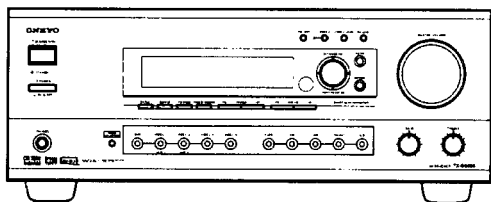


ONKYO® SERVICE MANUAL

Ref. No. 3678

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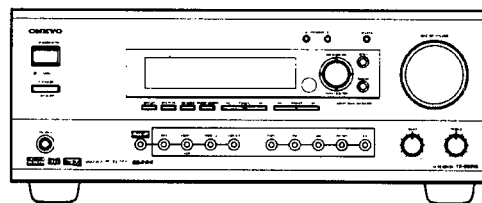
AUDIO VIDEO CONTROL RECEIVER MODEL TX-DS696



Black, Golden and Silver models

BMDD	120V AC, 60Hz
BMPP,SMPP BMPA,GMPA	230-240V AC, 50Hz
BMWT,GMWT GMWR	220-230V/120V AC, 50/60 Hz


AUDIO VIDEO CONTROL RECEIVER MODEL TX-DS595



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BMPP,SMPP BMPA,GMPA	230-240V AC, 50Hz
BMWT,GMWT GMWR	220-230V/120V AC, 50/60 Hz
GMGT	220-230V AC,50 Hz

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBER APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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SPECIFICATIONS

AMPLIFIER SECTION

Continuous Average Power output (FTC)

All channels: 75 W per channel min. RMS at 8 Ω , 2 channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion. 100 W min. RMS at 6 Ω , 2 channels driven from 1 kHz with no more than 0.1% total harmonic distortion.

Continuous Power output (DIN)	110 W at 6 Ω
Maximum Power output (EIAJ)	140 W at 6 Ω
Dynamic Power Output (Stereo)	2 \times 210 W at 3 Ω 2 \times 155 W at 4 Ω 2 \times 90 W at 8 Ω
Total Harmonic Distortion:	0.08% at rated power 0.08% at 1 W output
IM Distortion:	0.08% at rated power 0.08% at 1 W output
Damping Factor:	60 at 8 Ω
Input Sensitivity and Impedance	
PHONO:	2.5 mV, 50 k Ω
LINE (CD, TAPE, DVD, VIDEO 1, 2, 3):	200 mV, 50 k Ω
MULTICHANNEL INPUT (FRONT L/C/R, SURROUND L/R):	200 mV, 50 k Ω
(SUBWOOFER):	36 mV, 50 k Ω
COAXIAL 1, 2 (DIGITAL):	0.5 Vp-p, 75 Ω
DVD, VIDEO1, 2, 3:	1 Vp-p, 75 Ω 1 Vp-p, 75 Ω (Y) 0.28 Vp-p, 75 Ω (C)
Output Level and Impedance	
Rec out (TAPE, VIDEO 1):	200 mV, 2.2 k Ω
Pre out:	1 V, 470 Ω
VIDEO (VIDEO 1, MONITOR OUT):	1 Vp-p, 75 Ω 1 Vp-p, 75 Ω (Y) 0.28 Vp-p, 75 Ω (C)
Phono Overload:	180 mV RMS at 1 kHz, 0.5% T.H.D.
Frequency Response:	10 Hz to 100 kHz: +1 dB, -3 dB
RIAA Deviation:	20 Hz to 20 kHz: \pm 0.8 dB
Tone Control:	
Bass:	\pm 10 dB at 50 Hz
Treble:	\pm 10 dB at 20 kHz
Signal-to-Noise Ratio (Stereo)	
Phono:	80 dB (IHF A, 5 mV input)
CD/Tape:	100 dB (IHF A, 0.5 V input)
Muting:	-50 dB

TUNER SECTION

FM

Tuning Range:	87.5 to 108.0 MHz (50-kHz steps)
Usable Sensitivity	
Mono:	11.2 dBf, 1.0 μ V (75 Ω IHF) 0.9 μ V (75 Ω DIN)
Stereo:	17.2 dBf, 2.0 μ V (75 Ω IHF) 23 μ V (75 Ω DIN)
50 dB Quieting Sensitivity	
Mono:	17.2 dBf, 2.0 μ V (75 Ω)
Stereo:	37.2 dBf, 20 μ V (75 Ω)
Capture Ratio:	2.0 dB
Image Rejection Ratio:	
USA & Canadian models:	40 dB
Other area models:	85 dB
IF Rejection Ratio:	90 dB
Signal-to-Noise Ratio	
Mono:	76 dB
Stereo:	70 dB
Alternate Channel Attenuation:	55 dB
Selectivity:	50 dB (DIN)
AM Suppression Ratio:	50 dB
Total Harmonic Distortion	
Mono:	0.2%
Stereo:	0.3%
Frequency Response:	30 Hz to 15 kHz, \pm 1.0 dB
Stereo Separation:	45 dB at 1 kHz 30 dB at 100 Hz to 10 kHz

AM

Tuning Range	
USA & Canadian models:	530 to 1,710 kHz (10-kHz steps)
European & Australian models:	522 to 1,611 kHz (9-kHz steps)
Worldwide models:	531 to 1,602 kHz (9-kHz steps) 530 to 1,710 kHz (10-kHz steps)
Usable Sensitivity:	30 μ V
Image Rejection Ratio:	40 dB
IF Rejection Ratio:	40 dB
Signal-to-Noise Ratio:	40 dB
Total Harmonic Distortion:	0.7%

GENERAL

Power Supply:	AC 120 V, 60 Hz (USA & Canadian models) AC 230-240 V, 50 Hz (European & Australian models) AC 220-230 V, 50/60 Hz (some Asian models) AC 220-230 and 120 V switchable, 50/60 Hz (Worldwide models)
Power Consumption:	4.7 A 380 W
Dimensions (W \times H \times D):	435 \times 175 \times 431 mm 17-1/8" \times 6-7/8" \times 16-15/16"
Weight:	25.4 lbs. (USA & Canadian models) 12.5 kg (Other models)

REMOTE CONTROLLER

Transmitter:	Infrared
Signal range:	Approx. 5 meters, 16 ft.
Power supply:	Two "AA" batteries (1.5 V \times 2)

Specifications and features are subject to change without notice.

Power supply and voltage vary depending on the area in which the unit is purchased.

SPECIFICATIONS

AMPLIFIER SECTION

Continuous Average Power output (FTC)

All channels: 100 W per channel min. RMS at 8 Ω , 2 channels driven from 20 Hz to 20 kHz with no more than 0.08% total harmonic distortion.
125 W min. RMS at 6 Ω , 2 channels driven from 1 kHz with no more than 0.1% total harmonic distortion.

Continuous Power output (DIN) 130 W at 6 Ω

Maximum Power output (EIAJ) 160 W at 6 Ω

Dynamic Power Output (Stereo) 2×230 W at 3 Ω

2×170 W at 4 Ω

2×115 W at 8 Ω

Total Harmonic Distortion: 0.08% at rated power

0.08% at 1 W output

IM Distortion: 0.08% at rated power

0.08% at 1 W output

Damping Factor: 60 at 8 Ω

Input Sensitivity and Impedance

PHONO: 2.5 mV, 50 k Ω

LINE (CD, TAPE, DVD, VIDEO 1-4): 200 mV, 50 k Ω

MULTICHANNEL INPUT

(FRONT L/C/R, SURROUND L/R):

200 mV, 50 k Ω

(SUBWOOFER): 36 mV, 50 k Ω

COAXIAL 1, 2 (DIGITAL): 0.5 Vp-p, 75 Ω

DVD, VIDEO1-4 1 Vp-p, 75 Ω

1 Vp-p, 75 Ω (Y)

0.28 Vp-p, 75 Ω (C)

COMPONENT VIDEO 1, 2: 1 Vp-p, 75 Ω (Y)

0.7 Vp-p, 75 Ω (Cb/Cr, Pb/Pr)

Output Level and Impedance

Rec out (TAPE, VIDEO 1, 2): 200 mV, 2.2 k Ω

Pre out: 1 V, 470 Ω

VIDEO (VIDEO 1, 2, MONITOR OUT):

1 Vp-p, 75 Ω

1 Vp-p, 75 Ω (Y)

0.28 Vp-p, 75 Ω (C)

COMPONENT VIDEO OUT: 1 Vp-p, 75 Ω (Y)

0.7 Vp-p, 75 Ω (Cb/Cr, Pb/Pr)

Phono Overload: 110 mV RMS at 1 kHz, 0.5% T.H.D.

Frequency Response: 5 Hz to 100 kHz: +1 dB, -3 dB

RIAA Deviation: 20 Hz to 20 kHz : ± 0.8 dB

Tone Control

Bass: ± 10 dB at 50 Hz

Treble: ± 10 dB at 20 kHz

Signal-to-Noise Ratio (Stereo)

Phono: 80 dB (IHF A, 5 mV input)

CD/Tape: 100 dB (IHF A, 0.5 V input)

Muting: -50 dB

TUNER SECTION

FM

Tuning Range: 87.5 to 108.0 MHz (50-kHz steps)

Usable Sensitivity

Mono: 11.2 dBf, 1.0 μ V (75 Ω IHF)

0.9 μ V (75 Ω DIN)

Stereo: 17.2 dBf, 2.0 μ V (75 Ω IHF)

23 μ V (75 Ω DIN)

50 dB Quieting Sensitivity

Mono: 17.2 dBf, 2.0 μ V (75 Ω)

Stereo: 37.2 dBf, 20 μ V (75 Ω)

Capture Ratio: 2.0 dB

Image Rejection Ratio:

USA & Canadian models: 40 dB

Other area models: 85 dB

IF Rejection Ratio: 90 dB

Signal-to-Noise Ratio

Mono: 76 dB

Stereo: 70 dB

Alternate Channel Attenuation: 55 dB

Selectivity: 50 dB (DIN)

AM Suppression Ratio: 50 dB

Total Harmonic Distortion

Mono: 0.2%

Stereo: 0.3%

Frequency Response: 30 Hz to 15 kHz, ± 1.0 dB

Stereo Separation: 45 dB at 1 kHz

30 dB at 100 Hz to 10 kHz

AM

Tuning Range

USA & Canadian models: 530 to 1,710 kHz (10-kHz steps)

European & Australian models: 522 to 1,611 kHz (9-kHz steps)

Worldwide models: 531 to 1,602 kHz (9-kHz steps)

530 to 1,710 kHz (10-kHz steps)

Usable Sensitivity: 30 μ V

Image Rejection Ratio: 40 dB

IF Rejection Ratio: 40 dB

Signal-to-Noise Ratio: 40 dB

Total Harmonic Distortion: 0.7%

GENERAL

Power Supply

AC 120 V, 60 Hz

(USA & Canadian models)

AC 230-240 V, 50 Hz

(European & Australian models)

AC 220-230 and 120 V switchable,

50/60 Hz (Worldwide models)

Power Consumption:

5.7 A

460 W

Dimensions (W \times H \times D):

435 \times 175 \times 431 mm

17-1/8" \times 6-7/8" \times 16-15/16"

Weight:

27.8 lbs. (USA & Canadian models)

13.5 kg (Other models)

REMOTE CONTROLLER

Transmitter:

Infrared

Signal range:

Approx. 5 meters, 16 ft.

Power supply:


Two "AA" batteries (1.5 V \times 2)


Specifications and features are subject to change without notice.

Power supply and voltage vary depending on the area in which the unit is purchased.

SERVICE PROCEDURES

1. Replacing the fuses

 This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

 Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n'utiliser que fusibles de même type. Ce dernier est la ou le present symbol est appse.

TX-DS696

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252198	8A-UL,Fuse <D/WT/WR>
F902	252077	4A-SE-EA<,Fuse <P/WT/WR/A>
F903	252075	2.5A-SE-EA<,Fuse <P/A>
F95C1	252160	2.5A-UL/T-237,Fuse <D>
	252075	2.5A-SE-EA<,Fuse <P/A/WR/WT>

TX-DS695

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252166	6.3A-UL/T237,Fuse <D/WT/WR>
F902	252076	3.15A-SE-EA<,Fuse <P/WT/WR/A/GT>
F903	252075	2.5A-SE-EA<,Fuse <P/A>
F95C1	252160	2.5A-UL/T-237,Fuse <D>
	252075	2.5A-SE-EA<,Fuse <P/A/WR/WT/GT>

Note. <D>: 120V model only
<P>: European model only
<WT>: Worldwide model only
<WR>: Asian model only for 230V
<GT>: 220-230V model only
<A>: Australian model only

2. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally

To perform a reset, please follow the procedure below.

1. Turn POWER to on
2. Press and hold down the PRESET MEMORY button, then press the STANDBY button.

After "clear" is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting

3. Disconnect Power supply cord.

3. Safety-check out

(Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.

Specifications: 3.3Mohm \pm 10% at 500V

4. Memory Preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in order to charge the back-up system.

The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

5. Setting the AM tuning step frequency

(Worldwide models only)

The initializing setting is 9 kHz, and this needs only to be changed if you are using the unit in a 10-kHz region.

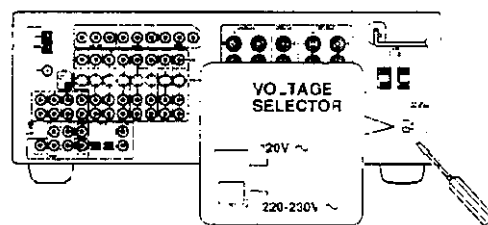
1. Press the SETUP button.
Turn the jog dial or press the \blacktriangle and \blacktriangledown cursor buttons on the remote controller to display "3. PREFERENCE."
2. Press the jog dial or ENTER button on the remote controller.
Turn the jog dial or press the \blacktriangledown cursor buttons on the remote controller to display "AM FREQ STEP?".
3. Press the jog dial or ENTER button on the remote controller.
The currently set frequency step appears.
4. Turn the jog dial or press the \blacktriangleleft and \blacktriangleright cursor buttons on the remote controller to set the frequency.
5. Press the RETURN button.
"AM FREQ STEP?" appears in the FL tube.
To exit the setup mode immediately, press the SETUP button.

6. Setting the Voltage selector (Worldwide models only)

Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit.

Determine the proper voltage for your area: 220-230 V or 120 V.

2. If the preset voltage is not correct for your area, insert a screwdriver into the groove in the switch. Slide the switch all the way to the right (120 V) or to the left (220-230 V), whichever is appropriate.



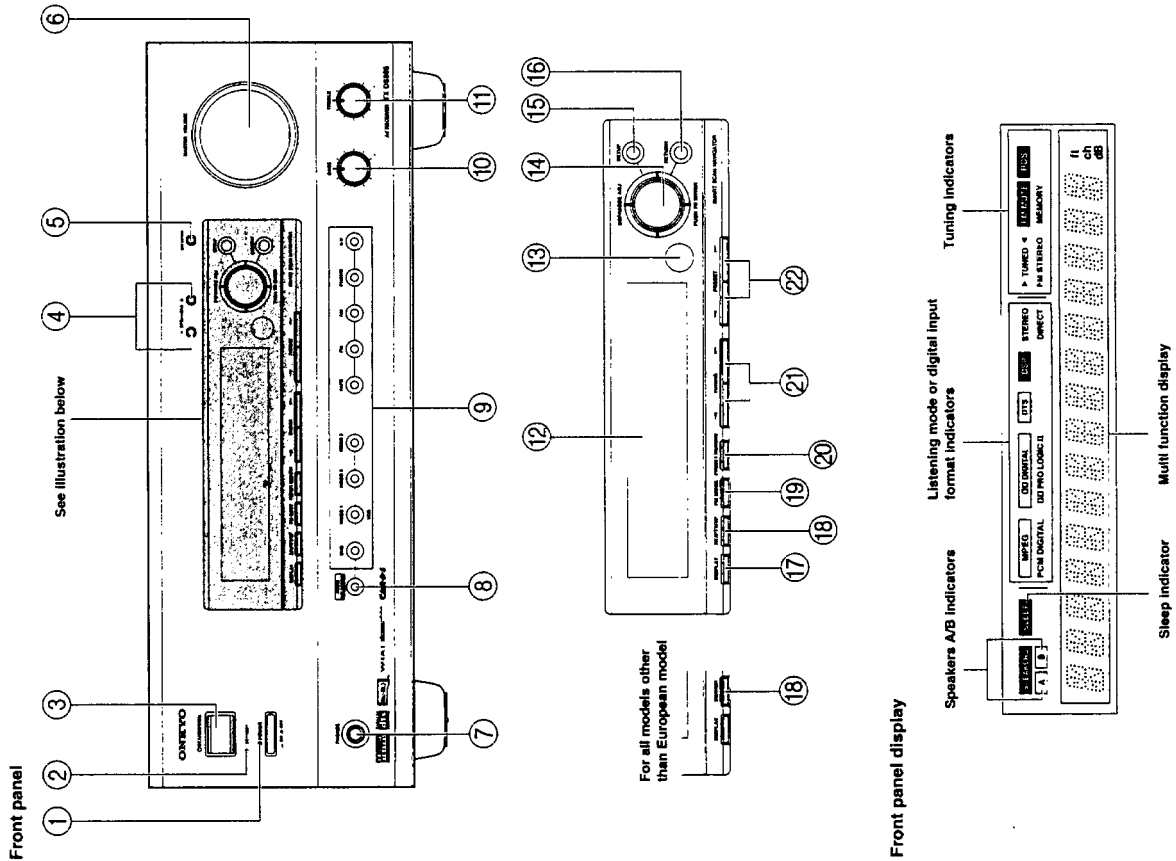
7. Changing the AM band step

With the exception of the worldwide models a tuning step setup mode is not provided. When you change the band step, change the parts as shown below.

	To 10kHz	To 9kHz
F7780, F7781	330 ohm	Open
F7880, R7881	Open	2.2 kohm

PANEL VIEWS

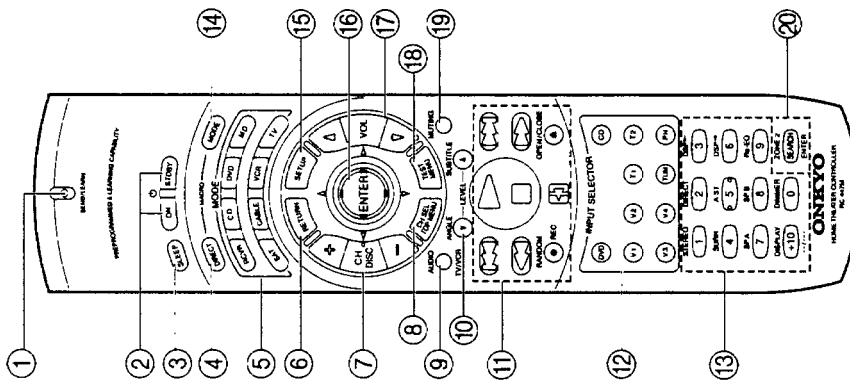
Front panel



- 1 **POWER switch**
Turns on and off the main power supply for the TX-DS595.
- 2 **STANDBY indicator**
Lights when the TX-DS595 is in the standby state and flashes when a signal is received from the remote controller.
- 3 **STANDBY/ON button**
Press to turn on the TX-DS595 when in the standby state. Press again to return the TX-DS595 to the standby state.
- 4 **SPEAKERS A/B buttons**
Press these buttons to turn on and off speakers systems A and B.
- 5 **CH LEVEL button**
Press to select the channel whose level is to be adjusted.
- 6 **MASTER VOLUME dial**
The MASTER VOLUME dial is used to control the volume.
- 7 **PHONES jack**
To listen with headphones, plug a pair of headphones with a standard stereo plug into the PHONES jack on the TX-DS595 front panel. When you connect headphones, the unit will enter STEREO mode automatically and no sound will be heard from the speakers. If you have selected MULTICH INPUT, you will hear sound only from the FRONT L and R channels. Note that the volume level for the headphones is adjustable.
- 8 **AUDIO SELECTOR button**
This button is used to select the type of audio input signal. Each time pressed, the setting cycles from "AUTO" → "MULTI CHIP" → "ANALOG" and back.
- 9 **Input source buttons (DVD, VIDEO 1-3, TAPE, FM, AM, PHONO, and CD)**
These buttons are used to select the input source.
- 10 **BASS dial**
Boosts or cuts the bass response. Bass adjustment is effective only for the front speakers and headphones.
- 11 **TREBLE dial**
Boosts or cuts the treble response. Treble adjustment is effective only for the front speakers and headphones.
- 12 **Front display**
- 13 **Remote control sensor**
- 14 **SMART SCAN NAVIGATOR jog dial and indicators**
Used to make settings in the setup display, change listening mode settings, and more.
- 15 **SETUP button**
Press to enter and exit the setup mode.
- 16 **RETURN button**
Press to move up one level in the setup mode.
- 17 **DISPLAY button**
The DISPLAY button is used to display information about the current input source signal. Each time you press the display button, the screen changes to show you different information concerning the input signal.
- 18 **RT/PTY/TP (European models only) button**
This button is only available on European models. Use this button to help tune into the Radio Data System (RDS) for FM broadcasting. RDS was developed within the European Broadcasting Union (EBU) and is available in most European countries. Each time the button is pressed, the display changes from RT (radio text) to PTY (program type) to TP (traffic program) and then back to RT again.
- 18 **DIMMER (other than European models) button**
Press to set the brightness of the front display. There are 3 settings available: normal, dark, and very dark.
- 19 **FM MODE button**
When there is too much noise in the stereo reception of an FM broadcast, press to turn off the FM MUTE function.
- 20 **PRESET MEMORY button**
This button is used to assign the radio station that is currently tuned in to a preset channel or delete a previously preset station.
- 21 **TUNING </> buttons**
Use these buttons to change the tuner frequency. The tuner frequency is displayed in the front display and it can be changed in 50 kHz increments for FM and 10 kHz (or 9 kHz) increments for AM. When FM is selected, you can hold down one of the tuning buttons and then release it to activate the auto-search feature. It will search for a station in the direction of the button you pressed and stop when it tunes into one.
- 22 **PRESET </> buttons**
When AM or FM is selected as the input source, press one of these buttons to jump to a radio station that you preset using the PRESET MEMORY button. Pressing the right button moves from the most recently preset station to older ones, and pressing the left button moves in the reverse order.



REMOTE CONTROLLER



1 Selects an input source. Same as the input selector buttons on front panel of the TX-DS595. The input source for each button is given here: DVD/DVD, CD/CD, V1/VIDEO1, V2/VIDEO2, V3/VIDEO3, V4/Not used with the TX-DS595, T1/TAPE, T2/Not used with the TX-DS595, TUN/FM/AM, PHILIPION.

2 **Numeric key/Listening mode selector/SP A, B/RE-EQUALIZER/DIMMER buttons**
1 to **9**, **10**, **-->**, **0**: For entering the number of a track.
STEREO, DIRECT, DSP \blacktriangleleft , **SURR**, **A, ST**: You can select a listening mode.

3 **STEREO**: Changes the listening mode directly to the Stereo listening mode. If pressed, the listening mode for the selected input source set in the Listening Mode Preset is also changed to the Stereo listening mode.
SURR (Surround): Changes the listening mode to the surround mode for the current input signal (e.g., Dolby Pro Logic II, Dolby Digital, or DTS). If pressed, the listening mode for the selected input source set in the Listening Mode Preset is also changed to the Surround listening mode.
For Dolby Pro Logic II, this button also changes the mode between Dolby Pro Logic II Movie and Dolby Pro Logic II Music.

DIRECT: Changes the listening mode directly to the Direct listening mode. If pressed, the listening mode for the selected input source set in the Listening Mode Preset is also changed to the Direct listening mode.
A, ST (All Channel Stereo): Changes the listening mode directly to the Stereo listening mode. If pressed, the listening mode for the selected input source set in the Listening Mode Preset is also changed to the All Channel Stereo listening mode.
DSP \blacktriangleleft : Changes the listening mode as shown below.
Direct \leftrightarrow Stereo \leftrightarrow Surround \leftrightarrow Orchestra \leftrightarrow Unplugged \leftrightarrow Studio-Mix \leftrightarrow TV Logic \leftrightarrow All Ch Stereo \leftrightarrow Direct.
 If pressed, the listening mode for the selected input source set in the Listening Mode Preset is also changed.

Re-EQ: Depending on the listening mode, you can turn the cinema re-equalization function on or off.
Re-EQ (re-equalization) takes the edginess or "brightness" out of your home cinema sound to compensate for the fact that sound mixed for theaters may sound too bright when played back through speakers in the home environment.
On: Select to turn on the re-equalization filter.
Off: Select to turn off the re-equalization filter.

Note:
 The Re-EQ function is effective on the Dolby Pro Logic II Surround and Dolby Digital Surround.

SP A, SP B: For turning on and off speakers systems A and B.
DISPLAY: For changing the display in the front display.
DIMMER: Adjusts the display brightness.
 There are three settings available: normal, dark and very dark.

14 **MODE MACRO button**
 For executing and programming the Macro function.

15 **SETUP button**
 Press to enter and exit the setup mode.

16 **ENTER/cursor button**
 For selecting and entering settings in the setup mode.

1 **SEND/LEARN indicator**
 This indicator acts as a guide when commands are programmed into or sent by the remote controller. It also warns the user when an error is made or battery power is low.

2 **ON/STDBY button**
ON: Turns on the TX-DS595.
STDBY: Places the TX-DS595 in the standby state.
 Be aware that pressing the STDBY button only places the TX-DS595 in standby and does not turn the power completely off.

3 **SLEEP button**
 Sets the sleep function.
 The SLEEP button enables you to set the TX-DS595 to turn off automatically after a specified time period.

4 **DIRECT MACRO button**
 For executing and programming the Direct Macro function.

5 **MODE buttons and indicators**
 For selecting the component to be operated by the remote controller. When a MODE button is pressed, it will light green for 8 seconds. The selected MODE button will also light whenever any other operation button is pressed to tell you which mode the remote controller is in.

6 **RETURN button**
 Press to move up one level in the setup mode.

7 **CH/DISC +/- button**
 When in the RCVR mode, for selecting a tuner preset channel. For selecting the disc to be played back for components with disc changers when in the DVD or CD modes.

8 **CH SEL/TOP MENU button**
CH SEL: For selecting the speaker level adjustment when in the RCVR mode. Used together with the LEVEL \blacktriangleleft / \blacktriangleright buttons.
TOP MENU: When in the DVD mode, for displaying the menu screen(s) recorded on DVD media.

9 **AUDIO/TV/VCR button**
AUDIO: For selecting the audio input signal. The setting changes from "AUTO" to "MULTI" to "ANALOG" and back each time this button is pressed.
TV/VCR: Must be preprogrammed for use in the TV and VCR modes.

10 **LEVEL V/ANGLE and LEVEL A/SUBTITLE buttons**
LEVEL V/A: Select the speaker whose volume is to be adjusted using the CH SEL button and adjust the volume using the LEVEL \blacktriangleleft / \blacktriangleright buttons in the RCVR mode.
ANGLE: When in the DVD mode, for selecting a camera angle when a DVD-Video is recorded with multiple angle playback.
SUBTITLE: When in the DVD mode, for selecting one of the subtitle languages recorded on a DVD-Video.

11 **CD/TAPE/DVD/DMD operation buttons**
 For operating Onkyo components connected to the TX-DS595.

12 **INPUT SELECTOR buttons**

17 **VOL +/- button**
 Use this button in conjunction with the LEVEL \blacktriangleleft / \blacktriangleright and CH SEL buttons to calibrate the speakers levels.

18 **TEST/MENU button**
TEST: Outputs a test tone for setting speaker levels. Use this button in conjunction with the LEVEL \blacktriangleleft / \blacktriangleright and CH SEL buttons to calibrate the speakers levels.
1. Press the TEST button.
 A test sound (pink noise) will be heard from the left front speaker. At this point, it is not necessary to adjust the volume of the test sound.
2. Press the CH SEL button.
 The test sound will now be heard from a different speaker.
3. Use the LEVEL \blacktriangleleft / \blacktriangleright buttons to adjust the volume of the test sound from this speaker to the same level that you heard from the previous speaker.
4. Repeat the procedure in step 2 and 3 until the volume of the test sound from all speakers is the same level.
 Each time you press the CH SEL button, the test sound will be heard from a different speaker. The speaker order for calibration is front left \rightarrow center \rightarrow front right \rightarrow surround right \rightarrow surround left \rightarrow subwoofer.

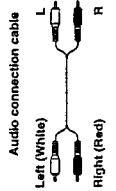
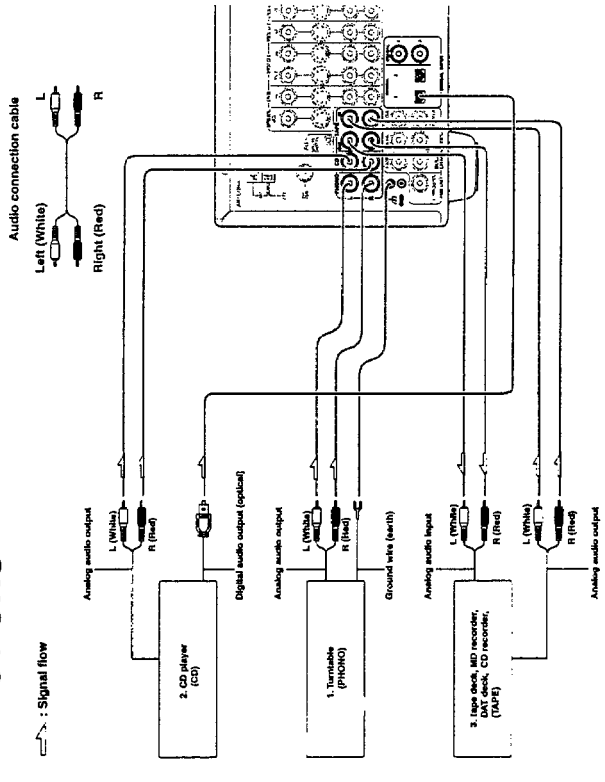
5. Press the TEST button to exit the setting.
 For a more detailed explanation of how to calibrate the speaker levels, see page 20.

