AV RECEIVER/AV AMPLIFIER
RX-V463/HTR-6140/ DSP-AX463
SERVICE MANUAL

RX-V463/HTR-6140/ DSP-AX463

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel.
It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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This Service Manual uses recycled paper.

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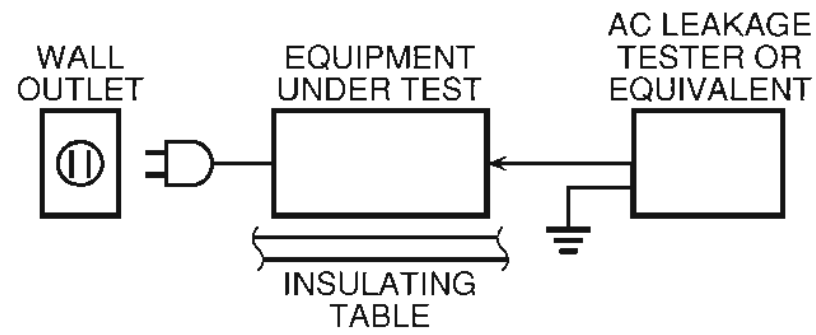
YAMAHA CORPORATION
P.O.Box 1, Hamamatsu, Japan
'08 03

■ TO SERVICE PERSONNEL

1. Critical Components Information
   Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V Models Only)
   When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohms shunted by 0.15µF.



- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

For U model
"CAUTION"
"F3401: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 6A, 125V FUSE."

For C model
CAUTION
F3401: REPLACE WITH SAME TYPE 6A, 125V FUSE.

ATTENTION
F3401: UTILISER UN FUSIBLE DE RECHANGE DE MÉME TYPE DE 6A, 125V.

WARNING: CHEMICAL CONTENT NOTICE!

This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

About lead free solder / 無鉛ハンダについて

All of the P.C.B.s installed in this unit and solder joints are soldered using the lead free solder.

Among some types of lead free solder currently available, it is recommended to use one of the following types for the repair work.

- Sn + Ag + Cu (tin + silver + copper)
- Sn + Cu (tin + copper)
- Sn + Zn + Bi (tin + zinc + bismuth)

Caution:
As the melting point temperature of the lead free solder is about 30°C to 40°C (50°F to 70°F) higher than that of the lead solder, be sure to use a soldering iron suitable to each solder.

本機に搭載されているすべての基板およびハンダ付けによる接合部は無鉛ハンダでハンダ付けされています。

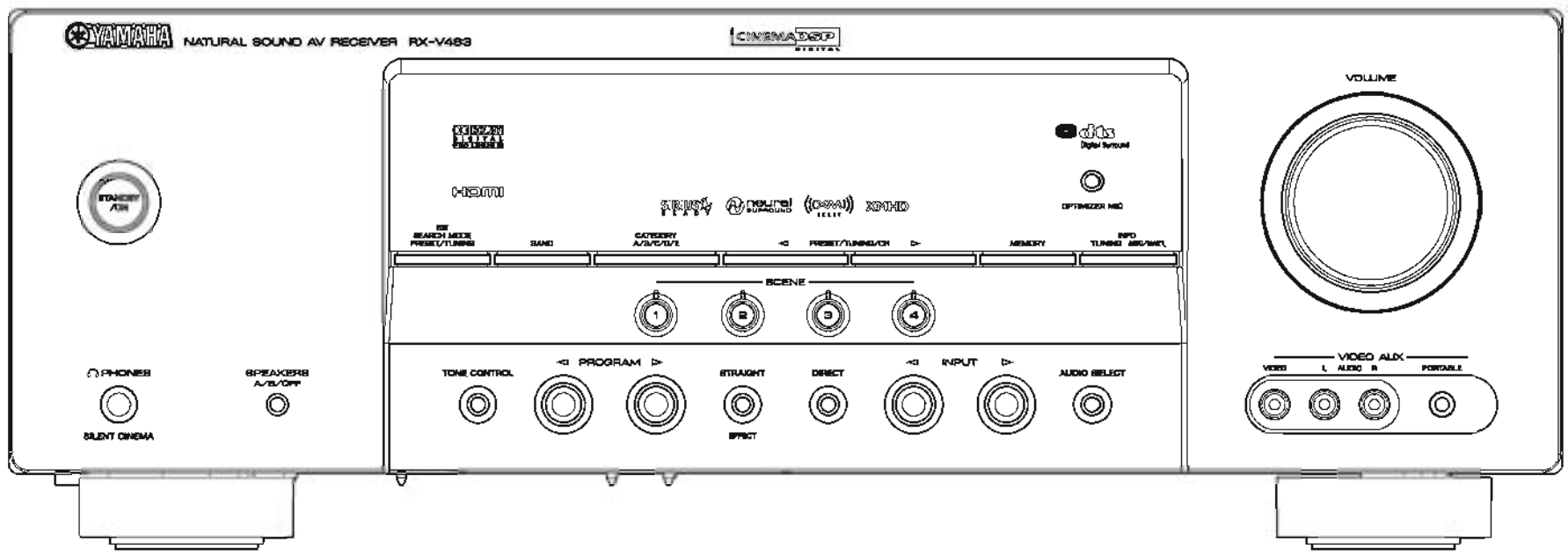
無鉛ハンダにはいくつかの種類がありますが、修理時には下記のような無鉛ハンダの使用を推奨します。

- Sn+Ag+Cu(錫+銀+銅)
- Sn+Cu(錫+銅)
- Sn+Zn+Bi(錫+亜鉛+ビスマス)

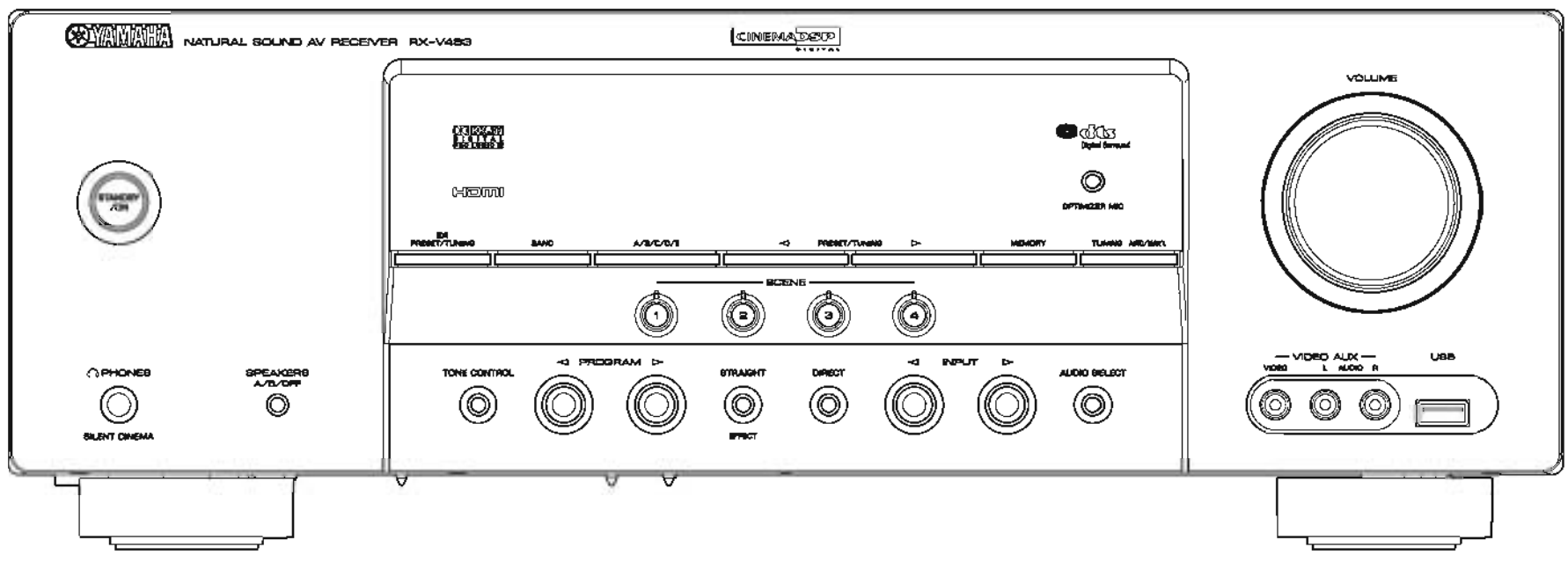
注意：
無鉛ハンダの融点温度は通常の鉛入りハンダに比べ30～40℃程度高くなっていますので、それぞれのハンダに合ったハンダごてをご使用ください。

■ FRONT PANELS

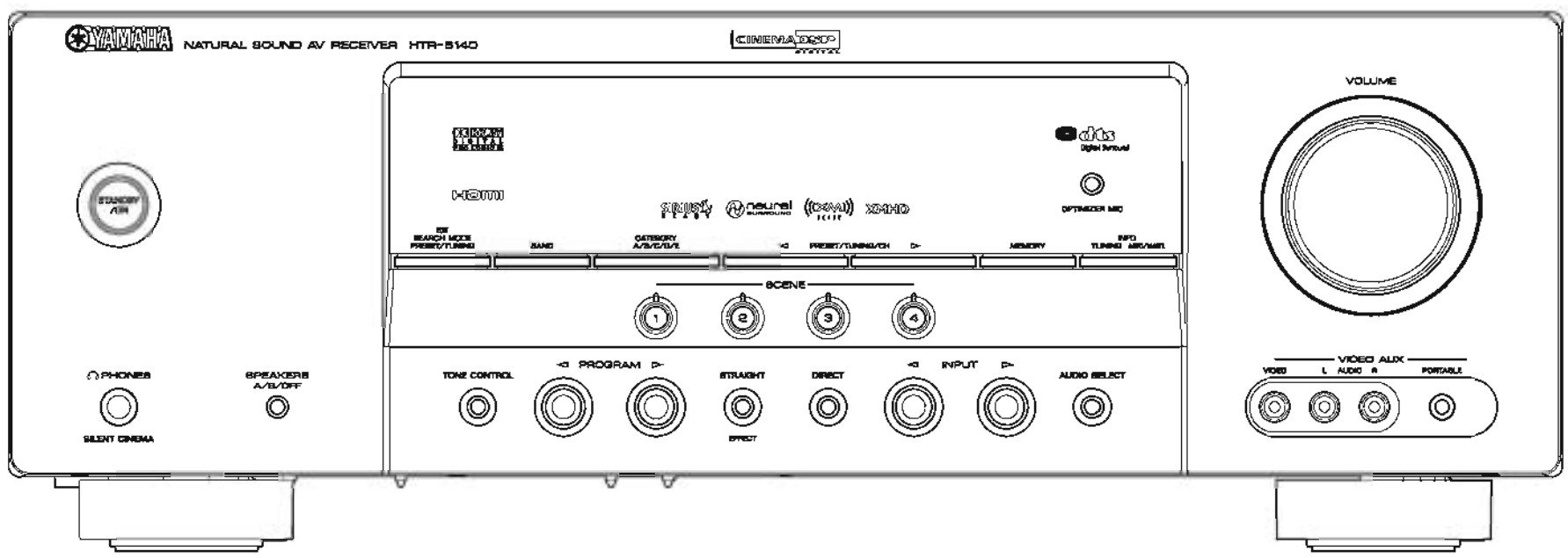
RX-V463 (U, C models)



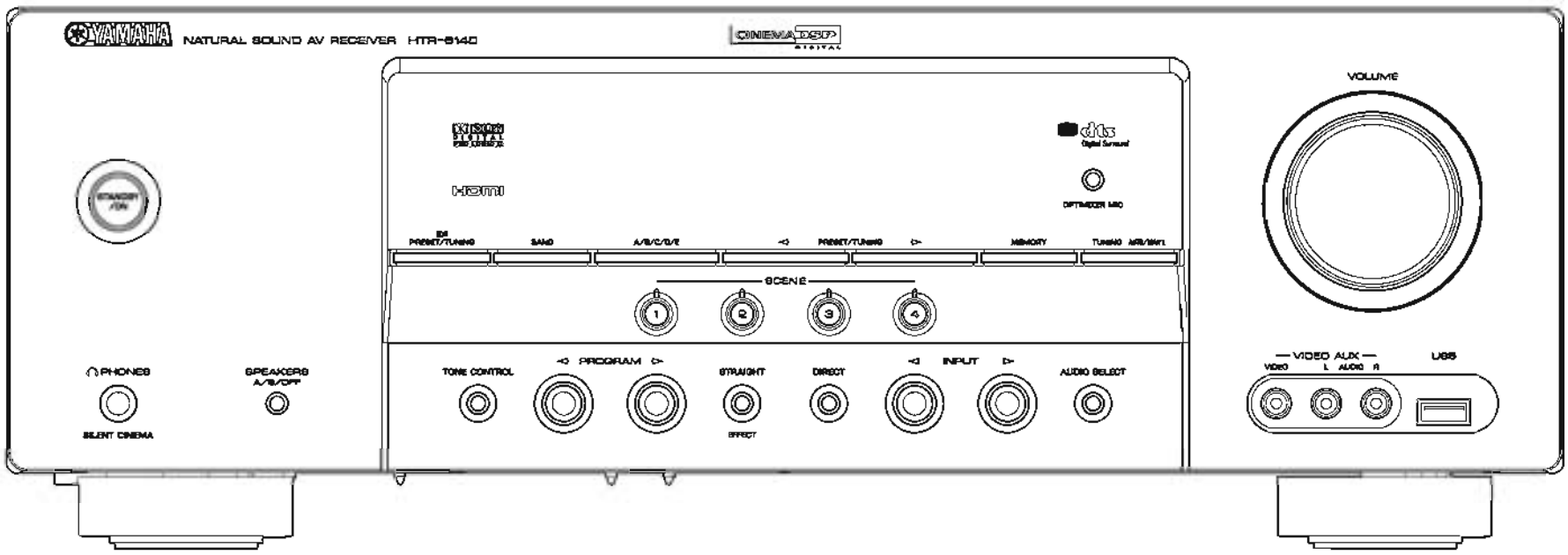
RX-V463 (R, T, K, A, G, E, F, L models)



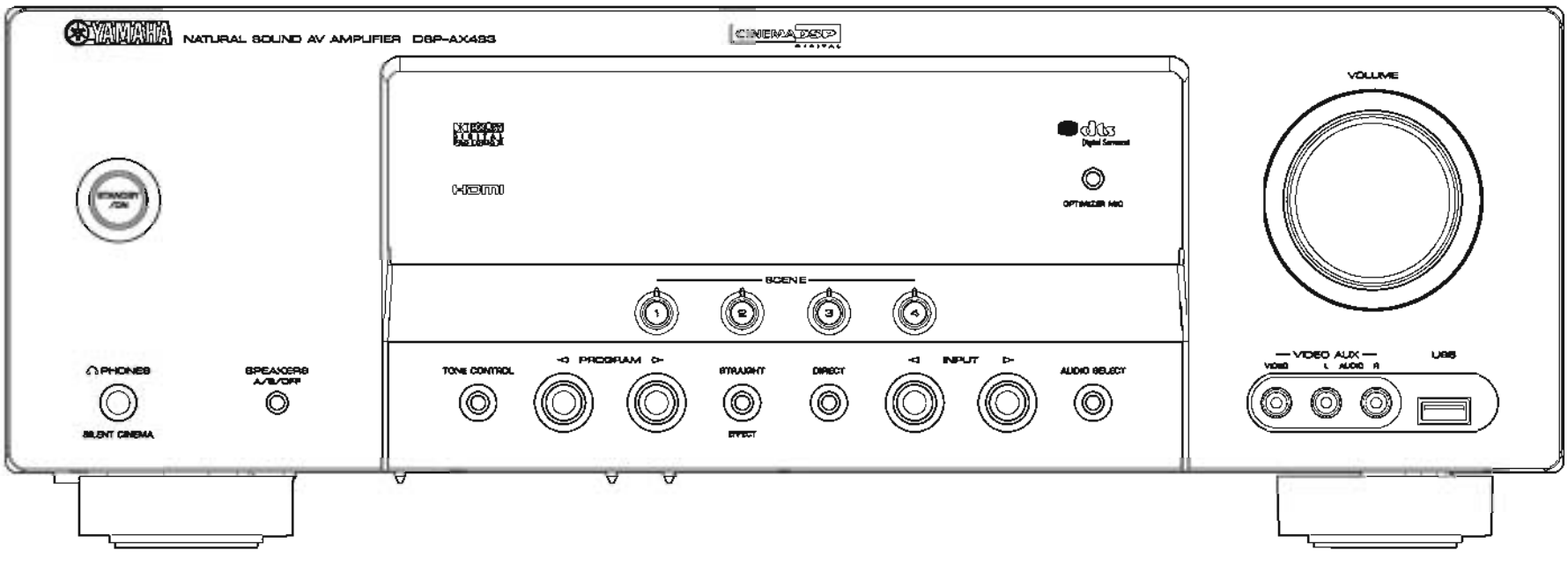
HTR-6140 (U, C models)



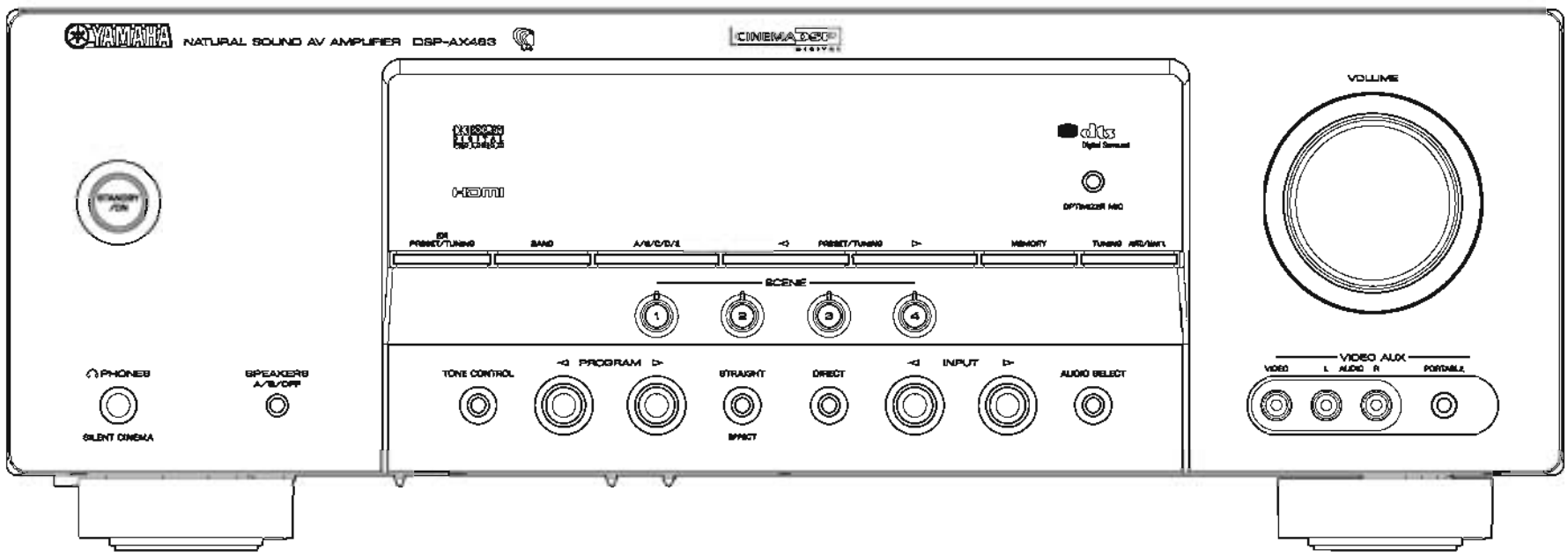
HTR-6140 (T, K, G, E, F models)



DSP-AX463 (B model)

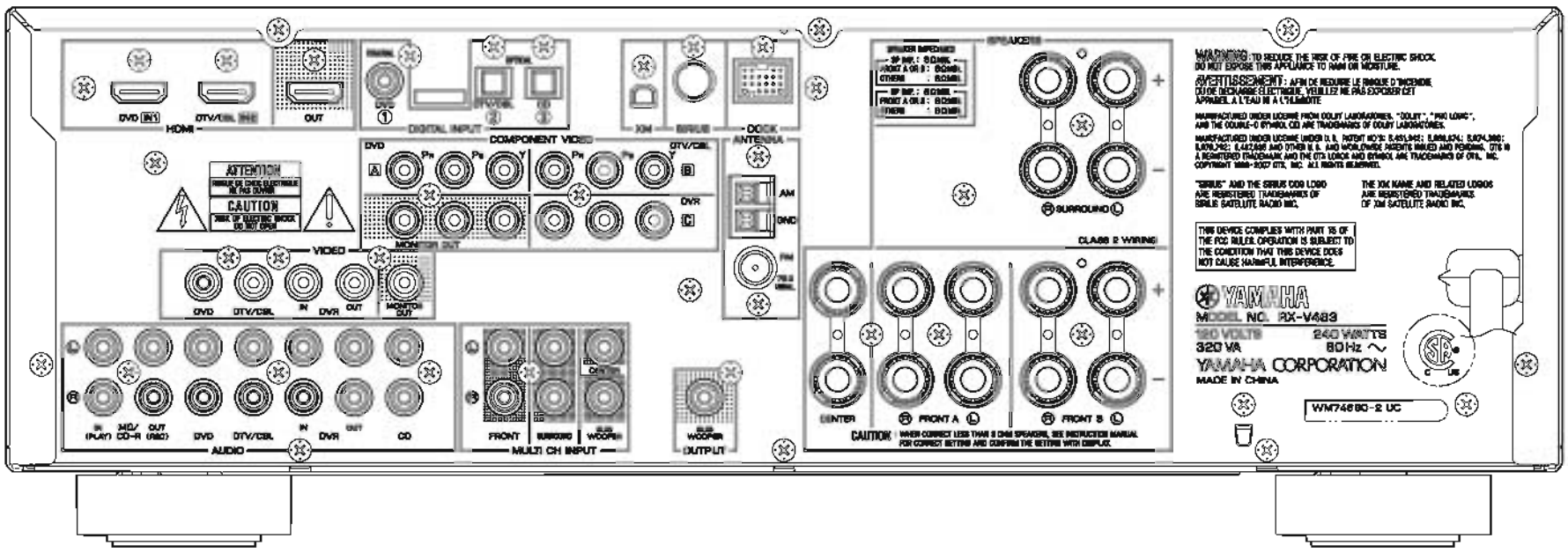


DSP-AX463 (J model)

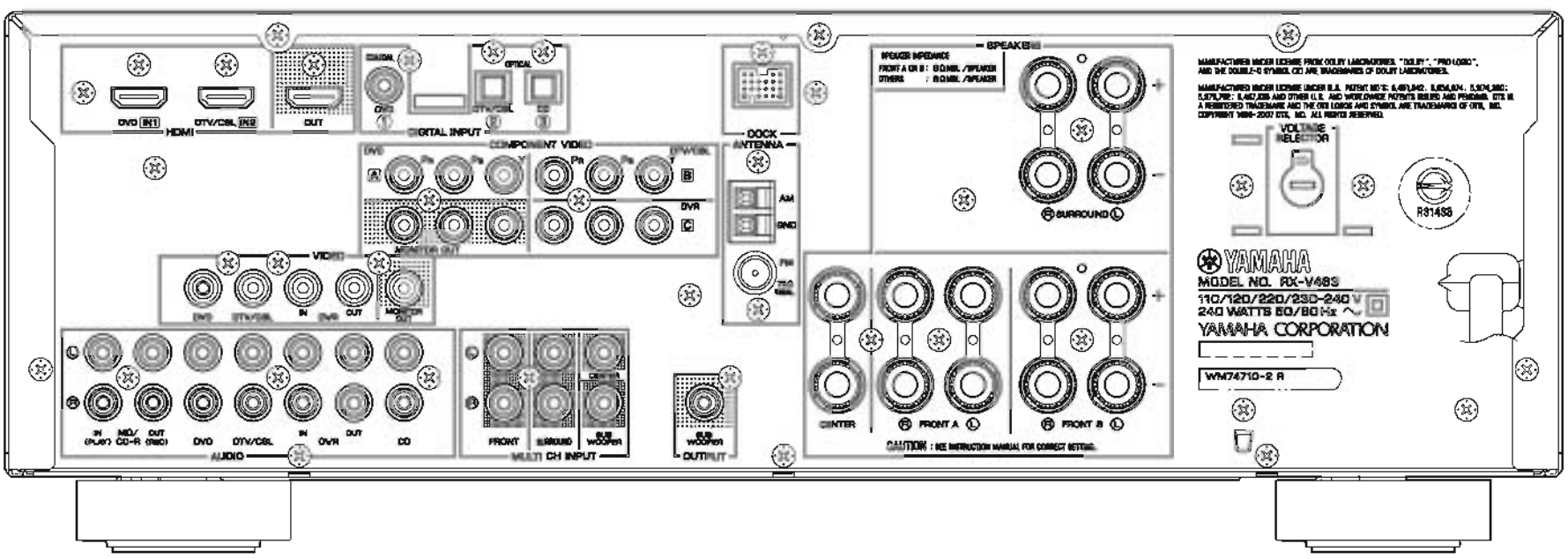


■ REAR PANELS

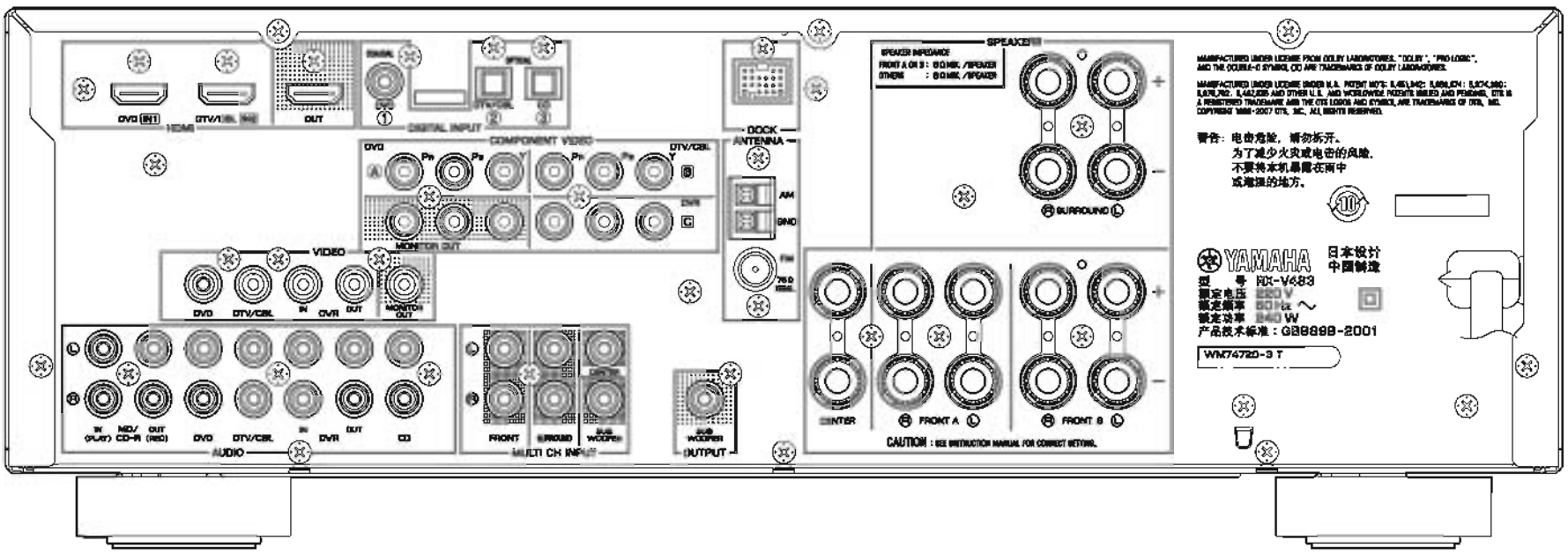
RX-V463 (U, C models)



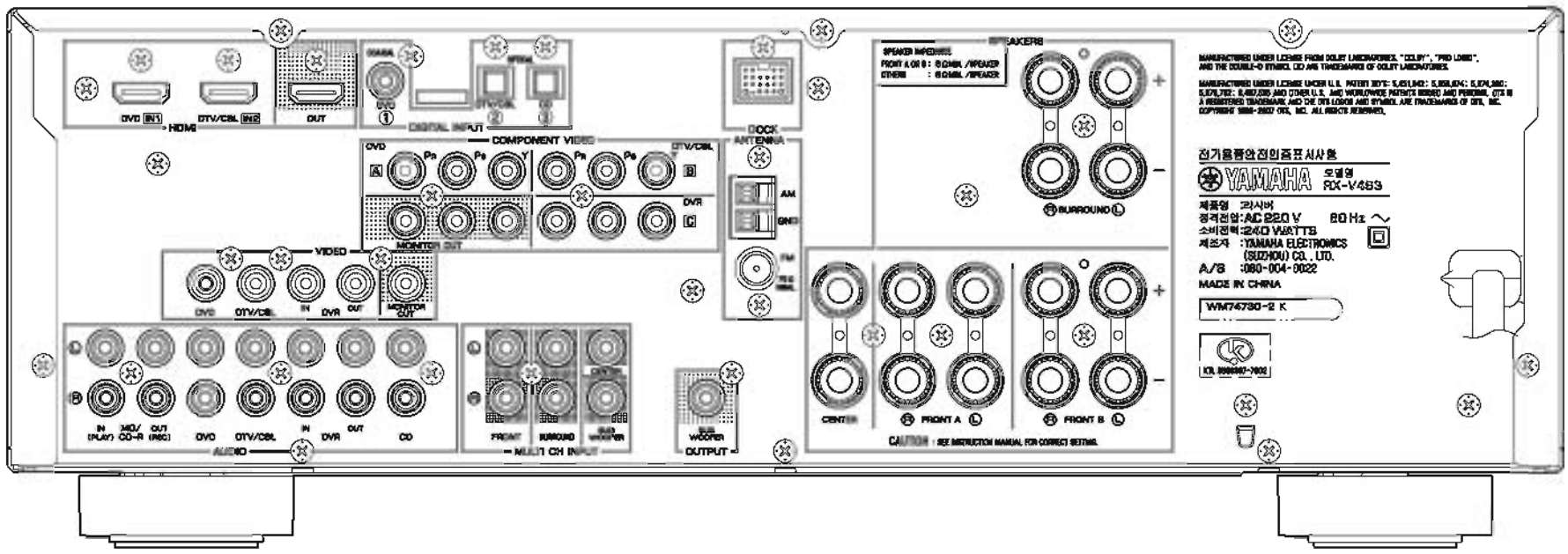
RX-V463 (R model)



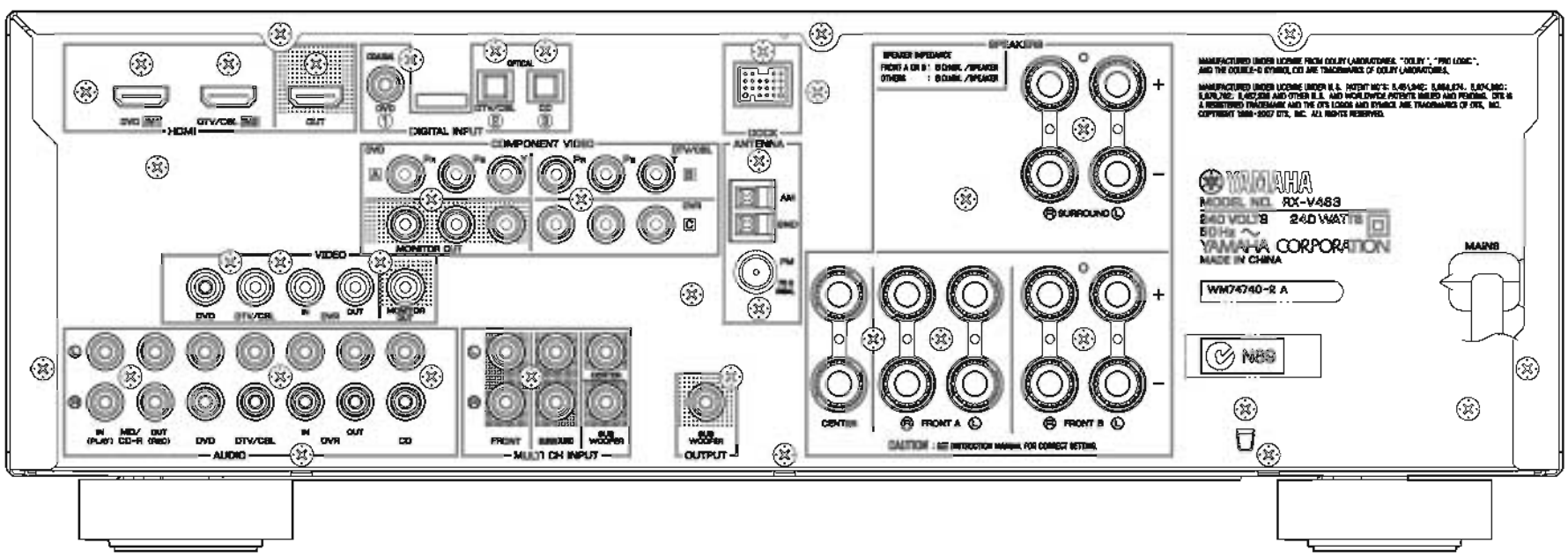
RX-V463 (T model)



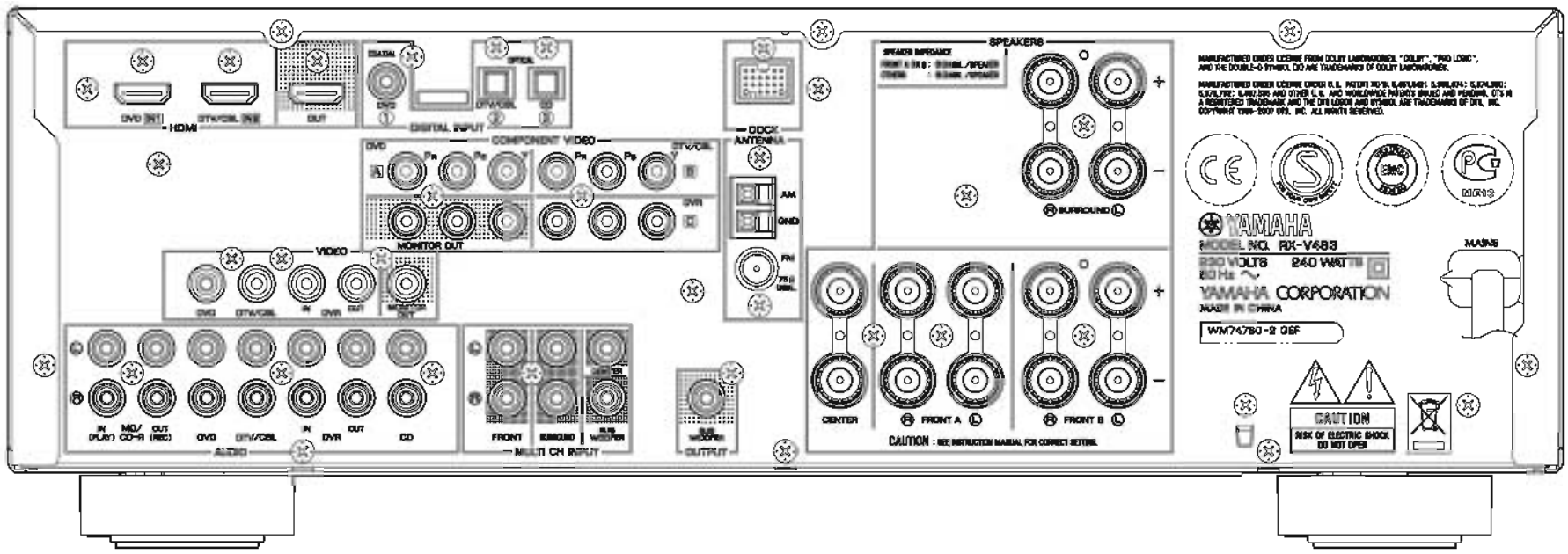
RX-V463 (K model)



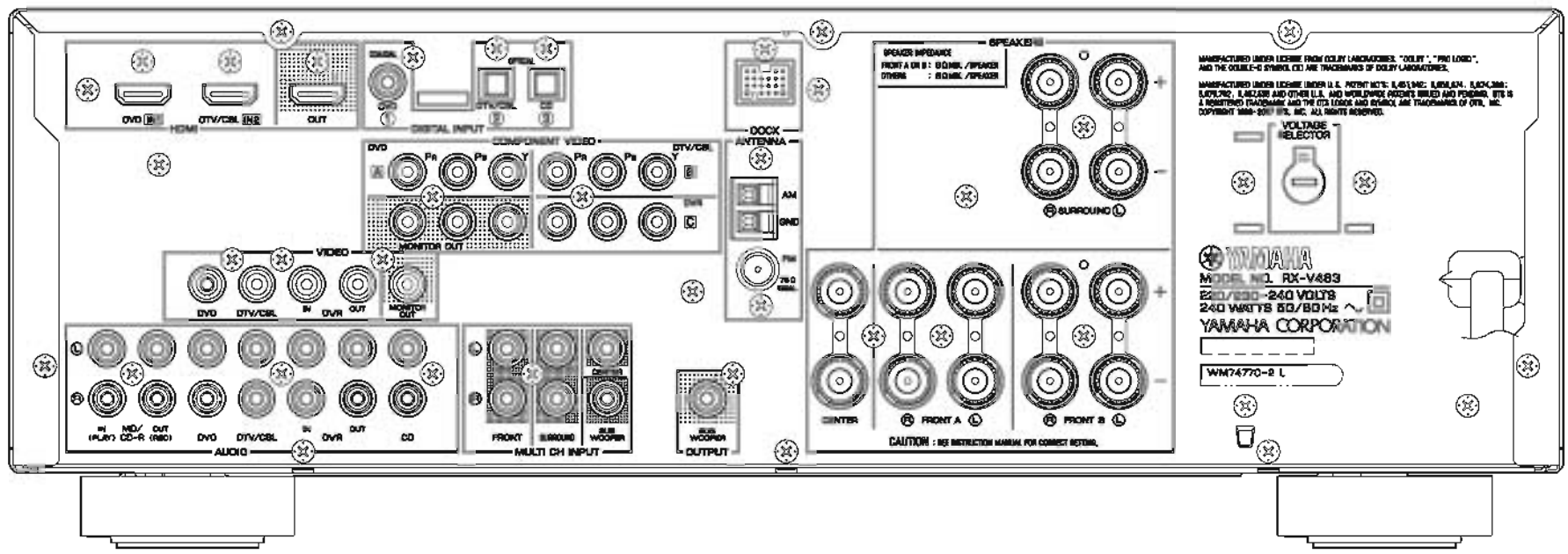
RX-V463 (A model)



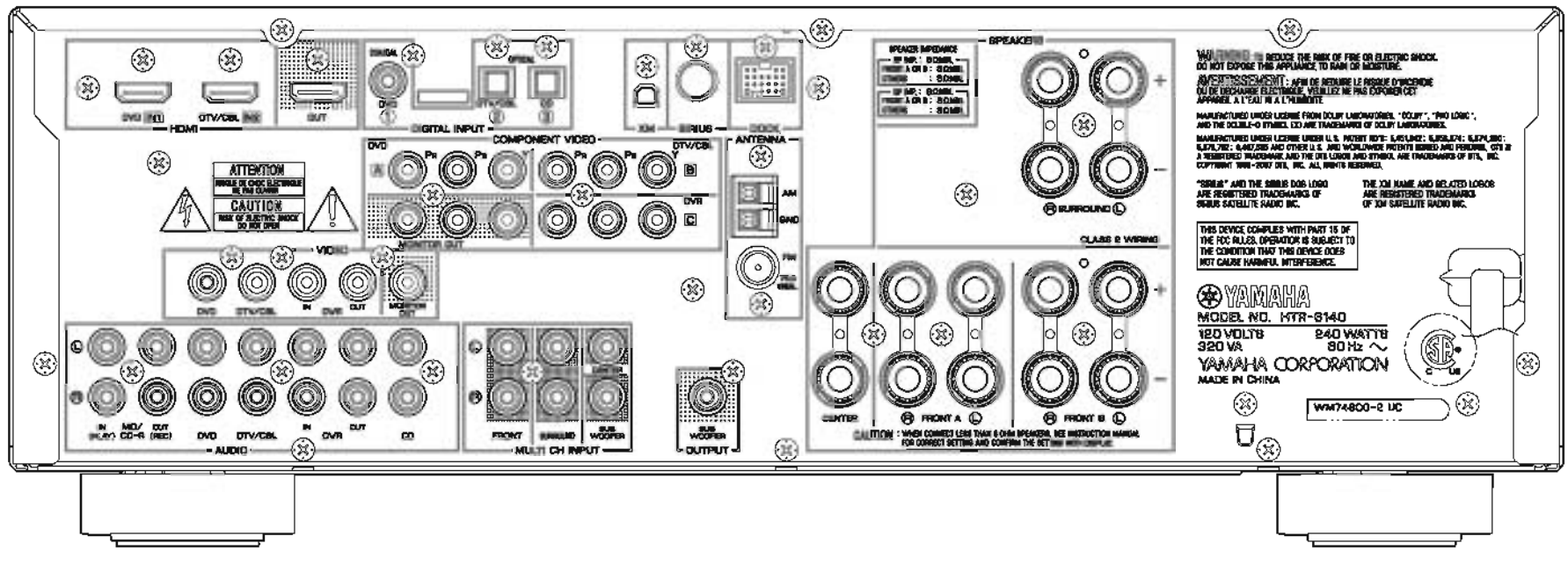
RX-V463 (G, E, F models)



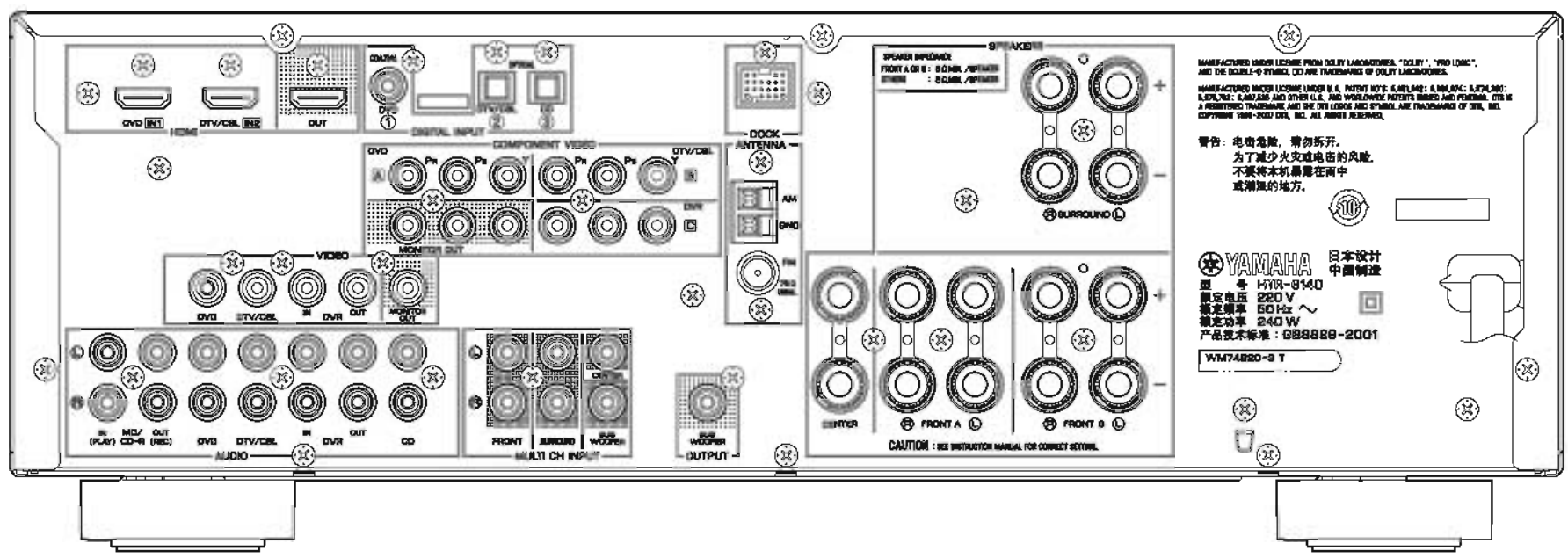
RX-V463 (L model)



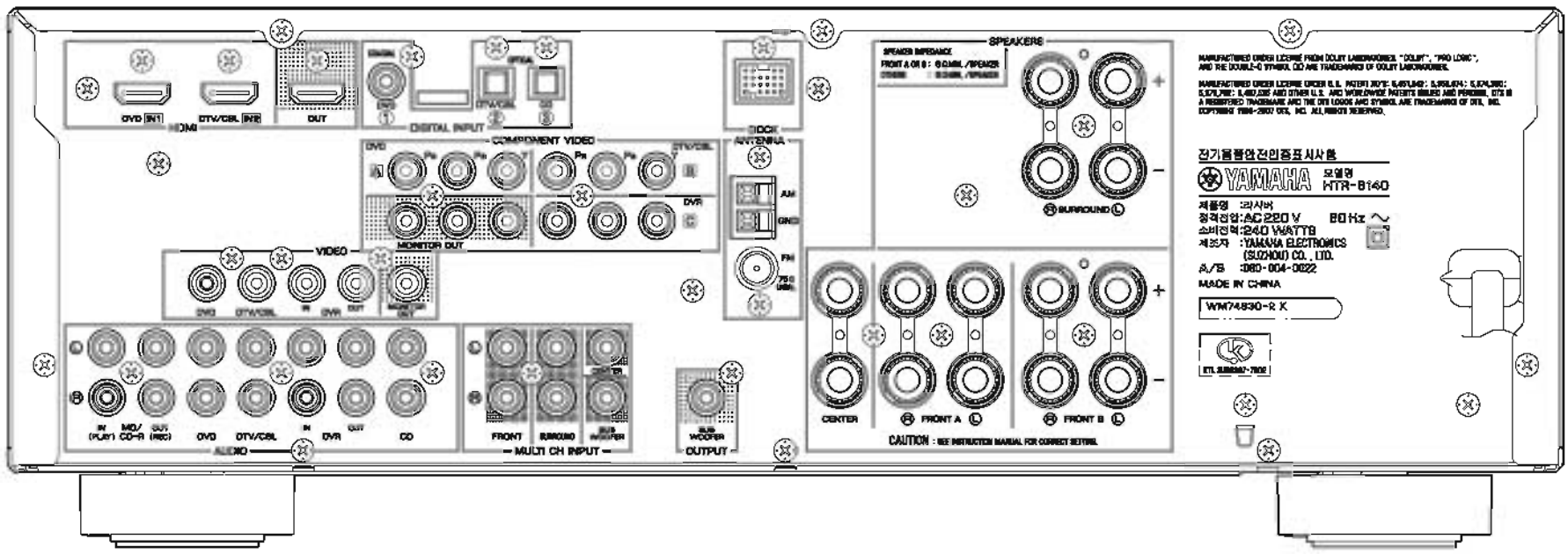
HTR-6140 (U, C models)



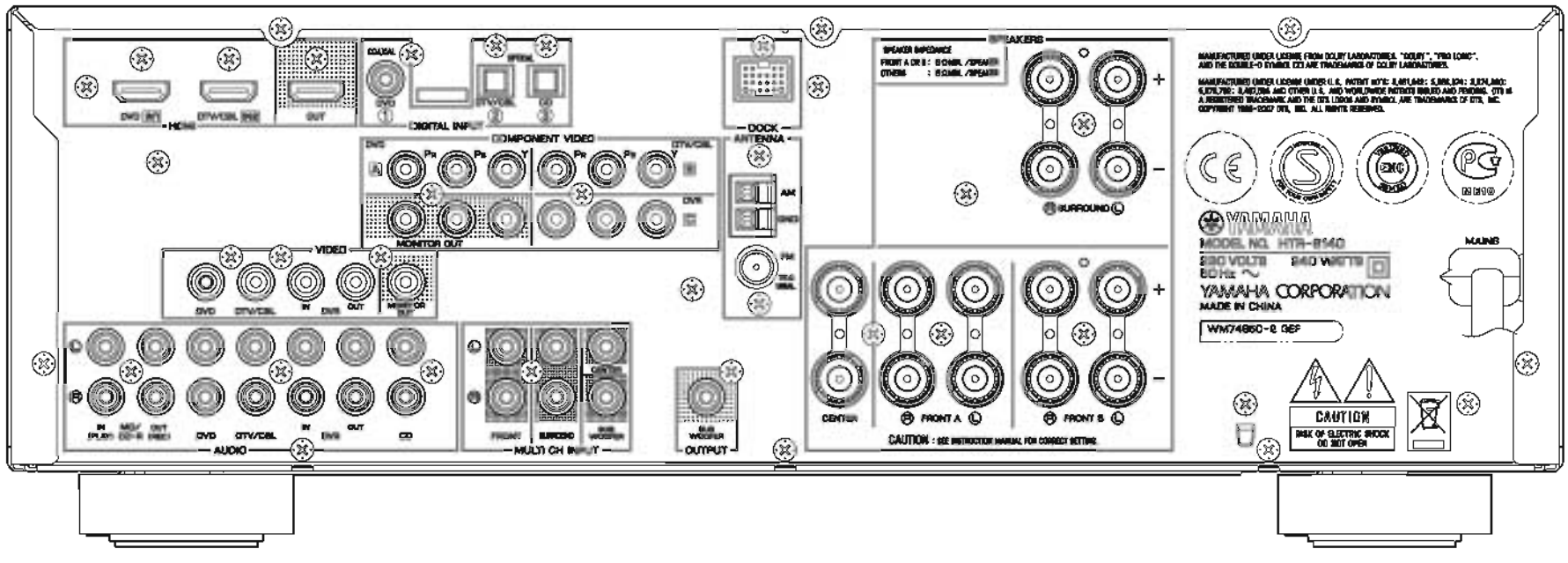
HTR-6140 (T model)



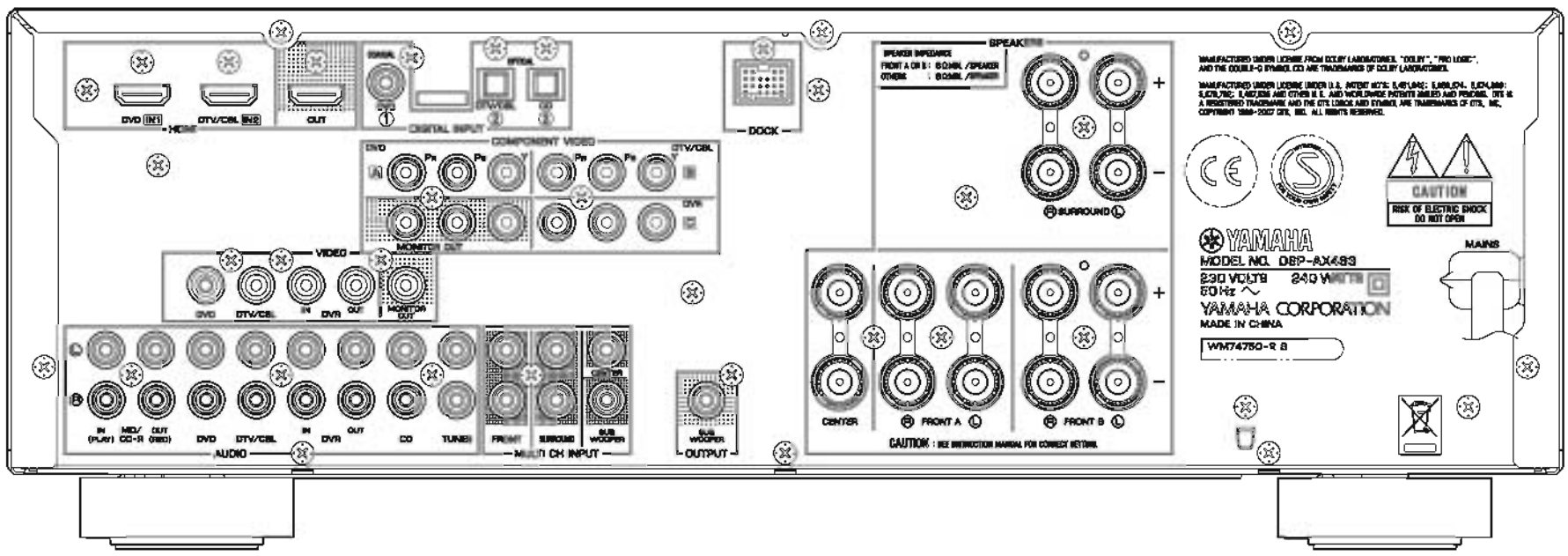
HTR-6140 (K model)



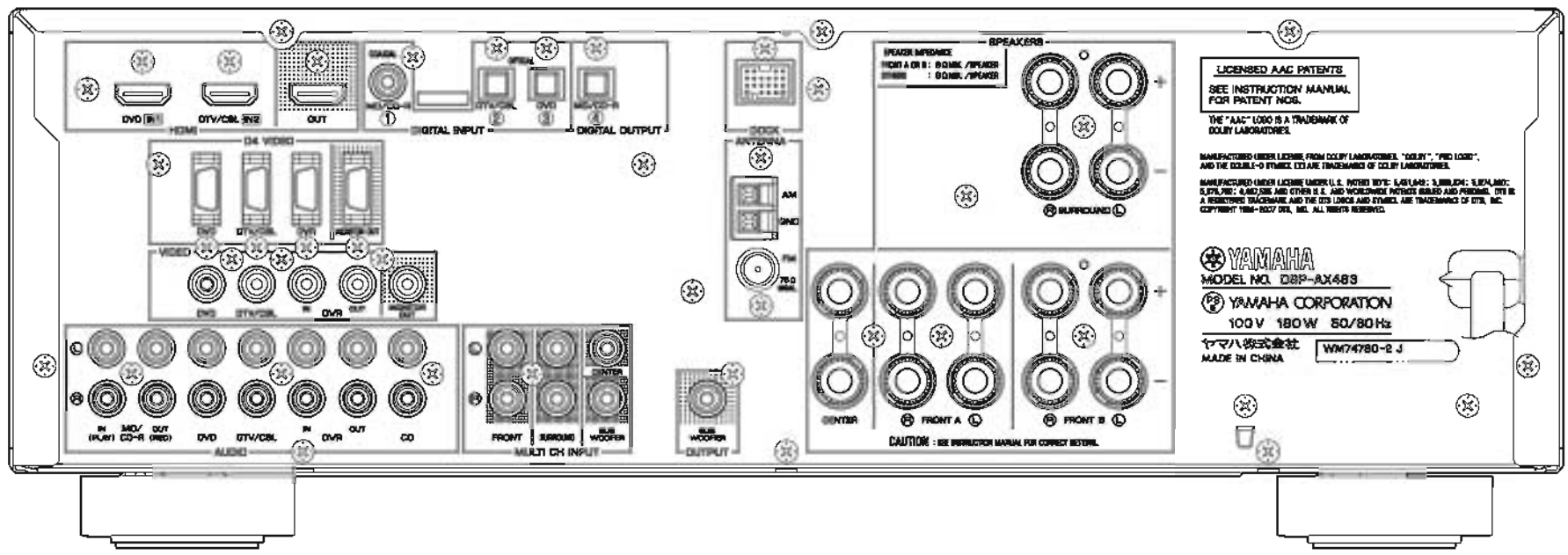
HTR-6140 (G, E, F models)



DSP-AX463 (B model)

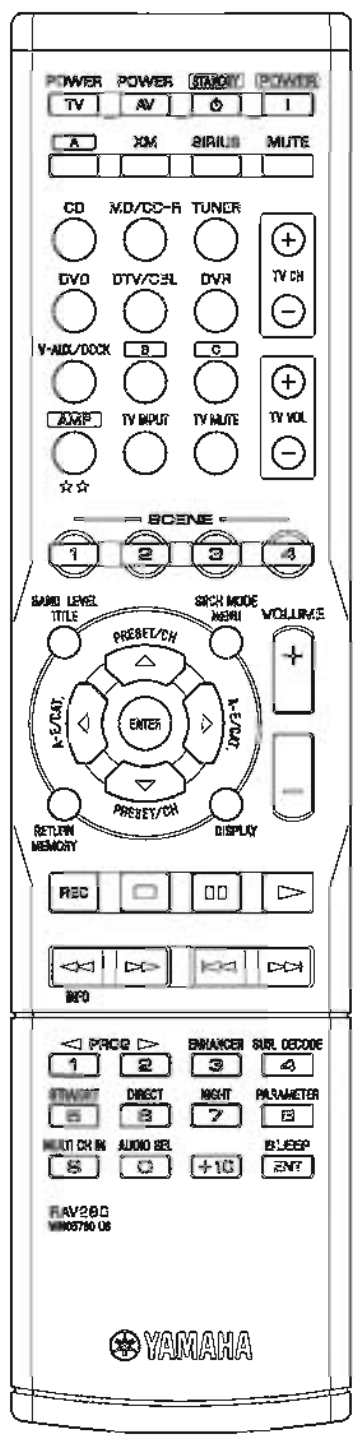


DSP-AX463 (J model)

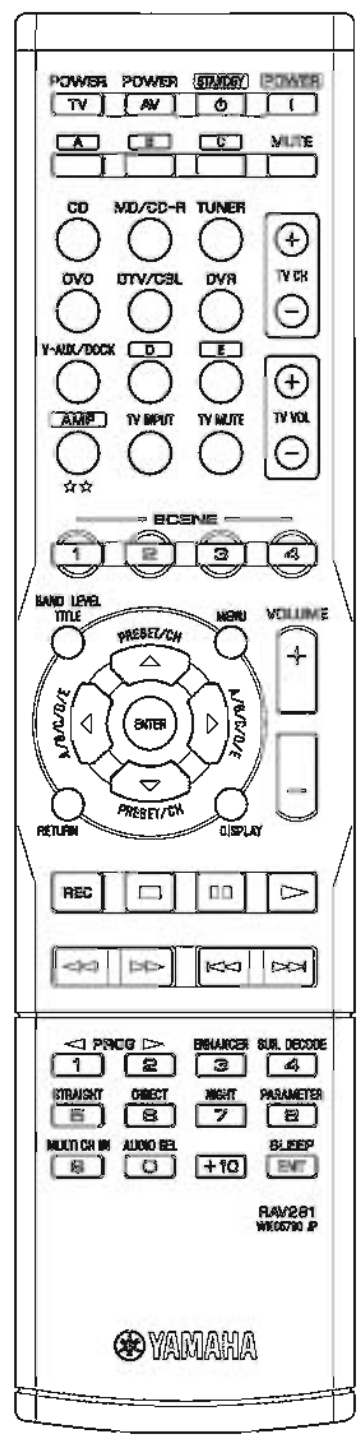


■ REMOTE CONTROL PANEL

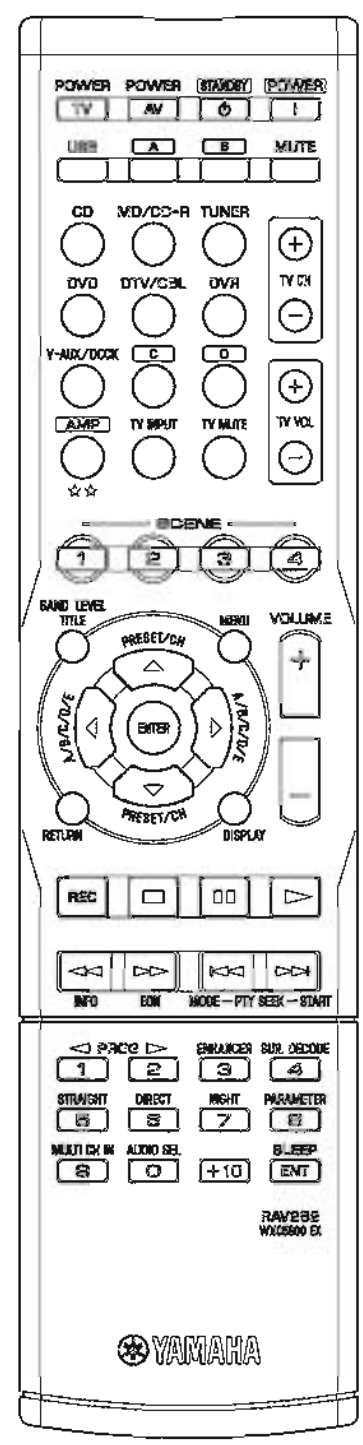
- **RAV280**
  RX-V463 (U, C models)
  HTR-6140 (U, C models)



- **RAV282**
  RX-V463 (R, T, K, A, G, E, F, L models)
  HTR-6140 (F model)
  DSP-AX463 (B model)



- **RAV281**
  DSP-AX463 (J model)



■ SPECIFICATIONS / 参考仕様

■ Audio Section / オーディオ部

Minimum RMS Output Power (Power Amp. Section) / 定格出力(パワーアンプ部) (1 kHz, 0.9 % THD)
FRONT L/R, CENTER, SURROUND L/R
U, C models (8 ohms) ..... 105 W/ch
R, T, K, A, B, G, E, F, L, J models (6 ohms) ..... 105 W/ch

Maximum Power / 実用最大出力 (JEITA)
(1 kHz, 10 % THD, 6 ohms)
FRONT L/R, CENTER, SURROUND L/R
R, T, K, L, J models ..... 140 W/ch

Dynamic Power Per Channel / ダイナミックパワー (IHF)
(FRONT L/R drive)
U, C models
(8/6/4/2 ohms) ..... 90/110/130/150 W
R, T, K, A, B, G, E, F, L, J models
(6/4/2 ohms) ..... 100/110/125 W

Dynamic Headroom
U, C models (8 ohms) ..... 0.27 dB

Input Sensitivity/Input Impedance / 入力感度／入力インピーダンス (1 kHz, 100 W / 8 ohms)
CD, etc. ..... 200 mV / 47 k-ohms
MULTI CH INPUT
FRONT L/R, CENTER, SURROUND L/R, SUBWOOFER
..... 200 mV / 47 k-ohms

Maximum Input Signal / 最大許容入力
(1 kHz, 0.5 % THD, Effect on)
CD, etc. ..... 2.0 V or more

Output Level/Output Impedance / 出力電圧／出力インピーダンス
REC OUT ..... 200 mV / 1.2 k-ohms
SUBWOOFER (2ch STEREO and FRONT SP: Small)
..... 4 V / 1.2 k-ohms

Headphone Jack Rated Output/Impedance / ヘッドフォン出力／出力インピーダンス
CD, etc. (1 kHz, 200 mV, 8 ohms) ..... 400 mV / 470 ohms

Frequency Response / 周波数特性 (10 Hz to 100 kHz)
CD, etc. to FRONT L/R ..... 0 / -3 dB

Total Harmonic Distortion / 全高調波歪率 (1 kHz)
Direct to FRONT L/R SP OUT
U, C models
(45 W, 8 ohms) ..... 0.06 % or less
R, T, K, A, B, G, E, F, L, J models
(50 W, 6 ohms) ..... 0.06 % or less

Signal to Noise Ratio / 信号対雑音比 (IHF-A Network)
Direct STEREO to Input shorted SP OUT
200 mV ..... 98 dB or more
250 mV ..... 100 dB or more

Residual Noise / 残留ノイズ (IHF-A Network)
FRONT L/R SP OUT ..... 150 ∝V or less

Channel Separation / チャンネルセパレーション
CD, etc. (Input 5.1 k-ohms shorted, 1 kHz / 10 kHz)
..... 60 dB or more / 45 dB or more

Tone Control Characteristics / トーンコントロール特性
BASS
Boost/Cut ..... ±10 dB (100 Hz)
TREBLE
Boost/Cut ..... ±10 dB (20 kHz)

Filter Characteristics / フィルタ特性
FRONT, CENTER, SURROUND small (H.P.F.)
..... fc=40/60/80/90/100/110/120/160/200 Hz, 12 dB/oct.
SUBWOOFER (L.P.F.)
..... fc=40/60/80/90/100/110/120/160/200 Hz, 24 dB/oct.

■ Video Section / ビデオ部

Video Signal Type (Gray back) / ビデオ信号方式(グレーバック)
U, C, R, K, J models ..... NTSC
T, A, B, G, E, F, L models ..... PAL

Composite Video Signal Level / コンポジットビデオ信号
..... 1 Vp-p / 75 ohms

Component Signal Level
(U, C, R, T, K, A, B, G, E, F, L models)
Y ..... 1 Vp-p / 75 ohms
Pb/Pr ..... 0.7 Vp-p / 75 ohms

D4-Video Signal Level / D4ビデオ信号
(J model)
Y ..... 1 Vp-p / 75 ohms
Pb/Pr ..... 0.7 Vp-p / 75 ohms

Video Maximum Input Level / ビデオ最大許容入力
..... 1.5 Vp-p or more

Signal to Noise Ratio / 信号対雑音比
..... 50 dB or more

Monitor Out Frequency Response / モニターアウト周波数帯域
U, C, R, T, K, A, B, G, E, F, L models
Component video signal ..... 5 Hz to 60 MHz, -3 dB
J model
D4-video signal ..... 5 Hz to 60 MHz, -3 dB
HDMI ..... Ver. 1.2a

■ FM Section / FM部 (U, C, R, T, K, A, G, E, F, L, J models)

Tuning Range / 受信周波数範囲
U, C models ..... 87.5 to 107.9 MHz
R, L models ..... 87.5 to 108.0 / 87.50 to 108.00 MHz
T, K, A, G, E, F models ..... 87.50 to 108.00 MHz
J model ..... 76.0 to 90.0 MHz

50dB Quieting Sensitivity / 50 dB SN感度 (IHF)
(1 kHz, 100 % Mod.)
Mono ..... 2.8 ∝V (20.2 dBf)

Signal to Noise Ratio / 信号対雑音比 (IHF)
Mono / Stereo ..... 73 dB / 70 dB

Harmonic Distortion / 歪率 (1 kHz)
Mono / Stereo ..... 0.5 % / 0.5 %

Antenna Input / アンテナ入力 ..... 75 ohms unbalanced

■ AM Section / AM部 (U, C, R, T, K, A, G, E, F, L, J models)

Tuning Range / 受信周波数範囲
U, C models ..... 530 to 1,710 kHz
R, L models ..... 530 to 1,710 / 531 to 1,611 kHz
T, K, A, G, E, F, J models ..... 531 to 1,611 kHz

Antenna Input / アンテナ入力 ..... Loop antenna

■ General / 総合

Power Supply / 電源電圧
U, C models ..... AC 120 V, 60 Hz
R model ..... AC 110, 120/220, 230-240 V, 50/60 Hz
T model ..... AC 220 V, 50 Hz
K model ..... AC 220 V, 60 Hz
A model ..... AC 240 V, 50 Hz
B, G, E, F models ..... AC 230 V, 50 Hz
L model ..... AC 220, 230-240 V, 50/60 Hz
J model ..... AC 100 V, 50/60 Hz

Power Consumption / 消費電力
U, C models ..... 240 W / 320 VA
R, T, K, A, B, G, E, F, L models ..... 240 W
J model ..... 180 W

Standby Power Consumption (reference data) / 待機時消費電力（参考値）
U, C, T, K, A, B, G, E, F, J models ..... 0.8 W

Maximum Power Consumption (5ch drive, 10 % THD)
R, L models ..... 440 W

Dimensions / 寸法 (W x H x D)
..... 435 x 151 x 351.6 mm (17-1/8" x 5-15/16" x 13-13/16")

Weight / 質量
.....8.5 kg (18 lbs. 11 oz.)

Finish / 仕上げ
[RX-V463]
Gold color..... R, T models
Black color ..... U, C, R, A, G, E, F models
Titanium color ..... K, G, E, F, L models
Silver color ..... A, L models
[HTR-6140]
Gold color.....T model
Black color ..... U, C, G, F models
Silver color ..... K, G, E, F models
[DSP-AX463]
Gold color..... J model
Black color ..... B, J models
Silver color ..... J model

Accessories / 付属品
Remote control x 1, Batteries (R03, AAA, UM-4) x 2, Indoor FM antenna x 1 (U, C, R, T, K, A, G, E, F, L, J models), AM loop antenna x 1 (U, C, R, T, K, A, G, E, F, L, J models), Optimizer microphone x 1

* Specifications are subject to change without notice due to product improvements.

