

# STR-D2020

## SERVICE MANUAL

*US Model  
Canadian Model*



### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS

##### POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm load, both channels driven, from 20 - 20,000 Hz, rated 130 watts per channel minimum RMS power, with no more than 0.008 % total harmonic distortion from 250 milliwatts to rated output.

#### Other Specifications

##### Amplifier section

|                                                       |                                                            |                                              |
|-------------------------------------------------------|------------------------------------------------------------|----------------------------------------------|
| Dynamic power output                                  | 8 ohms, at 1 kHz 1HF                                       | 195 + 195 watts                              |
|                                                       | 4 ohms, at 1 kHz 1HF                                       | 250 + 250 watts                              |
| Power output of surround amplifier (8 ohms, at 1 kHz) |                                                            | 15 + 15 watts                                |
| Harmonic distortion at rated output                   |                                                            | Less than 0.008%                             |
| Intermodulation (IM) distortion at rated output       |                                                            | Less than 0.008%                             |
| Frequency response                                    | PHONO RIAA equalization curve                              | +0.5 dB                                      |
|                                                       | CD, DAT, TAPE 1/2, DIGITAL (OPTICAL/COAXIAL) VIDEO 1, 2, 3 | 5 Hz -20 kHz $\pm$ 0.5 dB                    |
| Residual noise                                        |                                                            | Less than 70 $\mu$ V                         |
| Damping factor (8 ohms, at 1 kHz)                     |                                                            | 50                                           |
| Input sensitivity/impedance                           | PHONO MM                                                   | 3 mV, 50 kilohms                             |
|                                                       | DAT, CD VIDEO 1, 2, 3 TAPE 1, 2                            | 200 mV, 50 kilohms                           |
|                                                       | DIGITAL (COAXIAL)                                          | 0.5 Vp-p, $\pm$ 20%, 75 ohms                 |
|                                                       | DIGITAL (OPTICAL)                                          | TOSLINK                                      |
| Output sensitivity/impedance                          | DAT OUT TAPE OUT 1,2 VIDEO 1                               | 200 mV, 10 kilohms                           |
|                                                       | SPEAKERS                                                   | Accepts speakers of 8 - 16 ohms              |
|                                                       | HEADPHONES                                                 | Accepts headphones of high and low impedance |
| MUTING                                                |                                                            | -20 dB                                       |

— continued on next page —

FM STEREO/FM-AM RECEIVER  
**SONY**<sup>®</sup>

**Digital signal processor section**

|                               |                                                                                                                                  |                                                                                                                                                                  |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modulation (A/D conversion)   |                                                                                                                                  | High Density Linear Converter                                                                                                                                    |
| Demodulation (D/A conversion) |                                                                                                                                  | High Density Linear Converter System (Pulse D/A Converter)                                                                                                       |
| Sampling frequency            |                                                                                                                                  | 32 kHz, 44.1 kHz, 48 kHz                                                                                                                                         |
| Equalizer                     | Band                                                                                                                             | 3-band, Bass/Treble/Mid                                                                                                                                          |
|                               | Turnover frequency                                                                                                               | Bass: 99 Hz - 1 kHz<br>Treble: 1 kHz - 10 kHz                                                                                                                    |
|                               | Center frequency                                                                                                                 | Mid: 20 Hz - 18 kHz                                                                                                                                              |
|                               | Level                                                                                                                            | ± 12 dB, 0.2 dB step                                                                                                                                             |
|                               | Slope (Q)                                                                                                                        | 3-step selectable, Wide, Mid, Narrow                                                                                                                             |
| DDS                           | Compressor                                                                                                                       | 9-step adjustable                                                                                                                                                |
|                               | Expander                                                                                                                         | 9-step adjustable                                                                                                                                                |
| Surround                      | Main parameter<br>ROOM SIZE<br>WALL<br>SEAT POSITION<br>F-R<br>SEAT POSITION<br>L-R<br>EFFECT LEVEL<br>REVERB TIME<br>DELAY TIME | 20-step adjustable<br>20-step adjustable<br>20-step adjustable<br>20-step adjustable<br>20-step adjustable<br>20-step adjustable<br>15.0 ms-30.0 ms, 0.1 ms step |
|                               | Sub parameter<br>REAR LEVEL<br>CENTER LEVEL<br>INPUT BALANCE                                                                     | 0 - -60 dB, -∞, 1 dB step<br>0 - -60 dB, -∞, 1 dB step<br>Auto/Manual                                                                                            |

**General**

|                    |                         |                                                                                                    |
|--------------------|-------------------------|----------------------------------------------------------------------------------------------------|
| System             | Tuner section           | PLL quartz-locked digital synthesizer system                                                       |
|                    | Preamplifier section    | Low-noise NF type equalizer                                                                        |
|                    | Power amplifier section | Pure-complimentary SEPP                                                                            |
| Power requirements |                         | 120 V AC, 60 Hz                                                                                    |
| Power consumption  |                         | USA model: 250 watts<br>Canada model: 550 VA<br>(5 watts at standby condition)                     |
| AC outlets         |                         | Two switched, total 100 watts                                                                      |
| Dimensions         |                         | 430 × 148 × 372 mm<br>(17 × 5 <sup>7</sup> / <sub>8</sub> × 14 <sup>3</sup> / <sub>4</sub> inches) |
| Weight             |                         | 12.1 kg (26 lb 11 oz)                                                                              |

**Supplied accessories**

- FM ribbon antenna (1)
- AM loop antenna (1)
- Programmable commander RM-P301 (1)
- External antenna connector (1)
- Sony Batteries SUM-3 (NS) (2)

Design and specifications subject to change without notice.

**Video section**

|         |                                  |
|---------|----------------------------------|
| Inputs  | VIDEO 1, 2, 3: 1 Vp-p 75 ohms    |
| Outputs | VIDEO 1, MONITOR: 1 Vp-p 75 ohms |

**FM tuner section**

|                               |        |                                                    |
|-------------------------------|--------|----------------------------------------------------|
| Frequency range               |        | 87.5 - 108.0 MHz                                   |
| Antenna terminals             |        | 75 ohms coaxial                                    |
| Sensitivity at 50 dB          |        | 18.3 dBf, 45 μV (mono)<br>38.3 dBf, 45 μV (stereo) |
| Usable sensitivity            |        | 11.2 dBf, 2 μV (IHF)                               |
| S/N                           | Mono   | 84 dB                                              |
|                               | Stereo | 78 dB                                              |
| Harmonic distortion at 1 kHz  | Mono   | 0.2 %                                              |
|                               | Stereo | 0.4 %                                              |
| IM distortion                 | Mono   | 0.2 %                                              |
|                               | Stereo | 0.4 %                                              |
| Separation                    |        | 45 dB at 1 kHz                                     |
| Frequency response            |        | 30 Hz - 15 kHz <sup>+0</sup> / <sub>-1.5</sub> dB  |
| Selectivity                   |        | 65 dB at 300 kHz                                   |
| Capture ratio                 |        | 1.2 dB                                             |
| AM suppression ratio          |        | 60 dB                                              |
| Image response ratio          |        | 80 dB                                              |
| IF response ratio             |        | 90 dB                                              |
| Spurious response ratio       |        | 100 dB                                             |
| RF intermodulation at 800 kHz |        | 65 dB                                              |
| Auto tuning threshold         | Low    | 30 dBf                                             |
|                               | High   | 50 dBf                                             |

**AM tuning section**

|                       |  |                                                                           |
|-----------------------|--|---------------------------------------------------------------------------|
| Frequency range       |  | 530-1710 kHz (with 10 kHz interval)<br>531-1710 kHz (with 9 kHz interval) |
| Antenna               |  | Loop antenna                                                              |
| Usable sensitivity    |  | 50 dB/m (at 1,000 kHz or 999 kHz)                                         |
| S/N                   |  | 54 dB (at 50 mV/m)                                                        |
| Harmonic distortion   |  | 0.5 % (50 mV/m, 400 Hz)                                                   |
| Selectivity           |  | 35 dB (9 kHz), 40 dB (10 kHz)                                             |
| Auto tuning threshold |  | 55 dB/m                                                                   |

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## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:



Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

## SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

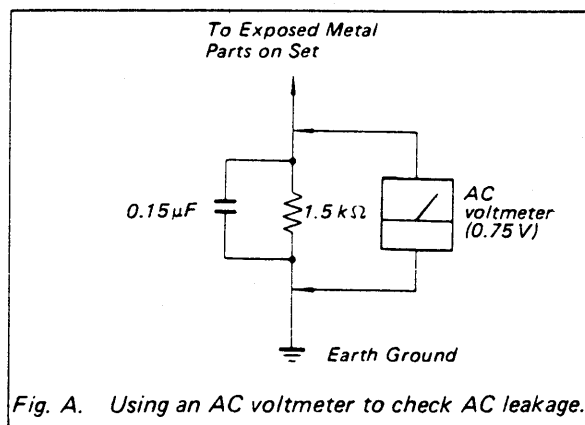



Fig. A. Using an AC voltmeter to check AC leakage.

## ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

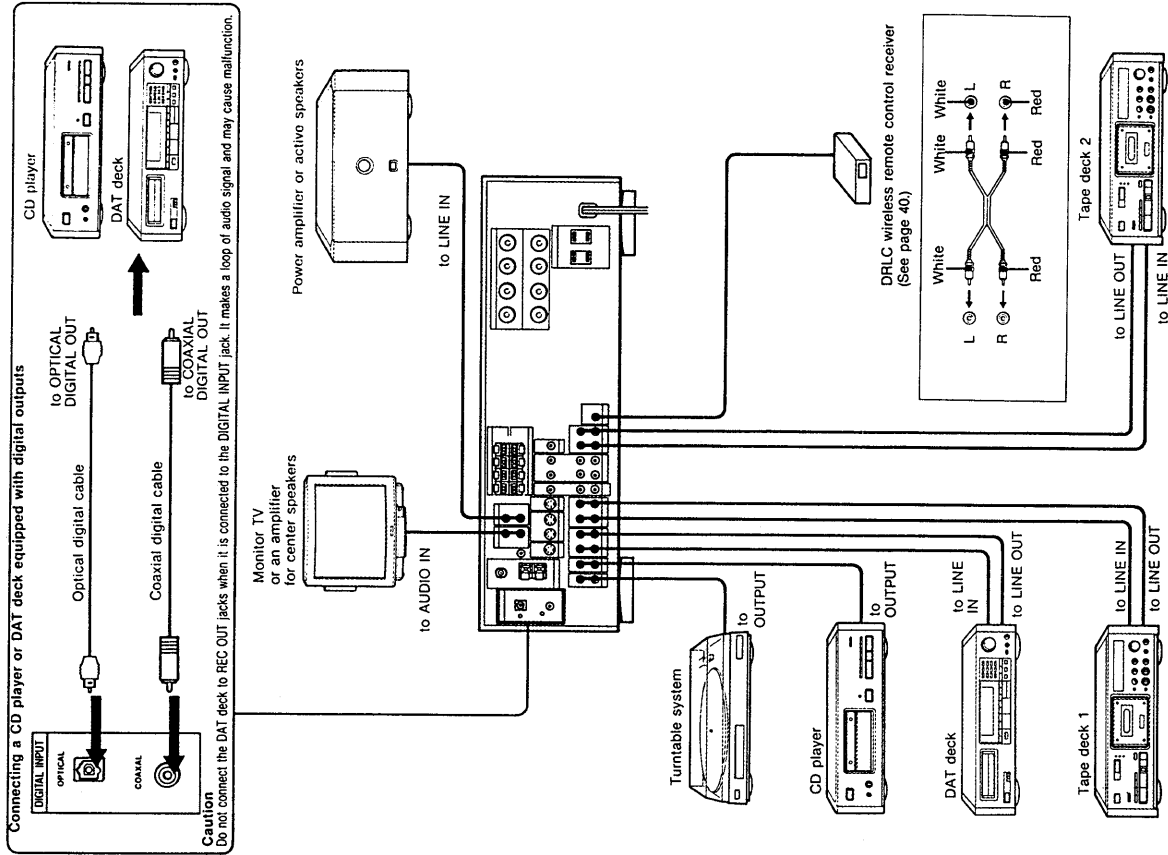
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## SECTION 1 GENERAL

This section is extracted from  
instruction manual.


### Connecting the System

#### Connecting Audio Equipment



### Overview

The STR-D2020 is a FM stereo/FM-AM receiver with a built-in digital signal processor. You can enjoy various audio and video program sources with this unit.

- Digital surround processor**
- The STR-D2020 electronically reproduces the reflected sound (early reflection) and reverberative sound (reverb) by using its digital signal processor, and allows you to obtain the acoustics of various situations.
  - **Dolby Digital**™ decoder reproduces the specially encoded surround sound of Dolby surround video programs.
  - Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877.
  - **DOLBY**™ and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

- Digital parametric equalizer**
- You can enjoy audio program sources with appropriate equalization curve by controlling the level of the desired 3 frequency bands.

- Digital Dynamic Sound (DDS)**
- You can use the compressor or expander to control the dynamics:
    - the compressor compresses the dynamic range of the program source, so you can enjoy dynamic sound at small output levels.
    - the expander eliminates undesired noise.

#### Sound field

- 10 recommended sound field programs (combination of surround, parametric equalizer, and digital dynamic sound settings) are preset in the factory for easy use. You can also store up to 10 settings you created in the memory.
- Combined use of the sound field programs and the preset stations allow you to enjoy broadcast listening immediately with the memorized sound field settings.

### Precautions

- On safety**
- Operate the unit only on 120 V AC, 60 Hz.
  - Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
  - Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the cord itself.
  - One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- On operation**
- Before making program source connections, be sure to unplug the unit.

- TVVCR control center**
- You can control up to three VCRs or Laser disc players and a monitor TV with this unit.
  - You can enjoy TV or CATV programs with FM simulcast sounds.
  - You can add sounds from various audio program sources to video tapes during editing.

- Quartz-locked digital synthesizer tuner**
- You can store up to 30 radio broadcast stations in the unit.
  - Index tuning system allows you to categorize the stations by kinds of music, etc. and tune in a station quickly.

- High-power amplifier with a built-in DIA converter**
- The built-in DIA converter allows you to directly connect digital audio equipment with optical/coaxial digital outputs.
  - Independent 2-channel amplifier is built-in for the rear surround speakers.

#### Dual room link control (DRLC)

- The DRLC function allows you to link a second room to your main or primary listening room. You can enjoy listening to either the same program source being played in the main room or a different program source in the second room.

#### Programmable system commander RM-P301

- The supplied remote commander can "learn" the various functions of other infrared type remote commanders.

#### On cleaning the cabinet

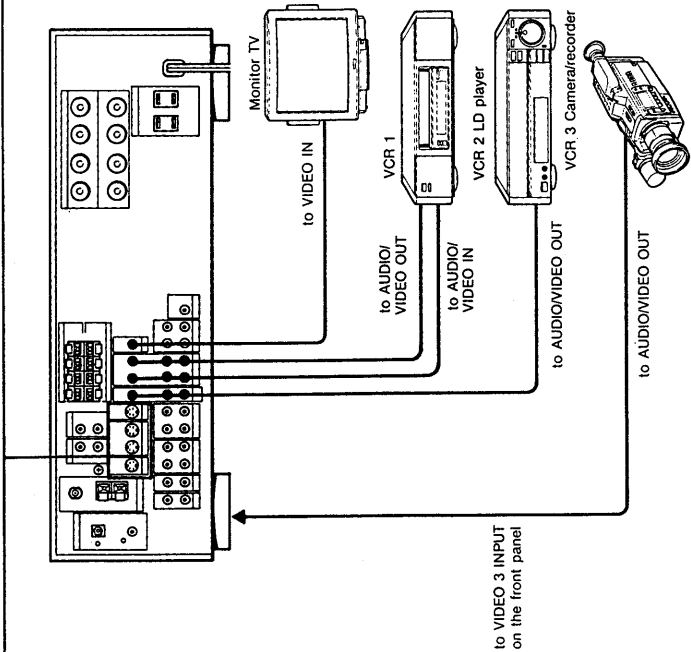
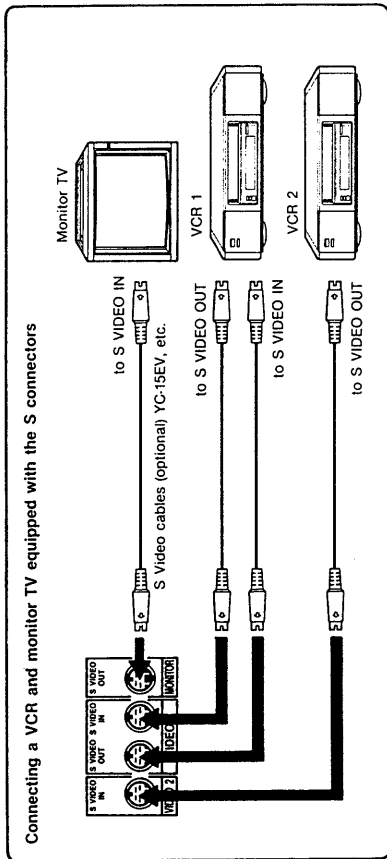
Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine.

**For the customers in the U.S.A.**  
For detailed safety precautions, see the "IMPORTANT SAFEGUARDS" leaflet.

If you have any question or problem concerning your unit, please consult your nearest Sony dealer.

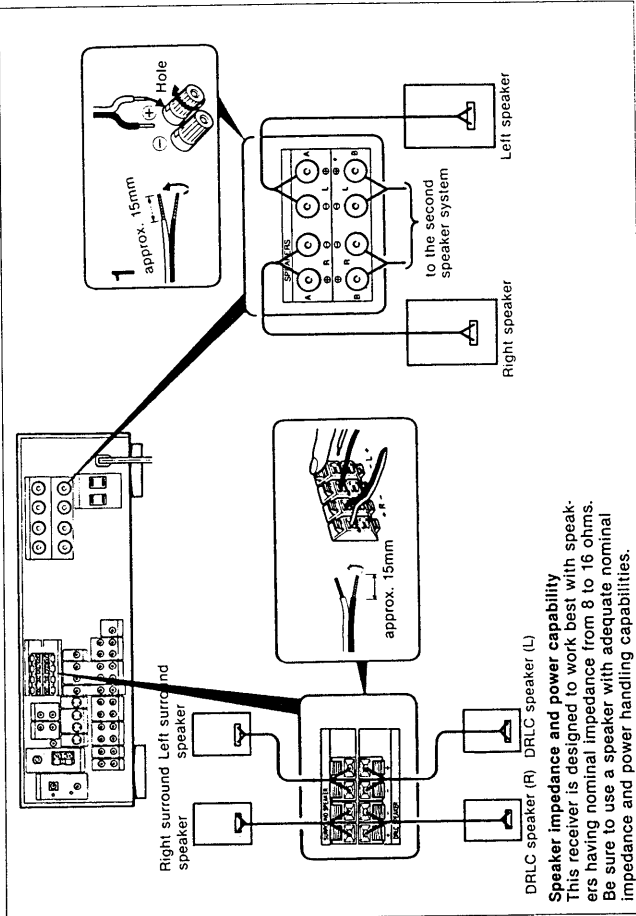
# Connecting the System

## Connecting Video Equipment

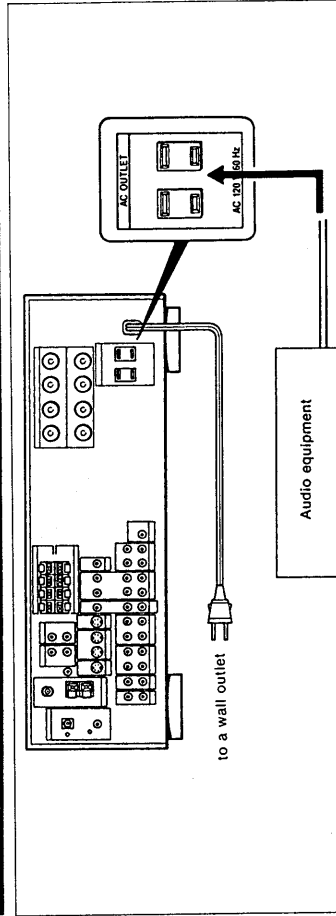


**Note**  
The unit has independent input/output circuitries for S VIDEO and VIDEO IN jacks. Therefore, the video signal input from VIDEO IN does not output for S VIDEO OUT jacks, and vice versa.

## Connecting Speaker Systems



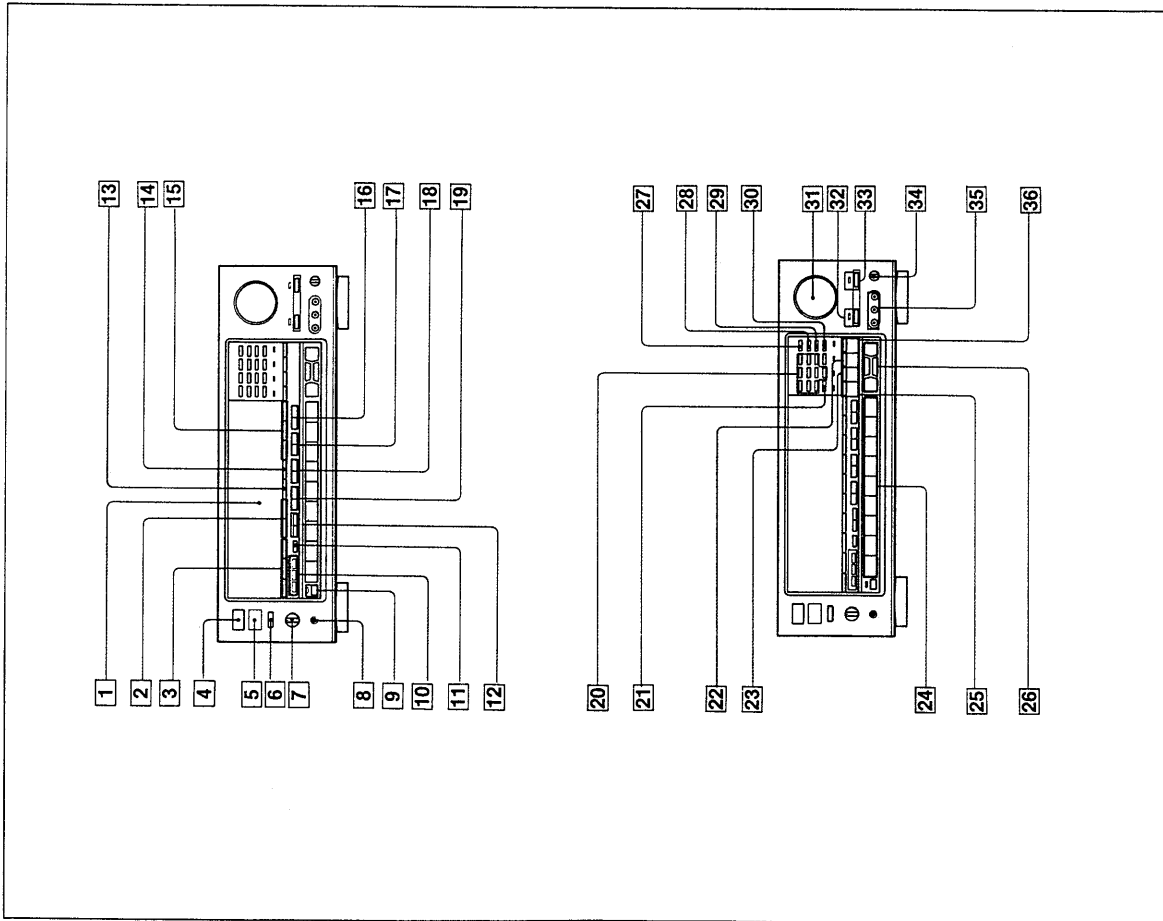
## Connecting the AC Power



**Caution**  
Be careful that the total power consumption of each equipment connected to the outlets on the receiver does not exceed 100 watts. Do not connect electrical home appliance such as an electric iron, fan, or other high-wattage equipment to these outlets.

Parts Identification

Front Panel—Refer to the pages indicated in ○ for details.



- 1 Display window
- 2 EQUALIZER function buttons (ON/OFF, FLAT)
- 3 SURROUND function buttons (ON/OFF, MODE, PROLOGIC)
- 4 POWER switch
- 5 Remote control sensor
- 6 DRLC/POWER switch
- 7 SPEAKERS selector (A + B, OFF, A, B)
- 8 HEADPHONES jack
- 9 TAPE 2 MONITOR button and indicator
- 10 SAMPLING FREQUENCY indicators
- 11 DOLBY PRO LOGIC TEST TONE button
- 12 EDIT buttons (VIDEO, AUDIO)
- 13 DDS (Digital Dynamic Sound) ON/OFF button
- 14 S. (sound) FIELD LINK ON/OFF button
- 15 TUNER function buttons (INDEX SELECT, FM MODE, FM/AM)
- 16 PRESET TUNING -/+ buttons
- 17 INDEX TUNING -/+ buttons
- 18 SOUND FIELD buttons (USER/PRESET, MODE)
- 19 DISPLAY buttons (GRAPH, CHARA) (graphics, character)
- 20 Numeric buttons
- 21 MEMORY button
- 22 TUNER TUN/CHARA (tuning/character) button and indicator
- 23 PARAMETER SUB button and indicator
- 24 Function selectors
- 25 PARAMETER MAIN button and indicator
- 26 CURSOR MODE operation buttons
- 27 PGM (program) SET button
- 28 RECALL button
- 29 TUNING DIRECT button
- 30 SLOPE button
- 31 VOLUME control knob
- 32 MUTING button and indicator
- 33 AUTO INPUT BAL (balance) button and indicator
- 34 BALANCE control
- 35 VIDEO 3 INPUT jacks
- 36 EQUALIZER BAND button and indicator

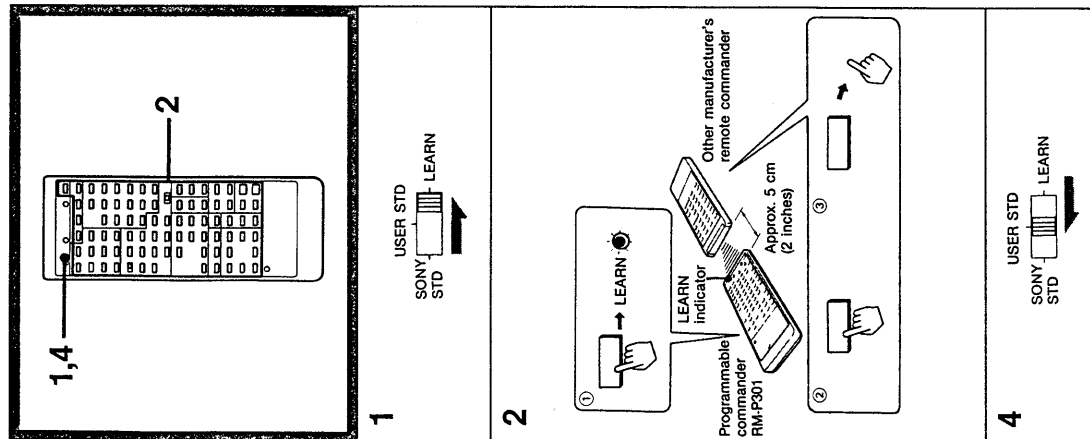


## Using the Remote Commander

When you manipulate a switch or button on the commander be sure to point the head of the commander toward the remote control sensor on the front of the receiver. If there is an obstacle between the receiver and the head of the commander, the receiver may not be controlled remotely.

### Programming Signals of Other Audio/Video Equipment with Programmable System Commander RIM-P301

The RIM-P301 learns various functions of other remote commanders emitting infrared rays and allows you to control most of audio and video equipment from a distance.



- 1 Set the mode selector to LEARN.
  - 2 Program a signal.
    - ① Press and hold the button which shall "learn" the remote-control signal until the LEARN indicator lights up.
    - ② Press and hold the button of other manufacturer's remote commander whose signal is to be learned.
    - ③ Remove your finger(s) from the button(s) after the LEARN indicator goes off.

The two remote commanders must:

    - face straight each other.
    - be placed at a distance of approx. 5 cm (2 inches).
    - not be moved during programming operation.
  - 3 Repeat operation for each button to be programmed.
  - 4 Set the mode selector to USER STD or SONY STD.
- After programming**  
Be sure to test if the equipment really works with the programmed signals.
- Number of signals that the commander can learn**  
It depends on the format of the signal. If you program signals of Sony equipment, approximately 50 signals can be programmed.

If the LEARN indicator flashes or does not go off in step 2-2, ③  
The memory capacity is full. This occurs when other signals stronger than the remote-control signals have been stored because the signals were programmed in a noisy environment or the remote commander were placed too far apart from each other.  
→ Clear all the signals following the procedure on the right and program again from the beginning under the proper conditions.

**Notes on programming**

- Remote-control signals of equipment of manufacturers other than Sony can be programmed only when they are compatible with the infrared wireless remote control system. Since the programmable commander can "learn" only the signals output from another remote commander, it cannot control equipment that do not use a remote commander. Also, note that there are some special remote-control signals that cannot be programmed.
- Do not attempt to use the programmable system commander with an air conditioner or other household appliances.

### To program a new signal onto a previously programmed button

Follow the programming procedure.  
The previously programmed signal is cleared and replaced by the new signal.

To clear all programmed signals

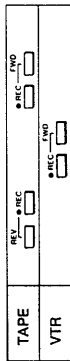
- 1 Set the mode selector to LEARN.
- 2 Press and hold any button of the programmable area until the LEARN indicator lights up.
- 3 Press PROGRAM CLEAR until the LEARN indicator flashes and goes off.

**Note**

It is not possible to clear the programmed content of just one button.

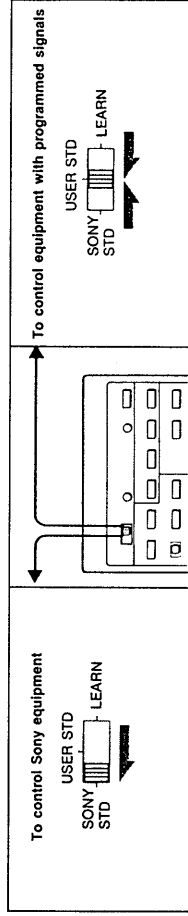
To program a signal onto the ● REC button in the TAPE or VTR section

It is not possible to operate any equipment with only the ● REC button. To program a signal on the ● REC button, press and hold the following buttons at the same time in step 2-①.



### Controlling Equipment

By switching the mode selector as shown below, a single button alternately controls Sony equipment and equipment of another manufacturer.



**When Sony equipment cannot be remote-controlled**  
Program the signal in the same way as for equipment from other manufacturers. In this case, even with Sony equipment, set the mode selector to USER STD.

**Note on battery**  
If the LEARN indicator does not light when a button is pressed, the batteries are almost exhausted. When the batteries are exhausted, the remote commander can no longer operate the unit or programming becomes impossible.  
If this happens, replace both batteries with new ones. We strongly recommend the use of alkaline batteries.

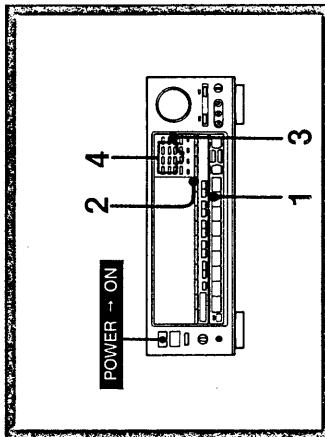
**If no signal has been programmed**  
The programmable commander can control Sony equipment even when the mode selector is set to USER STD.

**If the equipment works incorrectly**  
Press RESET and operate again. The programmed contents of the buttons are not cleared by pressing RESET.

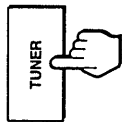


# Receiving Radio Broadcast Programs

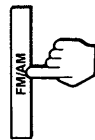
## Tuning in a Station Directly - Direct Tuning



1



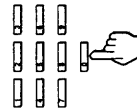
2 Select FM or AM.



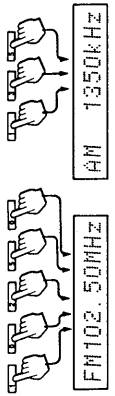
3



4 Enter the frequency of the desired station.



Example 1: FM 102.50 MHz Example 2: AM 1350 kHz



To correct the entered frequency Repeat steps 3 to 4.

For entering AM frequencies, you need not enter the last "0". However, if you have changed the AM tuning interval to 9 kHz, enter all the digits.

If you enter a frequency not covered by the tuning interval The entered value is automatically rounded up or down to the closest value covered by the tuning interval.

Tuning interval for direct tuning are the followings:

FM: 50 kHz interval

AM: 10 kHz interval (changeable to the 9 kHz interval)

When the entered number is not in the receivable frequency range

The entered digits (up to 5 digits for FM or up to 3 digits for AM) blink in the frequency display area, and reception does not take place.

If this occurs, press TUNING DIRECT again, and enter the correct frequency (the frequency of the receiver is 87.50 to 108.0 MHz for FM, and 530 to 1710 kHz for AM).

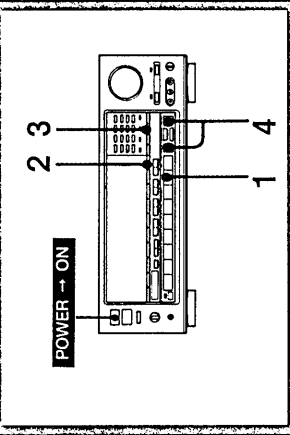
When an FM stereo program is noisy

When the unit receives an FM stereo program, the STEREO indicator goes on in the display window. If the stereo program is noisy, press FM MODE to change the mode over the MONO. This eliminates the stereo effect, but the noise will be greatly reduced.

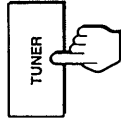
To return to the stereo mode, press FM MODE again.

## Scanning Stations Automatically - Auto Tuning

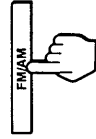
When you do not know the frequency of the station, proceed as follows.



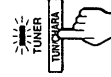
1



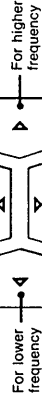
2 Select FM or AM.



3 When the TUNER indicator is lit, skip this step.



4



When a station is received, automatic tuning stops.

5 Repeat step 4 until the desired station is received.

If the automatic scan stops frequently You can select the signal level to receive, so that the scan stops only at the stations with strong signal. To select the signal level:

- 1 Press TUNICHARA, so that its indicator lights.
- 2 Press  $\Delta$ , so that HIGH indicator lights.

To receive lower signals again, press  $\nabla$ . HIGH indicator disappears, and the scan stops at all receivable stations.

**Presetting Stations**

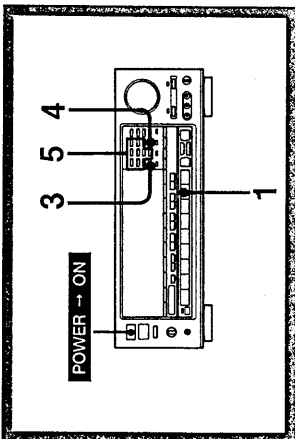
A total of 30 FM/AM stations (10 stations on each memory page) can be memorized in any desired sequence.

**Replacing a preset station**

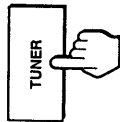
Preset another station on the number of the station to be replaced. The previously preset station will be erased.

**Memorizing FM mode**

The FM MODE is memorized in the station presetting. In step 2, select the STEREO or MONO with the FM MODE, if necessary.



1



2 Tune in the desired station.  
(See "Auto tuning" or "Direct Tuning".)

3

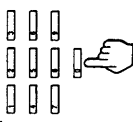


MEMORY indicator appears for a few seconds.

