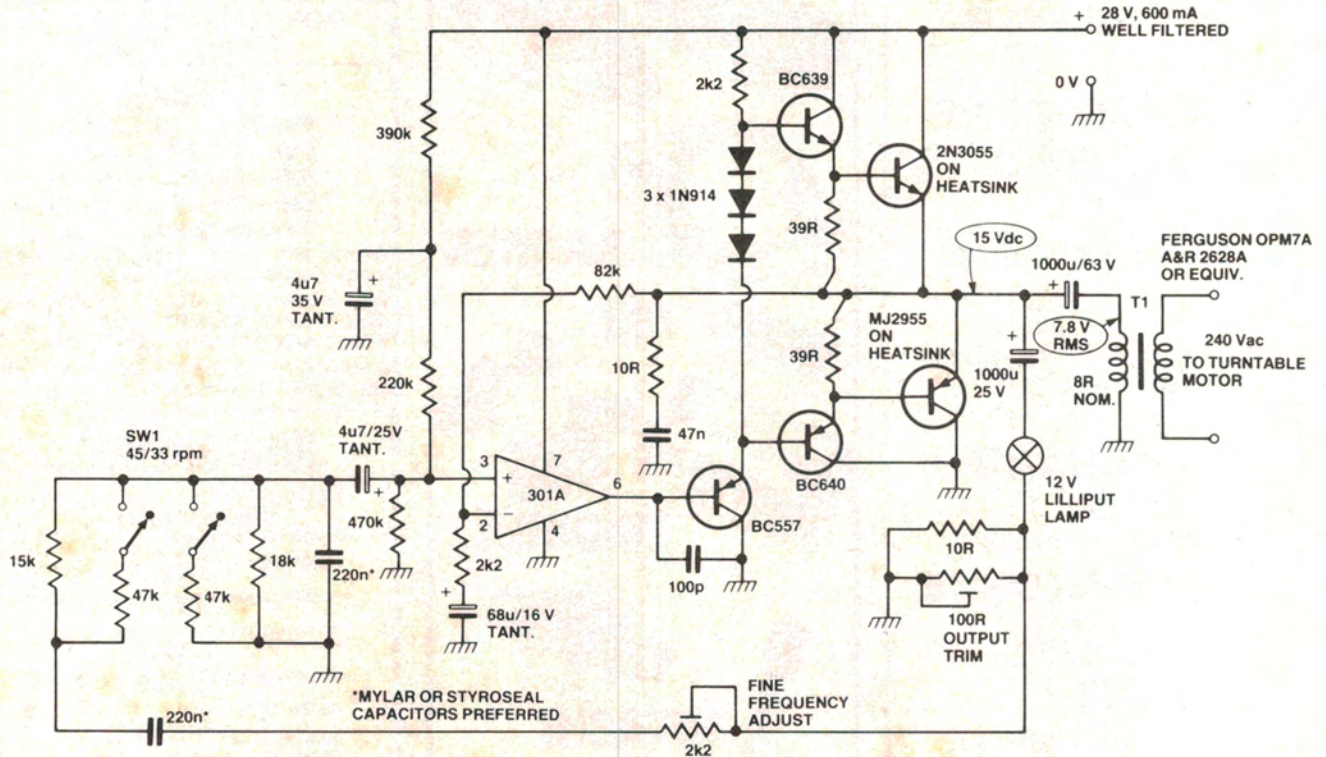


Ideas for Experimenters

These pages are intended primarily as a source of ideas. As far as reasonably possible all material has been checked for feasibility, component availability etc, but the circuits have not necessarily been built and tested in our laboratory. Because of the nature of the information in this section we cannot enter into any correspondence about any of the circuits, nor can we produce constructional details.



Turntable speed controller

Philip Allison of Summer Hill NSW submitted this useful idea.

This device was designed to vary the supply frequency to the motor of a synchronous turntable, enabling correction of the 3-5% excess speed found with the unit. In addition, provision has been made for 45 rpm drive without the tedium of belt changing — a feature useful to owners of expensive single-speed turntables like the Linn Sondek. Other advantages of this circuit include a steady voltage output and low distortion compared to the mains. Note that one can also slow down those pop recordings that appear to be recorded at slightly high speed, producing a more 'natural' sound (maybe the apparent fast speed is deliberate? — Ed.)

The circuit is based around the ETI-452 Guitar Practice Amp power output stage (this appeared in the January 1980 edition but the ETI-453 General Purpose Amp Module, April '80,

uses the same circuit — Ed.) I have made some modifications and additions, as shown in the circuit diagram, converting it to a power Wien Bridge oscillator using a 12 V lilliput bezel lamp as the stabilising element. I used a 2N3055 and MJ2955 combination for the output stage (though this is unnecessary — Ed.). The output transformer came from a discarded valve hi-fi amp, but others with a 30:1 ratio and at least a 12 W rating should be fine. A power transformer is not recommended here as I found they had poor efficiency.

The 100 ohm trimpot is adjusted to give 240 Vac with the turntable connected. A strobe disc allows setting the correct speed (using the 2k trimpot). Component tolerances may necessitate small adjustments to be made to the Wien Bridge capacitors or resistors to give the desired frequency range. Extra resistors are switched in circuit to

increase the frequency for 45 rpm operation.

Any ideas?

Have you had a bright idea lately, or discovered an interesting circuit modification? We are always looking for items for these pages so naturally, we'd like to hear from you.

We pay between \$5 and \$10 per item — depending on how much work we have to do on it before we publish it.

The sort of items we are seeking, and the ones which other readers would like to see, are novel applications of existing devices, new ways of tackling old problems, hints and tips.