※ 参考仕様および外観は予告なく変更されることがあります。

U ..... U.S.A. model
C ..... Canadian model
R ..... General model
T ..... Chinese model
K ..... Korean model
A ..... Australian model
B ..... British model
G ..... European model
E ..... South European model
F ..... Russian model
L ..... Singapore model
J ..... Japanese model

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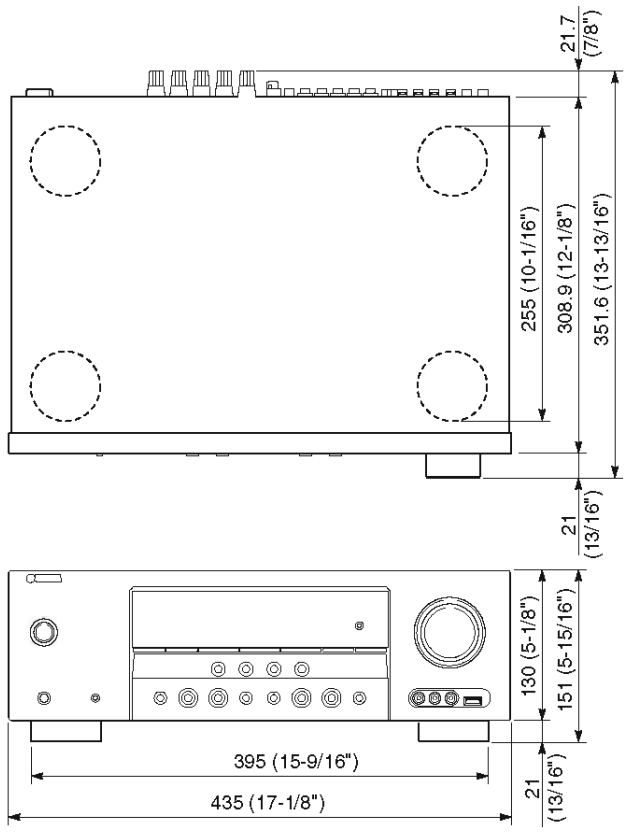
- **DIMENSIONS**



Unit: mm (inch)

- **SCENE TEMPLATE**

SCENE name	Contents		Source	Program Mode	Program Sub-mode	NIGHT	Select (Default) U, C models	Select (Default) R, T, K, A, B, G, E, F, L models	Select (Default) J model
DVD Viewing	DVD	Movie	DVD	STRAIGHT	–	SYSTEM	O (SCENE 1)	O	O
DVD Movie Viewing			DVD	MOVIE	Movie Dramatic	SYSTEM	O	O (SCENE 1)	O (SCENE 1)
DVD Live Viewing		Music Live	DVD	MUSIC	Pop/Rock	SYSTEM	O	O	O
DVR Viewing	DVR		DVR	MOVIE	Movie Dramatic	SYSTEM	O	O	O
Disc Hi-fi Listening	DVD-Audio / SA-CD / CD	Music Disc	DVD	DIRECT STEREO	–	SYSTEM	O	O	O
Music Disc Listening			DVD	STEREO	2ch Stereo	SYSTEM	O	O (SCENE 2)	O (SCENE 2)
Disc Listening			DVD	STEREO	5ch Stereo	SYSTEM	O (SCENE 2)	O	O
CD Hi-fi Listening	CD	Music Disc	CD	DIRECT STEREO	–	SYSTEM	O	O	O
CD Listening			CD	STEREO	5ch Stereo	SYSTEM	O	O	O
CD Music Listening			CD	STEREO	2ch Stereo	SYSTEM	O	O	O
Radio Listening	TUNER/RADIO	FM/AM	FM/AM (TUNER)	MUSIC ENHANCER	5ch Enhancer	SYSTEM	O (SCENE 4)	O (SCENE 4)	O (SCENE 4)
XM Listening		XM	XM	MUSIC ENHANCER	5ch Enhancer	SYSTEM	O	–	–
SIRIUS Listening		SIRIUS	SIRIUS	MUSIC ENHANCER	5ch Enhancer	SYSTEM	O	–	–
Dock Listening	DAP	iPod / Bluetooth	DOCK (V-AUX)	MUSIC ENHANCER	5ch Enhancer	SYSTEM	O	O	O
USB Audio Listening		USB	USB	MUSIC ENHANCER	5ch Enhancer	SYSTEM	–	O	–
TV Viewing	TV		DTV/CBL	STRAIGHT	–	SYSTEM	O (SCENE 3)	O (SCENE 3)	O (SCENE 3)
TV Sports Viewing			DTV/CBL	ENTERTAINMENT	TV Sports	SYSTEM	O	O	O
Game Playing	GAME		V-AUX	ENTERTAINMENT	Game	SYSTEM	O	O	O

- **SOUND/SURROUND SELECT MENU**

Sound Field Parameters

		DSP LEVEL MIN, [MID], MAX	MUSIC ENHANCER LOW, [HIGH]
STEREO	2ch Stereo		
	5ch Stereo		
MUSIC	Pop/Rock	O	
	Hall	O	
	Jazz	O	
ENTERTAIN	Game	O	
	TV Sports	O	
MOVIE	Movie Spacious	O	
	Movie Dramatic	O	
MUSIC ENHANCER	Music Enh. 2ch		O
	Music Enh. 5ch		O

Surround Decoders

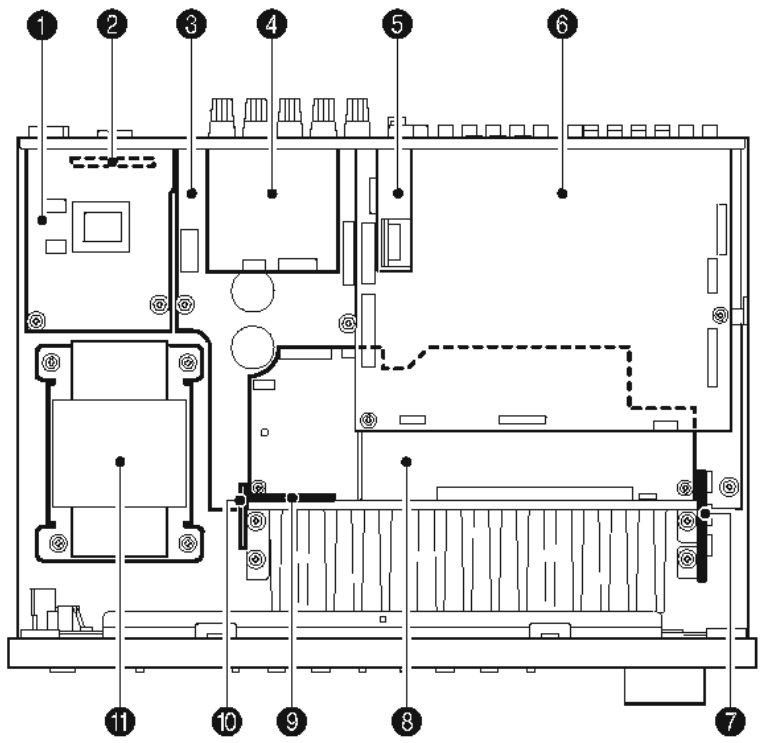
		PANORAMA ON, [OFF]	DIMENSION -3, [STD], +3	CENTER WIDTH 0, 1, 2, [3], 4, 5, 6, 7
DECODING FORMAT	Dolby Digital			
	DTS			
	AAC (J model)			
POST DECODING FORMAT	Dolby Pro Logic			
	Dolby Pro Logic II Music	O	O	O
	Dolby Pro Logic II Movie			
	Dolby Pro Logic II Game			
	Neural Surround (U, C models)			

- **SET MENU TABLE**

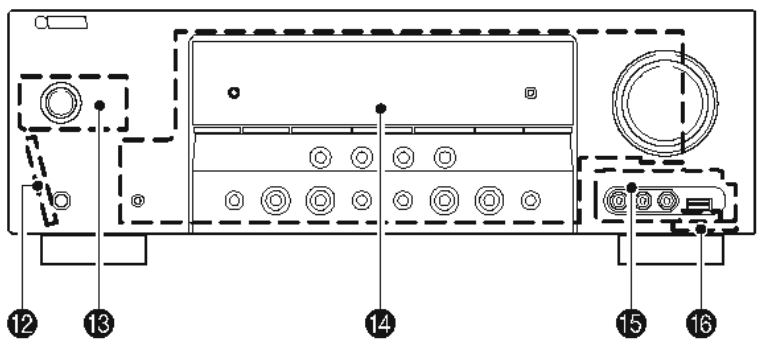
CATEGORY	MAIN MENU	SUB MENU	SELECT MENU		VALUE [INITIAL]
AUTO SETUP	Use this feature to automatically adjust speaker and system parameters.				
MANUAL SETUP	1 SOUND MENU	A) SPEAKER SET	FRONT B	FRONT	[FRONT] / ZONE B
			FRONT	LARGE	SMALL / [LARGE]
			CENTER	SMALL	NONE / [SMALL] / LARGE
			SUR. LR	SMALL	
			BASS OUT	BOTH	SWFR / FRONT / [BOTH]
			CROSSOVER	80 Hz	40 / 60 / [80] / 90 / 100 / 110 / 120 / 160 / 200 Hz
			SWFR PHASE	NRM	[NRM (normal)] / REV (reverse)
		B) SP LEVEL	FL	• • • • • || • • • • •	-10 to +10 dB, [0 dB], 1 dB step
			FR	• • • • • || • • • • •	
			C	• • • • • || • • • • •	
			SWFR	• • • • • || • • • • •	
			SUR. L	• • • • • || • • • • •	
			SUR. R	• • • • • || • • • • •	
		C) SP DISTANCE	UNIT	feet	feet / meters
		Unit: feet	FRONT L	10.0 ft	1.0 to 80.0 ft, [10.0 ft], 0.5 ft step
			FRONT R	10.0 ft	
			CENTER	8.5 ft	1.0 to 80.0 ft, [8.5 ft], 0.5 ft step
			SWFR	10.0 ft	1.0 to 80.0 ft, [10.0 ft], 0.5 ft step
			SUR. L	8.0 ft	1.0 to 80.0 ft, [8.0 ft], 0.5 ft step
			SUR. R	8.0 ft	
		Unit: meters	FRONT L	3.00 m	0.30 to 24.00 m, [3.00 m], 0.10 m step
			FRONT R	3.00 m	
			CENTER	2.60 m	0.30 to 24.00 m, [2.60 m], 0.10 m step
			SWFR	3.00 m	0.30 to 24.00 m, [3.00 m], 0.10 m step
			SUR. L	2.40 m	0.30 to 24.00 m, [2.40 m], 0.10 m step
			SUR. R	2.40 m	
		D) CENTER GEQ	TEST TONE	OFF	[OFF] / ON
			100 Hz	- - || - - 0 dB	-6.0 dB to +6.0 dB, [0 dB], 0.5 dB step
			300 Hz	- - || - - 0 dB	
			1 kHz	- - || - - 0 dB	
			3 kHz	- - || - - 0 dB	
			10 kHz	- - || - - 0 dB	
		E) LFE LEVEL	SP LFE	0 dB	-20 dB to 0 dB, [0 dB], 1 dB step
			HP LFE	0 dB	
		F) D. RANGE	SP D. R	MAX	MIN / STD / [MAX]
			HP D. R	MAX	
		G) AUDIO SET	MUTE TYP	FULL	[FULL] / -20 dB
			A. DELAY	0 ms	0 to 160 ms, [0 ms], 1 ms step
			MAX VOL.	+16 dB	+16 dB / +10 to -30 dB, [+16 dB], 5 dB step
			INI. VOL.	OFF	OFF / MUTE / -80 to +16 dB, [OFF], 1 dB step
		H) HDMI SET	S. AUDIO		[RX-V463 / HTR-6140 / DSP-AX463] / OTHER
	2 INPUT MENU	A) INPUT ASSIGN	IN (1) [COAXIAL]	DVD	CD / MD/CD-R / [DVD] / DTV/CBL / V-AUX / DVR / TUNER (B model)
			IN (2) [OPTICAL]	DTV/CBL	CD / MD/CD-R / DVD / [DTV/CBL] / V-AUX / DVR / TUNER (B model)
			IN (3) [OPTICAL]	CD	[CD] / MD/CD-R / DVD / DTV/CBL / V-AUX / DVR / TUNER (B model)
			HDMI1	DVD	[DVD] / DTV/CBL / V-AUX / DVR
			HDMI2	DTV/CBL	DVD / [DTV/CBL] / V-AUX / DVR
		B) INPUT RENAME			CD / MD/CD-R / DVD / DTV/CBL / V-AUX / DVR
					Input is possible to 8 characters / 9文字まで入力可能 Input possible Character type / 入力可能文字 Capital / 英大文字: A to Z Small / 英小文字: a to z Figure / 数字: 0 to 9 Space / 空白 Marks / 記号: # * + , - . / : < > ?
		C) VOLUME TRIM			CD / MD/CD-R / TUNER / DVD / DTV/CBL / V-AUX / DVR / DOCK / USB (R, T, K, A, B, G, E, F, L models) / MULTI CH / XM (U, C models) / SIRIUS (U, C models)
					-6.0 to +6.0 dB, [0.0 dB], 1.0 dB step
		D) DECODER MODE	CD / DTV/CBL / V-AUX		[AUTO] / LAST
					[AUTO] / DTS
		E) MULTI CH SET	BGV	LAST	DVD / DTV/CBL / V-AUX / DVR / [LAST]
	3 OPTION MENU	A) DISPLAY SET	DIMMER	0	-4 to 0, [0], 1 step
			FL SCROLL	CONT	[CONT] / ONCE
			OSD SHIFT	0	-5 (upward) to +5 (downward), [0], 1step
			OSD-SOURCE	30s	ON / 10s / [30s]
			OSD-AMP	30s	ON / 10s / [30s]
		B) MEMORY GUARD	MEMORY GUARD	OFF	[OFF] / ON
		C) AUDIO SELECT	>AUTO LAST		[AUTO] / LAST
		D) PARAM. INI			[NO] / YES
		E) BLUETOOTH SET			
	(U, C models)	F) XM RADIO SET	XM ANT.		NONE / 0 to 100 %
		G) SIRIUS SET	PARENTAL LOCK		
	(R, T, K, A, B, G, E, F, L models)	F) USB PLAY STYLE	REPEAT	OFF	[OFF] / SINGLE / ALL
			SHUFFLE	OFF	[OFF] / ON
SIGNAL INFO	AUDIO	FORMAT (Signal format)			Analog / – – – / – – – / – – – / – – – / – – – / – – – / – – –
		SAMPLING			
		CHANNEL			
		BITRATE			3/2/0.1 (front/surround/LFE)
		FLAG			DTS, Dolby Digital, or PC
	VIDEO	HDMI SIGNAL			(HDMI–> DVI)
		HDMI RES.			(1080p–> 1080p)
		HDMI ERROR (HDMI MESSAGE)			DEVICE OVER / HDCP ERROR / OUT OF RES.

■ INTERNAL VIEW

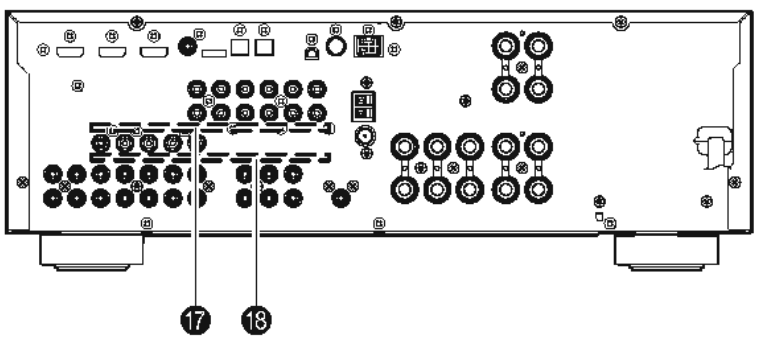
- **Top view**



- **Front view**



- **Rear view**



❶ VIDEO (3) P.C.B.
❷ VIDEO (5) P.C.B. (R, L models)
❸ MAIN (1) P.C.B.
❹ VIDEO (4) P.C.B.
❺ Tuner
❻ DSP P.C.B.
❼ OPERATION (8) P.C.B.
❽ OPERATION (2) P.C.B.
❾ MAIN (2) P.C.B.
❿ OPERATION (9) P.C.B.
⓫ Power Transformer
⓬ OPERATION (3) P.C.B.
⓭ OPERATION (7) P.C.B.
⓮ OPERATION (1) P.C.B.
⓯ OPERATION (5) P.C.B. (U, C, J models)
OPERATION (4) P.C.B. (R, T, K, A, B, G, E, F, L models)
⓰ OPERATION (6) P.C.B. (R, T, K, A, B, G, E, F, L models)
⓱ VIDEO (2) P.C.B.
⓲ VIDEO (1) P.C.B.

■ DISASSEMBLY PROCEDURES / 分解手順

(Remove parts in the order as numbered.)
Disconnect the power cable from the AC outlet.

1. Removal of Top Cover

a. Remove 5 screws (①), 4 screws (②) and 1 screw (③). (Fig. 1)
b. Slide the top cover rearward to remove it. (Fig. 1)

2. Removal of Front Panel Unit

a. Remove 6 screws (④). (Fig. 1)
b. Remove CB71 (R, T, K, A, B, G, E, F, L models), CB83, CB601, CB602, CB608 and CB703. (Fig. 1)
c. Release hook and then remove the front panel unit. (Fig. 1)

（番号順に部品を取り外してください。）
AC電源コンセントから、電源コードを抜いてください。

1. トップカバーの外し方

a. ①のネジ5本、②のネジ4本、③のネジ1本を外します。(Fig. 1)
b. トップカバーを後方へスライドさせ、取り外します。(Fig. 1)

2. フロントパネルユニットの外し方

a. ④のネジ6本を外します。(Fig. 1)
b. CB83、CB601、CB602、CB608、CB703を外します。(Fig. 1)
c. フック1ヶ所を外し、フロントパネルユニットを取り外します。(Fig. 1)

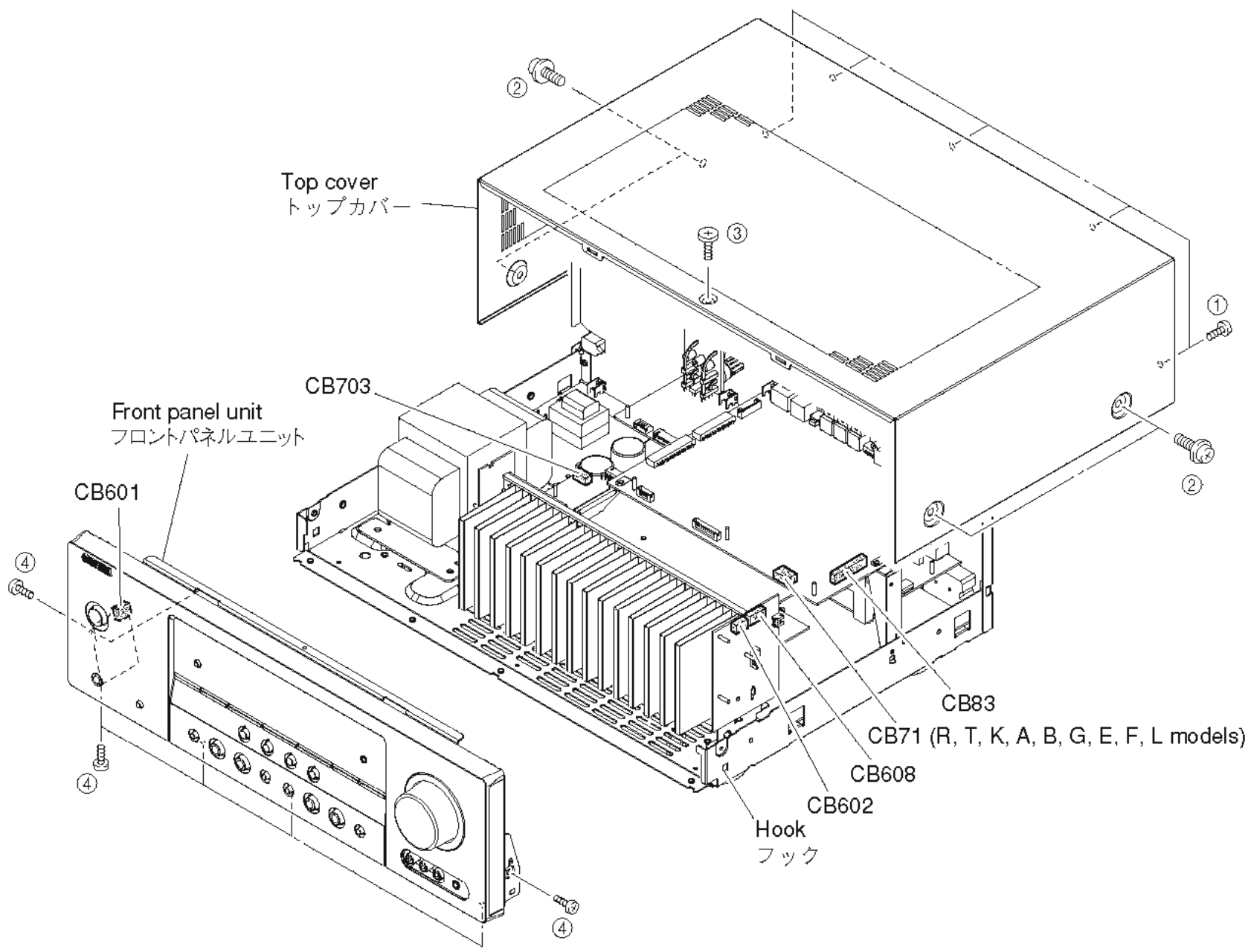


Fig. 1

3. Removal of DSP P.C.B.

Note: U, C, T, K, G, E, F models
After replacement of DSP P.C.B. or writing of the firmware, make sure to activate the self-diagnostic function and change the "M6 Model ID" setting to the same model name as this unit (RX-V463 or HTR-6140).

a. Remove 2 screws (⑤). (Fig. 2)
b. Remove 11 screws (⑥). (Fig. 3)
c. Remove CB21, CB22, CB31, CB32, CB81, CB82 and CB84. (Fig. 2)
d. Remove DSP P.C.B. (Fig. 2)

3. DSP P.C.B.の外し方

a. ⑤のネジ2本を外します。(Fig. 2)
b. ⑥のネジ10本を外します。(Fig. 3)
c. CB21、CB22、CB31、CB32、CB81、CB82、CB84を外します。(Fig. 2)
d. DSP P.C.B.を取り外します。(Fig. 2)

4. Removal of VIDEO (1) and (2) P.C.B.s

a. Remove 7 screws (⑦). (Fig. 3)
b. Remove CB301 and CB609. (Fig. 2)
c. Remove VIDEO (1) and (2) P.C.B.s. (Fig. 2)

4. VIDEO (1), (2) P.C.B.の外し方

a. ⑦のネジ5本を外します。(Fig. 3)
b. CB301、CB609を外します。(Fig. 2)
c. VIDEO (1), (2) P.C.B.を取り外します。(Fig. 2)

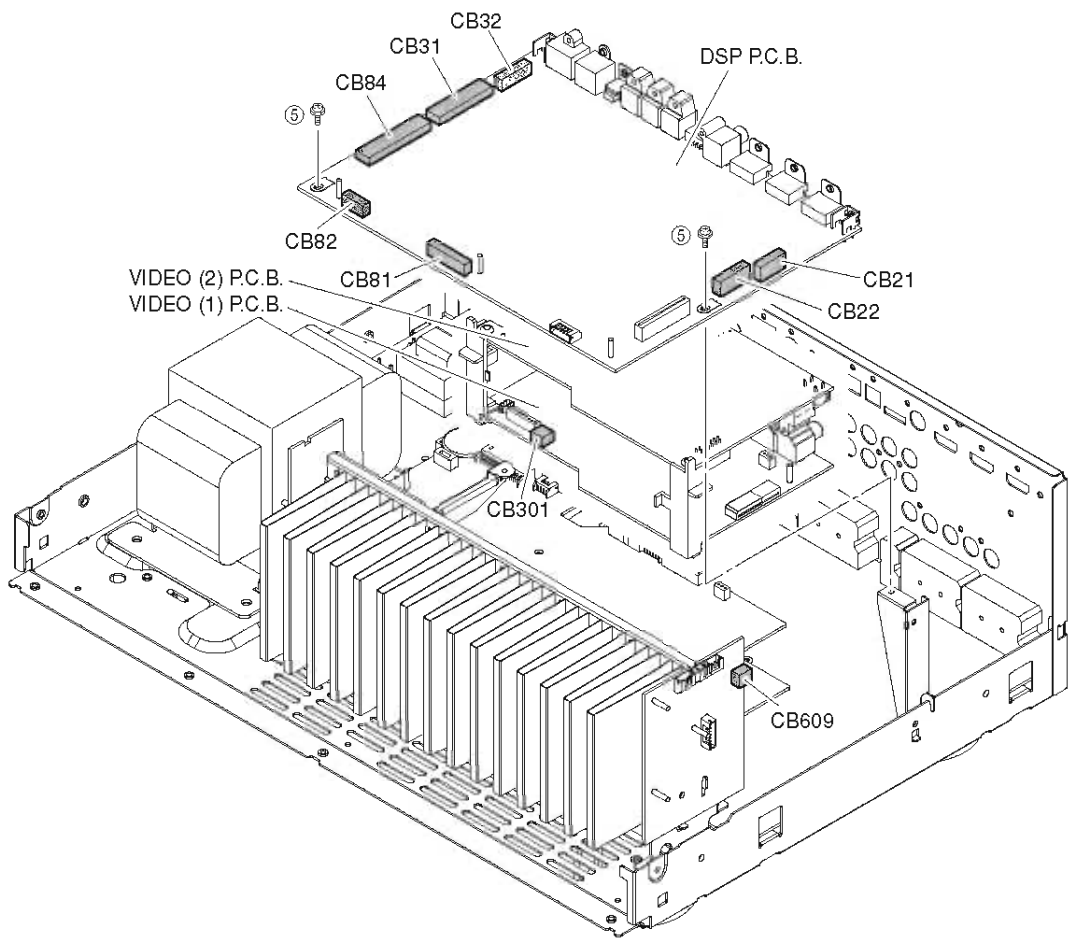


Fig. 2

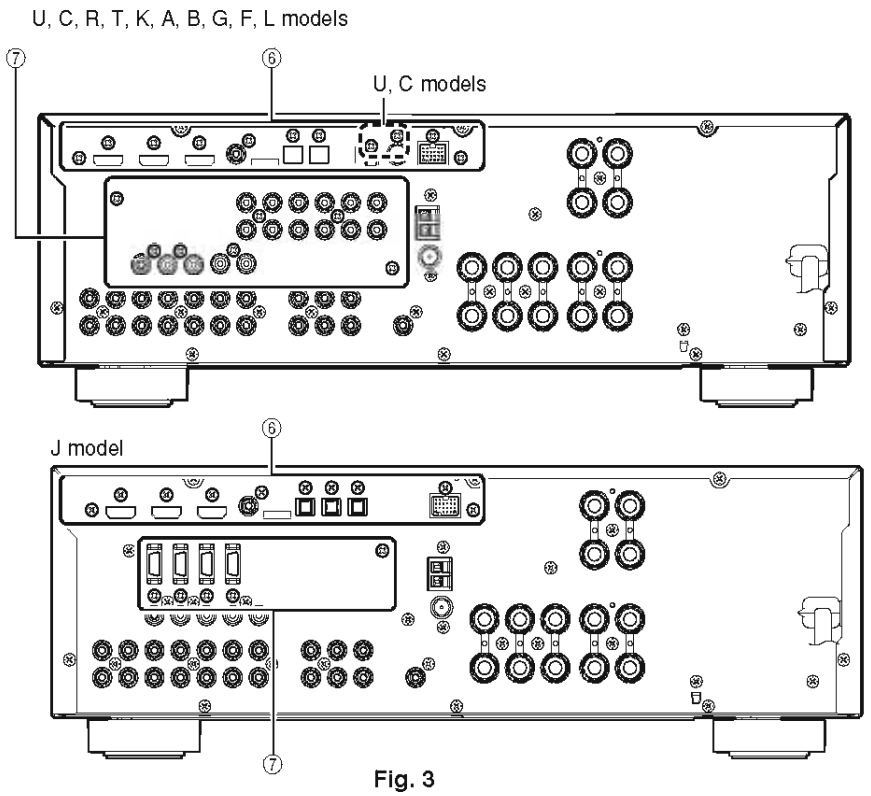


Fig. 3

5. Removal of VIDEO (4) P.C.B.

a. Remove 2 screws (⑧). (Fig. 4)
b. Remove CB351 and CB353. (Fig. 4)
g. Remove VIDEO (4) P.C.B. (Fig. 4)

6. Removal of FM/AM Tuner

a. Remove 2 screws (⑨). (Fig. 4)
b. Remove CB403. (Fig. 4)
c. Remove FM/AM tuner. (Fig. 4)

5. VIDEO (4) P.C.B.の外し方

a. ⑧のネジ2本を外します。(Fig. 4)
b. CB351、CB353を外します。(Fig. 4)
c. VIDEO (4) P.C.B.を取り外します。(Fig. 4)

6. FM/AMチューナーの外し方

a. ⑨のネジ2本を外します。(Fig. 4)
b. CB403を外します。(Fig. 4)
c. FM/AMチューナーを取り外します。(Fig. 4)

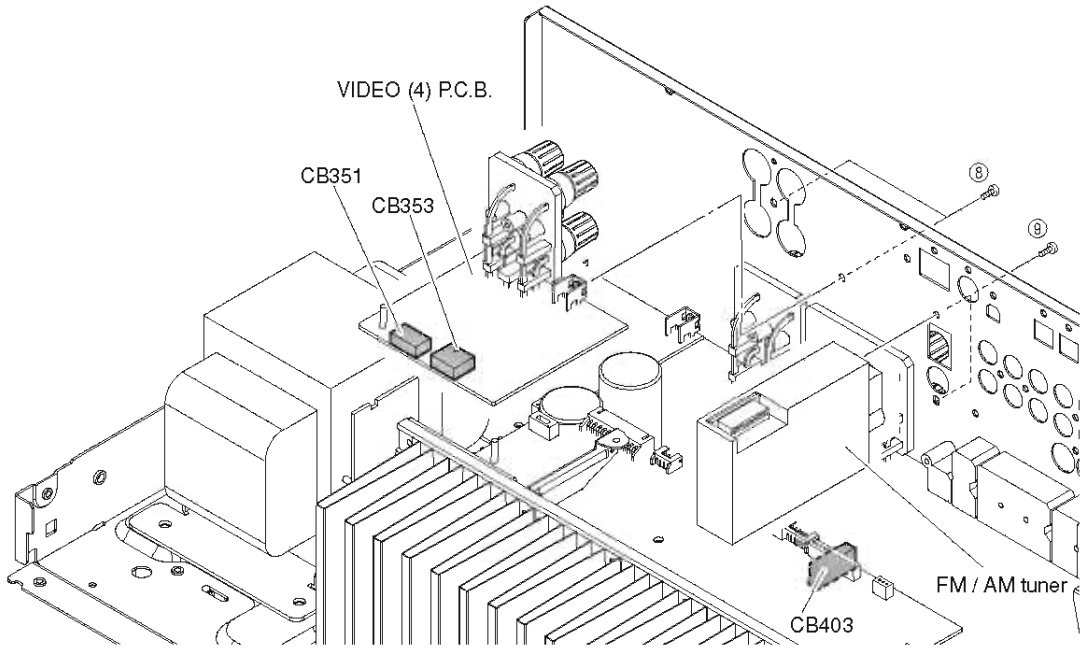


Fig. 4

When checking the P.C.B.:

a. Remove the top cover. (Fig. 1)
b. Remove DSP P.C.B.. (Fig. 2)
c. Remove 6 screws (⑩). (Fig. 5)
d. Remove 2 screws (⑪). (Fig. 5)
e. Remove 3 screws (⑫). (Fig. 6)
f. Remove 2 screws (⑬). (Fig. 5)
g. Remove 4 screws (⑭). (Fig. 5)
h. Place the P.C.B. upright. (Fig. 7)
i. The P.C.B. removed from the chassis does not work because its grounding is loose.
Be sure to connect the ground of rear panel and MAIN (1) P.C.B. (G5004, G5005, G5006 and G3401) and DSP P.C.B. (G801 and G802) to the chassis with a ground lead or the like. (Fig. 7)

P.C.B.チェックをする場合には：

a. トップカバーを取り外します。(Fig. 1)
b. DSP P.C.B.を取り外します。(Fig. 2)
c. ⑩のネジ6本を外します。(Fig. 5)
d. ⑪のネジ2本を外します。(Fig. 5)
e. ⑫のネジ3本を外します。(Fig. 6)
f. ⑬のネジ2本を外します。(Fig. 5)
g. ⑭のネジ4本を外します。(Fig. 5)
h. P.C.B.を立ち上げて置きます。(Fig. 7)
i. シャーシから外したP.C.B.はアースが浮いて動作しませんので、リアパネルおよびMAIN (1) P.C.B.のG5004、G5005、G5006、G3401とDSP P.C.B.のG801、G802のアースをリード線等でシャーシに接続してください。(Fig. 7)

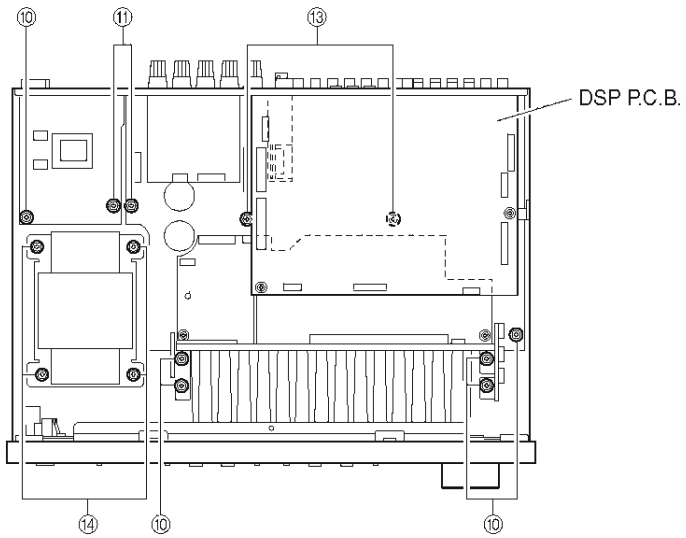


Fig. 5

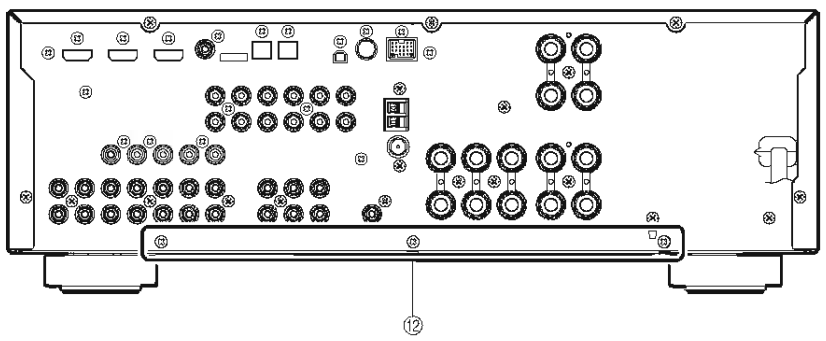
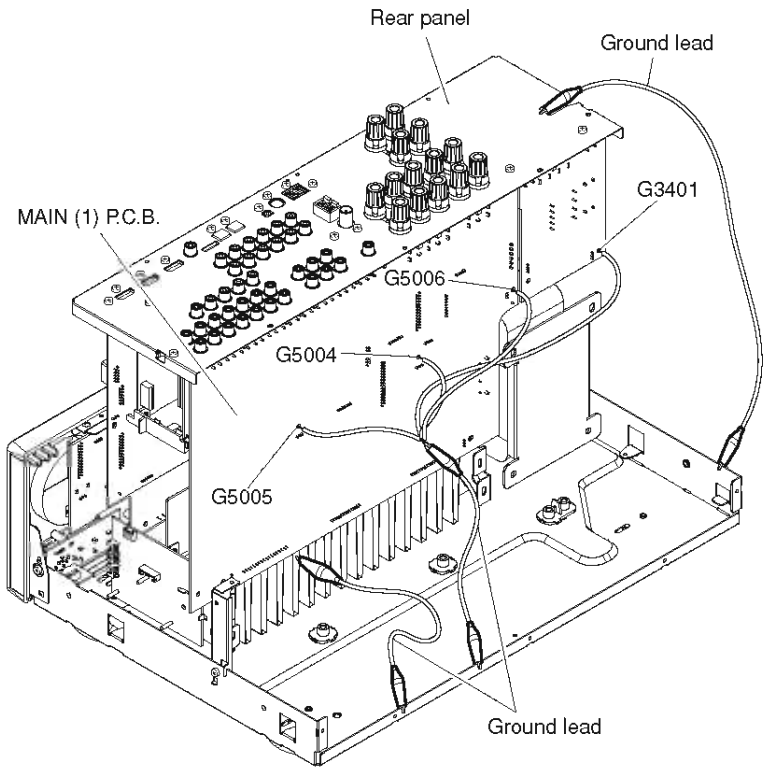


Fig. 6



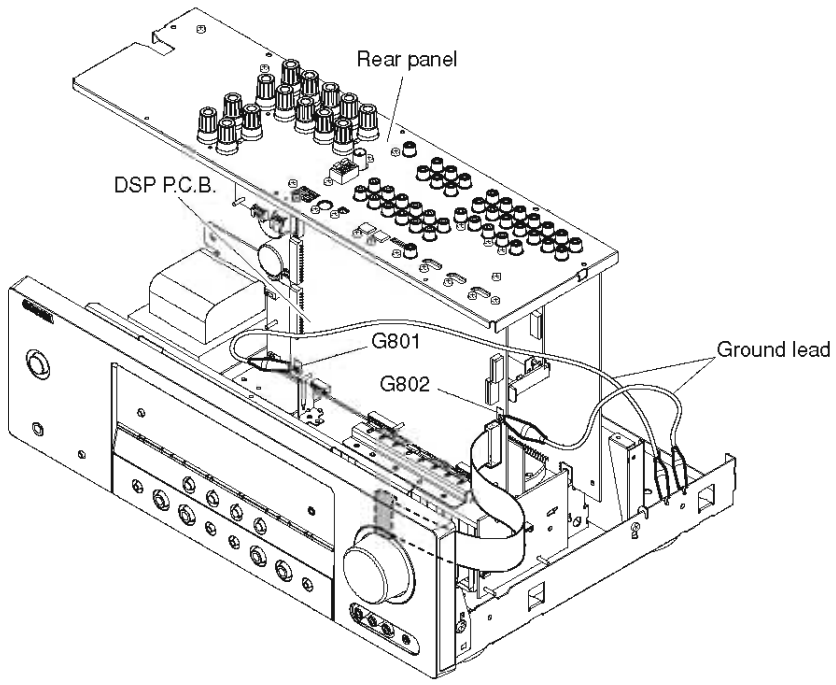


Fig. 7

■ UPDATING FIRMWARE / ファームウェアの書き込み

Note: U, C, T, K, G, E, F models
After replacement of DSP P.C.B. or writing of the firmware, make sure to activate the self-diagnostic function and change the "M6 Model ID" setting to the same model name as this unit (RX-V463 or HTR-6140).

After replacing the following parts, be sure to write the latest firmware.

- P.C.B. ass'y DSP P.C.B.
- IC52 FLASH ROM of DSP P.C.B.

● Required Tools

- DVD or CD player (with DIGITAL OUTPUT (OPTICAL or COAXIAL) jack)
- Optical cable (when OPTICAL jack is used)
- Digital audio pin cable (when COAXIAL jack is used)
- Firmware CD
  * To make the firmware CD, download the latest firmware from the specified download source to PC.

● Operation Procedures

1. Connect this unit and DVD/CD player as shown below. (Fig. 1)

下記の部品をサービス部品に交換した場合、最新のファームウェアの書き込みを行ってください。

- P.C.B. ASSY　：DSP
- DSP P.C.B.　：IC52 FLASH ROM

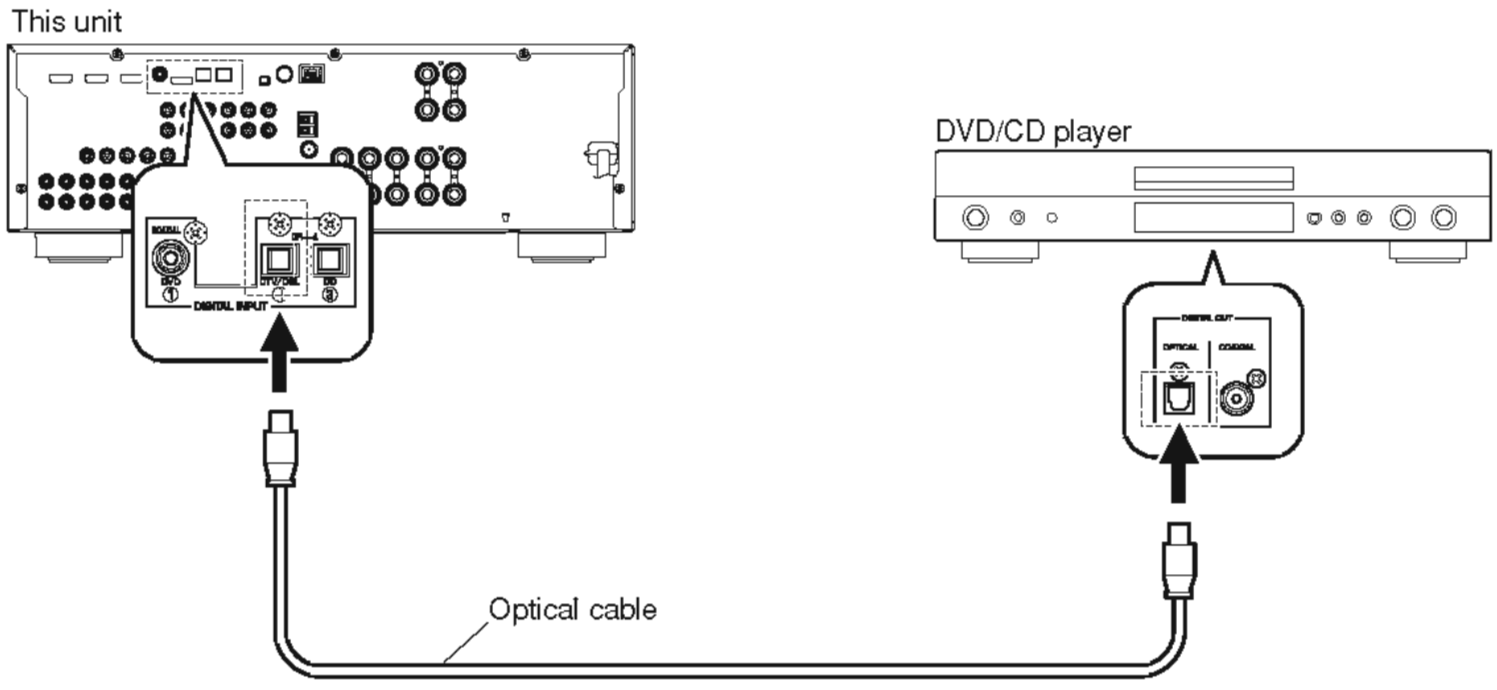
● 必要なツール

- DVDまたはCDプレーヤー（DIGITAL OUTPUT（OPTICALまたはCOAXIAL）端子付き）
- 光ファイバーケーブル（OPTICAL端子使用時）
- デジタル音声ピンケーブル（COAXIAL端子使用時）
- ファームウェアCD
  ※ ファームウェアCDは、PCへ最新のファームウェアを指定のダウンロード先からダウンロードして制作してください。

● 操作手順

1. 本機とDVD/CDプレーヤーを下記のように接続します。（Fig. 1）

Example of connection between digital OPTICAL jacks



Example of connection between digital COAXIAL jacks

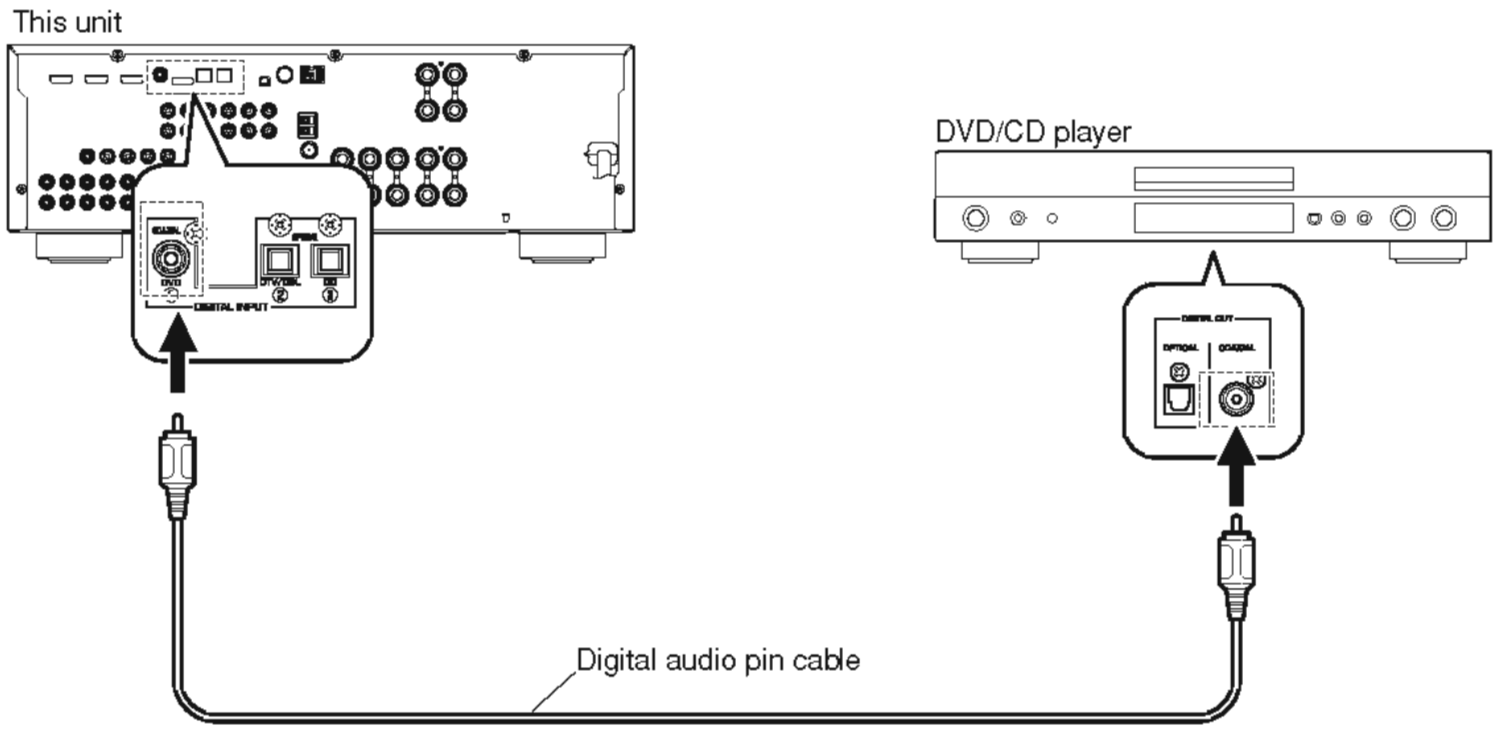


Fig. 1

2. While simultaneously pressing the “STANDBY/ON” and “SPEAKERS A/B/OFF” keys of this unit, connect the power cable of this unit to the AC outlet. (Fig. 2)
   The FIRMWARE UPDATE mode is activated and “SPDIF Upgrade” is displayed. (Fig. 2)

2. 本機の“STANDBY/ON”キーと“SPEAKERS A/B/OFF”キーを同時に押しながら、本機の電源コードをACコンセントに接続します。(Fig. 2)
   FIRMWARE UPDATEモードが起動し、“SPDIF Upgrade”が表示されます。(Fig. 2)

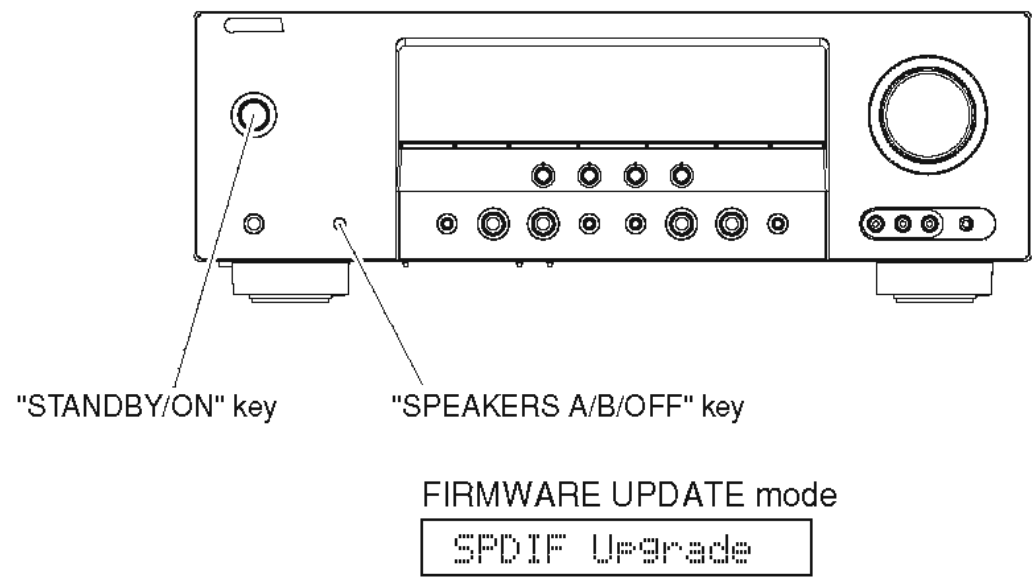


Fig. 2

3. Connect the power cable of DVD/CD player to the AC outlet.
4. Press the “STANDBY/ON” key of the DVD/CD player.
5. Press the “EJECT” key of the DVD/CD player to open the disc tray.
6. Place the firmware CD in the disc tray and close the disc tray.
7. Press the “PLAY” key of the DVD/CD player.
   Then writing of the firmware is started. (Fig. 3)
8. When writing of the firmware is completed, “Upgrade OK”, “Please...” and “Turn off!!” are displayed repeatedly. (Fig. 3)

3. DVD/CDプレーヤーの電源コードをACコンセントに接続します。
4. DVD/CDプレーヤーの“STANDBY/ON”キーを押します。
5. DVD/CDプレーヤーの“EJECT”キーを押し、トレーを開きます。
6. ファームウェアCDをトレーに載せ、トレーを閉じます。
7. DVD/CDプレーヤーの“PLAY”キーを押します。
   ファームウェアの書き込みが開始されます。(Fig. 3)
8. ファームウェアの書き込み完了後、“Upgrade OK”、“Please...”、“Turn off!!”が繰り返し表示されます。(Fig. 3)

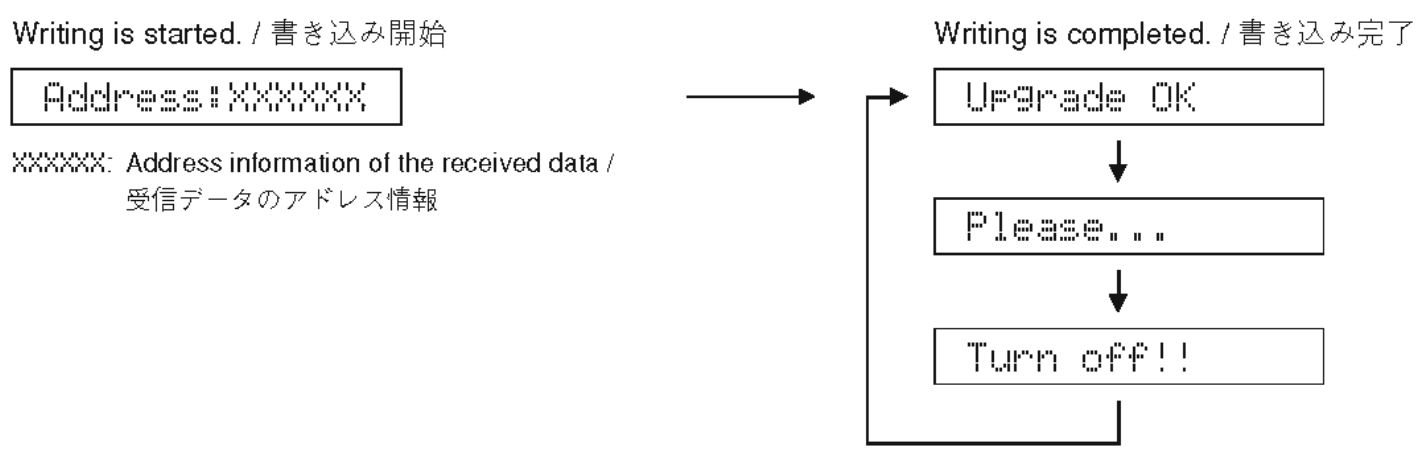


Fig. 3

* When the version of the firmware to be written is the same as the one existing in this unit, "Same Version", "Please..." and "Turn off!!" are displayed repeatedly. (Upgrading is not necessary.)

If the display remains unchanged for more than 10 seconds after starting the firmware CD play procedure, perform the firmware CD play procedure again from the beginning.

If "FILE CORRUPTED" is displayed after "Address:XXXXXX", make sure that the firmware CD is not corrupted and perform steps 1 to 8 of "Operation Procedures" again.

If "Upgrade Failed" is displayed, perform Steps 1 to 8 of "Operation Procedures" again.

9. Press the "STOP" key of the DVD/CD player.
10. Press the "EJECT" key of the DVD/CD player to open the disc tray.
11. Remove the firmware CD from the disc tray and close the disc tray.
12. Turn off the power of the DVD/CD player and disconnect the power cable from the AC outlet.
13. Turn off the power by pressing the "STANDBY/ON" key of this unit.

● Initializing of this unit

* After updating the firmware, be sure to initialize this unit.

1. Connect the power cable of this unit to the AC outlet.
2. Press the "STANDBY/ON" key while simultaneously pressing the "STRAIGHT" and "AUDIO SELECT" keys. (Fig. 4)
   The self-diagnostic function is activated.

※ 本機に既存のファームウェアと、書き込もうとしているファームウェアのバージョンが同じ場合、"Same Version"、"Please..."、"Turn off!!"の表示が繰り返されます。(バージョンアップの必要はありません。)

ファームウェアCDの再生開始後、10秒以上経過してもディスプレイ表示が変わらない場合、ファームウェアCDの再生を最初からやり直してください。

"Address:XXXXXX"の後に、"FILE CORRUPTED"が表示された場合、書き込みデータが破損していないかを確認し、"操作方法"の1から8までをもう一度やり直してください。

"Upgrade Failed"が表示された場合、"操作方法"の1から8までをもう一度やり直してください。

9. DVD/CDプレーヤーの"STOP"キーを押します。
10. DVD/CDプレーヤーの"EJECT"キーを押し、トレーを開きます。
11. ファームウェアCDをトレーから外し、トレーを閉じます。
12. DVD/CDプレーヤーの電源を切り、電源コードをACコンセントから抜きます。
13. 本機の"STANDBY/ON"キーを押して電源を切ります。

● 本機の初期化

※ ファームウェアのアップデート後は、必ず本機を初期化してください。

1. 本機の電源コードをACコンセントに接続します。
2. "STRAIGHT"キーと"AUDIO SELECT"キーを押しながら、"STANDBY/ON"キーを押し、ダイアグを起動します。(Fig. 4)

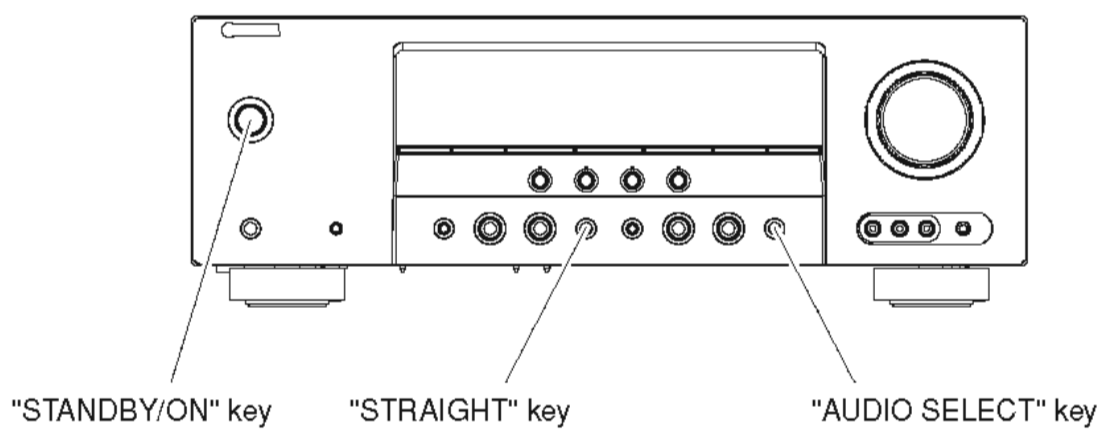


Fig. 4

3. Select the main menu "R. FACTORY PRESET".
4. Select the "R2. PRESET RSRV".

PRESET INHIBIT (Initialization inhibited)

R1.PRESET INHI

PRESET RESERVED (Initialization reserved)

R2.PRESET RSRV

5. Turn off the power of this unit and disconnect the power cable from the AC outlet.

3. ダイアグ"R. FACTORY PRESET"を選択します。
4. "R2. PRESET RSRV"を選択します。

5. 本機の電源を切り、電源コードをACコンセントから抜きます。

● Confirmation of firmware version and checksum

To confirm that the firmware is updated successfully, check the firmware version and checksum value by using the self-diagnostic function menu "S. ROM VER/SUM".
For more information, refer to "SELF-DIAGNOSTIC FUNCTION".

* When the displayed firmware version and checksum are different from written firmware version and checksum, follow the steps from 1 to 13 of "Operation Procedures" again.

1. Reconnect the power cable of this unit to the AC outlet.
2. Press the "STANDBY/ON" key while simultaneously pressing the "STRAIGHT" and "AUDIO SELECT" keys. (Fig. 5)
   Then the self-diagnostic function is activated.
3. Select the self-diagnostic function menu "S1. Version".
   Confirm the displayed firmware version is the same as the written firmware version. (Fig. 5)

● ファームウェアバージョンおよびチェックサムの確認

ダイアグメニューでファームウェアのバージョンおよびチェックサムが正しく更新されたことを確認します。
ダイアグメニューの詳細は「ダイアグ(自己診断機能)」を参照してください。

※ 表示されたファームウェアのバージョンおよびチェックサムが、書き込んだファームウェアのバージョンおよびチェックサムと異なる場合、"操作方法"の1から13までをもう一度やり直してください。

1. 本機の電源コードをACコンセントに接続します。
2. "STRAIGHT"キーと"AUDIO SELECT"キーを押しながら、"STANDBY/ON"キーを押し、ダイアグを起動します。(Fig. 5)
3. ダイアグ"S1. Version"を選択します。
   表示されたファームウェアのバージョンが書き込んだファームウェアのバージョンと同じであることを確認します。(Fig. 5)

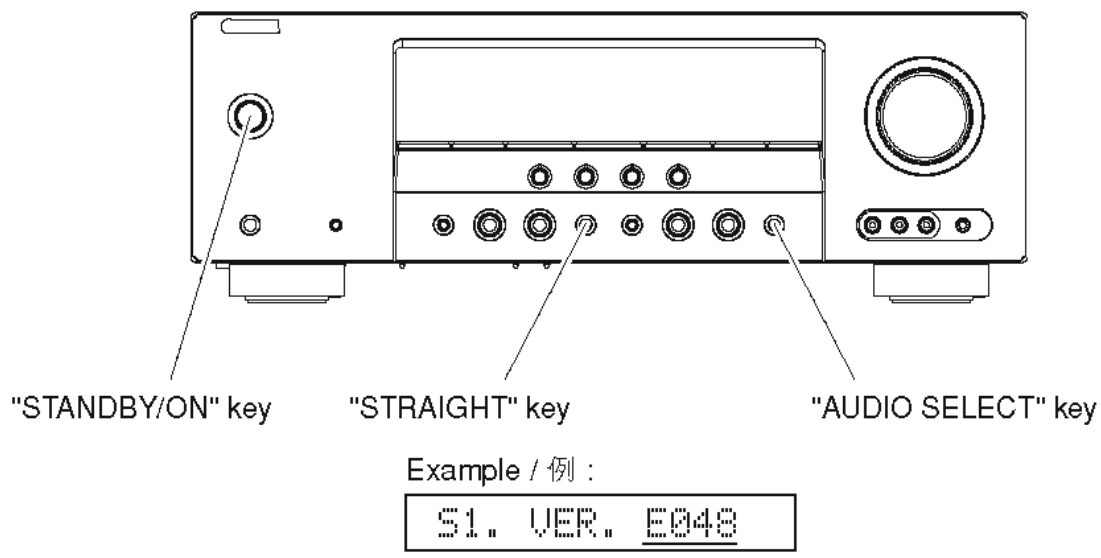


Fig. 5

4. Select the self-diagnostic function menu "S2. All checksum".
   Confirm the displayed checksum is the same as the written firmware checksum. (Fig. 6)
   (The checksum value is found where downloading is specified to.)

4. ダイアグ"S2. All checksum"を選択します。
   表示されたチェックサムが書き込んだファームウェアのチェックサムと同じであることを確認します。(Fig. 6)
   (チェックサム値は指定ダウンロード先に記載されています。)

Example / 例 :

S2.A.SUM:EDA1

Fig. 6

5. Select the self-diagnostic function menu "S3. Program checksum".
   Confirm the displayed checksum is the same as the written firmware checksum. (Fig. 7)
   (The checksum value is found where downloading is specified to.)

5. ダイアグ"S3. Program checksum"を選択します。
   表示されたチェックサムが書き込んだファームウェアのチェックサムと同じであることを確認します。(Fig. 7)
   (チェックサム値は指定ダウンロード先に記載されています。)

Example / 例 :

S3.P.SUM:FE77

Fig. 7

6. Turn off the power of this unit and disconnect the power cable from the AC outlet.

* When the displayed firmware version and checksum are different from written firmware version and checksum, follow the steps from 1 to 13 of "Operation Procedures" again.

● Confirmation of model name (U, C, T, K, G, E, F models)

After replacement of DSP P.C.B. or writing of the firmware, make sure to activate the self-diagnostic function and change the "M6 Model ID" setting to the same model name as this unit (RX-V463 or HTR-6140).

1. Connect the power cable of this unit to the AC outlet.
2. Press the "STANDBY/ON" key while simultaneously pressing the "STRAIGHT" and "AUDIO SELECT" keys. (Fig. 8)
   The self-diagnostic function is activated.
3. Select the self-diagnostic function menu "M6. Model ID".

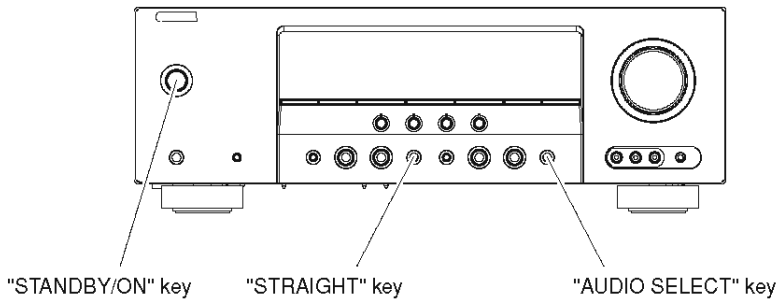


Fig. 8

6. 本機の電源を切り、電源コードをACコンセントから抜きます。

※ 表示されたファームウェアのバージョンおよびチェックサムが、書き込んだファームウェアのバージョンおよびチェックサムと異なる場合、"操作手順"の1から13までをもう一度やり直してください。

● モデル名の確認

このモデルには適用されません。

4. Press "PRESET/TUNING<" or "PRESET/TUNING>" key and select the model name.

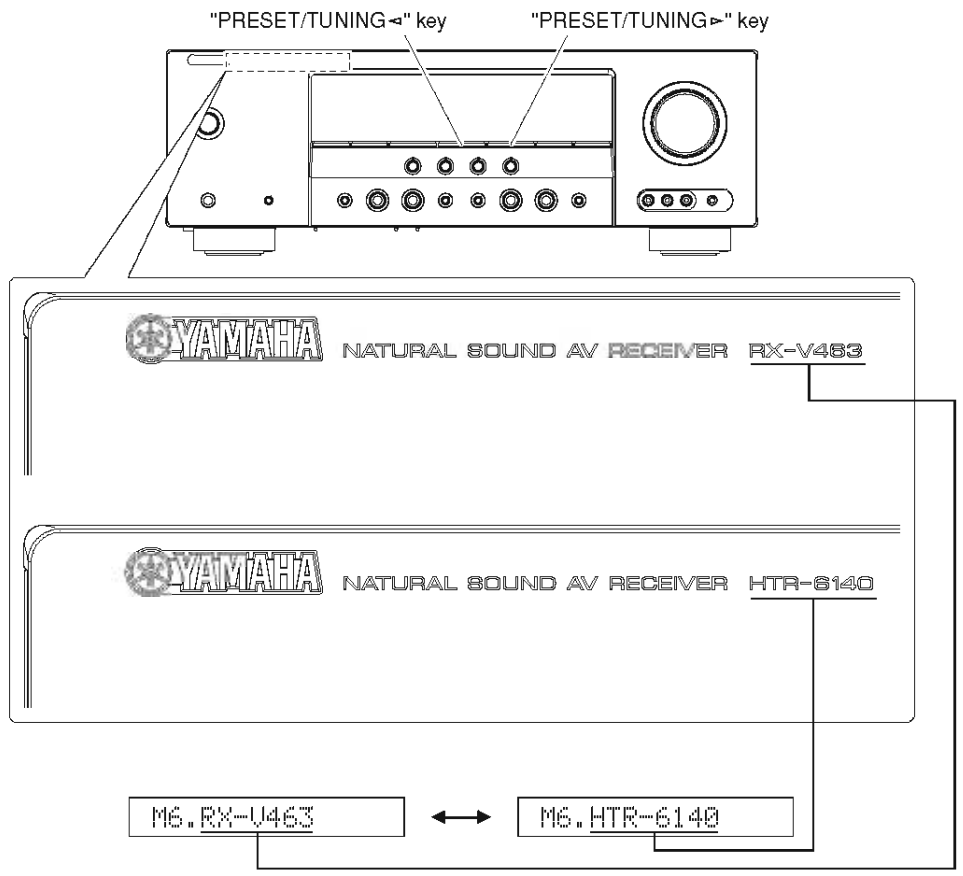


Fig. 9

5. Turn off the power of this unit and disconnect the power cable from the AC outlet.

■ SELF-DIAGNOSTIC FUNCTION / ダイアグ（自己診断機能）

This unit has self diagnosis functions that are intended for inspection, measurement and location of faulty point.
There are 19 main menu items, each of which has sub-menu items.
Listed in the table below are menu items and sub-menu items.
Note that not all menu items listed will apply to the models covered in this service manual.

本機には、検査、測定、不良個所の発見を目的にしたダイアグ（自己診断機能）があります。
ダイアグメニューは24個あり、そのそれぞれにサブメニューがあります。
下表はダイアグメニュー一覧です。
下表の全ダイアグメニュー項目が、このサービスマニュアル記載のモデルに適用されるとは限りません。

No.	Main menu	Sub-menu	
A	BYPASS	1 ANLOG BYPAS	
		2 DSP BYPASS	
B	AUDIO CHECK	1 AUDIO CHECK	
		2 ANALOG AUDIO PLAYBACK	
		3 MUTE ALL	
		4 MUTE SYS IC	
		5 MUTE TR	
C	SPEAKERS SET	1 FRNT : SML0dB	
		2 CENTER : NONE	
		3 LFE/B : FRNT	
		4 TONE : MAX	
		5 TONE : MIN	
D	XCH-INPUT	1 6chINPUT 6Ω	
		2 8chINPUT 6Ω	
		3 6chINPUT 8Ω	
		4 8chINPUT 8Ω	
		5 LIM : PLDET : THM	(ex. D5.255:255: 64)
E	MIC CHECK	1 MIC CHECK	
F	FL CHECK	1 VFD CHECK	
		2 VFD DISP OFF	
		3 VFD DISP ALL	
		4 VFD DIMMER	
		5 CHECK PATTERN	
G	TEST TONE	1 TEST ALL	
		2 TEST FRNT L	
		3 TEST CENTER	
		4 TEST FRNT R	
		5 TEST SURR R	
		6 TEST SURR L	
		7 TEST LFE	
H	XM STATUS (U, C models)	1 1k – 1dB/44	
		2 1k –61dB/44	
		3 MUTE /44	
		4 XM TONE/44	
		5 ISO TONE/44	
		6 1k – 1dB/32	
		7 1k –61dB/32	
		8 MUTE /32	
		9 XM TONE/32	
		10 ISOTONE/32	
		11 BUSPWR (BUS power) : OFF	
I	iPod	1 DOCK : xx xxx	
		2 DOCK IGNORE	
		3 Bluetooth version	
		4 Clear Bluetooth pairing info.	
J	USB (R, T, K, A, B, G, E, F, L models)	1 USBFile1/xx	
		2 USBFile2/xx	
		3 High Speed TEST_PACKET mode	
		4 High Speed TEST_SE0_NAK mode	
K	SIRIUS (U, C models)	1 SIRIUS connection check	
		2 SIRIUS antenna status	
		3 SIRIUS loop back test	
		4 SSP : (SIRIUS #0 version)	
		5 MAC : (SIRIUS #1 version)	
		6 ADP : (SIRIUS #2 version)	
		7 PRDID : (Product ID)	
		8 SEQID : (Sequence ID)	

No.	Main menu	Sub-menu	
L	VIDEO CONVERSION (Not applied to these models./ このモデルには適用されません。)	1 V–IN (Video info.)	
		2 V–CONV S–V (Conversion S-video)	
		3 V–CONV CVBS (Conversion CVBS)	
		4 V–CONV OFF (Conversion OFF)	
		5 V–TestPttrn (Video test pattern)	
M	HDMI Check	1 HDMI SPDIF (SPDIF audio playback)	
		2 HDMI NONE	
		3 HDMI IN1	
		4 HDMI IN2	
		5 I2C : xx xxx (I2C access check)	
		6 Model ID for EDID setting	
N	AD DATA CHECK	1 PD : xxx DI : xxx	(ex. N1PD: 45DI: 0)
		2 V1 : xxx V2 : xxx	(ex. N2V1: 94V2:128)
		3 TH : xxx PL : xxx	(ex. N3TH: 64PL:255)
		4 PI : xxx DE : xxx	(ex. N4PI: 0DE: 0)
		5 K0 : xxx K1 : xxx	(ex. N5K0:254K1:254)
O	PROTECTION	1 PRD : xxx/xxx	(ex. O1.PRD: 23/ 70)
		2 PV1 : xxx/xxx	(ex. O2.PV1: 68/161)
		3 PV2 : xxx/xxx	(ex. O3.PV2:104/181)
		4 THM : xxx/xxx	(ex. O4.THM: 0/131)
		5 L66 : xxx/xxx (PLDET 6ch 6ohms : xxx/xxx)	(ex. O5.L66: 0/ 0)
		6 L86 : xxx/xxx (PLDET 8ch 6ohms : xxx/xxx)	(ex. O6.L86: 0/ 0)
		7 L68 : xxx/xxx (PLDET 6ch 8ohms : xxx/xxx)	(ex. O7.L68: 0/ 0)
		8 L88 : xxx/xxx (PLDET 8ch 8ohms : xxx/xxx)	(ex. O8.L88: 0/ 0)
		9 PRI : xxx/xxx (PRI : xxx/xxx)	(ex. O9.PRI: 0/100)
		10 PDE : xxx/xxx (PDET : xxx/xxx)	(ex. O10PDE: 0/255)
P	PROTECTION HIST.	1 History 1	(ex. PRV:xxx)
		2 History 2	(ex. THM:xxx)
		3 History 3	(ex. PRI:xxx)
		4 History 4	
Q	RESERVED		
R	FACTORY PRESET	1 PRESET INHI	
		2 PRESET RSRV	
S	ROM VER/SUM	1 Microprocessor version	
		2 All checksum	
		3 Program checksum	
		4 SPI checksum	
		5 SPD checksum	
		6 XM version (U, C models)	
		7 SIRIUS version (U, C models)	
		8 FlashROM read/write check test	
		9 SDRAM read/write check test	
		10 EEPROM read/write check test	

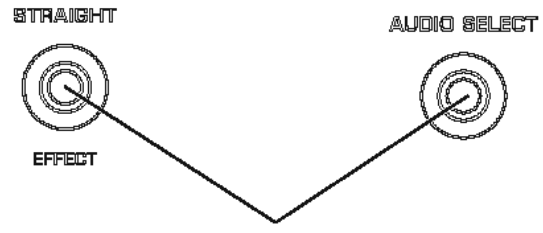
• Starting Self-diagnostic Function

Press the "STANDBY/ON" key while simultaneously pressing those two keys of this unit as indicated in the figure below.

● ダイアグの起動

本機の下図に示すキーを同時に押しながら"STANDBY/ON"キーを押すと、ダイアグが起動します。

Keys of this unit / 本機キー



Turn on the power while pressing these keys. /
これらのキーを同時に押しながら、電源オンする。

• Starting Self-diagnostic Function in the protection cancel mode

If the protection function works and causes hindrance to trouble diagnosis, cancel the protection function as described below, and it will be possible to enter the self-diagnostic function mode. (The protection functions other than the excess current detect function will be disabled.)

