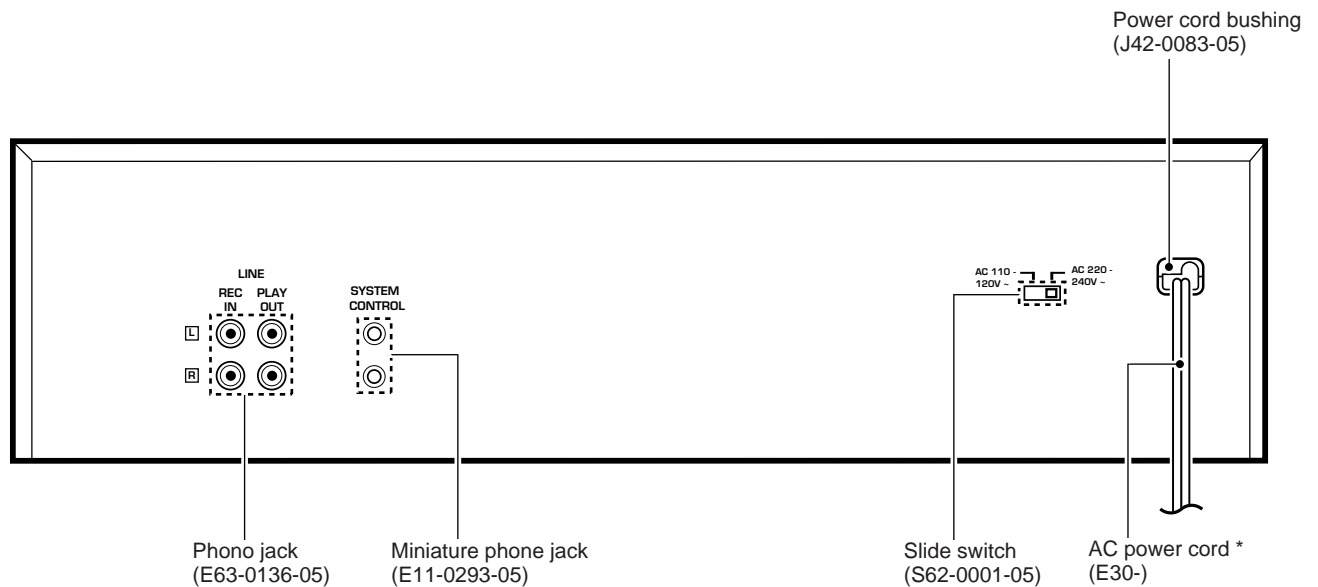
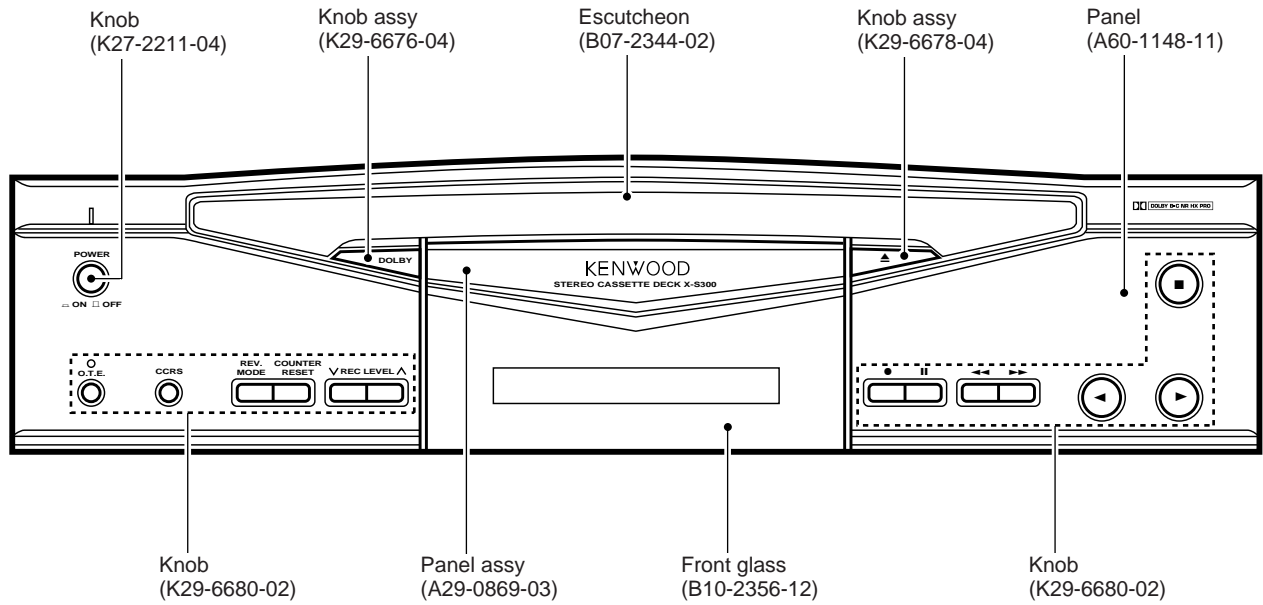


STEREO CASSETTE DECK  
**X-S300**  
 SERVICE MANUAL

**KENWOOD**

© 1997-6/B51- 5325-00 (K/K) 2147



\* Refer to parts list on page 13.



# X-S300

## CONTENTS / ACCESSORIES

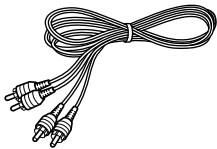
### Contents

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PARTS DESCRIPTIONS .....	4	PATS LIST .....	13
PC BOARD .....	5	SPECIFICATIONS .....	17

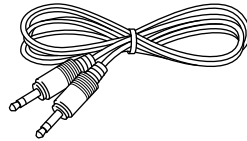
### Accessories

Check that the following accessories are present.

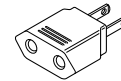
Audio cord .....(2)  
(E30-0505-05)



System control cord.....(1)  
(E30-2816-05)

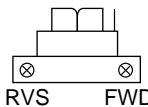


\* AC plug adapter .....(1)  
(E03-0115-05)

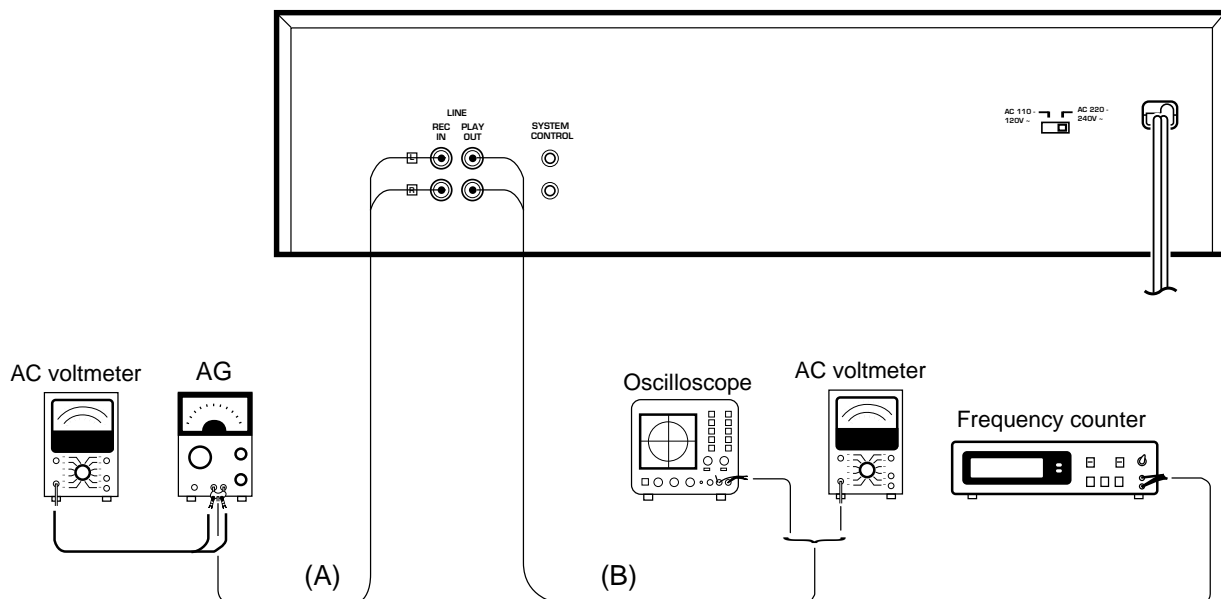


\* Use to adapt the plug on the power cord to the shape of the wall outlet (Accessory only for regions where use is necessary.)

