

KARAN

30th Anniversary - Master Collection

PHONO α & PSU α

DUAL MONO BALANCED PHONO PREAMPLIFIER WITH EXTERNAL POWER SUPPLY

We sincerely thank you for selecting a product from **KARAN Acoustics**. We hope you will have many years as a true high-end musical enjoyment from our creation within your audio system. Please read this instruction manual carefully in order to familiarise yourself with our product before use.

About us

KARAN Acoustics has been founded in the summer of **1986** by **Mr. Milan Karan**.

In it's early days, the company was engaged in servicing and maintenance of extremely sophisticated medical and television broadcasting equipment. As often happens, love for music and desire to create first-class audio components prevailed and, at the end of **1989** first designs of **KARAN Acoustics** high-end audio components came into life.

The very first product was a moderately powered ($2 \times 100W$) integrated amplifier while the company continued it's main activities. As customary, once a truly remarkable audio component comes into life, the audio community learns about it and the level of interest grew rapidly. Which, in turn made Milan Karan decide he should dedicate his time and energy in this domain more than anything else.

In recent years, our company has focussed on design and manufacturing of state of the art solid-state (*transistor*) audio electronics. The ultimate was, is and will remain the highest possible proximity to a perfectly reproduced sound of recorded music.

Our products have a unique design and sonic signature, which became a trademark of **KARAN Acoustics**. Uncompromised design, combined with the best passive and active components, as well as the small manufacture scrupulous approach to assembly and quality control, are the unequivocal guarantee of a reference standard sonic result from a finished product.

Main features of KARAN Acoustic designs:

- all our products are hand made with carefully selected electronic components.
- all our products use highest quality, custom made components and carefully designed boards with **75um and 105um copper** on all layers.
- all our products are designed within the realms of solid-state technology, utilizing very fast, state of the art **RET (Ring Emitter Transistor)** bi-polar output devices.
- zero overall feedback.
- all stages of amplification are pure dual mono designs, fully differential (**balanced**), of high transient speed, as well as **DC coupled in class-A** operational mode (**without any capacitors in the audio signal path**).
- power supplies of our products have minimal internal impedance with large capacitance reserves for ample dynamic headroom.
- the electronic boards are decoupled with custom made mechanical parts to achieve zero feedback from unit chassis.
- all our products are built into massive aluminium chassis of original aesthetic and mechanical concept with an easy to recognize illuminated display of the **KARAN Acoustics logo**.
- all our products are equipped with **Critical Mass Systems - CS2M** supporting feet to achieve zero feedback between the components and the supporting surface.

We invite you to experience and critically appraise any of our high-end audio designs and are confident you will be pleased with their sonic performance, reliability and craftsmanship of manufacturing for many years to come.

Respectfully,

Milan Karan
KARAN Acoustics

Unpacking

The packing should contain the following elements:

- Warranty card
- User manual
- allen key **NO.3** for the top cover removal
- **7-pin XLR CARDAS** power supply cable

If any of these items are missing, please contact your **KARAN Acoustics** dealer or national distributor. Unpack the unit carefully and please remember to save all the packaging materials in case you need to transport the unit at a later date. The packaging has been designed to offer the safest possible protection when transporting your product.

Before anything else

Before you begin the installation please verify that your unit has been factory set to the correct voltage/frequency of your location. If not, please **DO NOT** attempt to install the unit and contact your dealer or national distributor for assistance. Kindly note that no **KARAN Acoustics** products have any user adjustable voltage settings and any such changes must be performed by authorized qualified personnel.

Please do not make any connections, insert or remove audio or other connectors, while the unit is connected to the mains supply and switched on, as the high output level may cause damage to your loudspeakers and other equipment.

Positioning

The unit should be set on rigid, vibration-free supporting surface. In order to avoid damage to the top panel, we would advise avoiding placing other equipment on the top of the unit.

It is to be expected that our components feel moderately warm to touch when in use. Therefore, the component should be positioned to allow a generous amount of free air flow and circulation in all directions, particularly in the vicinity of the heat sinks.

Further, please **DO NOT** place your unit:

- in direct sunlight
- near any heat sources
- near, on, or under any other audio components, as the heat it generates may damage other components

Connecting the unit

Please ensure that the specified mains voltage on the back panel of your **KARAN Acoustics** component corresponds with the mains (**line**) voltage of the territory where you intend to use our product!

