

AUDIO-VIDEO STEREO RECEIVER

# KR-V7070

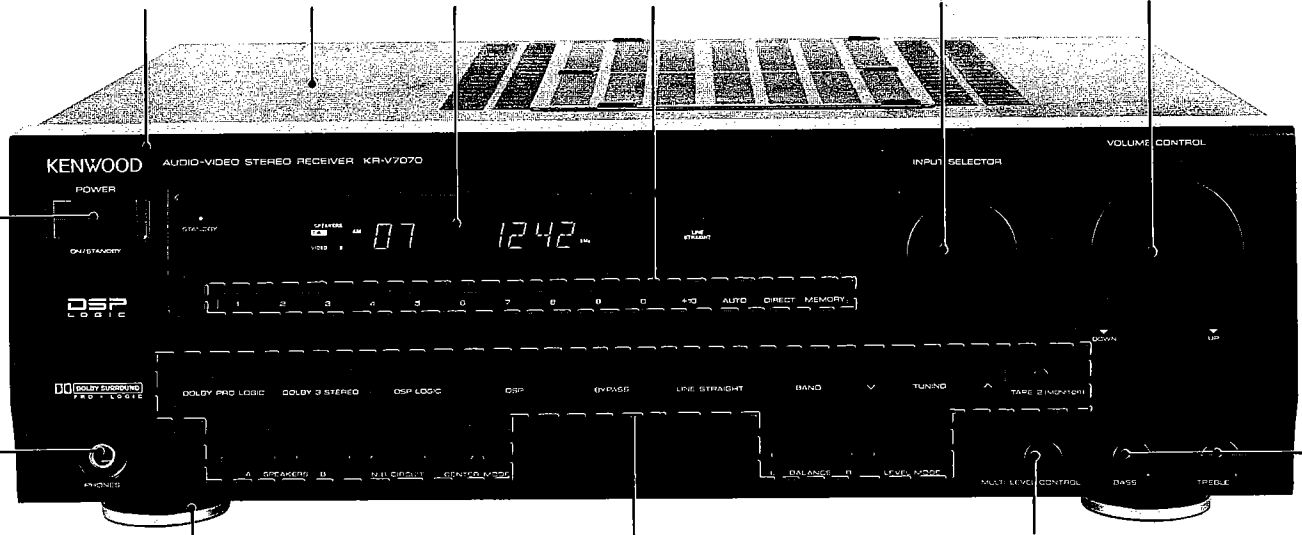
## SERVICE MANUAL

# KENWOOD

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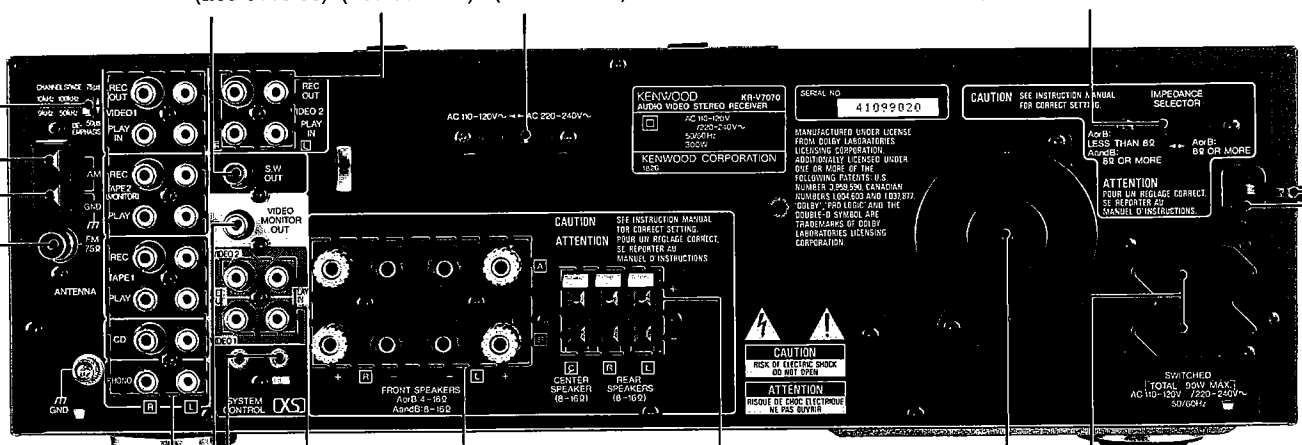
757

- Knob(POWER) (K29-6039-02)
- Panel \* (A60-)
- Metallic cabinet (A01-3192-01)
- Dressing plate \* (B03-)
- Knob(10KEY) (K29-6039-02)
- Knob(INPUT SELECTOR) (K29-6043-04)
- Knob(VOLUME CONTROL) (K29-5851-04)



- Phone jack (PHONES) (E11-0190-05)
- Foot (J02-1122-05)
- Knob (K29-6045-02)
- Knob(Multi-level control) (K29-6042-04)
- Knob(Bass/Treble) (K29-6041-04)

- Slide switch(CH SPACE) (S62-0034-05)
- Phono jack (SW out) (E63-0116-05)
- Phono jack (4P VIDEO 2) (E63-0046-15)
- Slide switch (AC VOLTAGE SEL) (S31-3010-05)
- Slide switch (IMPEDANCE SEL) (S31-2136-05)
- AC power cord \* (E30-)



- Lock terminal board (Antenna) (E20-0321-05)
- Phono jack (16P) (E63-0070-15)
- Phono jack (4P) VIDEO1 /VIDEO 2 (E63-0069-15)
- Miniature phone jack (2P SYSTEM CONTROL) (E11-0188-05)
- Phono jack (VIDEO MONITOR OUT) (E63-0130-05)
- Screw terminal board \* (8P FRONT SP) (E70-)
- Lock terminal board (6P) (CENTER SP/ REAR SP) (E70-0046-05)
- MOTOR ASSY (T49-0025-02)
- AC outlet\* (E03-)
- Power cord bushing (J42-0083-05)



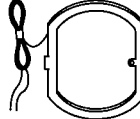
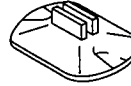


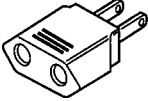
\* Refer to parts list on page 54.

# KR-V7070

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## ACCESSORIES

|                                                                                                                                                                                 |                                                                                                                               |                                                                                                                                          |                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| FM indoor antenna.....(1)<br>(T90-0801-05)<br>                                                 | Antenna adaptor.....(1)<br>(T90-0198-05)<br> | AM loop antenna assy.....(1)<br>(T90-0195-05)<br>      | Loop antenna stand<br>(J19-3645-05)<br> |
| Remote control unit.....(1)<br>(A70-1009-05):RC-R0704<br>BATTERY COVER:<br>(A09-0194-08)<br> | Batteries(R6/AA).....(2)<br>               | AC plug adaptor.....(1)<br>(E03-0115-05):M only<br> |                                                                                                                            |

## REMOTE CONTROL UNIT

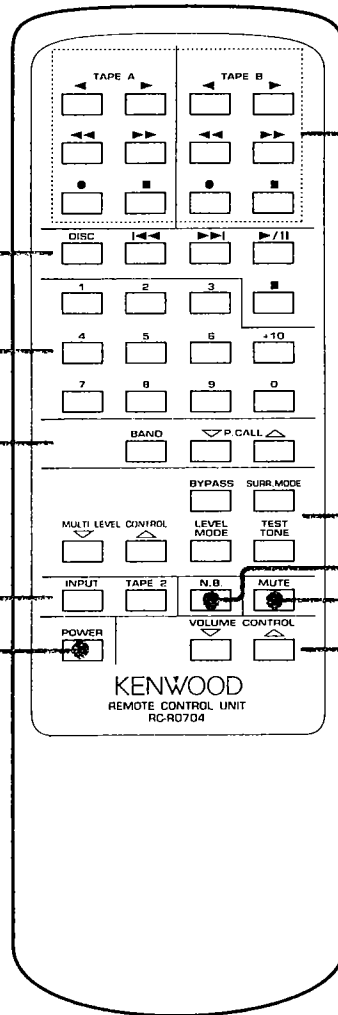
**CD player operation keys**  
**DISC:** This key is used as the disc selector of a multi-CD player. Each press selects a different disc.

**Numeric keys**  
 When the CD input is selected, function as the numeric keys of the CD player. When the TUNER input is selected, function as the numeric keys of the tuner.

**TUNER operation keys**  
**BAND:** Selects the broadcast band.  
**P.CALL:** Recalls preset stations.

**INPUT key**  
 Selects the input sources.  
**TAPE 2 (MONITOR) key**  
 Press to monitor the source being recorded.

**POWER key**



**Cassette Deck Operation keys**  
 Use to operate both TAPE A and TAPE B of a double cassette deck. To operate a single cassette deck, use only the TAPE B keys.

**SURROUND keys**  
**SURR. MODE:** Switches the surround modes.  
**TEST TONE:** Switches the test tone ON and OFF.  
**LEVEL MODE:** Selects the item whose presets are to be changed. The item changes each time you press the key.  
**MULTI LEVEL CONTROL:** Adjusts up or down the presets of the item selected with the LEVEL MODE key.  
**BYPASS:** Cancels the SURROUND mode.

**N.B. key**  
 Use for correct reproduction of natural bass sound.

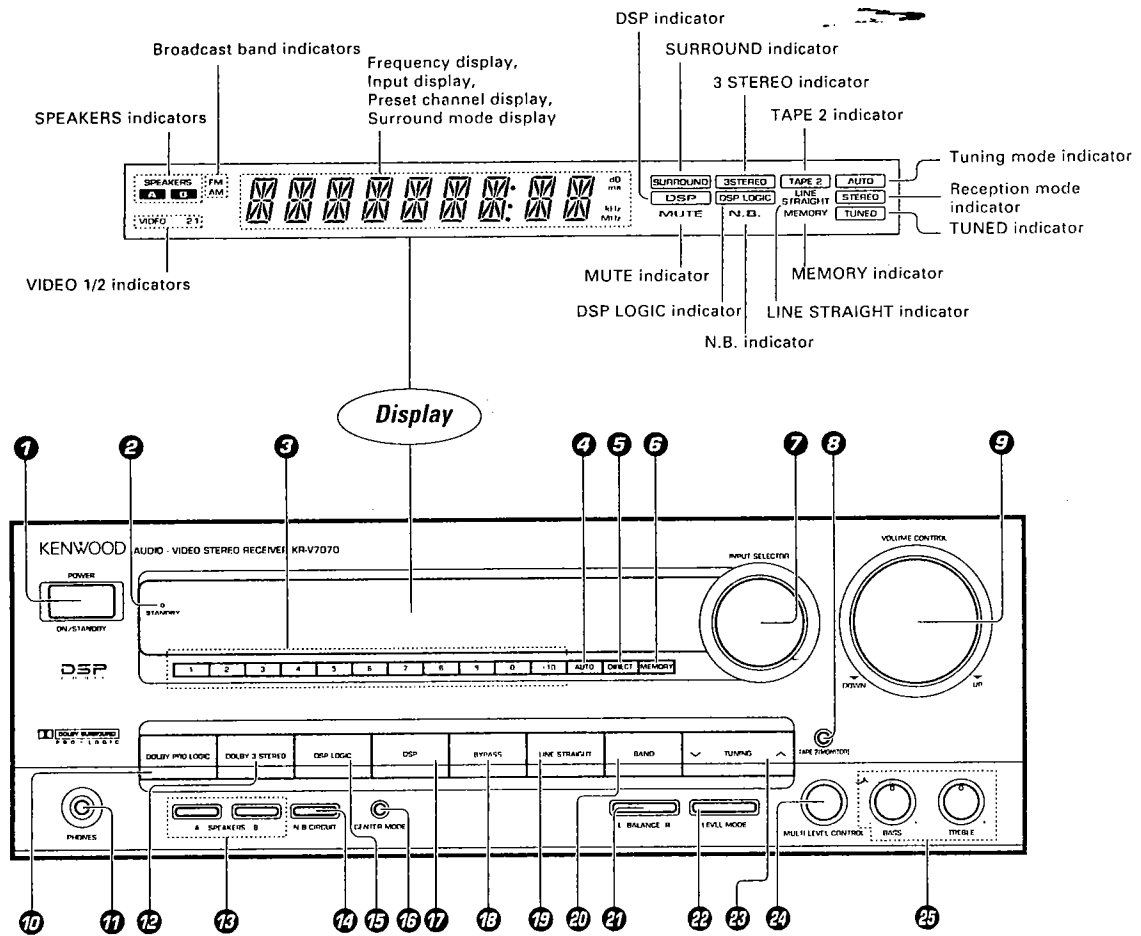
**MUTE key**  
 Mutes the sound temporarily.

**VOLUME CONTROL keys**  
 Adjust the listening volume.

Model: RC-R0704  
 Infrared ray system

# KR-V7070

## CONTROL UNIT



- ① **POWER key**
- ② **STANDBY indicator**
- ③ **Numeric keys**
- ④ **AUTO key**
- ⑤ **DIRECT key**  
Press for direct station tuning based on numerical input.
- ⑥ **MEMORY key**  
Press to preset a station in the memory.
- ⑦ **INPUT SELECTOR knob**  
Turn to select the input sources.
- ⑧ **TAPE 2 (MONITOR) key**
- ⑨ **VOLUME CONTROL knob**
- ⑩ **DOLBY PRO LOGIC key**
- ⑪ **PHONES jack**  
Used for headphone listening.
- ⑫ **DOLBY 3 STEREO key**
- ⑬ **SPEAKERS A/B keys**  
Press to select the A and/or B speaker systems.
- ⑭ **N. B. CIRCUIT key**  
Use for correct reproduction of natural bass sound.
- ⑮ **DSP LOGIC key**
- ⑯ **CENTER MODE key**  
Press to select the center mode of the DOLBY PRO LOGIC surround play.
- ⑰ **DSP key**
- ⑱ **BYPASS key**  
Press to cancel the surround modes.
- ⑲ **LINE STRAIGHT key**  
Press to reproduce the source with a higher sound quality.
- ⑳ **BAND key**  
Press to switch the broadcast band.
- ㉑ **BALANCE keys**  
Turn to adjust the volume balance between left and right.
- ㉒ **LEVEL MODE key**  
Selects the item whose presets are to be changed (in SURROUND MODE).
- ㉓ **TUNING keys**
- ㉔ **MULTI LEVEL CONTROL knob**  
Adjusts up or down the presets of the item selected with the LEVEL MODE key (in SURROUND MODE).
- ㉕ **Tone control knobs**

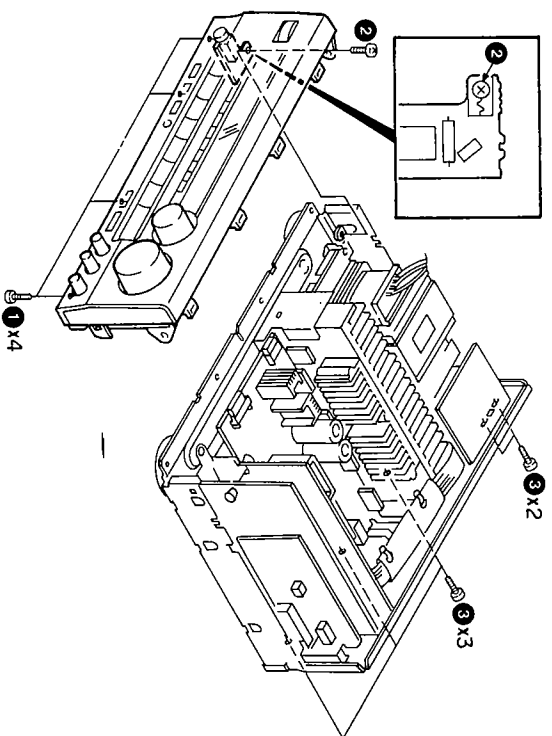
DISASSEMBLY FOR REPAIR

DISASSEMBLY FOR REPAIR

move the four front panel screws (1).

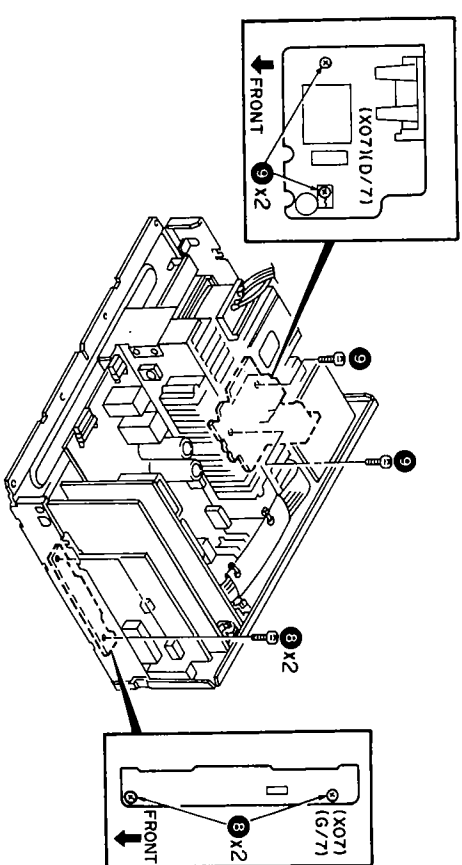
move the one phone jack PCB screw (2).

move the five rear panel screws (3).

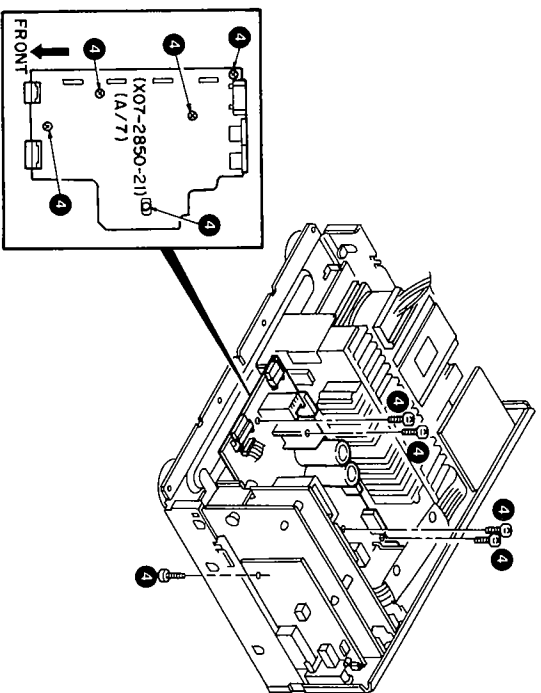


8. Remove the two (X07) (G/7) PCB screws (8).

9. Remove the two (X07) (D/7) PCB screws (9).



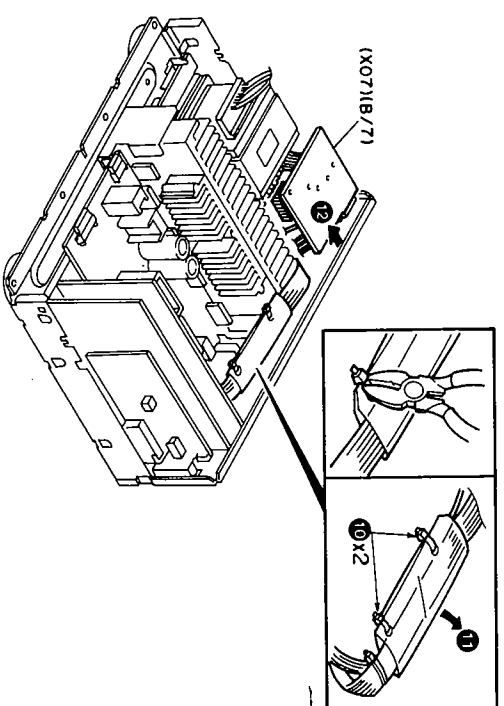
move the five main PCB screws (4).



10. Cut the two wire bands (10).

11. Remove the insulating sheet (11). [Y.M type]

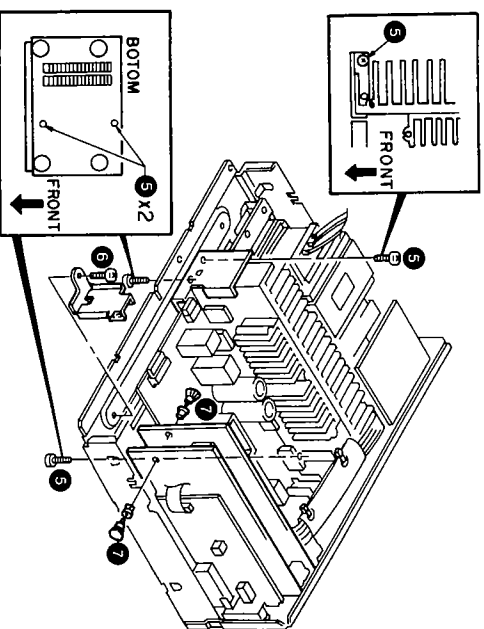
12. Remove the (X07) (B/7) PCB (12).



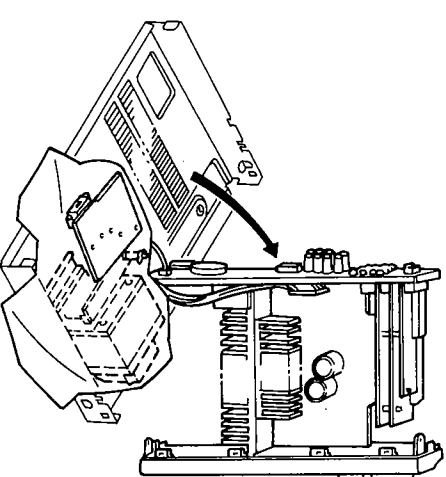
remove the three heat sink mounting hardware screws (5).

remove the one X09 BCB mounting hardware screw (6).

remove the two push rivets (7).

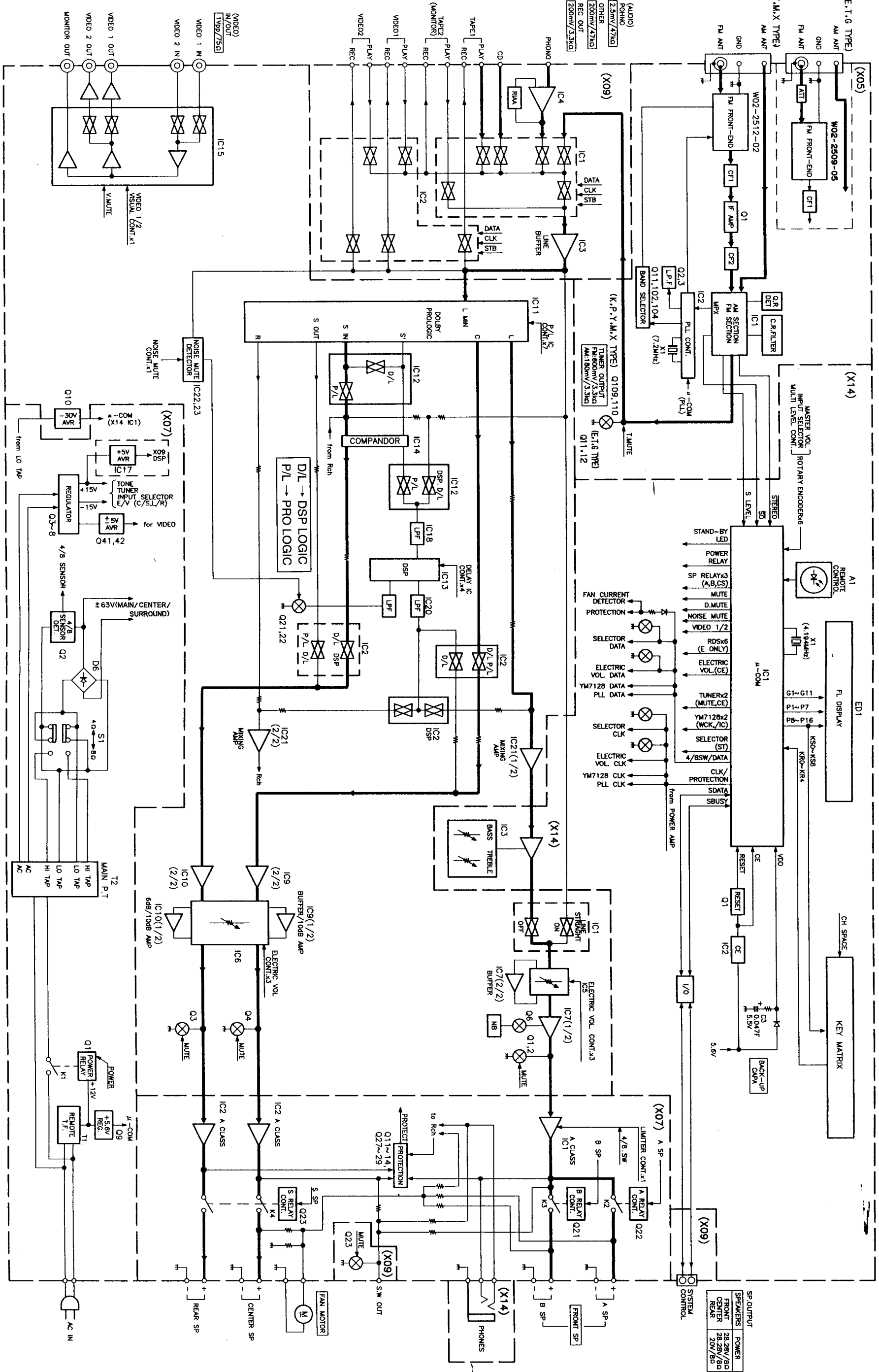


13. Stand the set with left side down ward. (Lay a cloth on top of the transformer.)



# BLOCK DIAGRAM

# KR-V7070 KR-V7070



| SP OUTPUT | POWER     |
|-----------|-----------|
| FRONT     | 28.28V/80 |
| CENTER    | 28.28V/80 |
| REAR      | 20V/80    |

## CIRCUIT DESCRIPTION

### 1. INITIAL STATE

#### (1) POWER OFF

#### (2) AMP-related block

- AUDIO SELECTOR TUNER
- VIDEO SELECTOR VIDEO 1
- SPEAKER A ON
- SPEAKER B OFF
- TAPE 2 MONITOR OFF
- LINE STRAIGHT OFF
- VISUAL FIX OFF
- N.B. CIRCUIT OFF
- BALANCE CENTER
- VOLUME -65 dB

#### (3) SURROUND-related block

- MODE BYPASS (OFF)
- CENTER LEVEL 0 dB
- REAR LEVEL 0 dB
- CENTER MODE NORMAL
- DSP MODE ARENA
- DSP LOGIC MODE LARGE
- EFFECT LEVEL:

##### KR-V8070

- DSP ARENA -2 dB
- JAZZ CLUB -2 dB
- STADIUM +2 dB
- DSP LOGIC 0 dB

##### KR-V7070

- DSP 0 dB
- DSP LOGIC 0 dB

#### • DELAY TIME

##### KR-V8070

- DSP ARENA 10 msec
- JAZZ CLUB 20 msec
- STADIUM 30 msec

- DSP LOGIC LARGE 20 msec
- SMALL 30 msec

- PRO LOGIC 20 msec

##### KR-V7070

- DSP 40 msec
- DSP LOGIC 40 msec
- PRO LOGIC 20 msec

#### (4) Tune-related block

- BAND FM
- FREQUENCY Lower-limit value of FM (87.50 MHz)
- Tuning MODE AUTO TUNING (AUTO STEREO)
- P. CH DISPLAY -- CH
- Preset memory

Table 1-1 Initial Data List of Tuner

| Channel | BAND | K1 TYPE   | BAND | K2 TYPE   | BAND | E TYPE    |
|---------|------|-----------|------|-----------|------|-----------|
| 01ch    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 02ch    | FM   | 98.00MHz  | FM   | 98.00MHz  | FM   | 98.00MHz  |
| 03ch    | FM   | 108.00MHz | FM   | 108.00MHz | FM   | 108.00MHz |
| 04ch    | AM   | 630kHz    | AM   | 630kHz    | AM   | 630kHz    |
| 05ch    | AM   | 990kHz    | AM   | 990kHz    | AM   | 990kHz    |
| 06ch    | AM   | 1440kHz   | AM   | 1440kHz   | AM   | 1440kHz   |
| 07ch    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 08ch    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 09ch    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 10ch    | FM   | 89.10MHz  | FM   | 89.10MHz  | FM   | 89.10MHz  |
| 11ch    | FM   | 88.00MHz  | FM   | 88.00MHz  | FM   | 88.00MHz  |
| 12ch    | FM   | 90.00MHz  | FM   | 90.00MHz  | FM   | 90.00MHz  |
| 13ch    | FM   | 97.50MHz  | FM   | 97.50MHz  | FM   | 97.50MHz  |
| 14ch    | FM   | 98.50MHz  | FM   | 98.50MHz  | FM   | 98.50MHz  |
| 15ch    | FM   | 106.00MHz | FM   | 106.00MHz | FM   | 106.00MHz |
| 16ch    | AM   | 530kHz    | AM   | 530kHz    | AM   | 531kHz    |
| 17ch    | AM   | 1000kHz   | AM   | 1000kHz   | AM   | 999kHz    |
| 18ch    | AM   | 1700kHz   | AM   | 1610kHz   | AM   | 1602kHz   |
| 19ch    | FM   | 96.30MHz  | FM   | 96.30MHz  | FM   | 96.30MHz  |
| 20ch    | FM   | 107.00MHz | FM   | 107.00MHz | FM   | 107.00MHz |
| 21CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 22CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 23CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 24CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 25CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 26CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 27CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 28CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 29CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 30CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 31CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 32CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 33CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 34CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 35CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 36CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 37CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 38CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 39CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |
| 40CH    | FM   | 87.50MHz  | FM   | 87.50MHz  | FM   | 87.50MHz  |

## CIRCUIT DESCRIPTION

### 2. BACKUP

This function holds the current state of the unit even if the AC power of the AV receiver is turned OFF.

