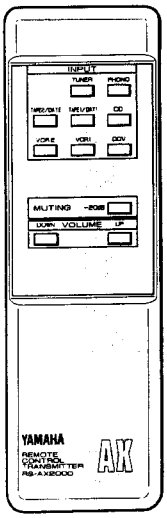
YAMA-00416

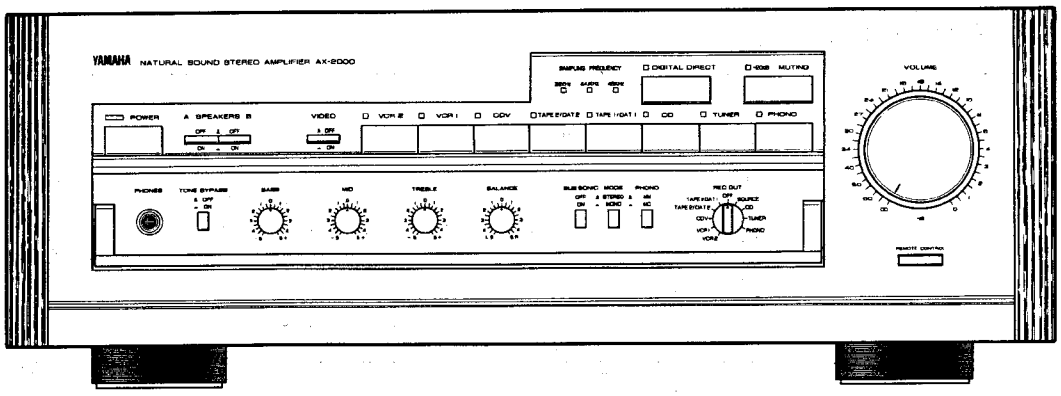
STEREO INTEGRATED AMPLIFIER

AX-2000

SERVICE MANUAL

● RS-AX2000





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 inherant 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 all 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, 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 parts replacement. Recheck all work before you apply power to the unit.

■ CONTENTS

100192

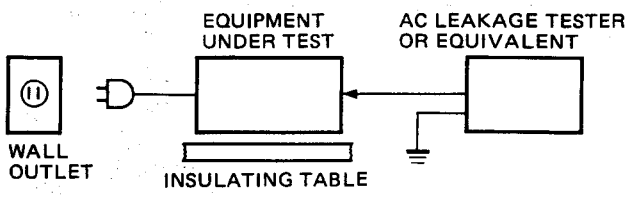
YAMAHA

YAMAHA CORPORATION HAMAMATSU, JAPAN
2.1K-646 ⓒ ⊖]

■ TO SERVICE PERSONNEL

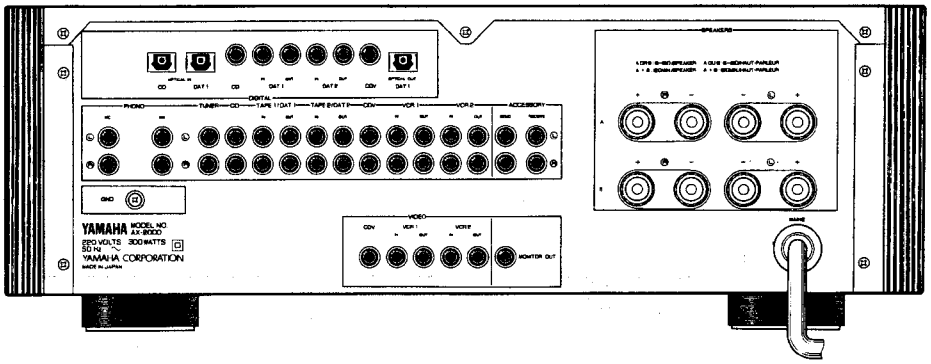
1. Critical Components Information.
   Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V Model Only).
   When service has been completed, it is imperative that you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

- Meter impedance should be equivalent to 1500 ohm shunted by 0.15μF.
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

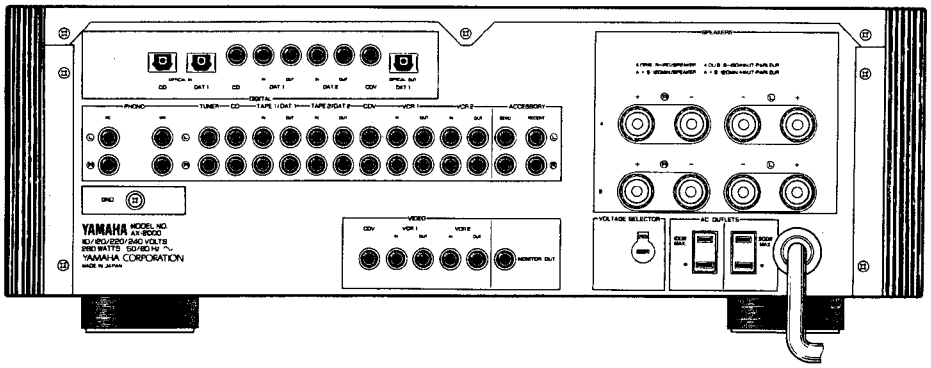


■ REAR PANELS

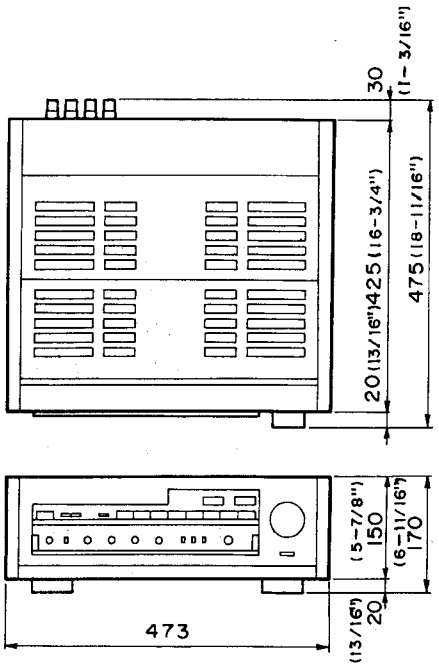
- **W MODEL**



- **R MODEL**



■ DIMENSIONS



■ SPECIFICATIONS

AMPLIFIER SECTION

Maximum RMS Output Power per Channel

20Hz ~ 20kHz 0.003% THD 8Ω 130W

20Hz ~ 20kHz 0.003% THD 6Ω 150W

DIN Standard Output Power per Channel

(European model)

1kHz 1% THD 4Ω 220W

Dynamic Power per Channel

(by IHF Dynamic Headroom Measuring Method)

1kHz 1% THD 8/6/4Ω 180W/240W/340W

IEC Power (European model)

1kHz 0.004% THD 8Ω 130W

Power Band Width

0.02% THD 65W 8Ω ..... 20Hz ~ 50kHz

Damping Factor

1kHz 8Ω 130W

Input Sensitivity/Impedance

Phono MC 100mV/1kΩ

MM 2.6mV/47kΩ

CD, etc. 185mV/47kΩ

ACCESSORY IN 185mV/47kΩ

Maximum Input Signal

(0.007% THD 1kHz) Phono MC 6mV

(0.007% THD 1kHz) Phono MM 140mV

Output Level/Impedance

REC OUT 150mV/1kΩ

Headphone Jack Socket Rated Output/Impedance

0.004% THD 0.86V/8Ω

Frequency Response

CD, TUNER, TAPE, DAT, CDV, VCR

..... 20Hz ~ 20kHz ± 0.2dB

ACCESSORY IN ..... 20Hz ~ 20kHz ± 0.2dB

RIAA Equalization Deviation

Phono MC ..... ±0.2dB

MM ..... ±0.2dB

Total Harmonic Distortion (20Hz ~ 20kHz)

Phono MC to REC OUT 3V 0.003%

Phono MM to REC OUT 3V 0.003%

CD, etc. to SP OUT 130W/8Ω 0.003%

ACCESSORY IN to SP OUT 130W/8Ω 0.003%

Intermodulation Distortion

CD, etc. Rated Output/8Ω 0.004%

Signal to Noise Ratio (IHF-A-Network)

Phono MC (500μV Input Shorted) 85dB

MM (5mV Input Shorted) 88dB

Residual Noise (IHF-A-Network) 30μV

Channel Separation (Vol -30dB)

Phono MM (Input Shorted 1kHz/10kHz) ... 82dB/72dB

Phono MC (Input Shorted 1kHz/10kHz) 84dB/65dB

CD, etc. (Input 5.1kΩ Terminated 1kHz/10kHz)

..... 76dB/57dB

Tone Control Characteristics

BASS boost/cut ..... ±10dB (at 20Hz)

BASS turnover frequency 350Hz

TREBLE boost/cut ..... ±10dB (at 20kHz)

TREBLE turnover frequency 3.5kHz

MID boost/cut ..... ±10dB (at 1kHz)

MID center frequency 1kHz

Filter Characteristics

Subsonic ..... 15Hz -6dB/oct

Audio Muting ..... -20dB

Gain Tracking Error (0 ~ -60dB) 3dB

Power Supply

General model AC110/120/220V/240V 60/50Hz

European model AC220V 50Hz

Power Consumption

General model 280W

European models 300W

AC Outlet (General Model only)

Switched x 1 ..... 100W max.

Unswitched x 2 ..... 300W max.

Dimensions (W x H x D) ..... 473 x 170 x 475mm

(18.6 x 6.7 x 18.7in)

Weight 28kg

(10.1lbs)

D/A CONVERTER SECTION

Output Voltage REC OUT OUTPUT (0dB signal input)

..... 2V

Frequency Characteristics (20 ~ 20kHz) ..... ±0.3dB

Diemphasis Deviation (EIAJ) ..... ±0.3dB

Harmonic Distortion Ratio (1kHz, EIAJ) 0.002%

Dynamic Range (EIAJ) 100dB

S/N Ratio (EIAJ) 118dB

Channel Separation (1kHz) 100dB

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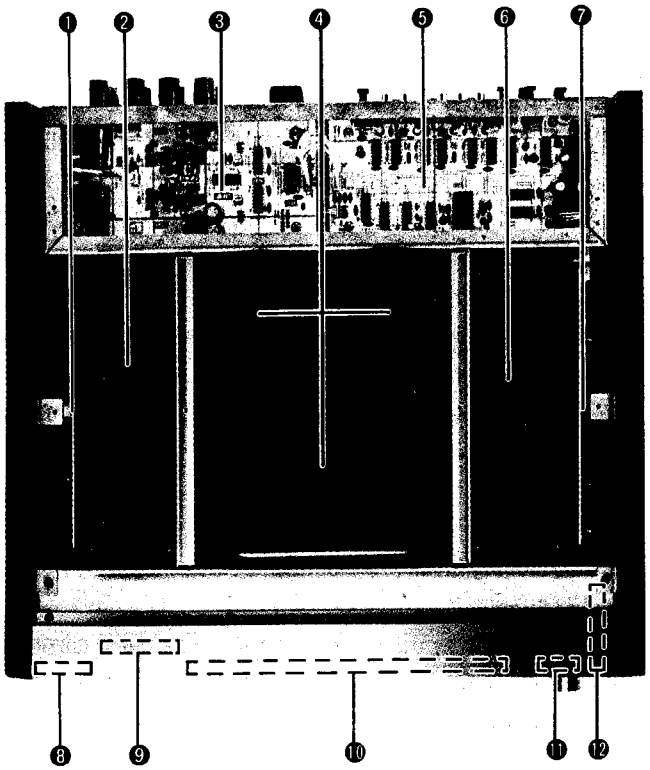
* Specifications subject to change without notice.

(W) ... European model

(R) ... General model

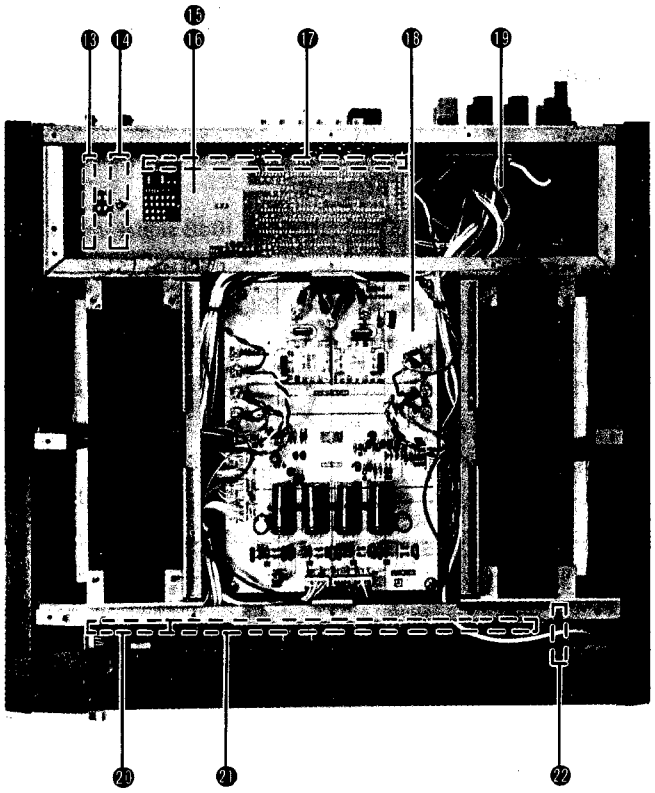
■ INTERNAL VIEW

(TOP VIEW)



❶ MAIN CIRCUIT BOARD (L)
❷ RADIATOR (L)
❸ SELECTOR 2 CIRCUIT BOARD (1)
❹ POWER TRANSFORMER and ELECTROLYTIC CAP.
❺ TONE CONTROL CIRCUIT BOARD (1)
❻ RADIATOR (R)
❼ MAIN CIRCUIT BOARD (R)
❽ FRONT PANEL CIRCUIT BOARD (4)
❾ FRONT PANEL CIRCUIT BOARD (2)
❿ FRONT PANEL CIRCUIT BOARD (1)
⓫ FRONT PANEL CIRCUIT BOARD (3)
⓬ TONE CONTROL CIRCUIT BOARD (4)

(BOTTOM VIEW)



⓭ SELECTOR 1 CIRCUIT BOARD (4)
⓮ SELECTOR 1 CIRCUIT BOARD (3)
⓯ SELECTOR 1 CIRCUIT BOARD (1): TOP SIDE
⓰ SELECTOR 1 CIRCUIT BOARD (2): BOTTOM SIDE
⓱ SELECTOR 2 CIRCUIT BOARD (2)
⓲ FRONT PANEL CIRCUIT BOARD (5)
⓳ SELECTOR 2 CIRCUIT BOARD (3)
⓴ TONE CONTROL CIRCUIT BOARD (3)
㉑ TONE CONTROL CIRCUIT BOARD (2)
㉒ TONE CONTROL CIRCUIT BOARD (5)

■ DISASSEMBLY PROCEDURES (Remove parts in disassembly order as numbered)

1. Removal of Bottom Cover:

a. Remove 24 screws of ①.

2. Removal of Top Cover (A), (B) & (C):

a. Remove 3 screws of ②, and remove the cover lifting up the back of Top Cover (C).

b. Remove 4 screws of ③, and remove the cover lifting up the back of Top Cover (B).

c. Remove 4 screws of ④, and remove the cover (A).

3. Removal of Front Panel Unit:

a. Pull out 5 knobs located at inside of Sealing Panel of ⑤.

b. Remove connector which is projected out of circuit board located at inside of front panel.

c. Remove 6 screws of ⑥, then remove the unit trying to pull the front panel toward you.

d. Remove 1 plastic rivet of ⑦.

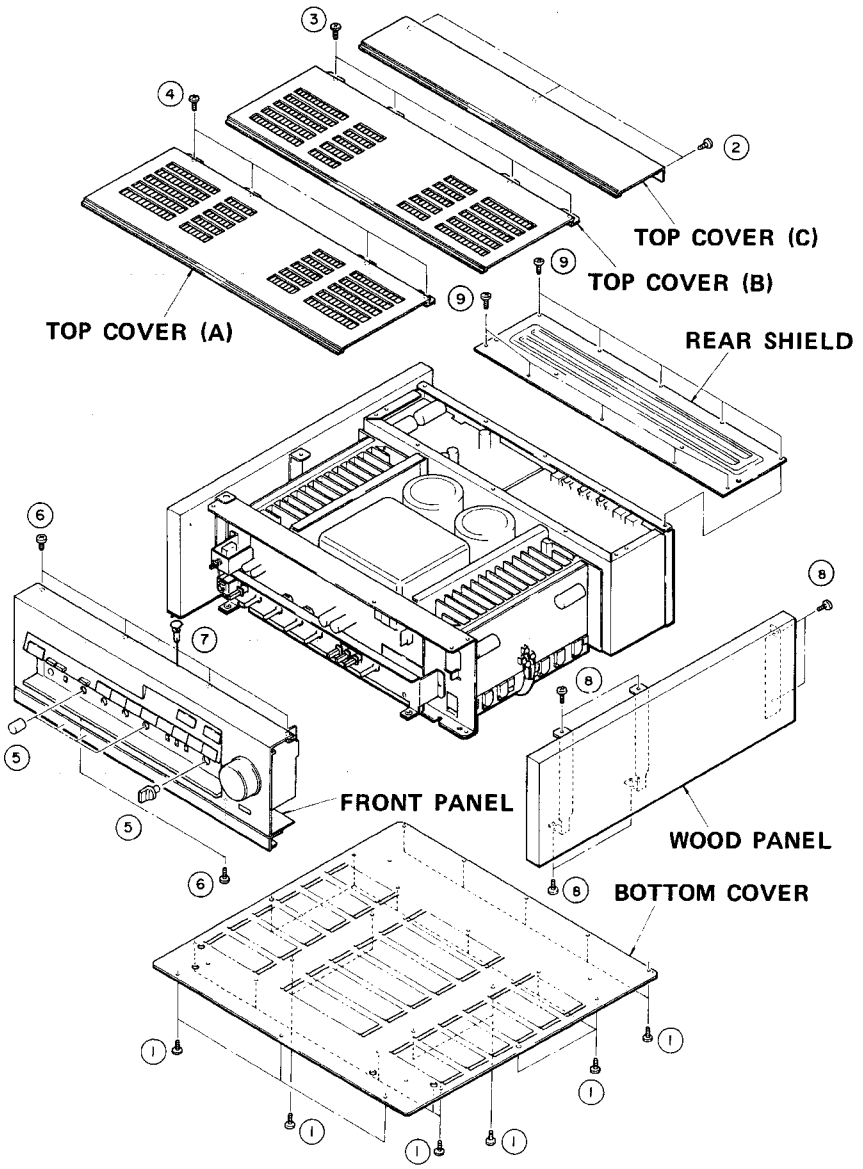
4. Removal of Wood Panel:

a. Remove 6 screws of ⑧, and remove the panel sliding it to the side.

Precaution: Remove both left and right wood panels with the same removal procedure. Also, if you removed the wood panel, the strength weakens.

5. Removal of Rear Shield:

a. Remove 10 screws of ⑨.



■ ADJUSTMENTS

Before adjustment

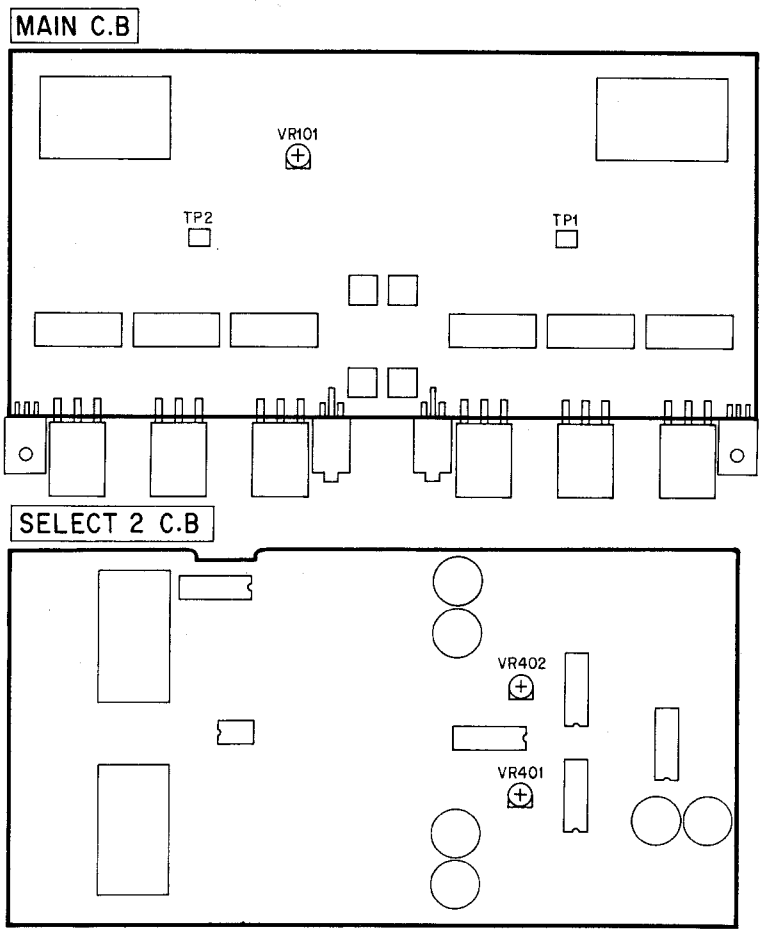
- In order to stabilize the operation of Amplifier, conduct the adjustment after having done 3 minutes aging under no-load status.

Adjustment	Place to be measured	Place to be adjusted	Specification
Idling of Electric Current	Main Circuit Board TP1 ↔ TP2 (Both L & R)	VR101 (Both L & R)	DC60mV-5mV
Distortion Rate Adjustment of D/A Converter	Selector 2 Circuit Board Digital 1kHz, 0dB Signal	VR401 (L) VR402 (R)	Adjust it so as to be the best condition. (See Note 1.)

Note 1:

- Use 20 kHz, LPF.
- Switch on Digital Direct.
- Let the Main Volume be the minimum
- Set REC OUT SELECTOR at the position of SOURCE REC, and measure output (analogue) of REC OUT. For the Input, input Digital Signal of 1kHz 0dB to DIGITAL CD INPUT Terminal. (CD Player with DIGITAL OUT is connected with it.)
- Digital Signal from either CD or TAPE 1/DAT 1 Terminal chosen by INPUT SELECTOR has to be outputting to DIGITAL OUT Terminal.
- Rated Input is 0.5+0.1V_{P-P}, and Impedance of Signal Source is R_g =75 Ω
- Rated Output is 0.5-0.1V_{P-P} (when its load is 75 Ω.)

- **TESTPOINT**

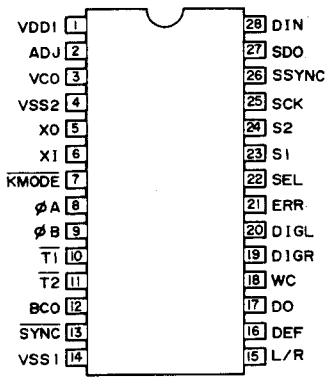


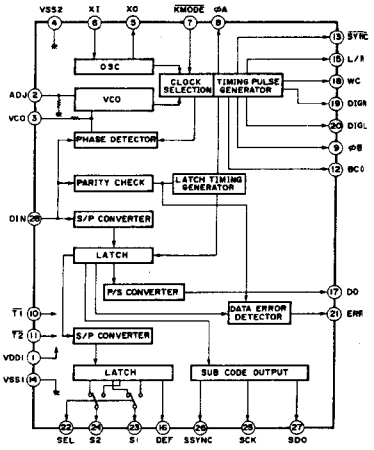
■ IC BLOCK

IC312: YM3623B (Digital I/O)

The pin with (PU) in the I/O column is pulled up internally.

Pin No.	Pin Name	I/O	Function
1	VDD1		Power supply for system (+5V)
2	ADJ	I	For adjustment of VCO oscillation frequency, non-connected
3	VCO	I/O	External capacitor terminal for VCO circuit
4	Vss2		Ground of VCO circuit Connect commonly with Vss1 (Inside of IC is not used in common.)
5	XO	O	For crystal oscillator (16.9344MHz)
6	XI	I	For crystal oscillator
7	$\overline{KMODE}$	I (PU)	H: Activates PLL circuit if input is entered to DIN pin but if not, it operates by using crystal oscillator. L: Uses crystal oscillator regardless of DIN pin
8	ϕA	O	Crystal oscillator oscillation frequency output (16.9344MHz)
9	ϕB	O	1/3 division of ϕA when crystal oscillator is used With PLL circuit in operation, it varies depending on data speed entered to DIN pin (About 5.6448 MHz when fs = 44.1 kHz)
10	$\overline{T1}$	I (PU)	For checking internal circuit
11	$\overline{T2}$	I (PU)	For checking internal circuit
12	BCO	O	Timing clock of output signal from DO pin
13	$\overline{SYNC}$	O	Synchronizing signal
14	Vss1	O	System ground (+0V)
15	L/R	O	Indicates that H = L channel and L = R channel data is output from DO pin
16	DEF	O	H: Indicates that input data is emphasized L: Indicates that input data isn't emphasized
17	DO	O	16 bit data output
18	MC	O	Indicates that data is output at DO pin
19	DIGR	O	Signal for R channel deglitch
20	DIGR	O	Signal for L channel deglitch
21	ERR	O	H: Indicates parity error or in operation with crystal L: Indicates that there is no error
22	SEL	I (PU)	Refer to the separate table.
23	S1	O	Refer to the separate table.
24	S2	O	Refer to the separate table.
25	SCK	O	Clock for sub-code output
26	SSYNC	O	Signal for sub-code
27	SDO	O	For output of sub-code data
28	DIN	I (PU)	For data input



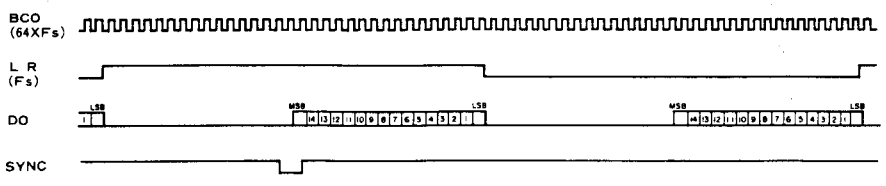


- **S1, S2 SEL**
  The output function of S1 and S2 pins is increased. Switching the SEL pin input will switch to S1 or S2 pin output.

Input	Output		Output	
SEL	S1	Function	S2	Function
L	L	Copy forbidden	L	CD (except DAT)
	H	Copy enable	H	DAT
H	L		L	Sampling frequency of DIN input signal 44.1KHz
	L		H	48.1KHz
	H		H	32kHz
	H		L	–

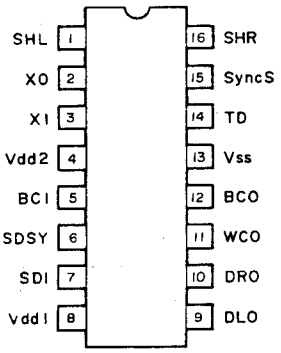
As in the above table, necessary data is drawn out of the digital audio interface format signals which have been entered and output at S1 and S2 pins.