## ADJUSTMENT

NO.	ITEM	INPUT SETTING	OUTPUT SETTING	CASSETTE TAPE DECK SETTING	ALIGNMENT POINTS	ALIGN FOR	FIG.
Unless otherwise specified, set the respective switches as follows: TAPE : NORMAL                      DOLBY : OFF I Cassette mechanism unit (Adjustment of the REC / PLAY head)						0dBs = 0.775V	
(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	SCC-1727 TCC-153 MTT-114 10kHz, -10dB	(B)	PLAY	 RVS      FWD	Adjust the output to maximum and adjust the azimuth adjustment screw for the Lissajours waveform pattern of the oscilloscope to become close to a 45° straight line.	
<b>II PC BOARD ADJUSTMENT</b>							
(1)	TAPE SPEED (NORMAL)	TCC-110 MTT-111 SCC-1727 3kHz	(B)	PLAY	VR7	Adjust the tape speed so that 3kHz is obtained at the center of the tape.	
<b>III PC board adjustment.</b>							
(1)	PLAYBACK LEVEL	MTT-150 400Hz	(B)	PLAY	VR 1 (L) VR 2 (R)	Adjust the playback output to -1dBs.	
		MTT-256, SCC-1727 315Hz				Adjust the playback output to -4dBs.	
		MTT-256U, TCC-120 315 Hz				Adjust the playback output to 0 dBs.	
(2)	BIAS CURRENT	(A) Adjust the AG for the output of the DECK to become 12.5kHz -20dBs. 400Hz/12.5kHz (AC-224)	(B)	REC PLAY	VR 3 (L) VR 4 (R)	Record 400Hz and 12.5kHz alternately, and adjust the bias current adjustment potentiometer for the playback levels to become the same.	
(3)	RECORDING LEVEL	(A) Adjust the AG for the output of the DECK to become 1kHz -20dBs.	(B)	REC PLAY	VR 5 (L) VR 6 (R)	-20 dBs	

### Measurement Equipment Connections



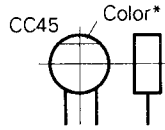
# X-S300

## PARTS DESCRIPTIONS

### CAPACITORS

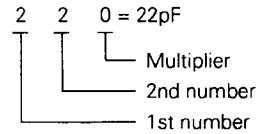
CC	45	TH	1H	220	J
1	2	3	4	5	6

- 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 -20	+80 -20	+100 -0	More than 10μF -10 ~ +50 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)

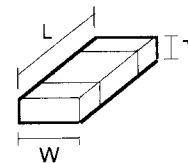
#### Carbon resistor (Normal type)

(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



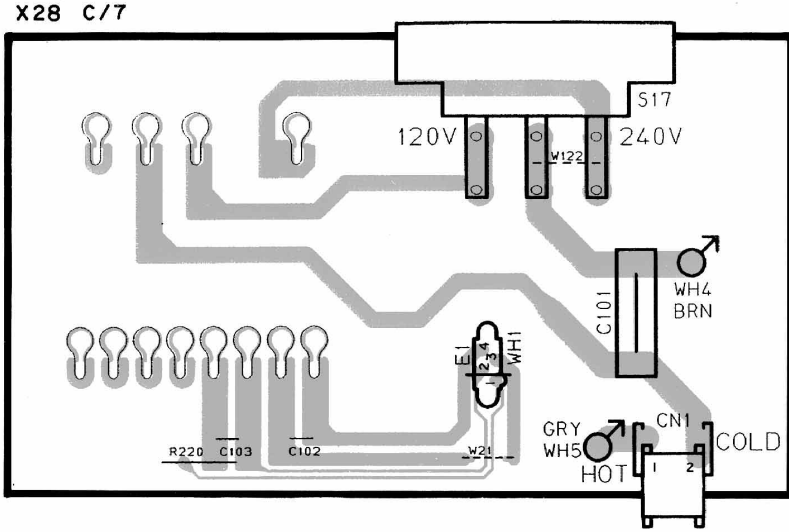
#### Dimension (Chip resistor)

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

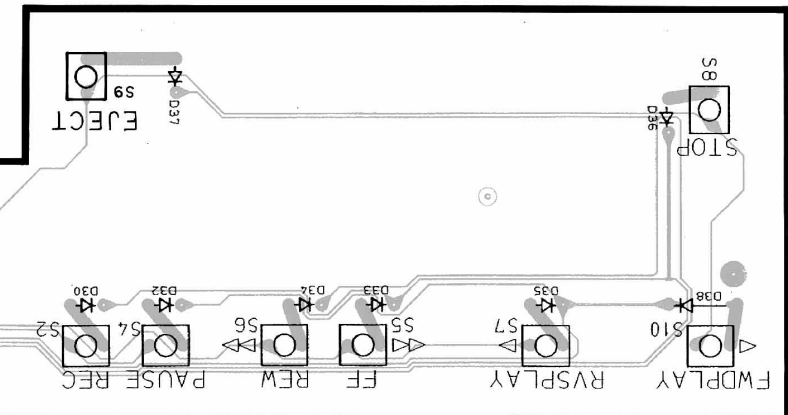
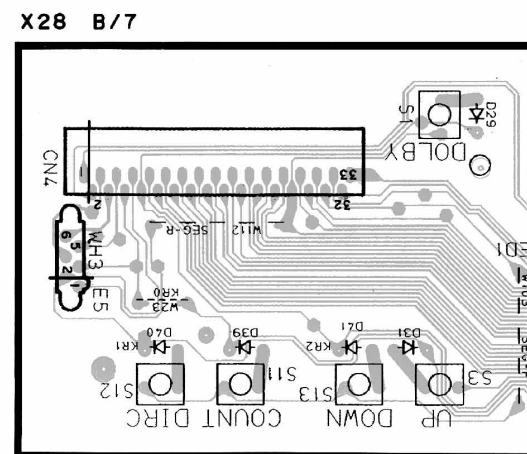
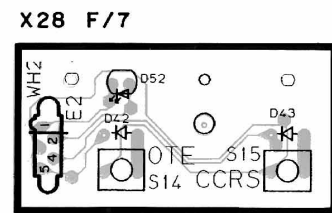
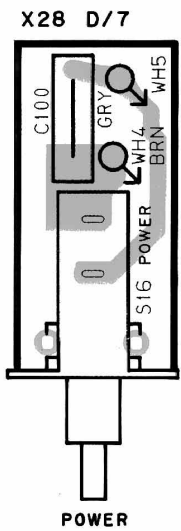
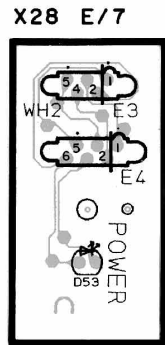
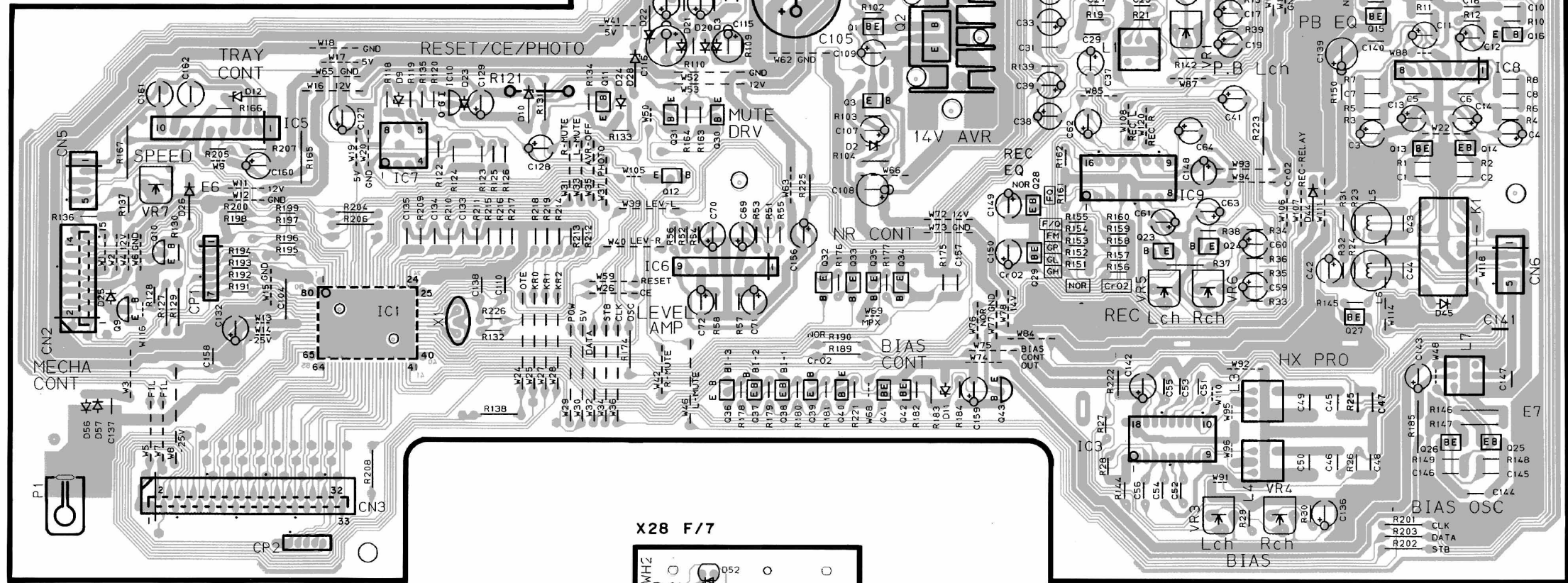
#### Rating wattage

