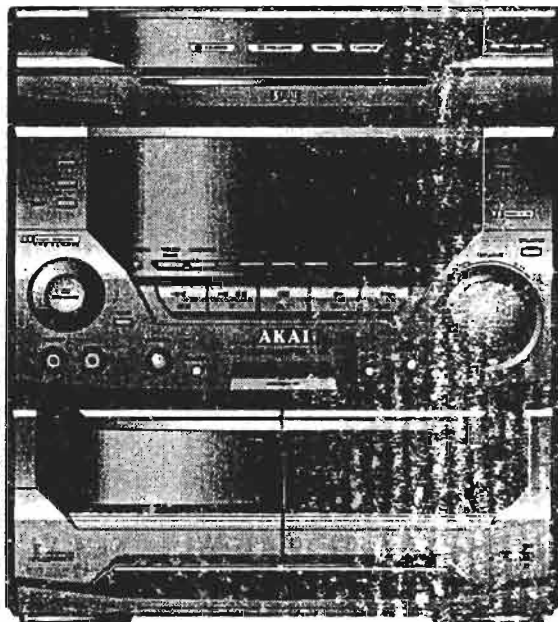


# AKAI SERVICE MANUAL



• The above illustration shows the AC-620 model.

COMPACT  
**disc**  
DIGITAL AUDIO

 DOLBY B NR

 DOLBY SURROUND  
PRO • LOGIC

MINI STEREO COMPONENT SYSTEM

MODEL **AC-420/423R/425K**

MODEL **AC-620/623R/625K**

MODEL **SR-425**

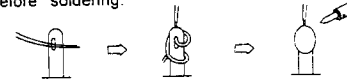
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## SAFETY INSTRUCTIONS

### PRECAUTIONS DURING SERVICING

- Parts identified by the  $\hat{\Delta}$  (\*) symbol parts are critical for safety. Replace them only with parts whose numbers are specified.
- 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.
- Use specified internal Wiring. Note especially:
  - Wires covered with PVC tubing
  - Double insulated wires
  - High voltage leads
- Use specified insulating materials for hazardous live parts. Note especially:
  - insulating Tape
  - PVC tubing
  - Spacers (insulating barriers)
  - Insulating sheets for transistors
  - Plastic screws for fixing micro switches
- When replacing AC primary side components (transformers, power cords, noise blocking capacitor, etc.), wrap ends of wires securely about the terminals before soldering.



- Make sure that wires do not contact heat generating parts (heat sinks, oxide metal film resistors, fusible resistors, etc.)
- Check if replaced wires do not contact sharply edged or pointed parts.
- Also check areas surrounding repaired parts.
- 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.

### 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.

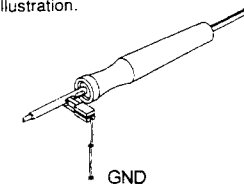
The leakage-current measurement should be done between accessible metal parts, (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohm paralleled with a 0.15  $\mu$ F capacitor, under the unit's normal working condition.

The leakage-current should be less the 0.5mA rms AC. The resistance measurement should be done between accessible 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

- 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.
- 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.
- 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.

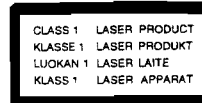


- Do not loosen any screws in the pick-up block. Please refer to NOTE when replacing the pick up block.
- To avoid hazardous invisible Laser Radiation, do not look at the Laser Beam (Objective lens) directly.
- On model for some countries, laser warning labels are affixed on and inside of the unit as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

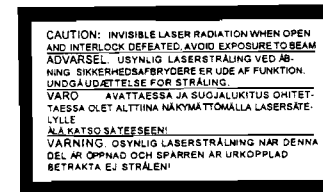
### CAUTION

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 BLOCK

## INFORMATION

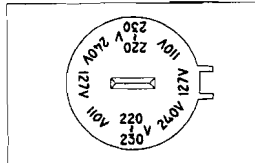
### SYMBOLS FOR PRIMARY DESTINATION

Alphabet indicates the destination of the units as listed below.

Symbol	Principal 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-425K/625K so that the correct voltage for your area is indicated.



[U5,U8, Y6, Y7 ]

### TEST MODE

Various kind of test modes are installed in this unit's microcomputer in order to test them on the production line. Following test modes among the various test modes can be used for adjustment, operation check or maintenance. To terminate the test mode, simply press the "POWER ON/STANDBY " button or disconnect the AC power cord from the AC outlet.

#### 1. DECK TEST MODE

This test mode can be used for tape speed adjustment as well as bias oscillator frequency adjustment in TAPE DECK section.

While pressing and holding the "TAPE II" and "▶" (F) buttons, connect the AC power cord to AC outlet. The function turns to "TAPE I" and "DUBX1" as well as "T P I □ □ □ □" indicators on the FLD light when this mode is engaged.

#### 2. DECK CLEANING MODE

This test mode can be used for cleaning of the TAPE DECK mechanism.

Because, this mode enables engaging of the playback, fast forward (FF), and rewind (RWD) modes without a cassette tape, it makes the cleaning (such as the capstan shaft, magnetic head, pinch roller etc..) easier. While pressing and holding the "TAPE I" and "◀ II" (F) button, connect the AC power cord to the AC outlet. The tape run indicator light without the cassette tape when this mode is engaged.

## SPECIFICATIONS

### [Tuner Section]

Frequency range

FM .....	87.5-108MHz(50KHz step)
MW .....	530-1710KHz(U8) 531-1602KHz (except U8)
LW .....	144-288KHz(1KHz step) (E1/E2/E3/B1 only)
SW .....	3.8-12.5MHz(5KHz step) (Y7 only)

### USABLE SENSITIVITY

FM .....	16.2dBf IHF,3%THD (except E1/E2/E3/B1) 20.2dBf IHF,3%THD (E1/E2/E3/B1)
MW .....	500uV/m
LW .....	800uV/m
SW .....	800uV/m

### S/N Ratio(IHF)

FM .....	MONO 75dB, STEREO 65dB
MW .....	40dB
LW .....	30dB
SW .....	30dB
Stereo separation .....	40dB(at 1KHz)

### [AMPLIFIER Section]

Power output .....	(AC-420/423R/425K) 50W+50W(6ohms, 10%THD, EIAJ) 40W+40W (6ohms, 1%THD, DIN)
	(AC-620/623R/625K) 30W+30W(6ohms, 10%THD, EIAJ) 25W+25W (6ohms, 1%THD, DIN)

Input sensitivity (AUX IN) .....	310mV/47KΩ
channel separation .....	70dB
Frequency response .....	10Hz-100KHz(-3dB)

### [DECK SECTION]

Track system .....	4track, 2channel system
Frequency response .....	40Hz-15KHz (Normal tape, ±3dB) 40Hz-16KHz(Cro2 tape, ±3dB)
Wow & Flutter .....	0.09% (WRMS), 0.15%(DIN)
S/N ratio .....	Dolby B 63dB (5KHz) Dolby off 53dB (Cro2 tape)
Total harmonic distortion .....	less than 0.5%(normal tape at 315Hz)
Channel separation .....	43dB

**[CD SECTION]**

Pick up system .....	3Beam Laser
Sampling frequency .....	44.1KHz
Error correction system .....	Cross interleave read solomon
Number of channels .....	2Channe
Frequency response .....	20Hz-20KHz
Wow & Flutter .....	Below measurable limits
S/N ratio .....	83dB
Total harmonic distortion .....	0.035% (at 1KHz)
Channel separation .....	73dB(at 1KHz)
Dynamic range .....	82dB (at 1KHz)

**[GENERAL]**

Power requirement	
E1/E2/E3/B1/S1 .....	AC 220-230V/50Hz
U5/U8/Y6/Y7 .....	AC110/127/220-230/240V, 50/60Hz
Power consumption .....	110W/AC-420/423R/425K, 130W/AC-620/623R/625K
Weight .....	8.2Kg/AC-420/423R/425K, 8.2Kg/AC-620/623R/625K

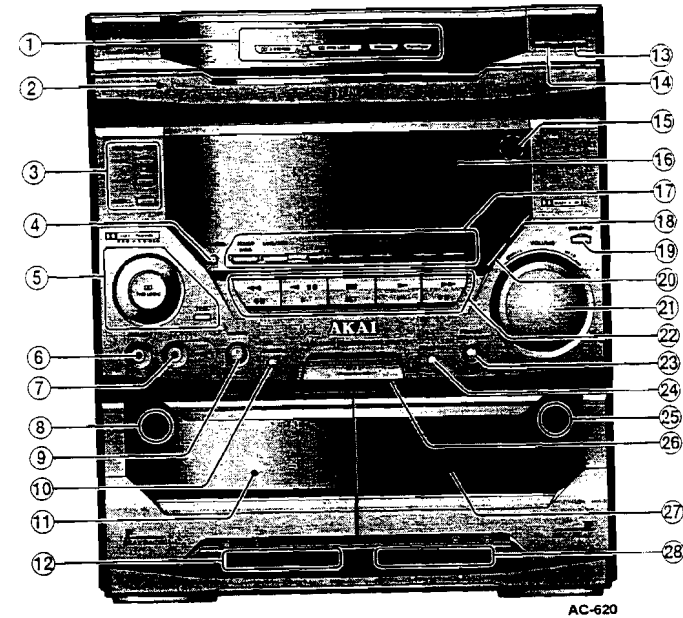
**[SPEAKER SECTION]**

<b>ITEM</b> .....	<b>SR-425</b>
System Constructions .....	3-way 3-speakers
Woofer Unit .....	135mm Cone type
Midrange Unit .....	65mm Cone type
Tweeter Unit .....	20mm dome type (piezo)
System Impedance .....	6Ω
Maxium Power Input .....	80w
Sensitivity .....	more than 87dB/w/m
Frequency Response .....	60Hz-20KHz
Harmonic Distortion .....	less than 3%
Enclosure Type .....	bass reflex type
Units Layout .....	L/R mirror layout
Dimension .....	200(W)X305(H)X265(D)
Net Weight .....	3.6Kg/pc

For improvement purposes, specifications and design are subject to change without notice.  
 Manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the  symbol are trademarks of Dolby Laboratories Licensing Corporation.

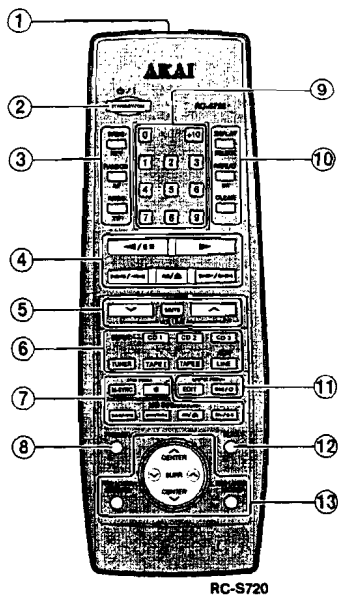
**CONTROLS**

**A MAIN UNIT**



- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. PRO LOGIC mode indicators (AC-620/623R/625K)                     <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> 3 STEREO indicators</li> <li><input checked="" type="checkbox"/> PRO LOGIC - NORMAL indicators</li> <li><input checked="" type="checkbox"/> PROG logic - PHANTOM indicators</li> </ul> </li> <li>2. Disc tray</li> <li>3. TIMER CONTROL buttons                     <ul style="list-style-type: none"> <li>PROG button</li> <li>ON/OFF button</li> <li>SLEEP button</li> </ul> </li> <li>4. CH MEMO button</li> <li>5. DOLBY PROG LOGIC operation buttons(AC-620/623R/625K only)                     <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> PROG LOGIC on/off button</li> <li>TEST button</li> </ul> </li> <li>6. PHONES jack</li> <li>7. MIC jack</li> <li>8. Tape deck I PUSH OPEN button</li> <li>9. Mixing control</li> <li>10. Dimmer button</li> <li>11. Tape deck I cassette compartment</li> <li>12. Tape deck I direction indicator and transportation indicator</li> </ol> | <ol style="list-style-type: none"> <li>13. TRAY OPEN/CLOSE button</li> <li>14. DISC CHANGE button</li> <li>15. Remote sensor</li> <li>16. System FL display</li> <li>17. Input source select buttons(AUX is not included on the AC-420/423R/425K models)                     <ul style="list-style-type: none"> <li>TUNER BAND, LIINE/AUX, CD1, CD2, CD3, TAPE I, TAPE II</li> </ul> </li> <li>18. DUB SPEEDx1/x2 button</li> <li>19. BALANCE button</li> <li>20. REC button</li> <li>21. Volume control</li> <li>22. Multi-function buttons</li> <li>23. DYNAMIC SUPER BASS button</li> <li>24. DOLBY NR button</li> <li>25. Tape deck II PUSH OPEN button</li> <li>26. STANDBY/ POWER ON button</li> <li>27. Tape deck II cassette compartment</li> <li>28. Tape deck II direction indicator and transportation indicator</li> </ol> |
|--|--|

## B Remote Control



RC-S720

When using the remote control for operation, make sure that it is pointing to the remote sensor window on the main unit.

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. Transmitting window</li> <li>2.  /  POWER ON/STANDBY button</li> <li>3. CD operation buttons/RDS buttons<br/>(The RDS function is only available on the AC-423R/623R)</li> <li>4. Multi-function buttons</li> <li>5. VOLUME buttons</li> <li>6. Input source select buttons</li> <li>7. MD operation buttons             <ul style="list-style-type: none"> <li>M-SYNC buttons</li> <li>● REC button</li> <li>⏮/⏪ buttons</li> <li>⏩/⏭ buttons</li> <li>■/▲ buttons</li> <li>▶/   buttons</li> </ul> </li> </ol> | <ol style="list-style-type: none"> <li>8. PRESET button</li> <li>9. CD/TUNER 11 KEY buttons</li> <li>10. CD operation buttons/RDS buttons<br/>(The RDS function is only available on the AC-423R/623R)</li> <li>11. TAPE REC buttons             <ul style="list-style-type: none"> <li>⏸/⏹ REC/PAUSE button</li> <li>✎ EDIT button</li> </ul> </li> <li>12. FLAT button</li> <li>13. PRO LOGIC operation buttons             <ul style="list-style-type: none"> <li>PROG LOGIC ON/OFF buttons</li> <li>PROG LOGIC MODE button</li> <li>CENTER ^/~ buttons</li> <li>SURRound ^/~ buttons</li> </ul> </li> </ol> |
|--|---|

\* These PROG LOGIC operation buttons are not included on the RC-S520 remote control (for AC-420/423R/425K model operation)  
These MD operation buttons can only be used if you have connected the optional MD recorder (MD-720).

**Note:**

The remote control can not be used for some functions that require the combined pressing of two tape transportation buttons (intro scan or auto play for example). Please Use the Main unit's multi-function buttons for the operation of such functions.

## I. DISASSEMBLY

### 1-1. REMOVE OF MAIN COVER

- 1) Remove the seven screws on back and six screws on both sides.
- 2) Remove the MAIN COVER

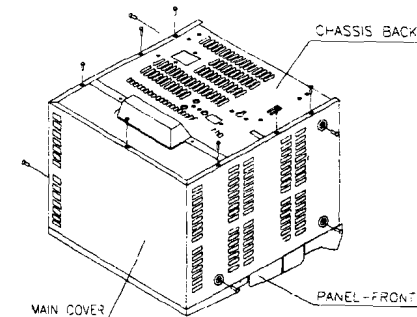


Fig. 1-1

### 1-2. REMOVE OF CD MECHA & FRONT PANEL

- 1) Remove the CD door
- 2) Remove the four screws (A) on both sides and disconnect three connectors and the flat cable from the TC-DK P.C.B.
- 3) Remove the CD player block
- 4) Remove the three screws (B) and two screws (C) on both sides.
- 5) Remove the FRONT PANEL

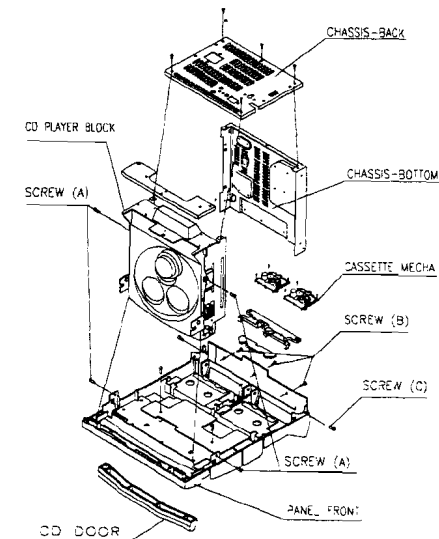


Fig. 1-2

## II. PRINCIPAL PARTS LOCATION

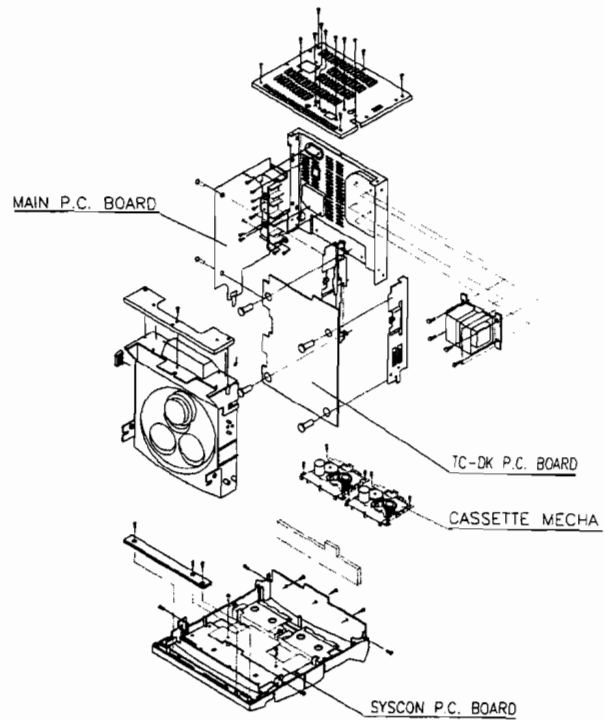


Fig. 2-1

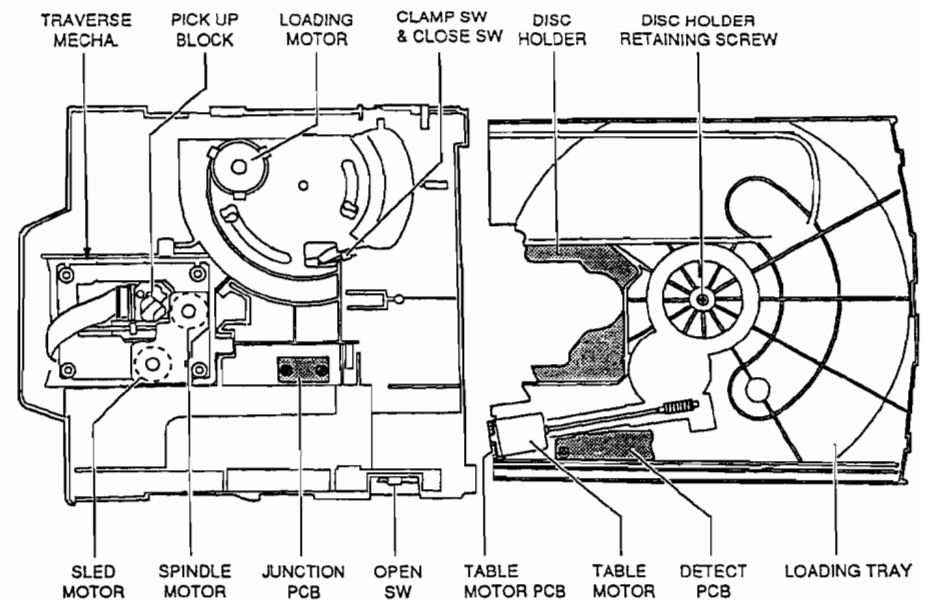


Fig. 2-2 CD PLAYER BLOCK

# III. DISASSEMBLY OF THE MAIN COMPONENTS

## 3-1. CD PLAYER BLOCK

\* Remove the CD PLAYER BLOCK before proceeding.

### 3-1-1. Removal of the TRAVERSE MECHA.

- 1) Remove the TRAVERSE COVER by releasing the two tabs in the direction of the arrow as shown in Fig. 3-1.

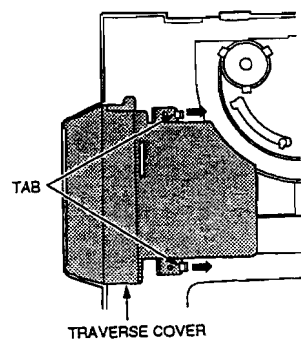


Fig. 3-1

- 2) Short the circuit on the PICK UP BLOCK with solder as shown in Fig. 3-2.

**Note:** To protect the laser diode from damage caused by high voltage static electricity, a part of the PCB on the PICK UP BLOCK has to be shorted before disconnecting the connectors. After replacement, be sure to connect the two connectors and then remove the solder of the shorted circuit before turning the power ON.

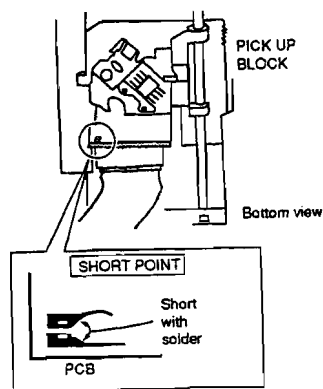


Fig. 3-2

- 3) Disconnect the two connectors carefully.

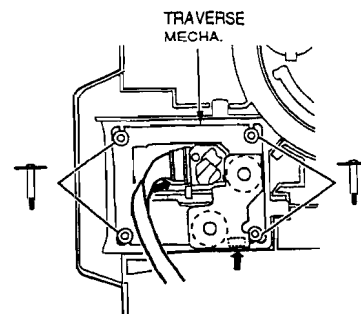


Fig. 3-3

- 4) Remove the four retaining screws, then remove the TRAVERSE MECHA.
- 5) Proceed in the reverse order for installation but never unsolder the shorted circuit before connecting the three connectors.

### 3-1-2. Replacement of the SLED MOTOR

- 1) Remove the TRAVERSE MECHA (refer to section 3-1-1)
- 2) Unsolder the leads of the SLED and SPINDLE MOTOR; then remove the MOTOR PCB.

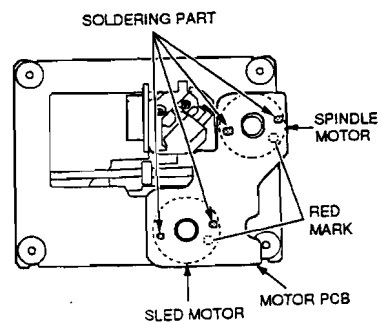


Fig. 3-4

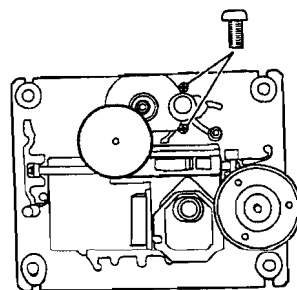


Fig. 3-5

- 3) Remove the two retaining screws, then remove the SLED MOTOR.

Next, extract the plastic gear from the motor shaft and attach it onto the new motor's shaft.

- 4) Reassemble in the reverse order.

### About the SPINDLE MOTOR:

Replacement of the SPINDLE MOTOR itself is not recommended, because adjustment of the TURN TABLE height is quite critical and requires the use of a special jig.

### 3-1-3. Replacement of the PICK UP BLOCK

- 1) Remove the TRAVERSE MECHA (refer to section 3-1-1).
- 2) While pressing the (A) stopper upwards, pull the SLIDE SHAFT to the right to remove the PICK UP BLOCK, then replace the PICK UP BLOCK.

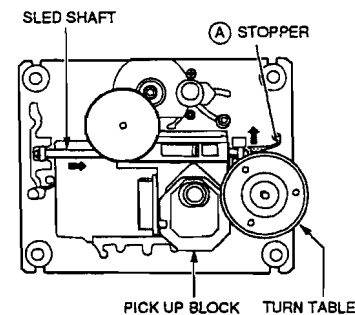


Fig. 3-6

- 3) Reassemble in the reverse order.

### 3-1-4. Replacement of the LOADING MOTOR

- 1) Slide the protruding part of the GEAR HOLDER PART in the direction of the arrow, then pull out the TRAY BLOCK.

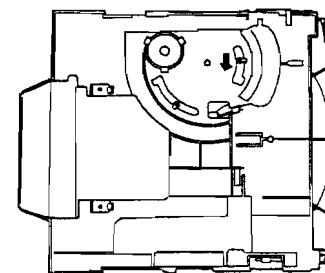
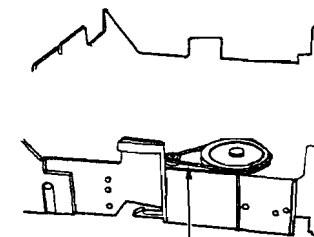


Fig. 3-7

- 2) Unhook the LOADING BELT with tweezers.



LOADING BELT

Fig. 3-8

- 3) Unsolder the lead wires of the LOADING MOTOR with a soldering iron.

- 4) While releasing the LOADING MOTOR's three retaining hooks, push the motor pulley part down with your middle finger to remove the LOADING MOTOR, then replace it.

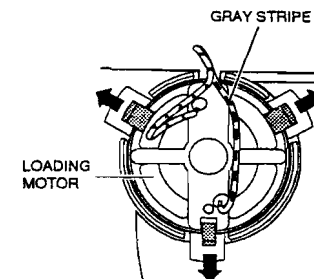


Fig. 3-9

- 5) Reassemble in the reverse order. Make sure that the wire with the gray stripe is connected to the motor's O marked terminal when soldering.

### 3-1-5. Removal of the TRAY BLOCK

- 1) If the TRAY BLOCK is in the "in" position, slide the protruding part of the GEAR HOLDER PART in the direction of the arrow and pull out the TRAY BLOCK slowly (refer to Fig. 3-7).

- 2) In order to disengage the two stoppers, carefully press the (A) part of the TRAY BLOCK downwards while pulling the TRAY BLOCK out as shown in Fig. 3-10.

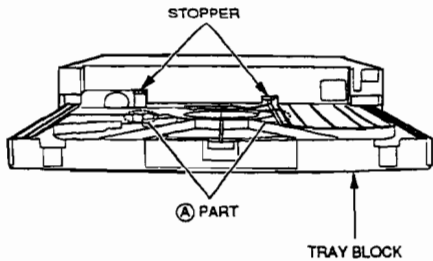


Fig. 3-10

- 4) Remove the TRAY BLOCK by pulling it out carefully.
- 5) Reassemble in the reverse order for installation. When reattaching the TRAY BLOCK to the chassis, carefully align the guides on both sides of the TRAY BLOCK with their corresponding rails on the chassis. Also, make sure that any one of the reference marks on the DISC HOLDER aligns with the reference mark on the LOADING TRAY.

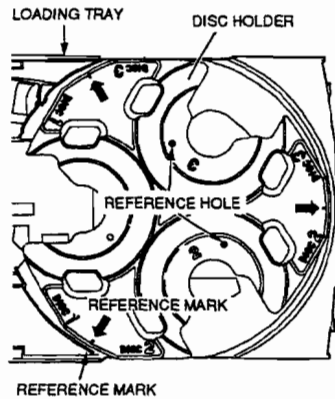


Fig. 3-11

Next, move the head of the GEAR HOLDER PART in the direction of the arrow before engaging the stoppers as shown in Fig. 3-12.

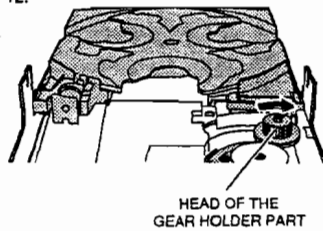


Fig. 3-12

### 3-1-6. Replacement of the TABLE MOTOR

- 1) Remove the TRAY BLOCK (refer to section 3-1-5).
- 2) Remove the DISC HOLDER retaining screw then remove the DISC HOLDER.

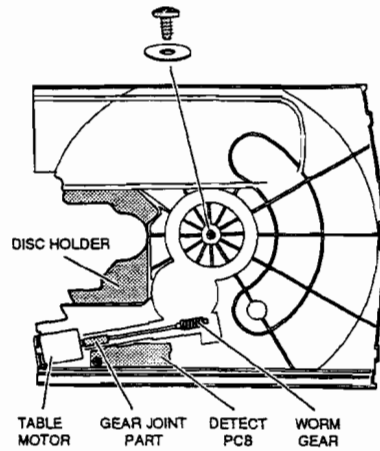


Fig. 3-13

- 3) Unsolder the leads of the TABLE MOTOR and remove the TABLE MOTOR PCB.

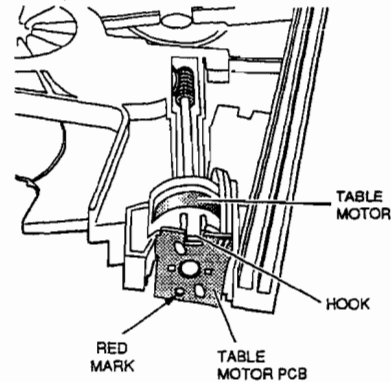


Fig. 3-14

- 4) Remove the TABLE MOTOR by pulling it out while opening the TABLE MOTOR retaining hook. Next, remove the WORM GEAR BLOCK by pulling the GEAR JOINT PART out and attach it to the new motor as shown in Fig. 3-13.
- 5) Reassemble in the reverse order.
  - When soldering the TABLE MOTOR PCB on the TABLE MOTOR, the TABLE MOTOR's red mark must be visible through the hole on the TABLE MOTOR PCB.
  - When attaching the DISC HOLDER on the LOADING TRAY, make sure to place the DISC HOLDER so that any one of the three reference marks aligns with the reference mark on the LOADING TRAY (any two reference holes on the DISC HOLDER align with the corresponding reference holes on the LOADING TRAY accordingly). (Refer to Fig. 3-11)

## 3-2. TAPE-I & TAPE-II MECHANISM BLOCK

\* If CASSETTE MECHANISM BLOCK removal is intended, press both the "EJECT" buttons on the FRONT PANEL to open the CASSETTE HOLDERS and CASSETTE DOOR before proceeding (AC-600/603R/605K only).

### 3-2-1. Removal of the MECHANISM BLOCK

- 1) Remove the FRONT PANEL BLOCK.
- 2) Remove the four screws for each of the TAPE-I and TAPE-II MECHANISM BLOCKS then remove the MECHANISM BLOCKS from the FRONT PANEL BLOCK.

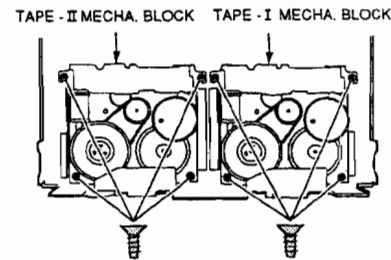


Fig. 3-15

### 3-2-2. Replacement of the CAPSTAN MOTOR

NOTE: After replacement, tape speed adjustment must be performed.

- 1) Unsolder the flat cable on the CAPSTAN MOTOR with a soldering iron.
- 2) While pressing the INTER-LOCK LEVER in the direction of the arrow, remove the two screws and then remove the CAPSTAN MOTOR.

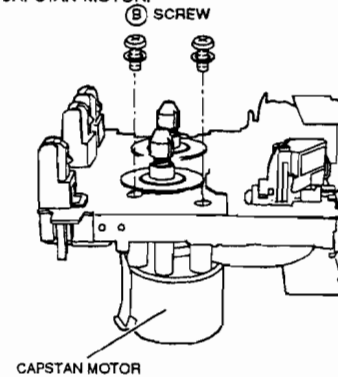


Fig. 3-16

- 3) Install a new motor and re-assemble in the reverse order for installation.