IMPORTANT !!!

If the unit is not correctly set, DO NOT apply power to the unit but consult your dealer or national distributor. An attempt to use the unit at an incorrect mains (line) supply setting may cause a malfunction, overheating or permanent damage and will invalidate the warranty.

Safe and wise precautions

A good operational practice is to turn **OFF** the equipment before any connections or disconnections are made. Do not under any circumstances connect or disconnect any other equipment while your **KARAN Acoustics** component is switched on and the power is turned **ON**. This could damage both our and other components in question.

Replacing a faulty mains fuse

Always remove all mains (AC) cables from the IEC receptacle on the back of the unit and the mains supply wall or other outlet before attempting to replace a faulty mains or any other fuse !!!

The mains fuse holder is located on back panel of the unit. If, for some reason, the fuse blows, turn the power of the unit off and remove the mains (AC) cable from the IEC receptacle on the unit as well as the wall mains outlet. Open the fuse holder drawer prising it carefully with a small, flat blade screwdriver and replace the faulty fuse with a new one of the same value. ***NEVER replace a faulty fuse with any other values than those printed on the unit and etched into the ends of the fuse itself!***

Safety Notice

Your unit contains no user serviceable parts. The user should not attempt to open the product enclosure, as there are ***potentially dangerous voltages*** present inside the unit and they may cause injury or death. If the unit may have developed a fault, please consult your ***KARAN Acoustics*** dealer or national distributor for assistance.

Running-In Period

For the best sonic results please allow a ***minimum of 100 h*** in active use with power and audio signal flowing through your ***KARAN Acoustics*** product. Both passive and active components need to be conditioned to perform at their best and so does the internal wiring. Once run-in, your product will subsequently reach its optimum sonic performance within ***45-60 minutes*** after being switched on power. We do ***NOT*** recommend any ***KARAN Acoustics*** power amplifiers being permanently switched on power as there is no need for that with regard to the long-term sonic performance.

Cleaning

- When cleaning the unit, use a slightly damp soft cloth.
- Do not apply any corrosive, abrasive agents, spirit or alcohol based cleaning fluids or polishing wax as they will damage or alter the finish irreparably.

Troubleshooting

If steps suggested in this section fail to solve the possible issue, please contact your **KARAN Acoustics** dealer or national distributor for further assistance.

Front panel display does not illuminate when unit power is ON:

- Check if your mains **(AC)** power supply is connected correctly.
- Check if the **ON-OFF** switch on the rear panel is in the **ON** position.
- Check if the fuse on the unit rear panel may have become faulty.

NO sound:

- Check all connections between the source, amplifier and speakers.
- Check that the correct source has been selected on your control unit.
- Check that the unit is connected correctly to the other components of your System.

Technical specifications

The following data were consistently measured on random test objects and are typical of the product in question.

PHONO INPUTS:	6 (3 x Single-Ended RCA + 3 x Balanced XLR)
LINE OUTPUTS:	2 (1 x Single-Ended RCA + 1 x Balanced XLR)
PHONO EQ SETTINGS:	RIAA: +/- 0.1dB EMI: +/- 0.15dB DECCA: +/- 0.15dB COLUMBIA: +/- 0.15dB TELDEC: +/- 0.1dB
OUTPUT IMPEDANCE:	90 Ohm
OUTPUT LEVEL:	1.55 V/RMS (nominal) 18.0 V/RMS (maximum / balanced / 600 Ohm load)
GAIN:	from 48 to 71dB (multiple internal adjustments available, please see GAIN SETTINGS page of this manual)
FREQUENCY RESPONSE:	20 Hz to 20 kHz, +/- 0 dB; <u>(1.5 Hz to 1 MHz, -3 dB)</u>
DISTORTION:	THD 0.003% (Full output, 20Hz to 20kHz) IMD 0.003% (Full output)
SPEED:	Rise and Settling time < 450 ns Slew rate 1.500 V/us (Amplification stages)
SIGNAL TO NOISE RATIO:	> 90 dB (Phono MM), > 81 dB (Phono MC)
AC VOLTAGE:	115 V or 230 V (nominal line voltage)
AC VOLTAGE RANGE:	+/- 10% (from nominal line voltage)
POWER CONSUMPTION:	60 W (maximum)
WARRANTY:	5 years, parts and labor
NET DIMENSIONS:	504 x 141 x 390 mm (whd); 19.8 x 5.6 x 15.3 inch (whd) (Main control unit and Power supply unit)
NET WEIGHT:	15.0 kg / 32.8 lbs - (Main control unit) 17.1 kg / 37.5 lbs - (Power supply unit)
PACKAGE DIMENSIONS:	645 x 255 x 516 mm (whd); 25.5 x 10.2 x 20.4 inch (whd) (Main control unit and Power supply unit)
PACKAGE WEIGHT:	25.0 kg / 54.6 lbs - (Main control unit) 27.0 kg / 59.4 lbs - (Power supply unit)

