

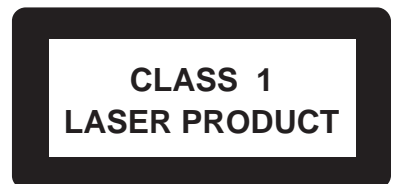
Service
Service
Service



Service Manual

TABLE OF CONTENTS

| | Page |
|----------------------------------------------------|-------------|
| Location of PC Boards | 1-2 |
| Versions Variation & Package | 1-2 |
| Specifications | 1-3 |
| Measurement Setup | 1-4 |
| Service Aids | 1-5 |
| ESD & Safety Instruction | 1-6 |
| Connections & Preparations | 1-7 to 1-14 |
| Setting Procedure & Repair Instructions | 2 |
| Disassembly Instructions & Service positions | 3 |
| Block & Wiring Diagram | 4 |
| Key/Video/Sensor/Phone/Vol /Vu Board | 5 |
| Tuner Board | 6 |
| Main Board | 7 |
| Tape Board | 8 |
| Servo Board | 9 |
| Power Board | 10 |
| Mechanical Exploded View & Parts List | 11 |



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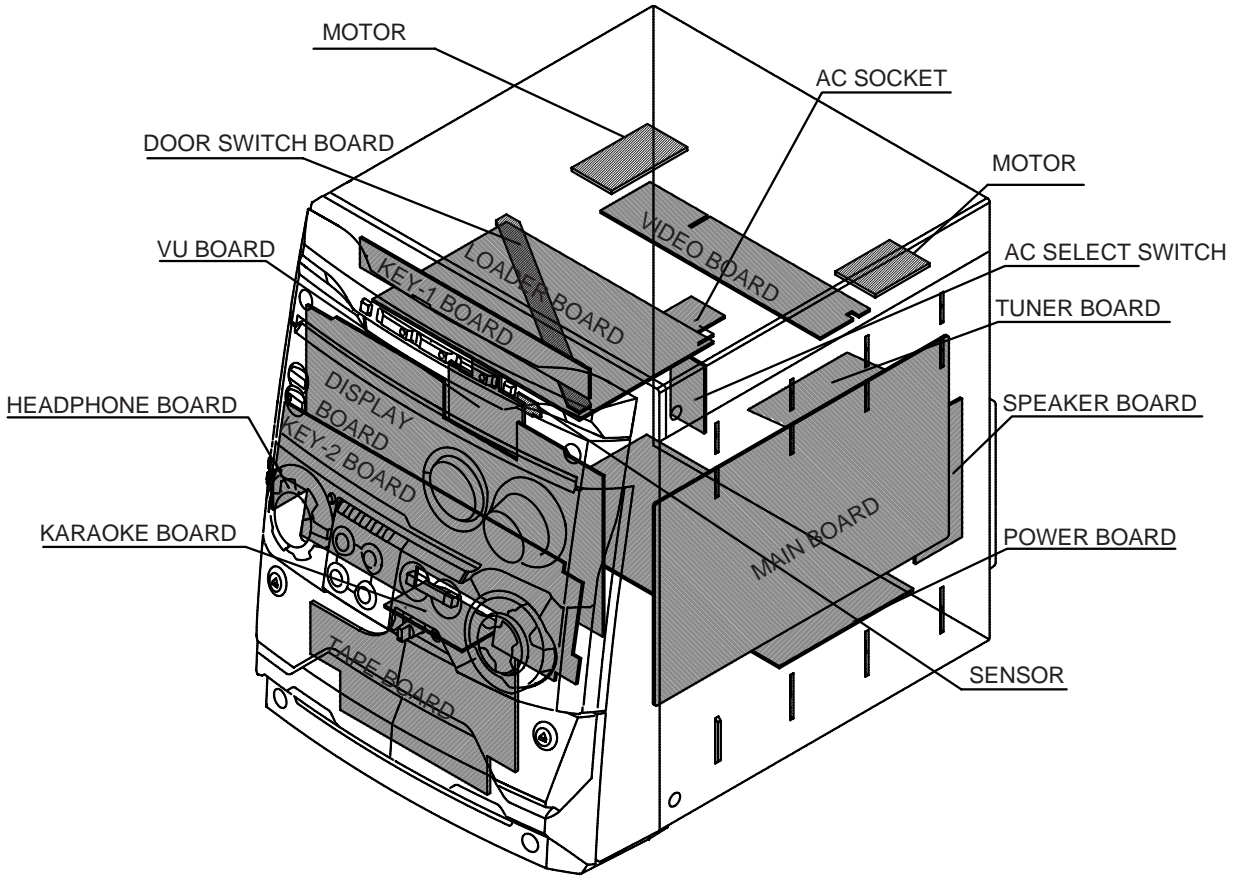
3140 785 32910

Version 1.0



PHILIPS

LOCATION OF PC BOARDS



VERSION VARIATIONS:

| Type /Versions: | FW-D596 |
|---------------------------------|---------|
| | /21M |
| Features & Board in used: | |
| Karaoke | x |
| RDS | |
| Rotary Encoder (volume control) | x |
| Jog Shuttle | x |
| Voltage Selector | x |
| Aux Input | x |
| Digital Output | x |
| Headphone Socket | x |
| Line Output | |
| Standby - FTD Clock Display | x |
| Tuner board - ECO6 System | x |
| | |
| | |

SPECIFICATIONS

AMPLIFIER SECTION

| | |
|-----------------------------|---------------------------------|
| Output power | 120 W Total power |
| Stereo mode (DIN) | 60 W + 60 W RMS |
| Surround mode (1 kHz) | DIN OUT |
| Frequency Response | 100 Hz - 20 kHz / - 3 dB |
| Signal-to-Noise Ratio | > 65dB (CCIR) Input Sensitivity |
| AUX/TV In | 500 mV |

Output Sensitivity

| | |
|-----------------|-----------------|
| Headphone | 600 mV – 800 mV |
| Line Out | 300 mV – 500 mV |

TUNER SECTION

| | |
|----------------------------------|-----------------------------------|
| Tuning Range | FM 87.5 – 108 MHz (50 kHz steps) |
| ..... | AM 531 – 1602 kHz (9 kHz steps) |
| ..... | AM 530 – 1710 kHz (10 kHz steps) |
| 26 dB Quieting Sensitivity | FM 20 dB |
| 26 dB Quieting Sensitivity | AM 3162 mV/m |
| Image Rejection Radio | FM 25dB |
| ..... | AM 28 dB |
| IF Rejection Ratio | FM 60 dB |
| ..... | AM 24 dB |
| Signal-to-Noise Ratio | FM 60 dB |
| ..... | AM 40 dB |
| AM Suppression Ratio | FM 30 dB |
| Harmonic Distortion | FM Mono 3 % |
| ..... | FM Stereo 3 % |
| ..... | AM 5 % |
| Frequency Response | FM 180 Hz – 10 kHz / ±6 dB |
| Stereo Separation | FM 26 dB (1 kHz) |
| Stereo Threshold | FM 23.5 dB |

TAPE SECTION

| | |
|----------------------------|----------------------|
| Frequency Response | |
| Normal tape (type 1) | 80 – 12500 Hz (8 dB) |
| Signal-to-Noise Ratio | |
| Normal tape (type 1) | ≥ 45 dBA |
| Wow and flutter | £ 0.4% DIN |

DVD SECTION

| | |
|------------------------------|-------------------------|
| Laser Type | Semiconductor |
| Disc Diameter | 12cm / 8cm |
| Video Decoding | MPEG-2 / MPEG-1 |
| Video DAC | 10 Bits |
| Signal System | PAL / NTSC |
| Video Format | 4:3 / 16:9 |
| Video S/N | 56 dB (minimum) |
| Composite Video Output | 1.0 Vp-p, 75 W |
| S-Video Output | Y - 1.0 Vp-p, 75 W |
| ..... | C - 0.286 Vp-p, 75 W |
| Audio DAC | 24 Bits / 96 kHz |
| Frequency Response | 4 Hz - 20 kHz (44.1kHz) |
| ..... | 4 Hz - 22 kHz (48kHz) |

| | |
|-------------------------|------------------------------------------------|
| ..... | 4 Hz - 44 kHz (96kHz) |
| Digital Output | |
| ..... | SPDIF (Sony Philips digital interface) Coaxial |
| PCM | IEC 60958 |
| Dolby Digital/DTS | IEC 60958, IEC 61937 |

MAIN UNIT

| | |
|------------------------------|---------------------------|
| Power Supply Rating | 230 V / 50 Hz |
| Power Consumption | |
| Active | 160W |
| Standby | 15W |
| Dimensions (w × h × d) | 265× 310 × 410 (mm) |
| ..... | 10.4 × 12.2 × 16.1 (inch) |
| Weight | 5.46 kg / 12.04 pounds |

SPEAKERS

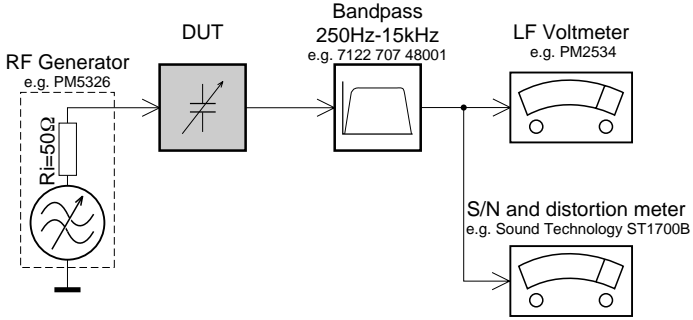
| | |
|------------------------------|-------------------------|
| Front speakers | |
| System | triple drive |
| Impedance | 6 Ω |
| Speaker drivers | 1× 5.25" woofer, |
| ..... | 1× 2' tweeter |
| Frequency response | 80 Hz – 20 kHz |
| Dimensions (w × h × d) | |
| ..... | 210 × 313 × 234 (mm) |
| ..... | 8.3 × 12.3 × 9.2 (inch) |
| Weight | 3.42 kg/each |
| ..... | 7.54 pounds/each |

SUBWOOFER

| | |
|---------------------------------------------------|---------------------------|
| Subwoofer(not magnetically shielded design) | 6.5" |
| Impedance | 4Ω |
| Output power(10% at 80Hz) | 60W (4Ω) |
| Reproduction Frequency Response | 20 Hz-150 Hz |
| Input Sensitivity (Subwoofer In) | 450 mV/m |
| AC Power | 110 - 127 / 220 - 240V |
| Power Consumption | 40 W (at 1/8 Rated Power) |
| Dimensions (w × h × d) | 200x310.5x350.8(mm) |
| Weight | 8.32Kg |

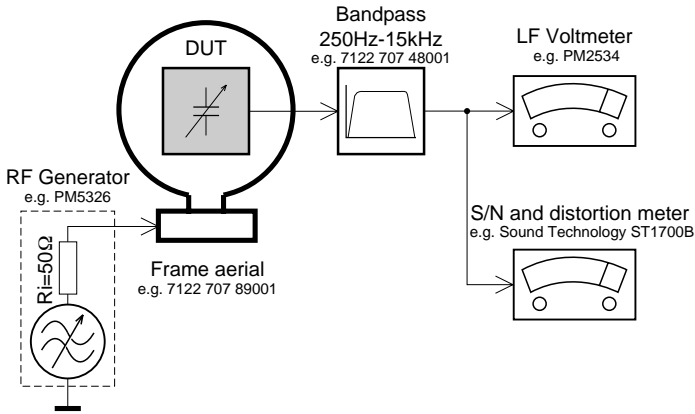
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilotone (19kHz, 38kHz).

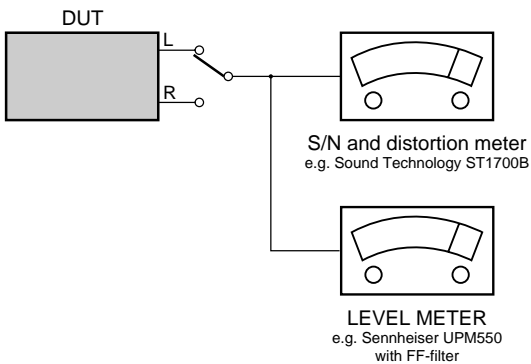
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage. Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

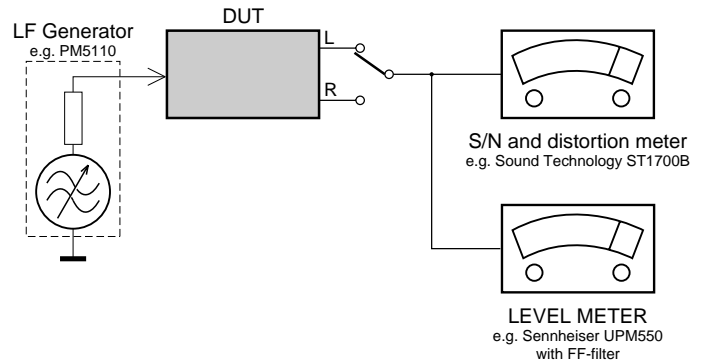
CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)



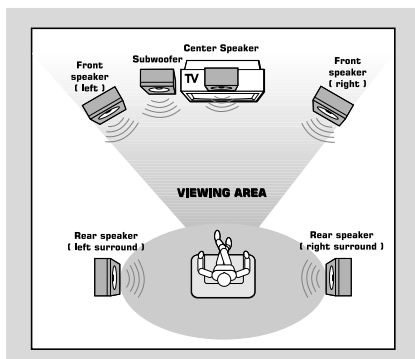
Recorder

Use Universal Test Cassette **CrO2** SBC419 4822 397 30069 or Universal Test Cassette **Fe** SBC420 4822 397 30071



Connections

Step 1: Placing the speakers and subwoofer



For best possible surround sound, all speakers (except subwoofer) should be placed at the same distance from the listening position.

Place the front left and right speakers at equal distances from the TV set and at an angle of approximately 45 degrees from the listening position.

Place the center speaker above the TV set or the system so the center channel's sound is localized. Place the surround speakers at normal listening ear level facing each other or mounted on the set.

Place the subwoofer on the floor near the TV set.

Notes:

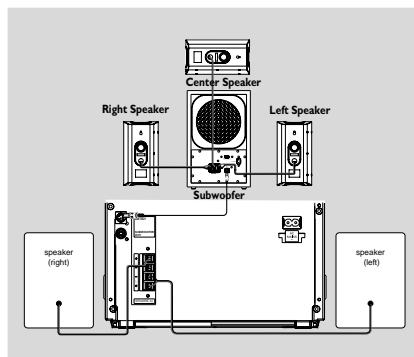
- To avoid magnetic interference, do not position the front speakers too close to your TV set.
- Allow adequate ventilation around the DVD Mini Hi-Fi System.

IMPORTANT!

The type plate is located on the rear of the system.

To avoid overheating of the system, a safety circuit has been built in. Therefore, your system may switch to Standby mode automatically under extreme conditions. If this happens, let the system cool down before reusing it.

Step 2: Connecting speakers and subwoofer



Connect the speaker wires to the SPEAKERS (FRONT) terminals, right speaker to "R" and left speaker to "L", coloured (marked) wire to "+" and black (unmarked) wire to "-". Fully insert the stripped portion of the speaker wire into the terminal as shown.

Connect the Surround Speakers and Center Speaker system using the supplied speaker cables to the speaker jacks on the SUBWOOFER by matching the colours of the jacks and speaker plugs.

Connect the Subwoofer using the supplied speaker cable to the DIN OUT jack on the DVD Mini Hi-Fi System.

Connect the AC MAINS.

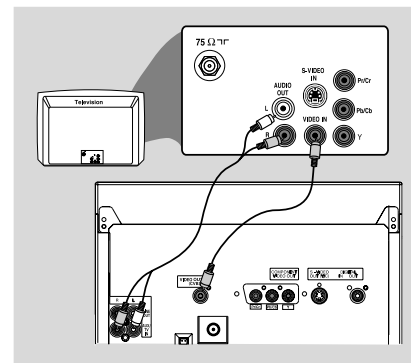
| Speakers | ⊖ | ⊕ |
|---------------------------|-------|-------|
| Front Left (L) | Black | White |
| Front Right (R) | Black | Red |
| Center | Black | Green |
| Surround (Rear) Left (L) | Black | Blue |
| Surround (Rear) Right (R) | Black | Grey |

Notes:

- For optimal sound performance, use the supplied speakers.
- Do not connect more than one speaker to any one pair of +/- speaker terminals.
- Do not connect speakers with an impedance lower than the speakers supplied. Please refer to the SPECIFICATIONS section of this manual.

Connections

Step 3: Connecting TV set



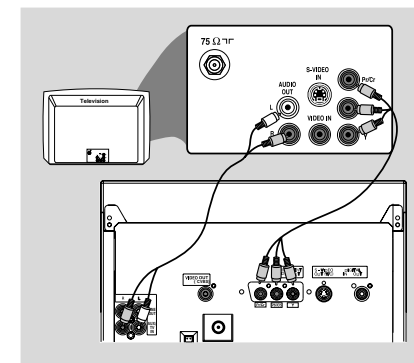
IMPORTANT!

- You only need to make **one** video connection from the following options, according to the capabilities of your TV system.
- S-Video or Component Video connection provides higher picture quality. These options must be available on your TV set.
- Connect the system directly to the TV set.

Using Video In jack (CVBS)

Use the composite video cable (yellow) to connect the system's CVBS jack to the video input jack (or labeled as A/V In, Video In, Composite or Baseband) on the TV set.

To listen to TV channels through this system, use the audio cables (white/red) to connect **AUX/TV IN (L/R)** jacks to the corresponding AUDIO OUT jacks on the TV set.



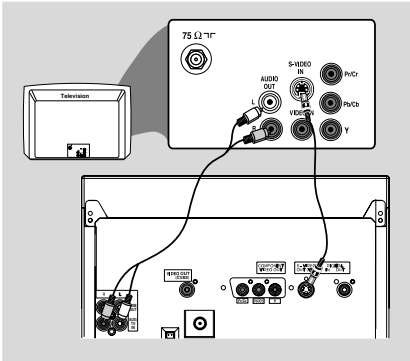
IMPORTANT!

- To set the VIDEO OUT (put) to 'Pr Pb Y', see page 31, Using the Setup Menu – Setting the video out.

Using component Video In jack (Pr Pb Y)

Use the component video cables (red/blue/green) to connect the system's Pr Pb Y jacks to the corresponding Component video input jacks (or labeled as Pr/Cr Pb/Cb Y or YUV) on the TV set.

To listen to TV channels through this system, use the audio cables (white/red) to connect **AUX/TV IN (L/R)** jacks to the corresponding AUDIO OUT jacks on the TV set.



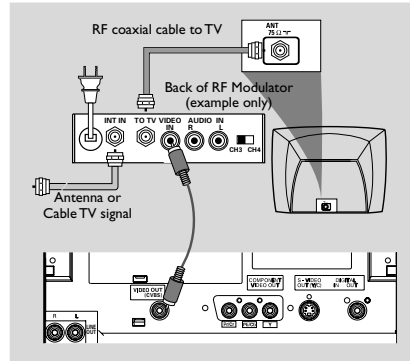
IMPORTANT!

- If the picture is distorted, check the **Video Output** setting. Make sure it is set to 'S-Video'. See page 31, Using the Setup Menu – Setting the video out.

Using S-Video In jack

Use the S-Video cable (not supplied) to connect the system's **S-VIDEO OUT** jack to the S-Video input jack (or labeled as Y/C or S-VHS) on the TV set.

To listen to TV channels through this system, use the audio cables (white/red) to connect **AUX/TV IN (L/R)** jacks to the corresponding **AUDIO OUT** jacks on the TV set.



IMPORTANT!

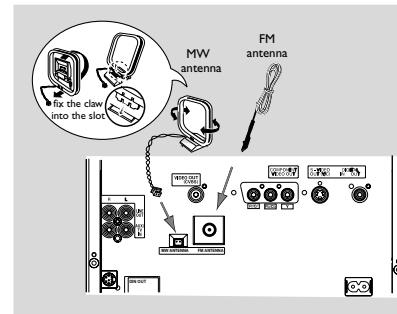
- If your TV set only has a single **Antenna In** jack (or labeled as 75 ohm or RF In), you will need a RF modulator in order to view the DVD playback via TV. See your electronics retailer or contact Philips for details on RF modulator availability and operations.

Using an accessory RF modulator

Use the composite cable (yellow) to connect the system's **CVBS** jack to the video input jack on the RF modulator.

Use the RF coaxial cable (not supplied) to connect the RF modulator to your TV's RF jack.

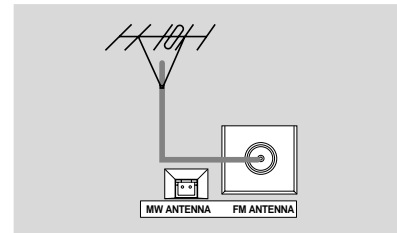
Step 4: Connecting FM/MW antennas



Connect the supplied MW loop antenna to the **MW** jack. Place the MW loop antenna on a shelf or attach it to a stand or wall.

Connect the supplied FM antenna to the **FM** jack. Extend the FM antenna and fix its end to the wall.

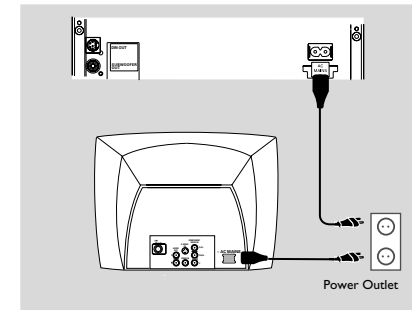
For better FM stereo reception, connect an outdoor FM antenna to the FM ANTENNA terminal.



Notes:

- Adjust the position of the antennas for optimal reception.
- Position the antennas as far as possible from your TV set, VCR or other radiation sources to prevent unwanted interference.

Step 5: Connecting the power cord



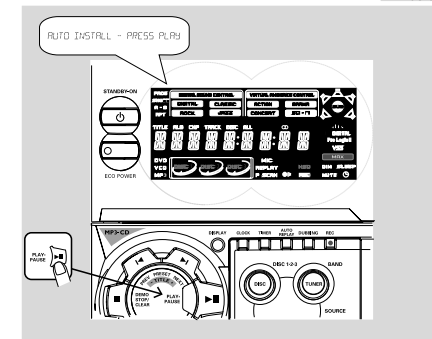
After everything is connected properly, plug in the AC power cord to the power outlet.

Never make or change any connection with the power switched on.

On the DVD Mini Hi-Fi System

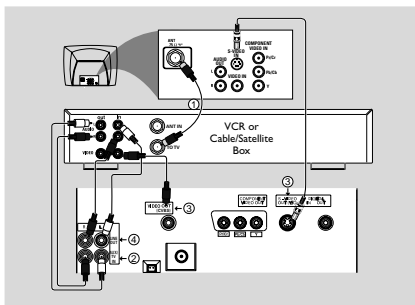
"AUTO INSTALL -PRESS PLAY" may appear on the display panel. Press **▶** on the front panel to search and store all available radio stations or press **■** to exit (See page 35, Tuner Operations- Presetting radio stations).

If your system is equipped with a Voltage Selector, set the **VOLTAGE SELECTOR** to the local power line voltage.



Connections

Connecting a VCR or cable/satellite box



Viewing and listening to playback

- 1 Connect the VCR or Cable/Satellite Box to the TV system as shown.
- 2 Connect the system's AUX/TV IN (R/L) jacks to the AUDIO OUT jacks on the VCR or Cable/Satellite box.

Before starting operation, press **AUX/TV** on the remote control to select "AUX" in order to activate the input source.

Using the VCR for recording DVDs

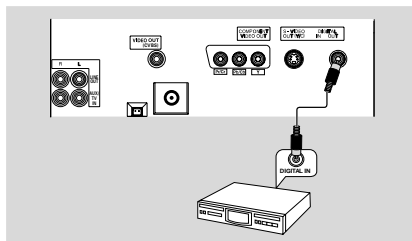
Some DVDs are copy-protected. You cannot record or dub protected discs using a VCR.

- 3 Connect the system's **CVBS** jack to the VIDEO IN jack on the VCR.
- 4 Connect the system's **LINE OUT (R/L)** jacks to the AUDIO IN jacks on the VCR. This will allow you to make analog stereo (two channel, right and left) recording.

To view DVD playback while recording

You must connect the system to your TV system using the S-VIDEO (as shown above) or the Component (Pr Pb Y) video connection.

Connecting digital audio equipment




Recording (digital)

Connect the system's DIGITAL OUT jack to the DIGITAL IN jack on a digital recording device (DTS-Digital Theater System compatible, with a Dolby Digital decoder, for example).

Before operation, set the DIGITAL OUTPUT according to the audio connection. (See page 31, Using the Setup Menu – Setting the digital output).

Functional Overview

Controls on the system

- ① **ECO POWER**
 - to switch the system on or to Eco Power Standby mode.
- ② **STANDBY ON** 
 - to switch the system on or to Standby mode.
- ③ **DISPLAY SCREEN**
 - to view the current status of the system.
- ④ **DISC TRAYS**
- ⑤ **DISC CHANGE**
 - to change disc(s).
- ⑥ **DISC 1 / DISC 2 / DISC 3**
 - to select a disc tray for playback.
- ⑦ **OPEN•CLOSE**
 - to open or close the disc tray.
- ⑧ **INTERACTIVE VU METER**
 - to show the VU (volume unit) meter in music or volume mode depending on the display mode selected.
- ⑨ **SENSOR**
 - point the remote control towards this sensor.
- ⑩ **VOLUME**
 - to increase or decrease the volume.
- ⑪ **Tape Deck Operation**
 - AUTO REPLAY**
 - to select continuous playback in either AUTO PLAY or ONCE mode only.
 - DUBBING**
 - to dub a tape.
 - REC**
 - to start recording on tape deck 2.
- ⑫ **VOCAL**
 - to fade out the original vocal from Karaoke or to switch between mono or stereo mode during audio disc playback.
- ⑬ **JOG CONTROL**
 - to select the desired sound effect for the selected sound feature.
- ⑭ **KEY CONTROL**
 - to change the tone level to suit your vocal range.
 - b**to decrease the key tone level.
 - h**to restore the key tone level to original setting.
 - #**to increase the key tone level.
- ⑮ **ECHO**
 - to adjust the echo level for karaoke after inserting the microphone.

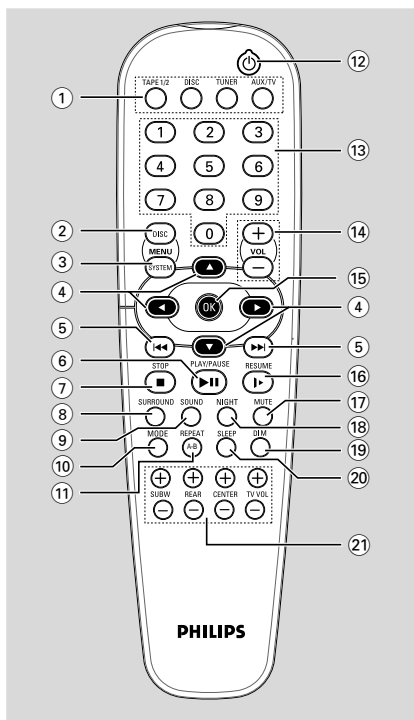
- ⑯ **SOUND**
 - to activate or deactivate the surround sound effect.
- ⑰ **MAX SOUND (MAX)**
 - to activate or deactivate the optimal mix of various sound features.
- ⑱ **MIC/LEVEL**
 - to connect microphone jack.
 - to adjust the mixing level for karaoke or microphone recording.
- ⑲ **▲**
 - to open the tape deck door.
- ⑳ **TAPE DECK 1**
- ㉑ **TAPE DECK 2**
- ㉒ **SOURCE**
 - to select the following:
 - DISC (DISC 1•2•3)**
 - to select disc tray 1, 2 or 3
 - TUNER (BAND)**
 - to select waveband: FM or AM.
 - TAPE (TAPE 1-2)**
 - to select tape deck 1 or 2.
 - AUX/TV**
 - to select a connected external source: TV/CDR or AUX (auxiliary) mode.
- ㉓ **Mode Selection**
 - PLAY/PAUSE ►II**
 - for DISC to start or interrupt playback.
 - for TAPE to start playback.
 - for PLUG&PLAY ... *(on the system only)* to initiate plug & play mode.
 - SEARCH•TUNING ◀◀ ▶▶**
 - (ALBUM – / +)**
 - for DISC to search backward/forward.
 - for TAPE to rewind or fast forward.
 - for TUNER to tune to a lower or higher radio frequency.
 - for CLOCK *(in standby mode)* to set the minute and hour.
 - DEMO STOP/CLEAR ■**
 - for DISC to stop playback or to clear a programme.
 - for DEMO *(in Standby or ECO power mode)* to activate/deactivate demonstration.
 - for PLUG&PLAY ... *(on the system only)* to exit plug&play mode.

Functional Overview

- PREV / PRESET / NEXT ◀▶**
 - (TITLE – / +)**
 - for DISC to select previous/next title, chapter and track during playback.
 - for TUNER to select a preset radio station.
 - for CLOCK *(on the system only)* to set the minute.
- ㉔ 
 - to connect headphones.
- ㉕ **SUBTITLE**
 - to select the preferred language for subtitle.
- ㉖ **LANGUAGE**
 - to select the preferred language for audio recorded.
- ㉗ **PROGRAM**
 - for DISC to programme disc tracks.
 - for TUNER to programme preset radio stations.
- ㉘ **DISPLAY**
 - to view the time, title or chapter information.
- ㉙ **CLOCK**
 - to view the clock, set the clock.
- ㉚ **TIMER**
 - to set the timer.

Functional Overview

Remote control



Notes:

- First, select the source you wish to control by pressing one of the source select keys on the remote control (DISC or TUNER, for example).
- Then select the desired function (▶, ◀◀, ▶▶ for example).

① SOURCE

- to select the relevant active mode: TAPE, DISC, TUNER or AUX/TV.
- TUNER: toggles between FM and AM band.
- AUX/TV: toggles between AUX-ANA and AUX-DIG (Digital Input) mode.

② DISC MENU (disc mode only)

- to enter or exit the disc contents menu.

③ SYSTEM MENU (disc mode only)

- to enter or exit the system menu bar.

