

DISO

1.2 SPECIFICATIONS

1.2.1 STEREO SPECIFICATIONS

Output Power **80 watts per channel minimum RMS (both channels operating) into an 8 ohm load over a bandwidth of 1Hz-20KHz at a rated RMS sum total harmonic distortion of 0.05% of the fundamental output voltage.**

Frequency Response $\pm 0.1\text{dB}$ DC-20KHz at 1 watt into 8 ohms; $\pm 1\text{dB}$ DC-100KHz.

1KHz Power 90 watts RMS into 8 ohms, per channel, both channels operating, 0.1% total harmonic distortion.

Harmonic Distortion Less than 0.001% from 20Hz-400Hz, and increasing linearly to 0.05% at 20KHz at 80 watts RMS per channel into 8 ohms.

I.M. Distortion
(60Hz-7KHz 4:1) Less than 0.05% from 0.01 watt to 0.25 watts and less than **0.01%** from 0.25 watts to 80 watts into 8 ohms, per channel.

Slewing Rate 6 volts per microsecond (slewing rate is the maximum value of the first derivative of the output signal, or the maximum slope of the output signal).

Damping Factor Greater than 400, DC-400Hz into 8 ohms.

Output Impedance Less than 15 milliohms in series with less than 3 microhenries.

Load Impedance Rated for 8 ohm usage; safely drives-any load including completely reactive loads,

Voltage Gain $20.6\pm 2\%$ or $26.3\pm 2\text{dB}$ at maximum gain.

Input Sensitivity 1.19 volts $\pm 2\%$ for 80 watts into 8 ohms.

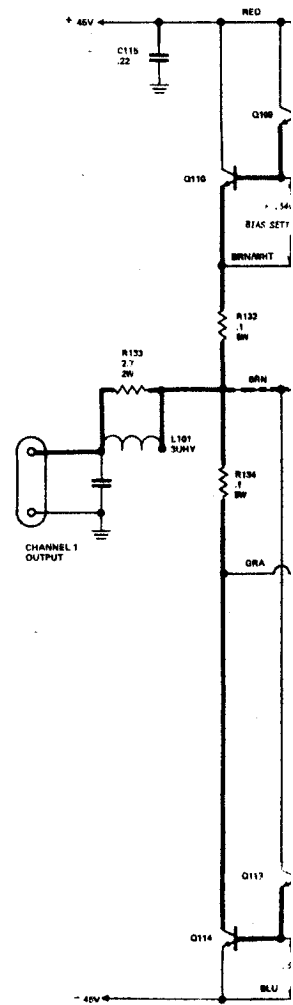
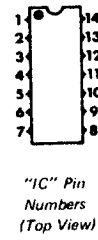
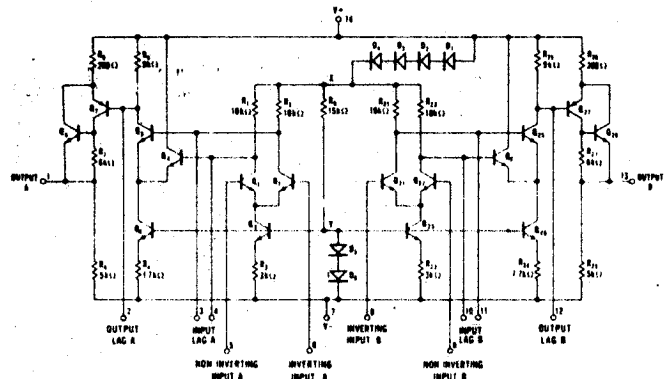
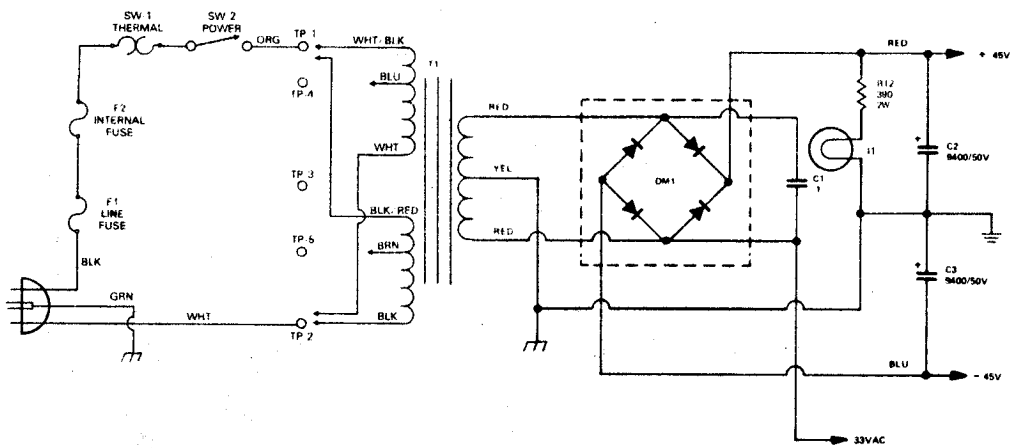
Output Signal Unbalanced, dual channel.

