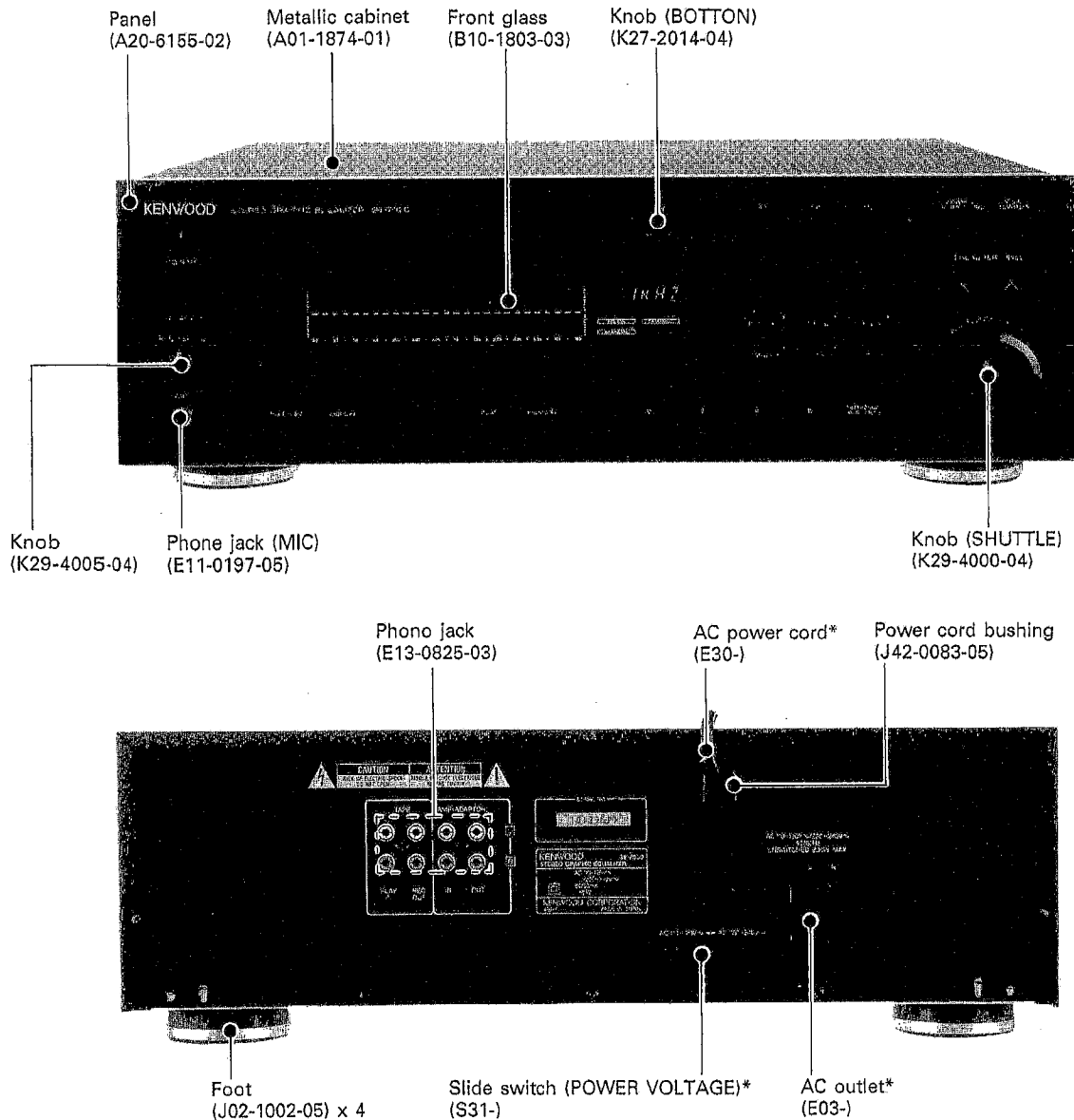


GRAPHIC EQUALIZER

# GE-7030

SERVICE MANUAL

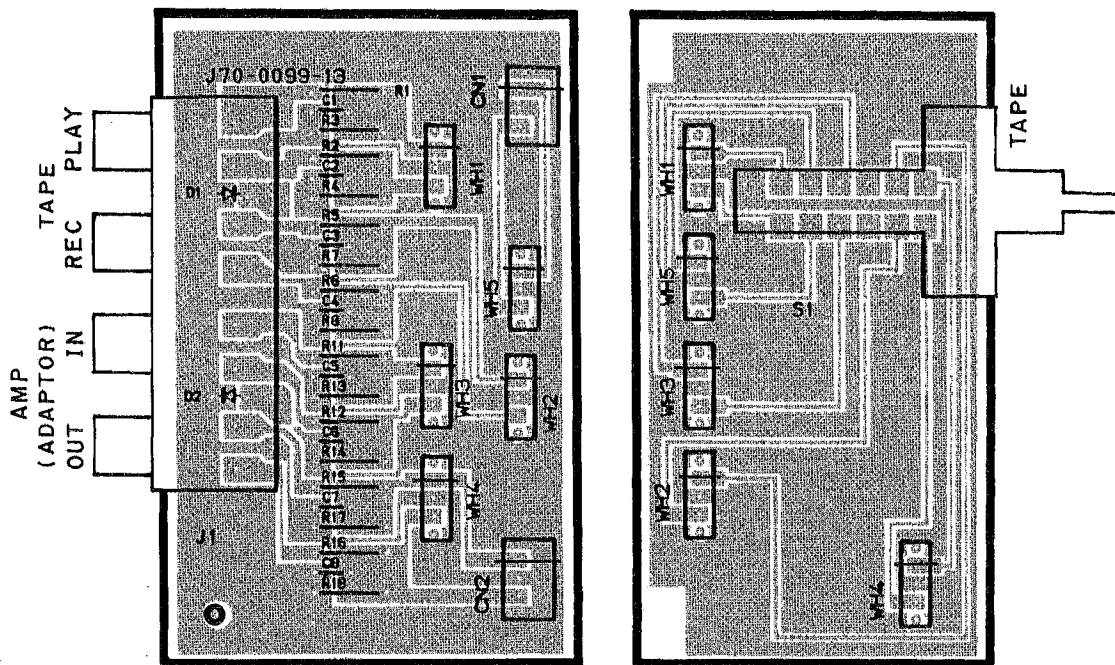
# KENWOOD



**NOTE :** Please refer to GE-7020 service manual (B51-4204-00), as the same circuit is used. Micro-processors M50945-061SP and M50747-D60SP are changed for M50945-081SP and M50747-E68SP. However, they work the same function as GE-7020.