FRONT PANEL CONTROLS

ROTARY CONTROL LEFT - INPUT and PHASE Selection

(Position 1 is the furthest switch position to the left; counter clockwise)

Position 1: PHONO 1 input is selected in 0 phase (PHONO 1 on display is illuminated)

Position 2: PHONO 1 input is selected in 180 phase (PHONO 1 and REV on display are illuminated)

Position 3: PHONO 2 input is selected in 0 phase (PHONO 2 on display is illuminated)

Position 4: PHONO 2 input is selected in 180 phase (PHONO 2 and REV on display are illuminated)

Position 5: PHONO 3 input is selected in 0 phase (PHONO 3 on display is illuminated)

Position 6: PHONO 3 input is selected in 180 phase (PHONO 3 and REV on display are illuminated)

Before any change of INPUT is attempted, please make sure the MUTE option on this phono preamplifier IS engaged and the accompanying line preamplifier VOLUME control is set to MINIMUM (ZERO). This will avoid switching noises that could potentially endanger other components within your audio system!

When the absolute polarity (PHASE) is to be changed, there is NO need to put the phono preamplifier into its MUTE status or change the setting of the volume control on the accompanying line preamplifier

ROTARY CONTROL RIGHT - MUTE and EQ SETTINGS

(Position 1 is the furthest switch position to the left; counter clockwise)

Position 1: MUTE function is enabled (MUTE segment on display is illuminated and all of the EQ segment lights are switched off)

Position 2: RIAA EQ curve selected (RIAA segment on display is illuminated)

Position 3: EMI EQ curve selected (EMI segment on display is illuminated)

Position 4: DECCA EQ curve selected (DECCA segment on display is illuminated)

Position 5: COLUMBIA EQ curve selected (COL segment on display is illuminated)

Position 6: TELDEC EQ curve selected (TEL segment on display is illuminated)

When different EQ settings are implemented in use, there is NO need to put the phono preamplifier into its MUTE status for as long as the EQ settings changes are applied to the SAME audio (phono) input.

REAR PANEL LAYOUT AND DESCRIPTION

- **DC power connector** is positioned in the centre of the rear panel.

- **Each audio (phono) input has its own GND (ground) terminal** located above the DC power connector and accepts ground wires from up to 3 tonearms that may be used with this preamplifier.

- **This preamplifier has 3 audio (phono) inputs** and each input is available in single-ended (RCA) or balanced (XLR) configuration.

- **XLR input/output connector pin layout:**

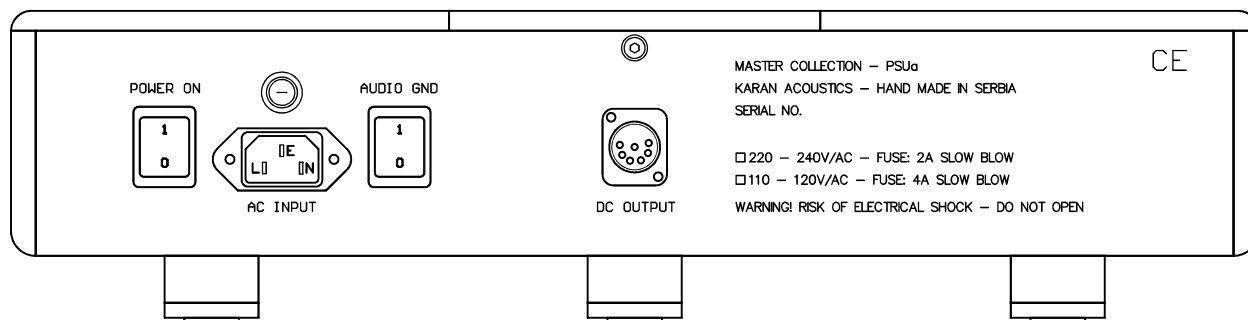
PIN 1 - GND
PIN 2 - positive signal (+)
PIN 3 - negative signal (-)

IMPORTANT!

