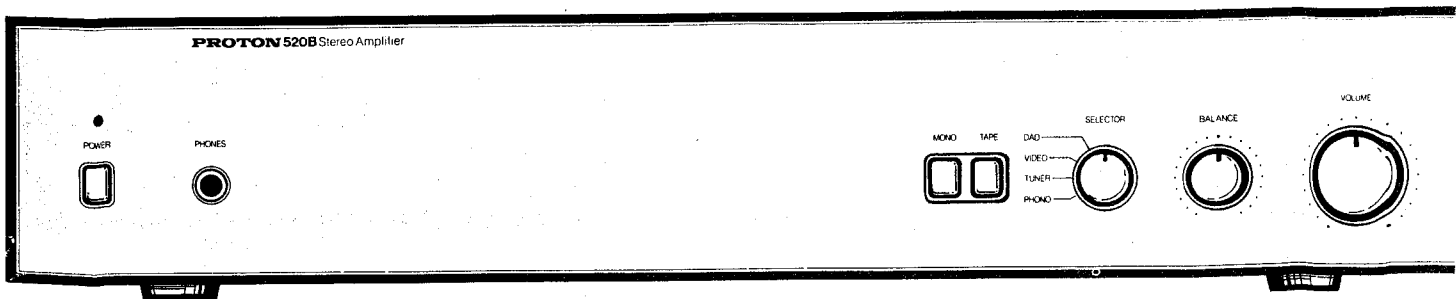


PROTON SERVICE MANUAL

520B STEREO AMPLIFIER



CONTENTS

SPECIFICATION.....	1
ALIGNMENT.....	2
BLOCK DIAGRAM.....	3
WIRING DIAGRAM.....	4
CIRCUIT DIAGRAM.....	5
PCB PARTS LOCATION (TOP VIEW).....	6
PCB PARTS LOCATION (BOTTOM VIEW).....	7
ELECTRICAL PARTS LIST.....	8
MECHANICAL PARTS LIST.....	8
ASSEMBLY DIAGRAM.....	9
PACKING DIAGRAM.....	10

