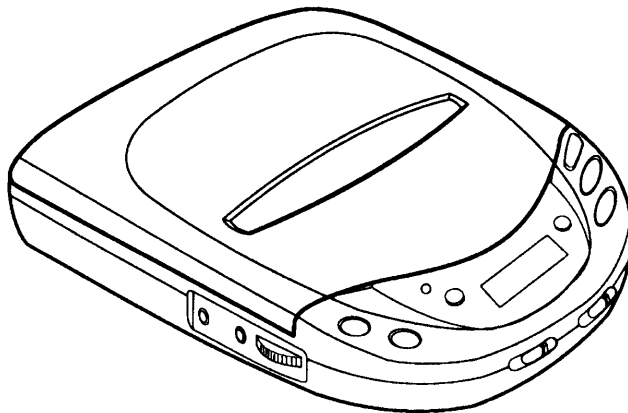


FILE NO.

Service Manual

Compact Disc Player



CDP-195 (CA)
(UK)
(AU)
(XE)

CDP-195A (AU)
(XE)

CDP-195BX(CA)
CDP-195CR(CA)

PRODUCT CODE No.

CDP-195(CA)	142 699 00
CDP-195(UK)	142 699 01
CDP-195(AU)	142 699 04
CDP-195(XE)	142 699 02
CDP-195A(AU)	164 000 03
CDP-195A(XE)	164 000 01
CDP-195BX(CA)	164 001 00
CDP-195CR(CA)	164 009 00

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FILE NO.

Service Manual Supplement

Compact Disc Player

CDP-195 (UK)

PRODUCT CODE No.
142 699 05 (Blue)
142 699 06 (Green)

The original service manual of CDP-195 reflects the "Gray" cabinet color version only.
This supplement is intended to add the "Blue" and "Green" cabinet color version to the original service manual.
Please refer to the original service manual CDP-195 (SM580871) for other items.

PARTS LIST

Ref. No.	ORIGINAL MODEL (Gray)	SUPPLEMENT MODEL		DESCRIPTION
		(Blue)	(Green)	
• CABINET & CHASSIS				
1	645 027 5715	645 028 4106	645 028 4113	ASSY, DOOR CD

SPECIFICATION

CD Player Section

Channels 2 channels
S/N ratio 80 dB
60 dB(XE,UK,AU)
Wow & Flutter..... undetectable
Sampling frequency 44.1kHz
D/A converter 1-bit
Pick-up light source Semi-conductor laser
Pick-up wavelength 790nm
Laser output Continuous wave max. 0.5mW

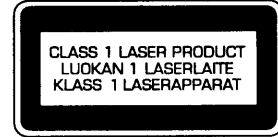
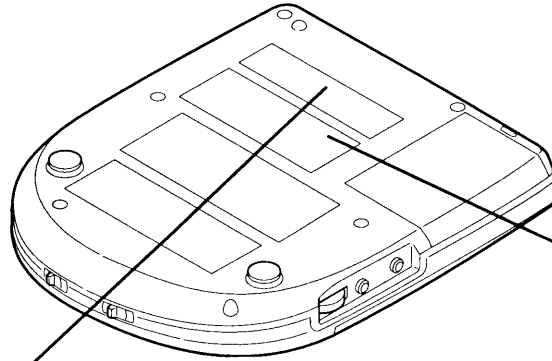
General

Maximum Output 15mW + 15mW
(stereo headphone)
Terminal impedance
PHONES 8 - 32 Ω (XE,AU)
16 - 32 Ω (UK)
LINE OUT 47k Ω (XE,UK,AU)
Power Supply
AC Adaptor 120V/60Hz
230V/50Hz(XE,UK)
230V - 240V/50Hz(AU)
DC 3V : Using two AA batteries
3V : Using the rechargeable nickel-cadmium battery
3V : (Ni-Cd battery NBP-50A or AA x 2)(XE,AU)
3V : (Ni-Cd battery NBP-50A or HP7 x 2)(UK)
12V : Using the cigarette lighter adaptor
Dimensions 133 x 28 x 158mm(W x H x D)
Weight(approx.)..... 270g without batteries
Amplified Speaker Section
Full-range speaker 57mm diameter(XE,AU)
Power Output 2W + 2W(RMS)
1.5W Max (750mW per channel)(XE,AU)
Amplifier input impedance 10k Ω (XE,AU)
Input Impedance 500 Ω at 1kHz
Normal Impedance 4 Ω
Frequency response 500Hz to 12kHz(XE,AU)
Tone boost Bass,+6dB at 10kHz(XE,AU)
Treble, +6dB at 10kHz(XE,AU)
Power Handling Capacity
Rated..... 2Watts
Maximum..... 4Watts
Power Requirements[Master(left)Speaker Only]
DC 9V : Using 6 AA batteries
9V : Using the AC adaptor
9V : 500mA(with AC adaptor)(XE,AU)
6V : 4"C"size batteries(2"C" size in each speaker)(XE,AU)
Dimensions(Approximate) 90 X 170 X 90 mm(W x H x D)
Weight(approx.)..... 477g(without batteries)

Specifications subject to change without notice.

LASER BEAM SAFETY PRECAUTIONS

- Pickup that emits a laser beam is used on this CD section.



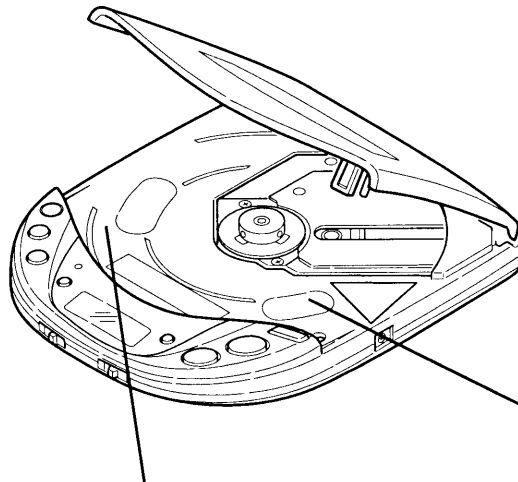
AU , XE , UK

CAUTION :
THIS PRODUCT CONTAINS A LOW POWER LASER DEVICE, TO ENSURE CONTINUES SAFETY DO NOT REMOVE ANY COVERS OR ATTEMPT TO GAIN ACCESS TO THE INSIDE OF PRODUCT. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

CAUTION :
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

AU

UK



XE & AU



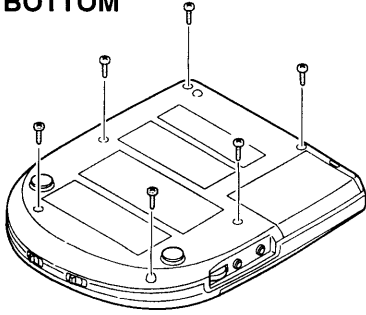
CAUTION - INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL - USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING - OSYNLIG LASER STRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT - UNSICHTBARE LASERSTRAHLUNG TRITTS AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO! Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso äteeseen.

XE & AU

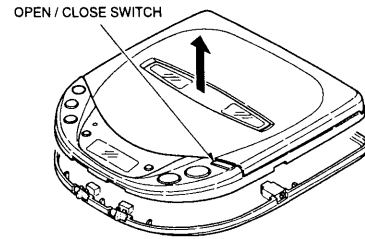
REMOVAL AND INSTALLATION

- Disconnect the AC adaptor's plug.
- Remove the batteries.
- All wiring should be returned to the original position after work is completed.

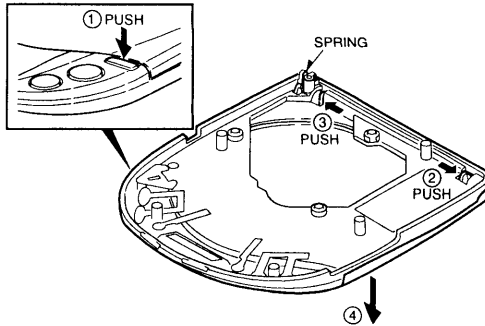
a. CABINET, BOTTOM



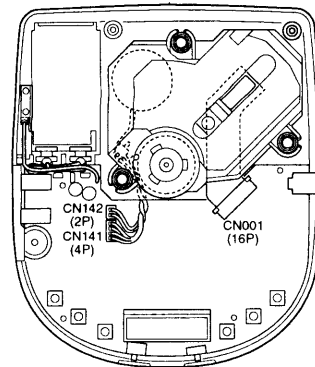
b. CABINET



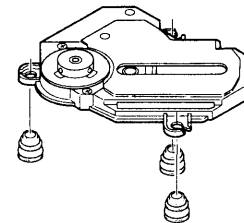
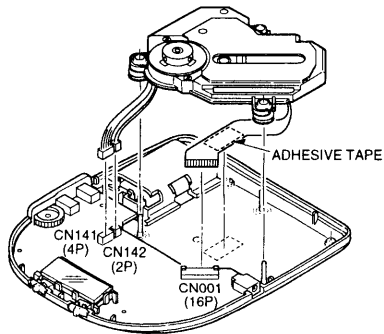
c. CD LID