④ ▲ / ▼ / ◀ / ▶

- in Tuner mode, to select a preset radio station number (◀ or ▶).
- to select movement direction in disc contents menu/system menu bar.

⑤ ◀◀ / ▶▶

- in Disc mode, press to skip to the previous/next chapter/track.
- in Disc mode, press and hold to fast reverse/forward the disc.
- in Tuner mode, to tune to a lower or higher radio frequency.

⑥ PLAY/PAUSE ▶||

- to start or interrupt disc playback.

⑦ STOP ■

- to stop playing the disc.

⑧ SURROUND

- to select multichannel surround (Dolby Digital, DTS and VSS) or stereo sound effect.

⑨ SOUND

- to select various sound effect: CONCERT, DRAMA, ACTION, SCI-FI, CLASSIC, JAZZ, ROCK or DIGITAL, MAX ON, MAX OFF.

⑩ MODE

- to select the REPEAT or SHUFFLE function.

⑪ REPEAT A-B

- to repeat a specific section on a disc.

⑫ POWER ⏻

- to switch to standby mode.

⑬ Numeric Keypad (0-9)

- to enter a track/title number of the disc.
- to enter a number of preset radio stations.

⑭ VOL +/-

- adjust the volume level.

⑮ OK

- to exit or confirm the selection.

⑯ RESUME

- to continue disc playback after interruption.

⑰ MUTE

- to interrupt or resume sound reproduction.

⑱ NIGHT (Dolby Digital mode only)

- to optimize the dynamic effect of the sound output.

⑲ DIM

- to select different brightness for the display.

Functional Overview

⑳ SLEEP

- to set the sleep (auto-off) timer function.

㉑ SUBW +/- (for subwoofer connection only)

- to adjust the subwoofer's level.

REAR +/- (for 5.1 speaker connection only)

- to adjust the rear speakers' level.

CENTER +/- (for 5.1 speaker connection only)

- to adjust the center speaker's level.

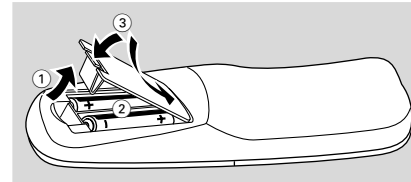
TVVOL +/-

- to adjust Philips' television volume level.

IMPORTANT!

– Make sure to complete the preparation procedures before operating the system.

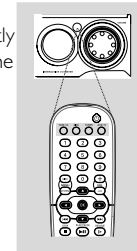
Step 1: Inserting batteries into the remote control



- ① Open the battery compartment.
- ② Place two batteries (Type R06 or AA) in the compartment with the correct polarity as indicated by "+" and "-" symbols.
- ③ Close the cover.

Using the remote control to operate the system

- 1 Point the remote control directly at the remote sensor (IR) on the front panel.
- 2 Select the source you wish to control by pressing one of the source select buttons on the remote control (for example TAPE, TUNER).
- 3 Then select the desired function (for example ►|| ◀◀, ►►).

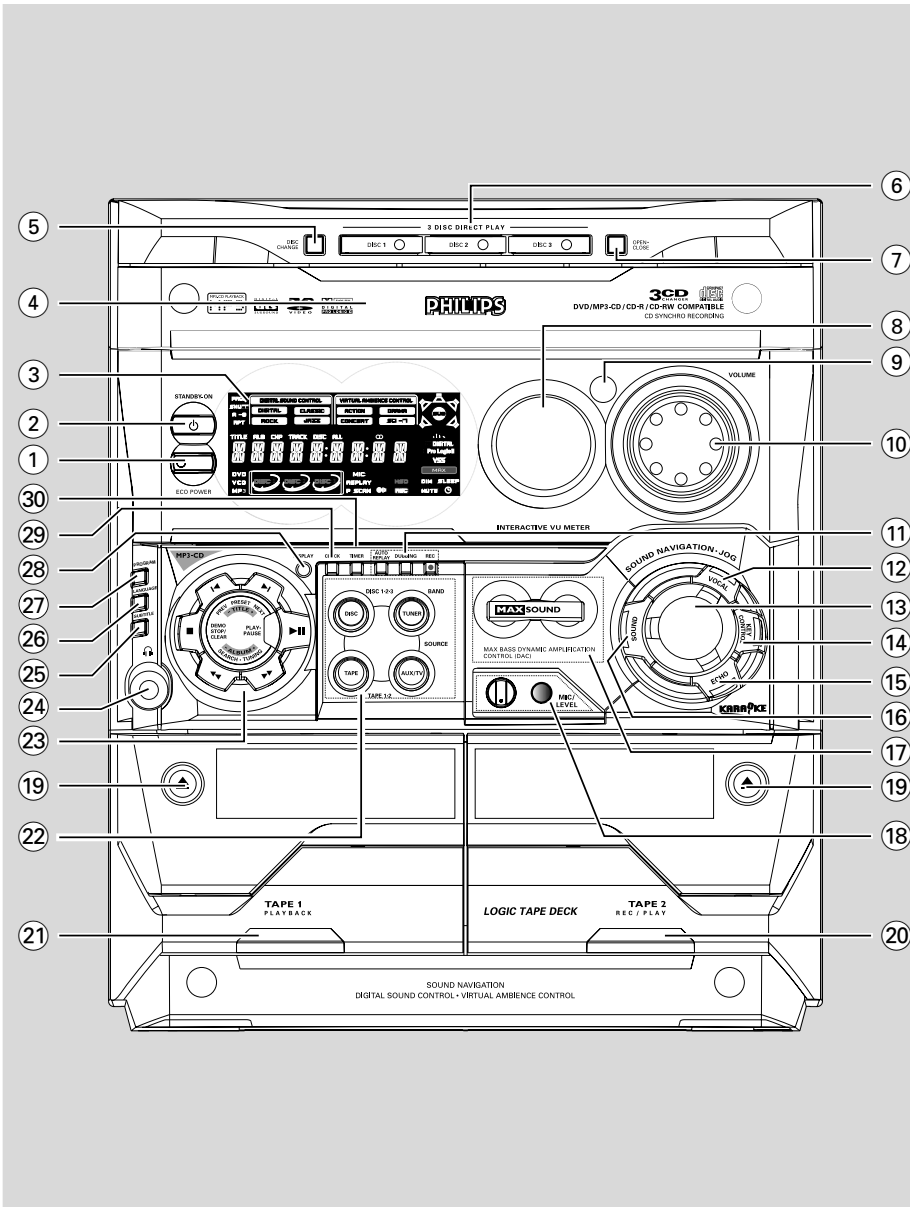


CAUTION!

– Remove batteries if they are exhausted or will not be used for a long time.

– Do not use old and new or different types of batteries in combination.

– Batteries contain chemical substances, so they should be disposed of properly.



Step 2: Setting the clock

The clock can be set in either 12-hour or 24-hour mode ("PM 00:00" or "00:00" for example).

- 1 Go into Standby mode.
If you have not set the clock, "--:--" will display until you set the clock.



- 2 Press **CLOCK** and "00:00" blinks on the display.
The current time is flashing on the display.
If you have not set the clock, "--:--" will appear on the display.
- 3 Press ◀ or ▶ on the system to set the hours.
- 4 Press ◀◀ or ▶▶ on the system to set the minutes.
- 5 Press **CLOCK** to confirm your setting, and then go into standby mode. The system will store the setting automatically.

The time setting becomes effective.

To exit the setting without storing

Press ■ on the system to exit.
"CANCEL" will appear on the display.
Press **ECO POWER** to exit setting mode and go into **ECO POWER** mode.
You can also press **DISC, DISC1~3, DISC CHANGE, OPEN/CLOSE** to exit setting mode and go into disc mode.

The system will also exit setting mode and go to tuner, AUX, tape mode when you press the corresponding source button.

Viewing the clock in any source mode

Press **DISPLAY** on the system to toggle between 12-hour and 24-hour modes.
The time will be displayed for a few seconds.

Notes:

- The clock will be cancelled when the power cord is disconnected or if a power failure occurs.
- During clock setting, if no button is pressed within 30 seconds, the system will exit the setting mode and go into standby mode.

Preparations

Step 3: Setting the TV set

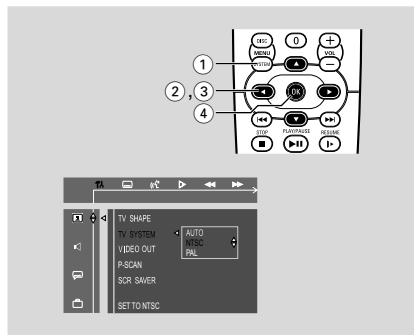
IMPORTANT!

– Make sure you have completed all the necessary connections.

- 1 Press **DISC (DISC 1•2•3)** on the front panel (or press **DISC** on the remote control).
- 2 Turn on the TV set and set to the correct Video-In channel. You should see the blue Philips DVD background screen on the TV set.
You may go to channel 1 on your TV set, then press the channel down button repeatedly until you see the Video In channel.
Or, you can use the TV remote control to select different video modes.
Or, set TV to channel 3 or 4 if you are using an RF modulator.

Selecting the color system that matches your TV set

This DVD Mini Hi-Fi System is compatible with both NTSC and PAL. For the playback of a DVD disc on this DVD Mini Hi-Fi System, the color systems of the DVD, TV set and DVD Mini Hi-Fi System should match.



- 1 In disc mode, stop playback and press **SYSTEM MENU**.
- 2 Select icon and press **▼**.
- 3 Press **◀ / ▶ / ▲ / ▼** keys on the remote control to toggle through the functions and select your preferred option.
Move to and press **▶**.
Move to "TV System" and press **▶**.

AUTO

– Select this if the connected TV set is compatible with both NTSC and PAL (multi system). The output format will be consistent with the video signal of the disc.

NTSC

– Select this if the connected TV set is NTSC system. It will change the video signal of a PAL video disc and output to NTSC system.

PAL

– Select this if the connected TV set is PAL system. It will change the video signal of an NTSC disc and output to PAL format.

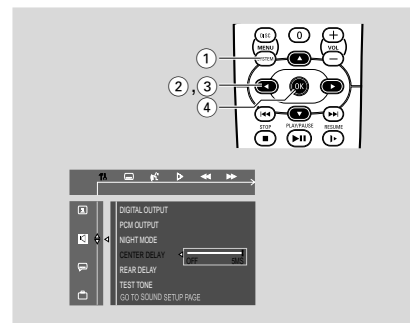
- 4 Select an item and press **OK**.

To remove the menu

Press **SYSTEM MENU**.

Step 4: Setting speakers

You can adjust the delay time (center and rear only) for individual speakers to optimize the sound effect according to your surroundings and setup. Speaker settings are only active on effective in the case of Multi-channel audio output.



- 1 In disc mode, press **SYSTEM MENU**.
- 2 Select icon and press **▼**.
- 3 Press **◀ / ▶ / ▲ / ▼** keys on the remote control to select your preferred option.
Move to and press **▶**.
Move to "CENTER/REAR DELAY" and press **▶**.
- 4 Press **▶** to set CENTER/REAR DELAY values you want.
Use longer delay time if the surround speakers are closer to the listener than the front speakers.
- 5 Press **OK** to confirm.

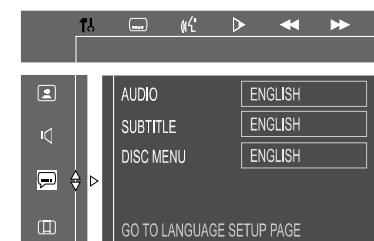
To remove the menu

Press **SYSTEM MENU**.

Preparations

Step 5: Setting language preference

You can select your preferred language settings so that this DVD Mini Hi-Fi System will automatically switch to the language for you whenever you load a disc. If the language selected is not available on the disc, the language set by default will be used instead. But the menu language of the DVD Mini Hi-Fi System cannot be changed once selected.



- 1 In disc mode, stop playback and press **SYSTEM MENU**.
- 2 Select icon and press **▼**.
- 3 Press **◀ / ▶ / ▲ / ▼** keys on the remote control to select your preferred option.
Move to and press **▶**.
Move to one of the following and press **▶**.
 - Audio (disc's soundtrack)
 - Subtitle (disc's subtitles)
 - Menu (on screen menu)
- 4 Press **▲ / ▼** to select a language and press **OK**.
- 5 Repeat **steps 3~4** for other settings.

To remove the menu

Press **SYSTEM MENU**.

Troubleshooting

WARNING

Under no circumstances should you try to repair the system yourself, as this will invalidate the warranty. Do not open the system as there is a risk of electric shock.

If a fault occurs, first check the points listed below before taking the system for repair. If you are unable to remedy a problem by following these hints, consult your dealer or service center.

| Problem | Solution |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No power. | <ul style="list-style-type: none">– Check if the AC power cord is properly connected. |
| "UNREADABLE DISC" is displayed. | <ul style="list-style-type: none">– Check if the disc is inserted upside down.– Wait until the moisture condensed at the lens has cleared.– Replace or clean the disc, see "Maintenance".– Use a readable disc or correctly recorded format MP3-CD. |
| No picture. | <ul style="list-style-type: none">– Select the appropriate video input mode on the TV set.– Check if the TV set is switched on.– Check the video connection.– Check if the system is securely connected. |
| Distorted or poor picture. | <ul style="list-style-type: none">– Sometimes a slight picture distortion may appear. This is not a malfunction.– Clean the disc.– Connect the system to the S-video input of your TV set. |
| The aspect ratio of the screen cannot be changed even though you have set the TV shape. | <ul style="list-style-type: none">– The aspect ratio is fixed on the DVD disc.– The aspect ratio may not be changed for some TV systems. |
| The DVD player does not start playback. | <ul style="list-style-type: none">– Insert a readable disc.– Check the disc type, color system and region code.– Clean the disc.– Place the disc with the playback side down.– Press SYSTEM MENU to turn off the setup menu.– Cancel the parental control rating function or change the rating level.– Moisture has condensed inside the system. Remove the disc and leave the system turned on for about an hour. |
| The system does not respond when the buttons are pressed. | <ul style="list-style-type: none">– Disconnect the power plug from the jack, and insert again. |

Troubleshooting

| | |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The language for the sound or subtitle cannot be changed when playing a DVD. | <ul style="list-style-type: none">– Multi-language sound or subtitle is not recorded on the DVD.– Changing the language for the sound or subtitle is prohibited on the DVD. |
| No image is output when a function is selected. | <ul style="list-style-type: none">– Make sure the component is connected correctly.– Press the correct function button for the input source. |
| Sound cannot be heard or is of poor quality | <ul style="list-style-type: none">– Adjust the volume.– Disconnect the headphones.– Check that the speakers are connected correctly.– Check if the stripped speaker wire is clamped.– If the system is in pause, slow motion or fast forward/reverse mode, press ►\|\| to resume the normal play mode.– Make sure the MP3-CD was recorded within 32-256 kbps bit rate with sampling frequencies at 48 kHz, 44.1 kHz or 32 kHz. |
| Poor radio reception. | <ul style="list-style-type: none">– If the signal is too weak, adjust the antenna or connect an external antenna for better reception.– Increase the distance between the MiNi HiFi System and your TV set or VCR. |
| Recording or playback cannot be made | <ul style="list-style-type: none">– Clean deck parts, see "Maintenance".– Use only NORMAL tape.– Apply a piece of adhesive tape over the missing tab space. |
| The tape deck door cannot open | <ul style="list-style-type: none">– Remove and reconnect the AC power plug and switch on the system again. |
| Left and right sound outputs are reversed. | <ul style="list-style-type: none">– Check the speaker connections and location. |
| The remote control does not function. | <ul style="list-style-type: none">– Point the remote control at the remote control sensor of the unit.– Reduce the distance to the player.– Remove any possible obstacles.– Replace the batteries with new ones.– Check that the batteries are loaded correctly. |
| The display is dark. | <ul style="list-style-type: none">– Press DIM again. |
| The timer is not working | <ul style="list-style-type: none">– Set the clock correctly.– If recording is in progress, stop it |
| The Clock/Timer setting is erased | <ul style="list-style-type: none">– Power has been interrupted or the power cord has been disconnected. Reset the clock/timer. |

System, Region code, Tuner, etc. setting procedure

1) System Reset

- Press "SYSTEM" button on R/C. TV show "SETUP"
- Select the menu using the "▼" and "▶" button on R/C
- Go feature setup page to do system reset

2) Region Code Change

After replacement / repair of the MPEG board, the customer setting and the region code may be lost. Changing the Region code will put the player back in the state which it has left the factory.

| Region Code | |
|-------------|----------------------|
| 1 | USA |
| 2 | EU |
| 3 | AP |
| 4 | Australia, NZ, Latam |
| 5 | RUSSIA, INDIA |
| 6 | CHINA |

| TV System | |
|-----------|------|
| 1 | NTSC |
| 2 | PAL |
| 3 | AUTO |

| Menu/ Audio Subtitle (AS) Language | |
|------------------------------------|---------|
| 1 | English |
| 2 | English |
| 3 | English |
| 4 | English |

| AFS | |
|-----|-------------------------|
| 001 | LX3000D/LX3500D /MRD200 |
| 002 | MX3600D/MX3800 |
| 003 | LX3700D/LX3750W |
| 005 | MRD210 |
| 006 | MX3660D |
| 008 | FW-D550 |

| oem derivative | |
|----------------|--|
| 08 | |

- region code = 1 digit
- tv system = 1 digit
- "as/menu lang" = 1 digit
- "AFS" = "architecture Feature Set" = 3 digits

This field is used to define the architecture / features sets for each product.

- "oem derivative" = 2 digit

This field is used to define the OEM set. This will affect the background display.

Hence in total, reprogramming will be done by way of the remote control. It should run as below :-

- Put the player in stop mode. No disc loaded.
- Press the following key on remote control:

For FW-D550 /21M (A/P) :
<PLAY> <159> <331> <008> <08> <PLAY>

* After the Region Code is changed it is necessary to reset the system so that the new Region Code will be fully effective. All customer setting will be lost.

* On top of the maximum number of times allowed for changing the region code is changed to 25.

* When the counter reaches 25, you will not be able to further change the code until you reset the timer by the Region Code timer reset procedure

CAUTION !

This information is confidential and may not be distributed. Only a qualified service person should reprogram the Region Code.

3) Region code change timer reset

Press below key to reset the timer :

- In DISC source, stop mode and no disc in tray.
- Press R/C "Play -159-PLAY" to reset timer to 25

4) Tuner area change

- Press the "OPEN/CLOSE" button to open the set's door
- Press "1" "5" "9" button by using R/C.
- TV Show "TUNER AREA"
- Select the tuner area you want by using the "▼" and "▶" button on R/C, then press "OK" to confirm. TV show "TUNER AREA CHANGED"

If you didn't press it in five seconds, the system will remain original status.

| AREA | BAND | FREQUENCY (Hz) | | STEP(Hz) |
|----------------|------|-----------------|-------|-----------|
| A/P (21M) | FM | 87.5M | 108M | 50K |
| | MW | 531K | 1602K | 9K |
| | | | 530K | 1710K |
| KOREA (33) | FM | 87.5M | 108M | 50K |
| | MW | 531K | 1602K | 9K |
| | | | 530K | 1710K |
| AUSTRALIA (30) | FM | 87.5M | 108M | 50K |
| | MW | 531K | 1602K | 9K |
| | | | 530K | 1710K |

Note :-

Please refer to the above different tuner area.

5. Video Out Change

- Press "SYSTEM" on R/C button
- Select the menu using the "▼" and "▶" button on R/C
- Go picture setup page select Video out item.

6. Password Change

- Press "SYSTEM" on R/C button
 - Select the menu using the "▼" and "▶" button on R/C
 - Go feature setup page select "PASSWORD". TV show "ENTER CODE". Press 4 times of "STOP" button on R/C.
 - Select "PARENTAL" "8 ADULT" on TV.
 - Enter PASSWORD to "1234".
- * "1234" is a default password supplied.

7. Checking on the Software version

- Open the CD door.
- Press "123" and "OK" on the remote control.
- TV will show the version on screen.

8. Upgrading new software

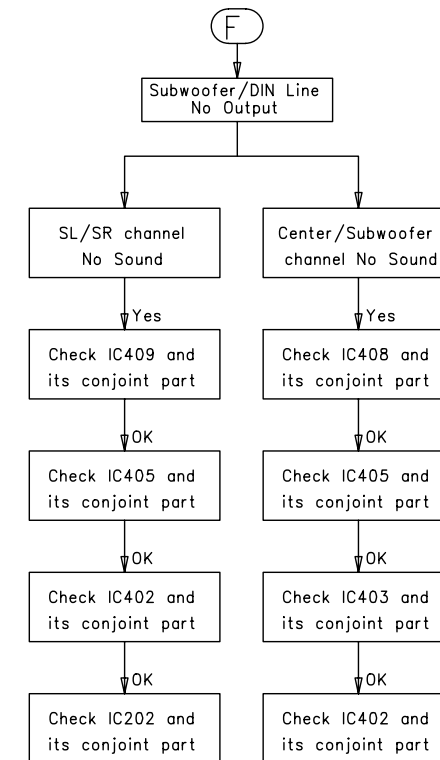
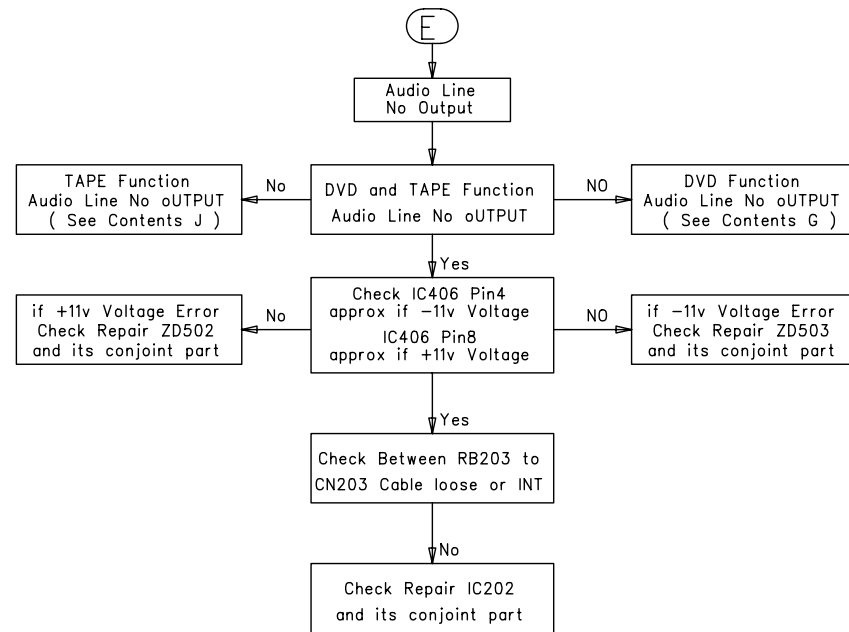
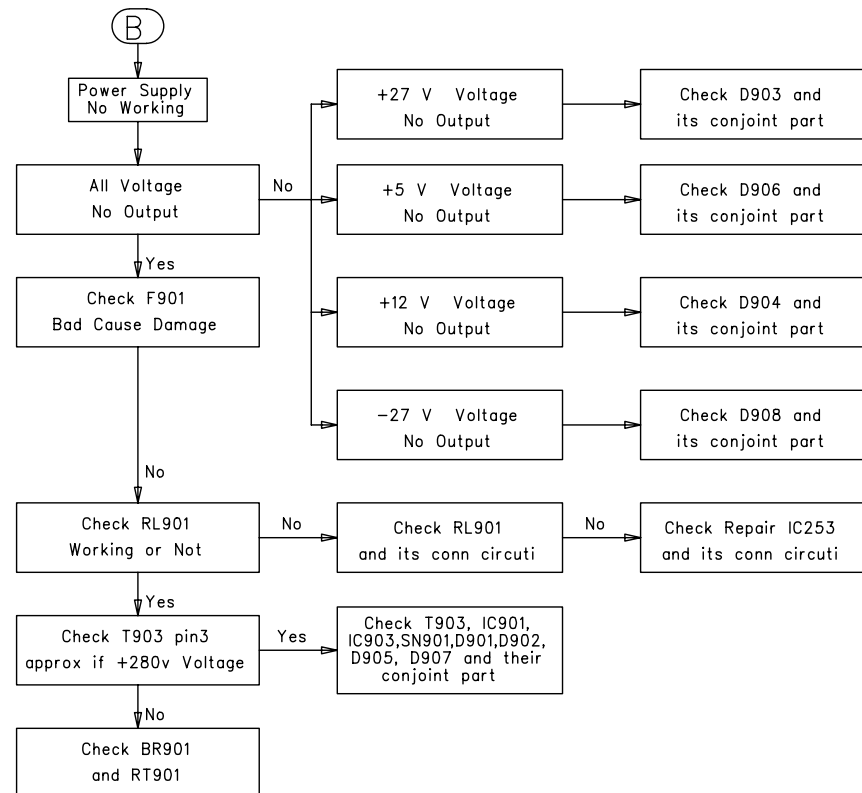
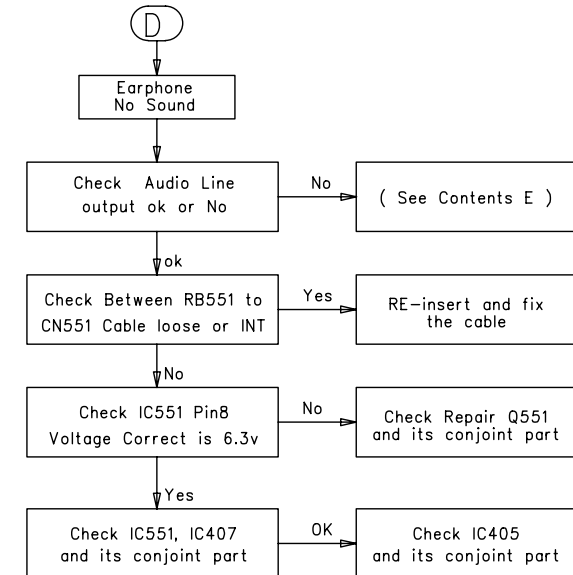
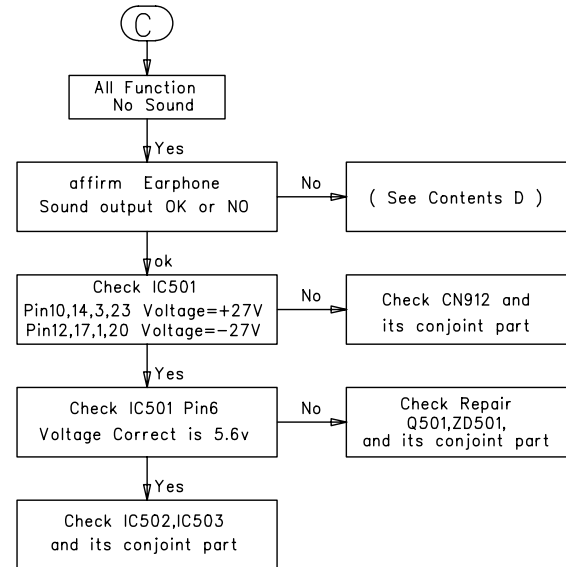
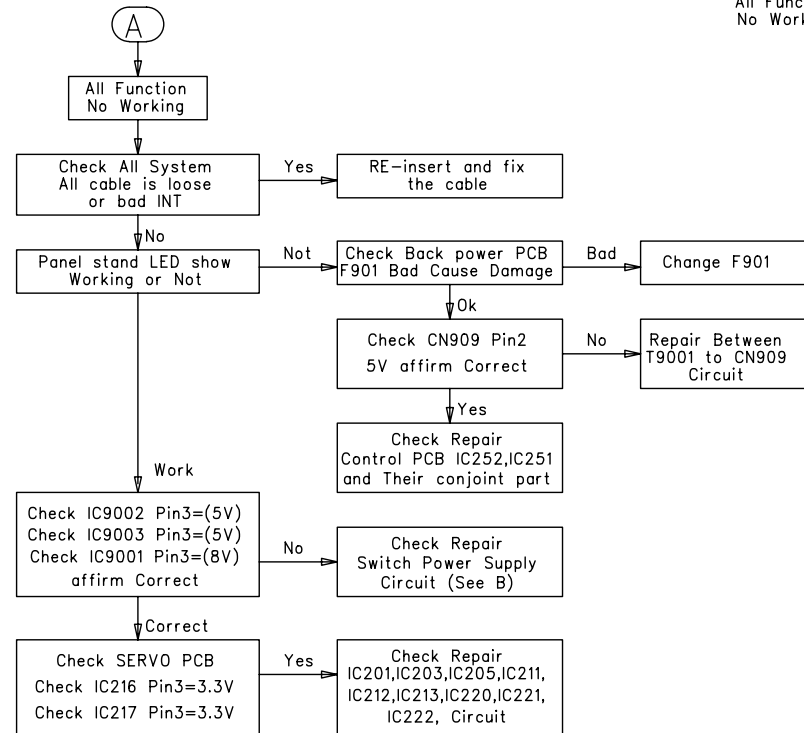
- Open the door, then insert the CD-R program disc.
- Close the door.
- TV will show:-
 - "disc loading"
 - "bank30.rom"
 - "writing" about 6 seconds.
 - "Done"

* The latest upgraded is in version VER1027.

