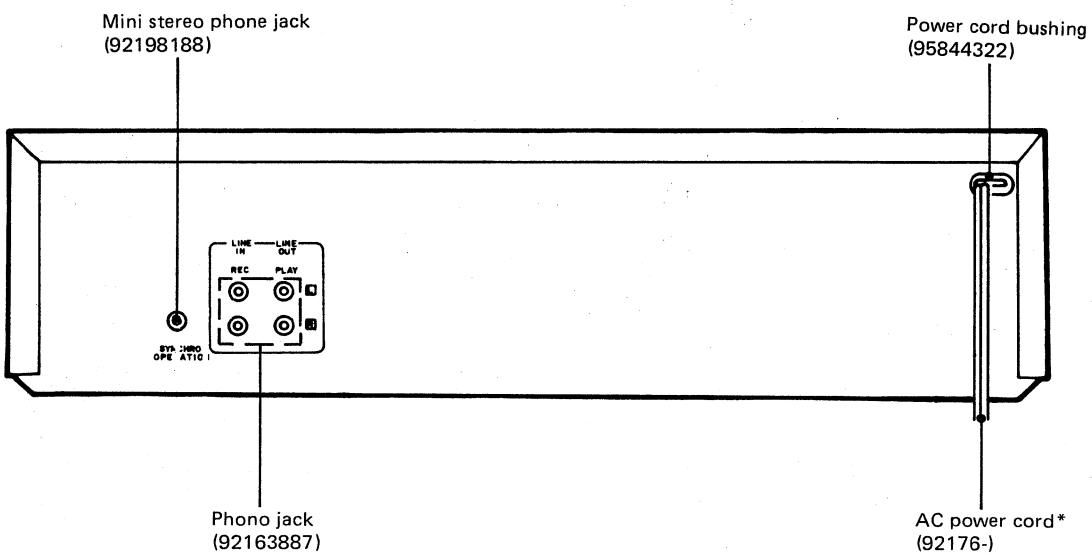
SERVICE MANUAL

KENWOOD

KX-94W

STEREO DOUBLE CASSETTE TAPE DECK

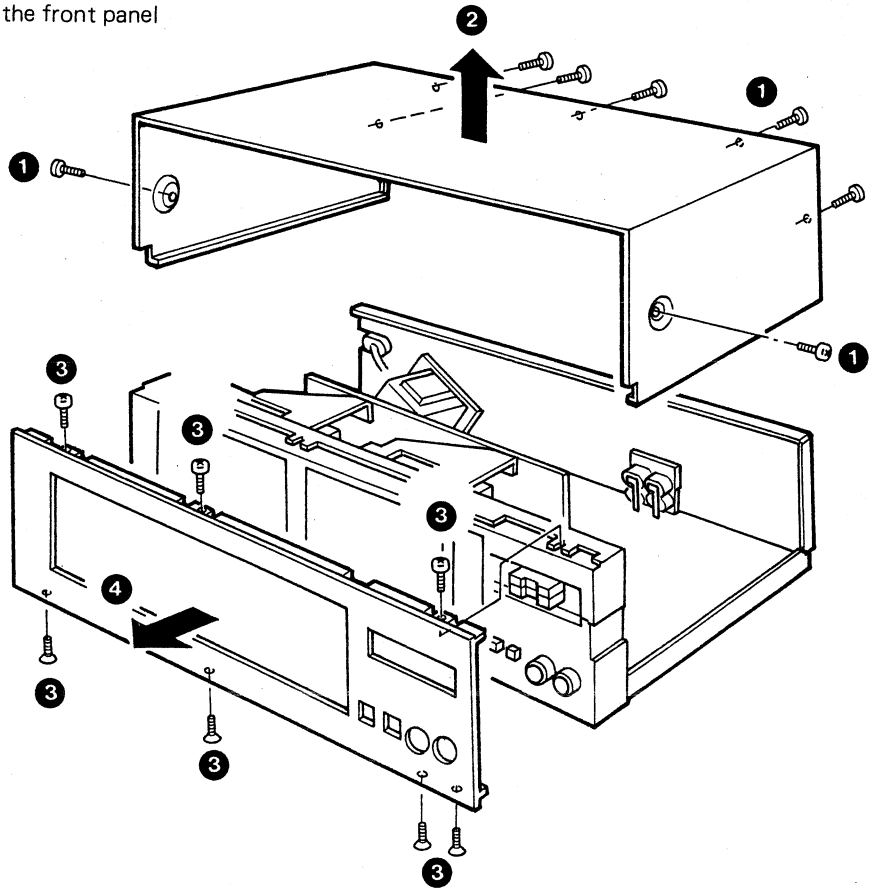


* **Refer to parts list on page 11.**
Photo is KX-94W (Black version)
S : Sliver version
B : Black version