PARTS LIST, D-150A Page 2

Schematic Designation	Description	Crown Part #	Other Information
R115, R215 R11	10K ohm $\frac{1}{2}$ watt 1% Film	2343	
R116, R216	820 ohm $\frac{1}{4}$ watt 10%	3301	
R117, R217	33K $\frac{1}{2}$ watt 5%	3137	
R118, R218 R123, R223	120 ohm $\frac{1}{2}$ watt 5% Film	3837	
R119,	82 ohm $\frac{1}{4}$ watt 5% Film	3960	
	5.1K 1 watt 5%	2808	
	27K $\frac{1}{2}$ watt 5% Film	3970	
	82 ohm $\frac{1}{4}$ watt 10%	3300	
	2.2K $\frac{1}{2}$ watt 5% Film	3145	
	750 ohm $\frac{1}{4}$ watt 5%	3803	
	15 ohm $\frac{1}{4}$ watt 10%	3614	
	Selected		
	47 ohm $\frac{1}{4}$ watt 5%	1011	
	180 ohm $\frac{1}{4}$ watt 10%	2873	
	5.6 ohm $\frac{1}{2}$ watt 5%	3299	
	180K $\frac{1}{4}$ watt 10%	2884	
	2.2K $\frac{1}{2}$ watt 10%	1'036	
	1.5K 2 watt 10%	3303	
	200K $\frac{1}{4}$ watt 5%	3622	
	91K ohm $\frac{1}{4}$ watt 5%	3621	
	6.2K $\frac{1}{4}$ watt 5%	3619	
	2.7K 1 watt 10%	1079	
R10	390 ohm $\frac{1}{2}$ watt 10%	2609	
	Semiconductors		
Q1 Q103, Q106, Q206 Q111, Q211	Selected 2N3859A	2961	
Q100, Q104, Q204	2N4125	3625	
Q101, Q2	PN4250A	3786	

Schematic Designation	Description	Crown Part #	Other Information
Q102, Q202	MPSA93	3578	
Q105, Q205	MPSL01	3232	
Q107, Q207	NSD106	4069	
Q112, Q212	NSD206	4116	
D1, D2 D106, D206 D102, D202	1N4003	2851	
D3, D4, D5	IN961B 10V Zener	3549	
D107, D207	IN270	3447	
D100, D200 D101, D201 D103, D203 D104, D204 D105, D205	IN4148	3181	
IC-1A, B	Dual μ A739PC OP AMP	3231*	
IC-1A;B	Dual uA749 OP AMP	3643*	*NOTE: R108, 208 are omitted when uA739 is used, and 3.3K when uA749 is used. See R108,208 under resistors.
Miscellaneous			
L100, L200	.5 MH axial lead choke	3510	
	Main PC board	9604	
	TO-92 D-clip	3953	Mounts over Q111, Q211
	D-150A PC board mount bracket	9562	Fastens 3953 to PC board
	#6 internal star washer	1823	Used to mount 9562.
	6-32 Hex nut	1889	Used to mount 9562.
	6-32 x $\frac{3}{8}$ BHP screw	2134	Used to mount 9562.
	Dual TO-92 cooler	3493	Mounted over Q102, Q202.
	14 pin DIL IC socket	3450	Socket for IC-1.
	Transistor lead PC receptacle	3519	Used to mount R128, R228.
L102, L202	OUTPUT INDUCTOR ASSY.	40959	
	Output coil, torroid form	2850	
	Nylon washer	3609	One on each side of coil.
	#16 brown wire	2812	
	#8 int. star washer	1951	Used to mount coil

