

PIN CONNECTION DIAGRAM

● ICs

<p>AN78N09</p> <p>1:INPUT 2:COMMON 3:OUTPUT</p>	<p>BA15218N BA7612N</p>	<p>μPC4570HA</p>	<p>TA8409S</p>	<p>HD74HC125P</p>	<p>TC4052BP TC4053BP BU2090</p>	<p>STK4182II STK4122MK2</p>
<p>BA3835S BU9252S</p>	<p>LC72130 LV1015</p>	<p>LA1835 LC7536</p>	<p>BA7726AS</p>	<p>LA2786</p>	<p>M38024M6-260SP</p>	
<p>LA6536M</p>	<p>AN8806SB</p>	<p>LC75359E</p>	<p>MN66271RA</p>	<p>M38197MA-XXXFP</p>		

● Diodes

<p>1SS133 1SS270A 1SR139-400 MTZJ4.7C MTZJ13.0B MTZJ20.0C MTZJ27.0D</p> <p>Anode Cathode</p>	<p>D3SBA20</p>
<p>1SS355 1SS380 MA8047-H MA8056-M MA8056-L MA8062-M MA8068-M MA8091-H UDZ7.5B</p> <p>Anode Cathode</p>	<p>S4VB20</p>

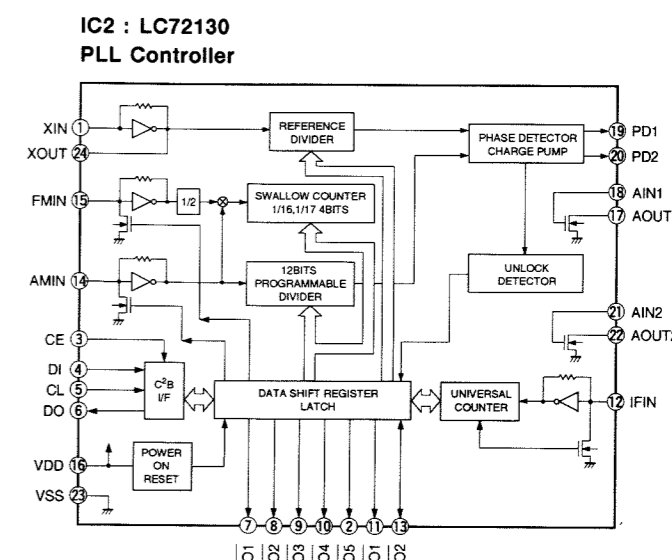
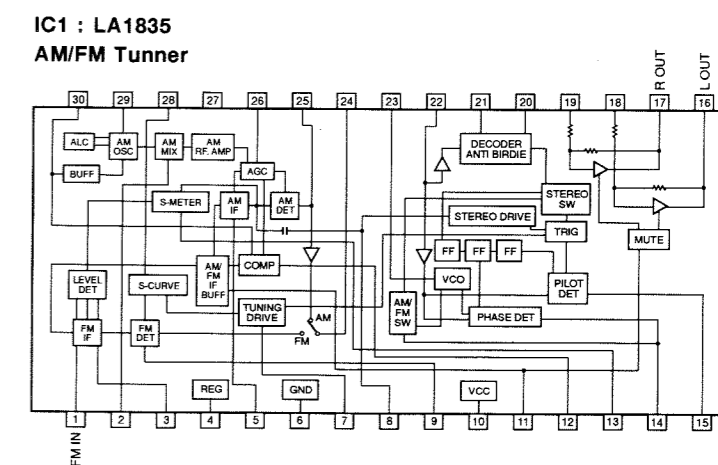
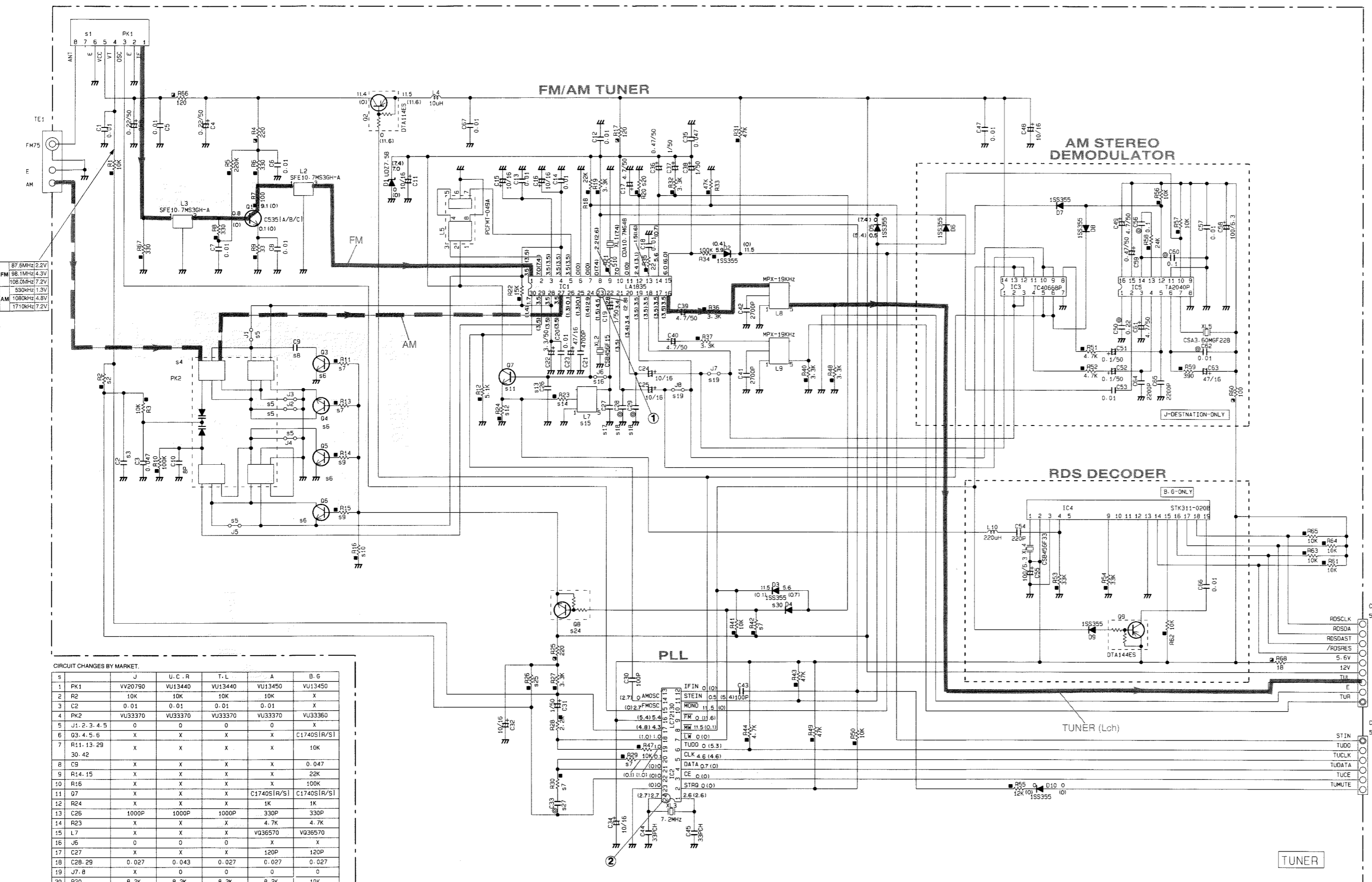
● Transistors

<p>2SA933S (Q, R) 2SC1740S (R, S) DTA114ES DTA144ES DTC114ES DTC144ES DTC143XS</p> <p>B C E</p>	<p>2SA893A (D, E) 2SA1015 (Y) 2SB647 (C, D) 2SC535 (A, B, C) 2SC1815 (Y) 2SC1890A (D, E) 2SC2878 (A, B) 2SC4208A (Q, R, S)</p> <p>E C B</p>	<p>2SB1565 (E, F) 2SD2396 (J, K)</p> <p>B C E</p>
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EMX-100CD

SCHEMATIC DIAGRAM (TUNER)

Each voltage represents the voltage when receiving FM (stereo) signal and the voltage in the parentheses () is the voltage when receiving AM signal.



