

DENON

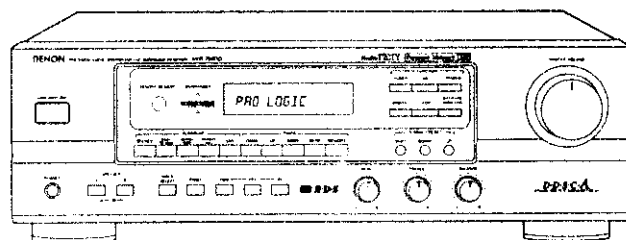
Hi-Fi AV Surround Receiver

For Europe Model

SERVICE MANUAL

MODEL AVR-700RD

AV SURROUND RECEIVER



This service manual is supplement for Europe model. For servicing, refer to the service manual of AVR-750/760/770/780 (Asia model) already issued at the same time.

ADDENDUM PARTS LIST OF EXPLODED VIEW

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|----------|----------|--------------|--------------------|------|
| | 1 | 9LJ P023 12 | Main P.W.B. Ass'y | 1 |
| | 2 | 9LJ P023 02 | FL P.W.B. Ass'y | 1 |
| Δ | 7 | 9LE V004 44 | AC Cord | 1 |
| | 9 | 9LP H051 81 | Inner panel | 1 |
| | 16 | 9LP H051 52 | Front panel | 1 |
| | 17 | 9LB T010 22 | Power trans | 1 |
| Δ | 21 | 9LQ A009 92 | Rear plate | 1 |
| Δ | 26 | 9L2 7277 22 | Fuse 2.5A | 1 |
| Δ | 27 | 9L2 7277 22 | Fuse 2.5A | 1 |
| Δ | 36 | 9LB T005 32 | Mini trans | 1 |
| | ★ | 9LP C018 12 | RDS Button | 1 |
| | ★ | 9LQ T008 13 | Preset label | 1 |
| | ★ | 9LS X020 23 | E2 EAN Label | 1 |
| | 205 | 511 3291 C02 | Instruction manual | 1 |
| | 207 | 9LS G070 032 | Carton box | 1 |

• Some illustrations using in this service manual are slightly different from the actual set.

NIPPON COLUMBIA CO., LTD.

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ADDENDUM PARTS LIST OF P.W.B. BOARD MAIN P.W.B. ASS'Y

FL P.W.B. ASS'Y

| Ref. No. | Part No. | Part Name | Remarks | Q'ty | Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|----------|--------------|-------------------------|--------------------|------|-----------|--------------|-----------------------------|-------------------|------|
| IC911 | 262 1701 906 | IC SAA6579 | | | TR001 | 9LC F011 21R | Transistor 2SK161Y | | |
| IC912 | 9LC K044 71 | IC LC7074M | | | R002 | 241 2400 034 | | RDL-562J1-16LQ | |
| D911 | 276 0401 905 | Diode 1SS133 | | | R004 | 241 2400 995 | | RDL-103J1-16LQ | |
| R425 | 241 2407 082 | | RD14S1J2R2J | | R005 | 241 2397 066 | | RDL-391J1-16LQ | |
| C361-364 | 255 1138 005 | | CQ92M1H333KB | | R006 | 241 2397 943 | | RDL-331J1-16LQ | |
| C409 | 253 4275 008 | | CC45SL2H180KB | | R023 | 241 2398 971 | | RDL-122J1-16LQ | |
| C428 | 255 4224 903 | | CQ92M1H473KB | | R032 | 241 2403 073 | | RDL-154J1-16LQ | |
| C453,454 | | | CC73MSL1H101J | | R033,034 | 241 2403 992 | | RDL-184J1-16LQ | |
| C513,514 | 255 4212 012 | | CQ92M1H472KEB | | R035 | 241 2403 073 | | RDL-154J1-16LQ | |
| C523 | 9L0 8901 01R | | CCT103M16D3 | | R041,042 | 241 2400 911 | | RDL-472J1-16LQ | |
| C609 | 9L0 8901 01R | | CCT103M16D3 | | R050 | 241 2396 025 | RDL-101J1-16LQ | Unused | |
| C911,912 | | | CC73MCH1H270J | | R161,162 | 241 2400 911 | | RDL-472J1-16LQ | |
| C913 | 254 4256 004 | | CE04W1E100MB (SSL) | | R705 | 241 2398 052 | | RDL-102J1-16LQ | |
| C914 | 254 4260 058 | | CE04W1H2R2MB | | R706 | 241 2399 064 | | RDL-302J1-16LQ | |
| C915 | | | CC73MSL1H561J | | R733 | 241 2400 911 | | RDL-472J1-16LQ | |
| C918 | 254 4256 004 | | CE04W1E100MB (SSL) | | R738 | 241 2399 022 | RDL-202J1-16LQ | Unused | |
| C919 | | | CK73MB1H103K | | C006 | | | CCT103M16D3 | |
| CN9A | 9L2 9590 59 | 10P PH Pinpost | Unused | 1 | C023 | | CCT101J50D3 | Unused | |
| CN14A | 9L2 9590 64 | 14P PH Pinpost | | 1 | C026 | 254 4260 993 | | CE4W1H220MB (SSL) | |
| XT911 | 9L2 1701 33F | Crystal 4.332MHz | | 1 | C030 | 9L0 8900 84R | | CCT561K50D3 | |
| XT912 | 399 9018 003 | Crystal (CST4.0MGM CER) | | 1 | C053,054 | 9L0 8900 81R | | CCT331K50D3 | |
| | | | | | C055 | 253 4538 965 | | CCT121J50D3 | |
| | | | | | C061,062 | 9L0 8900 96R | | CCT472M25D3 | |
| | | | | | C121-128 | | | CC73MSL1H560J | |
| | | | | | C140,141 | | | CK73MF1H102Z | |
| | | | | | C147,148 | | | CC73MSL1H101J | |
| | | | | | C148 | | | CC73MSL1H101J | |
| | | | | | CF001,002 | 261 0064 007 | Ceramic filter SFT10.7MS2-A | | 1 |
| | | | | | CN9B | 9L2 9092 92 | 10P PH B-C Connector L=270 | Unused | |
| | | | | | CN14B | 9L2 9094 12 | 14P PH B-C Connector L=270 | | 1 |
| | | | | | LF001 | 9L2 1363 13 | ANTI-BIRDIE Filter (114kHz) | | 1 |
| | | | | | LF002,003 | 9L2 1363 14 | Lowpass filter (19kHz) | | 1 |
| | | | | | LF101,102 | 9LB J002 11 | Lowpass filter | | 1 |
| | | | | | SW705-707 | 9L2 6396 82R | Tact switch | | 1 |
| | | | | | △ T501 | 9LB T005 32 | Sub power trans | | 1 |
| | | | | | TU001 | 9L2 4286 51 | Tuner pack (FE415-G11) | | 1 |

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• SAFETY PRECAUTIONS



CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN




CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.


The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

• 安全注意事項



CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN



注意：為減少觸電危險，切勿拆下機殼（或機背）。機身內並無用戶修理用零件。請交由專業修理人員修理本機。

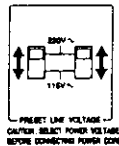
三角形內有箭頭的閃電符號旨在提醒用戶，本產品機殼內有未經絕緣的危險電壓，其幅足以使人觸電而發生危險。

三角形內加感嘆號旨在提醒用戶，有重要的操作與維修說明書配合本機。

警告：為減少著火或觸電危險，切勿讓本機受雨淋濕或受潮。

Make the following settings before connecting the components.
連接各設備之前請先進行下列設定。

- Setting the line voltage (AVR-750/770)
- 設定電源電壓 (AVR-750/770)






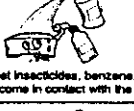




- The customer can set the VOLTAGE SELECTORS on the back panel for appropriate line voltage by using a screwdriver.
- Do not use excessive force in setting the VOLTAGE SELECTOR KNOB --- you may damage it.
- If the VOLTAGE SELECTOR KNOB does not move smoothly, contact your store of purchase.
- 用戶可利用螺絲起子將機背的VOLTAGE SELECTORS (電壓選擇器) 設定到適當的電源電壓。
- 旋轉電壓選擇器時請勿太用力，以免損壞。
- 如果電壓選擇器旋轉時不順暢，請向所購入本機之商店查詢。










CAUTION:

- Be sure to set both voltage selectors to same position.
- 各電壓選擇器均須設定到同樣的位置。

NOTE ON USE

| | | |
|--|---|--|
|  <p>• Avoid high temperatures. Allow for sufficient heat dispersion when installed on a rack.</p> |  <p>• Keep the set free from moisture, water, and dust.</p> |  <p>• Do not let foreign objects in the set.</p> |
|  <p>• Handle the power cord carefully. Hold the plug when unplugging the cord.</p> |  <p>• Unplug the power cord when not using the set for long periods of time.</p> |  <p>• Do not let insecticides, benzene, and thinner come in contact with the set.</p> |
|  <p>• (For sets with ventilation holes) • Do not obstruct the ventilation holes.</p> |  <p>• Never disassemble or modify the set in any way.</p> | |

使用注意事項

| | | |
|--|---|---|
|  <p>防止高溫</p> <ul style="list-style-type: none"> • 勿將本機放置於受到日曬曬或靠近發熱器材的位置。 |  <p>注意溫汽、水和塵</p> <ul style="list-style-type: none"> • 勿將本機放置於溫度濕氣多塵的位置。花露水或其他有水的物件均不宜置在本機上方。 |  <p>勿讓雜物掉入機內</p> <ul style="list-style-type: none"> • 特別留意勿讓針、髮夾、硬幣等進入本機。 |
|  <p>機背/機箱安裝注意</p> <ul style="list-style-type: none"> • 避免將本機裝於密封的機箱內。 • 裝於機箱或機櫃時，要配齊足夠大的通風孔，以加強散熱。 |  <p>當你外出時</p> <ul style="list-style-type: none"> • 長時間不用本機時，例如外出旅行時，須將插頭拔離電源插座。 |  <p>保護機殼</p> <ul style="list-style-type: none"> • 避免在本機附近噴灑殺蟲劑，也勿用汽油天拿水或其他溶劑來清潔，因這類溶劑易引起產品顏色改變。清潔要用軟布，在用以擦處理過的布擦時請小心處理勿說明書規定。 |
|  <p>留意電線線</p> <ul style="list-style-type: none"> • 從插座拔出插頭時切勿拉電線線，應抓握在插頭將其拔出。 |  <p>備有通風孔的機殼</p> <p>勿堵塞機殼的通風孔</p> <ul style="list-style-type: none"> • 堵塞通風孔會損壞本機。 • 各通風孔對本機內部散熱異常重要，必須特別留意。若通風孔有物件阻擋，就會使機內溫度上升提高。 |  <p>勿打開機殼</p> <ul style="list-style-type: none"> • 打開機殼頂蓋或底蓋，及伸手入機殼內部是危險的，切勿打開機殼。如果本機外殼在不妥當時，宜立刻拔下電源插頭，再向購入本機之商店或最近經銷商聯絡。 |

■ We greatly appreciate your purchase of the AVR-750/760/770/780.
 ■ To be sure you take maximum advantage of all the features the AVR-750/760/770/780 has to offer, read these instructions carefully and use the set properly. Be sure to keep this manual for future reference should any questions or problems arise.

"SERIAL NO. _____
 PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE
 CABINET FOR FUTURE REFERENCE"

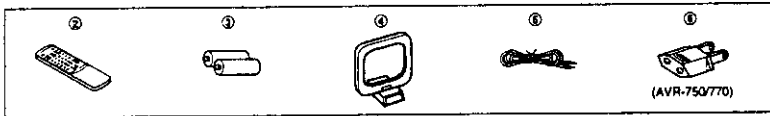
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ACCESSORIES

Check that the following parts are included in addition to the main unit:

| | | | |
|--------------------------------------|---|---------------------------------------|---|
| ① Operating instructions | 1 | ④ AM loop antenna | 1 |
| ② Remote control unit (RC-840) | 1 | ⑤ FM indoor antenna | 1 |
| ③ R6P/AA batteries | 2 | ⑥ Plug adaptor (AVR-750/770) | 1 |



1 INTRODUCTION

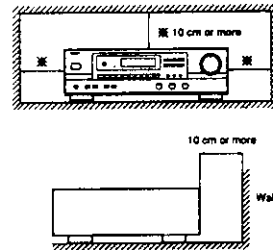
INSTALLATION PRECAUTIONS

Using this receiver or other electronic equipment containing microprocessors simultaneously with a tuner or TV may result in noise in the sound or picture.

If this should happen, take the following steps:

- Install this unit as far as possible from the tuner or TV set.
- Keep the antenna lines of the tuner or TV as far as possible from the receiver's power cord and connection cables.
- This problem is especially frequent when using indoor antennas. We recommend using outdoor antennas and 75 Ω ohms coaxial cables.

For heat dispersal, leave at least 10 cm of space between the top, back and sides of this unit and the wall or other components.



CAUTION:
 Whenever the POWER operation switch is in the OFF position, the unit is still connected on AC line voltage. Please be sure to unplug the cord when you leave home for, say, a vacation.

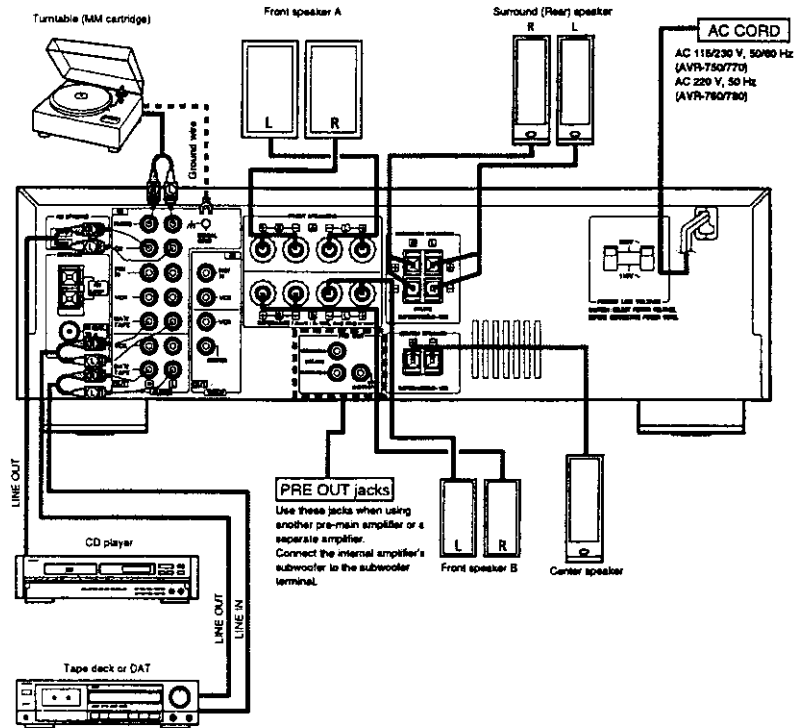
2 CONNECTIONS

- Do not plug in the power cord until all connections have been completed.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- Note that binding pin plug cords together with power cords or placing them near a power transformer will result in the introduction of hum or other noise.
- Noise or humming may be generated if a connected component is used independently without turning the power of the AVR-750/760/770/780 on. If this happens, turn on the power of the AVR-750/760/770/780.

2-1 Connecting the audio components

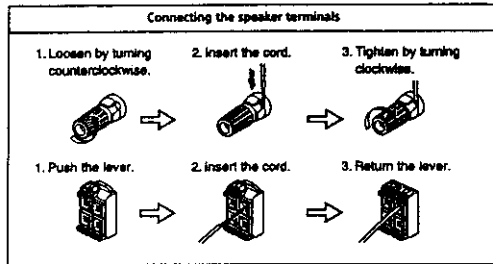
NOTE:
 This unit cannot be used with MC cartridges directly. Use a separate head amplifier or step-up transformer.

• Precautions when connecting speakers
 If a speaker is placed near a TV or video monitor, the colors on the screen may be disturbed by the speaker's magnetism. If this should happen, move the speaker away to a position where it does not have this effect.



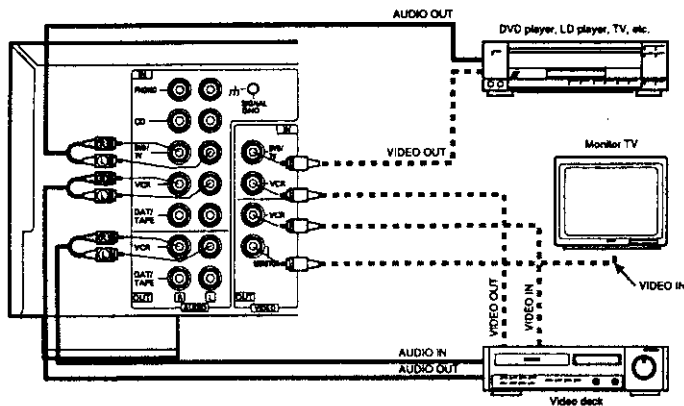
2-2 Speaker System Connections

- This unit can accommodate connections of a total of seven speakers including two set of front speakers (A and B), one set of SURROUND (REAR) speakers, and one center speaker.
- Connect the speaker terminals with the speakers making sure that like polarities are matched (⊕ with ⊕, ⊖ with ⊖). Mismatching of polarities will result in weak central sound, unclear orientation of the various instruments, and the sense of direction of the stereo being impaired.
- When making connections, take care that none of the individual conductors of the speaker cord come in contact with adjacent terminals, with other speaker cord conductors, or with the rear panel.
- **Speaker impedance**
 - When speaker systems A and B are used separately, speakers with an impedance of from 8 to 16 Ω/ohms can be connected.
 - When using with two pairs of speakers (A + B), use speakers with an impedance of 16 Ω/ohms or greater.
 - Speakers with an impedance of 8 to 16 Ω/ohms can be connected for use as center and SURROUND (REAR) speakers.
 - The protection circuit may operate or damage may occur when speakers with an impedance outside of the above range are used.

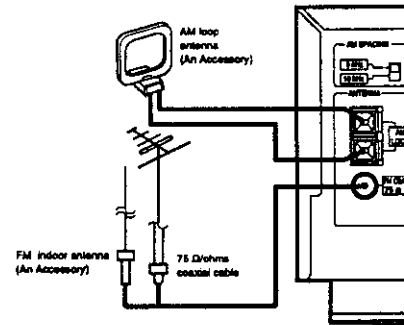


2-3 Connecting the video components

To connect the video signal, connect using a 75 Ω/ohms video signal cable cord. Using an improper cable can result in a drop in sound quality.



2-4 Connecting the antenna terminals

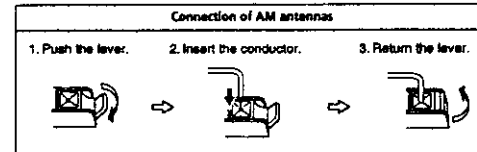


ANTENNA INSTALLATION

- **THE ANTENNA**
 - The supplied FM antenna can be used inside wooden houses for receiving local FM stations and other strong FM signals. Stretch out the ends of the antenna and mount the antenna on the wall or ceiling where optimum reception is achieved. A indoor FM antenna may not consistently ensure stable reception, due to environment changes. In such cases, the indoor FM antenna should only be used temporarily until an outdoor FM antenna has been installed. When connecting an outdoor FM antenna, the use of 75 Ω/ohms coaxial cable (3C - 2V, 5C - 2V) is strongly recommended.
- **AM ANTENNA**
 - Tune to an AM station (refer to page 12, 13) listen to the sound, then install the antenna in a position as far from the set as possible in which distortion and noise are minimum. Good reception of AM stations is not possible if the loop antenna is not connected or if it is touching metal objects.

NOTES

- The receiver has a full back-up system. When the power is turned on, the INPUT SELECTOR buttons are set to the last mode set before the power was turned off.
- When using this receiver in close proximity to video equipment (TV, VCR, DVD, etc.), noise may be generated in AM broadcasts. To avoid this, keep the receiver as far away from other video components as possible, or place the AM loop antenna where noise is reduced. If the noise is not reduced, turn off the power of the video components when listening to AM broadcasts.

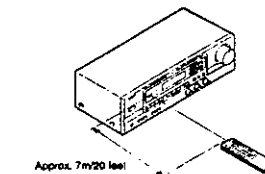


Note to CATV system installer:
The reminder is provided to call the CATV system installer's attention to Article 820 - 40 of the NEC which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

3 REMOTE CONTROL UNIT

Following the procedure outlined below, insert the batteries before using the remote control unit.

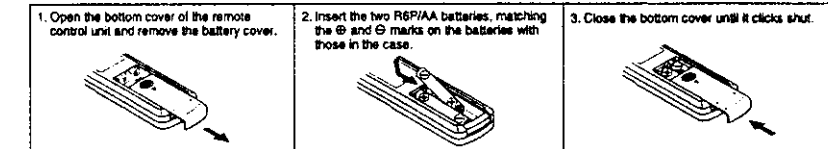
Range of operation of the remote control unit



Point the remote control unit at the remote control sensor as shown on the diagram at the left.

- NOTES:**
- The remote control unit can be used from a straight distance of approximately 7 meters/20 feet, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor, if the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
 - Neon signs or other devices emitting pulse-type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.