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		

# PC BOARD(Component side view)



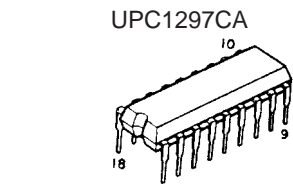
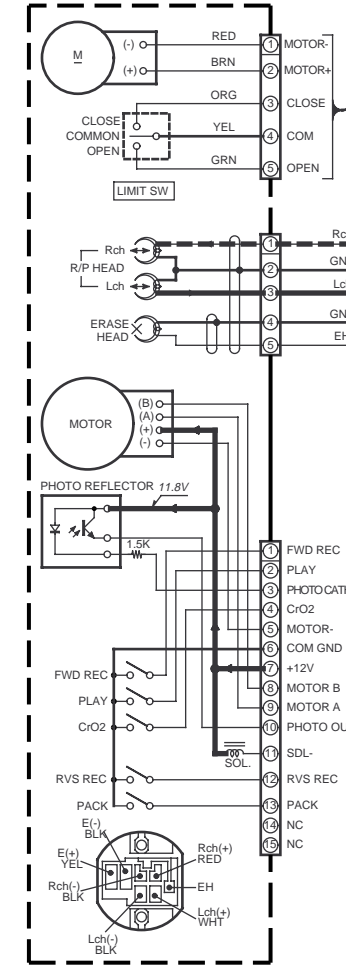
X28-2892-70: TE  
 X28-2940-20: MI  
 X28-2940-71: XC  
 X28-2892-70 A/7 (J70-1009-01)



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

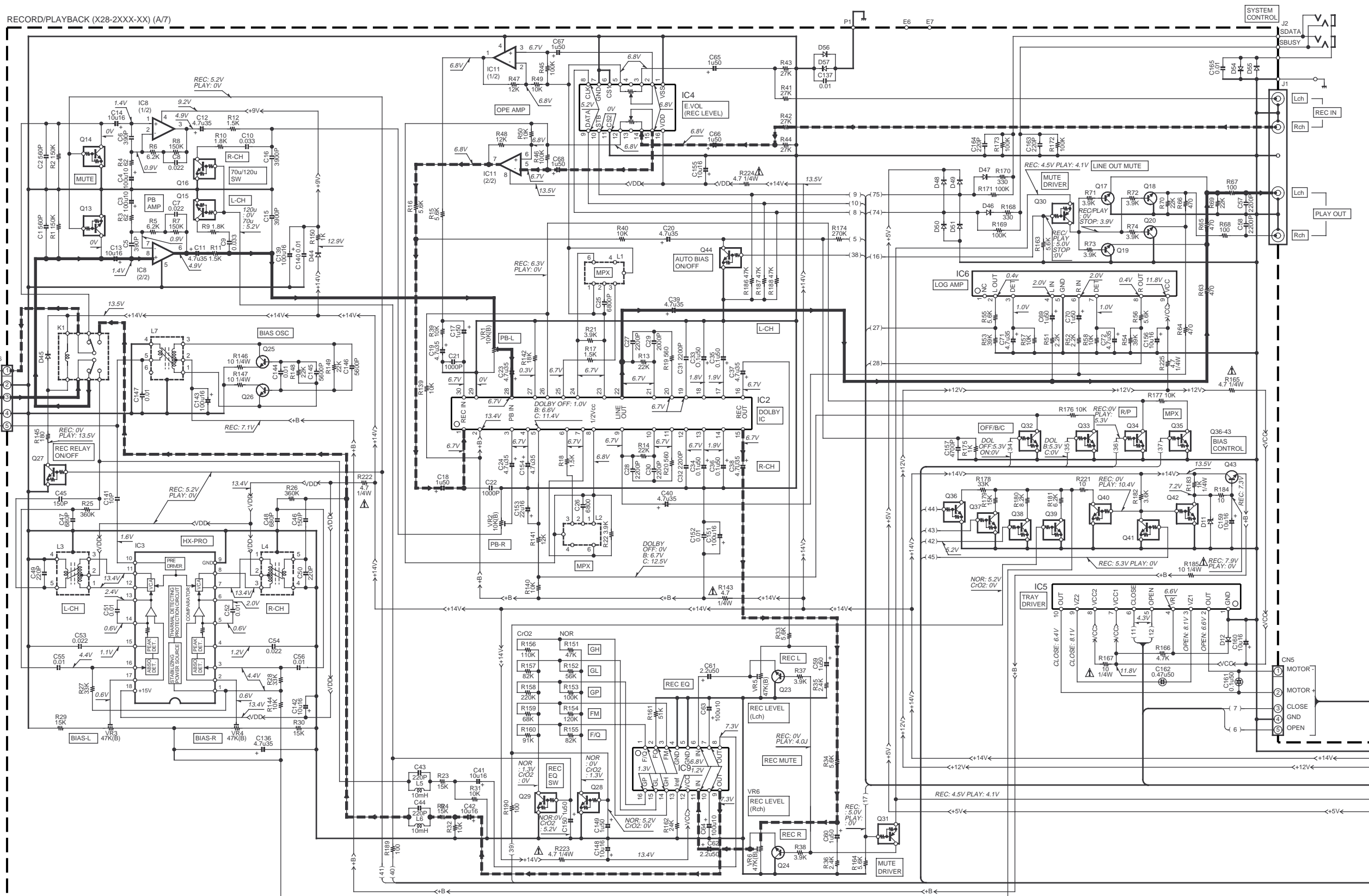
RECORD/PLAYBACK (X28-2XXX-XX) (A/7)