### 3-2-3. Replacement of the FR BELT

- 1) Unthread the MAIN BELT and replace the FR BELT as shown in Fig. 3-17.
- 2) Proceed in the reverse order for installation.

### 3-2-4. Replacement of the MAIN BELT

- 1) Remove the CAPSTAN MOTOR
- 2) Replace the MAIN BELT and re-assemble in the reverse order for installation.

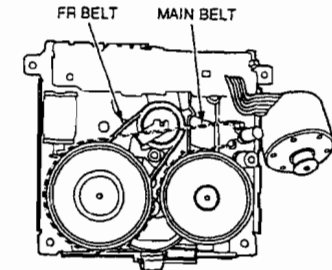


Fig. 3-17

- 3) After replacement, check the tape speed and if the result is not satisfactory, tape speed adjustment must be performed.

### 3-2-5. Replacement of the PINCH ROLLER BLOCK

- 1) Extract the PINCH ROLLER BLOCK upwards while releasing the pinch roller retaining hook in the direction of the arrow.

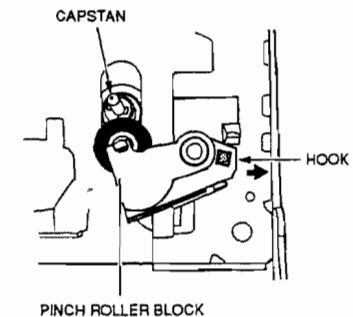


Fig. 3-18

- 2) Replace the PINCH ROLLER BLOCK and re-assemble in the reverse order. Attach the spring in the correct position when placing the PINCH ROLLER BLOCK.



### 3-2-6. Replacement of the PB HEAD OR REC/PB HEAD

- 1) Remove the two (A) screws and remove the HEAD SHIELD PLATE.

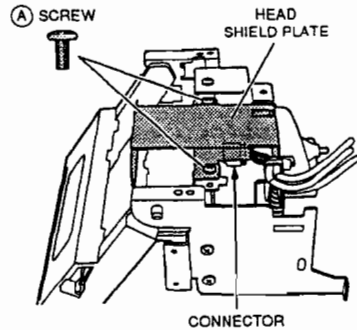


Fig. 3-19

- 2) Disconnect the connector on the CONNECTOR PCB and remove the PCB retaining screw.

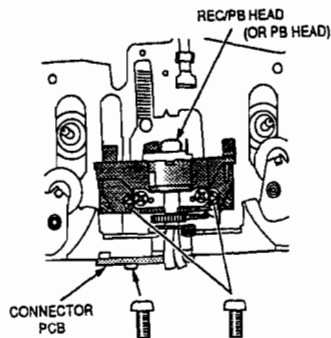


Fig. 3-20

- 3) Remove the two head retaining screws and remove the HEAD BLOCK.
- 4) Reassemble in the reverse order. After replacement, demagnetize the HEAD then perform head azimuth adjustment.

## IV. MECHANICAL ADJUSTMENT

### 4-1. ADJUSTMENT OF THE HEAD AZIMUTH ALIGNMENT

- 1) Connect an oscilloscope to the L-ch and R-ch LINE terminals of the unit.
- 2) Play back a 10 kHz (-15 dB), HEAD AZIMUTH ALIGNMENT TEST TAPE (TF-106CH) then adjust the HEAD AZIMUTH ALIGNMENT (A) (FWD PLAY) and (B) (REV PLAY) SCREWS respectively so that the waveform level of both the L-ch and R-ch are at maximum and also they are in the same phase in both FWD and REV directions. (Use a sharp edge philips type screwdriver that is de-magnetized for adjustment.) Perform the adjustment on both the TAPE-I and TAPE-II heads if necessary.

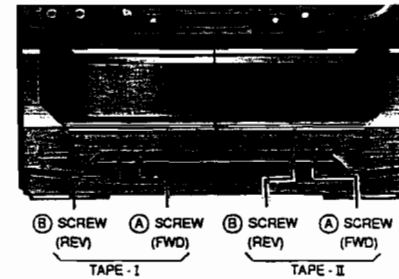


Fig. 4-1

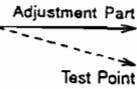
# V. ELECTRICAL ADJUSTMENT

## 5-1. TAPE DECK SECTION

### NOTE :

- The following adjustment should be performed in the "DECK test mode".  
To engage the DECK test mode, connect the AC power cord to the AC outlet while pressing the "TAPE-II" and "▶ ( F )" buttons together. When the "DECK test mode" is engaged, the "DUBX1" indicator on the FL display will light.
- When performing the tape speed adjustment, observe the following notes.
  - Adjustment should be started more than 30 seconds after the power is switched ON.
  - Adjustment should be made on X2 speed mode first then adjust the normal speed mode.
  - Adjustment should be made in the forward direction.
- To disengage the "DECK test mode", press the "POWER" button or unplug the AC power cord from the AC outlet.

STEP	ADJUSTMENT
1.	Test tape/input signal
2.	Mode
3.	Check point, adjustment part
4.	Remarks (*) and result (#)



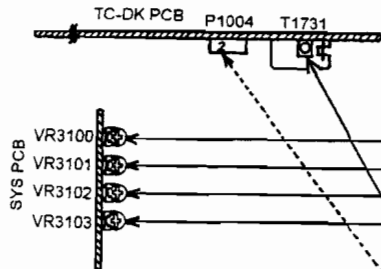
1	TAPE-I (X2) TAPE SPEED
1.	3,150 Hz test tape (TF-110CT)
2.	TAPE-I, PLAY
3.	LINE OUT, VR3100
4.	• Connect a frequency counter to the LINE OUT (L or R) and press the "DUBBING" button to engage double speed. * 6,340 ± 20 Hz

2	TAPE-I NORMAL TAPE SPEED
1.	3,150 Hz test tape (TF-110CT)
2.	TAPE-I, PLAY
3.	LINE OUT, VR3101
4.	• Connect a frequency counter to the LINE OUT and press the "▶ ( F )" button again to resume normal tape speed. * 3,150 ± 10 Hz

3	TAPE-II (X2) TAPE SPEED
1.	3,150 Hz test tape (TF-110CT)
2.	TAPE-II, PLAY
3.	LINE OUT, VR3102
4.	• Press the "TAPE-II" button and play back the test tape. • Connect a frequency counter to the LINE OUT and press the "DUBBING" button to engage double speed. * 6,320 ± 20 Hz

4	TAPE-II NORMAL TAPE SPEED
1.	3,150 Hz test tape (TF-110CT)
2.	TAPE-II, PLAY
3.	LINE OUT, VR3103
4.	• Connect a frequency counter to the LINE OUT and press the "▶ ( F )" button again to resume normal tape speed. * 3,140 ± 10 Hz

5	BIAS OSC FREQUENCY
1.	CrO2 type blank tape
2.	TAPE-II, REC
3.	P1004 @ pin, T1731
4.	• Connect a frequency counter between P1004 pin and GND. (10 : 1 probe should be used to avoid affecting the measurement.) • Start a recording (press the "REC" button then press the "▶" button). The "AUX" source indicator appears automatically. * 100.0 ± 0.2 kHz



## 5-2. CD PLAYER SECTION

### TEST MODE FOR CD PLAYER'S OPERATION

Some adjustments of the CD PLAYER section are automatically carried out by the micro computer.

If the CD player section is defective and it is necessary to partially check the operation, "CD TEST" mode can be used while repairing.

### Engaging the "CD TEST" MODE

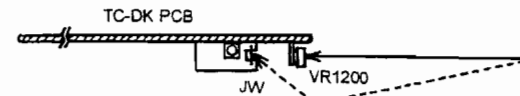
While pressing and holding both the "CD1" and "▶ ( F )" buttons, plug in the AC power cord to the AC outlet.

### Note :

- During "CD TEST" mode, only the DISC\*1 ▲ open/close button can be used for loading. So, place a disc on "TRAY 1".
- Proceed testing by pressing the "CD1" button once for each testing step.
- To disengage the "CD TEST" mode, press the "POWER ON/STANDBY" button or disconnect the AC power cord from the AC outlet.

DISPLAY	FUNCTION
T0 (TEST-0)	Initial condition of the "CD TEST" mode
T1 (TEST-1)	Perform "focus search".
T2 (TEST-2)	Turn on the "focus servo".
T3 (TEST-3)	Mode of the "E-F balance" adjustment.
T4 (TEST-4)	E-F balance adjustment is carried out automatically and its data value is displayed on the FLD.
T5 (TEST-5)	Mode of the "Tracking gain" adjustment.
T6 (TEST-6)	Tracking gain adjustment is carried out automatically and its data value is displayed on the FLD.
T7 (TEST-7)	Normal playback mode is engaged.

1	FOCUS OFFSET
1.	Test disc (SONY TYPE-III)
2.	Play back
3.	JW and VR1200
4.	Connect the hot side probe of an AC millivoltmeter to JW on the BIAS OSC PCB and GND side probe to the chassis. Adjust the VR1200 on the TC-DK PCB until indication of the AC millivoltmeter is maximum.



## VI. PARTS LIST

### ATTENTION

- When placing an order for parts, be sure to list the part No., Model No. and the description of each part. Otherwise, the nondelivery of the part or the delivery of a wrong part may result.
- Please make sure that part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
- 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]

- 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.
- The Recommended Spare Parts list shows those parts in the parts list which are considered particularly important for service.
- 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.

### AVEERTISSEMENT

 (\*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

### 1. REMOTE P.C. BOARD

REF. NO.	PARTS No.	DESCRIPTION
CF001	007-300455-46	RESONATOR CRK455 455KHz
IC001	033-806122-13	REMOTE TRANSMITTER UPD6122G-001
LED001	130-670303-00	INFRA RED EMITINT DIODE EL-1L1
PCB	090-010302-04	REMOTE BOARD T=1.6mm 94HB(46X119mm)
Q001	031-278050-03	TRANSISTOR NPN KTC8050C
D001-004	030-134148-00H	D SILICON IN4148
	210-010301-01S	REMOTE BATTERY COVER

### 2. SYS CON P.C. BOARD

REF. NO.	PARTS No.	DESCRIPTION
D3001-3015/3080-3087	030-320131-01H	D SILICON H 1SS131T T52
D3102-3112/3121-3124		
D3016/3017/3120( for AC-620)	030-320131-01H	D SILICON H 1SS131T T52
D3113(AC-420/620 S1 AC-425K/625K Y7)	030-320131-01H	D SILICON H 1SS131T T52
D3114/3117(for AC-425/625K)	030-320131-01H	D SILICON H 1SS131T T52
D3115(for AC-420/620 S1)	030-320131-01H	D SILICON H 1SS131T T52
D3116(for AC-423/623RE1)	030-320131-01H	D SILICON H 1SS131T T52
D3119(AC-420/620 E1/E2/E3/B1/RE1)	030-320131-01H	D SILICON H 1SS131T T52
D3027-3031/3037/3038/3040-3044/3052/	030-560034-10	D LED MYB34C YELLOW
D3053/3055/3056		
D3026-3029/3036/3039/3042/3051/3054	030-540034-04	D LED MGB34D GREEN
D3200-3211		
D3020/3024/3025/3032-3035/3045-3049	030-560031-00	D LED MYB31CA YELLOW
D3021-3023	030-510031-00	D LED MSB31TA RED
D3301/3302/3305-3307	030-540034-04	D LED MGB34D GREEN
(for AC-620/623R/625K)		
D3303/3304(for AC-620/623R/625K)	030-560034-10	D LED MYB34C YELLOW
IC3001	034-B01901-12	IC M38197MA-173FP TX3-SYS74-1
IC3002	033-509121-29	IC PST-9121 T05
IC3003	033-002401-42	IC XL24C01AP
IC3004	033-202011-14	IC TA2011S
IC3005-3007/3200	034-304094-18	IC BU4094BCF
IC3301(for AC-620/623R/625K)	034-304094-18	IC BU4094BCF
IC3100	033-304094-18A	IC BU4094BC
IC3101(for AC-423/623R)	034-106579-33	IC SAA6579T-T
IC3102(for AC-423/623R)	034-307073-16	IC LC7073M
IN3001	035-131610-00	IND FL SVA-16MM1D
J 3401	061-121406-00	PHONE J HSJ1406-01-010 3.5
J 3402(for AC-425/625K)	061-121406-00	PHONE J HSJ1406-01-010 3.5
J 3003/3003	060-406123-99	SOCKET 00 6216 006 000 6P
J 3022	060-423124-99	SOCKET 00 6216 023 100 23P
J3906-3907	060-615125-07	SOCKET 15FE-BT-VK-N 15P
P 3301(AC-420/423R/425K)	060-103204-07	PLUG S3B-PH-K WHT 3P
P 3301A(AC-620/623R/625K)	060-108204-07	PLUG S8B-PH-K WHT 8P
P 3011	060-422124-99	PLUG TKC-V22P-A1 22P
PH3001	036-600446-01	DETECTOR SPS-446-1
SW3001	040-002410-20	SW ROTARY EC16B24304
SW3002	046-080001-00	SW PUSH VPS-800
TR3003-3005/3125-3126	031-440144-05V	DTR DTC144ES(47-47) T05
TR3101/3103/3113-3120/3122-3123	031-211048-25V	TR 2SA1048 Y,GR T05
TR3100/3102/3104-3106	031-224682-00V	TR 2SC4682
TR3111(for AC-423RE1/623RE1)	031-211048-25V	TR 2SA1048 Y,GR T05
TR3112(for AC-423RE1/623RE1)	031-440144-05V	DTR DTC144ES(47-47) T05
TS3001-3004/3011-3301	046-110201-00	SW TACT 1.T-1102A 160GM
TS3005/3009	046-110201-00	SW TACT 1.T-1102A 160GM
VR3001	011-202298-00	VR ROTARY RK11K1140 L17.5 E202
VR3101/3103	112-102311-05	R S-FIX V T05 EVND CAA 30.10W 102
VR3100/3102	112-222311-05	R S-FIX V T05 EVND CAA 30.10W 222

W 3001(AC-420/423R/425K) 063-552701-03  
W 3001A(AC-620/623R/625K) 063-552701-03  
W 3007 077-622107-16  
W 3008 077-622107-15  
W 3011 077-622107-05  
W 3401 078-125021-00  
X 3001 007-208000-06  
X 3002 037-032768-10M  
X 3100(for AC-423/623R) 007-204000-06  
X 3101(for AC-423/623R) 037-004332-10Z

**3. MAIN P.C. BOARD  
REF. NO.**

	<b>PARTS No.</b>
D 001(AC-620/623R/625K)	△ 030-310040-02
D 002(AC-620/623R/625K)	△ 030-310040-02
D 003-004/025(AC-620/623R/625K)	030-410056-30H
D 005-008(AC-620/623R/625K)	△ 030-310152-06
D 006-009(AC-420/423R/425K)	△ 030-310152-06
D 021/023/081/086/087/	030-314002-10H
D 231/232(AC-420/423R/425K)	
D 021/023/081-083/141(AC-620/623R/625K)	030-314002-10H
D 001/022/024/042/044/046/083/	030-320131-01H
D 121-124/141-143/221/724 (AC-420/423R/425K)	
D 022/024/041-042/047/130-131/135-136	030-320131-01H
D 133/142/153-154/156-157	
D 322/724(AC-620/623R/625K)	
D 025/063/066/145/721-723/	030-410062-10H
D 751-753(AC-420/423R/425K)	
D 043/062/721-723(AC-620/623R/625K)	030-410062-10H
D 041	030-410075-10H
D 044/151-152(AC-620/623R/625K)	030-410075-10H
D 004/005/043/085/144 (AC-420/423R/425K)	030-410051-20H
D 045(AC-620/623R/625K)	030-410051-20H
D 046(AC-620/623R/625K)	030-410015-03H
D 084	030-410330-00H
D 085(AC-620/623R/625K)	030-410056-20H
D 132/134(AC-620/623R/625K)	030-410220-00H
D 155(AC-620/623R/625K)	030-410051-10H
D 531-533/551-554(for AC-625K)	030-320131-01H
D 551-554(for AC-425K)	030-320131-01H
F1(for AC-420/423R/425K)	△ 082-221600-06
F2(for AC-425K)	△ 082-221600-06
F1(for AC-620/623R/625K)	△ 082-222000-06
F2(for AC-625K)	△ 082-222000-06
F3(for AC-620/623R/625K)	△ 082-225000-06
F4(for AC-620/623R/625K)	△ 082-225000-06
IC 021	033-507805-00B
IC 201(AC-420/423R/425K)	030-404142-16
IC 202/203/204(AC-620/623R/625K)	033-218751-38
IC 501	033-K65843-12
IC 581	033-904558-30A
IC 602(for AC-620/623R/625K)	034-K02177-74
IC 701	034-262422-12
IC 751/761 (for AC-620/623R/625K)	033-209412-14
IC 761 (for AC-420/423R/425K)	033-209260-14
IC 101(for AC-420/423R/425K)	033-304094-18A
IC 801	033-304094-18A

WA PH-SAN L270 3P  
WA PH-SAN L270 3P  
WF 2468#26 P2.0 C09 L100 16P  
WF 2468#26 P2.0 C09 L100 15P  
WF 2468#26 P2.0 C09 L100 5P  
WA EARTH LUG L=200  
OSC CE CST8.00MTW 8.000MHZ  
OSC X'TAL C-002RX 32.768KHZ  
OSC CE CST4.00MGW 4.000MHZ  
OSC X'TAL HC-49/U-S 4.33200MHZ

**DESCRIPTION**

D SILICON DBF40C 200/4.0A  
D SILICON DBF40C 200/4.0A  
D ZENER MTZJ5.6C T52  
D SILICON RL152M11S15 100/1.5A  
D SILICON RL152M11S15 100/1.5A  
D SILICON 1N4002-F T52 100/1A  
D SILICON 1N4002-F T52 100/1A  
D SILICON H 1SS131T T52  
D SILICON H 1SS131T T52  
D ZENER MTZJ6.2A T52  
D ZENER MTZJ7.5C T52  
D ZENER MTZJ7.5C T52  
D ZENER MTZJ5.1B T52  
D ZENER MTZJ5.1B T52  
D ZENER MTZJ15B T52  
D ZENER MTZJ33B T52  
D ZENER MTZJ5.6A T52  
D ZENER MTZJ22D T52  
D ZENER MTZJ5.1A T52  
D SILICON H 1SS131T T52  
D SILICON H 1SS131T T52  
FUZE TIME 218 250V 1.6A  
FUZE TIME 218 250V 1.6A  
FUZE TIME 218 250V 2.00A  
FUZE TIME 218 250V 2.00A  
FUZE TIME 218 250V 5.00A  
FUZE TIME 218 250V 5.00A  
IC ML7805FA 5V/1A  
IC STK4142-2  
IC SI18751  
IC M65843AFP  
IC NJM4558L  
IC NJM2177AFB3  
IC M62422FP  
IC TC9412P  
IC TC9260P  
IC BU4094BC  
IC BU4094BC

IC 802 (for AC-620/623R/625K)  
J 011  
J 201  
J 301(only for AC-620/623R/625K)  
L 201/251(AC-420/423R/425K)  
L 281(AC-420/423R)  
L 202(for 620/623R)  
L 203(for AC-620/623R)  
L 801  
P 006(for AC-420/423R/425K)  
P 006(for AC-620/623R/625K)  
P 012(AC-420/423R/425K)  
P 012(for AC-620/623R/625K)  
P 013(for AC-420/423R/425K)  
P 013(for AC-620/623R/625K)  
P 014(AC-420/423R/425K)  
P 801(AC-620/623R/625K)  
P 902(AC-420/423R/425K)  
R 004-005/043  
R 021/103/106/109/112  
R 080(AC-620/623R/625K)  
R 081(AC-420/423R/425K)  
R 047-048  
R 060-063(AC-620/623R/625K)  
R 061/062-064(AC-420/423R/425K)  
R 132/135-136/141(AC-620/623R/625K)  
R 137(AC-620/623R/625K)  
R 213/263/233/283  
(for AC-620/623R/625K)  
R 209/210/259/260(AC-420/423R/425K)  
RL001  
TM 201  
TR 022/024/026/043  
TR 131(AC-620/623R/625K)  
TR 221(AC-420/423R/425K)  
TR 023(for AC-420/423R/425K)  
TR 023(for AC-620/623R/625K)  
TR 025  
TR 021/041/082/101-104  
TR 130/132(AC-620/623R/625K)  
TR 044/081  
TR 061(AC-620/623R/625K)  
TR 121-124(AC-420/423R/425K)  
TR 134(for AC-610/613R/615K)  
TR 045/135/151/152/154/155/201/251  
TR 221/271(AC-620/623R/625K)  
TR 045/141/201-203/251-253  
(for AC-420/423R/425K)  
TR 137(for AC-620/623R/625K)  
TR 153(for AC-620/623R/625K)  
TR 158(for AC-620/623R/625K)  
TR 320/321(for AC-620/623R/625K)  
TR 322(for AC-620/623R/625K)  
TR 531(for AC-625K)  
TR 532/533/535/536/539-541  
(for AC-625K)  
TR 534/537/538(for AC-625K)  
TR 551/552(for AC-425K/625K)

033-304094-18A  
060-422122-99  
061-123000-00  
061-780243-00  
004-285103-08  
0844-070410-00  
084-070410-00  
084-070410-00  
002-300002-09  
060-112204-07  
060-116204-07  
060-102045-20  
060-107204-07  
060-403001-17  
060-107045-20  
060-104205-27  
060-102045-20  
060-403001-17  
△ 013-478205-75  
△ 013-109205-75  
△ 013-109205-75  
△ 013-478205-75  
△ 013-221205-75  
△ 013-392205-75  
△ 013-102205-2A  
△ 013-151205-75  
△ 013-478205-75  
△ 013-479305-75  
013-478205-075  
△ 066-110212-04  
061-780401-00  
031-440114-05V  
031-440114-05V  
031-440114-05V  
031-221443-00V  
031-220621-00V  
031-220621-00V  
031-211048-25V  
031-211048-25V  
031-221375-00  
031-440114-60V  
031-440114-60V  
031-241785-00  
031-232458-25V  
031-232458-25V  
031-221258-00  
031-430114-19V  
031-440114-60V  
031-430114-05V  
031-440114-60V  
031-430114-19V  
031-440144-60  
031-440114-60V  
031-440114-60V  
031-440114-60V  
031-440114-60V  
031-440114-60V

IC BU4094BC  
SOCKET TKC-V22X-A1 22P  
PHONE J HSJ3000-01-010 3.5  
PIN J HSP-243V-06 3P  
COIL 202AK018K COILS  
COIL BALUM OPW/S-8-14-5H2  
COIL BALUM OPW/S-8-14-5H2  
COIL BALUM OPW 15-8-14-5H2  
COIL LF LF-4D-102 102UH  
PLUG S12B-PH-K WHT 12P  
PLUG S16B-PH-K WHT 16P  
PLUG B2P-3-VH P7.92 2P  
PLUG S7B-PH-KWHT 7P  
PLUG RB-115-3P 3P  
PLUG PS2438-7 7P  
PLUG B4B-PH-K WHT 4P  
PLUG B2P-3-VH P7.92 2P  
PLUG RTB-1.5-SP 3P  
R OMF H S10FLR ERG12SP1/2WR47J  
R OMF H S10FLR ERG12SP1/2W1R0J  
R OMF H S10FLR ERG12SP1/2W1R0J  
R OMF H S10FLR ERG12SP1/2WR47J  
R OMF H S10FLR ERG12SP1/2W221J  
R OMF H S10FLR ERG12SP1/2W392J  
R OMF H S10FLR ERG12SP1/2W102J  
R OMF H S10FLR ERG12SP1/2W151J  
R OMF H S10FLR ERG12SP1/2W562J  
R OMF H S12 FLR ERG15P 1W 4R7J  
R OEM H SLOFER ERG15P 1W 100J  
RELAY POW OSA-SS 212DM5 TV-3  
TERMINAL PUSH CJ-9007-060 4P  
DTR DTC114ES(10-10) T05  
DTR DTC114ES(10-10) T05  
DTR DTC114ES(10-10) T05  
TR 2SB1443 TV2  
TR2SB621 R.S T05  
TR 2SB621 R.S T05  
TR 2SA1048 Y,GR T05  
TR 2SA1048 Y,GR T05  
TR 2SB1375  
DTR DTC114TS(10) T05  
TR DTC114JS107 T05  
TR 2SD1785  
TR 2SC2458 Y,GR T05  
TR 2SC2458 Y,GR T05  
TR 2SB1258  
DTR DTA114TS(10) T05  
DTR DTC114TS(10) T05  
DTR DTA114ES(10-10) T05  
DTR DTC114TS(10) T05  
DTR DTA114TS(10) T05  
DTR DTC114TS(47) T05  
DTR DTC114TS(10) T05  
DTR DTC114TS(10) T05

TR 601-604(AC-620/623R/625K)	031-430114-19V
W 014(AC-420/423R/425K)	063-552301-04
W 801(for AC-425K/625K)	063-502401-11
W 913(for AC-620/623R/625K)	063-553201-07
X 501(only for AC-620/623R/625K)	007-002000-40
X 551(for AC-425K/625K)	007-200400-03

**4. TC-DK P.C. BOARD**

REF. NO.	PARTS No.
D 1300-1304	030-314002-10H
D 1400/1401/1721	030-320131-01H
D 1501	030-410051-10H
FL1611/1621/1661/1671	007-100100-09
IC1001	033-314052-21
IC1002/1210	033-904558-30A
IC1003(for AC-620/623R/625K)	033-314053-21
IC1100	033-601782-64Q
IC1200	033-K02508-64
IC1300	033-209258-61
IC1400	033-206247-18
IC1601	034-101897-64
IC1701/1702	034-304094-18
J 1001(for AC-420/423R/425K)	061-782441-00
J 1001A(for AC-620/623R/625K)	061-782441-00
J 1002	060-423123-99
J 1100	060-416109-99
L 1501(S1/U5/U8/Y6/Y7/A3)	005-229056-01H
L 1721	005-101056-00H
P 1004	060-108205-27
P 1005	060-103205-27
P 1200	036-400032-01
P 1400	060-105204-27
P 1401	060-107204-29
P 1402	060-106206-27
T 1731	002-800002-09
TM1501	061-480312-00
TR1100/1400/1102/1743	031-211048-25V
TR1300/1301	031-221425-00V
TR1302/1601/1621/1651/1671/	031-440114-05V
TR1741/1721/1742/1751/1752/1756	
TR1401/1501/1611/1612/1661-1662/1701	031-232458-25V
TR1502(for AC-423R/623R)	031-250304-06V
TR1613/1663	031-241012-06V
TR1010/1060/1631/1685/1642/1101/	031-440114-60V
TR1035/1681/1692	
TR1641/1643/1691/1693	031-440114-60V
(for AC-620/623R/625K)	
TR1723-1725	031-231815-26V
TR1726(E1/E2/B1/RE1/E3)	031-211048-25V
TR1731-1732(E1/B1/RE1/E3)	031-232458-25V
TU1501(E1/E2/B1/RE1/E3)	103-146601-04
TU1501A(S1/U5/U8/Y6)	103-146401-04
TU1501B(Y7)	103-146101-04
VR1200	112-103311-05
W 1006	063-B01001-12
W 1400/1401	077-322087-09
X 1200	037-169344-30J
W900	077-955168-16
W1500	072-122008-50

DTR DTA114TS(10) T05	
WA SAN-PH #24 C230 4P	
WA SDN L200 6P	
WA SDN-VH #22 L320 7P	
OSC CE CSA2.00MG 2.000MHZ	
OSC CE DCRK400 400.000KHZ	

DESCRIPTION
D SILICON 1N4002-F T52 100/1A
D SILICON H 1SS131T T52
D ZENER MTZJ5.1A T52
COIL TUN 1 100Z-121 100.00KHZ
IC MC14052BCP
IC NJM4558L
IC MC14053BCP
IC CXA1782BQ
IC CXD2508AQ
IC KA9258D
IC BA6247
IC CXA1897Q
IC BU4094BCF
PIN J HSP-244V1-05 2P
PIN J HSP-244V1-05 2P
SOCKET 00 6216 023 000 23P
SOCKET 00 6232 016 006 16P
COIL FIX 1 LAP02TA T26 2R2J
COIL FIX 1 LAP02TA T26 101J
PLUG B8B-PH-K WHT 8P
PLUG B3B-PH-K WHT 3P
SOCKET OPTICAL GPIF32T
PLUG S5B-PH-K WHT 5P
PLUG S7B-PH-K WHT 7P
PLUG S6B-PH-K WHT 6P
COIL OSC 1 C1047
TERMINAL LEVER HSP-312V-02
TR 2SA1048 Y,GR T05
TR 2SB1425 S,E T05
DTR DTC114ES(10-10) T05
TR 2SC2458 Y,GR T05
TR FET 2SK304 E,F T05
TR 2SD1012-V-SPA-AC F,G,H T05
DTR DTC114TS(10) T05
DTR DTC114TS(10) T05
TR 2SC1815 Y,GR T05
TR 2SA1048 Y,GR T05
TR 2SC2458 Y,GR T05
TUNER TFCB3E720A FM/MW/LW
TUNER TFCB1U717A FM/AM
TUNER TFCB1S713A FM/MW/SW
R S-FIX V T05EVNDCAA3 0.10W103
WA PH L100 12P
WF 2468#26 P2.0 C09 L80 9P
OSC XTALHO-49/U16934.400KHz
CORD FFC P1.0 L150 16P
WD 1007#22 CO 180

**5. P.C. BOARD BLOCK REF. NO.**

1-a(AC-420/423R)
1-b(AC-425K)
1-c(AC-420/423R)
1-d(AC-425K)
1-e(AC-420/423R/425K)
2-a(AC-420 B1/E1/E3)
2-b((AC-420/425K)
2-c(AC-423R)
2-d(AC-425K Y7)
2-e((AC-420/423R)
2-f(AC-420/425K)
2-g(AC-420/423R/425K)
3-a(AC-420/423R/425K)
3-b(AC-420 B1/E1/E3)
3-c(AC-420 S1)
3-d(AC-423R)
3-e(AC-425K U5/U8/Y6)
3-f(AC-420/425R/425K)
3-g(AC-420/423R/425K)
3-h(AC-420/423R)
3-i(AC-425K)
4a(AC-420)
4b(AC-620)
5-a(AC-620/623R)
5-b(AC-625K)
5-c(AC-620/623R)
5-d(AC-625K)
5-e(AC-620/623R/625K)
6-a(AC-620 B1/E1/E3)
6-b((AC-620 S1 AC-625K U5/U8/Y6/Y7)
6-c(AC-623R)
6-d(AC-625K Y7)
6-e(AC-620/623R)
6-f (AC-620/623R)
6-g (AC-620/623R/625K)
7-a(AC-620/623R/625K)
7-b(AC-620 B1/E1/E3)
7-c(AC-620 S1)
7-d(AC-623R)
7-e(AC-625K U5/U8/Y6)
7-f(AC-625K Y7)
7-g(AC-620/623R/625K)
7-h(AC-620/623R/625K)
7-i(AC-620/623R)
7-j(AC-625K)

