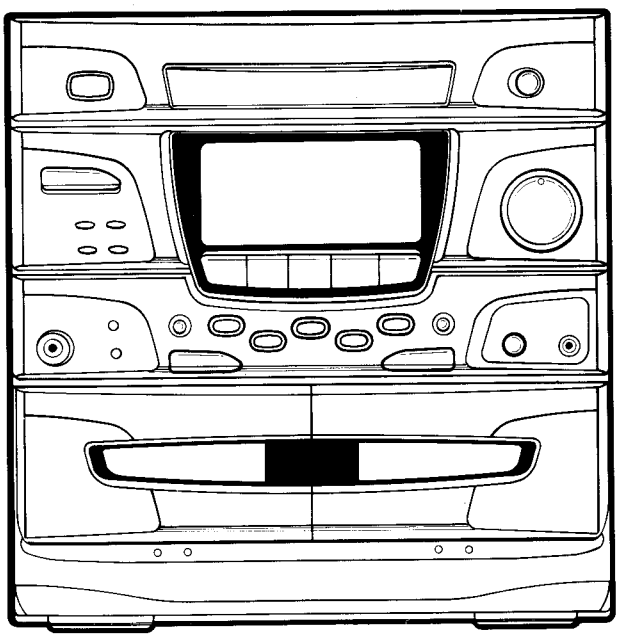
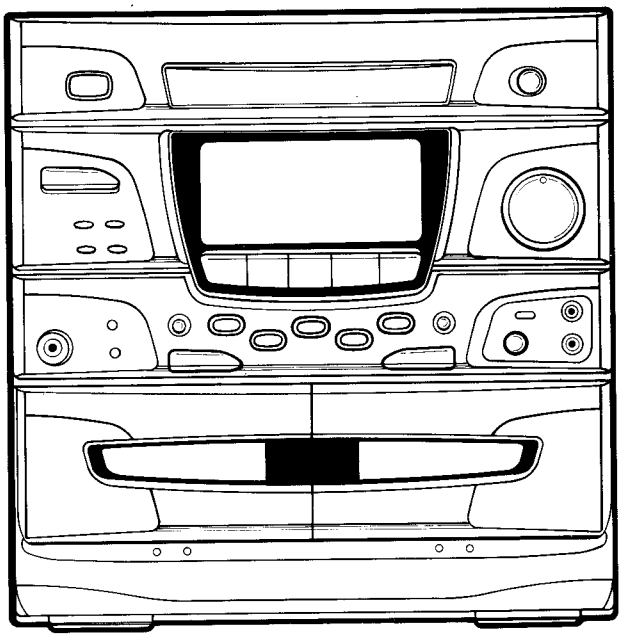
AC-400
AC-405K
SR-400

AKAI SERVICE MANUAL



AC-400



AC-405K

MINI COMPONENT SYSTEM

AC-400/AC-405K
SR-400

CONTENTS

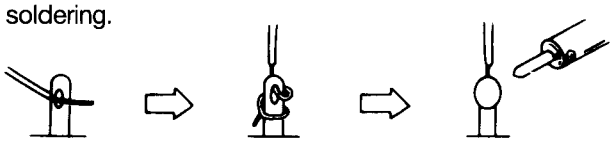
[AC-400 / AC-405K]

[SR-400]

SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts indentified by the ⚠ (*)symbol parts are critical for safety. Replace them only with parts whose numbers are specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples:RF converters, tuner units, antenna selection switches, RF cables, noise-blocking capacitors, noise-blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulating Tape
   2) PVC tubing
   3) Spacers(insulating barriers)
   4) Insulating sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Make sure that wires do not contact heat generating parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check if replaced wires do not contact sharply edged or pointed parts.
8. Also check areas surrounding repaired parts.
9. Make sure that foreign objects (screws, solder droplets, etc,) do not remain inside the set.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can. Please leave them at an appropriate depot. All other household batteries can be thrown out with the household waste.

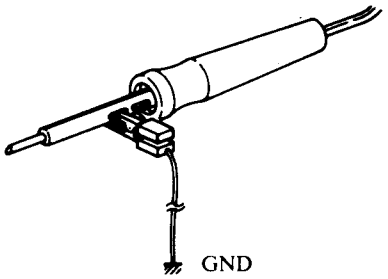
SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to check if exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resister of 1500 ohms paralleled with a 0.15μF capacitor, under the unit's normal working condition.
The leakage-current should be less than 0.5mA r ms AC.
The resistance measurement should be done between accesible exposed metal parts and power cord plug prongs with the power switch "ON"(if included). The resistance should be more than 2.2Mohms.

PRECAUTIONS IN REPAIRING

When repairing or adjusting the unit, please note the following points.

1. Do not put excessive pressure on the mechanical part (operation part), including the pick-up block, as extremely high mechanical precision is required in these parts.
2. When the base is removed for repair or adjustment, make sure that there are no metal objects between the P.C board or the mecha parts and the base.
3. The Micro-Computer and the CD signal processing ICs may be damaged by static electricity or leakage from a soldering iron during repairing. While soldering, please take the precautions against leakage as in the illustration.

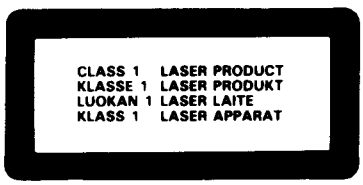


4. Do not loosen any screws in the pick-up block.
   Please refer to NOTE when replacing the pick up block.
5. To avoid hazardous invisible Laser Radiation, DO NOT look at the Laser Beam (Objective lens) directly.
6. On models for some countries, laser warning labels are affixed on and inside of the unit, as shown below. For your safety, read these labels carefully before repairing or adjusting the unit.

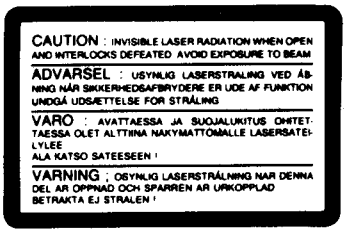
CAUTION

The use of controls or adjustments or the performance of procedures other than those specified herein may result in hazardous radiation.

[EUROPE, SCANDINAVIA, UK and AUSTRALIA]



Label affixed on the rear panel of the unit



Label affixed on the CD MECHA chassis

INFORMATIONS

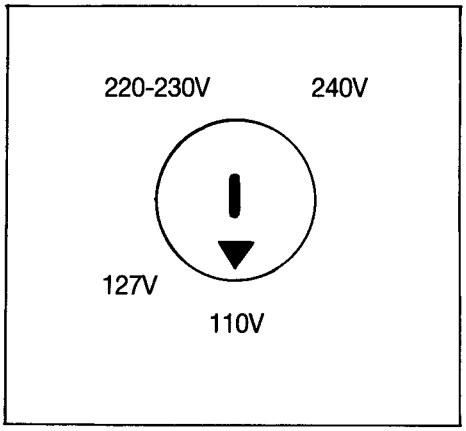
SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbol	Prinncipal Destination
[A]	USA
[B]	UK
[E]	Europe(except, UK)
[S]	Australia
[V]	Germany
[U]	Universal
[Y*]	Custom version

VOLTAGE CONVERSION ([U] [Y] Model only)

Before connecting the power cord, set the VOLTAGE SELECTOR located on the rear panel of the AC-400/AC-405K so that the correct voltage for your area is indicated.



[U, Y]

SPECIFICATIONS

[AMPLIFIER Section]

Power output ..... 30W+30W(6 ohm, 1KHz, 10% THD, EIAJ)
25W+25W(6 ohm, 1KHz, 1% THD, DIN)
Total harmonic distortion ..... 0.05%(−10dB for RMS)
Input sensitivity
AUX ..... 400mV/47K ohms
S/N ratio
AUX 70dB
Channel separation 55dB

[Deck Section]

Track system ..... 4 track, 2 channel system
Frequency response ..... 100-12,500Hz ± 3dB(Normal tape)
100-12,500Hz ± 3dB(CrO_2 tape)
Wow & Flutter ..... 0.2%(WRMS)
S/N ratio(CCIR/ARM) ..... 62dB(DOLBY ON, CrO_2 tape)
52dB(DOLBY OFF, Normal tape)
Total harmonic distortion ..... 1.0%(Normal tape, at 400Hz)
Channel separation 35dB

[General]

Power requirement

AC-400

E/V ..... AC 220-230V, 50Hz
B ..... AC 230V, 50Hz
S ..... AC 240V, 50Hz
U, Y ..... AC 110/127/220-230/240V, 50/60Hz convertible

AC-405K

U, Y ..... AC 110/127/220-230/240V, 50/60Hz convertible

Dimension ..... 270(W)×280(H)×371(D)mm
Weight 9Kg
Power consumption 88W

[Tuner Section]

Frequency range

FM ..... 87.5-108MHz(50KHz step)

MW ..... 531-1602KHz(9KHz step)
[E / V / S / B / U_5 / Y_1 / Y_3 / Y_7]
530-1610KHz(10KHz step)
[U_8 / Y_2 / Y_4]

LW ..... 144-288KHz(1KHz step)

SW ..... 3.8-12.5MHz(5KHz step)

Sensitivity

FM ..... 3μV (IHF, THD 3%) [EXCEPT V]
5μV (IHF, THD 3%) [V]

MW ..... 700μV (IHF, THD 10%)

LW ..... 1500μV (IHF, THD 10%)

SW ..... 30μV (IHF, THD 10%)

S/N ratio(IHF A NETWORK)

FM Mono:70dB
Stereo:65dB

MW 40dB

LW 30dB

SW 30dB

Total Harmonic distortion(at 1KHz)

FM Mono:0.8%
Stereo:1.0%

MW 1.0%

LW 1.0%

SW 2.0%

Stereo separation ..... 35dB(at 1KHz)

[Graphic Equlizer]

Center frequency 63Hz/160Hz/400Hz/1KHz/2.5KHz/6.3KHz/16KHz

Control range ..... ±8dB(2dB step)

[CD Section]

Pick up system ..... 3 Beam laser

Sampling frequency 44.1KHz

Error correction system ..... Cross interleave reed solomon

Number of channels ..... 2 Channel

Frequency response ..... 20Hz~20KHz

S/N ratio 90dB

Wow & flutter ..... Below measurable limits

Total harmonic distortion ..... 0.07% (at 1KHz)

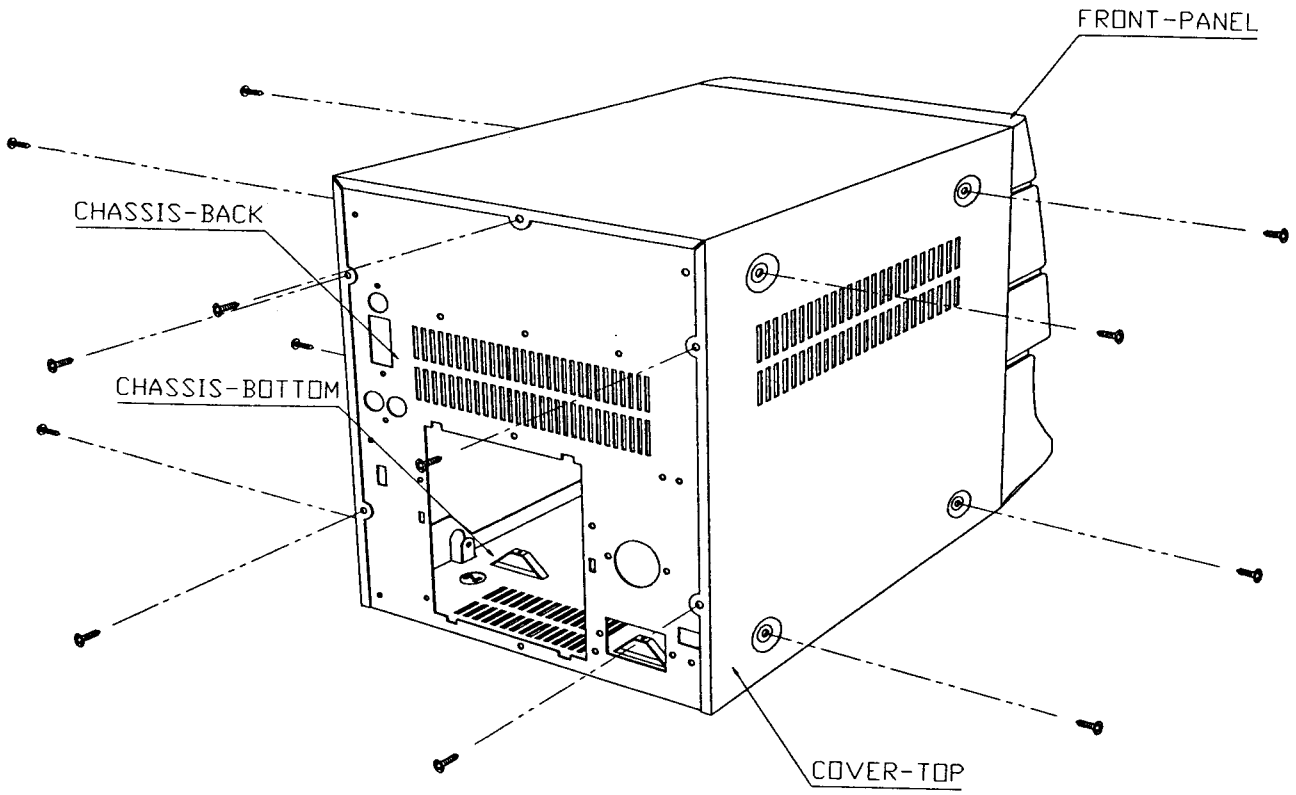
Channel separation ..... 85dB (at 1KHz)

Dynamic range ..... 85dB (at 1KHz)

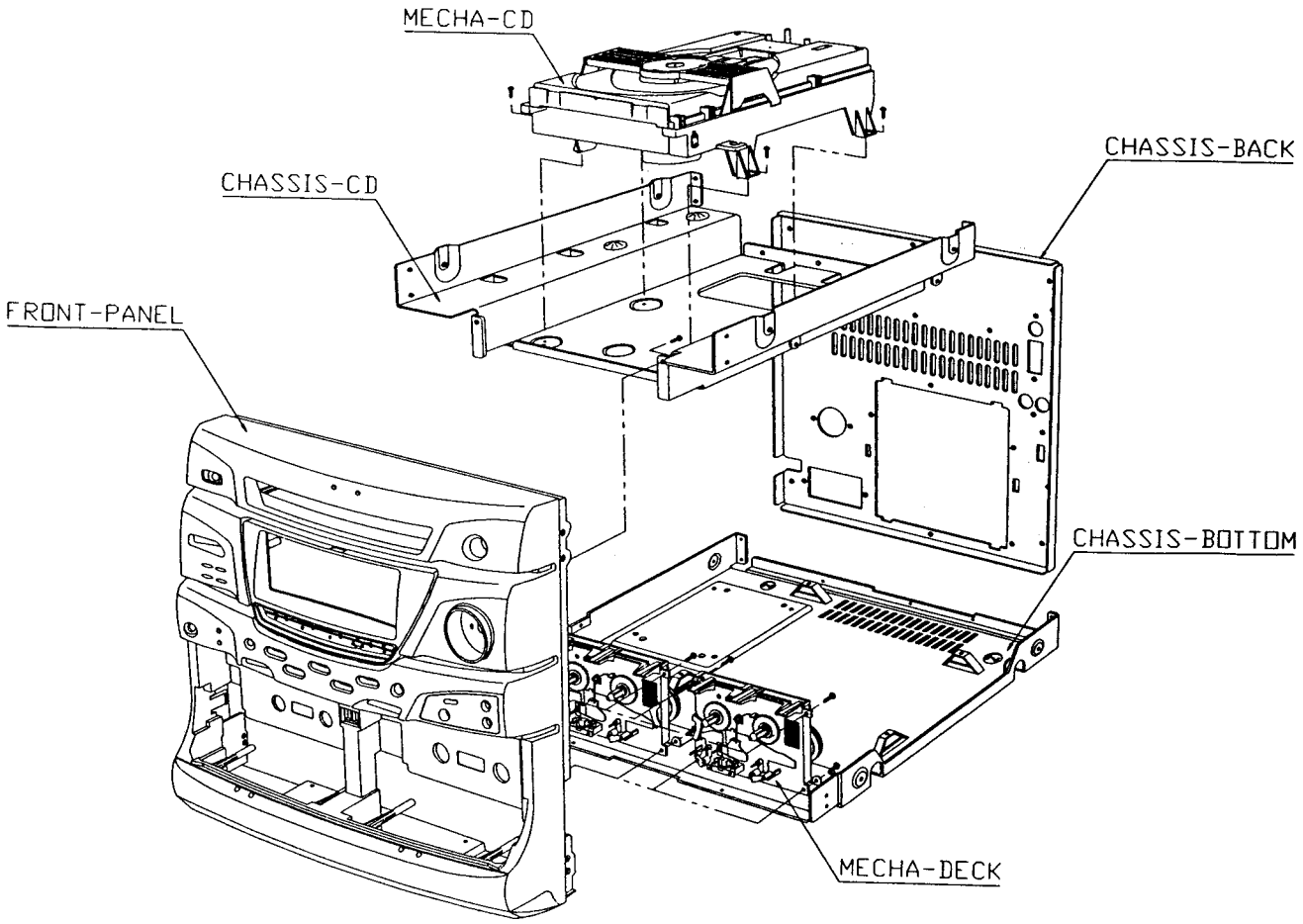
* For improvement purposes, specifications and design are subject to change without notice.

I. DISASSEMBLY

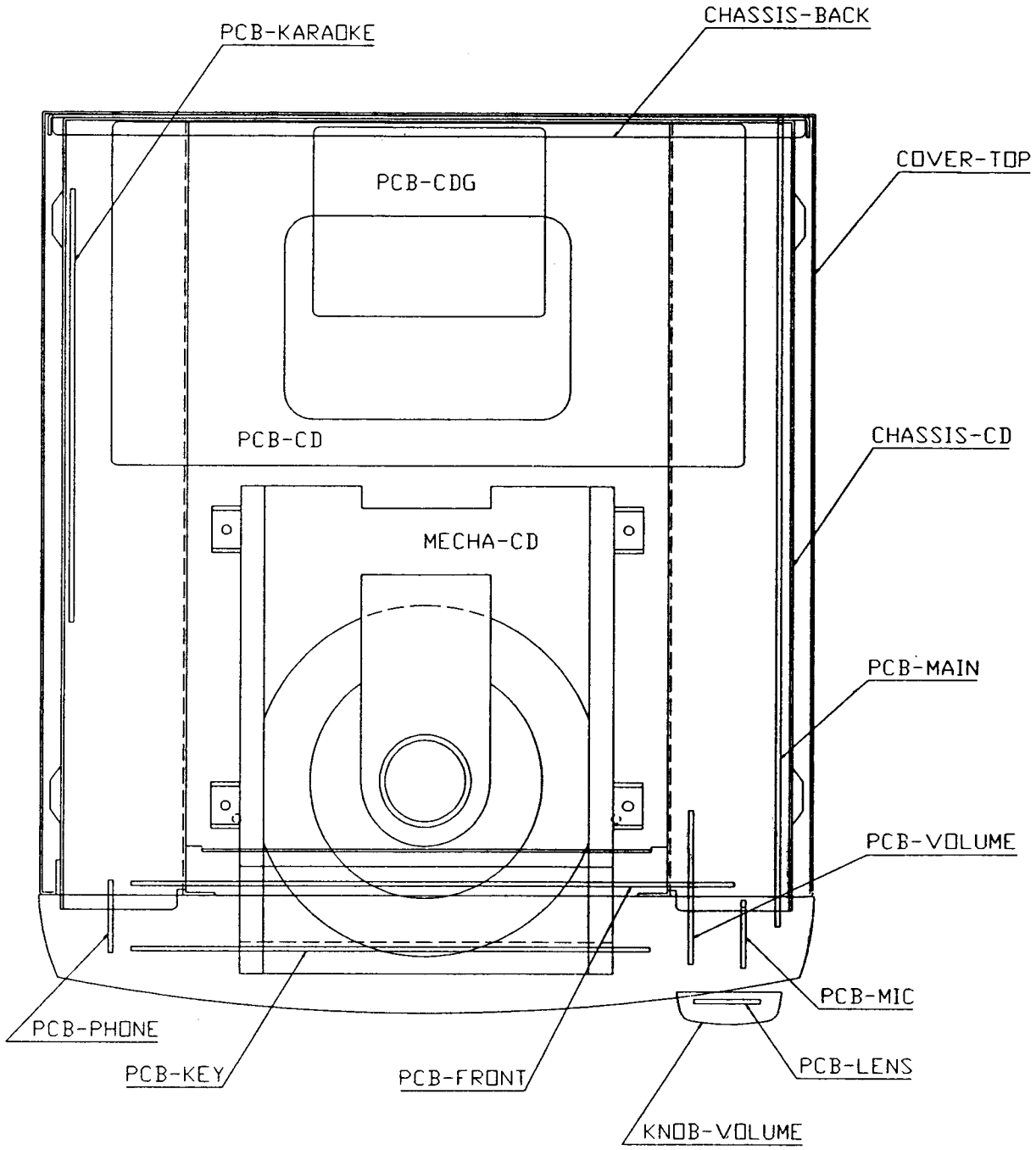
1. REMOVAL OF COVER-TOP

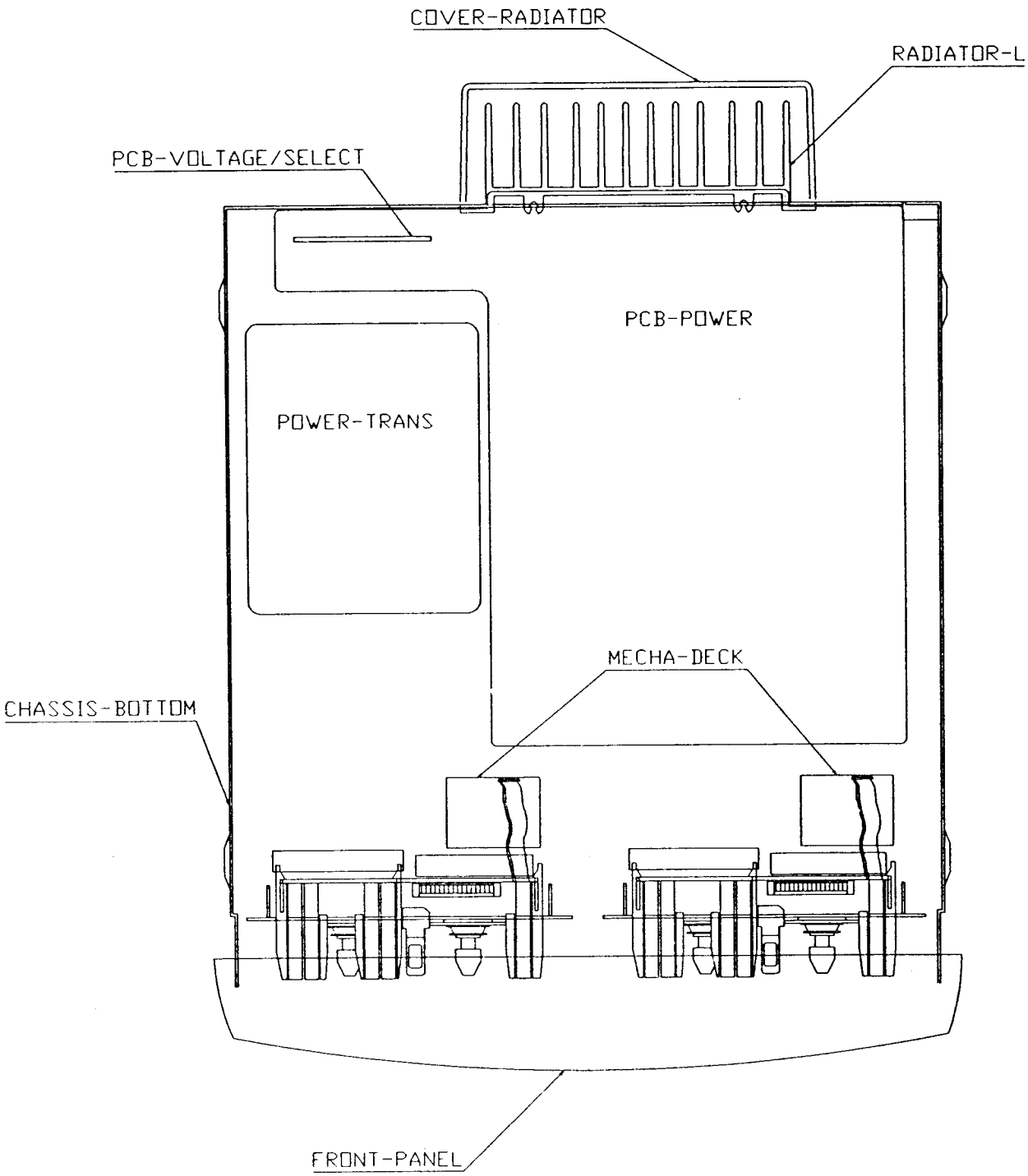


2. REMOVAL OF CD MECHA & CASSETTE DECK MAINTENANCE



II. PRINCIPAL PARTS LOCATIONS

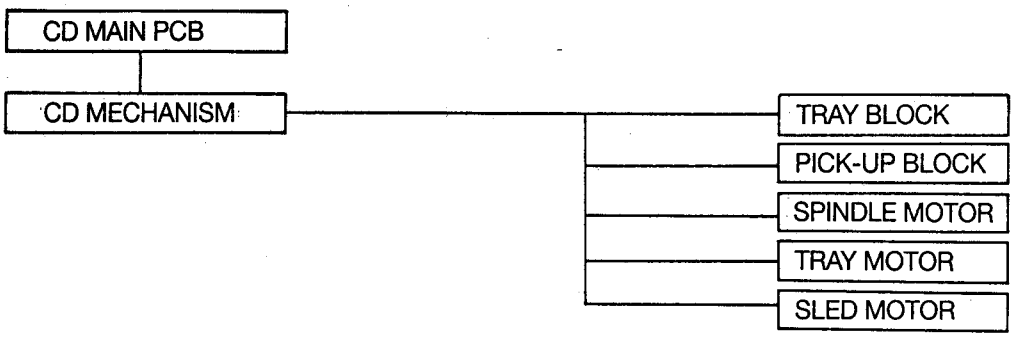



COVER-RADIATOR
RADIATOR-L
PCB-VOLTAGE/SELECT
PCB-POWER
POWER-TRANS
MECHA-DECK
CHASSIS-BOTTOM
FRONT-PANEL

III. REPLACEMENT OF PRINCIPAL MECHANICAL PARTS

CD MECHANISM

1. DISMANTLING PROCEDURE OF THE COMPONENTS



2.REMOVAL OF THE CD MAIN PCB

1) Disconnect the four connectors carefully (These are on the CD PCB. fig 1. CN601, CN602, CN605, CN606).