#### (1) Operation outline

The backup state set command signal (CE) of a microcomputer is set low when the AC power is turned OFF. The microcomputer detects the signal and enters the stop state.

The microcomputer is reset when the AC power is turned ON. The data for backup state confirmation is checked by reset processing.

The microcomputer is initialized when the data was destroyed. If it is not destroyed, the microcomputer is started in the backup state.

- The data (16-bit) for backup state confirmation is written in a RAM area.
- The microcomputer is set to the STOP mode so as to save the power consumption.
- A backup state set command signal is detected by a timer interrupt of 1 msec.
- The backup guarantee period is set in a circuit.

#### (2) Backup state setting

- The data (16-bit)(01011010 01101001b = 5A69h) for backup state confirmation is written in a RAM area.
- Setting the special function port  
Set the input/output port of a serial interface to the serial interface operation stop mode. Set the FIP controller to the display OFF mode.
- Setting the microcomputer's internal special function  
Set all the interrupt enable flags to the disable state, respectively. Set the microcomputer to the STOP mode and stop the system clock oscillation of the microcomputer.

#### (3) Contents of backup data to be held

- POWER ON/OFF state
- VOLUME LEVEL data
- BALANCE LEVEL data
- N.B. ON/OFF
- SELECTOR MODE data
- SURROUND MODE data
- DELAY TIME data (PRO LOGIC, DSP, and DSP LOGIC)
- EFFECT LEVEL data (DSP and DSP LOGIC)
- CENTER LEVEL data (DSP LOGIC, PRO LOGIC, and 3 STEREO)
- REAR LEVEL data (DSP, DSP LOGIC, and PRO LOGIC)

- TUNER RECEIVING ~~STATION~~ FREQUENCY data
- TUNER PRESET MEMORY data
- TUNER AUTO/MANUAL mode

### 3. PROTECTION

The protection state is entered when abnormality is detected during the POWER-ON sequence.

- The power and speaker are turned OFF when the abnormal state is detected during the POWER-ON sequence.
- The STANDBY LED blinks every 500 msec.
- The fluorescent display indicator goes OFF.



## CIRCUIT DESCRIPTION

### 4. DESTINATION AND MODEL LIST

Table 4-1 Destination and Model List

| MODEL       |            | KR-V8070 | KR-V7070 |
|-------------|------------|----------|----------|
| DESTINATION |            | KPMXY    | KPMXYET  |
| FUNCTION    |            |          |          |
| AMP         | DSP        | ○○○○○    | ○○○○○○○  |
|             | VISUAL FIX | ○○○○○    | ×××××××  |
| TUNER       | K1         | ×○×××    | ×○×××××  |
|             | K2         | ○○○×○    | ○○○×○××  |
|             | E1         | ××○○○    | ××○○○○○  |
|             | E3 (RDS)   | ×××××    | ×××××○○  |

○ :YES  
× :NO

### 5. DESTINATION LIST OF TUNER

Table 5-1 Destination List of Tuner

| Destination | BAND | Receive frequency range | channel space | 1F      | PLL reference frequency | Destination DSW(X14-) |        |      |
|-------------|------|-------------------------|---------------|---------|-------------------------|-----------------------|--------|------|
|             |      |                         |               |         |                         | DSW2                  | DSW1   | DSW0 |
|             |      |                         |               |         |                         | P25                   | P24,28 | P23  |
| K1          | FM   | 87.5MHz~108.0MHz        | 100kHz        | 10.7MHz | 50kHz                   | 0                     | 0      | 0    |
|             | AM   | 530kHz~1700kHz          | 10kHz         | 450kHz  | 10kHz                   |                       |        |      |
| K2          | FM   | 87.5MHz~108.0MHz        | 100kHz        | 10.7MHz | 50kHz                   | *1                    |        |      |
|             | AM   | 530kHz~1610kHz          | 10kHz         | 450kHz  | 10kHz                   |                       |        |      |
| E1          | FM   | 87.5MHz~108.0MHz        | 50kHz         | 10.7MHz | 50kHz                   | 0                     | 1      | 1    |
|             | AM   | 531kHz~1602kHz          | 9kHz          | 450kHz  | 10kHz                   |                       |        |      |
| E3          | FM   | 87.5MHz~108.0MHz        | 50kHz         | 10.7MHz | 50kHz                   | 1                     | 0      | 1    |
|             | AM   | 531kHz~1602kHz          | 9kHz          | 450kHz  | 9kHz                    |                       |        |      |

\*1 Set as K2 for except when the data for destination description is K1, E1, and E3.

#### ※ ATTENTION

A SUB WOOFER output signal is output irrespective of SP selector switch (ASP and BSP) ON/OFF setting

The RDS PTY AF search always corresponds to a span search of 100kHz. Therefore, a span search of 50 kHz cannot be performed.

## CIRCUIT DESCRIPTION

### 6. TEST MODE

#### 6-1. TEST MODE OF MAIN UNIT

##### (1) Setting the test mode

The main unit is put into the test mode when the AC power is turned ON while pressing the "TUNING DOWN" key. The following state is obtained when the test mode of the main unit is set.

- The power is turned ON automatically.
- All the fluorescent display indicators and LEDs light. (The all-illuminated state is cleared by pressing any main unit key.)
- The backup state except when the power is turned ON and OFF is initialized.

##### (2) Canceling the test mode

Turn OFF the AC power.

##### (3) Tuner functions

- Preset channel call function
  - 1) Calls channels 1 to 9 (keys 1 to 9) and channel 10 (key 0) when the 10 key is not operated.
  - 2) Calls channels 11 to 19 (keys 1 to 9) and channel 20 (key 0) when the +10 key is operated once.
  - 3) Calls channels 21 to 29 (keys 1 to 9) and channel 30 (key 0) when the +10 key is operated two times and calls channels 31 to 39 (keys 1 to 9) and channel 40 (key 0) when the +10 key is operated three times.
  - 4) Shifts to the operation obtained when the +10 key is not operated if it is operated four times.

- All turn-off function

Turns OFF and ON all the LEDs cyclically using the "MULTI MODE" key. This function is executed only when the SELECTOR mode is set to TUNER. In states other than TUNER, the original function of this key is executed.

- Mute signal output

No Selector MUTE (MUTE 1) control regulation is done whatever.

##### (4) AMP function

The original function of each key is executed when the SELECTOR mode is set to TUNER. The test mode operation is not performed in this case.

- FRONT VOLUME setting

Sets the maximum value (0 dB) of the front volume using the "AUTO" key.

Sets the minimum value ( $-\infty$  dB) of the front volume using the "TAPE2" key.

- BALANCE L/R setting

Sets the most left edge of the balance using the "BALANCE L" key.

Sets the center of the balance using the "MEMORY" key.

Sets the most right edge of the balance using the "BALANCE R" key.

- TEST TONE operation

Uses the "DIRECT" key instead of the "TEST TONE" key.

- MUTE signal output

Sets the analog muting to OFF at all times. No control is performed in this case. Sets the analog muting to ON in the same way as during normal operation when the front volume is set to the minimum value ( $-\infty$  dB).

- Impedance 4/8 selection

No impedance 4/8 display appears in the normal state. Therefore, the SPEAKERS lamp of the fluorescent display indicator is turned ON and OFF in the test mode.

The SPEAKERS lamp is turned on when the impedance is 4.

The SPEAKERS lamp is turned off when the impedance is 8.

#### 6-2. SERIAL TEST MODE

##### (1) Setting the serial test mode

The unit is put into the serial test mode when a serial code "TEST ON" is input during the power-on sequence.

In the 8-bit serial test mode, serial code 71H is input.

In the 16-bit serial test mode, serial code C27FH is input.

- In the serial test mode, all remote control keys and ordinary serial codes are disabled. Only the panel keys perform the same operation as usually.

##### (2) Canceling the serial test mode

- The serial test mode is canceled to return to the ordinary mode by inputting a "TEST OFF" code. After the ordinary mode was returned, the serial mode is returned to the state before the test mode is entered. The backup operation is not initialized.
- The serial test mode is also canceled when the AC power is turned OFF.

##### (3) Cautions

- The serial test code is prescribed as a 16-bit code only.
- The operations below are inhibited in the serial test mode.

Manual tuning up/down operation

Up/down selection in PTY selection mode

AF search in ATT ON state

The operations mentioned above cannot be guaranteed when they are performed in the serial test mode.

- An identical code is output when the serial test mode code is input.
- A TUNED ON/TUNED OFF code is only output.

## CIRCUIT DESCRIPTION

(4) SERIAL TEST CODE LIST

Table 6-1 Serial Test Code List

| Serial test code | Description                                           | Serial test code | Description                                |
|------------------|-------------------------------------------------------|------------------|--------------------------------------------|
| C200H            | Turn OFF the power.                                   | C298H            | Perform the 8 key operation.               |
| C201H            | Turn ON the power.                                    | C299H            | Perform the 9 key operation.               |
| C202H            | Set the selector to PHONO.                            | C29AH            | Perform the +10 key operation.             |
| C203H            | Set the selector to CD.                               | C29BH            | Set the band FM.                           |
| C204H            | Set the selector to TUNER.                            | C29CH            | Set the band AM.                           |
| C205H            | Set the selector to TAPE1.                            | C29EH            | Perform the tuning DOWN operation.         |
| C209H            | Set the selector to VIDEO1.                           | C29FH            | Perform the tuning UP operation.           |
| C20AH            | Set the selector to VIDEO2.                           | C2A0H            | Set the TUNER MEMORY mode.                 |
| C20BH            | Set the selector to VIDEO3.                           | C302H            | Set the surround level to BYPASS.          |
| C20CH            | Set the selector to VIDEO4.                           | C303H            | Set the surround level to PRO LOGIC.       |
| C20DH            | Turn ON the analog muting.                            | C304H            | Set the surround level to 3 STEREO.        |
| C20FH            | Turn OFF the analog muting.                           | C309H            | Set the CENTER mode to NORMAL.             |
| C216H            | Set the line straight to OFF.                         | C30AH            | Set the CENTER mode to WIDE BAND.          |
| C217H            | Set the line straight to ON.                          | C30BH            | Set the CENTER mode to PHANTOM.            |
| C21EH            | Set speaker A to OFF.                                 | C30CH            | Set the TEST TONE mode to OFF.             |
| C21FH            | Set speaker A to ON.                                  | C30DH            | Set the TEST TONE mode to ON.              |
| C220H            | Set speaker B to OFF.                                 | C312H            | Set the center level to the minimum value. |
| C221H            | Set speaker B to ON.                                  | C313H            | Set the center level to the middle value.  |
| C228H            | Set the TAPE2 monitor to OFF.                         | C314H            | Set the center level to the maximum value. |
| C229H            | Set the TAPE2 monitor to ON.                          | C315H            | Set the rear level to the minimum value.   |
| C23FH            | Set the NB circuit to ON.                             | C316H            | Set the rear level to the middle value.    |
| C240H            | Set the NB circuit to OFF.                            | C317H            | Set the rear level to the maximum value.   |
| C247H            | Set the balance channel L to the maximum value.       | C318H            | Set the delay time to the minimum value.   |
| C248H            | Set the balance channels L and R to the center value. | C319H            | Set the delay time to the middle value.    |
| C249H            | Set the balance channel R to the maximum value.       | C31AH            | Set the delay time to the maximum value.   |
| C279H            | Set all turn-off mode of FLs and LEDs to OFF.         | C31BH            | Set the effect level to the minimum value. |
| C27AH            | Set all turn-off mode of FLs and LEDs to ON.          | C31CH            | Set the effect level to the middle value.  |
| C27BH            | Set all turn-on mode of FLs and LEDs to OFF.          | C31DH            | Set the effect level to the maximum value. |
| C27CH            | Set all turn-on mode of FLs and LEDs to ON.           | C33AH            | Set the DSP mode to ARENA.                 |
| C27DH            | Initializes the system                                | C33BH            | Set the DSP mode to JAZZ CLUB.             |
| C27EH            | Set the serial test mode to OFF.                      | C33CH            | Set the DSP mode to STADIUM.               |
| C27FH            | Set the serial test mode to ON (71H in 8-bit mode)    | C34CH            | Set the DSP LOGIC mode to LARGE.           |
| C282H            | Set the tuner muting to OFF.                          | C34DH            | Set the DSP LOGIC mode to SMALL.           |
| C283H            | Set the tuner muting to ON.                           | C400H            | Set the volume value to 0 dB.              |
| C284H            | Set the TUNER AUTO STEREO mode.                       | C401H            | Set the volume value to -1 dB.             |
| C285H            | Set TUNER MONAURAL mode.                              | C402H            | Set the volume value to -2 dB.             |
| C286H            | TUNED OFF code                                        | C403H            | Set the volume value to -3 dB.             |
| C287H            | TUNED ON code                                         | C404H            | Set the volume value to -4 dB.             |
| C28FH            | Set the TUNER DIRECT mode.                            | C405H            | Set the volume value to -5 dB.             |
| C290H            | Perform the 0 key operation.                          | C406H            | Set the volume value to -6 dB.             |
| C291H            | Perform the 1 key operation.                          | C407H            | Set the volume value to -7 dB.             |
| C292H            | Perform the 2 key operation.                          | C408H            | Set the volume value to -8 dB.             |
| C293H            | Perform the 3 key operation.                          | C409H            | Set the volume value to -9 dB.             |
| C294H            | Perform the 4 key operation.                          | C40AH            | Set the volume value to -10 dB.            |

## CIRCUIT DESCRIPTION

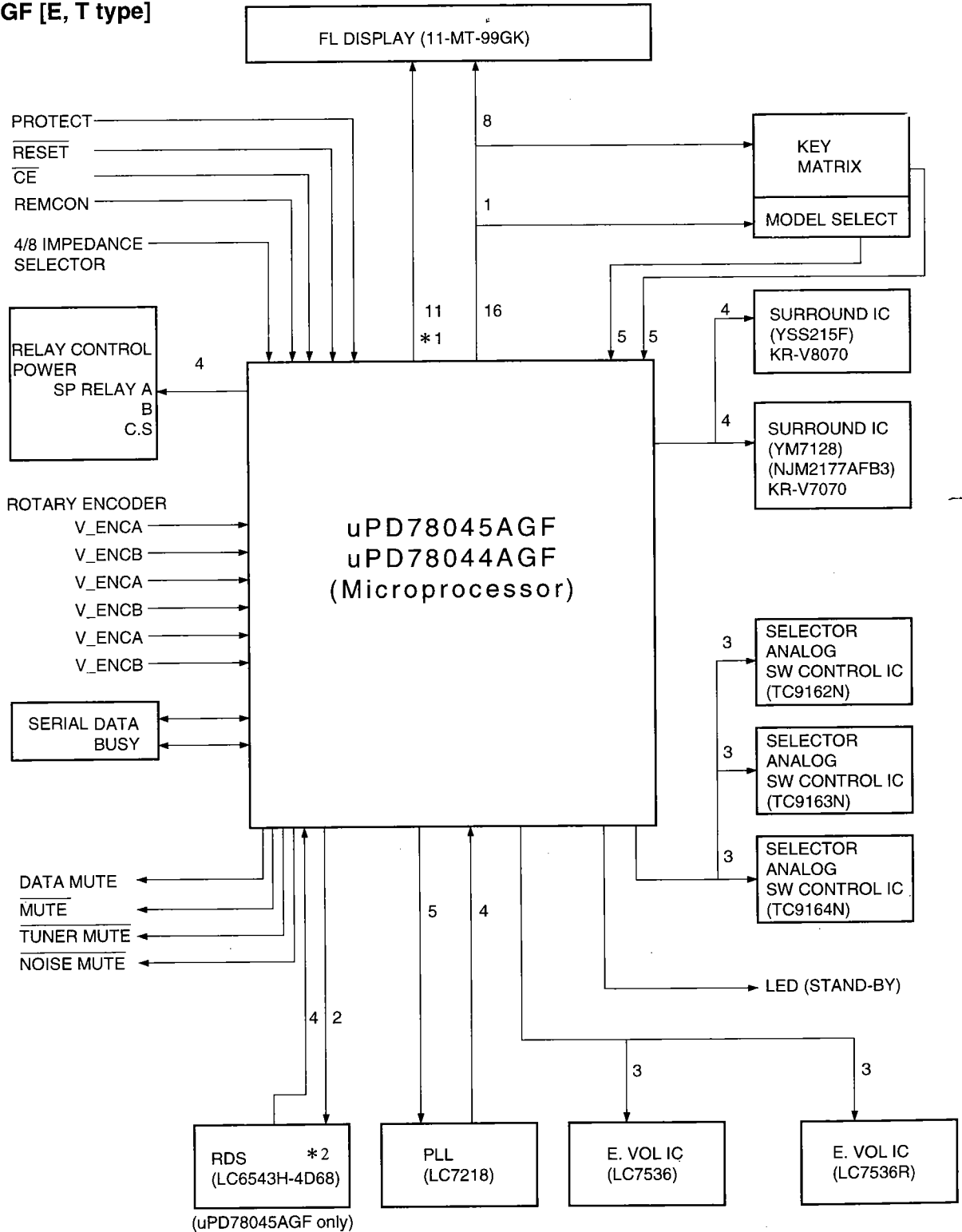
| Serial test code | Description                     | Serial test code | Description                           |
|------------------|---------------------------------|------------------|---------------------------------------|
| C295H            | Perform the 5 key operation.    | C40BH            | Set the volume value to -11 dB.       |
| C296H            | Perform the 6 key operation.    | C40CH            | Set the volume value to -12 dB.       |
| C297H            | Perform the 7 key operation.    | C40DH            | Set the volume value to -13 dB.       |
| C40EH            | Set the volume value to -14 dB. | C42BH            | Set the volume value to -43 dB.       |
| C40FH            | Set the volume value to -15 dB. | C42CH            | Set the volume value to -44 dB.       |
| C410H            | Set the volume value to -16 dB. | C42DH            | Set the volume value to -45 dB.       |
| C411H            | Set the volume value to -17 dB. | C42EH            | Set the volume value to -46 dB.       |
| C412H            | Set the volume value to -18 dB. | C42FH            | Set the volume value to -47 dB.       |
| C413H            | Set the volume value to -19 dB. | C430H            | Set the volume value to -48 dB.       |
| C414H            | Set the volume value to -20 dB. | C431H            | Set the volume value to -49 dB.       |
| C415H            | Set the volume value to -21 dB. | C432H            | Set the volume value to -50 dB.       |
| C416H            | Set the volume value to -22 dB. | C433H            | Set the volume value to -51 dB.       |
| C417H            | Set the volume value to -23 dB. | C434H            | Set the volume value to -52 dB.       |
| C418H            | Set the volume value to -24 dB. | C435H            | Set the volume value to -53 dB.       |
| C419H            | Set the volume value to -25 dB. | C436H            | Set the volume value to -54 dB.       |
| C41AH            | Set the volume value to -26 dB. | C437H            | Set the volume value to -55 dB.       |
| C41BH            | Set the volume value to -27 dB. | C438H            | Set the volume value to -56 dB.       |
| C41CH            | Set the volume value to -28 dB. | C439H            | Set the volume value to -57 dB.       |
| C41DH            | Set the volume value to -29 dB. | C43AH            | Set the volume value to -58 dB.       |
| C41EH            | Set the volume value to -30 dB. | C43BH            | Set the volume value to -59 dB.       |
| C41FH            | Set the volume value to -31 dB. | C43CH            | Set the volume value to -60 dB.       |
| C420H            | Set the volume value to -32 dB. | C43DH            | Set the volume value to -61 dB.       |
| C421H            | Set the volume value to -33 dB. | C43EH            | Set the volume value to -62 dB.       |
| C422H            | Set the volume value to -34 dB. | C43FH            | Set the volume value to -63 dB.       |
| C423H            | Set the volume value to -35 dB. | C440H            | Set the volume value to -64 dB.       |
| C424H            | Set the volume value to -36 dB. | C441H            | Set the volume value to -65 dB.       |
| C425H            | Set the volume value to -37 dB. | C442H            | Set the volume value to -66 dB.       |
| C426H            | Set the volume value to -38 dB. | C443H            | Set the volume value to -67 dB.       |
| C427H            | Set the volume value to -39 dB. | C444H            | Set the volume value to -68 dB.       |
| C428H            | Set the volume value to -40 dB. | C445H            | Set the volume value to -69 dB.       |
| C429H            | Set the volume value to -41 dB. | C446H            | Set the volume value to $-\infty$ dB. |
| C42AH            | Set the volume value to -42 dB. |                  |                                       |

## CIRCUIT DESCRIPTION

7. Micro processor:  $\mu$  PD 78044AGF (X14:IC1)  
 $\mu$  PD 78045AGF

### Block diagram

$\mu$  PD 78044AGF [K, P, M, X, Y type]  
 $\mu$  PD 78045AGF [E, T type]

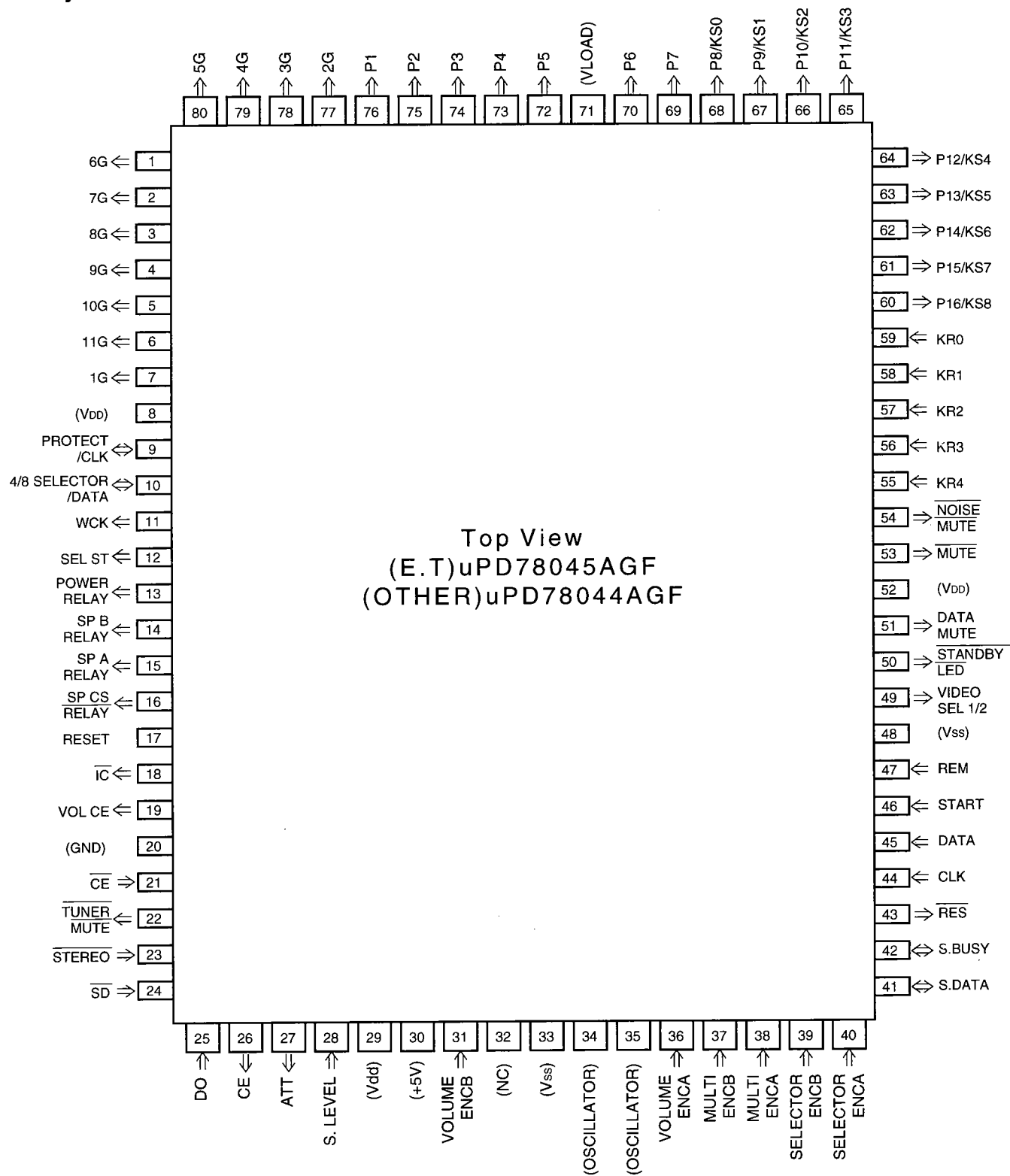


\* 1 GRID to FL  
 \* 2 E3 Type (RDS feature installed) used RDS sync microprocessor (LC6543H-4D68).

# KR-V7070

## CIRCUIT DESCRIPTION

### Port layout



## CIRCUIT DESCRIPTION

## 7.1 PIN FUNCTION

For pin numbers marked by an asterisk (\*) the upper row is  $\mu$ PD78045AGF and the lower ( $\square$ ) row is  $\mu$ PD78044AGF.

| Pin NO. | Pin name      | Port I/O | Name            | Description                                                  | Active           |
|---------|---------------|----------|-----------------|--------------------------------------------------------------|------------------|
| 1       | P94/FIP6      | O        | 6G              | FL grid 6                                                    | ————             |
| 2       | P93/FIP5      | O        | 7G              | FL grid 7                                                    | ————             |
| 3       | P92/FIP4      | O        | 8G              | FL grid 8                                                    | ————             |
| 4       | P91/FIP3      | O        | 9G              | FL grid 9                                                    | ————             |
| 5       | P90/FIP2      | O        | 10G             | FL grid 10                                                   | ————             |
| 6       | P81/FIP1      | O        | 11G             | FL grid 11                                                   | ————             |
| 7       | P80FIP0       | O        | 1G              | FL grid 1                                                    | ————             |
| 8       | Vcc           | ——       | VDD             | Micro processor power supply                                 | ————             |
| 9       | P27/ SCK0     | I/O      | PROTECT/CLK     | IN:Protection detection<br>OUT:Control IC clock              | L:ON             |
| 10      | P26/S00/SB1   | I/O      | 4/8 SELECT/DATA | IN:Speaker impedance selector<br>OUT:Control IC data         | H:8 L:4          |
| 11      | P25/SI0/SB0   | O        | WCK             | DSP IC address/data discrimination signal<br>(YSS215/YM7218) | H:ADDRESS L:DATA |
| 12      | P24/BUSY      | O        | SEL ST.         | Selector IC data definition signal                           | H:ADDRESS L:DATA |
| 13      | P23/STB       | O        | POWER RELAY     | Power relay control                                          | H:ON             |
| 14      | P22/ SCK1     | O        | SP B RELAY      | Speaker B relay control                                      | H:ON             |
| 15      | P21/S01       | O        | SP A RELAY      | Speaker A relay control                                      | H:ON             |
| 16      | P20/SI1       | O        | SP CS RELAY     | Surround speaker relay control                               | H:ON             |
| 17      | RESET         | I        | RESET           | Microprocesser reset                                         | L:RESET ON       |
| 18      | P74           | O        | IC              | DSP IC reset control (YSS215/YM7218)                         | L:RESET ON       |
| 19      | P73           | O        | VOL CE          | Volume IC address/data CE                                    | H:ADDRESS L:DATA |
| 20      | A Vss         | ——       | GND             | A/D power supply (GND)                                       | ————             |
| 21      | P17/AN17      | I        | CE              | Back up detection                                            | L:BACK UP ON     |
| 22      | P16/AN16      | O        | TUNER MUTE      | Tuner mute control                                           | L:MUTE ON        |
| 23      | P15/AN15      | I        | STEREO          | Stereo signal detection                                      | L:STEREO ON      |
| 24      | P14/AN14      | I        | SD              | Synchronized signal detection                                | ————             |
| 25      | P13/AN13      | I        | DO              | IF count data (PLL DO)                                       | ————             |
| 26      | P12/AN12      | O        | CE (PLL)        | PLL Chip enable control                                      | H:OH             |
| * 27    | P11/AN11      | O        | ATT (RDS)       | Attenuate control                                            | H:ON             |
| * 28    | P10/AN10      | I        | S.LEVEL (RDS)   | Signal level                                                 | H:ON             |
| 29      | A Vcc         | ——       | VDD             | A/D power supply                                             | ————             |
| 30      | A Vref        | ——       | +5V             | A/D reference voltage                                        | ————             |
| 31      | P04/XT1       | I        | VOLUME ENCB     | Volume encoder input B                                       | L:ON             |
| 32      | XT2           | ——       | NC              |                                                              | ————             |
| 33      | Vss           | ——       | Vss             | Microprocesser power supply                                  | ————             |
| 34      | X1            | ——       | OSC             | 4.19MHz oscillator                                           | ————             |
| 35      | X2            | ——       | OSC             | 4.19MHz oscillator                                           | ————             |
| 36      | P37           | I        | VOLUME ENCA     | Volume encoder input A                                       | L:ON             |
| 37      | P36/BUZ       | I        | MULTI ENCB      | Multi level encoder input B                                  | L:ON             |
| 38      | P35/PCL       | I        | MULTI ENCA      | Multi level encoder input A                                  | L:ON             |
| 39      | P34/T12       | I        | SELECTOR ENCB   | Selector encoder input B                                     | L:ON             |
| 40      | P33/T11       | I        | SELECTOR ENCA   | Selector encoder input A                                     | L:ON             |
| 41      | P32/T02       | I/O      | S. DATA         | 8/16 bit system data                                         | ————             |
| 42      | P31/T01       | I/O      | S. BUSY         | 8/16 bit system busy                                         | H:BUSY L:READY   |
| * 43    | P30/T00       | O        | RES (RDS)       | RDS IC reset signal                                          | L:RESET ON       |
| * 44    | P03/INTP3/C10 | I        | CLK (RDS)       | RDS clock                                                    | ————             |

# KR-V7070

## CIRCUIT DESCRIPTION

| Pin NO. | Pin name   | Port I/O | Name          | Description                 | Active          |
|---------|------------|----------|---------------|-----------------------------|-----------------|
| * 45    | P02/INTP2  | I        | DATA (RDS)    | RDS data                    | _____           |
| * 46    | P01/INTP1  | I        | START (RDS)   | RDS data start signal       | L:START         |
| 47      | P00/INTP0  | I        | REM           | Remote control input        | _____           |
| 48      | IC         | _____    | Vss           |                             | _____           |
| 49      | P72        | OUT      | VIDEO SEL 1/2 | Video selector              | H:V 1,4 L:V 2,3 |
| 50      | P71        | OUT      | STANDBY LED   | Standby LED                 | L:LED ON        |
| 51      | P70        | OUT      | DATA MUTE     | Data mute                   | H:MUTE ON       |
| 52      | Vcc        | _____    | Vcc           | Microprocessor power supply | _____           |
| 53      | P127/FIP33 | OUT      | MUTE          | Analog mute control         | L:MUTE ON       |
| 54      | P126/FIP32 | OUT      | NOISE MUTE    | Noise mute control          | L:MUTE ON       |
| 55      | P125/FIP31 | IN       | KR4           | Key return 4                | _____           |
| 56      | P124/FIP30 | IN       | KR3           | Key return 3                | _____           |
| 57      | P123/FIP29 | IN       | KR2           | Key return 2                | _____           |
| 58      | P122/FIP28 | IN       | KR1           | Key return 1                | _____           |
| 59      | P121/FIP27 | IN       | KR0           | Key return 0                | _____           |
| 60      | P120/FIP26 | OUT      | P16/KS8       | FL segment 16/key scan 8    | _____           |
| 61      | P117/FIP25 | OUT      | P15/KS7       | FL segment 15/key scan 7    | _____           |
| 62      | P116/FIP24 | OUT      | P14/KS6       | FL segment 14/key scan 6    | _____           |
| 63      | P115/FIP23 | OUT      | P13/KS5       | FL segment 13/key scan 5    | _____           |
| 64      | P114/FIP22 | OUT      | P12/KS4       | FL segment 12/key scan 4    | _____           |
| 65      | P113/FIP21 | OUT      | P11/KS3       | FL segment 11/key scan 3    | _____           |
| 66      | P112/FIP20 | OUT      | P10/KS2       | FL segment 10/key scan 2    | _____           |
| 67      | P111/FIP19 | OUT      | P9/KS1        | FL segment 09/key scan 1    | _____           |
| 68      | P110/FIP18 | OUT      | P8/KS0        | FL segment 08/key scan 0    | _____           |
| 69      | P107/FIP17 | OUT      | P7            | FL segment 01               | _____           |
| 70      | P106/FIP16 | OUT      | P6            | FL segment 02               | _____           |
| 71      | V load     | _____    | V load        | FL drive power supply       | _____           |
| 72      | P105/FIP15 | OUT      | P5            | FL segment 03               | _____           |
| 73      | P104/FIP14 | OUT      | P4            | FL segment 04               | _____           |
| 74      | P103/FIP13 | OUT      | P3            | FL segment 05               | _____           |
| 75      | P102/FIP12 | OUT      | P2            | FL segment 06               | _____           |
| 76      | P101/FIP11 | OUT      | P1            | FL segment 07               | _____           |
| 77      | P100/FIP10 | OUT      | 2G            | FL grid 2                   | _____           |
| 78      | P97/FIP9   | OUT      | 3G            | FL grid 3                   | _____           |
| 79      | P96/FIP8   | OUT      | 4G            | FL grid 4                   | _____           |
| 80      | P95/FIP7   | OUT      | 5G            | FL grid 5                   | _____           |

※ The RDS PTY AF search always corresponds to a span search of 100kHz. Therefore, a span search of 50 kHz cannot be performed.