MENU: When in the DVD mode, this button displays the DVD menu.

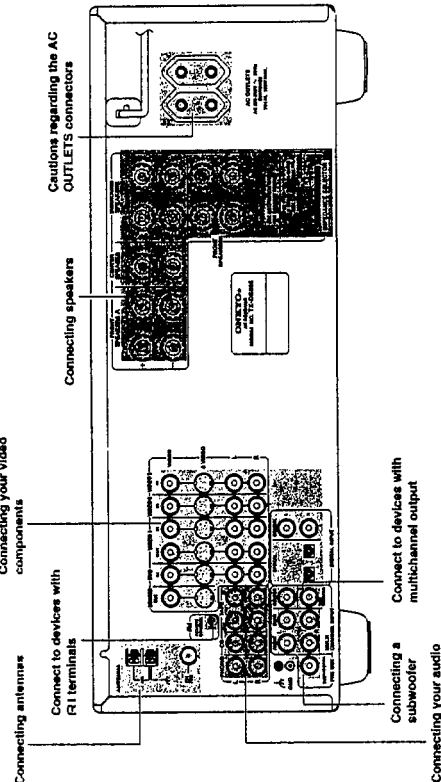
19 **MUTING button**
 Activates the mute function.

20 **ZONE 2/SEARCH/CENTER button**
ZONE 2: Not used with the TX-DS595.
SEARCH: When in the DVD mode, for finding the specific section on a disc where you want to start playback.
ENTER: When in the MD mode, for confirming the selection.

CONNECTIONS



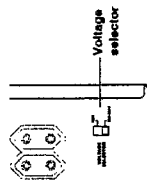
Signal flow



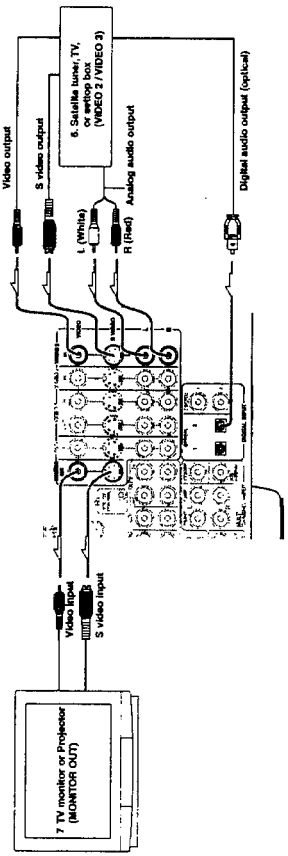
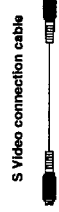
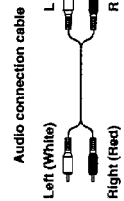
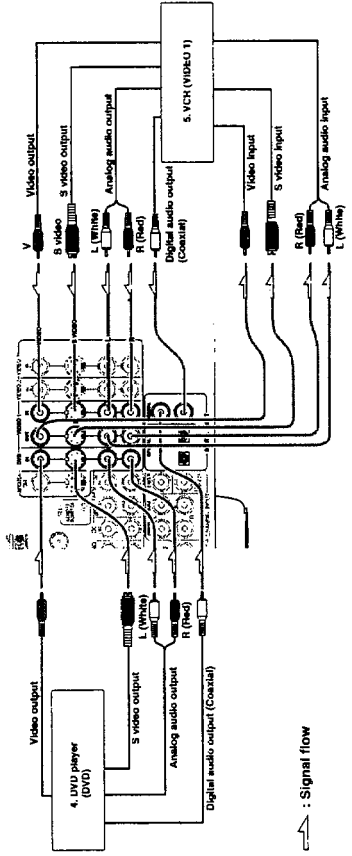
Default setting

Input source	Digital Input	Multichannel
DVD	COAX 1	Yes
VIDEO 1	COAX 2	No
VIDEO 2		No
VIDEO 3	OPT 2	No
VIDEO 4		No
TAPE		No
FM		No
AM		No
PHONO	OPT 1	No
CD		No

COAX: Coaxial OPT: Optical ---: No setting : Not applicable

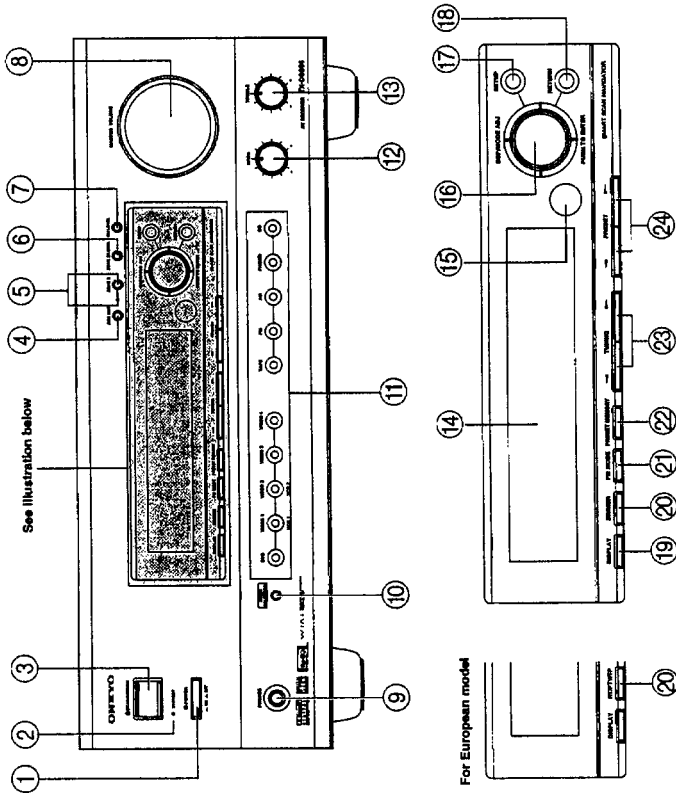


For worldwide models only



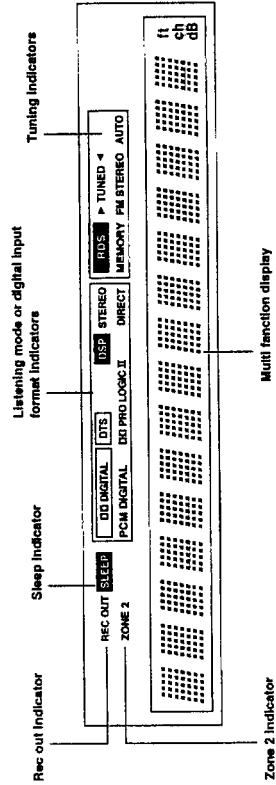
PANEL VIEWS

Front panel

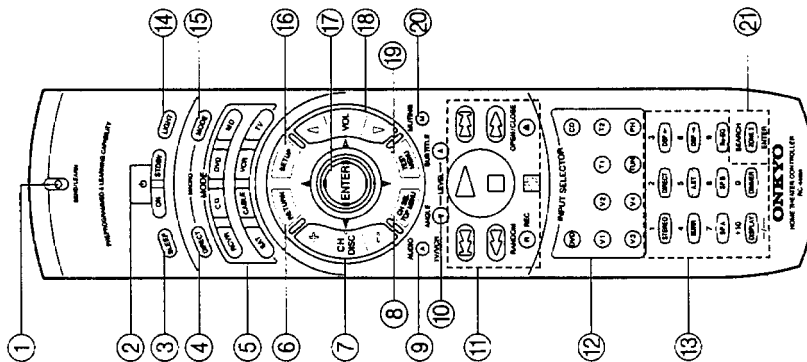


- 1 **POWER switch**
Turns on and off the main power supply for the TX-DS696.
- 2 **STANDBY indicator**
Lights when the TX-DS696 is in the standby state and flashes when a signal is received from the remote controller.
- 3 **STANDBY/ON button**
Press to turn on the TX-DS696 when in the standby state. Press again to return the TX-DS696 to the standby state.
- 4 **REC OUT button**
Press the REC OUT button to output the audio signals to a recording component for recording purposes.
- 5 **ZONE 2 button and indicator**
Press the ZONE 2 button to enjoy the output from the TX-DS696 in a different room, which is referred to as a remote zone (Zone 2). ZONE 2 indicator lights when a signal is output to the remote zone (Zone 2). When the ZONE 2 indicator is off, then either output to the remote zone is turned off or Rec Out is selected.
- 6 **ZONE 2 LEVEL button**
Press to enter the mode for adjusting the volume in the remote zone (Zone 2).
- 7 **CH LEVEL button**
Press to select the channel whose level is to be adjusted.
- 8 **MASTER VOLUME dial**
The MASTER VOLUME dial is used to control the volume for the main zone. The volume for the remote zone (Zone 2) is independent.
- 9 **PHONES jack**
This is a standard stereo jack for connecting stereo headphones.
- 10 **AUDIO SELECTOR button**
This button is used to select the type of audio input signal. Each time pressed, the setting cycles from "AUTO" → "Multich" → "Analog" and back.
- 11 **Input source buttons (DVD, VIDEO 1-4, TAPE, FM, AM, PHONO, and CD)**
These buttons are used to select the input source for the main zone. To select the input source for the remote zone (Zone 2) or recording out (Rec Out), first press the Zone 2 or Rec Out button, and then the desired input source button.
- 12 **BASS dial**
Boosts or cuts the bass response. Bass adjustment is effective only for the front speakers and headphones.
- 13 **TREBLE dial**
Boosts or cuts the treble response. Treble adjustment is effective only for the front speakers and headphones.
- 14 **Front display**
- 15 **Multi function display**
- 16 **Zone 2 indicator**
- 17 **Tuning indicators**
- 18 **Listening mode or digital input format indicators**
- 19 **Sleep indicator**
- 20 **Rec out indicator**
- 21 **Zone 2 indicator**
- 22 **Zone 2 indicator**
- 23 **Zone 2 indicator**
- 24 **Zone 2 indicator**
- 15 **Remote control sensor**
- 16 **SMART SCAN NAVIGATOR jog dial and indicators**
Used to make settings in the Setup menu, change listening mode settings, and more.
- 17 **SETUP button**
Press to bring up the Setup menu. The OSD menu will appear on the TV monitor as well as the front display on the TX-DS696.
- 18 **RETURN button**
Press to exit the Main menu level or go back one level up.
- 19 **DISPLAY button**
The DISPLAY button is used to display information about the current input source signal. Each time you press the display button, the screen changes to show you different information concerning the input signal.
- 20 **RTPTY/TP (European models only) button**
This button is only available on European models. Use this button to help tune into the Radio Data System (RDS) for FM broadcasting. RDS was developed within the European Broadcasting Union (EBU) and is available in most European countries. Each time the button is pressed, the display changes from RT (radio text) to PTY (program type) to TP (traffic program) and then back to RT again.
- 20 **DIMMER (other than European models) button**
Press to set the brightness of the front display. There are 3 settings available: normal, dark, and very dark.
- 21 **FM MODE button**
If you are listening to an FM radio station in stereo and the sound cuts out or there is a great deal of noise, switch from STEREO to MONO. Each time this button is pressed, the AUTO indication flashes and the stereo mode changes from AUTO to MONO and vice versa. This button also turns on and off the FM MUTE.
- 22 **PRESET MEMORY button**
This button is used to assign the radio station that is currently tuned in to a preset channel or delete a previously preset station.
- 23 **TUNING </> buttons**
Use these buttons to change the tuner frequency. The tuner frequency is displayed in the front display and it can be changed in 50 kHz increments for FM and 10 kHz (or 9 kHz) increments for AM.
When FM is selected, you can hold down one of the tuning buttons and then release it to activate the auto-search feature. It will search for a station in the direction of the button you pressed and stop when it tunes into one.
- 24 **PRESET </> buttons**
When AM or FM is selected as the input source, press one of these buttons to jump to a radio station that you preset using the PRESET MEMORY button. Pressing the right button moves from the most recently preset station to older ones, and pressing the left button moves in the reverse order.

Front panel display



REMOTE CONTROLLER



1 SEND/LEARN indicator

This indicator acts as a guide when commands are programmed into or sent by the remote controller. It also warns the user when an error is made or battery power is low.

2 ON/STDBY button

ON: Turns on the TX-DS696.

STDBY: Places the TX-DS696 in the standby state. Be aware that pressing the STDBY button only places the TX-DS696 in standby and does not turn the power completely off.

3 SLEEP button

Sets the sleep function. The SLEEP button enables you to set the TX-DS696 to turn off automatically after a specified time period.

4 DIRECT MACRO button

For executing and programming the Direct Macro function.

5 MODE buttons and indicators

For selecting the component to be operated by the remote controller. When a MODE button is pressed, it will light green for 8 seconds. The selected MODE button will also light whenever any other operation button is pressed to tell you which mode the remote controller is in.

6 RETURN button

For entering the selected setting and returning to the previous menu.

7 CH/DISC +/- button

When in the RCVR mode, for selecting a tuner preset channel. For selecting the disc to be played back for components with disc changers when in the DVD or CD modes.

8 CH SEL/TOP MENU button

CH SEL: For selecting the speaker for level adjustment when in the RCVR mode. Used together with the LEVEL Δ/V buttons.

TOP MENU: When in the DVD mode, for displaying the menu screen(s) recorded on DVD media.

9 AUDIO/TV/VCR button

AUDIO/A: For selecting the audio input signal. The setting changes from "AUTO" to "Multich" to "Analog" and back each time this button is pressed.

TV/VCR: Must be preprogrammed for use in the TV and VCR modes.

10 LEVEL /ANGLE and LEVEL Δ/SUBTITLE buttons

LEVEL /A: Select the speaker whose volume is to be adjusted using the CH SEL button and adjust the volume using the LEVEL Δ/V buttons in the RCVR mode.

ANGLE: When in the DVD mode, for selecting a camera angle when a DVD-Video is recorded with multiple angle playback. [48]

SUBTITLE: When in the DVD mode, for selecting one of the subtitle languages recorded on a DVD-Video.

11 CD/TAPE/DVD/MD operation buttons

For operating Onkyo components connected to the TX-DS696.

12 INPUT SELECTOR buttons

Selects an input source.

Same as the input selector buttons on front panel of the TX-DS696. The input source for each button is given here: DVD/DVD, CD/CD, V1-VIDEO1, V2-VIDEO2, V3-VIDEO3, VA-VIDEO4, T1-TAPE, T2. Not used with the TX-DS696, TUN:FM/AM, PH:PHONO.

13 Numeric key/Listening mode selector/SP A, B/ Re-EQ/DISPLAY/DIMMER buttons

1 to 9, +10, -1, --, 0: For entering the number of a track.

STEREO, DIRECT, DSP Δ/F, SURR, A-ST: You can select a listening mode.

Re-EQ: Depending on the listening mode, you can turn the cinema re-equalization function on or off.

SP A, SP B: Not used with the TX-DS696.

DISPLAY: For changing the display in the front display.

DIMMER: Adjusts the display brightness.

There are three settings available: normal, dark and very dark.

14 LIGHT button

For illuminating the buttons of the remote controller.

This is button is useful when using the remote controller in dark locations. When pressed, the buttons on the remote controller light green.

The button for the mode currently selected lights brighter than the rest.

15 MODE MACRO button

For executing and programming the Macro function.

16 SETUP button

For displaying and quitting the Setup menu.

17 ENTER/cursor button

When selecting items in the Setup menu, press the upper and lower portions to select item, press the right and left portions to select parameter values or modes, and press ENTER to select item.

18 VOL Δ/V button

For adjusting the volume.

19 TEST/MENU button

TEST: Outputs a test tone for setting speaker levels.

Use this button in conjunction with the LEVEL Δ/V and CH SEL buttons to calibrate the speakers levels without entering the Setup menu. When TEST button is pressed, the test noise (pink noise) is output. Use the LEVEL Δ/V buttons to increase or decrease the sound level. Use the CH SEL button to change from speaker to speaker. For a more detailed explanation of how to calibrate the speaker levels.

MENU: When in the DVD mode, this button displays the DVD menu.

20 MUTING/M button

Activates the mute function.

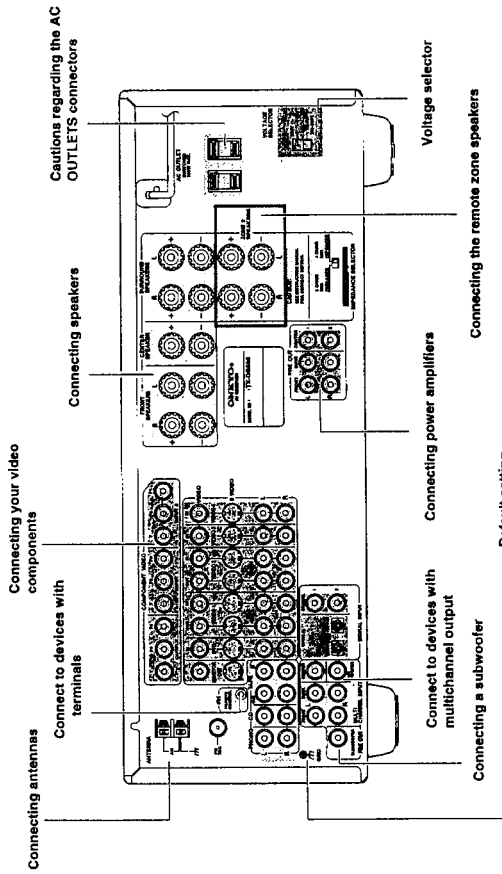
21 ZONE 2/SEARCH/ENTER button

ZONE 2: When in the RCVR mode, press this button to perform operations on the remote zone (Zone 2).

SEARCH: When in the DVD mode, for finding the specific section on a disc where you want to start playback.

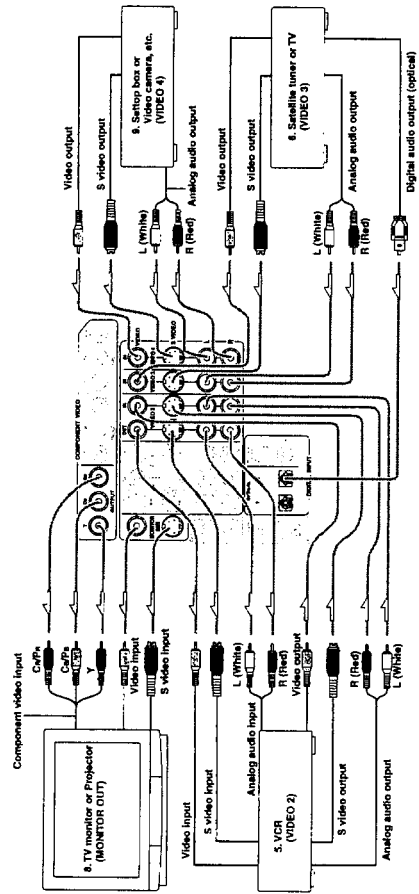
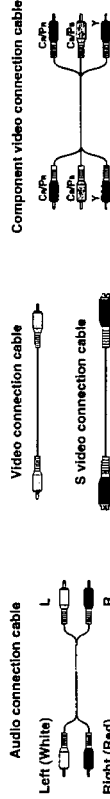
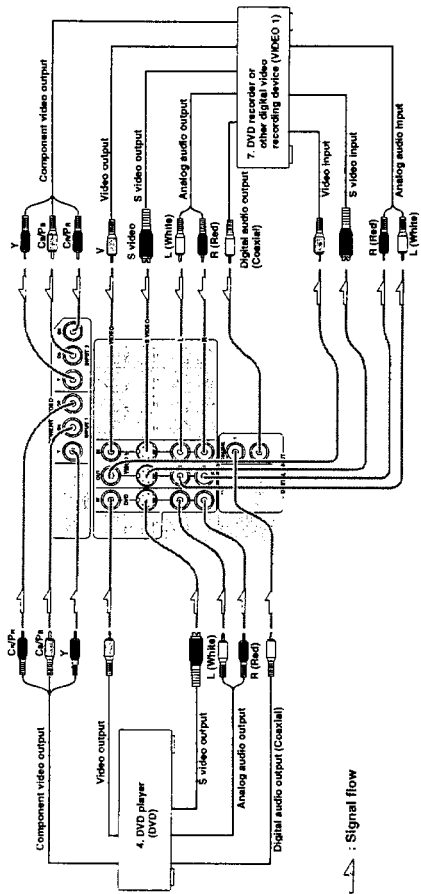
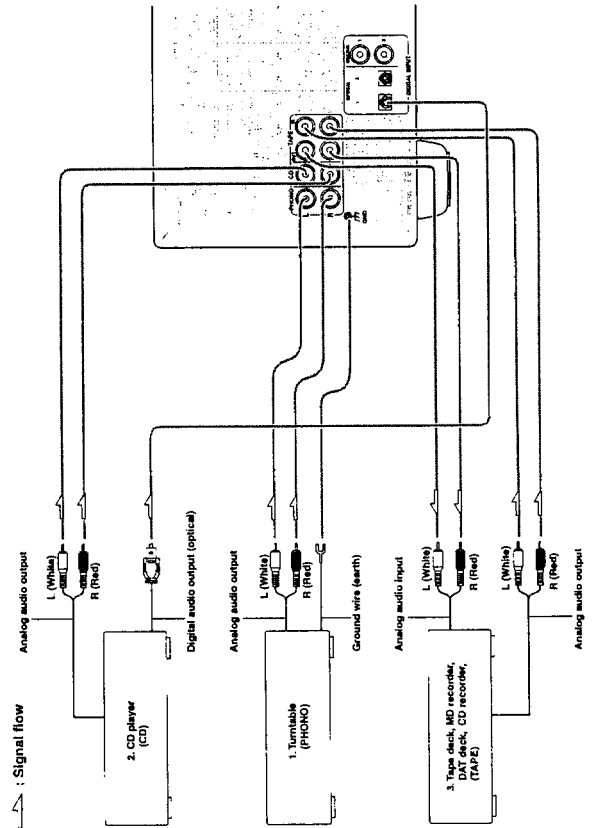
ENTER: When in the MD mode, for confirming the selection.

CONNECTIONS

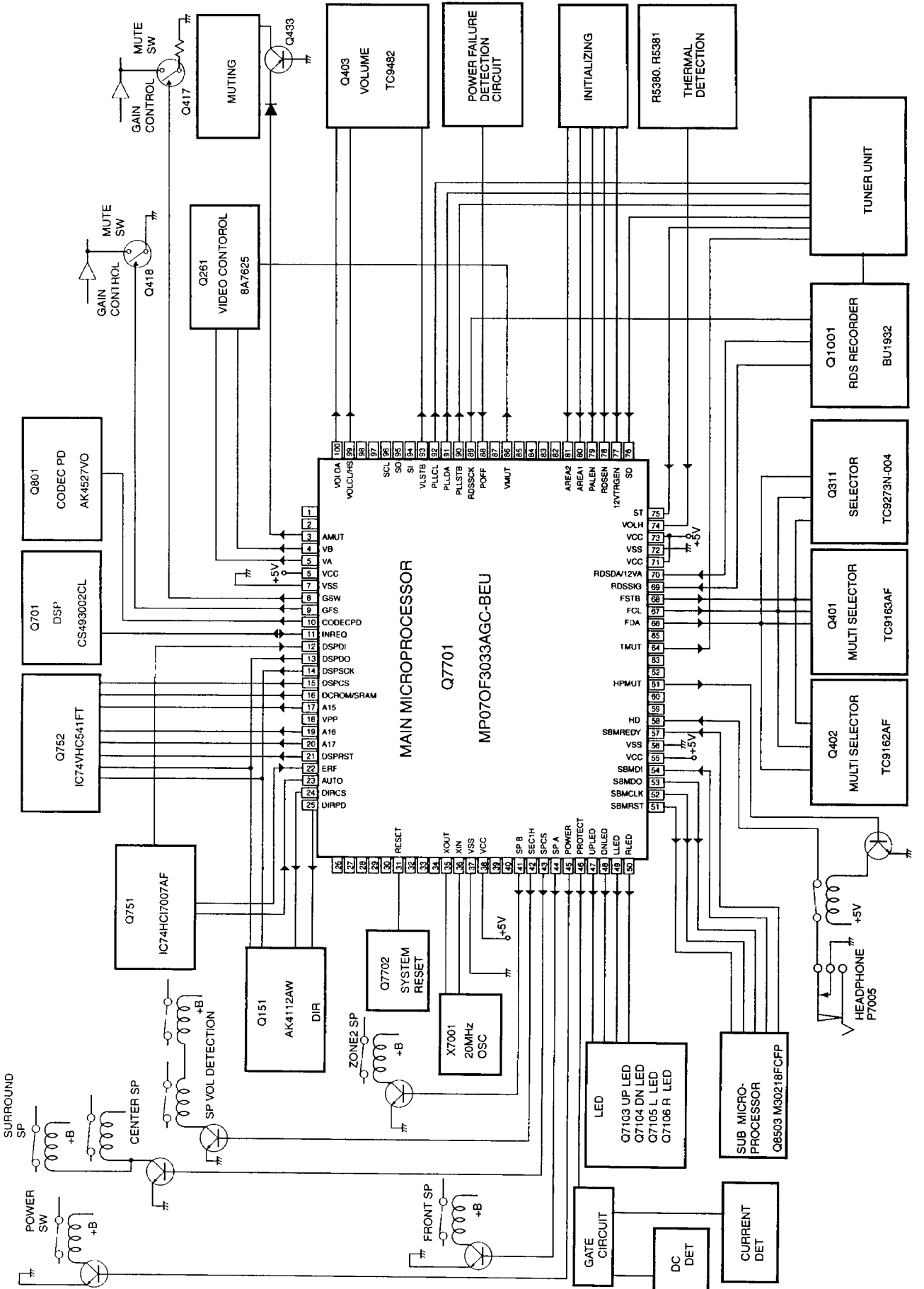


Default setting	Digital input	Component video	Multichannel
DVD	COAX 1	INPUT 1	Yes
VIDEO 1	COAX 2	INPUT 2	No
VIDEO 2	OPT 1	INPUT 1	No
VIDEO 3	OPT 2	INPUT 1	No
VIDEO 4	OPT 1	INPUT 1	No
TAPE			No
FM			No
AM			No
PHONO			No
CD			No

COAX: Coaxial OPT: Optical ---: No setting - - - : Not applicable



MAIN MICROPROCESSOR



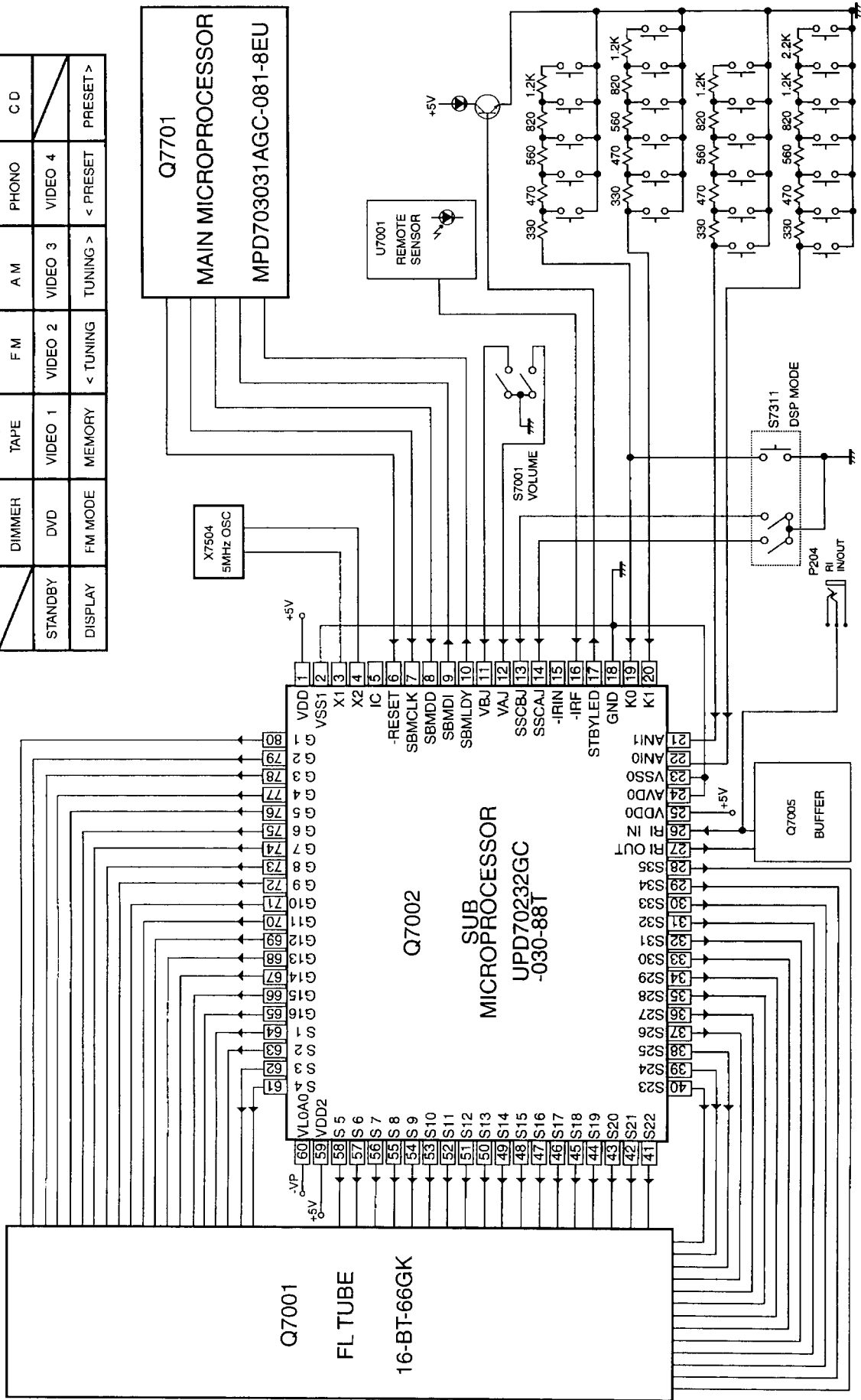
MAIN MICROPROCESSOR-TERMINAL DESCRIPTION

