

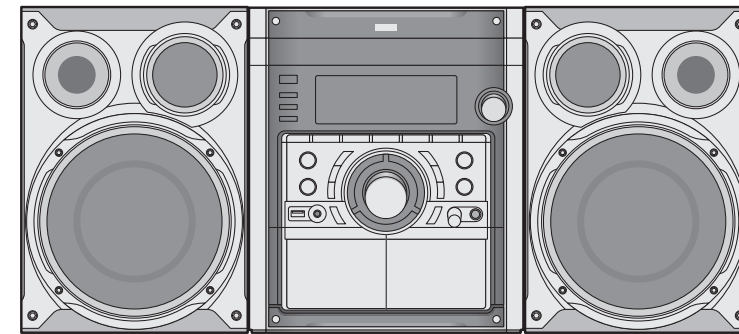


SERVICE MANUAL

MODEL : LM-U1060/LMS-U1060



# 3CD CHANGER MINI Hi-Fi SYSTEM **SERVICE MANUAL**



**MODEL : LM-U1060/LMS-U1060**

P/NO : AFN30721349

JUNE,2006

LG Electronics Inc.

# [CONTENTS]

## ○ SECTION 1. GENERAL

- SERVICING PRECAUTIONS ..... 1-2
- ESD PRECAUTIONS ..... 1-4
- SPECIFICATION ..... 1-5

## ○ SECTION 2. ELECTRICAL

- ELECTRICAL TROUBLESHOOTING GUIDE(AUDIO PART) ..... 2-1
- INTERNAL BLOCK DIAGRAM of ICs ..... 2-13
- ELECTRICAL TROUBLESHOOTING GUIDE & WAVEFORM(CD PART) ..... 2-22
- WIRING DIAGRAM ..... 2-36
- BLOCK DIAGRAM ..... 2-38
- SCHEMATIC DIAGRAMS ..... 2-40
- PRINTED CIRCUIT DIAGRAMS ..... 2-54

## ○ SECTION 3. EXPLODED VIEWS

- CABINET AND MAIN FRAME SECTION ..... 3-1
- TAPE DECK MECHANISM (A/R & A/S : RIGHT A/R DECK) ..... 3-3
- TAPE DECK MECHANISM (A/R & A/S : LEFT A/S DECK) ..... 3-5
- CD MECHANISM ..... 3-7
- SPEAKER ..... 3-9

## ○ SECTION 4. REPLACEMENT PARTS LIST

- REPLACEMENT PARTS LIST ..... 4-1

# SECTION 1. GENERAL

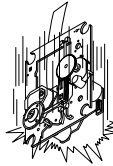
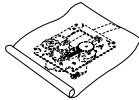
## ☐ SERVICING PRECAUTIONS

## ■ NOTES REGARDING HANDLING OF THE PICK-UP

### 1. Notes for transport and storage

- 1) The pick-up should always be left in its conductive bag until immediately prior to use.
- 2) The pick-up should never be subjected to external pressure or impact.

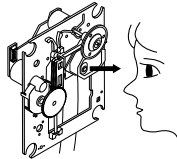
Storage in conductive bag



Drop impact

### 2. Repair notes

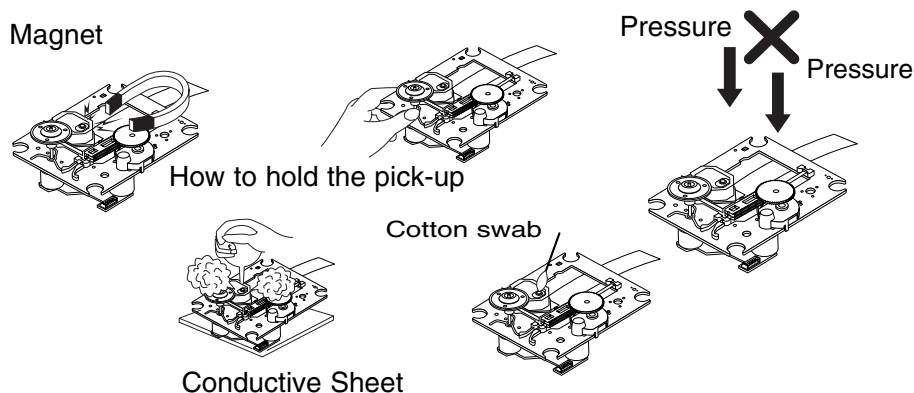
- 1) The pick-up incorporates a strong magnet, and so should never be brought close to magnetic materials.
- 2) The pick-up should always be handled correctly and carefully, taking care to avoid external pressure and impact. If it is subjected to strong pressure or impact, the result may be an operational malfunction and/or damage to the printed-circuit board.
- 3) Each and every pick-up is already individually adjusted to a high degree of precision, and for that reason the adjustment point and installation screws should absolutely never be touched.
- 4) Laser beams may damage the eyes!  
Absolutely never permit laser beams to enter the eyes!  
Also NEVER switch ON the power to the laser output part (lens, etc.) of the pick-up if it is damaged.



NEVER look directly at the laser beam, and don't let contact fingers or other exposed skin.

### 5) Cleaning the lens surface

If there is dust on the lens surface, the dust should be cleaned away by using an air bush (such as used for camera lens). The lens is held by a delicate spring. When cleaning the lens surface, therefore, a cotton swab should be used, taking care not to distort this.



### 6) Never attempt to disassemble the pick-up.

Spring by excess pressure. If the lens is extremely dirty, apply isopropyl alcohol to the cotton swab. (Do not use any other liquid cleaners, because they will damage the lens.) Take care not to use too much of this alcohol on the swab, and do not allow the alcohol to get inside the pick-up.

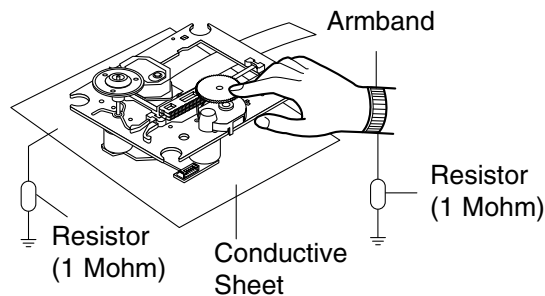
## ■ NOTES REGARDING COMPACT DISC PLAYER REPAIRS

### 1. Preparations

- 1) Compact disc players incorporate a great many ICs as well as the pick-up (laser diode). These components are sensitive to, and easily affected by, static electricity. If such static electricity is high voltage, components can be damaged, and for that reason components should be handled with care.
- 2) The pick-up is composed of many optical components and other high-precision components. Care must be taken, therefore, to avoid repair or storage where the temperature of humidity is high, where strong magnetism is present, or where there is excessive dust.

### 2. Notes for repair

- 1) Before replacing a component part, first disconnect the power supply lead wire from the unit
- 2) All equipment, measuring instruments and tools must be grounded.
- 3) The workbench should be covered with a conductive sheet and grounded.  
When removing the laser pick-up from its conductive bag, do not place the pick-up on the bag. (This is because there is the possibility of damage by static electricity.)
- 4) To prevent AC leakage, the metal part of the soldering iron should be grounded.
- 5) Workers should be grounded by an armband (1M  $\Omega$ )
- 6) Care should be taken not to permit the laser pick-up to come in contact with clothing, in order to prevent static electricity changes in the clothing to escape from the armband.
- 7) The laser beam from the pick-up should NEVER be directly facing the eyes or bare skin.



### CLEARING MALFUNCTION

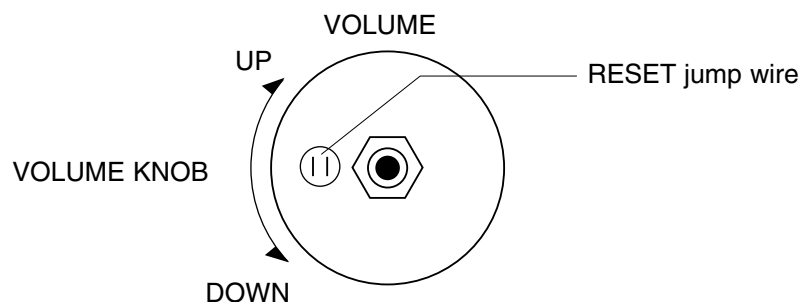
You can reset your unit to initial status if malfunction occur(button malfunction, display, etc.).

Using a pointed good conductor(such as driver), simply short the RESET jump wire on the inside of the volume knob for more than 3 seconds.

If you reset your unit, you must reenter all its settings(stations, clock, timer)

**NOTE:** 1. To operate the RESET jump wire, pull the volume rotary knob and release it.

2. If you wish to operate the RESET jump wire, it is necessary to unplug the power cord.



## □ ESD PRECAUTIONS

### ■ Electrostatically Sensitive Devices (ESD)



Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ESD devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ESD devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESD devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESD devices.
6. Do not remove a replacement ESD device from its protective package until immediately before you are ready to install it. (Most replacement ESD devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive materials).
7. Immediately before removing the protective material from the leads of a replacement ESD device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

**CAUTION : BE SURE NO POWER IS APPLIED TO THE CHASSIS OR CIRCUIT, AND OBSERVE ALL OTHER SAFETY PRECAUTIONS.**

8. Minimize bodily motions when handing unpackaged replacement ESD devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ESD device).

### CAUTION. GRAPHIC SYMBOLS

|   |  |
|---|--|
|  | THE LIGHTNING FLASH WITH APROWHEAD SYMBOL. WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK. |
|  | THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.   |

# □ SPECIFICATIONS

## [GENERAL]

|                                 |                                      |
|---------------------------------|--------------------------------------|
| Power supply                    | Refer to the back panel of the unit. |
| Power consumption               | Refer to the back panel of the unit. |
| Net Weight                      | 6.2 kg                               |
| External dimensions (W x H x D) | 273 x 321x 359 mm                    |

## [CD]

|                       |               |
|-----------------------|---------------|
| Frequency response    | 40 - 20000 Hz |
| Signal-to-noise ratio | 75 dB         |
| Dynamic range         | 75 dB         |

## [TUNER]

### FM

|                        |                  |
|------------------------|------------------|
| Tuning Range           | 87.5 - 108.0 MHz |
| Intermediate Frequency | 10.7 MHz         |
| Signal to Noise Ratio  | 60/55 dB         |
| Frequency Response     | 50 - 10000 Hz    |

### AM [MW]

|                        |                                  |
|------------------------|----------------------------------|
| Tuning Range           | 522 - 1620 kHz or 520 - 1720 kHz |
| Intermediate Frequency | 450 kHz                          |
| Signal to Noise Ratio  | 30 dB                            |
| Frequency Response     | 140 - 1800 Hz                    |

## [AMP]

|                       |  |
|-----------------------|--|
| Output Power          | 100W +100W+150W [LM-U1560+LMS-U1560W(SUB WOOFER)]<br>100W+100W [LM-U1060]<br>50W +50W [LM-U560]<br>30W + 30W [LM-U360] |
| T.H.D                 | 0.5%   |
| Frequency Response    | 40 - 20000 Hz  |
| Signal-to-noise ratio | 75 dB  |

## [TAPE]

|                       |                           |
|-----------------------|---------------------------|
| Tape Speed            | 4.75cm/sec                |
| Wow Flutter           | 0.25% (MTT -111, JIS-WTD) |
| F.F/REW Time          | 120sec (C-60)             |
| Frequency Response    | 250 - 8000Hz              |
| Signal to Noise Ratio | 43dB                      |
| Channel Separation    | 50dB(P/B)/45dB(R/P)       |
| Erase Ratio           | 55dB (MTT-5513)           |

## [SPEAKERS]

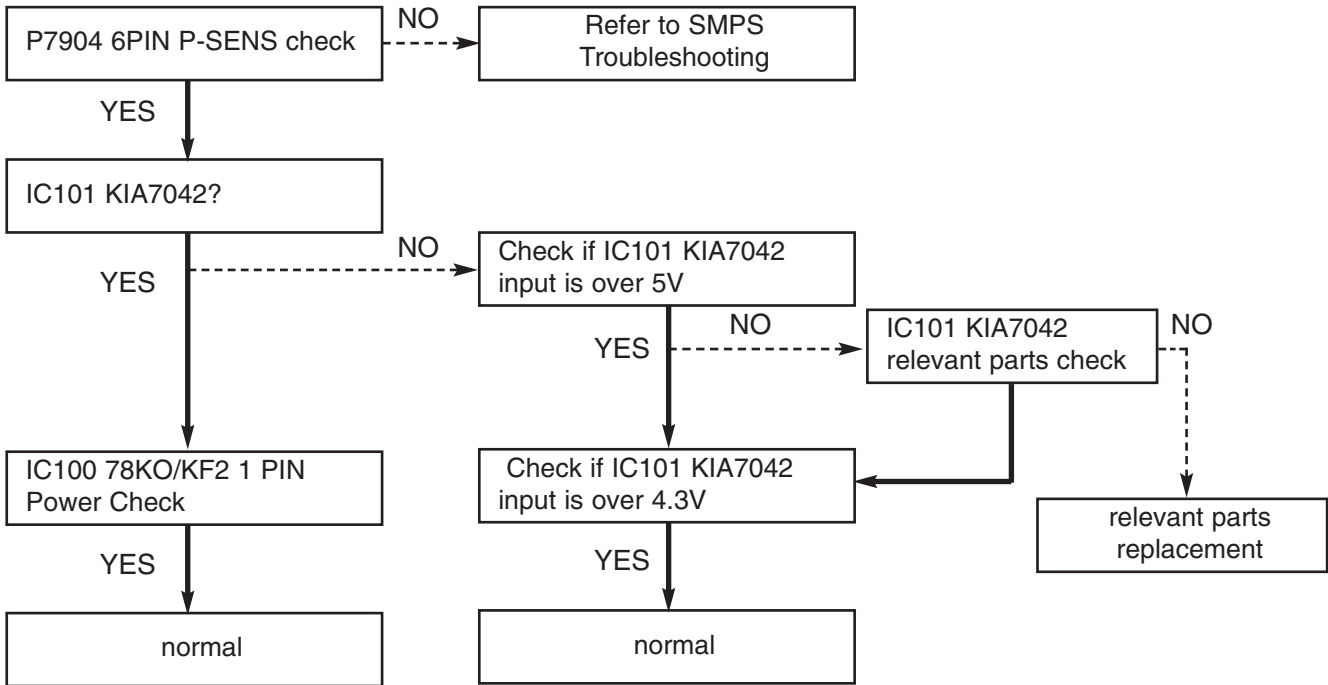
| MODEL                      | LMS-U1560     | LMS-U1560W<br>(SUB WOOFER) | LMS-U560      | LMS-U360      |
|----------------------------|---------------|----------------------------|---------------|---------------|
| Type                       | 2way 2speaker | 1way 1speaker              | 2way 2speaker | 2way 2speaker |
| Impedance                  | 4Ω            | 3Ω                         | 4Ω            | 4Ω            |
| Frequency Response         | 50-20000Hz    | 50-15000Hz                 | 55-20000Hz    | 55-20000Hz    |
| Sound Pressure Level       | 85dB/W (1m)   | 84dB/W (1m)                | 86dB/W (1m)   | 86dB/W (1m)   |
| Rated Input Power          | 100W          | 180W                       | 50W           | 30W           |
| Max. Input Power           | 200W          | 360W                       | 100W          | 60W           |
| Net Dimensions (W x H x D) | 229X224X286mm | 273x325x384mm              | 229X224X286mm | 229X224X286mm |
| Net Weight                 | 3.8kg         | 6kg                        | 3.9kg         | 3.8kg         |



# SECTION 2. ELECTRICAL

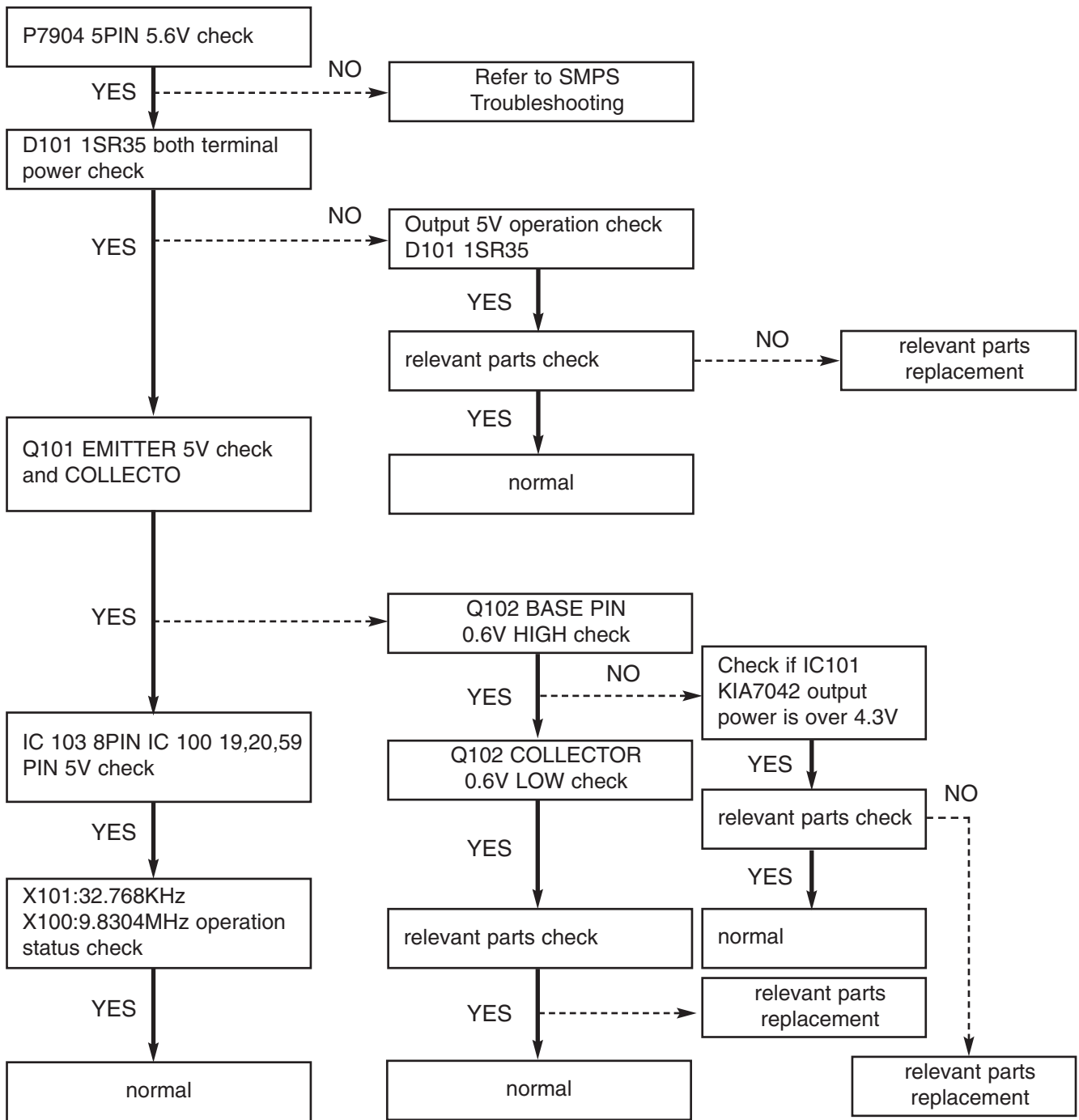
## □ ELECTRICAL TROUBLESHOOTING GUIDE(AUDIO PART)