CIRCUIT CHANGES BY MARKET

U	C	R	T-L	A	B	G
1	PK1	VU20750	VU13440	VU13440	VU13450	VU13450
2	R2	10K	10K	10K	10K	X
3	C2	0.01	0.01	0.01	0.01	X
4	PK2	VU33370	VU33370	VU33370	VU33370	VU33360
5	J1: 2, 3, 4, 5	0	0	0	0	X
6	Q3: 4, 5, 6	X	X	X	X	C17425(R/S)
7	R11, 13, 29, 30, 42	X	X	X	X	10K
8	C9	X	X	X	X	0.047
9	R14, 15	X	X	X	X	20K
10	R16	X	X	X	X	100K
11	Q7	X	X	X	X	C17425(R/S)
12	R24	X	X	X	X	1K
13	C26	1000P	1000P	1000P	330P	330P
14	R23	X	X	X	X	4.7K
15	L7	X	X	X	VQ36570	VQ36570
16	J6	0	0	0	0	X
17	C27	X	X	X	X	120P
18	C28, 29	0.027	0.043	0.027	0.027	0.027
19	J7: 8	X	0	0	0	0
20	R20	8.2K	8.2K	8.2K	8.2K	10K
21						
22						
23						
24	Q8	X	X	X	X	DT144E5
25	R26	X	X	X	X	3.3K
26						
27	C33	X	X	X	X	1
28						
29	D4	X	X	X	X	1S5355

X: NOT USED
O: USED

NOTICE (mode 1)
(J)..... JAPANESE
(U)..... U.S.A
(C)..... CANADIAN
(R)..... GENERAL
(A)..... AUSTRALIAN
(B)..... BRITISH
(G)..... EUROPEAN
(T)..... CHINA
(L)..... SINGAPORE

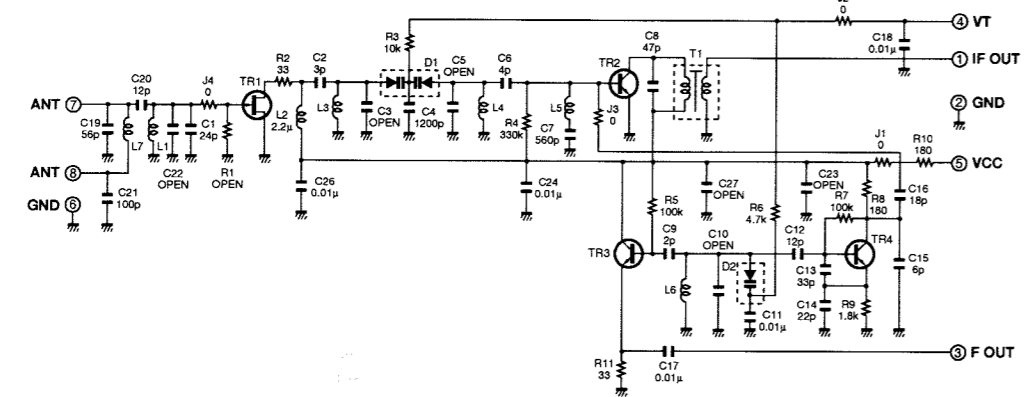
RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
■	FIRE-PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊙	SEMI-VARIABLE RESISTOR
■	CHIP RESISTOR

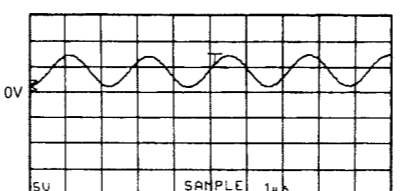
CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
□	CERAMIC CAPACITOR
⊙	CERAMIC TUBULAR CAPACITOR
⊕	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⊖	MICA CAPACITOR
⊙	POLYPROPYLENE FILM CAPACITOR
⊕	SEMICONDUCTIVE CERAMIC CAPACITOR

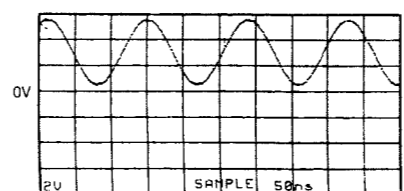
PK1: ENV-17298G1 (VU13440) U, C, R, L models



