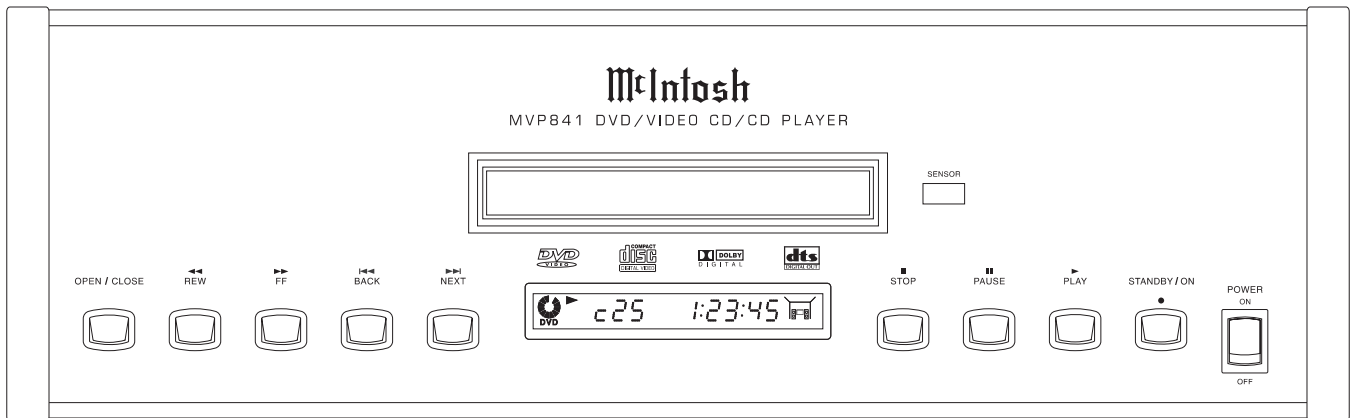


MVP841

DVD/VIDEO CD/CD PLAYER



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McIntosh

SERVICE MANUAL

PERFORMANCE SPECIFICATIONS

VIDEO SPECIFICATIONS

Signal System:	NTSC
Component Video Y Output Level:	1Vp-p (75 ohm)
Component Video PB Output Level:	0.7Vp-p (75 ohm)
Component Video PR Output Level:	0.7Vp-p (75 ohm)
Output Connector:	RCA Jack (Y: Green, PB: Blue, PR: Red)
S-Video Output Level:	1Vp-p (75 ohm)
S-Video C Output Level:	0.286Vp-p (75 ohm) (NTSC)
Output Connector:	Mini DIN
Video Output Level:	1Vp-p (75 ohm)
Output Connector:	RCA Jack

AUDIO SPECIFICATIONS

Number Of Channels:	2
Output Level:	2.2Vrms
DVD Frequency Response:	4-22kHz (48kHz Sampling, Linear Audio) 4-44kHz (96kHz Sampling, Linear Audio)
CD Frequency Response:	4-20kHz
CD Signal To Noise Ratio:	Better than 110dB (A-weighted)
DVD Dynamic Range:	Better than 100dB (Linear Audio)
CD Dynamic Range:	Better than 98dB
Harmonic Distortion:	0.003% (1kHz)
Channel Separation:	Better than 110dB (1kHz)

DIGITAL AUDIO OUTPUT

Optical:	-15dbm to -21dbm
----------	------------------

Output Connector:	Optical Connector
Coaxial:	0.5V p-p/75 ohm
Output Connector:	RCA Jack
Digital Signal Format:	44.1kHz, 48kHz and 96kHz

PICKUP

Laser Power:	CLASS II
Laser Beam Wavelength:	655nm

GENERAL SPECIFICATIONS

Power Requirements

100 Volts, 50/60Hz at 30 watts
110 Volts, 50/60Hz at 30 watts
120 Volts, 50/60Hz at 30 watts
220 Volts, 50/60Hz at 30 watts
230 Volts, 50/60Hz at 30 watts
240 Volts, 50/60Hz at 30 watts


Note: Refer to the rear panel of the MVP841 for the correct voltage.

Dimensions

Front Panel: 17-1/2 inches (44.5cm) wide, 5-3/8 inches (13.7cm) high, depth behind front mounting panel is 15 inches (38.1cm) including clearance for connectors. Panel clearance required in front of mounting panel is 3/4 inch (1.9cm).

Note: When the DVD/CD tray is opened, the panel clearance required in front of mounting panel is 6-3/4 inches (17.2cm).

NOTES

1. The heavy notes on the schematic denote the primary signal path.
2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
 - a. AC input at 120 volts, 50/60Hz.
 - b. All voltages are +/-10% with respect to ground. A high impedance (10 megaohm) voltmeter must be used.
3. Unless otherwise specified:
 - a. Resistor values are in ohms.
 - b. Capacitor values are microfarads (uF).
 - c. Inductor values are in microhenries (uH).
4. On PC board drawings, Square pad indicates:
 - a. Polarized Capacitors - Positive
 - b. Diodes - Cathode
 - c. Others - Pin 1
5. **WARNING**
Parts marked with the symbol  have critical characteristics. Use only replacement parts recommended by the manufacturer.

SAFETY INFORMATION

CAUTION: The use of optical instruments with this product will increase eye hazard.

Invisible laser radiation is emitted from the optical pickup lens when the unit is turned on.

1. Do not look directly into the pickup lens.
2. Do not use optical instruments to look at the pickup lens.
3. Do not adjust the preset variable resistor on the optical pickup.
4. Do not disassemble the optical pickup unit.
5. Use of controls or adjustment or performance of procedures other than those specified herein may result in hazardous radiation exposure.
6. Replace optical pickup only with manufacturers specified type.

Laser output: 0.65mW
Wavelength: 665nm

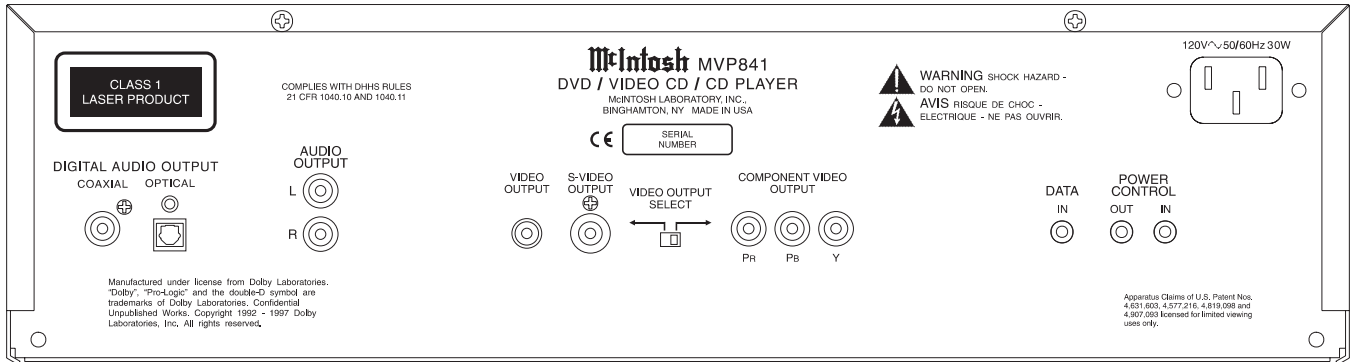
This product utilizes an embedded class 2 laser (CFR).

LUOKAN 1 LASERLAITE KLASS 1 LASER APPARAT

VAROITUS! Laitteen käyttäminen muulla kuin tassa kayttoohjeessa mainitulla tavalla saattaa altistaa kayttajan turvallisuusluokan 1 ylittavalle nakymattomalle lasersateiylle.