### ■ MICOM PART CHECK I

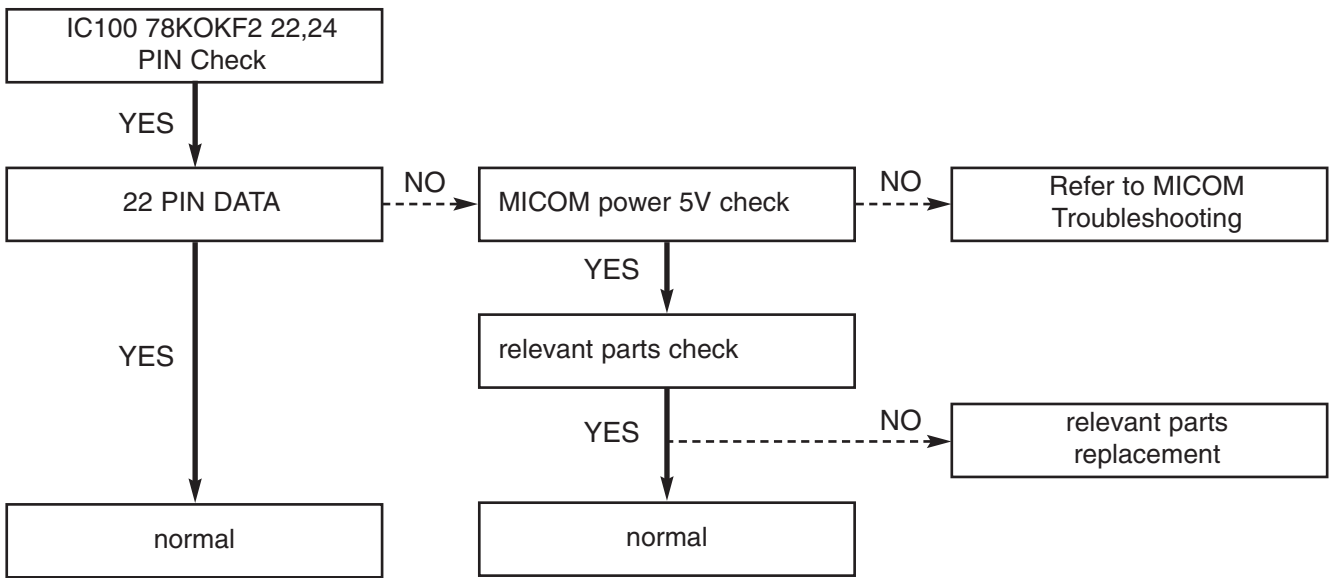




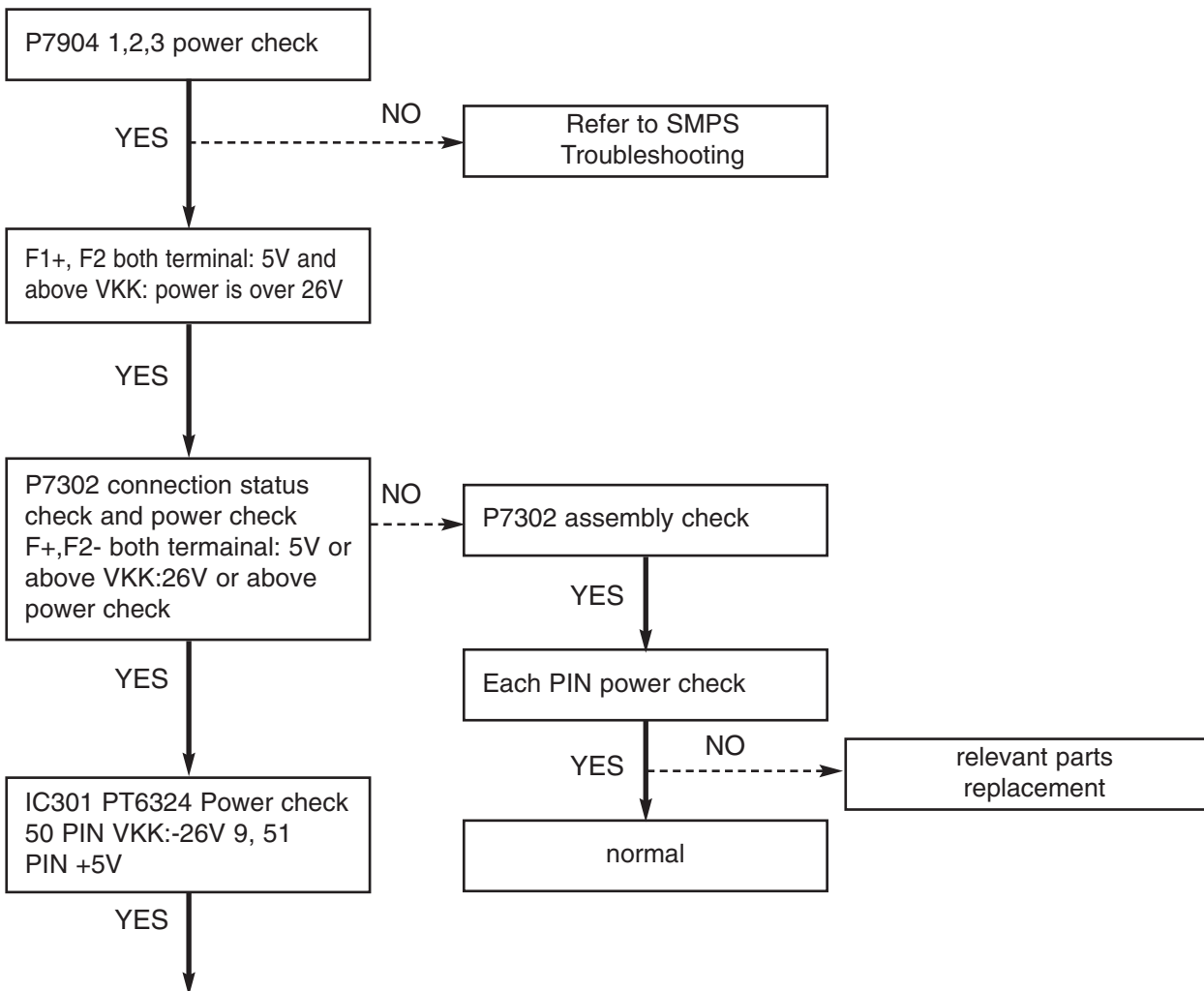
## ■ MICOM PART CHECK II

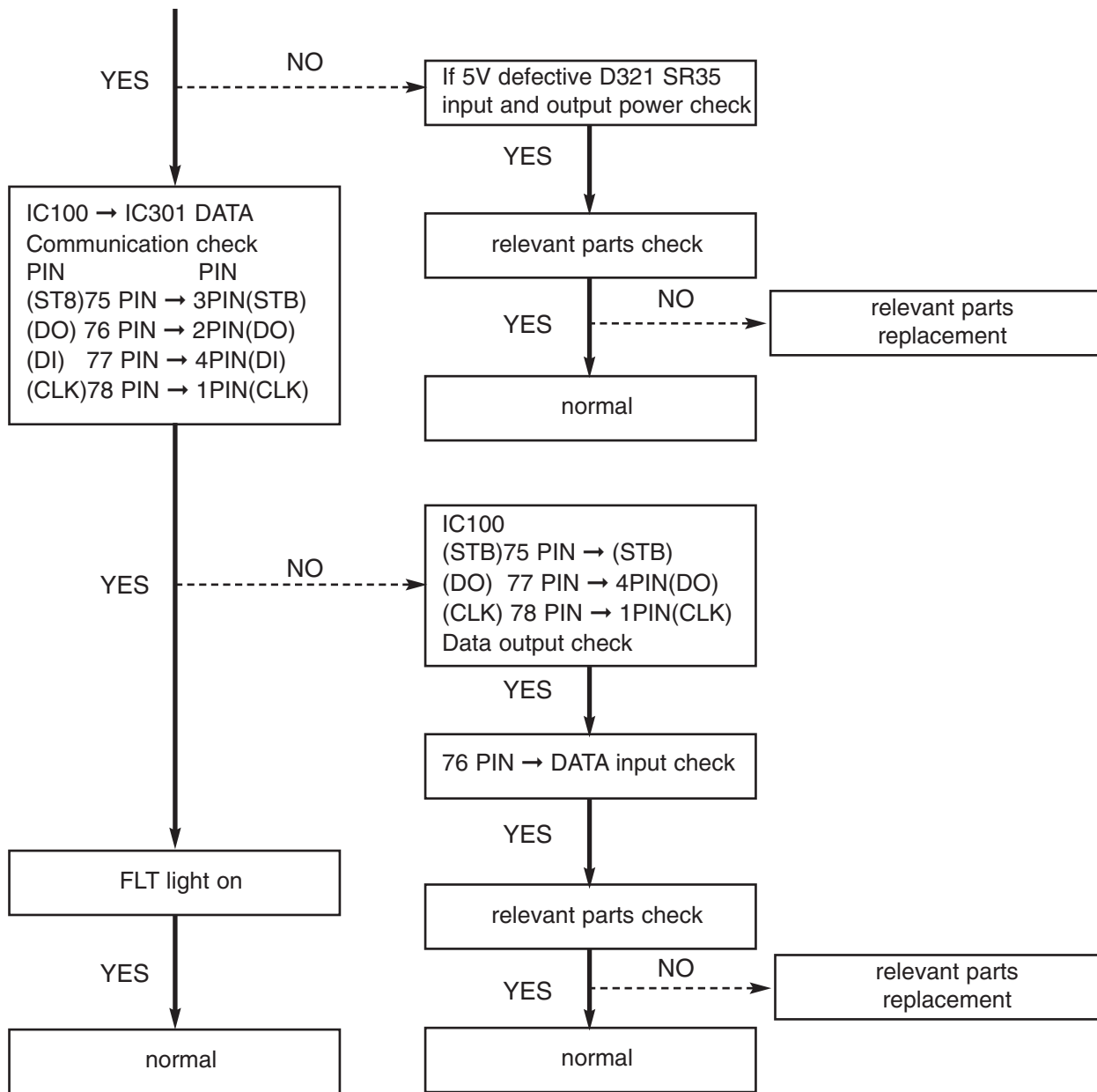


## ■ IC103 KS4CD21CS CHECK

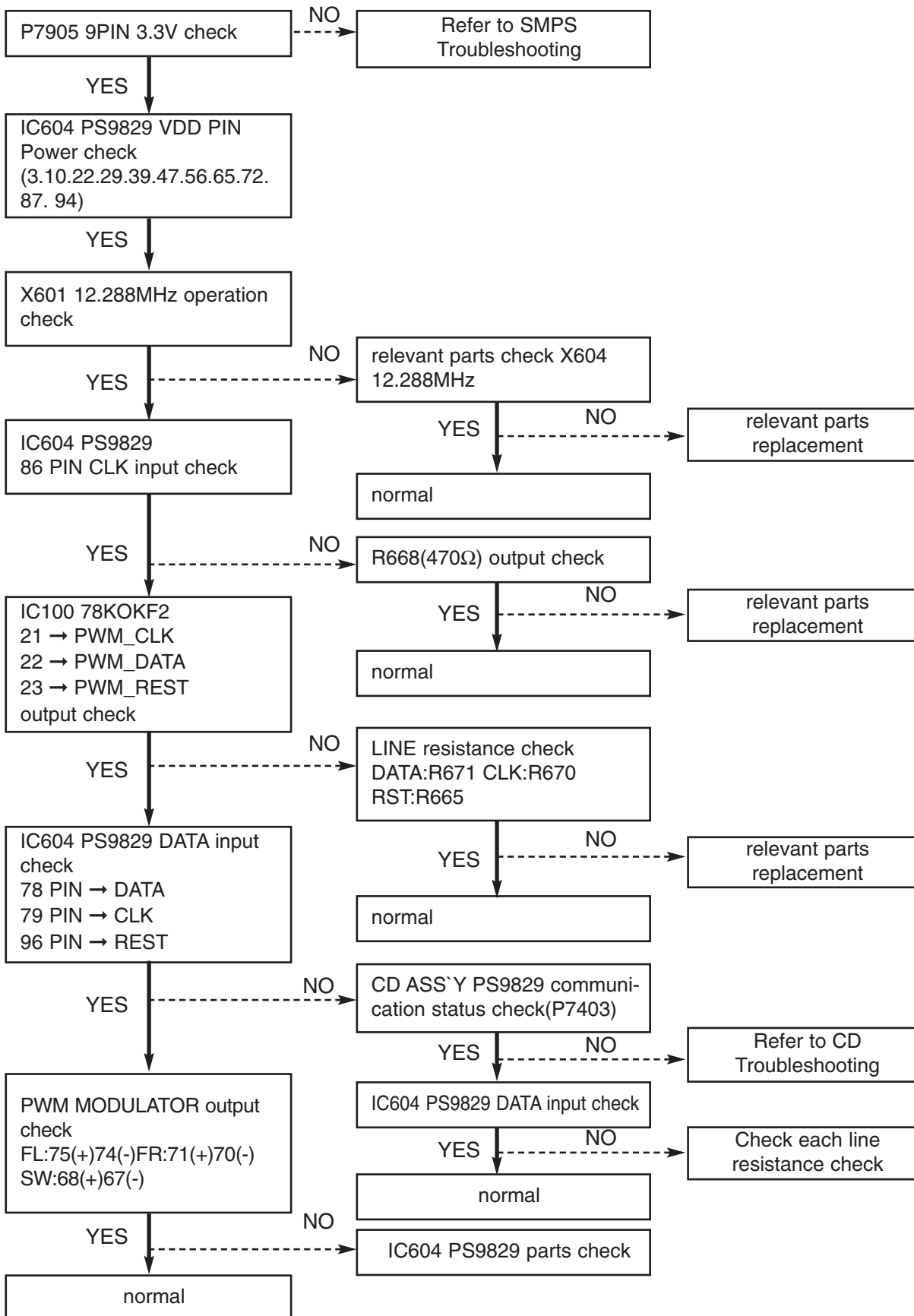


## ■ FLD DISPLAY CHECK

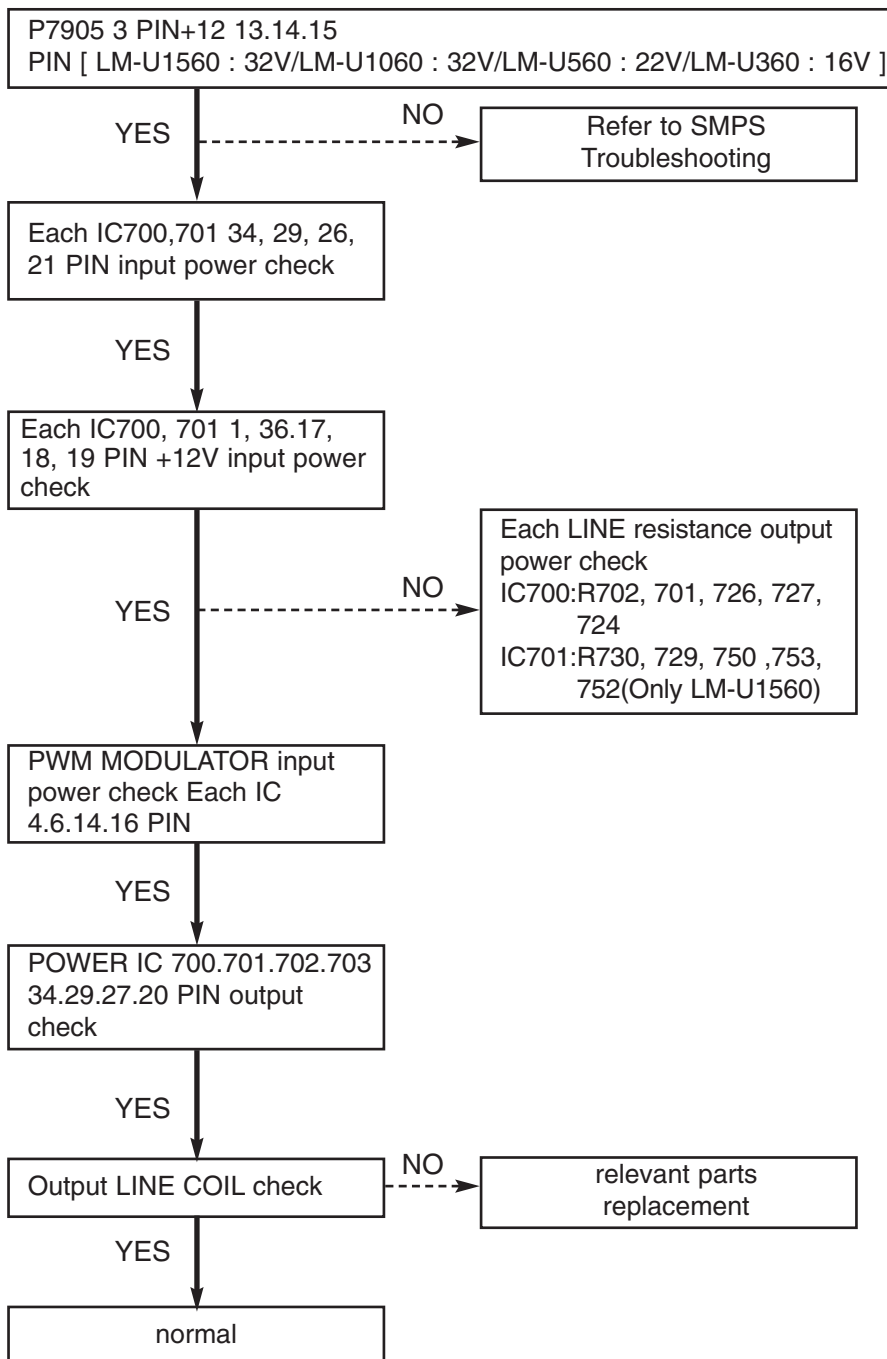




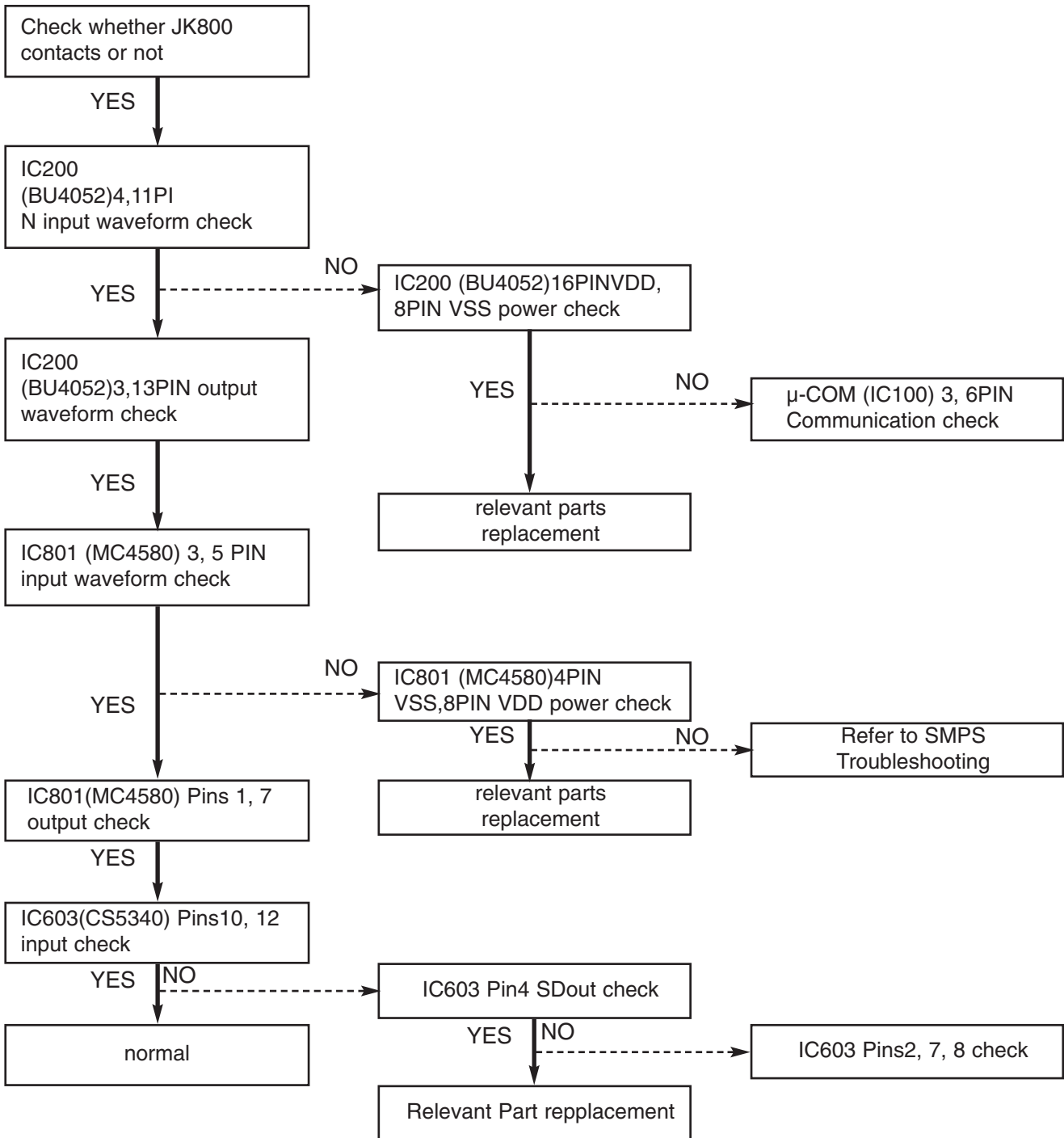
## ■ PWM ALTERATION PART CHECK



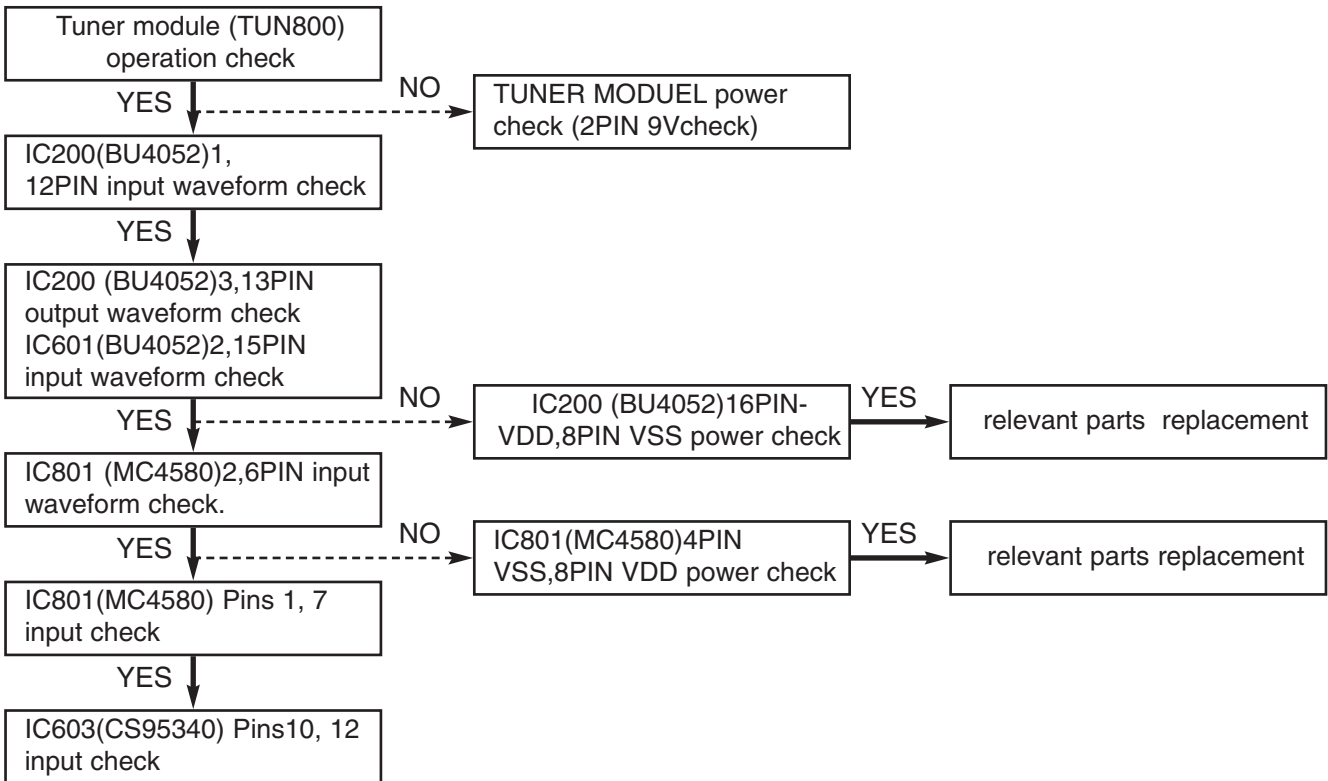
## ■ POWER AMP PART CHECK



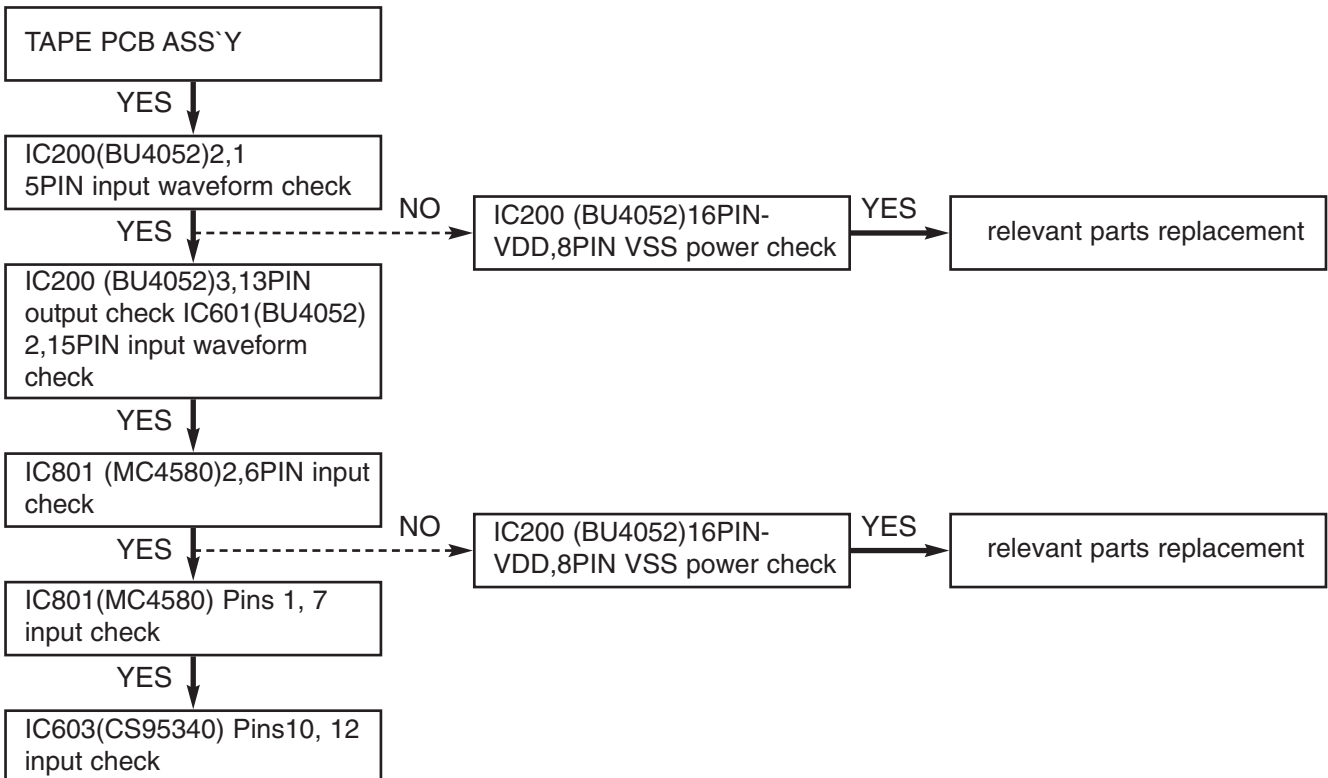
## ■ AUX FUNCTION



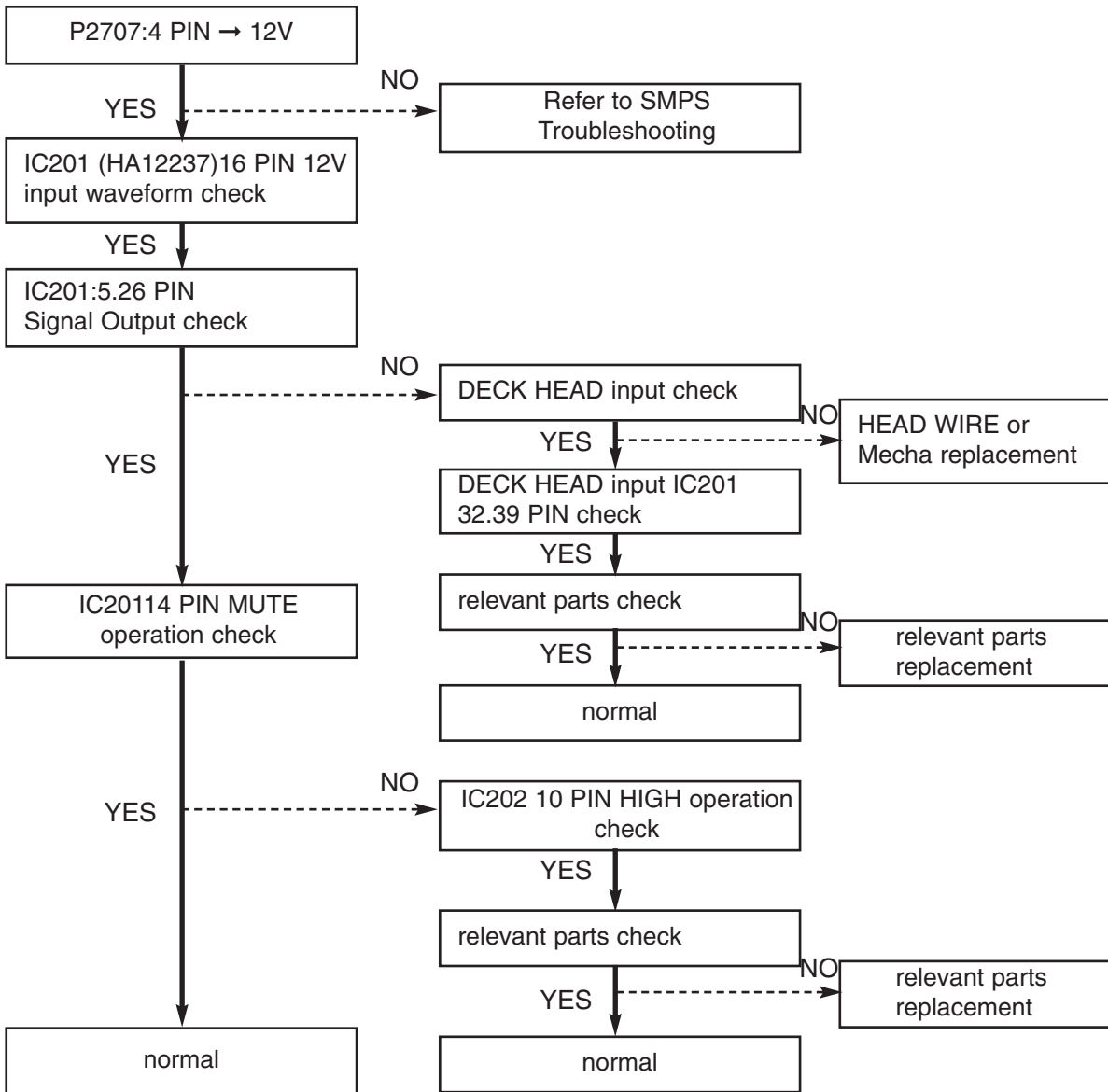
## ■ TUNER FUNCTION CHECK



## ■ TAPE FUNCTION CHECK

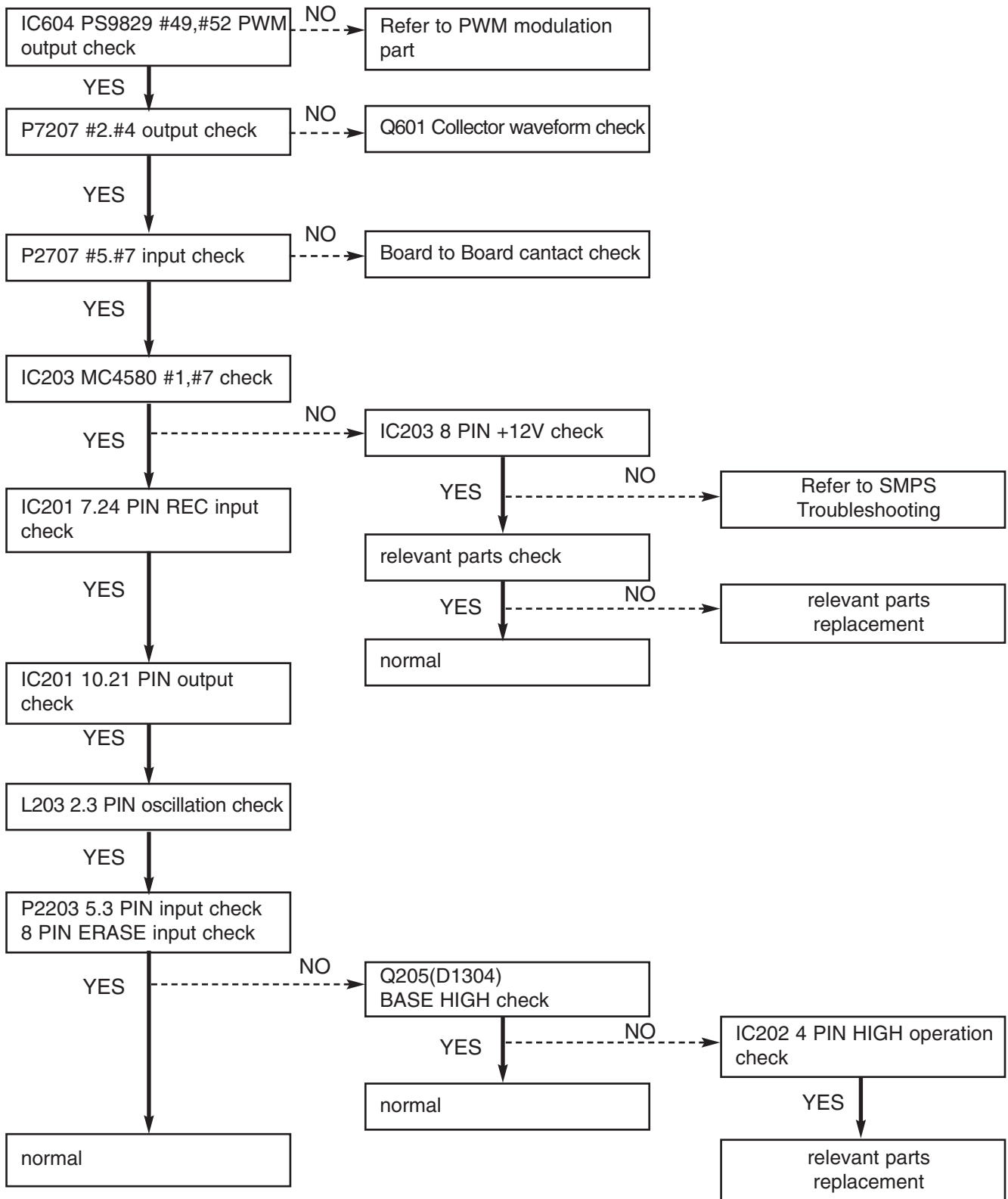


## ■ TAPE PLAY PART CHECK



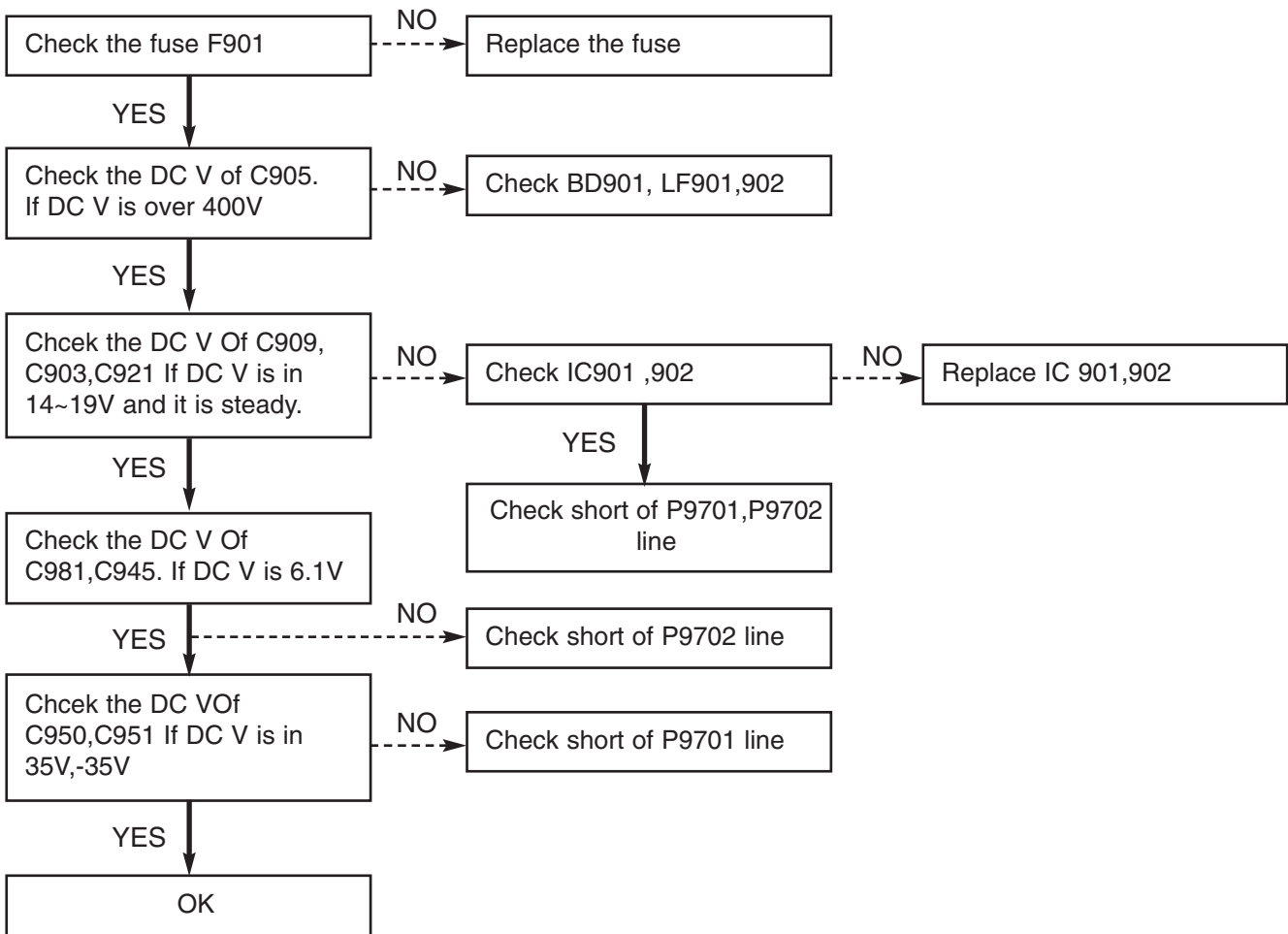


## ■ TAPE REC PART CHECK

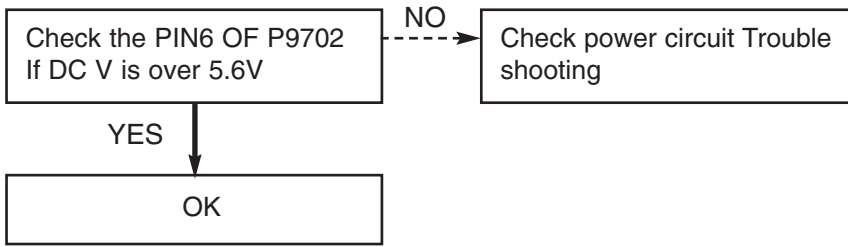


## ■ SMPS POWER CIRCUIT

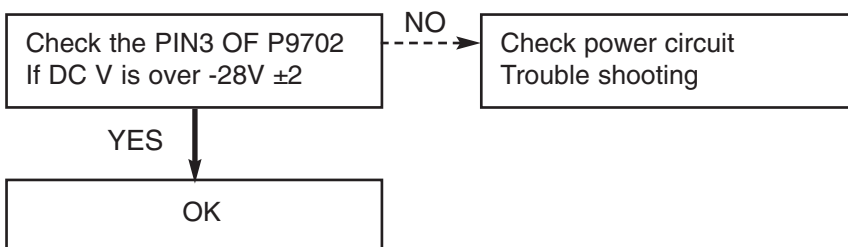
### \*MAIN PART



**\*P-SENS PART (OPTIONAL PART)**

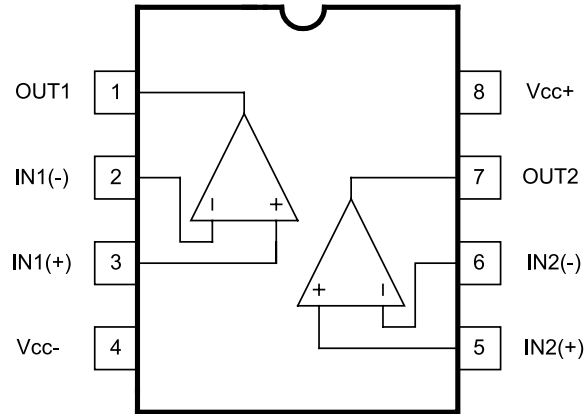


**\*VKK PART**

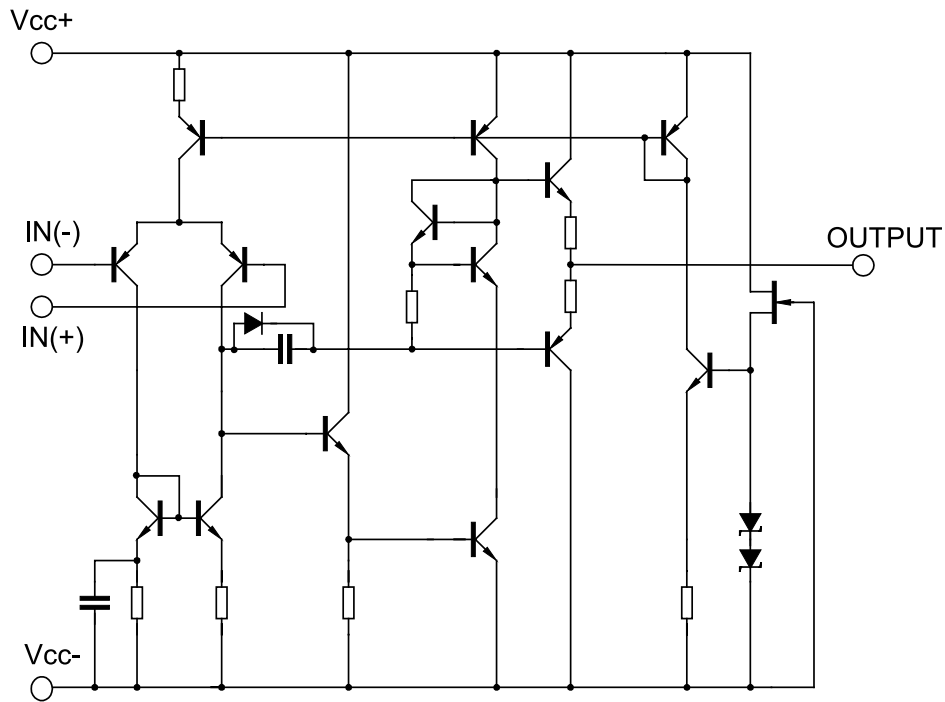


# INTERNAL BLOCK DIAGRAM of ICs

## • UTC MC4580 PIN CONFIGURATION



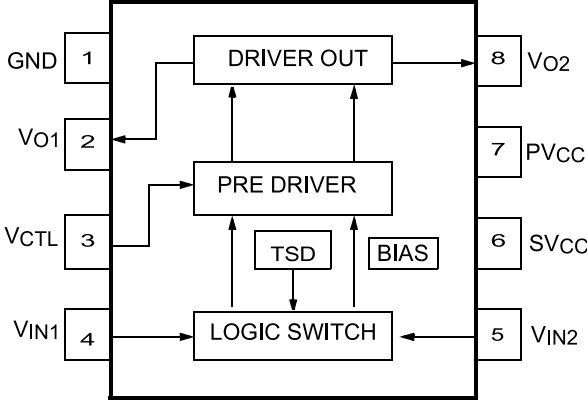
## TEST CIRCUIT



### ABSOLUTE MAXIMUM RATINGS (Ta=25 C)

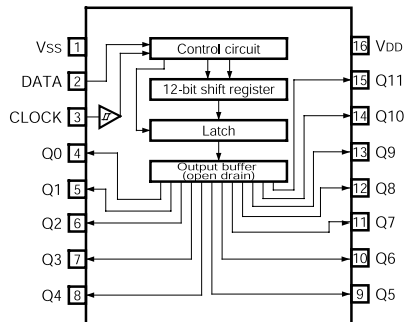
| PARAMETER                   | SY | MBOL                           | RATINGS                                       | UNIT |
|-----------------------------|----|--------------------------------|---|------|
| Supply Voltage              |    | V <sup>+</sup> /V <sup>-</sup> | ±18   | V    |
| Input Voltage               |    | V <sub>IC</sub>                | ±15   | V    |
| Differential Input Voltage  |    | V <sub>ID</sub>                | ±30   | V    |
| Output Current              |    | I <sub>o</sub>                 | ±50   | mA   |
| Power Dissipation           |    | P <sub>D</sub>                 | 300<br>(SOP-8)<br>800 (DIP-8)<br>250(TSSOP-8) | mW   |
| Operating Temperature Range |    | T <sub>opr</sub>               | -40 to+85                                     | °C   |
| Storage Temperature Range   |    | T <sub>stg</sub>               | -40 to +125                                   | °C   |

- **FAN8082D**  
**Internal Block Diagram**

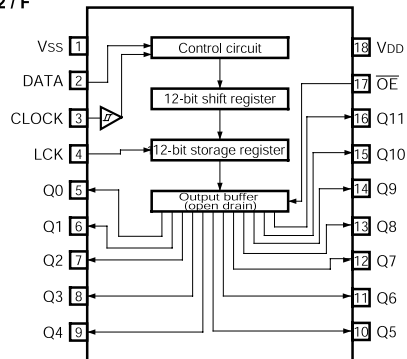


• **BU2090**  
Block diagram