**6. YMC03 P.C. BOARD**

REF. NO.
D4410
TR4410
J4410
J4411
W4401
W4412

**7. ACCESSARY REF. NO.**

1
2

PARTS No.	DESCRIPTION
771-AC42001-01	MAIN P.C. BOARD
771-AC42001-46	MAIN P.C. BOARD
771-AC42001-02	PRI. P.C. BOARD
771-AC42001-47	PRI. P.C. BOARD
771-AC42001-03	SEC. P.C. BOARD
771-AC42001-04	TC-TU/CD/DK P.C. BOARD
771-AC42001-27	TC-TU/CD/DK P.C. BOARD
771-AC42001-38	TC-TU/CD/DK P.C. BOARD
771-AC42001-82	TC-TU/CD/DK P.C. BOARD
771-AC42001-05	TC-OSC P.C. BOARD
771-AC42001-28	TC-OSC P.C. BOARD
771-AC42001-06	TC-RELAY P.C. BOARD
771-AC42001-07	SYS-SYS FLD P.C. BOARD
771-AC42001-08	SYS-MECH CON P.C. BOARD
771-AC42001-31	SYS-MECH CON P.C. BOARD
771-AC42001-42	SYS-MECH CON P.C. BOARD
771-AC42001-53	SYS-MECH CON P.C. BOARD
771-AC42001-09	SYS-MECH CON P.C. BOARD
771-AC42001-10	SYS-MECH CON P.C. BOARD
771-AC42001-11	SYS-MIC JACK P.C. BOARD
771-AC42001-56	SYS-MIC JACK P.C. BOARD
790-010301-01	REMOTE P.C. BOARD
790-010302-01	REMOTE P.C. BOARD
771-AC62001-01	MAIN P.C. BOARD
771-AC62001-46	MAIN P.C. BOARD
771-AC62001-02	PRI. P.C. BOARD
771-AC62001-47	PRI. P.C. BOARD
771-AC62001-03	PRI. P.C. BOARD
771-AC62001-04	TC-TU/CD/DK P.C. BOARD
771-AC62001-27	TC-TU/CD/DK P.C. BOARD
771-AC62001-38	TC-TU/CD/DK P.C. BOARD
771-AC62001-82	TC-TU/CD/DK P.C. BOARD
771-AC62001-05	TC-OSC P.C. BOARD
771-AC62001-28	TC-OSC P.C. BOARD
771-AC62001-06	TC-RELAY P.C. BOARD
771-AC62001-07	SYS-SYS LED P.C. BOARD
771-AC62001-08	SYS-MECH CON P.C. BOARD
771-AC62001-31	SYS-MECH CON P.C. BOARD
771-AC62001-42	SYS-MECH CON P.C. BOARD
771-AC62001-53	SYS-MECH CON P.C. BOARD
771-AC62001-86	SYS-MECH CON P.C. BOARD
771-AC62001-09	SYS-DECK LED P.C. BOARD
771-AC62001-10	SYS-CDOPE P.C. BOARD
771-AC62001-11	SYS-MIC JACK P.C. BOARD
771-AC62001-56	SYS-MIC JACK P.C. BOARD

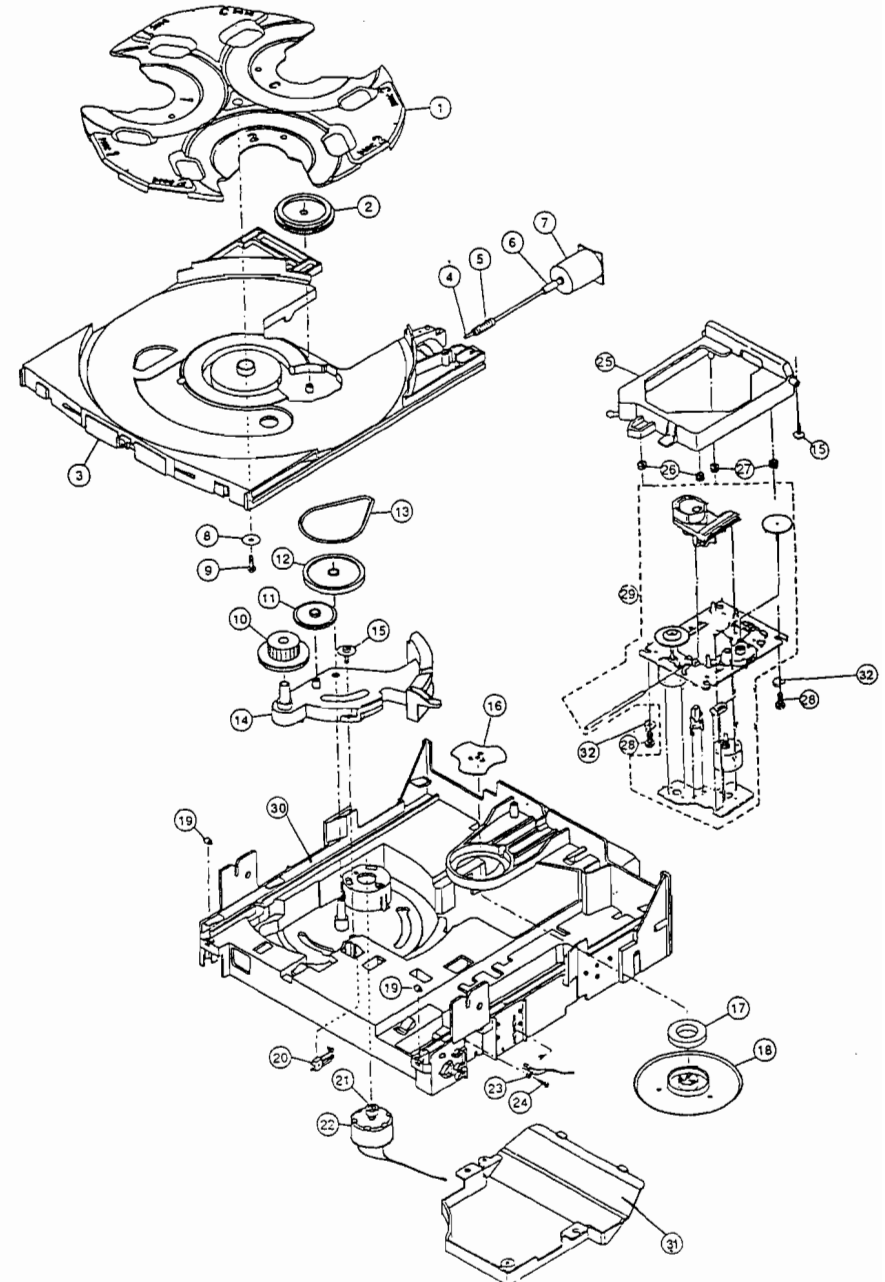
PARTS NO.	DESCRIPTION
030-600048-00	D LED GL4800
031-594800-00	TR PHOTO PT4800
060-405124-99	SOCKET 0062160051005 5P
060-405123-99	SOCKET 0062160051005 5P
077-622077-02	WF2468# P I O C09L072P
063-555301-05	WA SAN-PHL 530 5P

PARTS. No.	DESCRIPTION
790-010301-01	REMOCON RC-S520
790-010302-01	REMOCON RC-S720

## 8. CD MECHANISM

REF. NO.	PARTS NO.	DESCRIPTION
1	229-385602-01S	HOLDERDISC
2	288-385601-01Z	GEAR WORMWHEEL TABLE
3	220-385602-01S	TRAY LOADING
4	438-385601-01	SHAFT
5	288-385604-01Z	WORM
6	239-385601-01Z	JOINT
7	743-037012-54	MOTOR PF-370CA-15370 12V
8	634-150030-08	PW30X150X080 THK
9	619-300208-00	TAPING SCREW 3X1.25X8mm
10	288-385605-01Z	GEAR LOADING (A)
11	288-385606-01Z	GEAR LOADING(B)
12	288-385602-01Z	PULLEY GEAR
13	334-385604-01	BELT LOADING
14	288-385603-01S	HOLDER GEAR
15	615-300308-00	BW/T 3X8mm
16	428-385603-01	PLATE CLAMPER
17	489-383801-01	MAGNET DISC CLAMP
18	229-385606-01S	CLAMPER
19	259-385602-01Z	ROLLER
20	047-102127-00	LEAF SWITCH LSA-2127E
21	243-385601-01Z	PULLEY
22	743-050009-54	MOTOR RF-500TB-14415 D/V
23	047-101119-01	LEAF SWITCH ISA-1119H
24	610-260208-10	R/T 2.6X8mm
25	220-385601-01S	HOLDER TRAVERSE
26	334-385606-01	INSULATOR
27	334-385606-01	INSULATOR
28	610-200216-00	SELF-SCREW TAPING B/T 2.0X16
29	747-021301-02	MECHA TRAVERSE KSM213CCM
30	220-385603-01R	CHASSIS MAIN
31	219-385601-01Z	CD MECH COVER
32	634-100027-05	METAL WASHER 10X2.7X0.5

## CD MECHANISM BLOCK



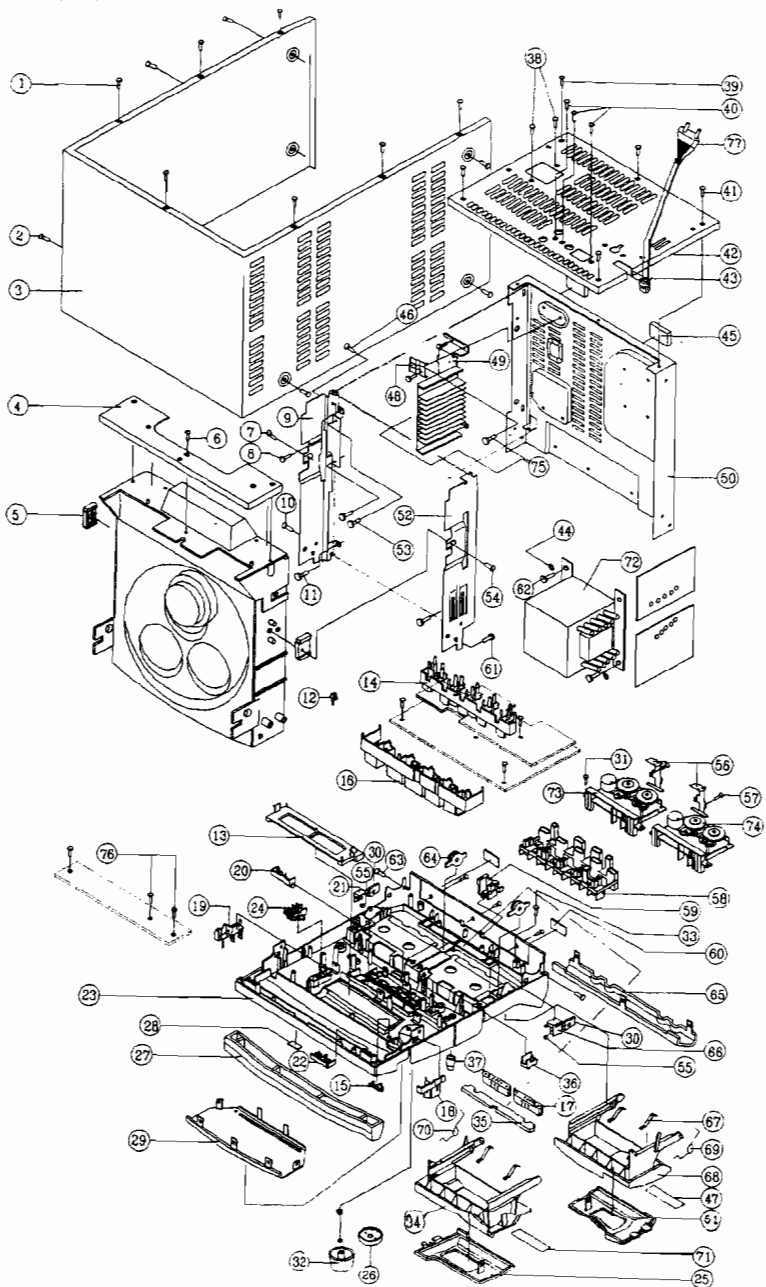
9. AC-420/423R/425K

REF. NO.	PARTS NO.	DESCRIPTION
1	606A301208-00	TAPING SCREW P TYPE BID H 3X1.25PX8MM
2	606A301208-00	TAPING SCREW P TYPE BID H 3X1.25PX8MM
3	402-385002-02	MAIN COVER SILVER
4	495-385017-01	REAR CABINET SUB
5	284-385001-01R	MECH SPACER BLACK HI-PS
6	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
7	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
8	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
9	428-385001-01	CD BRACKET 'L'
10	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
11	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
12	292-AA0302-01S	DOBLY BUTTON
13	229-AA0301-01S	FLD BRACKET HI-PS
14	291-AA0302-01S	FUNCTION BUTTON ABS
15	291-AA0303-01Z	BALANCE BUTTON GRAY
16	291-AA0306-01Z	OP BUTTON (AC-420)
17	250-AA0301-01S	LAMP HOLDER WHITE ABS
18	292-AA0301-01S	REC BUTTON RED (P-96014) ABS
19	291-AA0501-01S	CH BUTTON DARK GREY (P-92008) ABS
20	291-AA0305-01S	POWER BUTTON DARK GREY (P-92008) W/MET GREY(T-96008HB) SP. SILK'S RED(S-88011) LETT. ABS
21	229-AA0314-01Z	LATCH BRACKET (L) POM
22	291-AA0301-01S	DISC BUTTON DARK GREY (P-92008)
23-a(AC-420)	200-AA0311-01R	FRONT CABINET HI-PS
23-b(AC-423R)	200-AA0311-02R	FRONT CABINET HI-PS
23-c(AC-425K)	200-AA0312-01R	FRONT CABINET HI-PS
24	275-AA0301-01S	TIMER BUTTON DARK GREY (P-92008) ABS
25	261-AA0301-01K	CASS DOOR LENS ( L ) SMOKE
26	273-AA0302-01S	VOLUME RING DARK GREY (P-92008) W/PLATTING ABS
27	219-AA0311-01R	CD DOOR HI-PS
28	286-385001-02S	NAME PLATE 'AKAI'
29	263-AA0301-02K	DISPLAY LENS AS
30	229-385016-01Z	LATCH BRACKET BLACK POM
31	619-300210-00	TAPPING SCREW P TYPE BID H 3X10MM BLACK
32	273-AA0301-01S	VOLUME KNOB ABS
33	619-300210-00	TAPING SCREW P TYPE BID H 3X10MM BLACK
34	211-AA0301-01S	CASS DOOR ( L ) HI-PS
35	418-AA0301-01	OVERLAY CLEAR SILK'S WHITE(S-96001) COLOR PVC
36	291-AA0304-01S	BASS BUTTON MILKY WHITE (CL-301) ABS
37	273-AA0303-01S	DARK GRAY ABS
38	606A301208-00	TAPING SCREW P TYPE BID H 3X1.25PX8MM
39	606A301208-00	TAPING SCREW P TYPE BID H 3X1.25PX8MM
40	614-300208-00	SELF-TAPPING SCREW B/T 3X8MM BLACK
41	606A301208-00	TAPING SCREW P TYPE BID H 3X1.25PX8MM
42-a(AC-420 E/B)	495-AA0301-01	PANEL REAR
42-b(AC-420 S)	495-AA0301-02	PANEL REAR
42-c(for AC-423R(E) )	495-AA0301-03	PANEL REAR
42-d(AC-425K U5,Y6)	495-AA0302-01	PANEL REAR
42-e(AC-425K U8,Y7)	495-AA0302-01	PANEL REAR
43	650-381301-01	CORD BUSHING
44	663-076040-10S	SPRING WASHER 7.6X4X1MM THK SIL CMT
45	207-385101-01Z	REAR FOOT (PLASTIC) BLACK EVA
46	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK

47	211-AA0502-02S	CASS DOOR PALTE (R)-B BLACK
48	428-385101-01	HOLDER BRACKET ( H )
49	481-385102-01	HEAT SINK ( H-2 )
50	493-385112-01	METAL BOTTOM CABINET (H) 1MM
51	261-AA0302-01K	CASS DOOR LENS ( R ) SMOKE
52	428-385002-01	CD BRACKET 'R'
53	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
54	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
55	477-385011-01	LATCH PUSH SPRING
56	483-AA0301-01	SHIELD HEAD
57	604-264501-00A	TAPPING SCREW C TYPE BID 2.6X5MM
58	299-AA0312-01S	LID BRACKET TX-3 WHITE ABS
59	229-AA0303-01S	LID BRACKET BLACK ABS
60	330-385001-01	FRONT CUSHION FOOT
61	619-300208-00	TAPING SCREW P TYPE BID H 3X8MM BLACK
62	602-407008-60A	TAPPING SCREW P TYPE WASHER H 4X8MM
63	619-300212-00	TAPPING SCREW P TYPE BID H 3X12MM
64	703-385002-01	DAMPER DA-60WW ( 105 ) ASSEMBLY
65	263-AA0303-01K	DECK DIR LENS AS
66	229-AA0315-01Z	LATCH BRACKET (R) POM
67	470-AA0321-01	CASS DOOR SPRING SHEET
68	211-AA0302-01S	CASS DOOR ( R ) HI-PS
69	471-AA0302-01	CASS DOOR SPRING WIRE ( R )
70	471-AA0301-01	CASS DOOR SPRING WIRE ( L )
71	211-AA0501-02S	CASS DOOR PALTE (L)-B BLACK
72-a(AC-420/423R)	001-86AA03-22	POWER TRANSFORMER C1058-E
72-b(AC-425K)	001-86AA03-B2	POWER TRANSFORMER C1058-U
73	741-495300-09	LOGICAL CONTROL DECK MECHA GT-E5300 (P/B)
74	741-495600-09	LOGICAL CONTROL DECK MECHA GT-E5600(R/P)
75	606A301208-00	TAPING SCREW P TYPE BID H 3X1.25PX8MM
76	619-300210-00	TAPINET SCREW P TYPE BID H 3X10MM BLACK
77-a(except,B1,Y6,S1)	071-669078-00A	AC LINE CORD VDE
77-b(B1,Y6)	071-449078-20	AC LINE CORD BS
77-c(S1)	071-559078-10	AC LINE CORD SAA

FINAL ASSEMBLY BLOCK

MODEL AC-420/423R/425K



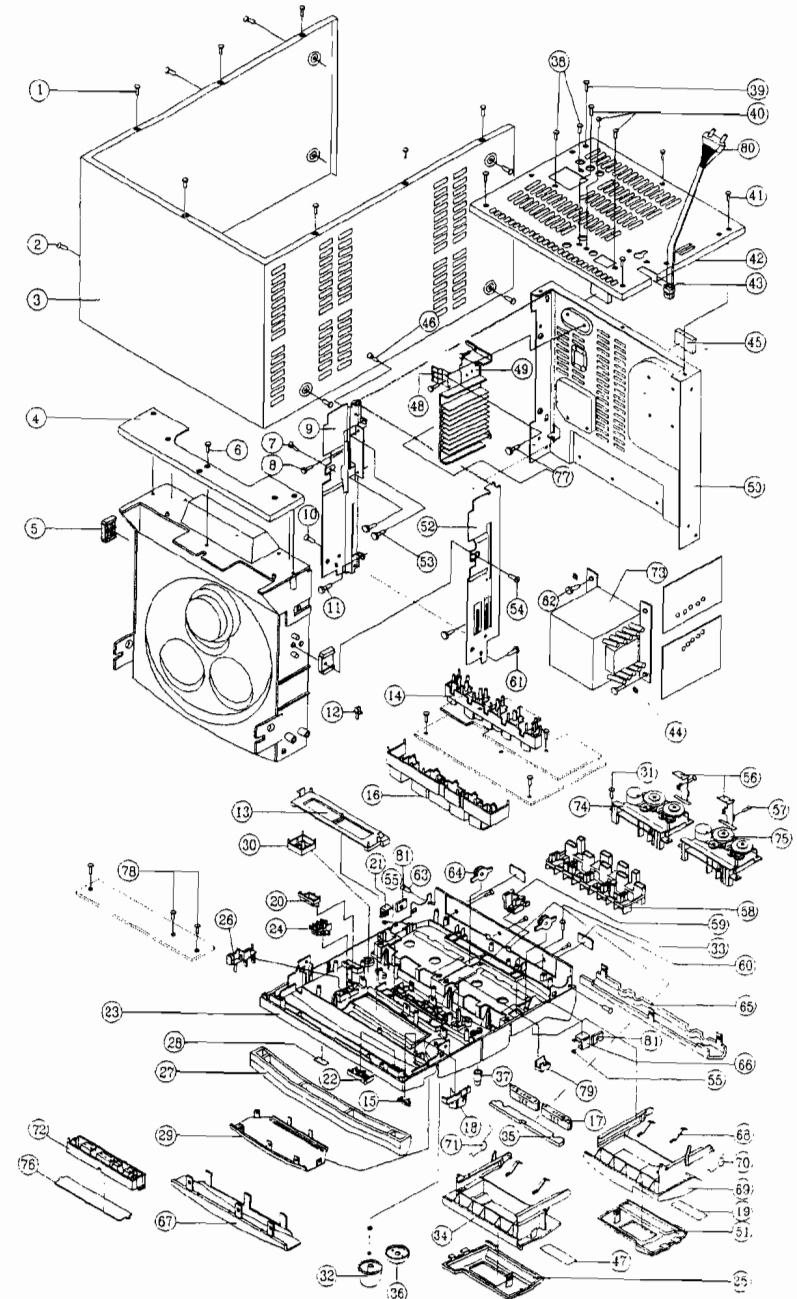
10. AC-620/623R/625K

REF. NO.	PARTS NO.	DESCRIPTION
1	606A301208-00	TAPPING SCREW P TYPE BID H 3X1.25PX8MM
2	606A301208-00	TAPPING SCREW P TYPE BID H 3X1.25PX8MM
3	402-385002-02	MAIN COVER SILVER
4	495-385027-01	REAR CABINET SUB
5	248-385001-01R	MECH SPACER BLACK HI-PS
6	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
7	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
8	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
9	428-385001-01	CD BRACKET 'L'
10	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
11	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
12	292-AA0302-01S	DOBLY BUTTON
13	229-AA0301-01S	FLD BRACKET HI-PS
14	291-AA0302-01S	FUNCTION BUTTON ABS
15	291-AA0303-01S	BALANCE BUTTON GRAY
16	291-AA0305-02Z	OP BUTTON (AC-620)
17	250-AA0301-01S	LAMP HOLDER WHITE ABS
18	292-AA0301-01S	REC BUTTON RED (P-96014) ABS
19	211-AA0502-01S	CASS DOOR PLATE (R)-B BLACK
20	291-AA0305-01S	POWER BUTTON DARK GREY (P-92008) W/MET GREY(T-96008HB) SP. SILK'S RED(S-88011) LETT. ABS
21	229-AA0314-01Z	LATCH BRACKET(L) POM
22	291-AA0301-01S	DISC BUTTON DARK GREY
23-a(AC-620)	200-AA0513-01R	FRONT CABINET HI-PS
23-b(AC-623R)	200-AA0513-02R	FRONT CABINET HI-PS
23-c(AC-625K)	200-AA0514-01R	FRONT CABINET HI-PS
24	275-AA0301-01S	TIMER BUTTON DARK GREY (P-92008) ABS
25	261-AA0301-01K	CASS DOOR LENS ( L ) SMOKE
26	291-AA0501-01S	CH BUTTON DARK GREY (P-92008) ABS
27	219-AA0311-01R	CD DOOR HI-PS
28	286-385001-02S	NAME PLATE 'AKAI'
29	263-AA0301-02K	DISPLAY LENS AS
30	292-AA0501-01S	ON/OFF BUTTON DARK GREY
31	619-300210-00	TAPPING SCREW P TYPE BID H 3X10MM BLACK
32	273-AA0301-01S	VOLUME KNOB ABS
33	619-300210-00	TAPING SCREW P TYPE BID H 3X10MM BLACK
34	211-AA0301-01S	CASS DOOR ( L ) HI-PS
35	418-AA0301-01	OVERLAY CLEAR SILK'S WHITE(S-96001) COLOR PVC
36	273-AA0302-01S	VOLUME RING DARK GREY (P-92008) W/PLATTING ABS
37	273-AA0303-01S	MIC KNOB DARK GREY ABS
38	606A301208-00	TAPINET SCREW TYPE BID H 3X1.25PX8MM
39	606A301208-00	TAPINET SCREW P TYPE BID H 3X1.25PX8MM
40	614-300208-00	SELF-TAPPING SCREW B/T 3X8MM BLACK
41	606A301208-00	TAPINET SCREW P TYPE BID H 3X1.25PX3MM
42-a(AC-620 E/B)	495-AA0305-01	PANEL REAR
42-b(AC-620 S)	495-AA0305-02	PANEL REAR
42-c(AC-623R(E) )	495-AA0305-03	PANEL REAR
42-d(AC-620 U5.Y6)	495-AA0306-01	PANEL REAR
42-e(AC-620 U8.Y7)	495-AA0306-02	PANEL REAR
43	650-381301-01	CORD BUSHING
44	663-076040-10S	SPRING WASHER 7.6X4X1MM THK SIL CMT
45	330-385002-01	REAR CUSHION FOOT
46	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK

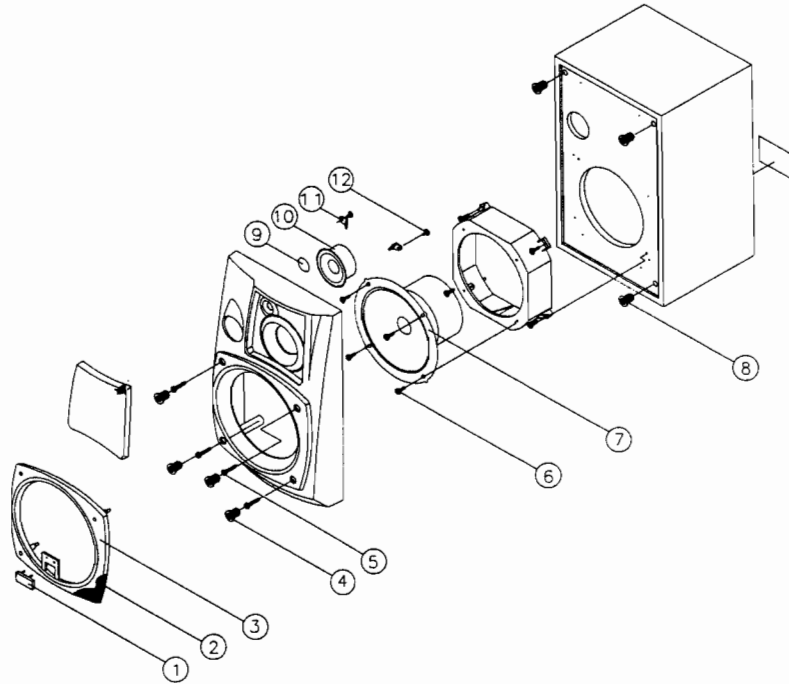


47	211-AA0501-01S	CASS DOOR PLATE (L)-B BLACK
48	428-AA0501-01	HOLDER BKT TR-4
49	481-AA0501-01	HEAT SINK 620
50	493-385021-01	METAL BOTTOM CAB 0.8MM
51	261-AA0302-01K	CASS DOOR LENS ( R ) SMOKE
52	428-385002-01	CD BRACKET 'R'
53	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
54	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
55	477-385011-01	LATCH PUSH SPRING
56	483-AA0301-01	SHIELD HEAD
57	604-264501-00A	TAPPING SCREW C TYPE BID H 2.6X5MM
58	299-AA0312-01S	LID BRACKET WHITE TX-3 ABS
59	229-AA0303-01S	LID BRACKET BLACK ABS
60	330-385001-01	FRONT CUSHION FOOT
61	619-300208-00	TAPPING SCREW P TYPE BID H 3X8MM BLACK
62	602-407008-60A	TAPPING SCREW P TYPE WASHER H 4X8MM
63	619-300212-00	TAPPING SCREW P TYPE BID H 3X12MM BLACK
64	703-385002-01	DAMPER DA-60W/W ( 105 ) ASSEMBLY
65	263-AA0303-01K	DECK DIR LENS AS
66	229-AA0315-01Z	LATCH BRACKET(R) POM
67	263-AA0501-02K	PROG DISPLAY LENS GREY SMOKE (P-96011)AS
68	470-AA0321-01	CASS DOOR SPRING SHEET
69	211-AA0302-01S	CASS DOOR ( R ) HI-PS
70	471-AA0302-01	CASS DOOR SPRING WIRE ( R )
71	471-AA0301-01	CASS DOOR SPRING WIRE ( L )
72	229-AA0501-01S	PRO LED BRACKET WHITE ABS
73-a(AC-620/623R)	001-873855-42	POWER TRANSFORMER C1050-E
73-b(AC-625K)	001-873855-02	POWER TRANSFORMER C1050-U
74	741-495300-09	LOGICAL CONTROL DECK MECHA GT-E5300 (P/B)
75	741-495600-09	LOGICAL CONTROL DECK MECHA GT-E5600 (R/P)
76	418-AA0501-01S	OVERLAY CLEAR SILK'S MILKY WHITE COLOR PVC
77	606A301208-00	TAPPING SCREW P TYPE BID H 3X1.25X8MM
78	619-300210-00	TAPPING SCREW P TYPE BID H 3X10MM BLACK
79	291-AA0304-01S	BASS BUTTON MILKY WHITE (CL-301) ABS
80-a(except,B1,Y6,S1)	071-669078-00A	AC LINE CORD VDE
80-b(B1,Y6)	071-449078-20	AC LINE CORD BS
80-c(S1)	071-559078-10	AC LINE CORD SAA
81	229-385016-01Z	LATCH BRACKET BLACK POM

FINAL ASSEMBLY BLOCK  
MODEL AC-620/623R/625K



11. SPEAKER SYSTEM (SR-425)

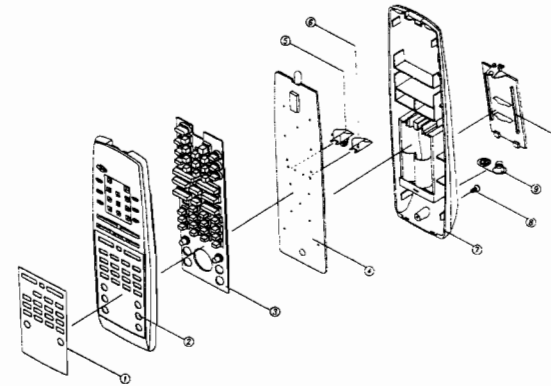


REF. NO	PART NO	DESCRIPTION
1	286-385002-01S	NAME PLATE FOR AKAI
2	583-051501-01	SPEAKER CLOTH
3	239-051501-01R	FRAME NET (R)
4	259-050201-01Z	CUSHION FOR SPEAKER BOX BLK S.B.R
5	610-350220-10	SELF-TAPPING SCREW R/T 3.5X20MM
6	614-400216-30	SELF-TAPPING SCREW R/T 4.0X16MM BLACK
7	066-953254-WT	WOOFER SPEAKER
8	259-381301-01	CUSHION
9	070-100027-02Z	27MM PIEZO
10	066-283220-WT	MIDRANGE SPEAKER
11	462-333202-01	SPEAKER CLIP
12	612-300210-10	SELF-TAPPING SCREW 3X10MM

12. REMOTE EXPLODED DIAGRAM AND PARTS LIST

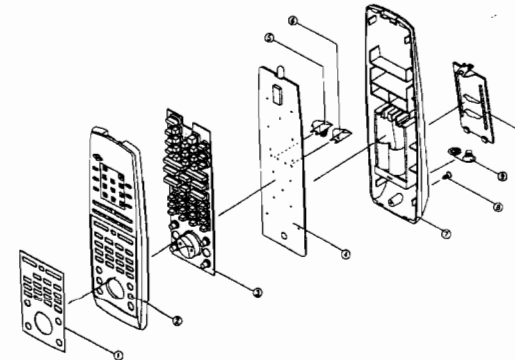
RC-S520  
REF. NO  
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PART NO	DESCRIPTION
790-010301-01	REMOTE CONTROL HANDSET RC-S520
411-010301-01	REMOTE NAME PLATE
201-010302-01S	REMOTE CAB TOP
334-010311-01	REMOTE CONTATIVE RUBBER (46 KEYS)
090-010302-03	PCB REMOTE BOARD
473-010311-01	BATT CONTACT SPRING SHEET-VE
472-010311-01	BAT CONTACT PLATE +VE
203-010311-01S	REMOTE CABINET BOTTOM
610-260206-10	SELF-TAPPING SCREW K/T 2.6X6
474-010101-01	BAT CONTACT SPRING WIRE +/-VE
210-010301-01S	REMOTE BATTERY COVER