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
3	AMUT	O	Audio muting output pin.	50	RI.FD	O	Right direction LED control output pin of SSC.
4	VB	O	Output B pin to control video signal.	51	~SBMRST	O	Reset signal output pin to sub microprocessor.
5	VA	O	Output A pin to control video signal.	52	SBMCLK	O	Clock signal output pin to transmit to the sub microprocessor.
6	EVDD		Power supply pin. Connect to +5V.	53	SBMDO	O	Data signal output pin to transmit to the sub microprocessor.
7	EVSS		Ground pin.	54	SBMDI	I	Data signal input pin to transmit from the sub microprocessor.
8	GSW	O	Gain control signal output pin for subwoofer.	55	BVDD		Power supply pin. Connect to +5V.
9	GF'S	O	Gain control output signal pin to front, surround, and center channels.	56	BVSS		Ground pin.
10	~CODECPD	O	Power down output pin to Codec IC.	57	SBMREDDY	I	Read signal input pin to transmit from the sub microprocessor.
11	INTREQ	I/O	Interrupter and abort signal input/output pin of DSP IC.	58	IID	I	Detection pin when insert the headphones.
12	DSPDI	I	Serial data input pin from DIR and DSP ICs.	59	Z2LED	O	Zone 2 LED control output pin.
13	DSPDO	O	Serial data output pin from DIR and DSP ICs.	61	HPMUT	O	Muting output pin to the headphone circuit.
14	DSPSCK	O	Serial clock output pin to DIR and DSP ICs.	64	TMUT	O	Muting output pin to the tuner block.
15	DSPCS	O	Chip select output pin to DSP IC.	66	FDA	O	Data signal output pin to Selector, Configuration, Multi channel, and Multi source control ICs.
16	CSROM/~SRAM	O	"Change-over pin of RAM and ROM, ROM at H."	67	FCL	O	Clock signal output pin to Selector, Configuration, Multi channel, and Multi source control ICs.
17	A15	O	ROM address 15	68	FSTB	O	Strobe signal output pin to Selector, Configuration, Multi channel, and Multi source control ICs.
18	VPP			69	RDSSIG/12VB	I/O	Quality check input pin of RDS demodulator signal.
19	A16	O	ROM address 16	70	RDSDA/12VA	I/O	Data input pin from RDS decoder.
20	A17	O	ROM address 17	71	AVDD		Power supply pin. Connect to +5V.
21	~DSPRST	O	Reset signal output pin to DSP IC.	72	AVSS		Ground pin.
22	ERF	I	Error flag input pin.	73	AVREF		Reference voltage input pin.
23	AUTO	O	Auto detection input pin of DIR IC.	74	VOLH	I	Voltage detection input pin of speaker terminal.
24	DIRCS	O	Chip select output pin to DIR IC.	75	~ST	I	Stereo broadcast detection input pin.
25	~DIRPD	O	Power down signal output pin to DIR IC.	76	~SD	I	Station input pin.
31	~RESET	I	System reset input terminal.	77	12VTRGEN	I	Initializing input terminal for 12V trigger.
32	XT1		Oscillator connection pin of sub system. Not used.	78	RDSEN	I	Initializing input terminal for RDS broadcast.
33	XT2		Not used.	79	PLAEN	I	Initializing input terminal for PAL/NTSC.
34	REGC			80	AREA1	I	Initializing input terminal for broadcast area.
35	X2		Ceramic oscillator connection pins.	81	AREA2	I	Initializing input terminal for broadcast area.
36	X1		Connect the 20MHz ceramic oscillator between X1 and X2 pins.	88	~POFF	I	Power failure detection input pin.
37	VSS		Power supply pin. Connect to ground pin.	89	RDSSCK	I	Clock signal input pin from RDS decoder.
38	VDD		Power supply pin. Connect to +5V.	90	PLLSTB	O	Chip enable signal output pin to PLL IC.
39	CLKOUT		Not used.	91	PLLDA	O	Data signal output pin to PLL IC.
41	SPB	O	Speaker relay B control signal output pin.	92	PLLCL	O	Clock signal output pin to PLL IC.
42	SECIH	O	Amplifier gain control output pin.	93	VLSTB	O	Strobe signal output pin to electrical volume IC.
43	SPCS	O	Speaker relay control output pin of center and surround channels.	94	SI	I	Signal input pin to write the program.
44	SPA	O	Speaker relay A control signal output pin.	95	SO	O	Signal output pin to write the program.
45	POWER	O	Power relay control output pin.	96	SCL	O	Clock signal output pin to write the program.
46	PROTECT	I	Protection circuit detection input pin.	99	VOLCL/HS	O	Clock signal output pin to the electrical volume IC.
47	UPLED	O	Up direction LED control output pin of SSC.	100	VOLDA	O	Data signal output pin to the electrical volume IC.
48	DNLED	O	Down direction LED control output pin of SSC.				
49	LEED	O	Left direction LED control output pin of SSC.				

SUB MICROPROCESSOR

OPERATION KEY

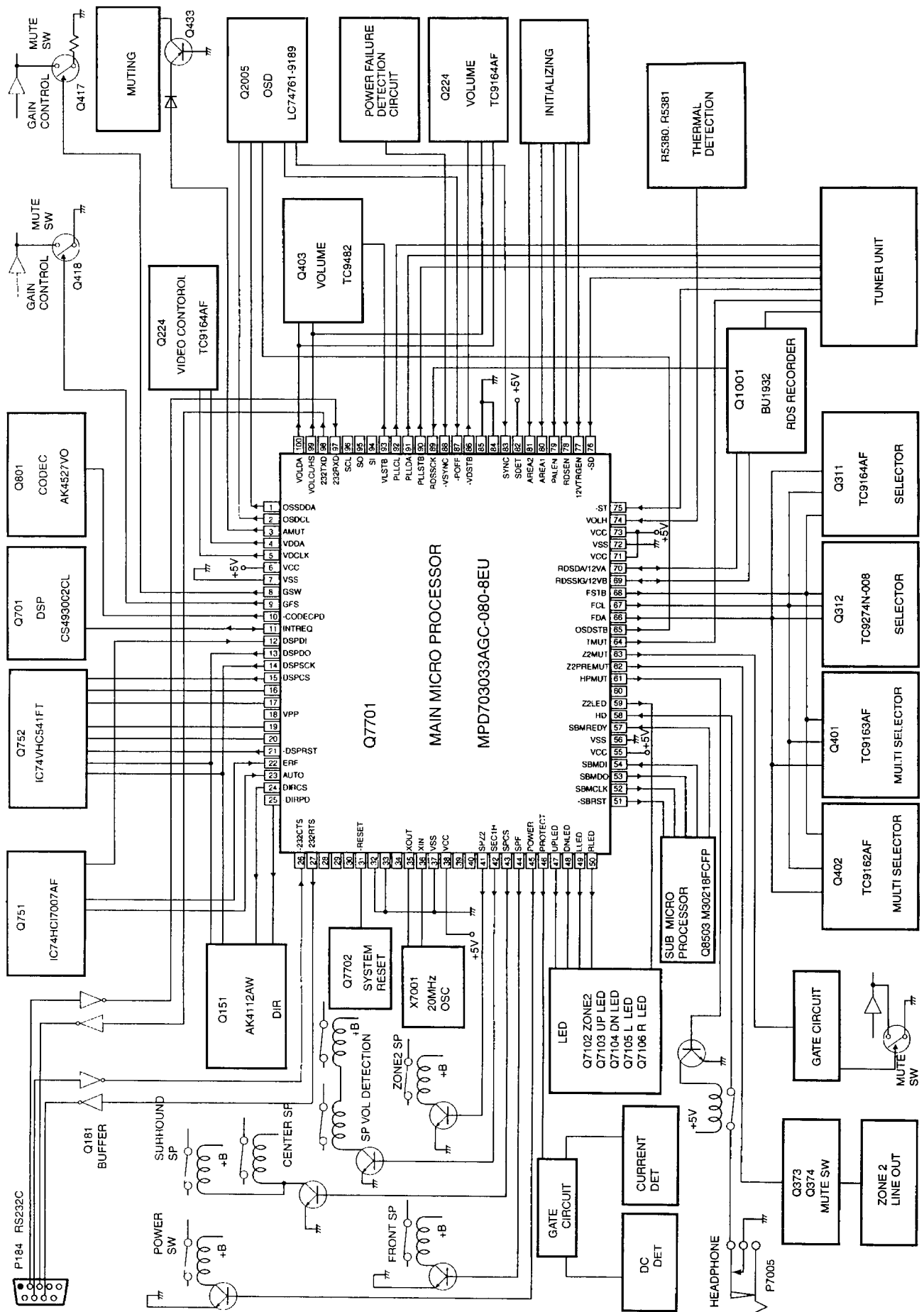
RETURN	SET UP	RECOUT	ZONE 2	CH LEVEL
DIMMER	TAPE	F M	A M	PHONO
STANDBY	DVD	VIDEO 1	VIDEO 3	VIDEO 4
DISPLAY	FM MODE	MEMORY	TUNING >	< PRESET
				PRESET >



SUB MICROPROCESSOR TERMINAL DESCRIPTION

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	VDD		Power supply terminal. Connect to 5V.	40	P23	O	Segment output terminal of P23.
2	VSS		Ground terminal.	41	P22	O	Segment output terminal of P22.
3	X1		Ceramic oscillator connection terminals for main system.	42	P21	O	Segment output terminal of P21.
4	X2		Connect the 5MHz ceramic oscillator between #3 and #4.	43	P20	O	Segment output terminal of P20.
5	IC/VPP		Power supply terminal for flash memory IC.	44	P19	O	Segment output terminal of P19.
6	~RESET	I	System reset signal input terminal.	45	P18	O	Segment output terminal of P18.
7	SUBCL/SCK	I	Clock input terminal to transmit from main microprocessor or to write the program.	46	P17	O	Segment output terminal of P17.
8	SUBDO/SDI	I	Data input terminal to transmit from main microprocessor or to write the program.	47	P16	O	Segment output terminal of P16.
9	SUBDI/SDD	O	Data output terminal to transmit to main microprocessor or to write the program.	48	P15	O	Segment output terminal of P15.
10	SUBLDY	O	Data ready output terminal to transmit to the main microprocessor.	49	P14	O	Segment output terminal of P14.
11	VBJ	I	Pulse input terminal from the rotary encoder of volume.	50	P13	O	Segment output terminal of P13.
12	VAJ	I	Pulse input terminal from the rotary encoder of volume.	51	P12	O	Segment output terminal of P12.
13	SSCBJ	I	Pulse input terminal from the rotary encoder of SSC.	52	P11	O	Segment output terminal of P11.
14	SSCAJ	I	Pulse input terminal from the rotary encoder of SSC.	53	P10	O	Segment output terminal of P10.
15	~IRIN	I	Signal input terminal to remote controller.	54	P9	O	Segment output terminal of P9.
16	~IRF	I	Signal input terminal to remote controller.	55	P8	O	Segment output terminal of P8.
17	STBYLED	O	Standby LED control output terminal.	56	P7	O	Segment output terminal of P7.
18	AVSS	O	Ground terminal for A/D converter.	57	P6	O	Segment output terminal of P6.
19	K3	I	Operation key connection terminal.	58	P5	O	Segment output terminal of P5.
20	K2	I	Operation key connection terminal.	59	VDD2		Power supply terminal. Apply +5V.
21	K1	I	Operation key connection terminal.	60	VLOAD		Negative power supply terminal of FL controller.
22	K0	I	Operation key connection terminal.	61	P4	O	Segment output terminal of P4.
23	VSS0		Ground terminal	62	P3	O	Segment output terminal of P3.
24	AVDD		Power supply terminal for A/D converter.	63	P2	O	Segment output terminal of P2.
25	VDDD		Power supply terminal. Apply +5V.	64	P1	O	Segment output terminal of P1.
26	~SYSIN	I	System code input terminal.	65	I6G	O	Grid output terminal of I6G.
27	~SYSOUT	O	System code output terminal.	66	I5G	O	Grid output terminal of I5G.
28	P35	O	Segment output terminal of P35.	67	I4G	O	Grid output terminal of I4G.
29	P34	O	Segment output terminal of P34.	68	I3G	O	Grid output terminal of I3G.
30	P33	O	Segment output terminal of P33.	69	I2G	O	Grid output terminal of I2G.
31	P32	O	Segment output terminal of P32.	70	I1G	O	Grid output terminal of I1G.
32	P31	O	Segment output terminal of P31.	71	I0G	O	Grid output terminal of I0G.
33	P30	O	Segment output terminal of P30.	72	9G	O	Grid output terminal of 9G.
34	P29	O	Segment output terminal of P29.	73	8G	O	Grid output terminal of 8G.
35	P28	O	Segment output terminal of P28.	74	7G	O	Grid output terminal of 7G.
36	P27	O	Segment output terminal of P27.	75	6G	O	Grid output terminal of 6G.
37	P26	O	Segment output terminal of P26.	76	5G	O	Grid output terminal of 5G.
38	P25	O	Segment output terminal of P25.	77	4G	O	Grid output terminal of 4G.
39	P24	O	Segment output terminal of P24.	78	3G	O	Grid output terminal of 3G.
				79	2G	O	Grid output terminal of 2G.
				80	1G	O	Grid output terminal of 1G.

MAIN MICROPROCESSOR



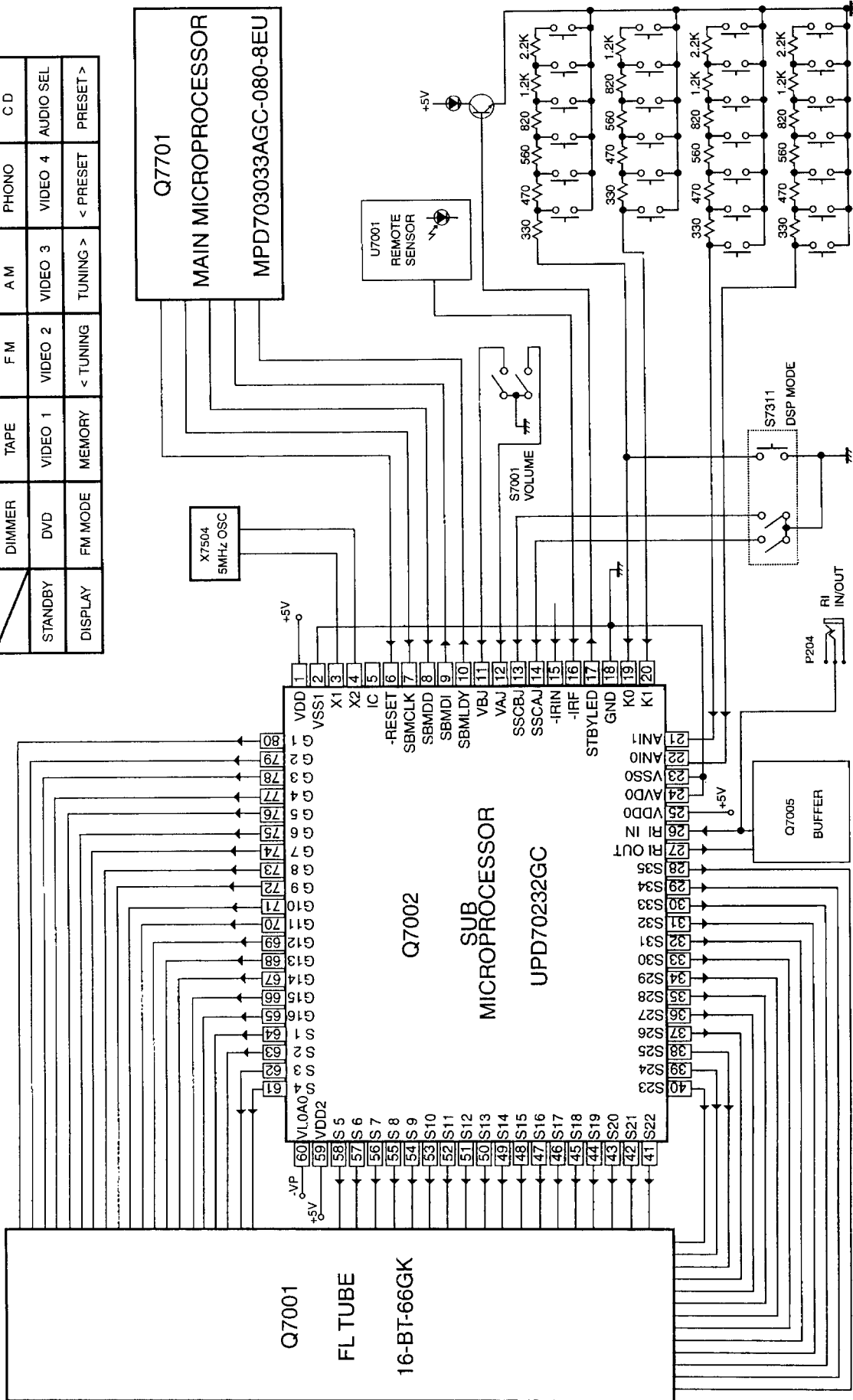
MAIN MICROPROCESSOR TERMINAL DESCRIPTION

Pin No.	Symbol	I/O	Description	Pin No.	Symbol	I/O	Description
1	DSPDA	O	Serial data output pin to DSP IC.	55	BVDD		Power supply pin. Connect to +5V.
2	DSPCL	O	Serial clock output pin to DSP IC.	56	BVSS		Ground pin.
3	AMUT	O	Audio muting output pin.	57	SBMREDY	I	Red signal input pin to transmit from the sub microprocessor.
4	VDDA	O	Data signal output pin to analog switch for video switch control.	58	HD	I	Detection pin when insert the headphones.
5	VDCLK	O	Clock signal output pin to analog switch for video switch control.	59	Z2LED	O	Zone 2 LED control output pin.
6	EVDD		Power supply pin. Connect to +5V.	61	HPMUT	O	Muting output pin to the headphone circuit.
7	EVSS		Ground pin.	62	VMUT	O	Muting output pin to the video circuit.
8	GSW	O	Gain control signal output pin for subwoofer.	63	Z2MUT	O	Muting output pin to the zone 2 circuit.
9	GFS	O	Gain control output signal pin to front, surround, and center channels.	64	TMUT	O	Muting output pin to the tuner block.
10	~CODECPD	O	Power down output pin to Codec IC.	65	OSDSTB	O	Chip select signal output pin to OSD IC.
11	INTREQ	I/O	Interrupter and abort signal input/output pin of DSP IC.	66	FDA	O	Data signal output pin to Selector, Configuration, Multi channel, and Multi source control ICs.
12	DSPDI	I	Serial data input pin from DIR and DSP ICs.	67	FCL	O	Clock signal output pin to Selector, Configuration, Multi channel, and Multi source control ICs.
13	DSPDO	O	Serial data output pin from DIR and DSP ICs.	68	FSTB	O	Strobe signal output pin to Selector, Configuration, Multi channel, and Multi source control ICs.
14	DSPSCK	O	Serial clock output pin to DIR and DSP ICs.	69	RDSSIG/12VB	I/O	Quality check input pin of RDS demodulator signal.
15	DSPCS	O	Chip select output pin to DSP IC.	70	RSDSA/12VA	I/O	Data input pin from RDS decoder.
18	VPP			71	AVDD		Power supply pin. Connect to +5V.
21	~DSPRST	O	Reset signal output pin to DSP IC.	72	AVSS		Ground pin.
22	ERF	I	Error flag input pin.	73	AVREF		Reference voltage input pin.
23	AUTO	O	Auto detection input pin of DIR IC.	74	VOLH	I	Voltage detection input pin of speaker terminal.
24	DIRCS	O	Chip select output pin to DIR IC.	75	~ST	I	Stereo broadcast detection input pin.
25	~DIRPD	O	Power down signal output pin to DIR IC.	76	~SD	I	Station input pin.
26	~232CTS	I	Transmission judge input pin of RS232C signal.	77	12VTRGEN	I	Initializing input terminal for 12V trigger.
27	~232RTS	O	Communication request signal output pin of RS232C signal.	78	RDSEN	I	Initializing input terminal for RDS broadcast.
31	~RESET	I	System reset input terminal.	79	PLAEN	I	Initializing input terminal for PAL/NTSC.
32	XT1		Oscillator connection pin of sub system. Not used.	80	AREA1	I	Initializing input terminal for broadcast area.
33	XT2		Not used.	81	AREA2	I	Initializing input terminal for broadcast area.
34	REGC			82	SDET	I	S video signal detection input pin.
35	X2		Ceramic oscillator connection pins.	83	SYNC	I	Judge input pin for external synchronizing of OSD.
36	X1		Connect the 20MHz ceramic oscillator between X1 and X2 pins.	86	VDSTB	O	Strobe output pin of analog switch for video controller.
37	VSS		Power supply pin. Connect to ground pin.	87	~VSYNC	I	Vertical synchronizing signal input pin.
38	VDD		Power supply pin. Connect to +5V.	88	~POFF	I	Power failure detection input pin.
39	CLKOUT		Not used.	89	RDSSCK	I	Clock signal input pin from RDS decoder.
41	SPZ2	O	Speaker relay control signal output pin for Zone 2.	90	PLLSTB	O	Chip enable signal output pin to PLL IC.
42	SECIH	O	Amplifier gain control output pin.	91	PLLDA	O	Data signal output pin to PLL IC.
43	SPCS	O	Speaker relay control output pin of center and surround channels.	92	PLLCL	O	Clock signal output pin to PLL IC.
44	SPF	O	Speaker relay control output pin of front channel.	93	VLSTB	O	Strobe signal output pin to electrical volume IC.
45	POWER	O	Power relay control output pin.	94	SI	I	Signal input pin to write the program.
46	PROTECT	I	Protection circuit detection input pin.	95	SO	O	Signal output pin to write the program.
47	UPLED	O	Up direction LED control output pin of SSC.	96	SCL	O	Clock signal output pin to write the program.
48	DNLED	O	Down direction LED control output pin of SSC.	97	232RXD	I	Transmission judge input pin of RS232C signal.
49	LEED	O	Left direction LED control output pin of SSC.	98	232TXD	O	Communication request signal output pin of RS232C signal.
50	RLED	O	Right direction LED control output pin of SSC.	99	VOLCL/HS	O	Clock signal output pin to the electrical volume IC.
51	~SBMRST	O	Reset signal output pin to sub microprocessor.	100	VOLDA	O	Data signal output pin to the electrical volume IC.
52	SBMCLK	O	Clock signal output pin to transmit to the sub microprocessor.				
53	SBMDO	O	Data signal output pin to transmit to the sub microprocessor.				
54	SBMDI	I	Data signal input pin to transmit from the sub microprocessor.				

SUB MICROPROCESSOR

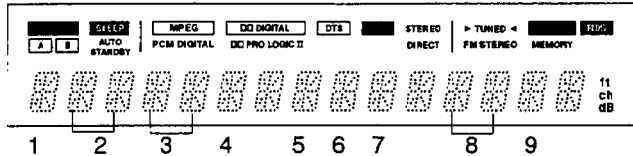
OPERATION KEY

RETURN	SET UP	RECOUT	ZONE 2	CH LEVEL	Z2 VOL
DIMMER	TAPE	F M	A M	PHONO	C D
STANDBY	DVD	VIDEO 1	VIDEO 3	VIDEO 4	AUDIO SEL
DISPLAY	FM MODE	MEMORY	TUNING >	< PRESET	PRESET >

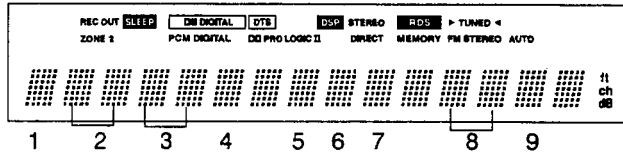


ABOUT DEBUG MODE

TX-DS595



TX-DS696



1. How to enter the debug mode

Press and hold down the AUDIO SEL button, then press the STANDBY/ON button to display "DEBUG MODE IN". After 5 second the unit enters the DEBUG mode. When there is the error that can judge by the microprocessor, the error message is displayed for 3 seconds.

DSPREAD ERROR: Problem of interface between DSP and microprocessor.

DSPLOCK ERROR: Problem of lock of DSP IC.

On all occasions the microprocessor resets DSP, and DSP is restarted.

2. How to investigate the unit by the debug mode

Apply the signal that the trouble occurs, and compare with the example of display or the normal unit. If there is difference on the display, you are able to check the rejection by the explanation below. If there is not difference, the input signal comes to DSP IC and the format of signal is recognized. Check the signal from the DSP output to the speaker output.

3. Explanation of Display

1. DIR ERROR: Check of digital signal of DIR IC (AK4112).

L:There is the digital signal. H:No digital signal.

When apply the digital signal, the display is "L".

Check the circuit from digital input to DIR IC and the connection between ERF (#18) of DIR and microprocessor.

2. DIR STATUS 1: It displays the status of Addr03H that AK4112 reads from the digital signal. It shows the sampling frequency, and pre emphasis etc. When the display is difference to the table below, check the signals of DSPCL and DSPDA to confirm the communication between the microprocessor and CDTO/SCDO(#28) of AK4112.

3. DIR STATUS 2: It displays the status of Addr0DH that AK4112 reads from the digital signal. It shows the constants of input signal (DD,DTS,MPEG etc.). When the display is difference to the table below, check the signals of DSPCL and DSPDA to confirm the communication between the microprocessor and CDTO/SCDO(#28) of AK4112.

4. DIR analog/digital judgment

It displays the result of judgment about input signal by the microprocessor. D:Digital A:Analog

5-7. Addr15 -17 :These displays show the port condition of the flash memory control. "L" except Japanese model.

	DIR ERROR	DIR STATUS1	DIR STATUS2	ANA/DIG	ADDR15	ADDR16	ADDR17	Judgment	DECODE
DOLBY DIGITAL	L	34 or B4	01	D	L	L	H	01	1
MPEG AAC *1	L	34 or B4	07	D	L	H	L	07	1
DTS DVD	L	34 or B4	0B	D	H	L	L	0B	1
PCM 48K	L	04	**	D	L	L	L	23	1
PCM 96K	L	03 or 05	**	D	L	L	H	23	1
ANALOG	L	**	**	A	H	L	H	23	1

*1: Japanese model only ** :State of last input

8. Judgment of DSP input signal

It displays the result of detection about the input signal by DSP IC. Refer to the table below.

When the display differs, check the DSP IC and circumference of DSP IC.

Digital Signal Detection		
DIR	STTS2	DSP
00	00	Null
01	01	Dolby Digital
02	02	Reserved
03	03	Pause
04	04	MPEG1 L1
05	05	MPEG1 L23/MPEG2 w/e
06	06	MPEG2 w/e
07	07	MPEGAAC
08	08	MPEG2 L1
09	09	MPEG2 L2/3
0A	0A	Reserved
0B	0B	DTS1(512)
0C	0C	DTS2(1024)
0D	0D	DTS3(2048)
	20	Silent
	21	DTS LD
	22	DTS CD
	23	Linear PCM

9. DSP DECODE

When there is the input signal in DSP IC.

"1" : When decode the signal.

"0": When does not decode the signal.

"0":When there is not the input signal in DSP IC.

When the digital signal is applied in DSP IC, the display is "0".

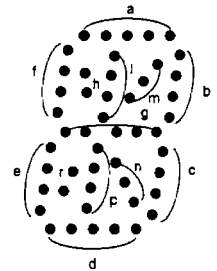
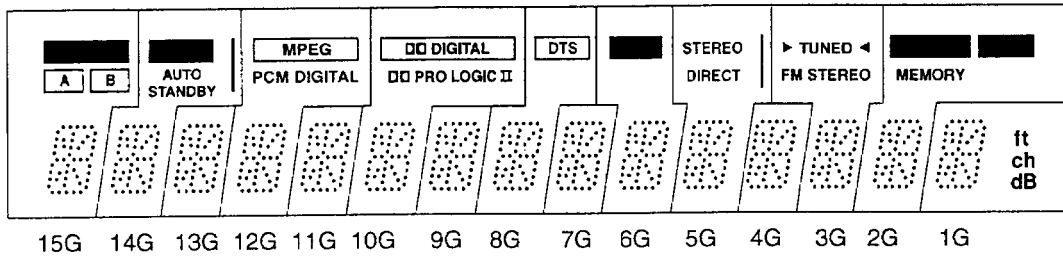
DSP IC does not operate.

Check the signals to the pins 22, 25, and 26 of DSP IC.

Is there the signal to pin 20 of DIR IC?