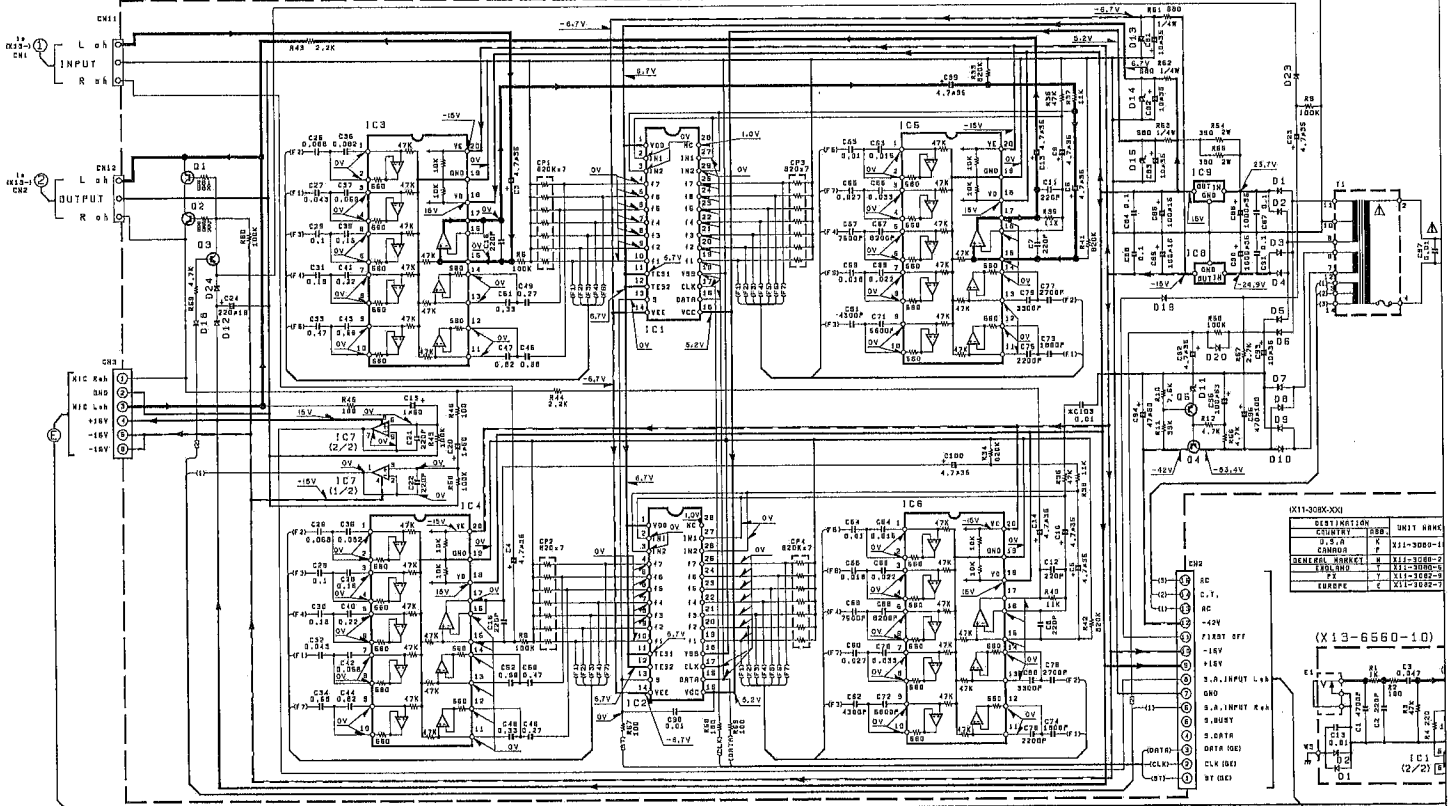
\* Refer to parts list on page 12.

# PC BOARD (COMPONENT SIDE VIEW)

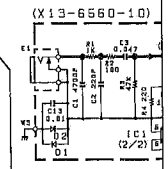


On PC board, this manual documents X13-6830-10 only.  
 Refer to the schematic diagram for the values of resistors and capacitors.

