



DCM500 Service Manual

**Product Description
Set-Up/Test Procedures
Component Lists
Full Schematics
PCB Overlays**

DCM Series

Circuit Description

The DCM series are power amplifiers designed for commercial installations. They can be used for either low impedance (4 ohm/8 ohm) or constant voltage line speakers (100v/70v). These amplifiers can be mounted in a standard 19" equipment rack or they can be used on a shelf or table. The DCM series feature line level input (with parallel output) and are normally used with mixers, mixer amplifiers or other power amplifiers. The DCM series will operate from mains voltage or 24VDC. The DCM series also feature a DC battery trickle charge facility, auto-sensing fan cooling, plus overload, short circuit and over temperature protection.

Power Switch

This switch controls the switching of AC power to the amplifier. A blue 'On' LED will indicate whether the amplifier is switched on or off. This switch will not switch DC power on or off in DC operation. In DC operation mode, the amplifier is always on and the blue power LED will always be illuminated. If both AC and DC voltage supply are connected and the AC power switch is in the off position, the amplifier will continue to operate normally from the DC supply and the mains fail LED will indicate.

Level Control

The output level control is located in the centre of the front panel. It is a fully recessed screwdriver adjustable pot. Turning this pot cw will increase the gain of the amplifier. At maximum setting the input sensitivity is 300mV. The amplifier ships from the factory with the sensitivity set to 1V.

Amplifier Status Display

This VU meter indicates the output level of the amplifier. The sensing for the circuit is taken on the amplifier side of the output transformer. The 0dB level is referenced to 100V. This is an RMS meter, not a peak meter.

Protect

The protect LED will illuminate when the amplifier cuts out because of either over current or high temperature. The amplifier will switch back on after approx 4 sec for an over current trip. The amplifier will switch back on after the amplifier has cooled to 60degC for a thermal trip.

Limiter

The limiter is a hard limiter with an attack time of about 1msec. It is defeatable by removing the jumper on the solder side of the front pcb. This however is not recommended as voltage overload and speaker transformer current saturation may cause the amplifier to cut out under normal program material.

Current Limit and Setup

Current limit is controlled by a microprocessor (PIC12C509A). The detection is done by sensing voltage across the emitter resistors. Trimpot P1 on the front pcb is accessible through the hole in the top right of the chassis return (only visible with the lid off). Turning the trimpot ccw will decrease the point at which the amp cuts out ie the amp will cut out earlier. (P1 resistance is increased.)

To set the current limit:

1. Reset the trimpot P1 turning fully clockwise.
2. Connect the amplifier to half it's minimum load (10ohm for DCM500, 20ohm for DCM250, 40ohm for DCM120).
3. Run an rms 1kHz sine wave into the amplifier and set the input level so that you read 425mVDC (DCM250/500) or 825mVDC (DCM120) across the emitter resistor, measuring the side which has the higher current (measured as a voltage across the emitter resistors).
4. Turn the trimpot P1 ccw till the amplifier cuts out. The amplifier is set to the factory default.

Thermal and Fan control and Setup

The thermal cutout and fan is controlled by a microprocessor (PIC12C509A). The temperature is sensed using a 10k@25degC NTC. The fan is normally off and turns on to full speed at 60degC. This temperature is fixed and not adjustable. The thermal cutout temperature is set using the trimpot accessible through the hole in the top left side of the chassis return (only visible with the lid off). Turning the trimpot cw will decrease the point at which the amp cuts out ie the amp will cut out earlier.

Power Amp

The power amplifier is a push pull single supply amplifier driven by a class A transformer coupled front end. The drive is provided by HEXFETs (RF9520/9530) into NPN BJTs (TIP35C). When replacing the FETs it is recommended that you replace both FETs. The matching of these FETs determines the balancing of the emitter currents in the output devices. For optimum performance the emitter currents in each side should match to within 30% of each other.

Bias Setup

The amplifier is set with a bias setting of 1mV measured across the emitter resistors.

Bias is set using the trimpots located on the power pcbs on each side of the amplifier.

Turning the trimpots cw increases the bias.

If the HEXFETs have been replaced the resistor in series with the pot may need to be changed. Use a lower value resistor if the bias cannot be turned off or a higher value if the bias cannot be turn on.

AC Power Inlet

The operating voltage is 230/240 VAC @ 50 Hz. The 3 pin IEC power inlet is located on the bottom left of the rear panel and accepts a standard mains power lead fitted with an IEC connector. Before plugging in a power lead, please check the rear panel of the amplifier to ensure that the voltage switch is set correctly for your part of the world.

The inlet is equipped with an in-built AC fuse containing the rated fuse and a spare.

24 Volt DC Power Inlet

The DCM series feature optional 24VDC power to run off a battery back-up if required. This is connected via the rear binding posts. The front panel Power Switch will not switch DC power 'on' or 'off' in DC operation. In this mode the amplifier is always 'on'.

The trickle charge resistor across the diode is a 47ohm/5watt wire wound resistor. The maximum trickle current is 300mA supplied from internal 35V rails.

230V/240V Slide Switch

The operating voltage of the amplifier is user selectable between 230V and 240V via a slide switch located on the center of the rear panel. This switch should be set to match the AC voltage of your country. The mains transformer is wound with a 230V winding plus a 10V winding internally connected.

Speaker Output Terminal Strip

The screw terminals located on the top left of the rear panel allow access to the direct speaker outputs of the amplifier. Reading from left to right the terminals are:

COM	Common or "-" for low impedance speaker loads (4 or 8 ohms)
4	Positive "+" for 4 ohm speaker loads (use with common)
8	Positive "+" for 8 ohm speaker loads (use with common) DCM120 only

COM	Common or "-" for 70v or 100v speaker loads
70	Positive "+" for 70v line speaker loads (use with common) DCM120/500 only
100	Positive "+" for 100v line speaker loads (use with common)

Please ensure that the correct "Common" is used. Low impedance and 70/100v loads can be used simultaneously but please pay careful attention to the overall speaker load.