Inserting the batteries



- NOTES:**
- Use only AA, R6P, UM-3 batteries for replacement.
 - Be sure the polarities are correct. (See the illustration inside the battery compartment.)
 - Remove the batteries if the remote control transmitter will not be used for an extended period of time.
 - If batteries leak, dispose of them immediately. Avoid touching the leaked material or letting it come in contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
 - Have replacement batteries on hand so that the old batteries can be replaced as quickly as possible when the time comes.

System code buttons

DENON remote-controllable audio components can be controlled using this unit's remote control unit. Note that some components, however, cannot be operated with this remote control unit.

1 Set the slide switch to the position for the component to be operated (CD or DECK).

2 Use the buttons shown below to operate the component. For details, refer to the respective component's manual.

a. For CD players

b. For tape decks (DECK)

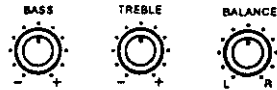
4 OPERATIONS

4-1 Preparations for playback

- Check that all connections are proper.
- Set to the minimum position.



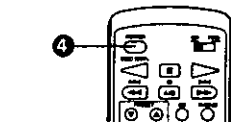
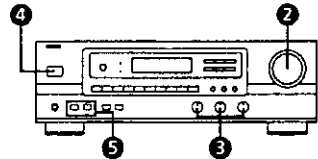
- Set to the center position.



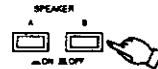
- Turn on the power. Press the POWER operation switch (button).



- ON/STANDBY**
The power turns on and "STANDBY" indicator is lit. Several seconds are required from the time the POWER operation switch is set to the "ON/STANDBY" position until sound is output. This is due to the built-in muting circuit that prevents noise when the POWER operation switch is turned on and off. Set the POWER operation switch to this position to turn the power on and off from the included remote control unit (RC-840).
- OFF**
The power turns off and "STANDBY" indicator is off. In this position, the power cannot be turned on and off from the remote control unit.



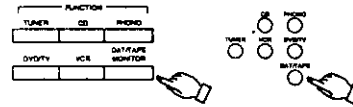
- Select the front speakers. Press the speaker A or B switch to turn the speaker on.



NOTE:
In the standby mode
If you lose the remote control unit, the power can be turned on by initializing the microprocessor.
For the operating procedure, see: [E] INITIALIZATION OF THE MICROPROCESSOR on page 13
Note that this operation will clear the last function memory.

4-2 Playing the program source (Stereo playback)

- Select the source to be played.



- Select the STEREO mode.



- Adjust the MASTER VOLUME control.



- Adjust the front left/right BALANCE. Turn the control counterclockwise to reduce the volume of the right channel, clockwise to reduce the volume of the left channel.



- Adjust the BASS and TREBLE.



Turn the control clockwise to increase the bass, counterclockwise to decrease it.
Turn the control clockwise to increase the treble, counterclockwise to decrease it.

4-3 Simulcast playback

Use this switch to monitor a video source other than the audio source.

- Press and hold the VIDEO SELECT button until the desired source appears on the display.

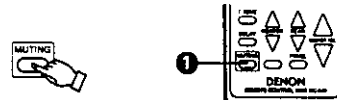


- Canceling simulcast playback
- Press the VIDEO SELECT button once more.
- Select the VIDEO function.

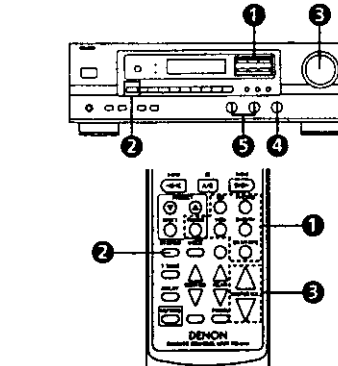
4-4 Using the muting function

Use this to turn off the audio output temporarily.

- Press the MUTING button.
- Canceling MUTING mode. Press the MUTING button again.



This function can only be set from the remote control unit. The STANDBY LED flashes when the muting function is set.



- Adjust the BASS and TREBLE.

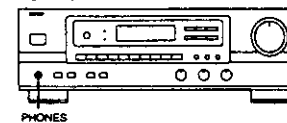


Turn the control clockwise to increase the bass, counterclockwise to decrease it.
Turn the control clockwise to increase the treble, counterclockwise to decrease it.

4-5 Listen with headphones

Connect the headphones to the PHONES jack. When listening with headphones privately, set A, B SPEAKER switches and the superwoofer's power switch to the OFF position and set the stereo surround mode.

NOTE:
To prevent hearing loss, do not raise the volume level excessively when using headphones.



4-6 Recording the program source
(recording the source currently being monitored)

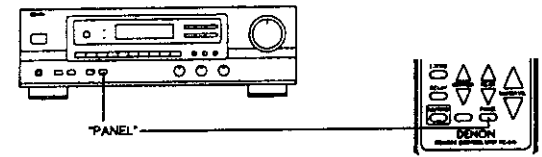
- Follow steps ① to ④ under "Playing the program source". (refer to page 9)
- Start recording on the tape or video deck. For instructions, refer to the component's operating instructions.

Simultaneous recording

The signals of the source selected with the function selector button are output simultaneously to the DAT/TAPE and VCR REC OUT jacks. If a total of two tape and/or video decks are connected and set to the recording mode, the same source can be recorded simultaneously on both decks. In addition, if the TAPE MONITOR (DAT/TAPE) button is pressed, the audio signals from the tape deck are output to the VCR AUDIO REC OUT jacks.

4-7 Front panel display

Descriptions of the unit's operations are also displayed on the front panel display. In addition, the display can be switched to check the unit's operating status while playing a source by pressing the PANEL button.



4-8 Using the surround function

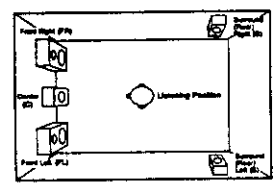
Types of surround modes and their characteristics

| | | |
|---|-----------------|--|
| 1 | DOLBY PRO LOGIC | Use this when playing program sources recorded in Dolby Surround or Dolby Stereo. |
| 2 | CONCERT HALL | Use this setting to create the atmosphere of a concert hall. There will be no output from the center speaker. |
| 3 | LIVE | Use this setting to create the atmosphere of watching a live performance. There will be no output from the center speaker. |

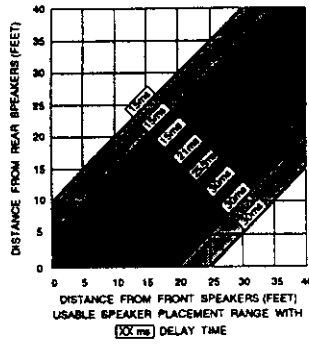
• Before using the surround function

Make the following adjustments before using the surround function.

- Set the Dolby Pro Logic mode.
 - Diagram showing the MODE button being pressed.
- Select the center mode (refer to page 11). Select the center mode according to the center speaker.
 - Diagram showing the SURROUND button being pressed, with a mode selector between NORMAL and PHANTOM, and WIDE.
 - The mode changes as shown above.
- Emit the test tone.
 - Diagram showing the T.TONE button being pressed.
 - Test tones are produced from the speakers in the order shown below, at 4 second intervals for the first two cycles, 2 second intervals after that.
 - Diagram showing the sequence: FL → C → FR → B.
- Adjust the center and surround (rear) levels to set the volume of the speakers to the same level.
 - Diagram showing the CENTER and REAR level sliders.
- Turn the test tone off.
 - Diagram showing the T.TONE button being pressed.
- Adjust the delay time and seating position as necessary (refer to page 11).
 - Diagram showing the DELAY button being pressed.



Dolby Surround systems with Pro Logic decoding most closely replicate the Dolby Stereo theatrical experience. Only two surround speakers are necessary in the home listening environment to provide the same enveloping soundfield as multiple surround speakers in the theater.



Center Mode

Set the center mode as described below, according to the type of center speaker being used.

Normal mode: This mode is suited for an arrangement in which the center channel speaker is smaller than the left and right speakers. Signals below 100 Hz which have almost no effect on directional orientation are distributed to the left and right channels, whereas the center channel output signals greater than 100Hz. As a result, the bass of the left and right channels increases the apparent depth of the sound.

Wide mode: This mode is suited for an arrangement in which the center channel speaker is of the same grade as the left and right speakers. The entire sound band from low region to high is output to the center channel to provide an exciting sound field for your enjoyment.

Phantom mode: Use this mode when center channel speaker is not used. A directional emphasis circuit provides signal reproduction which is electrically oriented to the center and this provides an exciting sound field for your enjoyment.

Delay Time

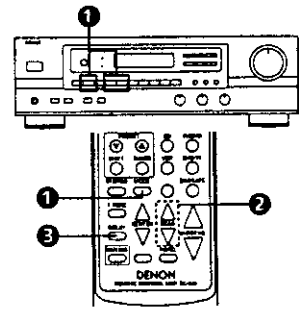
The optimum delay time will differ depending on the listening position. Referring to the chart at left, set the optimum delay time for your room's space and seating position. For example, when the distance from the front speakers to the listening position is 20 feet and that from the surround (rear) speakers to the listening position is 15 feet, the optimum delay time will be 21 ms. The variable range of the delay time differs depending on the mode.

Personal Memory Plus function for EASY TO USE

The AVR-750/760/770/780 automatically stores the surround mode adding effects for all input sources. The corresponding surround mode is recalled automatically each time an input source is selected.

• Using the surround function

- Select the surround mode according to the input source.
 - Diagram showing the MODE button being pressed.
- If necessary, adjust the levels.
 - Diagram showing the LEVEL button being pressed.
- Adjust the parameters to the desired settings.
 - Diagram showing the DELAY button being pressed.



Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Copyright 1992 Dolby Laboratories, Inc. All rights reserved.

Operating Possible in the Various Surround Modes

The following is a list of the buttons and functions which can be operated during the different surround modes. Figures in parentheses indicate adjustment ranges.

| | | OUTPUT | CENTER LEVEL | SURROUND (REAR) LEVEL | CENTER MODE | TEST TONE | DELAY TIME |
|-----------------|---------|--------|---------------|-----------------------|-------------|-----------|---------------|
| DOLBY PRO LOGIC | NORMAL | ○ | ○ (0 -- 24dB) | ○ (0 -- 24dB) | ○ | ○ | ○ (15 - 30ms) |
| | PHANTOM | ○ | X | ○ (0 -- 24dB) | ○ | ○ | ○ (15 - 30ms) |
| | WIDE | ○ | ○ (0 -- 24dB) | ○ (0 -- 24dB) | ○ | ○ | ○ (15 - 30ms) |
| CONCERT HALL | | ○ | X | ○ (0 -- 24dB) | Δ** | X | ○ (0 - 33ms) |
| LIVE | | ○ | X | ○ (0 -- 24dB) | Δ** | X | ○ (0 - 33ms) |

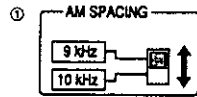
*1 Switches to the Dolby Pro Logic from any modes other than Dolby Pro Logic.
The level of the center and surround (rear) channels can be adjusted by 2 dB step.
The delay time can be set by 1.5 ms step.

○: Operation possible X: Operation not possible

The sound may be distorted for some sources if the surround (rear) level is raised during surround playback. If this happens, lower the surround (rear) level.

5 LISTENING TO THE RADIO

5-1 Setting the frequency step (AVR-750/770)



To know the tuning frequency steps, see the Table of Tuning Frequency Steps.

| TABLE OF TUNING FREQUENCY STEPS | | |
|---------------------------------|----------|--------|
| BAND | FM | AM |
| STEP AM SPACING: 9 kHz | 0.05 MHz | 9 kHz |
| STEP AM SPACING: 10 kHz | 0.2 MHz | 10 kHz |

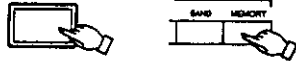
The tuning frequency steps are switchable between 9 kHz and 10 kHz for AM, between 0.05 MHz and 0.2 MHz for FM. To switch the tuning frequency steps, disconnect the power plug and set the AM SPACING switch (1) on the rear panel to the desired position. Then plug in the AC mains again.

5-2 Auto preset memory

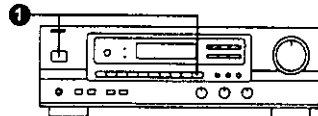
This unit is equipped with a function for automatically searching for FM broadcast stations and storing them in the preset memory.

1 Turn on the unit while holding in the MEMORY button. The unit automatically begins searching for FM broadcast stations.

ON / STANDBY & OFF



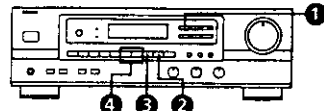
2 When the first FM broadcast station is found, that station is stored in the preset memory at channel A1. Subsequent stations are automatically stored in order at preset channels A2 to A8, B1 to B8, C1 to C8, D1 to D8 and E1 to E8, for a maximum of 40 stations.



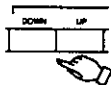
1 Channel A1 is tuned in after the auto preset memory operation is completed.

NOTES:

- If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation.
- To interrupt this function, press the POWER operation button.



2 Press the TUNING UP or DOWN button.



Automatic searching begins, then stops when a station is tuned in. If tuning does not stop at the desired station, use the "Manual tuning" operation.

5-4 Manual tuning

1 Set the input function to "TUNER".

2 Watching the display, press the BAND button to select the desired band (AM or FM).

3 Press the MODE button to set the manual-tuning mode. Check that the display's "AUTO" indicator turns off.

NOTES:

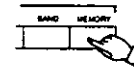
- When in the auto tuning mode on the FM band, the "STEREO" indicator lights on the display when a stereo broadcast is tuned in. At open frequencies, the noise is muted and the "TUNED" and "STEREO" indicators turn off.
- When the manual tuning mode is set, FM stereo broadcasts are received in monaural and the "STEREO" indicator turns off.

4 Press the TUNING UP or DOWN button to tune in the desired station. The frequency changes continuously when the button is held in.

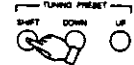
5-5 Preset memory

1 Use the "Auto tuning" or "Manual tuning" operation to tune in the station to be preset in the memory.

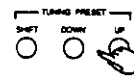
2 Press the MEMORY button.



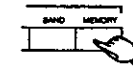
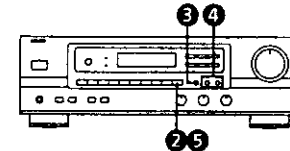
3 Press the SHIFT button and select the desired memory block (A to E).



4 Press the PRESET UP or DOWN button to select the desired preset channel (1 to 8).



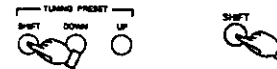
5 Press the MEMORY button again to store the station in the preset memory.



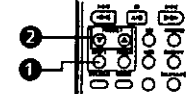
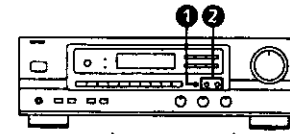
To preset other channels, repeat steps 2 to 5. A total of 40 broadcast stations can be preset - 8 stations (channels 1 to 8) in each of blocks A to E.

5-6 Recalling preset stations

1 Watching the display, press the SHIFT button to select the preset memory block.



2 Watching the display, press the PRESET UP or DOWN button to select the desired preset channel.



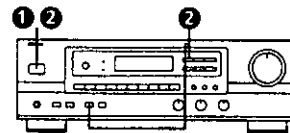
6 INITIALIZATION OF THE MICROPROCESSOR

When the indication of the display is not normal or when the operation of the unit does not show the reasonable result, the initialization of the microprocessor is required by the following procedure.

- Switch off the unit using the main unit's POWER operation switch.
- Hold the following TUNER button and VIDEO SELECT button, and turn the main unit's POWER operation switch on.
- Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons.
- Switch on the unit and the microprocessor will be initialized.

NOTE:

When the microprocessor is reset, all the settings you have made are reset to the values set upon shipment from the factory.



7 LAST FUNCTION MEMORY

- This unit is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off. This function eliminates the need to perform complicated resettings when the power is switched on.
- This unit is also equipped with a back-up memory. This function provides approximately one week of memory storage with the power cord disconnected.

8 TROUBLESHOOTING

If a problem should arise, first check the following:

- Are the connections correct?
 - Have you followed all operational instructions correctly?
 - Are the speakers, turntable, and other components operating properly?
- If the receiver is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

| | Symptom | Cause | Measures | Page | |
|---|---|---|---|---|-------------|
| Common problems arising when listening to the CD, records, tapes, and FM broadcasts, etc. | DISPLAY not lit and sound not produced when power operation switch set to on. | • Power cord not plugged in securely. | • Check the insertion of the power cord plug. | 5 | |
| | DISPLAY lit but sound not produced. | • Speaker cords not securely connected. • Speaker switch is off. • Improper position of the audio function button. • Volume control set to minimum. • MUTING is on. | • Connect securely. • Turn on speaker switch. • Set to a suitable position. • Turn volume up to suitable level. • Switch off MUTING. | 5, 8 8 9 9 9 | |
| | -PROTECT- display appears. | • Speaker terminals are short-circuited. • Block the ventilation holes of the set. | • Switch power off, connect speakers properly, then switch power back on. • Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on. • Turn off the set's power, then ventilate it well to cool it down. Once the set is cooled down, turn the power back on. | 5, 6 3, 4 3, 4 | |
| | Sound produced only from one channel. | • Incomplete connection of speaker cords. • Incomplete connection of input/output cords. • Left/right balance is off. | • Connect securely. • Connect securely. • Adjust balance knob properly. | 5, 6 5, 6 8 | |
| | Positions of instruments reversed during stereo playback. | • Reverse connections of left and right speakers or left and right input/output cords. | • Check left and right connections. | 5, 6 | |
| | Sound seems distorted. | • Surround (rear) level is too high. | • Set the Surround (rear) level to lower level. | 10, 11 | |
| | When playing records | Humming noise produced when record is playing. | • Ground wire of turntable not connected properly. • Incomplete PHONO jack connection. • TV or radio transmission antenna nearby. | • Connect securely. • Connect securely. • Contact your store of purchase. | 5 5 - |
| | | Howling noise produced when volume is high. | • Turntable and speaker systems too close together. • Floor is unstable and vibrates easily. | • Separate as much as possible. • Use cushions to absorb speaker vibrations transmitted by floor. If turntable is not equipped with insulators, use audio insulators (commonly available). | - - |
| | | Sound is distorted. | • Stylus pressure too weak. • Dust or dirt on stylus. • Cartridge defective. | • Apply proper stylus pressure. • Check stylus. • Replace cartridge. | - - - |
| | | Volume is weak. | • MC cartridge being used. | • Replace with MM cartridge or use a head amplifier or step-up transformer. | 5 |
| Receiver does not operate properly when remote control unit is used. | | • Batteries dead. • Remote control unit too far from receiver. • Obstacle between receiver and remote control unit. • Different button is being pressed. • ⊕ and ⊖ ends of battery inserted in reverse. | • Replace with new batteries. • Move closer. • Remove obstacles. • Press the proper button. • Insert batteries properly. | 7 7 7 7, 8 7 | |

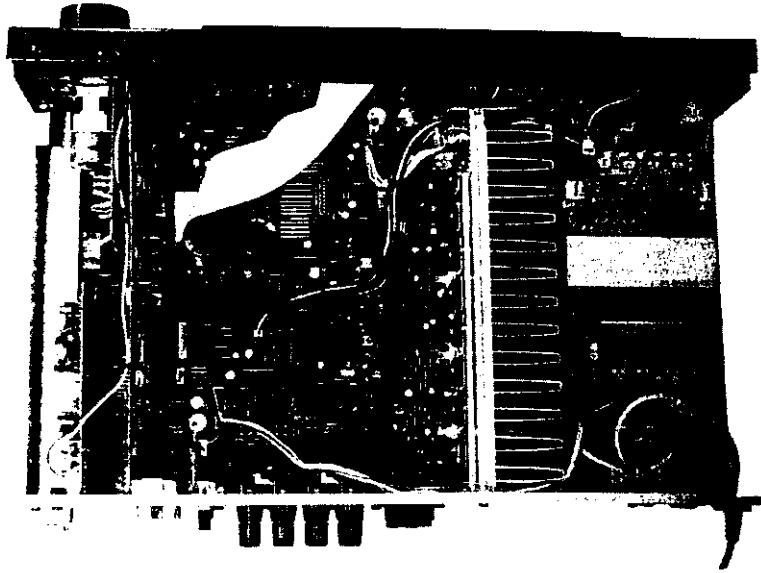
9 SPECIFICATIONS

| | | |
|--|--|---|
| • Audio Section (Power amplifier) | FRONT 55 W + 55 W (8 Ω/ohms, 20 Hz - 20 kHz with 0.08 % THD) 80 W + 80 W (8 Ω/ohms, EIAJ) | |
| (All properties shown are only for the power amplifier stage.) | CENTER 55 W (8 Ω/ohms, 20 Hz - 20 kHz with 0.08 % THD) 80 W (6 Ω/ohms, EIAJ) | |
| | SURROUND (REAR) 25 W + 25 W (8 Ω/ohms, 1 kHz with 0.9 % THD) 35 W + 35 W (6 Ω/ohms, EIAJ) | |
| Output terminals: | Front: 8 to 16 Ω/ohms Center: 8 to 16 Ω/ohms Surround (Rear): 8 to 16 Ω/ohms | |
| (Pre-amplifier) | | |
| Line input (Each line input - FRONT SP OUT) | 200 mV/47 kΩ/ohms | PHONO (MM): 2.5 mV/47kΩ/ohms |
| Input sensitivity/impedance: | 10 Hz to 50 kHz: ± 3 dB | |
| Frequency response: | BASS: ± 10 dB at 100 Hz | |
| Tone control range: | TREBLE: ± 10 dB at 10 kHz | |
| Signal-to-noise ratio: | 92dB (STEREO) | |
| Rated output (Pre out): | 1.2 V | |
| Phono equalizer (PHONO input - REC OUT) | ± 1 dB (20 Hz to 20 kHz) | |
| RIAA deviation: | 74 dB (A weighting, with 5 mV input) | |
| Signal-to-noise ratio: | 200 mV/8 V | |
| Rated output/Maximum output: | 0.03 % (1 kHz, 1 V) | |
| Distortion factor: | | |
| • Tuner Section | | |
| Receiving Range: | [FM] (note: μV at 75 Ω/ohms, 0 dB = 1 × 10 ⁻¹⁴ W) [AM SPACING: 9 kHz] 67.50 to 108.00 MHz (50 kHz step) [AM SPACING: 10 kHz] 87.50 to 107.90 MHz (200 kHz step) 1.0 μV (11.2 dB) | [AM] (AM SPACING: 9 kHz) 522 to 1,811 kHz (9 kHz step) (AM SPACING: 10 kHz) 520 to 1,710 kHz (10 kHz step) 18 μV |
| Usable Sensitivity: | MONO 1.6 μV (15.3 dB) | |
| 50 dB Quieting Sensitivity: | STEREO 23 μV (36.5 dB) | |
| Signal to Noise Ratio (IHF-A): | MONO 80 dB | 50 dB |
| Total Harmonic Distortion (at 1 kHz) | STEREO 0.15 % STEREO 0.3 % | |
| • Video Section | | |
| Standard video jacks | | |
| Input and output level/impedance: | 1 Vp-2/75 Ω/ohms | |
| Frequency response: | 2 Hz to 8 MHz + 0, -3 dB | |
| • General | | |
| Power supply: | AC 115/230V, 50/60 Hz (AVR-750/770) AC 220V, 50 Hz (AVR-760/780) | |
| Power consumption: | 180 W | |
| Maximum external dimensions: | 434 (W) x 142 (H) x 315 (D) mm (17-3/32" x 5-19/32" x 12-25/64") (AVR-750/760) 471 (W) x 143 (H) x 315 (D) mm (18-35/64" x 5-41/64" x 12-25/64") (AVR-770/780) | |
| Weight: | 7.8 kg (17 lbs 7 oz) (AVR-750/760) 8.8 kg (19 lbs 7 oz) (AVR-770/780) | |
| • Remote control unit | | |
| System remote control RC-840: | Total buttons: 28 DENON system code CD player: 6 buttons } (SWITCHED) Cassette deck: 6 buttons } AVR-750/760/770/780 fixed codes: 22 buttons Batteries: R6/AAA Type (two batteries) External dimensions: 51 (W) x 175 (H) x 18.5 (D) mm (2" x 6-57/64" x 47/64") Weight: 100 g (Approx. 3.5 oz) (Including batteries) | |

* For purposes of improvement, specifications and design are subject to change without notice.