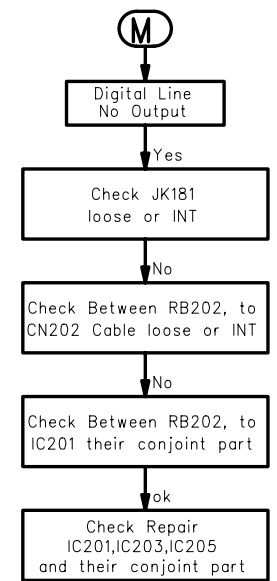
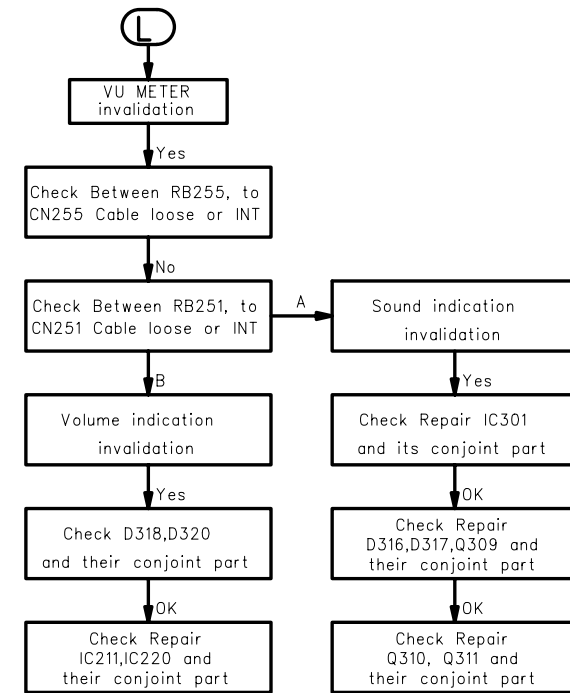
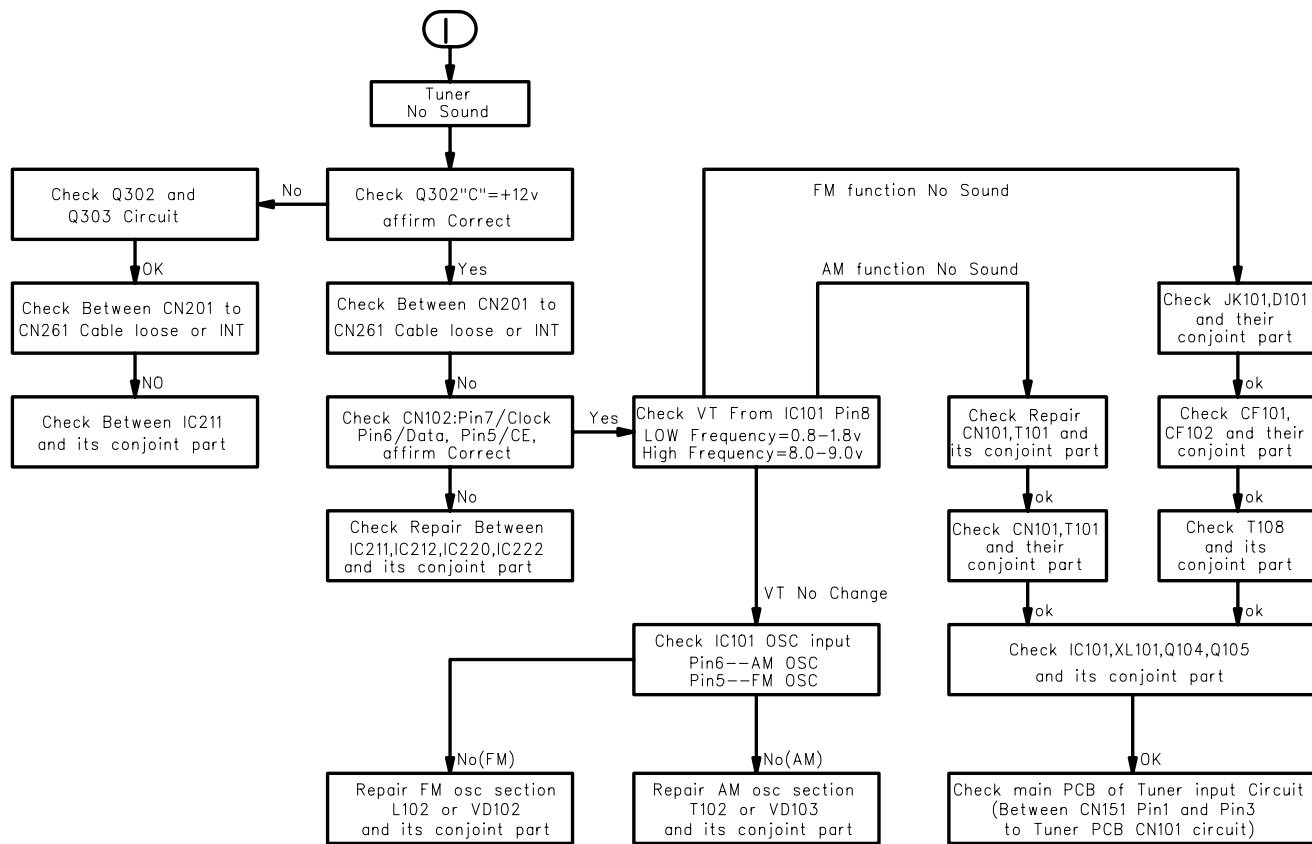
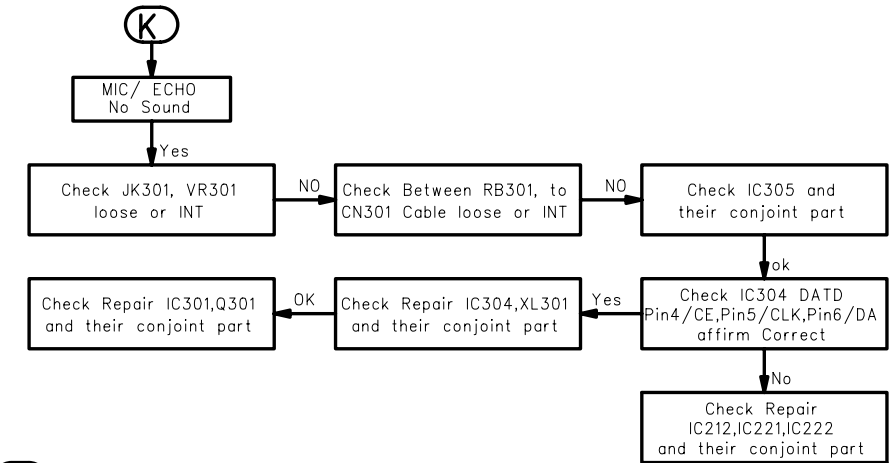
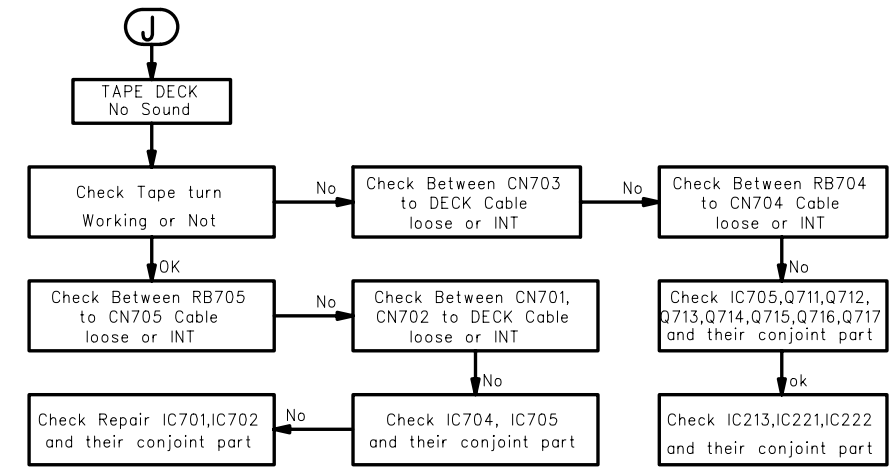
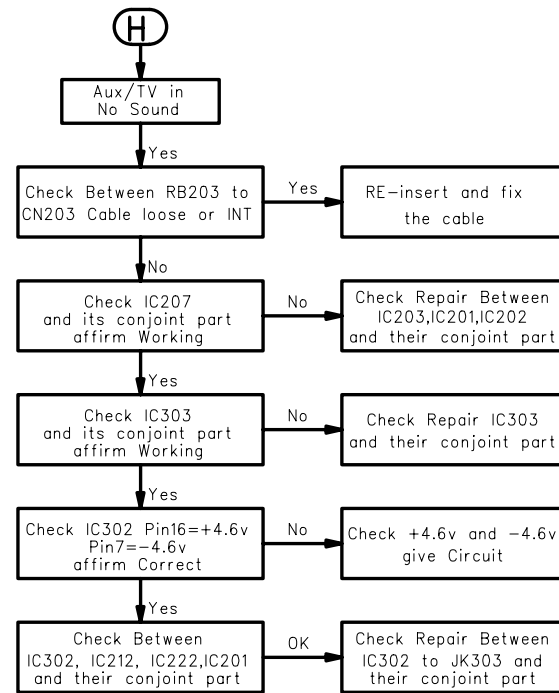
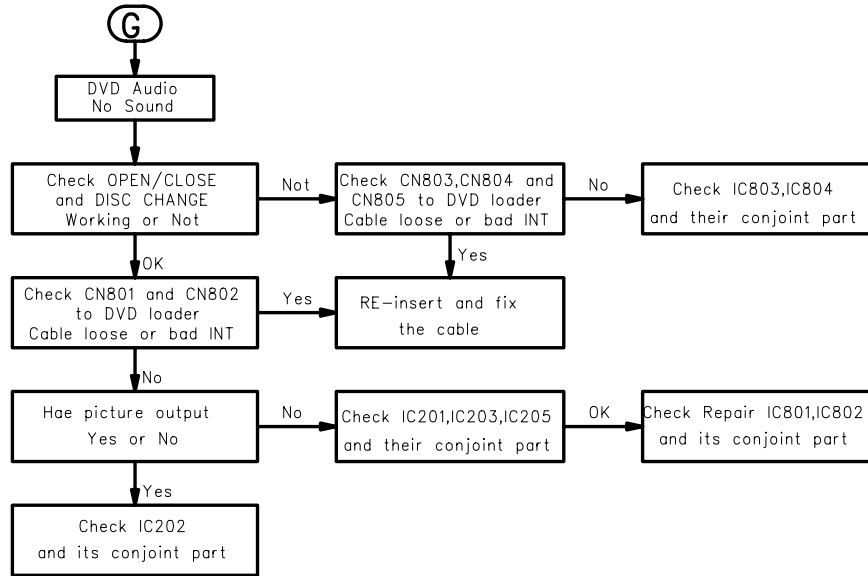
REPAIR INSTRUCTIONS

MAIN UNIT REPAIR CHART

- (A)
All Function
No Working
- (B)
Power Supply
No Working
- (C)
All Function
No Sound
- (D)
Earphone
No Sound
- (E)
Audio Line
No Output
- (F)
Subwoofer/DIN Line
No Output
- (G)
DVD Audio
No Sound
- (H)
Aux/TV in
No Sound
- (I)
Tuner
No Sound
- (J)
TAPE DECK
No Sound
- (K)
MIC/ ECHO
No Sound
- (L)
VU METER
invalidation
- (M)
Digital Line
No Output



REPAIR INSTRUCTIONS



DISMANTLING INSTRUCTIONS

Dismantling of the Cassette Cover

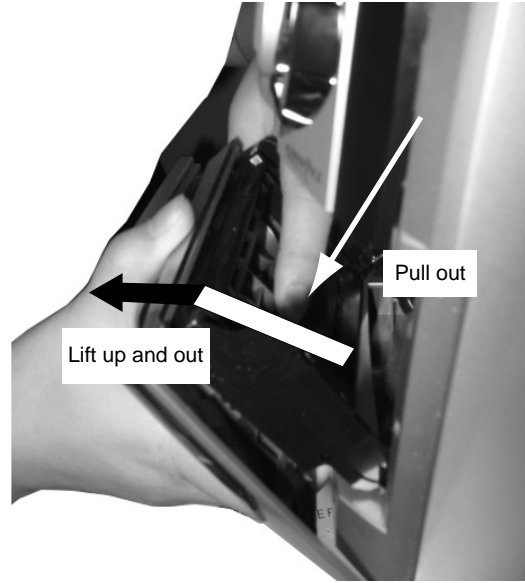


Figure 1

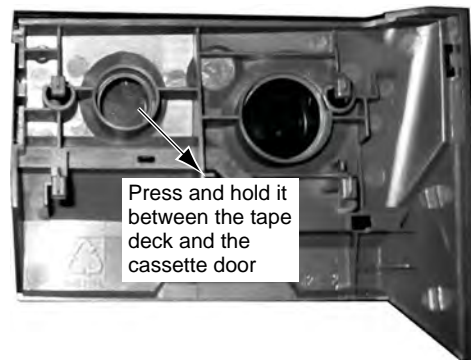


Figure 2

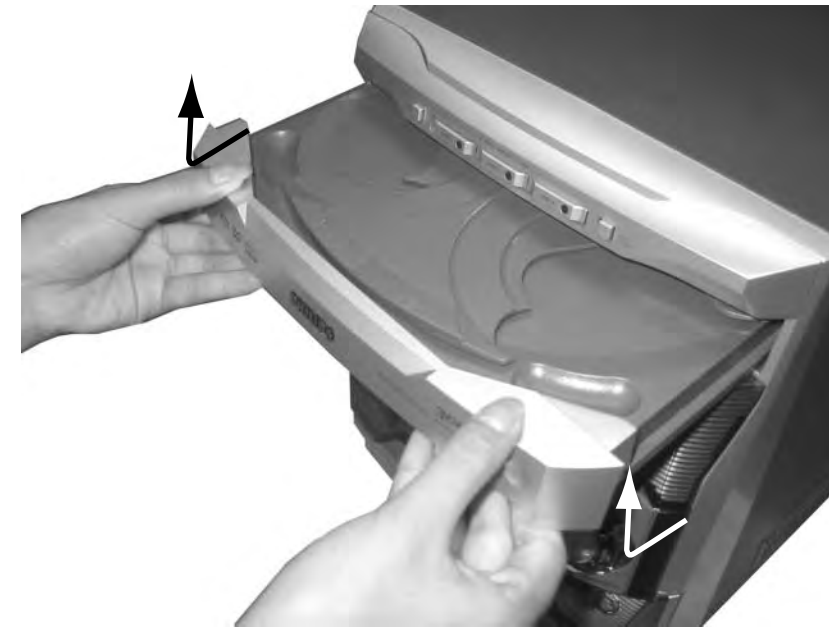


Figure 4

Dismantling the 3CDC Module

- 1) Loosen the 4 screws, slide Cover top (pos 255) towards the rear and remove it upwards.
- 2) Push the gear slowly towards the front as shown in figure 3 until the CDC tray starts to move out of the Front Cabinet. The CDC tray is now disengaged and can be pulled out completely.
- 3) Remove the Cover Tray as shown in figure 4.
- 4) Remove the Cover Tray as shown in figure 4.
- 5) Loosen 4 screws A to remove the CDC Module (pos 1105) as shown in figure 3.

Dismantling of the Cover Front Display and Cover Front Ornamental (pos 130)

- 1) Remove the Volume knobs as stated in Dismantling the Cover Front Display in Figure 5.

Notes: *There is nothing are sandwiched between the Front Cabinet (pos 101) and Cover Front Display (pos 129) but it has to be removed in order to reach the catches for the Cover Front Ornamental (pos 130) .*

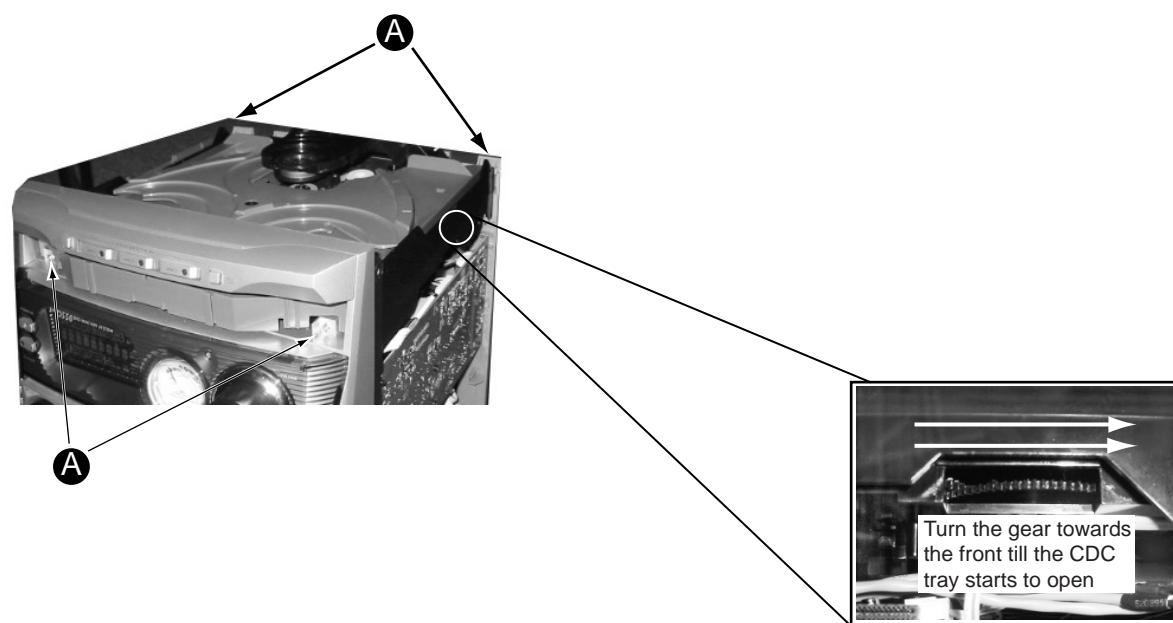


Figure 3

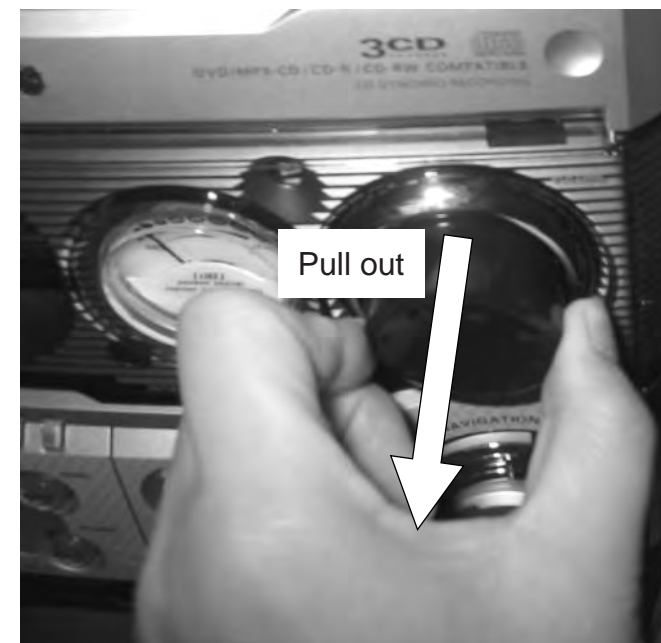


Figure 5

Detaching the Main board and Front Cabinet Assembly from the Bottom/Rear assembly

- 1) Release 2 catches ' B ' to free the Main board from the Front Cabinet Assembly as shown in figure 6.
- 2) Loosen 2 screws ' D ' at the bottom of the Front Cabinet on both sides of the set.
- 3) Release 2 catches ' C ' on both sides of the Front Cabinet and pull the Front Cabinet assembly out of the Bottom plate.

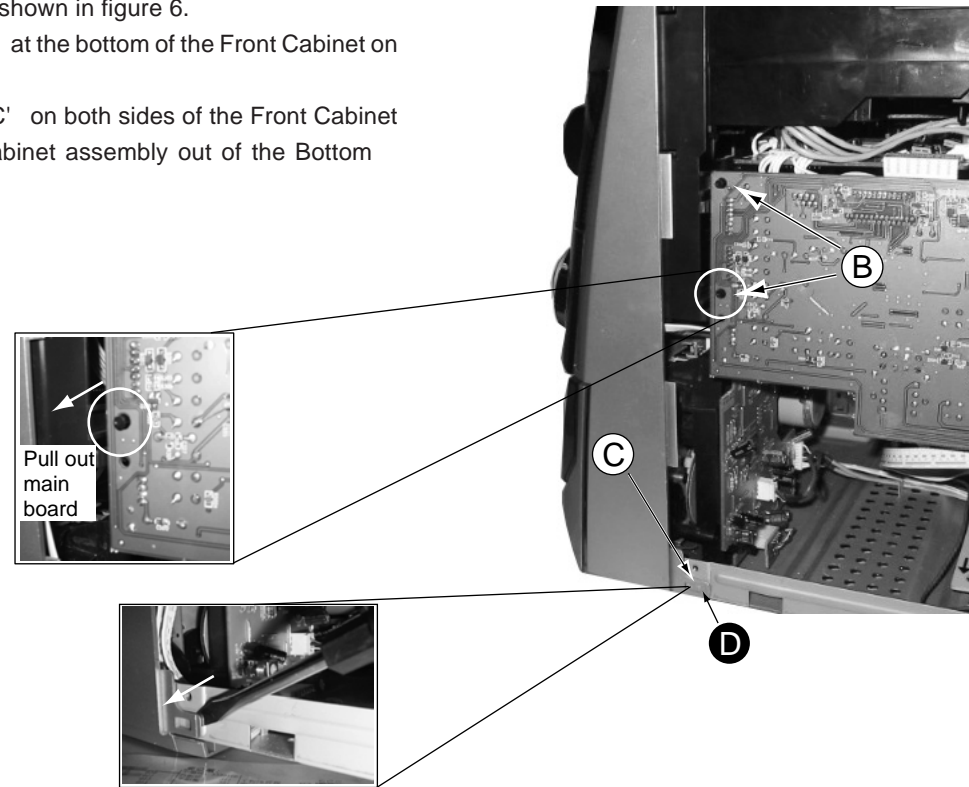


Figure 6

Dismantling of the Rear Panel

- 1) Loosen 8 screws ' J ' to remove the Rear Panel figure 11.
- 3) Release 2 catches ' K ' on both sides of the Rear Panel with the help of a minus screw driver and pull out the Rear Panel figure 11.

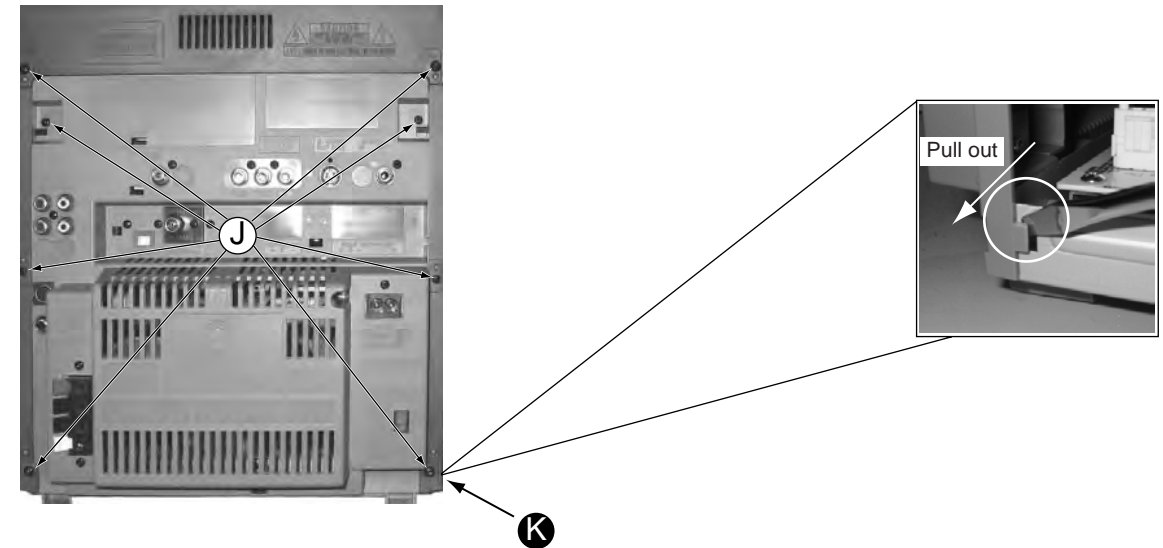


Figure11

Dismantling of the Key Board , VFD Board, Tape Board and Cassette module

- 1) Loosen 5 screws ' E ' to remove the Bracket CDC Right as shown in figure 7.
- 2) Loosen 5 screws ' F ' to remove the KEY board figure 7.
- 3) Loosen 9 screws ' H ' to remove the VFD Board figure 9.
- 4) Loosen 1 screws ' G ' to remove the Tape Board figure 8.
- 5) Loosen 8 screws ' I ' to remove the Cassette Module figure 10.

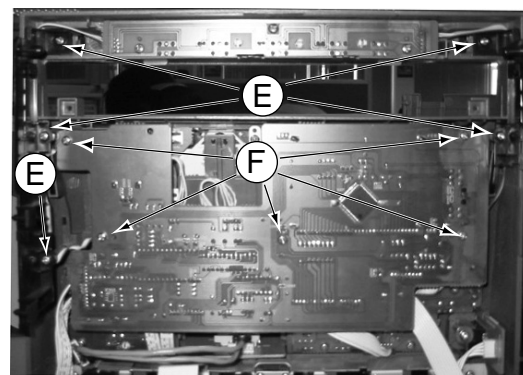


Figure 7

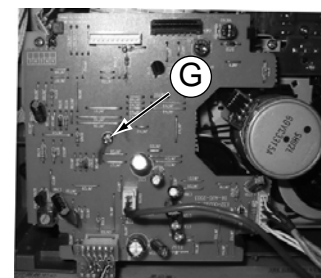


Figure 8

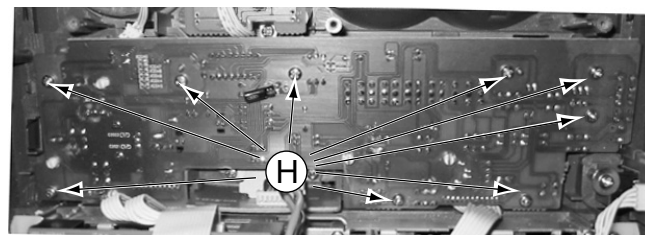


Figure 9

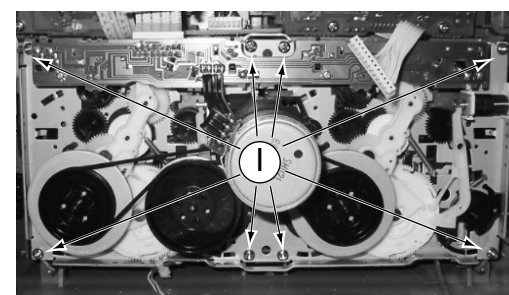


Figure 10

Dismantling of the Power Board

- 1) Loosen 4 screws ' L ' to remove the Power Board figure 12.