CONTROL UNIT  
(X11-3088-10)

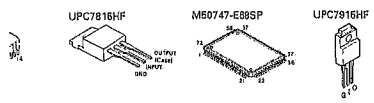
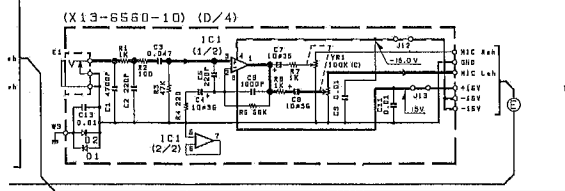
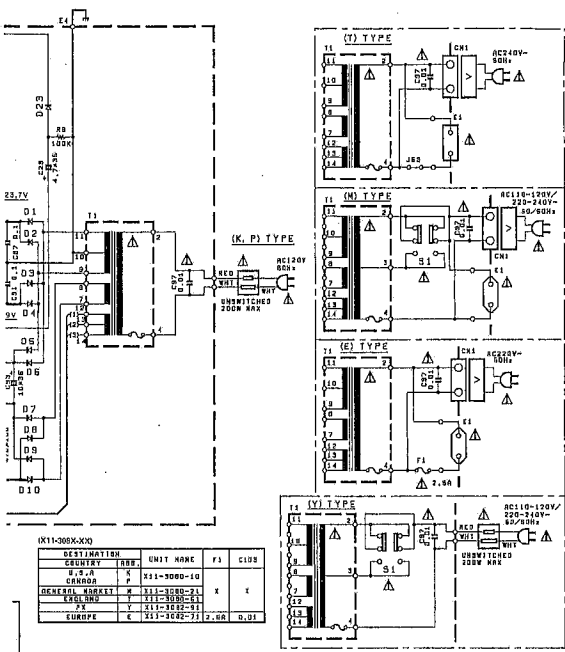


UNIT	MARK
IC1	74181
IC2	74181
IC3	74181
IC4	74181
IC5	74181
IC6	74181
IC7	74181

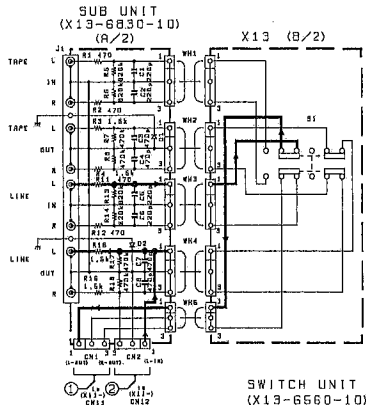


- 2SA733(A)  
2SC2878
- 2SC2003  
2SC946(A)
- 2SD1286
- DTA1246S  
2SA933S
- UN4112  
2SC1740S
- 2SB941
- NUM4658D
- TC74HC71P
- XR-1081DCP
- TC4051BP
- M5229P
- AN8914  
UPC4670C-A
- BA10393
- NJU7308L
- UPC7816HF

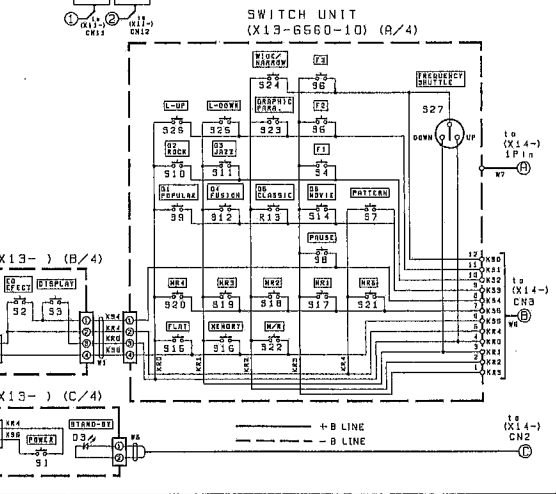




**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



- (X11-3080-10)**  
 D1-4, 7-10 : 155888R  
 D5, 6, 12, 18-20 : H59104R + H58131  
 D9, 24 :  
 D11 : R08, 2E3 (B2) + H256, 2N (B2)  
 D13, 14 : R08, 9E3 (B2) + H256, 8N (B2)  
 D16 : R06, 1E3 (B2) + H256, 1N (B2)
- D1, 2 : 28C2079 (D)  
 D3, 6 : 28J733 (R) (D, P) + 28A9335 (D, R)  
 D4 : 28B941
- IC1, 2 : NJU7306L  
 IC3-6 : H5229P  
 IC7 : NJM4558D  
 IC8 : PC7916HF  
 IC9 : PC7816HF
- (X13-6560-10)**  
 IC1 : APC4670C-R + NJM4580D-0
- D1, 2 : 195133 + H58104  
 D3 : B50-1251-05
- (X13-6830-10)**  
 D1, 2 : 195131 + H58104R