## CIRCUIT DESCRIPTION/ADJUSTMENT

### 8 KEY MATRIX

Table 8-1 Key Matrix List

| KRTN<br>KSCN | KR0         | KR1       | KR2           | KR3              | KR4        |
|--------------|-------------|-----------|---------------|------------------|------------|
| KS0          | 7 (10KEY)   | 6 (10KEY) | N. B. CIRCUIT | PRO LOGIC        | DIRECT     |
| KS1          | 8 (10KEY)   | 5 (10KEY) | SP. B         | LINE STRAIGHT    | MEMORY     |
| KS2          | 9 (10KEY)   | 4 (10KEY) | SP. A         | BALANCE L        | PTY *2     |
| KS3          | 0 (10KEY)   | 3 (10KEY) | CENTER MODE   | BALANCE R        | AF *2      |
| KS4          | +10         | 2 (10KEY) | DSP           | ————             | BAND       |
| KS5          | ————        | 1 (10KEY) | DSP LOGIC     | ————             | TUNER DOWN |
| KS6          | AUTO/MANUAL | POWER     | 3 STEREO      | VISUAL FIX *1    | TUNER UP   |
| KS7          | DISPLAY *2  | ————      | ————          | MULTI LEVEL MODE | TAPE 2     |
| KS8          | DSW0 *5     | DSW1 *5   | DSW2 *5       | DSW3 *3          | DSW4 *4    |

\*1 For KR-V8070 only.

\*2 The destination is E3 type only. For another destination, there is no key. (RDS function)

\*3 Used for description of each model.

\*4 Used for operation selector of 8- or 16- bit serial data.

\*5 Used for discrimination of the destination. (Refer to the Destination List of Tuner in Table 5-1. )

#### 8.1 Model Discrimination List

• KS8 and KR3 are used as a DSW switch for model discrimination. Each data is shown in the table below. Each model is discriminated only during reset initialization simultaneously with the discrimination of the destination.

• KS8 and KR4 are used for the operation selection of 8- or 16- bit serial data. The 8- and 16- bit serial data are selected only during reset initialization.

Table 8-2 Model Discrimination List

| Model    | DSW | DSW3<br>(D26) |
|----------|-----|---------------|
| KR-V8070 |     | 0             |
| KR-V7070 |     | 1             |

Table 8-3 8-/16- bit Selection

| Serial cord    | DSW | DSW4 |
|----------------|-----|------|
| 8- bit serial  |     | 0    |
| 16- bit serial |     | 1    |

## ADJUSTMENT

### ENGLISH (E, T TYPE)

| No.                  | ITEM                   | INPUT<br>SETTINGS                                                                        | OUTPUT<br>SETTINGS                                                                      | TUNER<br>SETTINGS          | ALIGNMENT<br>POINTS                                    | ALIGN FOR           | FIG. |
|----------------------|------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------|---------------------|------|
| <b>FM SECTION</b>    |                        |                                                                                          |                                                                                         |                            |                                                        |                     |      |
| <b>SELECTOR:FM</b>   |                        |                                                                                          |                                                                                         |                            |                                                        |                     |      |
| 1                    | DISCRIMINATOR          | (A)<br>98.0MHz<br>1kHz,±40kHz dev.(E,T type)<br>60dBμ(ANT input)                         | Connect a DC<br>voltmeter<br>between TP3 and TP4<br>(X05-)                              | AUTO or<br>MONO<br>98.0MHz | 1.3<br>(X05-)                                          | 0V                  | (a)  |
| 2                    | DISTORTION<br>(STEREO) | (C)<br>98.0MHz<br>1kHz,±40kHz dev.<br>Pilot:±6kHz dev.<br>(E,T type)<br>60dBμ(ANT input) | (B)                                                                                     | AUTO<br>98.0MHz            | IFT<br>(W02-)                                          | Minimum distortion. | (a)  |
| <b>AUDIO SECTION</b> |                        |                                                                                          |                                                                                         |                            |                                                        |                     |      |
| <1>                  | IDLE CURRENT           |                                                                                          | (E)<br>Connect a DC<br>voltmeter across<br>CP1(L)<br>CP2(R)<br>CP3(CENTER)<br>CP4(REAR) | Volume:0                   | VR1(L)<br>VR2(R)<br>VR3(CENTER)<br>VR4(REAR)<br>(X07-) | 22mV                | (b)  |

# KR-V7070

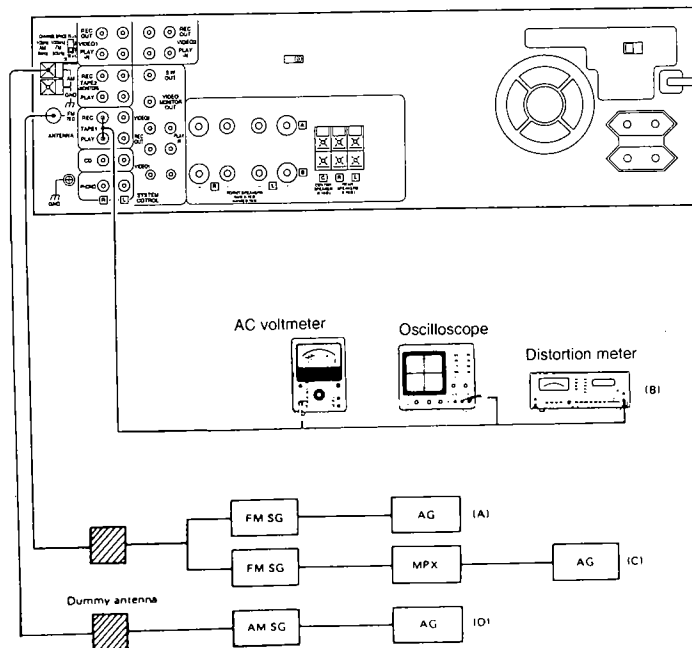
## ADJUSTMENT/AJUSTES

ESPAÑOL (E, T TYPE)

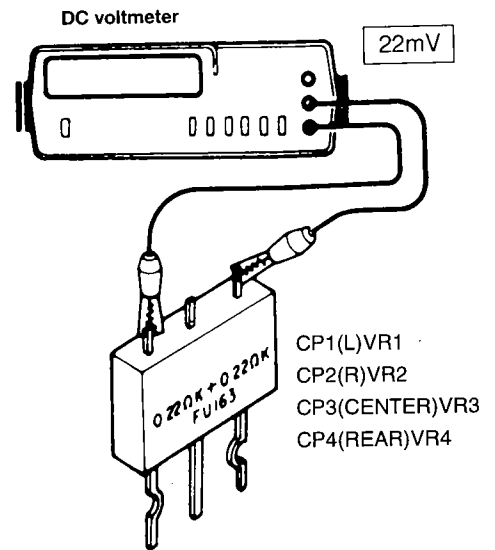
| Núm.                                                                                                             | ÍTEM                 | AJUSTES DE ENTRADA                                                                               | AJUSTES DE SALIDA                                                           | AJUSTES DEL SINTONIZADOR | PUNTOS DE ALINEACIÓN                                   | ALINEACIÓN PARA    | FIG. |
|------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------|--------------------------------------------------------|--------------------|------|
| <b>SECCIÓN DE FM</b>                                                                                             |                      | <b>SELECTOR:FM</b>                                                                               |                                                                             |                          |                                                        |                    |      |
| 1                                                                                                                | DISCRIMINADOR        | (A)<br>98.0MHz<br>1kHz,±40kHz dev.(E,T type)<br>60dBμ(Entrada de antena)                         | Conecte un voltímetro de CC entre TP3 y TP4 (X05-)                          | AUTO or MONO<br>98.0MHz  | 1.3<br>(X05-)                                          | 0V                 | (a)  |
| 2                                                                                                                | DISTORSIÓN (ESTÉREO) | (C)<br>98.0MHz<br>1kHz,±40kHz dev.<br>Pilot:±6kHz dev.<br>(E,T type)<br>60dBμ(Entrada de antena) | (B)                                                                         | AUTO<br>98.0MHz          | IFT<br>(W02-)                                          | Distorsión mínima. | (a)  |
| <b>A menos que se especifique otra cosa, los controles individuales deberán ajustarse de la forma siguiente:</b> |                      |                                                                                                  |                                                                             |                          |                                                        |                    |      |
| <b>POWER:ON</b>                                                                                                  |                      | <b>SPEAKER:B</b>                                                                                 | <b>SELECTOR:PHONO</b>                                                       |                          |                                                        |                    |      |
| 1                                                                                                                | OCIOSA CORRIENTE     | -                                                                                                | Conecte un voltímetro de CC entre CP1(L) y CP2(R) y CP3(CENTER) y CP4(REAR) | Volume:0                 | VR1(L)<br>VR2(R)<br>VR3(CENTER)<br>VR4(REAR)<br>(X07-) | 22mV               | (b)  |

(a)

(b)

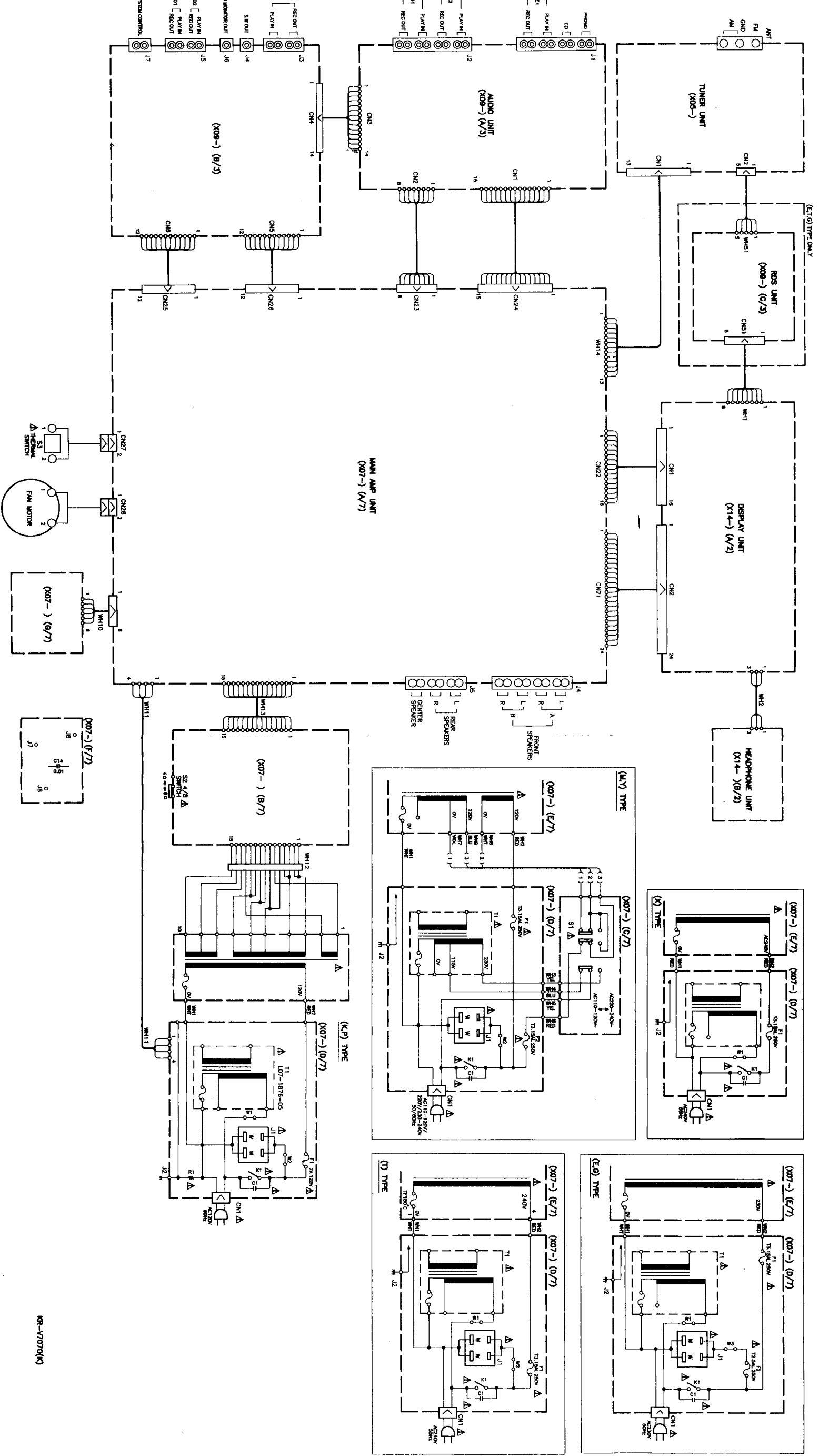


System connections



# WIRING DIAGRAM

## KR-V7070 KR-V7070



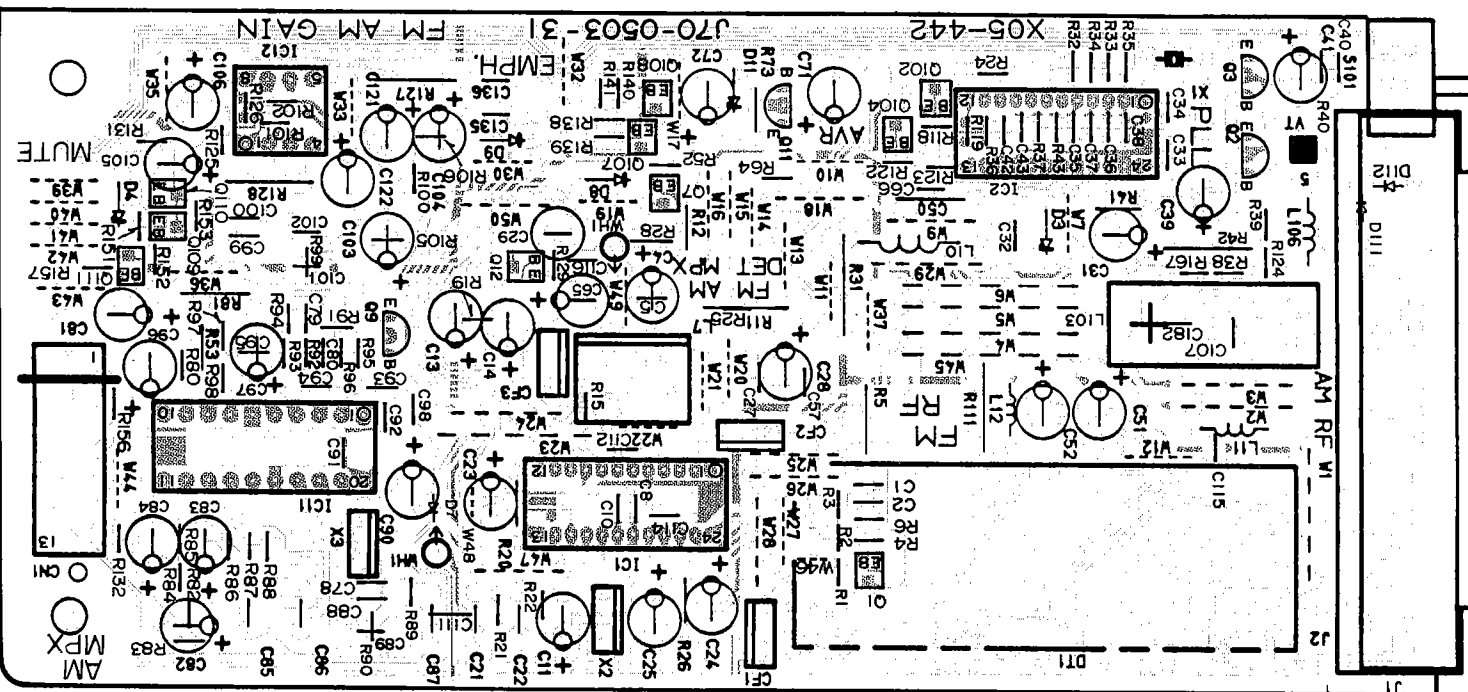
KS-V7070(K)

TUNER UNIT (X05-4460-13):KS, PS, -23:YS, MS, -73:XS

ANTENNA  
GND

AM FM75Ω

DE - EMPHASIS

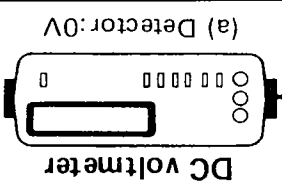
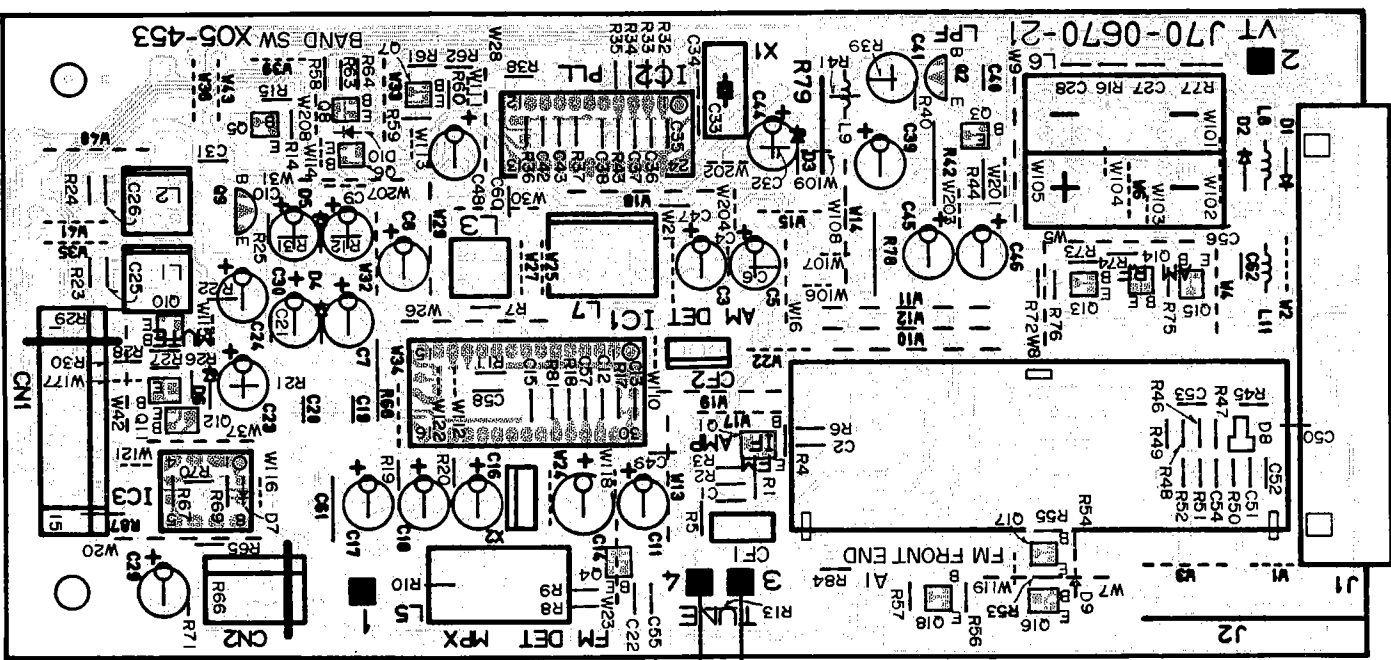


Refer to the schematic diagram for the values of resistors and capacitors.

TUNER UNIT (X05-4532-70):TS, ES, GS

ANTENNA  
GND

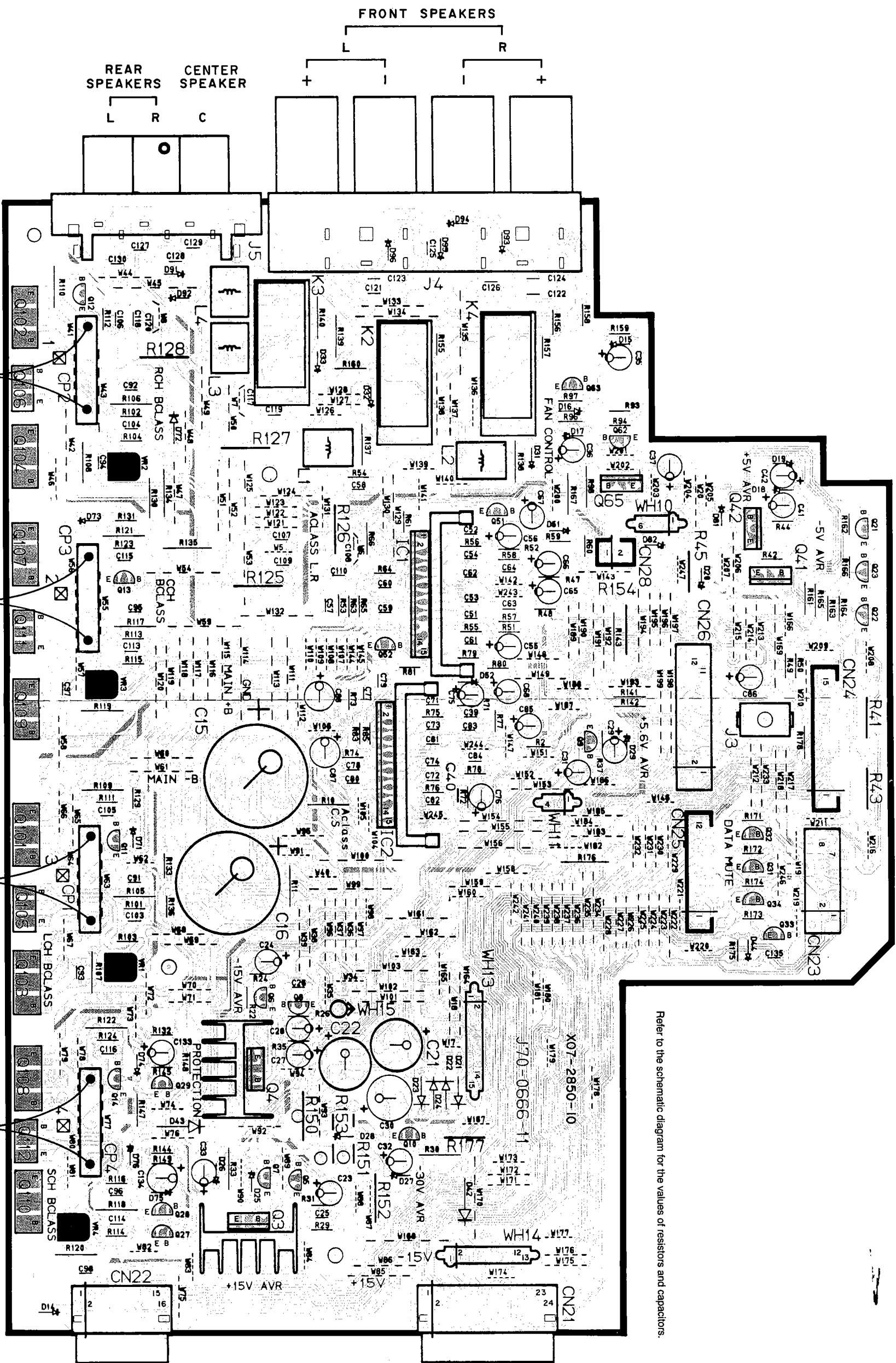
AM ANT FM75Ω



Refer to the schematic diagram for the values of resistors and capacitors.

# PC BOARD (Component side view)

MAIN AMP UNIT (X07-2850-10):KS, PS, -21:MS, -51:TS, -71:XS, 2-71:ES, GS, 2-91:YS



Refer to the schematic diagram for the values of resistors and capacitors.