SPECIFICATION

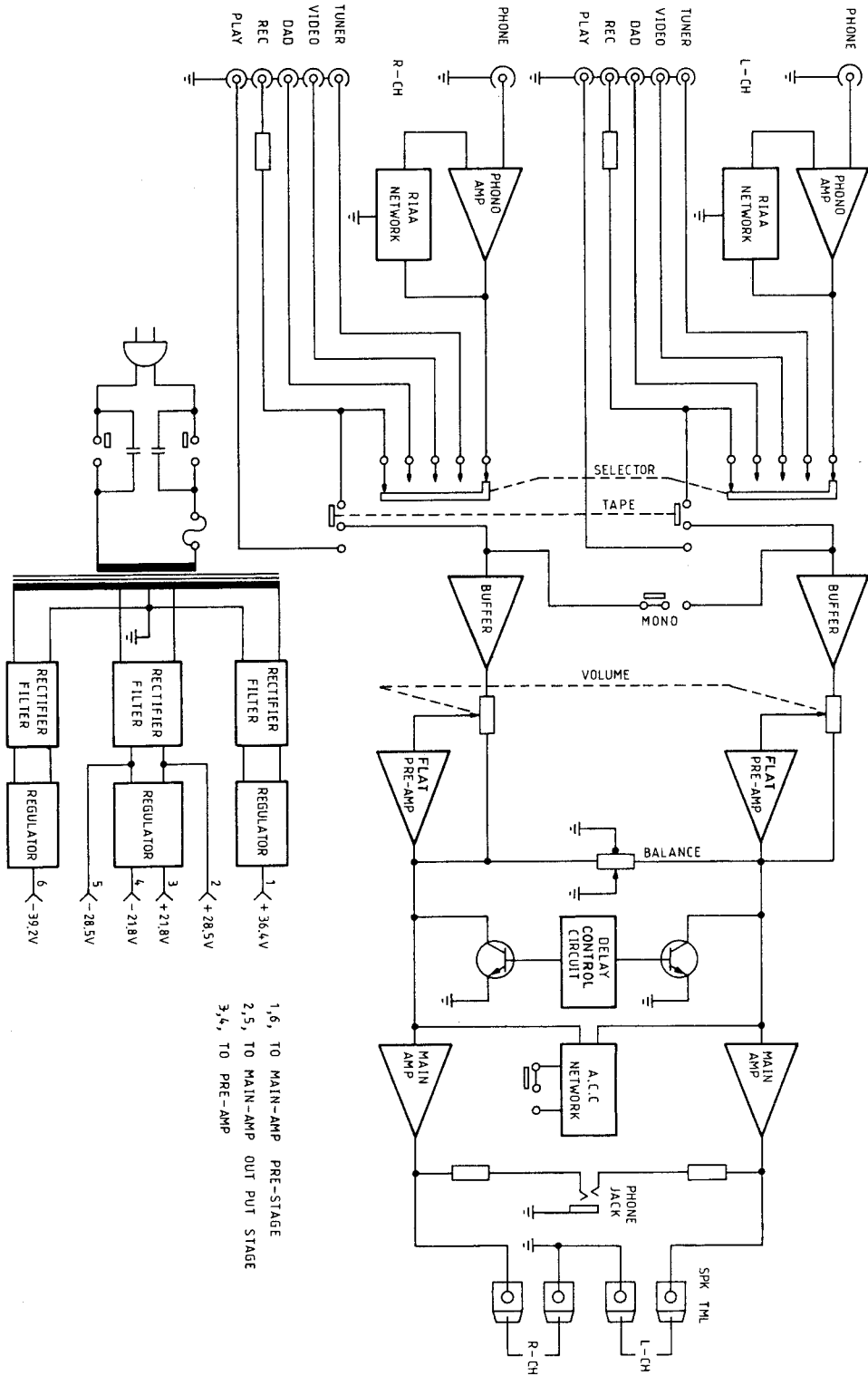
T.H.D. at Rated Power 20W:	0.015%
I.M.D. at Rated Power 20W:	0.015%
Clipping Power at 8 OHM/4 OHM/2 OHM:	26W/35W/39W
Dynamic Power at 8 OHM/4 OHM/2 OHM:	46W/78W/100W
Damping Factor:	>300
Frequency Response 20-20kHz:	±0.5dB
Power Bandwidth at T.H.D. 0.1%	10-60kHz
High Level Input Resistance/Capacitance:	15K OHM/220pF
Line Input Sensitivity (Video):	150mV
(Tape Play):	150mV
(Phono):	2.5mV
Residual Noise (Flat):	0.3mV
Channel Crosstalk (1kHz):	65dB
Function Crosstalk (1kHz):	70dB
S/N Ratio (A-Weighted) (AUX):	96dB
(Tape Play):	96dB
(Phono):	87dB
Phono Input Resistance:	47K OHM
Phono Overload @ T.H.D. 0.1% (20Hz/1kHz/20kHz);	20mV/200mV/2V
Phono T.H.D. at 4.5V Output:	0.03%
RIAA Response Accuracy:	±0.2dB
Power Supply:	
U.S.A. and Canadian Models	120V/60Hz
European Model	220V/50Hz
British and Australian Models	240V/50Hz
Other Area Model (General Model)	110V, 120V, 220V, 240V/50, 60Hz
Dimensions WxHxD (inch):	16-1/2"x3-7/16"x11"
(cm):	42.0x8.7x28.0
Net Weight:	5.2Kg/11.44Lbs