4 While the MEMORY indicator is on, select the memory page (A, B or C).



5 While the MEMORY indicator is on, press the desired number.

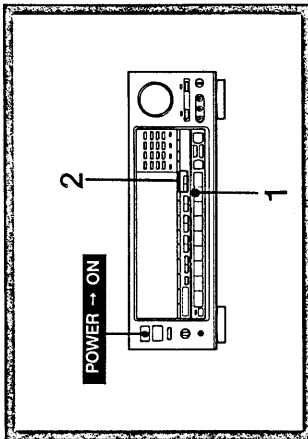


Repeat above steps for presetting other desired stations.

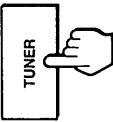
**Tuning in Preset Stations - Preset Tuning**

Scanning preset stations

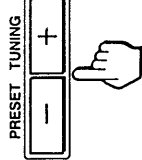
Tuning in preset stations directly



1

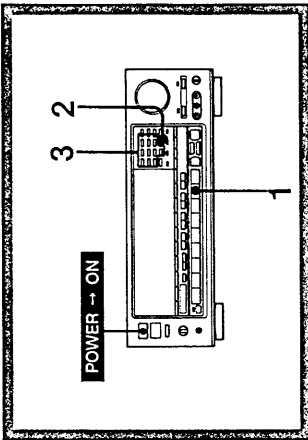
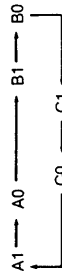


2 Select the desired station.

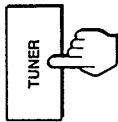


When you press +, the preset station is received sequentially in the direction of the arrow.

When you press -, the preset station is received sequentially in the reverse direction.



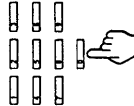
1



2 Select the memory page (A, B or C).



3

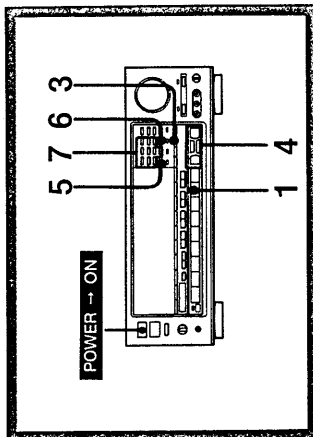


**IMPORTANT**

The memorized station is maintained for approximately one month even if the power cord is disconnected from the AC power source. If they are erased, store the stations again.

**Labelling the Preset Stations - Index Input**

You can divide preset stations under index names you create (up to 5 characters). If you want to categorize the preset stations by kinds of music, for example, create indexes, such as ROCK, JAZZ, etc.



**1** Press the TUNER button.

**2** Tune in the desired station with Direct, Auto, or Preset Tuning.

**3** Press the TUNER/CHARA button.

**4** Create an index name.

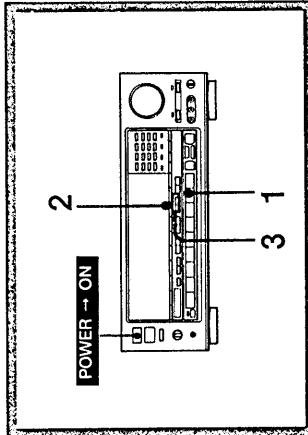
To select a letter or a number, press Δ or ∇.  
To change the position, press < or >.

**5** While the index name appears, press MEMORY.

The MEMORY indicator appears.

**6** While the MEMORY indicator is on, select memory page (A, B, or C).

**Selecting a Station from among the Preset Stations Having the Same Index - Index Tuning**



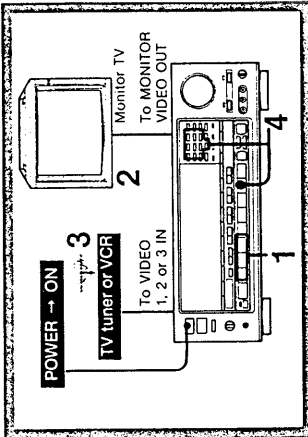
**1** Press the TUNER button.

**2** Select the index name.

**3** Select the desired station.

When you want to tune in a station memorized under a different index name, press INDEX SELECT as many times until the desired index name appears.

**Receiving FM Simulcast TV Programs**

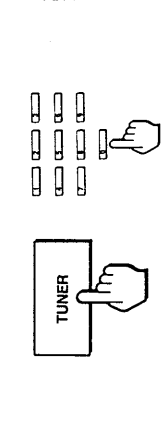


**1** Select VIDEO 1, VIDEO 2/ID, or VIDEO 3, according to video inputs connected to an equipment to which the VHF antenna is connected.

**2** Turn on the monitor TV.

**3** Press the desired program on the TV tuner or the VCR.

**4** Select TUNER and tune in the FM simulcast TV program on the receiver.



**7** While the MEMORY indicator is on, press the desired number.

If you want to assign the same index name to several stations Repeat steps 5 to 7.

To correct a previously memorized index Press TUN/CHARA twice so that all the characters in the index name flashes. Each time you press TUN/CHARA, the display changes as follows:

Frequency of the tuned station →  
One character in the index name flashes.  
All characters in the index name flashes.

**2** Press Δ or ∇ to call up previously memorized index names.  
**3** Press < or > to move cursor to the desired character.  
**4** Select the character with Δ or ∇.  
**5** Repeat steps 5 to 7 above.  
To resume the normal mode, press TUN/CHARA again.

Each station can be stored under only one index name. If you store an already categorized station under any other index name, only the last index name will be valid.

To memorize 0 and O Because 0 and O appear identical in the display, you need to remember what you set each character to.

To display the frequency and index name of preset stations Each time you press DISPLAY CHARA, frequency or index name of preset station is alternately appears.

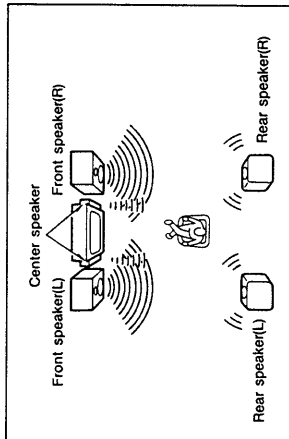
Usable letters and symbols

! → # = % & ' ( ) \* + - / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? [ \ ] ^ \_ ` { | } ~ ¡ ¢ £ ¤ ¥ ¦ § ¨ © ª « ¬ ® ¯ ° ± ² ³ ´ µ ¶ · ¸ ¹ º » ¼ ½ ¾ ¿ À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö × Ø Ù Ú Û Ü Ý Þ ß à á â ã ä å æ ç è é ê ë ì í î ï ð ñ ò ó ô õ ö ÷ ø ù ú û ü ý þ ÿ

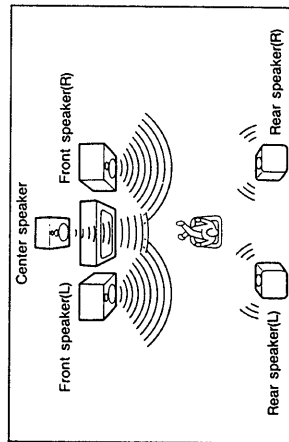
# Getting Ready to Enjoy Surround Sound

## Placement of Speakers for Dolby Surround Mode

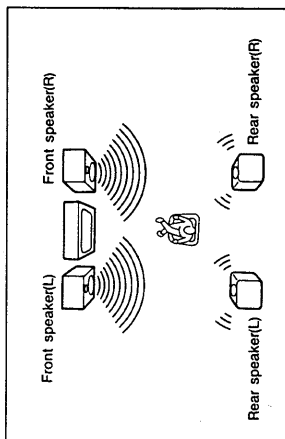
The STR-D2020 incorporates a decoder which reproduces the specially encoded surround sound of Dolby surround video programs. In the Dolby surround mode, select the speaker operation mode according to your speaker system.



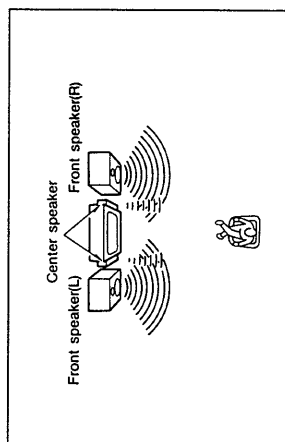
**NORMAL mode**  
Select this mode if you use a small center speaker. The bass sound of the center channel is output from the front speakers, as a small speaker cannot produce enough bass.



**WIDE mode**  
Select this mode if you use a medium to big center speaker.



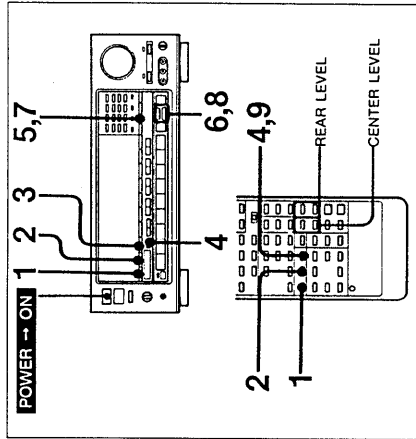
**PHANTOM mode**  
Select this mode when you play back a Dolby surround program source without using a center speaker. The sound of the center channel is output from the front (L and R) speakers.



**3CH. (channel) LOGIC mode**  
Select this mode when you play back a Dolby surround program source only with the front and center speakers. The sound of the rear channel is output from the front (L and R) speakers.

## Adjusting the Speaker Volume

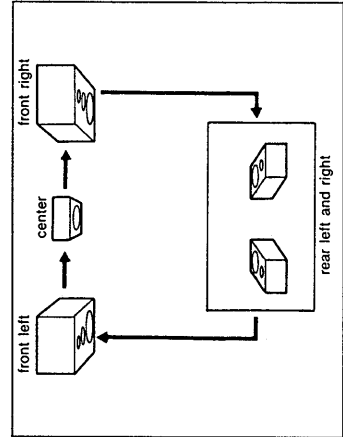
To enjoy the surround sound to the maximum on playing any program sources, adjust the front, rear, and center (if connected) speakers to the same volume level. The adjustment must be done with a test tone in the DOLBY SURROUND mode, but the level once adjusted can be used for all surround modes.



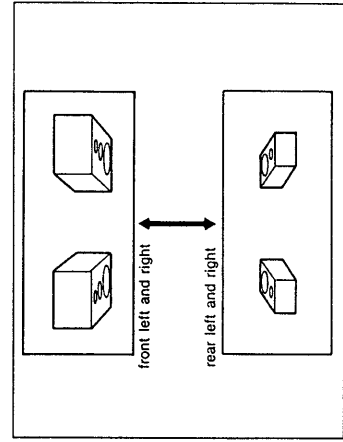
- 1 Press SURROUND ON/OFF to ON.
- 2 Press SURROUND MODE until DOLBY SURROUND indicator is in square on the display. In other surround modes, a test tone is not output from the center speaker.
- 3 Press PROLOGIC to select NORMAL, WIDE, PHANTOM or 3CH, LOGIC, depending on your speaker system (refer to page 26). The test tone will not be output from the rear speakers when you select 3CH, LOGIC.
- 4 Press T.TONE on the remote commander. If you use no center speakers, go to step 7.
- 5 Press PARAMETER SUB until "Cent. Level" appears in the display.
- 6 Press  $\Delta$  or  $\nabla$  to adjust the volume level of the center speaker so that it is the same as the front speakers.
- 7 Press PARAMETER SUB until "Rear Level" appears in the display.
- 8 Press  $\Delta$  or  $\nabla$  to adjust the volume level of rear speakers so that it is the same as the front speakers.
- 9 Press T.TONE again to turn off the test tone.

\* On the remote commander, you can adjust the volume level of the center speaker or the rear speakers with CENTER LEVEL + / - or REAR LEVEL + / -, instead of proceeding with steps 5, 6, 7, 8.

**Sequence of the test tone**  
In a system without a center speaker:  
The test tone will be output automatically from the front L, center, front R, and the rear speakers ("S"-surround) in succession.



In a system without a center speaker:  
The test tone will be output automatically from the front speakers and rear speakers alternatively.

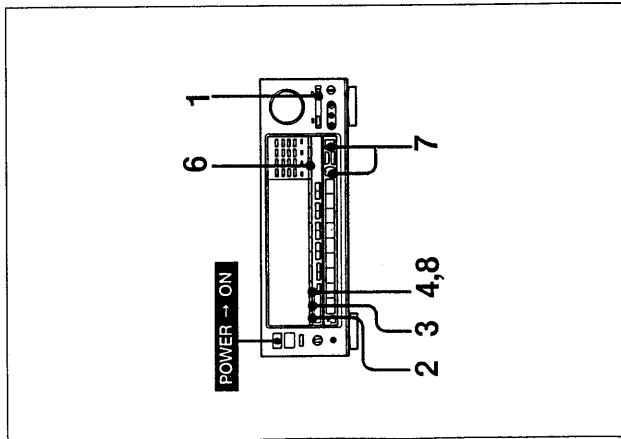


**Adjusting the Input Level and Input Balance (for Dolby Surround Mode)**

The STR-D2020 incorporates automatic adjustment circuitry of input balance which reproduces the best surround effect. This circuitry allows you to skip the adjustment the input balance when playing back a Dolby surround processed video tape or laser disc. To

To function the automatic adjustment of the input balance  
 Make sure that the indicator of AUTO INPUT BAL is on.  
 The input balance is adjusted automatically, regardless of the manual setting.

To adjust the input balance manually

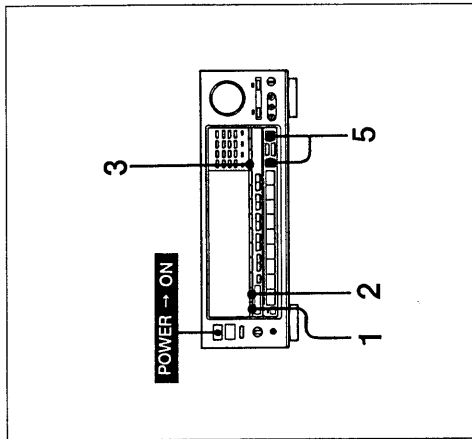


- 1 Press AUTO INPUT BAL so that its indicator is off\*.
- 2 Press SURROUND ON/OFF to ON.
- 3 Press SURROUND MODE until DOLBY SURROUND indicator is in square on the display.
- 4 Press PROLOGIC until CENTER OFF appears in the display.
- 5 Play back the program source (refer to page 17).
- 6 Press PARAMETER SUB until "Bal." appears in the display.
- 7 Adjust the input balance by pressing ◀ or ▶, so that the audio levels from the right and left speakers are minimized during dialogue (monaural).
- 8 Press PROLOGIC to resume the Pro Logic Mode selected on page 26.

**Note**  
 \* If this indicator is on, "auto" appears after you finish adjusting the parameter of the input balance.  
 Even for video software which does not carry the [DOLBY SURROUND] or [DOLBY SURROUND] mark. Some commercially available software may have Dolby surround processed sound tracks even though it is not so indicated on the package.

**Adjusting the Delay Time of the Rear Speakers (for Dolby Surround Mode)**

The delay time is a time between the surround sound from the front and that from rear speakers. The delay time is adjustable from 15.0 ms to 30.0 ms.



- 1 Press SURROUND ON/OFF to ON.
- 2 Press SURROUND MODE until DOLBY SURROUND indicator is in square on the display.
- 3 Press PARAMETER MAIN until "Delay Time" appears in the display.
- 4 Play back the program source (refer to page 17).
- 5 Adjust the delay time for the rear speakers by pressing ◀ or ▶.

**Note**  
 The delay time for the rear speaker can be adjusted even in the 3CH. LOGIC mode.

## Enjoying the Factory-preset Digital Sound Effects

### Understanding the Digital Sound Effects

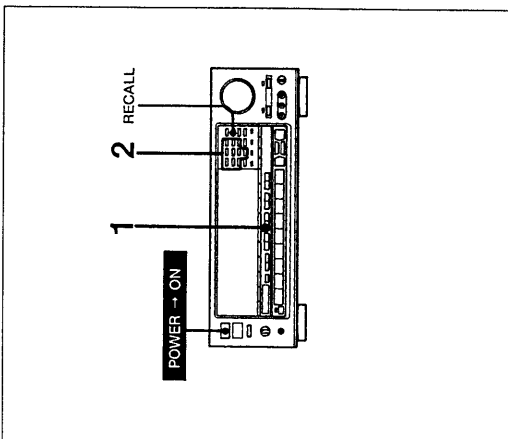
The STR-D2020 incorporates digital signal processing circuitry which consists of a digital surround processor, a digital parametric equalizer, and a digital dynamic sound (DDS) controller.

- The digital surround processor electronically reproduces the acoustics of various listening situations.
- The digital parametric equalizer controls the output level of specific frequencies to finely adjust the frequency responses.
- The digital dynamic sound (DDS) controller compresses or expands the dynamic range of the program source.

These three digital sound effects allow you to create the optimum sound quality and sound atmosphere in your room.

### Selecting the Factory-preset Sound Field Program

Ten recommended sound field programs (combination of settings of the surround, parametric equalizer, and digital dynamic sound) have been preset in the factory. Since these programs are appropriate for the most types of music and listening situations, you can enjoy the digital sound effects by just selecting the sound field programs according to the program source. You can also create a new sound field to your taste by setting each parameter. (Refer to "Making most of the digital sound effects" on next page.)



- 1 Press USER/PRESET so that PRESET appears in the display window.
- 2 Press the numeric button so that the indicator of the desired sound field program appears in the display. To use the numeric button in tuner mode, first press RECALL button.

| Preset number | Applications                                     |
|---------------|--------------------------------------------------|
| 1             | For orchestral music                             |
| 2             | For chamber music or an instrumental solo        |
| 3             | For operas or musicals                           |
| 4             | For church music or the pipe organ               |
| 5             | For jazz                                         |
| 6             | For disco music                                  |
| 7             | For a live concert in an open-air stadium        |
| 8             | For music programs on video tapes or laser discs |
| 9             | For movie programs on video tapes or laser discs |
| 10            | For Dolby surround encoded video programs        |

## Making Most of the Digital Sound Effects

### Before making most of the digital sound effects

Although ten sound field programs (recommended combinations of each settings) are already preset for easy use (refer to the previous page), you can also manipulate various parameters to finely tune the factory-preset settings to your room, or create original sound effects as you like.

To understand the digital sound effects, use the demonstration mode incorporated in the unit.

### Table of Adjustable Parameters

|                          | HALL 1 | HALL 2 | OPERA | CHURCH | JAZZ CLUB | DISCO | STADIUM | LIVE CONCERT | THEATER | DOLBY SURROUND |
|--------------------------|--------|--------|-------|--------|-----------|-------|---------|--------------|---------|----------------|
| Equalizer                | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| DDS                      | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Room Size                | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Wall                     | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Seat Position Front-Rear | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Seat Position Left-Right | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Main Effect level        | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Reverb Time              | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Delay Time*              | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Rear Level*              | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Center Level*            | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |
| Sub Input balance*       | •      | •      | •     | •      | •         | •     | •       | •            | •       | •              |

\*Refer to pages 27 to 29 for adjusting these parameters.

**Note**  
The digital sound effects (the surround, parametric equalizer, and digital dynamic sound controller) cannot be obtained with the program source connected to the TAPE 2 MONITOR.

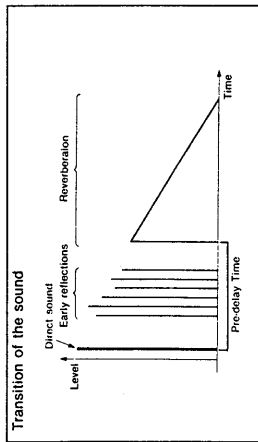
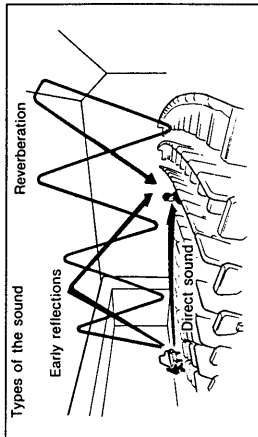
### To start the demonstration mode

While pressing MUTING, press AUTO INPUT BAL. The demonstration mode will illustrate how to use each parameter.

# Using the Digital Surround Processor

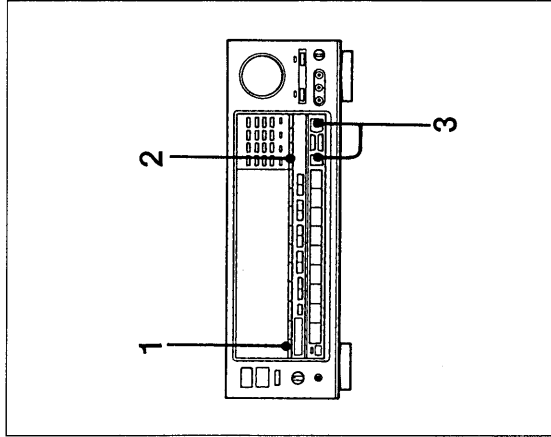
## Understanding the Digital Surround Processor

The sound heard in a place such as a concert hall or a movie theater consists of direct sound, and early reflected sound (early reflections) and a reverberative sound (reverberation). The acoustics of the room affect the way these three sounds are heard. We can estimate the size of the type of a hall by listening to and differentiating these three kinds of sound. The STR-D2020 reproduces the early reflections and the reverberation using its digital signal processor and allows you to design a variety of sound field in your own



## Adjusting the Main Parameters

Before adjusting parameters, play back the program source. You can adjust parameters while listening to the actual sound.



- 1 Press SURROUND ON/OFF to ON.\*
- 2 Press PARAMETER MAIN until the desired parameter appears in the display. (Once you press MAIN, you can select the desired parameter by pressing  $\blacktriangle$  or  $\blacktriangledown$ .)
- 3 Adjust the parameter by pressing  $\blacktriangleleft$  or  $\blacktriangleright$ .

**Tips for adjusting the main parameters**  
The following procedure allows you to make the desired sound field more effectively.

- 1 Select the desired factory-preset sound field program.
- 2 Adjust the Effect Level.
- 3 Adjust the Reverberation time.
- 4 Adjust other parameters, if necessary.

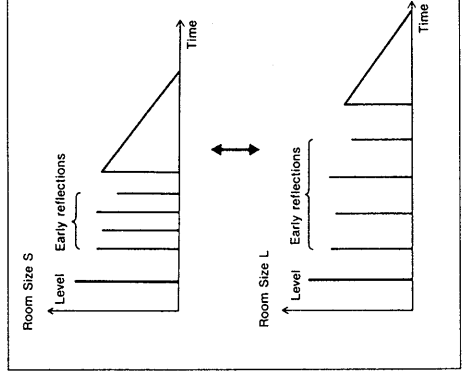
**Note**  
\*If the surround function is not turned on, "surround off" appears after you finish adjusting parameters.

## Characteristics of the Surround Modes

| Surround mode  | Characteristics                                                                                                                                                                                            | Appropriate music source                        |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| HALL 1         | Reproduces the acoustics of a rectangular concert hall with soft sound. It is effective for playing a program source with hard sound.                                                                      | Solo or medium-size orchestra                   |
| HALL 2         | Reproduces the acoustics of a vineyard type concert hall with a large early reflection effect. HALL 2 simulates a larger hall than HALL 1 with walls made of wood and stone. Bright sounds are reproduced. | Large-size concert play such as the orchestra   |
| OPERA          | Reproduces the acoustics of an opera house, keeping the clearness of the vocal music.                                                                                                                      | Opera                                           |
| CHURCH         | Reproduces the acoustics of a church made of wood.                                                                                                                                                         | Baroque music, string orchestra or choral group |
| JAZZ CLUB      | Reproduces the acoustics of a live house. The equalizer boosts high frequencies, adding sharpness to sounds.                                                                                               | Jazz                                            |
| DISCO          | The equalizer boosts high and low frequencies, and the dynamic sounds are reproduced.                                                                                                                      | Pops                                            |
| STADIUM        | Reproduces the acoustics of an outdoor stadium with a long pre-delay time. It is effective for playing a program source recorded in a stadium.                                                             | Pops                                            |
| LIVE CONCERT   | Adds the reflection of a large concert hall to decoded signals of the Dolby prologic decoder.                                                                                                              | Dolby surround processed music software         |
| THEATER        | Adds the reflection of a theater to decoded signals of the Dolby prologic decoder.                                                                                                                         | Dolby surround processed movie software         |
| DOLBY SURROUND | Decodes programs processed with the Dolby surround.                                                                                                                                                        | Dolby surround processed software               |

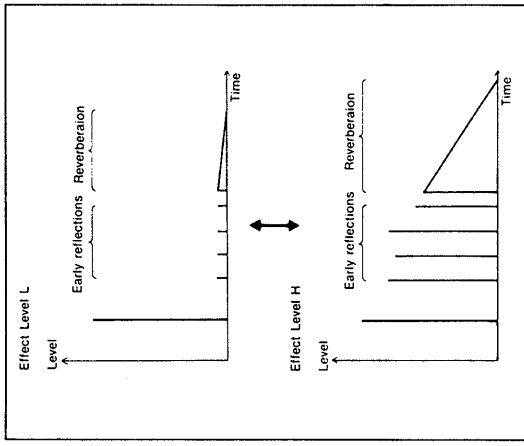
## Simulating the Room Size

The sound emitted from a sound source is reflected many times between the left and right walls, ceiling, and floor before it reaches our ears. In a large room, the sound takes more time to bounce from one surface to another than in a smaller room. The ROOM parameter controls the spacing of early reflections to simulate the room size. The S indicator in the display signifies a small room, the L indicator signifies a large room, and the middle point designates the standard room size.



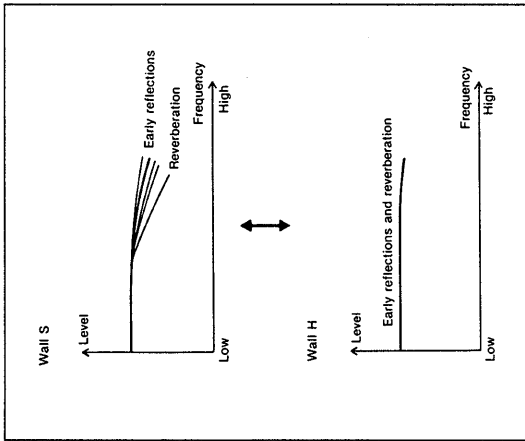
**Adjusting the Effect Level**

Effect level is the combination of the level of early reflections and reverberation. The L indicator in the display signifies the lowest level, and the H indicator signifies the highest level. The adjustable level is divided into 20 segments. As you select higher level, the room becomes more "live", and as you select lower level, the room becomes "dead".



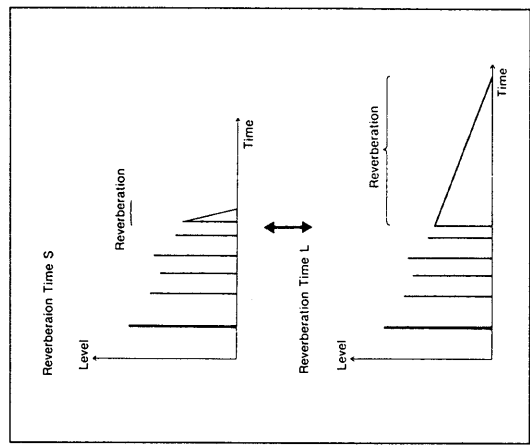
**Simulating the Wall Material**

When sound is reflected by a wall made of soft material such as wood or a wall covered with a curtain, the high frequency components are reduced. A hard wall is highly reflective and does not significantly affect the frequency response of the reflected sound. The WALL parameter controls the level of high frequencies to simulate the wall material. The S indicator in the display signifies a soft wall, the H indicator signifies a hard wall, the middle point designates the standard wall made of wood.



**Adjusting the Reverberation Time**

This parameter adjusts the length of the reverberation—the time required for reverberative sound to decrease to -60 dB. The S indicator in the display signifies the shortest reverberation time, the L indicator signifies the longest reverberation time.

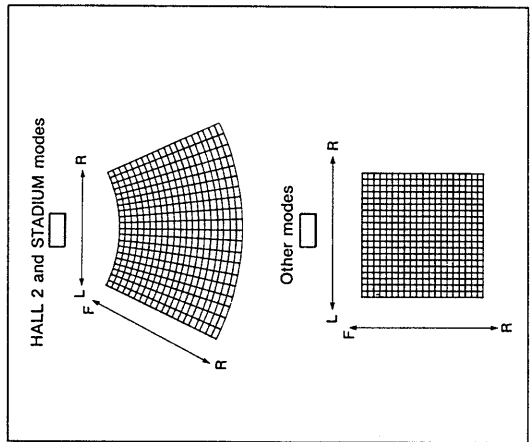


**Simulating the Seat Position**

When you sit in the front of a room, you will hear more direct sound from the front speakers, and the component of reflected sounds from the front speakers grows as you move to the rear. Similarly, the component of reflected sound changes when you move from left to right, and vice versa. The FR and LR parameters control the balance of the direct and reflected sound and other components of sound to simulate your listening position.

When adjusting the FR parameter, the F indicator in the display signifies the front position of the room, the R indicator signifies the rear position, the middle point of the indicator designates the center position. When adjusting the LR parameter, the L indicator signifies the left position of the room, the R indicator signifies the right position, and the middle point of the indicator designates the center position.

**Note**  
You cannot adjust the L/R parameter in the LIVE CONCERT and THEATER mode.





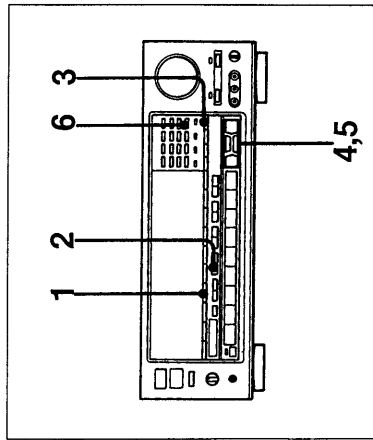
## Using the Digital Parametric Equalizer

### Understanding the Digital Parametric Equalizer

The parametric equalizer is a tone control system with adjustable center frequency and slope(Q). The STR-D2020 provides flexible equalization using one-band parametric equalizer with center frequency and slope, and 2-band shelving equalizers with adjustable turnover points. The equalization curve appearing in the display window allows you to accurately adjust the sound quality. The parametric equalizer effects all line output signals including SURROUND (REAR), CENTER.

### Adjusting the Digital Parametric Equalizer

Before adjusting the digital parametric equalizer, play back the program source. You can adjust the equalizer while listening to the actual sound.



**Spectrum analyzer display**  
Every time you press DISPLAY GRAPH, the display of equalizer curve, real time analyzer and peak hold is cyclically switched.

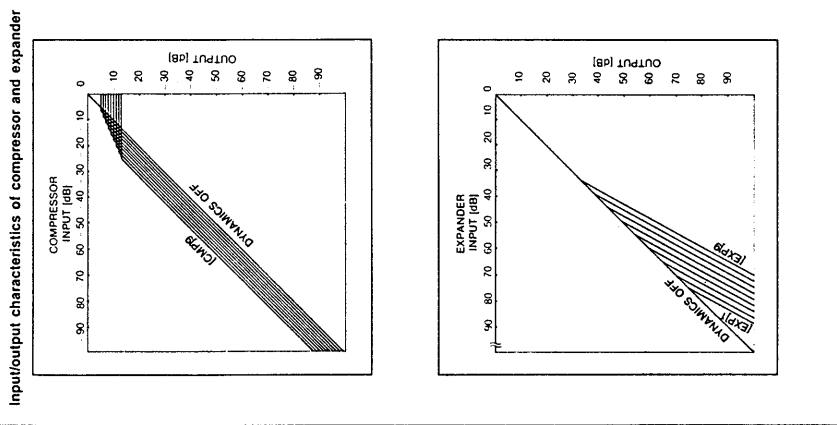
- Equalizer curve shows the settings of the equalizer controls.
- Real time analyzer (RTA type-1) shows the level of each frequency range.
- Peak hold mode (RTA type-2) holds the highest input of each frequency range for several seconds.
- Real time analyzer (RTA type-3) shows the highest level of each frequency range.

**Note**  
"If EQUALIZER ON/OFF is set to OFF, "equalizer off!" appears after you finish adjusting the parameter.

## Using the Digital Dynamic Sound (DDS) Controller

### Understanding the Digital Dynamic Sound Controller

The STR-D2020 allows you to select either of two digital dynamic sound controls, compressor or expander. The compressor compresses the dynamic range of the output signal to increase the average output level without distortion. This function is useful for obtaining dynamic sound at small output levels or when recording a program source with a wide dynamic range, such as a compact disc, on a cassette tape. On the other hand, the expander limits the dynamic range of the input signal to eliminate undesired noise. You can set the compressor or expander effect in 9 increments.



- 1 Press EQUALIZER ON/OFF to ON.\*
- 2 Press DISPLAY GRAPH until the equalization curve appears in the display.
- 3 Press EQUALIZER BAND to select a frequency band.  
B: Bass  
M: Middle  
T: Treble
- 4 Press ◀ or ▶ to select the frequency you want to adjust.
- 5 Press △ or ▽ to raise or lower the level of the selected frequency.
- 6 Press SLOPE to select the slope if necessary.
- 7 Repeat steps 4 through 6 for other frequency bands until you obtain the desired equalization curve. To restore the real time analyzer or peak hold mode, press DISPLAY GRAPH.

To make the equalization curve flat  
Press FLAT.  
You can create a new equalization curve.

When the center frequency band overlaps the bass or treble frequency band during adjustment  
The setting level of each band will accumulate.  
The equalization curve appears only between +/-12 dB.

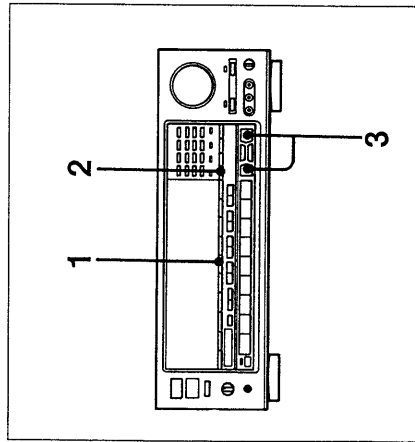
## Storing the Settings of Digital Sound Effects · Sound Field Memory

### Adjusting the Digital Dynamic Sound Controller

Before adjusting the digital dynamic sound controller, play back the program source. You can adjust the controller while listening to the actual sound.

#### IMPORTANT

You cannot operate the digital dynamic sound (DDS) controller when the DOLBY SURROUND mode is selected. If you select DOLBY SURROUND with SURROUND ON/OFF set to ON, the digital dynamic sound (DDS) controller is automatically turned off. To turn on the DDS controller, select another mode.

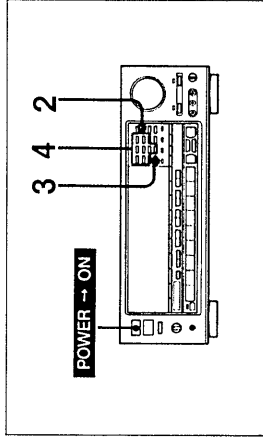


- 1 Press DDS ON/OFF to ON.
- 2 Press PARAMETER MAIN until "DDS" appears in the display.
- 3 Press ◀ or ▶ to adjust the compressor or expander.

