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Title:

POW 735 Power Supply
Technical Manual

Keywords:

POW 735, RC3600, RC3751.

Abstract:

This paper contains technical information on the POW 735 power supply.

(16 printed pages)

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1. DESCRIPTION.

1.

The POW 735 is designed to supply two FDD705 Flexible Disk Drives with AC and DC power.

The DC power supply section of the POW 735 consists of a transformer with three secondary windings, each supplying a separate rectifier and series regulator. These regulators produces the three output voltages: +24V, +5V and - 5V.

The POW 735 also contains timing logic and solid state relays to switch off the spindle drive motor of the FDD705 Diskette Drives if no disk access is made within half a minute.

2. SPECIFICATIONS.

2.1 Electrical Specifications.

<u>DC Output voltage:</u>	24V	5V	-5V
Tolerances	$\pm 10\%$	$\pm 5\%$	$\pm 5\%$
Maximum Ripple	100 mV	50 mV	50 mV
Maximum Current	2x0.8A	2x1.2A	2x80mA

AC Output voltage: 220V unregulated

Maximum AC current 2x250 mA

Power Requirements: 220V $\pm 10\%$, 50HZ $\pm 1\%$, 1A

2.2 Environmental Specifications.

Heat Dissipation (full Load): 55W, 1980 KJ/h, 1889 BTU/h
 Ambient Temperature: 10-40°C (59-194°F)
 Relative Humidity: 30-70% (no condensing)

2.3 Physical Specifications.

Dimension:
 Height: 120mm
 Width: 352mm
 Depth: 120mm
 Weight: 4.2 kg
 Mounting: For mounting in the CHS712 chassis.

3. FUNCTIONAL DESCRIPTION.

3.

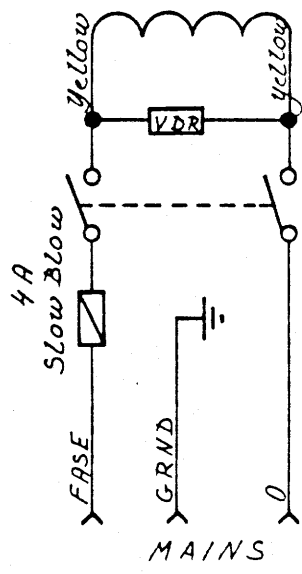
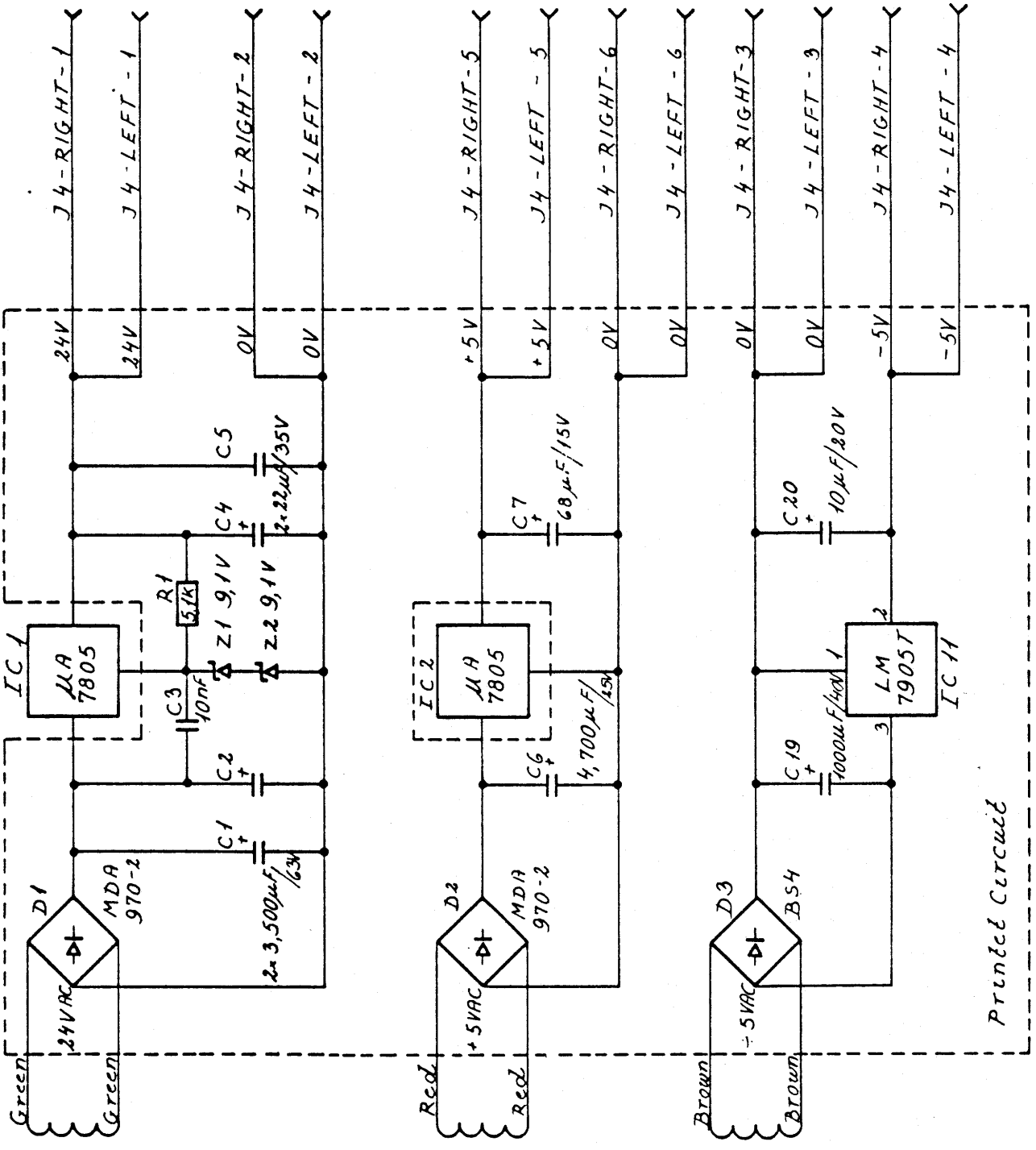
The AC motor control logic is divided into two identical parts. Each part consists of an app. 30 sec. timer and a 2 sec. timer.