3.REMOVAL OF THE CD MECHANISM

1) Remove the four retaining screws, then remove the CD mecha. unit (fig 2)

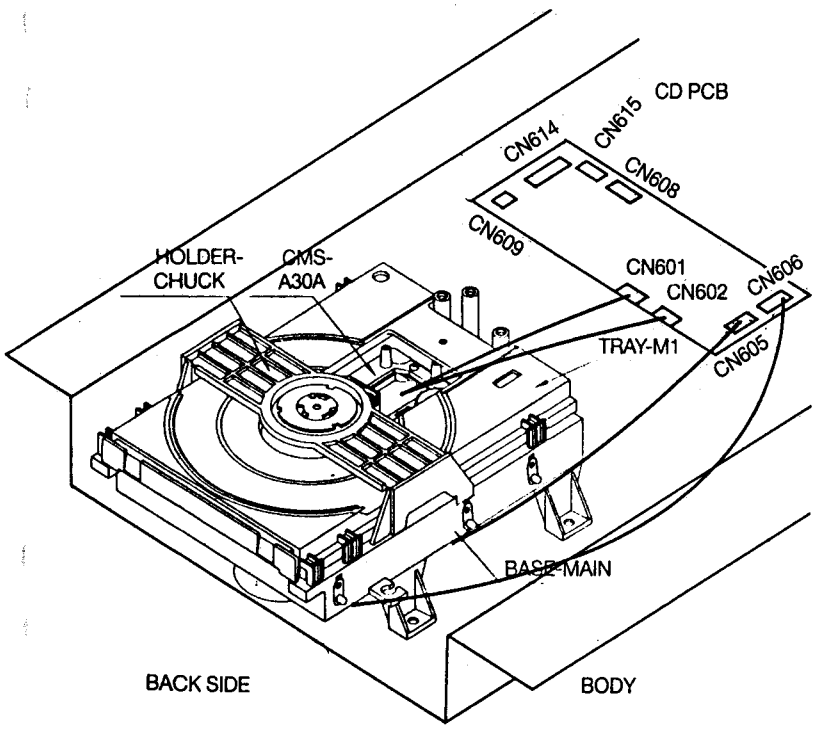


Fig. 1

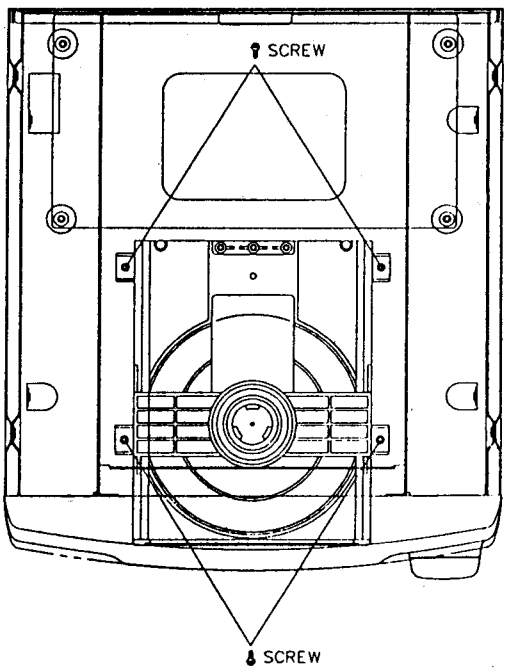


Fig. 2

4.REMOVAL OF THE TRAY BLOCK

1) Remove the four retaining screws for clamper and tray. (fig. 3)

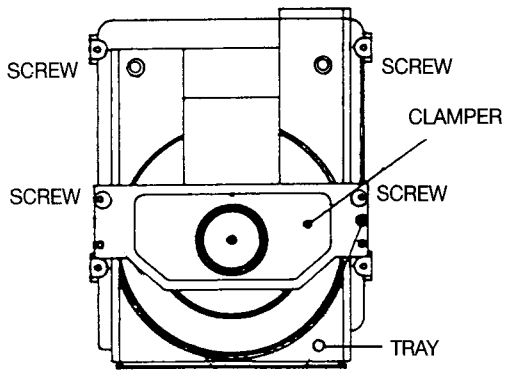


Fig. 3

2) Slide the bracket in the direction of the arrow (fig. 4)

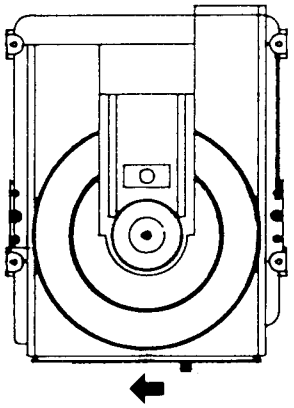


Fig. 4

3) Pull out the tray ass'y slowly in the direction of the arrow (fig. 5)

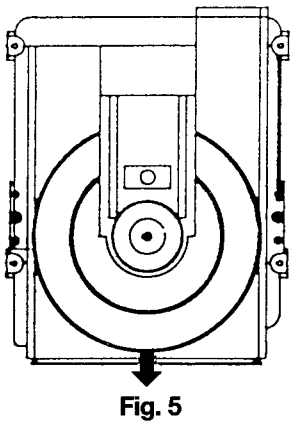


Fig. 5

4) Remove the tray block.

5.REPLACEMENT OF THE TRAY MOTOR

1) Remove the tray-belt
2) Unsolder the lead wires and PCB of the tran-motor with a soldering-iron.
3) Remove the tray-motor retaining screws.
4) Remove and replace the tray-motor.
5) Reassemble in the reverse order.

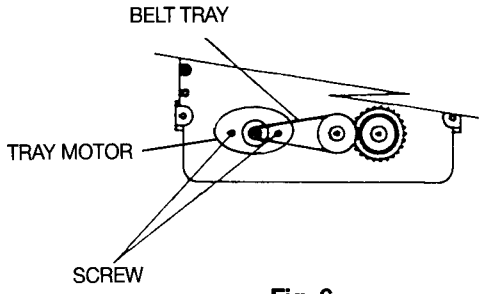


Fig. 6

6.REPLACEMENT OF THE SLED-MOTOR & REPLACEMENT OF THE SPINDLE -MOTOR

- Remove the four SHAFT CD and the four RUBBER CD for ASS'Y-MECHA FEED.
- Replacement of the spindle-motor itself is not recommended, because the adjustment of the turn table height is quite critical and necessitating the use of a special jig.
- Therefore, when need to replace the spindle-motor, please replace with a ASS'Y-MECHA FEED. (CD MECHA;CMS-A30A:ADCD-00110-031)

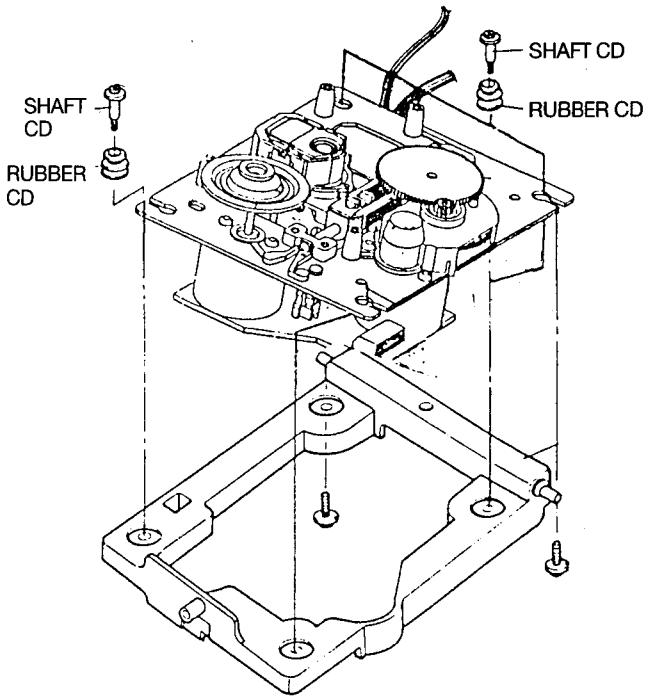


Fig. 7

2. CASSETTE DECK MECHANISM

2-1. REPLACEMENT OF THE PINCH ROLLER BLOCK

1) Pull the PINCH ROLLER BLOCK upward(⬆) while releasing the PINCH ROLLER RETAINING HOOK.
2) Reassemble in the reverse order.

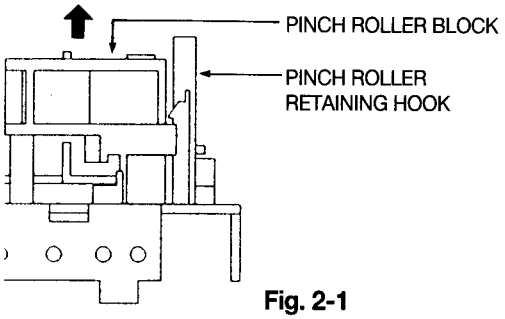


Fig. 2-1

2-2. REPLACEMENT OF THE PB HEAD (TAPE Ⅰ)

1) Remove the two HEAD RETAINING Ⓐ SCREWS.
2) Pull out the HEAD and disconnect all the lead wires with a soldering iron, then replace the PB HEAD.
3) Reassemble in the reverse order. After replacement, head azimuth and PB level adjustment must be performed.

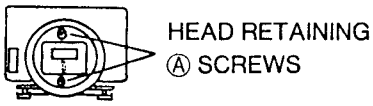


Fig. 2-2

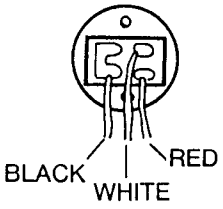


Fig. 2-3

2-3. REPLACEMENT OF THE REC/PB HEAD (TAPE Ⅱ)

1) Remove the two HEAD RETAINING Ⓐ SCREWS.
2) Pull out the HEAD and disconnect all lead wires with a soldering iron, then replace the REC/PB HEAD.
3) Reassemble in the reverse order, After replacement, head azimuth, PB level BIAS current and REC level adjustments must be performed.

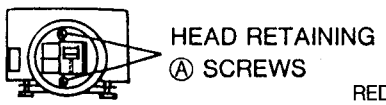


Fig. 2-4

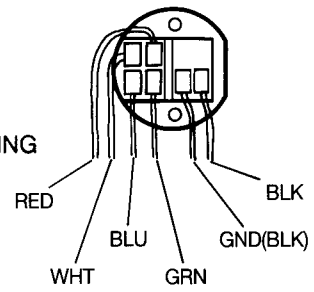


Fig. 2-5

2-4. REPLACEMENT OF THE CAPSTAN MOTOR

1) Disconnect the lead wire of the CAPSTAN MOTOR with a soldering iron.
2) Remove the CAPSTAN MOTOR RETAINING Ⓑ SCREWS, then replace the CAPSTAN MOTOR.
3) Reassemble in the reverse order and set the DRIVE BELT. After replacement, tape speed adjustment must be performed.

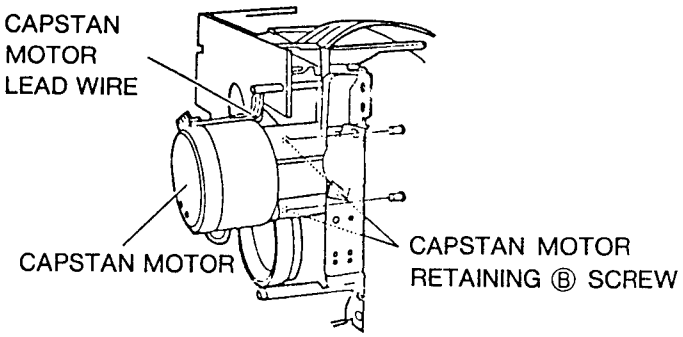


Fig. 2-6

2-5. REPLACEMENT OF THE DRIVE BELT

1) Remove the CAPSTAN MOTOR RETAINING Ⓑ SCREWS. (refer illustration Fig. 2-6)
2) Separate the MOTOR PCB from the MECHA BLK. Replace the DRIVE BELT.
3) Reassemble in the reverse order. After replacement, confirm the tape speed and if the result is not satisfactory, adjust the tape speed.

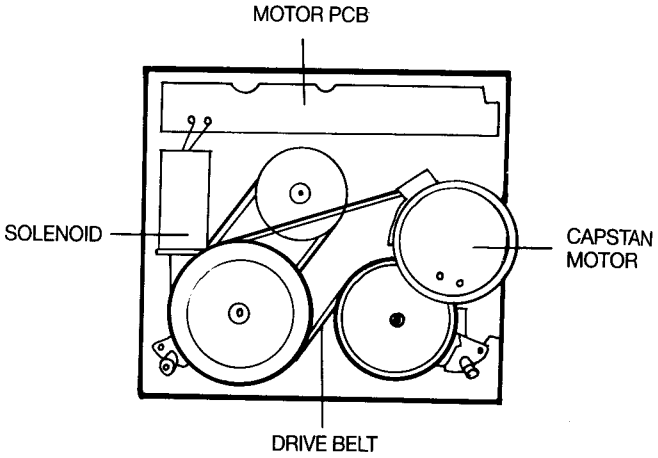


Fig. 2-7

2-6. ADJUSTMENT OF THE PB HEAD AZIMUTH ALIGNMENT (TAPE Ⅰ)

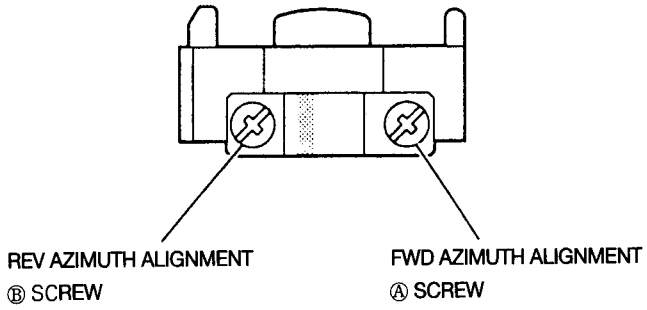


Fig. 2-8

1) Connect an AC milli-voltmeter to the TEST POINT TP401 (refer to the illustration on page8.) and connect an oscilloscope's input CH-1 and CH-2 to the output of the AC milli-voltmeters.
2) Play back the 10kHz(−15dB), HEAD AZIMUTH ALIGNMENT TEST TAPE(MTT-357G) then adjust the PB HEAD AZIMUTH ALIGNMENT Ⓐ (FWD PLAY) and Ⓑ (REV PLAY) SCREW respectively so that the reading on the AC milli-voltmeters are at maximum and waveforms on the oscilloscope are in the same phase, in both FWD and REV directions.

2-7. ADJUSTMENT OF THE REC/PB HEAD AZIMUTH ALIGNMENT (TAPE Ⅱ)

1) Connect an AC milli-voltmeter to the TEST POINT TP401 (refer to the illustration on page8.) and connect an oscilloscope's input CH-1 and CH-2 to the output of the AC milli-voltmeters.
2) Play back the 10kHz(−15dB), HEAD AZIMUTH ALIGNMENT TEST TAPE(MTT-357G) then adjust the REC/PB HEAD AZIMUTH ALIGNMENT Ⓐ (FWD PLAY) and Ⓑ (REV PLAY) SCREW respectively so that the reading on the AC milli-voltmeters are at maximum and waveforms on the oscilloscope are in the same phase, in both FWD and REV directions.

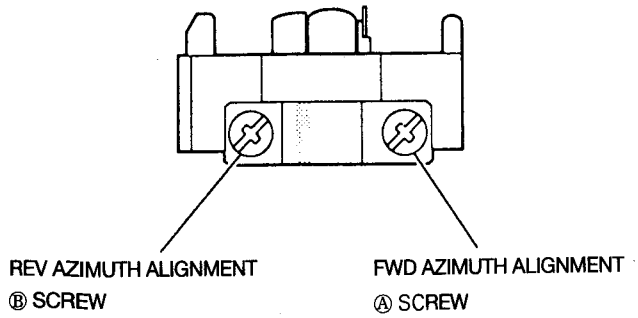


Fig. 2-9

2. TUNER ELECTRICAL ADJUSTMENT

NOTE: 1.Set the S.S.G. to 1kHz, 75kHz deviation for [U], [S], [B], [Y], [V2] or [E] model, 1kHz, 40kHz deviation for [V1] model.

STEP	ADJUSTMENT ITEM
1.	SSG FREQ. & OUTPUT LEVEL
2.	SET Tuning FREQ.
3.	ADJ. Part
4.	REMARKs(●) & RESULT(∗)

Test Point Adjustment Part

FM

3 DISTORTION(STEREO)

1. 98.0MHz, 60dBμ (STEREO L or R channel only)
2. 98.0MHz (PRESET 3CH)
3. IFT (FRONT END)
4. ● Connect the distortion meter to LINE OUT.
   ∗ Minimum Distortion

2 TUNING LED

1. 98.0MHz, 22dBμ (MONO)
2. 98.0MHz (PRESET 3CH)
3. TUNED indicator on the FL display.
4. ∗ TUNED indicator is lit.

1 CENTER VOLTAGE

1. 98.0MHz, 60dBμ (MONO)
2. 98.0MHz (PRESET 3CH)
3. T105
4. ● Connect the DC Digital Voltmeter to both ends of R138.
   ∗ 0 ± 50mV

4 STEREO SEPARATION

1. 98.0MHz, 60dBμ (STEREO L or R channel only)
2. 98.0MHz (PRESET 3CH)
3. SV102
4. ● Connect the milli-voltmeter to LINE OUT.
   ∗ Minimum output level for opposite channel.

LW <SW>

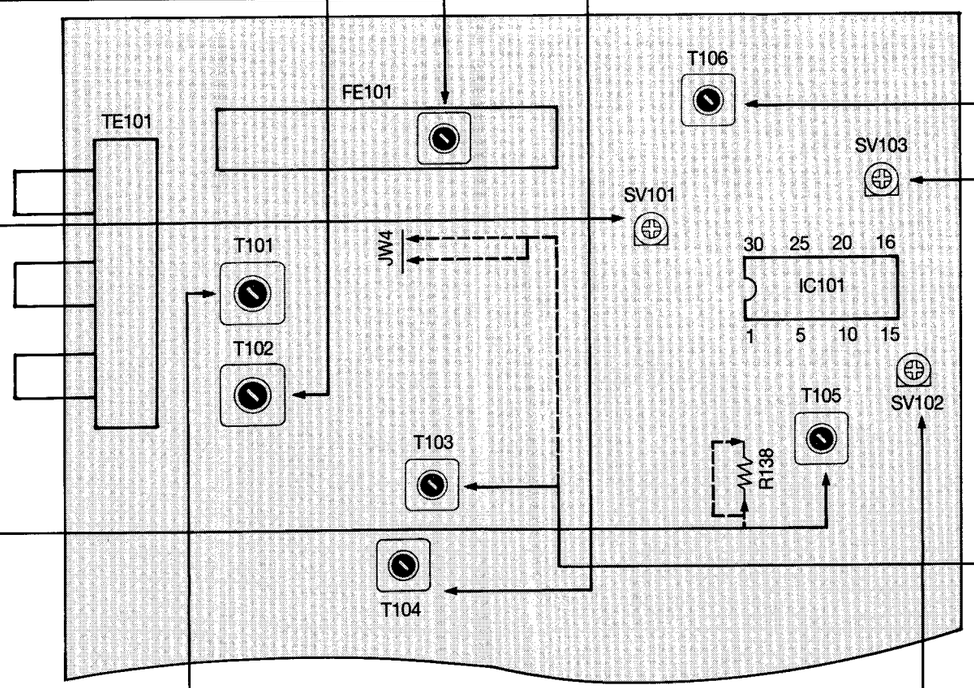
NOTE: 1. Set the S.S.G to 1kHz 30% modulation on each adjustment.
2. Frequencies indicated in < > are for the SW model.

2 LW <SW> SENSITIVITY

1. 160kHz, 70dBμ <4MHz, 35dBμ>
2. 160kHz <4MHz> PRESET 12CH <12CH>
3. T102
4. ● Connect the milli-voltmeter to LINE OUT
   ∗ Maximum output level.

1 LW <SW> OSC

1. –
2. 144kHz <3.8MHz> PRESET 11CH <11CH>
3. T104
4. ● Connect the Digital DC Voltmeter between JW4 and GND.
   ∗ 1.4 ± 0.1V <1.0 ± 0.1V>



MAIN PCB(A1U-311)

TUNER PART <TOP VIEW>

FRONT

AM

NOTE: Set the S.S.G to 1kHz 30% modulation on each adjustment.

3 AM IF

1. 603kHz, 60dBμ
2. 603kHz (PRESET 7CH)
3. T106
4. ● Connect the milli-voltmeter to LINE OUT.
   ∗ Maximum output level.

4 TUNING LED

1. 603kHz, 60dBμ
2. 603kHz (PRESET 7CH)
3. TUNED indicator on the FL display, SV103
4. TUNED indicator is lit.

1 AM(MW) OSC

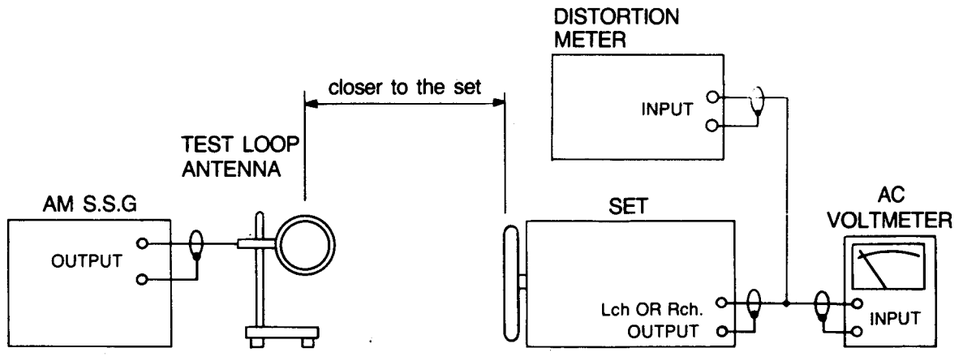
1. –
2. 531kHz(PRESET 6CH)
3. T103
4. ● Connect the Digital DC Voltmeter between JW4 and GND.
   ∗ 1.0V ± 0.1V

2 AM(MW) SENSITIVITY

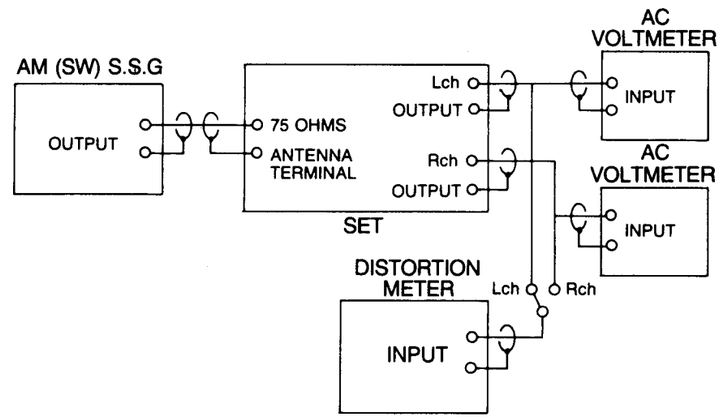
1. 603kHz, 70dBμ
2. 603kHz (PRESET 7CH)
3. T101
4. ● Connect the milli-voltmeter to LINE OUT
   ∗ Maximum output level.

IV. ADJUSTMENT

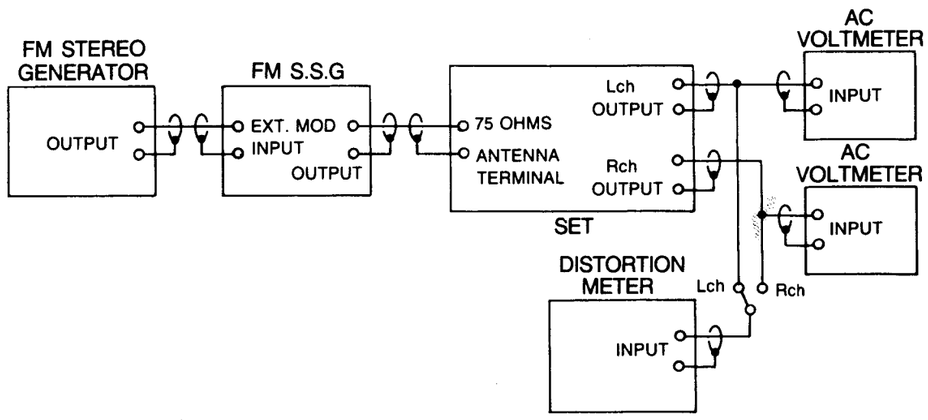
1. TUNER INSTRUMENT CONNECTIONS



Instrument connection for AM (MW, LW) section adjustment



Instrument connection for AM (SW) section adjustment



Instrument connection for FM section adjustment

4. CASSETTE DECK ELECTRICAL ADJUSTMENT

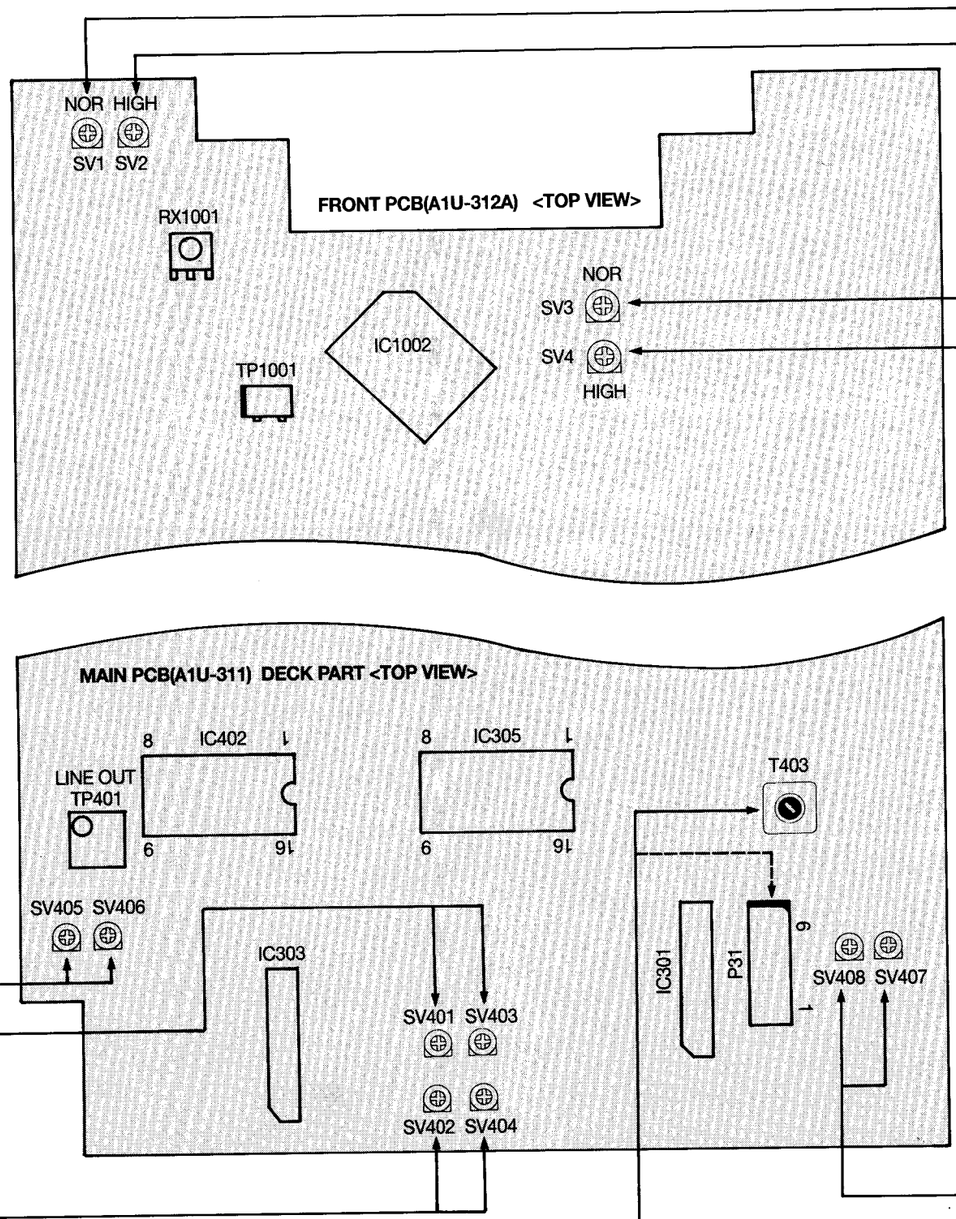
[PRECAUTIONS BEFORE ADJUSTMENT]

1. Before adjustment, clean and de-magnetize the heads and tape guides.
2. Set the Dolby NR switch off.
3. Use the following recording test tapes.
   NORMAL position : TDK AC-224
   CrO_2 position : TDK AC-513
4. LINE OUT =TP401

STEP ADJUSTMENT

1. TEST TAPE/INPUT SIGNAL
2. MODE
3. CHECK POINT, ADJUSTMENT PART
4. REMARKS(●) and RESULT(∗)

Adjustment Part　　Test Point



9 RECORDING LEVEL

1. NORMAL recording test tape(AC-224), 1KHz, −6.0dBs(LINE OUT)
2. REC → PLAY
3. LINE OUT, SV405(L-ch), SV406(R-ch)
4. ● Connect an AC milli-voltmeter to LINE OUT
   ∗ −6dBs(±1dB)

7 TAPE Ⅱ PB LEVEL

1. 400Hz test tape(MTT-150)
2. PLAY
3. LINE OUT, SV401(L-ch), SV403(R-ch)
4. ● Connect an AC milli-voltmeter to LINE OUT
   ∗580mV(−2.5dBs)

6 TAPE Ⅰ PB LEVEL

1. 400Hz test tape(MTT-150)
2. PLAY
3. LINE OUT, SV402(L-ch), SV404(R-ch)
4. ● Connect an AC milli-voltmeter to LINE OUT
   ∗580mV(−2.5dBs)

8 BIAS OSC FREQUENCY

1. CrO_2 type blank tape
2. REC
3. P31(6 pin), T403
4. ● Connect a frequency counter between P31(6 pin) and GND
   ∗105 ± 5KHz

1 TAPE Ⅰ HIGH (×2) SPEED

1. 3,000Hz test tape (MTT-111DN) in TAPE Ⅰ
   A blank tape in TAPE Ⅱ
2. PLAY(press the ×2 DUBBING START button)
3. LINE OUT, SV2
4. ● Connect a frequency counter to the LINE OUT
   ∗6,000 ± 120Hz

2 TAPE Ⅰ NORMAL (×1) SPEED

1. 3,000Hz test tape (MTT-111DN)
2. PLAY
3. LINE OUT, SV1
4. ● Connect a frequency counter to the LINE OUT
   ∗3,000 ± 60Hz

3 TAPE Ⅱ HIGH (×2) SPEED

1. 3,000Hz test tape (MTT-111DN) in TAPE Ⅱ
2. PLAY(During adjustment, short TP1001. After adjustment, remove it.)
3. LINE OUT, SV4
4. ● Connect a frequency counter to the LINE OUT
   ∗6,000 ± 120Hz

4 TAPE Ⅱ NORMAL (×1) SPEED

1. 3,000Hz test tape (MTT-111DN)
2. PLAY
3. LINE OUT, SV3
4. ● Connect a frequency counter to the LINE OUT
   ∗3,000 ± 60Hz

5 HEAD AZIMUTH ALIGNMENT(TAPE Ⅰ & Ⅱ)

1. 10KHz −15VU test tape(MTT-357G)
2. PLAY
3. LINE OUT, HEAD AZIMUTH ALIGNMENT SCREW (refer to the page 14)
4. ● Connect an AC milli-voltmeter to LINE OUT
   ∗Maximum output level.