Note: The minimum impedance (or maximum load) at 100 volt line should be no less than

DCM120 – 80 ohms
DCM250 – 40 ohms
DCM500 – 20 ohms

XLR Audio Input and Parallel Output

The DCM series includes both male and female 3 pin XLR connectors per channel. While the female is normally used as the input to the amplifier, both XLR's are connected in parallel so either will work.

The XLR's inputs are transformer balanced and wired as:

Pin 1: Shield.

Pin 2: Hot, +, Positive

Pin 3: Cold, -, Negative

Fuse Sizes

(DCM120)

Mains: 230 VAC 4 Amperes Slow Blow HRC 20x5mm

DC: 10 Amperes Slow Blow HRC 20x5mm

(DCM250)

Mains: 230 VAC 6.3 Amperes Slow Blow 20x5mm

DC: 2 x 10 Amperes Slow Blow HRC 3AG

(DCM500)

Mains: 230 VAC 10 Amperes Slow Blow HRC 20x5mm

DC: 2 x 35 Amperes Slow Blow 3AG

TESTING PROCEDURE OF DCM 120/DCM 250/DCM 500

I. PRE-TESTING (of complete sets).

- **Check**

- 1.1 All screw for tightness (Bridge rectifier and transistor bolts)
- 1.2 Earth Connection for good contact (solder and crimpling)
- 1.3 This setup has signal input to the Amplifier through male (XLR)
- 1.4 Check with Multimeter that there is a DC resistance of about $250\ \Omega$ between Pin2 & Pin3 of each of XLR's. Also between (Pin 1 & Pin 3) and (Pin1 & Pin2). There should be very high resistance. (IE: no reading).

2. Electrical Check

2.1 Fuse Check:

	DCM 120	DCM 250	DCM 500
Mains fuse:	4AT	6.3 AT	10 AT
DC fuse:	10AT (x1)	10AT (x2)	35AT (x2)

2.2 Connect the Amplifier to the setup (Variac voltage = 0V) set all presets on front board (only) fully clockwise, voltage selector switch to 230V

2.3 Slowly increase the input voltage to 230V, keep watching the input current should not exceed 0.1A for DCM-120, 0.1A for DCM-250, 0.1A for DCM 500.

2.4 Check and reset if necessary all emitter resistor voltages with the help of preset. (Each emitter resistor voltage should be between 0.5 mV to 0.8 mV)

2.5 Check DC voltage Main rail = 33V

7815 input = 30V

7815 output = 15.5V

2.6 Give input signal of 500 mV to get outputs as follows (@ $4\ \Omega$ output load)/ 22V for DCM 120, 32VAC for DCM250, 44.7VAC for DCM 500. Check 100V O/p at 100vV line, Remove the input signal

II. FINAL TESTING

(This setup should have signal input to Amplifier through female (XLR)
(The limiter link should be out of circuit initially.)

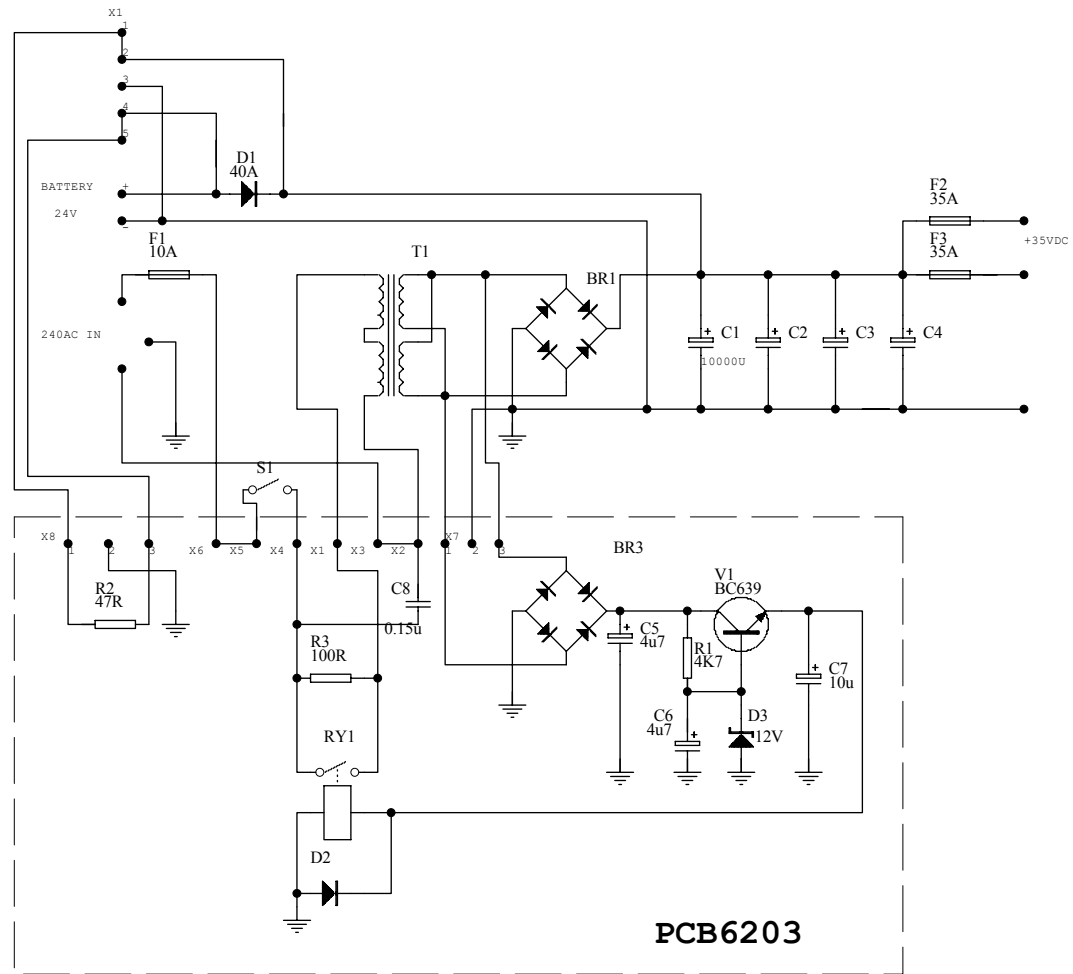
1. Connect the Amplifier to the setup, set voltage selector switch to 240V
2. Switch ON the set to 240VAC.
3. Slowly increase the input signal (of 1kHz) keep watching the 24dB LED, it should glow at approx 9V output. Increase the input signal to get 70VAC output.
4. Check Dc voltage of all emitter resistors, Minimum value should be within 30% of the maximum value.
5. Slowly increase the input signal, keep watching the 0db LED, it should glow at 100V \pm 5V output voltage.
6. Set 100V 1kHz as 0db reference. Change frequency to 10kHz check dB level drop. It should be 2.5dB \pm 0.5dB.
7. Change the frequency to 1kHz, reduce signal level to get 10VAC output. Half the output load.
8. **Overload setting:** - Check the DC voltage at the emitter resistors having the maximum voltage value. Increase input signal to get 820mV for DCM 120, 425mV (for DCM250 & DCM 500). Turn preset (P2) anticlockwise such that it just mutes the output signal and signal returns back slowly after 2 seconds.
9. Reduce the signal & re check whether the signal mutes at the corresponding above stated voltages.
10. Again make the output load to original full value. Turn volume preset fully anticlockwise, set input signal strength to 1V, set volume preset clockwise to get 100V output.
11. Set input signal strength to get output 110V VAC. Insert limiter link, the signal should reduce to 100V \pm 5V.
12. Remove the input signal and check noise. It should measure less than 25mV.

