

# Supplemental to New Product Information (SNPI)

## PE-505

Fully-balanced Phono Amplifier



**Phono equalizing amplifier with dual monaural and fully-balanced input/output circuit design**

### ■ Features at-a-glance

- Full differential input/outputs circuit
- High-precision RIAA EQ circuit achieves less than ±0.05dB of deviation
- Individual EQ curves for monaural records and those with EQ from DECCA and COLUMBIA
- Balanced MC input
- MC load-impedance measuring, and switchable impedance
- Switchable MM load-impedance capacity (0, 100, 220, 330pF)
- Switchable MM/MC gain (High/Low)
- Subsonic detection, and Subsonic filter
- MONO function that mixes left and right channels as a monaural channel
- DEMAG function that de-magnetizes cartridge
- 3-position pin-point feet



Brand	TEAC	TEAC
Series	Reference 500	
Model Name	PE-505-S	PE-505-B
Product name	Phono Equalizing Amplifier	
Color	Silver	Black
UPC Code	043774034314	043774034307
EAN Code	4907034223008	4907034222995
Product W x H x D / NW	290 x 84.5 x 252.5 mm / 11.4" x 3.3" x 9.9" 4.5 kg / 10.0 lbs.	
Package W x H x D / GW	440 x 190 x 340 mm / 17.3" x 7.5" x 13.4" 5.7 kg / 12.6 lbs.	
Quantity per master carton	1 pc.	

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### ■ Product overview

The PE-505 is a phono equalizing amplifier with dual monaural and fully-balanced input/output circuits that support balanced MC input.

The development of the PE-505 was achieved by relying on TEAC's audio technology expertise, focusing on recording and playback, with the goal of accurately reproducing the original intent of the recording producers. The PE-505 will amplify even very faint audio signals picked up by the cartridge, process them without coloration, and then deliver them faithfully in order to keep the listener as close as possible to the original sound that was played before it was engraved on the master disc.

The high precision RIAA correction circuit, as well as both DECCA and COLUMBIA curves are supported. In addition, selectable load resistance for MC cartridges and load capacity for MM cartridges are present; allowing users to optimize the settings for the type of cartridge used and for the condition of the record.

#### ● Fully-balanced circuit design

From the head amplifier to the equalizing amplifier sections to the buffer amplifier section on the final output stage; the PE-505 employs a fully-balanced circuit design throughout all stages that amplifies, equalizes, and maintains signal purity of even the most extremely faint audio signals picked up by a cartridge.

Even unbalanced signal on the conventional RCA input is converted to the differential processing mode right after the input terminals.

#### ● Equalizing circuit on the differential cartridge output

Absorbing errors on the balanced output, the differential output equalizing circuit delivers a more accurate audio signal. The differential output circuit that cross-multiplied the hot and cold outputs each other. As the result, both signals are equalized for a pure and natural audio signal delivery.

#### ● High-precision RIAA circuit

A newly developed NF-type equalizing amplifier achieves less than  $\pm 0.05\text{dB}$  of RIAA deviation. (20Hz to 20kHz)

#### ● High Signal-to-Noise ratio

The PE-505 achieves 106dB on the RCA input (MM), and 86dB on the XLR input (MC), while the residual noise voltage reaches  $10\mu\text{V}$  on the MM and  $85\mu\text{V}$  on the MC (XLR) which are sophisticated.

#### ● High-precision OLD EQ curves

As well as the modern RIAA curve, individual curves on monaural records from DECCA and COLUMBIA issued before the RIAA curve was defined in 1955 are also supported.

#### ● Versatile settings and unique measuring functions

The PE-505 equips switchable load-capacity for MM cartridges and switchable load-resistance for MC cartridges. Furthermore, the load-resistance measuring function allows users to select an appropriate load-resistance by pressing the



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MEASURE key on the front panel to show the total load-resistance value including cable resistance on the gauge.

Also, the Subsonic function shows subsonic signals less than 6Hz on the gauge, while the subsonic filter (17Hz, -24dB/octave) cuts unnecessary low frequency out of the hearing range.

### ● DEMAG function to refresh the cartridges

With the quick demagnetize function, both magnetized iron cores of MC cartridges and the step-up transformer are demagnetized by playing back a vinyl record for as short as 30 seconds with the DEMAG position.

## ■ Key Features

- Full differential inputs/outputs circuits
- High-precision RIAA EQ circuit achieves less than  $\pm 0.05\text{dB}$  of deviation
- Individual EQ curves for monaural records and ones with EQ from DECCA and COLUMBIA
- Balanced MC input
- Switchable MC impedance (10, 22, 47, 100, 220, 470, 1k $\Omega$ )
- Switchable MM load-impedance capacity (0, 100, 220, 330pF)
- MC load-impedance measurement function
- Switchable MM/MC gain (High/Low)
- Subsonic detection
- Subsonic filter (17Hz, -24dB/oct.)
- MONO function that mixes left and right channels as a monaural channel
- DEMAG function that de-magnetizes cartridge
- 3-position pin-point feet
- GND terminal
- RoHS compliant

## ■ Specifications

### Amplifier section

Total harmonic distortion	(Rated output, 1kHz, GAIN Low)
RCA input (MM)	0.002%
RCA input (MC)	0.02%
XLR input (MC)	0.02%
Residual noise voltage	(Input short, GAIN low, IHF-A)
RCA input (MM)	10 $\mu\text{V}$
RCA input (MC)	65 $\mu\text{V}$
XLR input (MC)	85 $\mu\text{V}$
S/N ratio	(Input short, Rated input, GAIN Low, IHF-A)
RCA input (MM)	106dB
XLR input (MC)	86dB
RIAA deviation (20Hz to 20kHz)	$\pm 0.05\text{dB}$
Channel separation	-90dB or higher (MM, 10kHz, GAIN Low)
Gain	
GAIN Low RCA input (MM)	34dB
RCA input (MC)	54dB

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XLR input (MC)		54dB
GAIN High RCA input (MM)		46dB
RCA input (MC)		66dB
XLR input (MC)		66dB
Subsonic filter		17Hz, -24dB/octave
 <u>Phono input section</u>		
Unbalanced input		RCA Pin (MC/MM compatible) x 1 pair
Max input level		150mV (MM, THD 0.1%, GAIN Low) 16mV (MC, THD 0.1%, GAIN Low)
Input impedance*	MM	47kΩ, Load-impedance: 0, 100, 220, 330pF
	MC	10, 22, 47, 100, 220, 470, 1kΩ
Balanced input		XLR (MC only) x 1 pair
Max input level		16mV (MC, THD 0.1%, GAIN Low)
Input impedance*	MC	10, 22, 47, 100, 220, 470, 1kΩ
		* switchable from the Settings

### Analog output section

Unbalanced output		RCA pin x 1 pair
Rated output level		2Vrms
Output impedance		63Ω
Balanced output		XLR x 1 pair
Rated output level		4Vrms
Output impedance		63Ω

### General

Operating power		AC 120V, 50/60Hz (US/Canada/Taiwan) AC 230V, 50/60Hz (Europe/Asia)
Power consumption		19W
Overall dimensions (W x H x D)		290 x 84.5 x 252.5 mm / 11.4" x 3.3" x 9.9"
Weight		4.5 kg / 10.0 lbs.

### Included accessories

Power cord x1  
Cushions for foot x3  
Owner's manual x1

## ■ Rear Panel

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