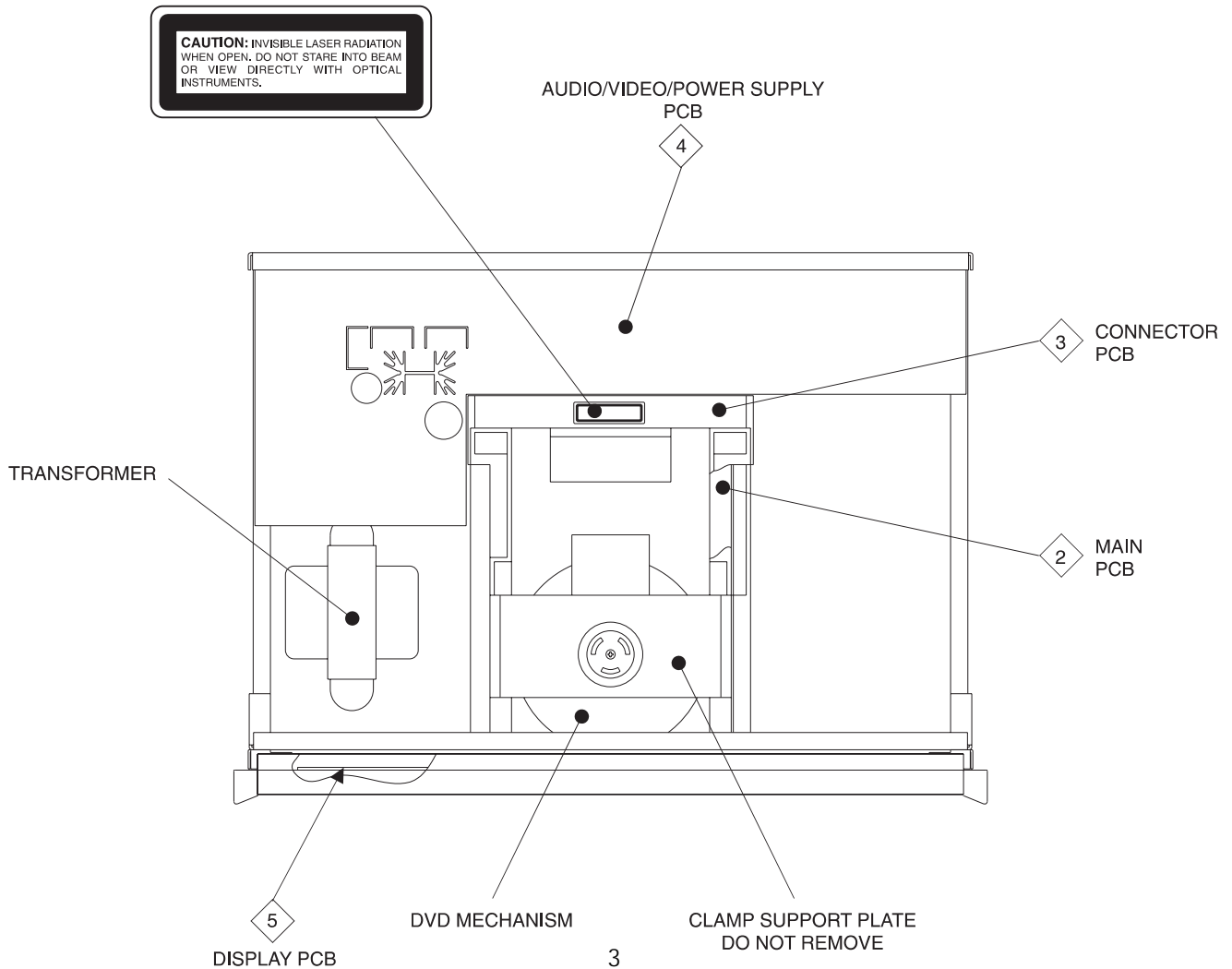
WARNING! Om apparaten anvands pa annat satt an i denna bruksanvisning specificerats, kan anvandaren utsattas for osynbg laserstraining, som overskrider gransen for laserklass 1.