Press the "STANDBY/ON" key while simultaneously pressing those two keys indicated in the figure above. At this time, keep pressing those two keys for 3 seconds or longer.
In this mode, the [SLEEP] segment of the FL display of this unit flashes to indicate that the mode is self-diagnostic function mode with the protection functions disabled.

CAUTION!
Using this product with the protection function disabled may cause damage to this unit. Use special care for this point when using this mode.

● プロテクション解除モードでの起動

プロテクションが動作することにより、故障箇所の診断に支障をきたすような場合は、次の方法によりプロテクションを解除した状態でダイアグモードに入ることができます。(過電流検出以外のプロテクション動作を解除する)

上図のキーを同時に押しながら"STANDBY/ON"キーを押します。このとき、上図のキーを3秒以上押し続けてください。
このモードでは本機FLの「SLEEP」セグメントが点滅し、プロテクションを解除した状態でのダイアグモードであることを知らせます。

注意！
プロテクション解除モードでの起動は、危険な状態でもプロテクションが作動しないため、動作させると本機を破壊することがあります。
このモードを使用する場合は十分注意してください。

• Canceling Self-diagnostic Function

1. Before canceling self-diagnostic function, execute setting for FACTORY PRESET of main menu No.R (Memory initialization inhibited or Memory initialized).
   * In order to keep the user memory stored, be sure to select PRESET INHIBITED (Memory initialization inhibited).
2. Turn off the power by pressing the "STANDBY/ON" key of this unit.

● ダイアグの解除

1. ダイアグを解除する前に、ダイアグメニューNo. 23 FACTORY PRESET(メモリーの初期化禁止／またはメモリーの初期化)の設定をします。
   ※ ユーザーメモリーを保持したい場合は、必ずPRESET INHIBITED(メモリー初期化禁止)を選択してください。
2. 本機の"STANDBY/ON"キーを押し、電源オフします。

- **Display provided when Self-diagnostic Function started**

On the FL display of this unit, an opening message (including the protection history) appears for a few seconds followed by the self-diagnostic function menu display (A1. ANALOG BYPASS).

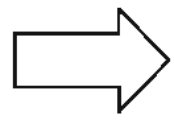
When there is no history of protection function:

Opening message / オープニング表示

When there is no protection history
プロテクション履歴が無い場合

NO PROTECTION

After a few seconds / 数秒後



A1.ANLOG BYPAS

When there is a history of protection function:

When there is a history of protection function due to excess current

PRI PRT:xxx

AD value when the protection function is working / プロテクション動作時のA/D値

Cause: An excessive current flowed through the power amplifier.

Supplementary information:
As current of the power amplifier is detected, the abnormal channel can be identified by checking the current detect transistor.
Turning on the power without correcting the abnormality will cause the protection function to work immediately and the power supply will instantly be shut off.

Note)

- **Applying the power to this unit without correcting the abnormality can be dangerous and cause additional circuit damage. To avoid this, if "PRI" and "PRD" protection function has been activated 3 times continuously, the power will not turn on even when the "STANDBY/ON" key is pressed. In order to turn on the power again, disconnect the power cable of this unit from the AC outlet once and then reconnect it again.**
- **The output transistors in each power amplifier channel should be checked for damage before applying power to this unit.**
- **Power amplifier current should be monitored by measuring DC voltage across the emitter resistors for each channel.**

- **ダイアグ起動時の表示**

本機のFLディスプレイには、オープニング(プロテクション履歴／バージョン)が表示され、数秒後にメインメニュー表示(A1. ANALOG BYPASS)となります。

プロテクション履歴が無い場合：

Main menu display / メインメニュー表示

プロテクション履歴がある場合：

過電流によるプロテクション履歴がある場合

原因： パワーアンプに過電流が流れた。
補足： パワーアンプの電流を検出していますので、電流検出トランジスタをチェックすれば異常チャンネルが特定できます。
異常状態のまま電源オンすると、瞬時にプロテクションがかかり、すぐに電源が切れます。

注意！

- 異常状態のまま本機の電源を入れると、危険な状態になり、さらに回路が損傷を受ける原因になります。そのため連続してプロテクションが働いた場合、3回目から"STANDBY/ON"キーを押しても電源が入らなくなります。再度電源を入れる場合、一度本機の電源コードをAC電源コンセントから抜いて接続し直してください。
- 本機の電源をいれる前に、各パワーアンプのチャンネル内の出力トランジスタに損傷がないかチェックしてください。
- パワーアンプの電流は、各チャンネルのエミッターの抵抗器間DC電圧を測定することによりモニターしてください。

When there is a history of protection function due to abnormal DC output

DC出力異常によるプロテクション履歴がある場合

PRD PRT:xxx

AD value when the protection function is working /
プロテクション動作時のA/D値

Cause: DC output of the power amplifier is abnormal.

Supplementary information:

The protection function worked due to a DC voltage appearing at the speaker terminal.
A cause could be a defect in the amplifier.
If the power is turned on with the abnormality unsolved, the protection function works in 3 seconds to turn off the power.

原因： パワーアンプのDC出力が異常。

補足： アンプの故障でスピーカー端子に直流電圧が掛かるなどが原因で、プロテクションが働いたことを示します。
異常状態のままパワーオンすると、3秒後にプロテクションが掛かり、電源が切れます。

When there is a history of protection function due to abnormal voltage in the power supply section

電源部の電圧異常によるプロテクション履歴がある場合

PRU1 PRT:xxx

AD value when the protection function is working /
プロテクション動作時のA/D値

Cause: The voltage in the power supply section is abnormal.

Supplementary information:

The protection function worked due to a defect or overload in the power supply.
If the power is turned on with the abnormality unsolved, the protection function works in 1 second to turn off the power.

原因： 電源部の電圧が異常。

補足： 電源電圧による原因で、プロテクションが働いたことを示します。
異常状態のままパワーオンすると、1秒後にプロテクションが掛かり、電源が切れます。

When there is a history of protection function due to abnormal voltage in the power supply section

電源部の電圧異常によるプロテクション履歴がある場合

PRU2 PRT:xxx

AD value when the protection function is working /
プロテクション動作時のA/D値

Cause: The voltage in the power supply section is abnormal.

Supplementary information:

The protection function worked due to a defect or overload in the power supply.
If the power is turned on with the abnormality unsolved, the protection function works in 1 second to turn off the power.

原因： 電源部の電圧が異常。

補足： 電源電圧による原因で、プロテクションが働いたことを示します。
異常状態のままパワーオンすると、1秒後にプロテクションが掛かり、電源が切れます。

When there is a history of protection function due to excessive heat sink temperature

ヒートシンクの異常温度によるプロテクション履歴がある場合

THM PRT:xxx

AD value when the protection function is working /
プロテクション動作時のA/D値

Cause: The temperature of the heat sink is excessive.
Supplementary information:
The protection function worked due to the temperature limit being exceeded.
Causes could be poor ventilation or a defect related to the thermal sensor.
If the power is turned on with the abnormality unsolved, the protection function works in 1 second to turn off the power.

原因： ヒートシンクの温度が異常。
補足： 温度制限を越えた原因で、プロテクションが働いたことを示します。
異常状態のままパワーオンすると、1秒後にプロテクションが掛かり、電源が切れます。

For detection of each protection function, refer to main menu described later.

各プロクテクションの検出に関しては、後述のメインメニューを参照してください。

History of protection function
When the protection function has worked, its history is stored in memory with a backup.
Even if no abnormality is noted while servicing the unit, an abnormality which has occurred previously can be defined as long as the backup data has been stored.
The history of the protection function is cleared when self-diagnostic function is cancelled by selecting PRESET RESERVED (Memory initialized) of main menu No. R or when the backup data is erased.

プロテクションの履歴
プロテクションが働いた場合、履歴をバックアップして記憶しています。
サービスのときに異常が認められなくても、バックアップが残っていれば、お客様のところで起きた異常を区別できます。
メインメニューNo. R PRESET RESERVED(メモリーの初期化)を選んでダイアグを解除した場合、またはバックアップが消えた場合にプロテクションの履歴はクリアされます。

• Display during menu operation

The function at work is indicated on the FL indicator of this unit.
The contents displayed during the function operation are described later in the “Details of self-diagnostic function menu” section.

● メニュー動作中の表示

本機のFLディスプレイには動作中の機能が表示されます。
機能動作中の表示内容については、後述の機能詳細で記述します。

- **Operation procedure of Main menu and Sub-menu**

There are 19 main menu items, each them having sub-menu items.

Main menu selection:
Select the main menu using " ▷ " (forward) and " ◁ " (reverse) keys of PROGRAM.

Sub-menu selection:
Select the sub-menu using "SCENE 2" (forward) and "SCENE 1" (Reverse) keys.

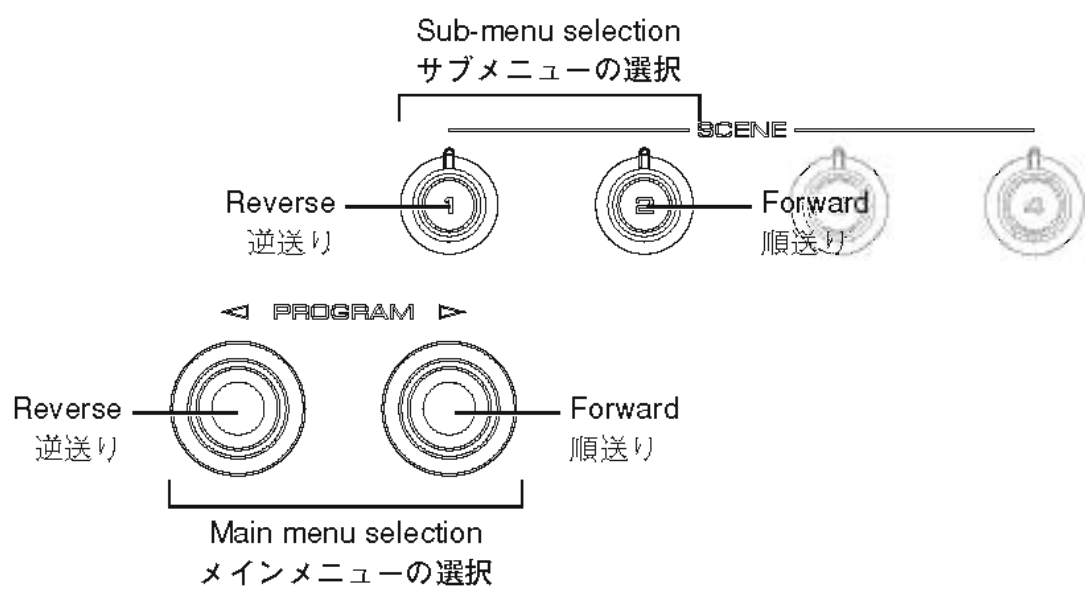
● メインメニューとサブメニューの操作

ダイアグにはNo. 1～19のメインメニューがあり、そのそれぞれにサブメニューがあります。

メインメニューの選択：
"PROGRAM ▷"(順送り)、"◁ PROGRAM"(逆送り)キーで選択します。

サブメニューの選択：
"SCENE 2"(順送り)、"SCENE 1"(逆送り)キーで選択します。

Keys of this unit / 本機キー



- **Functions in Self-Diagnostic Function mode**

In addition to the self-diagnostic function menu items, functions as listed below are available.
- Power on/off
- Master volume
- Muting
- Speakers A/B/OFF
- Input selection
- Audio select
- Tone control

* Functions related to the tuner and the set menu are not available.

● ダイアグ中の機能

ダイアグメニューの他に、以下の機能が動作します。
- パワーオン／オフ
- マスターボリューム
- ミューティング
- スピーカーリレーA、B、OFF
- インプットセレクト
- オーディオセレクト
- トーンコントロール

※ チューナー関連、セットメニュー関連は機能しません。

- **Initial settings used to start Self-Diagnostic Function**

The following initial settings are used when starting self-diagnostic function.
When self-diagnostic function is canceled, these settings are restored to those before starting self-diagnostic function.
- Master volume: -20 dB
- Input: DVD (MULTI CHANNEL INPUT OFF)
- Effect level: 0 dB
- Main menu: A1. ANALOG BYPASS

● ダイアグ開始時の初期設定

ダイアグ開始時に以下のような設定になります。
ダイアグ解除時にはダイアグ開始前の状態に戻ります。
- マスターボリューム：-20 dB
- インプット：DVD(マルチチャンネルINPUT オフ)
- エフェクトレベル：0 dB
- メインメニュー：A1. ANALOG BYPASS

• Details of Self-Diagnostic Function menu

A. BYPASS

Using the sub-menu, it is possible to select ANALOG BYPASS output or DSP BYPASS output.

ANALOG BYPASS

The analog input sound signal is output to FRONT L/R with EFFECT OFF.

A1.ANLOG BYPAS

INPUT: DVD ANALOG
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
		FRONT	CENTER	SURROUND	
Both ch, -20 dBm	+6.0 dB	+11.5 dBm	-∞	-∞	-∞

DSP BYPASS

The digital input sound signal is output to FRONT L/R with EFFECT OFF.

A2.DSP BYPASS

INPUT: DVD ANALOG
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
		FRONT	CENTER	SURROUND	
Both ch, -20 dBm	+6.0 dB	+11.5 dBm	-∞	-∞	-∞

B. AUDIO CHECK

AUDIO CHECK

The input sound signal is output.

* When the inputted sound signal is 2 ch L/R, it is distributed as follows when output.

L ch: FRONT L, CENTER, SURROUND L, LFE (L ch +10 dB)
R ch: SURROUND R

B1.AUDIO CHECK

INPUT: DVD ANALOG
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
		FRONT	CENTER	SURROUND	
Both ch, -20 dBm	+6.0 dB	+11.5 dBm	+11.5 dBm	+11.5 dBm	0 dBm

ANALOG AUDIO PLAYBACK

The analog input sound signal is output.

B2.ANALOG PLAY

MUTE ALL

Sound signals of all channels are muted by System IC (MAIN P.C.B.) and Transistor (Q5008-5011 MAIN P.C.B.).

B3.MUTE ALL

● ダイアグメニュー詳細

A. BYPASS

サブメニューによりANALOG BYPASS/DSP BYPASSが選択可能です。

ANALOG BYPASS

アナログ入力の音声信号をEFFECT OFFでFRONT L/Rへ出力します。

DSP BYPASS

デジタル入力の音声信号をEFFECT OFFでFRONT L/Rへ出力します。

B. AUDIO CHECK

AUDIO CHECK

入力された音声信号を出力します。

※ 入力された音声信号が2 ch L/Rの場合は、下記のように振り分け出力します。

L ch： FRONT L、CENTER、SURROUND L、LFE（L ch +10 dB）
R ch： SURROUND R

ANALOG AUDIO PLAYBACK

アナログ入力された音声信号を出力します。

MUTE ALL

全チャンネルの音声信号をシステムIC（MAIN P.C.B.）およびトランジスタ（Q5008-5011 MAIN P.C.B.）でミュートします。

MUTE SYSTEM IC
Sound signals of all channels are muted by System IC (MAIN P.C.B.).

MUTE SYSTEM IC
全チャンネルの音声信号をシステムIC(MAIN P.C.B.)でミュートします。

B4.MUTE SYS IC

MUTE TRANSISTOR
Sound signals of all channels are muted by Transistor (Q5008-5011 MAIN P.C.B.).

MUTE TRANSISTOR
全チャンネルの音声信号をトランジスタ(Q5008-5011 MAIN P.C.B.)でミュートします。

B5.MUTE TR

C. SPEAKER SET

The analog switch settings for each sub-menu are as shown in the table below.

C. SPEAKER SET

各サブメニューにおけるアナログスイッチの設定は以下の通りです。

FRONT : SML 0dB	SMALL	LARGE	LARGE	SWFR
CENTER : NONE	LARGE	NONE	LARGE	SWFR
LFE/B : FRNT	LARGE	SMALL	SMALL	FRONT
TONE : MAX	LARGE	LARGE	LARGE	SWFR
TONE : MIN	LARGE	LARGE	LARGE	SWFR

LARGE: This mode is used for a speaker with high bass reproduction performance (a large unit). Full bandwidth signals are output.

SMALL: This mode is used for a speaker with low bass reproduction performance (a small unit). The signals of 90 Hz or less are mixed into the channel specified by LFE/BASS.

NONE: This mode is used for no center speaker. The center content is reduced by 3 dB and distributed to FRONT L/R.

SWFR: LFE of 5.1 ch signal or LFE/BASS lower than 90 Hz is output through SUBWOOFER OUT.

FRONT: LFE of 5.1 ch signal or LFE/BASS lower than 90 Hz is distributed to FRONT L/R.

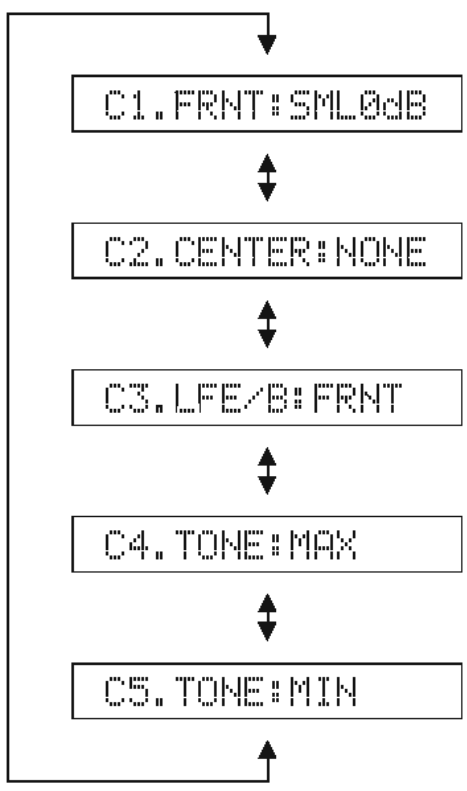
LARGE： 低音再生能力の高い(ユニットの大きい)スピーカーを使用するモードです。
全帯域が出力されます。

SMALL： 低音再生能力の低い(ユニットの小さい)スピーカーを使用するモードです。
90 Hz以下がLFE/BASSで指定したチャンネルにミックスされます。

NONE： センタースピーカーを使用しないモードです。
センター成分は-3dBされて、FRONT L/Rに振り分けられます。

SWFR： 5.1 ch信号のLFEまたは90 Hz以下のLFE/BASSがSUBWOOFER OUTに出力されます。

FRONT： 5.1 ch信号のLFEまたは90 Hz以下のLFE/BASSをFRONT L/Rに振り分けます。



FRONT: SML 0dB
The FRONT L/R signal, when 90 Hz or lower, is mixed to the channel specified by LFE/BASS.
FRONT L/Rの信号の90 Hz以下がLFE/BASSで指定したチャンネルにミックスされます。

CENTER: NONE
The CENTER signal is distributed to FRONT L/R.
CENTERの信号をFRONT L/Rに振り分けます。

LFE / BASS: FRONT
The LFE (SUBWOOFER) signal is distributed to FRONT L/R.
LFE(SUBWOOFER)の信号をFRONT L/Rに振り分けます。

TONE: MAX
The signal is output with the tone control [BASS +10 dB, TREBLE +10 dB].
トーンコントロール[BASS +10 dB、TREBLE +10 dB]で出力します。

TONE: MIN
The signal is output with the tone control [BASS -10 dB, TREBLE -10 dB].
トーンコントロール[BASS -10 dB、TREBLE -10 dB]で出力します。

INPUT: DVD ANALOG
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Sub-menu	Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
			FRONT	CENTER	SURROUND	
FRONT : SML 0dB	Both ch, -20 dBm	+6.0 dB	+11.5 dBm	-∞	-∞	-3.5 dBm
CENTER : NONE	Both ch, -20 dBm	+6.0 dB	+11.5 dBm	-∞	-∞	-∞
LFE/B : FRNT	Both ch, -20 dBm	+6.0 dB	+11.5 dBm	-∞	-∞	-∞
TONE : MAX	Both ch, -20 dBm	+6.0 dB	+14.5 dBm	-∞	-∞	-∞
TONE : MIN	Both ch, -20 dBm	+6.0 dB	+8.5 dBm	-∞	-∞	-∞

D. XCH INPUT

The input source [MULTI CHANNEL INPUT] is selected.
It is possible to select the 6-ohm/8-ohm by using the sub-menu.

D. XCH INPUT

入力ソース[MULTI CHANNEL INPUT]が選択されます。
サブメニューにより、6オーム／8オームが選択可能です。

6 ch INPUT 6-ohm

6 ch INPUT 6-ohm

D1.6chINPUT 6Ω

INPUT: MULTI CH INPUT
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Sub-menu	Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
			FRONT	CENTER	SURROUND	
6 ch INPUT 6-ohm	Both ch, -20 dBm	+6.0 dB	+11.5 dBm	+11.5 dBm	+11.5 dBm	-3.5 dBm

8 ch INPUT 6-ohm

8 ch INPUT 6-ohm

D2.8chINPUT 6Ω

INPUT: MULTI CH INPUT
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Sub-menu	Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
			FRONT	CENTER	SURROUND	
6 ch INPUT 8-ohm	Both ch, -20 dBm	+6.0 dB	+11.5 dBm	+11.5 dBm	+11.5 dBm	-3.5 dBm

6 ch INPUT 8-ohm

6 ch INPUT 8-ohm

D3.6chINPUT 8Ω

INPUT: MULTI CH INPUT
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Sub-menu	Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
			FRONT	CENTER	SURROUND	
6 ch INPUT 8-ohm	Both ch, -20 dBm	+6.0 dB	+11.5 dBm	+11.5 dBm	+11.5 dBm	-3.5 dBm

8 ch INPUT 8-ohm

8 ch INPUT 8-ohm

D4.8chINPUT 8Ω

INPUT: MULTI CH INPUT
SPEAKER OUT: 1 kHz, SUBWOOFER OUTPUT: 50 Hz

Sub-menu	Input level	Volume	SPEAKER OUT			SUBWOOFER OUTPUT
			FRONT	CENTER	SURROUND	
6 ch INPUT 8-ohm	Both ch, -20 dBm	+6.0 dB	+11.5 dBm	+11.5 dBm	+11.5 dBm	-3.5 dBm

LIM/PLDET/THM

LIM: Setting value of LIM (Limiter control)

* Do not change the setting value because this item is only for the use of development staff.

PLDET: Power limiter detection
The A/D conversion value during operation is displayed.

THM: Thermo protection detection
The A/D conversion value during operation is displayed.
(Reference voltage: 3.3 V=255)

LIM/PLDET/THM

LIM： LIM（リミッター制御）の設定値

※ 開発用メニューのため、設定値の変更は行わないでください。

PLDET： パワーリミッターの検出
動作時のA/D変換値が表示されます。

THM： 温度プロテクションの検出
動作時のA/D変換値が表示されます。
（基準電圧：3.3 V＝255）

D5.255:255: 64

- THM (Thermo protection detection / 温度プロテクションの検出)
- PLDET (Power limiter detection / パワーリミッターの検出)
- LIM (Limiter control / リミッター制御)

E. MIC CHECK

The signals input through the microphone are output of FRONT L/R via A/D and D/A.

E. MIC CHECK

マイク入力された信号をA/D－D/A経由でFRONT L/Rに出力します。

E1.MIC CHECK

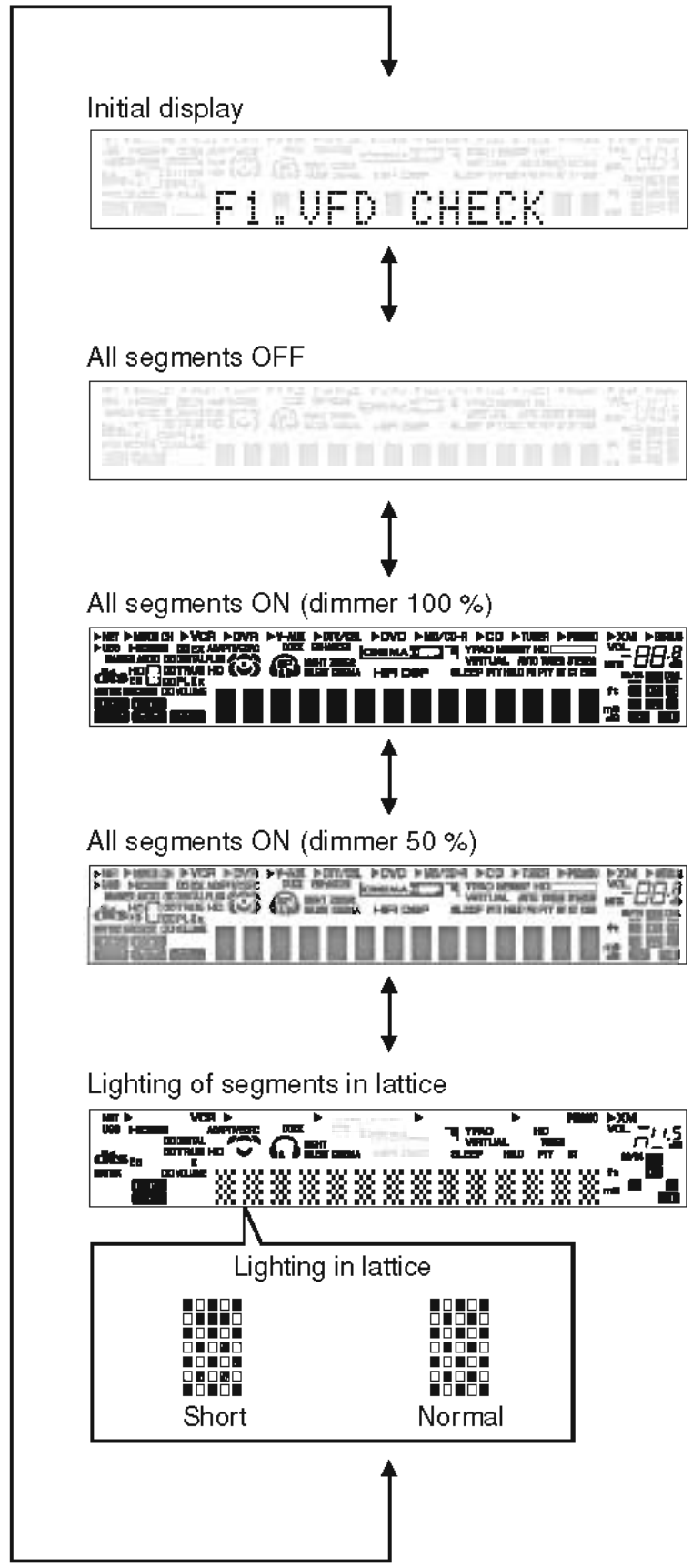
F. FL/OSD CHECK

Use this program to check the FL display section.
For audio signal processing, use STRAIGHT.

F. FL/OSD CHECK

FL表示部のチェックプログラムです。
オーディオ信号処理はSTRAIGHTです。

Checking FL display section /
FL表示部のチェック

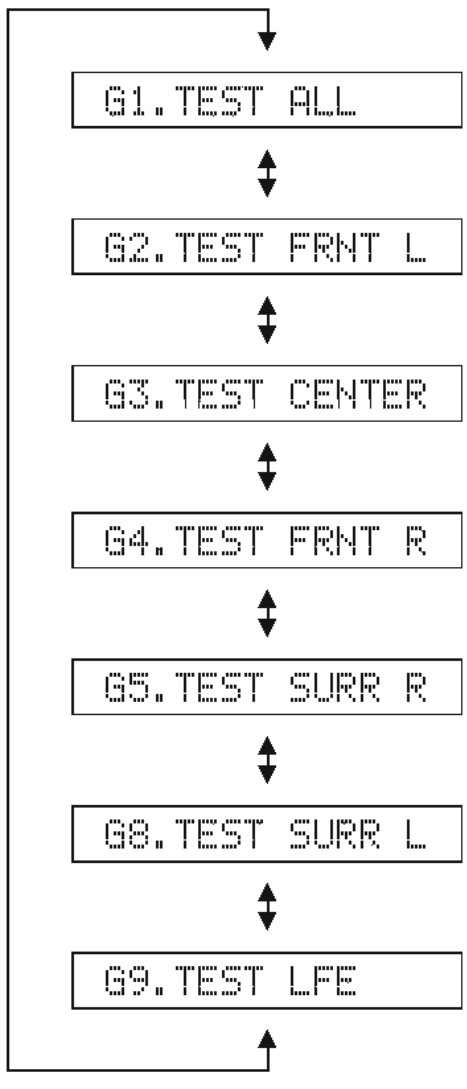


G. TEST TONE

The outputs the noise through the channels specified by the sub-menu.
The noise frequency for LFE (SUBWOOFER) is 35 to 80 Hz.
Other than that, the noise frequency is 500 to 2 kHz.

G. TEST TONE

サブメニューで指定したチャンネルへノイズを出力します。
LFE(SUBWOOFER)用のノイズ周波数は35～80 Hz、それ以外はノイズ周波数500～2 kHzとなります。



TEST ALL
Noise is output from all channels.
全チャンネルからノイズを出力。

TEST FRONT L
Noise is output from the FRONT L channel.
FRONT Lチャンネルからノイズを出力。

TEST CENTER
Noise is output from the CENTER channel.
CENTERチャンネルからノイズを出力。

TEST FRONT R
Noise is output from the FRONT R channel.
FRONT Rチャンネルからノイズを出力。

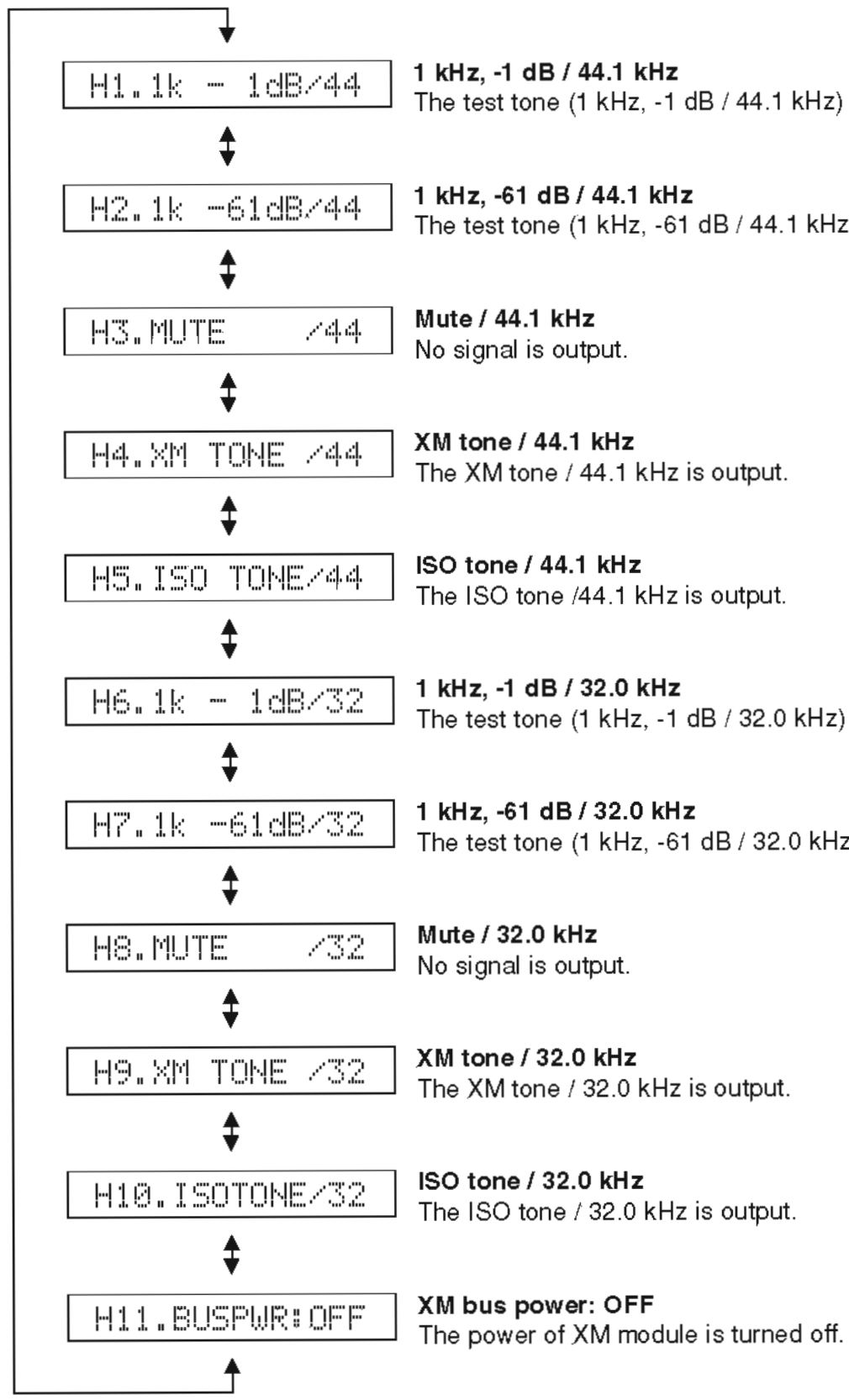
TEST SURROUND R
Noise is output from the SURROUND R channel.
SURROUND Rチャンネルからノイズを出力。

TEST SURROUND L
Noise is output from the SURROUND L channel.
SURROUND Lチャンネルからノイズを出力。

TEST LFE (SUBWOOFER)
Noise is output from the LFE (SUBWOOFER) channel.
LFE(SUBWOOFER)チャンネルからノイズを出力。

H. XM STATUS (U, C models)

The output check of XM radio is executed.
(Connect XM radio antenna module to this unit before executing.)



H. XM STATUS

このモデルには適用されません。

I. iPod

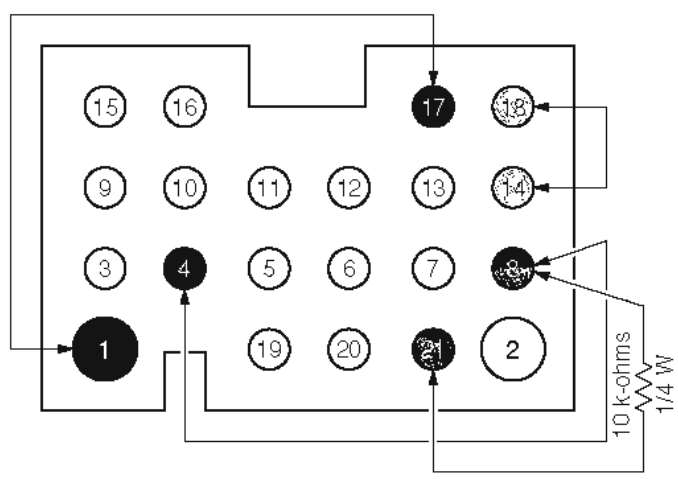
This menu is used to test the DOCK connector without the iPod itself. After turning off the power to this unit short between pins No. 14 (TX) and No. 18 (RX), between pins No. 1 (PWR) and No. 17 (ACCPOW), between pins No. 4 (iPDET) and No. 8 (DGND) and between pins No. 21 (DKID) and No. 8 (DGND) of the DOCK connector. (Make sure that the power is turned off when shorting pins.)
Start the self-diagnostic function and select this menu.
The check result is displayed according to the following display specifications.

Note) Be sure to return the shorted pins to their original condition after executing this test.

I. iPod

iPod本体無しで、DOCKコネクタの検査を行うメニューです。
本機をパワーオフ状態にしてから、DOCKコネクタの14ピン(TX)と18ピン(RX)、1ピン(PWR)と17ピン(ACCPOW)、4ピン(iPDET)と8ピン(DGND)、21ピン(DKID)と8ピン(DGND)をショートさせます。
(ショートさせる時は、必ず電源を切ってください。)
ダイアグを起動して本メニューを選択します。
下記の表示仕様に従って、チェック結果が表示されます。

注)検査後、ショートしたピンを必ず元の状態に戻してください。



DOCK CONNECTOR

I1.DOCK:NG NNN

All Y / 全てY = OK
Others / その他 = NG

Check item / チェック項目	Result / 結果		Display / 表示
UART loop back test UARTループバックテスト	OK		Y
	NG		N
iPAP (iPod accessory power) detection iPAP検出	IC83 pin No.5	High	Y
		Low	N
iPDET (iPod installation to DOCK) detection iPDET検出	IC82 pin No.5	Low (iPod universal dock)	Y
		High (Bluetooth adapter)	N
DKID (DOCK ID) detection DKID検出	IC82 pin No.4	10 k-ohms, 1/4 W pull down	Y
		Other	N

DOCK ignore

When DOCK and iPod are connected, the input source [DOCK (iPod)] is made ineffective and [V-AUX] is selected.

DOCK ignore

DOCKおよびiPodを接続している時、入力ソース[DOCK(iPod)]を無効にして[V-AUX]に切り替えます。

I2.DOCK IGNORE

Bluetooth version

When the Bluetooth DOCK is connected, the firmware version of that Bluetooth module is displayed.

Bluetooth version

Bluetooth DOCKを接続している時、そのBluetoothモジュールのファームウェアバージョンを表示します。

I3.BTVS:x.xxx

Clear Bluetooth pairing information
While the Bluetooth DOCK is connected, initialization of the Bluetooth DOCK pairing information is inhibited/reserved.
Use “PRESET/TUNING<” and “PRESET TUNING>” keys for operation.

Initialization inhibited /
初期化禁止

I4.BT CLR:INHI ←→

Initialization inhibited / 初期化禁止
User memory initialization is not executed. Select this sub-menu to protect the user memory.
Bluetooth DOCKのペアリング情報の初期化は行われません。Bluetooth DOCKのペアリング情報を保護するときは、こちらを選択してください。

Clear Bluetooth pairing information
Bluetooth DOCKを接続している時、Bluetooth DOCKのペアリング情報の初期化を予約／禁止します。
操作は、“PRESET/TUNING <”、“PRESET/TUNING >”キーで行います。

Initialization reserved /
初期化予約

I4.BT CLR:RSRV

Initialization reserved / 初期化予約
Initialization of the use memory is reserved. (Actually, initialization is executed the next time that the power is turned on.) Select this sub-menu to reset to the original factory settings or to reset the use memory.
Any protection history will be cleared.
Bluetooth DOCKのペアリング情報の初期化が予約されます。(実際に初期化されるのは、次回の電源投入時です。)
Bluetooth DOCKのペアリング情報を削除したいときは、こちらを選択してください。

J. USB (R, T, K, A, B, G, E, F, L models)
The music file recorded in the USB flash memory is reproduced.
a. Copy the 2 music files from PC into the roof folder of the USB flash memory.
b. Insert the USB flash memory to the USB terminal of this unit.

USB FILE1
Reproduced at this time is the first piece of the music file in the USB flash memory connected to the USB terminal on the front panel.

J1.USBFile1/OK
└ OK: Connected/Playback
NG: No music file

USB FILE2
Reproduced at this time is the second piece of the music file in the USB flash memory connected to the USB terminal on the front panel.

J2.USBFile2/OK
└ OK: Connected/Playback
NG: No music file

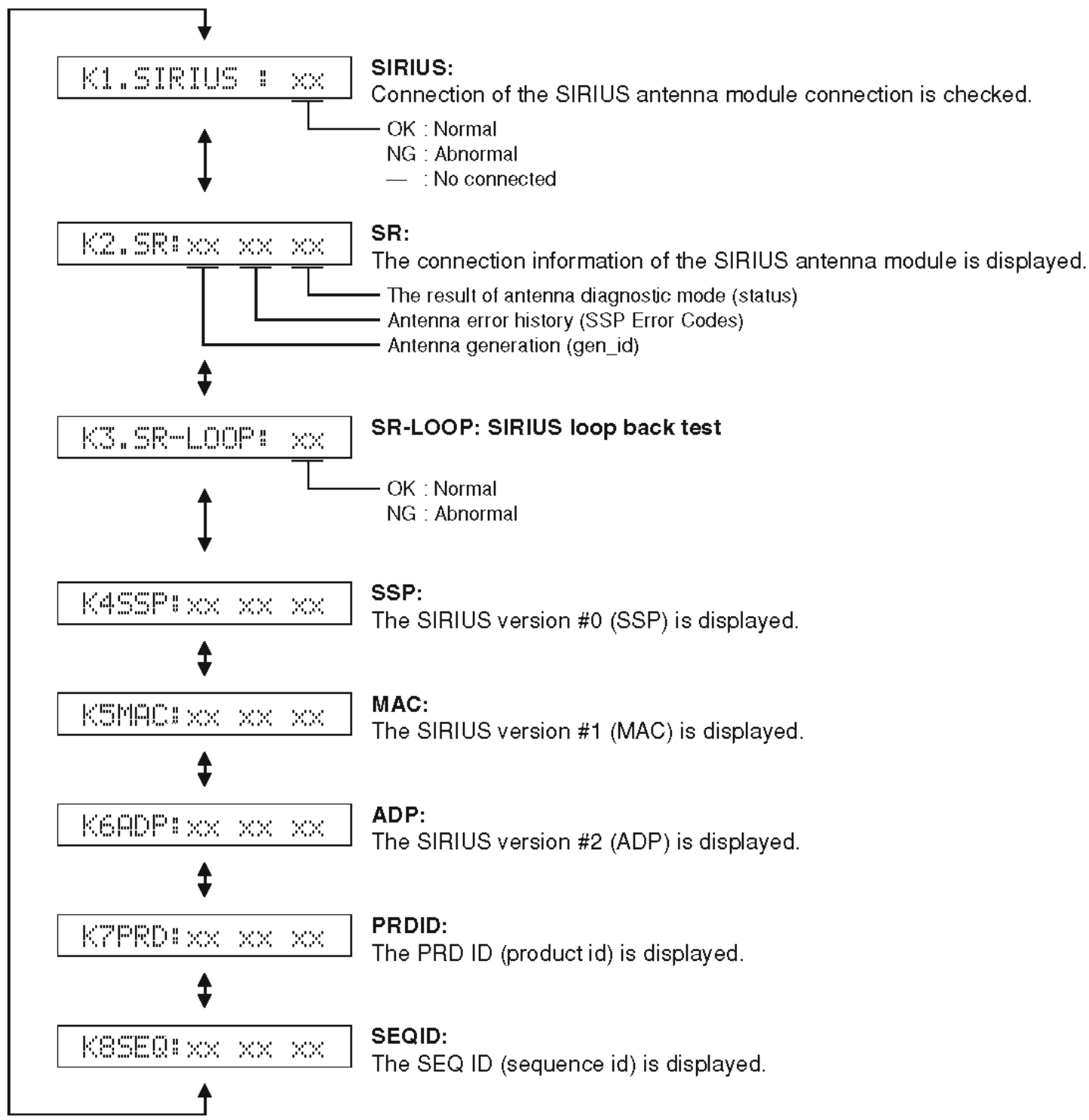
J. USB
このモデルには適用されません。

K. SIRIUS (U, C models)

The SIRIUS antenna module is checked.
(Connect SIRIUS antenna module to this unit before executing.)

K. SIRIUS

このモデルには適用されません。



L. VIDEO CONVERSION
Not applied to these models.

L. VIDEO CONVERSION
このモデルには適用されません。

Video INFO.

Video INFO.

```
L1. V-IN:
```

CONVERSION S-Video

CONVERSION S-Video

```
L2.V-CONV S-V
```

CONVERSION CVBS

CONVERSION CVBS

```
L3.V-CONV CVBS
```

CONVERSION OFF

CONVERSION OFF

```
L4.V-CONV OFF
```

Test pattern

Test pattern

```
L5.V-TestPttrn
```

M. HDMI SELECT

The selected input signal is output to HDMI OUT by the sub-menu operation.

HDMI SPDIF (SPDIF audio playback)
SPDIF signal is output.

M1.HDMI SPDIF

HDMI NONE
No signal is output.

M2.HDMI NONE

HDMI IN1
HDMI "IN 1" is output.

M3.HDMI IN1

HDMI IN2
HDMI "IN 2" is output.

M4.HDMI IN2

I2C : xx xxx (I2C access check)
Self-diagnosis is executed to check whether data reading/writing between the microprocessor connected to the 12C line and each IC is done properly or not.

M5.I2C:NG NYN

All Y / すべてY = "OK"
Others / その他 = "NG"

Check item	Result	Display
HDMI Rx (IC12 DSP P.C.B.)	OK	Y
	NG	N
HDMI Tx (IC11 DSP P.C.B.)	OK	Y
	NG	N
*	OK	Y
	NG	N

Model ID for EDID setting (U, C, T, K, G, E, F models)
After replacement of DSP P.C.B or writing of the firmware, make sure to change the "M6 Model ID" setting to the same model name as this unit (RX-V463 or HTR-6140). Press "PRESET/TUNING<" or "PRESET TUNING>" key for selection.

M6.RX-V463 ◀▶ M6.HTR-6140

R, A, L models

M6.RX-V463

B, J models

M6.DSP-AX463

M. HDMI SELECT

サブメニュー操作により，選択された入力信号をHDMI OUTへ出力します。

HDMI SPDIF（SPDIF audio playback）
SPDIF信号が出力されます。

HDMI NONE
何も出力されません。

HDMI IN1
HDMI "IN 1"が出力されます。

HDMI IN2
HDMI "IN 2"が出力されます。

I2C：xx xxx（I2C access check）
I2Cラインに接続されているマイコンと各IC間でデータ読み出し／書き込みの正否を自己診断します。

Model ID for EDID setting

N. A/D DATA CHECK

This menu is used to display the A/D conversion value of the microprocessor which detects panel keys of the main unit and protection functions in using the sub-menu.
When K0/K1 menu is selected, keys become non-operable due to detection of the values of all keys. However, it is possible to advance to the next sub-menu by turning the VOLUME of the main unit. When using this function, note that turning the VOLUME more than 1 click would cause the volume value to change.
During signal processing, the condition before execution is maintained.

* The figures in the diagram are given as reference only.

PD/DI

PD: PRD (Power amplifier DC protection detection)
The output of power amplifier DC (DC voltage) is detected.
Normal value: 27 to 89 (Reference voltage: 3.3 V=255)

* If PRD is out of the normal value range, the protection function works to turn off the power.

DI: DOCK ID (DOCK ID detection)
The output of DOCK ID is detected.
(Reference voltage: 3.3 V=255)

DOCK detection for AD port (IC82 AD converter pin no. 4)
Pull-up resistance 10 k-ohms

DOCK type	DOCK (Bluetooth)	Reserved	Reserved	DOCK (iPod)	Reserved	(Development)	No connect
Ohm	0.56k	2.7k	5.6k	10.0k	18.0k	39.0k	–
DKID (Pin no. 21)	5-25	50-60	85-100	120-140	150-170	195-210	245-255

```
N1PD: 45DI:  0
```

V1/V2

V1: PRV1 (Voltage protection detection)
Voltage detects: ACL, 10V, VP, +6.3H and +3.3H
Normal value: 68 to 161 (Reference voltage: 3.3 V=255)

V2: PRV2 (Voltage protection detection)
Voltage detects: AC2, +12, -12, +5D, +5I, +5V and -5V
Normal value: 104 to 181 (Reference voltage: 3.3 V=255)

* If PRV1 and PRV2 are out of the normal value range, the protection function works to turn off the power.

```
N2V1: 94V2:128
```

N. A/D DATA CHECK

本機パネルキー、プロテクションなどを検出しているマイコンのA/D変換値を、サブメニューで表示します。
K0/K1のメニューにすると、全キーの値を検出するためキー操作はできなくなりますが、本機のVOLUMEを回すことにより、次のサブメニューに進めることができます。このとき1クリック以上回すと、ボリューム値が変化するので注意してください。
信号処理は実行前の状態を維持します。
※ 図中の数値は参考例です。

PD/DI

PD： PRD（パワーアンプDCプロテクションの検出）
パワーアンプDC（直流電圧）出力の検出。
正常値： 27－89（基準電圧：3.3 V＝255）

※ PRDは正常値を外れるとプロテクションが働き、電源オフされます。

DI： DOCK ID（DOCK IDの検出）
DOCK ID出力の検出。
（基準電圧：3.3 V＝255）

V1/V2

V1： PRV1（電圧プロテクションの検出1）
検出電圧： ACL、10V、VP、+6.3H、+3.3H
正常値： 68－161（基準電圧：3.3 V＝255）

V2： PRV1（電圧プロテクションの検出2）
検出電圧： AC2、+12、-12、+5D、+5I、+5V、-5V
正常値： 104－181（基準電圧：3.3 V＝255）

※ PRV1、PRV2は正常値を外れるとプロテクションが働き、電源オフされます。

TH/PL

TH: THM (Thermo protection detection)
The temperature of the heat sink is detected.
Normal value: 0 to 136 (Reference voltage: 3.3 V=255)

* If THM is out of the normal value range, the protection function works to turn off the power.

PL: PLDET (Power limiter detection)
The output voltage of power amplifier is detected.

TH/PL

TH： THM（温度プロテクションの検出）
ヒートシンク温度の検出。
正常値：0―136（基準電圧：3.3 V＝255）

※ THMは正常値を外れるとプロテクションが働き、電源オフされます。

PL： PLDET（パワーリミッターの検出）
パワーアンプ出力電圧の検出。

N3TH: 64PL:255

U, C models (Reference voltage: 3.3 V=255)

	During normal operation	Value for starting limiter operation	Value for canceling limiter operation
PLDET	255	77	108
LIM H: 255 / L: 102	H	L	H

(LIM: Limiter control)

R, T, K, A, B, G, E, F, L models (Reference voltage: 3.3V=255)

	During normal operation	Value for starting limiter operation	Value for canceling limiter operation
PLDET	255	100	131
LIM H: 255 / L: 90	H	L	H

(LIM: Limiter control)

J model（基準電圧：3.3 V＝255）

	通常値	リミッター動作開始値	リミッター動作解除値
PLDET	255	108	139
LIM H: 255 / L: 90	H	L	H

（LIM：リミッター制御）

PI/DE

PI: PRI (Current protection detection)
The current of the power amplifier is detected.
Normal value: 0 to 100 (Reference voltage: 3.3 V=255)

DE: PDET (Sub-trans power detection)
Normal value: 0 to 255 (Reference voltage: 3.3 V=255)

* If PRI and PDET are out of the normal value range, the protection function works to turn off the power.

PI/DE

PI： PRI（電流プロテクションの検出）
パワーアンプ電流の検出。
正常値： 0―100（基準電圧：3.3 V＝255）

DE： PDET（サブトランス電源電圧の検出）
正常値： 0―255（基準電圧：3.3 V＝255）

※ PRIおよびPDETは正常値を外れるとプロテクションが働き、電源オフされます。

N4PI: 0DE: 0

K0/K1

K0/K1: KEY0/KEY1 (Panel key of this unit)
A/D value of the key fails to function properly when the standard value is deviated by ± 4.
In this case, check the constant of partial pressure resistor, solder condition, etc.
Refer to table.
(Reference voltage: 3.3 V=255)

K0/K1

K0/K1：KEY0/KEY1(本機パネルキー)
キーのA/D値は基準値から±4を外れると、正常な動きをしません。
下表をご覧になり、各キーの分圧抵抗の定数、ハンダ不良等の確認をしてください。
(基準電圧：3.3 V＝255)

N5K0:254K1:254

U, C, R, T, K, A, G, E, F, L, J models

Displayed	K0	K1
0 + 4	–	–
23 ± 4	SPEAKERS A/B/OFF	–
42 ± 4	TONE CONTROL	AUDIO SELECT
66 ± 4	PROGRAM <	INPUT >
92 ± 4	PROGRAM >	INPUT <
112 ± 4	STRAIGTH EFFECT	DIRECT
134 ± 4	A/B/C/D/E	PRESET/TUNING <
156 ± 4	BAND	PRESET/TUNING >
176 ± 4	–	MEMORY
195 ± 4	EDIT PRESET/TUNING	–
215 ± 4	–	INFO TUNING AUTO/MAN'L

B model

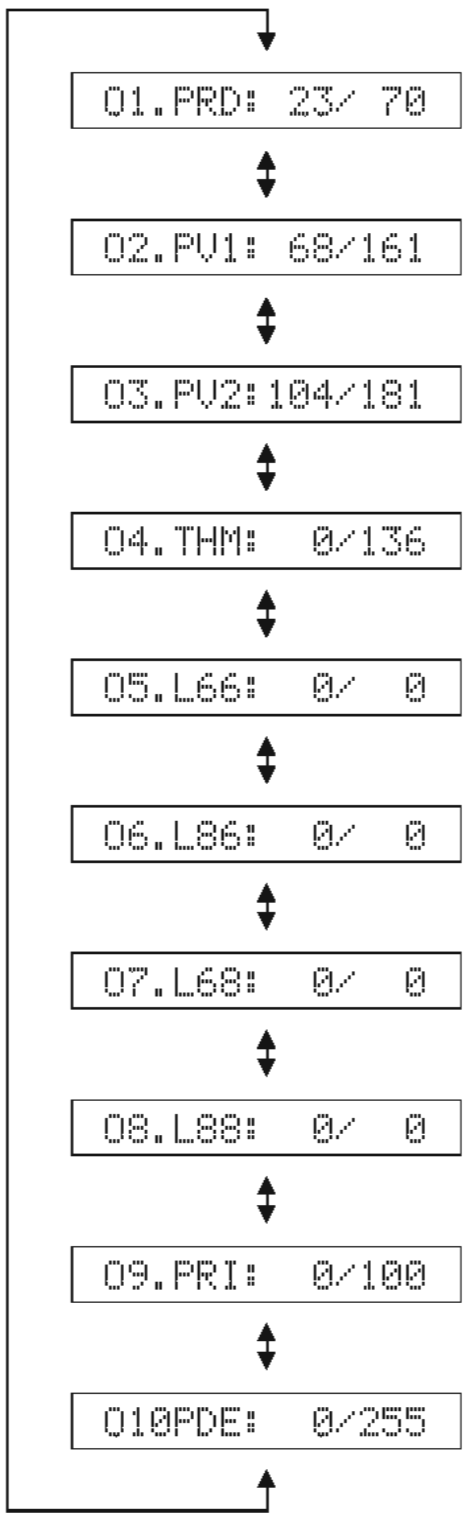
Displayed	K0	K1
0 + 4	–	–
23 ± 4	SPEAKERS A/B/OFF	–
42 ± 4	TONE CONTROL	AUDIO SELECT
66 ± 4	PROGRAM <	INPUT >
92 ± 4	PROGRAM >	INPUT <
112 ± 4	STRAIGTH EFFECT	DIRECT
134 ± 4	–	–
156 ± 4	–	–
176 ± 4	–	–
195 ± 4	–	–
215 ± 4	–	–

O. PROTECTION

The A/D setting value of each protection is displayed.
(Reference voltage: 3.3 V=255)

O. PROTECTION

各プロテクションのA/D設定値が表示されます。
（基準電圧：3.3 V＝255）



PRD (Amplifier DC protection) Low/High
The minimum and maximum preset value of PRD is displayed.
PRDの下限／上限設定値が表示されます。

PV1 (Voltage protection 1) Low/High
The minimum and maximum preset value of PV1 is displayed.
PV1の下限／上限設定値が表示されます。

PV2 (Voltage protection 2) Low/High
The minimum and maximum preset value of PV2 is displayed.
PV2の下限／上限設定値が表示されます。

THM (Thermo protection) Low/High
The minimum and maximum preset value of THM is displayed.
THMの下限／上限設定値が表示されます。

PLD (PLDET (Power limiter detection)) 6ch/6-ohm Low/High
The value for starting limiter operation of PLD6 is displayed.
PLD6のリミッター動作開始値が表示されます。

PLD (PLDET (Power limiter detection)) 8ch/6-ohm Low/High
The value for canceling limiter operation of PLD6 is displayed.
PLD6のリミッター動作解除値が表示されます。

PLD (PLDET (Power limiter detection)) 6ch/8-ohm Low/High
The value for starting limiter operation of PLD8 is displayed.
PLD8のリミッター動作開始値が表示されます。

PLD (PLDET (Power limiter detection)) 8ch/8-ohm Low/High
The value for canceling limiter operation of PLD8 is displayed.
PLD8のリミッター動作解除値が表示されます。

PRI (Amplifier current protection) Low/High
The minimum and maximum preset value of PRI is displayed.
PRIの下限／上限設定値が表示されます。

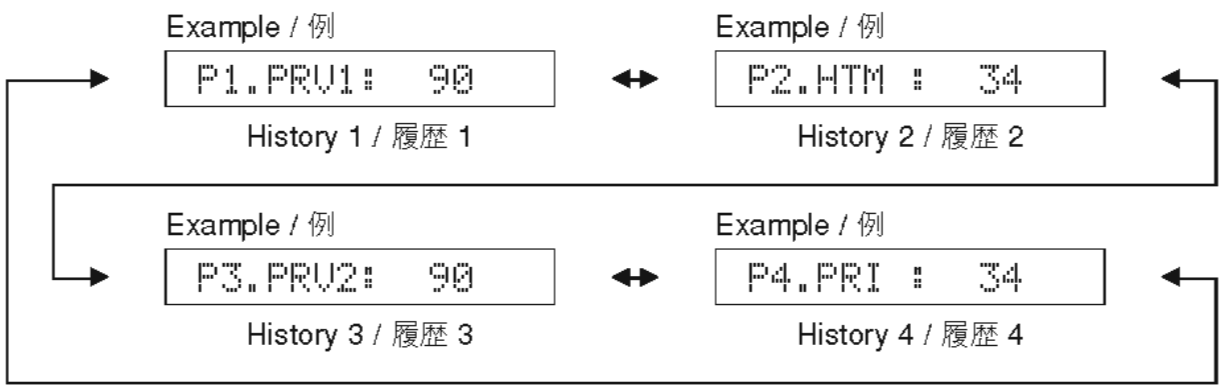
PDET Low/High
The minimum and maximum preset value of PDET is displayed.
PDETの下限／上限設定値が表示されます。

P. PROTECTION HISTORY

Four protection histories are displayed.

P. PROTECTION HISTORY

過去のプロテクション履歴が4つまで表示されます。



Q. RESERVED

Q. RESERVED

R. FACTORY PRESET

This menu is used to reserve/inhibit initialization of the user memory (Parameters and set menu contents, etc. of the sound field program).
The signals are processed using EFFECT OFF (The L/R signal is output using ANALOG BYPASS).

R. FACTORY PRESET

ユーザーメモリ(音場プログラムのパラメーターやセットメニュー内容等)の初期化を予約／禁止します。
信号処理はEFFECT OFF(ANALOG BYPASSでL/Rを出力)です。

R1.PRESET INHI

PRESET INHIBIT (Initialization inhibited) / PRESET INHIBIT(初期化禁止)
User memory initialization is not executed. Select this sub-menu to protect the user memory.
ユーザーメモリの初期化は行われません。ユーザーメモリを保護するときは、こちらを選択してください。

↕

R2.PRESET RSRV

PRESET RESERVED (Initialization reserved) / PRESET RESERVED(初期化予約)
Initialization of the use memory is reserved. (Actually, initialization is executed the next time that the power is turned on.)
Select this sub-menu to reset to the original factory settings or to reset the use memory.
Any protection history will be cleared.
ユーザーメモリの初期化が予約されます。(実際に初期化されるのは、次回の電源投入時です。)
工場出荷時やユーザーメモリをリセットしたいときは、こちらを選択してください。
このとき、プロテクション履歴も初期化されます。

CAUTION: Before setting to the PRESET RESERVED, write down the existing preset memory content of the tuner in a table as shown below. (This is because setting to the PRESET RESERVED will cause the user memory content of the tuner to be erased.)

注意： PRESET RESERVEDを選んで初期化をする前に、チューナーのユーザーメモリー内容を下表に書き写してください。
(初期化をすると、チューナーのユーザーメモリーの内容は消えてしまいます。)

Preset Group	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

S. ROM VER/SUM

The version and checksum are displayed. The signal is processed using EFFECT OFF.
The checksum is obtained by adding the data at every 8-bit for each program area and expressing the result as a 4-figure hexadecimal data.

S. ROM VER. / SUM / PORT

プログラムのバージョン、チェックサムを表示します。 信号はエフェクトオフです。
チェックサムは、プログラムエリア別にデータを8ビットごとに加算していき、4桁の16進データで現したものです。

S1. VER. E048

Microprocessor version
Firmware version of microprocessor (IC41 DSP P.C.B.) is displayed.
マイコン(IC41 DSP P.C.B.)のファームウェアのバージョンを表示します。

S2.A.SUM:EDA1

All checksum
Checksum value of microprocessor (IC41 DSP P.C.B.) is displayed.
マイコン(IC41 DSP P.C.B.)のチェックサム値を表示します。

S3.P.SUM:FE77

Program checksum
Checksum value of application and standby code program is displayed.
アプリケーションおよびスタンバイコードプログラムのチェックサム値を表示します。

S4.SPI.S:2D61

SPI (Serial Peripheral Interface) checksum
Checksum value of SPI firmware update code is displayed.
SPIファームウェアアップデートコードのチェックサム値を表示します。

S5.SPD.S:5BEE

SPD (S/PDIF) checksum
Checksum value of SPD firmware update code is displayed.
SPDファームウェアアップデートコードのチェックサム値を表示します。

S6. XM :

XM version (U, C models)
Firmware version of XM is displayed.
XMのファームウェアのバージョンを表示します。

S7. SR :

SIRIUS version (U, C models)
Firmware version of SIRIUS is displayed.

S8.FROMTEST:OK

FlashROM test
The read/write test of microprocessor (IC41 DSP P.C.B.) and flash ROM (IC52 DSP P.C.B.).
マイコン(IC41 DSP P.C.B.)とフラッシュROM(IC52 DSP P.C.B.)の読み出し／書き込みテストを行います。
OK: No error detected / 不良検出なし **NG:** An error is detected / 不良検出あり

S9.DRAMTEST:NG

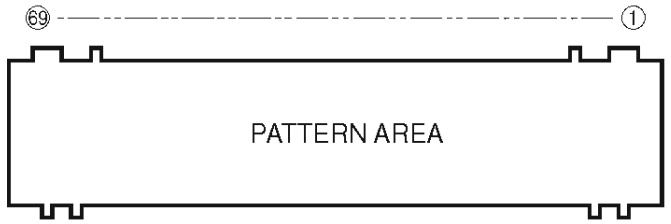
SDRAM test
The read/write test of microprocessor (IC41 DSP P.C.B.) and SDRAM (IC51 DSP P.C.B.).
マイコン(IC41 DSP P.C.B.)とSDRAM(IC51 DSP P.C.B.)の読み出し／書き込みテストを行います。
OK: No error detected / 不良検出なし **NG:** An error is detected / 不良検出あり

S10PROMTEST:OK

EEPROM test
The read/write test of microprocessor (IC41 DSP P.C.B.) and EEPROM (IC42 DSP P.C.B.).
マイコン(IC41 DSP P.C.B.)とEEPROM(IC42 DSP P.C.B.)の読み出し／書き込みテストを行います。
OK: No error detected / 不良検出なし **NG:** An error is detected / 不良検出あり

■ DISPLAY DATA

● V6001: 17-BT-32GNK (OPERATION P.C.B.)



