ORDER NO. AD9807142C3

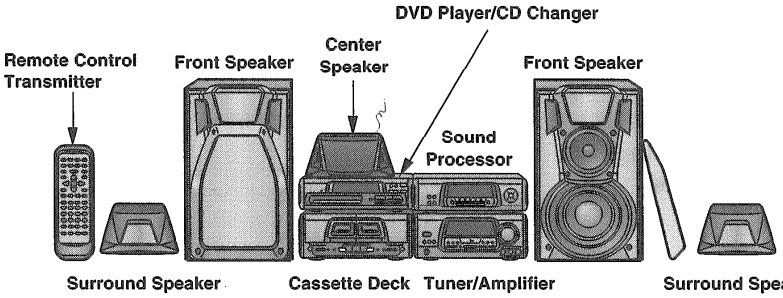
# Service Manual

DOLBY SURROUND PRO•LOGIC *1

Sound Processor

Sound Processor

# SH-EH1000




**Colour**
(S) ..... Silver Type.

**Area**
(GK)..... China.

**Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.**

| System | SC-VC1000 | SC-VC988 |
|---|---|---|
| Sound Processor | **SH-EH1000** | **SH-EH1000** |
| Tuner/Amplifier | SA-EH1000 | SA-EH602 |
| DVD Player | SL-EH1000 | ———— |
| CD Changer | ———— | SL-EH602 |
| Cassette Deck | RS-EH1000 | RS-EH1000 |
| Front Speakers*2 | SB-VC1000 | SB-VC1000 |
| Center Speaker*2 | SB-PC600X | SB-PC600X |
| Surround Speakers*2 | SB-PS600X | SB-PS600X |

## Specifications

### EQ/SFP Section

**MANUAL GEQ**
**Center frequency** 100 Hz, 315 Hz, 1 kHz, 3.15 kHz, 10 kHz
**Level control** ± 3, 6, 9 dB
**EQ SPACE mode**
**3 modes** HALL, CLEAR, HEAVY
**Acoustic Image Equalizer** 36 patterns

### Pre-amplifier Section

**Input sensitivity/impedance**
**VCR** 250 mV/15 kΩ
**VDP** 250 mV/15 kΩ
**Output level**
**VCR REC OUT** 250 mV/1.5 kΩ
**VIDEO OUTPUT**
**MONITOR OUT** 1 Vp-p, 75 Ω
**VCR REC OUT** 1 Vp-p, 75 Ω

### DOLBY PRO LOGIC Section

**PRO LOGIC mode** SURROUND, 3 STEREO
**CENTER mode** NORMAL, WIDE, PHANTOM
**DELAY TIME** 20 ms (Fixed)

### Spectrum analyzer Section

**Display mode** NORMAL, PEAKHOLD, AURORA

### General

**Power supply** DC ±7.5/+13/−30 V
AC 5.5 V 50/60 Hz
**Power consumption** 5 W
**Dimensions** 287 (W) × 89 (H) × 273.5 (D) mm
**Weight** 1.1 kg

**Notes:** Specifications are subject to change without notice.
Weight and dimensions are approximate.
*1: Manufactured under license from Dolby Laboratories Licensing Corporation.
DOLBY, the double-D symbol and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.
*2: Made in Singapore.

**⚠WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

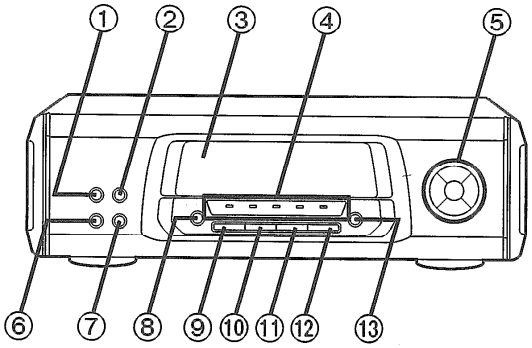
# ■ Contents



**NOTE:**

**Refer to the service manual for Model No. SA-EH1000 (ORDER No. AD9807143C3) for information on "Accessories", "Connections", "Installation" , "Operations" and "Packaging".**

# ■ Location of Controls



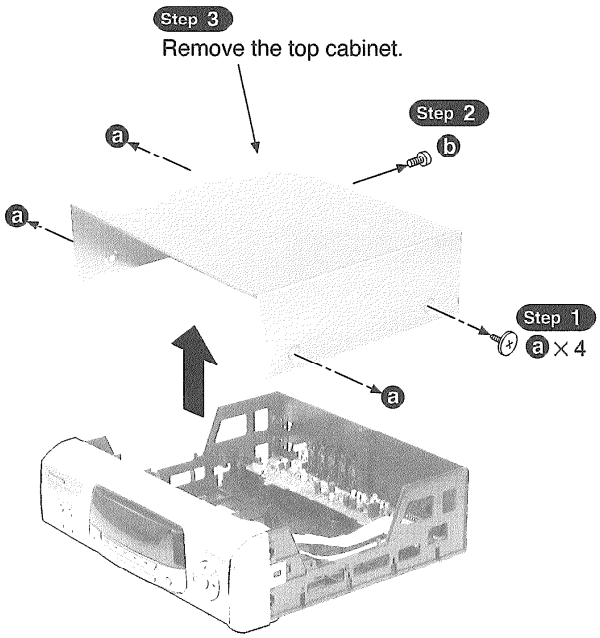

① **EQ SPACE on/flat button (EQ SPACE ON/FLAT)**
② **Display mode select/demonstration button (DISP MODE/—DEMO)**
③ **Display**
④ **DOLBY PRO LOGIC indicators (SURROUND, 3 STEREO, NORMAL, WIDE, PHANTOM)**
⑤ **Multi control buttons (MULTI CONTROL ◄, ►, ▼, ▲)**
⑥ **Acoustic image EQ button (ACOUSTIC IMAGE EQ)**
⑦ **EQ SPACE preset/manual select button (PRESET/MANUAL)**
⑧ **SUPER SURROUND button and indicator (SUPER SURROUND)**
⑨ **DOLBY PRO LOGIC on/off button (DOLBY PRO LOGIC, OFF/ON)**
⑩ **DOLBY PRO LOGIC mode select button (MODE)**
⑪ **DOLBY PRO LOGIC test signal button (TEST)**
⑫ **DOLBY PRO LOGIC center mode select button (CENTER MODE)**
⑬ **SUPER WOOFER button and indicator (SUPER WOOFER)**

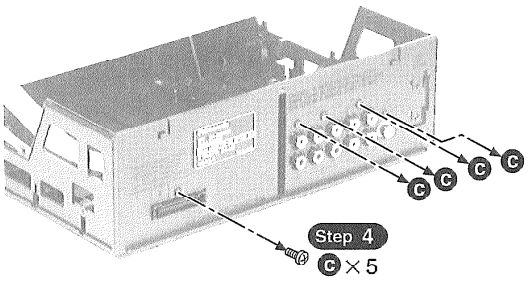
# ■ Operation Checks and Component Replacement Procedures

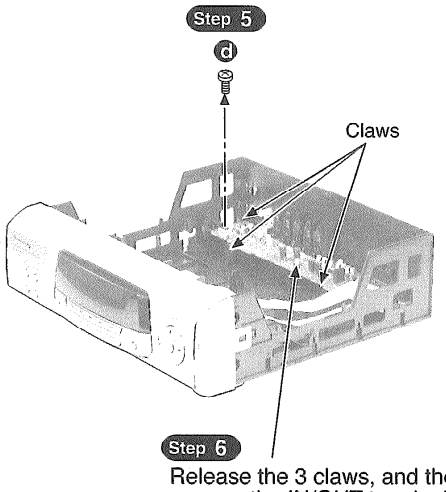
**NOTE** **1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**

**2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**

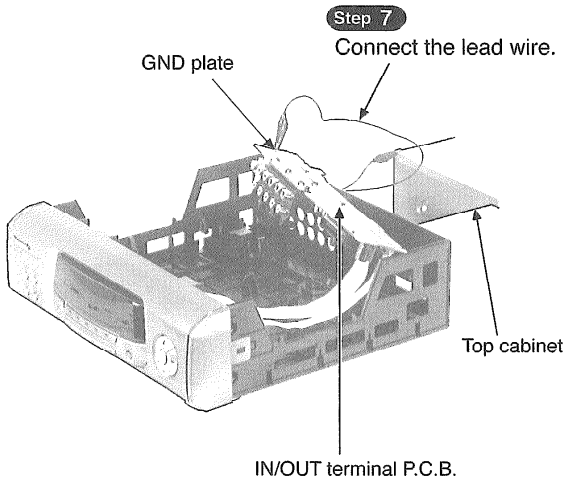
## 1. Checking for the IN/OUT terminal P.C.B.



