

ARTcessories

# USB Phono Plus

Audiophile Computer Interface V.2

Thank you for purchasing the ARTcessories USB PHONO PLUS! This will allow you to easily connect your turntable or any stereo line level output to your computer via USB. We hope that you enjoy the flexibility and superb sound quality this preamp has to offer.

The USB PHONO PLUS is a high quality phono and line level preamplifier with USB, Optical, and Line level outputs. Connectivity issues can be resolved by selecting the “Phono” or “Line” input switch on the face of the unit and then routing the outputs into the computer, stereo receiver, or recording equipment. If you plan to use the Phono Plus for SPDIF or TOSLINK sources, the internal A/D converter is disabled to maintain a pure digital signal path via the USB output. Monitoring can be done through the mini jack on the face of the unit. The monitor source can be set to listen to the preamp source, the computer output, or a mix of both signals. The “Line” level inputs are suitable for any Tape, CD, or other line level source that you might have. Finally, the “Phono” input section has a built in RIAA standard EQ curve and selectable low cut rumble filter for the most accurate playback and archiving of your records.

The USB PHONO PLUS can be powered by either an external 9V-150MA power source or directly off the USB port, making remote recording easy. It will work with the USB audio device drivers built into Windows 98SE/ME/2000/XP and Apple OS9.1/OSX computers with native USB support. No special drivers are needed. Inserting the USB PHONO PLUS allows you to upgrade your portable or desktop audio interface in one quick and easy step.

## INSTALLATION:

1. Connect your turntable, tape player, CD player or other analog audio device leads to the RCA input connectors on the USB PHONO PLUS or connect your digital audio device to the S/PDIF or OPTO inputs on the USB PHONO PLUS.

a. If the turntable has a separate ground wire, attach it to the ground terminal on the USB PHONO PLUS. This is to reduce hum. (Unnecessary for digital output turntables.)

b. Select “line” or “phono” input for the analog source type. Use the low cut filter for removing turntable rumble or other low frequency noise if you would like.

*NOTE: Inserting a plug into the S/PDIF IN disables the OPTO IN. Whenever there is a valid digital signal present at either the OPTO IN or S/PDIF IN, these inputs will override the analog inputs.*

*Therefore if the OPTO or S/PDIF inputs are left connected, turn off the digital audio device to enable use of the analog inputs.*

2. Connect the USB PHONO PLUS to the appropriate inputs on your computer.

3. Choose a source of power for the USB PHONO PLUS.

a. EXTERNAL POWER: Connect the AC adaptor to the rear panel 9V AC/DC jack. The front panel POWER LED will indicate when power is present.

b. USB BUS POWER: No external power connection is needed. Power is supplied over the USB connection. The front panel POWER LED will indicate that USB power is present when the USB cable is connected to a live USB jack. It is best to connect directly to a computer USB input or to a powered USB hub, to assure ample power for the USB PHONO PLUS.

*NOTE: EXTERNAL POWER will automatically override USB BUS POWER. This can be useful for reducing power drain when connecting to battery powered laptop computers.*

4. The computer “Default Audio Device” setting must be set to connect to the USB Phono Plus. Usually the computer will do this automatically whenever a USB device is first connected, but it is sometimes necessary to make the selection manually. The same settings may need to be made in the particular audio application that you are using as well. (Check your application instructions.) These settings should be made while the USB PHONO PLUS is connected to the computer and powered on. Select the following sound recording (input) and playback (output) settings:

### WINDOWS 98:

*Settings => Control Panel => Multimedia.*

Choose the preferred device: “USB Audio Device”

### WINDOWS XP:

*Settings => Control Panel => Sounds and Audio Devices => Audio.*

Choose the mixer device: “USB Audio CODEC”

*or...*

*Programs => Accessories => Entertainment =>*

*Volume => Control => Options => Properties.*

Choose the mixer device: “USB Audio CODEC”

### MAC OS 9.1+:

*Control Panels => Sound.*

Choose “USB Audio CODEC” for the input and output device.