The FDC 705 flexible disk controller provides the POW 735 with the signal \neg IN USE, indicating that the appropriate disk drive is accessed by the controller. Whenever this signal has been inactive for more than app. 30 sec., the first timer runs out switching off the AC supply current for the drive. The status signal "MOTOR OFF" will also be set.

When the \neg IN USE signal becomes active again, the motor is turned on immediately and the status signal "MOTOR OFF" is cleared some 2 sec. later, allowing the motor to reach operational speed.

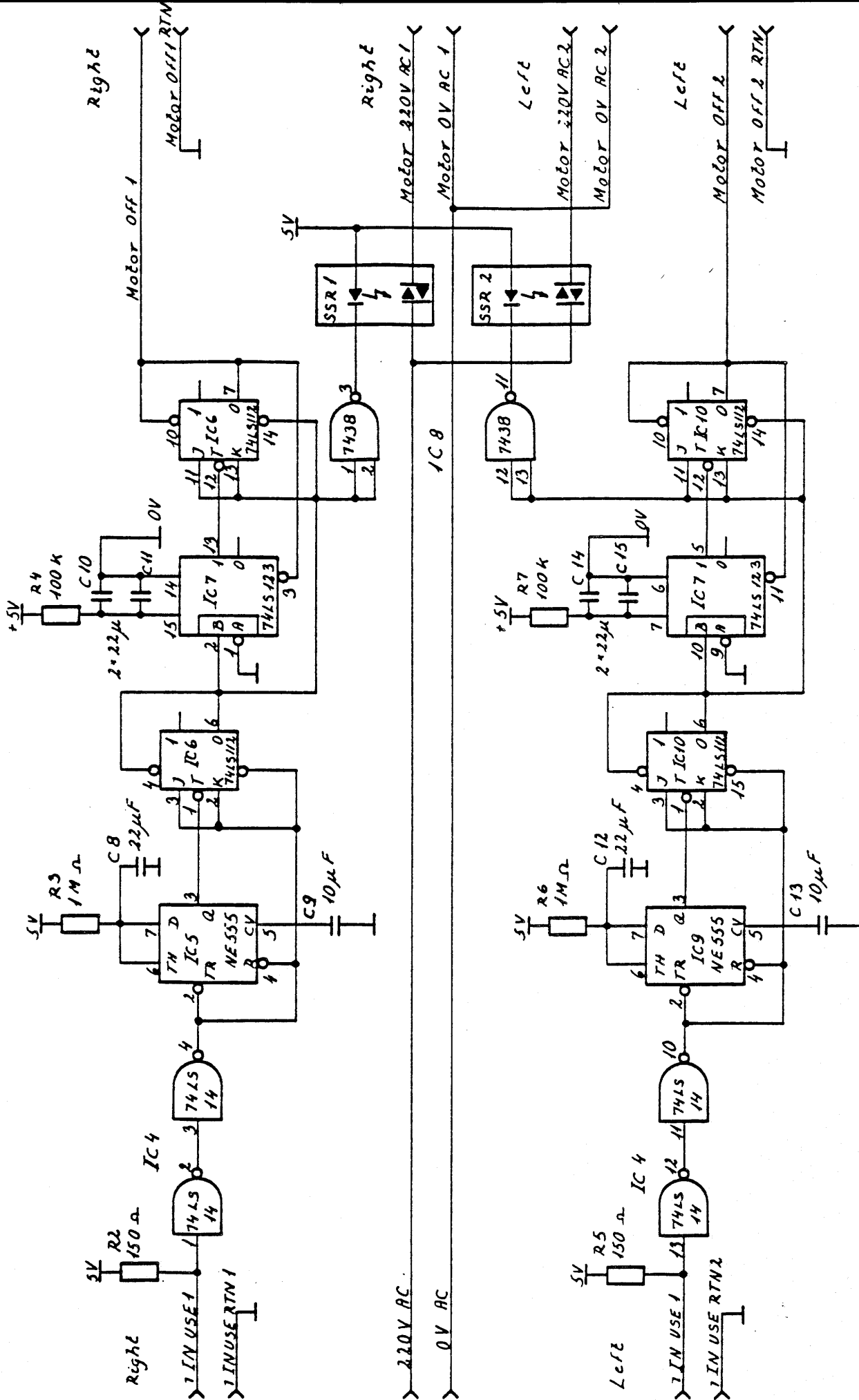
4. ELECTRIC DIAGRAMS.

The next two pages contains the electric and logic diagrams for the POW 735.