REAR PANEL

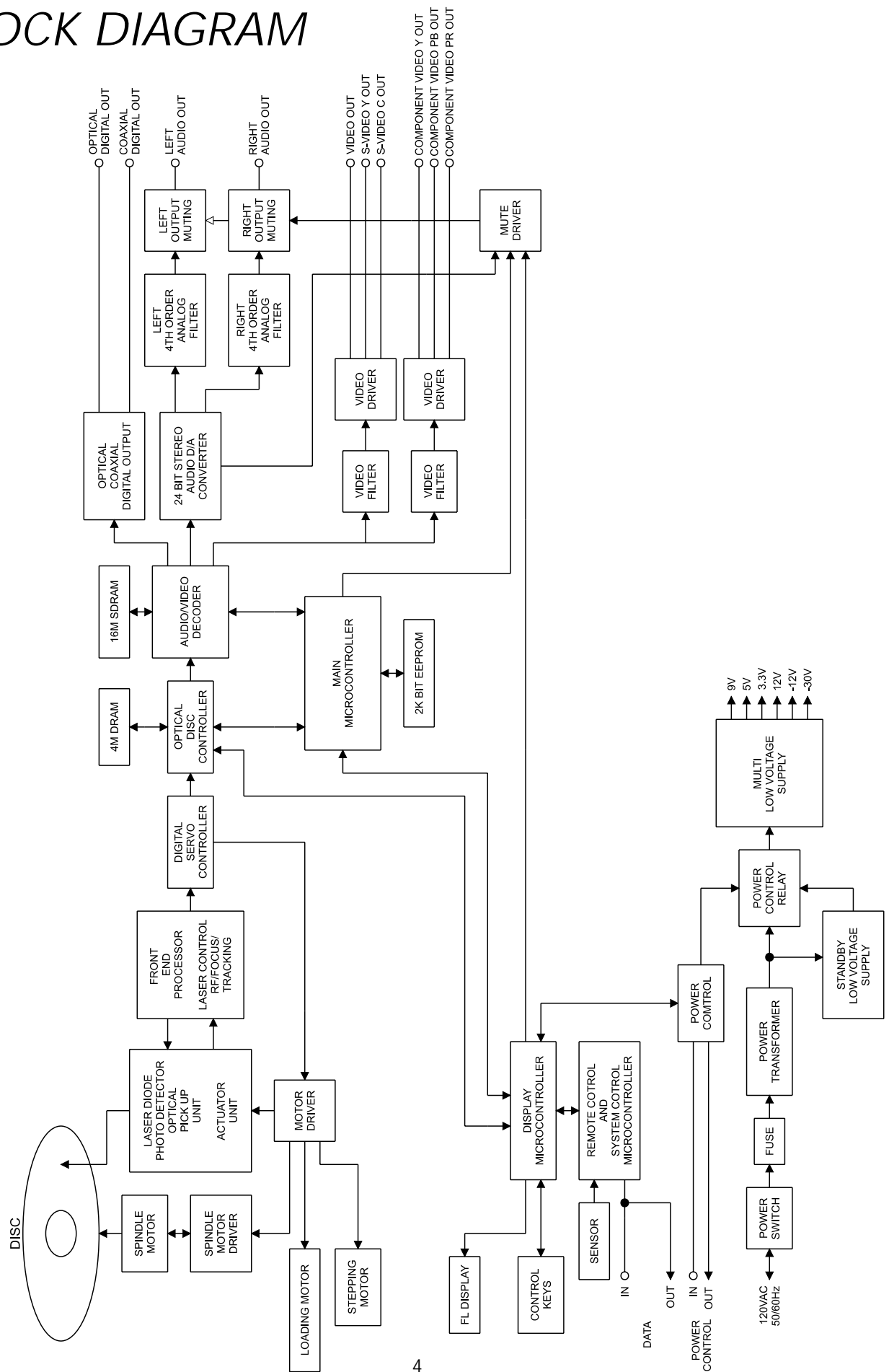


SECTION LOCATIONS

TOP VIEW WITH COVER REMOVED

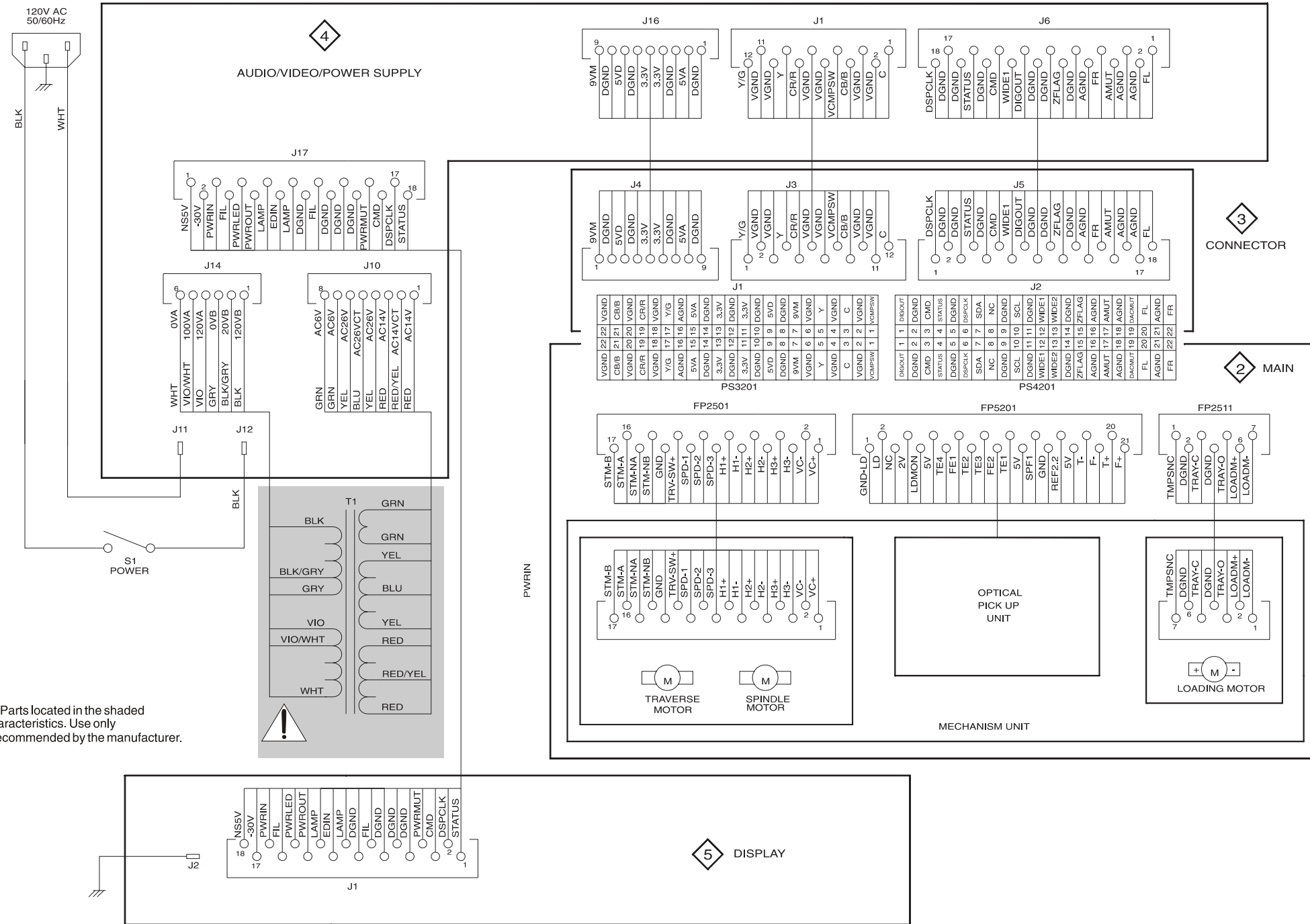


BLOCK DIAGRAM