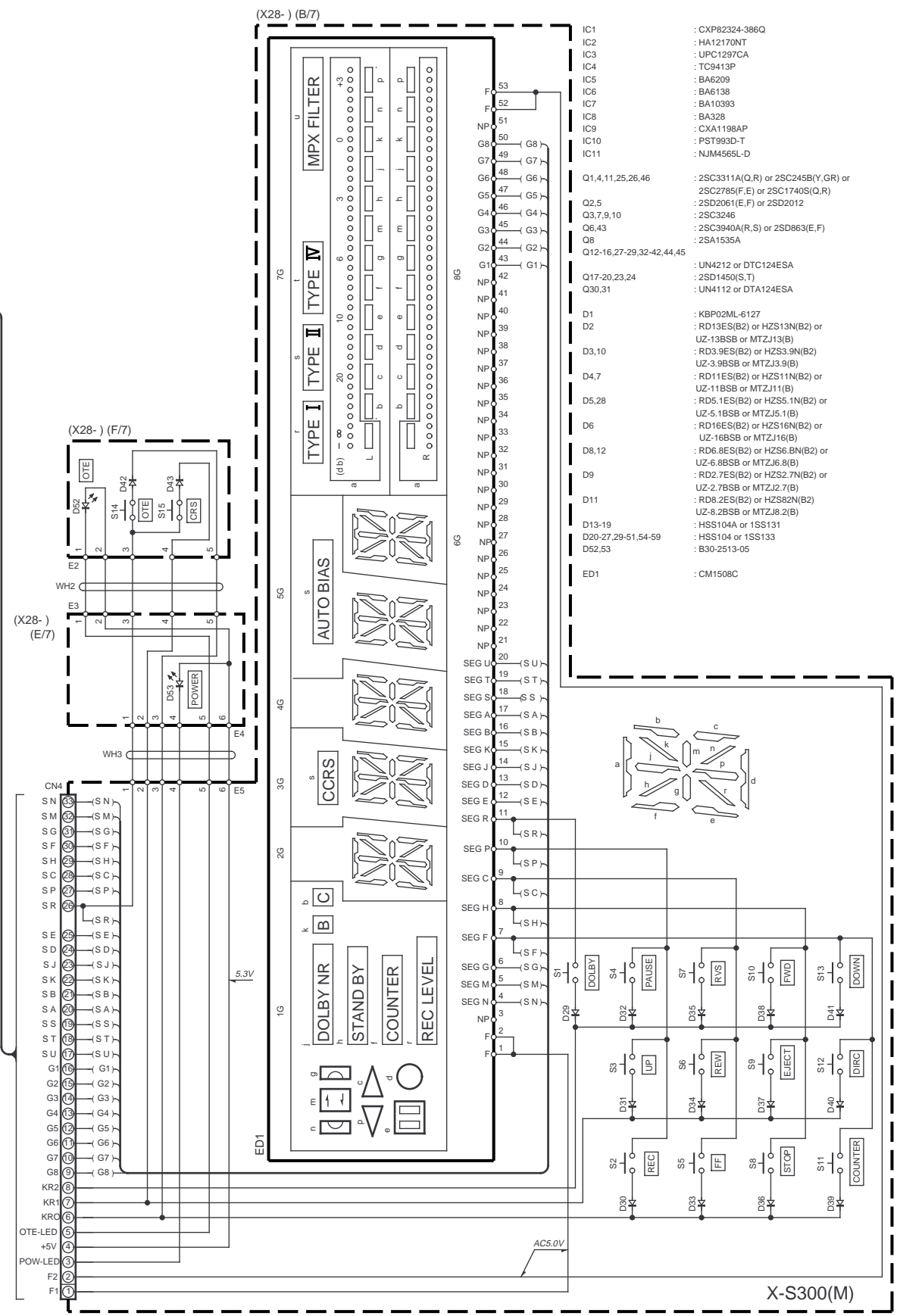
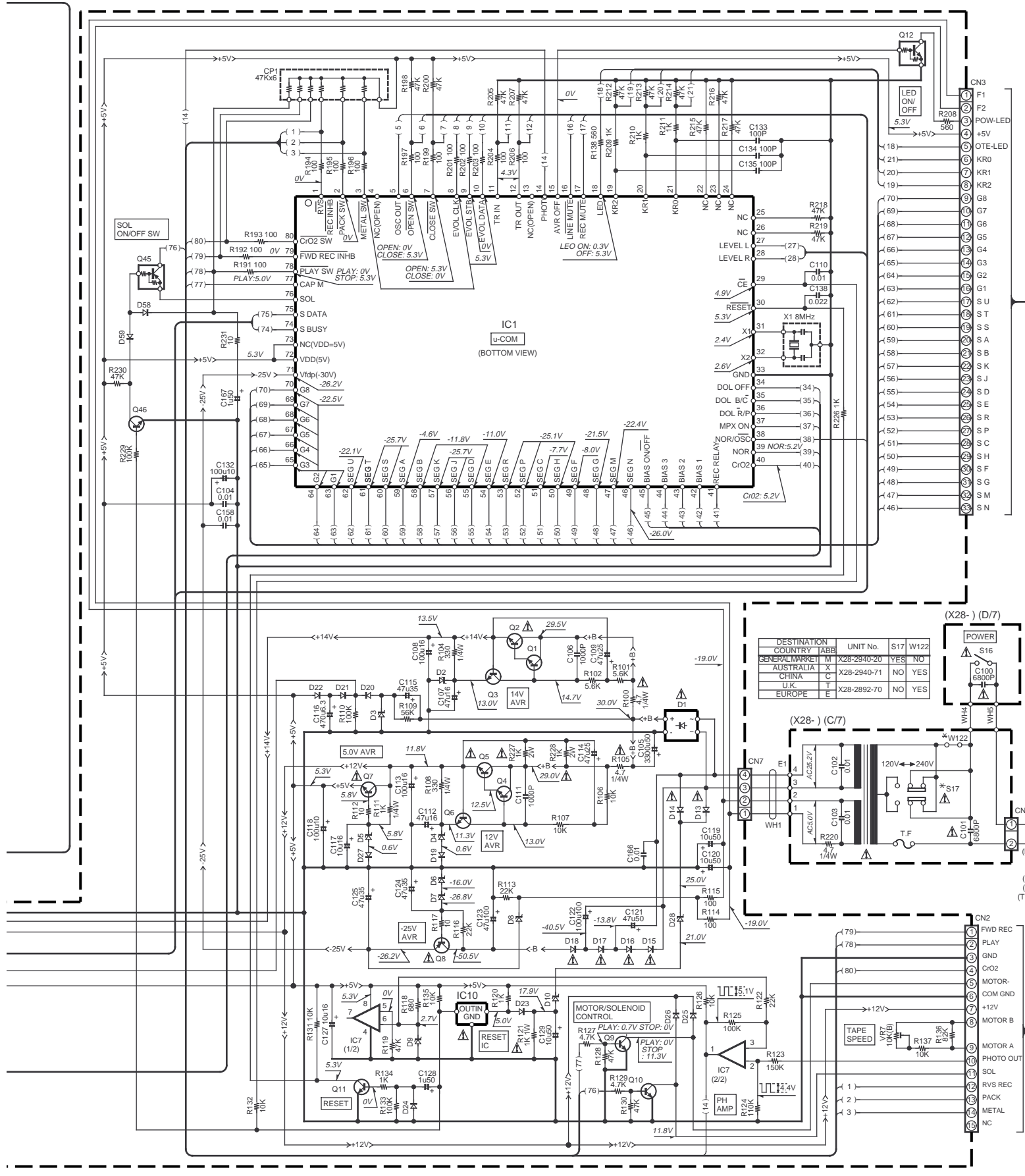
MECHANISM ASS'Y (D40-1563-05)



--- DIGITAL LINE  
 --- SIGNAL LINE  
 --- GND LINE  
 <-B > +B LINE  
 <-B > -B LINE

- 2SC3246
- 2SC3940A
- 2SD863
- 2SC2785
- DTA124ESA
- DTC124ESA
- UN4112
- 2SC1740S
- 2SC2458
- 2SA1535A
- 2SD2061
- UN4212
- 2SC3311A
- 2SD2012
- CXA1198AP
- TC9413P
- BA6138
- BA10393
- BA6209
- HA12170NT
- NJM4565L-D





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

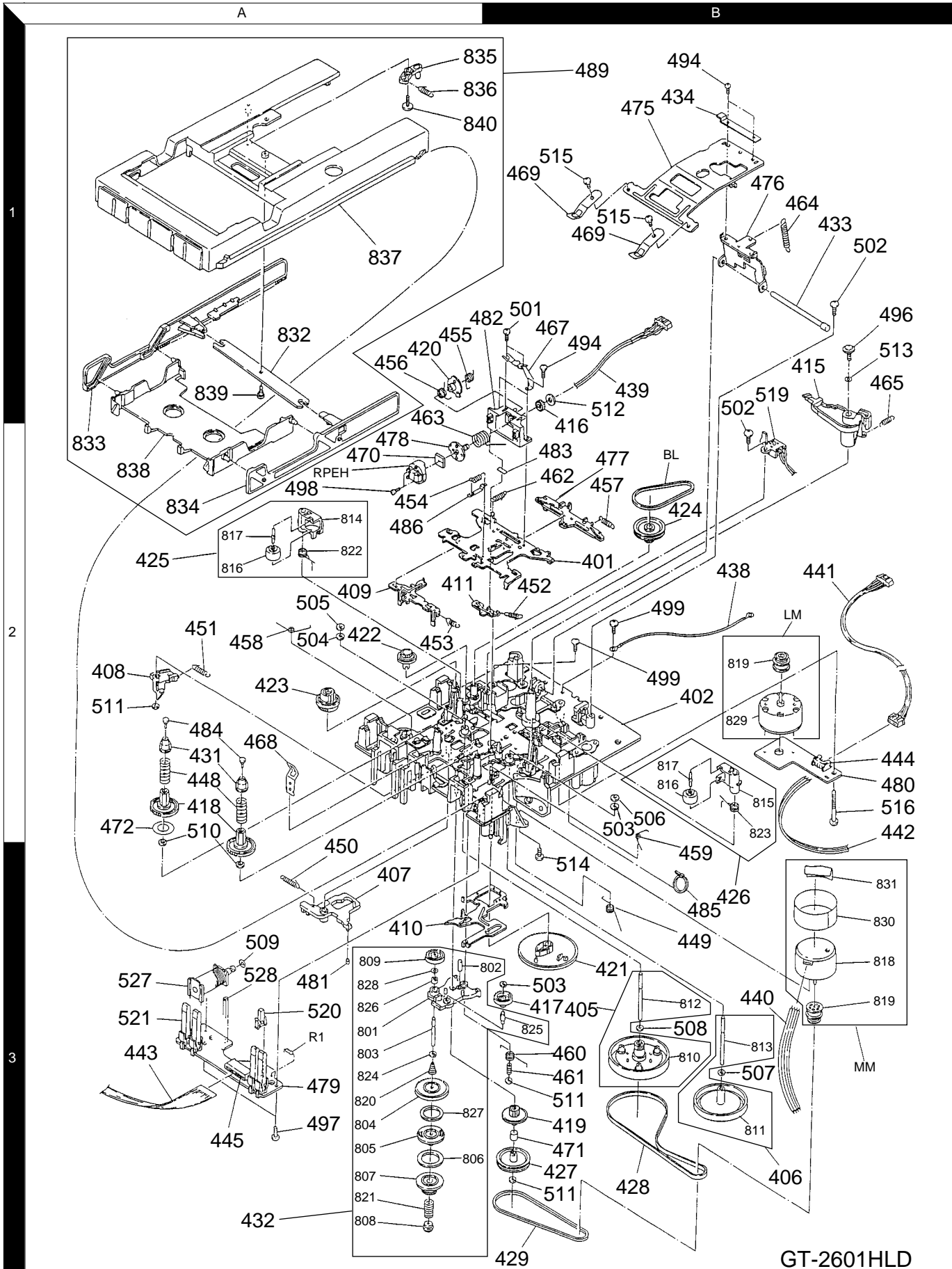
DOLBY and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Noise reduction circuit made under license from Dolby Laboratories Licensing Corporation.