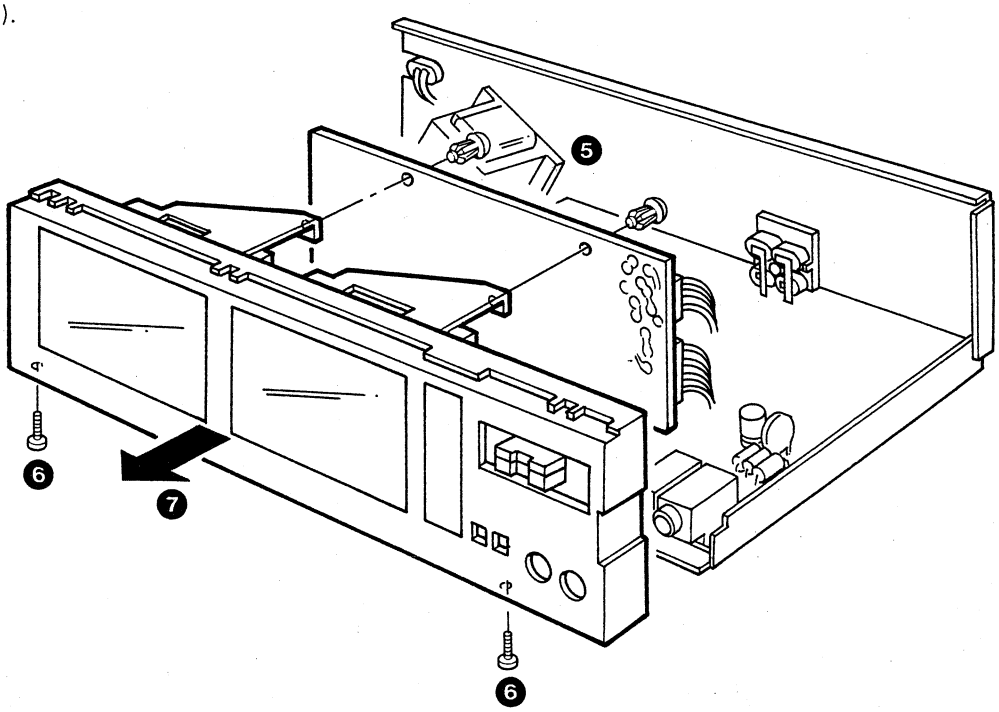
DISASSEMBLY FOR REPAIR

DISASSEMBLY FOR REPAIR

1. Remove 7 screws (❶), remove the metallic cabinet (❷). Remove 7 screws (❸), remove the front panel (❹).

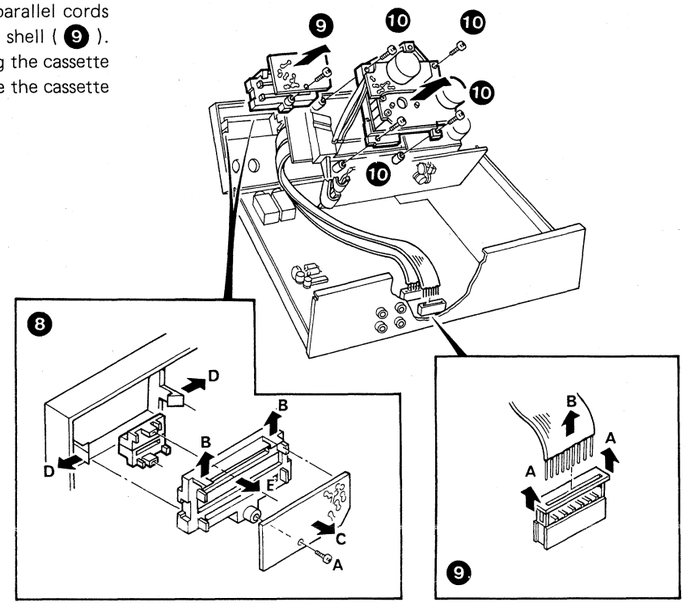


2. Remove 2 push-rivets (❺), remove the logic pcb from mounting hardware. Remove 2 screws (❻), pull out the sub panel a little bit (❼).

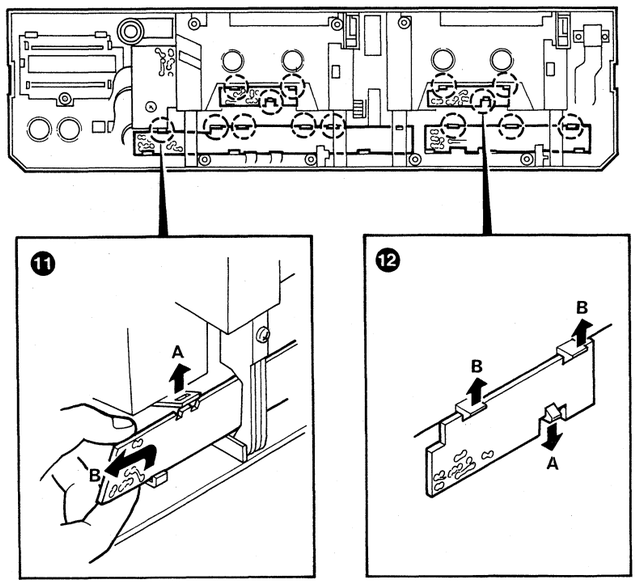


DISASSEMBLY FOR REPAIR

3. Remove 1 screw, remove the VOL pcb together with the escutcheon (❽). Disconnect the cable coming out from the meter LED pcb. To remove the parallel cords from the gray connector, pull up the outer shell (❾). Incline the sub panel, remove 4 screws fixing the cassette mechanism (❿) for each one, then remove the cassette mechanism.

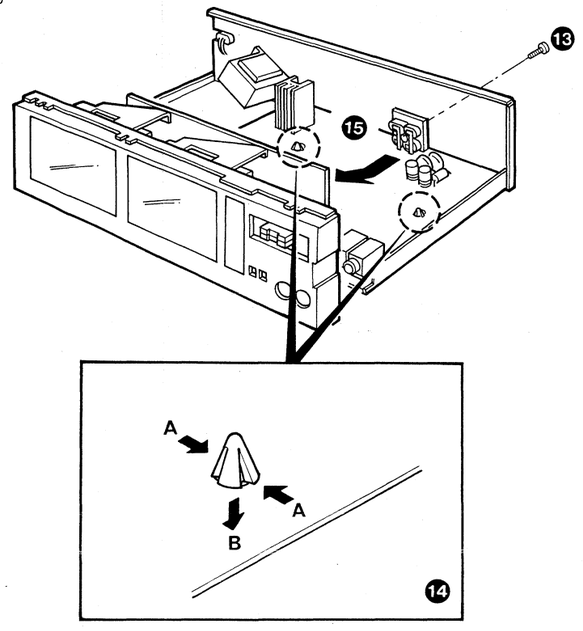


4. Remove the Key SW pcbs by relieving the projection of pcb from the hole of each hook (⓫) and the LED pcbs inside the cassette holder (⓬) as shown in the figure.