Schematic Designation	Description	Crown Part #	Other Information
	10-32 x ½ THP screw	2049 NIC	Used to mount one end of T1.
	#10 internal starwasher	2279	Used to mount T1.
	10-32 hex nuts	2170	Used to mount T1.
	I-G-2 terminal strip insulator	3599	Mounts over one 2049.
	2-G-I terminal strip	3323	
	D-150A end cover (transformer side)	9565-S	Mounts over two transformer screws.
	D-150A end cover (PC board side)	9566-S	Mounts under heat sink screws.
C23, C24	9,400 MF 50V Cap	3309	
	10-32 x ½ THP Screw	2049 NIC	Used to mount C2, C3
	Panel washer	2101	Used to mount C2, C3
	S o l d e r l u g	2934	Used as terminals on C2, C3
	5/16 Fiber shoulder washer	3320	Used to mount C2, C3
DM1	PWL-20 30A bridge	4131	Earlier units used CPN 3552
	6-32 x .625 BHP screw	3879	Used to mount DM1
	#6 internal star washer	1823	Used to mount DM1
	6-32 hex nut	1889 CAD	Used to mount DM1
SW1	SPST NC 160F Thermal Switch	2799	
R12	390 ohm 2W 5%	4029	May be trimmed with a 1K ohm resistor, CPN 3615.
	6-32 x .625 BHP screw	3879	#6 hardware used to mount 2799 and 9562 PC board mount bracket.
	#6 internal star washer	1823	
	#6 solder lug	3163	
	6-32 hex nut	1889 CAD	
	Faston flag terminal	3298	Used on DM1, C2, C3, thermal switch.
	Faston flag housing	3297	Used on DM1, C2, C3, thermal switch.
Q109, Q209 Q113, Q213	Selected 2N3585	3295	Driver transistors.
	TO-66 Insulator	4113	Used to mount drivers.
	TO-66 Mica Washer	2553	Used to mount drivers.
Q110, Q210 Q114, Q214	Selected T6J0377 (Fairchild)	3941	Output transistors.
Q110, Q210 Q114, Q214	2N 5631 75V (Motorola)	3991	Output transistors.
Q110, 4210 Q114, Q214	2N 5631 100V (Motorola)	3990	Output transistors.
	Anodized TO-3 insulator	4039	Used to mount outputs.

