

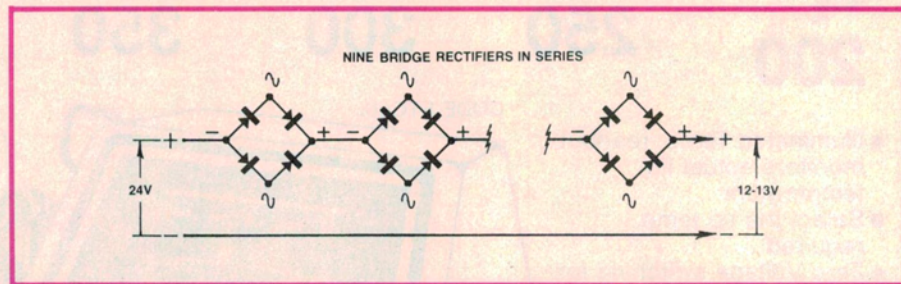
# Circuit & Design Ideas

Interesting circuit ideas from readers and technical literature. While the material has been checked for feasibility, the circuits have not been built and tested by us. As a consequence, we cannot accept responsibility, enter into correspondence or provide constructional details.

## Crude but simple voltage reducer

Most trucks and buses use a 24V electrical system and this can pose problems when hooking up 12V sound equipment and 2-way radio gear. A simple answer is to utilise the forward voltage drop in the diode junctions of a number of bridge rectifiers to derive a 12V rail.

The trick is to connect nine bridge rectifiers in series as shown in the accompanying diagram. Assuming a voltage drop of 1.3V for each bridge, this will result in a 12 to 13V supply when connected to a 24V battery, depending on its state of charge. If high current capability is required, use appropriately



rated bridge rectifiers bolted to a heat-sink.

Note that, in this role, each bridge should only be rated at about 75% of its AC current rating. This is because the parallel diode pairs will not necessarily share the current equally. Other volt-

ages can be derived by simply adjusting the number of bridge rectifiers. Note particularly the method of connection. The AC inputs of the bridges are not used.

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**\$10**