Point ① FM reception (Pin23 of IC1)
V: 5V/div H: 1 μsec/div
DC range 1:1 probe

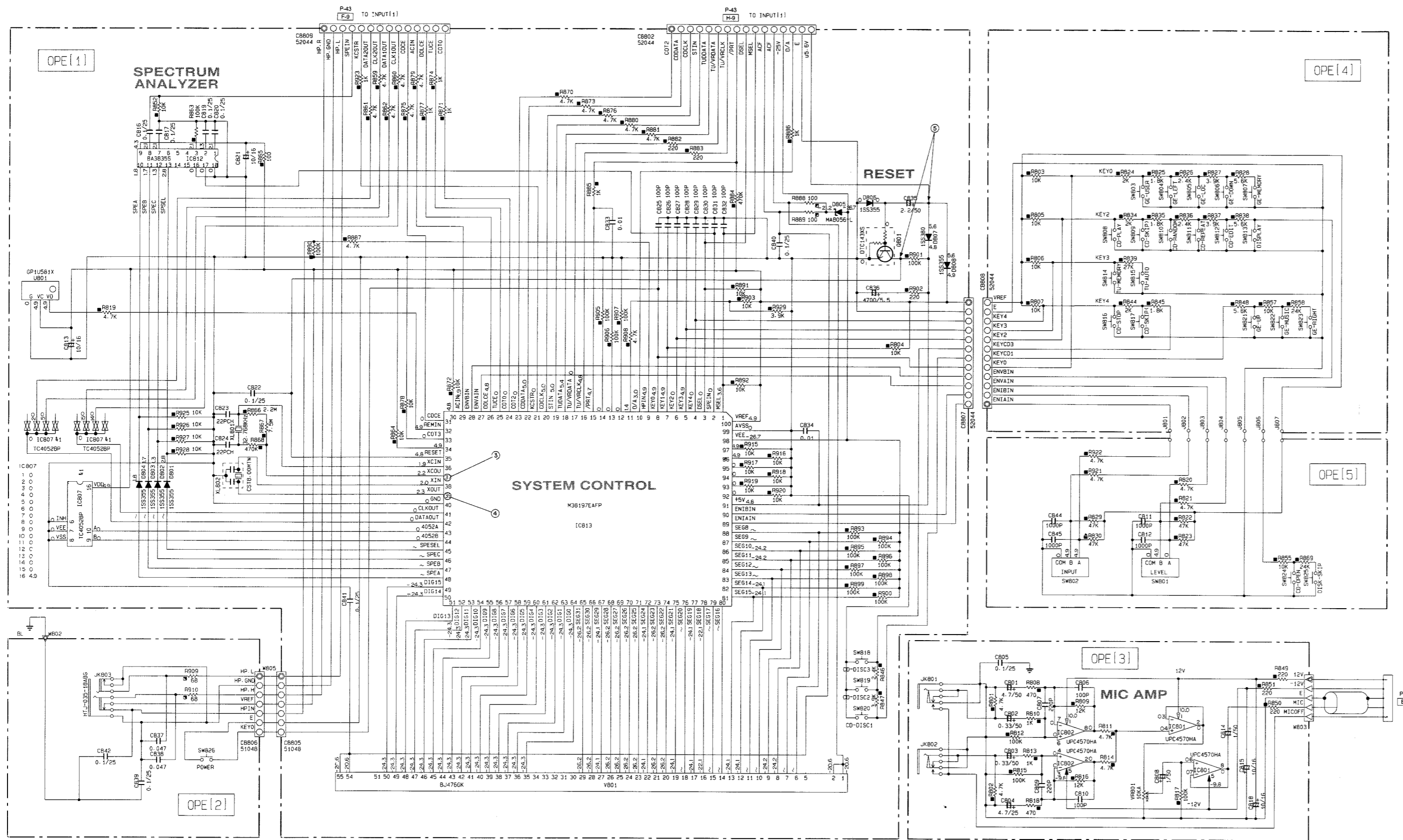


Point ② (Pin24 of IC2)
V: 2V/div H: 50nsec/div
DC range 1:1 probe



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

SCHEMATIC DIAGRAM (OPERATION)



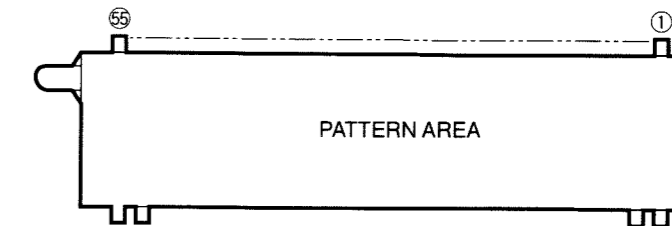
NOTICE (mode1)
 (J)..... JAPANESE
 (U)..... U. S. A
 (C)..... CANADIAN
 (A)..... GENERAL
 (B)..... AUSTRALIAN
 (G)..... BRITISH
 (E)..... EUROPEAN
 (T)..... CHINA
 (L)..... SINGAPORE

REMARKS	PARIS NAME	REMARKS	PARIS NAME
NO MARK	CARBON FILM RESISTOR [P=5]	NO MARK	ELECTROLYTIC CAPACITOR
△	CARBON FILM RESISTOR [P=10]	⊗	TANTALUM CAPACITOR
△	METAL OXIDE FILM RESISTOR	⊙	CERAMIC TUBULAR CAPACITOR
△	METAL FILM RESISTOR	⊙	POLYESTER FILM CAPACITOR
△	METAL PLATE RESISTOR	⊙	POLYSTYRENE FILM CAPACITOR
△	FIRE PROOF CARBON FILM RESISTOR	⊙	MICA CAPACITOR
△	CEMENT MOLDED RESISTOR	⊙	POLYPROPYLENE FILM CAPACITOR
△	SEMI VARIABLE RESISTOR	⊙	SEMICONDUCTIVE CERAMIC CAPACITOR
△	CHIP RESISTOR		

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1	IC807	TC4052BP UP4052BC

V801 : BJ476GK (VU667200)



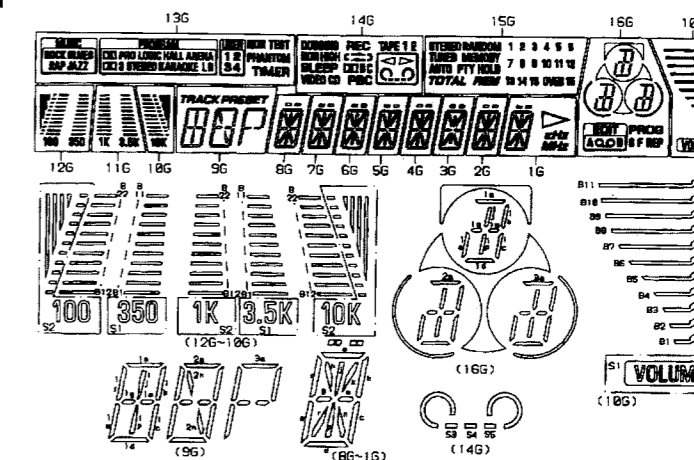
PIN CONNECTION

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Connection	F1	F1	NP	NP	NC	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23

Pin No.	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Connection	P24	NC	NC	NC	NC	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	16G	NC	NP	NP	F2	F2	

Note 1) F1, F2 Filament
 2) NP No Pin
 3) NC No Connection
 4) P1-P24 Datum Line
 5) 1G-16G Grid

