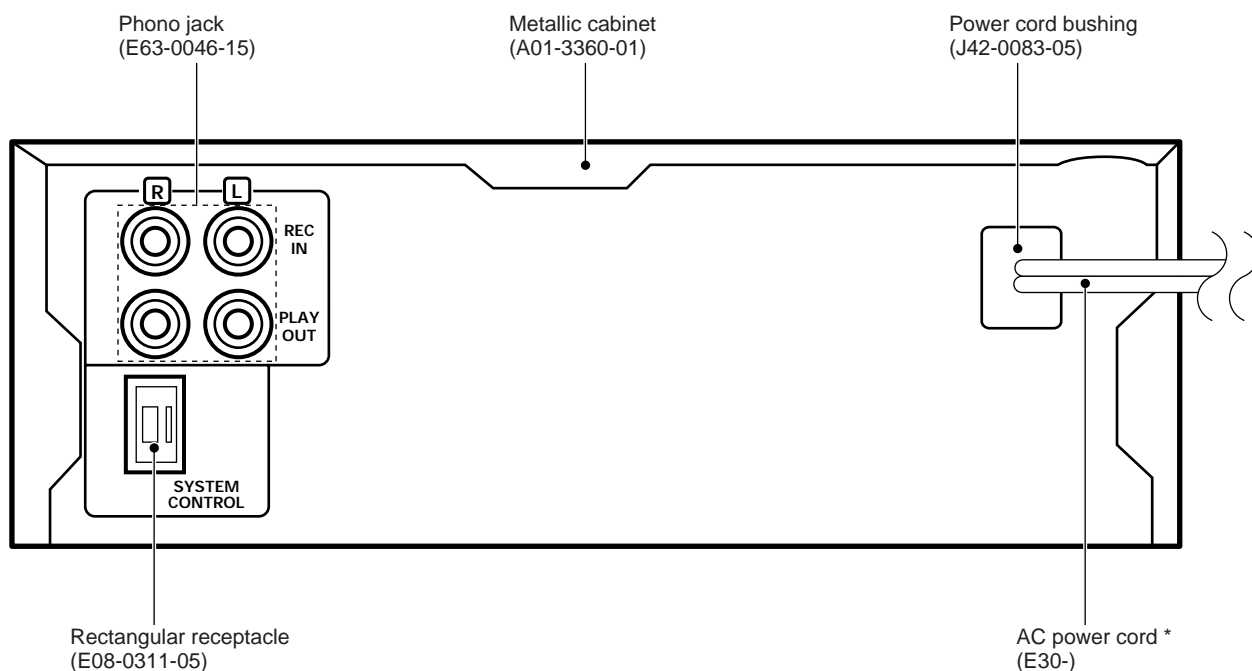
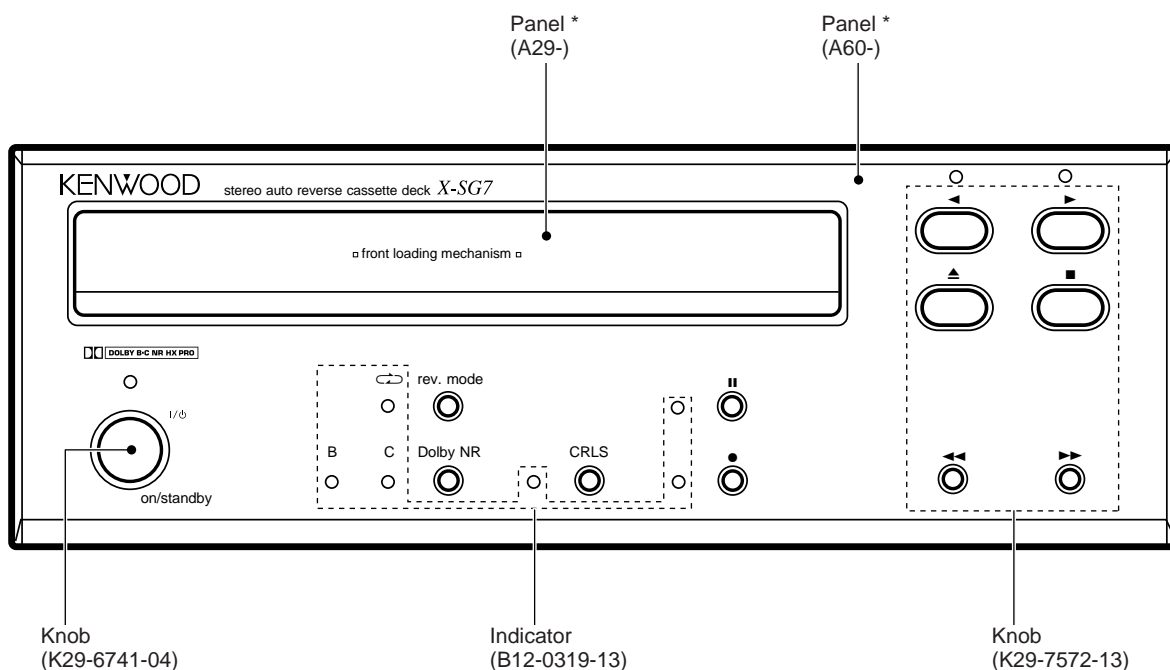


STEREO AUTO REVERSE CASSETTE DECK
X-SG7/SG7G
 SERVICE MANUAL

KENWOOD

© 1999-6/B51-5546-00 (K/K) 2299



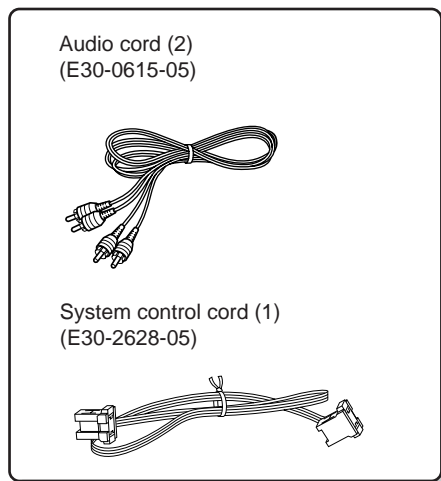
* Refer to parts list on page 13.

Refer to **X-E9** and **X-SA7** service manuals (**B51-4926-00/B51-5214-00**), if you require in detail.



X-SG7/SG7G

ACCESSORIES



Operation to reset

The microcomputer may fall into malfunction (impossibility to operate, erroneous display, etc.) when the power cord is unplugged while power is ON or due to an external factor. In this case, execute the following procedure to reset the microcomputer and return it to normal condition.

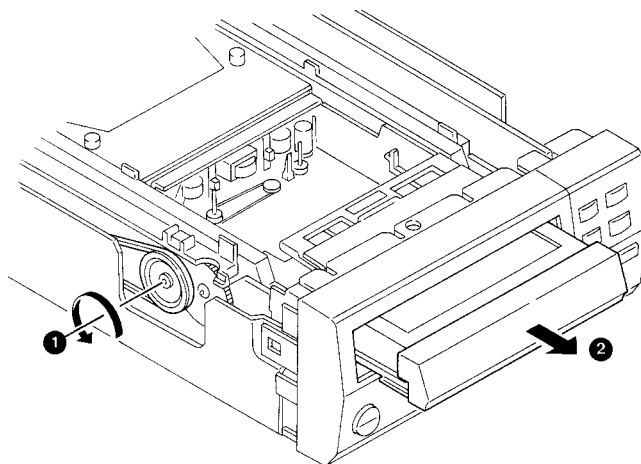
Unplug the power cord from the power outlet and, while holding the stop key depressed, plug the power cord again.

- Please note that resetting the microcomputer clears the contents stored in it returns it to condition when it left the factory.

DISASSEMBLY FOR REPAIR

❖ Power does not turn on and tray does not come out.

1. Turn the pulley in the direction of the arrow in the drawing with a finger (1).
2. If the tray comes out to the front side, pull out the tray by hand forward the front (2).



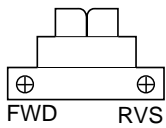
CIRCUIT DESCRIPTION

* Correction of circuit description
LED indication state.

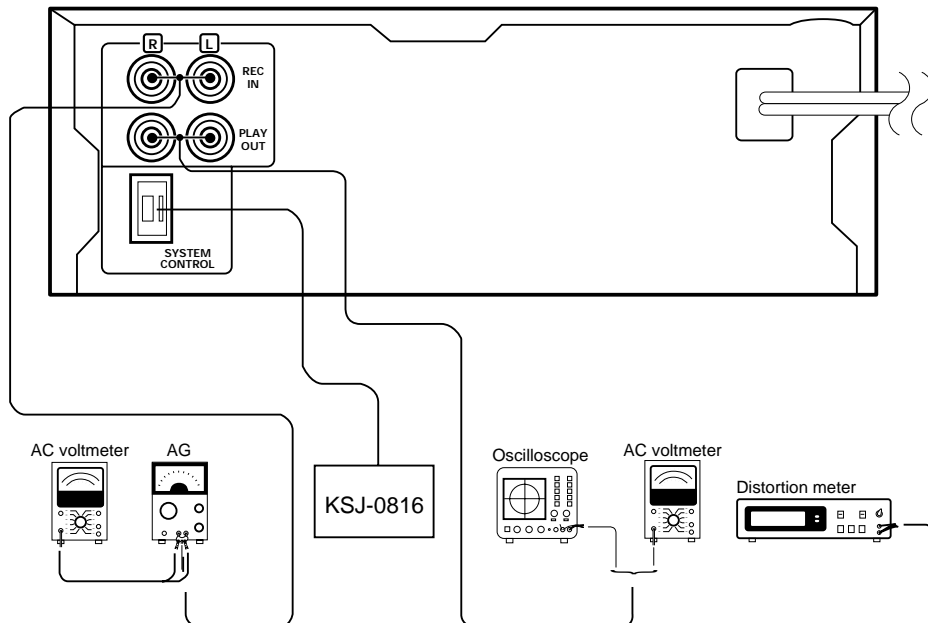
ITEM	LED	POWER	DOLBY B	DOLBY C	RVS MODE
UNDER ADJUSTMENT		●	●	●	●
PB CALIB ERR	L	○	●	○	○
	R	●	○	○	○
PB LEVEL ERR	L	○	●	○	●
	R	○	●	●	○
REC CALIB ERR	L	○	●	●	●
	R	●	○	●	●
REC LEVEL ERR	L	○	○	○	●
	R	○	○	●	○
BIAS DAC ERR	L	●	●	○	●
	R	●	●	●	○
PB ALL OK		○	○	●	●
ALL OK		●	●	○	○

