

mfa Power Module

The module is designed to be powered from any standard lab pack and is capable of accepting an input voltage in the range 9-20 volts either AC or DC. If a voltage less than 9 volts is fed to the unit, the output waveform will be spiky rather than smooth and this could cause damage to electronic circuitry being supplied by the module. We recommend that 12 volts AC be used as the input voltage, as this gives the best balance between heatsink dissipation and waveform smoothness although any voltage in the prescribed range will operate the unit in a satisfactory manner.

The input voltage should be connected to the Power Module via the two sockets, which are colour coded YELLOW. The supply may be connected either way round to these sockets. Output of the module is monitored via a red led near to the red output socket. Should this led **not** glow then please check that:

- * The module is receiving power from the lab pack.
- * The output of the module is not short circuited. The module is designed to withstand short-circuits and will automatically reset within a few seconds of the fault being removed. It is also protected, to some extent, against input voltages being applied to the output terminals, although this is a potentially damaging situation and should be avoided.

Use with mfa Modules

The unit is designed to connect directly to an mfa board using the mfa clip system. The Power Module should be firmly pushed into the top clips of the mfa board so that the arrows printed on the Power Module are pointing towards the mfa board. When the Power Module is correctly fitted, the printing on it will be 'the right way up'.

N.B. The red and black output sockets on the board are not used when using the board to power mfa modules, except for the possibility of powering an external circuit switched by the Decisions Module relay or powering of the Movement Module.

Care should be taken to ensure that the total current drawn does not exceed 1 amp or the module will automatically shut down until the load is removed.

Using with other Electronic Kits or Systems

The board may also be used as an electronics power supply to power transistors, CMOS, TTL and linear ICs. It is also suitable for powering other commercial electronics teaching systems such as Locktronics, Alpha, Omega, Kent etc. The red and black output sockets are provided for this purpose.

Using for 'Bulb and Switch' Work

The Power Module may be used for teaching basic electricity. We recommend the use of 6V, 60mA MES lamps. These will be run at slightly below recommended voltage. This, and the lack of switch-on surge, greatly extends the life of the lamps. The lamps are also protected against the lab pack voltage being turned up too high - the module will absorb the extra power.