WIRE ARRANGEMENT

In case of wires require unclasp or loosening to move the location to perform adjustment or part replacement, be sure to rearrange them neatly to restore properly in the same location as they were originally placed, or causing to produce a noise may occasionally occur.

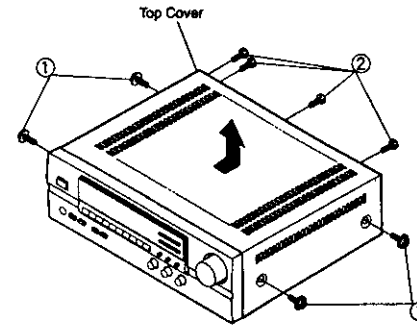


DISASSEMBLY

(To reassemble reverse disassembly)

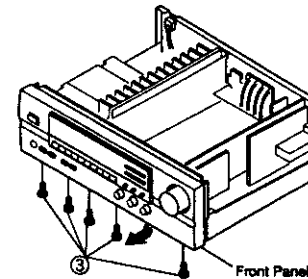
1. Top Cover

Remove 4 screws ① and 4 screws ②.



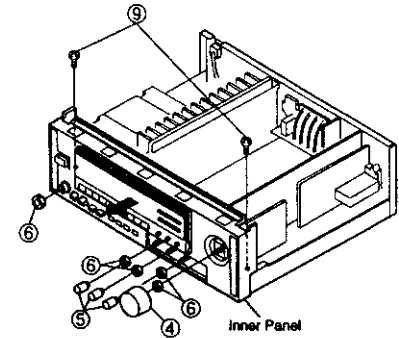
2. Front Panel

Remove 5 screws ③.



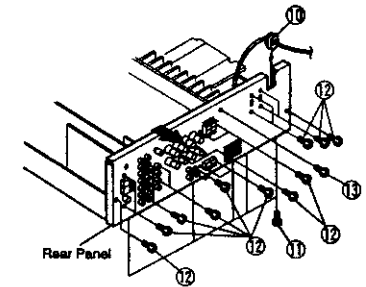
3. Inner Panel

(1) Pull out Volume knob ④ and 3 round knobs ⑤.
(2) Remove 5 nuts ⑥.
(3) Remove 2 screws ⑨.



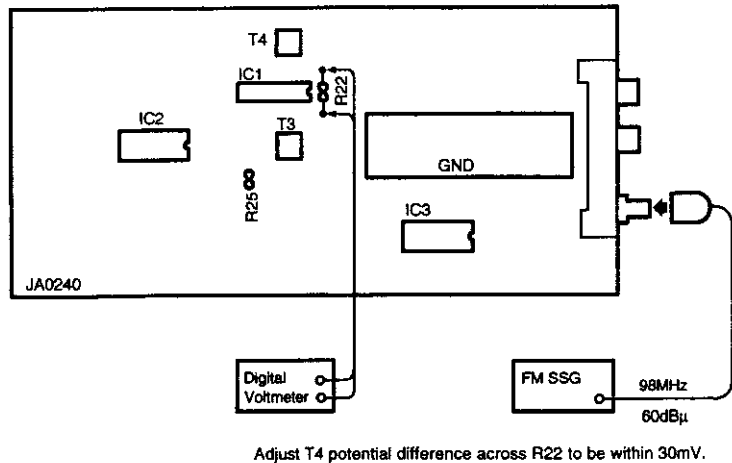
4. Rear Panel

(1) Disconnect cord bush ⑩.
(2) Remove 5 screws ⑪, and 22 screws ⑫.
* Screws ⑫ are tighten.
(3) Remove 1 screw ⑬.



CONNECTION DIAGRAM OF MEASURING INSTRUMENTS

● FM SECTION



● Initiating (Memory clearing) Method

To clear memory contents of microcomputer and restore to the initial state, take the following steps;

1. Press power switch, turn off power of the unit, and set to standby mode.
2. Pull out power cord from wall outlet temporarily.
3. Insert power cord into outlet while simultaneously pressing two keys of VIDEO SELECT and TUNER.
4. Press power switch to confirm that memory contents are cleared.

By completion of the above, the initial state is restored. In case the memory can not be cleared due to some reasons, repeat steps 1 through 3.

Note:

When in the Standby mode, the unit is in the Power OFF state when turn Power SW ON with remote control.

● AUDIO SECTION

Idling Current (JA0241)

Required measurement equipment: DC Voltmeter

Arrangement

- (1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room temperature 15°C ~ 30°C. (59°F ~ 86°F).

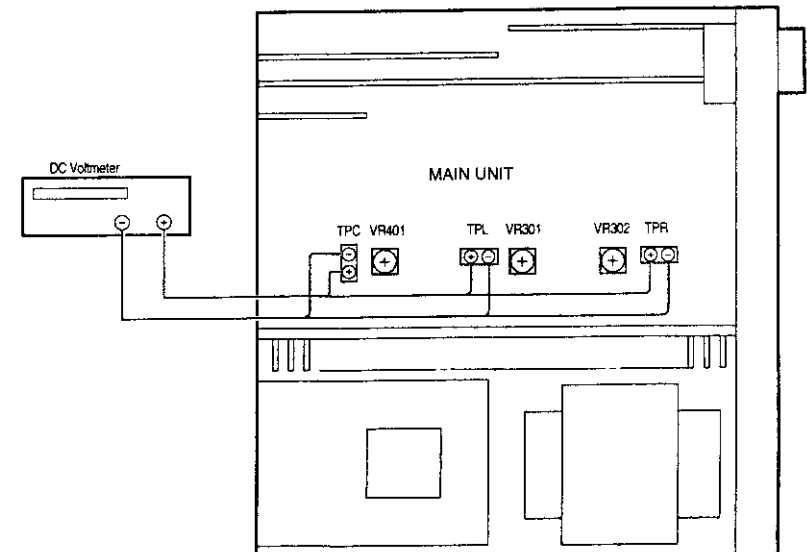
(2) Presetting

- POWER (Power source switch) → ON
- MODE (Mode button) → STEREO
- FUNCTION (Function button) → CD
- VOLUME (Volume control) → 0: fully counterclockwise (0 min.)
- BASS, TREBLE (Tone control) → 0: (Controls to center)
- SPEAKERS (Speaker terminal) → No load (Do not connect speaker, dummy resistor, etc.)

Adjustment

- (1) Remove top cover and set VR401, VR301 and VR302 of JA0241 (Main Unit) at counterclockwise fully.
- (2) Connect DC Voltmeter to test points (Lch TPL, Rch TPR, CENTER ch TPC).
- (3) Connect power cord to AC Line, and turn power switch "ON".
- (4) Allow 15 minutes, and turn VR301, VR302 and VR401 clockwise () and adjust the TEST POINTS voltage to 1.5 mV ±0.5 mV DC.
- (5) After 2 minutes from preset, turn VR301, VR302 and VR401 to set the voltage to 3 mV ±0.5mV DC.

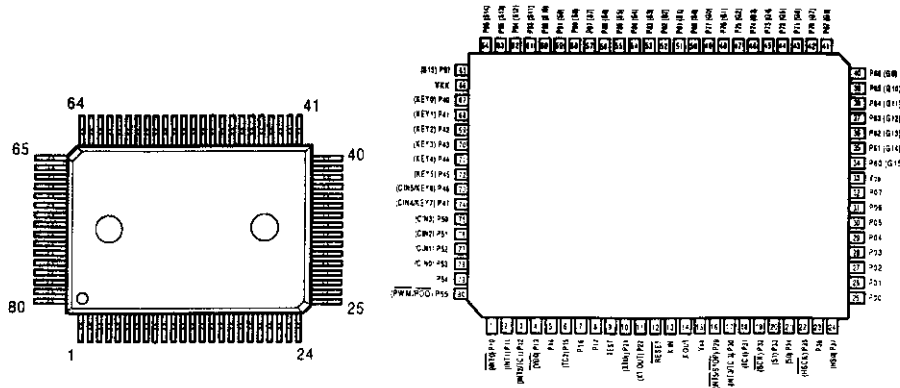
JA0241 Main Unit (Component Side)



SEMICONDUCTORS

● IC's

TMP87CM71F-6668 (IC701)



TMP87CM71F-6668 Terminal Function

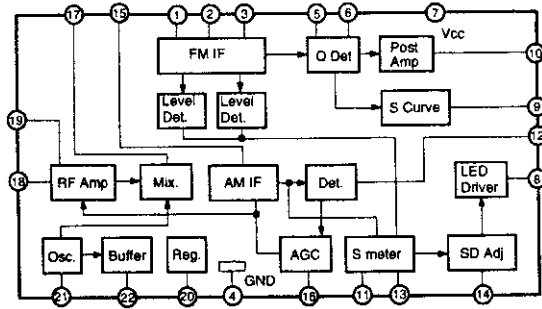
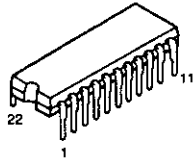
| Pin No. | Symbol | I/O | Type | Op | Det | Res | Init | Function |
|---------|------------|-----|------|-----|-----|-----|------|--|
| 1 | STOP | I | — | Eu | Lv | Z | — | Detect power stop ("L" at power stop) |
| 2 | PROTECTION | I | — | Eu | E&L | Z | — | Protection input ("H" at protection) |
| 3 | EXP. DATA | O | C | — | — | Z | L | Port expand data output |
| 4 | EXP. CK | O | C | — | — | Z | L | Port expand clock output |
| 5 | EXP. STB | O | C | — | — | Z | L | Port expand strobe output |
| 6 | VR. CK | O | C | — | S | Z | L | TC9176 (electron VR) control clock output |
| 7 | VR. DATA | O | C | — | S | Z | L | TC9176 (electron VR) control data output |
| 8 | VR. STB | O | C | — | — | Z | L | TC9176 (electron VR) control strobe output |
| 9 | TEST | I | — | GND | — | — | — | Connect to ground. |
| 10 | TUNED | I | — | Eu | Lv | Z | — | "L" at stereo receive |
| 11 | | O | — | — | — | Z | L | Fixed output on "L" |
| 12 | RESET | I | — | Eu | Lv | Z | — | Reset input |
| 13 | X IN | I | — | — | — | — | — | Oscillator circuit (4MHz) |
| 14 | X OUT | O | — | — | — | — | — | Oscillator circuit (4MHz) |
| 15 | GND | I | — | GND | — | — | — | Ground |
| 16 | RDS START | I | — | Eu | Ed | Z | — | RDS data. Start signal input (LC704)* |
| 17 | REMOCON | I | — | Eu | E&L | Z | — | Remote control signal input |
| 18 | STEREO | I | — | Eu | — | Z | L | "L" at TUNER stereo receive |
| 19 | RDS. CK | I | — | Eu | S | Z | — | RDS clock input (LC7074) |
| 20 | RDS. DATA | I | — | Eu | S | Z | — | RDS data input (LC7074)* |
| 21 | RDS. RESET | O | N | Eu | — | Z | L | RDS reset signal output (LC7074)* |
| 22 | PLL. CK | O | N | Eu | — | Z | L | LM7001 control clock output |
| 23 | PLL. STB | O | N | Eu | — | Z | L | LM7001 control strobe output |
| 24 | PLL. DATA | O | N | Eu | — | Z | L | LM7001 control data output |
| 25 | FUNC. DATA | O | C | — | — | Z | L | LC7822 (Function IC) control data output |
| 26 | FUNC. CK | O | C | — | — | Z | L | LC7822 (Function IC) control clock output |
| 27 | FUNC. STB | O | C | — | — | Z | L | LC7822 (Function IC) control strobe output |
| 28 | ST/MONO | O | C | — | — | Z | L | TUNER STEREO/MONO control output ("L" at STEREO) |
| 29 | POWER OFF | O | C | — | — | Z | L | "L" at ON |
| 30 | VOL. DOWN | O | C | — | — | Z | L | Electrically-drive volume control output (BA6208S) |

* port is fixed "L" at RDS non-selection mode.

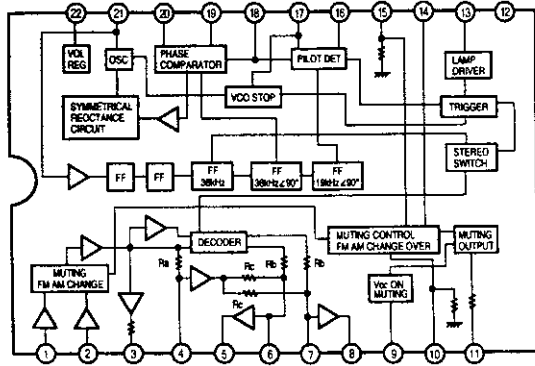
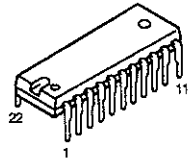
| Pin No. | Symbol | I/O | Type | Op | Det | Res | Init | Function |
|---------|-----------|-----|------|----|-----|-----|------|---|
| 31 | VOL. UP | O | C | — | — | Z | L | Electrically-driven volume control output. (BA6208S) |
| 32 | SP-FRONT | O | C | — | — | Z | L | Front speaker relay control output. |
| 33 | Vcc | I | — | — | — | — | — | Connect to +5V. |
| 34 | LED. PRO | O | P | Id | — | Z | H | DOLBY PROLOIC indicating LED drive output. ("H" at light) |
| 35 | LED. STBY | O | P | Id | — | Z | H | Standby indicating LED drive output. ("H" at light) |
| 36 | 1G | O | P | Id | — | L | L | FLD control output. |
| 37 | 2G | O | P | Id | — | L | L | FLD control output. |
| 38 | 3G | O | P | Id | — | L | H | FLD control output. |
| 39 | 4G | O | P | Id | — | L | H | FLD control output. |
| 40 | 5G | O | P | Id | — | L | L | FLD control output. |
| 41 | 6G | O | P | Id | — | L | L | FLD control output. |
| 42 | 7G | O | P | Id | — | L | H | FLD control output. |
| 43 | 8G | O | P | Id | — | L | L | FLD control output. |
| 44 | 9G | O | P | Id | — | L | L | FLD control output. |
| 45 | 10G | O | P | Id | — | L | L | FLD control output. |
| 46 | 11G | O | P | Id | — | L | H | FLD control output. |
| 47 | 12G | O | P | Id | — | L | L | FLD control output. |
| 48 | 13G | O | P | Id | — | L | H | FLD control output. |
| 49 | 14G | O | P | Id | — | L | H | FLD control output. |
| 50 | P (a) | O | P | Id | — | L | H | FLD control output. |
| 51 | P (b) | O | P | Id | — | L | H | FLD control output. |
| 52 | P (c) | O | P | Id | — | L | H | FLD control output. |
| 53 | P (d) | O | P | Id | — | L | H | FLD control output. |
| 54 | P (e) | O | P | Id | — | L | L | FLD control output. |
| 55 | P (f) | O | P | Id | — | L | L | FLD control output. |
| 56 | P (g) | O | P | Id | — | L | L | FLD control output. |
| 57 | P (h) | O | P | Id | — | L | L | FLD control output. |
| 58 | P (j) | O | P | Id | — | L | L | FLD control output. |
| 59 | P (k) | O | P | Id | — | L | L | FLD control output. |
| 60 | P (m) | O | P | Id | — | L | L | FLD control output. |
| 61 | P (n) | O | P | Id | — | L | L | FLD control output. |
| 62 | P (p) | O | P | Id | — | L | L | FLD control output. |
| 63 | P (q) | O | P | Id | — | L | L | FLD control output. |
| 64 | P (r) | O | P | Id | — | L | L | FLD control output. |
| 65 | P (s) | O | P | Id | — | L | L | FLD control output. |
| 66 | VKK | I | — | — | — | — | — | Connect to VKK. |
| 67 | DD. CK | O | N | Eu | — | Z | H | NJU9701G (Delay time) control clock output. |
| 68 | DD. REQ | O | N | Eu | — | Z | H | NJU9701G (Delay time) control request output. |
| 69 | DD. DATA | O | N | Eu | — | Z | H | NJU9701G (Delay time) control data output. |
| 70 | MODE2 | I | N | Eu | — | Z | — | Select occurring or no RDS function. ("H" at occurring RDS function)* |
| 71 | VIDEO A | O | N | Eu | — | Z | H | BU4066 (Video shift) control output. ("L" at selecting) |
| 72 | VIDEO B | O | N | Eu | — | Z | H | BU4066 (Video shift) control output. ("L" at selecting) |
| 73 | KEY 5 | I | — | Eu | Lv | Z | — | Button input 5. |
| 74 | KEY 4 | I | — | Eu | Lv | Z | — | Button input 4. |
| 75 | KEY 3 | I | — | Eu | Lv | Z | — | Button input 3. |
| 76 | KEY 2 | I | — | Eu | Lv | Z | — | Button input 2. |
| 77 | KEY 1 | I | — | Eu | Lv | Z | — | Button input 1. |
| 78 | MODE 1 | I | — | Eu | Lv | Z | — | Model version change input. |
| 79 | TU MUTE | O | N | Eu | — | Z | L | Tuner muting output. ("L" at muting) |
| 80 | | O | N | Eu | — | Z | H | Fixed output on "H". |

* port is fixed "L" at RDS non-selection mode.

