# **BOX**•DESIGN

BY PRO-JECT AUDIO SYSTEMS

# INSTRUCTIONS FOR USE Pro-Ject Tube Box S2

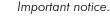
Dear music lover,

thank you for purchasing a Pro-Ject Audio Systems phono amplifier. In order to achieve maximum performance and reliability you should study these instructions for use carefully.



Warning of a hazard for the user, the unit or possible misuse.





#### Safety instructions

AC outlet voltages vary from country to country. Before connecting to the mains, make sure that the voltage in your area meets the voltage requirements printed on the power supply.



The power supply is used to disconnect the unit from the mains. Make sure that the power supply is easily accessible at all times. Never handle the device, the power supply while your hands are wet or damp. Avoid letting liquids enter the device or the power supply. Never place any item containing liquid, such as a flower vase on or near the device. Never spill any liquid on the device or the power supply. Never place any naked flame sources, such as lighted candles on or near the device. The product shall not be used

### Settings

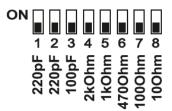
Use the dip switches at the bottom of the unit to set input capacitance and input impedance. Please set both channels equally.

To find out which type your cartridge is please consult the literature accompanying your cartridge. The literature for cartridges should also specify the correct input impedance (low-output MC cartridges) and the correct input capacitance (high-output MC and MM cartridges), into which the cartridge is designed to work. If in doubt please consult your dealer.

in damp or wet locations, next to a bathtub, sink, swimming pool or any other similar conditions.



To alter settings the unit must be disconnected from the power supply and the amplifier.



#### Setting for MM and high output MC cartridges

47pF is basic is the lowest fixed setting. DIP switches 1, 2 and 3 add more capacitance

| input capacitance 147pF | (1-OFF, 2-OFF, 3-ON) |
|-------------------------|----------------------|
| input capacitance 267pF | (1-OFF, 2-ON, 3-OFF) |
| input capacitance 367pF | (1-ON, 2-OFF, 3-ON)  |
| input capacitance 487pF | (1-ON, 2-ON, 3-OFF)  |
| input capacitance 587pF | (1-ON, 2-ON, 3-ON)   |

DIP switches 4-8 are OFF, it represent value 47kohms.

#### Setting for MC cartridges

Input capacitance is irrelevant for low-output MC cartridges

| input impedance 10ohms           | (4-OFF, 5-OFF, 6-OFF, 7-OFF, 8-ON) |
|----------------------------------|------------------------------------|
| input impedance 100ohms          | (4-OFF, 5-OFF, 6-OFF, 7-ON, 8-OFF) |
| input impedance 470ohms          | (4-OFF, 5-OFF, 6-ON, 7-OFF, 8-OFF) |
| input impedance 1kohms           | (4-OFF, 5-ON, 6-OFF, 7-OFF, 8-OFF) |
| input impedance 2kohms           | (4-ON, 5-OFF, 6-OFF, 7-OFF, 8-OFF) |
| (Combinations are also possible) |                                    |

# Examples of typical settings

**Ortofon 2M Red** (MM) input capacitance 147pF, input impedance 47kohms

3-ON rest- OFF

#### Ortofon X5-MC (High-Output MC)

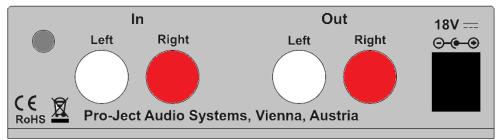
input capacitance 367pF, input impedance 47kohms

1,3-ON rest- OFF

### Ortofon Rondo Red (Low-Output MC)

input impedance 10ohms, Input capacitance is irrelevant for low-output MC cartridges 8-ON rest- OFF

# Connectors



Make all connections whilst the phono amplifier is disconnected from the power supply. Take care to connect the left and right channels correctly. The right channel is usually marked red, the left channel black or white.

Do not connect the phono amplifiers output to a phono input (sometimes labelled **gram**, **disc** or **RIAA**) on the amplifier.

Never use any other power supply than the one supplied with the unit.