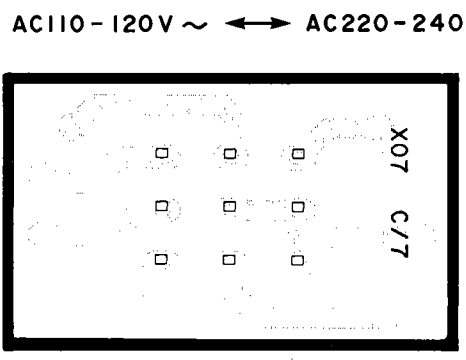
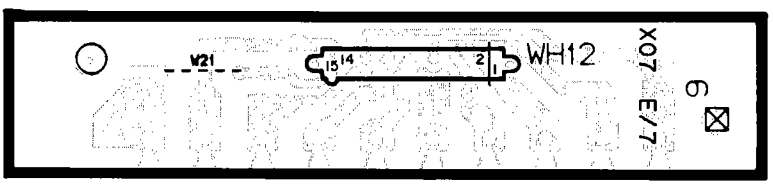
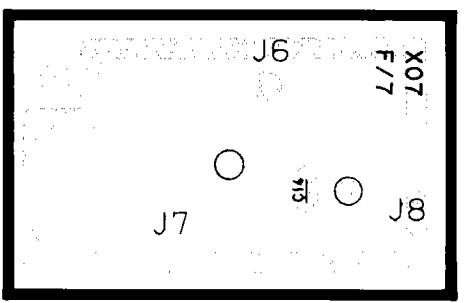
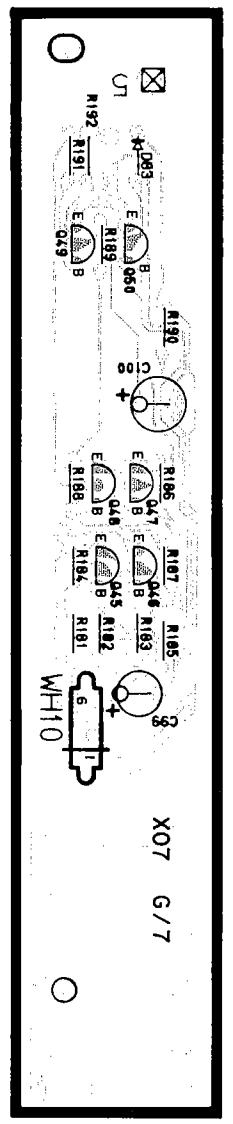
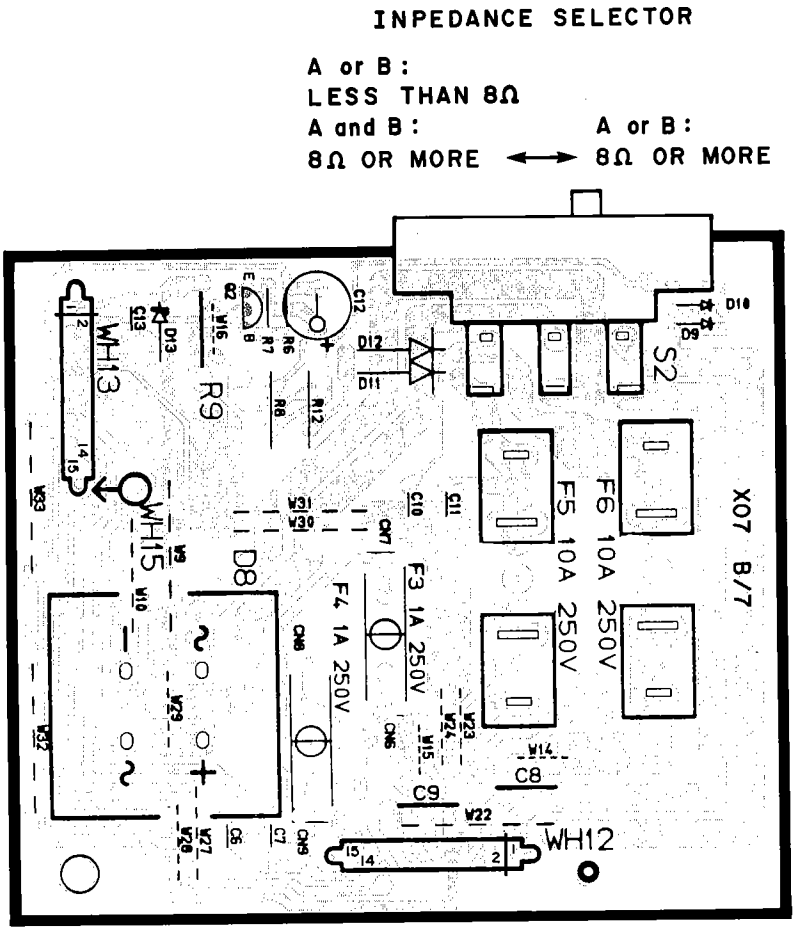
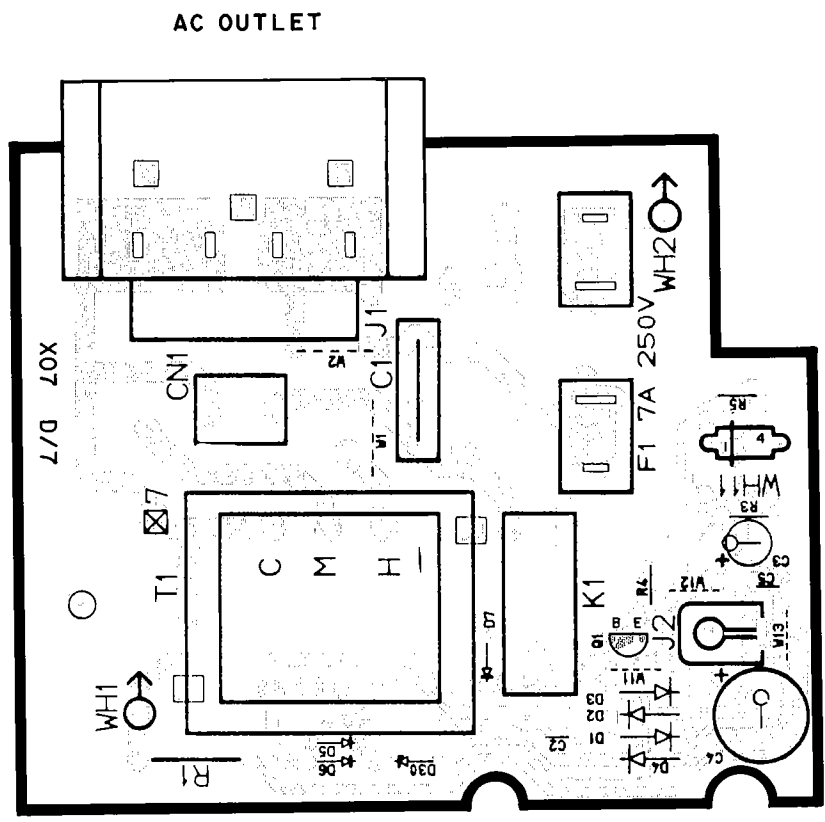
(b) IDLE CURRENT : 22mV

(b) IDLE CURRENT : 22mV

(b) IDLE CURRENT : 22mV

(b) IDLE CURRENT : 22mV

MAIN AMP UNIT (X07-2850-10):KS, PS, -21:MS, -51:TS, -71:XS, 2-71:ES, GS, 2-91:YS



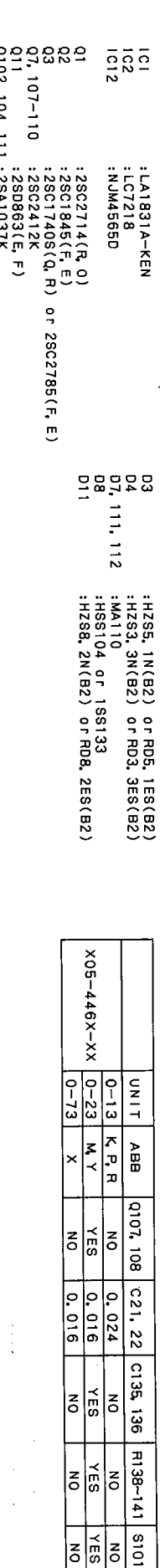
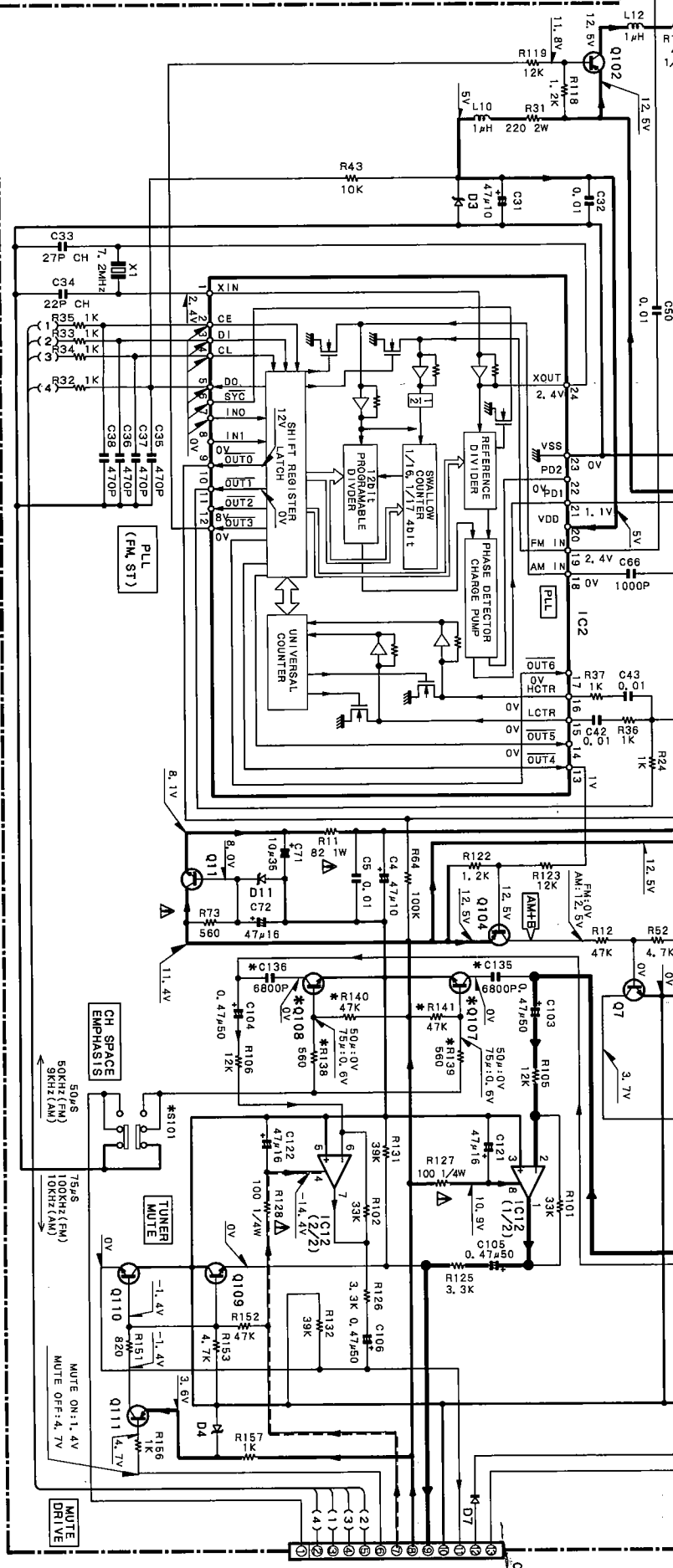
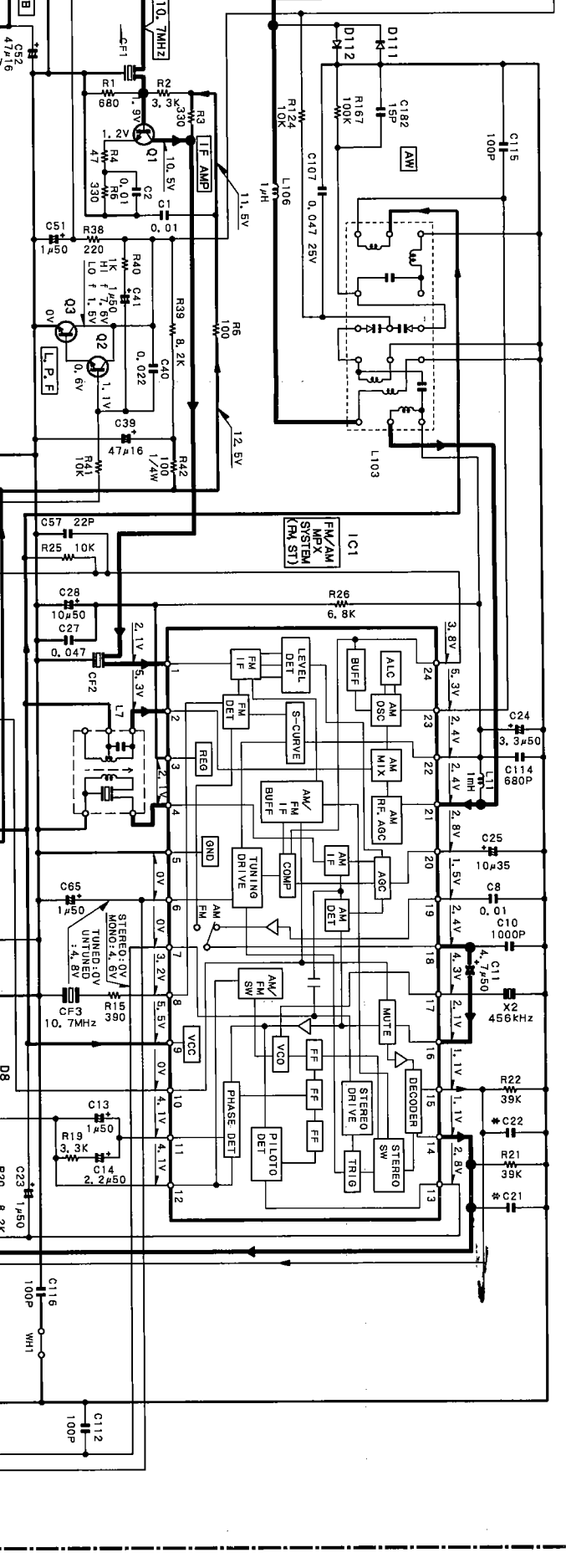
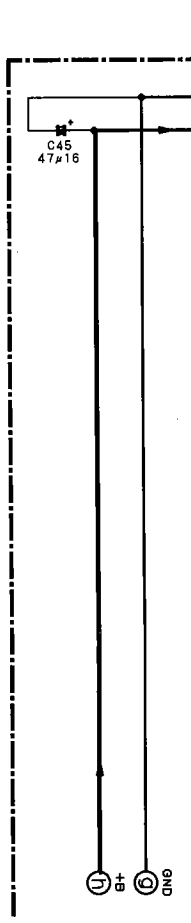
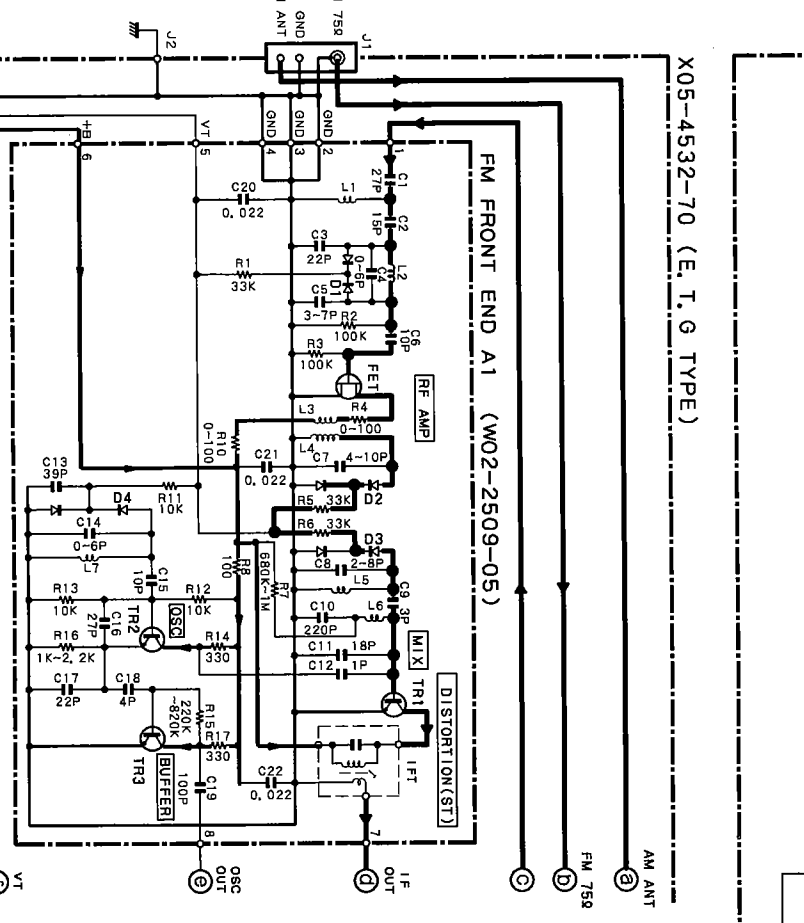
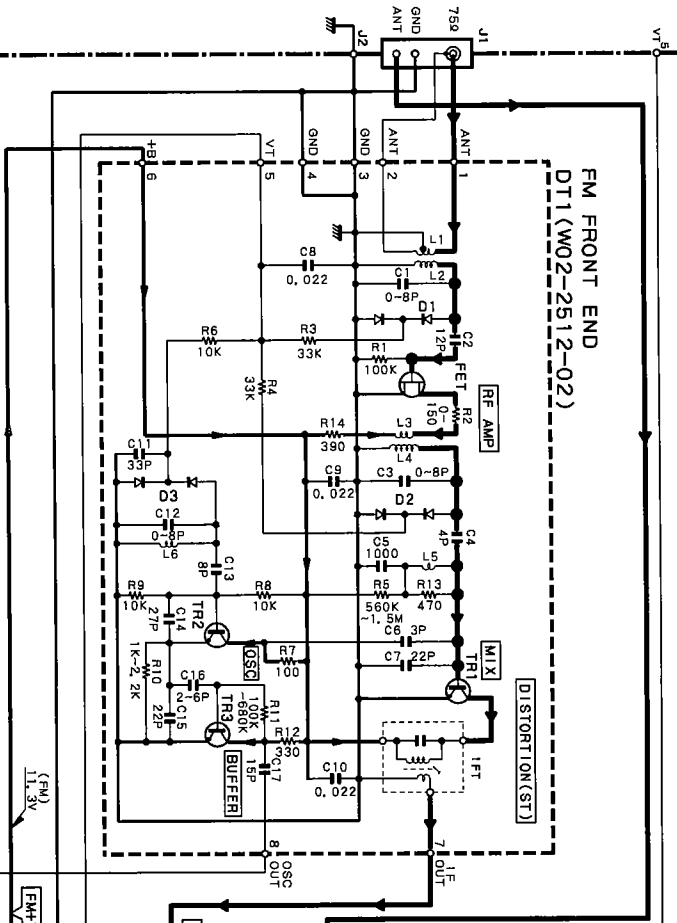
AC110-120V ~ ↔ AC220-240V ~

IMPEDANCE SELECTOR  
 A or B : LESS THAN 8Ω  
 A and B : 8Ω OR MORE  
 A or B : 8Ω OR MORE





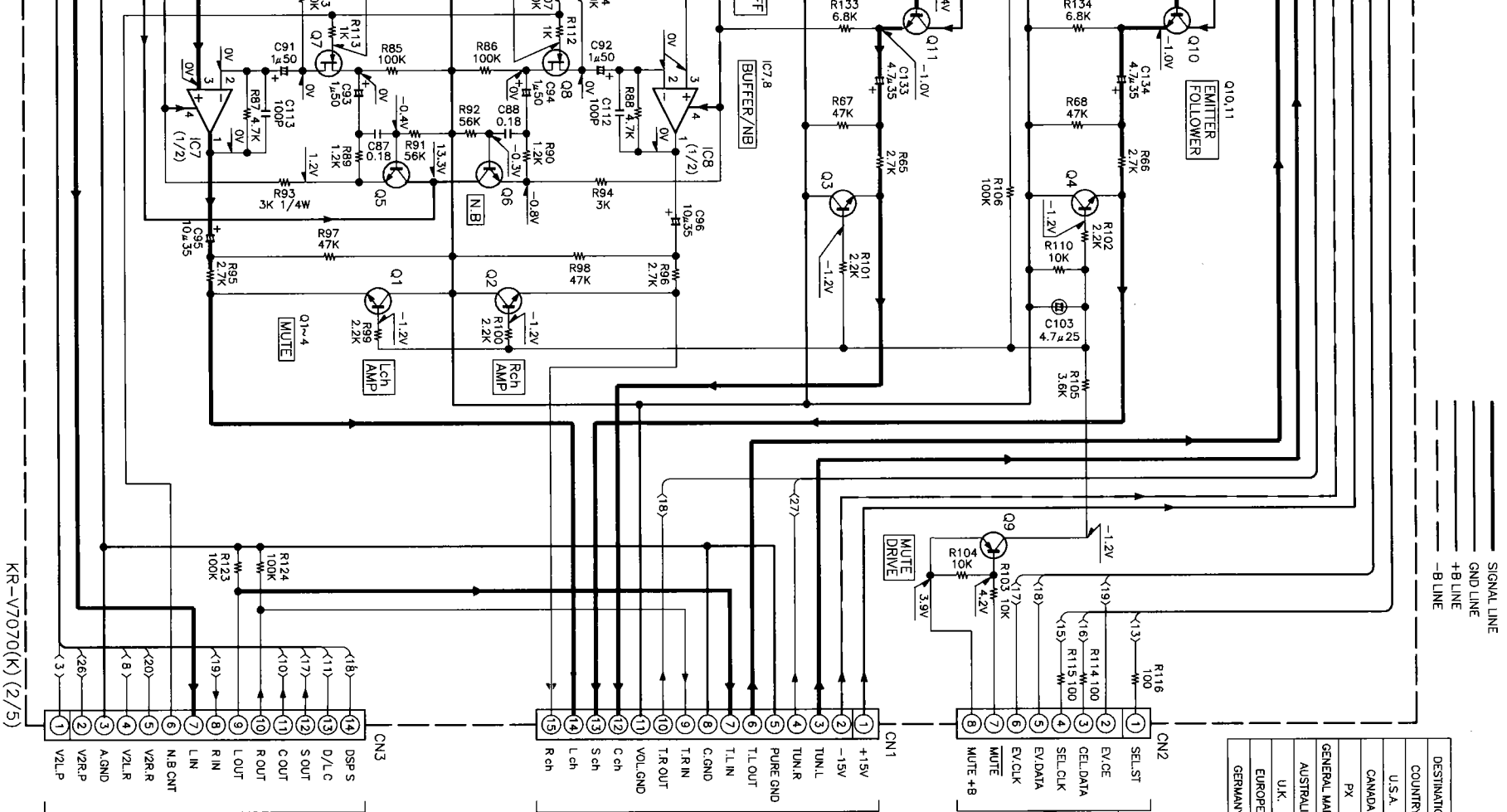




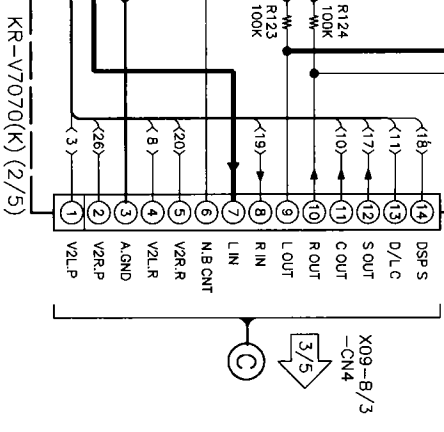
- IC1 : LA1831A-KEN
- IC2 : LC7218
- IC12 : NJM4556D
- Q1 : 2SC2714(R, O)
- Q2 : 2SC1845(F, E)
- Q3 : 2SC1740S(Q, R) or 2SC2785(F, E)
- Q7, 107-110 : 2SC2412K
- Q11 : 2SD8637E, F)
- Q102, 104, 111 : 2SA1037K
- D3 : HZS5, 1N(B2) or RD5, 1E5(B2)
- D4 : HZS3, 3N(B2) or RD3, 3E5(B2)
- D7, 111, 112 : MA110
- D8 : HSS104 or 1SS133
- D11 : HZS8, 2N(B2) or RD8, 2E5(B2)

| UNIT | ABB     | Q107, 108 | C21, 22 | C135, 136 | R138-141 | S101 |
|------|---------|-----------|---------|-----------|----------|------|
| 0-13 | K, P, R | NO        | 0.024   | NO        | NO       | NO   |
| 0-23 | M, Y    | YES       | 0.016   | YES       | YES      | YES  |
| 0-73 | X       | NO        | 0.016   | NO        | NO       | NO   |

DC voltages are as measured with a high impedance meter. Values may vary slightly due to variations between components of/and units.



| DESTINATION COUNTRY | ABB. | UNIT NAME   | C1,2,5,6,9,10,13,14 |
|---------------------|------|-------------|---------------------|
| U.S.A.              | K    |             |                     |
| CANADA              | P    |             |                     |
| PX                  | Y    | X09-4080-10 | NO                  |
| GENERAL MARKET      | M    |             |                     |
| AUSTRALIA           | X    |             |                     |
| U.K.                | T    |             |                     |
| EUROPE              | E    | X09-4082-71 | YES                 |
| GERMANY             | G    |             |                     |



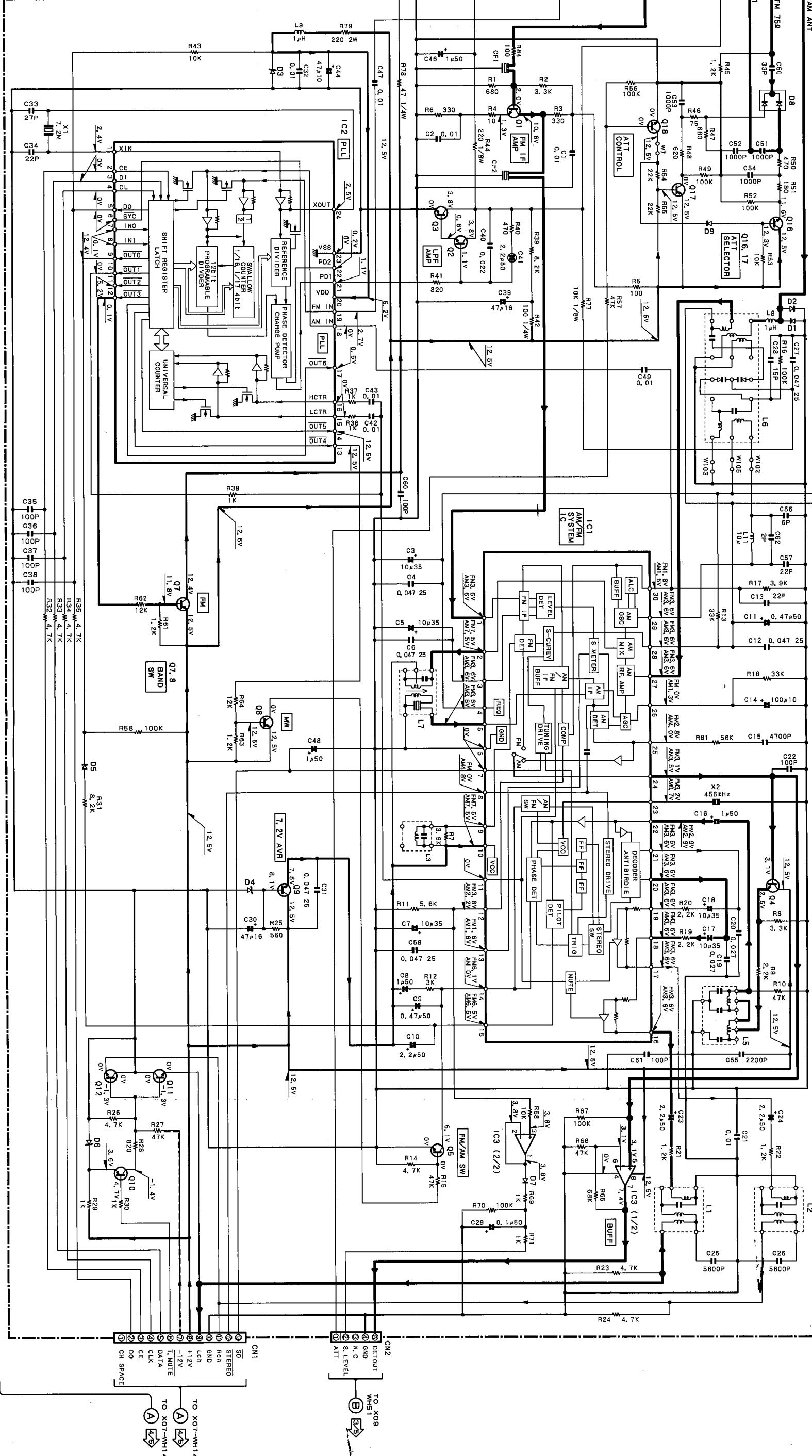
- 2SA1534A
- 2SA992
- 2SC1845
- 2SC2003
- 2SC2878
- 2SC3940A
- 2SD863
- 2SB1560LB
- 2SD2390LB
- 2SB1470BT
- 2SD2222BT
- 2SB1370
- 2SD2061
- MC14576CP
- NJM4565D
- NJM2279D
- SAA6579
- NJM072BL
- NJM2082L
- NJM4565L
- LA1836
- LC7536R
- NJM2177AFB3
- 2SA1175
- 2SC2785
- 2SB1375
- 2SD2012
- 2SD2374
- YM7128B
- LC7218
- DTC124ES
- 2SA933S
- 2SC1740S
- 2SC4137F19
- M5233P
- NJM4580D-D
- S-80740AL
- 2SA1037K
- 2SA1576
- 2SC2412K
- 2SC2714
- 2SC4081
- 2SD1757K
- UPC78L05J
- NJU7311AL
- NJU7312AL
- NJU7313AL
- NE571N
- 2SK246

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



- C1 : LA1836
- C2 : LC7218
- C3 : M5223P
- Q1 : 25C2714(R, O)
- Q2 : 25C1845(F, E)
- Q3, 4, 5, 16, 18 : 25C4081(R, S)
- Q7, 8, 10, 17 : 25A1576(R, S)
- Q9 : 25B863(E, F)
- Q11, 12 : 25D1757K
- D1, 2, 5 : 15S133 or H5S104
- D3 : HTZJ5, 1(B) or RD5, 1ES(B2)
- D4 : HTZJ8, 2(B) or RD8, 2ES(B2)
- D6 : HTZJ3, 3(B) or RD3, 3ES(B2)
- D7, 9 : MA110
- D8 : 15S268