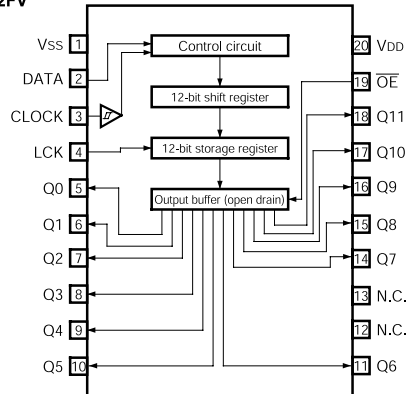
**BU2090 / F / FS**



**BU2092 / F**



**BU2092FV**

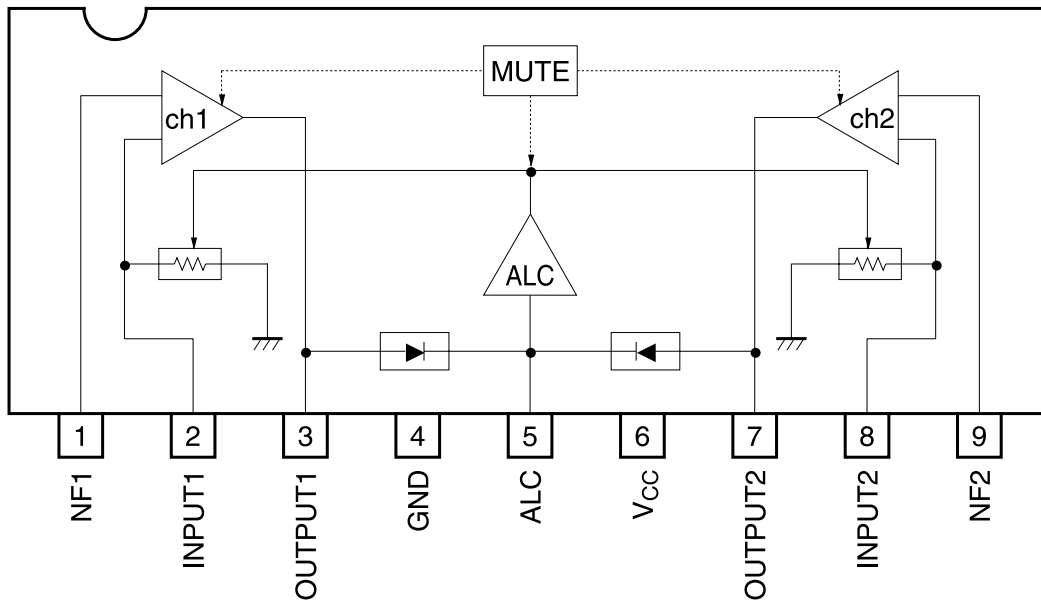


• Pin descriptions

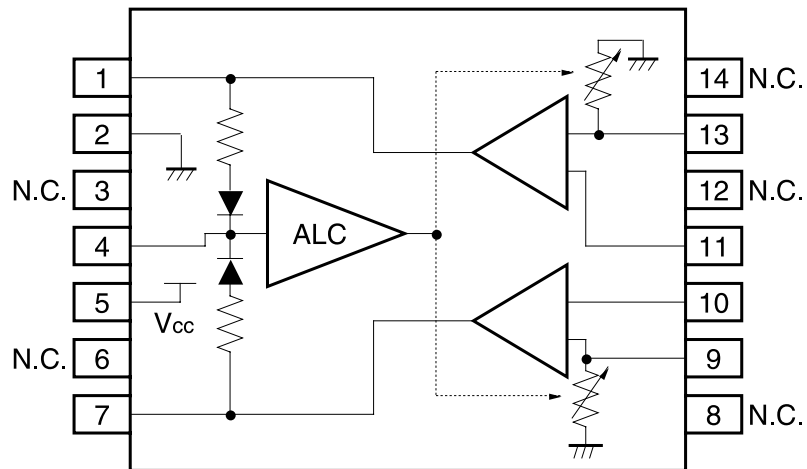
| Pin No.         |            |             | Pin name        | Function               |
|-----------------|------------|-------------|-----------------|------------------------|
| BU2090 / F / FS | BU2092 / F | BU2092 / FV |                 |                        |
| 1               | 1          | 1           | V <sub>SS</sub> | GND                    |
| 2               | 2          | 2           | DATA            | Serial data input      |
| 3               | 3          | 3           | CLOCK           | Data shift clock input |
| $\bar{N}$       | 4          | 4           | LCK             | Data latch clock input |
| 4               | 5          | 5           | Q0              | Parallel data output   |
| 5               | 6          | 6           | Q1              | Parallel data output   |
| 6               | 7          | 7           | Q2              | Parallel data output   |
| 7               | 8          | 8           | Q3              | Parallel data output   |
| 8               | 9          | 9           | Q4              | Parallel data output   |
| 9               | 10         | 10          | Q5              | Parallel data output   |
| 10              | 11         | 11          | Q6              | Parallel data output   |
| $\bar{N}$       | $\bar{N}$  | 12          | N.C.            | Not connected          |
| $\bar{N}$       | $\bar{N}$  | 13          | N.C.            | Not connected          |
| 11              | 12         | 14          | Q7              | Parallel data output   |
| 12              | 13         | 15          | Q8              | Parallel data output   |
| 13              | 14         | 16          | Q9              | Parallel data output   |
| 14              | 15         | 17          | Q10             | Parallel data output   |
| 15              | 16         | 18          | Q11             | Parallel data output   |
| $\bar{N}$       | 17         | 19          | $\overline{OE}$ | Output Enable          |
| 16              | 18         | 20          | V <sub>DD</sub> | Power supply           |