○ : LIGHT ON ● : LIGHT OFF ◎ : Flickering

ADJUSTMENT

Order	Item	Input setting	Output setting	Deck setting	Adjustment points	Adjustment method	Fig.
Unless otherwise specified, set the respective switches as follow : TAPE : NORMAL DOLBY : OFF INPUT : REC IN OUTPUT : PLAY OUT							
I. Cassette mechanism section (Recording/play head adjustment)							
< 1 >	Demagnetization and cleaning	—	—	Power : OFF Demagnetization, cleaning, PLAY	Recording head, erase head, capstan, pinch roller	Demagnetize the REC/PLAY head with the head eraser. Clean the REC/PLAY head, erase head, capstan and pinch roller using a cotton swab slightly damped with alcohol.	
< 2 >	Azimuth of the REC/PLAY head	TCC-153 MTT-114 10KHz, -10dB	LINE OUT (Lch or Rch)	PLAY		Adjust the output to maximum and adjust the azimuth adjustment screw for the Lissajous waveform pattern of the oscilloscope to become close to a 45° straight line.	
II. Printed circuit board adjustment (X28-297)							
(1)	Tape speed (normal)	TCC-110 MTT-111 3KHz	(A)	PLAY	MOTOR VR.	Adjust so ; that the frequency is 3KHz at the tape center.	
(2)	Playback level	TCC-130 400 Hz	(A)	※ MANUAL ADJUSTMENT MODE PLAY	ADJUSTMENT VALUE	Output level : -1dBs	
(3)	Bias current	TCC-108A 12.5KHz, -21dBm	(A)	※ MANUAL TEST MODE REC and PLAY	UP : [DOLBY] KEY DOWN : [RVS PLAY] KEY CHANGE OF ADJUSTMENT MODE [CRLS] KEY	-21dBm	
(4)	Recording level	TCC-108A 400Hz, -21dBm	(A)	※ MANUAL TEST MODE REC and PLAY	CHANGE OF ADJUSTMENT MODE [CRLS] KEY	-21dBm	

(A) Measurement Equipment Connection



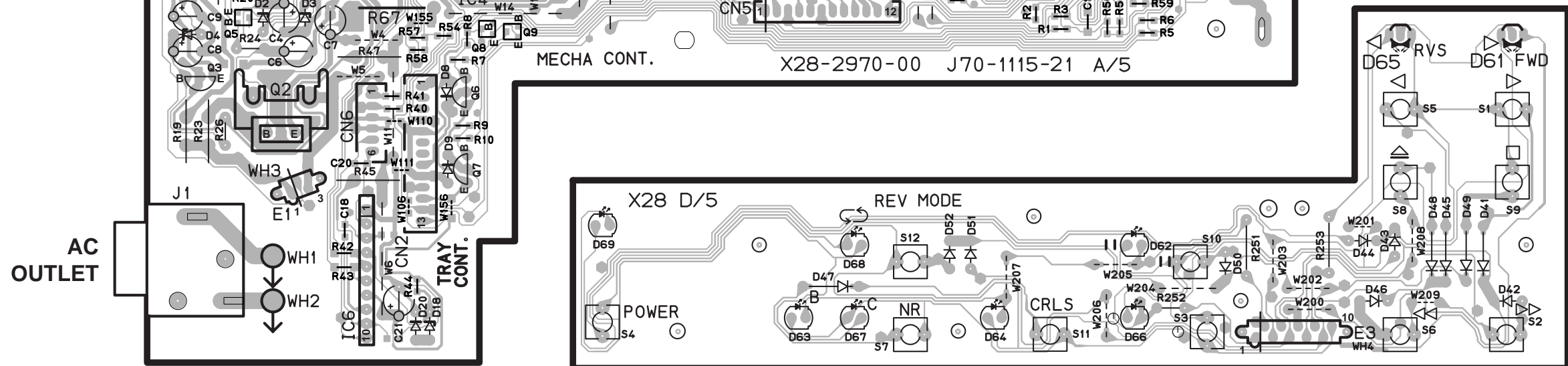
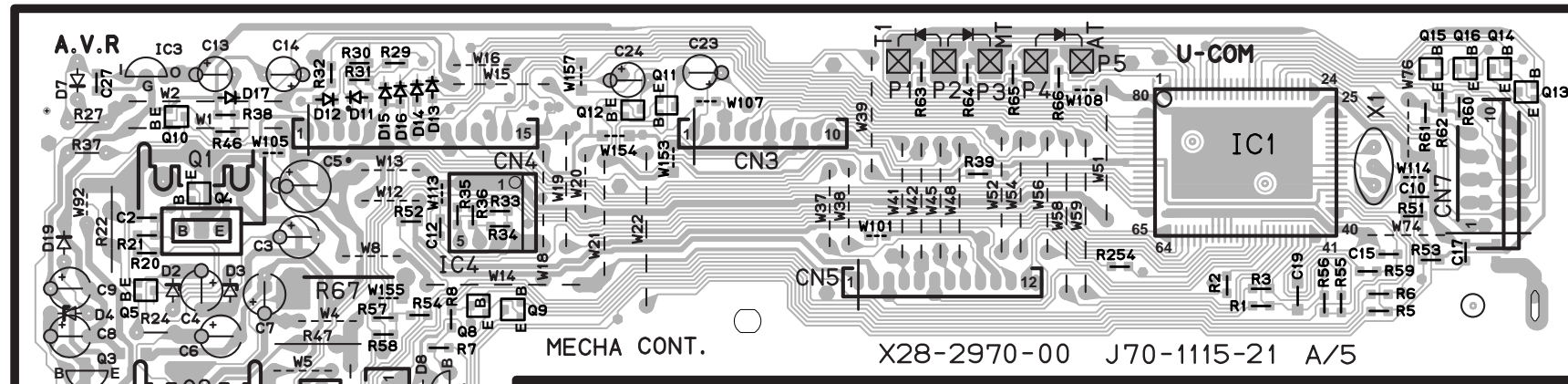
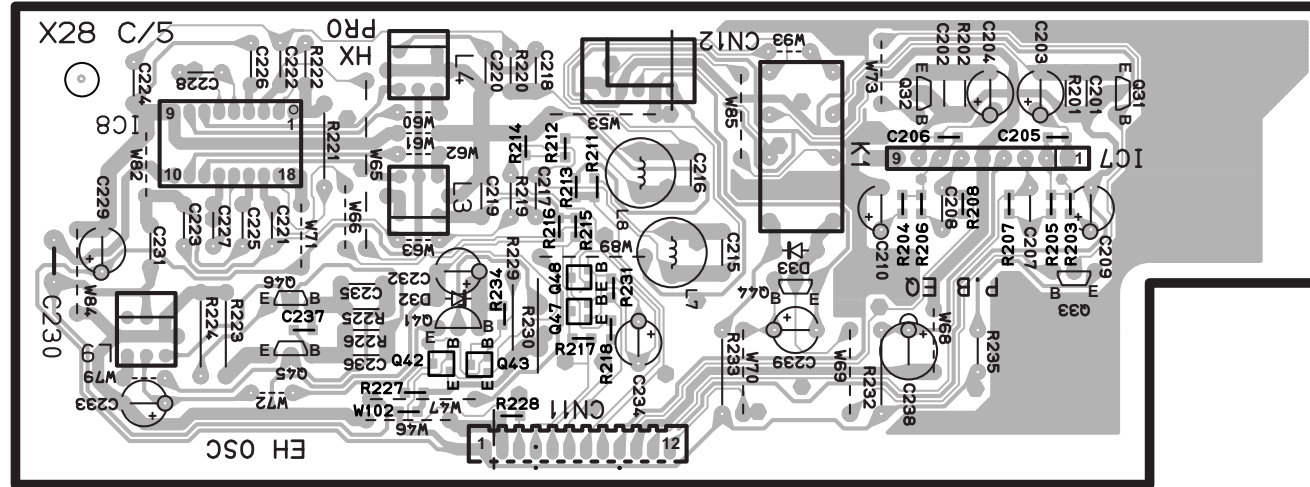
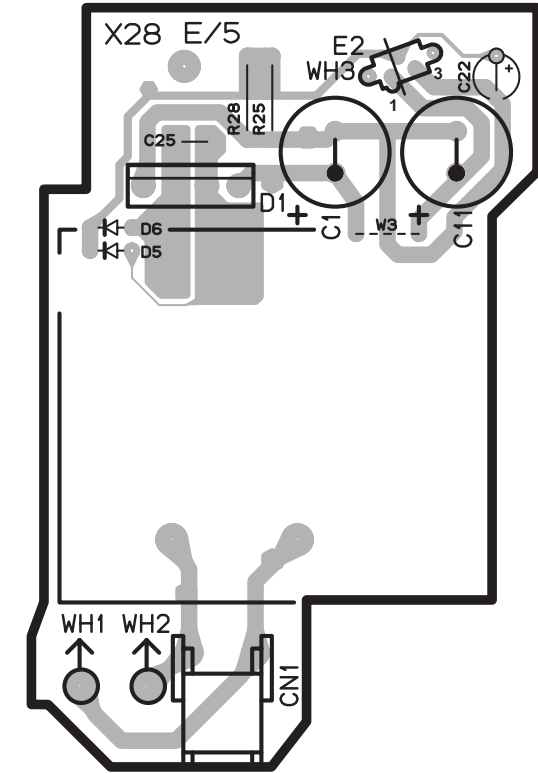
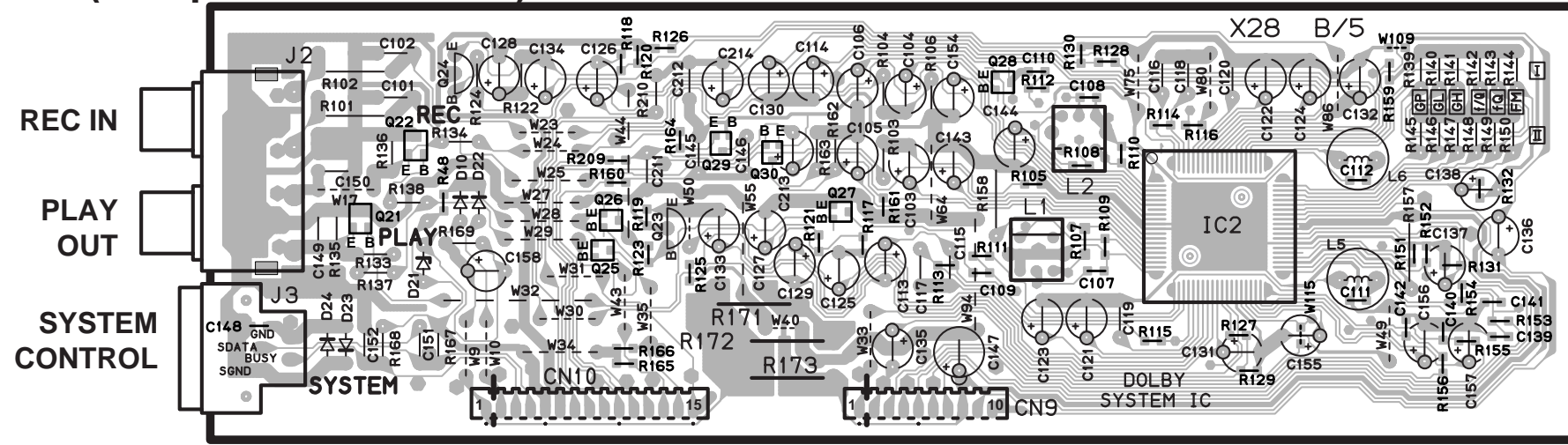
❖ The method of the manual adjustment mode.