III. THERMAL & SOAK TEST

1. Connect the Amplifier to the setup : Output load = 4 Ω Output Voltage: (DCM 120): 14V. (DCM 250):20V. (DCM 500): 40V
2. Set the Amplifier thermal cut off temperature at around 105°C with the help of preset P4.
3. Leave the unit "ON" (with lid fixed, if possible) for 24 hours.

IV. Sound Test/Listening test.

1. Switch On the set. Check for any switch on thump.
2. Connect CD player to the input, listen for irregularities if any.
3. Switch off the set check for switch off noises.

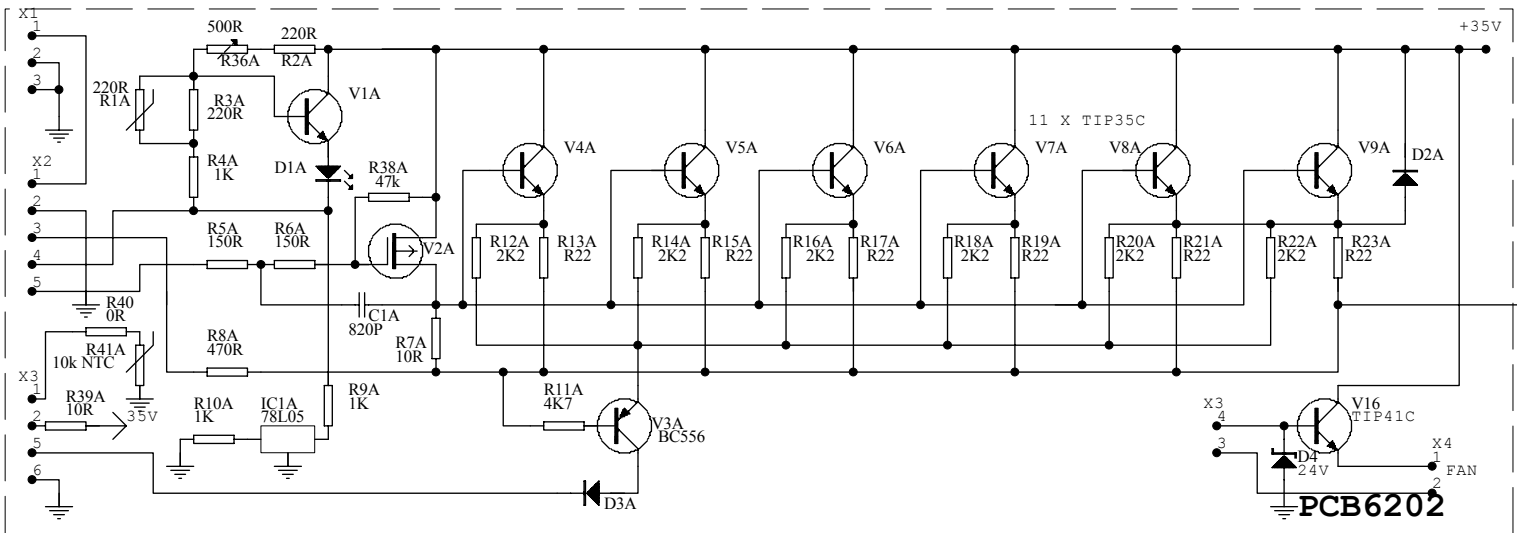