Before any input or output connection is attempted, please make sure that this preamplifier is COMPLETELY SWITCHED OFF (please switch off on the master power on/off switch at the rear panel of the Power Supply Unit)!

It is NOT possible to use single-ended (RCA) and balanced (XLR) interface simultaneously (at the same time) on any of the individual audio (phono) inputs!

POWER SUPPLY UNIT REAR PANEL



The power supply unit rear panel has the following functions, switches and connections:

- **MASTER POWER switch** with position "0" (*mains power off*) and position "1" (*mains power on*).

- **An IEC 15A receptacle (connector)** for the mains (power) cable of owner's choice. Please consult the drawing showing the positions of the **L-live, N-neutral and E-earth connecting pins for the best sonic results!**

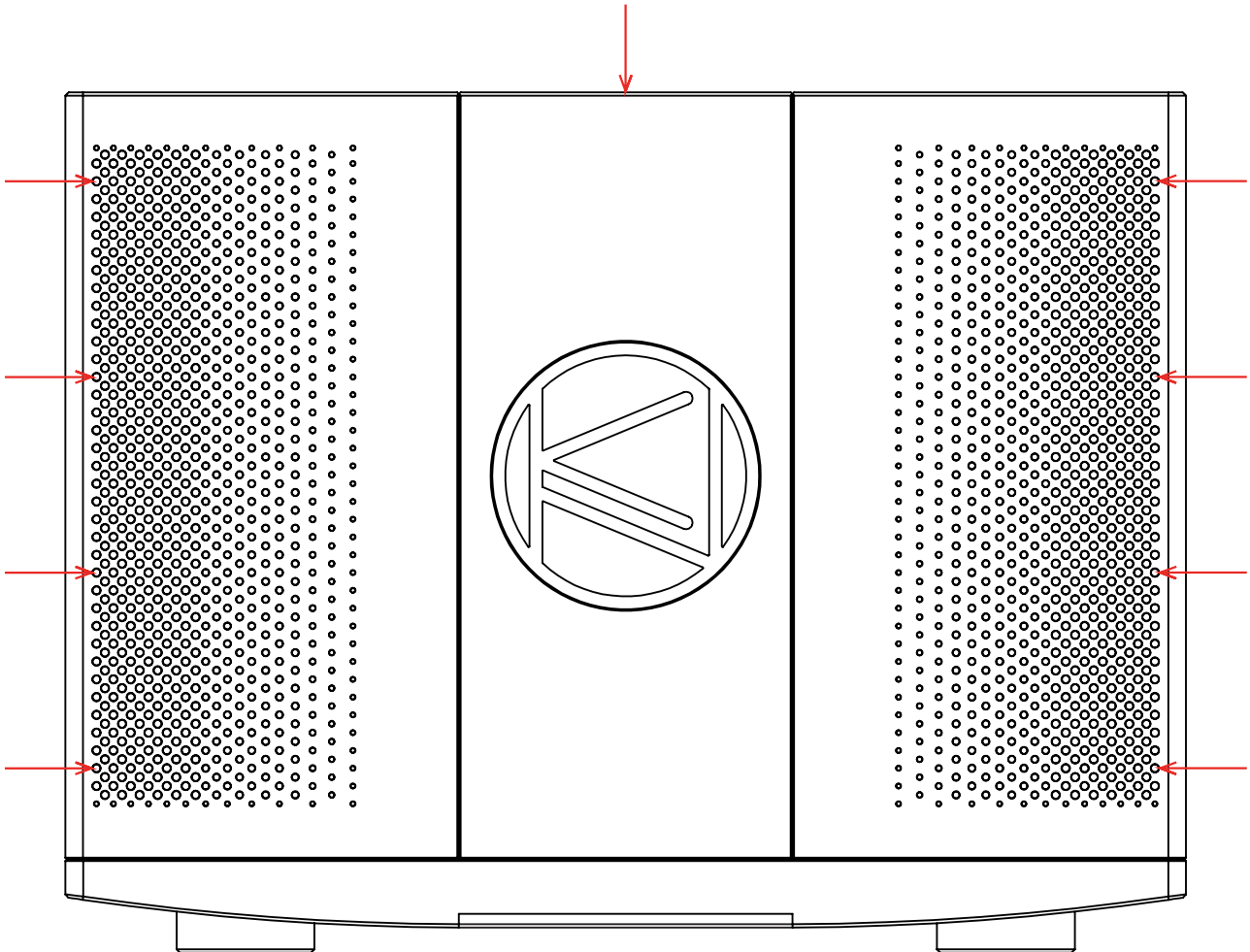
- **AUDIO GND switch** is unique facility allowing the **audio signal ground to be connected or disconnected from the mains supply earth**. In principle, **this switch should be always left in off (0) position for the best sonic results!** Please note that no level of safety is compromised to the slightest when the AUDIO GND switch is left in position off (0).

