

CLASS D MONO POWER AMPLIFIER

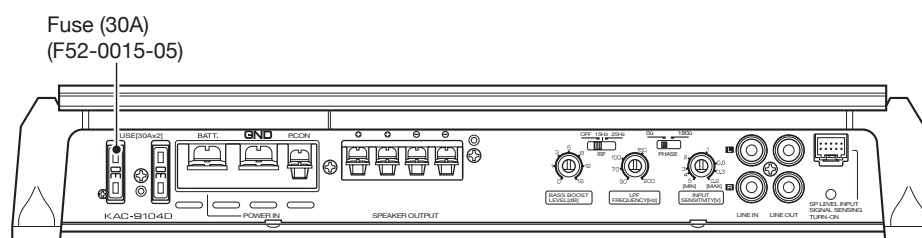
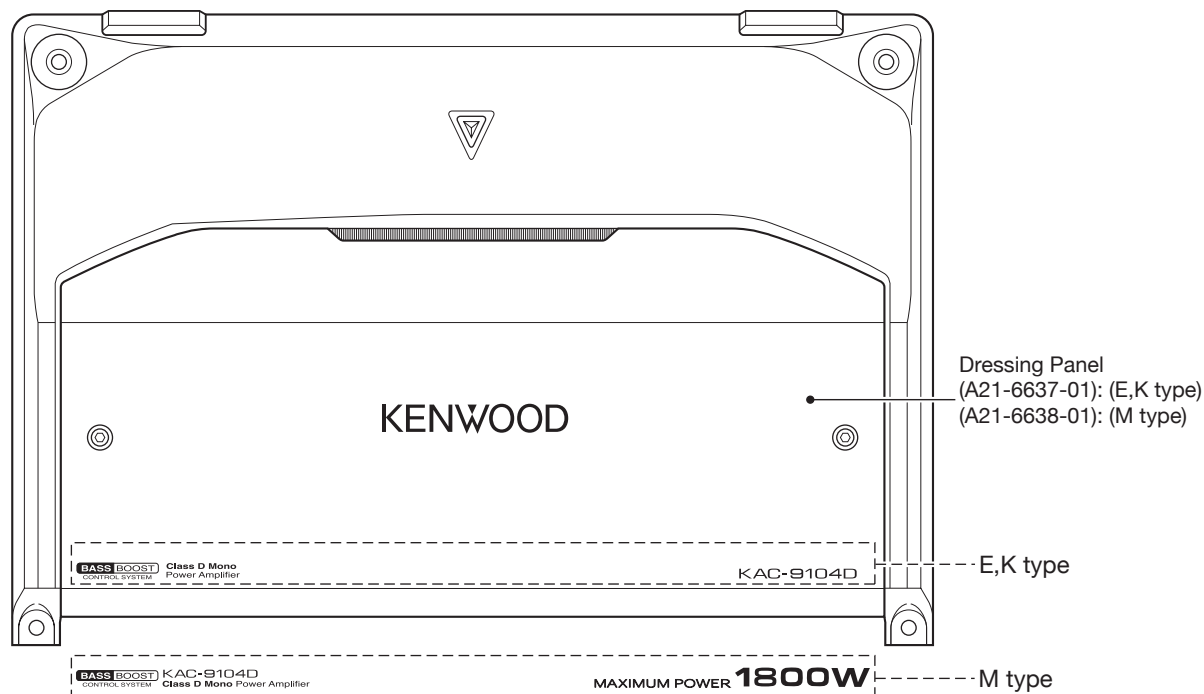
KAC-9104D

SERVICE MANUAL

KENWOOD

Kenwood Corporation

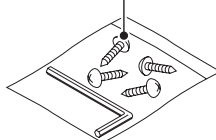
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B53-0611-00 (N) 519



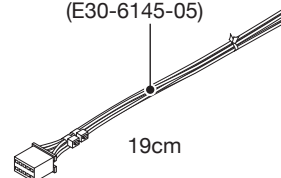
Accessories
(W01-1606-05)



Screw & wrench key set
(N99-1820-05)



Connecting cord assy
(E30-6145-05)

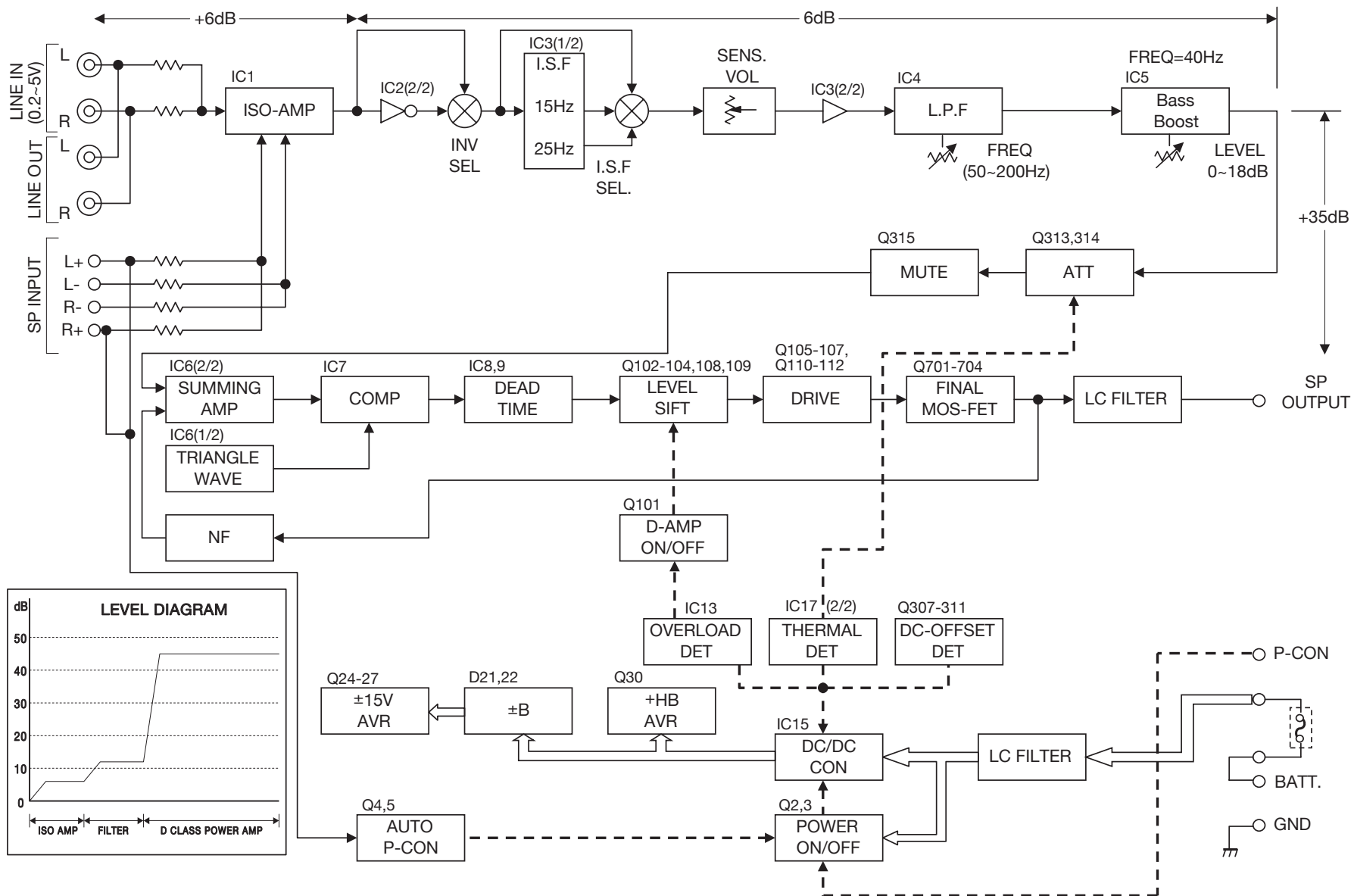


19cm



This product uses Lead Free solder.
This product complies with the **RoHS** directive for the European market.

