



RAAL requisite PDA-1a Planar & Dynamic Headphone Amplifier User Manual

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PDA-1a PLANAR & DYNAMIC HEADPHONE AMPLIFIER USER MANUAL



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INTRODUCTION:

The PDA-1a amplifier is engineered to drive all types of Planar and Dynamic headphones. True-Ribbon and 2 low impedance headphones can also be properly driven when using our TI-1a (optional) Transformer Interface. This includes output impedances ranging from 2 to 600 ohms.

The preferred sensitivity of classic headphones should be in the range of 90dB to max 110dB in order to achieve the declared pressure levels and an acceptable level of side effects in the form of noise.

Sound quality and tone balance, at high levels, are not reduced with headphones that are outside the recommended sensitivity range but can cause certain side effects that are not considered amplifier deficiencies but limitations of the topology of phenomena that can be seen in highly sensitive headphones over 110dB.

We sincerely appreciate your trust in our work and hope you will benefit by a lifetime of beautiful music and joyful ownership.

Cheers & Happy Listening,
Alex Radisavljevic
Dnny McKinney

What's In The Box:

PDT-1a Planar Dynamic Headphone Amplifier Power Cable – 115VAC (North America) All other regions; User provided – locally sourced

Power Requirements:

User Selectable Mains Voltage: 115VAC, 1A Slo-Blo Fuse, IEC cable provided (North America).

User Selectable Mains Voltage: 230VAC, 0.6A Slo-Blo Fuse, User provided local IEC cable.

Internally Set 100VAC Mains (Japan): 1A Slo-Blo Fuse, User provided local IEC cable.

CAUTION:

BEFORE TURNING AMP ON FOR THE FIRST TIME

Be sure to check that the mains voltage selector switch is set to correct mains voltage position for your location. The switch (red) is located on the top panel, front left corner. Just above the power switch. Fuse value will differ depending on mains voltage. 115V requires 1A Slo-Blo 230V requires 0.6A Slo-Blo

True-Ribbon Application:

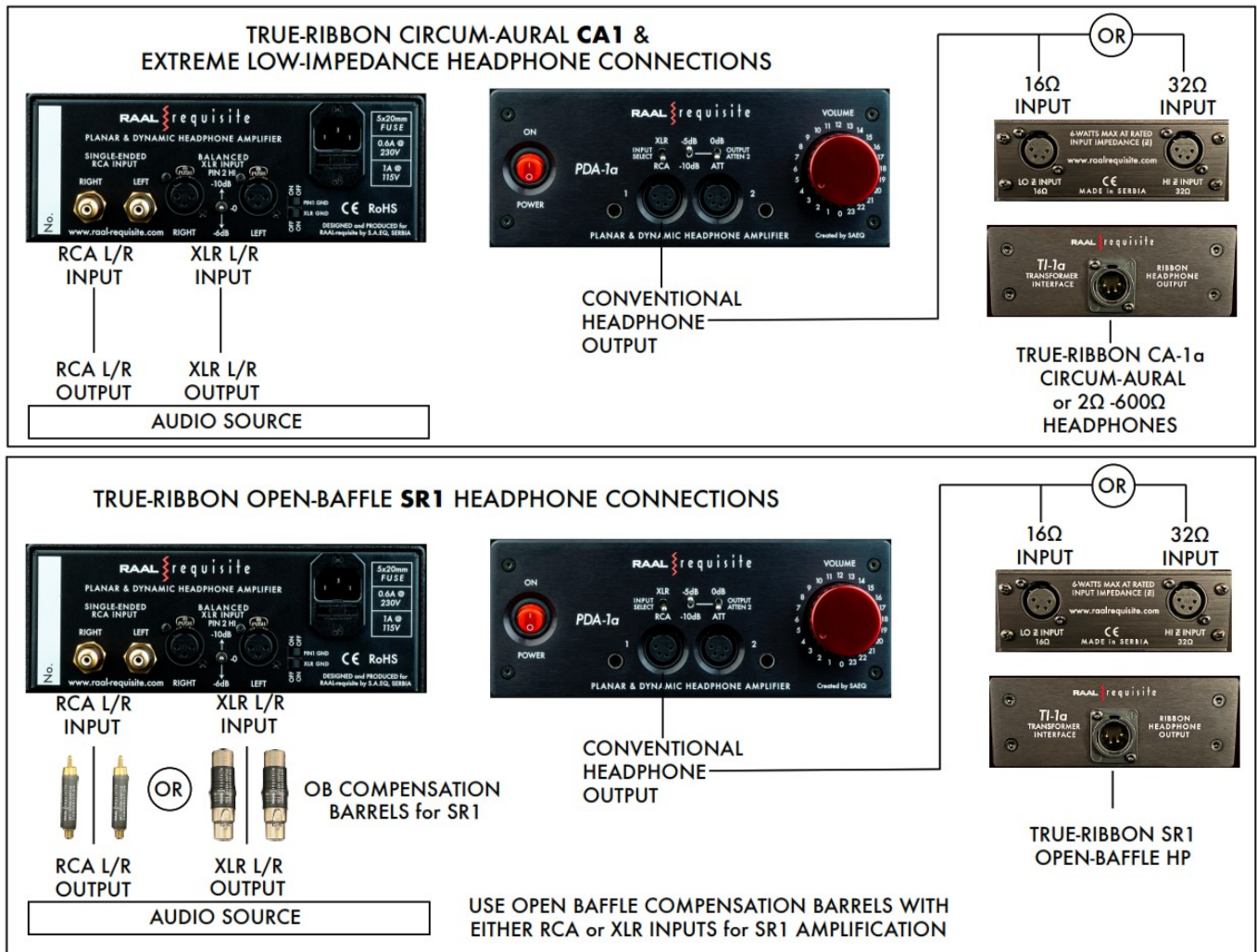
TI-1a (optional) REQUIRED The PDA-1a is also suitable for TrueRibbon and Extremely Low-Impedance (2Ω – 600Ω) loads, when paired with our TI-1a Interface

