Operation Manual

Attenuator Control Center Software

(P/N 189-163)

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1. GENERAL INFORMATION:

1-1 PURPOSE & SCOPE: This manual contains setup and operation information for the API / Weinschel's Attenuator Control Center Software, P/N 189-163. The manual also provides instructions for configuring and conducting a Fading or Handover Test as well as advanced tools and additional functionality

1-2 DESCRIPTION: API / Weinschel's Attenuator Control Center Software (ACCS) is to be used in conjunction with the operation of the API / Weinschel 8320, 8321 & 8331 series of programmable attenuator units. The ACCS will allow the user setup, control and perform test and measurements using these programmable attenuator units over standard communication interfaces such as RS-232, USB, IEEE-488 or Ethernet.

1-3. RELATED MANUALS: The following manuals contain information that may be used in conjunction with this manual to operate this software.

Manual	Title
IM-600	Operation & Installation Manual, Model 8331 Programmable Attenuator Units
IM-608	Operation & Installation Manual, Model 8320 & 8321 Programmable Attenuator Units

1-4. ABBREVIATIONS AND ACRONYMS: The following list contains abbreviations used throughout this manual. Abbreviations and acronyms that are not listed conform to MIL-STD-12D.

ACCS	Attenuator Control Center Software
TBD	To Be Determined

2. SYSTEM REQUIREMENTS:

Minimum requirements for operation of the Attenuator Control Center Software:

1. Microsoft Windows XP or newer
2. Microsoft .net Framework 3.5.1 or higher
3. 1024x768 or higher resolution monitor
4. Intel Pentium 4 Processor or later and 1 GB RAM

3. INSTALLATION:

Perform the following to install the Attenuator Control Center Software:

1. Run "setup.exe" from the appropriate downloaded folder or CD
2. Follow wizard as prompted to install the Attenuator Control Center and the LabView runtime

4. OPERATION:

4.1 GETTING CONNECTED

The following provides instructions for establishing a connection between terminal or computer and the programmable attenuation unit:

1. Double click icon on desktop or start menu labeled "API Attenuator Control"
2. Select "Create New Connection"
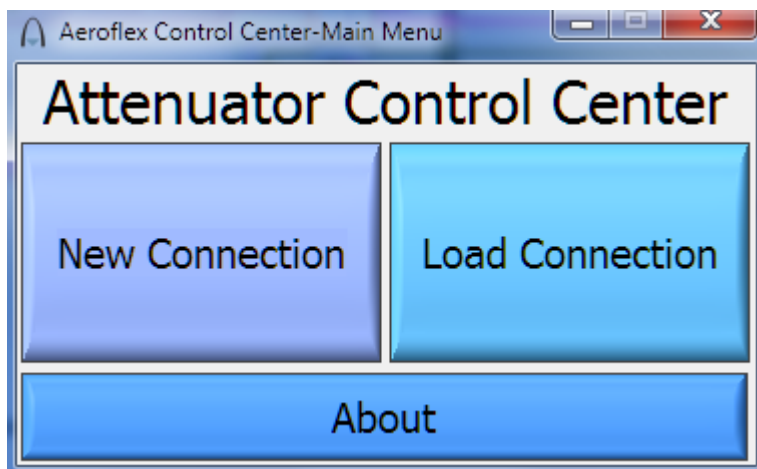
3. The connection configuration screen will appear. If the address of the controller is known, select the appropriate connection mode, enter the address and hit connect. If the controller is connected via USB, windows will automatically assign it a serial address, as if it is a serial to USB converter. The address can be determined in the system device manager.

   If the address is not known, the software may be able to find the controller if autodetect is selected.
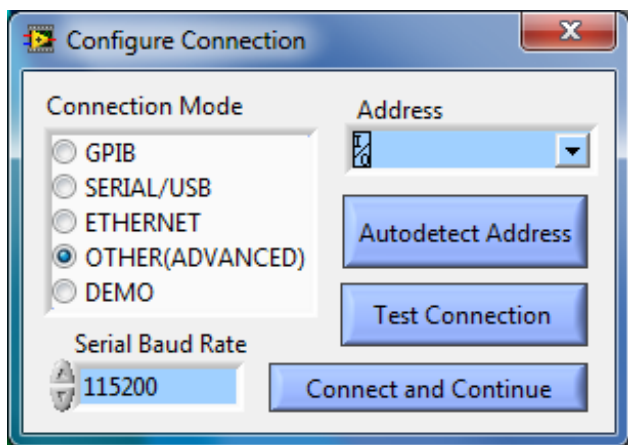

