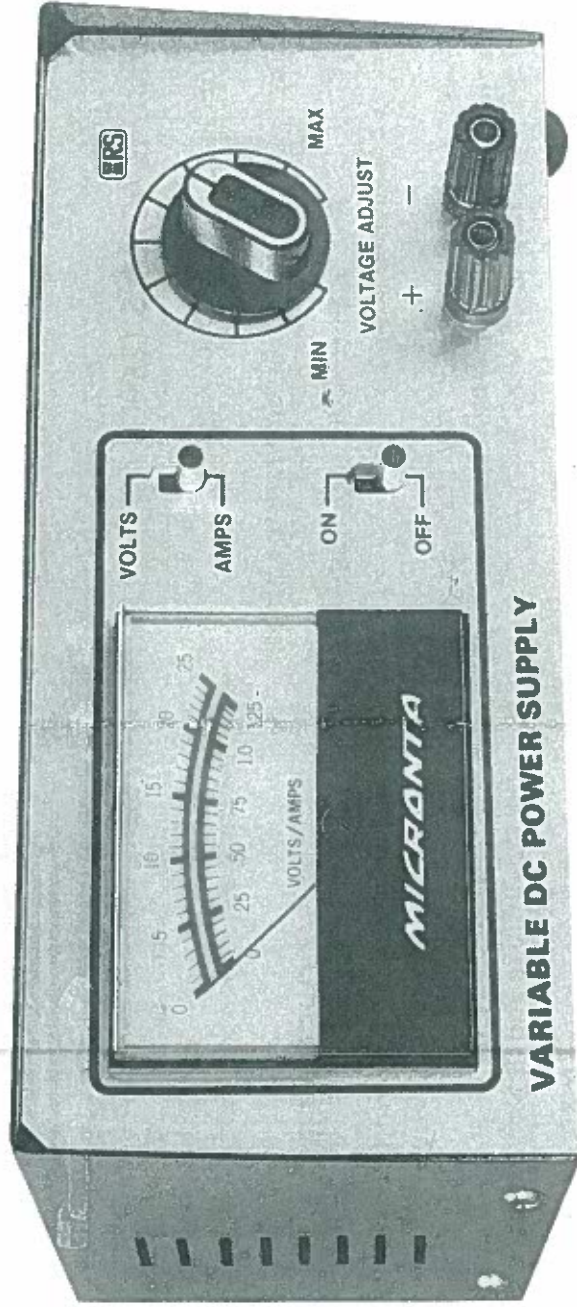


# OWNER'S MANUAL VARIABLE DC POWER SUPPLY



Catalog Number: 22-123

**MICRONTA**®

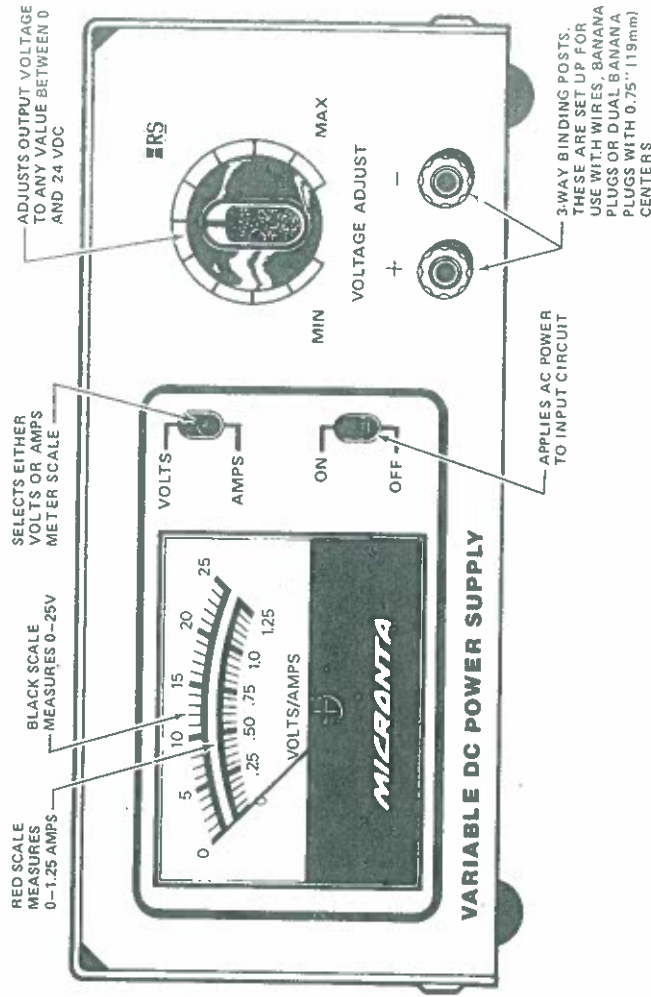
CUSTOM MANUFACTURED IN U.S.A. BY RADIO SHACK **T C** A DIVISION OF TANDY CORPORATION

## INTRODUCTION

The **Micronta Solid State Variable DC Power Supply** is designed to be used wherever a well regulated source of DC voltage is required (within the range of 0 – 24 volts and up to 1 Amp). The Variable Power Supply is perfect for powering transistor radios, tape players and CB's, as well as an experimenter's analog and digital circuits. A large meter lets you monitor the output voltage or current and a precision IC Voltage Regulator and Silicon Transistor assure maximum dependability and long life.