**Note**  
If DDS ON/OFF is set to OFF, "DDS off!" appears after you finish adjusting.

### Storing the Settings of Digital Sound Effects

You can store up to 10 digital sound effects (combinations of the settings of surround, parametric equalizer, and digital dynamic sound) you created into the memory and recall them. You can also link these 10 digital sound field effects to preset stations.



- 1 Set the parameters of surround, parametric equalizer, and digital dynamic sound controller.
- 2 Press RECALL button (when the unit is in a mode other than TUNER, skip this step).
- 3 Press MEMORY.
- 4 Press the numeric button to be stored (1 to 0).

#### Calling up the settings of digital sound effects

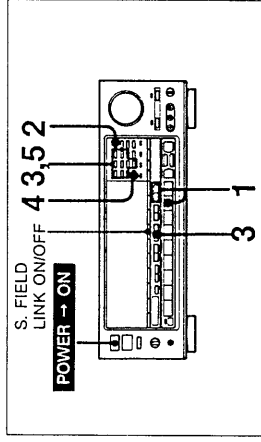
- 1 Press PRESET/USER until USER appears in the display.
- 2 Select the desired preset number by pressing the numeric button. To use the numeric buttons in tuner mode, first press RECALL button.

**When you store a new digital sound effect**  
The digital sound effect for the same user preset number will be replaced.

Even if the AC power cord is disconnected  
The stored data is maintained for approximately 2 weeks.

**To reset the unit to initial settings**  
Press POWER while pressing SURROUND ON/OFF. If the DRLC/POWER indicator is lit, first press DRLC/POWER to turn off this indicator. All of the 10 settings are then restored to the ones stored at the factory.

### Linking the Sound Field Memory to Preset Stations



- 1 Tune in a station to be linked to the sound field effect.
- 2 Press SOUND FIELD PGM SET.
- 3 Press USER/PRESET and the numeric buttons (1 to 0) to select the desired sound field effect.
- 4 Press MEMORY.
- 5 Press the numeric button corresponding to the station number to be linked.

#### Tuning in the preset station stored with the linked sound field effect

- 1 Press S FIELD LINK ON/OFF so that SOUND FIELD LINK ON appears in the display.
- 2 Select the desired number by pressing the SHIFT and numeric button.

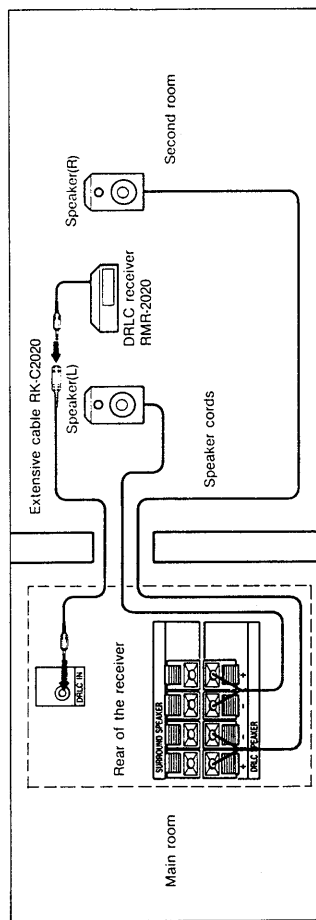
**To change the sound field setting**  
Press S FIELD LINK ON/OFF to OFF, and then adjust the sound field effect as you desire.

# Enjoying Sound in Another Room

## Overview

The Dual Room Link Control allows you to link a second room to your main or primary listening room. When the RM-S2020K Dual Room Link Control Kit (optional) and optional speakers are properly connected to your audio system and they are placed in the second room, either the same program source being played in the main room or a different program source can be heard in the second room.

## Connections



## Operation

- 1 Press DRLC/POWER. (The POWER switch on the main unit does not need to be turned on.)
- 2 To listen to CD or tape in the second room, set the CD player or tape deck into the play mode.
- 3 Control the system with the remote commander RM-S2020K for the second room.

The following examples illustrate program source options for the main and second room.

|                                                |                              |
|------------------------------------------------|------------------------------|
| Listening in the main room                     | Listening in the second room |
| CD                                             | FM broadcast                 |
| Tape                                           | CD                           |
| Sound from TV                                  | Same sound from TV           |
| Off                                            | FM broadcast                 |
| Sound from video source (with surround effect) | Second room system defeated  |
| FM broadcast                                   | Off                          |

### Note

- The surround system is used in the main room and the DRLC function cannot be operated simultaneously.
- You cannot use the following functions from the second room.
  - Surround effect
  - Equalizer control
  - DDS control
  - Muting
  - TAPE 2 MONITOR

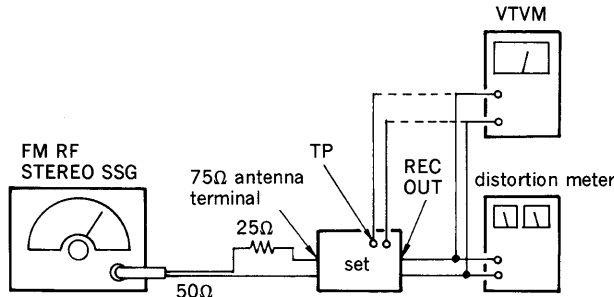
Please refer to the operating instructions of RM-S2020K for details.

## SECTION 2 ELECTRICAL ADJUSTMENTS

FE001 FM front-end and FE002 AM front-end are adjusted Perfectly and are supplied as unit for replacement.

### FM SECTION

Connecting :



|                         | Null & Mono Distortion | Stereo Separation                                                                                        | Muting Level          |
|-------------------------|------------------------|----------------------------------------------------------------------------------------------------------|-----------------------|
| Carries frequency       | 98.1MHz                |                                                                                                          |                       |
| Output level            | 60dB (1mV)             |                                                                                                          |                       |
| Modulation              | 1kHz, 75kHz deviation  | 1kHz, 33.75kHz deviation<br>sub carrier 38kHz,<br>33.75kHz deviation<br>pilot 19kHz,<br>7.5kHz deviation | 1kHz, 75kHz deviation |
| Adjustment Location     | T001/T002              | RT004                                                                                                    | RT002                 |
| Test Point (TP) or Jack | TP001/REC OUT          | REC OUT                                                                                                  | D033 (Cathode)        |

### Null and Mono Distortion Adjustment

Setting :

FUNCTION selector: TUNER  
BAND selector: FM  
FM MODE: MONO

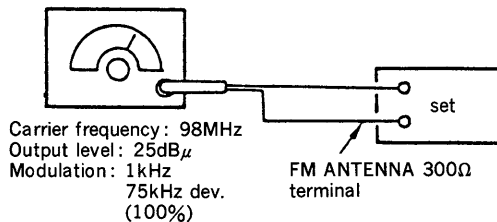
Procedure :

1. Tune the set to 98.1MHz.
2. Adjust T001 so that the voltage of TP001 (Null) becomes 0 V (within  $0 \pm 50mV$ )
3. Adjust T002 so that the distortion at REC OUT becomes minimum. (Not more than 0.05%)
4. Repeat the procedures 2. and 3. several times.

### • FM Stereo Operation Level Adjustment

Setting :

FM RF stereo signal generator



Procedure :

1. Tune the set to 98MHz.
2. Adjust RT003 that the STEREO LED goes on.

### Stereo Separation Adjustment

- This adjustment should be performed after Mono Distortion Adjustment.

Setting :

FUNCTION selector: TUNER  
BAND selector: FM  
FM MODE: STEREO

Procedure :

Tune the set to 98.1MHz

| FM stereo signal generator output channel | VTVM connection | VTVM reading (dB)                                  |
|-------------------------------------------|-----------------|----------------------------------------------------|
| L-CH                                      | L-HC            | Ⓐ                                                  |
| R-CH                                      | L-CH            | Ⓑ <sup>Ⓐ</sup><br>Adjust RT004 for minimum reading |
| R-CH                                      | R-CH            | Ⓒ                                                  |
| L-CH                                      | R-CH            | Ⓓ <sup>Ⓒ</sup><br>Adjust RT004 for minimum reading |

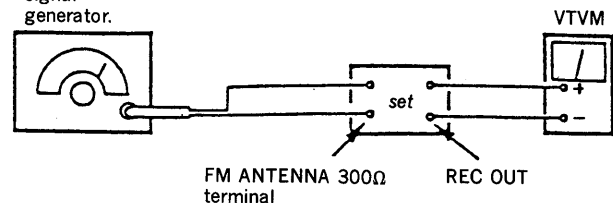
L-CH Stereo separation: Ⓐ - Ⓑ ( $\geq 40dB$ )  
R-CH Stereo separation: Ⓒ - Ⓓ ( $\geq 40dB$ )

The separations of both channels should be equal

### • Auto Stop Level Adjustment

Setting :

FM RF stereo signal generator.



Carrier frequency: 98MHz  
Output level: 40dB $\mu$  or 45dB $\mu$

Procedure :

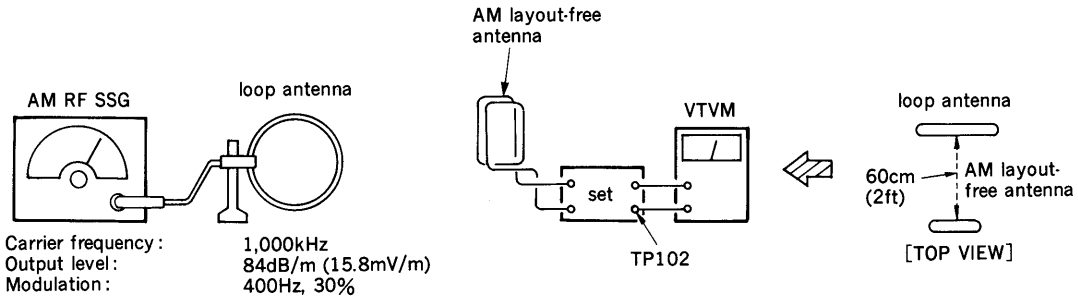
1. Turn the High/Low select switch to High.
2. Adjust RT002 so that the TUNED LED goes on.

**AM SECTION**

**Tuned Level Adjustment**

**Setting :**

FUNCTION selector : TUNER  
 BAND selector : AM

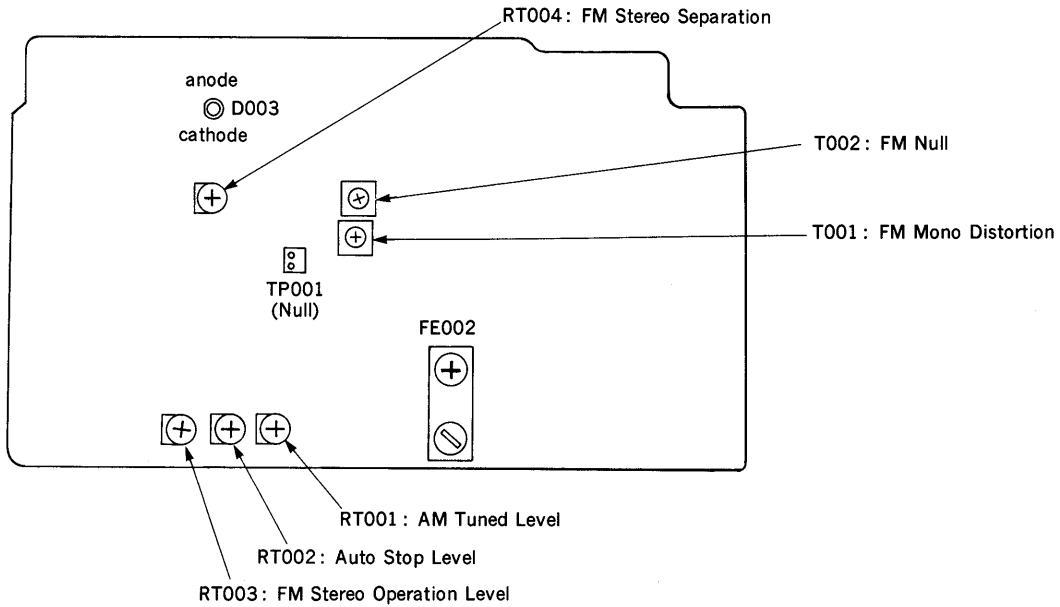


**Procedure :**

Adjust RT001 to the point where the voltage fo D003 (cathode) turns from high level to low.

**Adjustment Location :**

**[TUNER BOARD] —Component side—**



## AMP SECTION

### DC Bias Adjustment

- Perform this adjustment after replacement of power amp or drive circuit transistors.

#### Setting :

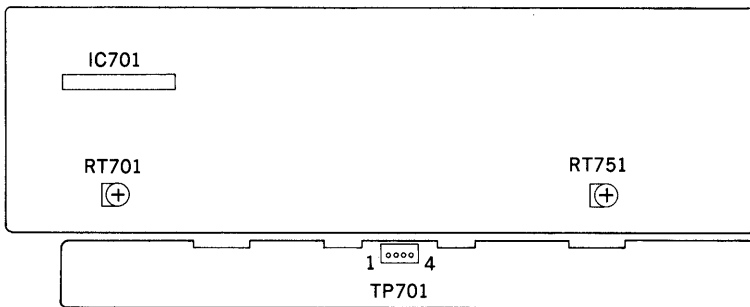
VOLUME: 0  
SPEAKERS: OFF (no load)

#### Procedures :

1. Connect the digital voltmeter to Bias Test Point (TP701 ①, ②: L-CH, TP701 ③, ④: R-CH)
2. Increase the AC power voltage gradually to 120V confirming that the voltmeter will not indicate an abnormal value.

#### Adjustment Location :

**[MAIN POWER AMP BOARD] —Component side—**



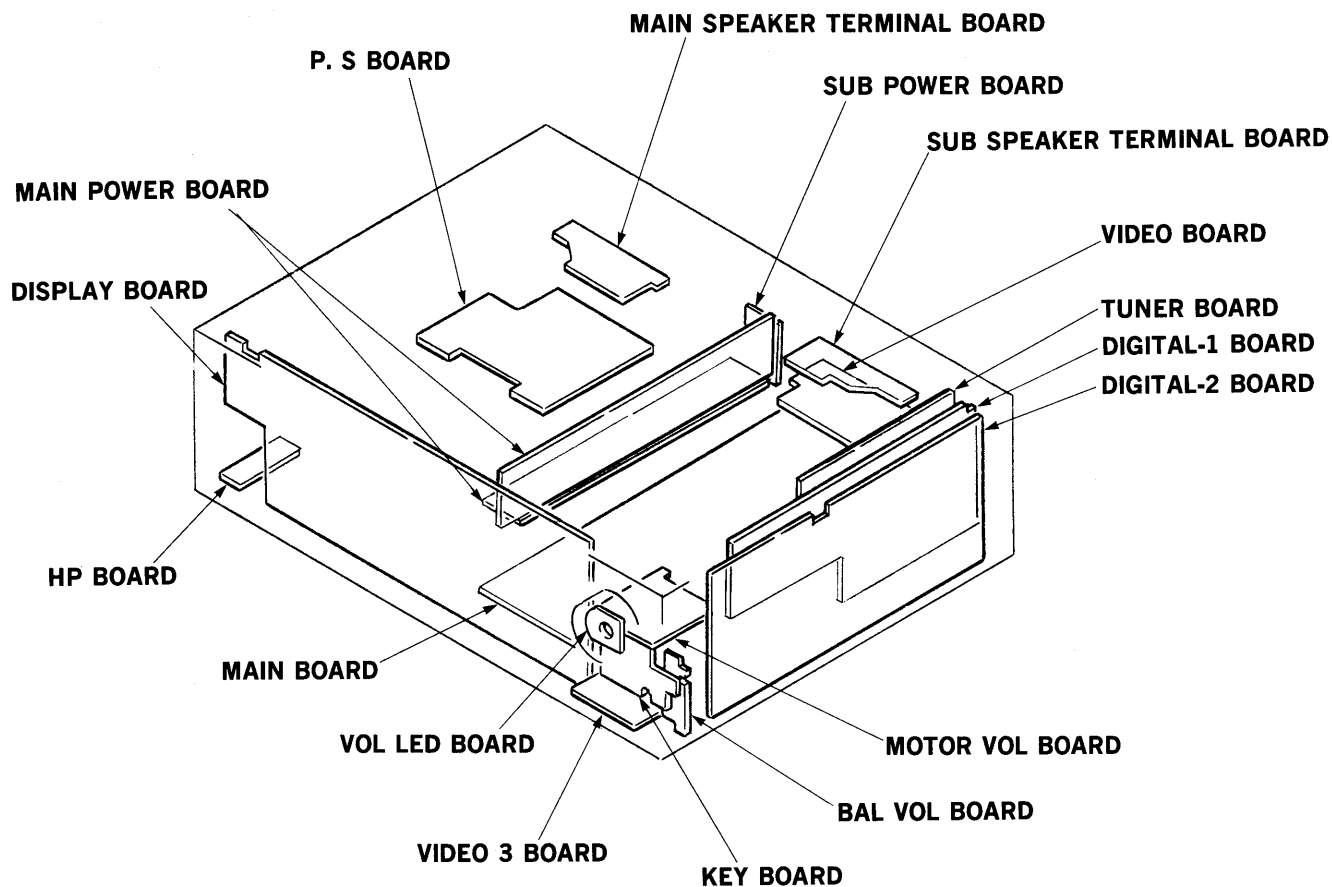
3. Confirm that the display is normal.
4. Adjust RT701 (L-ch) or RT751 (R-ch) so that the reading on the voltmeter becomes 0.01mV within 30 seconds after the power turned on.

**Note :** It is normal that the voltage will increase as time passes.

5. Turn the power off and remove the digital voltmeter.

## SECTION 3 DIAGRAMS

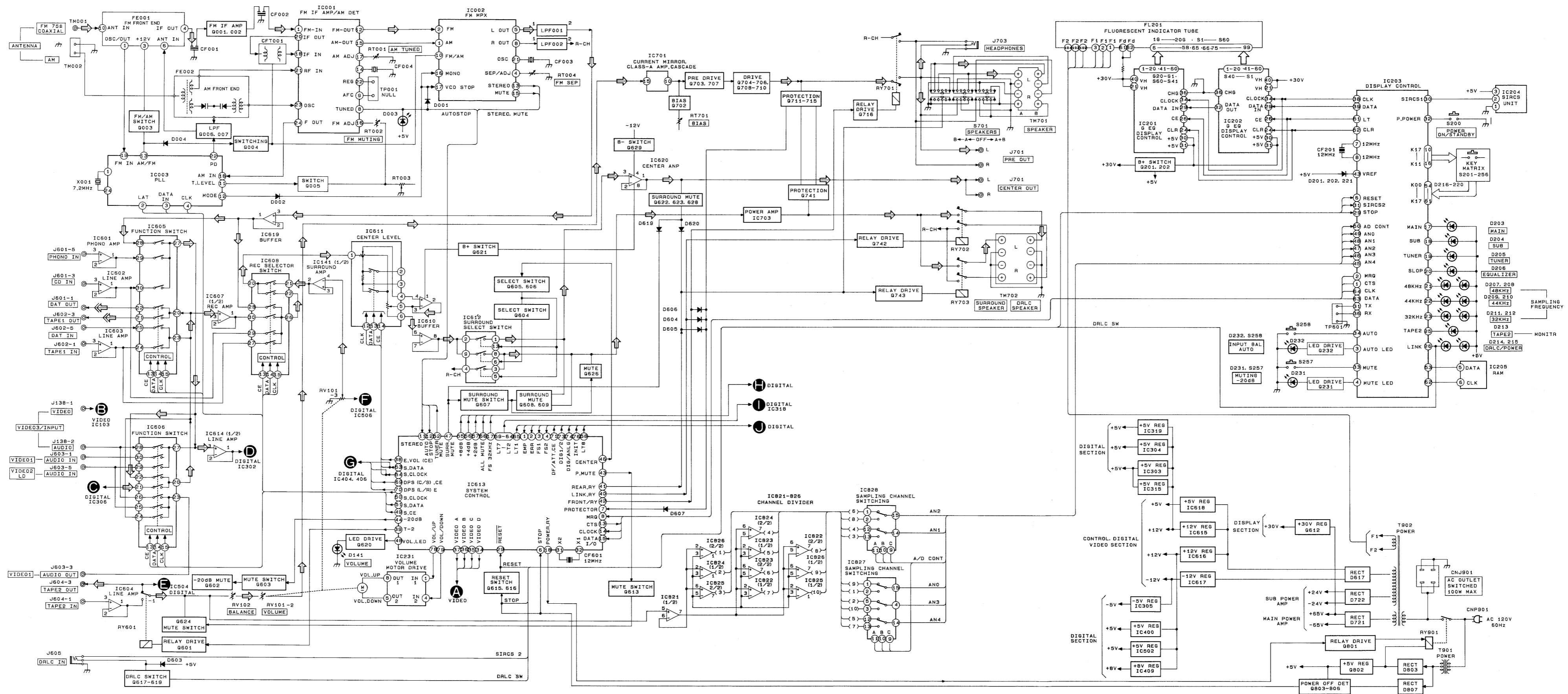
### 3-1. CIRCUIT BOARDS LOCATION



#### [Note on repair]

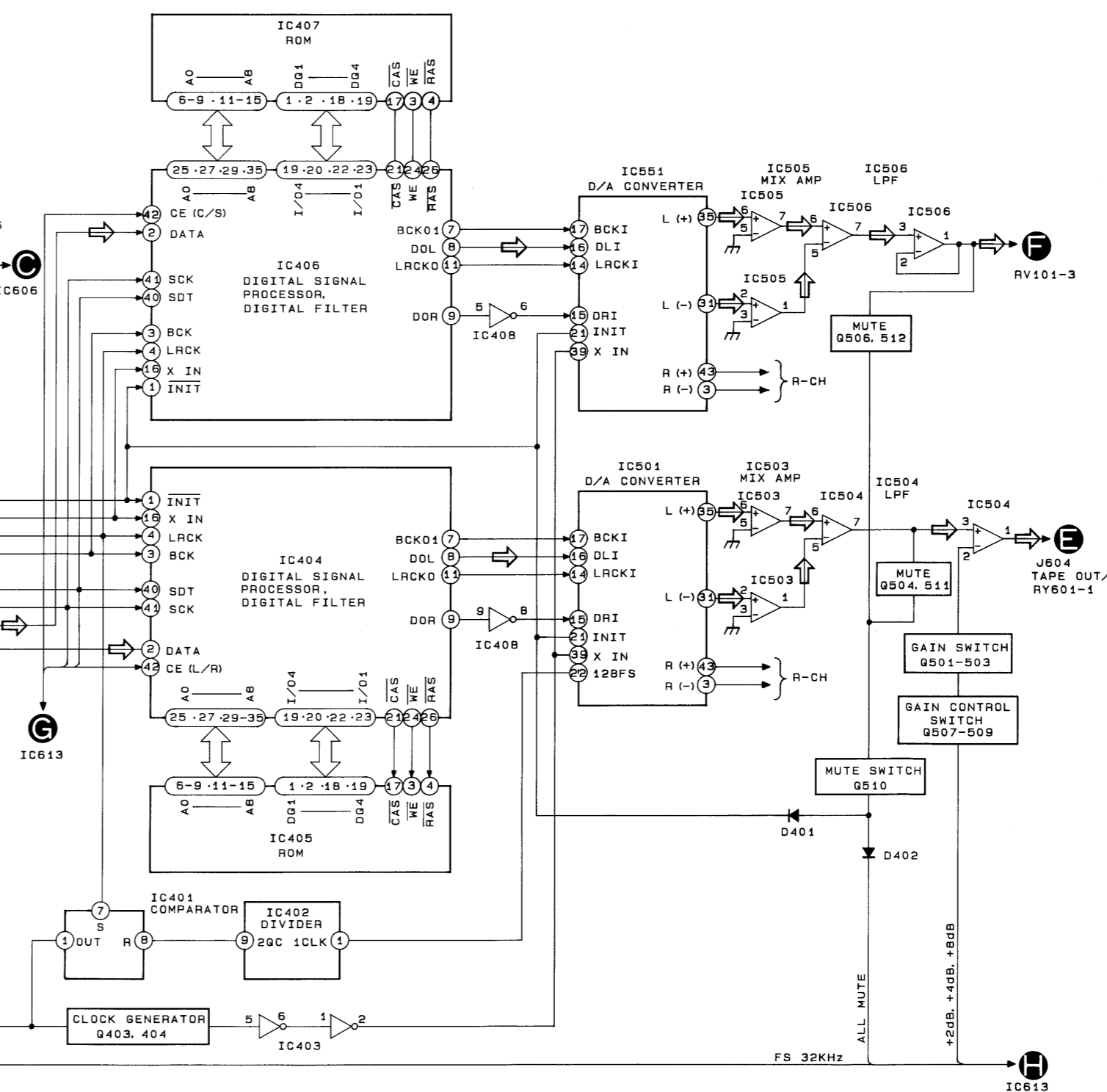
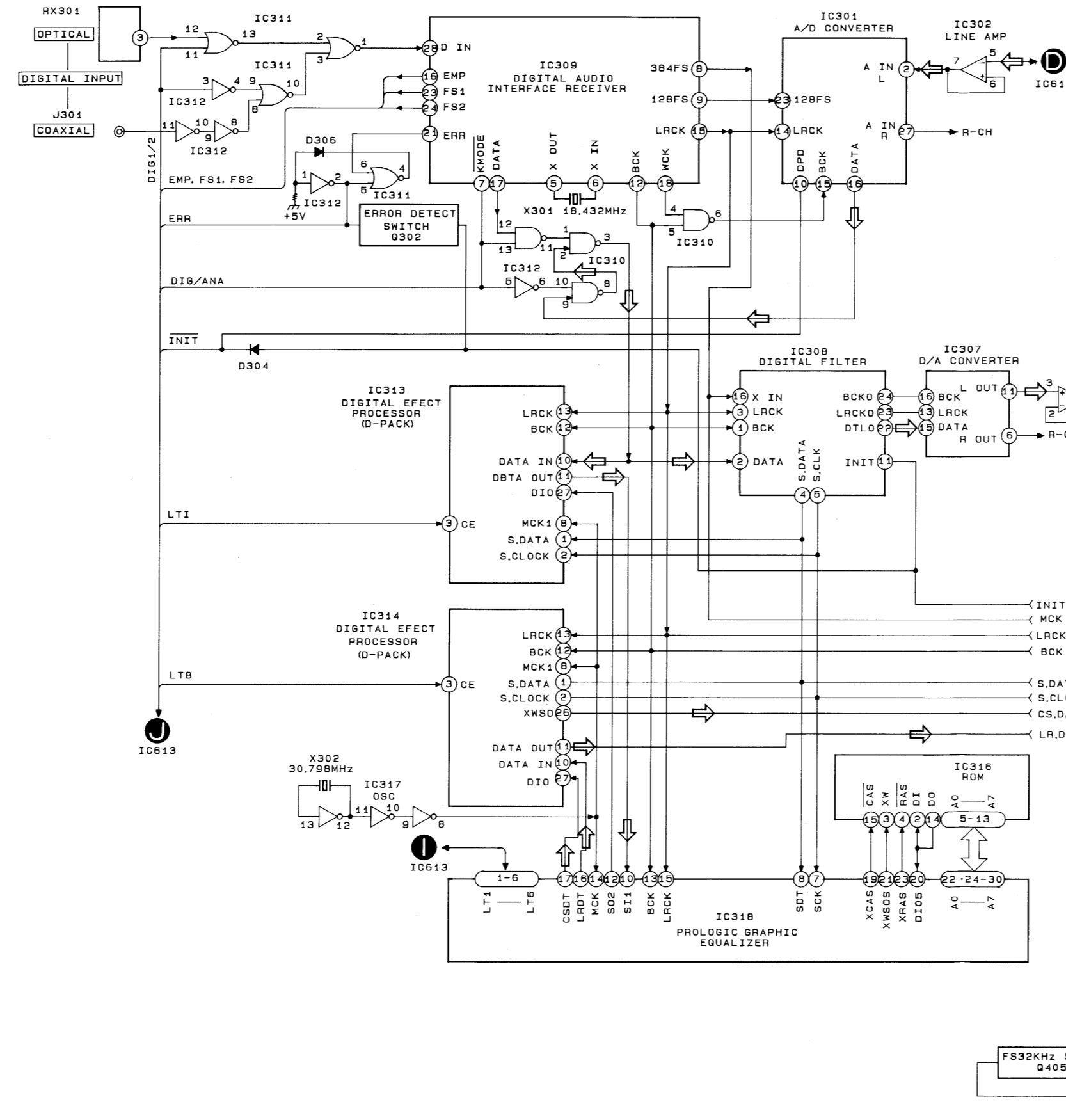
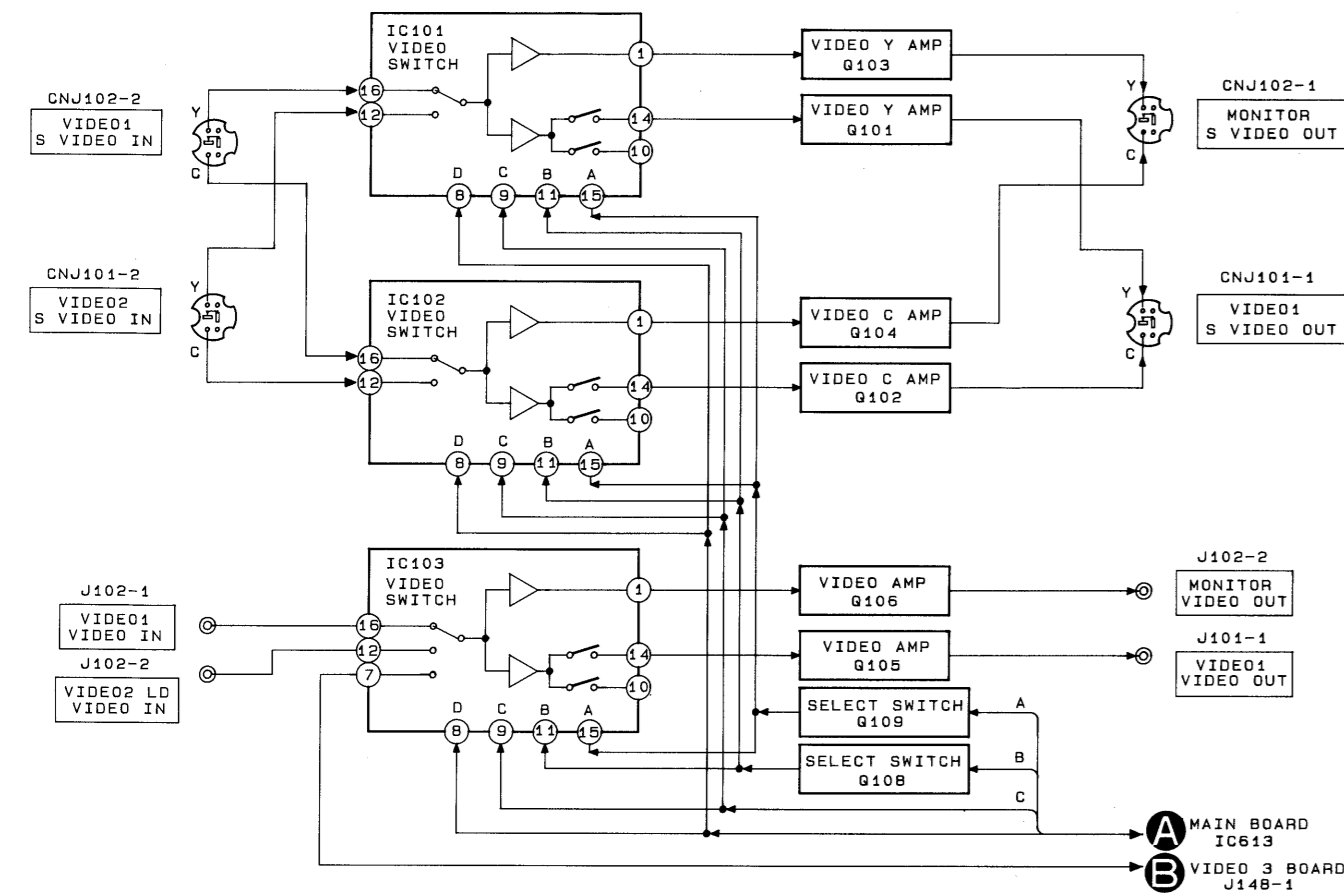
1. When replacing part on the main board (near the foot), remove the power amp block and the back panel.
2. When replacing IC601, remove the tuner board.