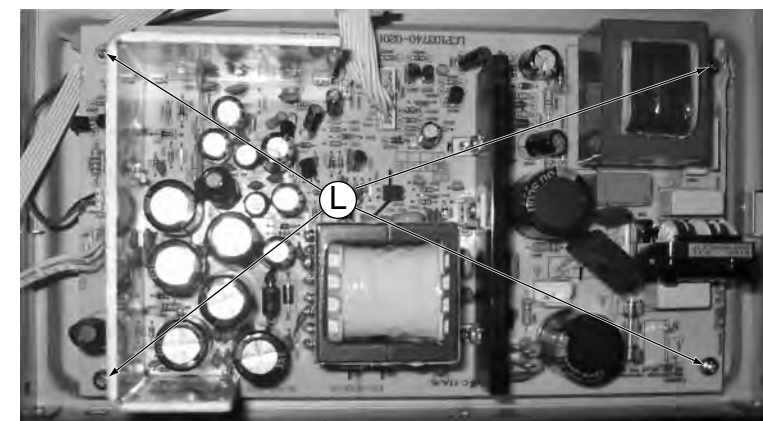


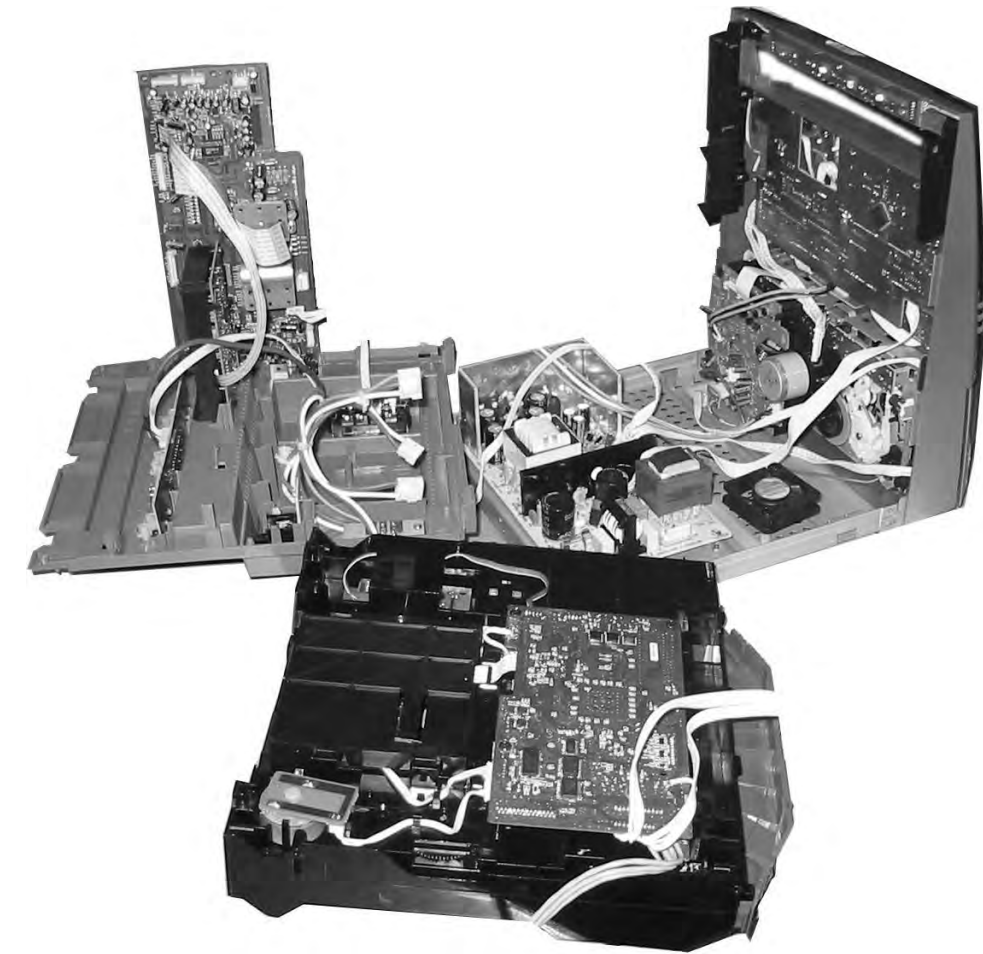
Figure 12

Service positions

Service position A

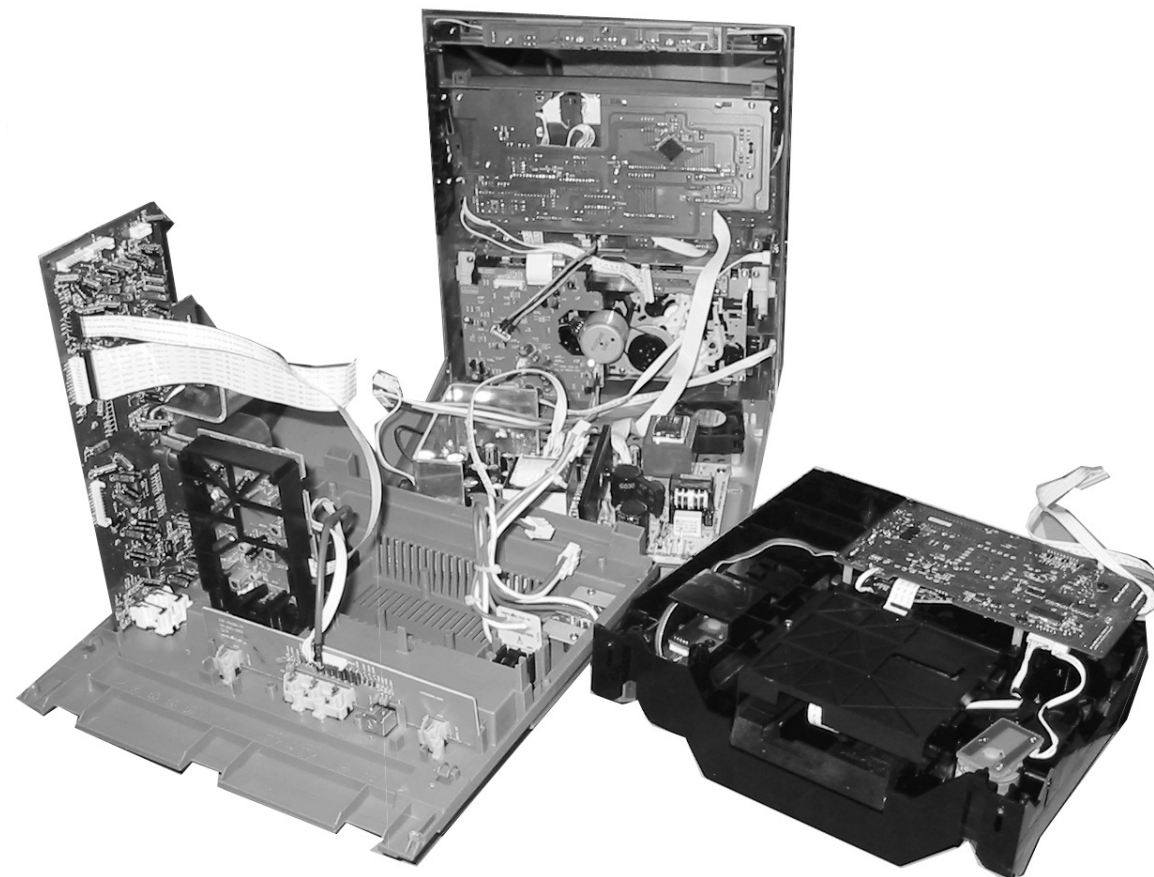


Service position B

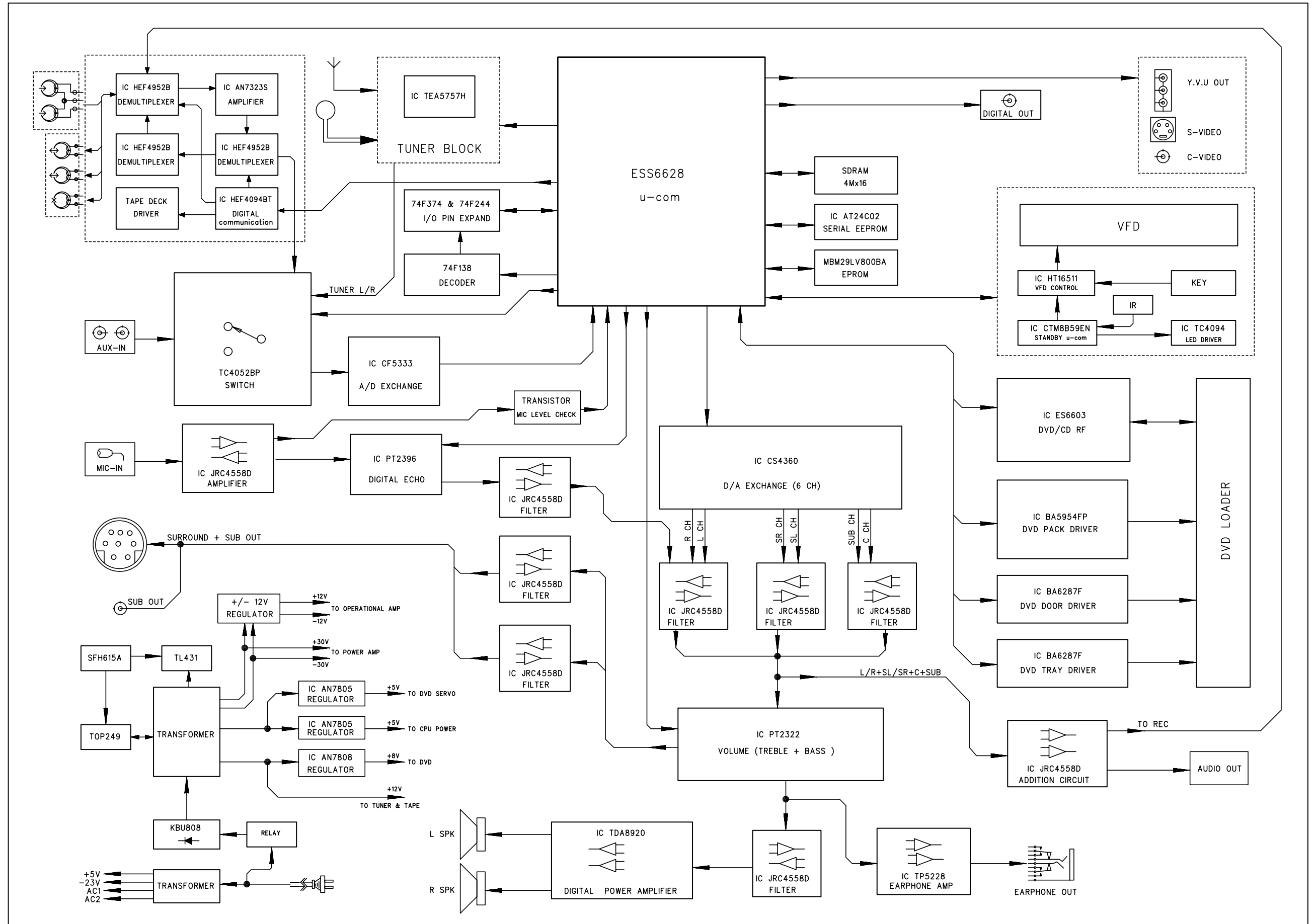


Note: After re-assembly, it is very important to ensure the wires are properly inserted into their respective sockets and routed not to touch or obstruct any moving parts.

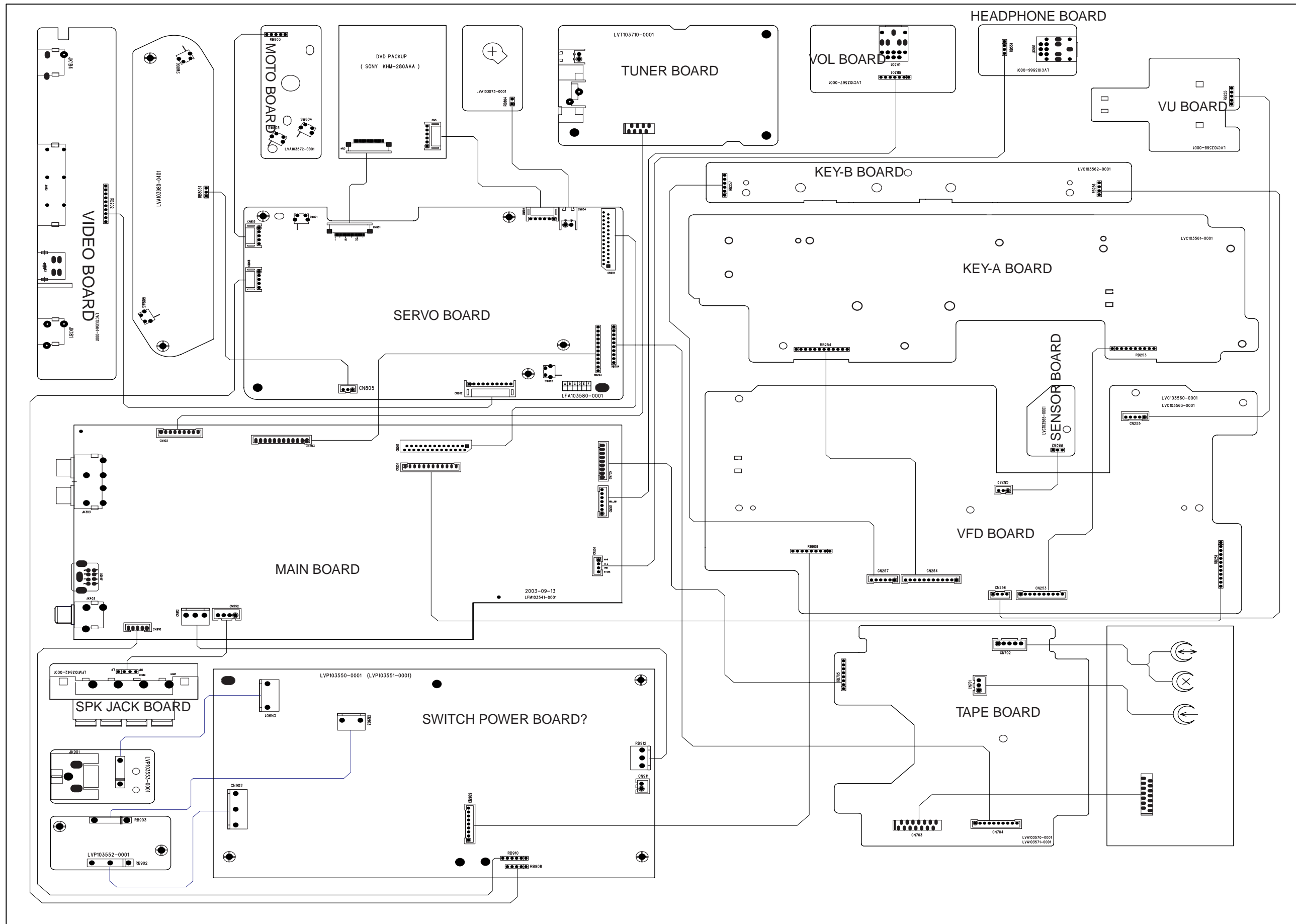
Service position C



BLOCK DIAGRAM



WIRING DIAGRAM

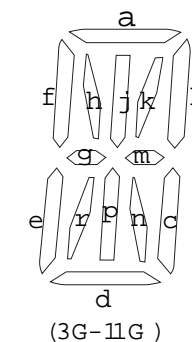
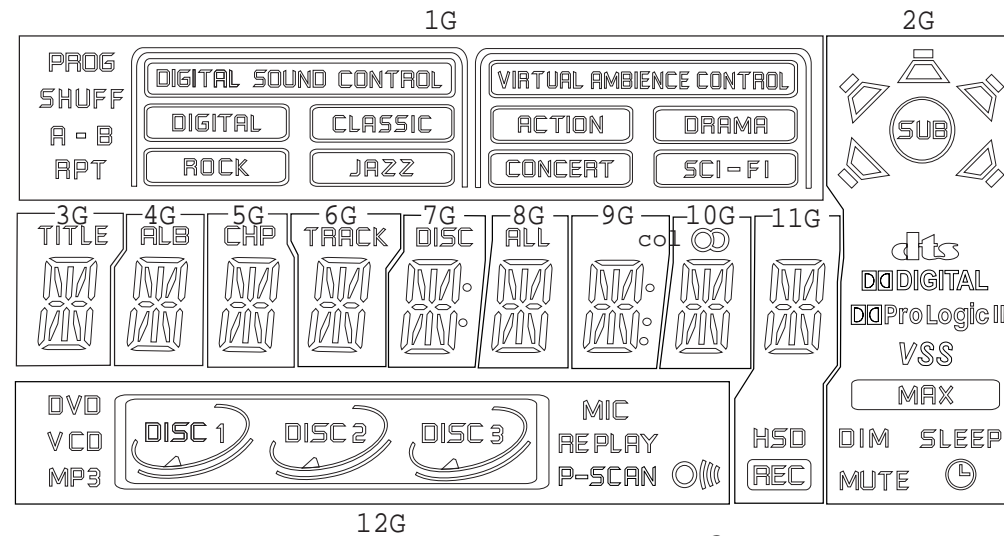


KEY / VIDEO / SENSOR / PHONE / VOL / VU BOARD

TABLE OF CONTENTS

FTD Display Pin Assignment 5-1
 Pin Connection 5-1
 Internal IC Diagram & Voltages List 5-2
 Circuit Diagram 5-3
 PCB Layout Top View 5-4
 PCB Layout Bottom View 5-5
 Electrical Parts List 5-6

FTD DISPLAY PIN ASSIGNMENT



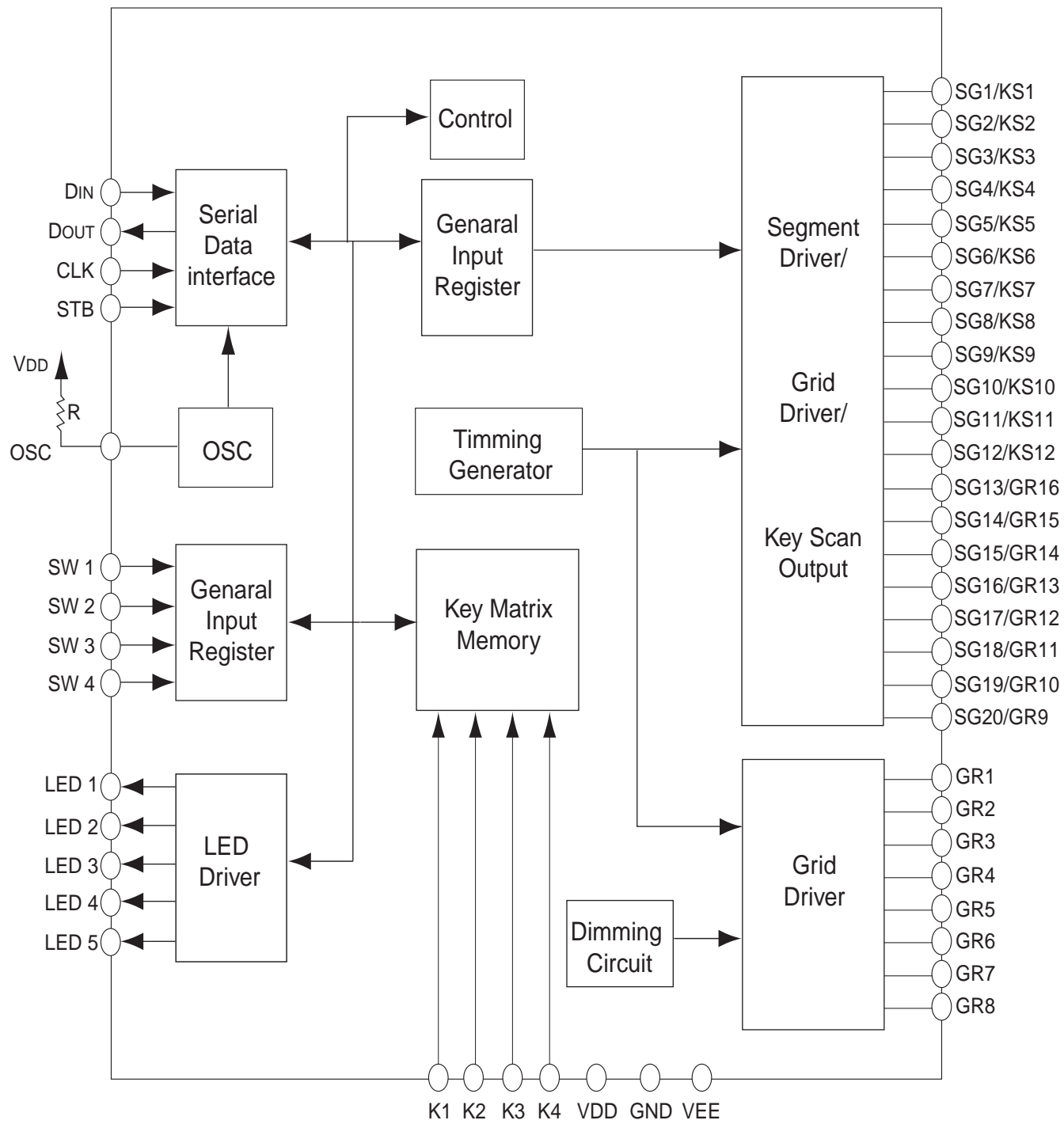
| | 1G | 2G | 3G | 4G | 5G | 6G | 7G | 8G | 9G | 10G | 11G | 12G |
|-----|-------|----------|-------|-----|-----|-------|------|-----|-----|-----|-----|--------|
| P1 | S10 | dts | TITLE | ALB | CHP | TRACK | DISC | ALL | Dp | Ⓞ | REC | DVD |
| P2 | S9 | MAX | a | a | a | a | a | a | a | a | a | PLAY |
| P3 | S8 | SLEEP | f | f | f | f | f | f | f | f | f | Ⓜ |
| P4 | S7 | DIM | j | j | j | j | j | j | j | j | j | P-SCAN |
| P5 | S6 | MUTE | h | h | h | h | h | h | h | h | h | RE |
| P6 | | Ⓛ | k | k | k | k | k | k | k | k | k | MIC |
| P7 | S5 | | b | b | b | b | b | b | b | b | b | DISC 3 |
| P8 | S4 | | g | g | g | g | g | g | g | g | g | T3 |
| P9 | S3 | | m | m | m | m | m | m | m | m | m | DISC 2 |
| P10 | S2 | | r | r | r | r | r | r | r | r | r | T2 |
| P11 | S1 | | n | n | n | n | n | n | n | n | n | DISC 1 |
| P12 | RPT | SUB | p | p | p | p | p | p | p | p | p | T1 |
| P13 | A - B | ProLogic | e | e | e | e | e | e | e | e | e | T0 |
| P14 | A | VSS | c | c | c | c | c | c | c | c | c | MP3 |
| P15 | SHUFF | DIGITAL | d | d | d | d | d | d | d | d | d | CO |
| P16 | PROG | II | | | | | col | | col | | HSD | V |

PIN CONNECTION

| PINNO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | | | | | | | | |
|------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|
| CONNECTION | F | F | F | N | N | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | N | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | N | N | F | F | F | F | F | F | F | F | F | F | F | F | F | F | | | |
| | 1 | 1 | 1 | P | P | G | G | G | G | G | G | G | G | G | G | G | G | X | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | P | P | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

- ## Note ##
 1. Fn: Filament pin
 2. nG : Grid pin
 3. Pn : Anode pin
 4. NP : No Pin
 5. NC : No Connection pin

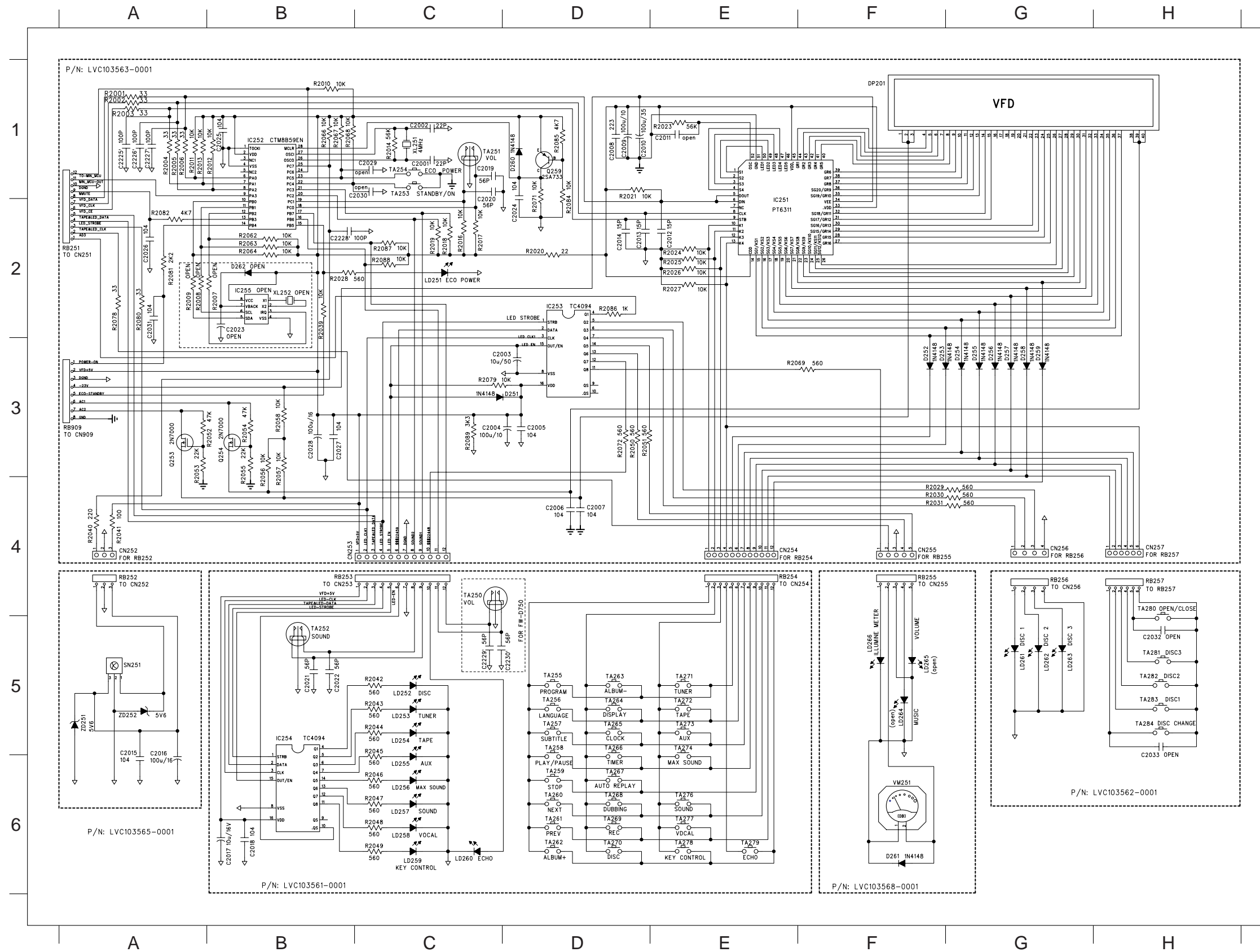
PT6 311 INTERNAL IC DIAGRAM



PT6 311 PIN DESCRIPTION

| Pin Name | I/O | Description | Pin No. |
|---------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| SW 1 to SW 4 | I | General Purpose Input Pins | 1 to 4 |
| DOUT | O | Data Output Pin (N-Channel, Open-Drain) This pin outputs serial data at the falling edge of the shift clock (starting from the lower bit). | 5 |
| DIN | I | Data Input Pin This pin inputs serial data at the rising edge of the shift clock (starting from the lower bit) | 6 |
| N C | - | No Connection | 7 |
| CLK | I | Clock Input Pin This pin reads serial data at the rising edge and outputs data at the falling edge. | 8 |
| STB | I | Serial Interface Strobe Pin The data input after the STB has fallen is processed as a command. When this pin is "HIGH", CLK is ignored. | 9 |
| K 1 to K 4 | I | Key Data Input Pins The data inputted to these pins are latched at the end of the display cycle. | 10 to 13 |
| VDD | - | Logic Power Supply | 14, 33, 45 |
| SG 1/KS 1 to SG 12/KS 12 | O | High-Voltage Segment Output Pins Also acts as the Key Source | 15 to 26 |
| SG 20/GR 9 to SG 19/GR 10 SG 18/GR 11 to SG 13/GR 16 | O | High Voltage Segment/ Grid Output Pins | 36 to 35 32 to 27 |
| VEE | - | Pull-Down Level | 34 |
| GR 1 to GR 8 | O | High-Voltage Grid Output Pins | 44 to 37 |
| LED 1 to LED 5 | O | LED Output Pin | 50 to 46 |
| GND | - | Ground Pin | 51 |
| OSC | I | Oscillator Input Pin A resistor is connected to this pin to determine the oscillation frequency | 52 |

CIRCUIT DIAGRAM - KEY BOARD



| | | | | | |
|-------|----|-------|----|-------|----|
| C2001 | C1 | Q259 | D1 | SN251 | A5 |
| C2002 | C1 | R2001 | A1 | TA251 | C1 |
| C2003 | C3 | R2002 | A1 | TA252 | B5 |
| C2004 | C3 | R2003 | A1 | TA253 | C1 |
| C2005 | D3 | R2004 | A1 | TA254 | C1 |
| C2006 | D4 | R2005 | A1 | TA255 | D5 |
| C2007 | D4 | R2006 | A1 | TA256 | D5 |
| C2008 | D1 | R2010 | B1 | TA257 | D5 |
| C2009 | D1 | R2011 | A1 | TA258 | D5 |
| C2010 | D1 | R2012 | B1 | TA259 | D6 |
| C2011 | E1 | R2013 | A1 | TA260 | D6 |
| C2012 | E2 | R2014 | C1 | TA261 | D6 |
| C2013 | D2 | R2016 | C2 | TA262 | D6 |
| C2014 | D2 | R2017 | C2 | TA263 | D5 |
| C2015 | A5 | R2018 | C2 | TA264 | D5 |
| C2016 | A5 | R2019 | C2 | TA265 | D5 |
| C2017 | B6 | R2020 | D2 | TA266 | D5 |
| C2018 | B6 | R2021 | D1 | TA267 | D6 |
| C2019 | C1 | R2023 | E1 | TA268 | D6 |
| C2020 | C1 | R2024 | E2 | TA269 | D6 |
| C2021 | B5 | R2025 | E2 | TA270 | D6 |
| C2022 | B5 | R2026 | E2 | TA271 | E5 |
| C2023 | B2 | R2027 | E2 | TA272 | E5 |
| C2024 | D2 | R2028 | B2 | TA273 | E5 |
| C2025 | B1 | R2029 | F4 | TA274 | E5 |
| C2026 | A2 | R2030 | F4 | TA276 | E6 |
| C2027 | B3 | R2031 | F4 | TA277 | E6 |
| C2028 | B3 | R2039 | B2 | TA278 | E6 |
| C2031 | A2 | R2040 | A4 | TA279 | E6 |
| C2032 | H5 | R2041 | A4 | TA280 | H5 |
| C2033 | H5 | R2042 | C5 | TA281 | H5 |
| C2225 | A1 | R2043 | C5 | TA282 | H5 |
| C2226 | A1 | R2044 | C5 | TA283 | H5 |
| C2227 | A1 | R2045 | C5 | TA284 | H5 |
| C2228 | A1 | R2046 | C6 | VM251 | F6 |
| CN252 | A4 | R2047 | C6 | XL251 | C1 |
| CN253 | B4 | R2048 | C6 | ZD251 | A5 |
| CN254 | E4 | R2049 | C6 | ZD252 | A5 |
| CN255 | F4 | R2050 | D3 | | |
| CN256 | G4 | R2051 | D3 | | |
| CN257 | H4 | R2052 | A3 | | |
| D251 | D3 | R2053 | A3 | | |
| D252 | F3 | R2054 | B3 | | |
| D253 | F3 | R2055 | B3 | | |
| D254 | G3 | R2056 | B3 | | |
| D255 | G3 | R2057 | B3 | | |
| D256 | G3 | R2058 | B3 | | |
| D257 | G3 | R2062 | B2 | | |
| D258 | G3 | R2063 | B2 | | |
| D259 | G3 | R2064 | B2 | | |
| D260 | D1 | R2066 | B1 | | |
| D261 | F6 | R2067 | B1 | | |
| DP201 | F1 | R2068 | B1 | | |
| IC251 | E2 | R2069 | F3 | | |
| IC252 | B1 | R2071 | D2 | | |
| IC253 | D2 | R2072 | D3 | | |
| IC254 | B5 | R2078 | A2 | | |
| LD251 | C2 | R2079 | C3 | | |
| LD252 | C5 | R2080 | A2 | | |
| LD253 | C5 | R2081 | A2 | | |
| LD254 | C5 | R2082 | A2 | | |
| LD255 | C6 | R2084 | D2 | | |
| LD256 | C6 | R2085 | D1 | | |
| LD257 | C6 | R2088 | C2 | | |
| LD258 | C6 | R2089 | C | | |
| LD259 | C6 | RB251 | A2 | | |
| LD260 | C6 | RB252 | A4 | | |
| LD261 | G5 | RB253 | B4 | | |
| LD262 | G5 | RB254 | E4 | | |
| LD263 | G5 | RB255 | F4 | | |
| LD266 | F5 | RB256 | G4 | | |
| Q253 | A3 | RB257 | H4 | | |
| Q254 | B3 | RB909 | A3 | | |