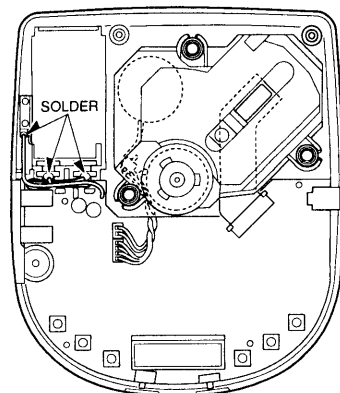
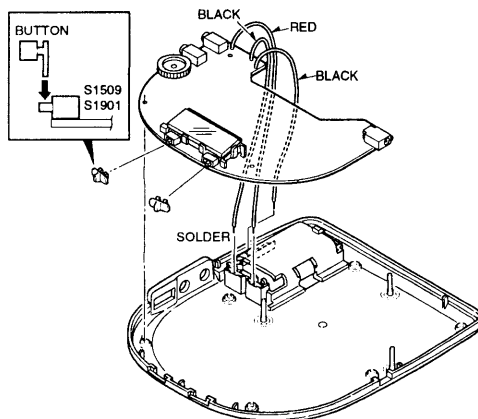
d. WIRING LAYOUT

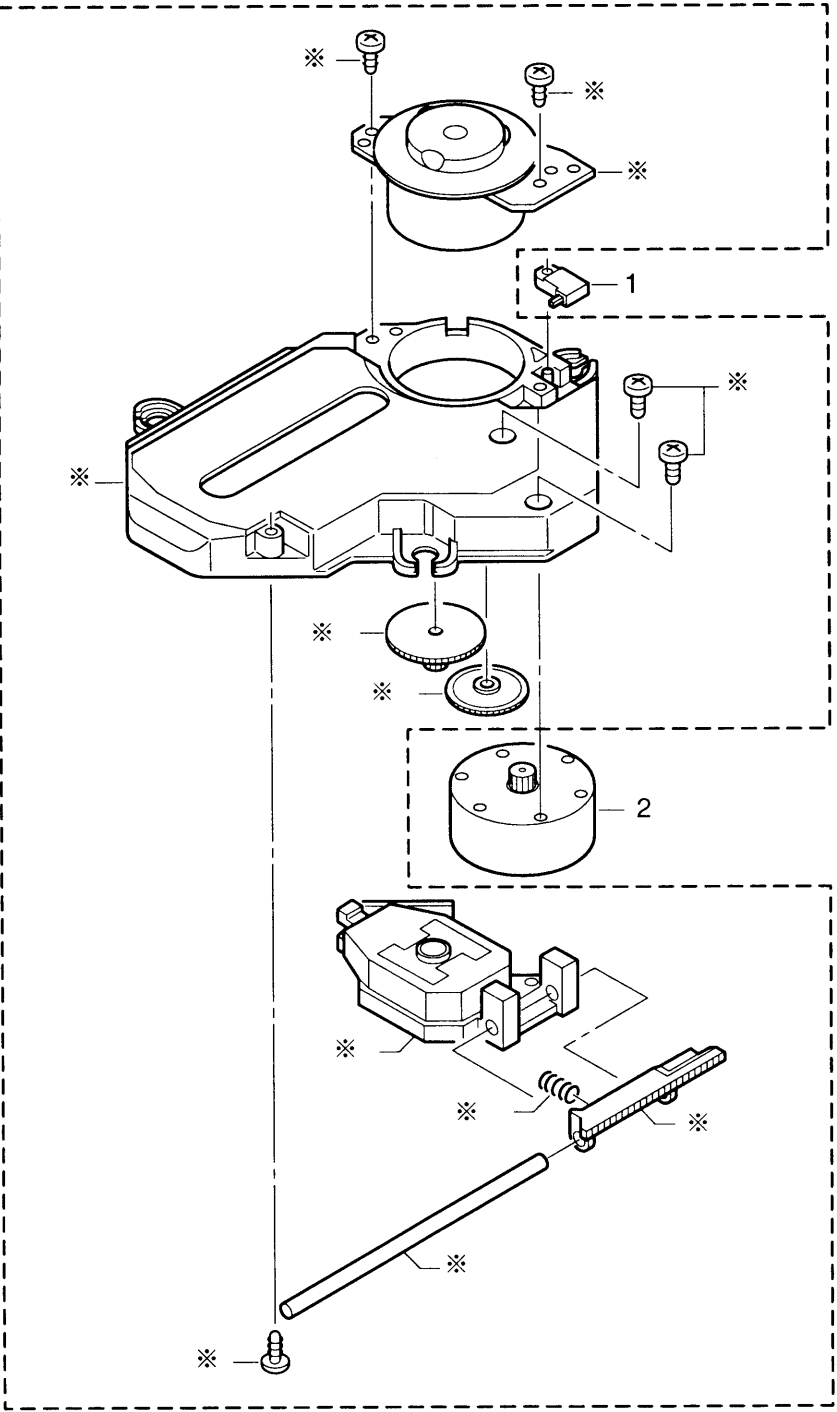
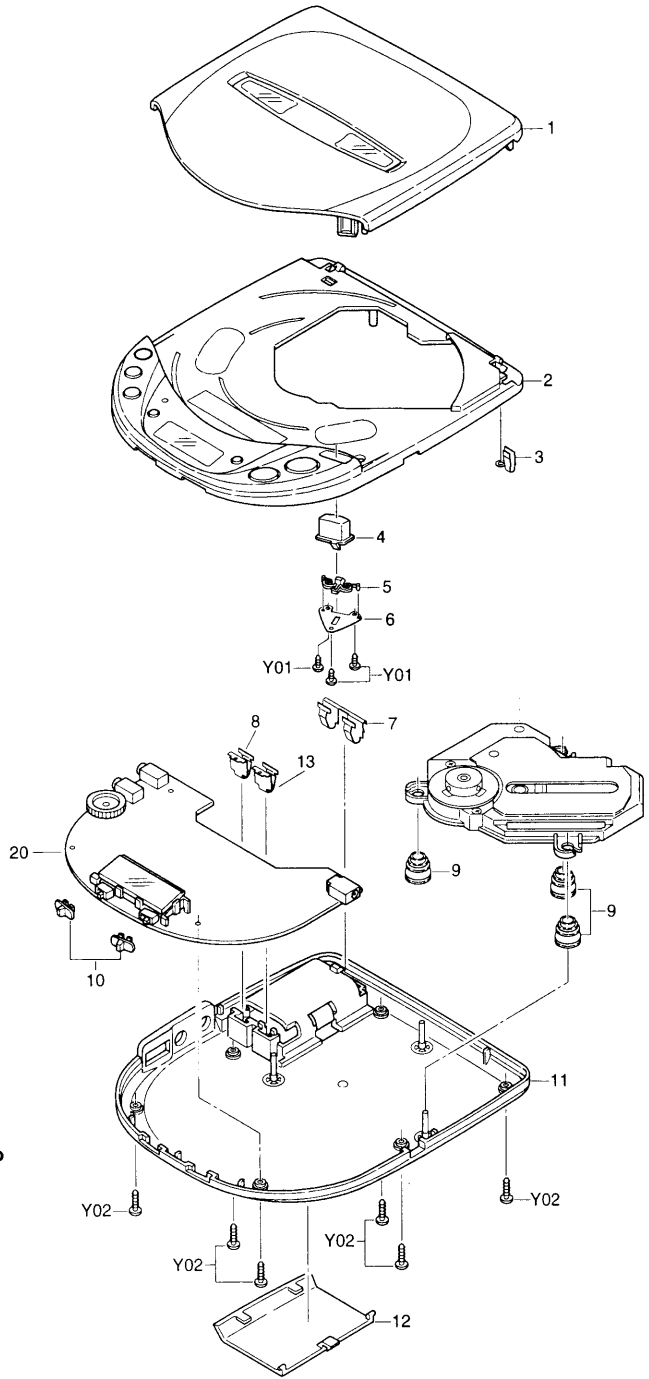


e. CD MECHANISM



f. CD P.W.BOARD





PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL Δ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY Δ , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
 Regular type resistors are less than 1/4W carbon type and 0 ohm chip resistors.
 Regular type capacitors are less than 50V and less than 1000 μ F of Ceramic type and Electrolytic type.
 N.S.P : Not available as service parts.

