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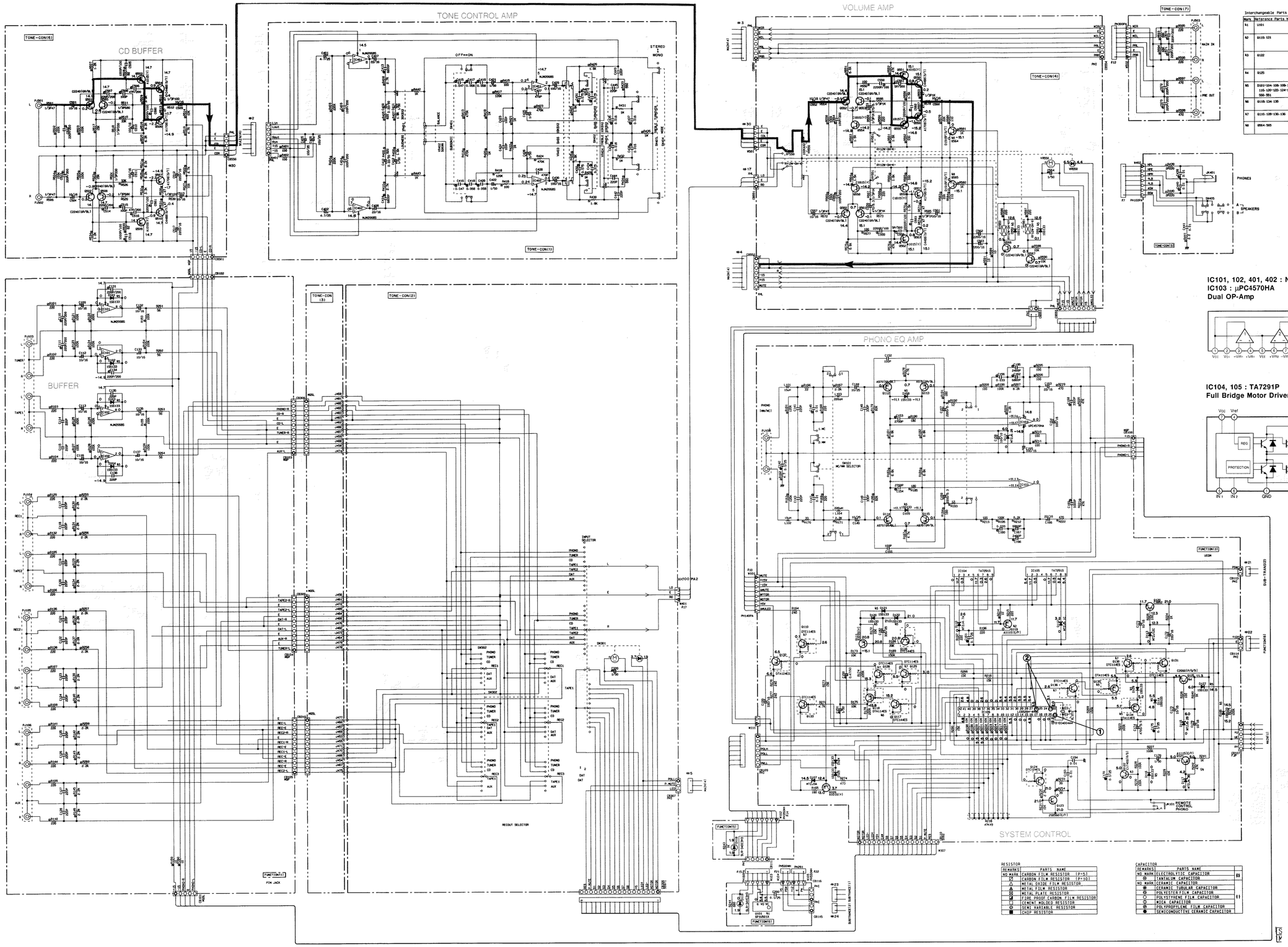
■ SCHEMATIC DIAGRAM (FUNCTION & TONE-CON)



Interchangeable Parts at Manufacture-Stage		
Mark	Reference Parts Number	Parts Name
K1	U101	UPD6616 UPD6621X
K2	Q115-121	2SA1115(E/F) 2SA933S(Q/R) 2SA1309A(Q/R/S)
K3	Q122	2SC1740S(R/S) 2SC2603(E/F) 2SC3311A(Q/R/S)
K4	Q125	2SC2060(P/Q/R) 2SD401(E/F)
K5	D101-104, 109, 109-114 115, 120-123, 124-128 500-551	1SS133 HSS104
K6	Q115-134-139	DTA114ES UN4111
K7	Q110-128-130-136	DTC114ES UN4211
K8	Q554-565	2SD1919F(S/T) 2SC2878(A/B)

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.