• BA3308 / BA3308F  
BLOCK DIAGRAM

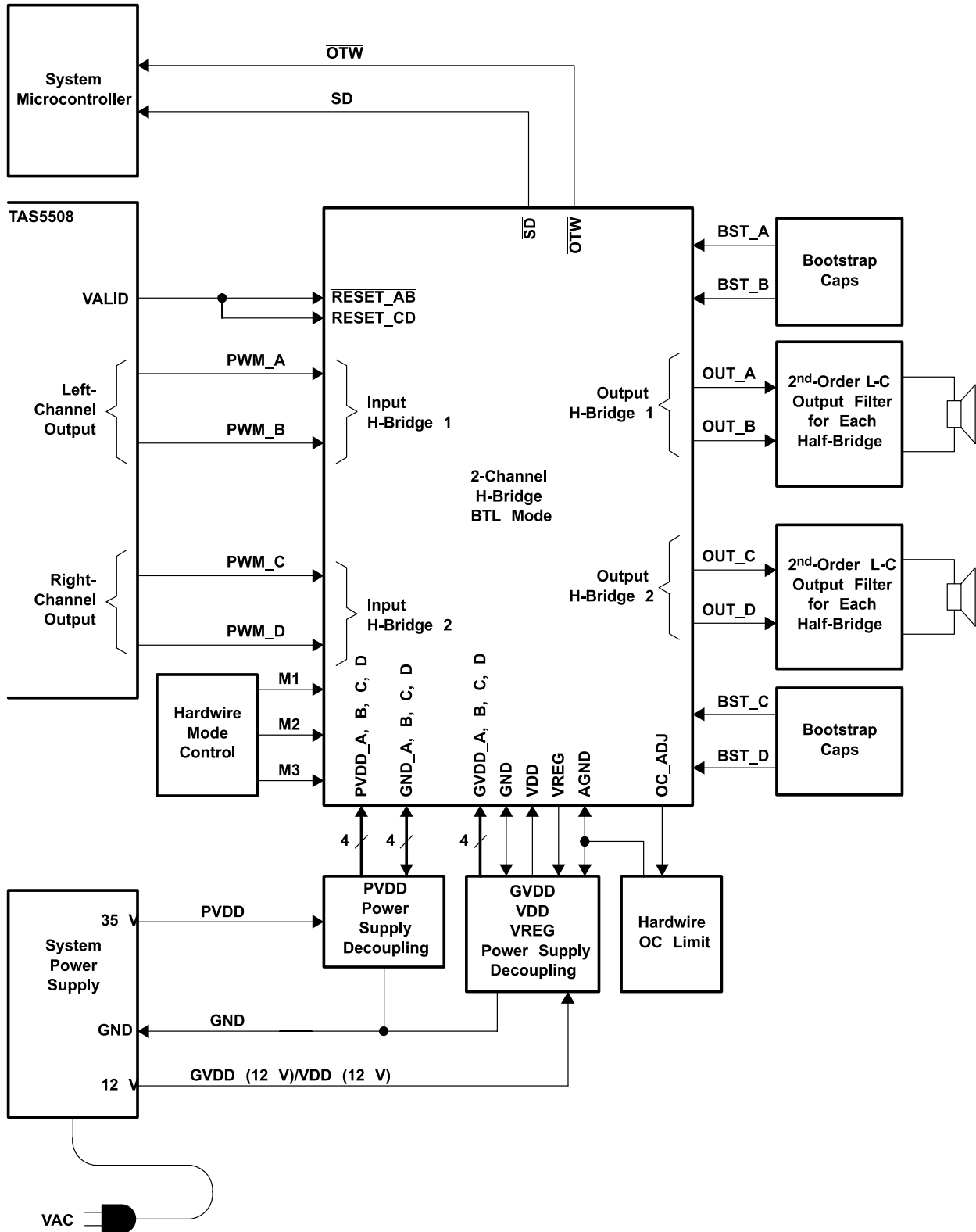
BA3308



BA3308F

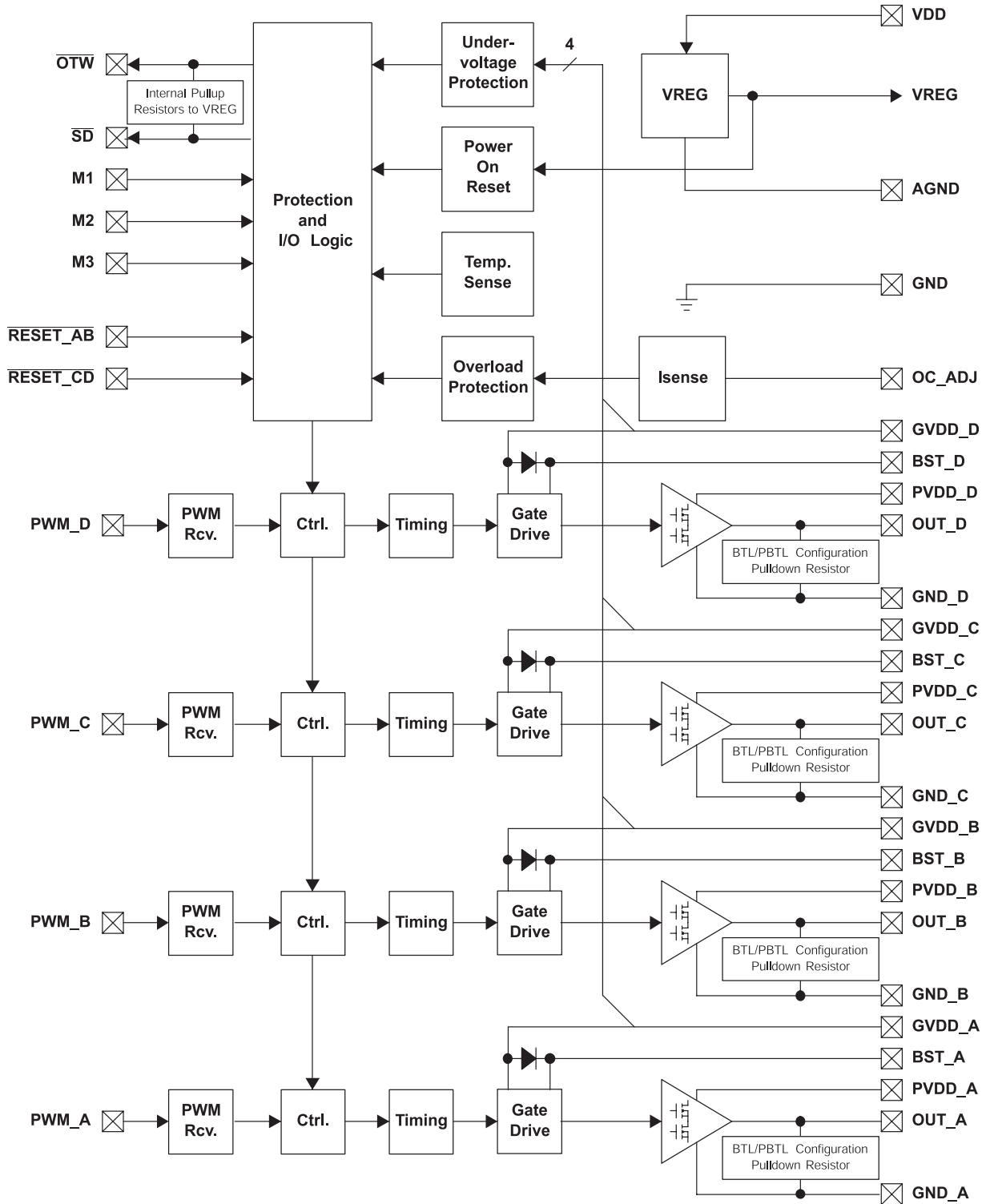


• HT1200-4  
SYSTEM BLOCK DIAGRAM

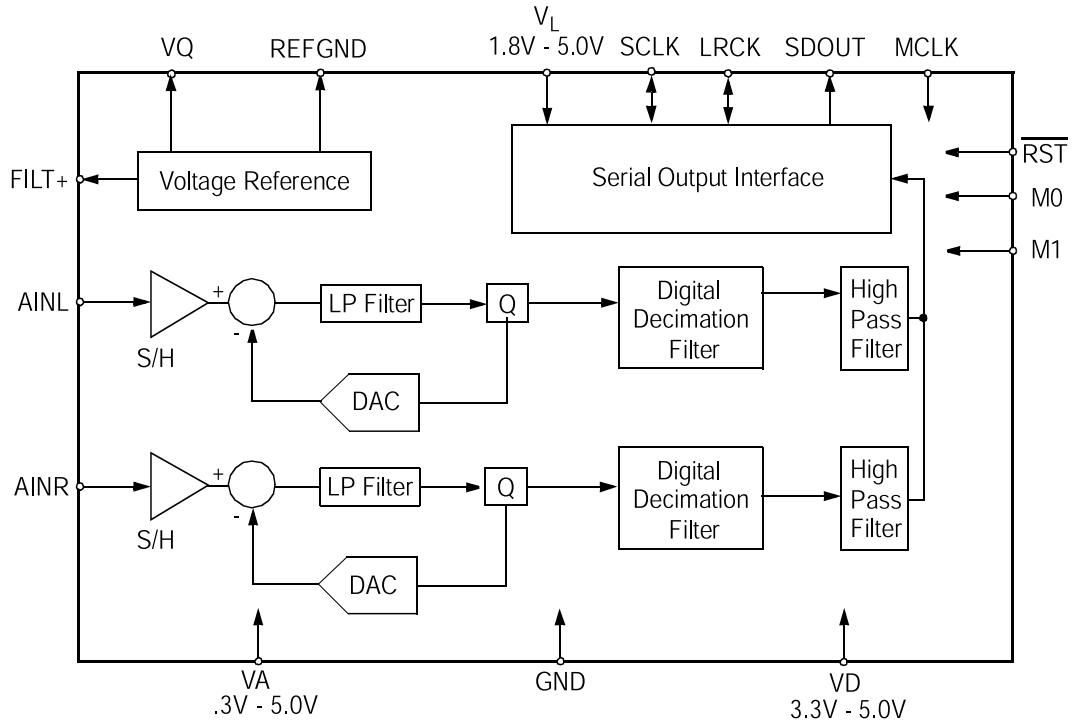




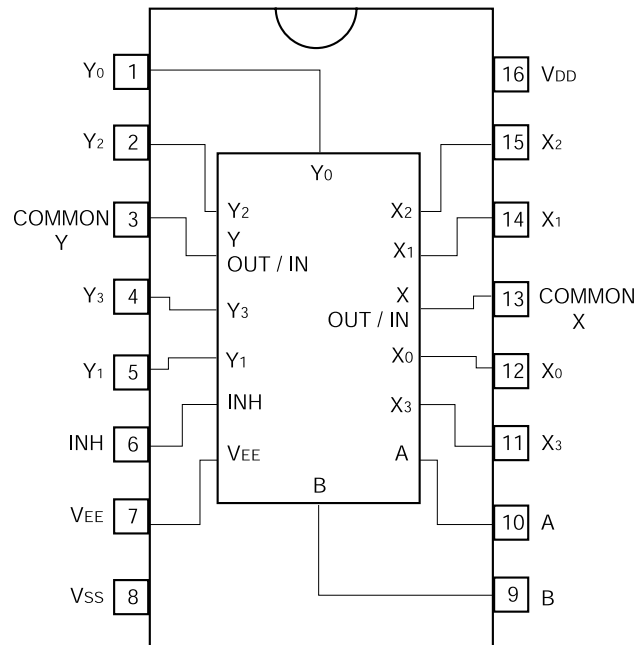
• HT1200-4  
FUNCTIONAL BLOCK DIAGRAM



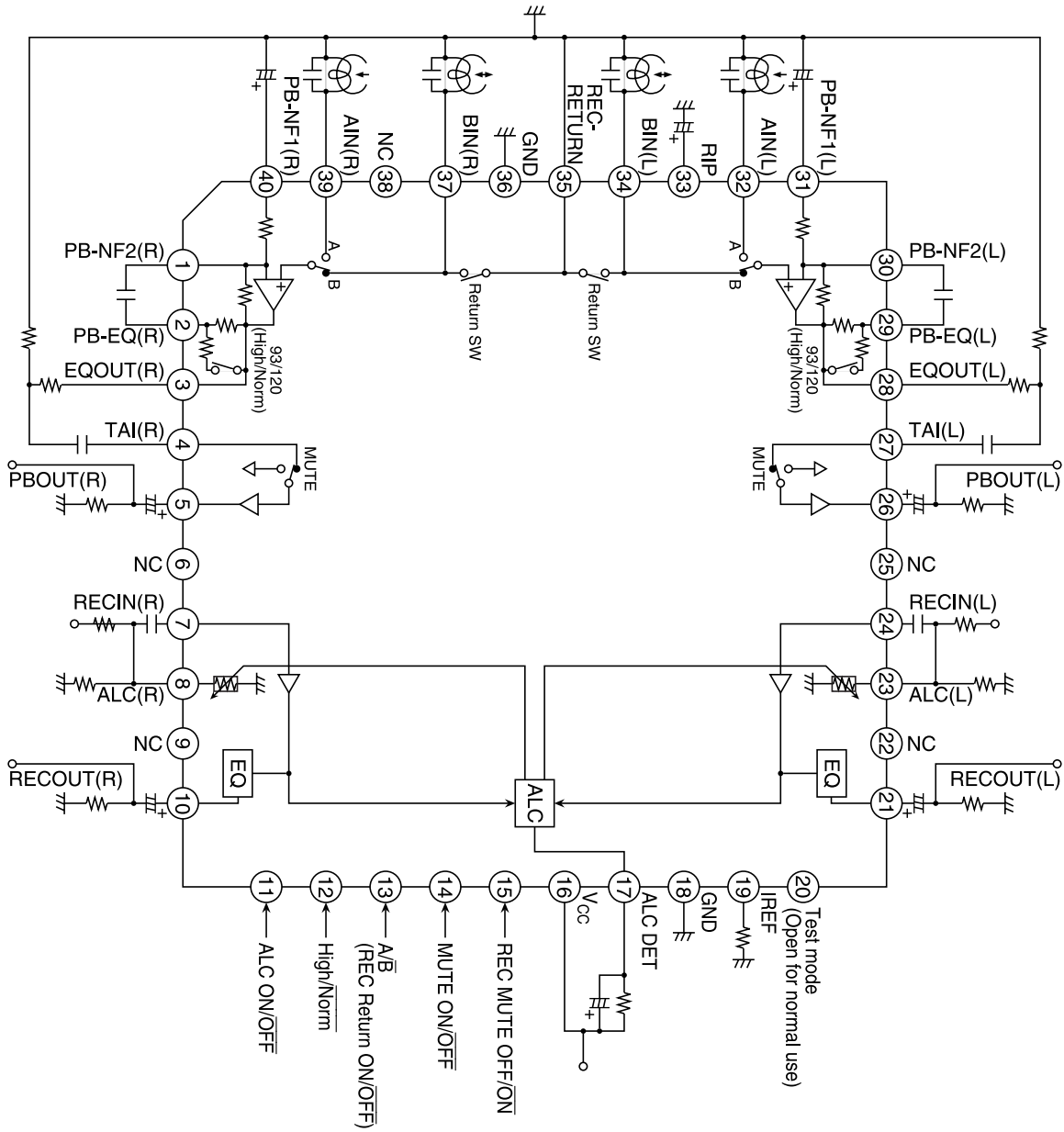
• **CS5340**  
**BLOCK DIAGRAM**



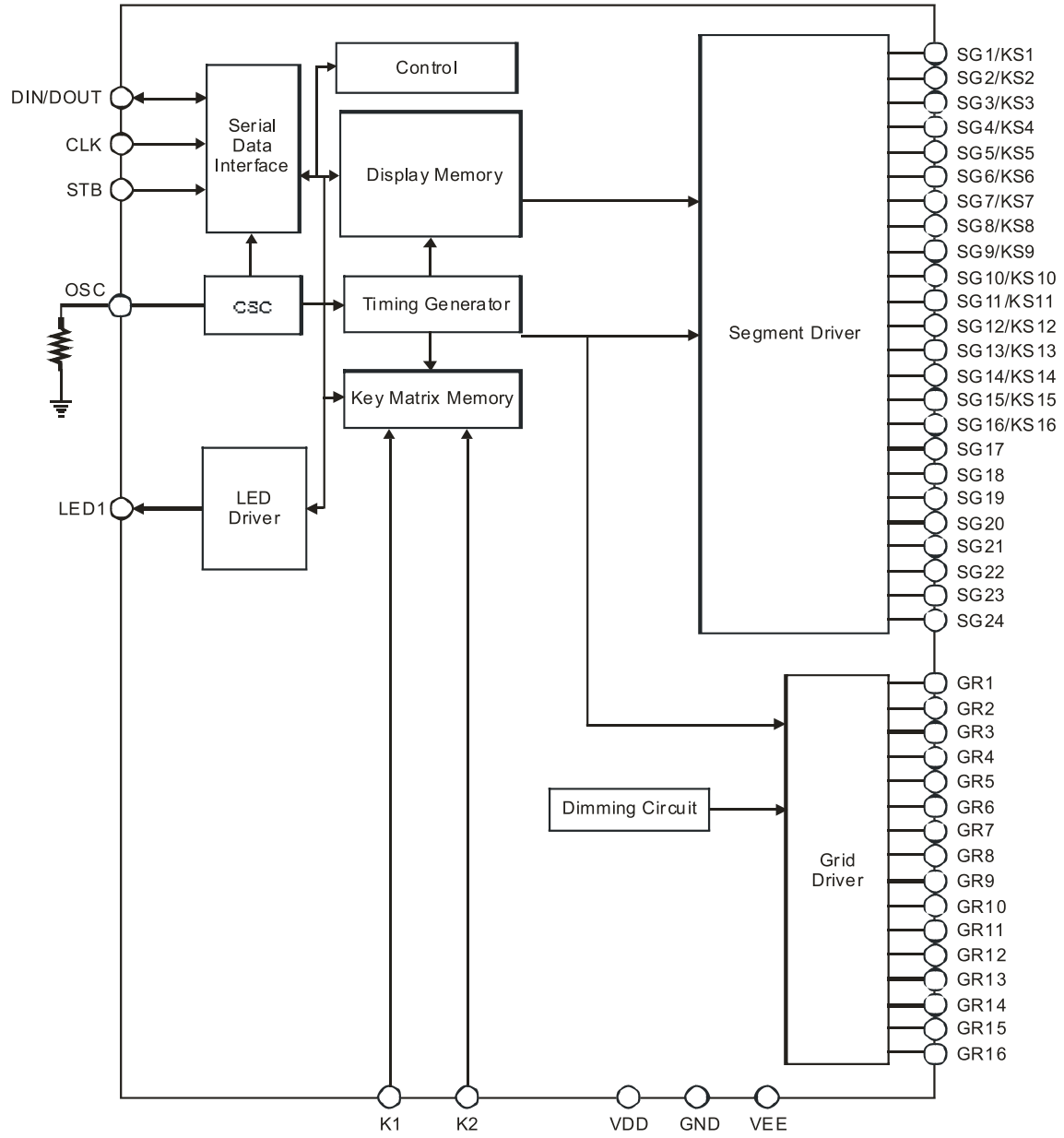
• **BU4052**  
**BLOCK DIAGRAM**



• HA12237F  
BLOCK DIAGRAM

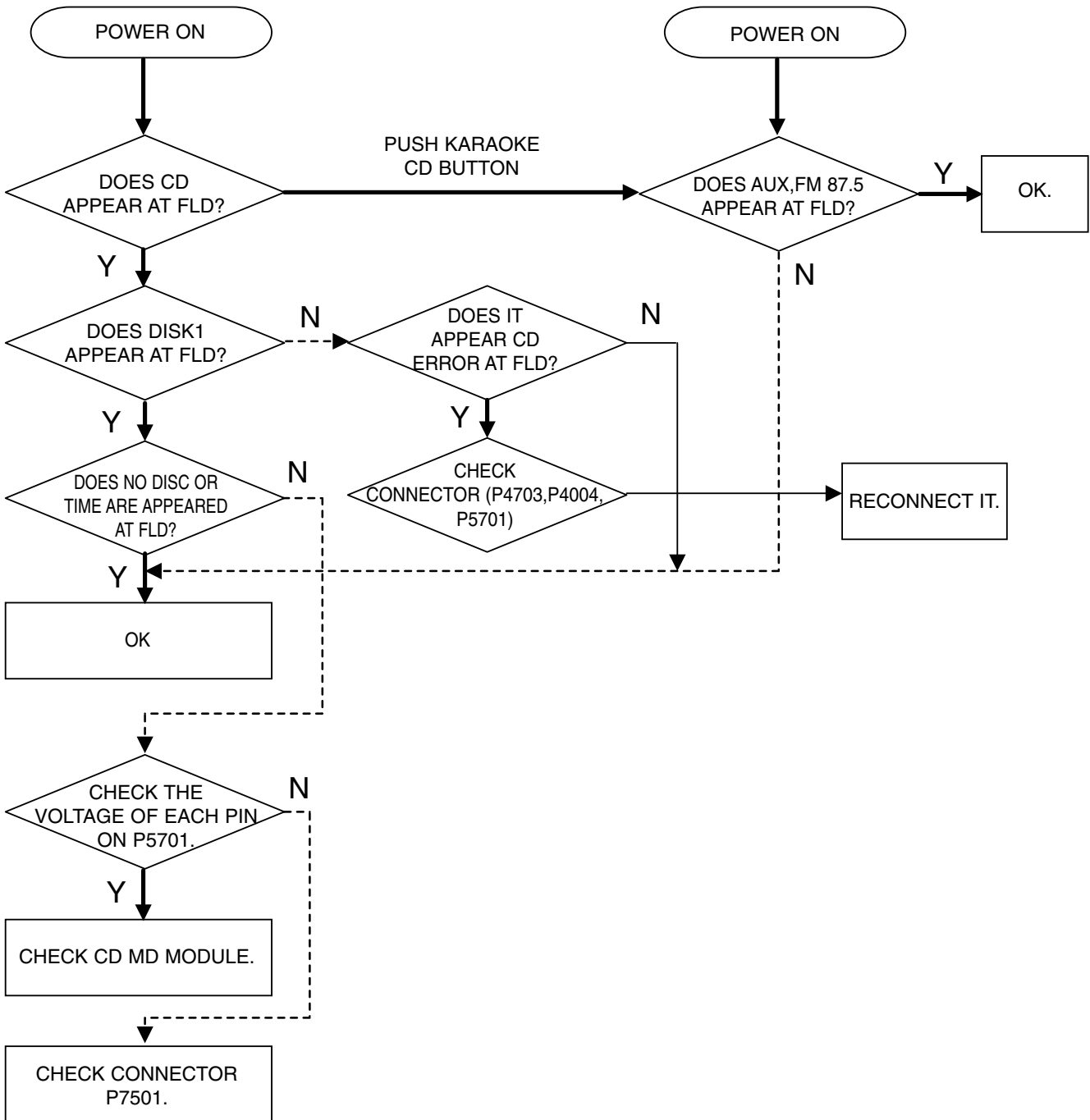


• **PT6324**  
**BLOCK DIAGRAM**

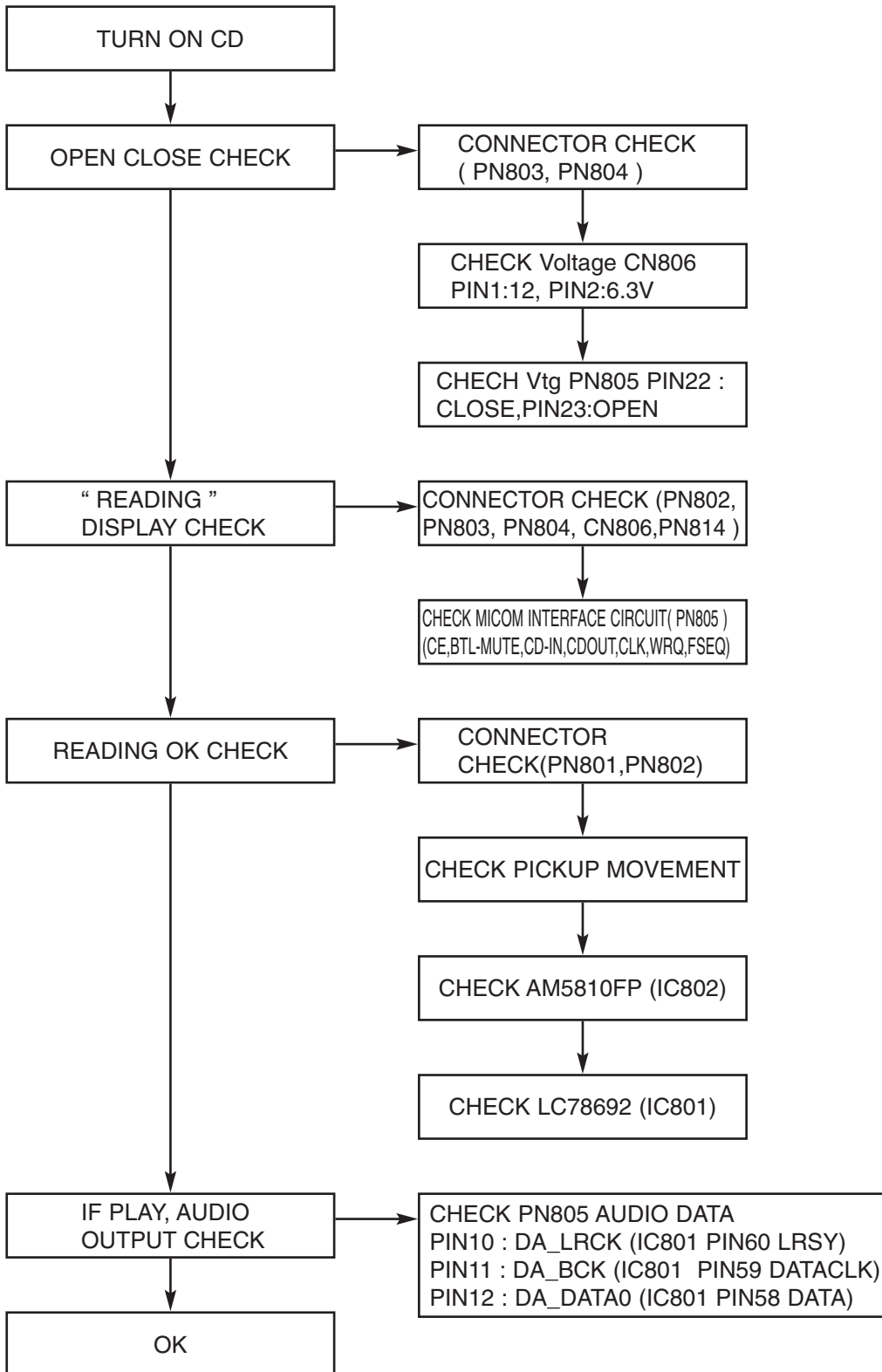


# □ ELECTRICAL TROUBLESHOOTING GUIDE & WAVEFORM(CD PART)

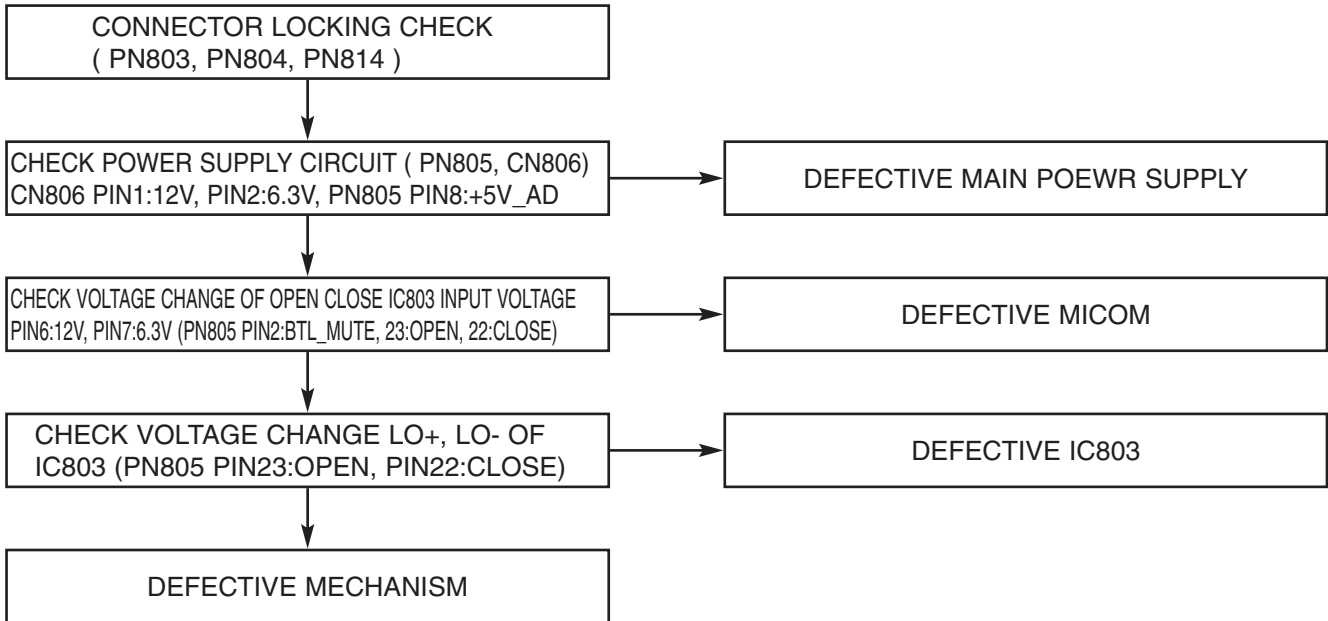
## ■ POWER CHECK GUIDE



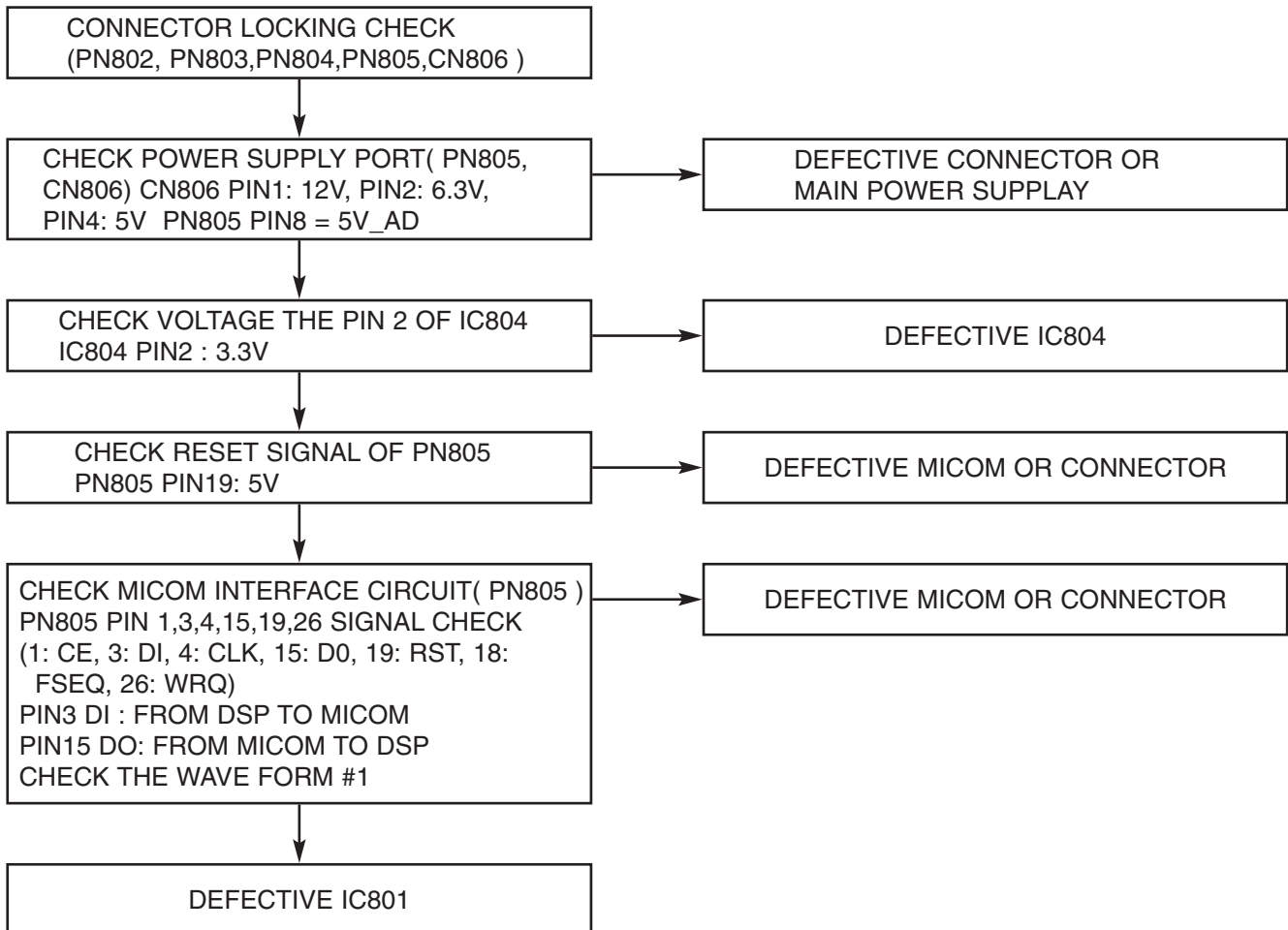
## ■ CD PART



## ■ OPEN CLOSE NG

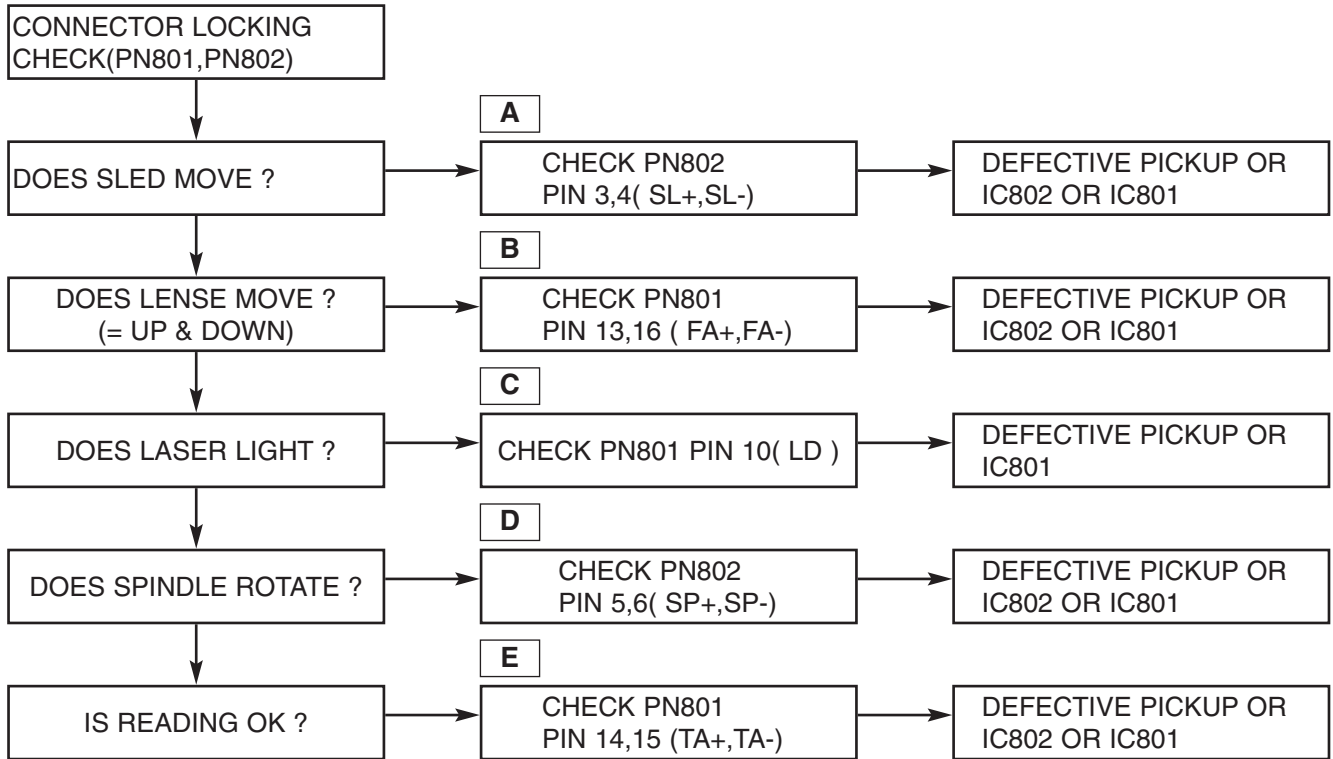