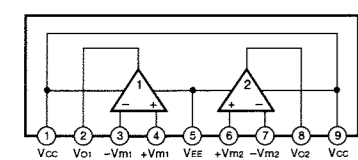
GRID ASSIGNMENT



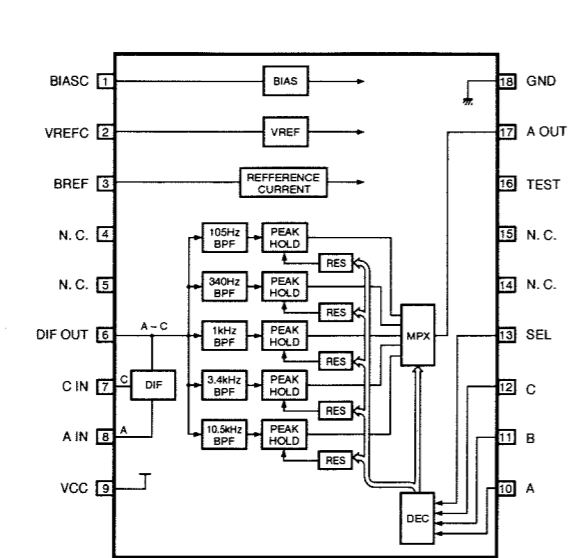
ANODE CONNECTION

16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	1a, 1b, 1c	1	TAPE	1	1	1	1	1	1	1	1	1	1	1	1
P2	1c	2	1	ROCK	1	1	1	1	1	1	1	1	1	1	1
P3	1a	3	2	BLUES	1	1	1	1	1	1	1	1	1	1	1
P4	1j, 1k	4	1	RAP	1	1	1	1	1	1	1	1	1	1	1
P5	2a, 2b, 2c	5	1	JAZZ	1	1	1	1	1	1	1	1	1	1	1
P6	2c	6	1	53	1	1	1	1	1	1	1	1	1	1	1
P7	2a	7	1	54	1	1	1	1	1	1	1	1	1	1	1
P8	2i, 2j	8	1	SS	1	1	1	1	1	1	1	1	1	1	1
P9	3a, 3b, 3c	9	1	TIMER	1	1	1	1	1	1	1	1	1	1	1
P10	3c	10	1	ANERA	1	1	1	1	1	1	1	1	1	1	1
P11	3a	11	1	ROCK	1	1	1	1	1	1	1	1	1	1	1
P12	3i, 3j	12	1	HIGH	1	1	1	1	1	1	1	1	1	1	1
P13	3j	13	1	REC	1	1	1	1	1	1	1	1	1	1	1
P14	3j	14	1	C	1	1	1	1	1	1	1	1	1	1	1
P15	3j	15	1	2	1	1	1	1	1	1	1	1	1	1	1
P16	PROG	OVER 15	1	HALL	1	1	1	1	1	1	1	1	1	1	1
P17	QD	TOTAL	1	1	1	1	1	1	1	1	1	1	1	1	1
P18	A	PREW	1	1	1	1	1	1	1	1	1	1	1	1	1
P19	B	RANDOM	1	1	1	1	1	1	1	1	1	1	1	1	1
P20	EDIT	STEREO	1	1	1	1	1	1	1	1	1	1	1	1	1
P21	MEMORY	VIDEO CD	1	1	1	1	1	1	1	1	1	1	1	1	1
P22	TUNED	PBC	1	1	1	1	1	1	1	1	1	1	1	1	1
P23	F	AUTO	1	1	1	1	1	1	1	1	1	1	1	1	1
P24	REP	PTY HOLD	1	1	1	1	1	1	1	1	1	1	1	1	1

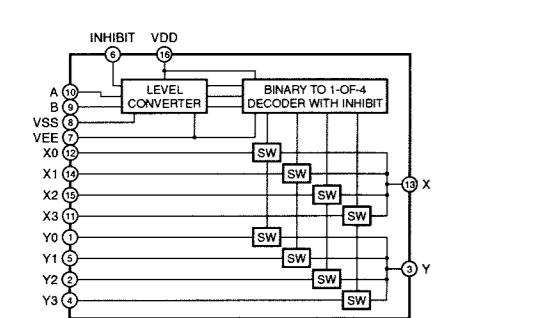
IC801, 802 : μPC4570HA
Dual OP-Amp



IC812 : BA3835S
5-Band BPF and Peak Hold for Spectrum Analyzer

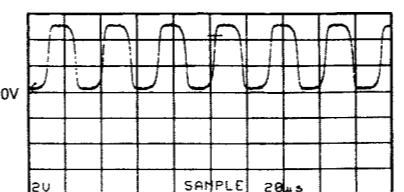


IC807 : TC4052BP
Dual 4 Channel Analog Multiplexers/Demultiplexers

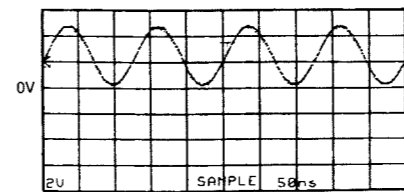


Other ICs
 IC813 : M38197MA-XXXFP → See page 17

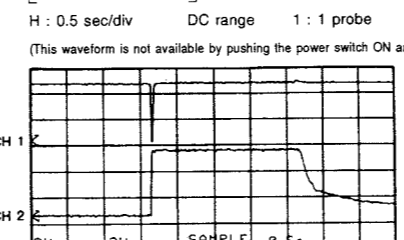
Point ③ (Pin37 of IC813)
 V : 2V/div H : 20 usec/div
 DC range 1 : 1 probe



Point ④ (Pin39 of IC813)
 V : 2V/div H : 50 nsec/div
 DC range 1 : 1 probe



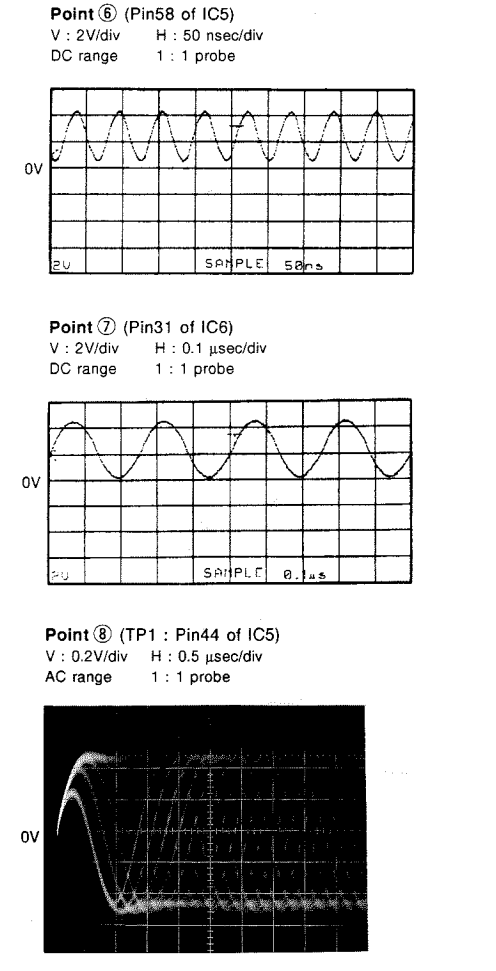
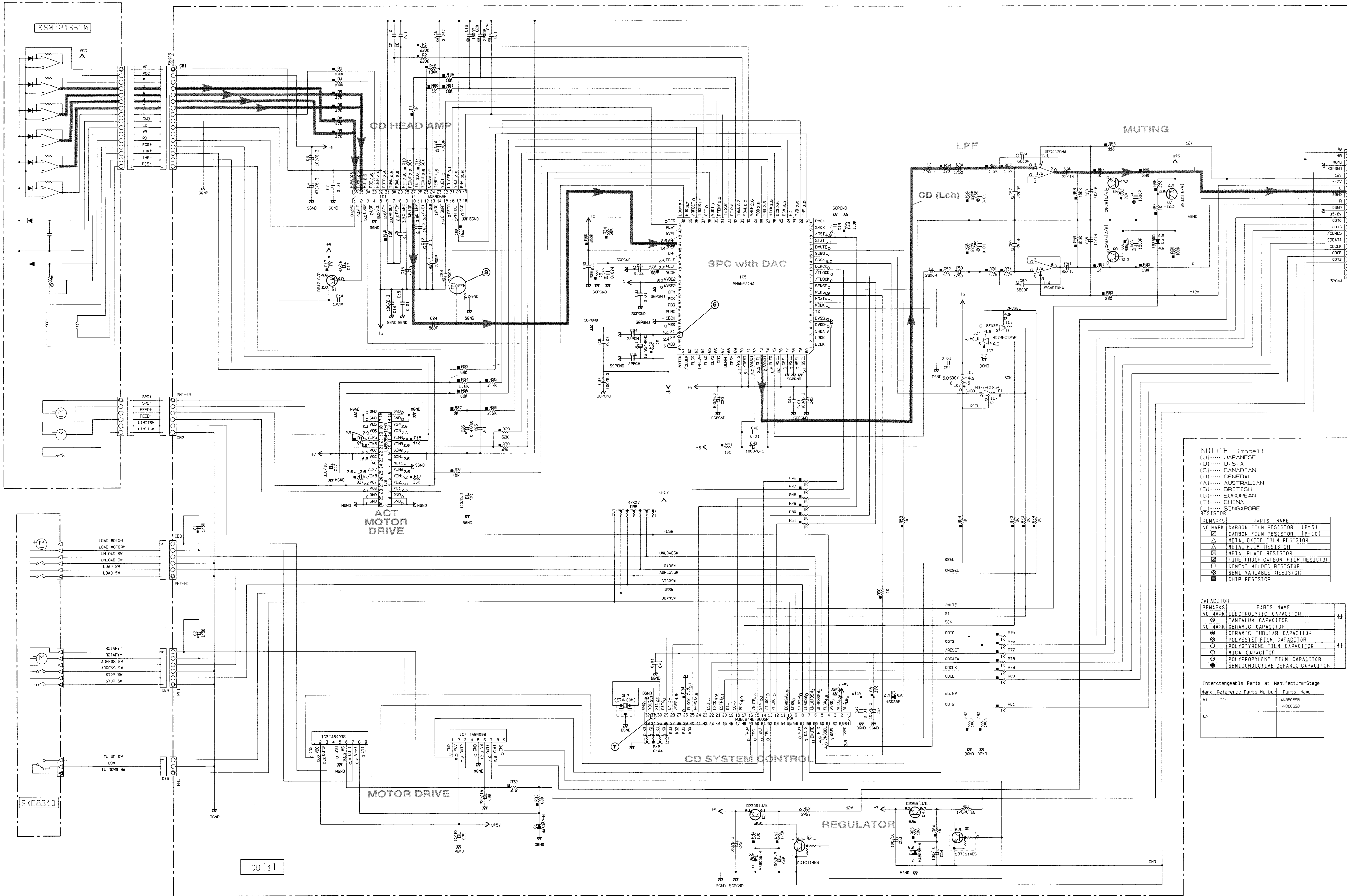
Point ⑤
 CH1 : Pin35 of IC813 V : 2V/div (CH1)
 CH2 : Anode of D807 V : 2V/div (CH2)
 H : 0.5 sec/div DC range 1 : 1 probe
 (This waveform is not available by pushing the power switch ON and OFF.)