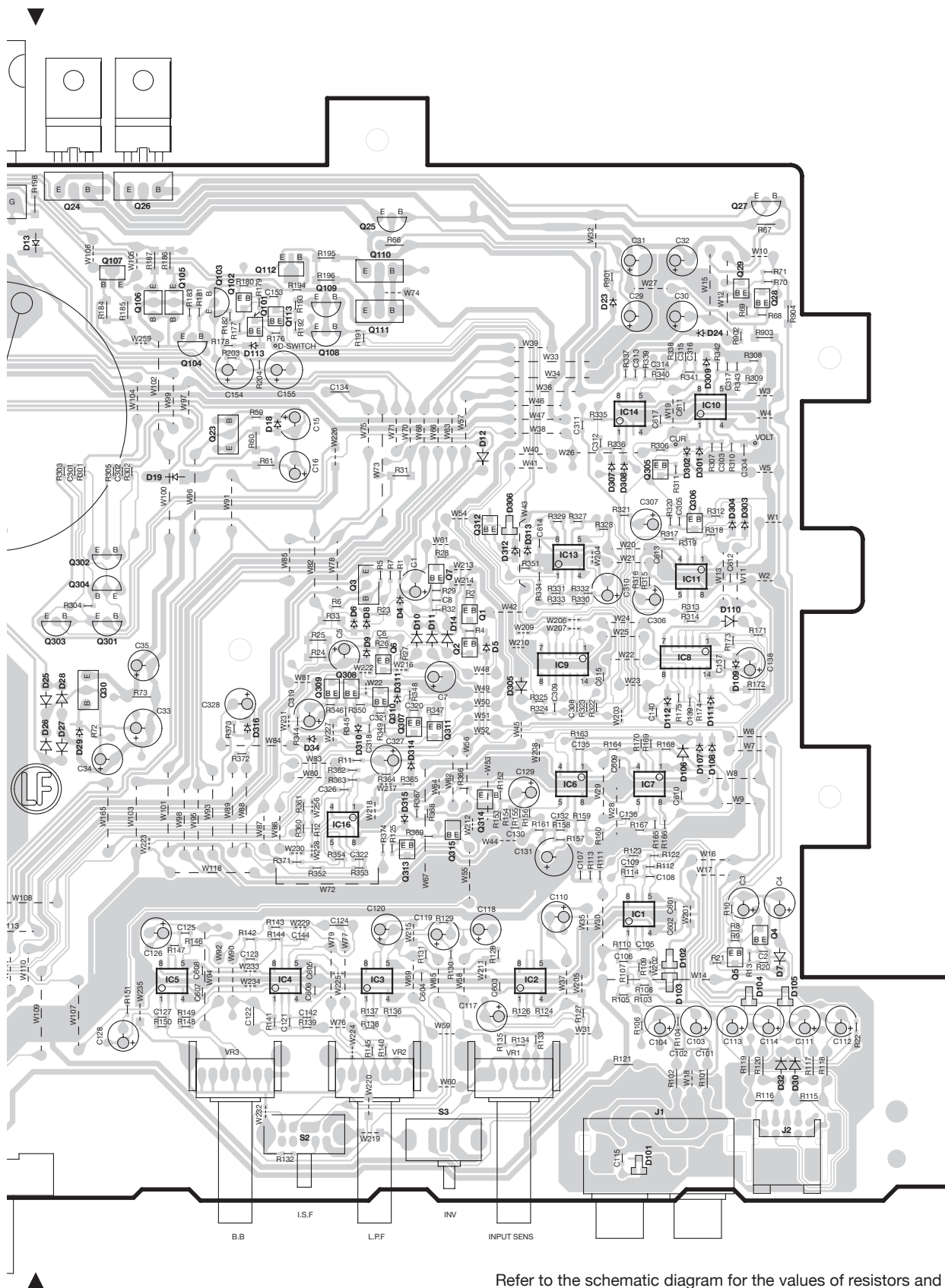
BLOCK DIAGRAM



COMPONENTS DESCRIPTION

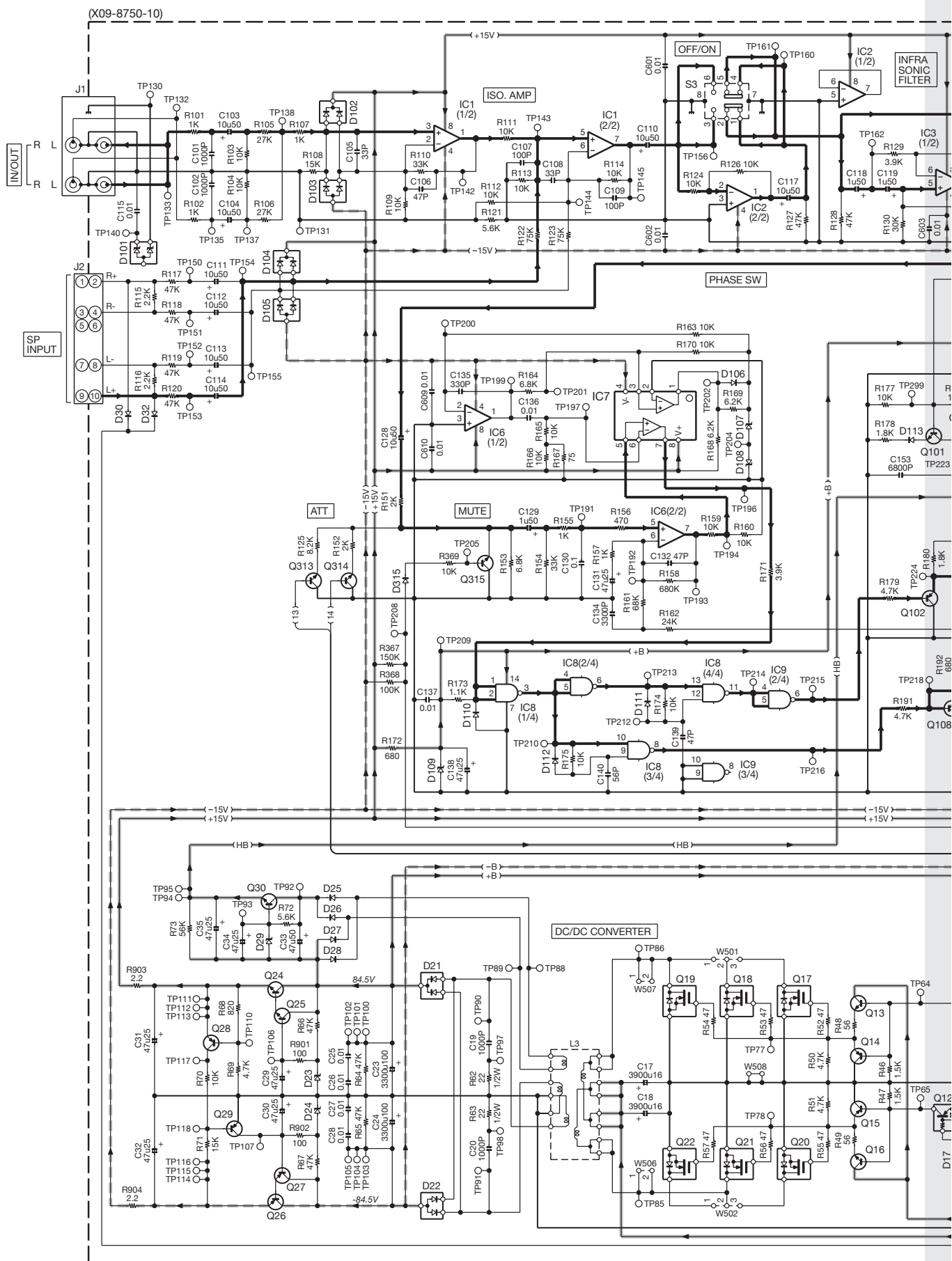
● AUDIO UNIT (X09-8750-10)