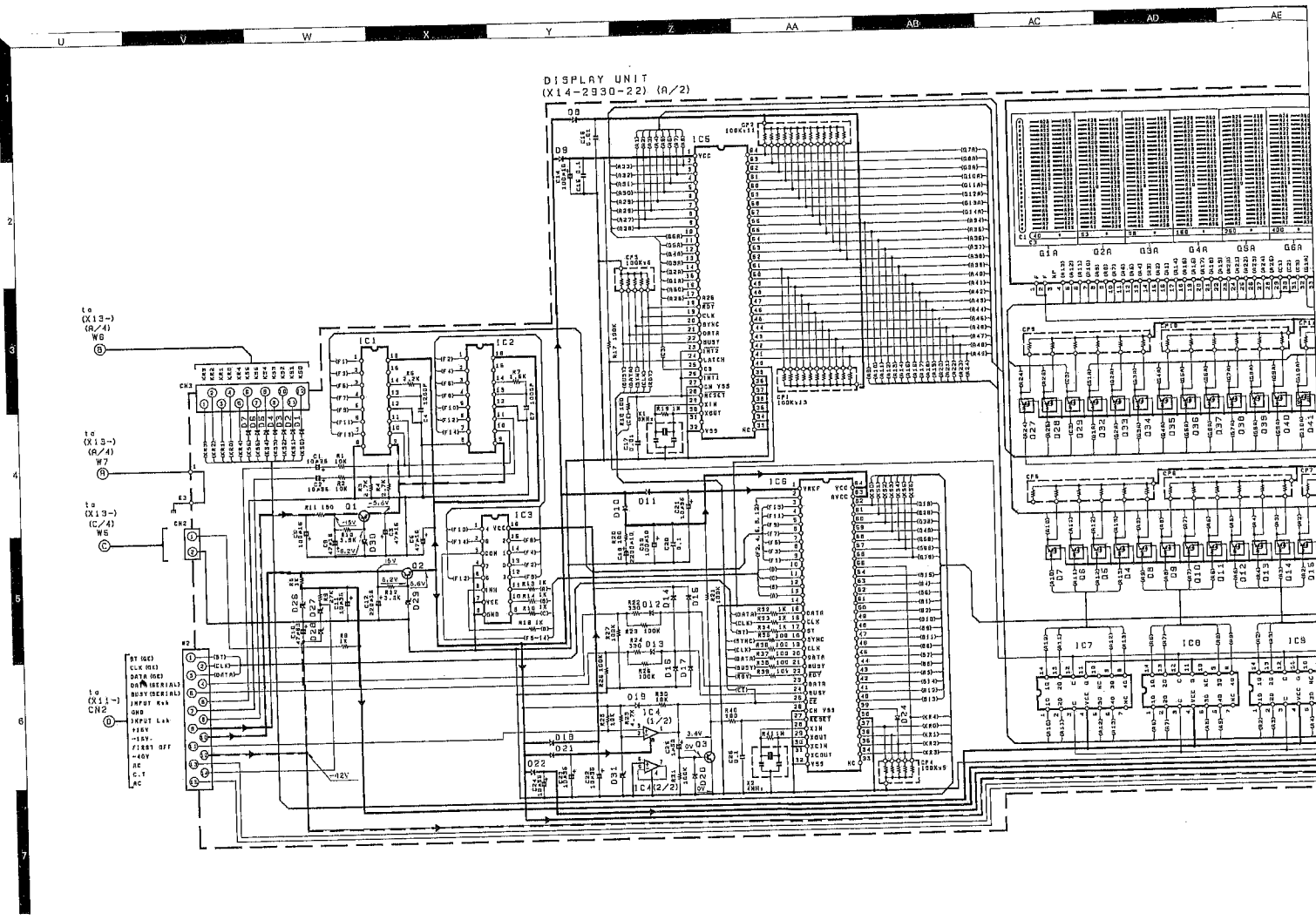


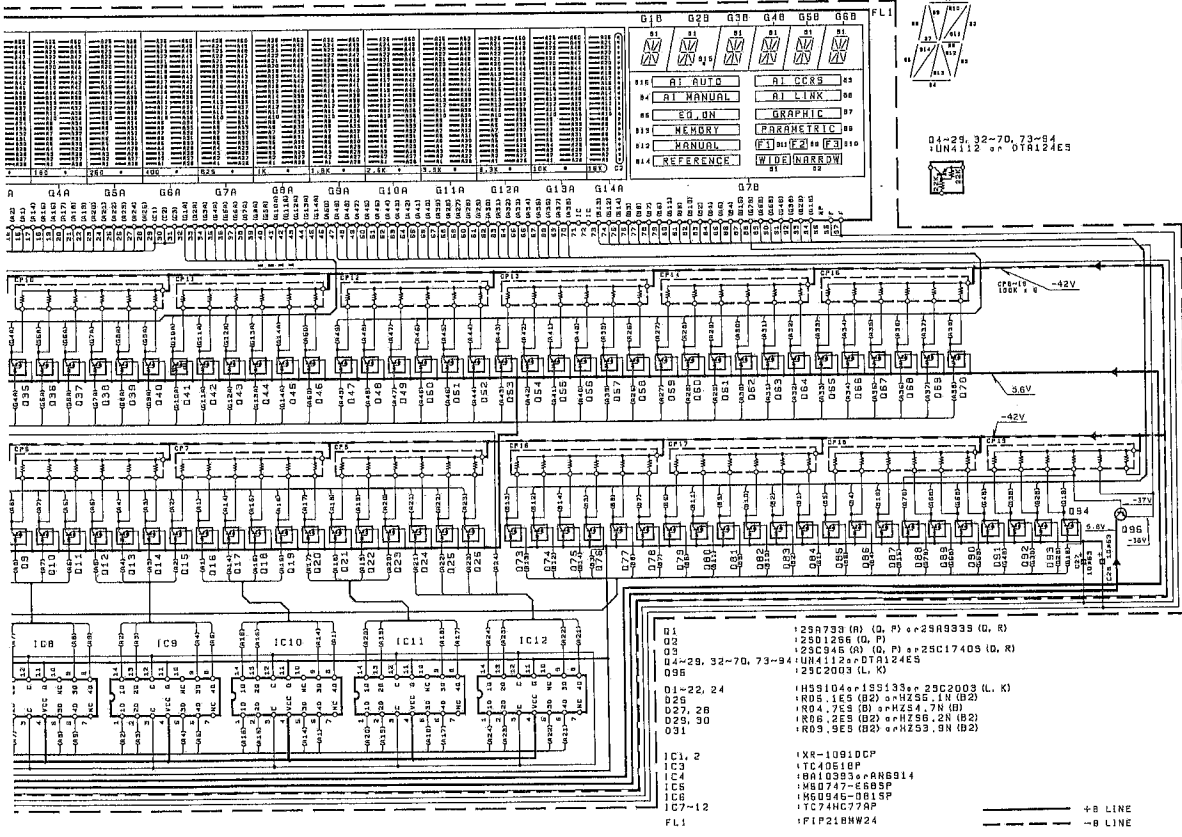
GE-7030 (K) (1/2)



Y09-3820-10

DISPLAY UNIT  
(X14-2930-22) (A/2)