Printed Circuit

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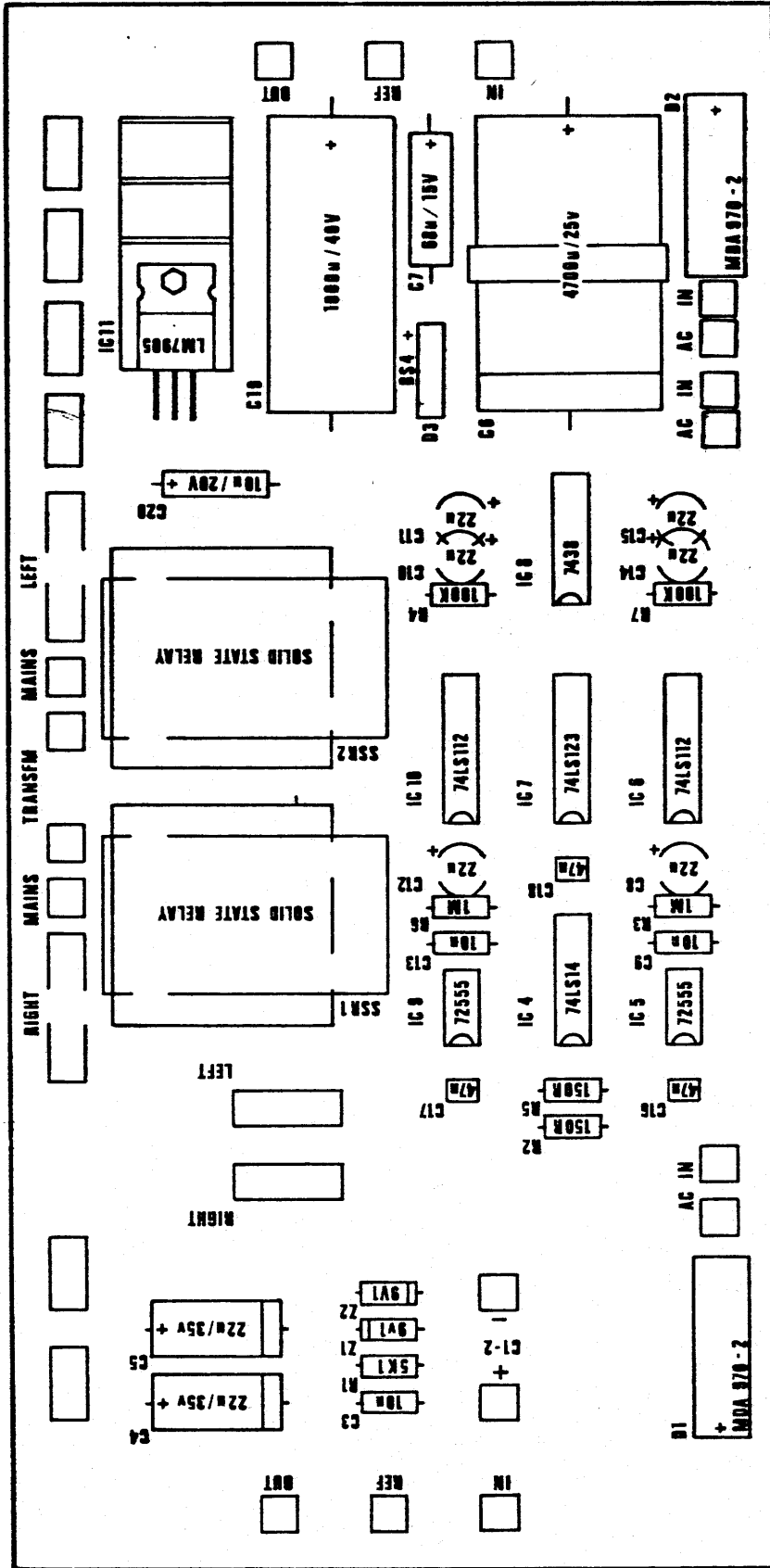