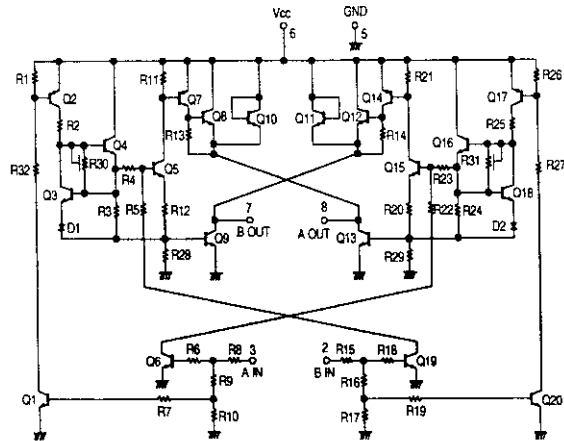
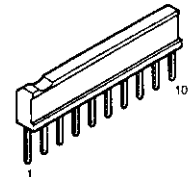
LA1265 (S)
(IC001)



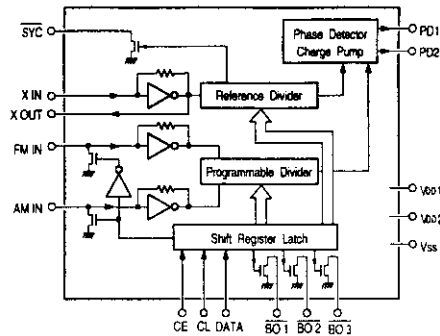
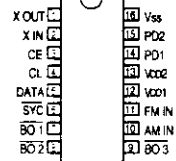
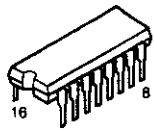
LA3401
(IC002)



BA6208S
(IC265)



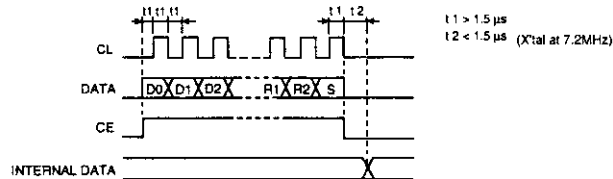
LM7001 (IC003)



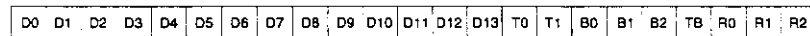
Terminal Description

- SYC : Clock for controller (400 kHz).
- XIN, XOUT : X'tal OSC (7.2 MHz).
- FMIN, AMIN : Station oscillation signal input.
- CE, CL, DATA : Data input.
- BO1, BO2, BO3 : Band data output. BO1 is feasible for time base output (8 Hz).
- VDD1, VDD2, VSS : Power supply. (VDD2 is for back-up).
- PD1, PD2 : Charge pump output.

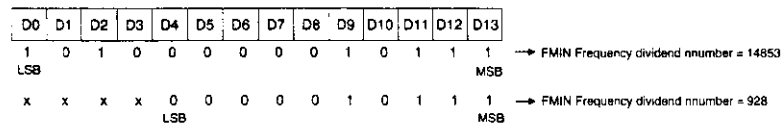
Data Input



— Input from D0.

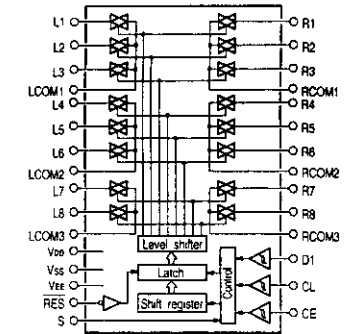
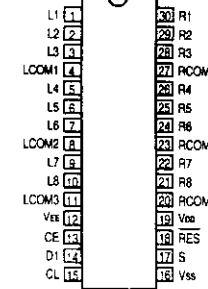
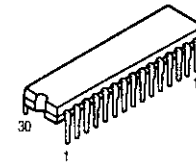


(1) D0(LSB)-D13(MSB) : Frequency dividend data
For FMIN, use D0-D13; for AMIN, use D4-D13.



(2) T0, T1 : For test of LSI (0,0)

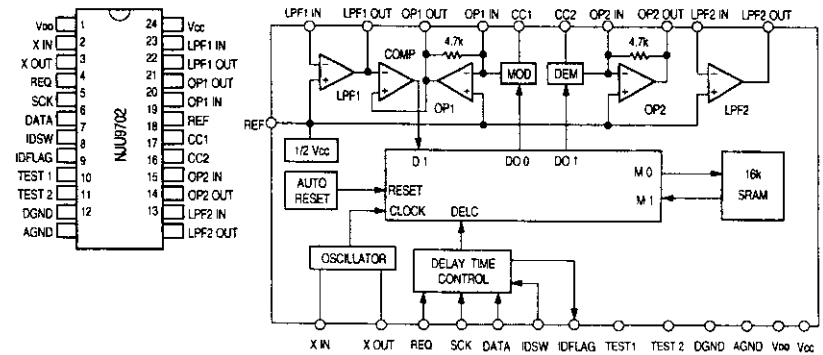
LC78212 (IC102)



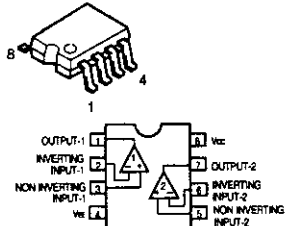
LC78212 Terminal Function

| Name of Terminal | I/O | Equivalent Internal Circuit | Function of Terminal | | | | | | | | | | | | | | | | | | | | | |
|---|------------|-----------------------------|---|--------------|------------|---------|--|--|--|----|----|----|----|---------|---|---|---|---|---|---|---|---|---|---|
| VDD, VSS, VEE | | | Power terminal. | | | | | | | | | | | | | | | | | | | | | |
| L1-L8, R1-R8 LCOM1-LCOM4, BCOM1-BCOM4 | | Refer to block diagram | In/Out terminal of analog switch. | | | | | | | | | | | | | | | | | | | | | |
| CL, DI, CE | I | | Serial data input terminal (schmitt buffer). CL=Clock input terminal. DI=Data input terminal/ CE=Chip enable terminal. | | | | | | | | | | | | | | | | | | | | | |
| S | I | | Selection terminal for using of two. Address will be shifted as per below table when switching S terminal to L or H. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th rowspan="2">Name of Item</th> <th rowspan="2">S Terminal</th> <th colspan="4">Address</th> </tr> <tr> <th>A0</th> <th>A1</th> <th>A2</th> <th>A3</th> </tr> </thead> <tbody> <tr> <td rowspan="2">LC78212</td> <td>L</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>H</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> </tr> </tbody> </table> | Name of Item | S Terminal | Address | | | | A0 | A1 | A2 | A3 | LC78212 | L | 0 | 1 | 0 | 1 | H | 1 | 1 | 0 | 1 |
| Name of Item | S Terminal | Address | | | | | | | | | | | | | | | | | | | | | | |
| | | A0 | A1 | A2 | A3 | | | | | | | | | | | | | | | | | | | |
| LC78212 | L | 0 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | |
| | H | 1 | 1 | 0 | 1 | | | | | | | | | | | | | | | | | | | |
| RES | I | | Reset terminal. Condition of analog switch is not fixed at the time of turning on the power. When shift this terminal to L, all analog switches become OFF. | | | | | | | | | | | | | | | | | | | | | |

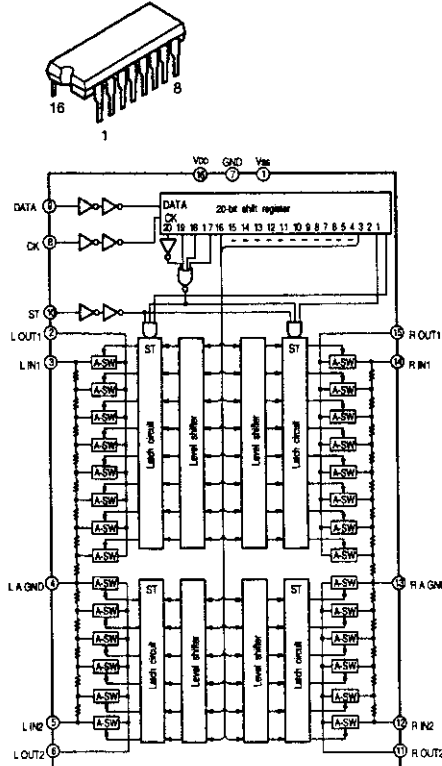
NUJ9702 (IC202)



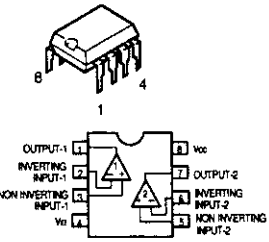
BA4558F (IC101, 103)



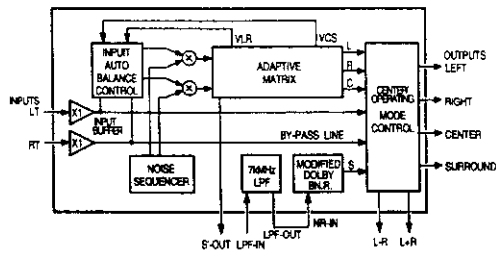
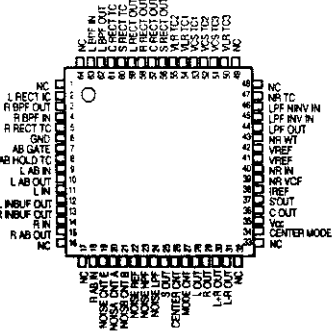
TC9176P (IC266)



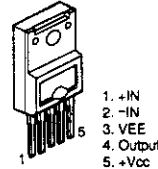
BA4558 (IC261, 263)
BA15218 (IC451)



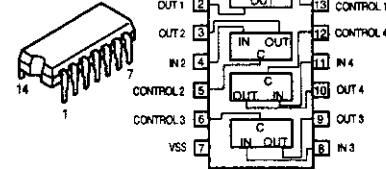
NJM2177AF (IC201)



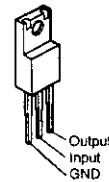
SI-18752 (IC571, 572)



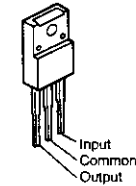
BU4066BC (IC601)



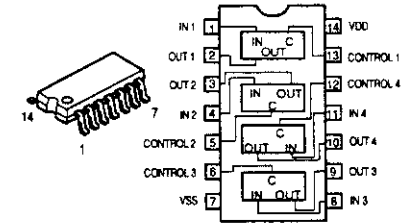
NJM7912FA (IC574)



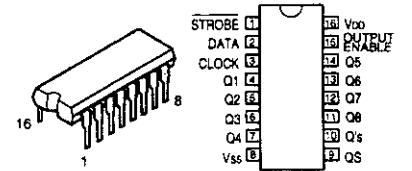
KIA7806PI (IC575)



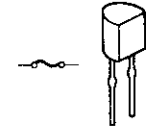
BU4066BCF (IC203, 205)



BU4094BC (IC913, 914)

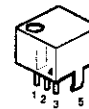


● IC PROTECTOR ICP-N20 (PR505, 506)

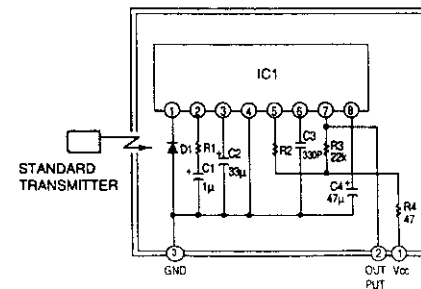


● OTHER

SBX1910 Remote Control Receiver)



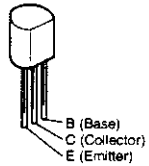
- 1. Vcc
- 2. Output
- 3. GND
- 4. Case Fin
- 5. Case Fin



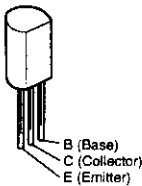
- IC1 : CX20106A Chip
- D1 : PIN Photo Diode Chip
- C1, C2, C4 : Aluminum Electrolytic Capacitor
- C3 : SL Characteristic ±5%
- R1 : Gain control resistor
- R2 : for control resistor (Using±1%)
- R (Other than above items) : ±5%

● TRANSISTORS

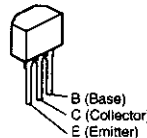
2SA970 (BL)
2SA988 (E/F)
2SA1015 (GR)
2SC1815 (Y), (GR)
2SC1841 (E/F)
2SC2058 (Q)
2SC2878 (A/B)
2SC1841 (E/F)



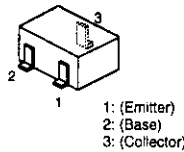
2SB647A (C)
2SD667A (C)



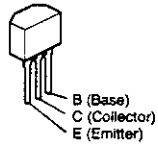
2SC2458



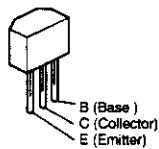
2SA1037K (S/R)
2SC2412K (S)



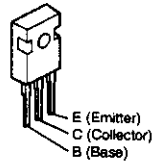
DTA114ES
DTC114TS
DTC114ES
DTC144TS
DTC323TS



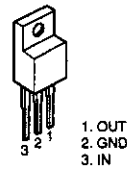
2SA933S (S)
2SC1740 (S)



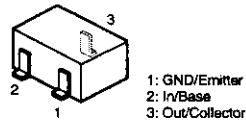
2SA1633
2SC4278



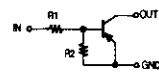
NJM7812FA (S)



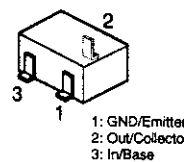
DTA114EKA
DTC143EKA
DTC144EKA



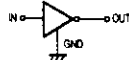
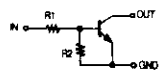
DTA114EKA



DTC143EK
DTC144EK

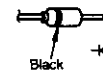


DTC143EKA
DTC144EKA

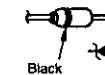


● DIODES (included LED)

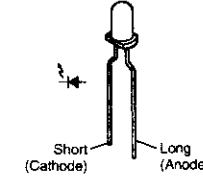
1S2471



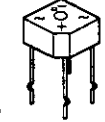
HZ9A3
HZS6C



SLR54



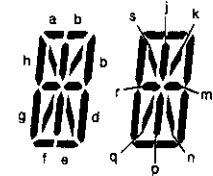
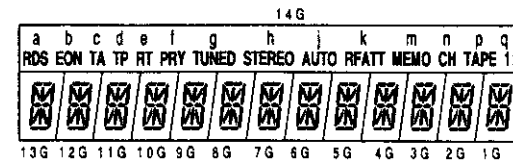
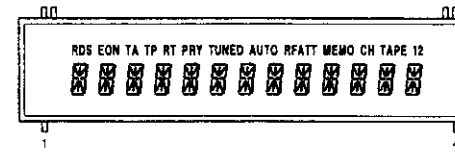
S4VB20



MTZJ3.3A



● FLD (FL701)



PIN CONNECTION

| Pin No. | 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 |
|------------|-----|-----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|-----|-----|-----|
| Connection | F1 | F1 | NP | NP | NC | NC | NC | NC | NC | NC | NC | P16 | P15 | P14 | P13 | P12 | P11 | P10 | P9 | P8 | P7 | P6 | P5 | P4 | P3 | P2 | P1 | 14G | 13G | 12G |
| Pin No. | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | | | | | | | | | | | | | | | |
| Connection | 11G | 10G | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G | NP | NP | F2 | F2 | | | | | | | | | | | | | | | |

Note 1) F1, F2 — Filament
2) NP — No pin
3) NC — No connection
4) DL — Datum line
5) 1G-14G — Grid

ANODE CONNECTION

| | 14G | 13G | 12G | 11G | 10G | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G |
|-----|--------|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|
| P1 | RDS | a1 | a1 | a1 | a1 | a1 | a1 | a1 | a1 | a1 | a1 | a1 | a1 | a1 |
| P2 | EON | a2 | a2 | a2 | a2 | a2 | a2 | a2 | a2 | a2 | a2 | a2 | a2 | a2 |
| P3 | TA | b | b | b | b | b | b | b | b | b | b | b | b | b |
| P4 | TP | c | c | c | c | c | c | c | c | c | c | c | c | c |
| P5 | RT | d2 | d2 | d2 | d2 | d2 | d2 | d2 | d2 | d2 | d2 | d2 | d2 | d2 |
| P6 | PTY | d1 | d1 | d1 | d1 | d1 | d1 | d1 | d1 | d1 | d1 | d1 | d1 | d1 |
| P7 | TUNED | e | e | e | e | e | e | e | e | e | e | e | e | e |
| P8 | STEREO | f | f | f | f | f | f | f | f | f | f | f | f | f |
| P9 | AUTO | j | j | j | j | j | j | j | j | j | j | j | j | j |
| P10 | RFATT | k | k | k | k | k | k | k | k | k | k | k | k | k |
| P11 | MEMO | m | m | m | m | m | m | m | m | m | m | m | m | m |
| P12 | CH | n | n | n | n | n | n | n | n | n | n | n | n | n |
| P13 | TAPE | p | p | p | p | p | p | p | p | p | p | p | p | p |
| P14 | 1 | r | r | r | r | r | r | r | r | r | r | r | r | r |
| P15 | 2 | g | g | g | g | g | g | g | g | g | g | g | g | g |
| P16 | — | h | h | h | h | h | h | h | h | h | h | h | h | h |

NOTE FOR PARTS LIST

- Part indicated with the mark "⊗" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
 - When ordering of part, clearly indicate "1" and "1" (i) to avoid mis-supplying.
 - Ordering part without stating its part number can not be supplied.
 - Part indicated with the mark "*" is not illustrated in the exploded view.
 - Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
- WARNING:**
Parts marked with this symbol Δ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

| |
|---|
| Ex.: BN 14K 2E 182 G FR |
| Type Shape Power Resist- Allowable Others |
| and performance error |

| | | | |
|-----------------------|-----------|----------|-------------------------|
| RD : Carbon | 2B : 1/8W | F : ±1% | P : Fuse-resistant type |
| RC : Composition | 2E : 1/4W | G : ±5% | NL : Low noise type |
| RS : Metal oxide film | 2H : 1/2W | J : ±5% | NB : Non-burning type |
| RW : Winding | 3A : 1W | K : ±10% | FR : Fuse-resistor |
| RZ : Metal film | 3D : 2W | M : ±20% | F : Lead wire forming |
| RK : Metal mixture | 3F : 3W | | |
| | 3H : 5W | | |

- * Resistance
- $\frac{1}{1} \frac{R}{2} \frac{2}{2} \Rightarrow 1800 \text{ ohm} = 1.8 \text{ kohm}$
Indicates number of zeros after effective number.
2-digit effective number.
- Units: ohm
- $\frac{1}{1} \frac{R}{2} \frac{2}{2} \Rightarrow 1.2 \text{ ohm}$
1-digit effective number.
2-digit effective number, decimal point indicated by R.
- Units: ohm

● Capacitors

| |
|---|
| Ex.: CE 04W 1H 2B2 M BP |
| Type Shape Dielectric Capacity Allowable Others |
| and performance strength error |

| | | | |
|----------------------------------|-----------|-------------|----------------------------------|
| CE : Aluminum foil electrolytic | 0J : 6.3V | F : ±1% | HS : High stability type |
| CA : Aluminum solid electrolytic | 1A : 10V | G : ±2% | BP : Non-polar type |
| CS : Tantalum electrolytic | 1C : 18V | J : ±5% | HR : Ripple-resistant type |
| CO : Film | 1E : 25V | K : ±10% | DL : For charge and discharge |
| CK : Ceramic | 1V : 35V | M : ±20% | HF : For assuring high frequency |
| CC : Ceramic | 1H : 60V | Z : ±80% | U : UA part |
| CP : Di | 2A : 100V | | C : CSA part |
| CM : Mica | 2B : 125V | F : ±100% | W : UK-CSA type |
| CC : Metallized | 2C : 180V | C : -0% | F : Lead wire forming |
| CH : Metallized | 2D : 200V | D : ±0.25pF | |
| | 2E : 250V | D : ±0.5pF | |
| | 2H : 500V | D : ±0.5pF | |
| | 2J : 630V | D : ±0.5pF | |

- * Capacity (electrolyte only)
- $\frac{2}{2} \frac{2}{2} \frac{2}{2} \Rightarrow 2200\mu\text{F}$
Indicates number of zeros after effective number.
2-digit effective number.
- Units: μF .
- $\frac{2}{2} \frac{R}{2} \frac{2}{2} \Rightarrow 2.2\mu\text{F}$
1-digit effective number.
2-digit effective number, decimal point indicated by R.
- Units: μF .
- * Capacity (except electrolyte)
- $\frac{2}{2} \frac{2}{2} \frac{2}{2} \Rightarrow 2200\text{F} = 0.0022\mu\text{F}$
(More than 2) — Indicates number of zeros after effective number.
2-digit effective number.
- Units: μF .
- $\frac{2}{2} \frac{2}{2} \frac{1}{2} \Rightarrow 220\text{pF}$
(0 or 1) — Indicates number of zeros after effective number.
2-digit effective number.
- Units: pF.
- When the dielectric strength is indicated in "AC", "AC" is included after the dielectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