3-2. BLOCK DIAGRAM —Tuner/System control/Power Amp Section—

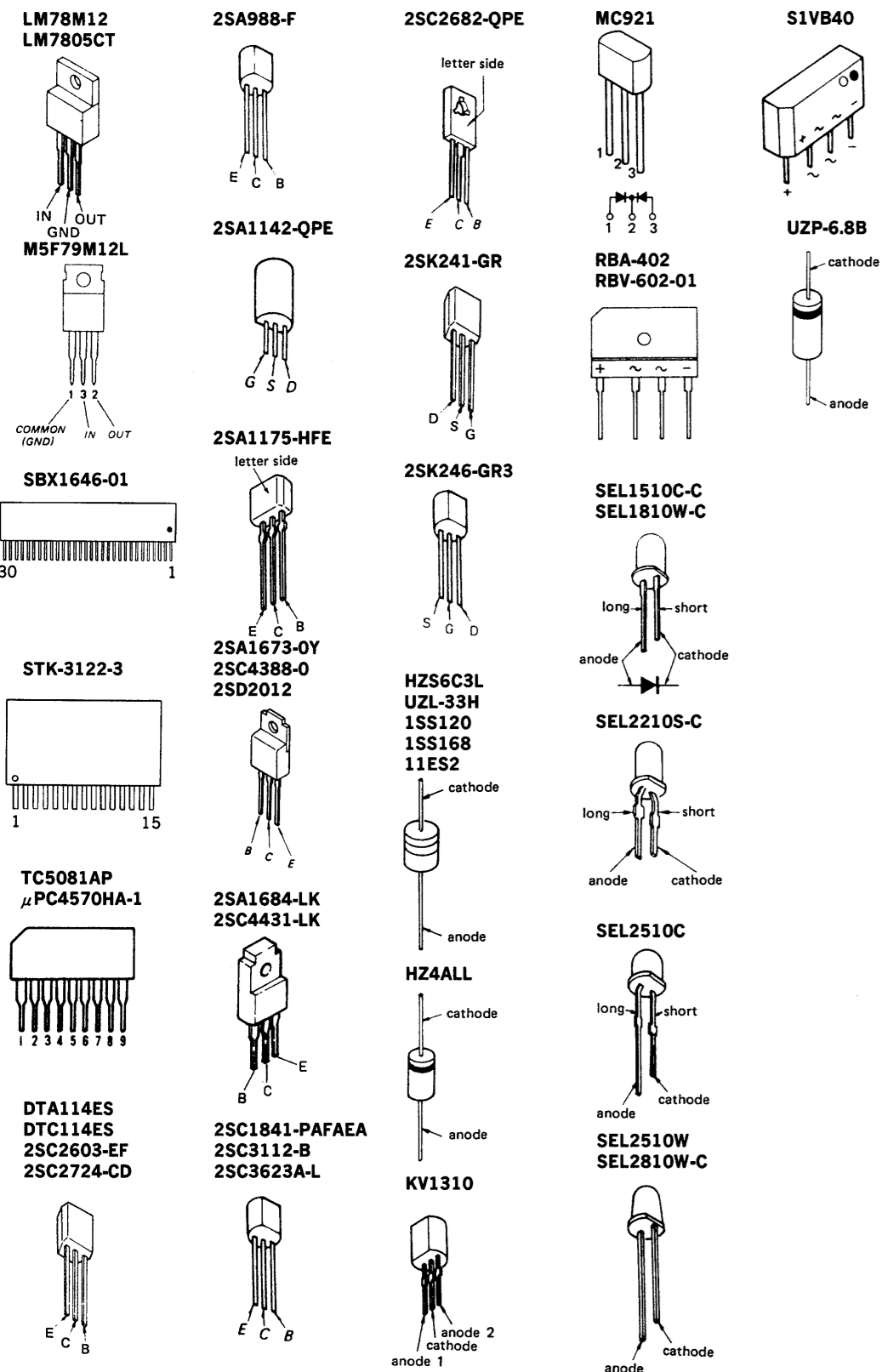




3-3. BLOCK DIAGRAM —Digital Section—



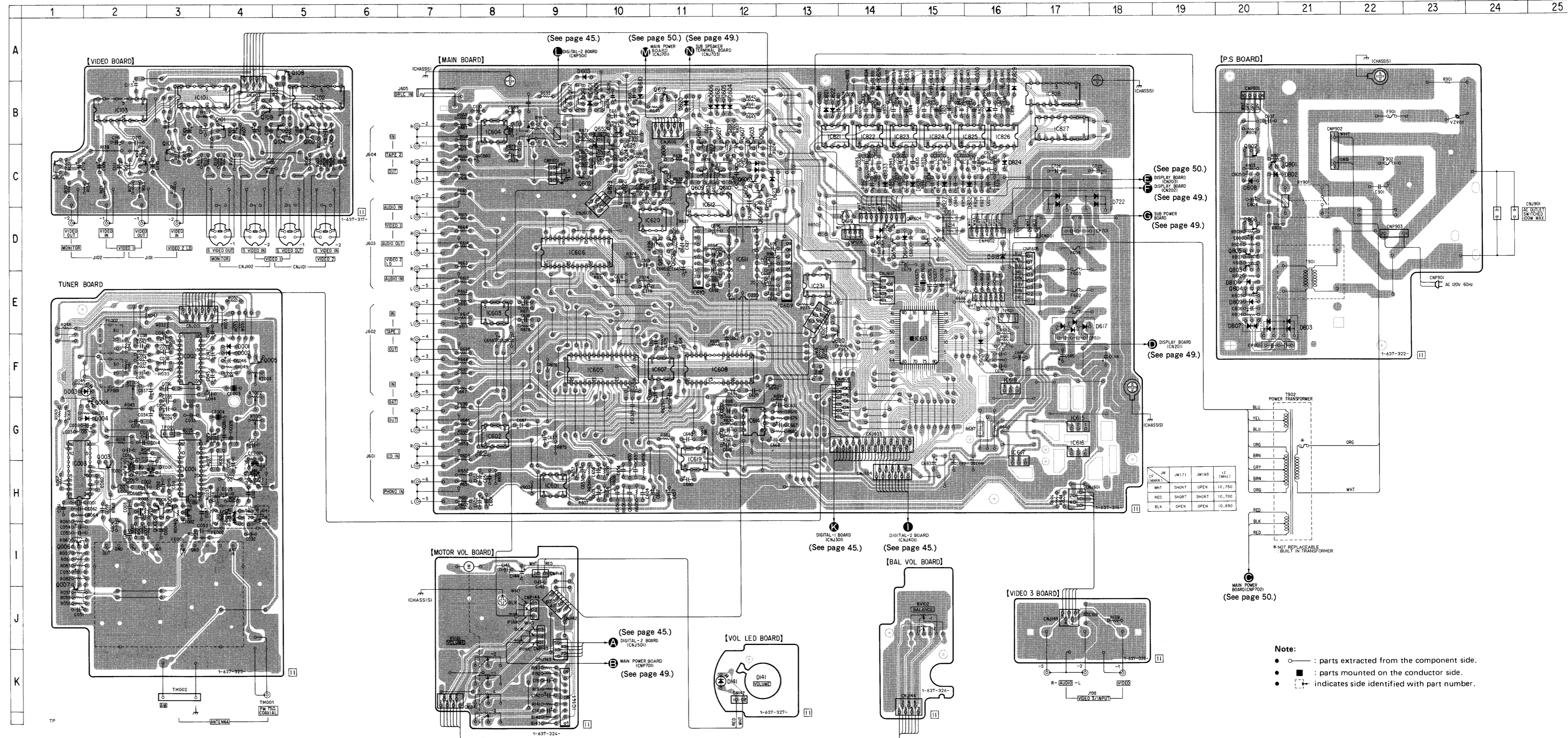
3-4. SEMICONDUCTOR LEAD LAYOUTS



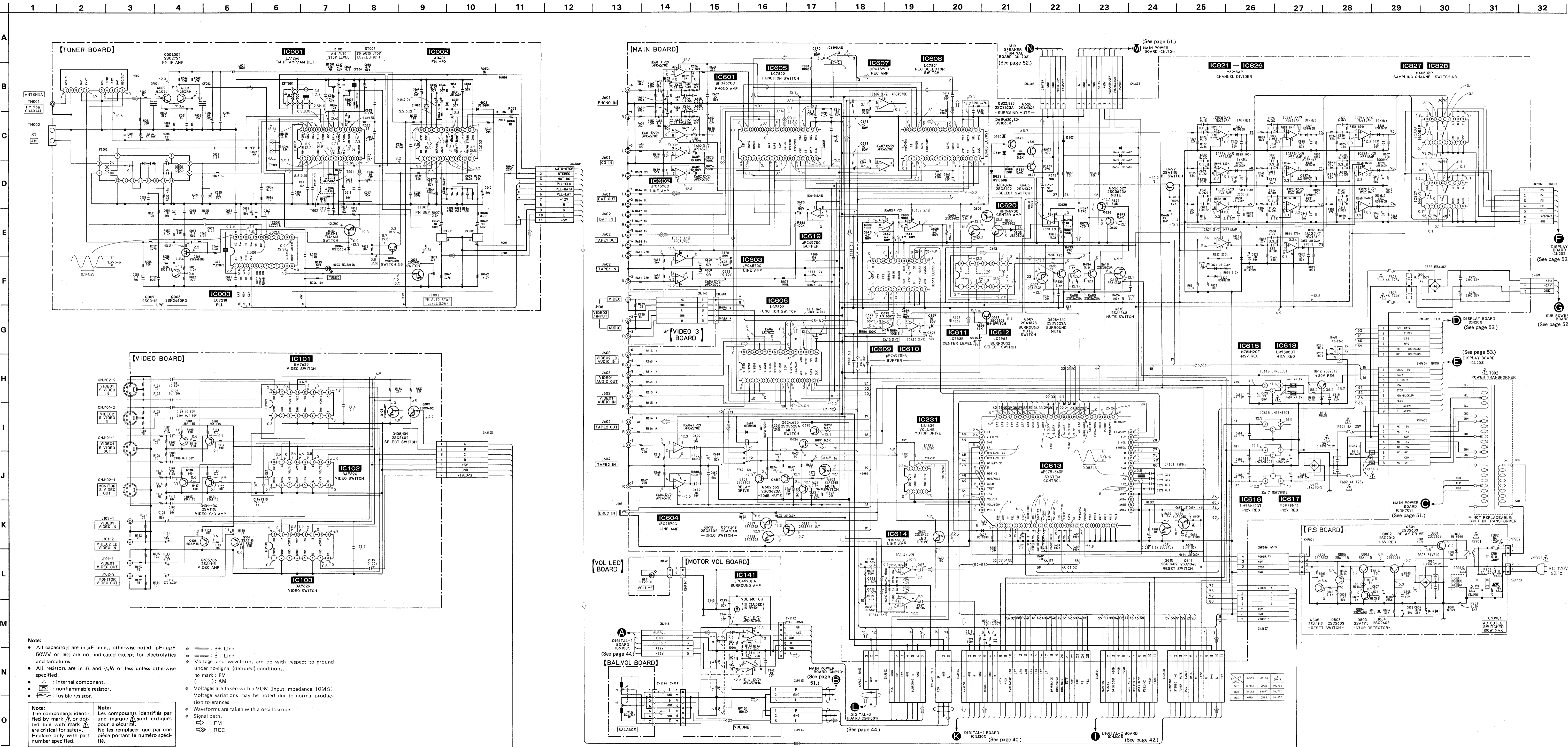
• Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D001     | F-4      | IC615    | G-17     |
| D002     | F-4      | IC616    | G-17     |
| D003     | F-1      | IC617    | H-16     |
| D004     | G-2      | IC618    | F-16     |
| D141     | K-12     | IC619    | H-11     |
| D601     | B-10     | IC620    | D-11     |
| D603     | A-9      | IC821    | B-13     |
| D604     | B-12     | IC822    | B-14     |
| D605     | B-12     | IC823    | B-14     |
| D606     | B-11     | IC824    | B-15     |
| D607     | F-16     | IC825    | B-16     |
| D610     | B-10     | IC826    | B-16     |
| D614     | D-14     | IC827    | B-17     |
| D615     | D-14     | IC828    | B-17     |
| D616     | D-15     |          |          |
| D617     | E-17     | Q001     | H-3      |
| D618     | D-16     | Q002     | H-3      |
| D619     | C-12     | Q003     | H-2      |
| D620     | B-11     | Q004     | G-2      |
| D621     | B-12     | Q005     | F-4      |
| D622     | C-12     | Q006     | I-1      |
| D623     | C-12     | Q007     | J-1      |
| D722     | C-17     | Q101     | B-4      |
| D802     | C-20     | Q102     | B-5      |
| D803     | E-20     | Q103     | C-3      |
| D807     | E-20     | Q104     | B-5      |
| D808     | C-20     | Q105     | C-2      |
| D809     | E-20     | Q106     | C-1      |
| D810     | E-20     | Q108     | A-5      |
| D821     | B-13     | Q109     | B-4      |
| D822     | B-13     | Q601     | B-10     |
| D823     | B-16     | Q602     | C-9      |
| D824     | C-16     | Q603     | C-12     |
| D825     | B-15     | Q604     | C-12     |
| D826     | B-14     | Q605     | C-12     |
| D827     | C-15     | Q606     | C-12     |
| D828     | C-15     | Q607     | C-12     |
| D829     | B-16     | Q608     | C-11     |
| D830     | B-16     | Q609     | C-11     |
| D831     | B-15     | Q610     | C-12     |
| D832     | C-16     | Q612     | B-11     |
| D833     | C-14     | Q613     | C-12     |
|          |          | Q615     | D-15     |
| IC001    | H-3      | Q616     | D-14     |
| IC002    | F-3      | Q617     | B-9      |
| IC003    | H-1      | Q618     | B-9      |
| IC101    | B-3      | Q619     | D-14     |
| IC102    | B-5      | Q620     | E-13     |
| IC103    | B-2      | Q621     | D-11     |
| IC141    | K-9      | Q624     | C-10     |
| IC231    | E-13     | Q625     | C-10     |
| IC601    | H-9      | Q626     | C-11     |
| IC602    | G-8      | Q627     | C-12     |
| IC603    | E-8      | Q628     | B-10     |
| IC604    | B-8      | Q629     | D-11     |
| IC605    | F-10     | Q652     | B-10     |
| IC606    | D-9      | Q801     | C-20     |
| IC607    | F-11     | Q802     | C-20     |
| IC608    | F-12     | Q803     | E-20     |
| IC609    | E-13     | Q804     | E-20     |
| IC610    | D-11     | Q805     | D-20     |
| IC611    | D-12     | Q806     | D-20     |
| IC612    | C-11     | Q822     | C-10     |
| IC613    | F-15     | Q823     | C-10     |
| IC614    | G-12     | Q824     | C-10     |

3-5. PRINTED WIRING BOARDS —Tuner/System Control/Power Section—



Note:  
 • ○ : parts extracted from the component side.  
 • ■ : parts mounted on the conductor side.  
 • ⊕ : indicates side identified with part number.



**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- $\Delta$ : internal component.
- $\square$ : nonflammable resistor.
- $\square$ : fusible resistor.

**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

**Note:** Les composants identifiés par une marque  $\Delta$  ou dotés d'une ligne en pointillés avec une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

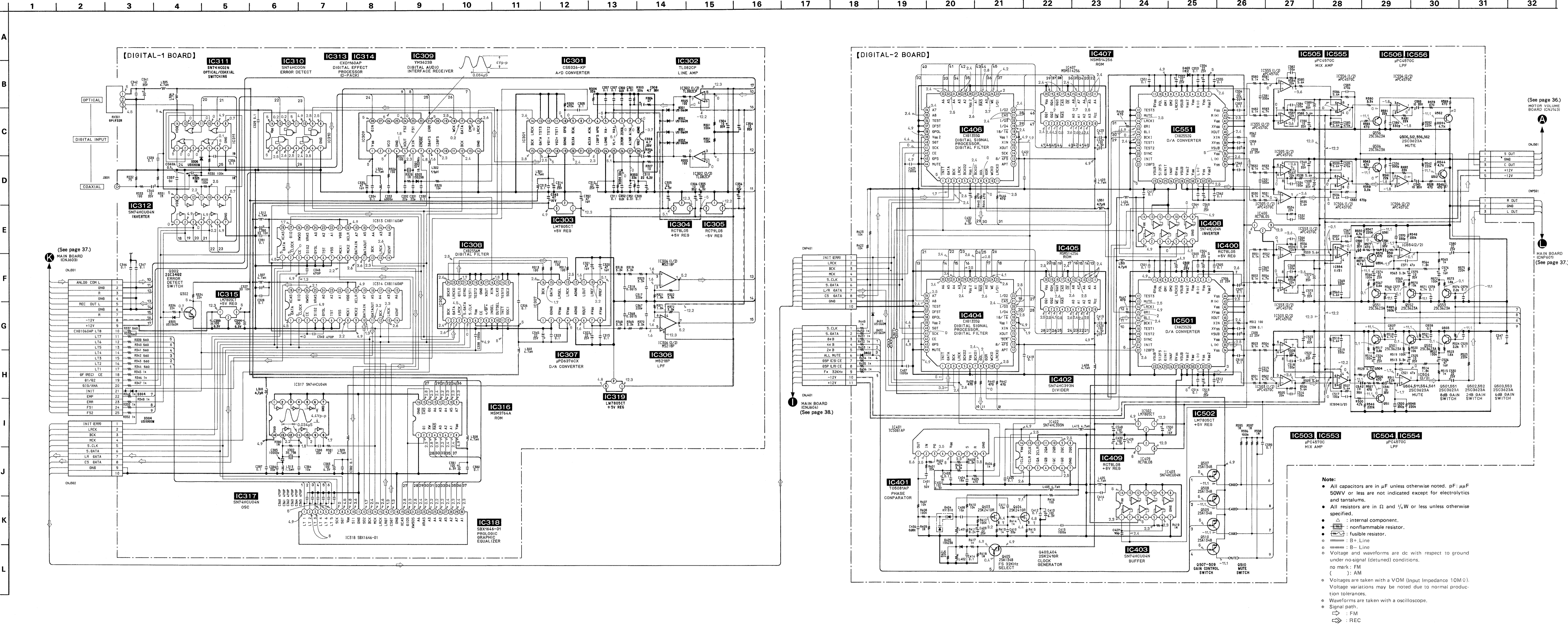
**Note:** Les composants identifiés par une marque  $\Delta$  ou dotés d'une ligne en pointillés avec une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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(See page 37.)

(See page 38.)

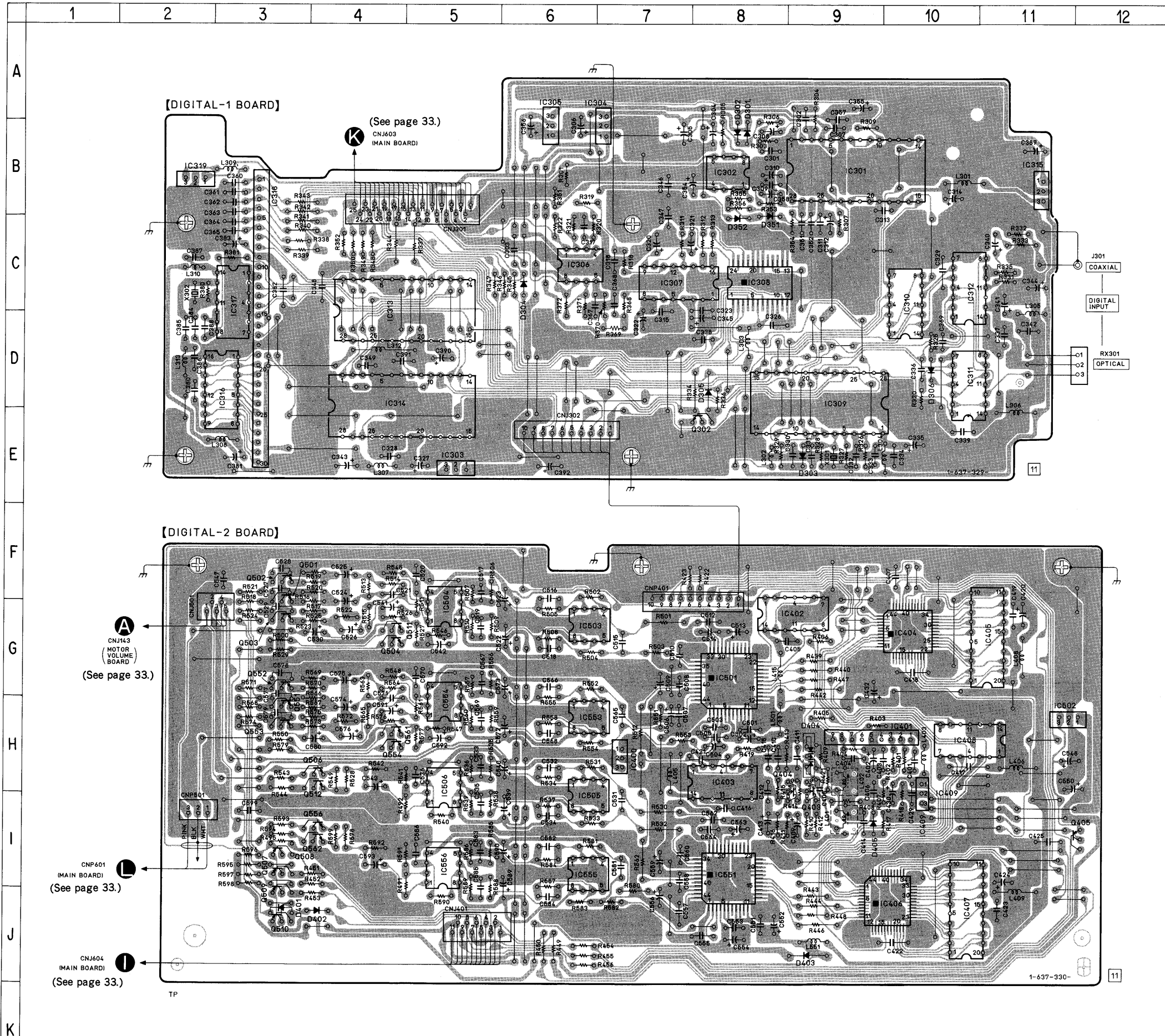
(See page 36.)

(See page 37.)

**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} = \mu\text{F} \times 10^{-6}$ . 500V or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- $\triangle$ : internal component.
- $\square$ : nonflammable resistor.
- $\square$ : fusible resistor.
- $\ominus$ : B+ Line
- $\ominus$ : B- Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark: FM ( ): AM
- Voltages are taken with a VOM (Input Impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
- Signal path.  $\rightarrow$ : FM  $\Rightarrow$ : REC

3-8. PRINTED WIRING BOARDS —Digital Section—



● Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D301     | B-8      | Q504     | G-4      |
| D302     | B-8      | Q506     | H-4      |
| D303     | E-9      | Q507     | I-3      |
| D304     | C-6      | Q508     | I-3      |
| D305     | D-8      | Q509     | J-3      |
| D306     | D-10     | Q510     | J-3      |
| D351     | B-8      | Q511     | G-4      |
| D352     | C-8      | Q512     | H-4      |
| D401     | J-3      | Q551     | H-3      |
| D402     | J-4      | Q552     | G-3      |
| D403     | J-9      | Q553     | H-3      |
| D404     | H-9      | Q554     | H-4      |
| D405     | I-9      | Q556     | I-4      |
|          |          | Q561     | H-4      |
|          |          | Q562     | I-4      |
| IC301    | B-9      |          |          |
| IC302    | B-8      |          |          |
| IC303    | E-5      |          |          |
| IC304    | B-7      |          |          |
| IC305    | B-6      |          |          |
| IC306    | C-6      |          |          |
| IC307    | C-7      |          |          |
| IC308    | C-8      |          |          |
| IC309    | D-9      |          |          |
| IC310    | C-10     |          |          |
| IC311    | D-10     |          |          |
| IC312    | C-10     |          |          |
| IC313    | C-4      |          |          |
| IC314    | D-4      |          |          |
| IC315    | B-11     |          |          |
| IC316    | D-3      |          |          |
| IC317    | C-3      |          |          |
| IC318    | C-3      |          |          |
| IC319    | B-2      |          |          |
| IC400    | H-7      |          |          |
| IC401    | H-9      |          |          |
| IC402    | G-9      |          |          |
| IC403    | H-8      |          |          |
| IC404    | G-10     |          |          |
| IC405    | G-11     |          |          |
| IC406    | J-10     |          |          |
| IC407    | J-10     |          |          |
| IC408    | H-10     |          |          |
| IC409    | H-10     |          |          |
| IC501    | G-8      |          |          |
| IC502    | H-11     |          |          |
| IC503    | G-6      |          |          |
| IC504    | G-5      |          |          |
| IC505    | I-6      |          |          |
| IC506    | H-5      |          |          |
| IC551    | I-8      |          |          |
| IC553    | H-6      |          |          |
| IC554    | H-5      |          |          |
| IC555    | I-6      |          |          |
| IC556    | I-5      |          |          |
| Q302     | E-8      |          |          |
| Q403     | H-9      |          |          |
| Q404     | H-9      |          |          |
| Q405     | I-12     |          |          |
| Q501     | F-3      |          |          |
| Q502     | F-3      |          |          |
| Q503     | G-3      |          |          |

Note:

- — : parts extracted from the component side.
- ■ : parts mounted on the conductor side.

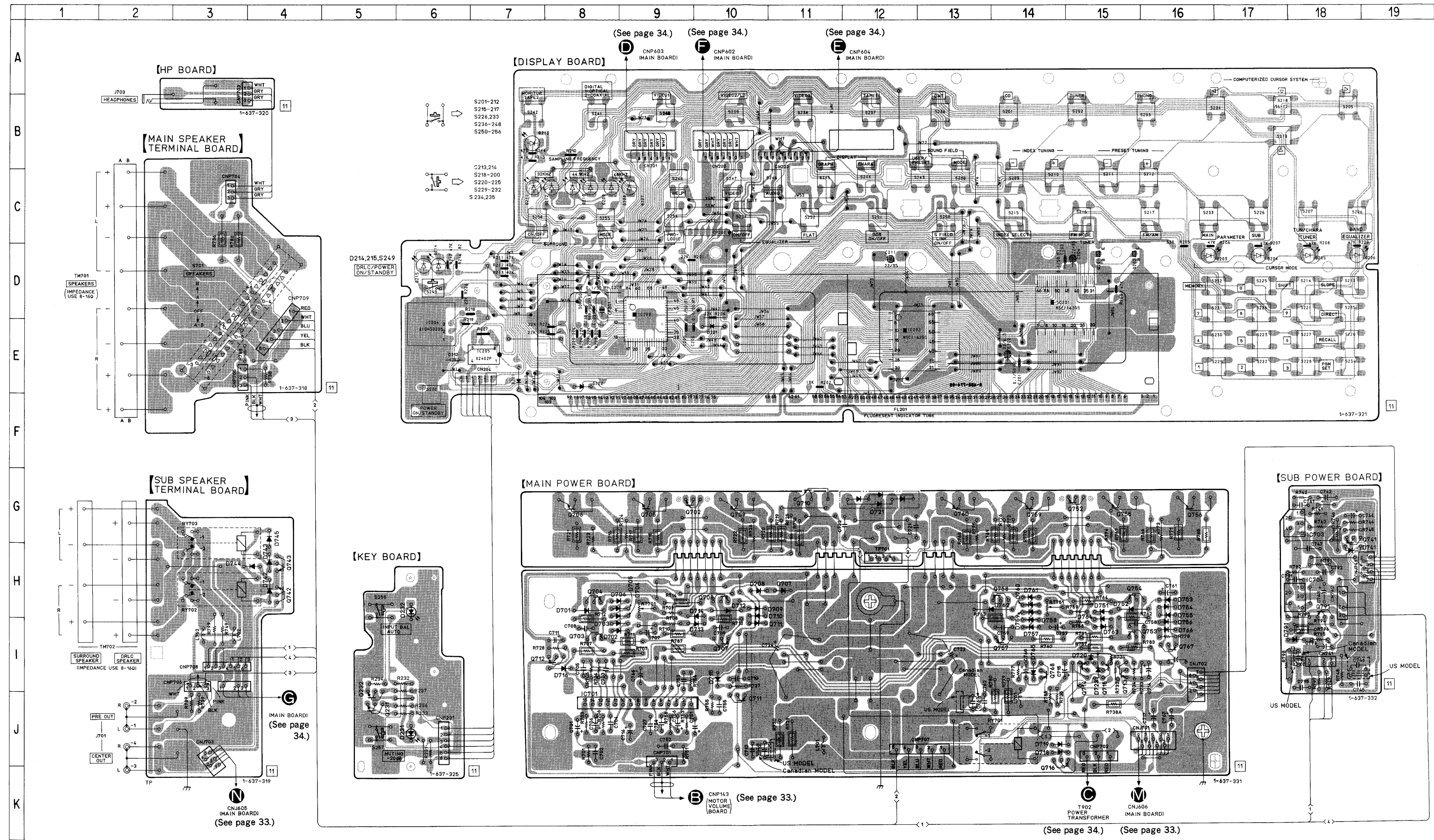


3-9. PRINTED WIRING BOARDS —Power Amp/Display Section—

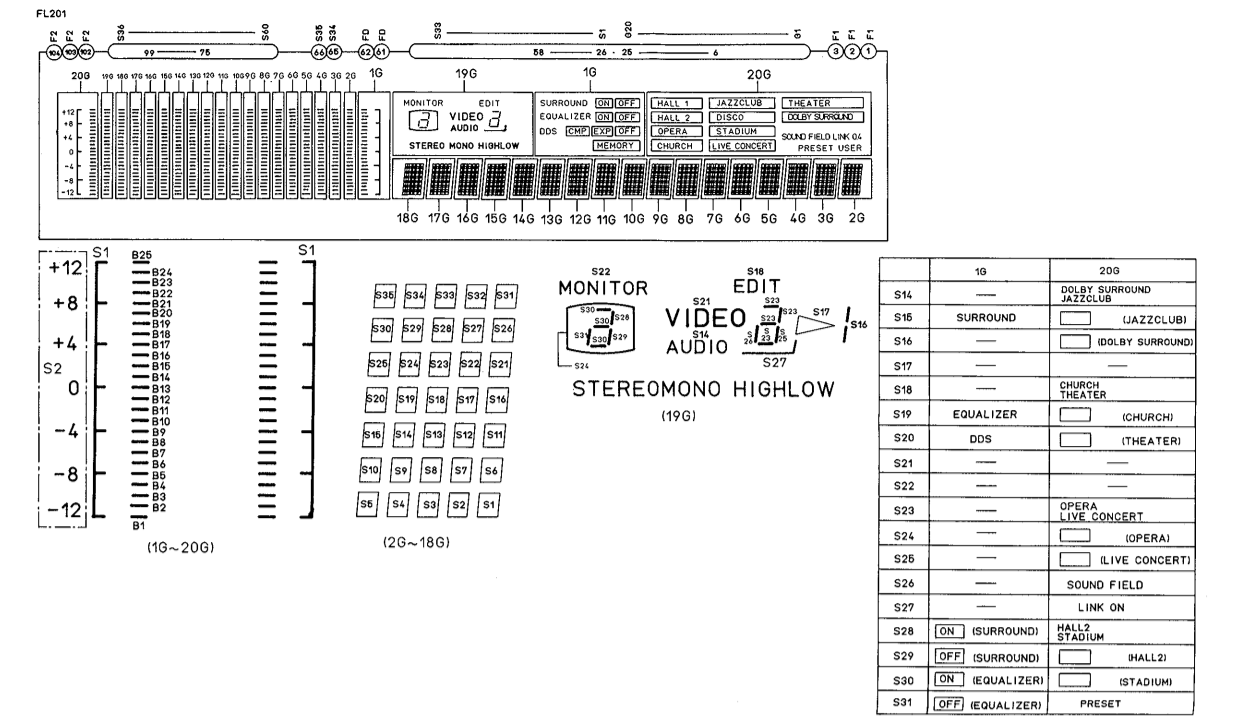
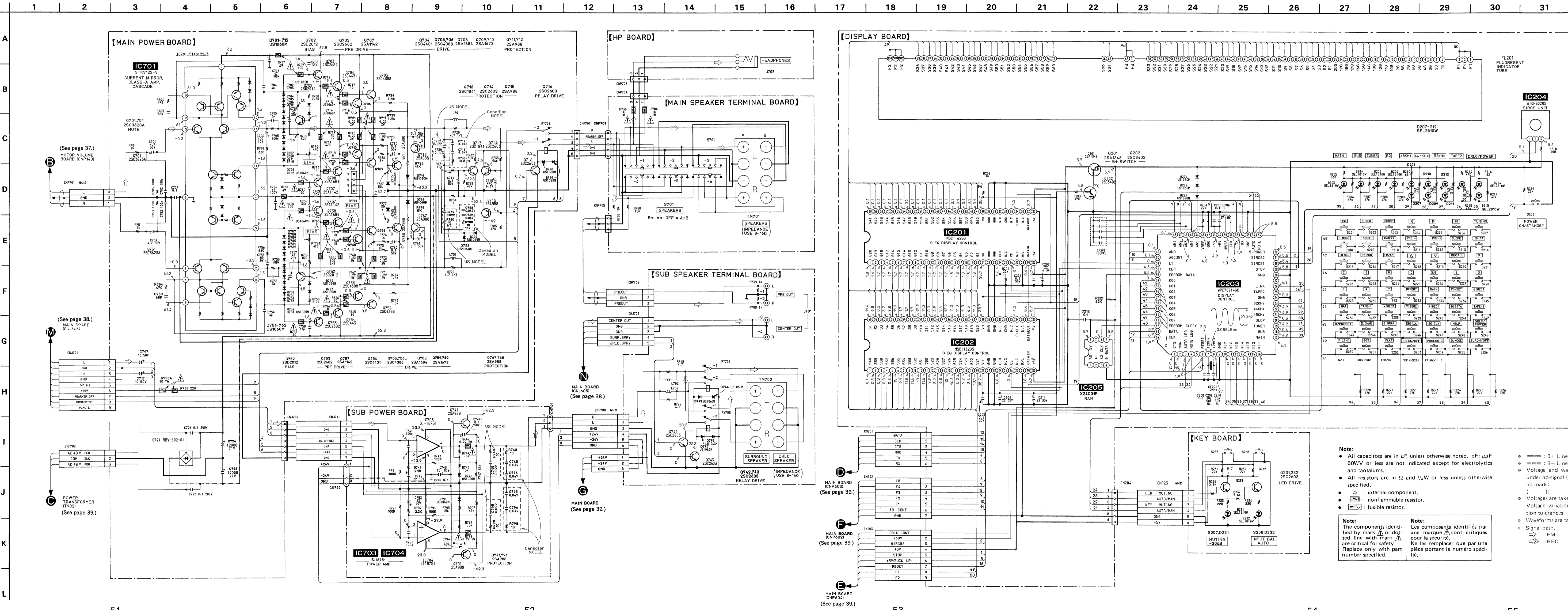
● Semiconductor Location

| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| D201     | E-7      | IC201    | D-14     |
| D202     | E-8      | IC202    | E-12     |
| D203     | D-16     | IC203    | D-9      |
| D204     | D-17     | IC204    | E-6      |
| D205     | D-18     | IC205    | E-6      |
| D206     | D-18     | IC701    | J-8      |
| D207     | C-8      | IC703    | G-17     |
| D208     | C-8      | IC704    | H-17     |
| D209     | C-8      |          |          |
| D210     | C-8      | Q201     | D-15     |
| D211     | C-7      | Q202     | D-15     |
| D212     | C-7      | Q231     | J-5      |
| D213     | B-7      | Q232     | J-5      |
| D214     | D-6      | Q702     | G-9      |
| D215     | D-6      | Q703     | G-9      |
| D221     | E-10     | Q704     | H-8      |
| D231     | J-5      | Q705     | G-9      |
| D232     | H-5      | Q706     | G-8      |
| D701     | H-8      | Q707     | I-10     |
| D702     | I-8      | Q708     | H-10     |
| D703     | I-8      | Q709     | G-10     |
| D704     | H-8      | Q710     | G-11     |
| D705     | H-8      | Q711     | J-10     |
| D706     | H-8      | Q712     | I-7      |
| D707     | H-10     | Q713     | I-15     |
| D708     | H-10     | Q714     | I-15     |
| D709     | H-10     | Q715     | I-15     |
| D710     | H-10     | Q716     | J-14     |
| D711     | I-10     | Q741     | G-18     |
| D712     | H-10     | Q742     | H-4      |
| D713     | I-9      | Q743     | H-4      |
| D714     | H-9      | Q752     | G-14     |
| D715     | I-10     | Q753     | I-15     |
| D716     | I-8      | Q754     | H-15     |
| D718     | J-14     | Q755     | G-15     |
| D719     | J-14     | Q756     | G-16     |
| D720     | I-15     | Q757     | I-13     |
| D721     | G-12     | Q758     | H-13     |
| D723     | I-15     | Q759     | G-14     |
| D741     | H-18     | Q760     | G-13     |
| D742     | H-4      | Q767     | I-16     |
| D743     | H-4      | Q768     | I-14     |
| D744     | H-3      | Q791     | H-18     |
| D745     | G-4      |          |          |
| D751     | H-15     |          |          |
| D752     | H-15     |          |          |
| D753     | H-16     |          |          |
| D754     | H-16     |          |          |
| D755     | H-16     |          |          |
| D756     | I-16     |          |          |
| D757     | I-14     |          |          |
| D758     | I-14     |          |          |
| D759     | H-14     |          |          |
| D760     | H-14     |          |          |
| D761     | H-14     |          |          |
| D762     | H-13     |          |          |
| D763     | I-15     |          |          |
| D764     | I-15     |          |          |
| D765     | I-14     |          |          |
| D766     | I-16     |          |          |
| D791     | I-17     |          |          |

Note:  
 ○ — : parts extracted from the component side.  
 ● ■ : parts mounted on the conductor side.