ELECTRICAL PARTSLIST - KEY/VIDEO/SENSOR/PHONE/VOL/VU BOARD**- MISCELLANEOUS -**

| | | |
|-------|----------------|------------------------|
| DP201 | 9940 000 00012 | VFD FW-D550 |
| JK181 | 9965 000 17363 | RCA JACK 1P W/GND P |
| JK182 | 9965 000 12609 | RCA JACK R/G/B |
| JK183 | 9965 000 12607 | DIN JACK, S-VIDEO OUT |
| JK184 | 9965 000 18044 | JACK 1P W/GND |
| JK301 | 9965 000 22276 | PHONE JACK D3.5 11P |
| JK551 | 9965 000 22276 | PHONE JACK D3.5 11P |
| LD259 | 9940 000 00018 | LED |
| LD260 | 9940 000 00018 | LED |
| LD251 | 9940 000 00018 | LED |
| LD252 | 9965 000 15933 | LED |
| LD253 | 9965 000 15933 | LED |
| LD254 | 9965 000 15933 | LED |
| LD255 | 9965 000 15933 | LED |
| LD256 | 9940 000 00018 | LED |
| LD257 | 9940 000 00018 | LED |
| LD258 | 9940 000 00018 | LED |
| LD261 | 9940 000 00018 | LED |
| LD262 | 9940 000 00018 | LED |
| LD263 | 9940 000 00018 | LED |
| LD266 | 9940 000 00025 | LED 3D HI-LIGHT BLUE |
| RB251 | 9965 000 22278 | FLAT CABLE 12PIN 200MM |
| RB252 | 9965 000 22279 | FLAT CABLE 3P 100MM |
| RB253 | 9965 000 22280 | FLAT CABLE 10PIN 100MM |
| RB254 | 9965 000 22281 | FLAT CABLE 12PIN 100MM |
| RB255 | 9965 000 22282 | FLAT CABLE 5P 100MM |
| SN251 | 9965 000 15935 | IRT SENSOR RIM B38F |
| TA251 | 9965 000 22290 | R-ENCODER |
| TA252 | 9965 000 22291 | R-ENCODER |
| TA253 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA254 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA255 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA256 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA257 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA258 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA259 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |

- MISCELLANEOUS -

| | | |
|-------|----------------|---------------------------|
| TA260 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA261 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA262 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA263 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA264 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA265 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA266 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA267 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA268 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA269 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA270 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA271 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA272 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA273 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA274 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA276 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA277 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA278 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA279 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA280 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA281 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA282 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA283 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| TA284 | 9965 000 22286 | TACT SW 2PIN 50MA 12V |
| VM251 | 9965 000 22292 | DC VU METER 650R |
| VR301 | 9965 000 22296 | CNTL ROTARY 50KΩ |
| FB181 | 9965 000 12470 | BEAD FERITE 100Ω/at100MHZ |
| FB183 | 9965 000 12470 | BEAD FERITE 100Ω/at100MHZ |
| FB184 | 9965 000 12470 | BEAD FERITE 100Ω/at100MHZ |
| FB185 | 9965 000 12470 | BEAD FERITE 100Ω/at100MHZ |
| FB186 | 9965 000 12470 | BEAD FERITE 100Ω/at100MHZ |
| FB187 | 9965 000 12470 | BEAD FERITE 100Ω/at100MHZ |
| FB188 | 9965 000 12470 | BEAD FERITE 100Ω/at100MHZ |

- COILS & FILTERS -**ELECTRICAL PARTSLIST - KEY/VIDEO/SENSOR/PHONE/VOL/VU BOARD****- COILS & FILTERS -**

| | | |
|-------|----------------|--------------------|
| XL251 | 9965 000 17405 | CRYSTAL 4.00000MHZ |
|-------|----------------|--------------------|

- DIODES -

| | | |
|-------|----------------|-------------------------|
| D251 | 4822 130 30621 | 1N4148 |
| D252 | 4822 130 30621 | 1N4148 |
| D253 | 4822 130 30621 | 1N4148 |
| D254 | 4822 130 30621 | 1N4148 |
| D255 | 4822 130 30621 | 1N4148 |
| D256 | 4822 130 30621 | 1N4148 |
| D257 | 4822 130 30621 | 1N4148 |
| D258 | 4822 130 30621 | 1N4148 |
| D259 | 4822 130 30621 | 1N4148 |
| D260 | 4822 130 30621 | 1N4148 |
| D261 | 4822 130 30621 | 1N4148 |
| ZD181 | 4822 130 34233 | BZX79-B5V1 |
| ZD183 | 4822 130 34233 | BZX79-B5V1 |
| ZD184 | 4822 130 34233 | BZX79-B5V1 |
| ZD185 | 4822 130 34233 | BZX79-B5V1 |
| ZD186 | 4822 130 34233 | BZX79-B5V1 |
| ZD187 | 4822 130 34233 | BZX79-B5V1 |
| ZD188 | 4822 130 34233 | BZX79-B5V1 |
| ZD251 | 9965 000 19397 | CHIP ZENER 5.6V 5% 0.5W |
| ZD252 | 9965 000 19397 | CHIP ZENER 5.6V 5% 0.5W |

- IC & TRANSISTORS -

| | | |
|-------|----------------|-------------------------|
| IC251 | 9965 000 12550 | IC PT6311 |
| IC252 | 9940 000 00019 | IC 28PIN CTM8B59EN PDIP |
| IC253 | 9965 000 22298 | IC 16PIN CD4094B |
| IC254 | 9965 000 22298 | IC 16PIN CD4094B |
| Q253 | 9965 000 16497 | 2N7000TA 60V/0.2A, |
| Q254 | 9965 000 16497 | 2N7000TA 60V/0.2A, |
| Q259 | 9965 000 14175 | 2SA733Q,P |

Note: Only these parts mentioned in the list are normal service parts.

TUNER BOARD

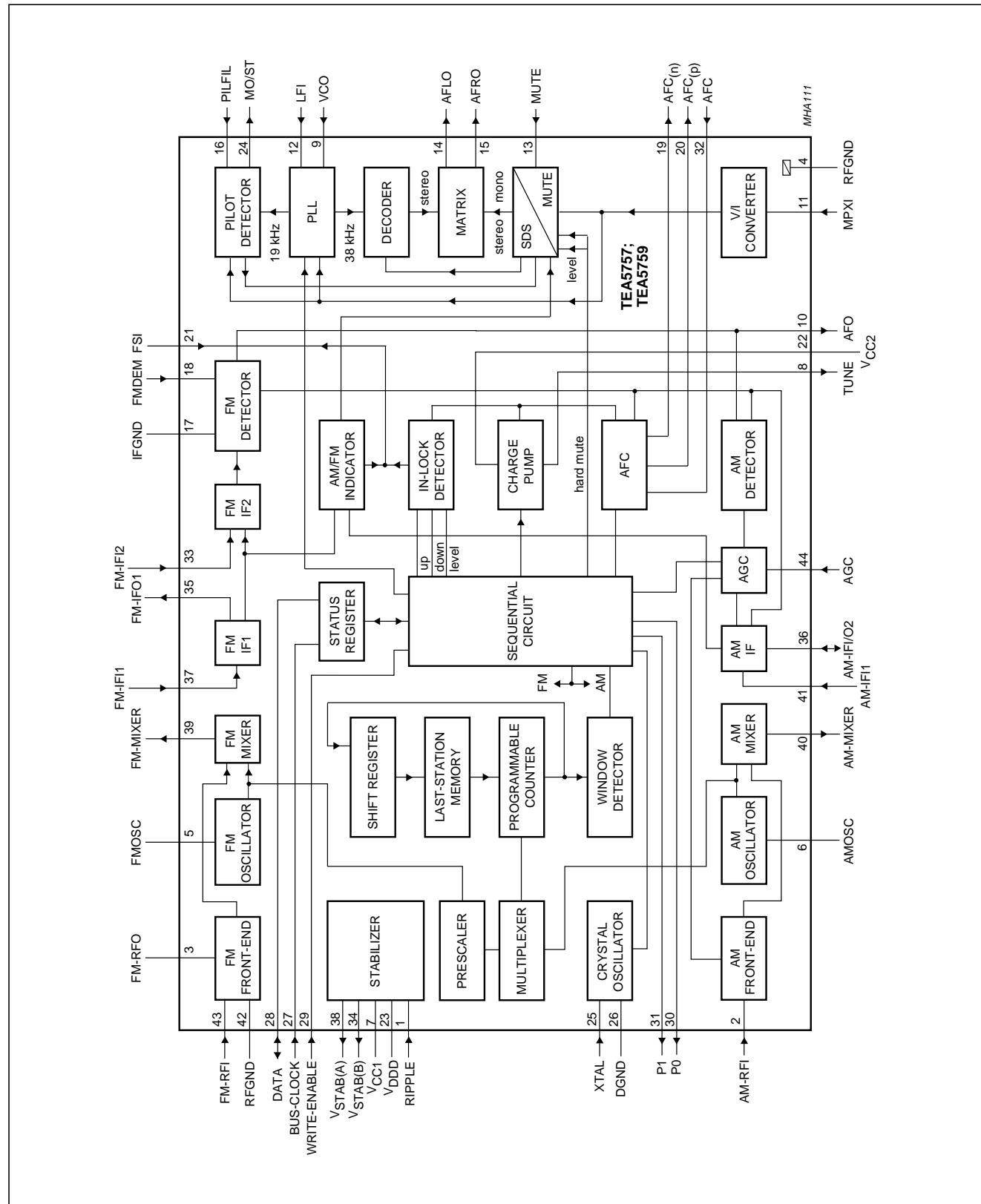
TABLE OF CONTENTS

| | |
|------------------------------|-----|
| IC Block Diagram | 6-2 |
| Circuit Diagram | 6-3 |
| PCB Layout Top View | 6-4 |
| PCB Layout Bottom View | 6-5 |
| Electrical Parts List | 6-6 |

TEA5757 INTERNAL IC DIAGRAM

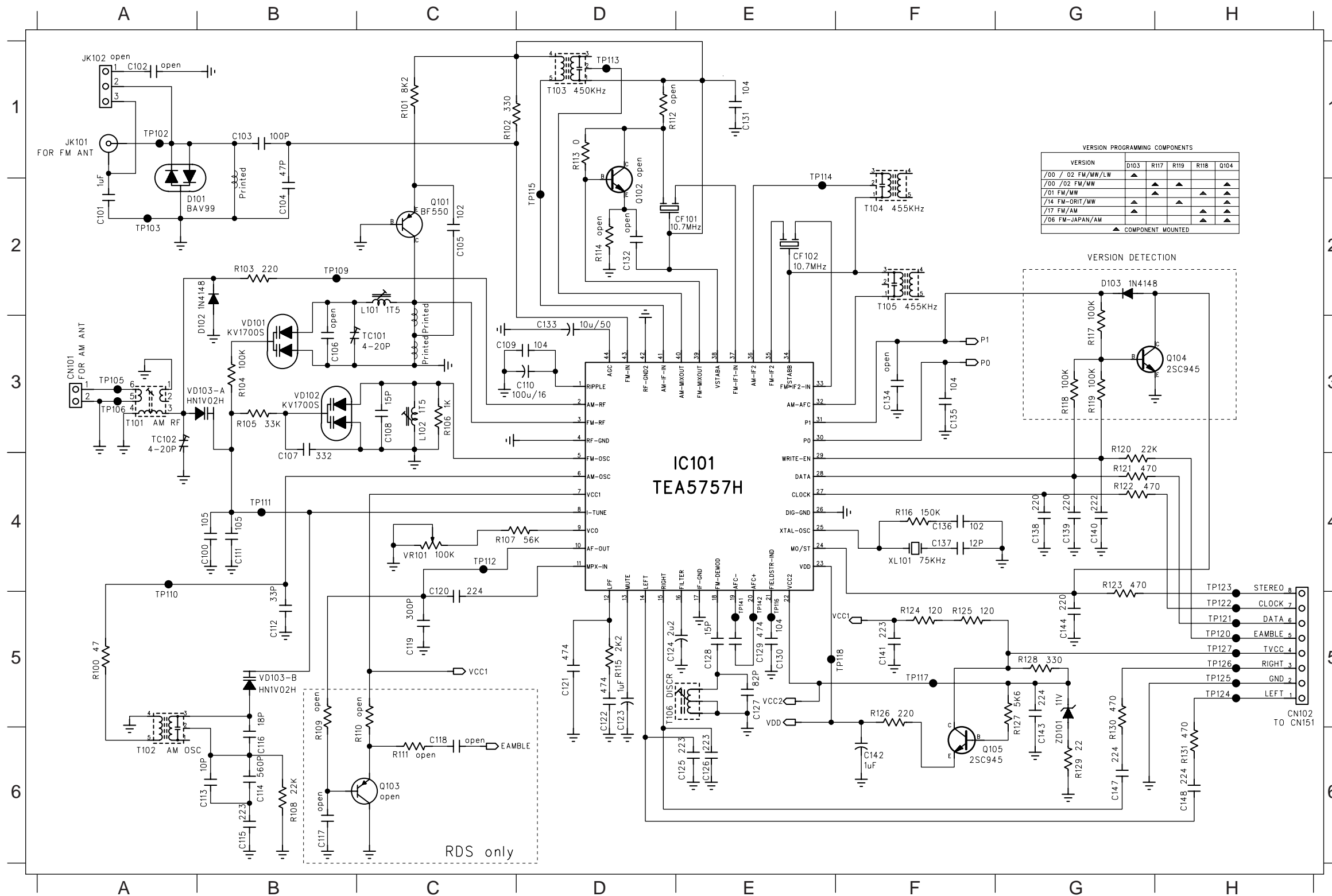
TEA5757 PIN DESCRIPTION

BLOCK DIAGRAM



| SYMBOL | PIN | DESCRIPTION |
|----------------------|-----|-----------------------------------------------------------------|
| RIPPLE | 1 | ripple capacitor input |
| AM-RFI | 2 | AMRF input |
| FM-RFO | 3 | parallel tuned FMRF circuit to ground |
| RFGND | 4 | RF ground and substrate |
| FMOSC | 5 | parallel tuned FM-oscillator circuit to ground |
| AMOSC | 6 | parallel tuned AM-oscillator circuit to ground |
| V _{CC1} | 7 | supply voltage |
| TUNE | 8 | tuning current output |
| VCO | 9 | voltage controlled oscillator input |
| AFO | 10 | AM/FM AF output (output impedance typical 5 k Ω) |
| MPXI | 11 | stereo decoder input (input impedance typical 150 k Ω) |
| LF1 | 12 | loop-filter input |
| MUTE | 13 | mute input |
| AFLO | 14 | left channel output (output impedance typical 4.3 k Ω) |
| AFRO | 15 | right channel output (output impedance typical 4.3 k Ω) |
| PILFIL | 16 | pilot detector filter input |
| IFGND | 17 | ground of IF, detector and MPX stage |
| FMDEM | 18 | ceramic discriminator input |
| AFC _(n) | 19 | AFC negative output |
| AFC _(p) | 20 | AFC positive output |
| FSI | 21 | field-strength indicator |
| V _{CC2} | 22 | supply voltage for tuning |
| V _{DDD} | 23 | digital supply voltage |
| MO/ST | 24 | mono/stereo and tuning indication output |
| XTAL | 25 | crystal input |
| DGND | 26 | digital ground |
| BUS-CLOCK | 27 | bus-clock input |
| DATA | 28 | bus data input/output |
| WRITE-ENABLE | 29 | bus write-enable input |
| P0 | 30 | programmable output port (P0) |
| P1 | 31 | programmable output port (P1) |
| AFC | 32 | 450 kHz LC-circuit |
| FM-IF2 | 33 | FMIF input 2 (input impedance typical 330 Ω) |
| V _{STAB(B)} | 34 | internal stabilized supply voltage (B) |
| FM-IFO1 | 35 | FMIF output 1 (output impedance typical 330 Ω) |
| AM-IF1/O2 | 36 | input/output to IF-Tank (IFT); output: current source |
| FM-IF1 | 37 | FMIF input 1 (input impedance typical 330 Ω) |
| V _{STAB(A)} | 38 | internal stabilized supply voltage (A) |
| FM-MIXER | 39 | ceramic filter output (output impedance typical 330 Ω) |
| AM-MIXER | 40 | open-collector output to IFT |

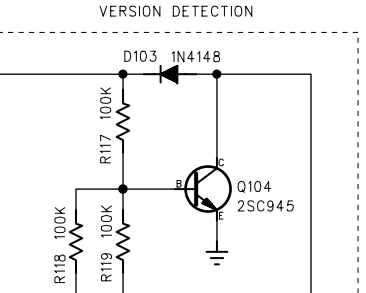
CIRCUIT DIAGRAM - TUNER BOARD



VERSION PROGRAMMING COMPONENTS

| VERSION | D103 | R117 | R119 | R118 | Q104 |
|-------------------|------|------|------|------|------|
| /00 / 02 FM/MW/LW | ▲ | ▲ | ▲ | ▲ | ▲ |
| /00 /02 FM/MW | ▲ | ▲ | ▲ | ▲ | ▲ |
| /01 FM/MW | ▲ | ▲ | ▲ | ▲ | ▲ |
| /14 FM-DRIT/MW | ▲ | ▲ | ▲ | ▲ | ▲ |
| /17 FM/AM | ▲ | ▲ | ▲ | ▲ | ▲ |
| /06 FM-JAPAN/AM | ▲ | ▲ | ▲ | ▲ | ▲ |

▲ COMPONENT MOUNTED



- C100 B4 R108 B6
- C101 A2 R113 D1
- C103 B1 R115 D5
- C104 B2 R116 F4
- C105 C2 R117 G3
- C107 B4 R118 G3
- C108 C3 R120 G4
- C109 C3 R121 G4
- C110 D3 R122 G4
- C111 B4 R123 G4
- C112 B5 R124 F5
- C113 B6 R125 F5
- C114 B6 R126 F5
- C115 B6 R127 G5
- C116 B6 R128 G5
- C119 C5 R129 G6
- C120 C4 R130 G6
- C121 D5 R131 H6
- C122 D5 T101 A3
- C124 D5 T103 D1
- C125 E6 T104 F2
- C126 E6 T105 F2
- C127 E5 T106 D5
- C128 E5 TC101 C3
- C129 E5 TC102 A3
- C130 E5 VD101 B3
- C131 E1 VD102 B3
- C133 D3 VD103-A B3
- C135 F3 VD103-B B5
- C136 F4 XR101 C4
- C138 G4 ZD101 G6
- C139 G4
- C140 G4
- C141 F5
- C142 F6
- C143 G6
- C144 G5
- C147 G6
- C148 H6
- CF101 E2
- CF102 E2
- CN101 A3
- CN102 H5
- D101 A2
- D102 B2
- IC101 E4
- L101 C2
- L102 C3
- JK101 A1
- Q101 C2
- Q104 H3
- Q105 F6
- R100 A5
- R101 C1
- R102 C1
- R103 B2
- R104 B3
- R105 B3
- R106 C3
- R107 C4

ELECTRICAL PARTSLIST - TUNER BOARD**- MISCELLANEOUS -**

JK101 9965 000 17361 FEMALE TYPE ID1.44MM

- CAPACITORS -

TC101 9965 000 15866 COND TRIM 4.2 - 20 PF N450

TC102 9965 000 15866 COND TRIM 4.2 - 20 PF N450

- RESISTORS -

VR101 9965 000 22264 CNTL TRIMMER 100KΩ

- COILS & FILTERS -

CF101 9965 000 17368 10.7 MHZ

CF102 9965 000 17368 10.7 MHZ

L101 9965 000 22251 MOULDED COIL 63.5PF 3%

L102 9965 000 22251 MOULDED COIL 63.5PF 3%

T101 9965 000 22252 RF COIL 295μH 8% (796KHZ)

T102 9965 000 22253 OSC COIL AM 120μH (796 KHZ)

T103 9965 000 22254 AM IFT 455KHZ 180PF

T104 9965 000 22255 AM IFT 455KHZ 180PF

T105 9965 000 22255 AM IFT 455KHZ 180PF

T106 9965 000 22256 RF COIL 2.45μH 5% (7.96KHZ)

XL101 9965 000 22260 CRYSTAL 75KHZ 20PPM

- DIODES -

D101 9965 000 22261 DIODE CHIP BAV99

D102 9965 000 19409 DIODE CHIP BAV16W/IN4148W

VD101 9965 000 22262 CHIP VAR.CAP DIODE KV1700S

VD102 9965 000 22262 CHIP VAR.CAP DIODE KV1700S

ZD101 9965 000 22263 CHIP ZENER 11V 5% 0.5W

- IC & TRANSISTORS -

IC101 9965 000 22265 IC 44PIN TEA5757H QFP44

- IC & TRANSISTORS -

Q101 9965 000 22272 XISTR PNP BF550

Q104 9965 000 20268 XISTR NPN 2SC1623

Q105 4822 130 41198 2SC945P

VD103 9965 000 22273 IC 8 PIN HN1V02H TAPING

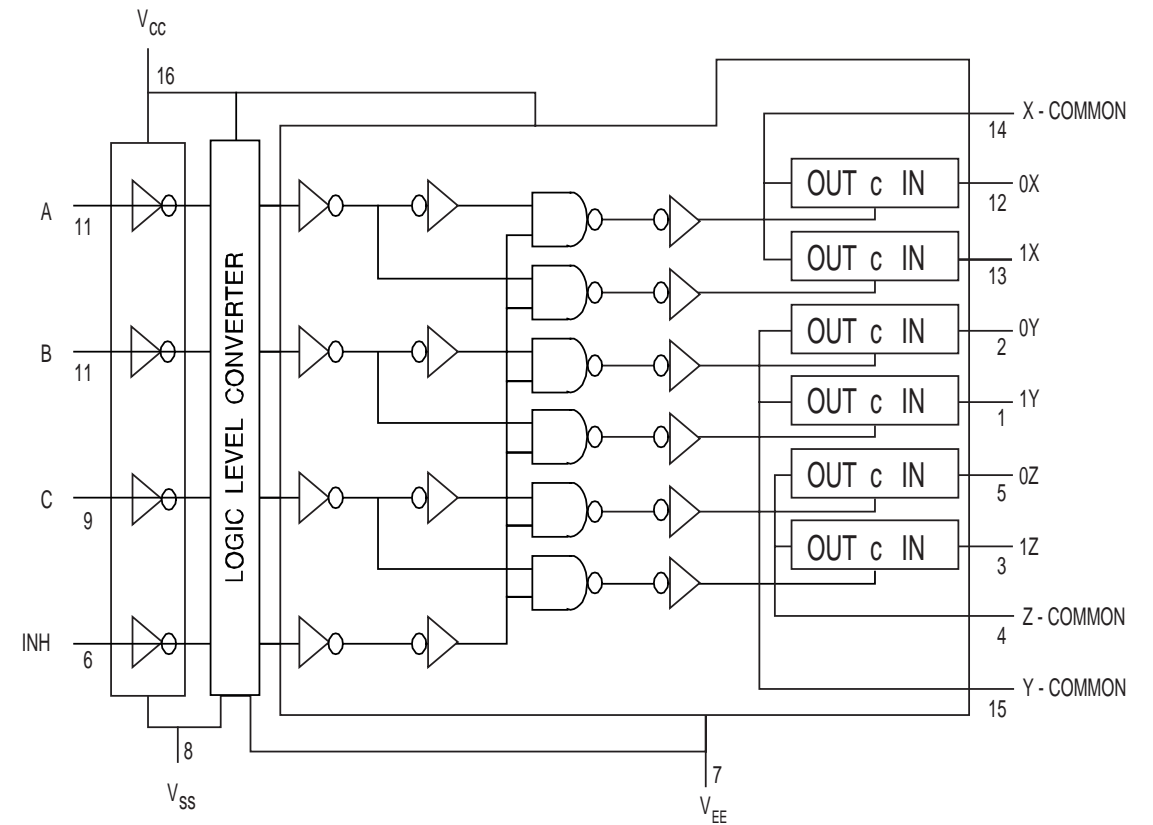
Note: Only these parts mentioned in the list are normal service parts.

MAIN BOARD

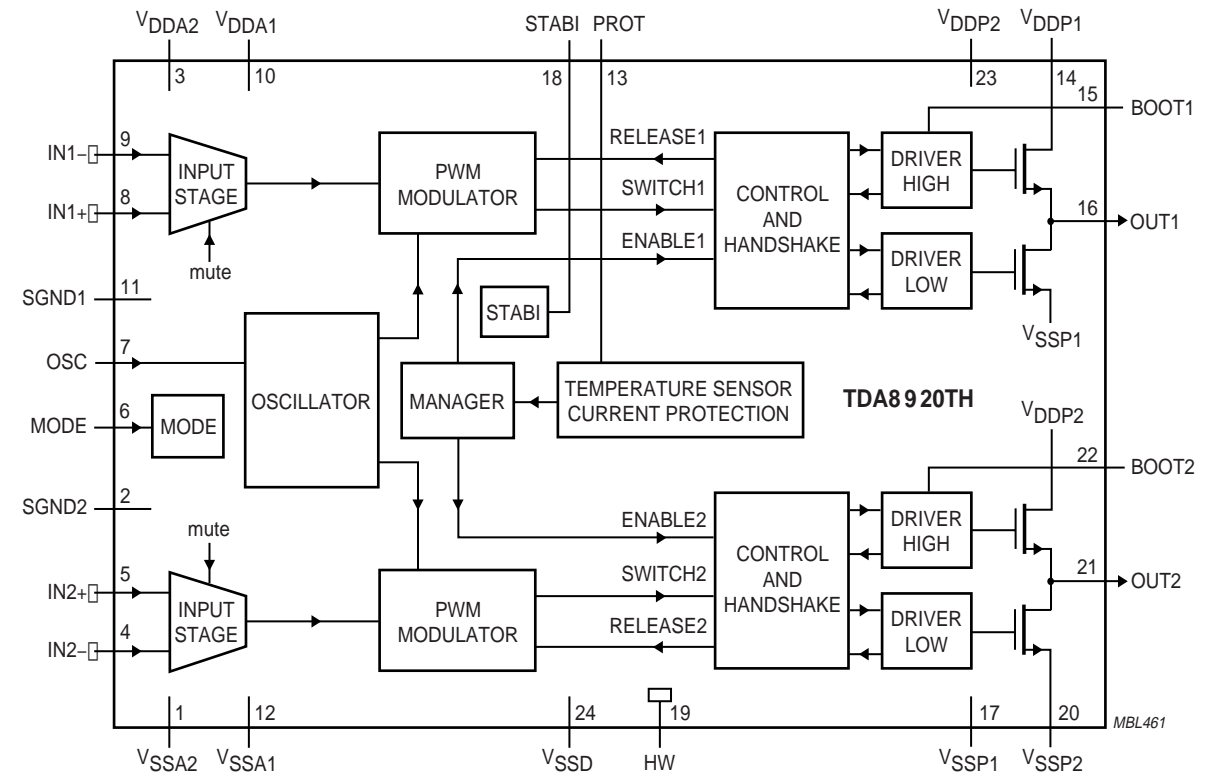
TABLE OF CONTENTS

| | |
|------------------------------|-----|
| Internal IC Diagram | 7-1 |
| Circuit Diagram | 7-2 |
| PCB Layout Top View | 7-3 |
| PCB Layout Bottom View | 7-4 |
| Electrical Parts list | 7-6 |