FOR PROPER CONNECTION

Refer to the following diagram when expanding functionality of PDA-1a to drive True-Ribbon Headphones or

difficult to drive loads of $2\Omega - 600\Omega$.

TRUE-RIBBON CIRCUM-AURAL CA1 & EXTREME LOW-IMPEDANCE HEADPHONE CONNECTIONS



Front Panel Features: (left to right)



1. POWER SWITCH (illuminated):
ON (UP) – OFF (DOWN)
2. HEADPHONE OUTPUTS 1:

1 – 6.3mm TRS (female)

1 – 4-pin XLR (female)

3. INPUT SELECT:

XLR Balanced Input at rear panel

RCA Single-Ended Input at rear panel

4. OUTPUT ATTENUATION 2:

If desired, the output level of HEADPHONE OUTPUT 2 can be attenuated by -5dB or -10dB. This is a useful feature if ever two headphones of different sensitivity are being used, at the same time, or if one listener prefers a lower listening level.

5. HEADPHONE OUTPUTS 2:

1 – 6.3mm TRS (female)

1 – 4-pin XLR (female)

6. VOLUME:

24-Step Precision Attenuator. Maintains solid left/right balance, in all positions.

Rear Panel Connections: (left to right)



1. RCA SINGLE-ENDED INPUT (2 each):

Right – Left

2. XLR BALANCED INPUT (2 each):

3-pin Female XLR (Right & Left)

Pin-1 Ground

Pin-2 Positive Going Phase

Pin-3 Negative Going Phase

3. INPUT SENSITIVITY:

0dB – Center

-6dB – Down

-10dB – Up

4. GROUNDING OPTIONS (2 ea):

3-pin Female XLR (Right & Left)

Pin-1 Ground

Pin-2 Positive Going Phase

Pin-3 Negative Going Phase

5. FUSE HOLDER:

1A SB for 115V mains operation

0.6A SB for 230V mains operation

1A SB for 100V (Japan) mains operation

(100V requires internal jumper connection)

6. IEC POWER INLET:

Standard IEC connector

SPECIFICATIONS:

Input Impedance: 80k Ohm

Input Sensitivity: 0.5V / 80k Ohm

Load impedance: 2 – 600 Ohms (headphone output)

Output Power: See Chart

Frequency Response -3dB: 500mV/sine. 10Hz – 500kHz

Distortion: 0.2% @ 1kHz

Signal to noise: > 96dB

Input Connectors (L/R): 3pin XLR (female) Balanced

Pin-1 Ground

Pin-2 Positive Going Phase

Pin-3 Negative Going Phase

Input Connectors (L/R): RCA Single-Ended

Sleeve Ground

Tip Signal

Output connectors (2 ea): 4-pin XLR (female)

Pin-1 Left (+)

Pin-2 Left (-)

Pin-3 Right (+)

Pin-4 Right (-)

Output connectors (2 ea): 6.3mm TRS (female)

Tip Left (+)

Ring Right (+)

Pin-3 left/Right (-)

Working voltage : 115 V / 230 VAC (selectors witch)

100V (requires internal connection)

Power Consumption: Idle 10W, Full Output 50W

Dimensions: H 90mm x W 218mm x D 320mm

| H 3.50 in x W 8.60 in x D 12.60 in

Net Weight: 5.2kg/11.4 lbs. Shipping Weight: 6.8Kg/15 lbs.