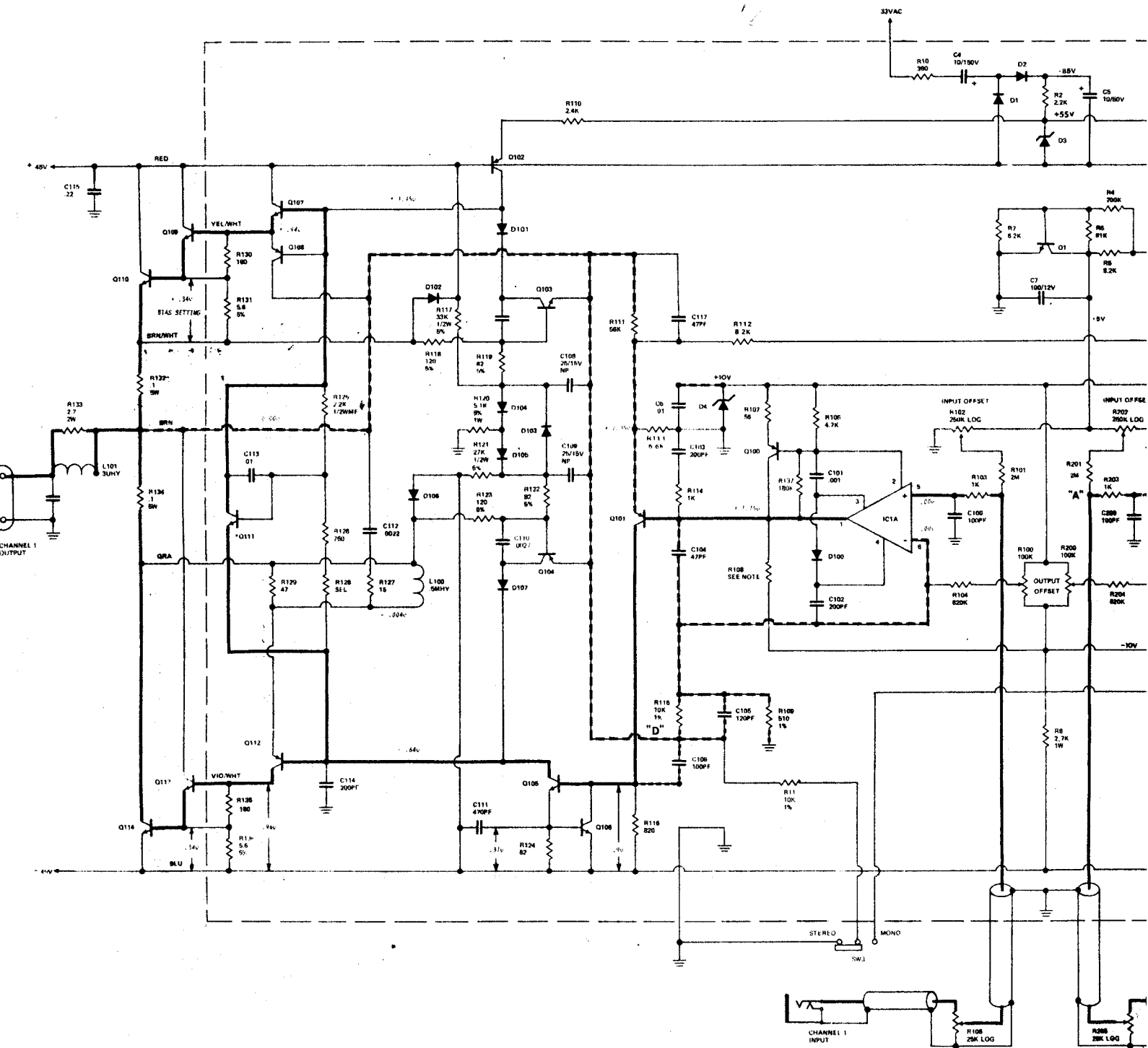


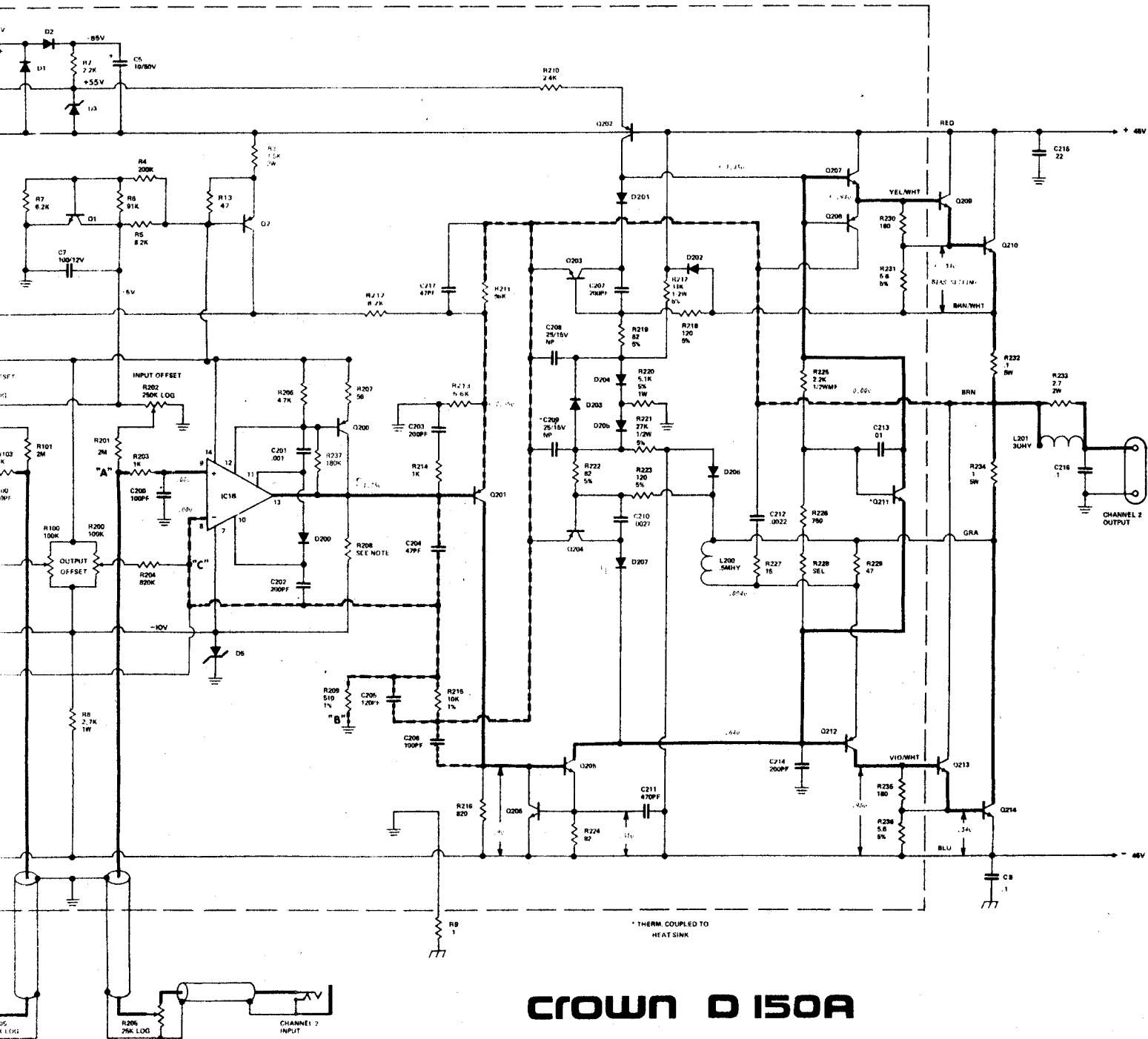
POWER SUPPLY SHOWN WIRED FOR 120VAC. FOR OPERATION AT ANOTHER LINE VOLTAGE FOLLOW CONVERSION CHART BELOW. SELECT THE CORRECT VOLTAGE. CAREFULLY IDENTIFY ALL WIRES BEFORE PROCEEDING.