Autodetect will provide a list of controllers and their addresses. Select the desired controller and hit connect to continue.
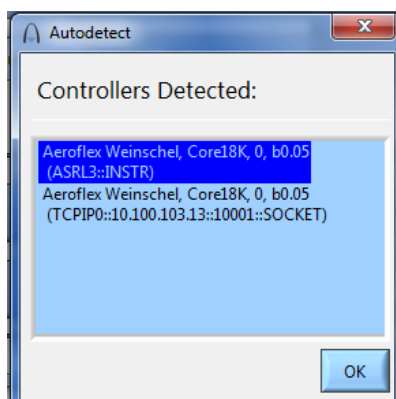
Autodetect has the following technical limitations:

- For serial connections the baud rate of the controller must be set to the default 115200.
- For Ethernet connections the TCP port must be set to the default 10001.
- The controller must be able to see UDP broadcast packets from the computer, and usually needs to be on the same local subnet.

4. Once connected the Control Center will appear. The software will automatically determine the attenuators connected to the selected controller.
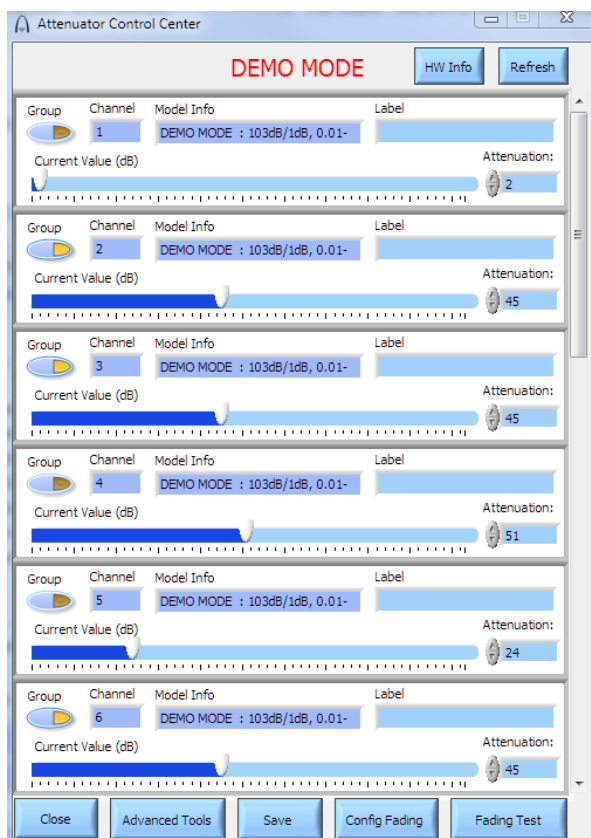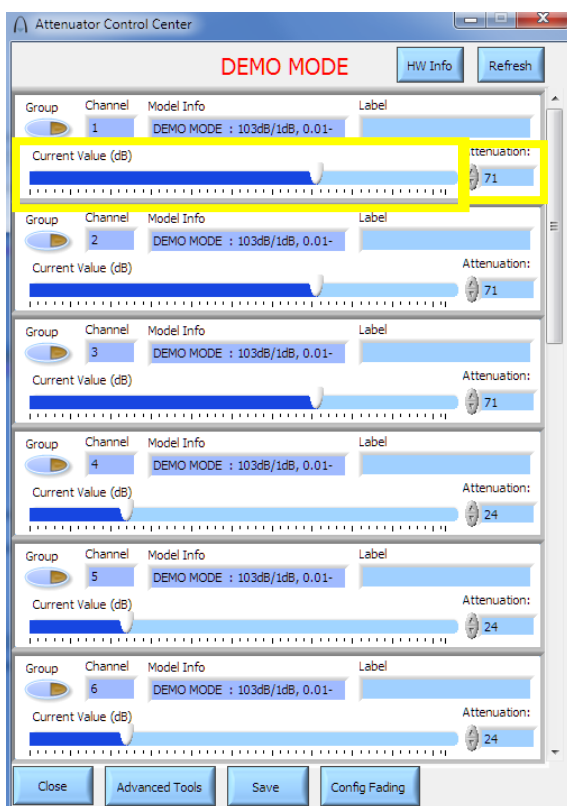

