

Precision Phono Pre

Low Noise Precision Phono Preamp

Project Series



User's Manual



IMPORTANT SAFETY INSTRUCTION – READ FIRST



 This symbol, whenever it appears alerts you to the presence of uninsulated dangerous voltage inside the enclosure—voltage that may be sufficient to constitute a risk of shock.

 This symbol, whenever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

Read Instructions: Retain safety and operating instructions for future reference. Heed all warnings printed here and on the equipment. Follow the operating instructions printed in this user manual.

Do not open: There are no user serviceable parts inside. Refer any service work to qualified technical personnel only.

Environment: Protect from excessive dirt, dust, heat, and vibration when operating and storing. Avoid tobacco ash, drink spillage and smoke, especially that associated with smoke machines.

Handling: Protect the controls from damage during transit. Use adequate padding if you need to ship the unit. To avoid injury to yourself or damage to the equipment, take care when lifting, moving or carrying the unit.

Servicing: Refer servicing to qualified technical personnel.

Installation: Install the unit in accordance with the instructions printed in the user manual.

INTRODUCTION

Thank you for purchasing Applied Research and Technology's Precision Phono Preamp, a high-quality standalone phono preamp. The PPP interfaces Moving Coil (MC) and Moving Magnet (MM) cartridges to a wide variety of audio systems. An Extraordinarily low noise amplifier allows connection to MC cartridges without picking up noise or distortion that transformers can exhibit.

Analog inputs are switchable between Moving Magnet and Moving Coil. The unit changes both the gain and the cartridge loading to suit the selected cartridge. A rear switch allows you to adjust MC cartridge loading between 100 Ohms and 25 Ohms. A low-cut filter removes rumble and low frequency feedback while leaving the audio pristine. The front gain trim control with the signal present/clip LED allows you to optimize the output for a wide range of cartridges. The Precision Phono PS is powered off an external 12V DC supply to provide low noise/ high headroom operation. Upgrade your system in one quick and easy step.

The built-in low noise phono preamp circuitry is highly accurate and precisely conforms to the RIAA standard. The line output jacks are low impedance and can work with any audio system. Housed in an aluminum-anodized case. If you need to amplify and EQ your vinyl records to interface with an audio workstation, home audio system, or monitor system, the DJ PRE II gives you flawless audio reproduction in a rugged and reliable package.

FEATURES

- High accuracy/low noise preamp
- Moving Coil/Moving Magnet switchable input
- Switchable low-cut rumble filter
- Variable preamp gain
- Signal present/clip indicator
- Selectable Moving Coil loading
- Gold plated RCA preamp outputs
- External universal power supply for lower noise
- Compact rugged extruded chassis designed for years of use
- Perfect for Connecting a phono cartridge to any audio system
- Designed and developed in the US

The Facts About Turntable Preamps

Phonograph Records Have Three Basic Problems

1. It is physically impossible to press them with ridges that allow low frequencies to come out at the same reproduction level as mid and high frequencies. Bass compensation is therefore needed during playback.
2. Records produce a certain amount of hiss, which is covered up in post-production by boosting the gain of the high frequencies before pressing. Counter-EQing during playback compensates for this.
3. Magnetic cartridges produce a weak signal (typically around 5mV), which must be boosted to match the rest of the amplification, and this too is done during playback. In the mid-1950s, the Recording Industry Association of America established compensation standards. The resulting RIAA preamp has been built into every hi-fi and stereo amplifier with phono or turntable inputs since then. A separate RIAA preamp is necessary when you are connecting a turntable to a mixer that does not have one built in.
4. Moving Coil cartridges typically have a low impedance and very low output (0.2mV typically). Most will work with a load between 24 and 100 Ohms. This load may be critical to the sound of the cartridge.
5. There is a variant on Moving Coil called "high output" that require a 47k load and have outputs in the 2mV range. The Precision Phono Pre can accommodate this using the MM setting and recovering 6-8dB of gain using the level control.

INSTALLATION and OPERATION

AC Power Hookup

The Precision Phono-PS has a universal external power supply designed to operate at 100 to 240V AC ~ 50/60 Hz. **Only use the adapter that came with the Precision Phono-PS.** If the adapter becomes lost or damaged, contact ART Customer Service for replacement. If you need to purchase one locally, please specify 12V DC, at $\geq 800\text{ma}$.