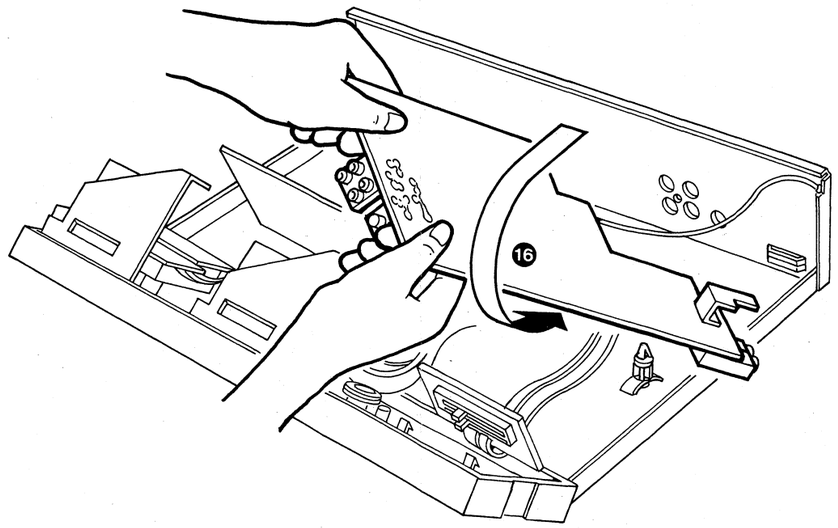


DISASSEMBLY FOR REPAIR

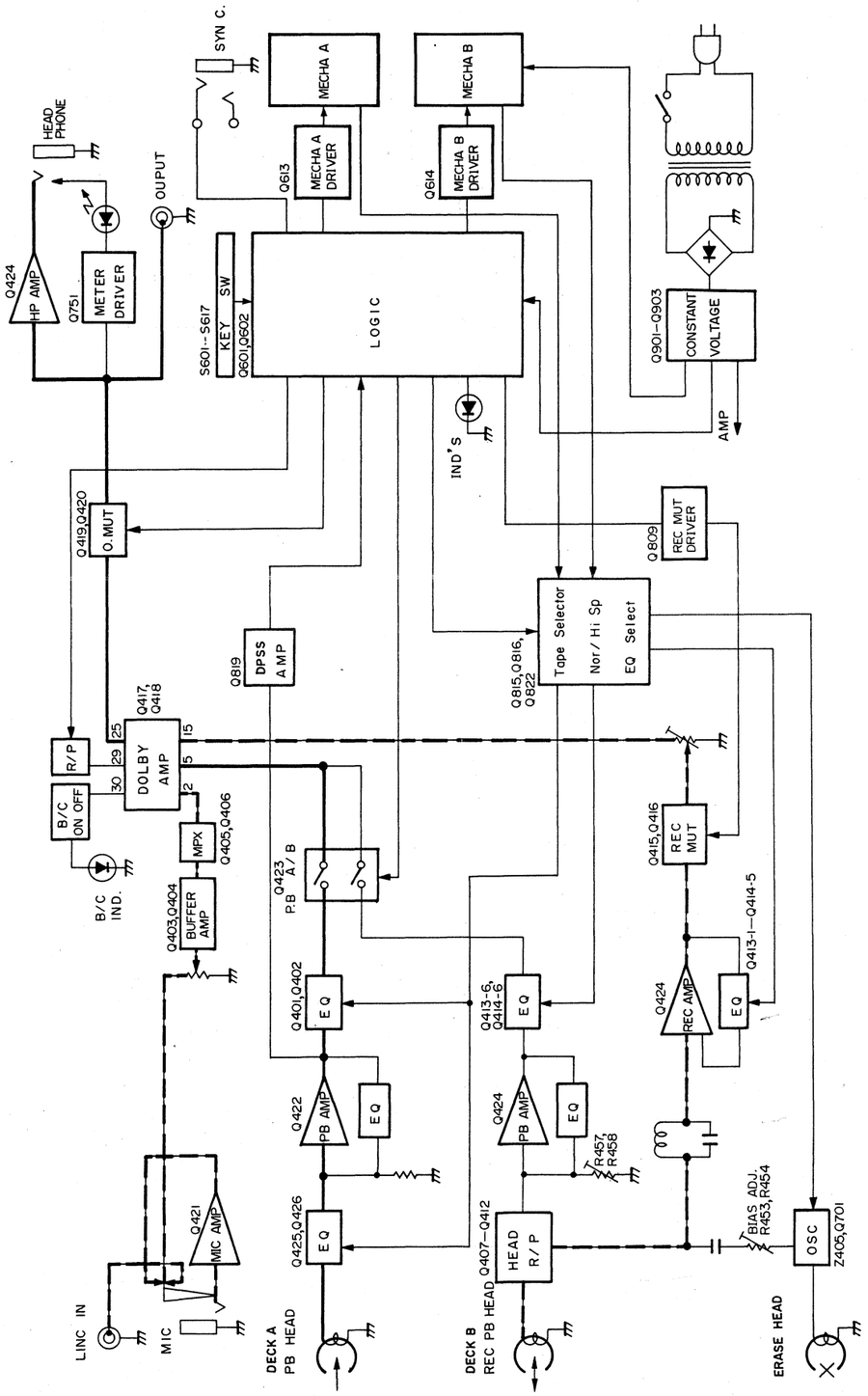
5. Remove the 2 pc supporters (⓮) and 1 screw fixing phone jack in rear panel (⓭).