5. To save the connection information, text entered to label each channel, and attenuator state hit the save button on the bottom of the control center window, then select either a preset or a custom save file name.
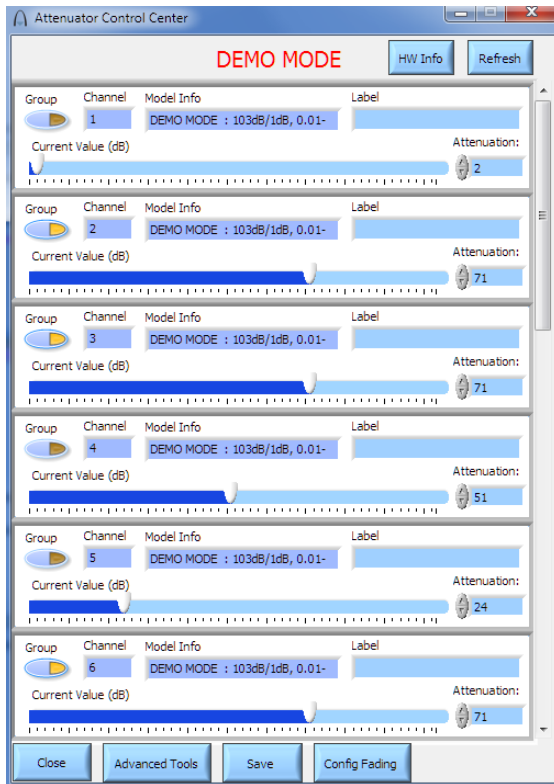
4-2. BASIC OPERATION:

1. Each attenuator may be adjusted by clicking on the slide bar or typing a number into the control box.
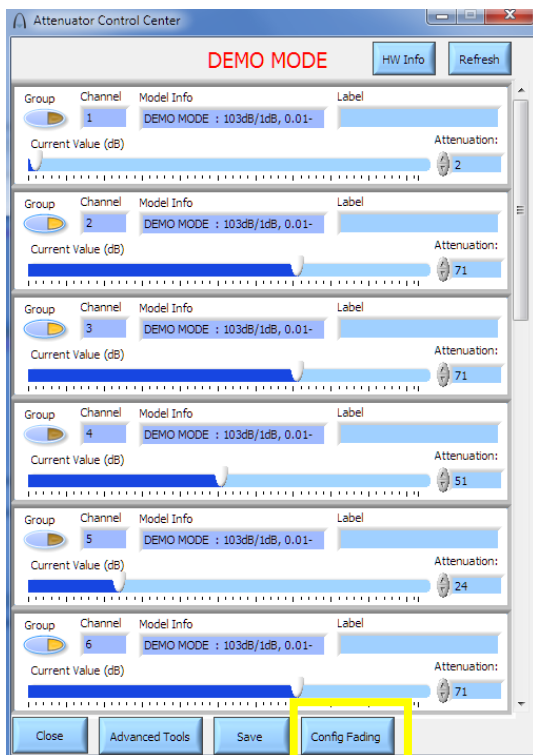
2. Selecting "Group" allows the user to control multiple attenuators to be controlled at once
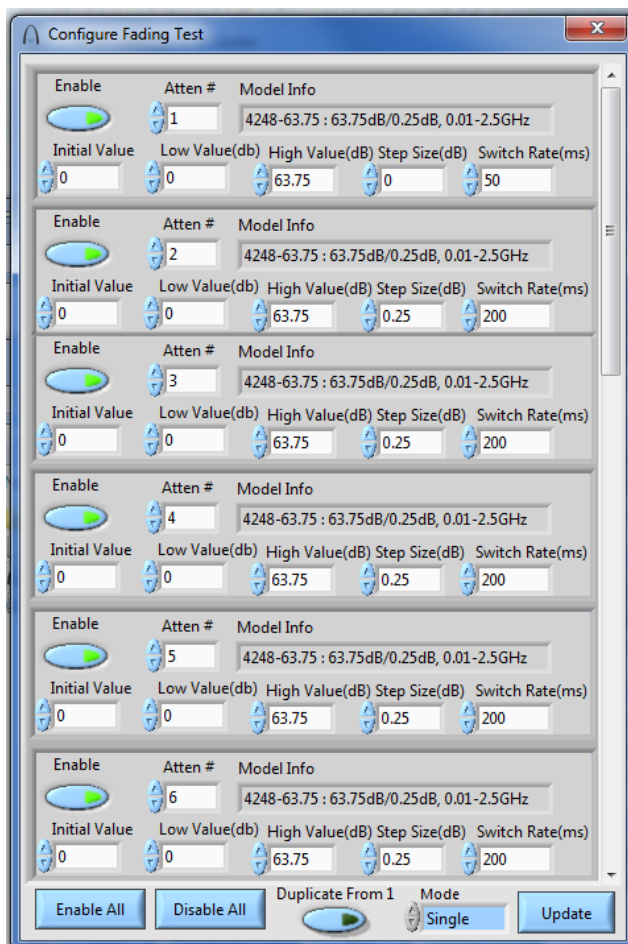