10 NORMAL POSITION BIAS

1. NORMAL recording test tape(AC-224), 1KHz and 10KHz, −26dBs(LINE OUT)
2. REC → PLAY
3. LINE OUT SV408(L-ch), SV407(R-ch)
4. ● Connect an AC-milli voltmeter to LINE OUT
   ∗Playback level difference between 1kHz and 10kHz after recording is within ± 0.3dB

3. CD ELECTRICAL ADJUSTMENT

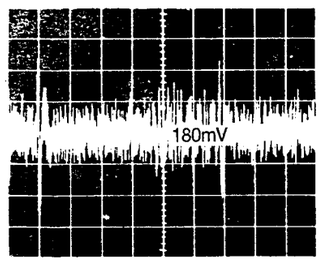
* CD adjustment starts after T.O.C. in the normal mode.

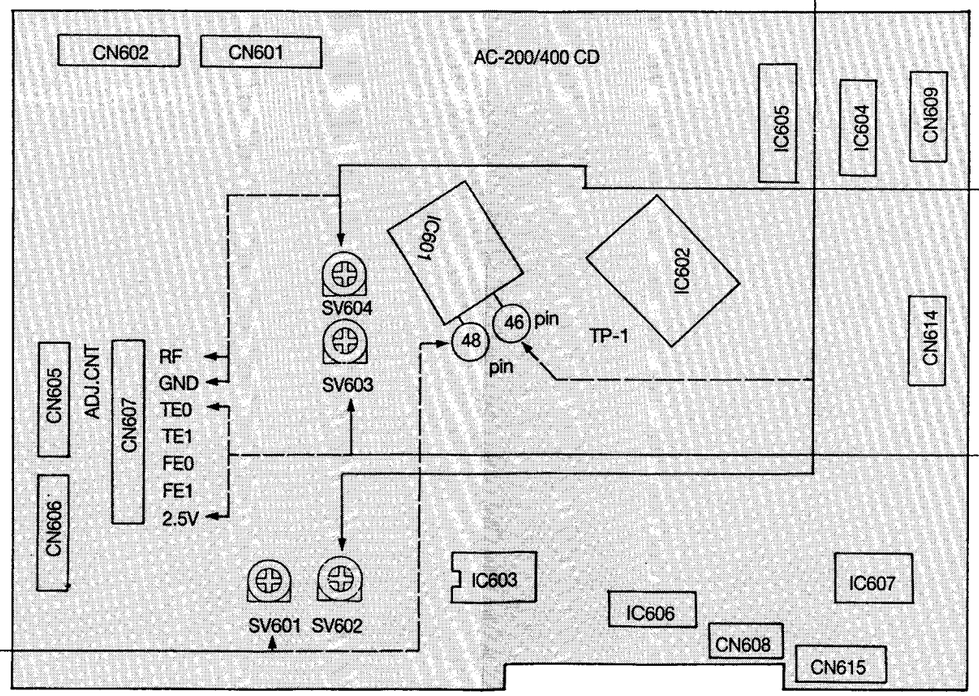
STEP	ADJUSTMENT
1. TEST DISC 2. MODE 3. TEST POINT and ADJUSTMENT parts. 4. REMARK(●) and RESULT(*)	

Test Point　　Adjustment Part

4　TRACKING SERVO GAIN

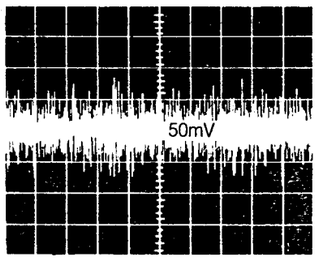
1. Test disc A-BEX TCD-781
2. PLAY mode
3. IC601 48pin/SV601
4. ● Connect an osciilloscope to the IC601 48pin.
   * 180mV





3　FOCUS SERVO GAIN

1. Test disc A-BEX TCD-781
2. PLAY mode
3. IC601 46pin/SV602
4. ● Connect an oscilloscope to the IC601 46pin
   * 50mV

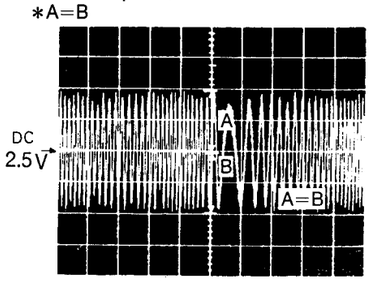


1　FOCUS BIAS

1. Test disc A-BEX TCD-781
2. PLAY mode
3. CN607(1, 2pin)/SV604
4. ● Connect an oscilloscope to the RF and GND Press PLAY button and adjust the RF signal to maximum
   * 1.4V p-p

2　E-F BALANCE

1. Test disc A-BEX TCD-781
2. PLAY mode
3. CN607(3, 7pin)/SV603
4. ● Connect an oscilloscope to the TE0 or TE1 and 2.5V(CN607 7pin)
   ● Set SV601 to minimum position. (Center → Left) then, set SV601 to CENTER position
   * A=B



1. RECOMMENDED SPARE PARTS

Ref. No.	Part No.	Description
1	* ACAC-00063-000	CORD-AC [E, V, U, Y] KKP419C
2	* ACAC-00083-000	CORD-AC [S] KKP-500
3	* ACAC-00094-000	CORD-AC [B] CW3201
4	BTCE-00050-004	FILTER-CERAMIC SFU 450B
5	BTCE-00060-107	FILTER-CERAMIC [EXCEPT V1] SFE 10.7MS3G-A
6	BTCE-00152-107	FILTER-CERAMIC [V1] SFE 10.7MJA 10M-A
7	* CACS-U102K-129	CAPACITOR AC DE7090B102KVA1-KC 400V S
8	DDMR-00210-T11	DIODE-RECTIFIER 1N5402S (200V 3A) DO-20 M
9	DDSV-0003B-S30	DIODE-VVC 1SV149B AM 8V DIP2 S
10	DDTR-00040-T10	DIODE-RECTIFIER 1N4004 (400V 1A) DO-41 T
11	DDTS-00060-SO0	DIODE-SI 1SS131 (90V 0.13A) DO-40 T
12	DDTZ-G056B-SO0	DIODE ZENER MTZ5.6B 5.45-5.73 DO40 T
13	DDTZ-G082C-SO0	DIODE ZENER MTZ8.2C 8.03-8.45 DO40 T
14	DDTZ-G091B-SO0	DIODE ZENER MTZ9.1B 9.01 DO40 T
15	DDTZ-G130B-SO0	DIODE ZENER MTZ13B 12.55-13.21 DO40 T
16	DPFL-00370-GCF	V.F.D CM1369D
17	DPLT-00073-YC3	DOT-LED SLR-34YC3 YEL R3 TAPPING
18	DPLT-00311-WW5	DOT-LED SPR-54MVW (2COLOR) R5 D
19	DPLT-00452-YC5	DOT-LED AL-151YC YEL R5 N
20	ESRY-00010-120	RELAY HR-703V DC 12V
21	* FGFB-S1002-337	FUSE GLASS [U, Y] 1A 250V 5×20
22	* FGFB-S2002-337	FUSE GLASS 2A 250V 5×20
23	* FGFB-S8001-337	FUSE GLASS 800mA 250V 5×20
24	ICCM-00060-SQ0	IC QUAD SWITCH GD4066B DIP14
25	ICCM-00170-SQ0	IC 4CH MUX/DEMUX GD4052B DIP16
26	ICCM-20360-T90	IC VOLTAGE DETECTOR S80721AN TO-90
27	ICCM-20380-S10	IC PLL LC7218 DIP24S
28	ICCM-20390-SG0	IC ELECTRONIC VOLUME NJU7305 SDIP28
29	ICCM-20501-S30	IC CMOS TC4094B DIP16
30	ICCM-20710-TQ0	IC GRAPHIC EQ FILTER XR-1093 DIP14
31	ICDG-01300-TP0	ECHO SOUND PROCESSOR ES56028E DIP28 [405K]
32	ICDG-00370-S20	IC TAPE SELECTOR μPC1330HA SIP9
33	ICDG-00560-SO0	IC MOTOR DRIVER BA6208 SIP9
34	ICDG-00940-SE0	IC D.S.P+D.A.C (CDP) KS-9282B QFP80
35	ICDG-00950-SE0	IC RF+SERVO (CDP) KA-9220B QFP80
36	ICHP-00070-S10	IC HYBRID AMP-POWER STK4142 Ⅱ 25W×2 SIP18
37	ICHY-00210-SG0	IC REMOTE RECEIV NJH41H380-L UNIT4
38	ICLN-00540-SO0	IC 2CH PRE AMP BA3416BL DIP16
39	ICLN-00610-S10	IC AUDIO SENSER LA2000 SIP9
40	ICLN-00681-SA0	IC DOLBY B HA12136A DIP16
41	ICLN-01550-S50	IC 7BAND EQ AN7337N DIP20
42	ICLN-01810-S40	IC VOCAL FADER [405K] CXA1642P DIP8
43	ICMP-01260-SA0	IC UCOMPUTER TCM-9503-008 QIP100
44	ICMP-01270-SA0	IC UCOMPUTER TCM-9503-009 QIP80
45	ICLN-01590-SE0	IC MOTOR CONTROL CDP KA-9258D HSOP28
46	ICOP-00130-SE0	IC DUAL OP AMP KA4558S SIP9
47	ICLN-01640-S10	IC AM/FM IF MPX LA1851N DIP30
48	ICOP-00131-SE0	IC DUAL OP AMP KA4558C DIP8
49	ICRG-00081-SE0	IC REGULATOR KA7924 24V 3mm TO-220
50	ICRG-00091-SE0	IC REGULATOR KA7806 6V 3mm TO-220
51	ICRG-00191-SE0	IC REGULATOR KA7912 12V 3mm TO-220
52	ICRG-00218-SE0	IC REGULATOR KA7812 12V 3mm TO-220
53	ICRG-00240-SE0	IC REGULATOR MC78L05 5V TO-92
54	IFFD-00140-E60	IFT-FM DET AFD014 7.4mm-CAN
55	KIAA-00140-ED0	COIL-AM IFT AAA-014B
56	KIAO-00240-E20	COIL-AM OSC AAO024 MW 7mm-CAN
57	KIAO-00250-E20	COIL-AM OSC AAO025 LW 7mm-CAN
58	KIAO-00260-E20	COIL-AM OSC AAO026 SW 7mm-CAN
59	KIAT-00301-E20	COIL-AM ANT AAT030-1 LW 10mm-CAN
60	KIAT-00351-E20	COIL-AM ANT AAT035-1 MW 10mm-CAN
61	KIAT-00370-E20	COIL-AM ANT AAT037 SW 10mm-CAN

V. PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list Part No, Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

[**NOTE**]

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.

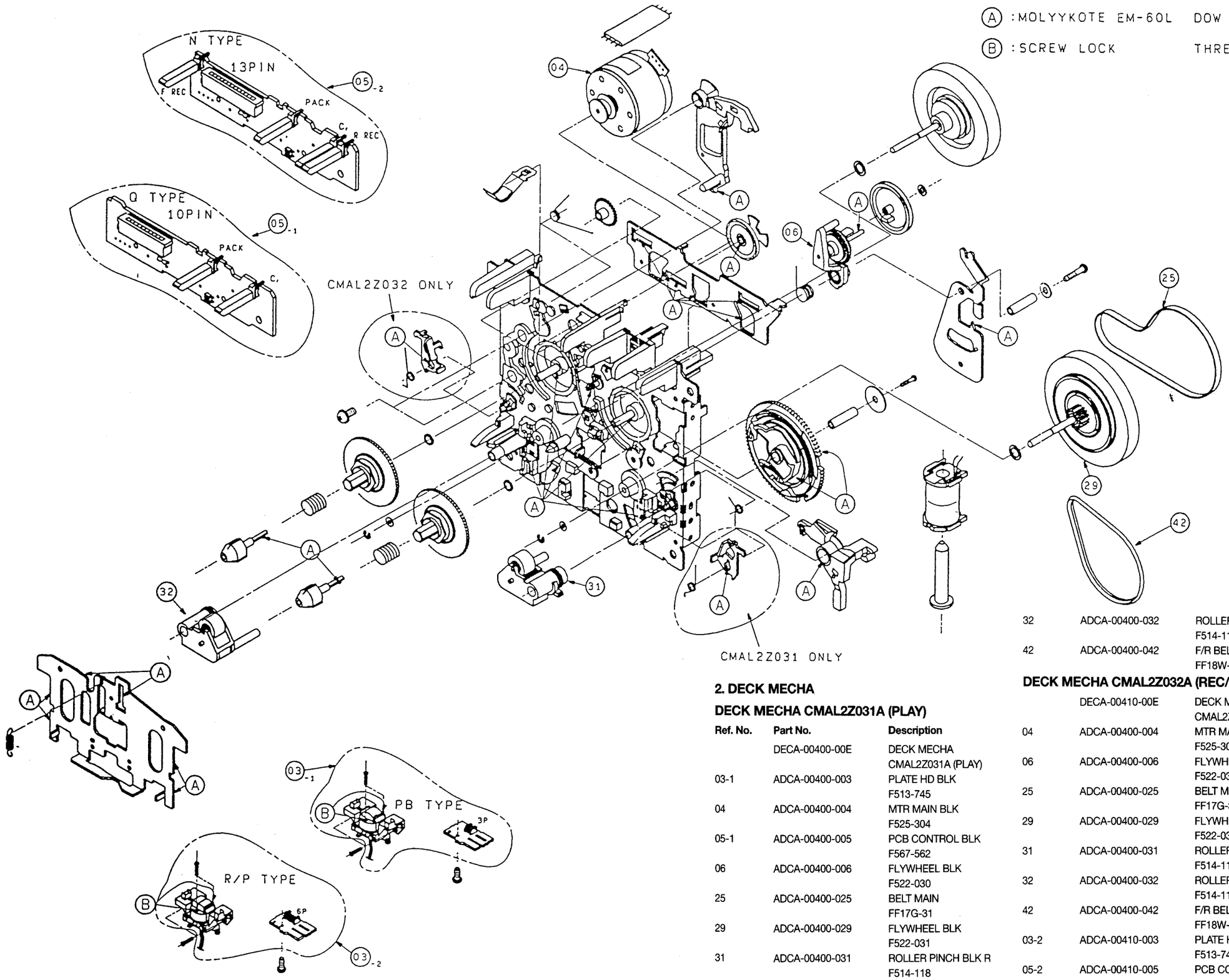
WARNING

⚠(*) INDICATED SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠(*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

Ref. No.	Part No.	Description
62	KIML-A0010-E60	COIL-FM MPX FILTER AMA-001A 19KHz 10mm-CAN
63	KIML-A0020-E20	COIL-FM MPX FILTER [V1] AFL002 114KHz 7mm-CAN
64	KIRK-00150-E60	COIL-REC CHOCK ARK-015A 8.2mH MOLD SHELD
65	KIRO-00140-E60	COIL-REC OSC ARO014 85KHz 10mm-CAN
66	KIRP-00050-E60	COIL-REC TRAP ARP005A 100KHz 7mm-C
67	KTAL-00041-072	CRYSTAL HC-49/U 7.200000MHz
68	KTAL-00101-003	CRYSTAL KDSIF 32.768KHz-20P
69	KTRE-00220-080	RESONATOR CST8.00MTW-TF01
70	* PTAJ-02370-C4U	TRANSFORMER-POWER [A] A74-237C-U 74 × 60 120V
71	* PTAJ-02370-H4O	TRANSFORMER-POWER [U, Y] A74-237H-O 74 × 60 110/127/220-230/240V
72	* PTAJ-02370-Y4V	TRANSFORMER-POWER [E, B, V] A74-237Y-V 74 × 60 230V
73	* PTAJ-02370-Z4A	TRANSFORMER-POWER [S] A74-237Z-A 74 × 60 240V
74	RFUE-F470J-010	RESISTOR-FUSIBLE 47ohm 1/4W ERQ14AJ470E T
75	RFUE-F560J-010	RESISTOR-FUSIBLE 56ohm 1/4W ERQ14AJ560E T
76	RFUM-G1R0J-130	RESISTOR-FUSIBLE 1ohm 1/2W 5% M
77	RFUM-G4R7J-130	RESISTOR-FUSIBLE 4.7ohm 1/2W 5% M
78	RJWT-00000-AA0	RESISTOR-JUMPER WIRE 60mm-TX123 F
79	RMOE-H4R7J-020	RESISTOR-METAL OXIDE 1W ERG(X) 1SJ4R7E 4.7ohm T
80	SKPH-00350-360	SOCKET-PHONE LGY6501-06
81	SKPH-00360-360	SOCKET-PHONE HTJ035-10A
82	SKRC-00290-020	SOCKET-RCA JK0200440N 2P
83	SWPU-00301-038	SWITCH-PUSH 00220014 1K(2C2P)
84	SWSL-00128-012	SWITCH-SLIDE 00120050 30V 0.3A
85	SWTA-00220-060	SWITCH-TACT SKHV10910(A) 12V 50mA
86	SWTA-00230-06V	SWITCH-TACT SKHH17910A 12V 50mA W/GND
87	SWVS-00103-S50	SWITCH-VOLTAGE SEL [U, Y] JUH1420-0104 250V/5A 1C4P
88	TEAT-00051-03R	TERMINAL ANTENNA AK1/2-1058A
89	TRSK-0001G-S30	FET N-CHANNEL 2SK246-GR TO92
90	TRSA-0023Y-SD0	TRANSISTOR P-H FREQ KTA1658-Y TO220 IS
91	TRTA-0012Y-SD0	TRANSISTOR P-H FREQ KTA1273-Y TO92L
92	TRTA-0056T-SOS	TRANSISTOR P-H FREQ DTA114T-S W/RESIST TO92M
93	TRTA-0008G-SD0	TRANSISTOR P-H FREQ KTA1266-GR TO92
94	TRTA-0042E-SOS	TRANSISTOR P-H FREQ DTA124E-S TO92M
95	TRTC-01060-SD0	TRANSISTOR N-H FREQ KTC3203 TO92
96	TRTC-0010Y-SD0	TRANSISTOR N-H FREQ KTC1923-Y TO92
97	TRTC-0016G-SD0	TRANSISTOR N-H FREQ KTC3198-GR TO92
98	TRTC-0016Y-SD0	TRANSISTOR N-H FREQ KTC3198-Y TO92
99	TRTC-0039Y-SD0	TRANSISTOR N-H FREQ KTC3205-Y TO92L
100	TRTC-0061E-SOS	TRANSISTOR N-H FREQ DTC124E-S TO92M
101	TRTC-0094Y-SD0	TRANSISTOR N-H FREQ KTC3199-Y TO92M
102	TRTC-0034Y-SOS	TRANSISTOR N-H FREQ DTC114Y-S TO92
103	TRTC-0039Y-SD0	TRANSISTOR N-H FREQ KTC3205-Y TO92L
104	TRTD-00200-SD0	TRANSISTOR N-L FREQ KTD-1302 TO92
105	TUFF-00120-00D	FRONT-END [V1] FE415-G11
106	TUFF-00100-000	FRONT-END [EXCEPT V1] KHF201V 8V
107	VFEB-A001B-103	RESISTOR-SEMI FIXED EVN DXA A03 B14 10Kohm
108	VFEB-A001B-104	RESISTOR-SEMI FIXED EVN DXA A03 B15 100Kohm
109	VFEB-A001B-223	RESISTOR-SEMI FIXED EVN DXA A03 BE4 22Kohm
110	VFEB-A001B-472	RESISTOR-SEMI FIXED EVN DXA A03 BQ3 4.7Kohm
111	VFEB-A001B-102	RESISTOR-SEMI FIXED EVN DXA A03 B13 1Kohm
112	VFEB-A001B-223	RESISTOR-SEMI FIXED EVN DXA A03 BE4 22Kohm
113	VRAE-D018C-203	VR-ROTARY RK12K1130 0A2 23C-20KC
114	VRBD-E038B-104	VR-ROTARY RK16812MG28A(14B)-100KB × 2



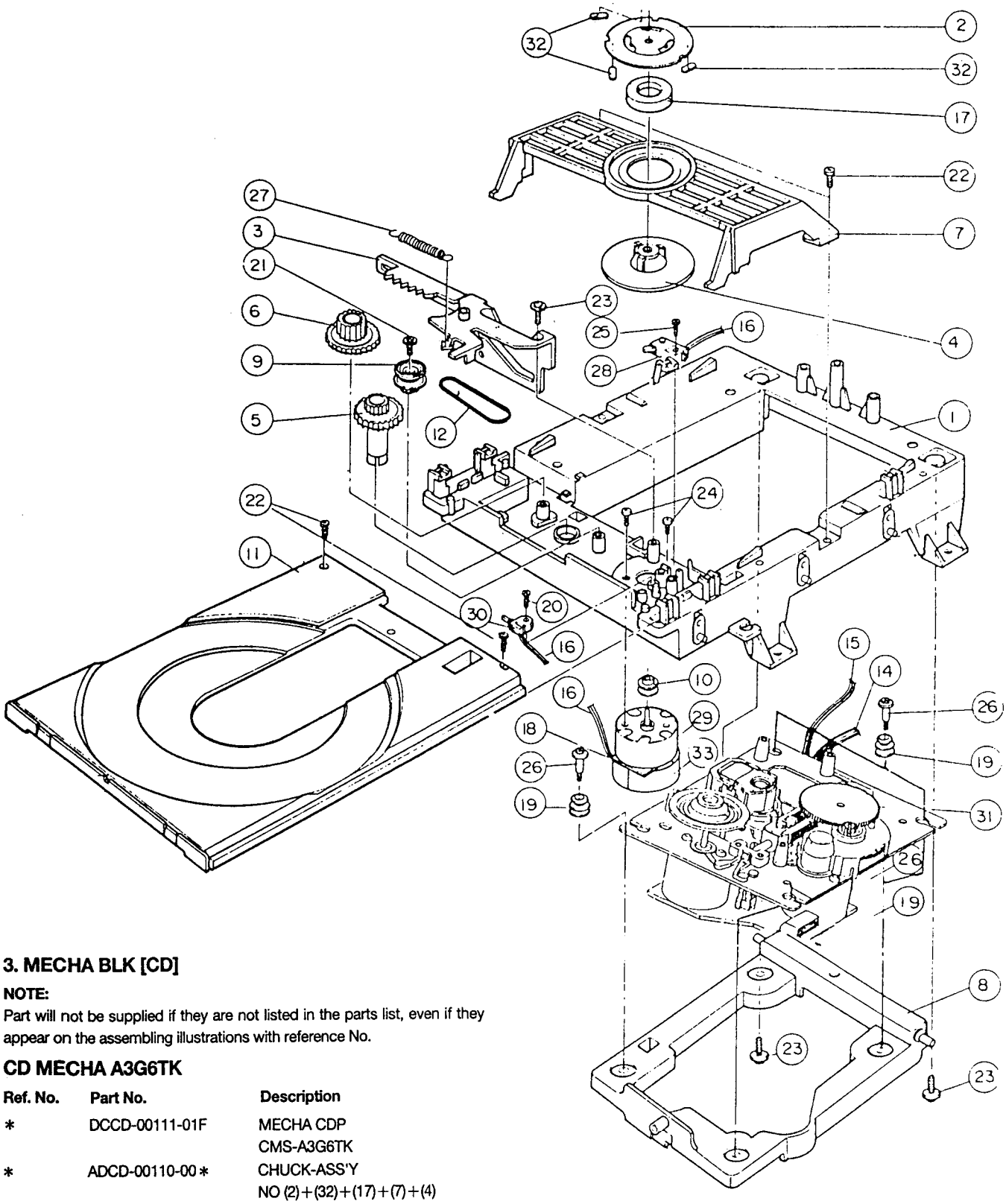
2. DECK MECHA

DECK MECHA CMAL2Z031A (PLAY)

Ref. No.	Part No.	Description
	DECA-00400-00E	DECK MECHA CMAL2Z031A (PLAY)
03-1	ADCA-00400-003	PLATE HD BLK F513-745
04	ADCA-00400-004	MTR MAIN BLK F525-304
05-1	ADCA-00400-005	PCB CONTROL BLK F567-562
06	ADCA-00400-006	FLYWHEEL BLK F522-030
25	ADCA-00400-025	BELT MAIN FF17G-31
29	ADCA-00400-029	FLYWHEEL BLK F522-031
31	ADCA-00400-031	ROLLER PINCH BLK R F514-118
32	ADCA-00400-032	ROLLER PINCH BLK L F514-119
42	ADCA-00400-042	F/R BELT FF18W-11

DECK MECHA CMAL2Z032A (REC/PLAY)

	DECA-00410-00E	DECK MECHA CMAL2Z032A (REC/PLAY)
04	ADCA-00400-004	MTR MAIN BLK F525-304
06	ADCA-00400-006	FLYWHEEL BLK F522-030
25	ADCA-00400-025	BELT MAIN FF17G-31
29	ADCA-00400-029	FLYWHEEL BLK F522-031
31	ADCA-00400-031	ROLLER PINCH BLK R F514-118
32	ADCA-00400-032	ROLLER PINCH BLK L F514-119
42	ADCA-00400-042	F/R BELT FF18W-11
03-2	ADCA-00410-003	PLATE HD BLK F513-746
05-2	ADCA-00410-005	PCB CONTROL BLK F567-563



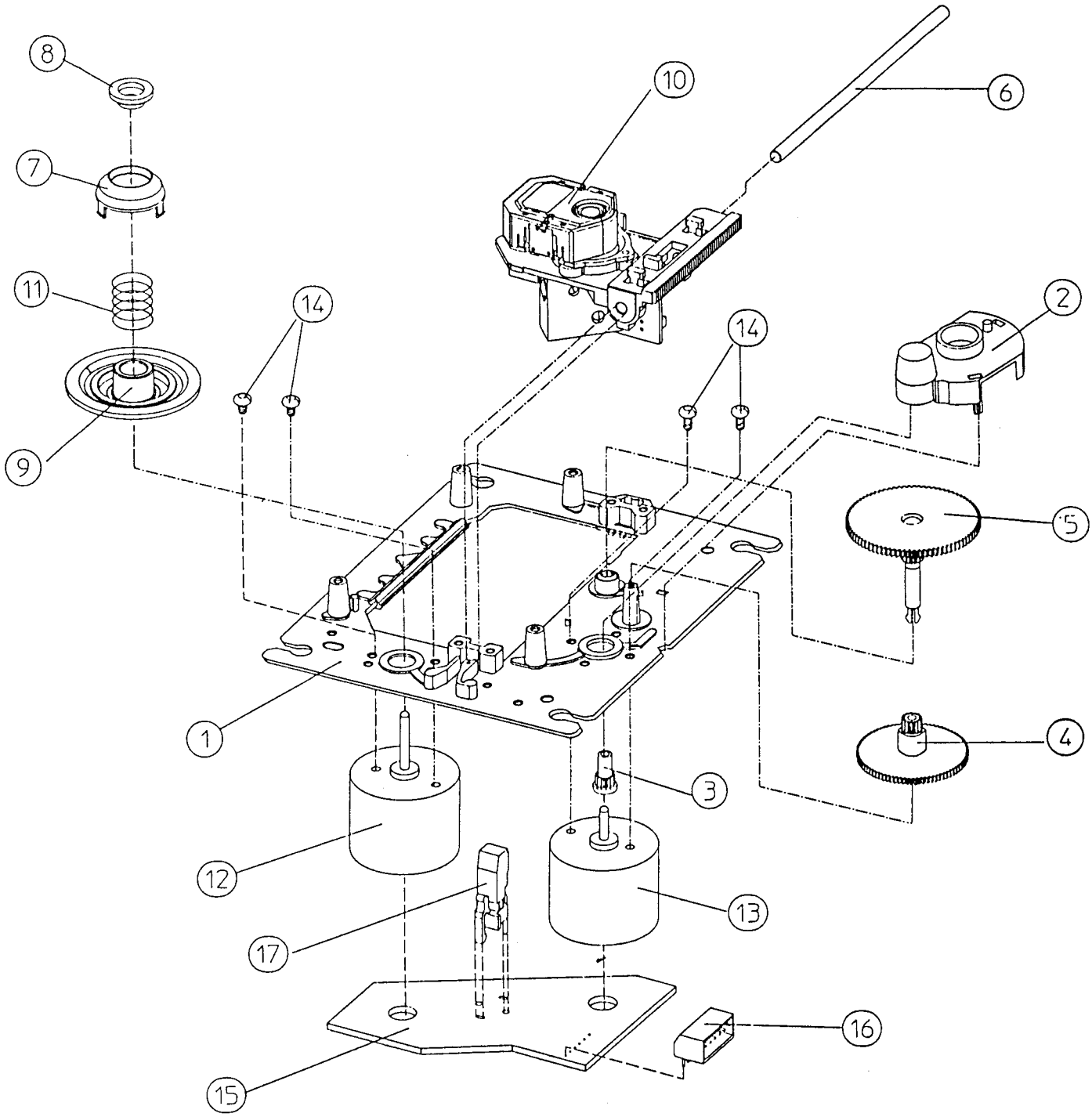
3. MECHA BLK [CD]