04-28, 32-70, 73-94  
UN4112 & DT8124ES

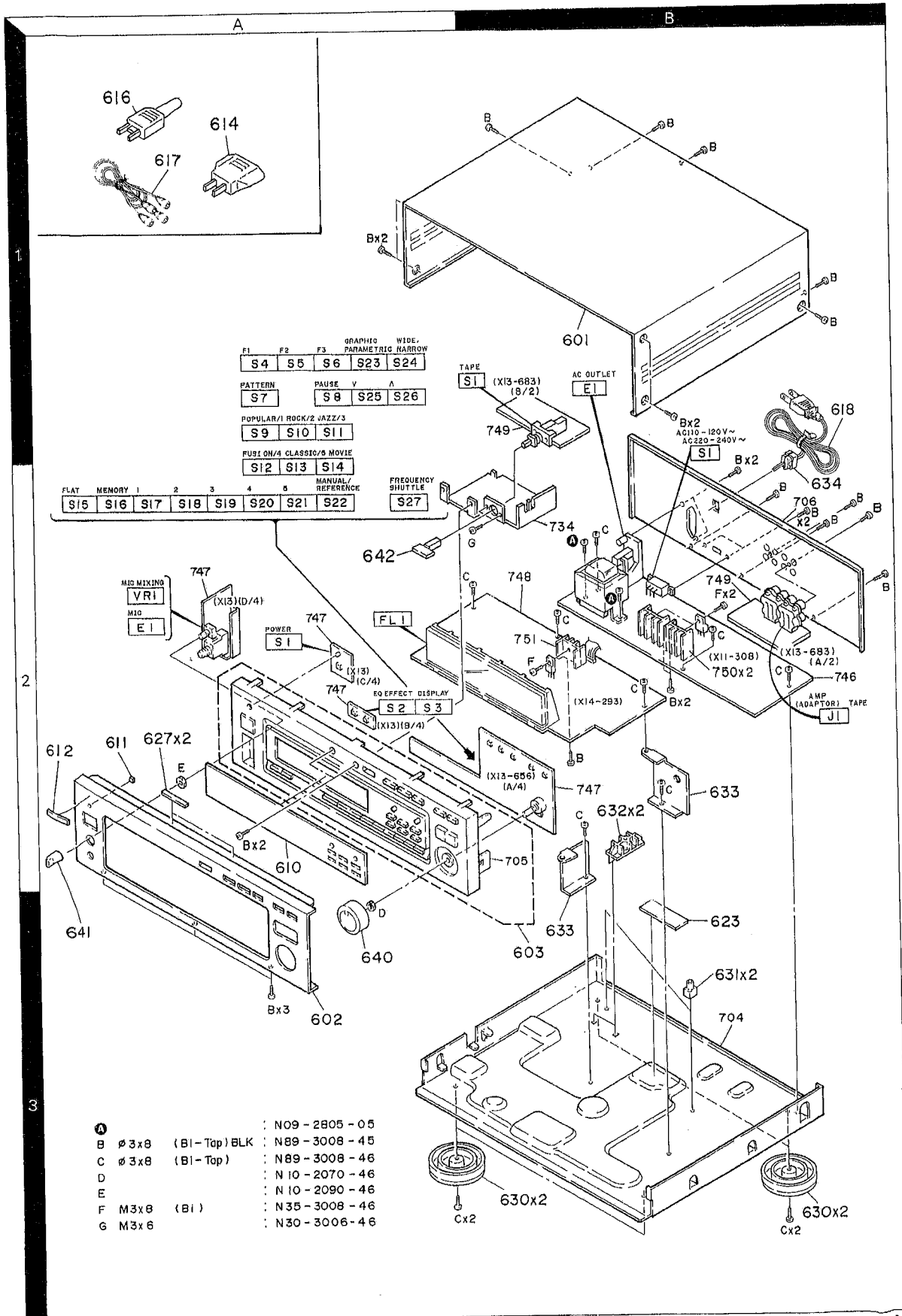
\* DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

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.

**GE-7030**  
**KENWOOD**

Y09-3820-10

## EXPLODED VIEW (UNIT)



Parts with the exploded numbers larger than 700 are not supplied.

\* 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.	Address	New Parts	Parts No.	Description	Destination	Remarks
参照番号	位置	新	部品番号	部品名 / 規格	仕	内備考
<b>GE-7030</b>						
601	1B		A01-1874-01	METALLIC CABINET		
602	3A	*	A20-6155-02	PANEL		
603	3B	*	A22-1429-32	SUB PANEL ASSY		
610	2A		B10-1803-03	FRONT GLASS		
611	2A		B12-0048-04	INDICATOR		
612	2A		B43-0297-04	KEYHOLE BADGE		
-	-		B46-0092-03	WARRANTY CARD		K
-	-		B46-0094-03	WARRANTY CARD		K
-	-		B46-0095-03	WARRANTY CARD		Y
-	-		B46-0121-03	WARRANTY CARD		P
-	-		B46-0122-13	WARRANTY CARD		E
-	-		B46-0143-13	WARRANTY CARD		T
-	-		B58-0269-04	CAUTION CARD		K
-	-		B58-0513-04	CAUTION CARD (PRESET7220-240)		Y
-	-	*	B60-0520-00	INSTRUCTION MANUAL (ENGLISH)		PE
-	-	*	B60-0521-00	INSTRUCTION MANUAL (FRENCH)		PE
-	-	*	B60-0522-00	INSTRUCTION MANUAL (G/D/I)		M
-	-	*	B60-0523-00	INSTRUCTION MANUAL (SPANISH)		M
614	1A		E03-0115-05	AC PLUG ADAPTER		M
615	1B		E03-0041-05	AC OUTLET		KPY
616	1A		E03-0049-05	AC PLUG		T
617	1A		E30-0505-05	AUDIO CORD		Y
618	1B		E30-0712-05	AC POWER CORD		Y
618	1B		E30-0974-05	AC POWER CORD		KP
618	1B		E30-2592-15	AC POWER CORD		NE
618	1B		E30-2593-15	AC POWER CORD		T
627	2A		G11-0155-14	SOFT TAPE (40X9X2)		
-	-		H10-5038-02	POLYSTYRENE FOAMED FIXTURE		
-	-		H10-5039-02	POLYSTYRENE FOAMED FIXTURE		
-	-		H25-0181-04	PROTECTION BAG (150X240X0.05)		
-	-		H25-0225-04	PROTECTION BAG (850X450X0.03)		
-	-		H25-0232-04	PROTECTION BAG (235X350X0.03)		
-	-	*	H50-0100-04	ITEM CARTON CASE		
630	3B		J02-1002-05	POD		
631	3B		J19-3180-05	UNIT HOLDER		
634	2B		J42-0083-05	POWER CORD BUSHING		
-	-		J61-0307-05	WIRE BAND		
640	3A		K29-4000-04	KNOB (SHUTTLE)		
641	3A		K29-4005-04	KNOB (W/O)		
642	1A		K27-2014-04	KNOB (BUTTON)		
T1	2B		L07-0184-05	POWER TRANSFORMER		YH
T1	2B		L07-0185-05	POWER TRANSFORMER		TE
T1	2B		L07-0186-05	POWER TRANSFORMER		KP
A	-		N09-2805-05	TAPTITE SCREW		
B	-		N89-3008-45	BINDING HEAD TAPTITE SCREW		
C	-		N89-3008-46	BINDING HEAD TAPTITE SCREW		
D	-		N10-2070-46	HEXAGON NUT (M7)		
E	-		N10-2090-46	HEXAGON NUT (M9)		
C	-		N30-3006-46	PAN HEAD SCREW		