(1) Setting

Shorting the TEST pin of (X28-)(A/5) TP5 → TP4 with the diode, plug the power cord to the AC wall let.

(2) Refer to manual adjustment mode(3-3), if require more details.

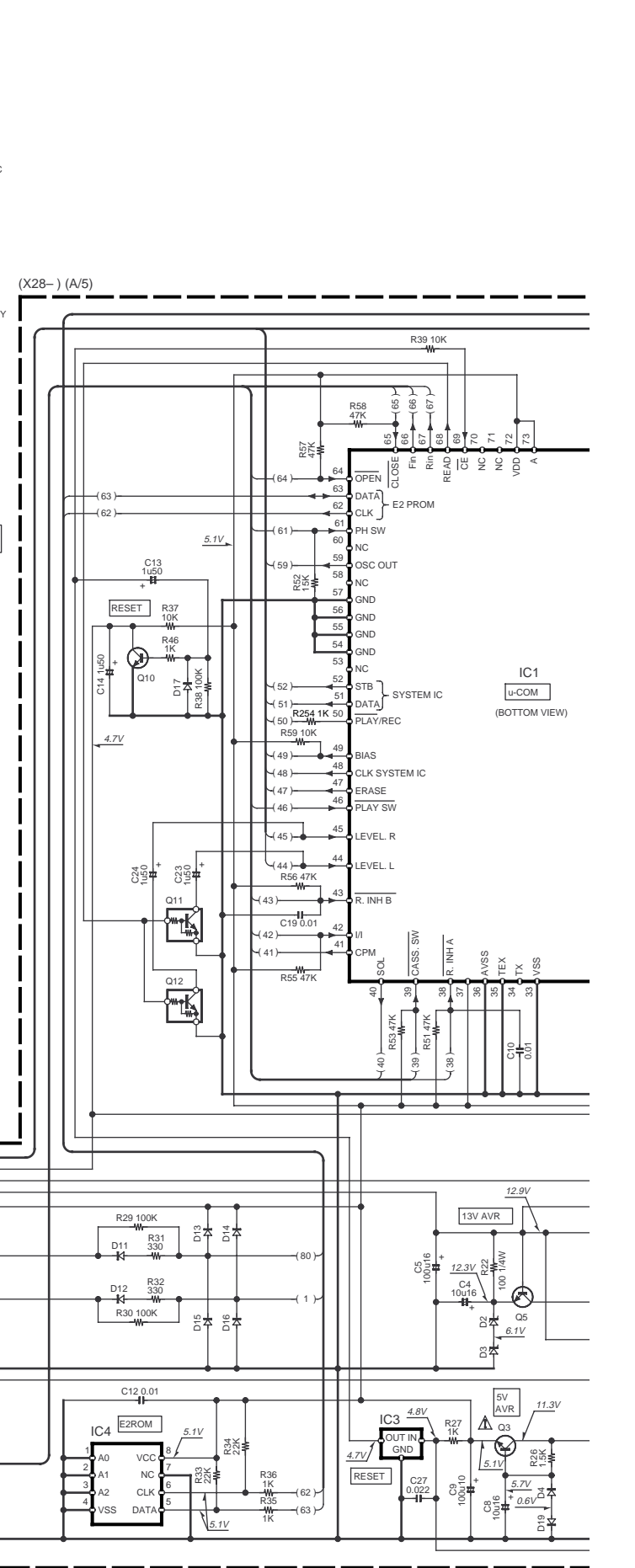
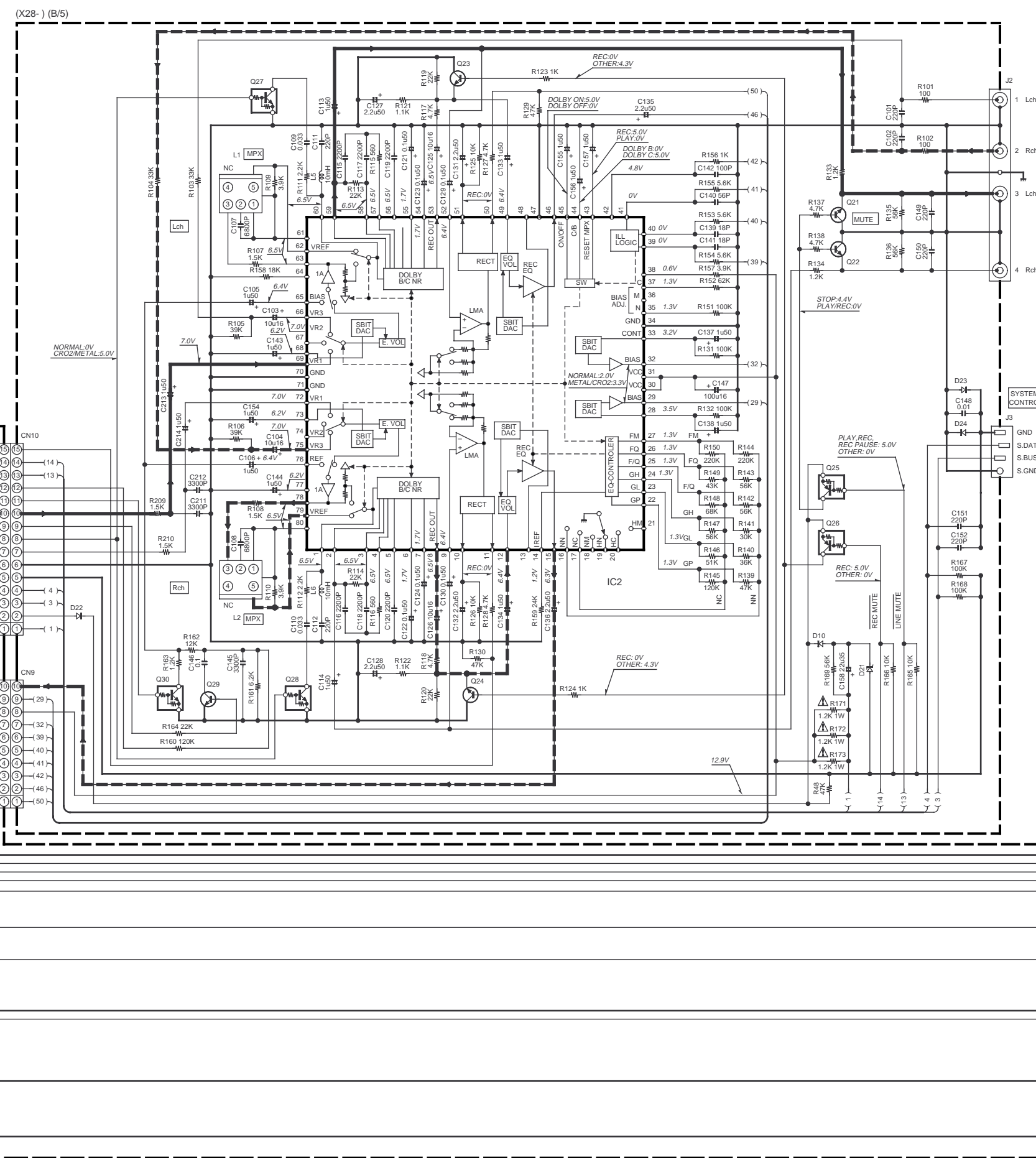
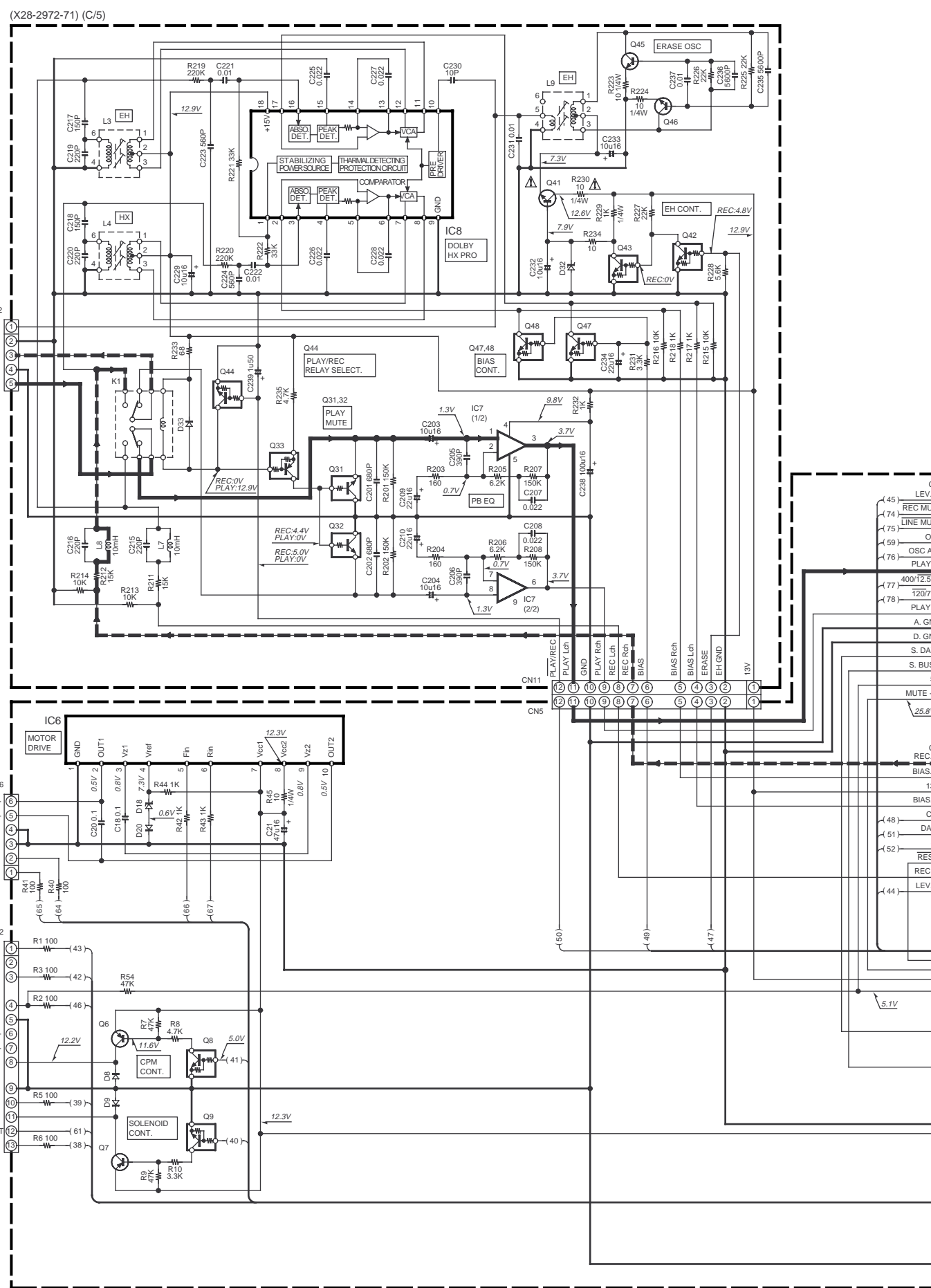
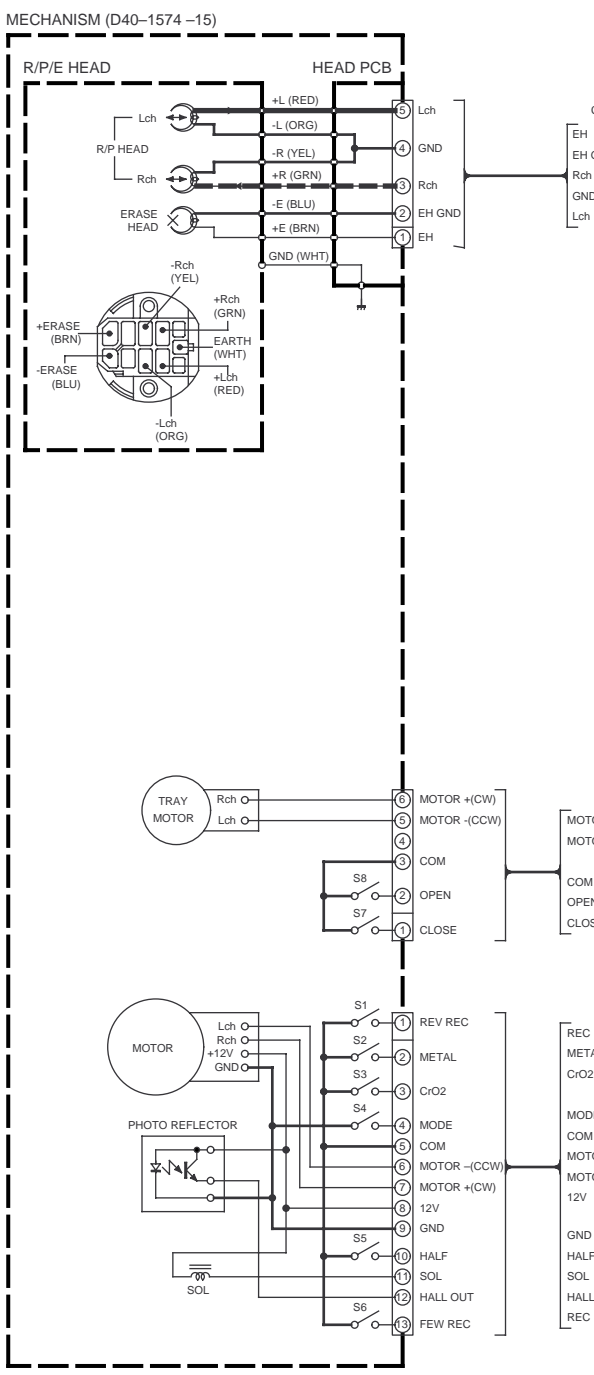
PC BOARD (Component side view)