With the POWER ON, disconnect the AC power cord. Reconnect the A/C power cord and the above waveforms will start.

* All voltages are measured with a 10MΩ/V DC electric volt meter.
 * 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.

■ SCHEMATIC DIAGRAM (CD)



NOTICE (model)

(J)..... JAPANESE
 (U)..... U. S. A.
 (C)..... CANADIAN
 (R)..... GENERAL
 (A)..... AUSTRALIAN
 (B)..... BRITISH
 (O)..... EUROPEAN
 (T)..... CHINA
 (S)..... SINGAPORE

RESISTOR

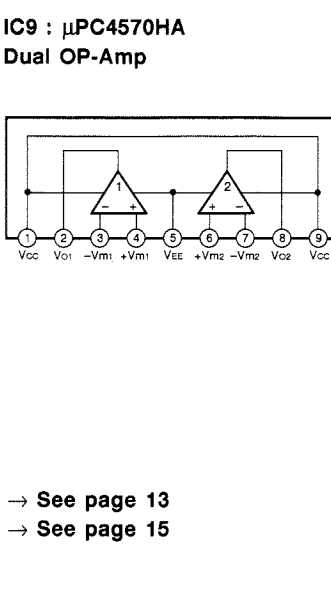
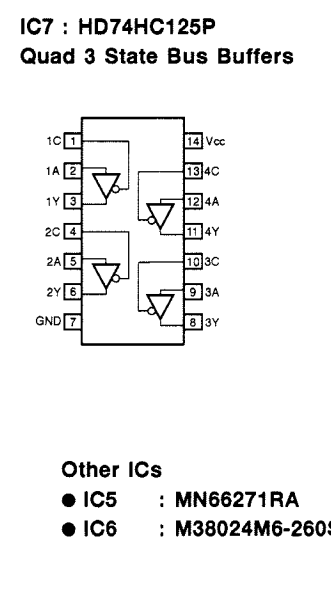
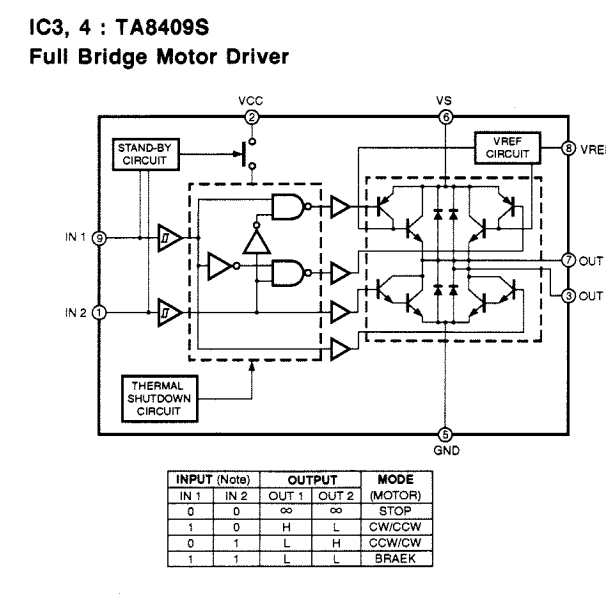
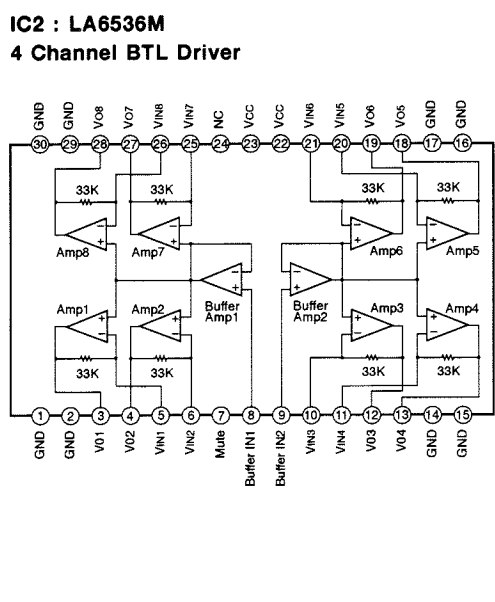
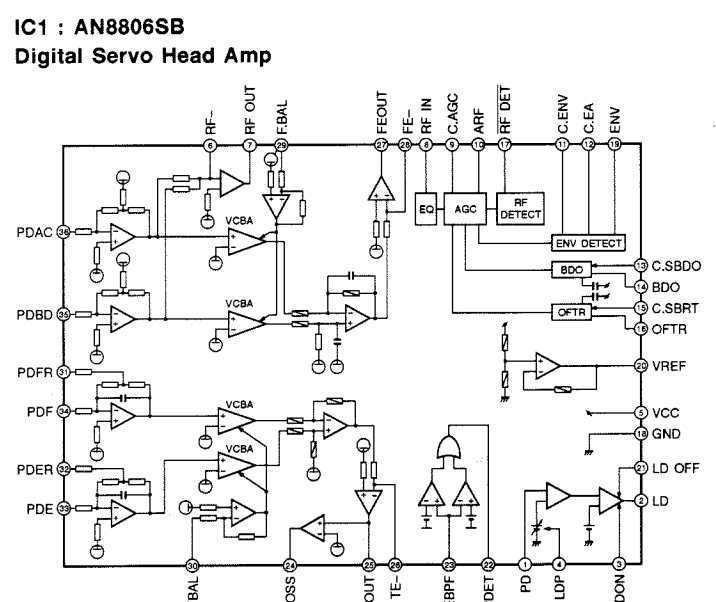
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
■	METAL PLATE RESISTOR
▨	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
○	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
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