E: Scandinavia & Europe K: USA P: Canada W: Europe  
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 Y: AAFES (Europe) X: Australia

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Ref. No.	Address	New Parts	Parts No.	Description	Destination	Remarks
参照番号	位置	新	部品番号	部品名 / 規格	仕	内備考
<b>CONTROL (X11-3080-10)</b>						
C3	-6		CB04KVI1V4R7H	ELECTRO		4.70UF 35WV
C7	8		CC45FSL1H221J	CERAMIC		220PF J
C9	10		CB04KVI1V4R7H	ELECTRO		4.7UF 35WV
C11	12		CC45FSL1H221J	CERAMIC		220PF J
C13	14		CB04KVI1V4R7H	ELECTRO		4.7UF 35WV
C15	16		CC45FSL1H221J	CERAMIC		220PF J
C19	20		CB04KVI1H010M	ELECTRO		1.0UF 50WV
C21	22		CC45FSL1H221J	CERAMIC		220PF J
C23	22		CB04KVI1H487H	ELECTRO		4.7UF 35WV
C24	24		CB04KVI0221H	ELECTRO		220UF 16WV
C25	26		CF92FV1H683J	MF		0.068UF J
C27	26		CF92FV1H433J	MF		0.043UF J
C28	29		CF92FV1H104J	MF		0.10UF J
C30	31		CF92FV1H104J	MF		0.10UF J
C32	31		CF92FV1H433J	MF		0.043UF J
C33	33		CF92FV1H474J	MF		0.47UF J
C34	34		CF92FV1H604J	MF		0.68UF J
C35	36		CF92FV1H823J	MF		0.082UF J
C37	37		CF92FV1H563J	MF		0.056UF J
C38	39		CF92FV1H154J	MF		0.15UF J
C40	41		CF92FV1H224J	MF		0.22UF J
C42	42		CF92FV1H563J	MF		0.056UF J
C43	43		CF92FV1H564J	MF		0.56UF J
C44	44		CF92FV1H824J	MF		0.82UF J
C45	45		CF92FV1H684J	MF		0.68UF J
C46	46		CF92FV1H274J	MF		0.27UF J
C47	47		CF92FV1H824J	MF		0.82UF J
C48	48		CF92FV1H344J	MF		0.33UF J
C49	49		CF92FV1H274J	MF		0.27UF J
C50	50		CF92FV1H474J	MF		0.47UF J
C51	51		CF92FV1H334J	MF		0.33UF J
C52	52		CF92FV1H564J	MF		0.56UF J
C53	54		C91-0676-05	CERAMIC		0.01UF K
C55	55		CF92FV1H273J	MF		0.027UF J
C56	56		C91-0682-05	CERAMIC		0.018UF K
C57	58		CF92FV1H752J	MF		7500PF J
C59	59		C91-0682-05	CERAMIC		0.018UF K
C60	60		CF92FV1H273J	MF		0.027UF J
C61	62		CF92FV1H432J	MF		4300PF J
C63	64		C91-0680-05	CERAMIC		0.015UF K
C65	65		CF92FV1H333J	MF		0.033UF J
C66	66		C91-0684-05	CERAMIC		0.022UF K
C67	68		CF92FV1H822J	MF		8200PF J
C69	69		C91-0684-05	CERAMIC		0.022UF K
C70	70		CF92FV1H333J	MF		0.033UF J
C71	72		CF92FV1H562J	MF		5600PF J
C73	74		C91-0686-05	CERAMIC		0.0018UF K
C75	76		C91-0660-05	CERAMIC		0.0022UF K
C77	78		C91-0662-05	CERAMIC		0.0027UF K
C79	80		C91-0664-05	CERAMIC		3300PF K
C81	83		CB04KVI1V100M	ELECTRO		10UF 35WV
C84	84		CF92FV1H104J	MF		0.10UF J
C85	85		CB04KVI010M	ELECTRO		100UF 16WV

E: Scandinavia & Europe K: USA P: Canada W: Europe  
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▲ indicates safety critical components.