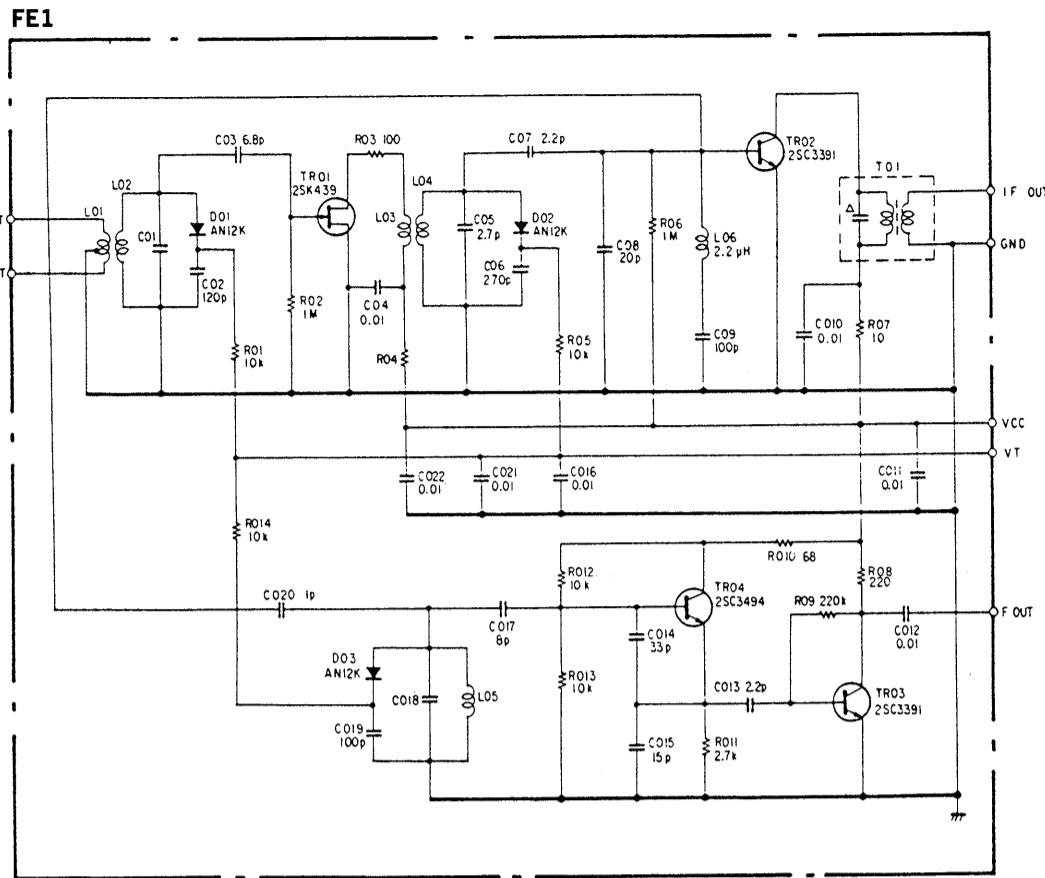


3-10. SCHEMATIC DIAGRAMS —Power Amp/Display Section— Refer to page 56 for IC Block Diagrams.

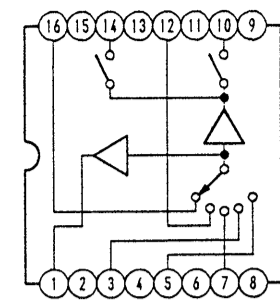




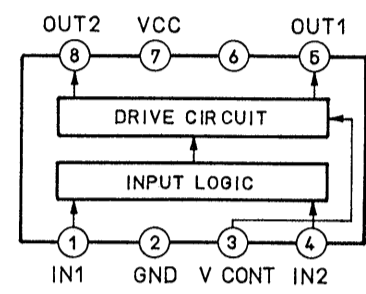
• FE1 (Front End) Schematic diagrams



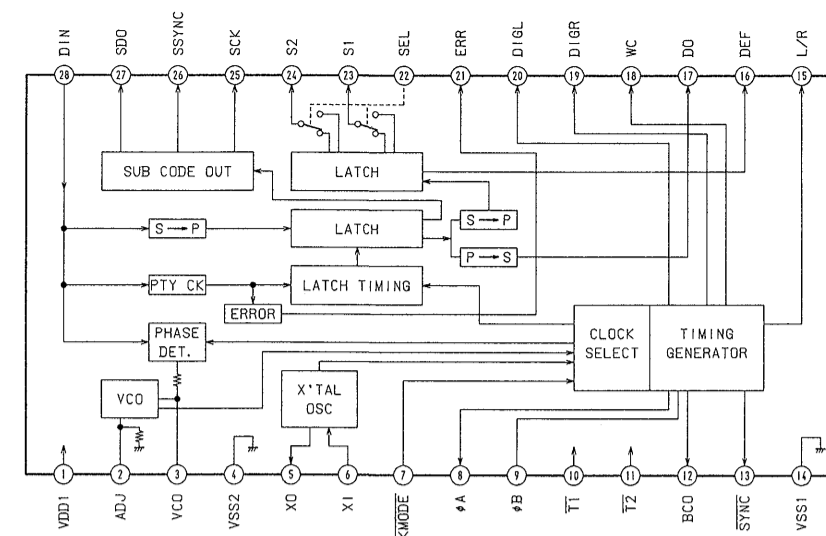
**IC101, 103 BA7625**



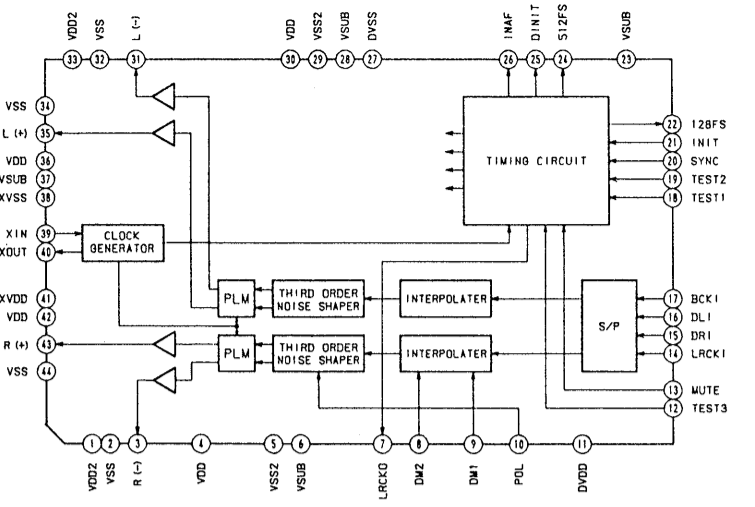
**IC231 LB1639**



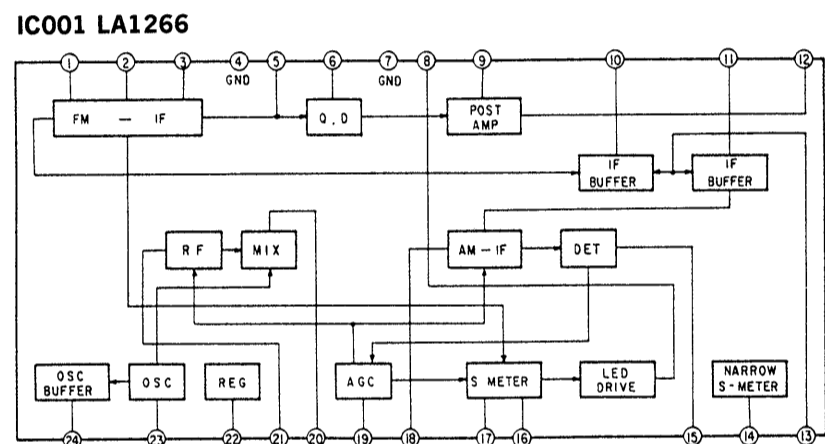
**IC309 YM3623B**



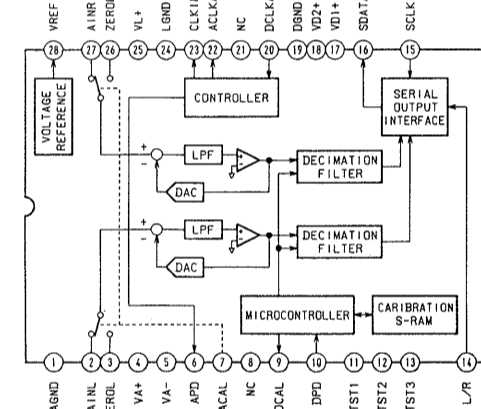
**IC501, 551 CXD2552Q**



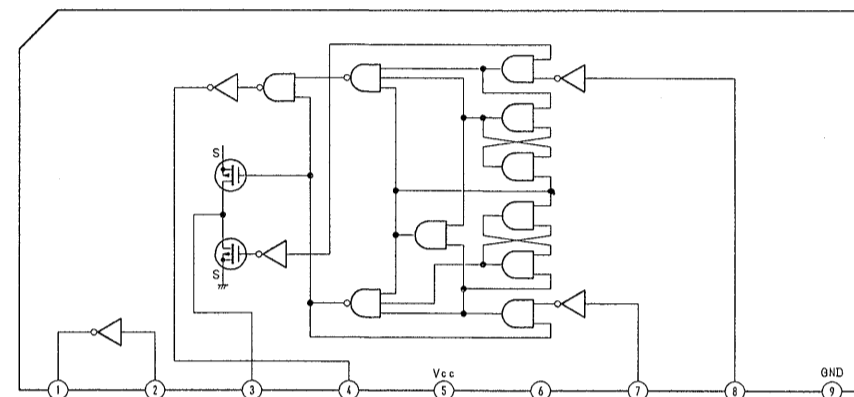
• IC Block Diagrams



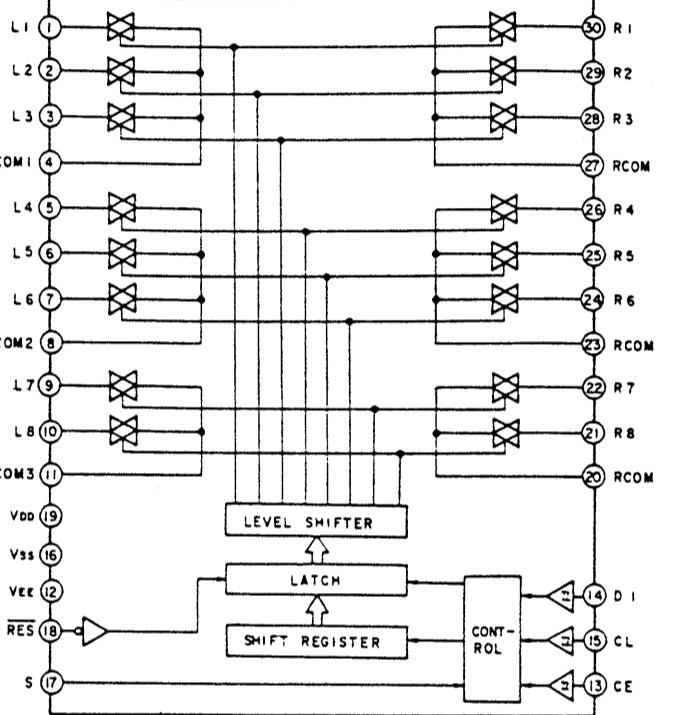
**IC301 CS5326-KP**



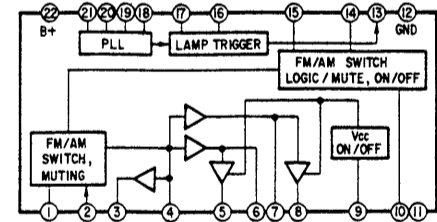
**IC401 TC5081AP**



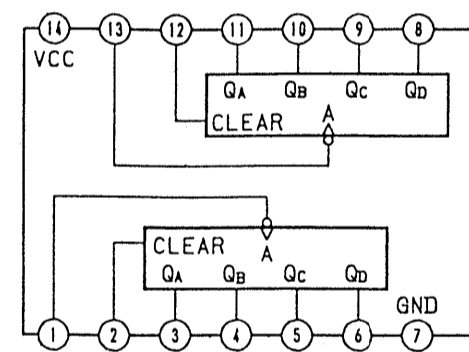
**IC605, 606 LC7822**



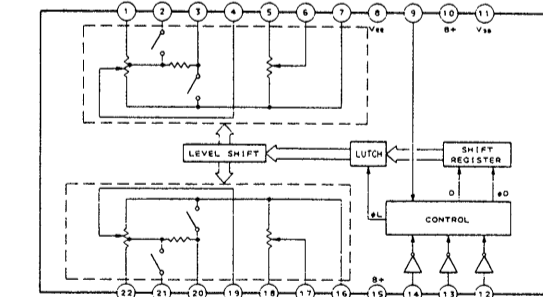
**IC002 LA3401**



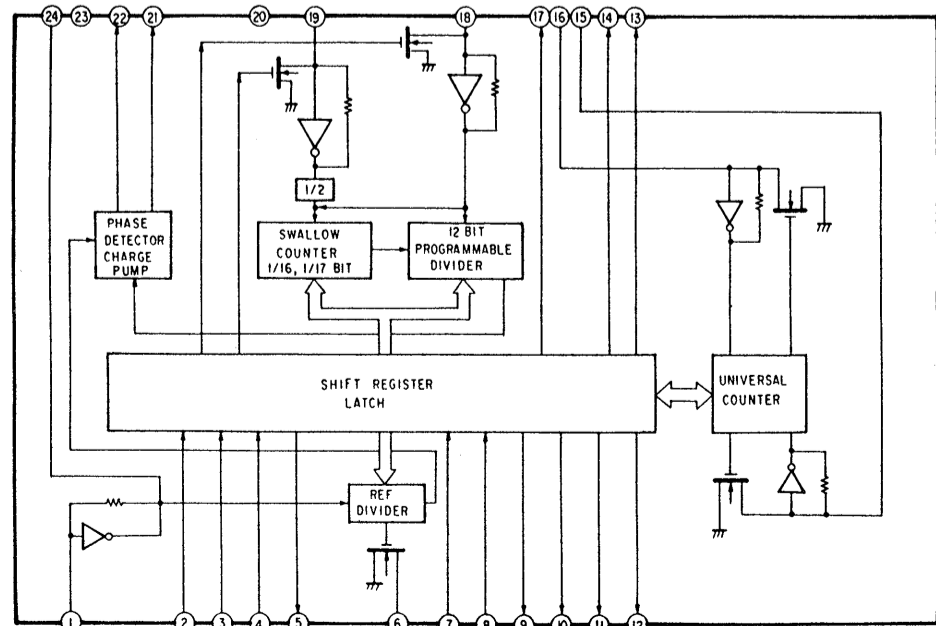
**IC402 TC74HC393N**



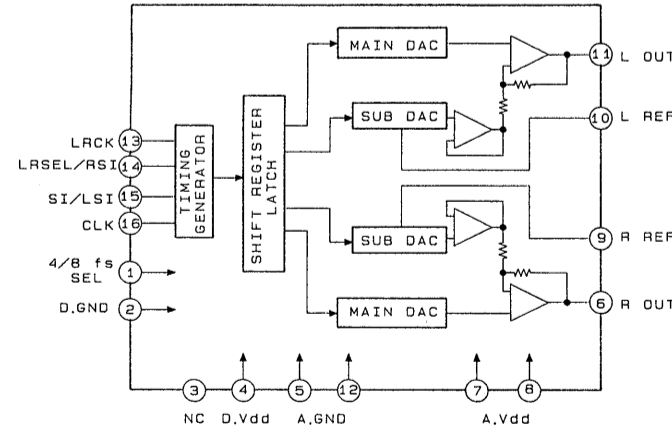
**IC611 LC7535**



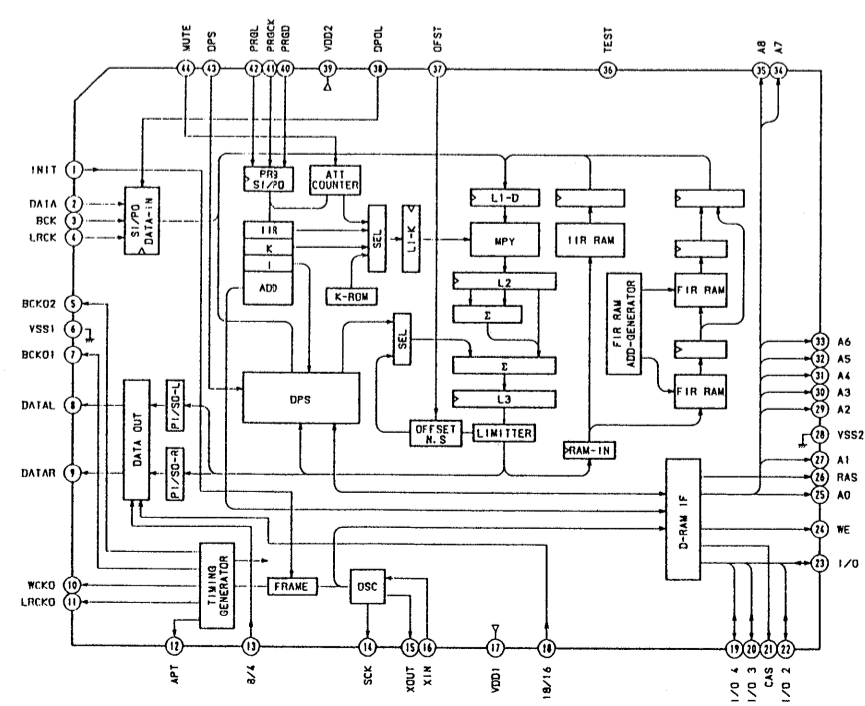
**IC003 LC7218**



**IC307 μPD6376CX**



**IC404,406 CXD1355Q**



### IC313, 314 Digital • Audio Signal Processing LSIs CXD1160 AP

These are digital • audio signal processing LSIs which incorporate instruction RAM, coefficient RAM, data RAM, multiplier and level shifter and are equipped with serial I/O, delay I/O (max. capability : stereo 1024 sampling • delay) and microcomputer interface for peripheral devices.

| Pin No. | Symbol | I/O | Description                                                                                                                                                                                                                                                                            |
|---------|--------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | SDT    | I   | Serial • data input terminal to receive instructions, coefficients, I/O controls transferred from the microcomputer.                                                                                                                                                                   |
| 2       | SCK    | I   | SDT serial • clock input terminal to fetches in data at a rise.                                                                                                                                                                                                                        |
| 3       | XSLD   | I   | Input terminal for a latch signal from the system microcomputer to latch serial • data inside the IC. LOW active (LCK for DPAC1).                                                                                                                                                      |
| 4       | SIO2   | I   | Input terminal to set the number of serial bit clocks BCK in each channels (ch1 or ch2) data transfer in one sampling section. 32-bit clock mode when fixed at GND, and 24-bit clock mode when fixed at +5V. (32 bits for this set)                                                    |
| 5       | DYSL   | I   | Delay I/O mode selector input terminal. Serial mode when fixed at GND, and similar operation to serial I/O. Delay mode when fixed at +5V, and a delay line equivalent to 2-channels is configured by connecting to external DRAM (64kbits).                                            |
| 6       | TST    | I   | Test pin. Normally, fix at GND.                                                                                                                                                                                                                                                        |
| 7       | VSS    |     | GND terminal.                                                                                                                                                                                                                                                                          |
| 8       | MCK1   | I   | Master clock input 1. The master clock ACK inside the IC is half this frequency. Fix MCK2 at +5V when inputting the master clock from MCK2.                                                                                                                                            |
| 9       | MCK2   | I   | Master clock input 2. The master clock ACK inside the IC is the same frequency as this. Fix MCK1 at +5V or GND when inputting the master clock from MCK 2.                                                                                                                             |
| 10      | SI     | I   | 1-sampling 2-channel serial data input terminal.                                                                                                                                                                                                                                       |
| 11      | SO     | O   | 1-sampling 2-channel serial data output terminal.                                                                                                                                                                                                                                      |
| 12      | BCK    | I   | Serial bit clock input terminal for SI and SO. Serial input data is fetched in at a rise of this BCK and output data is sent out. (64FS)                                                                                                                                               |
| 13      | LRCK   | I   | FS clock input terminal for I/O (1FS)                                                                                                                                                                                                                                                  |
| 14      | XOVF   | O   | Adder/subtractor overflow detection output. "L" at overflow time.                                                                                                                                                                                                                      |
| 15      | A6     | O   | External DRAM address output A6                                                                                                                                                                                                                                                        |
| 16      | A3     | O   | External DRAM address output A3                                                                                                                                                                                                                                                        |
| 17      | A4     | O   | External DRAM address output A4                                                                                                                                                                                                                                                        |
| 18      | A5     | O   | External DRAM address output A5                                                                                                                                                                                                                                                        |
| 19      | A7     | O   | External DRAM address output A7                                                                                                                                                                                                                                                        |
| 20      | XCLR   | I   | Test pin. Normally, fix at +5V.                                                                                                                                                                                                                                                        |
| 21      | VDD    | —   | +5V power supply terminal.                                                                                                                                                                                                                                                             |
| 22      | A1     | O   | External DRAM address output A1                                                                                                                                                                                                                                                        |
| 23      | A2     | O   | External DRAM address output A2                                                                                                                                                                                                                                                        |
| 24      | A0     | O   | External DRAM address output A0                                                                                                                                                                                                                                                        |
| 25      | XRAS   | O   | Low address • strobe output terminal for external DRAM.                                                                                                                                                                                                                                |
| 26      | XWSO   | O   | Serves as a serial data output terminal when DYSL is at "L", and works in accordance with each serial I/O mode. Serves as an external DRAM write enable output terminal when DYSL is at "H".                                                                                           |
| 27      | DIO    | I/O | Serves as a serial data input terminal when DYSL is at "L", and fetches in data ds accordance with each serial I/O mode. When DYSL is at "H", it serves as an external DRAM data input/output terminal to be used as a common line for data input $D_{IN}$ and data output $D_{OUT}$ . |
| 28      | XCAS   | O   | Column address strobe output terminal for external DRAM.                                                                                                                                                                                                                               |

**IC318 SBX1646-01**



| Pin No. | Symbol | I/O | Description                                                                                                                                                                                                                                                                  |
|---------|--------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | LT1    | I   | Latch1                                                                                                                                                                                                                                                                       |
| 2       | LT2    | I   | Latch2                                                                                                                                                                                                                                                                       |
| 3       | LT3    | I   | Latch3                                                                                                                                                                                                                                                                       |
| 4       | LT4    | I   | Latch4                                                                                                                                                                                                                                                                       |
| 5       | LT6    | I   | Latch6                                                                                                                                                                                                                                                                       |
| 6       | LT5    | I   | Latch5                                                                                                                                                                                                                                                                       |
| 7       | SCK    | I   | SDT serial • clock input terminal to fetches in data at a rise.                                                                                                                                                                                                              |
| 8       | SDT    | I   | Serial • data input terminal to receive instructions, coefficients I/O controls transferred from the microcomputer.                                                                                                                                                          |
| 9       | VDD    | —   | +5V power supply terminal.                                                                                                                                                                                                                                                   |
| 10      | SI1    | I   | 1-sampling 2-channel serial data input terminal.                                                                                                                                                                                                                             |
| 11      | GND    | —   | GND terminal.                                                                                                                                                                                                                                                                |
| 12      | SO2    | O   | 1-sampling 2-channel serial data output terminal.                                                                                                                                                                                                                            |
| 13      | BCK    | I   | Serial bit clock input terminal for and so. serial input data is fetched in at rise of this BCK and output data is sent out. (64FS)                                                                                                                                          |
| 14      | MCK    | I   | Master clock input1. The master clock ACK inside the IC is half this frequency. Fix MCK2 at +5V when inputting the master clock from MCK2.                                                                                                                                   |
| 15      | LRCK   | I   | FS clock input terminal for I/O (1FS)                                                                                                                                                                                                                                        |
| 16      | LRDT   | O   | Front L, Rch data out                                                                                                                                                                                                                                                        |
| 17      | CSDT   | O   | Center surround data out                                                                                                                                                                                                                                                     |
| 18      | GND    | —   | GND terminal                                                                                                                                                                                                                                                                 |
| 19      | XCAS   | O   | Column address Strobe output terminal for external DRAM.                                                                                                                                                                                                                     |
| 20      | DI05   | I/O | Serves as a serial data input terminal when DYSL is at “L” , and fetches in data ds accordance with each serial I/O mode. When DYSL is at “H”, it serves as an external DRAM data input/output terminal to be used as a Common line for data input DIN and data output Dout. |
| 21      | XWS05  | O   | Serves as a serial data output terminal when DYSL is at “L”, and works in accordance with each serial I/O mode. Serves as an external DRAM write enable output terminal when DYSL is at “H”.                                                                                 |
| 22      | A6     | O   | External DRAM address output A6                                                                                                                                                                                                                                              |
| 23      | XRAS   | O   | Low address • strobe output terminal for external DRAM.                                                                                                                                                                                                                      |
| 24      | A3     | O   | External DRAM address output A3                                                                                                                                                                                                                                              |
| 25      | A4     | O   | External DRAM address output A4                                                                                                                                                                                                                                              |
| 26      | A0     | O   | External DRAM address output A0                                                                                                                                                                                                                                              |
| 27      | A5     | O   | External DRAM address output A5                                                                                                                                                                                                                                              |
| 28      | A2     | O   | External DRAM address output A2                                                                                                                                                                                                                                              |
| 29      | A7     | O   | External DRAM address output A7                                                                                                                                                                                                                                              |
| 30      | A1     | O   | External DRAM address output A1                                                                                                                                                                                                                                              |


## SECTION 4 EXPLODED VIEWS

**NOTE:**

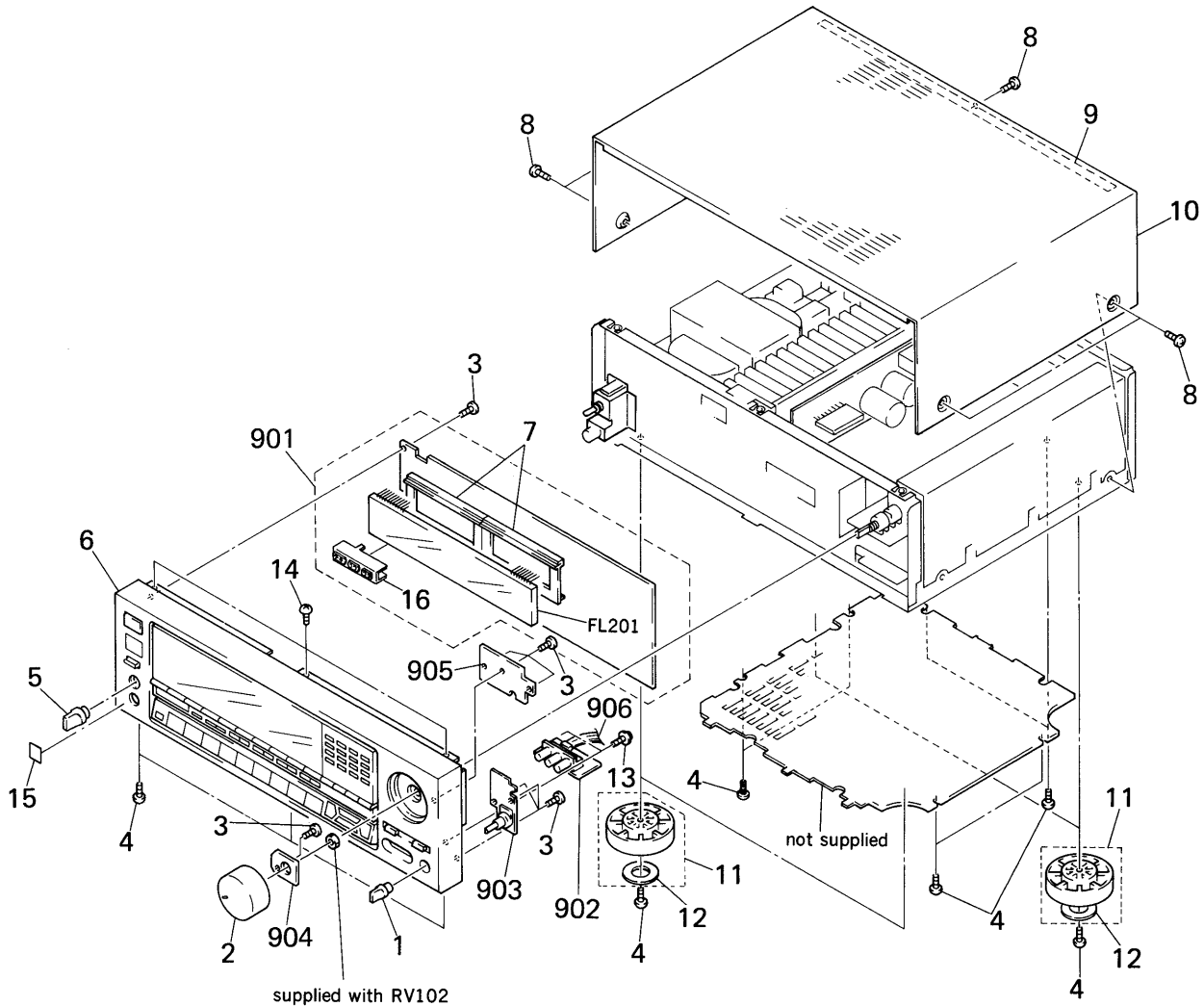
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts  
Example:  
(RED) ... KNOB, BALANCE (WHITE)  
↑ Cabinet's Color                      ↑ Parts' Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

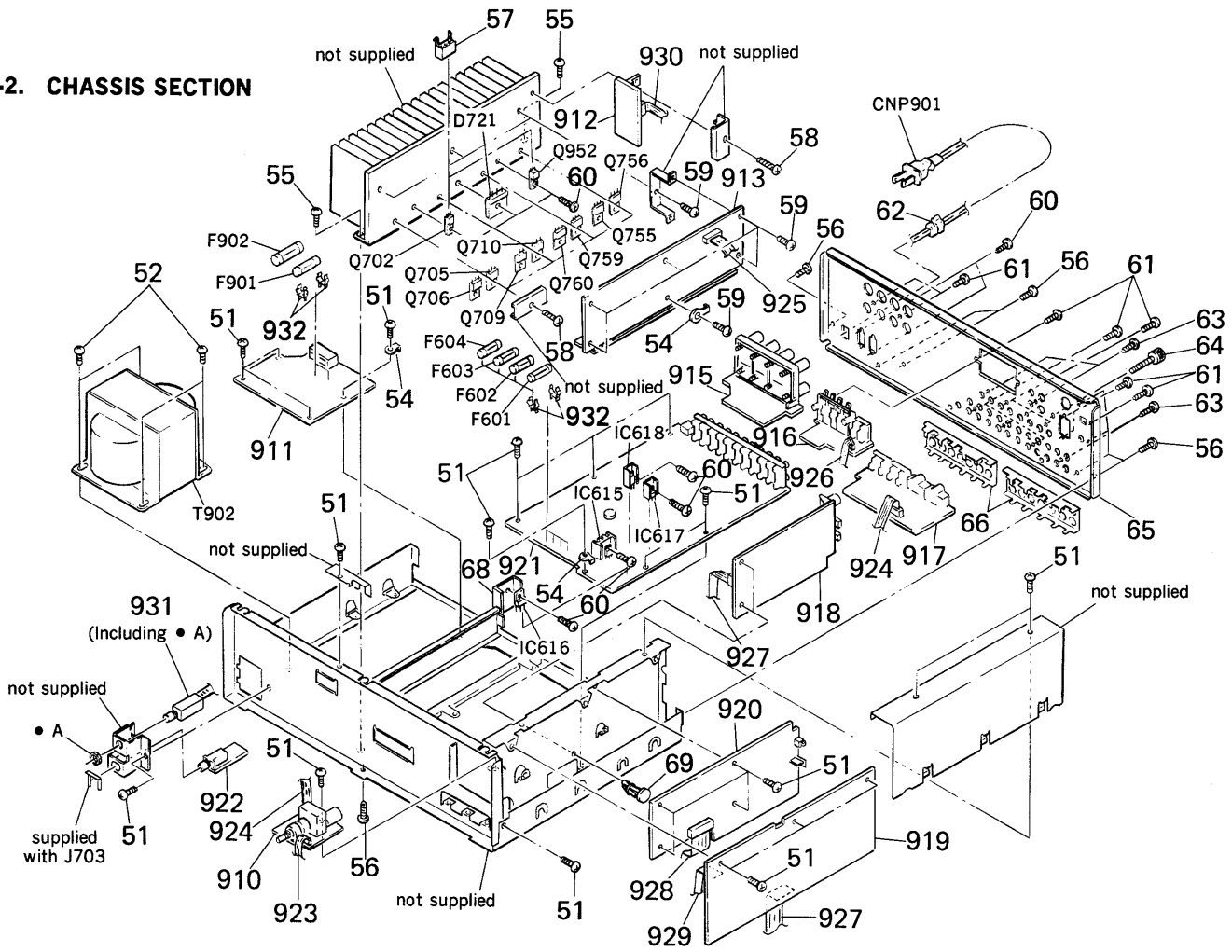
Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 4-1. FRONT PANEL SECTION



| No. | Part No.      | Description                | Remarks | No. | Part No.      | Description               | Remarks |
|-----|---------------|----------------------------|---------|-----|---------------|---------------------------|---------|
| 1   | 4-925-014-01  | KNOB (DIA.10)              |         | 12  | 4-923-836-11  | CUSHION                   |         |
| 2   | X-4906-828-1  | KNOB (47) ASSY             |         | 13  | 7-685-646-79  | SCREW +BTP 3X8 TYPE2 N-S  |         |
| 3   | 4-928-635-01  | SCREW, +BV (2.6X8) TAPPING |         | 14  | 7-682-547-04  | SCREW +BVTT 3X6 (S)       |         |
| 4   | 7-682-548-04  | SCREW +BVTT 3X8 (S)        |         | 15  | *3-703-710-41 | STICKER, SONY SYMBOL (12) |         |
| 5   | 4-908-097-21  | KNOB                       |         | 16  | *4-942-116-01 | HOLDER (LED)              |         |
| 6   | A-4323-617-A  | PANEL (BASE) ASSY          |         | 901 | *A-4334-970-A | MOUNTED PCB, DISPLAY      |         |
| 7   | 4-938-529-01  | HOLDER, FL TUBE            |         | 902 | 1-637-328-11  | PC BOARD, VIDEO 3         |         |
| 8   | 3-704-366-01  | SCREW (CASE) (M3X8)        |         | 903 | 1-637-326-11  | PC BOARD, BAL.VOL         |         |
| 9   | *4-931-060-11 | SPACER (0.2)               |         | 904 | 1-637-327-11  | PC BOARD, VOL LED         |         |
| 10  | 4-931-031-11  | CASE                       |         | 905 | 1-637-325-11  | PC BOARD, KEY             |         |
| 11  | X-4885-950-1  | FOOT ASSY                  |         | 906 | 1-575-730-11  | WIRE, FLAT TYPE (5 CORE)  |         |

4-2. CHASSIS SECTION



**Note:**  
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

**Note:**  
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| No. | Part No.      | Description                         | Remarks | No.    | Part No.                 | Description                     | Remarks |
|-----|---------------|-------------------------------------|---------|--------|--------------------------|---------------------------------|---------|
| 51  | 7-682-547-04  | SCREW +BVTT 3X6 (S)                 |         | 915    | 1-637-318-11             | PC BOARD, MAIN SPEAKER TERMINAL |         |
| 52  | 7-682-561-04  | SCREW +BVTT 4X8 (S)                 |         | 916    | 1-637-319-11             | PC BOARD, SUB SPEAKER TERMINAL  |         |
| 54  | 4-870-539-00  | PLATE, GROUND                       |         | 917    | *A-4334-982-A            | MOUNTED PCB, VIDEO              |         |
| 55  | 7-682-548-04  | SCREW +BVTT 3X8 (S)                 |         | 918    | *A-4334-972-A            | MOUNTED PCB, TUNER              |         |
| 56  | 7-682-547-09  | SCREW +BVTT 3X6 (S)                 |         | 919    | *A-4334-978-A            | MOUNTED PCB, DIGITAL-2          |         |
| 57  | *1-562-327-00 | SOCKET, CONNECTOR 3P                |         | 920    | *A-4334-977-A            | MOUNTED PCB, DIGITAL-1          |         |
| 58  | 7-685-649-71  | SCREW +BVTP 3X14 TYPE2 IT-3         |         | 921    | *A-4334-981-A            | MOUNTED PCB, MAIN               |         |
| 59  | 7-685-645-79  | SCREW +BVTP 3X6 TYPE2 IT-3          |         | 922    | 1-637-320-11             | PC BOARD, HP                    |         |
| 60  | 7-685-646-79  | SCREW +BTP 3X8 TYPE2 N-S            |         | 923    | 1-590-033-11             | WIRE, FLAT TYPE (7 CORE)        |         |
| 61  | 7-685-647-79  | SCREW +BVTP 3X10 TYPE2 N-S          |         | 924    | *1-590-239-11            | WIRE, FLAT TYPE (7 CORE)        |         |
| 62  | *3-703-244-00 | BUSHING (2104), CORD                |         | 925    | *1-590-240-11            | WIRE, FLAT TYPE (9 CORE)        |         |
| 63  | 7-621-849-00  | SCREW, TAPPING                      |         | 926    | 1-575-664-11             | WIRE, FLAT TYPE (5 CORE)        |         |
| 64  | 3-706-165-00  | SCREW                               |         | 927    | *1-590-241-11            | WIRE, FLAT TYPE (11 CORE)       |         |
| 65  | *4-931-996-01 | (US).....PANEL, BACK                |         | 928    | *1-590-242-11            | WIRE, FLAT TYPE (25 CORE)       |         |
|     | *4-931-996-11 | (Canadian)...PANEL, BACK            |         | 929    | 1-575-664-11             | WIRE, FLAT TYPE (5 CORE)        |         |
| 66  | *4-928-467-01 | PLATE (12P), SHIELD                 |         | 930    | *1-590-238-11            | WIRE, FLAT TYPE (7 CORE)        |         |
| 68  | *4-880-403-11 | HEAT SINK                           |         | 931    | 1-572-465-11             | SWITCH, ROTARY SLIDE            |         |
| 69  | *4-912-181-11 | SUPPORT, PC                         |         | 932    | *1-533-213-31            | HOLDER, FUSE                    |         |
| 910 | 1-637-324-11  | PC BOARD, MOTOR VOL                 |         | CNP901 | $\triangle$ 1-575-105-11 | CORD, POWER                     |         |
| 911 | *A-4334-971-A | MOUNTED PCB, POWER SUPPLY           |         | F601   | $\triangle$ 1-532-598-00 | FUSE, GLASS TUBE (125V/4A)      |         |
| 912 | *A-4334-980-A | (US).....MOUNTED PCB, AMPLIFIER     |         | F602   | $\triangle$ 1-532-598-00 | FUSE, GLASS TUBE (125V/4A)      |         |
|     | *A-4341-293-A | (Canadian)...MOUNTED PCB, AMPLIFIER |         | F603   | $\triangle$ 1-532-598-00 | FUSE, GLASS TUBE (125V/4A)      |         |
| 913 | *A-4334-979-A | (US).....MOUNTED PCB, AMPLIFIER     |         | F604   | $\triangle$ 1-532-598-00 | FUSE, GLASS TUBE (125V/4A)      |         |
|     | *A-4341-292-A | (Canadian)...MOUNTED PCB, AMPLIFIER |         | F901   | $\triangle$ 1-532-598-00 | FUSE, GLASS TUBE (125V/4A)      |         |
|     |               |                                     |         | F902   | $\triangle$ 1-532-749-11 | FUSE, GLASS TUBE (125V/8A)      |         |
|     |               |                                     |         | T902   | $\triangle$ 1-450-144-11 | TRANSFORMER, POWER              |         |

## SECTION 5 ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

**CAPACITORS:**MF:  $\mu$ F, PF:  $\mu$ MF**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

**COILS**

- MMH: mH, UH:  $\mu$ H

**SEMICONDUCTORS**In each case, U:  $\mu$ , for example:UA....:  $\mu$ A...., UPA....:  $\mu$ PA....,UPC....:  $\mu$ PC, UPD....:  $\mu$ PD...