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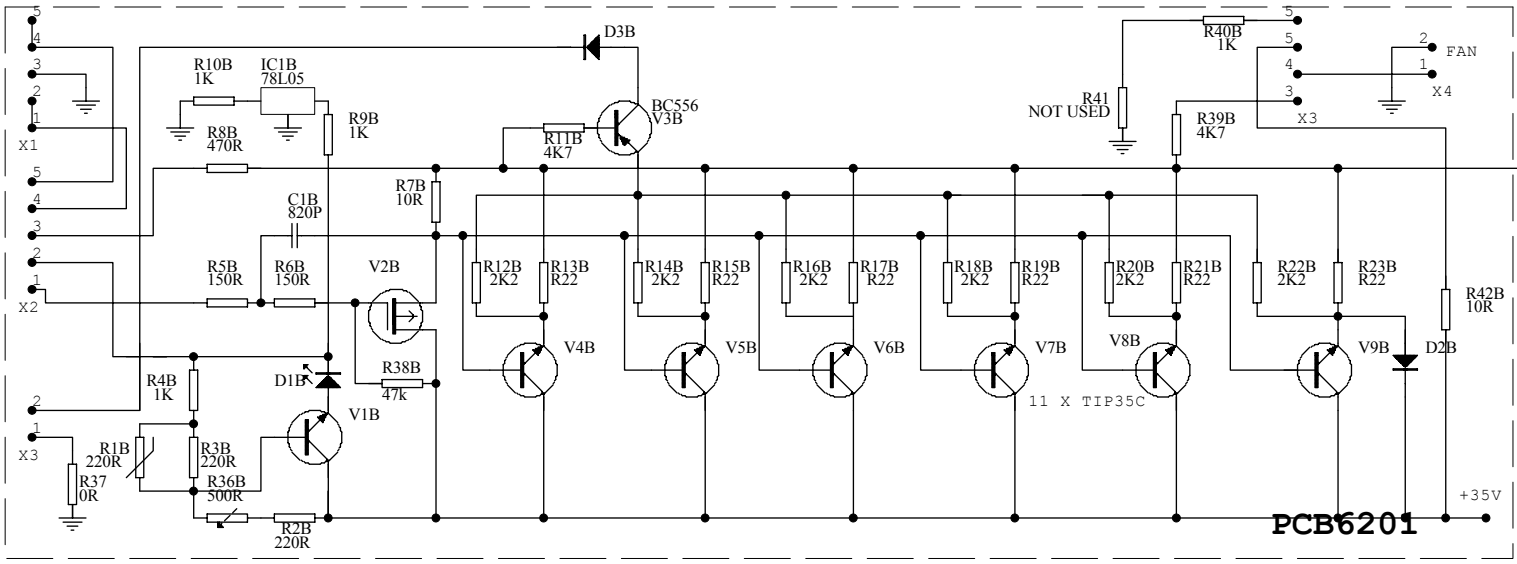
DCM500
 V10-V15 = TIP35C
 R25, R27, R29, R31, R33,
 R35 = 0.22R
 R24, R26, R28, R30, R32,
 R34 = 2R2

PCB6201
 X1 TO PCB6136
 X2 TO PCB6200 X3
 X3 TO PCB6200 X4
 X4 TO FAN

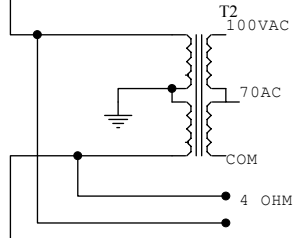
PCB6202
 X1 TP PCB6203
 X2 TO PCB6200 X1
 X3 TO PCB6200 X2
 X4 TO FAN



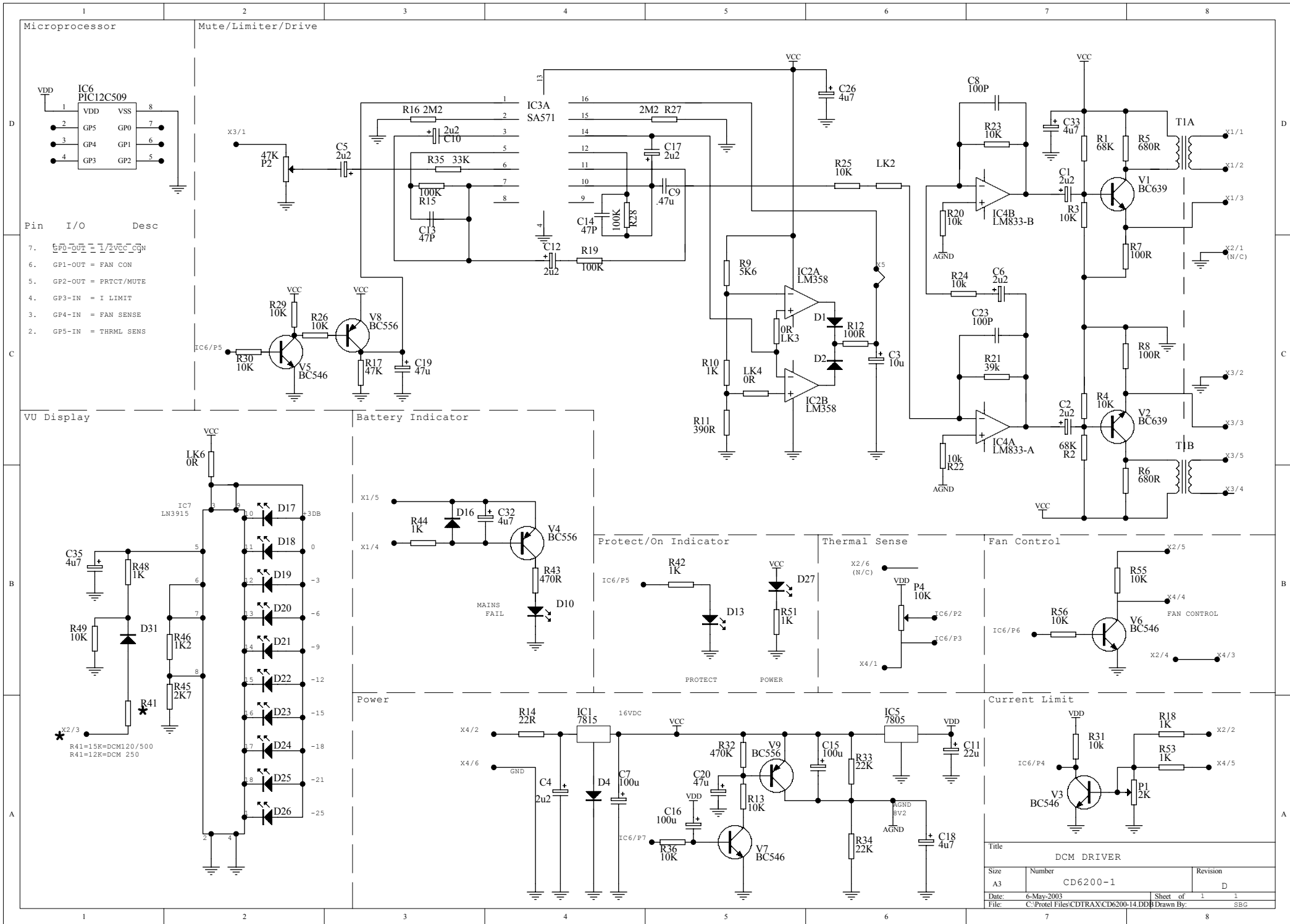
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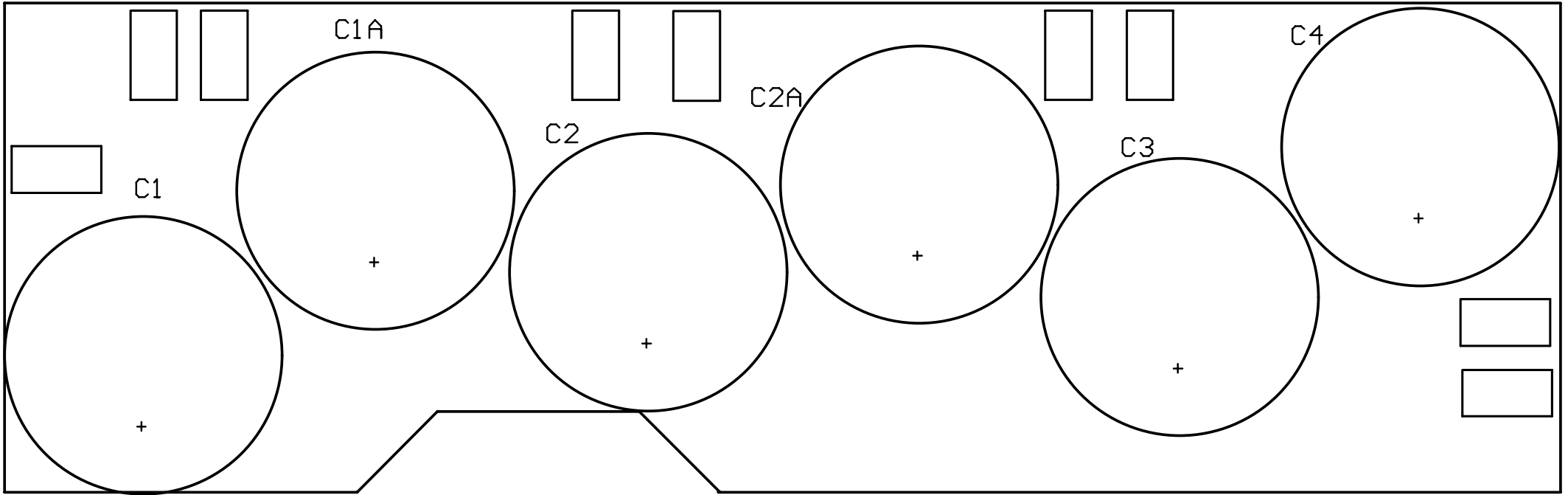