\* New Parts

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Ref. No.	Address	New Parts	Parts No.	Description	Desti- nation	Re- marks
参照番号	位置	新	部品番号	部品名/規格	仕	向
C86			CB04KW1V102M	ELECTRO 1000PF 35WV		
C87	, 98		CP92PV1H104J	MF 0.10UF J		
C89			CB04KW1C101M	ELECTRO 100UF 16WV		
C90			CB04KW1V102M	ELECTRO 1000UF 35WV		
C91			CP92PV1H104J	MF 0.10UF J		
C92			CB04KW1V4R7M	ELECTRO 4.7UF 35WV		
C93			CB04KW1V100M	ELECTRO 10UF 35WV		
C94			CB04KW1H470M	ELECTRO 47UF 50WV		
C95			CB04DW1J101M	ELECTRO 100UF 63WV		
C96			CB04KW2A471M	ELECTRO 470UF 100WV		
△ C97			C91-0647-05	CERAMIC 0.01UF P		
C98			CK45FP1H103Z	CERAMIC 0.010UF Z		
C99	, 100		CB04KW1V4R7M	ELECTRO 4.7UF 35WV		
G103			CK45FP1H103Z	CERAMIC 0.010UF Z		
△ E1			R03-0108-05	AC OUTLET	NE	
E1			R03-0109-05	AC OUTLET	T	
△ F1			R05-2525-05	FUSE (SEMKO) (250V T2.5A)	B	
CN4	, 5		J13-0075-05	FUSE CLIP	B	
B			N89-3008-45	BINDING HEAD TAPTITE SCRBW		
F			N35-3008-46	BINDING HEAD MACHINE SCRBW		
CP1	-4		R90-0491-05	MULTI-COMP 820KX7 J 1/6W		
RS1	-53		RD14NB2E681J	RD 680 J 1/4W		
RS4	, 55		RS14KB3D391J	FL-PROOF RS 390 J 2W		
△ S1			S31-2131-05	SLIDE SWITCH (POWER VOLTAGE)	YM	
D1	-4		SS5668	DIODE		
D5	, 6		HSS104A	DIODE		
D6	, 6		ISS131	DIODE		
D7	-10		SS5668	DIODE		
D11			HZ56.2N(B2)	ZENER DIODE		
D11			RD6.2DS(B2)	ZENER DIODE		
D12			HSS104A	DIODE		
D12			ISS131	DIODE		
D13	, 14		HZ56.6N(B2)	ZENER DIODE		
D13	, 14		RD6.8ES(B2)	ZENER DIODE		
D15			HZ56.1N(B2)	ZENER DIODE		
D15			RD5.1ES(B2)	ZENER DIODE		
D18	-20		HSS104A	DIODE		
D18	-20		ISS131	DIODE		
D23	, 24		HSS104A	DIODE		
D23	, 24		ISS131	DIODE		
IC1	, 2		N1U7305L	IC(ELECTRIC VOLUME)MULTIPLEXER		
IC3	-6		MS229F	IC(7CH GRAPHIC EQUALIZER)		
IC7			N2M4558D	IC(OP AMP X2)		
IC8			UPC7915HP	IC(VOLTAGE REGULATOR/ -15V)		
IC9			UPC7015HP	IC(VOLTAGE REGULATOR/ +15V)		
Q1	, 2		2SC2978(B)	TRANSISTOR		
Q3			2SA733(A)(Q, P)	TRANSISTOR		
Q3			2SA733S(Q, R)	TRANSISTOR		
Q4			2SD941	TRANSISTOR		
Q5			2SA733(A)(Q, P)	TRANSISTOR		
Q5			2SA733S(Q, R)	TRANSISTOR		

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V: FM(Far East, Hawaii) T: England M: Other Areas

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Teile ohne Parts No. werden nicht geliefert.

Ref. No.	Address	New Parts	Parts No.	Description	Desti- nation	Re- marks
参照番号	位置	新	部品番号	部品名/規格	仕	向
SWITCH (X13-6560-10)						
D3			B30-1291-05	LED		
C1			CK45FP1H472Z	CERAMIC 4700PF Z		
C2			CC45PSL1H221J	CERAMIC 220PF J		
C3			CP92PV1H473J	MF 0.047UF J		
C4			CB04JW1V100M	ELECTRO 10UF 35WV		
C5			CC45PSL1H221J	CERAMIC 220PF J		
C6			CK45PB1H102K	CERAMIC 1000PF K		
C7			CB04KW1V100M	ELECTRO 10UF 35WV		
C8			CB04JW1V100M	ELECTRO 10UF 35WV		
C9			CK45FP1H103Z	CERAMIC 0.010UF Z		
C10			CB04KW1C470M	ELECTRO 47UF 16WV		
C11			CK45FP1H103Z	CERAMIC 0.010UF Z		
C13			CK45FP1H103Z	CERAMIC 0.010UF Z		
B1	2A		E11-0197-05	PHONE JACK (MIC)		
VR1	2A	*	R10-5039-05	POTENTIOMETER 100K (C)X2 MIC		
S1	-26	1A, 2A	S40-1064-05	PUSH SWITCH		
S27	1A	*	S29-1156-05	ROTARY SWITCH		
D1	, 2		HSS104	DIODE		
D1	, 2		ISS133	DIODE		
IC1			N3M4580D-0	IC		
IC1			UPC45700-A	IC		
SUB (X13-6830-10)						
C1	, 2		CC45PSL1H221J	CERAMIC 220PF J		
C3	, 4		CK45PB1H471K	CERAMIC 470PF K		
C5	, 6		CC45PSL1H221J	CERAMIC 220PF J		
C7	, 8		CK45PB1H471K	CERAMIC 470PF K		
J1			B13-0825-05	PHONE JACK		
S1			S40-4037-05	PUSH SWITCH (TAPE)		
D1	, 2		HSS104A	DIODE		
D1	, 2		ISS131	DIODE		
DISPLAY (X14-2930-22)						
C1	, 2		CB04KW1V100M	ELECTRO 10UF 35WV		
C3			CB04KW1C470M	ELECTRO 47UF 16WV		
C4			CP92PV1H122J	MF 1200PF J		
C5			CB04KW1C470M	ELECTRO 47UF 16WV		
C6			CB04KW1C101M	ELECTRO 100UF 16WV		
C7			CP92PV1H102J	MF 1000PF J		
C9			CB04KW1C470M	ELECTRO 47UF 16WV		
C10			CB04KW1J470M	ELECTRO 47UF 63WV		
Q11			CB04KW1V100M	ELECTRO 10UF 35WV		
Q12			CB04KW1C221M	ELECTRO 220UF 16WV		
C14			CB04KW1A101M	ELECTRO 100UF 10WV		
C15			CP92PV1H104J	MF 0.10UF J		
C16	, 17		CP92PV1H103J	MF 0.010UF J		
C18			CB04KW1A222M	ELECTRO 2200UF 10WV		
C19			CB04KW1A101M	ELECTRO 100UF 10WV		
C20			CP92PV1H104J	MF 0.10UF J		
Q21	-24		CB04KW1V100M	ELECTRO 10UF 35WV		