Y26-4290-50

**X-S300**  
KENWOOD

# X-S300

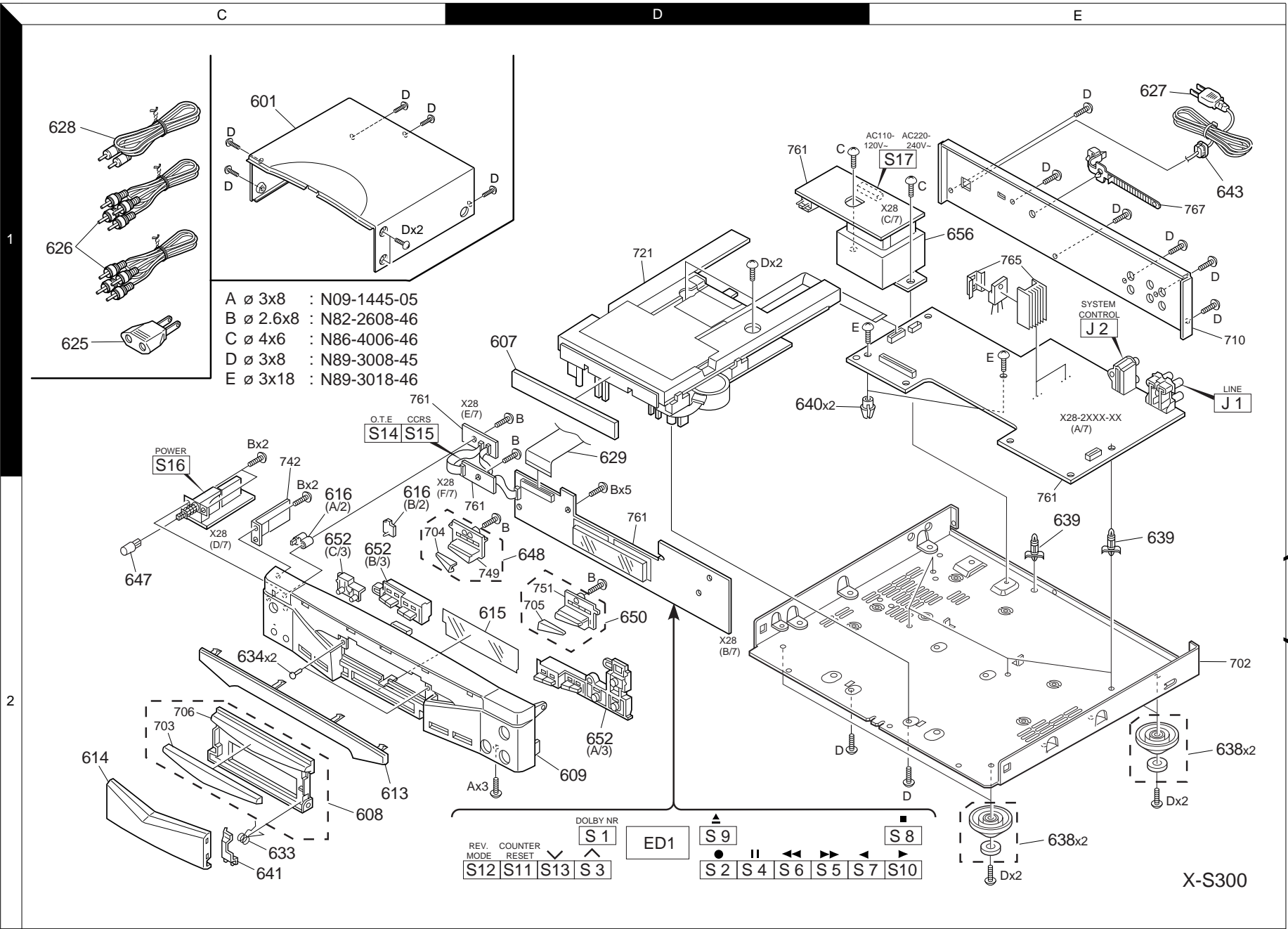
## EXPLODED VIEW(MECHANISM)



GT-2601HLD

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





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

\* New Parts  
 Parts without **Parts No.** are not supplied.  
 Les articles non mentionnes 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
<b>X-S300</b>						
601	1C	*	A01-3444-01	METALLIC CABINET		
607	1D	*	A29-0863-03	PANEL (TRAY)		
608	2C	*	A29-0869-03	PANEL ASSY (A21-1958&A29-0862)		
609	2D	*	A60-1148-11	PANEL		
613	2C	*	B07-2344-02	ESCUTCHEON		
614	2C	*	B10-2356-12	FRONT GLASS		
615	2D	*	B11-0350-04	FILTER		
616	2C	*	B12-0314-04	INDICATOR		
-			B46-0096-53	WARRANTY CARD	X	
-			B46-0310-03	WARRANTY CARD	TE	
-			B46-0326-03	WARRANTY CARD	C	
-			B58-0945-03	CAUTION CARD	T	
-		*	B58-0965-13	CAUTION CARD (T,XtypePL)	XT	
-		*	B58-0966-13	CAUTION CARD (ELMtypePL)	MIX	
-		*	B58-1546-03	CAUTION CARD	C	
-		*	B60-3282-00	INSTRUCTION MANUAL(ENGLISH)	MIXTC	
-		*	B60-3283-00	INSTRUCTION MANUAL(FRENCH)	E	
-		*	B60-3284-00	INSTRUCTION MANUAL(GERMAN)	E	
-		*	B60-3285-00	INSTRUCTION MANUAL(DUTCH)	E	
-		*	B60-3286-00	INSTRUCTION MANUAL(ITALIAN)	E	
-		*	B60-3287-00	INSTRUCTION MANUAL(SPANISH)	ME	
-		*	B60-3288-00	INSTRUCTION MANUAL(CHINESE)	C	
-		*	B60-3289-00	INSTRUCTION MANUAL(TAIWANESE)	MI	
△ 625	1C		E03-0115-05	AC PLUG ADAPTER	MI	
△ 626	1C		E30-0505-05	AUDIO CORD		
△ 627	1E		E30-2592-15	AC POWER CORD	MI	
△ 627	1E		E30-2717-05	AC POWER CORD	X	
△ 627	1E		E30-2788-05	AC POWER CORD	E	
△ 627	1E		E30-2791-05	AC POWER CORD	T	
△ 627	1E		E30-2830-05	AC POWER CORD	C	
628	1C		E30-2816-05	CORD WITH PLUG		
629	1D	*	E35-1863-05	FLAT CABLE		
633	2C	*	G09-0663-14	SPRING		
634	2C		G13-0182-04	CUSHION		
-		*	H10-7306-12	POLYSTYRENE FOAMED FIXTURE	T	
-		*	H10-7307-12	POLYSTYRENE FOAMED FIXTURE	T	
-		*	H10-7308-12	POLYSTYRENE FOAMED FIXTURE	MIXEC	
-		*	H10-7309-12	POLYSTYRENE FOAMED FIXTURE	MIXEC	
-		*	H13-0272-04	CARTON BOARD	X	
-			H20-0568-04	PROTECTION COVER	MIC	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	E	
-			H25-0651-04	PROTECTION BAG (0232 PRINT)	T	
-			H25-1516-04	PROTECTION BAG		
-			H25-1516-04	PROTECTION BAG	X	
-		*	H50-2326-04	ITEM CARTON CASE	C	
-		*	H50-2327-04	ITEM CARTON CASE	X	
-		*	H50-2392-04	ITEM CARTON CASE	T	
-		*	H50-2393-04	ITEM CARTON CASE	E	
-		*	H50-2394-04	ITEM CARTON CASE	MI	
638	2E		J02-1188-03	FOOT		
639	2E		J19-3325-05	UNIT HOLDER		
640	1D		J19-3732-04	UNIT HOLDER		

L : Scandinavia    K : USA    P : Canada    R : Mexico    I : Malaysia  
 Y : PX(Far East, Hawaii)    T : Europe    E : Europe    G : Germany    C: CHINA  
 Y : AAFES(Europe)    X : Australia    M : Other Areas    Q : Russia

△ indicates safety critical components.