Refer to the schematic diagram for the value of resistors and capacitors.

IC8 VOLTAGE MODE RECORDING

PIN	NORMAL	CROZ METAL	PIN	NORMAL	CROZ METAL
1	4.4V		10	1.69V	
2	1.9V	3.2V	11		
3	4.4V		12	12.9V	
4	2.4V	3.6V	13	2.64V	4.1V
5	1.9V	3.2V	14	1.7V	2.9V
6	2.6V	4.1V	15	2.3V	3.4V
7			16	4.39V	
8	12.9V		17	1.8V	2.9V
9	0V		18	12.9V	

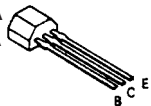


CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, 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.

The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

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DTA124ESA
DTC124ESA
DTC143TSA
UN4112
2SC1740S



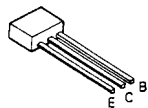
UN5119
2SD2114K



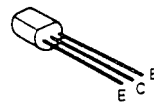
2SD2061



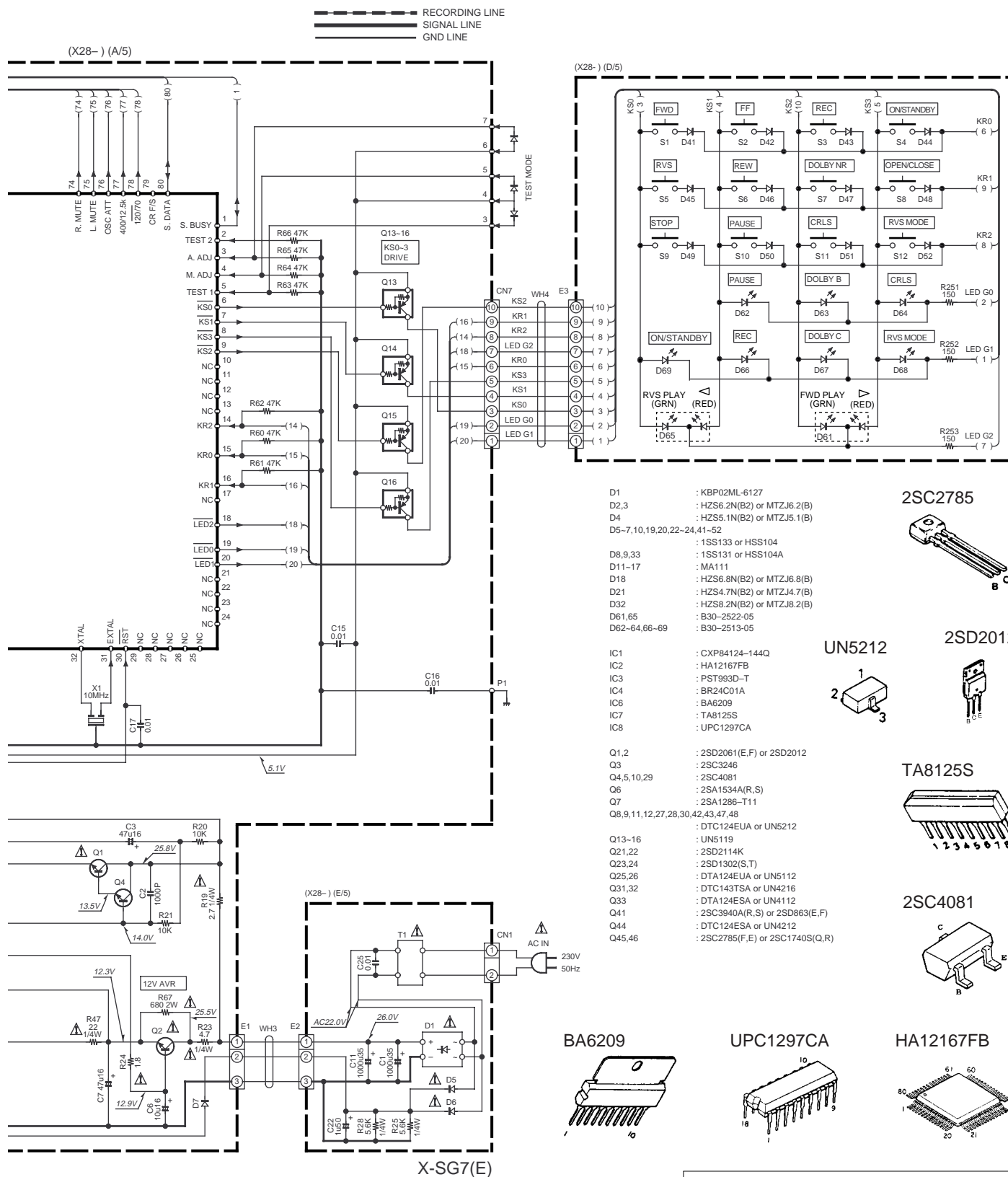
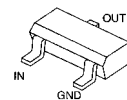
UN4212
UN4216