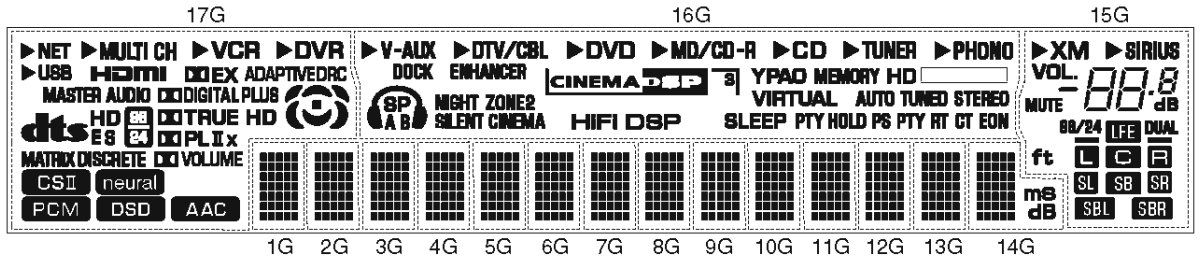
● PIN CONNECTION

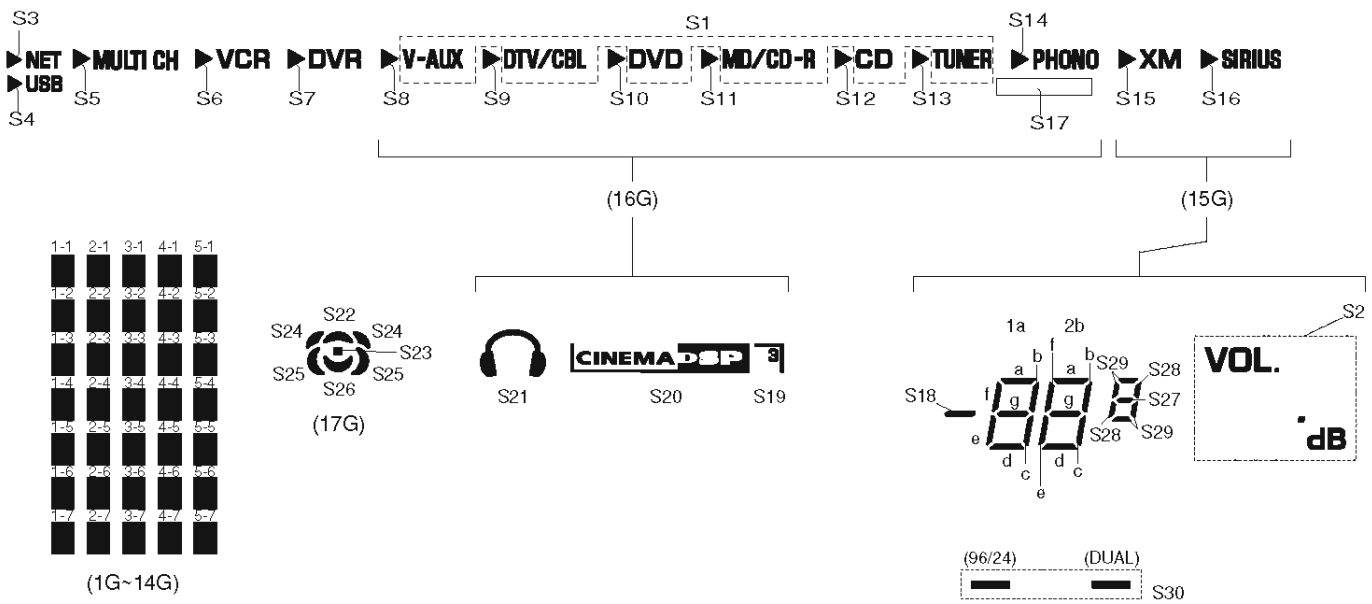
Pin No.	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
Connection	F2	NX	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30	P31

Pin No.	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	P32	P33	P34	P35	P36	P37	NX	NX	NX	NX	NX	NX	NX	17G	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	NX	F1

Note : 1) F1, F2 ..... Filament pin 2) NP ..... No pin 3) NX ..... No extend pin 4) 1G~17G ..... Grid pin

● GRID ASSIGNMENT



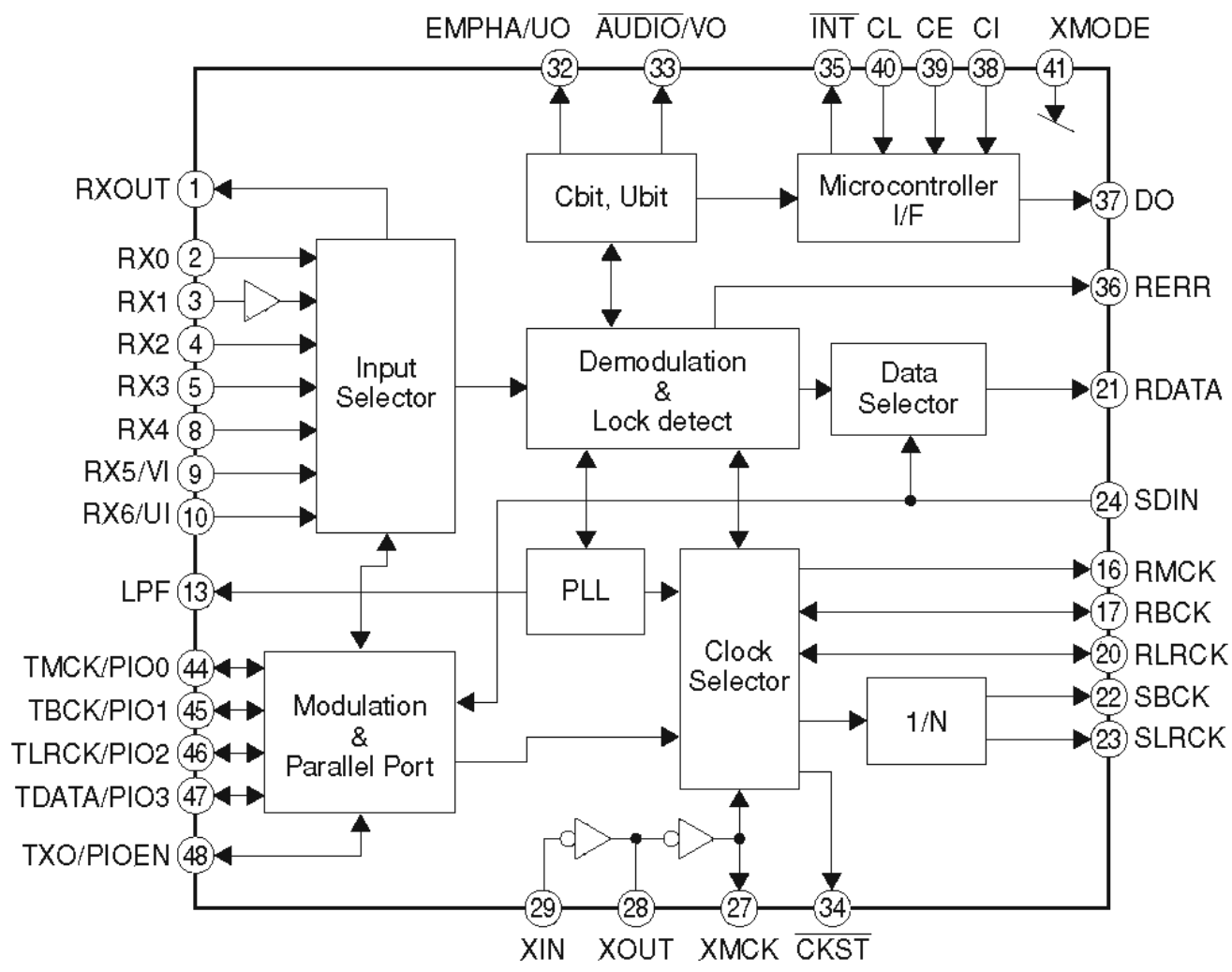


● ANODE CONNECTION

	17G	16G	15G	14G	13G~1G
1P	NET	S1	XM	1-1	1-1
2P	MULTI CH	PHONO	SIRIUS	2-1	2-1
3P	VCR	S8	S15	3-1	3-1
4P	DVR	S9	S16	4-1	4-1
5P	USB	S10	S2	5-1	5-1
6P	S3	S11	S18	1-2	1-2
7P	S5	S12	1a	2-2	2-2
8P	S6	S13	1b	3-2	3-2
9P	S7	S14	1c	4-2	4-2
10P	S4	DOCK	1d	5-2	5-2
11P	HDMI	ENHANCER	1e	1-3	1-3
12P	EX	S21	1f	2-3	2-3
13P	ADAPTIVE DRC	SP	1g	3-3	3-3
14P	MASTER AUDIO	A	2a	4-3	4-3
15P	dts	B	2b	5-3	5-3
16P	HD (ES)	NIGHT	2c	1-4	1-4
17P	ES	ZONE2	2d	2-4	2-4
18P	96/24	SILENT CINEMA	2e	3-4	3-4
19P	DIGITAL	S20	2f	4-4	4-4
20P	PLUS	S19	2g	5-4	5-4
21P	TRUE HD	HIFI DSP	S27	1-5	1-5
22P	PL	YPAO	S28	2-5	2-5
23P	II	MEMORY	S29	3-5	3-5
24P	x	HD	MUTE	4-5	4-5
25P	MATRIX	S17	96/24	5-5	5-5
26P	DISCRETE	VIRTUAL	DUAL	1-6	1-6
27P	VOLUME	AUTO	ft	2-6	2-6
28P	CS II	TUNED	S30	3-6	3-6
29P	neural	STEREO	LFE	4-6	4-6
30P	PCM	SLEEP	L	5-6	5-6
31P	DSD	PTY (HOLD)	C	1-7	1-7
32P	AAC	HOLD	R	2-7	2-7
33P	S22	PS	SL	3-7	3-7
34P	S23	PTY (RT)	SB	4-7	4-7
35P	S24	RT	SR	5-7	5-7
36P	S25	CT	SBL	ms	–
37P	S26	EON	SBR	dB	–

■ IC DATA

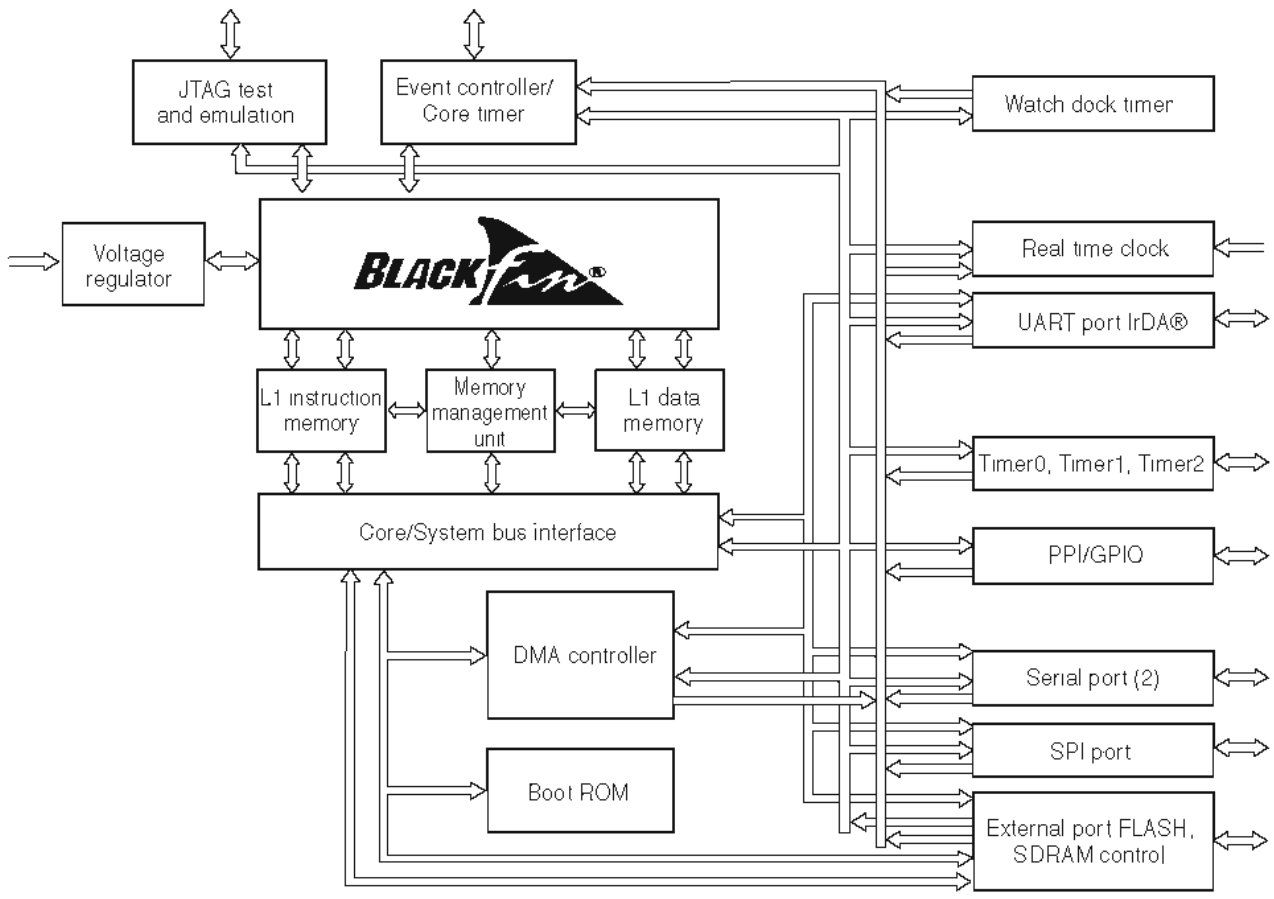
IC31: LC89057W-VF4AD-E (DSP P.C.B.)
Digital audio interface transceiver

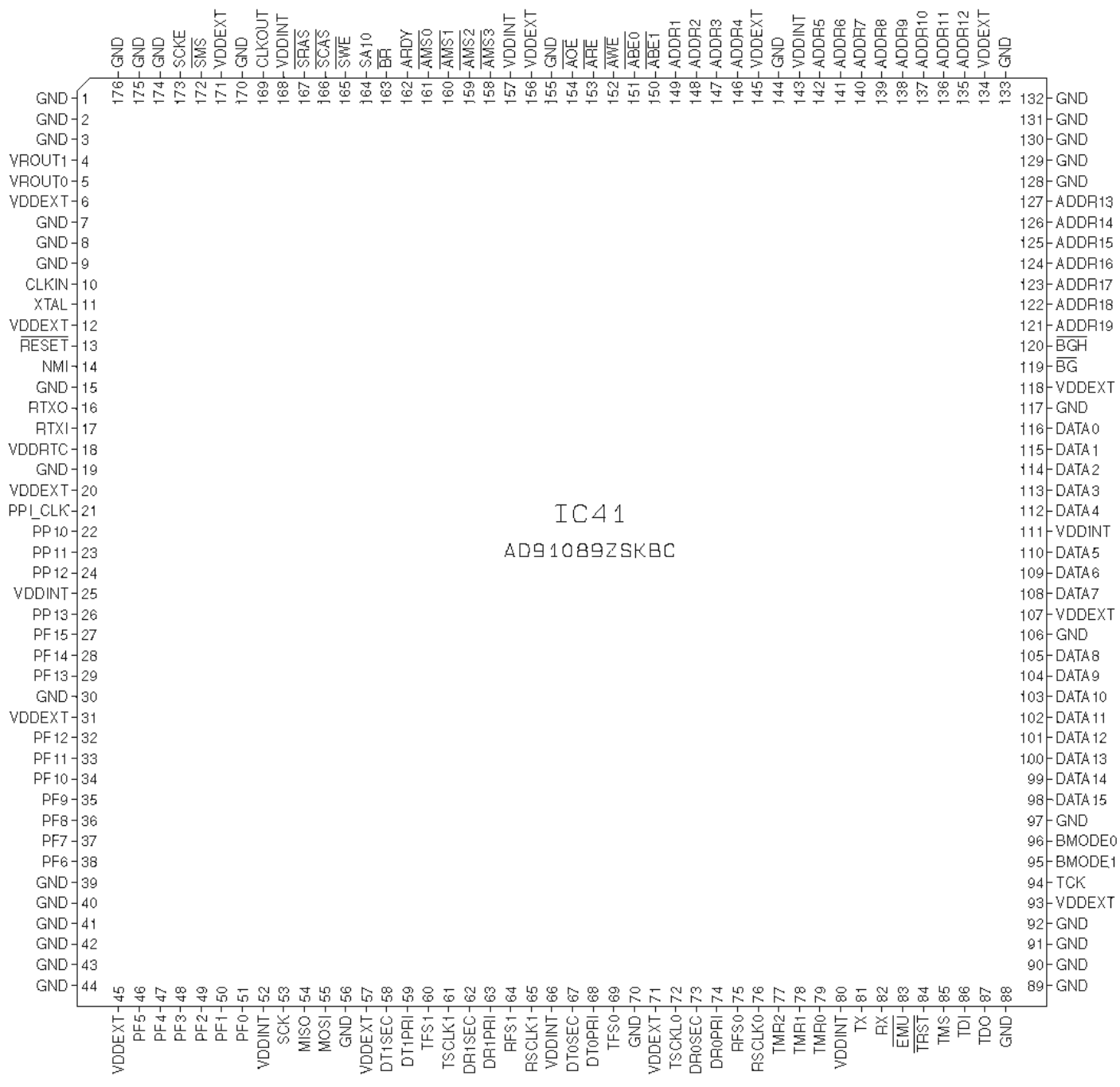


Pin No.	Function Name	I/O	Detail of Function
1	RXOUT	O	Output pin of input bi-phase selection data
2	RX0	Is	Input pin of TTL-compatible digital data
3	RX1	I	Digital data input pin with built-in amplifier that supports coaxial
4	RX2	Is	Input pin of TTL-compatible digital data
5	RX3	Is	Input pin of TTL-compatible digital data
6	DGND		Digital GND
7	DVDD		Digital power supply (3.3 V)
8	RX4	Is	Input pin of TTL-compatible digital data
9	RX5	Is	TTL-compatible digital data / Validity flag input pin for modulation
10	RX6	Is	TTL-compatible digital data / User data input pin for modulation
11	DVDD		Digital power supply for PLL
12	DGND		Digital GND for PLL
13	LPF	O	PLL loop filter connection pin
14	AVDD		Analog power supply for PLL (3.3 V)
15	AGND		Analog GND for PLL
16	RMCK	O	R system clock output pin (256 fs, 512 fs, XIN, VCO)
17	RBCK	O/I	R bit clock input/output pin (64 fs)
18	DGND		Digital GND
19	DVDD		Digital power supply (3.3 V)
20	RLRCK	O/I	R LR clock input/output pin (fs)
21	RDATA	O	Output pin of serial audio data
22	SBCK	O	S bit clock output pin (32 fs, 64 fs, 128 fs) (No connected.)
23	SLRCK	O	S LR clock output pin (fs/2, fs, 2 fs) (No connected.)
24	SDIN	Is	Input pin of serial audio data
25	DGND		Digital GND
26	DVDD		Digital power supply (3.3 V)
27	XMCK	O	Oscillation amplifier output pin
28	XOUT	O	Quartz resonator connection output pin
29	XIN	I	Quartz resonator connection, input pin of external supply clock (24.576 MHz or 12.288 MHz)
30	DVDD		Digital power supply (3.3 V)
31	DGND		Digital GND
32	EMPHA/UO/CD	I/O	Emphasis information / U data output / C data output / Chip address setting pin
33	$\overline{\text{AUDIO}}$/VO	I/O	Non-PCM detection / V flag output / Chip address setting pin
34	$\overline{\text{CKST}}$/PT	I/O	Output of clock switch transitional period signal / Preamble B output / Demodulation master or slave function switch pin
35	$\overline{\text{INT}}$	I/O	Interrupt output for microprocessor (Possible to select an interrupt factor.) / Modulation or general-purpose I/O switch pin
36	RERR	O	PLL clock error, data error flag output
37	DO	O	Microprocessor I/F, read data output pin (3-state)
38	DI	Is	Microprocessor I/F, write data input pin
39	CE	Is	Microprocessor I/F, chip enable input pin
40	CL	Is	Microprocessor I/F, clock input pin"
41	XMODE	Is	System reset input pin
42	DGND		Digital GND
43	DVDD		Digital power supply (3.3 V)
44	PIO0	O	Sport input select
45	PIO1	O	
46	PIO2	O	Audio direct stereo ON
47	PIO3	O	Audio clock select
48	PIOEN	I/O	Modulation data output / General-purpose I/O enable output pin

1) Withstand voltage input/output: I or O = -0.3 to 3.6 V, Is = -0.3 to 5.5 V
2) Pins 32 and 33 are input pins for chip address setting, when pin 41 = "L".
3) Pin 34 is a demodulation function master or an input pin for slave setting, when pin 41 = "L".
4) Pin 35 is a modulation function or an input pin for general-purpose I/O function switch setting, when pin 41 = "L".
5) ON/OFF for all power supplies must be done at the same timing as a latch-up countermeasure.

IC41: AD91089SKBC CPU (DSP P.C.B.)
Microprocessor





Memory Interface

Pin No.	Function Name	I/O	Detail of Function
121	ADDR19	O	Address bus for async/Sync access
122	ADDR18		
123	ADDR17		
124	ADDR16		
125	ADDR15		
126	ADDR14		
127	ADDR13		
135	ADDR12	O	Address bus for async/Sync access
136	ADDR11		
137	ADDR10		
138	ADDR9		
139	ADDR8		
140	ADDR7		
141	ADDR6		
142	ADDR5		
146	ADDR4	O	Address bus for async/Sync access
147	ADDR3		
148	ADDR2		
149	ADDR1		
98	DATA15	I/O	Daea bus for async access
99	DATA14		
100	DATA13		
101	DATA12		
102	DATA11		
103	DATA10		
104	DATA9		
105	DATA8		
108	DATA7	I/O	Daea bus for async access
109	DATA6		
110	DATA5		
112	DATA4	I/O	Daea bus for async access
113	DATA3		
114	DATA2		
115	DATA1		
116	DATA0		
150	ABE1	O	Byte enables/Data masks for async/ Sync access
151	ABE0		
163	BR	I	Bus request (This pin should be pulled HIGH if not used.)
119	BG	O	Bus grant
120	BGH	O	Bus grant hang

Asynchronous memory control

Pin No.	Function Name	I/O	Detail of Function
158	AMS3	O	Banks select
159	AMS2		
160	AMS1		
161	AMS0		
162	ARDY	I	hardware ready control (This pin should be pulled HIGH if not used.)
154	AOE	O	Output enable
153	ARE	O	Read enable
152	AWE	O	Write enable

Synchronous memory control

Pin No.	Function Name	I/O	Detail of Function
167	SRAS	O	Row address strobe
166	SCAS	O	Column address strobe
165	SWE	O	Write enable
173	SCKE	O	Clock enable
169	CLKOUT	O	Clock output
164	SA10	O	A10 pin
172	SMS	O	Bank select

Timers

Pin No.	Function Name	I/O	Detail of Function
79	TMR0	I/O	Timer0
78	TMR1	I/O	Timer1/PPI frame sync1
77	TMR2	I/O	Timer2/PPI frame sync2

PPI port

Pin No.	Function Name	I/O	Detail of Function
22	PPI0	I/O	PPI3-0
23	PPI1		
24	PPI2		
26	PPI3		
21	PPI_CLK	I	PPI clock/External timer reference

Port F:
GPOI/Parallel peripheral interface port/SPI/Timers

Pin No.	Function Name	I/O	Detail of Function
51	PF0	I/O	GPIO/SPI slave select input
50	PF1	I/O	GPIO/SPI slave select enable 1/ Timer alternate clock input
49	PF2	I/O	GPIO/SPI slave select enable 2
48	PF3	I/O	GPIO/SPI slave select enable 3/ PPI frame sync 3
47	PF4	I/O	GPIO/SPI slave select enable 4/ PPI 15
46	PF5	I/O	GPIO/SPI slave select enable 5/ PPI 14
38	PF6	I/O	GPIO/SPI slave select enable 6/ PPI 13
37	PF7	I/O	GPIO/SPI slave select enable 7/ PPI 12
36	PF8	I/O	GPIO/PPI 11
35	PF9	I/O	GPIO/PPI 10
34	PF10	I/O	GPIO/PPI 9
33	PF11	I/O	GPIO/PPI 8
32	PF12	I/O	GPIO/PPI 7
29	PF13	I/O	GPIO/PPI 6
28	PF14	I/O	GPIO/PPI 5
27	PF15	I/O	GPIO/PPI 4

JTAG port

Pin No.	Function Name	I/O	Detail of Function
94	TCK	I	JTAG clock
87	TDO	O	JTAG serial data out
86	TDI	I	JTAG serial data in
85	TMS	I	JTAG mode select
84	TRST	I	JTAG reset (This pin is should be pulled LOW if JTAG is not used.)
83	EMU	O	Emulation output

SPI port

Pin No.	Function Name	I/O	Detail of Function
55	MOSI	I/O	Master out slave in
54	MISO	I/O	Master in slave out (This pin is should be pulled HIGH throug a 4.7 k-ohms resistor if booting via the SPI port.)
53	SCK	I/O	SPI clock

Serial ports

Pin No.	Function Name	I/O	Detail of Function
76	RSCLK0	I/O	SPORT0 receive serial clock
75	RFS0	I/O	SPORT0 receive frame sync
74	DR0PRI	I	SPORT0 receive data primary
73	DR0SEC	I	SPORT0 receive data secondry
72	TSCLKO	I/O	SPORT0 transmit serial clock
69	TFSO	I/O	SPORT0 transmit frame sync
68	DTOPRI	O	SPORT0 transmit data primary
67	DTOSEC	O	SPORT0 transmit data secondary
65	RSCLK1	I/O	SPORT1 receive serial clock
64	RFS1	I/O	SPORT1 receive frame sync
63	DR1PRI	I	SPORT1 receive data primary
62	DR1SEC	I	SPORT1 receive data secondary
61	TSCLK1	I/O	SPORT1 transmit serial clock
60	TFS1	I/O	SPORT1 transmit frame sync
59	DT1PRI	O	SPORT1 transmit data primary
58	DT1SEC	O	SPORT1 transmit data secondary

UART port

Pin No.	Function Name	I/O	Detail of Function
82	RX	I	UART receive
81	TX	O	UART transmit

Real-time clock

Pin No.	Function Name	I/O	Detail of Function
17	RTXI	I	RTC crystal input (This pin should be pulled LOW when not used.)
16	RTXO	O	RTC crystal output

Clock

Pin No.	Function Name	I/O	Detail of Function
10	CLKIN	I	Clock/Crystal input (This pin needs to be at a level or clocking.)
11	XTAL	O	Crystal output

Mode controls

Pin No.	Function Name	I/O	Detail of Function
13	RESET	I	Reset (This pin is always active during core power-on.)
14	NMI	I	Nonmaskable interrypt (This pin should be pulled LOW when not used.)
95	BMODE1	I	Boot mode strap (These pins must be pulled to the state required for the desired boot mode.)
96	BMODE0		

Voltage regulator

Pin No.	Function Name	I/O	Detail of Function
4	VROUT1	O	Extarnal FET drive
5	VROUT0		

Supplies

Pin No.	Function Name	I/O	Detail of Function
6	VDDEXT	P	I/O power supply
12			
20			
31			
45			
57			
71			
93			
107			
118			
134			
145			
156			
171			
25	VDDINT	P	Core power supply
52			
66			
80			
111			
143			
157			
168			
18	VDDRTC	P	Real-time clock power supply

Pin No.	Function Name	I/O	Detail of Function
1	GND	G	External ground
2			
3			
7			
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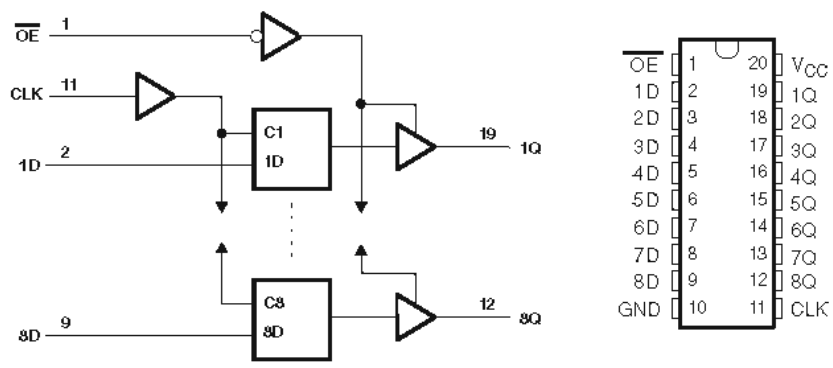
- **Microprocessor extended port**

IC57-IC59: SN74LV574APWR (DSP P.C.B.)
Octal edge-triggered D-type flip-flops with 3-state outputs



IC57

Pin No.	Port Name	Function Name	Detail of Function
1	/OE	/EXPE	Extended port enable
2	1D	D00	Data bus 00
3	2D	D01	Data bus 01
4	3D	D02	Data bus 02
5	4D	D03	Data bus 03
6	5D	D04	Data bus 04
7	6D	D05	Data bus 05
8	7D	D06	Data bus 06
9	8D	D07	Data bus 07
10	GND	DGND	Ground of external
11	LCK	NPGA_EXSTB	Bank select 1
12	8Q	–	–
13	7Q	R2A_CLK	E-Vol control clock
14	6Q	R2A_DATA	E-Vol control data
15	5Q	VIDEO_MTVR1	DVR REC output inhibit
16	4Q	/DAC_CS	DA converter chip select
17	3Q	/ADC_CS	AD converter chip select
18	2Q	/VFD_CS	VFD (Front display) chip select
19	1Q	/DIR_CS	Audio CODEC chip select
20	VCC	VCC	Power supply +3.3V

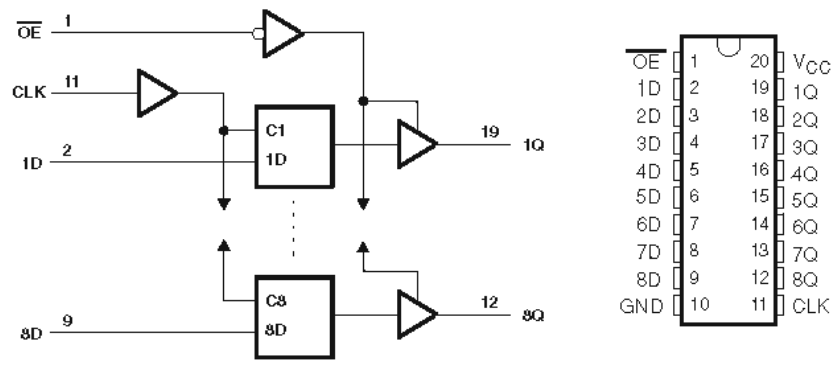
IC58

Pin No.	Port Name	Function Name	Detail of Function
1	/OE	/EXPE	Extended port enable
2	1D	D00	Data bus 00
3	2D	D01	Data bus 01
4	3D	D02	Data bus 02
5	4D	D03	Data bus 03
6	5D	D04	Data bus 04
7	6D	D05	Data bus 05
8	7D	D06	Data bus 06
9	8D	D07	Data bus 07
10	GND	DGND	Ground of external
11	CLK	NPGA_EXSTB	Bank select 1
12	8Q	PRY	Power relay control
13	7Q	XM_POWER	XM power enable
14	6Q	/Z2MT	Zone2 L/R mute
15	5Q	/SBMT	Surround back L/R mute
16	4Q	/SWMT	Subwoofer mute
17	3Q	/CMT	Center mute
18	2Q	/SMT	Surround L/R mute
19	1Q	/FMT	Front L/R mute
20	VCC	VCC	Power supply +3.3V

IC59

Pin No.	Port Name	Function Name	Detail of Function
1	/OE	/EXPE	Extended port enable
2	1D	D00	Data bus 00
3	2D	D01	Data bus 01
4	3D	D02	Data bus 02
5	4D	D03	Data bus 03
6	5D	D04	Data bus 04
7	6D	D05	Data bus 05
8	7D	D06	Data bus 06
9	8D	D07	Data bus 07
10	GND	DGND	Ground of external
11	CLK	NPGA_EXSTB	Bank select 0
12	8Q	ADC_SELECT_C	Selector C
13	7Q	ADC_SELECT_B	Selector B
14	6Q	ADC_SELECT_A	Selector A
15	5Q	SBRY	Speaker relay SB
16	4Q	HPRY	Headphone relay
17	3Q	CSRY	Speaker relay C/SW
18	2Q	MRYB	Speaker relay F/B
19	1Q	MRYA	Speaker relay F/A
20	VCC	VCC	Power supply +3.3V

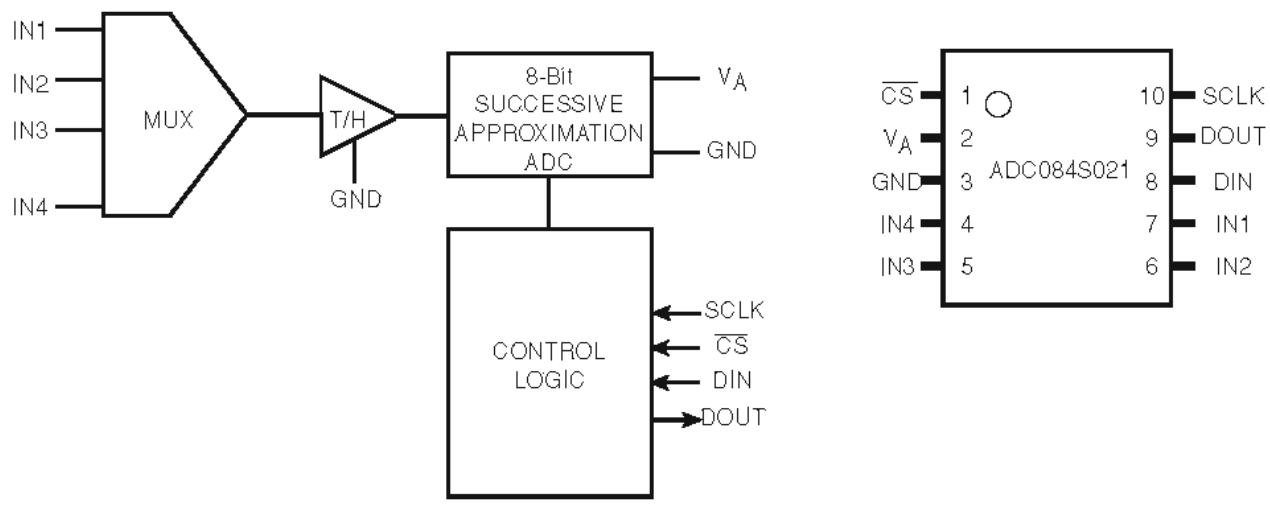
IC56: SN74AHCT574AWR (DSP P.C.B.)
Octal edge-triggered D-type flip-flops with 3-state outputs



Pin No.	Port Name	Function Name	Detail of Function
1	/OE	/EXPE	Extended port enable
2	1D	D00	Data bus 00
3	2D	D01	Data bus 01
4	3D	D02	Data bus 02
5	4D	D03	Data bus 03
6	5D	D04	Data bus 04
7	6D	D05	Data bus 05
8	7D	D06	Data bus 06
9	8D	D07	Data bus 07
10	GND	DGND	Ground of external
11	CLK	NPGA_EXSTB	Bank select 0
12	8Q	5VIDEO_VIA	Video input selector A
13	7Q	5VIDEO_VIB	Video input selector B
14	6Q	5VIDEO_VIC	Video input selector C
15	5Q	/5VIDEO_MTMON	Monitor output inhibit
16	4Q	/5VIDEO_CMON	Component output inhibit
17	3Q	5VIDEO_CBYPASS	Component bypass
18	2Q	5VIDEO_CMP1	Component select 1
19	1Q	5VIDEO_CMP0	Component select 2
20	VCC	VCC	Power supply +5V

- **Microprocessor ADC select port**

IC81: ADC084S021CIMM (DSP P.C.B.)
4-channel, 200 kSPS, 8-bit A/D converter



Pin No.	Port Name	Function Name	Detail of Function
1	/CS	/ADC_CS	CS for microprocessor
2	VA	+3.3S	Power supply +3.3V
3	GND	DGND	Ground of external
4	IN4	ADC_COM2	SPI bus COM (IC83)
5	IN3	ADC_COM1	SPI bus COM (IC82)
6	IN2	KEY1	Key input 1
7	IN1	KEY0	Key input 0
8	DIN	SPIMI	Master output/slave input
9	DOUT	SPIMO	Master input/slave output
10	SCLK	SPISCK	SPI clock

Key detection for A/D port
Key input (A/D) pull-up resistance 10 k-ohms

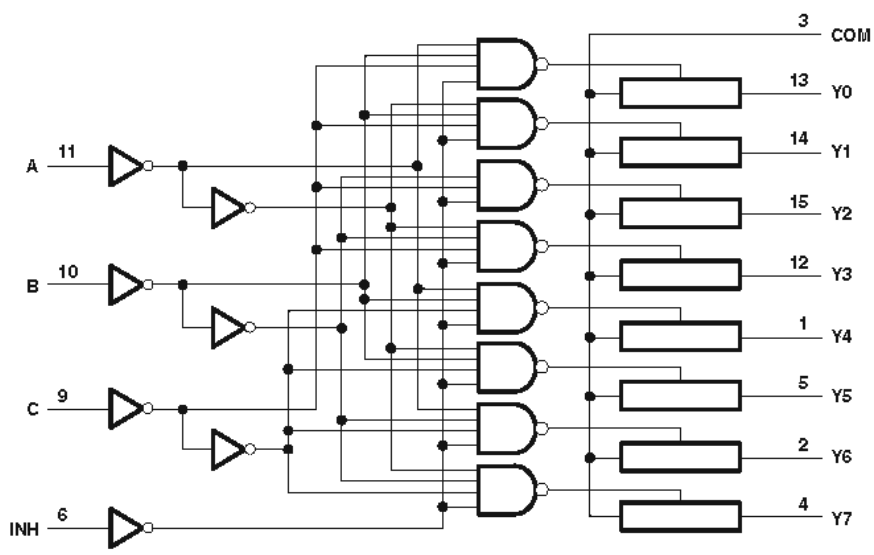
U, C, R, T, K, A, G, E, F, L, J models

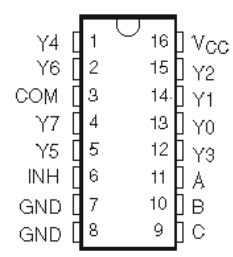
Ohm	0	+ 1.0 k	+ 1.0 k	+ 1.5 k	+ 2.2 k	+ 2.2 k	+ 3.3 k	+ 4.7 k	+ 6.8 k	+ 10.0 k	+ 22.0 k
V	0–0.2	0.2–0.4	0.4–0.7	0.7–1.0	1.0–1.3	1.3–1.6	1.6–1.9	1.9–2.1	2.1–2.4	2.4–2.7	2.7–3.0
KEY INPUT 0 (7 pin)	–	SPEAKERS A/B/OFF	TONE CONTROL	PROGRAM <	PROGRAM >	STRAIGTH EFFECT	A/B/C/D/E	BAND	–	EDIT PRESET/ TUNING	–
KEY INPUT 1 (6 pin)	–	–	AUDIO SELECT	INPUT >	INPUT <	DIRECT	PRESET/ TUNING <	PRESET/ TUNING >	MEMORY	–	INFO TUNING AUTO/ MAN'L

B model

Ohm	0	+ 1.0 k	+ 1.0 k	+ 1.5 k	+ 2.2 k	+ 2.2 k	+ 3.3 k	+ 4.7 k	+ 6.8 k	+ 10.0 k	+ 22.0 k
V	0–0.2	0.2–0.4	0.4–0.7	0.7–1.0	1.1–1.3	1.3–1.6	1.6–1.9	1.9–2.1	2.1–2.4	2.4–2.7	2.7–2.9
KEY INPUT 0 (7 pin)	–	SPEAKERS A/B/OFF	TONE CONTROL	PROGRAM <	PROGRAM >	STRAIGTH EFFECT	–	–	–	–	–
KEY INPUT 1 (6 pin)	–	–	AUDIO SELECT	INPUT >	INPUT <	DIRECT	–	–	–	–	–

IC82, IC83: SN74LV4051APWR (DSP P.C.B.)
8-channel analog multiplexers/demultiplexers





INPUTS				ON CHANNEL
INH	C	B	A	
L	L	L	L	Y0
L	L	L	H	Y1
L	L	H	L	Y2
L	L	H	H	Y3
L	H	L	L	Y4
L	H	L	H	Y5
L	H	H	L	Y6
L	H	H	H	Y7
H	X	X	X	None

IC82

Pin No.	Port Name	Function Name	Detail of Function
1	Y4	/TUNER_TUNED	Tuner tuned detection
2	Y6	XM_ANT	XM antenna
3	COM	ADC_COM1	SPI bus COM (IC81)
4	Y7	DOCK_ID	DOCK detection (Normal DOCK or Bluetooth adapter)
5	Y5	IP_DET	iPod detection
6	INH	DGND	Ground of external
7	GND	DGND	Ground of external
8	GND	DGND	Ground of external
9	C	SELECT C	ADC selecter C
10	B	SELECT B	ADC selecter B
11	A	SELECT A	ADC selecter A
12	Y3	THM	Temperature detection
13	Y0	DEST1	Destination detection
14	Y1	PRV1	Power supply protection 1
15	Y2	PRD	AMP DC protecton
16	Vcc	+3.3S	Power supply +3.3V

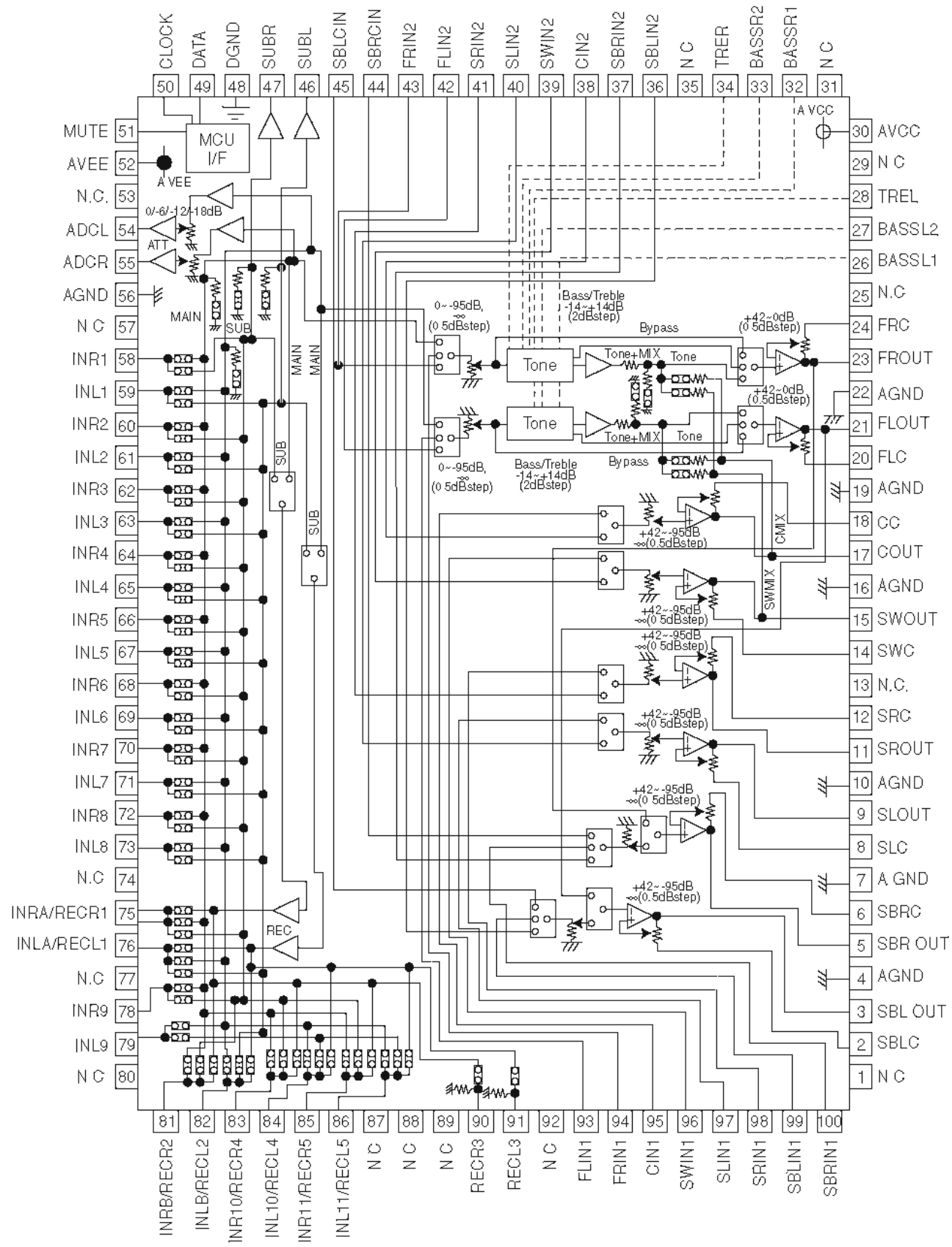
DOCK detection for AD port (IC82 AD converter pin no. 4)
Pull-up resistance 10 k-ohms

DOCK connector	DOCK (Bluetooth)	Reserved	Reserved	DOCK (iPod)	Reserved	(Develop-ment)	No connect
Ohm	0.56k	2.7k	5.6k	10.0k	18.0k	39.0k	–
DKID (Pin no. 21)	5-25	50-60	85-100	120-140	150-170	195-210	245-255

IC83

	Port Name	Function Name	Detail of Function
1	Y4	/TUNER_STEREO	Tuner stereo detection
2	Y6	XM_LINK	XM link
3	COM	ADC_COM2	SPI bus COM (IC81)
4	Y7	/HP_DET	Headphone detect
5	Y5	IP_AP	iPod
6	INH	DGND	Ground of external
7	GND	DGND	Ground of external
8	GND	DGND	Ground of external
9	C	SELECT C	ADC selector C
10	B	SELECT B	ADC selector B
11	A	SELECT A	ADC selector A
12	Y3	PRI	AMP current protection
13	Y0	DEST2	–
14	Y1	PRV2	Power supply protection 2
15	Y2	PLDET	Output voltage of power amplifier detection
16	Vcc	+3.3S	Power supply +3.3V

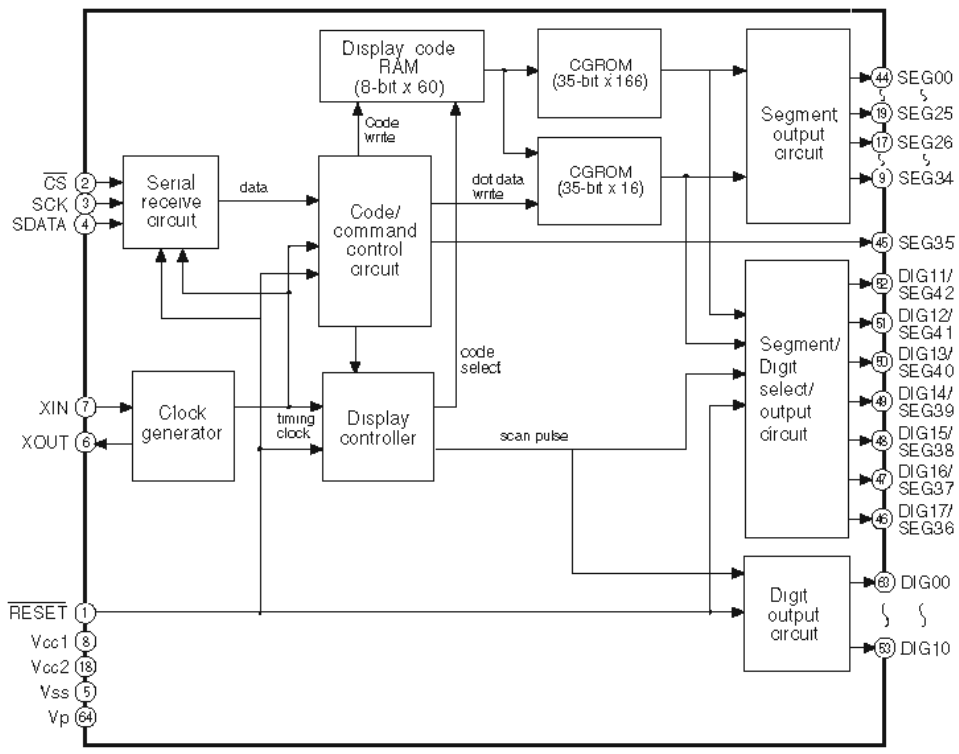
IC401 : R2A15218FP (MAIN P.C.B.)
8 ch electronic volume with 11 input selector and tone control

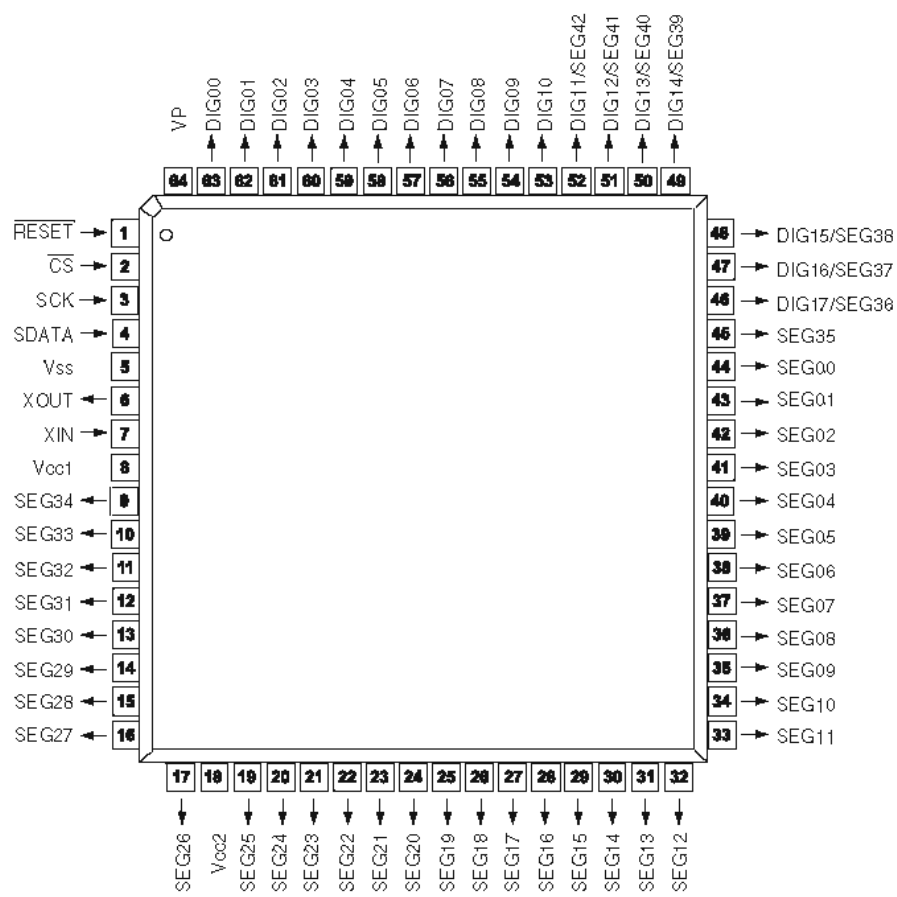


Pin No.	Function Name	Detail of Function
1	NC	
2	SBLC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
3	SBL OUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
4	AGND	Analog ground of internal circuit
5	SBR OUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
6	SBRC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
7	AGND	Analog ground of internal circuit
8	SLC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
9	SLOUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
10	AGND	Analog ground of internal circuit
11	SROUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
12	SRC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
13	NC	
14	SWC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
15	SWOUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
16	AGND	Analog ground of internal circuit
17	COUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
18	CC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
19	AGND	Analog ground of internal circuit
20	FLC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
21	FLOUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
22	AGND	Analog ground of internal circuit
23	FROUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
24	FRC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
25	NC	
26	BASSL1	Frequency characteristic setting pin of L/R channel tone control (Bass)
27	BASSL2	
28	TREL	Frequency characteristic setting pin of L/R channel tone control (Treble)
29	NC	
30	AVCC	Positive power supply to internal circuit
31	NC	
32	BASSR1	Frequency characteristic setting pin of L/R channel tone control (Bass)
33	BASSR2	
34	TRER	Frequency characteristic setting pin of L/R channel tone control (Treble)
35	NC	
36	SBLIN2	Input pin of L/R/C/SW/SL/SR/SBL/SBR channel (Multi IN 1/2)
37	SBRIN2	
38	CIN2	
39	SWIN2	
40	SLIN2	
41	SRIN2	
42	FLIN2	
43	FRIN2	
44	SBRCIN	Input pin for SBL/SBR channel volume
45	SBLCIN	
46	SUBL	Output pin for L/R channel SUB output
47	SUBR	
48	DGND	Digital ground of internal circuit
49	DATA	Input pin of control data
50	CLOCK	Input pin of control clock

Pin No.	Function Name	Detail of Function
51	MUTE	Outside mute control pin
52	AVEE	Negative power supply to internal circuit
53	NC	
54	ADCL	Output pin for L/R channel ADC
55	ADCR	
56	AGND	Analog ground of internal circuit
57	NC	
58	INR1	Input pin of L/R channel (Input selector)
59	INL1	
60	INR2	
61	INL2	
62	INR3	
63	INL3	
64	INR4	
65	INL4	
66	INR5	
67	INL5	
68	INR6	
69	INL6	
70	INR7	
71	INL7	
72	INR8	
73	INL8	
74	NC	
75	INRA/RECR1	Input pin of L/R channel (Input selector) / Output pin for L/R channel REC output
76	INLA/RECL1	
77	NC	
78	INR9	Input pin of L/R channel (Input selector)
79	INL9	
80	NC	
81	INRB/RECR2	Input pin of L/R channel (Input selector) / Output pin for L/R channel REC output
82	INLB/RECL2	
83	INR10/RECR4	
84	INL10/RECL4	
85	INR11/RECR5	
86	INL11/RECL5	
87	NC	
88	NC	
89	NC	
90	RECR3	Output pin for L/R channel REC output
91	RECL3	
92	NC	
93	FLIN1	Input pin of L/R/C/SW/SL/SR/SBL/SBR channel (Multi IN 1/2)
94	FRIN1	
95	CIN1	
96	SWIN1	
97	SLIN1	
98	SRIN1	
99	SBLIN1	
100	SBRIN1	

IC603: M66003-0131FP-R (OPERATION P.C.B.)
18 digit 5x7 segment VFD controller/driver



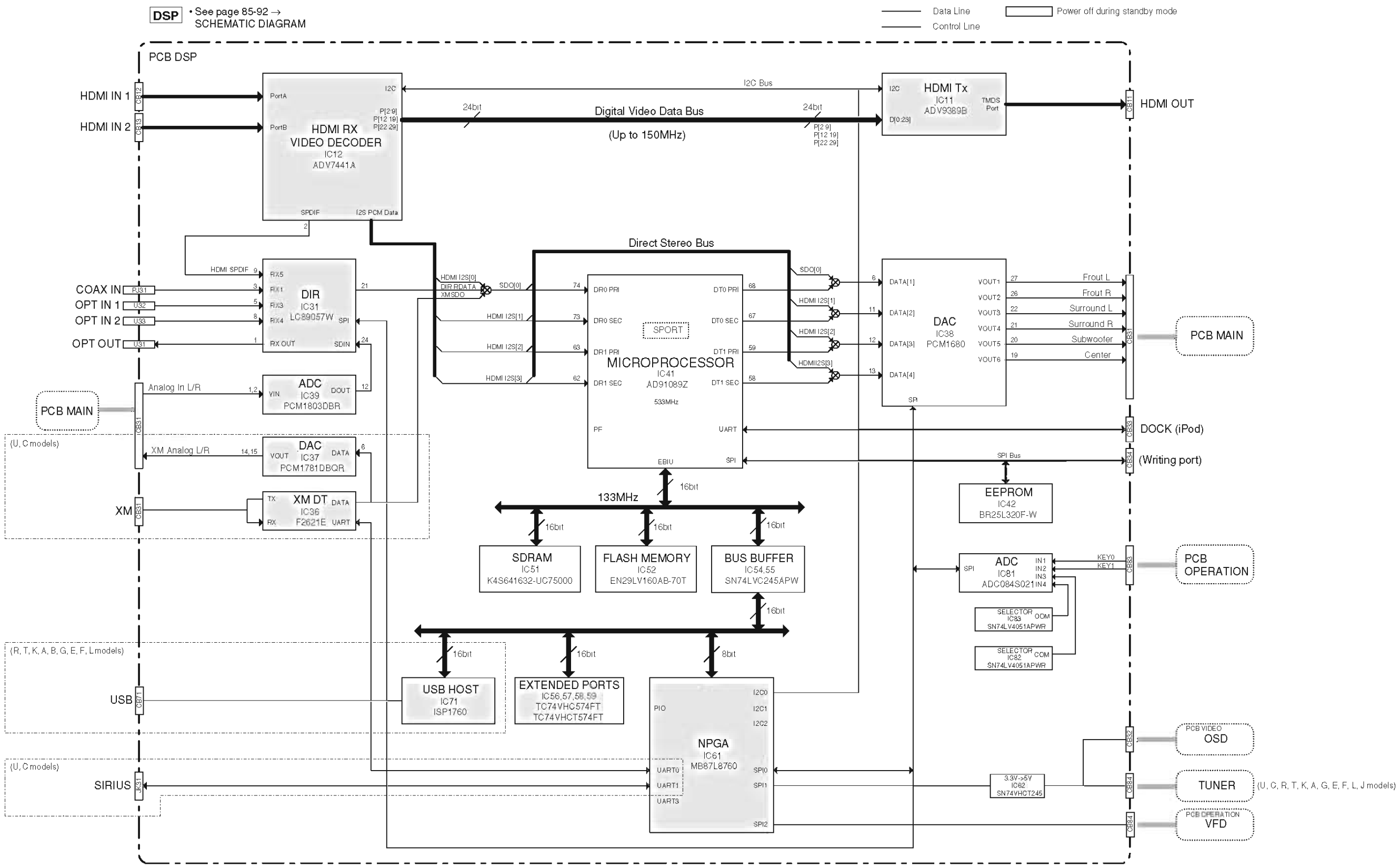


Pin No.	Port Name	Function Name	I/O	Detail of Function
1	/RESET	$\overline{\text{Reset}}$	Reset input	When "L", M66003 is initialized
2	/CEFL	$\overline{\text{CS}}$	Chip select input	When "L", communication with the MCU is possible When "H", any instruction from the MCU is neglected
3	CKFL	SCK	Shift clock input	Serial input data is taken and shifted by the positive edge of SCK
4	DTFL	SDATA	Serial data input	
5	VSS	Vss		GND (0V)
6	XOUT	XOUT	Clock output	When use as a CR oscillator, connect external resistor and capacitor / When use an external clock, input external clock to XIN, and XOUT must be opened
7	XIN	XIN	Clock input	
8	VDD	Vcc1		Positive power supply for internal logic
9	P1I	SEG34	Segment output	Positive power supply for DIG and SEG outputs
10	P2	SEG33	Segment output	
11	P3	SEG32	Segment output	
12	P4	SEG31	Segment output	
13	P5	SEG30	Segment output	
14	P6	SEG29	Segment output	
15	P7	SEG28	Segment output	
16	P8	SEG27	Segment output	
17	P9	SEG26	Segment output	
18	VDD	Vcc2		
19	P10	SEG25	Segment output	Connect to segment (anode) pins of VFD
20	P11	SEG24	Segment output	
21	P12	SEG23	Segment output	
22	P13	SEG22	Segment output	
23	P14	SEG21	Segment output	
24	P15	SEG20	Segment output	
25	P16	SEG19	Segment output	
26	P17	SEG18	Segment output	
27	P18I	SEG17	Segment output	
28	P19	SEG16	Segment output	
29	P20	SEG15	Segment output	
30	P21	SEG14	Segment output	
31	P22	SEG13	Segment output	
32	P23	SEG12	Segment output	
33	P24	SEG11	Segment output	
34	P25	SEG10	Segment output	
35	P26	SEG09	Segment output	
36	P27	SEG08	Segment output	
37	P28	SEG07	Segment output	
38	P29	SEG06	Segment output	
39	P30	SEG05	Segment output	
40	P31	SEG04	Segment output	
41	P32	SEG03	Segment output	
42	P33	SEG02	Segment output	
43	P34	SEG01	Segment output	
44	P35	SEG00	Segment output	
45	P36	SEG35	Segment output	
46	P37	DIG17/SEG36	Segment output	
47	G17I	DIG16/SEG37	Digit output	Connect to digit (grid) pins of VFD
48	G16I	DIG15/SEG38	Digit output	
49	G15I	DIG14/SEG39	Digit output	
50	G14	DIG13/SEG40	Digit output	
51	G13	DIG12/SEG41	Digit output	
52	G12	DIG11/SEG42	Digit output	
53	G11	DIG10	Digit output	
54	G10	DIG09	Digit output	
55	G9	DIG08	Digit output	
56	G8	DIG07	Digit output	
57	G7	DIG06	Digit output	
58	G6	DIG05	Digit output	
59	G5	DIG04	Digit output	
60	G4	DIG03	Digit output	
61	G3	DIG02	Digit output	
62	G2	DIG01	Digit output	
63	G1	DIG00	Digit output	
64	VP	Vp		Negative power supply to pull down

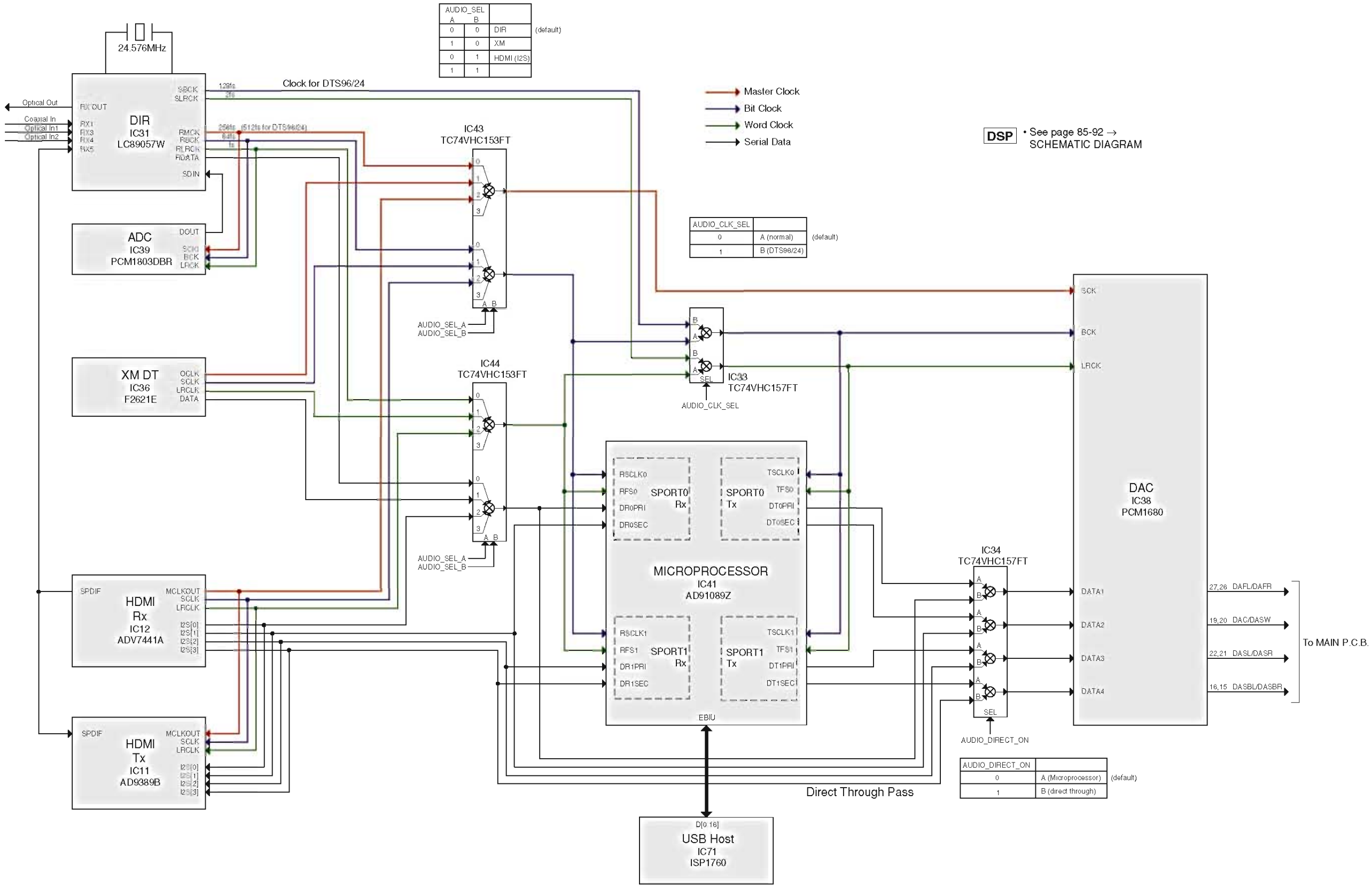
MEMO

■ BLOCK DIAGRAMS

AUDIO (DIGITAL) SECTION BLOCK DIAGRAM



DSP CONTROL SECTION BLOCK DIAGRAM

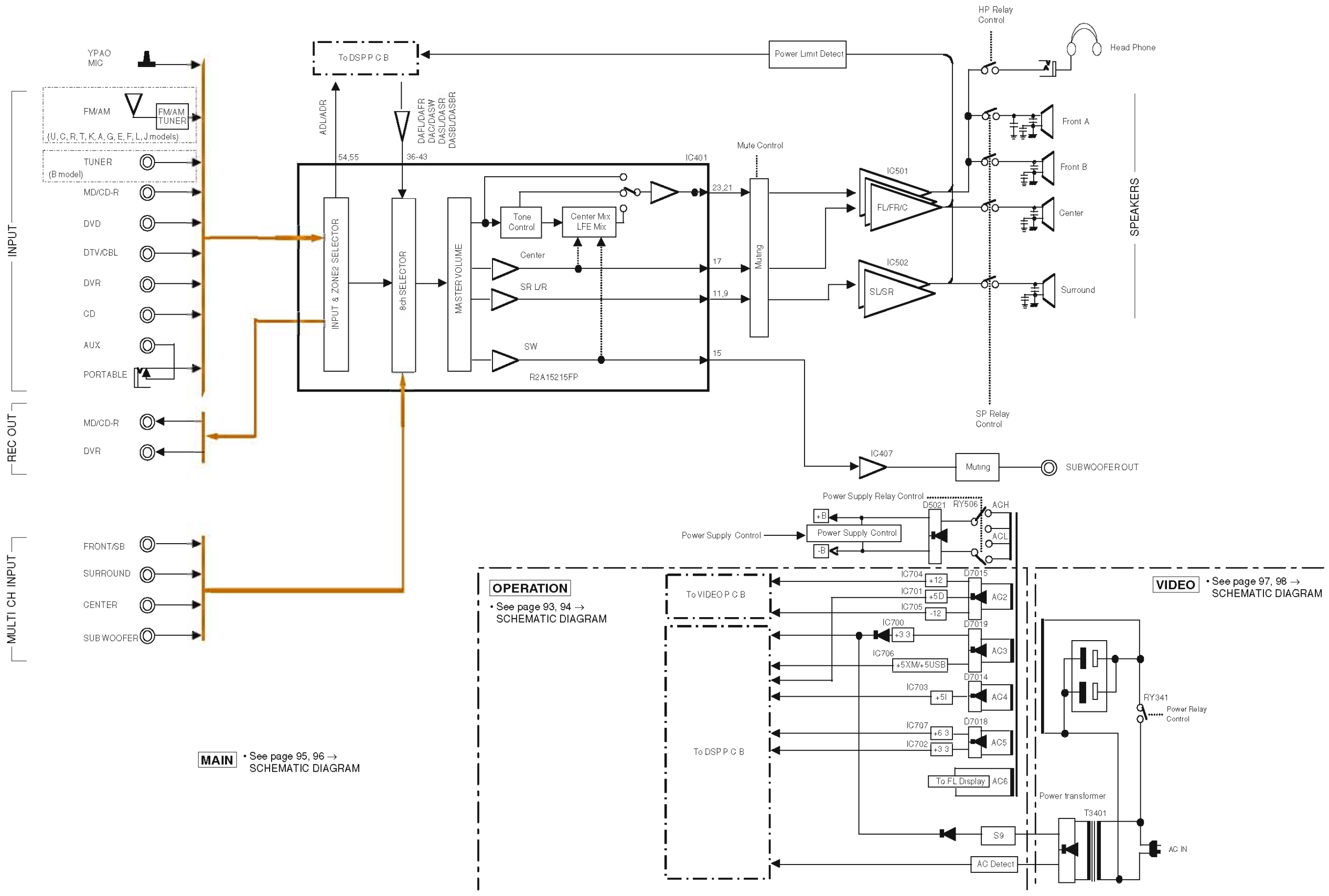


AUDIO_SEL A	B		
0	0	DIR	(default)
1	0	XM	
0	1	HDMI (I2S)	
1	1		

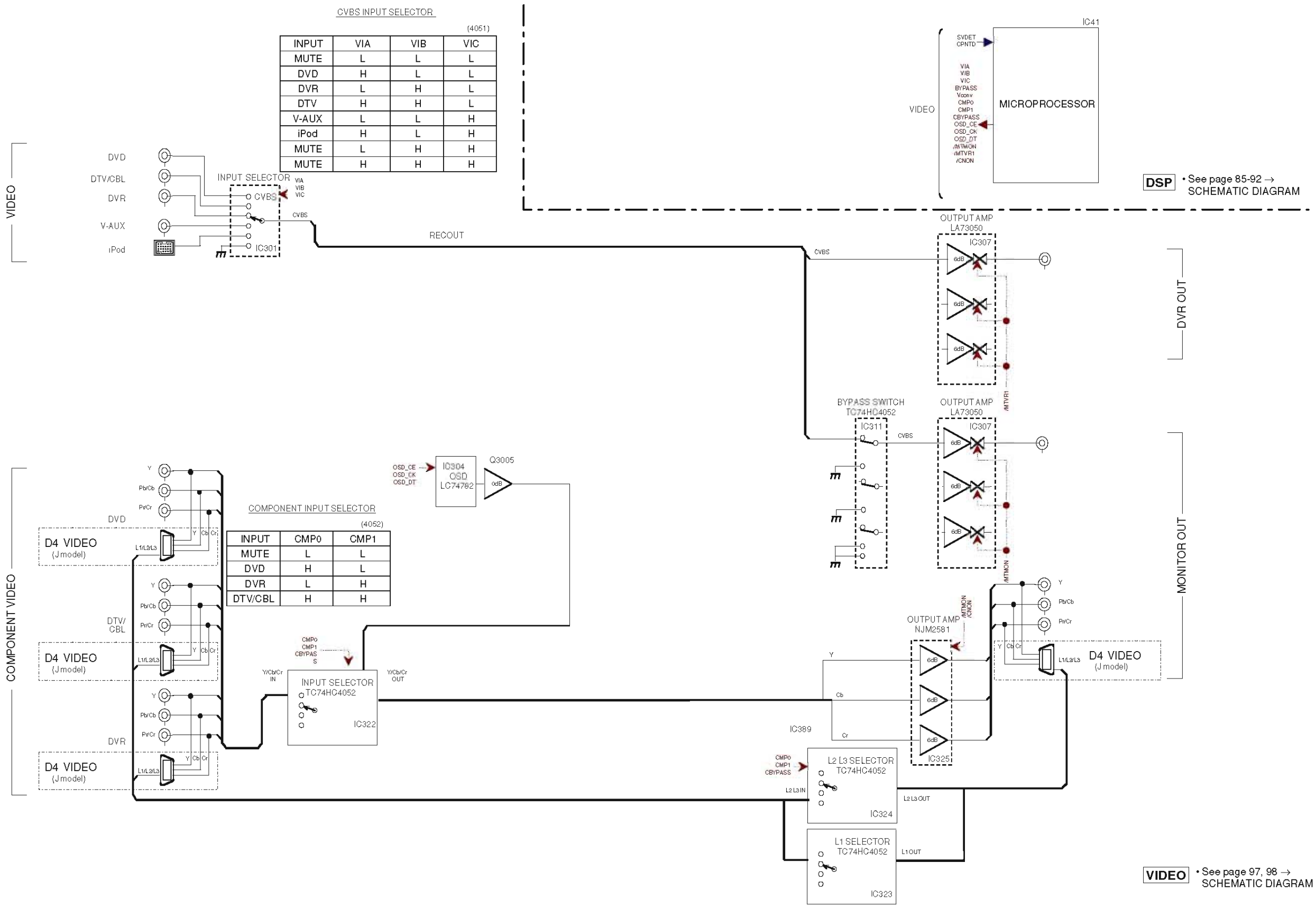
AUDIO_CLK_SEL		
0	A (normal)	(default)
1	B (DTS96/24)	

AUDIO_DIRECT_ON		
0	A (Microprocessor)	(default)
1	B (direct through)	

AUDIO (ANALOG) / POWER SUPPLY SECTION BLOCK DIAGRAM



VIDEO SECTION BLOCK DIAGRAM

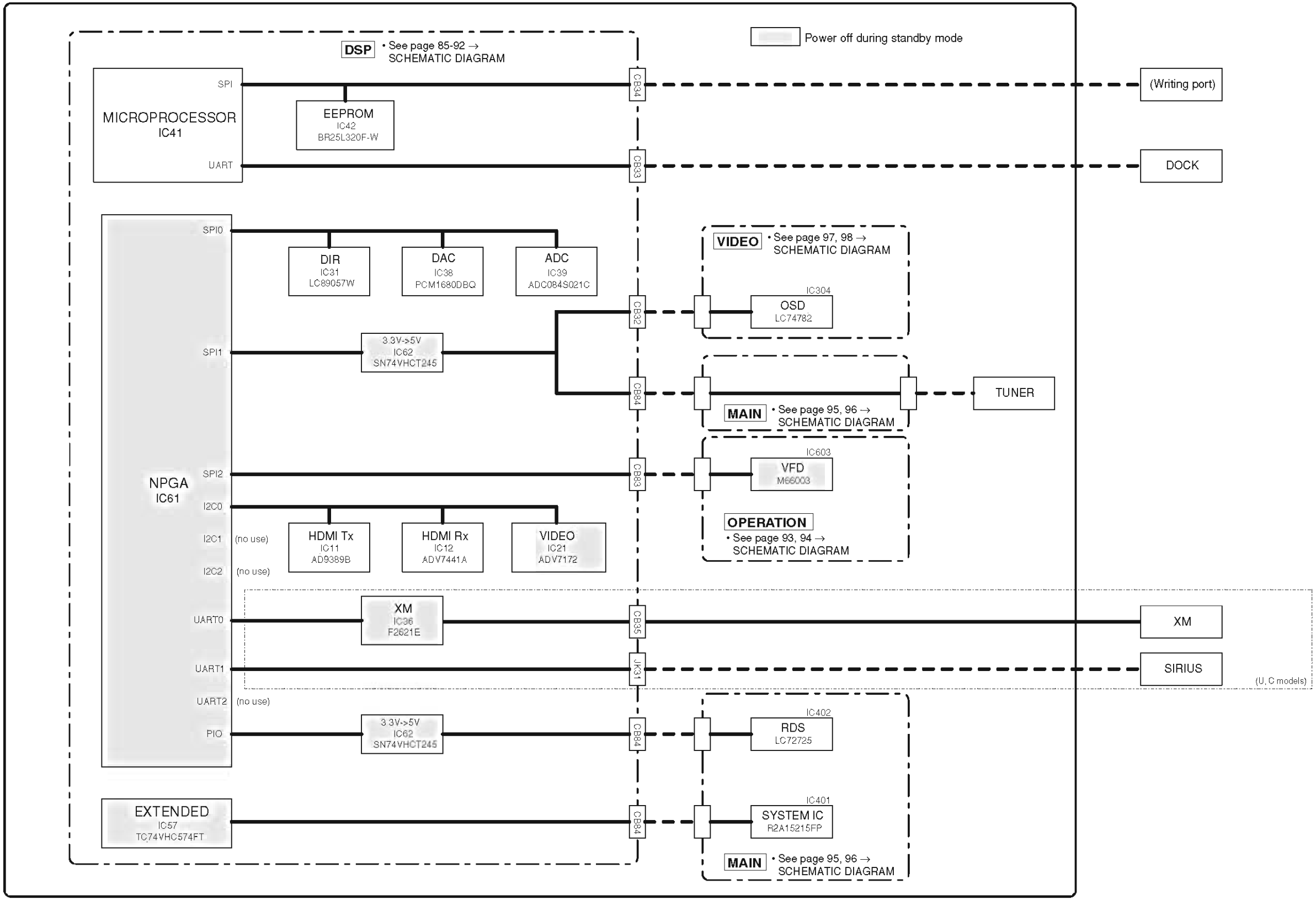


CVBS INPUT SELECTOR

(4051)