MAIN P.W.B. ASS'Y

| Ref. No. | Part No. | Part Name | Remarks | Ref. No. | Part No. | Part Name | Remarks |
|-----------------------------|--------------|--------------------------|---------|----------|--------------|--------------------------|---------|
| SEMICONDUCTORS GROUP | | | | | | | |
| IC451 | 263 0615 902 | IC BA15218F | | TR415 | 274 0060 007 | Transistor 2SD667A(C) | |
| IC571 | 263 0855 005 | IC S118752 | | TR417 | 272 0053 005 | Transistor 2SB647(C) | |
| IC572 | 263 0855 005 | IC S118752 | | TR419 | 273 0430 003 | Transistor 2SC4278(E/F) | |
| IC573 | 263 0516 001 | IC NJM7812FA | | TR421 | 271 0276 009 | Transistor 2SA1633(E/F) | |
| IC574 | | IC NJM7812FA | | TR423 | 273 0235 020 | Transistor 2SC1841(E/F) | |
| IC575 | 9LC P024 12 | IC KIA7806PI | | TR442 | UDM D010 434 | Transistor DTA114EKA | |
| IC601 | 262 1875 007 | IC BU40668CF | | TR443 | 269 0048 904 | Transistor DTC143EK | |
| IC913 | 9LC K089 01R | IC BU4094BCF | | TR481 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| IC914 | 9LC K089 01R | IC BU4094BCF | | TR482 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR301 | 271 0094 016 | Transistor 2SA970(BL) | | TR483 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR302 | 271 0094 016 | Transistor 2SA970(BL) | | TR484 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR303 | 271 0094 016 | Transistor 2SA970(BL) | | TR485 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR304 | 271 0094 016 | Transistor 2SA970(BL) | | TR486 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR305 | 271 0131 021 | Transistor 2SA988(E/F) | | TR487 | 271 0238 908 | Transistor 2SA1037K(Q/R) | |
| TR306 | 271 0131 021 | Transistor 2SA988(E/F) | | TR488 | 269 0054 901 | Transistor DTC144EK | |
| TR307 | 273 0235 020 | Transistor 2SC1841(E/F) | | TR531 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR308 | 273 0235 020 | Transistor 2SC1841(E/F) | | TR551 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR309 | 273 0235 020 | Transistor 2SC1841(E/F) | | TR601 | 273 0317 906 | Transistor 2SC2458(BL) | |
| TR310 | 273 0235 020 | Transistor 2SC1841(E/F) | | TR602 | 273 0317 906 | Transistor 2SC2458(BL) | |
| TR311 | 273 0235 020 | Transistor 2SC1841(E/F) | | TR603 | 271 0102 021 | Transistor 2SA1015(GR) | |
| TR312 | 273 0235 020 | Transistor 2SC1841(E/F) | | TR604 | 271 0102 021 | Transistor 2SA1015(GR) | |
| TR313 | 273 0325 008 | Transistor 2SC1815(GR) | | TR651 | 273 0253 028 | Transistor 2SC2878(B) | |
| TR314 | 273 0325 008 | Transistor 2SC1815(GR) | | TR653 | 273 0253 028 | Transistor 2SC2878(B) | |
| TR315 | 274 0060 007 | Transistor 2SD667A(C) | | TR801 | 269 0048 904 | Transistor DTC143EK | |
| TR316 | 274 0060 007 | Transistor 2SD667A(C) | | TR802 | 273 0384 900 | Transistor 2SC2412K(Q/R) | |
| TR317 | 272 0053 005 | Transistor 2SB647A(C) | | TR803 | UDM D010 434 | Transistor DTA114EKA | |
| TR318 | 272 0053 005 | Transistor 2SB647A(C) | | TR903 | UDM D010 434 | Transistor DTA114EKA | |
| TR319 | 273 0430 003 | Transistor 2SC4278(E/F) | | TR904 | UDM D010 434 | Transistor DTA114EKA | |
| TR320 | 273 0430 003 | Transistor 2SC4278(E/F) | | D301 | 276 0401 905 | Diode 1SS133 | |
| TR321 | 271 0276 009 | Transistor 2SA1633(E/F) | | D302 | 276 0401 905 | Diode 1SS133 | |
| TR322 | 271 0276 009 | Transistor 2SA1633(E/F) | | D303 | 276 0401 905 | Diode 1SS133 | |
| TR323 | 273 0235 020 | Transistor 2SC1841(E/F) | | D304 | 276 0401 905 | Diode 1SS133 | |
| TR324 | 273 0235 020 | Transistor 2SC1841(E/F) | | D305 | 276 0401 905 | Diode 1SS133 | |
| TR325 | 271 0131 021 | Transistor 2SA988(E/F) | | D306 | 276 0401 905 | Diode 1SS133 | |
| TR351 | 271 0131 021 | Transistor 2SA988(E/F) | | D307 | 9L2 3312 32M | Diode 1S2471B | |
| TR352 | 271 0131 021 | Transistor 2SA988(E/F) | | D308 | 9L2 3312 32M | Diode 1S2471B | |
| TR353 | 273 0384 900 | Transistor 2SC2412K(Q/R) | | D309 | 9L2 3312 32M | Diode 1S2471B | |
| TR354 | 271 0238 908 | Transistor 2SA1037K(Q/R) | | D310 | 9L2 3312 32M | Diode 1S2471B | |
| TR355 | 9L2 3286 25 | Transistor 2SB647(C) | | D311 | 276 0401 905 | Diode 1SS133 | |
| TR401 | 271 0094 016 | Transistor 2SA970(BL) | | D312 | 276 0401 905 | Diode 1SS133 | |
| TR403 | 271 0094 016 | Transistor 2SA970(BL) | | D351 | 276 0401 905 | Diode 1SS133 | |
| TR405 | 271 0131 021 | Transistor 2SA988(E/F) | | D401 | 276 0401 905 | Diode 1SS133 | |
| TR407 | 273 0235 020 | Transistor 2SC1841(E/F) | | D403 | 276 0401 905 | Diode 1SS133 | |
| TR409 | 273 0235 020 | Transistor 2SC1841(E/F) | | D405 | 276 0401 905 | Diode 1SS133 | |
| TR411 | 273 0235 020 | Transistor 2SC1841(E/F) | | D407 | 9L2 3312 32M | Diode 1S2471B | |
| TR413 | 273 0325 901 | Transistor 2SC1815(GR) | | | | | |

PRINTED WIRING BOARD

1 2 3 4 5 6 7 8

MAIN P.W.B. Ass'y UNIT

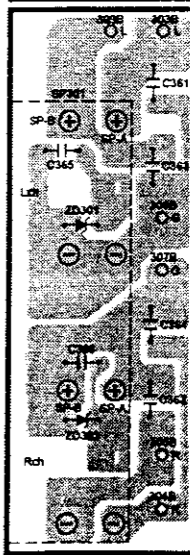
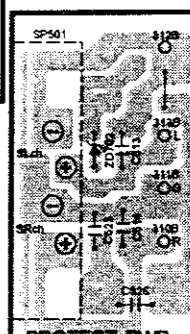
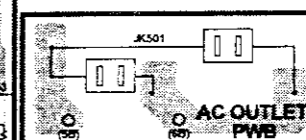
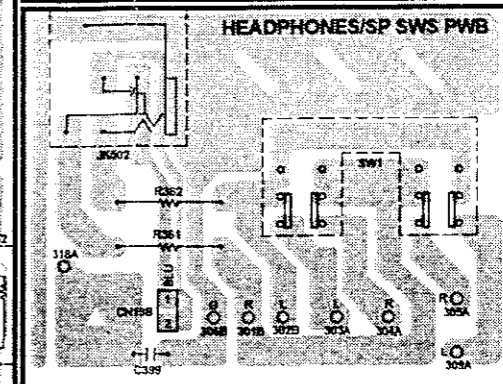
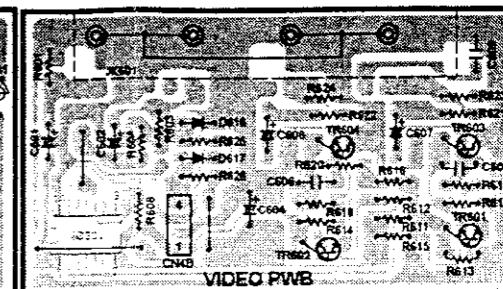
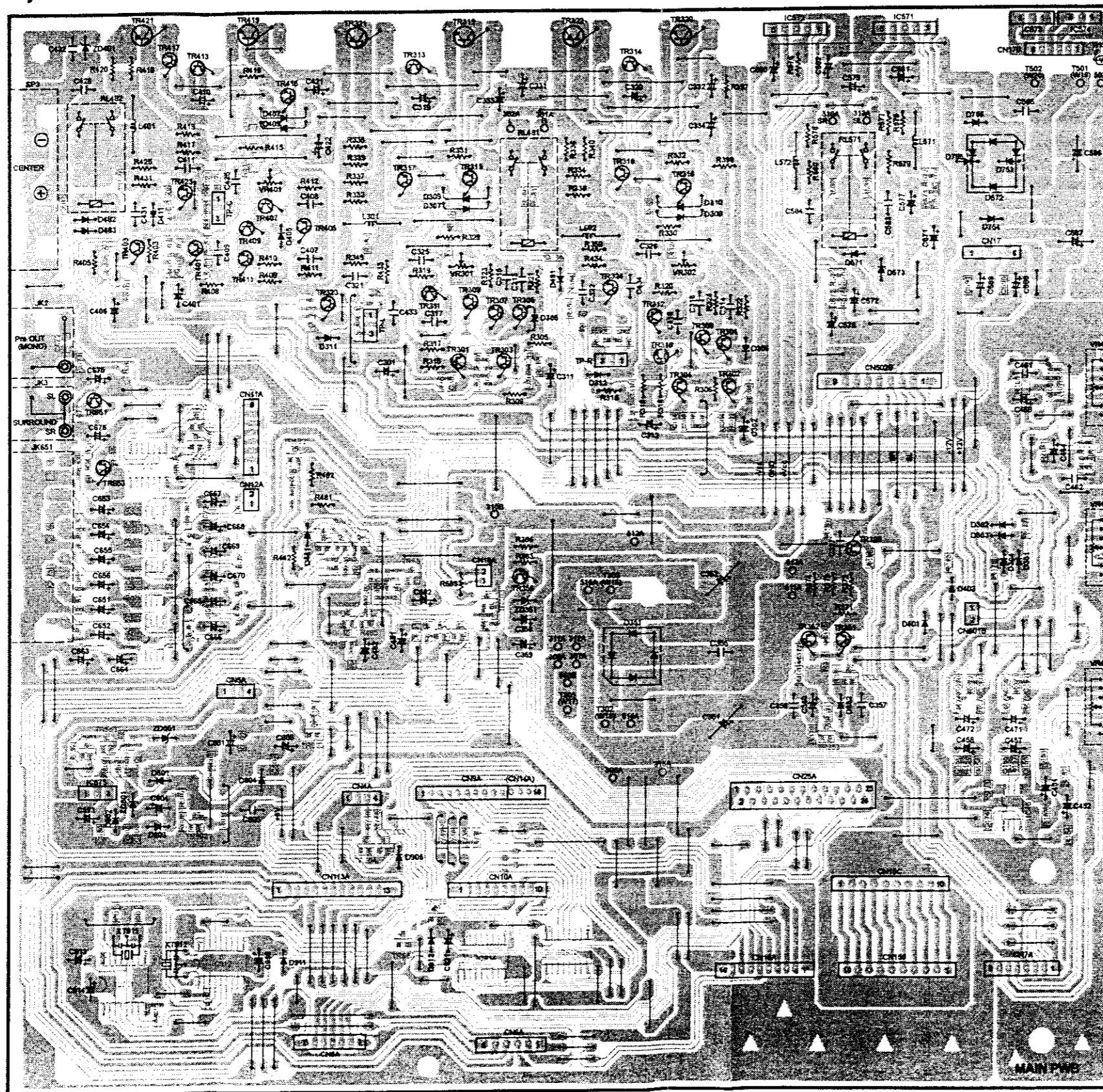
A