ALIGNMENT INSTRUCTION

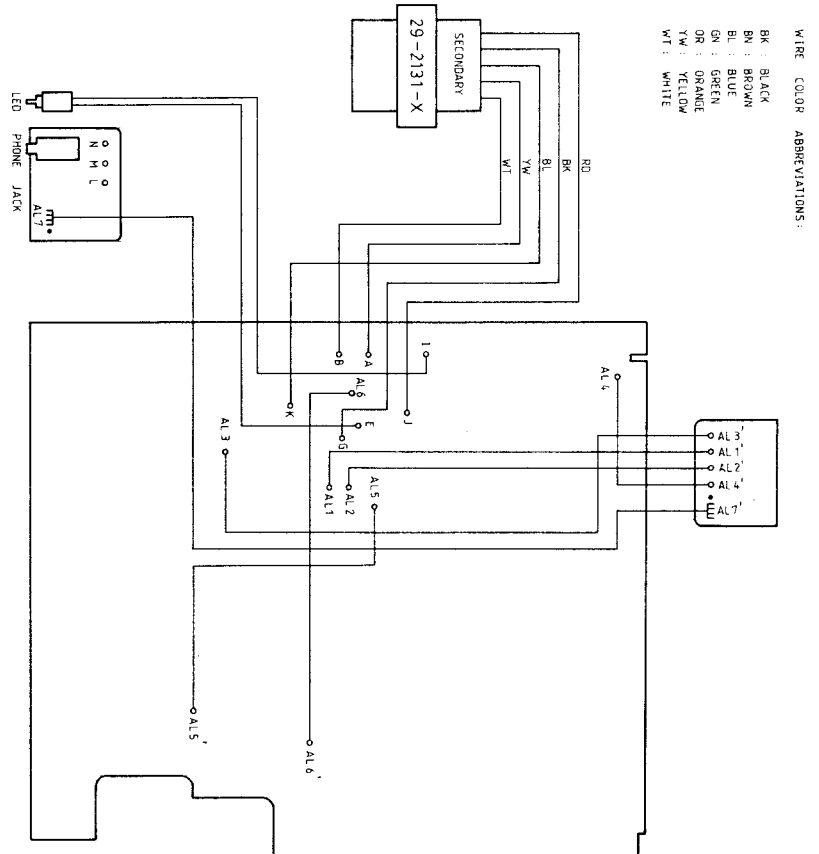
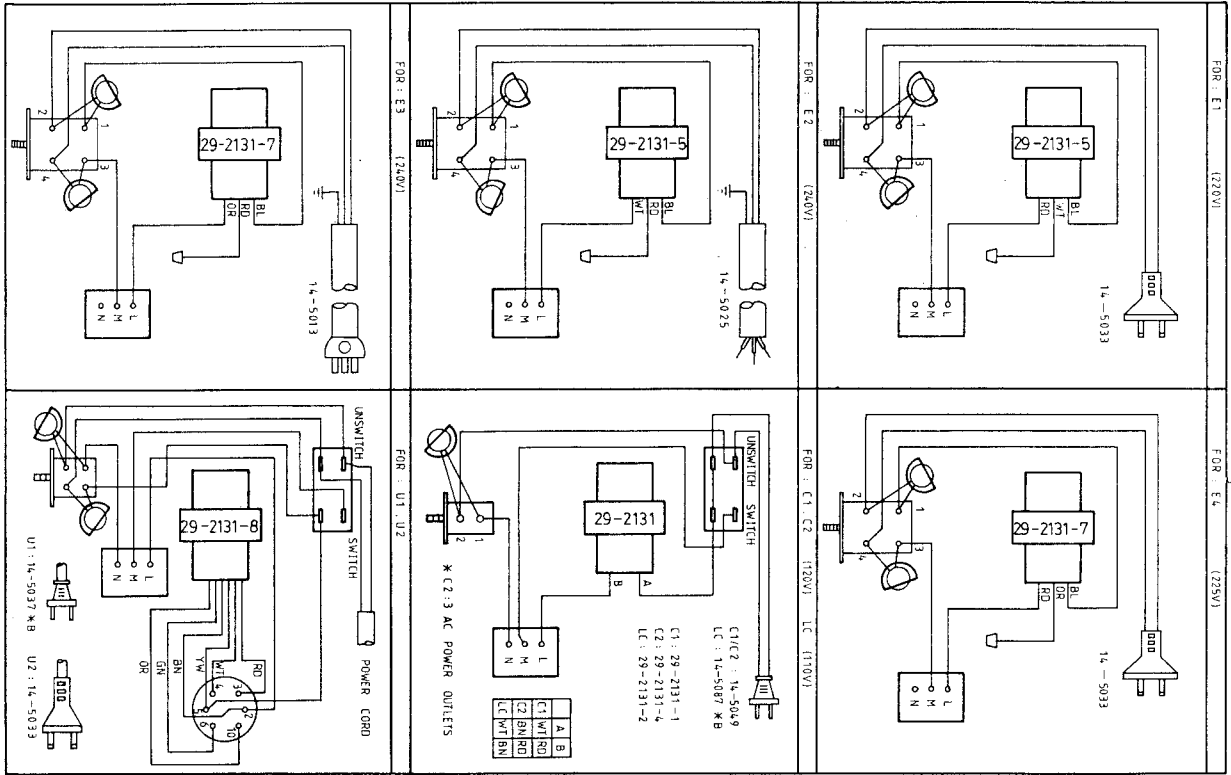
IDLE CURRENT ALIGNMENT

1. Turn VR601,VR602 to fully counter clockwise position.
2. Push on POWER for 5 minutes pre-heating.
3. Set the volume control at minimum position.
4. Remove the load from speaker terminals.
5. Unsolder each solder joint on R631,R632 which were be shorted in the circuitry, than soldering 1 OHM $\frac{1}{4}$ Watt carbon resistor on R631,R632 position.
6. Connect DC millivolt-meter across R631 for right channel and R632 for left channel. The meter sensitivity should be set at 100mV full scale deflection.
7. Adjust VR601 and VR602 properly so that the reading of meter is between 25mV and 50mV, the alignment is completed.
8. Next to short the R631 (right channnel) and R632 (left channel) 1 OHM resistors.