Interchangeable Parts at Manufacture-Stage

Nox	Reference Parts Number	Part Name
41	IC1	AN8806SB
42		AN8603SB

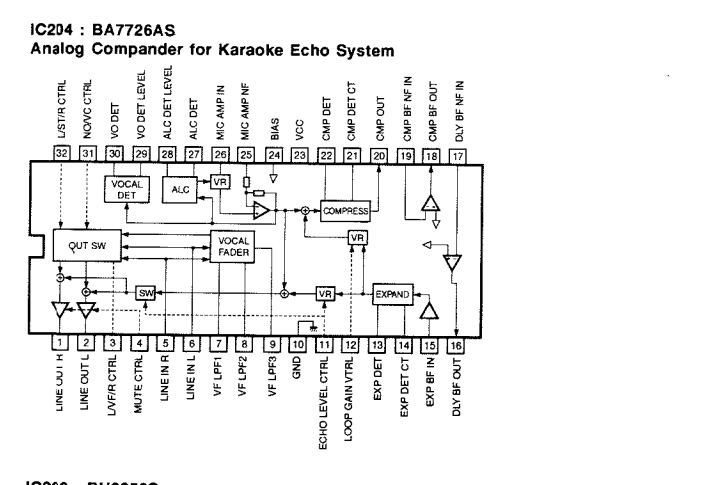
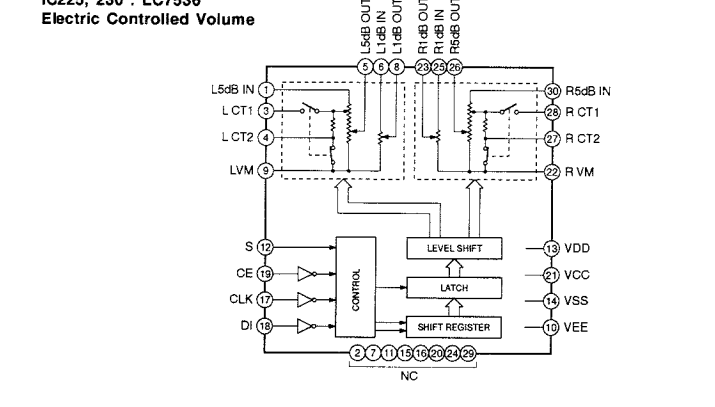
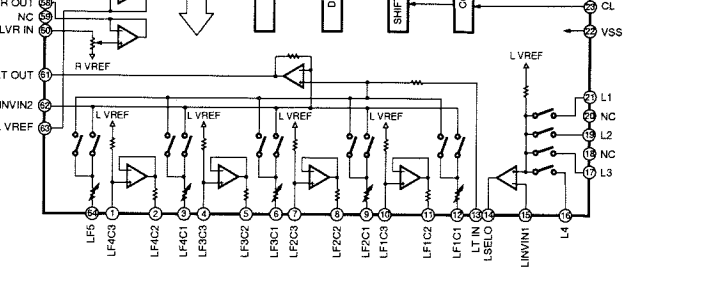
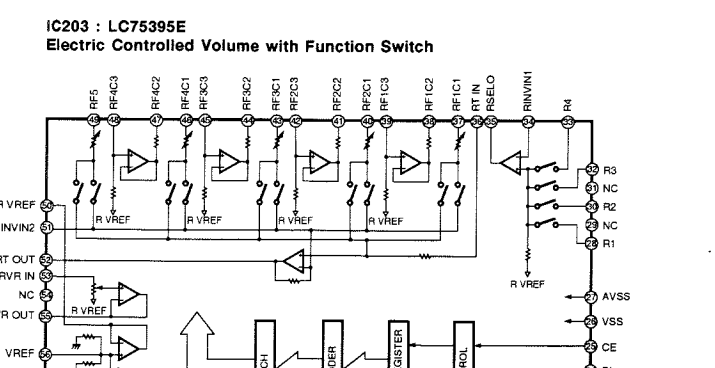
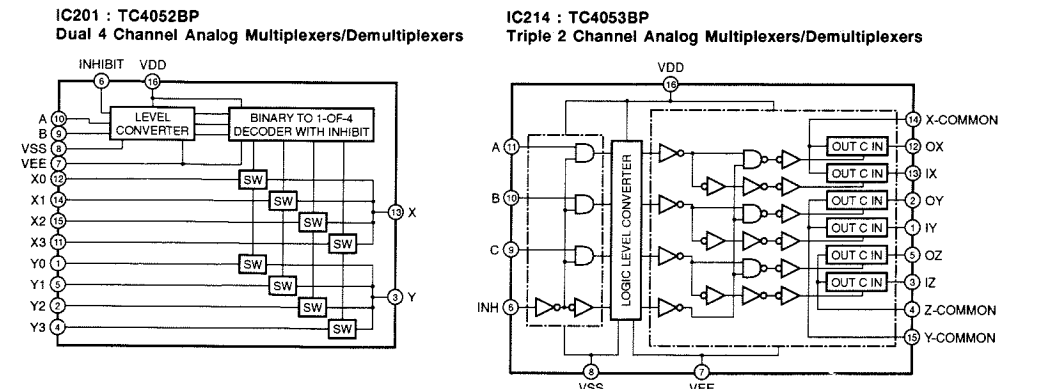
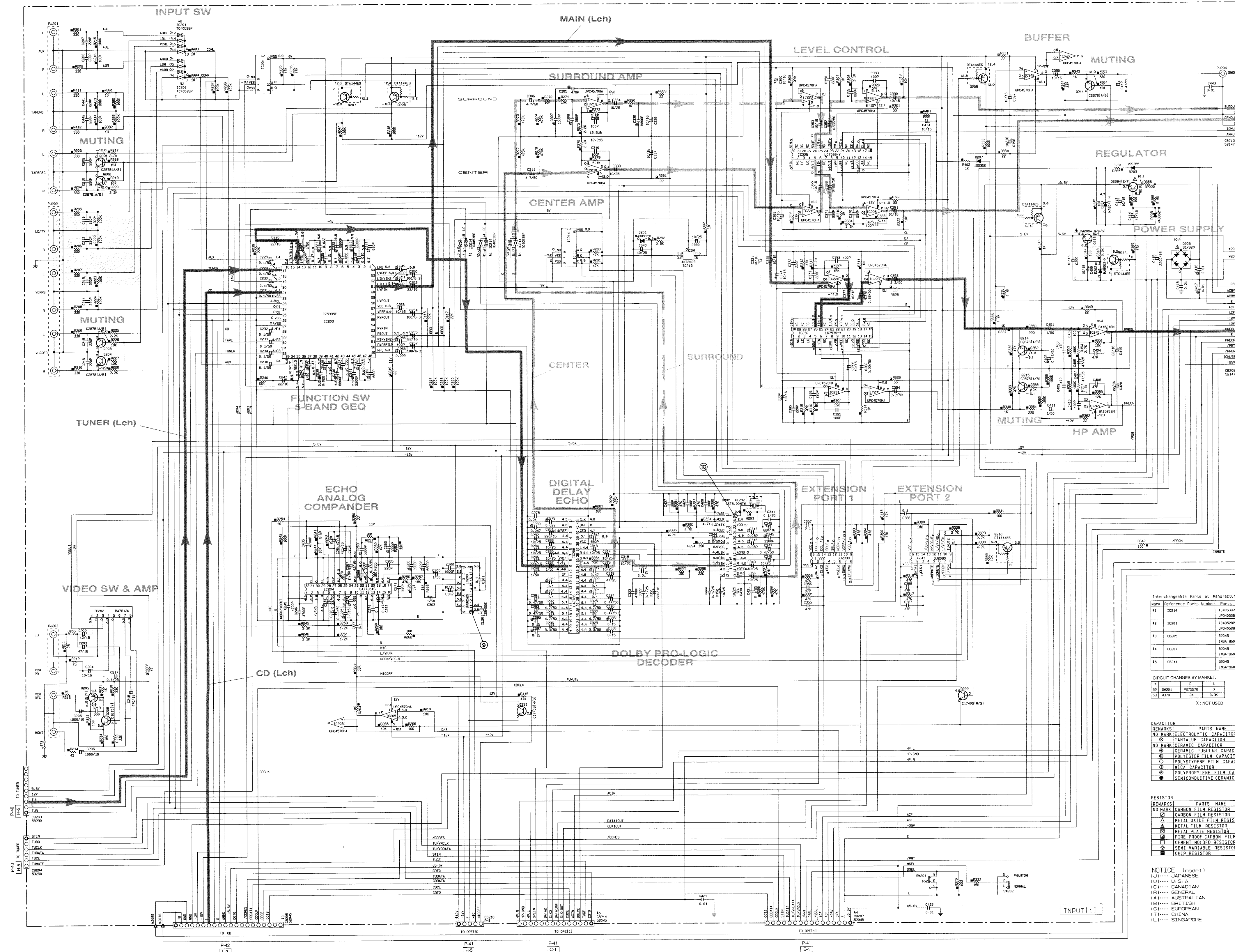