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No.      | Description                         | Ref.No. | Part No.     | Description |         |     |      |  |
|---------|---------------|-------------------------------------|---------|--------------|-------------|---------|-----|------|--|
| 901     | *A-4334-970-A | MOUNTED PCB, DISPLAY                | C026    | 1-124-927-11 | ELECT       | 4.7MF   | 20% | 50V  |  |
| 902     | 1-637-328-11  | PC BOARD, VIDEO 3                   | C027    | 1-124-927-11 | ELECT       | 4.7MF   | 20% | 50V  |  |
| 903     | 1-637-326-11  | PC BOARD, BAL.VOL                   | C028    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  |
| 904     | 1-637-327-11  | PC BOARD, VOL LED                   | C030    | 1-124-927-11 | ELECT       | 4.7MF   | 20% | 50V  |  |
| 905     | 1-637-325-11  | PC BOARD, KEY                       | C031    | 1-136-161-00 | FILM        | 0.047MF | 5%  | 50V  |  |
| 906     | 1-575-730-11  | WIRE, FLAT TYPE (5 CORE)            | C032    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  |
| 910     | 1-637-324-11  | PC BOARD, MOTOR VOL                 | C033    | 1-136-155-00 | FILM        | 0.015MF | 5%  | 50V  |  |
| 911     | *A-4334-971-A | MOUNTED PCB, POWER SUPPLY           | C034    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| 912     | *A-4334-980-A | (US).....MOUNTED PCB, AMPLIFIER     | C035    | 1-162-288-31 | CERAMIC     | 330PF   | 10% | 50V  |  |
|         | *A-4341-293-A | (Canadian)...MOUNTED PCB, AMPLIFIER | C036    | 1-136-161-00 | FILM        | 0.047MF | 5%  | 50V  |  |
| 913     | *A-4334-979-A | (US).....MOUNTED PCB, AMPLIFIER     | C037    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
|         | *A-4341-292-A | (Canadian)...MOUNTED PCB, AMPLIFIER | C038    | 1-130-468-00 | MYLAR       | 560PF   | 5%  | 50V  |  |
| 915     | 1-637-318-11  | PC BOARD, MAIN SPEAKER TERMINAL     | C039    | 1-130-468-00 | MYLAR       | 560PF   | 5%  | 50V  |  |
| 916     | 1-637-319-11  | PC BOARD, SUB SPEAKER TERMINAL      | C040    | 1-124-791-11 | ELECT       | 1MF     | 20% | 50V  |  |
| 917     | *A-4334-982-A | MOUNTED PCB, VIDEO                  | C041    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| 918     | *A-4334-972-A | MOUNTED PCB, TUNER                  | C042    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| 919     | *A-4334-978-A | MOUNTED PCB, DIGITAL-2              | C044    | 1-124-477-11 | ELECT       | 47MF    | 20% | 16V  |  |
| 920     | *A-4334-977-A | MOUNTED PCB, DIGITAL-1              | C045    | 1-124-902-00 | ELECT       | 0.47MF  | 20% | 50V  |  |
| 921     | *A-4334-981-A | MOUNTED PCB, MAIN                   | C046    | 1-124-791-11 | ELECT       | 1MF     | 20% | 50V  |  |
| 922     | 1-637-320-11  | PC BOARD, HP                        | C047    | 1-124-791-11 | ELECT       | 1MF     | 20% | 50V  |  |
| 923     | 1-590-033-11  | WIRE, FLAT TYPE (7 CORE)            | C048    | 1-124-791-11 | ELECT       | 1MF     | 20% | 50V  |  |
| 924     | *1-590-239-11 | WIRE, FLAT TYPE (7 CORE)            | C051    | 1-124-463-00 | ELECT       | 0.1MF   | 20% | 50V  |  |
| 925     | *1-590-240-11 | WIRE, FLAT TYPE (9 CORE)            | C052    | 1-161-379-00 | CERAMIC     | 0.01MF  | 30% | 16V  |  |
| 926     | 1-575-664-11  | WIRE, FLAT TYPE (5 CORE)            | C053    | 1-124-925-11 | ELECT       | 2.2MF   | 20% | 50V  |  |
| 927     | *1-590-241-11 | WIRE, FLAT TYPE (11 CORE)           | C054    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| 928     | *1-590-242-11 | WIRE, FLAT TYPE (25 CORE)           | C055    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  |
| 929     | 1-575-664-11  | WIRE, FLAT TYPE (5 CORE)            | C056    | 1-161-379-00 | CERAMIC     | 0.01MF  | 30% | 16V  |  |
| 930     | *1-590-238-11 | WIRE, FLAT TYPE (7 CORE)            | C057    | 1-162-207-31 | CERAMIC     | 22PF    | 5%  | 50V  |  |
| 931     | 1-572-465-11  | SWITCH, ROTARY SLIDE                | C058    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| 932     | *1-533-213-31 | HOLDER, FUSE                        | C059    | 1-161-379-00 | CERAMIC     | 0.01MF  | 30% | 16V  |  |
| C001    | 1-164-159-11  | CERAMIC                             | C060    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  |
| C002    | 1-123-875-11  | ELECT                               | C061    | 1-162-206-31 | CERAMIC     | 20PF    | 5%  | 50V  |  |
| C003    | 1-164-159-11  | CERAMIC                             | C062    | 1-162-206-31 | CERAMIC     | 20PF    | 5%  | 50V  |  |
| C005    | 1-164-159-11  | CERAMIC                             | C101    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| C006    | 1-124-477-11  | ELECT                               | C102    | 1-136-165-00 | FILM        | 0.1MF   | 5%  | 50V  |  |
| C011    | 1-164-159-11  | CERAMIC                             | C103    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| C012    | 1-164-159-11  | CERAMIC                             | C104    | 1-136-165-00 | FILM        | 0.1MF   | 5%  | 50V  |  |
| C013    | 1-164-159-11  | CERAMIC                             | C105    | 1-124-472-11 | ELECT       | 470MF   | 20% | 6.3V |  |
| C014    | 1-124-477-11  | ELECT                               | C106    | 1-136-165-00 | FILM        | 0.1MF   | 5%  | 50V  |  |
| C015    | 1-161-379-00  | CERAMIC                             | C107    | 1-124-472-11 | ELECT       | 470MF   | 20% | 6.3V |  |
| C016    | 1-124-791-11  | ELECT                               | C108    | 1-136-165-00 | FILM        | 0.1MF   | 5%  | 50V  |  |
| C017    | 1-162-211-31  | CERAMIC                             | C109    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| C021    | 1-161-379-00  | CERAMIC                             | C110    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |
| C024    | 1-164-159-11  | CERAMIC                             | C111    | 1-124-472-11 | ELECT       | 470MF   | 20% | 6.3V |  |
| C025    | 1-123-875-11  | ELECT                               | C112    | 1-124-472-11 | ELECT       | 470MF   | 20% | 6.3V |  |
|         |               |                                     | C113    | 1-123-875-11 | ELECT       | 10MF    | 20% | 50V  |  |

| Ref.No. | Part No.     | Description |          |     |      |  |  |  |  |  |
|---------|--------------|-------------|----------|-----|------|--|--|--|--|--|
| C114    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C115    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C116    | 1-124-120-11 | ELECT       | 220MF    | 20% | 16V  |  |  |  |  |  |
| C117    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C139    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C141    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V  |  |  |  |  |  |
| C142    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V  |  |  |  |  |  |
| C143    | 1-124-791-11 | ELECT       | 1MF      | 20% | 50V  |  |  |  |  |  |
| C144    | 1-124-791-11 | ELECT       | 1MF      | 20% | 50V  |  |  |  |  |  |
| C145    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C191    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V  |  |  |  |  |  |
| C201    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C202    | 1-124-638-11 | ELECT       | 22MF     | 20% | 6.3V |  |  |  |  |  |
| C203    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C204    | 1-123-357-00 | ELECT       | 22MF     | 20% | 35V  |  |  |  |  |  |
| C205    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C206    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C208    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C209    | 1-162-210-31 | CERAMIC     | 30PF     | 5%  | 50V  |  |  |  |  |  |
| C210    | 1-162-210-31 | CERAMIC     | 30PF     | 5%  | 50V  |  |  |  |  |  |
| C211    | 1-123-357-00 | ELECT       | 22MF     | 20% | 35V  |  |  |  |  |  |
| C212    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C301    | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V  |  |  |  |  |  |
| C302    | 1-162-306-11 | CERAMIC     | 0.01MF   | 20% | 16V  |  |  |  |  |  |
| C303    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C304    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V  |  |  |  |  |  |
| C305    | 1-124-638-11 | ELECT       | 22MF     | 20% | 6.3V |  |  |  |  |  |
| C306    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V  |  |  |  |  |  |
| C307    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C308    | 1-126-163-11 | ELECT       | 4.7MF    | 20% | 35V  |  |  |  |  |  |
| C309    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C310    | 1-124-638-11 | ELECT       | 22MF     | 20% | 6.3V |  |  |  |  |  |
| C311    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C312    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V  |  |  |  |  |  |
| C313    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C314    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V  |  |  |  |  |  |
| C315    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C317    | 1-162-286-31 | CERAMIC     | 220PF    | 10% | 50V  |  |  |  |  |  |
| C318    | 1-106-347-00 | MYLAR       | 0.0015MF | 5%  | 50V  |  |  |  |  |  |
| C319    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V  |  |  |  |  |  |
| C320    | 1-124-589-11 | ELECT       | 47MF     | 20% | 16V  |  |  |  |  |  |
| C321    | 1-124-589-11 | ELECT       | 47MF     | 20% | 16V  |  |  |  |  |  |
| C322    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V  |  |  |  |  |  |
| C323    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C326    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C327    | 1-124-229-00 | ELECT       | 33MF     | 20% | 10V  |  |  |  |  |  |
| C328    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C329    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C330    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C331    | 1-162-207-31 | CERAMIC     | 22PF     | 5%  | 50V  |  |  |  |  |  |
| C332    | 1-162-207-31 | CERAMIC     | 22PF     | 5%  | 50V  |  |  |  |  |  |
| C333    | 1-106-363-00 | MYLAR       | 0.0068MF | 5%  | 50V  |  |  |  |  |  |
| C334    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C335    | 1-124-589-11 | ELECT       | 47MF     | 20% | 16V  |  |  |  |  |  |
| C336    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C337    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C338    | 1-162-294-31 | CERAMIC     | 0.001MF  | 10% | 50V  |  |  |  |  |  |
| C339    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C340    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V  |  |  |  |  |  |
| C341    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V  |  |  |  |  |  |
| C342    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C343    | 1-124-589-11 | ELECT       | 47MF     | 20% | 16V  |  |  |  |  |  |
| C344    | 1-126-177-11 | ELECT       | 100MF    | 20% | 6.3V |  |  |  |  |  |
| C345    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V  |  |  |  |  |  |
| C346    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C347    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C348    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C349    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C351    | 1-136-153-00 | FILM        | 0.01MF   | 5%  | 50V  |  |  |  |  |  |
| C352    | 1-162-306-11 | CERAMIC     | 0.01MF   | 20% | 16V  |  |  |  |  |  |
| C354    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V  |  |  |  |  |  |
| C355    | 1-126-177-11 | ELECT       | 100MF    | 20% | 6.3V |  |  |  |  |  |
| C356    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V  |  |  |  |  |  |
| C357    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C358    | 1-126-163-11 | ELECT       | 4.7MF    | 20% | 35V  |  |  |  |  |  |
| C360    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C361    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C362    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C363    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C364    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C365    | 1-162-290-31 | CERAMIC     | 470PF    | 10% | 50V  |  |  |  |  |  |
| C367    | 1-162-286-31 | CERAMIC     | 220PF    | 10% | 50V  |  |  |  |  |  |
| C368    | 1-106-347-00 | MYLAR       | 0.0015MF | 5%  | 50V  |  |  |  |  |  |
| C369    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V  |  |  |  |  |  |
| C369A   | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C380    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C381    | 1-126-177-11 | ELECT       | 100MF    | 20% | 6.3V |  |  |  |  |  |
| C382    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C383    | 1-126-177-11 | ELECT       | 100MF    | 20% | 6.3V |  |  |  |  |  |
| C384    | 1-162-199-31 | CERAMIC     | 10PF     | 5%  | 50V  |  |  |  |  |  |
| C385    | 1-162-306-11 | CERAMIC     | 0.01MF   | 20% | 16V  |  |  |  |  |  |
| C386    | 1-162-211-31 | CERAMIC     | 33PF     | 5%  | 50V  |  |  |  |  |  |
| C387    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C388    | 1-162-211-31 | CERAMIC     | 33PF     | 5%  | 50V  |  |  |  |  |  |
| C389    | 1-126-177-11 | ELECT       | 100MF    | 20% | 6.3V |  |  |  |  |  |
| C390    | 1-124-229-00 | ELECT       | 33MF     | 20% | 10V  |  |  |  |  |  |
| C391    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C392    | 1-124-589-11 | ELECT       | 47MF     | 20% | 16V  |  |  |  |  |  |
| C401    | 1-124-611-00 | ELECT       | 1MF      | 20% | 50V  |  |  |  |  |  |
| C402    | 1-126-177-11 | ELECT       | 100MF    | 20% | 6.3V |  |  |  |  |  |
| C403    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C404    | 1-162-205-31 | CERAMIC     | 18PF     | 5%  | 50V  |  |  |  |  |  |
| C405    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C406    | 1-162-294-31 | CERAMIC     | 0.001MF  | 10% | 50V  |  |  |  |  |  |
| C407    | 1-162-294-31 | CERAMIC     | 0.001MF  | 10% | 50V  |  |  |  |  |  |
| C408    | 1-162-199-31 | CERAMIC     | 10PF     | 5%  | 50V  |  |  |  |  |  |
| C409    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V  |  |  |  |  |  |
| C410    | 1-162-211-31 | CERAMIC     | 33PF     | 5%  | 50V  |  |  |  |  |  |
| C411    | 1-162-199-31 | CERAMIC     | 10PF     | 5%  | 50V  |  |  |  |  |  |
| C412    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |
| C413    | 1-126-177-11 | ELECT       | 100MF    | 20% | 6.3V |  |  |  |  |  |
| C414    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V  |  |  |  |  |  |

| Ref.No. | Part No.     | Description |         |     |      |  | Ref.No. | Part No.     | Description |          |     |     |
|---------|--------------|-------------|---------|-----|------|--|---------|--------------|-------------|----------|-----|-----|
| C415    | 1-162-294-31 | CERAMIC     | 0.001MF | 10% | 50V  |  | C551    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C416    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C552    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V |
| C417    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C553    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C418    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C554    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V |
| C419    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C555    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C420    | 1-126-177-11 | ELECT       | 100MF   | 20% | 6.3V |  | C556    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V |
| C421    | 1-162-199-31 | CERAMIC     | 10PF    | 5%  | 50V  |  | C557    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C422    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C558    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C423    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C559    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V |
| C424    | 1-126-177-11 | ELECT       | 100MF   | 20% | 6.3V |  | C560    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C425    | 1-162-294-31 | CERAMIC     | 0.001MF | 10% | 50V  |  | C562    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C429    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C563    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V |
| C430    | 1-126-177-11 | ELECT       | 100MF   | 20% | 6.3V |  | C564    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C432    | 1-126-177-11 | ELECT       | 100MF   | 20% | 6.3V |  | C565    | 1-110-340-11 | MYLAR       | 270PF    | 5%  | 50V |
| C501    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C566    | 1-102-106-00 | CERAMIC     | 100PF    | 10% | 50V |
| C502    | 1-124-598-11 | ELECT       | 22MF    | 20% | 25V  |  | C567    | 1-102-106-00 | CERAMIC     | 100PF    | 10% | 50V |
| C503    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C568    | 1-102-106-00 | CERAMIC     | 100PF    | 10% | 50V |
| C504    | 1-124-598-11 | ELECT       | 22MF    | 20% | 25V  |  | C569    | 1-110-341-11 | MYLAR       | 330PF    | 5%  | 50V |
| C505    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C570    | 1-110-341-11 | MYLAR       | 330PF    | 5%  | 50V |
| C506    | 1-124-598-11 | ELECT       | 22MF    | 20% | 25V  |  | C571    | 1-162-215-31 | CERAMIC     | 47PF     | 5%  | 50V |
| C507    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C572    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C508    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C573    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C509    | 1-124-598-11 | ELECT       | 22MF    | 20% | 25V  |  | C574    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V |
| C510    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C575    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C512    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C576    | 1-124-589-11 | ELECT       | 47MF     | 20% | 16V |
| C513    | 1-124-598-11 | ELECT       | 22MF    | 20% | 25V  |  | C577    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C514    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C578    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C515    | 1-110-340-11 | MYLAR       | 270PF   | 5%  | 50V  |  | C579    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C516    | 1-102-106-00 | CERAMIC     | 100PF   | 10% | 50V  |  | C580    | 1-124-598-11 | ELECT       | 22MF     | 20% | 25V |
| C517    | 1-102-106-00 | CERAMIC     | 100PF   | 10% | 50V  |  | C581    | 1-110-341-11 | MYLAR       | 330PF    | 5%  | 50V |
| C518    | 1-102-106-00 | CERAMIC     | 100PF   | 10% | 50V  |  | C582    | 1-102-106-00 | CERAMIC     | 100PF    | 10% | 50V |
| C519    | 1-110-341-11 | MYLAR       | 330PF   | 5%  | 50V  |  | C583    | 1-130-467-00 | MYLAR       | 470PF    | 5%  | 50V |
| C520    | 1-110-341-11 | MYLAR       | 330PF   | 5%  | 50V  |  | C584    | 1-102-106-00 | CERAMIC     | 100PF    | 10% | 50V |
| C521    | 1-162-215-31 | CERAMIC     | 47PF    | 5%  | 50V  |  | C585    | 1-130-467-00 | MYLAR       | 470PF    | 5%  | 50V |
| C522    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C586    | 1-110-341-11 | MYLAR       | 330PF    | 5%  | 50V |
| C523    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C589    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C524    | 1-124-598-11 | ELECT       | 22MF    | 20% | 25V  |  | C590    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C525    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C591    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C526    | 1-124-589-11 | ELECT       | 47MF    | 20% | 16V  |  | C592    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C527    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C593    | 1-126-096-11 | ELECT       | 10MF     | 20% | 35V |
| C528    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C599    | 1-164-159-11 | CERAMIC     | 0.1MF    |     | 50V |
| C529    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C601    | 1-162-282-31 | CERAMIC     | 100PF    | 10% | 50V |
| C530    | 1-124-598-11 | ELECT       | 22MF    | 20% | 25V  |  | C602    | 1-124-927-11 | ELECT       | 4.7MF    | 20% | 50V |
| C531    | 1-110-341-11 | MYLAR       | 330PF   | 5%  | 50V  |  | C603    | 1-124-963-11 | ELECT       | 33MF     | 20% | 16V |
| C532    | 1-102-106-00 | CERAMIC     | 100PF   | 10% | 50V  |  | C604    | 1-130-480-00 | MYLAR       | 0.0056MF | 5%  | 50V |
| C533    | 1-130-467-00 | MYLAR       | 470PF   | 5%  | 50V  |  | C605    | 1-106-347-00 | MYLAR       | 0.0015MF | 5%  | 50V |
| C534    | 1-102-106-00 | CERAMIC     | 100PF   | 10% | 50V  |  | C606    | 1-124-927-11 | ELECT       | 4.7MF    | 20% | 50V |
| C535    | 1-130-467-00 | MYLAR       | 470PF   | 5%  | 50V  |  | C607    | 1-126-233-11 | ELECT       | 22MF     | 20% | 50V |
| C536    | 1-110-341-11 | MYLAR       | 330PF   | 5%  | 50V  |  | C608    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |
| C539    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C610    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |
| C540    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C611    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |
| C541    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C612    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |
| C542    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C613    | 1-162-294-31 | CERAMIC     | 0.001MF  | 10% | 50V |
| C543    | 1-126-096-11 | ELECT       | 10MF    | 20% | 35V  |  | C614    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |
| C547    | 1-164-159-11 | CERAMIC     | 0.1MF   |     | 50V  |  | C615    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |
| C548    | 1-126-177-11 | ELECT       | 100MF   | 20% | 6.3V |  | C616    | 1-162-294-31 | CERAMIC     | 0.001MF  | 10% | 50V |
| C550    | 1-124-589-11 | ELECT       | 47MF    | 20% | 16V  |  | C617    | 1-123-875-11 | ELECT       | 10MF     | 20% | 50V |



| Ref.No. | Part No.     | Description       |          |     |      | Ref.No. | Part No.     | Description       |         |        |      |
|---------|--------------|-------------------|----------|-----|------|---------|--------------|-------------------|---------|--------|------|
| C618    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C696    | 1-124-477-11 | ELECT             | 47MF    | 20%    | 25V  |
| C619    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C697    | 1-164-159-11 | CERAMIC           | 0.1MF   |        | 50V  |
| C620    | 1-162-294-31 | CERAMIC           | 0.001MF  | 10% | 50V  | C698    | 1-164-159-11 | CERAMIC           | 0.1MF   |        | 50V  |
| C621    | 1-164-159-11 | CERAMIC           | 0.1MF    |     | 50V  | C701    | 1-124-927-11 | ELECT             | 4.7MF   | 20%    | 50V  |
| C622    | 1-164-159-11 | CERAMIC           | 0.1MF    |     | 50V  | C702    | 1-102-973-00 | CERAMIC           | 100PF   | 5%     | 50V  |
| C625    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C703    | 1-101-888-00 | CERAMIC           | 68PF    | 5%     | 50V  |
| C626    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C704    | 1-102-230-00 | CERAMIC           | 4PF     | 0.25PF | 500V |
| C627    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C705    | 1-102-936-00 | CERAMIC           | 3PF     | 0.25PF | 50V  |
| C628    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C706    | 1-124-443-00 | ELECT             | 100MF   | 20%    | 10V  |
| C629    | 1-124-910-11 | ELECT             | 47MF     | 20% | 50V  | C707    | 1-124-477-11 | ELECT             | 47MF    | 20%    | 25V  |
| C630    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C708    | 1-102-233-00 | CERAMIC           | 33PF    | 10%    | 500V |
| C631    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C709    | 1-102-233-00 | CERAMIC           | 33PF    | 10%    | 500V |
| C637    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C710    | 1-124-463-00 | ELECT             | 0.1MF   | 20%    | 50V  |
| C638    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C711    | 1-124-463-00 | ELECT             | 0.1MF   | 20%    | 50V  |
| C639    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C712    | 1-136-157-00 | (US).....FILM     | 0.022MF | 5%     | 50V  |
| C640    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C712    | 1-136-161-00 | (Canadian)...FILM | 0.047MF | 5%     | 50V  |
| C641    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C713    | 1-136-161-00 | (Canadian)...FILM | 0.047MF | 5%     | 50V  |
| C642    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C714    | 1-124-463-00 | ELECT             | 0.1MF   | 20%    | 50V  |
| C643    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C715    | 1-124-472-11 | ELECT             | 470MF   | 20%    | 6.3V |
| C644    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C716    | 1-124-931-11 | ELECT             | 47MF    | 20%    | 100V |
| C645    | 1-124-477-11 | ELECT             | 47MF     | 20% | 16V  | C717    | 1-123-875-11 | ELECT             | 10MF    | 20%    | 50V  |
| C646    | 1-124-477-11 | ELECT             | 47MF     | 20% | 16V  | C721    | 1-106-391-12 | MYLAR             | 0.1MF   | 10%    | 200V |
| C651    | 1-162-282-31 | CERAMIC           | 100PF    | 10% | 50V  | C722    | 1-106-391-12 | MYLAR             | 0.1MF   | 10%    | 200V |
| C652    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C723    | 1-125-573-11 | ELECT(BLOCK)      | 12000MF | 20%    | 71V  |
| C653    | 1-124-963-11 | ELECT             | 33MF     | 20% | 16V  | C724    | 1-125-573-11 | ELECT(BLOCK)      | 12000MF | 20%    | 71V  |
| C654    | 1-130-480-00 | MYLAR             | 0.0056MF | 5%  | 50V  | C725    | 1-124-618-11 | ELECT             | 2200MF  | 20%    | 35V  |
| C655    | 1-106-347-00 | MYLAR             | 0.0015MF | 5%  | 50V  | C726    | 1-124-618-11 | ELECT             | 2200MF  | 20%    | 35V  |
| C656    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C727    | 1-164-159-11 | CERAMIC           | 0.1MF   |        | 50V  |
| C657    | 1-126-233-11 | ELECT             | 22MF     | 20% | 50V  | C741    | 1-162-282-31 | CERAMIC           | 100PF   | 10%    | 50V  |
| C658    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C742    | 1-126-233-11 | ELECT             | 22MF    | 20%    | 50V  |
| C660    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C743    | 1-124-667-11 | ELECT             | 10MF    | 20%    | 100V |
| C661    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C744    | 1-124-463-00 | ELECT             | 0.1MF   | 20%    | 50V  |
| C662    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C745    | 1-136-157-00 | (US).....FILM     | 0.022MF | 5%     | 50V  |
| C667    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C745    | 1-136-161-00 | (Canadian)...FILM | 0.047MF | 5%     | 50V  |
| C668    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C746    | 1-136-161-00 | (Canadian)...FILM | 0.047MF | 5%     | 50V  |
| C670    | 1-164-159-11 | CERAMIC           | 0.1MF    |     | 50V  | C747    | 1-164-159-11 | CERAMIC           | 0.1MF   |        | 50V  |
| C671    | 1-164-159-11 | CERAMIC           | 0.1MF    |     | 50V  | C751    | 1-124-927-11 | ELECT             | 4.7MF   | 20%    | 50V  |
| C675    | 1-162-210-31 | CERAMIC           | 30PF     | 5%  | 50V  | C752    | 1-102-973-00 | CERAMIC           | 100PF   | 5%     | 50V  |
| C676    | 1-162-210-31 | CERAMIC           | 30PF     | 5%  | 50V  | C753    | 1-101-888-00 | CERAMIC           | 68PF    | 5%     | 50V  |
| C677    | 1-164-159-11 | CERAMIC           | 0.1MF    |     | 50V  | C754    | 1-102-230-00 | CERAMIC           | 4PF     | 0.25PF | 500V |
| C678    | 1-164-159-11 | CERAMIC           | 0.1MF    |     | 50V  | C755    | 1-102-936-00 | CERAMIC           | 3PF     | 0.25PF | 50V  |
| C679    | 1-125-486-11 | CAP,DOUBLE LAYERS | 0.22F    |     | 5.5V | C756    | 1-124-443-00 | ELECT             | 100MF   | 20%    | 10V  |
| C680    | 1-124-465-00 | ELECT             | 0.47MF   | 20% | 50V  | C757    | 1-124-477-11 | ELECT             | 47MF    | 20%    | 25V  |
| C681    | 1-124-477-11 | ELECT             | 47MF     | 20% | 16V  | C758    | 1-102-233-00 | CERAMIC           | 33PF    | 10%    | 500V |
| C682    | 1-124-477-11 | ELECT             | 47MF     | 20% | 16V  | C759    | 1-102-233-00 | CERAMIC           | 33PF    | 10%    | 500V |
| C683    | 1-124-477-11 | ELECT             | 47MF     | 20% | 16V  | C760    | 1-124-463-00 | ELECT             | 0.1MF   | 20%    | 50V  |
| C684    | 1-124-564-11 | ELECT             | 4700MF   | 20% | 25V  | C761    | 1-124-463-00 | ELECT             | 0.1MF   | 20%    | 50V  |
| C685    | 1-124-557-11 | ELECT             | 1000MF   | 20% | 25V  | C762    | 1-136-157-00 | (US).....FILM     | 0.022MF | 5%     | 50V  |
| C686    | 1-124-477-11 | ELECT             | 47MF     | 20% | 16V  | C762    | 1-136-161-00 | (Canadian)...FILM | 0.047MF | 5%     | 50V  |
| C687    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C763    | 1-136-161-00 | (Canadian)...FILM | 0.047MF | 5%     | 50V  |
| C688    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C766    | 1-124-931-11 | ELECT             | 47MF    | 20%    | 100V |
| C689    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C767    | 1-123-875-11 | ELECT             | 10MF    | 20%    | 50V  |
| C690    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C791    | 1-162-282-31 | CERAMIC           | 100PF   | 10%    | 50V  |
| C691    | 1-123-875-11 | ELECT             | 10MF     | 20% | 50V  | C792    | 1-126-233-11 | ELECT             | 22MF    | 20%    | 50V  |
| C692    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C794    | 1-124-463-00 | ELECT             | 0.1MF   | 20%    | 50V  |
| C693    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C795    | 1-136-157-00 | (US).....FILM     | 0.022MF | 5%     | 50V  |
| C694    | 1-124-927-11 | ELECT             | 4.7MF    | 20% | 50V  | C795    | 1-136-161-00 | (Canadian)...FILM | 0.047MF | 5%     | 50V  |
| C695    | 1-124-477-11 | ELECT             | 47MF     | 20% | 16V  |         |              |                   |         |        |      |