PACKING DIAGRAM

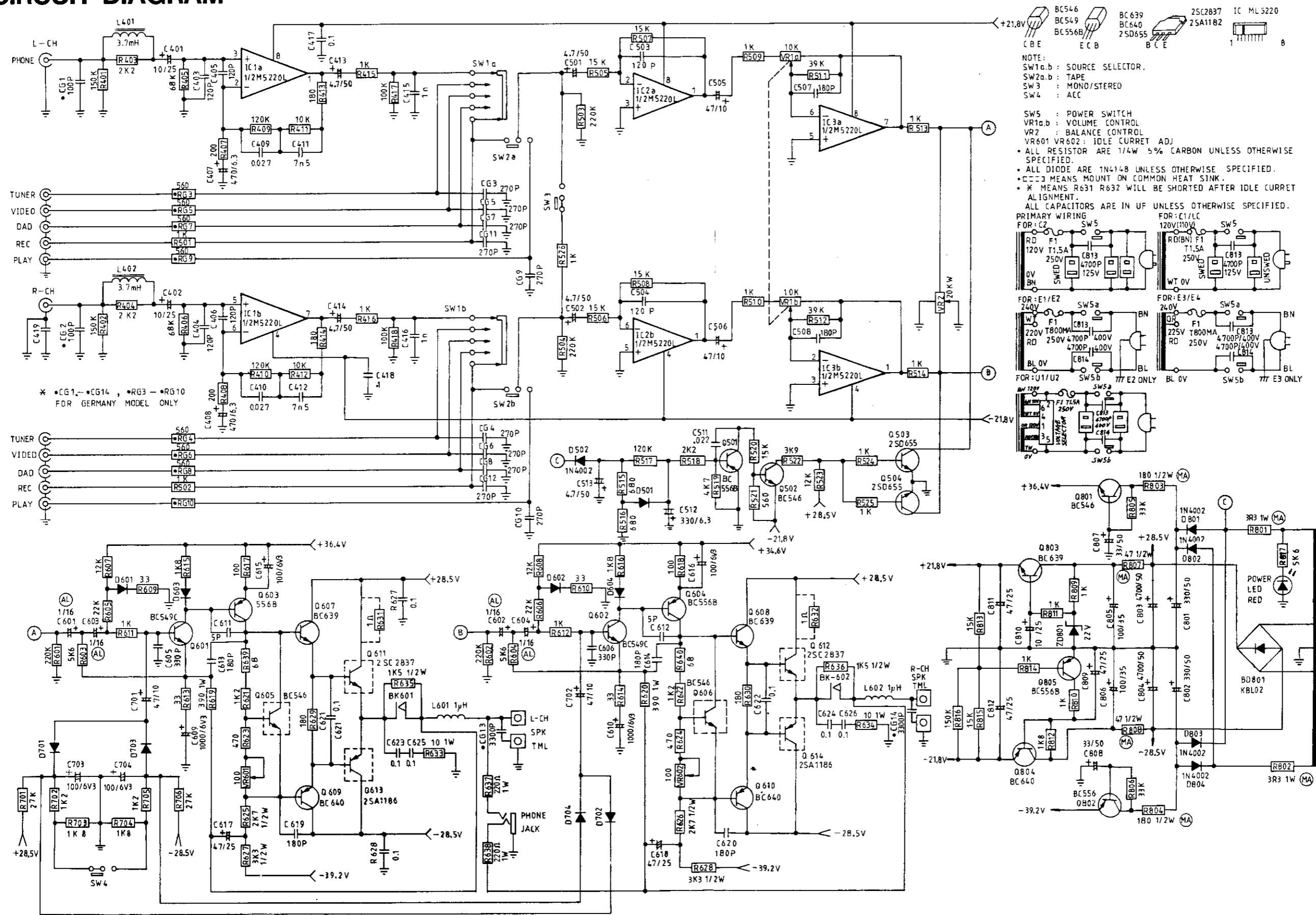


WIRING DIAGRAM



- WIRE COLOR ABBREVIATIONS:
- BK : BLACK
 - BN : BROWN
 - BL : BLUE
 - GN : GREEN
 - OR : ORANGE
 - YW : YELLOW
 - WT : WHITE