FL TUBE VIEW

15-BT-64GNK(Model TX-DS595)

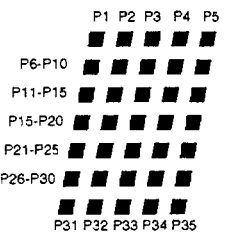
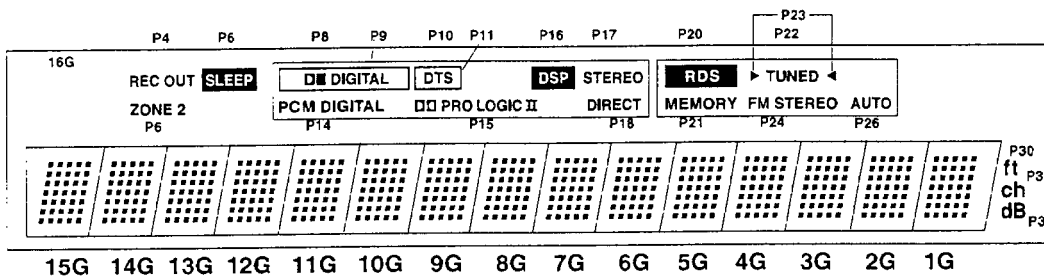


	15G	13G	11G	9G	7G	6G	5G	3G	2G	1G
P1			MPEG	DIGITAL	DTS		STEREO	TUNED		ft
P2	A	AUTO STANDBY					DIRECT	FM STEREO		ch
P3	B		PCM DIGITAL	PRO LOGIC II					MEMORY	dB

PIN NO.	6	6	6	6	6	6	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3			
	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4
CONNECTION	F	F	N	N	P	P	P	P	P	P	P	P	P	P	P	P	P	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
	2	2	P	P	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	X	X	X	X	X	X	X	X	X	X	X	

PIN NO.	3	3	3	3	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1
CONNECTION	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	

16-BT-66GK(Model TX-DS696)



PIN CONNECTION

PIN NO.	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3			
	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4
CONNECTION	F	F	N	N	N	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
	2	2	P	P	C	5	4	3	2	1	0	6	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8

PIN NO.	3	3	3	3	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1		
CONNECTION	P	P	P	P	P	P	N	N	N	N	N	N	N	N	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	N	N	F	F	
	7	6	5	4	3	2	1	C	C	C	C	C	C	C	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	P	P	1	1

F1,F2:filament NP: No pin nc: No connection

PRINTED CIRCUIT BOARD PARTS LIST

DSP CIRCUIT PC BOARD (NADG-7066-1H/1/1J/1K)			CIRCUIT NO.	PART NO.	DESCRIPTION
CIRCUIT NO.	PART NO.	DESCRIPTION			
	ICs				
Q101,Q102	22241383R2,	NJM4565M-D,	P121	25045645	NPJ-2PDO450
Q405-Q409	22240489R1	MPC4570G2-T1(MST) or	P401	25045572	NPJ-6PDBRW387
Q802-Q804	22240581R2	NJM4565M	P407	25045567	NPJ-1PDBL382
Q121	222740046R2	TC74HCU04F			Sockets
Q151	22241520R2	AK4112AVF	P412B	25052580R2	NSCT-14P2477
Q401	22240943R2	TC9163AF	P404	2009990651UL	NSAS-20P0906
Q402	22240981R2	TC9162AF			Plugs
Q403	22241444R2	TC9482F	JL405B	25055630	NPLG-9P592
Q701	22241518R9	CS493263-CL	P403	25055704	NPLG-8P660
Q702	22278025DR2NE	MPC2925T	P409B	25055807	NPLG-18P763
Q703	22240935R2	TC7WU04FU	P410B	25055708	NPLG-12P664
Q704	22278033DR2NE	MPC2933T	P411B	25055708	NPLG-12P664
Q751	222740077R2	TC74HCT7007AF	P702B	25055807	NPLG-18P763
Q752	22274541ER2	TC74VHC541FT	P7702	25055701	NPLG-5P657
Q7701	22241572R3	MPD703031AGC-081-8EU			
Q8C1	22241529R3	AK4527VQ			
	Photo couplers				
U121,U122	24120083 or 24120086	GP1FA550RZ or GP1FA551RZ			
	Transistors				
Q411-Q416	221541CR2	RN1441	Q5000-Q5004	2210755,	2SC1775A-E,
Q417,Q418	2214530R2 or	RN2402 or	Q5010-Q5014	2210756,	2SC1775A-F,
Q433	2216220R2	KRA102S	Q5020-Q5024	2211733 or	2SC1845-E or
Q421-Q426	2215410R2	RN1441		2215896	KTC3200-BL
Q428	2215410R2	RN1441	Q5030-Q5034	2211353,	2SA949-O,
Q7702	2214490R2 or 2216210R2	RN1404 or KRC104S	Q5040-Q5044	2211354,	2SA949-Y,
	Diodes		Q5050-Q5054	2215843 or 2215844	KTA1024-O or KTA1024-Y
D101-D108	223234R2 or	1SS352 or	Q5060-Q5064	2211633,	2SC2229-O,
D401,D402	223269R2	1SS355		2211634,	2SC2229-Y,
D404	223234R2 or 223269R2	1SS352 or 1SS355	D5000-D5004	2215854 or 2215853	KTC3206-Y or KTC3206-O
D7701-D7703	223234R2 or	1SS352 or			
D7706	223269R2	1SS355	C5000-C5004	393381017	100 μ F,50 V,Elect.
D7705	224490620R2	UDZ6.2B	C5010-C5014	374721515	150 pF+/-10 %,50 V,Plastic
	Oscillators		C5030-C5034	374721015	100 pF+/-10 %,50 V,Plastic
X151	3010323R2	HC-49/U03C 12.288MHz			<P/W/T/A/WR/GT>
X701	3010324R2	CSTCV12.2MTJ0C4	C5040-C5044	393343317	330 μ F,16 V,Elect.
X7701	3010342R2	CSTCW2000MX01	C5050-C5054	354781009	10 μ F,50 V,Elect.
	Coils		C5070-C5074	354791009	10 μ F,100 V,Elect.
L121,L122	231237K470R2	NCH-1479	C5080-C5084	354791009	10 μ F,100 V,Elect.
L152-L154	231237M022R2	NCH-1471	C5090-C5094	354784709	47 μ F,50 V,Elect.
L701	231237K470R2	NCH-1479	C5120-C5124	393372207	22 μ F,63 V,Elect.
L702,L703	231237M022R2	NCH-1471	C5130-C5134	393372207	22 μ F,63 V,Elect.
L801,L802	231237K470R2	NCH-1479	C5401	354780109	1 μ F,50 V,Elect.
L155,L156	230958R1	BK1608LM182-T			
R121,R122	230958R1	BK1608LM182-T			
	Capacitors		R5130-R5134	443528214	820ohm+/-5 %,1/2 W,Metal oxide
C106	356741009R2	10 μ F,16 V,Elect.	R5140-R5144	443528214	820ohm+/-5 %,1/2 W,Metal oxide
C111,C112	356724709R2	47 μ F,6.3 V,Elect.	R5150-R5154	443521034	10kohm+/-5 %,1/2 W,Metal oxide
C127,C132	356724709R2	47 μ F,6.3 V,Elect.	R5160-R5164	443521024	1kohm+/-5 %,1/2 W,Metal oxide
C152,C158	356724709R2	47 μ F,6.3 V,Elect.	R5170-R5174	443528214	820ohm+/-5 %,1/2 W,Metal oxide
C417-C422	356741009R2	10 μ F,15 V,Elect.	R5180-R5184	443523304	33ohm+/-5 %,1/2 W,Metal oxide
C435-C440	356721019R2	100 μ F,6.3 V,Elect.	R5190-R5194	443521014	100 ohm+/-5 %,1/2 W,Metal oxide
C457-C462	356744709R2	47 μ F,16 V,Elect.			Resistors
C471-C476	356741009R2	10 μ F,16 V,Elect.	R5200-R5204	443521014	100 ohm+/-5 %,1/2 W,Metal oxide
C477,C478	374724744	0.47 μ F+/-5 %,50 V,Plastic	R5230-R5234	443521004	10 ohm+/-5 %,1/2 W,Metal oxide
C706,C716	356724709R2	47 μ F,6.3 V,Elect.	R5240-R5244	443521004	10 ohm+/-5 %,1/2 W,Metal oxide
C719,C723	356724709R2	47 μ F,6.3 V,Elect.	R5280-R5284	443521034	10kohm+/-5 %,1/2 W,Metal oxide
C7703	356724709R2	47 μ F,6.3 V,Elect.			Sockets
C7705,C7706	356780109R2	1 μ F,50 V,Elect.	P6000A-P6004A	25052287	NSCT-4P2184
C7712	356721019R2	100 μ F,6.3 V,Elect.	P6011A	25052295	NSCT-12P2192
C806	356721019R2	100 μ F,6.3 V,Elect.			Plug
C808	356742209R2	22 μ F,16 V,Elect.	P404A	25055154	NPLG-10P138
C809	356724709R2	47 μ F,6.3 V,Elect.			
C831-C836	356741009R2	10 μ F,16 V,Elect.			
C867-C870	356741019R2	100 μ F,16 V,Elect.			

NOTE: THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

TERMINAL PC BOARD (NAETC-7069-1H/1V/1J/1K/1L/1M)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q6931	222780565JRC	NJM78M56FA
Q5303,Q5307	2215864	KTC3199-GR, 2SC1740S-S, 2SC1740S-R or 2SC2458-GR
Q5308,Q5309	2215770, 2213285, 2213284 or 2212115	KRA102M, DTA114ES or RN2202
D5306,D5307	223163, 223205 or 223222	1SS133, 1SS270A or WG713A
D6932,D6933	22380260, 22380032 or 22380035	RL1N4003, 1SR139-100 or GP104003E
C6931	354751029	1000 μ F,25 V,Elect.
C6933	354741009	10 μ F,16 V,Elect.
R6935	441721514	150 ohm \pm 5% ,2 W,Metal oxide
P410A,P411A	25051237	NSCT-12P1027
P6931A	25051527	NSCT-16P1314
P7002B	25052242, 25050949, 25051313 or 25051853	NSCT-9P2139, NSCT-9P736, NSCT-9P1102 or NSCT-9P1640
P6411	25055807	NPLG-18P763
Q6931A	27150211	RAID-68
Q6931B	838430107	3TTB-10S(BC),Self-tapping

PRIMARY CIRCUIT PC BOARD (NAPS-7070-1H/1V/1J/1K/1L/1M)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q921	2215864, 2213285, 2213284 or 2212115	KTC3199-GR, 2SC1740S-S, 2SC1740S-R or 2SC2458-GR
D921 D924	22380260, 22380032 or 22380035	RL1N4003, 1SR139-100 or GP104003E
D925	223163, 223205 or 223222	1SS133, 1SS270A or WG713A
T902	2301381 2301382 2301383	Δ NPT:358D <D> Δ NPT:358P <P/A> Δ NPT:358DG <WT/WR/GT>
C901	3500196S	Δ RE275V-103M,,IS
C902	3300030	Δ DE1307E472M-KH,IS
C922	354762219	220 μ F,35 V,Elect.
R901	431533355	Δ 3.3Mohm,1/2 W,Solid <D>
R924	443522704	27ohm \pm 5% ,1/2 W,Metal oxide
RL901	25065561, 25065508, 25065515 or 25065526	Δ NRL-1P5A-DC12-127, Δ NRL-1P10A-DC12-093, Δ NRL-1P5A-DC12-096 or Δ NRL-1P5A-DC12 102

CIRCUIT NO.	PART NO.	DESCRIPTION
P9C2	25051125 25051126 25052115 25052381	Δ NSCT-4P912 <P/WT/GT> Δ NSCT-4P913 <D> Δ NSCT-2P2013 <A> Δ NSCT-2P2278 <WR>
F901	252166	Δ 6.3A-UL/T237 <D/WT/WR>
F902	252076 or 252242	Δ 3.15A-SE-EAK or Δ 3.15A-SE-TL250V <P/WT/WR/A/GT>
F903	252075 or 252241	Δ 2.5A-SE-EAK or Δ 2.5A-SE-TL250V <P>
F901A,F901B	25052133	Δ NSCT-1P2031 <D/WT/WR>
F902A,F902B	25052133	Δ NSCT-1P2031 <P/WT/A/WR/GT>
F903A,F903B	25052133	Δ NSCT-1P2031 <P>
S902	25065437	Δ NSS-22157P <WT/WR>
P931A	25051230	NSCT-5P1020
P901A	25055675 or 25056028	NPLG-2P631 or NPLG-2P0978

SPEAKER TERMINAL A PC BOARD (NAETC-7071-1H/1V/1J/1K/1L/1M)

CIRCUIT NO.	PART NO.	DESCRIPTION
C6840,C6841	374721024	1000 pF \pm 5% ,50 V,Plastic <P/WT/A/WR/GT>
C6844		
P6803	25060297	NTM-6PDMN228
JL6803B,JL6804B	25050269	NSCT-5P97

SPEAKER TERMINAL B PC BOARD (NAETC-7072-1H/1V/1J/1K/1L/1M)

CIRCUIT NO.	PART NO.	DESCRIPTION
C6842,C6843	374721024	1000 pF \pm 5% ,50 V,Plastic <P/WT/A/WR/GT>
C6845,C6846		
P6802	25060296	NTM-8PDMN227
P6805A	25051127	NSCT-8P914

POWER SWITCH PC BOARD (NASW-7074-1H/1V/1J/1K/1L/1M)

CIRCUIT NO.	PART NO.	DESCRIPTION
S906	25035550	Δ NPS-111-L512P,Power switch

POWER AMPLIFIER B PC BOARD (NAAF-7077-1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q6000-Q6004	2213284 or 2213285	2SC1740S-R or 2SC1740S-S
Q6010-Q6014	2213354, 2213355, 2212125 or 2215995	2SA933S-R, 2SA933S-S, 2SA1048-GR or KTA1267-GR
Q6020-Q6024	2203434 or 2203010	KTD2061-Y or 2SC5171
C6030-Q6034	2203424 or 2203000	KTB1369-Y or 2SA1930
C6040-Q6044		

CAUTION : Replacement for transistor of mark *, if necessary must be made from the same beta group (HFE) as the original type.

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
Q6070-Q6074	2210755, 2210756, 2211732, 2211733, 2215895 or 2215896	2SC1775A-E, 2SC1775A-F, 2SC1845-F, 2SC1815-E, KTC3200-GR or KTC3200-BL	RL6600-RL6602	Relays 25065586 25065563 or 25065517 25065574 25065561, 25065526, 25065508 or 25065515	NRL-2P5A-DC24-142, NRL-2P5A-DC24-129 or NRL-2P5A-DC24-098 NRL-1P5A-DC24-134 NRL-1P10A-DC12-127, NRL-1P10A-DC12-102, NRL-1P10A-DC12-093 or NRL-1P10A-DC12-096
Q6050-Q6054	2203563, 2203562, 2202843, 2202842, 2201653, 2201655 or 2201654	* KTC5242-O * KTC5242-R * 2SC5242-O * 2SC5242-R * 2SC3856-O * 2SC3856-P * 2SC3856-Y	RL6604 RL6901,RL6902	Switch 25065581 Fuses 252198 252099	NSS-22203 8A-UL, Fuse <D> 8A-EAK, Fuse <P/WT/WR/A/GT>
Q6060-Q6064	2203553, 2203552, 2202833, 2202832, 2201663, 2201665 or 2201664	* KTA1962-O * KTA1962-R * 2SA1962-O * 2SA1962-R * 2SA1492-O * 2SA1492-P * 2SA1492-Y	F6901,F6902 F6901A,F69C1B F6902A,F69C2B F6901C	Fuseholders 25052133 25052133 Labels 29362800 Sockets 25051109 25051109	NSCT-1P2031 NSCT-1P2031 T8AL250V,Fuse <P/A/WT/WR/GT>
Q6600-Q6602 Q6701,Q6702 Q6901	2215864, 2212115, 2213284 or 2213285	KTC3199-GR, 2SC2458-GR, 2SC1740S-R or 2SC1740S-S	JL6803A,JL6804A JL6951A,JL6952A	Plugs 25056009 25056017 25055038 25055678 25055805 25055701	NSCT-5P896 NSCT-5P896 NPLG-4P0959 NPLG-12P0967 NPLG-2P29 NPLG-8P634 NPLG-16P761 NPLG-5P657
Q6703	2211792, 2211793, 2215885 or 2215886	2SA992-F, 2SA992-E, KTA1268-GR or KTA1268-BL	P6000-P6004 P6011 P6080-P6084 P6805 P6931 P931	27160483	RAD-152
Q6704	2212125, 2213354, 2215995 or 2213355	2SA1048-GR, 2SA933S-R, KTA1267-GR or 2SA933S-S	D6903B D6903A,D6904A	Heatsink Screws 838430107	
D6000-D6004 D6600-D6602 D6701,D6702 D6703,D6704 D6705,D6706 D6901,D6902	223163, 223205 or 223222 224470512 22380260, 22380032 or 22380035	1SS133, 1SS270A or WG713A MTZJ5.1B RL1N4003 1SR139-100 GP104003E	REGULATOR CIRCUIT PC BOARD (NAPS-7078-1H/11)		
D6903,D6904 D6906	22380274 223163, 223205 or 223222	RS603M 1SS133, 1SS270A or WG713A	CIRCUIT NO.	PART NO.	DESCRIPTION
L6000-L6004	231176SY	S-1.3C <P/A/WT/WR/GT>	Q9501	2211455 or 2215975	2SA1015-GR or KTA1266-GR
C6020-C6024 C6030-C6034 C6701,C6706 C6704 C6708 C6901,C6902 C6903 C6904-C6907	354784709 374724734 354721019 Capacitors 354780109 374722234 3504313 374722234 374793344	47 μ F,50 V,Elect. 0.047 μ F+/-5 %,50 V,Plastic 100 μ F,6.3 V,Elect. 1 μ F,50 V,Elect. 0.022 μ F+/-5 %,50 V,Plastic 12000 μ F,63 V,Elect. 0.022 μ F+/-5 %,50 V,Plastic 0.33 μ F+/-5 %,63 V,Plastic	D9501 D9502-D9507 D9508	22380022 or 22380285 22380260, 22380032 or 22380035 Diode 224473304 Capacitors 374721044 354762229 354761029S 354762219 354744729S 354772219	RBV402 or RS403M RL1N4003, 1SR139-100 or GP104003E MTZJ33D 0.1 μ F+/-5 %,50 V,Plastic 2200 μ F,35 V,Elect. 1000 μ F,35 V,Elect. 220 μ F,35 V,Elect. 4700 μ F,16 V,Elect. 220 μ F,63 V,Elect.
R6040-R6044 R6070-R6074 R6080-R6084 R6090-R6094 R6100-R6104	5210258 443521814 453530224 453530224 4000201, 4000132 or 4500245	N06HR1KBC,Trimming 180ohm+/-5 %,1/2 W,Metal oxide 2.2ohm+/-5 %,1/2 W,Metal 2.2ohm+/-5 %,1/2 W,Metal RF-5EGKR22, RC55 0.22 or EPR55FK0.22,Metal plate	R6907 R9501,R9502 R9506 R9521 F9501 F9501A,F9501B F9501C	453532294 453530104 443522204 453530224 252075 or 25224: 252160 Fuseholders 25052133 Label 29361747 Sockets 25051109 25051095	0.22ohm+/-5 %,1/2 W,Metal 1ohm+/-5 %,1/2 W,Metal 22ohm+/-5 %,1/2 W,Metal oxide 2.2ohm+/-5 %,1/2 W,Metal Δ 2.5A-SE-EAK or Δ 2.5A-SE-TL250V,Fuse <P/WT/WR/A/GT> Δ 2.5A-UL/T-237, Fuse <D> Δ NSCT-1P2031 T2.5AL250V,Fuse <P/A/WT/WR/GT>
R6130-R6134 R6850,R6851 R6904-R6907	453630824 443523914 453532294	8.2ohm+/-5 %,1/2 W,Metal 390ohm+/-5 %,1/2 W,Metal oxide 0.22ohm+/-5 %,1/2 W,Metal	JL6951B,JL6952B JL9501A	25051109 25051095	NSCT-5P896 NSCT-11P882

S VIDEO TERMINAL PC BOARD (NAVD-7095-1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q207, Q208	22240373	BA7625
	ICs	
Q201, Q202	2216031R2 or 2216032R2	RN1444-A or RN1444-B
Q203-Q206	2214375R2 or 2216185R2	2SA1162-GR or KTA1504-GR
Q209	2214530R2 or 2216220R2	RN2402 or KRA102S
CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D201, D202	223234R2 or 223269R2	1SS352 or 1SS355
	Capacitors	
C204, C206	354780229	2.2 μ F, 50 V.Elect.
C208, C214	354724719	470 μ F, 6.3 V.Elect.
C210, C212	354780229	2.2 μ F, 50 V.Elect.
C217, C218	354724719	470 μ F, 6.3 V.Elect.
	Terminal	
P201	25045504	NPJ-1PDBL319
	Socket	
JL201B	25051093	NSCT-9P880
P202, P203	25051568	NSCT-12P1355
P205B	25051235	NSCT-10P1025

COMPOSITE VIDEO TERMINAL PC BOARD (NAVD-7096-1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q261	22240373	BA7625
	Transistors	
Q262, Q264	2214375R2 or 2216185R2	2SA1162-GR or KTA1504-GR
Q266	2216031R2 or 2216032R2	RN1444-A or RN1444-B
	Diodes	
D261, D262	223234R2 or 223269R2	1SS352 or 1SS355
	Capacitors	
C261	354724719	470 μ F, 6.3 V.Elect.
C263	354780229	2.2 μ F, 50 V.Elect.
C264, C266	354724719	470 μ F, 6.3 V.Elect.
C265	354780109	1 μ F, 50 V.Elect.
C267-C269	354780229	2.2 μ F, 50 V.Elect.
	Terminals	
P262, P263	25045299 or 25045363	NPJ-3PDYE158 or NPJ-3PDYE208
	Socket	
JL201A	25051093	NSCT-9P880

INPUT TERMINAL PC BOARD (NAAF-7097-1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q301, Q361	22241383R2 or 22240489R1NE	NJM4565M-D or MPC4570G2-T1(MST); TC9273N-004
Q311	22240864	
	Capacitors	
C303, C304	354741009	10 μ F, 16 V.Elect.
C307, C308	354721019	100 μ F, 6.3 V.Elect.
C309, C310	374726824	6800 pF +/- 5 %, 50 V, Plastic
C311, C312	374721824	1800 pF +/- 5 %, 50 V, Plastic
C313, C314	354741009	10 μ F, 16 V.Elect.
C351, C352	354744719	470 μ F, 16 V.Elect.
C355, C356	354744709	47 μ F, 16 V.Elect.
C361-C364	393384707	47 μ F, 50 V.Elect.
	Terminals	
P301-P303	25045571 or 25045300	NPJ-6PDRW386 or NPJ-6PDBL159
	Socket	
P311B	25051237	NSCT-12P1027

NOTE : THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

CAUTION : Replacement for transistor of mark * , if necessary must be made from the same beta group (HFE) as the original type.

NOTE: : Black model only
<S>: Silver model only
<G>: Golden model only
<D>: 120 V model only
<P>: European model only
<WT>: Worldwide model only
<A>: Australian model only
<WR>: Chinese model only
<GT>: 220-230V model only

PRINTED CIRCUIT BOARD PARTS LIST

DSP CIRCUIT PC BOARD (NADG-7066-1A/1B/1C/1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q101,Q102	22241383R2,	NJM4565M-D,
Q405-Q409	22240489R1NE or	MPC4570G2-T1(MST) or
Q802-Q804	22240581R2	NJM4565M
Q121	222740046R2TO	TC74HCU04F
Q151	22241520R2	AK4112AVF
Q401	22240943R2	TC9163AF
Q402	22240981R2	TC9162AF
Q403	22241444R2	TC9482F
Q701	22241518R9	CS493263-CL
Q702	22278025DR2NE	MPC2925T
Q703	22240935R2	TC7WU04FU
Q704	22278033DR2NE	MPC2933T
Q751	222740077R2TO	TC74HCT7007AF
Q752	22274541ER2TO	TC74VHC541FT
Q7701	22241570R3	MPD703033AGC-080-8EU
Q801	22241529R3	AK4527VQ
	Photo couplers	
U121,U122	24120083 or 24120086	GP1FA550RZ or GP1FA551RZ
	Transistors	
Q411-Q416	2215410R2	RN1441
Q417,Q418	2214530R2 or	RN2402 or
Q433,Q434	2216220R2	KRA102S
Q421-Q426	2215410R2	RN1441
Q428	2215410R2	RN1441
Q7702	2214490R2 or 2216210R2	RN1404 or KRC104S
	Diodes	
D101-D108	223234R2 or	1SS352 or
D401,D402	223269R2	1SS355
D404,D405	223234R2 or 223269R2	1SS352 or 1SS355
D7701-D7703	223234R2 or	1SS352 or
D7706	223269R2	1SS355
D7705	224490620R2	UDZ6.2B
	Oscillators	
X151	3010323R2	HC-49/U03C 12.288MHz
X701	3010324R2	CSTCV12.2MTJ0C4
X7701	3010342R2	CSTCW2000MX01
	Coils	
L121,L122	231237K470R2	NCH-1479
L152-L154	231237M022R2	NCH-1471
L701	231237K470R2	NCH-1479
L702,L703	231237M022R2	NCH-1471
L801,L802	231237K470R2	NCH-1479
L155,L156	230958R1	BK1608LM182-T
R121,R122	230958R1	BK1608LM182-T
	Capacitors	
C106	356741009R2	10 μ F,16 V,Elect.
C111,C112	356724709R2	47 μ F,6.3 V,Elect.
C127,C132	356724709R2	47 μ F,6.3 V,Elect.
C152,C158	356724709R2	47 μ F,6.3 V,Elect.
C417-C422	356741009R2	10 μ F,16 V,Elect.
C435-C440	356721019R2	100 μ F,6.3 V,Elect.
C457-C462	356744709R2	47 μ F,16 V,Elect.
C471-C476	356741009R2	10 μ F,16 V,Elect.
C477,C478	374724744	0.47 μ F+/- 5%,50 V,Plastic
C706,C716	356724709R2	47 μ F,6.3 V,Elect.
C719,C723	356724709R2	47 μ F,6.3 V,Elect.
C7703	356724709R2	47 μ F,6.3 V,Elect.
C7705,C7706	356780109R2	1 μ F,50 V,Elect.
C7712	356721019R2	100 μ F,6.3 V,Elect.
C806	356721019R2	100 μ F,6.3 V,Elect.
C808	356742209R2	22 μ F,16 V,Elect.
C809	356724709R2	47 μ F,6.3 V,Elect.
C831-C836	356741009R2	10 μ F,16 V,Elect.
C867-C870	356741019R2	100 μ F,16 V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminals	
P121	25045645	NPJ-2PDO450
P401	25045572	NPJ-6PDBRW387
P407	25045567	NPJ-1PDBL382
	Sockets	
P412B	25052580R2	NSCT-14P2477
P404	2009990651UL	NSAS-20P0906
	Plugs	
JL405B	25055630	NPLG-9P592
P403	25055704	NPLG-8P660
P409B	25055807	NPLG-18P763
P410B	25055708	NPLG-12P664
P411B	25055708	NPLG-12P664
P702B	25055807	NPLG-18P763
P7702	25055701	NPLG-5P657

POWER AMPLIFIER A PC BOARD (NAAF-7068-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q5000-Q5004	2210755,	2SC1775A-E,
Q5010-Q5014	2210756,	2SC1775A-F,
Q5020-Q5024	2211733 or 2215896	2SC1845-E or KTC3200-BL
Q5030-Q5034	2211353,	2SA949-O,
Q5040-Q5044	2211354,	2SA949-Y,
Q5050-Q5054	2215843 or 2215844	KTA1024-O or KTA1024-Y
Q5060-Q5064	2211633, 2211634, 2215854 or 2215853	2SC2229-O, 2SC2229-Y, KTC3206-Y or KTC3206-O
	Diodes	
D5000-D5004	224470562	MTZJ5.6B
	Capacitors	
C5000-C5004	393384707	47 μ F,50 V,Elect.
C5010-C5014	374721515	150 pF+/-10 %,50 V,Plastic
C5030-C5034	374721015	100 pF+/-10 %,50 V,Plastic <P/WT/A/WR>
C5040-C5044	393343317	330 μ F,16 V,Elect.
C5050-C5054	354781009	10 μ F,50 V,Elect.
C5070-C5074	354791009	10 μ F,100 V,Elect.
C5080-C5084	354791009	10 μ F,100 V,Elect.
C5090-C5094	354784709	47 μ F,50 V,Elect.
C5120-C5124	393392207	22 μ F,100 V,Elect.
C5130-C5134	393392207	22 μ F,100 V,Elect.
C5401	354780109	1 μ F,50 V,Elect.
	Resistors	
R5130-R5134	443528214	820ohm+/-5 %,1/2 W,Metal oxide
R5140-R5144	443528214	820ohm+/-5 %,1/2 W,Metal oxide
R5150-R5154	443521034	10kohm+/-5 %,1/2 W,Metal oxide
R5160-R5164	443521024	1kohm+/-5 %,1/2 W,Metal oxide
R5170-R5174	443528214	820ohm+/-5 %,1/2 W,Metal oxide
R5180-R5184	443523304	33ohm+/-5 %,1/2 W,Metal oxide
R5190-R5194	443521014	100 ohm+/-5 %,1/2 W,Metal oxide
R5200-R5204	443521014	100 ohm+/-5 %,1/2 W,Metal oxide
R5230-R5234	443521004	10 ohm+/-5 %,1/2 W,Metal oxide
R5240-R5244	443521004	10 ohm+/-5 %,1/2 W,Metal oxide
R5280-R5284	443521034	10kohm+/-5 %,1/2 W,Metal oxide
	Sockets	
P6000A-P6004A	25052287	NSCT-4P2184
P6011A	25052295	NSCT-12P2192
	Plug	
P404A	25055154	NPLG-10P138

NOTE: :Black model only
 <S>: Silver model only
 <G>: Golden model only
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 <P>: European model only.
 <WT>: Worldwide model only
 <A>: Australian model only
 <WR>: Chinese model only

CAUTION : Replacement for transistor of mark * . if necessary must be made from the same beta group (HFE) as the original type.