PACKING & ACCESSORY

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
	614 294 5377	INSTRUCTION MANUAL(CR/CA,CA)	C1313	403 001 2903	CERAMIC 0.1U M 16V
	614 294 5384	INSTRUCTION MANUAL(UK)	C1315	403 002 9000	CERAMIC 0.015U M 25V
	614 294 5391	INSTRUCTION MANUAL(XE,A/XE)	C1316	403 072 9603	CERAMIC 3300P K 50V
	614 294 5414	INSTRUCTION MANUAL(A/AU,AU)	C1317	403 193 8400	ELECT 0.22U M 50V
	614 295 9473	INSTRUCTION MANUAL(BX/CA)	C1318	403 009 3001	CERAMIC 100P J 50V
	645 027 9386	RCA CABLE (CR/CA,XE,UK,A/AU,AU,A/XE)	C1319	403 167 7002	ELECT 4.7U M 50V
	645 011 9071	CABLE,Y,RCA-2P(CA,BX/CA)	C1320	403 150 6500	ELECT 22U M 16V
Δ	645 023 0103	BATTERY,RECHARGE (XE,A/AU,AU,A/XE)	C1321	403 072 9603	CERAMIC 3300P K 50V
Δ	645 025 7186	ADAPTOR,CAR CASSETTE (CR/CA,BX/CA)	C1322	403 006 6302	CERAMIC 1P C 50V
Δ	645 026 4375	ADAPTOR,AC-DC(XE,A/XE)	C1323	403 010 8507	CERAMIC 12P J 50V
Δ	645 026 4382	ADAPTOR,AC-DC(CR/CA,CA,BX/CA)	C1324	403 068 3202	CERAMIC 0.033U K 25V
Δ	645 026 4399	ADAPTOR,AC-DC(A/AU,AU)	C1325	403 071 8102	CERAMIC 2200P K 50V
Δ	645 027 9409	ADAPTOR,AC-DC(UK)	C1330	403 191 8808	ELECT 2.2U M 50V
Δ	645 026 4054	ADAPTOR,CD CAR CASS (CR/CA,BX/CA)	C1331	403 069 8404	CERAMIC 0.01U Z 50V
	645 026 4047	HEADPHONE(CR/CA,CA,BX/CA)	C1332	403 074 2701	CERAMIC 0.047U Z 50V
	645 027 9393	HEADPHONE(XE,UK,A/AU,AU,A/XE)	C1334	403 069 8404	CERAMIC 0.01U Z 50V
	645 027 9669	SPEAKER BOX(A/AU,A/XE)	C1335	403 167 7002	ELECT 4.7U M 50V
	645 017 6715	SPEAKER BOX(BX/CA)	C1336	403 069 8404	CERAMIC 0.01U Z 50V

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
1	645 027 5715	ASSY,DOOR CD	C1337	403 069 8404	CERAMIC 0.01U Z 50V
2	645 027 5692	ASSY,CAB TOP	C1338	403 139 0703	ELECT 100U M 6.3V
3	645 027 1717	CD DOOR SPRING PLATE	C1341	403 069 8404	CERAMIC 0.01U Z 50V
4	645 027 1588	BUTTON,DOOR OPEN	C1342	403 001 2903	CERAMIC 0.1U M 16V
5	645 027 5760	HOOK SPRING	C1343	403 193 7601	ELECT 220U M 6.3V
6	645 027 1625	MOUNTING PLATE	C1344	403 001 2903	CERAMIC 0.1U M 16V
7	645 027 1472	BATT. CONTACT PLATE(+/-)	C1345	403 167 6609	ELECT 47U M 10V
8	645 027 1458	BATTERY CONTACT PLATE(+)	C1346	403 191 8808	ELECT 2.2U M 50V
9	620 219 1362	CUSHION,RUBBER	C1347	403 193 8400	ELECT 0.22U M 50V
10	645 027 1571	SLIDE KNOB	C1401	403 001 2903	CERAMIC 0.1U M 16V
11	645 027 5708	ASSY,BOTTOM CAB	C1402	403 001 2903	CERAMIC 0.1U M 16V
12	645 027 1502	BATTERY DOOR	C1403	403 001 2903	CERAMIC 0.1U M 16V
13	645 027 1465	BATTERY CONTACT PLATE(-)	C1404	403 001 2903	CERAMIC 0.1U M 16V
Y01	645 027 1656	SCREW	C1405	403 167 6609	ELECT 47U M 10V
Y02	411 022 6800	SCR S-TPG PAN 2X10	C1406	403 193 8608	ELECT 0.47U M 50V

AMPLIFIER

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
20	614 295 9190	ASSY,PWB,CD(N.S.P)	C1407	403 013 1604	CERAMIC 150P J 50V
	645 026 8694	BRACKET,LCD,FOR LCD BRACKET	C1408	403 139 0703	ELECT 100U M 6.3V
	645 027 1618	RECHARGE CONTACT PLATE	C1410	403 001 2903	CERAMIC 0.1U M 16V
A1501	645 026 8670	LED DISPLAY 8630	C1411	403 167 7002	ELECT 4.7U M 50V
C1303	645 027 6453	CERAMIC CHIP 0.22U 50V	C1412	403 139 0703	ELECT 100U M 6.3V
C1304	403 003 7104	CERAMIC 0.033U M 25V	C1413	403 003 7104	CERAMIC 0.033U M 25V
C1305	403 104 1704	CERAMIC 330P J 50V	C1415	403 193 7601	ELECT 220U M 6.3V
C1308	403 072 9603	CERAMIC 3300P K 50V	C1416	403 001 2903	CERAMIC 0.1U M 16V
C1309	403 074 2701	CERAMIC 0.047U Z 50V	C1417	403 104 1704	CERAMIC 330P J 50V
C1310	403 256 6107	CERAMIC 0.15U Z 25V	C1418	403 139 0703	ELECT 100U M 6.3V
C1311	403 003 1003	CERAMIC 0.018U M 25V	C1419	403 193 7809	ELECT 100U M 16V
C1312	403 069 0705	CERAMIC 1000P K 50V	C1420	403 001 2903	CERAMIC 0.1U M 16V
			C1421	403 193 7601	ELECT 220U M 6.3V
			C1422	403 001 2903	CERAMIC 0.1U M 16V
			C1423	403 193 7601	ELECT 220U M 6.3V
			C1424	403 193 7601	ELECT 220U M 6.3V
			C1425	403 130 3109	CERAMIC 0.047U K 50V
			C1426	403 001 2903	CERAMIC 0.1U M 16V
			C1427	403 069 8404	CERAMIC 0.01U Z 50V
			C1428	403 193 7601	ELECT 220U M 6.3V
			C1429	403 192 5905	CERAMIC 0.1U K 25V