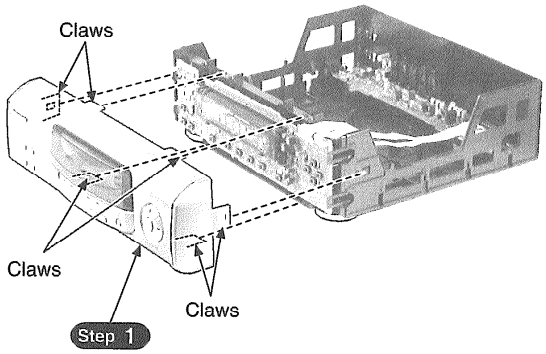




**· Check the IN/OUT terminal P.C.B. as shown below.**



## 2. Checking for the FL P.C.B.

· Follow the Step 1 ~ Step 3 of the item 1 on page 3.

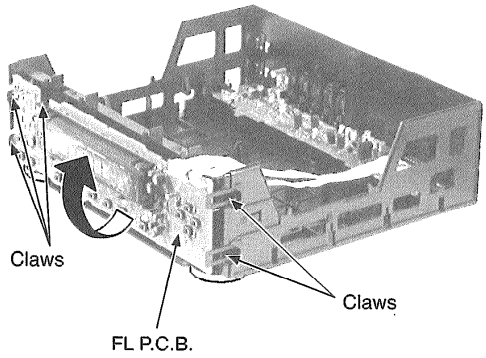



Step 1

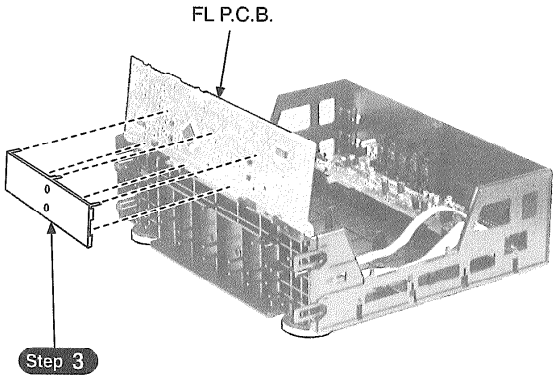
Release the 6 claws, and then remove the front panel ass'y.

Step 2

Release the 5 claws, and then remove the FL P.C.B..




**· Check the FL P.C.B. as shown below.**




Step 3

Unsolder the shield plate terminals. (6 points)

# ■ To Supply Power Source

**This unit SH-EH1000 is designed to operate on power supplied from the system connected. (For system connection, refer to Fig.1)**

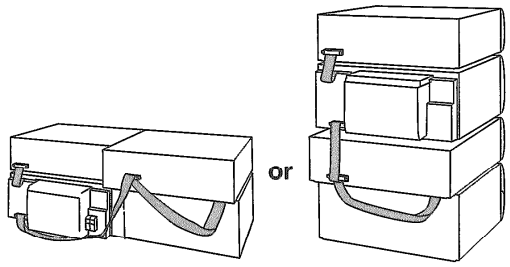
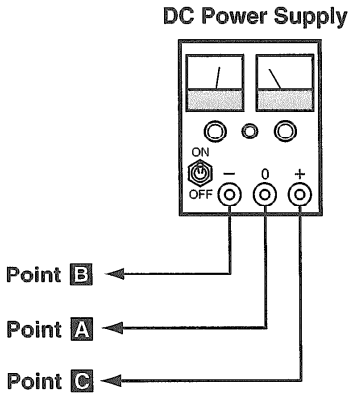
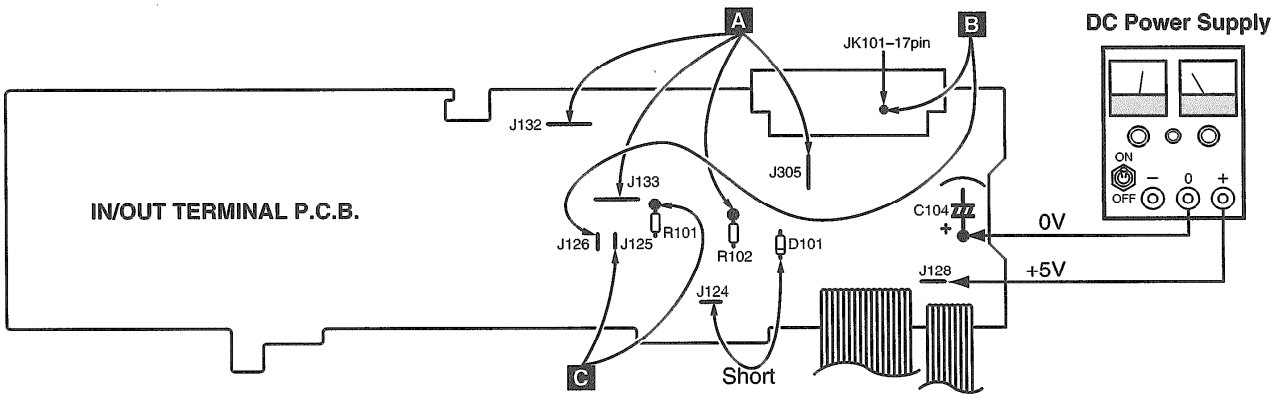



**Fig. 1**

**When you have to test and service the unit SH-EH1000 alone, use the following method to supply power source and operate the unit:**

1. Short the section between **J124** and **D101**.
2. Short the section **J132, J133, J305** and **R102** with each other. (Point A )
3. Short the section between **J126** and **17 pin** of the connector **JK101**. (Point B )
4. Short the section between **J125** and **R101**. (Point C )
5. Apply +5 V DC power to the section between **J128** and **(+) foil side** of **C104**.
6. Connect the DC power supply as shown below.
   - + 12 V terminal of the DC Power Supply connect to Point C .
   - GND terminal of the DC Power Supply connect to Point A .
   - – 12 V terminal of the DC Power Supply connect to Point B .

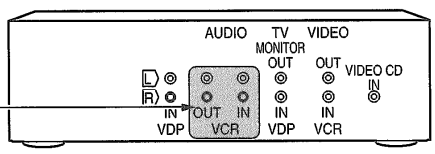



# ■ To Check Signals

Input the audio signal and confirm it to be outputted from the terminal.

| | INPUT | OUTPUT |
|---|---|---|
| L-ch | AUDIO IN VCR | AUDIO OUT VCR |
| R-ch | | |



# ■ Schematic Diagram



- This schematic diagram may be modified at any time with the development of new technology.

**Notes:**

- **S301**: EQ SPACE on/flat switch (EQ SPACE ON/FLAT)
- **S302**: Acoustic image EQ switch (ACOUSTIC IMAGE EQ)
- **S303**: EQ SPACE preset/manual select switch (PRESET/MANUAL)
- **S304**: Display mode select/demonstration switch (DISP MODE/–DEMO)
- **S305**: DOLBY PRO LOGIC on/off switch (OFF/ON)
- **S306**: DOLBY PRO LOGIC mode select switch (MODE)
- **S307**: DOLBY PRO LOGIC test signal switch (TEST)
- **S308**: DOLBY PRO LOGIC center mode select switch (CENTER MODE)
- **S309**: Super surround switch (SUPER SURROUND)
- **S310** ~ **S313** : Multi control switch
  (MULTI CONTROL , S310 : ▼, S311 : ◀, S312 : ▲, S313 : ▶)
- **S314**: Super woofer switch (SUPER WOOFER)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

- Voltage values and waveforms are measured as indicated in the schematic diagram when test points between AG and VG, and between DG and CTG, and between AG and DG are shorted.

- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- **Caution!**
  IC and LSI are sensitive to static electricity.
  Secondary trouble can be prevented by taking care during repair.
  Cover the parts boxes made of plastics with aluminum foil.
  Ground the soldering iron.
  Put a conductive mat on the work table.
  Do not touch the legs of IC or LSI with the fingers directly.