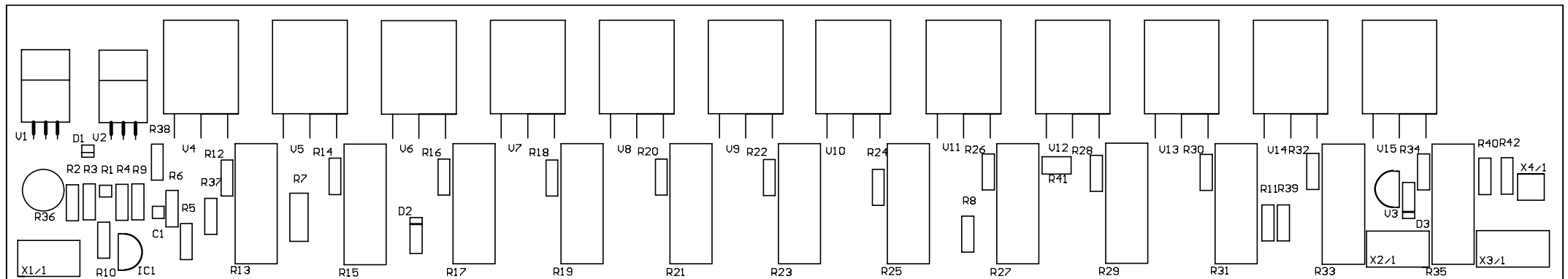
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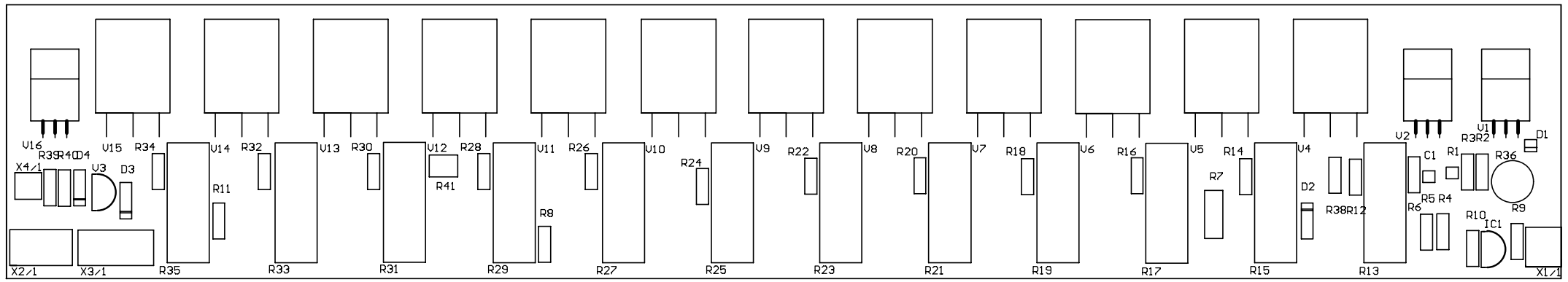