Other ICs

- IC5 : MN6271RA → See page 13
- IC6 : M38024M6-260SP → See page 15

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

SCHEMATIC DIAGRAM (INPUT)



Interchangeable Parts at Manufacture Stage

Mark	Reference Part Number	Parts Name
41	IC14	TC4053BP
42	IC201	U40453BC
43	CR005	5045
44	CR007	1MSA-5045-20C
45	CR214	1MSA-5045-15C
46	CR214	5045
47	CR214	1MSA-5045-14C

CIRCUIT CHANGES BY MARKET:

1	SK201	W7570	L
2	R370	2K	3.9K

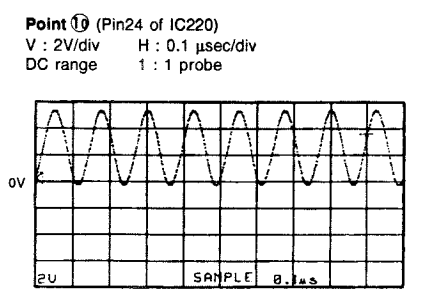
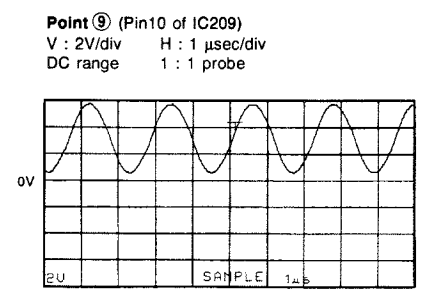
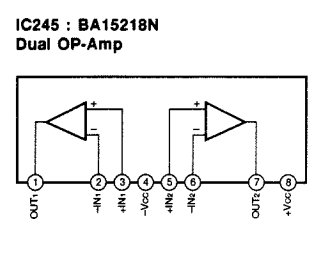
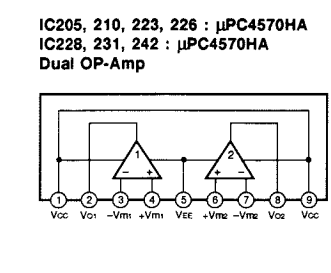
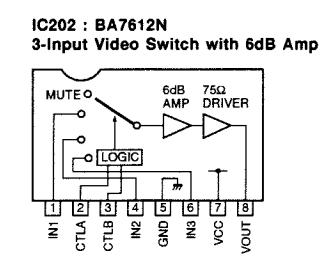
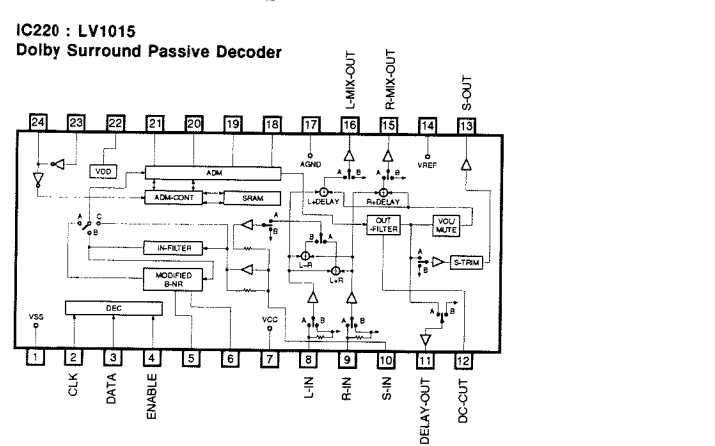
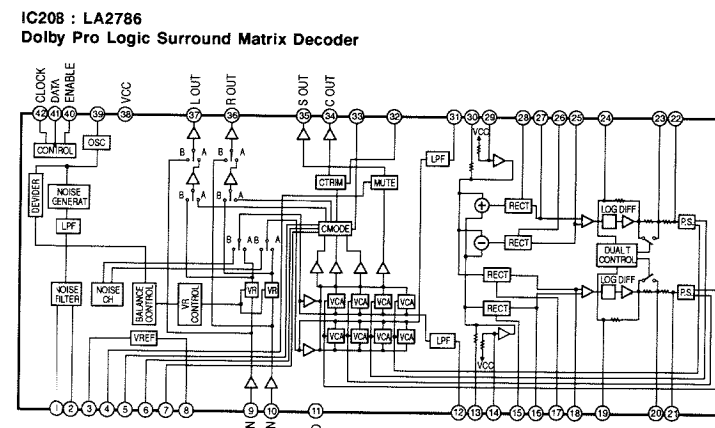
X: NOT USED

Capacitor Legend

MARK	REMARKS	PARTS NAME
⊙	NO MARK	ELECTROLYTIC CAPACITOR
⊖	NO MARK	CERAMIC CAPACITOR
⊕	NO MARK	CERAMIC TUBULAR CAPACITOR
⊗	NO MARK	POLYESTER FILM CAPACITOR
⊙	NO MARK	POLYSIEMENS FILM CAPACITOR
⊖	NO MARK	MICA CAPACITOR
⊕	NO MARK	POLYPROPYLENE FILM CAPACITOR
⊗	NO MARK	SEMICONDUCTIVE CERAMIC CAPACITOR