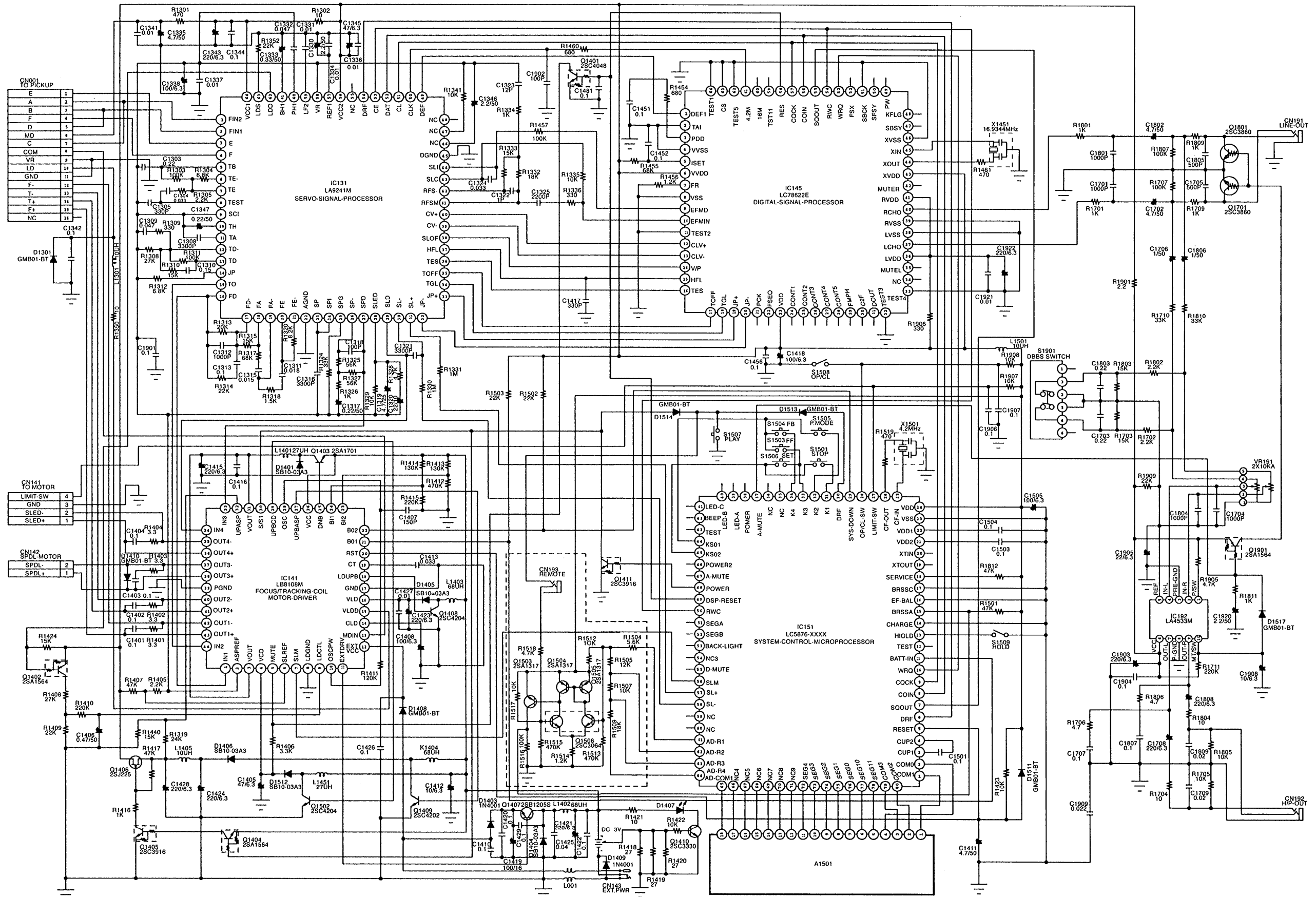
PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
C1452	403 001 2903	CERAMIC 0.1U M 16V	L1404	645 026 8618	INDUCTOR 68UH
C1454	403 139 0703	ELECT 100U M 6.3V	L1405	645 021 5438	AXIAL INDUCTOR 10UH
C1456	403 001 2903	CERAMIC 0.1U M 16V	L1451	645 026 8601	INDUCTOR 27UH
C1481	403 001 2903	CERAMIC 0.1U M 16V	L1501	645 021 5438	AXIAL INDUCTOR 10UH
C1501	403 001 2903	CERAMIC 0.1U M 16V	L1701	645 014 1317	SOLID WIRE
C1503	403 001 2903	CERAMIC 0.1U M 16V	L1801	645 014 1317	SOLID WIRE
C1504	403 001 2903	CERAMIC 0.1U M 16V	Q1402	645 026 8519	TRANSISTOR,2SA1564AC
C1505	403 139 0703	ELECT 100U M 6.3V	Q1403	645 026 8526	TRANSISTOR,2SA1701T-AC
C1701	403 069 0705	CERAMIC 1000P K 50V	Q1404	645 026 8519	TRANSISTOR,2SA1564AC
C1702	403 167 7002	ELECT 4.7U M 50V	Q1405	645 026 8540	TRANSISTOR,2SC3916
C1703	645 027 6446	CERAMIC CAP 0.22U 16V	Q1406	645 026 8496	TRANSISTOR,2SJ225
C1704	403 069 0705	CERAMIC 1000P K 50V	Q1407	645 026 8502	TRANSISTOR,2SB1205S
C1705	403 026 8300	CERAMIC 470P K 50V	Q1408	645 026 8557	TRANSISTOR,2SC4204-AN
C1706	403 191 8709	ELECT 1U M 50V	Q1409	645 026 8557	TRANSISTOR,2SC4204-AN
C1707	403 001 2903	CERAMIC 0.1U M 16V	Q1410	645 027 1410	TR 2SC 3330-T-AC
C1708	403 193 7601	ELECT 220U M 6.3V	Q1411	645 026 8540	TRANSISTOR,2SC3916
C1709	403 003 3304	CERAMIC 0.022U M 25V	Q1502	645 026 8557	TRANSISTOR,2SC4204-AN
C1801	403 069 0705	CERAMIC 1000P K 50V	Q1701	645 026 8533	TRANSISTOR,2SC3860-AC
C1802	403 167 7002	ELECT 4.7U M 50V	Q1801	645 026 8533	TRANSISTOR,2SC3860-AC
C1803	645 027 6446	CERAMIC CAP 0.22U 16V	Q1901	645 026 8519	TRANSISTOR,2SA1564AC
C1804	403 069 0705	CERAMIC 1000P K 50V	R1301	401 038 6307	MT-GLAZE 470 JA 1/10W
C1805	403 026 8300	CERAMIC 470P K 50V	R1302	401 037 5103	MT-GLAZE 10 JA 1/10W
C1806	403 191 8709	ELECT 1U M 50V	R1303	401 037 5707	MT-GLAZE 100K JA 1/10W
C1807	403 001 2903	CERAMIC 0.1U M 16V	R1304	401 037 5608	MT-GLAZE 10K JA 1/10W
C1808	403 193 7601	ELECT 220U M 6.3V	R1305	401 038 0701	MT-GLAZE 2.2K JA 1/10W
C1809	403 003 3304	CERAMIC 0.022U M 25V	R1308	401 038 2200	MT-GLAZE 27K JA 1/10W
C1901	403 001 2903	CERAMIC 0.1U M 16V	R1309	401 038 3504	MT-GLAZE 330 JA 1/10W
C1902	403 009 3001	CERAMIC 100P J 50V	R1310	401 037 8005	MT-GLAZE 15K JA 1/10W
C1903	403 193 7601	ELECT 220U M 6.3V	R1311	401 037 5707	MT-GLAZE 100K JA 1/10W
C1904	403 001 2903	CERAMIC 0.1U M 16V	R1312	401 038 9209	MT-GLAZE 6.8K JA 1/10W
C1905	403 197 5504	ELECT 100U M 10V	R1313	401 038 0206	MT-GLAZE 20K JA 1/10W
C1906	403 001 2903	CERAMIC 0.1U M 16V	R1314	401 038 0800	MT-GLAZE 22K JA 1/10W
C1907	403 001 2903	CERAMIC 0.1U M 16V	R1315	401 037 8005	MT-GLAZE 15K JA 1/10W
C1908	403 189 2405	ELECT 10U M 16V	R1317	401 038 9308	MT-GLAZE 68K JA 1/10W
C1909	403 068 2007	CERAMIC 0.022U K 25V	R1318	401 037 7909	MT-GLAZE 1.5K JA 1/10W
C1920	403 191 8808	ELECT 2.2U M 50V	R1319	401 038 1401	MT-GLAZE 24K JA 1/10W
C1921	403 069 8404	CERAMIC 0.01U Z 50V	R1320	401 039 0403	MT-GLAZE 8.2K JA 1/10W
C1922	403 193 7601	ELECT 220U M 6.3V	R1324	401 038 3702	MT-GLAZE 33K JA 1/10W
CN141	645 017 2045	4P WAFER	R1325	401 038 7809	MT-GLAZE 56K JA 1/10W
CN142	645 016 9342	2P WAFER	R1326	401 037 5400	MT-GLAZE 1K JA 1/10W
CN143	645 027 1434	DC JACK 3PINS(DC-014)	R1327	401 038 7809	MT-GLAZE 56K JA 1/10W
CN191	645 026 8656	STEREO JACK EJS-3-0935B	R1328	401 038 6406	MT-GLAZE 4.7K JA 1/10W
CN192	645 026 8663	STEREO JACK EJS-3-0935G	R1329	401 037 5608	MT-GLAZE 10K JA 1/10W
D1301	645 025 1689	SW DIODE GMB01-BT	R1330	401 037 5806	MT-GLAZE 1M JA 1/10W
D1401	645 026 8571	SW DIODE SB10-03A3-BT	R1331	401 037 5806	MT-GLAZE 1M JA 1/10W
D1403	645 016 9250	RECTIFIER	R1332	401 037 9309	MT-GLAZE 18K JA 1/10W
D1404	645 026 8571	SW DIODE SB10-03A3-BT	R1333	401 037 8005	MT-GLAZE 15K JA 1/10W
D1405	645 026 8571	SW DIODE SB10-03A3-BT	R1334	401 037 5400	MT-GLAZE 1K JA 1/10W
D1406	645 026 8571	SW DIODE SB10-03A3-BT	R1335	401 037 5608	MT-GLAZE 10K JA 1/10W
D1407	645 025 1771	LED	R1336	401 038 3504	MT-GLAZE 330 JA 1/10W
D1408	645 025 1689	SW DIODE GMB01-BT	R1341	401 037 5608	MT-GLAZE 10K JA 1/10W
D1409	645 016 9250	RECTIFIER	R1350	401 037 5103	MT-GLAZE 10 JA 1/10W
D1410	645 025 1689	SW DIODE GMB01-BT	R1352	401 038 0800	MT-GLAZE 22K JA 1/10W
D1511	645 025 1689	SW DIODE GMB01-BT	R1401	401 038 2507	MT-GLAZE 3.3 JA 1/10W
D1512	645 026 8571	SW DIODE SB10-03A3-BT	R1402	401 038 2507	MT-GLAZE 3.3 JA 1/10W
D1513	645 025 1689	SW DIODE GMB01-BT	R1403	401 038 2507	MT-GLAZE 3.3 JA 1/10W
D1514	645 025 1689	SW DIODE GMB01-BT	R1404	401 038 2507	MT-GLAZE 3.3 JA 1/10W
D1517	645 025 1689	SW DIODE GMB01-BT	R1405	401 038 0701	MT-GLAZE 2.2K JA 1/10W
IC131	645 026 8472	IC LA9241M	R1406	401 038 6505	MT-GLAZE 47K JA 1/10W
IC141	645 026 8465	IC LB8108M	R1407	401 038 6505	MT-GLAZE 47K JA 1/10W
IC145	645 025 1610	IC LC78622E	R1408	401 038 2200	MT-GLAZE 27K JA 1/10W
IC151	645 026 8489	IC LC587006-1J86	R1409	401 038 0800	MT-GLAZE 22K JA 1/10W
IC192	645 026 8458	IC LA4533M	R1410	401 038 0909	MT-GLAZE 220K JA 1/10W
L001	645 026 8595	RADIAL INDUCTOR 26UHX2	R1411	401 037 6902	MT-GLAZE 120K JA 1/10W
L1301	645 021 5438	AXIAL INDUCTOR 10UH	R1412	401 038 6604	MT-GLAZE 470K JA 1/10W
L1401	645 026 8601	INDUCTOR 27UH	R1413	401 037 7503	MT-GLAZE 130K JA 1/10W
L1402	645 026 8618	INDUCTOR 68UH	R1414	401 037 7503	MT-GLAZE 130K JA 1/10W
L1403	645 026 8618	INDUCTOR 68UH	R1415	401 038 0909	MT-GLAZE 220K JA 1/10W

