

Parts For The Microwave Cannon

The following are notes from our microwave cannon plans regarding parts to acquire. Some of the prices may be out of date and subject to change.

While almost any magnetron and power supply from any microwave oven will work, The best oven magnetron for our purposes is the 2M121A, which has its number conflated with the number 53 or 57. These last two numbers make no difference in the choice of editions of the 2M121A you procure. They are used in the following ovens: the Panasonic 1030, the Brother MF5000 and MF7000 The Merrichef models 136M, 165M, and 206M. It has a peak output power of 5800 watts, better than the 2000 watt magnetrons that cost more than twice as much. It can be ordered from www.expertappliance.com under the part number Z9-Panasonic NEI 030-412 if you type in Panasonic NE 1 030 for the type of oven for which you are purchasing parts. The magnetron costs \$160.54. The transformer number is 2IO- Panasonic NEIO30-5414 and it costs \$98.97. Global Microwave Parts has voltage doubling capacitors that are 0.85 micro farads rated at 2500 volts AC for \$7.80 each and diodes from \$3 to \$6. You should use one rated at half an ampere. Magnetrons and parts are available and listed on table 13-1

The magnetron is attached to the antenna as shown on figure 13-12. Follow the instructions closely and observe that the brass washer is flush with the copper conductive surface.

The power supply is a simple voltage doubler circuit shown in figure 13-13. It must be understood that the voltages in the wires will be in the thousands and a spark that can jump through air and through insulator conveys enough current that it will probably cause electrocution. Accordingly, the wires should be positioned where they will not be approached or touched. The magnetron and the horn must be securely grounded or it will be 4500 volts above ground potential. The frame you build around it will keep hands away from these wires. Also, after the cannon is shut off, four of the capacitors can hold a charge that can inflict a shock unless it is discharged, either through a bleeder resistor that may be built into the capacitor, or it can be discharged with a safety discharge probe.