Ref. No.	Application / Function	Operation / Condition / Compatibility
IC1	Isolation amplifier	Isolates noises caused by potential differences in GND
IC2	Phase	Change phase ($0^\circ \rightarrow 180^\circ$)
IC3	INFRA SONIC FILTER	Cuts off ultra low frequency of audio signal
IC4	LOW PASS FILTER	Cuts off high frequency of audio signal
IC5	BASS BOOST	Bass boost (Variable level)
IC6 (1/2)	Triangular wave generation	Generates reference signal for digitalizing analog signal
IC6 (2/2)	Error amplifier	Compensates errors by feedback from the output
IC7	Comparator	Digitalizes by comparing analog signal with triangular waves
IC8,9	NAND	Generates and shapes the inverted waveform and to create dead time in D-class section
IC10,11,14	Resonance detection circuit	Detects short in SP output circuit, measures over current in the circuit, and activates the protection operation
IC13	Comparator, Control circuit	Controls D/D CON and D-class On/Off with the over current detection and Pcon control signals
IC15	DC/DC converter IC	Generates drive signal for switching component
IC16 (1/2)	Attenuation circuit to attenuate input signal by 6dB	Attenuates output when temperature in the set becomes too high
IC16 (2/2)	Attenuation circuit to attenuate input signal by 1.5dB	Attenuates output when temperature in the set becomes high
IC17 (1/2)	Power supply voltage PWM control	Controls the dead time of DC/DC converter when the power supply voltage in the secondary side becomes too high. Prevents the power supply from pumping
IC17 (2/2)	Temperature protection	Turns off DC/DC converter when temperature in the set becomes too high
Q1-3	PCON switch	Turns on the circuit when ON signal is applied to the PCON circuit
Q4,5	AUTO Pcon	Sends DC voltage from SP IN to Pcon control circuit
Q6,7	Mute	Generates mute drive signal and turns off LED
Q8,9	DC/DC converter ON/OFF control	Turns off DC/DC converter when protection is detected
Q10	4.4V AVR	Vef 5V reference AVR
Q11,12	DC/DC converter pulse ON/OFF control	ON or OFF of DC/DC converter drive waveform
Q13-16	Gate driver	Gate driver in DC/DC converter FET
Q17-22	DC/DC converter	DC/DC converter switching
Q23	FAN drive	Limits FAN power supply voltage under the rated voltage
Q24-27	AVR	$\pm 15V$ AVR
Q28,29	Tracking when $\pm 15V$ AVR is turned OFF	Matches the trailing edge of “-15V” AVR with that of “+15V” AVR
Q30	HB 15V AVR	Stacking AVR to obtain High+B for D-class
Q101,113	D-class amplifier switch	Turns the D-class amplifier ON or OFF
Q102-112	Pulse amplification, shaping and level shift	Generates the signal that drives the D-class final FET
Q301-304	Current-voltage conversion	Converts current to voltage to detect over current and sends it to the comparator
Q305,306	Resonance detection circuit	Detects short in SP output circuit, measures over current in the circuit, and activates protection operation
Q307-311	Latch circuit	Detects abnormal output DC voltage and retains it
Q312	Comparator, Control circuit	Controls D/D CON and D-class On/Off with the over current detection and Pcon control signals
Q313	Attenuation circuit to attenuate input signal by 1.5dB	Attenuates output when temperature in the set becomes high
Q314	Attenuation circuit to attenuate input signal by 6dB	Attenuates output when temperature in the set becomes too high
Q315	Mute	Turns off audio signal
Q701-704	Electric power amplification	Switching of D-class high current

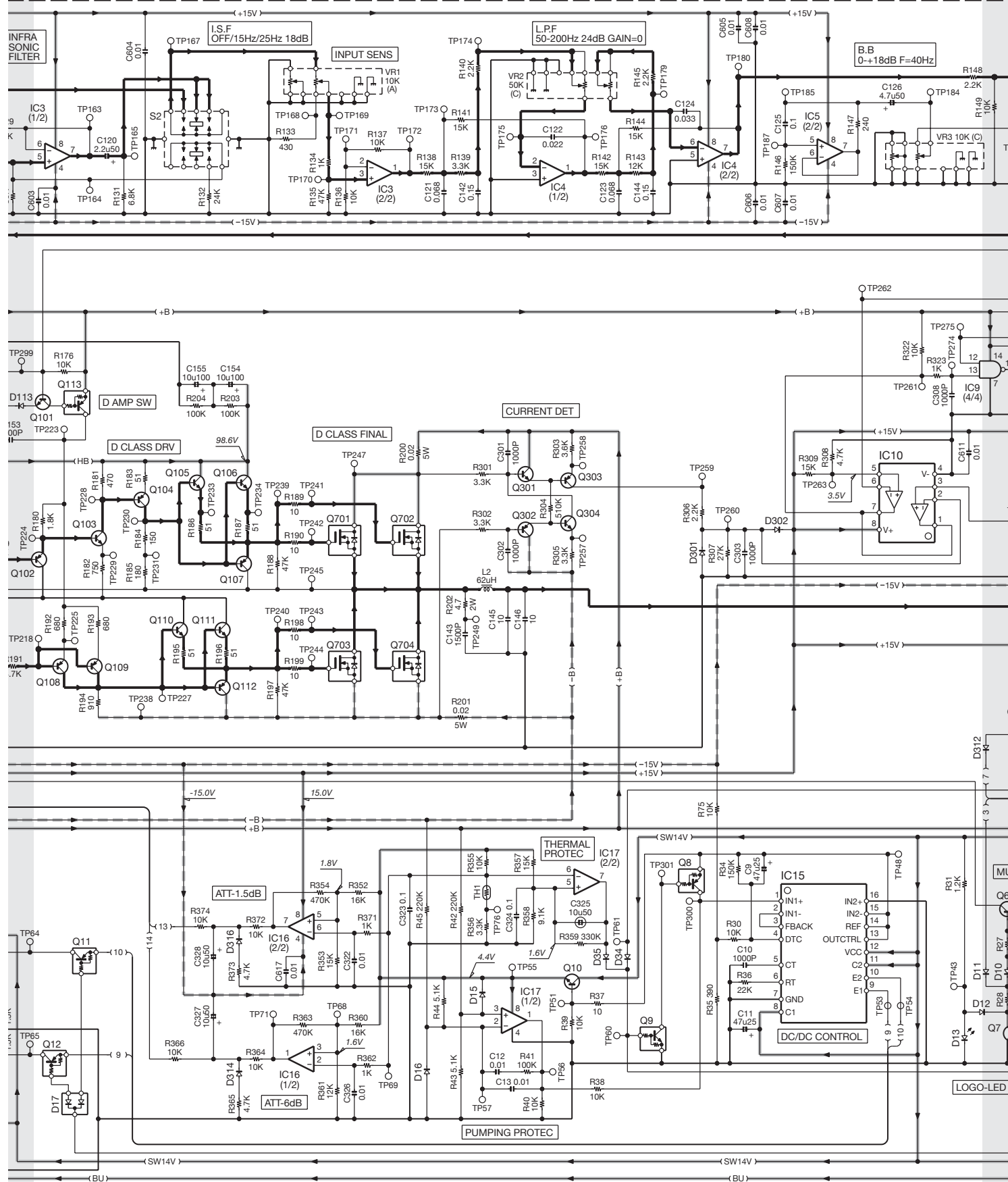


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
Q30	4F	Q105	2F	Q110	2G	Q302	3F	Q307	4G	Q312	3H
Q101	2G	Q106	2F	Q111	2G	Q303	4F	Q308	4G	Q313	5G
Q102	2G	Q107	2F	Q112	2G	Q304	4F	Q309	4G	Q314	5H
Q103	2F	Q108	2G	Q113	2G	Q305	3H	Q310	4G	Q315	5G
Q104	3F	Q109	2G	Q301	4F	Q306	3I	Q311	4G	Q701	2C
										Q702	2D
										Q703	2E
										Q704	2E