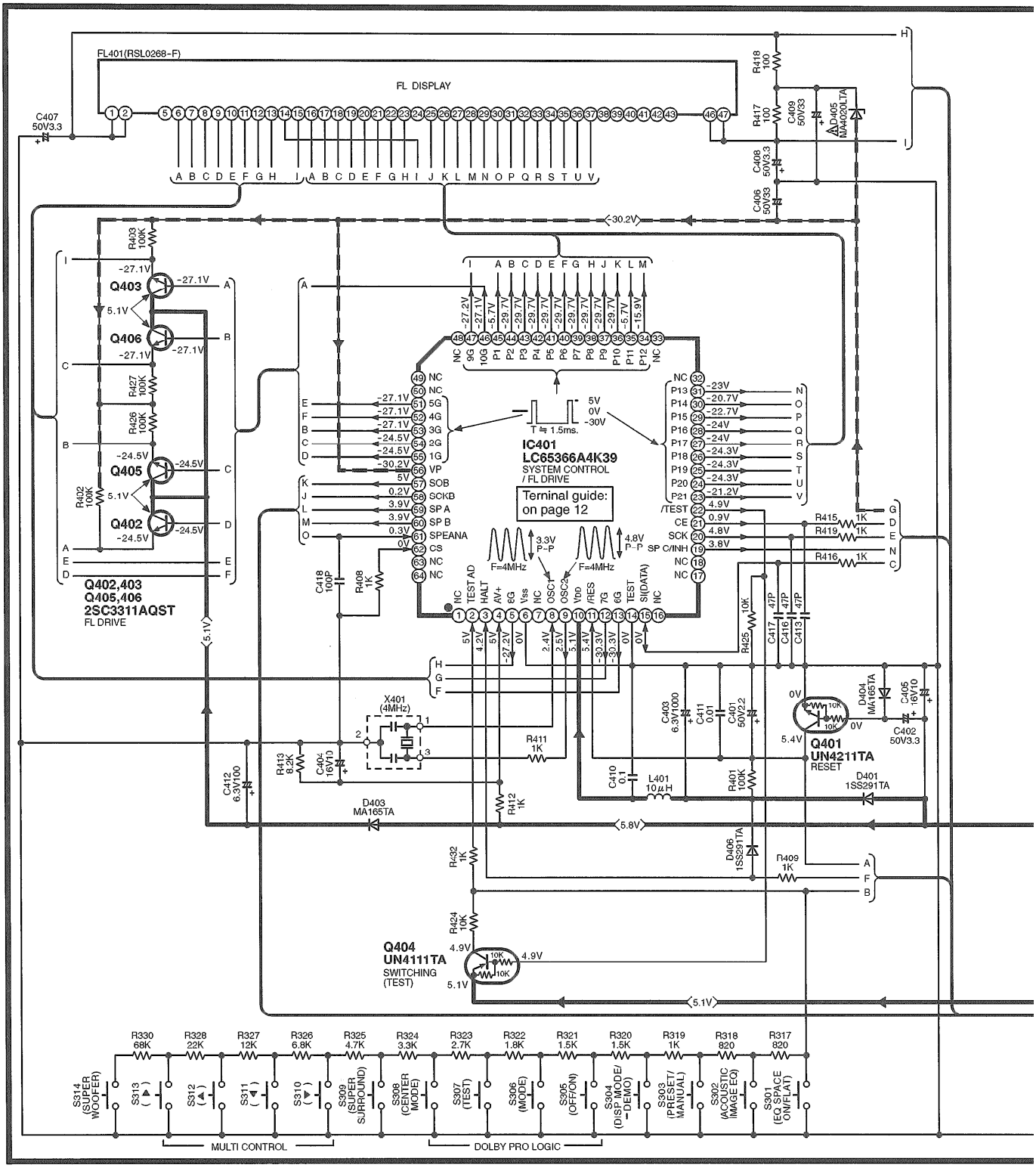
- **Voltage and signal line**

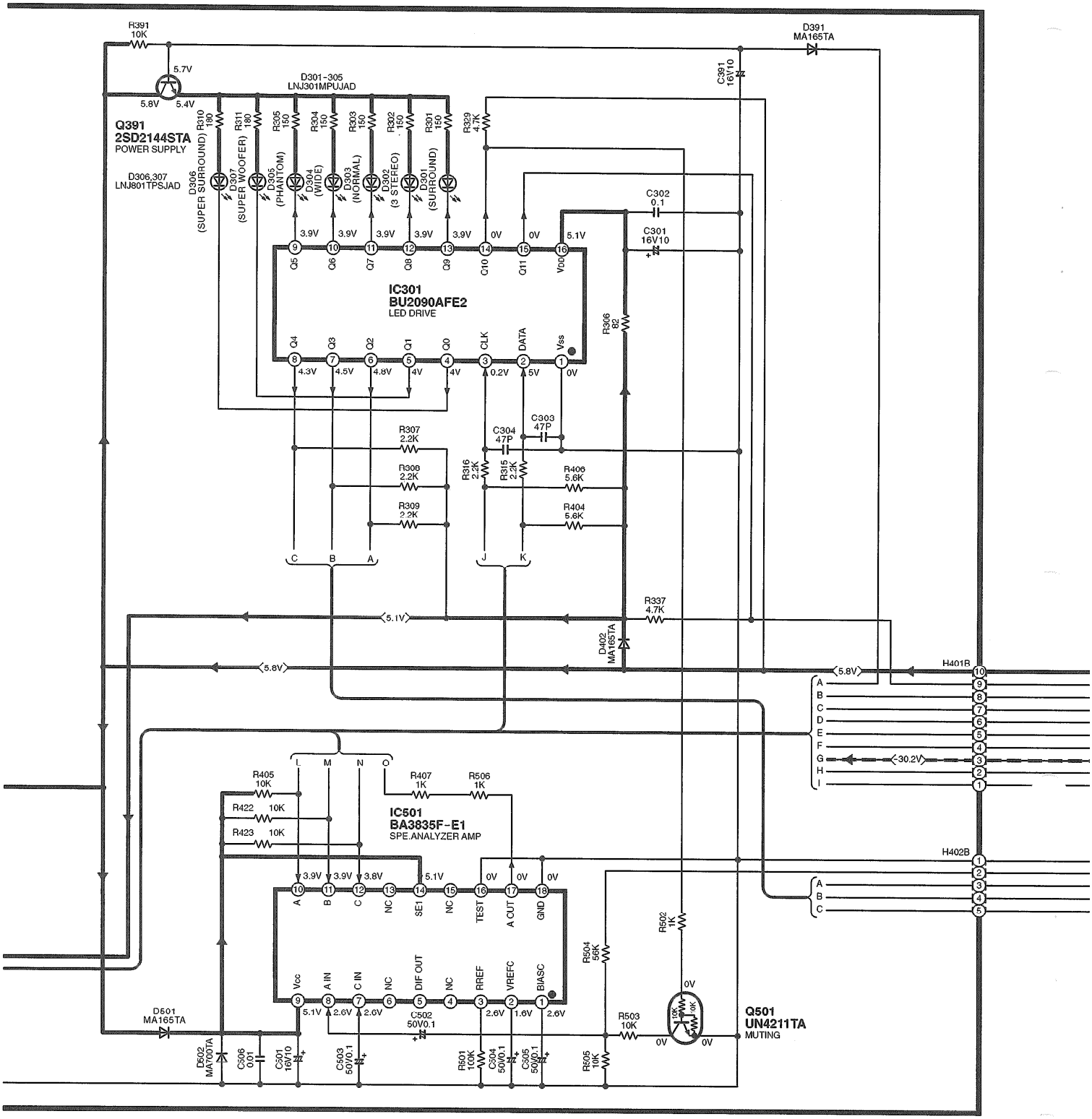
  : Positive voltage line

  : Negative voltage line

  : Source signal line (L-ch)