PARTS LIST

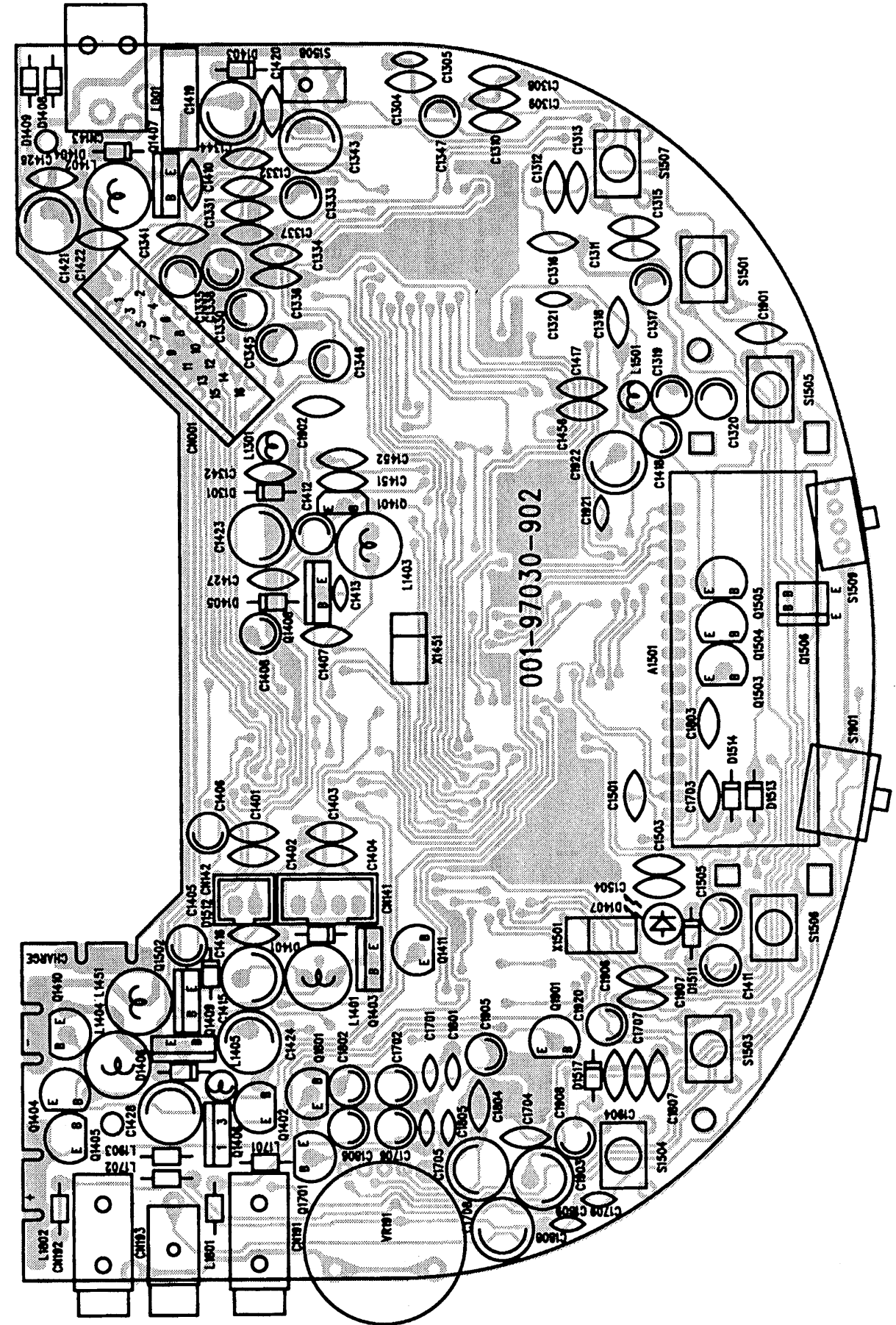
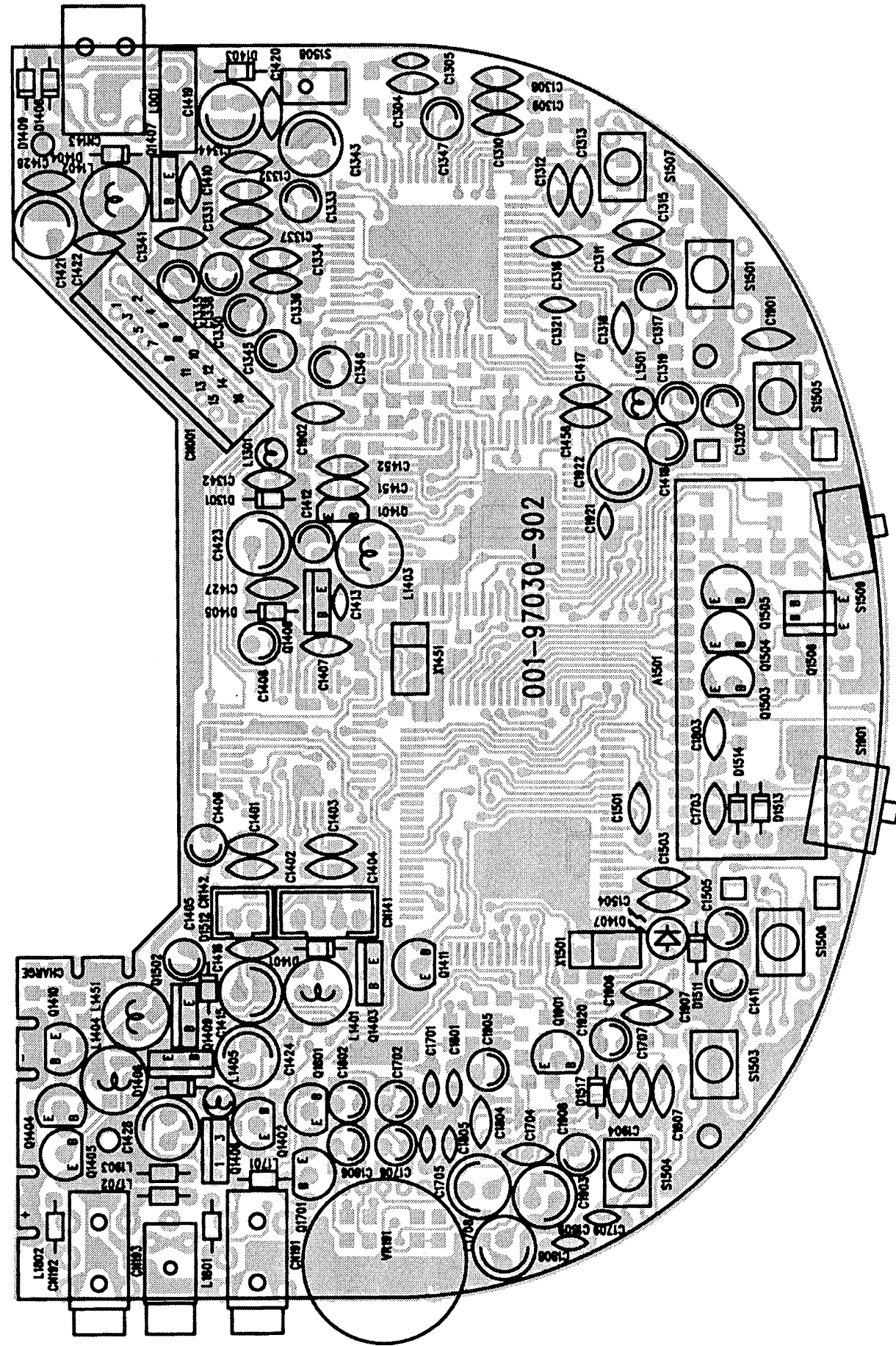
REF.NO.	PART NO.	DESCRIPTION	CD MECHANISM(D21)	REF.NO.	PART NO.	DESCRIPTION
R1416	401 037 5400	MT-GLAZE 1K JA 1/10W				
R1417	401 038 6505	MT-GLAZE 47K JA 1/10W				
R1418	401 038 1807	MT-GLAZE 27 JA 1/10W				
R1419	401 038 1807	MT-GLAZE 27 JA 1/10W	1	645 027 1700	CD MECHANISM D21	
R1420	401 038 1807	MT-GLAZE 27 JA 1/10W	2	620 201 7266	SWITCH,LEAF	
R1421	401 037 5103	MT-GLAZE 10 JA 1/10W		620 217 6734	ASSY,MOTOR,SLED	
R1422	401 037 5608	MT-GLAZE 10K JA 1/10W				
R1423	401 037 5608	MT-GLAZE 10K JA 1/10W				
R1424	401 037 8005	MT-GLAZE 15K JA 1/10W				
R1440	401 037 8005	MT-GLAZE 15K JA 1/10W				
R1454	401 038 9001	MT-GLAZE 680 JA 1/10W				
R1455	401 038 9308	MT-GLAZE 68K JA 1/10W				
R1456	401 037 6704	MT-GLAZE 1.2K JA 1/10W				
R1457	401 037 5707	MT-GLAZE 100K JA 1/10W				
R1460	401 038 9001	MT-GLAZE 680 JA 1/10W				
R1461	401 038 6307	MT-GLAZE 470 JA 1/10W				
R1501	401 038 6505	MT-GLAZE 47K JA 1/10W				
R1502	401 038 0800	MT-GLAZE 22K JA 1/10W				
R1503	401 038 0800	MT-GLAZE 22K JA 1/10W				
R1519	401 038 6307	MT-GLAZE 470 JA 1/10W				
R1701	401 037 5400	MT-GLAZE 1K JA 1/10W				
R1702	401 038 0701	MT-GLAZE 2.2K JA 1/10W				
R1703	401 037 8005	MT-GLAZE 15K JA 1/10W				
R1704	401 037 5103	MT-GLAZE 10 JA 1/10W				
R1705	401 037 5608	MT-GLAZE 10K JA 1/10W				
R1706	401 038 5508	MT-GLAZE 4.7 JA 1/10W				
R1707	401 037 5707	MT-GLAZE 100K JA 1/10W				
R1709	401 037 5400	MT-GLAZE 1K JA 1/10W				
R1710	401 038 3702	MT-GLAZE 33K JA 1/10W				
R1711	401 038 0909	MT-GLAZE 220K JA 1/10W				
R1801	401 037 5400	MT-GLAZE 1K JA 1/10W				
R1802	401 038 0701	MT-GLAZE 2.2K JA 1/10W				
R1803	401 037 8005	MT-GLAZE 15K JA 1/10W				
R1804	401 037 5103	MT-GLAZE 10 JA 1/10W				
R1805	401 037 5608	MT-GLAZE 10K JA 1/10W				
R1806	401 038 5508	MT-GLAZE 4.7 JA 1/10W				
R1807	401 037 5707	MT-GLAZE 100K JA 1/10W				
R1809	401 037 5400	MT-GLAZE 1K JA 1/10W				
R1810	401 038 3702	MT-GLAZE 33K JA 1/10W				
R1811	401 037 5400	MT-GLAZE 1K JA 1/10W				
R1812	401 038 6505	MT-GLAZE 47K JA 1/10W				
R1905	401 038 6406	MT-GLAZE 4.7K JA 1/10W				
R1906	401 038 3504	MT-GLAZE 330 JA 1/10W				
R1907	401 037 5608	MT-GLAZE 10K JA 1/10W				
R1908	401 037 5608	MT-GLAZE 10K JA 1/10W				
R1909	401 038 0800	MT-GLAZE 22K JA 1/10W				
R1910	401 098 7603	MT-GLAZE 2.2 JA 1/10W				
S1508	645 026 8649	SWITCH SPBB51				
S1509	645 026 8625	SWITCH SK-12D02G3				
S1901	645 026 8632	SWITCH SK-22D03-V-G2				
S1	645 027 1427	SWITCH,TACT TM114A-F				
S2	645 027 1427	SWITCH,TACT TM114A-F				
S3	645 027 1427	SWITCH,TACT TM114A-F				
S4	645 027 1427	SWITCH,TACT TM114A-F				
S5	645 027 1427	SWITCH,TACT TM114A-F				
S6	645 027 1427	SWITCH,TACT TM114A-F				
VR191	645 026 8588	ROTARY VR XV0102-A50K				
X1451	645 020 3572	CERAMIC RESONATOR				
X1501	645 026 8687	CERAMIC RESONATOR				