- R1 : 10K
- R2 : 10K
- R3 : 10K
- R4 : 10K
- R5 : 10K
- R6 : 10K
- R7 : 10K
- R8 : 10K
- R9 : 10K
- R10 : 10K
- R11 : 10K
- R12 : 10K
- R13 : 10K
- R14 : 10K
- R15 : 10K
- R16 : 10K
- R17 : 3.9K
- R18 : 33K
- R19 : 100Ω
- R20 : 100Ω
- R21 : 100Ω
- R22 : 100Ω
- R23 : 100Ω
- R24 : 100Ω
- R25 : 100Ω
- R26 : 100Ω
- R27 : 100Ω
- R28 : 100Ω
- R29 : 100Ω
- R30 : 100Ω
- R31 : 8.2K
- R32 : 4.7K
- R33 : 4.7K
- R34 : 4.7K
- R35 : 4.7K
- R36 : 4.7K
- R37 : 4.7K
- R38 : 4.7K
- R39 : 8.2K
- R40 : 2.2K
- R41 : 2.2K
- R42 : 100Ω
- R43 : 10K
- R44 : 220Ω
- R45 : 1.2K
- R46 : 1.5K
- R47 : 680Ω
- R48 : 12.5V
- R49 : 12.5V
- R50 : 1.1K
- R51 : 1.1K
- R52 : 1.1K
- R53 : 1.1K
- R54 : 1.1K
- R55 : 22K
- R56 : 22K
- R57 : 4.7K
- R58 : 12.5V
- R59 : 12.5V
- R60 : 1.1K
- R61 : 1.1K
- R62 : 1.1K
- R63 : 1.1K
- R64 : 1.1K
- R65 : 1.1K
- R66 : 1.1K
- R67 : 1.1K
- R68 : 1.1K
- R69 : 1.1K
- R70 : 100K
- R71 : 1K
- R72 : 1K
- R73 : 1K
- R74 : 1K
- R75 : 1K
- R76 : 1K
- R77 : 10K
- R78 : 47Ω
- R79 : 220Ω
- R80 : 1.1K
- R81 : 1.1K
- R82 : 1.1K
- R83 : 1.1K
- R84 : 1.1K
- R85 : 1.1K
- R86 : 1.1K
- R87 : 1.1K
- R88 : 1.1K
- R89 : 1.1K
- R90 : 1.1K

- C4 : 0.047 25
- C5 : 0.047 25
- C6 : 0.047 25
- C7 : 10K35
- C8 : 0.047 25
- C9 : 0.047 25
- C10 : 2.2K50
- C11 : 0.47 50
- C12 : 0.047 25
- C13 : 22P
- C14 : 100Ω10
- C15 : 4700P
- C16 : 1#50
- C17 : 10K35
- C18 : 10K35
- C19 : 0.027
- C20 : 0.027
- C21 : 0.01
- C22 : 100P
- C23 : 2.2K50
- C24 : 2.2K50
- C25 : 5600P
- C26 : 5600P
- C27 : 0.047 25
- C28 : 100K
- C29 : 100K
- C30 : 100K
- C31 : 0.047 25
- C32 : 47/10
- C33 : 27P
- C34 : 27P
- C35 : 100P
- C36 : 100P
- C37 : 100P
- C38 : 100P
- C39 : 100P
- C40 : 0.022
- C41 : 470
- C42 : 2.2K50
- C43 : 100Ω
- C44 : 47/10
- C45 : 0.01
- C46 : 1#50
- C47 : 0.01
- C48 : 1#50
- C49 : 0.022
- C50 : 100P
- C51 : 100P
- C52 : 100P
- C53 : 1000P
- C54 : 100P
- C55 : 2200P
- C56 : 22P

- L1 : 5600P
- L2 : 5600P
- L3 : 1.5K
- L4 : 1.5K
- L5 : 1.5K
- L6 : 1.5K
- L7 : 1.5K
- L8 : 1.5K
- L9 : 1.5K
- L10 : 1.5K
- L11 : 1.5K
- L12 : 1.5K
- L13 : 1.5K
- L14 : 1.5K
- L15 : 1.5K
- L16 : 1.5K
- L17 : 1.5K
- L18 : 1.5K
- L19 : 1.5K
- L20 : 1.5K
- L21 : 1.5K
- L22 : 1.5K
- L23 : 1.5K
- L24 : 1.5K
- L25 : 1.5K
- L26 : 1.5K
- L27 : 1.5K
- L28 : 1.5K
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- L30 : 1.5K
- L31 : 1.5K
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- L33 : 1.5K
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- L65 : 1.5K
- L66 : 1.5K
- L67 : 1.5K
- L68 : 1.5K
- L69 : 1.5K
- L70 : 1.5K
- L71 : 1.5K
- L72 : 1.5K
- L73 : 1.5K
- L74 : 1.5K
- L75 : 1.5K
- L76 : 1.5K
- L77 : 1.5K
- L78 : 1.5K
- L79 : 1.5K
- L80 : 1.5K
- L81 : 1.5K
- L82 : 1.5K
- L83 : 1.5K
- L84 : 1.5K
- L85 : 1.5K
- L86 : 1.5K
- L87 : 1.5K
- L88 : 1.5K
- L89 : 1.5K
- L90 : 1.5K

- X1 : 7.2M
- X2 : 456 kHz
- X3 : 456 kHz
- X4 : 456 kHz
- X5 : 456 kHz
- X6 : 456 kHz
- X7 : 456 kHz
- X8 : 456 kHz
- X9 : 456 kHz
- X10 : 456 kHz
- X11 : 456 kHz
- X12 : 456 kHz
- X13 : 456 kHz
- X14 : 456 kHz
- X15 : 456 kHz
- X16 : 456 kHz
- X17 : 456 kHz
- X18 : 456 kHz
- X19 : 456 kHz
- X20 : 456 kHz
- X21 : 456 kHz
- X22 : 456 kHz
- X23 : 456 kHz
- X24 : 456 kHz
- X25 : 456 kHz
- X26 : 456 kHz
- X27 : 456 kHz
- X28 : 456 kHz
- X29 : 456 kHz
- X30 : 456 kHz
- X31 : 456 kHz
- X32 : 456 kHz
- X33 : 456 kHz
- X34 : 456 kHz
- X35 : 456 kHz
- X36 : 456 kHz
- X37 : 456 kHz
- X38 : 456 kHz
- X39 : 456 kHz
- X40 : 456 kHz
- X41 : 456 kHz
- X42 : 456 kHz
- X43 : 456 kHz
- X44 : 456 kHz
- X45 : 456 kHz
- X46 : 456 kHz
- X47 : 456 kHz
- X48 : 456 kHz
- X49 : 456 kHz
- X50 : 456 kHz

- IC1 : AM/FM SYSTEM IC
- IC2 : PLL
- IC3 : (2/2)
- IC4 : (1/2)
- IC5 : (1/2)
- IC6 : (1/2)
- IC7 : (1/2)
- IC8 : (1/2)
- IC9 : (1/2)
- IC10 : (1/2)
- IC11 : (1/2)
- IC12 : (1/2)
- IC13 : (1/2)
- IC14 : (1/2)
- IC15 : (1/2)
- IC16 : (1/2)
- IC17 : (1/2)
- IC18 : (1/2)
- IC19 : (1/2)
- IC20 : (1/2)
- IC21 : (1/2)
- IC22 : (1/2)
- IC23 : (1/2)
- IC24 : (1/2)
- IC25 : (1/2)
- IC26 : (1/2)
- IC27 : (1/2)
- IC28 : (1/2)
- IC29 : (1/2)
- IC30 : (1/2)
- IC31 : (1/2)
- IC32 : (1/2)
- IC33 : (1/2)
- IC34 : (1/2)
- IC35 : (1/2)
- IC36 : (1/2)
- IC37 : (1/2)
- IC38 : (1/2)
- IC39 : (1/2)
- IC40 : (1/2)
- IC41 : (1/2)
- IC42 : (1/2)
- IC43 : (1/2)
- IC44 : (1/2)
- IC45 : (1/2)
- IC46 : (1/2)
- IC47 : (1/2)
- IC48 : (1/2)
- IC49 : (1/2)
- IC50 : (1/2)

- U1 : SHIF. REGISTER
- U2 : 12BIT. PROGRAMMABLE DIVIDER
- U3 : 1/6. COUNTER
- U4 : SMALL. COUNTER
- U5 : PHASE DETECTOR
- U6 : REFERENCE CHANGE PUMP
- U7 : UNIVERSAL COUNTER
- U8 : BAND SW
- U9 : FM/AM SW
- U10 : ATT CONTROL
- U11 : ATT SELECTOR
- U12 : FM TUNE
- U13 : BAND
- U14 : MUTE
- U15 : STEREO
- U16 : RCH
- U17 : LCH
- U18 : +12V
- U19 : -12V
- U20 : MUTE
- U21 : DATA
- U22 : CLK
- U23 : CE
- U24 : DO
- U25 : CH SPACE

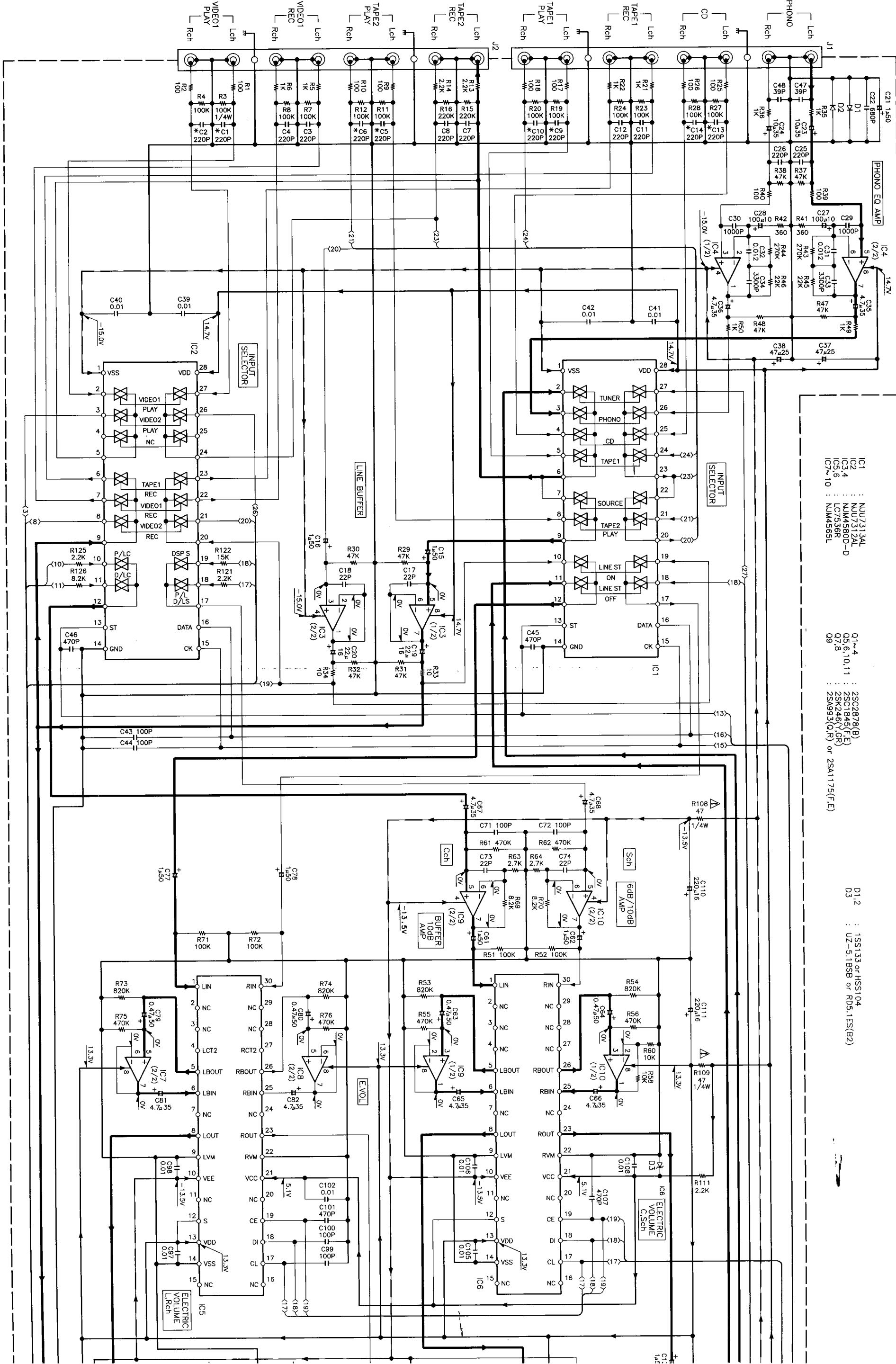
TO X07-WH14  
TO X07-WH14  
TO X07-WH14

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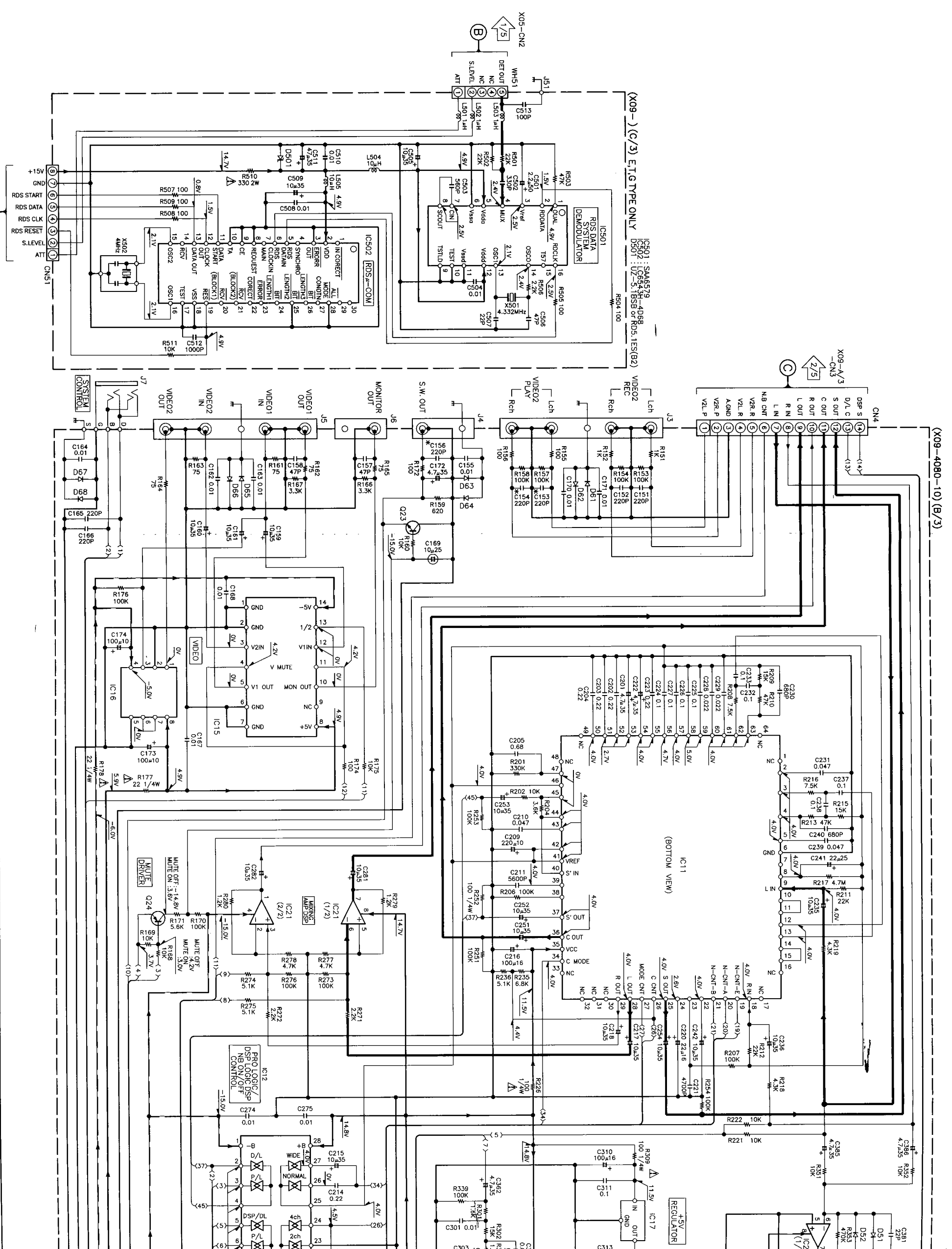
AUDIO UNIT (X09-4080-10)(A/3)



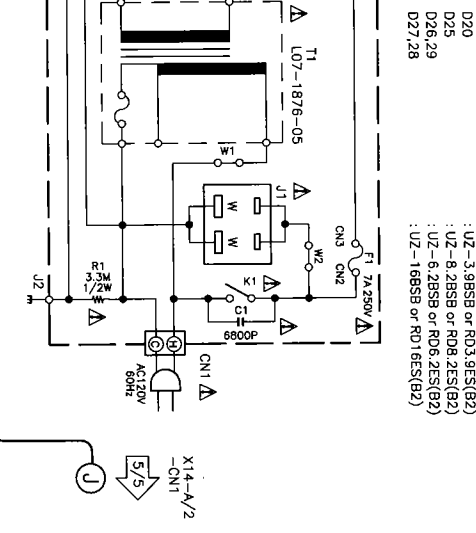
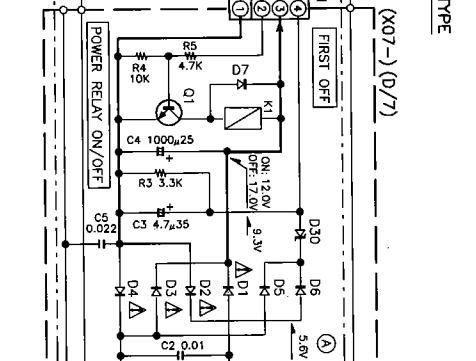
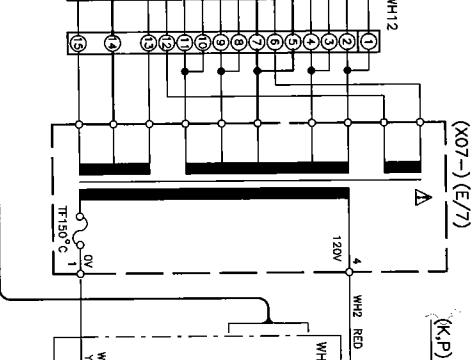
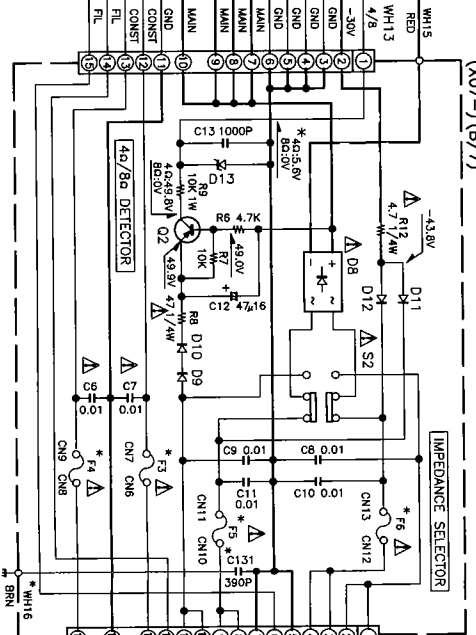
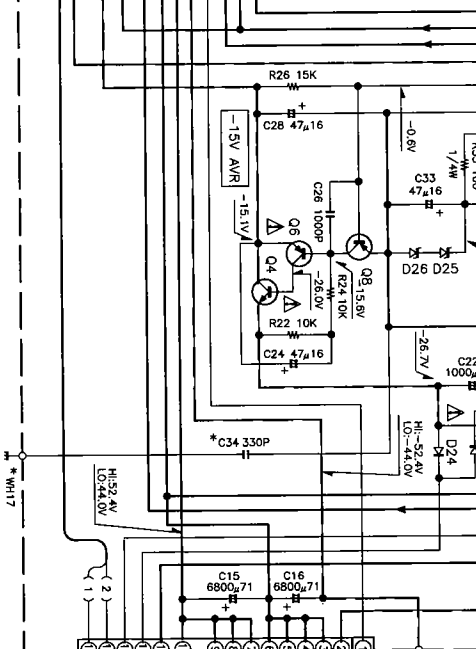
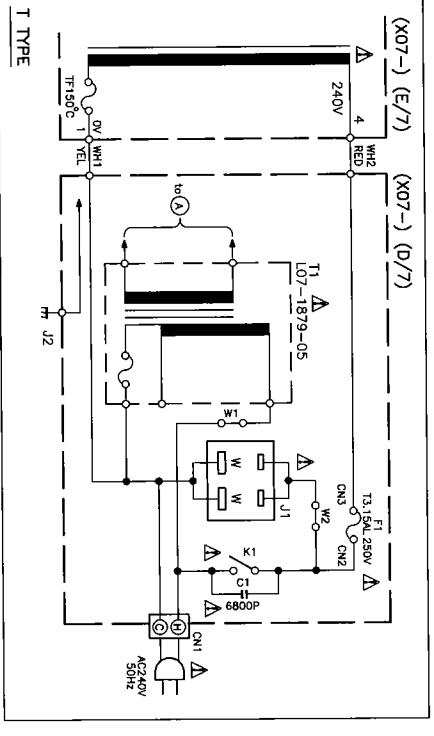
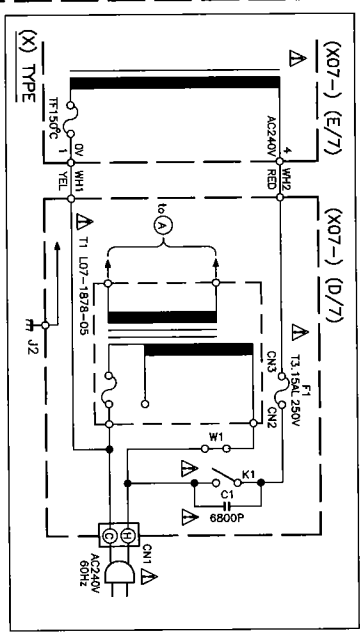
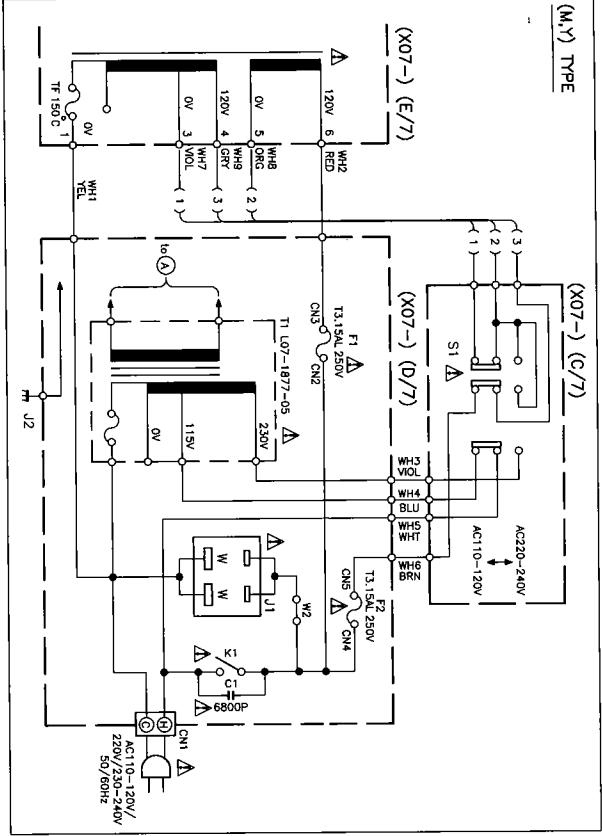
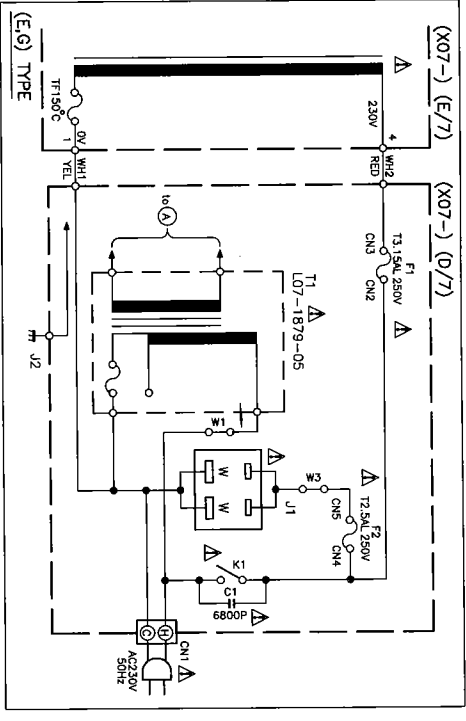
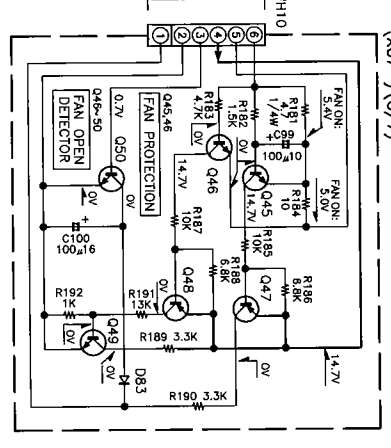
- IC1 : NUJ7313AL
- IC2 : NUJ7312AL
- IC3,4 : NUM4580D-0
- IC5,6 : LC7538R
- IC7~10 : NUM4555L

- Q1~4 : 2SC2878(B)
- Q5,6,10,11 : 2SC1845(F,E)
- Q7,8 : 2SK246(V,GR)
- Q9 : 2SA993(Q,R) or 2SA1175(F,E)

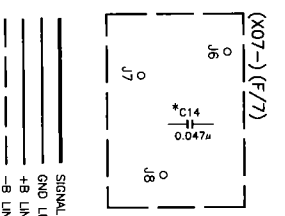
- D1,2 : 1SS133 or HSS104
- D3 : UZ-5.1B98B or RDS.1ES(B2)



| DESTINATION COUNTRY | UNIT NAME | F3.4        | F5.6      | C14 | R153 | C53 | C57 | C54   | C58 | C34.38 | 64   | C63 | C39.40 | C109.110. | 117.120 | C107.108. | 127-131 | C125. | WH16 |  |
|---------------------|-----------|-------------|-----------|-----|------|-----|-----|-------|-----|--------|------|-----|--------|-----------|---------|-----------|---------|-------|------|--|
| U.S.A.              | K         | X07-2850-10 | 1A.250V   | YES |      |     |     |       |     |        |      |     |        |           |         |           |         |       |      |  |
| CANADA              | P         | X07-2850-10 | 10A.250V  |     |      |     |     |       |     |        |      |     |        |           |         |           |         |       |      |  |
| GENERAL MARKET      | M         | X07-2850-21 | T1AL.250V |     |      |     |     |       |     |        |      |     |        |           |         |           |         |       |      |  |
| PX                  | Y         | X07-2852-91 | T1AL.250V | NO  | 150P | YES | NO  | 880P  | NO  | 0.1    | WS-8 | NO  | 1000P  |           |         |           |         |       |      |  |
| AUSTRALIA           | X         | X07-2850-71 | T1AL.250V |     |      |     |     |       |     |        |      |     |        |           |         |           |         |       |      |  |
| U.K.                | T         | X07-2850-51 | T1AL.250V | NO  | 390P | NO  | YES | 1000P | YES | 0.22   |      | YES | 3300P  | YES       |         |           |         |       |      |  |
| EUROPE              | E         | X07-2852-71 | T1AL.250V |     |      |     |     |       |     |        |      |     |        |           |         |           |         |       |      |  |
| GERMANY             | G         | X07-2852-71 | T1AL.250V |     |      |     |     |       |     |        |      |     |        |           |         |           |         |       |      |  |



- 01 : 2SC2003(L,K)
- 02.29 : 2SA992(F,E)
- 03.4.42.65 : 2SD2374 or 2SD2012 or 2SD2061
- 05.7.21~23.45.46.49.50.62.63 : 2SC1740S(Q,R) or 2SC2785(F,E)
- 06.8 : 2SA935S(Q,R) or 2SA1175(F,E)
- 09 : 2SC3940A(R,S)
- 010 : 2SA1534A(R,S)
- 011~14.27.28.51.52 : 2SC1845(F,E)
- 031~34 : DTC124ES or 4NA4212
- 047.48 : 2SB1370 or 2SB1375
- 0101.102.107 : 2SA935S(Q,R) or 2SA1175(F,E)
- 0103.104.109 : 2SB1470B1
- 0105.106.111.112 : 2SD2390(LB)
- 0108 : 2SB1560(LB)
- 0110 : JPC2581V
- IC1.2 : S5688B or 1SR139-100
- D1~4.11.12.21~24 : 1SS131 or H5S104A
- D5.6.9.10.15.71~75 : 1SS133 or H5S104
- D7.14.31~33.42~44 : DSF820-4002-120
- D13.78.82 : UZ-5.8B5B or R05.8E5(B2)
- D16 : UZ-4.7B5 or R04.7E5(B)
- D17.30 : UZ-2.7B5B or R02.7E5(B2)
- D18.19 : UZ-6.8B5B or R06.8E5(B2)
- D20 : UZ-3.9B5B or R03.9E5(B2)
- D25 : UZ-8.2B5B or R08.2E5(B2)
- D26.29 : UZ-6.2B5B or R06.2E5(B2)
- D27.28 : UZ-1.6B5B or R01.6E5(B2)

