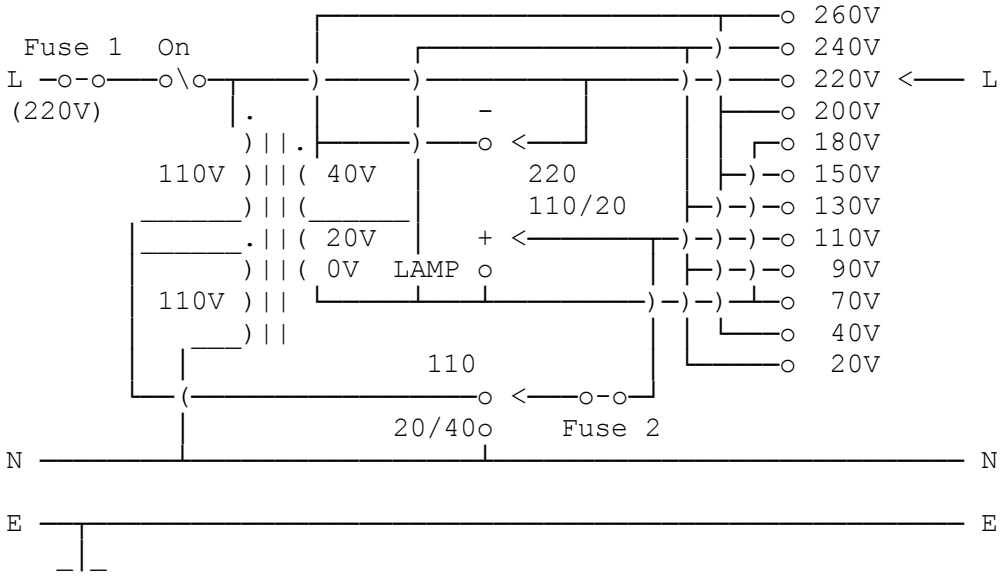
70-260V Mains Auto Transformer

By G8MNY (Updated Dec 12)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)
This is a poor variac substitute, but made with a suitable transformer & large wafer switch, it can provide useful mains test voltages.

Voltages shown are for simplicity of calculation only!

CIRCUIT



Here the 110/220V switching & phase reverse switching (+ or -) of the 40V secondary is not shown. The two lower secondary voltages of 20 & 40V are available with this complex switching.
If a good 12 position multi wafer switch is not available, then a plug board may be more suitable.

SAFETY

To stop switch arcing or shocks on a plug board, only change voltage with the mains OFF! The inclusion of a 20V lamp (not accessible!) is useful to remind you!

All housing & wiring etc. should be up to mains standards & also let heat out.

The power rating of the transformer will set the max current at a voltage...

VOLTS	MAX LOAD CURRENT	e.g. 80W Transformer
260	Full Secondary	2A
240	1.5 x Secondary	3A
220	Infinite	Fuse Limit
200	1.5 x Secondary	3A
180	Full Secondary	2A
150	2x Transformer rating	0.6A (220/80 x2)
130	2x Transformer rating	0.6A
110	2x Transformer rating	0.6A
90	2x Transformer rating	0.6A
70	2x Transformer rating	0.6A
40	Full Secondary	2A
20	Full Secondary	3A

So for an 80W transformer Fuse 1 can be 2 or 3A, & Fuse 2 a 1A.

See also my tech bul on "Maplin Mains Meter 2000MU-UK","Mains Power Protection" & "Saveplug Motor Economiser".

Why don't U send an interesting bul?

73 De John, G8MNY @ GB7CIP