NOTE:

Part will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

CD MECHA A3G6TK

Ref. No.	Part No.	Description
*	DCCD-00111-01F	MECHA CDP CMS-A3G6TK
*	ADCD-00110-00*	CHUCK-ASS'Y NO (2)+(32)+(17)+(7)+(4)
1	ADCD-00110-001	BASE-MAIN ; ABS BLACK
5	ADCD-00110-005	GEAR(A) ; WHT
6	ADCD-00110-006	GEAR(B) ; POM BLK
11	ADCD-00110-011	TRAY ; ABS BLK
12	ADCD-00110-012	BELT
19	ADCD-00110-019	RUBBER-CD SI WHT45
23	ADCD-00110-023	SCREW ; TAP 3×8(WASHER) 17154-100-640
26	ADCD-00110-026	SHAFT-CD ; FE FZY
27	ADCD-00110-027	SPRING-CAM STSWP10.2
28	ADCD-00110-028	SWITCH-LEAF ; MLS-1
29	ADCD-00110-029	MOTOR ; RF-500TB-12560
30	ADCD-00110-030	SWITCH-MICRO LSPPB11
31	ADCD-00111-031	DECK-CD ; CMS-A30A



CD MECHA CMS-A30A

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	ADCD-00110-101	CHASSIS-DECK(M)	8	ADCD-00110-108	CENTER KNOB
2	ADCD-00110-102	COVER-GEAR	9	ADCD-00110-109	T/TABLE
3	ADCD-00110-103	GEAR(A)	10	ADCD-00111-110	LASER PICK-UP
4	ADCD-00110-104	GEAR(B)	11	ADCD-00110-111	SPRING-T/TABLE
5	ADCD-00110-105	GEAR(C)	12	ADCD-00110-112	MOTOR-SPINDLE
6	ADCD-00110-106	SHAFT-P/U	13	ADCD-00110-113	MOTOR-FEED
7	ADCD-00110-107	CENTER RING	14	ADCD-00110-114	SCREW-PH
			17	ADCD-00110-117	SWITCH-LEAF

4. AMP PCB (A1U-310(A))

Ref. No.	Part No.	Description
L900	BTAL-00010-025	FILTER-AC LINE
		FKOB160MH02 2A
C900	* CACS-U102K-129	CAPACITOR AC
		DE7090B102KVA1-KC 400V S
D905	DDMR-00210-T11	DIODE-RECTIFIER
D906		1N5402S (200V 3A) DO-20 M
D907		
D908		
D901	DDTR-00040-T10	DIODE-RECTIFIER
D903		1N4004 (400V 1A) DO-41 T
D904		
D916		
D917		
D918		
D919		
D920		
D921		
D922		
D924		
D925		
D926		
D927		
D928		
D929		
D930		
D902	DDTS-00060-SO0	DIODE-SI
D910		1SS131 (90V 0.13A) DO-40 T
D911		
D912		
D913		
D914		
D915		
ZD901	DDTZ-G056B-SO0	DIODE ZENER
		MTZ5.6B 5.45-5.73 DO40 T
ZD902	DDTZ-G091B-SO0	DIODE ZENER
		MTZ9.1B 9.01 DO40 T
ZD903	DDTZ-G130B-SO0	DIODE ZENER
		MTZ13B 12.55-13.21 DO40 T
RL901	ESRY-00010-120	RELAY
		HR-703V DC 12V
F901	* FGFB-S2002-337	FUSE GLASS [U, Y]
F903		2A 250V 5×20 T
F904		
F901	FGFB-S8001-337	FUSE GLASS [EXCEPT U, Y]
		800mA 250V 5×20 T
IC901	ICHP-00070-S10	IC HYBRID AMP-POWER
		STK4142 Ⅱ 25W×2 SIP18
IC906	ICRG-00081-SE0	IC REGULATOR
		KA7924 24V 3mm TO-220
IC905	ICRG-00091-SE0	IC REGULATOR
		KA7806 6V 3mm TO-220
IC903	ICRG-00191-SE0	IC REGULATOR
		KA7912 12V 3mm TO-220
IC902	ICRG-00218-SE0	IC REGULATOR
IC904		KA7812 12V 3mm TO-220
IC908		
IC907	ICRG-00240-SE0	IC REGULATOR
		MC78L05 5V TO-92
L901	KIBK-00050-E40	COIL-AUDIO CHOCK
L902		ABK005 2.2μH
R919	RCMS-JR22K-410	RESISTOR-CEMENT
R929		0.22ohm 2W 10% S
FR902	RFUE-F470J-010	RESISTOR-FUSIBLE
		47ohm 1/4W ERQ14AJ470E T
FR901	RFUE-F560J-010	RESISTOR-FUSIBLE
		56ohm 1/4W ERQ14AJ560E T
FR905	RFUM-G1R0J-130	RESISTOR-FUSIBLE
FR906		1ohm 1/2W 5% M
FR903	RFUM-G4R7J-130	RESISTOR-FUSIBLE
		4.7ohm 1/2W 5% M
R920	RMOE-H4R7J-020	RESISTOR-METAL OXIDE
R923		1W ERG(X) 1SJ4R7E 4.7ohm T
R925		
R926		
SP101	TESP-00010-08P	TERMINAL SPEAKER
		AU8-2021
Q912	TRSA-0023Y-SD0	TRANSISTOR P-H FREQ
		KTA1658-Y TO220IS
Q905	TRTA-0008G-SD0	TRANSISTOR P-H FREQ
Q906		KTA1266-GR TO92
Q914	TRTA-0012Y-SD0	TRANSISTOR P-H FREQ
Q915		KTA1273-Y TO92L
Q920		
Q902	TRTA-0042E-SOS	TRANSISTOR P-H FREQ
Q918		DTA124E-S TO92M
Q911	TRTA-0056T-SOS	TRANSISTOR P-H FREQ
		DTA114T-S W/RESIST TO92M
Q923	TRTC-0016Y-SD0	TRANSISTOR N-H FREQ
		KTC3198-Y TO92
Q910	TRTC-0034Y-SOS	TRANSISTOR N-H FREQ
		DTC114Y-S TO92
Q504	TRTC-0039Y-SD0	TRANSISTOR N-H FREQ
		KTC3205-Y TO92L
Q901	TRTC-0061E-SOS	TRANSISTOR N-H FREQ
Q916		DTC124E-S TO92M
Q917		
Q919		
Q922		
Q903	TRTD-00200-SD0	TRANSISTOR N-L FREQ
Q904		KTD-1302 TO92
Q908		

5. ECHO PCB (A1U-310(B)) [AC-405K only]

Ref. No.	Part No.	Description
IC505	ICCM-00060-SQ0	IC QUAD SWITCH
IC506		GD4066B DIP14
IC504	ICDG-01300-TP0	ECHO SOUND PROCESSOR
		ES56028E DIP28
IC507	ICLN-01810-S40	IC VOCAL FADER
		CXA1642P DIP8
IC501	ICOP-00130-SE0	IC DUAL OP AMP
IC503		KA4558S SIP9
Q503	TRTA-0042E-SOS	TRANSISTOR P-H FREQ
Q520		DTA124E-S TO92M
Q504	TRTC-0039Y-SD0	TRANSISTOR N-H FREQ
		KTC3205-Y TO92L
Q501	TRTC-0061E-SOS	TRANSISTOR N-H FREQ
Q502		DTC124E-S TO92M

6. VOLTAGE SELECTOR PCB [U, Y] (A1U-310(C))

Ref. No.	Part No.	Description
SW901	SWVS-00103-S50	SWITCH-VOLTAGE SEL
		JUH1420-0104 250V/5A 1C4P

7. MAIN PCB (A1U-311(A)) [TUNER/DECK/EQ]

Ref. No.	Part No.	Description
BF101	BTBP-00011-BPM	FILTER-MICA PRINT BPMB6A 88-108MHz [V]
CF103	BTCE-00050-004	FILTER-CERAMIC SFU 450B
CF101	BTCE-00060-107	FILTER-CERAMIC [EXCEPT Vi]
CF102		SFE 10.7MS3G-A
	BTCE-00152-107	FILTER-CERAMIC [Vi] SFE 10.7MJA 10M-A
CF104	BTCE-00311-004	FILTER-CERAMIC CSB456F18
D106	DDSV-0003B-S30	DIODE-VVC 1SV149B AM 8V DIP2 S
D107		[S]
D110		
D111		[S]
D101	DDTS-00060-SO0	DIODE-SI
D102		1SS131 (90V 0.13A) DO-40 T
D103		
D104		
D112		
D114		
D115		
D301		
D401		
D402		
D403		
D404		
D405		
D406		
D105	DDTS-00100-SO0	DIODE-SI [U, Y]
D113		1SS135 (35V 0.1A) DO-40 T
ZD101	DDTZ-G056B-SO0	DIODE ZENER MTZ5.6B 5.45-5.73 DO40 T
ZD702	DDTZ-G082C-SO0	DIODE ZENER
ZD801		MTZ8.2C 8.03-8.45 DO40 T
ZD802		
ZD102	DDTZ-G091B-SO0	DIODE ZENER MTZ9.1B 9.01 DO40 T
IC801	ICCM-00170-SQ0	IC 4CH MUX/DEMUX GD4052B DIP16
IC102	ICCM-20380-S10	IC PLL LC7218 DIP24S
IC806	ICCM-20390-SG0	IC ELECTRONIC VOLUME NJU7305 SDIP28
IC304	ICCM-20501-S30	IC CMOS
IC305		TC4094B DIP16
IC301	ICDG-00370-S20	IC TAPE SELECTOR μPC1330HA SIP9
IC701	ICDG-00560-SO0	IC MOTOR DRIVER BA6208 SIP9
IC401	ICLN-00540-SO0	IC 2CH PRE AMP BA3416BL DIP16
IC302	ICLN-00610-S10	IC AUDIO SENSER LA2000 SIP9
IC402	ICLN-00681-SA0	IC DOLBY B HA12136A DIP16
IC804	ICLN-01550-S50	IC 7BAND EQ
IC805		AN7337N DIP20
IC101	ICLN-01640-S10	IC AM/FM IF MPX LA1851N DIP30
IC303	ICOP-00130-SE0	IC DUAL OP AMP
IC803		KA4558S SIP9
IC807		
IC502		[EXCEPT 405K]
IC702	ICOP-00131-SE0	IC DUAL OP AMP KA4558C DIP8
T105	IFFD-00140-E60	IFT-FM DET AFD014 7.4mm-CAN
T106	KIAA-00140-ED0	COIL-AM IFT AAA-014B
T103	KIAO-00240-E20	COIL-AM OSC AAO024 MW 7mm-CAN
T104	KIAO-00250-E20	COIL-AM OSC [E, B, V] AAO025 LW 7mm-CAN
	KIAO-00260-E20	COIL-AM OSC [U, Y] AAO-026 SW
T102	KIAT-00301-E20	COIL-AM ANT [E, B, V] AAT030-1 LW 10mm-CAN
	KIAT-00370-E20	COIL-AM ANT [U, Y] AAT-037 SW
T101	KIAT-00351-E20	COIL-AM ANT AAT035-1 MW 10mm-CAN
T108	KIML-A0010-E60	COIL-FM MPX FILTER
T109		AMA-001A 19KHz 10mm-CAN
T107	KIML-A0020-E20	COIL-FM MPX FILTER [Vi] AFL002 114KHz 7mm-CAN
T408	KIRK-00150-E60	COIL-REC CHOCK
T409		ARK-015A 8.2mH MOLD SHELD
T403	KIRO-00140-E60	COIL-REC OSC ARO014 85KHz 10mm-CAN
T103	KIRP-00050-E60	COIL-REC TRAP
T104		ARP005A 100KHz 7mm-C
T105		
T106		
T401		
T402		
T404		
T405		
T406		
T407		
X101	KTAL-00041-072	CRYSTAL HC-49/U 7.200000MHz
JK801	SKRC-00290-020	SOCKET-RCA JK0200440N 2P
SW401	SWSL-00128-012	SWITCH-SLIDE 00120050 30V 0.3A
SW402	SWTA-00230-06V	SWITCH-TACT SKHH17910A 12V 50mA W/GND
TE101	TEAT-00051-03R	TERMINAL ANTENNA AK1/2-1058A
Q110	TRSK-0001G-S30	FET N-CHANNEL 2SK246-GR TO92
Q106	TRTA-0008G-SD0	TRANSISTOR P-H FREQ
Q107		KTA1266-GR TO92
Q108		
Q703	TRTA-0042E-SOS	TRANSISTOR P-H FREQ DTA124E-S TO92M
Q101	TRTC-0010Y-SD0	TRANSISTOR N-H FREQ
Q116		KTC1923-Y TO92
Q109	TRTC-0016G-SD0	TRANSISTOR N-H FREQ KTC3198-GR TO92
Q309	TRTC-0016Y-SD0	TRANSISTOR N-H FREQ
Q702		KTC3198-Y TO92

Ref. No.	Part No.	Description
Q704		
Q801		
Q802		
Q115	TRTC-0039Y-SD0	TRANSISTOR N-H FREQ
Q304		KTC3205-Y TO92L
Q112	TRTC-0061E-SOS	TRANSISTOR N-H FREQ
Q301		DTC124E-S TO92M
Q302		
Q305		
Q306		
Q307		
Q312		
Q313		
Q314		
Q315		
Q316		
Q317		
Q318		
Q405		
Q406		
Q407		
Q408		
Q413		
Q414		
Q415		
Q416		
Q441		
Q701		
Q102	TRTC-0094Y-SD0	TRANSISTOR N-H FREQ
Q103		KTC3199-Y TO92M
Q401		
Q402		
Q403		
Q404		
Q409		
Q410		
Q419		
Q420		
Q421		
Q422		
Q423		
Q424		
Q425		
Q303	TRTC-01060-SD0	TRANSISTOR N-H FREQ
		KTC3203 TO92
Q104	TRTD-00200-SD0	TRANSISTOR N-L FREQ
Q105		KTD-1302 TO92
Q111		
Q113		
Q114		
Q310		
Q311		
Q417		
Q418		
FE101	TUFF-00100-000	FRONT-END [EXCEPT V_i]
		KHF201V 8V
FE102	TUFF-00120-00D	FRONT-END [V_i]
		FE415-G11
SV102	VFEB-A001B-103	RESISTOR-SEMI FIXED
SV401		EVN DXA A03 B14 10Kohm
SV402		
SV403		
SV404		
SV407	VFEB-A001B-104	RESISTOR-SEMI FIXED
SV408		EVN DXA A03 B15 100Kohm
SV101	VFEB-A001B-223	RESISTOR-SEMI FIXED
SV405		EVN DXA A03 BE4 22Kohm
SV406		
SV103	VFEB-A001B-472	RESISTOR-SEMI FIXED
		EVN DXA A03 BQ3 4.7Kohm

8. MOTOR VOLUME P.C BOARD (A1U-311(B))

Ref. No.	Part No.	Description
IC703	ICCM-00060-SQ0	IC QUAD SWITCH
		GD4066B DIP14
IC701	ICDG-00560-SO0	IC MOTOR DRIVER
		BA6208 SIP9
IC702	ICOP-00131-SE0	IC DUAL OP AMP
		KA4558C DIP8
Q703	TRTA-0042E-SOS	TRANSISTOR P-H FREQ
		DTA124E-S TO92M
Q702	TRTC-0016Y-SD0	TRANSISTOR N-H FREQ
Q704		KTC3198-Y TO92
VR701	VRBD-E038B-104	VR-ROTARY
		RK16812MG28A (14B)-100KB×2

9. FRONT P.C BOARD (A1U-312(A))

Ref. No.	Part No.	Description
D1001	DDTR-00040-T10	DIODE-RECTIFIER
D1002		1N4004 (400V 1A) DO-41 T
D1003		
D1004		
D1007		
D1008		
D1006	DDTS-00060-SO0	DIODE-SI
D1009		1SS131 (90V 0.13A) DO-40 T
D1010		
D1011		
D1012		
Z1001	DDTZ-G051B-SO0	DIODE ZENER
Z1002		MTZ5.1B 4.94-5.2 DO40 T
VFD1	DPFL-00370-GCF	V.F.D
		CM1369D
IC1004	ICCM-20360-T90	IC VOLTAGE DETECTOR
		S80721AN TO-90
IC1003	ICCM-20710-TQ0	IC GRAPHIC EQ FILTER
		XR-1093 DIP14
RX1001	ICHY-00210-SG0	IC REMOTE RECEIV
		NJH41H380-L UNIT4
IC1001	ICMP-01260-SA0	IC μ-COMPUTER
		TCM-9503-008 QIP100
IC1002	ICMP-01270-SA0	IC μ-COMPUTER
		TCM-9503-009 QIP80
X1002	KTAL-00101-003	CRYSTAL
		KDSIF 32.768KHz-20P
X1001	KTRE-00220-080	RESONATOR
X1003		CST8.00MTW-TF01
SW1001	SWPU-00301-038	SWITCH-PUSH
		00220014 1K(2C2P)
S1002	SWTA-00220-060	SWITCH-TACT
S1003		SKHV10910(A) 12V 50mA
S1004		
S1005		
S1006		

Ref. No.	Part No.	Description
S1007		
S1008		
Q1004	TRTA-0008Y-SD0	TRANSISTOR P-H FREQ
Q1016		KTA1266-Y TO92
Q1005	TRTA-0012Y-SD0	TRANSISTOR P-H FREQ
Q1007		KTA1273-Y TO92L
Q1009		
Q1010		
Q1015		
Q1036	TRTC-0016Y-SD0	TRANSISTOR N-H FREQ
		KTC3198-Y TO92
Q1003	TRTC-0061E-SOS	TRANSISTOR N-H FREQ
Q1006		DTC124E-S TO92M
Q1008		
Q1011		
Q1012		
Q1013		
Q1017		
Q1019		
Q1020		
Q1021		
Q1022		
Q1023		
Q1024		
Q1025		
Q1026		
Q1027		
Q1035		
Q1037		
SV1	VFEB-A001B-102	RESISTOR-SEMI FIXED
SV2		EVN DXA A03 B13 1Kohm
SV3		
SV4		
VR1005	VRAE-D018C-203	VR-ROTARY
		RK12K1130 0A2 23C-20KC

10. FRONT P.C BOARD (A1U-312(B))

Ref. No.	Part No.	Description
L1001	DPLT-00073-YC3	DOT-LED
L1011		SLR-34YC3 YEL R3 TAPPING
L1012	DPLT-00311-WW5	DOT-LED
L1013		SPR-54MVW (2COLOR) R5 D
L1014		
L1015		
L1016		
S1009	SWTA-00220-060	SWITCH-TACT
S1010		SKHV10910 (A) 12V 50mA
S1011		
S1012		
S1013		
S1014		[AC-405K]
S1015		
S1016		
S1017		
S1018		
S1019		
S1020		
S1021		
S1022		
S1023		
S1024		
Q1038	TRTA-0043E-SOS	TRANSISTOR P-H FREQ
		DTA114E-S W/RESIST TO92M
Q1028	TRTC-0061E-SOS	TRANSISTOR N-H FREQ
Q1029		DTC124E-S TO92M
Q1030		
Q1031		
Q1032		
Q1033		
Q1034		

11. VOLUME LED P.C BOARD

Ref. No.	Part No.	Description
L1020	DPLT-00452-YC5	DOT-LED
		AL-151YC YEL R5 N

12. PHONES P.C BOARD(A1U-312(D))

Ref. No.	Part No.	Description
R1088	RMOE-H391J-020	RESISTOR-METAL OXIDE
R1089		1W ERG(X) 1SJ391E 390ohm T
JK1003	SKPH-00360-360	SOCKET-PHONE
		HTJ035-10A

13. MIC JACK PCB (A1U-312(C))

Ref. No.	Part No.	Description
JK1001	SKPH-00350-360	SOCKET-PHONE
		LGY6501-06
JK1002		[AC-405K]

14. CD P.C BOARD (A2U-154)

Ref. No.	Part No.	Description
D602	DDTZ-G056B-SO0	DIODE ZENER
		MTZ5.6B 5.45-5.73 DO40 T
D607	DDTZ-G062B-SO0	DIODE ZENER
		MTZ6.2B 5.96-6.27 DO40 T
IC606	ICDG-00340-SO0	IC MOTOR DRIVER
		BA6209 DIP10H
IC602	ICDG-00940-SE0	IC D.S.P+D.A.C (CDP)
		KS-9282B QFP80
IC601	ICDG-00950-SE0	IC RF+SERVO (CDP)
		KA-9220B QFP80
IC603	ICLN-01590-SE0	IC MOTOR CONTROL CDP
		KA-9258D HSOP28
IC604	ICOP-00130-SE0	IC DUAL OP AMP
IC605		KA4558S SIP9
PCB-CDP	PCSU-01540-21B	PCB-SINGLE
		A2U-154 247×247×1.6t
Q602	TRSA-0023Y-SD0	TRANSISTOR P-H FREQ
Q614		KTA1658-Y TO220IS
Q601	TRTA-0008G-SD0	TRANSISTOR P-H FREQ
Q604		KTA1266-GR TO92
Q606	TRTA-0042E-SOS	TRANSISTOR P-H FREQ
Q610		DTA124E-S TO92M
Q603	TRTC-0016G-SD0	TRANSISTOR N-H FREQ
		KTC3198-GR TO92
Q608	TRTC-0016Y-SD0	TRANSISTOR N-H FREQ
Q609		KTC3198-Y TO92
Q605	TRTC-0034Y-SOS	TRANSISTOR N-H FREQ
Q607		DTC114Y-S TO92
Q611		
Q615		

Ref. No.	Part No.	Description
IC607	ICCM-20501-S30	IC CMOS TC4094B DIP16
Q612	TRTD-00200-SD0	TRANSISTOR N-L FREQ
Q613		KTD-1302 TO92
SV601	VFEB-A001B-223	RESISTOR-SEMI FIXED
SV602		EVN DXA A03 BE4 22Kohm
SV603		
SV604		

15. P.C BOARD BLOCK

Ref. No.	Part No.	Description
1	PCSU-03120-11B	FRONT P.C BOARD A1U-312 197 × 247 × 1.6t
2	PCSU-03110-11B	MAIN P.C BOARD A1U-311 247 × 330 × 1.6t
3	PCSU-03100-15B	AMP/ECHO P.C BOARD A1U-310 197 × 247 × 1.6t
4	PCSU-01540-21B	CDP P.C BOARD A2U-154 247 × 247 × 1.6t
5	PCSU-01650-25B	SUB P.C BOARD [U, Y] A2U-165 163 × 163 × 1.6t

16. SUB PCB (A2U-165) [U, Y] only

Ref. No.	Part No.	Description
F2	* FGFB-S8001-337	FUSE GLASS 800mA 250V 5 × 20
F1	* FGFB-S1002-337	FUSE GLASS 1A 250V 5 × 20

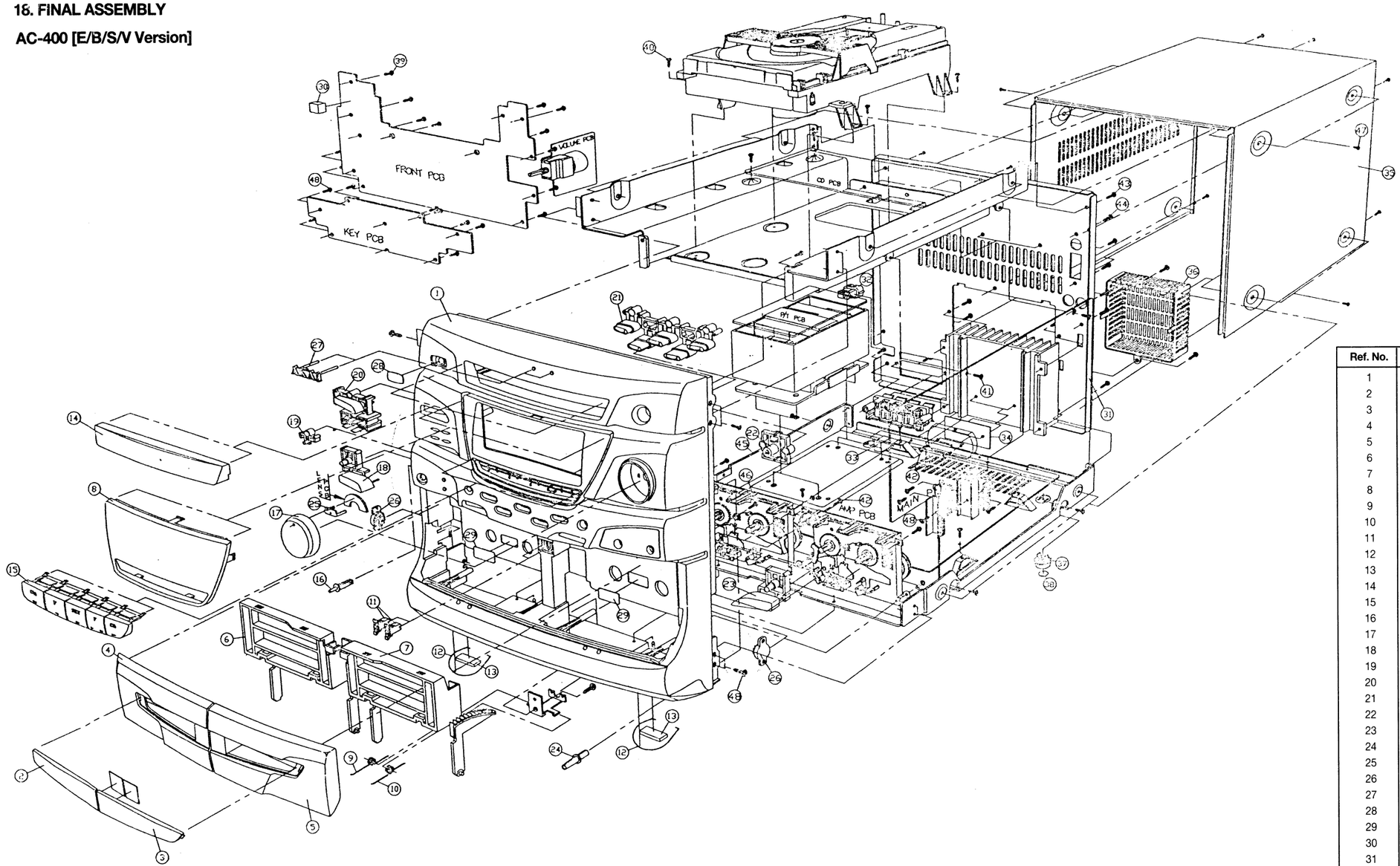
17. ACCESSARY

Ref. No.	Part No.	Description
1	A2RC-E4000-01E	REMOTE BOX RC-S400
2	BAMN-AAM00-150	BATTERY MANGANESE R6P 1.5V 14.5 × 50.5
3	YICC-E4000-01E	INST-MANUAL
4	ANTL-00060-E50	ANTENNA-LOOP AAN-007 19.5μH 7T 125 × 93
5	ANTW-00020-202	ANTENNA-WIRE AFN-002 1007#24-2000mm