RC-S720  
REF. NO  
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PART NO	DESCRIPTION
790-010302-01	REMOTE CONTROL HANDSET RC-S720
411-010302-01	REMOTE NAME PLATE
201-010301-02S	REMOTE CAB TOP
334-010312-01	REMOTE CONTATIVE RUBBER (46 KEYS)
090-010302-03	PCB REMOTE BOARD
473-010311-01	BATT CONTACT SPRING SHEET-VE
472-010311-01	BAT CONTACT PLATE +VE
203-010311-01S	REMOTE CABINET BOTTOM
610-260206-10	SELF-TAPPING SCREW K/T 2.6X6
474-010101-01	BAT CONTACT SPRING WIRE +/-VE
210-010301-01S	REMOTE BATTERY COVER



XII. ABBREVIATIONS

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	Institute 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
XTAL	Crystal		

COMPACT DISC

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A-D	Analog to Digital(Converter)	Mb	Mega Bits
ADC	Analog Code Decimal (Converter)	MDA	Motor Drive Amplifier
BCD	Binary Code Decimal	MFM	Modified Frequency Modulation
BPI	Bits Per Inch	MW	Mono-stable Multivibrator
CD	Compact Disc	M2FM	Modified Modified Frequency Modulation
CIRC	Cross Interleaving & Reed Solomon Coding	MOD2	Module 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-I	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,R1,R2,ect.	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,L1,L2,ect.	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	MultiPlex
AR	Anti Recording	NC	Not connected (No Connection)
ATBIAS	Auto Turning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMal
BAL	BALance	NR	Noise Reduction
BEFB	and Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAPM	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMPArator	OR	Quick Reverse
CONT	CONTInuance	RCH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECOrd (RECOding)
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 Forward	SIG	SIgNal
FLD	FLuorescent 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
LCH	Left Channel	VR	Variable Resistor
LEDLight	Emitting Diode	XTAL	crystAL
MEMO	MEMOry	X1	Normal speed
MICOM	MICroCOMputer	X2	Double speed

# AKAI

**MODEL AC-420, 423R, 425K**

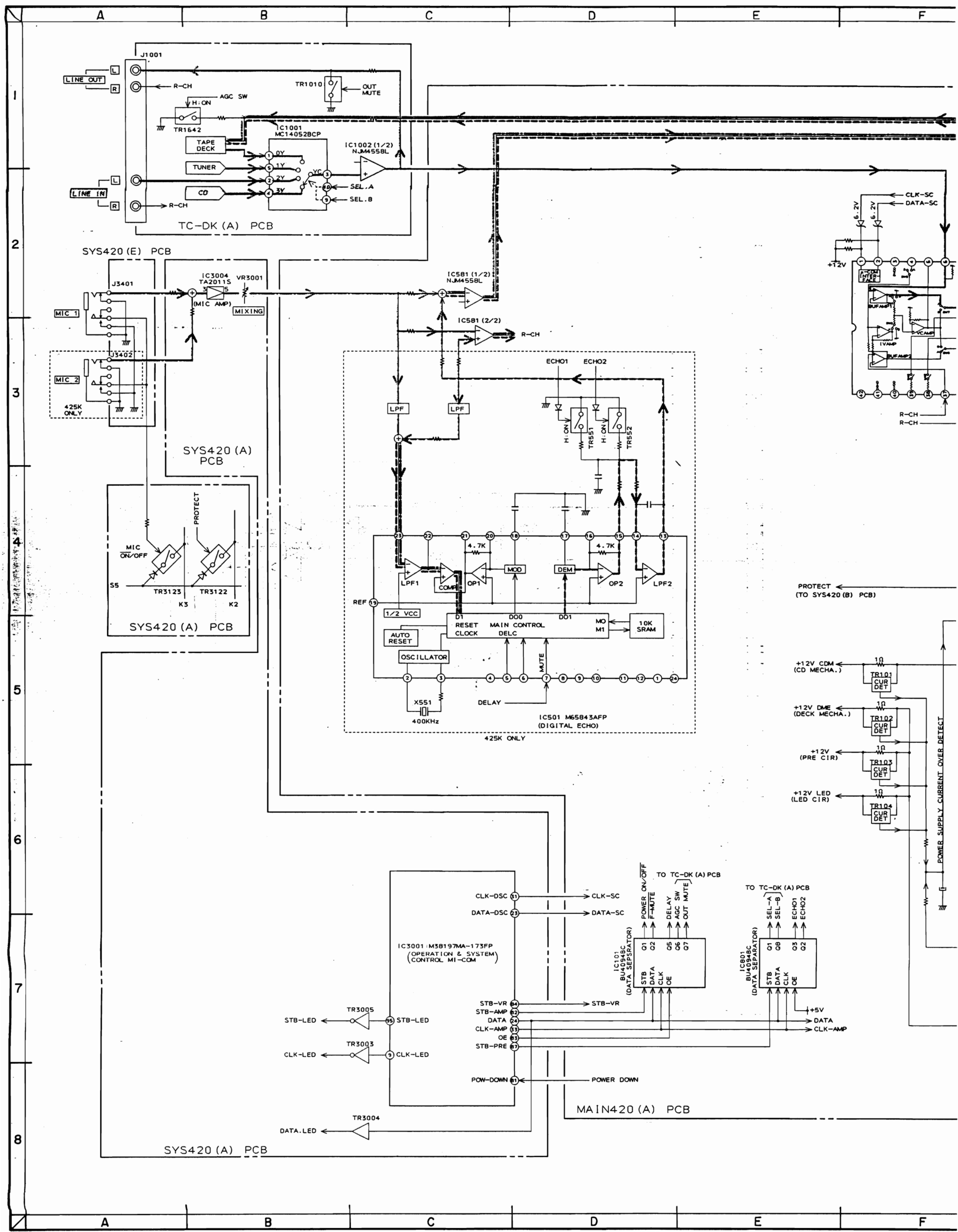
**MODEL AC-620, 623R, 625K**

## **SCHEMATIC DIAGRAMS AND PC BOARDS**

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Use these schematic diagrams and PC boards together with the provided service manual.



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A

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C

D

E

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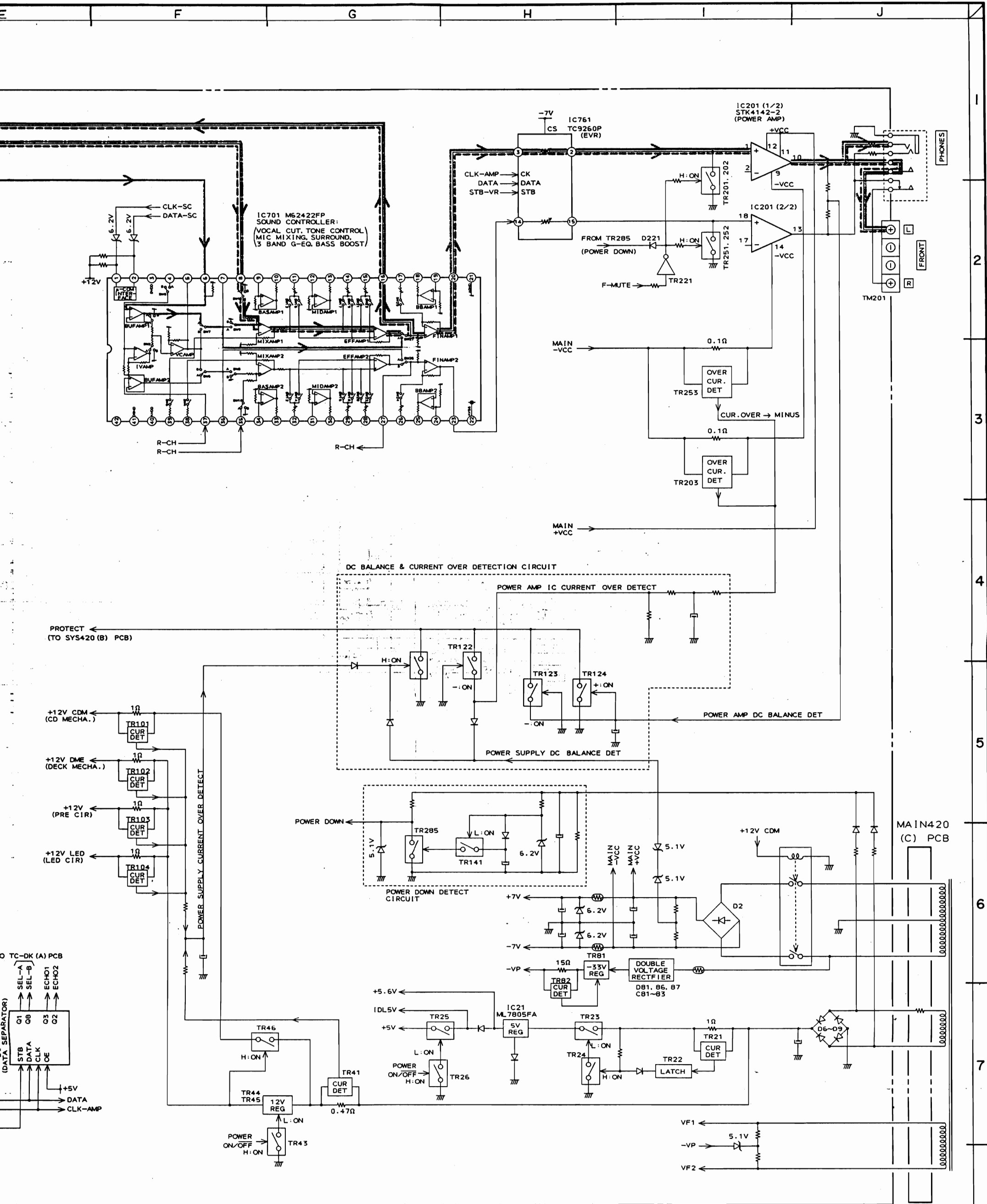
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C

D

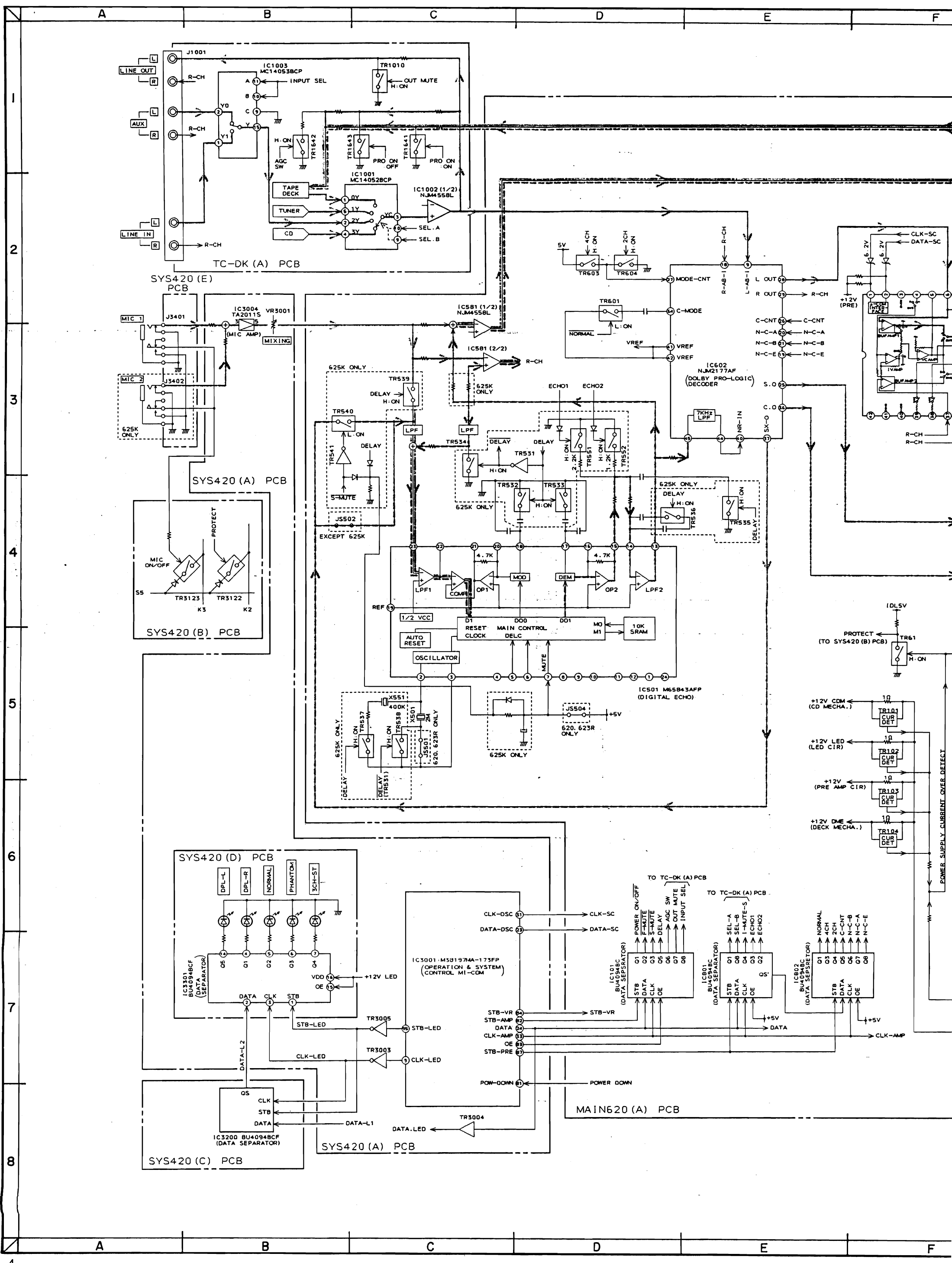
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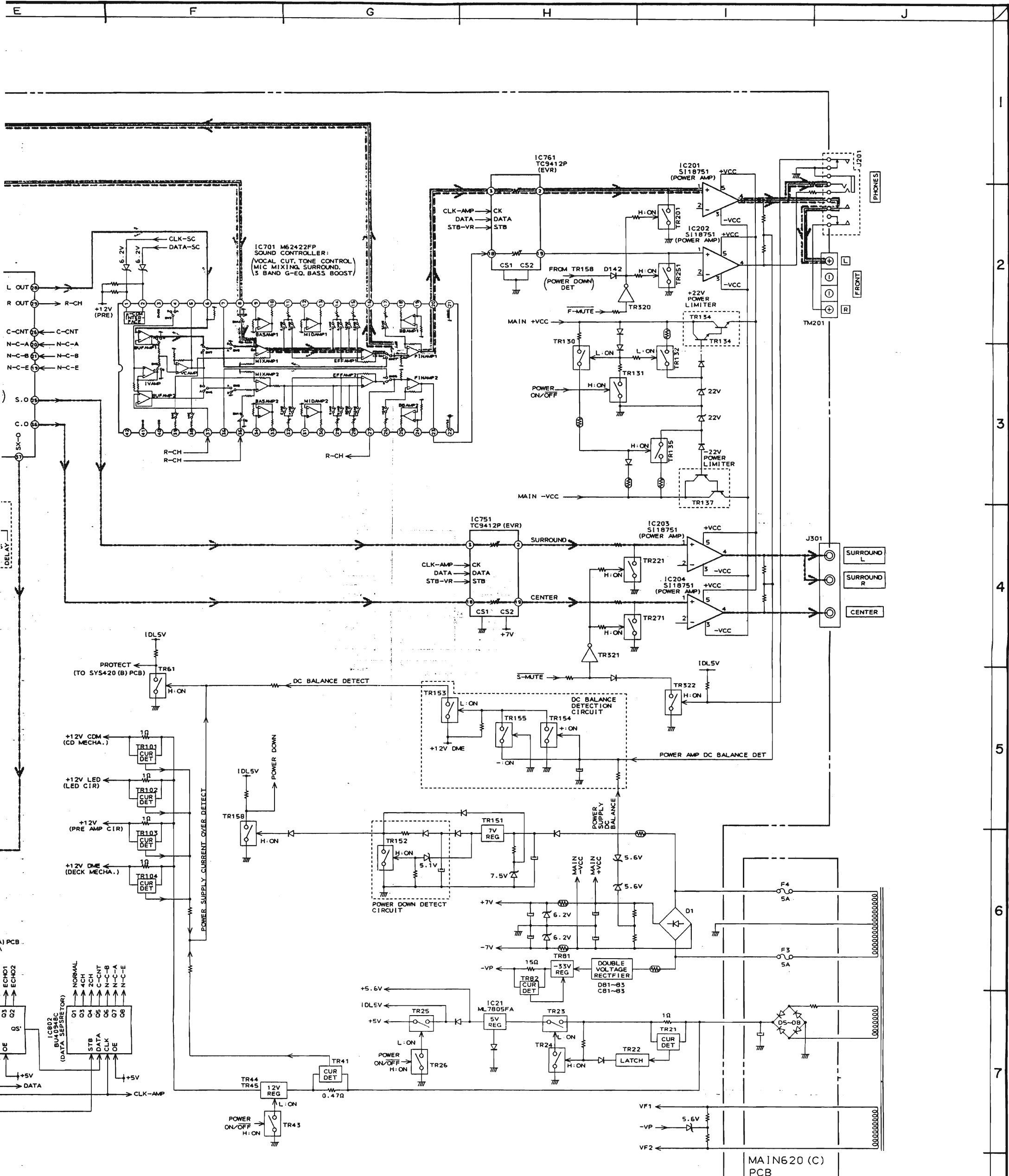
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——— NORMAL SIGNAL LINE (L-CH)  
 - - - - - EFFECT SIGNAL LINE (DELAY)  
 ——— MIC SIGNAL LINE

AC-420/423R/425K  
 MAIN  
 BLOCK DIAGRAM  
 NO. 4-1 C105851M<sub>A1</sub>

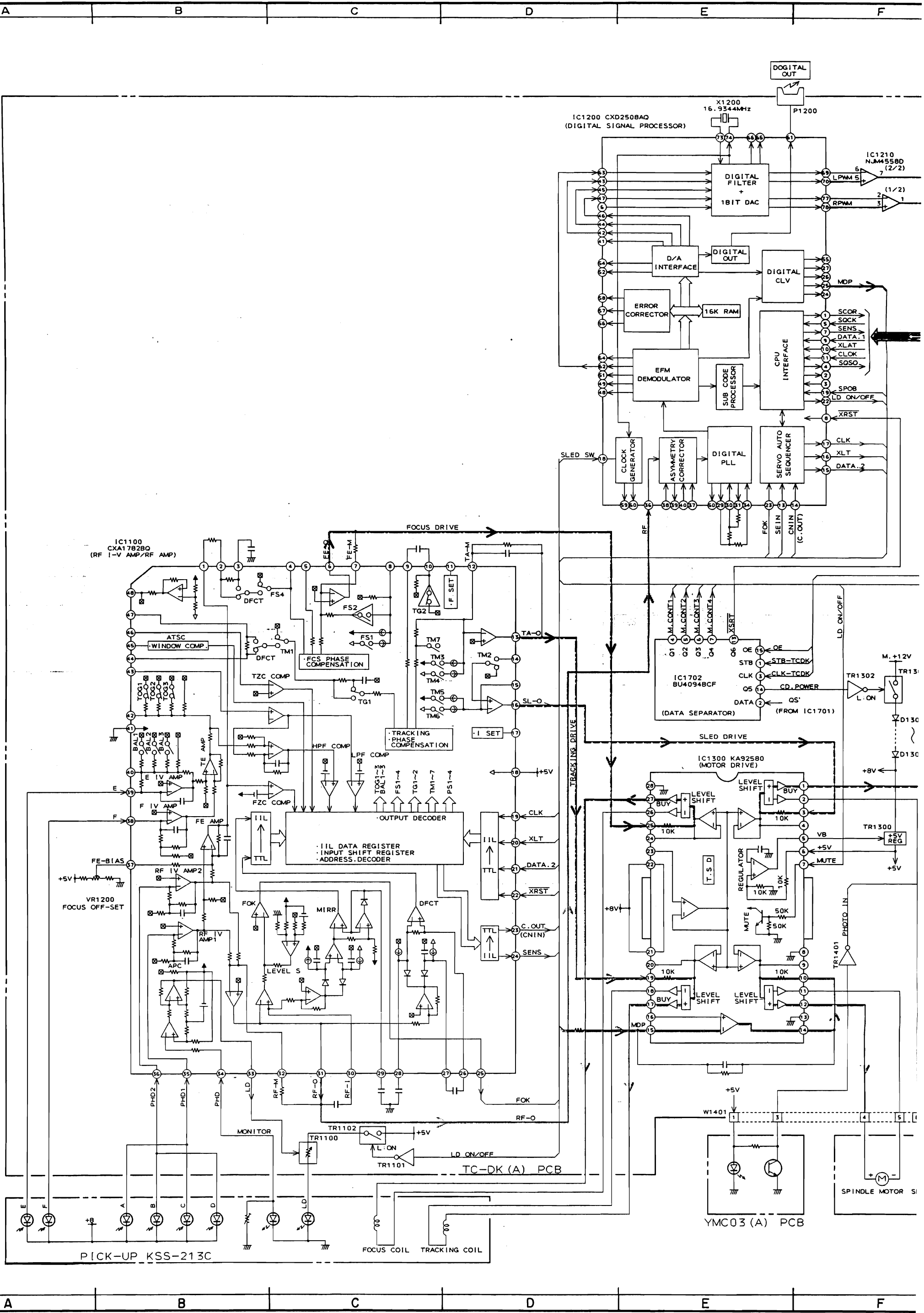




———— NORMAL SIGNAL LINE (L-CH)  
 - - - - - EFFECT SIGNAL LINE (DELAY & D.P.L.)  
 . . . . . MIC SIGNAL LINE  
 - - - - - CENTER & SURROUND SIGNAL LINE

AC-620/623R/625K  
 MAIN  
 BLOCK DIAGRAM  
 NO. 4-2 C105852M<sub>A1</sub>





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A B C D E F

PICK-UP KSS-213C

FOCUS COIL TRACKING COIL

YMC03 (A) PCB

SPINDLE MOTOR SI

TC-DK (A) PCB

IC1200 CXD250BAQ  
(DIGITAL SIGNAL PROCESSOR)

X1200  
16.9344MHz

DIGITAL FILTER  
+  
18BIT DAC

D/A  
INTERFACE

ERROR  
CORRECTOR

EFM  
DEMODULATOR

CLOCK  
GENERATOR

ASYMMETRY  
CORRECTOR

DIGITAL  
PLL

SERVO AUTO  
SEQUENCER

DIGITAL  
CLV

CPU  
INTERFACE

16K  
RAM

SCOR  
SENS

SOCK  
SENS

DATA.1

XLAT  
CLK

SQSO

SPOB  
LD ON/OFF

XRST

CLK

XLAT

DATA.2

RF

FOK

SEIN

CNIN

(C. OUT)

LD ON/OFF

M. +12V

+8V

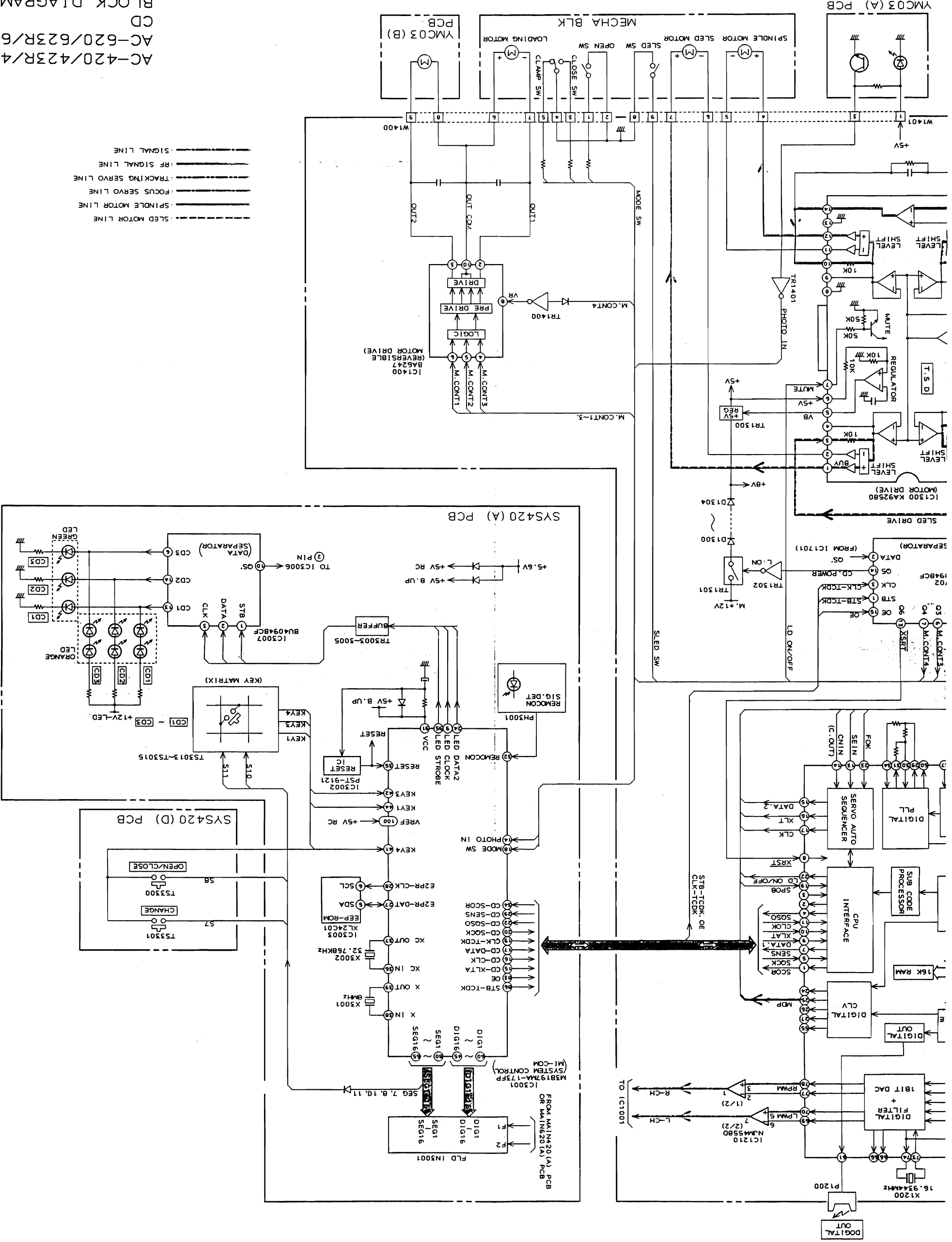
+5V

+5V

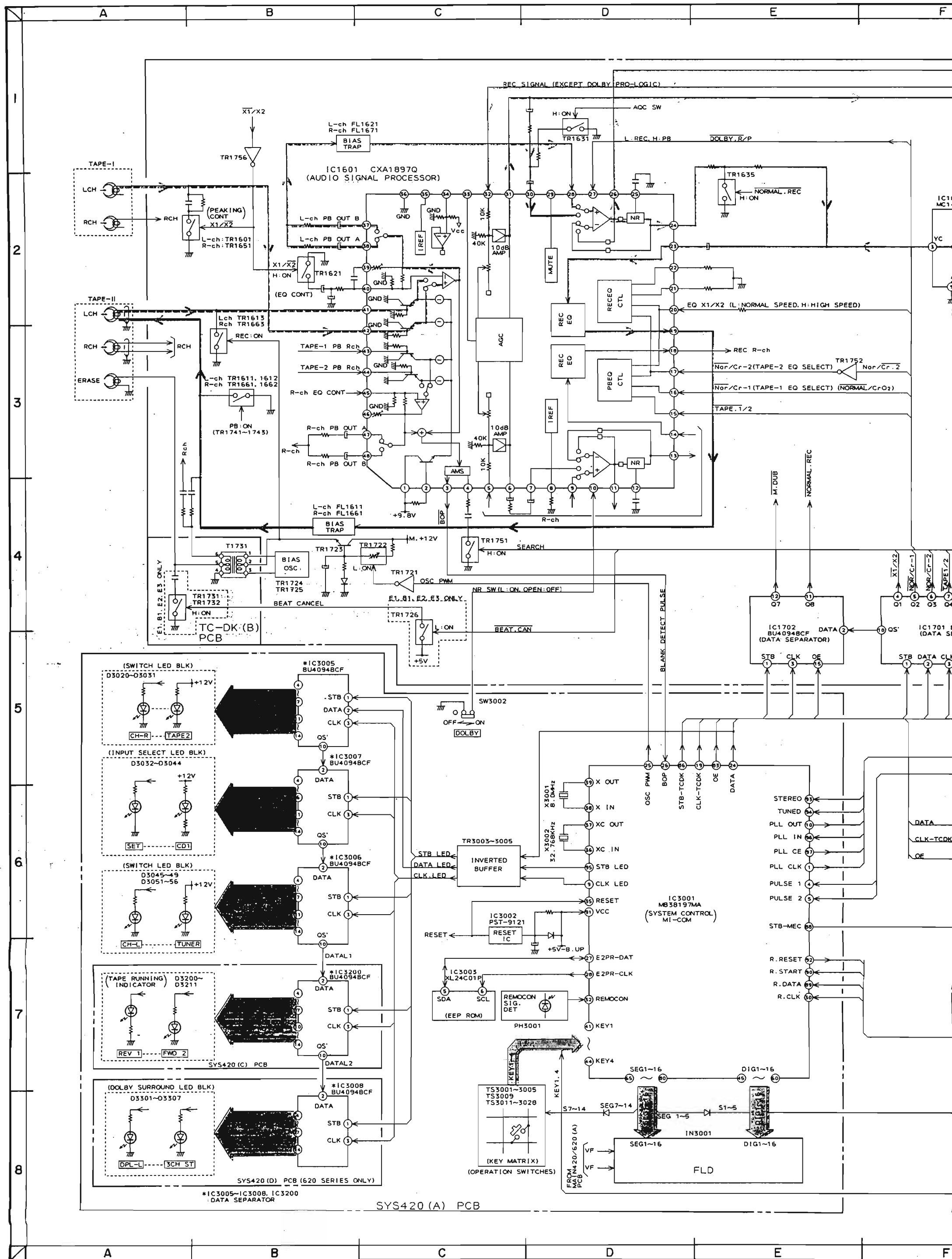
+5V

AC-420/423R/425K  
 AC-620/623R/625K  
 CD  
 BLOCK DIAGRAM  
 NO. 4-3 C105853M

--- SLED MOTOR LINE  
 --- SPINDLE MOTOR LINE  
 --- FOCUS SERVO LINE  
 --- TRACKING SERVO LINE  
 --- RF SIGNAL LINE  
 --- SIGNAL LINE