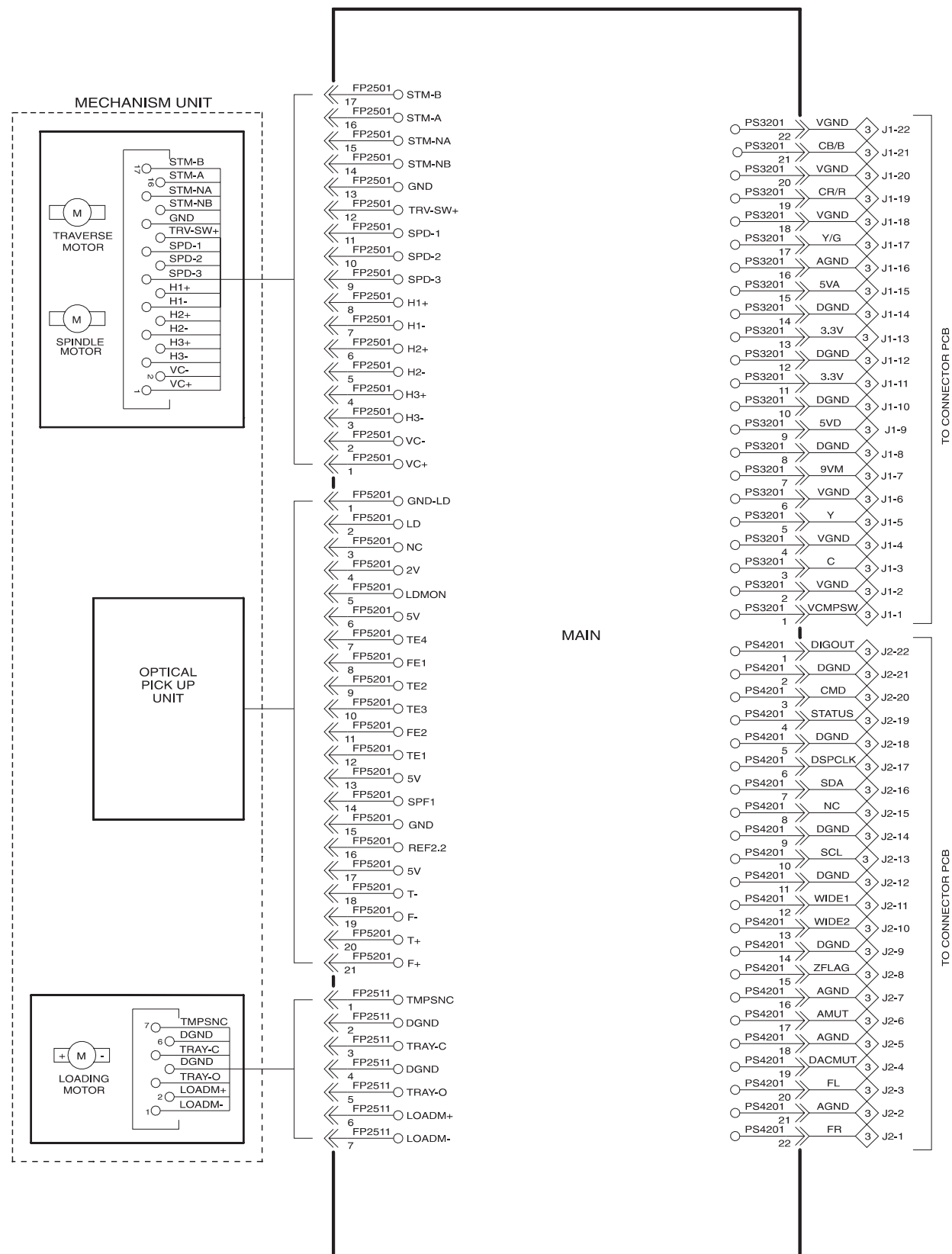


INTERCONNECT

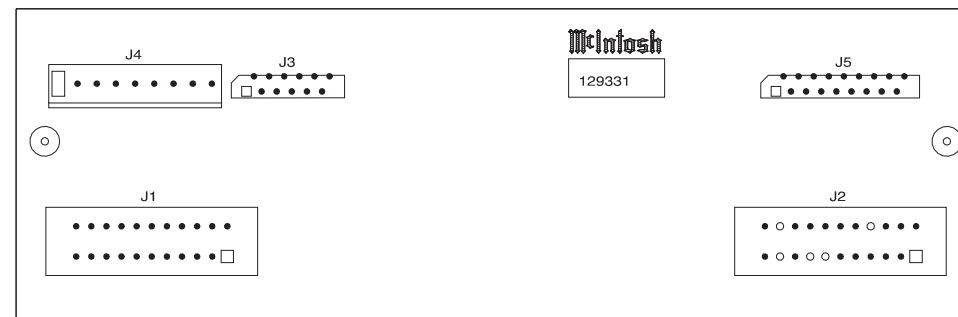
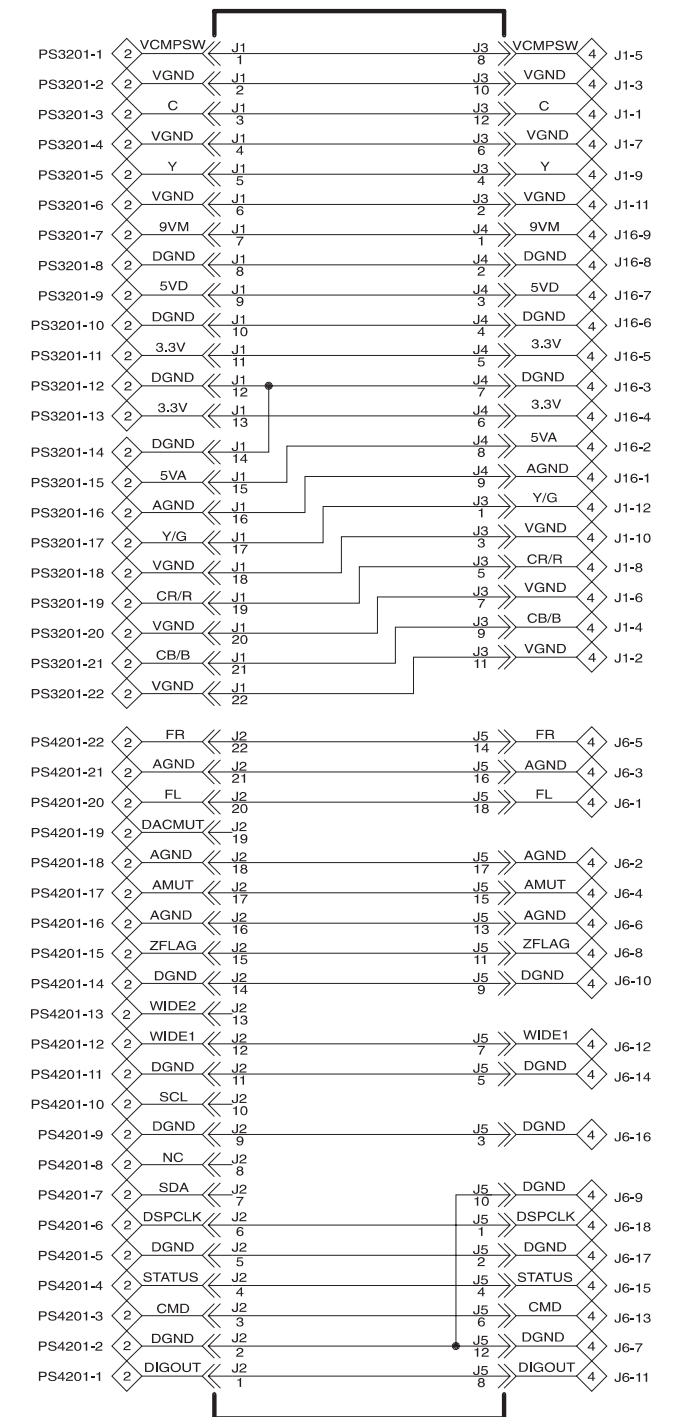
⚠ WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.