EXPLODED VIEW

16. FINAL ASSEMBLY

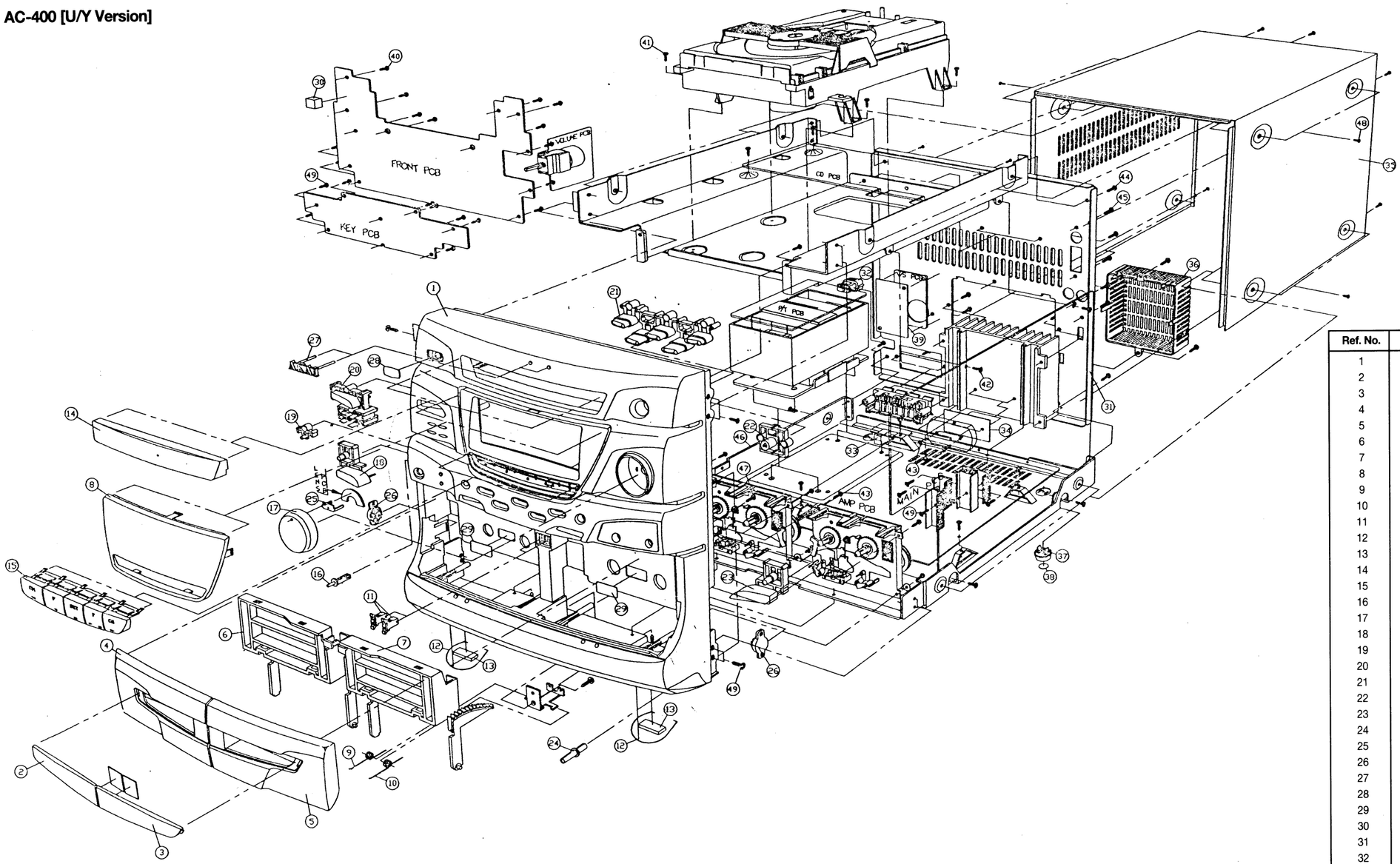
AC-400 [E/B/S/V Version]



Ref. No.	Part No.	Description
1	MJAF-03820-ZZ1	FRONT-PANEL
2	MJAF-05370-ZZ3	DOOR-WINDOW-L
3	MJAF-05380-ZZ3	DOOR-WINDOW-R
4	MJAF-02400-ZZ2	DOOR-CAP-L
5	MJAF-02410-ZZ2	DOOR-CAP-R
6	MJAF-02460-ZZ2	DOOR-DECK-L
7	MJAF-02470-ZZ2	DOOR-DECK-R
8	MAAF-05490-ZZ3	WINDOW-FL
9	MMAC-13470-004	SPRING-EJECT-L
10	MMAC-13480-004	SPRING-EJECT-R
11	MJAG-00840-003	PUSH-LATCH
12	MMAC-13490-004	FOOT-RING
13	MRAG-09140-004	CUSHION-FOOT
14	MJAF-05250-ZZ3	DOOR-CD
15	MJAF-05460-ZZ3	KNOB-MAGIC
16	MJAF-12570-ZZ4	KNOB-SURROUND
17	MJAF-12230-ZZ4	KNOB-VOLUME
18	MJAF-12520-ZZ4	KNOB-SOUND CHARACTOR
19	MJAF-12560-ZZ4	KNOB-SUPER BASS
20	MJAF-05480-ZZ3	KNOB-POWER
21	MJAF-05470-ZZ3	KNOB-OPERATION
22	MJAF-12550-ZZ4	KNOB-OPEN, CLOSE
23	MJAF-12510-ZZ4	KNOB-DOLBY
24	MJAF-12540-ZZ4	KNOB-MIXING
25	MJAF-12260-ZZ4	LENS-VOLUME
26	MJAG-08110-004	DAMPER-GEAR
27	MJAF-12580-ZZ4	BADGE-AKAI
28	MAAF-12350-ZZ4	PLATE-REMOTE
29	MGAF-04940-ZZ4	REFLECTOR-TAPE
30	MRAG-10910-004	CUSHION-REMOTE
31	MPAC-03390-ZZ2	CHASSIS-BACK
32	MJAG-00281-003	BUSH-CORD
33	MRAG-11080-004	CUSHION-PCB
34	MRAG-07451-004	RUBBER-IC-L
35	MPAC-03691-ZZ1	COVER-TOP
36	MJAG-00250-002	COVER-RADIATOR
37	MJAF-07620-ZZ4	FOOT
38	MRAG-07030-004	CUSHION-FOOT
39	XSTB-30100-ZY4	SCREW-TAPPING
40	XSTB-30080-ZY8	SCREW-TAPPING
41	XSTW-30080-ZY4	SCREW-TAPPING
42	XSTB-30140-ZY4	SCREW-TAPPING
43	XSTB-30080-ZB4	SCREW-TAPPING
44	XSTB-30120-ZB4	SCREW-TAPPING
45	XSTB-40080-ZY8	SCREW-TAPPING
46	XSTW-30100-ZY4	SCREW-TAPPING
47	XSTB-40080-ZB8	SCREW-TAPPING
48	XSTB-30080-ZY4	SCREW-TAPPING

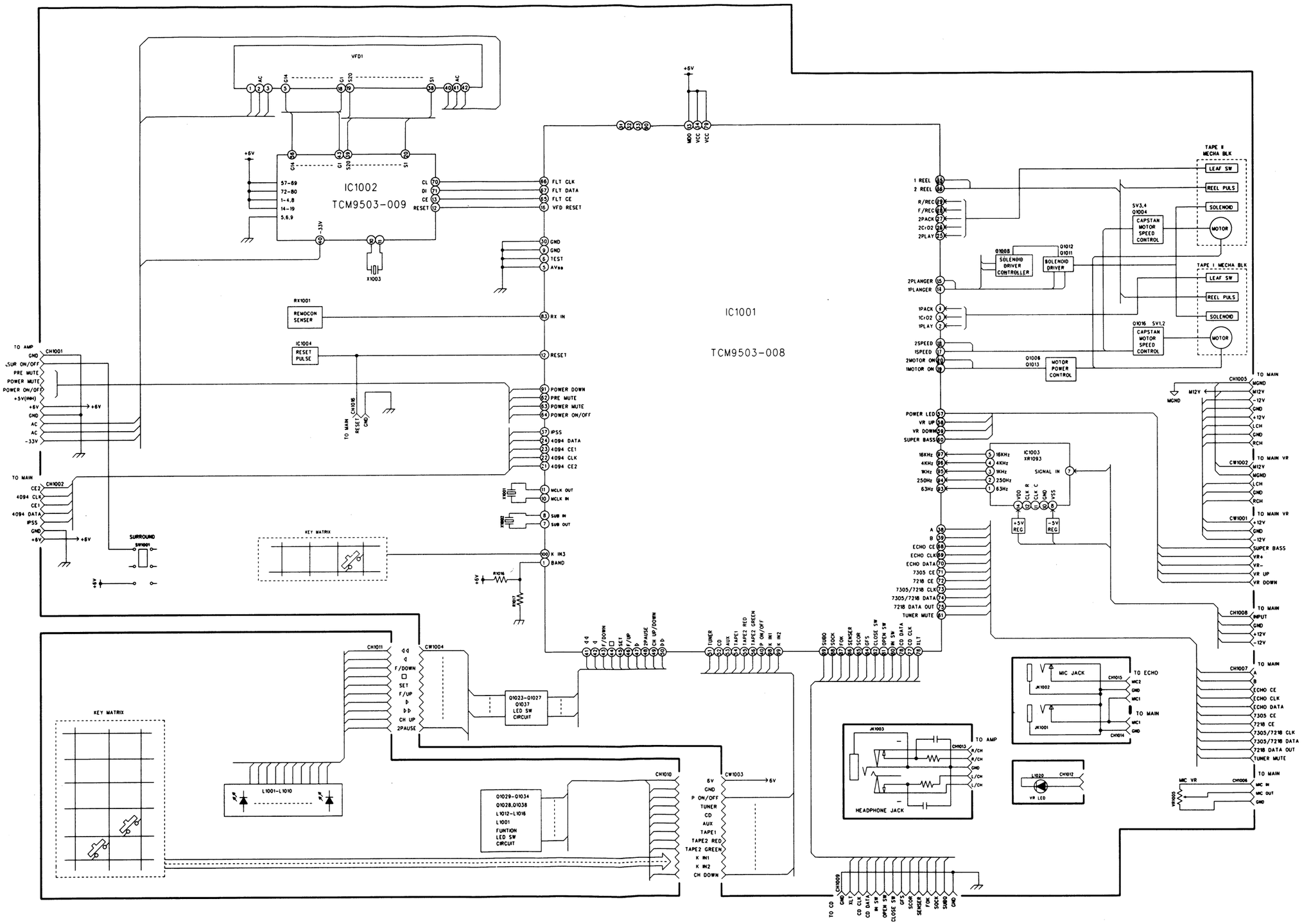
EXPLODED VIEW

AC-400 [U/Y Version]

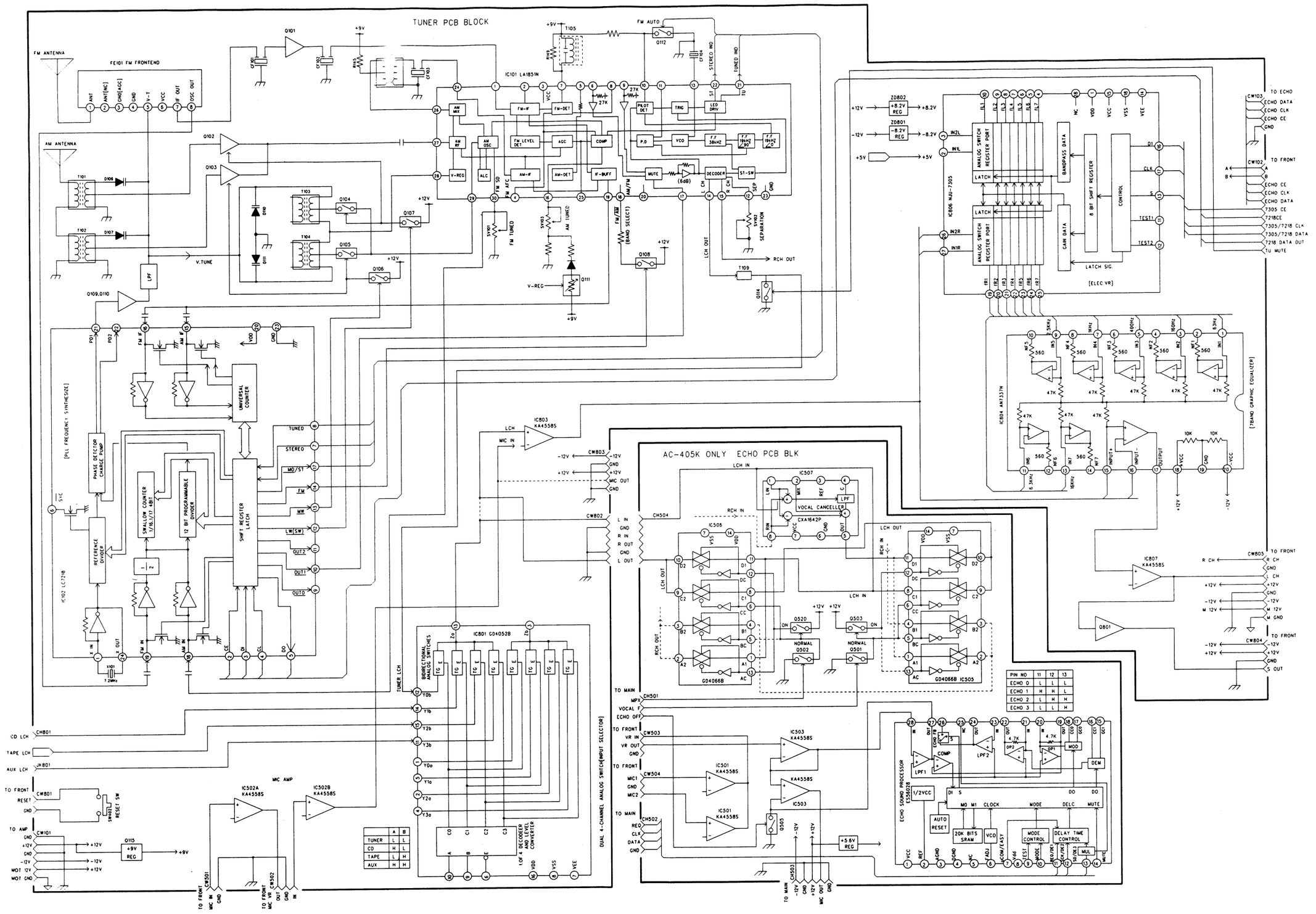


Ref. No.	Part No.	Description
1	MJAF-03820-ZZ1	FRONT-PANEL
2	MJAF-05370-ZZ3	DOOR-WINDOW-L
3	MJAF-05380-ZZ3	DOOR-WINDOW-R
4	MJAF-02400-ZZ2	DOOR-CAP-L
5	MJAF-02410-ZZ2	DOOR-CAP-R
6	MJAF-02460-ZZ2	DOOR-DECK-L
7	MJAF-02470-ZZ2	DOOR-DECK-R
8	MAAF-05490-ZZ3	WINDOW-FL
9	MMAC-13470-004	SPRING-EJECT-L
10	MMAC-13480-004	SPRING-EJECT-R
11	MJAG-00840-003	PUSH-LATCH
12	MMAC-13490-004	FOOT-RING
13	MRAG-09140-004	CUSHION-FOOT
14	MJAF-05250-ZZ3	DOOR-CD
15	MJAF-05460-ZZ3	KNOB-MAGIC
16	MJAF-12570-ZZ4	KNOB-SURROUND
17	MJAF-12230-ZZ4	KNOB-VOLUME
18	MJAF-12520-ZZ4	KNOB-SOUND CHARACTOR
19	MJAF-12560-ZZ4	KNOB-SUPER BASS
20	MJAF-05480-ZZ3	KNOB-POWER
21	MJAF-05470-ZZ3	KNOB-OPERATION
22	MJAF-12550-ZZ4	KNOB-OPEN, CLOSE
23	MJAF-12510-ZZ4	KNOB-DOLBY
24	MJAF-12540-ZZ4	KNOB-MIXING
25	MJAF-12260-ZZ4	LENS-VOLUME
26	MJAG-08110-004	DAMPER-GEAR
27	MJAF-12580-ZZ4	BADGE-AKAI
28	MAAF-12350-ZZ4	PLATE-REMOTE
29	MGAF-04940-ZZ4	REFLECTOR-TAPE
30	MRAG-10910-004	CUSHION-REMOTE
31	MPAC-03420-ZZ2	CHASSIS-BACK
32	MJAG-00281-003	BUSH-CORD
33	MRAG-11080-004	CUSHION-PCB
34	MRAG-07451-004	RUBBER-IC-L
35	MPAC-03691-ZZ1	COVER-TOP
36	MJAG-00250-002	COVER-RADIATOR
37	MJAF-07620-ZZ4	FOOT
38	MRAG-07030-004	CUSHION-FOOT
39	MAAG-10980-004	INSULATOR-V/S
40	XSTB-30100-ZY4	SCREW-TAPPING
41	XSTB-30080-ZY8	SCREW-TAPPING
42	XSTW-30080-ZY4	SCREW-TAPPING
43	XSTB-30140-ZY4	SCREW-TAPPING
44	XSTB-30080-ZB4	SCREW-TAPPING
45	XSTB-30120-ZB4	SCREW-TAPPING
46	XSTB-40080-ZY8	SCREW-TAPPING
47	XSTW-30100-ZY4	SCREW-TAPPING
48	XSTB-40080-ZB8	SCREW-TAPPING
49	XSTB-30080-ZY4	SCREW-TAPPING