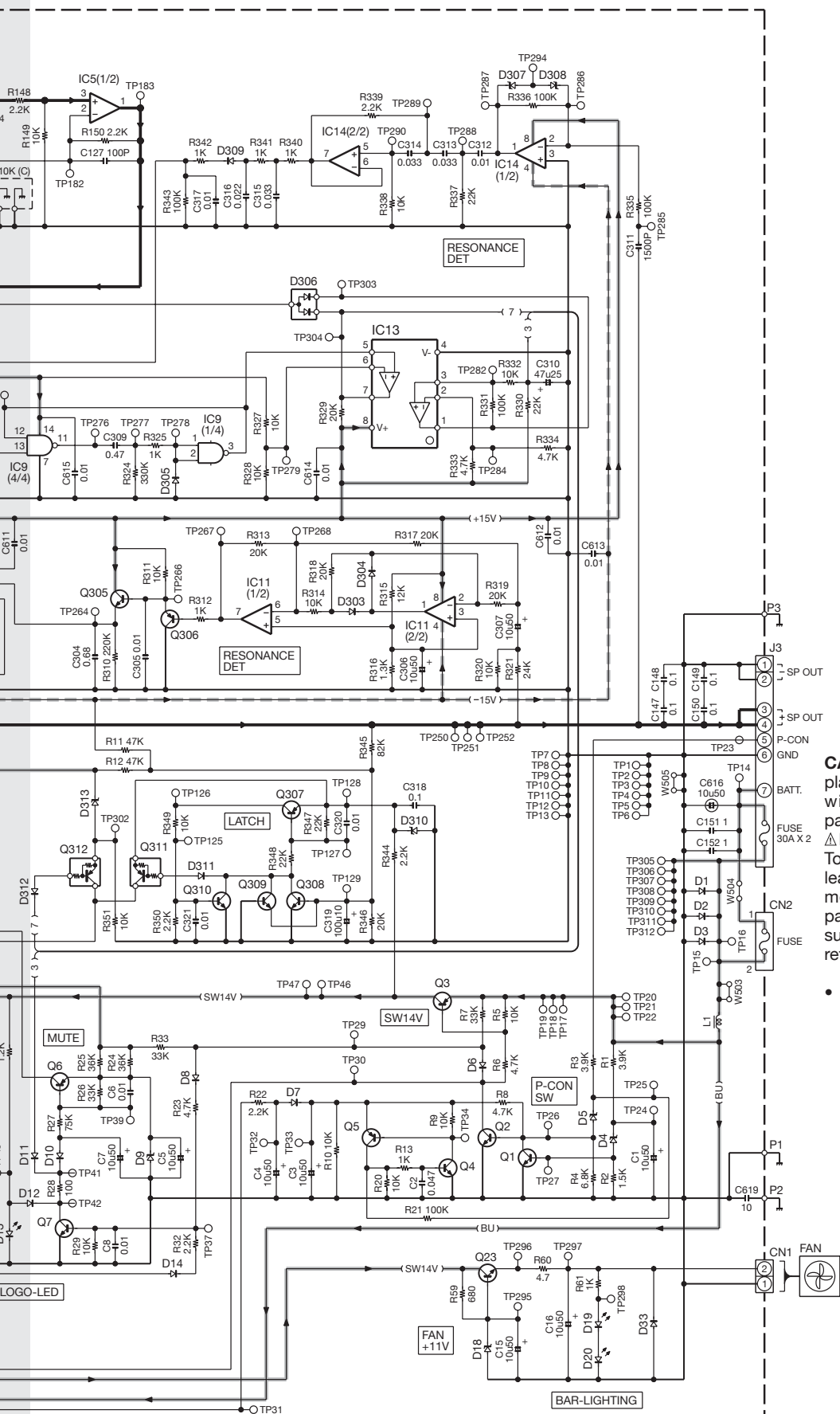
KAC-9104D



KAC-9104D



KAC-9104D



IC1-6,11,14,16 : BA4560RF
 IC7,10,13 : BA2903F
 IC8,9 : SN74HC00D
 IC15 : TL494IDR
 IC17 : BA10358F

Q1,2,4,10,101,305,308-310,
 313-315 : 2SC4081
 Q3 : 2SB1241
 Q5,6,28,29,102,306,307
 : 2SA1576A
 Q7,13,16 : 2SC4097
 Q8,11,12,113,312 : DTA114EUA
 Q9 : DTC114EUA
 Q14,15 : 2SA1577
 Q17-22 : STP60NF06FP
 Q23,30 : 2SD1863
 Q24 : 2SC4883ANF
 Q25,103 : 2SC1845-A(F,E)
 Q26 : 2SA1859ANF
 Q27,108,109 : 2SA992-A(F,E)
 Q104 : 2SA1370
 Q105,106 : 2SC3415S
 Q107,112 : 2SB1427
 Q110,111 : 2SC3902
 Q301,304 : 2SC3478AA(L,K)
 Q302,303 : 2SA1376AA(L,K)
 Q311 : DTA124EUA
 Q701-704 : IRFP250NPBF

D1-3 : 1N5406-TSC
 D4,29 : UDZS15B
 D5 : UDZS6.8B
 D6,8,33,34,111-113,
 301-304,309,311,312,
 314-316 : 1SS355
 D7,10-12,14-16,25-28,30,
 32,35,106,110,305
 : 1SS133

D9,307,308,310 : UDZS10B
 D13 : B30-1743-05
 D17,102,104 : LM1MA142WK-G
 D18 : UDZS12B
 D19,20 : B30-1770-05
 D21 : FCH20A20
 D22 : FRH20A20
 D23,24 : UDZS16B
 D101 : UMZ6.8N
 D103,105,306 : LM1MA142WA-G
 D107,108 : UDZS5.6B
 D109 : UDZS5.1B
 D313 : UDZS6.2B

— SIGNAL LINE
 — GND LINE
 — +B LINE
 — -B LINE

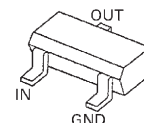
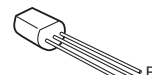
CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

△ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

2SA992-A
 2SC1845-A

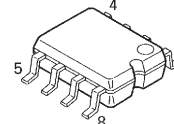
DTA114EUA
 DTA124EUA
 DTC114EUA



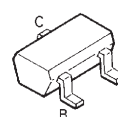
2SA1576A



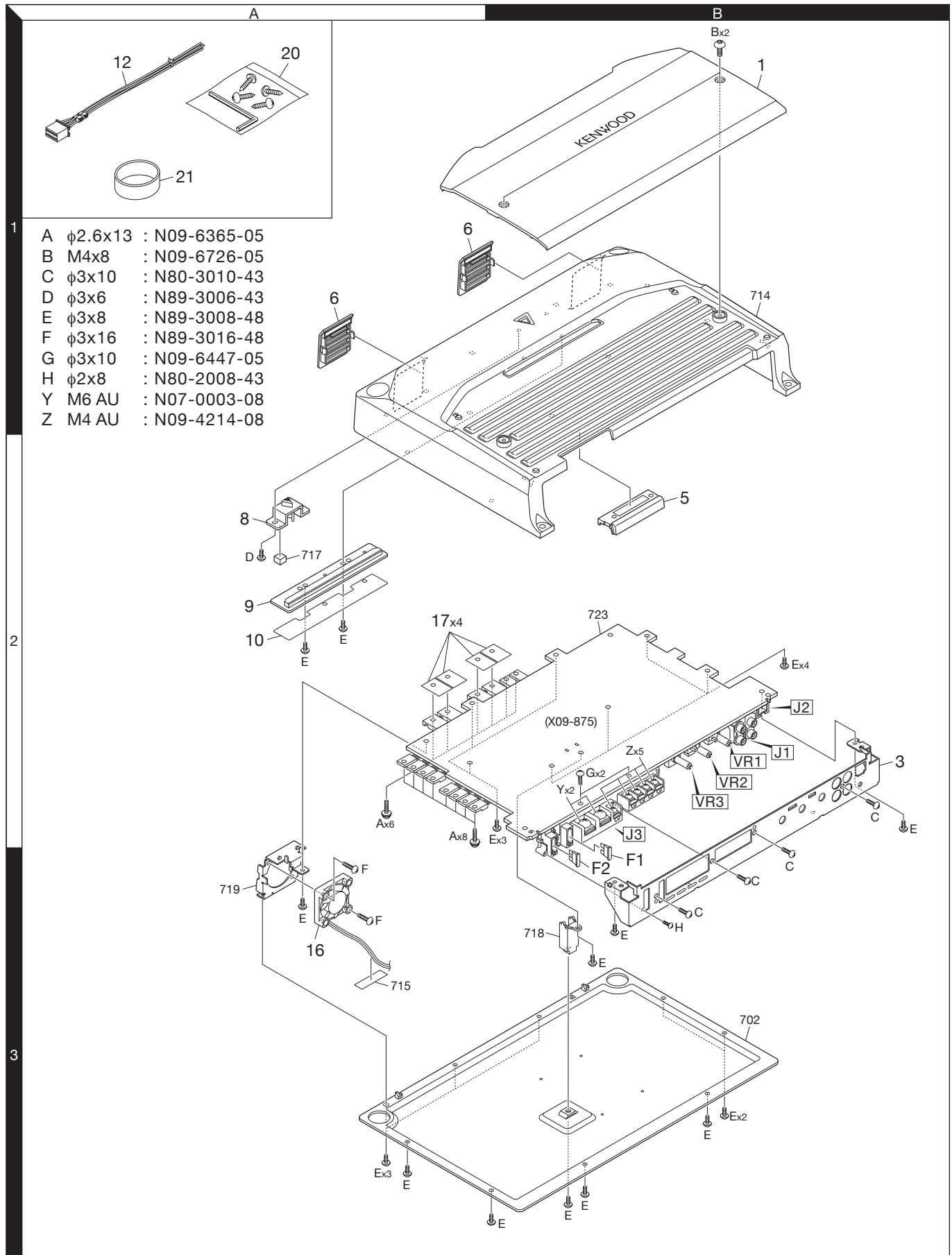
BA10358F



2SC4081



EXPLODED VIEW



A	$\phi 2.6 \times 13$: N09-6365-05
B	M4x8	: N09-6726-05
C	$\phi 3 \times 10$: N80-3010-43
D	$\phi 3 \times 6$: N89-3006-43
E	$\phi 3 \times 8$: N89-3008-48
F	$\phi 3 \times 16$: N89-3016-48
G	$\phi 3 \times 10$: N09-6447-05
H	$\phi 2 \times 8$: N80-2008-43
Y	M6 AU	: N07-0003-08
Z	M4 AU	: N09-4214-08

KAC-9104D

PARTS LIST

* New parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
KAC-9104D					
1	1B	*	A21-6637-01	DRESSING PANEL	KE1
1	1B	*	A21-6638-01	DRESSING PANEL	M1
3	2B	*	A64-4420-02	PANEL	
5	2B		B07-3231-03	ESCUTCHEON	
6	1A		B07-3232-02	ESCUTCHEON	
8	2A		B19-2324-03	LIGHTING BOARD	
9	2A		B19-2468-03	LIGHTING BOARD	
10	2A		B19-2502-03	LIGHTING BOARD	
-		*	B64-3925-00	INSTRUCTION MANUAL (ENG.FRE.SPA	KE1
-		*	B64-3926-00	INSTRUCTION MANUAL (GE.DU.IT.PO	E1
-		*	B64-3927-00	INSTRUCTION MANUAL (ENG.S-CHL)	M1
12	1A		E30-6145-05	CONNECTING CORD ASSY	
16	3A		F09-2974-05	FAN	
17	2A	*	F20-2450-04	INSULATING SHEET	
F1,2			F52-0015-05	FUSE (BLADE TYPE) 30A	
-		*	H54-4228-03	ITEM CARTON CASE	KE1
-		*	H54-4230-03	ITEM CARTON CASE	M1
20	1A		N99-1820-05	SCREW & WRENCH KEY SET	
A	2A		N09-6365-05	SEMS (TAPTITE SCREW) (2.6X13)	
B	1B		N09-6726-05	DRESSED SCREW (M4X8)	
C	3B		N80-3010-43	PAN HEAD TAPTITE SCREW	
D	2A		N89-3006-43	BINDING HEAD TAPTITE SCREW	
E	3B		N89-3008-48	BINDING HEAD TAPTITE SCREW	
F	3A		N89-3016-48	BINDING HEAD TAPTITE SCREW	
H	3B		N80-2008-43	PAN HEAD TAPTITE SCREW	
Y	2B		N07-0003-08	TERMINAL SCREW (M6 AU)	
Z	2B		N09-4214-08	TERMINAL SCREW (M4 AU)	
21	1A		W01-1606-05	ACCESSORIES	
AUDIO UNIT (X09-8750-10)					
C1			CD04BJ1H100M	ELECTRO 10UF 50WV	
C2			CK73GB1H473K	CHIP C 0.047UF K	
C3-5			CD04BJ1H100M	ELECTRO 10UF 50WV	
C6			CK73GB1H103K	CHIP C 0.010UF K	
C7			CD04BJ1H100M	ELECTRO 10UF 50WV	
C8			CK73GB1H103K	CHIP C 0.010UF K	
C9			CD04BJ1E470M	ELECTRO 47UF 25WV	
C10			CK73GB1H102K	CHIP C 1000PF K	
C11			CD04BJ1E470M	ELECTRO 47UF 25WV	
C12,13			CK73GB1H103K	CHIP C 0.010UF K	
C15,16			CD04BJ1H100M	ELECTRO 10UF 50WV	
C17,18			CD04BC1C392M	ELECTRO 3900UF 16WV	
C19,20			C91-2293-05	METAL-PF C 1000PF 200WV	
C23,24		*	C90-6862-05	ELECTRO 3300UF 100WV	
C25-28			CK73GB1H103K	CHIP C 0.010UF K	
C29-32			CD04BJ1E470M	ELECTRO 47UF 25WV	
C33			CD04BJ1H470M	ELECTRO 47UF 50WV	
C34,35			CD04BJ1E470M	ELECTRO 47UF 25WV	
C101,102			CK73GB1H102K	CHIP C 1000PF K	
C103,104			CD04BJ1H100M	ELECTRO 10UF 50WV	
C105			CC73GCH1H330J	CHIP C 33PF J	

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
C106			CC73GCH1H470J	CHIP C 47PF J	
C107			CC73GCH1H101J	CHIP C 100PF J	
C108			CC73GCH1H330J	CHIP C 33PF J	
C109			CC73GCH1H101J	CHIP C 100PF J	
C110-114			CD04BJ1H100M	ELECTRO 10UF 50WV	
C115			CK73GB1H103K	CHIP C 0.010UF K	
C117			CD04BJ1H100M	ELECTRO 10UF 50WV	
C118,119			CD04BJ1H010M	ELECTRO 1.0UF 50WV	
C120			CD04BJ1H2R2M	ELECTRO 2.2UF 50WV	
C121			CK73GB1H683K	CHIP C 0.068UF K	
C122			CQ93FMG1H223J	MYLAR 0.022UF J	
C123			CK73GB1H683K	CHIP C 0.068UF K	
C124			CQ93FMG1H333J	MYLAR 0.033UF J	
C125			CK73GB1H104K	CHIP C 0.10UF K	
C126			CD04BJ1H4R7M	ELECTRO 4.7UF 50WV	
C127			CC73GCH1H101J	CHIP C 100PF J	
C128			CD04BJ1H100M	ELECTRO 10UF 50WV	
C129			CD04BJ1H010M	ELECTRO 1.0UF 50WV	
C130			CK73GB1H104K	CHIP C 0.10UF K	
C131			CD04BJ1E470M	ELECTRO 47UF 25WV	
C132			CC73GCH1H470J	CHIP C 47PF J	
C134			CQ93FMG1H332J	MYLAR 3300PF J	
C135			CC73GCH1H331J	CHIP C 330PF J	
C136,137			CK73GB1H103K	CHIP C 0.010UF K	
C138			CD04BJ1E470M	ELECTRO 47UF 25WV	
C139			CC73GCH1H470J	CHIP C 47PF J	
C140			CC73GCH1H560J	CHIP C 56PF J	
C142			CK73GB1E154K	CHIP C 0.15UF K	
C143			C91-2295-05	METAL-PF C 1500PF K	
C144			CK73GB1E154K	CHIP C 0.15UF K	
C145,146			C91-2304-05	METAL-PF C 10UF J	
C147-150			CK73GB1H104K	CHIP C 0.10UF K	
C151,152			CK73EB1E105K	CHIP C 1.0UF K	
C153			CK73GB1H682K	CHIP C 6800PF K	
C154,155			CD04BJ2A100M	ELECTRO 10UF 100WV	
C301-303			CK73GB1H102K	CHIP C 1000PF K	
C304			CK73FB1C684K	CHIP C 0.68UF K	
C305			CK73GB1H103K	CHIP C 0.010UF K	
C306,307			CD04BJ1H100M	ELECTRO 10UF 50WV	
C308			CK73GB1H102K	CHIP C 1000PF K	
C309			CK73GB1A474K	CHIP C 0.47UF K	
C310			CD04BJ1E470M	ELECTRO 47UF 25WV	
C311			CK73GB1H152K	CHIP C 1500PF K	
C312			CK73GB1H103K	CHIP C 0.010UF K	
C313-315			CK73GB1H333K	CHIP C 0.033UF K	
C316			CK73GB1H223K	CHIP C 0.022UF K	
C317			CK73GB1H103K	CHIP C 0.010UF K	
C318			CK73GB1H104K	CHIP C 0.10UF K	
C319			CD04BJ1A101M	ELECTRO 100UF 10WV	
C320-322			CK73GB1H103K	CHIP C 0.010UF K	
C323,324			CK73GB1H104K	CHIP C 0.10UF K	
C325			CD04AU1H100M	NP ELEC 10UF 50WV	
C326			CK73GB1H103K	CHIP C 0.010UF K	
C327,328			CD04BJ1H100M	ELECTRO 10UF 50WV	
C601-615			CK73GB1H103K	CHIP C 0.010UF K	