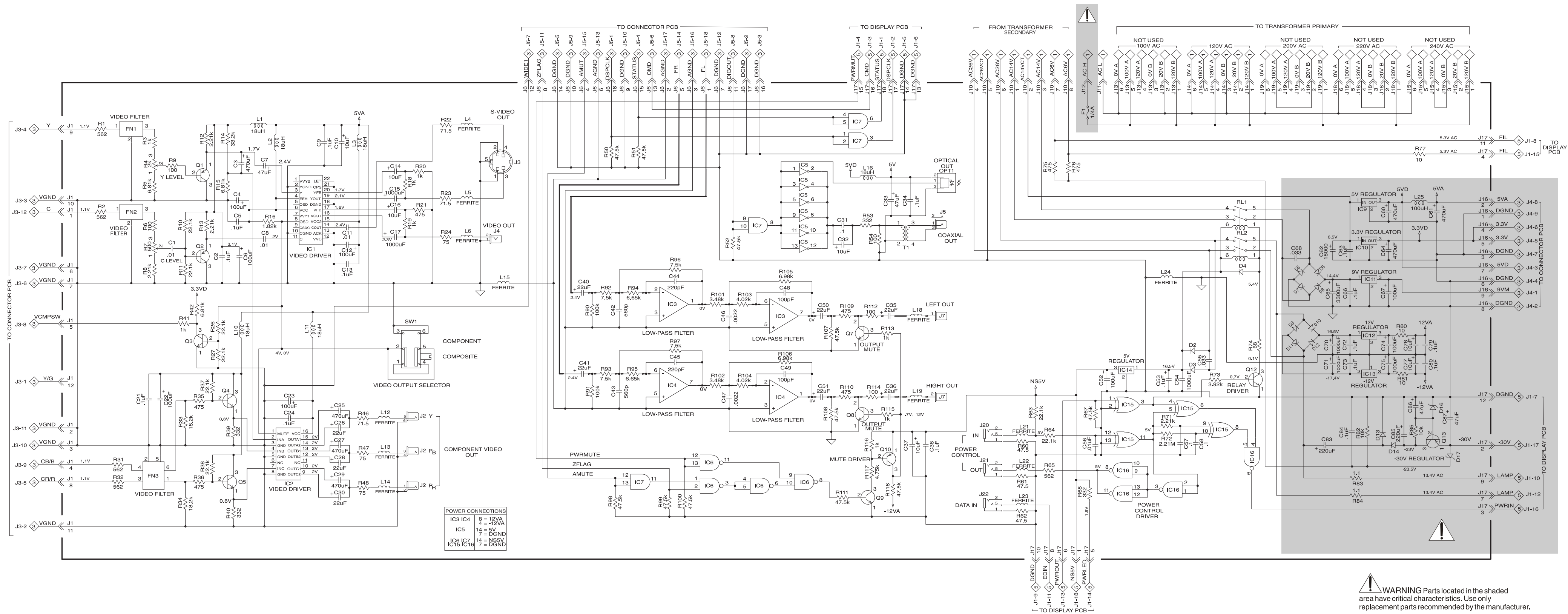
2 MAIN 320096



3 CONNECTOR 049413

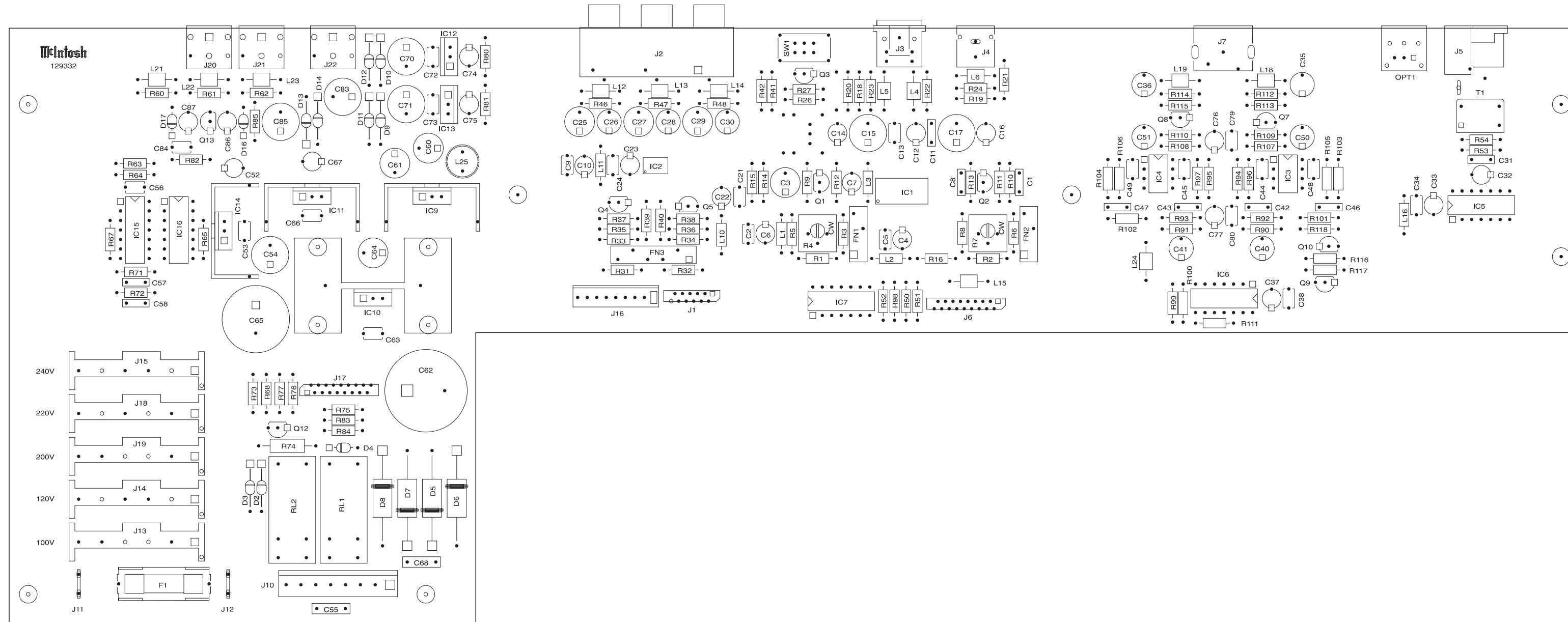


4 A/V POWER SUPPLY 049415

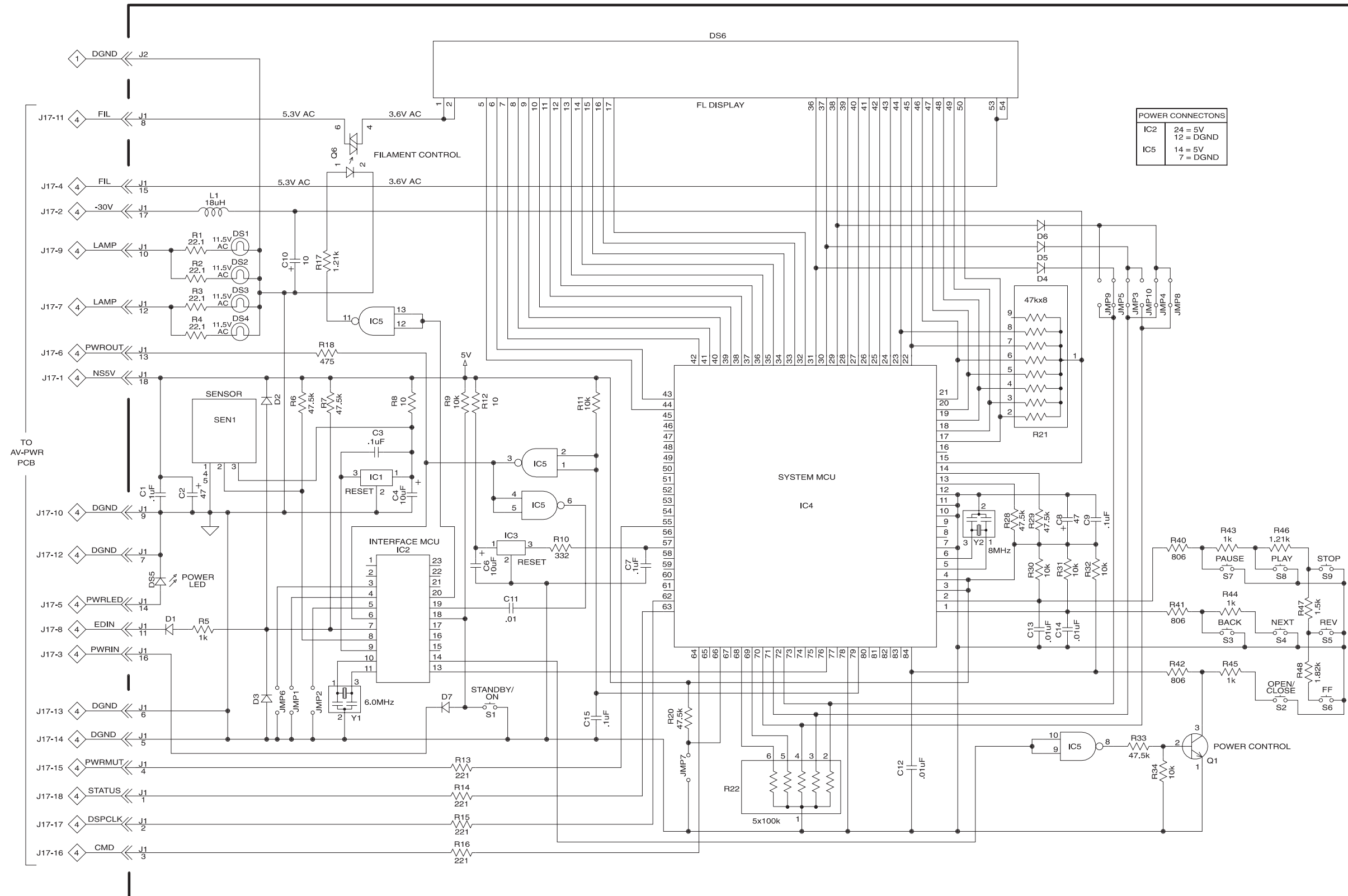


WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.