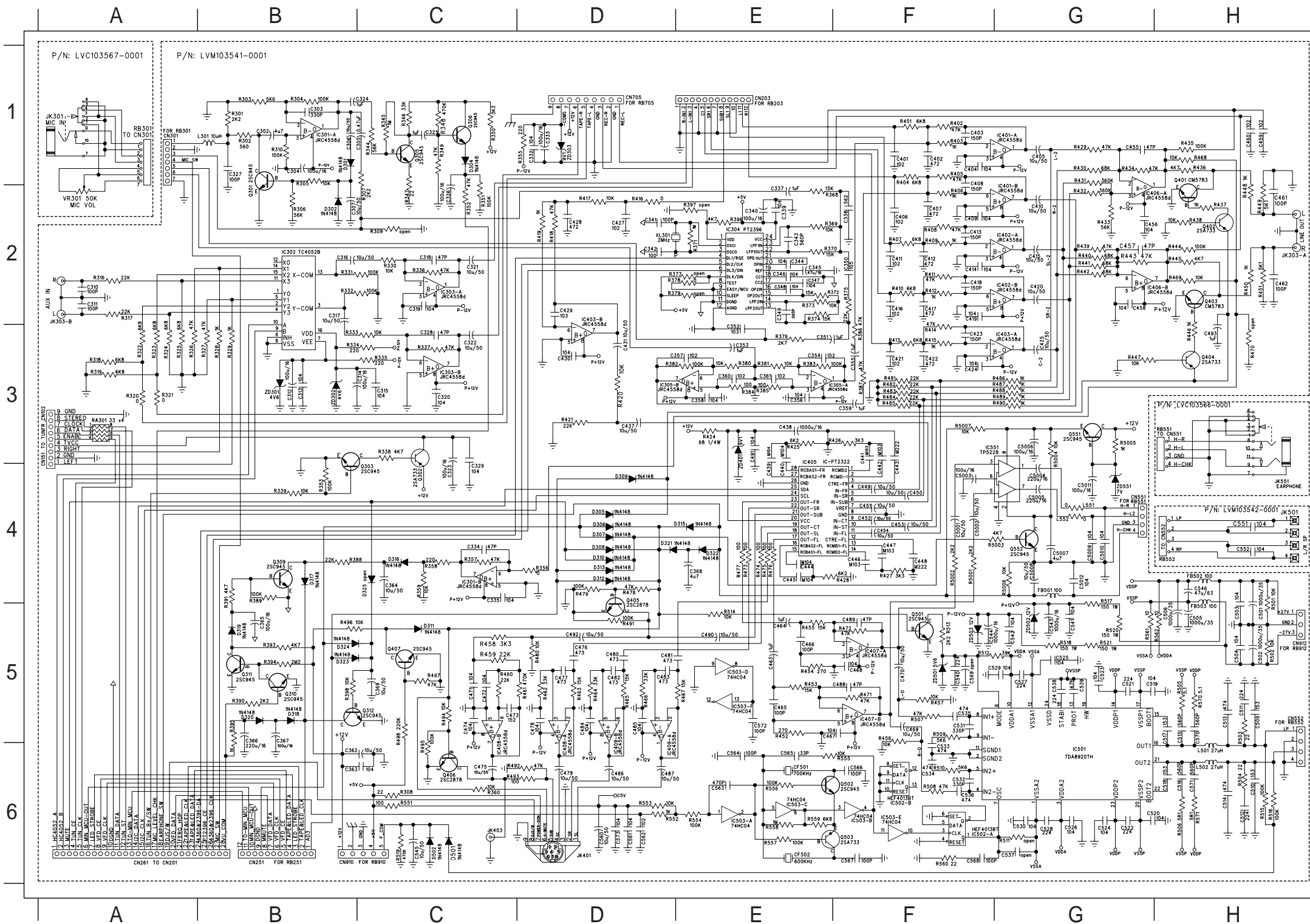
TC4053 INTERNAL IC DIAGRAM



TDA8920 INTERNAL IC DIAGRAM



CIRCUIT DIAGRAM - MAIN BOARD



| | | | | | | | | | | | |
|------|----|------|----|---------|----|---------|----|------|----|-------|----|
| C302 | B1 | C438 | E3 | C542 | G5 | IC503-B | F6 | R378 | E2 | R480 | D5 |
| C303 | B1 | C439 | E3 | C543 | G5 | IC503-C | E6 | R380 | E3 | R481 | F3 |
| C304 | B1 | C440 | E3 | C544 | F5 | IC503-D | E5 | R381 | E3 | R482 | F3 |
| C305 | B2 | C441 | F3 | C545 | C6 | IC503-E | F6 | R382 | E3 | R483 | F3 |
| C306 | B1 | C442 | F3 | C546 | H4 | IC503-F | E5 | R383 | E3 | R484 | F3 |
| C307 | B2 | C443 | F3 | C551 | H4 | IC551 | F3 | R384 | E3 | R485 | F3 |
| C310 | A2 | C444 | E4 | C552 | H4 | JK303-A | H2 | R385 | E3 | R486 | G3 |
| C311 | A2 | C445 | E4 | C560 | D6 | JK401 | D6 | R386 | F3 | R487 | G3 |
| C312 | B3 | C446 | F4 | C561 | D6 | JK403 | C6 | R387 | F3 | R488 | G3 |
| C313 | B3 | C447 | F4 | C562 | D6 | JK501 | H4 | R388 | B4 | R489 | G3 |
| C314 | C3 | C448 | F4 | C563 | E6 | L301 | B1 | R389 | B4 | R490 | G3 |
| C315 | C3 | C449 | F4 | C564 | E6 | L501 | H6 | R390 | B5 | R491 | D5 |
| C316 | B2 | C450 | F4 | C565 | E6 | L502 | H6 | R391 | B4 | R492 | D6 |
| C317 | B2 | C451 | F4 | C566 | F6 | L551 | G4 | R393 | B5 | R493 | D6 |
| C318 | C2 | C452 | F4 | C567 | F6 | L552 | G4 | R394 | B5 | R494 | C5 |
| C319 | C2 | C453 | F4 | C568 | F6 | Q301 | B1 | R395 | B5 | R495 | C6 |
| C320 | C3 | C454 | F4 | C570 | H5 | Q302 | C4 | R396 | E2 | R496 | B5 |
| C321 | C2 | C455 | G1 | C571 | H5 | Q303 | C4 | R398 | B5 | R497 | C5 |
| C322 | C3 | C456 | G2 | C572 | E5 | Q305 | C1 | R401 | F1 | R498 | C5 |
| C323 | C3 | C457 | G2 | C573 | D6 | Q306 | C1 | R402 | F1 | R501 | H5 |
| C324 | B1 | C458 | G2 | C5001 | F4 | Q309 | B4 | R403 | F1 | R502 | H5 |
| C325 | C1 | C459 | H1 | C5002 | F4 | Q310 | B5 | R404 | F1 | R503 | H5 |
| C326 | C1 | C460 | H1 | C5003 | F4 | Q311 | B5 | R405 | F1 | R504 | H6 |
| C327 | B1 | C461 | H2 | C5004 | G4 | Q312 | C5 | R406 | F2 | R505 | H5 |
| C328 | C3 | C462 | H2 | C5005 | G4 | Q401 | H1 | R407 | F2 | R506 | H6 |
| C329 | C3 | C463 | E5 | C5006 | G3 | Q402 | H2 | R408 | F2 | R507 | F5 |
| C332 | D1 | C464 | E5 | C5007 | G4 | Q403 | H2 | R409 | F2 | R508 | F6 |
| C333 | D1 | C465 | E5 | C5008 | G4 | Q404 | H3 | R410 | F2 | R509 | F5 |
| C334 | C4 | C466 | E5 | C5009 | G4 | Q405 | D5 | R411 | F2 | R510 | F6 |
| C335 | C4 | C467 | F5 | C5010 | G4 | Q406 | C6 | R412 | F2 | R512 | F5 |
| C337 | E2 | C468 | F5 | C5011 | G4 | Q408 | C5 | R413 | F3 | R513 | F5 |
| C338 | F2 | C469 | F5 | C5012 | G4 | Q501 | F5 | R414 | F3 | R514 | E5 |
| C339 | E2 | C470 | F5 | CF501 | E6 | Q502 | F6 | R415 | F3 | R515 | H6 |
| C340 | E2 | C471 | C5 | CF502 | E6 | Q503 | F6 | R416 | D2 | R516 | H6 |
| C341 | D2 | C472 | C5 | CN203 | E1 | Q551 | G3 | R417 | D2 | R517 | G5 |
| C342 | D2 | C473 | C5 | CN251 | B6 | Q552 | G4 | R418 | D2 | R518 | G5 |
| C343 | E2 | C474 | C5 | CN261 | A6 | R301 | B1 | R419 | D2 | R519 | C6 |
| C344 | E2 | C475 | C6 | CN301 | A1 | R302 | B1 | R420 | D3 | R520 | G5 |
| C345 | E2 | C476 | D5 | CN551 | G4 | R303 | B1 | R421 | D3 | R521 | G5 |
| C346 | E2 | C477 | D5 | CN552 | H5 | R304 | B1 | R424 | D3 | R551 | C6 |
| C347 | E2 | C478 | D5 | CN705 | D1 | R305 | B1 | R425 | E3 | R552 | D6 |
| C348 | E2 | C479 | D6 | CN910 | C6 | R306 | B2 | R426 | F3 | R553 | D6 |
| C349 | E2 | C480 | D5 | CN912 | H5 | R307 | C1 | R427 | F4 | R554 | E6 |
| C350 | F2 | C481 | E5 | D301 | B1 | R308 | C6 | R428 | E4 | R555 | E6 |
| C351 | E3 | C482 | D5 | D302 | B2 | R310 | B1 | R429 | G1 | R556 | E6 |
| C352 | E3 | C483 | D5 | D304 | C1 | R316 | A2 | R430 | G1 | R557 | E6 |
| C353 | E3 | C484 | D5 | D305 | D4 | R317 | A2 | R431 | G1 | R558 | E6 |
| C354 | E3 | C485 | D5 | D306 | D4 | R318 | A3 | R432 | G2 | R559 | E6 |
| C355 | F3 | C486 | D6 | D307 | D4 | R319 | A3 | R433 | G2 | R560 | F6 |
| C356 | E3 | C487 | D6 | D308 | D4 | R320 | A3 | R434 | G1 | R561 | G5 |
| C357 | E3 | C488 | F5 | D309 | D4 | R321 | A3 | R435 | H1 | R562 | H5 |
| C358 | E3 | C489 | F5 | D310 | D4 | R322 | A3 | R436 | H1 | R570 | H5 |
| C359 | F3 | C490 | E5 | D311 | C5 | R323 | A3 | R437 | H2 | R571 | H5 |
| C360 | E3 | C491 | E3 | D312 | D4 | R324 | A3 | R438 | H2 | R5001 | F4 |
| C361 | E3 | C492 | D5 | D313 | D4 | R325 | A3 | R439 | G2 | R5002 | F4 |
| C362 | C6 | C493 | H3 | D315 | E4 | R326 | A3 | R440 | G2 | R5003 | F4 |
| C363 | C6 | C501 | H5 | D316 | C4 | R327 | B3 | R441 | G2 | R5004 | G3 |
| C364 | C4 | C502 | H5 | D317 | B4 | R328 | B3 | R442 | G2 | R5005 | G3 |
| C365 | B5 | C503 | H5 | D318 | B5 | R329 | B3 | R443 | G2 | R5006 | G4 |
| C366 | B5 | C504 | H5 | D319 | B5 | R330 | C2 | R444 | H2 | R5007 | F3 |
| C367 | B5 | C505 | H5 | D320 | B5 | R331 | B2 | R445 | H2 | RA301 | A3 |
| C368 | E4 | C506 | H5 | D321 | D4 | R332 | B2 | R446 | H3 | RB552 | H4 |
| C369 | C5 | C509 | H5 | D322 | E4 | R333 | C3 | R447 | G3 | XL301 | E2 |
| C401 | F1 | C510 | H6 | D323 | B5 | R334 | C3 | R448 | H2 | ZD301 | B3 |
| C402 | F1 | C511 | H5 | D324 | B5 | R335 | C3 | R449 | H2 | ZD302 | B3 |
| C403 | F1 | C512 | H6 | D501 | C6 | R336 | C2 | R450 | H2 | ZD303 | D1 |
| C404 | F1 | C513 | H6 | D502 | C6 | R337 | C3 | R451 | H2 | ZD401 | E3 |
| C405 | G1 | C514 | H6 | FB501 | G4 | R338 | C3 | R452 | E5 | ZD501 | F5 |
| C406 | F2 | C515 | H5 | FB502 | H4 | R339 | B4 | R453 | E5 | ZD502 | G5 |
| C407 | F2 | C516 | H6 | FB503 | H5 | R344 | C1 | R454 | E5 | ZD503 | F5 |
| C408 | F1 | C517 | H5 | IC301-A | B1 | R345 | C1 | R455 | E5 | ZD551 | G4 |
| C409 | F2 | C518 | H6 | IC301-B | C4 | R346 | C1 | R456 | F5 | | |
| C410 | G2 | C519 | G5 | IC302 | B2 | R347 | C1 | R457 | E6 | | |
| C411 | F2 | C520 | H6 | IC303-A | C2 | R348 | C1 | R458 | C5 | | |
| C412 | F2 | C521 | G5 | IC303-B | C3 | R349 | C1 | R459 | C5 | | |
| C413 | F2 | C522 | G6 | IC304 | E2 | R350 | C1 | R460 | C5 | | |
| C414 | F2 | C523 | G5 | IC305-A | E3 | R351 | C1 | R461 | D5 | | |
| C415 | G2 | C524 | G6 | IC305-B | D3 | R352 | C2 | R462 | D5 | | |
| C416 | F2 | C525 | G5 | IC401-A | G1 | R353 | B4 | R463 | D5 | | |
| C417 | F2 | C526 | G6 | IC401-B | G2 | R355 | D1 | R464 | D5 | | |
| C418 | F2 | C527 | G5 | IC402-A | G2 | R356 | D4 | R465 | D5 | | |
| C419 | F2 | C528 | G6 | IC402-B | G2 | R357 | C4 | R466 | D5 | | |
| C420 | G2 | C529 | G5 | IC403-A | G3 | R358 | C4 | R467 | E5 | | |
| C421 | F3 | C530 | G6 | IC403-B | D2 | R359 | C4 | R468 | H1 | | |
| C422 | F3 | C531 | F5 | IC405 | E3 | R360 | C6 | R469 | H2 | | |
| C423 | F3 | C532 | F6 | IC406-A | G2 | R368 | E2 | R471 | F5 | | |
| C424 | F3 | C533 | F6 | IC406-B | G2 | R369 | E2 | R472 | F5 | | |
| C425 | G3 | C534 | F6 | IC407-A | F5 | R370 | E2 | R473 | E4 | | |
| C427 | D2 | C535 | F5 | IC407-B | F5 | R371 | E2 | R474 | E4 | | |
| C428 | D2 | C536 | F6 | IC408-A | D5 | R372 | E2 | R475 | E4 | | |
| C429 | D2 | C538 | G5 | IC409-A | D5 | R373 | E2 | R476 | E4 | | |
| C430 | D3 | C539 | G5 | IC409-B | D5 | R374 | E2 | R477 | E5 | | |
| C431 | D3 | C540 | F5 | IC501 | G6 | R375 | F2 | R478 | C5 | | |
| C437 | D3 | C541 | G5 | IC503-A | E6 | R376 | E3 | R479 | C5 | | |

ELECTRIC PARTS - MAIN+SPK. JACK BOARD**- MISCELLANEOUS -**

| | | |
|-------|----------------|------------------------|
| CF501 | 9965 000 22218 | RESONATOR 2 PIN 700KHZ |
| CF502 | 9965 000 22217 | RESONATOR 2 PIN 600KHZ |
| JK303 | 9965 000 22219 | RCA JACK 4P |
| JK401 | 9965 000 22220 | DIN JACK 8 PIN |
| JK403 | 4822 267 41238 | RCA JACK 1P |
| JK501 | 9940 000 00017 | SPK JACK |

- RESISTORS -

RA301 Δ 9965 000 12486 RES ARRAY 4* 33 Ω 1/10W 5%

- COILS & FILTERS -

| | | |
|-------|----------------|------------------------------|
| L301 | 9965 000 15871 | INDUCTOR 10 μ H 10% |
| L501 | 9965 000 22223 | INDUCTOR 27 μ H 20% 4.3A |
| L502 | 9965 000 22223 | INDUCTOR 27 μ H 20% 4.3A |
| XL301 | 9965 000 22224 | CRYSTAL 2MHZ 30PPM |

- DIODES -

| | | |
|------|----------------|----------------------|
| D301 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D302 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D304 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D305 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D306 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D307 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D308 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D309 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D310 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D311 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D312 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D313 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D315 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D316 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D317 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D318 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D319 | 9965 000 19409 | DIODE BAV16W/IN4148W |

- DIODES -

| | | |
|-------|----------------|--------------------------|
| D320 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D321 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D322 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D323 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D324 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D501 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| D502 | 9965 000 19409 | DIODE BAV16W/IN4148W |
| ZD301 | 9965 000 22225 | DIODE ZENR 4.7-4.9V 0.5W |
| ZD302 | 9965 000 22225 | DIODE ZENR 4.7-4.9V 0.5W |
| ZD303 | 9965 000 19432 | CHIP ZENER 9.1V 5% 0.5W |
| ZD401 | 9965 000 19432 | CHIP ZENER 9.1V 5% 0.5W |
| ZD501 | 9965 000 19397 | CHIP ZENER 5.6V 5% 0.5W |
| ZD502 | 9965 000 17375 | DIODE 11.9-12.4V 0.5W |
| ZD503 | 9965 000 17375 | DIODE 11.9-12.4V 0.5W |
| ZD551 | 4822 130 80272 | MTZJ7.5C |

- IC & TRANSISTORS -

| | | |
|-------|----------------|---------------------|
| IC301 | 9965 000 15886 | IC RC4558D |
| IC302 | 9965 000 12510 | TC4052BFN |
| IC303 | 9965 000 15886 | IC RC4558D |
| IC304 | 9965 000 22226 | IC 24 PIN PT2396S |
| IC305 | 9965 000 15886 | IC RC4558D |
| IC401 | 9965 000 15886 | IC RC4558D |
| IC402 | 9965 000 15886 | IC RC4558D |
| IC403 | 9965 000 15886 | IC RC4558D |
| IC405 | 9965 000 22227 | IC 28PIN PT2322-S |
| IC406 | 9965 000 15886 | IC RC4558D |
| IC407 | 9965 000 15886 | IC RC4558D |
| IC408 | 9965 000 15886 | IC RC4558D |
| IC409 | 9965 000 15886 | IC RC4558D |
| IC501 | 9965 000 22228 | IC 24PIN TDA8920TH |
| IC502 | 9965 000 22229 | IC14 PIN HEF4013BT |
| IC503 | 9965 000 22230 | IC 14 PIN 74LVC04AD |
| IC551 | 9965 000 17384 | IC TP5228 |
| Q301 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q302 | 9965 000 14175 | 2SA733Q,P |
| Q303 | 9965 000 20268 | XISTR NPN (2SC1623) |

ELECTRIC PARTS - MAIN+SPK. JACK BOARD**- IC & TRANSISTORS -**

| | | |
|------|----------------|--------------------------|
| Q305 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q306 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q309 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q310 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q311 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q312 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q401 | 9965 000 20286 | NPN CM5783GR HFE:200-400 |
| Q402 | 9965 000 14175 | 2SA733Q,P |
| Q403 | 9965 000 20286 | NPN CM5783GR HFE:200-400 |
| Q404 | 9965 000 14175 | 2SA733Q,P |
| Q405 | 4822 130 43818 | 2SC2878-A |
| Q406 | 4822 130 43818 | 2SC2878-A |
| Q407 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q501 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q502 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q503 | 9965 000 14175 | 2SA733Q,P |
| Q551 | 9965 000 20268 | XISTR NPN (2SC1623) |
| Q552 | 9965 000 20268 | XISTR NPN (2SC1623) |

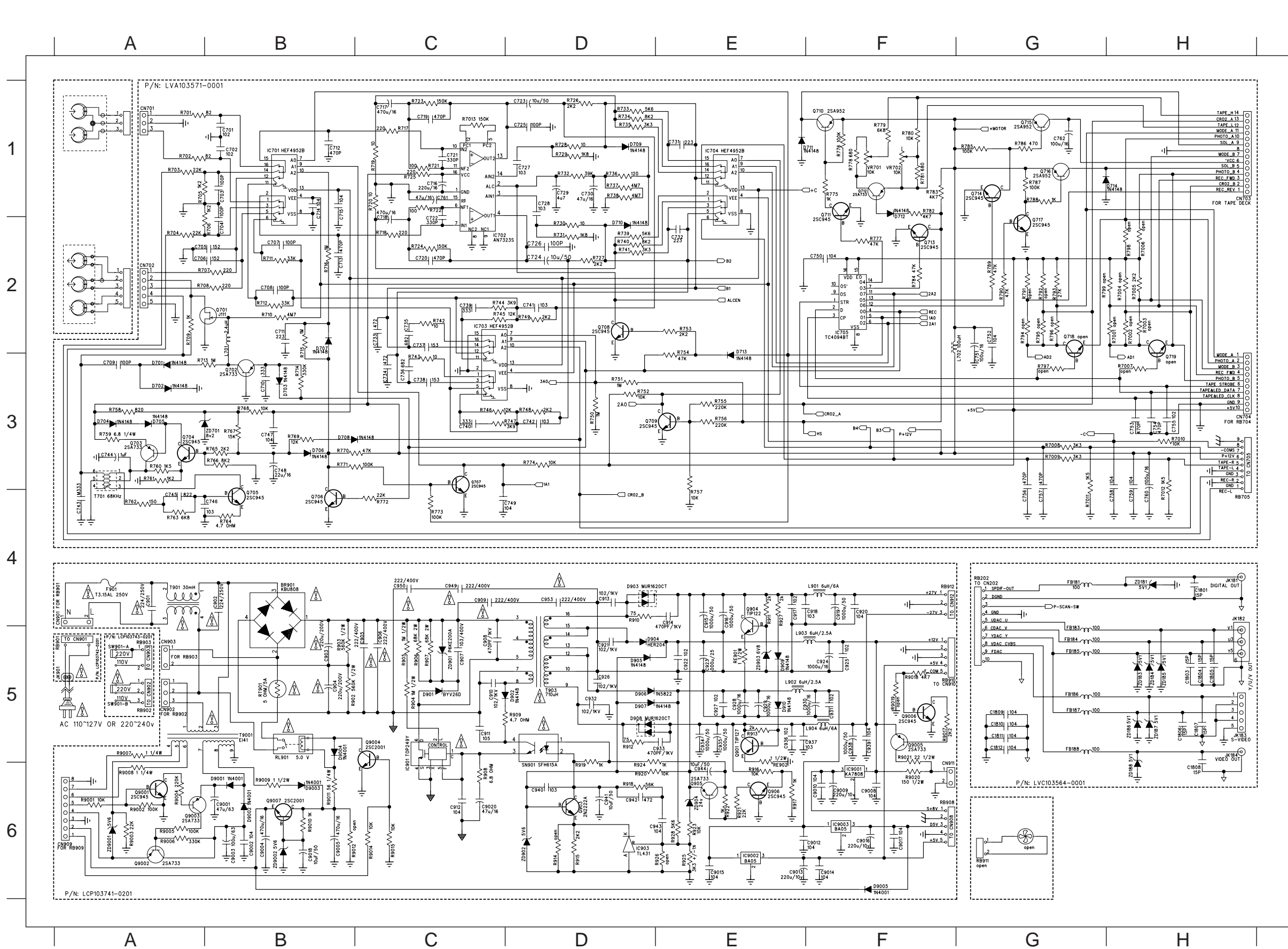
Note: Only these parts mentioned in the list are normal service parts.

TAPE BOARD

TABLE OF CONTENTS

Circuit Diagram 8-2
PCB Layout Top View 8-3
PCB Layout Bottom View 8-4
Electrical Parts List 8-5

CIRCUIT DIAGRAM-TAPE BOARD



| | | | | | |
|------|----|------|----|-------|----|
| C701 | B1 | Q701 | B2 | R771 | B3 |
| C702 | B1 | Q702 | B3 | R772 | C4 |
| C703 | B1 | Q703 | A3 | R773 | C4 |
| C704 | B2 | Q704 | A3 | R774 | D3 |
| C705 | B2 | Q705 | B4 | R775 | F1 |
| C706 | B2 | Q706 | B4 | R776 | F1 |
| C707 | B2 | Q707 | C3 | R777 | F2 |
| C708 | B2 | Q708 | D2 | R778 | F1 |
| C709 | A3 | Q709 | E3 | R779 | F1 |
| C710 | B3 | Q710 | F1 | R780 | F1 |
| C711 | B2 | Q711 | F1 | R781 | F1 |
| C712 | B1 | Q712 | F1 | R782 | F1 |
| C713 | B2 | Q713 | F2 | R783 | F1 |
| C714 | B1 | Q714 | G1 | R784 | F2 |
| C715 | B1 | Q715 | G1 | R785 | G1 |
| C716 | C1 | Q716 | G1 | R786 | G1 |
| C717 | C1 | Q717 | G2 | R787 | G1 |
| C718 | C2 | R701 | A1 | R788 | G1 |
| C719 | C1 | R702 | A1 | R789 | G2 |
| C720 | C2 | R703 | A1 | R790 | G2 |
| C721 | C1 | R704 | A2 | R793 | G2 |
| C722 | C2 | R705 | A1 | R7005 | H2 |
| C723 | D1 | R706 | B2 | R7008 | G3 |
| C724 | D2 | R707 | B2 | R7009 | G3 |
| C725 | D1 | R708 | B2 | R7010 | H3 |
| C726 | D2 | R709 | A2 | R7011 | G4 |
| C727 | D1 | R710 | B2 | R7012 | H3 |
| C728 | D1 | R711 | B2 | R7013 | C1 |
| C729 | D1 | R712 | B2 | RB705 | H3 |
| C730 | D1 | R713 | B2 | T701 | A3 |
| C731 | E1 | R714 | B3 | VR701 | F1 |
| C732 | E2 | R715 | B2 | VR702 | F1 |
| C733 | C2 | R716 | B2 | ZD701 | B3 |
| C734 | C3 | R717 | C1 | | |
| C735 | C2 | R718 | C2 | | |
| C736 | C3 | R719 | C1 | | |
| C737 | C2 | R720 | C1 | | |
| C738 | C3 | R721 | C1 | | |
| C739 | C2 | R722 | C1 | | |
| C740 | C3 | R723 | C1 | | |
| C741 | D2 | R724 | C2 | | |
| C742 | D3 | R725 | C1 | | |
| C743 | A4 | R726 | D1 | | |
| C744 | A3 | R727 | D2 | | |
| C745 | A4 | R728 | D1 | | |
| C746 | B4 | R729 | D1 | | |
| C747 | B3 | R730 | D2 | | |
| C748 | B3 | R731 | D2 | | |
| C749 | C4 | R732 | D1 | | |
| C750 | F2 | R733 | D1 | | |
| C751 | G2 | R734 | D1 | | |
| C752 | G2 | R735 | D1 | | |
| C753 | H3 | R736 | D1 | | |
| C754 | H3 | R737 | D1 | | |
| C755 | H3 | R738 | D1 | | |
| C756 | G3 | R739 | D2 | | |
| C757 | G3 | R740 | D2 | | |
| C758 | H3 | R741 | D2 | | |
| C759 | H3 | R742 | C2 | | |
| C760 | H3 | R743 | C3 | | |
| C761 | C1 | R744 | C2 | | |
| C762 | G1 | R745 | C2 | | |
| C763 | A1 | R746 | C3 | | |
| C764 | H1 | R748 | D3 | | |
| C765 | H3 | R749 | D2 | | |
| C766 | A3 | R750 | D3 | | |
| C767 | B3 | R751 | D3 | | |
| C768 | B3 | R752 | D3 | | |
| C769 | A3 | R753 | E2 | | |
| C770 | A3 | R754 | E3 | | |
| C771 | B3 | R755 | E3 | | |
| C772 | B2 | R756 | E3 | | |
| C773 | B3 | R757 | E3 | | |
| C774 | D1 | R758 | A3 | | |
| C775 | D2 | R759 | A3 | | |
| C776 | E1 | R760 | A3 | | |
| C777 | F1 | R761 | A3 | | |
| C778 | E3 | R762 | A4 | | |
| C779 | G1 | R763 | A4 | | |
| C780 | B1 | R764 | B4 | | |
| C781 | C2 | R765 | B3 | | |
| C782 | C2 | R766 | B3 | | |
| C783 | E1 | R767 | B3 | | |
| C784 | F2 | R768 | B3 | | |
| C785 | B2 | R769 | B3 | | |
| C786 | F2 | R770 | B3 | | |

ELECTRICAL PARTSLIST - TAPE+MOTO1+MOTO2 BOARD**- MISCELLANEOUS -**

M2 △ 9965 000 22299 MOTOR DC 6V RF-500TB
M3 △ 9965 000 22299 MOTOR DC 6V RF-500TB
RB803 9940 000 00016 FLAT CABLE 5P 220MM
RB804 9965 000 22301 FLAT CABLE 2P 120MM
SW803 9965 000 22244 TACT SW DIA1.7MM

SW804 9965 000 22244 TACT SW DIA1.7MM
VR701 9965 000 22302 CNTL TRIMR 10KB 30%
VR702 9965 000 22302 CNTL TRIMR 10KB 30%

- COILS & FILTERS -

L701 9965 000 18025 2.4μH 5%
L702 9965 000 15931 INDUCTOR 100μH 10%
T701 9965 000 22303 OSC COIL REC OSC 3MH

- DIODES -

D701 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D702 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D703 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D704 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D705 9965 000 19409 DIODE CHIP BAV16W/IN4148W

D706 4822 130 30621 1N4148
D707 4822 130 30621 1N4148
D708 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D709 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D710 9965 000 19409 DIODE CHIP BAV16W/IN4148W

D711 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D712 4822 130 30621 1N4148
D713 9965 000 19409 DIODE CHIP BAV16W/IN4148W
D714 9965 000 19409 DIODE CHIP BAV16W/IN4148W
ZD701 9965 000 22305 DIODE ZENR 7.8-8.4V 0.5W

- IC & TRANSISTORS -

IC703 4822 209 32919 HEF4952BT
IC704 4822 209 32919 HEF4952BT
IC705 9940 000 00015 IC 16PIN TC4094BFN
Q701 9965 000 16497 2N7000TA 60V/0.2A,
Q702 9965 000 14175 2SA733Q,P

Q703 4822 130 63876 2SA733R
Q704 9965 000 20268 XISTR NPN 2SC1623
Q705 4822 130 41198 2SC945P
Q706 9965 000 20268 XISTR NPN 2SC1623
Q707 9965 000 20268 XISTR NPN 2SC1623

Q708 9965 000 20268 XISTR NPN 2SC1623
Q709 9965 000 20268 XISTR NPN 2SC1623
Q710 4822 130 10211 2SA952
Q711 9965 000 20268 XISTR NPN 2SC1623
Q712 9965 000 14175 2SA733Q,P

Q713 9965 000 20268 XISTR NPN 2SC1623
Q714 9965 000 20268 XISTR NPN 2SC1623
Q715 4822 130 10211 2SA952
Q716 4822 130 10211 2SA952
Q717 9965 000 20268 XISTR NPN 2SC1623

Note: Only these parts mentioned in the list are normal service parts.