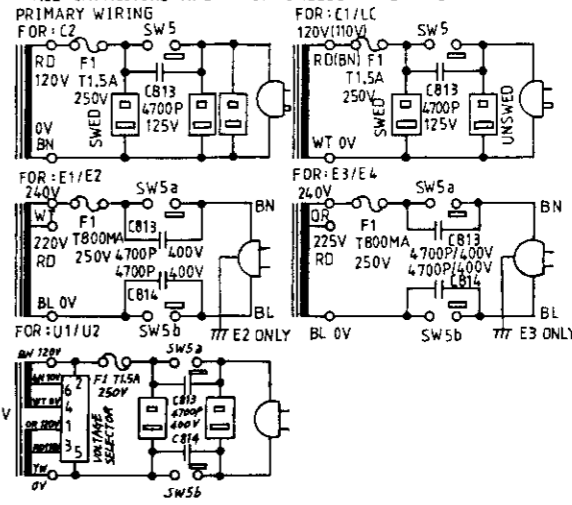
CIRCUIT DIAGRAM



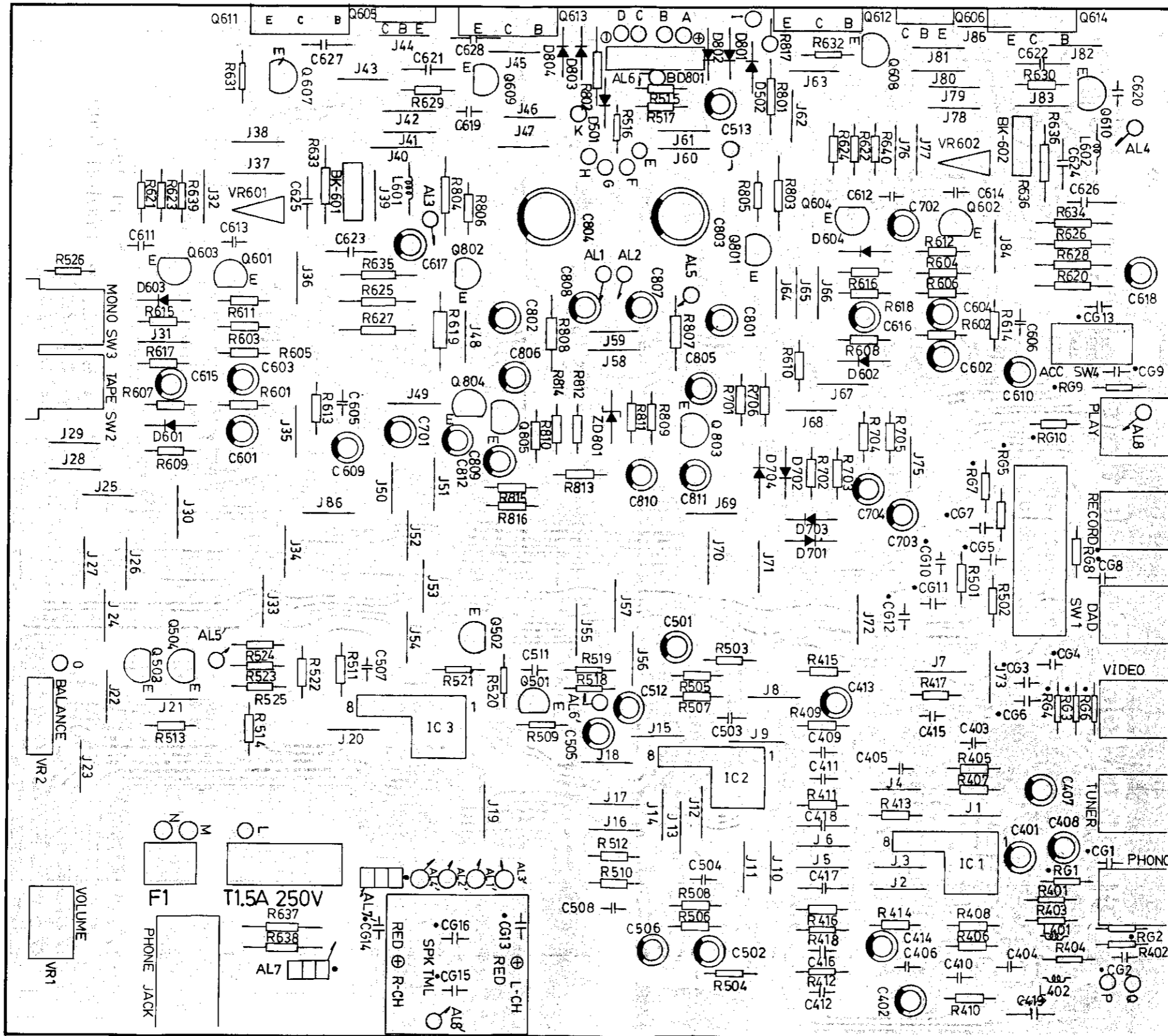
BC546 BC639 2SC2837 IC ML5220
 BC549 BC640 2SA1182
 BC556B 2SD655
 C B E E C B B C E