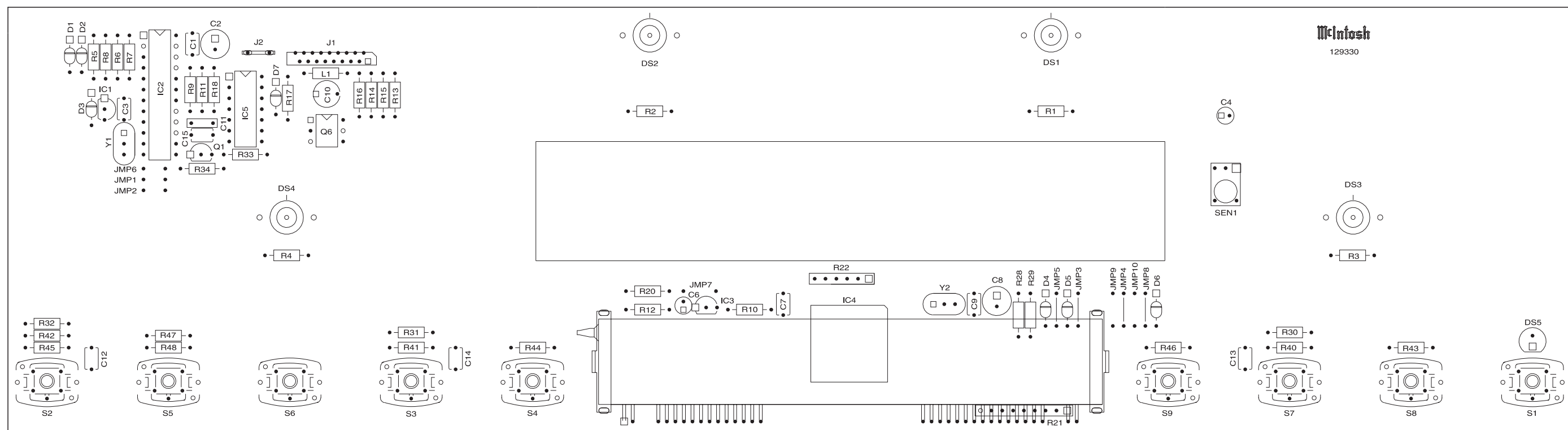
4 A/V POWER SUPPLY 049415



5 DISPLAY 049414



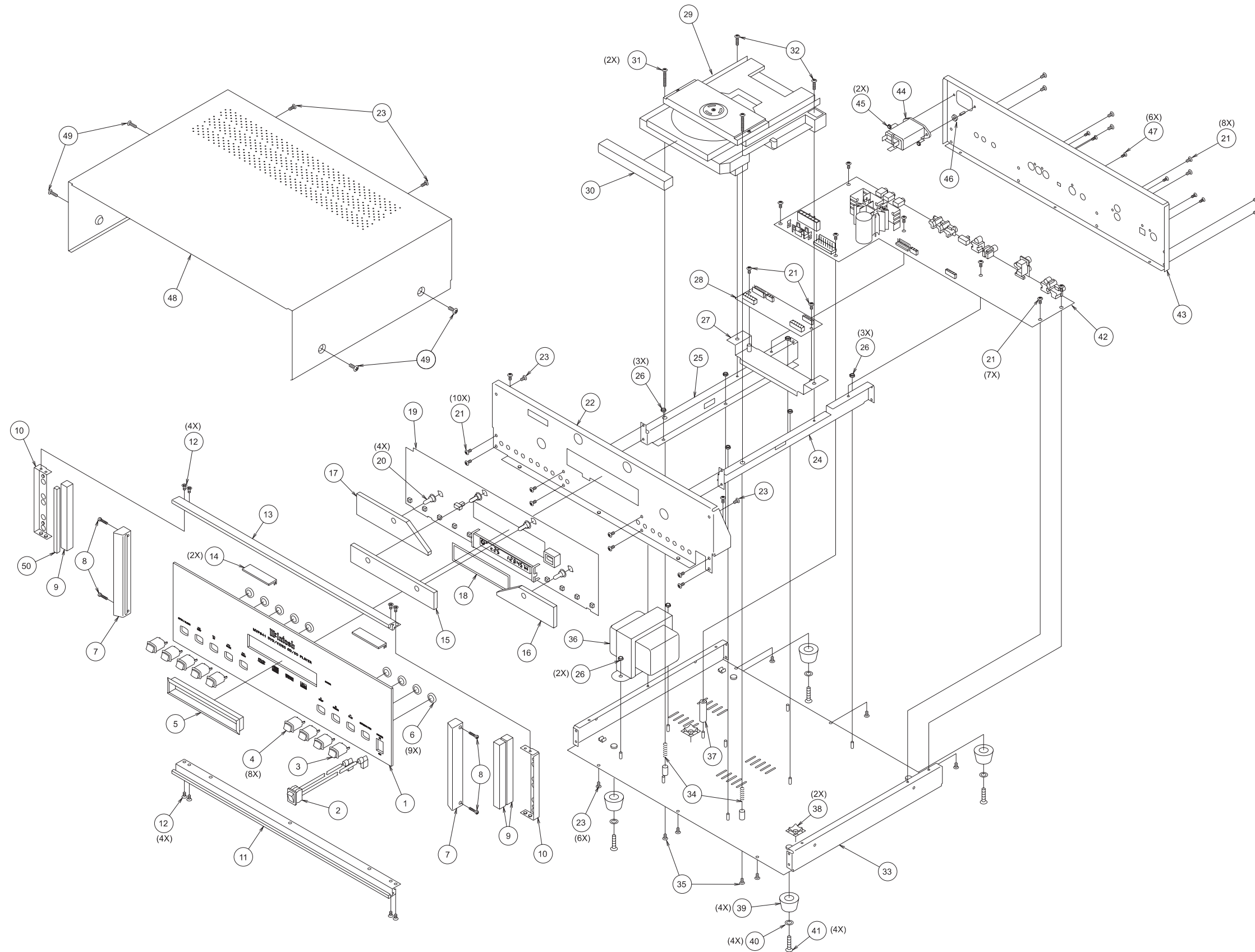
5 DISPLAY 049414



PARTS LIST

PART NO.	DESCRIPTION	REFERENCE NO.					
049413	CONNECTOR PCB						
117244	FRICTION LK CONN 9POS MALE	J4	133094	IC DUAL OPERATIONAL AMPLIFIER	IC3 IC4	066382	CAP ELECT 10UF 16V (4X5 CASE)
117720	12PIN FFC CONNECTOR	J3	133155	IC REGULATOR -12V	IC13	066437	CAP ELECT 10UF 50V LOW ESR
117764	22 PIN CONNECTOR 2MM PITCH	J1 J2	133156	IC REGULATOR 12V	IC12	070047	DIODE SILICON
117765	FFC CONNECTOR 18PIN	J5	133161	74HC00N NAND 2 INPUT X 4	IC6 IC16	070093	LED LAMP RED
			133173	MC74HCU04N HEX UNBUF INVERTER	IC5	117708	FASTON BLADE W/FEET
049415	AUDIO/VIDEO/POWER SUPPLY PCB		133250	IC REGULATOR 5V	IC14	117765	FFC CONNECTOR 18PIN
058157	FIBER OPTIC TRANSMITTER	OPT1	133340	VOLTAGE REGULATOR 9V 1.5A	IC11	121041	IR RECEIVER
061300	MONO CAP 100PF 100V 5% NPO T&R	C48 C49	133365	IC 5V 1.5A REGULATOR LOW DROP	IC9	122224	CHOKO 18UH 5%-10%
061301	MONO CAP 220PF 100V 5% NPO T&R	C44 C45	133371	TRIPLE VIDEO DRIVER	IC2	131022	600V TRIAC DRIVER OPTOCOUPLER
061304	MONO CAP .01UF 50V 5% X 7R T&R	C56	133372	QUAD AND GATE	IC7	132223	TRANSISTOR NPN MPS4124 2K/REEL
061305	MONO CAP .1UF 50V 5% Z50 T&R	C2 C5 C9 C13 C21 C24 C34 C38 C53 C63 C66 C72 C73 C79 C80 C84 C42 C43	133387	QUAD 2 INPUT EXCLUSIVE OR GATE	IC15	133161	74HC00N NAND 2 INPUT X 4
			133393	IC 3.3V LOW DROPOUT REGULATOR	IC10	133240	PST572E MICROPCSSR RESET NEG
			134388	TRIM POT 2K OHM HORIZ.	R4	133241	IC MICROPCSSR RESET POS
064297	CAP POLY 560PF 5% 160VDC	C46 C47	134396	POT: 500 OHMS,20%,LINEAR	R7	133341	PROGRAMMED VERSION OF 133292
064304	CAP MPOLY .0022UF 5% 63/400VDC	C1 C8 C11	137002	RES FP 1.1 OHM 1/4W 5%	R83 R84	144053	RES MF 10K 1% 1/4W
064312	CAP M POLY .01UF 5% 63VDC	C31 C57 C58	137025	FLAMEPROOF RES: 10 OHMS 5% 1/4W	R77		
064325	CAP M POLY .1UF 5% 63VDC	C55 C68	141208	RES CF 68 5% 1/2W	R74	144086	RES MF 475 1% 1/4W
064427	CAP MPOLY .033UF 100V 10%	C83 C85	144015	RES MF 33.2K 1% 1/4W	R14	144089	RES MF 806 1% 1/4W
066254	CAP ELECT 220UF 50V 20%	C10 C14 C16 C32 C37 C77 C76	144053	RES MF 10K 1% 1/4W	R82 R85	144090	RES MF 1K 1% 1/4W
066445	CAP ELECT 10UF 50V	C7 C33 C86 C87 C4 C6 C12 C22 C23 C52 C67 C74 C75	144086	RES MF 475 1% 1/4W	R21 R35 R36 R75 R76 R109 R110 R3 R18 R19 R20 R41 R113 R115 R116	144108	RES MF 47.5K 1% 1/4W
066446	CAP ELECT 47UF 35V	C62	144090	RES MF 1K 1% 1/4W	R103 R104 R117	144128	RES MF 1.5K 1% 1/4W
066447	CAP ELECT 100UF 16V	C26 C28 C30 C35 C36 C40 C41 C50 C51 C3 C25 C27 C29 C60 C61 C64	144096	RES MF 4.02K 1% 1/4W	R50 R51 R52 R67 R98 R99 R100 R107 R108 R111 R118	144157	RES MF 10 1% 1/4W
066460	CAP ELECT 18000UF 16V	C65	144097	RES MF 4.75K 1% 1/4W	R90 R91 R80 R81	144160	RES MF 22.1 1% 1/4W
066506	CAP ELECT 22UF 100V	C15 C17 C54 C70 C71	144099	RES 6.98K 1% 1/4W	R33 R34 R10 R11 R26 R27 R37 R38 R63 R64	144172	RES MF 221 1% 1/4W