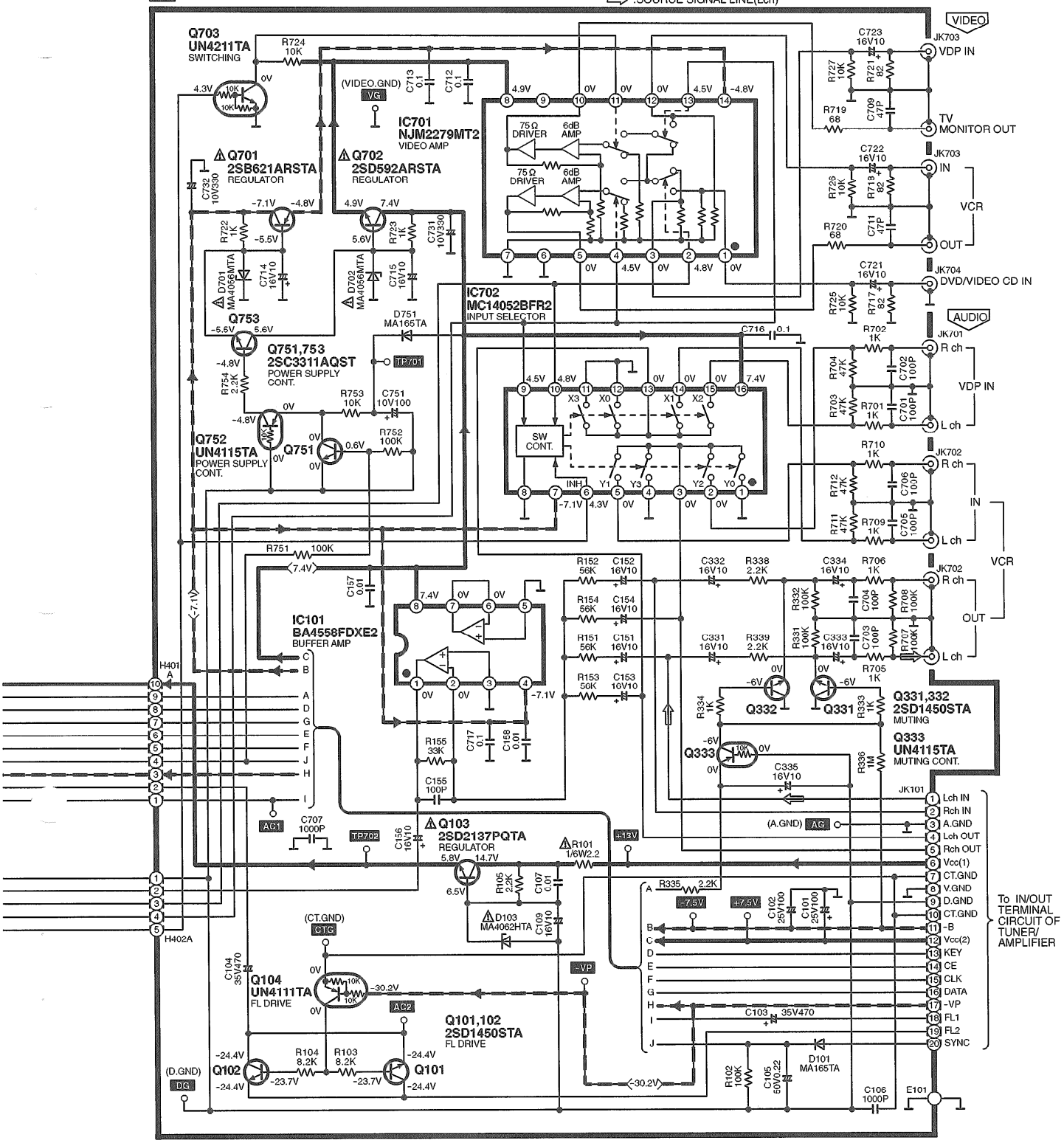
## A FL CIRCUIT (P.C.Board: on page 10) :POSITIVE VOLTAGE LINE :NEGATIVE VOLTAGE LINE




R391
10K
5.7V
5.8V
5.4V
D391
MA165TA
C391
16V10
D301-305
LNJ301MPUJAD
Q391
2SD2144STA
POWER SUPPLY
D306,307
LNJ801TPSJAD
D306 (SUPER SURROUND)
D307 (SUPER WOOFER)
D305 (PHANTOM)
D304 (WIDE)
D303 (NORMAL)
D302 (3 STEREO)
D301 (SURROUND)
R310 180
R311 180
R305 150
R304 150
R303 150
R302 150
R301 150
R329 4.7K
C302
0.1
C301
16V10
IC301
BU2090AFE2
LED DRIVE
Q5 Q6 Q7 Q8 Q9 Q10 Q11 VDD
Q4 Q3 Q2 Q1 Q0 CLK DATA Vss
R306
82
C303
47P
C304
47P
R307
2.2K
R308
2.2K
R309
2.2K
R316
2.2K
R315
2.2K
R406
5.6K
R404
5.6K
C B A
J K
R337
4.7K
D402
MA165TA
5.1V
5.8V
H401B
H402B
R405
10K
R422
10K
R423
10K
R407
1K
R506
1K
L M N O
IC501
BA3835F-E1
SPE.ANALYZER AMP
A B C NC SE1 NC TEST A CUT GND
Vcc A IN C IN NC DIF OUT NC RREF VREFC BIASC
R502
1K
R504
56K
R503
10K
Q501
UN4211TA
MUTING
D501
MA165TA
D502
MA700TA
C506
0.01
C501
16V10
C503
50V0.1
C502
50V0.1
R601
100K
C304
50V0.1
C305
50V0.1
R605
10K

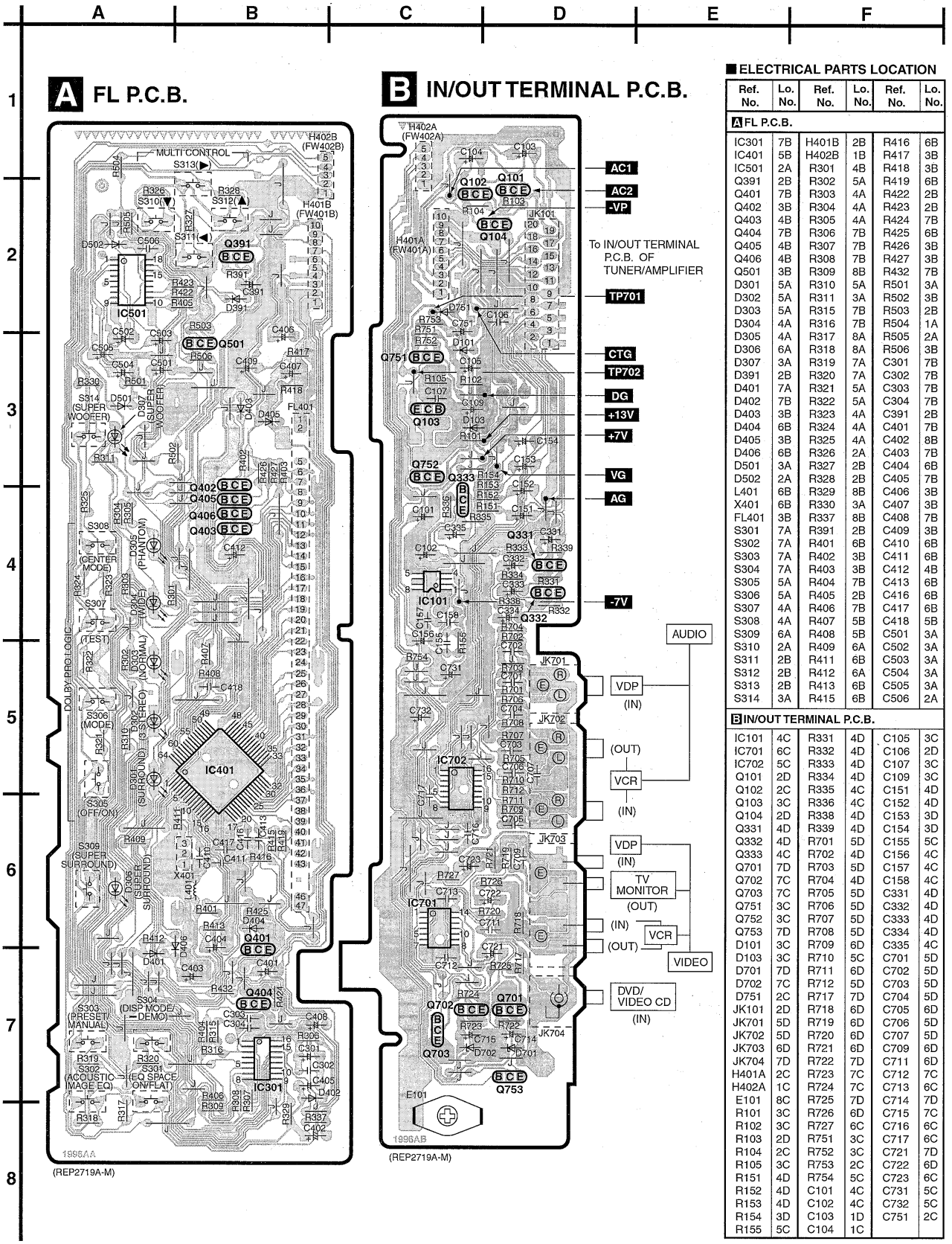
## B IN/OUT TERMINAL CIRCUIT (P.C.Board: on page 10)

:POSITIVE VOLTAGE LINE :NEGATIVE VOLTAGE LINE
:SOURCE SIGNAL LINE(Lch)



# ■ Printed Circuit Board Diagram

● This circuit board diagram may be modified at any time with the development of new technology.