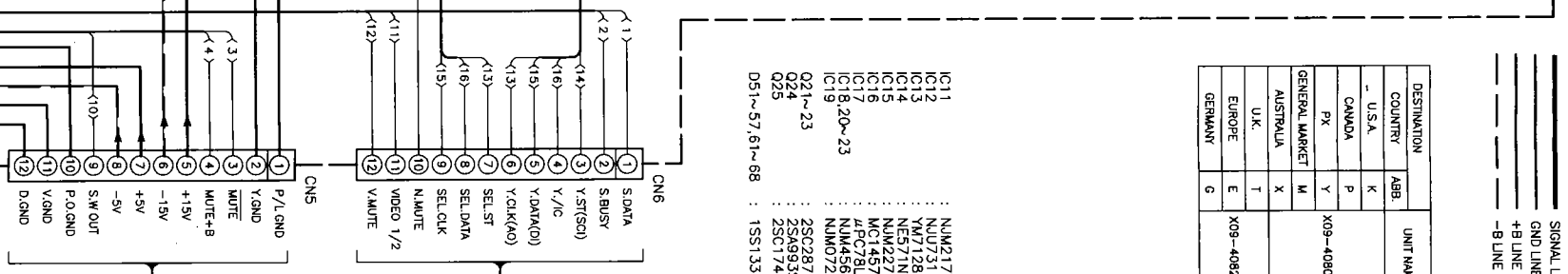
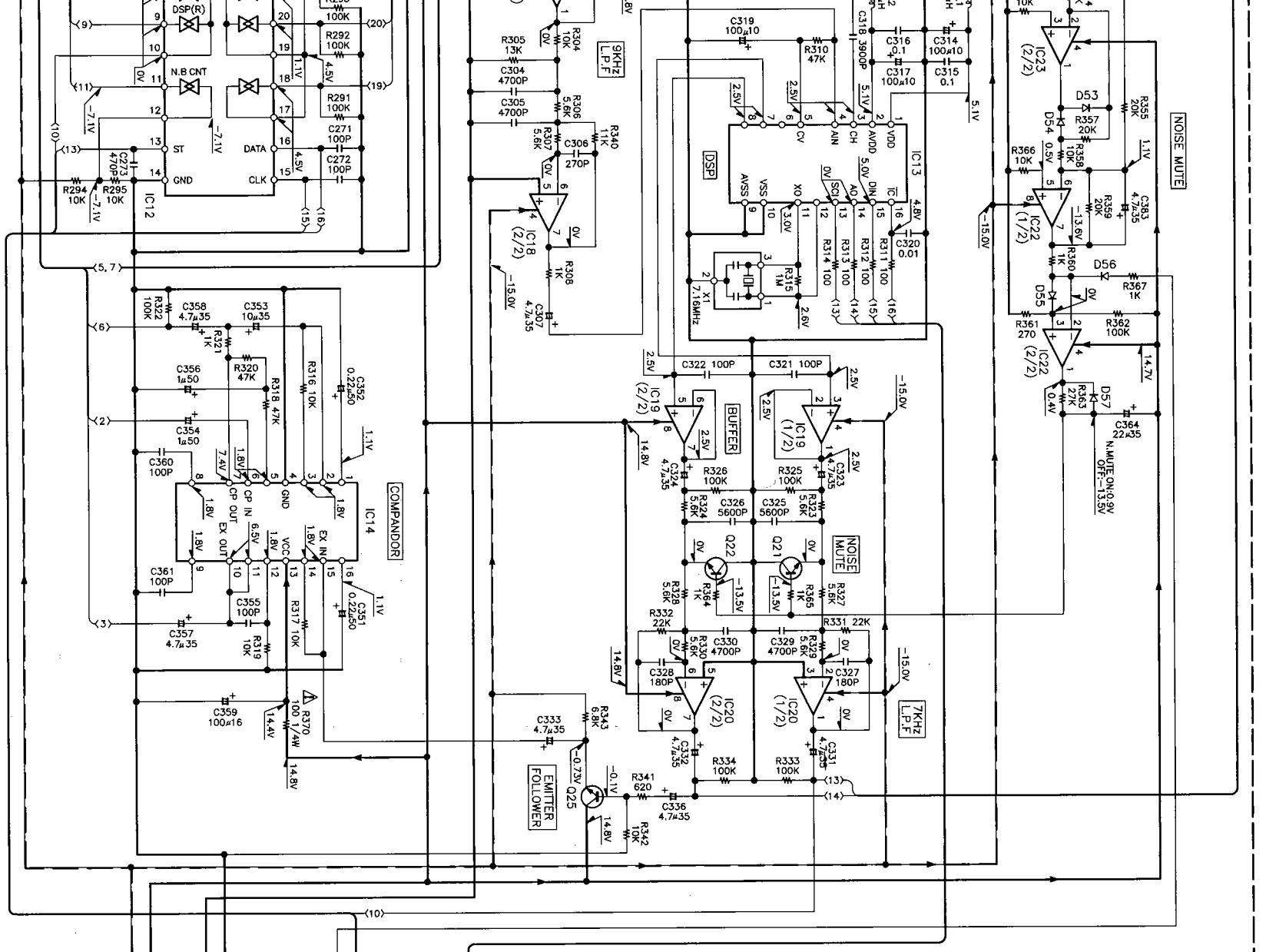


SIGNAL LINE  
GND LINE  
+B LINE  
-B LINE

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Messwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. Resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



| DESTINATION    | ABB. | UNIT NAME   | C153,154,<br>156 |
|----------------|------|-------------|------------------|
| U.S.A.         | K    |             |                  |
| CANADA         | P    |             |                  |
| PX             | Y    | X09-4080-10 | NO               |
| GENERAL MARKET | M    |             |                  |
| AUSTRALIA      | X    |             |                  |
| U.K.           | T    |             |                  |
| EUROPE         | E    | X09-4082-71 | YES              |
| GERMANY        | G    |             |                  |

- IC11 : NUM2177AFB3
- IC12 : NUJ7311AL
- IC13 : YM7128B
- IC14 : NE571N
- IC15 : NUM2279D
- IC16 : MC14876CP
- IC17 : LFC78LBSJ
- IC18 : NUM435SL
- IC19 : NUM672BL or NUM2082L
- Q21~23 : 2SC2878(B)
- Q24 : 2SA4935(Q,R) or 2SA1175(F,E)
- Q25 : 2SC1740S(Q,R) or 2SC2785(F,E)
- D51~57,61~68 : 1SS133 or HSS104

SIGNAL LINE  
 GND LINE  
 +B LINE  
 -B LINE

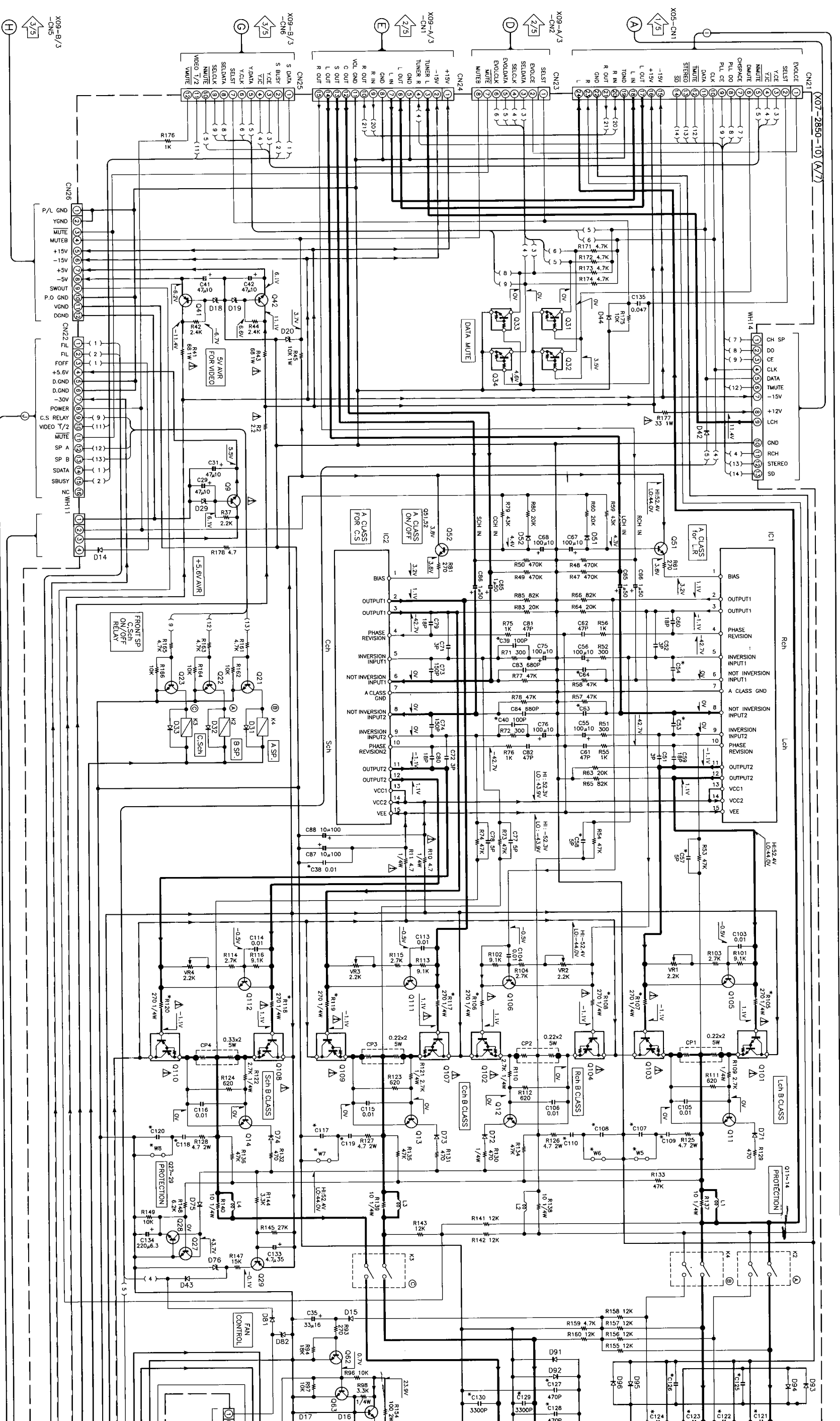
KR-V7070(K) (3/5)

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



X09-B/3  
-CN6  
3/5

X09-A/3  
-CN1  
2/5

X09-A/3  
-CN2  
2/5

X09-A/3  
-CN3  
2/5

X09-A/3  
-CN4  
2/5

X09-A/3  
-CN5  
2/5

X09-B/3  
-CN6  
3/5

X09-B/3  
-CN5  
3/5

X09-B/3  
-CN5  
3/5

X09-B/3  
-CN5  
3/5

X09-B/3  
-CN5  
3/5

DC voltages are as measured with a high  $\Omega$  meter. Values may vary slightly due to variations between components and units.

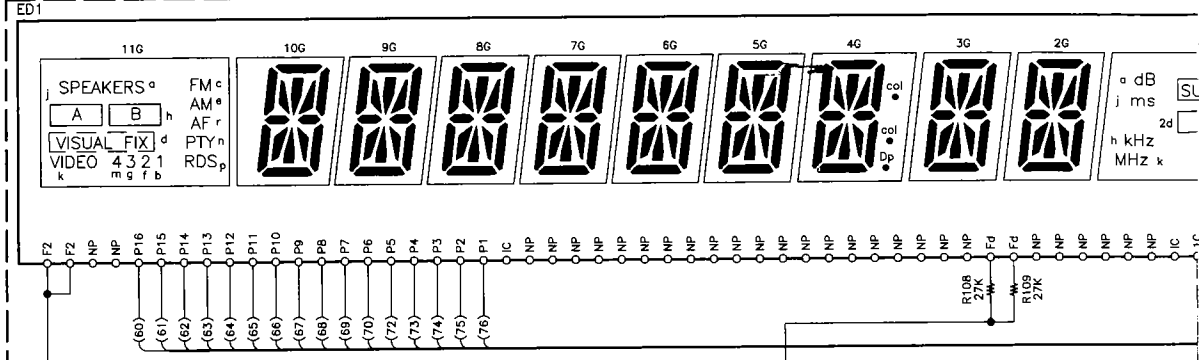
U  
V  
W  
X  
Y  
Z  
AA  
AB  
AC  
AD



X07-A/7  
-CN21



DISPLAY UNIT (X14-3970-10) (A/2)



2

3

4

5

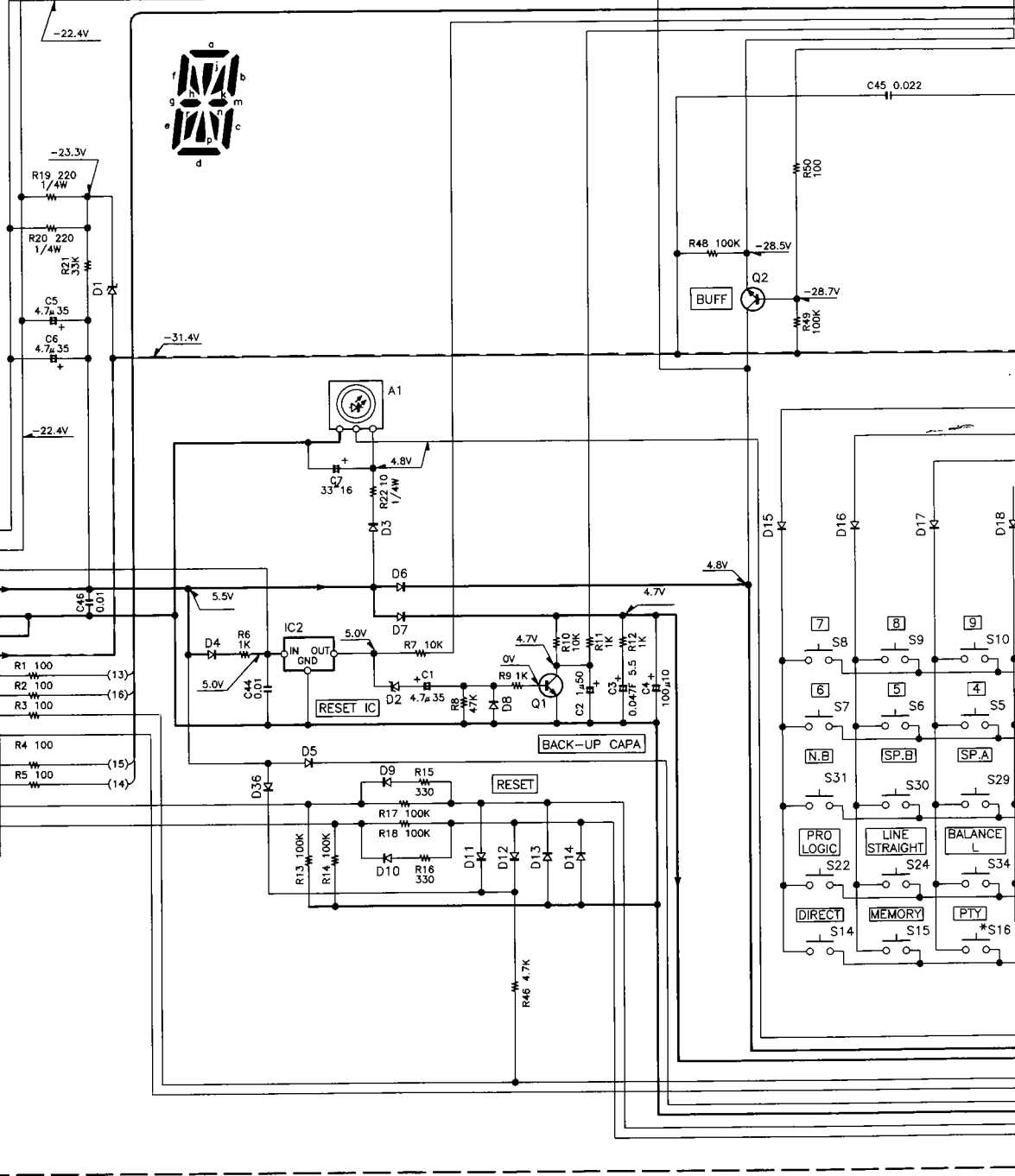
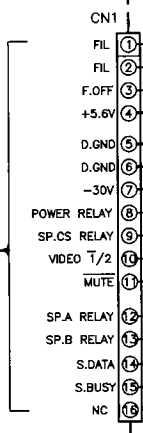
6

7

X07-A/7  
-CN22



X09-C/3  
-CN51



## PARTS LIST

### TUNER UNIT

| UNIT NO.    | Destination |
|-------------|-------------|
| X05-4460-13 | KS, PS      |
| X05-4460-23 | YS, MS      |
| X05-4460-73 | XS          |

### TUNER UNIT

| UNIT NO.    | Destination |
|-------------|-------------|
| X05-4532-70 | TS, ES, GS  |

### MAIN AMP UNIT

| UNIT NO.    | Destination |
|-------------|-------------|
| X07-2850-10 | KS, PS      |
| X07-2850-21 | MS          |
| X07-2850-51 | TS          |
| X07-2850-71 | XS          |
| X07-2852-71 | ES, GS      |
| X07-2852-91 | YS          |

### AUDIO UNIT

| UNIT NO.    | Destination        |
|-------------|--------------------|
| X09-4080-10 | KS, PS, YS, MS, XS |
| X09-4082-71 | TS, ES, GS         |

### DISPLAY UNIT

| UNIT NO.    | Destination |
|-------------|-------------|
| X14-3970-10 | KS, PS      |
| X14-3970-21 | YS, MS      |
| X14-3970-71 | XS          |
| X14-3972-71 | TS, ES, GS  |

No.1

| Ref. No.<br>参照番号 | Address<br>位 | New Parts<br>新部品番号 | Parts No.<br>部品番号 | Description<br>部 品 名 / 規 格     | Desti-<br>nation<br>仕 向 備 考 | Re-<br>marks<br>備 考 |
|------------------|--------------|--------------------|-------------------|--------------------------------|-----------------------------|---------------------|
| <b>KR-V7070</b>  |              |                    |                   |                                |                             |                     |
| 601              | 1A           | *                  | A01-3192-01       | METALLIC CABINET               | KPYMX                       |                     |
| 603              | 2A           | *                  | A09-0194-08       | BATTERY COVER                  | TEG                         |                     |
| 606              | 2A           | *                  | A60-0661-11       | PANEL                          | KPYMX                       |                     |
| 607              | 2A           | *                  | A60-0722-11       | PANEL                          | KPYMX                       |                     |
|                  | 2A           | *                  | A70-1006-05       | REMOTE CONTROLLER ASSY(-R0704) |                             |                     |
|                  | 2A           | *                  | A70-1009-05       | REMOTE CONTROLLER ASSY(-R0705) | TEG                         |                     |
| 612              | 3A           | *                  | B03-2924-13       | DRESSING PLATE                 | KPYMX                       |                     |
| 612              | 3A           | *                  | B03-2925-13       | DRESSING PLATE                 | TEG                         |                     |
| 614              | 3A           | *                  | B43-0287-04       | KENWOOD BADGE                  | KY                          |                     |
|                  |              | *                  | B46-0092-43       | WARRANTY CARD                  | X                           |                     |
|                  |              | *                  | B46-0096-53       | WARRANTY CARD                  |                             |                     |
|                  |              | *                  | B46-0121-33       | WARRANTY CARD                  | P                           |                     |
|                  |              | *                  | B46-0197-00       | QUESTIONNAIRE CARD             | K                           |                     |
|                  |              | *                  | B46-0310-03       | WARRANTY CARD                  | TEG                         |                     |
|                  |              | *                  | B58-0513-04       | CAUTION CARD (PRESET220-240)   | Y                           |                     |
|                  |              | *                  | B58-0964-13       | CAUTION CARD (UL)              | KY                          |                     |
|                  |              | *                  | B58-0945-13       | CAUTION CARD (P, T, X)         | XT                          |                     |
|                  |              | *                  | B58-0946-13       | CAUTION CARD (ELM)             | ME                          |                     |
|                  |              | *                  | B58-0947-03       | CAUTION CARD                   | P                           |                     |
|                  |              | *                  | B58-0970-13       | CAUTION CARD                   | G                           |                     |
|                  |              | *                  | B59-1104-00       | SERVICE DIRECTORY              | Y                           |                     |
|                  |              | *                  | B60-1870-00       | INSTRUCTION MANUAL (ENGLISH)   | KPYMX                       |                     |
|                  |              | *                  | B60-1871-00       | INSTRUCTION MANUAL (FRENCH)    | P                           |                     |
|                  |              | *                  | B60-1872-00       | INSTRUCTION MANUAL (SPA, CHI)  | K                           |                     |
|                  |              | *                  | B60-1873-00       | INSTRUCTION MANUAL (ENGLISH)   | TE                          |                     |
|                  |              | *                  | B60-1874-00       | INSTRUCTION MANUAL (FRE, DUT)  | E                           |                     |
|                  |              | *                  | B60-1875-00       | INSTRUCTION MANUAL (GERMANY)   | EG                          |                     |
|                  |              | *                  | B60-1877-00       | INSTRUCTION MANUAL (ITA, SPA)  | E                           |                     |
|                  |              | *                  | B60-2083-00       | INSTRUCTION MANUAL (TAIWANESE) | M                           |                     |
| 620              | 2A           | *                  | E03-0115-05       | AC PLUG ADAPTOR                | M                           |                     |
| 622              | 1D           | *                  | E30-2592-15       | AC POWER CORD                  | MEG                         |                     |
| 622              | 1D           | *                  | E30-2605-05       | AC POWER CORD                  | Y                           |                     |
| 622              | 1D           | *                  | E30-2650-05       | AC POWER CORD                  | KP                          |                     |
| 622              | 1D           | *                  | E30-2717-05       | AC POWER CORD                  | X                           |                     |
| 622              | 1D           | *                  | E30-2721-05       | AC POWER CORD                  | T                           |                     |
| 626              | 1B           | *                  | F20-1297-05       | INSULATING SHEET               |                             |                     |
| 627              | 1B           | *                  | F20-1301-04       | INSULATING BOARD               | T                           |                     |
| 628              | 1C           | *                  | F20-1322-05       | INSULATING BOARD               |                             |                     |
| 630              | 1A           | *                  | F20-1433-03       | INSULATING BOARD               | M                           |                     |
| 633              | 2C           | *                  | G11-2191-04       | CUSHION                        |                             |                     |
|                  |              | *                  | H50-1317-14       | ITEM CARTON CASE               | KPYXEG                      |                     |
|                  |              | *                  | H50-1318-14       | ITEM CARTON CASE               | M                           |                     |
|                  |              | *                  | H50-1320-14       | ITEM CARTON CASE               | T                           |                     |
|                  |              | *                  | H10-5915-02       | POLYSTYRENE FOAMED FIXTURE(L)  | KPYMXE                      |                     |
|                  |              | *                  | H10-5915-02       | POLYSTYRENE FOAMED FIXTURE(L)  | G                           |                     |
|                  |              | *                  | H10-5916-12       | POLYSTYRENE FOAMED FIXTURE(R)  | KPYMXE                      |                     |
|                  |              | *                  | H10-5916-12       | POLYSTYRENE FOAMED FIXTURE(R)  | G                           |                     |
|                  |              | *                  | H10-5917-02       | POLYSTYRENE FOAMED FIXTURE(L)  | T                           |                     |
|                  |              | *                  | H10-5918-02       | POLYSTYRENE FOAMED FIXTURE(R)  | T                           |                     |
|                  |              | *                  | H13-0147-14       | CARTON BOARD                   | X                           |                     |

x New Parts

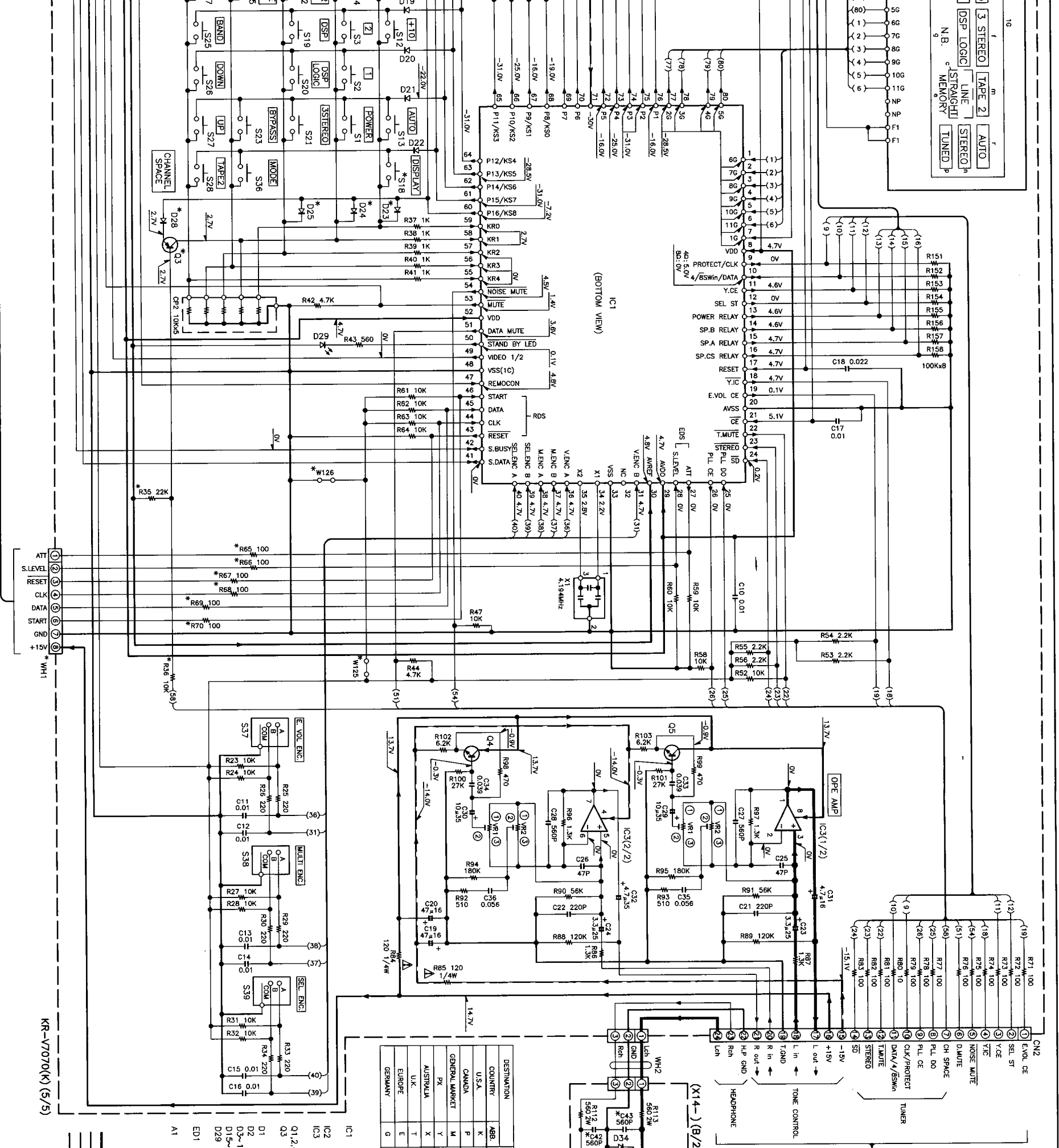
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

L: Scandinavia  
K: USA  
T: England  
Y: FX (Far East, Hawaii)  
Y: AAFES (Europe)

P: Canada  
E: Europe  
M: Other Areas

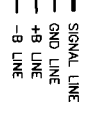
R: Mexico  
G: Germany

△ indicates safety critical components



| DESTINATION    | ABB. | UNIT NAME   | D23 | D24 | D25 | D28 | R53 | R55   | C41 | C42 | S16 | WH103 | WH217 | WH126 |
|----------------|------|-------------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-------|-------|-------|
| U.S.A.         | K    | X14-3970-10 | NO  | NO  | NO  | NO  | NO  | NO    | NO  | NO  | NO  | NO    | NO    | YES   |
| CANADA         | P    | X14-3970-10 | NO  | NO  | NO  | NO  | NO  | NO    | NO  | NO  | NO  | NO    | NO    | YES   |
| GENERAL MARKET | M    | X14-3970-21 | YES | YES | NO  | YES | YES | 0.01  | NO  | NO  | NO  | NO    | YES   | YES   |
| AUSTRALIA      | X    | X14-3970-71 | NO  | YES | NO  | NO  | NO  | 0.01  | NO  | NO  | NO  | NO    | NO    | YES   |
| U.K.           | T    | X14-3970-71 | NO  | YES | NO  | NO  | NO  | 0.01  | NO  | NO  | NO  | NO    | NO    | YES   |
| EUROPE         | E    | X14-3972-71 | NO  | YES | NO  | NO  | NO  | 0.022 | YES | YES | YES | YES   | NO    | NO    |
| GERMANY        | G    |             | NO  | YES | NO  | NO  | NO  | 0.022 | YES | YES | YES | YES   | NO    | NO    |

- IC1 : PD78045AGF-013 (E1,G TYPE)  
 : S-80740AL  
 : S-80740AL  
 : NJM4580D-0
- IC2 : 2SC17A0S(Q,R) or 2SC2785(F,E)  
 : S-80740AL  
 : ZSA9335(Q,R) or ZSA1175(F,E)
- IC3 : NJM4580D-0
- Q1,2,4,5 : 2SC17A0S(Q,R) or 2SC2785(F,E)  
 Q3 : S-80740AL  
 D1 : UZ-8, 2BS8 or RD8, 2ES(B2)  
 D2 : UZ-2, 7BS8 or RD2, 7ES(B2)  
 D3~14, 34~36 : HSS104 or 1SS133  
 D15~25, 28 : HSS104 or 1SS131  
 D29 : B30-2461-05  
 ED1 : 11-MT-996K  
 A1 : W02-1153-05 or W02-1174-05



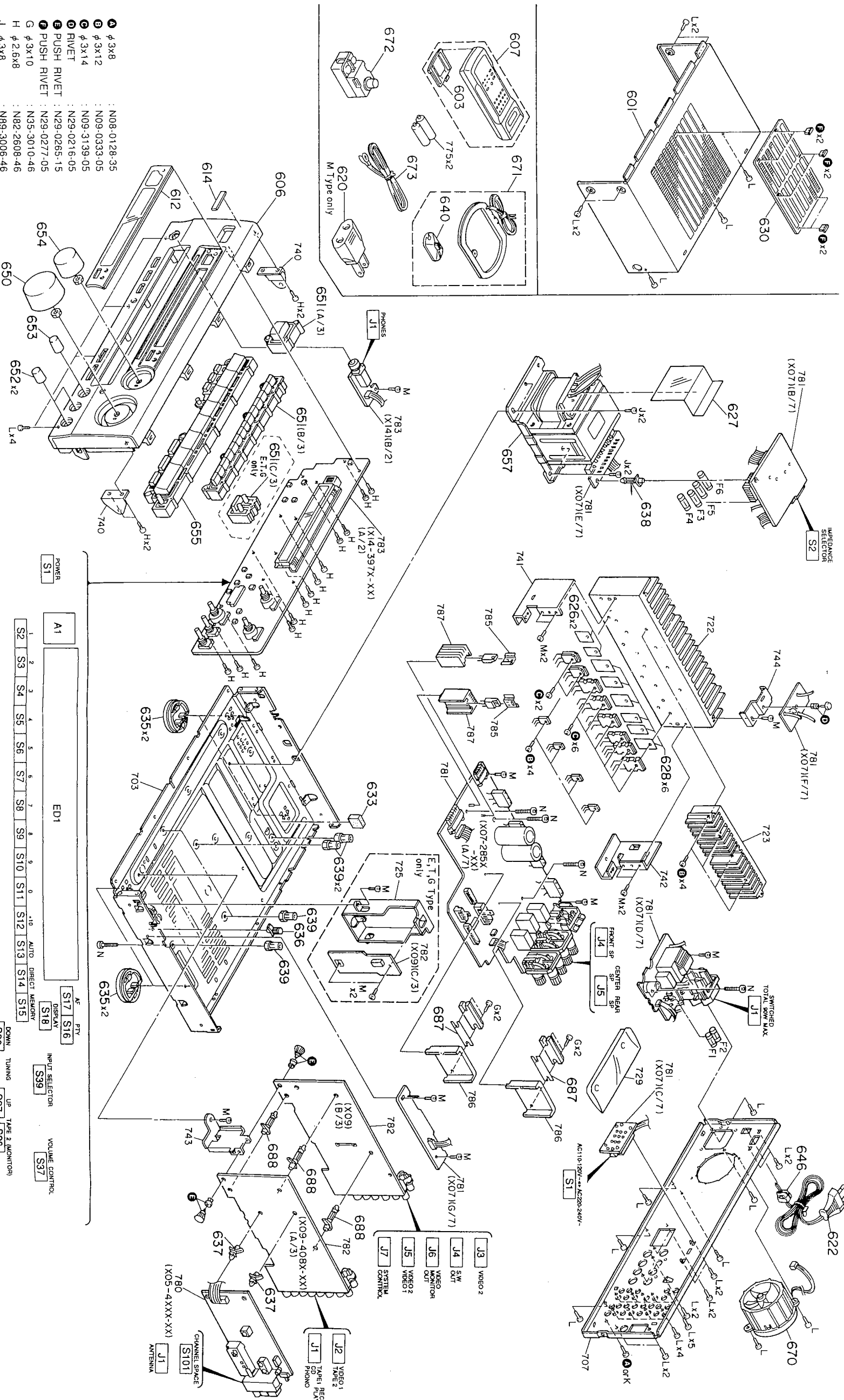
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or brand units.