SCHEMATIC DIAGRAM

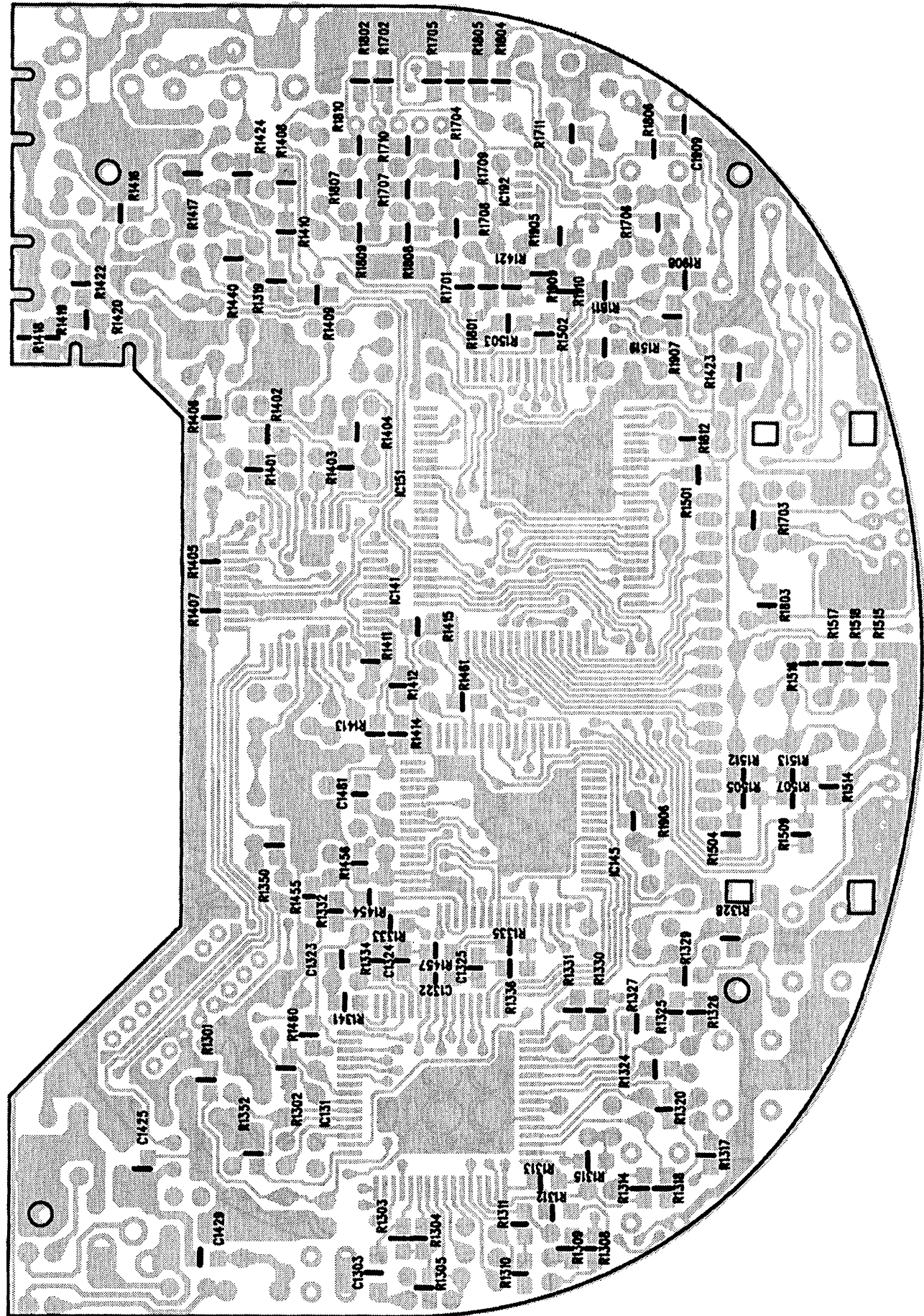


Remark : All parts are changed without prior notice.