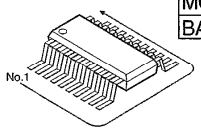



■ ELECTRICAL PARTS LOCATION

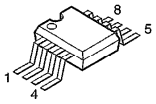
| Ref. No. | Lo. No. | Ref. No. | Lo. No. | Ref. No. | Lo. No. |
|---|---|---|---|---|---|
| **A FL P.C.B.** | | | | | |
| IC301 | 7B | H401B | 2B | R416 | 6B |
| IC401 | 5B | H402B | 1B | R417 | 3B |
| IC501 | 2A | R301 | 4B | R418 | 3B |
| Q391 | 2B | R302 | 5A | R419 | 6B |
| Q401 | 7B | R303 | 4A | R422 | 2B |
| Q402 | 3B | R304 | 4A | R423 | 2B |
| Q403 | 4B | R305 | 4A | R424 | 7B |
| Q404 | 7B | R306 | 7B | R425 | 6B |
| Q405 | 4B | R307 | 7B | R426 | 3B |
| Q406 | 4B | R308 | 7B | R427 | 3B |
| Q501 | 3B | R309 | 8B | R432 | 7B |
| D301 | 5A | R310 | 5A | R501 | 3A |
| D302 | 5A | R311 | 3A | R502 | 3B |
| D303 | 5A | R315 | 7B | R503 | 2B |
| D304 | 4A | R316 | 7B | R504 | 1A |
| D305 | 4A | R317 | 8A | R505 | 2A |
| D306 | 6A | R318 | 8A | R506 | 3B |
| D307 | 3A | R319 | 7A | C301 | 7B |
| D391 | 2B | R320 | 7A | C302 | 7B |
| D401 | 7A | R321 | 5A | C303 | 7B |
| D402 | 7B | R322 | 5A | C304 | 7B |
| D403 | 3B | R323 | 4A | C391 | 2B |
| D404 | 6B | R324 | 4A | C401 | 7B |
| D405 | 3B | R325 | 4A | C402 | 8B |
| D406 | 6B | R326 | 2A | C403 | 7B |
| D501 | 3A | R327 | 2B | C404 | 6B |
| D502 | 2A | R328 | 2B | C405 | 7B |
| L401 | 6B | R329 | 8B | C406 | 3B |
| X401 | 6B | R330 | 3A | C407 | 3B |
| FL401 | 3B | R337 | 8B | C408 | 7B |
| S301 | 7A | R391 | 2B | C409 | 3B |
| S302 | 7A | R401 | 6B | C410 | 6B |
| S303 | 7A | R402 | 3B | C411 | 6B |
| S304 | 7A | R403 | 3B | C412 | 4B |
| S305 | 5A | R404 | 7B | C413 | 6B |
| S306 | 5A | R405 | 2B | C416 | 6B |
| S307 | 4A | R406 | 7B | C417 | 6B |
| S308 | 4A | R407 | 5B | C418 | 5B |
| S309 | 6A | R408 | 5B | C501 | 3A |
| S310 | 2A | R409 | 6A | C502 | 3A |
| S311 | 2B | R411 | 6B | C503 | 3A |
| S312 | 2B | R412 | 6A | C504 | 3A |
| S313 | 2B | R413 | 6B | C505 | 3A |
| S314 | 3A | R415 | 6B | C506 | 2A |
| **B IN/OUT TERMINAL P.C.B.** | | | | | |
| IC101 | 4C | R331 | 4D | C105 | 3C |
| IC701 | 6C | R332 | 4D | C106 | 2D |
| IC702 | 5C | R333 | 4D | C107 | 3C |
| Q101 | 2D | R334 | 4D | C109 | 3C |
| Q102 | 2C | R335 | 4C | C151 | 4D |
| Q103 | 3C | R336 | 4C | C152 | 4D |
| Q104 | 2D | R338 | 4D | C153 | 3D |
| Q331 | 4D | R339 | 4D | C154 | 3D |
| Q332 | 4D | R701 | 5D | C155 | 5C |
| Q333 | 4C | R702 | 4D | C156 | 4C |
| Q701 | 7D | R703 | 5D | C157 | 4C |
| Q702 | 7C | R704 | 4D | C158 | 4C |
| Q703 | 7C | R705 | 5D | C331 | 4D |
| Q751 | 3C | R706 | 5D | C332 | 4D |
| Q752 | 3C | R707 | 5D | C333 | 4D |
| Q753 | 7D | R708 | 5D | C334 | 4D |
| D101 | 3C | R709 | 6D | C335 | 4C |
| D103 | 3C | R710 | 5C | C701 | 5D |
| D701 | 7D | R711 | 6D | C702 | 5D |
| D702 | 7C | R712 | 5D | C703 | 5D |
| D751 | 2C | R717 | 7D | C704 | 5D |
| JK101 | 2D | R718 | 6D | C705 | 6D |
| JK701 | 5D | R719 | 6D | C706 | 5D |
| JK702 | 5D | R720 | 6D | C707 | 5D |
| JK703 | 6D | R721 | 6D | C709 | 6D |
| JK704 | 7D | R722 | 7D | C711 | 6D |
| H401A | 2C | R723 | 7C | C712 | 7C |
| H402A | 1C | R724 | 7C | C713 | 6C |
| E101 | 8C | R725 | 7D | C714 | 7D |
| R101 | 3C | R726 | 6D | C715 | 7C |
| R102 | 3C | R727 | 6C | C716 | 6C |
| R103 | 2D | R751 | 3C | C717 | 6C |
| R104 | 2C | R752 | 3C | C721 | 7D |
| R105 | 3C | R753 | 2C | C722 | 6D |
| R151 | 4D | R754 | 5C | C723 | 6C |
| R152 | 4D | C101 | 4C | C731 | 5C |
| R153 | 4D | C102 | 4C | C732 | 5C |
| R154 | 3D | C103 | 1D | C751 | 2C |
| R155 | 5C | C104 | 1C | | |

# ■ Type Illustration of IC's, Transistors and Diodes

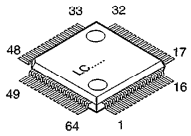
| | |
|---|---|
| NJM2279MT2 | 14PIN |
| BU2090AFE2 | 16PIN |
| MC14052BFR2 | 16PIN |
| BA3835F-E1 | 18PIN |