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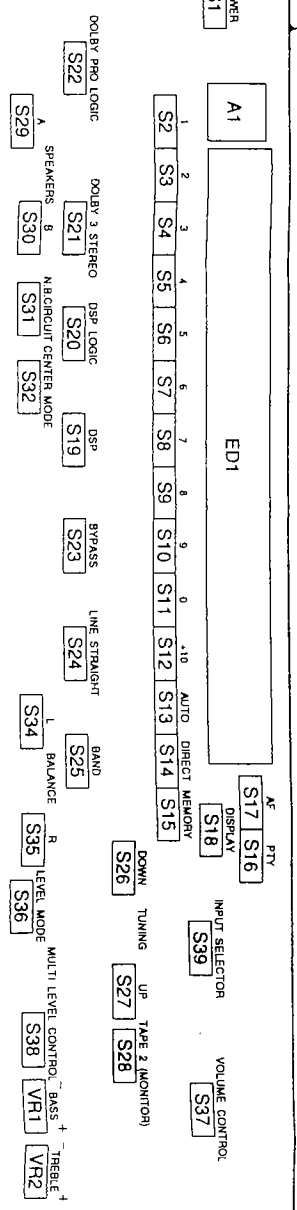
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

EXPLODED VIEW



- A φ 3x8 : N08-0128-35
- B φ 3x12 : N09-0333-05
- C φ 3x14 : N09-3139-05
- D RIVET : N29-0216-05
- E RIVET : N29-0265-15
- F PUSH RIVET : N29-0277-05
- G φ 3x10 : N35-3010-46
- H φ 2.6x8 : N82-2608-46
- I φ 3x8 : N89-3006-46
- J φ 3x8 : N89-3008-41
- K φ 3x8 : N89-3008-45
- L φ 3x8 : N89-3008-46
- M φ 3x8 : N89-3023-46
- N φ 3x23 : N89-3023-46



## PARTS LIST

No.3

\* New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnés dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

| Ref. No.<br>参照番号 | Address<br>位置 | New Parts<br>新置 | Parts No.<br>部品番号 | Description<br>部品名 / 規格       | Destination<br>仕向 | Re-<br>marks<br>備考 |
|------------------|---------------|-----------------|-------------------|-------------------------------|-------------------|--------------------|
| C28              |               |                 | CE04L1V100M       | ELECTRØ                       | KPYMX             |                    |
| C31              |               |                 | CE04L1A470M       | ELECTRØ                       | KPYMX             |                    |
| C32              |               |                 | CK73FB1H103K      | CHIP C                        | KPYMX             |                    |
| C33              |               |                 | CC73FCH1H20J      | CHIP C                        | KPYMX             |                    |
| C34              |               |                 | CC73FCH1H220J     | CHIP C                        | KPYMX             |                    |
| C35 -38          |               |                 | CK73FB1H471K      | CHIP C                        | KPYMX             |                    |
| C39              |               |                 | CE04LW1C470M      | ELECTRØ                       | KPYMX             |                    |
| C40              |               |                 | CK73FB1H223K      | CHIP C                        | KPYMX             |                    |
| C41              |               |                 | CE04LW1H010M      | ELECTRØ                       | KPYMX             |                    |
| C42 ,43          |               |                 | CK73FB1H103K      | CHIP C                        | KPYMX             |                    |
| C50              |               |                 | C91-0769-05       | CERAMIC                       | KPYMX             |                    |
| C51              |               |                 | CE04LW1H010M      | ELECTRØ                       | KPYMX             |                    |
| C52              |               |                 | CE04LW1C470M      | ELECTRØ                       | KPYMX             |                    |
| C57              |               |                 | CC73FSL1H220J     | CHIP C                        | KPYMX             |                    |
| C65              |               |                 | CE04LW1H010M      | ELECTRØ                       | KPYMX             |                    |
| C66              |               |                 | CK73FB1H102K      | CHIP C                        | KPYMX             |                    |
| C71              |               |                 | CE04LW1V100M      | ELECTRØ                       | KPYMX             |                    |
| C72              |               |                 | CE04LW1C470M      | ELECTRØ                       | KPYMX             |                    |
| C103-106         |               |                 | CE04LW1HR47M      | ELECTRØ                       | KPYMX             |                    |
| C107             |               |                 | CK73FB1E473K      | CHIP C                        | KPYMX             |                    |
| C112             |               |                 | CC73FSL1H101J     | CHIP C                        | KPYMX             |                    |
| C114             |               |                 | CK73FB1H681K      | CHIP C                        | KPYMX             |                    |
| C115, 116        |               |                 | CC73FSL1H101J     | CHIP C                        | KPYMX             |                    |
| C121, 122        |               |                 | CE04LW1C470M      | ELECTRØ                       | KPYMX             |                    |
| C135, 136        |               |                 | CG92FMIH682J      | MYLAR                         | YM                |                    |
| C182             |               |                 | CC73FSL1H150J     | CHIP C                        | KPYMX             |                    |
| J1               |               |                 | E20-0321-05       | LOCK TERMINAL BOARD ANTENNA   | KPYMX             |                    |
| CF1 ,2           |               |                 | L72-0531-05       | CERAMIC FILTER                | KPYMX             |                    |
| CF3              |               |                 | L72-0574-05       | CERAMIC FILTER                | KPYMX             |                    |
| L7               |               |                 | L30-0467-05       | AM IFT                        | KPYMX             |                    |
| L10              |               |                 | L40-1091-17       | SMALL FIXED INDUCTOR(1UH)     | KPYMX             |                    |
| L11              |               |                 | L40-1021-14       | SMALL FIXED INDUCTOR(1.0MH,K) | KPYMX             |                    |
| L12              |               |                 | L40-1091-17       | SMALL FIXED INDUCTOR(1UH)     | KPYMX             |                    |
| L103             |               |                 | L39-1328-05       | COMBINATION COIL              | KPYMX             |                    |
| L106             |               |                 | L40-1091-17       | SMALL FIXED INDUCTOR(1UH)     | KPYMX             |                    |
| X1               |               |                 | L77-1122-05       | CRYSTAL RESONATOR(7.2MHZ)     | KPYMX             |                    |
| X2               |               |                 | L78-0295-05       | RESONATOR (456KHZ)            | KPYMX             |                    |
| R11              |               |                 | RS14KB3A820J      | FL-PROOF RS 62                | KPYMX             |                    |
| R31              |               |                 | RS14KB3D221J      | FL-PROOF RS 220               | KPYMX             |                    |
| R42              |               |                 | RD14NB2E101J      | RD 100                        | KPYMX             |                    |
| R44              |               |                 | RD14NB2E470J      | RD 47                         | KPYMX             |                    |
| R117, 128        |               |                 | RD14NB2E101J      | RD 100                        | KPYMX             |                    |
| W46              |               |                 | R92-0670-05       | CHIP R 0 ØHM                  | KPYMX             |                    |
| W48              |               |                 | R92-0670-05       | CHIP R 0 ØHM                  | KPYMX             |                    |
| S101             |               |                 | S62-0034-05       | SLIDE SWITCH CHANNEL SPACE    | YM                |                    |
| D3               |               |                 | HZ55-1N(B2)       | ZENER DIODE                   | KPYMX             |                    |
| D3               |               |                 | R05-1ES(B2)       | ZENER DIODE                   | KPYMX             |                    |
| D4               |               |                 | HZ55-3K(B2)       | ZENER DIODE                   | KPYMX             |                    |
| D4               |               |                 | RJ3-3ES(B2)       | ZENER DIODE                   | KPYMX             |                    |
| D7               |               |                 | MA110             | DIODE                         | KPYMX             |                    |

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No.2

\* New Parts  
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| Ref. No.<br>参照番号                | Address<br>位置 | New Parts<br>新置 | Parts No.<br>部品番号 | Description<br>部品名 / 規格       | Destination<br>仕向 | Re-<br>marks<br>備考 |
|---------------------------------|---------------|-----------------|-------------------|-------------------------------|-------------------|--------------------|
| -                               |               |                 | H25-0232-04       | PROTECTION BAG (235X350X0.03) | KPYMX             |                    |
| -                               |               |                 | H25-0232-04       | PROTECTION BAG (235X350X0.03) | G                 |                    |
| -                               |               |                 | H25-0651-04       | PROTECTION BAG (0232 PRINTED) | T                 |                    |
| -                               |               |                 | H25-1516-04       | PROTECTION BAG                |                   |                    |
| 635                             | 3C            | *               | J02-1122-05       | FOOT (46mm)                   |                   |                    |
| 636                             | 2D            |                 | J19-3534-05       | UNIT HOLDER                   |                   |                    |
| 637                             | 2D, 3D        |                 | J19-3326-15       | UNIT HOLDER                   |                   |                    |
| 638                             | 1B            |                 | J19-3326-05       | UNIT HOLDER                   |                   |                    |
| 639                             | 2C            | *               | J19-3752-14       | UNIT HOLDER                   |                   |                    |
| 640                             | 2A            |                 | J19-3645-05       | LOOP ANTENNA STAND            |                   |                    |
| 646                             | 1D            |                 | J42-0083-05       | POWER CORD BUSHING            |                   |                    |
| -                               |               |                 | J61-0307-05       | WIRE BAND                     |                   |                    |
| 650                             | 3A            |                 | K29-5851-04       | KNØB (VOLUME CONTROL)         |                   |                    |
| 651                             | 2A, 2B        |                 | K29-6039-02       | KNØB (POWER/TOKEY/RDS)        |                   |                    |
| 652                             | 3B            |                 | K29-6041-04       | KNØB (BASS, TREBLE)           |                   |                    |
| 653                             | 3A            |                 | K29-6042-04       | KNØB (MULTI LEVEL CONTROL)    |                   |                    |
| 654                             | 3A            |                 | K29-6043-04       | KNØB (INPUT SELECTOR)         |                   |                    |
| 655                             | 3B            | *               | K29-6045-02       | KNØB                          |                   |                    |
| 657                             | 2B            | *               | L07-1842-05       | POWER TRANSFORMER             | KP                |                    |
| 657                             | 2B            | *               | L07-1844-05       | POWER TRANSFORMER             | YM                |                    |
| 657                             | 2B            | *               | L07-1845-05       | POWER TRANSFORMER             | X                 |                    |
| 657                             | 2B            | *               | L07-1846-05       | POWER TRANSFORMER             | TEG               |                    |
| A                               | 1D, 2C        |                 | N08-0128-35       | BINDING POST (GND)            | YMXTEG            |                    |
| B                               | 1C, 2C        |                 | N09-0333-05       | TAPPING SCREW (3X12)          |                   |                    |
| C                               | 1B, 1C        |                 | N09-3139-05       | TAPTITE SCREW (3X14)          |                   |                    |
| D                               | 1C            |                 | N29-0216-05       | RIVET                         |                   |                    |
| E                               | 2D, 3D        |                 | N29-0265-15       | PUSH RIVET                    |                   |                    |
| F                               | 1A            |                 | N29-0277-05       | PUSH RIVET                    |                   |                    |
| H                               | 2B, 3B        |                 | N82-2608-46       | BINDING HEAD TAPTITE SCREW    | M                 |                    |
| J                               | 1B            |                 | N86-3006-46       | BINDING HEAD TAPTITE SCREW    |                   |                    |
| K                               | 1D            |                 | N89-3008-41       | BINDING HEAD TAPTITE SCREW    | KP                |                    |
| L                               | 1D, 3B        |                 | N89-3008-45       | BINDING HEAD TAPTITE SCREW    |                   |                    |
| M                               | 1C, 2D        |                 | N89-3008-46       | BINDING HEAD TAPTITE SCREW    |                   |                    |
| N                               | 1C, 3C        |                 | N89-3023-46       | BINDING HEAD TAPTITE SCREW    |                   |                    |
| 670                             | 1D            | *               | T49-0025-02       | MØTØR ASSY                    |                   |                    |
| 671                             | 2A            |                 | T90-0195-05       | LOOP ANTENNA ASSY             |                   |                    |
| 672                             | 2A            |                 | T90-0198-05       | ANTENNA ADAPTOR               |                   |                    |
| 673                             | 2A            |                 | T90-0801-05       | LEAD WIRE ANTENNA             |                   |                    |
| <b>TUNER UNIT (X05-4460-XX)</b> |               |                 |                   |                               |                   |                    |
| C1 ,2                           |               |                 | CK73FB1H103K      | CHIP C                        | KPYMX             |                    |
| C4                              |               |                 | CE04LW1A470M      | ELECTRØ                       | KPYMX             |                    |
| C5                              |               |                 | CK73FB1H103K      | CHIP C                        | KPYMX             |                    |
| C8                              |               |                 | CK73FB1H103K      | CHIP C                        | KPYMX             |                    |
| C10                             |               |                 | CK73FB1H102K      | CHIP C                        | KPYMX             |                    |
| C11                             |               |                 | CE04LW1HR7M       | ELECTRØ                       | KPYMX             |                    |
| C13                             |               |                 | CE04LW1H010M      | ELECTRØ                       | KPYMX             |                    |
| C14                             |               |                 | CE04LW1H2R2M      | ELECTRØ                       | KPYMX             |                    |
| C21 ,22                         |               |                 | CG92FMIH163J      | MYLAR                         | YMX               |                    |
| C21 ,22                         |               |                 | CG92FMIH243J      | MYLAR                         | KP                |                    |
| C23                             |               |                 | CE04LW1H010M      | ELECTRØ                       | KPYMX             |                    |
| C24                             |               |                 | CE04LW1HR3M       | ELECTRØ                       | KPYMX             |                    |
| C25                             |               |                 | CE04LW1V100M      | ELECTRØ                       | KPYMX             |                    |
| C27                             |               |                 | CK73FB1B473K      | CHIP C                        | KPYMX             |                    |

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## PARTS LIST

No.5

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|------------------|---------------|----------------|-------------------|-------------------------------|--------------------------------|
| C42, 43          |               |                | CK73FB1H103K      | CHIP C                        | TEG                            |
| C44              |               |                | CE04LW1A470M      | ELECTR0                       | TEG                            |
| C45              |               |                | CE04LW1C470M      | ELECTR0                       | TEG                            |
| C46              |               |                | CE04LW1H010M      | ELECTR0                       | TEG                            |
| C47              |               |                | CK73FB1H103K      | CHIP C                        | TEG                            |
| C48              |               |                | CE04LW1H010M      | ELECTR0                       | TEG                            |
| C49              |               |                | CK73FB1H103K      | CHIP C                        | TEG                            |
| C50              |               |                | CC73FCH1H30J      | CHIP C                        | TEG                            |
| C51 -54          |               |                | CK73FB1H102K      | CHIP C                        | TEG                            |
| C55              |               |                | CK73FB1H222K      | CHIP C                        | TEG                            |
| C56              |               |                | CC73FCH1H060D     | CHIP C                        | TEG                            |
| C57              |               |                | CC73FCH1H220J     | CHIP C                        | TEG                            |
| C58              |               |                | CK73FB1E473K      | CHIP C                        | TEG                            |
| C60              |               |                | CC73FSL1H101J     | CHIP C                        | TEG                            |
| C61              |               |                | C91-0745-05       | CERAMIC                       | TEG                            |
| C62              |               |                | CC45FSL1H020C     | CERAMIC                       | TEG                            |
| J1               |               |                | E20-0321-05       | LOCK TERMINAL BOARD ANTENNA   | TEG                            |
| CF1, 2           |               |                | L72-0536-05       | CERAMIC FILTER                | TEG                            |
| L1, 2            |               |                | L79-1219-05       | LC FILTER                     | TEG                            |
| L3               |               |                | L30-0910-05       | FM IFT                        | TEG                            |
| L5               |               |                | L79-0125-05       | LC FILTER                     | TEG                            |
| L6               |               |                | L39-1328-05       | COMBINATION COIL              | TEG                            |
| L7               |               |                | L30-0467-05       | AM IFT                        | TEG                            |
| L8, 9            |               |                | L40-1091-17       | SMALL FIXED INDUCTOR(1UH, K)  | TEG                            |
| L11              |               |                | L40-1001-17       | SMALL FIXED INDUCTOR(10UH, K) | TEG                            |
| X1               |               |                | L77-1122-05       | CRYSTAL RESONATOR(7.2MHZ)     | TEG                            |
| X2               |               |                | L78-0295-05       | RESONATOR (456KHZ)            | TEG                            |
| R42              |               |                | RD14NB2E101J      | RD                            | TEG                            |
| R78              |               |                | RD14NB2E470J      | RD                            | TEG                            |
| R79              |               |                | RS14K95D221J      | FL-FR00F RS                   | TEG                            |
| W101-106         |               |                | R92-0670-05       | CHIP R                        | TEG                            |
| W108-112         |               |                | R92-0670-05       | CHIP R                        | TEG                            |
| W114-119         |               |                | R92-0670-05       | CHIP R                        | TEG                            |
| W121, 122        |               |                | R92-0670-05       | CHIP R                        | TEG                            |
| W201-203         |               |                | R92-0679-05       | CHIP R                        | TEG                            |
| W207, 208        |               |                | R92-0679-05       | CHIP R                        | TEG                            |
| D1, 2            |               |                | HSS104            | DIODE                         | TEG                            |
| D1, 2            |               |                | SS133             | DIODE                         | TEG                            |
| D3               |               |                | MTZJ5.1(B)        | ZENER DIODE                   | TEG                            |
| D4               |               |                | RD5.1ES(B2)       | ZENER DIODE                   | TEG                            |
| D4               |               |                | MTZJ6.2(B)        | ZENER DIODE                   | TEG                            |
| D4               |               |                | R08.2ES(B2)       | ZENER DIODE                   | TEG                            |
| D5               |               |                | HSS104            | DIODE                         | TEG                            |
| D5               |               |                | SS133             | DIODE                         | TEG                            |
| D6               |               |                | MTZJ3.3(B)        | ZENER DIODE                   | TEG                            |
| D6               |               |                | R03.3ES(B2)       | ZENER DIODE                   | TEG                            |
| D7               |               |                | MA110             | DIODE                         | TEG                            |
| D8               |               |                | SS268             | DIODE                         | TEG                            |
| D9               |               |                | MA110             | DIODE                         | TEG                            |
| TC1              |               |                | LA1836            | ANALOGUE IC                   | TEG                            |
| TC2              |               |                | LC7218            | IC(PLL SYNTHESIZER)           | TEG                            |

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|---------------------------------|---------------|----------------|---------------------|-------------------------|--------------------------------|
| D8                              |               |                | HSS104              | DIODE                   | KPYMX                          |
| D8                              |               |                | SS133               | DIODE                   | KPYMX                          |
| D11                             |               |                | HZ58.2N(B2)         | ZENER DIODE             | KPYMX                          |
| D11                             |               |                | RD8.2ES(B2)         | ZENER DIODE             | KPYMX                          |
| D111, 112                       |               |                | MA110               | DIODE                   | KPYMX                          |
| IC1                             |               |                | LA1831A-KEN         | ANALOGUE IC             | KPYMX                          |
| IC2                             |               |                | IC(PLL SYNTHESIZER) | IC(PLL SYNTHESIZER)     | KPYMX                          |
| IC12                            |               |                | IC(OP AMP X2)       | IC(OP AMP X2)           | KPYMX                          |
| Q1                              |               |                | NJ4565D             | TRANSISTOR              | KPYMX                          |
| Q2                              |               |                | 2SC2714(R, 0)       | TRANSISTOR              | KPYMX                          |
| Q3                              |               |                | 2SC1845(F, E)       | TRANSISTOR              | KPYMX                          |
| Q3                              |               |                | 2SC1740S(Q, R)      | TRANSISTOR              | KPYMX                          |
| Q3                              |               |                | 2SC2765(F, E)       | TRANSISTOR              | KPYMX                          |
| Q7                              |               |                | 2SC2412K            | TRANSISTOR              | KPYMX                          |
| Q11                             |               |                | 2SD865(B, F)        | TRANSISTOR              | KPYMX                          |
| Q102                            |               |                | 2SA1037K            | TRANSISTOR              | KPYMX                          |
| Q104                            |               |                | 2SA1037K            | TRANSISTOR              | KPYMX                          |
| Q107-110                        |               |                | 2SC2412K            | TRANSISTOR              | KPYMX                          |
| Q109, 110                       |               |                | 2SC2412K            | TRANSISTOR              | KPYMX                          |
| Q111                            |               |                | 2SA1037K            | TRANSISTOR              | KPYMX                          |
| DT1                             |               |                | W02-2512-05         | FM FRONT-END ASSY       | KPYMX                          |
| <b>TUNER UNIT (X05-4532-70)</b> |               |                |                     |                         |                                |
| C1, 2                           |               |                | CK73FB1H103K        | CHIP C                  | TEG                            |
| C3                              |               |                | CE04LW1V100M        | ELECTR0                 | TEG                            |
| C4                              |               |                | CK73FB1E473K        | CHIP C                  | TEG                            |
| C5                              |               |                | CE04LW1V100M        | ELECTR0                 | TEG                            |
| C6                              |               |                | CK73FB1E473K        | CHIP C                  | TEG                            |
| C7                              |               |                | CE04LW1V100M        | ELECTR0                 | TEG                            |
| C8                              |               |                | CE04LW1H010M        | ELECTR0                 | TEG                            |
| C9                              |               |                | CE04LW1HR47M        | ELECTR0                 | TEG                            |
| C10                             |               |                | CE04LW1HR2M         | ELECTR0                 | TEG                            |
| C11                             |               |                | CE04LW1HR47M        | ELECTR0                 | TEG                            |
| C12                             |               |                | CK73FB1E473K        | CHIP C                  | TEG                            |
| C13                             |               |                | CC73FCH1H220J       | CHIP C                  | TEG                            |
| C14                             |               |                | CE04LW1A101M        | ELECTR0                 | TEG                            |
| C15                             |               |                | CK73FB1H472K        | CHIP C                  | TEG                            |
| C16                             |               |                | CE04LW1H010M        | ELECTR0                 | TEG                            |
| C17, 18                         |               |                | CE04LW1V100M        | ELECTR0                 | TEG                            |
| C19, 20                         |               |                | CE04LW1H273T        | MYLAR                   | TEG                            |
| C21                             |               |                | CK73FB1H103K        | CHIP C                  | TEG                            |
| C22                             |               |                | CC73FSL1H101J       | CHIP C                  | TEG                            |
| C23, 24                         |               |                | CE04LW1HR2M         | ELECTR0                 | TEG                            |
| C25, 26                         |               |                | CK73FB1H562K        | CHIP C                  | TEG                            |
| C27                             |               |                | CK73FB1E473K        | CHIP C                  | TEG                            |
| C28                             |               |                | CK73FSL1H150J       | CHIP C                  | TEG                            |
| C29                             |               |                | CE04LW1HOR1M        | ELECTR0                 | TEG                            |
| C30                             |               |                | CE04LW1C470M        | ELECTR0                 | TEG                            |
| C31                             |               |                | CK73FB1E473K        | CHIP C                  | TEG                            |
| C32                             |               |                | CK73FB1H103K        | CHIP C                  | TEG                            |
| C33                             |               |                | CC73FCH1H270J       | CHIP C                  | TEG                            |
| C34                             |               |                | CC73FCH1H220J       | CHIP C                  | TEG                            |
| C35 -38                         |               |                | CC73FSL1H101J       | CHIP C                  | TEG                            |
| C39                             |               |                | CE04LW1C470M        | ELECTR0                 | TEG                            |
| C40                             |               |                | CE92FM1H223J        | MYLAR                   | TEG                            |
| C41                             |               |                | CE04HW1H2R2M        | NP-ELEC                 | TEG                            |