## SPECIFICATIONS (25°C)

<b>POWER REQUIREMENTS:</b>	120 VAC, 60 Hz
<b>OUTPUT VOLTAGE:</b>	0 – 24 VDC continuously variable
<b>OUTPUT CURRENT:</b>	0 – 1 amp, with automatic current limiting
<b>LOAD REGULATION:</b>	Less than 480 mV ( $\pm 2\%$ ) change at output terminals from 0 to 1 amp at 24 VDC
<b>LINE REGULATION:</b>	Less than 150 mV change at output terminals at 24 VDC at 1 amp with line variation from 105 to 135 VAC
<b>RIPPLE:</b>	Less than 25 mV at 24 VDC at 1 amp
<b>DIMENSIONS:</b>	3.5" x 8" x 6" (9 cm x 20 cm x 15 cm) HWD



## OPERATING INSTRUCTIONS

Set the ON-OFF switch to "OFF", then plug the AC line cord connector into any 120-volt AC outlet.

Connect the output (+ and -) terminals of the Power Supply to the positive and negative input of the load.

Set the VOLTS-AMPS switch to "VOLTS" and rotate the VOLTAGE ADJUST for the voltage required (0 – 24).

To check the output current [0 – 1.25], set the VOLTS-AMPS switch to "AMPS".

**CAUTION:** If you plan to power a unit that could supply current back into the Variable Power Supply (such as a battery or large capacitor), connect a 1 Amp diode in series with the positive (+) lead to prevent damage (see the Detail [diode lead identification] and the "Stacked Power Supplies" illustration).

## HELPFUL HINTS

This Variable DC Power Supply is designed to be a trouble-free unit but a few words of caution are needed as to its use.

The Power Supply is electrically protected so that any load over 1 Amp will cause the current to limit at approximately 1 Amp maximum, eliminating the need for any external fuses or circuit breakers to replace or reset. This method of protection is called "constant current limiting".

The Power Supply has adequate internal heat sinking so that it will run continuously — even with a short circuit across its output terminals. However, care must be taken not to block any of the ventilation holes by laying something on top of the cabinet.

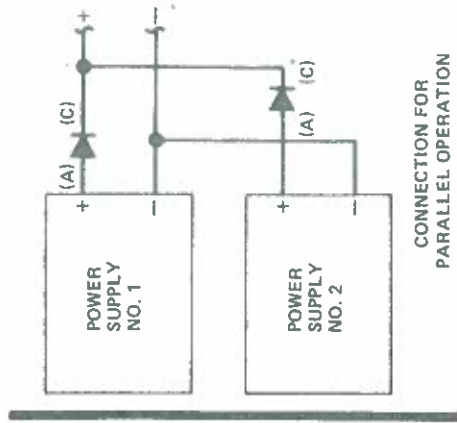
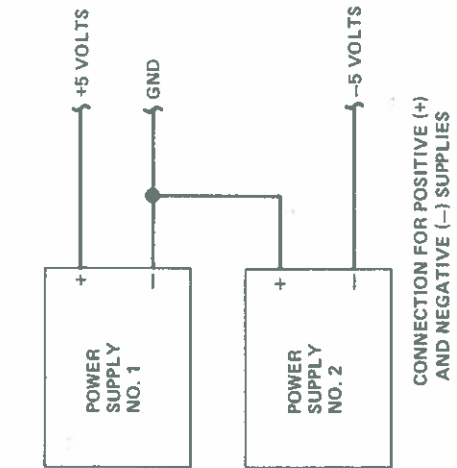
If the voltage drops when a load is connected, it is an indication that the Power Supply has gone into constant current limiting.

Both terminals of the Power Supply are floating with respect to ground, so you can electrically stack power supplies such as for a positive (+) and negative (—) supply. If two Power Supplies are to be connected in parallel, a 1 Amp diode should be placed in series with the output of each Power Supply to prevent the current from flowing back into the Power Supply. Remember, a series diode should also be used when powering a unit that could supply current back into the Variable Power Supply.

The Variable Power Supply has been designed to be trouble free in normal use; but, if any problems do occur, take it to a Qualified Service Technician.