6. Turn over the Main pcb (⓰).



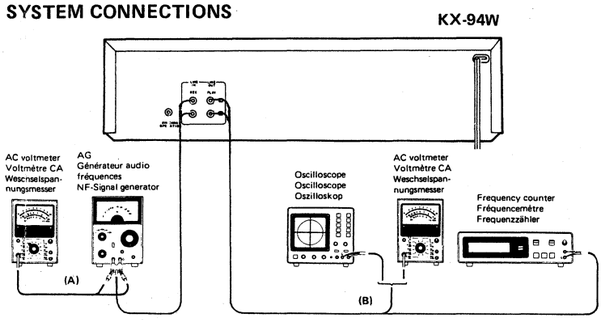
BLOCK DIAGRAM



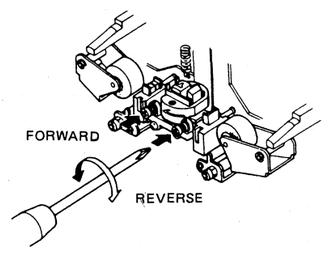
ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	CASSETTE TAPE DECK SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
CASSETTE DECK SECTION		TAPE: NORMAL, DOLBY: OFF, INPUT: LINE				0dBs=0.775V	
I REC/PLAY HEAD							
[1]	DEMAGNETIZATION	—	—	POWER: OFF Remove the cassette door.	REC/PLAY head	Demagnetize the REC/PLAY head with a head demagnetizer.	
[2]	CLEANING	—	—	PLAY	REC/PLAY head erase head, capstan, pinch roller.	Clean the REC/PLAY head erase head, capstan and pinch roller using a cotton swab slightly damped with alcohol.	
[3]	AZIMUTH	MTT-256 10kHz,-20dB	(B)	PLAY	Azimuth adjustment screw	Maximum output.	
II PC BOARD							
(1)	TAPE SPEED (HI SPEED)	MTT-111	(B)	Connect a jumper between GND and TP-HISP PLAY	A DECK: R654 B DECK: R643	Adjust the tape speed so that a 6kHz signal is produced at the center of the tape.	(a)
(2)	TAPE SPEED (NORMAL)	MTT-111	(B)	NORMAL PLAY	A DECK: R655 B DECK: R644	Adjust the tape speed so that a 3kHz signal is produced at the center of the tape.	(b)
(3)	PLAYBACK LEVEL	MTT-150	(B)	PLAY	A DECK: R423 (L) R424 (R) B DECK: R457 (L) R458 (R)	Output level: -3.8dBs (500mV)	(c)
(4)	BIAS OSC	—	Connect a Frequency counter beteween GND and TP10.	REC/PAUSE TAPE: METAL	Z 407	105kHz	(d)
(5)	BIAS CURRENT	(A) 1kHz,-37.5dBs 12.5kHz,-37.5dBs	(B)	Adjust REC LEVEL so that the REC monitor output becomes -27dBs at 1kHz, then record and reproduce signal of 1kHz and 12.5kHz in alternation.	R453 (L) R454 (R)	Record 1kHz and 12.5kHz in alternation and adjust the variable resistors which control the bias current so that the same playback level is obtained.	(e)
(6)	RECORD LEVEL	(A) 1kHz,-17.5dBs	(B)	Record and reproduce a 1kHz signal under the conditions set in (5).	R505 (L) R506 (R)	Adjust the variable resistors so that a playback level of -7dBs is obtained.	(f)
(7)	QUICK SENSOR	—	Connect a DC voltmeter between TP4 and TP5. B DECK: TP4 and TP6.	STOP	A DECK: R804 B DECK: R806	0.4V	(g)

SYSTEM CONNECTIONS



Azimuth adjustment screw



REGLAGE

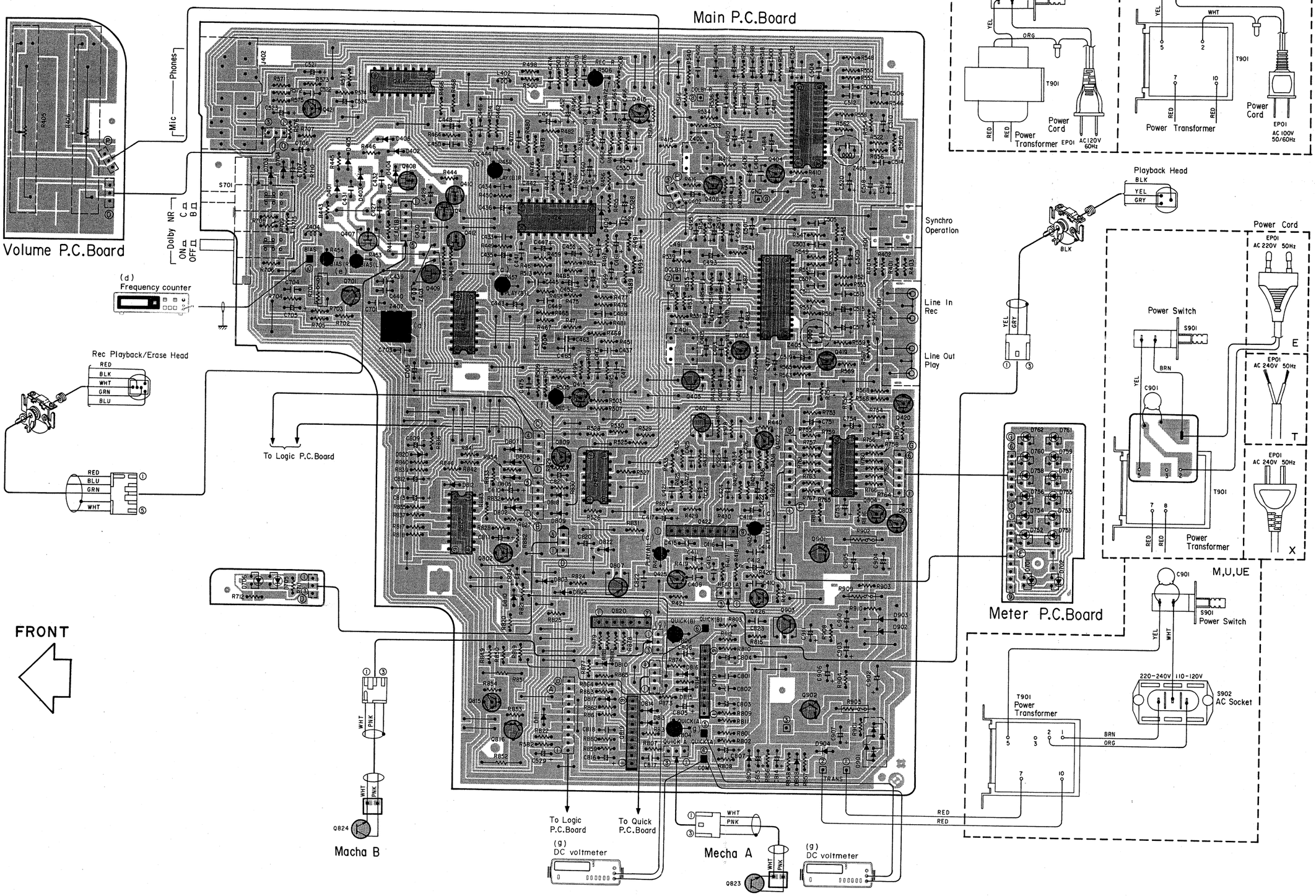
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU MAGNETO -PHONE A CASSETTE	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION DU MAGNETOPHONE		TAPE: NORMAL, DOLBY: OFF, ENTREE: LINE				0dBs=0,775V	
I TETE D'ENREGISTREMENT/LECTURE							
[1]	DEMAGNETISATION	—	—	POWER: OFF Eloigner la porte.	Tête D'ENREGISTREMENT/ LECTURE	Demagnétiser la tête D'ENREGISTREMENT/LECTURE avec un démagnétiseur de tête.	
[2]	NETTOYAGE	—	—	PLAY	Tête D'ENREGISTREMENT/ LECTURE tête d'effacement, cabestan, galetpresseur.	Nettoyer la tête D'ENREGISTREMENT/LECTURE la tête d'effacement, le cabestan et le galetpresseur avec un coton-tige légèrement imbibé d'alcool.	
[3]	AZIMUT	MTT-256 10kHz.-20dB	(B)	PLAY	Vis d'azimut	Sortie maximer.	
II PLAQUE IMPRIMEE							
(1)	VITESSE DE DEFILEMENT (HI SPEED)	MTT-111	(B)	Connecter un cablage entre les GND et TP-HISP. PLAY	A DECK: R654 B DECK: R643	Régler la vitesse de bande de façon qu'un signal de 6kHz soit produit au centre de la bande.	(a)
(2)	VITESSE DE DEFILEMENT (NORMAL)	MTT-111	(B)	NORMAL PLAY	A DECK: R655 B DECK: R644	Régler la vitesse de bande de façon qu'un signal de 3kHz soit produit au centre de la bande.	(b)
(3)	NIVEAU DE LECTURE	MTT-150	(B)	PLAY	A DECK: R423 (G) R424 (D) B DECK: R457 (G) R458 (D)	Niveau de sortie: -3,8dBs (500mV)	(c)
(4)	POLARISATION OSCILLATEUR	—	Connecter un campteur de frèquenese entre les GND et TP10.	REC/PAUSE BANDE: METAL	Z 407	105kHz	(d)
(5)	COURANT DE POLARISATION	(A) 1kHz.-37,5dBs 12,5kHz.-37,5dBs	(B)	Régler REC LEVEL façon que la sortie de moniteur REC soit de -27dBs à 1kHz, puis en registrer et reproduire des signaux de 1kHz et 12,5kHz en alternance.	R453 (G) R454 (D)	Enregistrer un signal de 1kHz et 12,5kHz en alternance et ajuster les résistances variables qui commandent le courant de polarité de façon à obtenir le même niveau de lecture.	(e)
(6)	NIVEAU D'ENREGISTREMENT	(A) 1kHz.-17,5dBs	(B)	Enregistrer et reproduire un signal de 1kHz dans les conditions précisées en (5).	R505 (G) R506 (D)	Ajuster les résistances variables de façon à obtenir un niveau de lecture de -7dBs.	(f)
(7)	RAPIDE CAPTEUR	—	Connecter un voltmètre CC entre les TP4 et TP5. B DECK: TP4 et TP6.	STOP	A DECK: R804 B DECK: R806	0,4V	(g)

ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	KASSETTENGERÄT-EINSTELLUNG	ABGLEICH PUNKTE	ABGLEICHEN FUR	ABB.
CASSETTEN-DECK-ABTEILUNG		TAPE: NORMAL, DOLBY: OFF, EINGANG: LINE				0dBs=0,775V	
I AUFNAHME/WIEDERGABE-KOPF							
[1]	ENTMAGNETI-SIERUNG	—	—	POWER: OFF Den Kassettenfach deckel oben herausziehen.	AUFNAHME/ WIEDERGABE-Kopf	Entmagnetisierung von dem AUFNAHME/WIEDERGABE-Kopf mit einem Tonkopf Entmagnetisierungsdrossel.	
[2]	REINIGUNG	—	—	PLAY	AUFNAHME/ WIEDERGABE-Kopf Löschkopf, Tonwelle, Andruckrolle.	AUFNAHME/WIEDERGABE-Kopf, Löschkopf, Tonwelle und Andruckrolle mit einem leicht mit Alkohol befeuch teten Wattebausch reinigen.	
[3]	AZIMUT-EINSTELLUNG	MTT-256 10kHz.-20dB	(B)	PLAY	Azimut-Einstellschraube	Maximal Ausgang.	
II GEDRUCKTE SCHALTPLATTE							
(1)	BANDGESCH-WINDIGKEIT (HI SPEED)	MTT-111	(B)	Einen Schaltdraht zwischen GND und TP-HISP anschließen. PLAY	A DECK: R654 B DECK: R643	Die Bandgeschwindigkeit so justieren, daß ein 6kHz Signal auf der Mitte des Bands erzeugt wird.	(a)
(2)	BANDGESCH-WINDIGKEIT (NORMAL)	MTT-111	(B)	NORMAL PLAY	A DECK: R655 B DECK: R644	Die Bandgeschwindigkeit so justieren, daß ein 3kHz Signal auf der Mitte des Bands erzeugt wird.	(b)
(3)	WIEDERGABE-PEGEL	MTT-150	(B)	PLAY	A DECK: R423 (L) R424 (R) B DECK: R457 (L) R458 (R)	Ausgangspegel: -3,8dBs (500mV)	(c)
(4)	VORSPANNUNG OSZILLATOR	—	Einen Freguenz messer zwischen GND und TP10 anschließen.	REC/PAUSE TAPE: METAL	Z 407	105kHz	(d)
(5)	LEERLAUFSTROM	(A) 1kHz.-37,5dBs 12,5kHz.-37,5dBs	(B)	REC LEVEL so justieren,der REC Monitorausgang -27dBs bei 1kHz wird, und danach abwechselnd Signale von 1kHz und 12,5kHz aufnehmen und wiedergeben.	R453 (L) R454 (R)	Signale von 1kHz und 12,5kHz abwechselnd aufnehmen und die Regelwiderstände, die den Vormagnetisierugsstrom regeln, so justieren, daß der gleiche Wiedergabepegel erzielt wird.	(e)
(6)	AUFNAHMEPEGEL	(A) 1kHz.-17,5dBs	(B)	Ein 1kHz Signal unter den in Punkt (5) beschriebenen Bedingungen aufnehmen und reproduzieren.	R505 (L) R506 (R)	Die Regelwiderstände so justieren, daß ein wiedergabepegel von -7dBs erzielt wird.	(f)
(7)	SCHNELL SENSOR	—	Einen Gleich-spannungsmesser zwischen TP4 und TP5 anshließen. B DECK: TP4 und TP6.	STOP	A DECK: R804 B DECK: R806	0,4V	(g)

PC BOARD

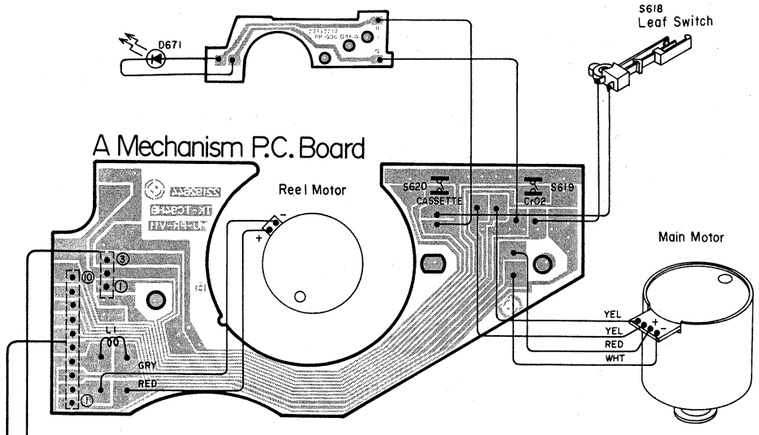
Refer to the schematic diagram for the values of resistors and capacitors.
The PC board drawing is viewing from the side easy to check.