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|------------------|---------------|----------------|-------------------|-------------------------------|------------------------|
| C71, 72          |               |                | CC45FSL1H030C     | 3.0PF C                       |                        |
| C73, 74          |               |                | CC45FSL1H151J     | 150PF J                       |                        |
| C75, 76          |               |                | CE04LW1A101M      | 100UF 10WV                    |                        |
| C77, 78          |               |                | CC45FSL1H050C     | 5.0PF C                       |                        |
| C79, 80          |               |                | CC45FSL1H180J     | 18PF J                        |                        |
| C81, 82          |               |                | CC45FSL1H470J     | 47PF J                        |                        |
| C83, 84          |               |                | CC45FSL1H691K     | 680PF K                       |                        |
| C85, 86          |               |                | CE04LW1H010M      | 1.0UF 50WV                    |                        |
| C87, 88          |               |                | CE04LW2A100M      | 1.0UF 100WV                   |                        |
| C99              |               |                | CE04LW1A101M      | 100UF 10WV                    |                        |
| C100             |               |                | CE04LW1C101M      | 100UF 16WV                    |                        |
| C103-106         |               |                | CK45FF1H103Z      | 0.010UF Z                     | TEG                    |
| C107-110         |               |                | CF92FV1H224J      | 0.22UF J                      | KPYMX                  |
| C109, 110        |               |                | C993FMG1H104J     | 0.10UF J                      |                        |
| C113-116         |               |                | CK45FF1H103Z      | 0.010UF Z                     |                        |
| C117-120         |               |                | CF92FV1H224J      | 0.22UF J                      | TEG                    |
| C118, 119        |               |                | C993FMG1H104J     | 0.10UF J                      | KPYMX                  |
| C121-124         |               |                | CK45FF1H472Z      | 4700PF Z                      | TEG                    |
| C125-128         |               |                | CK45FB1H102K      | 1000PF K                      | KPYMX                  |
| C125, 126        |               |                | CK45FB1H332K      | 3300PF K                      | TEG                    |
| C127, 128        |               |                | CK45FB1H471K      | 470PF K                       | TEG                    |
| C129, 130        |               |                | CK45FB1H332K      | 3300PF K                      | TEG                    |
| C131             |               |                | CK45FB1H331K      | 390PF K                       | TEG                    |
| C132             |               |                | CE04LW1V457M      | 4.7UF 35WV                    |                        |
| C134             |               |                | CE04LW07221M      | 220UF 6.3WV                   |                        |
| C135             |               |                | C993FMG1H473J     | 0.047UF J                     |                        |
| J1               |               |                | E03-0148-05       | AC OULET                      | KP                     |
| J1               |               |                | E03-0149-05       | AC OULET                      | YMEG                   |
| J1               |               |                | E03-0310-05       | AC OULET                      | KPYMX                  |
| J4               |               |                | E70-0018-05       | SCREW TERMINAL BOARD FRONT SP | TEG                    |
| J4               |               |                | E70-0019-05       | SCREW TERMINAL BOARD FRONT SP |                        |
| J5               |               |                | E70-0046-05       | LOCK TERMINAL BOARD C-SP/R-SP |                        |
| 687              | 1D, 2C        |                | F20-1426-05       | INSULATING BOARD              | XTEG                   |
| F1               |               |                | F05-3121-05       | FUSE (SEMΚ0) (250V T3.15AL)   | TEG                    |
| F1               |               |                | F05-7026-05       | FUSE (UL) (250V 7A)           | YM                     |
| F1, 2            |               |                | F05-3121-05       | FUSE (SEMΚ0) (250V T3.15AL)   | YM                     |
| F2               |               |                | F05-2525-05       | FUSE (SEMΚ0) (250V T2.5AL)    | EG                     |
| F3, 4            |               |                | F04-1026-05       | FUSE (UL) (250V 1A)           | KP                     |
| F3, 4            |               |                | F06-1022-05       | FUSE (SEMΚ0) (250V T1AL)      | YMXTEG                 |
| F5, 6            |               |                | F05-1037-05       | FUSE (UL) (250V 10A)          | KP                     |
| F5, 6            |               |                | F05-6321-05       | FUSE (SEMΚ0) (250V T6.3A)     | YMXTEG                 |
| CN2, 13          |               |                | J13-0075-05       | FUSE CLIP                     | YMEG                   |
| CN2, 13          |               |                | J13-0047-05       | FUSE CLIP                     | KP                     |
| CN2, 13          |               |                | J13-0075-05       | FUSE CLIP                     | XT                     |
| CN6 -13          |               |                | J13-0075-05       | FUSE CLIP                     | KT                     |
| CN6 -9           |               |                | J13-0075-05       | FUSE CLIP                     | KP                     |
| CN10-13          |               |                | J13-0041-05       | FUSE CLIP                     | KP                     |
| J6 -8            |               |                | J11-0098-05       | WIRE CLAMPER                  |                        |
| L1 -4            |               |                | L39-0085-05       | PHASE COMPENSATION COIL       | KP                     |
| T1               |               |                | L07-1876-05       | POWER TRANSFORMER             | YM                     |
| T1               |               |                | L07-1877-05       | POWER TRANSFORMER             | X                      |
| T1               |               |                | L07-1878-05       | POWER TRANSFORMER             | X                      |
| T1               |               |                | L07-1879-05       | POWER TRANSFORMER             | TEG                    |

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No.6

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| Ref. No.<br>参照番号                   | Address<br>位置 | New Parts<br>新 | Parts No.<br>部品番号 | Description<br>部品名 / 規格 | Destination marks<br>仕 |
|------------------------------------|---------------|----------------|-------------------|-------------------------|------------------------|
| Ic3                                |               |                | M5223P            | IC(OP AMP X2)           | TEG                    |
| Q1                                 |               |                | 2SC2714(R,0)      | TRANSISTOR              | TEG                    |
| Q2                                 |               |                | 2SC1845(F,E)      | TRANSISTOR              | TEG                    |
| Q3 -5                              |               |                | 2SC4081(R,S)      | TRANSISTOR              | TEG                    |
| Q7, 8                              |               |                | 2SA1576(R,S)      | TRANSISTOR              | TEG                    |
| Q9                                 |               |                | 2SD863(E,F)       | TRANSISTOR              | TEG                    |
| Q10                                |               |                | 2SA1576(R,S)      | TRANSISTOR              | TEG                    |
| Q11, 12                            |               |                | 2SD1757K          | TRANSISTOR              | TEG                    |
| Q16                                |               |                | 2SC4081(R,S)      | TRANSISTOR              | TEG                    |
| Q17                                |               |                | 2SA1576(R,S)      | TRANSISTOR              | TEG                    |
| Q18                                |               |                | 2SC4081(R,S)      | TRANSISTOR              | TEG                    |
| A1                                 |               |                | EM FRONT-END ASSY |                         | TEG                    |
| <b>MAIN AMP UNIT (X07-285X-XX)</b> |               |                |                   |                         |                        |
| C1                                 |               |                | C91-1488-05       | 250VAC                  |                        |
| C2                                 |               |                | CK45FB1H103Z      | 0.010UF Z               |                        |
| C3                                 |               |                | CE04LW1V457M      | 4.7UF 35WV              |                        |
| C4                                 |               |                | CE04LW1B102M      | 1000UF 25WV             |                        |
| C5                                 |               |                | CK45FF1H223Z      | 0.022UF Z               |                        |
| C6, 7                              |               |                | CK45FE1H103Z      | 0.010UF Z               |                        |
| C8, 9                              |               |                | CK45FE2H103P      | 0.010UF P               |                        |
| C10, 11                            |               |                | CK45FE1H103Z      | 0.010UF Z               |                        |
| C12                                |               |                | CE04LW1C331M      | 330UF 16WV              |                        |
| C13                                |               |                | CK45FB1H102K      | 1000PF K                |                        |
| C14                                |               |                | CK45FE1H473Z      | 0.047UF Z               | KP                     |
| C15, 16                            |               |                | C90-3536-05       | ELECTR0                 |                        |
| C21, 22                            |               |                | CE04LW1V102M      | 1000UF 35WV             |                        |
| C23, 24                            |               |                | CE04LW1C470M      | 47UF 16WV               |                        |
| C25, 26                            |               |                | CK45FB1H102K      | 1000PF K                |                        |
| C27, 28                            |               |                | CE04LW1C470M      | 47UF 16WV               |                        |
| C29                                |               |                | CE04LW1A470M      | 47UF 10WV               |                        |
| C30                                |               |                | CE04LW1J221M      | 220UF 63WV              |                        |
| C31                                |               |                | CE04LW1A470M      | 47UF 10WV               |                        |
| C32                                |               |                | CE04LW1V100M      | 10UF 35WV               |                        |
| C33                                |               |                | CE04LW1C470M      | 47UF 16WV               |                        |
| C34                                |               |                | CC45FSL1H331J     | 330PF J                 |                        |
| C35                                |               |                | CE04LW1C330M      | 330UF 16WV              | TEG                    |
| C36                                |               |                | CE04LW1V457M      | 4.7UF 35WV              |                        |
| C37                                |               |                | CE04LW1V100M      | 10UF 35WV               |                        |
| C38                                |               |                | CK45FF1H103Z      | 0.010UF Z               | TEG                    |
| C39                                |               |                | CC45FSL1H101J     | 100PF J                 | TEG                    |
| C40                                |               |                | CC45FSL1H101J     | 100PF J                 | TEG                    |
| C41, 42                            |               |                | CE04LW1A470M      | 47UF 10WV               |                        |
| C51, 52                            |               |                | CC45FSL1H030C     | 3.0PF C                 |                        |
| C53, 54                            |               |                | CC45FSL1H151J     | 150PF J                 | KPYMX                  |
| C55, 56                            |               |                | CK45FB1H391K      | 390PF K                 | TEG                    |
| C55, 56                            |               |                | CE04LW1A101M      | 100UF 10WV              | KPYMX                  |
| C57, 58                            |               |                | CC45FSL1H050C     | 5.0PF C                 |                        |
| C59, 60                            |               |                | CC45FSL1H180J     | 18PF J                  |                        |
| C61, 62                            |               |                | CC45FSL1H470J     | 47PF J                  |                        |
| C63, 64                            |               |                | CK45FB1H102K      | 1000PF K                | TEG                    |
| C63, 64                            |               |                | CK45FB1H681K      | 680PF K                 | KPYMX                  |
| C65, 66                            |               |                | CE04LW1H010M      | 1.0UF 50WV              |                        |
| C67, 68                            |               |                | CE04LW1A101M      | 100UF 10WV              |                        |

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## PARTS LIST

No.9

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|------------------|---------------|----------------|-------------------|-------------------------|-----------------------|--------------------|
| D20              |               | *              | UZ-3.9BSB         | ZENER DIODE             |                       |                    |
| D21 -24          |               |                | S56688            | DIODE                   |                       |                    |
| D21 -24          |               |                | 1SR139-100        | DIODE                   |                       |                    |
| D25              |               |                | R08-2ES(B2)       | ZENER DIODE             |                       |                    |
| D25              |               |                | UZ-6.2BSB         | ZENER DIODE             |                       |                    |
| D26              |               |                | R06-2ES(B2)       | ZENER DIODE             |                       |                    |
| D26              |               |                | UZ-6.2BSB         | ZENER DIODE             |                       |                    |
| D27, 28          |               |                | RD16ES(B2)        | ZENER DIODE             |                       |                    |
| D27, 28          |               |                | UZ-16BSB          | ZENER DIODE             |                       |                    |
| D29              |               |                | R06-2ES(B2)       | ZENER DIODE             |                       |                    |
| D29              |               |                | UZ-6.2BSB         | ZENER DIODE             |                       |                    |
| D30              |               |                | RD2.7ES(B2)       | ZENER DIODE             |                       |                    |
| D31 -33          |               |                | UZ-2.7BSB         | ZENER DIODE             |                       |                    |
| D31 -33          |               |                | HSS104            | DIODE                   |                       |                    |
| D31 -33          |               |                | 1SS133            | DIODE                   |                       |                    |
| D42 -44          |               |                | HSS104            | DIODE                   |                       |                    |
| D42 -44          |               |                | 1SS133            | DIODE                   |                       |                    |
| D51, 52          |               |                | HSS104            | DIODE                   |                       |                    |
| D51, 52          |               |                | 1SS133            | DIODE                   |                       |                    |
| D71 -75          |               |                | HSS104A           | DIODE                   |                       |                    |
| D71 -75          |               |                | 1SS131            | DIODE                   |                       |                    |
| D76              |               |                | RD5.6ES(B2)       | ZENER DIODE             |                       |                    |
| D76              |               |                | UZ-5.6BSB         | ZENER DIODE             |                       |                    |
| D81              |               |                | HSS104            | DIODE                   |                       |                    |
| D81              |               |                | 1SS133            | DIODE                   |                       |                    |
| D82              |               |                | RD5.6ES(B2)       | ZENER DIODE             |                       |                    |
| D82              |               |                | UZ-5.6BSB         | ZENER DIODE             |                       |                    |
| D83              |               |                | HSS104            | DIODE                   |                       |                    |
| D83              |               |                | 1SS133            | DIODE                   |                       |                    |
| D91 -96          |               |                | HSS104            | DIODE                   |                       |                    |
| D91 -96          |               |                | 1SS133            | DIODE                   |                       |                    |
| IC1, 2           |               |                | UPC2581V          | IC SET                  |                       |                    |
| Q1               |               |                | 2SC2003(L,K)      | TRANSISTOR              |                       |                    |
| Q2               |               |                | 2SA992(F,E)       | TRANSISTOR              |                       |                    |
| Q3, 4            |               |                | 2SD2012           | TRANSISTOR              |                       |                    |
| Q3, 4            |               |                | 2SD2061           | TRANSISTOR              |                       |                    |
| Q3, 4            |               |                | 2SD2374           | TRANSISTOR              |                       |                    |
| Q5               |               |                | 2SC1740S(Q,R)     | TRANSISTOR              |                       |                    |
| Q5               |               |                | 2SC2785(F,E)      | TRANSISTOR              |                       |                    |
| Q6               |               |                | 2SA1175(F,E)      | TRANSISTOR              |                       |                    |
| Q6               |               |                | 2SA933S(Q,R)      | TRANSISTOR              |                       |                    |
| Q7               |               |                | 2SC1740S(Q,R)     | TRANSISTOR              |                       |                    |
| Q7               |               |                | 2SC2785(F,E)      | TRANSISTOR              |                       |                    |
| Q8               |               |                | 2SA1175(F,E)      | TRANSISTOR              |                       |                    |
| Q8               |               |                | 2SA933S(Q,R)      | TRANSISTOR              |                       |                    |
| Q9               |               |                | 2SC3940A(R,S)     | TRANSISTOR              |                       |                    |
| Q10              |               |                | 2SA1534A(R,S)     | TRANSISTOR              |                       |                    |
| Q11 -14          |               |                | 2SC1845(F,E)      | TRANSISTOR              |                       |                    |
| Q21 -23          |               |                | 2SC1740S(Q,R)     | TRANSISTOR              |                       |                    |
| Q21 -23          |               |                | 2SC2785(F,E)      | TRANSISTOR              |                       |                    |
| Q27, 28          |               |                | 2SC1845(F,E)      | TRANSISTOR              |                       |                    |
| Q29              |               |                | 2SA992(F,E)       | TRANSISTOR              |                       |                    |
| Q31 -34          |               |                | DTC124ES          | DIGITAL TRANSISTOR      |                       |                    |
| Q31 -34          |               |                | UN4212            | TRANSISTOR              |                       |                    |
| Q41              |               |                | 2SB1370           | TRANSISTOR              |                       |                    |

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|------------------|---------------|----------------|-------------------|-----------------------------|-----------------------|--------------------|
| G                | 1D, 2C        |                | N35-3010-46       | BINDING HEAD MACHINE SCREW  |                       |                    |
| CP1 -3           |               |                | R90-0840-05       | RD 0.22                     | SW                    |                    |
| CP4              |               |                | R90-0868-05       | MULTIPLE RESISTOR           |                       |                    |
| R1               |               |                | R92-1769-05       | CARBON                      | J 1/2W                |                    |
| R6               |               |                | RD14NB2E470J      | RD 47                       | J 1/4W                | KP                 |
| R9               |               |                | RS14KB3A103J      | FL-PROOF RS 10K             | J 1W                  |                    |
| R10 -12          |               |                | RD14NB2E4R7J      | RD 4.7                      | J 1/4W                |                    |
| R30              |               |                | RD14NB2E682J      | RD 6.8K                     | J 1/4W                |                    |
| R33              |               |                | RD14NB2E101J      | RD 100                      | J 1/4W                |                    |
| R41              |               |                | RS14KB3A680J      | FL-PROOF RS 68              | J 1W                  |                    |
| R43              |               |                | RS14KB3A680J      | FL-PROOF RS 68              | J 1W                  |                    |
| R45              |               |                | RS14KB3A103J      | FL-PROOF RS 10K             | J 1W                  |                    |
| R98              |               |                | RD14NB2E332J      | RD 3.3K                     | J 1/4W                |                    |
| R105-108         |               |                | RD14NB2E271J      | RD 270                      | J 1/4W                |                    |
| R109, 110        |               | *              | RD14NB2E272J      | RD 2.7K                     | J 1/4W                |                    |
| R117-120         |               |                | RD14NB2E271J      | RD 270                      | J 1/4W                |                    |
| R121, 122        |               | *              | RD14NB2E272J      | RD 2.7K                     | J 1/4W                |                    |
| R125-128         |               |                | RS14KB3D4R7J      | FL-PROOF RS 4.7             | J 2W                  |                    |
| R137-140         |               |                | RD14NB2E100J      | RD 100                      | J 1/4W                |                    |
| R150-152         |               |                | RS14KB3D271J      | FL-PROOF RS 270             | J 2W                  | KPYMX              |
| R150-153         |               |                | RS14KB3D271J      | FL-PROOF RS 270             | J 2W                  | TEG                |
| R154             |               |                | RS14KB3D101J      | FL-PROOF RS 100             | J 2W                  |                    |
| R167             |               |                | RD14NB2E470J      | RD 47                       | J 1/4W                |                    |
| R177             |               |                | RS14KB3A330J      | FL-PROOF RS 33              | J 1W                  |                    |
| VR1 -4           |               |                | R12-1617-05       | TRIMMING POT. (2.2K)        |                       |                    |
| K1               |               |                | S76-0002-05       | MAGNETIC RELAY              |                       |                    |
| K2 -4            |               |                | S51-2078-05       | MAGNETIC RELAY              |                       |                    |
| K2 -4            |               |                | S51-2092-05       | MAGNETIC RELAY              |                       |                    |
| S1               |               |                | S31-3010-05       | SLIDE SWITCH AC VOLTAGE SEL |                       | YM                 |
| S2               |               |                | S31-2136-05       | SLIDE SWITCH IMPEDANCE SEL  |                       |                    |
| D1 -4            |               |                | S56688            | DIODE                       |                       |                    |
| D1 -4            |               |                | 1SR139-100        | DIODE                       |                       |                    |
| D5, 6            |               |                | HSS104A           | DIODE                       |                       |                    |
| D5, 6            |               |                | 1SS131            | DIODE                       |                       |                    |
| D7               |               |                | HSS104            | DIODE                       |                       |                    |
| D7               |               |                | 1SS133            | DIODE                       |                       |                    |
| D8               |               |                | D5FB20-4002-L20   | DIODE                       |                       |                    |
| D9, 10           |               |                | HSS104A           | DIODE                       |                       |                    |
| D9, 10           |               |                | 1SS131            | DIODE                       |                       |                    |
| D11, 12          |               |                | S56688            | DIODE                       |                       |                    |
| D11, 12          |               |                | 1SR139-100        | DIODE                       |                       |                    |
| D13              |               |                | RD5.6ES(B2)       | ZENER DIODE                 |                       |                    |
| D13              |               |                | UZ-5.6BSB         | ZENER DIODE                 |                       |                    |
| D14              |               |                | HSS104            | DIODE                       |                       |                    |
| D14              |               |                | 1SS133            | DIODE                       |                       |                    |
| D15              |               |                | HSS104A           | DIODE                       |                       |                    |
| D15              |               |                | 1SS133            | DIODE                       |                       |                    |
| D16              |               |                | RD4.7ES(B)        | ZENER DIODE                 |                       |                    |
| D16              |               |                | UZ-4.7BS          | ZENER DIODE                 |                       |                    |
| D17              |               |                | RD2.7ES(B2)       | ZENER DIODE                 |                       |                    |
| D17              |               |                | UZ-2.7BSB         | ZENER DIODE                 |                       |                    |
| D18, 19          |               |                | RD6.8ES(B2)       | ZENER DIODE                 |                       |                    |
| D18, 19          |               | *              | UZ-6.8BSB         | ZENER DIODE                 |                       |                    |
| D20              |               |                | RD3.9ES(B2)       | ZENER DIODE                 |                       |                    |

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Table with columns: Ref. No., Address, New Parts, Parts No., Description, Destination, Remarks. Rows include various transistor and audio unit components.

Table with columns: Ref. No., Address, New Parts, Parts No., Description, Destination, Remarks. Rows include various electronic components like capacitors, resistors, and integrated circuits.

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PARTS LIST

KR-V7070 KR-V7070

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# KR-V7070

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# SPECIFICATIONS

| Ref. No.                          | Address | New Parts | Parts No.     | Description                   | Desti-nation | Re-marks |
|-----------------------------------|---------|-----------|---------------|-------------------------------|--------------|----------|
| 参照番号                              | 位置      | 新         | 部品番号          | 部品名/規格                        | 仕            | 備考       |
| Q24                               |         |           | 2SA1175(F,E)  | TRANSISTOR                    |              |          |
| Q24                               |         |           | 2SA9335(Q,R)  | TRANSISTOR                    |              |          |
| Q25                               |         |           | 2SC1740S(Q,R) | TRANSISTOR                    |              |          |
| Q25                               |         |           | 2SC2785(F,E)  | TRANSISTOR                    |              |          |
| <b>DISPLAY UNIT (X14-397X-XX)</b> |         |           |               |                               |              |          |
| D29                               |         |           | B30-2461-05   | LED(RED)                      |              |          |
| C1                                |         |           | CE04LW1V4R7M  | ELECTRO                       |              |          |
| C2                                |         |           | CE04LW1H010M  | ELECTRO                       |              |          |
| C3                                |         |           | C90-1827-05   | ELECTRO                       |              |          |
| C4                                |         |           | CE04LW1A101M  | ELECTRO                       |              |          |
| C5                                | ,6      |           | CE04LW1V4R7M  | ELECTRO                       |              |          |
| C7                                |         |           | CE04LW1C330M  | ELECTRO                       |              |          |
| C10                               | -14     |           | C91-0769-05   | CERAMIC                       |              |          |
| C15                               | ,16     |           | CK45FF1H103Z  | CERAMIC                       |              |          |
| C17                               |         |           | C91-0769-05   | CERAMIC                       |              |          |
| C18                               |         |           | C91-0085-05   | CERAMIC                       |              |          |
| C19                               | ,20     |           | C90-3228-05   | ELECTRO                       |              |          |
| C21                               | ,22     |           | C91-0749-05   | CERAMIC                       |              |          |
| C23                               | ,24     |           | C90-3231-05   | ELECTRO                       |              |          |
| C25                               | ,26     |           | C91-0737-05   | CERAMIC                       |              |          |
| C27                               |         |           | C91-0754-05   | CERAMIC                       |              |          |
| C28                               |         |           | CK45FB1H561K  | CERAMIC                       |              |          |
| C29                               | ,30     |           | CE04LW1V100M  | ELECTRO                       |              |          |
| C31                               |         |           | C90-3224-05   | ELECTRO                       |              |          |
| C32                               |         |           | CE04LW1V4R7M  | ELECTRO                       |              |          |
| C33                               | ,34     |           | CQ93FMG1H393J | MYLAR                         |              |          |
| C35                               | ,36     |           | CQ93FMG1H563J | MYLAR                         |              |          |
| C41                               |         |           | CK45FF1H103Z  | CERAMIC                       |              |          |
| C42                               |         |           | CQ93FMG1H223J | MYLAR                         |              |          |
| C43                               | ,43     |           | CK45FB1H561K  | CERAMIC                       |              |          |
| C44                               |         |           | CK45FF1H103Z  | CERAMIC                       |              |          |
| C45                               |         |           | CQ93FMG1H223J | MYLAR                         |              |          |
| C46                               |         |           | CK45FF1H103Z  | CERAMIC                       |              |          |
| J1                                |         |           | E11-0190-05   | PHONE JACK PHONES             |              |          |
|                                   |         |           | L78-0267-05   | RESONATOR (4.194MHz)          |              |          |
| X1                                |         |           | R90-0856-05   | MULTI-COMP                    |              |          |
| CP2                               |         |           | RD14NB2E221J  | RD                            |              |          |
| R19                               | ,20     |           | RD14NB2E100J  | RD                            |              |          |
| R22                               |         |           | RD14NB2E121J  | RD                            |              |          |
| R84                               | ,85     |           | RS14KB3D561J  | FL-PROOF RS                   |              |          |
| R112                              | ,113    |           | R31-0036-05   | VARIABLE RESISTOR             |              |          |
| VR1                               | ,2      |           | S40-1064-05   | PUSH SWITCH                   |              |          |
| S1                                | -15     |           | S40-1064-05   | PUSH SWITCH AF/PTY/DISPLAY    |              |          |
| S16                               | -18     |           | S40-1064-05   | PUSH SWITCH                   |              |          |
| S19                               | -32     |           | S40-1064-05   | PUSH SWITCH                   |              |          |
| S34                               | -36     |           | T99-0554-05   | ROTARY ENCODER VOLUME CONTROL |              |          |
| S37                               |         |           | T99-0547-05   | SPEED DETECTOR INPUT/MULTI    |              |          |
| S38                               | ,39     |           | RD8.2ES(B2)   | ZENER DIODE                   |              |          |
| D1                                |         |           | UZ-8.2BSB     | ZENER DIODE                   |              |          |
| D1                                |         |           |               |                               |              |          |

| Ref. No. | Address | New Parts | Parts No.       | Description             | Desti-nation | Re-marks |
|----------|---------|-----------|-----------------|-------------------------|--------------|----------|
| 参照番号     | 位置      | 新         | 部品番号            | 部品名/規格                  | 仕            | 備考       |
| D2       |         |           | RD2.7ES(B2)     | ZENER DIODE             |              |          |
| D2       |         |           | UZ-2.7BSB       | ZENER DIODE             |              |          |
| D3       | -14     |           | HSS104          | DIODE                   |              |          |
| D3       | -14     |           | 1SS133          | DIODE                   |              |          |
| D15      | -22     |           | HSS104A         | DIODE                   |              |          |
| D15      | -22     |           | 1SS131          | DIODE                   |              |          |
| D15      | -23     |           | HSS104A         | DIODE                   |              |          |
| D15      | -23     |           | 1SS131          | DIODE                   |              |          |
| D15      | -24     |           | HSS104A         | DIODE                   |              |          |
| D15      | -24     |           | 1SS131          | DIODE                   |              |          |
| D25      |         |           | HSS104A         | DIODE                   |              |          |
| D25      |         |           | 1SS131          | DIODE                   |              |          |
| D28      |         |           | HSS104A         | DIODE                   |              |          |
| D28      |         |           | 1SS131          | DIODE                   |              |          |
| D34      | -36     |           | HSS104          | DIODE                   |              |          |
| D34      | -36     |           | 1SS133          | DIODE                   |              |          |
| ED1      |         |           | 11-MT-99GK      | INDICATOR TUBE          |              |          |
| IC1      |         |           | UPD78044AGF-071 | MI-COM IC               |              |          |
| IC1      |         | *         | UPD78045AGF-013 | MI-COM IC               |              |          |
| IC2      |         |           | S-80740AL       | IC(VOLTAGE DETECTOR)    |              |          |
| IC3      |         |           | NJH4580D-D      | IC(OP AMP X2)           |              |          |
| Q1       | ,2      |           | 2SC1740S(Q,R)   | TRANSISTOR              |              |          |
| Q1       | ,2      |           | 2SC2785(F,E)    | TRANSISTOR              |              |          |
| Q3       |         |           | 2SA1175(F,E)    | TRANSISTOR              |              |          |
| Q3       |         |           | 2SA9335(Q,R)    | TRANSISTOR              |              |          |
| Q4       | ,5      |           | 2SC1740S(Q,R)   | TRANSISTOR              |              |          |
| Q4       | ,5      |           | 2SC2785(F,E)    | TRANSISTOR              |              |          |
| A1       |         |           | W02-1153-05     | ELECTRIC CIRCUIT MODULE |              |          |
| A1       |         |           | W02-1174-05     | ELECTRIC CIRCUIT MODULE |              |          |

L: Scandinavia K: USA P: Canada R: Mexico  
 Y: PX (Far East, Hawaii) T: England E: Europe G: Germany  
 Y: AAFES (Europe) X: Australia M: Other Areas

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**Audio section**  
 Rated power output at the STEREO operation  
 100 watts per channel minimum RMS, both channels driven at 8 Ω, from 20 Hz to 20,000 Hz with no more than 0.06 % total harmonic distortions. (FTC)  
 Power output at the Surround operation  
 Front  
 100 watts per channel minimum RMS, both channels driven at 8 Ω, 1 KHz with no more than 0.7 % total harmonic distortions. (FTC)  
 Center  
 100 watts per channel minimum RMS, both channels driven at 8 Ω, 1 KHz with no more than 0.7 % total harmonic distortions. (FTC)  
 Rear  
 28 watts per channel minimum RMS, both channels driven at 8 Ω, 1 KHz with no more than 0.7 % total harmonic distortions. (FTC)

Total harmonic distortion (1 KHz, 8 Ω) ..... 0.01 % at 50 W  
 Signal to noise ratio (IHF A)  
 PHONO (MM) ..... 75 dB  
 CD ..... 98 dB  
 Input sensitivity / impedance  
 PHONO (MM) ..... 2.5 mV / 47 kΩ  
 CD, TAPE, VIDEO ..... 200 mV / 47 kΩ  
 Output level / impedance  
 S.W. OUT ..... 2.0 V / 600 Ω

Tone controls  
 BASS ..... ± 10 dB (at 100 Hz)  
 TREBLE ..... ± 10 dB (at 10 kHz)  
 N.B. circuit ..... + 9 dB (70 Hz)  
**Video section**  
 Video inputs / outputs (Composite) ..... 1 Vp-p / 75 Ω

**FM Tuner section**  
 Tuning frequency range ..... 87.5 MHz - 108 MHz  
 Usable sensitivity (IHF) ..... 13.2 dBf (11.2 μV at 75 Ω)  
 50 dB quieting sensitivity  
 STEREO ..... 41.2 dBf (32 μV at 75 Ω)  
 Total harmonic distortion at 1 kHz  
 MONO ..... 0.6 %  
 STEREO ..... 0.7 %  
 Signal to noise ratio at 65 dBf (IHF)  
 MONO ..... 75 dB  
 STEREO ..... 68 dB  
 Selectivity (IHF ± 400 kHz) ..... 50 dB  
 Stereo separation (IHF at 1 kHz) ..... 40 dB  
 Frequency response ..... 30 Hz - 15 KHz, + 0.5 dB, - 3.0 dB

**AM Tuner section**  
 Tuning frequency range ..... 530 kHz - 1,700 kHz  
 Usable sensitivity ..... 12 μV / (500 μV / m)  
 Total harmonic distortion ..... 0.7 %  
 Signal to noise ratio ..... 48 dB  
 Selectivity ..... 30 dB

**General**  
 Power consumption ..... 3.5 A  
 AC outlet  
 SWITCHED ..... 2. (total 150 W, 1.25 A max.)  
 Dimensions  
 W: 440 mm (17-5/16")  
 H: 144 mm (5-11/16")  
 D: 347 mm (13-11/16")  
 Weight (net) ..... 9.8 kg (21.6 lb)

Kenwood follows a policy of continuous advancements in development.  
 For this reason specifications may be changed without notice.

**Note:**  
 Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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