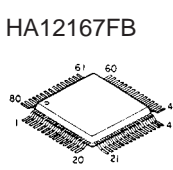
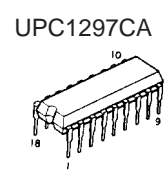
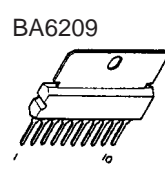
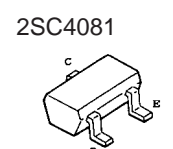
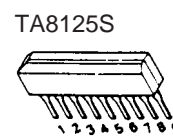
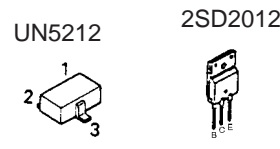
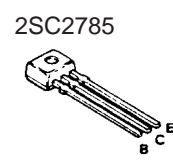
2SA1286-T11
2SA1534A
2SC3246
2SC3940A
2SD1302
2SD863



DTA124EUA
DTC124EUA



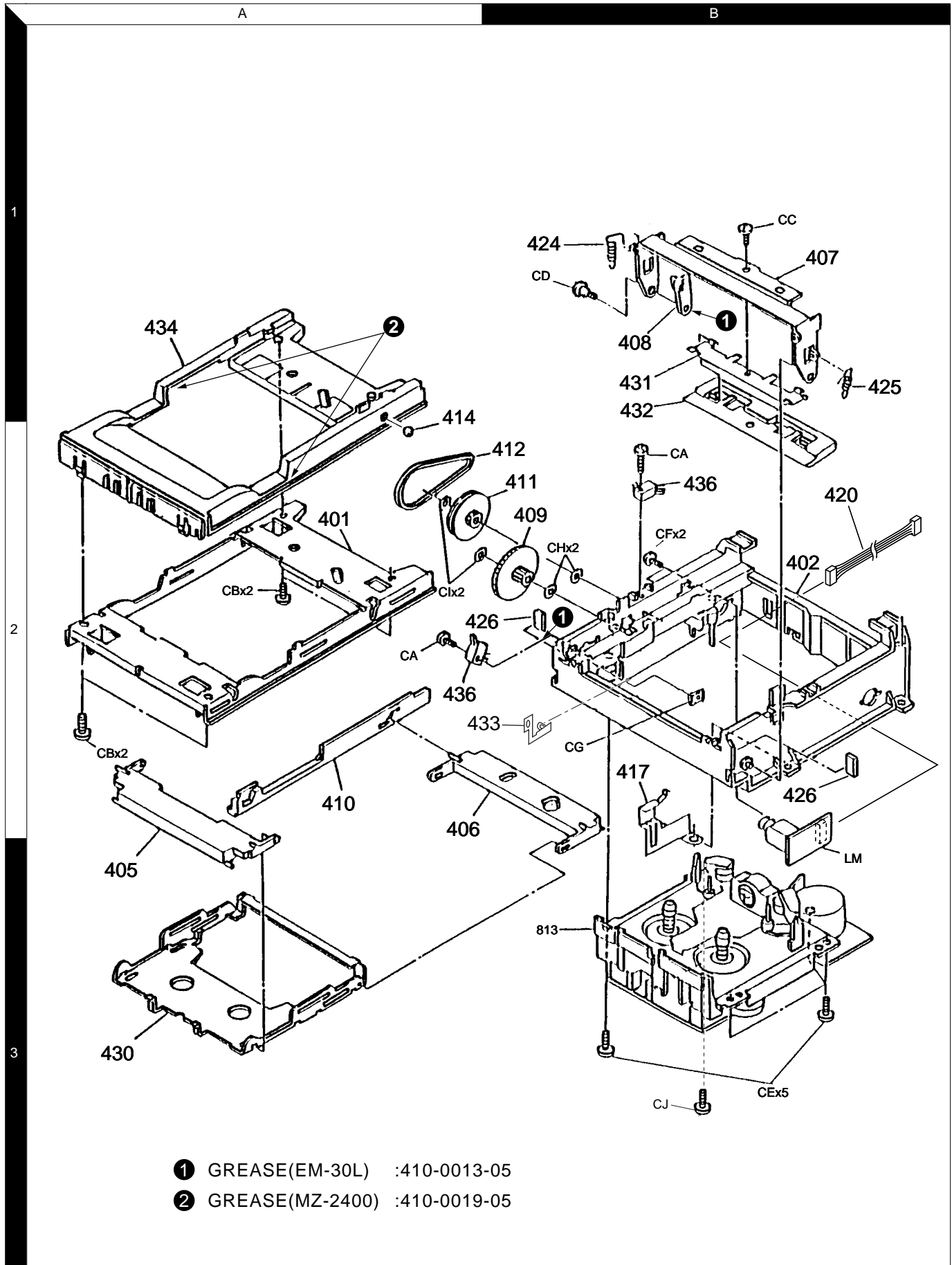
- D1 : KBP02ML-6127
- D2,3 : HZS6.2N(B2) or MTZJ6.2(B)
- D4 : HZS5.1N(B2) or MTZJ5.1(B)
- D5-7,10,19,20,22-24,41-52 : 1SS133 or HSS104
- D8,9,33 : 1SS131 or HSS104A
- D11-17 : MA111
- D18 : HZS6.8N(B2) or MTZJ6.8(B)
- D21 : HZS4.7N(B2) or MTZJ4.7(B)
- D32 : HZS8.2N(B2) or MTZJ8.2(B)
- D61,65 : B30-2522-05
- D62-64,66-69 : B30-2513-05
- IC1 : CXP84124-144Q
- IC2 : HA12167FB
- IC3 : PST993D-T
- IC4 : BR24C01A
- IC6 : BA6209
- IC7 : TA8125S
- IC8 : UPC1297CA
- Q1,2 : 2SD2061(E,F) or 2SD2012
- Q3 : 2SC3246
- Q4,5,10,29 : 2SC4081
- Q6 : 2SA1534A(R,S)
- Q7 : 2SA1286-T11
- Q8,9,11,12,27,28,30,42,43,47,48 : DTC124EUA or UN5212
- Q13-16 : UN5119
- Q21,22 : 2SD2114K
- Q23,24 : 2SD1302(S,T)
- Q25,26 : DTA124EUA or UN5112
- Q31,32 : DTC143TSA or UN4216
- Q33 : DTA124ESA or UN4112
- Q41 : 2SC3940A(R,S) or 2SD863(E,F)
- Q44 : DTC124ESA or UN4212
- Q45,46 : 2SC2785(F,E) or 2SC1740S(Q,R)



X-SG7/SG7G

X-SG7/SG7G

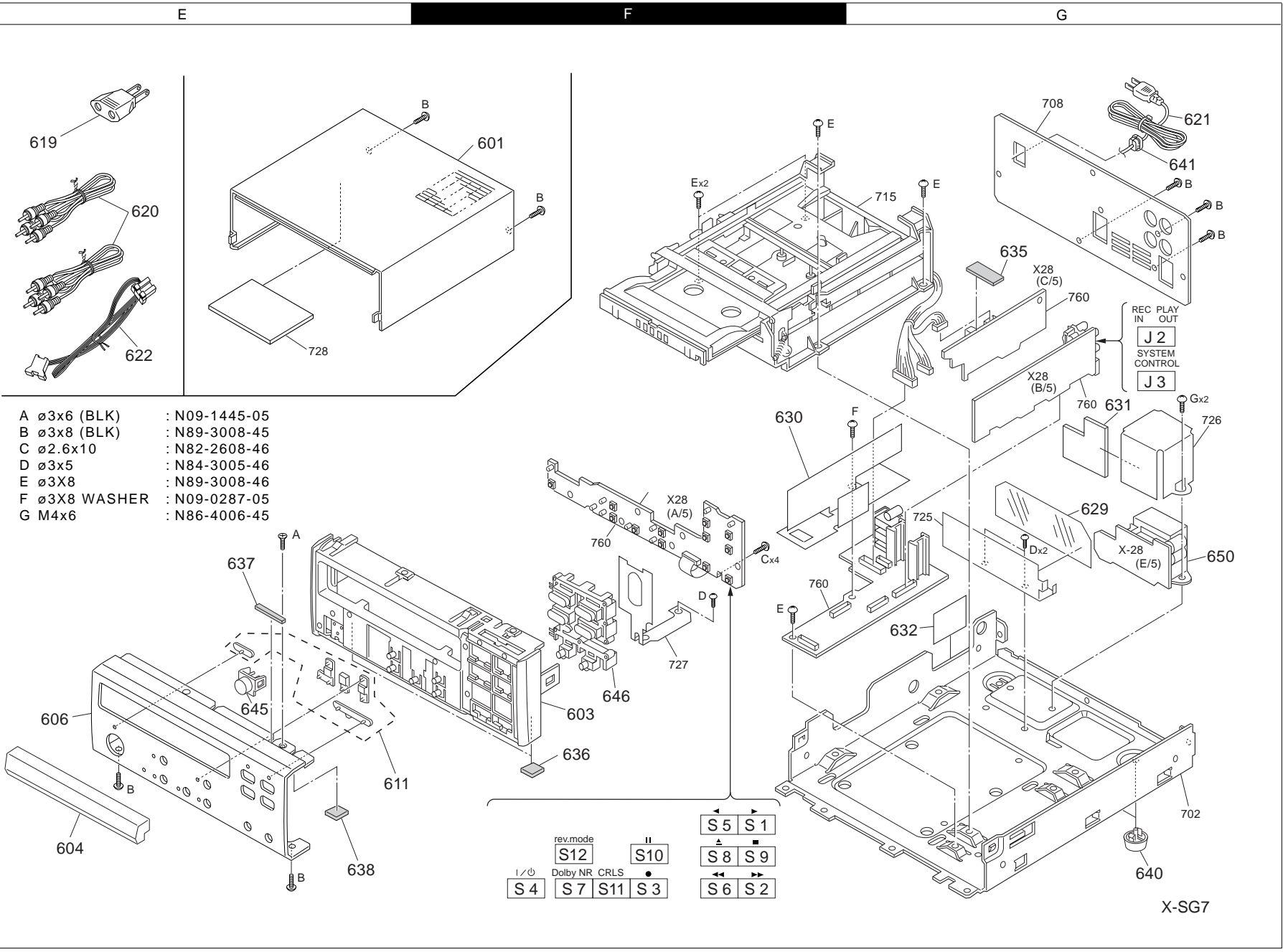
EXPLODED VIEW (MECHANISM: A)



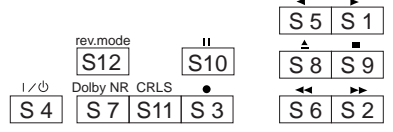
X-SG7/SG7G

EXPLODED VIEW (UNIT)

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



- A \varnothing 3x6 (BLK) : N09-1445-05
- B \varnothing 3x8 (BLK) : N89-3008-45
- C \varnothing 2.6x10 : N82-2608-46
- D \varnothing 3x5 : N84-3005-46
- E \varnothing 3X8 : N89-3008-46
- F \varnothing 3X8 WASHER : N09-0287-05
- G M4x6 : N86-4006-45



X-SG7

* 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.