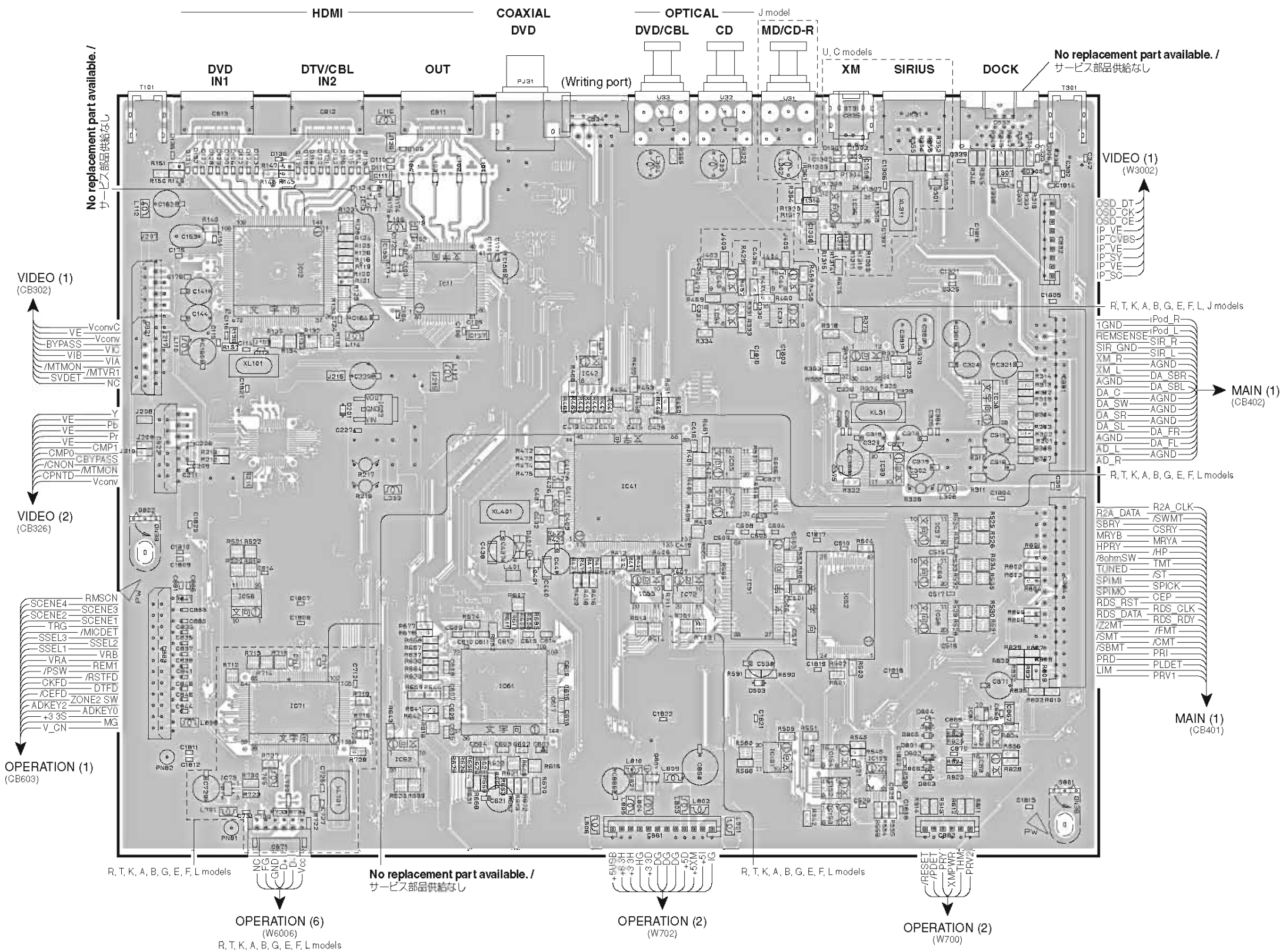
INPUT	VIA	VIB	VIC
MUTE	L	L	L
DVD	H	L	L
DVR	L	H	L
DTV	H	H	L
V-AUX	L	L	H
iPod	H	L	H
MUTE	L	H	H
MUTE	H	H	H

CONTROL SECTION BLOCK DIAGRAM



■ PRINTED CIRCUIT BOARDS

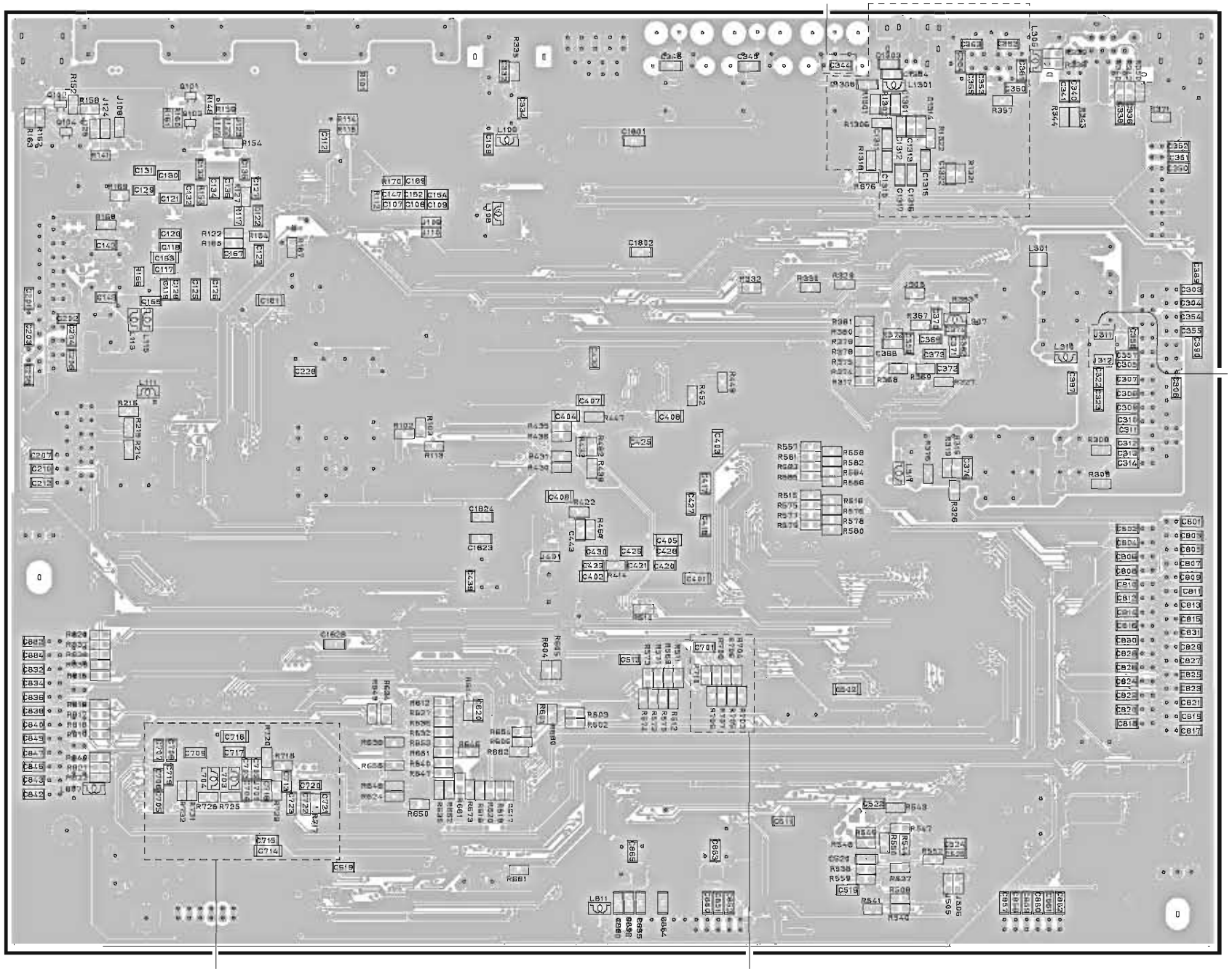
DSP P.C.B. (Side A)



- **Semiconductor Location**

Ref no.	Location	Ref no.	Location
D109	E2	IC12	D3
D110	D2	IC13	D3
D111	D2	IC21	D4
D112	D2	IC22	D4
D113	D2	IC31	G3
D114	D2	IC33	G3
D115	D2	IC34	F3
D116	D2	IC36	G3
D117	D2	IC37	H3
D118	D2	IC38	H4
D119	D2	IC39	G4
D120	D2	IC41	F4
D121	D2	IC42	F3
D122	D2	IC43	F3
D123	D2	IC44	G3
D124	D2	IC51	G5
D125	D2	IC52	G5
D126	D2	IC53	F5
D127	C2	IC54	F4
D128	C2	IC55	F4
D129	C2	IC56	D5
D130	D2	IC57	H4
D131	C2	IC58	H5
D132	C2	IC59	H5
D135	C2	IC61	E5
D136	D2	IC62	E6
D201	D4	IC71	D5
D305	H2	IC72	F5
D306	H2	IC81	H5
D401	E4	IC82	H6
D503	G5	IC83	H6
D801	H6	IC151	G6
D802	H6	IC152	G6
D803	H6	IC153	G6
D804	H6	IC154	G6
D805	H6	IC155	G6
D806	H6	Q301	H2
D1301	G2	Q401	E5
D1302	G2	Q801	F6
IC11	E3		

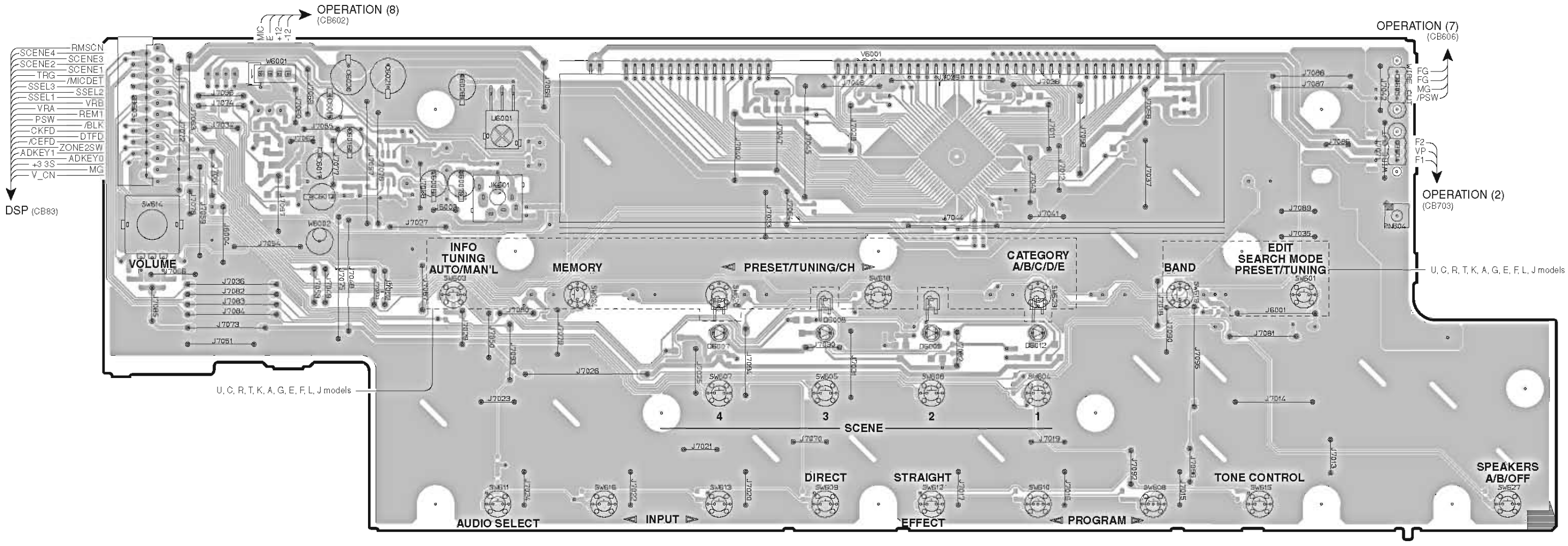
DSP P.C.B. (Side B)



- **Semiconductor Location**

Ref no.	Location
D1303	G2
Q101	D2
Q102	C2
Q103	D2
Q104	C2

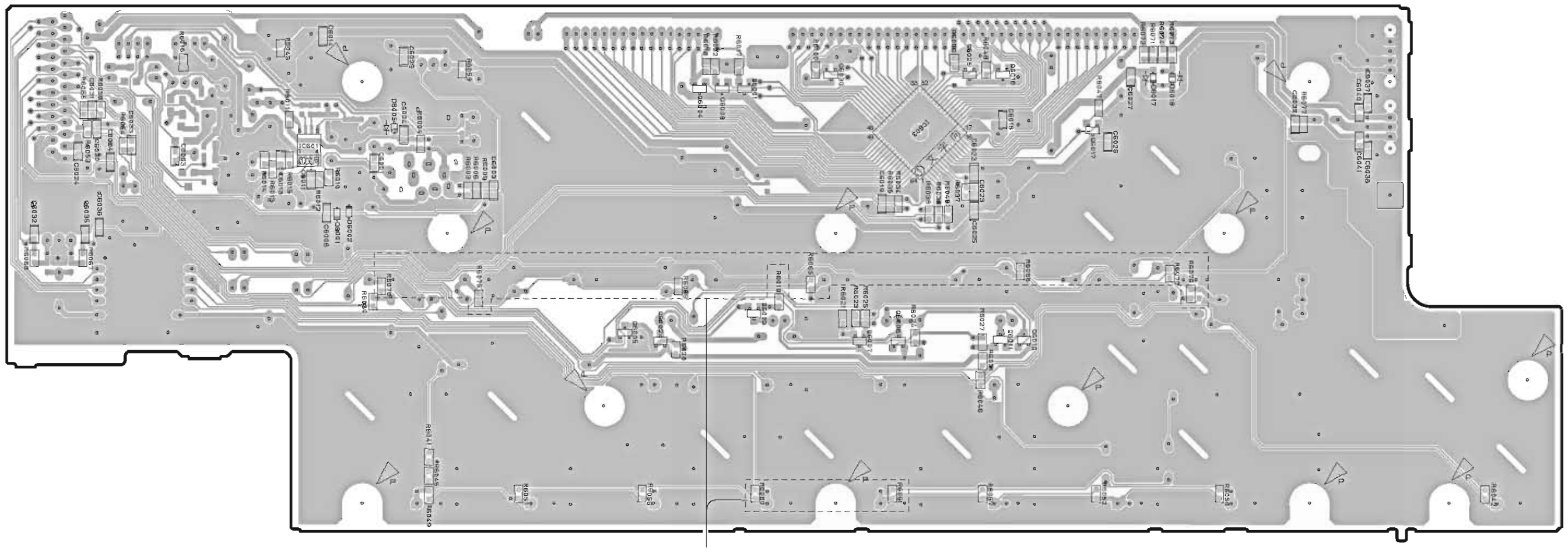
OPERATION (1) P.C.B. (Side A)



- **Semiconductor Location**

Ref no.	Location
D6007	E4
D6008	F4
D6009	G4
D6012	G4

OPERATION (1) P.C.B. (Side B)

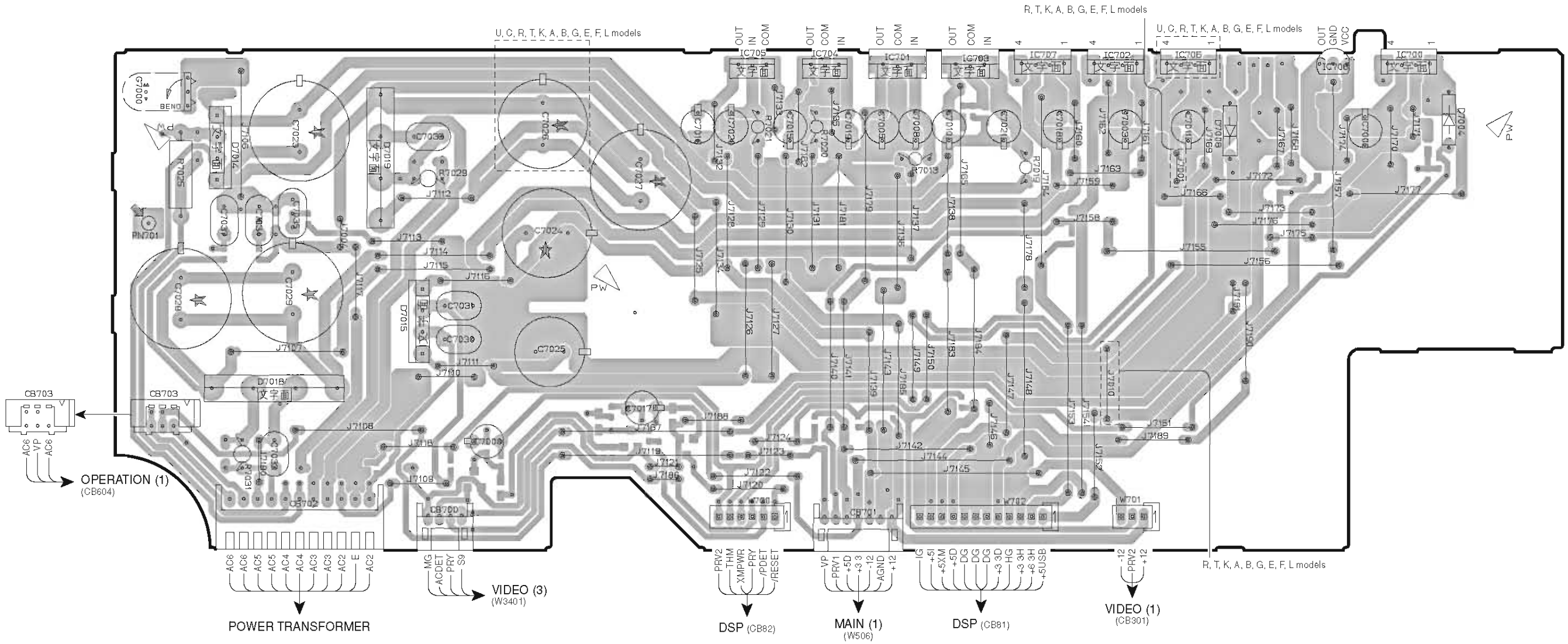


U, C, R, T, K, A, G, E, F, L, J models

- **Semiconductor Location**

Ref no.	Location	Ref no.	Location	Ref no.	Location
D6001	C4	Q6003	F4	Q6018	G3
D6002	C4	Q6004	E3	Q6029	G3
D6005	D3	Q6005	E4	Q6030	F3
D6017	H3	Q6006	G4		
D6018	H3	Q6007	F4		
IC601	C3	Q6008	E3		
IC603	G3	Q6010	G4		
Q6001	F3	Q6011	G4		
Q6002	E4	Q6017	H3		

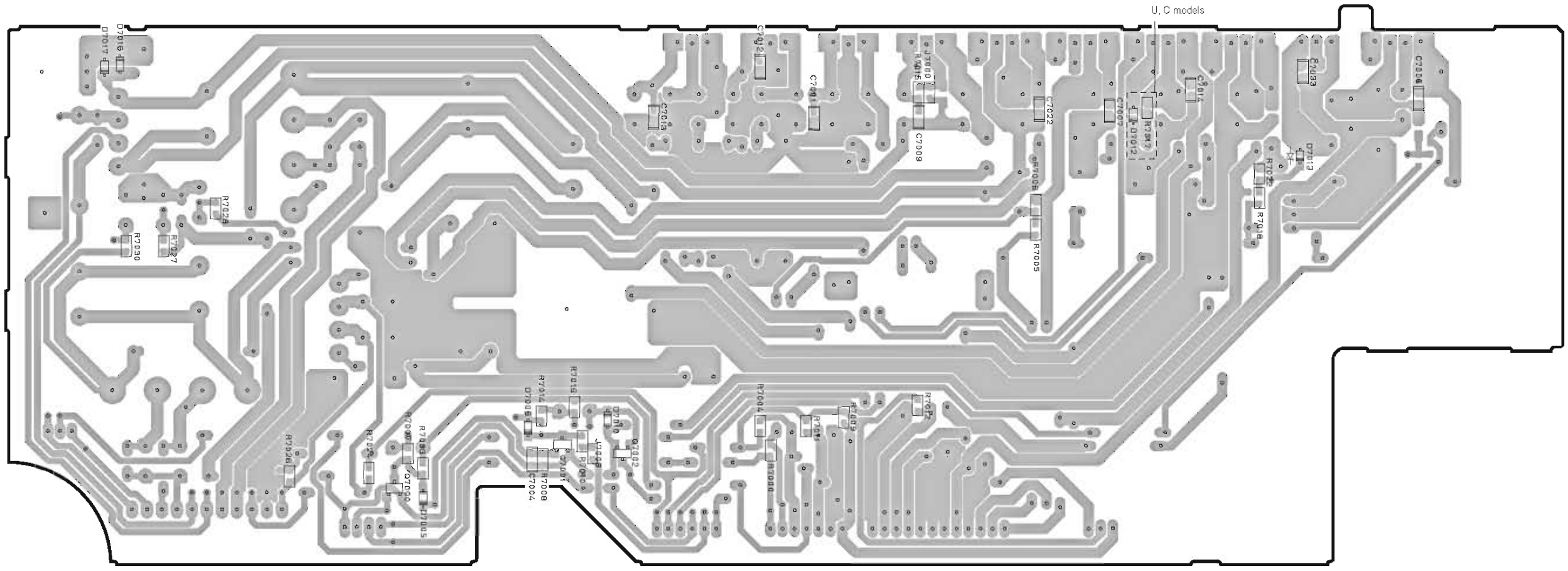
OPERATION (2) P.C.B. (Side A)



- **Semiconductor Location**

Ref no.	Location	Ref no.	Location
D7004	I3	IC702	H2
D7008	H3	IC703	G2
D7014	B3	IC704	F2
D7015	C4	IC705	E2
D7018	C4	IC706	H2
D7019	C3	IC707	G2
IC700	I2	IC708	I2
IC701	F2		

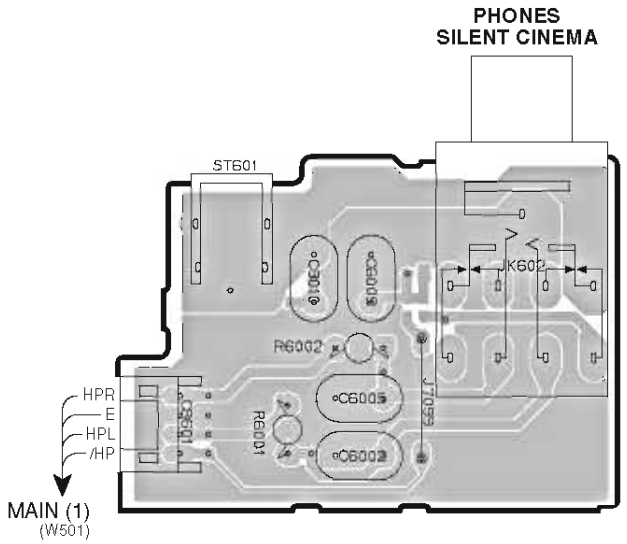
OPERATION (2) P.C.B. (Side B)



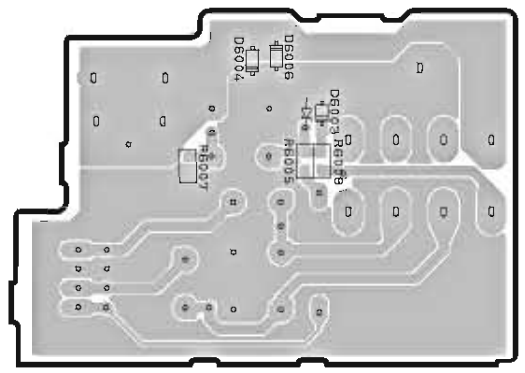
- **Semiconductor Location**

Ref no.	Location	Ref no.	Location
D7005	D5	D7016	B3
D7006	D4	D7017	B3
D7010	E4	Q7000	D5
D7012	H3	Q7001	E5
D7013	I3	Q7002	E5

OPERATION (3) P.C.B. (Side A)

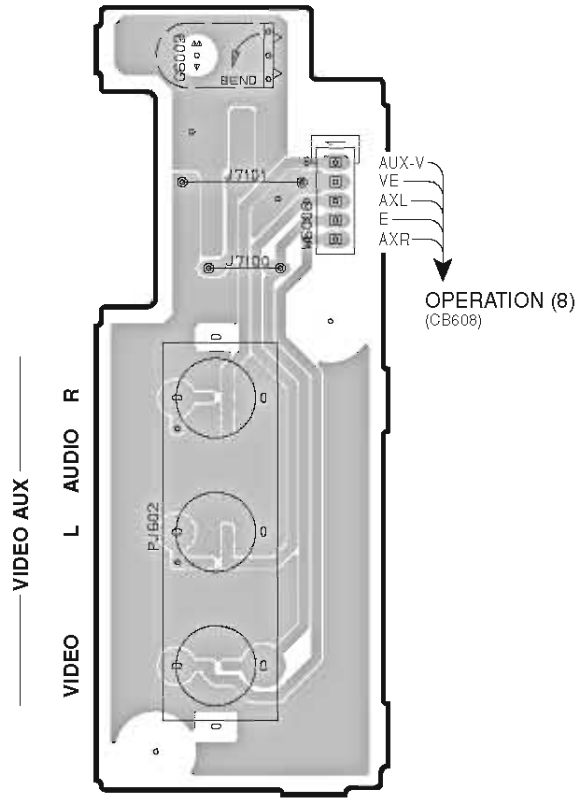


OPERATION (3) P.C.B. (Side B)



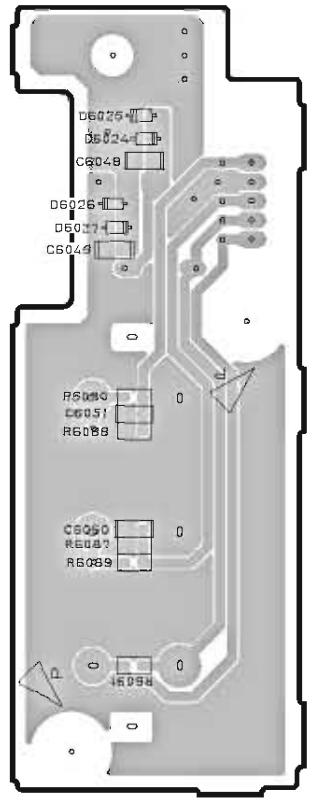
OPERATION (4) P.C.B. (Side A)

R, T, K, A, B, G, E, F, L models



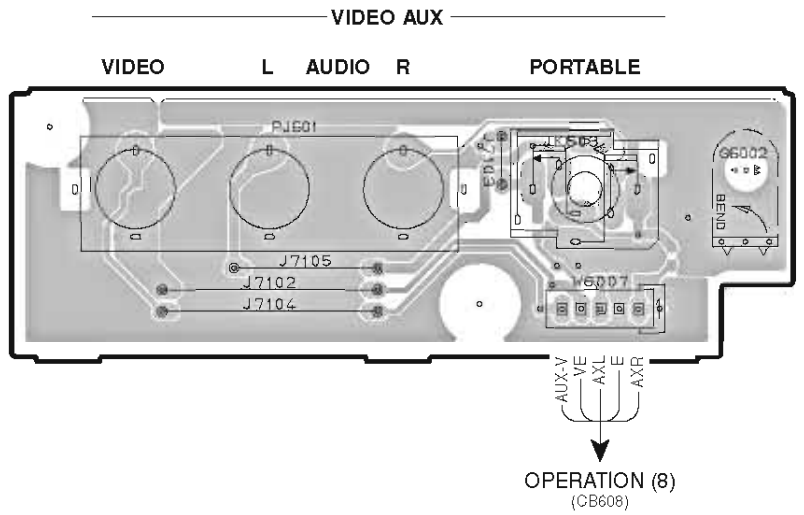
OPERATION (4) P.C.B. (Side B)

R, T, K, A, B, G, E, F, L models



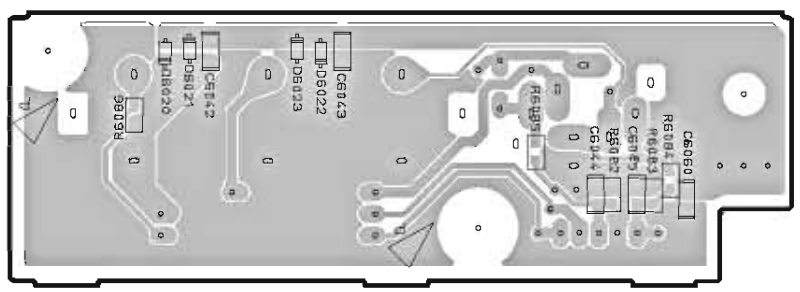
OPERATION (5) P.C.B. (Side A)

U, C, J models



OPERATION (5) P.C.B. (Side B)

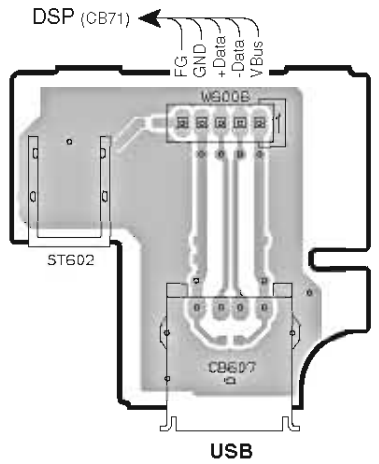
U, C, J models



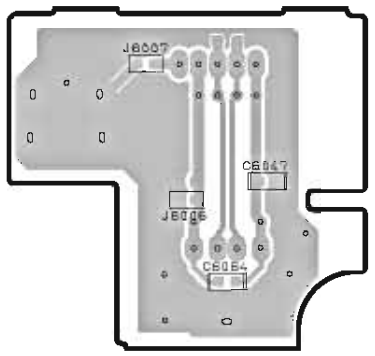
- **Semiconductor Location**

Ref no.	Location	Ref no.	Location
D6003	E2	D6023	F5
D6004	E2	D6024	I2
D6006	E2	D6025	I2
D6020	F5	D6026	I2
D6021	F5	D6027	I2
D6022	F5		

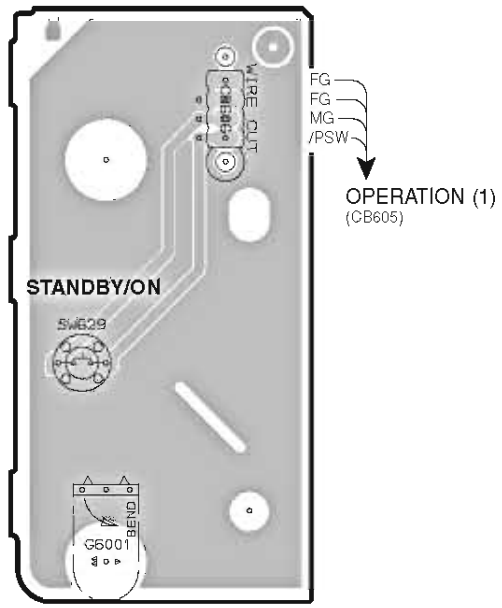
OPERATION (6) P.C.B. (Side A)
R, T, K, A, B, G, E, F, L models



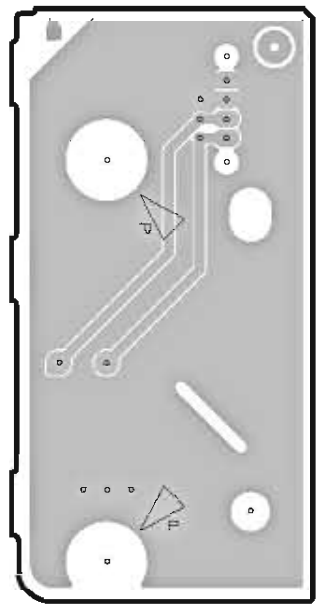
OPERATION (6) P.C.B. (Side B)
R, T, K, A, B, G, E, F, L models



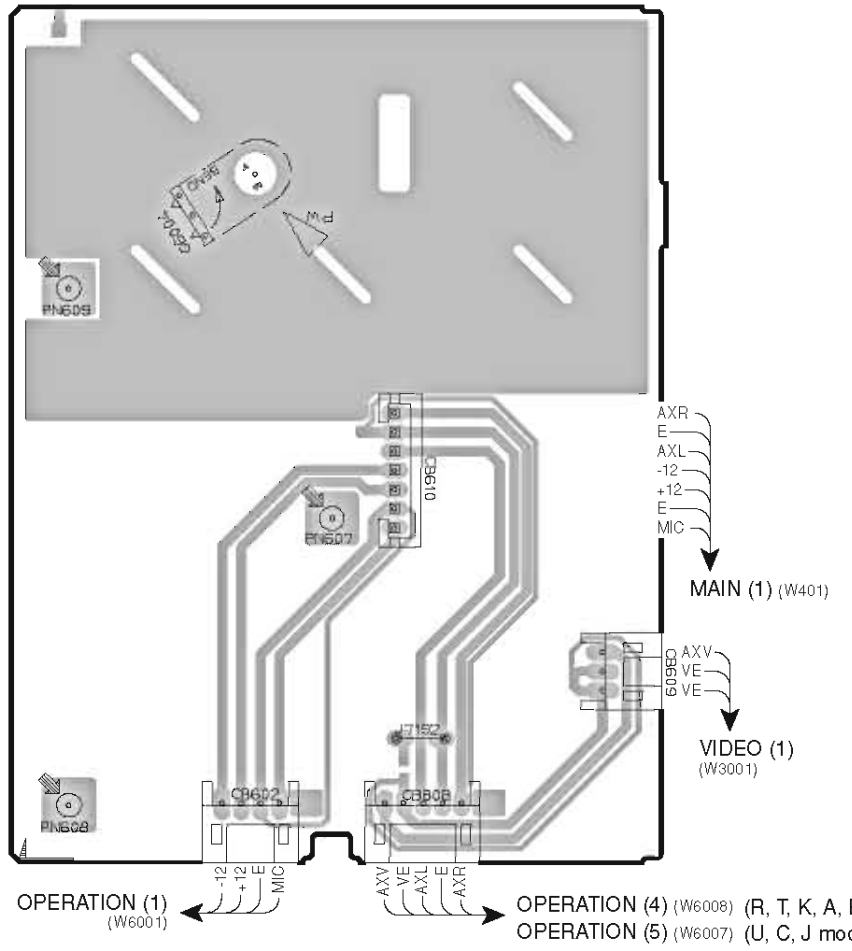
OPERATION (7) P.C.B. (Side A)



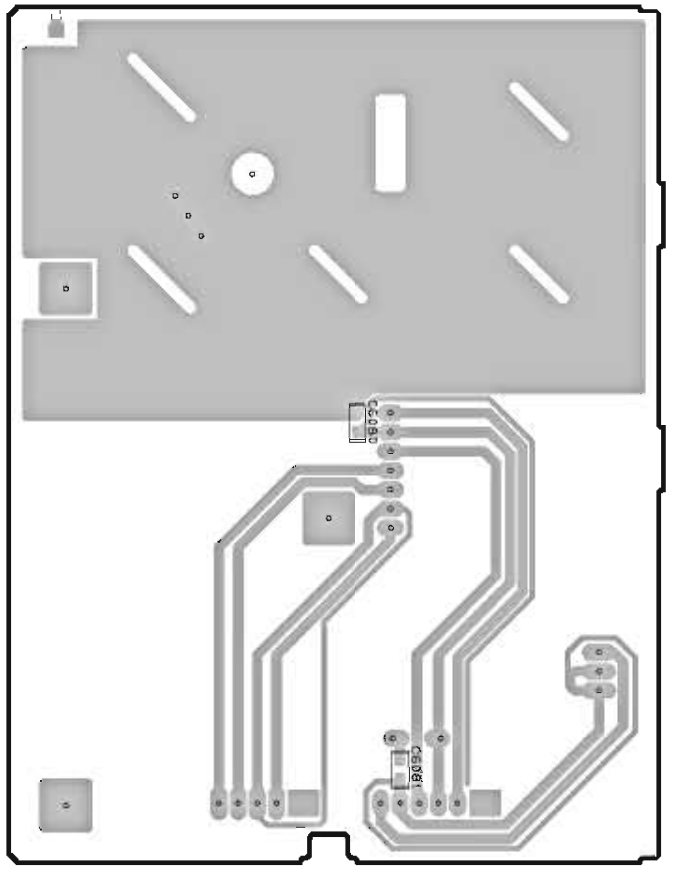
OPERATION (7) P.C.B. (Side B)



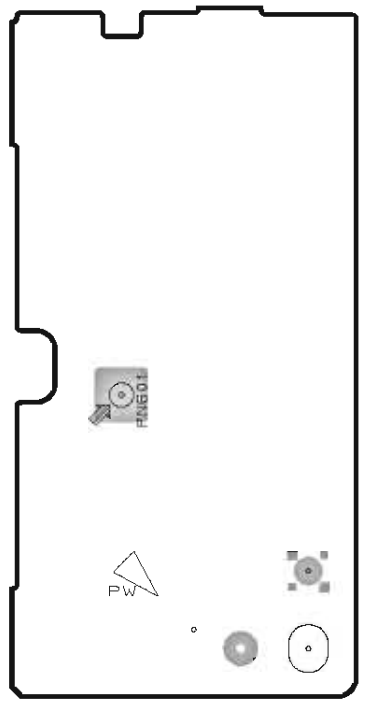
OPERATION (8) P.C.B. (Side A)



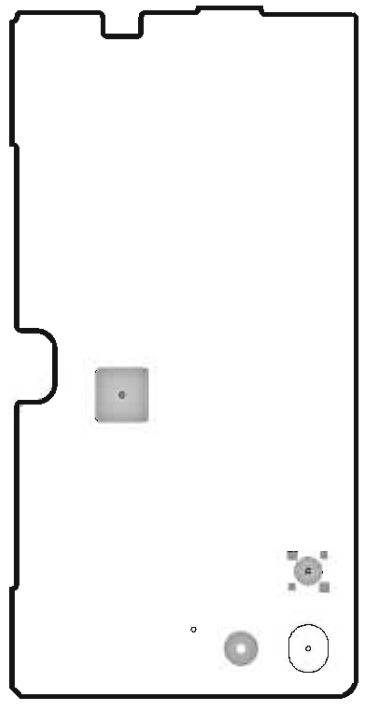
OPERATION (8) P.C.B. (Side B)



OPERATION (9) P.C.B.
(Side A)



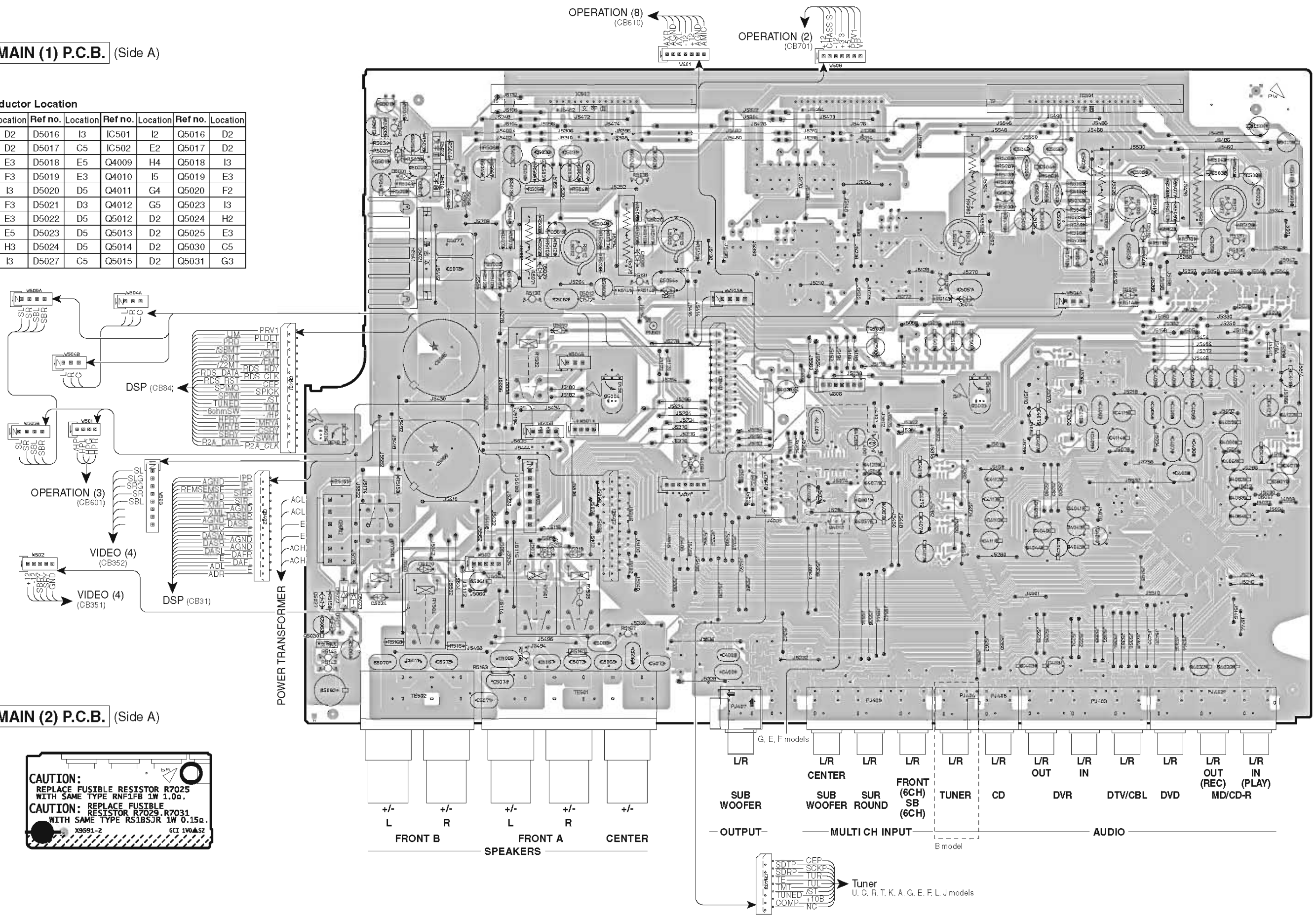
OPERATION (9) P.C.B.
(Side B)



MAIN (1) P.C.B. (Side A)

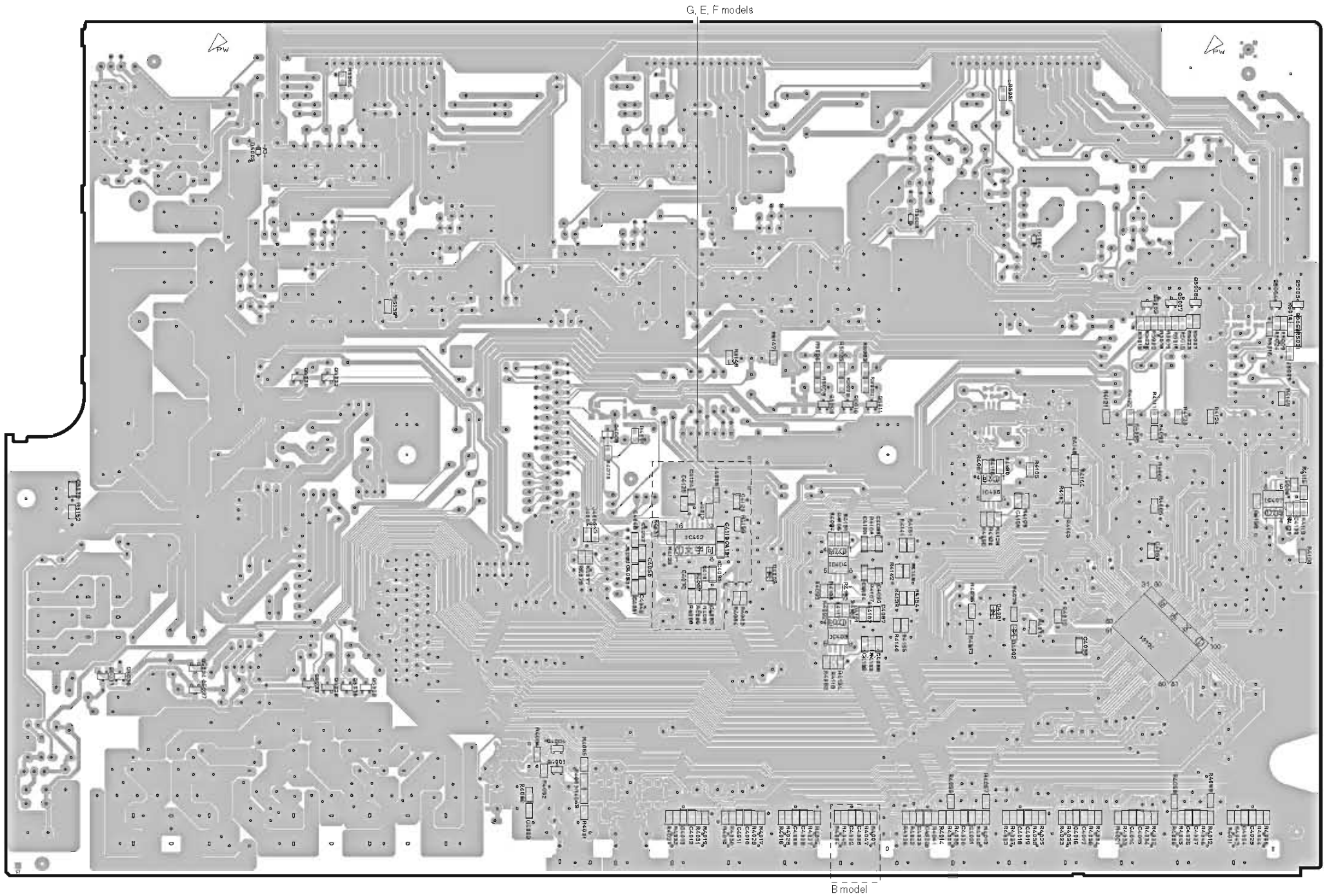
- **Semiconductor Location**

Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location
D5001	D2	D5016	I3	IC501	I2	Q5016	D2
D5002	D2	D5017	C5	IC502	E2	Q5017	D2
D5005	E3	D5018	E5	Q4009	H4	Q5018	I3
D5006	F3	D5019	E3	Q4010	I5	Q5019	E3
D5010	I3	D5020	D5	Q4011	G4	Q5020	F2
D5011	F3	D5021	D3	Q4012	G5	Q5023	I3
D5012	E3	D5022	D5	Q5012	D2	Q5024	H2
D5013	E5	D5023	D5	Q5013	D2	Q5025	E3
D5014	H3	D5024	D5	Q5014	D2	Q5030	C5
D5015	I3	D5027	C5	Q5015	D2	Q5031	G3

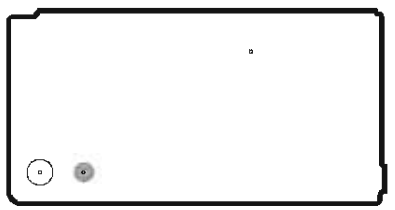


MAIN (2) P.C.B. (Side A)

MAIN (1) P.C.B. (Side B)



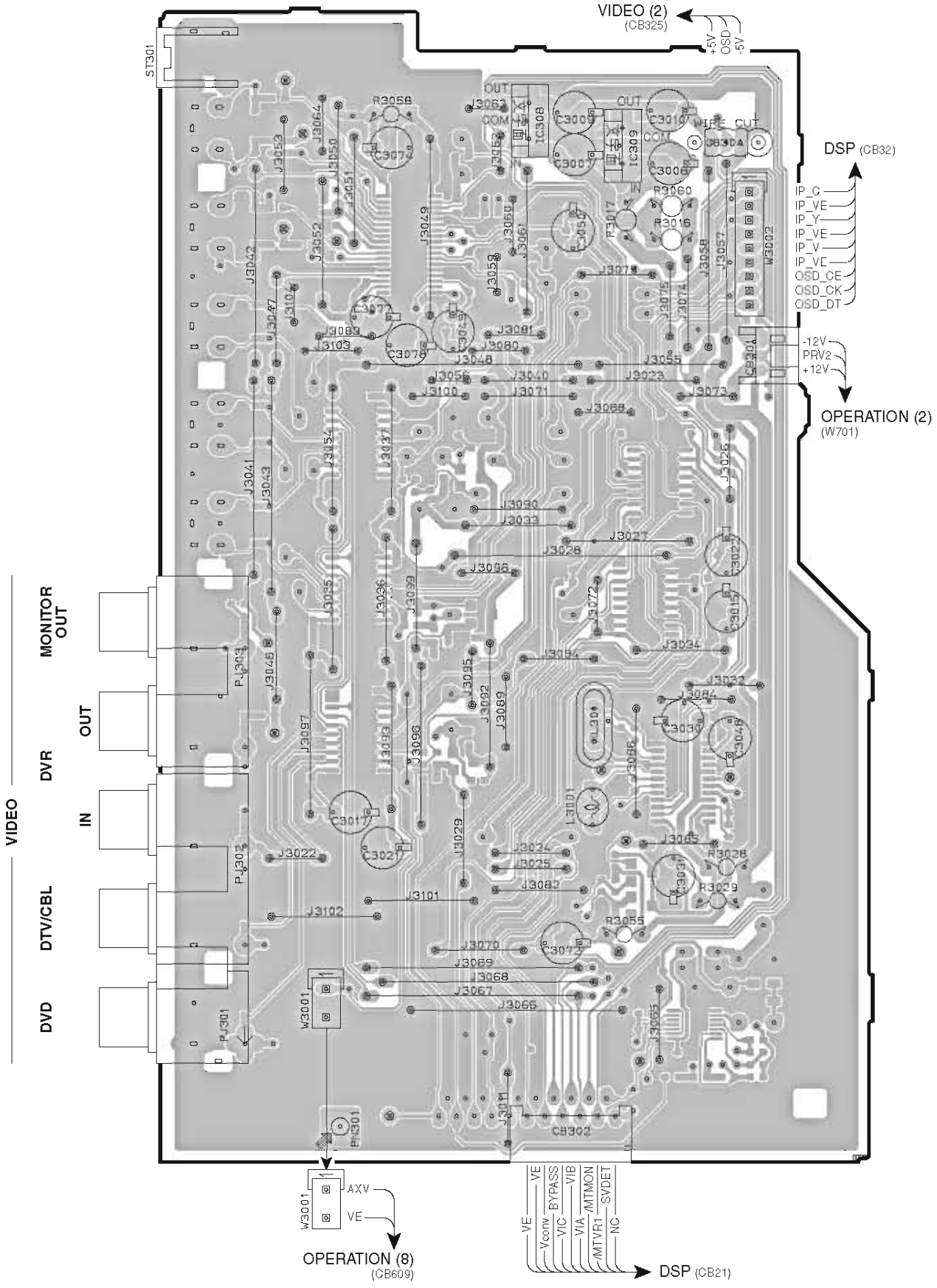
MAIN (2) P.C.B. (Side B)



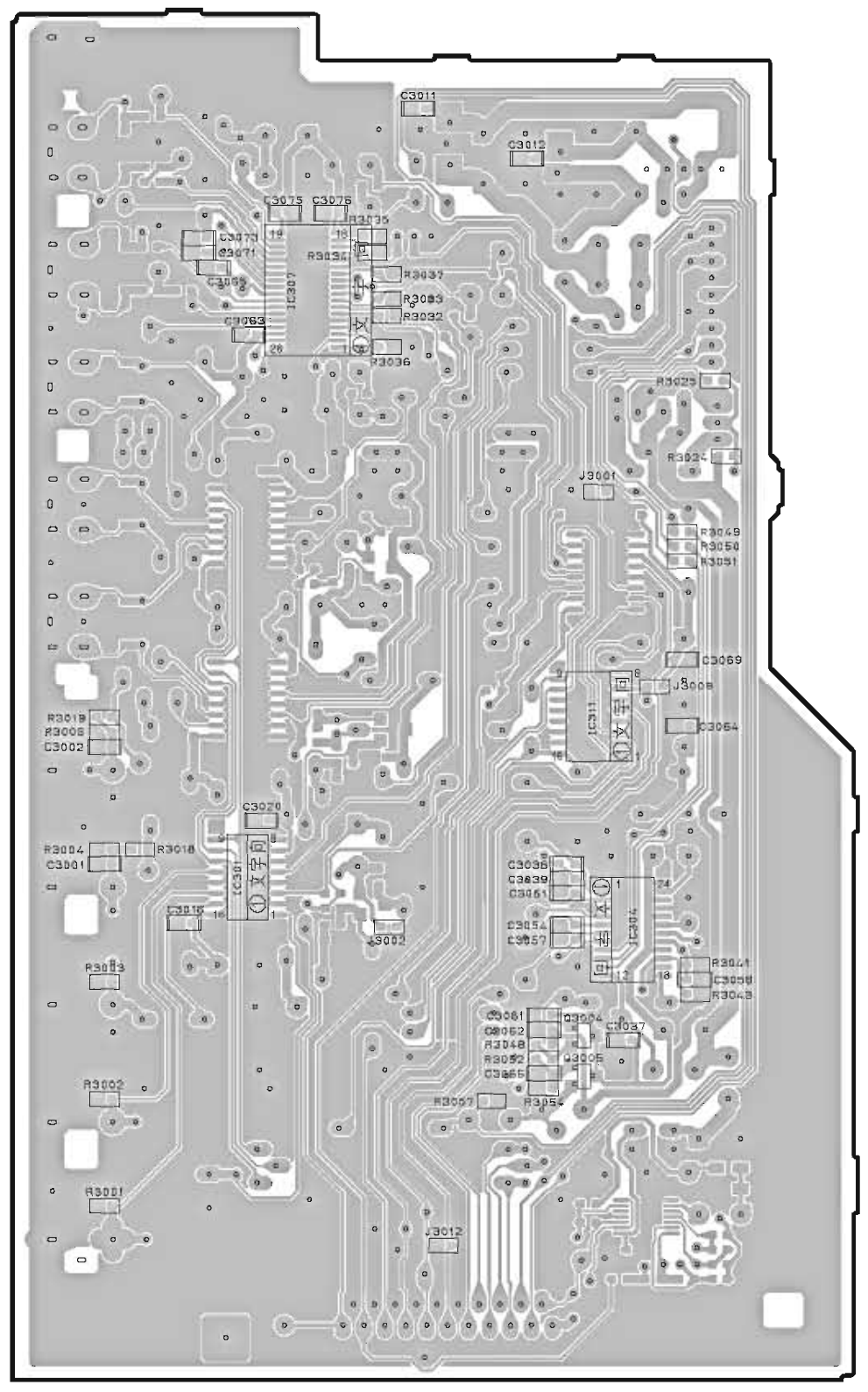
- **Semiconductor Location**

Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location
D4001	H5	IC404	G4	Q5006	I3	Q5032	D3
D4002	H5	IC405	H4	Q5007	H3	Q5033	D5
D4003	F4	IC407	I4	Q5009	G3	Q5034	C5
D5003	D2	Q4001	E5	Q5010	G3	Q5035	D5
D5004	H3	Q4004	E5	Q5011	G3	Q5036	C5
D5009	G2	Q4008	E4	Q5026	D5	Q5037	C5
IC401	H5	Q5003	H3	Q5027	C5		
IC402	F4	Q5004	I3	Q5028	D5		
IC403	G5	Q5005	I3	Q5029	D3		

VIDEO (1) P.C.B. (Side A)



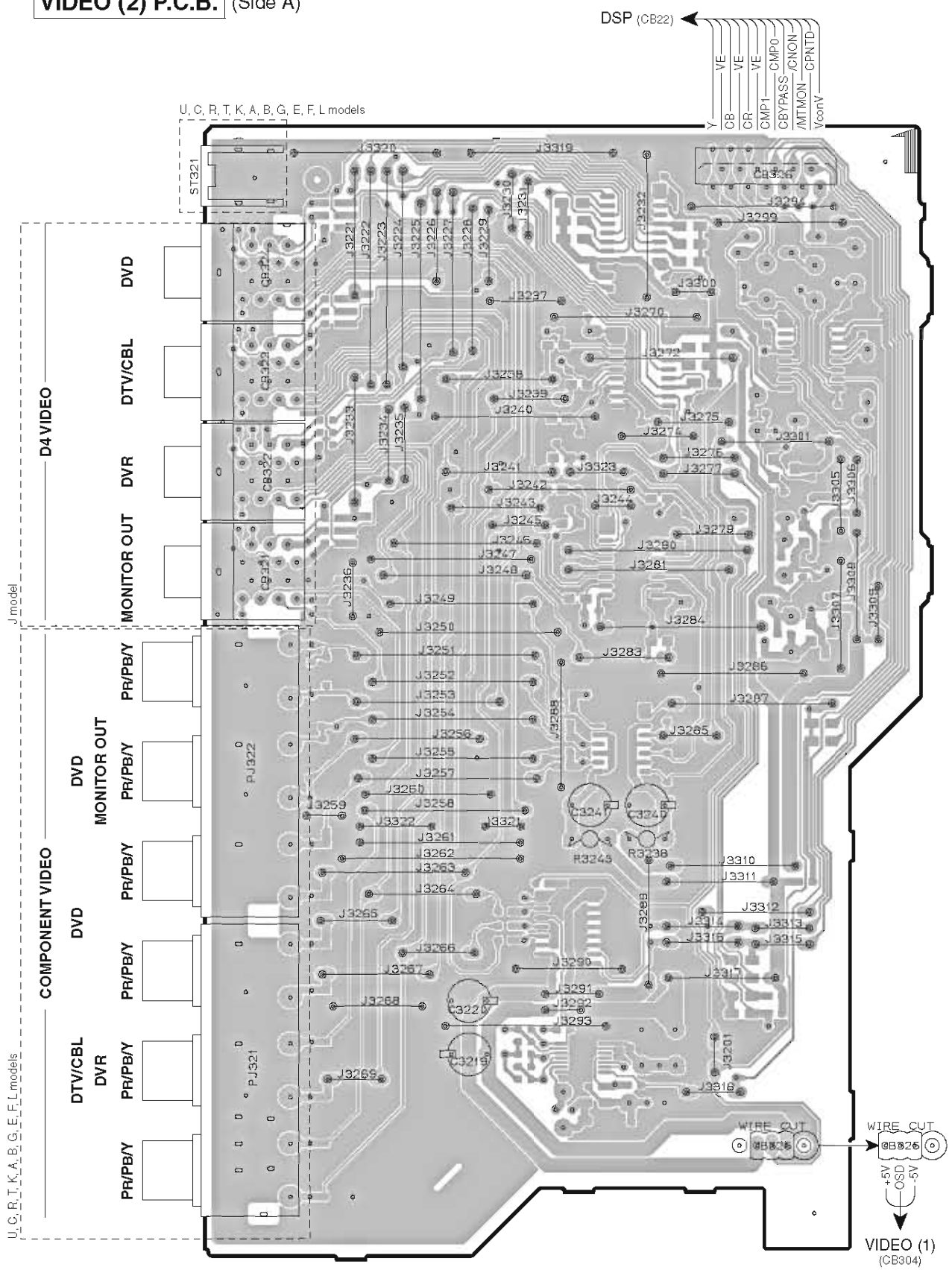
VIDEO (1) P.C.B. (Side B)



- **Semiconductor Location**

Ref no.	Location
IC301	G5
IC304	H5
IC307	G2
IC308	D2
IC309	D2
IC311	H4
Q3004	H5
Q3005	H5

VIDEO (2) P.C.B. (Side A)



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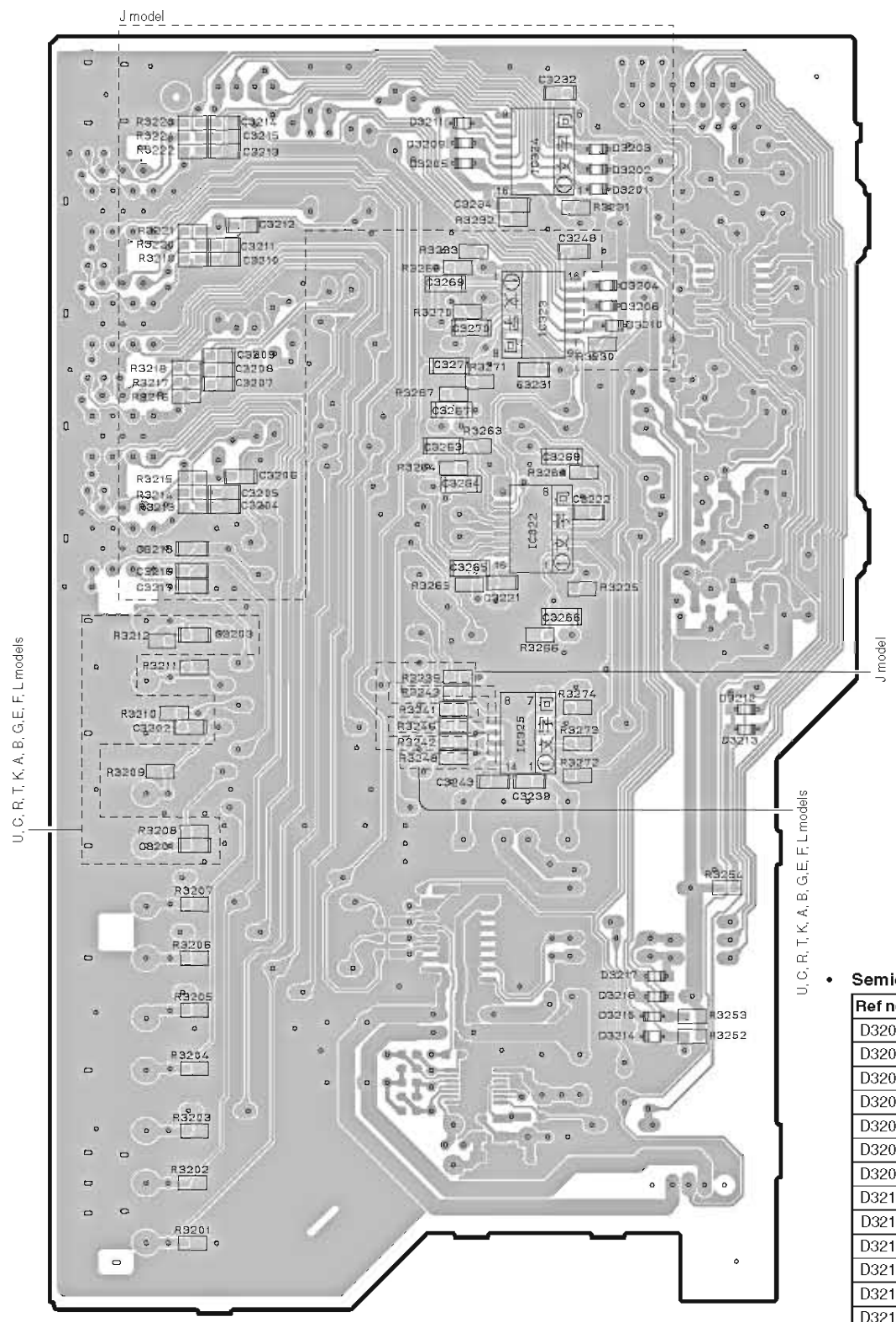
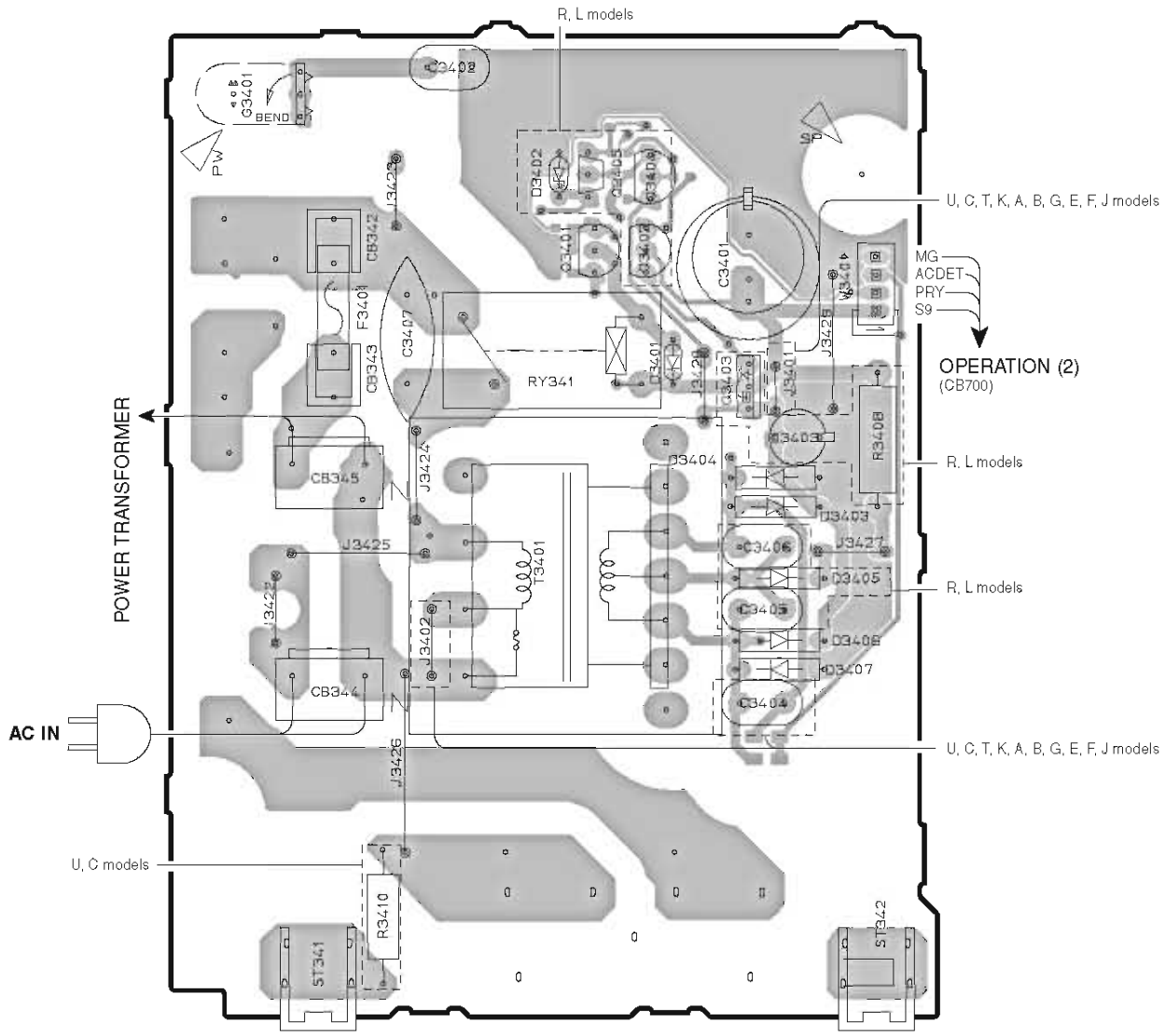


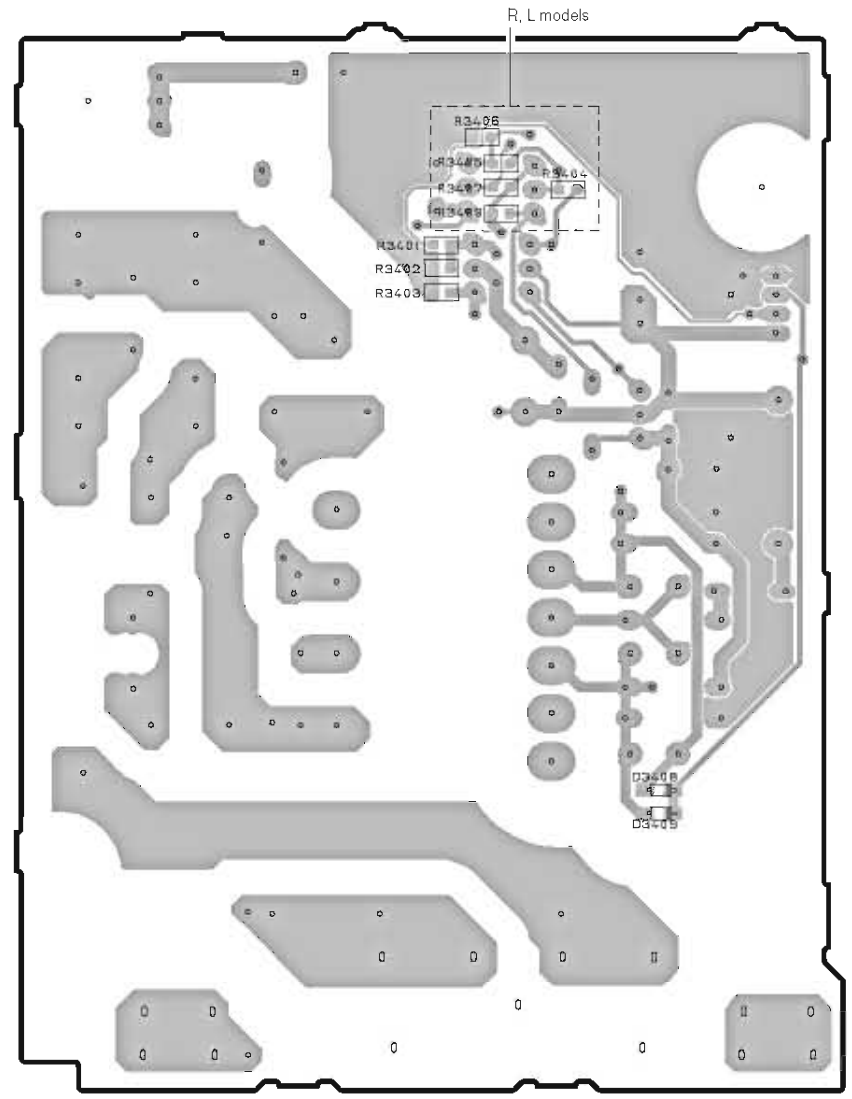
- **Semiconductor Location**

Ref no.	Location	Ref no.	Location
D3201	H2	D3217	I6
D3202	H2	IC322	H4
D3203	H2	IC323	H3
D3204	H3	IC324	H2
D3205	H2	IC325	H5
D3208	H3		
D3209	H2		
D3210	H3		
D3211	H2		
D3212	I5		
D3213	I5		
D3214	I6		
D3215	I6		
D3216	I6		

VIDEO (3) P.C.B. (Side A)



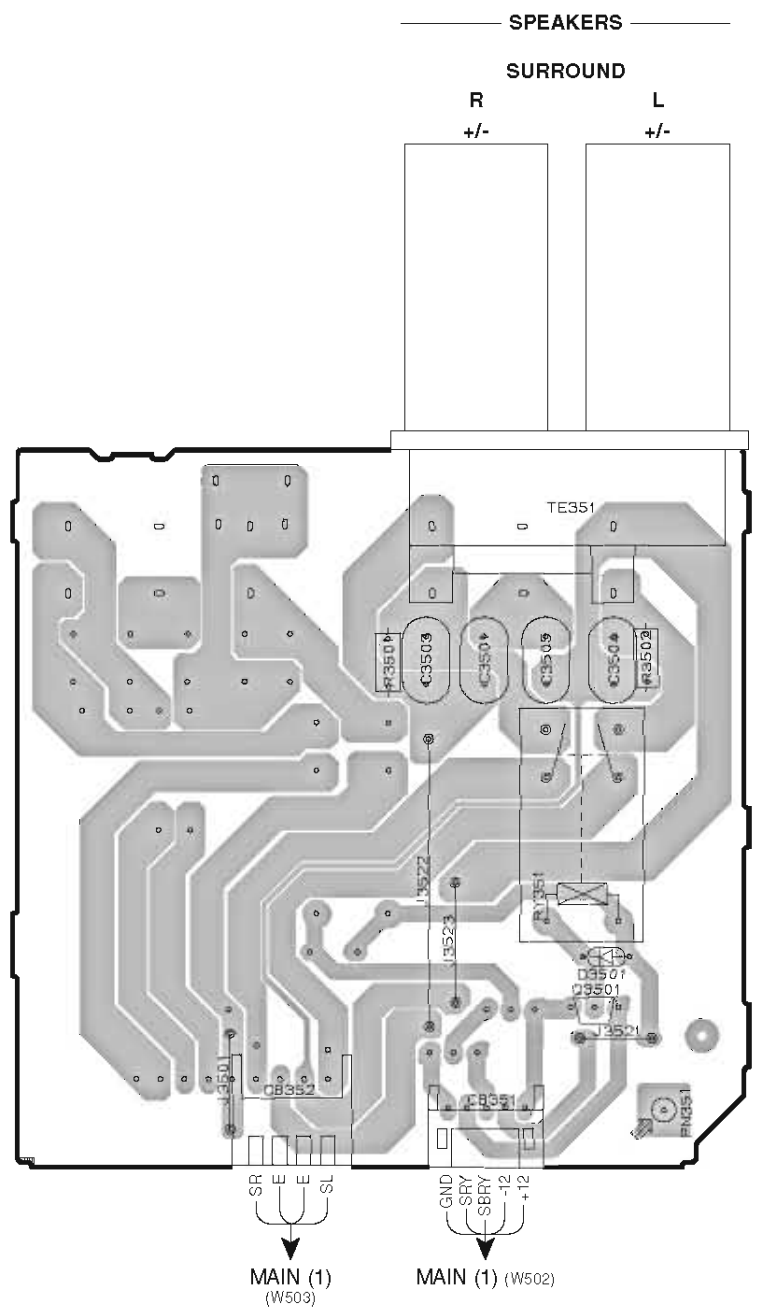
VIDEO (3) P.C.B. (Side B)