4.3 CONFIGURING AND CONDUCTING A FADING OR HANDOVER TEST:

1. From the Control Center front panel select "Config Fading":

2. The fading test configuration window will appear:

The system automatically determines the allowed limits for each parameter. Each attenuator has the following parameters:

Enable: Selects enabled state of attenuator. The Enable All and Disable All buttons on the bottom of the screen allows this state to be changed en masse.

Atten #: The attenuator number being configured. This number must be unique for each enabled attenuator.

Initial Value: The value to start the test at.

Low Value: The lower limit of the test.

**High Value:** The upper limit of the test.

Step Size: The amount to increment by. Select a negative number to initially decrease in attenuation.

Switch Rate: The frequency at which the attenuator is to be switched. Please note that most attenuators have both a switching time and a maximum cycle rate. Therefore the program has the following restrictions:

> Switch rate cannot exceed the maximum cycle rate (200 ms for most relay based attenuators)

> Latency and the switching requirements of some attenuators may cause the controller to not be able to respond fast enough depending on the connection method, attenuator type, attenuator count, and switching rate. Therefore the system will provide a warning if there is too large a number of attenuators enabled and/or a high switching rate.

3. Select the Test Mode:
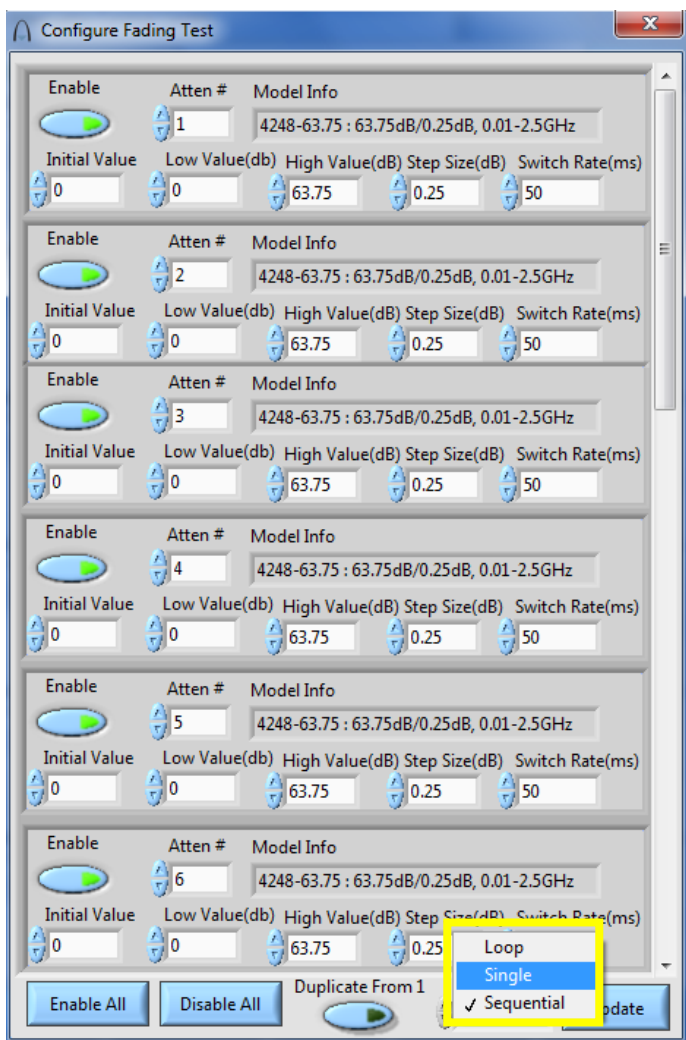
Loop: Continually loop through the selected test profile. The increment is reversed each time an attenuator hits its limit.

Single: Performs a single sweep simultaneously. Each attenuator stops at the first limit it reaches.