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DCM500 Power Supply Components List

Designato	Part Type	Description	Manufacturer's code
BR1	KBPC3504	Bridge recitfier 600V/35A	2134800356
BR3	KBPC3504	Bridge recitfier 600V/35A	2134800356
C1	15000uF	Electrolytic Capacitor 50V	2121250153
C2	15000uF	Electrolytic Capacitor 50V	2121250153
C3	15000uF	Electrolytic Capacitor 50V	2121250153
C4	15000uF	Electrolytic Capacitor 50V	2121250153
C5	4u7	Electrolytic Capacitor 50V	2121250479
C6	4u7	Electrolytic Capacitor 50V	2121250479
C7	10u	Electrolytic Capacitor 50V	2121230100
C8	0.15u	Metalised Poly Capacitor 275V	2124290158
D1	40A	Stud Mount Rectifier Diode 40A	2135940100
D2	1N4007	Rectifier Diode	2133440007
D3	12V	Zener diode 1W 12V	2136010120
F1	***	Fuse, refer user manual	
F2	35A	Fuse, 35A 3AG	2541120350
F3	35A	Fuse, 35A 3AG	2541120350
R1	4K7	Resistor, metal film .5W	9111590472
R2	47R	PW5 Wire Wound resistor 5W	2111450470
R3	100R	PW10 Wire wound resistor 10w	2111460101
RY1	Relay	Relay 12V 16A SPDT	2522220793
S1	Switch	Rocker Switch DPST	2511210155
T1		Power transformer	2651991355
V1	BC639	Transistor TO92	2144200639

DCM Series Drive Stage Component List

Designator	Part Type	Description	Manufacturer's Code
C1	2u2	Electrolytic Capacitor 35V	2121260229
C10	2u2	Electrolytic Capacitor 35V	2121260229
C11	22u	Electrolytic Capacitor 35V	2121250220
C12	2u2	Electrolytic Capacitor 35V	2121260229
C13	47P	Multi layer ceramic capacitor	2127181470
C14	47P	Multi layer ceramic capacitor	2127181470
C15	100u	Electrolytic Capacitor 16V	2121210101
C16	100u	Electrolytic Capacitor 16V	2121210101
C17	2u2	Electrolytic Capacitor 35V	2121260229
C18	4u7	Electrolytic Capacitor 35V	2121250479
C19	47u	Electrolytic Capacitor 35V	2121230470
C2	2u2	Electrolytic Capacitor 35V	2121260229
C20	47u	Electrolytic Capacitor 35V	2121230470
C23	100P	Multi layer ceramic capacitor	2127181101
C26	4u7	Electrolytic Capacitor 35V	2121250479
C3	10u	Electrolytic Capacitor 35V	2121230100
C32	4u7	Electrolytic Capacitor 35V	2121250479
C33	4u7	Electrolytic Capacitor 35V	2121250479
C35	4u7	Electrolytic Capacitor 35V	2121250479
C4	2u2	Electrolytic Capacitor 35V	2121260229
C5	2u2	Electrolytic Capacitor 35V	2121260229
C6	2u2	Electrolytic Capacitor 35V	2121260229
C7	100u	Electrolytic Capacitor 16V	2121210101
C8	100P	Multi layer ceramic capacitor	2127181101
C9	.47u	Metalised Poly Capacitor 63V	2124262472
D1	1N4148	Rectifier Diode	2133440148
D10	L-LED(red)	LED 3.0mm	2137200003
D13	L-LED(red)	LED 3.0mm	2137200003
D16	1N4148	Rectifier Diode	2133440148
D17	L-LED(red)	LED 3.0mm	2137200003
D18	L-LED(red)	LED 3.0mm	2137200003
D19	L-LED(grn)	LED 3.0mm	2137500003
D2	1N4148	Rectifier Diode	2133440148
D20	L-LED(grn)	LED 3.0mm	2137500003
D21	L-LED(grn)	LED 3.0mm	2137500003
D22	L-LED(grn)	LED 3.0mm	2137500003
D23	L-LED(grn)	LED 3.0mm	2137500003
D24	L-LED(grn)	LED 3.0mm	2137500003
D25	L-LED(grn)	LED 3.0mm	2137500003
D26	L-LED(grn)	LED 3.0mm	2137500003
D27	L-LED(grn)	LED 3.0mm	2137500003
D31	1N4148	Rectifier Diode	2133440148
D4	1N4007	Rectifier Diode	2133440007
IC1	7815	Voltage regulator I.C TO220	2151370815
IC2A	LM358	Comparator, dual IC DIP	2152800358
IC2B	LM358	Comparator, dual IC DIP	2152800358
IC3	SA571	Compander IC DIP	2153600571
IC4A	LM833-A	Dual op-amp IC DIP	2157800833
IC4B	LM833-B	Dual op-amp IC DIP	2157800833
IC5	7805	Regulator IC TO92	2151270805
IC6	PIC12C509	Programmable IC DIP	2159082509
LK2	0R	Link, zero ohms	9111590000
LK3	0R	Link, zero ohms	9111590000