■ “ READING ” DISPLAY CHECK (= ONLY “CD” DISPLAY)



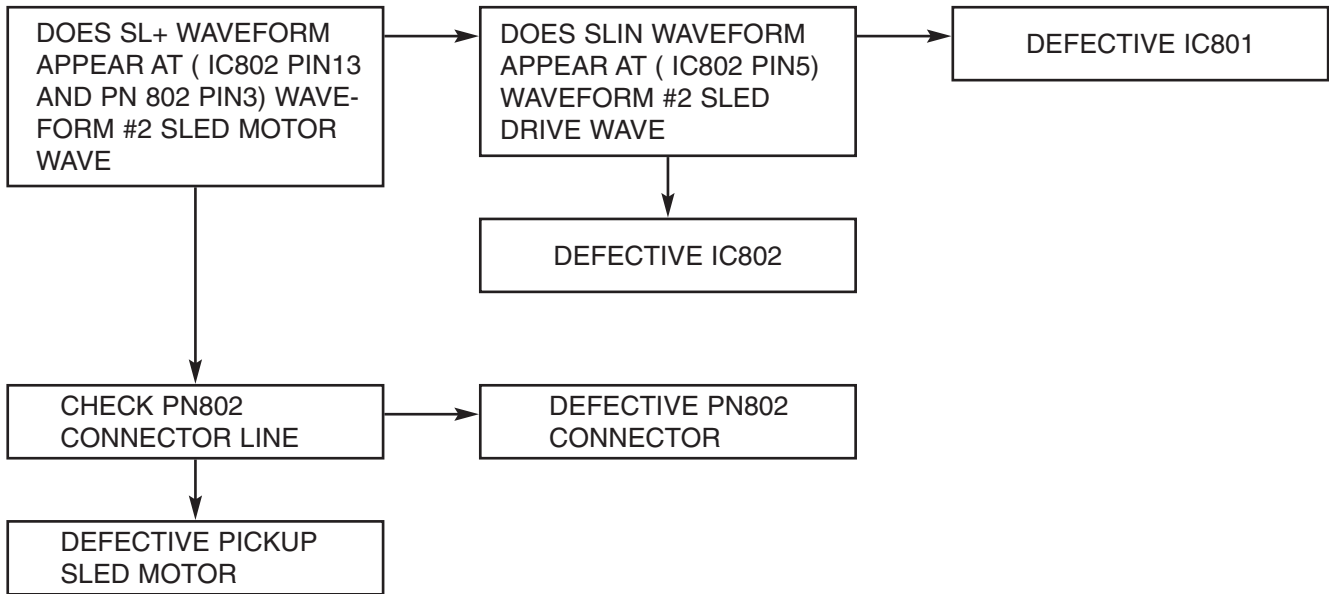


## ■ READING OK CHECK (= “NO DISC” DISPLAY)



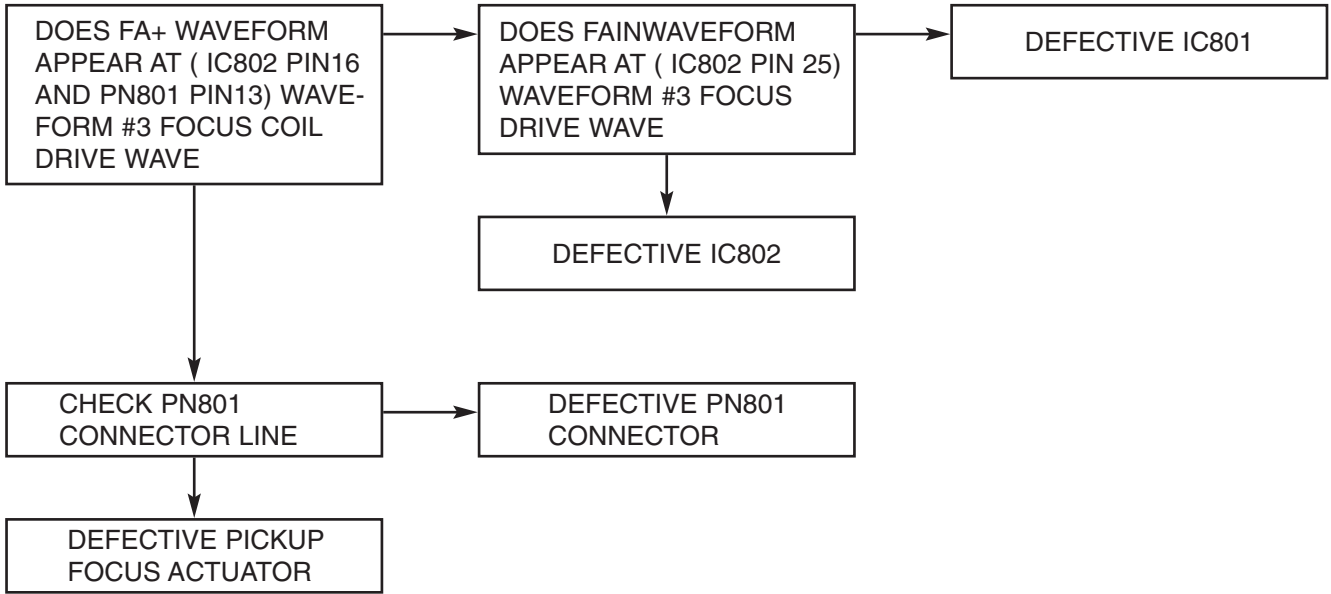
## ■ READING OK CHECK #A (= “NO DISC” DISPLAY)

A



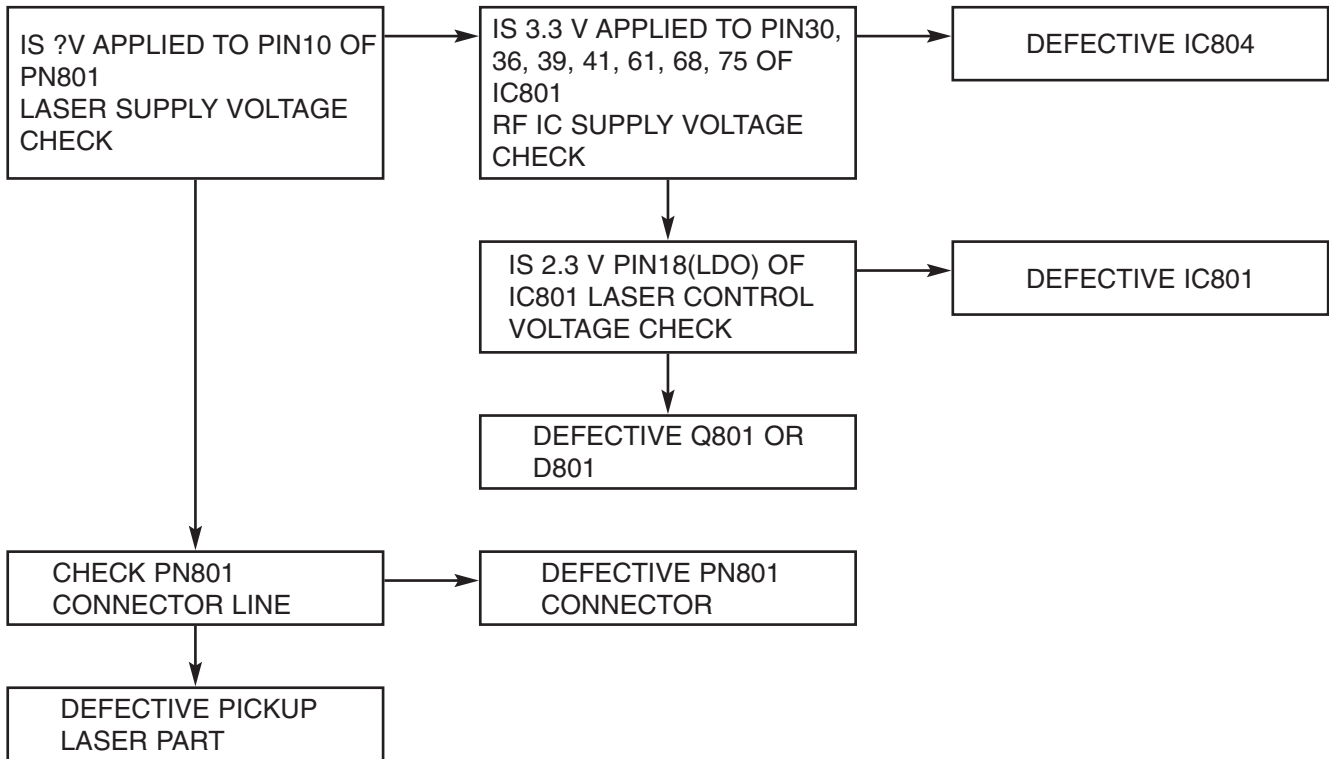
■ READING OK CHECK #B (= “NO DISC” DISPLAY)

**B**



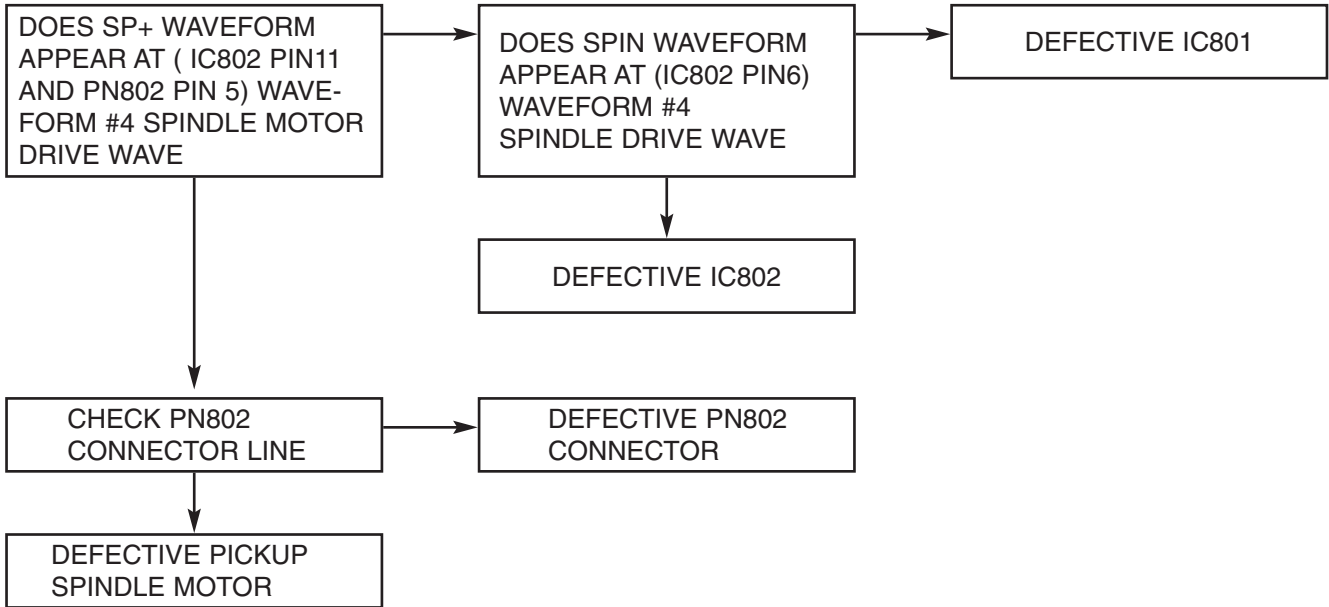
## ■ READING OK CHECK #C (= “NO DISC” DISPLAY)

C



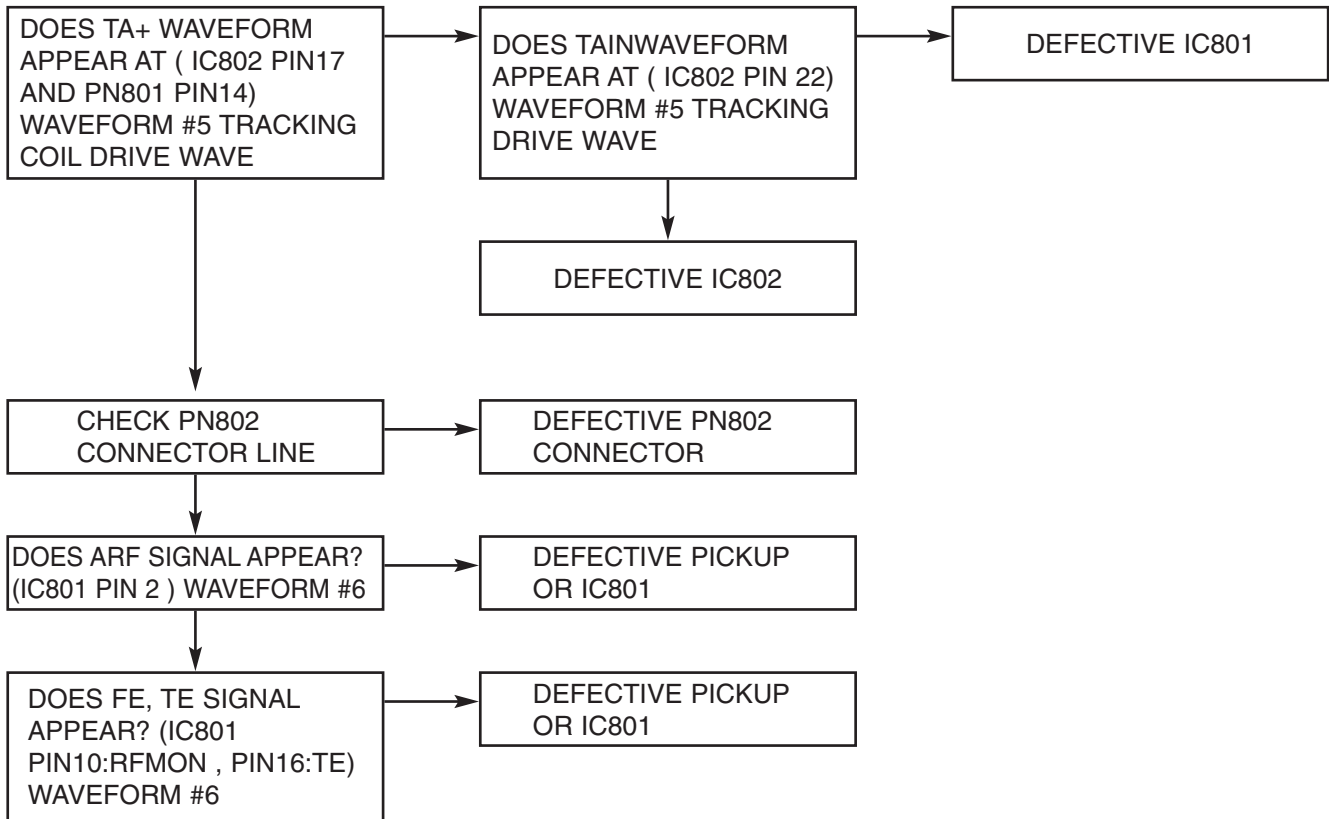
■ READING OK CHECK #D (= “NO DISC” DISPLAY)

D



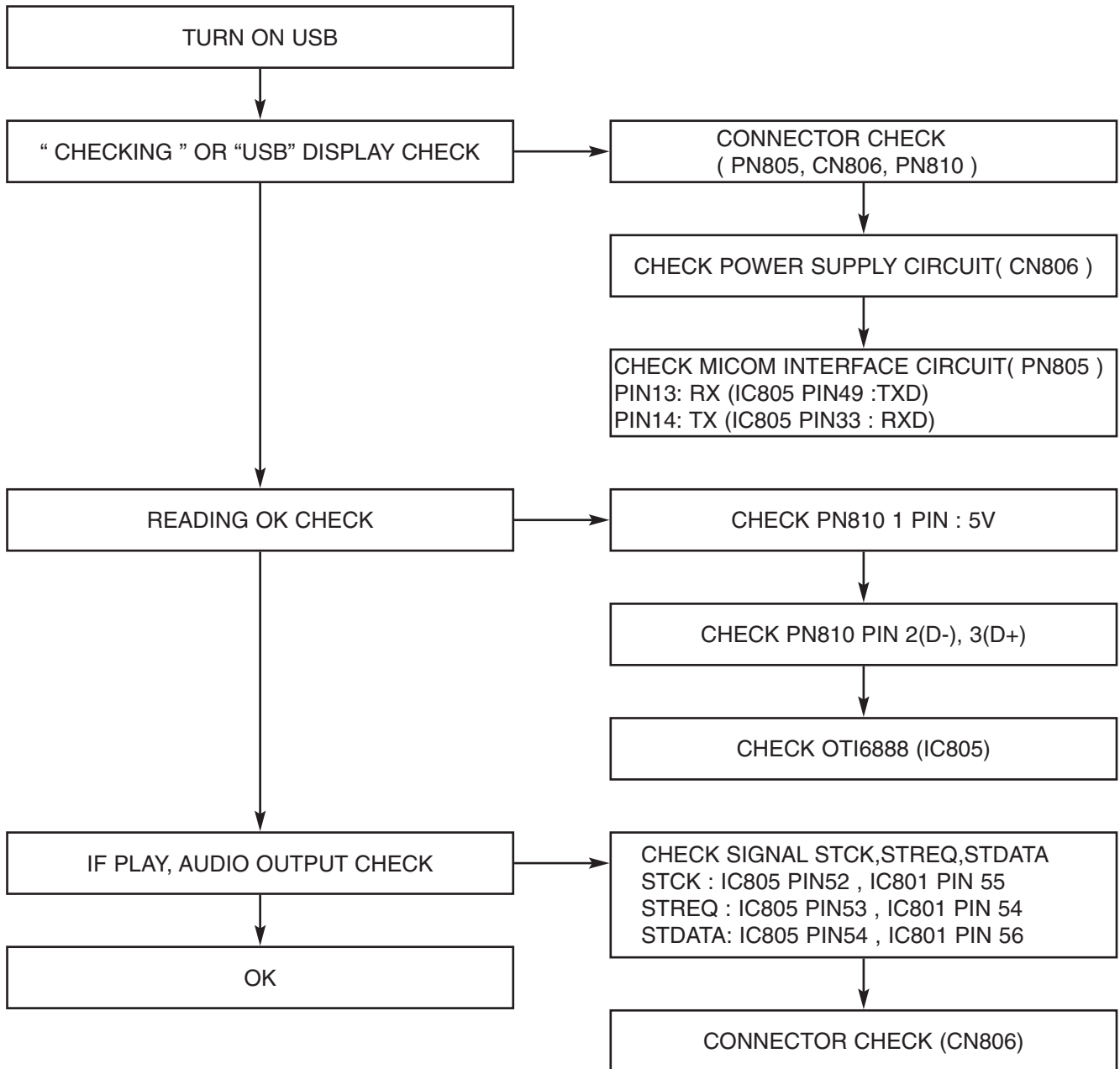
## ■ READING OK CHECK #E (= “NO DISC” DISPLAY)

E



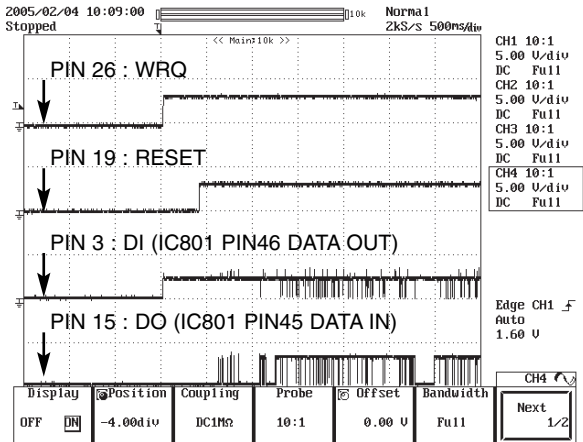
\* REMON IS FE

## ■ USB PART

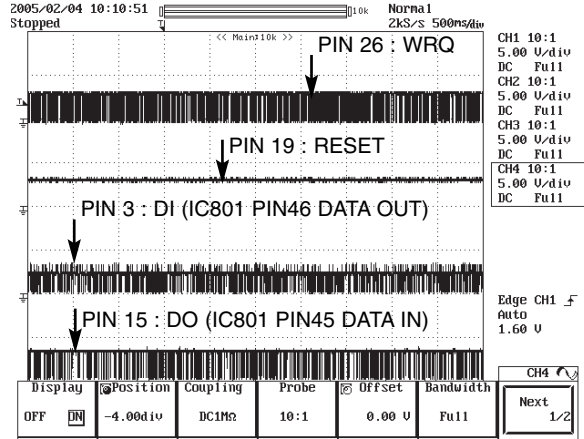


# ■ WAVEFORMS OF MAKOR CHECK POINT

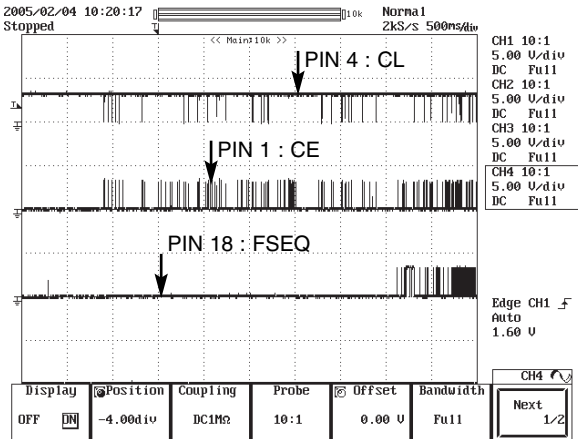
**#1. MICOM INTERFACE WAVEFORM  
(PN805 PIN 26, 19, 3, 15) DURING POWER ON**