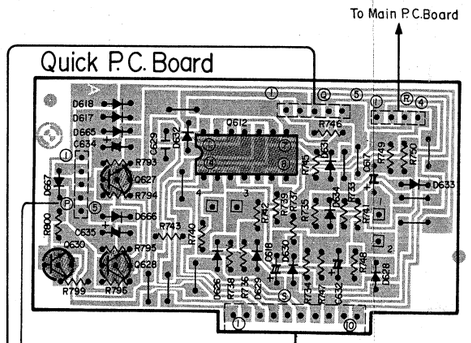


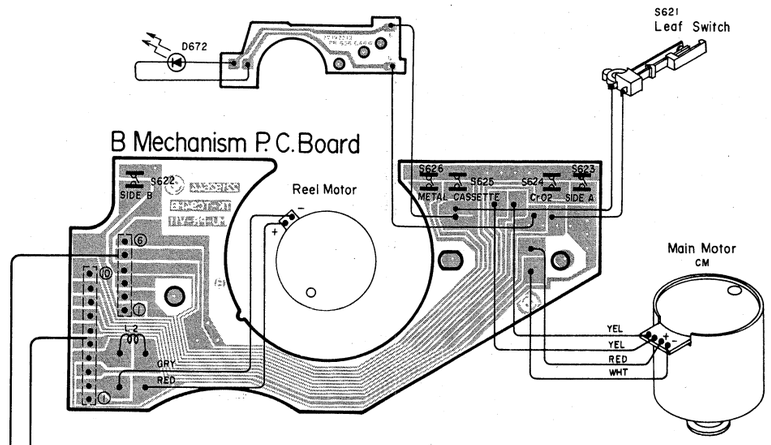
KX-94W KX-94W

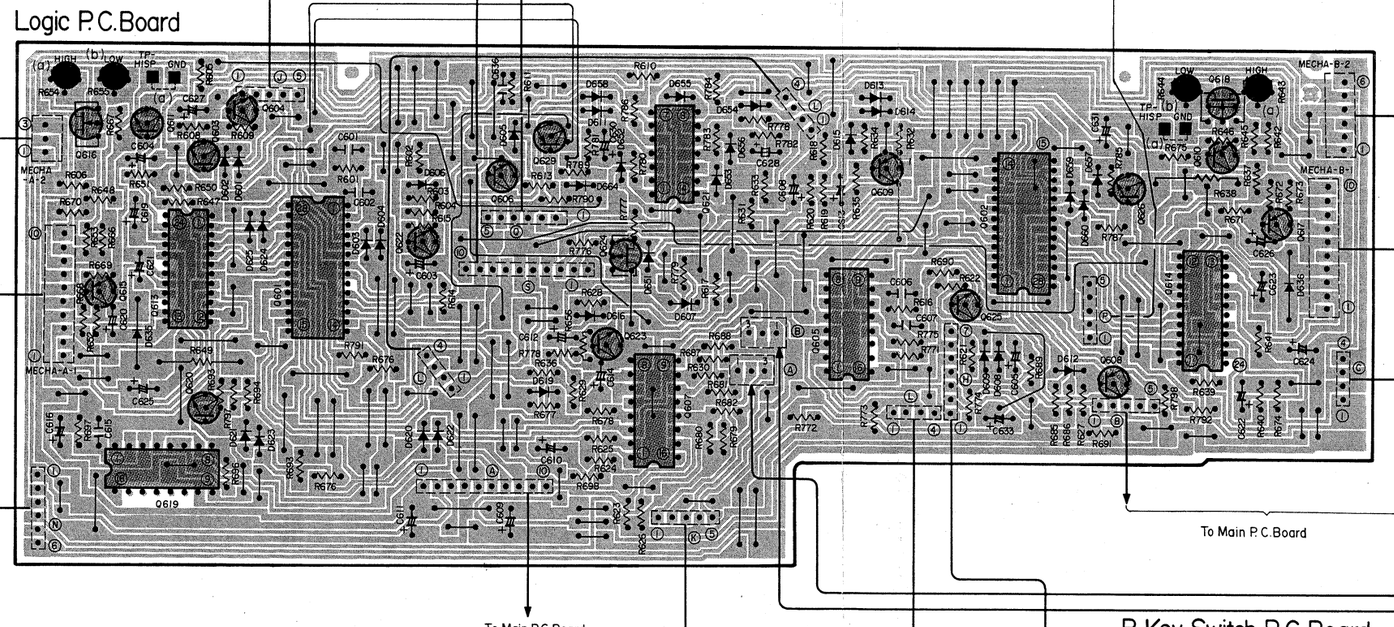
PC BOARD

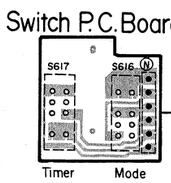
Refer to the schematic diagram for the values of resistors and capacitors.
The PC board drawing is viewing from the side easy to check.