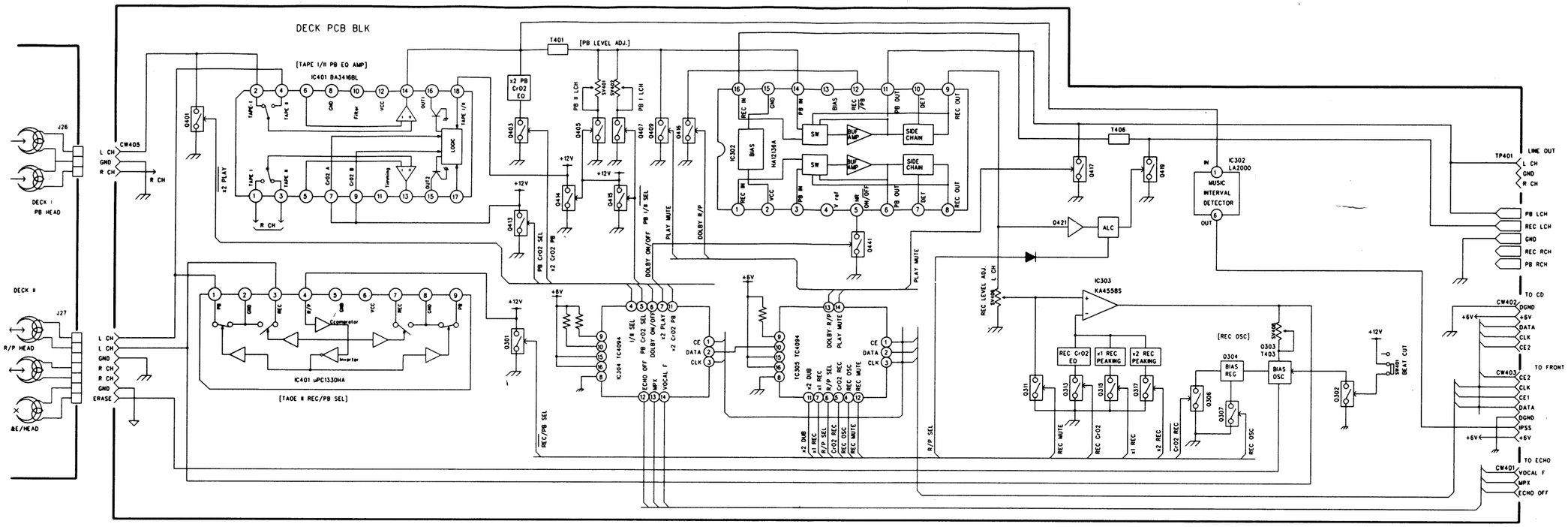
VII. BLOCK DIAGRAM/FRONT

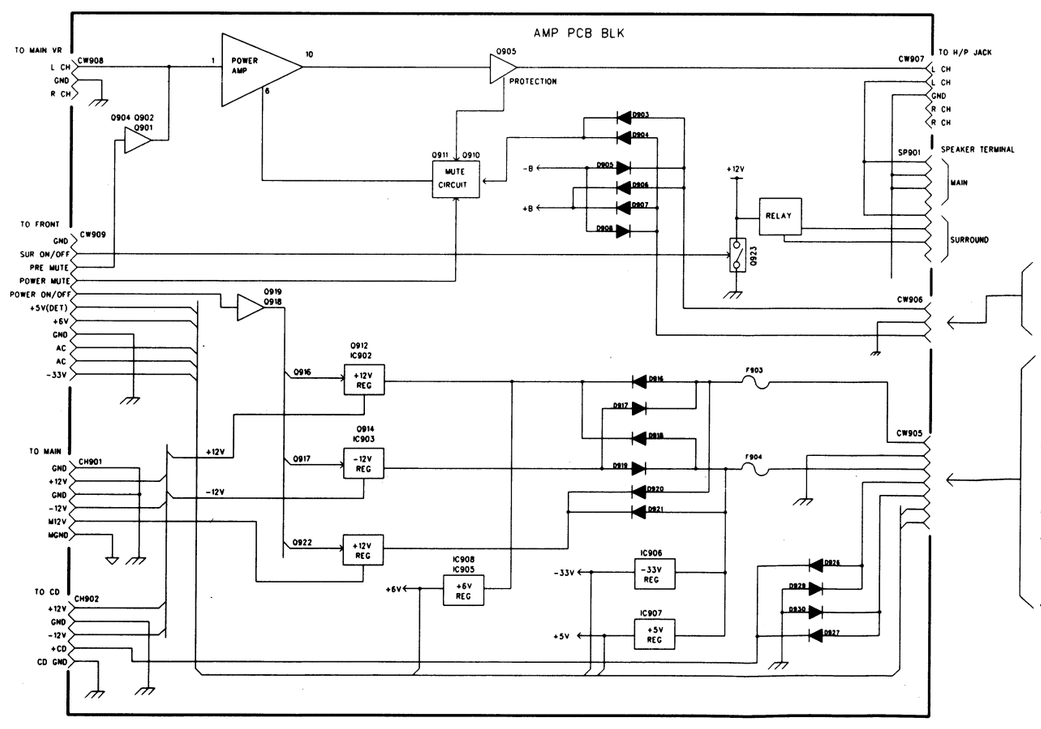


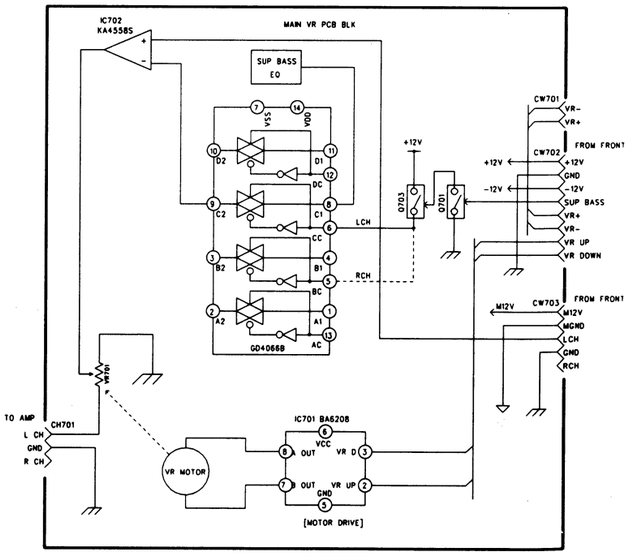
BLOCK DIAGRAM/TUNER, EQ, ECHO



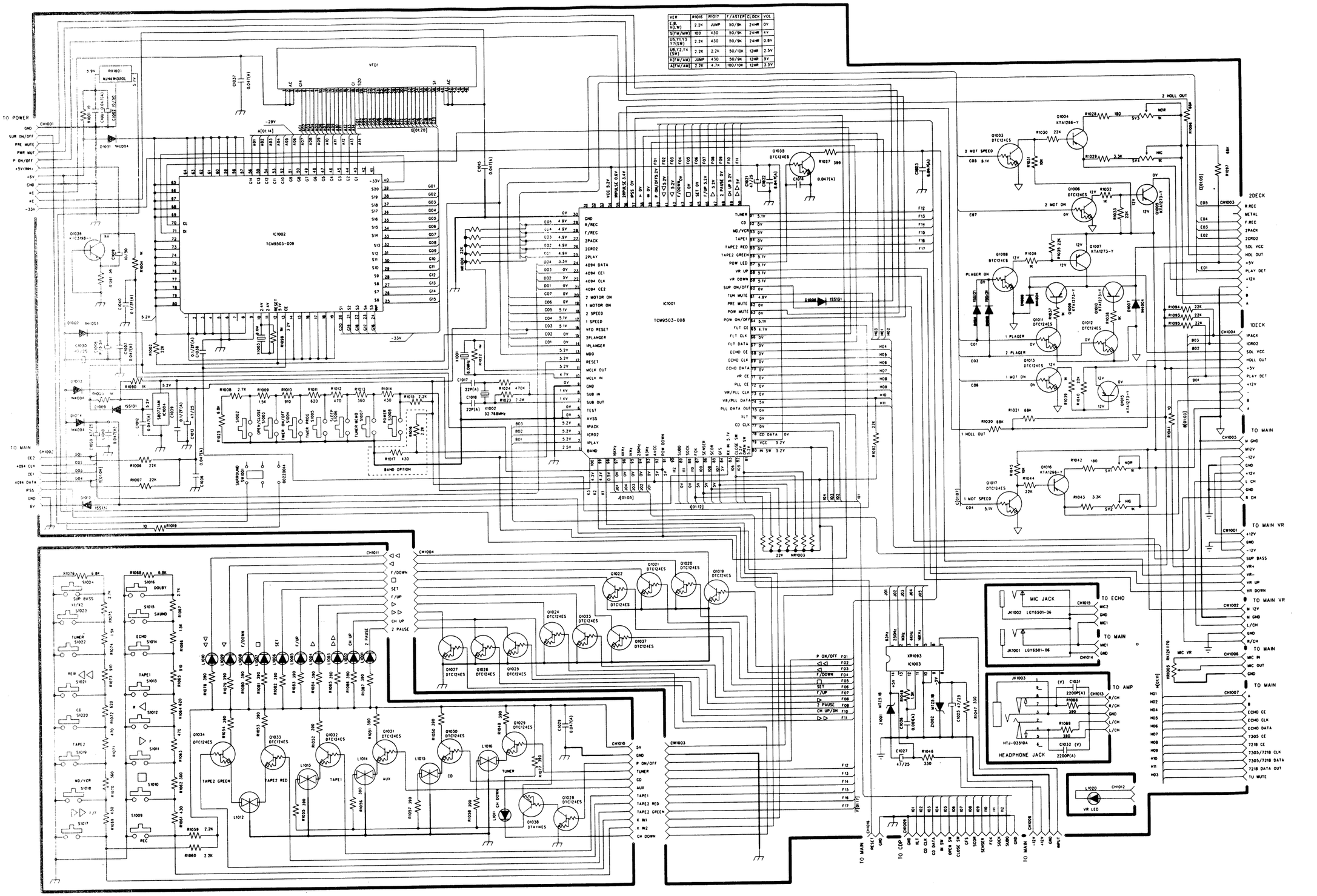
BLOCK DIAGRAM/AMP, DECK



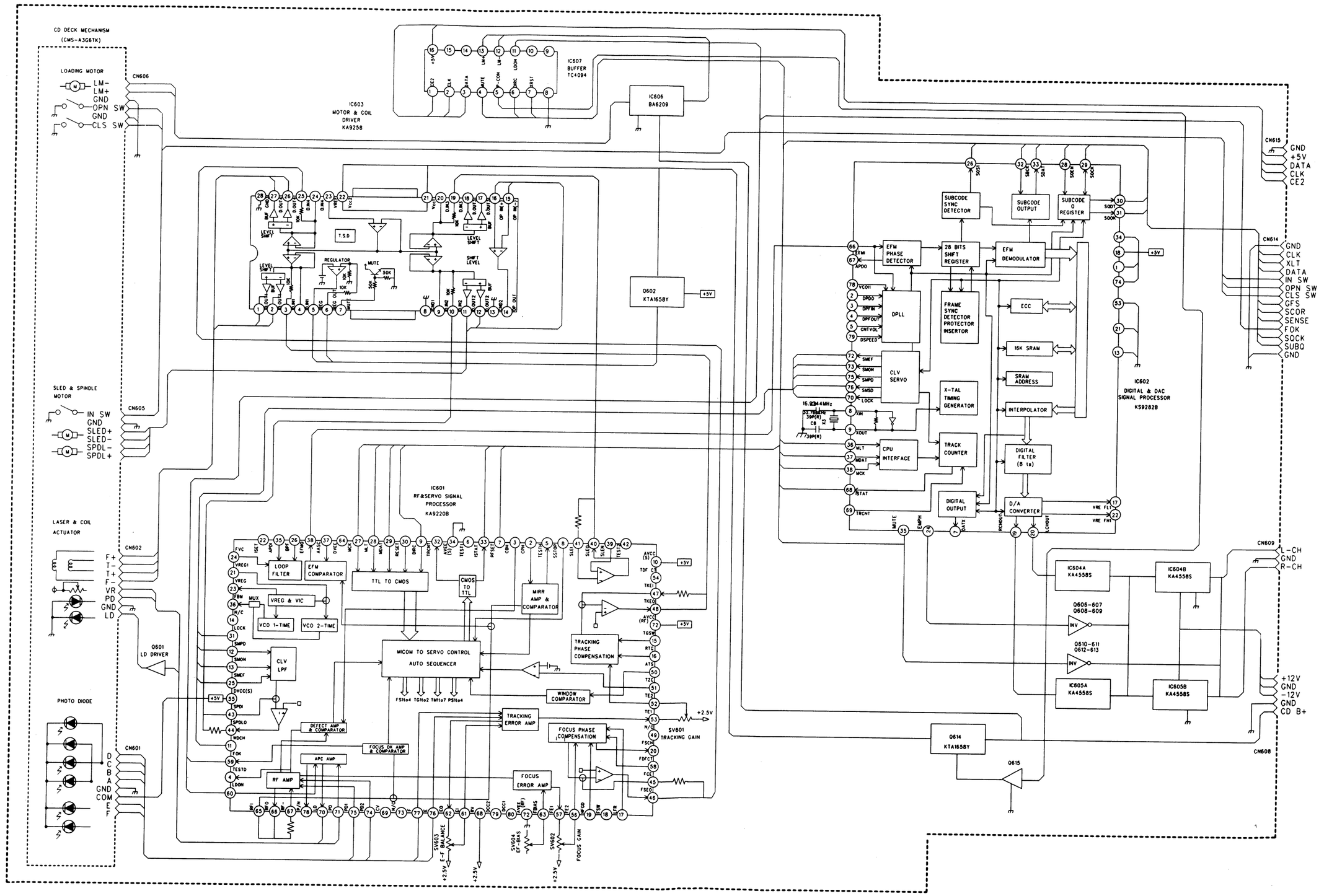




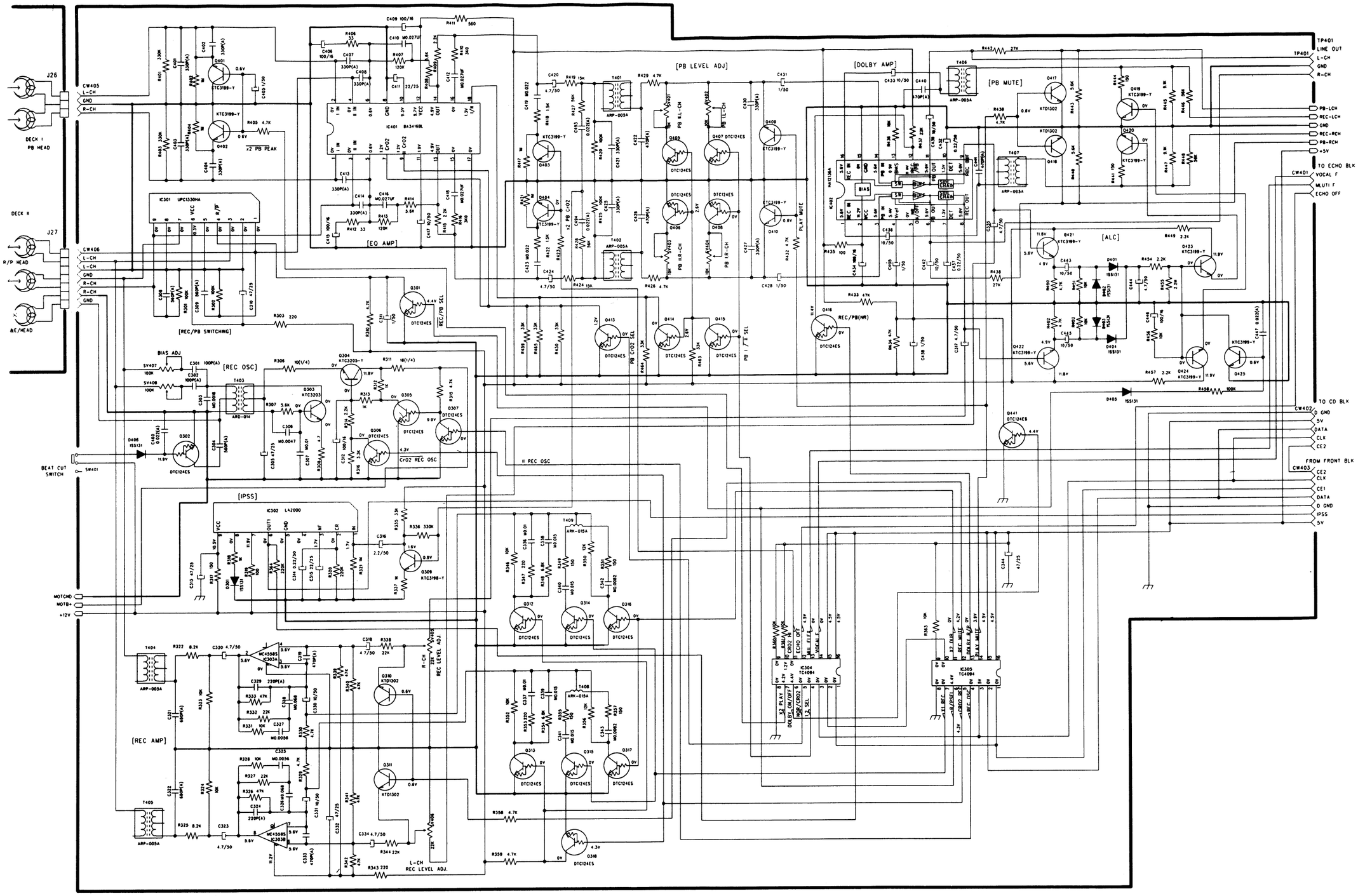
VIII. SCHEMATIC DIAGRAM/FRONT



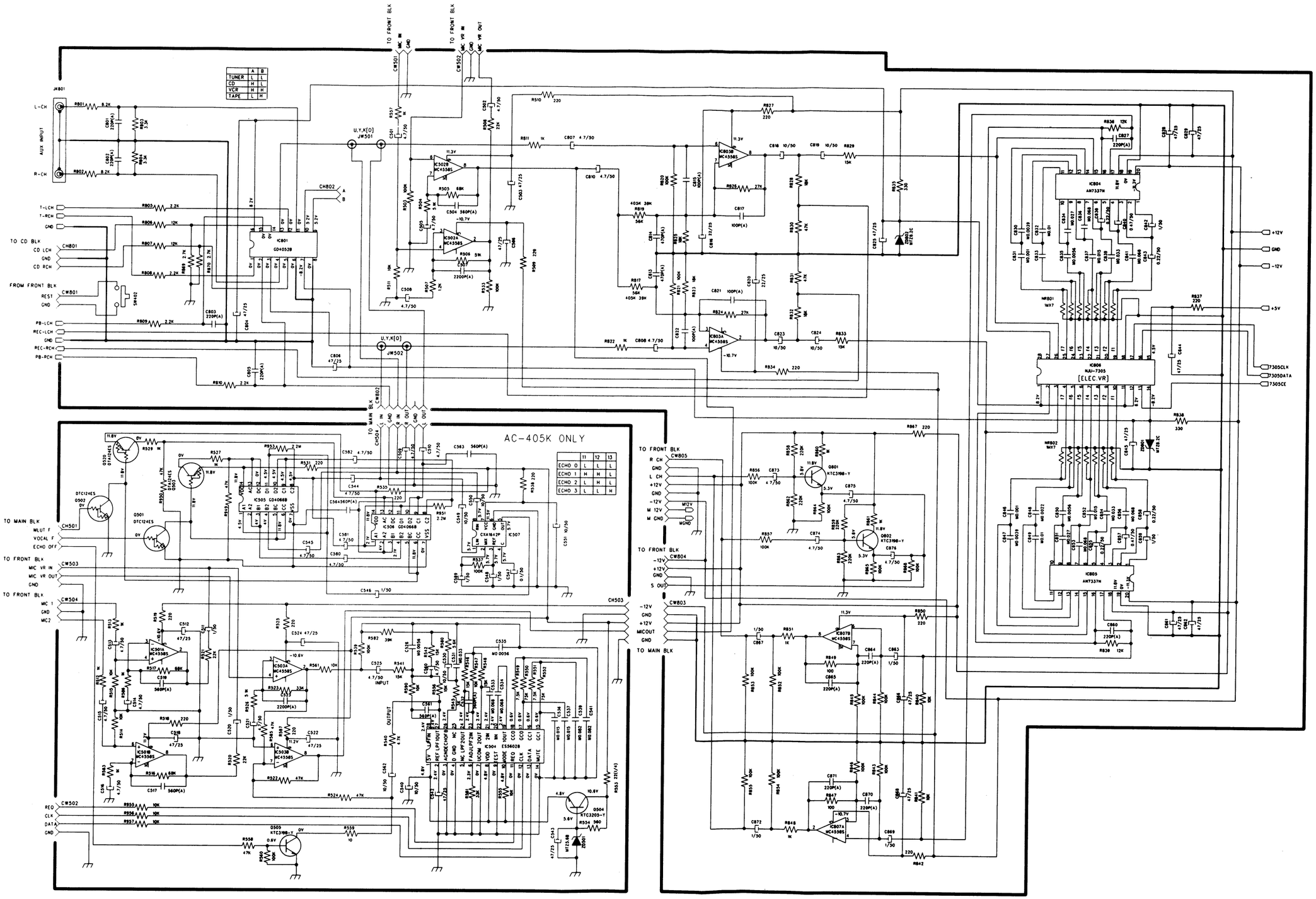
BLOCK DIAGRAM/CD



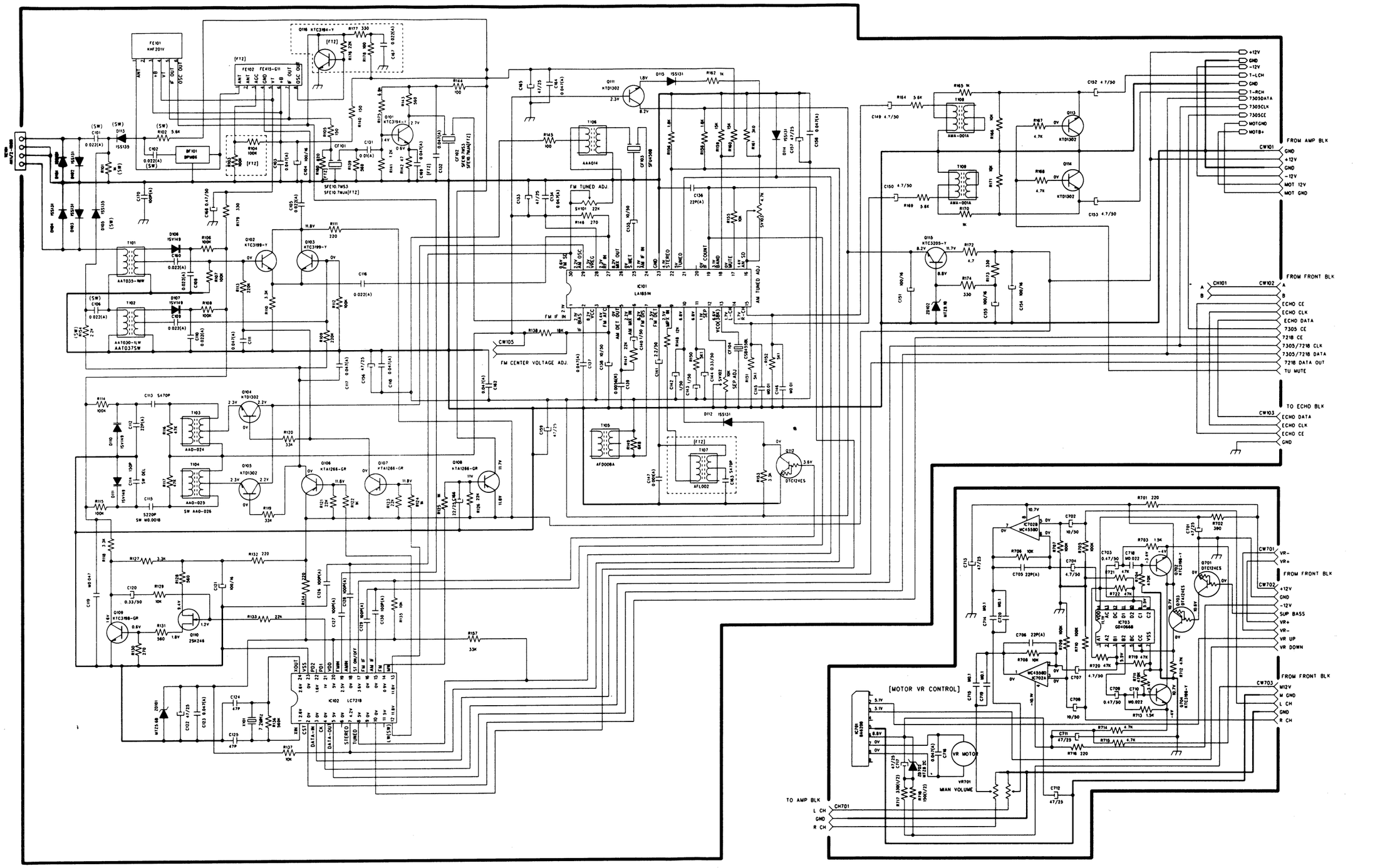
SCHEMATIC DIAGRAM/DECK



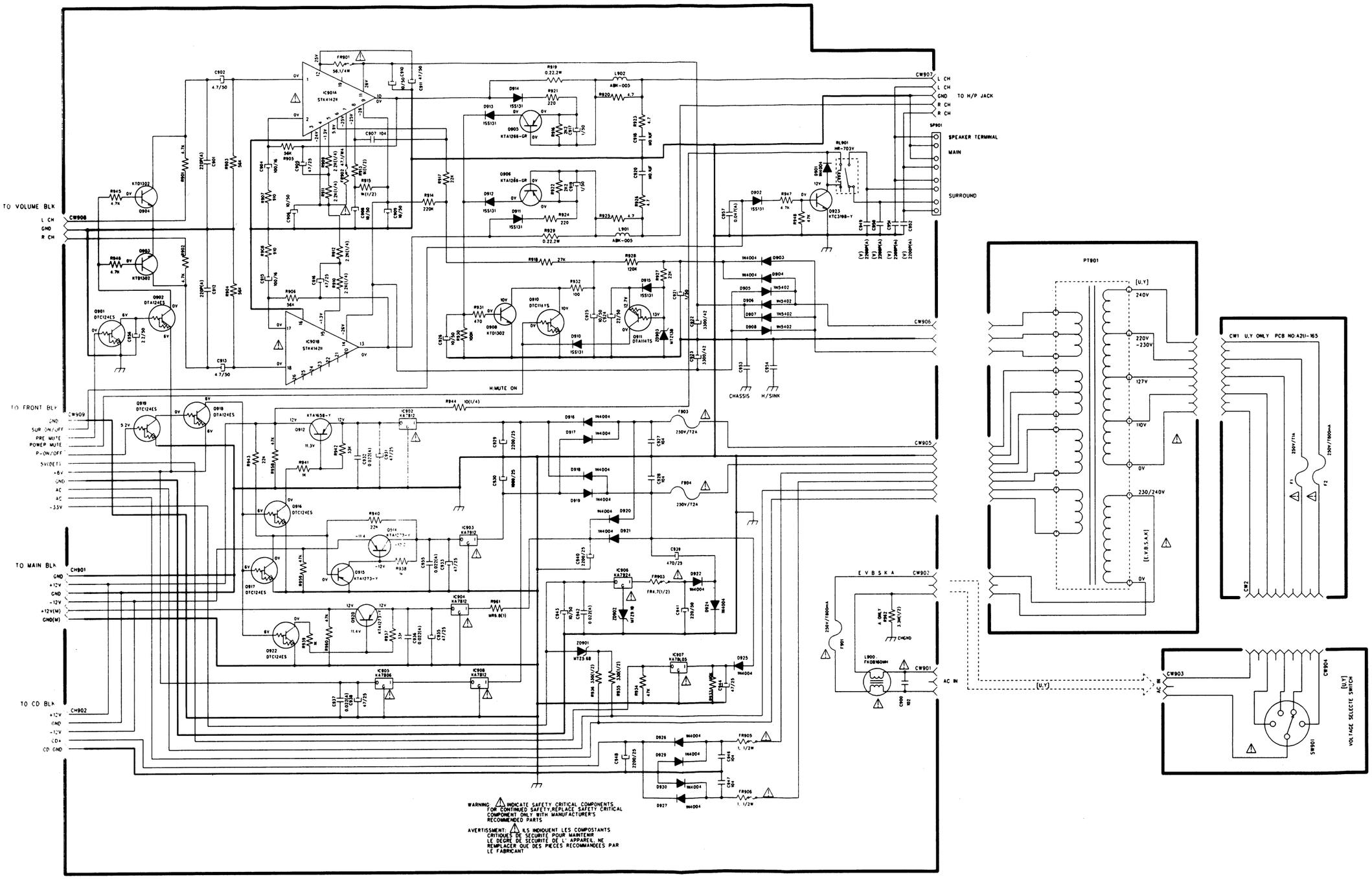
SCHEMATIC DIAGRAM/FUNCTION/G-EQ



SCHEMATIC DIAGRAM/TUNER, MAIN, VR



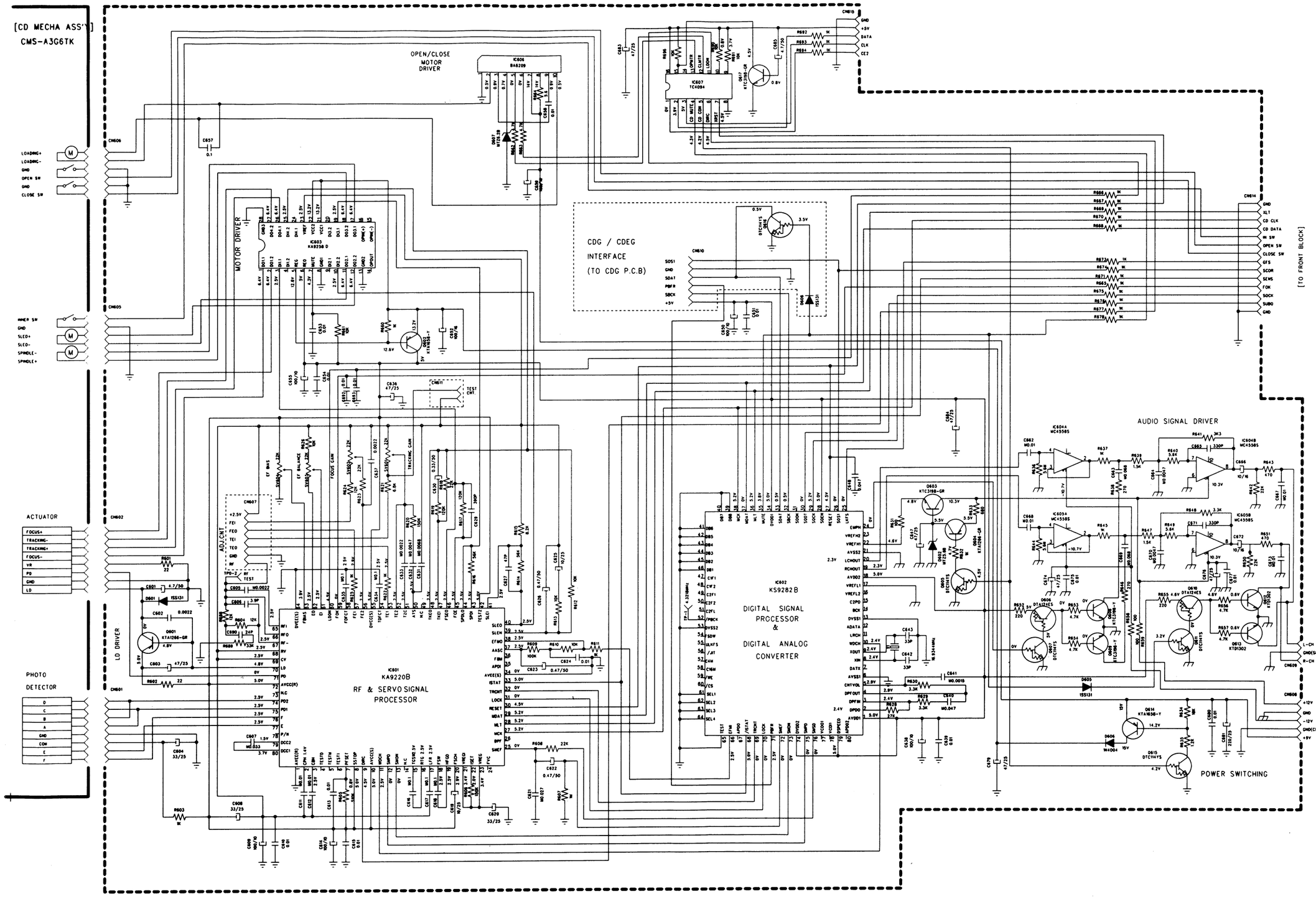
SCHEMATIC DIAGRAM/POWER AMP



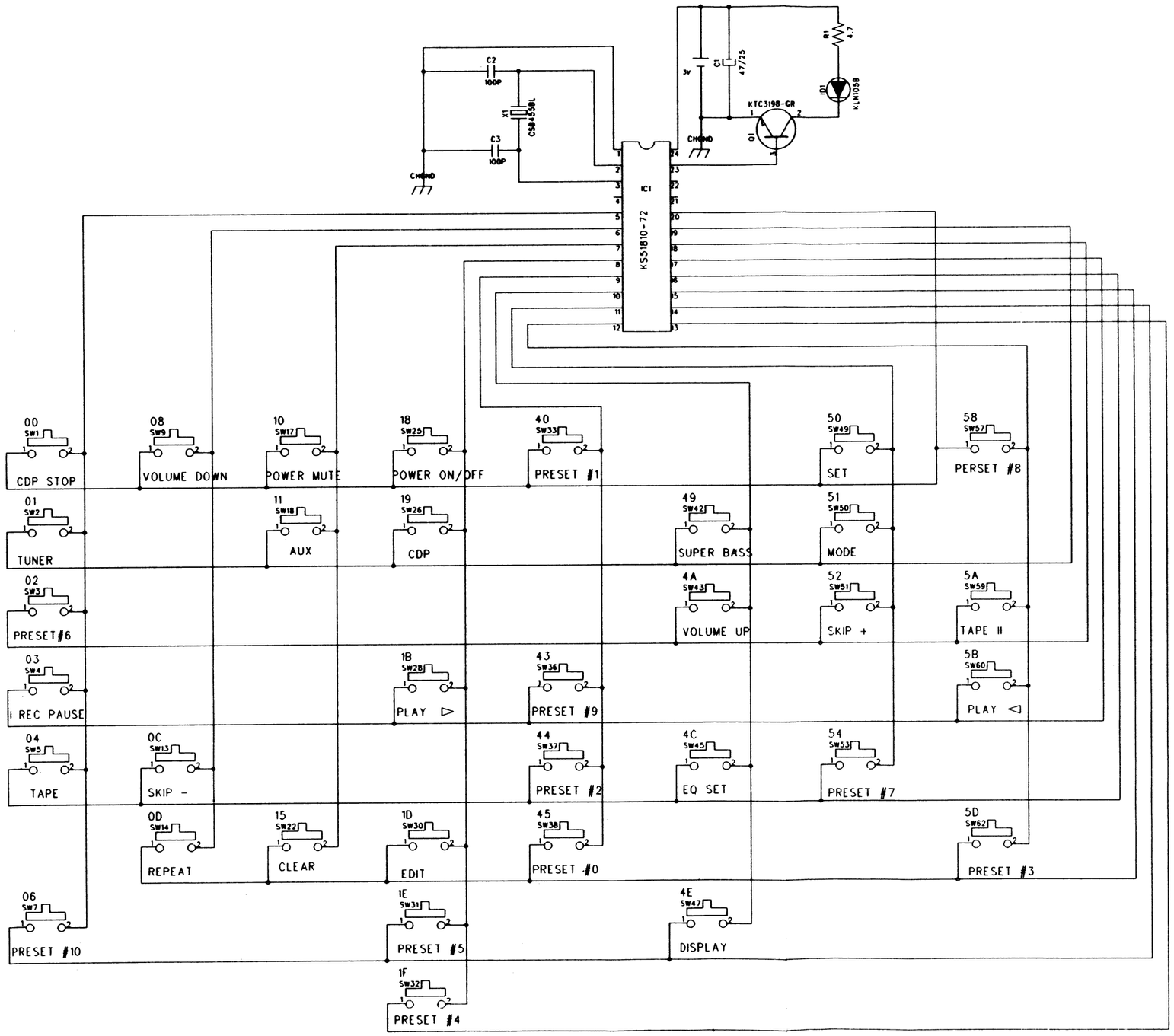
WARNING: ⚠ INDICATE SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENT ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SECURITE POUR MAINTENIR LE DEGRE DE SECURITE DE L' APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT

SCHEMATIC DIAGRAM/CD

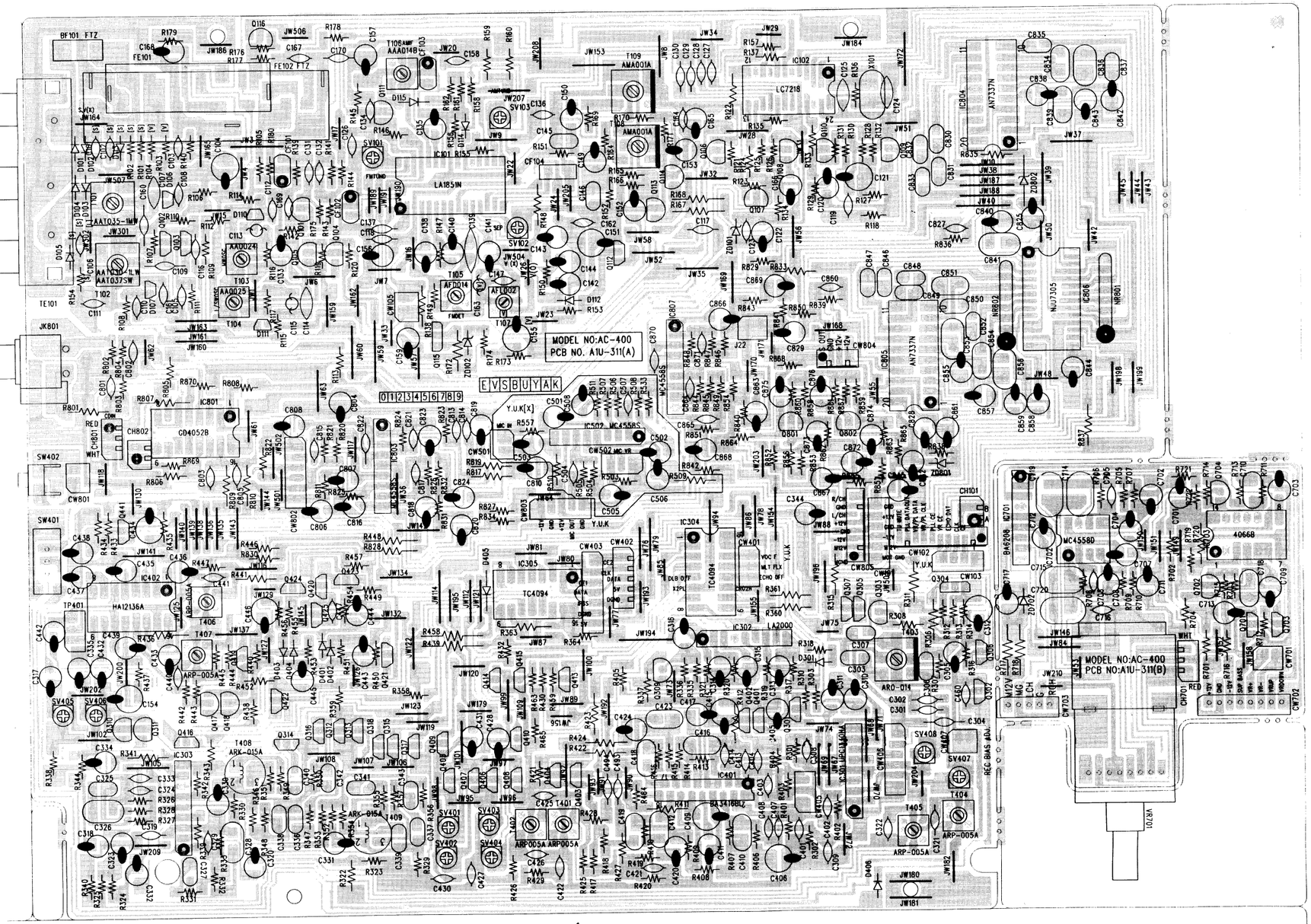


SCHEMATIC DIAGRAM/REMOTE



HEX	NO	FUNCTIN
00	K1	CDP STOP
01	K2	TUNER
02	K3	PRESET #6
03	K4	II REC PAUSE
04	K5	TAPE
06	K7	PRESET #10
08	K9	VOLUME DOWN
0C	K13	SKIP -
0D	K14	REPEAT
10	K17	POWER MUTE
11	K18	AUX
15	K22	CLEAR
18	K25	POWER ON/OFF
19	K26	CDP
1B	K28	PLAY ▷
1D	K30	EDIT
1E	K31	PRESET #5
1F	K32	PRESET #4
40	K33	PRESET #1
43	K36	PRESET #9
44	K37	PRESET #2
45	K38	PRESET #0
49	K42	SUPER BASS
4A	K43	VOLUME UP
4C	K45	EQ SET
4E	K47	DISPLAY
50	K49	SET
51	K50	MODE
52	K51	SKIP +
54	K53	PRESET #7
58	K57	PERSET #8
5A	K59	TAPE II
5B	K60	PLAY ◁
5D	K62	PRESET #3