NOTE:
 SW1a,b : SOURCE SELECTOR.
 SW2a,b : TAPE
 SW3 : MONO/STEREO
 SW4 : ACC

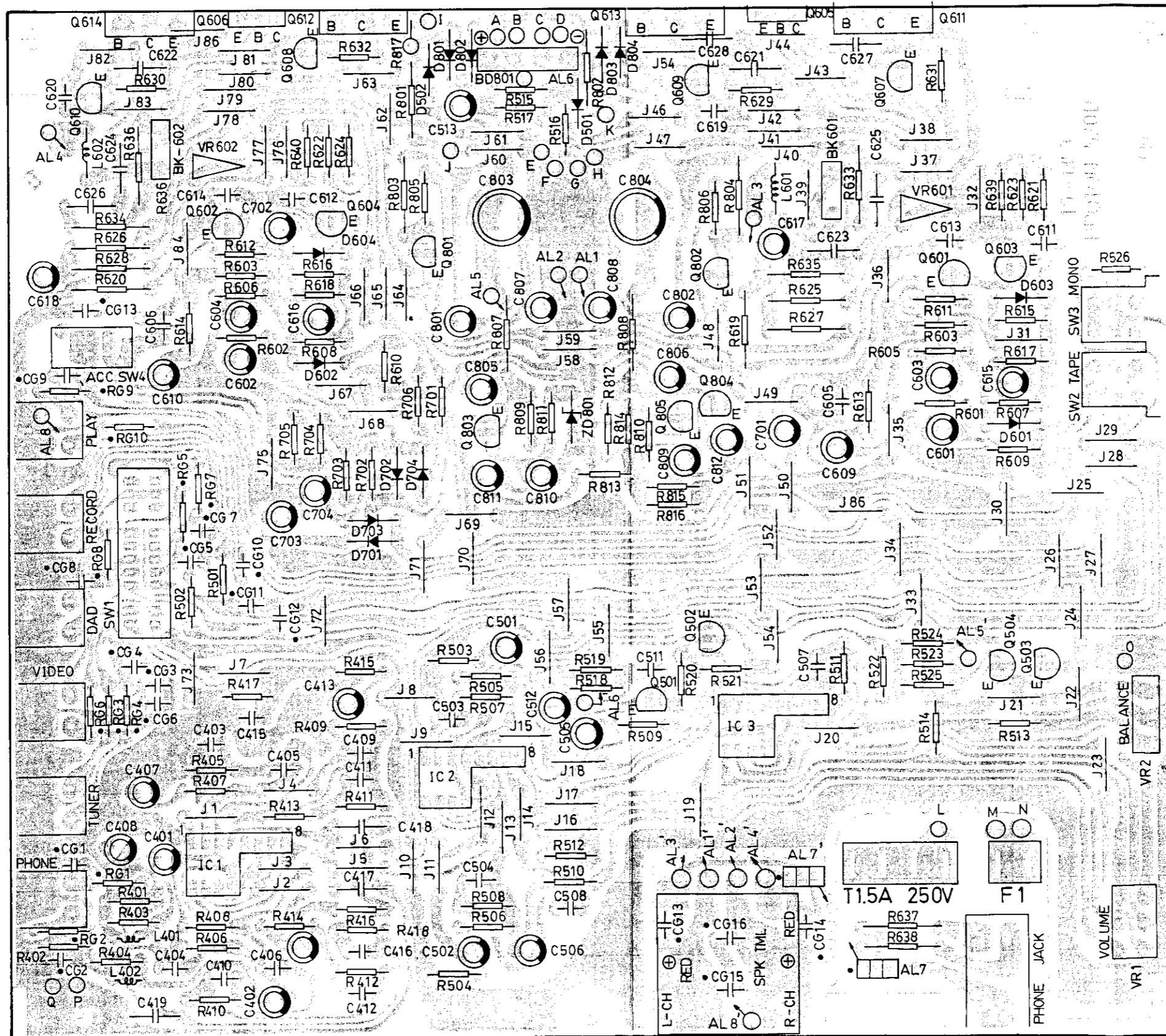
SW5 : POWER SWITCH
 VR1a,b : VOLUME CONTROL
 VR2 : BALANCE CONTROL
 VR601 VR602 : IDLE CURRENT ADJ
 * ALL RESISTOR ARE 1/4W 5% CARBON UNLESS OTHERWISE SPECIFIED.
 * ALL DIODE ARE 1N4148 UNLESS OTHERWISE SPECIFIED.
 * C- means MOUNT ON COMMON HEAT SINK.
 * * MEANS R631 R632 WILL BE SHORTED AFTER IDLE CURRENT ALIGNMENT.
 ALL CAPACITORS ARE IN UF UNLESS OTHERWISE SPECIFIED.