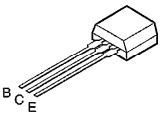

BA4558FDXE2



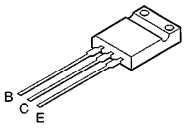

LC65366A4K39

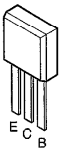



2SD2144STA
2SC3311AQST



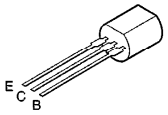

2SD2137PQTA

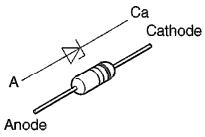



2SD1450STA
UN4111TA
UN4115TA
UN4211TA

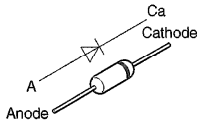
2SB621ARSTA
2SD592ARSTA



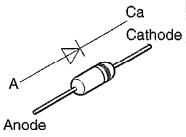




MA4020LTA
MA4056MTA
MA4062HTA

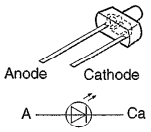
MA165TA
MA700TA



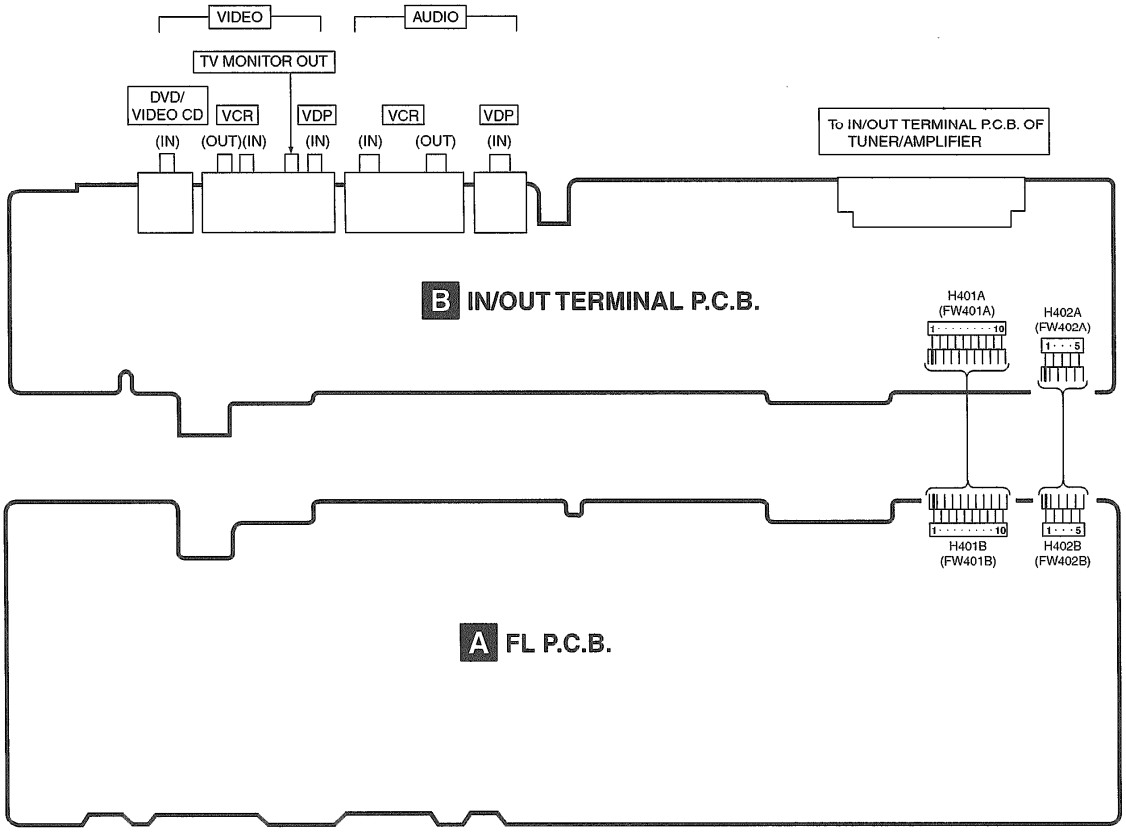

1SS291TA




LNJ301MPUJAD
LNJ801TPSJAD




# ■ Wiring Connection Diagram



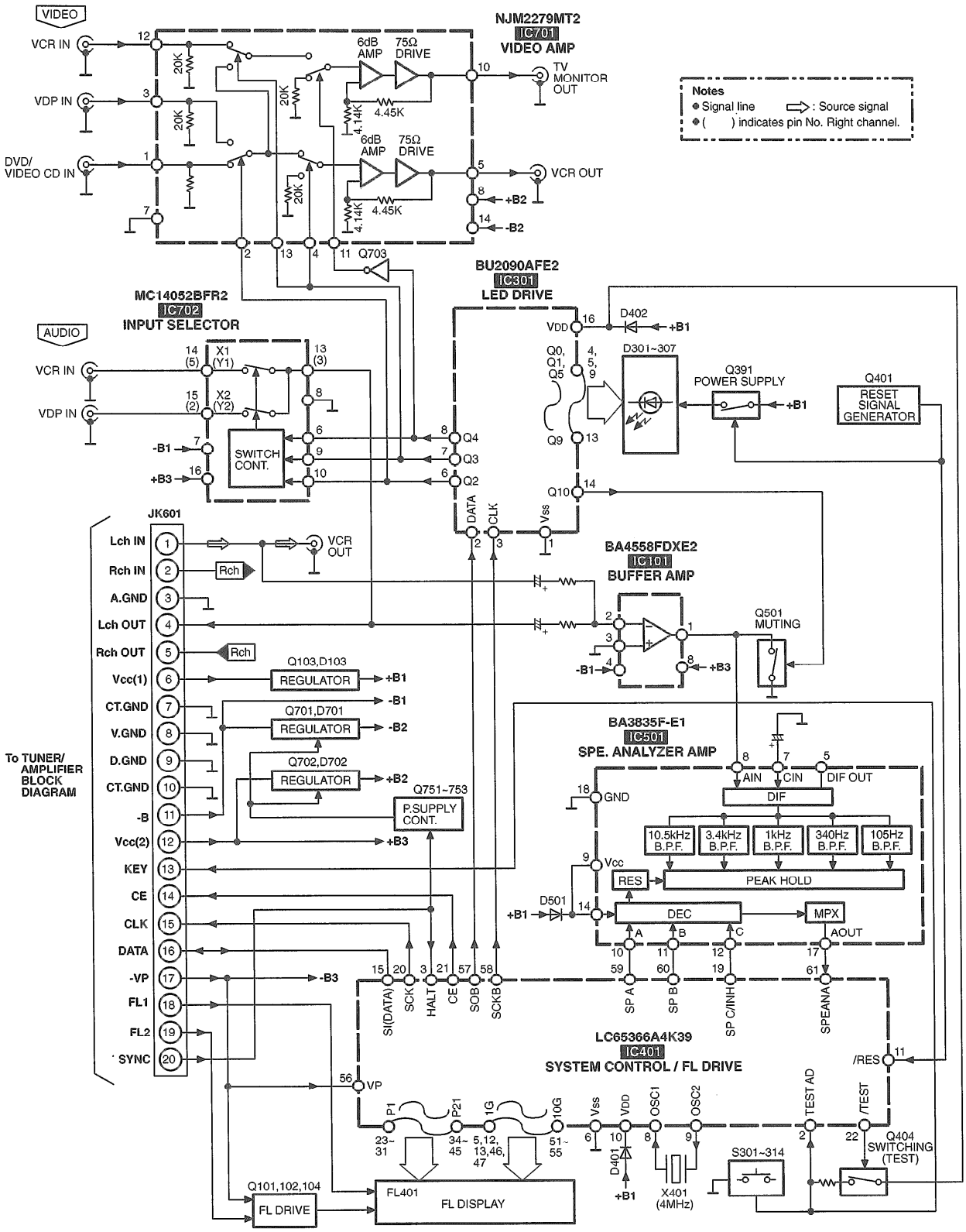
# ■ Terminal Function of IC's

## ● IC401 (LC65366A4K39) : System Control / FL Drive

| Pin No. | Terminal Name | I/O | Function |
|---|---|---|---|
| 1 | NC | — | No used, open |
| 2 | TEST AD | I | TEST mode key signal input |
| 3 | HALT | I | Power failure detect signal input |
| 4 | AV+ | I | Power supply for analog circuit (+5 V) |
| 5 | 8G | O | Grid signal output |
| 6 | $V_{SS}$ | — | GND terminal |
| 7 | NC | — | No used, open |
| 8 | OSC1 | I | Oscillator connected terminal (4 MHz) |
| 9 | OSC2 | O | |
| 10 | $V_{DD}$ | — | Power supply |
| 11 | /RES | I | Reset signal input |
| 12, 13 | 7G, 6G | O | Grid signal output |
| 14 | TEST | — | No used, connected to VSS |
| 15 | SI | I/O | Communication data signal input/output |
| 16~18 | NC | — | No used, open |
| 19 | SP C/INH | O | Select terminal for Spectrum analyzer IC output |
| 20 | SCK | O | Serial communication signal output (Clock signal output) |

| Pin No. | Terminal Name | I/O | Function |
|---|---|---|---|
| 21 | CE | O | Serial communication signal output (Chip enable signal output) |
| 22 | /TEST | O | Test signal terminal |
| 23~31 | P21~P13 | O | Segment signal output |
| 32, 33 | NC | — | No used, open |
| 34~45 | P12~P1 | O | Segment signal output |
| 46, 47 | 10G, 9G | O | Grid signal output |
| 48~50 | NC | — | No used, open |
| 51~55 | 5G~1G | O | Grid signal output |
| 56 | VP | — | Negative power supply |
| 57 | SOB | O | Serial data signal output |
| 58 | SCKB | O | Serial clock signal output |
| 59 | SP A | O | Select terminal to spectrum analyzer IC output |
| 60 | SP B | O | |
| 61 | SPEANA | I | Analog signal input from spectrum analyzer IC |
| 62 | CS | I | Chip select signal input terminal |
| 63, 64 | NC | — | No used, open |