2SA970 (GR, BL)
2SA1015 (Y)
2SB560 (E, F)
2SC1815 (Y)
2SC2060 (P, Q, R)
2SD400 (E, F)
2SC2240 (GR, BL)
2SD438 (E, F)

2SA1115 (E, F)
2SA933S (Q, R)
2SA1309A (Q, R, S)
2SC1740S (R, S)
2SC2603 (E, F)
2SC3311A (Q, R, S)
DTC144ES
DTA124ES
DTA114ES
UN4111
DTC114ES
UN4211
DTC124ES
2SD1915 (F) S, T
2SC2878 (A, B)

2SC3852

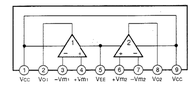
1SS133
HSS104TD
MTZJ3.0A
MTZJ4.3B
MTZJ4.7A
MTZJ5.1C
MTZJ6.2B
MTZJ12.0C

NJM2068S

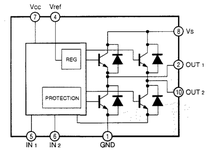
μPC4570HA
TA7291S

LC65201H

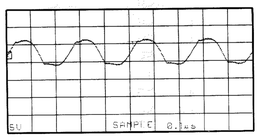
IC101, 102, 401, 402 : NJM2068S
IC103 : μPC4570HA
Dual OP-Amp



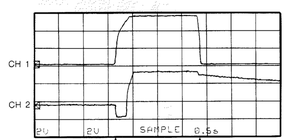
IC104, 105 : TA7291P
Full Bridge Motor Driver



Point ①
(Pin 21 of IC106)
V : 5V/div H : 0.1μsec/div
DC range 1 : 1 probe



Point ②
CH1 : Pin 26 of IC106 V : 2V/div (CH1)
CH2 : Pin 23 of IC106 V : 2V/div (CH2)
H : 0.5sec/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 A/C power cord. Reconnect the A/C power cord and the above waveforms will start.

Disconnect the power cord from the AC outlet.

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

- All voltage 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.

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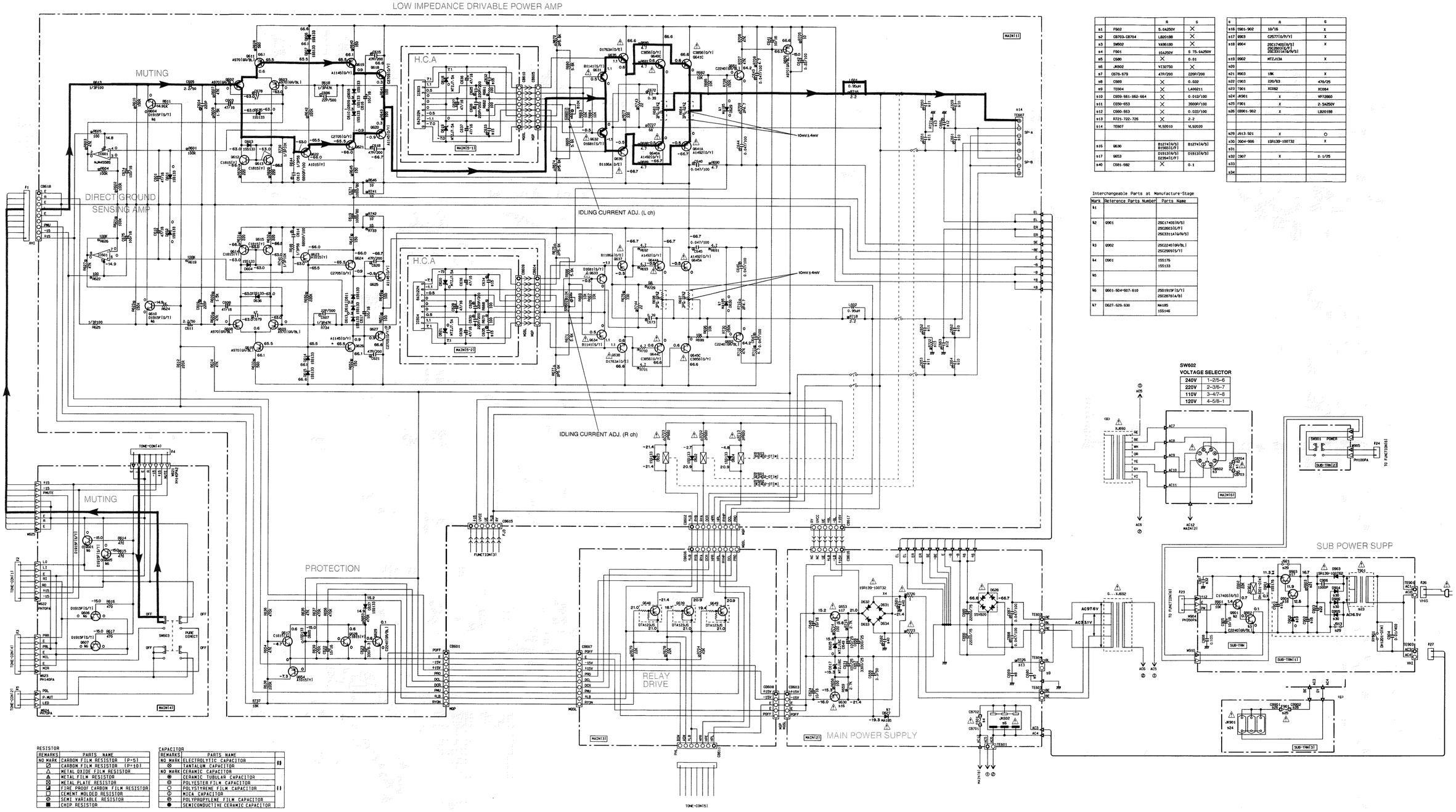
■ SCHEMATIC DIAGRAM (MAIN & SUB-TRANS)