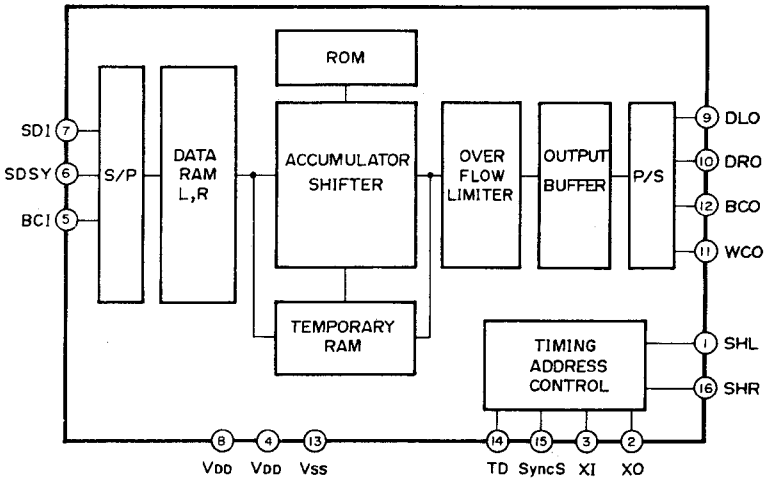
- **OUTPUT TIMING**



Note) FS shows the sampling frequency. For example, it is 44.1kHz with the compact disk and 48kHz with the DAT. The internal sampling frequency Fa of AX-2000 at analog-in is 48kHz (and internal crystal oscillation is 18.432MHz).

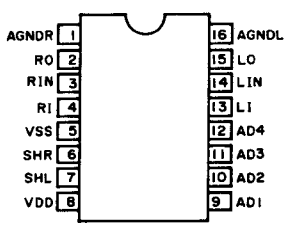
IC314: YM3414
(2-ch, 8th Digital Filter)

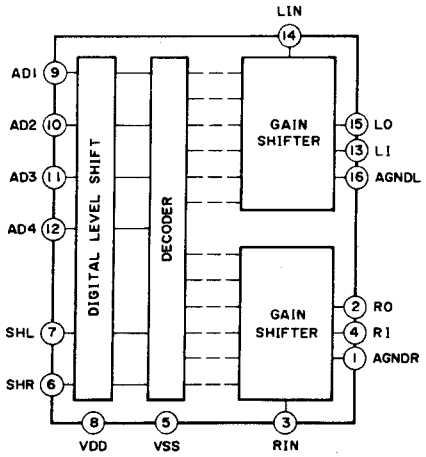




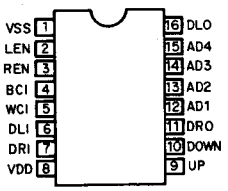
Symbol	Pin No.	I/O	
SHL	1	O	When it is 1DAC (TD= "L"):Deglitcher Signal (Quadrupled Time) When it is 2DAC (TD= "H"):Deglitcher Signal (Quadrupled Time)
XO	2	O	Crystal Oscillation is done between XI-XO.
XI	3	I	It can be input in 16.9344MHz XI directiy from outside.
Vdd2	4		Crystal Oscillation & Deglitcher Signal with +5VPower Source Terminal
BCI	5	I	Bit Clock Input Terminal of Input Data
SDSY	6	I	Clock which shows division of Input Data's L/R ch and Input Timing
SDI	7	I	Data Input Terminal
Vdd 1	8		Digital Signal System with +5V Power Source Terminal
DLO	9	O	When it is 1DAC (TD= "L"). L. R ch Data Output Terminal (Quadrupled Time) When it is 2DAC (TD= "L"). L ch Data Output Terminal (Quadrupled Time)
DRO	10	O	R ch Data Output Terminal
WCO	11		Output Data DLO. Word Clock of DRO
BCO	12	O	Bit Clock of Output Data
V_{SS}	13		GND Terminal
TD	14	I	1DAC/2DAC Switching Terminal (1DAC (Quaduple) = "L". (2DAC (Octuple) = "H")
Syacs	15	I	Synchronous Signal for use in Asynchronous Input Jitter Breathing (Syncs= "H":Perfect Synchronous Input. Syncs = "L":SDSY Prohibition)
SHR	16	O	R ch Deglitcher Signal for IDAC time

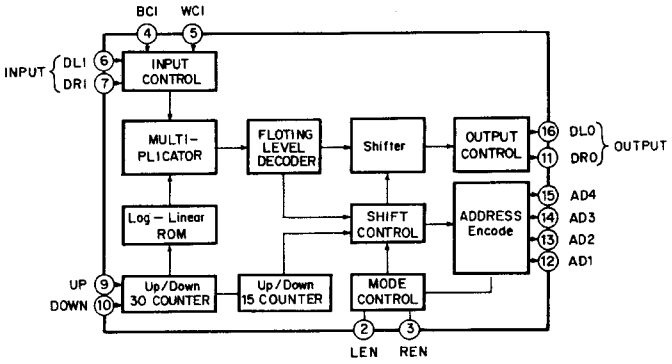
IC404: YM3023
(Floating Sample Hold)



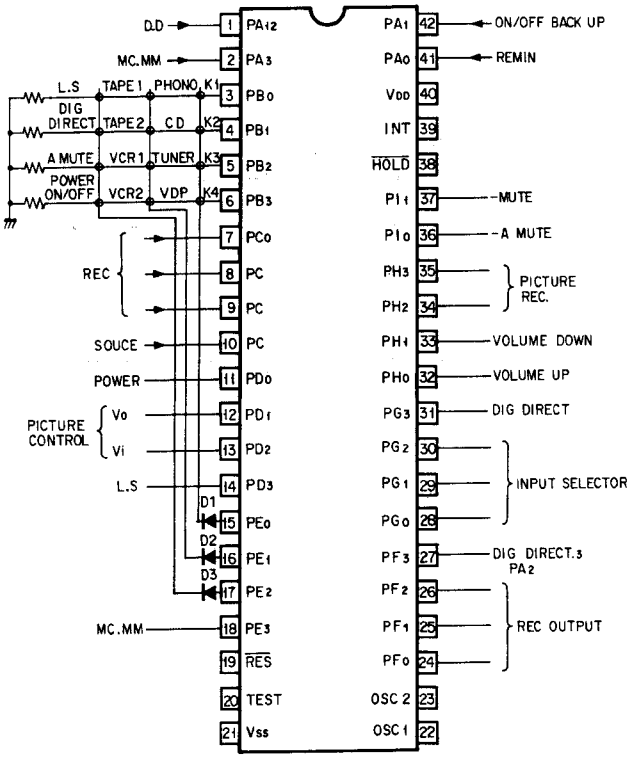


IC402: YM6013
(8-Bit Over Sampling)





IC208: LC6505C-3556
(4 Bit μ-COM)

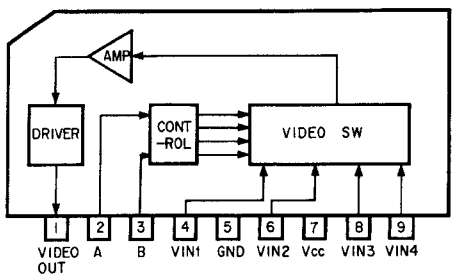


FUNCTION DATA

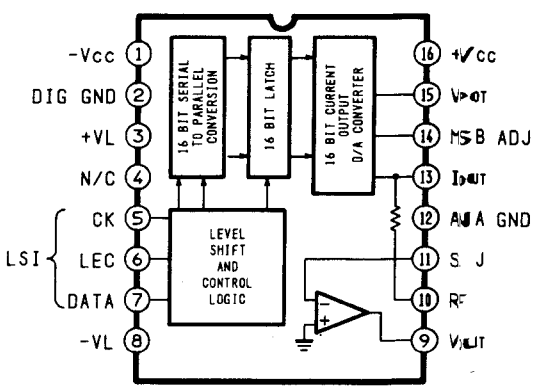
PORT G(INPUT SELECTOR) PIN No.								FUNCTION
31	30	29	28					
0	1	0	0	0	0	0	0	PHONO
0	0	0	0	0	0	0	0	CD
0	1	0	1	0	0	0	0	TUNER
0	0	0	1	0	0	0	0	VDP
0	0	1	0	0	0	0	0	TAPE 1
0	0	1	1	0	0	0	0	TAPE 2
0	1	1	0	0	0	0	0	VCR 1
0	1	1	1	0	0	0	0	VCR 2

PORT D (PICTURE CONTROL) PIN No.		FUNCTION
13	12	
0	1	VDP
1	0	VCR 1
1	1	VCR 2

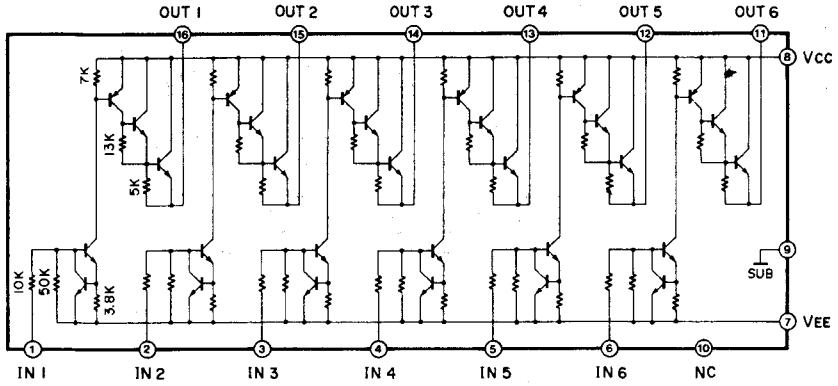
IC707 ~ 709: LA7952
(Video Switch)



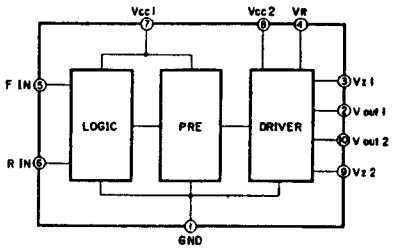
IC401, 403: PCM56P
(D/A Converter)



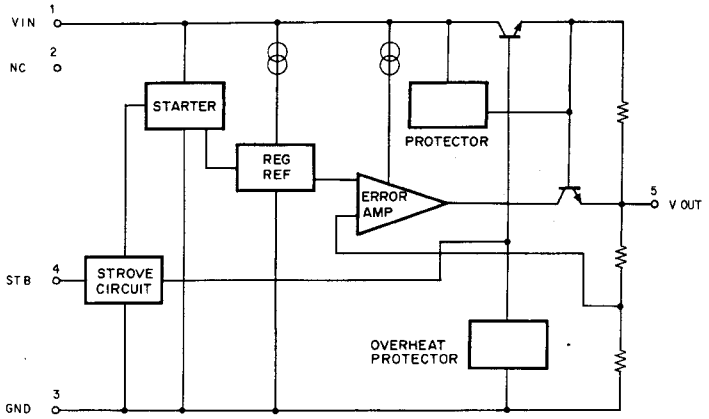
IC407, 711 ~ 714: LB1294
(LED Driver)



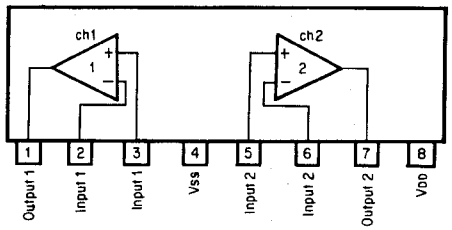
IC210: BA6209
(Motor Driver)



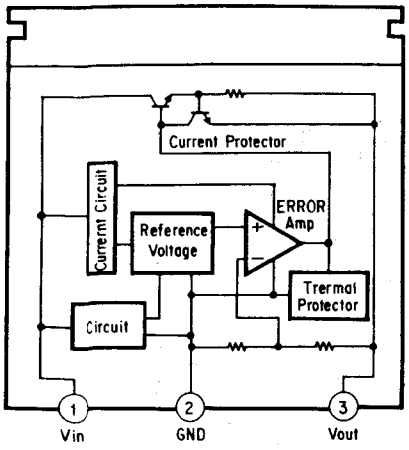
IC710: L780S12
(Voltage Regulator)



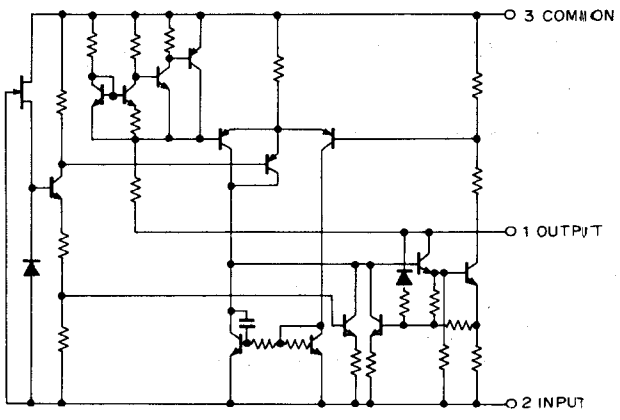
IC203: M5219L
(Dual Low Noise Pre-Amp.)



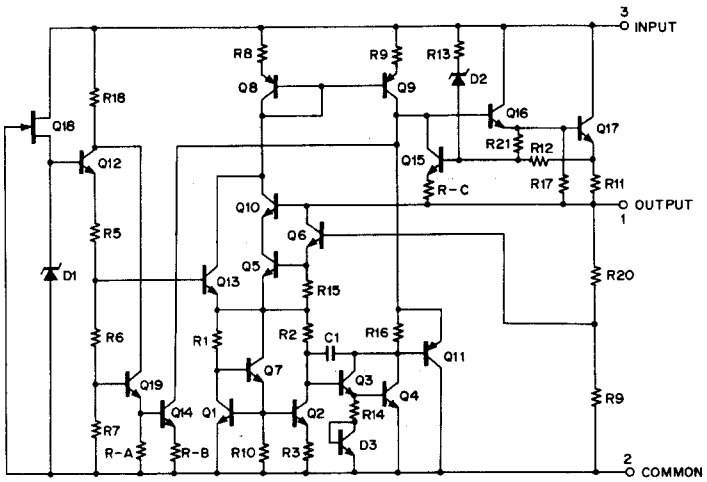
IC209: NJM78M05
IC410, 411: NJM78M05A
(Regulator)



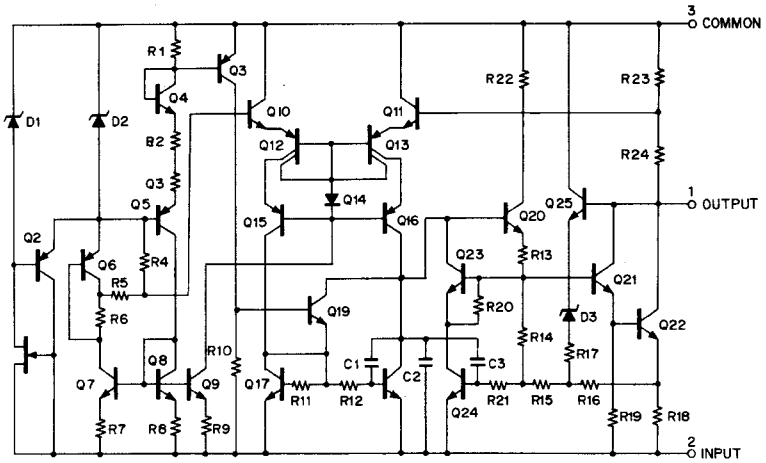
IC412: NJM79L05A
(Regulator)



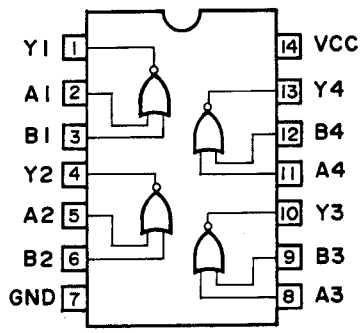
IC204, 408, 705: NJM78M18
(Regulator)



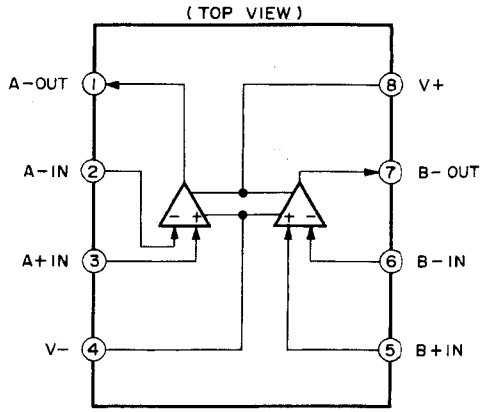
IC205, 409, 706: NJM79M18
(Regulator)



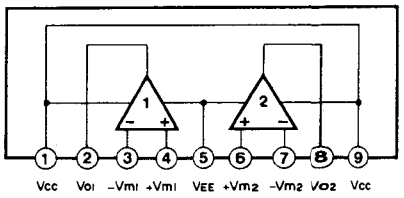
IC315: TC74HC02P, M74HC02P
(Quad 2-Input NOR Gate)



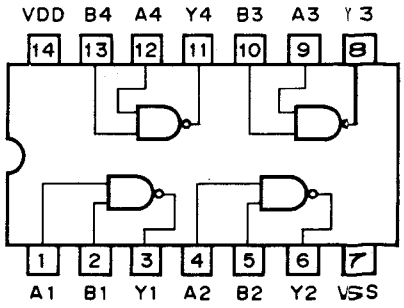
IC405, 406, 413, 603, 701, 702: NJM5532D
IC703: NJM2041D
(Dual Ope-Amp.)



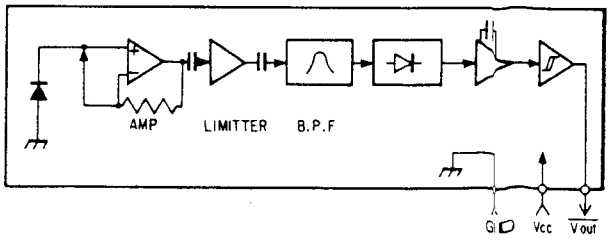
IC201, 202, 212, 405, 406, 601, 602: NJM5532S
(Dual Ope-Amp.)



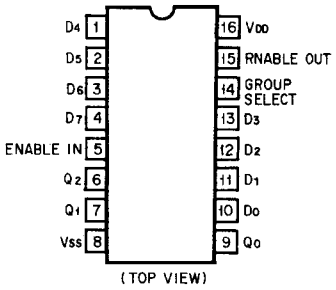
IC302, 304, 316: TC74HC00P, M74HC00P
(Quad 2-Input Nand Gate)

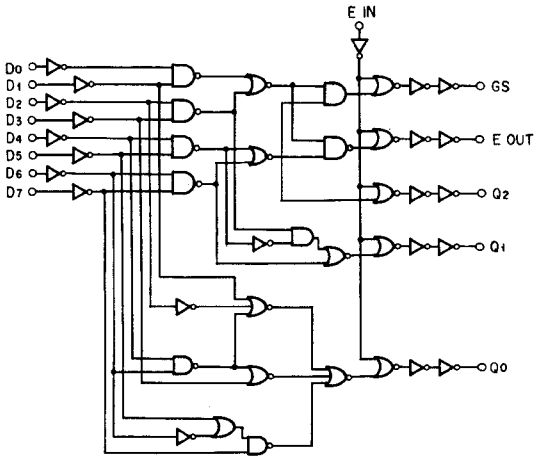


U801: GP1U101, 501
(Remote Control Receptor)



IC211: TC4532BP
(8-Bit Priority Encoder)



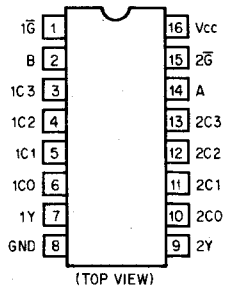


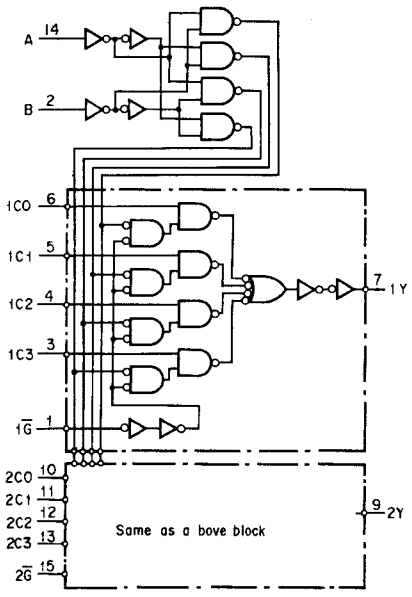
Truth Table

INPUT									OUTPUT				
EIN	D7	D6	D5	D4	D3	D2	D1	D0	GS	Q2	Q1	Q0	K OUT
L	※	※	※	※	※	※	※	※	L	L	L	L	L
H	L	L	L	L	L	L	L	L	L	L	L	L	H
H	H	※	※	※	※	※	※	※	H	H	H	H	L
H	L	H	※	※	※	※	※	※	H	H	H	L	L
H	L	L	H	※	※	※	※	※	H	H	L	H	L
H	L	L	L	H	※	※	※	※	H	H	L	L	L
H	L	L	L	L	H	※	※	※	H	L	H	H	L
H	L	L	L	L	L	H	※	※	H	L	H	L	L
H	L	L	L	L	L	L	H	※	H	L	L	H	L
H	L	L	L	L	L	L	L	H	H	L	L	L	L

※ Don't Care

IC310, 311: TC74HC153P
(Dual 4-Channel Multiplexer)



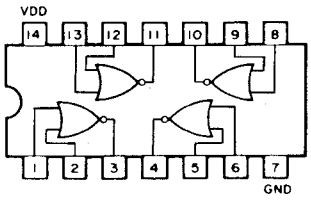


Truth Table

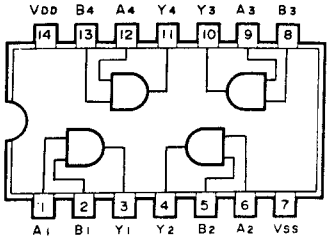
SELECT INPUTS		DATA INPUTS				STROBE	OUTPUT Y	
B	A	C0	C1	C2	C3	$\bar{G}$	HC153	HC253
X	X	X	X	X	X	H	L	Z
L	L	L	X	X	X	L	L	L
L	L	H	X	X	X	L	H	H
L	H	X	L	X	X	L	L	L
L	H	X	H	X	X	L	H	H
H	L	X	X	L	X	L	L	L
H	L	X	X	H	X	L	H	H
H	H	X	X	X	L	L	L	L
H	H	X	X	X	H	L	H	H

X : Don't care
Z : High Impedance

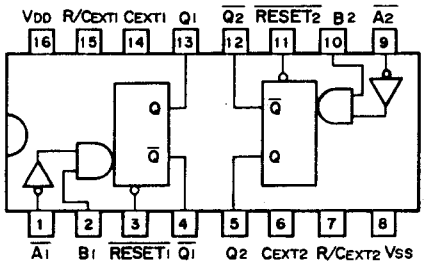
IC716: TC4001BP
(Quad 2-Input Positive NAND Gates)



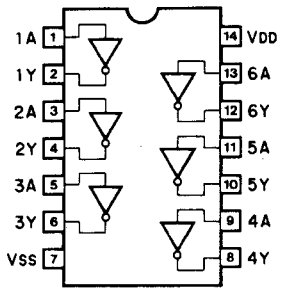
IC717: TC4081BP
(Quad 2-Input and Gate)



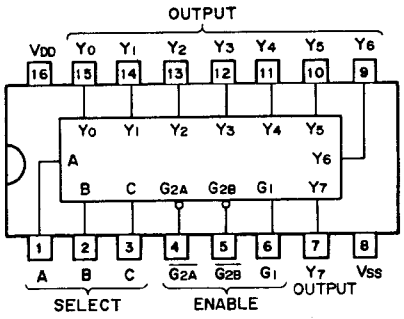
IC309, 313, 317: μPD74HC123AC
(Dual Retriggerable Single Shot)



IC301, 303, 305 ~ 308: μPD74HCU04C
(Hex Inverters)



IC207, 715, 718: μPD74HC238C
(Decoder/Demultiplexer)



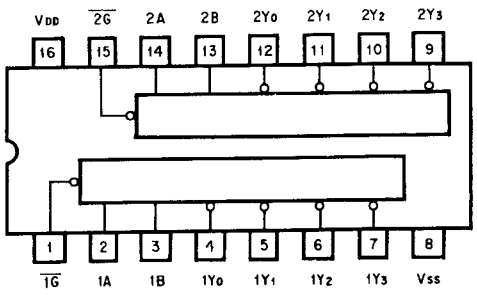
Truth Table

INPUT					OUTPUT							
ENABLE		SELECT										
G_1	$\overline{G_2}$*	C	B	A	Y_0	Y_1	Y_2	Y_3	Y_4	Y_5	Y_6	Y_7
X	H	X	X	X	L	L	L	L	L	L	L	L
L	X	X	X	X	L	L	L	L	L	L	L	L
H	L	L	L	L	H	L	L	L	L	L	L	L
H	L	L	L	H	L	H	L	L	L	L	L	L
H	L	L	H	L	L	L	H	L	L	L	L	L
H	L	L	H	H	L	L	L	H	L	L	L	L
H	L	H	L	L	L	L	L	L	H	L	L	L
H	L	H	L	H	L	L	L	L	L	H	L	L
H	L	H	H	L	L	L	L	L	L	L	H	L
H	L	H	H	H	L	L	L	L	L	L	L	H

$\overline{G_2}$* = $\overline{G_2A}$ X $\overline{G_2B}$

H: HIGH LEVEL L: LOW LEVEL X: H or L

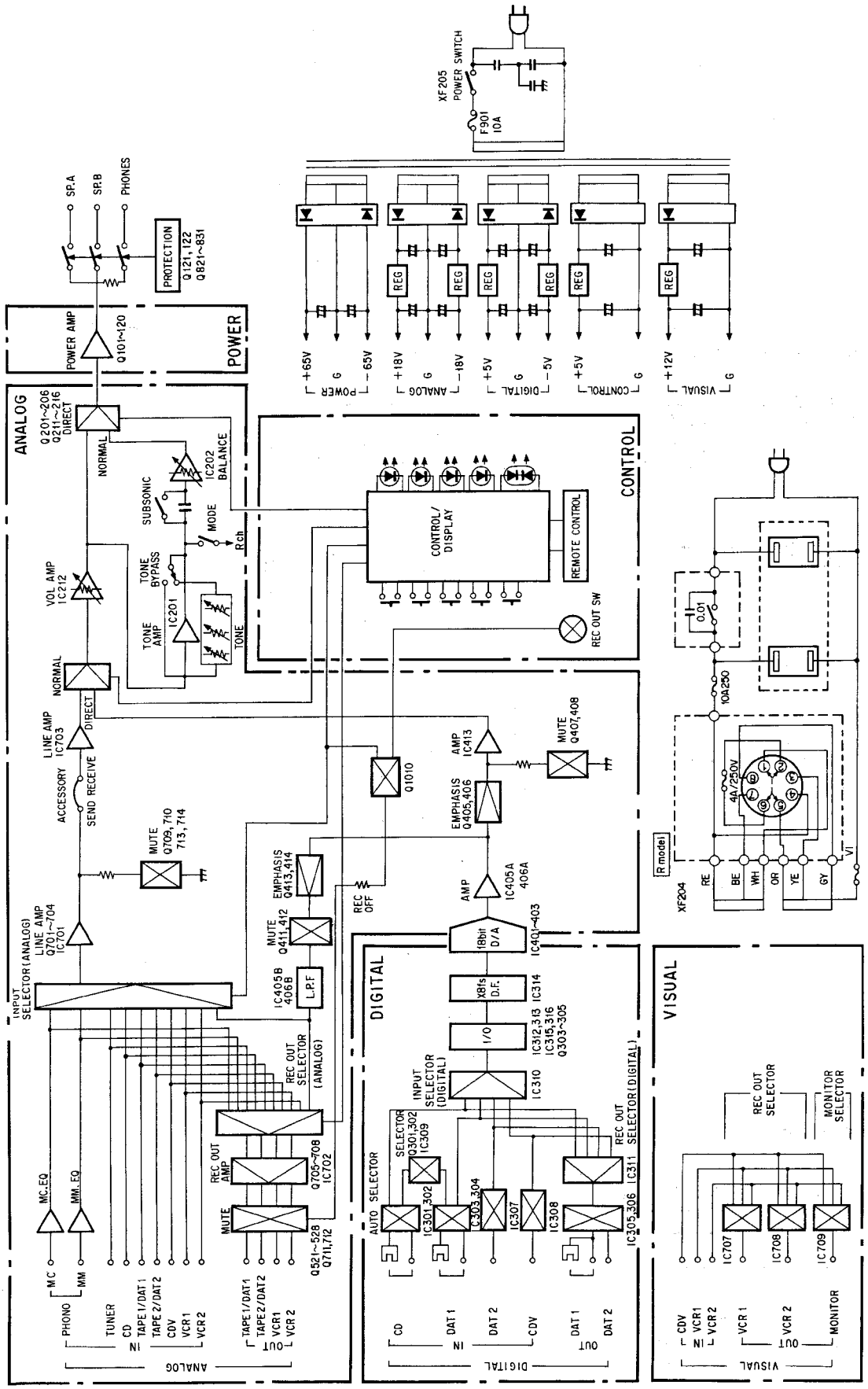
IC206: μPD74HC239C
(Decorder/Demultiplexer)