Setting up the Universal the power supply

Insert the correct clip adapter to the supply according to country of operation. There are four different clips included. Please attach the matching clip as per your AC power source.

Connect the power supply to the unit, labeled 12V DC .

Always make sure the output plug is securely plugged into the rear of the Precision Phono-PS, and that the adapter is held firmly in an electrical outlet. Never operate the Precision Phono-PS or power adapter in the rain or in wet locations. If the adapter's cord is ever cut, discontinue use and replace the adapter with a new one. Unplug the adapter when the Precision Phono-PS is not in use. Refer to the label on the adapter or the specifications later in this manual for the appropriate power specifications.

If the turntable has a separate ground wire, attach it to the Ground terminal on the Precision Phono Pre to reduce hum.

Connect the RCA outputs to the appropriate inputs on your mixer or stereo receiver (Line input, or an unused tape input). If the mixer does not have RCA inputs (on any of the channels) a stereo RCA to dual mono ¼-inch male cable may be needed to connect to the mixer line inputs.



APPLICATIONS

Select the Cartridge setting

1. Select the correct mode using the switch (MC/MM). If you have a high output MC cartridge that requires a 47k load, choose MM mode.
2. If using MC mode, select the correct load (100 or 24 Ohms).
3. The Load switch only applies to the MC mode. You will hear a slight difference between the two settings.
 - a. Start by using the manufacturer's recommended load. If you are not sure, select the 100 Ohm setting. If the high end is exaggerated, the 24 Ohm setting will flatten the response out by dampening the cartridge resonance.
4. You can adjust the level so you never see the Clip LED light. There is plenty of dynamic range in the "green" portion of the LED (18dB). In the event you do see the Red LED just start to come on there is still 10-15dB of headroom.

Low Cut Filter

The **Filter** switch, when in the **Low-Cut** position, adds a filter for removing turntable rumble or other low frequency noise. The use of the low-cut filter enables you to roll off deep bass to eliminate turntable rumble and "skipping" in heavy feet traffic areas.

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 **three** years 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.

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

SERVICE

The following information is provided in the unlikely event that your unit requires service.

1. Be sure that the unit is the cause of the problem. Check to make sure the unit has power, all cables are connected correctly, and the cables themselves are in working condition. You may want to consult with your dealer for assistance in troubleshooting or testing your particular configuration.
2. If you believe that the ART unit is at fault, go to www.artpro-audio.com. Select “*Support*”, then “*Return Authorization Request*” to request a return authorization number.
3. If you are returning the unit for service, pack the unit in its original carton or a reasonable substitute. The original packaging may not be suitable as a shipping carton, so consider putting the packaged unit in another box for shipping. Print the RA number clearly on the outside of the shipping box. Print your return shipping address on the outside of the box.
4. Include, with your unit, a note with the RA number and your contact information, including a return shipping address (we cannot ship to a P.O. box) and a daytime phone number, and a description of the problem, preferably attached to the top of the unit. Also include a copy of your purchase receipt.

Fill in the following information for your reference:

Date of purchase _____

Purchased from _____

SPECIFICATIONS

Input Connections	Gold plated RCA jacks 47k / 100pf (MM) or 25/100 Ohms (MC, switchable)
Output Connections	Gold plated RCA jacks, 100 Ohms
Max Input Level	440 mV (1 kHz, MM mode) / 44mV (1kHz, MC mode)
Max output level	6V RMS / +18dBu
Maximum Gain	43dB (MM)/63dB (MC)
Frequency Response	20 Hz – 20 kHz, +/-0.5dB
Low Cut Filter	22Hz, 2pole
THD	<0.0010% {typical}
E.I.N	346nV, -127dBu
Chassis Type	All aluminum black anodized with integral rubber sides
Power Requirements	
Input	100-240V AC~50/60Hz
Output	12V DC @ ≥ 800 mA 
Dimensions (HWD)	1.87-inch x 4.61-inch x 4.27-inch 47.5mm x 117mm x 108mm
Weight	1.89 lbs., 0.86 kg

Note: 0 dBu = 0.775Vrms



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