TERMINAL PC BOARD (NAETC-7069-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q693*	222780565JRC	NJM78M56FA
IC		
Transistors		
Q5303,Q5307	2215864, 2213284 or 2212115	KTC3199-GR, 2SC1740S-R cr 2SC2458-GR
Q5308,Q5309	2215770, 2213510 or 2214350	KRA102M, DTA114ES or RN2202
Diodes		
D5306,D5307	223163, 223205 or 223222	1SS133, 1SS270A cr WG713A
D6932,D6933	22380260, 22380032 or 22380035	RL1N4003, ISR139-100 or GP104003E
Capacitors		
C6931	354751029	1000 μ F,25 V,Elect.
C6933	354741009	10 μ F,16 V,Elect.
Resistor		
R6935	441721514	150 ohm+/-5 % 2 W,Metal oxide
Sockets		
P410A,P411A	25051237	NSCT-12P1027
P6931A	25051527	NSCT-16P1314
P7002B	25052242, 25050949, 25051313 or 25051853	NSCT-9P2139, NSCT-9P736, NSCT-9P1102 or NSCT-9P1640
Plug		
P6411	25055807	NPLG-18P763
Heatsink		
Q6931A	27160211	RAD-68
Screw		
Q6931B	838430107	3TTB+10S(BC),Self-tapping

PRIMARY CIRCUIT PC BOARD (NAPS-7070-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q921	2215864, 2213285, 2213284 or 2212115	KTC3199-GR, 2SC1740S-S, 2SC1740S-R or 2SC2458-GR
Diodes		
D921-D924	22380260, 22380032 or 22380035	RL1N4003, ISR139-100 or GP104003E
D925	223163, 223205 or 223222	1SS133, 1SS270A or WG713A
Power transformer		
T902	2301381 2301382 2301383	Δ NPT-1358D <D> Δ NPT-1358P <P/A> Δ NPT-1358DG <WT/WR>
Capacitors		
C901	3500196S	Δ RE275V-103M,IS
C902	3300030	Δ DE1307E472M-KH,IS
C922	354762219	220 μ F,35 V,Elect.
Resistors		
R901	431533355	Δ 3.3Mohm,1/2 W,Solid <D>
R924	443522704	27ohm+/-5 % 1/2 W,Metal oxide
Relay		
RL901	25065584, 25065516 or 25065588 25065561, 25065508, 25065515 or 25065526	Δ NRL-1P10A-DC12-140, Δ NRL-1P10A-DC12-097 or Δ NRL-1P10A-DC12-143 <D/WT/WR> Δ NRL-1P5A-DC12-127, Δ NRL-1P10A-DC12-093, Δ NRL-1P5A-DC12-096 or Δ NRL-1P5A-DC12-102 <P/A>

CIRCUIT NO.	PART NO.	DESCRIPTION
Outlet		
P902	25051125 25051126 25052115 25052381	Δ NSCT-4P912 <P/WT> Δ NSCT-4P913 <D> Δ NSCT-2P2013 <A> Δ NSCT-2P2278 <WR>
Fuses		
F901	252198	Δ 8A-UL, Fuse <D/WT/WR>
F902	252077	Δ 4A-SE-EAK, Fuse <P/WT/WR/A>
F903	252075	Δ 2.5A-SE-EAK, Fuse <P/A>
Fuseholders		
F901A,F901B	25052133	Δ NSCT-1P2031 <D/WT/WR>
F902A,F902B	25052133	Δ NSCT-1P2031 <P/WT/A/WR>
F903A,F903B	25052133	Δ NSCT-1P2031 <P>
Switch		
S902	25065437	Δ NSS-22157P <WT/WR>
Labels		
F901D	29360842	Fuse <D/WT/WR>
F902C	29361732A	T4AL250V <P/WT/A/WR>
Socket		
P931A	25051230	NSCT-5P1020
Plugs		
P901A	25055675 or 25056028	NPLG-2P631 or NPLG-2P0978

SPEAKER TERMINAL A PC BOARD (NAETC-7071-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
Capacitors		
C6840,C6841	374721024	1000 pF+/-5 % .50 V,Plastic
C6844	374721024	1000 pF+/-5 % .50 V,Plastic
Terminal		
P6803	25060297	NTM-6PDMN228
Sockets		
JL6803B,JL6804B	25050269	NSCT-5P97

SPEAKER TERMINAL B PC BOARD (NAETC-7072-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
Capacitors		
C6842,C6843	374721024	1000 pF+/-5 % .50 V,Plastic <P/WT/A/WR>
C6845,C6846	374721024	1000 pF+/-5 % .50 V,Plastic
Terminal		
P6802	25060296	NTM-8PDMN227
Socket		
P6805A	25051127	NSCT-8P914

POWER SWITCH PC BOARD (NASW-7074-1A/1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
S906	25035550	Δ NPS-111-L512P,Power switch

POWER AMPLIFIER B PC BOARD (NAAF-7077-1A/1B/1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
Transistors		
Q6000-Q6004	2213284 or	2SC1740S-R or
Q6010-Q6014	2213285	2SC1740S-S
Q6020-Q6024	2213354, 2213355, 2212125 or 2215995	2SA933S-R, 2SA933S-S, 2SA1048-GR or KTA1267-GR
Q6030-Q6034	2203434 or 2203010	KTD2961-Y or 2SC5171
Q6040-Q6044	2203424 or 2203000	KTB1369-Y or 2SA1930
Q6050-Q6054	2202823 cr *	2SC5200-O or
Q6060-Q6064	2202822 cr *	2SC5200-R,Transistor
	2202813 cr *	2SA1943-O or
	2202812 *	2SA1943-R,Transistor

NOTE: THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors			Terminal	
Q6070-Q6074	2214984 or 2214985	2SC2631-R or 2SC2631-S	P6801	25045572	NPJ-6PDBRW387
Q6600-Q6602	2215864,	KTC3199-GR,	JL6803A,JL6804A	25051109	NSCT-5P896
Q6701,Q6702	2212115,	2SC2458-GR,	JL6951A,JL6952A	25051109	NSCT-5P896
Q6901	2213284 or 2213285	2SC1740S-R or 2SC1740S-S		Plugs	
Q6703	2211792,	2SA992-F,	P6000-P6004	25056009	NPLG-4P0959
	2211793,	2SA992-E,	P6011	25056017	NPLG-12P0967
	2215885 or 2215886	KTA1268-GR or KTA1268-BL	P6080-P6064	25055038	NPLG-2P29
Q6704	2212125,	2SA1048-GR,	P6805	25055678	NPLG-8P634
	2213354,	2SA933S-R,	P6931	25055805	NPLG-16P761
	2215995 or 2213355	KTA1267-GR or 2SA933S-S	P931	25055701	NPLG-5P657
	Diodes			Heatsink	
D6000-D6004	223163,	1SS133,	D6903B	27160483	RAD-152
D6600-D6602	223205 or 223222	1SS270A or WG713A		Screws	
D6701,D6702	224470512	MTZJ5.1B	D6903A,D6904A	838430107	3TTB+10S(BC), Self-tapping
D6703,D6704	22380260,	RL1N4003		REGULATOR CIRCUIT PC BOARD (NAPS-7078-1A/1B/1D)	
D6705,D6706	22380032 or 22380035	ISR139-100 GP104003E	CIRCUIT NO.	PART NO.	DESCRIPTION
D6903,D6904	22380273	RS804M	Q9501	2211455 or 2215975	2SA1015-GR or KTA1256-GR
D6906	223163,	1SS133,		Diodes	
	223205 or 223222	1SS270A or WG713A	D9501	22380022 or 22380285	RBV402 or RS403M
	Coils		D9502-D9507	22380260,	RL1N4003,
L6000-L6004	231176SY	S-1.3C <P/A/WT/WR>		22380032 or 22380035	ISR139-100 or GP104003E
	Capacitors		D9508	224473304	MTZJ33D
C6020-C6024	354784709	47 μ F,50 V,Elect.		Capacitors	
C6030-C6034	374724734	0.047 μ F/+/-5 % ,50 V,Plastic	C9501-C9503	374721044	0.1 μ F/+/-5 % ,50 V,Plastic
C6701,C6706	354721019	100 μ F,6.3 V,Elect.	C9505	354762229	2200 μ F,35 V,Elect.
C6704	354780109	1 μ F,50 V,Elect.	C9506	354761029S	1000 μ F,35 V,Elect.
C6708	374722234	0.022 μ F/+/-5 % ,50 V,Plastic	C9507	354762219	220 μ F,35 V,Elect.
C6901,C6902	3504373	15000 μ F,71 V,Elect.	C9508	354744729S	4700 μ F,16 V,Elect.
C6903	374722234	0.022 μ F/+/-5 % ,50 V,Plastic	C9510	354772219	220 μ F,63 V,Elect.
C6904-C6907	374793344	0.33 μ F/+/-5 % ,63 V,Plastic		Resistors	
	Resistors		R6907	453532294	0.22ohm/+/-5 % ,1/2 W,Metal
R6040-R6044	5210258	N06HR1KBC,Trimming	R9501,R9502	453530104	1ohm/+/-5 % ,1/2 W,Metal
R6070-R6074	443521814	180ohm/+/-5 % ,1/2 W,Metal oxide	R9506	443522204	22ohm/+/-5 % ,1/2 W,Metal oxid
R6080-R6084	453530224	2.2ohm/+/-5 % ,1/2 W,Metal	R9521	453530224	2.2ohm/+/-5 % ,1/2 W,Metal
R6090-R6094	453530224	2.2ohm/+/-5 % ,1/2 W,Metal		Fuses	
R6100-R6104	4000201,	RF-SEGKR22,	F9501	252075	Δ 2.5A-SE-EAK,Fuse <P/WT/WR/A>
	4000132 or 4500245	RGC55 0.22 or BPR55FK0.22.Metal plate	F9501	252160	Δ 2.5A-UL/T-237, Fuse <D>
R6130-R6134	453630824	8.2ohm/+/-5 % ,1/2 W,Metal		Fuseholders	
R6850,R6851	443523914	390ohm/+/-5 % ,1/2 W,Metal oxide	F9501A,F9501B	25052133	Δ NSCT-1P2031
R6904-R6907	453532294	0.22ohm/+/-5 % ,1/2 W,Metal		Label	
	Relays		F9501C	29361747	T2.5AL250V,Fuse <P/A/WT/WR>
RL6600-RL6602	25065563,	NRL-2P5A-DC24-129,	JL6951B,JL6952B	25051109	NSCT-5P896
	25065517 or 25065586	NRL-2P5A-DC24-098 or NRL-2P5A-DC24-142	JL9501A	25051095	NSCT-11P882
RL6604	25065574	NRL-1P5A-DC24-134		CONSTANT VOLTAGE PC BOARD (NAPS-7079-1A/1B/1D)	
RL6901,RL6902	25065584,	NRL-1P10A-DC12-140,	CIRCUIT NO.	PART NO.	DESCRIPTION
	25065516 or 25065588	NRL-1P10A-DC12-097 or NRL-1P10A-DC12-143	Q6402	222780155JRC	NJM78M15FA
	Switch		Q6403	222790155JRC	NJM79M15FA
S6901	25065581	NSS-22203	Q6405	222780054JRC	NJM7805FA
	Fuseholders		Q6406	222780055JRC	NJM78M05FA
F6901A,F6901B	25052133	Δ NSCT-1P2031		Capacitors	
F6902A,F6902B	25052133	Δ NSCT-1P2031	C6403-C6406	394561007	10 μ F,35V,Elect.
	Fuses		C6409-C6412	394561007	10 μ F,35V,Elect.
F6901,F6902	252199	Δ 10A-UL, Fuse <D>		Resistors	
F6901,F6902	25210C	Δ 10A-EAK, Fuse <P/WT/WR/A>	R6402	443621004	10ohm/+/-5 % ,1 W,Metal oxide
	Labels		R6403	443523304	33ohm/+/-5 % ,1/2 W,Metal oxide
F6901C	29362241	Δ 10A/125V,Fuse <D>	R6407,R6408	452730824	8.2ohm/+/-5 % ,2 W,Metal
F6901C	29362801	Δ T10AL250V,Fuse <P/A/WT/WR>	R6410	452730684	6.8ohm/+/-5 % ,2 W,Metal

CIRCUIT NO.	PART NO.	DESCRIPTION
	Sockets	
JL6402A	25051088	NSCT-4P875
JL9501B	25051095	NSCT-11P882
P6411A	25051529	NSCT-18P1316
	Plug	
P6401	25055042	NPLG-3P32

**THERMAL DETECTOR CIRCUIT PC BOARD
(NAETC-7081-1A/1B/1D)**

CIRCUIT NO.	PART NO.	DESCRIPTION
R5380	4000151	PTH9M04BD222TS2F333 Thermister
R5381	4000149	PTH9M04BB222TS2F333 Thermister
JL6402B	25051088	NSCT-4P875,Socket

DISPLAY CIRCUIT PC BOARD (NADIS-7084-1A/1B/1C/1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	FL tube	
Q7001	212216	16-BT-96GNK
	Remote sensor	
U7001	241330	PIC-26043TE2
	IC	
Q7002	22241571R3	MPD780232GC-030-8BT
	Transistors	
Q7003	2213145R2, 2213143R2, 2213144R2, 2213146R2, 2216173R2, 2216174R2, 2216175R2 or 2216176R2	2SC2712-GR, 2SC2712-O, 2SC2712-Y, 2SC2712-BL, KTC3875-O, KTC3875-Y, KTC3875-GR or KTC3875-BL
Q7004,Q7006	2216190R2 or	KRC102S or
Q7101-Q7106	2214470R2	RN1402
Q7005	2214540R2 or	RN2403 or
Q7005	2216230R2	KRA103S
	Diodes	
D7001,D7002	223234R2 or	1SS352 or
D7004-D7006	223269R2	1SS355
D7003	224490820R2	UDZ8.2B
D7007	224490510R2	UDZ5.1B
D7008	224490270R2	UDZ2.7B
D7101	225290	SEL4110R
D7102	225291D	SEL4910D-D
D7103-D7106	225291D	SEL4910D-D <S/G>
D7103-D7106	225292D	SEL4310G-D
	Coil	
L7001	231237M022R2	NCH-1471
	Oscillator	
X7501	3010242	CST5.00MGW
	Capacitors	
C7001	354722219	220 μ F,6.3 V,Elect.
C7002,C7502	375524744	0.47 μ F+/-5 %,50 V,Plastic
C7007	354784709	47 μ F,50 V,Elect.
C7016,C7517	353721019	100 μ F,6.3 V,Elect.
C7503	3000120	FMC0H104Z,Super
	Sockets	
P412A	25051896 or 25052535	NSCT-14P1683 or NSCT-14P2432
P7002A	25052055 or 25051853	NSCT-9P1842 or NSCT-9P1640
P7003A	25051089	NSCT-5P876
P7004A	25051087	NSCT-3P874
	Relay	
RL7001	25065612	NRL-2P1A-DC4.5-157
	Switches	
S7011-S7017	25035652	NPS-111-S604
S7111-S7117	25035652	NPS-111-S604
S7211-S7216	25035652	NPS-111-S604

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switches	
S7311	25065608	EC11B30C17
S7312-S7317	25035652	NPS-111-S604
	Holder	
Q7001A	27191074	(FL)

VOLUME PC BOARD (NASW-7085-1A/1B/1C/1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
P7004B	25051087	NSCT-3P874,Socket
S7001	25065575	EC16B2425,Rotary encoder

**HEDPHONE TERMINAL PC BOARD
(NAETC-7086-1A/1B/1C/1D)**

CIRCUIT NO.	PART NO.	DESCRIPTION
P7003B	25051089	NSCT-5P876,Socket
P7005	25045514	YKB26-5005,Headphone

TERMINAL PC BOARD (NAETC-7087-1A/1B/1C/1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q1001	22241297R2	BU1923F <P>
Q1005	222780125	78M12HF
	Transistor	
Q1002	2213145R2, 2213143R2, 2213144R2, 2213146R2, 2216173R2, 2216174R2, 2216175R2 or 2216176R2	2SC2712-GR, 2SC2712-O, 2SC2712-Y, 2SC2712-BL, KTC3875-O, KTC3875-Y, KTC3875-GR or KTC3875-BL <P>
	Coil	
L1001	231237K220R2	NCH-1477 <P>
	Oscillator	
X1001	3010203 or 3010345	AF6146CG or HQS-3H2-04332-20 <P>
	Capacitors	
C1003,C1007	354721019	100 μ F,6.3 V,Elect. <P>
C1012,C1016	354780339	3.3 μ F,50 V,Elect.
C1014	354741009	10 μ F,16 V,Elect.
	Sockets	
P1001A	25052248, 25051859 or 25052061	NSCT-15P2145, NSCT-15P1646 or NSCT-15P1848
P403A	25051233	NSCT-8P1023
P409A,P702A	25051529	NSCT-18P1316
	Plugs	
P205A	25055712	NPLG-20P668
P311A	25055805	NPLG-16P761

TONE CONTROL CIRCUIT PC BOARD

(NAAF-7088-1A/1B/1C/1D)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q3501,Q3502	22241383R2 or 22240489R1	NJM4565M-D or MPC4570G2-T1(MST)
	Capacitors	
C3501,C3502	354744709	47 μ F,16 V,Elect.
C3505-C3508	354744709	47 μ F,16 V,Elect.
C3509,C3510	374721534	0.015 μ F+/-5 %,50 V,Plastic
C3511,C3512	354744709	47 F,16 V,Elect.
C3513,C3514	374721534	0.015 μ F+/-5 %,50 V,Plastic
C3515,C3516	354744709	47 μ F,16 V,Elect.
	Resistors	
R3509,R3510	5104356	N14RLC100KWT20Z,Variable
	Socket	
JL351A	25051093	NSCT-9P880

S VIDEO TERMINAL PC BOARD (NAVD-7090-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q212,Q213	22240373	BA7625
Q224	22241221R2	TC9164AF
	Transistors	
Q201	2216031R2 or	RN1444-A or
Q202-Q204	2216032R2	RN1444-B
Q205-Q210	2214375R2 or	2SA1162-GR or
Q215	2216185R2	KTA1504-GR
Q216-Q219	2216031R2 or	RN1444-A or
Q222,Q223	2216032R2	RN1444-B
Q220	2214530R2 or	RN2402 or
	2216220R2	KRA102S
	Diodes	
D201-D204	223234R2 or	1SS352 or
D201-D204	223269R2	1SS355
	Coils	
L201,L203	231237K022R2	NCH-1471
L202,L204	231292J056R2	NCH-1572
	Capacitors	
C206,C208	354780229	2.2 μ F,50 V,Elect.
C209,C215	354780229	2.2 μ F,50 V,Elect.
C211,C213	354724719	470 μ F,6.3 V,Elect.
C217,C221	354780229	2.2 μ F,50 V,Elect.
C219	354724719	470 μ F,6.3 V,Elect.
C222	354784799	0.47 μ F,50 V,Elect.
C225-C227	354724719	470 μ F,6.3 V,Elect.
	Terminals	
P204	25045504	NPJ-1PDBL319
	Sockets	
P201	25051748	NSCT-8P1535
P202,P203	25051568	NSCT-12P1355
P205B	25051241	NSCT-20P1031
P206B	25051834	NSCT-27P1621
	Plug	
JL204B	25055627	NPLG-6P589

COMPOSITE VIDEO PC BOARD (NAVD-7091-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q2001	22240373	BA7625
Q2004	22241579	NJM2267D
Q2005	22241037	LC74761-9189
	Transistors	
Q2002,Q2003	2216031R2 or	RN1444-A or
Q2013-Q2015	2216032R2	RN1444-B
Q2006-Q2008	2214375R2 or	2SA1162-GR or
Q2010,Q2012	2216185R2	KTA1504-GR
Q2016	2213145R2 or	2SC2712-GR or
	2216175R2	KTC3875-GR
Q2017,Q2018	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
	Diodes	
D2001-D2003	223234R2 or	1SS352 or
	223269R2	1SS355
	Coils	
L2001	231237K022R2	NCH-1471
L2002	231292J056R2	NCH-1572
	Capacitors	
C2001	354724719	470 μ F,6.3 V,Elect.
C2010-C2012	354724719	470 μ F,6.3 V,Elect.
C2013,C2029	354780109	1 μ F,50 V,Elect.
C2016,C2018	354721019	100 μ F,6.3 V,Elect.
C2020,C2055	354744709	47 μ F,16 V,Elect.
C2021,C2025	375524744	0.47 μ F+/-5 %,50 V,Plastic
C2022,C2042	354721019	100 μ F,6.3 V,Elect.
C2023	354783399	0.33 μ F,50 V,Elect.
C2027	374721224	1200 pF+/-5 %,50 V,Plastic
C2028,C2033	354780229	2.2 μ F,50 V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C2032	374726824	6800 pF+/-5 %,50 V,Plastic
C2034,C2036	354724719	470 μ F,6.3 V,Elect.
C2035	354780229	2.2 μ F,50 V,Elect.
C2037,C2038	354780229	2.2 μ F,50 V,Elect.
C2039	354724719	470 μ F,6.3 V,Elect.
C2040	354784799	0.47 μ F,50 V,Elect.
C2041	374722234	0.022 μ F+/-5 %,50 V,Plastic
C2045	354780109	1 μ F,50 V,Elect.
"C2046,C2047	354724719	470 μ F,6.3 V,Elect.
	Terminals	
P2001	25045569	NPJ-2PDYE384
"P2002,P2003	25045299	NPJ-3PDYE158
P2004	25045504	NPJ-1PDBL319
	Socket	
P206A	25051834	NSCT-27P1621
	Oscillators	
X2001	3010167 or	XTL-14.32M or
	3010347	HQS-HC49U-14318-11
X2002	3010238 or	XTL-17.73M or
	3010348	HQS-HC49U-17734-11
		<P/A/WT/WR>

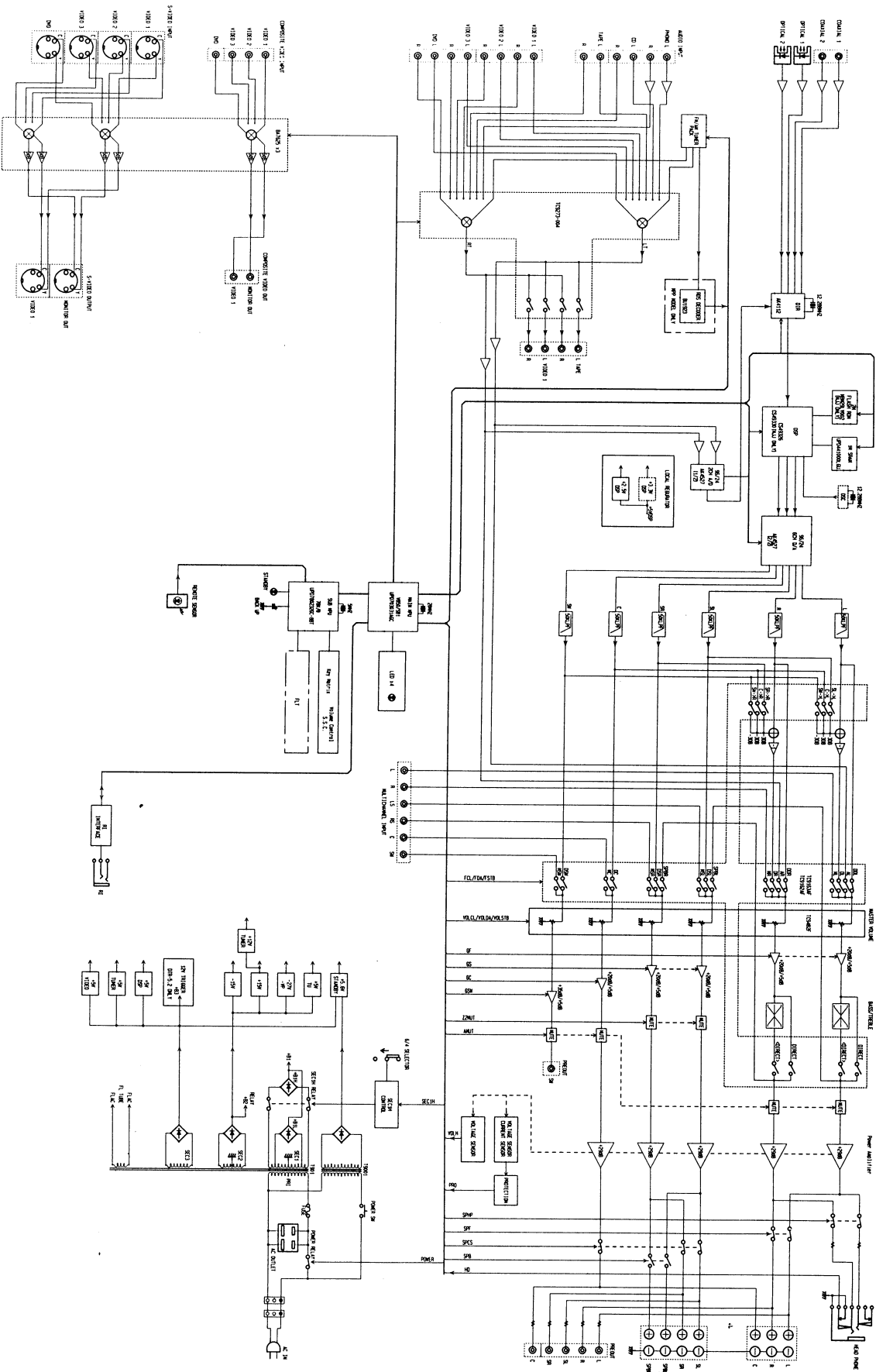
COMPONENT VIDEO TERMINAL PC BOARD (NAVD-7092-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q2101	2214460R2 or	RN1401 or
Q2101	2216330R2	KRC101S
	Diodes	
D2101,D2102	223234R2 or	1SS352 or
	223269R2	1SS355
	Capacitor	
C2113	354780109	1 μ F,50V,Elect.
	Terminal	
P2101-P2103	25045629	NPJ-3PDGLR436
	Relays	
RL2101,RL2102	25065610	NRL-2P1A-DC4.5-156
	Socket	
JL204A	25051090	NSCT-6P877

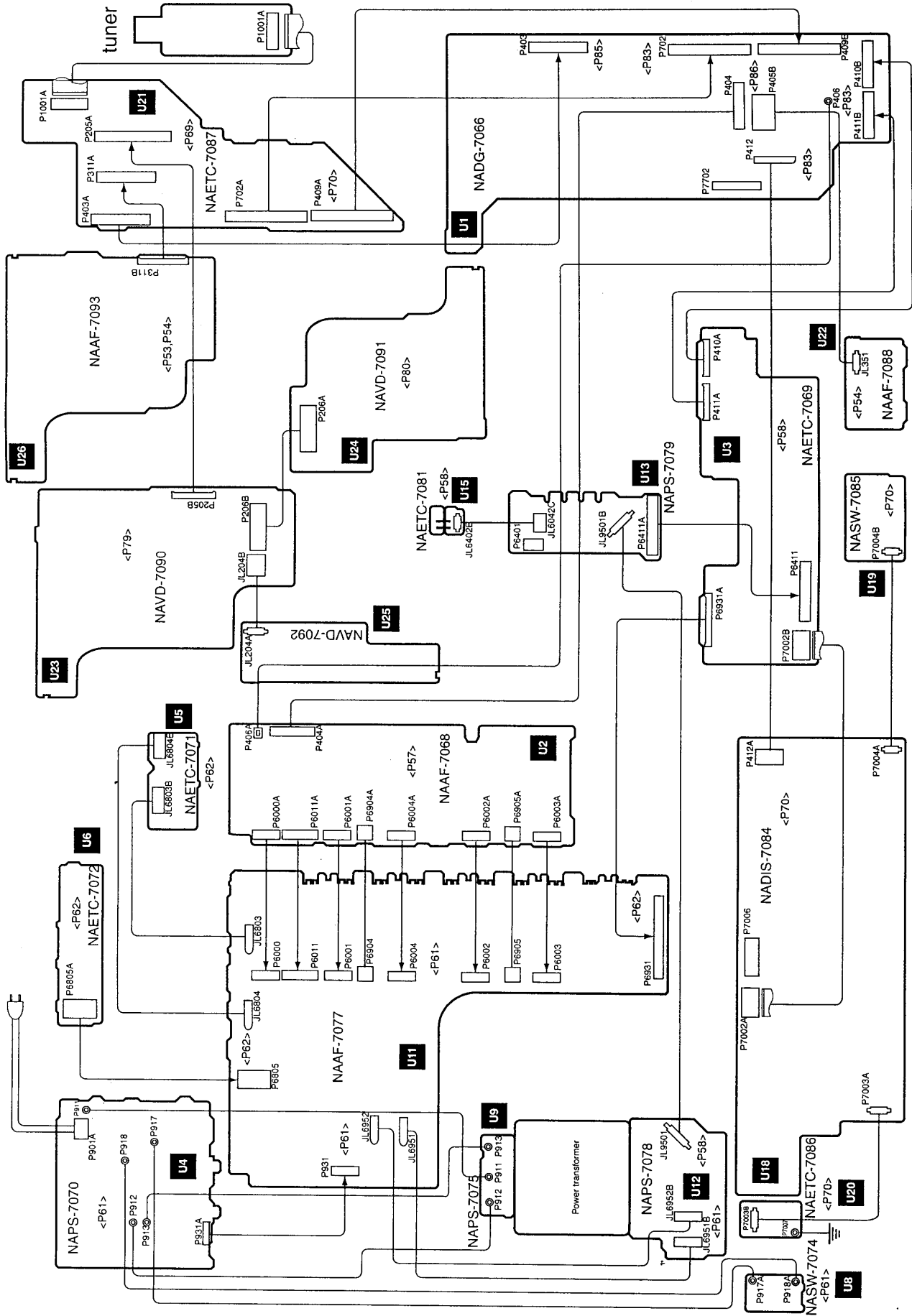
INPUT TERMINAL PC BOARD (NAAF-7093-1A/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q301,Q361	22241383R2 or	NJM4565M-D or
Q371	22240489R1NE	MPC4570G2-T1(MST)
Q311	22241221R2	TC9164AF
Q312	22240829	TC9274N-008
	Transistor	
Q373,Q374	2215410R2	RN1441
	Capacitors	
C303,C304	354741009	10 μ F,16 V,Elect.
C307,C308	354721019	100 μ F,6.3 V,Elect.
C309,C310	374726824	6800 pF+/-5 %,50 V,Plastic
C311,C312	374721824	1800 pF+/-5 %,50 V,Plastic
C313,C314	354741009	10 μ F,16 V,Elect.
C351	354744719	470 μ F,16 V,Elect.
C352	354741029S	1000 μ F,16 V,Elect.
C355,C356	354744709	47 μ F,16 V,Elect.
C361,C362	393384707	47 μ F,50 V,Elect.
C371,C372	393380227	2.2 μ F,50 V,Elect.
C373,C374	393384707	47 μ F,50 V,Elect.
C377,C378	374721024	1000 pF+/-5 %,50 V,Plastic
	Terminals	
P301-P303	25045571 or	NPJ-6PDRW386 or
	25045300	NPJ-6PDBL159
P304	25045575 or	NPJ-4PDRW389 or
	25045303	NPJ-4PDBL162
	Socket	
P311B	25051527	NSCT-16P1314

