## **TUBE POWER SUPPLY**

## **BRINKMANN**

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### Some operating instructions

the tube supply is especially made for the motors of our turntables LaGRANGE and BALANCE, it fits their demands of start up, drive and stand-by current perfectly. It delivers a stabilized output voltage of 24..25VDC, the output is short circuit proof. The output voltage shuts down when the current exceeds 150mA, but as the triodes are capable of a constant current of 200mA, there is no damage to the tubes possible.

The tube supply utilizes two high current low resistance triodes (EC360), two full wave rectifiers (6BW4) and a miniature double triode as a regulator (6111WA). All tubes are made for long life, the triodes are good for 10000 hours under full load (which is by far not needed here).

Secondary AC voltage is rectified by the two full wave rectifiers and directly fed to one of the current triodes. Under control of the miniature double triode this current triode charges a high capacitance condenser to a smooth and quite clean voltage of about 80VDC. The output voltage of 25VDC is stabilized by the second current triode and a temperature stabilized voltage reference.

For start up, the motor of the turntable needs about 150mA, you may help the platter spinning by hand and by that reduce the start up current.

During operation the current goes down to about 60mA. When switched to stop, the supply reduces the output current to about 30mA, just enough, to hold the motor electronics under current for the next start. The tube supply may remain in this stand-by state (motor "stop") for a long time, but to increase the tubes life, please switch off the mains switch when the supply is not used for some time (over night).

The motor is connected to the 3-pole connector at the back panel.

The heat of the big tubes may exceed 120°C, please do not touch the tubes during operation.

The tube supply should have its solid granite support underneath, as the heat of the tubes could cause some varition in the colour of a laquered surface of a sideboard.

#### some technical details:

power consumption : about 120 Watts,

output voltage : stablilized to 24 ... 25VDC output current : 0...150mA

life time: better than 10,000 hours

Dimensions:  $W \times H$  (with stone)  $\times D$  180  $\times 65$  (100)  $\times 310$  mm

Weight with granite plate: ca. 12 kg

# **BRINKMANN**

 Im Himmelreich 13
 tel: 0049 8380 981195

 D-88147 Achberg
 fax: 0049 8380 981233

 Germany
 mail: info@brinkmann-audio.com