B

C

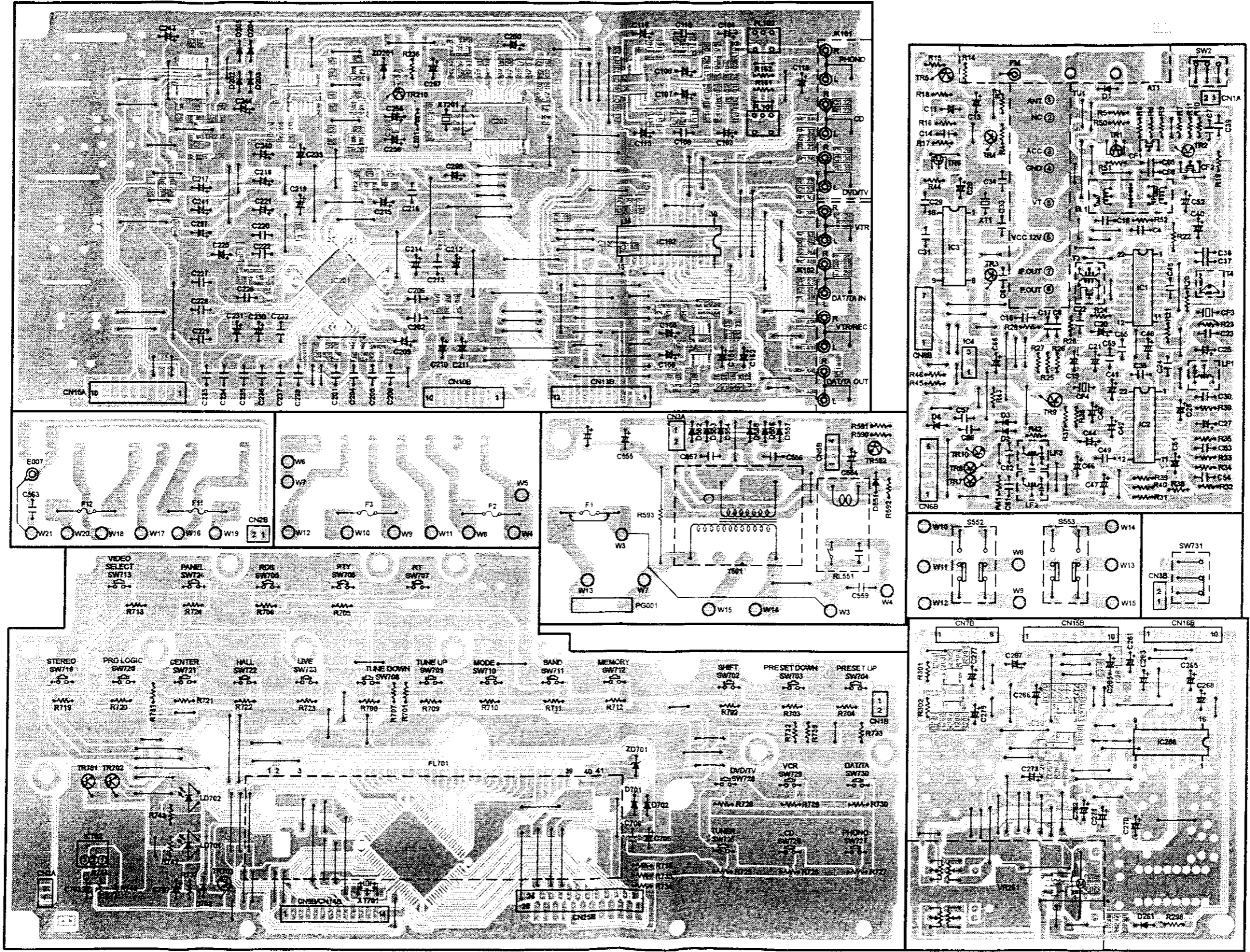
D

E



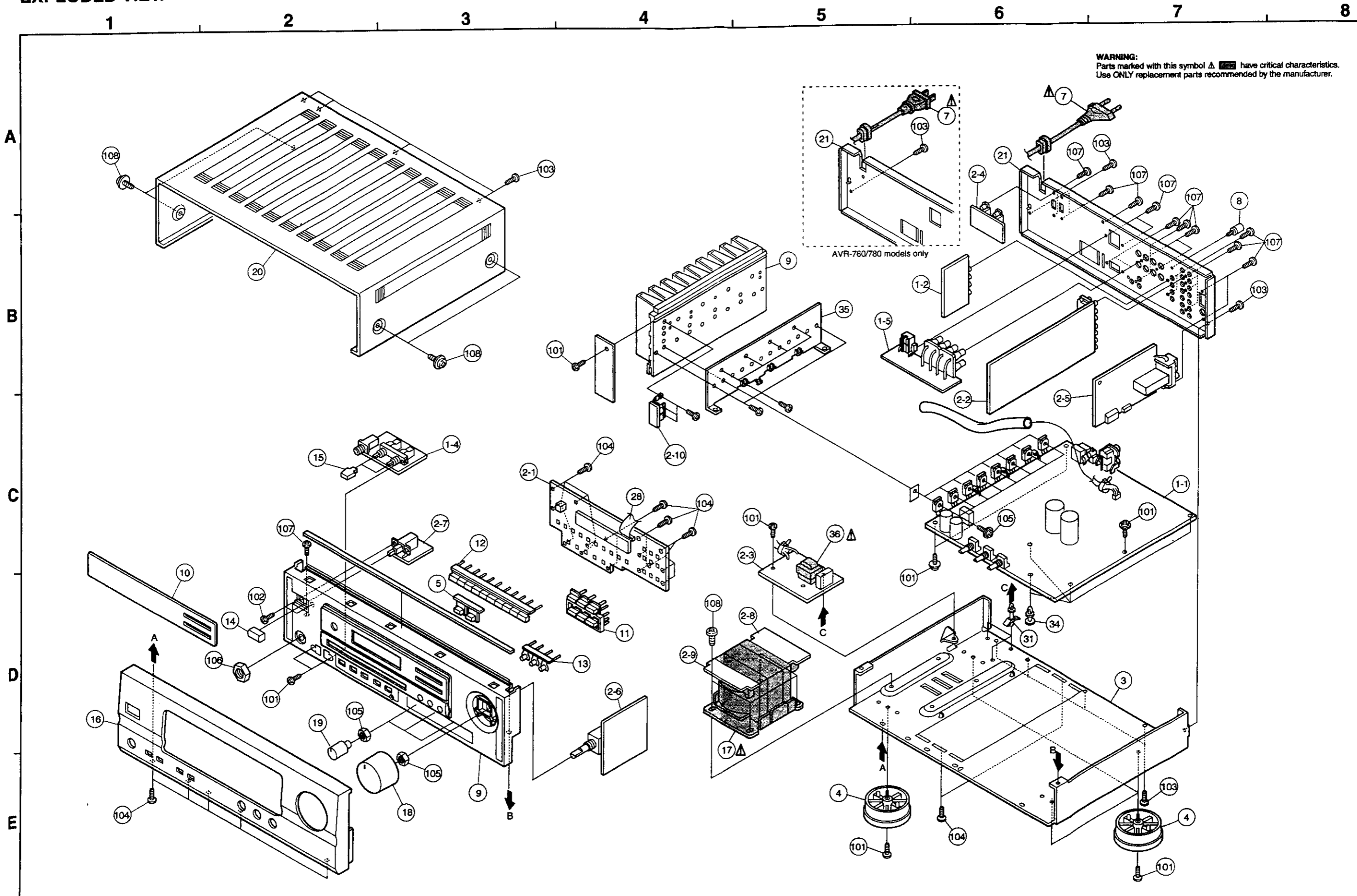
1 2 3 4 5 6 7 8

FL P.W.B. Ass'y UNIT



A
B
C
D
E

EXPLODED VIEW



PARTS LIST OF EXPLODED VIEW
AVR-750/760/770/780

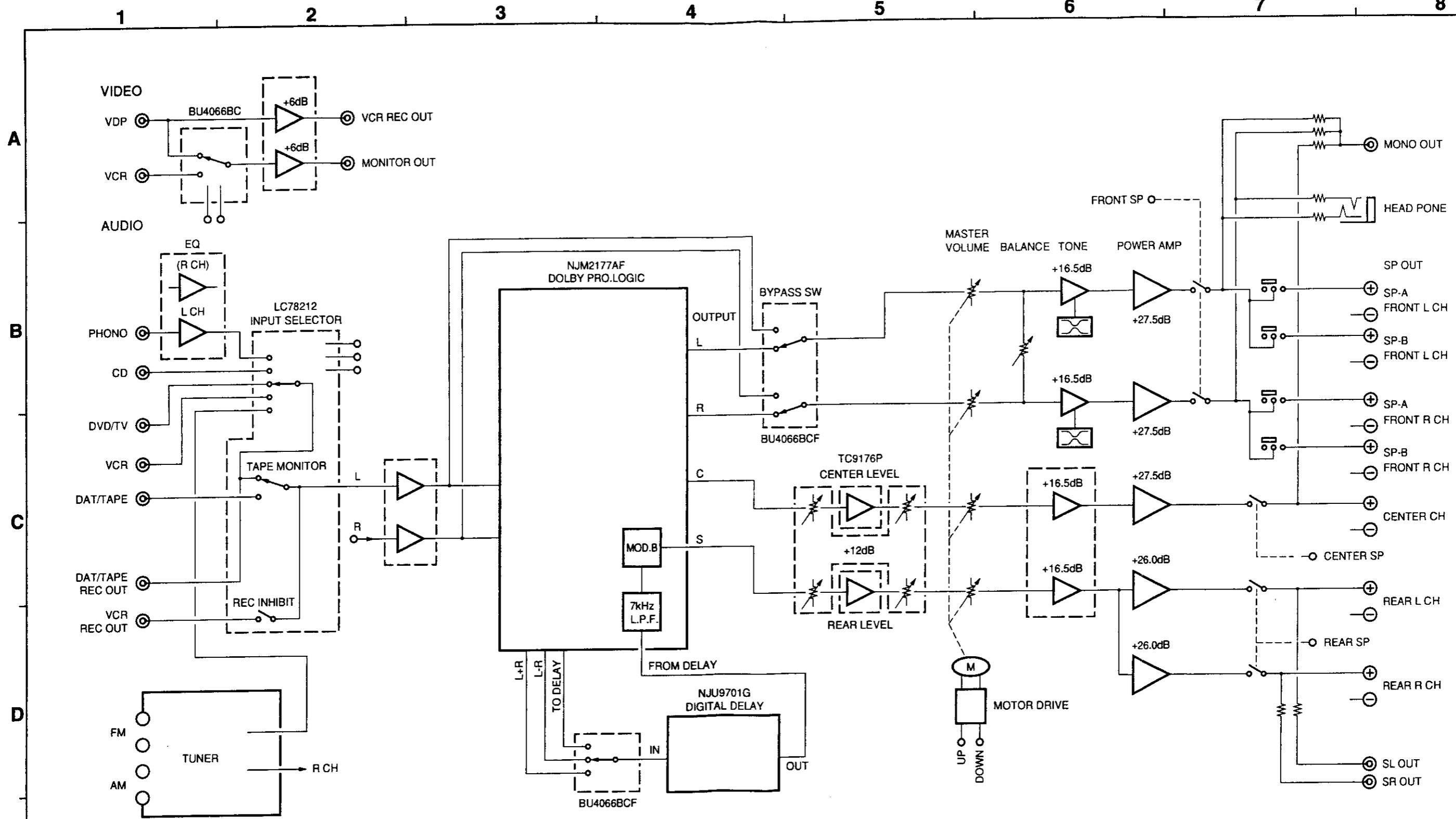
| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|----------|--------------|-------------------------------|-------------|------|
| 1 | | Main P.W.B. Ass'y | | 1 |
| 1-1 | -- | Main P.W.B. unit | | 1 |
| 1-2 | -- | Video P.W.B. unit | | 1 |
| 1-3 | -- | AC Outlet P.W.B. unit | | 1 |
| 1-4 | -- | Headphones/SP sw P.W.B. unit | | 1 |
| 1-5 | -- | SP Terminal P.W.B. unit | | 1 |
| 1-6 | -- | Protect P.W.B. unit | | 1 |
| 2 | | FL P.W.B. Ass'y | | 1 |
| 2-1 | -- | FL P.W.B. unit | | 1 |
| 2-2 | -- | Audio P.W.B. unit | | 1 |
| 2-3 | -- | Power supply P.W.B. unit | | 1 |
| 2-4 | -- | Voltage select sw P.W.B. unit | | 1 |
| 2-5 | -- | Tuner P.W.B. unit | | 1 |
| 2-6 | -- | Master volume P.W.B. unit | | 1 |
| 2-7 | -- | Power switch P.W.B. unit | | 1 |
| 2-8 | -- | TF-PRI P.W.B. unit | | 1 |
| 2-9 | -- | TF-SEC P.W.B. unit | | 1 |
| 2-10 | -- | STAB1 unit | | 1 |
| 3 | 9LQ A004 81 | Bottom chassis | | 1 |
| 4 | 104 0194 205 | Foot | Black only | 4 |
| | | Foot | Gold only | |
| 5 | 9LP C018 02 | VS button | Gold only | 1 |
| | 9LP C018 01 | | Black only | |
| Δ | Note | AC Cord | AVR-750/770 | 1 |
| | Note | AC Cord | AVR-760/780 | 1 |
| 8 | 9LN X016 21 | Phono earth terminal | | 1 |
| 9 | Note | Inner panel | Gold only | 1 |
| | | Inner panel | Black only | |
| 10 | 9LP H051 71 | Clear panel | | 1 |
| 11 | 9LP C025 01 | Function button | | 1 |
| 12 | 9LP C017 63 | Tunner button | Gold only | 1 |
| | 9LP C017 61 | | Black only | |
| 13 | 9LP C017 72 | Tuning button | Gold only | 1 |
| | 9LP C017 71 | | Black only | |
| 14 | 9LP C017 82 | Power button | Gold only | 1 |
| | 9LP C017 81 | | Black only | |
| 15 | 9LP C017 92 | SP button | Gold only | 2 |
| | 9LP C017 91 | | Black only | |
| 16 | Note | Front panel | | 1 |
| Δ | Note | Power trans | | 1 |
| 18 | 9LP C025 12 | VOL knob | Gold only | 1 |
| | 9LP C025 11 | | Black only | |
| 19 | 9LP C017 42 | BASS knob | Gold only | 3 |
| | 9LP C017 41 | | Black only | |
| 20 | 9LQ A004 94 | Top cover | Gold only | 1 |
| | 9LQ A004 92 | | Black only | |
| 21 | Note | Rear plate | | 1 |
| Δ | Note | Fuse T5A | F1 | 1 |
| Δ | Note | Fuse T2.5A | F2 | 1 |
| Δ | Note | Fuse T2.5A | F3 | 1 |

| Ref. No. | Part No. | Part Name | Remarks | Q'ty |
|---------------------------------|--------------|---------------------------|-------------------------|------|
| 28 | 9LE K001 18 | 25P FFC Cable | | 1 |
| 29 | -- | Heat sink | | 1 |
| 30 | 9LM L002 51 | Mini PWB post | | 5 |
| 31 | 9LM 004 31 | PWB support L | | 3 |
| 32 | 9LP P002 41 | Side wood L | Gold only | 1 |
| 33 | 9LP P002 31 | Side wood R | Gold only | 1 |
| 34 | -- | Card spacer (L=8) | | 5 |
| 35 | -- | Heat sink bracket | | 1 |
| Δ | Note | Mini trans | | 1 |
| ★ | -- | Origin label | AVR-750/770 Models only | 1 |
| ★ | -- | Number sheet | | 1 |
| ★ | -- | Preset label | AVR-750/770 Models only | 1 |
| ★ | -- | Caution label | AVR-760/780 Models only | 1 |
| ★ | -- | Rating label | AVR-760/780 Models only | 1 |
| Screws | | | | |
| 101 | 9L8 6914 10 | Screw 3 x 10 BT BIND | | 29 |
| 102 | 9L8 6714 06 | Screw 3 x 6 DT BIND | | 4 |
| 103 | 9L8 6794 06 | Screw 3 x 6 DT BIND B | | 5 |
| 104 | 9L8 6796 06 | Screw 4 x 6 DT BIND B | | 8 |
| 105 | 475 6138 002 | NUT M9 x 0.75 | | 4 |
| 106 | 475 6124 003 | NUT M12 x 1 | | 1 |
| 107 | 9L8 6914 14 | Screw 3 x 14 BT BIND | | 1 |
| 108 | 9L8 6794 08 | Screw 3 x 8 DT BIND B | | 4 |
| 109 | 9L8 6994 10 | Screw 3 x 10 BT BIND B | | 27 |
| 110 | 9L8 6993 08 | Screw 2.6 x 8 BT BIND B | AVR-750/770 Models only | 4 |
| 111 | 9L8 6914 14 | Screw 3 x 14 BT BIND B | | 1 |
| 112 | 9L8 6994 08 | Screw 3 x 8 BT BIND B | | 2 |
| 113 | 9LM J009 81 | Screw (Side wood) | Gold only | 4 |
| PACKING & ACCSSORIES | | | | |
| 201 | 9L3 6402 14W | Poly sack | | 1 |
| 202 | 9L2 7593 41 | AM Loop ant. | | 1 |
| 203 | 9LE F021 33 | FM Ant. | | 1 |
| 204 | 9LE Y002 81 | Plug adapter | AVR-750/770 Models only | 1 |
| 205 | 9LQ R233 34 | Instruction manual | | 1 |
| 206 | 9LH L005 83 | Remote controller (RC840) | | 1 |
| 207 | Note | Carton box | | 1 |
| 208 | 9LS P029 51 | Cushion | | 2 |
| 209 | -- | Poly sack | | 1 |
| 210 | -- | Soft sack | | 1 |

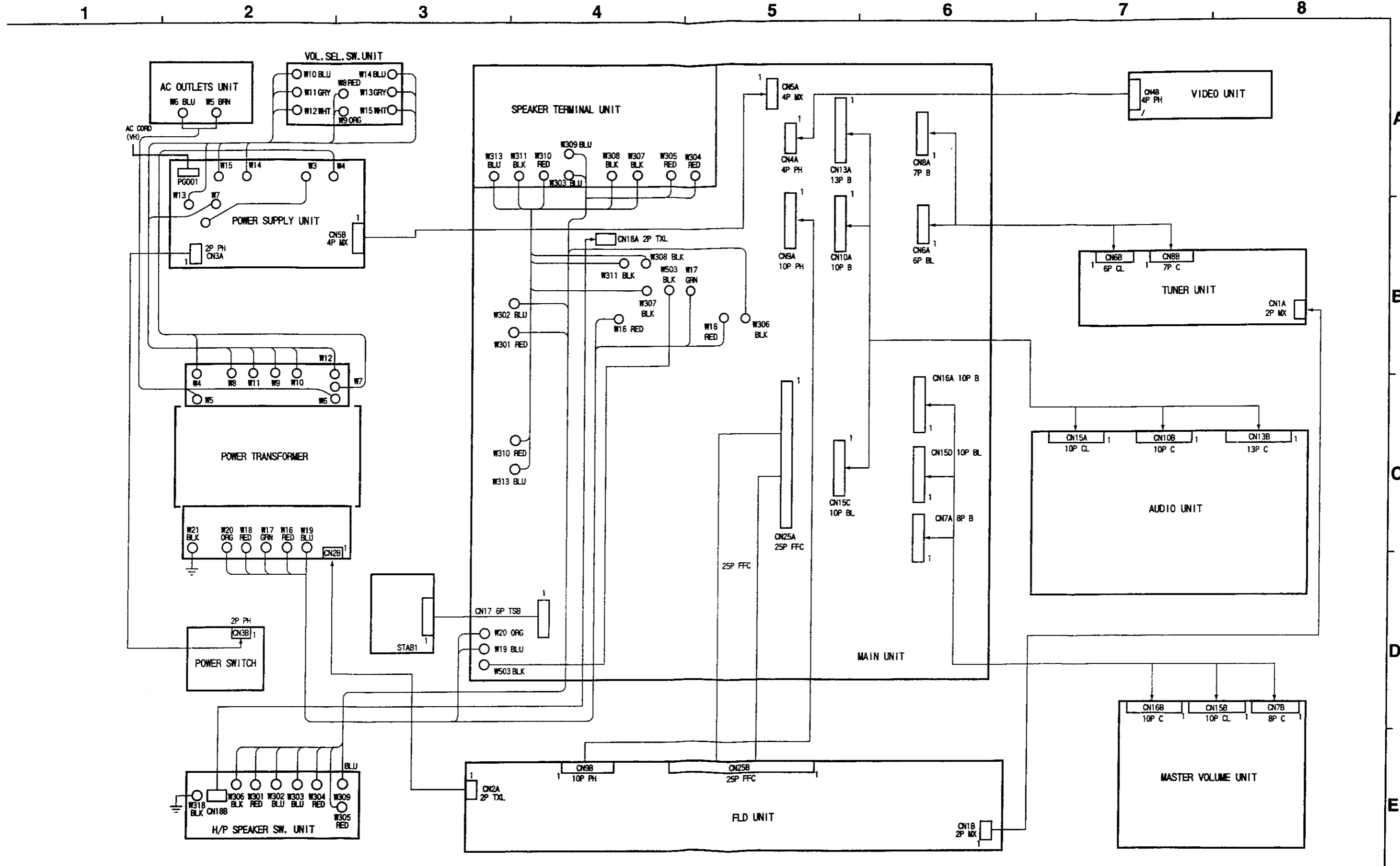
ADDENDUM PARTS LIST

| Ref. No. | Part Name | Part No. | | | |
|-------------------------------|-----------------------|-------------|-------------|-------------|-------------|
| | | AVR-750 | AVR-760 | AVR-770 | AVR-780 |
| 1 | Main P.W.B. Ass'y | | | | |
| 2 | FL P.W.B. Ass'y | | | | |
| Δ | ★ Euro converter plug | 9LE P000 62 | | 9LE P000 62 | |
| Δ | ★ AC Cord | 9LE V004 44 | 9LE V004 45 | 9LE V004 44 | 9LE V004 45 |
| 9 | Inner panel | 9LP H051 81 | 9LP H051 82 | 9LP H051 83 | 9LP H051 84 |
| 14 | Power trans | 9LB T010 23 | 9LB T010 22 | 9LB T010 23 | 9LB T010 22 |
| 16 | Front panell | 9LP H051 54 | 9LP H051 55 | 9LP H051 56 | 9LP H051 57 |
| 21 | Rear plate | 9LQ A009 93 | 9LQ A009 94 | 9LQ A009 95 | 9LQ A009 96 |
| Δ | ★ Fuse T5A | 9L2 7280 70 | | 9L2 7280 70 | |
| Δ | ★ Fuse T2.5A | | 9L2 7277 22 | | 9L2 7277 22 |
| Δ | ★ Fuse T2.5A | 9L2 7277 22 | | 9L2 7277 22 | |
| Δ | ★ Mini trans | 9LB T005 33 | 9LB T005 32 | 9LB T005 33 | 9LB T005 32 |
| PACKING AND ACCSEERIES | | | | | |
| 207 | Carton box | 9L SG07 033 | 9L SG07 034 | 9L SG07 271 | 9L SG07 272 |

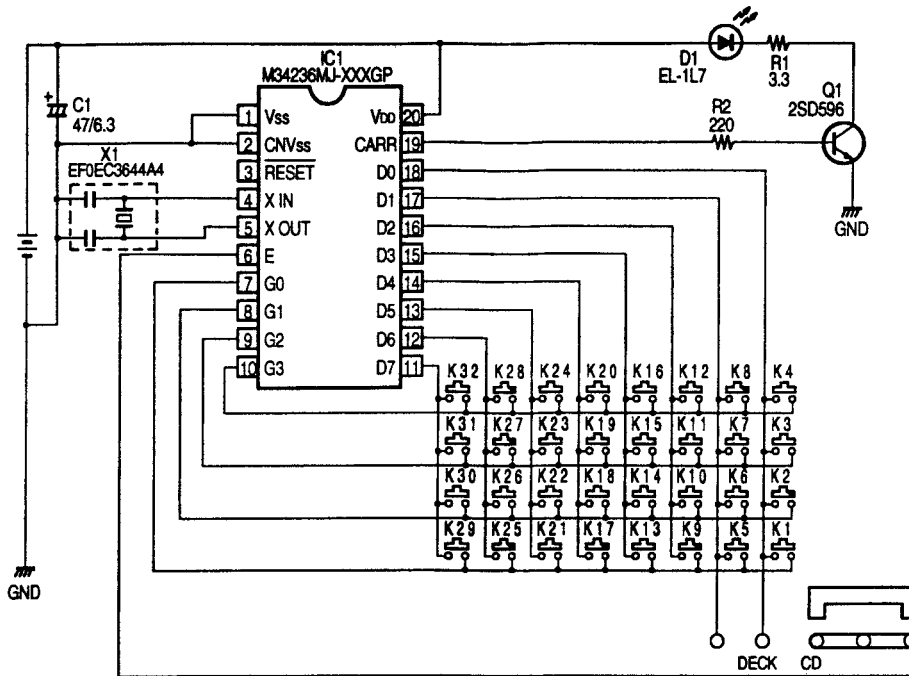
BLOCK DIAGRAM



WIRING DIAGRAM



REMOTE CONTROL UNIT (RC-840)



RC-840 Transmitting Code Table

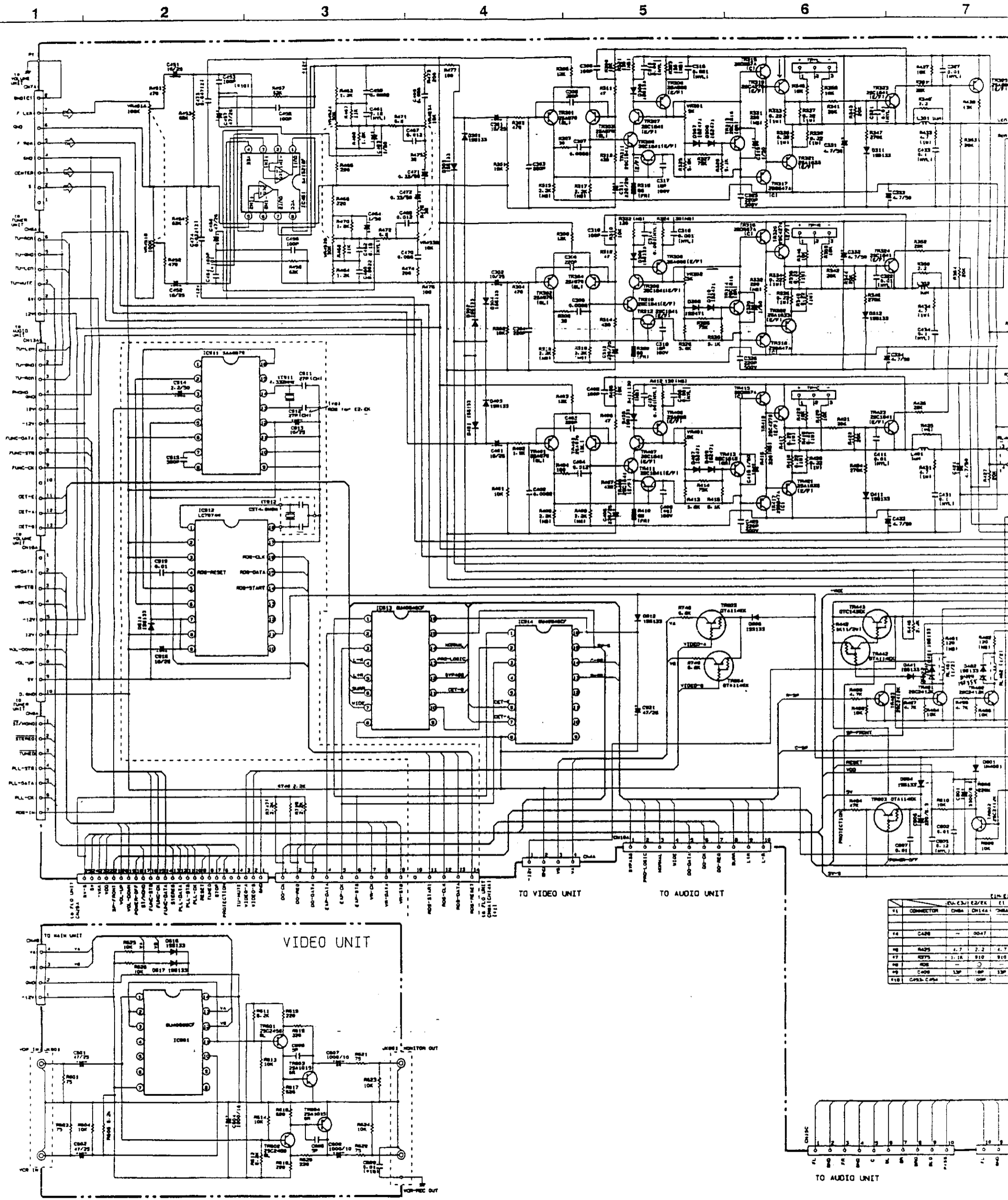
CD

| KEY No. | Function | Classification | System address | | | | | Data code | | | | | Extension | | Mask | Judge |
|---------|--------------------|----------------|----------------|----|----|----|----|-----------|----|----|----|-----|-----------|-----|------|-------|
| | | | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 |
| 1 | POWER ON/OFF | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 2 | DISK SKIP+ | CD | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 3 | STOP | CD | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 4 | PLAY | CD | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 5 | AUTO SEARCH | CD | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 6 | PAUSE | CD | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 7 | AUTO SEARCH | CD | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 8 | PRESET. DOWN | TUNER | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 9 | PRESET CH. UP | TUNER | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| 10 | CD | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 11 | PHOTO | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 |
| 12 | SHIFT | TUNER | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 13 | TUNER | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 14 | VCR | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| 15 | VDP/DBS | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| 16 | STEREO | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 17 | SURR. MODE | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 18 | V.AUX/GAME | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| 19 | DAT/TAPE MONITOR | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 20 | T. TONE | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 21 | DELAY+ | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 22 | MUTING | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 |
| 23 | SCREEN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 24 | PANEL | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 25 | CENTER VOLUME UP | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| 26 | CENTER VOLUME DOWN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 |
| 27 | REAR VOLUME UP | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |
| 28 | REAR VOLUME DOWN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 |
| 29 | MASTER VOLUME UP | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 30 | MASTER VOLUME DOWN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |

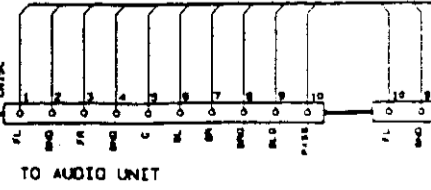
DECK

| KEY No. | Function | Classification | System address | | | | | Data code | | | | | Extension | | Mask | Judge | |
|---------|--------------------|----------------|----------------|----|----|----|----|-----------|----|----|----|-----|-----------|-----|------|-------|---|
| | | | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | K |
| 1 | POWER ON/OFF | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 2 | PLAY ◀ | DECK | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 3 | STOP ■ | DECK | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 4 | PLAY ▶ | DECK | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 5 | REW ◀◀ | DECK | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 6 | A/B | DECK | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 7 | FF ▶▶ | DECK | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 8 | PRESET CH. DOWN | TUNER | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 9 | PRESET CH. UP | TUNER | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 10 | CD | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 11 | PHOTO | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 12 | SHIFT | TUNER | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 13 | TUNER | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 14 | VCR | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 15 | VDP/DBS | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 16 | STEREO | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 17 | SURR. MODE | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| 18 | V. AUX/GAME | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 |
| 19 | DAT/TAPE MONITOR | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| 20 | T. TONE | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 21 | DELAY+ | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 |
| 22 | MUTING | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 23 | SCREEN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 24 | PANEL | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 25 | CENTER VOLUME UP | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 26 | CENTER VOLUME DOWN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 27 | REAR VOLUME UP | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 28 | REAR VOLUME DOWN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 29 | MASTER VOLUME UP | AV. AMP | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 30 | MASTER VOLUME DOWN | AV. AMP | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |

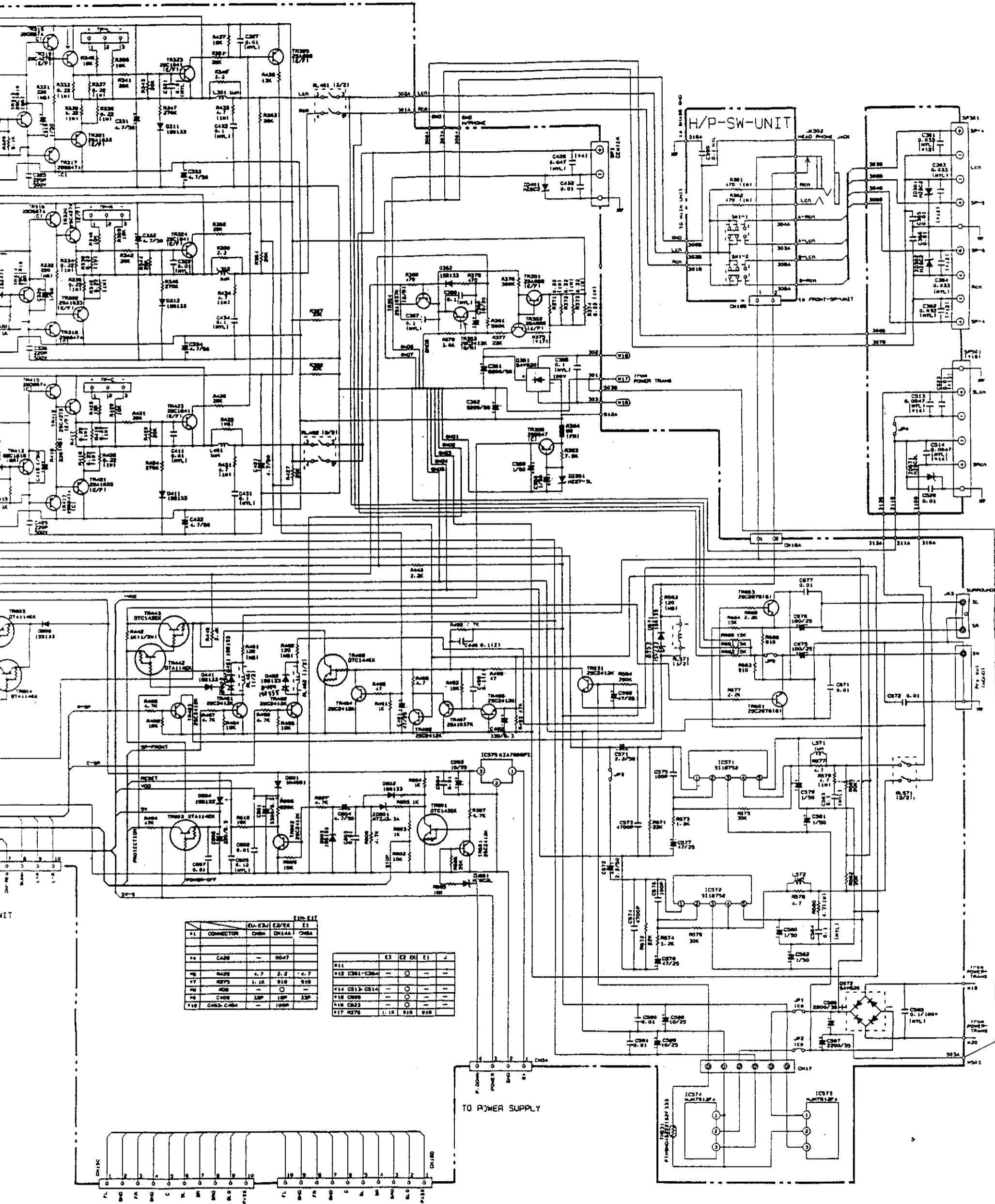
SCHEMATIC DIAGRAM (1/5)



| NO. | CONNECTOR | TO MAIN UNIT | TO VIDEO UNIT | TO AUDIO UNIT |
|-----|-----------|--------------|---------------|---------------|
| 11 | CONNECTOR | CH16 | CH14 | CH14 |
| 12 | CARD | - | 0047 | - |
| 13 | BASE | 4.7 | 2.2 | 4.7 |
| 14 | RES | 1.1K | 910 | 910 |
| 15 | CAP | 100 | 100 | 100 |
| 16 | CAP | 100 | 100 | 100 |
| 17 | CAP | 100 | 100 | 100 |
| 18 | CAP | 100 | 100 | 100 |
| 19 | CAP | 100 | 100 | 100 |
| 20 | CAP | 100 | 100 | 100 |
| 21 | CAP | 100 | 100 | 100 |
| 22 | CAP | 100 | 100 | 100 |
| 23 | CAP | 100 | 100 | 100 |
| 24 | CAP | 100 | 100 | 100 |
| 25 | CAP | 100 | 100 | 100 |
| 26 | CAP | 100 | 100 | 100 |
| 27 | CAP | 100 | 100 | 100 |
| 28 | CAP | 100 | 100 | 100 |
| 29 | CAP | 100 | 100 | 100 |
| 30 | CAP | 100 | 100 | 100 |
| 31 | CAP | 100 | 100 | 100 |
| 32 | CAP | 100 | 100 | 100 |
| 33 | CAP | 100 | 100 | 100 |
| 34 | CAP | 100 | 100 | 100 |
| 35 | CAP | 100 | 100 | 100 |
| 36 | CAP | 100 | 100 | 100 |
| 37 | CAP | 100 | 100 | 100 |
| 38 | CAP | 100 | 100 | 100 |
| 39 | CAP | 100 | 100 | 100 |
| 40 | CAP | 100 | 100 | 100 |
| 41 | CAP | 100 | 100 | 100 |
| 42 | CAP | 100 | 100 | 100 |
| 43 | CAP | 100 | 100 | 100 |
| 44 | CAP | 100 | 100 | 100 |
| 45 | CAP | 100 | 100 | 100 |
| 46 | CAP | 100 | 100 | 100 |
| 47 | CAP | 100 | 100 | 100 |
| 48 | CAP | 100 | 100 | 100 |
| 49 | CAP | 100 | 100 | 100 |
| 50 | CAP | 100 | 100 | 100 |
| 51 | CAP | 100 | 100 | 100 |
| 52 | CAP | 100 | 100 | 100 |
| 53 | CAP | 100 | 100 | 100 |
| 54 | CAP | 100 | 100 | 100 |
| 55 | CAP | 100 | 100 | 100 |
| 56 | CAP | 100 | 100 | 100 |
| 57 | CAP | 100 | 100 | 100 |
| 58 | CAP | 100 | 100 | 100 |
| 59 | CAP | 100 | 100 | 100 |
| 60 | CAP | 100 | 100 | 100 |
| 61 | CAP | 100 | 100 | 100 |
| 62 | CAP | 100 | 100 | 100 |
| 63 | CAP | 100 | 100 | 100 |
| 64 | CAP | 100 | 100 | 100 |
| 65 | CAP | 100 | 100 | 100 |
| 66 | CAP | 100 | 100 | 100 |
| 67 | CAP | 100 | 100 | 100 |
| 68 | CAP | 100 | 100 | 100 |
| 69 | CAP | 100 | 100 | 100 |
| 70 | CAP | 100 | 100 | 100 |
| 71 | CAP | 100 | 100 | 100 |
| 72 | CAP | 100 | 100 | 100 |
| 73 | CAP | 100 | 100 | 100 |
| 74 | CAP | 100 | 100 | 100 |
| 75 | CAP | 100 | 100 | 100 |
| 76 | CAP | 100 | 100 | 100 |
| 77 | CAP | 100 | 100 | 100 |
| 78 | CAP | 100 | 100 | 100 |
| 79 | CAP | 100 | 100 | 100 |
| 80 | CAP | 100 | 100 | 100 |
| 81 | CAP | 100 | 100 | 100 |
| 82 | CAP | 100 | 100 | 100 |
| 83 | CAP | 100 | 100 | 100 |
| 84 | CAP | 100 | 100 | 100 |
| 85 | CAP | 100 | 100 | 100 |
| 86 | CAP | 100 | 100 | 100 |
| 87 | CAP | 100 | 100 | 100 |
| 88 | CAP | 100 | 100 | 100 |
| 89 | CAP | 100 | 100 | 100 |
| 90 | CAP | 100 | 100 | 100 |
| 91 | CAP | 100 | 100 | 100 |
| 92 | CAP | 100 | 100 | 100 |
| 93 | CAP | 100 | 100 | 100 |
| 94 | CAP | 100 | 100 | 100 |
| 95 | CAP | 100 | 100 | 100 |
| 96 | CAP | 100 | 100 | 100 |
| 97 | CAP | 100 | 100 | 100 |
| 98 | CAP | 100 | 100 | 100 |
| 99 | CAP | 100 | 100 | 100 |
| 100 | CAP | 100 | 100 | 100 |



TO AUDIO UNIT



| | | TABLE I | | | |
|-----|-----------|---------|-------|------|----|
| #1 | CONNECTOR | CH2A | CH14A | CH2A | E1 |
| #4 | CAS8 | | 0047 | | |
| #6 | R428 | 4.7 | 2.2 | 4.7 | |
| #7 | R773 | 1.1K | 910 | 910 | |
| #8 | R78 | | | | |
| #9 | C408 | 15P | 15P | 15P | |
| #10 | CAS3-CAS4 | | 100P | | |

| #11 | E3 | E2 | E1 | J |
|-----|-----------|------|-----|-----|
| #12 | CS11-CS14 | | | |
| #14 | CS13-CS14 | | | |
| #16 | CS23 | | | |
| #17 | R773 | 1.1K | 910 | 910 |

WARNING:
Parts marked with this symbol have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE
ALL RESISTANCE VALUES IN OHM, K=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD, P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

A
B
C
D
E
F
G
H

SCHEMATIC DIAGRAM (2/5)

1 2 3 4 5 6

A

B

C

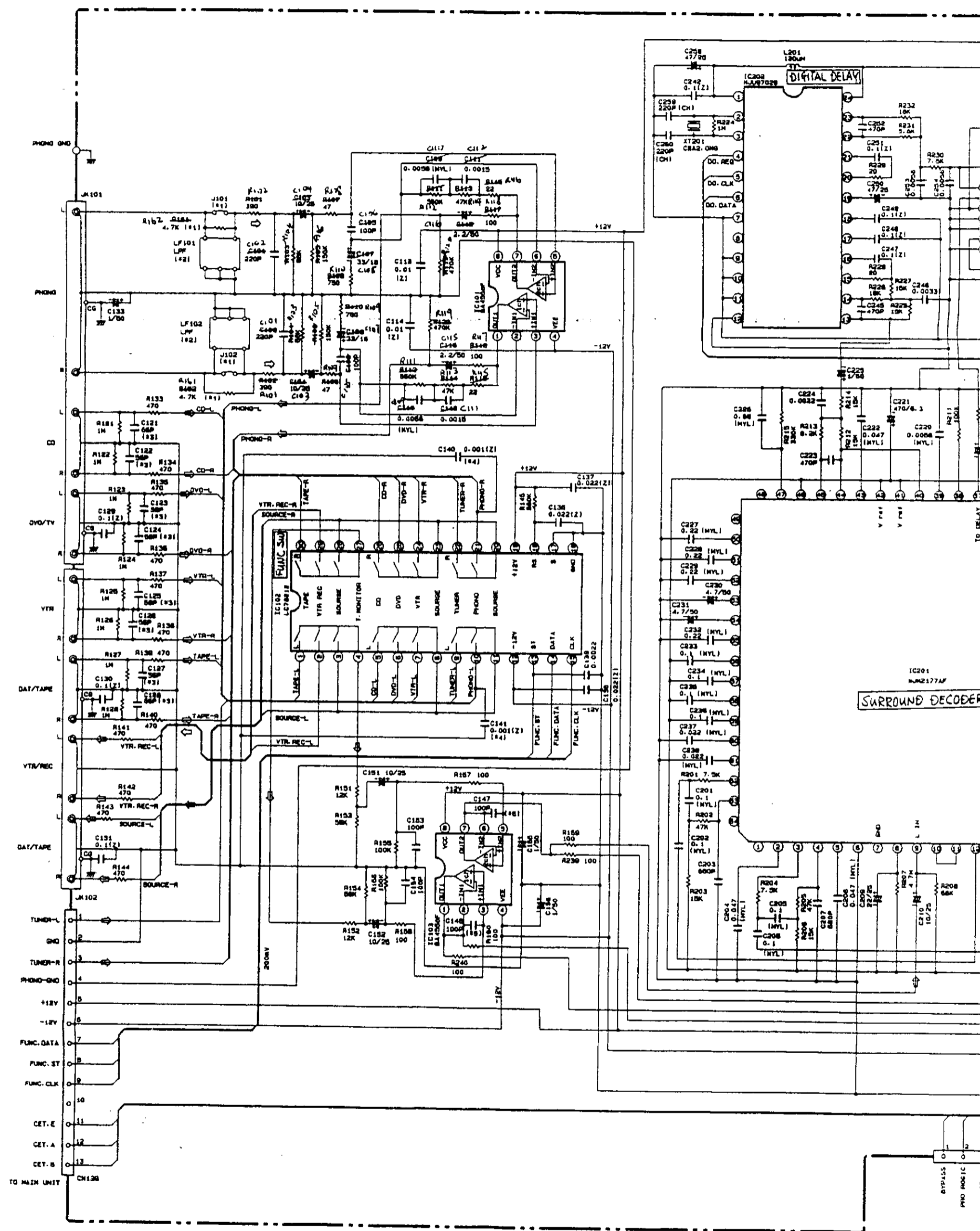
D

E

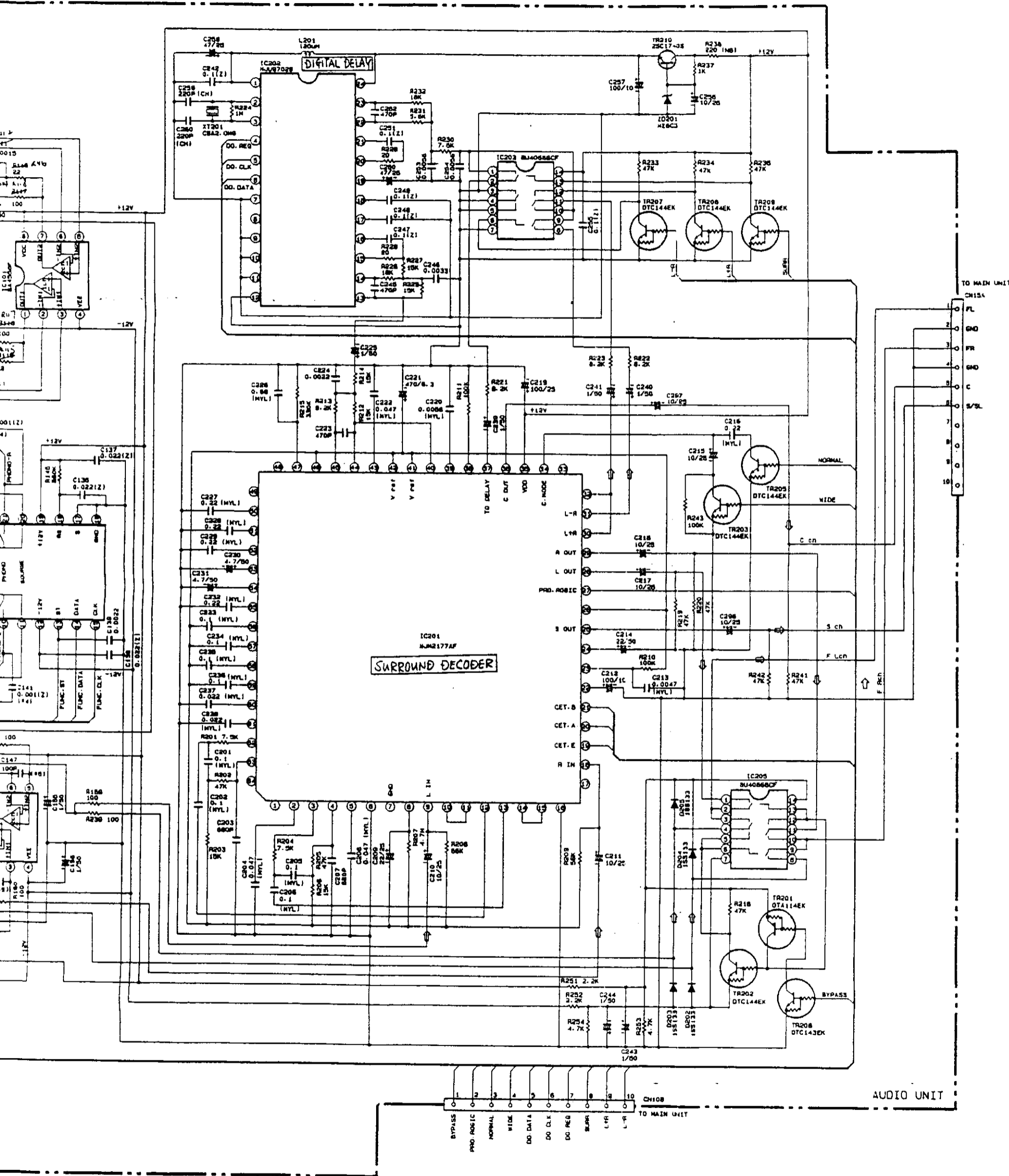
F

G


H



NOTICE
 ALL RESISTANCE VALUES IN OHM, K=1,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD, P=
 EACH VOLTAGE AND CURRENT ARE MEASURED AT
 CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE
 NOTICE.



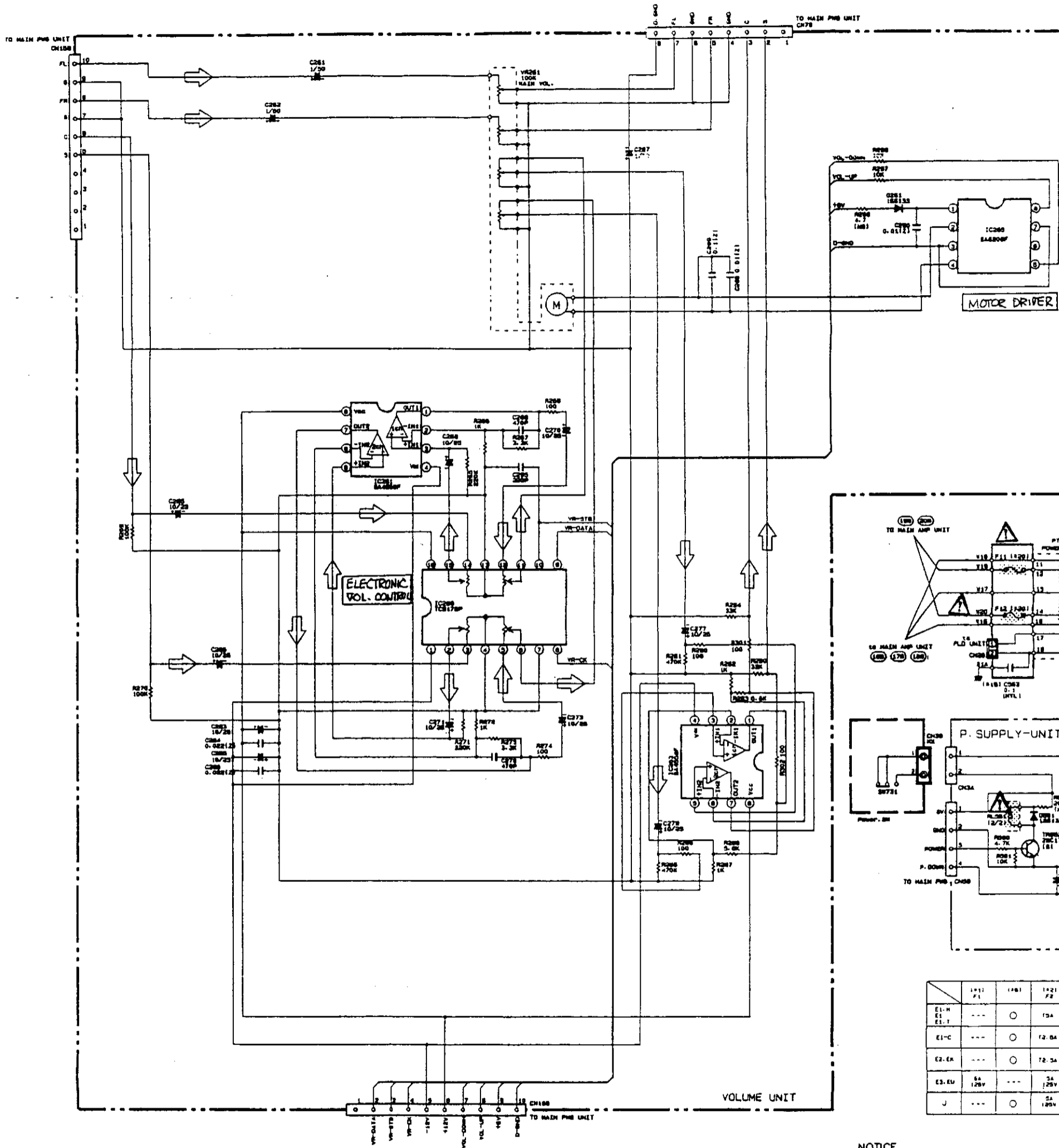
NOTICE
 ALL RESISTANCE VALUES IN OHM, k=1,000 OHM M=1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD, P=MICRO-MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT
 CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR
 NOTICE.