| Ref.No.  | Part No.      | Description                       |          |     |      | Ref.No.   | Part No.     | Description                 |        |      |  |
|----------|---------------|-----------------------------------|----------|-----|------|-----------|--------------|-----------------------------|--------|------|--|
| C796     | 1-136-161-00  | FILM                              | 0.047MF  | 5%  | 50V  | CNJ501*1  | -568-824-11  | SOCKET, CONNECTOR           | 5P     |      |  |
| C804     | 1-124-557-11  | ELECT                             | 1000MF   | 20% | 25V  | CNJ601*1  | -568-824-11  | SOCKET, CONNECTOR           | 5P     |      |  |
| C805     | 1-124-477-11  | ELECT                             | 47MF     | 20% | 16V  | CNJ602*1  | -568-826-11  | SOCKET, CONNECTOR           | 7P     |      |  |
| C806     | 1-124-791-11  | ELECT                             | 1MF      | 20% | 50V  | CNJ603*1  | -568-841-11  | SOCKET, CONNECTOR           | 25P    |      |  |
| C807     | 1-123-875-11  | ELECT                             | 10MF     | 20% | 50V  | CNJ604*1  | -568-830-11  | SOCKET, CONNECTOR           | 11P    |      |  |
| C808     | 1-124-464-11  | ELECT                             | 0.22MF   | 20% | 50V  | CNJ605*1  | -568-824-11  | SOCKET, CONNECTOR           | 5P     |      |  |
| C821     | 1-126-233-11  | ELECT                             | 22MF     | 20% | 50V  | CNJ606*1  | -568-828-11  | SOCKET, CONNECTOR           | 9P     |      |  |
| C822     | 1-123-875-11  | ELECT                             | 10MF     | 20% | 50V  | CNJ607*1  | -568-826-11  | SOCKET, CONNECTOR           | 7P     |      |  |
| C823     | 1-136-167-00  | FILM                              | 0.15MF   | 5%  | 50V  | CNJ608*1  | -568-830-11  | SOCKET, CONNECTOR           | 11P    |      |  |
| C824     | 1-136-167-00  | FILM                              | 0.15MF   | 5%  | 50V  | CNJ701*1  | -568-828-11  | SOCKET, CONNECTOR           | 9P     |      |  |
| C825     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNJ702*1  | -568-826-11  | SOCKET, CONNECTOR           | 7P     |      |  |
| C826     | 1-136-164-00  | FILM                              | 0.082MF  | 5%  | 50V  | CNJ703*1  | -568-824-11  | SOCKET, CONNECTOR           | 5P     |      |  |
| C827     | 1-136-164-00  | FILM                              | 0.082MF  | 5%  | 50V  | CNJ741*1  | -568-826-11  | SOCKET, CONNECTOR           | 7P     |      |  |
| C828     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNJ901    | 1-540-060-11 | OUTLET, AC (POLAR)          |        |      |  |
| C829     | 1-136-161-00  | FILM                              | 0.047MF  | 5%  | 50V  | CNP141*1  | -564-505-11  | PLUG, CONNECTOR             | 2P     |      |  |
| C830     | 1-136-161-00  | FILM                              | 0.047MF  | 5%  | 50V  | CNP143*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C831     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNP144*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C832     | 1-136-157-00  | FILM                              | 0.022MF  | 5%  | 50V  | CNP231*1  | -564-340-00  | PIN, CONNECTOR              | 6P     |      |  |
| C833     | 1-136-157-00  | FILM                              | 0.022MF  | 5%  | 50V  | CNP401*1  | -506-608-11  | PIN, CONNECTOR              | 10P    |      |  |
| C834     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNP501*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C835     | 1-136-153-00  | FILM                              | 0.01MF   | 5%  | 50V  | CNP601*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C836     | 1-136-153-00  | FILM                              | 0.01MF   | 5%  | 50V  | CNP602*1  | -564-341-71  | PIN, CONNECTOR              | 7P     |      |  |
| C837     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNP603*1  | -564-340-61  | PIN, CONNECTOR              | 6P     |      |  |
| C838     | 1-130-480-00  | MYLAR                             | 0.0056MF | 5%  | 50V  | CNP604*1  | -506-503-11  | PIN, CONNECTOR              | 9P     |      |  |
| C839     | 1-130-480-00  | MYLAR                             | 0.0056MF | 5%  | 50V  | CNP605*1  | -560-065-00  | PIN, CONNECTOR              | 8P     |      |  |
| C840     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNP606*1  | -564-338-61  | PIN, CONNECTOR              | 4P     |      |  |
| C841     | 1-130-475-00  | MYLAR                             | 0.0022MF | 5%  | 50V  | CNP607*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C842     | 1-130-475-00  | MYLAR                             | 0.0022MF | 5%  | 50V  | CNP701*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C843     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNP702*1  | -564-104-00  | PIN, CONNECTOR              | 3P     |      |  |
| C844     | 1-130-471-00  | MYLAR                             | 0.001MF  | 5%  | 50V  | CNP703*1  | -564-337-00  | PIN, CONNECTOR              | 3P     |      |  |
| C845     | 1-130-471-00  | MYLAR                             | 0.001MF  | 5%  | 50V  | CNP704*1  | -564-337-00  | PIN, CONNECTOR              | 3P     |      |  |
| C846     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNP705*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C847     | 1-130-471-00  | MYLAR                             | 0.001MF  | 5%  | 50V  | CNP706*1  | -564-506-11  | PLUG, CONNECTOR             | 3P     |      |  |
| C848     | 1-130-471-00  | MYLAR                             | 0.001MF  | 5%  | 50V  | CNP707*1  | -564-242-00  | PIN, CONNECTOR              | 5P     |      |  |
| C849     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | CNP708*1  | -564-509-11  | PLUG, CONNECTOR             | 6P     |      |  |
| C850     | 1-130-471-00  | MYLAR                             | 0.001MF  | 5%  | 50V  | CNP709*1  | -564-242-00  | PIN, CONNECTOR              | 5P     |      |  |
| C851     | 1-130-471-00  | MYLAR                             | 0.001MF  | 5%  | 50V  | CNP801*1  | -564-338-61  | PIN, CONNECTOR              | 4P     |      |  |
| C852     | 1-124-925-11  | ELECT                             | 2.2MF    | 20% | 50V  | ▲CNP901.1 | -575-105-11  | CORD, POWER                 |        |      |  |
| C901     | ▲1-161-744-00 | CERAMIC                           | 0.01MF   |     | 400V |           |              |                             |        |      |  |
| CF001    | 1-567-393-11  | FILTER, CERAMIC                   |          |     |      | CNP902    | 1-535-139-00 | BASE POST 22MM (10MM PITCH) | 2P     |      |  |
| CF002    | 1-567-393-11  | FILTER, CERAMIC                   |          |     |      | CNP903*1  | -564-321-00  | PIN, CONNECTOR              | 2P     |      |  |
| CF003    | 1-567-250-11  | OSCILLATOR, CERAMIC (18.95kHz)    |          |     |      | CP201     | 1-233-221-11 | COMPOSITION CIRCUIT BLOCK   |        |      |  |
| CF004    | 1-527-981-00  | FILTER, CERAMIC                   |          |     |      | CP601▲.1  | -102-394-11  | CERAMIC                     | 0.01MF | 250V |  |
| CF201    | 1-567-797-11  | VIBRATOR, CERAMIC (12MHZ)         |          |     |      | CP701     | 1-102-394-11 | CERAMIC                     | 0.01MF | 250V |  |
| CF601    | 1-567-797-11  | VIBRATOR, CERAMIC (12MHZ)         |          |     |      | CP801     | 1-102-394-11 | CERAMIC                     | 0.01MF | 250V |  |
| CFT001   | 1-404-713-11  | TRANSFORMER, IF                   |          |     |      | D001      | 8-719-912-20 | DIODE 1SS120                |        |      |  |
| CNJ001*1 | -568-830-11   | SOCKET, CONNECTOR                 | 11P      |     |      | D002      | 8-719-912-20 | DIODE 1SS120                |        |      |  |
| CNJ101*1 | -569-588-11   | CONNECTOR, DIN (S VIDEO 1,2)      |          |     |      | D003      | 8-719-301-38 | DIODE SEL2210S-C            |        |      |  |
| CNJ102*1 | -569-588-11   | CONNECTOR, DIN (S VIDEO, MONITOR) |          |     |      | D004      | 8-719-912-20 | DIODE 1SS120                |        |      |  |
| CNJ103*1 | -568-826-11   | SOCKET, CONNECTOR                 | 7P       |     |      | D141      | 8-719-303-00 | DIODE SEL2510C              |        |      |  |
| CNJ141*1 | -568-826-11   | SOCKET, CONNECTOR                 | 7P       |     |      | D201      | 8-719-912-20 | DIODE 1SS120                |        |      |  |
| CNJ142*1 | -568-826-11   | SOCKET, CONNECTOR                 | 7P       |     |      | D202      | 8-719-912-20 | DIODE 1SS120                |        |      |  |
| CNJ143*1 | -568-824-11   | SOCKET, CONNECTOR                 | 5P       |     |      | D203      | 8-719-310-78 | DIODE SEL1810W-C            |        |      |  |
| CNJ144*1 | -568-826-11   | SOCKET, CONNECTOR                 | 7P       |     |      | D204      | 8-719-310-78 | DIODE SEL1810W-C            |        |      |  |
| CNJ145*1 | -568-848-11   | SOCKET, CONNECTOR                 | 5P       |     |      | D205      | 8-719-310-78 | DIODE SEL1810W-C            |        |      |  |
| CNJ301*1 | -568-867-11   | SOCKET, CONNECTOR                 | 25P      |     |      | D206      | 8-719-310-78 | DIODE SEL1810W-C            |        |      |  |
| CNJ302*1 | -563-106-11   | CONNECTOR (SOCKET) 10P            |          |     |      | D207      | 8-719-304-14 | DIODE SEL2510W              |        |      |  |
| CNJ401*1 | -568-830-11   | SOCKET, CONNECTOR                 | 11P      |     |      | D208      | 8-719-304-14 | DIODE SEL2510W              |        |      |  |

**Note:**  
The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.

**Note:**  
Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No.     | Description      |
|---------|--------------|------------------|
| D209    | 8-719-304-14 | DIODE SEL2510W   |
| D210    | 8-719-304-14 | DIODE SEL2510W   |
| D211    | 8-719-304-14 | DIODE SEL2510W   |
| D212    | 8-719-304-14 | DIODE SEL2510W   |
| D213    | 8-719-310-60 | DIODE SEL1510C-C |
| D214    | 8-719-311-37 | DIODE SEL2810W-C |
| D215    | 8-719-311-37 | DIODE SEL2810W-C |
| D221    | 8-719-912-20 | DIODE 1SS120     |
| D231    | 8-719-310-78 | DIODE SEL1810W-C |
| D232    | 8-719-310-78 | DIODE SEL1810W-C |
| D301    | 8-719-912-20 | DIODE 1SS120     |
| D302    | 8-719-912-20 | DIODE 1SS120     |
| D303    | 8-719-903-27 | DIODE 1SS168     |
| D304    | 8-719-912-20 | DIODE 1SS120     |
| D305    | 8-719-912-20 | DIODE 1SS120     |
| D306    | 8-719-912-20 | DIODE 1SS120     |
| D351    | 8-719-912-20 | DIODE 1SS120     |
| D352    | 8-719-912-20 | DIODE 1SS120     |
| D401    | 8-719-912-20 | DIODE 1SS120     |
| D402    | 8-719-912-20 | DIODE 1SS120     |
| D403    | 8-719-200-82 | DIODE 11ES2      |
| D404    | 8-719-918-45 | DIODE KV1310     |
| D405    | 8-719-903-27 | DIODE 1SS168     |
| D601    | 8-719-912-20 | DIODE 1SS120     |
| D603    | 8-719-912-20 | DIODE 1SS120     |
| D604    | 8-719-912-20 | DIODE 1SS120     |
| D605    | 8-719-912-20 | DIODE 1SS120     |
| D606    | 8-719-912-20 | DIODE 1SS120     |
| D607    | 8-719-912-20 | DIODE 1SS120     |
| D610    | 8-719-002-67 | DIODE UZL-33H    |
| D614    | 8-719-912-20 | DIODE 1SS120     |
| D615    | 8-719-912-20 | DIODE 1SS120     |
| D616    | 8-719-912-20 | DIODE 1SS120     |
| D617    | 8-719-511-40 | DIODE S1VB40     |
| D618    | 8-719-014-82 | DIODE UZP-6.8B   |
| D619    | 8-719-912-20 | DIODE 1SS120     |
| D620    | 8-719-912-20 | DIODE 1SS120     |
| D621    | 8-719-912-20 | DIODE 1SS120     |
| D622    | 8-719-912-20 | DIODE 1SS120     |
| D623    | 8-719-912-20 | DIODE 1SS120     |
| D701    | 8-719-912-20 | DIODE 1SS120     |
| D702    | 8-719-912-20 | DIODE 1SS120     |
| D703    | 8-719-912-20 | DIODE 1SS120     |
| D704    | 8-719-912-20 | DIODE 1SS120     |
| D705    | 8-719-912-20 | DIODE 1SS120     |
| D706    | 8-719-912-20 | DIODE 1SS120     |
| D707    | 8-719-912-20 | DIODE 1SS120     |
| D708    | 8-719-912-20 | DIODE 1SS120     |
| D709    | 8-719-912-20 | DIODE 1SS120     |
| D710    | 8-719-912-20 | DIODE 1SS120     |
| D711    | 8-719-912-20 | DIODE 1SS120     |
| D712    | 8-719-912-20 | DIODE 1SS120     |
| D713    | 8-719-912-20 | DIODE 1SS120     |
| D714    | 8-719-912-20 | DIODE 1SS120     |
| D715    | 8-719-912-20 | DIODE 1SS120     |
| D716    | 8-719-912-20 | DIODE 1SS120     |
| D718    | 8-719-912-20 | DIODE 1SS120     |
| D719    | 8-719-912-20 | DIODE 1SS120     |

| Ref.No. | Part No.       | Description                 |
|---------|----------------|-----------------------------|
| D720    | 8-719-912-20   | DIODE 1SS120                |
| D721    | 8-719-302-38   | DIODE RBV-602-01            |
| D722    | 8-719-312-09   | DIODE RBA-402               |
| D723    | 8-719-912-20   | DIODE 1SS120                |
| D741    | 8-719-912-20   | DIODE 1SS120                |
| D742    | 8-719-912-20   | DIODE 1SS120                |
| D743    | 8-719-912-20   | DIODE 1SS120                |
| D744    | 8-719-912-20   | DIODE 1SS120                |
| D745    | 8-719-912-20   | DIODE 1SS120                |
| D751    | 8-719-912-20   | DIODE 1SS120                |
| D752    | 8-719-912-20   | DIODE 1SS120                |
| D753    | 8-719-912-20   | DIODE 1SS120                |
| D754    | 8-719-912-20   | DIODE 1SS120                |
| D755    | 8-719-912-20   | DIODE 1SS120                |
| D756    | 8-719-912-20   | DIODE 1SS120                |
| D757    | 8-719-912-20   | DIODE 1SS120                |
| D758    | 8-719-912-20   | DIODE 1SS120                |
| D759    | 8-719-912-20   | DIODE 1SS120                |
| D760    | 8-719-912-20   | DIODE 1SS120                |
| D761    | 8-719-912-20   | DIODE 1SS120                |
| D762    | 8-719-912-20   | DIODE 1SS120                |
| D763    | 8-719-912-20   | DIODE 1SS120                |
| D764    | 8-719-912-20   | DIODE 1SS120                |
| D765    | 8-719-912-20   | DIODE 1SS120                |
| D766    | 8-719-912-20   | DIODE 1SS120                |
| D791    | 8-719-912-20   | DIODE 1SS120                |
| D802    | 8-719-912-20   | DIODE 1SS120                |
| D803    | 8-719-511-40   | DIODE S1VB40                |
| D807    | 8-719-000-06   | DIODE MC921                 |
| D808    | 8-719-933-41   | DIODE HZS6C3L               |
| D809    | 8-719-933-41   | DIODE HZS6C3L               |
| D810    | 8-719-914-11   | DIODE HZ4ALL                |
| D821    | 8-719-912-20   | DIODE 1SS120                |
| D822    | 8-719-912-20   | DIODE 1SS120                |
| D823    | 8-719-912-20   | DIODE 1SS120                |
| D824    | 8-719-912-20   | DIODE 1SS120                |
| D825    | 8-719-912-20   | DIODE 1SS120                |
| D826    | 8-719-912-20   | DIODE 1SS120                |
| D827    | 8-719-912-20   | DIODE 1SS120                |
| D828    | 8-719-912-20   | DIODE 1SS120                |
| D829    | 8-719-912-20   | DIODE 1SS120                |
| D830    | 8-719-912-20   | DIODE 1SS120                |
| D831    | 8-719-912-20   | DIODE 1SS120                |
| D832    | 8-719-912-20   | DIODE 1SS120                |
| D833    | 8-719-912-20   | DIODE 1SS120                |
| F601    | △.1-532-598-00 | FUSE, GLASS TUBE (125V/4A)  |
| F602    | △.1-532-598-00 | FUSE, GLASS TUBE (125V/4A)  |
| F603    | △.1-532-598-00 | FUSE, GLASS TUBE (125V/4A)  |
| F604    | △.1-532-598-00 | FUSE, GLASS TUBE (125V/4A)  |
| F902    | △.1-532-749-11 | FUSE, GLASS TUBE (125V/8A)  |
| FE001   | 1-463-862-21   | FRONT END, FM               |
| FE002   | 1-236-461-11   | ENCAPSULATED COMPONENT      |
| FL201   | 1-519-605-11   | INDICATOR TUBE, FLUORESCENT |

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| Ref.No. | Part No.     | Description       | Ref.No. | Part No.     | Description                                                |
|---------|--------------|-------------------|---------|--------------|------------------------------------------------------------|
| IC001   | 8-759-804-55 | IC LA1266         | IC605   | 8-759-805-14 | IC LC7822                                                  |
| IC002   | 8-759-801-80 | IC LA3401         | IC606   | 8-759-805-14 | IC LC7822                                                  |
| IC003   | 8-759-820-91 | IC LC7218         | IC607   | 8-759-106-41 | IC UPC4570C                                                |
| IC101   | 8-759-991-77 | IC BA7625         | IC608   | 8-759-805-13 | IC LC7821                                                  |
| IC102   | 8-759-991-78 | IC BA7626         | IC609   | 8-759-112-93 | IC UPC4570HA-1                                             |
| IC103   | 8-759-991-77 | IC BA7625         | IC610   | 8-759-112-93 | IC UPC4570HA-1                                             |
| IC141   | 8-759-112-93 | IC UPC4570HA      | IC611   | 8-759-820-11 | IC LC7535                                                  |
| IC201   | 8-759-990-38 | IC MSC1162GS      | IC612   | 8-759-801-01 | IC LC4966                                                  |
| IC202   | 8-759-990-38 | IC MSC1162GS      | IC613   | 8-759-149-95 | IC UPD78134GF                                              |
| IC203   | 8-759-149-94 | IC UPD78214GC     | IC614   | 8-759-711-35 | IC NJM4580D                                                |
| IC204   | 8-749-920-59 | IC AIQH3020S      | IC615   | 8-759-501-47 | IC LM78M12                                                 |
| IC205   | 8-759-500-31 | IC X24C01P        | IC616   | 8-759-501-47 | IC LM78M12                                                 |
| IC231   | 8-759-820-62 | IC LB1639         | IC617   | 8-759-604-45 | IC M5F79M12L                                               |
| IC301   | 8-759-999-09 | IC CS5326-KP      | IC618   | 8-759-924-12 | IC LM7805CT                                                |
| IC302   | 8-759-990-82 | IC TL082CP        | IC619   | 8-759-106-41 | IC UPC4570C                                                |
| IC303   | 8-759-924-12 | IC LM7805CT       | IC620   | 8-759-106-41 | IC UPC4570C                                                |
| IC304   | 8-759-982-21 | IC RC78L05A       | IC701   | 8-749-921-85 | IC STK-3122-3                                              |
| IC305   | 8-759-982-44 | IC RC79L05A       | IC703   | 8-759-502-30 | IC SI-18751N                                               |
| IC306   | 8-759-634-51 | IC M5218AP        | IC704   | 8-759-502-30 | IC SI-18751N                                               |
| IC307   | 8-759-148-89 | IC UPD6376CX      | IC821   | 8-759-601-02 | IC M5218P                                                  |
| IC308   | 8-759-822-82 | IC CXD2556M       | IC822   | 8-759-601-02 | IC M5218P                                                  |
| IC309   | 8-759-973-98 | IC YM3623B        | IC823   | 8-759-601-02 | IC M5218P                                                  |
| IC310   | 8-759-916-12 | IC SN74HC00N      | IC824   | 8-759-601-02 | IC M5218P                                                  |
| IC311   | 8-759-921-08 | IC SN74HC02N      | IC825   | 8-759-601-02 | IC M5218P                                                  |
| IC312   | 8-759-917-18 | IC SN74HCU04N     | IC826   | 8-759-601-02 | IC M5218P                                                  |
| IC313   | 8-752-331-87 | IC CXD1160AP      | IC827   | 8-759-208-10 | IC TC4053BPHB                                              |
| IC314   | 8-752-331-87 | IC CXD1160AP      | IC828   | 8-759-208-10 | IC TC4053BPHB                                              |
| IC315   | 8-759-924-12 | IC LM7805CT       | J101    | 1-565-319-11 | JACK, PIN 2P (VIDEO 1,VIDEO 2 LD)                          |
| IC316   | 8-759-978-11 | IC MSM3764A-12RS  | J102    | 1-565-319-11 | JACK, PIN 2P (VIDEO 1,MONITOR)                             |
| IC317   | 8-759-917-18 | IC SN74HCU04N     | J138    | 1-563-136-31 | JACK, PIN 3P (VIDEO 3/INPUT)                               |
| IC318   | 8-741-646-01 | IC SBX1646-01     | J301    | 1-568-750-11 | JACK, PIN (1P SHIELD TYPE)(COAXIAL)                        |
| IC319   | 8-759-924-12 | IC LM7805CT       | J601    | 1-565-320-11 | JACK, PIN 6P (CD IN/PHONO IN/DAT OUT)                      |
| IC400   | 8-759-982-21 | IC RC78L05A       | J602    | 1-565-320-11 | JACK, PIN 6P (TAPE 1 OUT,DAT IN/OUT)                       |
| IC401   | 8-759-250-81 | IC TC5081AP       | J603    | 1-565-320-11 | JACK, PIN 6P<br>(VIDEO 1 AUDIO IN/OUT,VIDEO 2 LD AUDIO IN) |
| IC402   | 8-759-917-11 | IC SN74HC393N     | J604    | 1-565-258-11 | JACK, PIN 4P (TAPE 2 IN)                                   |
| IC403   | 8-759-917-18 | IC SN74HCU04N     | J605    | 1-566-819-21 | JACK 1P (DRCL IN)                                          |
| IC404   | 8-759-979-94 | IC CXD1355Q       | J701    | 1-565-258-11 | JACK, PIN 4P (PRE OUT,CENTER OUT)                          |
| IC405   | 8-759-987-63 | IC MSM514256-1ORS | J703    | 1-507-796-71 | JACK (HEADPHONES)                                          |
| IC406   | 8-759-979-94 | IC CXD1355Q       | L001    | 1-410-509-11 | INDUCTOR 10UH                                              |
| IC407   | 8-759-987-63 | IC MSM514256-1ORS | L002    | 1-410-171-11 | INDUCTOR 1MMH                                              |
| IC408   | 8-759-917-18 | IC SN74HCU04N     | L003    | 1-410-509-11 | INDUCTOR 10UH                                              |
| IC409   | 8-759-982-23 | IC RC78L08A       | L301    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC501   | 8-752-335-52 | IC CXD2552Q-2     | L302    | 1-410-397-21 | FERRITE BEAD INDUCTOR                                      |
| IC502   | 8-759-924-12 | IC LM7805CT       | L303    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC503   | 8-759-106-41 | IC UPC4570C       | L304    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC504   | 8-759-106-41 | IC UPC4570C       | L305    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC505   | 8-759-106-41 | IC UPC4570C       | L306    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC506   | 8-759-106-41 | IC UPC4570C       | L307    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC551   | 8-752-335-52 | IC CXD2552Q-2     | L308    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC553   | 8-759-106-41 | IC UPC4570C       | L309    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC554   | 8-759-106-41 | IC UPC4570C       | L310    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC555   | 8-759-106-41 | IC UPC4570C       | L312    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC556   | 8-759-106-41 | IC UPC4570C       | L313    | 1-410-499-41 | INDUCTOR 1.5UH                                             |
| IC601   | 8-759-106-41 | IC UPC4570C       | L401    | 1-426-150-00 | COIL, RF                                                   |
| IC602   | 8-759-106-41 | IC UPC4570C       | L402    | 1-426-150-00 | COIL, RF                                                   |
| IC603   | 8-759-106-41 | IC UPC4570C       | L403    | 1-410-324-11 | INDUCTOR 4.7UH                                             |
| IC604   | 8-759-106-41 | IC UPC4570C       |         |              |                                                            |

| Ref.No. | Part No.      | Description            | Ref.No. | Part No.     | Description               |
|---------|---------------|------------------------|---------|--------------|---------------------------|
| L405    | 1-410-324-11  | INDUCTOR 4.7UH         | Q602    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| L406    | 1-410-324-11  | INDUCTOR 4.7UH         | Q603    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| L408    | 1-410-324-11  | INDUCTOR 4.7UH         | Q604    | 8-729-900-80 | TRANSISTOR DTC114ES       |
| L409    | 1-410-324-11  | INDUCTOR 4.7UH         | Q605    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| L415    | 1-410-324-11  | INDUCTOR 4.7UH         | Q606    | 8-729-900-80 | TRANSISTOR DTC114ES       |
| L501    | 1-410-324-11  | INDUCTOR 4.7UH         | Q607    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| L551    | 1-410-324-11  | INDUCTOR 4.7UH         | Q608    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| L701    | *1-420-872-00 | COIL, AIR CORE         | Q609    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| L702    | *1-420-872-00 | COIL, AIR CORE         | Q610    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| L751    | *1-420-872-00 | COIL, AIR CORE         | Q612    | 8-729-209-15 | TRANSISTOR 2SD2012        |
| L752    | *1-420-872-00 | COIL, AIR CORE         | Q613    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| LPF001  | 1-235-164-00  | FILTER, LOW PASS       | Q615    | 8-729-900-80 | TRANSISTOR DTC114ES       |
| LPF002  | 1-235-164-00  | FILTER, LOW PASS       | Q616    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| Q001    | 8-729-620-19  | TRANSISTOR 2SC2724-CD  | Q617    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| Q002    | 8-729-620-19  | TRANSISTOR 2SC2724-CD  | Q618    | 8-729-900-80 | TRANSISTOR DTC114ES       |
| Q003    | 8-729-900-61  | TRANSISTOR DTA114ES    | Q619    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| Q004    | 8-729-620-05  | TRANSISTOR 2SC2603-EF  | Q620    | 8-729-900-80 | TRANSISTOR DTC114ES       |
| Q005    | 8-729-900-80  | TRANSISTOR DTC114ES    | Q621    | 8-729-620-05 | TRANSISTOR 2SC2603-EF     |
| Q006    | 8-729-202-67  | TRANSISTOR 2SK246-GR3  | Q624    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| Q007    | 8-729-201-84  | TRANSISTOR 2SC3112-B   | Q625    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| Q101    | 8-729-119-76  | TRANSISTOR 2SA1175-HFE | Q626    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| Q102    | 8-729-119-76  | TRANSISTOR 2SA1175-HFE | Q627    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| Q103    | 8-729-119-76  | TRANSISTOR 2SA1175-HFE | Q628    | 8-729-900-61 | TRANSISTOR DTA114ES       |
| Q104    | 8-729-119-76  | TRANSISTOR 2SA1175-HFE | Q629    | 8-729-119-76 | TRANSISTOR 2SA1175-HFE    |
| Q105    | 8-729-119-76  | TRANSISTOR 2SA1175-HFE | Q652    | 8-729-107-84 | TRANSISTOR 2SC3623A-L     |
| Q106    | 8-729-119-76  | TRANSISTOR 2SA1175-HFE | Q702    | 8-729-209-15 | TRANSISTOR 2SD2012        |
| Q108    | 8-729-900-80  | TRANSISTOR DTC114ES    | Q703    | 8-729-141-05 | TRANSISTOR 2SC2682-QPE    |
| Q109    | 8-729-900-80  | TRANSISTOR DTC114ES    | Q704    | 8-729-141-46 | TRANSISTOR 2SC4431-LK     |
| Q201    | 8-729-900-61  | TRANSISTOR DTA114ES    | Q705    | 8-729-321-13 | TRANSISTOR 2SC4388-0      |
| Q202    | 8-729-900-80  | TRANSISTOR DTC114ES    | Q706    | 8-729-321-13 | TRANSISTOR 2SC4388-0      |
| Q231    | 8-729-620-05  | TRANSISTOR 2SC2603-EF  | Q707    | 8-729-141-06 | TRANSISTOR 2SA1142-QPE    |
| Q232    | 8-729-620-05  | TRANSISTOR 2SC2603-EF  | Q708    | 8-729-141-37 | TRANSISTOR 2SA1684-LK     |
| Q302    | 8-729-900-80  | TRANSISTOR DTC114ES    | Q709    | 8-729-321-18 | TRANSISTOR 2SA1673-OY     |
| Q403    | 8-729-200-56  | TRANSISTOR 2SK241-GR   | Q710    | 8-729-321-18 | TRANSISTOR 2SA1673-OY     |
| Q404    | 8-729-200-56  | TRANSISTOR 2SK241-GR   | Q711    | 8-729-108-14 | TRANSISTOR 2SA988-F       |
| Q405    | 8-729-900-61  | TRANSISTOR DTA114ES    | Q712    | 8-729-108-14 | TRANSISTOR 2SA988-F       |
| Q501    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q713    | 8-729-140-84 | TRANSISTOR 2SA1841-PAFAEA |
| Q502    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q714    | 8-729-620-05 | TRANSISTOR 2SC2603-EF     |
| Q503    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q715    | 8-729-108-14 | TRANSISTOR 2SA988-F       |
| Q504    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q716    | 8-729-620-05 | TRANSISTOR 2SC2603-EF     |
| Q506    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q741    | 8-729-108-14 | TRANSISTOR 2SA988-F       |
| Q507    | 8-729-900-61  | TRANSISTOR DTA114ES    | Q742    | 8-729-620-05 | TRANSISTOR 2SC2603-EF     |
| Q508    | 8-729-900-61  | TRANSISTOR DTA114ES    | Q743    | 8-729-620-05 | TRANSISTOR 2SC2603-EF     |
| Q509    | 8-729-900-61  | TRANSISTOR DTA114ES    | Q752    | 8-729-209-15 | TRANSISTOR 2SD2012        |
| Q510    | 8-729-900-61  | TRANSISTOR DTA114ES    | Q753    | 8-729-141-05 | TRANSISTOR 2SC2682-QPE    |
| Q511    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q754    | 8-729-141-46 | TRANSISTOR 2SC4431-LK     |
| Q512    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q755    | 8-729-321-13 | TRANSISTOR 2SC4388-0      |
| Q551    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q756    | 8-729-321-13 | TRANSISTOR 2SC4388-0      |
| Q552    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q757    | 8-729-141-06 | TRANSISTOR 2SA1142-QPE    |
| Q553    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q758    | 8-729-141-37 | TRANSISTOR 2SA1684-LK     |
| Q554    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q759    | 8-729-321-18 | TRANSISTOR 2SA1673-OY     |
| Q556    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q760    | 8-729-321-18 | TRANSISTOR 2SA1673-OY     |
| Q561    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q767    | 8-729-108-14 | TRANSISTOR 2SA988-F       |
| Q562    | 8-729-107-84  | TRANSISTOR 2SC3623A-L  | Q768    | 8-729-108-14 | TRANSISTOR 2SA988-F       |
| Q601    | 8-729-620-05  | TRANSISTOR 2SC2603-EF  | Q791    | 8-729-108-14 | TRANSISTOR 2SA988-F       |
|         |               |                        | Q801    | 8-729-620-05 | TRANSISTOR 2SC2603-EF     |
|         |               |                        | Q802    | 8-729-209-15 | TRANSISTOR 2SD2012        |

| Ref.No. | Part No.     | Description            |      |    |      |  |  |  |  |
|---------|--------------|------------------------|------|----|------|--|--|--|--|
| Q803    | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |      |    |      |  |  |  |  |
| Q804    | 8-729-620-05 | TRANSISTOR 2SC2603-EF  |      |    |      |  |  |  |  |
| Q805    | 8-729-119-76 | TRANSISTOR 2SA1175-HFE |      |    |      |  |  |  |  |
| Q806    | 8-729-620-05 | TRANSISTOR 2SC2603-EF  |      |    |      |  |  |  |  |
| Q822    | 8-729-107-84 | TRANSISTOR 2SC3623A-L  |      |    |      |  |  |  |  |
| Q823    | 8-729-107-84 | TRANSISTOR 2SC3623A-L  |      |    |      |  |  |  |  |
| R001    | 1-249-411-11 | CARBON                 | 330  | 5% | 1/4W |  |  |  |  |
| R002    | 1-249-401-11 | CARBON                 | 47   | 5% | 1/4W |  |  |  |  |
| R003    | 1-249-411-11 | CARBON                 | 330  | 5% | 1/4W |  |  |  |  |
| R004    | 1-249-415-11 | CARBON                 | 680  | 5% | 1/4W |  |  |  |  |
| R005    | 1-249-431-11 | CARBON                 | 15K  | 5% | 1/4W |  |  |  |  |
| R006    | 1-249-411-11 | CARBON                 | 330  | 5% | 1/4W |  |  |  |  |
| R007    | 1-249-434-11 | CARBON                 | 27K  | 5% | 1/4W |  |  |  |  |
| R008    | 1-249-397-11 | CARBON                 | 22   | 5% | 1/4W |  |  |  |  |
| R016    | 1-249-431-11 | CARBON                 | 15K  | 5% | 1/4W |  |  |  |  |
| R017    | 1-249-423-11 | CARBON                 | 3.3K | 5% | 1/4W |  |  |  |  |
| R018    | 1-249-406-11 | CARBON                 | 120  | 5% | 1/4W |  |  |  |  |
| R021    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R022    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R023    | 1-249-402-11 | CARBON                 | 56   | 5% | 1/4W |  |  |  |  |
| R024    | 1-249-430-11 | CARBON                 | 12K  | 5% | 1/4W |  |  |  |  |
| R025    | 1-249-421-11 | CARBON                 | 2.2K | 5% | 1/4W |  |  |  |  |
| R026    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R027    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R028    | 1-249-404-00 | CARBON                 | 82   | 5% | 1/4W |  |  |  |  |
| R029    | 1-249-423-11 | CARBON                 | 3.3K | 5% | 1/4W |  |  |  |  |
| R032    | 1-249-438-11 | CARBON                 | 56K  | 5% | 1/4W |  |  |  |  |
| R033    | 1-247-881-00 | CARBON                 | 120K | 5% | 1/4W |  |  |  |  |
| R034    | 1-247-883-00 | CARBON                 | 150K | 5% | 1/4W |  |  |  |  |
| R035    | 1-247-881-00 | CARBON                 | 120K | 5% | 1/4W |  |  |  |  |
| R036    | 1-247-883-00 | CARBON                 | 150K | 5% | 1/4W |  |  |  |  |
| R037    | 1-249-423-11 | CARBON                 | 3.3K | 5% | 1/4W |  |  |  |  |
| R038    | 1-249-423-11 | CARBON                 | 3.3K | 5% | 1/4W |  |  |  |  |
| R041    | 1-249-425-11 | CARBON                 | 4.7K | 5% | 1/4W |  |  |  |  |
| R042    | 1-249-425-11 | CARBON                 | 4.7K | 5% | 1/4W |  |  |  |  |
| R043    | 1-249-406-11 | CARBON                 | 120  | 5% | 1/4W |  |  |  |  |
| R044    | 1-249-423-11 | CARBON                 | 3.3K | 5% | 1/4W |  |  |  |  |
| R045    | 1-249-414-11 | CARBON                 | 560  | 5% | 1/4W |  |  |  |  |
| R046    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R047    | 1-249-433-11 | CARBON                 | 22K  | 5% | 1/4W |  |  |  |  |
| R049    | 1-249-438-11 | CARBON                 | 56K  | 5% | 1/4W |  |  |  |  |
| R051    | 1-249-417-11 | CARBON                 | 1K   | 5% | 1/4W |  |  |  |  |
| R052    | 1-249-417-11 | CARBON                 | 1K   | 5% | 1/4W |  |  |  |  |
| R053    | 1-249-417-11 | CARBON                 | 1K   | 5% | 1/4W |  |  |  |  |
| R055    | 1-249-417-11 | CARBON                 | 1K   | 5% | 1/4W |  |  |  |  |
| R056    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R057    | 1-249-425-11 | CARBON                 | 4.7K | 5% | 1/4W |  |  |  |  |
| R058    | 1-249-425-11 | CARBON                 | 4.7K | 5% | 1/4W |  |  |  |  |
| R059    | 1-249-421-11 | CARBON                 | 2.2K | 5% | 1/4W |  |  |  |  |
| R060    | 1-249-414-11 | CARBON                 | 560  | 5% | 1/4W |  |  |  |  |
| R061    | 1-249-417-11 | CARBON                 | 1K   | 5% | 1/4W |  |  |  |  |
| R062    | 1-249-410-11 | CARBON                 | 270  | 5% | 1/4W |  |  |  |  |
| R063    | 1-249-425-11 | CARBON                 | 4.7K | 5% | 1/4W |  |  |  |  |
| R064    | 1-249-423-11 | CARBON                 | 3.3K | 5% | 1/4W |  |  |  |  |
| R065    | 1-249-406-11 | CARBON                 | 120  | 5% | 1/4W |  |  |  |  |
| R066    | 1-249-417-11 | CARBON                 | 1K   | 5% | 1/4W |  |  |  |  |
| R067    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R068    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R069    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R071    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R101    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R102    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R103    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R104    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R105    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R106    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R107    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R108    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R109    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R110    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R111    | 1-249-413-11 | CARBON                 | 470  | 5% | 1/4W |  |  |  |  |
| R112    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R113    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R114    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R115    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R116    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R117    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R118    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R119    | 1-249-413-11 | CARBON                 | 470  | 5% | 1/4W |  |  |  |  |
| R120    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R121    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R122    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R123    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R125    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R126    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R127    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R128    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R129    | 1-249-405-11 | CARBON                 | 100  | 5% | 1/4W |  |  |  |  |
| R132    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R134    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R136    | 1-249-433-11 | CARBON                 | 22K  | 5% | 1/4W |  |  |  |  |
| R137    | 1-249-433-11 | CARBON                 | 22K  | 5% | 1/4W |  |  |  |  |
| R139    | 1-247-804-11 | CARBON                 | 75   | 5% | 1/4W |  |  |  |  |
| R141    | 1-249-441-11 | CARBON                 | 100K | 5% | 1/4W |  |  |  |  |
| R142    | 1-249-418-11 | CARBON                 | 1.2K | 5% | 1/4W |  |  |  |  |
| R143    | 1-249-433-11 | CARBON                 | 22K  | 5% | 1/4W |  |  |  |  |
| R191    | 1-249-441-11 | CARBON                 | 100K | 5% | 1/4W |  |  |  |  |
| R192    | 1-249-418-11 | CARBON                 | 1.2K | 5% | 1/4W |  |  |  |  |
| R193    | 1-249-433-11 | CARBON                 | 22K  | 5% | 1/4W |  |  |  |  |
| R201    | 1-249-433-11 | CARBON                 | 22K  | 5% | 1/4W |  |  |  |  |
| R202    | 1-249-429-11 | CARBON                 | 10K  | 5% | 1/4W |  |  |  |  |
| R203    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R204    | 1-249-433-11 | CARBON                 | 22K  | 5% | 1/4W |  |  |  |  |
| R205    | 1-249-411-11 | CARBON                 | 330  | 5% | 1/4W |  |  |  |  |
| R206    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R207    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R208    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R209    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R210    | 1-249-403-11 | CARBON                 | 68   | 5% | 1/4W |  |  |  |  |
| R211    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R212    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R213    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |
| R214    | 1-249-413-11 | CARBON                 | 470  | 5% | 1/4W |  |  |  |  |
| R215    | 1-249-437-11 | CARBON                 | 47K  | 5% | 1/4W |  |  |  |  |