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Y: AAFES(Europe) X: Australia

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PARTS LIST

GE-7030

# GE-7030

## PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向	Re- marks 備考
C25			CE04KW1H010M	ELECTRO 1.0UF 50WV.		
C26			CF92FV1H104J	MF 0.10UF J		
C27 ,28			CE04KW1J100M	ELECTRO 10UF 63WV		
E1 ,2			J11-0098-05	WIRE CLAMPER		
X1			L78-0275-05	RESONATOR		
X2			L78-0244-05	RESONATOR		
CP1			R90-0483-05	MULTI-COMP 100KX13 J 1/6W		
CP2			R90-0851-05	MULTI-COMP 100KX11		
CP3 ,4			R90-0855-05	MULTI-COMP 100KX5 J		
CP5 -19			R90-0500-05	MULTI-COMP 100KX6 J 1/4W		
D1 -22			HSS104	DIODE		
D1 -22			1SS133	DIODE		
D24			HSS104	DIODE		
D24			1SS133	DIODE		
D26			HZS5.1N(B2)	ZENER DIODE		
D26			RD5.1ES(B2)	ZENER DIODE		
D27 ,28			HZS4.7N(B)	ZENER DIODE		
D27 ,28			RD4.7ES(B)	ZENER DIODE		
D29 ,30			HZS6.2N(B2)	ZENER DIODE		
D29 ,30			RD6.2ES(B2)	ZENER DIODE		
D31			HZS3.9N(B2)	ZENER DIODE		
D31			RD3.9ES(B2)	ZENER DIODE		
FL1	2A		FIP21BMW24	FLUORESCENT INDICATOR TUBE		
IC1 ,2			XR-1091DCP	IC(GE DISPLAY FILTER)		
IC3			TC4051BP	IC(8CH MPX/ DE-MPX)		
IC4			AN6914	IC(DUAL COMPALATOR)		
IC4			BA10393	IC(DUAL COMPALATOR)		
IC5			M50747-E68SP	IC(MICROPROCESSOR)		
IC6			M50945-081SP	IC		
IC7 -12			TC74HC77AP	IC(D-TYPE LATCH)		
Q1			2SA733(A)(Q,P)	TRANSISTOR		
Q1			2SA933S(Q,R)	TRANSISTOR		
Q2			2SD1266(Q,P)	TRANSISTOR		
Q3			2SC1740S(Q,R)	TRANSISTOR		
Q3			2SC945(A)(Q,P)	TRANSISTOR		
Q4 -29			DTA124BS	DIGITAL TRANSISTOR		
Q4 -29			UN4112	IC(DIGITAL TRANSISTOR)		
Q32 -70			DTA124ES	DIGITAL TRANSISTOR		
Q32 -70			UN4112	IC(DIGITAL TRANSISTOR)		
Q73 -94			DTA124ES	DIGITAL TRANSISTOR		
Q73 -94			UN4112	IC(DIGITAL TRANSISTOR)		
Q95			2SC2003(L,K)	TRANSISTOR		

E: Scandinavia & Europe K: USA P: Canada W: Europe

Y: PX(Far East, Hawaii) T: England M: Other Areas

Y: AAFES(Europe) X: Australia

⚠ indicates safety critical components.

# GE-7030

## SPECIFICATIONS

<b>[Performance]</b>	
Equalizer characteristic variable range .....	±12dB
Individual channel adjust .....	40Hz, 63Hz, 98Hz, 160Hz, 250Hz, 400Hz, 625Hz, 1kHz 1.5kHz, 2.5kHz, 3.9kHz, 6.3kHz, 10kHz, 16kHz
Total harmonic distortion (at 1kHz, Flat) .....	0.006%
Gain .....	0dB
Frequency response .....	10Hz to 70kHz, ±3dB
Signal to noise ratio (IHF '66) .....	100dB
Input impedance .....	47kΩ
Maximum output voltage (at 1% T.H.D.) .....	9V
Output impedance .....	2.2kΩ
<b>[General]</b>	
Power consumption .....	18W
AC outlets	
For the U.S.A. and Canada UNSWITCHED .....	1 (200W, 1.6A max.)
For other countries UNSWITCHED .....	1 (200W max.)
Dimensions .....	W : 440mm (17-5 / 16") H : 148mm (5-13 / 16") D : 376mm (14-13 / 16")
Weight (net) .....	5.1kg (11.2lb)

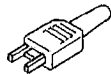
**Note:** KENWOOD follow a policy of continuous advancements in development. For this reason specifications may be changed without notice.

### Accessories

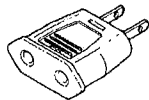
- Audio cord ..... 1  
(E30-0505-05)



- AC plug (U.K. only) ..... 1  
(E03-0049-05)



- AC plug adaptor ..... 1  
(E03-0115-05)



(Except for some areas)  
For the unit with a European  
AC plug in areas other than  
Europe.

### Note :

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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