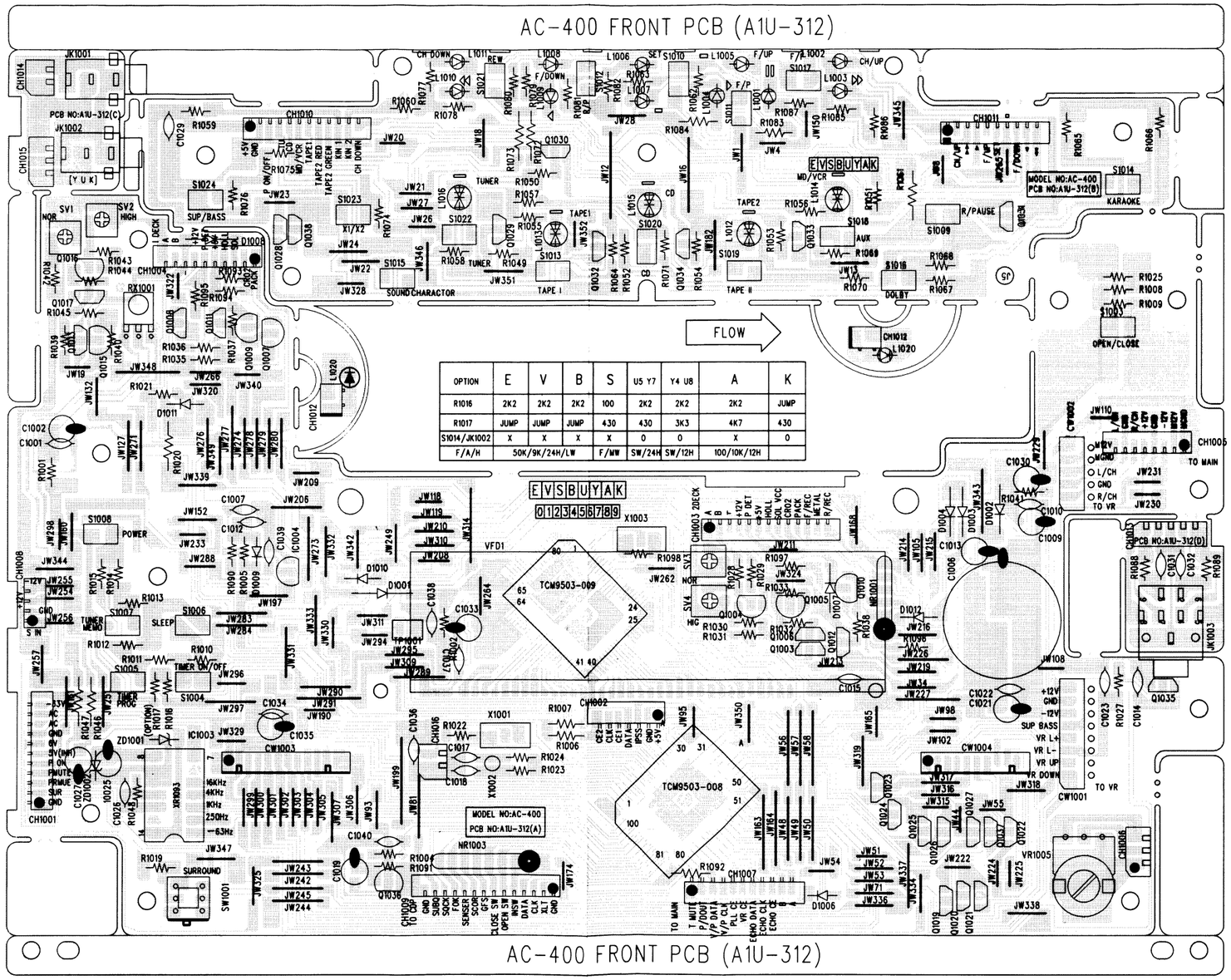
IX. PCB LAYOUT/MAIN



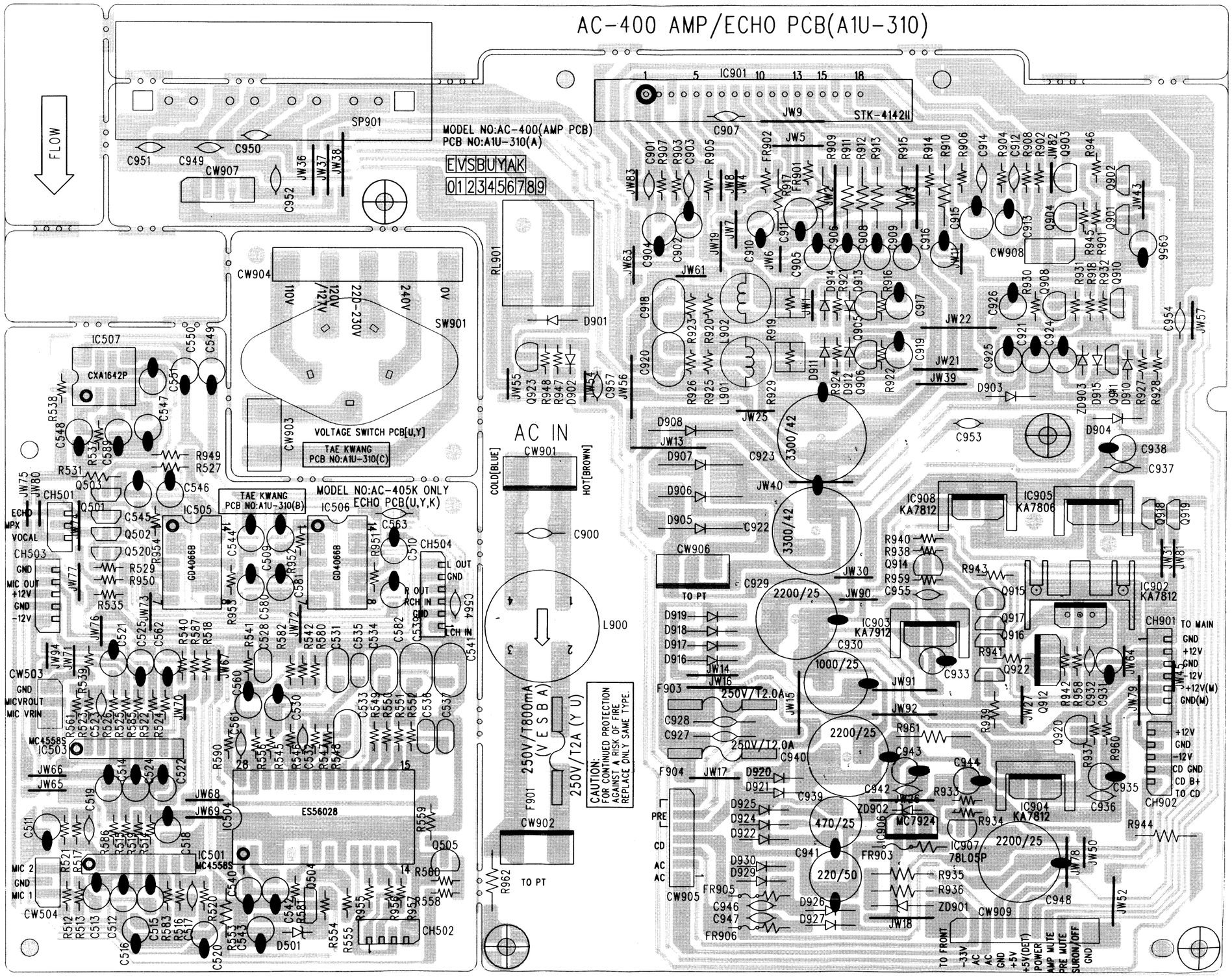
AC-400 MAIN PCB PCB NO:A1U-311 AC-400 MAIN PCB PCB NO:A1U-311 AC-400 MAIN PCB

MODEL	AC-400					405K	405	
VER.	FM/MW/LW			FM/MW		SW	SW	REMARK
LOC NO.	B	E	V	S	K	U/Y	U/Y	
JW164	0	0	X	0	0	X	X	JUMP
JW301	X	X	X	0	0	X	0	JUMP
JW302	X	X	X	X	0	X	0	JUMP
JW501	X	X	X	X	0	X	0	JUMP
JW502	X	X	X	X	0	0	0	JUMP
C101	X	X	X	X	X	0	0	223
C102	X	X	X	X	X	0	0	223
R101	X	X	X	X	X	0	0	1K
R102	X	X	X	X	X	0	0	5K6
D105	X	X	X	X	X	0	0	1SS135
D113	X	X	X	X	X	0	0	1SS135
FE101	0	0	0	X	X	X	X	KHF201V(V2)
FE102	X	X	0	X	X	X	X	FE415-G11(V1)
BF101	X	X	0	X	X	X	X	BPMB6
R103	X	X	0	X	X	X	X	100K(V1)
R104	X	X	0	X	X	X	X	100K(V1)
R140	0	0	0	0	0	0	0	150(V1:JUMP)
CF101	10.7S	10.7S	10.7J	10.7S	10.7S	10.7S	10.7S	V2:10.7S
CF102	10.7S	10.7S	10.7J	10.7S	10.7S	10.7S	10.7S	V2:10.7S
C106	X	X	X	X	X	X	0	223
R154	X	X	X	X	X	X	0	2K2
T102	30-1	30-1	30-1	X	X	037	037	
D107	0	0	0	X	X	0	0	1SV149
R108	0	0	0	X	X	0	0	100K
C109	0	0	0	X	X	0	0	223
C110	0	0	0	X	X	0	0	223
R109	0	0	0	X	X	0	0	220K
Q103	0	0	0	X	X	0	0	C3199Y
R112	0	0	0	X	X	0	0	100K
C126	0	0	0	0	0	X	X	100P
C117	0	0	0	X	X	0	0	473
R115	0	0	0	X	X	0	0	100K
D111	0	0	0	X	X	0	0	1SV149
C114	0	0	0	X	X	X	X	150P
C115	220S	220S	220S	X	X	M182	M182	
R117	0	0	0	X	X	0	0	47K
T104	025	025	025	X	X	026	026	
Q105	0	0	0	X	X	0	0	D1302
Q106	0	0	0	X	X	0	0	A1266
R119	0	0	0	X	X	0	0	33K
R121	0	0	0	X	X	0	0	22K
R122	0	0	0	X	X	0	0	1K
T107	X	X	0	X	X	X	X	AFL002(V1)
C163	X	X	0	X	X	X	X	S470P(V1)
CW802	X	X	X	X	0	0	X	5267-06
CW803	X	X	X	X	0	0	X	5267-05
CW401	X	X	X	X	0	0	X	5267-03
CW103	X	X	X	X	0	0	X	5267-04
CW501	0	0	0	0	X	X	0	5267-02
CW502	0	0	0	0	X	X	0	5267-04
R557	0	0	0	0	X	X	0	1K
C501	0	0	0	0	X	X	0	4.7/50
R511	0	0	0	0	X	X	0	10K
IC502	0	0	0	0	X	X	0	KA4558S
R503	0	0	0	0	X	X	0	100K
R504	0	0	0	0	X	X	0	5K1
R505	0	0	0	0	X	X	0	68K
C504	0	0	0	0	X	X	0	560P
C505	0	0	0	0	X	X	0	4.7/50
C502	0	0	0	0	X	X	0	4.7/50
R508	0	0	0	0	X	X	0	22K
R510	0	0	0	0	X	X	0	220
C503	0	0	0	0	X	X	0	47/25
C506	0	0	0	0	X	X	0	47/25
R506	0	0	0	0	X	X	0	51K
R507	0	0	0	0	X	X	0	1K2
R533	0	0	0	0	X	X	0	100K
R509	0	0	0	0	X	X	0	220
C507	0	0	0	0	X	X	0	2200P
C508	0	0	0	0	X	X	0	4.7/50
R176	X	X	0	X	X	X	X	22K(V1)
R177	X	X	0	X	X	X	X	330(V1)
R178	X	X	0	X	X	X	X	100(V1)
C167	X	X	0	X	X	X	X	223(V1)
Q116	X	X	0	X	X	X	X	C3194Y(V1)
JW504	0	0	X	0	0	X	0	JUMP(V2:0)
JW26	X	X	0	X	X	X	X	JUMP(V2:X)
R180	X	X	0	X	X	X	X	820(V1)
C169	X	X	0	X	X	X	X	473(V1)
R817	56K	56K	56K	56K	56K	39K	39K	56K
R819	56K	56K	56K	56K	56K	39K	39K	56K

PCB LAYOUT/FRONT



OPTION	E	V	B	S	U5 Y7	Y4 U8	A	K
R1016	2K2	2K2	2K2	100	2K2	2K2	2K2	JUMP
R1017	JUMP	JUMP	JUMP	430	430	3K3	4K7	430
S1014/JK1002	X	X	X	X	0	0	X	0
F/A/H	50K/9K/24H/LW			F/MW	SW/24H	SW/12H	100/10K/12H	


AC-400 AMP/ECHO PCB(A1U-310)
MODEL NO:AC-400(AMP PCB)
PCB NO:A1U-310(A)
EVSBUYAK
0123456789
FLOW
SP901
C950
C951
C949
CW907
C952
JW36
JW37
JW38
IC901
STK-4142II
JW9
C907
JW5
FR902
R909
R911
R912
R913
R915
R914
R910
R906
C914
R904
C912
R908
R902
JW82
Q903
R946
C901
R907
R903
C903
R905
JW83
JW8
JW4
R917
FR901
JW7
JW19
JW6
C910
C911
C905
C906
C908
C909
C916
JW11
C915
C913
Q904
R945
R901
Q901
JW43
Q902
9560
CW908
R931
R918
R932
Q910
C904
C902
JW61
C918
C920
R923
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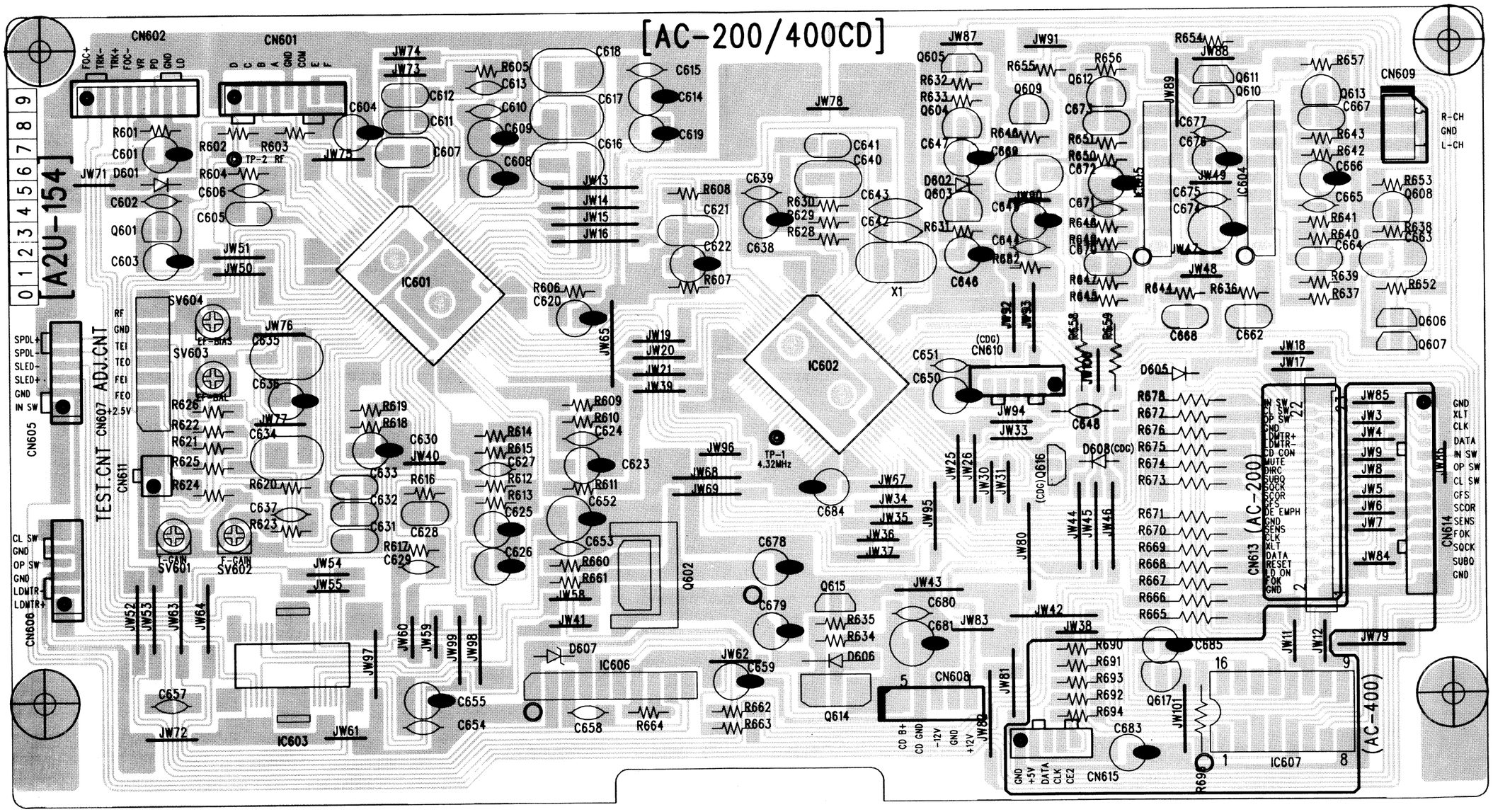
L902
R919
JW1
D914
R921
D913
R916
C917
JW22
C926
R930
Q908
C954
JW57
JW55
Q923
R948
R947
D902
JW54
C957
JW56
R926
R925
L901
R929
D911
D905
Q905
R924
D912
Q906
R922
C919
JW21
JW39
C925
C921
C924
D903
ZD903
D915
Q911
D910
R927
R928
D904
C938
C937
RL901
D901
AC IN
CW901
COLD[BLUE]
HOT[BROWN]
C900
L900
250V/T800mA
(VESBA)
250V/T2A (YU)
F901
CW902
TO PT
R962
CAUTION:
FOR CONTINUED PROTECTION
AGAINST A RISK OF FIRE
REPLACE ONLY SAME TYPE.
D908
JW13
D907
D906
D905
C923
C922
3300/42
JW40
C953
CW906
TO PT
D919
D918
D917
D916
JW14
JW16
F903
250V/T2.0A
C928
C927
F904
JW17
PRE
CD
AC
AC
CW905
C929
2200/25
JW30
JW90
C930
1000/25
JW91
JW92
2200/25
C940
D920
D921
C939
D925
D924
D922
470/25
C941
D930
D929
FR905
C946
C947
FR906
D926
D927
JW18
IC908
KA7812
IC905
KA7806
R940
R938
Q914
R959
C955
R943
Q915
Q917
Q916
IC903
KA7912
C933
R941
Q922
Q912
R942
R958
C932
C931
JW27
R939
JW79
JW64
JW45
IC902
KA7812
CH901
TO MAIN
GND
+12V
GND
-12V
+12V(M)
GND(M)
Q920
R937
R960
C935
C936
+12V
GND
-12V
CD GND
CD B+
TO CD
CH902
R944
C943
C944
R933
JW26
ZD902
MC7924
C906
IC907
78L05P
IC904
KA7812
2200/25
JW78
JW50
C948
JW52
FR903
R935
R936
ZD901
CW909
TO FRONT
-33V
AC
AC
GND
+5V
+5V(DET)
POWER
AMP MUTE
PRE MUTE
SURON/OFF
GND
VOLTAGE SWITCH PCB[U,Y]
TAE KWANG
PCB NO:A1U-310(C)
SW901
110V
120V/127V
220-230V
240V
0V
CW904
CW903
IC507
CXA1642P
C550
C549
C551
C547
R538
C548
C589
R537
R531
R949
R527
C546
Q503
Q501
C545
Q502
Q520
R954
R529
R950
R535
JW75
JW80
ECHO
MPX
VOCAL
CH501
JW74
CH503
GND
MIC OUT
+12V
GND
-12V
JW77
JW76
JW94
JW71
C521
C525
JW73
C562
R540
R587
R518
R539
CW503
GND
MICVROUT
MIC VRIN
IC503
MC4558S
R561
R523
C523
R526
R525
R585
R522
R524
JW70
JW66
JW65
C514
C524
C522
C519
C511
R52
R517
JW68
JW69
C518
R586
R514
R519
R515
IC501
MC4558S
MIC 2
GND
MIC 1
CW504
R512
R513
C513
C512
C516
C515
R583
R516
C517
C520
R520
R553
C543
C540
R542
R581
D504
D501
R554
R555
R955
R956
R957
CH502
TAE KWANG
PCB NO:A1U-310(B)
IC505
GD4066B
C544
C509
R952
C581
R953
C580
C582
MODEL NO:AC-405K ONLY
ECHO PCB(U,Y,K)
IC506
GD4066B
C563
R951
C510
CH504
L OUT
GND
R OUT
RCH IN
GND
C564
LCH IN
C541
C539
C538
C537
C533
C549
R550
R551
R552
C536
C534
C535
R531
C530
C531
R580
C532
R544
R543
R548
R590
R561
C560
R541
C528
R582
JW72
JW67
IC504
ES56028
28
15
14
R559
Q505
R560
R558
R557
R556
R545
R546
R547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CN606
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IC601
IC602
IC603
IC604
IC606
IC607
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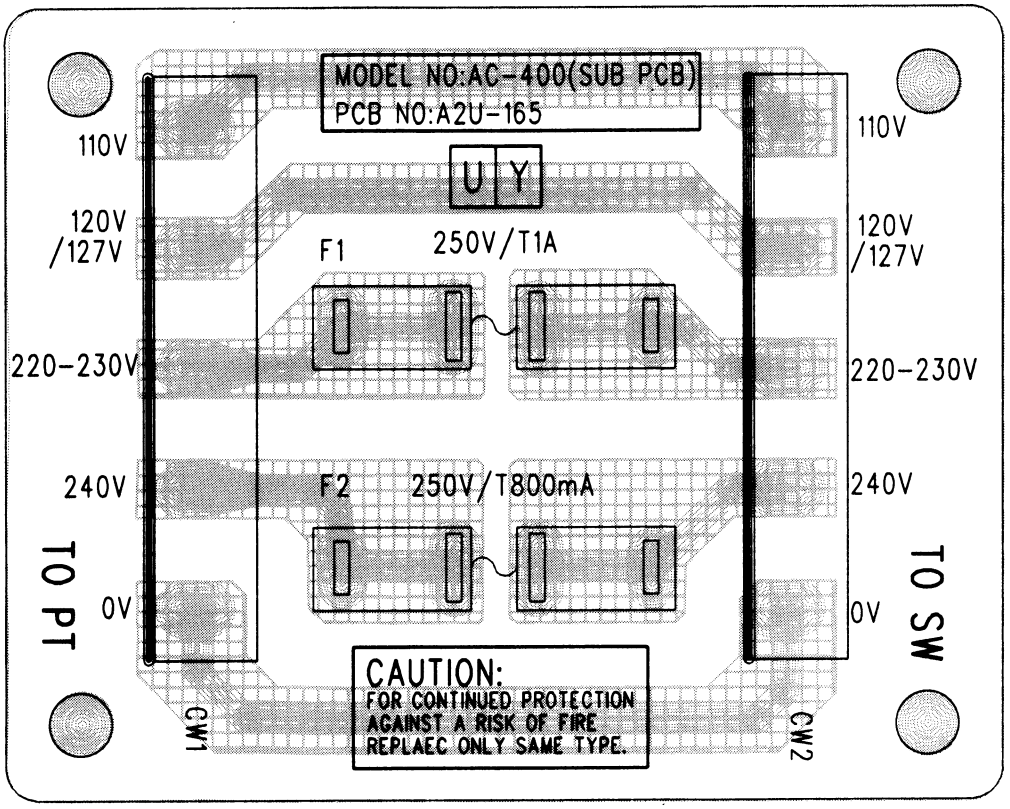
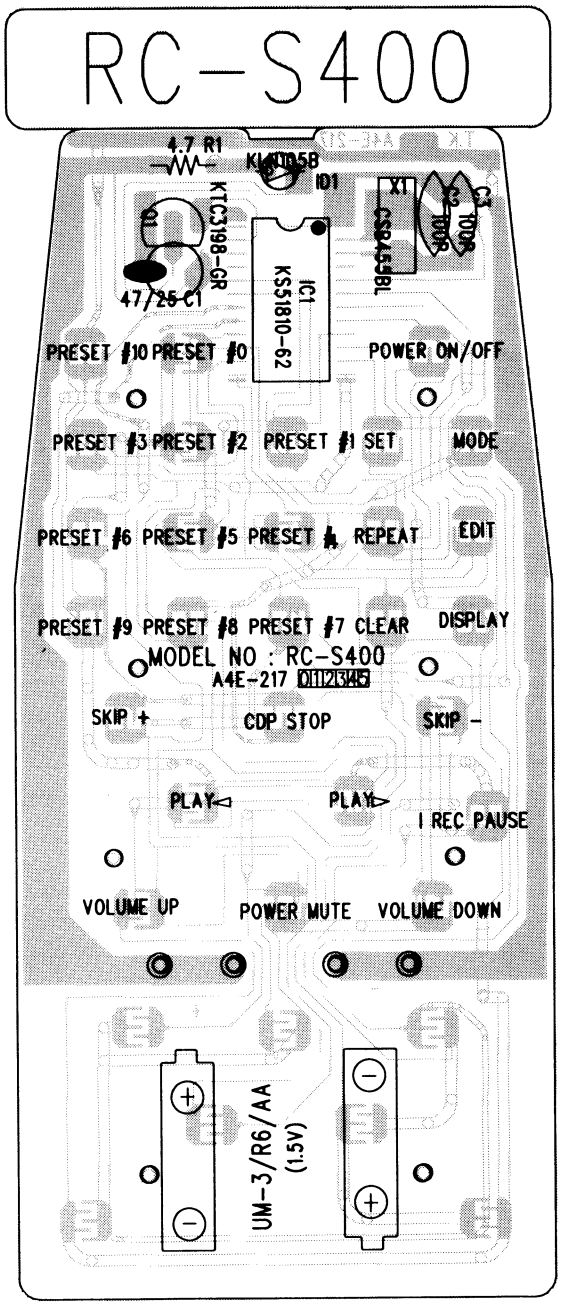
Q609
Q610
Q611
Q612
Q613
Q614
Q615
Q616
Q617
X1
TEST.CNT
ADJ.CNT
(AC-200)
(AC-400)
(CDG)
R-CH
GND
L-CH

PCB LAYOUT/SUB



PCB LAYOUT/REMOTE



X. INFORMATION OF ICs MI-COM

IC1001 TCM9503-008 (SYSTEM CONTROL μ-COM)