		R	G
s1	F502	5.0A250V	×
s2	CB703-CB704	LB20188	×
s3	SW502	VA96180	×
s4	F601	10A250V	5.75-0A250V
s5	C580	×	0.01
s6	JK602	V132750	×
s7	C578-579	47P/200	220P/200
s8	C569	×	0.022
s9	TE604	×	LA40211
s10	C559-561-562-564	×	0.012/100
s11	C550-553	×	3900P/100
s12	C560-563	×	0.022/100
s13	R721-722-726	×	2.2
s14	TE607	VL52010	VL52020
s15	Q630	B1274(R/S) B1565(E/F)	B1274(R/S)
s17	Q653	D1913(R/S) D2941(E/F)	D1913(R/S)
s40	C581-582	×	0.1

s		R	G
s16	IC601-602	10/16	X
s17	D563	C25771(O/R/Y)	X
s18	Q604	2SC1740S(R/S) 2SC2603(E/F) 2SC3311A(R/S)	X
s19	D602	MTZJ13A	X
s20			
s21	R603	18K	X
s22	C603	220/63	470/25
s23	IC601	KC062	KC084
s24	JK901	X	WY72860
s25	F901	X	2.5A250V
s26	CB901-902	X	LB20188
s29	J913-921	X	O
s30	2904-906	1SR139-100T32	X
s31			
s32	C907	X	0.1/25
s33			
s34			

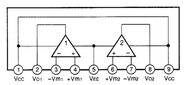
Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1		
k2	Q901	2SC1740S(R/S) 2SC2603(E/F) 2SC3311A(R/S)
k3	Q902	2SC2240(GR/BL) 2SC2909(S/T)
k4	D901	1SS176 1SS133
k5		
k6	Q601-604-607-610	2SD1915F(S/T) 2SC2878(A/B)
k7	Q627-629-630	MA185 1SS146

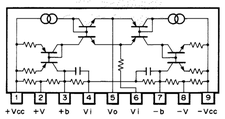
RESISTOR		
REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR (P=5)	
⊘	CARBON FILM RESISTOR (P=10)	
△	METAL OXIDE FILM RESISTOR	
▲	METAL FILM RESISTOR	
⊗	METAL PLATE RESISTOR	
◪	FIRE PROOF CARBON FILM RESISTOR	
□	CEMENT MOLDED RESISTOR	
⊘	SEMI VARIABLE RESISTOR	
■	CHIP RESISTOR	

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	‖

IC601 : NJM4558S
Dual OP-Amp



IC603, 604 : BA3122N
Hyperbolic Conversion Amp



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS.

2SC1740S(R,S) 2SC2603(E,F) 2SC3311A(Q,R,S) 2SD1915(F/S,T) 2SC2878(A,B) DTA123JS	2SC2240(GR,BL) 2SC2909(S,T) 2SA970(GR,BL) 2SA1015(Y) 2SA1145(O,Y) 2SC1815(Y) 2SC2705(O,Y)	2SC2577(O,P,Y) 2SA1492(O,Y) 2SC3856(O,Y)	2SB1274(R,S) 2SB1186A(D,E) 2SD1913(R,S) 2SD1763A(D,E)	2SB1141(S,T) 2SD1681(S,T)	1SS176 1SS133 ISR139-100 MA185 1SS146 MTZJ7.5A MTZJ13.0A MTZJ16.0C	S5VB20	NJM4558S	BA3122N

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- Schematic diagram is subject to change without notice.

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