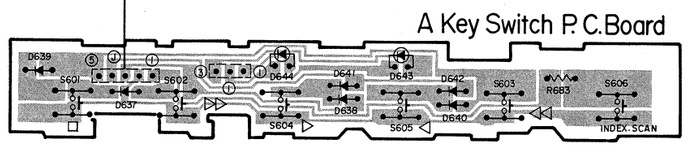


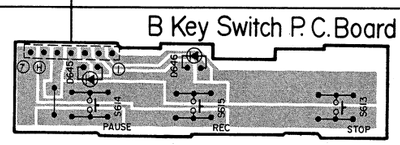


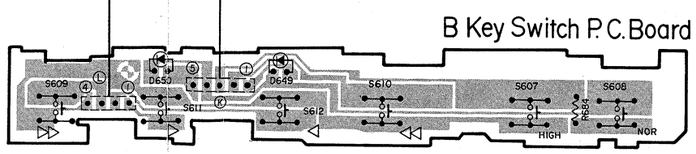


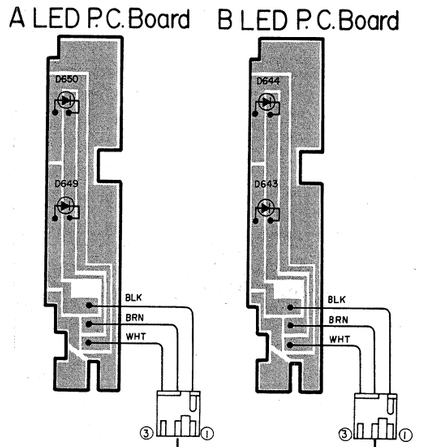






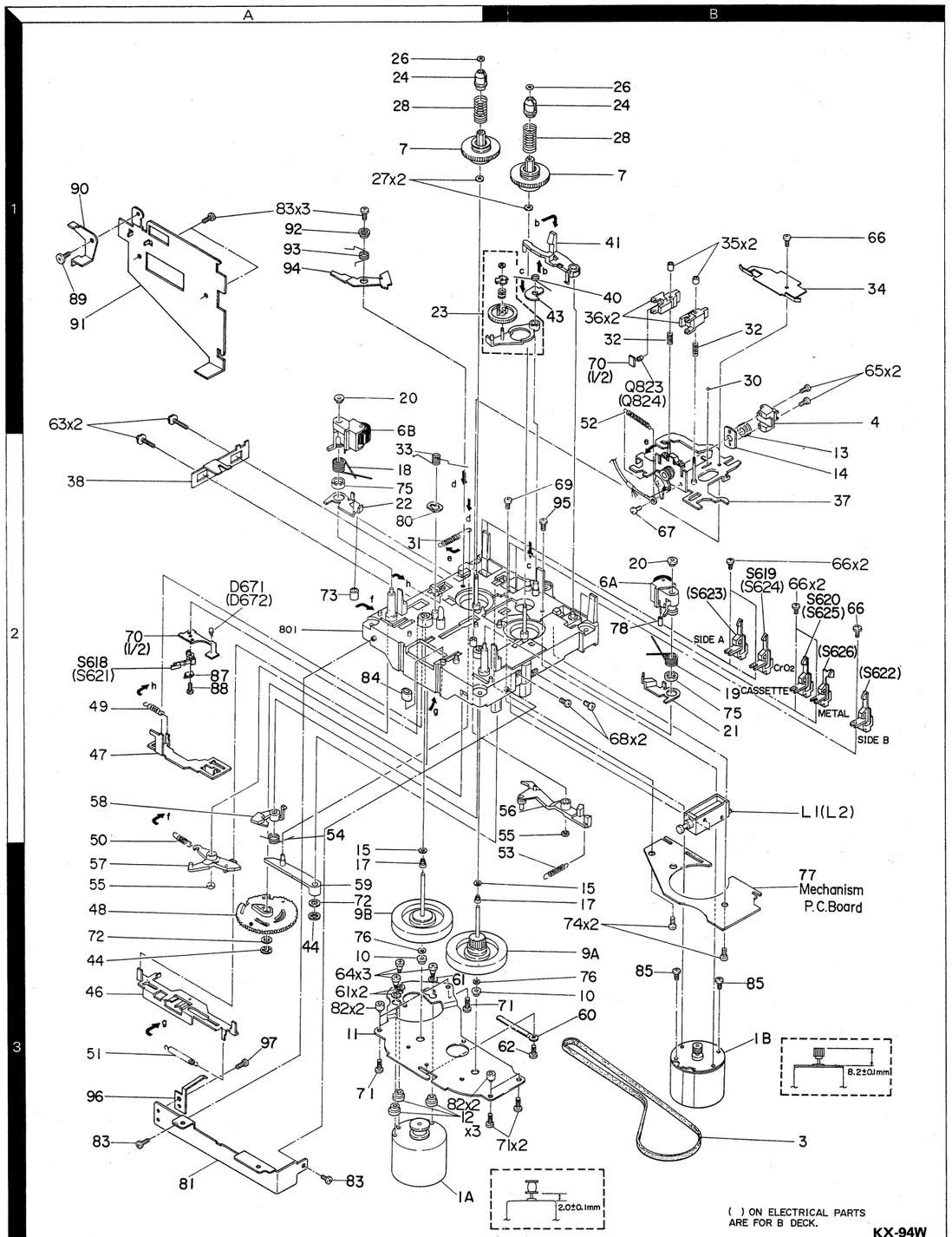






FRONT

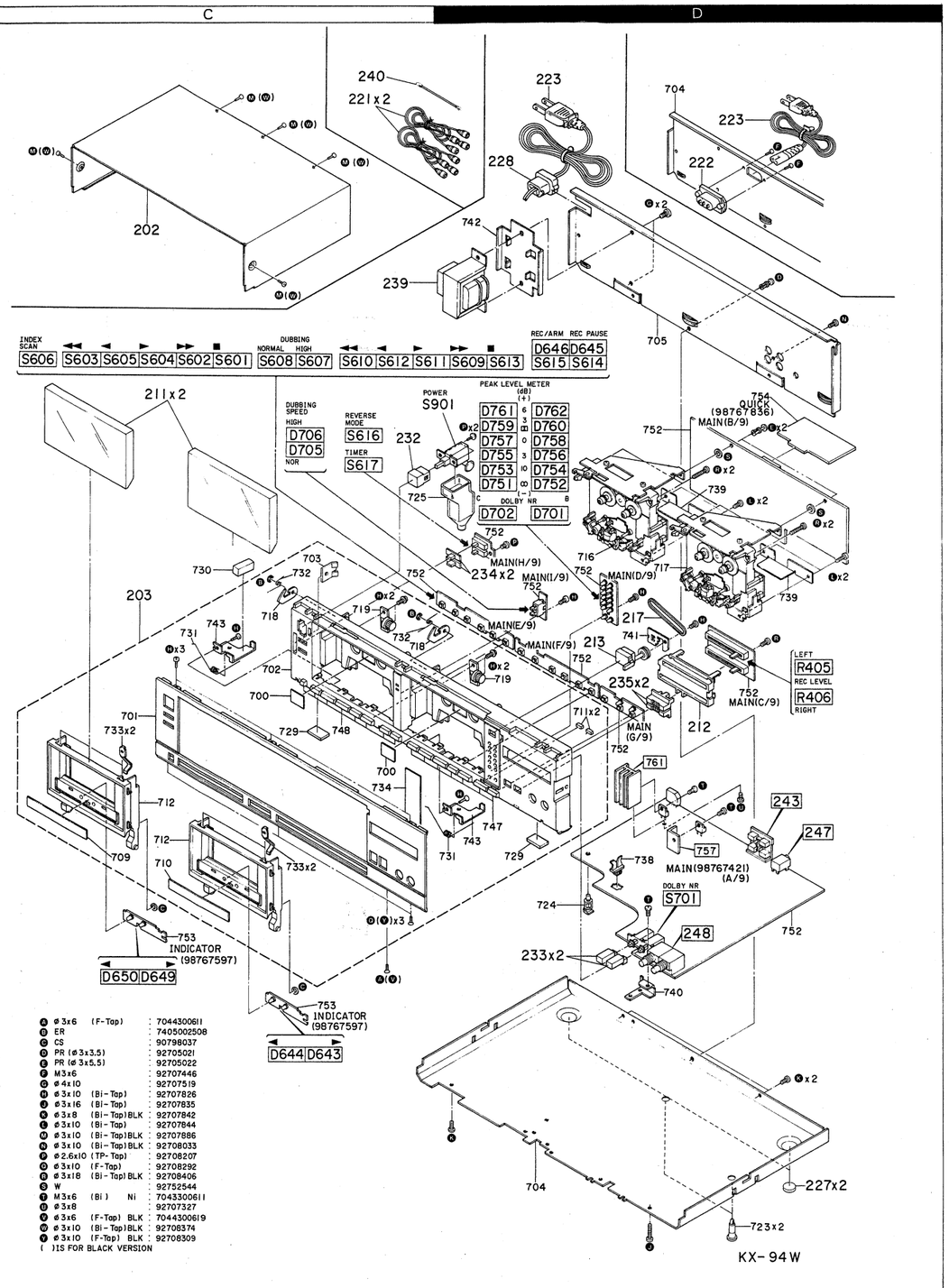