BLOCK DIAGRAM

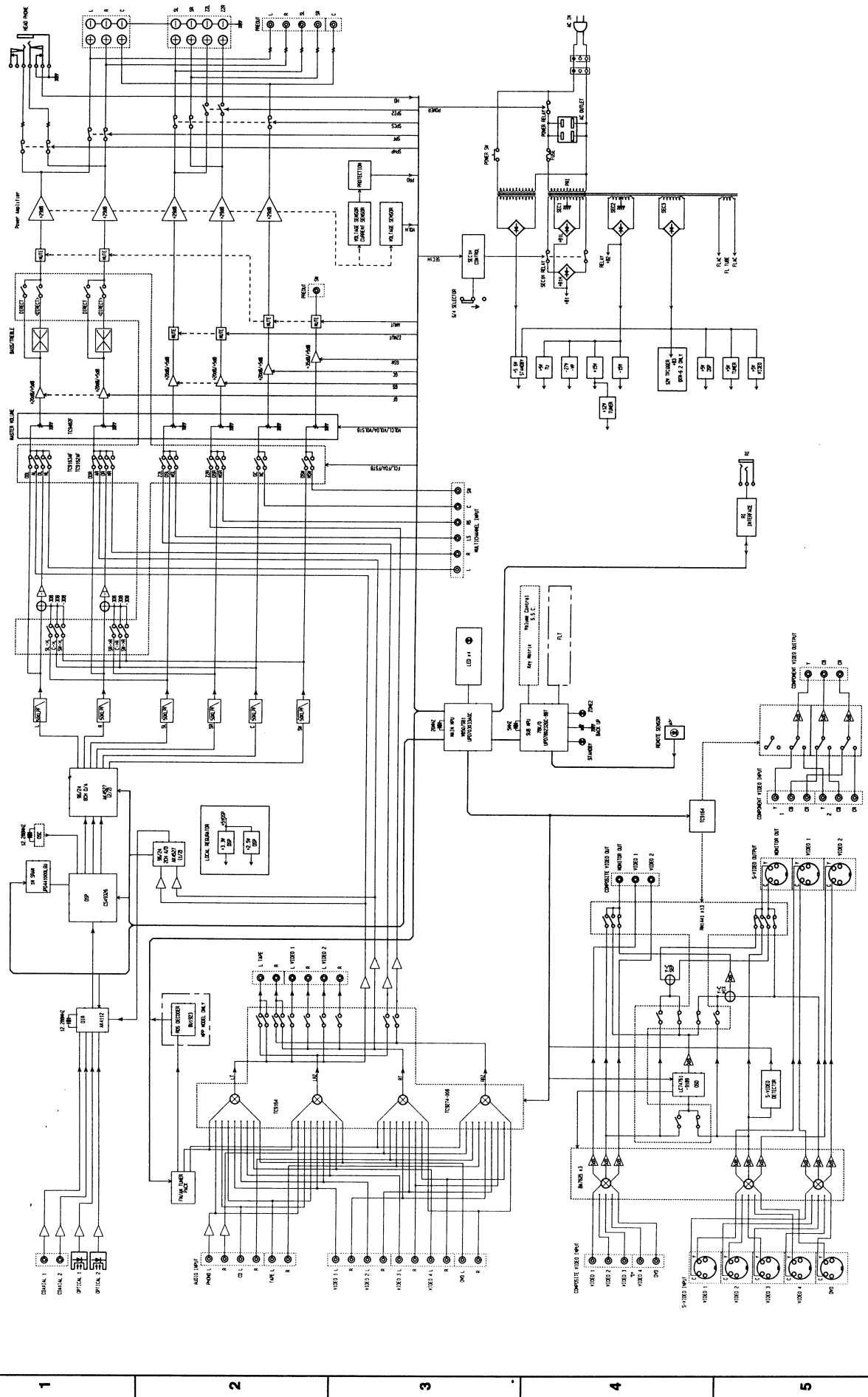


WIRING VIEW



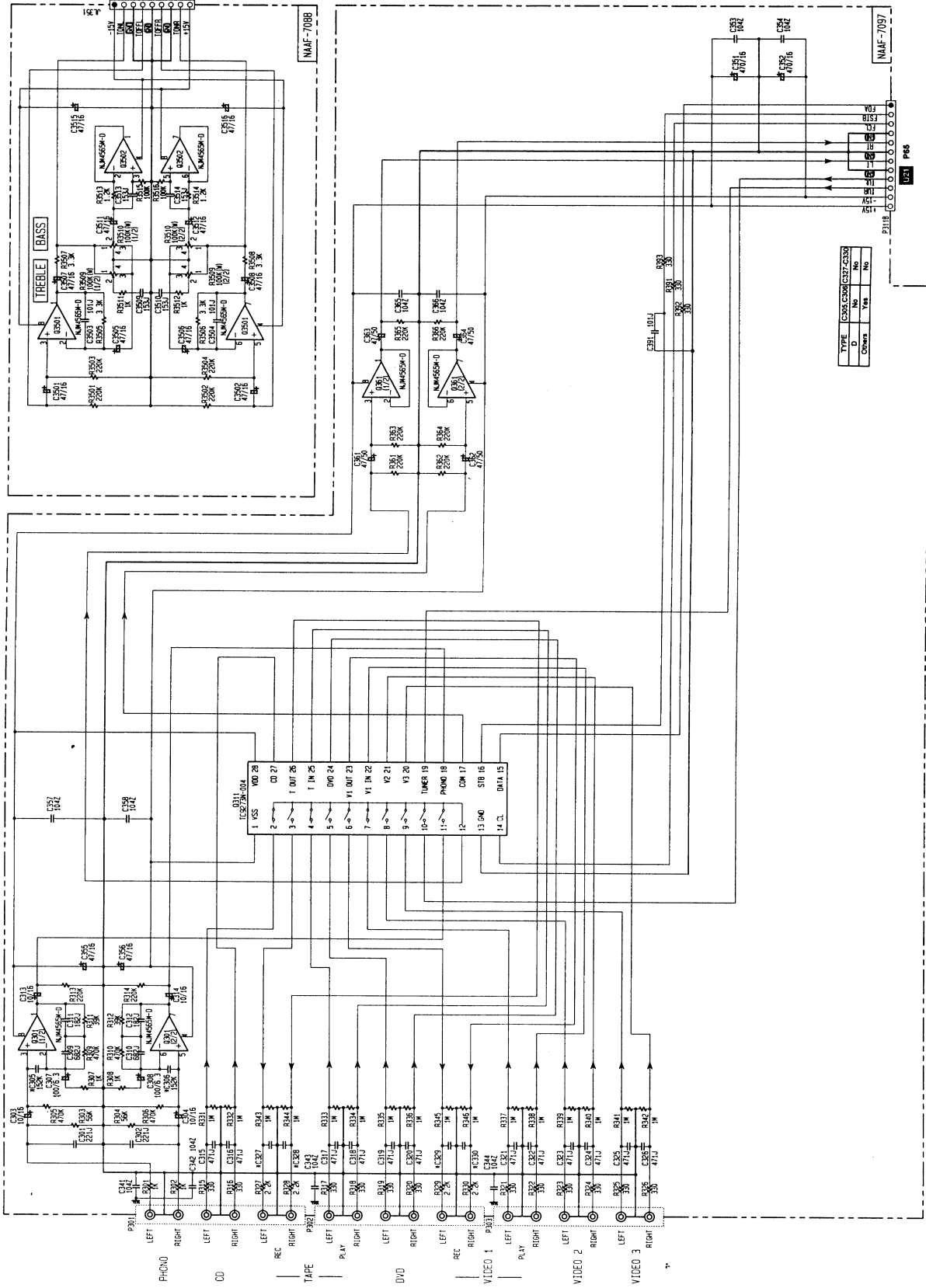
A B C D E F G

BLOCK DIAGRAM

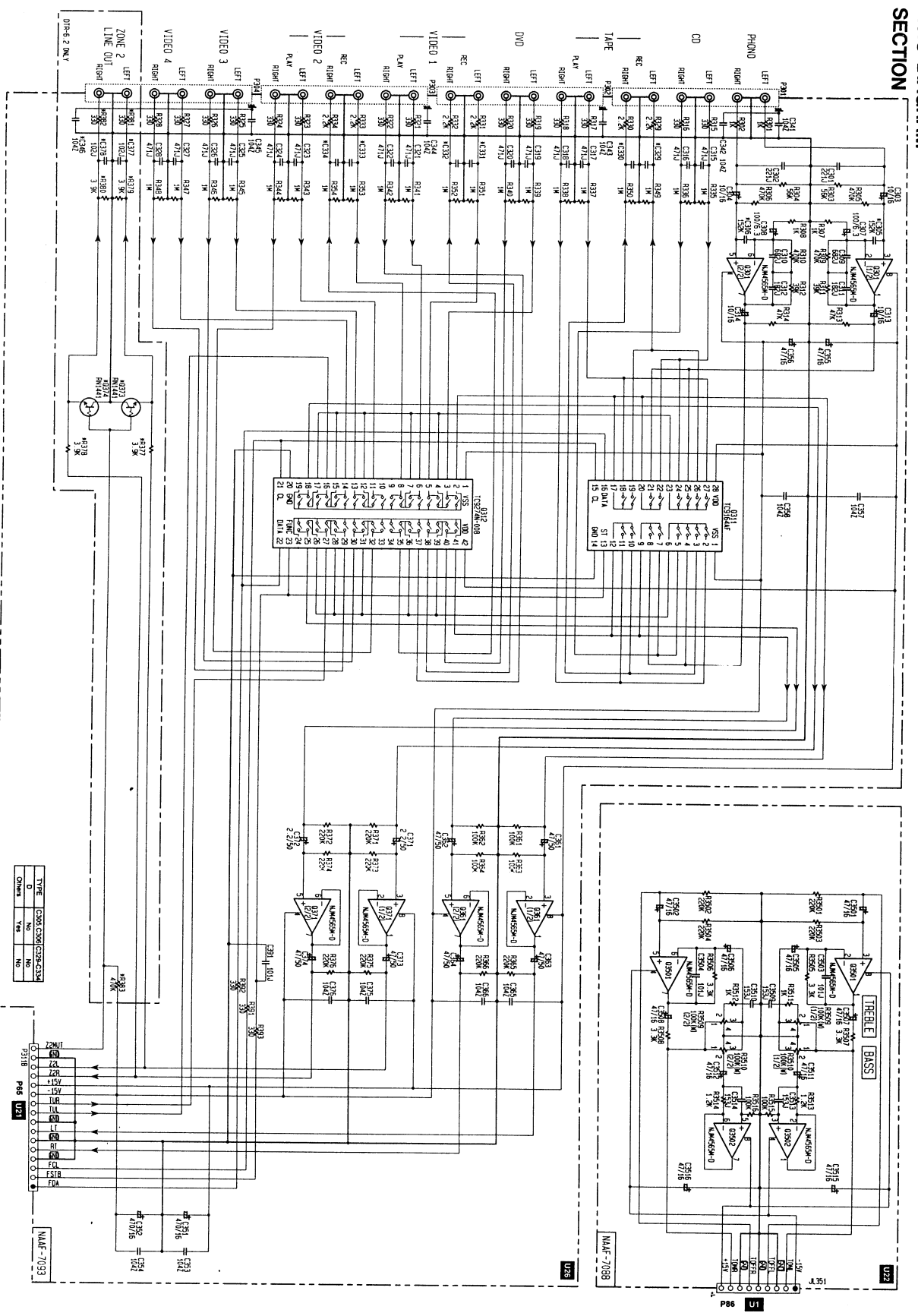


A B C D E F G

**SCHEMATIC DIAGRAM
INPUT SECTION**

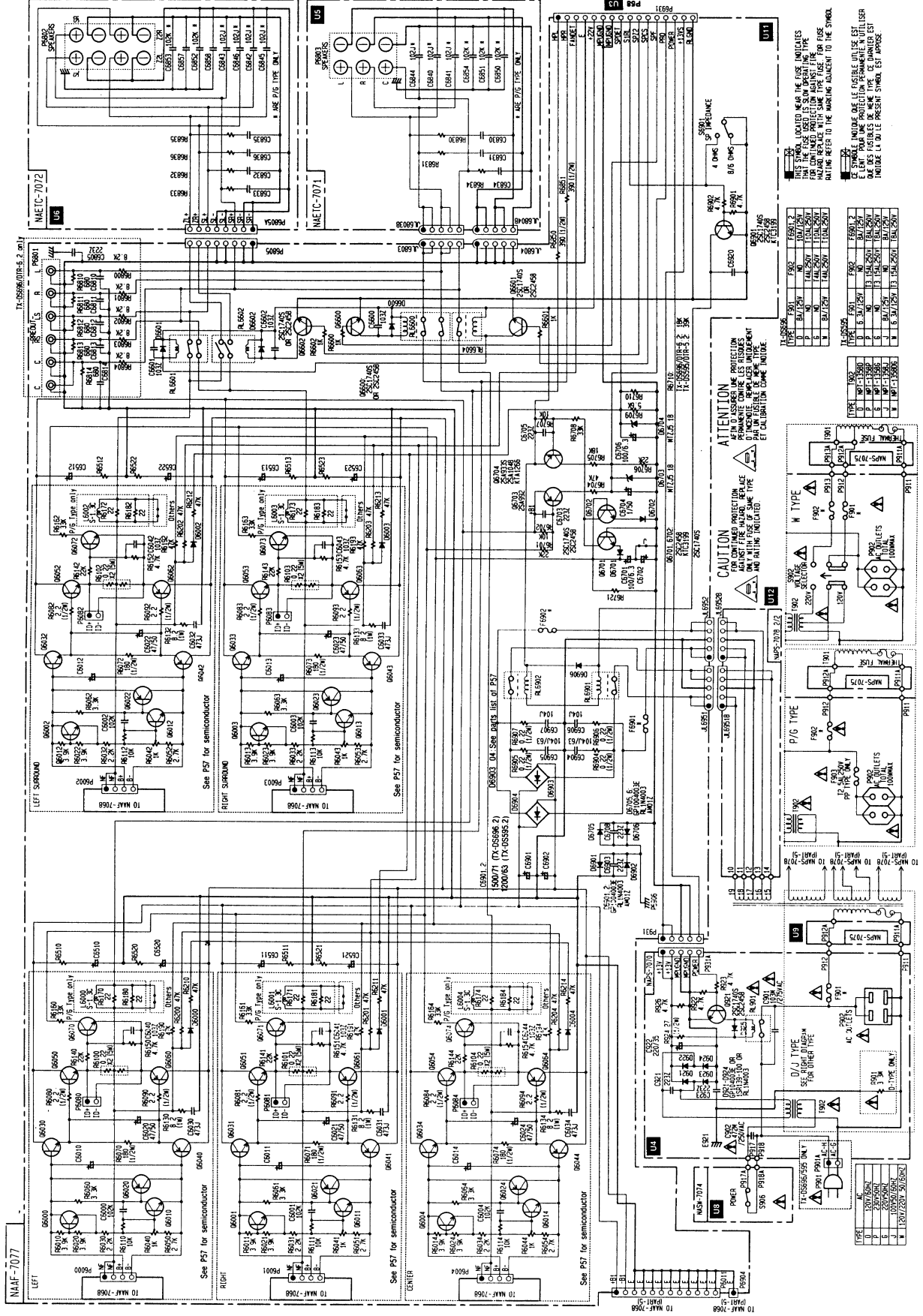


SCHEMATIC DIAGRAM
INPUT SECTION



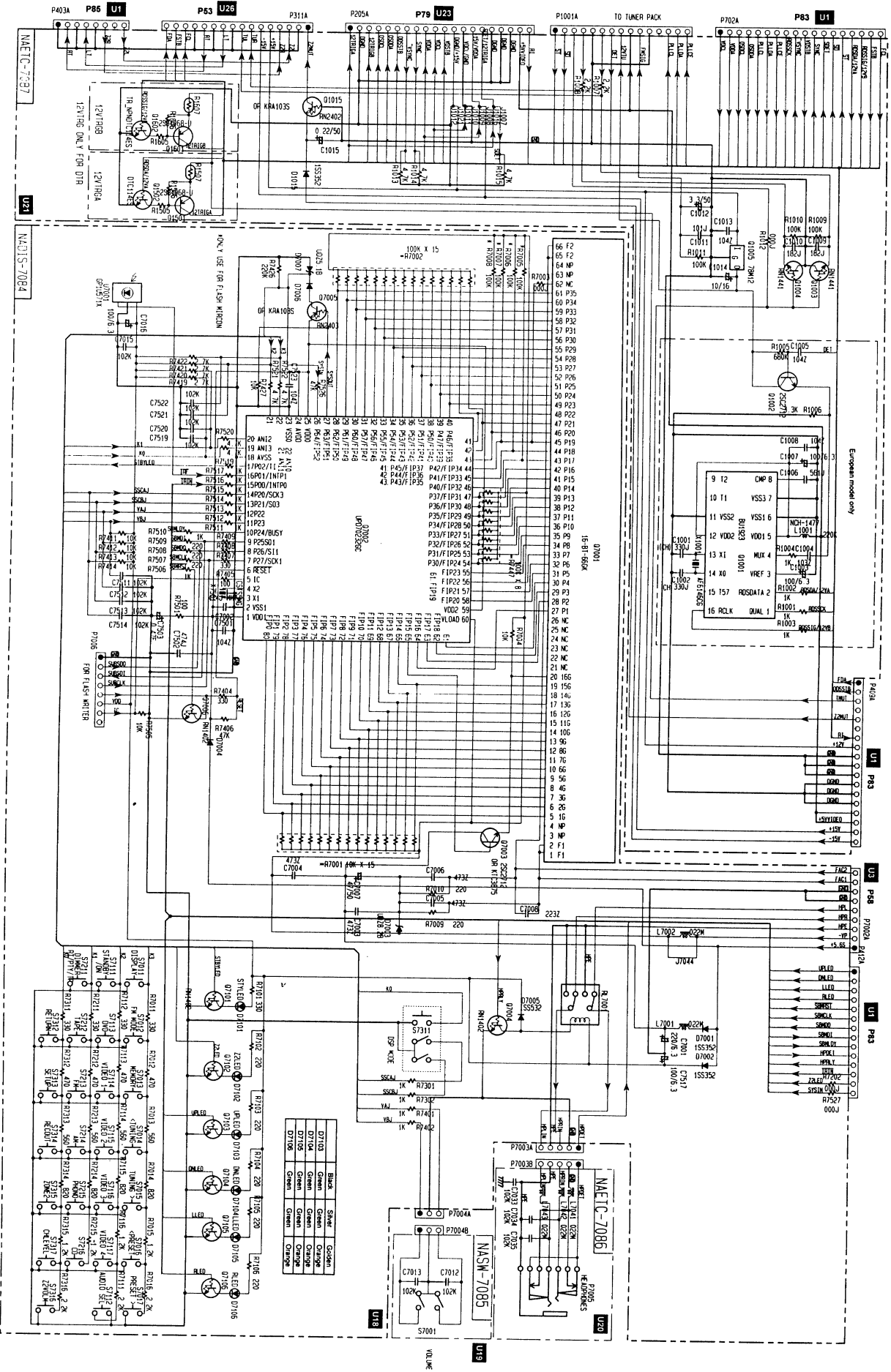
TYPE	U22	U23	U24	U25
IC	LM833	LM833	LM833	LM833
MANUFACTURER	TI	TI	TI	TI

SCHEMATIC DIAGRAM POWER AMPLIFIER SECTION 2



SCHEMATIC DIAGRAM
DISPLAY SECTION

A B C D E F G



TX-DS595/696

TX-DS595

A B C D E F G

SCHEMATIC DIAGRAM
VIDEO SECTION

The schematic diagram illustrates the video section of a system, divided into two main sub-circuits: U23 (NAVD-7095) and U24 (NAVD-7096).

U23 (NAVD-7095) Details:

- Inputs:** VIDEO-3 IN, VIDEO-2 IN, VIDEO-1 IN, DPO IN, S-MONITOR OUT, and control signals from P209B (R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100).
- Control Logic:** IC207 (8 CTL-0 CTL-C-9) and IC208 (8 CTL-0 CTL-C-9) manage control signals.
- Video Processing:** IC204 (25A1182-GR) and IC205 (25A1182-GR) process video signals.
- Outputs:** VIDEO-3 IN, VIDEO-2 IN, VIDEO-1 IN, DPO IN, S-MONITOR OUT.

U24 (NAVD-7096) Details:

- Inputs:** VIDEO-3 IN, VIDEO-2 IN, VIDEO-1 IN, DPO IN, MONITOR OUT, and control signals from U23 (IN1, IN2, IN3, IN4, IN5, IN6, IN7, IN8, IN9, IN10, IN11, IN12, IN13, IN14, IN15, IN16).
- Control Logic:** IC201 (8 CTL-0 CTL-C-9), IC202 (8 CTL-0 CTL-C-9), IC203 (8 CTL-0 CTL-C-9), IC204 (8 CTL-0 CTL-C-9), IC205 (8 CTL-0 CTL-C-9), IC206 (8 CTL-0 CTL-C-9), IC207 (8 CTL-0 CTL-C-9), and IC208 (8 CTL-0 CTL-C-9) manage control signals.
- Video Processing:** IC209 (25A1182-GR) and IC210 (25A1182-GR) process video signals.
- Outputs:** MONITOR OUT.

- 72 -

- 71 -

A

B

C

D

SCHEMATIC DIAGRAM DSP SECTION

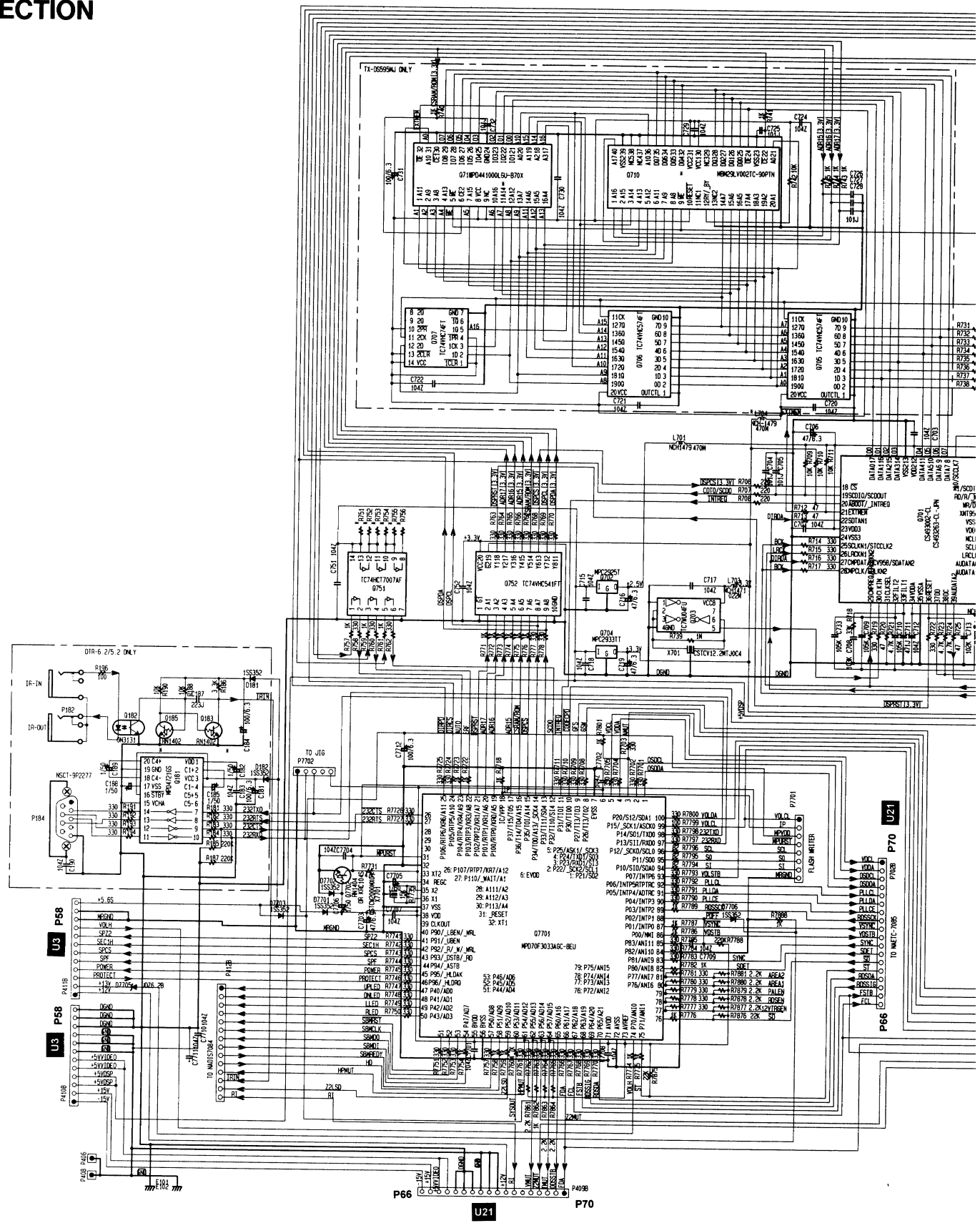
1

2

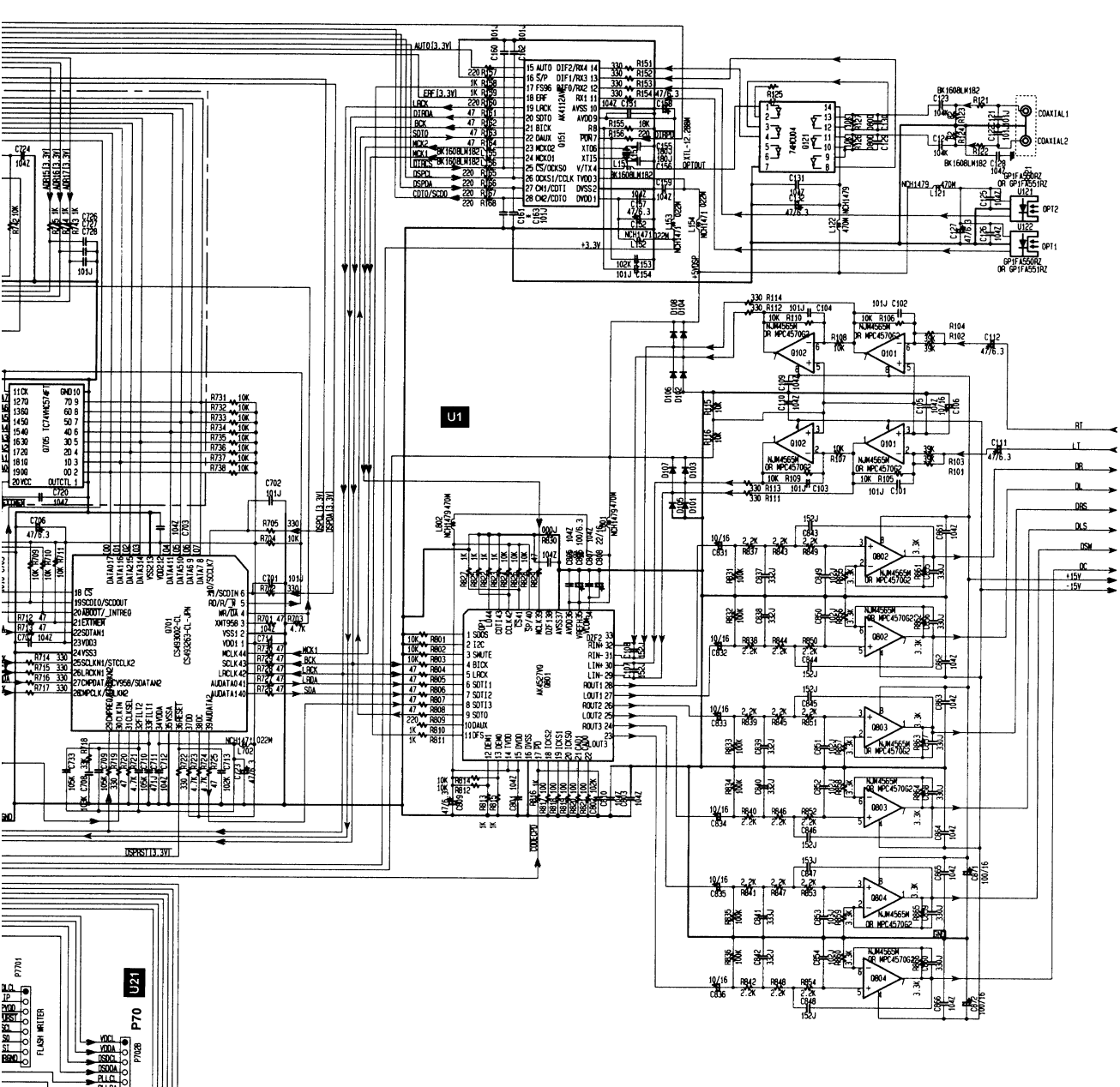
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4

