SRInstComms

ActiveX Control for *SIGNAL RECOVERY* instruments

New Version

FEATURES

- **Easy PC control for compatible instruments**

- **Operates from one to ten instruments simultaneously**

- **Uses GPIB, RS232, USB, or Ethernet interface**

- **Automatic detection of instruments**

- **Supplied with example programs in Visual Basic, Visual C++, Visual C#, LabVIEW, Excel and HTML.**

- **Full printed and on-screen documentation**

APPLICATIONS

- **Direct instrument control and output charting from an Excel spreadsheet**

- **Experiments using multiple instruments**

- **Remote control systems**

- **Data acquisition direct to an Access database**

- **Web-based test systems**

DESCRIPTION

SRInstComms is an ActiveX control that allows users of *SIGNAL RECOVERY* instruments to control them from PC's running Windows XP/Vista. Unlike the Acquire applications software which we also offer (see page 56), it is not a complete package but rather a component conforming to recognized industry standards that allows instruments to be controlled by user-developed programs. The only requirement is that these programs must be written in a language that supports such controls, which in practice is virtually all modern languages capable of developing Windows applications.

The control takes care of all communication between the user-developed program and the instrument, performing the necessary handshaking and decoding status signals over the selected interface, which can be GPIB, RS232, Ethernet or USB, depending on the type of interface fitted to the instrument being controlled. With the exception of speed, the interface type is essentially transparent to the user, making programs portable between systems with different interfaces.

It includes an automatic search routine which will find any compatible instruments that are connected to the computer. In most cases, this eliminates the need to adjust the communications settings controls on the instrument. The complete "profile" of connected instruments, together with any user-entered descriptive comments, is then securely saved in the system registry. Subsequent data transmissions to and from the instrument use this information to give the fastest possible communication.

Up to ten compatible instruments can be controlled independently or simultaneously, so that for example in a system measuring impedance one lock-in amplifier can measure the sample current while a second measures the voltage. Both instruments can be read via the control and the output readings combined to determine the impedance.

The package includes a full printed instruction manual, as well as on-screen help so that programming information is always easily available. In addition, sample applications in Visual Basic, Visual C++, Visual C#, LabVIEW, Excel and VBScript (HTML web page) are supplied. The VB, Visual C++ and Visual C# examples include a working executable as well as a full project workspace with all the corresponding source files. Similarly the LabVIEW, Excel and VBScript demonstration programs are complete with all source code information so that they can be easily edited by the user.

Software

User Interface

The control offers a dialog box that programs can activate to allow users to check and if necessary update details of the instruments connected to the system. This box can also be used to initiate a search for instruments via the "Find instruments" button.

The "Test connections" button checks whether an instrument recorded as being of a certain type and connected to a given port is actually present.
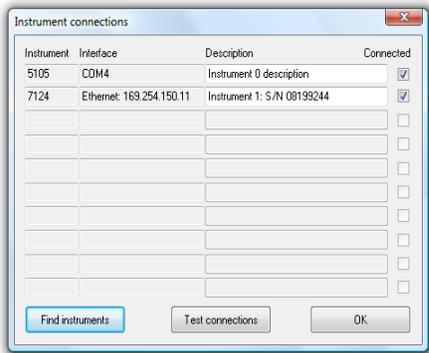

User Interface Dialog

Sample Programs

The supplied example programs offer a quick way to start developing a program. Unlike some software toolkits, this ensures that you have access to code that is known to work with a wide range of hardware.

The Excel spreadsheet and LabVIEW VI demonstrate perfectly the power of the control, allowing data to be taken directly from the instrument and plotted to a graphical display.
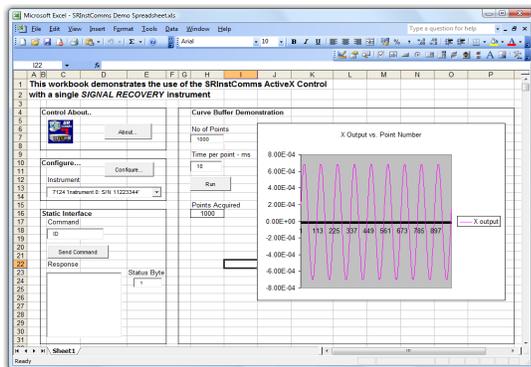
Demonstration Excel Spreadsheet
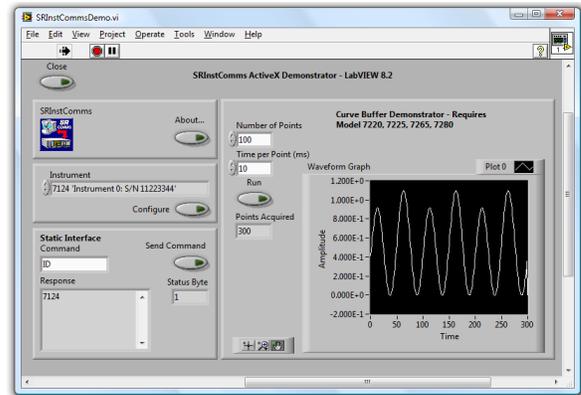
Demonstration LabVIEW VI

Technical Requirements

In addition to a compatible operating system and suitable programming software, the control requires at least one free USB or RS232 port on the computer, or a connection to an Ethernet network, or a spare PCI/PCMCIA slot to accommodate a National Instruments GPIB Interface card, typically a PCI-GPIB or PCMCIA-GPIB. **Other manufacturer's cards or cables will not work.**

Ordering Information

The SRInstComms software pack includes the software supplied on CD and a 57 page instruction manual. The package is licenced for use on a single computer; for multiple or redistribution licenses please contact us first.

Optional Accessories

Model CE0114S	National Instruments PCI-GPIB Interface Board
Model CE0115S	National Instruments USB-GPIB Interface Cable
Model CE0116S	USB-RS232 Serial Adaptor
Model SC0073	2m GPIB cable
Model SC0067	4m GPIB cable
Model SC0066	1m GPIB cable
Model C01001	9F - 9F Null Modem RS232 cable (for models 5105 and 5106)
Model C01002	9F - 25M Null Modem RS232 cable (for models 5109, 5110, 5209 and 5210)
Model C01003	9F - 9M Null Modem RS232 cable (for models 7124, 7220, 7260, 7225, 7225BFP, 7265, 7270, 7280 and 7280BFP)
Model K02001	25F - 9M RS232 adapter.
Model 796190	6' (2 meter) long USB type A to type B cable for connecting model 7124 and 7270 to the USB port on a computer