| Ref.No. | Part No.     | Description |      |    |      |  | Ref.No. | Part No.     | Description |      |    |      |  |
|---------|--------------|-------------|------|----|------|--|---------|--------------|-------------|------|----|------|--|
| R454    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  | R549    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  |
| R455    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  | R550    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R456    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  | R551    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  |
| R491    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/4W |  | R552    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R492    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/4W |  | R553    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  |
| R493    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R554    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R494    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R555    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  |
| R495    | 1-247-892-11 | CARBON      | 360K | 5% | 1/4W |  | R556    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R500    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R557    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R501    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  | R558    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  |
| R502    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R559    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R503    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  | R560    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R504    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R561    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/4W |  |
| R505    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  | R562    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |  |
| R506    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R563    | 1-249-423-11 | CARBON      | 3.3K | 5% | 1/4W |  |
| R507    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R564    | 1-249-420-11 | CARBON      | 1.8K | 5% | 1/4W |  |
| R508    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  | R565    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  |
| R509    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R566    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R510    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R567    | 1-247-844-11 | CARBON      | 3.6K | 5% | 1/4W |  |
| R511    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/4W |  | R568    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R512    | 1-249-405-11 | CARBON      | 100  | 5% | 1/4W |  | R569    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R513    | 1-249-423-11 | CARBON      | 3.3K | 5% | 1/4W |  | R570    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  |
| R514    | 1-249-420-11 | CARBON      | 1.8K | 5% | 1/4W |  | R571    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R515    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  | R572    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R516    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  | R573    | 1-247-836-11 | CARBON      | 1.6K | 5% | 1/4W |  |
| R517    | 1-247-844-11 | CARBON      | 3.6K | 5% | 1/4W |  | R574    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/4W |  |
| R518    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R575    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  |
| R519    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  | R576    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  |
| R520    | 1-249-429-11 | CARBON      | 10K  | 5% | 1/4W |  | R577    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  |
| R521    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R578    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  |
| R522    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  | R579    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R523    | 1-247-836-11 | CARBON      | 1.6K | 5% | 1/4W |  | R580    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  |
| R524    | 1-249-421-11 | CARBON      | 2.2K | 5% | 1/4W |  | R581    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R525    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  | R582    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  |
| R526    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  | R583    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R527    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  | R584    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  |
| R528    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  | R585    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R529    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R586    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R530    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  | R587    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  |
| R531    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R588    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R532    | 1-247-854-11 | CARBON      | 9.1K | 5% | 1/4W |  | R589    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  |
| R533    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R590    | 1-249-423-11 | CARBON      | 3.3K | 5% | 1/4W |  |
| R534    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  | R591    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/4W |  |
| R535    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R592    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  |
| R536    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R593    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  |
| R537    | 1-247-862-11 | CARBON      | 20K  | 5% | 1/4W |  | R594    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  |
| R538    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R595    | 1-247-903-00 | CARBON      | 1M   | 5% | 1/4W |  |
| R539    | 1-249-426-11 | CARBON      | 5.6K | 5% | 1/4W |  | R596    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R540    | 1-249-423-11 | CARBON      | 3.3K | 5% | 1/4W |  | R597    | 1-247-903-00 | CARBON      | 1M   | 5% | 1/4W |  |
| R541    | 1-249-433-11 | CARBON      | 22K  | 5% | 1/4W |  | R598    | 1-247-903-00 | CARBON      | 1M   | 5% | 1/4W |  |
| R542    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  | R599    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  |
| R543    | 1-249-413-11 | CARBON      | 470  | 5% | 1/4W |  | R600    | 1-249-407-11 | CARBON      | 150  | 5% | 1/4W |  |
| R544    | 1-249-425-11 | CARBON      | 4.7K | 5% | 1/4W |  | R601    | 1-249-411-11 | CARBON      | 330  | 5% | 1/4W |  |
| R545    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  | R602    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R546    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  | R603    | 1-249-441-11 | CARBON      | 100K | 5% | 1/4W |  |
| R547    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  | R604    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W |  |
| R548    | 1-247-887-00 | CARBON      | 220K | 5% | 1/4W |  | R605    | 1-247-897-11 | CARBON      | 560K | 5% | 1/4W |  |



| Ref.No. | Part No.       | Description |      |    |      |
|---------|----------------|-------------|------|----|------|
| R606    | 1-249-437-11   | CARBON      | 47K  | 5% | 1/4W |
| R607    | 1-247-903-00   | CARBON      | 1M   | 5% | 1/4W |
| R608    | 1-249-409-11   | CARBON      | 220  | 5% | 1/4W |
| R609    | 1-249-409-11   | CARBON      | 220  | 5% | 1/4W |
| R610    | 1-249-438-11   | CARBON      | 56K  | 5% | 1/4W |
| R611    | 1-249-409-11   | CARBON      | 220  | 5% | 1/4W |
| R612    | 1-249-438-11   | CARBON      | 56K  | 5% | 1/4W |
| R613    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R614    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R615    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R616    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R617    | 1-249-409-11   | CARBON      | 220  | 5% | 1/4W |
| R618    | 1-249-438-11   | CARBON      | 56K  | 5% | 1/4W |
| R620    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R621    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R622    | 1-249-405-11   | CARBON      | 100  | 5% | 1/4W |
| R623    | 1-249-426-11   | CARBON      | 5.6K | 5% | 1/4W |
| R624    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R625    | 1-247-887-00   | CARBON      | 220K | 5% | 1/4W |
| R626    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R627    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R629    | 1-249-425-11   | CARBON      | 4.7K | 5% | 1/4W |
| R630    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R631    | 1-249-425-11   | CARBON      | 4.7K | 5% | 1/4W |
| R632    | 1-249-433-11   | CARBON      | 22K  | 5% | 1/4W |
| R633    | 1-249-413-11   | CARBON      | 470  | 5% | 1/4W |
| R634    | 1-249-413-11   | CARBON      | 470  | 5% | 1/4W |
| R635    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R636    | 1-249-426-11   | CARBON      | 5.6K | 5% | 1/4W |
| R637    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R638    | 1-249-426-11   | CARBON      | 5.6K | 5% | 1/4W |
| R639    | 1-249-426-11   | CARBON      | 5.6K | 5% | 1/4W |
| R640    | △.1-215-884-11 | METAL OXIDE | 47   | 5% | 2W F |
| R641    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R642    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R643    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R644    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R645    | 1-249-426-11   | CARBON      | 5.6K | 5% | 1/4W |
| R646    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R647    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R648    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R649    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R650    | 1-249-429-11   | CARBON      | 10K  | 5% | 1/4W |
| R651    | 1-249-411-11   | CARBON      | 330  | 5% | 1/4W |
| R652    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R653    | 1-249-441-11   | CARBON      | 100K | 5% | 1/4W |
| R654    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R655    | 1-247-897-11   | CARBON      | 560K | 5% | 1/4W |
| R656    | 1-249-437-11   | CARBON      | 47K  | 5% | 1/4W |
| R657    | 1-247-903-00   | CARBON      | 1M   | 5% | 1/4W |
| R658    | 1-249-409-11   | CARBON      | 220  | 5% | 1/4W |
| R659    | 1-249-409-11   | CARBON      | 220  | 5% | 1/4W |
| R660    | 1-249-438-11   | CARBON      | 56K  | 5% | 1/4W |
| R661    | 1-249-409-11   | CARBON      | 220  | 5% | 1/4W |
| R662    | 1-249-438-11   | CARBON      | 56K  | 5% | 1/4W |
| R663    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |
| R664    | 1-249-417-11   | CARBON      | 1K   | 5% | 1/4W |



| Ref.No. | Part No.       | Description           |      |    |        |
|---------|----------------|-----------------------|------|----|--------|
| R665    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R666    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R667    | 1-249-409-11   | CARBON                | 220  | 5% | 1/4W   |
| R668    | 1-249-438-11   | CARBON                | 56K  | 5% | 1/4W   |
| R669    | 1-247-887-00   | CARBON                | 220K | 5% | 1/4W   |
| R670    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R671    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R672    | 1-249-405-11   | CARBON                | 100  | 5% | 1/4W   |
| R673    | 1-249-426-11   | CARBON                | 5.6K | 5% | 1/4W   |
| R674    | 1-249-429-11   | CARBON                | 10K  | 5% | 1/4W   |
| R675    | 1-247-887-00   | CARBON                | 220K | 5% | 1/4W   |
| R676    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R677    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R678    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R679    | 1-249-425-11   | CARBON                | 4.7K | 5% | 1/4W   |
| R680    | 1-249-429-11   | CARBON                | 10K  | 5% | 1/4W   |
| R681    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R682    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R683    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R684    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R685    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R686    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R687    | △.1-215-884-11 | METAL OXIDE           | 47   | 5% | 2W F   |
| R688    | 1-249-393-11   | CARBON                | 10   | 5% | 1/4W   |
| R689    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R690    | 1-249-429-11   | CARBON                | 10K  | 5% | 1/4W   |
| R691    | 1-249-425-11   | CARBON                | 4.7K | 5% | 1/4W   |
| R692    | 1-249-393-11   | CARBON                | 10   | 5% | 1/4W   |
| R693    | 1-249-425-11   | CARBON                | 4.7K | 5% | 1/4W   |
| R694    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R695    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R696    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R697    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R698    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R699    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R701    | 1-249-417-11   | CARBON                | 1K   | 5% | 1/4W   |
| R703    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R704    | 1-249-413-11   | CARBON                | 470  | 5% | 1/4W   |
| R705    | 1-249-441-11   | CARBON                | 100K | 5% | 1/4W   |
| R706    | 1-249-415-11   | CARBON                | 680  | 5% | 1/4W   |
| R707    | △.1-247-700-11 | CARBON                | 100  | 5% | 1/4W F |
| R708    | 1-249-422-11   | CARBON                | 2.7K | 5% | 1/4W   |
| R709    | 1-249-416-11   | CARBON                | 820  | 5% | 1/4W   |
| R710    | △.1-247-700-11 | CARBON                | 100  | 5% | 1/4W F |
| R711    | △.1-247-708-11 | CARBON                | 470  | 5% | 1/4W F |
| R712    | △.1-247-688-11 | CARBON                | 10   | 5% | 1/4W F |
| R713    | △.1-247-688-11 | CARBON                | 10   | 5% | 1/4W F |
| R714    | △.1-247-739-11 | CARBON                | 100  | 5% | 1/2W F |
| R715    | △.1-247-688-11 | CARBON                | 10   | 5% | 1/4W F |
| R716    | △.1-247-688-11 | CARBON                | 10   | 5% | 1/4W F |
| R717    | △.1-217-151-00 | RES, METAL PLATE 0.22 |      |    | 2W     |
| R718    | △.1-217-151-00 | RES, METAL PLATE 0.22 |      |    | 2W     |
| R719    | △.1-247-688-11 | CARBON                | 10   | 5% | 1/4W F |
| R720    | △.1-247-688-11 | CARBON                | 10   | 5% | 1/4W F |
| R721    | △.1-217-151-00 | RES, METAL PLATE 0.22 |      |    | 2W     |
| R722    | △.1-217-151-00 | RES, METAL PLATE 0.22 |      |    | 2W     |
| R723    | 1-249-419-11   | CARBON                | 1.5K | 5% | 1/4W   |

**Note:**  
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.


**Note:**  
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No.       | Description      |      |    |      |   |  |  |  |
|---------|----------------|------------------|------|----|------|---|--|--|--|
| R724    | 1-249-419-11   | CARBON           | 1.5K | 5% | 1/4W |   |  |  |  |
| R725    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R726    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R727    | 1-249-431-11   | CARBON           | 15K  | 5% | 1/4W |   |  |  |  |
| R728    | 1-249-431-11   | CARBON           | 15K  | 5% | 1/4W |   |  |  |  |
| R729    | 1-249-482-11   | CARBON           | 4.7  | 5% | 1/2W |   |  |  |  |
| R730    | 1-247-727-11   | CARBON           | 10   | 5% | 1/2W |   |  |  |  |
| R731    | 1-249-429-11   | CARBON           | 10K  | 5% | 1/4W |   |  |  |  |
| R732    | 1-249-436-11   | CARBON           | 39K  | 5% | 1/4W |   |  |  |  |
| R733    | 1-249-437-11   | CARBON           | 47K  | 5% | 1/4W |   |  |  |  |
| R734    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R735    | 1-249-438-11   | CARBON           | 56K  | 5% | 1/4W |   |  |  |  |
| R736    | △.1-215-869-11 | METAL OXIDE      | 1K   | 5% | 1W   | F |  |  |  |
| R737    | △.1-247-696-11 | CARBON           | 47   | 5% | 1/4W | F |  |  |  |
| R738A   | △.1-215-869-11 | METAL OXIDE      | 1K   | 5% | 1W   | F |  |  |  |
| R738    | 1-249-429-11   | CARBON           | 10K  | 5% | 1/4W |   |  |  |  |
| R739    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R741    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R742    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |
| R743    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R744    | 1-249-419-11   | CARBON           | 1.5K | 5% | 1/4W |   |  |  |  |
| R745    | 1-249-431-11   | CARBON           | 15K  | 5% | 1/4W |   |  |  |  |
| R746    | △.1-217-151-00 | RES, METAL PLATE | 0.22 |    | 2W   |   |  |  |  |
| R747    | 1-249-438-11   | CARBON           | 56K  | 5% | 1/4W |   |  |  |  |
| R748    | 1-249-393-11   | CARBON           | 10   | 5% | 1/4W |   |  |  |  |
| R749    | 1-249-389-11   | CARBON           | 4.7  | 5% | 1/4W |   |  |  |  |
| R751    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R753    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R754    | 1-249-413-11   | CARBON           | 470  | 5% | 1/4W |   |  |  |  |
| R755    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R756    | 1-249-415-11   | CARBON           | 680  | 5% | 1/4W |   |  |  |  |
| R757    | △.1-247-700-11 | CARBON           | 100  | 5% | 1/4W | F |  |  |  |
| R758    | 1-249-422-11   | CARBON           | 2.7K | 5% | 1/4W |   |  |  |  |
| R759    | 1-249-416-11   | CARBON           | 820  | 5% | 1/4W |   |  |  |  |
| R760    | △.1-247-700-11 | CARBON           | 100  | 5% | 1/4W | F |  |  |  |
| R761    | △.1-247-708-11 | CARBON           | 470  | 5% | 1/4W | F |  |  |  |
| R762    | △.1-247-688-11 | CARBON           | 10   | 5% | 1/4W | F |  |  |  |
| R763    | △.1-247-688-11 | CARBON           | 10   | 5% | 1/4W | F |  |  |  |
| R764    | △.1-247-739-11 | CARBON           | 100  | 5% | 1/2W | F |  |  |  |
| R765    | △.1-247-688-11 | CARBON           | 10   | 5% | 1/4W | F |  |  |  |
| R766    | △.1-247-688-11 | CARBON           | 10   | 5% | 1/4W | F |  |  |  |
| R767    | △.1-217-151-00 | RES, METAL PLATE | 0.22 |    | 2W   |   |  |  |  |
| R768    | △.1-217-151-00 | RES, METAL PLATE | 0.22 |    | 2W   |   |  |  |  |
| R769    | △.1-247-688-11 | CARBON           | 10   | 5% | 1/4W | F |  |  |  |
| R770    | △.1-247-688-11 | CARBON           | 10   | 5% | 1/4W | F |  |  |  |
| R771    | △.1-217-151-00 | RES, METAL PLATE | 0.22 |    | 2W   |   |  |  |  |
| R772    | △.1-217-151-00 | RES, METAL PLATE | 0.22 |    | 2W   |   |  |  |  |
| R773    | 1-249-419-11   | CARBON           | 1.5K | 5% | 1/4W |   |  |  |  |
| R774    | 1-249-419-11   | CARBON           | 1.5K | 5% | 1/4W |   |  |  |  |
| R775    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R776    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R777    | 1-249-431-11   | CARBON           | 15K  | 5% | 1/4W |   |  |  |  |
| R778    | 1-249-431-11   | CARBON           | 15K  | 5% | 1/4W |   |  |  |  |
| R779    | 1-249-482-11   | CARBON           | 4.7  | 5% | 1/2W |   |  |  |  |
| R780    | 1-247-727-11   | CARBON           | 10   | 5% | 1/2W |   |  |  |  |
| R783    | △.1-247-704-11 | CARBON           | 220  | 5% | 1/4W | F |  |  |  |
| R785    | 1-249-437-11   | CARBON           | 47K  | 5% | 1/4W |   |  |  |  |
| R786    | △.1-215-869-11 | METAL OXIDE      | 1K   | 5% | 1W   | F |  |  |  |
| R787    | △.1-247-696-11 | CARBON           | 47   | 5% | 1/4W | F |  |  |  |
| R788    | 1-249-429-11   | CARBON           | 10K  | 5% | 1/4W |   |  |  |  |
| R789    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R791    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R792    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |
| R793    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R794    | 1-249-419-11   | CARBON           | 1.5K | 5% | 1/4W |   |  |  |  |
| R795    | 1-249-431-11   | CARBON           | 15K  | 5% | 1/4W |   |  |  |  |
| R796    | △.1-217-151-00 | RES, METAL PLATE | 0.22 |    | 2W   |   |  |  |  |
| R797    | 1-249-437-11   | CARBON           | 47K  | 5% | 1/4W |   |  |  |  |
| R798    | 1-249-393-11   | CARBON           | 10   | 5% | 1/4W |   |  |  |  |
| R799    | 1-249-389-11   | CARBON           | 4.7  | 5% | 1/4W |   |  |  |  |
| R801    | 1-249-425-11   | CARBON           | 4.7K | 5% | 1/4W |   |  |  |  |
| R802    | 1-249-396-11   | CARBON           | 18   | 5% | 1/4W |   |  |  |  |
| R803    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R804    | 1-249-436-11   | CARBON           | 39K  | 5% | 1/4W |   |  |  |  |
| R805    | 1-249-429-11   | CARBON           | 10K  | 5% | 1/4W |   |  |  |  |
| R806    | 1-249-426-11   | CARBON           | 5.6K | 5% | 1/4W |   |  |  |  |
| R807    | 1-249-429-11   | CARBON           | 10K  | 5% | 1/4W |   |  |  |  |
| R808    | 1-249-426-11   | CARBON           | 5.6K | 5% | 1/4W |   |  |  |  |
| R809    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R812    | 1-249-417-11   | CARBON           | 1K   | 5% | 1/4W |   |  |  |  |
| R813    | 1-249-429-11   | CARBON           | 10K  | 5% | 1/4W |   |  |  |  |
| R819    | 1-249-428-11   | CARBON           | 8.2K | 5% | 1/4W |   |  |  |  |
| R820    | 1-249-433-11   | CARBON           | 22K  | 5% | 1/4W |   |  |  |  |
| R821    | 1-249-420-11   | CARBON           | 1.8K | 5% | 1/4W |   |  |  |  |
| R822    | 1-247-887-00   | CARBON           | 220K | 5% | 1/4W |   |  |  |  |
| R823    | 1-249-405-11   | CARBON           | 100  | 5% | 1/4W |   |  |  |  |
| R824    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |
| R825    | 1-247-901-11   | CARBON           | 820K | 5% | 1/4W |   |  |  |  |
| R826    | 1-249-440-11   | CARBON           | 82K  | 5% | 1/4W |   |  |  |  |
| R827    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |
| R828    | 1-247-903-00   | CARBON           | 1M   | 5% | 1/4W |   |  |  |  |
| R829    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R830    | 1-249-440-11   | CARBON           | 82K  | 5% | 1/4W |   |  |  |  |
| R831    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |
| R832    | 1-247-903-00   | CARBON           | 1M   | 5% | 1/4W |   |  |  |  |
| R833    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R834    | 1-249-439-11   | CARBON           | 68K  | 5% | 1/4W |   |  |  |  |
| R835    | 1-249-420-11   | CARBON           | 1.8K | 5% | 1/4W |   |  |  |  |
| R836    | 1-247-901-11   | CARBON           | 820K | 5% | 1/4W |   |  |  |  |
| R837    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R838    | 1-249-439-11   | CARBON           | 68K  | 5% | 1/4W |   |  |  |  |
| R839    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |
| R840    | 1-247-901-11   | CARBON           | 820K | 5% | 1/4W |   |  |  |  |
| R841    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R842    | 1-249-440-11   | CARBON           | 82K  | 5% | 1/4W |   |  |  |  |
| R843    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |
| R844    | 1-247-903-00   | CARBON           | 1M   | 5% | 1/4W |   |  |  |  |
| R845    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R846    | 1-249-439-11   | CARBON           | 68K  | 5% | 1/4W |   |  |  |  |
| R847    | 1-249-420-11   | CARBON           | 1.8K | 5% | 1/4W |   |  |  |  |
| R848    | 1-247-901-11   | CARBON           | 820K | 5% | 1/4W |   |  |  |  |
| R849    | 1-249-441-11   | CARBON           | 100K | 5% | 1/4W |   |  |  |  |
| R850    | 1-249-440-11   | CARBON           | 82K  | 5% | 1/4W |   |  |  |  |
| R851    | 1-249-421-11   | CARBON           | 2.2K | 5% | 1/4W |   |  |  |  |

**Note:**

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

**Note:**

Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No.       | Description                                |
|---------|----------------|--------------------------------------------|
| R852    | 1-247-903-00   | CARBON 1M 5% 1/4W                          |
| R853    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R854    | 1-249-440-11   | CARBON 82K 5% 1/4W                         |
| R855    | 1-249-422-11   | CARBON 2.7K 5% 1/4W                        |
| R856    | 1-247-903-00   | CARBON 1M 5% 1/4W                          |
| R857    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R858    | 1-249-437-11   | CARBON 47K 5% 1/4W                         |
| R859    | 1-249-418-11   | CARBON 1.2K 5% 1/4W                        |
| R860    | 1-247-897-11   | CARBON 560K 5% 1/4W                        |
| R861    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R862    | 1-249-433-11   | CARBON 22K 5% 1/4W                         |
| R863    | 1-249-415-11   | CARBON 680 5% 1/4W                         |
| R864    | 1-247-889-00   | CARBON 270K 5% 1/4W                        |
| R865    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R867    | 1-249-429-11   | CARBON 10K 5% 1/4W                         |
| R868    | 1-249-429-11   | CARBON 10K 5% 1/4W                         |
| R869    | 1-249-429-11   | CARBON 10K 5% 1/4W                         |
| R870    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R871    | 1-249-413-11   | CARBON 470 5% 1/4W                         |
| R872    | 1-249-413-11   | CARBON 470 5% 1/4W                         |
| R873    | 1-249-413-11   | CARBON 470 5% 1/4W                         |
| R874    | 1-249-413-11   | CARBON 470 5% 1/4W                         |
| R875    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R876    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R877    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R878    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R879    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R880    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R881    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R882    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R883    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R884    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R885    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R886    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R887    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R888    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R889    | 1-249-426-11   | CARBON 5.6K 5% 1/4W                        |
| R890    | 1-249-426-11   | CARBON 5.6K 5% 1/4W                        |
| R891    | 1-249-426-11   | CARBON 5.6K 5% 1/4W                        |
| R892    | 1-249-426-11   | CARBON 5.6K 5% 1/4W                        |
| R893    | 1-249-426-11   | CARBON 5.6K 5% 1/4W                        |
| R894    | 1-249-426-11   | CARBON 5.6K 5% 1/4W                        |
| R895    | 1-249-437-11   | CARBON 47K 5% 1/4W                         |
| R896    | 1-249-437-11   | CARBON 47K 5% 1/4W                         |
| R898    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R899    | 1-249-441-11   | CARBON 100K 5% 1/4W                        |
| R901    | ▲,1-202-725-00 | SOLID 3.3M 10% 1/2W                        |
| RT001   | 1-238-601-11   | RES, ADJ, CARBON 22K (AM TUNED)            |
| RT002   | 1-238-601-11   | RES, ADJ, CARBON 22K (AUTO STOP)           |
| RT003   | 1-238-602-11   | RES, ADJ, CARBON 47K (FM STEREO OPERATION) |
| RT004   | 1-238-604-11   | RES, ADJ, CARBON 220K (FM SEP)             |
| RT701   | 1-238-596-11   | RES, ADJ, CAREBON 470 (BIAS)               |
| RT751   | 1-238-596-11   | RES, ADJ, CAREBON 470 (BIAS)               |
| RV101   | 1-238-655-11   | RES, VAR, CARBON 100KX4 (VOLUME)           |
| RV102   | 1-238-637-11   | RES, VAR, CARBON 50K/50K (BALANCE)         |

| Ref.No. | Part No.       | Description                   |
|---------|----------------|-------------------------------|
| RX301   | 8-749-921-11   | IC GP1F32R (OPTICAL)          |
| RY601   | 1-515-726-11   | RELAY                         |
| RY701   | 1-515-356-00   | RELAY                         |
| RY702   | 1-515-533-11   | RELAY                         |
| RY703   | 1-515-533-11   | RELAY                         |
| RY901   | ▲,1-515-701-11 | RELAY                         |
| S200    | 1-554-303-21   | SWITCH, KEY BOARD (POWER)     |
| S201    | 1-554-303-21   | SWITCH, KEY BOARD (CD)        |
| S202    | 1-554-303-21   | SWITCH, KEY BOARD (TUNER)     |
| S203    | 1-554-303-21   | SWITCH, KEY BOARD (PHONO)     |
| S204    | 1-554-303-21   | SWITCH, KEY BOARD (<)         |
| S205    | 1-554-303-21   | SWITCH, KEY BOARD (>)         |
| S206    | 1-554-303-21   | SWITCH, KEY BOARD (EQ)        |
| S207    | 1-554-303-21   | SWITCH, KEY BOARD (TUNING)    |
| S208    | 1-554-303-21   | SWITCH, KEY BOARD (F.MODE)    |
| S209    | 1-554-303-21   | SWITCH, KEY BOARD (INDEX -)   |
| S210    | 1-554-303-21   | SWITCH, KEY BOARD (INDEX +)   |
| S211    | 1-554-303-21   | SWITCH, KEY BOARD (PRE -)     |
| S212    | 1-554-303-21   | SWITCH, KEY BOARD (PRE +)     |
| S213    | 1-554-303-21   | SWITCH, KEY BOARD (SLOPE)     |
| S214    | 1-554-303-21   | SWITCH, KEY BOARD (SHIFT)     |
| S215    | 1-554-303-21   | SWITCH, KEY BOARD (ID SEL)    |
| S216    | 1-554-303-21   | SWITCH, KEY BOARD (FM MODE)   |
| S217    | 1-554-303-21   | SWITCH, KEY BOARD (FM/AM)     |
| S218    | 1-554-303-21   | SWITCH, KEY BOARD (▽)         |
| S219    | 1-554-303-21   | SWITCH, KEY BOARD (△)         |
| S220    | 1-554-303-21   | SWITCH, KEY BOARD (RECALL)    |
| S221    | 1-554-303-21   | SWITCH, KEY BOARD (9)         |
| S222    | 1-554-303-21   | SWITCH, KEY BOARD (2)         |
| S223    | 1-554-303-21   | SWITCH, KEY BOARD (5)         |
| S224    | 1-554-303-21   | SWITCH, KEY BOARD (8)         |
| S225    | 1-554-303-21   | SWITCH, KEY BOARD (0)         |
| S226    | 1-554-303-21   | SWITCH, KEY BOARD (SUB)       |
| S227    | 1-554-303-21   | SWITCH, KEY BOARD (6)         |
| S228    | 1-554-303-21   | SWITCH, KEY BOARD (3)         |
| S229    | 1-554-303-21   | SWITCH, KEY BOARD (1)         |
| S230    | 1-554-303-21   | SWITCH, KEY BOARD (4)         |
| S231    | 1-554-303-21   | SWITCH, KEY BOARD (7)         |
| S232    | 1-554-303-21   | SWITCH, KEY BOARD (MEMORY)    |
| S233    | 1-554-303-21   | SWITCH, KEY BOARD (MAIN)      |
| S234    | 1-554-303-21   | SWITCH, KEY BOARD (PGM SET)   |
| S235    | 1-554-303-21   | SWITCH, KEY BOARD (DIRECT)    |
| S236    | 1-554-303-21   | SWITCH, KEY BOARD (DAT)       |
| S237    | 1-554-303-21   | SWITCH, KEY BOARD (TAPE 1)    |
| S238    | 1-554-303-21   | SWITCH, KEY BOARD (VIDEO 3)   |
| S239    | 1-554-303-21   | SWITCH, KEY BOARD (VIDEO 2)   |
| S240    | 1-554-303-21   | SWITCH, KEY BOARD (VIDEO 1)   |
| S241    | 1-554-303-21   | SWITCH, KEY BOARD (DIGITAL)   |
| S242    | 1-554-303-21   | SWITCH, KEY BOARD (TAPE 2)    |
| S243    | 1-554-303-21   | SWITCH, KEY BOARD (U/PRESET)  |
| S244    | 1-554-303-21   | SWITCH, KEY BOARD (D.CHAR)    |
| S245    | 1-554-303-21   | SWITCH, KEY BOARD (D.GRAP)    |
| S246    | 1-554-303-21   | SWITCH, KEY BOARD (EDIT A)    |
| S247    | 1-554-303-21   | SWITCH, KEY BOARD (EDIT V)    |
| S248    | 1-554-303-21   | SWITCH, KEY BOARD (HELP)      |
| S249    | 1-572-184-11   | SWITCH, KEYBOARD (DRLC/POWER) |
| S250    | 1-554-303-21   | SWITCH, KEY BOARD (F, LINK)   |

**Note:**  
The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.



**Note:**  
Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref.No. | Part No.       | Description                                    |
|---------|----------------|------------------------------------------------|
| S251    | 1-554-303-21   | SWITCH, KEY BOARD (D DS)                       |
| S252    | 1-554-303-21   | SWITCH, KEY BOARD (FLAT)                       |
| S253    | 1-554-303-21   | SWITCH, KEY BOARD (EQ ON/OFF)                  |
| S254    | 1-554-303-21   | SWITCH, KEY BOARD (PROLOGIC)                   |
| S255    | 1-554-303-21   | SWITCH, KEY BOARD (S,MODE)                     |
| S256    | 1-554-303-21   | SWITCH, KEY BOARD (SURROUND/OFF)               |
| S257    | 1-554-303-21   | SWITCH, KEY BOARD (MUTING -20dB)               |
| S258    | 1-554-303-21   | SWITCH, KEY BOARD (INPUT BAL AUTO)             |
| S701    | 1-572-322-11   | SWITCH, SLIDE (SPEAKERS)                       |
| T001    | 1-404-743-11   | COIL, DISCRIMINATOR                            |
| T002    | 1-404-742-11   | COIL, DISCRIMINATOR                            |
| T901    | △.1-448-517-21 | TRANSFORMER, POWER                             |
| T902    | △.1-450-144-11 | TRANSFORMER, POWER                             |
| TM001   | *1-562-907-11  | CONNECTOR, F-J (ANTENNA FM)                    |
| TM002   | 1-536-707-00   | TERMINAL BOARD, PUSH 2P (ANTENNA AM)           |
| TM701   | 1-537-235-11   | TERMINAL BOARD (SP)(SPEAKERS)                  |
| TM702   | 1-536-706-00   | TERMINAL BOARD (SP)<br>(SURROUND/DRLC SPEAKER) |
| TP001   | *1-560-060-00  | PIN, CONNECTOR 2P (NULL)                       |
| TP601   | *1-560-061-00  | PIN, CONNECTOR 3P                              |
| TP701   | *1-560-062-00  | PIN, CONNECTOR 4P (BIAS)                       |
| VZ901   | △.1-807-293-11 | VARISTOR (SNR-14A 140K)                        |
| X001    | 1-567-826-21   | VIBRATOR, CRYSTAL (7.2MHz)                     |
| X301    | 1-577-269-11   | VIBRATOR, CRYSTAL (18.432MHz)                  |
| X302    | 1-579-047-11   | VIBRATOR, CRYSTAL (30.798MHz)                  |


#### ACCESSORY & PACKING MATERIAL

|               |                                           |
|---------------|-------------------------------------------|
| 1-417-141-11  | MATCHING TRANSFORMER, ANTENNA             |
| 1-465-417-11  | REMOTE COMMANDER (RM-P301)                |
| 1-501-224-00  | ANTENNA, FEEDER                           |
| 1-501-374-11  | ANTENNA, LOOP                             |
| 3-752-284-21  | MANUAL, INSTRUCTION (ENGLISH)             |
| 3-752-284-31  | (Canadian)...MANUAL, INSTRUCTION (FRENCH) |
| 3-703-390-01  | (US).....INSTRUCTION                      |
| 3-795-433-31  | (Canadian)...INSTRUCTION                  |
| 4-925-079-01  | COVER (6), BATTERY                        |
| *4-931-047-01 | CUSHION                                   |
| *4-938-150-01 | INDIVIDUAL CARTON                         |

#### **Note:**

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

#### **Note:**

Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