- IC & TRANSISTORS -

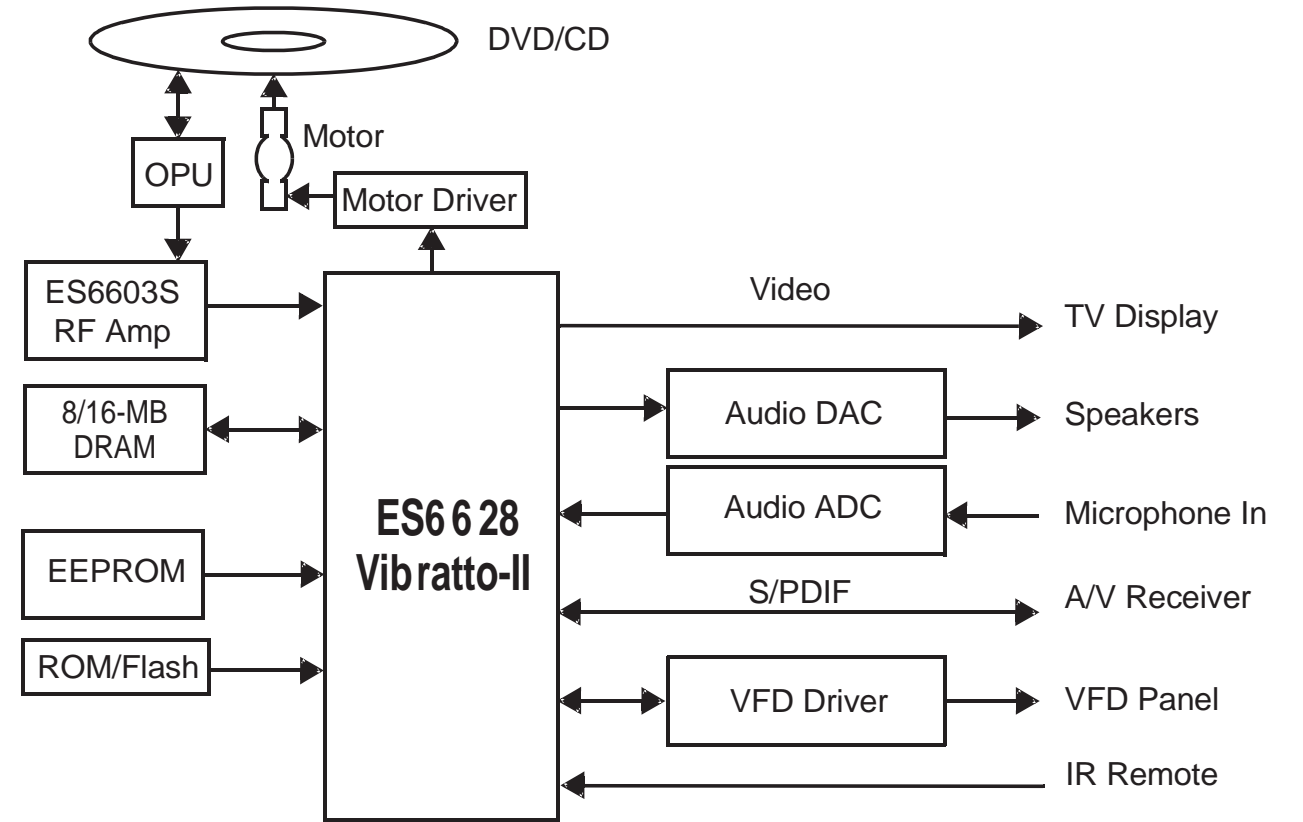
IC701 4822 209 32919 HEF4952BT
IC702 9322 140 00668 IC SM AN7323S (MATJ)

SERVO & DOOR SWITCH BOARD

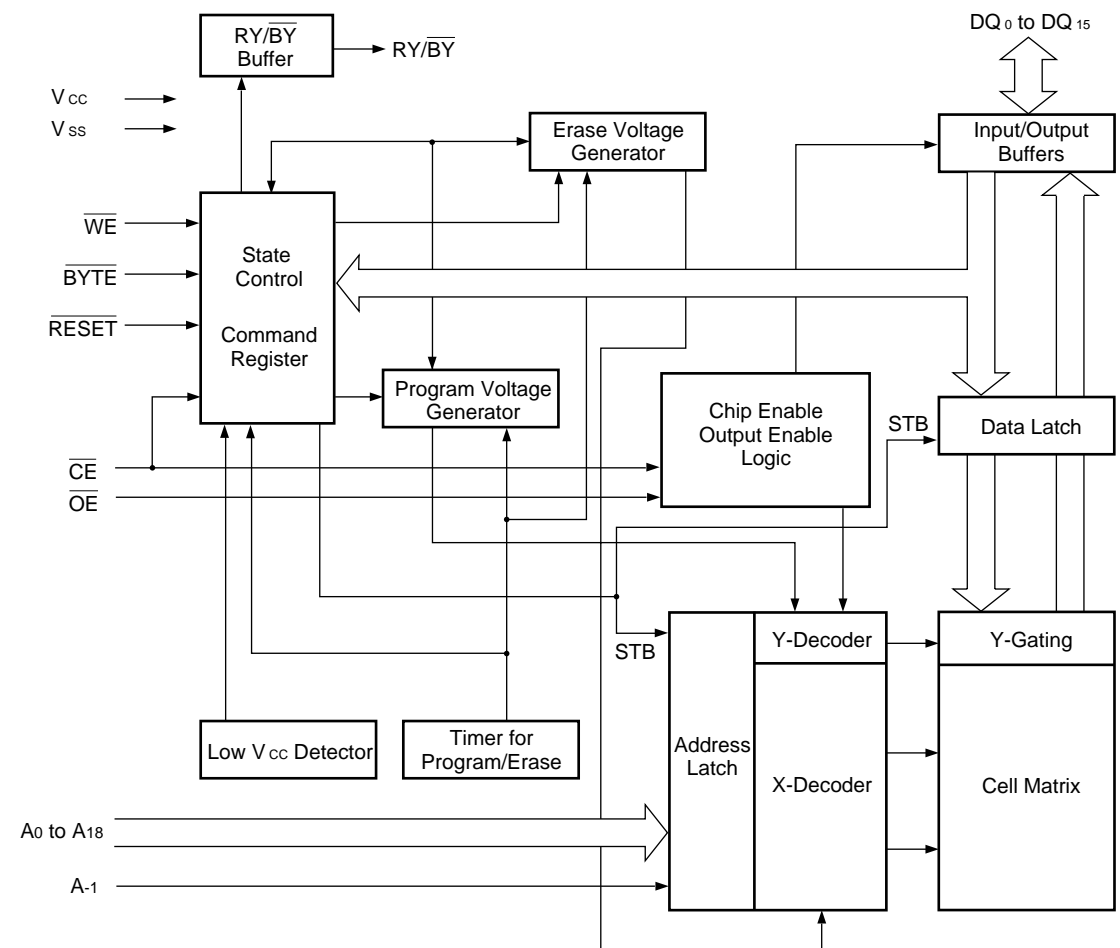
TABLE OF CONTENTS

| | |
|------------------------------|-----|
| Internal IC Diagram | 9-1 |
| Circuit Diagram | 9-2 |
| PCB Layout Top View | 9-3 |
| PCB Layout Bottom View | 9-4 |
| Electrical Parts List | 9-5 |

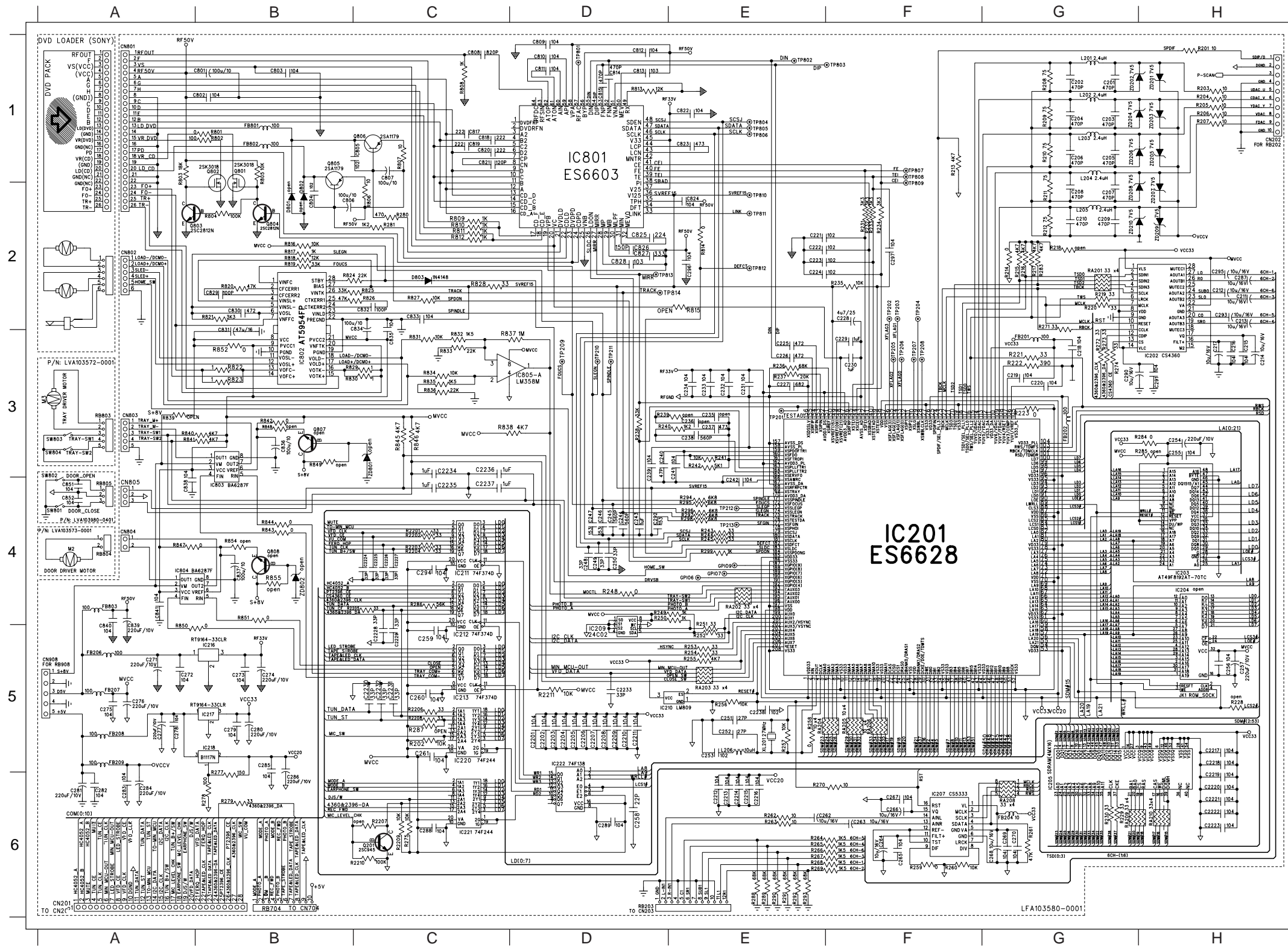
ES6 6 28 INTERNAL IC DIAGRAM



MBM29 LV8 00 INTERNAL IC DIAGRAM



CIRCUIT DIAGRAM - SERVO & DOOR SW BOARD



| | | | | | | | |
|------|----|-------|----|-------|----|-------|----|
| C201 | G1 | C805 | C1 | IC205 | G6 | R279 | B6 |
| C202 | G1 | C806 | B2 | IC207 | F6 | R280 | C2 |
| C203 | G1 | C807 | C1 | IC209 | D5 | R281 | C2 |
| C204 | G1 | C808 | C1 | IC210 | E5 | R283 | G2 |
| C205 | G1 | C809 | D1 | IC211 | C4 | R284 | H3 |
| C206 | G1 | C810 | D1 | IC212 | C4 | R286 | C4 |
| C207 | G2 | C811 | D1 | IC213 | C5 | R288 | E6 |
| C208 | G2 | C812 | D1 | IC216 | B5 | R289 | E6 |
| C209 | G2 | C813 | D1 | IC217 | B5 | R290 | E6 |
| C210 | G2 | C814 | D1 | IC218 | B5 | R291 | E6 |
| C211 | H2 | C815 | D1 | IC220 | C5 | R292 | E6 |
| C212 | H2 | C817 | C1 | IC221 | C6 | R293 | E6 |
| C213 | H2 | C818 | C1 | IC222 | D5 | R294 | E4 |
| C214 | H3 | C819 | C1 | IC801 | D1 | R295 | E4 |
| C215 | H3 | C820 | C1 | IC802 | B3 | R296 | E4 |
| C216 | H3 | C821 | C1 | IC803 | B3 | R297 | E4 |
| C217 | H3 | C822 | E1 | IC804 | B4 | R298 | E4 |
| C218 | G3 | C823 | E1 | IC805 | D3 | R299 | E4 |
| C219 | G3 | C824 | E2 | L201 | G1 | R801 | B1 |
| C220 | G3 | C825 | D2 | L202 | G1 | R802 | B1 |
| C221 | F2 | C826 | D2 | L203 | G1 | R803 | A1 |
| C222 | F2 | C827 | D2 | L204 | G1 | R804 | B2 |
| C223 | F2 | C828 | D2 | L205 | G2 | R805 | B1 |
| C224 | F2 | C829 | B2 | L206 | E5 | R806 | C2 |
| C225 | E3 | C830 | B2 | Q201 | C6 | R807 | C1 |
| C226 | E3 | C831 | B3 | Q801 | B1 | R808 | C1 |
| C227 | E3 | C832 | C2 | Q802 | B1 | R809 | C2 |
| C228 | F2 | C833 | C2 | Q803 | B2 | R810 | C2 |
| C229 | F3 | C834 | C3 | Q804 | B2 | R811 | C2 |
| C230 | F3 | C835 | C3 | Q805 | B2 | R812 | C2 |
| C231 | E3 | C836 | B3 | Q806 | C1 | R813 | D1 |
| C232 | E3 | C837 | B4 | R201 | H1 | R814 | E2 |
| C233 | E3 | C838 | A4 | R202 | C5 | R816 | B2 |
| C234 | E3 | C839 | A4 | R203 | H1 | R817 | B2 |
| C237 | E3 | C840 | A4 | R204 | H1 | R818 | B2 |
| C238 | E3 | C841 | A4 | R205 | H1 | R819 | B2 |
| C239 | D3 | C2201 | D5 | R206 | H1 | R821 | B2 |
| C240 | D3 | C2202 | D5 | R207 | H1 | R822 | B3 |
| C241 | E3 | C2203 | D5 | R208 | G1 | R824 | C2 |
| C242 | E4 | C2204 | D5 | R209 | G1 | R823 | B3 |
| C243 | D4 | C2205 | D5 | R210 | G1 | R824 | C2 |
| C244 | D4 | C2206 | D5 | R211 | G2 | R825 | C2 |
| C245 | D4 | C2207 | D5 | R212 | G2 | R826 | C2 |
| C246 | D4 | C2208 | D5 | R213 | F1 | R827 | C2 |
| C247 | D4 | C2209 | D5 | R214 | G2 | R828 | C2 |
| C248 | D4 | C2210 | D5 | R215 | G2 | R829 | C3 |
| C249 | D4 | C2211 | D5 | R216 | G2 | R830 | C3 |
| C250 | D4 | C2212 | E6 | R217 | G2 | R832 | C3 |
| C251 | E5 | C2213 | E6 | R219 | G2 | R833 | C3 |
| C252 | E5 | C2214 | E6 | R220 | G2 | R834 | C3 |
| C253 | E5 | C2215 | E6 | R221 | G3 | R835 | C3 |
| C254 | H3 | C2216 | E6 | R222 | G3 | R836 | C3 |
| C255 | H3 | C2217 | H5 | R223 | G3 | R836 | C3 |
| C256 | H5 | C2218 | H5 | R229 | G6 | R837 | D3 |
| C257 | H5 | C2219 | H6 | R230 | G6 | R838 | D3 |
| C258 | D6 | C2220 | H6 | R231 | F2 | R840 | B3 |
| C259 | C5 | C2221 | H6 | R232 | F2 | R842 | B3 |
| C260 | C5 | C2222 | H6 | R233 | F2 | R843 | B4 |
| C261 | C5 | C2223 | H6 | R234 | F2 | R844 | B4 |
| C262 | E6 | C2224 | C4 | R235 | F2 | R845 | C3 |
| C263 | F6 | C2225 | C4 | R236 | E3 | R846 | C3 |
| C264 | F6 | C2226 | C4 | R237 | E3 | R847 | B4 |
| C265 | F6 | C2227 | C4 | R238 | D3 | R850 | B5 |
| C266 | F6 | C2228 | C5 | R240 | E3 | R851 | B4 |
| C267 | F6 | C2229 | C5 | R241 | E3 | R852 | B3 |
| C268 | G6 | C2230 | C5 | R242 | E3 | R2201 | C4 |
| C269 | G6 | C2231 | C5 | R243 | E4 | R2202 | C4 |
| C270 | G6 | C2232 | C5 | R244 | E4 | R2203 | C4 |
| C271 | A5 | C2233 | D5 | R245 | E4 | R2204 | C4 |
| C272 | A5 | C2234 | C3 | R248 | D4 | R2205 | C4 |
| C273 | B5 | C2235 | C4 | R249 | E4 | R2206 | C5 |
| C274 | B5 | C2236 | C3 | R250 | E4 | R2208 | C5 |
| C275 | A5 | C2237 | C4 | R251 | E5 | R2209 | C6 |
| C276 | A5 | C2238 | E5 | R252 | E5 | R2210 | C6 |
| C277 | A5 | CN201 | A6 | R253 | E5 | R2211 | D5 |
| C278 | A5 | CN202 | H1 | R254 | E5 | RA201 | G2 |
| C279 | B5 | CN801 | A1 | R255 | E5 | RA202 | E4 |
| C280 | B5 | CN802 | A2 | R256 | E5 | RA203 | E5 |
| C281 | A6 | CN803 | A3 | R257 | E5 | RA204 | F5 |
| C282 | A6 | CN804 | A4 | R258 | E5 | RA205 | F5 |
| C283 | A6 | CN805 | A4 | R259 | F6 | RA206 | F5 |
| C284 | A6 | CN908 | A5 | R260 | F6 | RA208 | G6 |
| C285 | B5 | D803 | C2 | R261 | G6 | RA209 | H6 |
| C286 | B5 | FB201 | G3 | R262 | E6 | RA210 | H6 |
| C287 | H2 | FB202 | G3 | R263 | E6 | RB203 | D6 |
| C288 | C6 | FB204 | G6 | R264 | F6 | RB704 | B6 |
| C289 | D6 | FB206 | A5 | R265 | F6 | RB803 | A3 |
| C290 | H3 | FB207 | A5 | R266 | F6 | RB804 | A4 |
| C291 | H3 | FB208 | A5 | R267 | F6 | XL201 | E5 |
| C292 | D4 | FB209 | A5 | R268 | F6 | ZD201 | H1 |
| C293 | H2 | FB801 | B1 | R269 | F6 | ZD202 | H1 |
| C294 | C4 | FB802 | B1 | R270 | F6 | ZD203 | H1 |
| C295 | H2 | FB803 | A4 | R271 | G2 | ZD204 | H1 |
| C296 | E2 | GP106 | E4 | R272 | G3 | ZD205 | H1 |
| C297 | F2 | GP107 | E4 | R273 | G3 | ZD206 | H1 |
| C801 | B1 | GP109 | E4 | R274 | G3 | ZD207 | H2 |
| C802 | B1 | IC201 | F4 | R275 | C6 | ZD208 | H2 |
| C803 | B1 | IC202 | H3 | R277 | B6 | ZD209 | H2 |
| C804 | B2 | IC203 | H4 | R278 | B6 | ZD210 | H2 |

ELECTRICAL PARTSLIST - SERVO BOARD**- MISCELLANEOUS -**

RB704 9965 000 22243 FLAT CABLE 10PIN 220MM

- RESISTORS -RA201 Δ 9965 000 12486 RES ARRAY 4* 33 Ω 1/10W 5%RA202 Δ 9965 000 12486 RES ARRAY 4* 33 Ω 1/10W 5%RA203 Δ 9965 000 12486 RES ARRAY 4* 33 Ω 1/10W 5%RA204 Δ 9965 000 12487 RES ARRAY 4* 10 Ω 1/10W 5%RA205 Δ 9965 000 12487 RES ARRAY 4* 10 Ω 1/10W 5%RA206 Δ 9965 000 12487 RES ARRAY 4* 10 Ω 1/10W 5%RA208 Δ 9965 000 12486 RES ARRAY 4* 33 Ω 1/10W 5%RA209 Δ 9965 000 12486 RES ARRAY 4* 33 Ω 1/10W 5%RA210 Δ 9965 000 12486 RES ARRAY 4* 33 Ω 1/10W 5%**- COILS & FILTERS -**FB201 9965 000 12470 BEAD FERITE 100 Ω /AT100MHZFB202 9965 000 12470 BEAD FERITE 100 Ω /AT100MHZFB204 9965 000 19426 CHIP INDUCTOR 10 μ H 10%FB206 9965 000 12470 BEAD FERITE 100 Ω /AT100MHZFB207 9965 000 12470 BEAD FERITE 100 Ω /AT100MHZFB208 9965 000 12470 BEAD FERITE 100 Ω /AT100MHZFB209 9965 000 12470 BEAD FERITE 100 Ω /AT100MHZFB801 9965 000 12471 BEAD FERITE 600 Ω AT100MHZFB802 9965 000 12471 BEAD FERITE 600 Ω AT100MHZFB803 9965 000 12470 BEAD FERITE 100 Ω /AT100MHZL201 9965 000 18025 2.4 μ H 5%L202 9965 000 18025 2.4 μ H 5%L203 9965 000 18025 2.4 μ H 5%L204 9965 000 18025 2.4 μ H 5%L205 9965 000 18025 2.4 μ H 5%L206 9965 000 15871 INDUCTOR 10 μ H 10%

XL201 9965 000 17371 27.0000MHZ HC-49US +/-20PPM

- DIODES -**- DIODES -**

D803 9965 000 19409 DIODE BAV16W/IN4148W

ZD201 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD202 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD203 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD204 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD205 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD206 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD207 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD208 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD209 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

ZD210 9965 000 19431 CHIP ZENER 7.5V 5% 0.5W

- IC & TRANSISTORS -

IC201 9965 000 21180 IC 208 PIN ES6628F PQFP

IC202 9965 000 12490 CS4360KZ

IC203 9940 000 00021 IC MBM29LV800BA W/S.W.

IC205 9940 000 00029 IC SD41621HGT-6

IC207 9322 190 52668 IC SM CS5333-KZ

IC209 9965 000 15884 IC AT24C02N-10SI-2.7

IC210 9965 000 15890 IC IMP809 SOT23 2.93V

IC211 9965 000 20293 IC 20 PIN 74F374D

IC212 9965 000 20293 IC 20 PIN 74F374D

IC213 9965 000 20293 IC 20 PIN 74F374D

IC216 9965 000 15887 IC RT9164-33CLR

IC217 9965 000 15887 IC RT9164-33CLR

IC218 9965 000 19385 IC 4P B1117N-2.85

IC220 9965 000 22246 IC 20PIN 74F244

IC221 9965 000 22246 IC 20PIN 74F244

IC222 9965 000 22247 IC 16 PIN N74F138D

IC801 9965 000 21182 IC 64 PIN ES6603S LQFP

IC802 9322 187 63668 IC SM BA5954FP

IC803 9965 000 15917 IC BA6287FE 2R

IC804 9965 000 15917 IC BA6287FE 2R

IC805 9965 000 20290 IC 8 PIN LM358MX NS

Q201 9965 000 20268 XISTR NPN 2SC1623

ELECTRICAL PARTSLIST - SERVO BOARD**- IC & TRANSISTORS -**

Q801 3141 018 51690 TRA SM 2SK3018

Q802 3141 018 51690 TRA SM 2SK3018

Q803 9965 000 19393 XISTR NPN 2SC2812N 2204

Q804 9965 000 19393 XISTR NPN 2SC2812N 2204

Q805 9965 000 19394 XISTR PNP 2SA1179N 2204

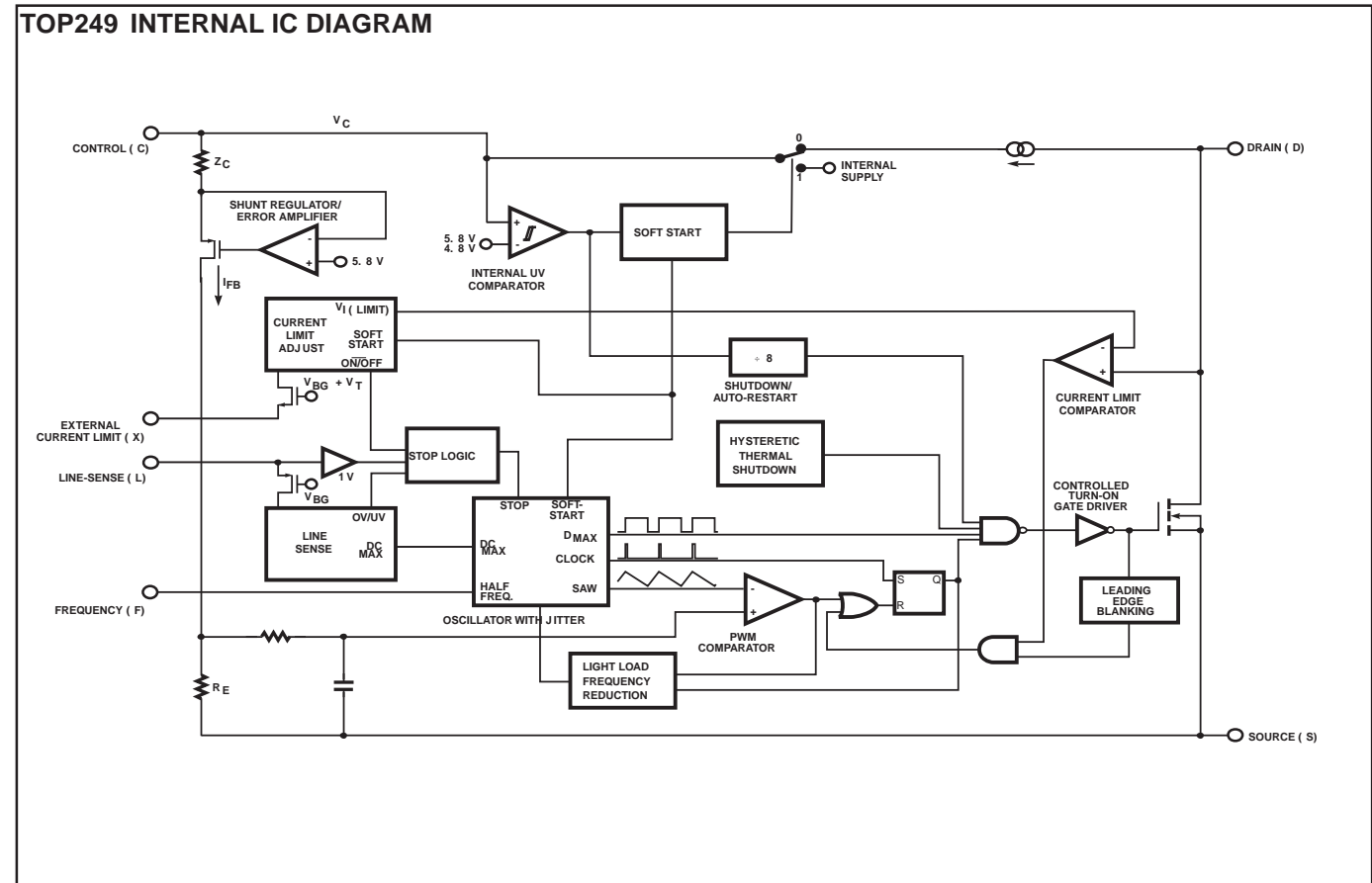
Q806 9965 000 19394 XISTR PNP 2SA1179N 2204

Note: Only these parts mentioned in the list are normal service parts.