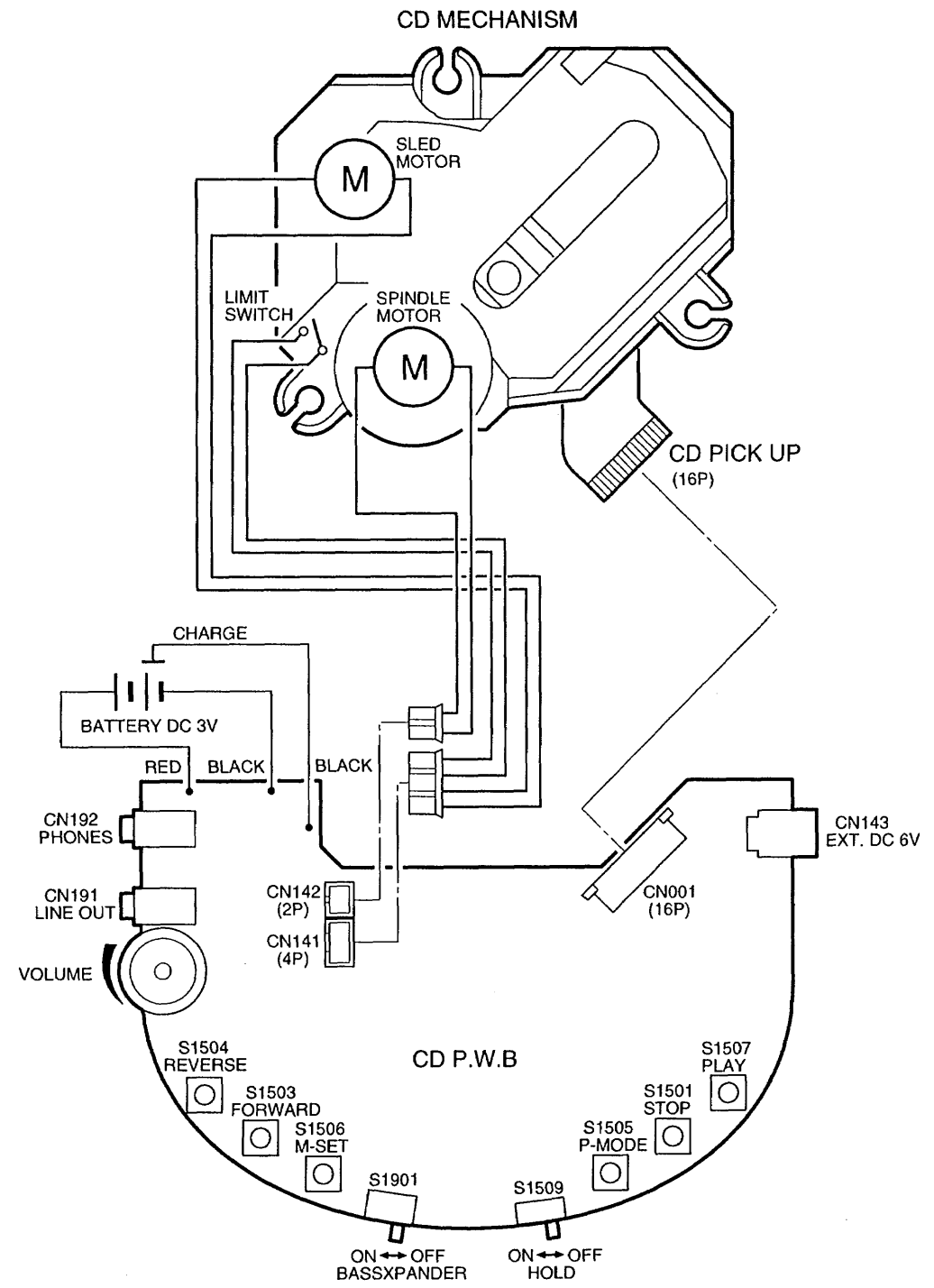
This is a basic schematic diagram.