Sequential: Each attenuator performs a single sweep, in sequential order, from top to bottom of the list.

4. Press "Update" to apply your results and return to the front panel

5. If desired, press "Save" on the front panel and choose a preset or custom save file to save the results

6. To conduct the fading test, press the fading test button that should now appear on the front panel:
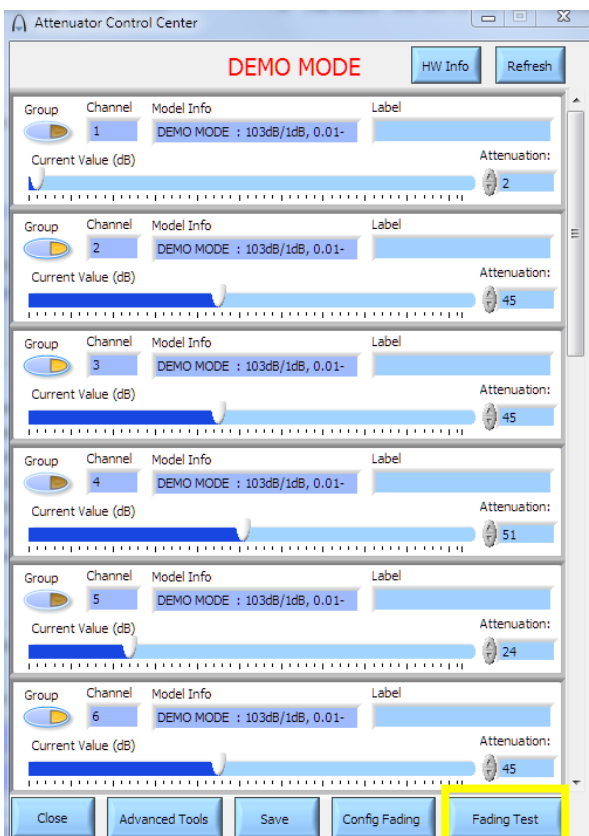
7. Press "Start" to begin the test. You can manually step through the test while it is paused using the arrow buttons.
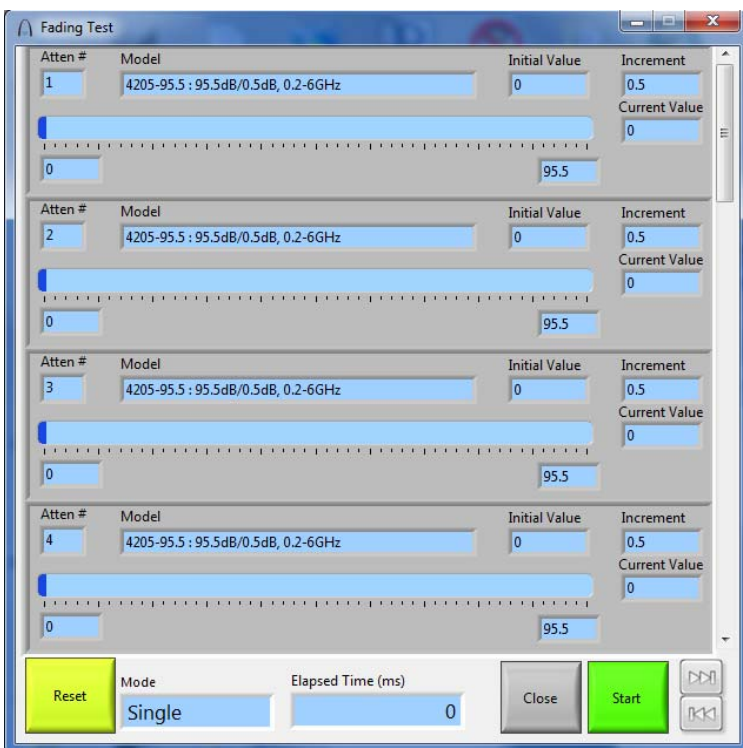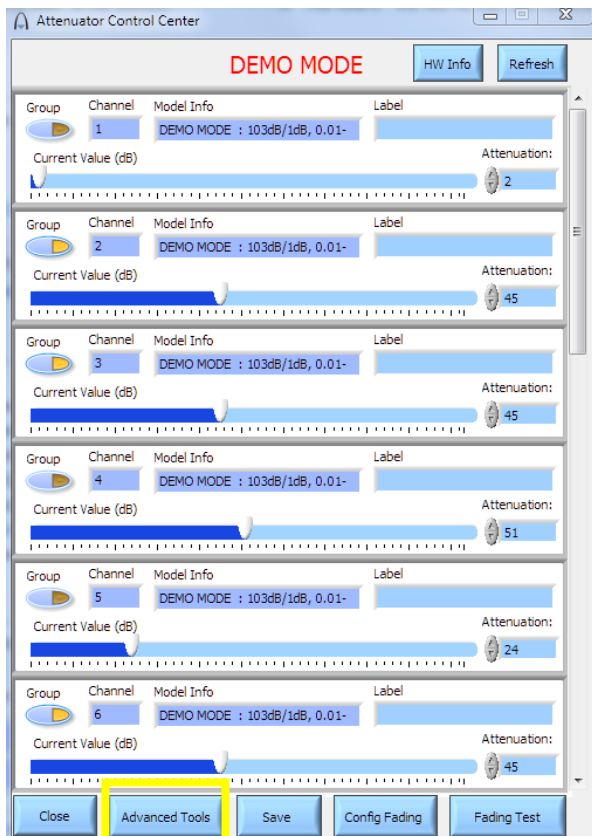
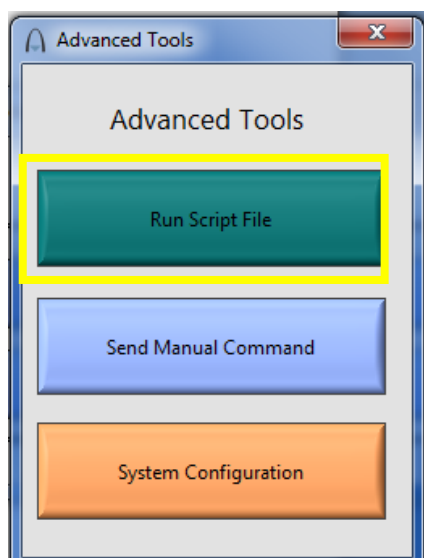## 4-4. ADVANCED TOOLS AND ADDITIONAL FUNCTIONALITY