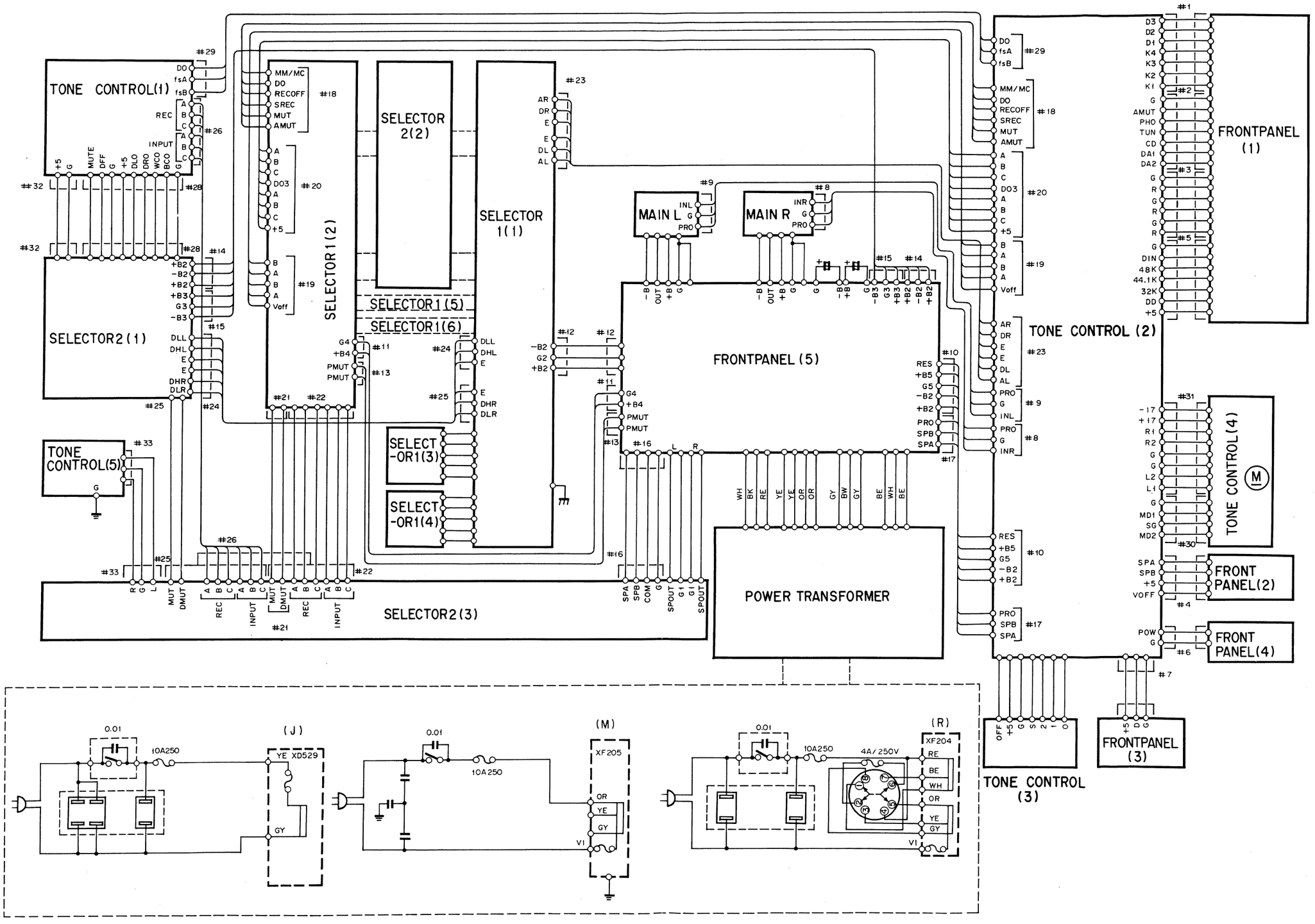
Input			Output			
ENABLE	SELECT					
$\overline{G}$	B	A	Y_0	Y_1	Y_2	Y_3
H	X	X	L	L	L	L
L	L	L	H	L	L	L
L	L	H	L	H	L	L
L	H	L	L	L	H	L
L	H	H	L	L	L	H

H : HIGH LEVEL L : LOW LEVEL X : H or L

■ BLOCK DIAGRAM



■ WIRING


TONE CONTROL(1)
SELECTOR2(1)
SELECTOR1(2)
SELECTOR 2(2)
SELECTOR 1(1)
SELECTOR1(5)
SELECTOR1(6)
SELECT-OR1(3)
SELECT-OR1(4)
MAIN L
MAIN R
FRONTPANEL (5)
TONE CONTROL(5)
SELECTOR2(3)
POWER TRANSFORMER
FRONTPANEL (1)
TONE CONTROL (2)
TONE CONTROL (4)
FRONT PANEL(2)
FRONT PANEL(4)
FRONTPANEL (3)
TONE CONTROL (3)
(J)
(M)
(R)
0.01
10A250
4A/250V
YE XD529
GY
XF205
XF204

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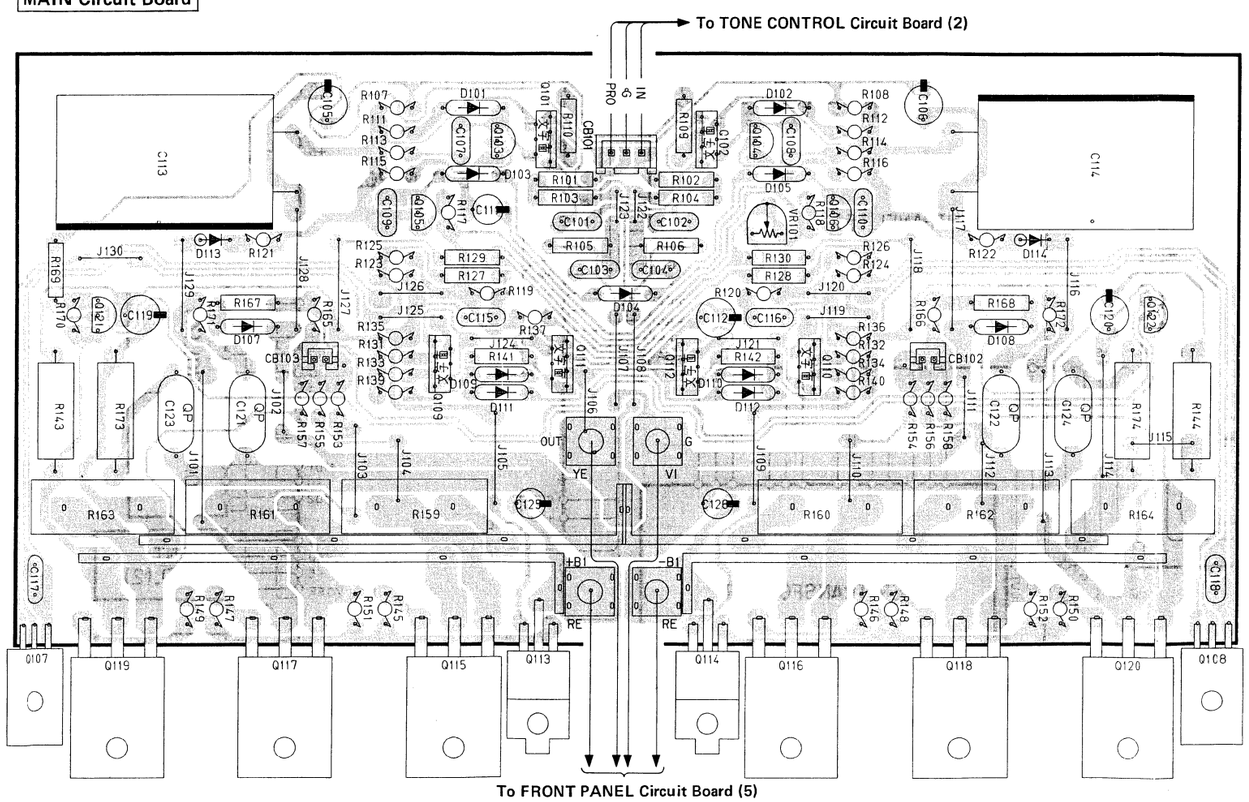
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

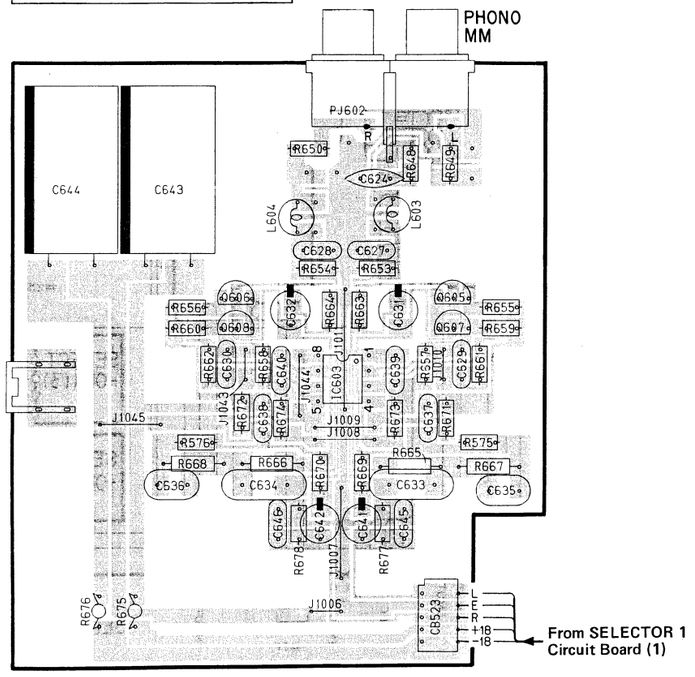
(MAIN Circuit Board)
(SELECTOR 1 Circuit Board)

Note: Selector I Circuit Board and Tone Control Circuit Board used differ by the destination.
Unless otherwise stated specially,it is common to all desinations.

MAIN Circuit Board



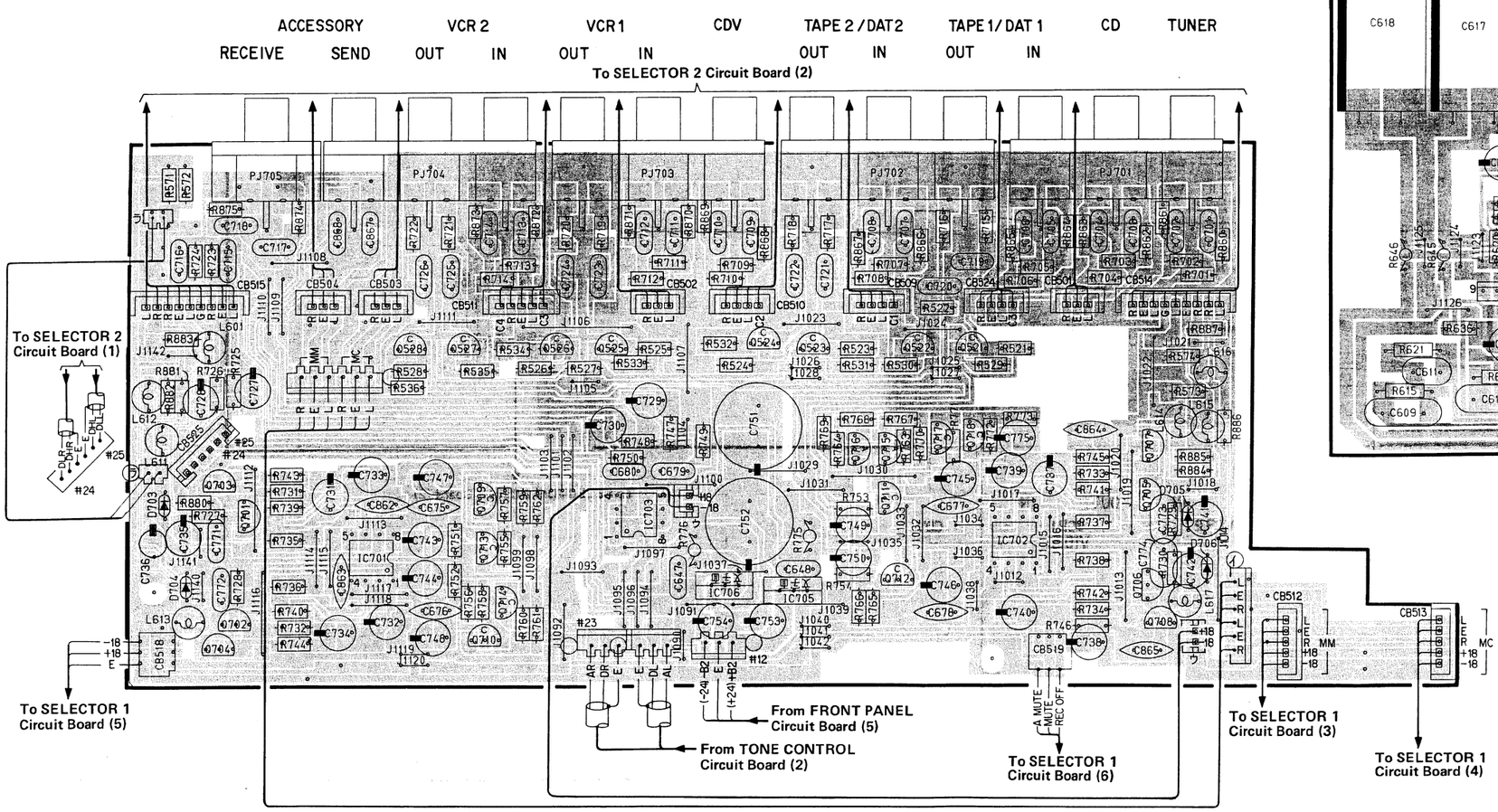
SELECTOR 1 Circuit Board (3) (W Model)



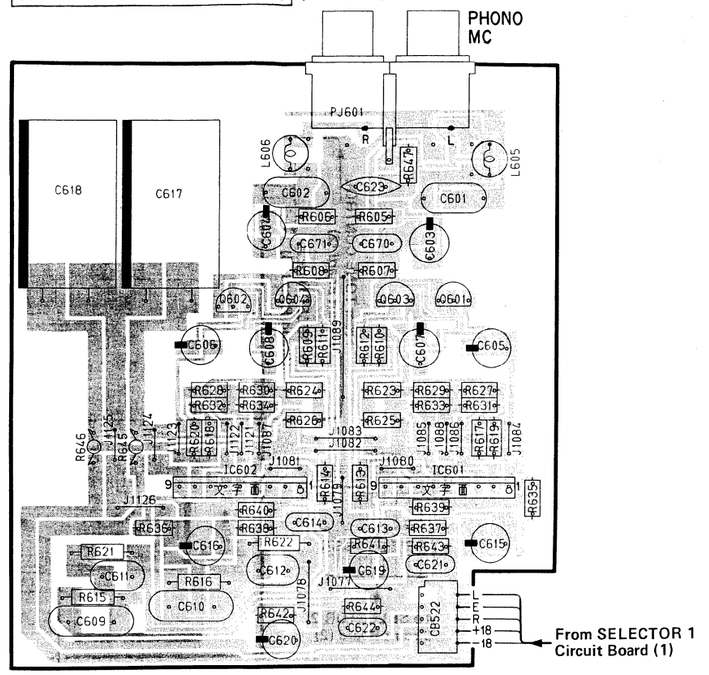
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

(SELECTOR 1 Circuit Board)

SELECTOR 1 Circuit Board (1) (W Model)



SELECTOR 1 Circuit Board (4) (W Model)



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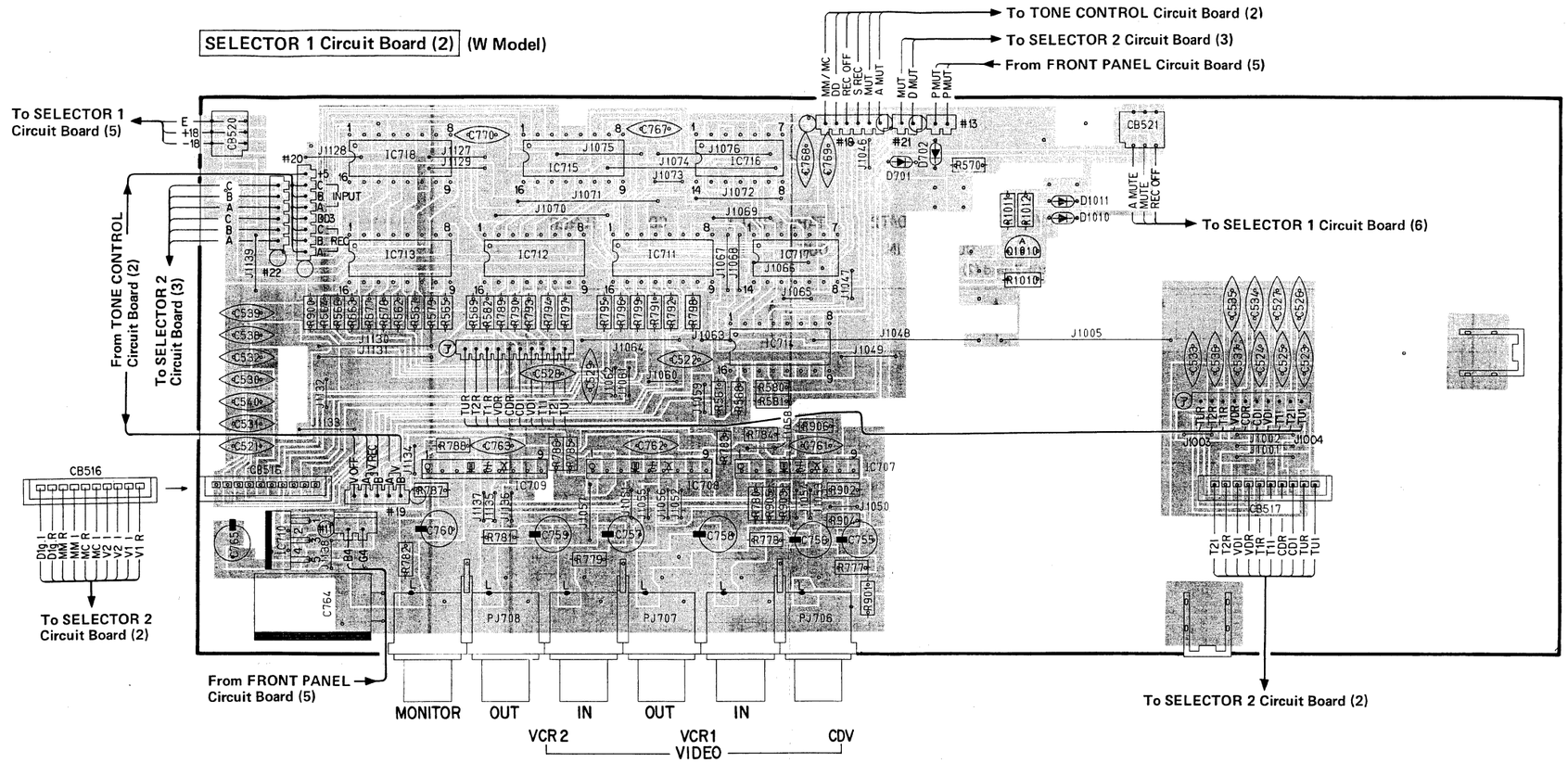
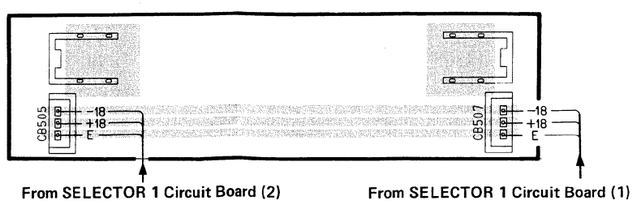
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

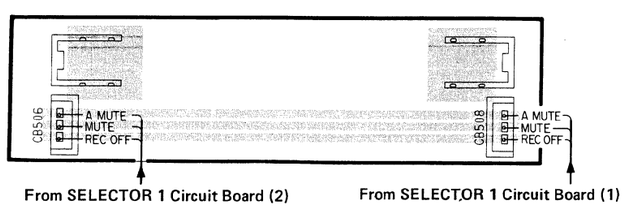
(SELECTOR 1 Circuit Board)



SELECTOR 1 Circuit Board (5)



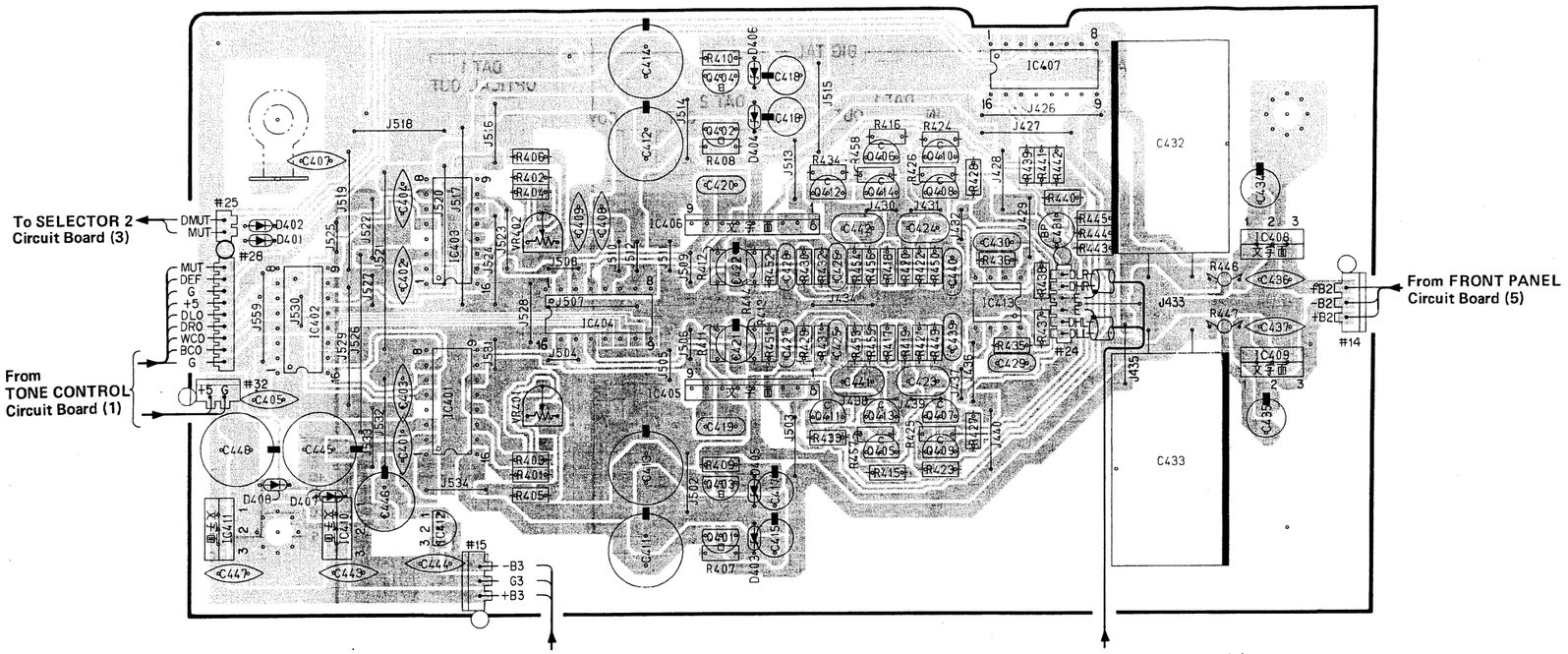
SELECTOR 1 Circuit Board (6)



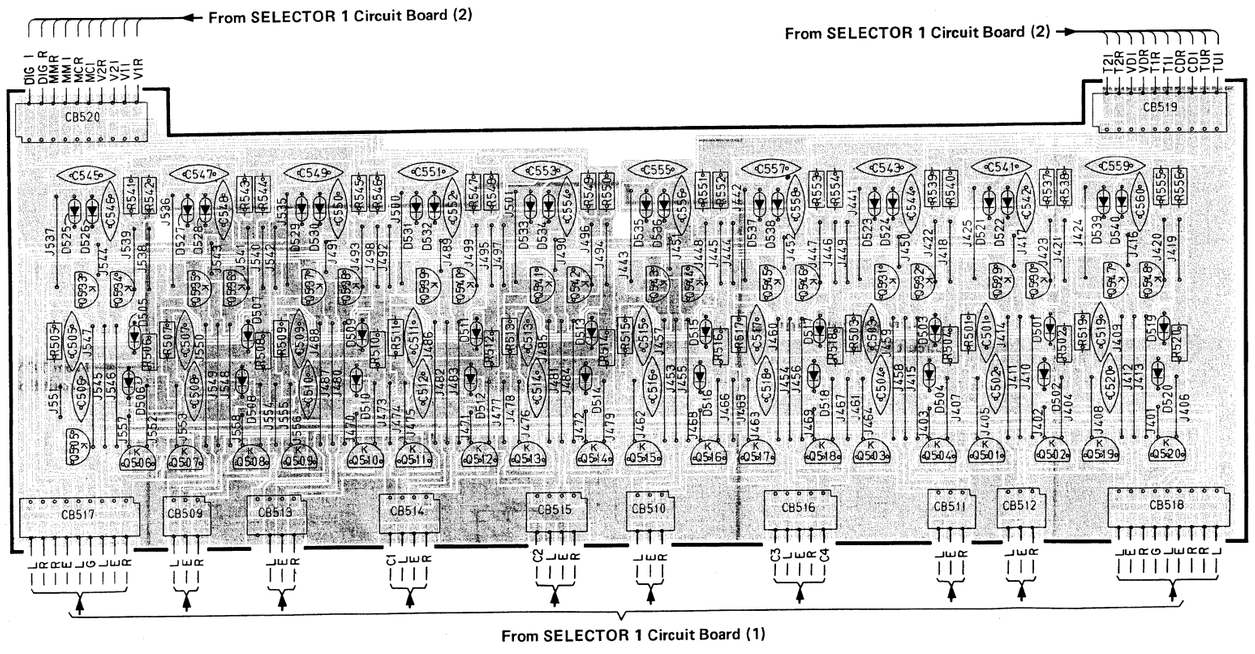
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