5



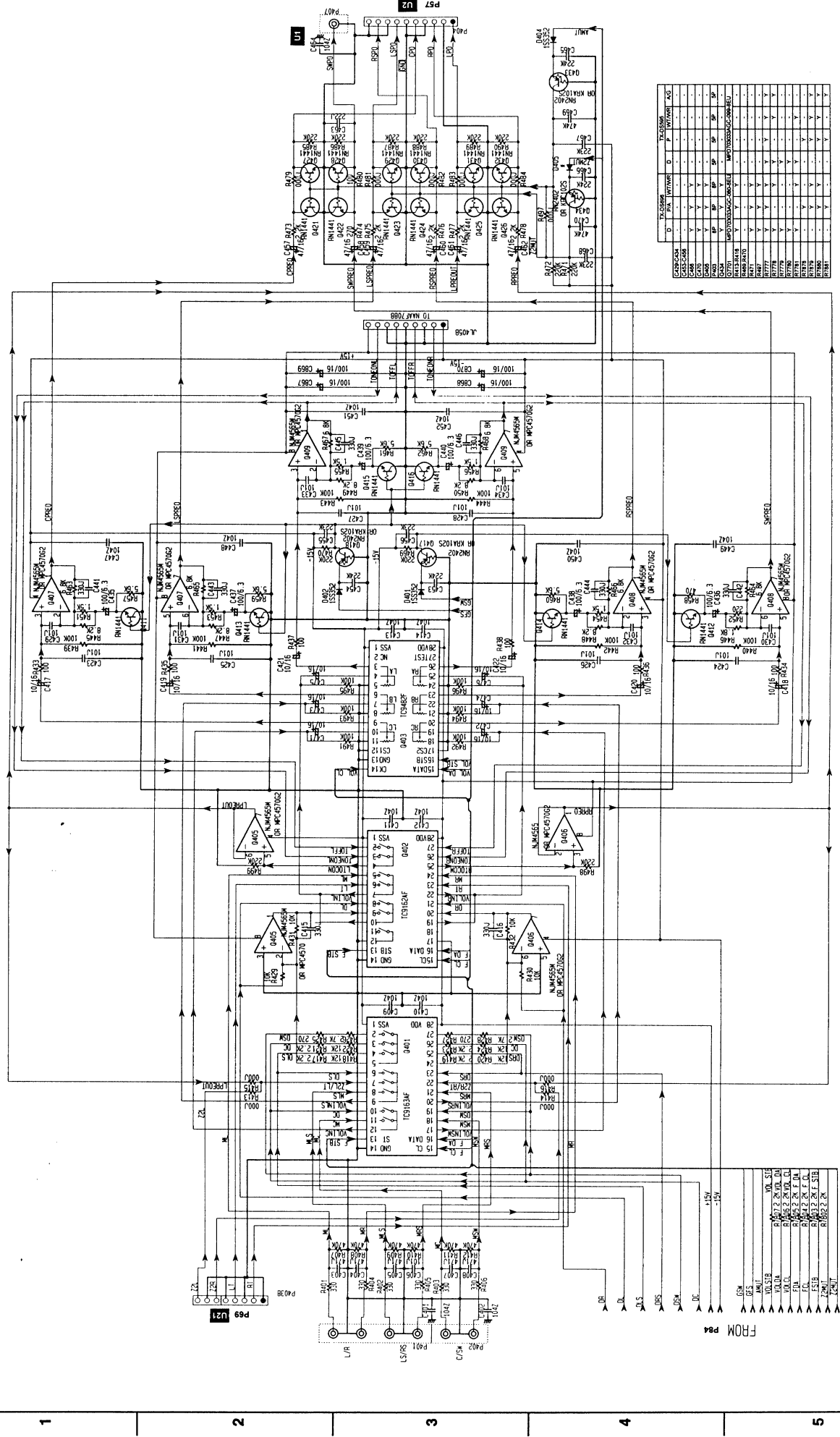
D E F G



	TX-DS696			TX-DS595			
	D	P/A	WT/WR	D	P	WT/WR	A/G
C429-C434	-	-	-	-	-	-	-
C453-C456	-	-	-	-	-	-	-
C466	Y	Y	Y	-	-	-	-
C470	Y	Y	Y	-	-	-	-
D405	Y	Y	Y	-	-	-	-
P403	8P	8P	8P	5P	5P	5P	5P
Q434	Y	Y	Y	-	-	-	-
Q7701	MPD703033AGC-080-BEU			MPD703033AGC-096-BEU			
R413-R416	Y	Y	Y	-	-	-	-
R469,R470	-	-	-	-	-	-	-
R471	Y	Y	Y	-	-	-	-
R497	Y	Y	Y	-	-	-	-
R7777	Y	Y	Y	Y	Y	Y	Y
R7778	Y	-	Y	-	-	-	-
R7779	Y	-	Y	-	-	-	-
R7780	Y	-	Y	-	-	-	-
R7781	Y	-	Y	-	-	-	-
R7878	-	Y	-	-	-	-	-
R7879	-	Y	-	-	-	-	-
R7880	-	Y	-	-	-	-	-
R7881	-	Y	-	-	-	-	-

**SCHEMATIC DIAGRAM
DSP CIRCUIT**

A | B | C | D | E | F | G

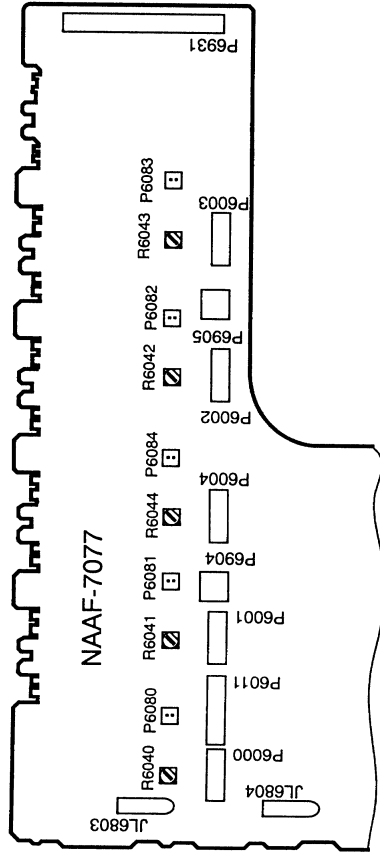


COMPONENT	VALUE	QTY	REF	TEST POINT	ASSEMBLY
C429	100K	1	C429		Y
C430	100K	1	C430		Y
C431	100K	1	C431		Y
C432	100K	1	C432		Y
C433	100K	1	C433		Y
C434	100K	1	C434		Y
C435	100K	1	C435		Y
C436	100K	1	C436		Y
C437	100K	1	C437		Y
C438	100K	1	C438		Y
C439	100K	1	C439		Y
C440	100K	1	C440		Y
C441	100K	1	C441		Y
C442	100K	1	C442		Y
C443	100K	1	C443		Y
C444	100K	1	C444		Y
C445	100K	1	C445		Y
C446	100K	1	C446		Y
C447	100K	1	C447		Y
C448	100K	1	C448		Y
C449	100K	1	C449		Y
C450	100K	1	C450		Y
C451	100K	1	C451		Y
C452	100K	1	C452		Y
C453	100K	1	C453		Y
C454	100K	1	C454		Y
C455	100K	1	C455		Y
C456	100K	1	C456		Y
C457	100K	1	C457		Y
C458	100K	1	C458		Y
R429	10K	1	R429		Y
R430	10K	1	R430		Y
R431	10K	1	R431		Y
R432	10K	1	R432		Y
R433	10K	1	R433		Y
R434	10K	1	R434		Y
R435	10K	1	R435		Y
R436	10K	1	R436		Y
R437	10K	1	R437		Y
R438	10K	1	R438		Y
R439	10K	1	R439		Y
R440	10K	1	R440		Y
R441	10K	1	R441		Y
R442	10K	1	R442		Y
R443	10K	1	R443		Y
R444	10K	1	R444		Y
R445	10K	1	R445		Y
R446	10K	1	R446		Y
R447	10K	1	R447		Y
R448	10K	1	R448		Y
R449	10K	1	R449		Y
R450	10K	1	R450		Y
R451	10K	1	R451		Y
R452	10K	1	R452		Y
R453	10K	1	R453		Y
R454	10K	1	R454		Y
R455	10K	1	R455		Y
R456	10K	1	R456		Y
R457	10K	1	R457		Y
R458	10K	1	R458		Y

ADJUSTMENTS AND CONFIRMATION PROCEDURES

Idling current adjustment

Before idling adjustment, turn the trimming resistors R6040, R6041, R6042, R6043 and R6044 to counter clockwise. Connect the DC voltmeter to sockets P6080, P6081, P6082, P6083 and P6804. After turn POWER to ON, adjust the trimming resistors R6040, R6041, R6042, R6043 and R6044 so that the reading of voltmeter becomes 5.0 mV.
 After adjustment, attach the top cover.
 Confirm the voltage of points above after five minutes.
 When less than 6.0 mV, readjust the resistors above so that the voltage becomes 6.0 mV.
 When 6.0 mV to 8.0 mV, you are not necessary to adjust.
 When more than 8.0 mV, readjust the resistors above so that the voltage becomes 8.0 mV.
 Note: No load and No signal



Confirmation of protection circuit

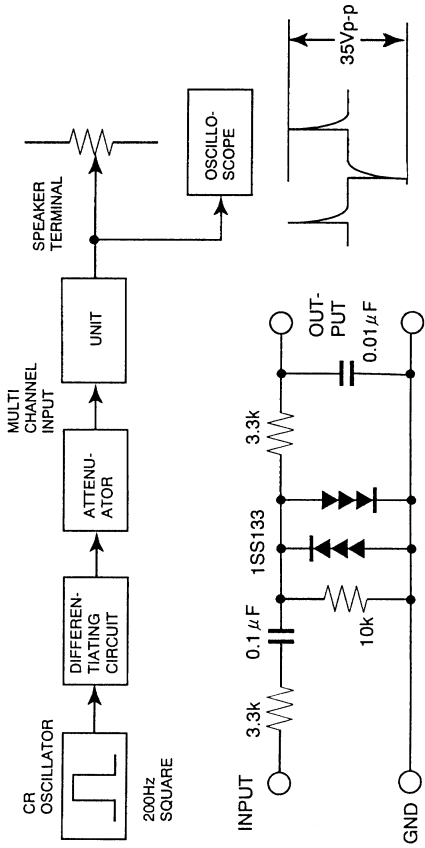
1. **Confirmation of operation of speaker relay**
 Confirm that the speaker relay turns ON approximately 5 seconds after the power switch is turned ON.
 Confirm that the speaker relay turns OFF immediately after the power switch is turned OFF.

2. Confirmation of DC detection circuit

Connect the shored plug between the both terminals of P5601.
 Press and hold down DVD button, then press STANDBY button.
 During "TEST-1" on the FL tube light on, press ZONE 2 (TX-DS696) or SPEAKER A (TX-DS595) button.
 Apply DC 1.5 to 3V to MULTI CHANNEL INPUT terminal with no load.
 Confirm that the speaker relay turns OFF.
 Apply DC -1.5 to -3V to MULTI CHANNEL INPUT terminal with no load.
 Confirm that the speaker relay turns OFF.
 After the adjustment, disconnect the shorted plug.
 Caution: Don't apply DC voltage more than 1 sec..

3. Confirmation of Current detection circuit

Connect the shored plug between the both terminals of P5601.
 Press and hold down DVD button, then press STANDBY button.
 During "TEST-1" on the FL tube light on, press ZONE 2 (TX-DS696) or SPEAKER A (TX-DS595) button.
 Connect the differentiating circuit and apply the 200Hz square signal to MULTI CHANNEL INPUT terminal.
 Adjust the attenuator or Volume so that the output level becomes 35V p-p.
 Confirm that the speaker relay does not turn OFF when a 3.0 ohm load is connected.
 Confirm that the speaker relay turns OFF when a 1.5 ohm load is connected.



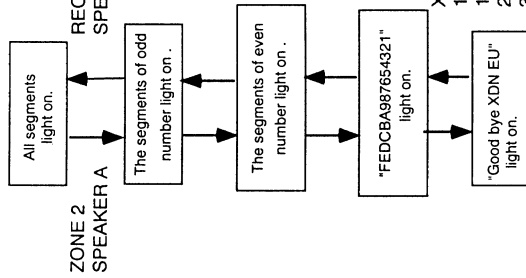
Test Mode

1. Turn POWER button on.
 2. Press and hold down DVD button, then press STANDBY button.
 3. During "TEST-1" on the FL tube is displayed, press CD button to set the unit to the test mode of FL tube.
 Note: VIDEO 1:TEST-1 VIDEO 2:TEST-2 ZONE2/SP A: UP
 VIDEO 3:TEST-3 VIDEO 4:TEST-4 REC OUT/SP B: DOWN

Test mode of FL tube

TX-DS696: Press ZONE 2 or REC OUT button to change the test mode of FL tube.

TX-DS595: Press SPEAKER A or SPEAKER B button to change the test mode of FL tube.



Press POWER button to finish the test mode of FL tube.



Confirmation of voltage sensor

1. Set the unit to TEST-3-4.
 2. Apply the signal 1kHz, -15dBV to the MULTI-CH input. Confirm that the FM STEREO is displayed. Confirm the all channels except SUBWOFFER.
 3. When connect the resistor 1.2 kohm/1 W between the terminals COM and TH1 of P6401, confirm that the speaker relays of RL6901 and RL6902 turn off.
 Note: No input signal.
 4. When change SPEAKER IMPEDANCE switch to 4 ohm, confirm that the speaker relays of RL6901 and RL6902 turn off.
 Note: No input signal.

Confirmation of thermal protect

Set the unit to TEST-1-00 with no input signal.
 When connect the resistor 1.2 kohm/1 W between the both terminals of P6401, confirm that all speaker relays turn off.

T: Use

P: PAL AUTO

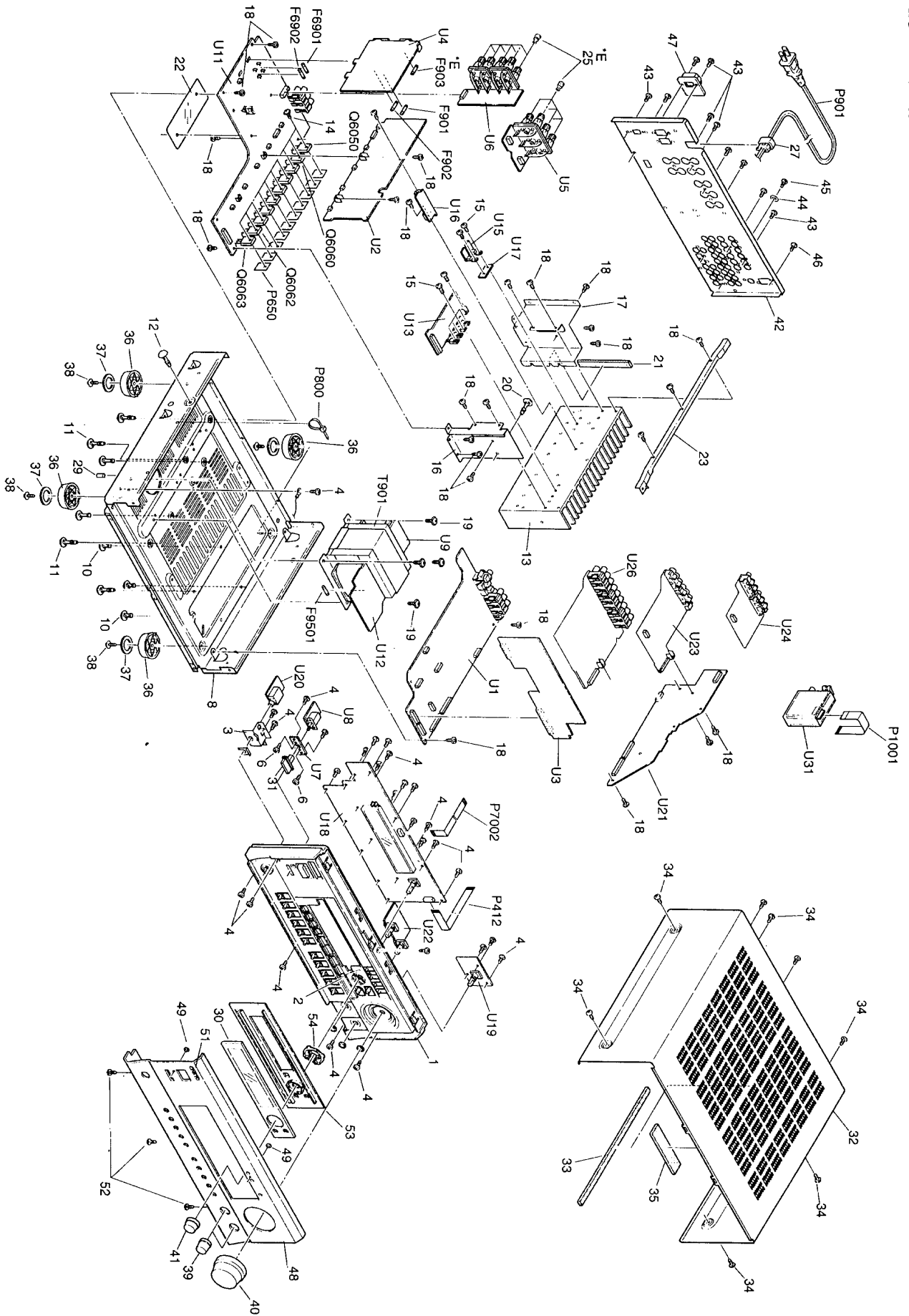
N: NTSC

9: 9 kHz step

0: 10 kHz step

EU: Europe US: USA SA: Saudi JP: Japan

EXPLODED VIEW



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PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
1	27111192	Front bracket 	53	27215345	Decorative frame <D/WT/A>
	27111193	Front bracket <S>		27215346	Decorative frame <P>
	27111194	Front bracket <G>		27215347	Decorative frame <S>
2	29110157	Tape, copper		27215348	Decorative frame <G>
3	27141756	Retainer HP	54	28198922	Facet
4	838130088	3TTB+8B,Self-tapping screw	55	880048	P-3055B-8L, Plastic rivet <P/A/GT>
6	82143010	3P+10FN(BC),Pan head screw	F6901,F6902	252198	△ 8A-UL, Fuse <D>
8	27100393A	Chassis	F6901,F6902	252099	△ 8A-EAK, Fuse <P/WT/WR/A/GT>
10	27191044	KGPS-8RF,Holder	F901	252166	△ 6.3A-UL/T237, Fuse <D/WT/WR>
11	27190503A	KGLS-8RF,Holder	F902	252076 or	△ 3.15A-SE-EAK or
12	27190511	KGLS-16RF,Holder		252242	△ 3.15A-SE-TL250V, Fuse <P/WT/WR/A/GT>
13	27160482A	Heatsink	F903	252075 or	△ 2.5A-SE-EAK or
14	801433	3SMS8W.SW+14B(BC),Special screw		252241	△ 2.5A-SE-TL250V,Fuse <P>
15	838430107	3TTB+10S(BC),Self-tapping screw	F9501	252075 or	△ 2.5A-SE-EAK or
16	27141782	Retainer F		252241	△ 2.5A-SE-TL250V,Fuse <P/WT/WR/A/GT>
17	27141783	Retainer R		252160	△ 2.5A-UL/T-237, Fuse <D>
18	838130088	3TTB+8B,Self-tapping screw	P1001	2047151012	NCFC7-151012,Flexible flat cable
19	830440089	4TTC+8C(BC),Self-tapping screw	P206	2047271012	NCFC7-271012,Flexible flat cable
20	27190266	KGLS-12RF,Holder	P650	223024	△ AC238,Isolated plate
21	28141433	Cushion	P7001	2045142212	NCFC5-142212,Flexible flat cable
22	28175270	Isolated plate	P7002	2047091012	NCFC7-091012,Flexible flat cable
23	27130863A	Bracket B	P800	260208	Binder
27	27300750	△ Bushing, cord	P901	253280VOL	△ AS-UC-2#18,Power supply cord <D>
28	27190965	Holder		253193HIT or	△ AS-CEE or
29	28330135A	Cap, screw		253195MAR	△ AS-CEE,Power supply cord <P/GT>
30	28191908	Clear plate 		253197HIT	△ AS-SAA, Power supply cord <A>
	28191909	Clear plate <G/S>		253279HIT or	△ AS-UC-2#18 or
31	28325497A	Knob, power 		253233KAW	△ AS-CEE-2,Power supply cord <WT>
	28325499A	Knob, power <G>		253267KAW,	△ AS-CCEE,
	28325547A	Knob, power <S>		253285HIT or	△ AS-CCEE or
32	28184802	Top cover 		253286VOL	△ AS-CCEE, Power supply cord <WR>
	28184803	Top cover <S>	Q6050-Q6054	2203563,	* KTC5242-O
	28184804	Top cover <G>		2203562,	* KTC5242-R
33	28141449	t9*280*9, Cushion		2202843,	* 2SC5242-O
34	838930088	3TTB+8B(UN),Self-tapping screw <G/S>		2202842,	* 2SC5242-R
	838430088	3TTB+8B(BC), Self-tapping screw 		2201653	* 2SC3856-O
35	28141453	t1.0*100*25,Cushion		2201655 or	* 2SC3856-P
36	27175319A	Leg		2201654	* 2SC3856-Y,Transistor
37	28141332	Cushion	Q6060-Q6064	2203553,	* KTA1962-O
38	831430088	3TTW+8B(BC),Self-tapping screw		2203552,	* KTA1962-R
39	28325405	Knob, tone 		2202833,	* 2SA1962-O
	28325407	Knob, tone <G>		2202832,	* 2SA1962-R
	28325474	Knob, tone <S>		2201663,	* 2SA1492-O
40	28325907	Knob, volume <D>		2201665 or	* 2SA1492-P
	28325898	Knob, volume <P/A/WT>		2201664	* 2SA1492-Y,Transistor
	28325899	Knob, volume <S>	T901	2301509	△ NPT-1411D,Power transformer <D>
	28325900	Knob, volume <G>		2301510	△ NPT-1411P,Power transformer <P/A>
41	28325904	Knob, DSP 		2301511	△ NPT-1411DG,Power transformer <WT/WR/GT>
	28325905	Knob, DSP <S>	U1	1A896566-1H	NADG-7066-1H,DSP circuit PC board ass'y <D>
	28325906	Knob, DSP <G>		1A896566-1I	NADG-7066-1I,DSP circuit PC board ass'y <P>
42	27122794	Rear panel <D>		1A896566-1J	NADG-7066-1J,DSP circuit PC board ass'y <WT/WR>
	27122795	Rear panel <P>		1A896566-1K	NADG-7066-1K,DSP circuit PC board ass'y <A/GT>
	27122796	Rear panel <WT>	U2	1A896568-1H	NAAF-7068-1H,Power amplifier A PC board ass'y <D>
	27122797	Rear panel <A>		1A896568-1I	NAAF-7068-1I,Power amplifier A PC board ass'y <P>
	27122798	Rear panel <WR>		1A896568-1J	NAAF-7068-1J,Power amplifier A PC board ass'y <WT>
	27122799	Rear panel <GT>		1A896568-1K	NAAF-7068-1K,Power amplifier A PC board ass'y <A>
43	838430088	3TTB+8B(BC), Self-tapping screw		1A896568-1L	NAAF-7068-1L,Power amplifier A PC board ass'y <WR>
44	87643010	W3*10F(BC),Flat washer		1A896568-1M	NAAF-7068-1M,Power amplifier A PC board ass'y <GT>
45	838930088	3TTB+8B(UN),Self-tapping screw	U3	1A896569-1H	NAETC-7069-1H,Terminal PC board ass'y <D>
46	838430068	3TTB+6B(BC),Self-tapping screw		1A896569-1I	NAETC-7069-1I,Terminal PC board ass'y <P>
47	27191130	△ Holder,outlet <WR>		1A896569-1J	NAETC-7069-1J,Terminal PC board ass'y <WT>
48	27212273	Front panel <D/WT/A>		1A896569-1K	NAETC-7069-1K,Terminal PC board ass'y <A>
	27212274	Front panel <P>		1A896569-1L	NAETC-7069-1L,Terminal PC board ass'y <WR>
	27212275	Front panel <S>		1A896569-1M	NAETC-7069-1M,Terminal PC board ass'y <GT>
	27212276	Front panel <G>	U4	1A896570-1H	NAPS-7070-1H,Primary circuit PC board ass'y <D>
49	28198778	Facet		1A896570-1I	NAPS-7070-1I,Primary circuit PC board ass'y <P>
51	28135244	Badge 		1A896570-1J	NAPS-7070-1J,Primary circuit PC board ass'y <WT>
	28135245	Badge <G/S>		1A896570-1K	NAPS-7070-1K,Primary circuit PC board ass'y <A>
52	838430088	3TTB+8B(BC), Self-tapping screw		1A896570-1L	NAPS-7070-1L,Primary circuit PC board ass'y <WR>
				1A896570-1M	NAPS-7070-1M,Primary circuit PC board ass'y <GT>