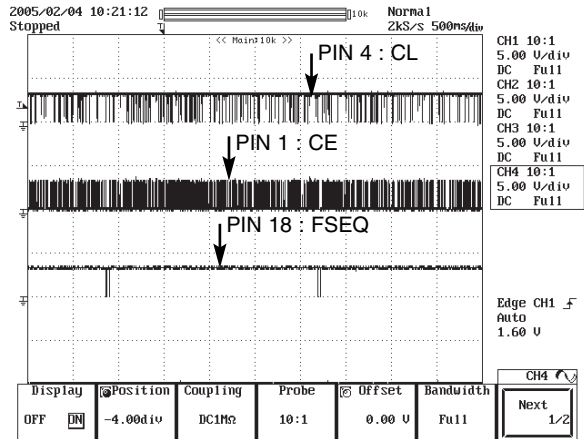
**#2. MICOM INTERFACE WAVEFORM  
(PN805 PIN 26, 19, 3, 15) DURING NORMAL PLAY**



**#1. MICOM INTERFACE WAVEFORM  
(PN805 PIN 4, 1, 18) DURING POWER ON**



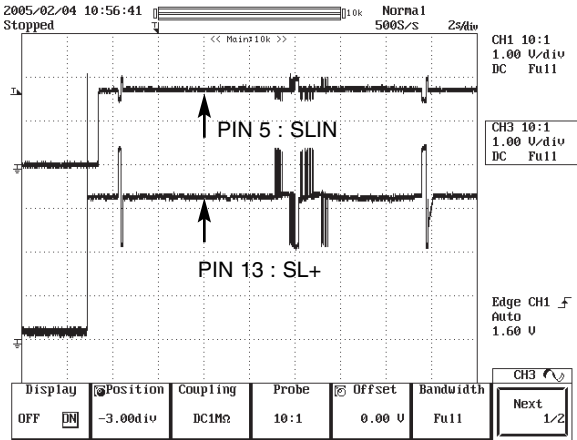
**#1. MICOM INTERFACE WAVEFORM  
(PN805 PIN 4, 1, 18) DURING NORMAL PLAY**



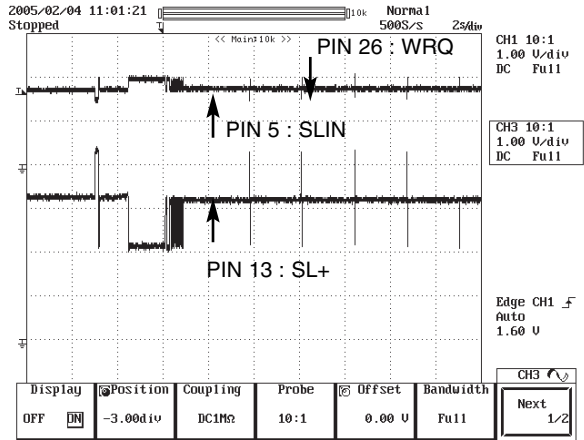


# ■ WAVEFORMS OF MAKOR CHECK POINT

## #2. SLED DRIVE AND MOTOR WAVEFORM (IC802 PIN 5, 13) WHEN FOCUS SEARCH

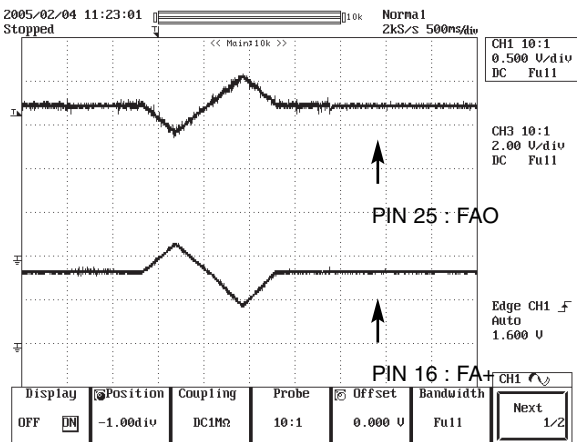


## #2. MICOM INTERFACE WAVEFORM (PN805 PIN 26, 19, 3, 15) DURING NORMAL PLAY



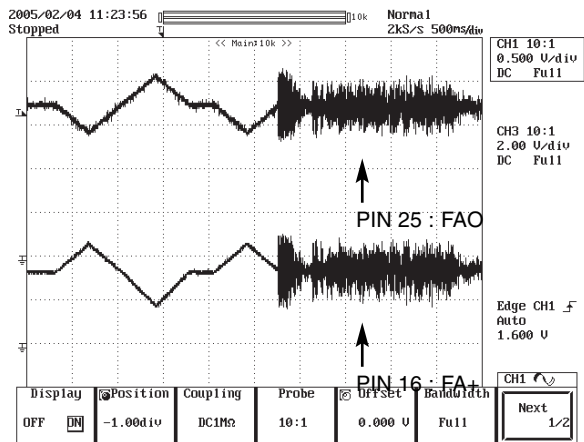
## #3. FOCUS DRIVE AND MOTOR WAVEFORM (IC802 PIN 25, IC802 PIN 16)

- WHEN FOCUS SEARCH FAILED OR THERE IS NO DISC ON TRAY



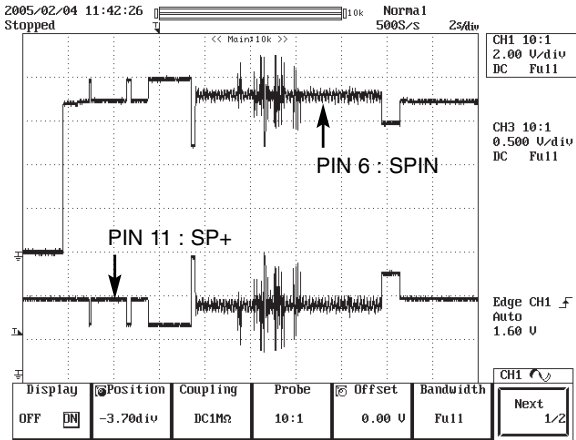
## #3. FOCUS DRIVE AND MOTOR WAVEFORM (IC802 PIN 25, IC802 PIN 16)

- THERE IS DISC ON TRAY AND FOCUS SEARCH SUCCESS

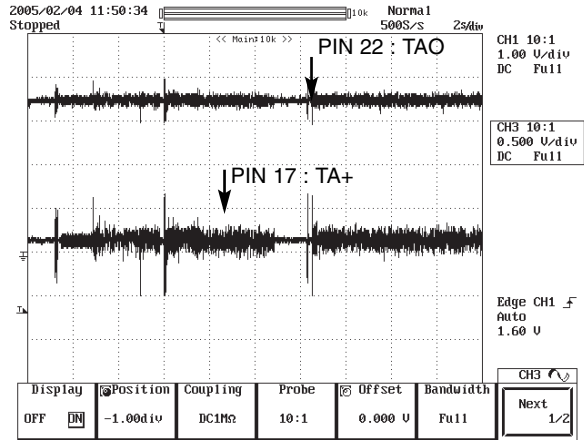


# ■ WAVEFORMS OF MAKOR CHECK POINT

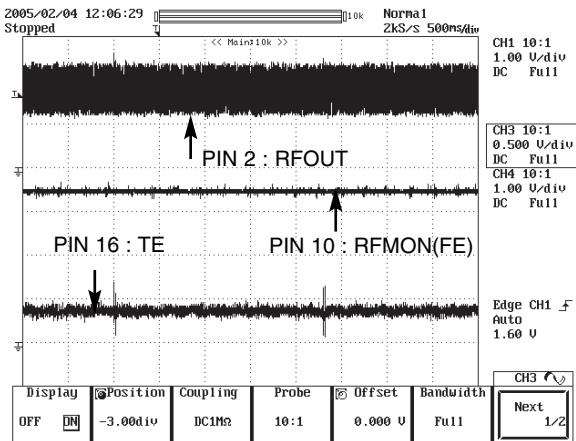
## #4. SPINDLE DRIVE AND MOTOR WAVEFORM (IC802 PIN 6, 11) WHEN TOC READING



## #5. TRACK DRIVE AND MOTOR WAVEFORM (IC802 PIN 22, IC802 PIN 17) DURING NORMAL PLAY



## #6. RF, FOCUS AND TRACKING ERROR WAVEFORM (IC801 PIN 2, 10, 16) DURING NORMAL PLAY

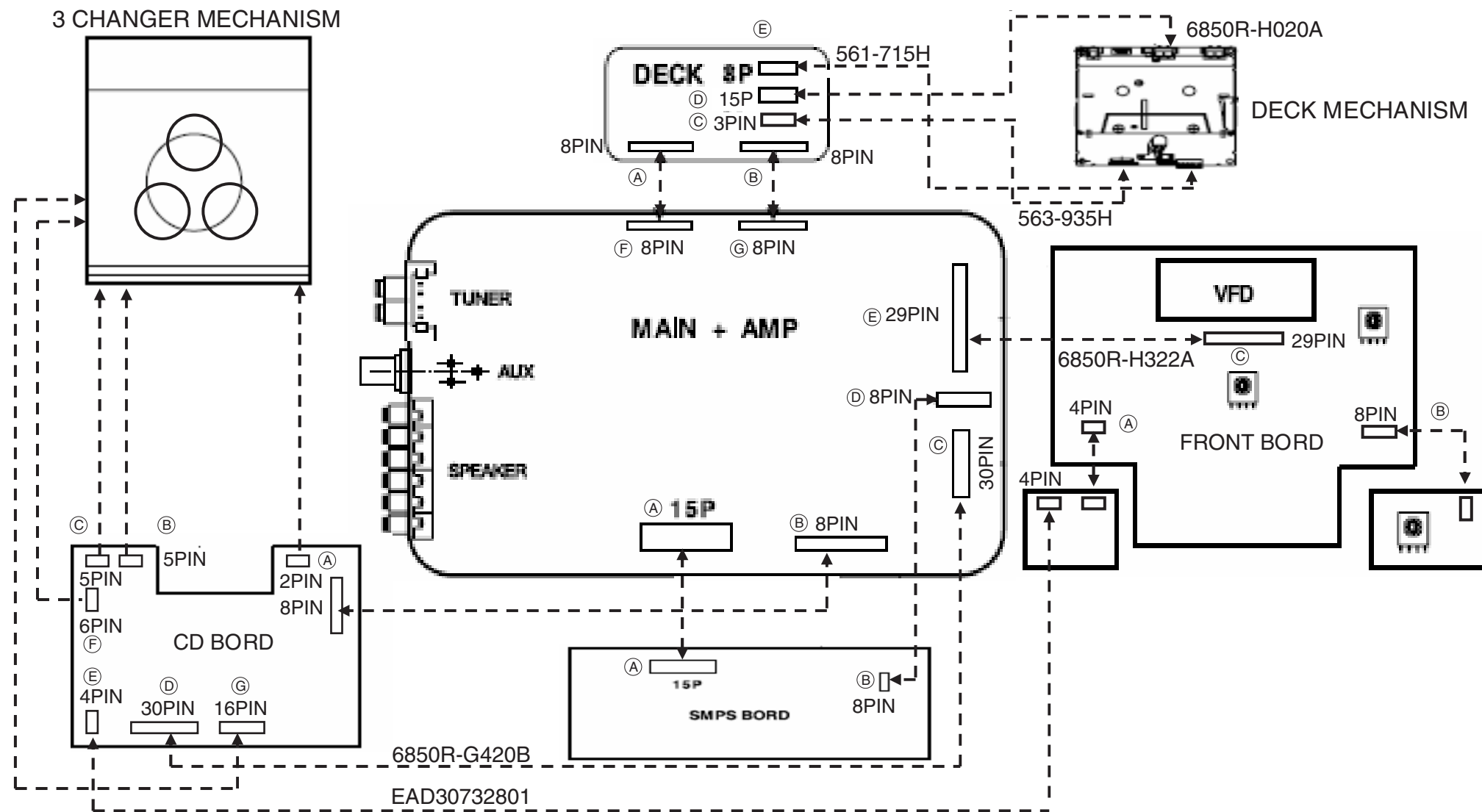


# MEMO

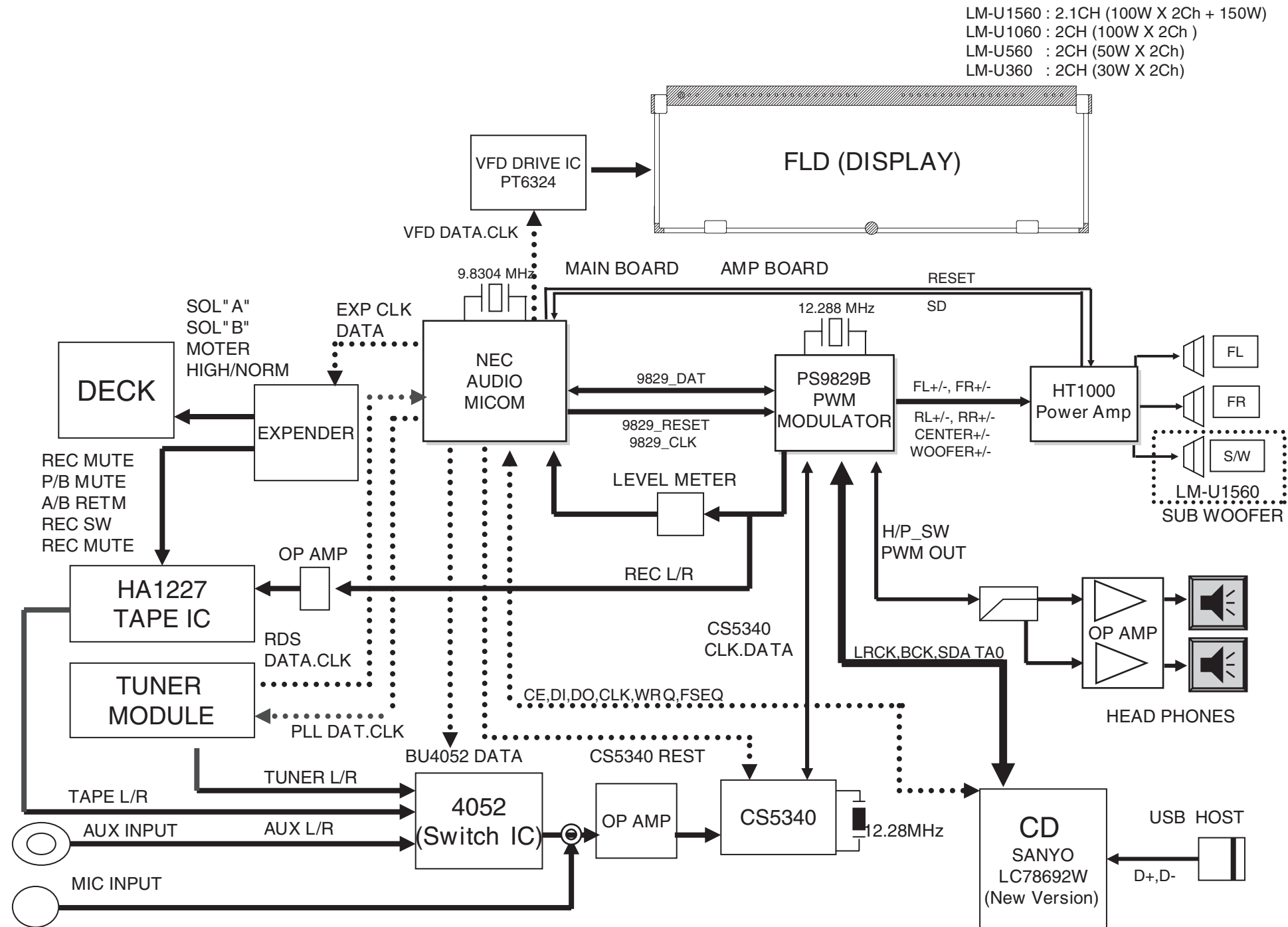
A series of horizontal dotted lines for writing.

# WIRING DIAGRAM

| FRONT           | MAIN            | CD                 | DECK            | SMPS            |
|-----------------|-----------------|--------------------|-----------------|-----------------|
| (A) EAD30732401 | (A) 561-7150    | (A) 561-711C       | (A)(B) 561-844G | (A) 6631R-F039K |
| (B) EAD30731701 | (C) 6630XE00130 | (C) 561-711E       | (C) 561-715C    | (B) 6631R-E108H |
| (C) 561-7073    | (B)(D) 561-711H | (B)(D) 6630XE00130 | (D) 6630XF00415 |                 |
|                 | (E) 6630XF00429 | (E) 561-715D       | (E) 561-715H    |                 |
|                 | (F)(G) 561-843G | (F)(G) 561-711F    |                 |                 |
|                 |                 | (F) 6630XE00816    |                 |                 |

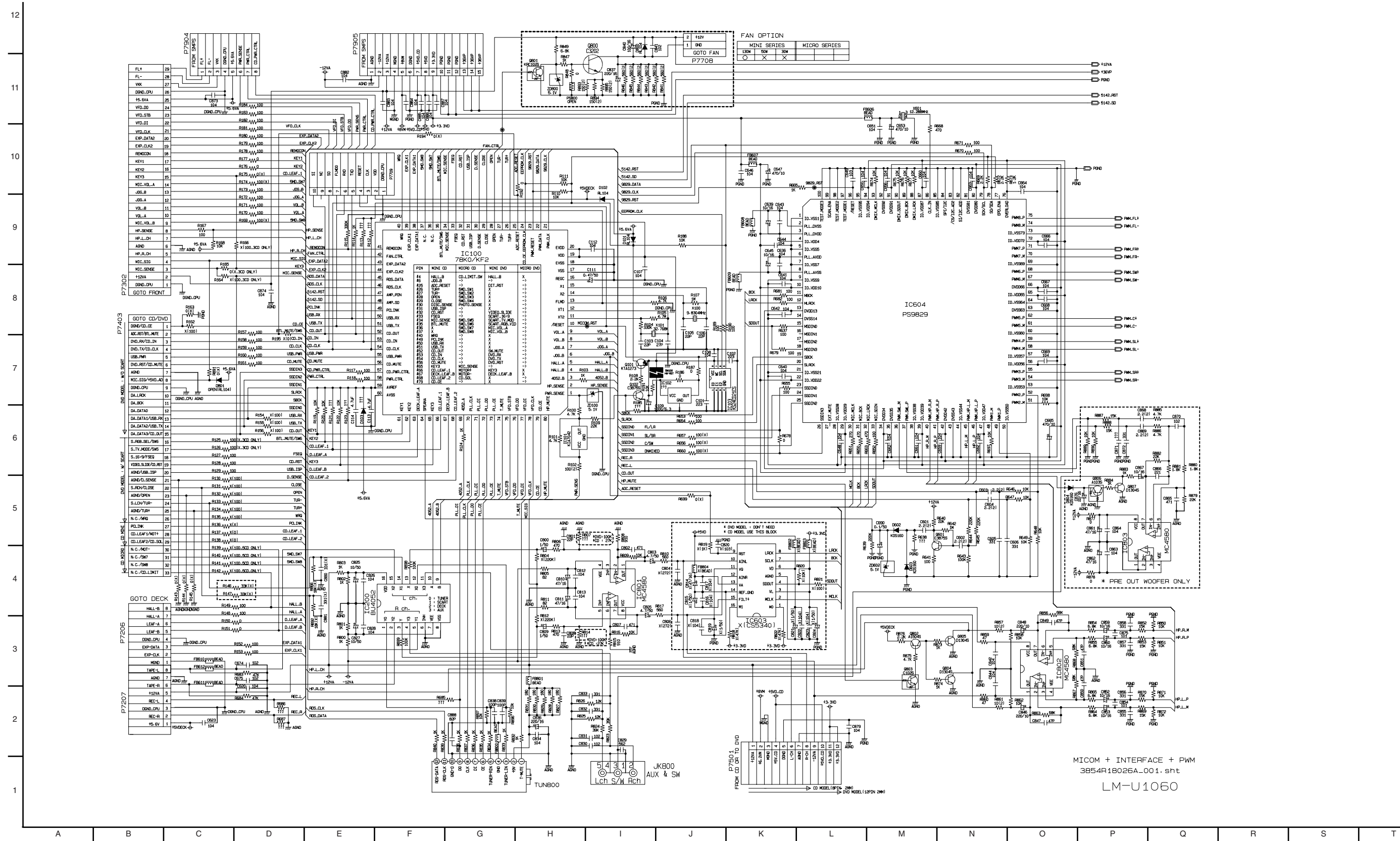


# □ BLOCK DIAGRAM

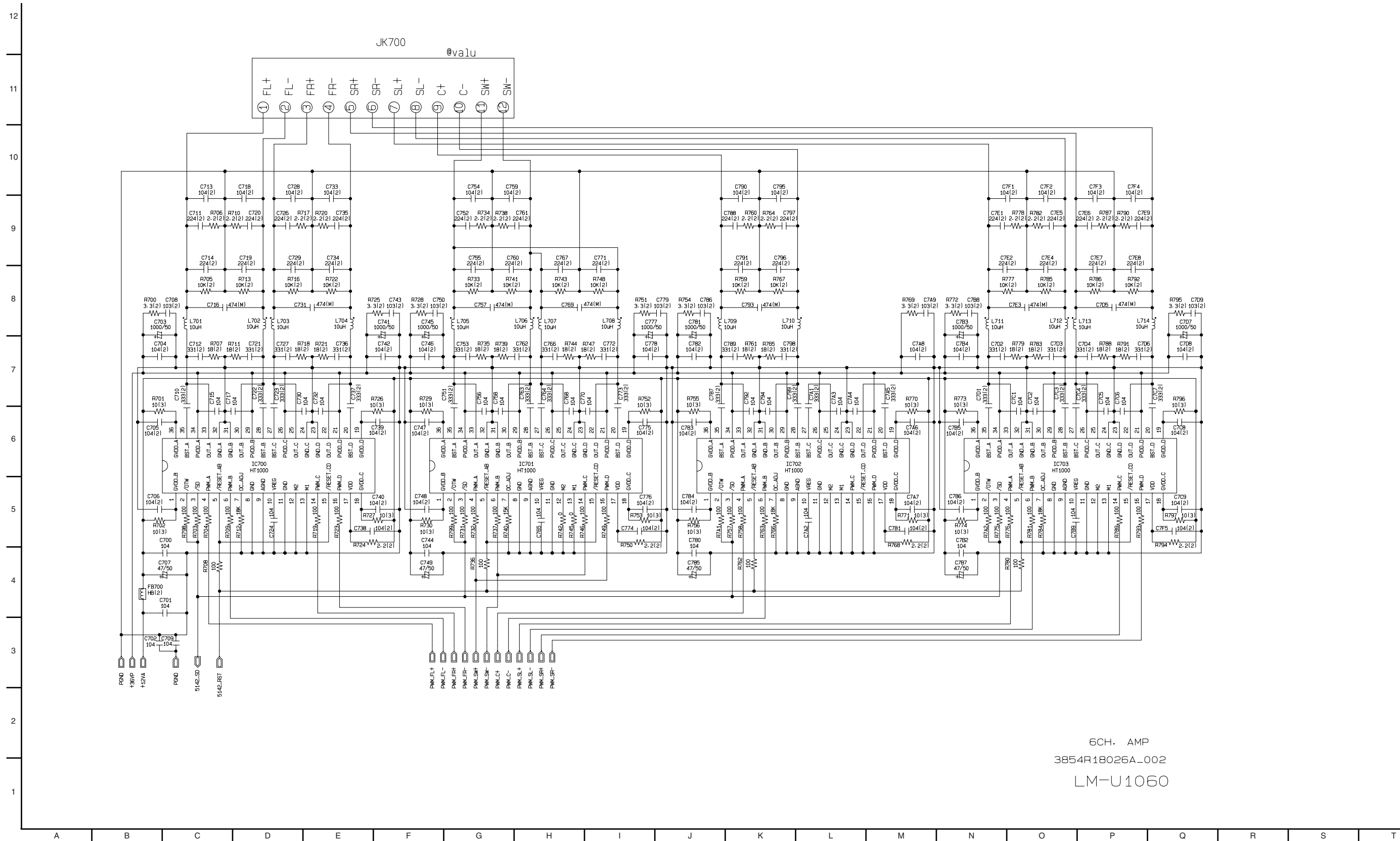


# SCHEMATIC DIAGRAMS

## MAIN SCHEMATIC DIAGRAM



# • AMP SCHEMATIC DIAGRAM

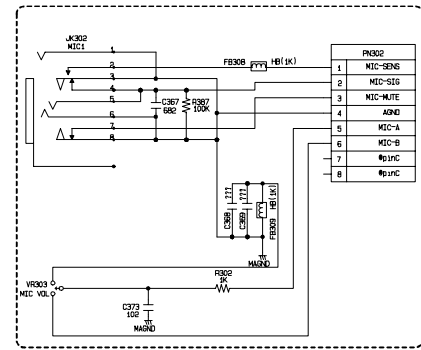


# FRONT SCHEMATIC DIAGRAM

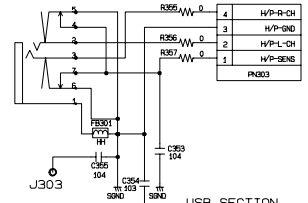
12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1

| SYMBOL | CONTENTS         | DESCRIPTION |                                     |
|--------|------------------|-------------|-------------------------------------|
| D301   | RDS              | X           | NON RDS (FM50KHz-RDS/FM100KHz-RBDS) |
| D302   | AM STEP          | X           | 9KHz 10KHz                          |
| D303   | FM STEP          | X           | 50KHz 100KHz                        |
| D304   | BAND1            | X           | AM/FM                               |
| D305   | BAND2            | X           | AM/FM/DIR                           |
| D306   | JAPAN BAND       | X           | NON JAPAN BAND JAPAN BAND           |
| D307   | TUNER            | X           | 2CHIP(IC72131) 1CHIP(LV2300M)       |
| D308   | SCART            | X           | WITHOUT SCART WITH SCART            |
| D309   | USB              | X           | WITHOUT USB WITH USB                |
| D310   | OPTICAL-IN       | X           | WITHOUT OPTICAL-IN WITH OPTICAL-IN  |
| D311   | OUTPUT POWER     | X           | 30W 60W 130W                        |
| D313   | CONFIG (SPEAKER) | X           | 2CH 2.1CH 5CH(PREOUT) 6CH(5.1CH)    |
| D315   | DECK OPTION      | X           | A/S/A/R A/R/A/R A/S/A/S             |
| D317   | VOLUME INITIAL   | X           | LAST MEMORY VOLUME INITIAL          |
| D318   | BUYER OPTION     | X           | LG SEMP PHILCO                      |
| D319   | PICK-UP          | X           | SAMSUNG SONY                        |
| D324   | DECO LED         | X           | LED LIGHT LED UNLIGHT               |