NOTES: - ONLY FOUR TRANSFORMER PRIMARY WIRES ARE USED FOR ANY VOLTAGE CONFIGURATION. THESE WIRES ARE SOLDERED TO AN ADJACENT TERMINAL STRIP (TP-1, TP-2, TP-3). THE REMAINING TWO WIRES (UNUSED) ARE SOLDERED TO AN EXTRA TERMINAL STRIP (TP-4, TP-5).
 FOR CONNECTIONS BELOW 200 VAC THE LINE FUSE, F1, IS 4 AMPS. FOR CONNECTIONS 200VAC AND ABOVE F1 IS 2 AMPS.

VOLTAGE	TP-1	TP-2	TP-3	TP-4	TP-5
100	BLU. BRN	WHT. BLK	-	WHT./BLK	BLK./RED
120	WHT./BLK. BLK./RED	WHT. BLK	-	BLU	BRN
200	BLU	BLK	WHT. BRN	WHT./BLK	BLK./RED
220	BLU	BLK	WHT. BLK./RED	WHT. BLK	BRN
240	WHT./BLK	BLK	WHT. BLK./RED	BLU	BRN

NOTES:
 THIS SCHEMATIC APPLIES TO AMPLIFIERS NUMBERED D-14001 AND ABOVE (DOES NOT APPLY TO ANY EARLIER UNITS).
 POWER SUPPLY SHOWN STARTS SN 16310.
 CIRCUIT SHOWN APPLIES TO PC BOARD #9604 ONLY.
 DC VOLTAGES ARE SHOWN FOR VARIOUS POINTS THESE ARE THE NORMAL OPERATING VOLTAGES FOR ZERO INPUT.
 THE HEAVY CONTINUOUS TRACE FOLLOWS THE PRIMARY SIGNAL PATH THROUGH THE CIRCUIT. THE HEAVY BROKEN TRACE SHOWS FEEDBACK PATHS.
 WIRE COLOR CODES ARE GIVEN FOR THE MAIN POWER SUPPLY AND SOME BOARD WIRES.
 ALL RESISTORS IN OHMS UNLESS OTHERWISE STATED.
 ALL CAPACITORS IN MICRO-FARADS UNLESS OTHERWISE STATED.
 COMPONENTS COMMON TO BOTH CHANNELS ARE NUMBERED FROM 1 TO 99.
 CHANNEL ONE COMPONENTS ARE NUMBERED FROM 100 TO 199.
 CHANNEL TWO COMPONENTS ARE NUMBERED FROM 200 TO 299.
 R108, 208 ARE OMITTED WHEN IC-1 IS uA739; 3.3K WHEN uA749 IS USED.