(SELECTOR 2 Circuit Board)

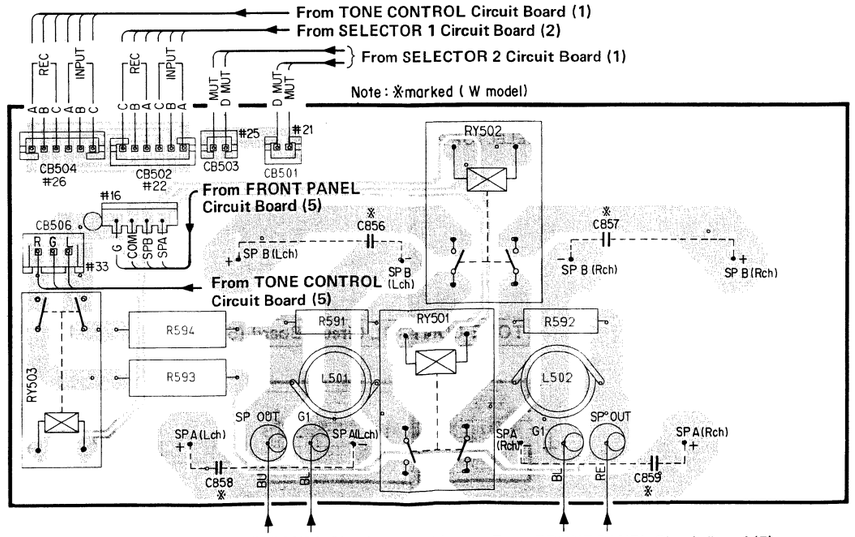
SELECTOR 2 Circuit Board (1)



SELECTOR 2 Circuit Board (2)



SELECTOR 2 Circuit Board (3)



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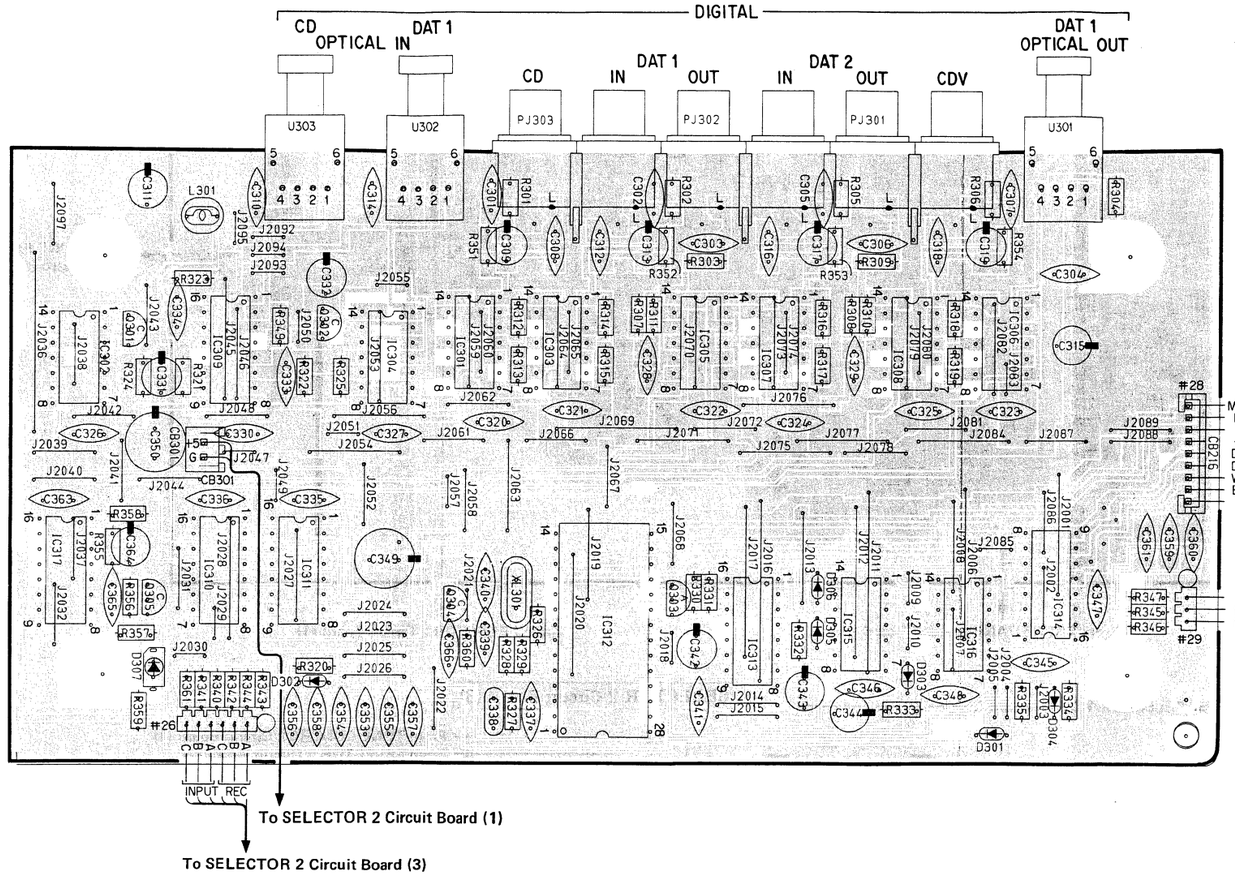
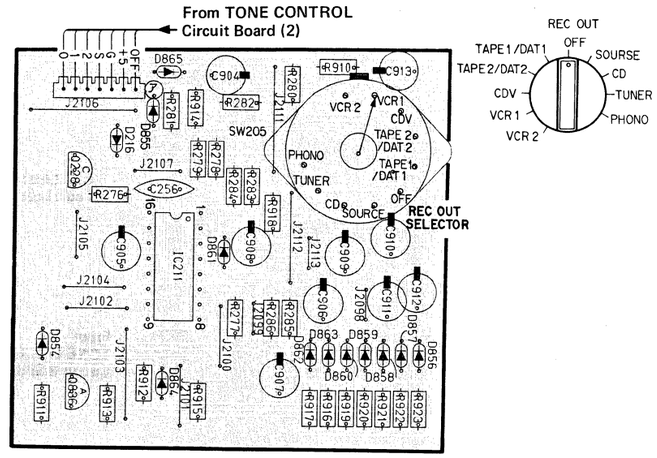
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

(TONE CONTROL Circuit Board)

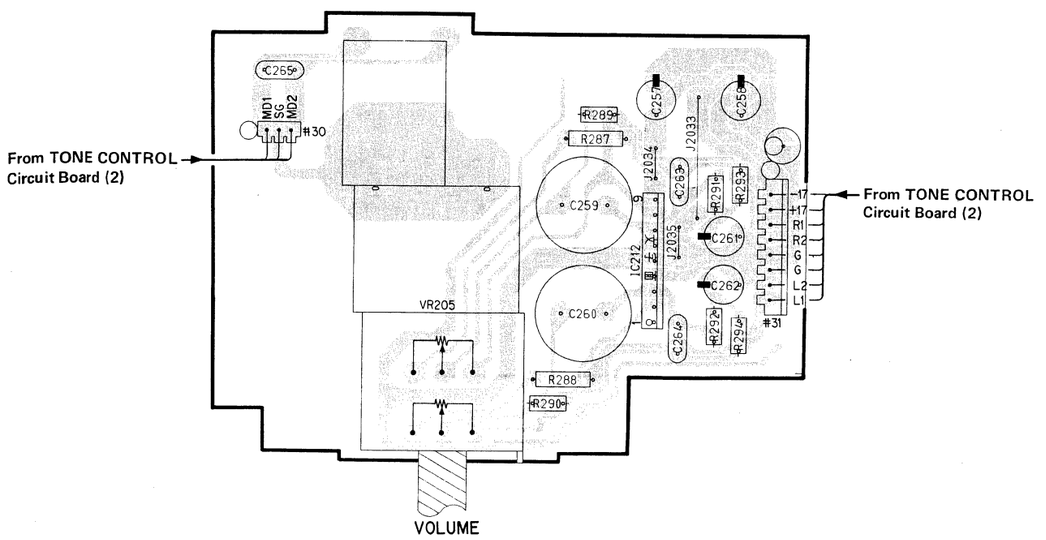
TONE CONTROL Circuit Board (1) (W Model)



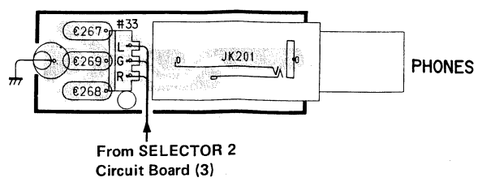
TONE CONTROL Circuit Board (3) (W Model)



TONE CONTROL Circuit Board (4) (W Model)

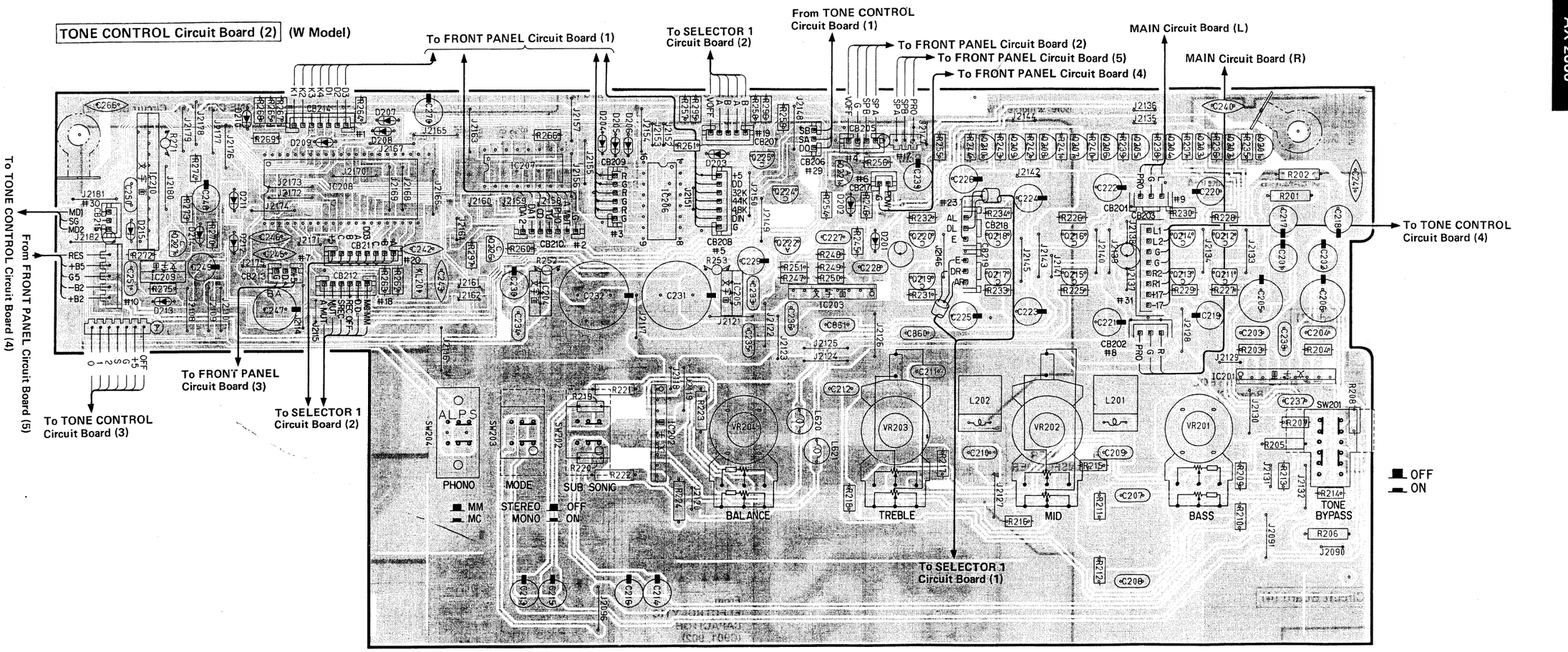


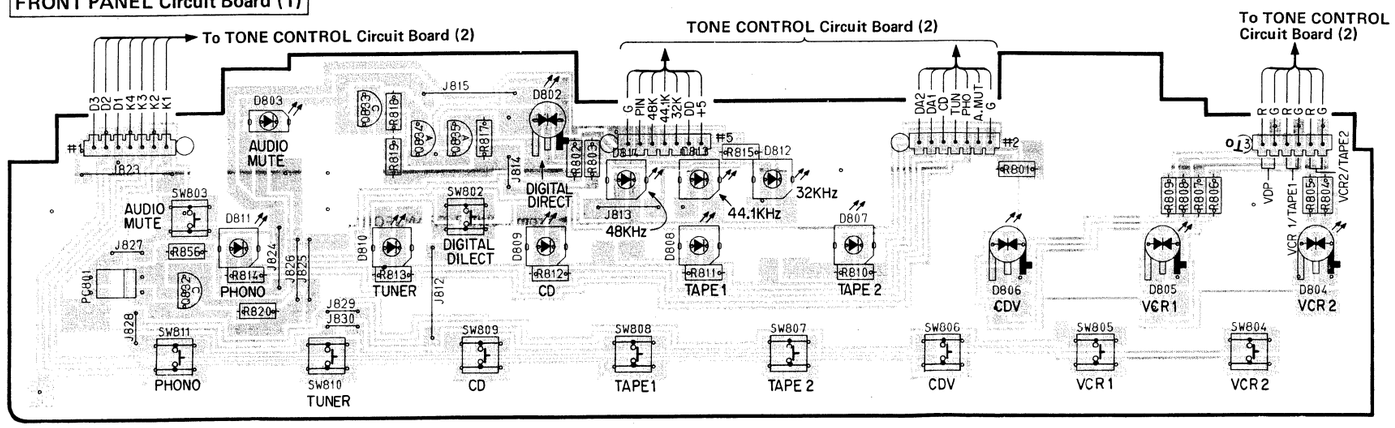
TONE CONTROL Circuit Board (5)



■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

(TONE CONTROL Circuit Board)





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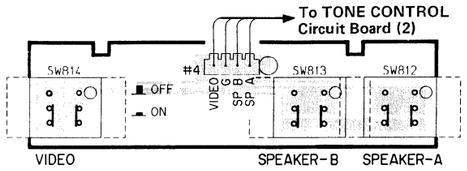
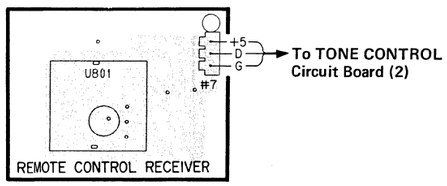
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

(FRONT PANEL Circuit Board)

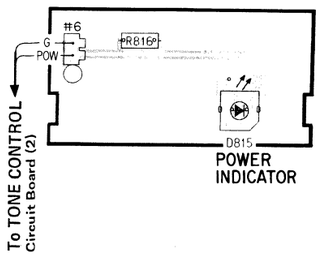
FRONT PANEL Circuit Board (2)



FRONT PANEL Circuit Board (3)

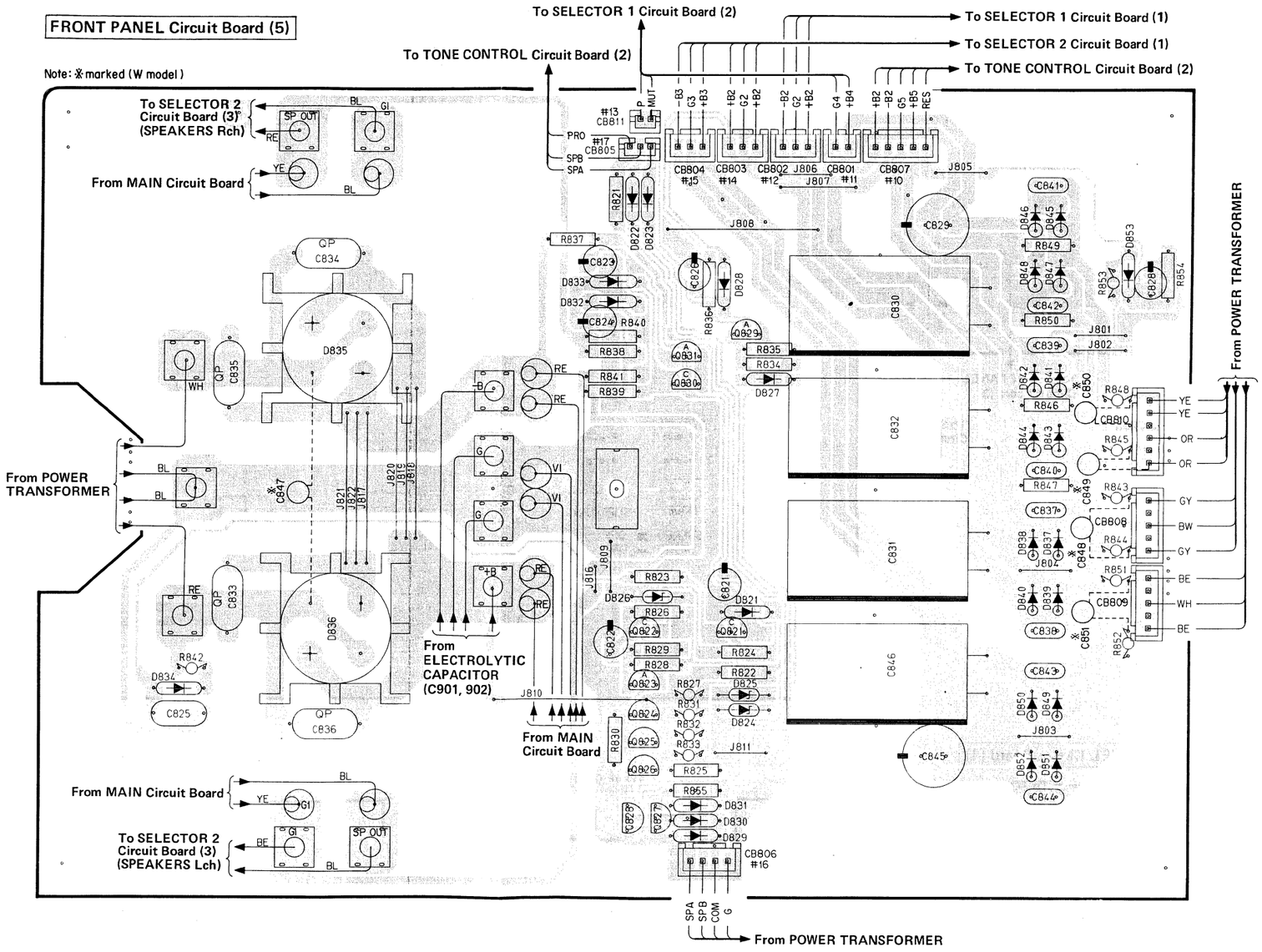


FRONT PANEL Circuit Board (4)



FRONT PANEL Circuit Board (5)

Note: ※ marked (W model)

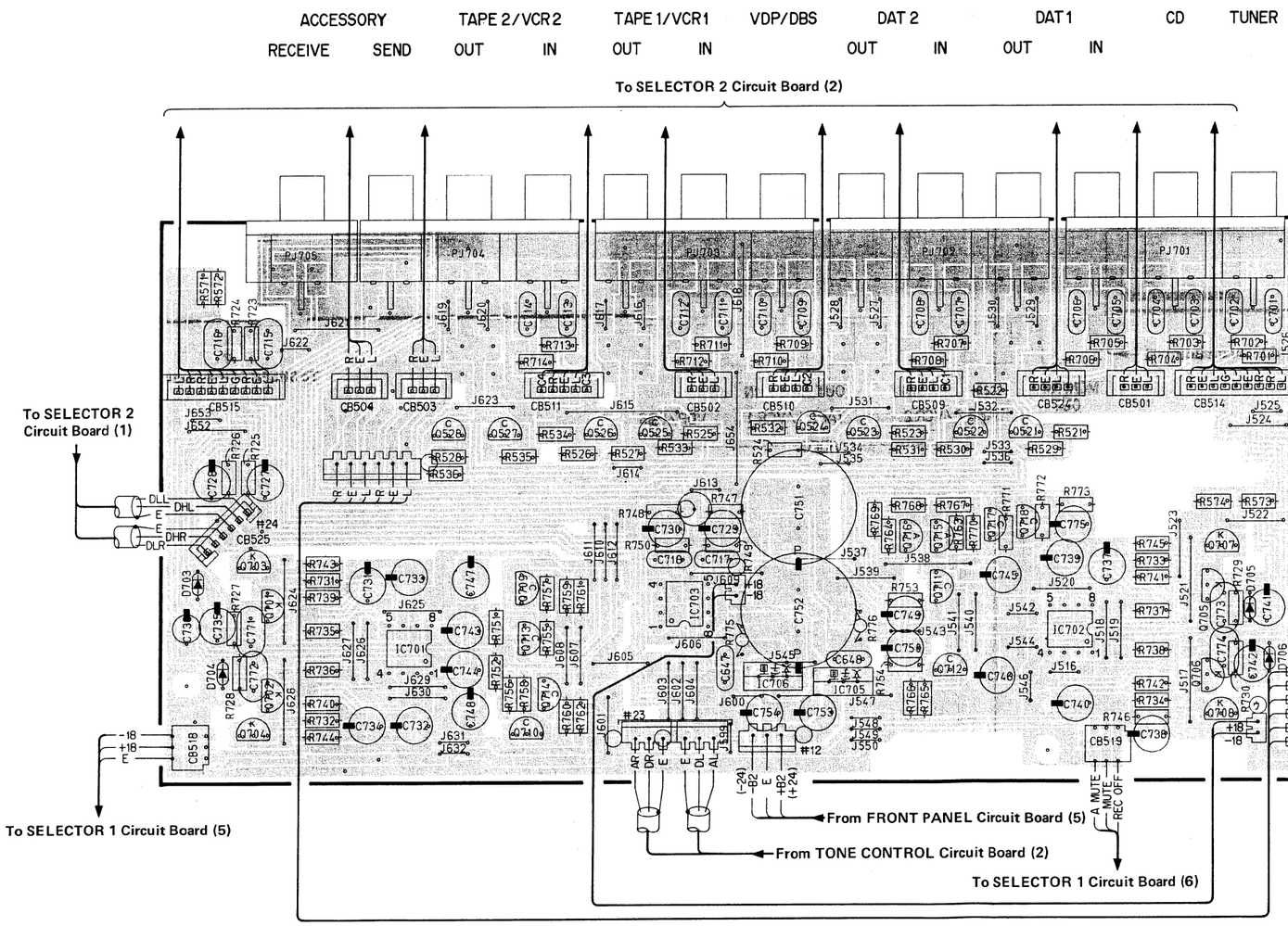


■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

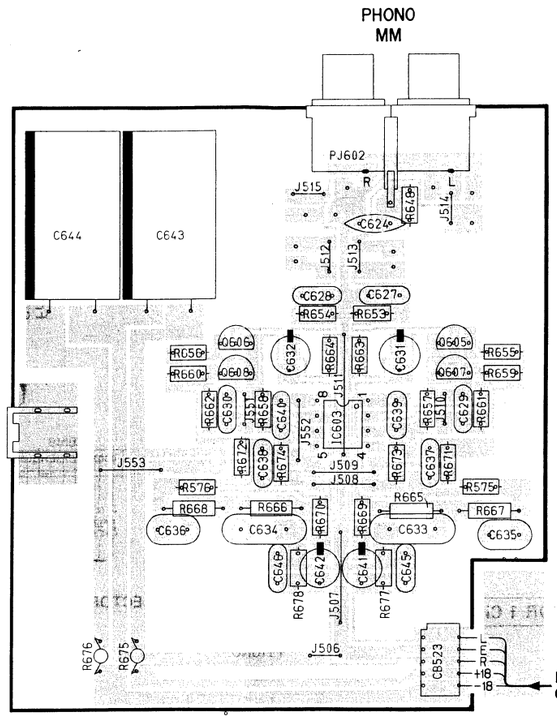
(SELECTOR 1 Circuit Board)

Note: Selector I Circuit Board and Tone Control Circuit Board used differ by the destination.
Unless otherwise stated specially,it is common to all desinations.