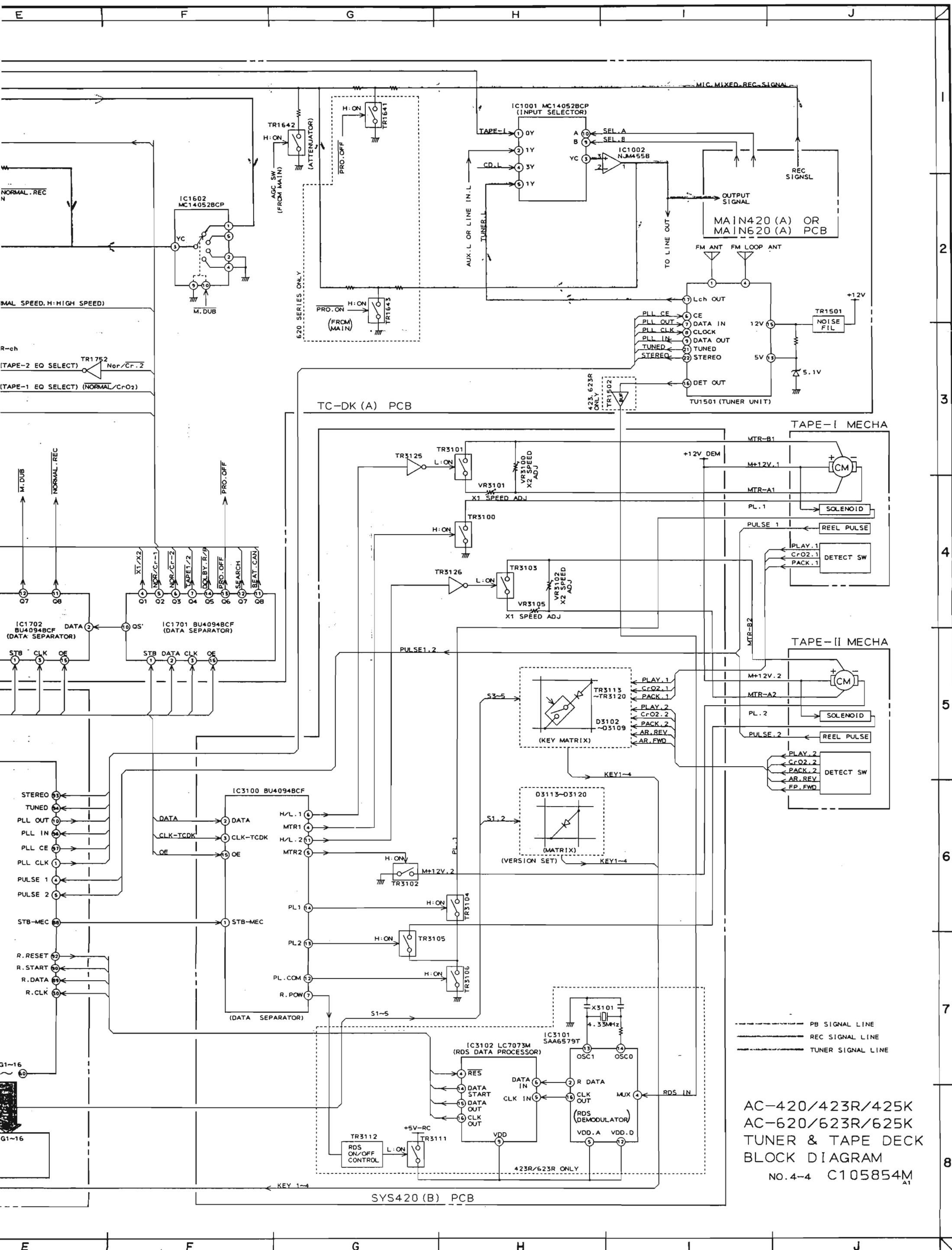


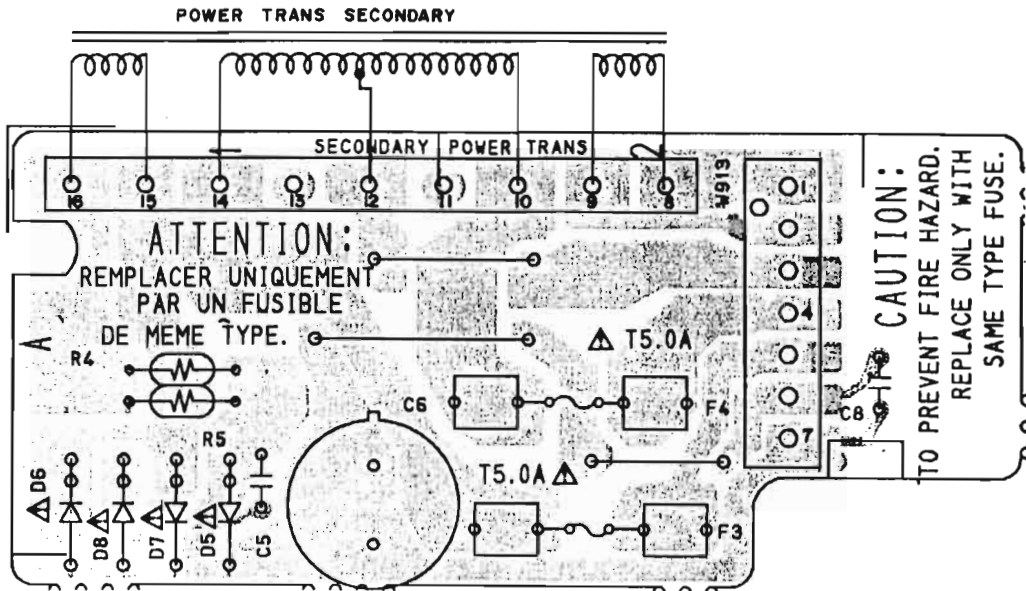
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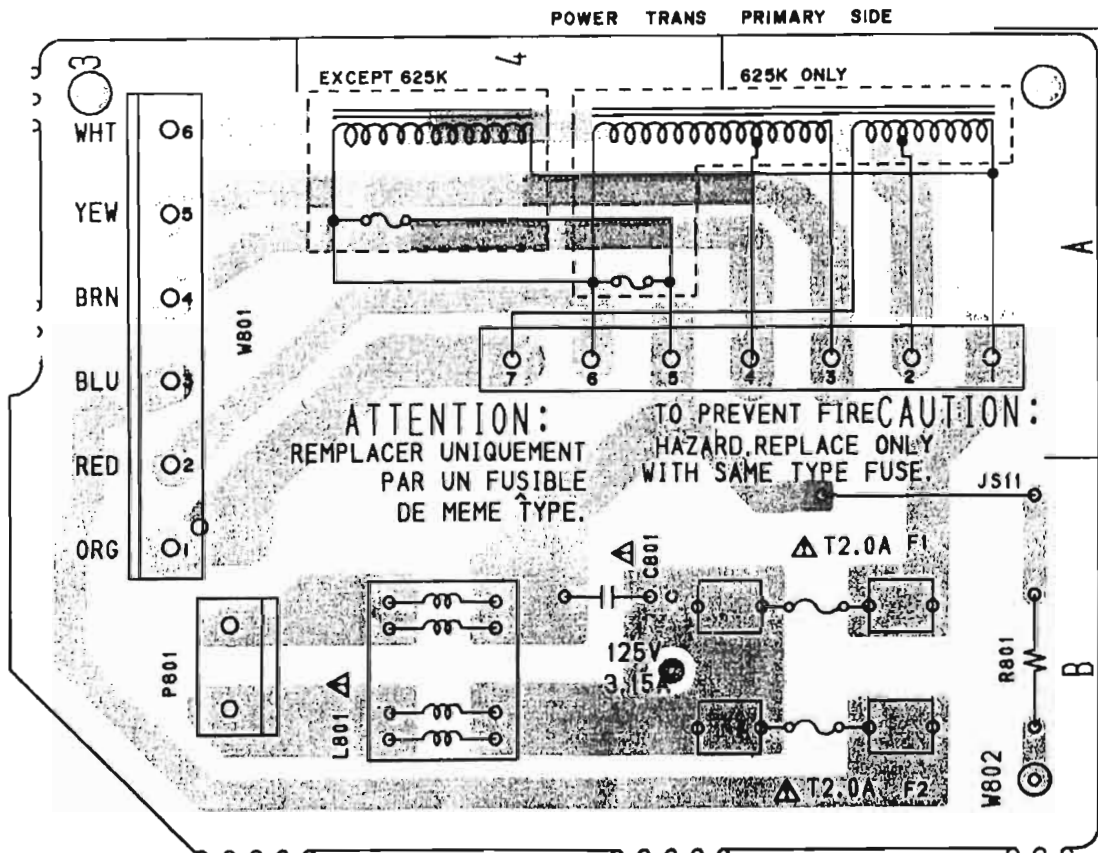
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A B C D E F





MAIN620(C) PCB C1060A501C

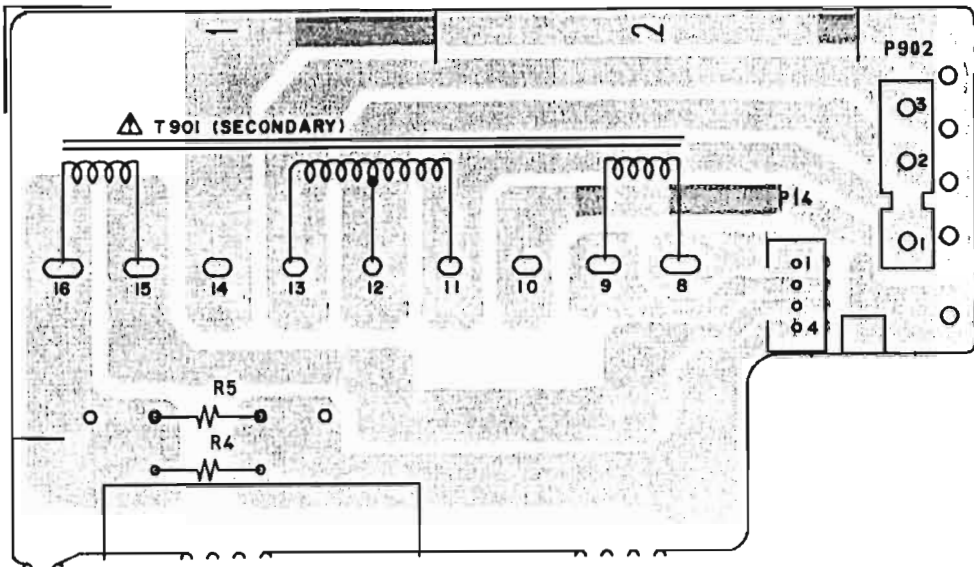


MAIN620(B) PCB C1060A501B

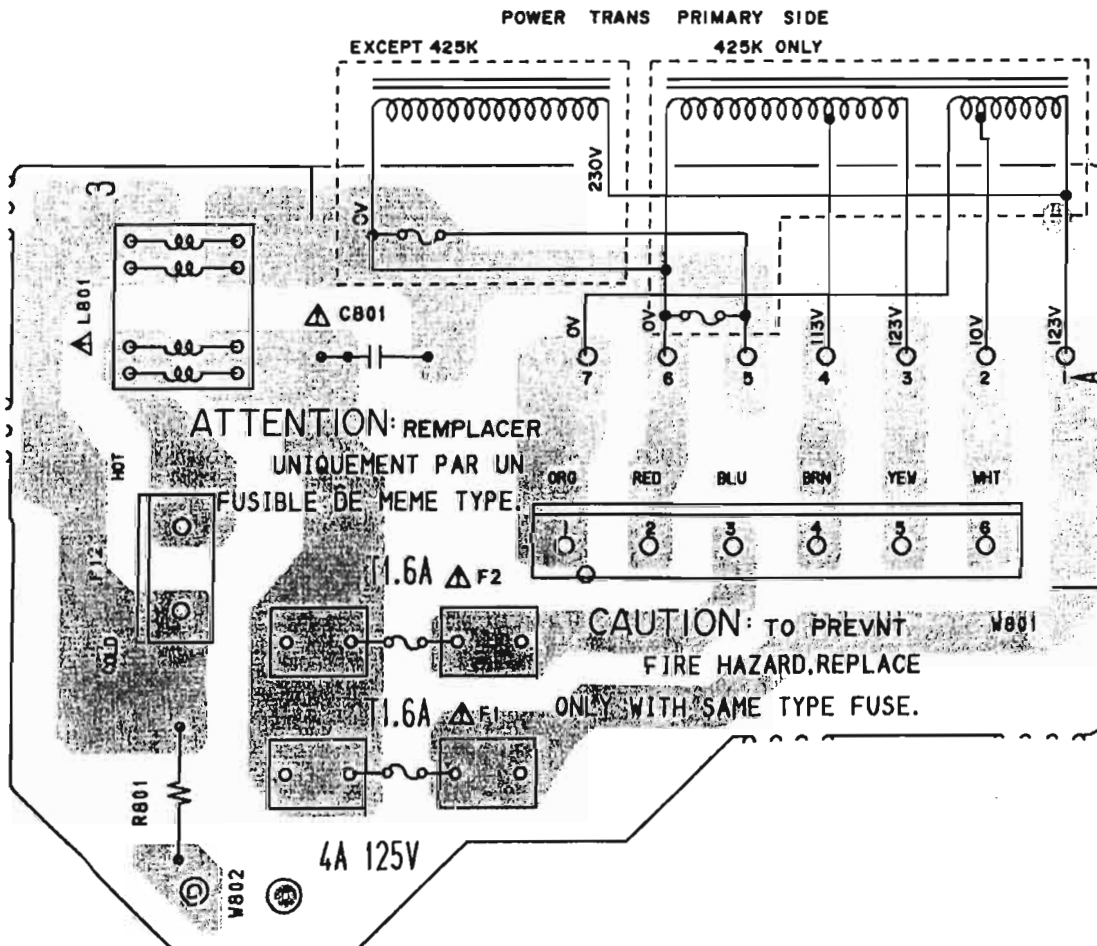
**NOTE:** PARTS DIFFER DEPENDING ON MODEL NUMBER.  
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT  
PARTS INFORMATION.

**WARNING:**  $\Delta$  INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,  
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S  
RECOMMENDED PARTS

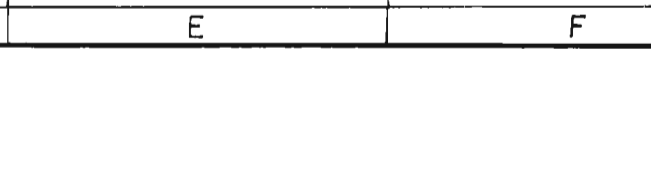
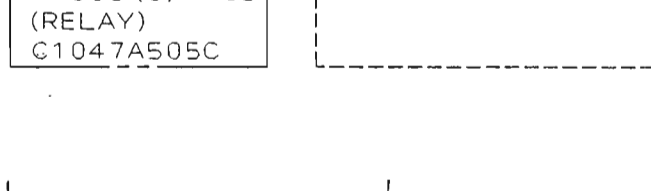
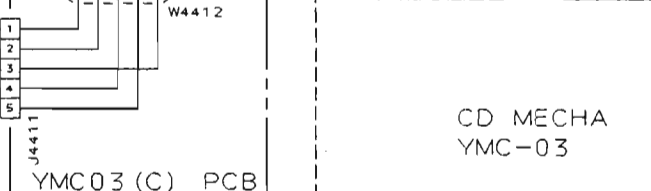
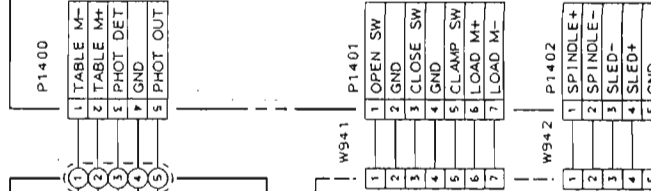
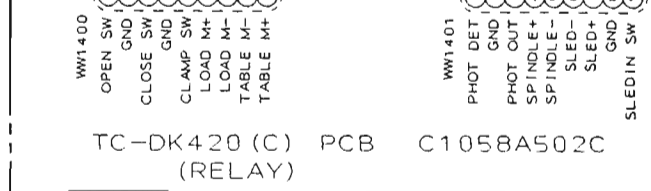
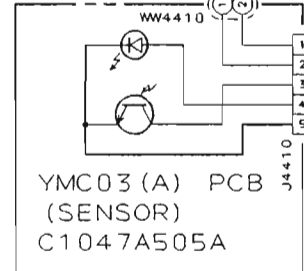
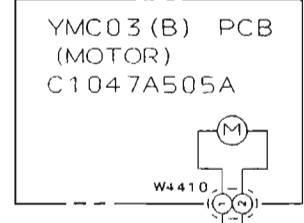
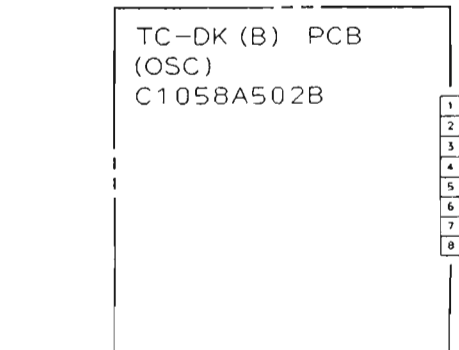
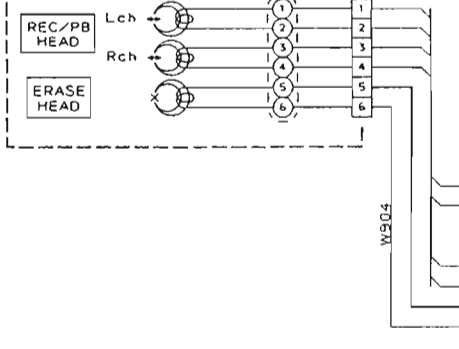
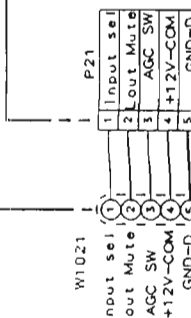
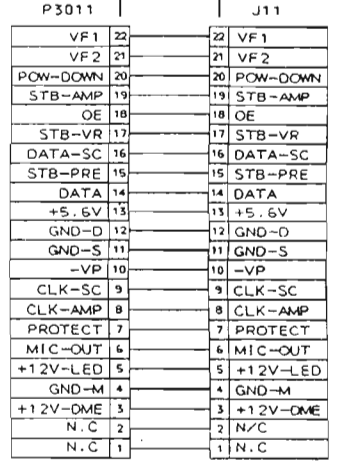
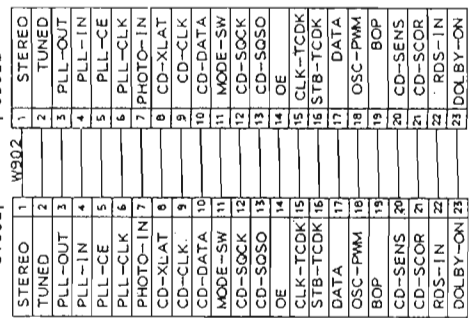
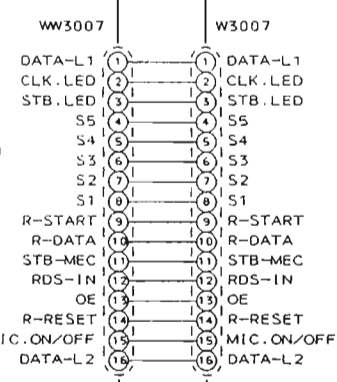
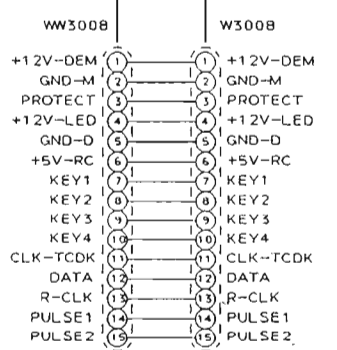
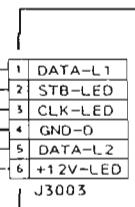
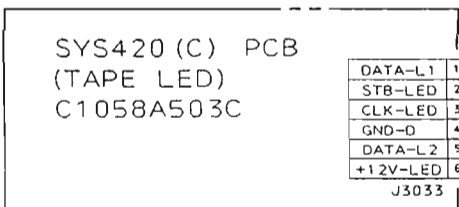
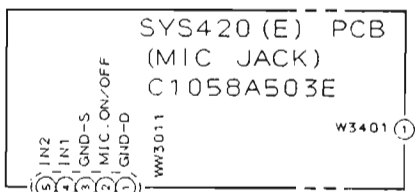
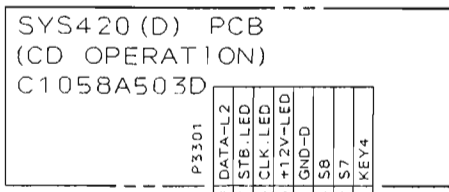
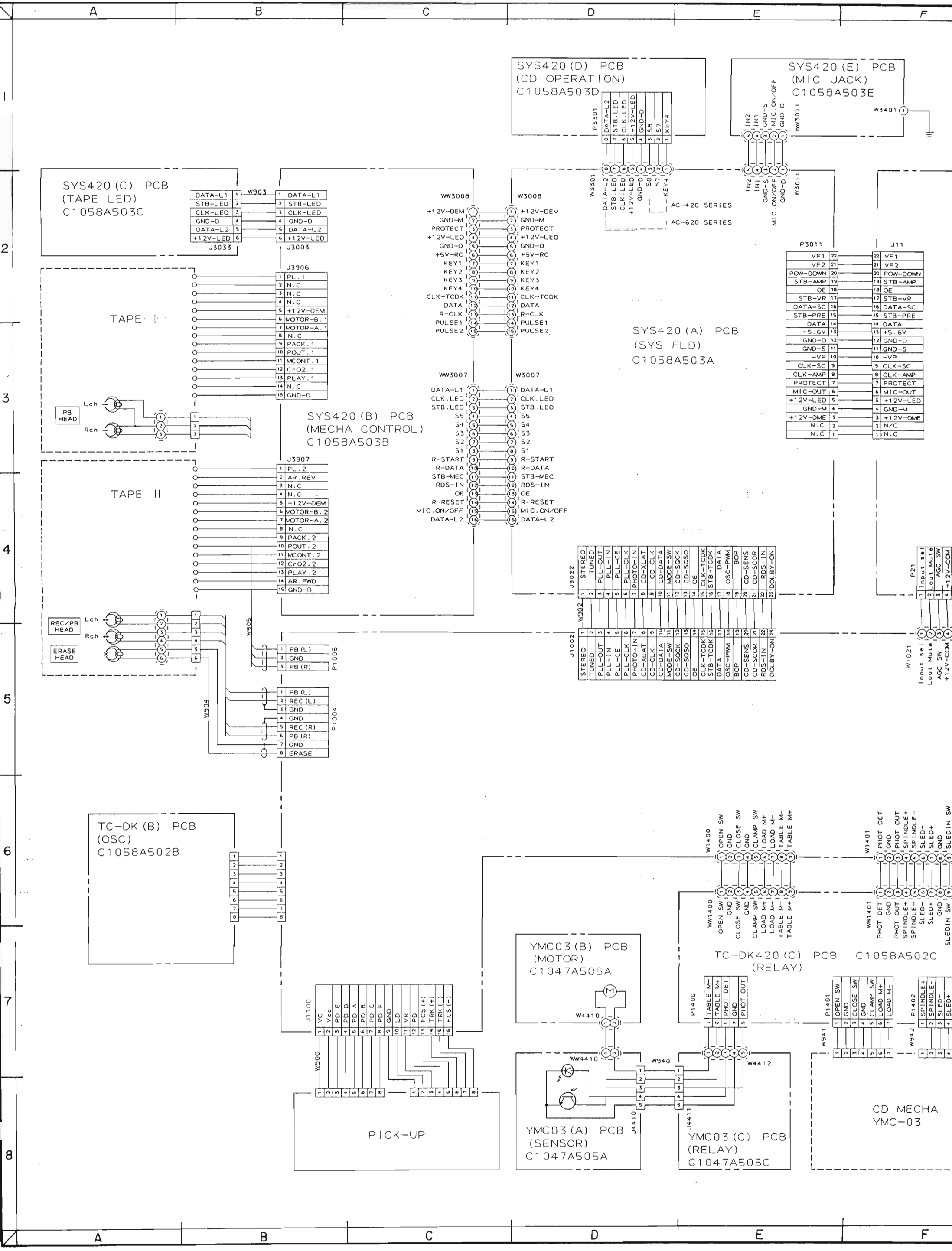
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NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

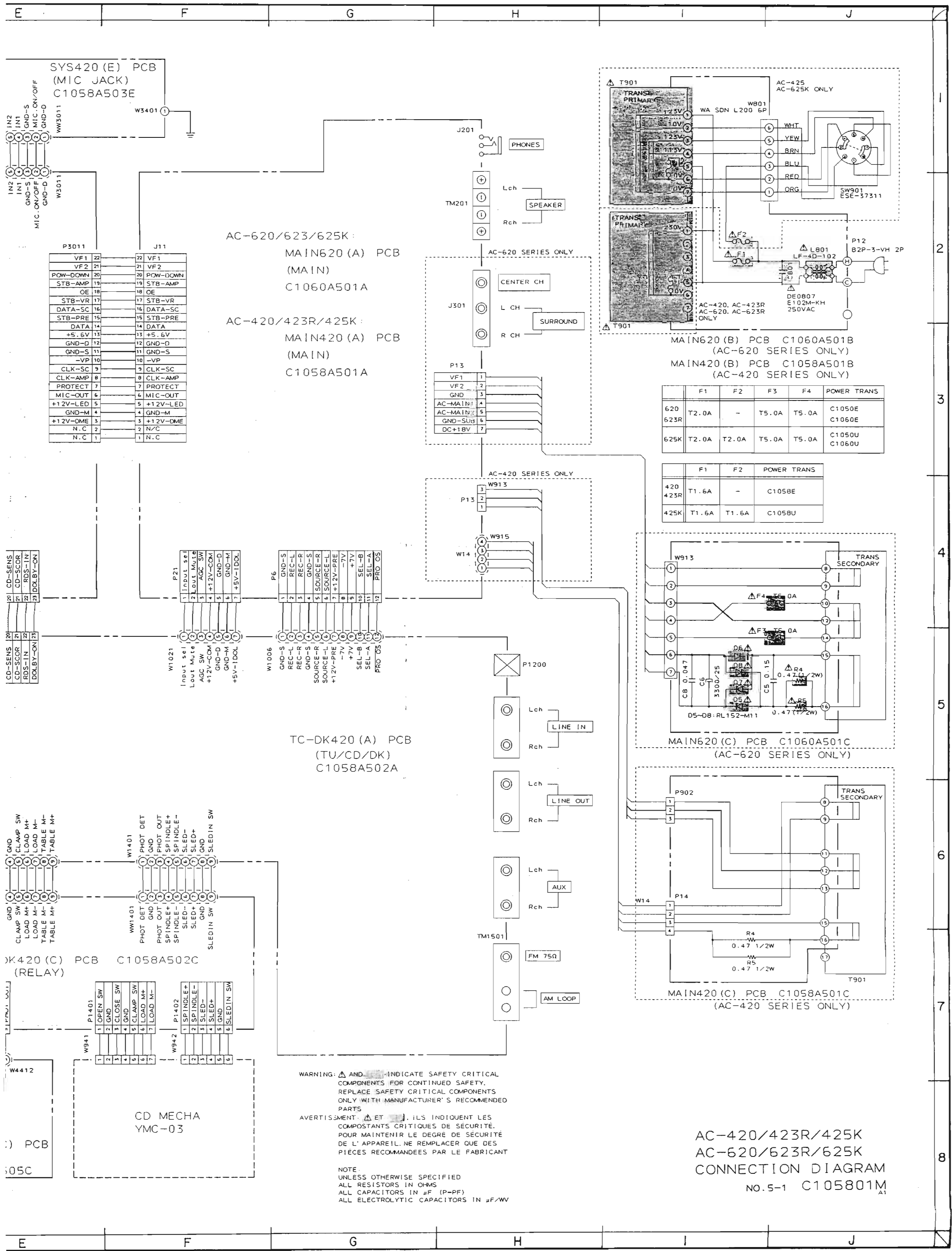


MAIN420(C) PCB CI058A50IC



MAIN420(B) PCB CI058A50IB



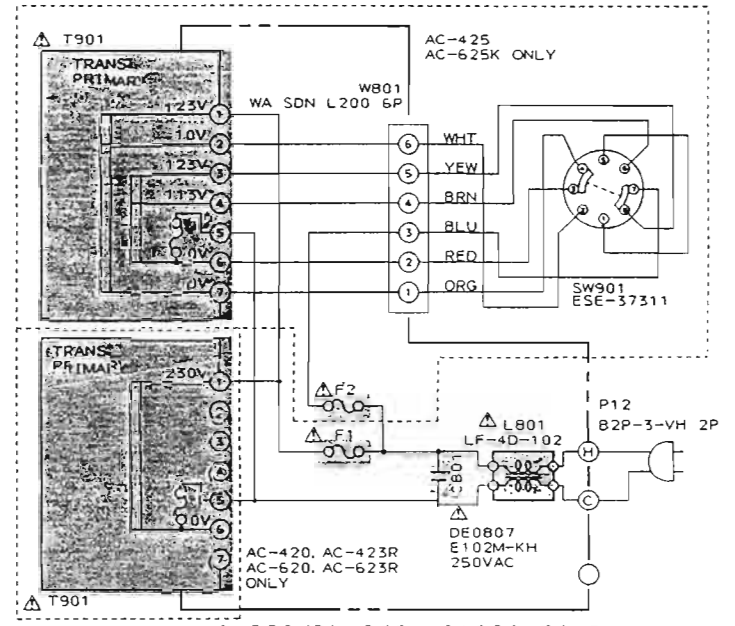


AC-620/623/625K :  
 MAIN620 (A) PCB  
 (MAIN)  
 C1060A501A

AC-420/423R/425K :  
 MAIN420 (A) PCB  
 (MAIN)  
 C1058A501A

TC-DK420 (A) PCB  
 (TU/CD/DK)  
 C1058A502A

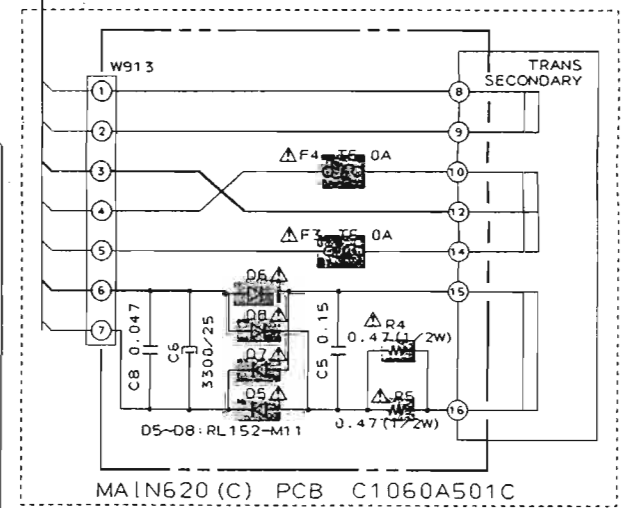
CD MECHA  
 YMC-03



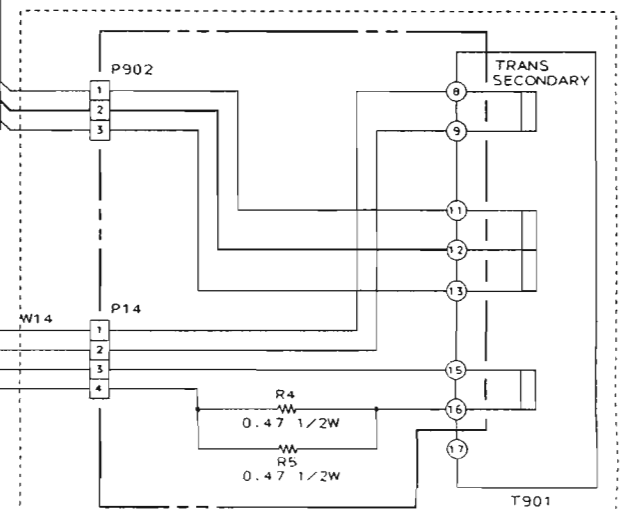
MAIN620 (B) PCB C1060A501B  
 (AC-620 SERIES ONLY)  
 MAIN420 (B) PCB C1058A501B  
 (AC-420 SERIES ONLY)