POWER BOARD

TABLE OF CONTENTS

Internal IC Diagram & Voltages List 10-1
 Circuit Diagram 10-2
 PCB Layout 10-3
 Electrical Parts List 10-4



VOLTAGE

| IC901 (TOP249) | | | | | | | | | | |
|----------------|---|----|------|------|---|----|--|--|--|--|
| PIN | 1 | 2 | 3 | 4 | 5 | 6 | | | | |
| VOLTAGE | 0 | 40 | -1.5 | -1.5 | 0 | 83 | | | | |

| IC903 (TL431) | | | | | | | | | | |
|---------------|-----|---|---|--|--|--|--|--|--|--|
| PIN | 1 | 2 | 3 | | | | | | | |
| VOLTAGE | 2.4 | 0 | 5 | | | | | | | |

| IC9001 (L7808) | | | | | | | | | | |
|----------------|----|---|-----|--|--|--|--|--|--|--|
| PIN | 1 | 2 | 3 | | | | | | | |
| VOLTAGE | 12 | 0 | 7.9 | | | | | | | |

| IC9002 (BA05T) | | | | | | | | | | |
|----------------|-----|---|---|--|--|--|--|--|--|--|
| PIN | 1 | 2 | 3 | | | | | | | |
| VOLTAGE | 6.9 | 0 | 5 | | | | | | | |

| IC9003 (BA05T) | | | | | | | | | | |
|----------------|-----|---|---|--|--|--|--|--|--|--|
| PIN | 1 | 2 | 3 | | | | | | | |
| VOLTAGE | 6.9 | 0 | 5 | | | | | | | |

| Q901 (TIP127) | | | |
|---------------|------|-------|-------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | -3.8 | -28.2 | -12.3 |

| Q903 (2N2222A) | | | |
|----------------|-----|-----|------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 5.1 | 5.7 | 19.8 |

| Q904 (TLP122) | | | |
|---------------|-----|------|---|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 7.2 | 27.7 | 7 |

| Q905 (2SA733) | | | |
|---------------|-----|------|---|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 7.2 | 27.7 | 7 |

| Q905 (2SA733) | | | |
|---------------|------|------|------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 25.4 | 27.8 | 27.2 |

| Q906 (2SC945) | | | |
|---------------|-------|-------|---|
| PIN | 1 | 2 | 3 |
| VOLTAGE | -0.67 | -0.67 | 0 |

| Q9001 (2SC945) | | | |
|----------------|------|----|------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 0.06 | 42 | 0.05 |

| Q9002 (2SA733) | | | |
|----------------|-------|-------|-------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | -32.2 | -41.9 | -32.6 |

| Q9003 (2SA733) | | | |
|----------------|----|-------|------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 43 | -26.8 | 42.2 |

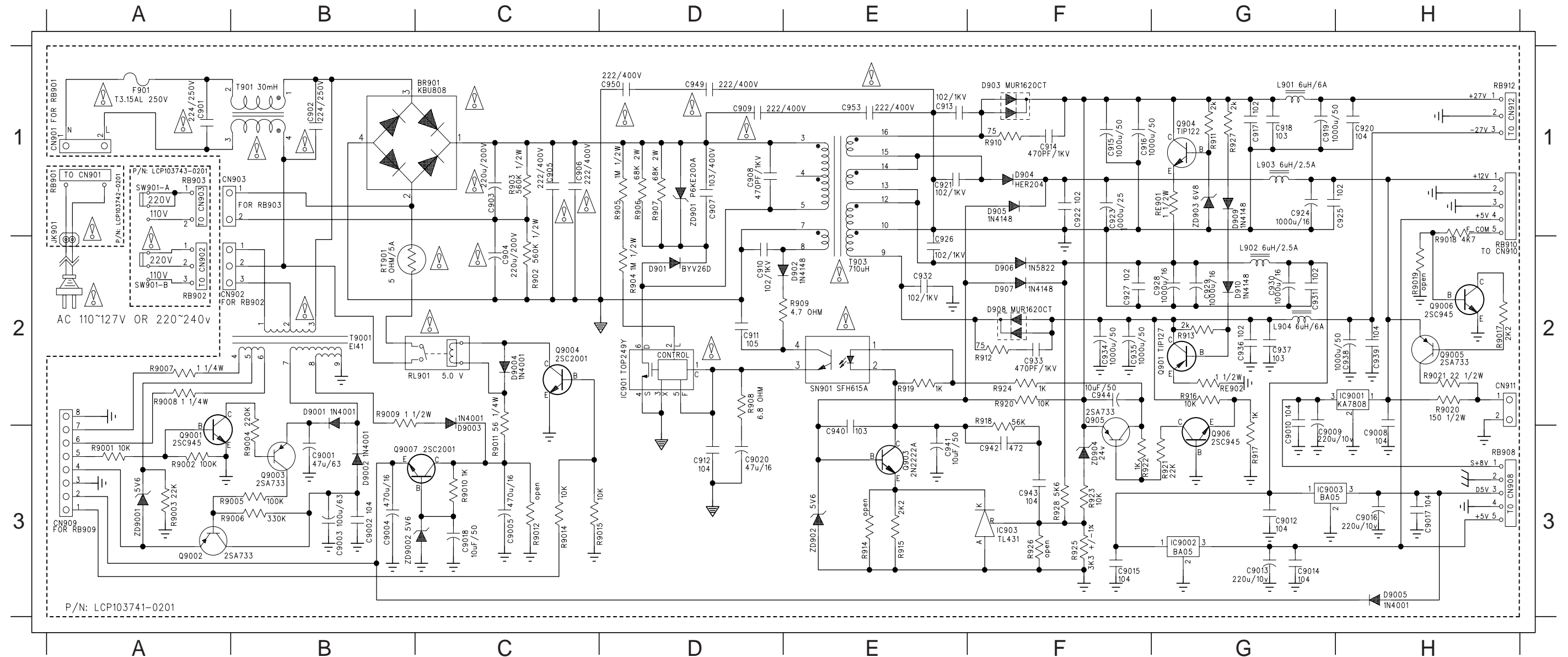
| Q9004 (2SC2001) | | | |
|-----------------|------|-----|------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 0.06 | 0.2 | 0.74 |

| Q9005 (2SA733) | | | |
|----------------|-------|-------|-------|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 12.15 | 12.15 | 13.35 |

| Q9006 (2SC945) | | | |
|----------------|---|-------|---|
| PIN | 1 | 2 | 3 |
| VOLTAGE | 0 | 13.25 | 0 |

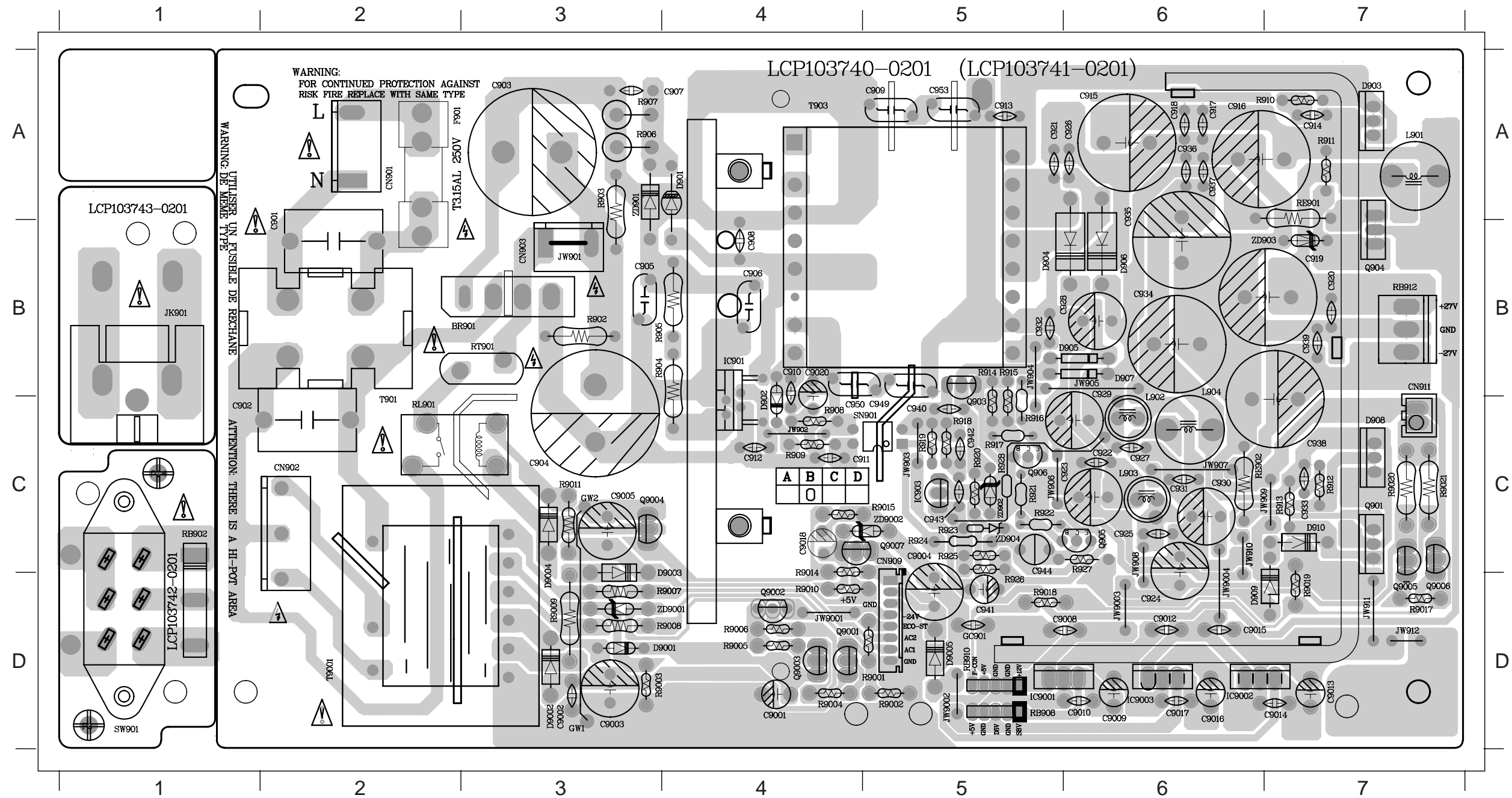
CIRCUIT DIAGRAM-POWER BOARD

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------|----|------|----|------|----|-------|----|-------|----|--------|----|-------|----|-------|----|-------|----|-------|----|---------|----|--------|----|
| BR901 | C1 | C915 | F1 | C930 | G2 | C949 | D1 | C9015 | F3 | D906 | F2 | IC903 | F3 | Q9005 | H2 | R915 | E3 | R9003 | A3 | R9021 | H2 | T903 | E2 |
| C901 | A1 | C916 | F1 | C931 | G2 | C950 | D1 | C9016 | H3 | D907 | F2 | JK901 | A2 | Q9006 | H2 | R916 | G2 | R9004 | B3 | RB901 | A1 | T9001 | B2 |
| C902 | B1 | C917 | G1 | C932 | E2 | C951 | D3 | C9017 | H3 | D908 | F2 | L901 | G1 | Q9007 | C3 | R917 | G3 | R9005 | B3 | RB902 | A2 | ZD901 | D1 |
| C903 | C1 | C918 | G1 | C933 | F2 | C953 | E1 | C9018 | C3 | D909 | G1 | L902 | G2 | R902 | C2 | R918 | F3 | R9006 | B3 | RB903 | A1 | ZD902 | E3 |
| C904 | C2 | C919 | G1 | C934 | F2 | C9001 | B3 | C9020 | D3 | D910 | G2 | L903 | G1 | R903 | C1 | R919 | E2 | R9007 | A2 | RB908 | H3 | ZD903 | G1 |
| C905 | C1 | C920 | H1 | C935 | F2 | C9002 | B3 | CN901 | A1 | D9001 | B2 | L904 | G2 | R904 | D2 | R920 | F2 | R9008 | A2 | RB910 | H1 | ZD904 | F3 |
| C906 | C1 | C921 | E1 | C936 | G2 | C9003 | B3 | CN902 | A2 | D9002 | B3 | Q901 | G2 | R905 | D1 | R921 | G3 | R9009 | B2 | RB912 | H1 | ZD9001 | A3 |
| C907 | D1 | C922 | F1 | C937 | G2 | C9004 | B3 | CN903 | B1 | D9003 | C2 | Q903 | E3 | R906 | D1 | R922 | F3 | R9010 | C3 | RE901 | G1 | ZD9002 | C3 |
| C908 | D1 | C923 | F1 | C938 | H2 | C9005 | C3 | CN909 | A3 | D9004 | C2 | Q904 | G1 | R907 | D1 | R923 | F3 | R9011 | C2 | RE902 | G2 | | |
| C909 | D1 | C924 | G1 | C939 | H2 | C9008 | H3 | CN911 | H2 | D9005 | H3 | Q905 | F2 | R908 | D2 | R924 | F2 | R9014 | C3 | RL901 | B2 | | |
| C910 | D2 | C925 | G1 | C940 | E3 | C9009 | G3 | D901 | D2 | F901 | A1 | Q906 | G3 | R909 | E2 | R925 | F3 | R9015 | C3 | RT901 | B2 | | |
| C911 | D2 | C926 | E2 | C941 | E3 | C9010 | G3 | D902 | E2 | IC9001 | H2 | Q9001 | A3 | R910 | F1 | R927 | G1 | R9017 | H2 | SN901 | E2 | | |
| C912 | D3 | C927 | F2 | C942 | F3 | C9012 | G3 | D903 | F1 | IC9002 | G3 | Q9002 | A3 | R911 | G1 | R928 | F3 | R9018 | H1 | SW901-A | A1 | | |
| C913 | E1 | C928 | G2 | C943 | F3 | C9013 | G3 | D904 | F1 | IC9003 | G3 | Q9003 | B3 | R912 | F2 | R9001 | A3 | R9019 | H2 | SW901-B | A2 | | |
| C914 | F1 | C929 | G2 | C944 | F2 | C9014 | G3 | D905 | F1 | IC901 | D2 | Q9004 | C2 | R913 | G2 | R9002 | A3 | R9020 | H2 | T901 | B1 | | |



PCB LAYOUT - POWER BOARD

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|----|------|----|------|----|-------|----|-------|----|--------|----|--------|----|--------|----|-------|----|------|----|-------|----|-------|----|--------|----|
| BR901 | B3 | C915 | A6 | C930 | C6 | C949 | B5 | C9015 | D6 | D907 | B6 | JK901 | B1 | JW9002 | D5 | Q9004 | C3 | R913 | C7 | R928 | C5 | R9018 | D5 | T903 | A4 |
| C901 | A2 | C916 | A6 | C931 | C6 | C950 | B4 | C9016 | D6 | D908 | C7 | JW901 | B3 | JW9003 | D6 | Q9005 | C7 | R914 | B5 | R9001 | D5 | R9019 | D7 | T9001 | D2 |
| C902 | C2 | C917 | A6 | C932 | B5 | C953 | A5 | C9017 | D6 | D909 | D7 | JW902 | C4 | JW9004 | D6 | Q9006 | C7 | R915 | B5 | R9002 | D5 | R9020 | C7 | ZD901 | A3 |
| C903 | A3 | C918 | A6 | C933 | C7 | C9001 | D4 | C9018 | C4 | D910 | C7 | JW903 | C5 | L901 | A7 | Q9007 | C5 | R916 | C5 | R9003 | D3 | R9021 | C7 | ZD902 | C5 |
| C904 | C3 | C919 | B7 | C934 | B6 | C9002 | D3 | CN901 | A2 | D9001 | D3 | JW904 | B5 | L902 | C6 | R902 | B3 | R917 | C5 | R9004 | D4 | RB902 | C1 | ZD903 | B7 |
| C905 | B3 | C920 | B7 | C935 | B6 | C9003 | D3 | CN902 | C2 | D9002 | D3 | JW905 | B6 | L903 | C6 | R903 | A3 | R918 | C5 | R9005 | D4 | RB908 | D5 | ZD904 | C5 |
| C906 | B4 | C921 | A5 | C936 | A6 | C9004 | D5 | CN903 | B3 | D9003 | D3 | JW906 | C5 | L904 | C6 | R904 | B4 | R919 | C5 | R9006 | D4 | RB910 | D5 | ZD9001 | D3 |
| C907 | A3 | C922 | C6 | C937 | A6 | C9005 | C3 | CN909 | C5 | D9004 | C3 | JW907 | C6 | Q901 | C7 | R905 | B4 | R920 | C5 | R9007 | D3 | RB912 | B7 | ZD9002 | C5 |
| C908 | B4 | C923 | C6 | C938 | C7 | C9006 | D5 | CN911 | C7 | D9005 | D5 | JW908 | E6 | Q903 | C5 | R906 | A3 | R921 | C5 | R9008 | D3 | RE901 | A7 | | |
| C909 | A5 | C924 | D6 | C939 | B7 | C9008 | D5 | D901 | A4 | F901 | A2 | JW908 | C6 | Q904 | B7 | R907 | A3 | R922 | C5 | R9009 | D3 | RE902 | C6 | | |
| C910 | B4 | C925 | C6 | C940 | C5 | C9009 | D6 | D902 | B4 | IC901 | B4 | JW909 | C7 | Q905 | C6 | R908 | C4 | R923 | C5 | R9010 | D4 | RL901 | C2 | | |
| C911 | C4 | C926 | A6 | C941 | D5 | C9010 | D6 | D903 | A7 | IC903 | C5 | JW910 | C6 | Q906 | C5 | R909 | C4 | R924 | C5 | R9011 | C3 | RT901 | B3 | | |
| C912 | C4 | C927 | C6 | C942 | C5 | C9012 | D6 | D904 | B6 | IC9001 | D5 | JW911 | D7 | Q9001 | D4 | R910 | A7 | R925 | C5 | R9014 | C4 | SN901 | C5 | | |
| C913 | A5 | C928 | B6 | C943 | C5 | C9013 | D7 | D905 | B6 | IC9002 | D6 | JW912 | D7 | Q9002 | D4 | R911 | A7 | R926 | D5 | R9015 | C4 | SW901 | D1 | | |
| C914 | A7 | C929 | C6 | C944 | C5 | C9014 | D7 | D906 | C7 | IC9003 | D6 | JW9001 | D4 | Q9003 | D4 | R912 | C7 | R927 | C6 | R9017 | D7 | T901 | C2 | | |



ELECTRICAL PARTSLIST - POWER BOARD**- MISCELLANEOUS -**

| | | | |
|-------|---|----------------|----------------------------|
| JK901 | △ | 9965 000 22231 | SOCKET MAINS 94V0 |
| RB908 | | 9965 000 22232 | FLAT CABLE 5PIN 300MM |
| RB910 | | 9965 000 22232 | FLAT CABLE 5PIN 300MM |
| RB912 | | 9965 000 22233 | FLAT CABLE 3P 120MM |
| RL901 | | 9965 000 22234 | RELAY 5VDC 40MA |
| | | | |
| RT901 | | 9965 000 17394 | 5R 5A |
| SN901 | | 9965 000 15769 | PHOTO COUPLER SFH615A-3 |
| SW901 | | 9965 000 16339 | SW SLIDE 6 PIN SL14-22AH |
| T9001 | △ | 9965 000 22235 | PWR TRANS. EI-41 120V/230V |
| T901 | | 9965 000 17395 | 1.7A L1:86TS L2:86TS |
| | | | |
| T903 | △ | 9965 000 22236 | PWR TRANS EI-42 710μH 10% |
| BR901 | | 9965 000 14176 | KBU808 8A 800V SEP |
| F901 | | 9965 000 17388 | FUSE 3.15A 250V SLOW |

- CAPACITORS -

| | | | |
|------|---|----------------|--------------------------|
| C901 | | 9965 000 16687 | 0.22μF 275V X2P 20% |
| C902 | | 9965 000 16687 | 0.22μF 275V X2P 20% |
| C905 | △ | 9965 000 20259 | SAFETY 0.0022μF 250V 20% |
| C906 | △ | 9965 000 20259 | SAFETY 0.0022μF 250V 20% |
| C909 | △ | 9965 000 20259 | SAFETY 0.0022μF 250V 20% |
| | | | |
| C949 | △ | 9965 000 20259 | SAFETY 0.0022μF 250V 20% |
| C950 | △ | 9965 000 20259 | SAFETY 0.0022μF 250V 20% |
| C953 | △ | 9965 000 20259 | SAFETY 0.0022μF 250V 20% |

- COILS & FILTERS -

| | | | |
|------|--|----------------|-----------------|
| L901 | | 9965 000 16693 | 6μH 10.5TS 6A |
| L902 | | 9965 000 16694 | 6μH 13.5TS 2UEW |
| L903 | | 9965 000 16694 | 6μH 13.5TS 2UEW |
| L904 | | 9965 000 16693 | 6μH 10.5TS 6A |

- DIODES -

| | | | |
|------|--|----------------|-------------------|
| D901 | | 4822 130 11044 | BYV26D |
| D902 | | 4822 130 30621 | 1N4148 |
| D903 | | 9965 000 14186 | MUR1620CT 8A 200V |

- DIODES -

| | | | |
|-------|--|----------------|--------------------------|
| D904 | | 9965 000 14187 | HER204 2A/300V 50NS |
| D905 | | 4822 130 30621 | 1N4148 |
| D906 | | 5322 130 32677 | 1N5822 |
| D907 | | 4822 130 30621 | 1N4148 |
| D908 | | 9965 000 14186 | MUR1620CT 8A 200V |
| | | | |
| D909 | | 4822 130 30621 | 1N4148 |
| D910 | | 4822 130 30621 | 1N4148 |
| D9001 | | 4822 130 31438 | 1N4001G |
| D9002 | | 4822 130 31438 | 1N4001G |
| D9003 | | 4822 130 31438 | 1N4001G |
| | | | |
| D9004 | | 4822 130 31438 | 1N4001G |
| D9005 | | 4822 130 31438 | 1N4001G |
| ZD901 | | 9965 000 22238 | DIODE P6KE200A 190-220V |
| ZD902 | | 9965 000 15944 | DIODE ZENR 5.6-5.9V 0.5W |
| ZD903 | | 4822 130 80272 | MTZJ7.5C |

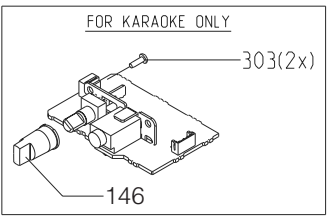
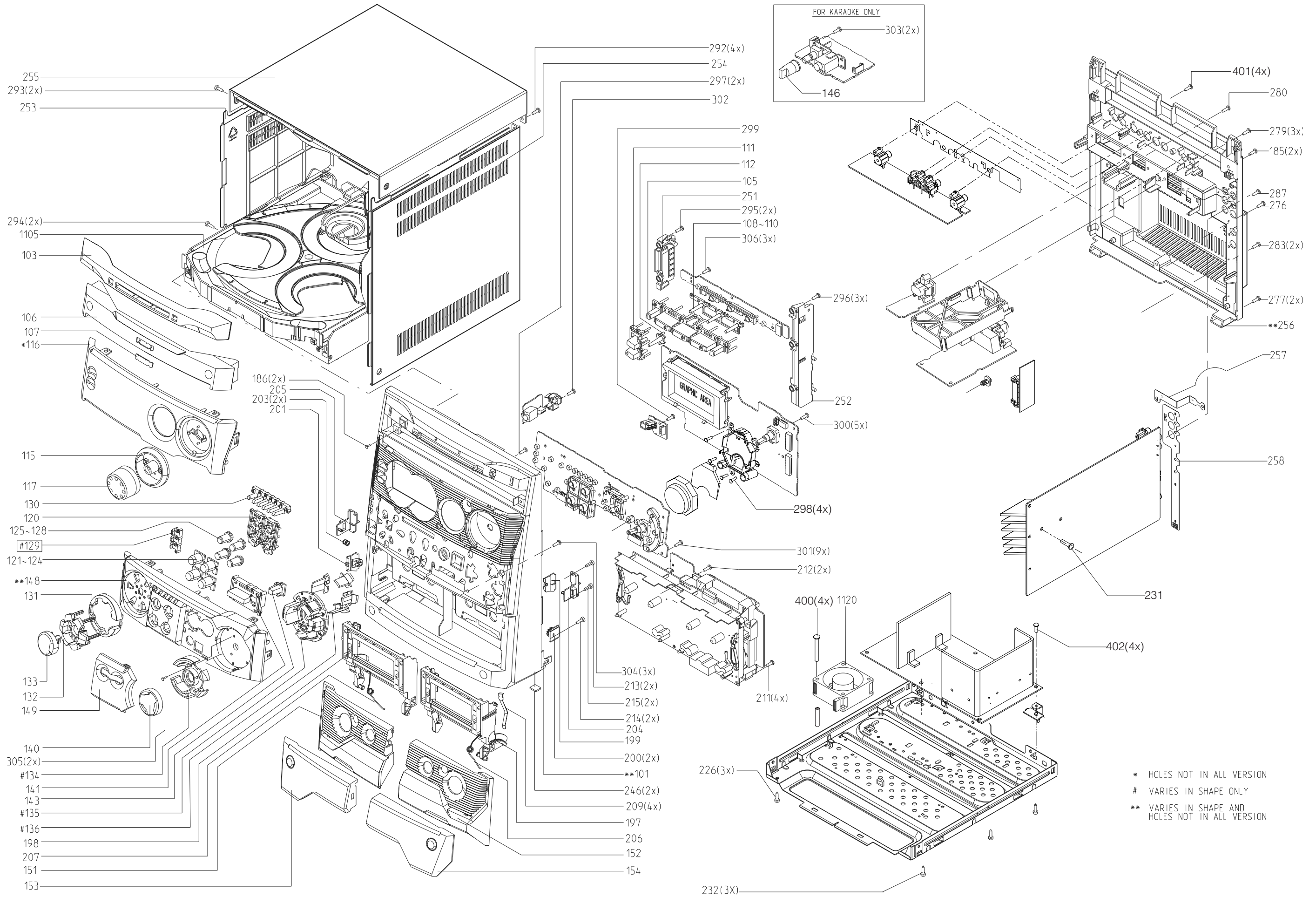
| | | | |
|--------|--|----------------|--------------------------|
| ZD9001 | | 9965 000 15944 | DIODE ZENR 5.6-5.9V 0.5W |
| ZD9002 | | 9965 000 15944 | DIODE ZENR 5.6-5.9V 0.5W |

- IC & TRANSISTORS -

| | | | |
|--------|--|----------------|-------------------------|
| IC901 | | 9965 000 14189 | TOP249Y 250W |
| IC903 | | 9965 000 17387 | IC TL431 |
| IC9001 | | 9965 000 15945 | IC 7808 8V 1A |
| IC9002 | | 9965 000 12512 | BA05T ROHM |
| IC9003 | | 9965 000 12512 | BA05T ROHM |
| | | | |
| Q901 | | 9965 000 22242 | XISTR PNP TIP127 |
| Q903 | | 9965 000 17396 | PN2222A FAIRCHILD |
| Q904 | | 9965 000 20581 | XISTR NPN TIP122 SGS-TH |
| Q905 | | 4822 130 63876 | 2SA733R |
| Q906 | | 4822 130 41198 | 2SC945P |
| Q9001 | | 4822 130 41198 | 2SC945P |
| | | | |
| Q9002 | | 4822 130 63876 | 2SA733R |
| Q9003 | | 4822 130 63876 | 2SA733R |
| Q9005 | | 4822 130 63876 | 2SA733R |
| Q9006 | | 4822 130 41198 | 2SC945P |
| Q9007 | | 4822 130 41651 | 2SC2001L |

Note: Only these parts mentioned in the list are normal service parts.

MECHANICAL EXPLODED VIEW



* HOLES NOT IN ALL VERSION
 # VARIES IN SHAPE ONLY
 ** VARIES IN SHAPE AND HOLES NOT IN ALL VERSION

MECHANICAL PARTS

| | | |
|-----|----------------|-------------------------------|
| 101 | 9965 000 22155 | FRONT CAB. |
| 103 | 9965 000 22166 | WINDOW DISC-CONTROL |
| 105 | 9965 000 22121 | BUTTON SET CDC SELECT |
| 106 | 9965 000 22158 | COVER LOADER CDC |
| 108 | 3139 114 72050 | LIGHTGUIDE DISC SELECT 1 |
| 109 | 3139 114 72060 | LIGHTGUIDE DISC SELECT 2 |
| 110 | 3139 114 72070 | LIGHTGUIDE DISC SELECT 3 |
| 111 | 9965 000 22125 | BUTTON STDBY/ECO POWER |
| 115 | 9965 000 22160 | COVER RING VOLUME/VU |
| 116 | 9940 000 00033 | WINDOW DISPLAY |
| 117 | 9965 000 22138 | KNOB VOLUME ROTARY |
| 120 | 9965 000 22144 | FRAME BUTTON SOURCE SEL |
| 121 | 9965 000 22128 | BUTTON CAP SOURCE-CD |
| 122 | 9965 000 22129 | BUTTON CAP SOURCE-TUNER |
| 123 | 9965 000 22130 | BUTTON CAP SOURCE-TAPE |
| 124 | 9965 000 22131 | BUTTON CAP SOURCE-AUX |
| 125 | 9965 000 22195 | LIGHTGUIDE SOURCE-DISC |
| 126 | 9965 000 22196 | LIGHTGUIDE SOURCE-TUNER |
| 127 | 9965 000 22197 | LIGHTGUIDE SOURCE-TAPE |
| 128 | 9965 000 22198 | LIGHTGUIDE SOURCE-AUX |
| 129 | 9965 000 22142 | BUTTON SET PROG/LANG./SUB. |
| 130 | 9965 000 22143 | BUTTON SET DIS/CLK/T/AR/D/REC |
| 131 | 9965 000 22161 | COVER RING FUNCTION CONTROL |
| 132 | 9965 000 22127 | BUTTON FUNCTION CONTROL |
| 133 | 9965 000 22133 | CAP FUNCTION CONTROL |
| 134 | 9965 000 22159 | COVER RING S/V/C/ECHO |
| 135 | 9965 000 22126 | BUTTON SET S/V/C/ECHO |
| 140 | 9965 000 22139 | KNOB JOG-ROTARY |
| 141 | 9965 000 22132 | BUTTON MAX |
| 146 | 9965 000 22137 | KNOB-KARAOKE |
| 148 | 9965 000 22157 | COVER CONTROL |
| 149 | 9965 000 22164 | COVER CONTROL MAX KOK |
| 151 | 9965 000 22162 | COVER CASSETTE LEFT |
| 152 | 9965 000 22163 | COVER CASSETTE RIGHT |
| 153 | 9965 000 22174 | LENS CASSETTE-LEFT |
| 154 | 9965 000 22175 | LENS CASSETTE RIGHT |
| 197 | 9965 000 22173 | DOOR CASSETTE-RIGHT |
| 198 | 9965 000 22172 | DOOR CASSETTE LEFT |
| 199 | 9965 000 22141 | PUSH CATCH RIGHT |
| 200 | 9965 000 22120 | DAMPER-ASSY-MODULE-0.8 |
| 201 | 9965 000 22140 | PUSH CATCH-LEFT |

SCREW LISTS - MAIN UNIT

| | | | | |
|------|----------------|-----------------------|-----|-------------|
| 203 | 9965 000 22203 | SPRING PUSH | 185 | D3x12 |
| 204 | 9965 000 22181 | BRACKET RIGHT | 186 | D3x12 |
| 205 | 9965 000 22182 | BRACKET LEFT | 211 | D3x12 |
| 206 | 9965 000 22200 | SPRING TWIST (R) | 212 | D3x12 |
| 207 | 9965 000 22201 | SPRING TWIST (L) | 213 | D3x12 |
| 209 | 9965 000 22205 | SPRING-CASSETTE | 214 | M3x12 |
| 246 | 9965 000 22119 | FOOT RUBBER | 215 | M3x12 |
| 251 | 9965 000 22185 | BRACKET CDC RIGHT | 226 | M3x6 |
| 252 | 9965 000 22184 | BRACKET CDC LEFT | 231 | M3x6 |
| 253 | 9965 000 22179 | PANEL LEFT | 232 | M3x6 |
| 254 | 9965 000 22180 | PANEL RIGHT | 276 | M3x6 |
| 255 | 9965 000 22165 | COVER TOP | 277 | M3x10 |
| 256 | 9965 000 22156 | PANEL REAR | 279 | D3x12 |
| 1104 | 9965 000 22214 | TAPE DECK | 280 | D3x12 |
| 1105 | 9965 000 22116 | 3 DVD CHANGER | 283 | D3x12 |
| 1120 | 9940 000 00026 | FAN KD1205PHS2 DV 12V | 287 | D3x12 |
| | | | 292 | M3x12 |
| | | | 293 | M3x12 |
| | | | 294 | M3x10 |
| | | | 295 | D3x12 |
| | | | 296 | D3x12 |
| | | | 297 | D2x8 |
| | | | 298 | D3x10 |
| | | | 299 | D3x10 |
| | | | 300 | D3x12 |
| | | | 301 | D3x12 |
| | | | 302 | D3x12 |
| | | | 303 | D3x10 |
| | | | 304 | D3x12 |
| | | | 305 | D2x8 |
| | | | 306 | D3x12 |
| | | | 400 | T3xL38xP0.5 |
| | | | 401 | T3x8 |
| | | | 402 | M3x6 |

ACCESSORIES PARTS

| | |
|------------------|----------------------------|
| 9940 000 00013 | FFC CABLE 28P 160MM |
| 9940 000 00028 | LOUDSPEAKER BOX 4R |
| 9940 000 00034 | SUBWOOFER AMPLIFIER 60W |
| 9940 000 00043 | SUBWOOFER SPK ASS' Y L/R/C |
| △ 9940 000 00044 | MAINS CORD 2P 2000MM |
| 9965 000 14632 | FM ANTENNA |
| 9965 000 14633 | LOOP ANTENNA |
| 9965 000 14636 | RCA CABLE 1200MM |
| 9965 000 16339 | SW SLIDE 6 PIN SL14-22AH |
| 9965 000 20234 | RCA CABLE 1500MM |
| 9965 000 20577 | RCA CABLE 1500MM |
| 9965 000 22207 | FFC CABLE 14PIN 80MM |
| 9965 000 22208 | FFC CABLE 26PIN 180MM |
| 9965 000 22215 | REMOTE CONTROL |

Note: Only these parts mentioned in the list are normal service parts.