



DEM RVD-1

24-28 VOLT RELAY VOLTAGE DOUBLER

CIRCUIT DESCRIPTION

Most 24-28 volt relays after being energized need only a small voltage to hold it in the energized position. The RVD-1 takes advantage of this fact. When it is in its stand-by state, C1, a 330uF capacitor charges to approx. 12VDC. Then when the TXON line is grounded (see schematic), K1 switches C1 in series with the 12VDC line, thus creating a +24VDC pulse. This short burst is enough to energize most 24-28 volt relays. C1 bleeds down to 0 VDC and the +12 VDC remains on the relay coil keeping it energized until TXON is removed from ground, thus starting the cycle over again.

PARTS LIST

C1	330-470 uF electrolytic capacitor, 25V
CR1-CR3	1N400X series diode
K1	DPDT 12 volt relay, dip mount
Misc.	PC board

ASSEMBLY

1. Assemble all components on the blank side of the PC aboard as shown in the diagram. Be careful to note the polarity of C1 and the 3 diodes. Solder all connections and cut leads flush with the board. Now refer to the schematic for the external wiring. The PC board is marked for this. The GND connection is -12 VDC. Some 24 volt relays are polarity sensitive (internal diode across coil). Be sure to wire accordingly. To energize relay, the TXON line can be connected to the switching circuit on your transceiver, transverter, or sequencer that switches to ground.