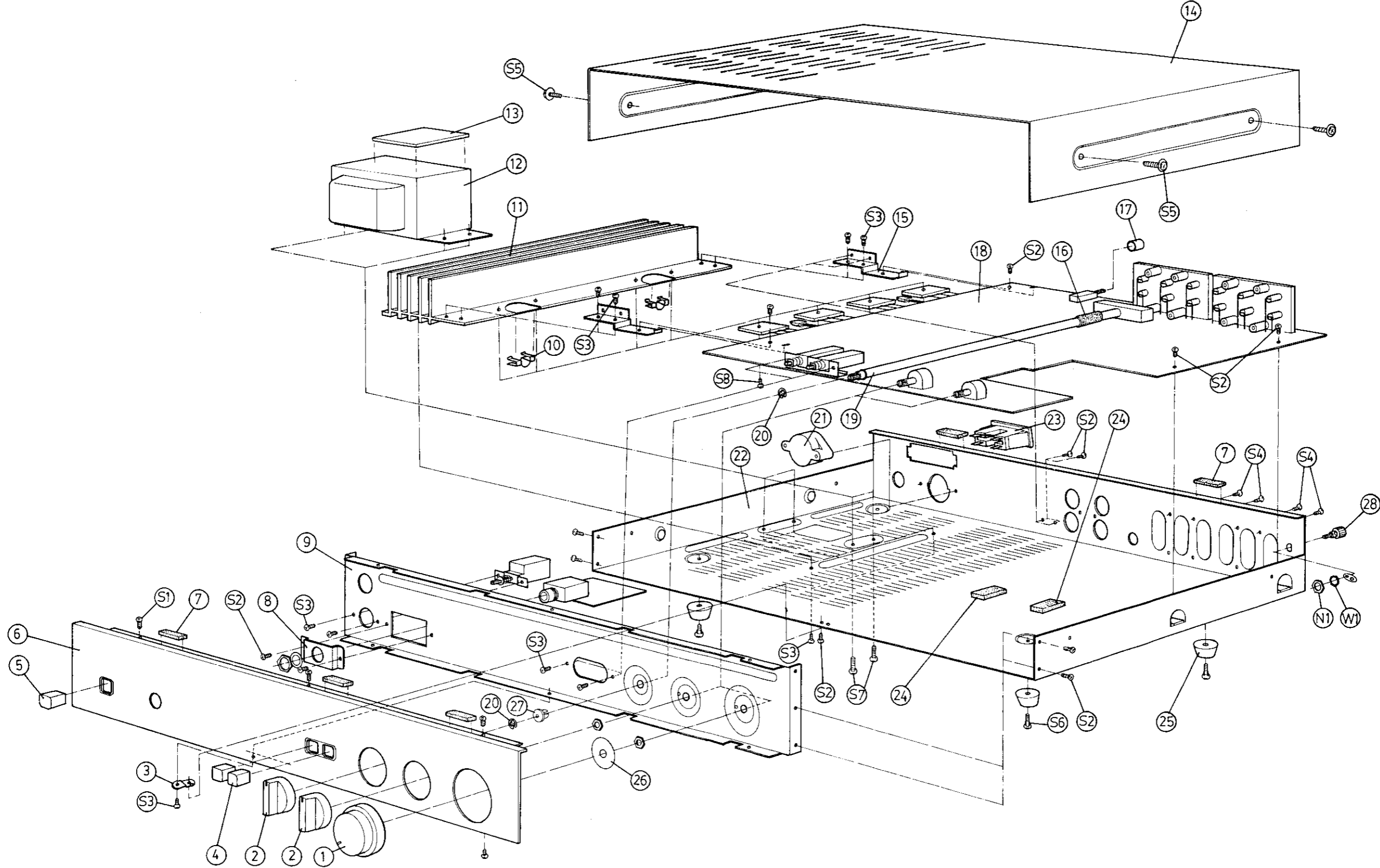
PCB PARTS LOCATION (TOP VIEW)