\* New Parts  
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②

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
641	2C	*	J19-5816-04	HOLDER		
643	1E		J42-0083-05	POWER CORD BUSHING		
647	2C	*	K27-2211-04	KNOB (BUTTON)		
648	2D	*	K29-6676-04	KNOB ASSY (A21-1959&K29-6677)		
650	2D	*	K29-6678-04	KNOB ASSY (A21-1960&K29-6679)		
652	2C,2D	*	K29-6680-02	KNOB		
△ 656	1E	*	L07-2342-05	POWER TRANSFORMER	XTEC	
△ 656	1E	*	L07-2343-05	POWER TRANSFORMER	MI	
<b>RECORD PLAYBACK UNIT (X28-2XXX-XX)</b>						
D52 ,53		*	B30-2513-05	LED(RED)		
C1 ,2			CK45FB1H561K	CERAMIC	560PF	K
C3 ,4			CE04LW1A101M	ELECTRO	100UF	10WV
C5 ,6			CK45FB1H391K	CERAMIC	390PF	K
C7 ,8			CQ93FMG1H223J	MYLAR	0.022UF	J
C9 ,10			CQ93FMG1H333J	MYLAR	0.033UF	J
C11 ,12			CE04LW1V4R7M	ELECTRO	4.7UF	35WV
C13 ,14			CE04LW1C100M	ELECTRO	10UF	16WV
C15 ,16			CQ93FMG1H392J	MYLAR	3900PF	J
C17 ,18			CE04LW1H010M	ELECTRO	1.0UF	50WV
C19 ,20			CE04LW1V4R7M	ELECTRO	4.7UF	35WV
C21 ,22			CK45FB1H102K	CERAMIC	1000PF	K
C23 ,24			CE04LW1V4R7M	ELECTRO	4.7UF	35WV
C25 ,26			CK45FB1H682K	CERAMIC	6800PF	K
C27 -32			CQ93FMG1H222J	MYLAR	2200PF	J
C33 -36			CE04LW1H0R1M	ELECTRO	0.1UF	50WV
C37 -40			CE04LW1V4R7M	ELECTRO	4.7UF	35WV
C41 ,42			CE04LW1C100M	ELECTRO	10UF	16WV
C43 ,44			CC45FSL1H221J	CERAMIC	220PF	J
C45 ,46			C91-1434-05	FILM	150PF	J
C47 ,48			CK45FB1H681K	CERAMIC	680PF	K
C49 ,50			C91-1436-05	FILM	220PF	J
C51 ,52			CK45FF1H103Z	CERAMIC	0.010UF	Z
C53 ,54			CK45FF1H223Z	CERAMIC	0.022UF	Z
C55 ,56			CK45FF1H103Z	CERAMIC	0.010UF	Z
C57 ,58			CK45FB1H222K	CERAMIC	2200PF	K
C59 ,60			CE04LW1H010M	ELECTRO	1.0UF	50WV
C61 ,62			CE04LW1H2R2M	ELECTRO	2.2UF	50WV
C63 ,64			CE04LW1A101M	ELECTRO	100UF	10WV
C65 -70			CE04LW1H010M	ELECTRO	1.0UF	50WV
C71 ,72			CE04LW1V4R7M	ELECTRO	4.7UF	35WV
C100,101			C91-1488-05	MF	6800PF	250VAC
C102,103			CK45FF1H103Z	CERAMIC	0.010UF	Z
C104			C91-0769-05	CERAMIC	0.010UF	K
C105			C90-1780-05	ELECTRO	3300UF	50WV
C106			CK45FB1H102K	CERAMIC	1000PF	K
C107			CE04LW1C470M	ELECTRO	47UF	16WV
C108			CE04LW1C101M	ELECTRO	100UF	16WV
C109			CE04LW1E470M	ELECTRO	47UF	25WV
C110			CK45FF1H103Z	CERAMIC	0.010UF	Z
C111			CK45FB1H102K	CERAMIC	1000PF	K
C112			CE04LW1C470M	ELECTRO	47UF	16WV
C113			CE04LW1C101M	ELECTRO	100UF	16WV
C114			CE04LW1E470M	ELECTRO	47UF	25WV

L : Scandinavia    K : USA    P : Canada    R : Mexico  
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△ indicates safety critical components.

PARTS LIST

X-S300

\* New Parts  
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3

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C115			CE04LW1V470M	ELECTRO 47UF 35WV		
C116			CE04LW0J471M	ELECTRO 470UF 6.3WV		
C117			CE04LW1C100M	ELECTRO 10UF 16WV		
C118			CE04LW1A101M	ELECTRO 100UF 10WV		
C119,120			CE04LW1H100M	ELECTRO 10UF 50WV		
C121			CE04LW1H470M	ELECTRO 47UF 50WV		
C122			CE04LW2A101M	ELECTRO 100UF 100WV		
C123			CE04LW2A470M	ELECTRO 47UF 100WV		
C124,125			CE04LW1V470M	ELECTRO 47UF 35WV		
C127			CE04LW1C100M	ELECTRO 10UF 16WV		
C128			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C129			CE04LW1H100M	ELECTRO 10UF 50WV		
C132			CE04LW1A101M	ELECTRO 100UF 10WV		
C133-135			CC45FSL1H101J	CERAMIC 100PF J		
C136			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C137			CK45FF1H103Z	CERAMIC 0.010UF Z		
C138			CK45FF1H223Z	CERAMIC 0.022UF Z		
C139			CE04LW1C101M	ELECTRO 100UF 16WV		
C140			CK45FF1H103Z	CERAMIC 0.010UF Z		
C141			CC45FSL2H100D	CERAMIC 10PF D		
C142			CE04LW1C100M	ELECTRO 10UF 16WV		
C143			CE04LW1C101M	ELECTRO 100UF 16WV		
C144			CQ93FMG1H103J	MYLAR 0.010UF J		
C145,146			CQ93FMG1H562J	MYLAR 5600PF J		
C147			CQ93HP2A103J	MYLAR 0.010UF J		
C148			CE04LW1C100M	ELECTRO 10UF 16WV		
C149,150			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C151			CE04LW1C101M	ELECTRO 100UF 16WV		
C152			CK45FF1H103Z	CERAMIC 0.010UF Z		
C153			CE04LW1C220M	ELECTRO 22UF 16WV		
C154			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C155,156			CE04LW1C100M	ELECTRO 10UF 16WV		
C157			CK45FF1H472Z	CERAMIC 4700PF Z		
C158			CK45FF1H103Z	CERAMIC 0.010UF Z		
C159,160			CE04LW1C100M	ELECTRO 10UF 16WV		
C161			CE04HW1H0R1M	NP-ELEC 0.1UF 50WV		
C162			CE04HW1HR47M	NP-ELEC 0.47UF 50WV		
C163,164			CC45FSL1HR221J	CERAMIC 220PF J		
C165,166			CK45FF1H103Z	CERAMIC 0.010UF Z		
C167			CE04LW1H010M	ELECTRO 1.0UF 50WV		
CN1			E40-4632-05	PIN ASSY		
CN2			E40-4902-05	FLAT CABLE CONNECTOR		
CN3			E40-4920-05	FLAT CABLE CONNECTOR		
CN4			E40-4958-05	FLAT CABLE CONNECTOR		
CN5 ,6			E40-3249-05	PIN ASSY		
CN7			E40-4294-05	FLAT CABLE CONNECTOR		
J1			E63-0136-15	PHONO JACK		
J2			E11-0293-05	MINIATURE PHONE JACK(2P)		
-		*	J19-5832-03	HOLDER(INDICATOR TUBE)		
E6 ,7			J11-0808-05	WIRE CLAMPER		
L1 ,2			L79-1242-05	LC FILTER		
L3 ,4			L32-0547-05	BIAS OSCILLATING COIL		
L5 ,6			L40-1035-29	SMALL FIXED INDUCTOR(10MH, J)		
L7			L32-0570-05	BIAS OSCILLATING COIL		