SELECTOR 1 Circuit Board (1) (R Model)



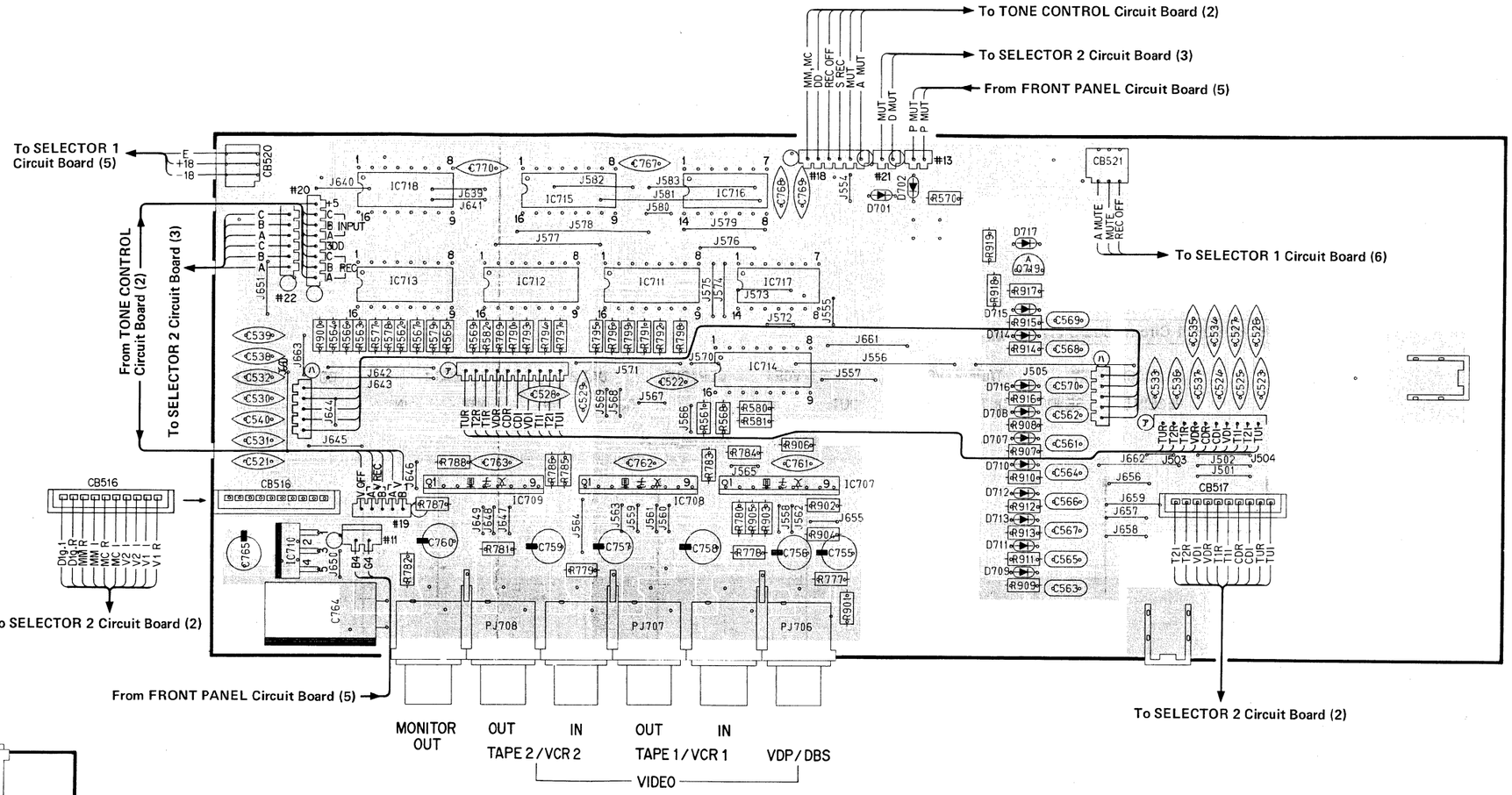
SELECTOR 1 Circuit Board (3) (R Model)



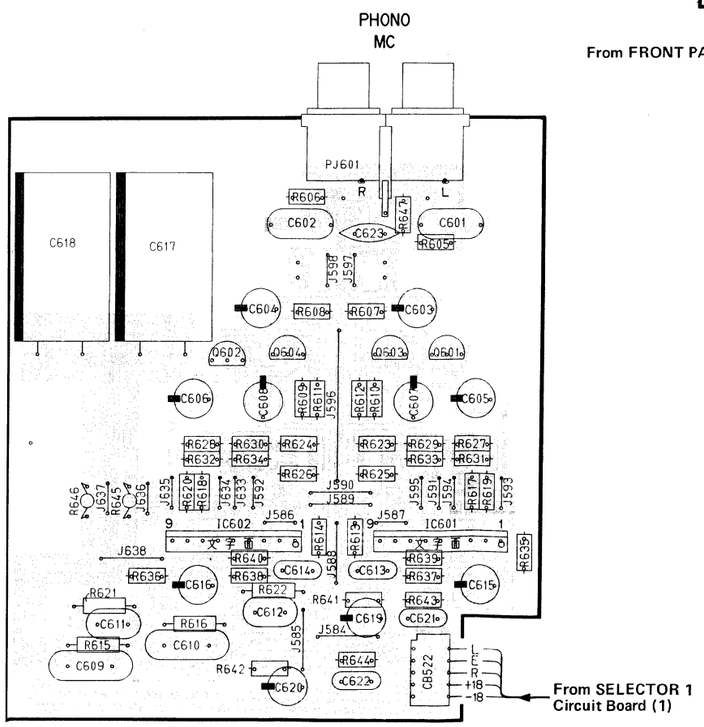
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

(SELECTOR 1 Circuit Board)

SELECTOR 1 Circuit Board (2) (R Model)

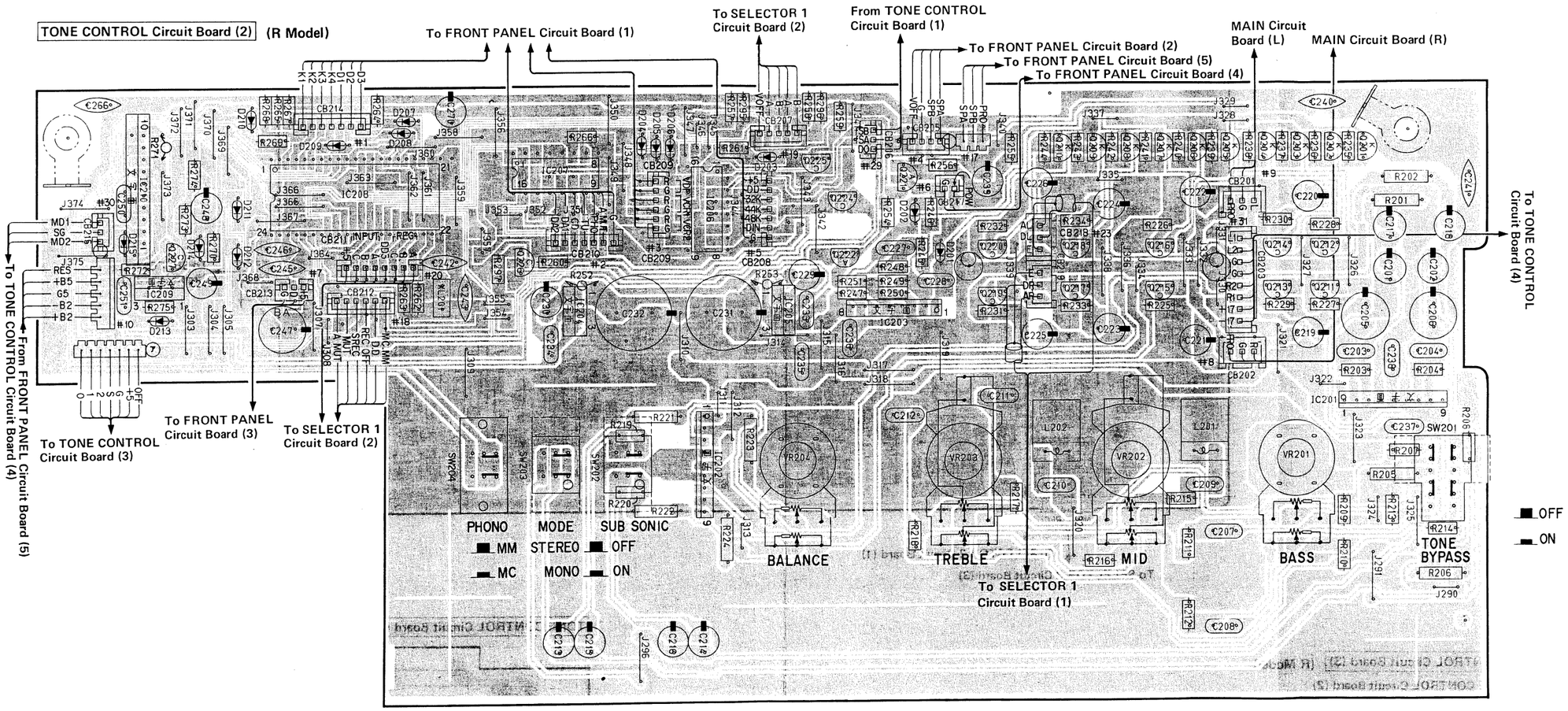


SELECTOR 1 Circuit Board (4) (R Model)



■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

(TONE CONTROL Circuit Board)



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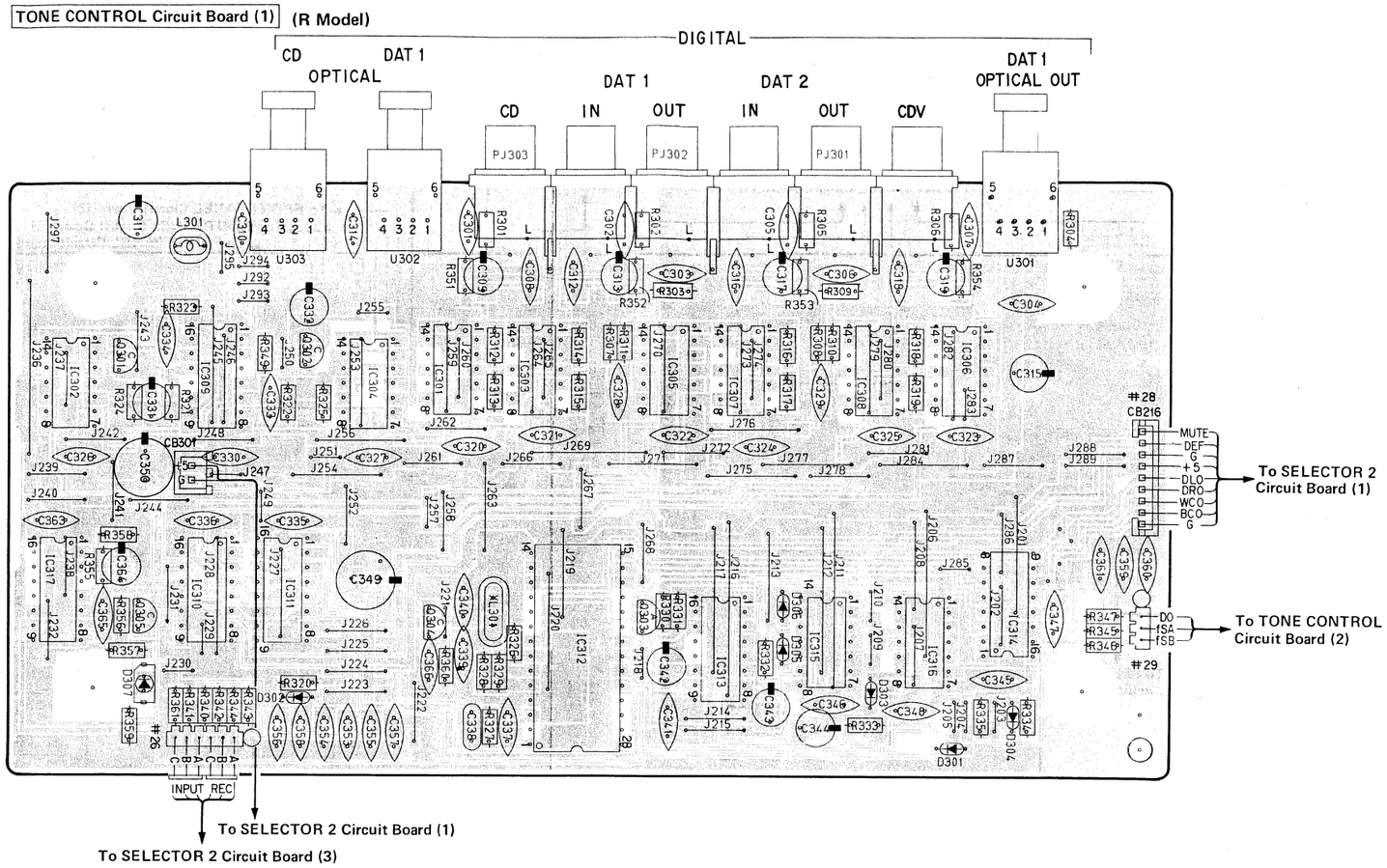
■ PRINTED CIRCUIT BOARD (Pattern Side) (Note) 文字面：Component Side

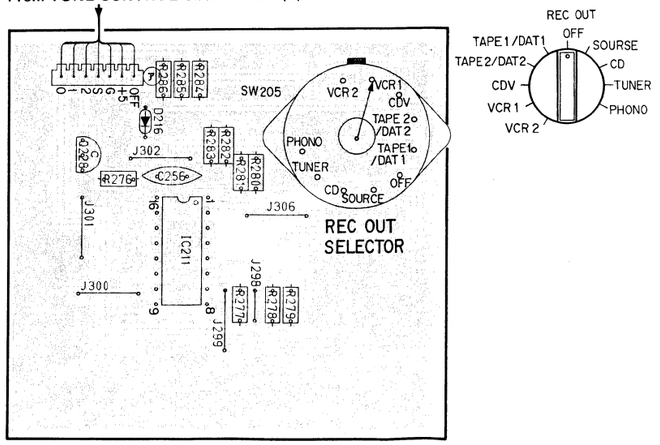
(TONE CONTROL Circuit Board)

TONE CONTROL Circuit Board (1) (R Model)

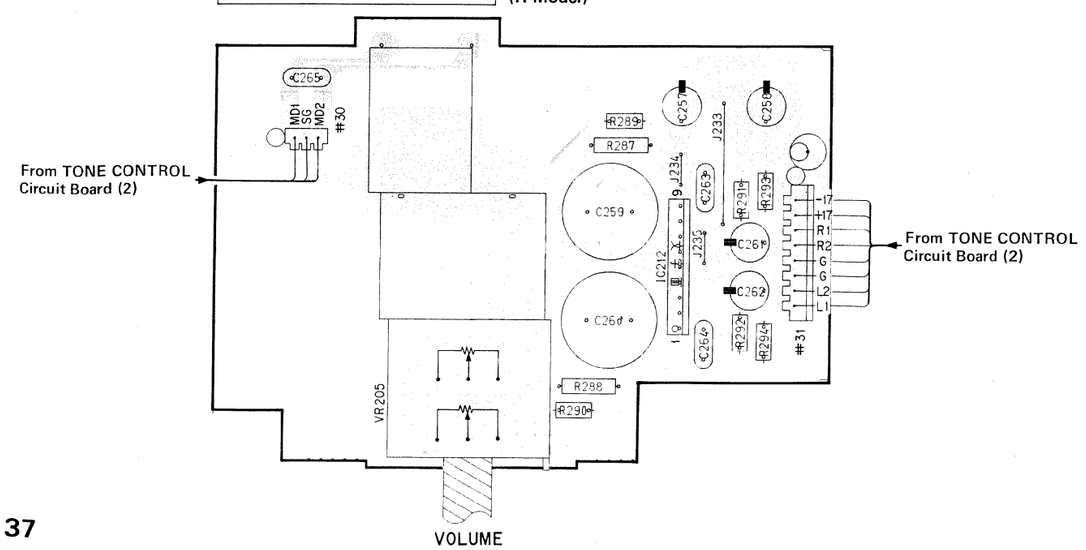


TONE CONTROL Circuit Board (3) (R Model)

From TONE CONTROL Circuit Board (2)



TONE CONTROL Circuit Board (4) (R Model)



PARTS LIST

■ ELECTRICAL PARTS

■ **WARNING**

Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS list. For the parts No. of the carbon resistor, refer to the last Page.

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		***NA 09 65 60***	***Main Circuit Board***		メインシート				
		FC 27 51 00	Polypropylene Film Cap.	0.1μF 100V	Q P コン	C121,122			
		FC 29 44 70	//	0.047μF 250V	//	C123,124			
		FU 35 12 20	Mica Cap.	22pF 500V	FE マイカコン	C103,104			
		FU 35 16 80	//	68pF 500V	//	C109,110			
		UT 45 22 20	Polypropylene Film Cap.	220pF 100V	ポリプロコン	C117,118			
		UT 45 28 20	//	820pF 100V	//	C107,108			
		UT 45 31 20	//	1200pF 100V	//	C101,102			
		UT 65 33 30	//	3300pF 100V	//	C115,116			
※		VE 01 88 00	Electrolytic Cap.	220μF 25V	ケミコン	C119,120			
		UH 14 74 70	//	47μF 25V	//	C112			
※		VE 02 03 00	//	22μF 50V	//	C105,106			
		VE 74 30 00	// (Duorex)	33μF 100V	//	C125,126			
		FZ 00 59 80	//	1000μF 80V	//	C113,114			
		FZ 00 54 10	//	100μF 6.3V	ブラックゲートコン	C111			
		HV 45 34 70	Flame Proof Carbon Resistor	4.7Ω 1/4W	不燃化カーボン抵抗	R145～150			
		HV 45 41 00	//	10Ω 1/4W	//	R153～158			
		HV 45 45 60	//	56Ω 1/4W	//	R113,114,117,118, 171,172			
		HV 45 46 80	//	68Ω 1/4W	//	R151,152			
		HV 45 51 00	//	100Ω 1/4W	//	R119～122			
		HV 45 52 20	//	220Ω 1/4W	//	R115,116			
		HV 45 55 60	//	560Ω 1/4W	//	R170			
		HV 45 58 20	//	820Ω 1/4W	//	R123,124			
		HV 45 61 00	//	1kΩ 1/4W	//	R125,126,131～134,137			
		HV 45 61 20	//	1.2kΩ 1/4W	//	R111,112			
		HV 45 61 50	//	1.5kΩ 1/4W	//	R135,136,165,166			
		HV 45 71 00	//	10kΩ 1/4W	//	R107,108,139,140			
		HL 32 41 00	Metal Oxide Film Resistor	10Ω 2 W	酸金抵抗	R173,174			
		HL 32 65 60	//	5.6kΩ 2 W	//	R143,144			
※		VE 33 25 00	Wire-Wound Resistor	0.33Ω 3 W	セメント抵抗	R159～164			
		VB 86 16 00	Pre-set Potentiometer	B22kΩ	半固定抵抗	VR101			
		iA 13 49 00	Dual Transistor	2SA1349(GR,BL)	デュアルトランジスタ	Q102,109,112			
		iC 33 81 00	//	2SC3381(GR,BL)	//	Q101,110,111			
		iA 11 45 00	Transistor	2SA1145(O,Y)	トランジスタ	Q103,106,121			
		iC 27 05 00	//	2SC2705(O,Y)	//	Q104,105,122			
		iX 60 85 10	//	2SA1358(O,Y)	//	Q107			
		iX 60 85 20	//	2SC3421(O,Y)	//	Q108			
※		iX 60 81 50	//	2SA1306(O,Y)	//	Q114			
		iX 60 81 60	//	2SC3298(O,Y)	//	Q113			
※		iX 60 97 30	//	2SA1491A(O,P,Y)	//	Q116,118,120			
		iX 60 97 40	//	2SC3855A(O,P,Y)	//	Q115,117,119	inter-changeable		
※		iX 61 10 40	//	2SB1362NY(P,S)	//	Q116,118,120			
		iX 61 10 50	//	2SD2053NY(P,S)	//	Q115,117,119			
		iF 00 00 40	Diode	1S1555	ダイオード	D101～105,109～112			
		iF 00 14 00	//	1SS82	//	D107,108			
		VE 46 65 00	//	1IDQ09 FE-2	ショットキーダイオード	D113,114			
		LB 91 80 30	Base Pin	3P i-Type	XH ベースピン	CB101			
		VD 00 45 00	//	2P i-Type	PH ベースピン	CB102,103			

※New Parts (新規部品)

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		VE 80 85 00	Terminal,Screw	M4	ネジ端子				
※		VE 46 67 00	Bus Bar	AX-L	バスバー				
※		VE 46 91 00	〃	AX-R	〃				
		CB 81 85 40	Binding Tie	T30R	インシュロックタイ				
※		***NA 09 65 70***	***Selector 1 Circuit Board***		セレクターシート(1)			R	
※		***VG 18 74 00***	〃		〃			W	
		FG 21 21 00	Ceramic Cap.	100pF 50V	セラコン	C862～865		W	
		FU 35 12 20	Mica Cap.	22pF 500V	マイカコン	C771～774			
		FG 24 41 00	Ceramic Cap.	0.01μF 50V	セラコン	C521～530			
		FA 15 51 00	Mylar Cap.	0.1μF 50V	マイラーコン	C647,648			
		FA 15 51 00	〃	0.1μF 50V	〃	C561～570		R	
		UT 45 21 00	Polypropylene Film Cap.	100pF 100V	ポリプロコン	C701～714		R	
		UT 45 23 30	〃	330pF 100V	〃	〃		W	
		UT 45 21 00	〃	100pF 100V	〃	C679,680		W	
		UT 45 21 80	〃	180pF 100V	〃	C719～726		W	
		UT 45 22 20	〃	220pF 100V	〃	C627,628,717,718		R	
		UT 45 23 30	〃	330pF 100V	〃	〃		W	
		UT 45 22 20	〃	220pF 100V	〃	C867,868,		W	
		UT 45 23 30	〃	330pF 100V	〃	C670,671		W	
		UT 45 26 80	〃	680pF 100V	〃	C637～640			
		UT 65 33 30	〃	3300pF 100V	CQコン	C715,716			
		UT 45 33 90	〃	3900pF 100V	ポリプロコン	C629,630			
		UT 45 34 70	〃	4700pF 100V	〃	C621,622,645,646			
		UT 65 38 20	〃	8200pF 100V	〃	C613,614			
		FT 16 41 60	〃	0.016μF 100V	〃	C611,612,635,636			
		FT 16 45 60	〃	0.056μF 100V	〃	C609,610,633,634			
		VC 93 80 00	Electrolytic Cap.	0.01μF 50V	銅ハクポリプロコン	C601,602			
		UJ 15 71 00	〃	10μF 35V	ケミコン	C755～757,775			
		UJ 13 73 30	〃	33μF 16V	〃	C731～742			
		VE 74 27 00	〃	10μF 50V	〃	C619,620,641,642,729,730,745～750,765			
		UH 14 74 70	〃	47μF 25V	〃	C727,728,743,744			
		VE 01 98 00	〃	1μF 50V	〃	C753,754			
		UJ 11 91 00	〃	1000μF 6.3V	〃	C758～760			
		UJ 13 91 00	〃	1000μF 16V	〃	C764			
		UJ 14 91 00	〃	1000μF 25V	〃	C643,644			
		VE 01 66 00	〃	220μF 6.3V	〃	C603,604			
※		VE 01 67 00	〃	330μF 6.3V	〃	C631,632			
※		VE 01 68 00	〃	470μF 6.3V	〃	C605～608,615,616			
※		UJ 24 93 30	〃	3300μF 25V	オーディオケミコン	C751,752			
※		UH 13 94 70	〃	4700μF 16V	〃	C617,618			
		FZ 00 58 80	Ceramic Cap.	0.1μF 25V	積層セラコン	C531～540,623,624,761～763,767～770			
		FZ 00 47 90	〃	0.1μF 50V	〃	C675～678		W	
		VA 98 36 00	Coil	220μH	コイル	L603～606,610～617		W	
		HU 57 64 70	Metal Film Resistor	4.7kΩ 1/4W	金属被膜抵抗	R621,622,667,668			
※		HU 57 75 60	〃	56kΩ 1/4W	〃	R615,616,665,666			
		HV 45 43 30	Flame Proof Carbon Resistor	33Ω 1/4W	不燃化カーボン抵抗	R775,776			

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
		HV 45 44 70	Flame Proof Carbon Resistor	47Ω 1/4W 不燃化カーボン抵抗	R675,676			
		HV 45 51 00	〃	100Ω 1/4W 〃	R645,646			
		iA 10 15 21	Transistor	2SA1015(Y) トランジスタ	Q715,716			
		iA 10 15 21	〃	2SA1015(Y) 〃	Q719		R	
		iC 18 15 20	〃	2SC1815(Y) 〃	Q717,718			
		iA 10 15 21	〃	2SA1015(Y) 〃	Q1010		W	
		iC 28 78 20	〃	2SC2878(A,B) 〃	Q521～528,709～714			
		iB 07 37 00	〃	2SB737(Q,R,S) 〃	Q601,602			
		iD 07 86 00	〃	2SD786(Q,R,S) 〃	Q603,604			
		iE 10 12 10	FET	2SK105(E) FET	Q701～708			
		iE 10 24 20	〃	2SK170(GR,BL) 〃	Q605～608			
		iF 00 34 50	Diode	1SS133 ダイオード	D701～706			
		iF 00 34 50	〃	1SS133 〃	D707～717		R	
		iF 00 34 50	〃	1SS133 〃	D1010,1011		W	
		iG 00 11 70	IC	TC4001BP IC	IC716			
		iG 00 17 60	〃	TC4081BP 〃	IC717			
		iG 12 14 00	〃	NJM2041D 〃	IC703			
※		iG 14 28 00	〃	NJM5532D 〃	IC603,701,702			
		XA 42 60 01	〃	NJM5532S 〃	IC601,602			
		XA 54 90 01	〃	LB1294 〃	IC711～714			
※		XD 49 30 01	〃	L780S12 〃	IC710			
※		XD 52 10 01	〃	NJM78M18 〃	IC705			
※		XD 52 20 01	〃	NJM79M18 〃	IC706			
※		XD 52 40 01	〃	LA7952 〃	IC707～709			
		iR 02 38 20	〃	μPD74HC238C 〃	IC715,718			
※		VE 38 45 00	Pin Jack	2P ピンジャック	PJ601,602			
※		VE 33 26 00	〃	2P 〃	PJ706～708			
※		VE 33 29 00	〃	2P 〃	PJ705			
※		VE 33 36 00	〃	6P 〃	PJ701～704			
※		VE 27 90 00	〃	5512-03P 3P ウェハーソケット	CB501～508			
※		VE 27 91 00	〃	5512-04P 4P 〃	CB509,510,524			
※		VE 27 92 00	〃	5512-05P 5P 〃	CB511～513			
※		VE 27 96 00	〃	5512-09P 9P 〃	CB514,515			
※		VE 27 97 00	〃	5512-10P 10P 〃	CB516,517			
※		VE 28 09 00	Housing	5513-03APB 3P ハウジング	CB518～521			
※		VE 28 11 00	〃	5513-05APB 5P 〃	CB522,523			
		VB 21 93 00	Base Pin	6P i-Type PHベースピン	CB525			
		BB 07 13 60	Terminal,Screw	ネジ端子				
※		***NA 09 65 80***	***Selector 2 Circuit Board***	セレクターシート(2)			R	
※		***VG 23 52 00***	〃	〃			W	
		UT 45 46 80	Polypropylene Film Cap.	0.068μF 100V C Qコン	C423,424,441,442			
		UT 45 26 80	〃	680pF 100V ポリプロコン	C856～859		W	

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
		UT 45 21 00	Polypropylone Film Cap.	100pF 100V	ポリプロコン	C419,420			
		UT 65 22 20	〃	220pF 100V	C Q コン	C429,430			
※		UT 65 38 20	〃	8200pF 100V	〃	C425,426			
※		UT 65 24 70	〃	470pF 100V	〃	C439,440			
※		UT 65 33 30	Polypropyleme Film Cap.	3300pF 100V	ポリプロコン	C427,428			
		FZ 00 64 50	Ceramic Cap.	0.1μ 50V	積層セラコン	C436,437,443,444,447			
		VE 41 57 00	Electrolytic Cap.	1000μF 10V	ケミコン	C411～414,445,448			
		UJ 11 84 70	〃	470μF 6.3V	〃	C446			
		UJ 24 93 30	〃	3300μF 25V	〃	C432,433			
		VE 39 45 00	〃	47μF 25V	〃	C421,422			
		UJ 14 72 20	〃	22μF 25V	〃	C415～418			
		UK 14 71 00	〃	10μF 25V	BP コン	C431			
		UJ 16 61 00	〃	1μF 50V	ケミコン	C434,435			
		FZ 00 58 80	Ceramic Cap.	0.1μF 25V	積層セラコン	C401～405,407～409,501～520,541～560			
		VB 86 19 00	Pre-set Potentiometer	B100kΩ	半固定抵抗	VR401,402			
		HL 31 41 00	Metal Oxide Film Resistor	10Ω 1W	酸金抵抗	R591,592			
		HL 32 52 70	〃	270Ω 2W	〃	R593,594			
		HV 45 43 30	Flame Proof Carbon Resistor	33Ω 1/4W	不燃化カーボン抵抗	R446,447			
		iB 05 44 10	Transistor	2SB544	トランジスタ	Q403,404			
		iD 04 00 10	〃	2SD400	〃	Q401,402			
		iC 28 78 20	〃	2SC2878(A,B)	〃	Q405～414			
		iE 10 12 80	FET	2SK105(F,H)	FET	Q501～520,529～548			
		iF 00 34 50	Diode	ISS133	ダイオード	D401,402,407,408,501～540			
		iF 00 86 30	Zener Diode	MTZ6.2A	ツェナーダイオード	D403～406			
		XA 42 60 01	IC	NJM5532S	IC	IC405,406			
		XA 54 90 01	〃	LB1294	〃	IC407			
		XB 63 70 01	〃	PCM56P	〃	IC401,403			
※		XD 52 10 01	〃	NJM78M18	〃	IC408			
※		XD 52 20 01	〃	NJM79M18	〃	IC409			
※		iG 14 28 00	〃	NJM5532D	〃	IC413			
		XB 70 30 01	〃	YM3023	〃	IC404			
		XD 71 10 01	〃	YM6013	〃	IC402			
		iG 07 56 00	〃	NJM78M05A	〃	IC410,411			
		iG 08 79 00	〃	NJM79L05A	〃	IC412			
※		VG 73 01 00	Relay	JC2ad-DC48V	リレー	RY501,502			
※		VE 29 77 00	〃	JR2ad-DC48V	〃	RY503			
		VC 79 37 00	Coil	1.5μH	コイル	L501,502			
		VD 00 45 00	Base Pin	2P i-Type	PH ベースピン	CB501,503			
		VD 00 49 00	〃	6P i-Type	〃	CB502,504			
		LB 91 80 30	〃	3P i-Type	XH ベースピン	CB506			
※		VE 28 09 00	Housing	3P	ハウジング	CB509～512			
※		VE 28 10 00	〃	4P	〃	CB513～515			
※		VE 28 11 00	〃	5P	〃	CB516			
※		VE 28 15 00	〃	9P	〃	CB517,518			
※		VE 28 16 00	〃	10P	〃	CB519,520			