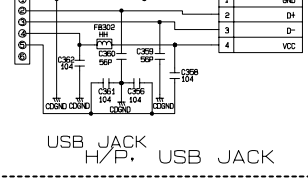
## MIC JACK



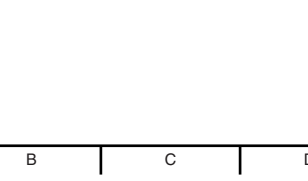
## JK301 HEADPHONE



## USB SECTION



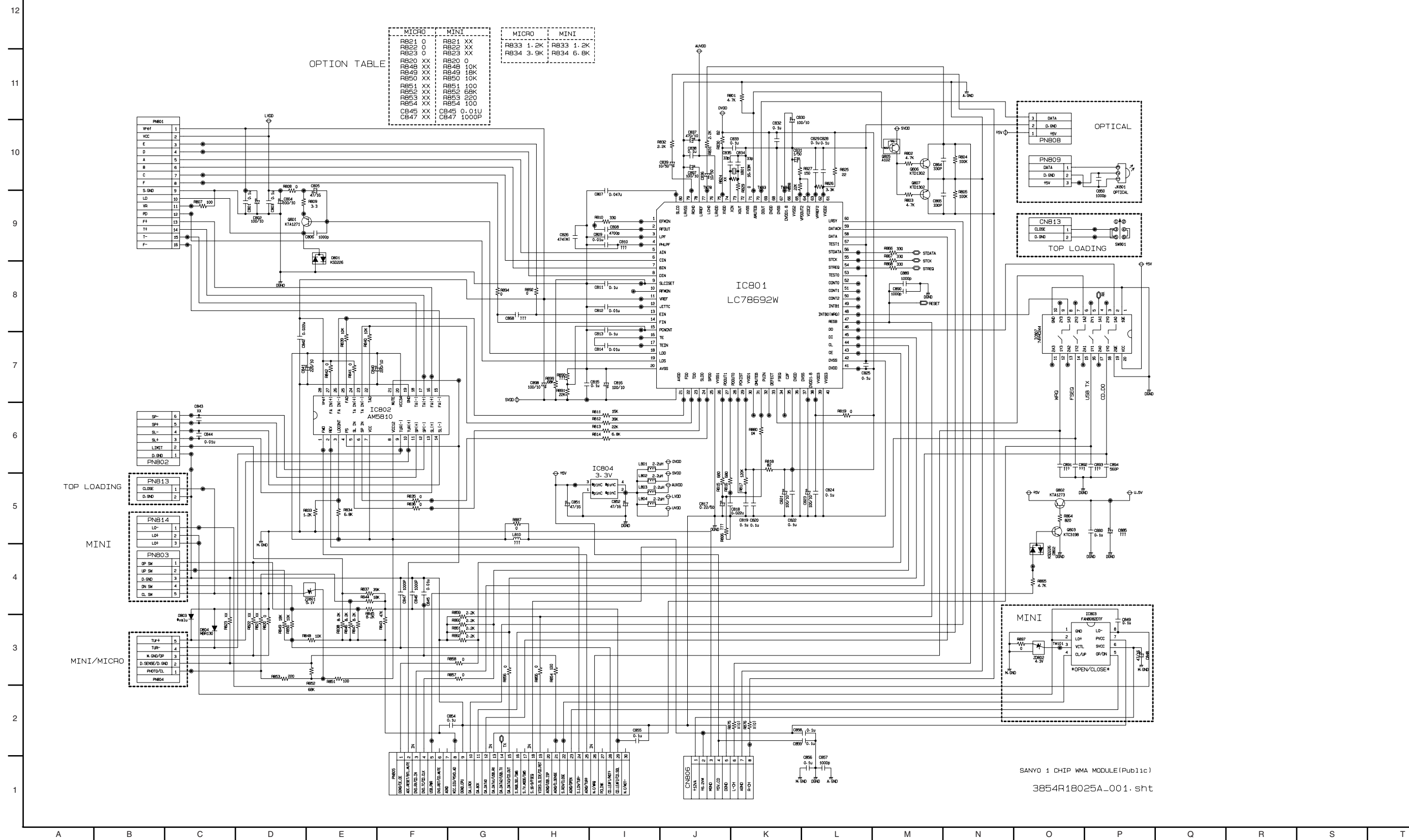
## USB JACK H/P, USB JACK







# CD SCHEMATIC DIAGRAM



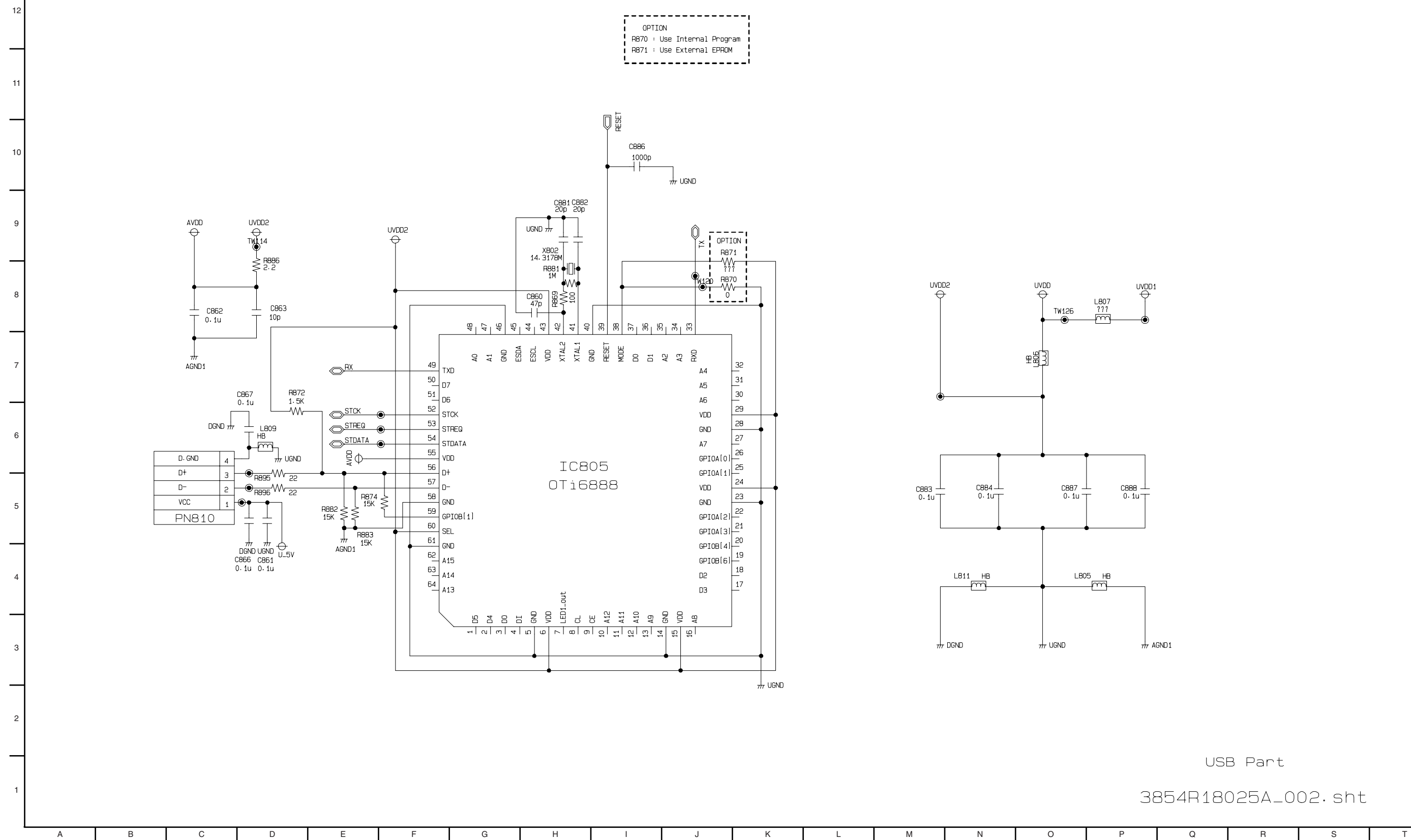
OPTION TABLE

| MICRO |    | MINI |       |
|-------|----|------|-------|
| RB21  | 0  | RB21 | XX    |
| RB22  | 0  | RB22 | XX    |
| RB23  | 0  | RB23 | XX    |
| RB20  | XX | RB20 | 0     |
| RB48  | XX | RB48 | 10K   |
| RB49  | XX | RB49 | 15K   |
| RB50  | XX | RB50 | 10K   |
| RB51  | XX | RB51 | 100   |
| RB52  | XX | RB52 | 68K   |
| RB53  | XX | RB53 | 220   |
| RB54  | XX | RB54 | 100   |
| CB45  | XX | CB45 | 0.01u |
| CB47  | XX | CB47 | 1000P |

| MICRO |      | MINI |      |
|-------|------|------|------|
| RB33  | 1.2K | RB33 | 1.2K |
| RB34  | 3.9K | RB34 | 6.8K |

SANYO 1 CHIP WMA MODULE(Public)  
3854R18025A\_001.sht

# • USB SCHEMATIC DIAGRAM



USB Part

3854R18025A\_002.sht

# SMPS SCHEMATIC DIAGRAM

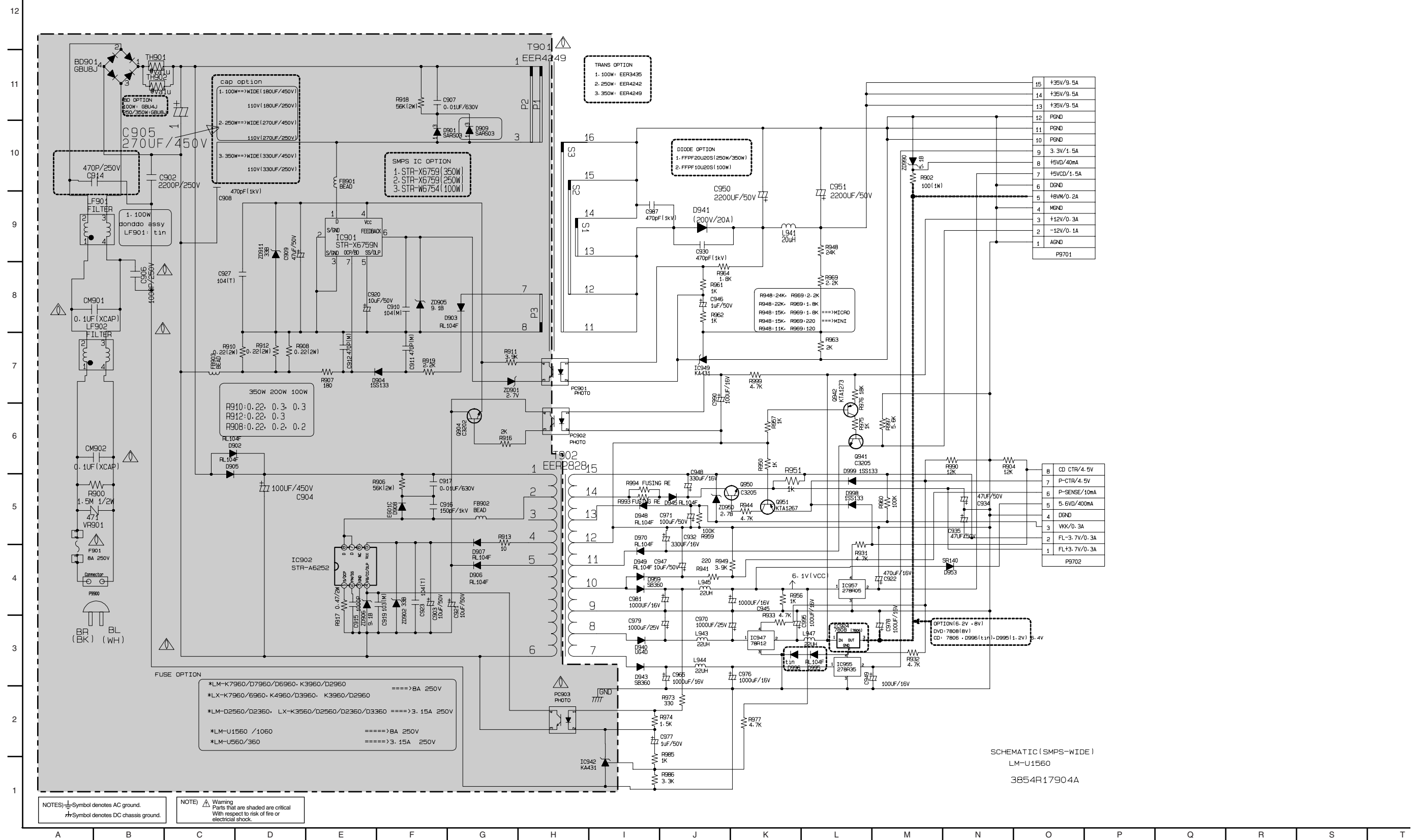
## IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE LG ELECTRONICS CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT.

CAUTION: SPECIAL COMPONENTS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION. THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

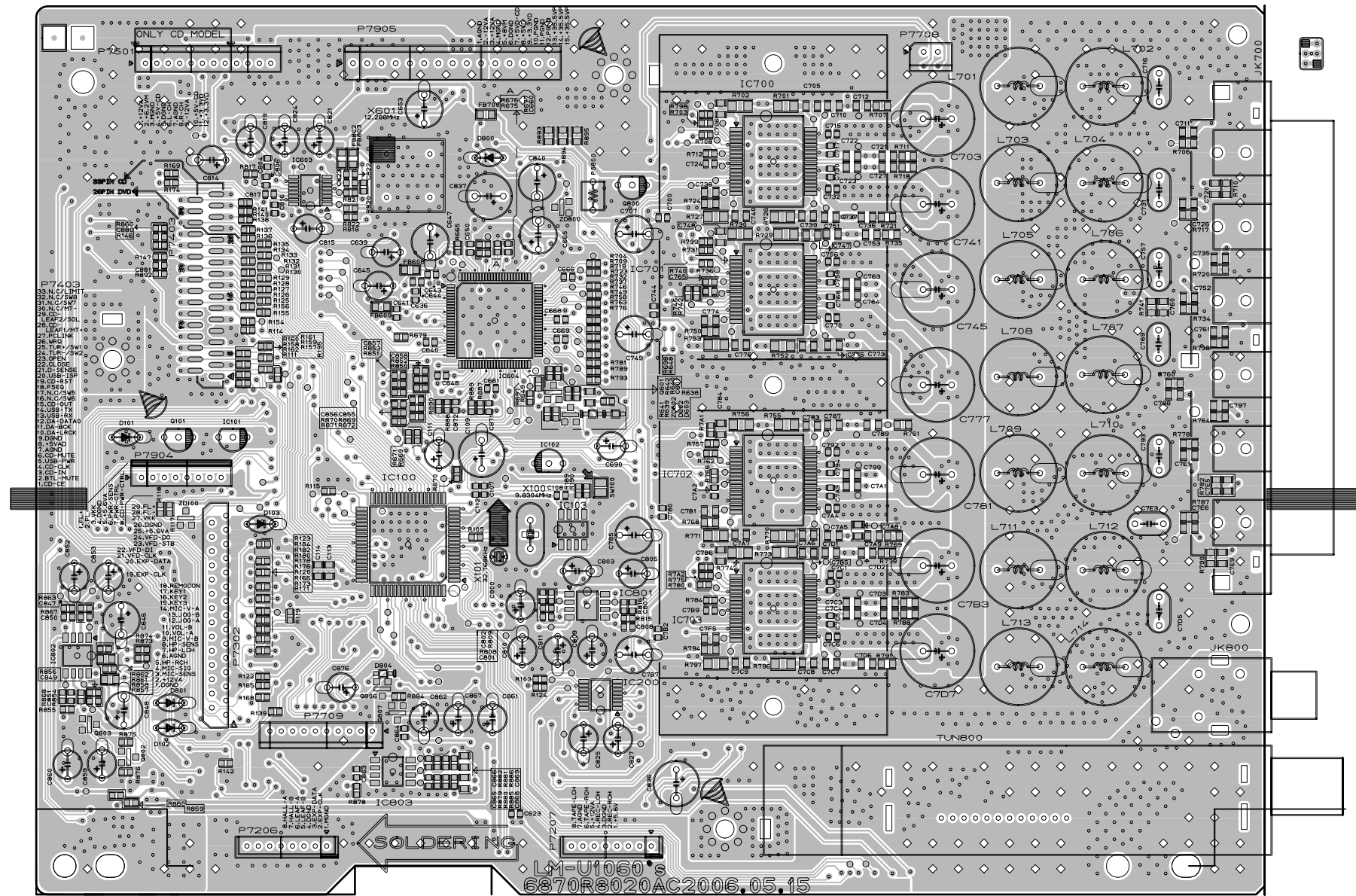
## NOTE:

1. Shaded (■) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.



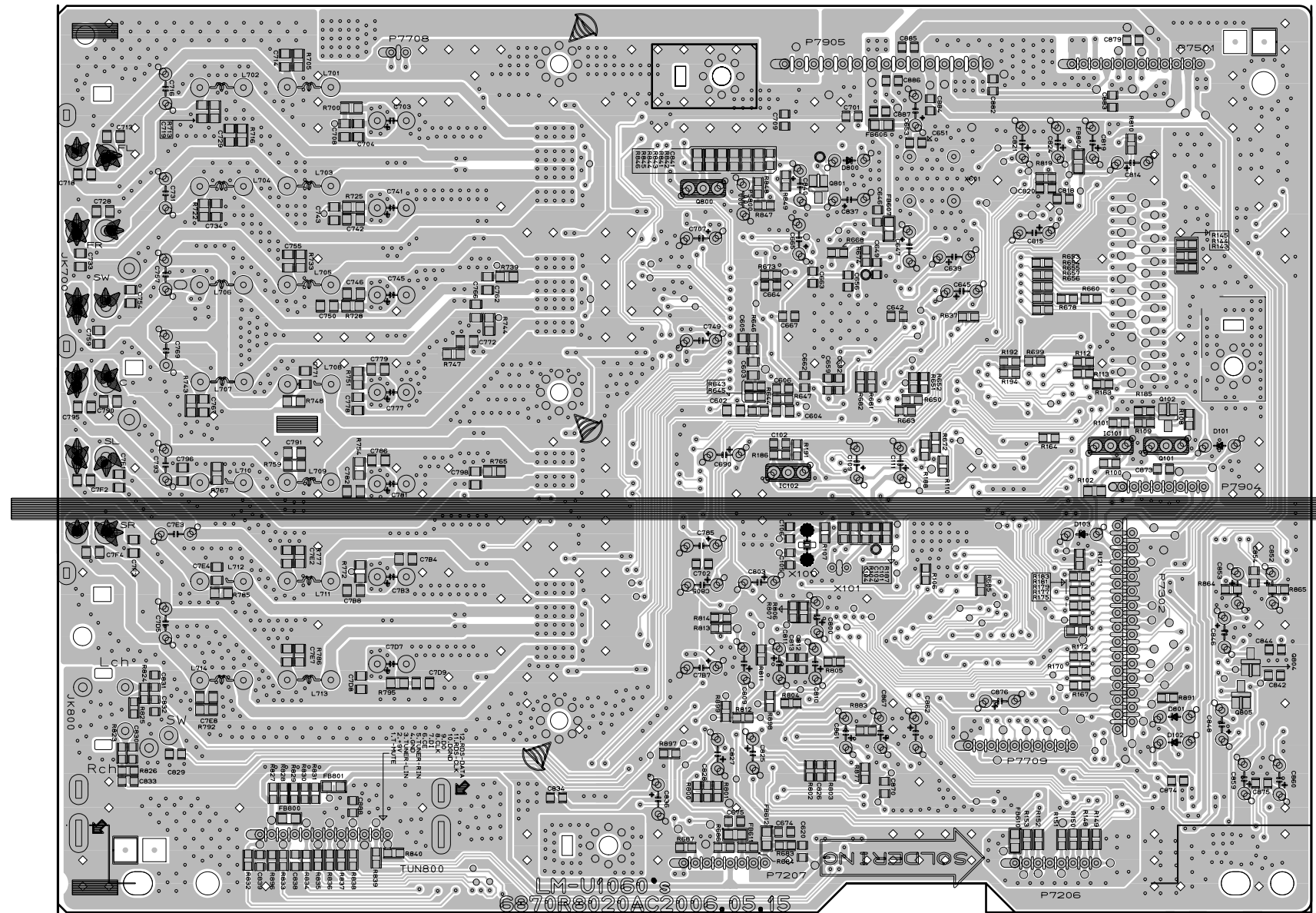
# PRINTED CIRCUIT DIAGRAMS

## MAIN P.C. BOARD (TOP VIEW)

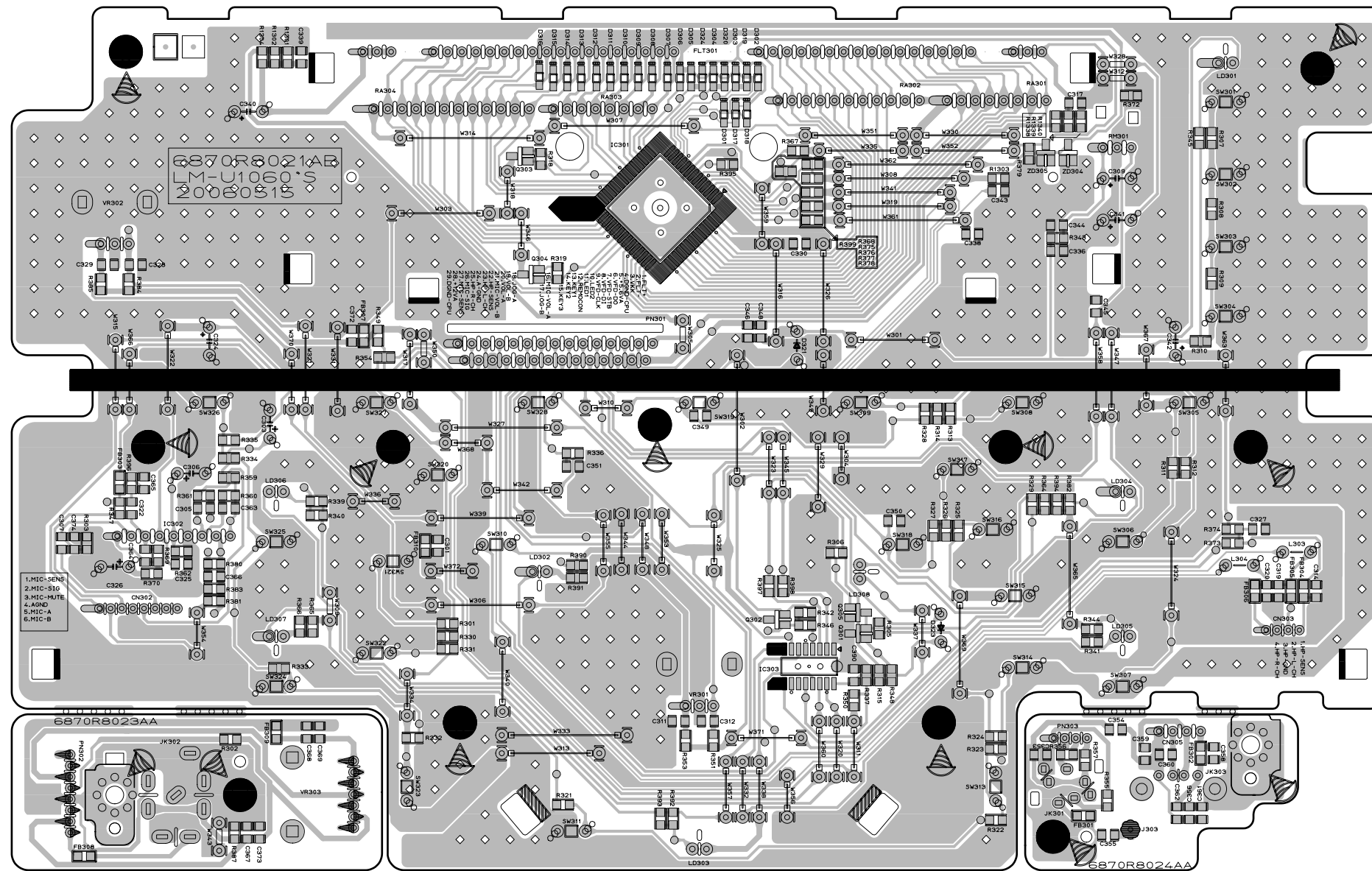




• MAIN P.C. BOARD (BOTTOM VIEW)



