

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.

ERRATA

A rather obvious, but potentially dangerous error occurred in the circuit on the top left of page 60 ('Power Monitor') in the March issue. It shows the mains active input connected to the earth at the output. The mains active input should instead go to the fuse. Correct your copy now. Correction slips were inserted in the majority of copies distributed.

Simple anemometer

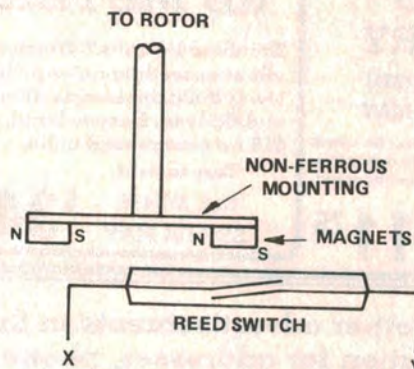
Having managed to pronounce the heading (an-ee-mom-meter), no doubt you're wondering what it is. It's a wind speed indicator.

The idea comes from 14-year-old **Wayne Brown of Dromana in Victoria**. Make up an anemometer rotor and attach two small magnets to a mounting on the bottom. A reed switch is then placed under this assembly such that the two magnets operate the reed switch twice per revolution of the rotor shaft.

The reed switch gates on and off a 555, the output of which is rectified and integrated to drive a meter (M1). You can use a meter having a sensitivity up to 150 microamps, but the resistor in series with the 1N914 will have to be selected to suit.

To calibrate it, you will need:
 one daring passenger
 one car
 plenty of road
 no radar traps.

With the anemometer's rotor held outside the vehicle (clamped to a roof rack, for example), drive at a variety of speeds for a short distance at each speed. The passenger can then mark down the meter reading against the car's speed so that the meter scale can be later marked with the calibrations.



The ETI-480 amp module — barefoot and bridged.

For many years now, constructors have built the ever-reliable ETI-480 power amp and many people in the industry have used this design in many different ways. Some other variations that have been tried from time to time are listed in the table here, compiled by **G.T. Dicker of Parkholme, S.A.**

One of the most useful ways to utilise the ETI-480 is by bridging the output stage for increased power into higher load impedances.

This may be done with the 2N3055/2N2955 output stage combination or by utilising the MJ802/MJ4502 or

MJ15004/MJ15003 type transistors in their place.

To bridge two modules, one must first get the modules working to specification, then add a 10k, ½W resistor from the junction of R8 and R9 on module 2 to the output stage, junction of R22 and R21 on module 1. Audio input is then provided to module 1 and output is taken from module 1 and 2 output stages. The input to module 2 may optionally be shorted but in practice makes little difference.

If you feel some of the options tabled look attractive wait and see what will be done with the ETI 466!

ETI-480 TABLE OF OUTPUT POWER FOR VARIOUS CONFIGURATIONS

Supply Voltage	3055/2955	MJ802/4502	MJ15003/MJ15004
±30 Vdc single-ended	35 W - 8 ohm 65 W - 4 ohm	35 W - 8 ohm 65 W - 4 ohm	35 W - 8 ohm 65 W - 4 ohm 100 W - 2 ohm
±45 Vdc single-ended	65 W - 8 ohm	100 W - 8 ohm 150 W - 4 ohm*	100 W - 8 ohm 190 W - 4 ohm 300 W - 2 ohm*
±30 Vdc bridge	150 W - 8 ohm* 75 W - 16 ohm	150 W - 8 ohm 75 W - 4 ohm	150 W - 8 ohm 190 W - 4 ohm
±45 Vdc	100 W - 32 ohm	190 W - 16 ohm	195 W - 16 ohm 355 W - 8 ohm*

*NOTES: Not recommended, unless for home hi-fi.

At output powers above 100 W RMS extreme heatsinking and/or forced air cooling is recommended. Not all configurations are necessarily safe for continuous output power operation.

When MJ802/MJ4502 or MJ15003/MJ15004 are used supply fuses F1, F2 must be changed to 5 amps.