LK4	0R	Link, zero ohms	9111590000
LK6	0R	Link, zero ohms	9111590000
P1	2K	Cermet, preset Horizontal	2112210202
P2	47K	Potentiometer 16mm	2112211473
P4	10K	Cermet, preset Horizontal	2112210103
R1	68K	Resistor, metal film .5W	9111590683
R10	1K	Resistor, metal film .5W	9111590102
R11	390R	Resistor, metal film .5W	9111590391
R12	100R	Resistor, metal film .5W	9111590101
R13	10K	Resistor, metal film .5W	9111590103
R14	22R	Resistor, metal film .5W	9111590220
R15	100K	Resistor, metal film .5W	9111590104
R16	2M2	Resistor, metal film .5W	9111590225
R17	47K	Resistor, metal film .5W	9111590473
R18	1K	Resistor, metal film .5W	9111590102
R19	100K	Resistor, metal film .5W	9111590104
R2	68K	Resistor, metal film .5W	9111590682
R20	10k	Resistor, metal film .5W	9111590103
R21	39k	Resistor, metal film .5W	9111590393
R22	10k	Resistor, metal film .5W	9111590103
R23	10K	Resistor, metal film .5W	9111590103
R24	10k	Resistor, metal film .5W	9111590103
R25	10K	Resistor, metal film .5W	9111590103
R26	10K	Resistor, metal film .5W	9111590103
R27	2M2	Resistor, metal film .5W	9111590105
R28	100K	Resistor, metal film .5W	9111590104
R29	10K	Resistor, metal film .5W	9111590103
R3	10K	Resistor, metal film .5W	9111590103
R30	10K	Resistor, metal film .5W	9111590103
R31	10k	Resistor, metal film .5W	9111590103
R32	470K	Resistor, metal film .5W	9111590474
R33	22K	Resistor, metal film .5W	9111590223
R34	22K	Resistor, metal film .5W	9111590223
R35	33K	Resistor, metal film .5W	9111590333
R36	10K	Resistor, metal film .5W	9111590103
R4	10K	Resistor, metal film .5W	9111590103
R41	15K*	Resistor, metal film .5W	9111590153
R41	12K**	Resistor, metal film .5W	9111590123
R42	1K	Resistor, metal film .5W	9111590102
R43	470R	Resistor, metal film .5W	9111590471
R44	1K	Resistor, metal film .5W	9111590102
R45	2K7	Resistor, metal film .5W	9111590272
R46	1K2	Resistor, metal film .5W	9111590122
R48	1K	Resistor, metal film .5W	9111590102
R49	10K	Resistor, metal film .5W	9111590103
R5	680R	Resistor, metal film .5W	9111590681
R51	1K	Resistor, metal film .5W	9111590102
R53	1K	Resistor, metal film .5W	9111590102
R55	10K	Resistor, metal film .5W	9111590103
R56	10K	Resistor, metal film .5W	9111590103
R6	680R	Resistor, metal film .5W	9111590681
R7	100R	Resistor, metal film .5W	9111590101
R8	100R	Resistor, metal film .5W	9111590101
R9	5K6	Resistor, metal film .5W	9111590562
T1A	RF2285A	Driver Transformer	DCM-120-24

T1B	RF2285B	Driver Transformer	DCM-120-24
V1	BC639	Transistor TO92	2144200639
V2	BC639	Transistor TO92	2144200639
V3	BC546	Transistor TO92	2144200546
V4	BC556	Transistor TO92	2144200556
V5	BC546	Transistor TO92	2144200546
V6	BC546	Transistor TO92	2144200546
V7	BC546	Transistor TO92	2144200546
V8	BC556	Transistor TO92	2144200556
V9	BC556	Transistor TO92	2144200556
	Please note	* DCM120-DCM500	
	Please note	** DCM250	

DCM500 Output stage Components List

Designator	Part Type	Description	Manufacturer's Code
C1A	820P	Multi layer Ceramic Capacitor	2127181821
C1B	820P	Multi layer Ceramic Capacitor	2127181821
D1A	1N4007	Rectifier Diode	2133440007
D1B	1N4007	Rectifier Diode	2133440007
D2A	1N4007	Rectifier Diode	2133440007
D2B	1N4007	Rectifier Diode	2133440007
D3A	1N4007	Rectifier Diode	2133440007
D3B	1N4007	Rectifier Diode	2133440007
D4	1N4007	Rectifier Diode	2133440007
IC1A	78L05	Voltage regulator IC TO92	2151270805
IC1B	78L05	Voltage regulator IC TO92	2151270805
R10A	1K	Resistor, Metalfilm .5W	9111590102
R10B	1K	Resistor, Metalfilm .5W	9111590102
R11A	4K7	Resistor, Metalfilm .5W	9111590472
R11B	4K7	Resistor, Metalfilm .5W	9111590472
R12A	2K2	Resistor, Metalfilm .5W	9111590222
R12B	2K2	Resistor, Metalfilm .5W	9111590222
R13A	R22	Wire wound resistor 5W	2111450228
R13B	R22	Wire wound resistor 5W	2111450228
R14A	2K2	Resistor, Metalfilm .5W	9111590222
R14B	2K2	Resistor, Metalfilm .5W	9111590222
R15A	R22	Wire wound resistor 5W	2111450228
R15B	R22	Wire wound resistor 5W	2111450228
R16A	2K2	Resistor, Metalfilm .5W	9111590222
R16B	2K2	Resistor, Metalfilm .5W	9111590222
R17A	R22	Wire wound resistor 5W	2111450228
R17B	R22	Wire wound resistor 5W	2111450228
R18A	2K2	Resistor, Metalfilm .5W	9111590222
R18B	2K2	Resistor, Metalfilm .5W	9111590222
R19A	R22	Wire wound resistor 5W	2111450228
R19B	R22	Wire wound resistor 5W	2111450228
R1A	220R	Resistor, Metalfilm .5W	9111590221
R1B	220R	Resistor, Metalfilm .5W	9111590221
R20A	2K2	Resistor, Metalfilm .5W	9111590222
R20B	2K2	Resistor, Metalfilm .5W	9111590222
R21A	R22	Wire wound resistor 5W	2111450228
R21B	R22	Wire wound resistor 5W	2111450228
R22A	2K2	Resistor, Metalfilm .5W	9111590222
R22B	2K2	Resistor, Metalfilm .5W	9111590222
R23A	R22	Resistor, Metalfilm .5W	2111450228
R23B	R22	Wire wound resistor 5W	2111450228
R2A	220R	Resistor, Metalfilm .5W	9111590221
R2B	220R	Resistor, Metalfilm .5W	9111590221
R36A	500R	Cermet, preset horizontal	2112210501
R36B	500R	Cermet, preset horizontal	2112210501
R37	0R	Link, zero ohms .5W	9111590000
R38A	47k	Resistor, Metalfilm .5W	9111590473
R38B	47k	Resistor, Metalfilm .5W	9111590473
R39A	10R	Resistor, Metalfilm .5W	9111590100
R39B	4K7	Resistor, Metalfilm .5W	9111590472
R3A	220R	Resistor, Metalfilm .5W	9111590221
R3B	220R	Resistor, Metalfilm .5W	9111590221
R40	1K	Resistor, Metalfilm .5W	9111590102