①

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
X-SG7/SG7G M: X-SG7G						
601	1F	*	A01-3360-01	METALLIC CABINET		
603	2F		A22-1779-31	SUB PANEL	TE	
603	2F		A22-1780-31	SUB PANEL	M	
604	2E		A29-0873-03	PANEL	TE	
604	2E		A29-0874-03	PANEL	M	
606	2E	*	A60-1672-03	PANEL	TE	
606	2E	*	A60-1684-03	PANEL	M	
611	2E		B12-0319-13	INDICATOR		
-			B46-0310-03	WARRANTY CARD	TE	
-		*	B60-4375-00	INSTRUCTION MANUAL(EN)	E	
-		*	B60-4376-00	INSTRUCTION MANUAL(5-LNG)	M	
-		*	B60-4377-00	INSTRUCTION MANUAL(TC)		
Δ 619	1E		E03-0115-05	AC PLUG ADAPTER	M	
620	1E		E30-0615-05	AUDIO CORD		
Δ 621	1G		E30-2592-15	AC POWER CORD	ME	
Δ 621	1G		E30-2721-05	AC POWER CORD	T	
622	1E		E30-2628-05	CORD WITH CONNECTOR		
629	2G		F20-1480-24	INSULATING BOARD		
630	1F		F20-1484-03	INSULATING BOARD		
631	1G		F20-1491-04	INSULATING BOARD		
632	2G	*	F20-3542-04	INSULATING BOARD		
635	1G		G11-2286-04	CUSHION		
636	2F		G11-2381-04	CUSHION		
637	2E		G11-2288-04	CUSHION		
638	2E		G11-2389-04	CUSHION		
-			G10-0146-04	NON-WOVEN FABRIC		
-			H10-7456-02	POLYSTYRENE FOAMED FIXTURE		
-			H10-7457-02	POLYSTYRENE FOAMED FIXTURE		
-			H11-0073-04	POLYSTYRENE FOAMED BOARD		
-			H12-2299-14	PACKING FIXTURE	T	
-			H25-1579-04	PROTECTION BAG	E	
-			H25-1581-04	PROTECTION BAG (1579)	T	
-			H25-1595-04	PROTECTION BAG		
-			H25-1620-04	PROTECTION BAG	M	
-		*	H50-3429-04	ITEM CARTON CASE	E	
-		*	H50-3431-14	ITEM CARTON CASE	M	
-		*	H50-3433-04	ITEM CARTON CASE	T	
Δ 640	2G		J02-0370-05	FOOT		
Δ 641	1G		J42-0083-05	POWER CORD BUSHING		
-			J61-0081-05	WIRE BAND		
-			J61-0307-05	WIRE BAND		
645	2E		K29-6741-04	KNOB		
646	2F	*	K29-7572-13	KNOB		
Δ 650	2G		L07-2167-05	POWER TRANSFORMER	TE	
Δ 650	2G		L07-2413-05	POWER TRANSFORMER	M	
REC/PLAY (X28-2972-71)						
D61			B30-2522-05	LED(REDF, GREEN, 3MM)		
D62 -64			B30-2430-05	LED(REDF)		
D65			B30-2522-05	LED(REDF, GREEN, 3MM)		
D66 -69			B30-2430-05	LED(REDF)		

L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia
Y : PX(Far East, Hawaii) T : Europe E : Europe G : Germany V : China (Shanghai)
Y : AAFES(Europe) X : Australia Q : Russia H : Korea M : Other Areas Δ indicates safety critical components.

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②

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C1			C90-3676-05	ELECTRO		1000UF 35WV
C2			CC73FSL1H102J	CHIP C		1000PF J
C3			C90-3649-05	ELECTRO		47UF 16WV
C4			C90-3658-05	ELECTRO		10UF 16WV
C5			C90-3650-05	ELECTRO		100UF 16WV
C6			C90-3658-05	ELECTRO		10UF 16WV
C7			C90-3649-05	ELECTRO		47UF 16WV
C8			C90-3658-05	ELECTRO		10UF 16WV
C9			C90-3643-05	ELECTRO		100UF 10WV
C10			CK73EB1H103K	CHIP C		0.010UF K
C11			C90-3676-05	ELECTRO		1000UF 35WV
C12			CK73FB1H103K	CHIP C		0.010UF K
C13, 14			C90-3253-05	ELECTRO		1.0UF 50WV
C15			CK73FB1H103K	CHIP C		0.010UF K
C17			CK73FB1H103K	CHIP C		0.010UF K
C18			CK73FB1E104K	CHIP C		0.10UF K
C19			CK73EB1H103K	CHIP C		0.010UF K
C20			CK73FB1E104K	CHIP C		0.10UF K
C21			C90-3649-05	ELECTRO		47UF 16WV
C22			C90-3680-05	ELECTRO		1UF 50WV
C23, 24			C90-3253-05	ELECTRO		1.0UF 50WV
C25			CK45FF1H103Z	CERAMIC		0.010UF Z
C27			CK73FB1H223K	CHIP C		0.022UF K
C101,102			C91-0749-05	CERAMIC		220PF K
C103,104			CE04LW1C100M	ELECTRO		10UF 16WV
C105,106			CE04LW1H010M	ELECTRO		1.0UF 50WV
C107,108			CK73FB1H682K	CHIP C		6800PF K
C109,110			CK73FB1H333K	CHIP C		0.033UF K
C111,112			CC73FSL1H221J	CHIP C		220PF J
C113,114			CE04LW1H010M	ELECTRO		1.0UF 50WV
C115-120			CQ93FMG1H222J	MYLAR		2200PF J
C121-124			CE04LW1H0R1M	ELECTRO		0.1UF 50WV
C125,126			CE04LW1C100M	ELECTRO		10UF 16WV
C127,128			CE04LW1H2R2M	ELECTRO		2.2UF 50WV
C129,130			CE04LW1H0R1M	ELECTRO		0.1UF 50WV
C131,132			CE04LW1H2R2M	ELECTRO		2.2UF 50WV
C133,134			CE04LW1H010M	ELECTRO		1.0UF 50WV
C135,136			CE04LW1H2R2M	ELECTRO		2.2UF 50WV
C137,138			CE04LW1H010M	ELECTRO		1.0UF 50WV
C139			CC73FSL1H180J	CHIP C		18PF J
C140			CC73FSL1H560J	CHIP C		56PF J
C141			CC73FSL1H180J	CHIP C		18PF J
C142			CC73FSL1H101J	CHIP C		100PF J
C143,144			CE04LW1H010M	ELECTRO		1.0UF 50WV
C145			CQ93FMG1H332J	MYLAR		3300PF J
C146			CQ93FMG1H104J	MYLAR		0.10UF J
C147			C90-3650-05	ELECTRO		100UF 16WV
C148			CK73FB1H103K	CHIP C		0.010UF K
C149-152			C91-0749-05	CERAMIC		220PF K
C154-157			CE04LW1H010M	ELECTRO		1.0UF 50WV
C158			C90-3716-05	ELECTRO		22UF 35WV
C201,202			C91-0755-05	CERAMIC		680PF K
C203,204			CE04LW1C100M	ELECTRO		10UF 16WV
C205,206			CC73FSL1H391J	CHIP C		390PF J
C207,208			CQ93FMG1H223J	MYLAR		0.022UF J

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Y : PX(Far East, Hawaii) T : Europe E : Europe G : Germany V : China (Shanghai)
Y : AAFES(Europe) X : Australia Q : Russia H : Korea M : Other Areas Δ indicates safety critical components.

