Turntable speed controller Goliath. - Replacement for Linn Valhalla / Hercules / Lingo / Mose etc.

You may be interested to note that I have developed a drop-in replacement for the Linn Valhalla board that overcomes some of its shortcomings and offers a modern update of this classic design. The unit is just undergoing final testing and will be available in December 2019. It will probably be offered as a self-build kit and finished boards as well

- Electronic switching between 33.3 rpm and 45 rpm (no more pulleys)
- Highly accurate sine wave frequency synthesis generated for 50Hz or 67.5Hz controlled to 0.001 Hz
- Class A motor drive circuitry.
- Optional optical platter feedback sensor to lock platter rotation at exactly the right speed. This runs a PID controller loop reach maximum speed quickly then keeps rotation speed locked rock solid. +/ 0.003 Hz.
- Control over motor parameters such as frequencies, phase angle, voltage amplitude via a serial interface. Adjusting these values enables smoothest motor operation with minimum motor noise and vibration. Values may be written to EEPROM once optimum setup achieved. The boards will ship with suggested default values.
- Configurable voltages and phase angle for each motor phase. May also be set to reduce drive voltage once full speed reached to reduce noise and vibration.
- Configurable Auto rotation on application of main power
- Configurable auto sleep
- Windows application for tuning the PID parameters.
- Optional 128x32 OLED display to indicate exact platter rotation speed
- Fits on original Linn Valhalla mounting.
- Can connect to original Linn power switches. Speed change controlled by holding power switch for four seconds. (Visual speed change flash provided)
- Less heat generated than original Valhalla due to redesigned PSU section (no more burned out resistors).
- May be used for other turntables that use a two phase synchronous motor such as Airpax, Premotec, Philips e.g. Rega, Linn, Manticore, ProJect etc. (50/60Hz synchronous motors 6v -110v rms @ 10mA per phase)
- Stacking of two boards for 3 & 4 phase motors.
- PCB Can be housed in a separate box with separate enclosures for display & IR sensor if required.
- Uses standard commonly available low cost parts such as Arduino, AD1933 DDS generators, common transistors.
- Full 2 layer PCB available with kit of parts.