066508	CAP ELECT 470UF 16V	D4	144108	RES MF 47.5K 1% 1/4W	R111 R118 R90 R91 R80 R81	144191	RES MF 1.21K 1% 1/4W
066509	CAP ELECT 3300UF 35V	D17	144113	RES MF 100K 1% 1/4W	R105 R106 R50 R51 R52 R67 R98 R99 R100 R107 R108 R111 R118	144250	RES NETWORK 9 X 47K BUS
066513	CAP ELECT 1000UF 25V	D5 D6 D7 D8	144157	RES MF 10 1% 1/4W	R111 R118 R90 R91 R80 R81	144296	RES MF 1.82K 1% 1/4W
070047	DIODE SILICON	D2 D3 D9 D10 D11 D12 D13 D14	144181	RES MF 18.2K 1% 1/4W	R10 R11 R26 R27 R37 R38 R63 R64 R6 R9 R54 R112 R114 R73	144446	METAL FILM RES. 332 OOHM 1/4W
070085	DIODE ZENER 6.2V 5% 500MW	D16	144187	RES MF 22.1K 1% 1/4W	R92 R93 R96 R97 R72	144450	RESISTOR NETWORK 100KB
070126	DIODE 200V 3A	L4 L5 L6 L12 L13 L14 L15 L18 L19 L21 L22 L23 L24	144196	RES MF 100 1% 1/4W	R16	150058	TACT SWITCH
070131	DIODE RECTIFIER	RL1 RL2	144198	MF RES 3920 OHM 1% 1/4W	R5 R15 R42 R8 R12 R13 R71 R22 R23 R46	180039	CERAM RESON 6.0MHZ W/CAP
070161	ZENER DIODE 30V 1/2W 5%	F1	144210	RES MF 7.5K 1% 1/4W	R1 R2 R3 R4 R60 R61 R62 R24 R47 R48 R39 R40 R53 R68 R101 R102	180049	CERAMIC RESONATOR 8MHZ
076019	LEADED FERRITE BEADS	J16	144265	RES MF 2.21M 1/4W	R1 R2 R31 R32 R65 R60 R61 R62 R24 R47 R48 R39 R40 R53 R68 R101 R102	310290	DVD CONTROL MCU
087059	RELAY	J3	144296	RES MF 1.82K 1% 1/4W	R1 R2 R31 R32 R65 R60 R61 R62 R24 R47 R48 R39 R40 R53 R68 R101 R102		
089093	FUSE 1/4A 250V SB 5X20 IEC	J7	144297	RES MF 6.81K 1% 1/4W	R5 R15 R42 R8 R12 R13 R71 R22 R23 R46		
117244	FRICTION LK CONN 9POS MALE	J5	144298	RES MF 2.21K 1% 1/4W	R1 R2 R31 R32 R65 R60 R61 R62 R24 R47 R48 R39 R40 R53 R68 R101 R102		
117417	MINI DIN CONNECTOR	J11 J12	144407	METAL FILM RES. 71.5 1/4W 1%	R94 R95 SW1		
117436	PJ261G PHON JACK, GOLD	J10	144408	MF RES 562 OHM 1% 1/4W	T1		
117451	PH/JACK GL PL BLK M7008	J14	144442	RES MF 47.5 1% 1/4W	IC1		
117572	PHONO JACK YELLOW GOLD FLASHED	J1	144444	METAL FILM RES 75 1% 1/4W	FN1		
117708	FASTON BLADE W/FEET	J2	144444	METAL FILM RES 332 OHM 1/4W	FN2		
117717	MTA-156 HEADER 8PIN	J20 J21 J22	144448	METAL FILM RES 3.48K OHM 1/4W	FN3		
117719	PCB MOUNT POWER CONNECTOR RED	J6 J17	144449	METAL FILM RES 6.65K OHM 1/4W			
117720	12PIN FFC CONNECTOR	L1 L2 L3 L10 L11 L16	148059	SLIDE SWITCH			
117721	RCA JACK 3P RED-BLU-GRN		159285	DIGITAL INTERFACE TRANSFORMER			
117759	STEREO 1/8 HEAD PHONE JACK		310297	VIDEO DRIVER			
117765	FFC CONNECTOR 18PIN		310299	Y-LOWPASS FILTER			
122224	CHOKO 18UH 5%-10%		310300	C-BANDPASS FILTER			
			310303	DUAL VIDEO LOW PASS FILTER			
122312	POWER INDUCTOR 100UH	L25	049414	DISPLAY PCB			
132171	TRANSISTOR NPN	Q12	058153	INCANDESCENT LAMP 14V 100MA	DS1 DS2 DS3 DS4		
132172	TRANSISTOR SI PNP MPSA55	Q13	061304	MONO CAP .01UF 50V 5% X 7R T&R	C12 C13 C14		
132223	TRANSISTOR NPN MPS4124 2K/REEL	Q3 Q4 Q5 Q9	061305	MONO CAP .1UF 50V 5% Z50 T&R	C1 C3 C7 C9 C15		
132224	TRANSISTOR PNP	Q1 Q2 Q10	064312	CAP M POLY .01UF 5% 63VDC	C11		
132257	TRANSISTOR SI NPN	Q7 Q8	066380	CAP ELECT 47UF 16V (6.3X5CASE)	C2 C8		