The following paragraphs provide instructions for such items as running a script file and sending manual commands to the programmable attenuator unit
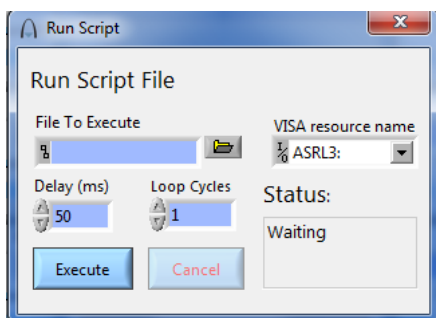
4-4.1   Running a Script File:

1. Select "Advanced Tools" from the Control Center Front Panel:

2. Select "Run Script File"

3. Select the location of the script file to execute, the number of times to execute it, and the delay between each command.
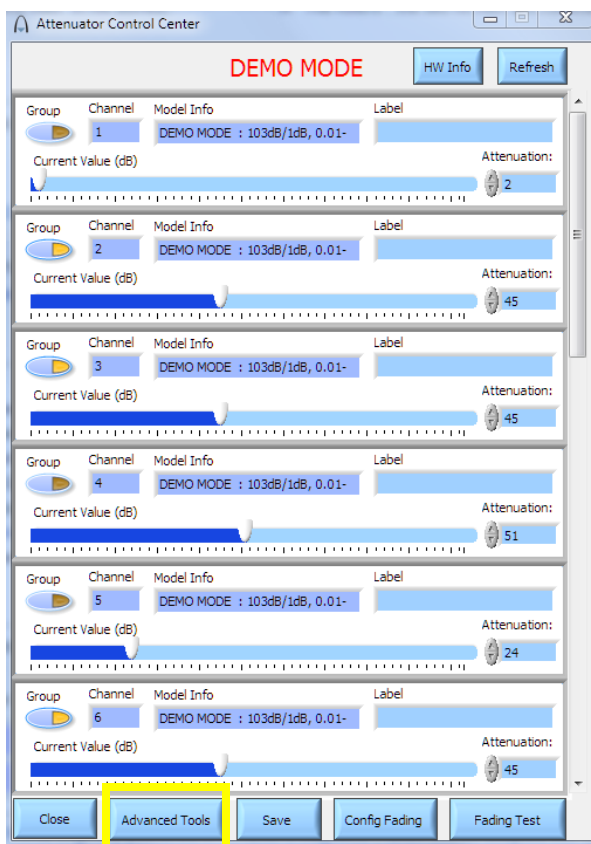