※New Parts（新規部品）

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		VD 85 20 00	Terminal,Speaker		SPターミナル				
		BB 06 62 90	Ground Washer		アース金具				
※		***NA 09 65 90***	***Tone Control Circuit Board***		トーンコンシート			R	
※		***VG 23 53 00***	*〃*		〃			W	
		FG 21 21 00	Ceramic Cap.	100pF 50V	セラコン	C333,334,365			
		FG 21 22 20	〃	220pF 50V	〃	C243			
		FG 21 24 70	〃	470pF 50V	〃	C242			
		FG 24 42 20	〃	0.022μF 50V	〃	C240,241,266			
		FU 35 12 20	Mica Cap.	22pF 500V	FEマイカコン	C263,264			
		VA 76 10 00	Ceramic Cap.	22pF(CH) 50V	セラコン	C301～303,305～307,339,340			
		FZ 00 58 80	〃	0.1μF 25V	積層セラコン	C245,246,256,304,308,310,312,314,316,318,320～330,335～337,341,345～348,353～361,363,366			
		FC 34 44 70	Mylar Cap.	0.047μF 50V	マイラーコン	C235～238			
		FA 15 43 30	〃	0.033μF 50V	〃	C211,212			
		FA 15 51 00	〃	0.1μF 50V	〃	C227,228,233,234,250,251,265			
		FA 15 51 20	〃	0.12μF 50V	〃	C207,208			
		FA 15 54 70	〃	0.47μF 50V	〃	C209,210			
		UT 45 21 00	Polypropylene Film Cap.	100pF 100V	ポリプロコン	C203,204			
		UT 45 22 20	〃	220pF 100V	〃	C860,861		W	
		UT 65 38 20	〃	8200pF 100V	〃	C338			
		UT 45 41 00	〃	0.01μF 100V	〃	C267～269			
		UJ 11 81 00	Electrolytic Cap.	100μF 6.3V	ケミコン	C315,349,350			
		UJ 11 84 70	〃	470μF 6.3V	〃	C239,311			
		UJ 12 74 70	〃	47μF 10V	〃	C249,270			
		UJ 14 72 20	〃	22μF 25V	〃	C309,313,317,319,331,332,344,364			
		UH 14 71 00	〃	10μF 25V	〃	C248			
		UJ 16 61 00	〃	1μF 25V	〃	C904～913		W	
		UJ 16 61 00	〃	1μF 50V	〃	C342,343			
		VB 17 01 00	〃	4700μF 5.5V	〃	C247			
		VE 39 45 00	〃	47μF 25V	〃	C215～226			
※		VE 74 26 00	〃	47μF 25V	〃	C257,258			
※		VE 01 98 00	〃	1μF 50V	〃	C201,202,213,214,229,230,261,262			
※		VE 41 57 00	〃	1000μF 10V	〃	C205,206			
		FZ 00 74 10	〃	1000μF 25V	ブラックゲートケミコン	C231,232			
		FM 17 73 30	〃	33μF 50V	BPコン	C259,260			
		VC 25 94 00	Coil	47mH	コイル	L201,202			
		VA 98 36 00	〃	220μH	〃	L620,621		W	
		GE 90 19 70	〃	68μH	〃	L301			
		HV 45 41 00	Flame Proof Carbon Resistor	10Ω 1/4W	不燃化カーボン抵抗	R271			
		HV 45 45 60	〃	56Ω 1/4W	〃	R252,253			
※		VE 27 82 00	Rotary Potentiometer	16KΩ×2	ロータリーボリューム	VR201			
※		VE 27 83 00	〃	20KΩ×2	〃	VR202,203			
※		VE 32 74 00	〃	250KΩMN×2	〃	VR204			
※		VE 24 41 00	Potentiometer with Motor	27KΩ	モーター付ボリューム	VR205			

※New Parts（新規部品）

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
		iA 10 15 21	Transistor	2SA1015(Y)	トランジスタ	Q836	W	
		iA 10 15 21	〃	2SA1015(Y)	〃	Q221,222,303		
		iC 18 15 20	〃	2SC1815(Y)	〃	Q224～228,301,302,305		
		iC 28 78 20	〃	2SC2878(A,B)	〃	Q211～220		
		iC 05 35 40	〃	2SC535(A,B,C)	〃	Q304 } inter-changeable		
		VB 17 04 00	〃	2SC1923(R,O,Y)	〃	〃 } inter-changeable		
		VB 43 33 00	〃	2SC1809(M,N,P)	〃	〃 } inter-changeable		
		iE 10 12 00	FET	2SK105(H)	FET	Q201～210		
		XA 42 60 01	IC	NJM5532S	IC	IC201,202,212		
※		XD 52 10 01	〃	NJM78M18	〃	IC204		
※		XD 52 20 01	〃	NJM79M18	〃	IC205		
		iG 14 22 20	〃	μPD74HCU04C	〃	IC301,303,305～308		
		iG 07 56 00	〃	NJM78M05	〃	IC209		
		iG 10 11 00	〃	BA6209	〃	IC210		
		iG 09 21 00	〃	M5219L	〃	IC203		
		iR 00 00 00	〃	TC74HC00P	〃	IC302,304,316 } inter-chageable		
		iR 00 00 80	〃	M74HC00P	〃	〃 } inter-chageable		
		iR 00 02 00	〃	TC74HC02P	〃	IC315 } inter-changeable		
		iR 00 02 80	〃	M74HC02P	〃	〃 } inter-changeable		
		iR 01 23 20	〃	μPD74HC123AC	〃	IC309,313,317		
※		iR 01 53 00	〃	TC74HC153P	〃	IC310,311		
		iR 02 38 20	〃	μPD74HC238C	〃	IC207		
※		iR 02 39 20	〃	μPD74HC239C	〃	IC206		
※		XD 52 70 01	〃	TC4532BP	〃	IC211		
※		XD 52 60 01	〃	LC6505C-3556	〃	IC208		
		XD 22 20 01	〃	YM3623B	〃	IC312		
※		XD 71 20 01	〃	YM3414	〃	IC314		
		iF 00 87 30	LED	SLR-34URC3H3	LED	D307		
		VD 98 21 00	Module,Transmitter	TOTX172	送信モジュール	U301		
※		VD 98 22 00	Module,Receiver	TORX172	受信モジュール	U302,303		
		iF 00 34 50	Diode	1SS133	ダイオード	D201～214,216,301～306		
		iF 00 34 50	〃	1SS133	〃	D854～865	W	
		iF 01 06 80	Zener Diode	MTZ5.1A	ツェナーダイオード	D215		
※		VE 33 27 00	Pin Jack	2P	ピンジャック	PJ301～303		
※		VE 27 77 00	Push Switch	4-2S	プッシュスイッチ	SW201		
※		VE 27 78 00	〃	2-2NS	〃	SW204		
※		VE 18 51 00	Rotary Switch	1-10S	ロータリースイッチ	SW205		
		VC 24 55 00	Push Switch	2-2NS	プッシュスイッチ	SW202,203		
		GG 00 07 00	Ceramic Resonator	FCR400K	セラミック振動子	XL201		
		VD 61 38 00	Quarts Crystal	17.9MHz	水晶振動子	XL301		
		VA 31 63 00	Phone Jack		ヘッドホンジャック	JK201		
		LB 91 80 20	Base Pin	2P i-Type	XH ベースピン	CB301		
		LB 91 80 30	〃	3P i-Type	〃	CB201,202,218,219		
		LB 91 80 80	〃	8P i-Type	〃	CB203		
		VD 00 45 00	〃	2P	PH ベースピン	CB217		

※New Parts（新規部品）

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	VD 00 46 00	Base Pin	3P	PHベースピン	CB206,213,215			
	VD 00 47 00	〃	4P	〃	CB205			
	VD 00 48 00	〃	5P	〃	CB207			
	VD 00 49 00	〃	6P	〃	CB209,212			
	VD 00 50 00	Base Pin	7P	PHベースピン	CB208,210,214			
	VD 00 51 00	〃	8P	〃	CB211			
	VD 00 52 00	〃	9P	〃	CB216			
	BB 06 62 90	Ground Washer		アース金具				
※	***NA 09 66 00***	***Front Panel Circuit Board***		フロントパネルシート			R	
※	***VG 31 82 00***	〃		〃			W	
	Fi 32 41 00	Ceramic Cap.	0.01μF 250V	セラコン	C847～851		W	
	FZ 00 46 60	Metalized Mylar Cap.	0.1μF 250V	MMコン	C825			
	FC 29 44 70	Polypropylene Film Cap.	0.047μF 250V	QPコン	C833～836			
	UH 23 74 70	Electrolytic Cap.	47μF 16V	ケミコン	C822			
	UJ 11 74 70	〃	47μF 6.3V	〃	C823,824			
	UH 24 72 20	〃	22μF 25V	〃	C828			
	UJ 14 74 70	〃	47μF 25V	〃	C826			
	UH 16 63 30	〃	3.3μF 50V	〃	C821			
	UJ 14 84 70	〃	470μF 25V	〃	C845			
※	VE 33 52 00	〃	4700μF 16V	〃	C830,846			
※	VE 33 53 00	〃	2200μF 35V	〃	C831,832			
	UH 14 91 00	〃	1000μF 25V	〃	C829			
	UT 45 41 00	Polypropylene Film Cap.	0.01μF 100V	ポリプロコン	C837～844			
	HV 45 32 20	Flame Proof Carbon Resistor	2.2Ω 1/4W	不燃化カーボン抵抗	R843～845,848,851,852			
	HV 45 34 70	〃	4.7Ω 1/4W	〃	R831～833,842			
	HV 45 51 00	〃	100Ω 1/4W	〃	R853			
	HV 45 63 30	〃	3.3kΩ 1/4W	〃	R827			
	iA 10 15 21	Transistor	2SA1015(Y)	トランジスタ	Q829,834,835			
	iA 09 70 00	〃	2SA970(GR,BL)	〃	Q823,831			
	iC 18 15 20	〃	2SC1815(Y)	〃	Q821,822,832,833			
	iC 22 40 00	〃	2SC2240(GR,BL)	〃	Q830			
	iC 27 05 00	〃	2SC2705(O,Y)	〃	Q824～828			
	VC 69 46 00	Photo Coupler	TLP621	フォトカプラー	PC801			
	iF 00 06 70	Diode	IS2473	ダイオード	D821～823,827 828,832,833 〃 interchangeable			
	iF 00 00 40	〃	IS1555	〃				
	iF 00 14 00	〃	ISS82	〃	D829～831,834,853			
	iF 00 84 80	〃	ISR35-100AT-93X	〃	D841～848			
※	VE 46 65 00	〃	11DQ09FE-2	ショットキーダイオード	D837～840,849～852			
	iH 00 11 30	Diode,Bridge	D5FB20	ダイオードブリッジ	D835,836			
	iF 00 19 40	Zener Diode	HZ24-2	ツェナーダイオード	D824,825			
	iF 00 33 70	〃	HZ5C-1	〃	D826			
	iF 00 42 70	LED	SLR-55URC3H	LED	D807～811,815			
	iF 00 42 80	〃	SLR-55MC3H	〃	D812～814			
	iF 00 87 30	〃	SLR-34URC3H3	〃	D803			

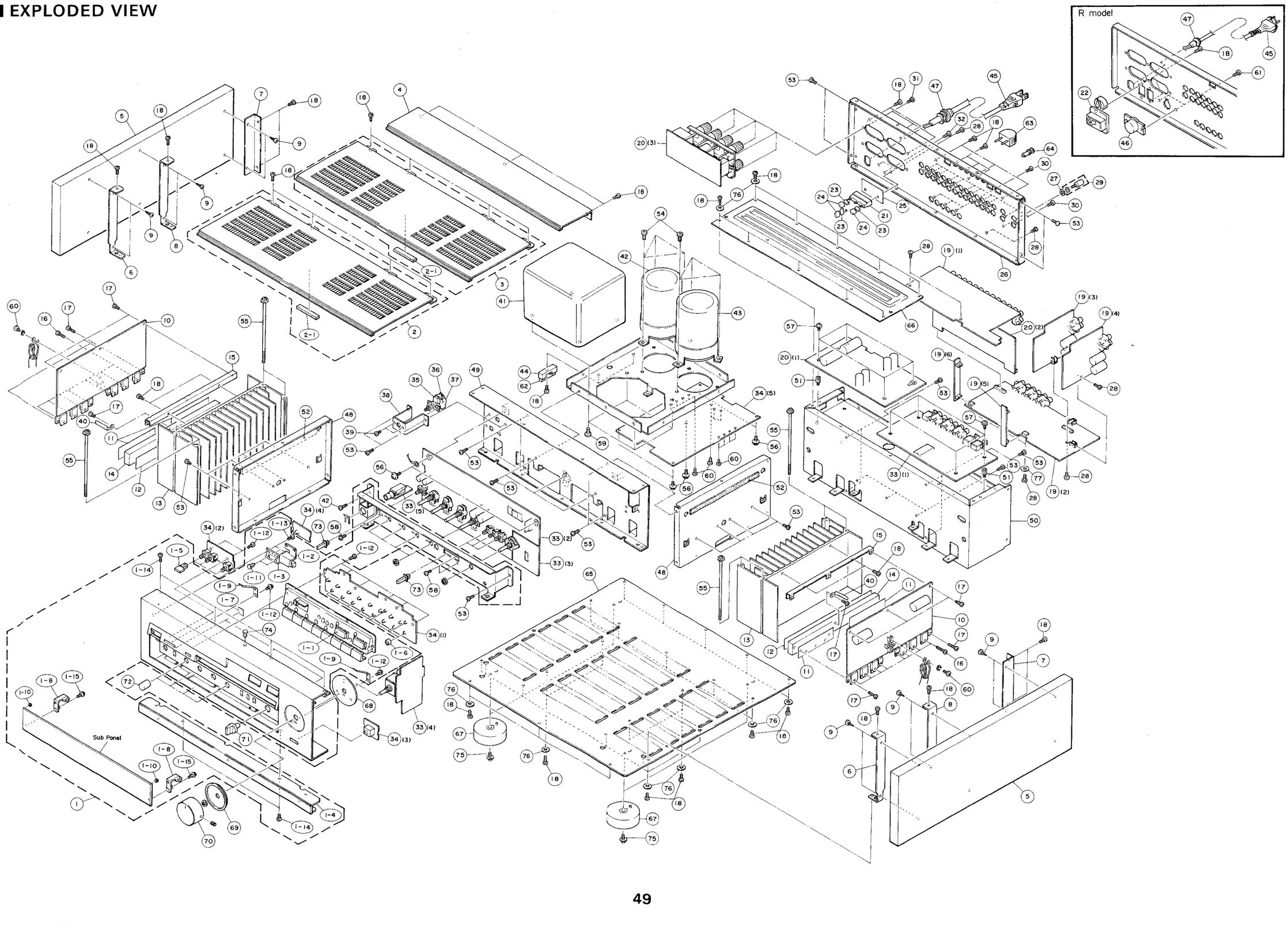
※New Parts（新規部品）

Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
	iF 00 79 70	LED	SPR-55	2色LED	D802,804～806			
	VB 96 96 00	Receptor Unit	GPIU011	受光ユニット	U801 〃 inter-changeable			
	VD 85 31 00	〃	GPIU501	〃				
	VE 32 73 00	Switch	KHH-MA901	タクトスイッチ	SW802～811			
	VC 24 55 00	Push Switch	2-2NS	プッシュスイッチ	SW812～814			
	LB 91 80 20	Base Pin	2P i-Type	XHベースピン	CB801			
	LB 91 80 30	〃	3P i-Type	〃	CB802～804			
	LB 91 80 40	〃	4P i-Type	〃	CB806			
	LB 91 80 50	〃	5P i-Type	〃	CB807～809			
	LB 91 80 60	〃	6P i-Type	〃	CB810			
	VB 21 89 00	〃	2P i-Type	PHベースピン	CB811			
	VB 21 90 00	〃	3P i-Type	〃	CB805			
	BB 06 95 10	Ground Metal		ランド金具				
	VE 80 85 00	Terminal,Screw	M4	ネジ端子				

※New Parts（新規部品）

AX-2000

■ EXPLODED VIEW



■ EXPLODED VIEW PARTS

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※	1	VG 18 29 00	Front Panel Unit		フロントパネルユニット				
※	1-1	VE 30 36 00	Button Ass'y		ボタン Ass'y				
※	1-2	VE 27 21 00	Button		ボタン	POWER			
※	1-3	VE 27 26 00	Spring		スプリング				
※	1-4	VE 27 42 00	Sub Panel		サブパネル				
	1-5	VD 91 88 00	Button	3×14	ボタン	SPEAKERS A,B, VIDEO			
	1-6	VE 27 47 00	Cushion		クッション				
	1-7	VE 79 82 00	//		//				
	1 8	VE 27 45 00	Stopper		ストッパー				
	1-9	BB 07 04 50	Stopper, Hinge		ヒンジ押え		A-950/1000		
※	1-10	VE 79 81 00	Dumper		ダンパー				
	1-11	CB 09 96 00	Plastic Rivet		プラスチックリベット				
	1-12	EK 93 00 10	BW Head Tapping Screw	3×8×φ8 ZMC2-BI	BWヘッドタッピングネジ	(Pタイト)			
	1-13	Ei 03 00 66	Binding Head Tyte Screw	3×6 ZMC2-BI	バインドタイトネジ(Pタイト)	(PACK)			
	1-14	Ei 33 00 86	//	3×8 ZMC2-BI	// (Bタイト)	(PACK)			
	1-15	EK 33 60 10	BW Head Screw	3×8×φ8 FCRM3-3g	BWヘッド小ネジ				
※	2	VF 01 24 00	Top Cover (A)		トップカバー(A)				
	2-1	CB 66 11 40	Cushion		クッション		AX-900		
※	3	VF 01 25 00	Top Cover (B)		トップカバー(B)				
※	4	VF 01 26 00	// (C)		// (C)				
※	5	VE 27 54 10	Wood Panel	L+R	ウッドパネル				
※	6	VE 27 55 00	Holder, Wood Panel (F)		ウッドパネルホルダー(F)				
※	7	VE 27 56 00	// (R)		// (R)				
※	8	VE 41 38 00	Stay, Top Cover		トップカバーステイ				
※	9	EQ 03 11 66	Round Head Wood Screw	3.1×16 ZMC2-Y	丸木ネジ	PACK			
※	10	NA 09 65 60	Main C. Board		メインシート	L,R			
※	11	VE 35 30 00	Sheet	TO-5	シート	L,R			
※	12	VE 82 68 00	Sheet, Block		シートブロック	L,R			
※	13	VE 27 64 00	Radiator		ラジエター	L,R			
※	14	VE 27 65 00	TR Block		TRブロック	L,R			
	15	AA 62 00 50	Holder, C. Board		シートホルダー	L,R	A-2000		
※	16	EK 33 00 40	BW Head Tapping Screw	3×24×φ10 FCRM3-BI	BWヘッドタッピングネジ				
	17	EK 33 60 10	//	3×8×φ8 FCRM3-BI	//				
	18	Ei 33 00 86	Binding Head Tapping Screw	3×8 ZMC2-BI	バインドタイトネジ(Bタイト)				
※	19	NA 09 65 70	Selector C. Board (1)		セレクターシート(1)			R	
※	//	VG 18 74 00	//		//			W	
※	20	NA 09 65 80	Selector C. Board (2)		セレクターシート(2)			R	
※	//	VG 23 52 00	//		//			W	
	21	LA 00 10 00	Relay Terminal	3P	中継端子台			W	
※	22	VG 18 10 00	AC Outlet	2P	ACアウトレット			R	
※	23	VB 38 06 00	Capacitor	3300pF	認定コン	C852~854		W	
	24	CB 09 52 60	Cover, Capacitor		コンデンサーカバー			W	
※	25	VG 61 64 00	Sheet		絶縁シート			W	
※	26	VG 07 43 00	Rear Panel		リアパネル			W	
※	//	VG 07 44 00	//		//			R	
	27	EV 90 13 60	Sems Plain Washer	φ10×φ3.6×t0.8 FNM3-3g	セムス平座金				
	28	ED 33 00 66	Binding Head Screw	3×6 FCRM3-BI	バインド小ネジ	PACK			
	29	AA 62 73 10	Ground Terminal Screw	STG3×13 FNM3-3g	GNDターミナル				
	30	EN 04 00 10	Binding Head Bonding Screw	3×8 FCRM3-BI	バインドボンディングネジ(Pタイト)				
	31	Ei 03 00 86	Binding Head Tyte Screw	3×8 ZMC2-Y	バインドタイトネジ(Pタイト)				
	32	Ei 13 01 20	Binding Head Tapping Screw	3×12 FNM3-3g	バインドタッピングネジ				
※	33	NA 09 65 90	Tone Control C. Board		トーンコントロールシート			R	
※	//	VG 23 53 00	//		//			W	

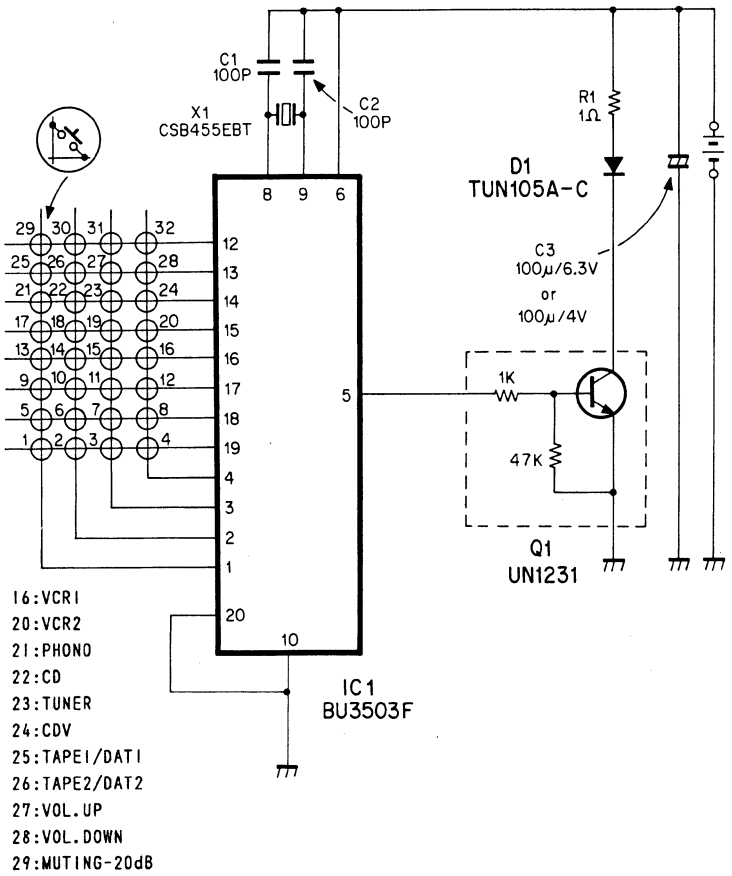
※New Parts (新規部品)

	Ref. No	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※	34	NA 09 66 00	Front Panel C. Board		フロントパネルシート			R	
※	//	VG 31 82 00	//		//			W	
	35	KA 80 43 00	Power Switch	TV-8	パワースイッチ				
	36	Fi 38 41 00	Ceramic Cap.	0.01μF AC400V	セラコン				
	37	CB 09 52 60	Cover, Capacitor		コンデンサーカバー				
	38	VE 27 62 00	Holder, Power Switch		パワースイッチホルダー				
	39	ED 03 00 61	Binding Head Screw	3×6 ZMC2-Y	バインド小ネジ				
	40	LA 00 53 50	Terminal	SRA-21T-4	丸型端子				
※	41	XF 20 4A 00	Power Transformer		電源トランス			R	
※	//	XF 20 5A 00	//		//			W	
※	42	VF 07 49 00	Electrolytic Cap.	27000μF 80V	ブロックケミコン	L			
※	43	VF 07 50 00	//	27000μF 80V	//	R			
	44	LB 20 13 00	Fuse Holder		ヒューズホルダー			R	
	//	LB 20 21 10	//		//			W	
	45	VE 37 10 00	AC Power Cord	6A 250V	電源コード			R	
※	//	VG 38 80 00	//	6A 250V	//			W	
	46	VA 93 29 00	Voltage Selector		電圧切換器			R	
	47	CB 62 01 90	Cord Stopper	CM-22B	コードストッパー			R	
	//	CB 07 27 50	//	SR-4N-4	//			W	
※	48	VE 27 58 00	Side Frame		サイドフレーム				
※	49	VE 27 59 00	Front Frame		フロントフレーム				
※	50	VE 27 60 00	Rear Frame		リアフレーム				
※	51	VE 27 63 00	Post C. Board	L=8.4	PCBポスト				
※	52	VE 35 28 00	Dumper	10×180	ダンパー				
	53	Ei 33 00 86	Binding Head Bonding Screw	3×8 FCRM3-BI	バインドボンディングネジ (Bタイト)	PACK			
	54	EK 95 00 50	Binding Head Tyte Screw	4×6 ZMC2-BI	バインドタイトネジ(Bタイト)				
	55	EX 60 00 30	BW Head Screw	4×132 FCRM3-BI	BWヘッド小ネジ(トガリ先)				
	56	EK 93 00 10	BW Head Tapping Screw	3×8 ZMC2-BI	BWヘッドタッピングネジ				
	57	EX 60 07 50	BW Head Screw	3×6 FCRM3-3g	BWヘッド小ネジ				
	58	ED 13 00 66	Binding Head Screw	3×6 FNM3-3g	バインド小ネジ	PACK			
	59	ED 04 01 06	Binding Head Tyte Screw	4×10 ZMC2-Y	バインドタイトネジ(Sタイト)	PACK			
※	60	VE 98 95 00	Pan Head Sems Screw	4×6 BS金メッキ	セムスナベ小ネジ				
	61	ED 33 00 66	Binding Head Screw	3×6 FCRM3-BI	バインド小ネジ	PACK		R	
	62	KB 00 07 90	Fuse	T4A 250V	ヒューズ				
	//	VD 37 09 00	//	10A 250V	//			R	
	63	VE 40 28 00	Short Plug	P16HQ	ショートプラグ				
	64	LB 10 01 80	//		//				
※	65	VE 27 49 00	Bottom Cover		ボトムカバー				
※	66	VE 27 48 00	Shield, Rear		リアシールド				
	67	VD 17 61 00	Leg Ass'y		脚				
※	68	VE 27 38 00	Shield Plate		シールドプレート				
※	69	VE 27 23 00	Base, Knob		ノブベース				
※	70	VE 27 22 00	Knob		ノブ	VOLUME			
※	71	VE 27 24 00	//		//	REC OUT			
※	72	VE 27 25 00	//		//	BASS,MID,TREBLE, BLANCE			
※	73	VE 27 43 00	Button		ボタン	TONE,BYPASS,SUBSONIC MODE,PHONO			
	74	CB 60 56 20	Plastic Rivet		プラスチックリベット				
	75	EK 33 60 10	BW Head Tapping Screw	3×8 FCM3-BI	BWヘッドタッピングネジ				
	76	EV 41 30 36	Toothed Lock Washer	M3 FCRM3-BI	歯付座金	PACK			
	77	VF 42 10 00	Washer		ワッシャー				
		CB 06 92 50	Binding Tie	BK-1	インシュロックタイ				
			Accessories		付属品				
※		VG 07 45 00	Remote Control Transmitter	RS-AX2000	リモートコントロールトランスミッター				
			Dry Cell	AA,R6	単3乾電池				