- **Semiconductor Location**

Ref no.	Location	Ref no.	Location
D3401	D3	D3408	H5
D3402	C2	D3409	H5
D3403	D4	Q3401	C3
D3404	D4	Q3402	D3
D3405	D4	Q3403	D3
D3406	D4	Q3404	D2
D3407	D4	Q3405	C2

VIDEO (4) P.C.B. (Side A)

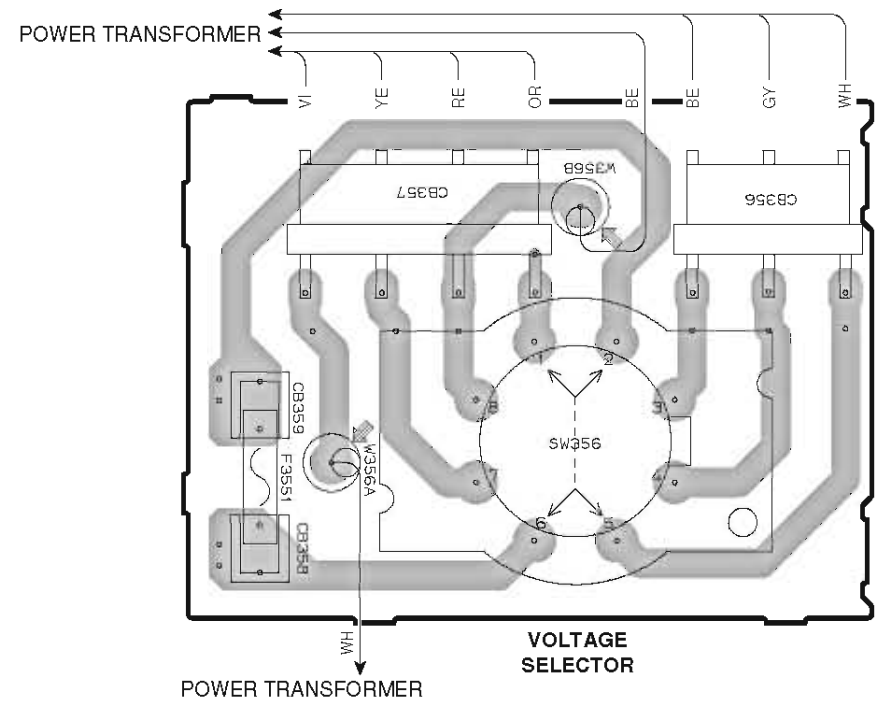


- **Semiconductor Location**

Ref no.	Location
D3502	C5
D3651	H5
D3652	I5
Q3502	C6
Q3503	C5

VIDEO (5) P.C.B. (Side A)

R, L models



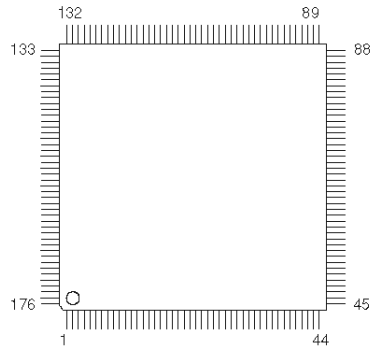
VOLTAGE SELECTOR

230-240V	1-2/5-6
220V	2-3/6-7
110V	3-4/7-8
120V	4-5/8-1

■ PIN CONNECTION DIAGRAMS

ICs

AD91089ZSKBC



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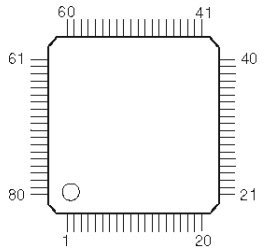

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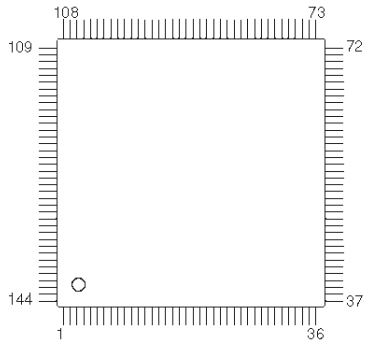

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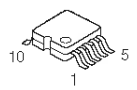

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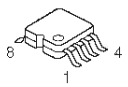

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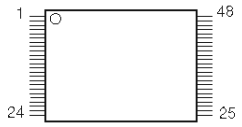

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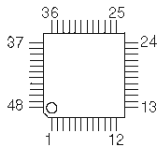

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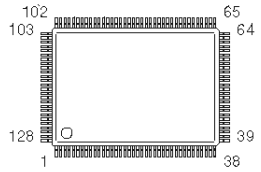

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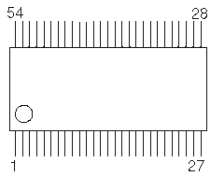

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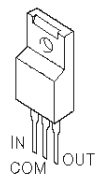

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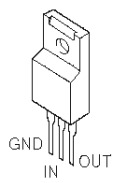

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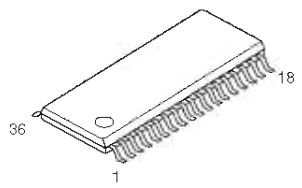

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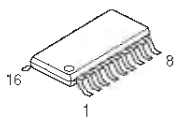

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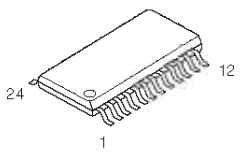

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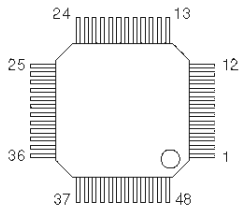

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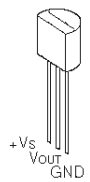

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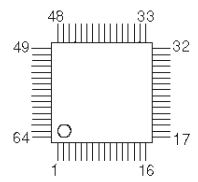

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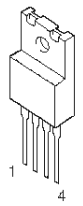

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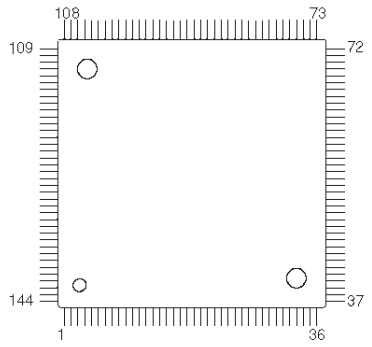

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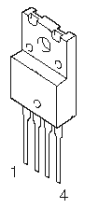

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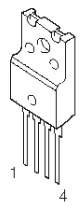

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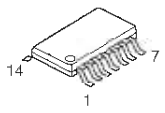

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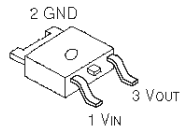

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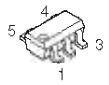

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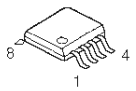

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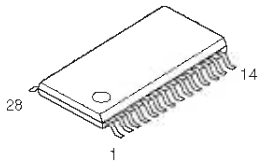

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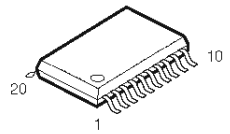

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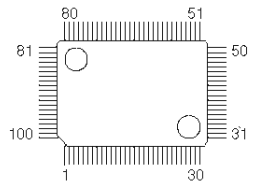

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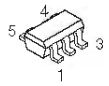

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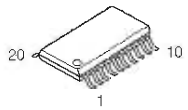

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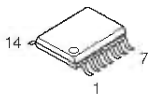

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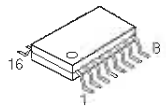

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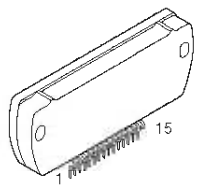

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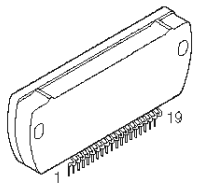

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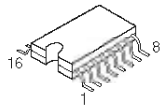

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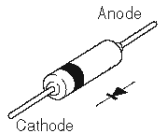

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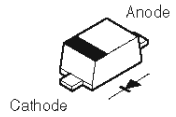
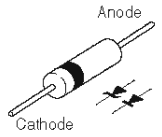
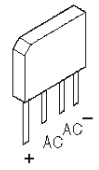
MA8100-H 10.3V
RB500V-40
UDZ3.6BTE-17 3.6V
UDZ5.1B
UDZS3.3BTE-17 3.3V
UDZS9.1B



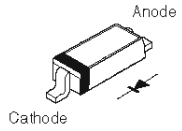
1T2



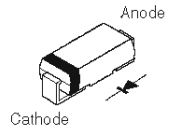
KBP103G 1.0A 200V



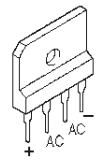
KDS160-RTK



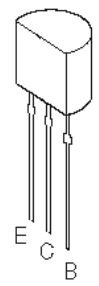
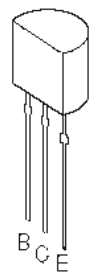
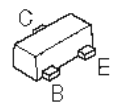
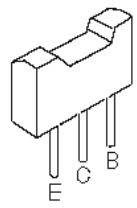
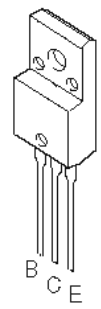
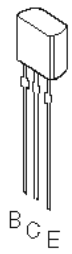
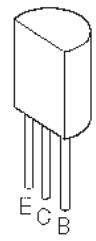
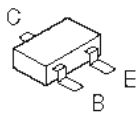
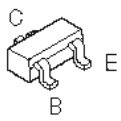
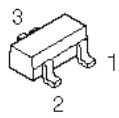
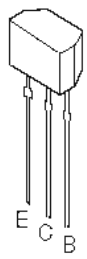
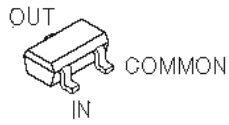
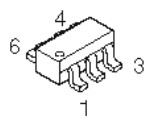
RB160L-40 TE25



RS403M
TS6P03G 6.0A 200V



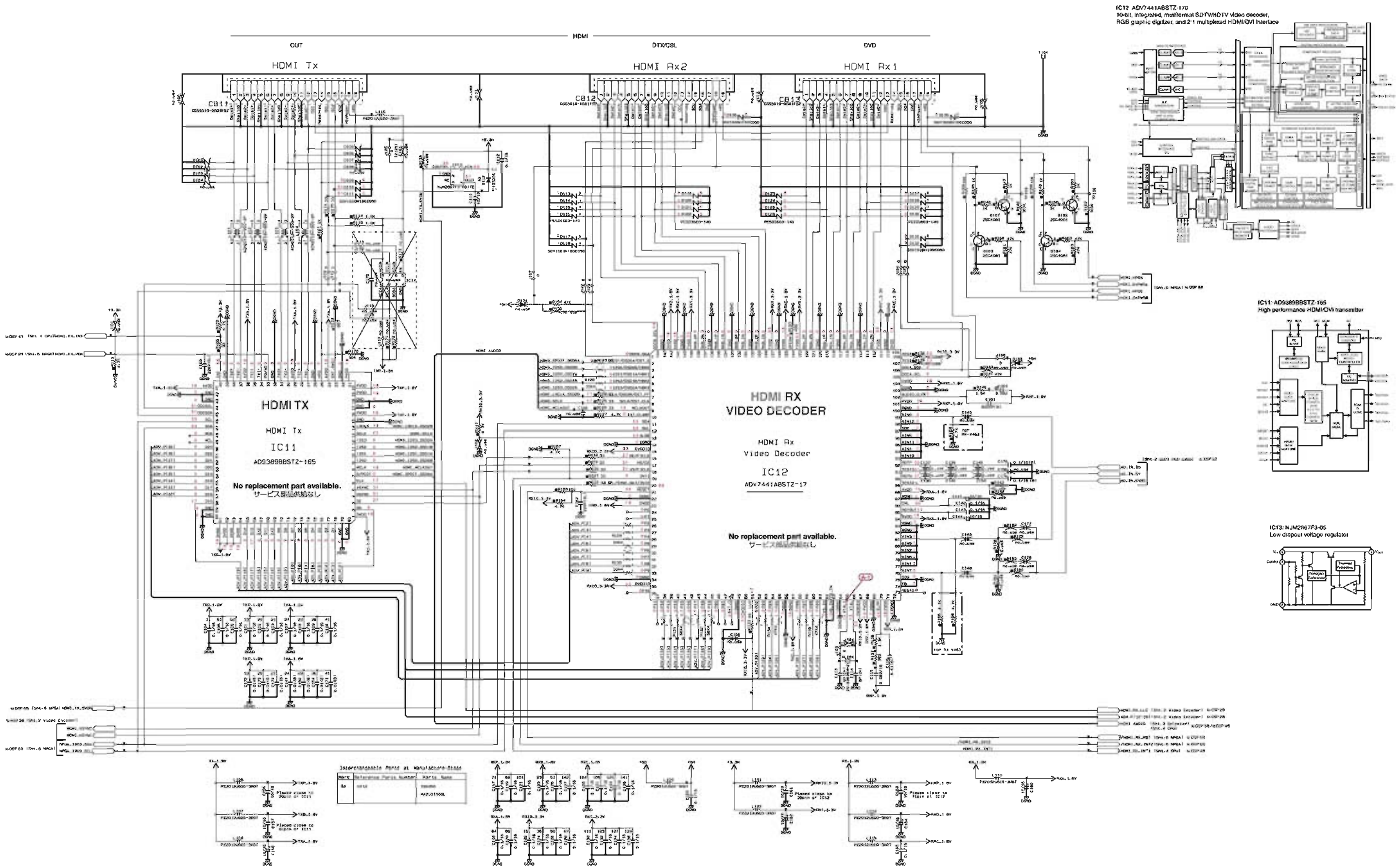
Transistors

2N5401C-AT/P 2SA1015-Y 2SC2705 	2N5551C-AT 	2SA1037K 	2SA1708 	2SB1274 	2SC1740S 	2SC1815 Y 
2SC2412K 	2SC3326-A (TE85R, F) 2SC3326-B (TE85R, F) 2SC4081 T106 2SD1938F 	DTA143EKA  1 GND 2 IN 3 OUT	KRA102M-AT/P KRC102M-AT 	KRA102S-RTK/P KRA104S-RTK KRC102S-RTK KRC104S-RTK 	RTQ040P02  1 Drain 2. Drain 3. Gate 4. Source 5 Drain 6 Drain

MEMO

■ SCHEMATIC DIAGRAMS

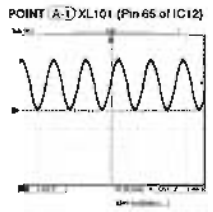
DSP 1/8



Mark	Reference Parts Number	Parts Name
Ex	[illegible]	[illegible]

NOTICE (Model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(G)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(D)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN

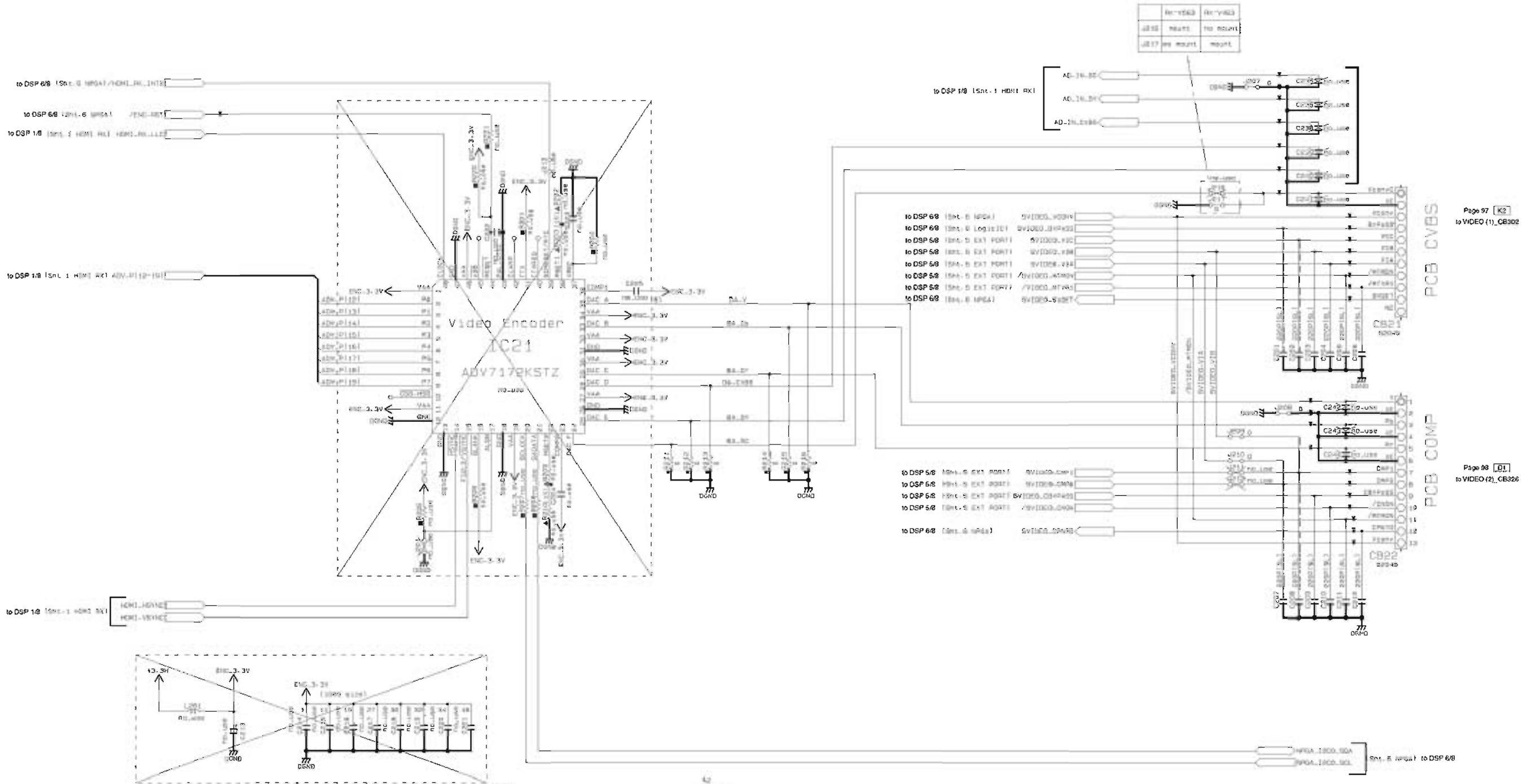
POINT (A-D) XL101 (Pin 65 of IC12)

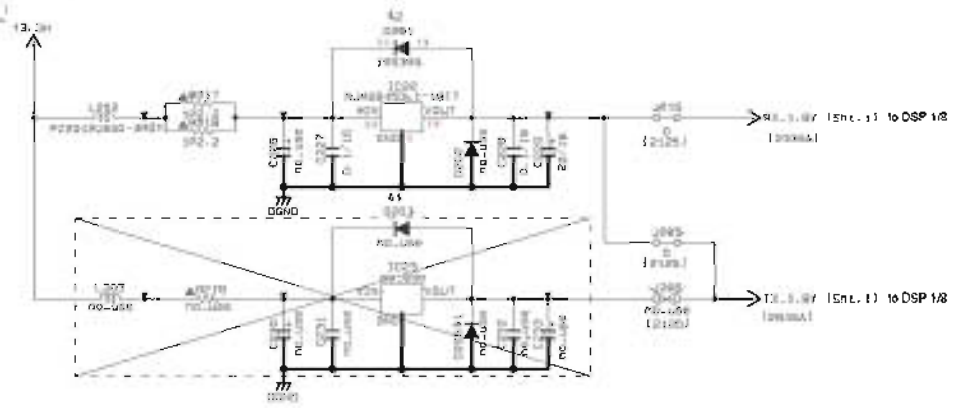


★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed
★ Schematic diagram is subject to change without notice.

● 電圧は、内部抵抗10MΩの電圧計で測定したものです。
● ⚠印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
● 本回路図は標準回路図です。改良のため予告なく変更することがございます。

DSP 2/8

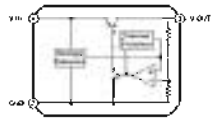




Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
K2	D301	155355 MA2J111WL

IC22 NJM2845DL1-18
Low dropout voltage regulator



RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/4W)
○	CARBON FILM RESISTOR (1/6W)
△	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
▭	METAL PLATE RESISTOR
▨	FUSE FUSE CARBON FILM RESISTOR
▯	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

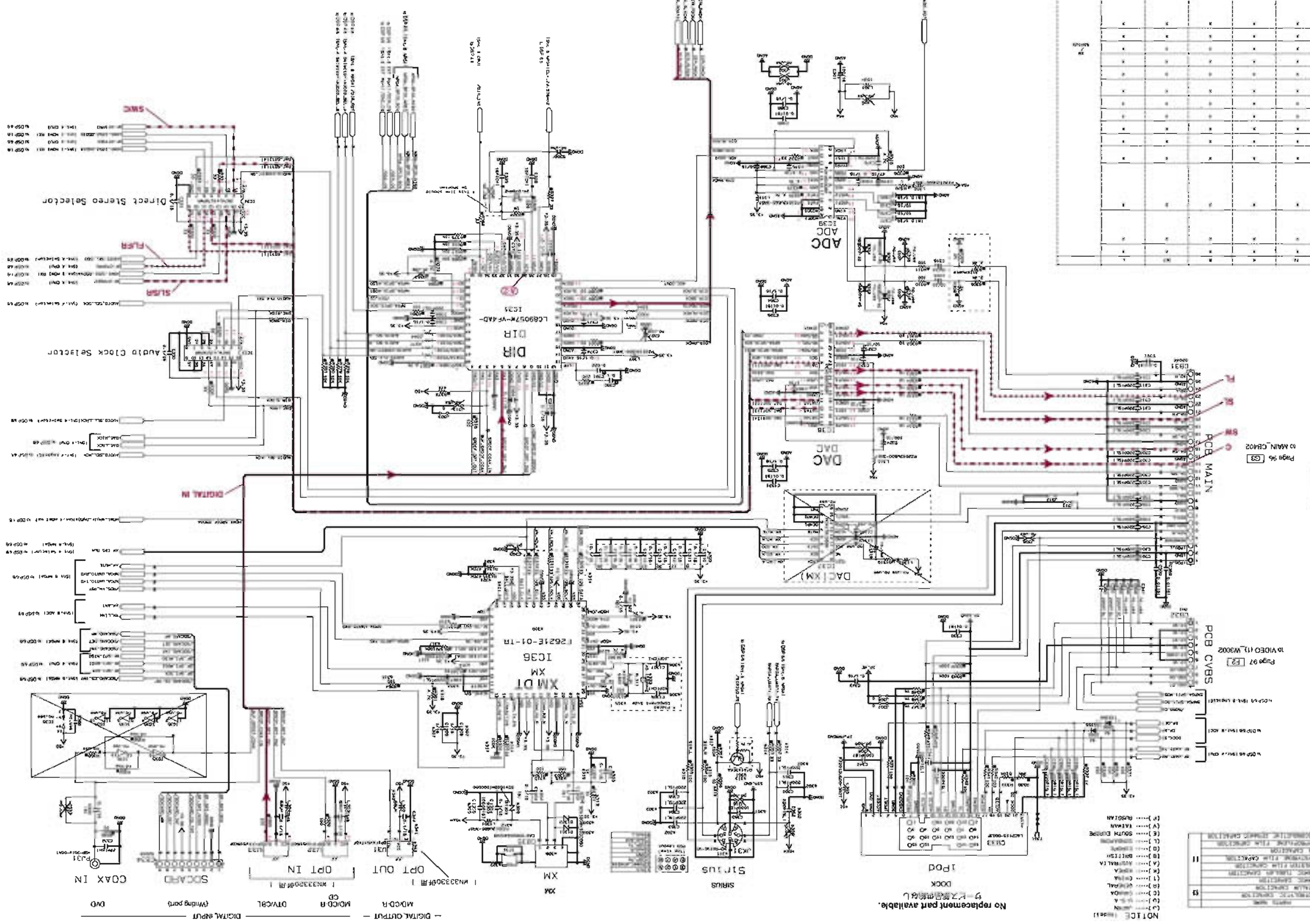
CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	II
⊘	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	II
●	CERAMIC TUBULAR CAPACITOR	
⊘	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⊘	MICA CAPACITOR	
⊘	POLYPROPLENE FILM CAPACITOR	
●	SEMICONDUCTING CERAMIC CAPACITOR	

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(A)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(D)····· EUROPE
(L)····· SINGAPORE
(E)····· GRAY EUROPE
(V)····· TAIWAN
(P)····· RUSSIAN

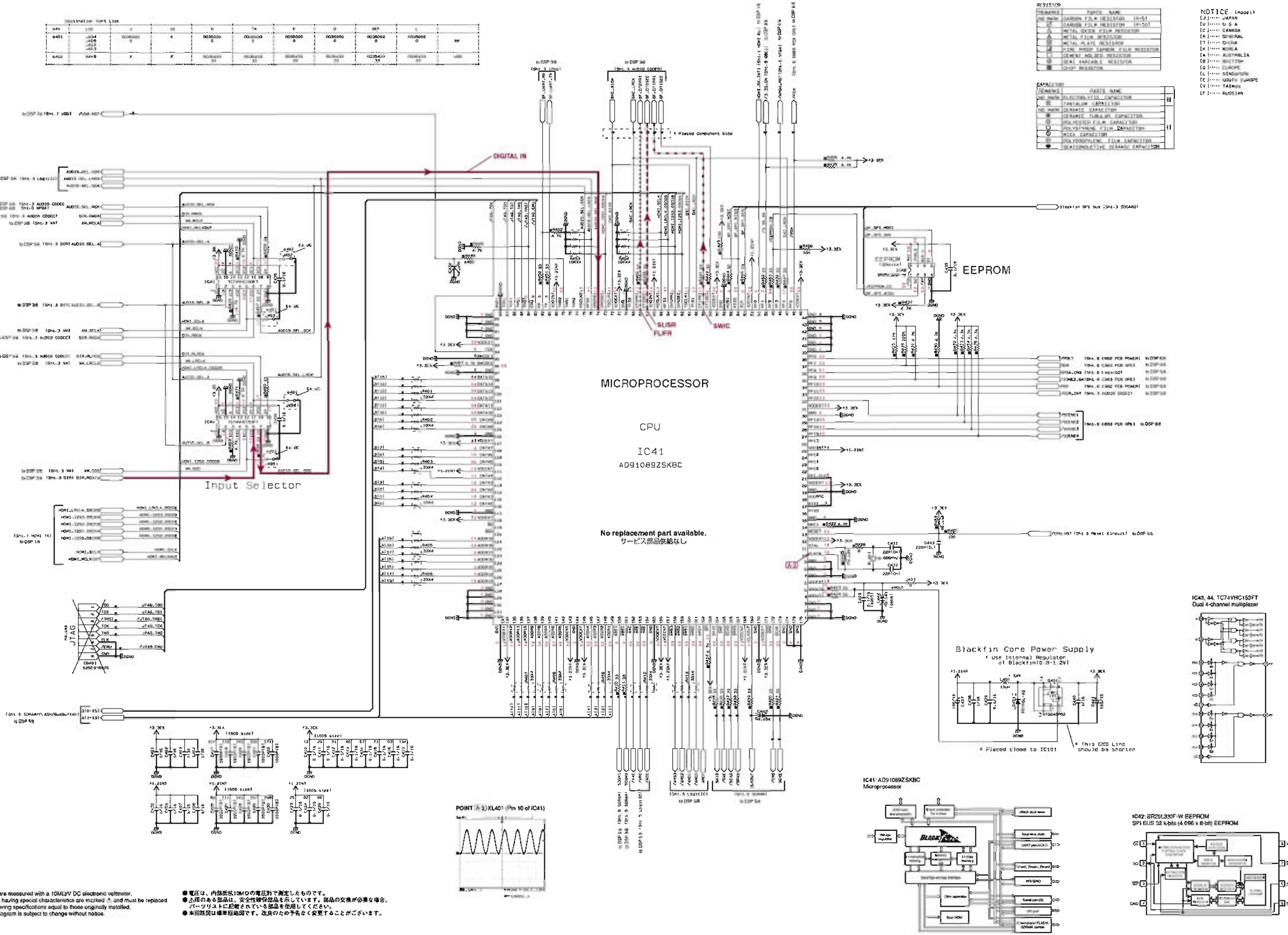
★ All voltages are measured with a 10MΩ/V DC electronic voltmeter
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

● 電圧は、内部抵抗10MΩの電圧計で測定したものです。
● ⚠印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
● 本回路図は暫定回路図です。改良のため予告なく変更することがございます。



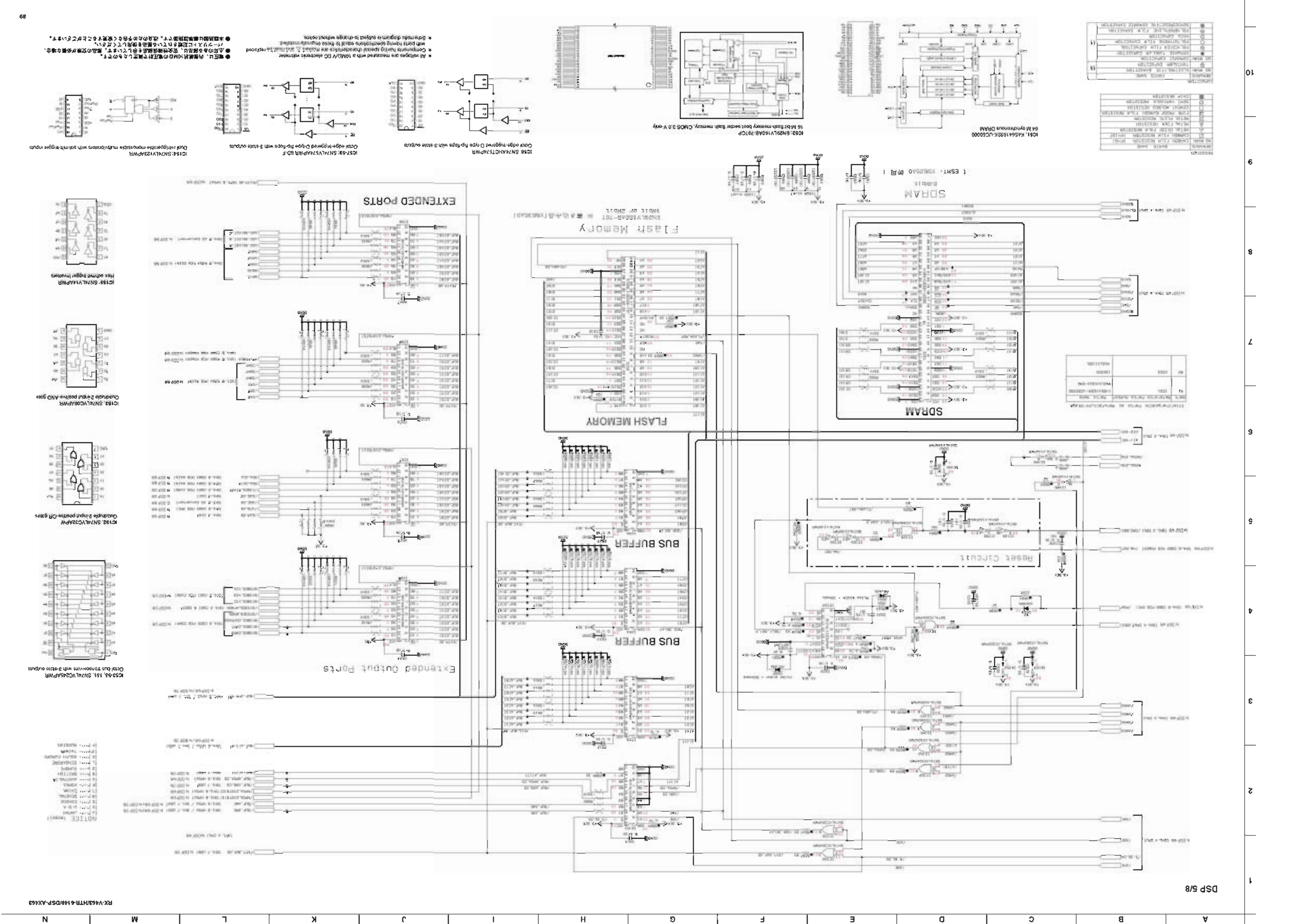
● 定格、性能表示は10μHの電圧計で測定した値です。
● 入力のある状態、安全保護回路を活生しています。既品の交換が必要な場合、インヴァ上に異常とお表示が出ます。
● 本回路図は最新回路図です。既品のバージョンが古く（変更されていません。

* All voltages are measured with a 10MΩ/V DC electronic voltmeter.
* Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.



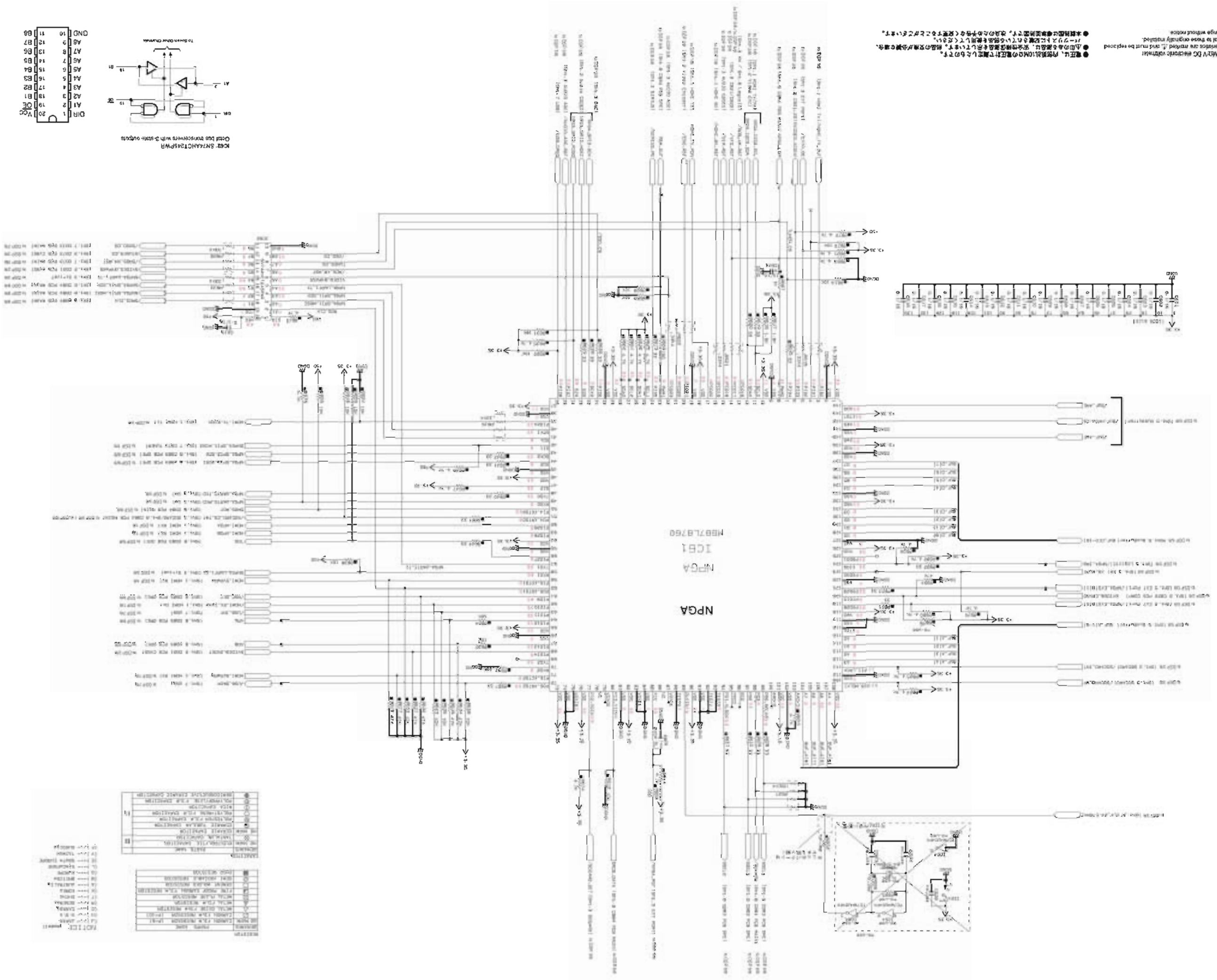
★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ★ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

● 電圧は、内部抵抗10MΩの電圧計で測定したものです。
● 小印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
● 本回路図は標準回路図です。改良のため予告なく変更することがございます。



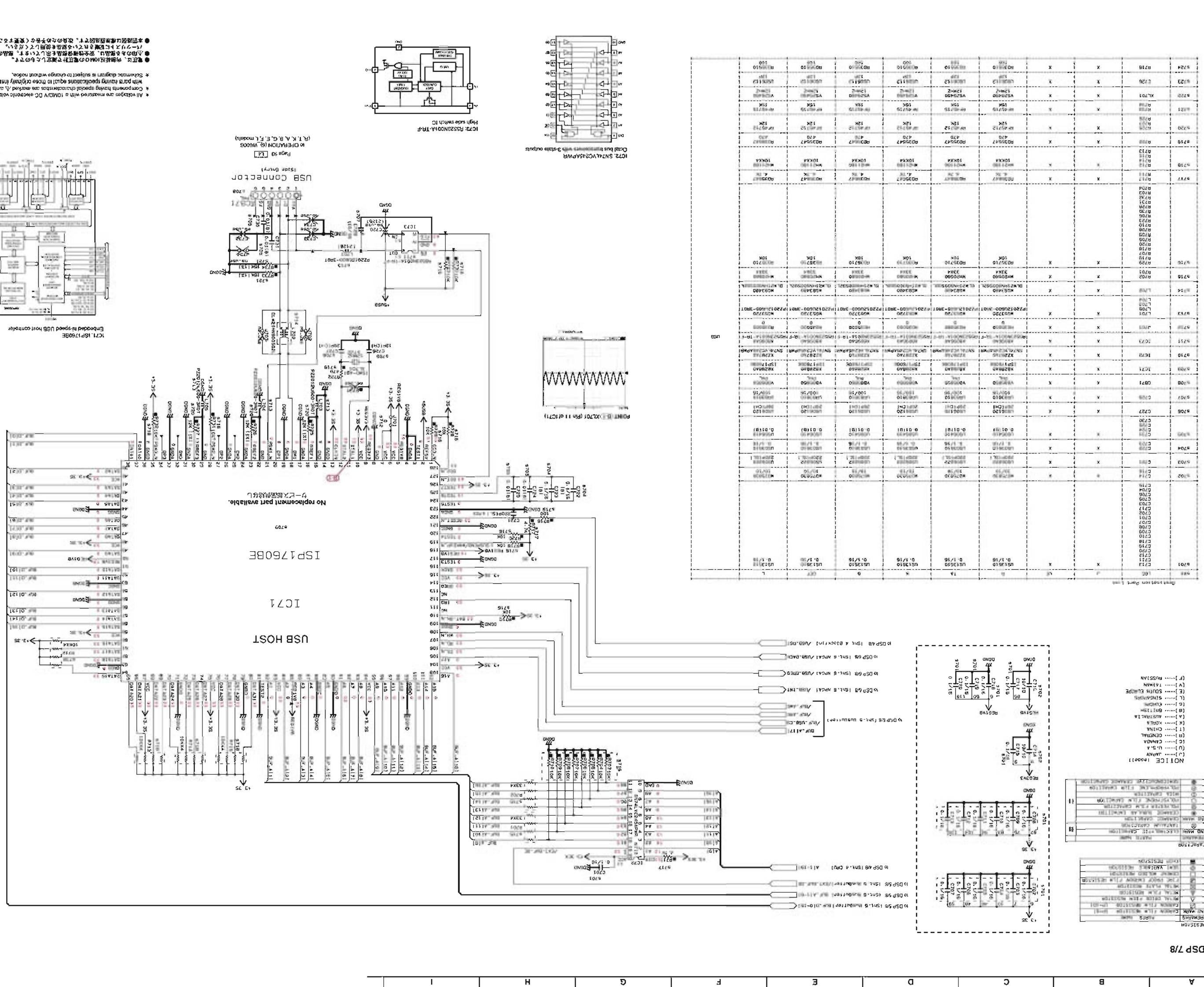
RX-V463/HTR-6140/DSP-AX463

DSP 6/8



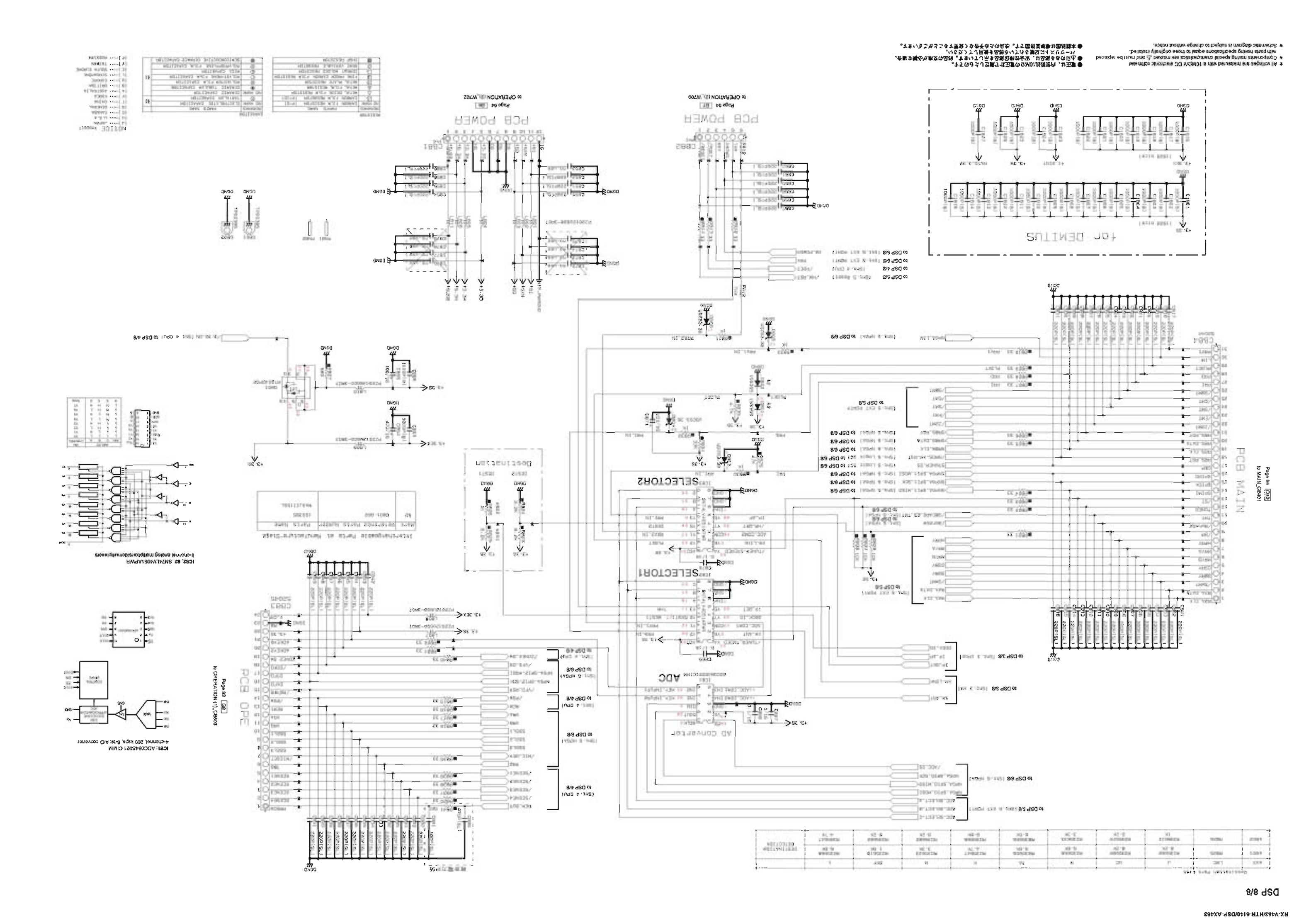
* All voltages are measured with a 10MΩ/V DC electronic voltmeter.
* Component items having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

● 電圧は、内部抵抗10MΩの電圧計で測定した値です。
● △印のある部品、安全性確保部品となっています。純正の交換パーツを使用ください。
● 本回路図は参考図面です。改造のため予告なく変更することがございます。



● 注意は、外観部品100の電圧が変更されることがあります。
● 人間のような部品は、安全保障部品を表しています。 部品の交換が必要な場合、パーツリストに記載されていない部品を使用しないでください。
● 本回路図は概略図です。 図面のレイアウトを変更することがあります。

* All voltages are measured with a 10MΩ/V DC electronic voltmeter.
* Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.


DSP 8/8
RX-V463/HTR-6140/DSP-AX463
PCB MAIN
Page 66 [G3]
to MAIN CB401
PCB OPE
Page 93 [G8]
to OPERATION (1) CB603
PCB POWER
Page 94 [G8]
to OPERATION (2) W702
PCB POWER
Page 54 [G8]
to OPERATION (3) W702
SELECTOR1
SELECTOR2
ADC
AD Converter
Decoder 138
IC81: ADC0845CCJ1 CMOS
4-channel, 200 ksps, 8-bit A/D converter
IC82, 83: SN74LV4051APWR
8-channel analog multiplexers/demultiplexers
Capacitor 220pF(SL)
Capacitor 22pF(SL)
Capacitor 10pF(SL)
Capacitor 1pF(SL)
Capacitor 4.7pF(SL)
Capacitor 3.3pF(SL)
Capacitor 2.2pF(SL)
Capacitor 1.5pF(SL)
Capacitor 1.0pF(SL)
Capacitor 0.5pF(SL)
Capacitor 0.3pF(SL)
Capacitor 0.2pF(SL)
Capacitor 0.1pF(SL)
Capacitor 0.05pF(SL)
Capacitor 0.03pF(SL)
Capacitor 0.02pF(SL)
Capacitor 0.01pF(SL)
Capacitor 0.005pF(SL)
Capacitor 0.003pF(SL)
Capacitor 0.002pF(SL)
Capacitor 0.001pF(SL)
Capacitor 0.0005pF(SL)
Capacitor 0.0003pF(SL)
Capacitor 0.0002pF(SL)
Capacitor 0.0001pF(SL)
Capacitor 0.00005pF(SL)
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Capacitor 0.00000005pF(SL)
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Capacitor 0.000000005pF(SL)
Capacitor 0.000000003pF(SL)
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Capacitor 0.0000000000000000000005pF(SL)
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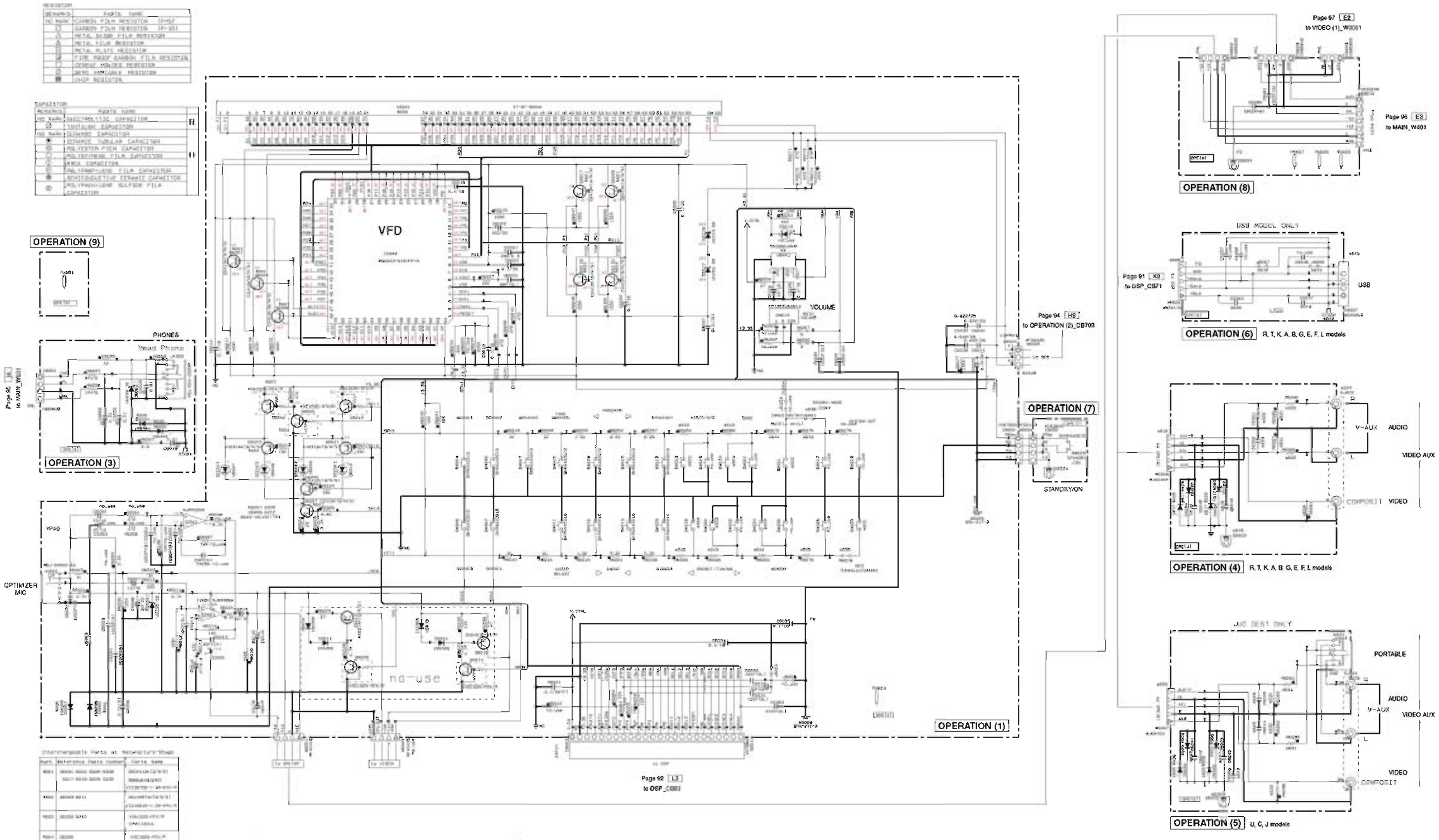
OPERATION 1/2



IC601: NJM4565M
Dual operational amplifier

IC603: M66003-0131FP-R
18 digit 5 x 7 segment VFD controller/driver

NOTICE

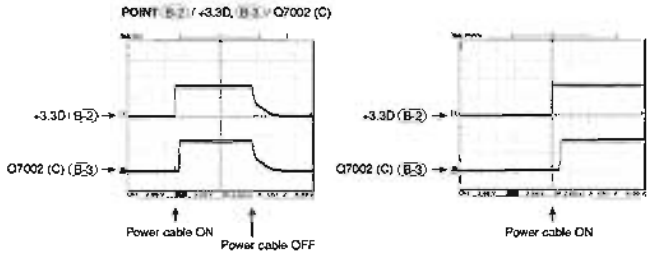
- ★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
- ★ Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
- ★ Schematic diagram is subject to change without notice.

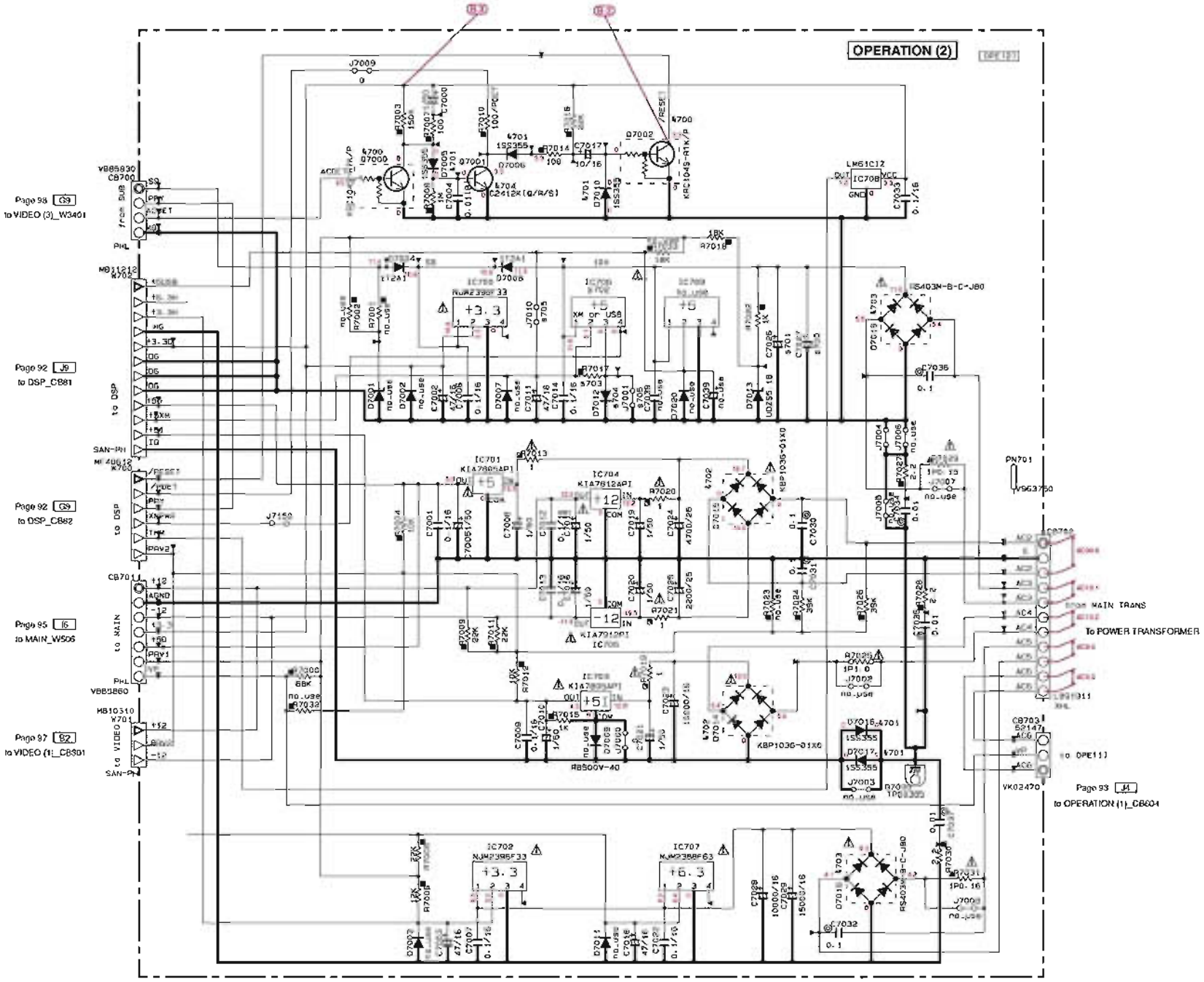
● 電圧は、内部抵抗10MΩの電圧計で測定したものです。
● △印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
● 本回路図は標準回路図です。改良のため予告なく変更することがございます。

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
[illegible]	Q7000, 7002	DTC114EKA KRC104S-RTK/P
[illegible]	Q7005, 7006, 7010, 7016 7017	1SS355 MAZU1110GL
[illegible]	Q7014, 7015	KRP103G RN103
[illegible]	Q7018, 7019	RS403M-B-C-J80 TS4803G-07
[illegible]	Q7001	2SC2412K(Q/R/S) KTC3875S-Y-RTK/P 2SD601A(R/AQL(Q/R/S)

POINT B-2 / +3.3D, B-3 / Q7002 (C)





RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (PR40)
○	CARBON FILM RESISTOR (PR101)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
✕	METAL PLATE RESISTOR
◆	FIRE PROOF CARBON FILM RESISTOR
●	CEMENT MOLDED RESISTOR
◎	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
		E
NO MARK	ELECTROLYTIC CAPACITOR	
⊘	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	
◆	CERAMIC TUBULAR CAPACITOR	
○	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
○	MICA CAPACITOR	
○	POLYPROPYLENE FILM CAPACITOR	
◎	SEMICONDUCTIVE CERAMIC CAPACITOR	

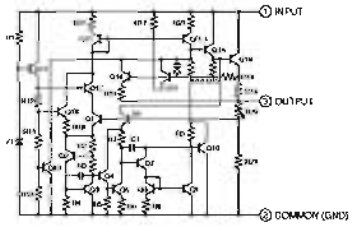
NOTICE (model)

(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(G)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(E)····· EUROPE
(L)····· SINGAPORE
(S)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN

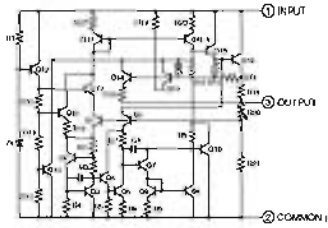
Combination Part List

REF	LOC	J	UC	RTKAGEFL	G
S600	SW618 SW603 SW620 SW619 SW601 SW623 SW624	WD48310 SKRGAAD010	WD48310 SKRGAAD010	WD48310 SKRGAAD010	X
S609	W6085	X	X	WN02170 -	WN02170 -
S612	J5006 J5007	X	X	RD35000 0	RD35000 0
S613	D5047	X	X	US08510 1SS355(L)	US08510 1SS355(L)
S614	ST602	X	X	WA78970	WA78970
S615	D5007	X	X	W08810 1U8A-4R-S1A1-4Q1	W08810 1U8A-4R-S1A1-4Q1
S616	W5090	X	X	WJ02450 SAN-PH	WJ02450 SAN-PH
S617	D5034 D5035 D5036 D5037	X	X	VT33290 1SS355	VT33290 1SS355
S618	D5048 D5049	X	X	US13510 0.1/16	US13510 0.1/16
S619	D5053	X	X	VR46340 TP00385	VR46340 TP00385
S620	D5051 D5050	X	X	US06510 220P(SL)	US06510 220P(SL)
S621	R5087 R5088	X	X	RD35647 470K	RD35647 470K
S622	R5090 R5089	X	X	RD35647 470	RD35647 470
S623	R5091	X	X	RD35475 75	RD35475 75
S624	PJ602	X	X	WJ11750 MSP-303H-888-11	WJ11750 MSP-303H-888-11
S625	W5097	WJ02450 SAN-PH	WJ02450 SAN-PH	X	X
S626	D5032 D5033 D5030 D5031	VT33290 1SS355	VT33290 1SS355	X	X
S627	D5042 D5043 D5040	US13510 0.1/16	US13510 0.1/16	X	X
S628	D5052	VR46340 TP00385	VR46340 TP00385	X	X
S629	D5045 D5024	US06510 560P(SL)	US06510 560P(SL)	X	X
S630	R5093 R5092	RD35647 470K	RD35647 470K	X	X
S631	R5094 R5095	RD35647 470	RD35647 470	X	X
S632	R5096	RD35475 75	RD35475 75	X	X
S633	PJ601	WJ11750 MSP-303H-888-11	WJ11750 MSP-303H-888-11	X	X
S634	JK603	WJ11740 MSJ-035-05A	WJ11740 MSJ-035-05A	X	X
S635	D5064	X	X	US12610 1/10	US12610 1/10
S638	J5001	VN50000 0	VN50000 0	VN50000 0	X
S639	R5078	RD35000 0	RD35000 0	RD35000 0	X
S642	R5060 R5061	RD35633 3.3K	RD35633 3.3K	RD35633 3.3K	X
S643	R5085 R5086	RD35647 4.7K	RD35647 4.7K	RD35647 4.7K	X
S644	R5070 R5071	RD35668 6.8K	RD35668 6.8K	RD35668 6.8K	X
S645	R5075 R5076	RD35710 10K	RD35710 10K	RD35710 10K	X
S700	C7027	UR71410 10000/16	W08200 15000/16	W08200 15000/16	W08200 15000/16
S701	C7026	X	UR03947 4700/16	UR03947 4700/16	UR03947 4700/16
S702	IC706	X	X6143A0 NJM2388F05	X6143A0 NJM2388F05	X6143A0 NJM2388F05
S703	R7017	X	RD35610 1K	X	X
S704	D7012	X	V237660 R8500V-40	X	X
S705	J7010 J7001	X	X	VN50000 -	VN50000 -

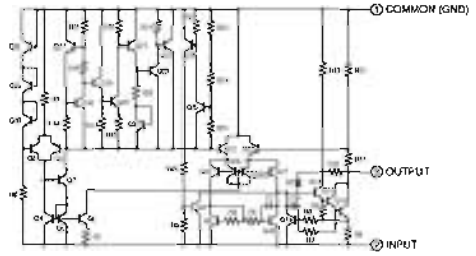
IC701, 703. KIA7805API
Voltage regulator



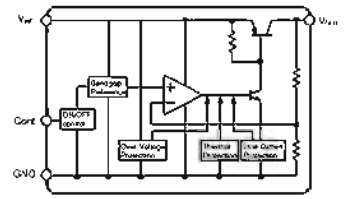
IC704. KIA7812API
Voltage regulator



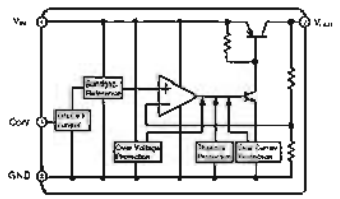
IC705: KIA7912PI
Voltage regulator



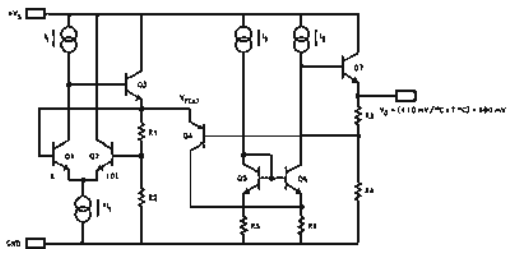
IC706: NJM2388F05
Low dropout voltage regulator with ON/OFF control



IC707: NJM2388F63
Low dropout voltage regulator with ON/OFF control



IC708: LM61CIZ
Temperature sensor



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
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★ Schematic diagram is subject to change without notice.

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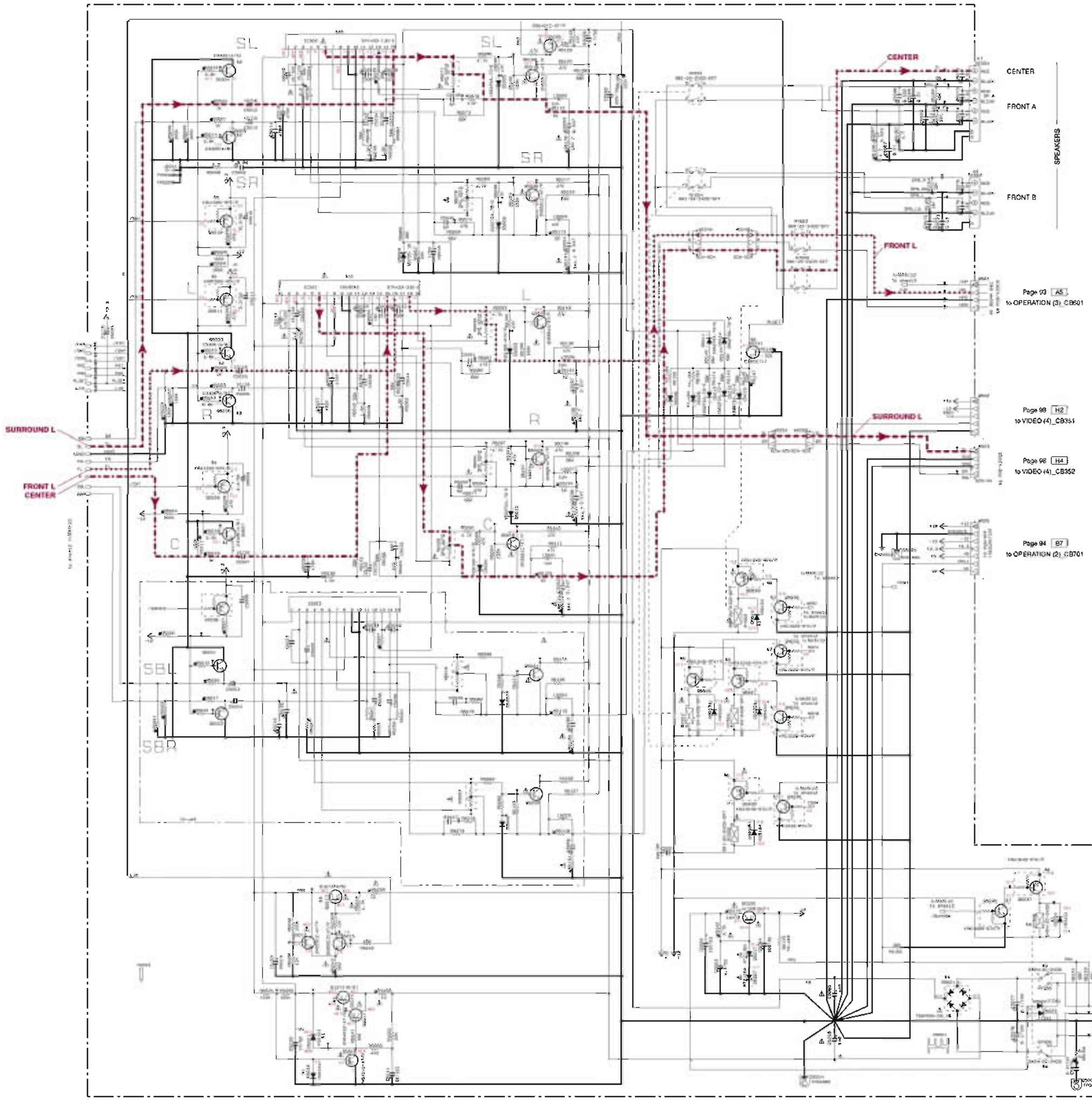
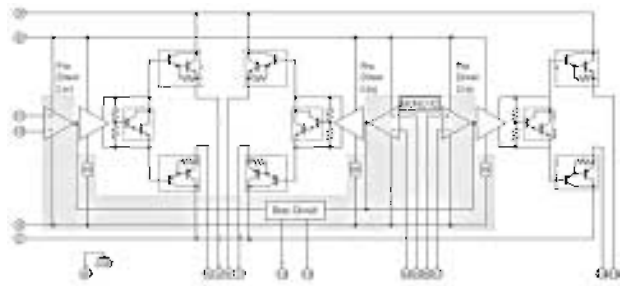
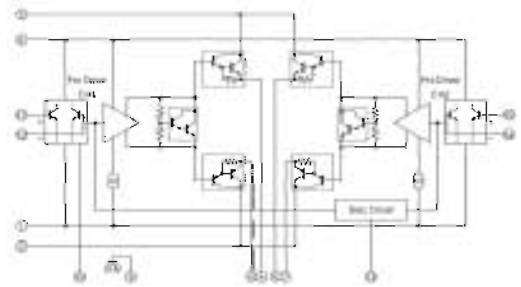
MAIN 1/2



IC501: STK433-330-E
3-channel AF power amplifier, stand-by circuit built-in



IC502: STK433-130-E
2-channel AF power amplifier, stand-by circuit built-in



CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊘	INSULAR CAPACITOR
NO MARK	CERAMIC CAPACITOR
◆	CERAMIC TUBULAR CAPACITOR
⊘	POLYESTER FILM CAPACITOR
○	POLYPROPYLENE FILM CAPACITOR
⊘	MICA CAPACITOR
⊘	POLYPHENYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR
◎	POLYPHENYLENE SULFIDE FILM CAPACITOR

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (PHS)
⊘	CARBON FILM RESISTOR (PHSB)
△	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
⊘	METAL PLATE RESISTOR
⊘	FUSE PROOF CARBON FILM RESISTOR
○	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

NOTICE (Model)

LJ	JAPAN
LU	U.S.A.
LC	CANADA
LM	GENERAL
LT	CHINA
LK	KOREA
LA	AUSTRALIA
LB	BRITISH
LD	EUROPE
LL	SINGAPORE
LE	SOUTH EUROPE
LW	TAIWAN
LP	RUSSIAN

Interchangeable Parts at Manufacture Stage

PARTS	REFERENCE PARTS SUPPLIED	PARTS NAME
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
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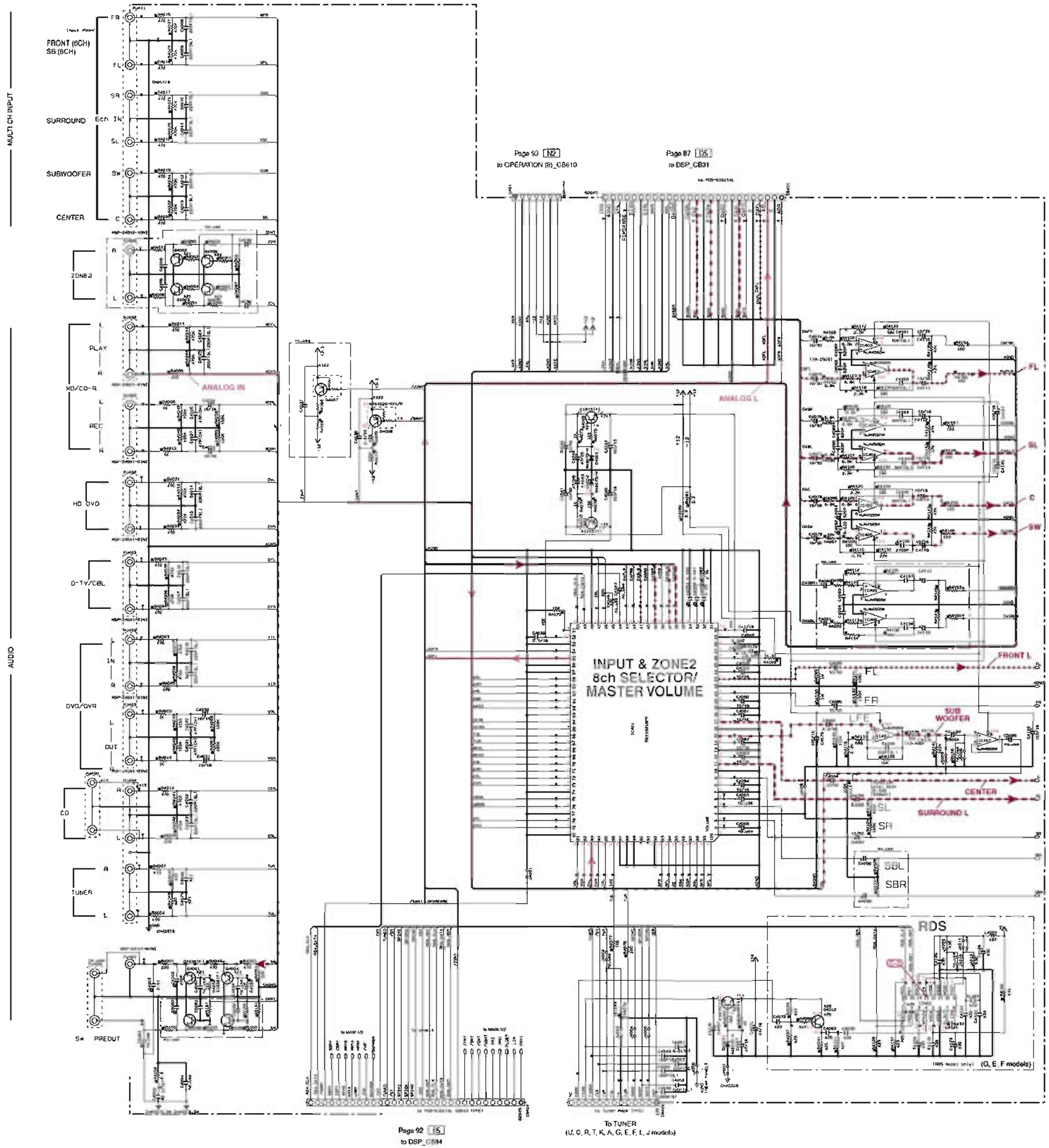
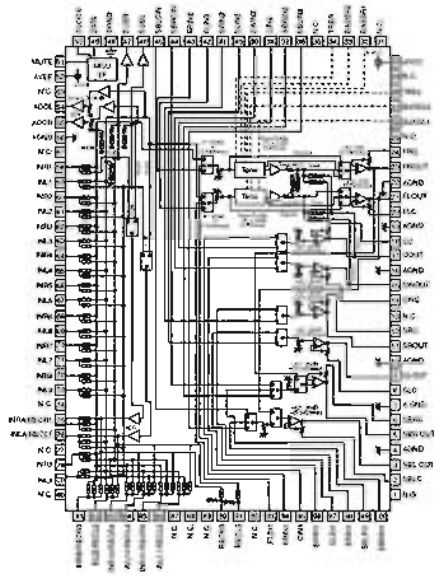
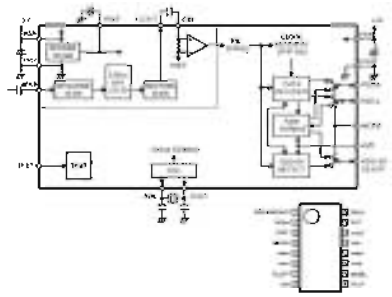
MAIN 2/2

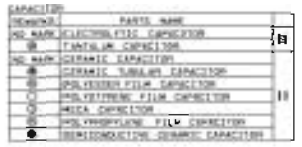


IC401: R2A15218FP
2-channel electronic volume with 11 input selector and tone control

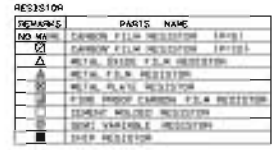


IC402, LC72725KM-UY-TLM-E
RDS signal demodulation IC

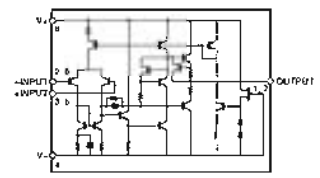




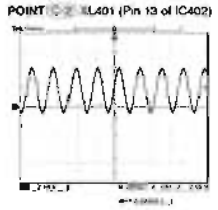
NOTICE (models)
(J)..... JAPAN
(U)..... U.S.A.
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN
(F)..... RUSSIAN



IC403-405, 407: NJM4565M
Dual operational amplifier



POINT IC-2 IL401 (Pin 13 of IC402)



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* Schematic diagram is subject to change without notice.