# ■ Block Diagram



# ■ Replacement Parts List

**Notes:** * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
* All parts are supplied by MESA.

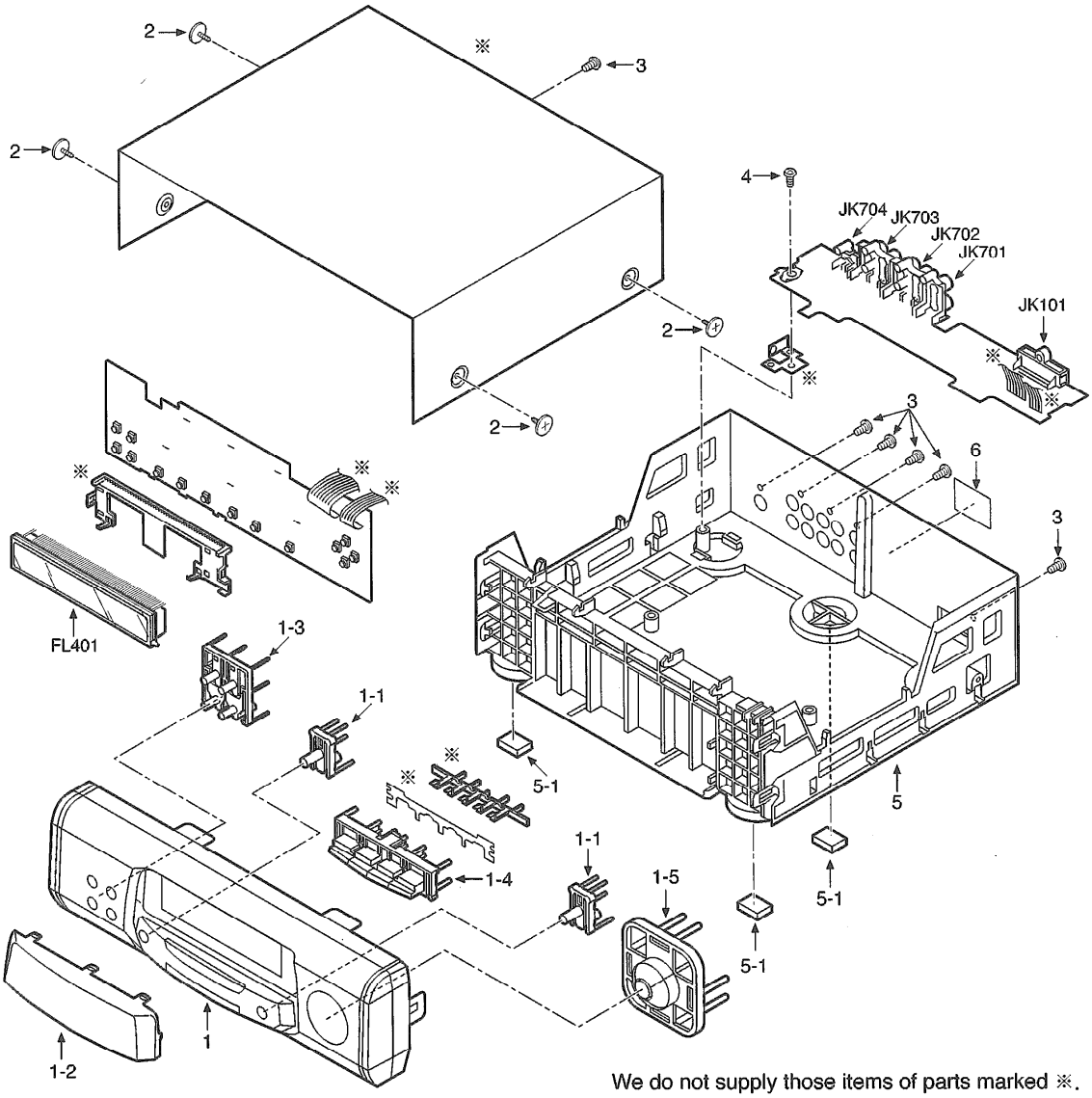
| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| 1 | RYP0733P-S | FRONT PANEL ASS'Y | 1 | |
| 1-1 | RGU1682-Q | BUTTON 1 | 2 | |
| 1-2 | RKW0504-V | FL WINDOW | 1 | |
| 1-3 | RGU1509-S | BUTTON 2 | 1 | |
| 1-4 | RGU1510A-S | BUTTON 3 | 1 | |
| 1-5 | RGU1511-S | BUTTON 4 | 1 | |
| 2 | RHD30007-K1 | SCREW | 4 | |
| 3 | XTB3+8JFZ | SCREW | 6 | |
| 4 | XTBS3+8JFZ1 | SCREW | 1 | |
| 5 | RYK0700M-K | CHASSIS | 1 | |
| 5-1 | RKA0089-K | RUBBER | 3 | |
| 6 | RGN1560-K | NAME PLATE | 1 | |
| | | | | |
| C101,02 | ECA1EM101 | 25V 100U | 2 | |
| C103,04 | RCE1VM471BV | 35V 470U | 2 | |
| C105 | ECEA1HKAR22B | 50V 0.22U | 1 | |
| C106 | ECBT1H102KB5 | 50V 1000P | 1 | |
| C107 | ECBT1E103ZF | 25V 0.01U | 1 | |
| C109 | RCE1CKA100BG | 16V 10U | 1 | |
| C151-54 | RCE1CKA100BG | 16V 10U | 4 | |
| C155 | ECBT1H101KB5 | 50V 100P | 1 | |
| C156 | RCE1CKA100BG | 16V 10U | 1 | |
| C157,58 | ECBT1E103ZF | 25V 0.01U | 2 | |
| C301 | RCE1CKA100BG | 16V 10U | 1 | |
| C302 | ECBT1H104ZF5 | 50V 0.1U | 1 | |
| C303,04 | ECBT1H470J5 | 50V 47P | 2 | |
| C331-35 | RCE1CKA100BG | 16V 10U | 5 | |
| C391 | RCE1CKA100BG | 16V 10U | 1 | |
| C401 | ECEA1HKS2R2 | 50V 2.2U | 1 | |
| C402 | RCE1HKA3R3BG | 50V 3.3U | 1 | |
| C403 | RCE0JU102BV | 6.3V 1000U | 1 | |
| C404,05 | RCE1CKA100BG | 16V 10U | 2 | |
| C406 | ECEA1HKA330B | 50V 33U | 1 | |
| C407,08 | RCE1HKA3R3BG | 50V 3.3U | 2 | |
| C409 | ECEA1HKA330B | 50V 33U | 1 | |
| C410 | ECBT1H104ZF5 | 50V 0.1U | 1 | |
| C411 | ECBT1E103ZF | 25V 0.01U | 1 | |
| C412 | ECEA0JKS101 | 6.3V 100U | 1 | |
| C413 | ECBT1H470J5 | 50V 47P | 1 | |
| C416,17 | ECBT1H470J5 | 50V 47P | 2 | |
| C418 | ECBT1H101KB5 | 50V 100P | 1 | |
| C501 | RCE1CKA100BG | 16V 10U | 1 | |
| C502-05 | ECEA1HKS0R1 | 50V 0.1U | 4 | |
| C506 | ECBT1E103ZF | 25V 0.01U | 1 | |
| C701-06 | ECBT1H101KB5 | 50V 100P | 6 | |
| C707 | ECBT1H102KB5 | 50V 1000P | 1 | |
| C709 | ECBT1H470J5 | 50V 47P | 1 | |
| C711 | ECBT1H470J5 | 50V 47P | 1 | |
| C712,13 | ECBT1H104ZF5 | 50V 0.1U | 2 | |
| C714,15 | RCE1CKA100BG | 16V 10U | 2 | |
| C716,17 | ECBT1H104ZF5 | 50V 0.1U | 2 | |
| C721-23 | RCE1CKA100BG | 16V 10U | 3 | |
| C731,32 | ECA1AM331 | 10V 330U | 2 | |
| C751 | RCE1AKA101BG | 10V 100U | 1 | |
| | | | | |
| D101 | MA165 | DIODE | 1 | |
| ⚠ D103 | MA4062-H | DIODE | 1 | |
| D301-05 | LNJ301MPUJAD | LED | 5 | |
| D306,07 | LNJ801TPSJAD | LED | 2 | |
| D391 | MA165 | DIODE | 1 | |
| D401 | 1SS291TA | DIODE | 1 | |
| D402-04 | MA165 | DIODE | 3 | |
| ⚠ D405 | MA4020LTA | DIODE | 1 | |
| D406 | 1SS291TA | DIODE | 1 | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| D501 | MA165 | DIODE | 1 | |
| D502 | MA700TA | DIODE | 1 | |
| ⚠ D701,02 | MA4056MTA | DIODE | 2 | |
| D751 | MA165 | DIODE | 1 | |
| | | | | |
| E101 | SNE1004-2 | GND PLATE | 1 | |
| | | | | |
| FL401 | RSL0268-F | FL | 1 | |
| | | | | |
| IC101 | BA4558FDXE2 | IC | 1 | |
| IC301 | BU2090AFE2 | IC | 1 | |
| IC401 | LC65366A4K39 | IC | 1 | |
| IC501 | BA3835F-E1 | IC | 1 | |
| IC701 | NJM2279MT2 | IC | 1 | |
| IC702 | MC14052BFR2 | IC | 1 | |
| | | | | |
| JK101 | RJT065K20 | JACK | 1 | |
| JK701 | SJF3068-7N | JACK | 1 | |
| JK702 | SJF3069N | JACK,LINE OUT/QUX IN JACK | 1 | |
| JK703 | SJF3069-3N | JACK | 1 | |
| JK704 | SJFD7-5 | JACK,VCR1 IN TERMINAL | 1 | |
| | | | | |
| L401 | RLQA100JT-Y | COIL,CHOKE | 1 | |
| | | | | |
| Q101,02 | 2SD1450R | TRANSISTOR | 2 | |
| ⚠ Q103 | 2SD2137PQTA | TRANSISTOR | 1 | |
| Q104 | UN4111 | TRANSISTOR | 1 | |
| Q331,32 | 2SD1450R | TRANSISTOR | 2 | |
| Q333 | UN4115 | TRANSISTOR | 1 | |
| Q391 | 2SD2144S | TRANSISTOR | 1 | |
| Q401 | UN4211 | TRANSISTOR | 1 | |
| Q402,03 | 2SC3311AQST | TRANSISTOR | 2 | |
| Q404 | UN4111 | TRANSISTOR | 1 | |
