

# Some Safety Warnings

1. **With the power supply open and connected to AC mains (house) power, there is the possibility that you may contact AC mains (house) voltage.**

**Depending on the scenario, that can be fatal.**

2. **The large aluminium electrolytic filter capacitors are considered hazardous, because of the combination of high voltage and high charge.**

**You need to 'treat them with respect'.**

**When you remove AC mains (house) power from the power supply, these filter capacitors take time to discharge.**

**To gauge discharge status, a voltmeter can be used to measure the voltage on the filter capacitors.**

**For information on manually discharging the filter capacitors, see <http://www.electronicrepairguide.com/capacitor-discharge.html>**

3. **In old power supplies, the thermal paste used between semiconductors and heatsinks, typically contained beryllium oxide (BeO).**

**Beryllium oxide is known to be carcinogenic.**

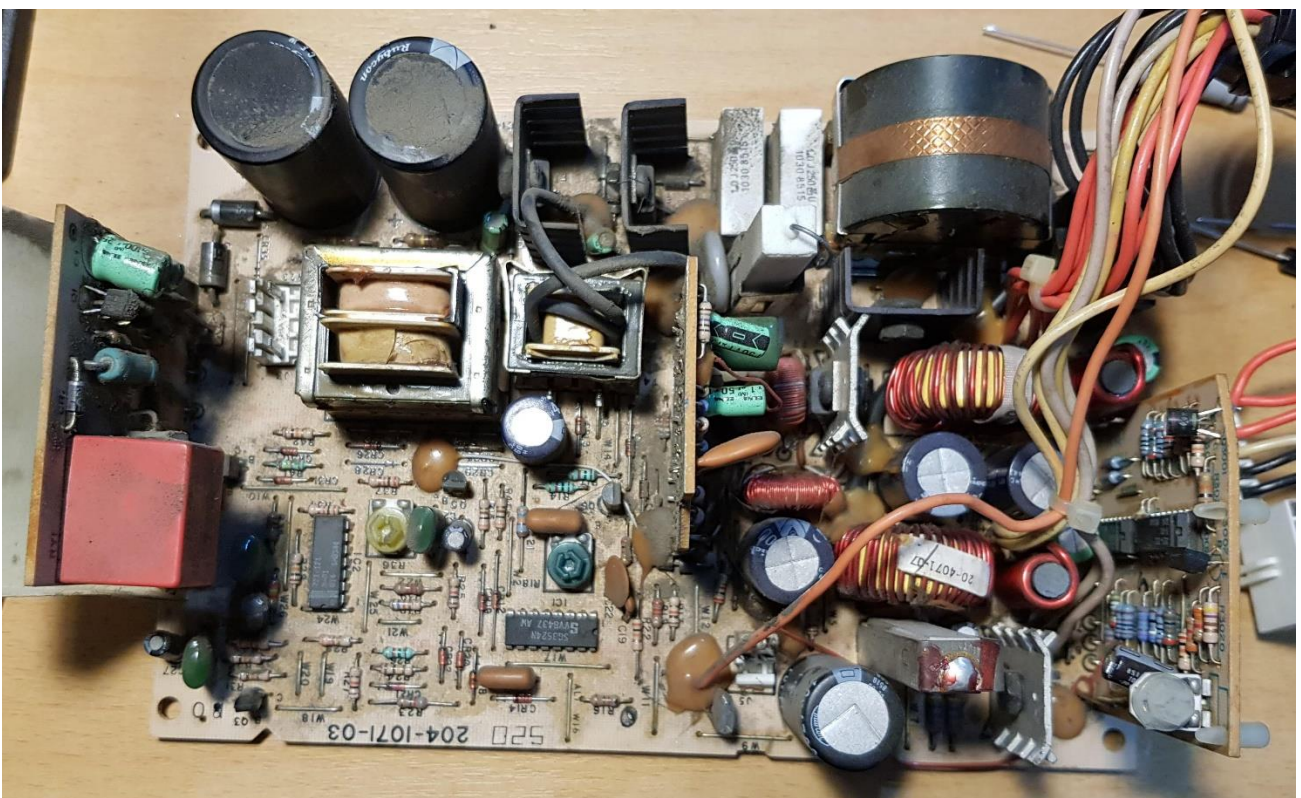
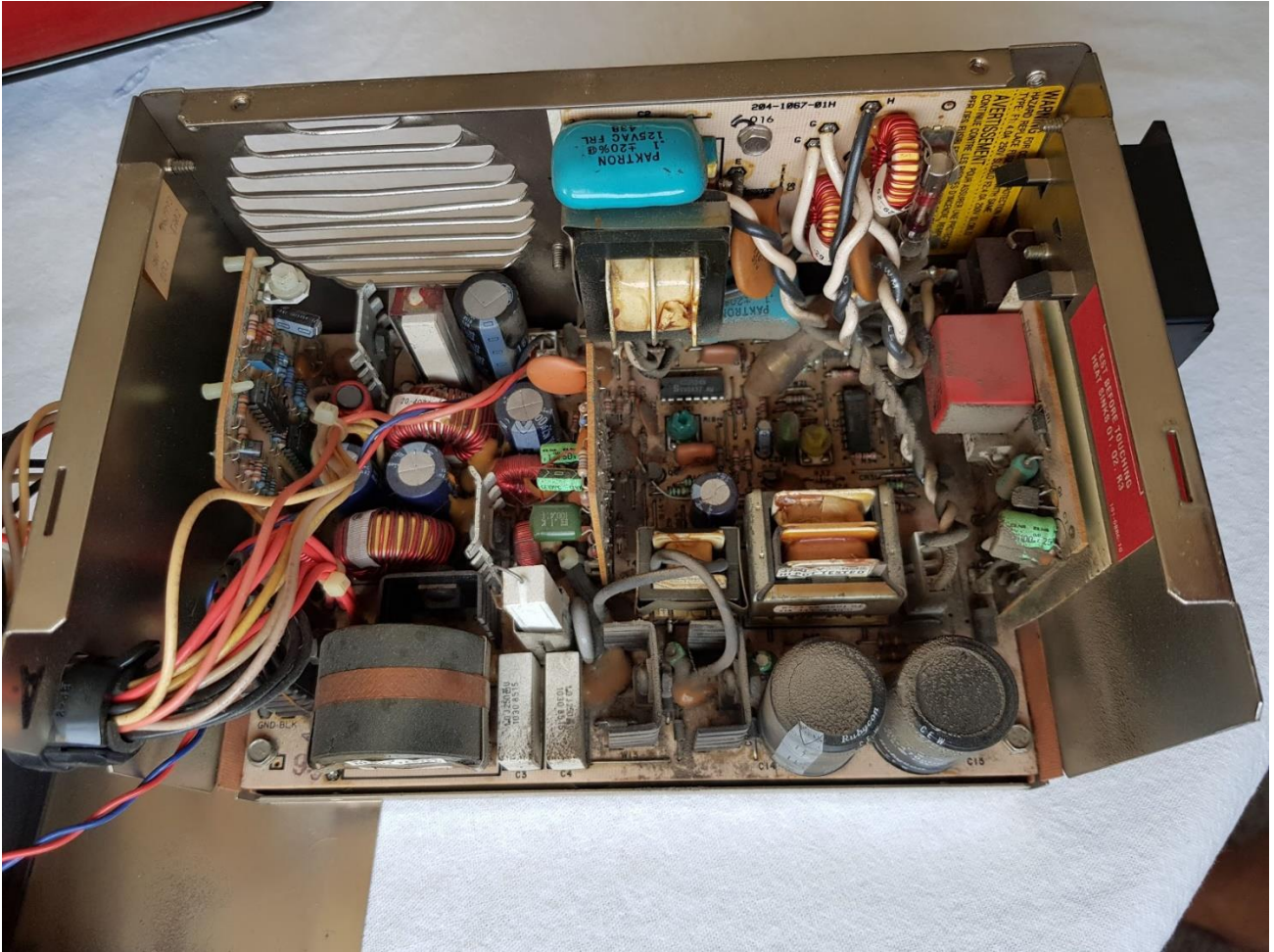
## Converting a certain model of IBM PC/XT 5160 Power Supply from 120V to 240V

Reverse directions should work for going from 240V to 120V, as this is much simpler than the 5150 PSUs.