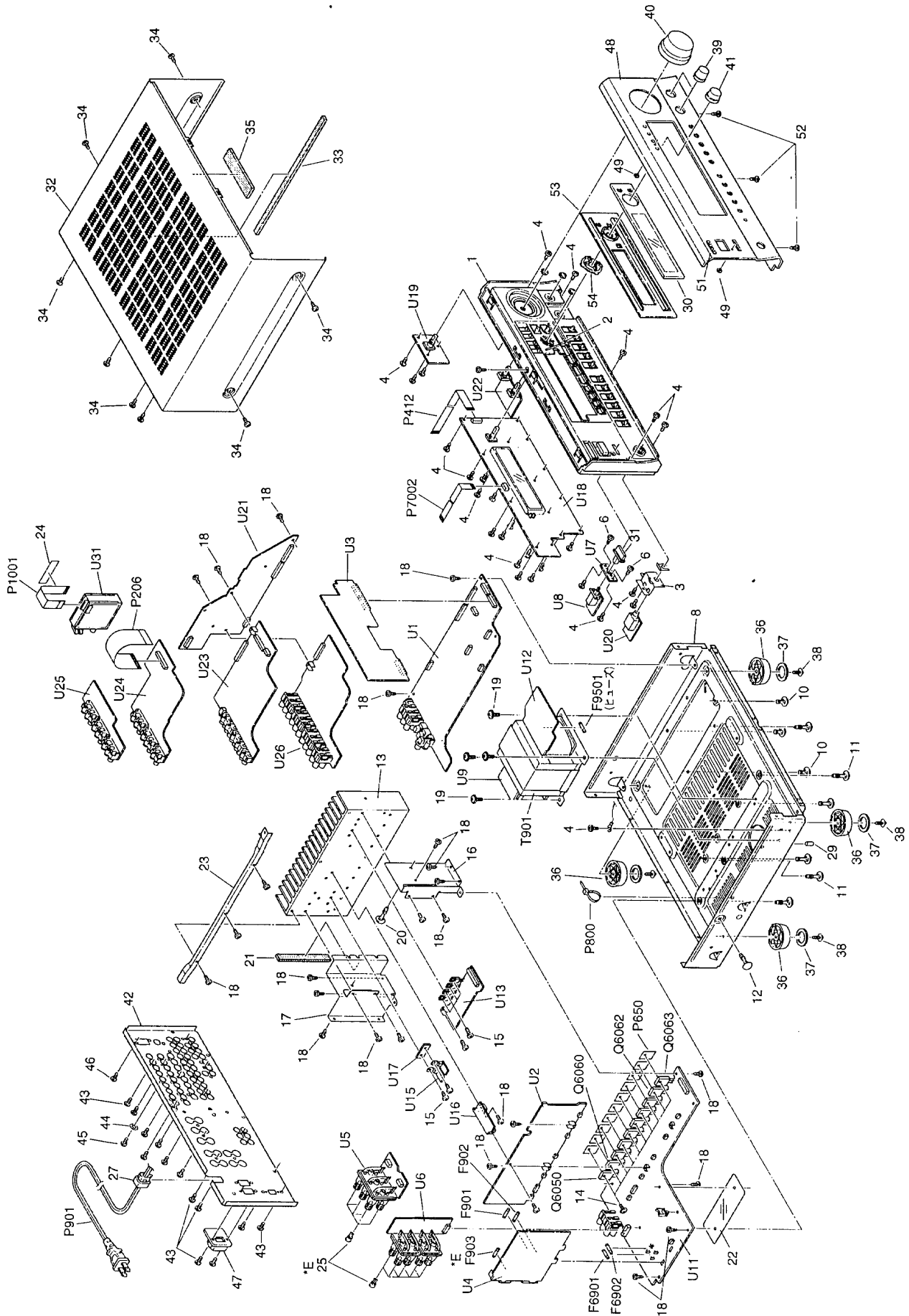
REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
U5	1A896571-1H	NAETC-7071-1H,Speaker terminal A PC board ass'y <D>	71	29091969	Pad
	1A896571-1I	NAETC-7071-1I,Speaker terminal A PC board ass'y <P>	72	29091981	Pad PT
	1A896571-1J	NAETC-7071-1J,Speaker terminal A PC board ass'y <WT>	73	29100153	1020x720,Polybag
	1A896571-1K	NAETC-7071-1K,Speaker terminal A PC board ass'y <A>	74	261504	Paper tape
	1A896571-1L	NAETC-7071-1L,Speaker terminal A PC board ass'y <WR>	75	29110098	PP tape
	1A896571-1M	NAETC-7071-1M,Speaker terminal A PC board ass'y <GT>	76	282301	Staple
U6	1A896572-1H	NAETC-7072-1H,Speaker terminal B PC board ass'y <D>	77	29053723	Carton box S
	1A896572-1I	NAETC-7072-1I,Speaker terminal B PC board ass'y <P>	78	29053686A	Carton box <WT/A>
	1A896572-1J	NAETC-7072-1J,Speaker terminal B PC board ass'y <WT>		29053687A	Carton box <P>
	1A896572-1K	NAETC-7072-1K,Speaker terminal B PC board ass'y <A>		29053688A	Carton box <S>
	1A896572-1L	NAETC-7072-1L,Speaker terminal B PC board ass'y <WR>		29053689A	Carton box <G>
	1A896572-1M	NAETC-7072-1M,Speaker terminal B PC board ass'y <GT>		29053712A	Carton box <D>
U7	25137073	NCETC-7073,PC board for holder	80	29362786	Label EAN <P/WT/A>
U8	1A896574-1H	NASW-7074-1H,Power switch PC board ass'y <D>		29362787	Label EAN <S>
	1A896574-1I	NASW-7074-1I,Power switch PC board ass'y <P>		29362788	Label EAN <G>
	1A896574-1J	NASW-7074-1J,Power switch PC board ass'y <WT>		29362789	Label UPC <D>
	1A896574-1K	NASW-7074-1K,Power switch PC board ass'y <A>	81	29100097-1A	350*250,Poly bag
	1A896574-1L	NASW-7074-1L,Power switch PC board ass'y <WR>	82	29100097-1A	350*250,Poly bag <P/WT/WR/A>
	1A896574-1M	NASW-7074-1M,Power switch PC board ass'y <GT>	83	29343023	Instruction manual E
U9	1A896575-1H	NAPS-7075-1H,Terminal PC board <D>	84	29343024	Instruction manual FSI <P>
	1A896575-1I	NAPS-7075-1I,Terminal PC board <P>	85	29343025	Instruction manual GDSW <P>
	1A896575-1J	NAPS-7075-1J,Terminal PC board <WT>	86	29343026	Instruction manual TC <WT/GT/WR>
	1A896575-1K	NAPS-7075-1K,Terminal PC board <A>	88	29343029	Instruction sheet <D>
	1A896575-1L	NAPS-7075-1L,Terminal PC board <WR>	89	29365083A	Warranty card <D>
	1A896575-1M	NAPS-7075-1M,Terminal PC board <GT>	90	29095866	Sheet <D>
U10	1A896576-1H	NAETC-7076-1H,Ground PC board ass'y <D>	91	24140447	RC-447M,Remote controller
	1A896576-1I	NAETC-7076-1I,Ground PC board ass'y <P>	92	3010054	UM-3, Two batteries
	1A896576-1J	NAETC-7076-1J,Ground PC board ass'y <WT>	93	232140	NMA-3057,AM loop antenna
	1A896576-1K	NAETC-7076-1K,Ground PC board ass'y <A>	94	292115	FM antenna <P/WT/WR/A/GT>
	1A896576-1L	NAETC-7076-1L,Ground PC board ass'y <WR>		292142	FM antenna <D>
	1A896576-1M	NAETC-7076-1M,Ground PC board ass'y <GT>	95	25065462	Adapter for FM antenna <WT/WR/A/GT>
U11	1A896577-1H	NAAF-7077-1H,Power amplifier B PC board ass'y <D>			
	1A896577-1I	NAAF-7077-1I,Power amplifier B PC board ass'y <P/WT/WR/A/GT>			
U12	1A896578-1H	NAPS-7078-1H,Regulator circuit PC board ass'y <D>			
	1A896578-1I	NAPS-7078-1I,Regulator circuit PC board ass'y <P/WT/WR/A/GT>			
U13	1A896579-1H	NAPS-7079-1H,Constant voltage PC board ass'y <D>			
	1A896579-1I	NAPS-7079-1I,Constant voltage PC board ass'y <P/WT/WR/A/GT>			
U15	1A896581-1H	NAETC-7081-1H,Thermal Detector circuit PC board ass'y <D>			
	1A896581-1I	NAETC-7081-1I,Thermal Detector circuit PC board ass'y <P/WT/WR/A/GT>			
U17	25137083	NCETC-7083,PC board			
U18	1A896584-1H	NADIS-7084-1H,Display circuit PC board ass'y <D/WT/A>			
	1A896584-1I	NADIS-7084-1I,Display circuit PC board ass'y <P>			
	1A896584-1J	NADIS-7084-1J,Display circuit PC board ass'y <S>			
	1A896584-1K	NADIS-7084-1K,Display circuit PC board ass'y <G>			
U19	1A896585-1H	NASW-7085-1H, Volume PC board ass'y <D/WT/A>			
	1A896585-1I	NASW-7085-1I, Volume PC board ass'y <P>			
	1A896585-1J	NASW-7085-1J, Volume PC board ass'y <S>			
	1A896585-1K	NASW-7085-1K, Volume PC board ass'y <G>			
U20	1A896586-1H	NAETC-7086-1H,Headphone terminal PC board ass'y <D/WT/A>			
	1A896586-1I	NAETC-7086-1I,Headphone terminal PC board ass'y <P>			
	1A896586-1J	NAETC-7086-1J,Headphone terminal PC board ass'y <S>			
	1A896586-1K	NAETC-7086-1K,Headphone terminal PC board ass'y <G>			
U21	1A896587-1H	NAETC-7087-1H,Terminal PC board ass'y <D/WT/A>			
	1A896587-1I	NAETC-7087-1I,Terminal PC board ass'y <P>			
	1A896587-1J	NAETC-7087-1J,Terminal PC board ass'y <S>			
	1A896587-1K	NAETC-7087-1K,Terminal PC board ass'y <G>			
U22	1A896588-1H	NAAF-7088-1H,Tone control circuit PC board ass'y <D/WT/A>			
	1A896588-1I	NAAF-7088-1I,Tone control circuit PC board ass'y <P>			
	1A896588-1J	NAAF-7088-1J,Tone control circuit PC board ass'y <S>			
	1A896588-1K	NAAF-7088-1K,Tone control circuit PC board ass'y <G>			
U23	1A896595-1H	NAVD-7095-1H,S video terminal PC board ass'y <D>			
	1A896595-1I	NAVD-7095-1I,S video terminal PC board ass'y <P/WT/WR/A/GT>			
U24	1A896596-1H	NAVD-7096-1H,Composite video PC board ass'y <D>			
	1A896596-1I	NAVD-7096-1I,Composite video PC board ass'y <P/WT/WR/A/GT>			
U26	1A896597-1H	NAAF-7097-1H, Input terminal PC board ass'y <D>			
	1A896597-1I	NAAF-7097-1I, Input terminal PC board ass'y <P/WT/WR/A/GT>			
U31	240138A or 240134	ENG06501QR or TFCE1U114A, Tuner unit <D>			
	240139A or 240135	ENG07501QR or TFCE1E512A, Tuner unit <P/A/WT/WR/GT>			

NOTE: THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

CAUTION: Replacement for transistor of mark *, if necessary must be made from the same beta group (HFE) as the original type.

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<GT>: 220-230V model only

EXPLODED VIEW



PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
1	27111192	Front bracket 	49	28198778	Facet
	27111193	Front bracket <S>	51	28135244	Badge
	27111194	Front bracket <G>		28135245	Badge <G/S>
2	29110157	Tape, copper	52	838430088	3TTB+8B(BC), Self-tapping screw
3	27141756	Retainer HP	53	27215345	Decorative frame <D/WT/A>
4	838130088	3TTB+8B,Self-tapping screw		27215346	Decorative frame <P>
6	82143010	3P+10FN(BC),Pan head screw		27215347	Decorative frame <S>
8	27100393A	Chassis		27215348	Decorative frame <G>
10	27191044	KGPS-8RF,Holder	54	28198922	Facet
11	27190503A	KGLS-8RF,Holder	55	880048	P-3055B-8L, Plastic rivet <P/A>
12	27190511	KGLS-16RF,Holder	F6901,F6902	252199	△ 10A-UL, Fuse <D>
13	27160481A	Heatsink	F6901,F6902	252100	△ 10A-EAK, Fuse <P/WT/WR/A>
14	801433	3SMS8W.SW+14B(BC),Special screw	F901	252198	△ 8A-UL, Fuse <D/WT/WR>
15	838430107	3TTB+10S(BC),Self-tapping screw	F902	252077	△ 4A-SE-EAK, Fuse <P/WT/WR/A>
16	27141782	Retainer F	F903	252075	△ 2.5A-SE-EAK,Fuse <P/A>
17	27141783	Retainer R	F9501	252075	△ 2.5A-SE-EAK,Fuse <P/WT/WR/A>
18	838130088	3TTB+8B,Self-tapping screw	F9501	252160	△ 2.5A-UL/T-237, Fuse <D>
19	830440089	4TTC+8C(BC),Self-tapping screw	P1001	2047151012	NCFC7-151012,Flexible flat cable
20	27190266	KGLS-12RF,Holder	P206	2047271012	NCFC7-271012,Flexible flat cable
21	28141433	Cushion	P650	223025	△ AC262,Isolated plate
22	28175270	Isolated plate	P7001	2045142212	NCFC5-142212,Flexible flat cable
23	27130863A	Bracket B	P7002	2047091012	NCFC7-091012,Flexible flat cable
27	27300750	△ Bushing, cord	P800	260208	Binder
28	27190965	Holder	P901	253197HIT	△ AS-SAA, Power supply cord <A>
29	28330135A	Cap, screw		253233KAW	△ AS-CEE-2,Power supply cord <P/WT>
30	28191908	Clear plate 		253279HIT or	△ AS-UC-2#18 or
	28191909	Clear plate <G/S>		253280VOL	△ AS-UC-2#18,Power supply cord <D>
31	28325497A	Knob, power 		253267KAW,	△ AS-CCEE,
	28325499A	Knob, power <G>		253285HIT or	△ AS-CCEE or
	28325547A	Knob, power <S>		253286VOL	△ AS-CCEE, Power supply cord <WR>
32	28184802	Top cover 	Q6050-Q6054	2202823 or	* 2SC5200-O or
	28184803	Top cover <S>		2202822	* 2SC5200-R,Transistor
	28184804	Top cover <G>	Q6060-Q6064	2202813 or	* 2SA1943-O or
33	28141449	t9*280*9, Cushion		2202812	* 2SA1943-R,Transistor
34	838930088	3TTB+8B(UN),Self-tapping screw <G/S>	T901	2301505	△ NPT-1410D,Power transformer <D>
	831430088	3TTW+8B(BC),Self-tapping screw 		2301506	△ NPT-1410P,Power transformer <P/A>
35	28141453	t1.0*100*25,Cushion		2301507	△ NPT-1410DG,Power transformer <WT/WR>
36	27175319A	Leg	U1	1A896566-1A	NADG-7066-1A,DSP circuit PC board ass'y <D>
37	28141332	Cushion		1A896566-1B	NADG-7066-1B,DSP circuit PC board ass'y <P>
38	831430088	3TTW+8B(BC),Self-tapping screw		1A896566-1C	NADG-7066-1C,DSP circuit PC board ass'y <WT/WR>
39	28325405	Knob, tone 		1A896566-1D	NADG-7066-1D,DSP circuit PC board ass'y <A>
	28325407	Knob, tone <G>	U2	1A896568-1A	NAAF-7068-1A,Power amplifier A PC board ass'y <D>
	28325474	Knob, tone <S>		1A896568-1B	NAAF-7068-1B,Power amplifier A PC board ass'y <P>
40	28325898	Knob, volume 		1A896568-1C	NAAF-7068-1C,Power amplifier A PC board ass'y <WT>
	28325899	Knob, volume <S>		1A896568-1D	NAAF-7068-1D,Power amplifier A PC board ass'y <A>
	28325900	Knob, volume <G>		1A896568-1E	NAAF-7068-1E,Power amplifier A PC board ass'y <WR>
41	28325901	Knob, DSP 	U3	1A896569-1A	NAETC-7069-1A,Terminal PC board ass'y <D>
	28325902	Knob, DSP <S>		1A896569-1B	NAETC-7069-1B,Terminal PC board ass'y <P>
	28325903	Knob, DSP <G>		1A896569-1C	NAETC-7069-1C,Terminal PC board ass'y <WT>
42	27122788	Rear panel <D>		1A896569-1D	NAETC-7069-1D,Terminal PC board ass'y <A>
	27122789	Rear panel <P>		1A896569-1E	NAETC-7069-1E,Terminal PC board ass'y <WR>
	27122790	Rear panel <WT>	U4	1A896570-1A	NAPS-7070-1A,Primary circuit PC board ass'y <D>
	27122791	Rear panel <A>		1A896570-1B	NAPS-7070-1B,Primary circuit PC board ass'y <P>
	27122792	Rear panel <WR>		1A896570-1C	NAPS-7070-1C,Primary circuit PC board ass'y <WT>
43	838430088	3TTB+8B(BC), Self-tapping screw		1A896570-1D	NAPS-7070-1D,Primary circuit PC board ass'y <A>
44	87643010	W3*10F(BC),Flat washer		1A896570-1E	NAPS-7070-1E,Primary circuit PC board ass'y <WR>
45	838930088	3TTB+8B(UN),Self-tapping screw	U5	1A896571-1A	NAETC-7071-1A,Speaker terminal A PC board ass'y <D>
46	838430068	3TTB+6B(BC),Self-tapping screw		1A896571-1B	NAETC-7071-1B,Speaker terminal A PC board ass'y <P>
47	27191130	△ Holder,outlet <WR>		1A896571-1C	NAETC-7071-1C,Speaker terminal A PC board ass'y <WT>
48	27212269	Front panel <D/WT/A>		1A896571-1D	NAETC-7071-1D,Speaker terminal A PC board ass'y <A>
	27212270	Front panel <P>		1A896571-1E	NAETC-7071-1E,Speaker terminal A PC board ass'y <WR>
	27212271	Front panel <S>			
	27212272	Front panel <G>			

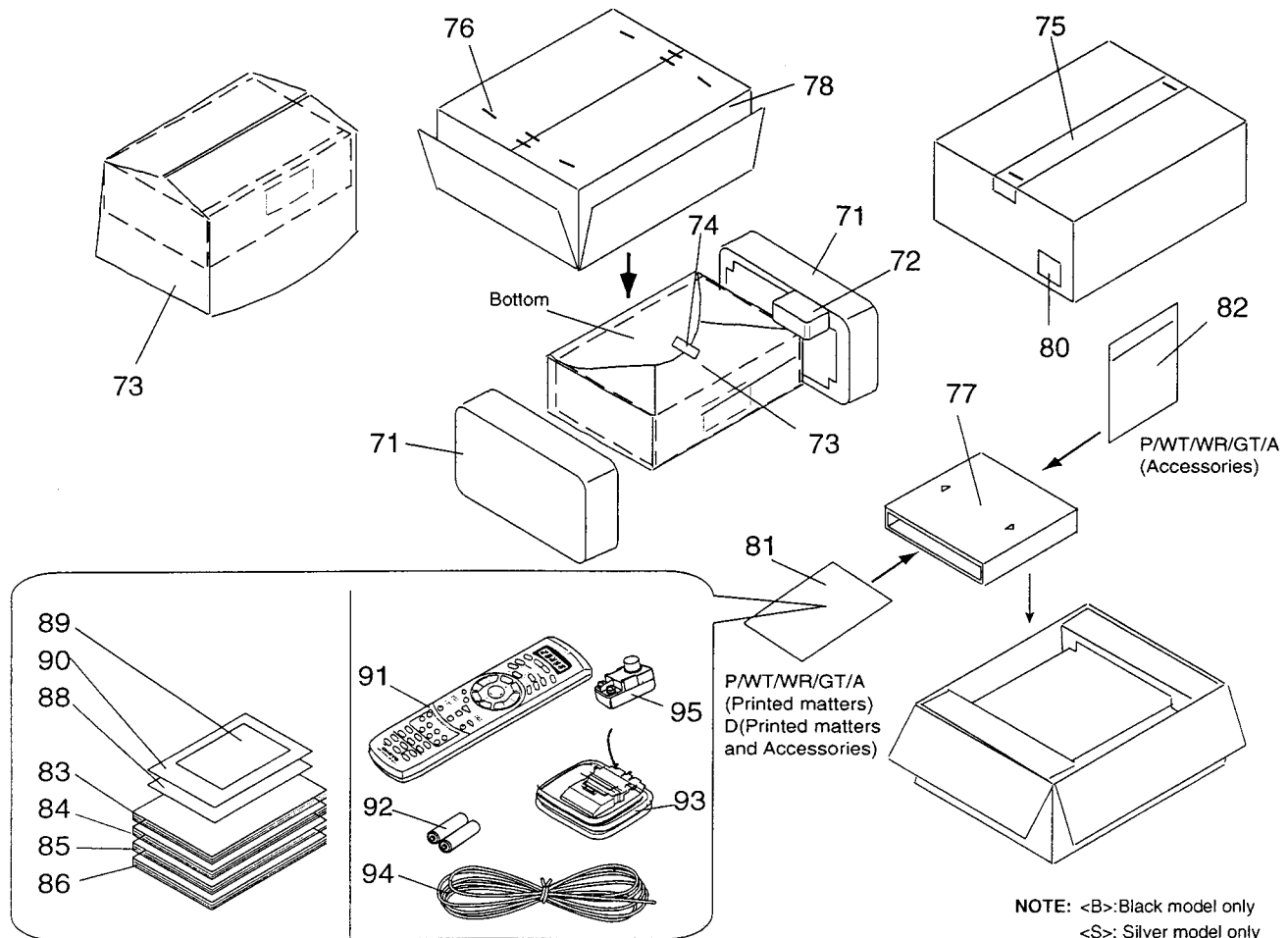
REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
U6	1A896572-1A	NAETC-7072-1A,Speaker terminal B PC board ass'y <D>	71	29091969	Pad
	1A896572-1B	NAETC-7072-1B,Speaker terminal B PC board ass'y <P>	72	29091981	Pad PT
	1A896572-1C	NAETC-7072-1C,Speaker terminal B PC board ass'y <WT>	73	29100153	1020x720,Polybag
	1A896572-1D	NAETC-7072-1D,Speaker terminal B PC board ass'y <A>	74	261504	Paper tape
	1A896572-1E	NAETC-7072-1E,Speaker terminal B PC board ass'y <WR>	75	29110098	PP tape
U7	25137073	NCETC-7073,PC board for holder	76	282301	Staple
U8	1A896574-1A	NASW-7074-1A,Power switch PC board ass'y <D>	77	29053723	Carton box S
	1A896574-1B	NASW-7074-1B,Power switch PC board ass'y <P>	78	29053682A	Carton box <WT/A>
	1A896574-1C	NASW-7074-1C,Power switch PC board ass'y <WT>		29053683A	Carton box <P>
	1A896574-1D	NASW-7074-1D,Power switch PC board ass'y <A>		29053684A	Carton box <S>
	1A896574-1E	NASW-7074-1E,Power switch PC board ass'y <WR>		29053685A	Carton box <G>
U9	1A896575-1A	NAPS-7075-1A,Terminal PC board <D>		29053711A	Carton box <D>
	1A896575-1B	NAPS-7075-1B,Terminal PC board <P>	79	29362772	Label
	1A896575-1C	NAPS-7075-1C,Terminal PC board <WT>	80	29362781	Label EAN <P/WT/A>
	1A896575-1D	NAPS-7075-1D,Terminal PC board <A>		29362782	Label EAN <S>
	1A896575-1E	NAPS-7075-1E,Terminal PC board <WR>		29362783	Label EAN <G>
U10	1A896576-1A	NAETC-7076-1A,Ground PC board ass'y <D>		29362784	Label UPC <D>
	1A896576-1B	NAETC-7076-1B,Ground PC board ass'y <P>	81	29100097-1A	350*250,Poly bag
	1A896576-1C	NAETC-7076-1C,Ground PC board ass'y <WT>	82	29100097-1A	350*250,Poly bag <P/WT/WR/A>
	1A896576-1D	NAETC-7076-1D,Ground PC board ass'y <A>	83	29343015	Instruction manual E
	1A896576-1E	NAETC-7076-1E,Ground PC board ass'y <WR>	84	29343016	Instruction manual FSI <P>
U11	1A896577-1A	NAAF-7077-1A,Power amplifier B PC board ass'y <D>	85	29343017	Instruction manual GDSW <P>
	1A896577-1B	NAAF-7077-1B,Power amplifier B PC board ass'y <P/WT/WR/A>	86	29343018	Instruction manual T <WT>
U12	1A896578-1A	NAPS-7078-1A,Regulator circuit PC board ass'y <D>	87	29343019	Instruction manual C <WR>
	1A896578-1B	NAPS-7078-1B,Regulator circuit PC board ass'y <P/WT/WR/A>	88	29343020	Instruction sheet <D>
U13	1A896579-1A	NAPS-7079-1A,Constant voltage PC board ass'y <D>	89	29365083A	Warranty card <D>
	1A896579-1B	NAPS-7079-1B,Constant voltage PC board ass'y <P/WT/WR/A>	90	29095866	Sheet <D>
U15	1A896581-1A	NAETC-7081-1A,Thermal Detector circuit PC board ass'y <D>	91	24140440	RC-440M,Remote controller
	1A896581-1B	NAETC-7081-1B,Thermal Detector circuit PC board ass'y <P/WT/WR/A>	92	3010054	UM-3, Two batteries
U17	25137083	NCETC-7083,PC board	93	232140	NMA-3057,AM loop antenna
U18	1A896584-1A	NADIS-7084-1A,Display circuit PC board ass'y <D/WT/A>	94	292115	FM antenna <P/WT/WR/A>
	1A896584-1B	NADIS-7084-1B,Display circuit PC board ass'y <P>		292142	FM antenna <D>
	1A896584-1C	NADIS-7084-1C,Display circuit PC board ass'y <S>	95	25065462	Adapter for FM antenna <WT/WR/A>
	1A896584-1D	NADIS-7084-1D,Display circuit PC board ass'y <G>			
U19	1A896585-1A	NASW-7085-1A, Volume PC board ass'y <D/WT/A>			
	1A896585-1B	NASW-7085-1B, Volume PC board ass'y <P>			
	1A896585-1C	NASW-7085-1C, Volume PC board ass'y <S>			
	1A896585-1D	NASW-7085-1D, Volume PC board ass'y <G>			
U20	1A896586-1A	NAETC-7086-1A,Headphone terminal PC board ass'y <D/WT/A>			
	1A896586-1B	NAETC-7086-1B,Headphone terminal PC board ass'y <P>			
	1A896586-1C	NAETC-7086-1C,Headphone terminal PC board ass'y <S>			
	1A896586-1D	NAETC-7086-1D,Headphone terminal PC board ass'y <G>			
U21	1A896587-1A	NAETC-7087-1A,Terminal PC board ass'y <D/WT/A>			
	1A896587-1B	NAETC-7087-1B,Terminal PC board ass'y <P>			
	1A896587-1C	NAETC-7087-1C,Terminal PC board ass'y <S>			
	1A896587-1D	NAETC-7087-1D,Terminal PC board ass'y <G>			
U22	1A896588-1A	NAAF-7088-1A,Tone control circuit PC board ass'y <D/WT/A>			
	1A896588-1B	NAAF-7088-1B,Tone control circuit PC board ass'y <P>			
	1A896588-1C	NAAF-7088-1C,Tone control circuit PC board ass'y <S>			
	1A896588-1D	NAAF-7088-1D,Tone control circuit PC board ass'y <G>			
U23	1A896590-1A	NAVD-7090-1A,S video terminal PC board ass'y <D>			
	1A896590-1B	NAVD-7090-1B,S video terminal PC board ass'y <P/WT/WR/A>			
U24	1A896591-1A	NAVD-7091-1A,Composite video PC board ass'y <D>			
	1A896591-1B	NAVD-7091-1B,Composite video PC board ass'y <P/WT/WR/A>			
U25	1A896592-1A	NAVD-7092-1A,Component video terminal PC board ass'y <D>			
	1A896592-1B	NAVD-7092-1B,Component video terminal PC board ass'y <P/WT/WR/A>			
U26	1A896593-1A	NAAF-7093-1A, Input terminal PC board ass'y <D>			
	1A896593-1B	NAAF-7093-1B, Input terminal PC board ass'y <P/WT/WR/A>			
U31	240138A or 240134	ENG06501QR or TFCE1U114A, Tuner unit <D>			
	240139A or 240135	ENG07501QR or TFCE1E512A, Tuner unit <P/A/WT/WR>			

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PACKING VIEW

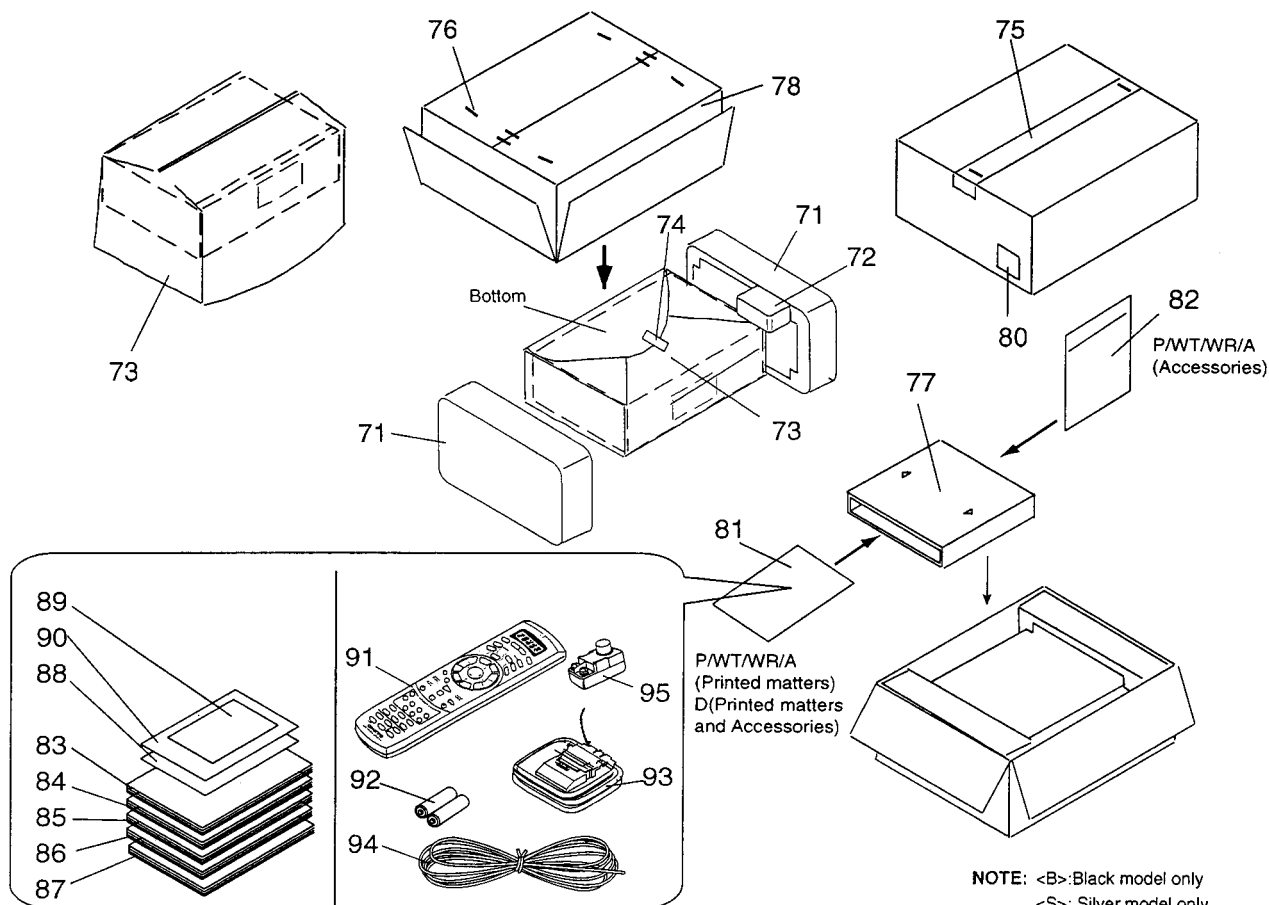


PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
71	29091969	Pad	81	29100097-1A	350*250,Poly bag
72	29091981	Pad PT	82	29100097-1A	350*250,Poly bag <P/WT/WR/GT/A>
73	29100153	1020x720,Polybag	83	29343023	Instruction manual E
74	261504	Paper tape	84	29343024	Instruction manual FSI <P>
75	29110098	PP tape	85	29343025	Instruction manual GDSW <P>
76	282301	Staple	86	29343026	Instruction manual TC <WT/GT/WR>
77	29053723	Carton box S	88	29343029	Instruction sheet <D>
78	29053686A	Carton box <WT/A>	89	29365083A	Warranty card <D>
	29053687A	Carton box <P>	90	29095866	Sheet <D>
	29053688A	Carton box <S>	91	24140447	RC-447M,Remote controller
	29053689A	Carton box <G>	92	3010054	UM-3, Two batteries
	29053712A	Carton box <D>	93	232140	NMA-3057,AM loop antenna
80	29362786	Label EAN <P/WT/A>	94	292115	FM antenna <P/WT/WR/A/GT>
	29362787	Label EAN <S>		292142	FM antenna <D>
	29362788	Label EAN <G>	95	25065462	Adapter for FM antenna <WT/WR/A/GT>
	29362789	Label UPC <D>			

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PACKING VIEW



PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
71	29091969	Pad	81	29100097-1A	350*250, Poly bag
72	29091981	Pad PT	82	29100097-1A	350*250, Poly bag <P/W/T/W/R/A>
73	29100153	1020x720, Polybag	83	29343015	Instruction manual E
74	261504	Paper tape	84	29343016	Instruction manual FSI <P>
75	29110098	PP tape	85	29343017	Instruction manual GDSW <P>
76	282301	Staple	86	29343018	Instruction manual T <WT>
77	29053723	Carton box S	87	29343019	Instruction manual C <WR>
78	29053682A	Carton box <WT/A>	88	29343020	Instruction sheet <D>
	29053683A	Carton box <P>	89	29365083A	Warranty card <D>
	29053684A	Carton box <S>	90	29095866	Sheet <D>
	29053685A	Carton box <G>	91	24140440	RC-440M, Remote controller
	29053711A	Carton box <D>	92	3010054	UM-3, Two batteries
79	29362772	Label	93	232140	NMA-3057, AM loop antenna
80	29362781	Label EAN <P/W/T/A>	94	292115	FM antenna <P/W/T/W/R/A>
	29362782	Label EAN <S>		292142	FM antenna <D>
	29362783	Label EAN <G>	95	25065462	Adapter for FM antenna <WT/W/R/A>
	29362784	Label UPC <D>			

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