Only if and when a ground loop or any other interference, noise or hum may be present with the **AUDIO GND switch is in off (0) position, please keep in position on (1)**.

- **XLR (7-pin) connector** for the supplied umbilical cable connecting the power supply unit with the main control unit (provision of DC power to the main control unit circuits).

We recommend each of the two chassis to be positioned and placed on a separate supporting platform or shelf within an equipment stand. This will ensure best sonic results as well as allow for generous air circulation around each chassis.

REMOVAL OF THE TOP COVER



Top cover is fixed to the main chassis by **eight (8) hidden allen screws**. Locate **eight (8)** clearly marked positions with access holes in the top cover. Using the supplied **allen key No.3** reach each screw carefully through the holes in the top cover and release the screws. Using the same allen key release **one (1) remaining**, clearly marked screw in the centre (**middle**) of the back panel.

Once all the screws have been released lift **vertically** the top cover and place it safely away from the main chassis.

Re-fitting of the top cover is an exact opposite process of the one described for the removal. Do not overtighten any of the allen screws in order to preserve the perfect shape of both the allen key end and the recess in the screw head.

OPERATION/PERFORMANCE INTERNAL SETTINGS

INPUT CAPACITANCE SETTINGS

Separate for each audio channel (**L and R**) as well as separate for each audio (**PHONO**) input (**1,2 and3**).

Input capacity	SW1 position			
	1	2	3	4
50*	OFF	OFF	OFF	OFF
100	OFF	OFF	OFF	ON
150	OFF	OFF	ON	OFF
200	OFF	OFF	ON	ON
250	OFF	ON	ON	OFF
300	OFF	ON	ON	ON
350	ON	ON	ON	OFF
400	ON	ON	ON	ON

* - default factory setting is 50pF

IMPORTANT!

Before any adjustments to the internal settings are attempted, please make sure this phono preamplifier is set to MUTE position, the accompanying line preamplifier VOLUME control is set to MINIMUM (ZERO) and the unit is also set to MUTE position for its main outputs (if available)!

INPUT IMPEDANCE (LOADING) SETTINGS

Separate for each audio channel (**L and R**) as well as separate for each audio (**PHONO**) input (**1,2 and3**). If a user selected, custom loading may be selected, those resistors can be installed into the “**snap-in**” pins marked **OPT** and located above the switch **SW2**. (resistor OPT1 is to be installed above position 1 and resistor OPT2 above position 2)

Input load	SW2 position				SW3 position			
	1	2	3	4	1	2	3	4
OPT1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
OPT2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
450	OFF	OFF	ON	ON	ON	ON	ON	ON
500	OFF	OFF	ON	ON	ON	ON	OFF	OFF
525	OFF	OFF	ON	ON	OFF	ON	ON	OFF
550	OFF	OFF	ON	ON	ON	OFF	OFF	ON
590	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
660*	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
667	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
700	OFF	OFF	ON	OFF	OFF	ON	ON	ON
750	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
820	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
1.000	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
1.100	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
1.250	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
1.400	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
2.000	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
2.350	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
2.500	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
3.000	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
3.300	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
4.500	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
5.000	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
47.000	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

* - default factory setting is 660ohm

IMPORTANT!