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4

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X1			L78-0290-05	RESONATOR (8MHZ)		
CP1			R90-0819-05	MULTI-COMP 47KX6 J 1/6W		
Δ R100			RD14NB2E4R7J	RD 4.7 J 1/4W		
R104			RD14NB2E331J	RD 330 J 1/4W		
Δ R105			RD14NB2E4R7J	RD 4.7 J 1/4W		
Δ R108			RD14NB2E331J	RD 330 J 1/4W		
R111			RD14NB2E102J	RD 1.0K J 1/4W		
Δ R121			RS14KB3A102J	FL-PROOF RS 1.0K J 1W		
Δ R143			RD14NB2E4R7J	RD 4.7 J 1/4W		
Δ R165			RD14NB2E4R7J	RD 4.7 J 1/4W		
Δ R167			RD14NB2E100J	RD 10 J 1/4W		
R183			RD14NB2E102J	RD 1.0K J 1/4W		
Δ R185			RD14NB2E100J	RD 10 J 1/4W		
R220			RD14NB2E4R7J	RD 4.7 J 1/4W		
Δ R222-225			RD14NB2E4R7J	RD 4.7 J 1/4W		
Δ R227			RS14KB3D102J	FL-PROOF RS 1.0K J 2W		
Δ R228			RS14KB3D102J	FL-PROOF RS 1.0K J 2W		
VR1 ,2			R12-3685-05	TRIMMING POT.(10K)		
VR3 -6			R12-3688-05	TRIMMING POT.(47K)		
VR7			R12-3685-05	TRIMMING POT.(10K)		
K1			S76-0018-05	MAGNETIC RELAY		
S1 -15			S70-0031-05	TACT SWITCH		
Δ S16			S40-1153-05	PUSH SWITCH		
Δ S17			S62-0001-05	SLIDE SWITCH		M
Δ D1			KBP02ML-6127	DIODE		
D2			HZS13N(B2)	ZENER DIODE		
D2			MTZJ13(B)	ZENER DIODE		
D2			RD13ES(B2)	ZENER DIODE		
D2			UZ-13BSB	ZENER DIODE		
D3			HZS3.9N(B2)	ZENER DIODE		
D3			MTZJ3.9(B)	ZENER DIODE		
D3			RD3.9ES(B2)	ZENER DIODE		
D3			UZ-3.9BSB	ZENER DIODE		
D4			HZS11N(B2)	ZENER DIODE		
D4			MTZJ11(B)	ZENER DIODE		
D4			RD11ES(B2)	ZENER DIODE		
D4			UZ-11BSB	ZENER DIODE		
D5			HZS5.1N(B2)	ZENER DIODE		
D5			MTZJ5.1(B)	ZENER DIODE		
D5			RD5.1ES(B2)	ZENER DIODE		
D5			UZ-5.1BSB	ZENER DIODE		
D6			HZS15N(B2)	ZENER DIODE		
D6			MTZJ15(B)	ZENER DIODE		
D6			RD15ES(B2)	ZENER DIODE		
D6			UZ-15BSB	ZENER DIODE		
D7			HZS11N(B2)	ZENER DIODE		
D7			MTZJ11(B)	ZENER DIODE		
D7			RD11ES(B2)	ZENER DIODE		
D7			UZ-11BSB	ZENER DIODE		
D8			HZS6.8N(B2)	ZENER DIODE		
D8			MTZJ6.8(B)	ZENER DIODE		
D8			RD6.8ES(B2)	ZENER DIODE		
D8			UZ-6.8BSB	ZENER DIODE		
D9			HZS2.7N(B2)	ZENER DIODE		

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X-S300

PARTS LIST

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D9			MTZJ2.7(B)	ZENER DIODE		
D9			RD2.7ES(B2)	ZENER DIODE		
D9			UZ-2.7BSB	ZENER DIODE		
D10			HZS3.9N(B2)	ZENER DIODE		
D10			MTZJ3.9(B)	ZENER DIODE		
D10			RD3.9ES(B2)	ZENER DIODE		
D10			UZ-3.9BSB	ZENER DIODE		
D11			HZS8.2N(B2)	ZENER DIODE		
D11			MTZJ8.2(B)	ZENER DIODE		
D11			RD8.2ES(B2)	ZENER DIODE		
D11			UZ-8.2BSB	ZENER DIODE		
D12			HZS6.8N(B2)	ZENER DIODE		
D12			MTZJ6.8(B)	ZENER DIODE		
D12			RD6.8ES(B2)	ZENER DIODE		
D12			UZ-6.8BSB	ZENER DIODE		
△ D13 -19			HSS104A	DIODE		
△ D13 -19			1SS131	DIODE		
D20 -27			HSS104	DIODE		
D20 -27			1SS133	DIODE		
D28			HZS5.1N(B2)	ZENER DIODE		
D28			MTZJ5.1(B)	ZENER DIODE		
D28			RD5.1ES(B2)	ZENER DIODE		
D28			UZ-5.1BSB	ZENER DIODE		
D29 -51			HSS104	DIODE		
D29 -51			1SS133	DIODE		
D54 -59			HSS104	DIODE		
D54 -59			1SS133	DIODE		
ED1			CM1508C	INDICATOR TUBE		
IC1		*	CXP82324-386Q	MI-COM IC		
IC2			HA12170NT	ANALOGUE IC		
IC3			UPC1297CA	ANALOGUE IC		
IC4			TC9413P	MOS-IC		
IC5			BA6209	ANALOGUE IC		
IC6			BA6138	ANALOGUE IC		
IC7			BA10393	ANALOGUE IC		
IC8			BA328	IC		
IC9			CXA1198AP	ANALOGUE IC		
IC10			PST993D-T	ANALOGUE IC		
IC11			NJM4565L-D	ANALOGUE IC		
Q1			2SC1740S(Q,R)	TRANSISTOR		
Q1			2SC2458(Y,GR)	TRANSISTOR		
Q1			2SC2785(F,E)	TRANSISTOR		
Q1			2SC3311A(Q,R)	TRANSISTOR		
△ Q2			2SD2012	TRANSISTOR		
△ Q2			2SD2061(E,F)	TRANSISTOR		
Q3			2SC3246	TRANSISTOR		
Q4			2SC1740S(Q,R)	TRANSISTOR		
Q4			2SC2458(Y,GR)	TRANSISTOR		
Q4			2SC2785(F,E)	TRANSISTOR		
Q4			2SC3311A(Q,R)	TRANSISTOR		
△ Q5			2SD2012	TRANSISTOR		
△ Q5			2SD2061(E,F)	TRANSISTOR		
Q6			2SC3940A(R,S)	TRANSISTOR		
Q6			2SD863(E,F)	TRANSISTOR		
△ Q7			2SC3246	TRANSISTOR		