※New Parts (新規部品)

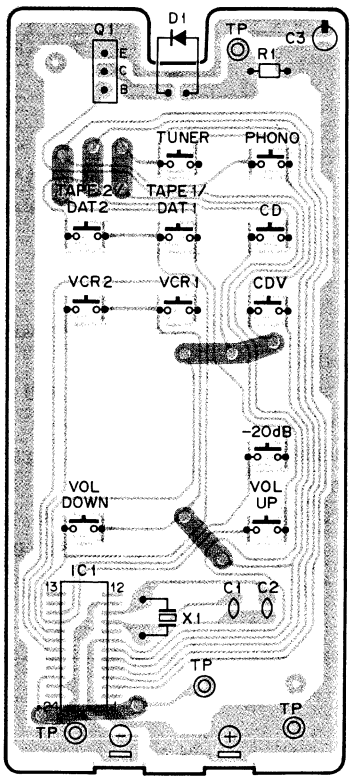
RS-AX2000
REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM



KEY NO.	FUNCTION	DATA CODE
K 1		0 0
K 2		0 1
K 3		0 2
K 4		0 3
K 5		0 4
K 6		0 5
K 7		0 6
K 8		0 7
K 9		0 8
K10		0 9
K11		0 A
K12		0 B
K13		0 C
K14		0 D
K15		0 E
K16	VCR1	0 F
K17		1 0
K18		1 1
K19		1 2
K20	VCR2	1 3
K21	PHONO	1 4
K22	CD	1 5
K23	TUNER	1 6
K24	CDV	1 7
K25	TAPE1/DAT1	1 8
K26	TAPE2/DAT2	1 9
K27	VOL.UP	1 A
K28	VOL.DOWN	1 B
K29	MUTING-20dB	1 C
K30		1 D
K31		1 E
K32		1 F
CUSTOM CODE 7A		

● PRINTED CIRCUIT BOARD



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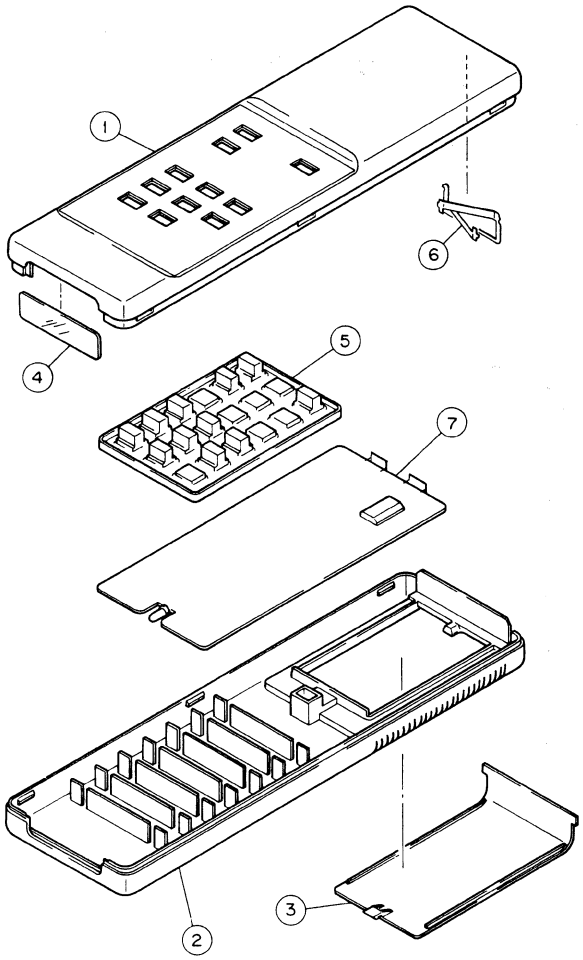
■ EXPLODED VIEW



	Ref. No.	Part No.	Description		部品名	Remarks／Markets	Common Model		ランク
※		***VG 07 45 00***	***Remote Control Transmitter***	RS-AX2000	リモートコントロールトランスミッター			EUR64428	
※	1	CX 60 55 90	Cace(A)		ケース（A）			UR64UCS651	
	2	CX 60 04 80	Case(B)		ケース（B）		RS-KW5	UR64CS263	
	3	CX 60 05 00	Lid		電池カバー		//	UR64EC264	
	4	CX 60 05 10	Fillter		スモーク板		//	UR52SB327	
※	5	CX 60 27 90	Rubber		ゴム接点			UR64CT690	
	6	LX 60 02 80	Battery Terminal		電池電極板（A）		RS-KW5	UR52TD101	
※	7	NX 60 15 80	P. C Board Ass'y		プリント基板Ass'y			UR64VPB411	
※		***NX 60 15 80***	***P. C Board Ass'y***		プリント基板Ass'y				
		iX 60 89 70	IC	BU3503F	IC	IC1			
		QX 60 00 20	Ceramic Resornater	CSB455EB1	セラミック振動子	X1			
		iX 60 53 10	Transistor	UN1231	トランジスター	Q1			
		iX 60 86 10	LED	TLN105A-C	赤外線LED	D1			
		FG 21 21 00	Ceramic Cap.	100pF 50V	セラコン	C1, 2			
		HJ 35 31 00	Carbon Film Resistor	1Ω	カーボン抵抗	R1			
		LX 60 02 90	Battery Terminal(B)		電池電極板（B）				
		UH 14 64 70	Electrolytic Cap.	4.7μ 25V	ケミコン	C3			

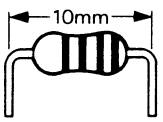
※New Parts（新規部品）

Parts List for Carbon Resistor

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	HJ353100	HF853100	12KΩ	HJ357120	HF857120
1.8 〃	HJ353180	※	15 〃	HJ357150	HF857150
2.2 〃	HJ353220	HF853220	18 〃	HJ357180	HF857180
3.3 〃	HJ353330	HF853330	22 〃	HJ357220	HF857220
4.7 〃	HJ353470	HF853470	27 〃	HJ357270	HF857270
5.6 〃	HJ353560	HF853560	33 〃	HJ357330	HF857330
10 〃	HJ354100	HF854100	39 〃	HJ357390	HF857390
15 〃	HJ354150	HF854150	47 〃	HJ357470	HF857470
22 〃	HJ354220	HF854220	56 〃	HJ357560	HF857560
27 〃	HJ354270	HF854270	68 〃	HJ357680	HF857680
33 〃	HJ354330	HF854330	82 〃	HJ357820	HF857820
39 〃	HJ354390	HF854390	91 〃	HJ357910	HF857910
47 〃	HJ354470	HF854470	100 〃	HJ358100	HF858100
56 〃	HJ354560	HF854560	120 〃	HJ358120	HF858120
68 〃	HJ354680	HF854680	150 〃	HJ358150	HF858150
82 〃	HJ354820	HF854820	180 〃	HJ358180	HF858180
100 〃	HJ355100	HF855100	220 〃	HJ358220	HF858220
110 〃	HJ355110	HF855110	270 〃	HJ358270	HF858270
120 〃	HJ355120	HF855120	330 〃	HJ358330	HF858330
150 〃	HJ355150	HF855150	390 〃	HJ358390	HF858390
160 〃	HJ355160	※	470 〃	HJ358470	HF858470
180 〃	HJ355180	HF855180	560 〃	HJ358560	HF858560
220 〃	HJ355220	HF855220	680 〃	HJ358680	HF858680
270 〃	HJ355270	HF855270	820 〃	HJ358820	HF858820
330 〃	HJ355330	HF855330	1.0MΩ	HJ359100	HF859100
390 〃	HJ355390	HF855390	1.2 〃	HJ359120	※
470 〃	HJ355470	HF855470	1.5 〃	HJ359150	HF859150
510 〃	※	HF855510	1.8 〃	HJ359180	HF859180
560 〃	HJ355560	HF855560	2.2 〃	HJ359220	HF859220
680 〃	HJ355680	HF855680	3.3 〃	HJ359330	HF859330
820 〃	HJ355820	HF855820	3.9 〃	HJ359390	※
910 〃	HJ355910	HF855910	4.7 〃	HJ359470	HF859470
1.0KΩ	HJ356100	HF856100			
1.2 〃	HJ356120	HF856120			
1.5 〃	HJ356150	HF856150			
1.8 〃	HJ356180	HF856180			
2.0 〃	HJ356200	HF856200			
2.2 〃	HJ356220	HF856220			
2.4 〃	HJ356240	HF856240			
2.7 〃	HJ356270	HF856270			
3.0 〃	HJ356300	HF856300			
3.3 〃	HJ356330	HF856330			
3.6 〃	HJ356360	HF856360			
3.9 〃	HJ356390	HF856390			
4.7 〃	HJ356470	HF856470			
5.1 〃	HJ356510	HF856510			
5.6 〃	HJ356560	HF856560			
6.8 〃	HJ356680	HF856680			
8.2 〃	HJ356820	HF856820			
9.1 〃	HJ356910	HF856910			
10 〃	HJ357100	HF857100			

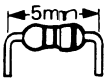
1/4W Type

HJ35□□□□



1/6W Type

HF85□□□□



AX-2000

YAMAHA

Printed by: Schaltungsdienst Lange, Berlin (Germany)

■ SCHEMATIC DIAGRAM (W Model)

Q715.716	2SA1015(Y)
Q717.718	2SC1815(Y)
Q521-528.709-714	2SC2878(A.B)
Q501.502	2SB737(Q.R.S)
Q603.604	2SD786(Q.R.S)
Q701-708	2SK128(R1.2.3.4.Q1.2)
Q605-608	2SK170(GR.BL)
Q501-520 Q529-548	2SK105(F.H)

Unless otherwise specified

PNP TRANSISTOR	
NPN TRANSISTOR	
DIODE	MA165 or1SS133

SELECTOR1(4)
MC EQ. AMP
SELECTOR2(2)
SELECTOR1(3)
MM EQ. AMP
SELECTOR1(6)
CONTROL
SELECTOR1(2)
SELECTOR1(5)
LINE AMP. MUTE
MUTE
MAIN(

MUTE

INPUT SELECTOR

REC OUT SELECTOR

REC OUT AMP.
LINE AMP.

MUTE/ MUTE DRIVE

±18V REG.

+12V REG.

ANALOG/DIGITAL SW and SW DRIVE

TONE AMP.

TONE CON[2]

TONE CON[4]

SELECTOR[1]

SELECTOR[5]

DIGITAL [7.5V] IN

RECEIVE

SEND

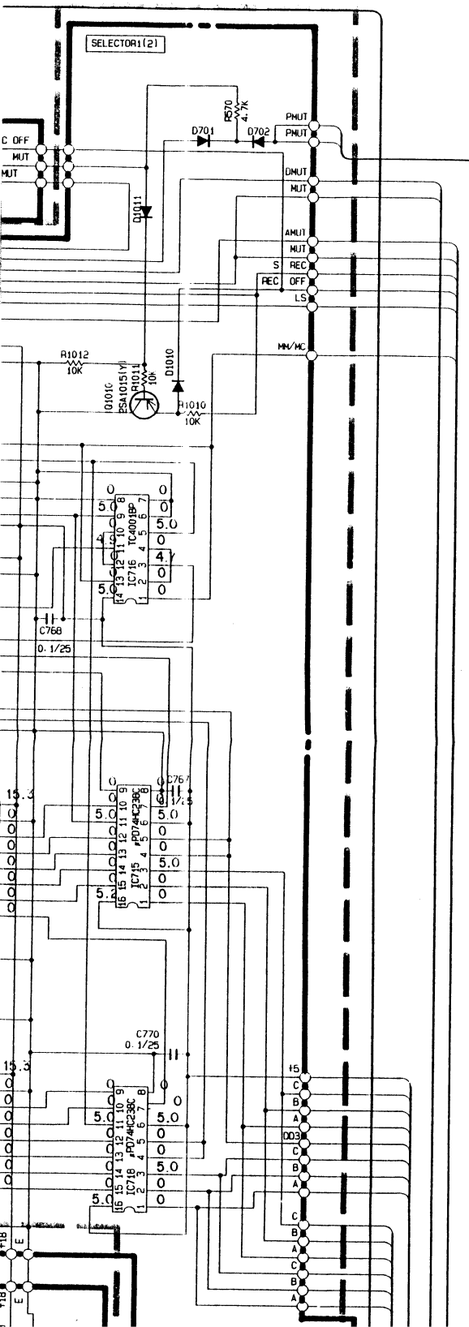
AX-2000

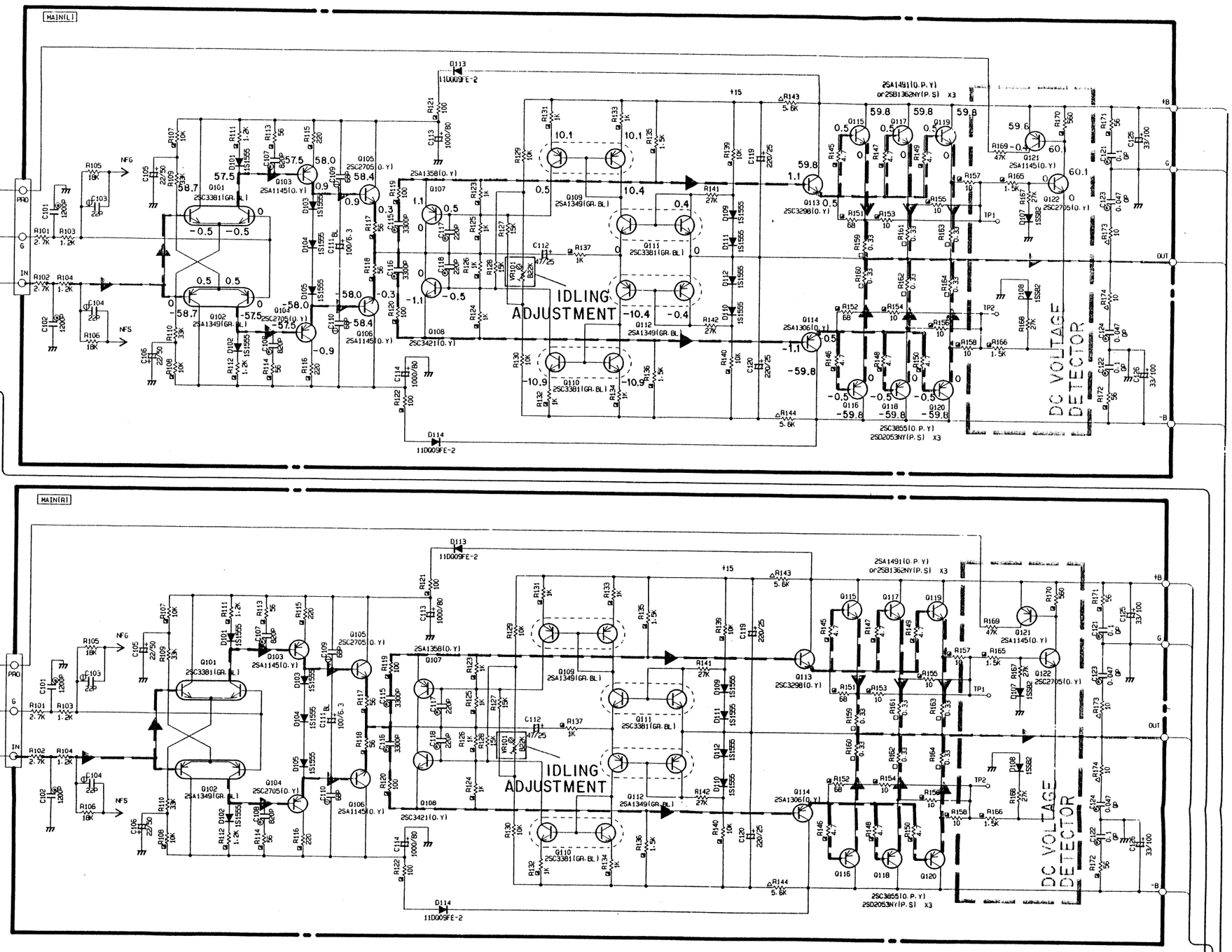
SCHEMATIC DIAGRAM
MODEL AX-2000G
KEC

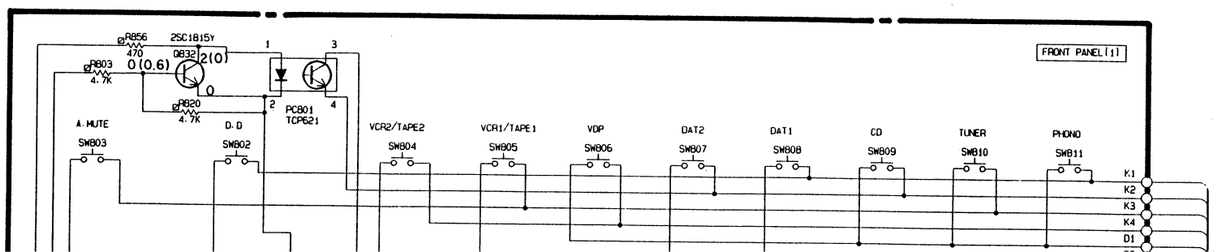
	2SA1015(Y)
	2SC1815(Y)
	2SC2878(A.B)
	2SB737(Q.R.S)
	2SD786(Q.R.S)
	2SK12B(R1.2.3.4.Q1.2)
	2SK170(GR.BL)
IB	2SK105(F.H)

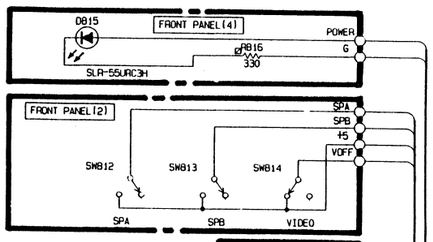
pecified

MA165 or1SS133

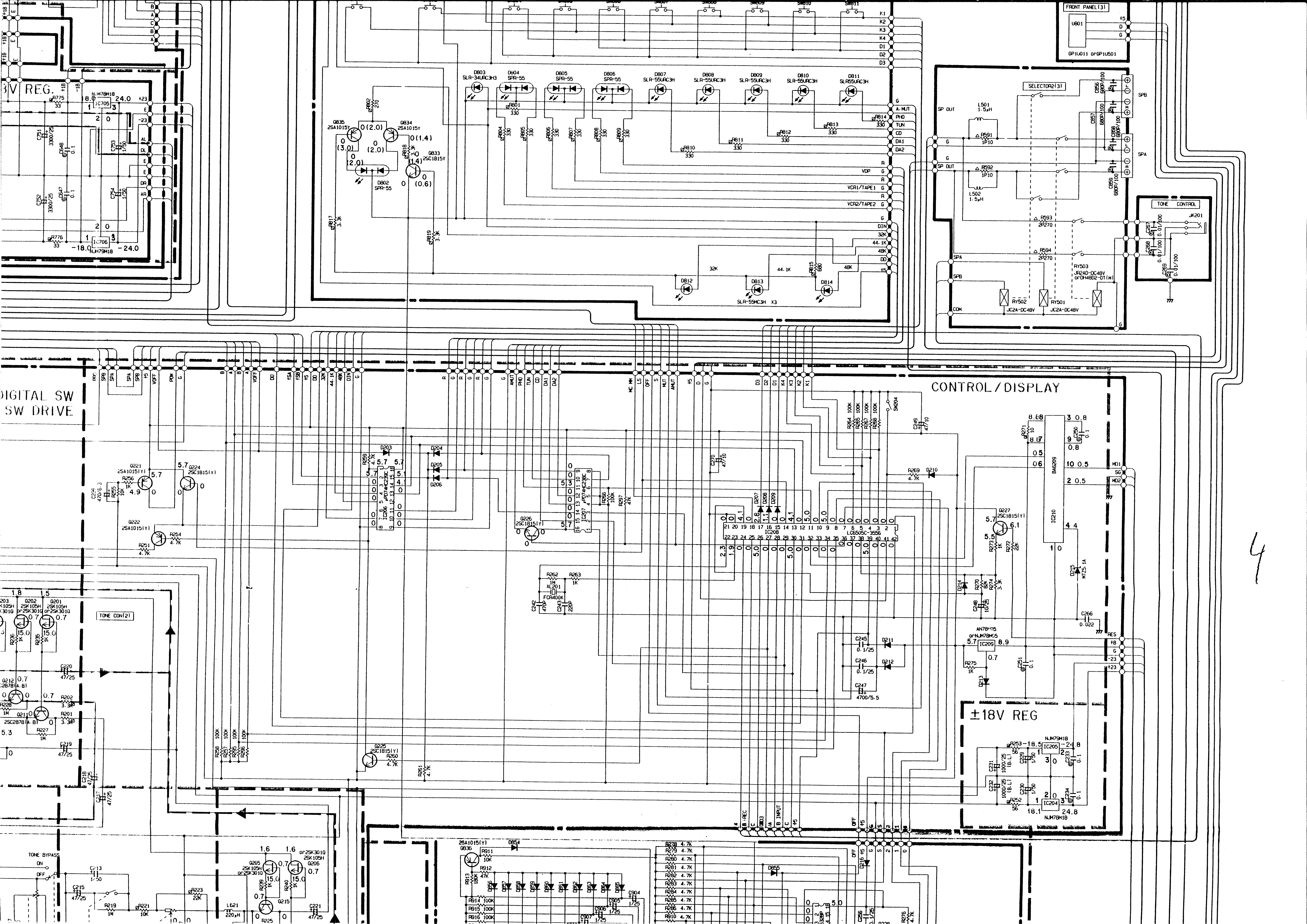








2


FRONT PANEL(3)
SELECTOR2(3)
TONE CONTROL
CONTROL/DISPLAY
DIGITAL SW
SW DRIVE
TONE CON(2)
±18V REG
TONE BYPASS

INPUT SELECTOR

REC OUT SELECTOR

MUTE

DIGITAL (7.5V) IN

+12V REG.

VISUAL REC OUT SELECTOR

VOLUME AMP.

TONE AMP.

TONE CONTROL

BALANCE AMP

OPTICAL AUTO SELECTOR

I/O

DIGITAL FILTER for x 8fs

DIGITAL AMP.

CD/DAT 1 SW.

INPUT SELECTOR

INPUT

REC OUT SELECTOR

RECOUT SELECTOR

DIGITAL AMP.

D/A CONVERTER

±6V REG.

DVR

D/A CONVERTER

±6V REG.

D/A CONVERTER

MUTE DRIVE

2SA970 (GR, BL) 2SA1015 (Y) 2SA1145 (O, Y) 2SB544 2SB737 (Q, R, S) 2SC535 (A, B, C) 2SC1809 (M, N, P) 2SC1815 (Y) 2SC1923 (R, O, Y)	2SC2240 (GR, BL) 2SC2705 (O, Y) 2SC2878 (A, B) 2SD400 2SD786 (Q, R, S)	2SA1358 2SC3421	2SA1306 (O, Y) 2SC3298 (O, Y)	2SA1491A (O, P, Y) 2SB1362NY (P, S) 2SC3855A (O, P, Y) 2SD2053NY (P, S)	2SA1349 (GR, BL) 2SC3381 (GR, BL)	2SK105 (F, H) 2SK170 (GR, BL)	11DQ09FE-2 1S1555 1S2473 1SS82 1SS133 1SR35-100AT-93X MA165 MTZ5.1A MTZ6.2A	HZ5C-1 HZ24-2	D5FB20	SLR-34URC3H3 SLR-55MC3H SLR-55URC3H	NJM79L05A
NJM78M05 NJM78M05A NJM78M18 NJM79M18	L780S12	M5219L	NJM5532D	LA7952 NJM532S	BA6209	TC4001BP TC4081BP M74HC00P TC74HC00P M74HC02P TC74HC02PP µPD74HCU04C		TC4532BP TC74HC153P µPD74HC123AC µPD74HC238C µPD74HC239C LB1294 PCM56P YM3023	YM3413 YM6013	YM3623B	LC6505C-3556

TONE CONTROL

BALANCE AMP

TONE CON(2)

TONE CON(3)

FRONT PANEL(5)

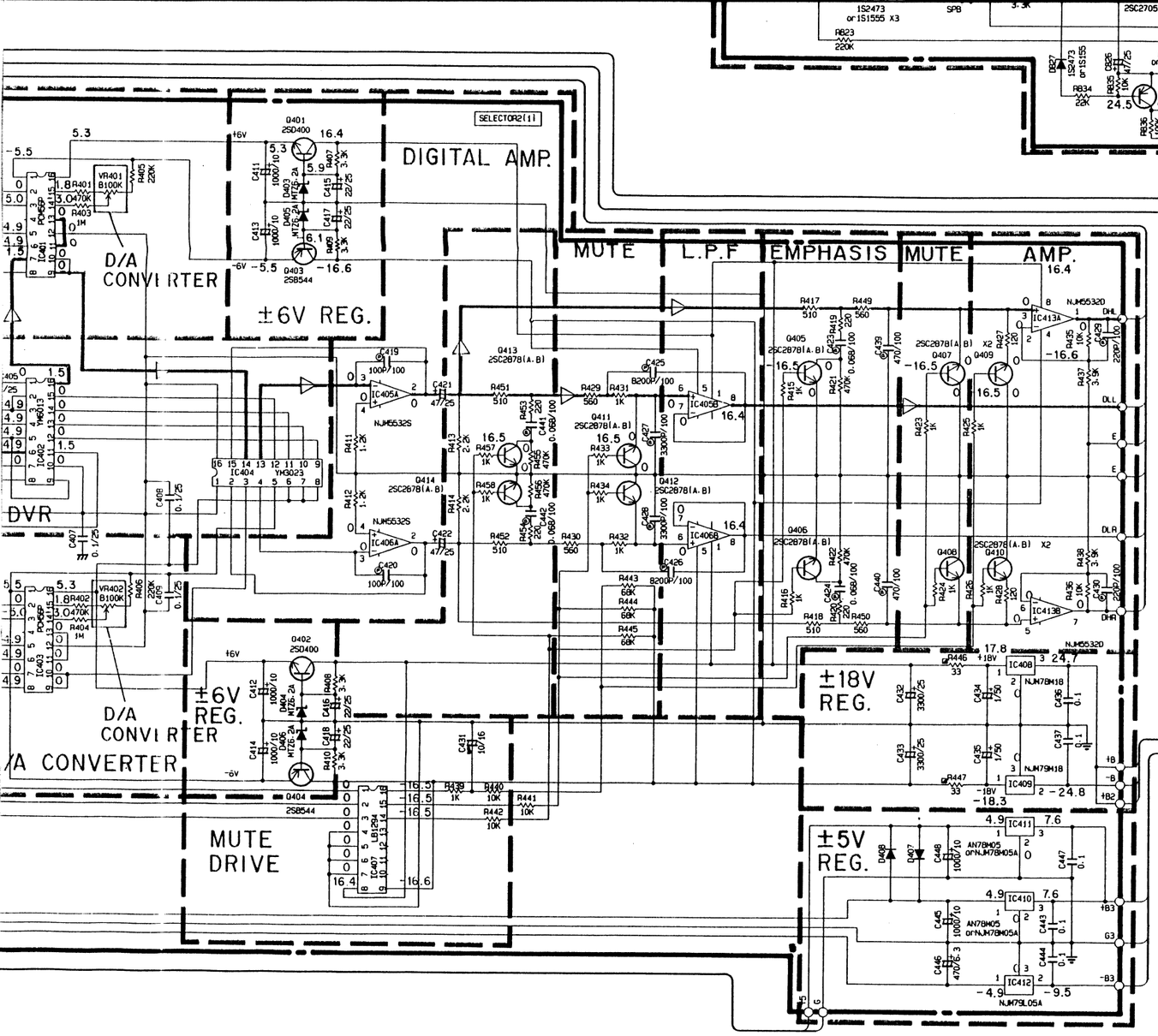
PROTECTION/RELAY DRIVE

POWER SUPPLY

±18V REG

SW205
RECOUT SELECTOR

4



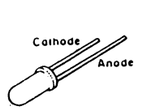
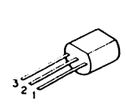
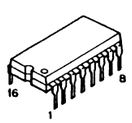
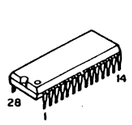
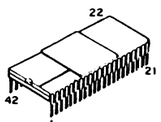
RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/6W)
☑	CARBON FILM RESISTOR
△	METAL OXIDE FILM RESISTOR
▲	METEL FILM RESISTOR
⊠	METEL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	SEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⫴
NO MARK	CERAMIC CAPACITOR	
◎	POLYESTEL FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	⫼
ⓘ	MICA CAPACITOR	
⊛	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

LAST NO.	UN LISTED NO.