# Connecting the record player

Connect the tonearm signal lead to the **In** of the phono amplifier. The earthing wire may be connected to the screw terminal if you encounter hum problems when using the record player.

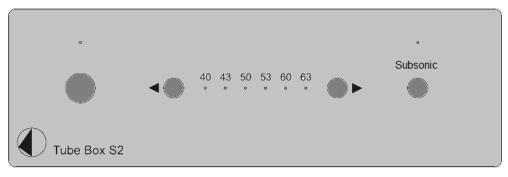
# Connection to the amplifier

Connect the **Out** of the phono amplifier to a line input (such as **AUX**, **CD**, **Tuner**, **Tape** or **Video**) on your amplifier.

### Mains power connection

Connect the low voltage plug from the power supply to the **Power 18V DC** socket of the phono amplifier before connecting the power supply to the mains.

### Front panel controls



#### Stand-By

The button on the left side of a front panel of the unit turns the unit on or returns it to standby mode. The blue LED above the stand-by push button shows that the unit is switched on.

## Gain setting

Buttons marked with ◀and ▶ set gain of the amplifier. Selected value is indicated by LED. Possible settings are 40, 43, 50, 53, 60 and 63dB.

#### Subsonic

The button on the right side of a front panel turns on and off subsonic filter. The blue LED above the button is illuminated when it's on.

### Technical specifications Pro-Ject Tube Box S2

<sup>A</sup> Typical for low output MC cartridges, <sup>B</sup> typical for MM or high output MC cartridges

\* Input capacitance is irrelevant for low-output MC cartridges

| Tubes:<br>Input impedance:                         | 2 x ECC83 (12AX 7A)<br>10ohms, 100ohms, 1kohm, 2kohms <sup>A,</sup>  |
|--|--|
| Input capacitance/impedance:                       | 47pF, 147pF, 267pF, 367pF,487pF and 587pF*/47kohms <sup>B</sup><br>Together with other input impedance settings without any influence! |
| Input gain:  | 40dB,43dB <sup>B</sup> ; 50dB, 53dB and 60dB, 63dB <sup>A</sup>  |
| Noise floor:                                       | 80dB (A weighted) at 40dB input gain   |
|  | 75dB (A weighted) at 50 dB and 63dB input gain   |
| THD:   | <0,02% at 40dB input gain  |
|  | <0,05% at 50dB and 63dB input gain   |
| RIAA-equalisation curve accuracy:                  | 20Hz - 20kHz / max. 0,4dB  |
| Subsonic filter:                                   | at 20Hz with 18dB/octave   |
| Input:   | 1 pair RCA/phono sockets   |
| Line-level output:                                 | 1 pair RCA/phono sockets   |
| Outboard power supply:                             | 18V/1.000mA DC, suitable for your country's mains supply   |
| Power consumption:                                 | 470mA DC, <1W in standby   |
| Dimensions $W \times H \times D$ (D with sockets): | 103 x 73 x 119 (131)mm   |
| Weight:  | 410g without power supply  |

#### Potential incorrect use and fault conditions

No signal on one or both channels:

No connection between player and phono amplifier or amplifier. This could be due to a faulty plug, broken wire or solder joint or simply loose plug/socket connection.

#### Strong hum:

No earth connection from cartridge or arm, or arm cable to phono amplifier, or earth loop.

Output too quiet or too loud, or distorted:

Input gain incorrectly set - input overloading or insufficiently amplified.

Should you encounter a problem which you are not able to alleviate or identify, please contact your dealer for further advice. Only if the problem cannot be resolved there, the unit should be sent to the responsible distributor in your country.

#### Service

Should you encounter a problem which you are not able to alleviate or identify, please contact your dealer for further advice. Only if the problem cannot be resolved there, the unit should be sent to the responsible distributor in your country.

#### Warranty



The manufacturer accepts no responsibility for damage caused by not adhering to these instructions for use. Modification or changes to any part of the product by unauthorized persons release the manufacturer from any liability over and above the lawful rights of the customer.

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