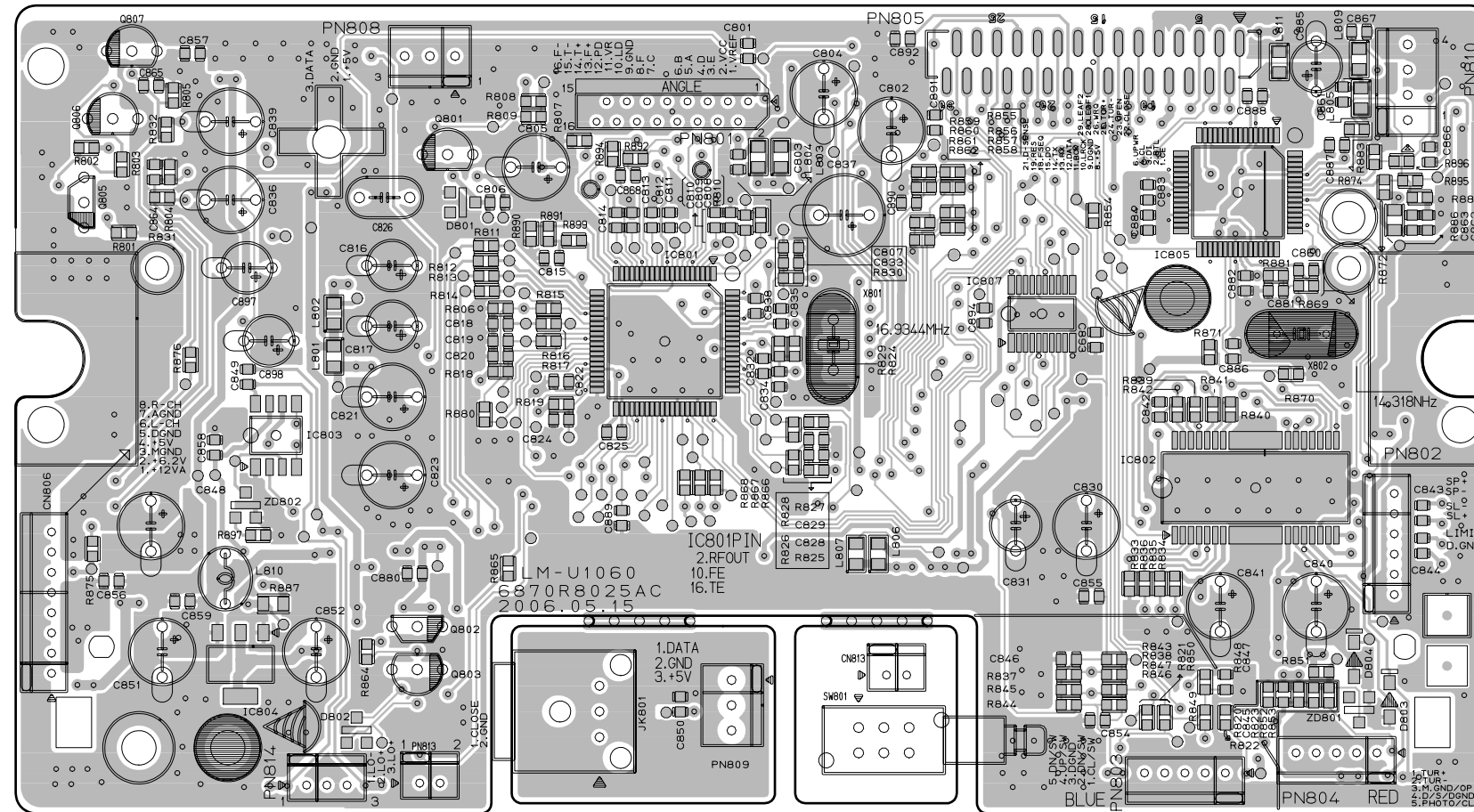
• FRONT P.C. BOARD



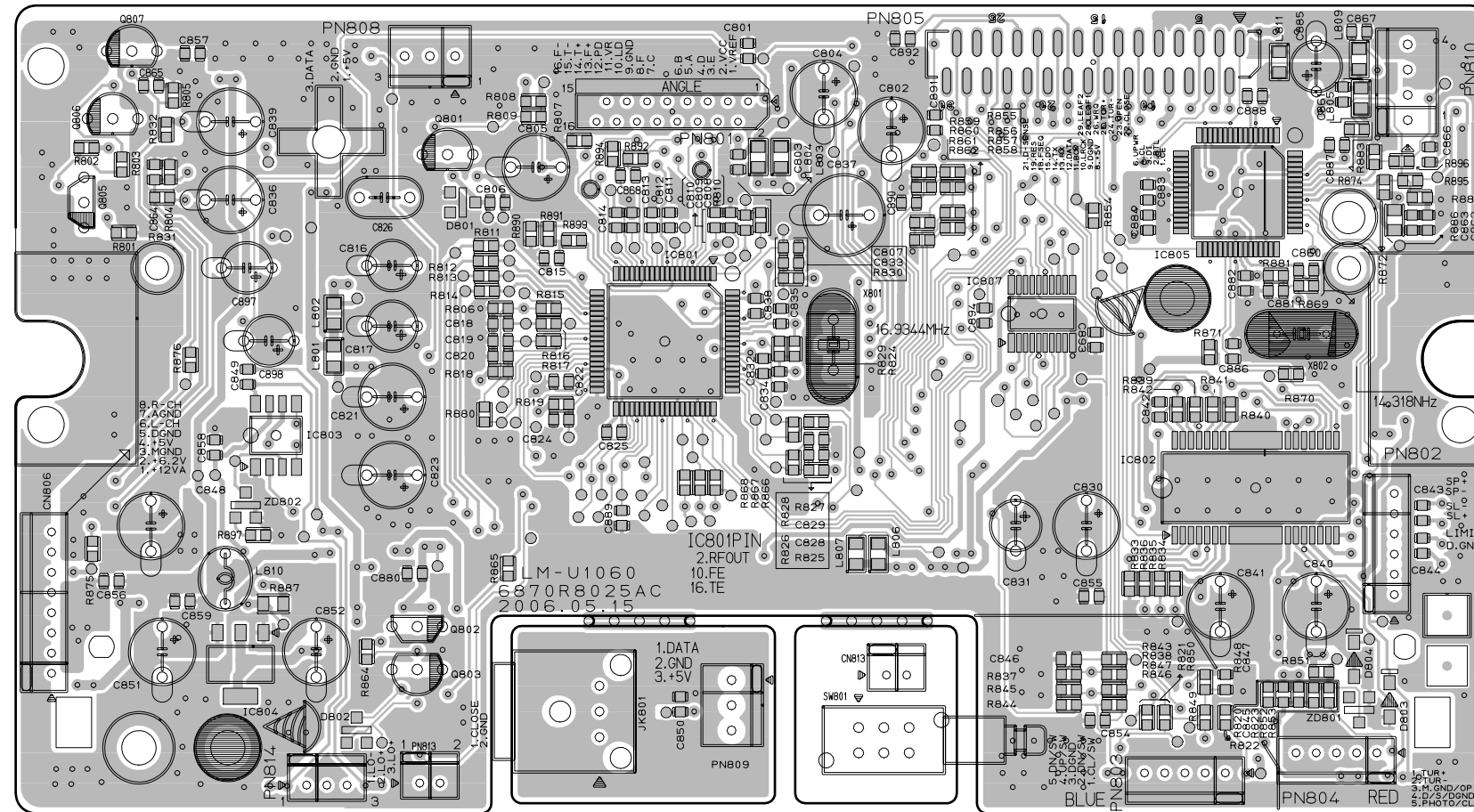




• CD P.C. BOARD (TOP VIEW)



• CD P.C. BOARD (BOTTOM VIEW)



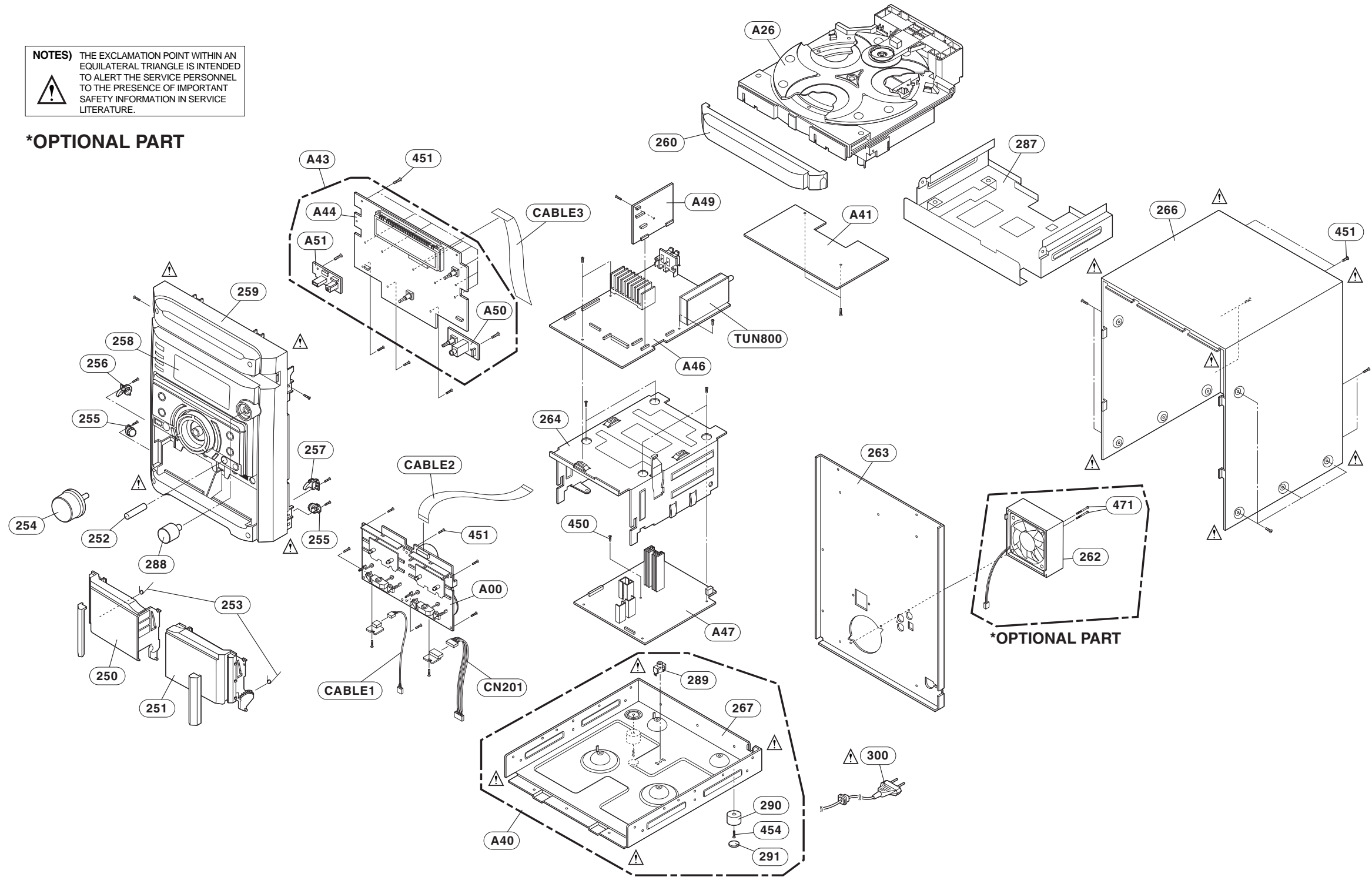


# SECTION 3. EXPLODED VIEWS

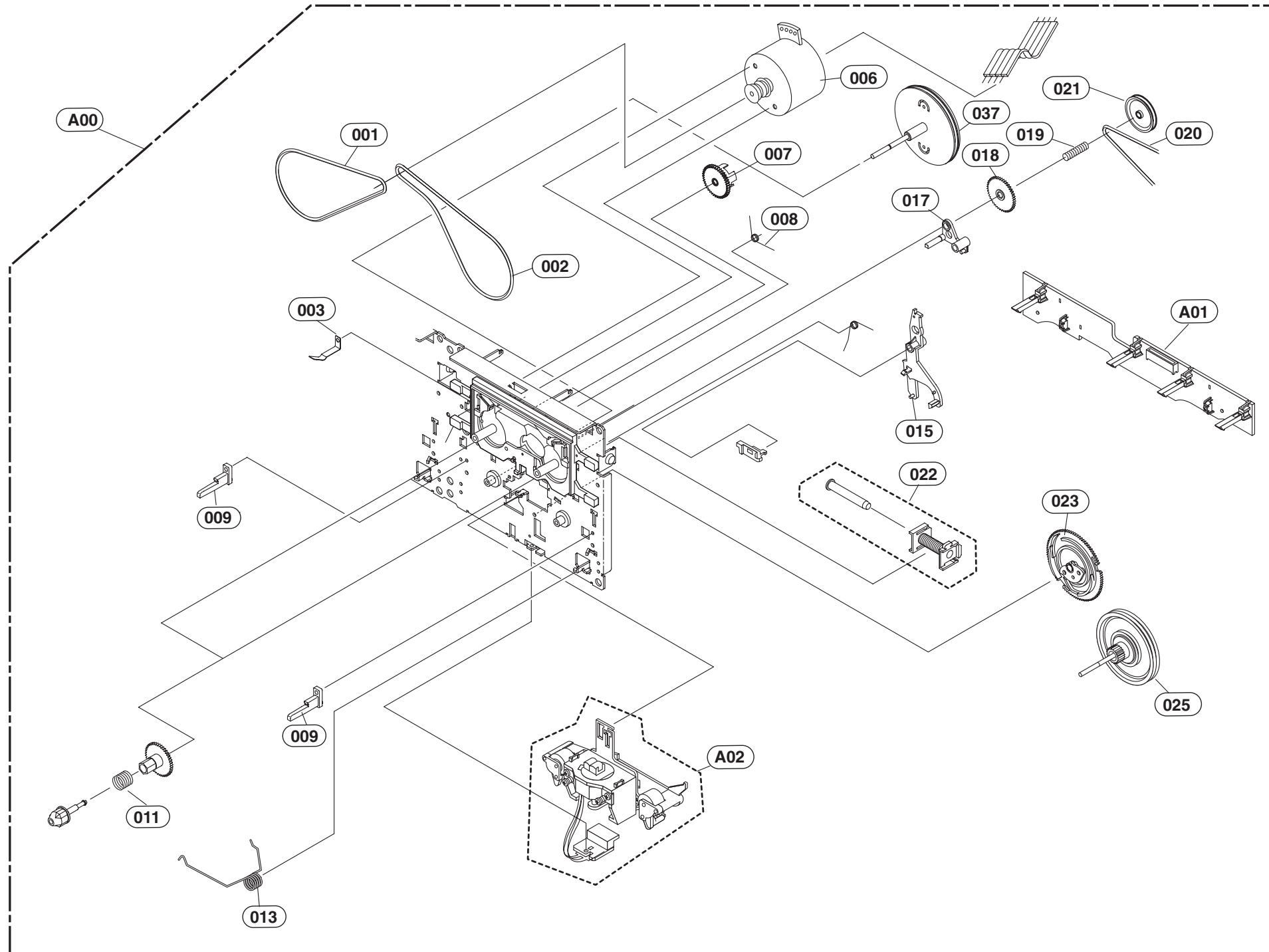
## □ CABINET AND MAIN FRAME SECTION

**NOTES)** THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

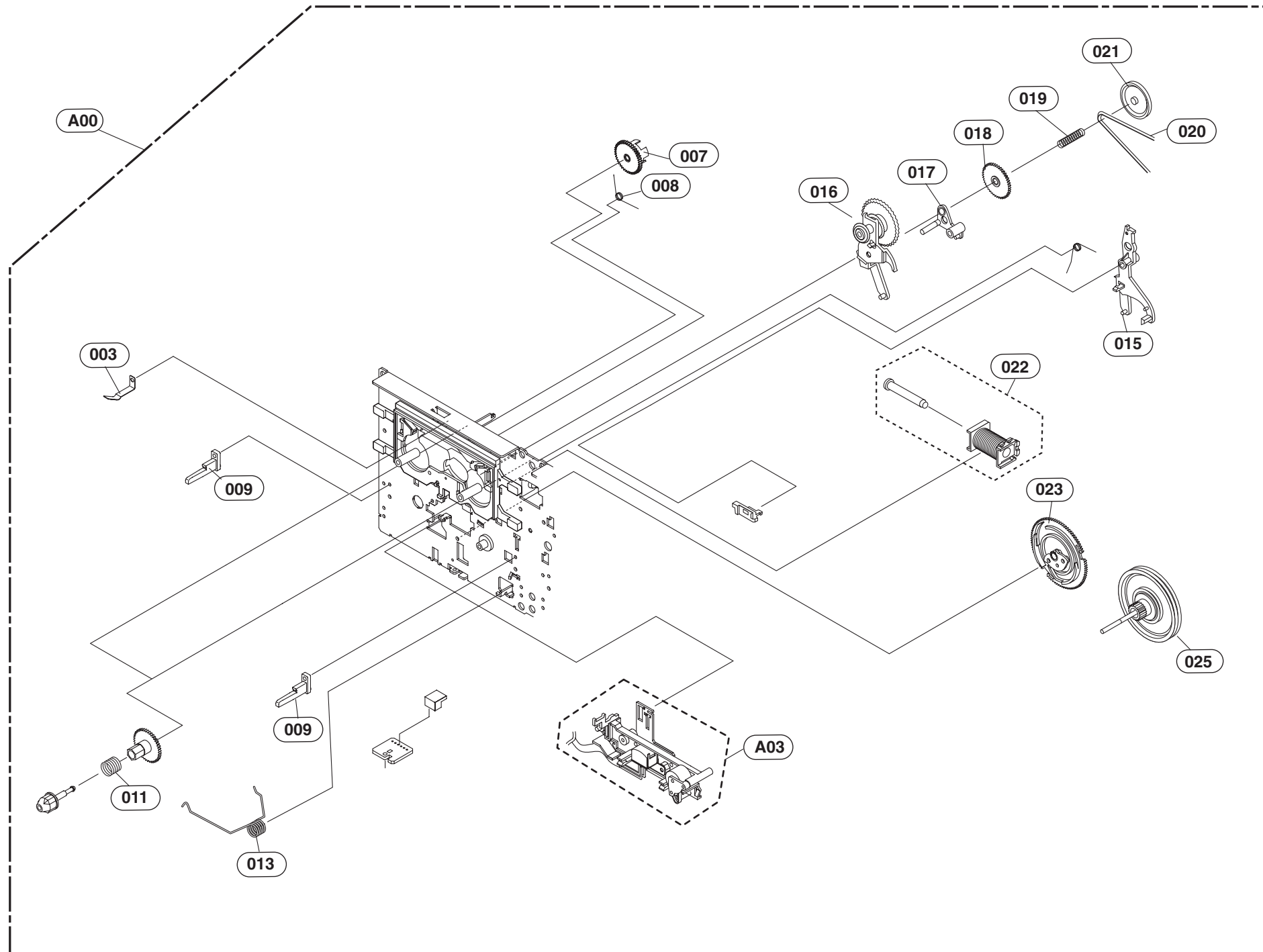
**\*OPTIONAL PART**



# □ TAPE DECK MECHANISM (A/R & A/S : LEFT A/S DECK)

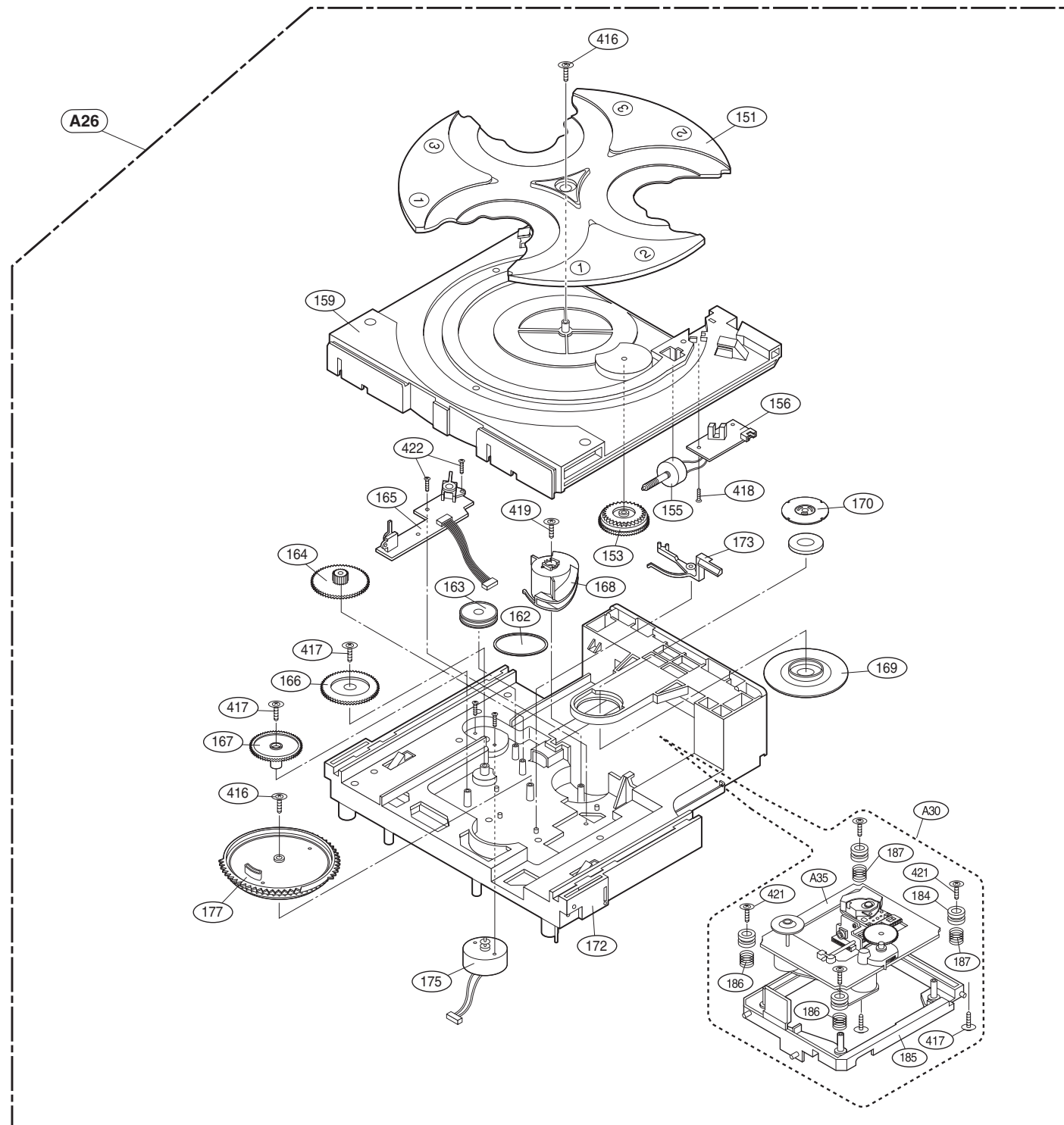


# □ TAPE DECK MECHANISM (A/R & A/S : RIGHT A/R DECK)

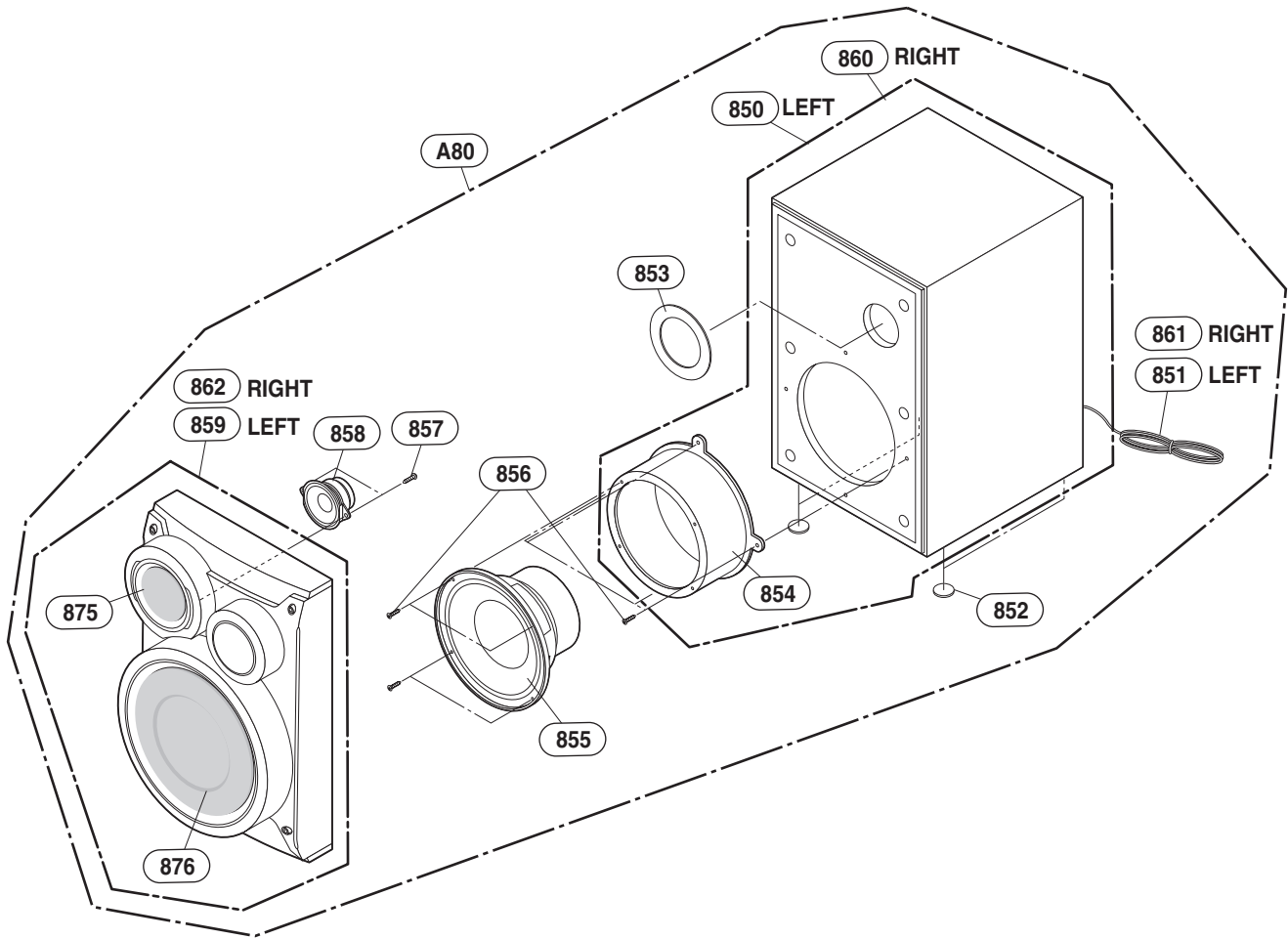




# DECK MECHANISM EXPLODED VIEWS



# □ SPEAKER (MODEL:LMS-U1060)





# MEMO

A series of horizontal dotted lines for writing.