OUTPUT POWER:

5W @ 16 Ω

2.5W @ 32 Ω

1.2W @ 64 Ω

0.6W @ 120 Ω

0.3W @ 240 Ω

0.1W @ 600 Ω

Limited 1-Year Warranty

RAAL-requisite warrants its amplifier products to be free from defects in material and workmanship under normal use and service for a period of ONE (1) year from the date of delivery.

This warranty is only made to the original purchaser and is not transferable. In the event of failure of a product under this warranty, RAAL-requisite will repair, at no charge, the product returned to its factory. RAAL-requisite may, at its option, replace the product in lieu of repair. If the failure has been caused by misuse, neglect, accident or abnormal operating conditions, repairs will be billed at the normal shop rate. In such cases, an estimate will be submitted before work is started, if requested by the customer.

ALL OTHER WARRANTIES ARE HEREBY DISCLAIMED.

This warranty does not cover: normal wear and tear or normal aging of the product; tubes (if applicable) are covered by a 90-day warranty;

3. cosmetic damage, including but not limited to scratches and dents;
4. damage through accident, abuse, neglect, misuse, natural events, or other external causes;
5. damage through misapplication, overloading, or improper usage;
6. damage due to improper maintenance and repair;
7. damage as a result from the shipping and handling by third parties; or
8. product alterations.

Limitation of Liability:

EXCEPT AS PROVIDED IN THIS WARRANTY AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, RAAL-REQUISITE IS NOT RESPONSIBLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR INJURIES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, INCLUDING BUT NOT LIMITED TO LOSS OF USE; LOSS OF REVENUE; LOSS OF ACTUAL OR ANTICIPATED PROFITS; LOSS OF BUSINESS; LOSS OF OPPORTUNITY; LOSS OF GOODWILL; LOSS OF REPUTATION; OR ANY DIRECT OR INDIRECT OR CONSEQUENTIAL LOSS OR DAMAGE WHATSOEVER CAUSED INCLUDING THE REPLACEMENT OF EQUIPMENT AND PROPERTY.

Customer Responsibilities:

Customers may be required to provide proof of purchase date, respond to questions designed to assist with diagnosing potential issues and follow RAAL-requisite directions to make a claim on your warranty. **DO NOT OPEN THE PRODUCT. OPENING THE PRODUCT MAY VOID YOUR WARRANTY.** To make a warranty claim:

1. Contact us either through:

phone: (818) 437-0779

email: danny@raalrequisite.com

office: 2175 Goodyear Ave, STE 110. Ventura CA. 93003-7761

RAAL-requisite's Responsibilities:

1. We will try to assist you in operating or repairing your product.

2. If we determine a replacement part is necessary, we will send you a free replacement part.
3. If we determine a replacement will not resolve your problem, we may ask you to return your product to our warehouse. Upon receiving the product at our warehouse, RAAL-requisite will inspect the product.
4. If we determine that the product has a manufacturing defect we will send you a replacement part. If replacement of the part or repair of the unit is not possible, RAAL-requisite will send you a replacement product.

Safety



If you don't know how to install audio devices, get a qualified professional to help.

Never use this device near water, and clean only with a dry cloth.

Assure adequate ventilation, do not block any ventilation openings, or place near heat sources.

Use only the supplied power cord or suitable replacement. Route cords away from traffic areas and protect them from being pinched. Unplug the cord from the outlet if the apparatus is unused for a long period of time.

To prevent electric shock, do not use the plug with an extension cord, receptacle, or outlet unless blades can be fully inserted.

Refer all servicing to qualified service personnel. Service is required when the device has been damaged, including cord or plug damage, liquid has been spilled or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS DEVICE TO RAIN OR MOISTURE.



U.S.A.

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Documents / Resources

 The image shows the RAAL requisite PDA-1a Planar Dynamic Headphone Amplifier. It is a small, black, rectangular device with a silver-colored front panel. The front panel features the RAAL requisite logo, the model name 'PDA-1a', and a small red LED indicator. The device is shown in its open, clamshell-like configuration.	<p>RAAL requisite PDA-1a Planar & Dynamic Headphone Amplifier [pdf] User Manual PDA-1a, Planar Dynamic Headphone Amplifier, Headphone Amplifier, Planar Dynamic Amplifier , Dynamic Amplifier, Amplifier</p>
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