## DETAIL



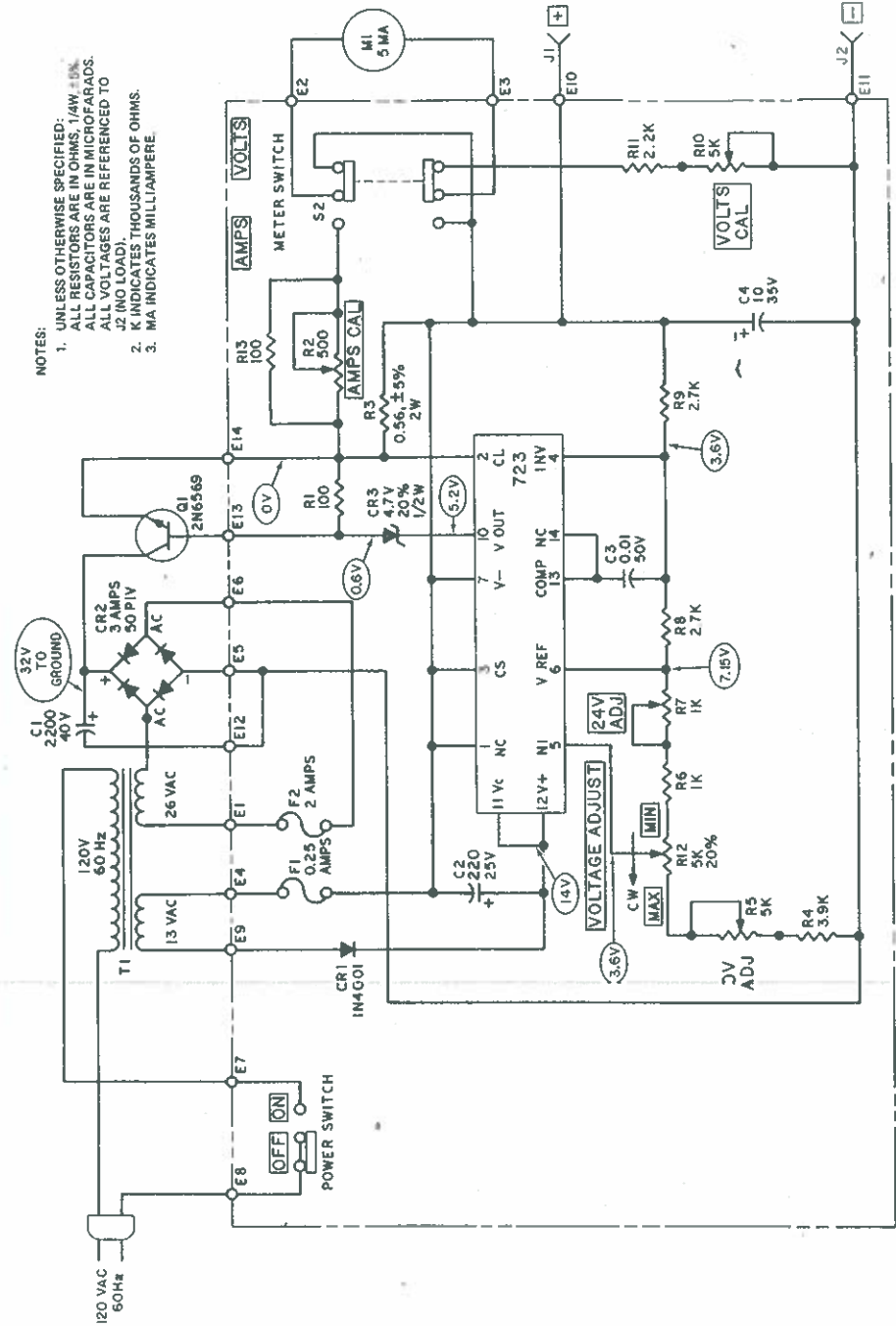
## STACKED POWER SUPPLIES

### RADIO SHACK LIMITED WARRANTY

This equipment is warranteed against defects for 90 days from date of purchase. Within this period, we will repair it without charge for parts and labor. Simply bring your sales slip as proof of purchase date to any Radio Shack store. Warranty does not cover transportation costs. Nor does it cover equipment subjected to misuse or accidental damage.

This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

*We Service What We Sell*



- NOTES:
1. UNLESS OTHERWISE SPECIFIED: ALL RESISTORS ARE IN OHMS, 1/4W, ±1%. ALL CAPACITORS ARE IN MICROFARADS. ALL VOLTAGES ARE REFERENCED TO J2 (NO LOAD).
  2. K INDICATES THOUSANDS OF OHMS.
  3. MA INDICATES MILLIAMPERE.

**SCHEMATIC DIAGRAM**

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TANDY CORPORATION

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