This PSU is sometimes found in some late model 5150's, either from factory, or added by a user to support an XT's hard drive.

**Guide by Monotech PCs. No warranty whatsoever. Use at your own risk.**

Ensure your PSU is the same as the one pictured below:

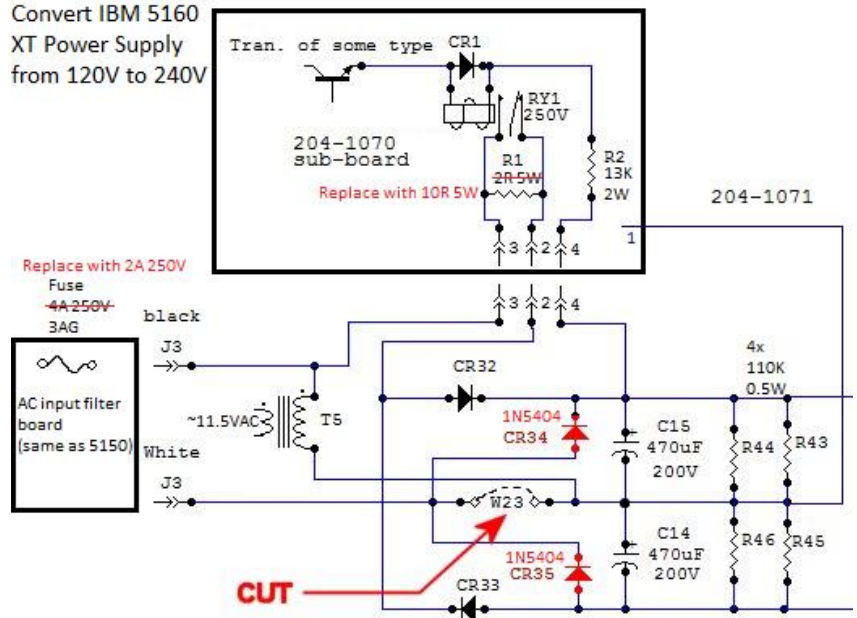


### Parts list:

- 2 x 1N5408 diodes
- 1 x 10ohm 5W resistor
- 1 x 560K 1W resistor
- 1 x 2A 250V 3AG-size slow-blow fuse
- 2 x 100nF 275VAC+ "X2" film capacitors
- Torx T10H security-bit screwdriver
- ~7mm nut driver

**This is not a beginner's project.** Do not attempt if you don't know the basics, don't understand the adjacent schematic, or don't know how to stay safe around high voltage.

Convert IBM 5160  
XT Power Supply  
from 120V to 240V



### Procedure:

1. Install two 1N5408 diodes at CR32 and CR33 empty holes. (May need to drill holes slightly bigger)
2. Remove jumper W23 next to J3.
3. Replace R1 (2ohm 5W) on the relay board, with a 10ohm 5W.
4. Replace the main fuse (4A 250V 3AG-size) on the AC-input board, with a 2A 250V 3AG-size slow-blow.
5. Replace the 300K resistor on the AC input board, with a 560K 1W.
6. Replace the two X2 capacitors on the AC input board, with ones rated 275VAC or higher.

Test that you still get between 9 and 12 V AC on the secondary of T5 when mains is applied.

A test load is needed to test the power supply. One 3.5" drive was not enough for me. A 5.25" drive was. Maybe two 3.5" would be.