Note: A different "VISA resource name" may be selected to send commands to a different NI VISA compatible instrument than the 8331.
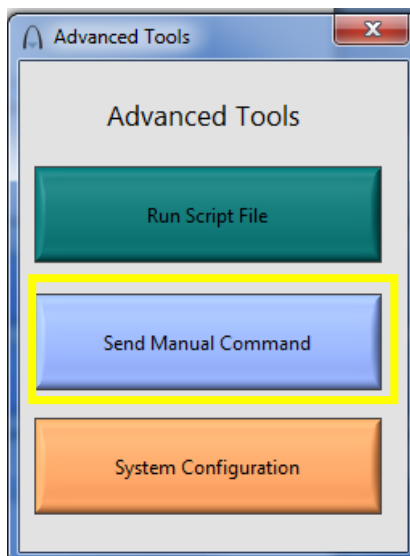
4. Select "Execute"

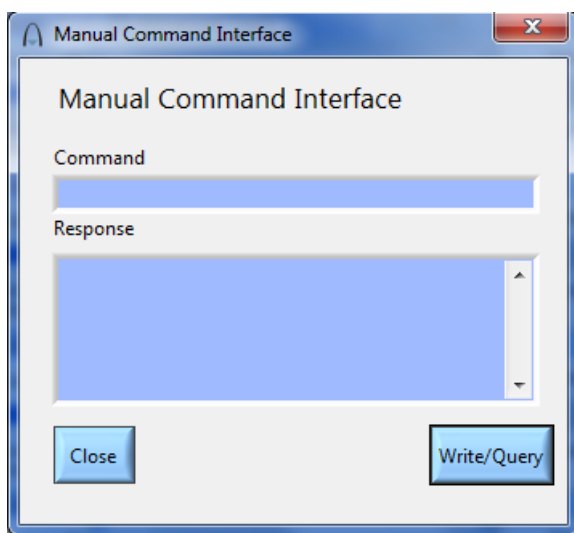### 4-4.2   Sending a Manual Command

1. Select "Advanced Tools" from the Control Center Front Panel.

2. Select "Send Manual Command"
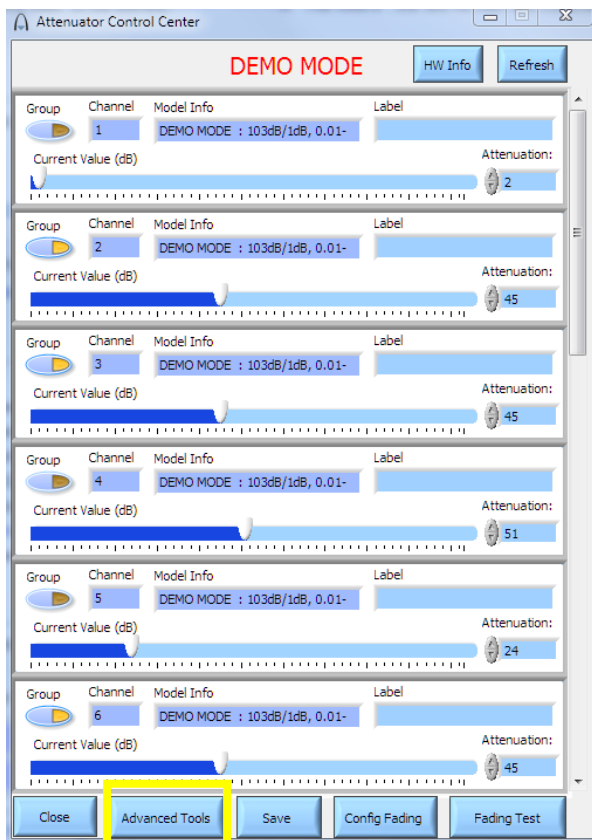

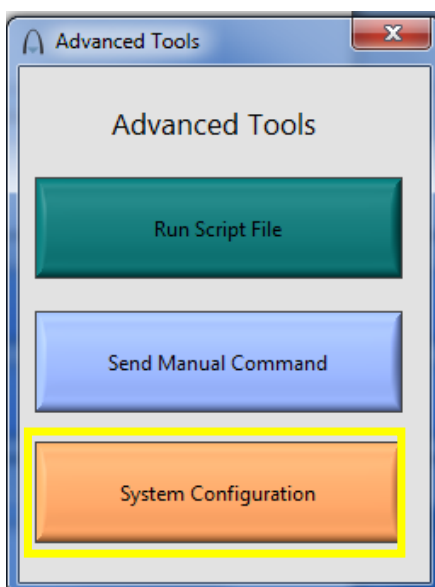3. Enter the command to send, and then hit "Write/Query".