| Q405,06 | 2SC3311AQST | TRANSISTOR | 2 | |
| Q501 | UN4211 | TRANSISTOR | 1 | |
| ⚠ Q701 | 2SB621A-R | TRANSISTOR | 1 | |
| ⚠ Q702 | 2SD592ARSTA | TRANSISTOR | 1 | |
| Q703 | UN4211 | TRANSISTOR | 1 | |
| Q751 | 2SC3311AQST | TRANSISTOR | 1 | |
| Q752 | UN4115 | TRANSISTOR | 1 | |
| Q753 | 2SC3311AQST | TRANSISTOR | 1 | |
| | | | | |
| ⚠ R101 | ERQ16NKW2R2E | 1/6W 2.2 | 1 | |
| R102 | ERDS2FJ104 | 1/4W 100K | 1 | |
| R103,04 | ERDS2FJ822 | 1/4W 8.2K | 2 | |
| R105 | ERDS2FJ222 | 1/4W 2.2K | 1 | |
| R151-54 | ERDS2FJ563 | 1/4W 56K | 4 | |
| R155 | ERDS2FJ333 | 1/4W 33K | 1 | |
| R301-05 | ERDS2FJ151 | 1/4W 150 | 5 | |
| R306 | ERDS2FJ820 | 1/4W 82 | 1 | |
| R307-09 | ERDS2FJ222 | 1/4W 2.2K | 3 | |
| R310,11 | ERDS2FJ181 | 1/4W 180 | 2 | |
| R315,16 | ERDS2FJ222 | 1/4W 2.2K | 2 | |
| R317,18 | ERDS2FJ821 | 1/4W 820 | 2 | |
| R319 | ERDS2FJ102 | 1/4W 12K | 1 | |
| R320,21 | ERDS2FJ152 | 1/4W 1.5K | 2 | |
| R322 | ERDS2FJ182 | 1/4W 1.8K | 1 | |
| R323 | ERDS2FJ272 | 1/4W 2.7K | 1 | |
| R324 | ERDS2FJ332 | 1/4W 3.3K | 1 | |
| R325 | ERDS2FJ472 | 1/4W 4.7K | 1 | |
| R326 | ERDS2FJ682 | 1/4W 6.8K | 1 | |
| R327 | ERDS2FJ123 | 1/4W 12K | 1 | |
| R328 | ERDS2FJ223 | 1/4W 22K | 1 | |
| R329 | ERDS2FJ472 | 1/4W 4.7K | 1 | |
| R330 | ERDS2FJ683 | 1/4W 68K | 1 | |
| R331,32 | ERDS2FJ104 | 1/4W 100K | 2 | |
| R333,34 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R335 | ERDS2FJ222 | 1/4W 2.2K | 1 | |
| R336 | ERDS2FJ105 | 1/4W 1M | 1 | |
| R337 | ERDS2FJ472 | 1/4W 4.7K | 1 | |
| R338,39 | ERDS2FJ222 | 1/4W 2.2K | 2 | |
| R391 | ERDS2FJ103 | 1/4W 10K | 1 | |
| R401-03 | ERDS2FJ104 | 1/4W 100K | 3 | |
| R404 | ERDS2FJ562 | 1/4W 5.6K | 1 | |
| R405 | ERDS2FJ103 | 1/4W 10K | 1 | |
| R406 | ERDS2FJ562 | 1/4W 5.6K | 1 | |
| R407-09 | ERDS2FJ102 | 1/4W 1K | 3 | |
| R411,12 | ERDS2FJ102 | 1/4W 1K | 2 | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R413 | ERDS2FJ822 | 1/4W 8.2K | 1 | |
| R415,16 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R417,18 | ERDS2FJ101 | 1/4W 100 | 2 | |
| R419 | ERDS2FJ102 | 1/4W 1K | 1 | |
| R422-25 | ERDS2FJ103 | 1/4W 10K | 4 | |
| R426,27 | ERDS2FJ104 | 1/4W 100K | 2 | |
| R432 | ERDS2FJ102 | 1/4W 1K | 1 | |
| R501 | ERDS2FJ104 | 1/4W 100K | 1 | |
| R502 | ERDS2FJ102 | 1/4W 1K | 1 | |
| R503 | ERDS2FJ103 | 1/4W 10K | 1 | |
| R504 | ERDS2FJ563 | 1/4W 56K | 1 | |
| R505 | ERDS2FJ103 | 1/4W 10K | 1 | |
| R506 | ERDS2FJ102 | 1/4W 1K | 1 | |
| R701,02 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R703,04 | ERDS2FJ473 | 1/4W 47K | 2 | |
| R705,06 | ERDS2FJ102 | 1/4W 1K | 2 | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| R707,08 | ERDS2FJ104 | 1/4W 100K | 2 | |
| R709,10 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R711,12 | ERDS2FJ473 | 1/4W 47K | 2 | |
| R717,18 | ERDS2FJ820 | 1/4W 82 | 2 | |
| R719,20 | ERDS2FJ680 | 1/4W 68 | 2 | |
| R721 | ERDS2FJ820 | 1/4W 82 | 1 | |
| R722,23 | ERDS2FJ102 | 1/4W 1K | 2 | |
| R724-27 | ERDS2FJ103 | 1/4W 10K | 4 | |
| R751,52 | ERDS2FJ104 | 1/4W 100K | 2 | |
| R753 | ERDS2FJ103 | 1/4W 10K | 1 | |
| R754 | ERDS2FJ222 | 1/4W 2.2K | 1 | |
| | | | | |
| S301-14 | EVQPTD05Q | SW,PUSH | 14 | |
| | | | | |
| X401 | EF0EC4004T4 | OSCILLATOR | 1 | |
| | | | | |

## ■ Cabinet Parts Location




We do not supply those items of parts marked ※.

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| 1 | RYP0733P-S | FRONT PANEL ASS'Y | 1 | |
| 1-1 | RGU1682-Q | BUTTON 1 | 2 | |
| 1-2 | RKW0504-V | FL WINDOW | 1 | |
| 1-3 | RGU1509-S | BUTTON 2 | 1 | |
| 1-4 | RGU1510A-S | BUTTON 3 | 1 | |
| 1-5 | RGU1511-S | BUTTON 4 | 1 | |

| Ref.No. | Part No. | Part Name & Description | Pcs | Remarks |
|---|---|---|---|---|
| | | | | |
| 2 | RHD30007-K1 | SCREW | 4 | |
| 3 | XTB3+8JFZ | SCREW | 6 | |
| 4 | XTBS3+8JFZ1 | SCREW | 1 | |
| 5 | RYK0700M-K | CHASSIS | 1 | |
| 5-1 | RKA0089-K | RUBBER | 3 | |
| 6 | RGN1560-K | NAME PLATE | 1 | |



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