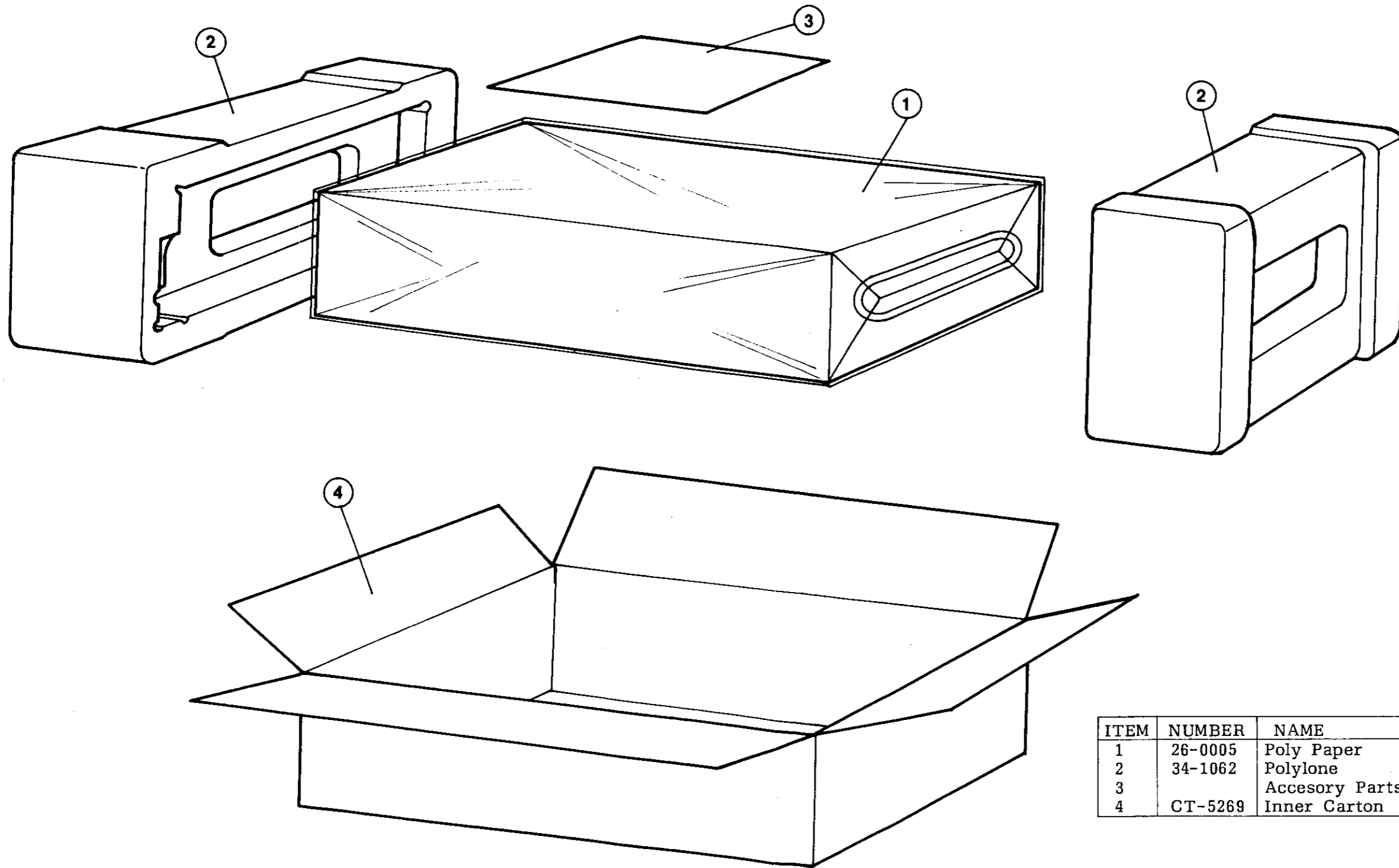
PCB PARTS LOCATION (BOTTOM VIEW)



ASSEMBLY DIAGRAM



BLOCK DIAGRAM



ITEM	NUMBER	NAME
1	26-0005	Poly Paper
2	34-1062	Polyone
3		Accessory Parts
4	CT-5269	Inner Carton