WARNING:
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CAUTION:
 Before returning the unit to the customer, make sure you make either (1) a
 leakage current check or (2) a line to chassis resistance check. If the leakage
 current exceeds 0.5 milliamps, or if the resistance from chassis to either side
 of the power cord is less than 240 kohnms, the unit is defective.

WARNING:
 DO NOT return the unit to the customer unit the problem is located and
 corrected.

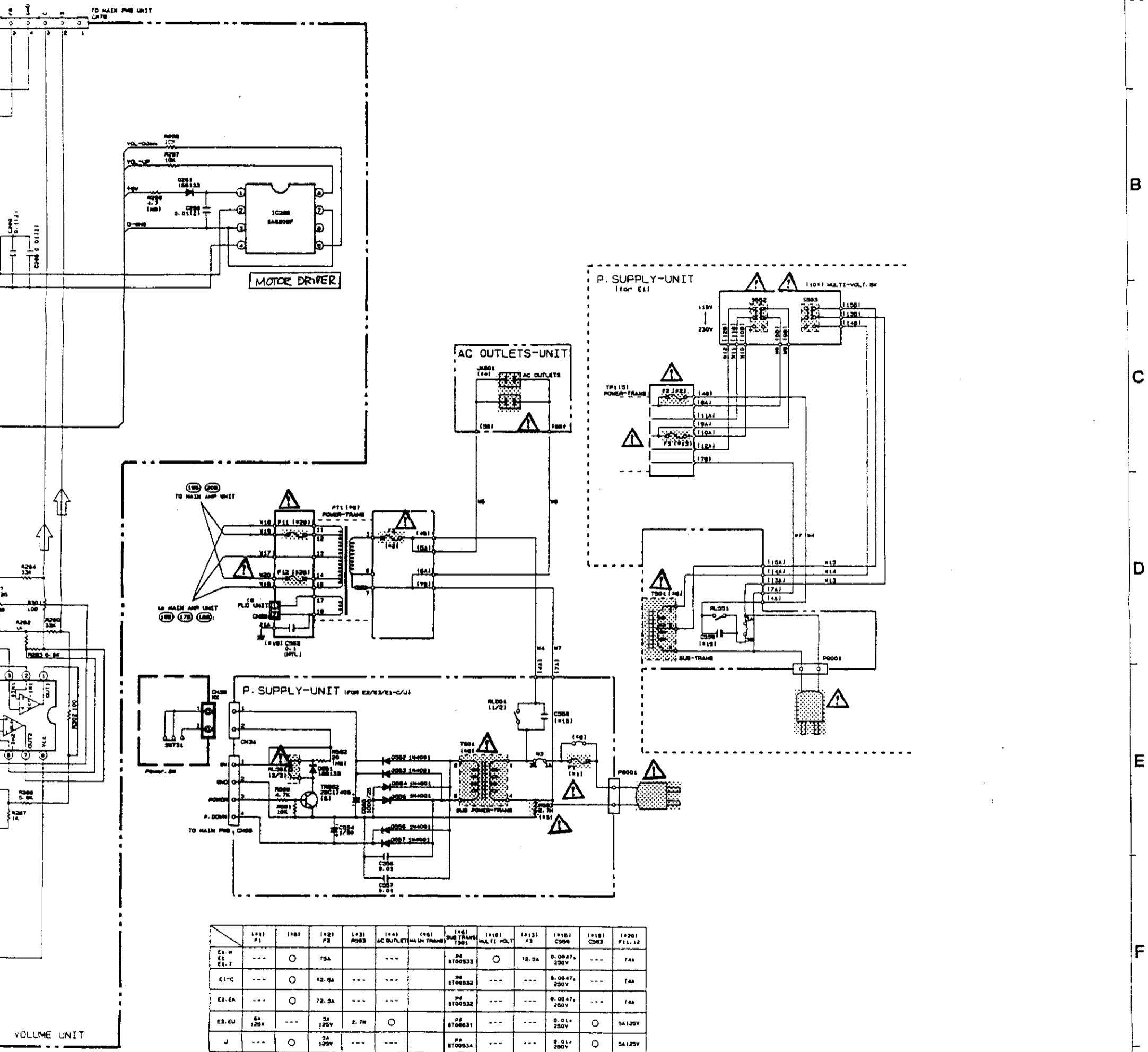
1 2 3 4 5 6 7



| | 1411 F1 | 1481 | 1421 F2 |
|-------|------------|------|------------|
| E1-H | --- | ○ | 12A |
| E1-T | --- | ○ | 12A |
| E1-C | --- | ○ | 12.5A |
| E2-EX | --- | ○ | 12.5A |
| E3-EU | 5A 125V | --- | 5A 125V |
| J | --- | ○ | 5A 125V |

NOTICE
 ALL RESISTANCE VALUES IN OHM. K=1,000
 ALL CAPACITANCE VALUES IN MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED
 IN NORMAL CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE
 WITHOUT NOTICE.

6 7 8 9 10 11



NOTICE
 ALL RESISTANCE VALUES IN OHM, K=1,000 OHM M=1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD, P=MICRO-MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT
 CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR
 NOTICE.

WARNING:
 Parts marked with this symbol have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
 Before returning the unit to the customer, make sure you make either (1) a
 leakage current check or (2) a line to chassis resistance check. If the leakage
 current exceeds 0.5 millamps, or if the resistance from chassis to either side
 of the power cord is less than 240 kohms, the unit is defective.

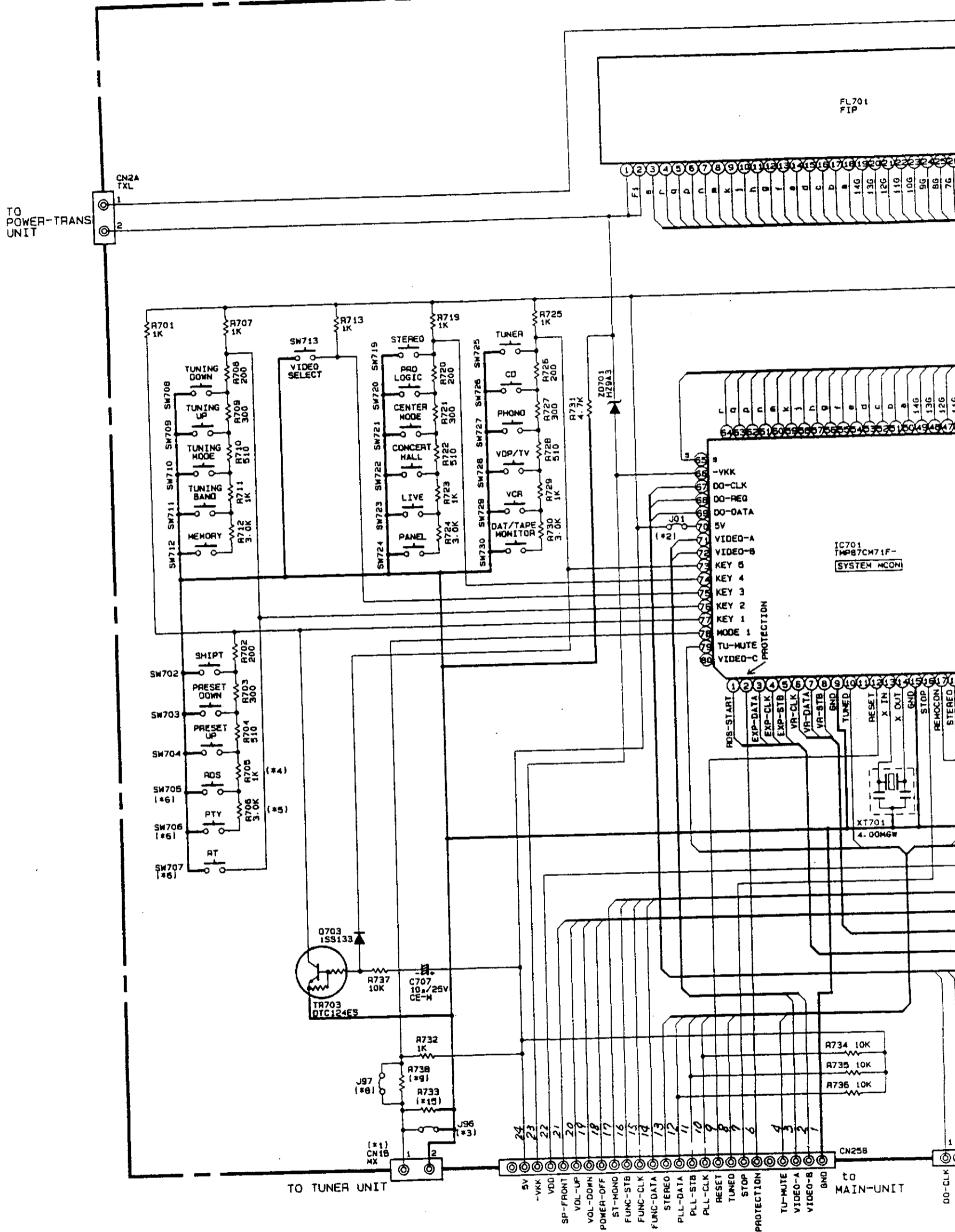
WARNING:
 DO NOT return the unit to the customer until the problem is located and
 corrected.

A
B
C
D
E
F
G
H

SCHEMATIC DIAGRAM (4/5)

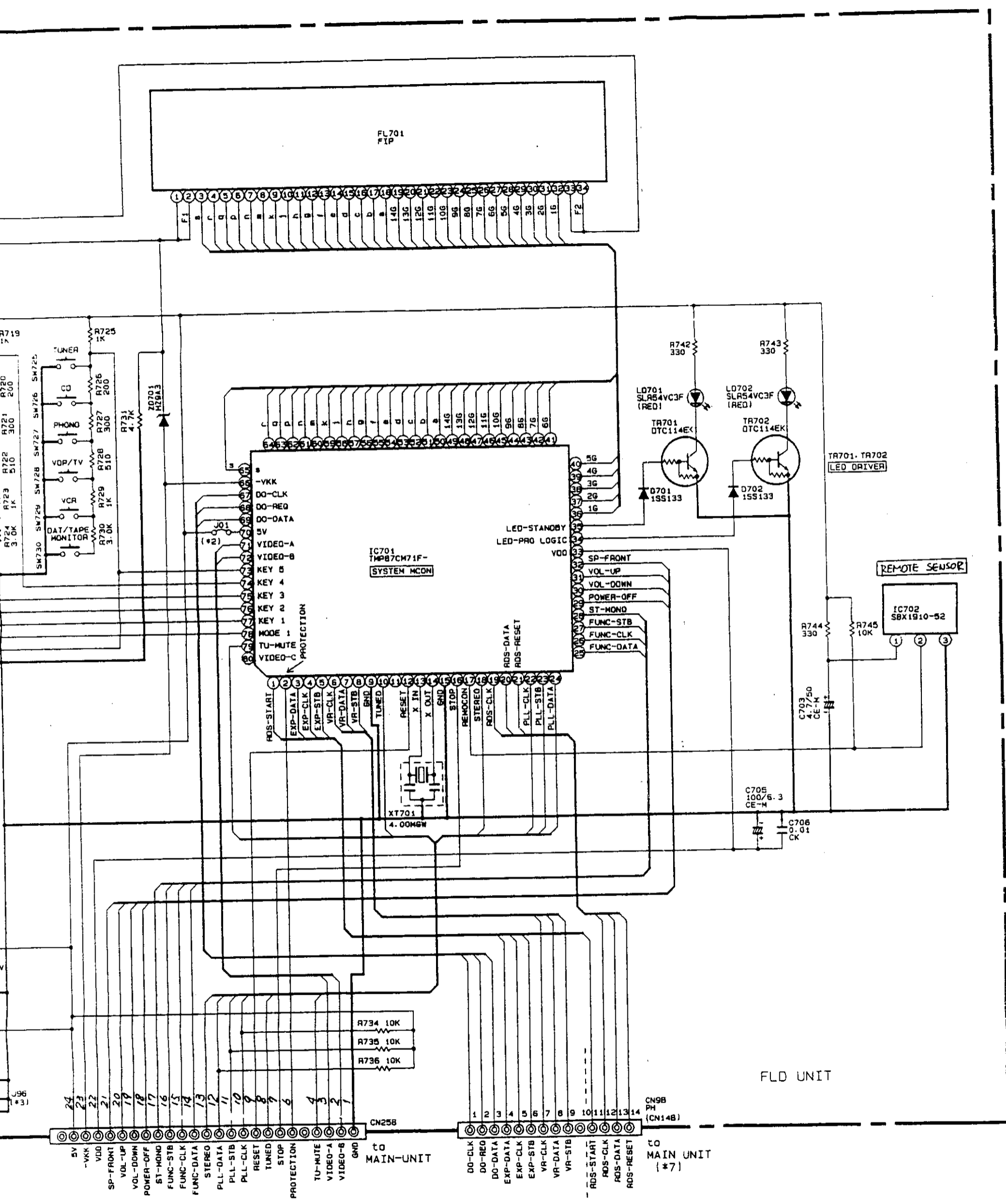
A
B
C
D
E
F
G
H

1 2 3 4 5 6



| | (#1) CN1B | (#2) ROS J01 | (#3) J95 | (#4) R705 | (#5) R706 | (#6) SW705 | (#7) CN9B | (#8) R733 | (#9) J97 R738 |
|-------|--------------|--------------------|-------------|--------------|--------------|---------------|--------------|--------------|---------------------|
| EU | | | | | | | | 2K | JUM |
| E3 | | | | | | | | | PER |
| E1 | ○ | | | | | | | 2.7K | 2K |
| E2/EK | | JUM | | 1K | 3K | ○ | CN14B | 4.7K | JUM |
| J | | | | | | | | | PER |
| E1-C | | | | | | | | 2.7K | 2K |

NOTICE
ALL RESISTANCE VALUES IN
ALL CAPACITANCE VALUES IN
EACH VOLTAGE AND CURRENT
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO
NOTICE.

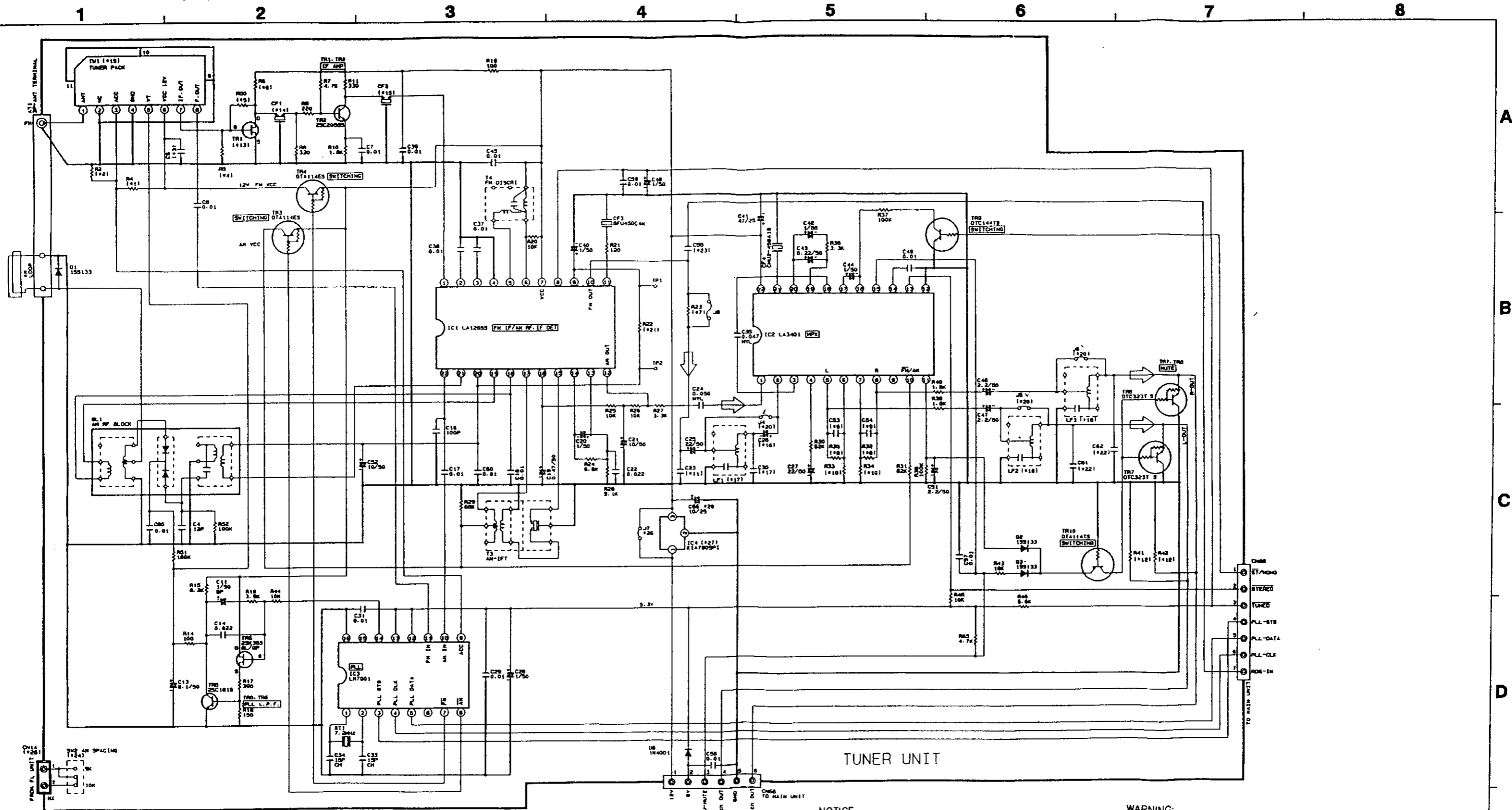


| | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| [Symbol] | [Symbol] | [Symbol] | [Symbol] | [Symbol] | [Symbol] | [Symbol] | [Symbol] | [Symbol] | [Symbol] |
| 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| CN1E | R705 | R706 | SW705 | CN9B | R733 | IC701 | J97 | R73B | |
| | | | | | 2K | | JUM PER | | |
| | | | | | 2.7K | | | 2K | |
| | JUM PER | 1K | 3K | CN14B | 4.7K | | JUM PER | | |
| | | | | | | | | | |
| | | | | | 2.7K | | | 2K | |

NOTICE
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WARNING:
 Parts marked with this symbol Δ have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.
CAUTION:
 Before returning the unit to the customer, make sure you make either (1) a
 leakage current check or (2) a line to chassis resistance check. If the leakage
 current exceeds 0.5 milliamps, or if the resistance from chassis to either side
 of the power cord is less than 240 koms, the unit is defective.
WARNING:
 DO NOT return the unit to the customer unit the problem is located and
 corrected.

SCHEMATIC DIAGRAM (5/5)



| | *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 |
|-----------|-----|------|------|-----|-----|--------|------|---------|---------|---------|-----|---------|--------|------------------|-------------------|-------|---------------|---------|-----|--------|--------|---------|--------|------|------|-----|-----|-----|
| | R1 | R2 | C8 | R9 | R50 | R6 | R23 | R32-R35 | C93-C94 | R33-R34 | C23 | R41-R42 | FR1 | CF1 | CF2 | C26 | LF1-C301560P1 | LF2-LF3 | FU1 | J4-S-6 | R22 | C61-C62 | C56 | SW2 | CH1A | J7 | IC4 | C58 |
| E2/EK | 10K | 5.6K | 0.01 | 390 | — | 330 | 1.2K | 150K | 330P | 180K | — | 4.7K | 25K161 | SFE10.7 MS2-A | SFE10.7 MS2-A | 22/50 | — | — | — | 4-TUNE | — | 39K | 0.0047 | 120P | — | — | — | — |
| E3/EU | — | — | 1K | 100 | — | JUMPER | 100K | 660P | 120K | 100P | — | 6.8K | — | SFE10.7 MA-B | SFE10.7 MS20-A | — | — | — | — | 3-TUNE | JUMPER | 18K | — | — | — | — | — | — |
| E4-E11-E1 | — | — | 1K | 100 | — | JUMPER | 100K | 660P | 120K | 100P | — | 6.8K | — | SFE10.7 MA-B | SFE10.7 MS20-A | — | — | — | — | 3-TUNE | JUMPER | 39K | — | — | — | — | — | — |
| E1-C | — | — | 1K | 100 | — | JUMPER | 100K | 660P | 120K | 100P | — | 6.8K | — | SFE10.7 MA-B | SFE10.7 MS20-A | — | — | — | — | 3-TUNE | JUMPER | 39K | — | — | — | — | — | — |
| J | — | — | 1K | 100 | — | JUMPER | 150K | 330P | 180K | 100P | — | 6.8K | — | SFE10.7 MA-B | SFE10.7 MS20-A | — | — | — | — | 3-TUNE | JUMPER | 18K | — | — | — | — | — | — |

NOTICE
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