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C16 + 17 + 18

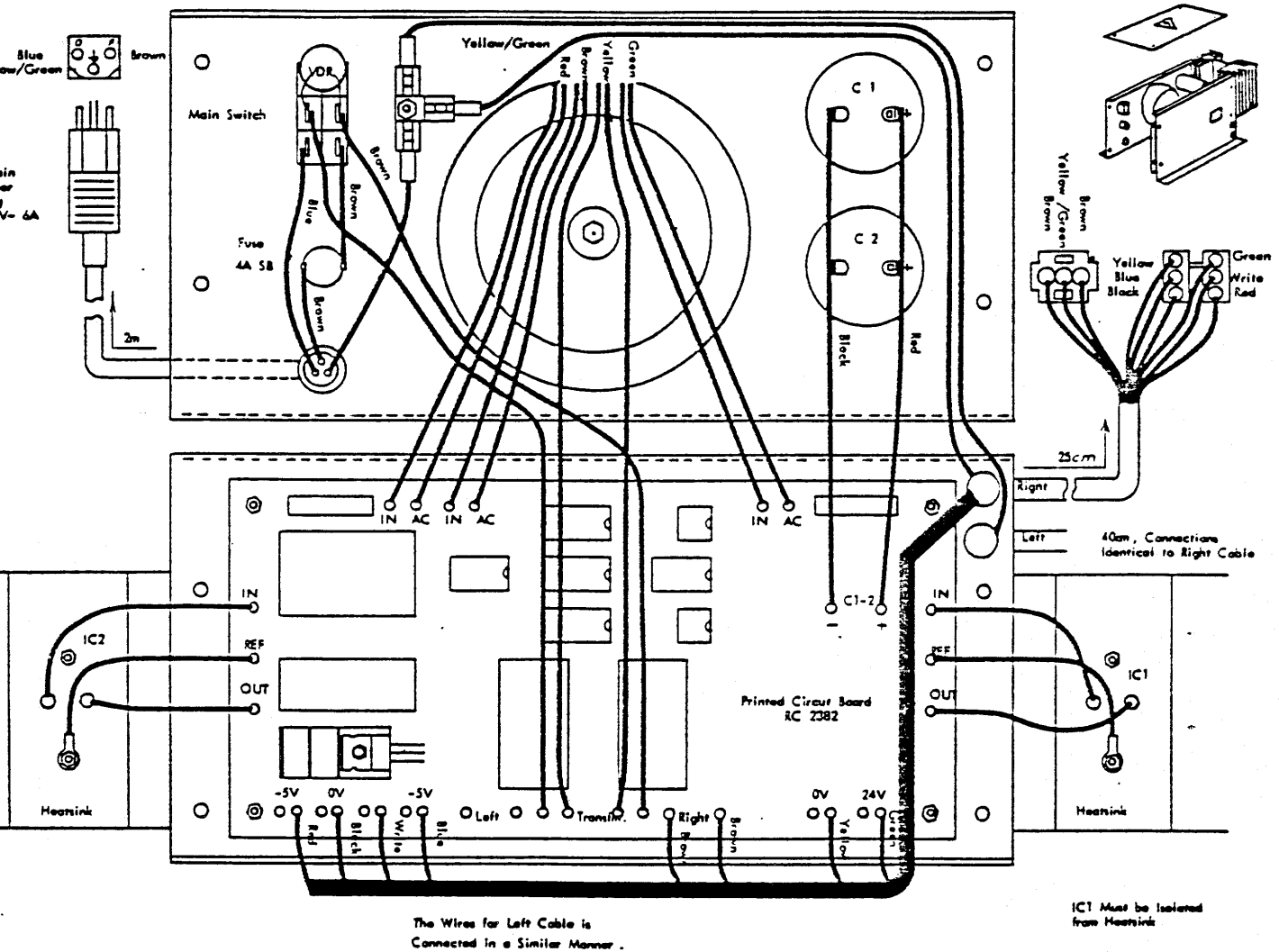
POW 735
R12569

AC Motor Control Logic

5. ASSEMBLY DRAWINGS.



RC2382 Printed Circuit Board
component locations.



POW 735 Assembly Drawing

6. COMPONENT LIST

6.

The following electrical components are used in the POW 735 power supply.

<u>QTY</u>	<u>Description</u>	<u>RC partnumber</u>
2	IC, MA7805	5-8317
1	IC, LM7905T	
2	MDA970-2, rectifier	
1	BS4, rectifier	
2	BZY88-C9V1, diode	4-3718
2	IC, 72555P	5-4717
1	IC, 7438N	4-0804
1	IC, 74LS14N	5-8111
2	IC, 74LS112N	6-1812
1	IC, 74LS123N	6-1915
2	S322, solid state relay	
2	Capacitor 3500 uF /63V	3-4413
1	Capacitor 4700 uF /25V	6-4404
1	Capacitor 68 uF /15V, tantal	1-1119
2	Capacitor 22 UF /35V, Tantal	1-0517
6	Capacitor 22 uF /15V, tantal	5-7001
3	Capacitor 46 uF /12V	4-3911
3	Capacitor 19 uF /100V	1-1315
1	Capacitor 10 uF /20V, tantal	
1	Capacitor 1000 uF /40V	
2	Resistor 150E , 1/8W	1-5108
1	Resistor 5K1 1/8W	1-0617
2	Resistor 100K 1/8W	1-0808
2	Resistor 1M 1/8W	1-0814
1	Fuse 4A SLO BLO 5x20	2-0718
1	Varistor 250V	4-5313
1	Transformator	



RETURN LETTER

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