### MAC OS 10+:

*System Preferences => Sound.*

Choose “USB Audio CODEC” for the input and output device.

*NOTE: After these settings are made, the computer will automatically reconfigure itself back to these settings every time the USB PHONO PLUS is reconnected to the computer. If you prefer, you can have the computer output routed to your computer speakers instead of the USB PHONO PLUS monitor output jack, by selecting your computer speakers for “OUTPUT” instead of “USB Audio CODEC” in the above setup procedures. This must be done while the USB PHONO PLUS is connected to the computer and powered on. The computer will then remember these settings every time the USB PHONO PLUS is reconnected to the computer.*

## MONITORING WHAT YOU RECORD

Set the front panel MONITOR SOURCE SWITCH to PREAMP in order to monitor the analog audio coming directly from the preamp. This is useful for auditioning and cueing records or tapes prior to recording. This signal has no latency.

Set the front panel MONITOR SOURCE SWITCH to CPU in order to monitor the digital audio coming back from the computer. This is useful for playback from the computer. This signal can have latency, dependent on your computer and software configuration. See discussion below.

A third position on the MONITOR SOURCE SWITCH is labeled “BOTH” and it provides a mix of the preamp and computer signals. During typical operation either a record (or tape) is playing back, or the computer is playing back, but not both at the same time. You can listen to either the preamp, or the computer, without changing any settings. You will also be able to hear any computer alert signals while you are listening to the record or tape if the alerts are also routed to the USB CODEC in your computer’s sound setting control panel.

Some recording programs, and computer systems provide what is called a “Play-Through” function. This can be performed through software or hardware. When Play-Through is set to ON, the computer will output the audio that is being recorded, at the same time that it is actually being recorded. There is a short delay, or latency with this audio signal. There is also a potential for the computer’s audio inputs and outputs to be inadvertently connected together thereby forming a feedback loop. This can accidentally create very loud and disturbing sounds. Therefore “Play-Through” is usually set to OFF as the “default” setting in both software and hardware.

If Software/Hardware Play-Through is set to ON and the MONITOR SOURCE SWITCH is in the BOTH position, then you will most likely hear the original preamp signal together with the computer audio signal slightly delayed, thereby creating an echo effect. This is normal behavior, so while using the BOTH setting it may be preferable to leave Play-Through set to OFF.

With the included Audacity recording software the Play-Through function can be found under the Audacity menu at: AUDACITY => PREFERENCES => AUDIO I/O.

## RECORDING SOFTWARE

There is a multitude of computer recording software available today, some specializing in converting tape and old records to digital. We encourage you to do some research and find the best program that suits your needs.

To find links to a variety of computer audio applications please go to:

*www.artproaudio.com => Audio Products => ARTcessories => Select Model => USB Phono Plus*

As a simple system test in order to get started without any recording software on a PC, you can use Windows Sound Recorder. This will allow you to transfer analog or digital audio to your computer in 60 second increments. These files can then be saved as .WAV files.

On a Macintosh computer there are several standard sound applications to choose from depending on your machine configuration. These include “Sound Studio”, iMovie, and GarageBand. The recording time is limited only by your available hard drive space, and the file format options include AIFF, WAV, MP3, AAC, Apple Lossless, MOV, Sound Designer II, and System 7 Sounds, depending on the program you are using.

## WARRANTY INFORMATION

### Limited Warranty

Applied Research and Technology will provide warranty and service for this unit in accordance with the following warrants:

Applied Research and Technology, (A R T) warrants to the original purchaser that this product and the components thereof will be free from defects in workmanship and materials for a period of one year from the date of purchase. Applied Research and Technology will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt.

### Exclusions:

This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed.

A R T reserves the right to make changes in design or make additions to, or improvements upon, this product without any obligation to install the same on products previously manufactured.

A R T shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights and you may have other rights, which vary, from state to state.

For units purchased outside the United States, an authorized distributor of Applied Research and Technology will provide service.

ART maintains a policy of constant product improvement. ART reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install same on products previously manufactured. Therefore, specifications are subject to change without notice.

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