WIRING DIAGRAM

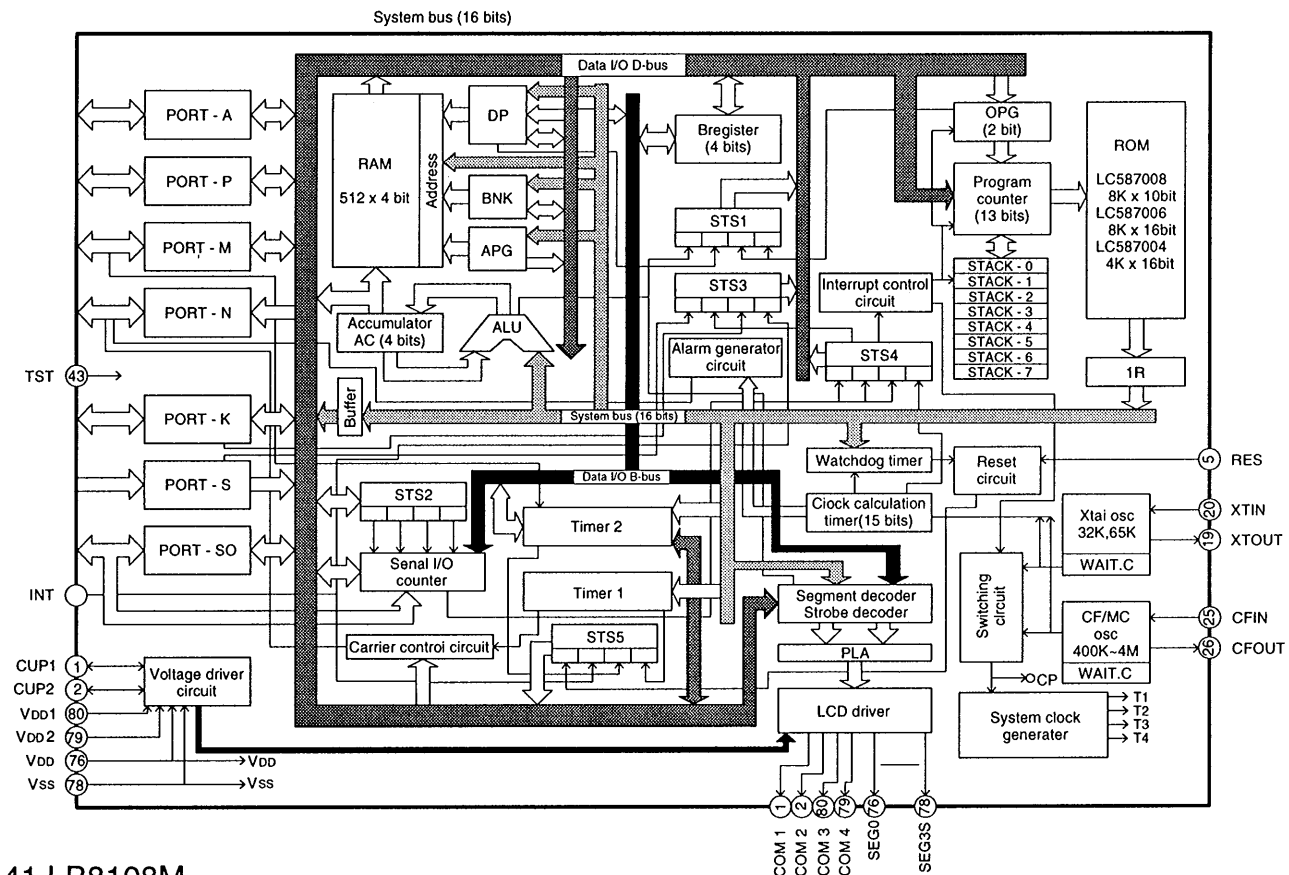


WIRING CONNECTION

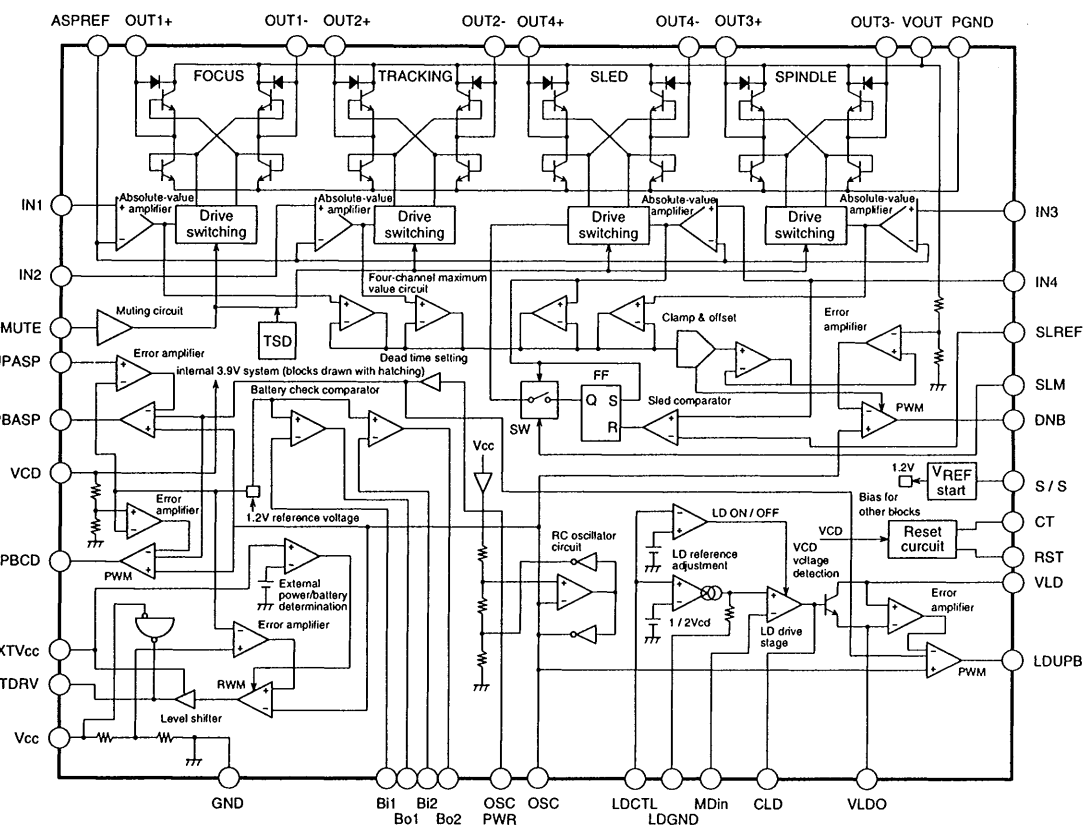


IC BLOCK DIAGRAM & DESCRIPTION

IC145 LC587006

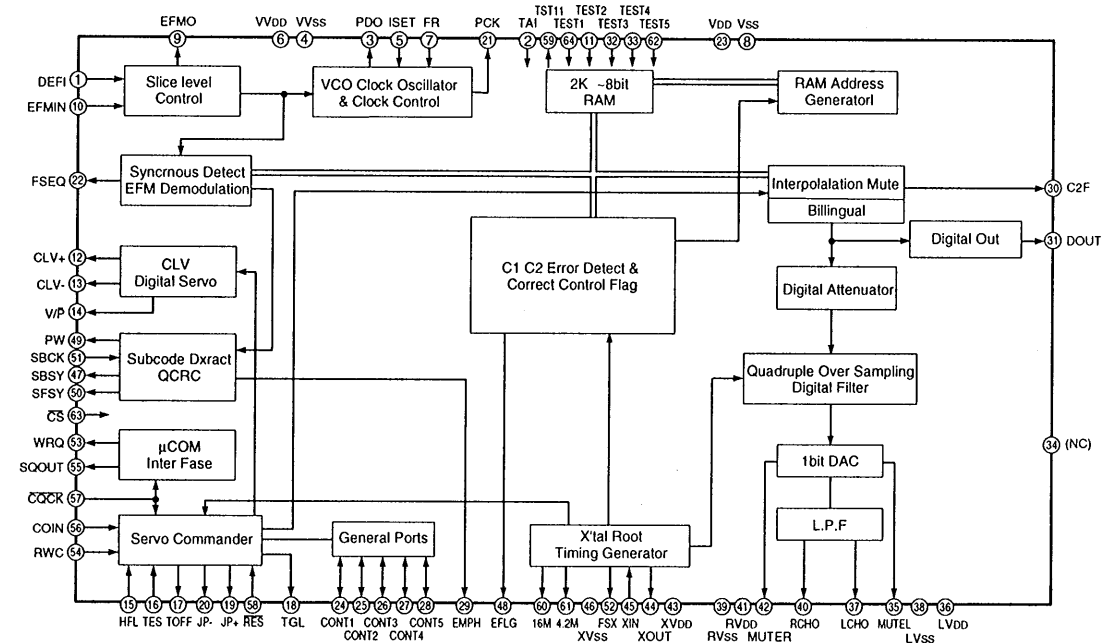


IC141 LB8108M

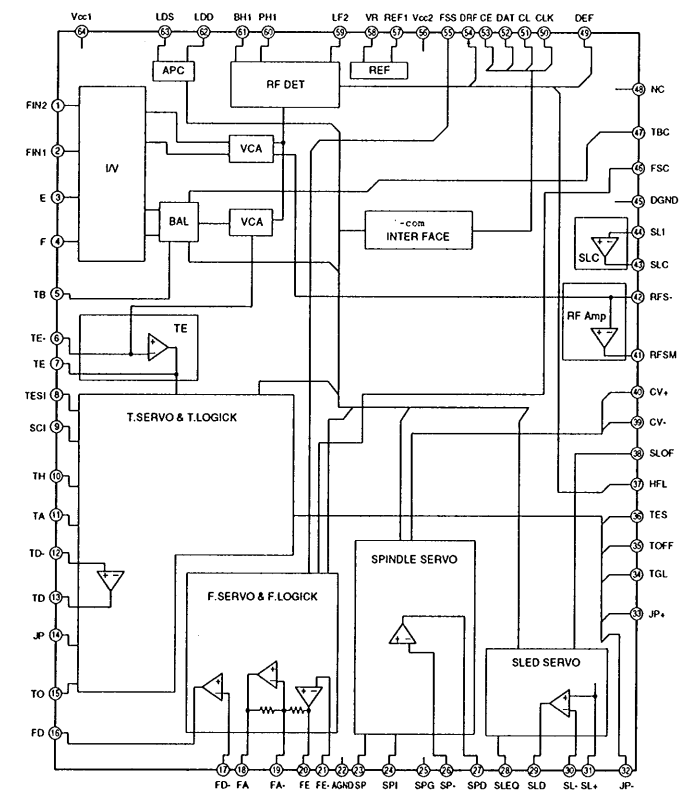


IC BLOCK DIAGRAM & DESCRIPTION

LC78622E (Digital Signal Processor)



LA9240M (Servo Signal Processor)



VOLTAGE OF IC & TRANSISTOR

TRANSISTOR VOLTAGE TABLE(V) :

Pin Number	B	C	E	Pin Number	B	C	E
Q1401	3.3	0	0	Q1409	0.2	3.5	0
Q1402	1.4	3.4	3.4	Q1410	0	2.1	0
Q1403	3.4	0.8	3.5	Q1411	3.3	0	0
Q1404	0	3.5	3.5	Q1502	0.1	3.5	0
Q1405	3.5	0	0	Q1701	0	0	0
Q1406	0.1	3.4	3.4	Q1801	0	0	0
Q1407	7.2	3.6	7.5	Q1901	3.4	0	3.4
Q1408	0.1	3.5	0				

IC VOLTAGE TABLE(V) :

IC131 LA9241M

Pin Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VOLTAGE(V)	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8
Pin Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
VOLTAGE(V)	1.7	1.7	1.7	1.7	1.7	0	1.7	1.7	1.7	1.7	1.9	1.7	1.7	1.7	1.7	0
Pin Number	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
VOLTAGE(V)	0	3.4	0	0.4	0	0	0	0.2	1.7	1.7	1.8	1.7	0	0	0	0
Pin Number	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
VOLTAGE(V)	0	1.6	3.3	0	0	3.3	0	3.4	1.7	1.7	1.6	1.7	1.7	1.4	0	3.3

IC141 LB8108M

Pin Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VOLTAGE(V)	1.8	1.7	1	3.9	0	1.8	0	0	1.6	3.5	7.2	7.6	0.1	3.1	2.2	3.2
Pin Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
VOLTAGE(V)	0	0.1	1.2	3.4	0.1	0.1	2.7	2.2	3.3	3.5	0.2	1.1	0.2	0	1	1.3
Pin Number	33	34	35	36	37	38	39	40	41	42	43	44				
VOLTAGE(V)	1.9	1.7	0.1	0.1	0.1	0.6	0	0.1	0.1	0.1	0.2	1.7				

IC145 LC8622

Pin Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VOLTAGE(V)	0	0	1	0	1.4	3.4	0.1	0	1.7	1.8	0	0.2	0	0	0	0.5
Pin Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
VOLTAGE(V)	0	3.4	0	0	1.7	3.4	3.4	0	0	0	0	0	0	0	1.7	0
Pin Number	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
VOLTAGE(V)	0	0	0	3	1.3	0	0	1.3	3.1	0	3.4	1.5	1.5	0	0.1	0
Pin Number	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
VOLTAGE(V)	0.1	1.7	0	1.7	1.2	0	0	0	3.3	3.3	0	1.7	1.6	0	0	0

IC151 LC587006

Pin Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VOLTAGE(V)	1.7	1.7	1.4	2.5	3.4	3.3	0	0	3.3	1.2	0.1	3.3	3.3	0	3.4	0
Pin Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
VOLTAGE(V)	0	3.3	3.3	0	1.1	2.3	0	3.4	1.4	1.7	3.4	0	0.1	3.3	3.4	3.4
Pin Number	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
VOLTAGE(V)	3.4	3.4	0	3.4	3.4	0	0	0	0	0	0	0	0	3.3	3.3	3.3
Pin Number	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
VOLTAGE(V)	3.3	0	0	0	0	1.7	0	0	0	0	0	1.7	0	0	0	0
Pin Number	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
VOLTAGE(V)	1.7	0	0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7

IC192 LA4533M

Pin Number	1	2	3	4	5	6	7	8	9	10
VOLTAGE(V)	2.8	1.7	0	1.7	1.7	3.4	1.7	0	1.7	0.9

For Parts or Service Contact
 SANYO FISHER SERVICE CORPORATION.
 50 Beth Neilson Drive, Tronto, Ontario, M4H 1M6.
 (CA)

SANYO Technosound Co., Ltd
 Osaka Japan

(AU,UK,XE)