Note: A different "VISA resource name" may be selected to send commands to a different NI VISA compatible instrument than the 8331 or equivalent programmable attenuator unit.

4-4.3   Configuring the Ethernet settings
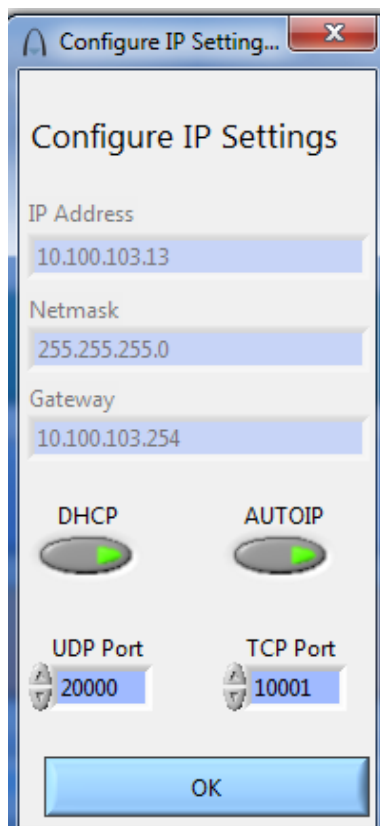
1.   Select "Advanced Tools" from the Control Center Front Panel.

2.   Select "System Configuration"

3. Enter appropriate network information:

Note:

1. Changing Ethernet settings while connected over Ethernet will cause the software to lose connection, and will require a software restart.

2. Changing the UDP or TCP ports from their default values will cause the autodetect feature of the software to malfunction.

5. CONTACTING API / WEINSCHEL:

In the event of a malfunction, contact API / Weinschel. An apparent malfunction of an instrument or component may be diagnosed over the phone by first contacting the Customer Service Department at API / Weinschel. DO NOT send the instrument or component back to the factory without prior authorization. When it is necessary to return an item, state the symptoms, catalog and type number of the instrument or component, and date of original purchase. Also write the Company name and your name and phone number on a card and tape the card to the item returned. Contact API / Weinschel Customer Service Department as follows:

Via mail: API / Weinschel, Inc. 5305
Spectrum Drive Frederick,
MD 21703-7362 U.S.A.

Via Telefax: 301-846-9116

Via Phone: Call TOLL FREE 800-638-2048
Toll call # 301-846-9222

Via Website: www.API.com/weinschel

Via e-mail: weinschel-sales@API.com

6. API / WEINSCHEL WARRANTY:

PRODUCTS - API / Weinschel warrants each product it manufactures to be free from defects in material and workmanship under normal use and service anywhere in the world. API / Weinschel's only obligation under this Warranty is to repair or replace, at its plant, any product or part thereof that is returned with transportation charges prepaid to API / Weinschel by the original purchaser within ONE YEAR from the date of shipment.

The foregoing Warranty does not apply in API / Weinschel's sole opinion, to products that have been subject to improper or inadequate maintenance, unauthorized modifications, misuse, or operation outside the environmental specifications for the product.

SOFTWARE PRODUCTS- API / Weinschel software products are supplied without representation or Warranty of any kind. API / Weinschel, therefore, assume no responsibility and will not accept liability (consequential or otherwise) arising from the use of program materials, disk, or tape.

The Warranty period is controlled by the Warranty document furnished with each product and begins on the date of shipment. All Warranty returns must be authorized by API / Weinschel prior to their return.

API / Weinschel's Quality System Certified to:

Certificate No. 289j

ACC Software (IM-604) Revision Record

REVISION	DATE	DESCRIPTION	APPLICABLE SERIAL NUMBERS
A	10-15-12	ERN 12-174: Initial Issue	All Versions
B	2-14-13	ECN 13-177: Added demo mode, label, and manual fading control	All Versions
C	7-14-14	ECN 14-244: Updated screen example graphics and removed the line about "Control all" and added a new line about "Group" and other edits.	All Versions