PARTS LIST

X-SG7/SG7G

* New Parts
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3

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C209,210			CE04LW1C220M	ELECTRO 22UF 16WV		
C211,212			CQ93FMG1H332J	MYLAR 3300PF J		
C213,214			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C215,216			CK45FB1H221K	CERAMIC 220PF K		
C217,218			C91-1434-05	FILM 150PF J		
C219,220			C91-1436-05	FILM 220PF J		
C221,222			CQ93FMG1H103J	MYLAR 0.010UF J		
C223,224			CC45FSL1H561J	CERAMIC 560PF J		
C225-228			CQ93FMG1H223J	MYLAR 0.022UF J		
C229			CE04LW1C100M	ELECTRO 10UF 16WV		
C230			CC45FSL2H100D	CERAMIC 10PF D		
C231			CQ93HP2A103J	MYLAR 0.010UF J		
C232,233			C90-3658-05	ELECTRO 10UF 16WV		
C234			CE04LW1C220M	ELECTRO 22UF 16WV		
C235,236			CQ93FMG1H562J	MYLAR 5600PF J		
C237			CK73FB1H103K	CHIP C 0.010UF K		
C238			C90-3650-05	ELECTRO 100UF 16WV		
C239			CE04LW1H010M	ELECTRO 1.0UF 50WV		
CN1			E40-4632-05	PIN ASSY		
CN2			E40-3257-05	PIN ASSY		
CN3			E40-9843-05	PIN ASSY		
CN4			E40-9848-05	PIN ASSY		
CN5			E40-9845-05	PIN ASSY		
CN6			E40-3250-05	PIN ASSY		
CN7			E40-4284-05	FLAT CABLE CONNECTOR		
CN9			E40-9826-05	SOCKET FOR PIN ASSY		
CN10			E40-9831-05	SOCKET FOR PIN ASSY		
CN11			E40-9828-05	SOCKET FOR PIN ASSY		
CN12			E40-3263-05	PIN ASSY		
J2	2G		E63-0046-15	PHONO JACK		
J3	2G		E08-0311-05	RECTANGULAR RECEPTACLE		
L1 ,2			L79-1201-05	LC FILTER		
L3 ,4			L32-0547-05	BIAS OSCILATING COIL		
L5 -8			L40-1035-29	SMALL FIXED INDUCTOR(10MH, J)		
L9			L32-0570-05	BIAS OSCILATING COIL		
X1			L78-0294-05	RESONATOR (10.000M)		
R1 -3			RK73FB2A101J	CHIP R 100 J 1/10W		
R5 ,6			RK73FB2A101J	CHIP R 100 J 1/10W		
R7			RK73FB2A473J	CHIP R 47K J 1/10W		
R8			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R9			RK73FB2A473J	CHIP R 47K J 1/10W		
R10			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R19			RD14NB2E2R7J	RD 2.7 J 1/4W		
R20 ,21			RK73FB2A103J	CHIP R 10K J 1/10W		
R22			RD14NB2E101J	RD 100 J 1/4W		
R23			RD14NB2E4R7J	RD 4.7 J 1/4W		
R29 ,30			RK73FB2A104J	CHIP R 100K J 1/10W		
R31 ,32			RK73FB2A331J	CHIP R 330 J 1/10W		
R33 ,34			RK73FB2A223J	CHIP R 22K J 1/10W		
R35 ,36			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R38 ,39			RK73FB2A104J	CHIP R 100K J 1/10W		
R40 ,41			RK73FB2A101J	CHIP R 100 J 1/10W		
R42 ,43			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R44			RK73FB2A102J	CHIP R 1.0K J 1/10W		

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4

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Δ R45			RD14NB2E100J	RD 10 J 1/4W		
R46			RK73FB2A102J	CHIP R 1.0K J 1/10W		
Δ R47			RD14NB2E220J	RD 22 J 1/4W		
R48			RK73FB2A473J	CHIP R 47K J 1/10W		
R51			RK73FB2A473J	CHIP R 47K J 1/10W		
R52			RK73FB2A153J	CHIP R 15K J 1/10W		
R53 -58			RK73FB2A473J	CHIP R 47K J 1/10W		
R59			RK73FB2A103J	CHIP R 10K J 1/10W		
R60 -66			RK73FB2A473J	CHIP R 47K J 1/10W		
Δ R67			RS14KB3D681J	FL-PROOF RS 680 J 2W		
R105			RK73FB2A393J	CHIP R 39K J 1/10W		
R107			RK73EB2B152J	CHIP R 1.5K J 1/8W		
R108			RK73FB2A152J	CHIP R 1.5K J 1/10W		
R109,110			RK73FB2A392J	CHIP R 3.9K J 1/10W		
R111,112			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R113,114			RK73FB2A223J	CHIP R 2.2K J 1/10W		
R115,116			RK73FB2A561J	CHIP R 560 J 1/10W		
R117,118			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R119,120			RK73FB2A223J	CHIP R 22K J 1/10W		
R121			RK73FB2A112J	CHIP R 1.1K J 1/10W		
R123			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R125,126			RK73FB2A103J	CHIP R 10K J 1/10W		
R127,128			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R129,130			RK73FB2A473J	CHIP R 47K J 1/10W		
R131,132			RK73FB2A104J	CHIP R 100K J 1/10W		
R151			RK73FB2A104J	CHIP R 100K J 1/10W		
R152			RK73FB2A623J	CHIP R 62K J 1/10W		
R153-155			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R156			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R159			RK73FB2A243J	CHIP R 24K J 1/10W		
R160			RK73FB2A124J	CHIP R 120K J 1/10W		
R161			RK73FB2A622J	CHIP R 6.2K J 1/10W		
R164			RK73FB2A223J	CHIP R 22K J 1/10W		
R165,166			RK73FB2A103J	CHIP R 10K J 1/10W		
Δ R171-173			RS14KB3A122J	FL-PROOF RS 1.2K J 1W		
R203,204			RK73FB2A161J	CHIP R 160 J 1/10W		
R205,206			RK73FB2A622J	CHIP R 6.2K J 1/10W		
R207,208			RK73FB2A154J	CHIP R 150K J 1/10W		
R209			RK73FB2A152J	CHIP R 1.5K J 1/10W		
R211,212			RK73FB2A153J	CHIP R 15K J 1/10W		
R213-216			RK73FB2A103J	CHIP R 10K J 1/10W		
R217,218			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R227			RK73FB2A223J	CHIP R 22K J 1/10W		
R228			RK73FB2A562J	CHIP R 5.6K J 1/10W		
Δ R230			RD14NB2E100J	RD 10 J 1/4W		
R231			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R234			RK73FB2A100J	CHIP R 10 J 1/10W		
R254			RK73FB2A102J	CHIP R 1.0K J 1/10W		
W101,102			R92-0670-05	CHIP R 0 OHM		
W105-111			R92-0670-05	CHIP R 0 OHM		
W113-115			R92-0670-05	CHIP R 0 OHM		
W153-157			R92-0679-05	CHIP R 0 OHM		
K1			S76-0018-05	MAGNETIC RELAY		
S1 -12	2F		S70-0031-05	TACT SWITCH		

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Δ D1			KBP02ML-6127	DIODE		
D2 ,3			HZS6.2N(B2)	ZENER DIODE		
D2 ,3			MTZJ6.2(B)	ZENER DIODE		
D4			HZS5.1N(B2)	ZENER DIODE		
Δ D4			MTZJ5.1(B)	ZENER DIODE		
Δ D5 -7			HSS104	DIODE		
Δ D5 -7			1SS133	DIODE		
D8 ,9			HSS104A	DIODE		
D8 ,9			1SS131	DIODE		
D10			HSS104	DIODE		
D10			1SS133	DIODE		
D11 -17			MA111	DIODE		
D18			HZS6.8N(B2)	ZENER DIODE		
D18			MTZJ6.8(B)	ZENER DIODE		
D19 ,20			HSS104	DIODE		
D19 ,20			1SS133	DIODE		
D21			HZS4.7N(B)	ZENER DIODE		
D21			MTZJ4.7(B)	ZENER DIODE		
D22 -24			HSS104	DIODE		
D22 -24			1SS133	DIODE		
D32			HZS8.2N(B2)	ZENER DIODE		
D32			MTZJ8.2(B)	ZENER DIODE		
D33			HSS104A	DIODE		
D33			1SS131	DIODE		
D41 -52			HSS104	DIODE		
D41 -52			1SS133	DIODE		
IC1			CXP84124-144Q	MI-COM IC		
IC2			HA12167FB	IC(DOLBY B/C, REC EQ)		
IC3			PST993D-T	ANALOGUE IC		
IC4			BR24C01A	MEMORY IC		
IC6			BA6209	ANALOGUE IC		
IC7			TA8125S	IC(2CH PRE AMP)		
IC8			UPC1297CA	ANALOGUE IC		
Q1 ,2			2SD2012	TRANSISTOR		
Q1 ,2			2SD2061(E,F)	TRANSISTOR		
Q3			2SC3246	TRANSISTOR		
Q4 ,5			2SC4081	TRANSISTOR		
Q6			2SA1534A(R,S)	TRANSISTOR		
Q7			2SA1286-T11	TRANSISTOR		
Q8 ,9			DTC124EUA	DIGITAL TRANSISTOR		
Q8 ,9			UN5212	DIGITAL TRANSISTOR		
Q10			2SC4081	TRANSISTOR		
Q11 ,12			DTC124EUA	DIGITAL TRANSISTOR		
Q11 ,12			UN5212	DIGITAL TRANSISTOR		
Q13 -16			UN5119	DIGITAL TRANSISTOR		
Q21 ,22			2SD2114K	TRANSISTOR		
Q23 ,24			2SD1302(S,T)	TRANSISTOR		
Q25 ,26			DTA124EUA	DIGITAL TRANSISTOR		
Q25 ,26			UN5112	DIGITAL TRANSISTOR		
Q27 ,28			DTC124EUA	DIGITAL TRANSISTOR		
Q27 ,28			UN5212	DIGITAL TRANSISTOR		
Q29			2SC4081	TRANSISTOR		
Q30			DTC124EUA	DIGITAL TRANSISTOR		
Q30			UN5212	DIGITAL TRANSISTOR		
Q31 ,32			DTC143TSA	DIGITAL TRANSISTOR		