E1 : KAC-9104D (Europe) K : KAC-9104D (North America)
M1 : KAC-9104D (Other Areas)

△Indicates safety critical components.

PARTS LIST

AUDIO UNIT (X09-8750-10)

Ref. No.	Ad	New	Parts No.	Description	Destination	Ref. No.	Ad	New	Parts No.	Description	Destination
C616			CD04AU1H100M	NP ELEC 10UF 50WV		R64,65			RK73EB2E473J	CHIP R 47K J 1/4W	
C617			CK73GB1H103K	CHIP C 0.010UF K		R66,67			RD14BB2C473J	RD 47K J 1/6W	
C619			CK73EB1C106K	CHIP C 10UF K		R68			RK73GB2A821J	CHIP R 820 J 1/10W	
CN1			E41-1682-05	PIN ASSY		R69			RK73GB2A472J	CHIP R 4.7K J 1/10W	
J1			E63-0947-05	PIN JACK		R70			RK73GB2A103J	CHIP R 10K J 1/10W	
J2			E58-1031-05	RECTANGULAR RECEPTACLE		R71			RK73GB2A153J	CHIP R 15K J 1/10W	
△ J3			E70-0832-15	SCREW TERMINAL BOARD		R72			RK73GB2A562J	CHIP R 5.6K J 1/10W	
△ CN2			J13-0602-05	FUSE HOLDER		R73			RD14BB2C563J	RD 56K J 1/6W	
L1		*	L33-2463-05	CHOKE COIL		R75			RK73GB2A103J	CHIP R 10K J 1/10W	
L2		*	L33-2465-15	CHOKE COIL		R101,102			RD14BB2C102J	RD 1.0K J 1/6W	
L3			L19-0778-05	TRANSFORMER FOR CONVERTER		R103,104			RK73GB2A103J	CHIP R 10K J 1/10W	
G	2B		N09-6447-05	TAPTITE SCREW (3X10)		R105,106			RK73GB2A273J	CHIP R 27K J 1/10W	
R1			RK73GB2A392J	CHIP R 3.9K J 1/10W		R107			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R2			RK73GB2A152J	CHIP R 1.5K J 1/10W		R108			RK73GB2A153J	CHIP R 15K J 1/10W	
R3			RD14BB2C392J	RD 3.9K J 1/6W		R109			RK73GB2A103J	CHIP R 10K J 1/10W	
R4			RK73GB2A682J	CHIP R 6.8K J 1/10W		R110			RK73GB2A333J	CHIP R 33K J 1/10W	
R5			RK73GB2A103J	CHIP R 10K J 1/10W		R111-114			RK73GH2A103D	CHIP R 10K D 1/10W	
R6			RK73GB2A472J	CHIP R 4.7K J 1/10W		R115,116			RD14BB2C222J	RD 2.2K J 1/6W	
R7			RK73GB2A333J	CHIP R 33K J 1/10W		R117-120			RD14BB2C473J	RD 47K J 1/6W	
R8			RK73GB2A472J	CHIP R 4.7K J 1/10W		R121			RD14BB2C562J	RD 5.6K J 1/6W	
R9,10			RK73GB2A103J	CHIP R 10K J 1/10W		R122,123			RK73GB2A753J	CHIP R 75K J 1/10W	
R11,12			RK73GB2A473J	CHIP R 47K J 1/10W		R124			RK73GB2A103J	CHIP R 10K J 1/10W	
R13			RK73GB2A102J	CHIP R 1.0K J 1/10W		R125			RK73GB2A822J	CHIP R 8.2K J 1/10W	
R20			RK73GB2A103J	CHIP R 10K J 1/10W		R126			RK73GB2A103J	CHIP R 10K J 1/10W	
R21			RK73GB2A104J	CHIP R 100K J 1/10W		R127,128			RK73GB2A473J	CHIP R 47K J 1/10W	
R22			RK73GB2A222J	CHIP R 2.2K J 1/10W		R129			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R23			RK73GB2A472J	CHIP R 4.7K J 1/10W		R130			RK73GB2A303J	CHIP R 30K J 1/10W	
R24,25		*	RK73EB2E363J	CHIP R 36K J 1/4W		R131			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R26			RK73GB2A333J	CHIP R 33K J 1/10W		R132			RK73GB2A243J	CHIP R 24K J 1/10W	
R27			RK73GB2A753J	CHIP R 75K J 1/10W		R133			RK73GB2A431J	CHIP R 430 J 1/10W	
R28			RK73GB2A101J	CHIP R 100 J 1/10W		R134			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R29,30			RK73GB2A103J	CHIP R 10K J 1/10W		R135			RK73GB2A473J	CHIP R 47K J 1/10W	
R31			RK73EB2E122J	CHIP R 1.2K J 1/4W		R136,137			RK73GB2A103J	CHIP R 10K J 1/10W	
R32			RK73GB2A222J	CHIP R 2.2K J 1/10W		R138			RK73GB2A153J	CHIP R 15K J 1/10W	
R33			RK73EB2E333J	CHIP R 33K J 1/4W		R139			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R34			RK73GB2A154J	CHIP R 150K J 1/10W		R140			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R35			RK73GB2A391J	CHIP R 390 J 1/10W		R141,142			RK73GB2A153J	CHIP R 15K J 1/10W	
R36			RK73GB2A223J	CHIP R 22K J 1/10W		R143			RK73GB2A123J	CHIP R 12K J 1/10W	
R37			RK73GB2A100J	CHIP R 10 J 1/10W		R144			RK73GB2A153J	CHIP R 15K J 1/10W	
R38-40			RK73GB2A103J	CHIP R 10K J 1/10W		R145			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R41			RK73GB2A104J	CHIP R 100K J 1/10W		R146			RK73GB2A154J	CHIP R 150K J 1/10W	
R42			RK73GB2A224J	CHIP R 220K J 1/10W		R147			RK73GB2A241J	CHIP R 240 J 1/10W	
R43,44			RK73GB2A512J	CHIP R 5.1K J 1/10W		R148			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R45			RK73GB2A224J	CHIP R 220K J 1/10W		R149			RK73GB2A103J	CHIP R 10K J 1/10W	
R46,47			RK73GB2A152J	CHIP R 1.5K J 1/10W		R150			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R48,49			RK73GB2A560J	CHIP R 56 J 1/10W		R151,152			RK73GB2A202J	CHIP R 2.0K J 1/10W	
R50,51			RK73GB2A472J	CHIP R 4.7K J 1/10W		R153			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R52-57			RK73GB2A470J	CHIP R 47 J 1/10W		R154			RK73GB2A333J	CHIP R 33K J 1/10W	
R59			RK73GB2A681J	CHIP R 680 J 1/10W		R155			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R60			RK73EB2E4R7J	CHIP R 4.7 J 1/4W		R156			RK73GB2A471J	CHIP R 470 J 1/10W	
R61			RK73EB2E102J	CHIP R 1.0K J 1/4W		R157			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R62,63			RD14DB2H220J	SMALL-RD 22 J 1/2W		R158			RK73GB2A684J	CHIP R 680K J 1/10W	
						R159,160			RK73GB2A103J	CHIP R 10K J 1/10W	
						R161			RK73GB2A683J	CHIP R 68K J 1/10W	
						R162			RD14BB2C243J	RD 24K J 1/6W	

E1 : KAC-9104D (Europe) K : KAC-9104D (North America)
M1 : KAC-9104D (Other Areas)

△ Indicates safety critical components.