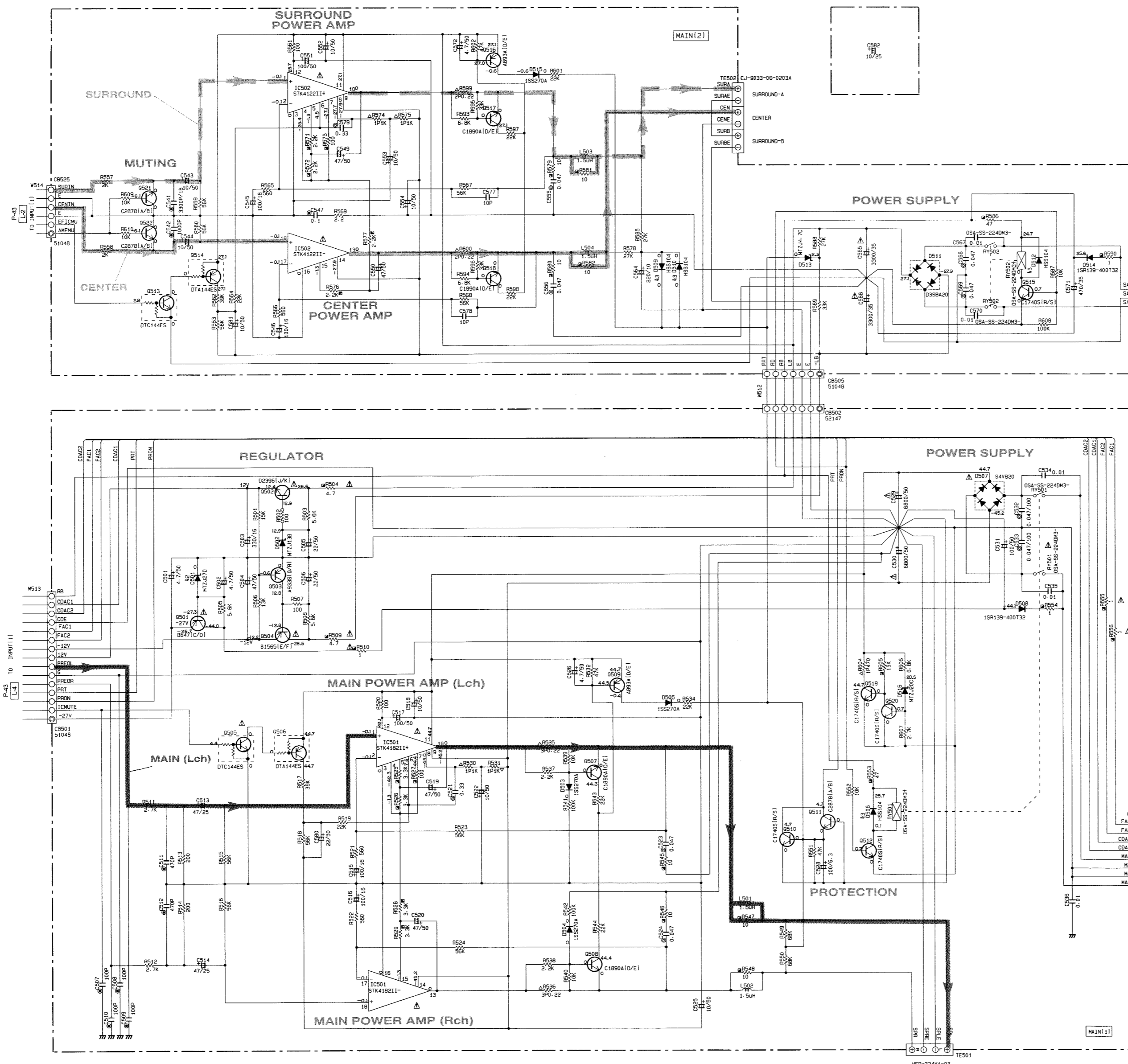
Resistor Legend

MARK	REMARKS	PARTS NAME
⊖	NO MARK	CARBON FILM RESISTOR (P-5)
⊕	NO MARK	CARBON FILM RESISTOR (P-10)
⊗	NO MARK	METAL OXIDE FILM RESISTOR
⊙	NO MARK	METAL FILM RESISTOR
⊖	NO MARK	METAL PLATE RESISTOR
⊕	NO MARK	THICK FROOF CARBON FILM RESISTOR
⊗	NO MARK	CEMENT MOUNTED RESISTOR
⊙	NO MARK	SEMI-VARIABLE RESISTOR
⊖	NO MARK	TRIMP RESISTOR



* All voltages are measured with a 10MΩV DC electric volt meter.
* Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

SCHEMATIC DIAGRAM (MAIN)



CIRCUIT CHANGES BY MARKET.

S	R	L	
5	F502	T4L250V K8007B	T1:6AL250V #80166
9	T501	XS423	XS425
9	TE503	VV53780	VV53740

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
K2	0501	MT2-070 #5212
K3	0506-509-510-512	HSS104 1SS133 1SS176

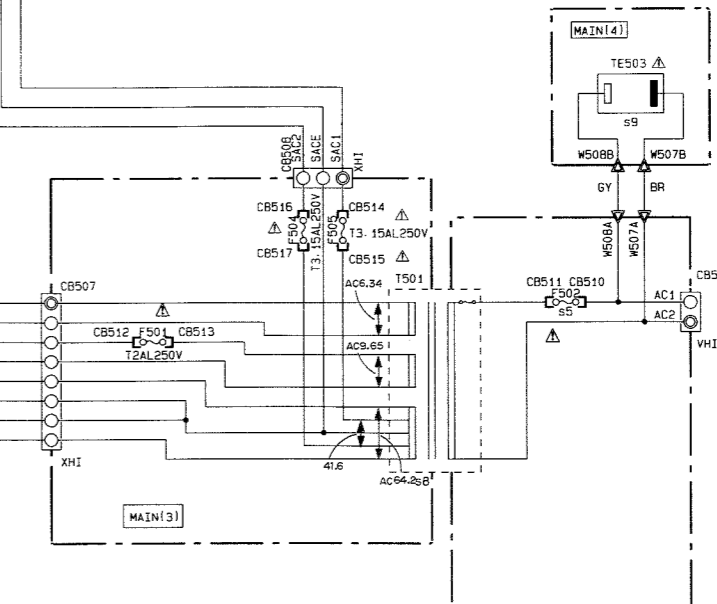
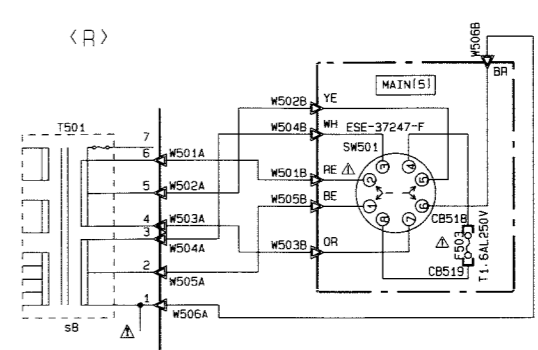
NOTICE (model)
 (J)..... JAPANESE
 (U)..... U. S. A
 (C)..... CANADIAN
 (R)..... GENERAL
 (A)..... AUSTRALIAN
 (B)..... BRITISH
 (G)..... EUROPEAN
 (T)..... CHINA
 (L)..... SINGAPORE

RESISTOR

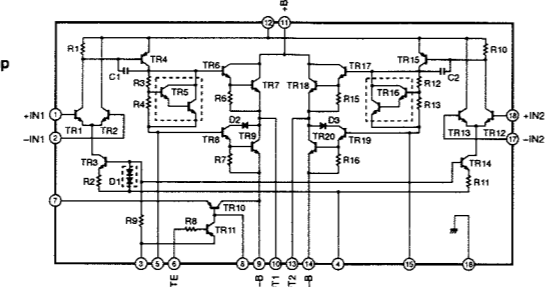
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
■	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊞	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
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



IC501 : STK418211
 IC502 : STK4122MK2
 2 Channel AF Power Amp



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