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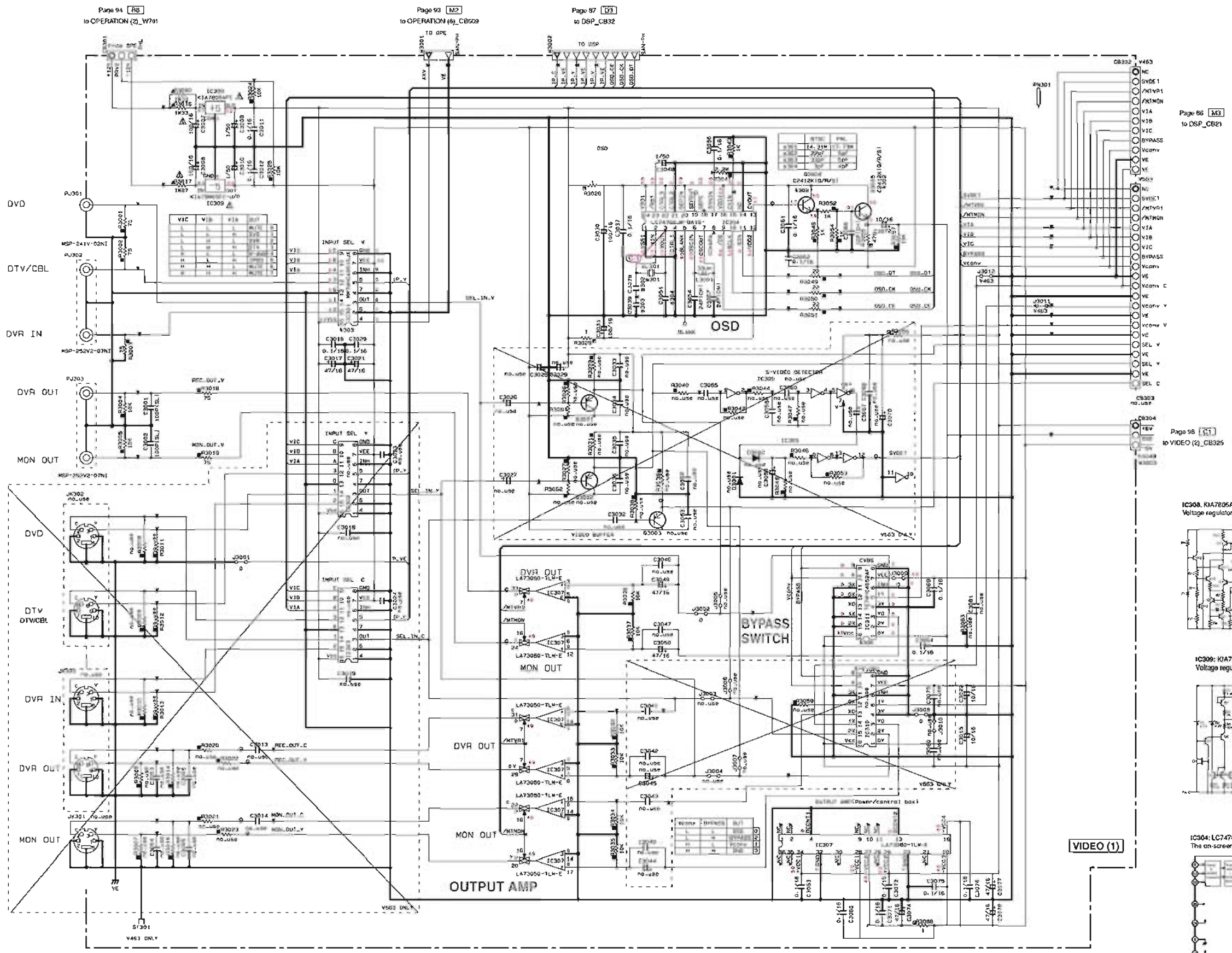
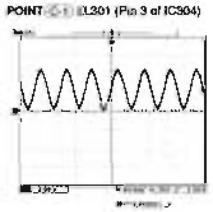
VIDEO 1/2



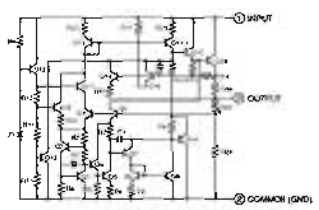
Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
8301	D3200-3205 D3208-3217	155386 MA2J11100L
8302	D3004-3005	[illegible] [illegible]1ARL/AGL1Q/R/S1 X1C38765-[illegible] OR-RTK/P
8303	IC301	MM74HC4051SJX,NL TC74HC4051AF(EL,F)
8304		
8306	IC311-322-324	TC74HC4052AF(EL,F)
8307	D3401-3501	[illegible]G4 155133 155176
8308	D3402-3404	2SA1015(Y) KTA1266(Y)
8309		
8310	D3601	DTA114ESA KRA[illegible]K-AT

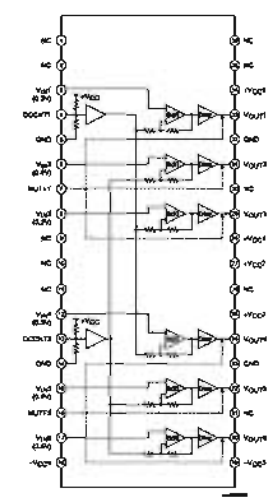
POINT (1) IC301 (Pin 3 of IC304)



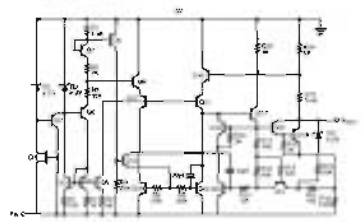
IC308: KIA7805API
Voltage regulator



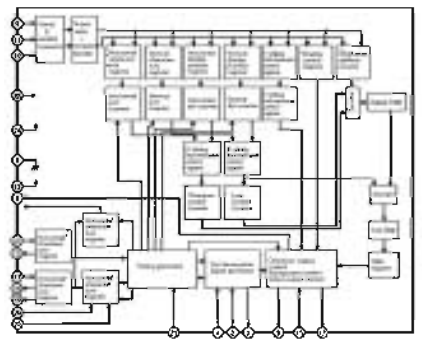
IC307: LA73050-TLM-E
6-channel 75-ohm video driver



IC309: KIA79M05PI-U
Voltage regulator



IC304: LC74782JM-8A16-TLMC
The on-screen display controller LSI



NOTICE (mode1)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(A)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN

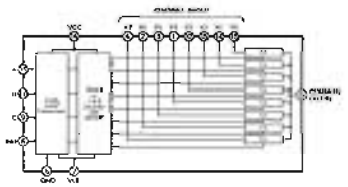
RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/4-5)
⊠	CARBON FILM RESISTOR (1/4-10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
▨	FUSE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

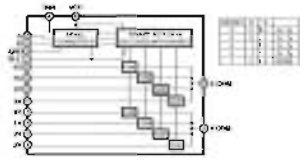
CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	B
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	H
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
ⓘ	MICA CAPACITOR	
ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

IC301: MM74HC4051SJX
8-channel analog multiplexer



IC311: TC74HC4052AF
Analog multiplexer/demultiplexer



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★ Schematic diagram is subject to change without notice

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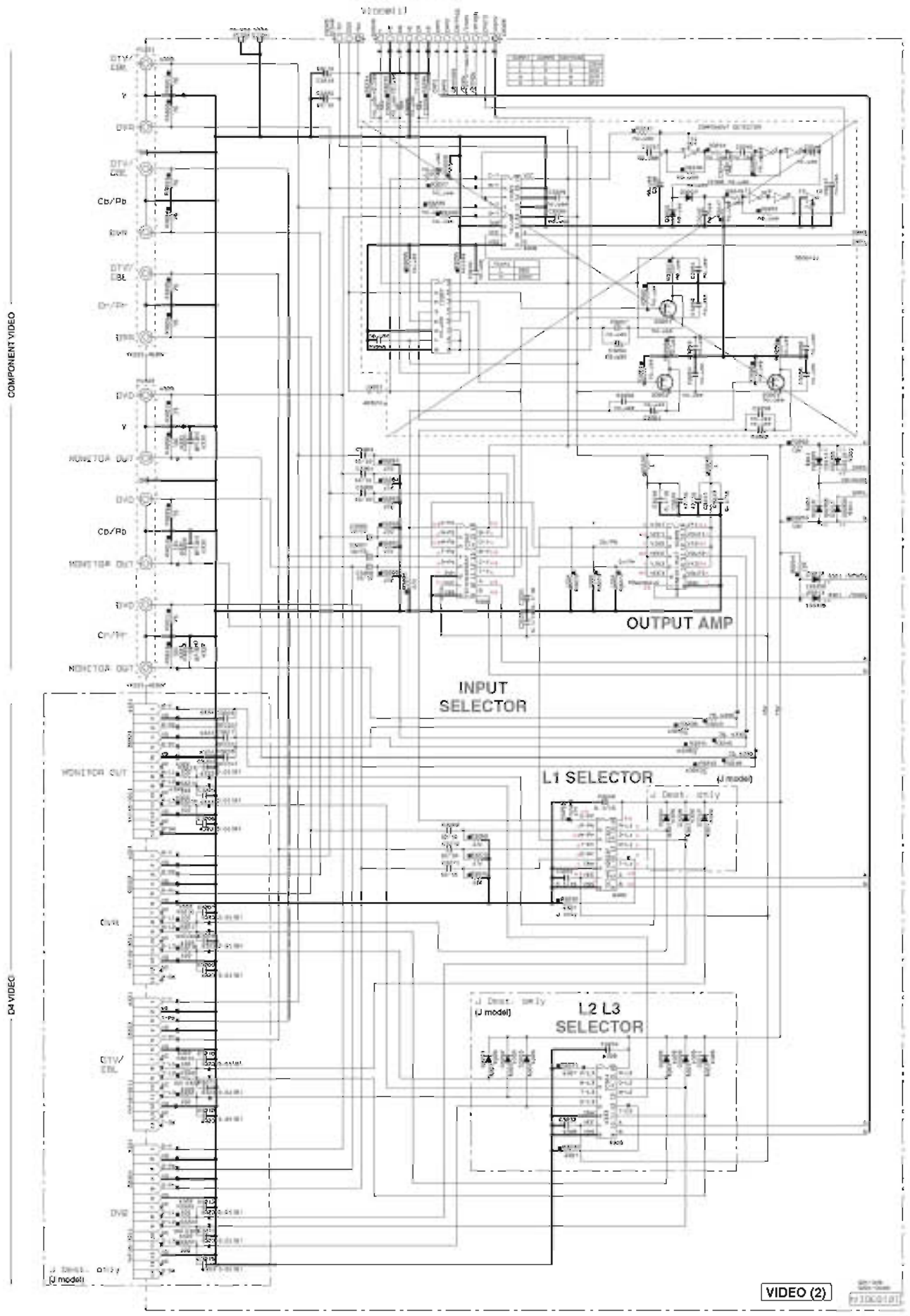
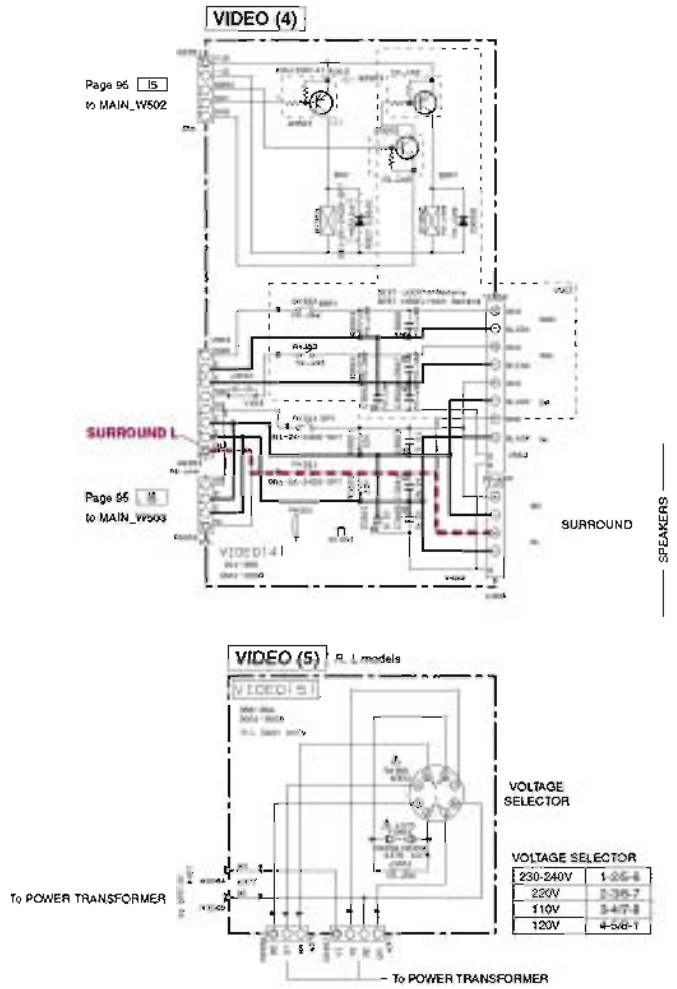
VIDEO 2/2

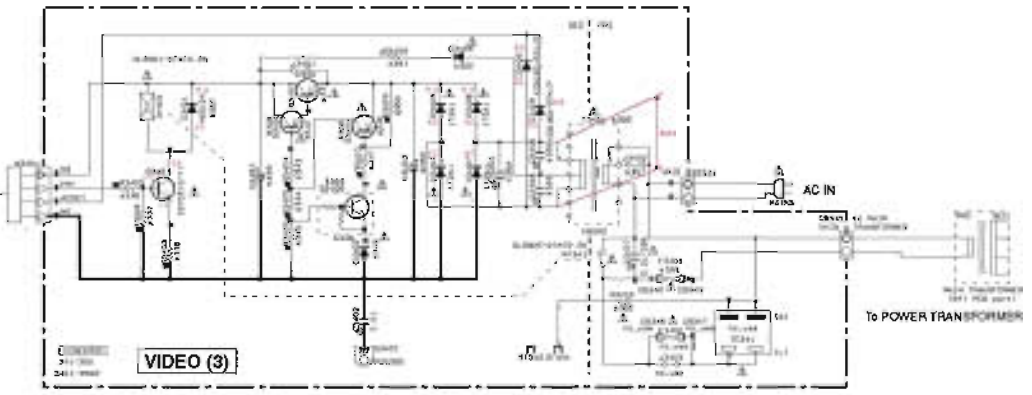
Page 87 K6
to VIDEO (1)_CB304

Page 86 M5
to DSP_CB22

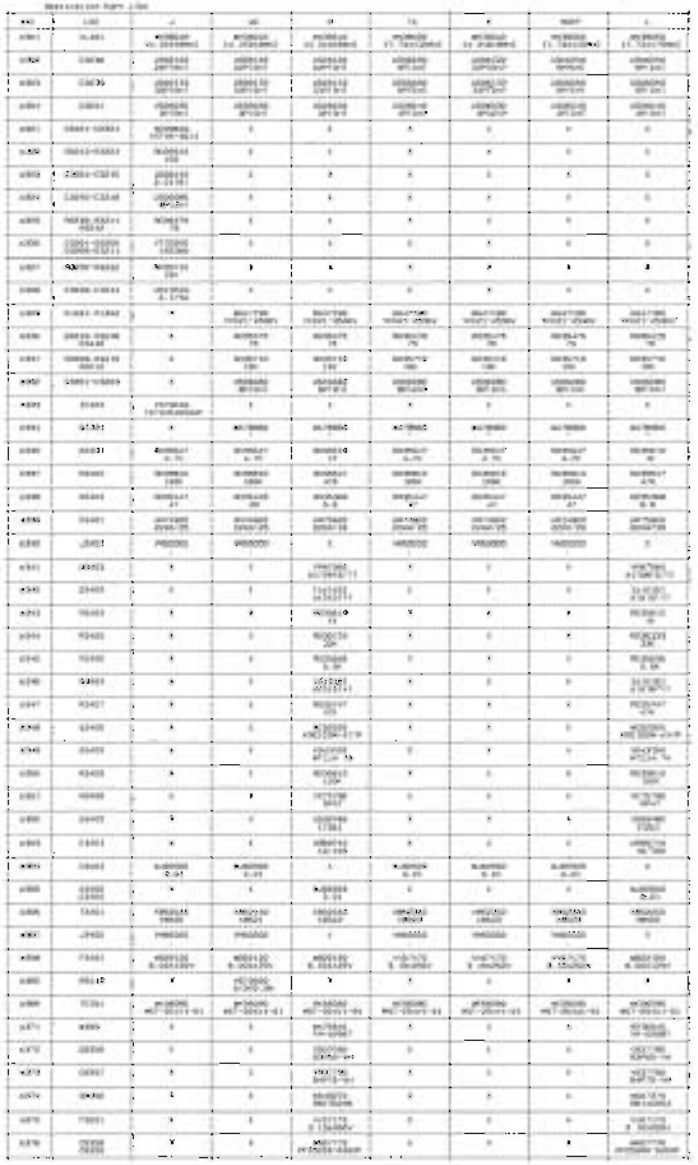




VOLTAGE SELECTOR	
230-240V	1-2/5-6
220V	2-3/6-7
110V	3-4/7-8
120V	4-5/8-1



Page 94 B5
to OPERATION (2)_CB700



RESISTOR

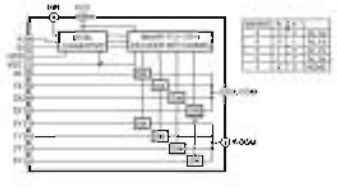
PRIORITY	PARTS NAME
NO MARK	CARBON FILM RESISTOR (E24)
⊘	CARBON FILM RESISTOR (E192)
⊘	METAL OXIDE FILM RESISTOR
⊘	METAL FILM RESISTOR
⊘	METAL PLATE RESISTOR
⊘	FUSE PROOF CARBON FILM RESISTOR
⊘	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
⊘	CHIP RESISTOR

CAPACITOR

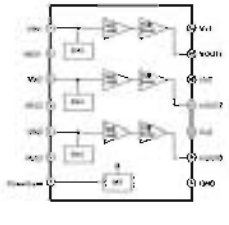
PRIORITY	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	E1
⊘	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	E2
⊘	CERAMIC TUBULAR CAPACITOR	
⊘	POLYESTER FILM CAPACITOR	
⊘	POLYSTYRENE FILM CAPACITOR	
⊘	MICA CAPACITOR	
⊘	POLYPROPYLENE FILM CAPACITOR	
⊘	SEMICONDUCTIVE CERAMIC CAPACITOR	

NOTICE (model)
[J]>>>> JAPAN
[U]>>>> U.S.A.
[C]>>>> CANADA
[M]>>>> GENERAL
[T]>>>> EUROPE
[E]>>>> KOREA
[A]>>>> AUSTRALIA
[K]>>>> BRITISH
[G]>>>> EUROPE
[L]>>>> SINGAPORE
[S]>>>> SOUTH EUROPE
[R]>>>> TAIWAN
[Y]>>>> MOROCCO

IC322-324 TC74HC4052AF
Analog multiplexer/demultiplexer



IC325 NJM2581M
Video amplifier



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■ REPLACEMENT PARTS LIST

• ELECTRICAL COMPONENT PARTS

WARNING

- Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
- The chip resistor is not supplied as a replacement part.
  - * When a chip resistor is necessary, use the following part.
    AAX60720: CHIP RESISTOR SAMPLE BOOK
- ⚠印のある部分は、安全確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- 部品価格ランクは、予告なく変更することがあります。
- チップ抵抗はサービス部品として供給できません。
  - ※ チップ抵抗が必要な場合は、下記の部品をご利用ください。
    AAX60720: CHIP RESISTOR SAMPLE BOOK

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

C.A.EL.CHP	: CHIP ALUMI.ELECTROLYTIC CAP
C.CE	: CERAMIC CAP
C.CE.ARRAY	: CERAMIC CAP ARRAY
C.CE.CHP	: CHIP CERAMIC CAP
C.CE.ML	: MULTILAYER CERAMIC CAP
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP
C.CE.TUBLR	: CERAMIC TUBULAR CAP
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP
C.EL	: ELECTROLYTIC CAP
C.MICA	: MICA CAP
C.ML.FLM	: MULTILAYER FILM CAP
C.MP	: METALLIZED PAPER CAP
C.MYLAR	: MYLAR FILM CAP
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP
C.PAPER	: PAPER CAPACITOR
C.PLS	: POLYSTYRENE FILM CAP
C.POL	: POLYESTER FILM CAP
C.POLY	: POLYETHYLENE FILM CAP
C.PP	: POLYPROPYLENE FILM CAP
C.TNTL	: TANTALUM CAP
C.TNTL.CHP	: CHIP TANTALUM CAP
C.TRIM	: TRIMMER CAP
CN	: CONNECTOR
CN.BS.PIN	: CONNECTOR,BASE PIN
CN.CANNON	: CONNECTOR,CANNON
CN.DIN	: CONNECTOR,DIN
CN.FLAT	: CONNECTOR,FLAT CABLE
CN.POST	: CONNECTOR,BASE POST
COIL.MX.AM	: COIL,AM MIX
COIL.AT.FM	: COIL,FM ANTENNA
COIL.DT.FM	: COIL,FM DETECT
COIL.MX.FM	: COIL,FM MIX
COIL,OUTPT	: OUTPUT COIL
DIOD.ARRAY	: DIODE ARRAY
DIODE.BRG	: DIODE BRIDGE
DIODE.CHP	: CHIP DIODE
DIODE.VAR	: VARACTOR DIODE
DIOD.Z.CHP	: CHIP ZENER DIODE
DIODE.ZENR	: ZENER DIODE
DSCR.CE	: CERAMIC DISCRIMINATOR
FER.BEAD	: FERRITE BEADS
FER.CORE	: FERRITE CORE
FET.CHP	: CHIP FET
FL.DSPLY	: FLUORESCENT DISPLAY
FLTR.CE	: CERAMIC FILTER
FLTR.COMB	: COMB FILTER MODULE
FLTR.LC.RF	: LC FILTER,EMI
GND.MTL	: GROUND PLATE
GND.TERM	: GROUND TERMINAL
HOLDER.FUS	: FUSE HOLDER
IC.PRTCT	: IC PROTECTOR
JUMPER.CN	: JUMPER CONNECTOR
JUMPER.TST	: JUMPER,TEST POINT
L.DTCT	: LIGHT DETECTING MODULE
L.EMIT	: LIGHT EMITTING MODULE
LED.DSPLY	: LED DISPLAY
LED.INFRD	: LED,INFRARED
MODUL.RF	: MODULATOR,RF
PHOT.CPL	: PHOTO COUPLER
PHOT.INTR	: PHOTO INTERRUPTER
PHOT.RFLCT	: PHOTO REFLECTOR
PIN.TEST	: PIN,TEST POINT
PLST.RIVET	: PLASTIC RIVET
R.ARRAY	: RESISTOR ARRAY
R.CAR.	: CARBON RESISTOR
R.CAR.CHP	: CHIP RESISTOR
R.CAR.FP	: FLAME PROOF CARBON RESISTOR
R.FUS	: FUSABLE RESISTOR
R.MTL.CHP	: CHIP METAL FILM RESISTOR
R.MTL.FLM	: METAL FILM RESISTOR
R.MTL.OXD	: METAL OXIDE FILM RESISTOR
R.MTL.PLAT	: METAL PLATE RESISTOR
RSNR.CE	: CERAMIC RESONATOR
RSNR.CRYS	: CRYSTAL RESONATOR
R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
R.CEMENT	: CEMENT RESISTOR
SCR.BND.HD	: BIND HEAD B-TIGHT SCREW
SCR.BW.HD	: BW HEAD TAPPING SCREW
SCR.CUP	: CUP TIGHT SCREW
SCR.TERM	: SCREW TERMINAL
SCR.TR	: SCREW,TRANSISTOR
SUPRT.PCB	: SUPPORT,P.C.B.
SURG.PRTCT	: SURGE PROTECTOR
SW.TACT	: TACT SWITCH
SW.LEAF	: LEAF SWITCH
SW.LEVER	: LEVER SWITCH
SW.MICRO	: MICRO SWITCH
SW.PUSH	: PUSH SWITCH
SW.RT.ENC	: ROTARY ENCODER
SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
SW.RT	: ROTARY SWITCH
SW.SLIDE	: SLIDE SWITCH
TERM.SP	: SPEAKER TERMINAL
TERM.WRAP	: WRAPPING TERMINAL
THRMST.CHP	: CHIP THERMISTOR
TR.CHP	: CHIP TRANSISTOR
TR.DGT	: DIGITAL TRANSISTOR
TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
TRANS	: TRANSFORMER
TRANS.PULS	: PULSE TRANSFORMER
TRANS.PWR	: POWER TRANSFORMER ASS'Y
TUNER.AM	: TUNER PACK,AM
TUNER.FM	: TUNER PACK,FM
TUNER.PK	: FRONT-ENDTUNER PACK
VR	: ROTARY POTENTIOMETER
VR.MTR	: POTENTIOMETER WITH MOTOR
VR.SW	: POTENTIOMETER WITH ROTARY SW
VR.SLIDE	: SLIDE POTENTIOMETER
VR.TRIM	: TRIMMER POTENTIOMETER

P.C.B. DSP

	Ref No.	Part No.	Description			Remarks	Markets	部 品 名	ランク
*		WN276900	P.C.B.	DSP			J	ＰＣＢ　ＤＳＰ	
*		WN277000	P.C.B.	DSP			UC	ＰＣＢ　ＤＳＰ	
*		WN277100	P.C.B.	DSP			R	ＰＣＢ　ＤＳＰ	
*		WN277200	P.C.B.	DSP			TA	ＰＣＢ　ＤＳＰ	
*		WN277300	P.C.B.	DSP			K	ＰＣＢ　ＤＳＰ	
*		WN277400	P.C.B.	DSP			B	ＰＣＢ　ＤＳＰ	
*		WN277500	P.C.B.	DSP			GEF	ＰＣＢ　ＤＳＰ	
*		WN277600	P.C.B.	DSP			L	ＰＣＢ　ＤＳＰ	
*	CB11-13	WM462600	CN.HDMI	19P SE				コネクタ　ＨＤＭＩ	
	CB21	VM859500	CN.BS.PIN	11P				ＦＦＣコネクター	01
	CB22	VM923600	CN.BS.PIN	13P				ＦＦＣコネクター	01
	CB31	VQ045500	CN.BS.PIN	26P				ＦＦＣコネクター	02
	CB32	VB390500	CN.BS.PIN	9P				コネクタベースポスト	03
	CB34	VQ044400	CN.BS.PIN	9P				ＦＦＣコネクター	01
*	CB35	WJ458700	CN.XM	4P, CAM-D96			UC	ＸＭコネクタ	
	CB71	VB858500	CN.BS.PIN	6P			RTKABGEFL	ベースピン	01
	CB71	VB858500	CN.BS.PIN	6P				ベースピン	01
	CB81	VB390800	CN.BS.PIN	12P				コネクタベースポスト	01
	CB82	VB390200	CN.BS.PIN	6P				コネクタベースポスト	01
	CB83	VP127700	CN	24P				コネクター	01
	CB84	VQ046000	CN.BS.PIN	31P				ＦＦＣコネクター	03
	C101-110	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
	C111	WD758300	C.CE.CHP	10uF	10V			チップセラコン	01
	C112	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
	C113	US060900	C.CE.CHP	9pF	50V D			チップセラコン	01
	C114	US060800	C.CE.CHP	8pF	50V B			チップセラコン	01
	C115	US034820	C.CE.CHP	0.082uF	16V K			チップセラコン	01
	C116	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
	C117-136	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
	C141	UR837100	C.EL	10uF	16V			ケミコン	01
	C142-143	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
	C144	UR837100	C.EL	10uF	16V			ケミコン	01
	C147	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
	C151	US063820	C.CE.CHP	8200pF	50V B			チップセラコン	01
	C152	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
*	C153	WJ606100	C.MYLAR	0.082uF	50V			マイラーコン	
	C154	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
	C156-157	WD758300	C.CE.CHP	10uF	10V			チップセラコン	01
	C158	UR037100	C.EL	10uF	16V			ケミコン	01
	C159	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
	C160	UR037100	C.EL	10uF	16V			ケミコン	01
	C161	WD758300	C.CE.CHP	10uF	10V			チップセラコン	01
	C162	UR037100	C.EL	10uF	16V			ケミコン	01
	C163	WD758300	C.CE.CHP	10uF	10V			チップセラコン	01
	C164	UR037100	C.EL	10uF	16V			ケミコン	01
	C165	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
	C167	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
	C169	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
	C171-174	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
	C175-176	US035100	C.CE.CHP	0.1uF	16V B			チップセラコン	01
	C201-212	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
	C227-228	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
	C229	UR237220	C.EL	22uF	16V			ケミコン	
	C301	UR038100	C.EL	100uF	16V			ケミコン	01
	C302	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01

＊ New Parts　＊新規部品

P.C.B. DSP

Ref No.	Part No.	Description			Remarks	Markets	部 品 名	ランク
C303-314	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C315-316	UR037100	C.EL	10uF	16V			ケミコン	01
C319	UR037100	C.EL	10uF	16V			ケミコン	01
C320	US035100	C.CE.CHP	0.1uF	16V B			チップセラコン	01
C321	UR067100	C.EL	10uF	50V			ケミコン	01
C322-323	US126100	C.CE.CHP	1uF	10V			チップセラコン	01
C324	UU238100	C.EL	100uF	16V			ケミコン	01
C325	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C326	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
C328-329	US061200	C.CE.CHP	20pF	50V B			チップセラコン	01
C330-331	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C332	US061220	C.CE.CHP	22pF	50V B			チップセラコン	01
C334	US035100	C.CE.CHP	0.1uF	16V B			チップセラコン	01
C335-338	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C339	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
C340-341	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C342	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C343	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C344	US135100	C.CE.CHP	0.1uF	16V		J	チップセラコン	01
C345-346	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C350-352	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C353	US063100	C.CE.CHP	1000pF	50V B		UC	チップセラコン	01
C354-357	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C359	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C360-365	US062220	C.CE.CHP	220pF	50V B		UC	チップセラコン	01
C367	US062220	C.CE.CHP	220pF	50V B		UC	チップセラコン	01
C368	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C369-375	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C376	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C377	US035100	C.CE.CHP	0.1uF	16V B			チップセラコン	01
C378	UR037100	C.EL	10uF	16V			ケミコン	01
C379	UR237470	C.EL	47uF	16V			ケミコン	01
* C380	WJ606200	C.MYLAR	0.1uF	50V			マイラーコン	
C381	WJ605400	C.MYLAR	0.022uF	50V J			マイラーコン	01
C382	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C384	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C385	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
C386	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C387	US126100	C.CE.CHP	1uF	10V			チップセラコン	01
C388	UR037100	C.EL	10uF	16V			ケミコン	
C389-391	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
C401-408	UB446100	C.CE.CHP	1uF	16V			チップセラコン	01
C409-416	US635100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C417-418	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C419	US635100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C420-422	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C423-424	US635100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C425	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C426	US635100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C427-430	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C431-432	US061220	C.CE.CHP	22pF	50V B			チップセラコン	01
C433	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C435-436	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C437	WH771300	C.EL	100uF	10V			ケミコン	01
C438	UB446100	C.CE.CHP	1uF	16V			チップセラコン	01

* New Parts　* 新規部品

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Ref No.	Part No.	Description			Remarks	Markets	部 品 名	ランク
C439	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C440	UB446100	C.CE.CHP	1uF	16V			チップセラコン	01
C441	WH771300	C.EL	100uF	10V			ケミコン	01
C443	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C501-502	UB446100	C.CE.CHP	1uF	16V			チップセラコン	01
C503	US635100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C504-505	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C506-507	US635100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C508-509	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C510-517	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C519-520	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C521	US035100	C.CE.CHP	0.1uF	16V B			チップセラコン	01
C522	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C523	US061180	C.CE.CHP	18pF	50V B			チップセラコン	01
C524-525	US035100	C.CE.CHP	0.1uF	16V B			チップセラコン	01
C526-527	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C529	US035100	C.CE.CHP	0.1uF	16V B			チップセラコン	01
C530	UR038100	C.EL	100uF	16V			ケミコン	01
C601-618	US635100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C619	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C620	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C621	UR837100	C.EL	10uF	16V			ケミコン	01
C701-713	US135100	C.CE.CHP	0.1uF	16V		RTKABGEFL	チップセラコン	01
C714	WD758300	C.CE.CHP	10uF	10V		RTKABGEFL	チップセラコン	01
C715	US135100	C.CE.CHP	0.1uF	16V		RTKABGEFL	チップセラコン	01
C716	WD758300	C.CE.CHP	10uF	10V		RTKABGEFL	チップセラコン	01
C717-720	US135100	C.CE.CHP	0.1uF	16V		RTKABGEFL	チップセラコン	01
C721	US062220	C.CE.CHP	220pF	50V B		RTKABGEFL	チップセラコン	01
C722-723	US035100	C.CE.CHP	0.1uF	16V B		RTKABGEFL	チップセラコン	01
C724-725	US064100	C.CE.CHP	0.01uF	50V B		RTKABGEFL	チップセラコン	01
C726	US061120	C.CE.CHP	12pF	50V B		RTKABGEFL	チップセラコン	01
C727	US061200	C.CE.CHP	20pF	50V B		RTKABGEFL	チップセラコン	01
C729	UR838100	C.EL	100uF	16V		RTKABGEFL	ケミコン	01
C730-731	US064100	C.CE.CHP	0.01uF	50V B		RTKABGEFL	チップセラコン	01
C801-852	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C854-862	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C863	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C864	UR038470	C.EL	470uF	16V			ケミコン	
C865	US063100	C.CE.CHP	1000pF	50V B			チップセラコン	01
C866	UR238100	C.EL	100uF	16V			ケミコン	
C867	UB446100	C.CE.CHP	1uF	16V			チップセラコン	01
C868-870	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C871	UR038100	C.EL	100uF	16V			ケミコン	01
C880	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C881	US062100	C.CE.CHP	100pF	50V B			チップセラコン	01
C882-885	US062220	C.CE.CHP	220pF	50V B			チップセラコン	01
C886	US062470	C.CE.CHP	470pF	50V B			チップセラコン	01
C1301	US135100	C.CE.CHP	0.1uF	16V		UC	チップセラコン	01
C1302-1303	US035100	C.CE.CHP	0.1uF	16V B		UC	チップセラコン	01
C1304	US135100	C.CE.CHP	0.1uF	16V		UC	チップセラコン	01
C1305	US063100	C.CE.CHP	1000pF	50V B		UC	チップセラコン	01
C1306-1307	US061100	C.CE.CHP	10pF	50V B		UC	チップセラコン	01
C1308-1309	UB446100	C.CE.CHP	1uF	16V		UC	チップセラコン	01
C1310-1317	US135100	C.CE.CHP	0.1uF	16V		UC	チップセラコン	01
C1321	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01

＊New Parts　＊新規部品

P.C.B. DSP

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
	C1322	US035100	C.CE.CHP	0.1uF 16V B		UC	チップセラコン	01
	C1801-1827	US063100	C.CE.CHP	1000pF 50V B			チップセラコン	01
*	D109-111	WJ586300	VARISTOR	SDV1608H100C050YPT			チップバリスタ	
	D112	VT332900	DIODE	1SS355			ダイオード	01
	D113-116	WH641900	ESD	PESD0603-140			ポリマーＥＳＤ	01
*	D117-118	WJ586300	VARISTOR	SDV1608H100C050YPT			チップバリスタ	
	D119-130	WH641900	ESD	PESD0603-140			ポリマーＥＳＤ	01
*	D131-132	WJ586300	VARISTOR	SDV1608H100C050YPT			チップバリスタ	
*	D135-136	WJ586300	VARISTOR	SDV1608H100C050YPT			チップバリスタ	
	D201	VT332900	DIODE	1SS355			ダイオード	01
	D305-306	VT332900	DIODE	1SS355			ダイオード	01
	D401	VS597600	DIODE.CHP	RB160L-40 TE25			チップダイオード	01
	D503	VT332900	DIODE	1SS355			ダイオード	01
	D801-802	VT332900	DIODE	1SS355			ダイオード	01
	D803-806	VU171400	DIODE.ZENR	UDZS3.3BTE-17 3.3V			ツェナーダイオード	
*	D1301-1303	WJ586300	VARISTOR	SDV1608H100C050YPT		UC	チップバリスタ	
	IC13	X7741A00	IC	NJM2867F3-05(TE1)			電源ＩＣ	02
	IC22	X7907A00	IC	NJM2845DL1-18			電源ＩＣ	04
	IC31	X7746A00	IC	LC89057W-VF4AD-E			ＩＣ	07
	IC33-34	X6123A00	IC	SN74LV157APWR			ロジックＩＣ	02
*	IC36	X8192A00	IC	F2621E-01-TR		UC	ＩＣ	
	IC38	X7355A00	IC	PCM1680DBQR			ＩＣ	07
	IC39	X7357A00	IC	PCM1803DBR			ＩＣ	04
	IC42	X8653A00	IC	BR25L320F-W EEPROM			メモリＩＣ	04
	IC43-44	XV894A00	IC	TC74VHC153FT MULTI			ロジックＩＣ	03
*	IC51	X9626A00	IC.MEMORY	K4S641632K-UC60000			メモリＩＣ　６４Ｍ	
*	IC52	X9636A00	IC.MEMORY	EN29LV160AB-70TCP	written		メモリＩＣ	
	IC53-55	XZ287A00	IC	SN74LVC245APWR			ロジックＩＣ	02
*	IC56	X9439A00	IC	SN74AHCT574PWR			ロジックＩＣ	
	IC57-59	X5135A00	IC	SN74LV574APWR 8D-F			ロジックＩＣ	02
	IC61	X8813A00	IC	MB87L8760			ＩＣ　デジタル	08
	IC62	X2709A00	IC	SN74AHCT245PWR			ロジックＩＣ	02
	IC72	XZ287A00	IC	SN74LVC245APWR		RTKABGEFL	ロジックＩＣ	02
*	IC73	X8096A00	IC	R5523N001A-TR-F		RTKABGEFL	電源ＩＣ	
	IC81	X6905A00	IC	ADC084S021CIMM			ＡＤコンバーター	04
	IC82-83	X5875A00	IC	SN74LV4051APWR			ロジックＩＣ	01
	IC151	XZ287A00	IC	SN74LVC245APWR			ロジックＩＣ	02
	IC152	X5405A00	IC	SN74LVC32APWR OR			ロジックＩＣ	01
*	IC153	X5404A00	IC	SN74LVC08APWR AND			ロジックＩＣ	
	IC154	X6611A00	IC	SN74LV123APWR			ロジックＩＣ	01
	IC155	X6688A00	IC	SN74LV14APWR INV			ロジックＩＣ	01
	JK31	VV269500	CN	8P DIN		UC	複合コネクタ	03
	PJ31	V8795700	JACK.PIN	1P			ピンジャック	01
	PN81-82	V9637500	PIN	L=70 #18			スタイルピン	
	Q101-104	VQ986700	TR	2SC4081 T106			トランジスタ	01
	Q301	VV655200	TR.DGT	DTA143EKA		UC	デジタルトランジスタ	01
	Q401	WE736300	FET	RTQ040P02			ＦＥＴ	01
	Q801	WE736300	FET	RTQ040P02			ＦＥＴ	01
*	R217-218	WJ682800	R.MTL.FLM	2.2Ω 1W			金属被膜抵抗	
	R328	HV753100	R.CAR.FP	1Ω 1/4W			不燃化カーボン抵抗	01
	T101	WA789600	SCR.TERM	M3			スクリューターミナル	
	T301	WA789600	SCR.TERM	M3			スクリューターミナル	
	U31	WH536900	CN.PHOTO.T	1P GP1FAV51TK0F		J	光ファイバー送信器	04
	U32-33	WH169900	CN.PHOTO.R	1P GP1FAV51RK0F			光ファイバー受信器	04
	XL31	WJ625200	RSNR.CRYS	24.576MHz			水晶振動子	02

＊New Parts　＊新規部品

P.C.B. DSP and P.C.B. OPERATION

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
	XL101	VZ772700	RSNR.CRYS	28.63636MHz			水晶振動子	03
	XL311	WH455300	RSNR.CRYS	45.1584MHz		UC	水晶振動子	
	XL401	WB551700	RSNR.CRYS	16.666MHz SMD-49			水晶振動子	03
	XL701	VS294900	RSNR.CRYS	12MHz SMD-49		RTKABGEFL	水晶振動子	04
*		WN278400	P.C.B.	OPERATION		J	PCB OPERATION	
*		WN278500	P.C.B.	OPERATION		UC	PCB OPERATION	
*		WN278600	P.C.B.	OPERATION		RTKAGEFL	PCB OPERATION	
*		WN278700	P.C.B.	OPERATION		B	PCB OPERATION	
	CB601-602	VB858300	CN.BS.PIN	4P			コネクタベースポスト	01
	CB603	VP798200	CN.BS.PIN	24P			FFCコネクター	01
	CB607	WG668100	CN.USB	USB 4P SE		RTKABGEFL	USBコネクター	04
	CB608	VB858400	CN.BS.PIN	5P			ベースピン	01
	CB609	VB858200	CN.BS.PIN	3P			ベースピン	01
	CB610	VB390300	CN.BS.PIN	7P			ベースピン	01
	CB700	VB858300	CN.BS.PIN	4P			コネクタベースポスト	01
	CB701	VB858600	CN.BS.PIN	7P			ベースピン	01
	CB702	LB919110	CN.BS.PIN	11P SE			ベースツキポスト	01
	CB703	VK024700	CN.BS.PIN	3P			ワイヤートラップ	01
	C6001	US063100	C.CE.CHP	1000pF 50V B			チップセラコン	01
	C6002	WJ605000	C.MYLAR	0.01uF 50V J			マイラーコン	01
	C6003-6004	US063100	C.CE.CHP	1000pF 50V B			チップセラコン	01
	C6005	WJ605000	C.MYLAR	0.01uF 50V J			マイラーコン	01
	C6006	US064100	C.CE.CHP	0.01uF 50V B			チップセラコン	01
	C6007	UM397100	C.EL	10uF 16V			ケミコン	01
	C6008	UM397220	C.EL	22uF 25V			ケミコン	01
	C6009-6010	WJ605000	C.MYLAR	0.01uF 50V J			マイラーコン	01
	C6011	US062100	C.CE.CHP	100pF 50V B			チップセラコン	01
	C6012	UM387470	C.EL	47uF 16V			ケミコン	01
	C6013	US061330	C.CE.CHP	33pF 50V B			チップセラコン	01
	C6014	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C6015	UM397100	C.EL	10uF 16V			ケミコン	01
	C6016-6017	UM397220	C.EL	22uF 25V			ケミコン	01
	C6018-6019	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C6020	UR068100	C.EL	100uF 50V			ケミコン	01
	C6021	UM388330	C.EL	330uF 6.3V			ケミコン	01
	C6022	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C6023	US061680	C.CE.CHP	68pF 50V B			チップセラコン	01
	C6024	US065100	C.CE.CHP	0.1uF 50V B			チップセラコン	01
	C6025-6026	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C6027	US064100	C.CE.CHP	0.01uF 50V B			チップセラコン	01
	C6028	UM397100	C.EL	10uF 16V			ケミコン	01
	C6029	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C6030-6031	US062100	C.CE.CHP	100pF 50V B			チップセラコン	01
	C6032	US063100	C.CE.CHP	1000pF 50V B			チップセラコン	01
	C6033	US061100	C.CE.CHP	10pF 50V B			チップセラコン	01
	C6034	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C6035	US063100	C.CE.CHP	1000pF 50V B			チップセラコン	01
	C6036	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C6037-6038	US044220	C.CE.CHP	0.022uF 25V B			チップセラコン	01
	C6039	US064100	C.CE.CHP	0.01uF 50V B			チップセラコン	01
	C6040-6041	US044220	C.CE.CHP	0.022uF 25V B			チップセラコン	01
	C6042-6043	US135100	C.CE.CHP	0.1uF 16V		JUC	チップセラコン	01

＊ New Parts ＊新規部品

P.C.B. OPERATION

Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
C6044-6045	US063680	C.CE.CHP	6800pF 50V B		JUC	チップセラコン	01
C6047	US062100	C.CE.CHP	100pF 50V B		RTKABGEFL	チップセラコン	01
C6048-6049	US135100	C.CE.CHP	0.1uF 16V		RTKABGEFL	チップセラコン	01
C6050-6051	US062220	C.CE.CHP	220pF 50V B		RTKABGEFL	チップセラコン	01
C6060	US135100	C.CE.CHP	0.1uF 16V		JUC	チップセラコン	01
C6063	US062470	C.CE.CHP	470pF 50V B			チップセラコン	01
C6064	US126100	C.CE.CHP	1uF 10V		RTKABGEFL	チップセラコン	01
C6080-6081	US063100	C.CE.CHP	1000pF 50V B			チップセラコン	01
C6082	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
C7000	UR866100	C.EL	1uF 50V			ケミコン	01
C7001	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
C7002-7003	UR837470	C.EL	47uF 16V			ケミコン	01
C7004	US064100	C.CE.CHP	0.01uF 50V B			チップセラコン	01
C7005	UR866100	C.EL	1uF 50V			ケミコン	01
C7006-7007	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
C7008	UR866100	C.EL	1uF 50V			ケミコン	01
C7009	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
C7010	UR866100	C.EL	1uF 50V			ケミコン	01
C7011	UR837470	C.EL	47uF 16V			ケミコン	01
C7012-7014	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
C7015-7016	UR866100	C.EL	1uF 50V			ケミコン	01
C7017	UR837100	C.EL	10uF 16V			ケミコン	01
C7018	UR837470	C.EL	47uF 16V			ケミコン	01
C7019-7021	UR866100	C.EL	1uF 50V			ケミコン	01
C7022	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
C7023	UR73A100	C.EL	10000uF 16V			ケミコン	03
C7024	UR749470	C.EL	4700uF 25V			ケミコン	05
C7025	UR749220	C.EL	2200uF 25V			ケミコン	03
C7026	UR039470	C.EL	4700uF 16V		UCRTKABGEFL	ケミコン	03
C7027	UR73A100	C.EL	10000uF 16V		J	ケミコン	03
C7027	WG602000	C.EL	15000uF 16V		UCRTKABGEFL	ケミコン	04
C7028	UR73A100	C.EL	10000uF 16V			ケミコン	03
C7029	WG602000	C.EL	15000uF 16V			ケミコン	04
C7030-7032	VE326000	C.MYLAR	0.1uF 50V			マイラーコン	01
C7033	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
C7034-7035	WJ605000	C.MYLAR	0.01uF 50V J			マイラーコン	01
C7036	VE326000	C.MYLAR	0.1uF 50V			マイラーコン	01
C7037	WJ605000	C.MYLAR	0.01uF 50V J			マイラーコン	01
D6001-6002	VT332900	DIODE	1SS355			ダイオード	01
D6003	VU172500	DIODE.ZENR	UDZS9.1B			ツェナーダイオード	01
D6004	VT332900	DIODE	1SS355			ダイオード	01
D6005	VU171900	DIODE.ZENR	UDZ5.1B 5.1V			ツェナーダイオード	01
D6006	VT332900	DIODE	1SS355			ダイオード	01
D6007-6009	WJ249600	LED	ORANGE			ＬＥＤ	01
D6012	WJ249600	LED	ORANGE			ＬＥＤ	01
D6017-6018	VU171500	DIODE.ZENR	UDZ 3.6BTE-17 3.6V			ツェナーダイオード	01
D6020-6023	VT332900	DIODE	1SS355		JUC	ダイオード	01
D6024-6027	VT332900	DIODE	1SS355		RTKABGEFL	ダイオード	01
D7004	VS997800	DIODE	1T2			ダイオード	01
D7005-7006	VT332900	DIODE	1SS355			ダイオード	01
D7008	VS997800	DIODE	1T2			ダイオード	01
D7010	VT332900	DIODE	1SS355			ダイオード	01
D7012	V2376600	DIODE.SHOT	RB500V-40		UC	ショットキーダイオード	01
D7013	VU171900	DIODE.ZENR	UDZ5.1B 5.1V			ツェナーダイオード	01
⚠ D7014-7015	WA653100	DIODE.BRG	KBP103G 1A 200V			ダイオードブリッジ	02

＊New Parts ＊新規部品

P.C.B. OPERATION

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
	D7016-7017	VT332900	DIODE	1SS355			ダイオード	01
⚠	D7018-7019	WJ286700	DIODE.BRG	RS403M 4A 140V			ダイオートブリッジ	03
	IC601	X7378A00	IC	NJM4565M(TE1)			アンプＩＣ	01
	IC603	X6386A00	IC	M66003-0131FP			ＩＣ	07
⚠	IC700	X4419A00	IC	NJM2396F33 3.3V			電源ＩＣ	03
⚠	IC701	X4928A00	IC	KIA7805API 5V			電源ＩＣ	02
⚠	IC702	X4419A00	IC	NJM2396F33 3.3V			電源ＩＣ	03
⚠	IC703	X4928A00	IC	KIA7805API 5V			電源ＩＣ	02
⚠	IC704	X4153A00	IC	KIA7812API			電源ＩＣ	02
⚠	IC705	X4154A00	IC	KIA7912PI			電源ＩＣ	
⚠	IC706	X6143A00	IC	NJM2388F05 5.0V		UCRTKABGEFL	電源ＩＣ	04
* ⚠	IC707	X7976A00	IC	NJM2388F63			電源ＩＣ	
	IC708	X0515A00	IC	LM61CIZ THERMAL			電源ＩＣ	03
	JK601	WJ117300	JACK.PHONE	PHONES			ヘッドホンジャック	02
	JK602	V9408200	JACK.PHONE	MSJ-064-05B GR			ホーンジャック	03
	JK603	WJ117400	JACK.MNI	OPTIMIZER MIC		JUC	ミニジャック	02
	PJ601	WJ117500	JACK.PIN	3P		JUC	ピンジャック	03
	PJ602	WJ117500	JACK.PIN	3P		RTKABGEFL	ピンジャック	03
	PN601	V9637500	PIN	L=70 ∮18			スタイルピン	
	PN604	V9637500	PIN	L=70 ∮18			スタイルピン	
	PN607-609	V9637500	PIN	L=70 ∮18			スタイルピン	
	PN701	V9637500	PIN	L=70 ∮18			スタイルピン	
	Q6001	VV556400	TR	2SC2412K Q,R,S			トランジスタ	01
	Q6002	WC434800	TR.DGT	KRA102S-RTK/P			デジタルトランジスタ	01
	Q6003	VV556500	TR	2SA1037K Q,R,S			トランジスタ	01
	Q6004	VV556400	TR	2SC2412K Q,R,S			トランジスタ	01
	Q6005	WC435000	TR.DGT	KRC102S-RTK			デジタルトランジスタ	01
	Q6006-6008	VV556400	TR	2SC2412K Q,R,S			トランジスタ	01
	Q6010	WC434800	TR.DGT	KRA102S-RTK/P			デジタルトランジスタ	01
	Q6011	VV556500	TR	2SA1037K Q,R,S			トランジスタ	01
	Q6017-6018	VV556400	TR	2SC2412K Q,R,S			トランジスタ	01
	Q6029-6030	VV556400	TR	2SC2412K Q,R,S			トランジスタ	01
	Q7000	WC435100	TR.DGT	KRC104S-RTK			デジタルトランジスタ	01
	Q7001	VV556400	TR	2SC2412K Q,R,S			トランジスタ	01
	Q7002	WC435100	TR.DGT	KRC104S-RTK			デジタルトランジスタ	01
	R6001-6002	WJ685600	R.MTL.FLM	470Ω 1W J			金属被膜抵抗	01
⚠	R7013	HV753100	R.CAR.FP	1Ω 1/4W			不燃化カーボン抵抗	01
⚠	R7019-7021	HV753100	R.CAR.FP	1Ω 1/4W			不燃化カーボン抵抗	01
⚠	R7025	WH820300	R.FUSE	1Ω 1W J			ヒューズ抵抗	01
* ⚠	R7029	WJ681400	R.MTL.FLM	0.15Ω 1W			金属被膜抵抗	
* ⚠	R7031	WJ681400	R.MTL.FLM	0.15Ω 1W			金属被膜抵抗	
	ST601	WA789700	SCR.TERM	D3.5			スクリューターミナル	01
	ST602	WA789700	SCR.TERM	D3.5		RTKABGEFL	スクリューターミナル	01
	SW601	WD483100	SW.TACT	SKRGAAD010		JUCRTKAGEFL	タクト ＳＷ	01
	SW603	WD483100	SW.TACT	SKRGAAD010		JUCRTKAGEFL	タクト ＳＷ	01
	SW604-613	WD483100	SW.TACT	SKRGAAD010			タクト ＳＷ	01
	SW614	V9597100	SW.RT.ENC	EC12E2460802			ロータリーエンコーダ	04
	SW615-616	WD483100	SW.TACT	SKRGAAD010			タクト ＳＷ	01
	SW618-620	WD483100	SW.TACT	SKRGAAD010		JUCRTKAGEFL	タクト ＳＷ	01
	SW623-624	WD483100	SW.TACT	SKRGAAD010		JUCRTKAGEFL	タクト ＳＷ	01
	SW627	WD483100	SW.TACT	SKRGAAD010			タクト ＳＷ	01
	SW629	WD483100	SW.TACT	SKRGAAD010			タクト ＳＷ	01
	U6001	WJ645300	L.DTCT	SM3385UMH6			リモコン受光ユニット	03
*	V6001	WN049000	FL.DSPLY	17-BT-32GNK			螢光表示管	
		WA790900	SPACER	4.6/10/32			スペーサ ＦＬ	

＊ New Parts ＊新規部品

P.C.B. MAIN

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
*		WN272700	P.C.B. MAIN			JUCRTA	ＰＣＢ ＭＡＩＮ	
*		WN272900	P.C.B. MAIN			KL	ＰＣＢ ＭＡＩＮ	
*		WN273000	P.C.B. MAIN			B	ＰＣＢ ＭＡＩＮ	
*		WN273100	P.C.B. MAIN			GEF	ＰＣＢ ＭＡＩＮ	
	CB401	VQ048000	CN.BS.PIN	31P			ＦＦＣコネクター	02
	CB402	VN520900	CN.BS.PIN	52045 26P TE			ＦＦＣコネクター	02
	CB403	VM923600	CN.BS.PIN	13P		JUCRTKAGEFL	ＦＦＣコネクター	01
	CB502	LB932060	CN.BS.PIN	6P			ベースポスト	01
	C4001	WJ605000	C.MYLAR	0.01uF 50V J			マイラーコン	01
	C4002	WJ603300	C.MYLAR	470pF 50V J			マイラーコン	01
	C4003	US064100	C.CE.CHP	0.01uF 50V B			チップセラコン	01
	C4008-4019	US062220	C.CE.CHP	220pF 50V B			チップセラコン	01
	C4020-4021	US061470	C.CE.CHP	47pF 50V B			チップセラコン	01
	C4022-4025	US062220	C.CE.CHP	220pF 50V B			チップセラコン	01
	C4026-4027	US061470	C.CE.CHP	47pF 50V B			チップセラコン	01
	C4028-4029	US062220	C.CE.CHP	220pF 50V B		B	チップセラコン	01
	C4030-4033	UR837100	C.EL	10uF 16V			ケミコン	01
	C4038	UR866220	C.EL	2.2uF 50V			ケミコン	01
	C4039	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C4040-4041	UR067100	C.EL	10uF 50V			ケミコン	01
	C4042-4043	UR847470	C.EL	47uF 25V			ケミコン	01
	C4044-4045	UR038100	C.EL	100uF 16V			ケミコン	
	C4048	US063100	C.CE.CHP	1000pF 50V B			チップセラコン	01
	C4049-4050	US062100	C.CE.CHP	100pF 50V B			チップセラコン	01
	C4051	US064100	C.CE.CHP	0.01uF 50V B			チップセラコン	01
	C4052-4053	US062100	C.CE.CHP	100pF 50V B			チップセラコン	01
	C4054	WJ605400	C.MYLAR	0.022uF 50V J			マイラーコン	01
	C4055	WJ605800	C.MYLAR	0.047uF 50V J			マイラーコン	01
	C4056	VE326200	C.MYLAR	0.15uF 50V			マイラーコン	
	C4057	UR837470	C.EL	47uF 16V			ケミコン	01
	C4058	WJ605400	C.MYLAR	0.022uF 50V J			マイラーコン	01
	C4059-4064	UR837100	C.EL	10uF 16V			ケミコン	01
	C4067	UR837470	C.EL	47uF 16V			ケミコン	01
	C4068	VE326200	C.MYLAR	0.15uF 50V			マイラーコン	
	C4069	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C4070	WJ605800	C.MYLAR	0.047uF 50V J			マイラーコン	01
	C4071	UR837470	C.EL	47uF 16V			ケミコン	01
	C4072	US135100	C.CE.CHP	0.1uF 16V		GEF	チップセラコン	01
	C4073	UR038100	C.EL	100uF 16V			ケミコン	
	C4074-4079	UR067100	C.EL	10uF 50V			ケミコン	01
	C4082	UR866220	C.EL	2.2uF 50V			ケミコン	01
	C4083	US062330	C.CE.CHP	330pF 50V B		GEF	チップセラコン	01
	C4084-4086	UR067100	C.EL	10uF 50V			ケミコン	01
	C4087-4090	US162820	C.CE.CHP	820pF 50V J			チップセラコン	
	C4091	WJ603600	C.MYLAR	820pF 50V J			マイラーコン	01
	C4092	WJ605400	C.MYLAR	0.022uF 50V J			マイラーコン	01
	C4095	US062330	C.CE.CHP	330pF 50V B		GEF	チップセラコン	01
	C4096-4097	UR067100	C.EL	10uF 50V			ケミコン	01
	C4100	US062100	C.CE.CHP	100pF 50V B			チップセラコン	01
	C4101-4105	US061820	C.CE.CHP	82pF 50V B			チップセラコン	01
*	C4106	WJ604200	C.MYLAR	2700pF 50V			マイラーコン	
	C4109	UR837470	C.EL	47uF 16V		GEF	ケミコン	01
	C4110-4116	UR837100	C.EL	10uF 16V			ケミコン	01
	C4119-4120	US135100	C.CE.CHP	0.1uF 16V		GEF	チップセラコン	01
	C4121	US062560	C.CE.CHP	560pF 50V B		GEF	チップセラコン	01

＊New Parts ＊新規部品

P.C.B. MAIN

	Ref No.	Part No.	Description			Remarks	Markets	部 品 名	ランク
	C4122	UR038100	C.EL	100uF	16V			ケミコン	
	C4123	UR837470	C.EL	47uF	16V		GEF	ケミコン	01
	C4124-4125	US061270	C.CE.CHP	27pF	50V B		GEF	チップセラコン	01
	C4126	UR837470	C.EL	47uF	16V		GEF	ケミコン	01
	C4127-4128	UR038100	C.EL	100uF	16V			ケミコン	
	C5001	UR837330	C.EL	33uF	16V			ケミコン	01
	C5002	WJ605000	C.MYLAR	0.01uF	50V J			マイラーコン	01
	C5005-5007	UR037100	C.EL	10uF	16V			ケミコン	01
	C5009-5011	UR866220	C.EL	2.2uF	50V			ケミコン	01
	C5012-5013	UR037100	C.EL	10uF	16V			ケミコン	01
	C5014	WJ603300	C.MYLAR	470pF	50V J			マイラーコン	01
*	C5015	UR277220	C.EL	22uF	63V			ケミコン	
	C5017	UR297100	C.EL	10uF	100V			ケミコン	
⚠	C5018	WJ603300	C.MYLAR	470pF	50V J			マイラーコン	01
	C5020	UR297100	C.EL	10uF	100V			ケミコン	
*	C5022	UR277220	C.EL	22uF	63V			ケミコン	
	C5023-5024	UR297100	C.EL	10uF	100V			ケミコン	
	C5026-5028	WJ603300	C.MYLAR	470pF	50V J			マイラーコン	01
	C5029	WJ602900	C.MYLAR	100pF	50V K			マイラーコン	01
*	C5030	UR067330	C.EL	33uF	50V			ケミコン	
	C5031	WJ602900	C.MYLAR	100pF	50V K			マイラーコン	01
*	C5032	UR067330	C.EL	33uF	50V			ケミコン	
*	C5034	UR067330	C.EL	33uF	50V			ケミコン	
	C5036	WJ602900	C.MYLAR	100pF	50V K			マイラーコン	01
*	C5037	UR067330	C.EL	33uF	50V			ケミコン	
	C5038	WJ602900	C.MYLAR	100pF	50V K			マイラーコン	01
	C5041	UR897100	C.EL	10uF	100V			ケミコン	01
	C5042	FG651100	C.CE	10pF	50V			セラコン	01
	C5043	WJ602900	C.MYLAR	100pF	50V K			マイラーコン	01
*	C5044	UR067330	C.EL	33uF	50V			ケミコン	
	C5045	UR866100	C.EL	1uF	50V			ケミコン	01
	C5046	FG650500	C.CE	5pF	50V			セラコン	01
	C5048	FG650500	C.CE	5pF	50V			セラコン	01
	C5050-5051	FG650500	C.CE	5pF	50V			セラコン	01
	C5052-5054	WJ605800	C.MYLAR	0.047uF	50V J			マイラーコン	01
	C5057-5058	WJ605800	C.MYLAR	0.047uF	50V J			マイラーコン	01
	C5059	UR866470	C.EL	4.7uF	50V			ケミコン	01
	C5060	UR828220	C.EL	220uF	10V			ケミコン	01
	C5061	UR858100	C.EL	100uF	35V			ケミコン	01
*	C5062	UR278100	C.EL	100uF	63V			ケミコン	
	C5063	UR866470	C.EL	4.7uF	50V			ケミコン	01
	C5064	UR058100	C.EL	100uF	35V			ケミコン	01
⚠	C5065	WE514200	C.EL	6800uF	63V		JUCRTKAL	ケミコン	
*	C5065	WN524400	C.EL	6800uF	63V		BGEF	ケミコン	
	C5066	WE514200	C.EL	6800uF	63V		JUCRTKAL	ケミコン	
*	C5066	WN524400	C.EL	6800uF	63V		BGEF	ケミコン	
	C5067-5076	WJ605000	C.MYLAR	0.01uF	50V J			マイラーコン	01
	C5077-5078	WJ611400	C.MYLAR	0.1uF	100V J			マイラーコン	01
	C5079	US064100	C.CE.CHP	0.01uF	50V B			チップセラコン	01
	C5086-5087	WJ605400	C.MYLAR	0.022uF	50V J			マイラーコン	01
	D4001-4002	VU994300	DIODE.ZENR	MA8075-H	7.7V			ツェナーダイオード	01
	D4003	VU995500	DIODE.ZENR	MA8100-H	10.3V			ツェナーダイオード	02
	D5001-5002	VD631600	DIODE	1SS133,176				ダイオード	01
	D5003	VU171900	DIODE.ZENR	UDZ5.1B	5.1V			ツェナーダイオード	01
	D5004	WC398800	DIODE	KDS160-RTK				ダイオード	01

＊ New Parts ＊新規部品

P.C.B. MAIN

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
	D5005-5006	VN008700	DIODE	1SS270A			ダイオード	01
	D5009	WC398800	DIODE	KDS160-RTK			ダイオード	01
	D5010-5012	VN008700	DIODE	1SS270A			ダイオード	01
	D5013	VD631600	DIODE	1SS133,176			ダイオード	01
	D5014-5016	VN008700	DIODE	1SS270A			ダイオード	01
⚠	D5017	VG441000	DIODE.ZENR	MTZJ16A 16V			ツェナーダイオード	01
	D5018-5020	VD631600	DIODE	1SS133,176			ダイオード	01
⚠	D5021	WA653200	DIODE.BRG	TS6P03G 6A 200V			ダイオードブリッジ	04
	D5022-5023	VS997800	DIODE	1T2			ダイオード	01
	D5024	VD631600	DIODE	1SS133,176			ダイオード	01
⚠	D5027	VG441000	DIODE.ZENR	MTZJ16A 16V			ツェナーダイオード	01
*	IC401	X8155B00	IC	R2A15218FP			ＩＣ	
*	IC402	X8235A00	IC	LC72725KM		GEF	ＩＣ	
	IC403-405	X7378A00	IC	NJM4565M(TE1)			アンプＩＣ	01
	IC407	X7378A00	IC	NJM4565M(TE1)			アンプＩＣ	01
⚠	IC501	X8190A00	IC	STK433-330-E			パワーＩＣ	12
⚠	IC502	X7427A00	IC	STK433-130-E			アンプＩＣ	04
	PJ401	V7190400	JACK.PIN	6P			ピンジャック	03
	PJ402-403	V7046800	JACK.PIN	6P MSP-246V1-01NI			ピンジャック	04
	PJ404	V7046700	JACK.PIN	4P MSP-244V1-01NI		B	ピンジャック	03
	PJ407	V7189700	JACK.PIN	1P			ピンジャック	01
*	PJ408	WC612700	JACK.PIN	2P		JUCRTKAGEFL	ピンジャック	
	PN501	V9637500	PIN	L=70 #18			スタイルピン	
	Q4001	VZ725900	TR	2SD1938F S,T			トランジスタ	01
	Q4004	VZ725900	TR	2SD1938F S,T			トランジスタ	01
	Q4008	WC434800	TR.DGT	KRA102S-RTK/P			デジタルトランジスタ	01
	Q4009	iC181510	TR	2SC1815 Y			トランジスタ	01
	Q4010	iA101510	TR	2SA1015 Y			トランジスタ	01
	Q4011	iC181510	TR	2SC1815 Y			トランジスタ	01
	Q4012	iC174020	TR	2SC1740S QRS		GEF	トランジスタ	01
	Q5003-5007	VD303700	TR	2SC3326 A,B			トランジスタ	01
	Q5009-5011	WC434800	TR.DGT	KRA102S-RTK/P			デジタルトランジスタ	01
⚠	Q5012	WC398400	TR	2N5551C-AT			トランジスタ	01
⚠	Q5013-5014	VC614000	TR	2SB1274 Q,R,S			トランジスタ	02
⚠	Q5015	WC398400	TR	2N5551C-AT			トランジスタ	01
⚠	Q5016-5017	WC397700	TR	2N5401C-AT			トランジスタ	
⚠	Q5018-5020	WC398400	TR	2N5551C-AT			トランジスタ	01
	Q5023-5024	WC398400	TR	2N5551C-AT			トランジスタ	01
⚠	Q5025	WC397700	TR	2N5401C-AT			トランジスタ	
⚠	Q5026-5029	WC434900	TR.DGT	KRA104S-RTK			デジタルトランジスタ	01
⚠	Q5030	VP872600	TR	2SA1708 S,T			トランジスタ	01
	Q5031	iC181510	TR	2SC1815 Y			トランジスタ	01
	Q5032-5036	WC435000	TR.DGT	KRC102S-RTK			デジタルトランジスタ	01
	Q5037	WC434900	TR.DGT	KRA104S-RTK			デジタルトランジスタ	01
	R4080-4081	HV753220	R.CAR.FP	2.2Ω 1/4W			不燃化カーボン抵抗	01
⚠	R5035-5036	HV753220	R.CAR.FP	2.2Ω 1/4W			不燃化カーボン抵抗	01
⚠	R5040	HV755560	R.CAR.FP	560Ω 1/4W			不燃化カーボン抵抗	01
⚠	R5052	HV754100	R.CAR.FP	10Ω 1/4W			不燃化カーボン抵抗	01
⚠	R5055	HV754100	R.CAR.FP	10Ω 1/4W			不燃化カーボン抵抗	01
* ⚠	R5069	WM280300	R.MTL.PLAT	0.22+0.22Ω RGC33			金属板抵抗	
* ⚠	R5071	WM280300	R.MTL.PLAT	0.22+0.22Ω RGC33			金属板抵抗	
* ⚠	R5079	WM280300	R.MTL.PLAT	0.22+0.22Ω RGC33			金属板抵抗	
* ⚠	R5090-5091	WM280300	R.MTL.PLAT	0.22+0.22Ω RGC33			金属板抵抗	
	R5109	HV754100	R.CAR.FP	10Ω 1/4W			不燃化カーボン抵抗	01
	R5112-5113	HV754100	R.CAR.FP	10Ω 1/4W			不燃化カーボン抵抗	01