PARTS LIST

AUDIO UNIT (X09-8750-10)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
R163			RK73GB2A103J	CHIP R 10K J 1/10W	
R164			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R165,166			RK73GB2A103J	CHIP R 10K J 1/10W	
R167			RK73GB2A750J	CHIP R 75 J 1/10W	
R168,169			RK73GB2A622J	CHIP R 6.2K J 1/10W	
R170			RK73GB2A103J	CHIP R 10K J 1/10W	
R171			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R172			RK73EB2E681J	CHIP R 680 J 1/4W	
R173			RK73GB2A112J	CHIP R 1.1K J 1/10W	
R174-177			RK73GB2A103J	CHIP R 10K J 1/10W	
R178			RK73GB2A182J	CHIP R 1.8K J 1/10W	
R179			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R180			RK73GB2A182J	CHIP R 1.8K J 1/10W	
R181			RK73GB2A471J	CHIP R 470 J 1/10W	
R182			RK73GB2A751J	CHIP R 750 J 1/10W	
R183			RK73GB2A510J	CHIP R 51 J 1/10W	
R184			RK73EB2E151J	CHIP R 150 J 1/4W	
R185			RK73EB2E181J	CHIP R 180 J 1/4W	
R186,187			RK73EB2E510J	CHIP R 51 J 1/4W	
R188			RK73GB2A473J	CHIP R 47K J 1/10W	
R189,190			RK73EB2E100J	CHIP R 10 J 1/4W	
R191			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R192,193			RK73GB2A681J	CHIP R 680 J 1/10W	
R194			RK73GB2A911J	CHIP R 910 J 1/10W	
R195,196			RK73EB2E510J	CHIP R 51 J 1/4W	
R197			RK73GB2A473J	CHIP R 47K J 1/10W	
R198,199			RK73EB2E100J	CHIP R 10 J 1/4W	
R200,201			R92-5161-05	METAL PR 0.02 5W	
R202			RS14KB3D4R7JP	FL-PROOF RS 4.7 J 2W	
R203,204			RK73GB2A104J	CHIP R 100K J 1/10W	
R301,302			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R303			RK73GB2A362J	CHIP R 3.6K J 1/10W	
R304			RK73GB2A514J	CHIP R 510K J 1/10W	
R305			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R306			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R307			RK73GB2A273J	CHIP R 27K J 1/10W	
R308			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R309			RK73GB2A153J	CHIP R 15K J 1/10W	
R310			RK73GB2A224J	CHIP R 220K J 1/10W	
R311			RK73GB2A103J	CHIP R 10K J 1/10W	
R312			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R313			RK73GB2A203J	CHIP R 20K J 1/10W	
R314			RK73GB2A103J	CHIP R 10K J 1/10W	
R315			RK73GB2A123J	CHIP R 12K J 1/10W	
R316			RK73GB2A132J	CHIP R 1.3K J 1/10W	
R317-319			RK73GB2A203J	CHIP R 20K J 1/10W	
R320			RK73GB2A103J	CHIP R 10K J 1/10W	
R321			RK73GB2A243J	CHIP R 24K J 1/10W	
R322			RK73GB2A103J	CHIP R 10K J 1/10W	
R323			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R324			RK73GB2A334J	CHIP R 330K J 1/10W	
R325			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R327,328			RK73GB2A103J	CHIP R 10K J 1/10W	
R329			RK73GB2A203J	CHIP R 20K J 1/10W	
R330			RK73GB2A223J	CHIP R 22K J 1/10W	

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
R331			RK73GB2A104J	CHIP R 100K J 1/10W	
R332			RK73GB2A103J	CHIP R 10K J 1/10W	
R333,334			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R335,336			RK73GB2A104J	CHIP R 100K J 1/10W	
R337			RK73GB2A223J	CHIP R 22K J 1/10W	
R338			RK73GB2A103J	CHIP R 10K J 1/10W	
R339			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R340-342			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R343			RK73GB2A104J	CHIP R 100K J 1/10W	
R344			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R345			RK73GB2A823J	CHIP R 82K J 1/10W	
R346			RK73GB2A203J	CHIP R 20K J 1/10W	
R347,348			RK73GB2A223J	CHIP R 22K J 1/10W	
R349			RK73GB2A103J	CHIP R 10K J 1/10W	
R350			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R351			RK73GB2A103J	CHIP R 10K J 1/10W	
R352			RK73GB2A163J	CHIP R 16K J 1/10W	
R353			RK73GB2A153J	CHIP R 15K J 1/10W	
R354			RK73GB2A474J	CHIP R 470K J 1/10W	
R355			RK73GB2A103J	CHIP R 10K J 1/10W	
R356			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R357			RK73GB2A153J	CHIP R 15K J 1/10W	
R358			RK73GB2A912J	CHIP R 9.1K J 1/10W	
R359			RK73GB2A334J	CHIP R 330K J 1/10W	
R360			RK73GB2A163J	CHIP R 16K J 1/10W	
R361			RK73GB2A123J	CHIP R 12K J 1/10W	
R362			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R363			RK73GB2A474J	CHIP R 470K J 1/10W	
R364			RK73GB2A103J	CHIP R 10K J 1/10W	
R365			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R366			RK73GB2A103J	CHIP R 10K J 1/10W	
R367			RK73GB2A154J	CHIP R 150K J 1/10W	
R368			RK73GB2A104J	CHIP R 100K J 1/10W	
R369			RK73GB2A103J	CHIP R 10K J 1/10W	
R371			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R372			RK73GB2A103J	CHIP R 10K J 1/10W	
R373			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R374			RK73GB2A103J	CHIP R 10K J 1/10W	
R901,902			RK73GB2A101J	CHIP R 100 J 1/10W	
R903,904			RK73EB2E2R2J	CHIP R 2.2 J 1/4W	
VR1			R31-0253-05	VARIABLE RESISTOR 10K, A	
VR2			R31-0255-05	VARIABLE RESISTOR 50K, C	
VR3			R31-0254-05	VARIABLE RESISTOR 10K, C	
W201			R92-2053-05	CHIP R 0 OHM J 1/8W	
W202-204			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W205			R92-2053-05	CHIP R 0 OHM J 1/8W	
W206,207			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W208			R92-2053-05	CHIP R 0 OHM J 1/8W	
W209,210			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W211			R92-2053-05	CHIP R 0 OHM J 1/8W	
W212			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W213-215			R92-2053-05	CHIP R 0 OHM J 1/8W	
W216,217			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W218-220			R92-2053-05	CHIP R 0 OHM J 1/8W	
W221-225			RK73GB2A000J	CHIP R 0.0 J 1/10W	

E1 : KAC-9104D (Europe) K : KAC-9104D (North America)

M1 : KAC-9104D (Other Areas)

△Indicates safety critical components.