	F1	F2	F3	F4	POWER TRANS
620	T2.0A	-	T5.0A	T5.0A	C1050E C1060E
623K	T2.0A	T2.0A	T5.0A	T5.0A	C1050U C1060U

	F1	F2	POWER TRANS
420	T1.6A	-	C1058E
423R	T1.6A	T1.6A	C1058U



MAIN620 (C) PCB C1060A501C  
 (AC-620 SERIES ONLY)



MAIN420 (C) PCB C1058A501C  
 (AC-420 SERIES ONLY)

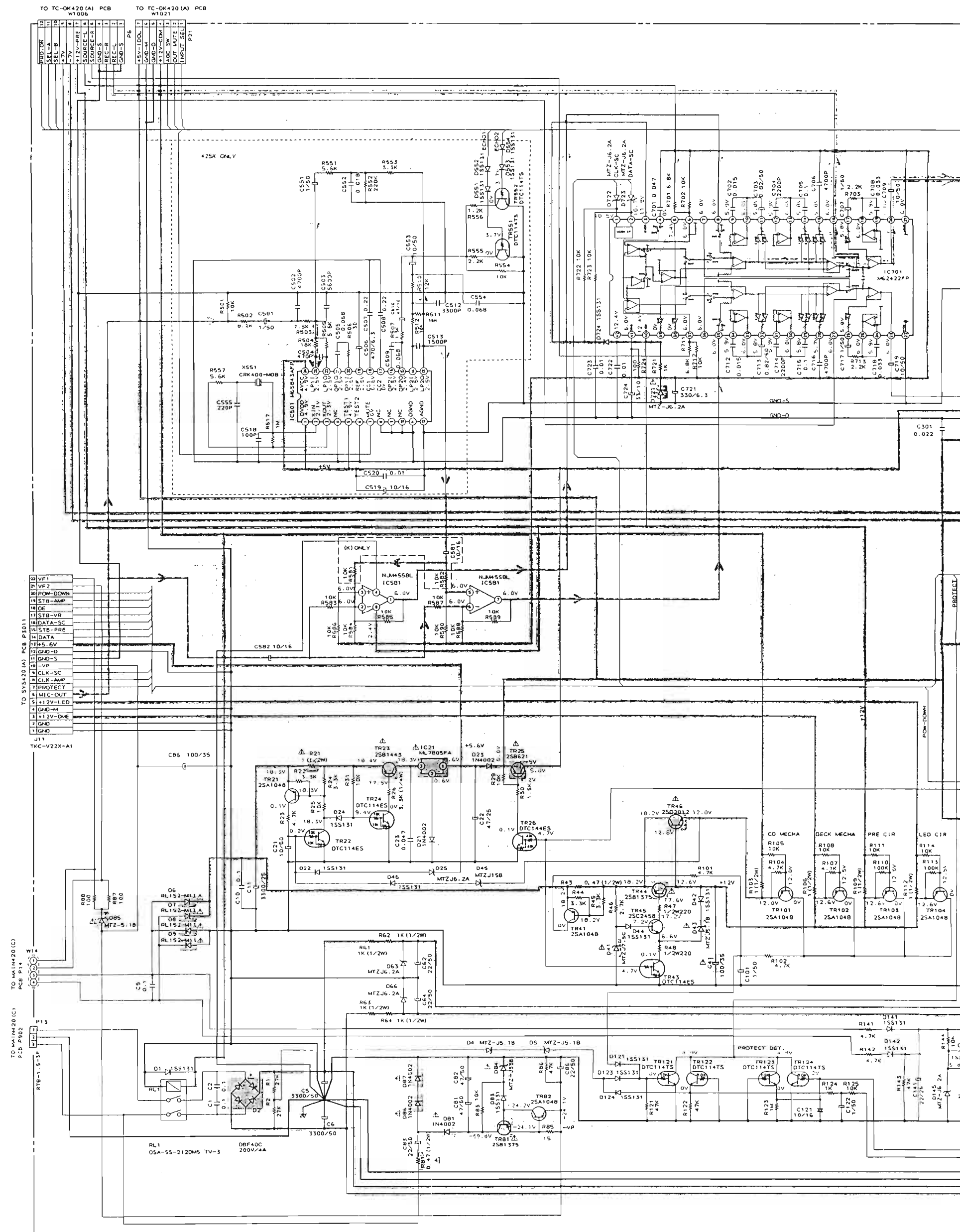
WARNING:  $\Delta$  AND  $\square$  INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT:  $\Delta$  ET  $\square$  ILS INDIQUENT LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

NOTE  
 UNLESS OTHERWISE SPECIFIED  
 ALL RESISTORS IN OHMS  
 ALL CAPACITORS IN  $\mu$ F (P-PF)  
 ALL ELECTROLYTIC CAPACITORS IN  $\mu$ F/WV

AC-420/423R/425K  
 AC-620/623R/625K  
 CONNECTION DIAGRAM  
 NO.5-1 C105801M<sub>A1</sub>

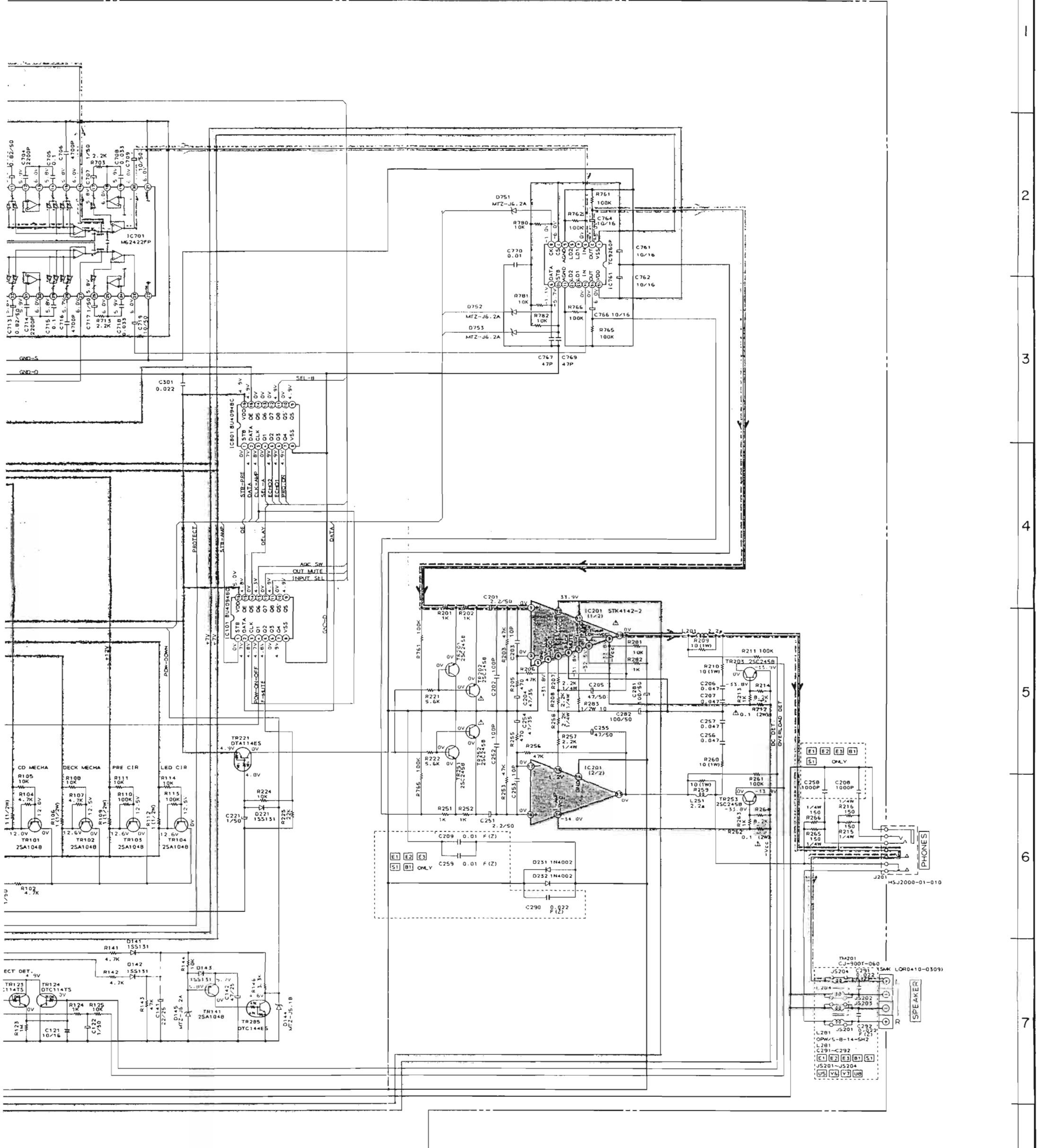




MAIN420 (A) PCB C1058A501A

B (POWER SUPPLY) LINE  
 L-CM MAIN SIGNAL LINE  
 MIC SIGNAL LINE  
 DELAYED SIGNAL LINE

WARNING: ⚠ AND (NO) COMPONENTS FOR REPLACE SAFETY ONLY WITH MANUFACTURER'S PARTS  
 AVERTISSEMENT: ⚠ ET (NO) COMPOSANTS CR POUR MAINTENIR DE L'APPAREIL. PIÈCES RECOMMANDEES



B (POWER SUPPLY) LINE  
 L-CH MAIN SIGNAL LINE  
 MIC SIGNAL LINE  
 DELAYED SIGNAL LINE

WARNING:  $\Delta$  AND  $\square$  INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT:  $\Delta$  ET  $\square$  ILS INDICENT LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.

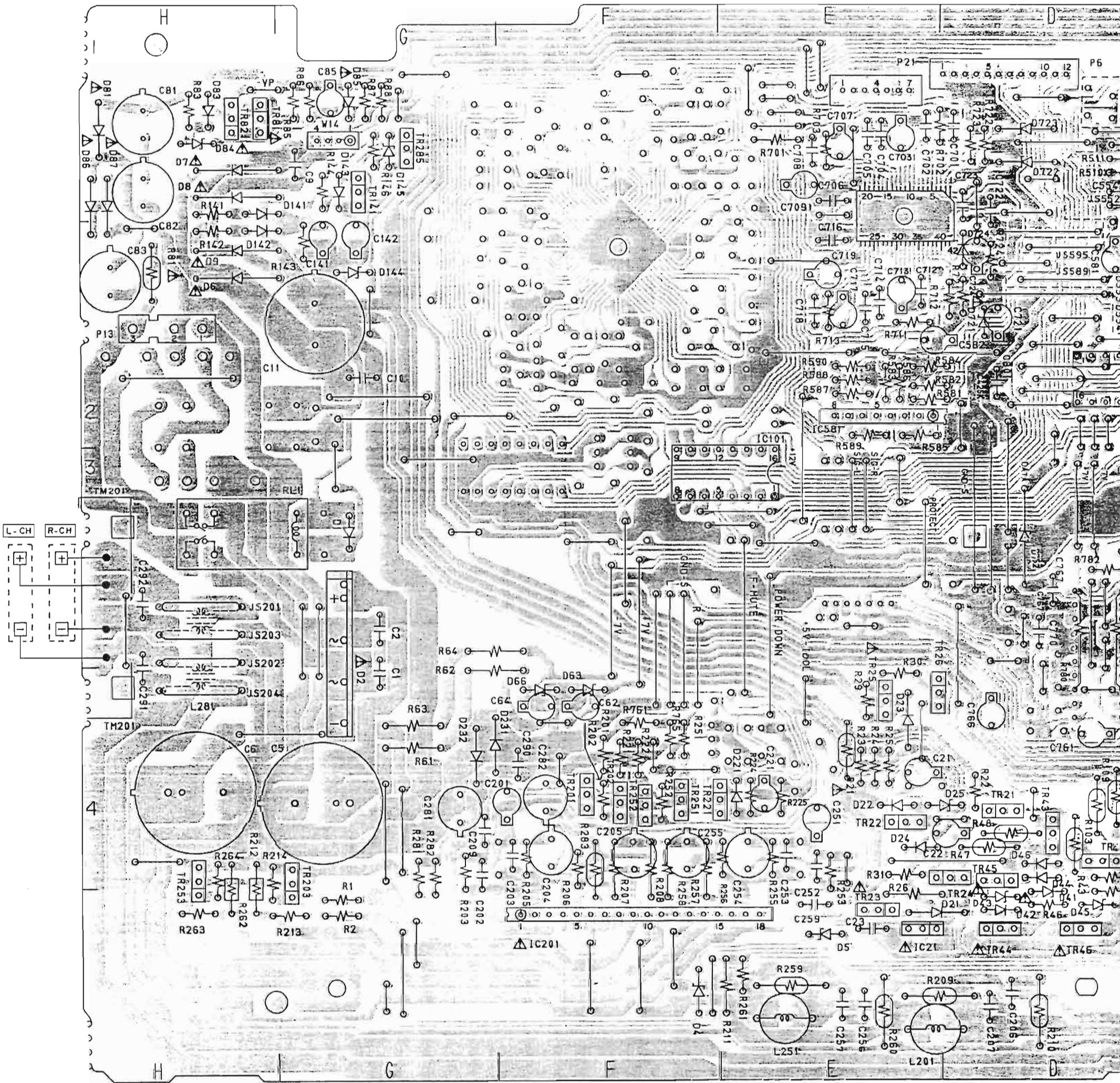
NOTE: UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN  $\Omega$ 'S ALL CAPACITORS IN  $\mu$ F (p-PF) ALL ELECTROLYTIC CAPACITORS IN  $\mu$ F/W

INDICATED VOLTAGES WERE MEASURED UNDER 100% TAP AND 50% PLING INPUT. (FUNCTION LINE MODE)

AC-420/423R/425K  
 MAIN  
 SCHEMATIC DIAGRAM  
 NO.5-2 C105802M  
 AD

# PRINCIPAL PARTS LOCATION

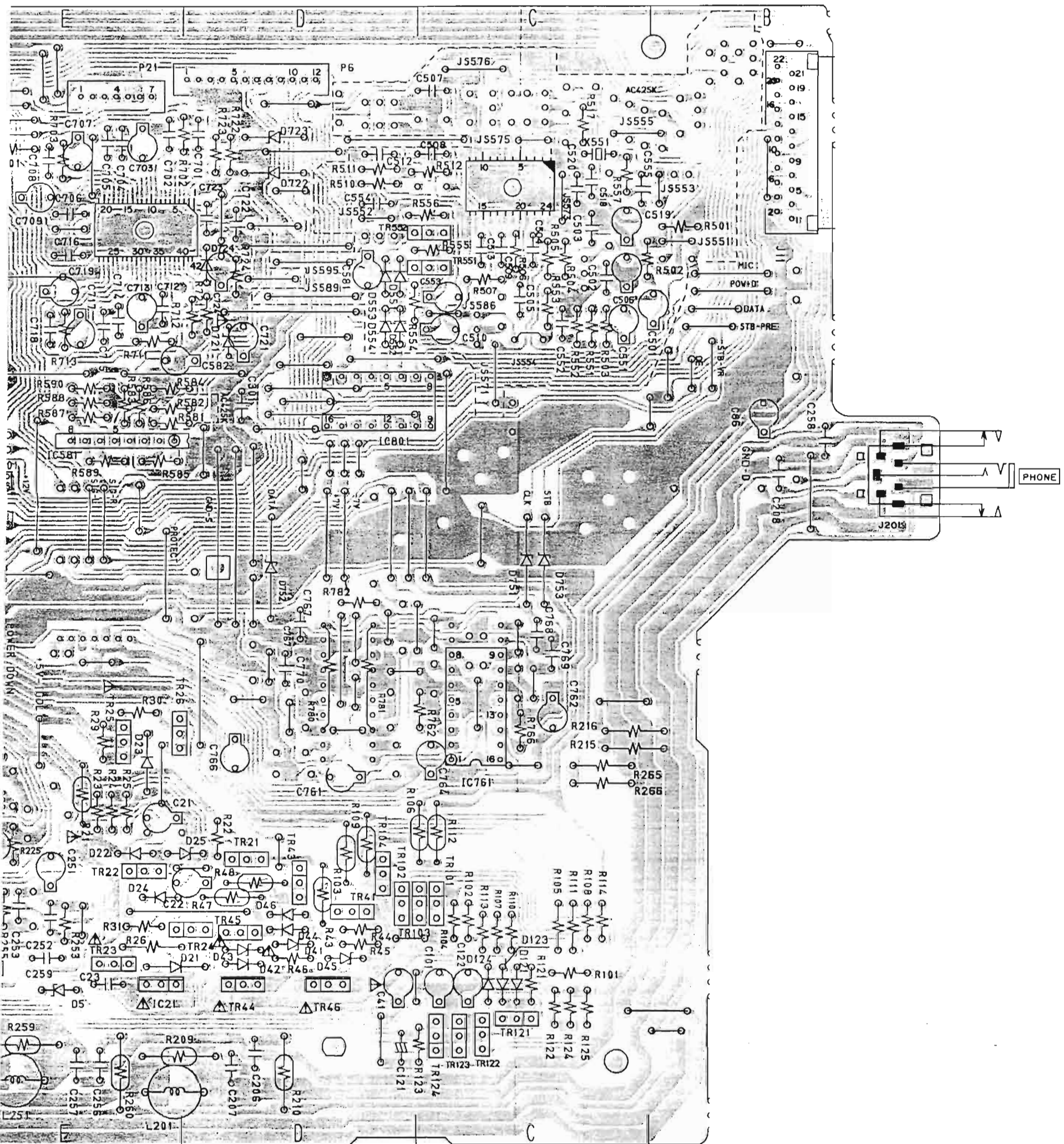
<b>ICs</b>	<b>TRANSISTORS</b>	TR46 ..... D5	TR141 ..... G1	<b>CONNECTORS</b>
IC21 ..... E5	TR21 ..... D4	TR81 ..... H1	TR201 ..... F4	J11 ..... B1
IC101 ..... E,F3	TR22 ..... E4	TR82 ..... H2	TR202 ..... F4	J201 ..... B2,3
IC201 ..... F5	TR23 ..... E5	TR101 ..... C4	TR203 ..... G4,5	P6 ..... D1
IC501 ..... C1	TR24 ..... D4	TR102 ..... D4	TR221 ..... E,F4	P13 ..... H2
IC581 ..... E2	TR25 ..... E4	TR103 ..... C4	TR251 ..... F4	P21 ..... E1
IC701 ..... E1,2	TR26 ..... D,E4	TR104 ..... D4	TR252 ..... F4	
IC761 ..... C3,4	TR41 ..... D4	TR121 ..... C5	TR253 ..... H4,5	<b>WIRE</b>
IC801 ..... D2	TR43 ..... D4	TR122 ..... C5	TR285 ..... G1	W14 ..... G1
	TR44 ..... D5	TR123 ..... C5	TR551 ..... C2	
	TR45 ..... D4	TR124 ..... C5	TR552 ..... C1	



MAIN 420(A) PCB C1058A501A



- CONNECTORS**  
 J11 ..... B1  
 J201 ..... B2,3  
 P6 ..... D1  
 P13 ..... H2  
 P21 ..... E1
- WIRE**  
 W14 ..... G1

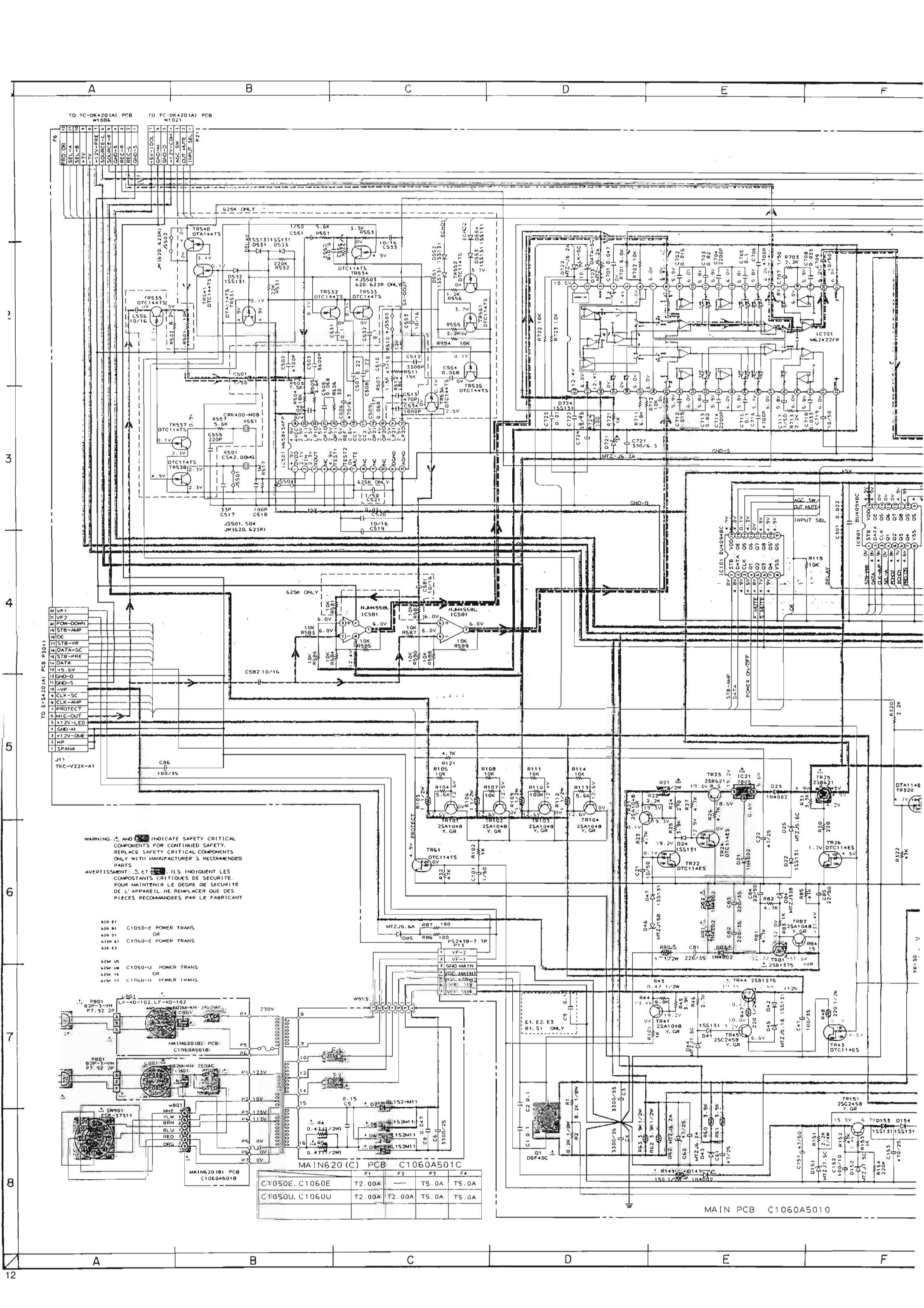


420(A) PCB CI058A501A

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.  
 REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT  
 PARTS INFORMATION.

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

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.  
 POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,  
 NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT



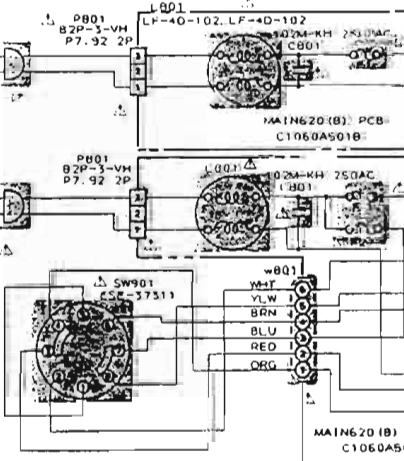
TO TC-DK420 (A) PCB W1006  
 TO TC-DK420 (A) PCB W1021

TO SYS420 (A) PCB P3011

WARNING: **▲** AND **■** INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: **▲** ET **■** ILS INDICENT LES COMPOSANTS CRITIQUES DE SECURITE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL, NE REMPLACER QUE DES PIECES RECOMMANDEES PAR LE FABRICANT.

- 630 E1 C105D-E POWER TRANS
- 630 E1 OR
- 630 E1 C106D-E POWER TRANS
- 630 E3
- 635 U6 C105D-U POWER TRANS
- 635 U6 OR
- 635 V4 C106D-U POWER TRANS
- 635 V4



MAIN620 (C) PCB C1060A501C

	F1	F2	F3	F4
C1050E, C1060E	T2.00A	—	T5.0A	T5.0A
C1050U, C1060U	T2.00A	T2.00A	T5.0A	T5.0A

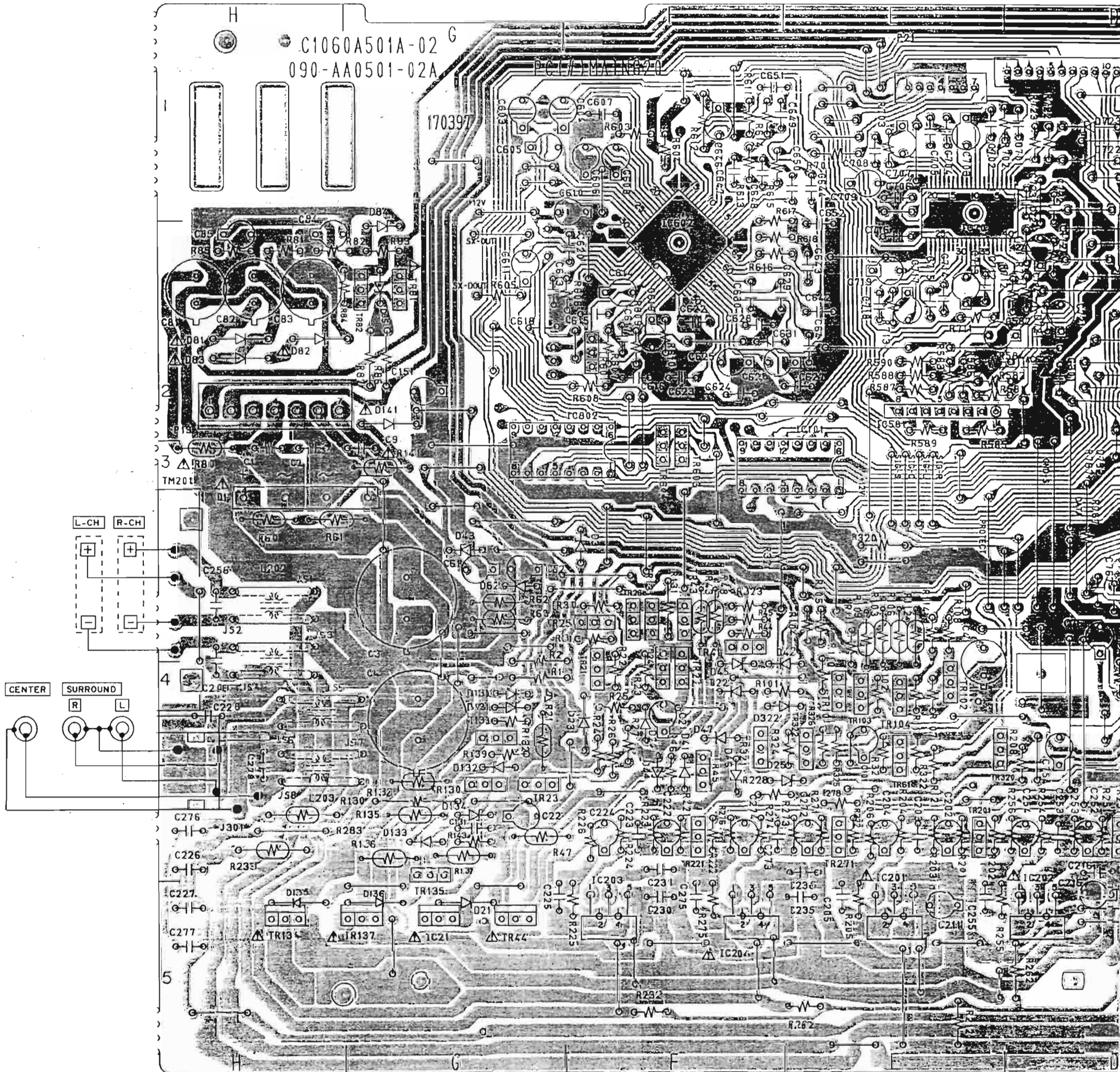
MAIN PCB C1060A5010





### PRINCIPAL PARTS LOCATION

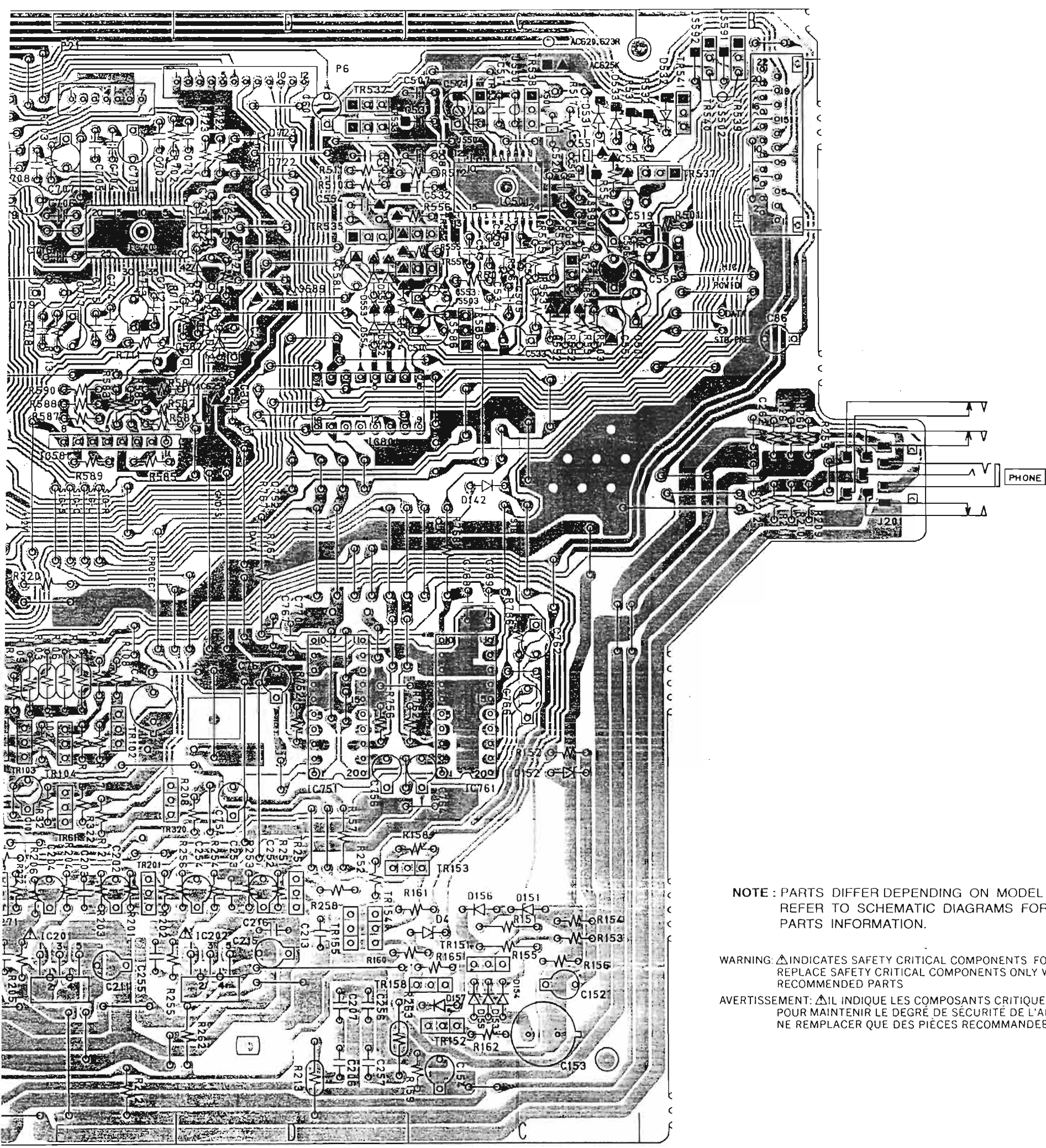
ICs	IC802 ..... F,G3	TR81 ..... G2	TR153 ..... C,D4	TR534 ..... C2	CONNECTORS
IC21 ..... G5	<b>TRANSISTORS</b>	TR82 ..... G2	TR154 ..... D5	TR535 ..... D1,2	J11 ..... B1
IC101 ..... E,F3	TR21 ..... F4	TR101 ..... E4	TR155 ..... D5	TR536 ..... C2	J201 ..... B2,3
IC201 ..... E5	TR22 ..... F4	TR102 ..... E4	TR158 ..... C5	TR537 ..... B1	J301 ..... H4
IC202 ..... D5	TR23 ..... G4	TR103 ..... E4	TR201 ..... E4	TR538 ..... C1	P6 ..... D1
IC203 ..... F5	TR24 ..... F4	TR104 ..... E4	TR221 ..... F4	TR539 ..... B1	P13 ..... H2
IC204 ..... F5	TR25 ..... F3	TR130 ..... G4	TR251 ..... D4	TR540 ..... B1	P21 ..... E1
IC501 ..... C1	TR26 ..... F3	TR131 ..... F3	TR271 ..... E4	TR541 ..... B1	
IC581 ..... E2	TR41 ..... F3	TR132 ..... G4	TR320 ..... E4	TR551 ..... C2	
IC602 ..... F2	TR43 ..... F3	TR134 ..... H5	TR321 ..... F4	TR552 ..... C1	
IC701 ..... E1	TR44 ..... G5	TR135 ..... G4	TR322 ..... E4	TR601 ..... F2	
IC751 ..... D3,4	TR45 ..... F4	TR137 ..... G5	TR531 ..... C1	TR603 ..... F3	
IC761 ..... C3,4	TR61 ..... E4	TR151 ..... C5	TR532 ..... D1	TR604 ..... F3	
IC801 ..... D2		TR152 ..... C5	TR533 ..... D1		