	D5FB20 	SLR-34URC3H3 SLR-55MC3H SLR-55URC3H 	NJM79L05A 
YM3413 YM6013 	YM3623B 	LC6505C-3556 	

CAUTION

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- All voltages are measured with a 10MΩ/V DC electric volt meter.
- Schematic diagram is subject to change without notice.

AX-2000

■ SCHEMATIC DIAGRAM (R Model)

MC EQ AMP.

MM. EQ AMP.

LINE AMP. MUTE

CONTROL

Q715.715.719	2SA1015(Y)
Q717.718	2SC1815(Y)
Q521-528.709-714	2SC2878(A.B)
Q601.602	2SB737(Q.R.S)
Q603.604	2SD786(Q.R.S)
Q701~708	2SK126(R1.2.3.4.01.2)
Q605-608	2SK170(GR.BL)
Q501-520 Q529-548	2SK105(F.H)

Unless otherwise specified

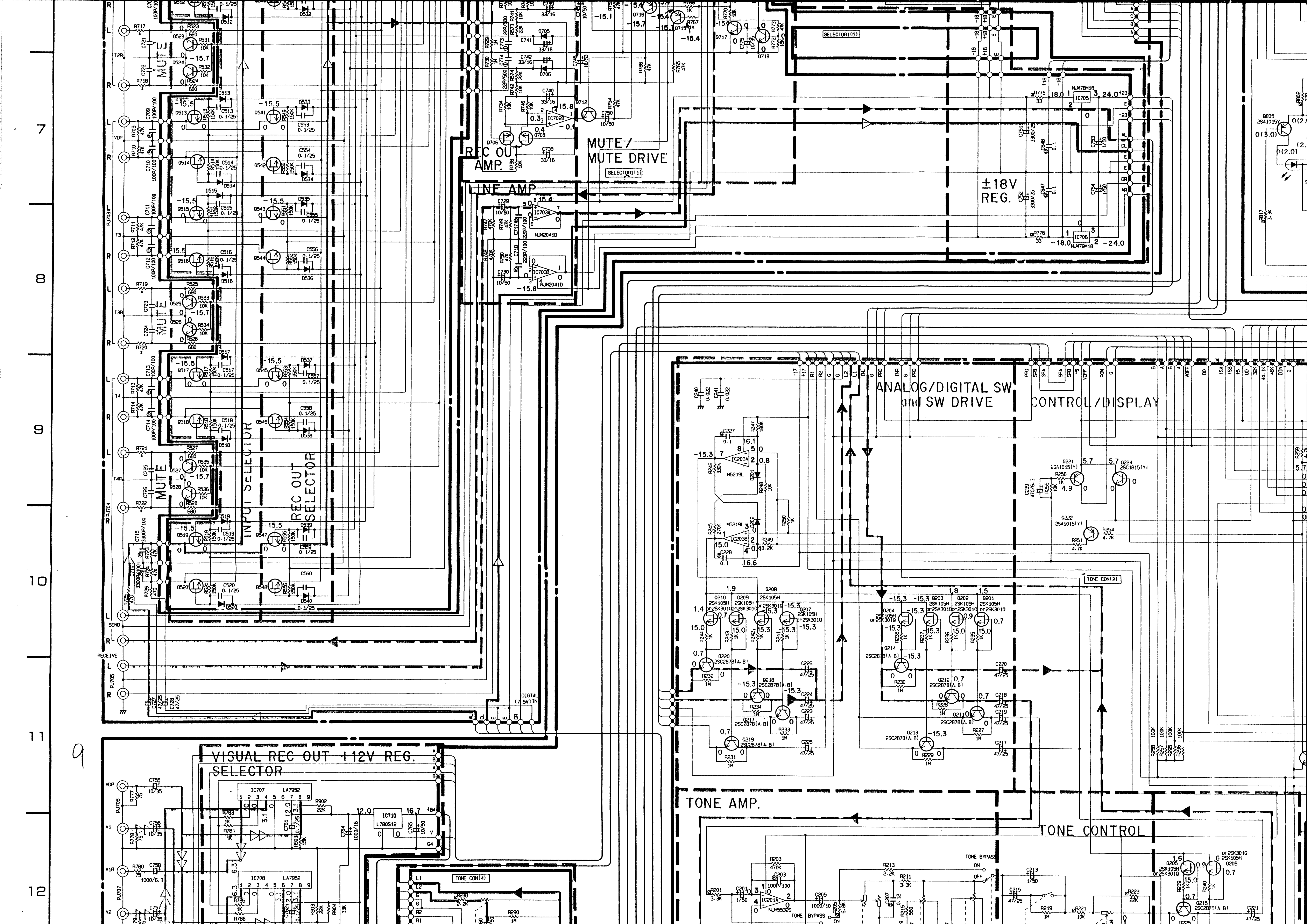
PNP TRANSISTOR	
NPN TRANSISTOR	
DIODE	MA165 or1SS133

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⫼
NO MARK	CERAMIC CAPACITOR	⫼
◎	POLYESTEL FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
Ⓜ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/6W)
▨	CARBON FILM RESISTOR
△	METAL OXIDE FILM RESISTOR
▲	METEL FILM RESISTOR
⊠	METEL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	SEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR



MUTE
INPUT SELECTOR
REC OUT SELECTOR
REC OUT AMP.
MUTE / MUTE DRIVE
LINE AMP.
±18V REG.
ANALOG/DIGITAL SW and SW DRIVE
CONTROL/DISPLAY
TONE AMP.
TONE CONTROL
VISUAL REC OUT SELECTOR
+12V REG.
TONE BYPASS
SEND
RECEIVE
DIGITAL (7.5V) IN

G H I J K L M N

SCHEMATIC DIAGRAM
MODEL AX-2000
KEC

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	共
NO MARK	CERAMIC CAPACITOR	
◎	POLYESTEL FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	共
Ⓟ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

RESISTOR

REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR	(1/6W)
◪	CARBON FILM RESISTOR	
△	METAL OXIDE FILM RESISTOR	
▲	METEL FILM RESISTOR	
⊠	METEL PLATE RESISTOR	
◪	FIRE PROOF CARBON FILM RESISTOR	
□	SEMENT MOLDED RESISTOR	
⊘	SEMI VARIABLE RESISTOR	
■	CHIP RESISTOR	

MAIN(L)

MAIN(R)

IDLING ADJUSTMENT

DC VOLTAGE DETECTOR

SELECTOR1(2)

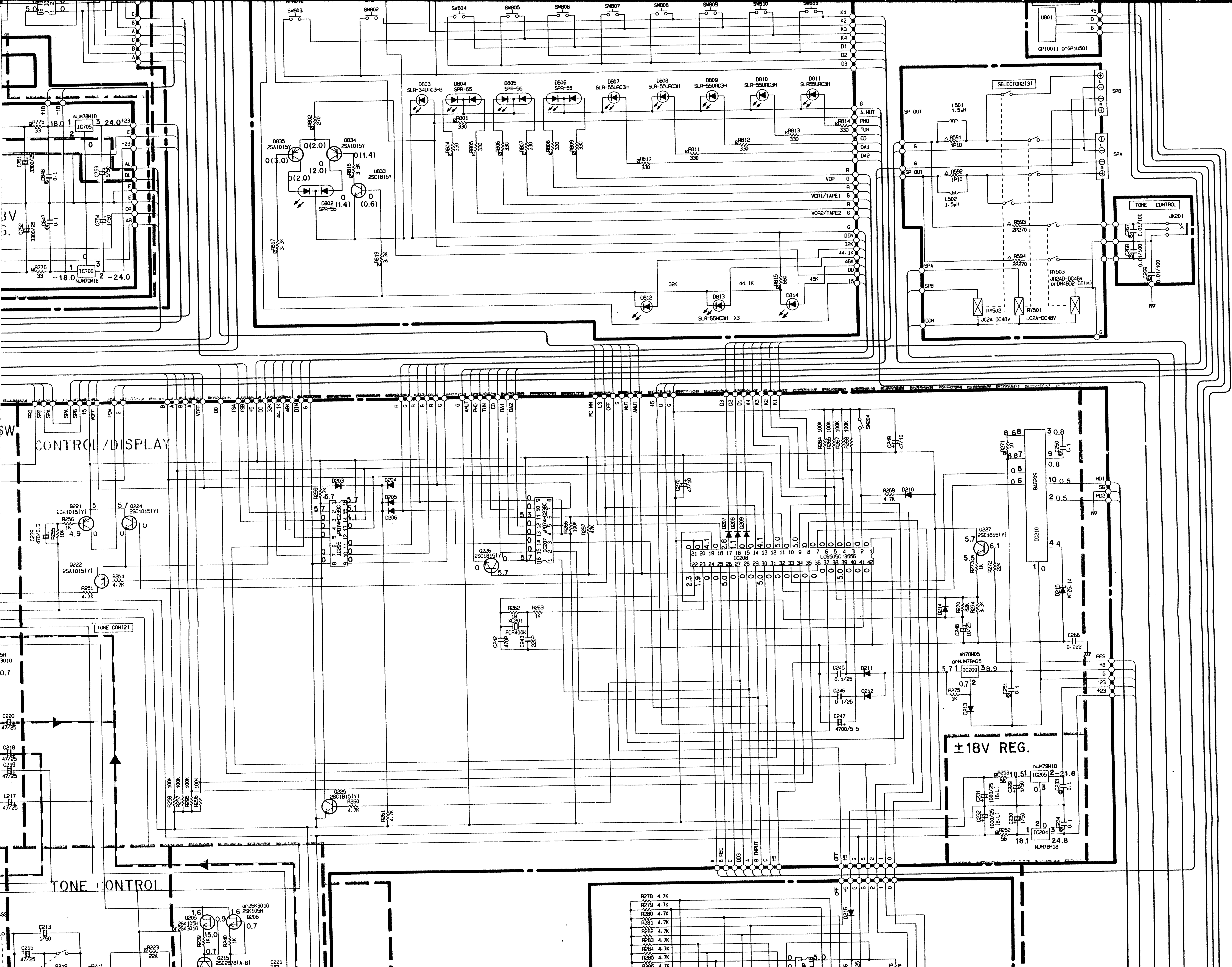
FRONT PANEL(1)

FRONT PANEL(2)

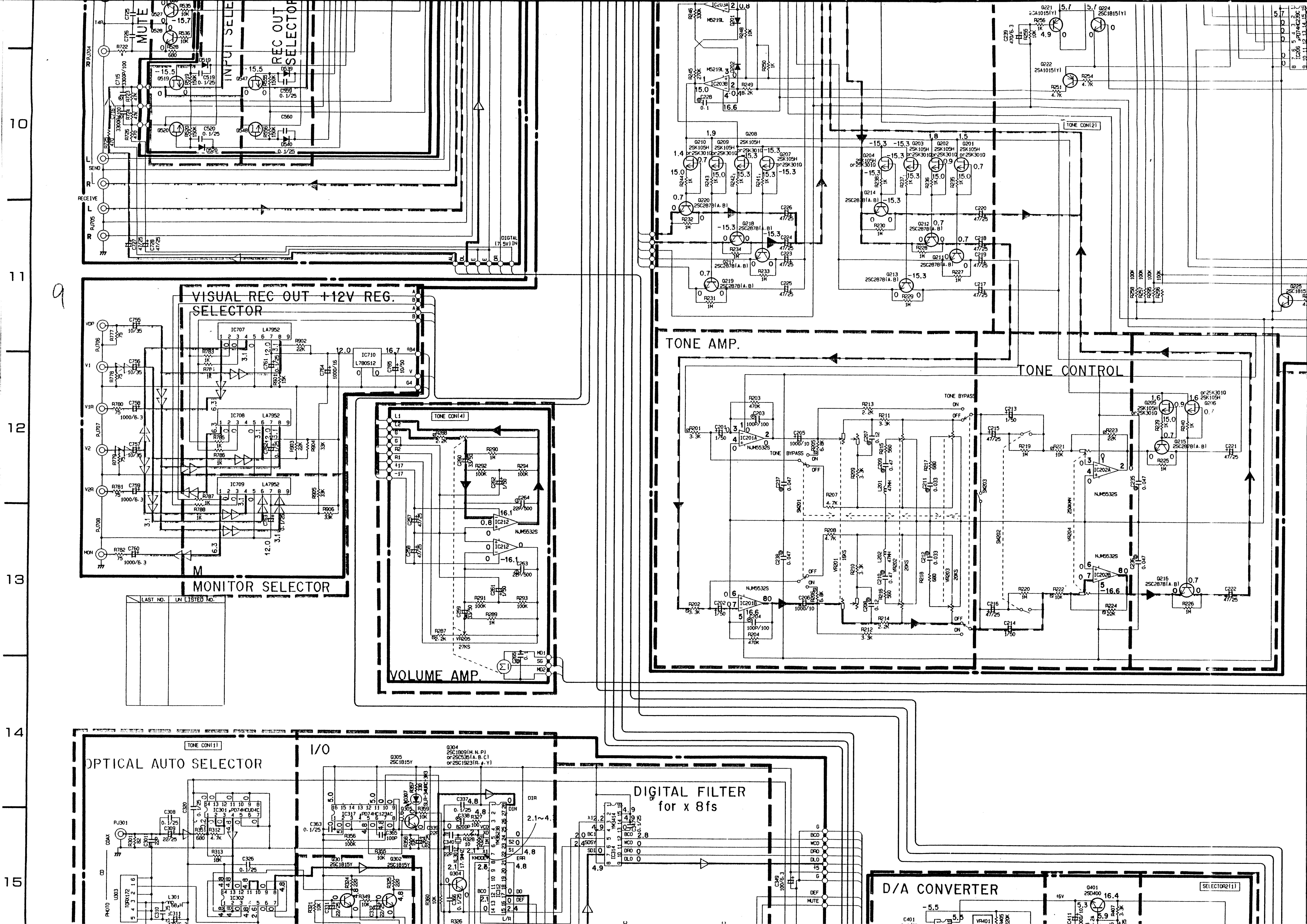
FRONT PANEL(3)

FRONT PANEL(4)

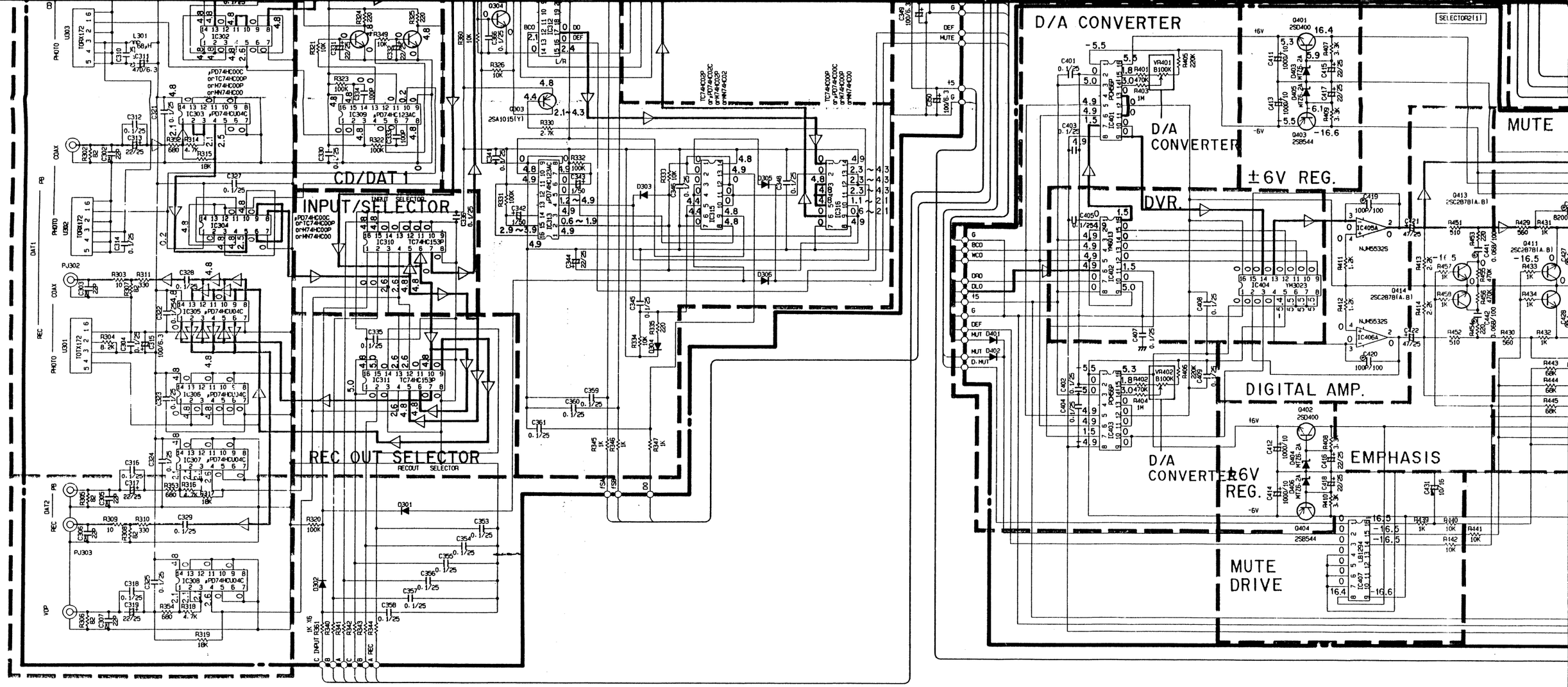
8


CONTROL/DISPLAY
TONE CONTROL
±18V REG.
SELECTOR2(3)
TONE CONTROL
TONE CON(2)
U801
GP1U011 or GP1U501
IC705 NJM78M18
IC706 NJM79M18
IC206
IC207
IC208 LC6505C-3556
IC210 BA6209
IC209 AN78M05 or NJM78M05
IC205 NJM79M18
IC204 NJM78M18
XL201 FCR400K
RY501 JC2A-DC48V
RY502 JC2A-DC48V
RY503 JR2AD-DC48V or DH4BD2-DT(H)
JK201
SP OUT
SPA
SPB
VDP
VCR1/TAPE1
VCR2/TAPE2
SLR-55HC3H X3

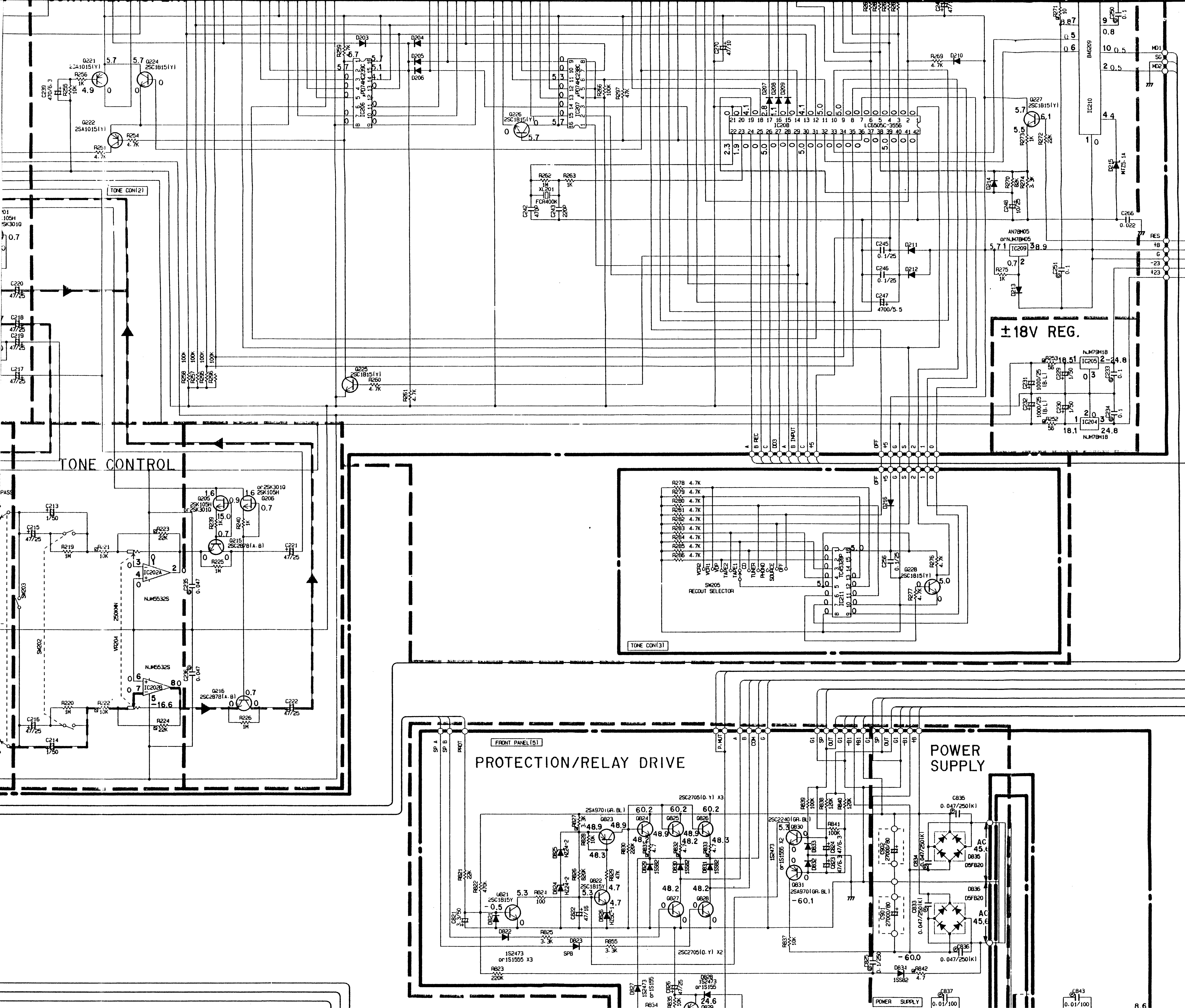
10



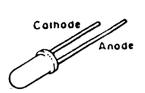
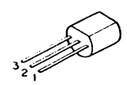
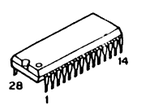
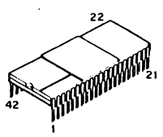
MUTE
INPUT SELECTOR
REC OUT SELECTOR
VISUAL REC OUT SELECTOR
+12V REG.
MONITOR SELECTOR
VOLUME AMP.
TONE AMP.
TONE CONTROL
TONE BYPASS
OPTICAL AUTO SELECTOR
I/O
DIGITAL FILTER
for x 8fs
D/A CONVERTER
LAST NO.
UN LISTED NO.



2SA970 (GR, BL) 2SA1015 (Y) 2SA1145 (O, Y) 2SB544 2SB737 (Q, R, S) 2SC535 (A, B, C) 2SC1809 (M, N, P) 2SC1815 (Y) 2SC1923 (R, O, Y)	2SC2240 (GR, BL) 2SC2705 (O, Y) 2SC2878 (A, B) 2SD400 2SD786 (Q, R, S)	2SA1358 2SC3421	2SA1306 (O, Y) 2SC3298 (O, Y)	2SA1491A (O, P, Y) 2SB1362NY (P, S) 2SC3855A (O, P, Y) 2SD2053NY (P, S)	2SA1349 (GR, BL) 2SC3381 (GR, BL)	2SK105 (F, H) 2SK170 (GR, BL)	11DQ09FE-2 1S1555 1S2473 1SS82 1SS133 1SR35-100AT-93X MA165 MTZ5.1A MTZ6.2A	HZ5C-1 HZ24-2	D5FB20	SLR-34URC3H3 SLR-55MC3H SLR-55URC3H	NJM79L05A
NJM78M05 NJM78M05A NJM78M18 NJM79M18	L780S12	M5219L	NJM5532D	LA7952 NJM532S	BA6209	TC4001BP TC4081BP M74HC00P TC74HC00P M74HC02P TC74HC02PP μPD74HCU04C	TC4532BP TC74HC153P μPD74HC123AC μPD74HC238C μPD74HC239C LB1294 PCM56P YM3023	YM3413 YM6013	YM3623B	LC6505C-3556	


TONE CON(2)
TONE CONTROL
±18V REG.
SW205
RECOUT SELECTOR
TONE CON(3)
FRONT PANEL(5)
PROTECTION/RELAY DRIVE
POWER SUPPLY
POWER SUPPLY

10

	SLR-34URC3H3 **SLR-55MC3H** **SLR-55URC3H** 	**NJM79L05A** 
	YM3623B 	**LC6505C-3556** 

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