EXPLODED VIEW AND PARTS LIST



Ref No.	Part No.	Description
1	016422	FRONT PANEL GLASS
2	171264	C/A POWER SWITCH
3	017531	PUSHBUTTON ASSY RED
4	017517	PUSHBUTTON ASSY BLACK
5	017781	FRONT BEZEL
6	078033	O-RING
7	018611	END CAP
8	101042	TS 4-40 X 1/2 SLOT FILLISTER
9	094360	FOAM TAPE 1/2" X 1/2"
10	005090	EXTRUSION BRACKET
11	018588	BOTTOM EXTRUSION
12	100147	MS 6-32 X 3/16 PHIL FLAT U/C
13	018585	TOP EXTRUSION
14	017779	PRINTED CIRCUIT GUIDES
15	017755	PLEXIGLAS/LOGO
16	017807	PLEXIGLAS RIGHT
17	017782	PLEXIGLAS LEFT
18	092419	DISPLAY FILTER
19	049414	DISPLAY PCB ASSY
20	058153	INCANDESCENT LAMP
21	101196	SEMS TS 6-32 X 1/4 PHIL PAN
22	005085	SUBPANEL
23	101054	TS 6-32 X 1/4 PH PAN TAPTITE BLK
24	005089	RIGHT ZEE BRACKET
25	005088	LEFT ZEE BRACKET
26	102003	MACH NUT 6-32 W/LOCK
27	005087	PCB CONNECTOR BRACKET
28	049413	CONNECTOR PCB ASSY
29	320096	DVD PLAYER MECHANISM ASSY
30	017808	DVD DOOR MOLDING
31	100300	SEMS 6-32 X 1" PHIL PAN
32	100299	SEMS 6-32 X 1/2 PHIL PAN
33	005084	CHASSIS
34	019056	SPRING
35	100180	MS 6-32 X 1/8 PHIL PAN ZINC
36	159286	POWER TRANSFORMER
37	112083	STANDOFF 6-32 X 1.250
38	017518	CABLE TIE HOLDER
39	017218	PLASTIC FEET-BLACK
40	104083	WASHER #10 FLAT STEEL PLAT
41	100159	MS 10-32 X 3/4 PH PAN BLK ZINC
42	049415	AV-PWR PCB ASSY
43	005086	REAR PANEL
44	117755	INPUT RECEPTACLE AND LINE FILTER
45	102001	KEP NUT 4-40 CADMIUM PLATE
46	102020	MACH NUT 6-32 SELF-LOCK
47	101197	HI/LO 4-24 X 3/8 PH ROUND BLACK
48	005102	TOP COVER
49	101078	TS 8-32 X 5/16 PHIL PAN BLK
50	094017	FOAM TAPE 1/4" X 1/4"

REPACKING INSTRUCTIONS

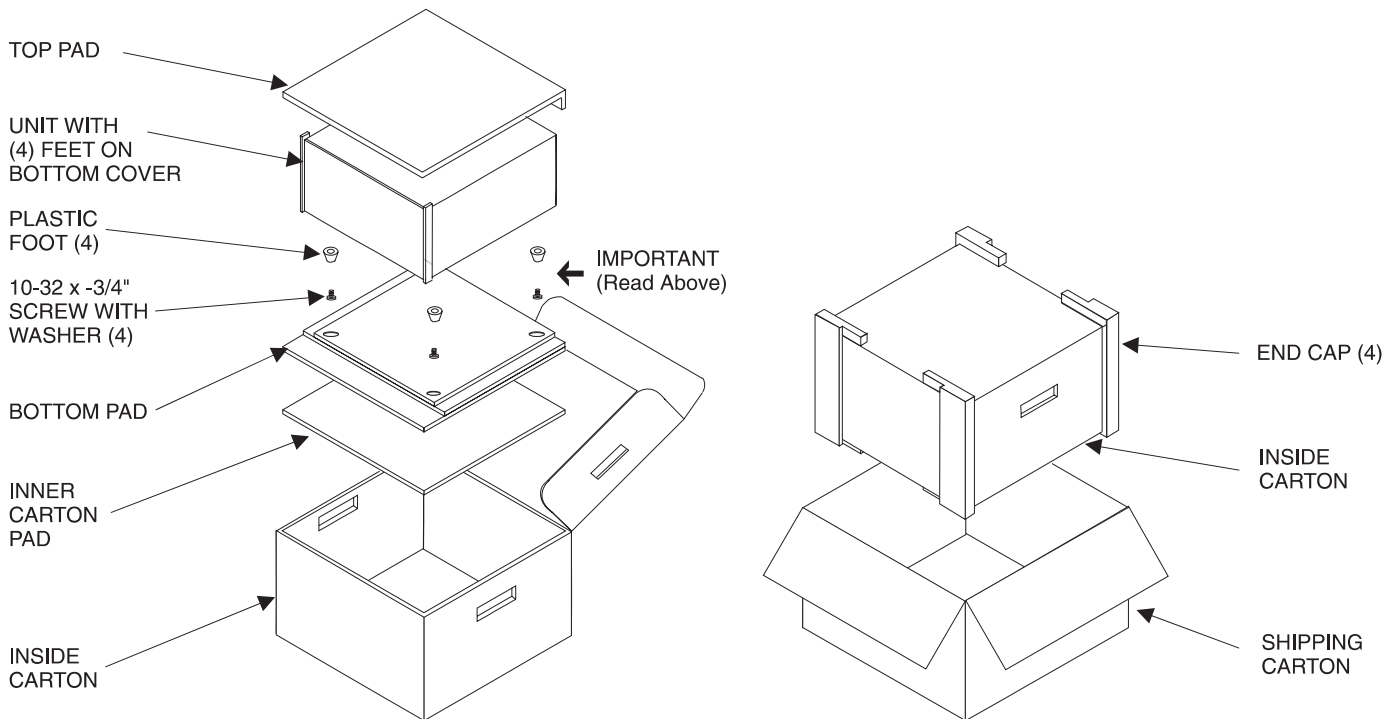
In the event it is necessary to repack the unit for shipment, the unit must be packed exactly as shown below.

IMPORTANT - The four plastic feet must be attached to the bottom of the unit so they will locate in the four holes of the bottom pad. Failure to do this will result in shipping damage.

If a shipping carton or any of the interior parts is needed, please call or write the Customer Service Department of McIntosh Laboratory. Order parts from the accompanying list by part number.

Use the original shipping carton and interior parts only if they are in good serviceable condition.

Qty.	Part No.	Description
1	034075	Shipping carton only
4	033837	Foam end cap
1	034076	Inside carton only
1	033726	Top pad
1	034036	Bottom pad
1	034077	Inner carton pad
4	017218	Plastic foot
4	100159	#10-32 x 3/4" Machine screw
4	104083	#10 x 7/16" Flat washer
1	049270	Shipping carton complete with all the above parts.



MVP841

DVD/VIDEO CD/CD PLAYER

SERVICE MANUAL

The continuous improvement of its products is the policy of McIntosh Laboratory Incorporated, who reserve the right to improve design without notice. Because of the constant upgrading of McIntosh products' circuitry and components, the Company cannot insure, and does not warrant, the accuracy of the within schematic material, which is intended for information only.