MAIN620(A) PCB C1060A501A



1534 .....	C2	<b>CONNECTORS</b>	
1535 .....	D1,2	J11 .....	B1
1536 .....	C2	J201 .....	B2,3
1537 .....	B1	J301 .....	H4
1538 .....	C1	P6 .....	D1
1539 .....	B1	P13 .....	H2
1540 .....	B1	P21 .....	E1
1541 .....	B1		
1551 .....	C2		
1552 .....	C1		
1601 .....	F2		
1603 .....	F3		
1604 .....	F3		



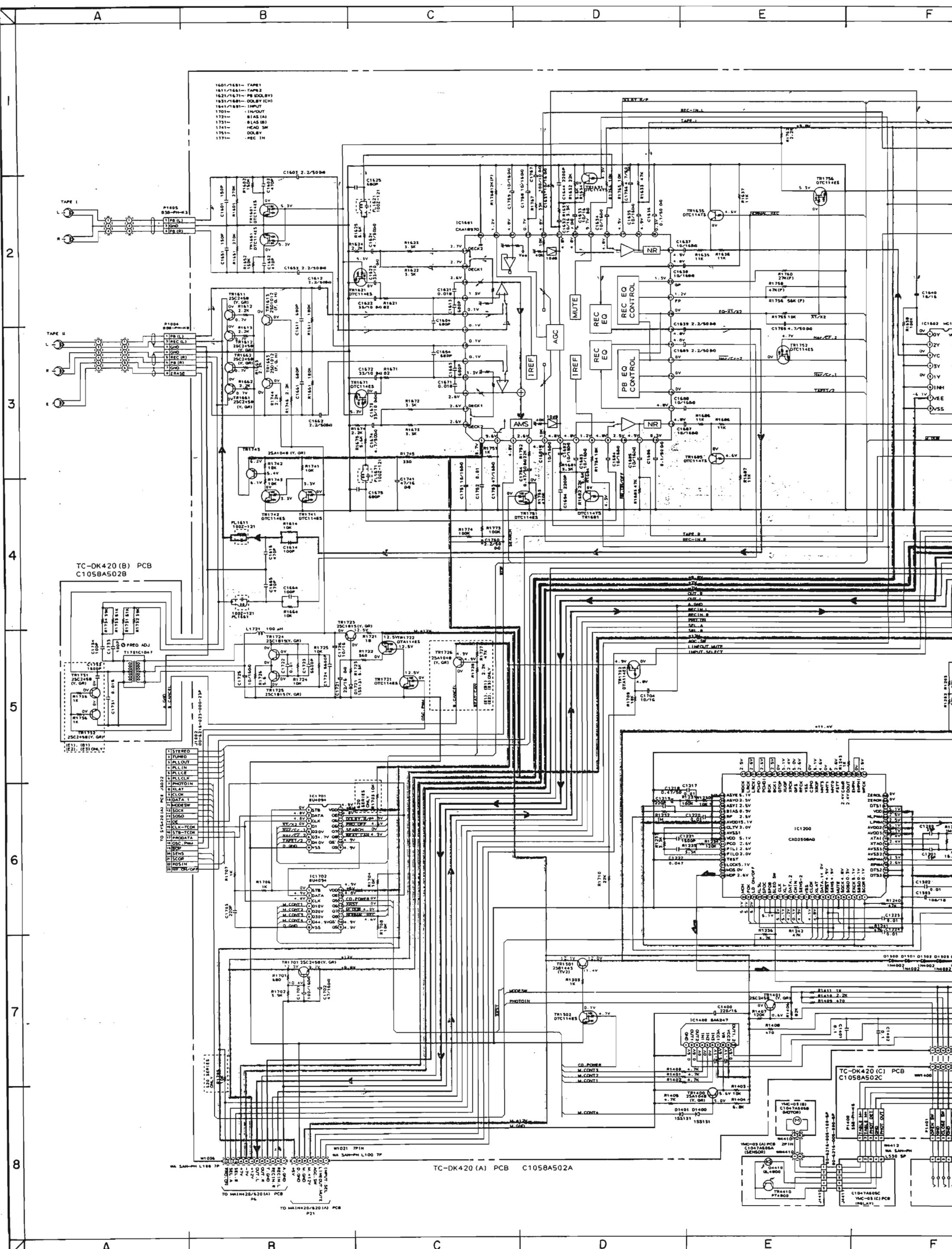
**NOTE :** PARTS DIFFER DEPENDING ON MODEL NUMBER.  
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT  
PARTS INFORMATION.

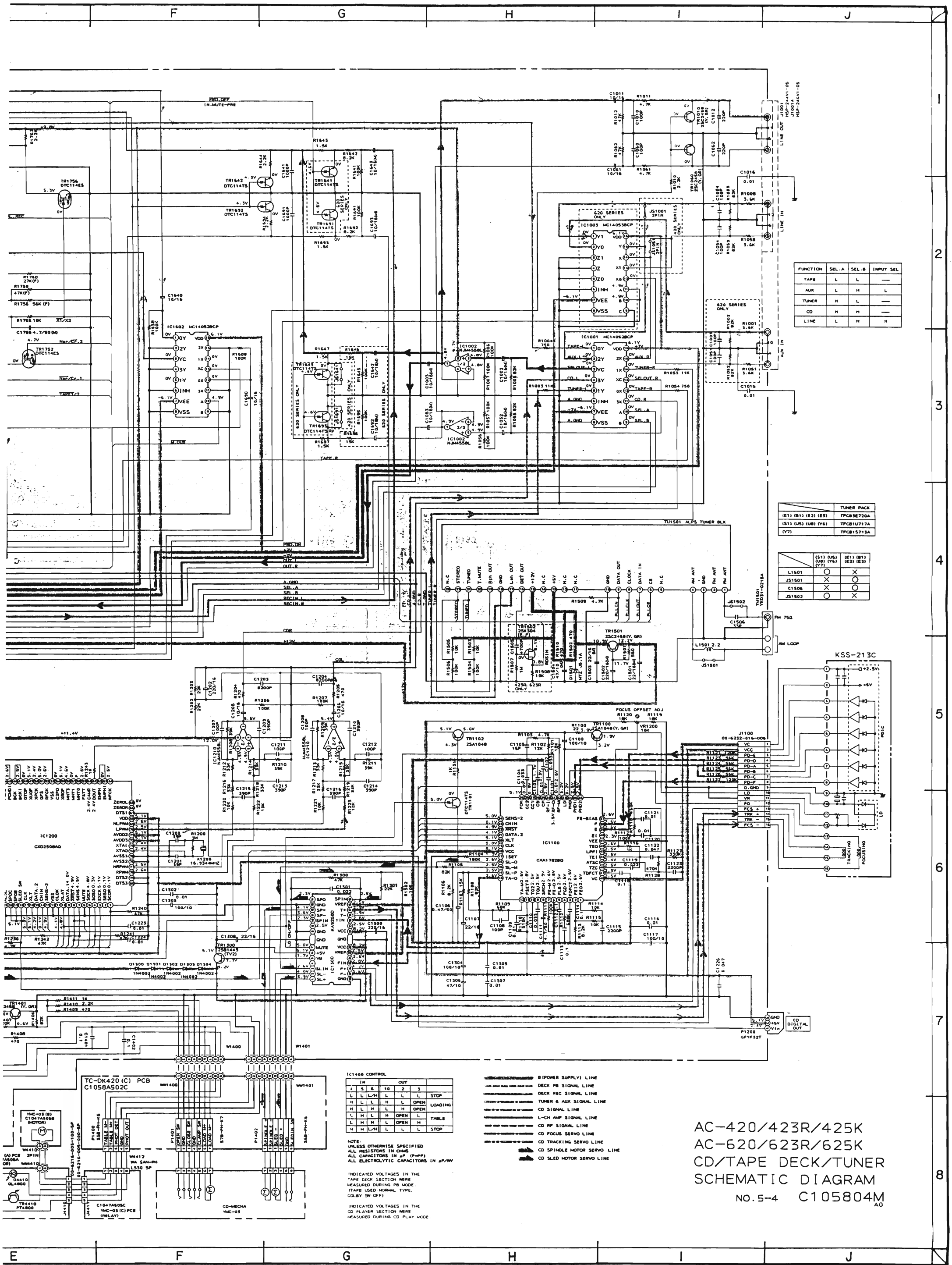
**WARNING:** ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.  
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S  
RECOMMENDED PARTS

**AVERTISSEMENT:** ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.  
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,  
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

A501A







FUNCTION	SEL. A	SEL. B	INPUT SEL.
TAPE	L	L	—
AUX	L	H	L
TUNER	H	L	—
CD	H	H	—
LINE	L	H	H

	TUNER PACK			
(E1) (B1) (E2) (E3)				TPCB5E720A
(S1) (U5) (U8) (Y6)				TPCB1U717A
(Y7)				TPCB1S718A

	(S1) (U5)	(E1) (E3)
L1501	○	○
J5101	○	○
C1506	○	○
J5102	○	○

IC1400 CONTROL

IN	OUT
1	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
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95	95
96	96
97	97
98	98
99	99
100	100

NOTE: UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN CHAS. ALL CAPACITORS IN  $\mu$ F (P=PPF) ALL ELECTROLYTIC CAPACITORS IN  $\mu$ F/WV

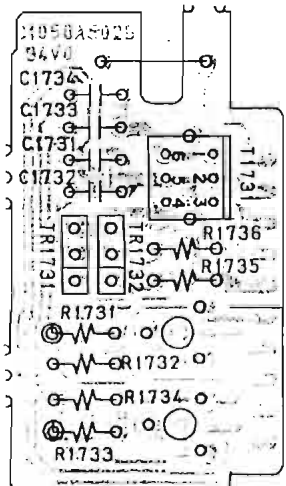
INDICATED VOLTAGES IN THE TAPE DECK SECTION WERE MEASURED DURING PB MODE. (TAPE USED NORMAL TYPE. COLBY 5M OFF)

INDICATED VOLTAGES IN THE CD PLAYER SECTION WERE MEASURED DURING CD PLAY MODE.

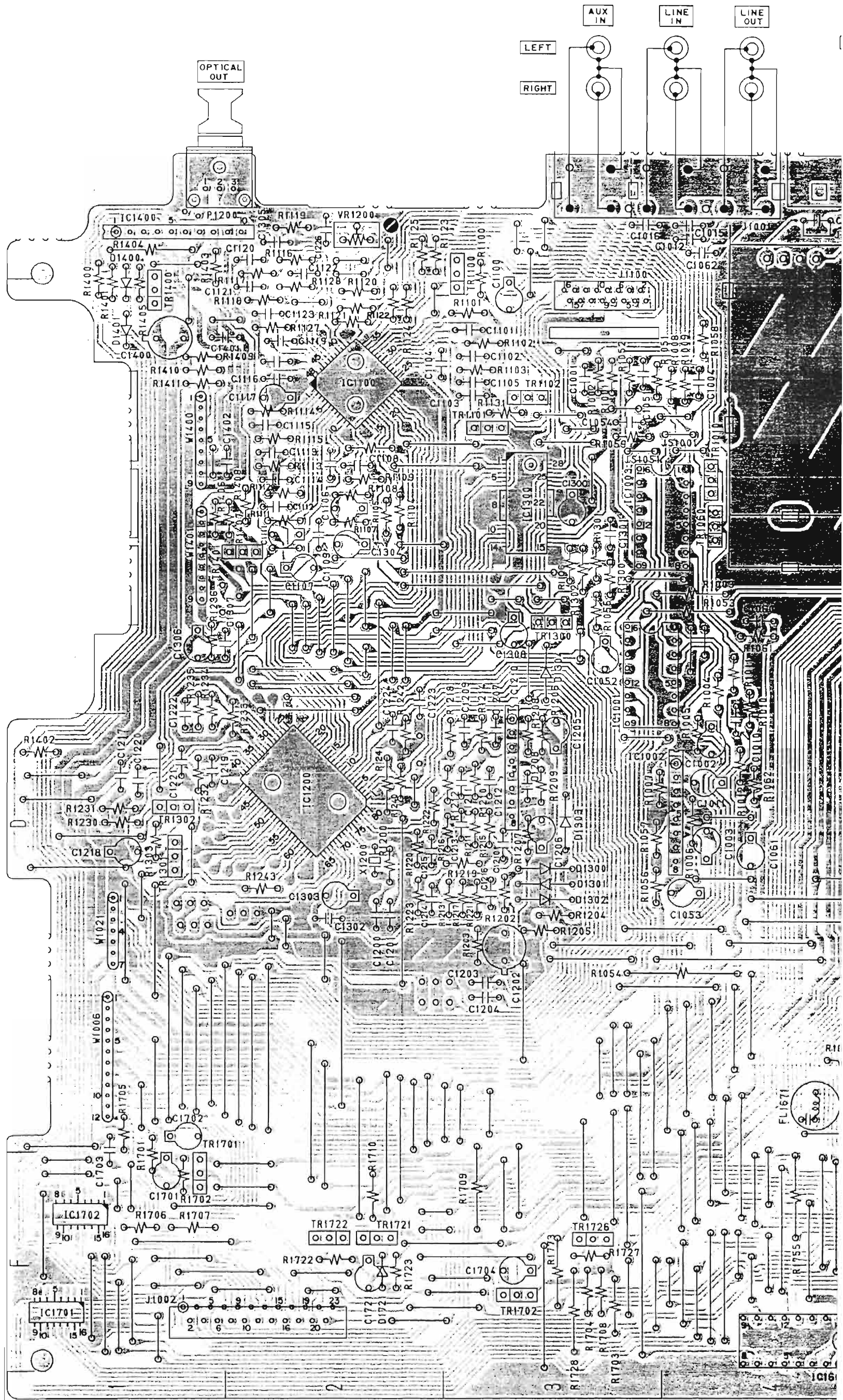
AC-420/423R/425K  
 AC-620/623R/625K  
 CD/TAPE DECK/TUNER  
 SCHEMATIC DIAGRAM  
 NO. 5-4 C105804M  
 A0

**PRINCIPAL PARTS LOCATION**

<b>ICs</b>		TR1661 .....	D6
IC1001 .....	C3	TR1662 .....	D6
IC1002 .....	D4	TR1663 .....	D6
IC1003 .....	B,C,3,4	TR1671 .....	E6
IC1100 .....	B2	TR1681 .....	D5
IC1200 .....	D2	TR1685 .....	F5
IC1210 .....	D3	TR1691 .....	D5
IC1300 .....	B,C3	TR1692 .....	D5
IC1400 .....	A1	TR1693 .....	D5
IC1601 .....	E5	TR1701 .....	F1
IC1602 .....	F4	TR1702 .....	F3
IC1701 .....	F1	TR1721 .....	F2
IC1702 .....	F1	TR1722 .....	F2
		TR1723 .....	C6
		TR1724 .....	C6
		TR1725 .....	C6
		TR1726 .....	F3
		TR1741 .....	E6
		TR1742 .....	E6
		TR1743 .....	D,E6
		TR1751 .....	D5
		TR1752 .....	F5
		TR1756 .....	C5
<b>TRANSISTORS</b>			
TR1010 .....	B4		
TR1060 .....	C4		
TR1100 .....	A,B3		
TR1101 .....	B3		
TR1102 .....	B3		
TR1300 .....	C3		
TR1301 .....	D1		
TR1302 .....	D1		
TR1400 .....	B1		
TR1401 .....	C2		
TR1501 .....	B6		
TR1502 .....	A6		
TR1601 .....	E6		
TR1611 .....	D6		
TR1612 .....	D6		
TR1613 .....	D6		
TR1621 .....	F6		
TR1631 .....	F5		
TR1635 .....	F5		
TR1641 .....	F5		
TR1642 .....	F5		
TR1643 .....	F5		
TR1651 .....	E6		
<b>CONNECTORS</b>			
TR1501 .....	B6	J1001 .....	A3,4
TR1502 .....	A6	J1002 .....	F1,2
TR1601 .....	E6	J1100 .....	B3
TR1611 .....	D6	P1004 .....	D6
TR1612 .....	D6	P1005 .....	E6
TR1613 .....	D6	P1200 .....	A1,2
TR1621 .....	F6		
TR1631 .....	F5		
TR1635 .....	F5		
TR1641 .....	F5		
TR1642 .....	F5		
TR1643 .....	F5		
TR1651 .....	E6		
<b>WIRES</b>			
TR1501 .....	B6	W1006 .....	E1
TR1502 .....	A6	W1201 .....	D,E1
TR1601 .....	E6	W1400 .....	B1
TR1611 .....	D6	W1401 .....	C1

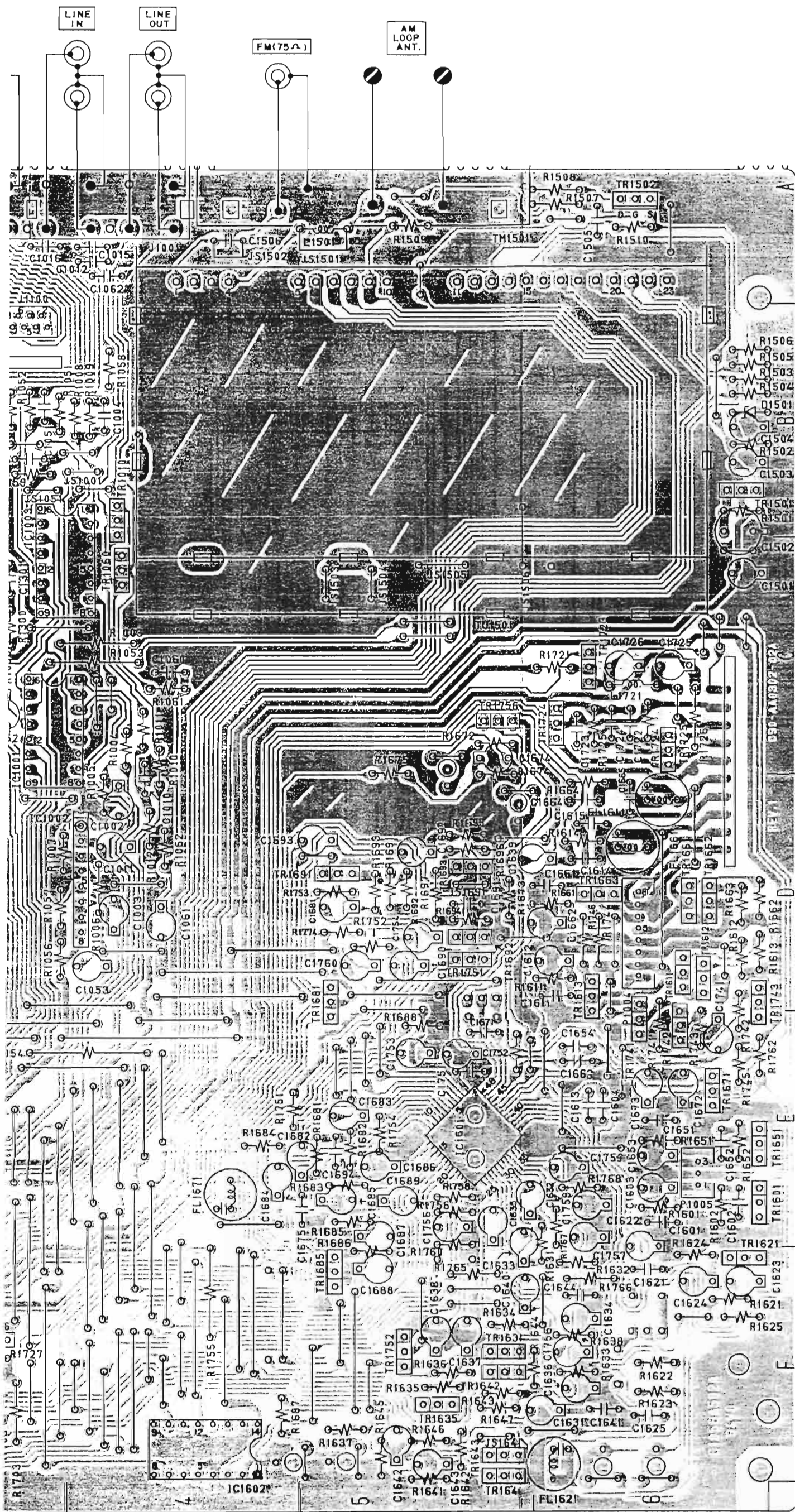


TC-DK420(B) PCB  
CI058A502B

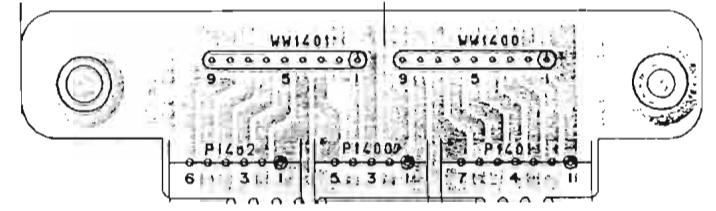


TC-DK420(A) PCB CI058A502A

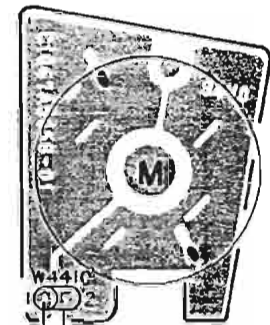




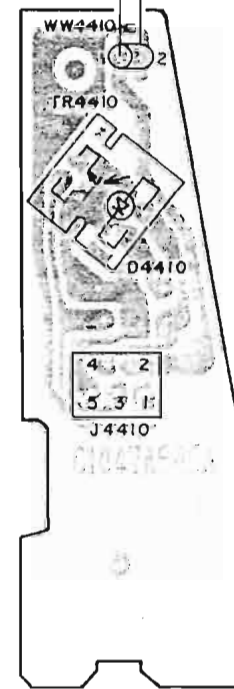
120(A) PCB CI058A502A



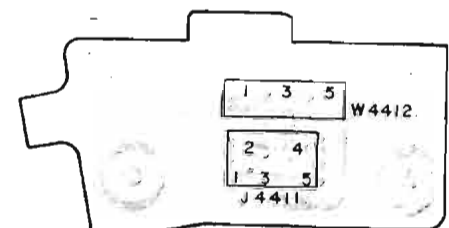
TC-DK420(C) PCB  
CI058A502C



YMC03(B) PCB  
CI047A505B

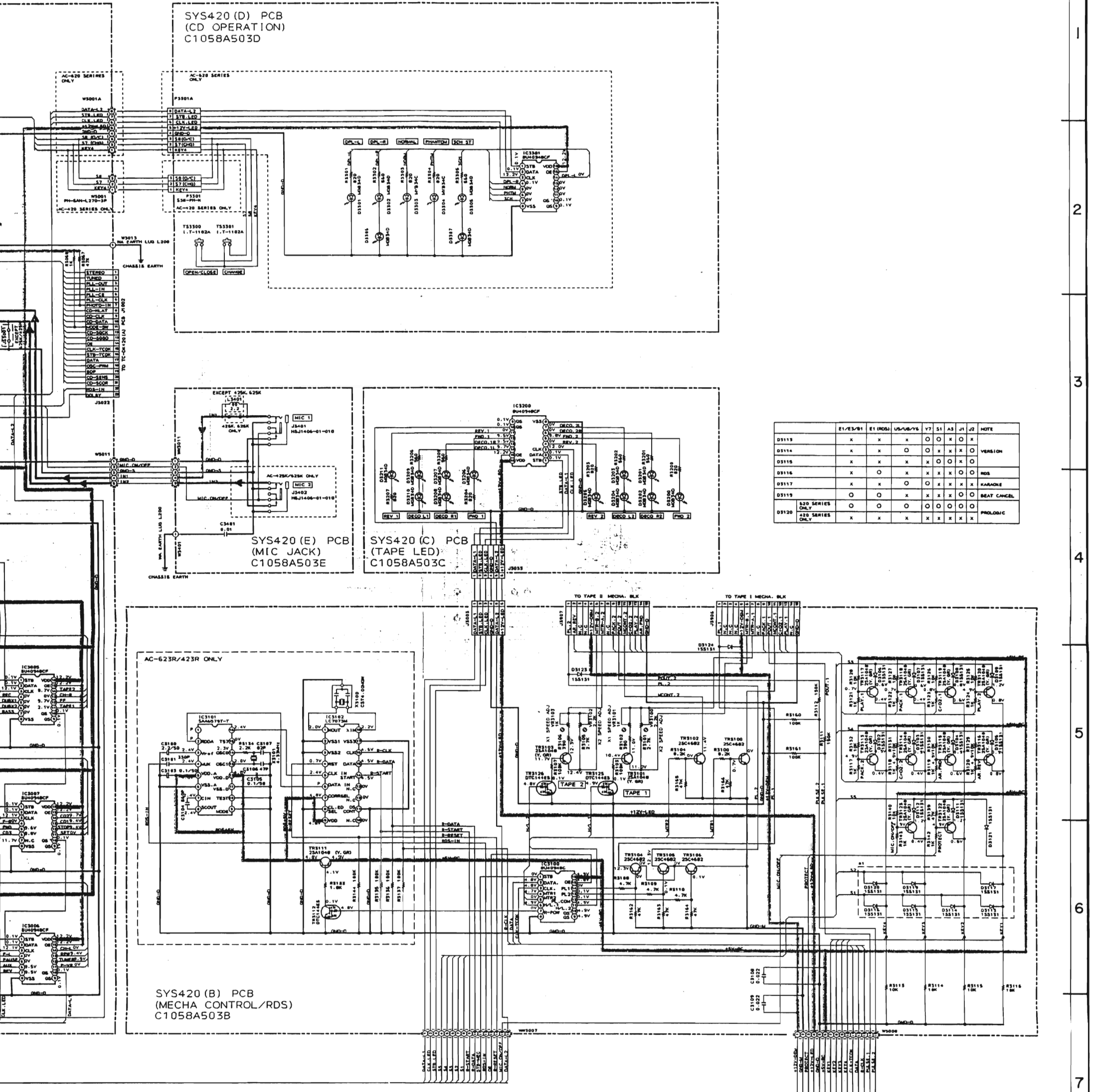


YMC03(A) PCB  
CI047A505A



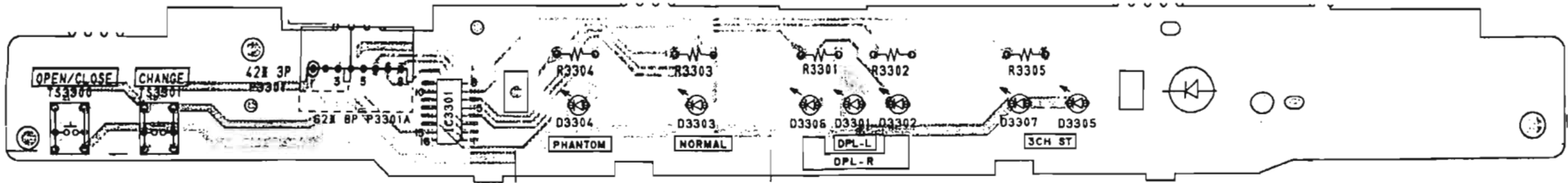
YMC03(C) PCB  
CI047A505C





AC-420/423R/425K  
 AC-620/623R/625K  
 SYSCON/MECHA. DRIVE  
 SCHEMATIC DIAGRAM  
 NO. 5-5 C105805M<sub>A0</sub>

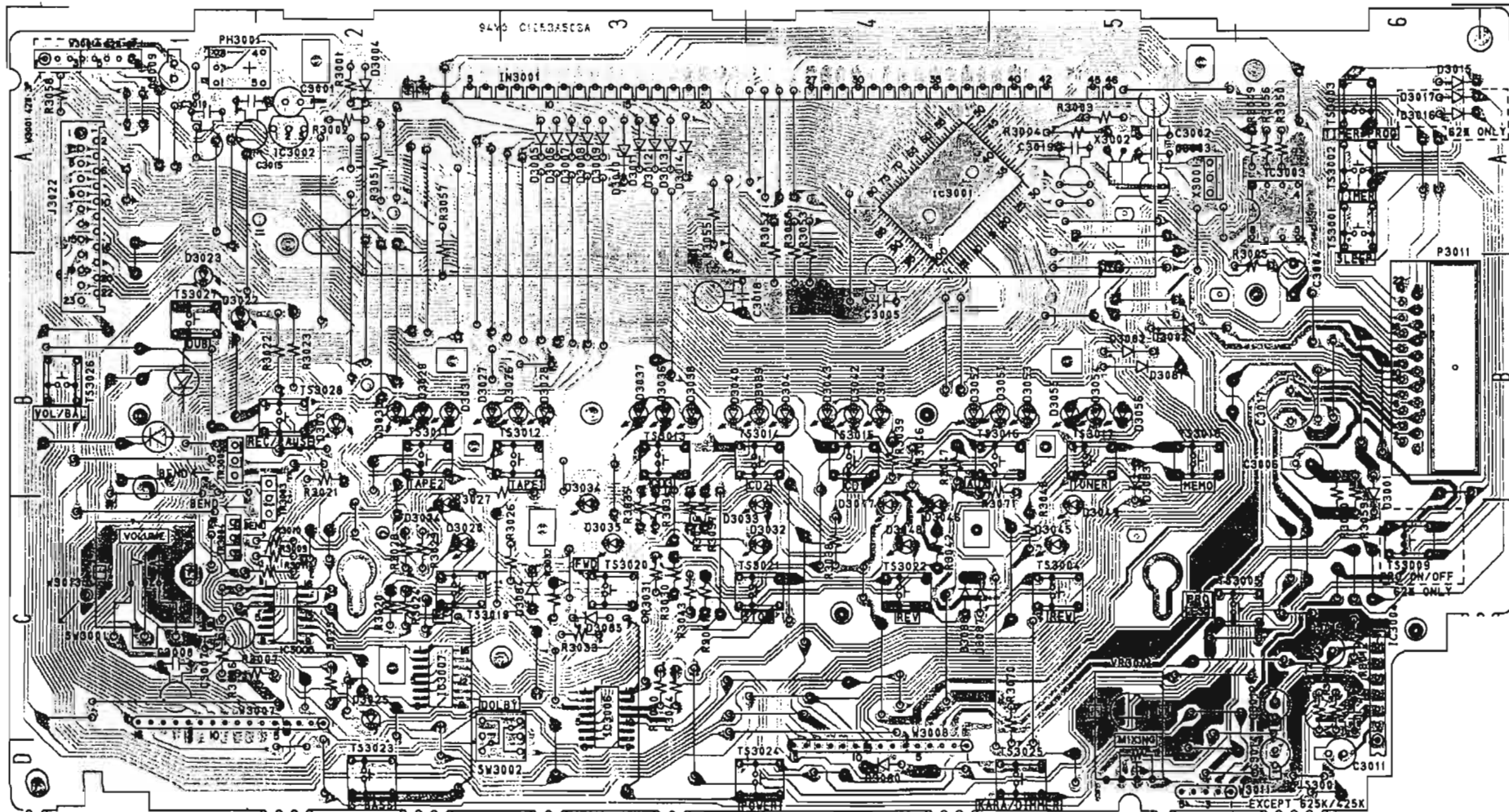




\*NOTE

42\*: 420 SERIES  
62\*: 620 SERIES

SYS420(D) PCB CI058A503D

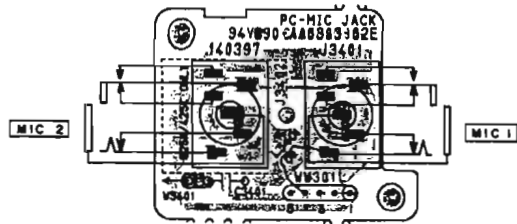


SYS420(A) PCB CI058A503A

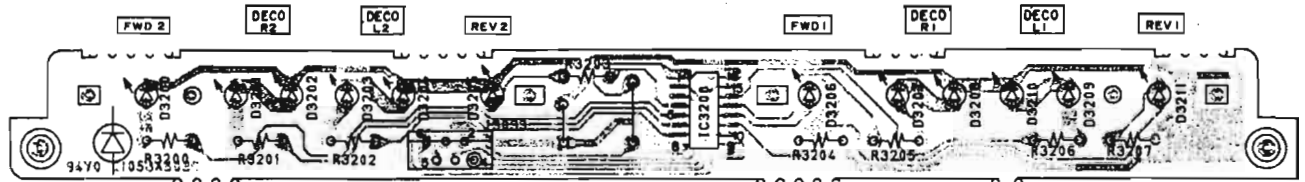
\*NOTE

42\* INDICATES THE 420 SERIES MODELS.  
62\* INDICATES THE 620 SERIES MODELS.