Before any adjustments to the internal settings are attempted, please make sure this phono preamplifier is set to MUTE position, the accompanying line preamplifier VOLUME control is set to MINIMUM (ZERO) and the unit is also set to MUTE position for its main outputs (if available)!

GAIN SETTINGS

Separate for each audio channel (**L and R**) as well as separate for each audio (**PHONO**) input (**1,2 and3**). In an unlikely case a custom (**higher than highest available, or lower than lowest available**) gain value may be required, custom value resistors can be installed into the “**snap-in**” pins marked **OPT** and located above the switch **SW4 (position 1)**. Please contact your national distributor with your specific gain requirement and a factory selected resistor(s) will be provided accordingly to ascertain correct brand, tolerance and sonic performance is retained.

Gain**	SW4 position				SW5 position			
dB	1	2	3	4	1	2	3	4
OPT	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
48	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
52	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
64	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
67*	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
69	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
70	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
71	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

* - default factory setting is 67dB

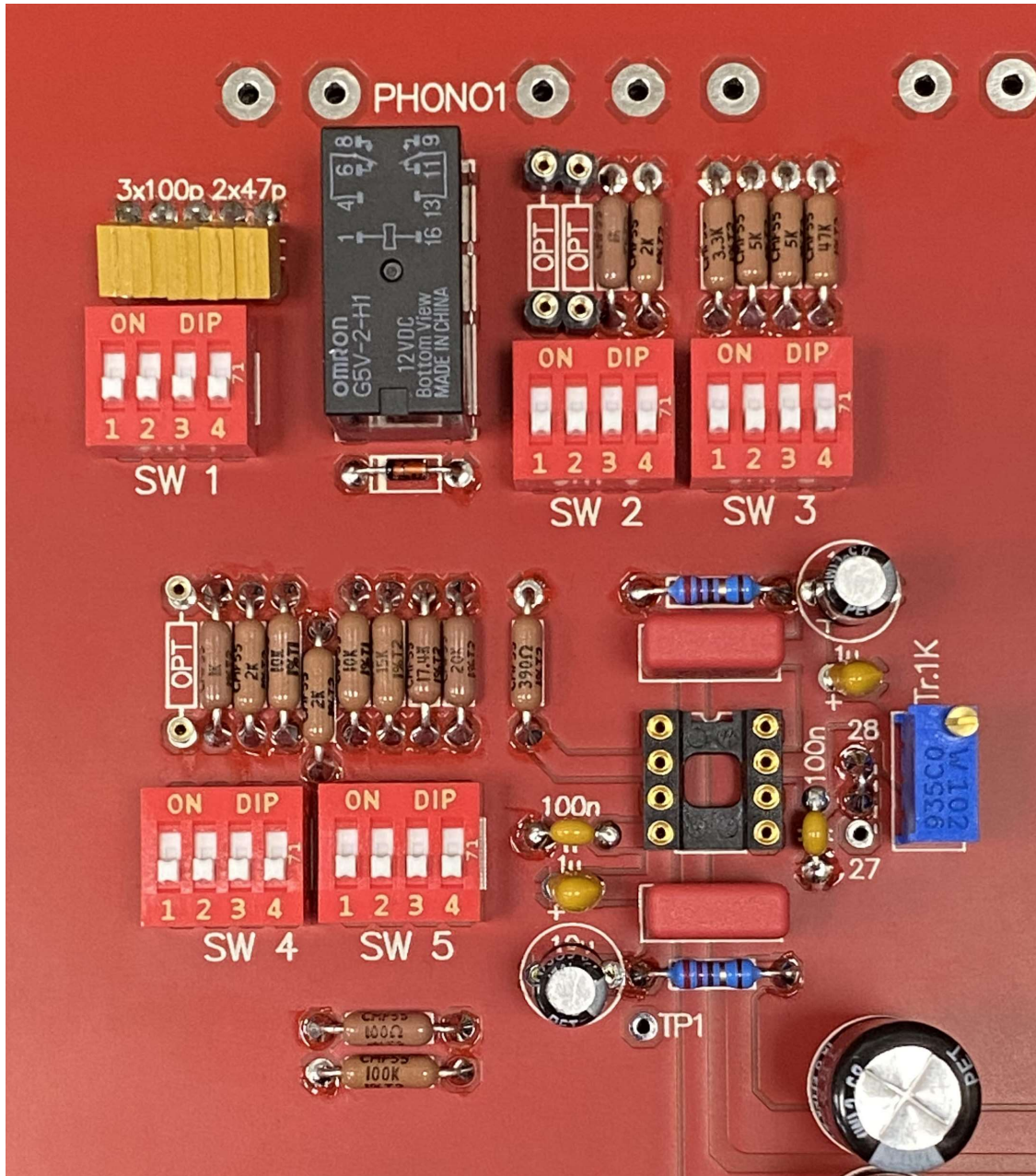
IMPORTANT!