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Q31 ,32			UN4216	DIGITAL TRANSISTOR		
Q33			DTA124ESA	DIGITAL TRANSISTOR		
Q33			UN4112	DIGITAL TRANSISTOR		
Q41			2SC3940A(R,S)	TRANSISTOR		
Δ Q41			2SD863(E,F)	TRANSISTOR		
Q42 ,43			DTC124EUA	DIGITAL TRANSISTOR		
Q42 ,43			UN5212	DIGITAL TRANSISTOR		
Q44			DTC124ESA	DIGITAL TRANSISTOR		
Q44			UN4212	DIGITAL TRANSISTOR		
Q45 ,46			2SC1740S(Q,R)	TRANSISTOR		
Q45 ,46			2SC2785(F,E)	TRANSISTOR		
Q47 ,48			DTC124EUA	DIGITAL TRANSISTOR		
Q47 ,48			UN5212	DIGITAL TRANSISTOR		
LOADING MECHANISM (D40-1574-15)						
401	2A		A10-3306-08	CHASSIS 576		
402	2B		A15-0093-08	FLAME ASSY		
405	3A		D10-3667-08	ARM A		
406	2A		D10-3668-08	ARM C		
407	1B		D10-3669-08	ARM-576		
408	1B		D10-3670-08	ARM		
409	2B		D13-1850-08	GEAR B		
410	2A		D13-1775-08	GEAR LUCK		
411	2B		D15-0409-08	PULLEY(C)		
412	2B		D16-0707-08	BELT-49.2		
414	1A		D90-0042-08	BALL		
417	2B		E29-1621-08	PLATE EARTH		
420	2B		E40-8034-08	CNW 6P-6PPH-76A		
424	1B		G01-3945-08	SPRING A		
425	1B		G01-3946-08	SPRING B		
426	2A,2B		G11-2280-08	BUFFER		
430	3A		J19-5737-08	HOLDER ASSY		
431	1B		J19-5738-08	RETAINER		
432	1B		J19-5739-08	PLATE		
433	2B	*	J21-6625-08	PLATE		
434	1A		J99-0590-08	TRAY 117A		
CA	2A,2B		N09-3319-08	B TITE SCREW M2X8BK		
CB	2C		N09-3320-08	B TITE SCREW M2.6X5BK		
CC	1B		N09-3321-08	SCREW M1.4X2BK		
CD	1B		N09-3322-08	SCREW M1.7X8.2-7.0		
CE	3B		N09-3323-08	P TITE SCREW 3X6BK		
CF	2B		N09-3327-08	SCREW M2X4BK		
CG	2B		N14-0198-08	NUT		
CH	2B		N19-1427-08	PSW 2.1X4X0.5		
CI	2C		N19-1428-08	PSW 1.6X4X0.5C		
CJ	2B	*	N09-3464-08	B TITE SCREW M3X8		
436	2A,2B		S74-0073-08	SWITCH MSS-8B		
LM	3B		T42-0859-08	MOTOR PCB ASSY		
CASSETTE MECHANISM (D40-1574-15)						
501	2D		A10-3304-08	CHASSIS(OS)ASSY		
502	1D		A10-3305-08	CHASSIS(HEAD)ASSY		
505	3D		D01-0199-08	FLYWEEL(F)ASSY		

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PARTS LIST

X-SG7/SG7G

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506	3C		D01-0200-08	FLYWHEEL(R)ASSY		
507	2C		D10-3661-08	ARM(PLAY)ASSY		
508	3C		D10-3662-08	ARM-P		
509	2D		D10-3663-08	LEVER-BRAKE		
510	2C		D10-3664-08	ARM-CAM LOCK		
511	3C		D10-3665-08	ARM-RF		
512	1C		D10-3666-08	LEVER-AC		
515	2C,3D		D13-1767-08	BASE-REEL		
517	3C		D13-1769-08	GEAR-CAM		
518	2C		D13-1770-08	GEAR-IDLER		
519	3D		D13-1771-08	GEAR-P		
521	3C,3D		D13-1773-08	GEAR-RF		
524	1D		D14-0380-08	PINCHROLLER ASSY(F)		
525	1C		D14-0381-08	PINCHROLLER ASSY(R)		
526	1D		D14-0382-08	ROLLER-P		
527	3D		D15-0396-08	PULLY-C		
528	3D		D16-0705-08	BELT SUB		
529	3D		D16-0706-08	BELT MAIN		
530A	1C,1D		J42-0337-08	BASE-REEL		
530B	1C,1D		D19-0309-08	CAP-REEL		
531	1C		E35-1662-08	WIRE HEAD(BROWN)		
532	1C		E35-1663-08	WIRE HEAD(BLUE)		
533	1C		E35-1664-08	WIRE HEAD(GREEN)		
534	1C		E35-1665-08	WIRE HEAD(ORANGE)		
535	1C		E35-1666-08	WIRE HEAD(RED)		
536	1C		E35-1667-08	WIRE HEAD(WHITE)		
537	1C		E35-1668-08	WIRE HEAD(YELLOW)		
541	3C		E35-1631-08	WIRE-MOTOR		
542	3C		E40-8030-08	CONNECTOR R/P		
543	1C		E40-8032-08	CNW 5P-5PPH-76A		
544	1C		E40-8033-08	CNW 13P-13PPH-76A		
545	3D		F09-0104-08	CAP-P		
546	3D		F09-0105-08	CAP-C		
547	3C		F09-0106-08	CAP-MAGNET		
550	1D		G01-3911-08	SPRING-B/T F		
551	1C		G01-3932-08	SPRING-B/T R		
552	2C		G01-3933-08	SPRING-LEVER AC		
553	3D		G01-3934-08	SPRING-P		
554	1D		G01-3935-08	SPRING-BASE HEAD		
555	1D		G01-3937-08	SPRING-PINCH F		
556	1C		G01-3938-08	SPRING-PINCH R		
557	2C		G01-3939-08	SPRING-CAM LOCK		
558	3D		G01-3940-08	SPRING-C		
559	2C		G01-3941-08	SPRING-ARM RF		
560	1D		G01-3942-08	SPR-PINCH RETURN F		
561	1C		G01-3943-08	SPR-PINCH RETURN R		
562	3C		G02-1606-08	PLATE-SPRING		
563	2D,3D		G10-0430-08	FELT P		
564	3D		G10-0431-08	FELT C		
565	3C		G11-2279-08	CUSHIN MOTOR		
568	2C,2D		J19-5735-08	BRKT SIDE		
570	3C		J19-5736-08	BRKT M/T TOP		
571	2D		J42-0332-08	BUSH-P		

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572	3D		J42-0333-08	BUSH-C		
573	2C		J60-0027-08	TAPE PAPER		
574	2D		J21-6555-08	PLATE-UPPER		
CK	1C,2C		N09-3315-08	SCREW-T BH M2X4		
CM	3D		N09-3317-08	SCREW S		
CN	3C		N09-3318-08	SCREW M		
CO	3D		N19-1423-08	WASHER-PLAIN		
CP	2D		N19-1424-08	WASHER-PLAIN		
CQ	2C		N19-1425-08	WASHER-PLAIN		
CR	3D		N19-1426-08	WASHER-PLAIN		
CS	1C,1D		N19-1429-08	WASHER B/T		
CT	3C		N09-3415-08	SCREW T		
CU	2C,2D		N19-1448-08	WASHER-PLAIN		
575	3D		S74-0071-08	SWITCH DETECT		
576	3C		S74-0072-08	SWITCH MODE		
580	2D		T94-0238-08	SOLENOID		
581	3C		T95-0153-08	HALL IC		
582	3C		T99-0581-08	PLATE MAGNET		
MM	3C		T42-0858-08	DC MOTOR ASSY		
RPEH	1C		T39-0033-08	HEAD R/P		
585	3C		W02-2577-08	PCB CONTROL 2103		

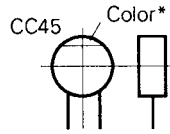
L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia
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PARTS DESCRIPTIONS

CAPACITORS

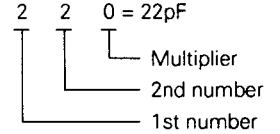
CC 45 TH 1H 220 J
 1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc.
- 2 = Shape ... round, square, ect.
- 3 = Temp. coefficient
- 4 = Voltage rating
- 5 = Value
- 6 = Tolerance



• Capacitor value

- 010 = 1pF
- 100 = 10pF
- 101 = 100pF
- 102 = 1000pF = 0.001μF
- 103 = 0.01μF



• Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470 ± 60ppm/°C

• Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40	+80	+100	More than 10μF -10 ~ +50
							-20	-20	-0	Less than 4.7μF -10 ~ +75

(Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

• Voltage rating

2nd word \ 1st word	A	B	C	D	E	F	G	H	J	K	V
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	-
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	-
3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	-

• Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J
 1 2 3 4 5 6 7

(Chip) (CH, RH, UJ, SL)

(EX) C K 7 3 F F 1 H 0 0 0 Z
 1 2 3 4 5 6 7

(Chip) (B, F)

Refer to the table above.

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

Dimension (Chip capacitors)

Dimension code	L	W	T
Empty	5.6 ± 0.5	5.0 ± 0.5	Less than 2.0
A	4.5 ± 0.5	3.2 ± 0.4	Less than 2.0
B	4.5 ± 0.5	2.0 ± 0.3	Less than 2.0
C	4.5 ± 0.5	1.25 ± 0.2	Less than 1.25
D	3.2 ± 0.4	2.5 ± 0.3	Less than 1.5
E	3.2 ± 0.2	1.6 ± 0.2	Less than 1.25
F	2.0 ± 0.3	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	0.8 ± 0.2	Less than 1.0

RESISTORS

• Chip resistor (Carbon)

(EX) R K 7 3 E B 2 B 0 0 0 J
 1 2 3 4 5 6 7

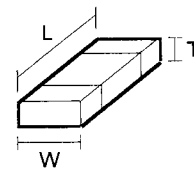
(Chip) (B,F)

• Carbon resistor (Normal type)

(EX) R D 1 4 B B 2 C 0 0 0 J
 1 2 3 4 5 6 7

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Rating wattage
- 6 = Value
- 7 = Tolerance

Dimension



Dimension (Chip resistor)

Dimension code	L	W	T
E	3.2 ± 0.2	1.6 ± 0.2	1.0
F	2.0 ± 0.3	1.25 ± 0.2	1.0
G	1.6 ± 0.2	0.8 ± 0.2	0.5 ± 0.1

Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

X-SG7/SG7G

SPECIFICATIONS

Track..... 4-track, 2-channel stereo
Recording system..... AC bias system
(Frequency: 105 kHz)

Heads

Playback / recording head..... 1
Erasing head 1
Motors..... 1
Wow and flutter..... 0.1 % (W.R.M.S.)
Fast winding time Approx. 110 seconds
(C-60 tape)

Frequency response

TYPE I tape 40 Hz to 18,000 Hz, ± 3 dB
TYPE II tape 40 Hz to 19,000 Hz, ± 3 dB

Signal to noise ratio

Dolby C NR ON 73 dB (CrO₂ tape)
Dolby B NR ON 67 dB (CrO₂ tape)
Dolby NR OFF 60 dB (CrO₂ tape)

Input sensitivity / Impedance 77.5 mV/47 k Ω
Output level / Impedance 775 mV/10 k Ω

[General]

Power consumption 14 W
(For the U.S.A. only)
AC outlet (UNSWITCHED) 1 (max 100W)
Dimensions W : 200 mm
H : 77 mm
D : 249 mm
Weight (net) 2.2 kg



- 1.KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
- 2.Sufficient performance may not be possible at very low temperatures (under a water-freezing temperature).

Note:

Component and circuit are subject to modification to insure best operation under differing local conditions. This manual is based on Europe (E) 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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