In thanking you for your help on our past season, we hope you will keep FAST FORWARD in mind and we would appreciate any support that you could give us in the line of news, available films or videotapes and people we might contact in the communications field. It would also help us immensely if you could pass along our name and address to anyone you may feel would like to contact us.

Thanks again, and we hope to hear from you soon.

For the FAST FORWARD crew,

Best wishes,

Jim St. Lawrence
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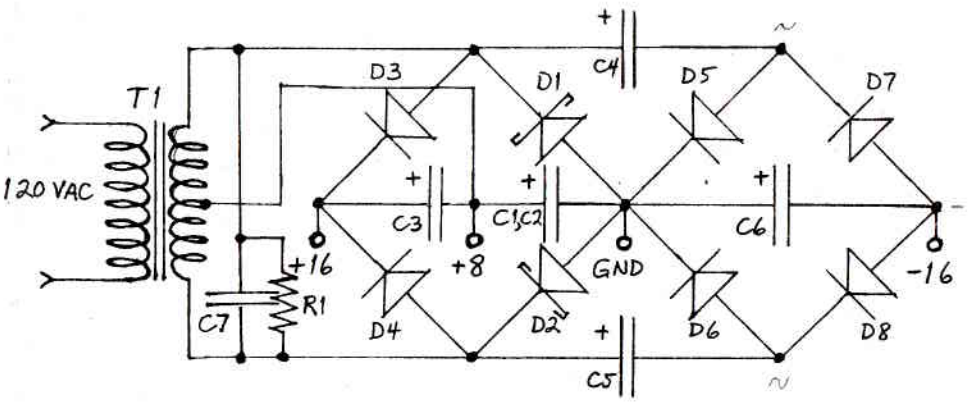
Building an S-100 Power Supply from Off-the-Shelf Components

One of the problems usually encountered in building a multiple-voltage power supply is that most off-the-shelf transformers provide only one or two output voltages. Since transformers are expensive, one is not inclined to use two or more of them unless it is absolutely necessary. This article describes an S-100 power supply designed around a single off-the-shelf transformer and a bevy of surplus electrolytic capacitors. The circuit uses full-wave voltage tripling to obtain nominal outputs of +8 volts @15 amps, +16 volts @ 3 amps, and -16 volts @ 3 amps. A similar approach could, of course, be used for other voltages and/or currents.

The heart of the circuit is a conventional full-wave centre-tapped rectifier configuration (D1, D2, C1, C2) with a slight twist: the polarities are such that the centre-tap becomes the +8-volt output instead of the common. The negative side of C1 and C2 are grounded. A second full-wave centre-tapped rectifier circuit of the opposite polarity (D3, D4, C3) delivers +8 volts with respect to the centre-tap, for a total of +16 volts with respect to ground. The -16 volt output is obtained by using a voltage tripler (D1, D2, D5, D6, D7, D8, C1, C2, C4, C5, C6) to give -24 volts with respect to the centre-tap, or -16 volts with respect to ground.

Bridge rectifiers (2 of them) could be used in place of the eight diodes, but Shottky diodes provide an extra half volt of output. The transformer is rated 12.6 VCT RMS, which gives approximately 8.1 volts peak output with ordinary diodes. Since the ripple and secondary losses at full load are about half a volt each, Shottky diodes are needed to keep the output above 7.5 volts under load. Note that transient protection (R1, C7) is mandatory with Shottky diodes because of their fast switching, their vulnerability to damage by reverse voltage spikes, and their price - about $7.00 a crack! (Guess who learned the hard way.)

by Gifford Toole



Parts List

C1,C2	320000 uF 10 V (2-160000 uF caps in parallel)
C3-C6	24000 uF 20 V
C7	.33 uF 50 V
D1,D2	25 A 20 V Shottky diodes (TRW SD41, Motorola MBR2520)
D3-D8	3 A 50 V diodes (1N5400 or equivalent)
R1	330 ohm 0.5 watt resistor
T1	12.6 VCT 20 A RMS transformer (Hammond 167V12)

Text Editors

by Ross Cooling

A text editor is a software program that is used for inputting ASCII information into the computers memory and is able to easily make modifications to the information once it's in memory. It is this latter part that truly seperates it from a simple monitor command to input ASCII information.