＊New Parts ＊新規部品

P.C.B. MAIN and P.C.B. VIDEO

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
	R5121	HV754100	R.CAR.FP	10Ω 1/4W			不燃化カーボン抵抗	01
	R5124	HV754100	R.CAR.FP	10Ω 1/4W			不燃化カーボン抵抗	01
⚠	R5126	WB625100	R.MTL.FLM	4.7Ω 1W J			金属被膜抵抗	01
⚠	R5130-5131	WB625100	R.MTL.FLM	4.7Ω 1W J			金属被膜抵抗	01
	R5136-5137	WB625100	R.MTL.FLM	4.7Ω 1W J			金属被膜抵抗	01
⚠	R5142	HV756270	R.CAR.FP	2.7KΩ 1/4W			不燃化カーボン抵抗	01
⚠	R5145	WB627300	R.MTL.OXD	470Ω 1W			酸化金属被膜抵抗	
	R5167-5168	HV753470	R.CAR.FP	4.7Ω 1/4W			不燃化カーボン抵抗	01
⚠	RY501-502	WJ122400	RELAY	981-2A-24DS-SP7			リレー 24V	04
⚠	RY504-505	WJ122400	RELAY	981-2A-24DS-SP7			リレー 24V	04
*	RY506	WJ117200	RELAY	DC24V 942H-2C-24DS			リレー	
*	TE501	WK561000	TERM.SP	6P MST-207V1-01 NC		JUCRTA	スピーカーターミナル	
*	TE501	WK561100	TERM.SP	6P MST-207V1-01 WC		KBGEFL	スピーカーターミナル	
*	TE502	WK560800	TERM.SP	4P MST-204V1-01 NC		JUCRTA	スピーカーターミナル	
*	TE502	WK560900	TERM.SP	4P MST-204V1-01 WC		KBGEFL	スピーカーターミナル	
*	XL401	WJ588000	RSNR.CRYS	4.332MHz		GEF	水晶振動子	
		WE774200	SCR.BND.HD	3x10 MFZN2W3			バインドBタイトネジ	01
*		WN274300	P.C.B.	VIDEO		J	PCB VIDEO	
*		WN274400	P.C.B.	VIDEO		UC	PCB VIDEO	
*		WN274500	P.C.B.	VIDEO		R	PCB VIDEO	
*		WN274600	P.C.B.	VIDEO		TA	PCB VIDEO	
*		WN274700	P.C.B.	VIDEO		K	PCB VIDEO	
*		WN274800	P.C.B.	VIDEO		BGEF	PCB VIDEO	
*		WN274900	P.C.B.	VIDEO		L	PCB VIDEO	
	CB301	VB858200	CN.BS.PIN	3P			ベースピン	01
	CB302	VQ044500	CN.BS.PIN	11P			FFCコネクター	01
	CB321-324	WD398400	CN.DIN	14P YKF45-3011		J	DINコネクタ	05
	CB326	VM923600	CN.BS.PIN	13P			FFCコネクター	01
*	CB342-343	WN077700	CLIP.FUSE	CLIP PFC5000-0202F			ヒューズクリップ	
	CB344-345	VG879900	CN.BS.PIN	2P			ベースピン	01
	CB351	VB858400	CN.BS.PIN	5P			ベースピン	01
	CB352	LB919040	CN.BS.PIN	4P			ベース付ポスト	01
*	CB356	V9377800	CN.BS.PIN	3P		RL	ベース付ポスト	
*	CB357	V9377900	CN.BS.PIN	4P		RL	ベース付ポスト	
*	CB358-359	WN077700	CLIP.FUSE	CLIP PFC5000-0202F		RL	ヒューズクリップ	
	C3001-3002	US062100	C.CE.CHP	100pF 50V B			チップセラコン	01
⚠	C3007-3008	WG218100	C.EL	100uF 16V			ケミコン	
	C3009-3010	V7887800	C.EL	1uF 50V			ケミコン	
	C3011-3012	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C3015	UR837100	C.EL	10uF 16V			ケミコン	01
	C3016	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C3017	UR837470	C.EL	47uF 16V			ケミコン	01
	C3020	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C3021	UR837470	C.EL	47uF 16V			ケミコン	01
	C3022	UR837100	C.EL	10uF 16V			ケミコン	01
	C3030-3031	UR838100	C.EL	100uF 16V			ケミコン	01
	C3037	US135100	C.CE.CHP	0.1uF 16V			チップセラコン	01
	C3038	US061220	C.CE.CHP	22pF 50V B		JUCRK	チップセラコン	01
	C3038	US060500	C.CE.CHP	5pF 50V B		TABGEFL	チップセラコン	01
	C3039	US061330	C.CE.CHP	33pF 50V B		JUCRK	チップセラコン	01
	C3039	US060500	C.CE.CHP	5pF 50V B		TABGEFL	チップセラコン	01
	C3048	UR866100	C.EL	1uF 50V			ケミコン	01

＊ New Parts ＊新規部品

P.C.B. VIDEO

Ref No.	Part No.	Description			Remarks	Markets	部 品 名	ランク
C3049-3050	UR837470	C.EL	47uF	16V			ケミコン	01
C3051	US060300	C.CE.CHP	3pF	50V B		JUCRK	チップセラコン	01
C3051	US060400	C.CE.CHP	4pF	50V B		TABGEFL	チップセラコン	
C3054	US061240	C.CE.CHP	24pF	50V B			チップセラコン	01
C3056	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3057	US061240	C.CE.CHP	24pF	50V B			チップセラコン	01
C3061-3065	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3066	US061100	C.CE.CHP	10pF	50V B			チップセラコン	01
C3069	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3071	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3072	UR837100	C.EL	10uF	16V			ケミコン	01
C3073	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3074	UR837470	C.EL	47uF	16V			ケミコン	01
C3075-3076	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3077-3078	UR837470	C.EL	47uF	16V			ケミコン	01
C3201-3203	US060800	C.CE.CHP	8pF	50V B		UCRTKABGEFL	チップセラコン	01
C3204-3215	US064100	C.CE.CHP	0.01uF	50V B		J	チップセラコン	01
C3216-3218	US060800	C.CE.CHP	8pF	50V B		J	チップセラコン	01
C3219-3220	UR837100	C.EL	10uF	16V			ケミコン	01
C3221-3222	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3231	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3232	US135100	C.CE.CHP	0.1uF	16V		J	チップセラコン	01
C3234	US135100	C.CE.CHP	0.1uF	16V		J	チップセラコン	01
C3239	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3240-3241	UR837470	C.EL	47uF	16V			ケミコン	01
C3243	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3248	US135100	C.CE.CHP	0.1uF	16V			チップセラコン	01
C3263-3271	WD758300	C.CE.CHP	10uF	10V			チップセラコン	01
C3401	UR749220	C.EL	2200uF	25V		JUCTKABGEF	ケミコン	03
C3401	UR759220	C.EL	2200uF	35V		RL	ケミコン	02
C3402	WJ605000	C.MYLAR	0.01uF	50V J			マイラーコン	01
C3403	UR897100	C.EL	10uF	100V		RL	ケミコン	01
C3404	WJ605000	C.MYLAR	0.01uF	50V J		JUCTKABGEF	マイラーコン	01
C3405-3406	WJ605000	C.MYLAR	0.01uF	50V J		RL	マイラーコン	01
⚠ C3407	WB121400	C.CE.SAFTY	0.01uF	295V			規格認定コンデンサ	
C3501	WJ605000	C.MYLAR	0.01uF	50V J			マイラーコン	01
C3503-3505	WJ605000	C.MYLAR	0.01uF	50V J			マイラーコン	01
D3201-3205	VT332900	DIODE	1SS355			J	ダイオード	01
D3208-3211	VT332900	DIODE	1SS355			J	ダイオード	01
D3212-3217	VT332900	DIODE	1SS355				ダイオード	01
D3401	VD631600	DIODE	1SS133,176				ダイオード	01
⚠ D3402	VG437000	DIODE.ZENR	MTZJ4.7A 4.7V			RL	ツェナーダイオード	01
⚠ D3403-3404	VS997800	DIODE	1T2				ダイオード	01
⚠ D3405	VS997800	DIODE	1T2			RL	ダイオード	01
⚠ D3406-3407	VS997800	DIODE	1T2				ダイオード	01
D3408-3409	WC398800	DIODE	KDS160-RTK				ダイオード	01
D3501	VD631600	DIODE	1SS133,176				ダイオード	01
⚠ F3401	WB221200	FUSE	T6A 125V			JUCRL	ヒューズ	01
⚠ F3401	VV071700	FUSE	3.15A 250V			TKABGEF	ヒューズ	01
⚠ F3551	VV071700	FUSE	3.15A 250V			RL	ヒューズ	01
IC301	XY550A00	IC	MM74HC4051SJX				ロジックＩＣ	01
IC304	X7818A00	IC	LC74782JM-8A16-TLM				ＩＣ	07
IC307	X6742A00	IC	LA73050-TLM-E				アンプＩＣ	04
⚠ IC308	X4928A00	IC	KIA7805API 5V				電源ＩＣ	02
⚠ IC309	X7973A00	IC	KIA79M05PI-U				電源ＩＣ	02

＊New Parts ＊新規部品

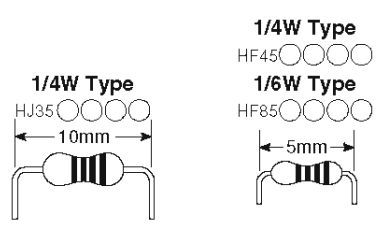
P.C.B. VIDEO

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
	IC311	XS790A00	IC	TC74HC4052AF MPX			ロジックＩＣ	02
	IC322-323	XS790A00	IC	TC74HC4052AF MPX			ロジックＩＣ	02
	IC324	XS790A00	IC	TC74HC4052AF MPX		J	ロジックＩＣ	02
	IC325	X2904A00	IC	NJM2581M VIDEO AMP			アンプＩＣ	06
	PJ301	V7189800	JACK.PIN	1P			ピンジャック	01
	PJ302-303	V7190000	JACK.PIN	2P			ピンジャック	
	PJ321-322	WG471900	JACK.PIN	6P		UCRTKABGEFL	ピンジャック　６Ｐ	03
	PN301	V9637500	PIN	L=70 #18			スタイルピン	
	PN351	V9637500	PIN	L=70 #18			スタイルピン	
	Q3004-3005	VV556400	TR	2SC2412K Q,R,S			トランジスタ	01
⚠	Q3401	VE198800	TR	2SC2705 O,Y			トランジスタ	01
⚠	Q3402	iA101510	TR	2SA1015 Y		RL	トランジスタ	01
⚠	Q3403	VP872600	TR	2SA1708 S,T		RL	トランジスタ	01
⚠	Q3404	iA101510	TR	2SA1015 Y		RL	トランジスタ	01
⚠	Q3405	WC529200	TR.DGT	KRC102M-AT		RL	デジタルトランジスタ	01
	Q3501	WC398500	TR.DGT	KRA102M-AT			デジタルトランジスタ	01
*	R3016	WB625900	R.MTL.OXD	33Ω　1W			酸化金属被膜抵抗	
* ⚠	R3017	WB625800	R.MTL.OXD	27Ω　1W			酸化金属被膜抵抗	
	R3028-3029	HV753100	R.CAR.FP	1Ω　1/4W			不燃化カーボン抵抗	01
	R3055	HV755470	R.CAR.FP	470Ω　1/4W			不燃化カーボン抵抗	01
	R3058	HV753100	R.CAR.FP	1Ω　1/4W			不燃化カーボン抵抗	01
*	R3060	WB625900	R.MTL.OXD	33Ω　1W			酸化金属被膜抵抗	
	R3238	HV753100	R.CAR.FP	1Ω　1/4W			不燃化カーボン抵抗	01
	R3245	HV753100	R.CAR.FP	1Ω　1/4W			不燃化カーボン抵抗	01
	R3408	VC757900	R.MTL.OXD	47Ω　2W		RL	酸化金属被膜抵抗	01
⚠	R3410	V6730000	R.CAR.	2.2MΩ　1/2W		UC	放電抵抗	01
⚠	RY341	V9366900	RELAY	DLS9D1-0(M)0.25W			リレー　９Ｖ　ＴＶ－８	05
	RY351	WJ122400	RELAY	981-2A-24DS-SP7			リレー　２４Ｖ	04
	ST301	WA789600	SCR.TERM	M3			スクリューターミナル	
	ST321	WA789600	SCR.TERM	M3		UCRTKABGEFL	スクリューターミナル	
	ST322	WA789600	SCR.TERM	M3		J	スクリューターミナル	
	ST341-342	WA789600	SCR.TERM	M3			スクリューターミナル	
	ST351	WA789600	SCR.TERM	M3			スクリューターミナル	
* ⚠	SW356	WB493700	VOLT.SELCT	R8140246		R	電圧切替器	
* ⚠	SW356	WD073700	VOLT.SELCT	R8140254		L	電圧切替器	
⚠	T3401	X8520A00	TRANS.PWR			J	電源トランス	07
* ⚠	T3401	X8521A00	TRANS.PWR			UC	電源トランス	
* ⚠	T3401	X8522A00	TRANS.PWR			RL	電源トランス	
* ⚠	T3401	X8523A00	TRANS.PWR			TKABGEF	電源トランス	
* ⚠	TE351	WK560800	TERM.SP	4P MST-204V1-01 NC		JUCRTA	スピーカーターミナル	
* ⚠	TE351	WK560900	TERM.SP	4P MST-204V1-01 WC		KBGEFL	スピーカーターミナル	
*	XL301	WN380400	RSNR.CRYS	14.3181MHz AT-49		JUCRK	水晶振動子	
*	XL301	WN380500	RSNR.CRYS	17.7344MHz AT-49		TABGEFL	水晶振動子	

＊ New Parts　＊新規部品

Chip Resistors

Value	**1/4W** Type Part No.	**1/6W** Type Part No.	Value	**1/4W** Type Part No.	**1/6W** Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	10 kΩ	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	❊	11 kΩ	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 kΩ	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 kΩ	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 kΩ	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 kΩ	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 kΩ	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 kΩ	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 kΩ	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 kΩ	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 kΩ	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 kΩ	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 kΩ	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 kΩ	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 kΩ	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 kΩ	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 kΩ	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 kΩ	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 kΩ	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 kΩ	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 kΩ	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 kΩ	HF45 8110	HF45 8110
160 Ω	HJ35 5160	❊	120 kΩ	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	❊
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	❊
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300			
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			



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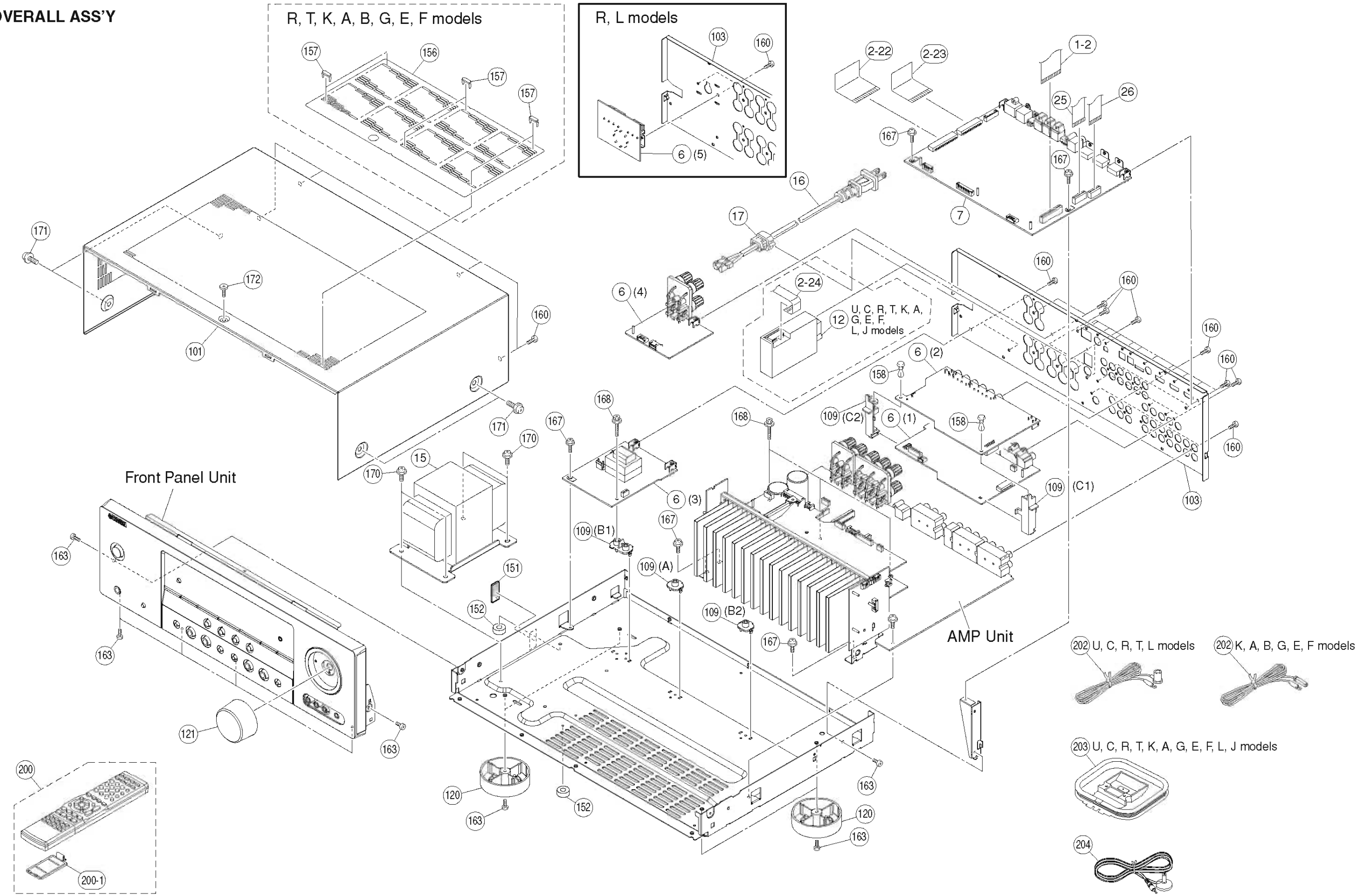
- **OVERALL ASS'Y**



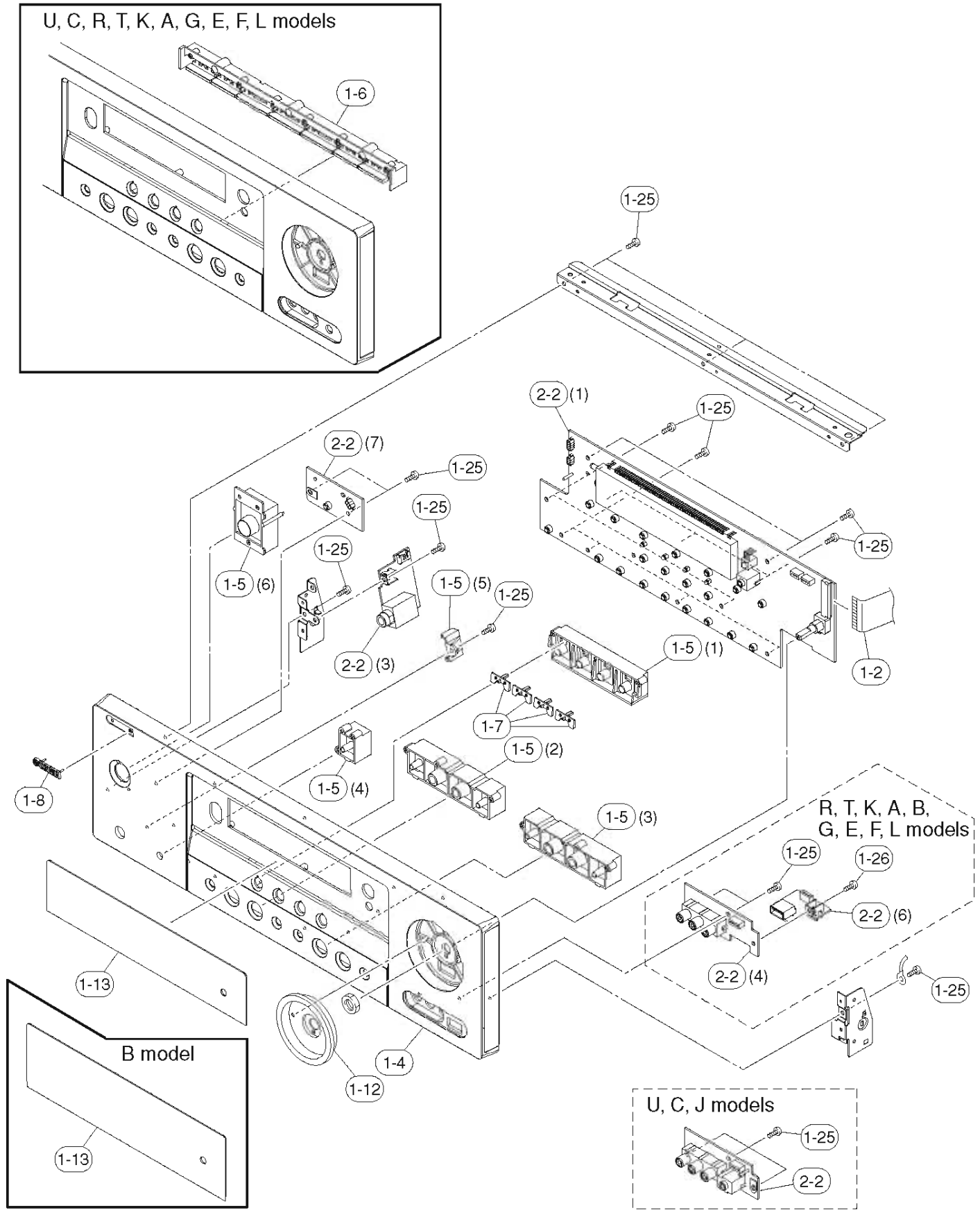
	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
	1-2	MF124250	FLEXIBLE FLAT CABLE	24P 250mm P=1.25			カード電線 C&C	03
	2-22	MF131120	FLEXIBLE FLAT CABLE	31P 120mm P=1.25			カード電線 C&C	03
	2-23	MF126100	FLEXIBLE FLAT CABLE	26P 100mm P=1.25			カード電線 C&C	01
	2-24	MF113160	FLEXIBLE FLAT CABLE	13P 160mm P=1.25		JUCRTKAGEFL	カード電線 C&C	01
*	6	WN274300	P.C.B. ASS'Y	VIDEO		J	PCB VIDEO	
*	6	WN274400	P.C.B. ASS'Y	VIDEO		UC	PCB VIDEO	
*	6	WN274500	P.C.B. ASS'Y	VIDEO		R	PCB VIDEO	
*	6	WN274600	P.C.B. ASS'Y	VIDEO		TA	PCB VIDEO	
*	6	WN274700	P.C.B. ASS'Y	VIDEO		K	PCB VIDEO	
*	6	WN274800	P.C.B. ASS'Y	VIDEO		BGEF	PCB VIDEO	
*	6	WN274900	P.C.B. ASS'Y	VIDEO		L	PCB VIDEO	
*	7	WN276900	P.C.B. ASS'Y	DSP		J	PCB DSP	
*	7	WN277000	P.C.B. ASS'Y	DSP		UC	PCB DSP	
*	7	WN277100	P.C.B. ASS'Y	DSP		R	PCB DSP	
*	7	WN277200	P.C.B. ASS'Y	DSP		TA	PCB DSP	
*	7	WN277300	P.C.B. ASS'Y	DSP		K	PCB DSP	
*	7	WN277400	P.C.B. ASS'Y	DSP		B	PCB DSP	
*	7	WN277500	P.C.B. ASS'Y	DSP		GEF	PCB DSP	
*	7	WN277600	P.C.B. ASS'Y	DSP		L	PCB DSP	
	12	WB877200	AM/FM TUNER	FAE381-J07F		J	AM/FMチューナー	12
	12	WB877300	AM/FM TUNER	FAE381-A07F		UCRTL	AM/FMチューナー	
	12	WB877400	AM/FM TUNER	FAE481-E07F		KAGEF	AM/FMチューナー	
* ⚠	15	X9544A00	POWER TRANSFORMER			J	電源トランス	
* ⚠	15	X9545A00	POWER TRANSFORMER			UC	電源トランス	
* ⚠	15	X9546A00	POWER TRANSFORMER			RL	電源トランス	
* ⚠	15	X9547A00	POWER TRANSFORMER			TK	電源トランス	
* ⚠	15	X9548A00	POWER TRANSFORMER			A	電源トランス	
* ⚠	15	X9549A00	POWER TRANSFORMER			BGEF	電源トランス	
⚠	16	WB211800	POWER CABLE	1.8m		J	電源コード	
⚠	16	WB120500	POWER CABLE	2m		UC	電源コード	
⚠	16	WC992700	POWER CABLE	2m		R	電源コード	
⚠	16	WB120600	POWER CABLE	2m		T	電源コード	
⚠	16	WC753000	POWER CABLE	2m		K	電源コード	
⚠	16	WC743700	POWER CABLE	2m		A	電源コード	
⚠	16	WB212200	POWER CABLE	2m		B	電源コード	
⚠	16	WB212300	POWER CABLE	2m		GEFL	電源コード	
	17	¥2438700	CORD STOPPER	10P1			コードストッパー	02
	25	MF113100	FLEXIBLE FLAT CABLE	13P 100mm P=1.25			カード電線 C&C	01
	26	MF111120	FLEXIBLE FLAT CABLE	11P 120mm P=1.25			カード電線 C&C	
*	101	WM744800	TOP COVER		BL		トップカバー	
*	101	WM744900	TOP COVER		GD		トップカバー	
*	101	WM745000	TOP COVER		TI		トップカバー	
*	101	WM745100	TOP COVER		SI		トップカバー	
*	103	WM747800	REAR PANEL		AX463	J	リヤパネル	
*	103	WM746900	REAR PANEL		¥463	UC	リヤパネル	
*	103	WM747100	REAR PANEL		¥463	R	リヤパネル	
*	103	WM747200	REAR PANEL		¥463	T	リヤパネル	
*	103	WM747300	REAR PANEL		¥463	K	リヤパネル	
*	103	WM747400	REAR PANEL		¥463	A	リヤパネル	
*	103	WM747500	REAR PANEL		AX463	B	リヤパネル	
*	103	WM747600	REAR PANEL		¥463	GEF	リヤパネル	
*	103	WM747700	REAR PANEL		¥463	L	リヤパネル	
*	103	WM748000	REAR PANEL		6140	UC	リヤパネル	
*	103	WM748200	REAR PANEL		6140	T	リヤパネル	
*	103	WM748300	REAR PANEL		6140	K	リヤパネル	
*	103	WM748500	REAR PANEL		6140	GEF	リヤパネル	
*	109	WM749300	SUPPORT PCB				サポートPCB	
	120	WA790600	LEG	D60/H21 GD	GD		レッグ	
	120	WA790500	LEG	D60/H21 HS	BL, TI, SI		レッグ	
*	121	WM749500	KNOB D48		GD		ノブ D48	

＊New Parts ＊新規部品

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
*	121	WM749400	KNOB D48		BL		ノブ D48	
*	121	WM749600	KNOB D48		TI		ノブ D48	
*	121	WM749700	KNOB D48		SI		ノブ D48	
	151	WB408400	DAMPER	10x30 t=4			ダンパー／サイド	
	152	WB484700	DAMPER	SCREW MASK			ダンパー	
	156	WJ589800	SHEET TOP			RTABGEF	シート トップ	
	157	WJ323900	RIVET TOP			RTABGEF	リベット トップ	
	158	VQ368600	PUSH RIVET	P3555-B			プッシュリベット	01
	160	WE774100	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2B3			ボンディングBタイトネジ	01
	163	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3			バインドBタイトネジ	01
	167	WF002600	PW HEAD B-TIGHT SCREW	3x8 MFZN2W3			PWヘッドBタイトネジ	01
	168	WE774600	SCREW IC	3x18 MFZN2W3			スクリュー IC	01
	170	WE774700	BIND HEAD S-TIGHT SCREW	4x10 MFZN2W3			バインドSタイトネジ	01
	171	VD069600	PW HEAD S-TIGHT SCREW	4x8-10 MFNI33	GD, TI, SI		PWヘッドSタイトネジ	01
	171	VH313200	PW HEAD S-TIGHT SCREW	4x8-10 MFNI3BL	BL		PWヘッドSタイトネジ	01
	172	WE200400	DISH HEAD B-TIGHT SCREW	3x6 MFNI33	GD, TI, SI		DISH Bタイトネジ	01
	172	WE200500	DISH HEAD B-TIGHT SCREW	3x6 MFNI3BL	BL		DISH Bタイトネジ	01
			ACCESSORIES				付属品	
*	200	WN057900	REMOTE CONTROL	RAV281		J	リモコン	
*	200	WN057800	REMOTE CONTROL	RAV280		UC	リモコン	
*	200	WN058000	REMOTE CONTROL	RAV282		RTKABGEFL	リモコン	
	200-1	AAX82380	BATTERY COVER		CG-2209		電池蓋	03
	202	WB212500	INDOOR FM ANTENNA	1.4m 1pc		JUCRTL	FM簡易アンテナ	03
	202	WB212400	INDOOR FM ANTENNA	1.4m 1pc		KAGEF	FM簡易アンテナ	
	203	WB212600	AM LOOP ANTENNA	1.0m 1pc		JUCRTKAGEFL	AMループアンテナ	04
*	204	WN649600	OPTIMIZER MICROPHONE	6.0m 1pc	EM6022L-HN1700		オプティマイザーマイク	
			BATTERY	R03,AAA,UM-4 2pcs			単4乾電池	

＊New Parts ＊新規部品

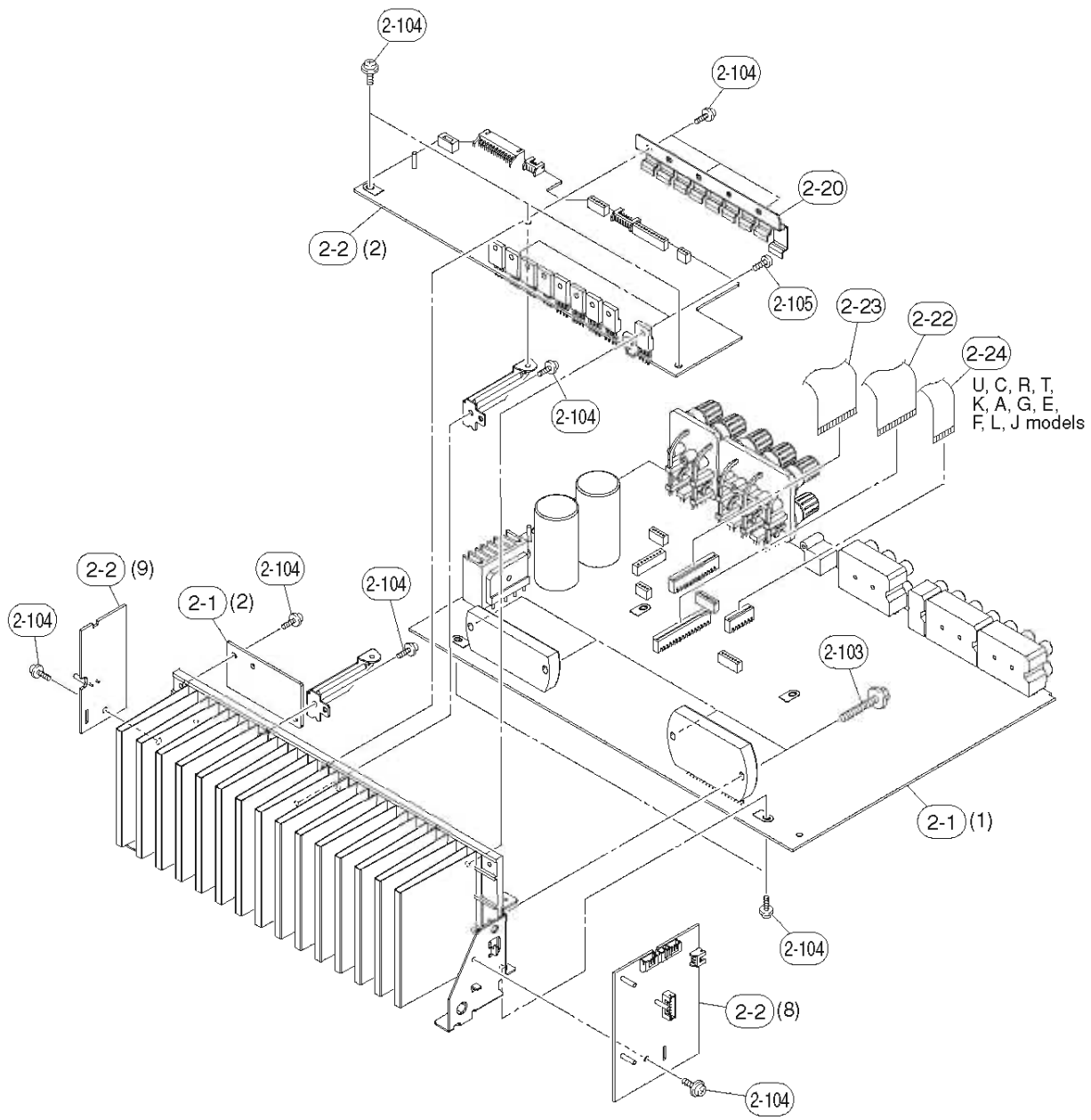
• FRONT PANEL UNIT



	Ref No.	Part No.	Description		Remarks	Markets	部品名	ランク
	1-2	MF124250	FLEXIBLE FLAT CABLE	24P 250mm P=1.25			カード電線　C＆C	03
*	1-4	WM753000	FRONT PANEL		AX463GD	J	フロントパネル	
*	1-4	WM752900	FRONT PANEL		V463GD	RT	フロントパネル	
*	1-4	WM751800	FRONT PANEL		AX463BL	J	フロントパネル	
*	1-4	WM751600	FRONT PANEL		V463BL	UC	フロントパネル	
*	1-4	WM751700	FRONT PANEL		V463BL	RAGEF	フロントパネル	
*	1-4	WM994600	FRONT PANEL		AX463BL	B	フロントパネル	
*	1-4	WM753900	FRONT PANEL		V463TI		フロントパネル	
*	1-4	WM995000	FRONT PANEL		AX463SI	J	フロントパネル	
*	1-4	WM994900	FRONT PANEL		V463SI	AL	フロントパネル	
*	1-4	WM753200	FRONT PANEL		6140GD		フロントパネル	
*	1-4	WM751900	FRONT PANEL		6140BL	UC	フロントパネル	
*	1-4	WM752000	FRONT PANEL		6140BL	GF	フロントパネル	
*	1-4	WM995100	FRONT PANEL		6140SI	K	フロントパネル	
*	1-4	WM754500	FRONT PANEL		6140SI	GEF	フロントパネル	
	1-5	WJ192500	BUTTON CASE		GD		ボタンケース	04
	1-5	WJ192300	BUTTON CASE		BL		ボタンケース	
	1-5	WJ192700	BUTTON CASE		TI		ボタンケース	
	1-5	WJ192600	BUTTON CASE		SI		ボタンケース	04
	1-6	WJ192800	BUTTON TUNER			JUCRTKAGEFL	ボタンチューナー	02
	1-7	WJ193200	LENS BUTTON	SCENE			ボタンレンズ	01
	1-8	WJ193400	EMBLEM GD		GD		エンブレムＧＤ	02
	1-8	WJ193300	EMBLEM BL		BL, TI, SI		エンブレムＢＬ	02
*	1-12	WM750100	ESCUTCHEON VOL		GD		エスカッションＶＯＬ	
*	1-12	WM750000	ESCUTCHEON VOL		BL		エスカッションＶＯＬ	
*	1-12	WM750200	ESCUTCHEON VOL		TI		エスカッションＶＯＬ	
*	1-12	WM750300	ESCUTCHEON VOL		SI		エスカッションＶＯＬ	
*	1-13	WM761800	SHEET WINDOW			JRTKAGEFL	シートウインドウ	
*	1-13	WM761700	SHEET WINDOW	XM		UC	シートウインドウ	
*	1-13	WM750500	SHEET WINDOW			B	シートウインドウ	
	1-25	WE774800	BIND HEAD P-TIGHT SCREW	3x8　MFZN2W3			バインドPタイトネジ	01
	1-26	WF268000	BIND HEAD P-TIGHT SCREW	3x10　MFZN2B3		RTKABGEFL	バインドPタイトネジ	01
*	2-2	WN278400	P.C.B. ASS'Y	OPERATION		J	ＰＣＢ　ＯＰＥＲＡＴＩＯＮ	
*	2-2	WN278500	P.C.B. ASS'Y	OPERATION		UC	ＰＣＢ　ＯＰＥＲＡＴＩＯＮ	
*	2-2	WN278600	P.C.B. ASS'Y	OPERATION		RTKAGEFL	ＰＣＢ　ＯＰＥＲＡＴＩＯＮ	
*	2-2	WN278700	P.C.B. ASS'Y	OPERATION		B	ＰＣＢ　ＯＰＥＲＡＴＩＯＮ	

＊New Parts　＊新規部品

• AMP UNIT



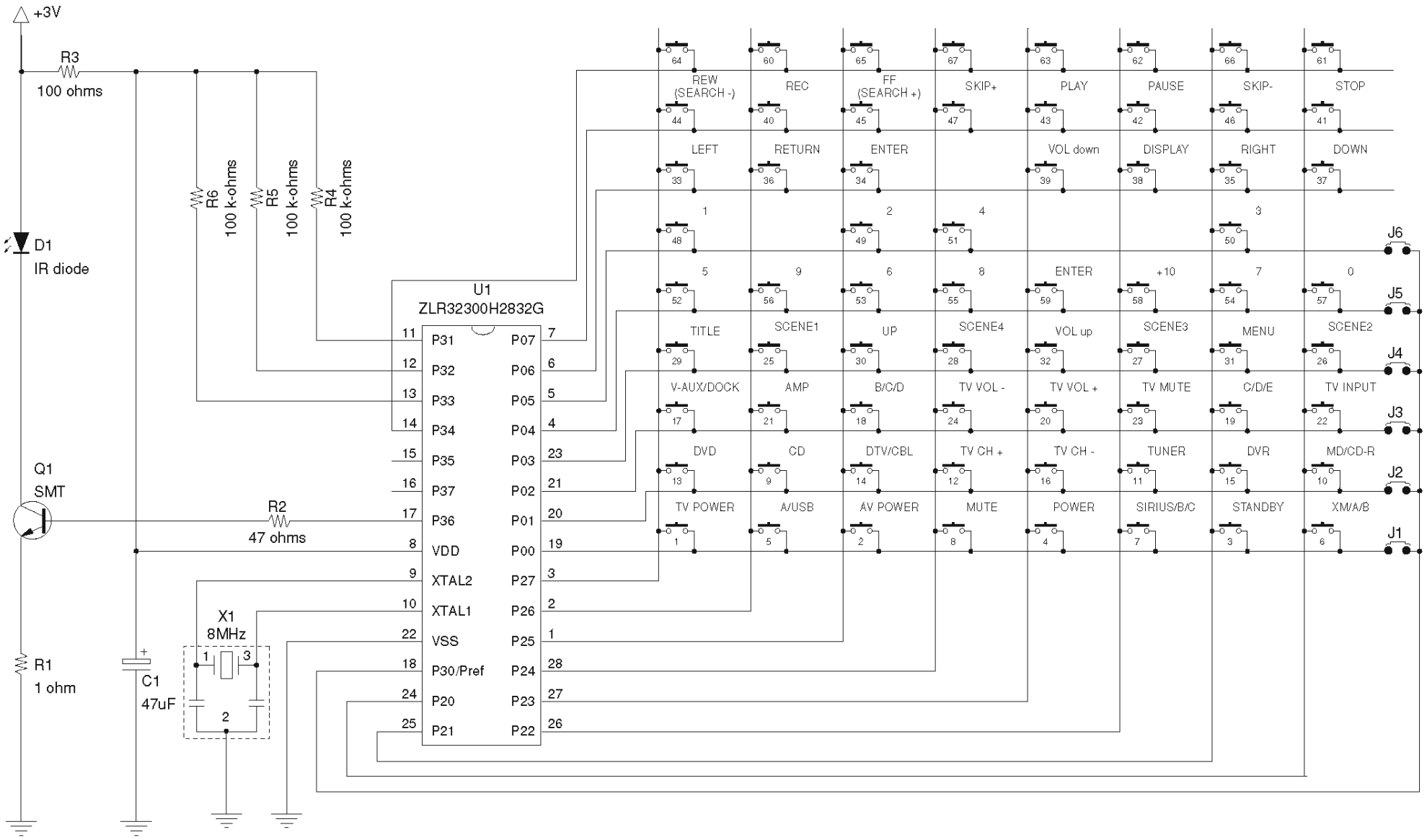
	Ref No.	Part No.	Description		Remarks	Markets	部品名	ランク
*	2-1	WN272700	P.C.B. ASS'Y	MAIN		JUCRTA	PCB MAIN	
*	2-1	WN272900	P.C.B. ASS'Y	MAIN		KL	PCB MAIN	
*	2-1	WN273000	P.C.B. ASS'Y	MAIN		B	PCB MAIN	
*	2-1	WN273100	P.C.B. ASS'Y	MAIN		GEF	PCB MAIN	
*	2-2	WN278400	P.C.B. ASS'Y	OPERATION		J	PCB OPERATION	
*	2-2	WN278500	P.C.B. ASS'Y	OPERATION		UC	PCB OPERATION	
*	2-2	WN278600	P.C.B. ASS'Y	OPERATION		RTKAGEFL	PCB OPERATION	
*	2-2	WN278700	P.C.B. ASS'Y	OPERATION		B	PCB OPERATION	
*	2-20	WM749200	SUPPORT TR-8P				サポートTR－8P	
	2-22	MF131120	FLEXIBLE FLAT CABLE	31P 120mm P=1.25			カード電線 C&C	03
	2-23	MF126100	FLEXIBLE FLAT CABLE	26P 100mm P=1.25			カード電線 C&C	01
	2-24	MF113160	FLEXIBLE FLAT CABLE	13P 160mm P=1.25		JUCRTKAGEFL	カード電線 C&C	01
	2-103	WE774600	SCREW IC	3x18 MFZN2W3			スクリュー IC	01
	2-104	WF002600	PW HEAD B-TIGHT SCREW	3x8 MFZN2W3			PWヘッドBタイトネジ	01
	2-105	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3			バインドBタイトネジ	01

＊New Parts ＊新規部品

■ REMOTE CONTROL

● RAV280 (U, C models), RAV282 (R, T, K, A, B, G, E, F, L models), RAV281 (J model)

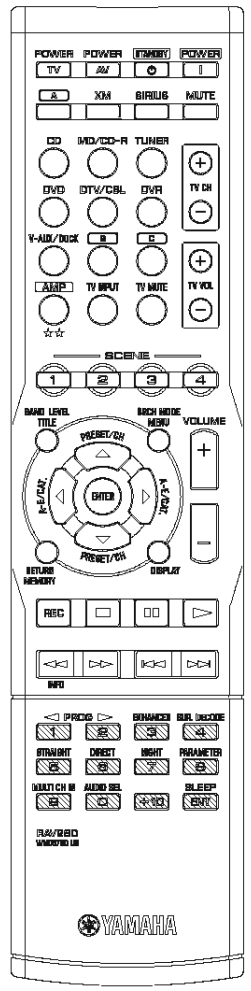
• SCHEMATIC DIAGRAM



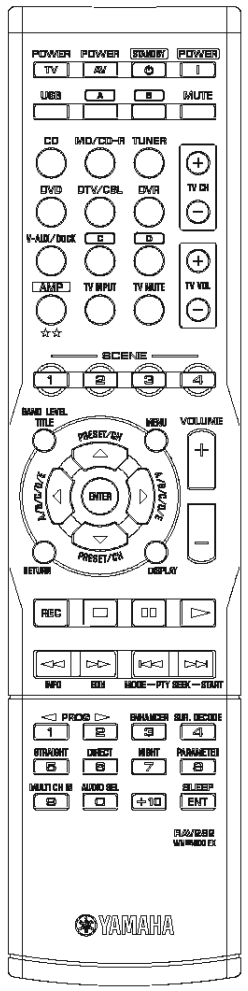
	RAV280	RAV281	RAV282
J1	O	X	X
J2	X	O	X
J3	X	X	O
J4	X	X	X
J5	X	X	X
J6	X	X	X

• PANELS

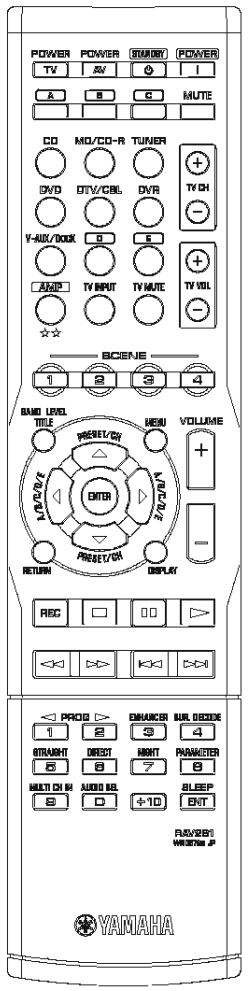
RAV280
(U, C models)



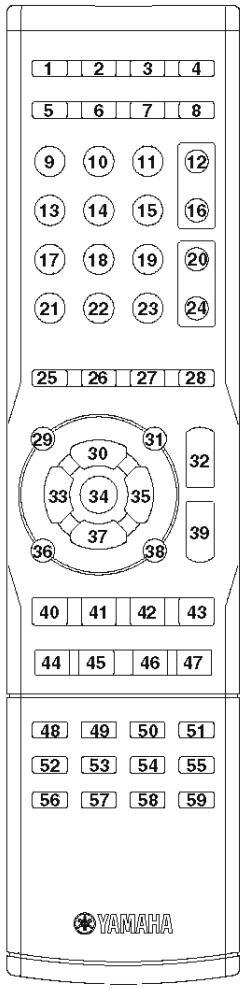
RAV282
(R, T, K, A, B, G, E, F, L models)



RAV281
(J model)

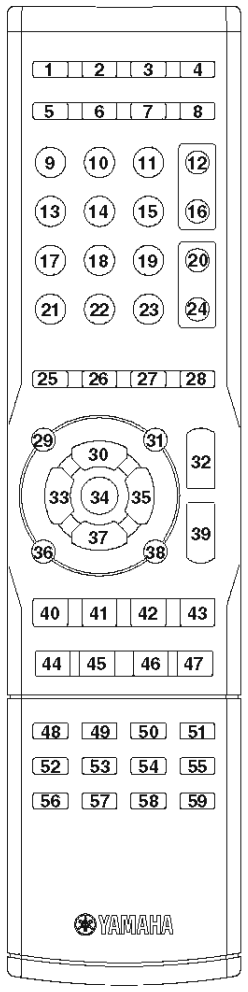


- **KEY LAYOUT**



- **IR CODE**

Key no.	Label	Key Common	Key ZONE2 code	K21 [AMP] ID1 (default) MAIN	K21 ID1 (default) ZONE2	K21 ID2 MAIN	K21 ID2 ZONE2	K5 [USB]RAV282	K6 [XM] RAV280 ID1 (default)	K6 ID2	K7 [SIRIUS] RAV280 ID1 (default)	K7 ID2	K9 [CD]	K10 [MD/CD-R]	K11 [TUNER] ID 1 (default)	K11 ID2	K13 [DVD]	K14 [DVD/CBL]	K15 [DVR]	K17 [V-AUX]	K18 [VCR]	K19 [PHONO]
1	POWER TV	–	–					(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	TV POWER	(TV POWER)	(TV POWER)	(TV POWER)	TV POWER
2	POWER AV	–	–					7F01-20	–	–	7F01-D0	7F01-D02E	79-60	7F-80	D1-1B	–	7C-80	(DVR POWER)	048 012	7F01-00	–	(DVR POWER)
3	STANDBY	O	O	7E-7F	7E-BB	7E-7F81	7E-BB45	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
4	POWER	O	O	7E-7E	7E-BA	7E-7E80	7E-BA44	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
5	A (RAV280, RAV281) USB (RAV282)	O	O	7F01-3F	7F01-40	7F01-3FC1	7F01-40BE	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
6	XM (RAV280) B (RAV281) A (RAV282)	O	O	7A-B4	7A-B8	7A-B44A	7A-B846	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
7	SIRIUS (RAV280) C (RAV281) B (RAV282)	O	O	7A-39	7A-3A	7A-39C7	7A-3AC4	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
8	MUTE	O	O	7A-1C	7A-DC	7A-1CE2	7A-DC22	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
9	CD	O	O	7A-15	7A-D1	7A-15EB	7A-D12F	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
10	MD/CD-R	O	O	7A-C9	7A-CF	7A-C937	7A-CF31	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
11	TUNER	O	O	7A-16	7A-D2	7A-16E8	7A-D22C	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
12	TV CH +	–	–					(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	TV CH +	(TV CH +)	(TV CH +)	TV CH +
13	DVD	O	O	7A-C1	7A-CD	7A-C13F	7A-CD33	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
14	DTV/CBL	O	O	7A-54	7A-D9	7A-54AA	7A-D927	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
15	DVR	O	O	7A-13	7A-D7	7A-13ED	7A-D729	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
16	TV CH –	–	–					(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	TV CH -	(TV CH -)	(TV CH -)	TV CH -
17	V-AUX/DOCK	O	O	7A-55	7A-D8	7A-55AB	7A-D826	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
18	B (RAV280) D (RAV281) C (RAV282)	O	O	7A-0F	7A-D6	7A-0FF1	7A-D628	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
19	C (RAV281) E (RAV282) D (RAV283)	O	O	7A-14	7A-D0	7A-14EA	7A-D02E	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
20	TV VOL +	–	–					(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	TV VOL +	(TV VOL +)	(TV VOL +)	(TV VOL +)	TV VOL +
21	AMP / ☆☆	O	–																			
22	TV INPUT	–	–					(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	TV INPUT	(TV INPUT)	(TV INPUT)	(TV INPUT)	TV INPUT
23	TV MUTE	–	–					(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	TV MUTE	(TV MUTE)	(TV MUTE)	(TV MUTE)	TV MUTE
24	TV VOL –	–	–					(TV VOL-)	(TV VOL-)	(TV VOL-)	(TV VOL-)	(TV VOL-)	(TV VOL-)	(TV VOL-)	(TV VOL-)	(TV VOL-)	(TV VOL-)	TV VOL-	(TV VOL-)	(TV VOL-)	(TV VOL-)	TV VOL-
25	SCENE 1	O	O	7A-007F	7A-017E	7A-007E	7A-017F	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
26	SCENE 2	O	O	7A-037C	7A-047B	7A-037D	7A-047A	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
27	SCENE 3	O	O	7A-0679	7A-0778	7A-0678	7A-0779	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
28	SCENE 4	O	O	7A-0976	7A-0A75	7A-0977	7A-0A74	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
29	BAND LEVEL / TITLE			7A-86		7A-8678		7F01-2D	7A-70	7A-708E	7F01-DD	7F01-DD23	–	–	7A-AE	7A-AE50	7C-B1	–	048 200	7F01-0D	–	–
30	PRESET/CH ▲ (UP)			7A-9D		7A-9D63		7F01-2E	7A-6A	7A-6A94	7F01-E1	7F01-E11F	–	–	7A-10	7A-10EE	7C-B4	–	048 088	7F01-0E	–	–
31	SRCH MODE / MENU			7A-84		7A-847A		7F01-2F	7A-6D	7A-6D93	7F01-DE	7F01-DE20	–	–	7A-AB	7A-AB55	7C-B2	–	048 084	7F01-0F	–	–
32	VOLUME +	O	O	7A-1A	7A-DA	7A-1AE4	7A-DA24	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
33	A-E/CAT / A/B/C/D/E _◄ (LEFT)			7A-9F		7A-9F61		7F01-30	7A-6E	7A-6E90	7F01-E2	7F01-E21C	–	–	7A-AC	7A-AC52	7C-B5	–	048 090	7F01-10	–	–
34	ENTER			7A-DE		7A-DE20		7F01-31	7A-6F	7A-6F91	7F01-E3	7F01-E31D	–	–	7A-AD	7A-AD53	7C-B8	–	048 092	7F01-11	–	–
35	A-E/CAT / A/B/C/D/E _► (RIGHT)			7A-9E		7A-9E60		7F01-32	7A-6C	7A-6C92	7F01-E4	7F01-E41A	–	–	7A-12	7A-12EC	7C-B6	–	048 091	7F01-12	–	–
36	RETURN / MEMORY			7A-AA		7A-AA54		7F01-33	7A-71	7A-718F	7F01-DF	7F01-DF21	–	–	7A-AF	7A-AF51	7C-B7	–	048 131	7F01-13	–	–
37	PRESET/CH_▼ (DOWN)			7A-9C		7A-9C62		7F01-34	7A-6B	7A-6B95	7F01-E5	7F01-E51B	–	–	7A-11	7A-11EF	7C-B3	–	048 089	7F01-14	–	–
38	DISPLAY			7A-C2		7A-C23C		7F01-35	7A-72	7A-728C	7F01-E0	7F01-E01E	79-0A	7F-9E	7A-B0	7A-B04E	7C-A6	–	048 015	7F01-15	–	–
39	VOLUME –	O	O	7A-1B	7A-DB	7A-1BE5	7A-DB25	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
40	REC			(device)		(device)		7F01-36	–	–	7F01-E6	7F01-E618	7A-4F	–	–	–	7C-8B	(DVR REC)	048 055	7F01-16	–	(DVR REC)
41	■ (STOP)			(device)		(device)		7F01-3D	–	–	7F01-E9	7F01-E917	7A-09	7F-84	–	–	7C-85	(DVR STOP)	048 049	7F01-1D	–	(DVR STOP)
42	❚❚ (PAUSE)			(device)		(device)		7F01-3A	–	–	7F01-E7	7F01-E719	7A-09	7F-83	–	–	7C-83	(DVR PAUSE)	048 048	7F01-1A	–	(DVR PAUSE)
43	► (PLAY)			(device)		(device)		7F01-3E	–	–	7F01-E8	7F01-E816	7A-08	7F-82	–	–	7C-82	(DVR PLAY)	048 044	7F01-1E	–	(DVR PLAY)
44	◄◄ (REW)_INFO			(device)		(device)		7F01-37	7A-3D	7A-3DC3	7F01-EA	7F01-EA14	7A-0D	7F-88	7A-A4	7A-A45A	7C-86	(DVR REW)	048 041	7F01-17	–	(DVR REW)
45	►► (FF)			(device)		(device)		7F01-38	7A-3E	7A-3EC0	7F01-EB	7F01-EB15	7A-0C	7F-89	7A-A5	7A-A55B	7C-87	(DVR FF)	048 040	7F01-18	–	(DVR FF)
46	⏮ (SKIP –) _PTY SEEK–MODE			(device)		(device)		7F01-3B	7A-3F	7A-3FC1	7F01-EC	7F01-EC12	7A-0B	7F-86	7A-A6	7A-A658	7C-B9	(DVR SKIP -)	048 033	7F01-1B	–	(DVR SKIP -)
47	⏭ (SKIP +) _PTY SEEK–START			(device)		(device)		7F01-3C	7A-EF	7A-EF11	7F01-ED	7F01-ED13	7A-0A	7F-87	7A-A7	7A-A759	7C-BA	(DVR SKIP +)	048 032	7F01-1C	–	(DVR SKIP +)
48	1_◄ PRG			7A-59		7A-59A7		7F01-21	7A-61	7A-619F	7F01-D1	7F01-D12F	79-11	7F-91	7A-E5	7A-E51B	7C-94	–	048 001	7F01-01	–	–
49	2_PRG ►			7A-58		7A-58A6		7F01-22	7A-62	7A-629C	7F01-D2	7F01-D22C	79-12	7F-92	7A-E6	7A-E618	7C-95	–	048 002	7F01-02	–	–
50	3_ENHANCER			7A-94		7A-946A		7F01-23	7A-63	7A-639D	7F01-D3	7F01-D32D	79-13	7F-93	7A-E7	7A-E719	7C-96	–	048 003	7F01-03	–	–
51	4_SUR DECODE			7A-8D		7A-8D73		7F01-24	7A-64	7A-649A	7F01-D4	7F01-D42A	79-14	7F-94	7A-E8	7A-E816	7C-97	–	048 004	7F01-04	–	–
52	5_STRAIGHT			7A-56		7A-56A8		7F01-25	7A-65	7A-659B	7F01-D5	7F01-D52B	79-15	7F-95	7A-E9	7A-E917	7C-98	–	048 005	7F01-05	–	–
53	6_DIRECT			7A-DD		7A-DD23		7F01-26	7A-66	7A-6698	7F01-D6	7F01-D628	79-16	7F-96	7A-EA	7A-EA14	7C-99	–	048 006	7F01-06	–	–
54	7_NIGHT			7A-95		7A-956B		7F01-27	7A-67	7A-6799	7F01-D7	7F01-D729	79-17	7F-97	7A-EB	7A-EB15	7C-9A	–	048 007	7F01-07	–	–
55	8_PARAMETER			7A-C4		7A-C43A		7F01-28	7A-68	7A-689E	7F01-D8	7F01-D826	79-18	7F-98	7A-EC	7A-EC12	7C-9B	–	048 008	7F01-08	–	–
56	9_MULTI CH IN			7A-87		7A-8779		7F01-29	7A-69	7A-6997	7F01-D9	7F01-D927	79-19	7F-99	7A-B1	7A-B14F	7C-9C	–	048 009	7F01-09	–	–
57	0_AUDIO SEL			7A-C3		7A-C33D		7F01-2A	7A-60	7A-609E	7F01-DA	7F01-DA24	79-10	7F-90	7A-B2	7A-B24C	7C-93	–	048 000	7F01-0A	–	–
58	+10			–		–		7F01-2B	–	–	7F01-DB	7F01-DB25	79-1A	7F-9A	–	–	7C-9D	–	–	7F01-0B	–	–
59	ENT_SLEEP			7A-57		7A-57A9		7F01-2C	7A-BF	7A-BF41	7F01-DC	7F01-DC22	79-0B	7F-8A	7A-B3	7A-B34D	7C-9E	–	–	7F01-0C	–	–
default		Library		AMP	–	AMP	–	TUNER	TUNER	TUNER	TUNER	TUNER	CD	CD-R	TUNER	TUNER	DVD	–	DVR	TUNER	–	–
		Brand		Yamaha-1	–	Yamaha-2	–	Yamaha-8	Yamaha-5	Yamaha-11	Yamaha-9	Yamaha-10	Yamaha-1	Yamaha	Yamaha-3	Yamaha-12	Yamaha-1	–	Yamaha	Yamaha-7	–	–
		Preset number		5019	–	5020	–	5012	5009	5015	5017	5018	5013	5001	5007	5016	2000	–	2011	5011	–	–
		setting		↓ [5019]		↓ [5020]			↓ [5009]	↓ [5015]	↓ [5017]	↓ [5018]			↓ [5007]	↓ [5016]						



• **FUNCTION CHART**

Key no.	Label	K21 [AMP]	K5 [USB] RAV282	K6 [XM] RAV280	K7 [SIRIUS] RAV280	K9 [CD]	K10 [MD/CD-R]	K11 [TUNER]	K13 [DVD]	K14 [DTV/CBL]	K15 [DVR]	K17 [V-AUX]	K18 [VCR]	K19 [PHONO]
1	POWER_TV	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	(TV POWER)	TV POWER	(TV POWER)	(TV POWER)	(TV POWER)	TV POWER
2	POWER_AV	(device)	POWER	POWER	POWER	POWER	POWER	POWER	POWER	(DVR POWER)	POWER	POWER	POWER	(DVR POWER)
12	TV CH +	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)	(TV CH +)
16	TV CH –	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)	(TV CH -)
20	TV VOL +	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)	(TV VOL +)
22	TV INPUT	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)	(TV INPUT)
23	TV MUTE	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)	(TV MUTE)
24	TV VOL –	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)	(TV VOL -)
25	SCENE 1													
26	SCENE 2													
27	SCENE 3													
28	SCENE 4													
29	BAND LEVEL / TITLE	LEVEL	TITLE	BAND	TITLE	–	–	BAND	TITLE	TITLE	TITLE	BAND	TITLE	TITLE
30	PRESET/CH_▲(UP)	MENU UP	UP	PRESET (+)	UP	–	–	PRESET (+)	MENU UP	MENU UP	MENU UP	PRESET (+)	–	MENU UP
31	SRCH MODE / MENU	MENU	MENU	SRCH MODE	SRCH MODE	–	–	SRCH MODE	MENU	MENU	MENU	SRCH MODE	–	MENU
32	VOLUME +													
33	A-E/CAT / A/B/C/D/E _◄ (LEFT)	MENU LEFT	LEFT	A-E/CAT (-)	LEFT	–	–	A-E/CAT (-)	MENU LEFT	MENU LEFT	MUTE LEFT	A-E/CAT (-)	–	MENU LEFT
34	ENTER	MENU SELECT	ENTER	ENTER	ENTER	–	-	ENTER	MENU ENTER	MENU ENTER	MENU ENTER	ENTER	–	MENU ENTER
35	A-E/CAT / A/B/C/D/E _► (RIGHT)	MENU RIGHT	RIGHT	A-E/CAT (+)	RIGHT	–	–	A-E/CAT (+)	MENU RIGHT	MENU RIGHT	MENU RIGHT	A-E/CAT (+)	–	MENU RIGHT
36	RETURN / MEMORY	RETURN	RETURN	MEMORY	MEMORY	–	–	MEMORY	RETURN	RETURN	RETURN	MEMORY	RETURN	RETURN
37	PRESET/CH_▼(DOWN)	MENU DOWN	DOWN	PRESET (-)	DOWN	–	–	PRESET (-)	MENU DOWN	MENU DOWN	MENU DOWN	PRESET (-)	–	MENU DOWN
38	DISPLAY	SUB MENU	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY	–	DISPLAY
39	VOLUME –													
40	REC	(device)	–	–	REC	DISC SKIP	REC	–	DISC SKIP	(DVR REC)	REC	–	REC	(DVR REC)
41	■ (STOP)	(device)	STOP	–	STOP	STOP	STOP	–	STOP	(DVR STOP)	STOP	–	STOP	(DVR STOP)
42	❚❚ (PAUSE)	(device)	PAUSE	–	PAUSE	PAUSE	PAUSE	–	PAUSE	(DVR PAUSE)	PAUSE	–	PAUSE	(DVR PAUSE)
43	► (PLAY)	(device)	PLAY	–	PLAY	PLAY	PLAY	–	PLAY	(DVR PLAY)	PLAY	–	PLAY	(DVR PLAY)
44	◄◄ (REW)_INFO	(device)	–	INFO	REW	REW	REW	INFO	REW	(DVR REW)	REW	INFO	REW	(DVR REW)
45	►► (FF)	(device)	–	EON	FF	FF	FF	EON	FF	(DVR FF)	FF	EON	FF	(DVR FF)
46	⏮ (SKIP –) _PTY SEEK–MODE	(device)	SKIP (-)	PTY MODE	SKIP (-)	SKIP (-)	SKIP (-)	PTY MODE	SKIP (-)	(DVR SKIP -)	SKIP (-)	PTY MODE	–	(DVR SKIP -)
47	⏭ (SKIP +) _PTY SEEK–START	(device)	SKIP (+)	PTY START	SKIP (+)	SKIP (+)	SKIP (+)	PTY START	SKIP (+)	(DVR SKIP +)	SKIP (+)	PTY START	–	(DVR SKIP +)
48	1_◄ PRG	PROG (-)	P1	P1	1	1	1	P1	1	1	1	P1	1	1
49	2_PRG ►	PROG (+)	P2	P2	2	2	2	P2	2	2	2	P2	2	2
50	3_ENHANCER	ENHANCER	P3	P3	3	3	3	P3	3	3	3	P3	3	3
51	4_SUR DECODE	SUR DECODE	P4	P4	4	4	4	P4	4	4	4	P4	4	4
52	5_STRAIGHT	STRAIGHT	P5	P5	5	5	5	P5	5	5	5	P5	5	5
53	6_DIRECT	(PURE) DIRECT	P6	P6	6	6	6	P6	6	6	6	P6	6	6
54	7_NIGHT	NIGHT	P7	P7	7	7	7	P7	7	7	7	P7	7	7
55	8_PARAMETER	PARAMENTER	P8	P8	8	8	8	P8	8	8	8	P8	8	8
56	9_MULTI CH IN	MULTI CH IN	P9	P9	9	9	9	P9	9	9	9	P9	9	9
57	0_AUDIO SEL	AUDIO SEL	P10	P0	10	0/10	0/10	P0	0	0/10	0	P0	0/10	0/10
58	+10	–	–	–	11	+10	+10	–	+10	_/_ _11	+10	–	>10	_/_ _11
59	ENT_SLEEP	SLEEP	P ENTER	P ENTER	12	INDEX	INDEX	P ENTER	TITLE/INDEX	ENTER/12	TITLE/INDEX	P ENTER	ENTER	ENTER/12

Advanced setup

This unit has additional menus that are displayed in the front panel display. The advanced setup menu offers additional operations to adjust and customize the way this unit operates. Change the initial settings (indicated in bold under each parameter) to reflect the needs of your listening environment.

Notes

- Only **STANDBY/ON**, **PROGRAM** ◁ / ▷, and **STRAIGHT** are effective while you are using the advanced setup menu.
- No other operations can be made while you are using the advanced setup menu.
- The advanced setup menu is only available in the front panel display.

1 Press STANDBY/ON to set this unit to the standby mode.

2 Press and hold TONE CONTROL and then press STANDBY/ON to turn on this unit.

This unit turns on, and the advanced setup menu appears in the front panel display.

3 Press PROGRAM ◁ / ▷ to select the parameter you want to adjust.

The name of the selected parameter appears in the front panel display.

4 Press STRAIGHT repeatedly to change the selected parameter setting.

5 Press STANDBY/ON to confirm your selection and set this unit to the standby mode.

✻
The settings you made are reflected next time you turn on this unit.

■ Speaker impedance SP IMP. (U.S.A. and Canada models only)

Use this feature to set the speaker impedance of this unit so that it matches that of your speakers.
Choices: **8Ω MIN**, 6Ω MIN

- Select "8Ω MIN" to set the speaker impedance to 8 Ω.
- Select "6Ω MIN" to set the speaker impedance to 6 Ω.

SP IMP.	Speaker	Impedance level
8Ω MIN	Front (A or B)	The impedance of each speaker must be 8 Ω or higher.
	Center	
	Surround	
6Ω MIN	Front (A or B)	The impedance of each speaker must be 6 Ω or higher.
	Center	
	Surround	

■ SIRIUS Satellite Radio Parental Lock code number reset SSR PIN

Use this feature to set the code number for the SIRIUS Satellite Radio Parental Lock feature to the initial factory setting.
Choices: RESET, **CANCEL**

- Select "RESET" to set the code number to the initial factory setting.
- Select "CANCEL" to set the code number to the initial factory setting.

Note

Even if you set "SSR PIN" to "RESET", this unit does not unlock the locked channels. The initial factory setting of the Parental Lock code number is "0000".

■ Tuner frequency step TU (Asia and General models only)

Use this feature to set the tuner frequency step according to the frequency spacing in your area.
Choices: AM10/FM100, **AM9/FM50**

- Select "AM10/FM100" for North, Central and South America.
- Select "AM9/FM50" for all other areas.

■ Initializing INIT.

Use this feature to reset all the parameters of this unit to the initial factory settings.
Choices: **CANCEL**, RESET

- Select "CANCEL" not to reset any parameters of this unit.
- Select "RESET" to reset the parameters of this unit.

Notes

- This setting completely resets all the parameters of this unit including the "SET MENU" parameters. However, the advanced setup menu parameters will not be initialized.
- The initial factory settings are activated next time you turn on this unit.

本機の設定を変更する（ADVANCED SETUP）

フロントパネルディスプレイに表示されるメニューを見ながら、さまざまな項目を設定します。アドバンストセットアップメニューでは、本機の設定を初期設定に戻したり、リモコン ID を変更したりすることができます。お好みに合わせて、設定を変更してください。

ご注意

- アドバンストセットアップメニューの操作中は、本体の STANDBY/ON キー、PROGRAM ◁ / ▷ キー、STRAIGHT キー以外は機能しません。
- アドバンストセットアップメニューの操作中は、他の操作はできません。
- アドバンストセットアップメニューはフロントパネルディスプレイでのみ操作できます。

1 STANDBY/ON キーを押して、本機の電源をスタンバイにする。

2 TONE CONTROL キーを押しながら、もう一度 STANDBY/ON キーを押す。

本機の電源がオンになり、アドバンストセットアップメニューがフロントパネルディスプレイに表示されます。

3 STRAIGHT キーを繰り返し押して、設定したい項目を選ぶ。

4 STANDBY/ON キーを押して、本機の電源をスタンバイにする。

変更した設定が保存されます。

✻
変更した設定は、次回電源を入れたときから有効になります。

■ 初期設定に戻す INIT.

変更した設定を初期設定に戻します。
選択項目：CANCEL、RESET
初期設定：CANCEL

- 初期設定に戻さない場合は、「CANCEL」を選んでください。
- すべてを初期設定に戻すには、「RESET」を選んでください。

ご注意

- 「SET MENU」の設定を含むすべての設定を初期設定に戻します。ただし、アドバンストセットアップメニューの設定は初期設定に戻りません。
- 次回電源をオンにしたときにすべての設定が初期設定に戻ります。

RX-V463/HTR-6140/
DSP-AX463

YAMAHA