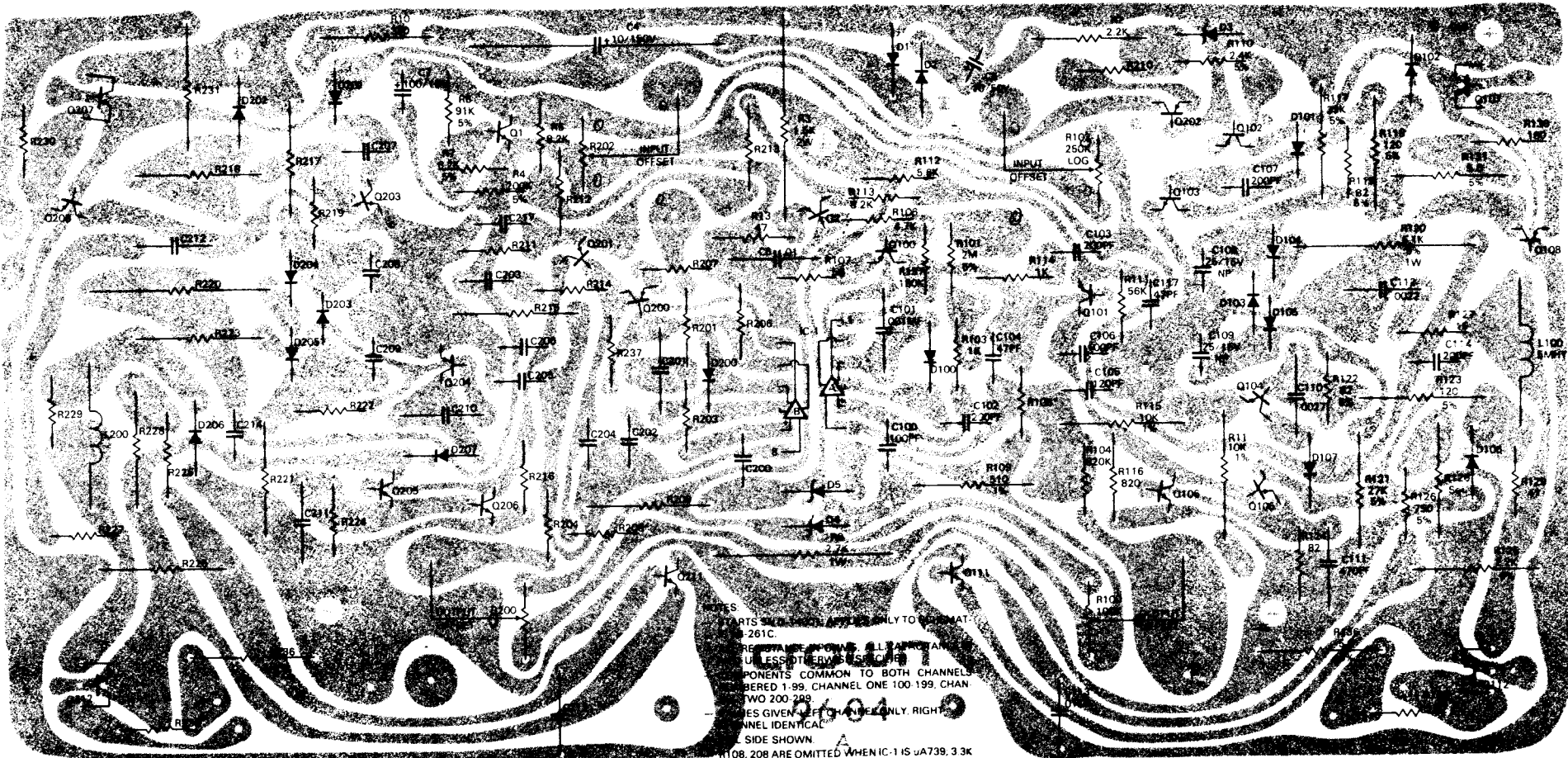


CROWN D 150A

Laboratory Power Amplifier

MI 261C

SC



PARTS ARE SHOWN ONLY TO THE EXTENT OF MAT-
 2-261C.
 REFERENCE TO THE LEFT AND RIGHT CHANNELS IS
 UNLESS OTHERWISE SPECIFIED.
 COMPONENTS COMMON TO BOTH CHANNELS ARE
 IDENTIFIED BY 1-99. CHANNEL ONE IDENTIFI-
 FERS ARE 100-199. CHANNEL TWO IDENTIFI-
 FERS ARE 200-299.
 DIMENSIONS GIVEN ARE FOR CHANNEL ONE ONLY. RIGHT
 CHANNEL IDENTICAL.
 SIDE SHOWN.
 R108, 208 ARE OMITTED WHEN IC-1 IS μ A739. 3 K
 WHEN μ A749 IS USED.