Before any adjustments to the gain settings are attempted, please make sure that this phono preamplifier is COMPLETELY SWITCHED OFF (please switch of the master power on/off switch at the rear panel of the Power Supply Unit!!!

DO NOT switch the preamplifier back on power on the Power Supply Unit unless AT LEAST ONE of the SW4 and SW5 switches are in ON position!!! At least ONE position (setting) except the OPT (when there no custom value resistor instaled) MUST be in ON position at all times!

PHOTO OF INPUT CIRCUIT

Photo of **PHONO 1** input circuit. Layout is the same for each audio channel (**L and R**) and same for each audio (**PHONO**) input (**1,2 and3**).



LP Record absolute polarity (phase) and EQ settings list for KARAN Acoustics - Master Collection phono preamplifiers.

RECORD LABEL	EQ CURVE	PHASE
A&M	COLUMBIA	180
ABC RECORDS	DECCA	180
ANGEL	EMI	180
ARCHIV	DECCA	0
ARCHIV	TELDEC	180
ARISTA	COLUMBIA	180
ARLEQUIN	TELDEC	180
ATLANTIC - USA	COLUMBIA	180
ATLANTIC - JAPAN	EMI	180
AUDIO FIDELITY - USA	RIAA	180
BLUENOTE - USA	EMI	180
BLUENOTE - JAPAN	DECCA	180
CALIOPE	EMI	180
CANYON	TELDEC	180
CAPITOL	EMI	180
CASTLE	DECCA	180
CBS	COLUMBIA	180
CHANDOS	DECCA	180
COLUMBIA	COLUMBIA	180
DECCA	DECCA	180
DENON	RIAA	180
DEUTSCHE GRAMM.	TELDEC	180
ECM	RIAA	180
ELEKTRA	RIAA	180
EMI	EMI	180
ENYA	TELDEC	180
EPIC	EMI	180
ERATO	RIAA	180
FONTANA	RIAA	180
FORMA	RIAA	180
HARMONIA MUNDI	RIAA	0
HARMONIA MUNDI - JPN	DECCA	180
HELIODOR	TELDEC	180
HUNGAROTON	TELDEC	180
IMPULSE	EMI	180
ISLAND	EMI	180
KLAVIER	RIAA	180

RECORD LABEL	EQ CURVE	PHASE
LEGACY	EMI	180
LONDON	DECCA	180
MCA	DECCA	180
MELODIYA	TELDEC	180
MERCURY	EMI	180
METRONOME	EMI	180
MGM	EMI	180
MOTOWN	DECCA	180
OPUS	EMI	180
PHILIPS	RIAA	0
POLYDOR	TELDEC	180
RCA	RIAA	180
REPRISE	COLUMBIA	180
ROULETTE	EMI	180
SHEFFIELD	EMI	180
SUPRAPHONE	TELDEC	180
TAMLA	RIAA	180
TELARC	RIAA	180
TELEFUNKEN	TELDEC	180
TELEFUNKEN - JAPAN	DECCA	180
THREE BLIND MICE	RIAA/EMI	180
UMBRELLA	RIAA	180
UNITED ARTISTS REC.	DECCA	180
VERVE	COLUMBIA	180
VICTOR	EMI	180
VIRGIN	DECCA	180
WARNER BROS	RIAA/EMI	180

(The above chart is based on information accured from the available literature and on the back of extensive listening tests. As some 'deviations' from the above chosen settings may always be possible, please do feel free to explore and experiment both the absolute polarity (phase) and EQ settings according to the genre of music and your personal preferences)