

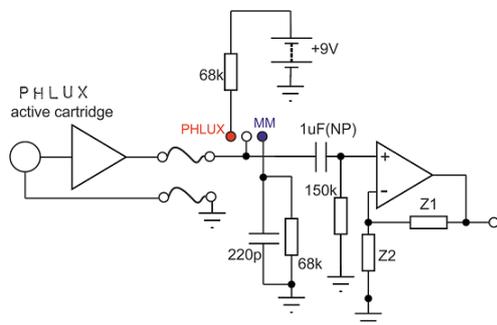
# PHLUX - II active phono cartridge

## Introduction

The Phædrus Audio PHLUX active phono cartridges represent a new development in phono cartridge technology in which a moving-magnet motor system is buffered by a miniature impedance-converter. PHLUX-II is the second-generation product and replaces the original PHLUX.

## Preamplifier considerations

The miniature impedance-converter which buffers the moving-magnet motor is supplied power via the signal wires. By this means, the PHLUX-II may be fitted to any turntable and arm combination without modifications to the wiring. A suitable preamplifier circuit to support the PHLUX II cartridge (or a standard MM cartridge) is illustrated below.



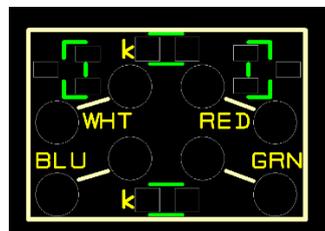
## Fitting the PHLUX II cartridge

The PHLUX II cartridge has a standard 1/2 inch mount. The body is tapped M2.5, so no nuts are necessary. This makes fitting the cartridge very simple. Suitable, non-ferrous bolts are supplied with the cartridge and are used to fix the PHLUX-II into its shipping box. Loosen them and remove the cartridge and fit into the tonearm or headshell. Be careful not to overtighten these bolts.

For alignment purposes, the stylus is positioned 4mm behind the front face of the cartridge body.

## Wiring

Connect the tonearm flying leads to the outer pins of the rear PHLUX-II PCB according to the colours indicated on the PCB silkscreen (illustrated below).



Note that, in some models, the LEDs will light at the top and bottom of the rear of the PHLUX-II once the phantom power is supplied. It is recommended that power be left applied at all times. The power consumption is less than 2milliwatts.

## Stylus guard

The PHLUX II is supplied with a stylus guard for shipping and installation. *It is not necessary to refit this guard once the cartridge has been installed in the tonearm or headshell.*

## Specification Phædrus Audio PHLUX-II

- Output voltage @ 1kHz, 5cm/sec.: 3.5mV
- Channel balance: Within 2dB
- Channel separation @ 1kHz: >26dB
- Frequency response: ±1dB 40Hz to 15kHz
- Load resistance: >100kΩ
- Load capacitance: Minimal for best stability margin
- Stylus: See stylus table.
- Tracking force range: 1.5 to 2.5g (15 to 25mN)
- Tracking force recommended: 2g (20mN)
- Compliance: 12.5µm/mN
- Mount: 1/2 inch; body tapped M2.5
- Vertical tracking angle: 20°
- Output impedance: 300Ω
- Weight: 8.5g (8g effective mass)



*Phædrus Audio reserves the right to alter this specification without notice.*



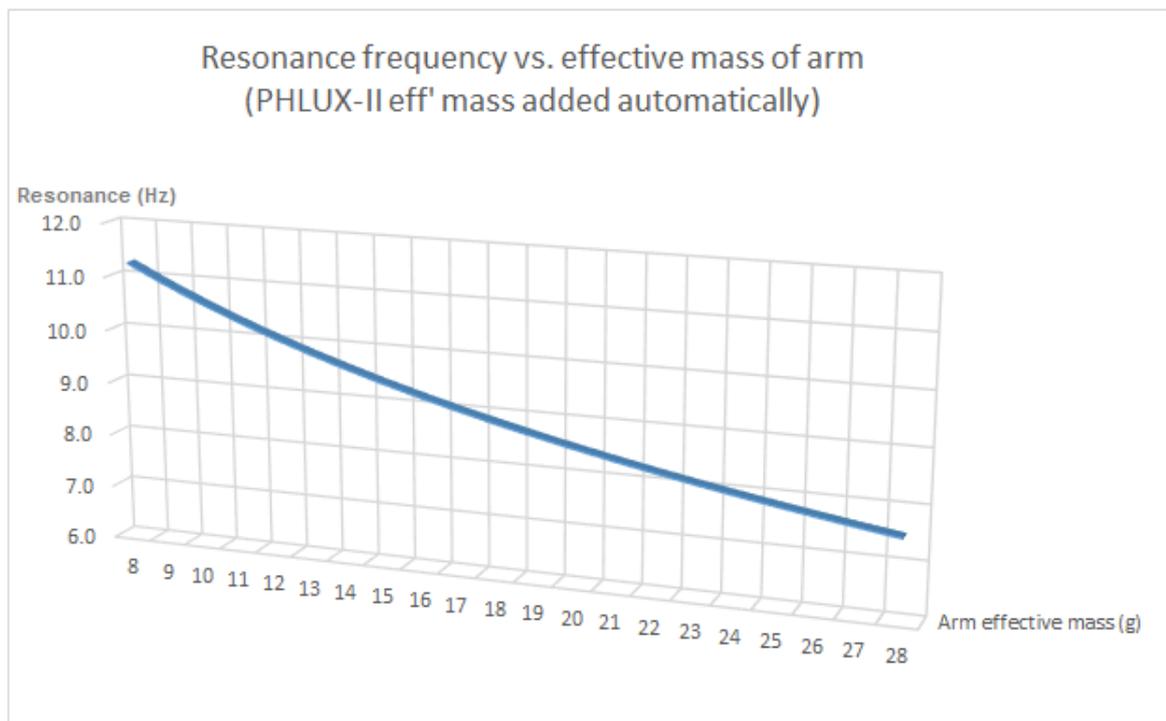
## Tonearm matching

The PHLUX-II has a compliance of  $12.5\mu(\text{cm}/\text{dyne})$  which one should express today as  $12.5\mu\text{m}/\text{mN}$ . This is a mid-range compliance value which suits a very wide range of tonearms as the graph below illustrates.

A tonearm whose effective mass is rated at 10 grams or below is considered low mass (for

example, early SME's). A tonearm whose effective mass is rated between 11 and 25 grams is considered moderate mass (for example SME IV, V, VI, Technics SL-1200). Arms above 25 grams of mass are considered high mass.

The PHLUX-II will suit almost any tonearm and will not move the resonance out of the "magic" 7 - 12Hz range.



## Stylus types and dimensions

- PHLUX-II - 0.0004" x 0.0007" ( $10\mu\text{m} \times 18\mu\text{m}$ ) bonded round-shank, elliptical
- PHLUX-II-NE - 0.0003 x 0.0007" ( $7.5\mu\text{m} \times 18\mu\text{m}$ ) nude, round-shank, elliptical
- PHLUX-II-L - 0.00012 x 0.0022" ( $3\mu\text{m} \times 55\mu\text{m}$ ) nude, square-shank, line-contact
- PHLUX-II-SH - 0.00026 x 0.0027" ( $6.5\mu\text{m} \times 68\mu\text{m}$ ) nude, square-shank, Shibata stylus

This range of modern stylus types is also complemented with the following types for historic recordings:

- PHLUX-78 - 0.003" ( $75\mu\text{m}$ ) bonded round-shank, conical stylus, for shellac records
- PHLUX-FEATHER - 0.0006" ( $15\mu\text{m}$ ) bonded, conical stylus, for mono and archive work