

## KM-7 DESIGN CONFIGURATION

Modified from the prestigious Matisse Reference Preamplifier circuit with a unique phono design to accommodate extremely low output MC cartridge to achieve high gain, low impedance and a wide and linear frequency response.

### The phono stage

The original Matisse circuit was modified by adding an interchangeable Ortofon T-3000 silver-wired (or any) step-up transformer at the forefront of the phono circuit to accommodate the modern low-output MC cartridge and then followed by a dual-gain stage high-mu Telefunken ECC83 and GEC A2900 with an RIAA compensation circuit.

### The line stage

The line stage is a traditional 2 tiers amplification circuit, firstly by a Telephone ECC83 and then by a GEC A2900.

At the second tier of amplification, a damping control circuit is added to enable the preamplifier to accommodate different characteristics and requirements of a variety of power amplifiers and loudspeakers.

### Design to avoid interference

To avoid interference and to achieve the best 'signal-to-noise' ratios, the amplifier and the power supply are separately housed into two different chassis.

The amplification circuit and its parts are sealed within a 6-facet chassis built with a combination of 0.8 mm high-purity copper and 6 mm aluminium alloy, the effect of which is to seal off all kinds of unwanted radio frequencies which might find their ways into the amplification circuit.

The 4 valves are mounted onto 4 Japanese high-quality gold plated ceramic socket bases with gold-plated pin-connectors and the latter are themselves mounted onto 2 heavy weighed high-purity copper dampers with a 3 micron gold-plate layer.

All signal paths are connected through WBT 99.99% purity silver single-core wires with Teflon sheathing.

## Parts

- (a) Signal path resistors – Holco metal film resistors.
- (b) Non-signal path resistors – Holco metal film resistors.
- (c) Power resistors – RMG carton resistors.
- (d) Input attenuations – 2 mono ladder-type American Shallco 31-step switches made to specifications with 1% tolerance Holo metal film resistors.
- (e) Input selections and damping controls – 6 positions stereo switches made by Elma of Switzerland. All turning knobs are of aluminium alloy and made by Sato of Japan.

## Specifications

### Phono circuit

Gain - MC 78 dB (through Ortofon T-3000), 3 - 5 Ohm (mc transformer switchable)

MM 58 dB, output impedance 47KOhm

Signal to noise ratio – Better than 80 dB

### Line circuit

Gain - Over 32 dB at 1mv

Harmonic Distortion – Less than 0.02% at 1KHz

Frequency response – 10Hz – 100KHz (variation within 0.1 dB)