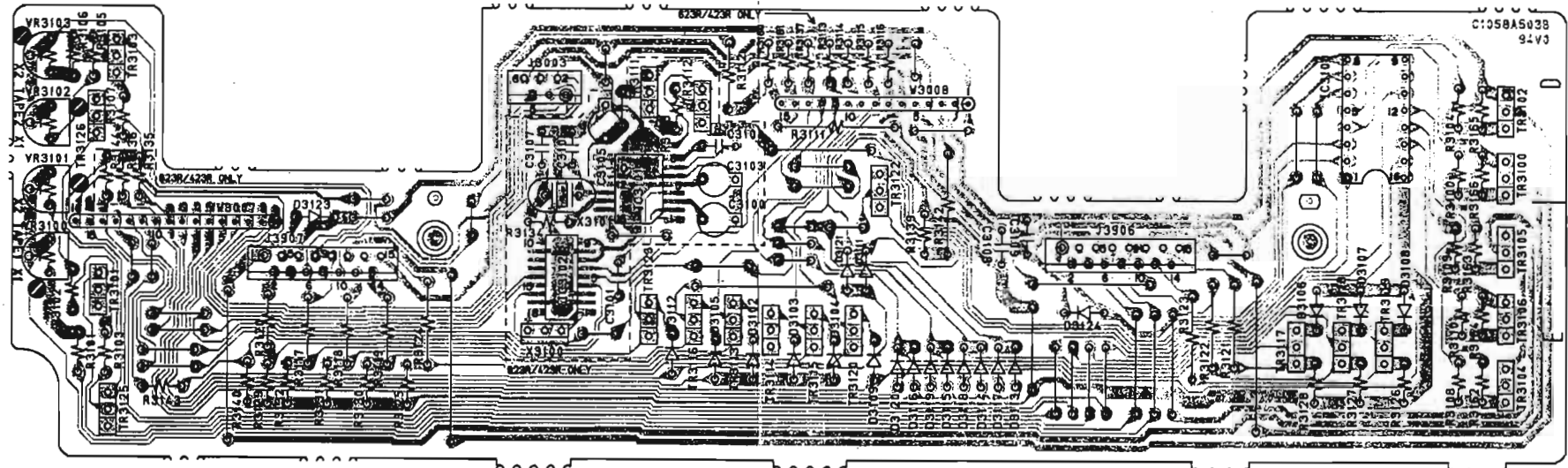
NOTE: PARTS DIFFER DEPENDING ON MODEL NUMBER.  
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT  
PARTS INFORMATION.



SYS420(E) PCB CI058A503E



SYS420(C) PCB CI058A503C



SYS420(B) PCB CI058A503B

NOTE: PARTS DIFFER DEPENDING ON MODEL NUMBER.  
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT  
PARTS INFORMATION.



## INFORMATION OF ICS

### CXA1782BQ (CD RF I-V AMP/RF AMP)

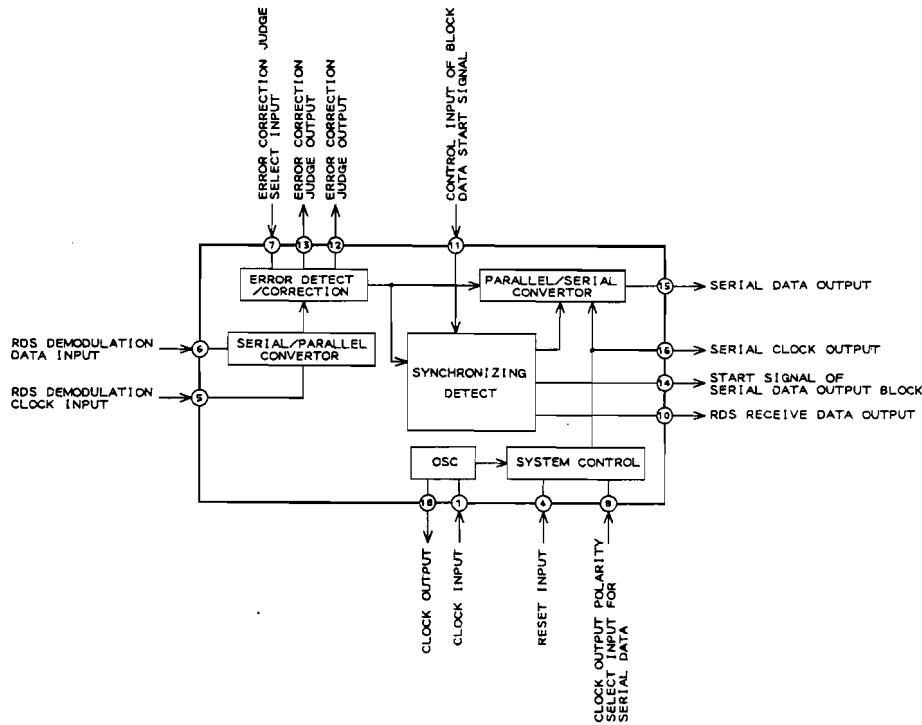
PIN No.	PORT NAME	I/O	FUNCTION
1	FEO	O	Focus drive output.
2	FEI	I	Focus error signal input.
3	DFDCT	I	Time constant capacitor connecting terminal at time of defect.
4	FGD	I	Connect condenser for Focus servo gain control.
5	FLB	I	Connect condenser for Focus servo correction.
6	FE-O	O	Focus drive output.
7	FE-M	I	FOCUS AMP Inverting input.
8	SRCH	I	Connect condenser for Focus search wave.
9	TGU	I	Connect condenser for Trackink gain select.
10	TG2	I	Connect condenser for Tracking gain select.
11	FSET	I	Terminal for peak setting for Focus tracking phase compensation.
12	TA-M	I	Tracking AMP Inverting input.
13	TA-O	O	Tracking drive output.
14	SL-P	I	Sled AMP non-inverting input.
15	SL-M	I	Sled AMP Inverting input.
16	SL-O	O	Sled drive output.
17	ISET	I	Focus search, Track jump and slide kick current input.
18	Vcc	-	+5 V
19	CLK	I	Clock signal input from the CD MI-COM.
20	XLT	I	Lutch signal input from the CD MI-COM.
21	DATA	I	Data signal input from the CD MI-COM.
22	XRST	I	RESET input.
23	C.OUT	O	Track count signal output.
24	SENS	O	FZC,DFCT,TZC,GAIN and BAL output.
25	FOK	O	Focus OK signal output.
26	CC2	I	Input terminal of DEFECT bottom hold output which is supplied through capacitor.
27	CC1	O	DEFECT bottom hold output terminal.
28	CB	I	DEFECT bottom hold capacitor connecting terminal.
29	CP	I	Terminal for connection of MIRR hold capacitor. (Non inverted input terminal of MIRR comparator.)
30	RF-I	I	Input terminal of RF summing AMP output which is supplied through a capacitor.
31	RF-O	O	RF summing AMP output.
32	RF-M	I	RF summing AMP inverted input terminal.
33	LD	O	APC AMP output terminal.
34	PHD	I	APC AMP input terminal.
35	PHD1	I	RF I-V AMP inverted input terminal (for photo diode A+C of pick up)
36	PHD2	I	RF I-V AMP inverted input terminal (for photo diode B+D of pick up)
37	FE-BIAS	I	Terminal for bias adjustment of focus error amp.
38	F	I	RF I-V AMP inverted input terminal (for photo diode F of pick up)
39	E	I	RF I-V AMP inverted input terminal (for photo diode E of pick up)
40	EI	-	Not used
41	VEE	-	GND
42	TEO	O	Tracking error amp output terminal. (E-F signal output.)
43	LPMI	I	BAL adjustment of comperator input terminal.
44	TEI	I	Tracking error input terminal.
45	ATSC	I	Window comperator input input terminal for ATSC detection.
46	TZC	I	Input terminal of tracking zero cross comparator.
47	TDFCT	I	Time constant capacitor connecting terminal at time of defect.
48	VC	O	(Vcc+VEE)/2 DC voltage output terminal.

### CXD2508AQ (CD DIGITAL SIGNAL PROCESS & SYSTEM CONTROL MI-COM)

Pin No.	PORT NAME	I/O	FUNCTION
1	SCOR	O	H output when either sub code S0 or S1 is detected.
2	SBSO	O	Serial output of Sub P to W.
3	EXCK	I	Clock input for SBSO read out.
4	SQSO	O	Serial output of SUBQ 80 bit.
5	SQCK	I	Clock input for SQSO read out.
6	MUTE	I	Muteing control. (H : MUTE, L : CANCEL)
7	SENS	O	SENS output. Output to the OPERATION MI-COM.
8	XRST	I	System reset. Reset at L.
9	DATA	I	Serial data input from THE OPERATION MI-COM.
10	XLAT	I	Latch input from the OPERATION MI-COM. (Latching of serial data at falling edge of the pulse.)
11	CLOK	I	Serial data transmission clock input from the OPERATION MI-COM.
12, 53	Vss	-	GND
13	SEIN	I	Sense input from SSP.
14	CNIN	I	Track jump number count signal input.
15	DATO	O	Serial data output to SSP.
16	XLTO	O	Serial data latch output to SSP. (Latching at falling edge of the pulse.)
17	CLKO	O	Serial data transmission clock output to SSP.
18	SLED SW	I	Innermost position ON/OFF detection input of sled motor. (Input A)
19	SPOB	I	Innermost position ON/OFF detection input of sled motor. (Input B)
20	SPOC	I	Innermost position ON/OFF detection input of sled motor. (input C)
21	XLSL	I	X'tal selection input terminal. L when X'tal is 16.9344 MHz. H when 33.8688 MHz.
22	LD ON/OFF	O	Laser diode ON/OFF control.
23	FOK	I	Focus OK input terminal. For SENS output and servo automatic sequencer.
24	MON	-	Not used
25	MDP	O	Servo control for spindle motor.
26	MDS	-	Not used
27	LOCK	-	Not used
28	TEST	-	Regular GND for TEST terminal.
29	FILO	O	Filter output for master PLL. (slave = digital PLL)
30	FILI	I	Filter input for master PLL.
31	PCO	O	Charge pump output for master PLL.
33, 75, 76	AVss1 ~ 3	-	GND
34	CLTV	I	VCO control voltage input for master.
36	RF	I	EFM signal input.
37	BIAS	I	Asymmetry circuit constant current input.
38	ASYI	I	Asymmetry compilasion voltage input.
39	ASYO	O	EFM full swing output. (L = Vss, H = VDD)
40	ASYE	I	L : Asymmetry circuit OFF H : Asymmetry circuit ON.
41	WDCK	-	Not used
42	LRCK	O	D/A interface for 48 bit slot. LR clock f = Fs
43	LRCKI	I	LR clock input to DAC.
44	PCMD	O	Serial data from D/A interface.
45	PCMDI	I	Audio data input to DAC.
46	BCK	O	Bit clock from D/A interface.
47	BCKI	I	Bit clock input to DAC.
48	GTOP	-	Not used
49	XUGF	-	
50	XPCK	-	
51	GFS	-	
52	RFCK	-	
54	C2PO	-	
55	XROF	-	
56	MNT3	-	
57	MNT1	-	
58	MNT0	-	
59	FSTT	-	
60	C4MR	-	
61	DOUT	O	

Pin No.	PORT NAME	I/O	FUNCTION
62	EMPH	O	H output when a playback disc is emphasised. L output when no emphasis.
63	EMPHI	I	De-emphasis control input. (H : ON, L : OFF)
64	WFCK	O	WFCK (Write Frame Clock) output.
65	ZEROL	-	Not used
66	ZEROR	-	Not used
67, 79, 80	DTS1 ~ 3	-	GND
69	NLPWM	O	L-ch PWM output. (opposite phase)
70	LPWM	O	L-ch PWM output. (in-phase)
73	XTAI	I	33.8688 MHz X'tal oscillation circuit input.
74	XTAO	O	33.8688 MHz X'tal oscillation circuit output.
77	NRPWM	O	R-ch PWM output. (opposite phase)
78	RPWM	O	R-ch PWM output. (in-phase)

### LC7073M (RDS DATA PROCESS)

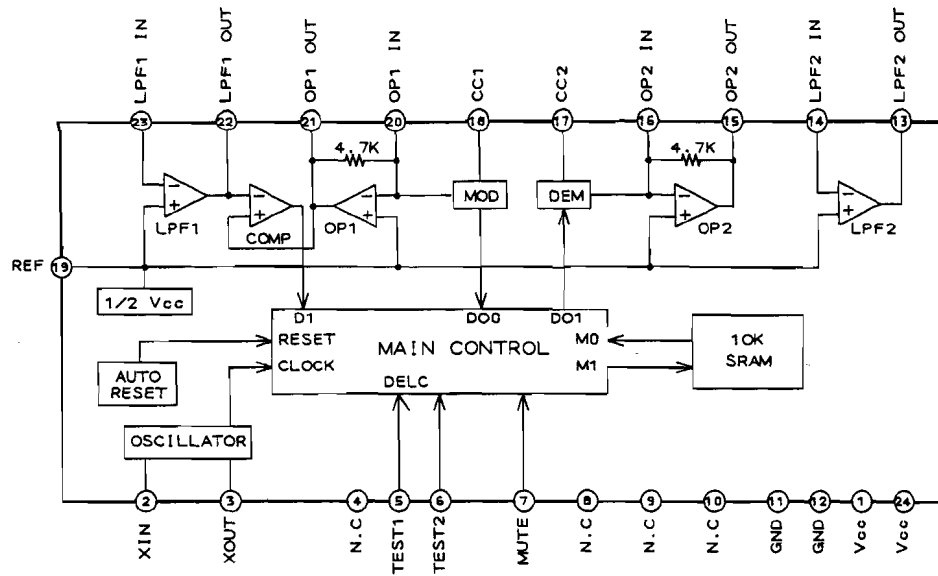


### M38197MA-173FP/174FP (SYSTEM CONTROL MI-COM)

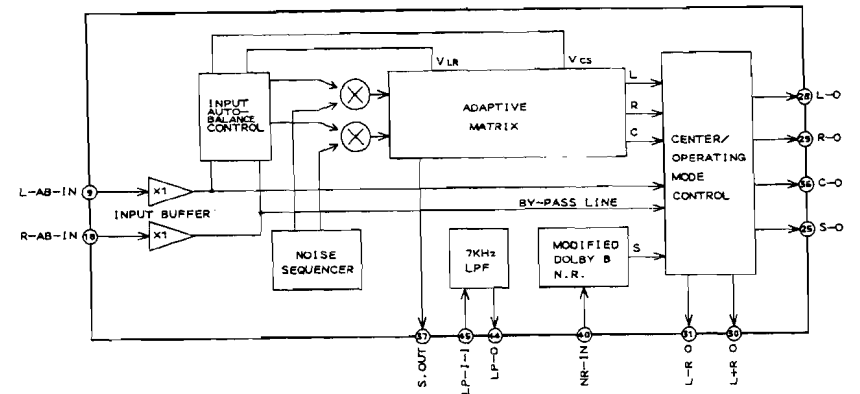
Pin No	PORT NAME	I/O	FUNCTION
1	PLL CLK	O	PLL clock signal output to the TUNER UNIT.
2	MAIN VR1	I	2 bit encoder input for electric volume control.
3	MAIN VR2	I	
4	PULSE 1	I	TAPE 1 reel pulse input.
5	PULSE 2	I	TAPE 2 reel pulse input.
6	LEVEL S	I	A/D input for surround level meter. (720 series only)
7	LEVEL C	I	A/D input for center level meter. (720 series only)
8	SPAN A	I	A/D input for spectrum analyzer indication. (520/720 series only)
9	CLK LED	O	Clock output for LED section expansion IC.
10	PLL OUT	O	PLL control output to the TUNER UNIT.
11	STB FLD	O	Strobe pulse output to DOLBY PRO-LOGIC FLD drive IC. (720 series only)
12	CLK FLD	O	Clock output to DOLBY PRO-LOGIC FLD drive IC. (720 series only)
13	DATA FLD	O	Data output to DOLBY PRO-LOGIC FLD drive IC. (720 series only)
14	PHOTO IN	I	Input from the TRAY rotation position detect photo sensor.
15	CD XLAT	O	Latch output for the CD MI-COM.
16	CD CLK	O	Serial clock output to the CD MI-COM.
17	CD DATA	O	Serial data output to the CD MI-COM.
18	MODE SW	I	A/D input from the CD's open, close and clamp switches.
19	CLK TCDK	O	Clock output for controlling the expansion IC of the TUNER/CD/DECK section.
20	CD SQCK	O	SQCK clock output to the CD MI-COM.
21,85	N.C	-	No connection.
22	CD SQSO	I	SUBQ 80 bits serial input.
23	DATA DSC	O	Serial data output for controlling the DIGITAL SOUND CONTROL IC.
24	DATA	O	Serial data output to the expansion ICs (for KEY control & EVR ICs, etc.).
25	OSC PWM	O	Erasing OSC level control output.(PWM)
26	BOP	I	Blank output pulse input. (L : blank)
27	E <sup>2</sup> PR DAT	I/O	EEP ROM serial data input/output.
28	E <sup>2</sup> PR CLK	O	Serial clock output to EEP ROM.
29	CD SENS	I	Input pin for reading various data from the CD MI-COM.
30	R CLK	I	Clock input from RDS data processor.
31	CLK DSC	O	Clock output to the DIGITAL SOUND CONTROLLER.
32	REMOCON	I	Remote control signal input.
33	CLK AMP	O	Clock output to the expansion ICs (EVR, Key control, etc. among the PRE/MAIN AMP section).
34	CD SCOR	I	Sub code detect input from the CD MI-COM. (H : sub code 0 or 1 is detected)
35	RESET	I	Reset input
36	XC IN	I	32.768 kHz X'tal input for clock.
37	XC OUT	O	Output to the 32.768 kHz X'tal.
38	X IN	I	8.0 MHz X'tal input.
39	X OUT	O	Output to the 8.0 MHz X'tal.
40	GND-D	-	Digital ground.
41 - 44	KEY1 - 4	I	Key matrix input from the operation switches.
45 - 80	DIG 1 - 16	O	System FLD's grid drive output.
61 - 80	SEG 1 - 20	O	System FLD's segment drive output. (SEG 17-20 : 520/720 series only)
81	POW DOWN	I	Back up voltage detection input. (H : normal, L : Power down)
82	STB AMP	O	Strobe pulse output for AMP section expansion IC.
83	OE	O	Output enable control for expansion ICs. (L : enable, H : expansion IC output → high impedance).
84	STB VR	O	Strobe pulse output for EVR (electric volume) IC.
86	STB TCDK	O	Strobe pulse output for TUNER/DECK/CD section expansion ICs.
87	STB PRE	O	Strobe pulse output for PRE AMP section expansion IC.
88	STB MEC	O	Strobe pulse output for DECK MECHA. section expansion IC.
89	R DATA	I	Data input from RDS data processor.
90	R START	I	Start signal input from RDS data processor.
91	VCC	-	+5 V power supply.
92	R RESET	O	Reset output to RDS error correction IC. (L : reset)
93	STEREO	I	A/D input for the "STEREO" indicator.
94	TUNED	I	A/D input for the "TUNED" indicator.
95	STB LED	O	Strobe pulse output for LED section expansion IC.
96	PLL IN	I	PLL control input from the tuner unit.
97	PLL CE	O	PLL chip enable output to the tuner unit.
98	-VP	I	Negative power supply for FLD blanking.
99	VSS	-	To be grounded.
100	VREF	I	Reference voltage input. (+5 V)

## M62422FP (SOUND CONTROLLER)

Pin No	PORT NAME	I/O	FUNCTION
1	CLOCK	I	Clock signal input pin for data transmission.
2	DATA	I	Control data input pin.
3	DVDD	-	Power supply for internal logic circuit.
4	VCUT	-	Capacitor connecting pin for vocal cut.
5	SUROUT	O	This pin outputs surround (L-R or L+R) signal and vocal cut signal.
6	IN1	I	Channel 1 input pin.
7	KEYCON1	O	Output pin to the key control circuit.
8	MIC IN1	I	Mic signal input pin during KARAOKE function.
9	INBASS1	I	BASS resonant bufferring AMP input pin.
10	NFBASS1	O	BASS resonant bufferring AMP output pin.
11	FBASS1	-	BASS BPF (resonant AMP) connecting pin.
12	INMID1	I	MID resonant bufferring AMP input pin.
13	NFMID1	O	MID resonant bufferring AMP output pin.
14	FMID1	-	MID BPF (resonant AMP) connecting pin.
15	FTRE1	-	TREBLE BPF connecting pin.
16	REC OUT1	O	Channel 1 REC OUT pin.
17	FBB1	I	BASS boost BPF (resonant AMP) connecting pin.
18	NFBB1	O	BASS boost resonant bufferring AMP output pin.
19	INBB1	I	BASS boost resonant bufferring AMP input pin.
20	OUT1	O	Channel 1 output pin.
21	AGND	-	Internal analog circuit grounding pin.
22	AVss	-	Negative power supply pin for internal analog circuit.
23	OUT2	O	Channel 2 output pin.
24	INBB2	I	BASS boost resonant bufferring AMP input pin.
25	NFBB2	O	BASS boost resonant bufferring AMP output pin.
26	FBB2	-	BASS boost BPF (resonant AMP) connecting pin.
27	REC OUT2	O	Channel 2 REC OUT pin.
28	FTRE2	-	TREBLE BPF connecting pin.
29	FMID2	-	MID BPF (resonant AMP) connecting pin.
30	NFMID2	O	MID resonant bufferring AMP output pin.
31	INMID2	I	MID resonant bufferring AMP input pin.
32	FBASS2	-	BASS BPF (resonant AMP) connecting pin.
33	NFBASS2	O	BASS resonant bufferring AMP output pin.
34	INBASS2	I	BASS resonant bufferring AMP input pin.
35	MIC IN2	I	Mic signal input pin during KARAOKE function.
36	KEYCON2	O	Output pin to the key control circuit.
37	IN2	I	Channel 2 input pin.
38	SUR R	-	Time constant setting capacitor connectig pin for the surround circuit.
39	SUR C	-	Time constant setting capacitor connectig pin for the surround circuit.
40	AVDD	-	Positive power supply pin for internal analog circuit.
41	DGND	-	Internal logic circuit grounding pin.
42	N.C	-	No connection.



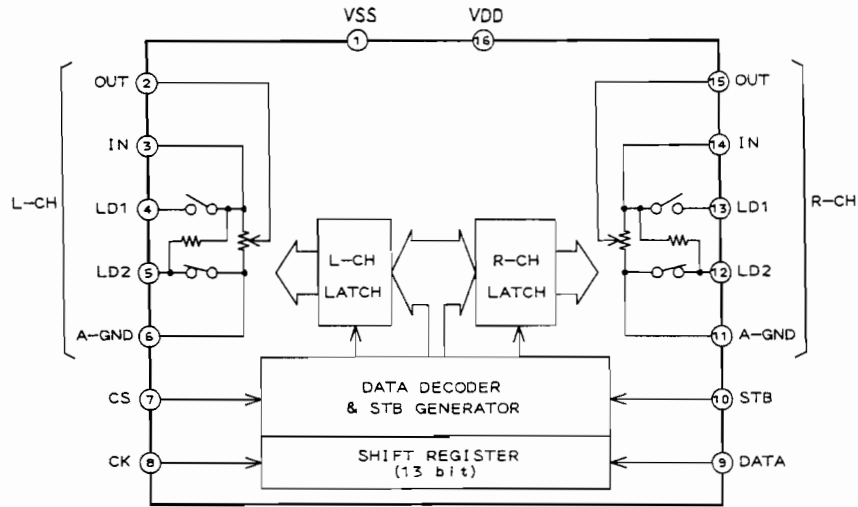
PIN No.	PORT NAME	I/O	FUNCTION
1	VDD	-	+5 V power supply for digital section.
2	X IN	I	X'tal OSC input.
3	X OUT	-	X'tal OSC output.
4	NC	-	No connection.
5	TEST 1	I	Test pin (fixed H in the normal condition).
6	TEST 2	I	Test pin (fixed L in the normal condition).
7	MUTE	I	Mute control input (L : mute).
8 ~ 10	NC	-	No connection.
11	D.GND	-	Digital ground.
12	A.GND	-	Analog ground.
13	LPF2 OUT	O	Constructs the output side low pass filter from the externally connected capacitor & resistor.
14	LPF2 IN	I	
15	OP2 OUT	O	Constructs the integrator for demodulation from the externally connected capacitor & resistor.
16	OP2 IN	I	
17	CC2	-	Current control for demodulator ADM control.
18	CC1	-	Current control for modulator ADM control.
19	REF	-	Analog reference voltage (1/2 Vcc).
20	OP1 IN	I	Constructs the integrator for modulation from the externally connected capacitor & resistor.
21	OP1 OUT	O	
22	LPF1 OUT	O	Constructs the input side low pass filter from the externally connected capacitor & resistor.
23	LPF1 IN	I	
24	Vcc	-	+5 V analog power supply.



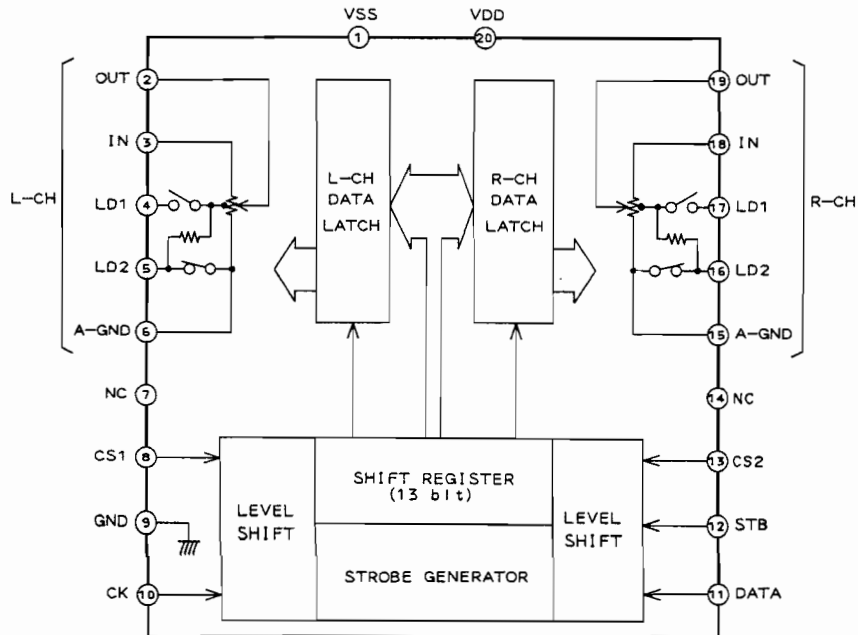
SAA6579T (RDS DEMODULATOR)

PIN No	PORT NAME	I/O	FUNCTION
1	QUAL	O	QUALITY INDICATION OUTPUT
2	RDDA	O	RDS DATA OUTPUT
3	VREF	-	REFERENCE VOLTAGE OUTPUT
4	MUX	I	MULTIPLEX SIGNAL INPUT
5	VDD	-	+5 V SUPPLY VOLTAGE FOR ANALOG PART
6	VSS	-	GND FOR ANALOG PART
7	CIN	I	SUBCARRIER INPUT TO COMPARATOR
8	SCOUT	O	SUBCARRIER OUTPUT OF RECONSTRUCTION FILTER
9	MODE	I	OSCILLATOR MODE / TEST CONTROL INPUT
10	TEST	I	TEST ENABLE INPUT
11	VSS	-	GND FOR DIGITAL PART
12	VDD	-	+5 V SUPPLY VOLTAGE FOR DIGITAL PART
13	OSC1	I	OSCILLATOR INPUT
14	OSC0	O	OSCILLATOR OUTPUT
15	T57	O	57 kHz CLOCK SIGNAL OUTPUT
16	RDCL	O	RDS CLOCK OUTPUT

TC9260P (ELECTRIC VOLUME CONTROL)



TC9412P (ELECTRIC VOLUME CONTROL)



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
VAMP	Voltage AMPLifier
V.DISC	Video DISC
VR	Variable Resistance
VTR	Video Tape Recorder