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△ Q8			2SA1535A	TRANSISTOR		
Q9 ,10			2SC3246	TRANSISTOR		
Q11			2SC2458(Y,GR)	TRANSISTOR		
Q11			2SC3311A(Q,R)	TRANSISTOR		
Q12 -16			DTC124ESA	DIGITAL TRANSISTOR		
Q12 -16			UN4212	DIGITAL TRANSISTOR		
Q17 -20			2SD1450(S,T)	TRANSISTOR		
Q23 ,24			2SD1450(S,T)	TRANSISTOR		
Q25 ,26			2SC2458(Y,GR)	TRANSISTOR		
Q25 ,26			2SC3311A(Q,R)	TRANSISTOR		
Q27 -29			DTC124ESA	DIGITAL TRANSISTOR		
Q27 -29			UN4212	DIGITAL TRANSISTOR		
Q30 ,31			DTA124ESA	DIGITAL TRANSISTOR		
Q30 ,31			UN4112	DIGITAL TRANSISTOR		
Q32 -42			DTC124ESA	DIGITAL TRANSISTOR		
Q32 -42			UN4212	DIGITAL TRANSISTOR		
Q43			2SC3940A(R,S)	TRANSISTOR		
Q43			2SD863(E,F)	TRANSISTOR		
Q44			DTC124ESA	DIGITAL TRANSISTOR		
Q44			UN4212	DIGITAL TRANSISTOR		
Q45			DTA124ESA	DIGITAL TRANSISTOR		
Q45			UN4112	DIGITAL TRANSISTOR		
Q46			2SC2458(Y,GR)	TRANSISTOR		
Q46			2SC3311A(Q,R)	TRANSISTOR		
<b>MECHANISM ASSY (D40-1563-05)</b>						
401	2B		A10-3174-08	HEAD CHASSIS		
402	2B		A10-3307-08	CHASSIS OS ASSY (H)		
405	3B		D01-0175-08	FLYWHEEL ASSY (R)		
406	3B		D01-0176-08	FLYWHEEL ASSY (L)		
407	3A		D10-3470-08	TRIGGER ARM		
408	2A		D10-3471-18	HEAD CHANGE ARM		
409	2A		D10-3478-08	SELECT LEVER		
410	3A		D10-3479-08	SHIFT LEVER		
411	2A		D10-3480-08	C/R LEVER		
415	1B		D10-3674-08	CLAMPER GUIDE		
416	2B		D13-0981-08	ROTATION GEAR		
417	3B		D13-1616-08	REW GEAR		
418	2A		D13-1617-08	REEL GEAR		
419	3B		D13-1618-08	IDLER GEAR		
420	1A		D13-1621-08	RETURN GEAR		
421	3B		D13-1622-18	CAM GEAR		
422	2A		D13-1776-08	GEAR (A)		
423	2A		D13-1777-08	GEAR (B)		
424	2B		D13-1778-08	PULLEY GEAR		
425	2A		D14-0383-08	PINCH ARM ASSY (R)		
426	3B		D14-0384-08	PINCH ARM ASSY (L)		
427	3B		D15-0369-08	IDLER PULLEY		
428	3B		D16-0708-08	DRIVE BELT (H)		
429	3B		D16-0709-08	CLUTCH BELT (H)		
431	2A		D19-0270-18	REEL CAP (A)		
432	3A		D19-0287-08	CLUTCH ARM ASSY		
433	1B		D21-1848-08	CLAMPER SHAFT		
434	1B		D32-0351-08	TRAY GUIDE		
BL	2B		D16-0710-08	BELT (LD)		

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438	2B		E31-1636-08	EARTH WIRE (H)		
439	1B		E35-1189-08	5P HEAD WIRE ASSY (C)		
440	3B		E35-1632-08	MOTOR WIRE (H)		
441	2B		E35-1633-08	5P WIRE ASSY		
442	2B		E35-1634-08	3P FLAT WIRE		
443	3A	*	E35-1635-08	FFC (15P)		
444	2B		E40-3263-05	CONNECTOR (5P)		
445	3A		E40-4195-05	CONNECTOR (15P)		
448	2A		G01-3709-08	B.T SPRING		
449	3B		G01-3710-08	SHIFT LEVER SP		
450	3A		G01-3711-08	TRIGGER ARM SP		
451	2A		G01-3712-08	HEAD CHANGE ARM SP		
452	2B		G01-3714-08	C/R LEVER SP		
453	2A		G01-3715-08	SELECT LEVER SP		
454	2A		G01-3716-08	SHIFT SP		
455	1A		G01-3718-08	RETURN SPR		
456	1A		G01-3719-08	FWD SPR		
457	2B		G01-3720-08	HEAD RETURN PLATE SP		
458	2A		G01-3721-08	BRAKE SP (R)		
459	3B		G01-3722-08	BRAKE SP (L)		
460	3B		G01-3724-08	CLUTCH ARM SPRING (B)		
461	3B		G01-3725-08	CLUTCH SP		
462	2B		G01-3739-08	HEAD CHASSIS SP		
463	1A		G01-3790-08	EARTH SPRING (B)		
464	1B		G01-3947-08	CLAMPER SP		
465	1B		G01-3948-08	CLAMPER GUIDE SP		
467	1B		G02-1068-08	AZIMUTH SPR (B)		
468	2A		G02-1607-08	PACK SPRING (N)		
469	1B		G02-1608-08	CASSETTE SPRING		
470	2A		G11-2100-08	HEAD WIRE CLAMP		
471	3B		G11-2205-08	TUBE		
472	2A		G16-0791-08	REFLECT SEAL		
475	1B		J11-0819-08	CLAMPER (A)		
476	1B		J11-0820-08	CLAMPER (B)		
477	2B		J21-6135-08	HEAD RETURN PLATE		
478	2A		J21-6184-08	HEAD PLATE ASSY		
479	3A		J26-0046-08	MECHA PCB (C)		
480	2B		J26-0047-08	LD PCB		
481	3A		J31-0875-08	COLLAR (H)		
482	1A		J39-0188-08	HEAD BASE		
483	2B		J39-0199-08	SEAL (B)		
484	2A		J42-0183-08	REEL BUSH		
485	3B		J61-0307-05	SK BINDER SKB-80		
486	2A		J90-0832-08	SHIFT SP GUIDE		
489	1B		J99-0589-08	TRAY ASSY		
494	1B		N09-1497-08	TAP TITE SCREW 2X5		
496	1B		N09-2769-05	SELF TAPPING SCREW 2.6X8		
497	3A		N09-2871-08	TAPPING SCREW 2X6		
498	2A		N09-2890-08	HEAD SCREW (RVS)		
499	2B		N09-2901-08	BIND TAP TITE SCREW 2X4		
501	1B		N09-3112-08	AZIMUTH SCREW		
502	1B		N09-3325-08	TRUSS TAPPING SC 2.6X8		
503	2B,3B		N19-1288-08	POLY WS 1.65X5X0.5CUT		
504	2A		N19-1316-08	POLY WS 1.8X6X0.5CUT		

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505	2A		N19-1354-08	NYLON WS 2.19X5.5X0.5		
506	2B		N19-1355-08	NYLON WS 1.9X5X0.5		
507	3B		N19-1384-08	POLY WS 2.1X5X0.25T		
508	3B		N19-1385-08	POLY WS 2.3X5X0.25T		
509	3A		N19-1386-08	POLY WS 1.65X5X0.13T		
510	2A		N19-1387-08	TEFLON WS 4.1X5.5X0.25T		
511	2A		N19-1388-08	POLY WS 1.57X4X0.5CUT		
512	1B		N19-1396-08	LUMILER WS 3.5X8X0.5CUT		
513	1B		N19-1430-08	LUMILER WS 4.5X7X0.188		
514	3B		N35-2604-46	BINDING SCREW 2.6X4		
515	1B		N86-2003-46	BIND TAP TITE SCREW 2X3		
516	2B		N89-2625-45	TAPPING SCREW B TITE 2.6X25		
R1	3A		RD14BB2C152J	RD                    1.5K            J            1/6W		
519	1B		S33-2061-05	SWITCH (SSCF21)		
520	3A		S74-0042-08	PLAY SWITCH		
521	3A		S74-0074-08	REC SWITCH		
527	3A		T94-0239-08	SOLENOID ASSY (H)		
528	3A		T95-0125-08	PHOTO INTERRUPTER SG107LF		
LM	2B		T42-0861-08	MOTOR ASSY (LD)		
MM	3B		T42-0860-08	MOTOR ASSY (H)		
RPEH	2A		T39-0027-08	ROTATION HEAD (RP)		

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## SPECIFICATIONS

Track System .....	4 track, 2 channel stereo
Recording System .....	AC bias (Frequency: 105 kHz)
Heads	
Playback/recording heads .....	1
Erasing head .....	1
Motors .....	DC motor x 1
Wow and Flutter .....	±0.19 % (IEC)
	±0.26 % (DIN)
	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 NR OFF .....	57 dB
	(IEC, 250 nWb/m, TYPE II tape)
Dolby NR OFF .....	60 dB
Dolby B NR ON .....	69 dB
Dolby C NR ON .....	76 dB
	(3rd, H.D., 3 %, TYPE II tape)
Harmonic Distortion .....	Less than 1.9 %
	(at 333 Hz, 3rd H.D., 250 nWb/m, TYPE II tape)
Input sensitivity/Impedance	
LINE IN .....	123 mV/47 kΩ
Output Level/Impedance	
LINE OUT .....	775 mV/1.0 kΩ

### [General]

Power Consumption .....	20 W
Dimensions .....	W : 400 mm (15-3/4')
	H : 100 mm (3-15/16')
	D : 365 mm (14-3/8')
Weight (Net) .....	4.2 kg (9.3 lb)



1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

# X-S300

**Note:**

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**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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