R40B	1K	Resistor, Metalfilm .5W	9111590102
R41			
R41A	100D		
R42B	10R	Resistor, Metalfilm .5W	9111590100
R4A	1K	Resistor, Metalfilm .5W	9111590102
R4B	1K	Resistor, Metalfilm .5W	9111590102
R5A	150R	Resistor, Metalfilm .5W	9111590151
R5B	150R	Resistor, Metalfilm .5W	9111590151
R6A	150R	Resistor, Metalfilm .5W	9111590151
R6B	150R	Resistor, Metalfilm .5W	9111590151
R7A	10R	Resistor, Metalfilm .5W	9111590100
R7B	10R	Resistor, Metalfilm .5W	9111590100
R8A	470R	Resistor, Metalfilm .5W	9111590471
R8B	470R	Resistor, Metalfilm .5W	9111590471
R9A	1K	Resistor, Metalfilm .5W	9111590102
R9B	1K	Resistor, Metalfilm .5W	9111590102
T2			
V16	TIP41C	Transistor TO220	2141300041
V1A	TIP41C	Transistor TO220	2141300041
V1B	TIP41C	Transistor TO220	2141300041
V2A	IRF9520	Mosfet, hexfet	2142309520
V2B	IRF9520	Mosfet, hexfet	2142309520
V3A	BC556	Transistor T092	2141600035
V3B	BC556	Transistor T092	2141600035
V4A	TIP35C	Transistor TOP-3	2141600035
V4B	TIP35C	Transistor TOP-3	2141600035
V5A	TIP35C	Transistor TOP-3	2141600035
V5B	TIP35C	Transistor TOP-3	2141600035
V6A	TIP35C	Transistor TOP-3	2141600035
V6B	TIP35C	Transistor TOP-3	2141600035
V7A	TIP35C	Transistor TOP-3	2141600035
V7B	TIP35C	Transistor TOP-3	2141600035
V8A	TIP35C	Transistor TOP-3	2141600035
V8B	TIP35C	Transistor TOP-3	2141600035
V9A	TIP35C	Transistor TOP-3	2141600035
V9B	TIP35C	Transistor TOP-3	2141600035
			2141600035

DCM500 Major Components price list				
<u>Part</u>	<u>Description</u>	<u>Manufacturer code</u>	<u>in house</u>	<u>AUD\$</u>
<u>PCB's</u>				
Power Supply PCB	Capacitor mount PCB	S5728MDCM50003		\$47.13
Input	Input PCB assy	S5728MDCM50005		\$10.05
Output Left	Output PCB assy	S5728MDCM50001		\$66.79
Output Right	Output PCB assy	S5728MDCM50002		\$62.75
Display-front PCB	Display PCB	S5728MDCM50006		\$33.44
Relay PCB	Relay slow start PCB	S5728MDCM50004		\$8.18
<u>Transformers</u>				
230/240VAC	Mains 230/240V	2561991355		\$79.36
Output	Output	2651991357		\$65.99
Fuse 35 amp	DC rail fuse	2541120350		\$0.51
Bridge Assembly	Bridge Assembly	S5728MDCM50023		\$27.31
Drive transformer	Drive Transformer	S5728MDCM50007		\$2.30
<u>Semiconductors</u>				
TIP35C	NPN TO3P transistor	2141600035	TIP36C	\$3.60
TIP41C	PNP TO220 transistor	2141300041	TIP42C	\$2.01
BC639	NPN TO92	2144200639	S7007	\$0.16
BC640	PNP TO92	2144200640	S7008	\$0.16
BD140	PNP TO92	2141400140		\$0.22
BD139	NPN TO92	2141400139	S7009	\$0.22
LM1458	IC Dual Op amp	2152801048	LM1458	\$0.27
LM833N	IC Dual Op amp	2157800833	LM833	\$1.05
LM358	IC Dual Op amp	2152800358	LM358	\$1.05
LM78L05	IC Regulator	2151270805	LM7805	\$0.17
LM7815	IC Regulator	2151370815	LM7815	\$0.52
LM7818	IC Regulator	2151370818	LM7818	\$0.52
10k Thermistor		2111911103		\$0.80
IRF 9530	Mosfet IRF9530	2142309530		\$3.49
PIC 12C509	PIC 12C509A, 8 PIN	2159082509		\$4.17
LED blue		2137600003		\$0.13
KBPC 3506	Bridge rectifier 35A	2134800356		\$7.49
SA 571N	Compander	2153600571		\$3.69
LM 3915N	LED driver IC	2156603915		\$3.77
<u>Switches & Pots</u>				
Volume Pot	Input attenuator	2112211473		\$0.56
Power switch	Rocker switch	2511210155		\$1.39

Hardware				
Front Panel	Front Panel DCM500	S600000132		\$4.88
Lid	Top cover DCM500	S600000130		\$13.14
Rack ears	Rack ears	S600000137		\$4.35
Chassis	Chassis Pan DCM500	S600000129		\$22.92
Barrier Strip	6 way barrier connector	2583528306		\$2.51
XLRF	XLF Female connector	2587210266		\$1.35
XLMR	XLR Male connector	2587110227		\$1.08
Screw + washer	Black screw w/star	2316420308		\$0.08
Screw	Black screw wo/star	2316421306		\$0.08
Acrylic cover for terminal	Clear cover for 6 way barrier connector	9347560006		\$0.31
Fuse Holder	DCM series fuse holder	2344400322		\$1.00
FAN 12V	DCM Series 12vdc fan	2571120122		\$6.33