Pin No.	Port Name	I/O	Description
1	BAND	I	Key scan input
2	Ⅰ PLAY	I	Input detect Ⅰ PLAY SW
3	Ⅰ CrO_2	I	DECK Ⅰ Tape Bias selecting input H:70μs, L:120μs
4	Ⅰ PACK	I	DECK Ⅰ Pack switching input H:PACK OFF, L:PACK ON
5	AVss	I	Analog GND
6	TEST	I	GND
7	X2	O	Sub clock
8	X1	I	Sub clock
9	Vss	I	GND
10	OSC1	I	System clock
11	OSC2	O	System clock
12	RES	I	Reset
13	MD0	I	Mode pin:Vcc
14	Ⅰ PLUNGER	O	Plunger ON/OFF Control output
15	Ⅱ PLUNGER	O	Plunger ON/OFF Control output
16	VFD RESET	O	VFD RESET Control output
17	Ⅰ SPEED	O	Ⅰ Motor speed switching output
18	Ⅱ SPEED	O	Ⅱ Motor speed switching output
19	Ⅰ MOTOR ON	O	Ⅰ Motor control
20	Ⅱ MOTOR ON	O	Ⅱ Motor control
21	4094 CE1	I	Serial Data input
22	4094 CLK	I/O	Serial clock I/O
23	4094 CE2	I	Serial Data input
24	4094 DATA	O	Serial Data out
25	Ⅱ PLAY	I	Input detect Ⅱ PLAY SW
26	Ⅱ CrO_2	I	DECK Ⅱ Tape Bias selecting input H:70μs, L:120μs
27	Ⅱ PACK	I	DECK Ⅱ Pack switching input H:PACK OFF, L:PACK ON
28	FWD REC SW	I	DECK Ⅱ Reverse REC switching input L:REC ON
29	RVS REC SW	I	DECK Ⅱ Forward REC switching input L:REC ON
30	Vss	I	GND
31	NC		
32	NC		
33	NC		
34	Vcc	I	POWER Supply (+5V)
35	Ⅰ REEL	I	Ⅰ Reel pulse input
36	Ⅱ REEL	I	Ⅱ Reel pulse input
37	IPSS	I	Input detect IPSS
38	A	O	Function switching output
39	B	O	Function switching output
40	P ON/OFF	O	LED Power switching output

Pin No.	Port Name	I/O	Description
41	◀◀	O	◀◀ LED Control output
42	◀	O	◀ LED Control output
43	F/DOWN	O	F LED Control output
44	■	O	■ LED Control output
45	SET	O	SET LED Control output
46	F/UP	O	F LED Control output
47	▶	O	▶ LED Control output
48	▮▮	O	▮▮ LED Control output
49	CH	O	CH LED Control output
50	▶▶	O	▶▶ LED Control output
51	TUNER	O	TUNER LED Control output
52	CD	O	CD LED Control output
53	AUX	O	AUX LED Control output
54	TAPE1	O	TAPE1 LED Control output
55	TAPE2 RED	O	TAPE2 RED LED Control output
56	TAPE2 GRN	O	TAPE2 GRN LED Control output
57	POWER LED	O	POWER LED Control output
58	VR UP	O	Main VR Control output
59	VR DOWN	O	Main VR Control output
60	SUP ON/OFF	O	SUPER BASS Control output
61	TUN MUTE	O	TUNER MUTE Control output
62	PRE MUTE	O	PRE MUTE Control output
63	POW MUTE	O	AMP MUTE Control output
64	POW ON/OFF	O	POWER ON/OFF Control output
65	FLT CE	O	FLT Control output
66	FLT CLK	O	FLT Control output
67	FLT DATA	O	FLT Control output
68	ECHO CE	O	ECHO LEVEL Control output
69	ECHO CLK	O	ECHO LEVEL
70	ECHO DATA	O	ECHO LEVEL
71	E, VR CE	O	E, VR Control output
72	PLL CE	O	PLL Control output
73	E, VR/PLL CLK	O	E, VR/PLL Control output
74	E, VR/PLL D	O	E, VR/PLL Control output
75	PLL DATA OUT	O	PLL Control output
76	XLT	O	Latch signal output
77	CD CLK	O	Clock signal output
78	CD DATA	O	Command data output for CD
79	Vcc .	I	POWER Supply (+5V)
80	IN SW	I	Input to detect sled Inner switch

Pin No.	Port Name	I/O	Description
81	OPEN SW	I	Input to detect tray open position
82	CLOSE SW	I	Input to detect tray close position
83	RX IN	I	REMOCON Signal detection input
84	GFS	I	Input to detect PLL lock condition
85	SCOR	I	Sub Code Q data detection input
86	SENSE	I	Auto sequence end detection input
87	FOK	I	Focus lock detection input
88	SQCK	O	Reading clock output of subcode Q data
89	SUBQ	I	Input to detect Subcode Q data
90	NC		
91	POW DOWN	I	+5V
92	AVcc	I	Analog Power Supply(+5V)
93	63Hz	I	(63Hz, 250Hz, 1KHz, 4KHz, 16KHz) Band frequency level input
94	250Hz	I	(63Hz, 250Hz, 1KHz, 4KHz, 16KHz) Band frequency level input
95	1KHz	I	(63Hz, 250Hz, 1KHz, 4KHz, 16KHz) Band frequency level input
96	4KHz	I	(63Hz, 250Hz, 1KHz, 4KHz, 16KHz) Band frequency level input
97	16KHz	I	(63Hz, 250Hz, 1KHz, 4KHz, 16KHz) Band frequency level input
98	KIN1	I	Key scan input 1
99	KIN2	I	Key scan input 2
100	KIN3	I	Key scan input 3

IC1002 TCM9503-009 (VFD driver/controller μ-COM)

Pin No.	Port Name	I/O	Description
1	Vcc		
2	Vcc		
3	Vcc		
4	Vcc		
5	AVss	I	Analog GND
6	TEST	I	GND
7	X2	O	NC
8	X1	I	Vcc
9	Vss	I	GND
10	OSC1	I	System clock
11	OSC2	O	System clock
12	RES	I	Reset
13	CE	I	VFD Control input
14	Vcc		
15	Vcc		
16	Vcc		
17	Vcc		
18	Vcc		
19	Vcc		
20	S1	O	VFD Segment output
21	S2	O	VFD Segment output
22	S3	O	VFD Segment output
23	S4	O	VFD Segment output
24	S5	O	VFD Segment output
25	S6	O	VFD Segment output
26	S7	O	VFD Segment output
27	S8	O	VFD Segment output
28	S9	O	VFD Segment output
29	S10	O	VFD Segment output
30	S11	O	VFD Segment output
31	S12	O	VFD Segment output
32	S13	O	VFD Segment output
33	S14	O	VFD Segment output
34	S15	O	VFD Segment output
35	S16	O	VFD Segment output
36	S17	O	VFD Segment output
37	S18	O	VFD Segment output
38	S19	O	VFD Segment output
39	S20	O	VFD Segment output
40	Vdisp	I	VFD Power source(233V)

Pin No.	Port Name	I/O	Description
41	NC		
42	NC		
43	G1	O	VFD digit output
44	G2	O	VFD digit output
45	G3	O	VFD digit output
46	G4	O	VFD digit output
47	G5	O	VFD digit output
48	G6	O	VFD digit output
49	G7	O	VFD digit output
50	G8	O	VFD digit output
51	G9	O	VFD digit output
52	G10	O	VFD digit output
53	G11	O	VFD digit output
54	G12	O	VFD digit output
55	G13	O	VFD digit output
56	G14	O	VFD digit output
57	Vcc		
58	Vcc		
59	Vcc		
60	Vcc		
61	Vcc		
62	Vcc		
63	Vcc		
64	Vcc		
65	Vcc		
66	Vcc		
67	Vcc		
68	Vcc		
69	Vcc		
70	VFD CLK	I/O	VFD Serial clock I/O
71	VFD DATA		VFD Control out
72	Vcc		
73	Vcc		
74	Vcc		
75	Vcc		
76	Vcc		
77	Vcc		
78	Vcc		
79	Vcc		
80	Vcc		

IC601 KA9220B (RF + 1SSP FOR CDP)

Pin No.	Port Name	Description
1	AVEE(R)	Analog negative power supply input pin for RF part
2	CPH	Capacitor connection pin of mirror hold.
3	CBH	Capacitor connection pin of defect bottom-hold
4	NC	
5	NC	
6	NC	
7	PFSET	Peak frequency setting pin for focus, tracking compensation and fc (cut off frequency) of CLV LPF.
8	SSTOP	Check the position pin of pick-up whether inside or not.
9	NC	
10	AVCC(S)	Analog positive power supply input pin for SERVO part.
11	WDCH	Auto-sequencer clock-input pin (Normal speed=88.2KHz, Double speed=176.4KHz)
12	SMPD	Connection pin of DSP SMPD
13	SMON	Connection pin of DSP SMON, spindle servo ON at "H"
14	NC	
15	TGSW	Providing time constant to change the high frequency tracking gain
16	RTG	Capacitor connection pin to switch the tracking gain of high frequency
17	LFR	Capacitor connection pin to perform rising low bandwidth of focus servo loop
18	FSW	High frequency gain of focus servo loop can be changed by FS3 switch ON or OFF
19	HFGD	Reducing high frequency gain with capacitor connected between pin 18 and pin 19.
20	FSCH	Time constant external pin to generate focus search waveform
21	VREGI	External regulator voltage input pin for VCO
22	ISET	Determining the peak value of focus search, track jump and SLED kick
23	VREG	3.5V Regulator output pin
24	NC	
25	SMEF	Providing an external LPF time constant of CLV SERVO Loop
26	NC	
27	MCK	Clock input pin from micom
28	MLT	Latch input pin from micom
29	MDAT	Data input pin from micom
30	RESET	Reset input pin from micom, reset at "L"
31	LOCK	Pin for operation of the sled runaway prevention function at "L"
32	TRCNT	Track count output pin
33	ISTAT	Internal status output pin
34	AVEE(S)	Analog negative power supply input pin for SERVO part
35	NC	
36	NC	
37	AASC	Auto-Asymmetry control input pin
38	EFMO	EFM comparator output pin
39	SLEN	Non-inverting input pin of SLED SERVO amplifier

Pin No.	Port Name	Description
40	SLEO	Output pin of SLED SERVO amplifier
41	SLEI	Inverting input pin of SLED SERVO amplifier
42	TEST2	Test input pin to change speed mode Normal speed="H", Double speed="L"
43	SPDI	Inverting input pin of spindle servo amplifier
44	SPDLO	Spindle servo amplifier output pin
45	FCE	Inverting input pin of focus servo complifier.
46	FSEO	Output pin of focus servo amplifier
47	TKEI	Non-inverting input pin of tracking servo amplifier
48	TKEO	Output pin of tracking servo amplifier
49	NC	
50	ATS	Anti-shock input pin
51	TZC	Tracking Zero Crossing input pin
52	TE2	Tracking Error Servo input pin
53	TE1	Output pin of tracking Error Amplifier
54	TDFCT	Capacitor Connection pin for Defect Compensation of tracking servo
55	DVCC(S)	Digital positive power supply input pin for servo part
56	FE2	Focus error servo input pin
57	FE1	Output pin of focus error Amplifier
58	FDFCT	Capacitor connection pin for defect compensation of focus servo
59	FOK	Output pin of Focus ok comparator.
60	LDON	Laser diode ON/OFF control pin
61	EI	Feedback input pin of E I-V amplifier
62	EO	Output pin of E I-V Amplifier
63	FBIAS	Bias pin of non-inverting input of focus error amplifier
64	DVEE(S)	Digital negative power supply input pin for servo part
65	RFI	Output Signal of RF summing amplifier is inputed through capacitor
66	RFO	Output pin of RF summing amplifier
67	RF−	Inverting input pin of RF summing amplifier
68	RV	Output pin of (AVCC+AVEE)/2 Voltage
69	CV	Bias input pin of Center Voltage buffer
70	LD	Output pin of APC amplifier
71	PD	Input pin of APC amplifier
72	AVCC(R)	Analog positive power supply input pin for RF part
73	NC	
74	PD2	Inverting input pin of RF-I-V AMP2
75	PD1	Inverting input pin of RF-I-V AMP1
76	F	Inverting input pin of F I-V AMP
77	E	Inverting input pin of E I-V AMP
78	NC	
79	DCC2	Defect bottom-hold output is inputed through capacitor
80	DCC1	Output pin of defect bottom-hold

IC602 KS9282B (DSP +1DAC(16BIT) FOR CDP)

Pin No.	Port Name	I/O	Description
1	AVDD1		Analog Vcc1
2	DPDO	O	Charge pump output for master PLL
3	DPFIN	I	Filter input for master PLL
4	DPFOUT	O	Filter output master PLL
5	CNTVOL	I	VCO control voltage for master PLL
6	AVSS1		Analog Ground 1
7	NC		
8	XIN	I	X-tal oscillator input
9	XOUT	O	X-tal oscillator output
10	WDCH	O	Word clock of 48 bit/SLOT(Normal speed=88.2KHz, Double speed=176.4KHz)
11	NC		
12	NC		
13	DVSS1		Digital Ground 1
14	NC		
15	NC		
16	NC		
17	VREFL1	I	Input terminal 1 of reference voltage "L" (GND Connection)
18	AVDD2		Analog VCC2
19	RCHOUT	O	Right-Channel audio output through D/A Converter
20	LCHOUT	O	Left-Channel audio output through D/A Converter
21	AVSS2		Analog Ground2
22	VREFH1	I	Input terminal 1 of reference voltage "H" (Vdd connection)
23	NC		
24	NC		
25	LKFS	O	The Lock Status output of frame sync
26	SOS1	O	Output of subcode sync signal(S0+S1)
27	RESET	I	System reset at "L"
28	SQEN	I	SQCK I/O Control("L":internal CK, "H":extermal CK)
29	SQCK	I/O	Clock for output Subcode-Q data
30	SQDT	O	Serial output of Subcode-Q data
31	NC		
32	SBCK	I	CLOCK for output subcode-Q data
33	SDAT	O	Subcode serial data output
34	$DV_{DD}1$		Digital Vcc1
35	MUTE	I	Mute control Input("H":Mute ON)
36	MLT	I	Latch Signal Input from Micom
37	MDAT	I	Serial data Input from Micom
38	MCK	I	Serial Clock Input from Micom
39	DB8	O	GND
40	DB7	O	GND

Pin No.	Port Name	I/O	Description
41	DB6	O	GND
42	DB5	O	GND
43	DB4	O	GND
44	DB3	O	GND
45	DB2	O	GND
46	DB1	O	GND
47	NC		
48	NC		
49	NC		
50	NC		
51	NC		
52	NC		
53	DVss2		Digital Ground 2
54	NC		
55	NC		
56	NC		
57	NC		
58	NC		
59	NC		
60	NC		
61	SEL1	I	GND
62	SEL2	I	GND
63	SEL3	I	GND
64	SEL4	I	GND
65	TEST	I	Test Terminal(L=Normal operating state) GND
66	EFMI	I	EFM Signal input
67	NC		
68	ISTAT	O	The internal status output
69	TRCNT	I	Tracking counter input signal
70	LOCK	O	Output signal of LKFS Condition sampled PBFR/16(If LKFS is "H", Lock is "H", If the LKFS is sampled "L" at least 8 times by PBFR/16, Lock is :"L")
71	PBFR	O	Write frame clock (Lock: 7.35KHz)
72	SMEF	O	LPF time constant control of the spindle servo error signal
73	SMON	O	ON/OFF control signal for spindle servo
74	$DV_{DD}2$		Digital Vcc2
75	SMPD	O	Spindle Motor drive(Rough control in the CLV-S mode Phase control in the CLV-P mode)
76	SMSD	O	Spindle Motor drive(Velocity control in the CLV-P mode)
77	NC		
78	NC		
79	DSPEED	I	Double speed mode control(H:Normal Speed, L:Double Speed)
80	NC		

ABBREVIATIONS

AMPLIFIER

ABBREVIATION	EXPLANATION
A	Analog
AC	Alternating Current
AMP	AMPlifier
CD	Compact Disc
COM	COMmon
D	Digital
D/A	Digital to Analog
DAC	Digital to Analog Converter
DAT	Digital Audio Tape recorder
DC	Direct Current
GND	GrouND
L	Left
LED	Light Emitting Diode
MC	Moving Coil
MM	Moving Magnet
PCB	Printed Circuit Board
R	Right
REG	REGulator
REC	RECord
TR	TRansistor
SW	SWitch
V.AMP	Voltage AMPlifier
V.DISC	Video DISC
VR	Variable Resistance
VTR	Video Tape Recorder

TUNER

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AFC	Auto Frequency Control	MEMO	MEMOry
AGC	Auto Gain Control	MI-COM	MIcro-COMputer
ALC	Auto Level Control	MIN	MINimum
AM	Amplitude Modulation	MIX	MIXing
AMP	AMPlifier	MPX	MultipleX
ANT	ANTenna	MW	Medium Wave(frequency)
BATT	BATTery	NC	No Connection
BLK	BLocK	NFB	Negative Feed Back
BUFF	BUFFer	OSC	OSCillator
COMP	COMParator	PCB	Printed Circuit Board
DET	DETect(DETector)	PLL	Phase Locked Loop
FLD	FLuorescent Display	Q.D	Quadrature Detector
FM	Frequency Modulation	Rch	Right channel
FREQ	FREQuency	REF	REFerence
GND	GrouND	REG	REGulator
H	High	RF	Radio Frequency
HPF	High Pass Filter	SEG	SEGment
IF	Intermediate Frequency	SELE	SELEctor
IHF	Institut of High Fidelity	SENS	SENSitivity
IND	INDicator	SIG	SIGnal
I/O	In/Out	S/N	Signal to Noise Ratio
JW	Jumper Wire	SSG	Standard Signal Generator
L	Low	STD	STanDard
LCD	Liquid Crystal Display	SW	SWitch : Short Wave(frequency)
Lch	Left channel	THD	Total Harmonic Distortion
LED	Light Emitting Diode	TP	Test Point
LPF	Low Pass Filter	VCO	Voltage Controlled Oscillator
LW	Long Wave(Frequency)	VR	Variable Resistor
		X'TAL	Crystal

COMPACT DISC

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A-D	Analog to Digital (Converter)	Mb	Mega Bits
ADC	Analog to Digital (Converter)	MDA	Motor Drive Amplifier
BCD	Binary Code Decimal	MFM	Modified Frequency Modulation
BPI	Bits per Inch	MM	Mono-stable Multivibrator
CD	Compact Disc	M_2FM	Modified Modified Frequency Modulation
CIRC	Cross Interleaving & Reed Solomon Coding	MOD2	Modulo 2(Addition)
CLV	Constant Linear Velocity	MP	Microprocessor
CP	Clock Pulses	MSB	Most Significant Bit
CRCC	Cyclic Redundancy Check Codes	NA	Numerical Aperture
D Level	Decision Level	NRZ	Non Return to Zero
D-A	Digital to Analog (Converter)	NRZ-1	Non Return to Zero Inverted
DAC	Digital to Analog (Converter)	P	Parity Data
DAD	Digital Audio Disc	PAM	Pulse Amplitude Modulation
DEM	Dynamic Element Matching	PCM	Pulse Code Modulation
DPD	Differential Phase Detection	PD	Phase Detector
DSV	Digital Sum Value	PE	Phase Encode
EFM	Eight to fourteen Modulation	PLL	Phase Locked Loop
EX-OR	Exclusive OR	PNM	Pulse Number Modulation
FCI	Flux Changes per Inch	PPM	Pulse Phase Modulation
FIR	Finite Impulse Response	PWM	Pulse Width Modulation
FP	Front Pulse	Q	Parity Data
FPG	Front Pulse Gate	R, R_1, R_2, etc	Data for Right Channel
F	Frequency of Sampling	RAM	Random Access Memory
GF	Galois Field	RPG	Rear Pulse Gate
H & V (Parity)	Horizontal & Vertical	SCOOP	Self Coupled Optical Pick-up
IIR	Infinite Impulse Response	S & H	Sample & Hold
KB	Kilo Bits	S/N	Signal to Noise Ratio
L, L^1, L^2, etc.	Data for Left Channel	SSG	Standard Signal Generator
LPF	Low Pass Filter	SYSCON	SYStem CONtrol
LSB	Least Significant Bit		

CASSETTE

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AC	Alternating Current	MIN	MINute
A/D	Analog/Digital	MML	Maximum Modulation Level
AF	Auto Fader	MOL	Maximum Output Level
AMP	AMPlifier	MPX	Multi Plex
AR	Anti Recording	MQSS	Memory Quick Search System
AT BIAS	Auto Turning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMal
BAL	BALance	NR	Noise Reduction
BEF	Band Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAP M	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMParator	QR	Quick Reverse
CONT	CONTinuance	R CH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECord(RECording)
CS	Chip Select	REV	REVerse
D/A	Digital/Analog	ROT	ROTation
DC	Direct Current	REW	REWind
DET	DETector	SEC	SECond
DISCRI	DISCRIminator	SELE	SELEctor
DUB	DUBbing	SENS	SENSitivity
EQ	EQualizer	SEPP	Single Ended Push Pull
FF(or F.FWD)	Fast Foward	SIG	SIGnal
FLD	FLuoresent Display	SPECT	SPECTrum
FREQ	FREQuency	STD	STanDard
FWD	ForWarD	SW	SWitch
GND	GrouND	SYSCON	SYStem CONtrol
H	High	TP	Test Point
HPF	High Pass Filter	TRIG	TRIGa
IND	INDicator	VCA	Voltage Control Attenuator
IPLS	Instant Program Location System	VOL	VOLume
L	Low	VOLT	VOLTage
L CH	Left CHannel	VR	Variable Resistor
LED	Ligh Emitting Diode	X'TAL	crysTAL
MEMO	MEMOry	X1	Normal speed
MICOM	MIcroCOMputer	X2	Dubble speed

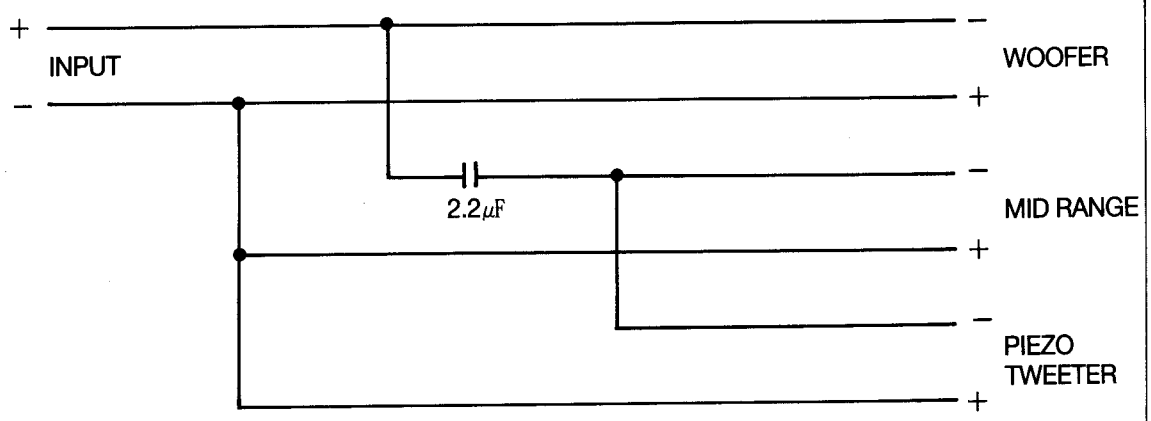
I. SPECIFICATIONS

Model No: SR-400

Type	3Way Bass Reflex
Component	Woofer : TAU-13W03013 Mid-Range : CT-57F12T Piezo Tweeter : PT-20T
Rated Power Input	20W
Maximum Power Input	40W
Rated Impedance	6 Ohm
Dimension	173(W)×280(H)×230(D)mm
Weight	3Kg/PC

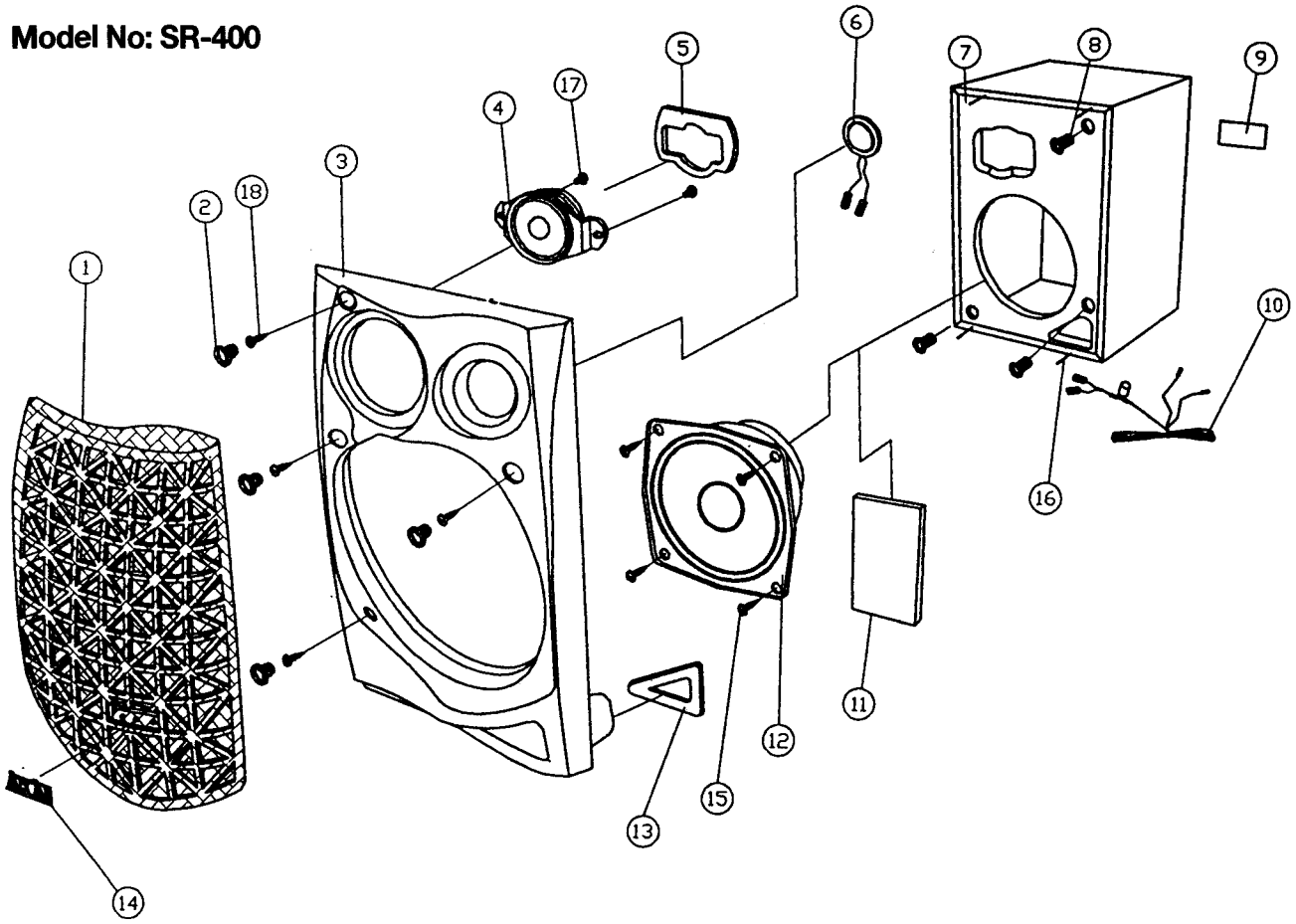
II. SCHEMATIC DIAGRAM

Model No: SR-400



III. PARTS LIST

Model No: SR-400



Ref. No	Part No.	Part Name	Description
1(L)	MJSG-00280-001	FRAME NET(L)	
1(R)	MJSG-00290-001	FRAME NET(R)	
2	MRSG-06230-004	HOOK RUBBER	
3(L)	MJSF-00560-ZZ1	COVER FRONT(L)	
3(R)	MJSF-00570-ZZ1	COVER FRONT(R)	
4	SPKT-00820-A70	SP. TWEETER	CT-57F12T
5	MRSG-07230-004	CUSHION MID	
6	SPPZ-00014-A70	SP. PIEZO	PT-20T
8	MJSG-00470-004	HOOK TAPER	
9(L)	YLSP-BG000-01L	BACK LABEL(L)	
9(R)	YLSP-BG000-01R	BACK LABEL(R)	
10	WSD2-24A9A-251	WIRE SP. CORD(D)	D-20/0.12, 2P, 1.9M 2.2μF
12	A2UW-F0000-01J	SP. WOOFER	TAU-13W03013
13	MRSG-07240-004	CUSHION DUCT	
14	MJSF-00460-ZZ4	BADGE	
15	XSWB-40150-ZB1	SCREW WOOD	FE-ZB BHT1 4×15
16	MMSC-00320-004	AIR NAIL	D2×20
17	MMSC-00320-004	SCREW COVER	D3×D9.5W/W×7
18	XSWB-40180-ZY1	SCREW WOOD	FE-ZY BHT1 4×18

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