PARTS LIST

AUDIO UNIT (X09-8750-10)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
W226,227			R92-2053-05	CHIP R 0 OHM J 1/8W		D314-316			1SS355	DIODE	
W228-234			RK73GB2A000J	CHIP R 0.0 J 1/10W		IC1-6			BA4560RF	ANALOGUE IC	
W235			R92-2053-05	CHIP R 0 OHM J 1/8W		IC7			BA2903F	ANALOGUE IC	
W238-242			R92-2053-05	CHIP R 0 OHM J 1/8W		IC8,9			SN74HC00D	MOS-IC	
W243,244			RK73GB2A000J	CHIP R 0.0 J 1/10W		IC10			BA2903F	ANALOGUE IC	
W245,246			R92-2053-05	CHIP R 0 OHM J 1/8W		IC11			BA4560RF	ANALOGUE IC	
W247-252			RK73GB2A000J	CHIP R 0.0 J 1/10W		IC13			BA2903F	ANALOGUE IC	
W253			R92-2053-05	CHIP R 0 OHM J 1/8W		IC14			BA4560RF	ANALOGUE IC	
W254			RK73GB2A000J	CHIP R 0.0 J 1/10W		IC15			TL494IDR	ANALOGUE IC	
W255			R92-2053-05	CHIP R 0 OHM J 1/8W		IC16			BA4560RF	ANALOGUE IC	
W256-259			RK73GB2A000J	CHIP R 0.0 J 1/10W		IC17			BA10358F	ANALOGUE IC	
S2			S31-2630-05	SLIDE SWITCH		Q1,2			2SC4081	TRANSISTOR	
S3			S62-0842-05	SLIDE SWITCH		Q3			2SB1241	TRANSISTOR	
D1-3			1N5406-TSC	DIODE		Q4			2SC4081	TRANSISTOR	
D4			UDZS15B	ZENER DIODE		Q5,6			2SA1576A	TRANSISTOR	
D5			UDZS6.8B	ZENER DIODE		Q7			2SC4097	TRANSISTOR	
D6			1SS355	DIODE		Q8			DTA114EUA	TRANSISTOR	
D7			1SS133	DIODE		Q9			DTC114EUA	TRANSISTOR	
D8			1SS355	DIODE		Q10			2SC4081	TRANSISTOR	
D9			UDZS10B	ZENER DIODE		Q11,12			DTA114EUA	TRANSISTOR	
D10-12			1SS133	DIODE		Q13			2SC4097	TRANSISTOR	
D13			B30-1743-05	LED (RED)		Q14,15			2SA1577	TRANSISTOR	
D14-16			1SS133	DIODE		Q16			2SC4097	TRANSISTOR	
D17			LM1MA142WK-G	DIODE		Q17-22			STP60NF06FP	FET	
D18			UDZS12B	ZENER DIODE		Q23			2SD1863	TRANSISTOR	
D19,20			B30-1770-05	LED (BLUE)		Q24			2SC4883ANF	TRANSISTOR	
D21			FCH20A20	DIODE		Q25			2SC1845-A(F,E)	TRANSISTOR	
D22			FRH20A20	DIODE		Q26			2SA1859ANF	TRANSISTOR	
D23,24			UDZS16B	ZENER DIODE		Q27			2SA992-A(F,E)	TRANSISTOR	
D25-28			1SS133	DIODE		Q28,29			2SA1576A	TRANSISTOR	
D29			UDZS15B	ZENER DIODE		Q30			2SD1863	TRANSISTOR	
D30			1SS133	DIODE		Q101			2SC4081	TRANSISTOR	
D32			1SS133	DIODE		Q102			2SA1576A	TRANSISTOR	
D33,34			1SS355	DIODE		Q103			2SC1845-A(F,E)	TRANSISTOR	
D35			1SS133	DIODE		Q104			2SA1370	TRANSISTOR	
D101			UMZ6.8N	ZENER DIODE		Q105,106			2SC3415S	TRANSISTOR	
D102			LM1MA142WK-G	DIODE		Q107			2SB1427	TRANSISTOR	
D103			LM1MA142WA-G	DIODE		Q108,109			2SA992-A(F,E)	TRANSISTOR	
D104			LM1MA142WK-G	DIODE		Q110,111			2SC3902	TRANSISTOR	
D105			LM1MA142WA-G	DIODE		Q112			2SB1427	TRANSISTOR	
D106			1SS133	DIODE		Q113			DTA114EUA	TRANSISTOR	
D107,108			UDZS5.6B	ZENER DIODE		Q301			2SC3478AA(L,K)	TRANSISTOR	
D109			UDZS5.1B	ZENER DIODE		Q302,303			2SA1376AA(L,K)	TRANSISTOR	
D110			1SS133	DIODE		Q304			2SC3478AA(L,K)	TRANSISTOR	
D111-113			1SS355	DIODE		Q305			2SC4081	TRANSISTOR	
D301-304			1SS355	DIODE		Q306,307			2SA1576A	TRANSISTOR	
D305			1SS133	DIODE		Q308-310			2SC4081	TRANSISTOR	
D306			LM1MA142WA-G	DIODE		Q311			DTA124EUA	TRANSISTOR	
D307,308			UDZS10B	ZENER DIODE		Q312			DTA114EUA	TRANSISTOR	
D309			1SS355	DIODE		Q313-315			2SC4081	TRANSISTOR	
D310			UDZS10B	ZENER DIODE		Q701-704		*	IRFP250NPBF	FET	
D311,312			1SS355	DIODE		TH1			NCP18WB473J0S	THERMISTOR	
D313			UDZS6.2B	ZENER DIODE							

E1 : KAC-9104D (Europe) K : KAC-9104D (North America)
M1 : KAC-9104D (Other Areas)

△ Indicates safety critical components.

KAC-9104D

SPECIFICATIONS

KAC-9104D (K,E type)

CEA-2006

Primary Power Output Ratings

(RMS Watts per channel @ 4 ohms, 1 % THD+N)

..... 500 W × 1

Signal to Noise Ratio (Reference: 1Watt into 4ohms)

..... 75 dBA

Audio Section

Max Power Output 1800 W × 1

Rated Power Output (+B = 14.4 V)

(4 Ω) (20 Hz – 200 Hz, 0.5 % THD) 500 W × 1

(4 Ω) (DIN45324, +B = 14.4 V) 500 W × 1

(2 Ω) (100 Hz, 0.8 % THD) 900 W × 1

(1 Ω) ≥ 900 W × 1

Frequency Response (+0, -3 dB) 5 Hz – 200 Hz

Sensitivity (rated output).....0.2 V – 5.0 V

Input Impedance 10 kΩ

Signal to Noise Ratio 100 dB

Low Pass Filter Frequency (-24 dB/oct.)

..... 50 – 200 Hz (variable)

Infrasonic Filter Frequency (-18 dB/oct.)..... 15 / 25 Hz

Bass Boost Circuit (40 Hz) 0 – +18 dB (variable)

General

Operating Voltage.....14.4 V (11 – 16 V allowable)

Current Consumption.....55 A

Installation Size (W × H × D)

.....350 × 59 × 238 mm (13-3/4 × 2-5/16 × 9-3/8 inch)

Weight 3.4 kg (7.5 lbs)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

KAC-9104D (M type)

Audio Section

Max Power Output 1800 W × 1

Rated Power Output (+B = 14.4 V)

(4 Ω) (20 Hz – 200 Hz, 0.5 % THD) 500 W × 1

(2 Ω) (100 Hz, 0.8 % THD) 900 W × 1

(1 Ω) ≥ 900 W × 1

Frequency Response (+0, -3 dB) 5 Hz – 200 Hz

Sensitivity (rated output).....0.2 V – 5.0 V

Input Impedance 10 kΩ

Signal to Noise Ratio..... 100 dB

Low Pass Filter Frequency (-24 dB/oct.)

..... 50 – 200 Hz (variable)

Infrasonic Filter Frequency (-18 dB/oct.)..... 15 / 25 Hz

Bass Boost Circuit (40 Hz) 0 – +18 dB (variable)

General

Operating Voltage.....14.4 V (11 – 16 V allowable)

Current Consumption.....55 A

Installation Size (W × H × D)..... 350 × 59 × 238 mm

Weight3.4 kg

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

INSTALLATION