EXPLODED VIEW (MECHANISM)



( ) ON ELECTRICAL PARTS ARE FOR B DECK.

KX-94W

EXPLODED VIEW

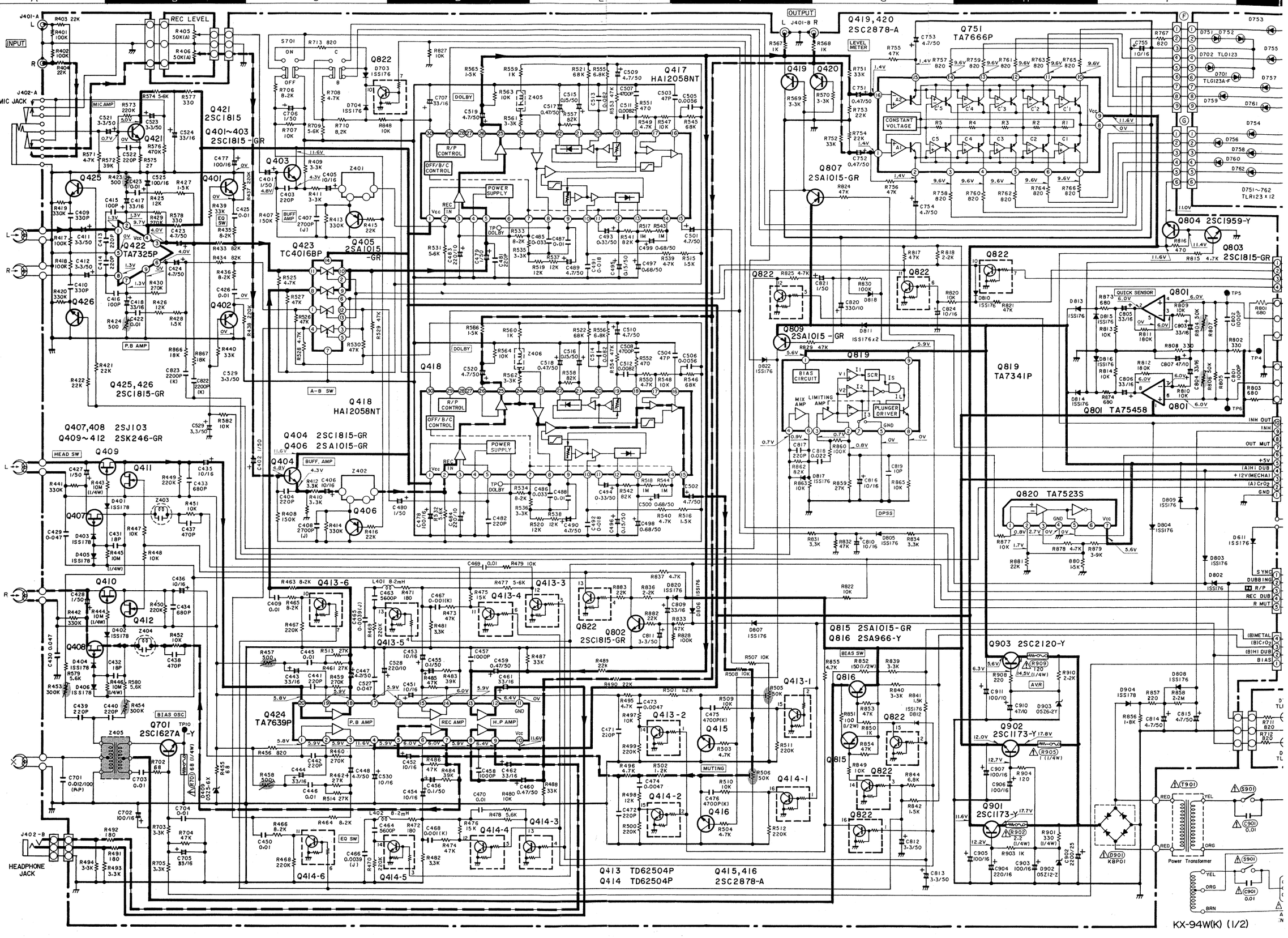


A	ø3x6	(F-Tap)	: 704430061
B	ER		: 7405002508
C	CS		: 90798037
D	PR (ø3x3.5)		: 92705021
E	PR (ø3x5.5)		: 92705022
F	M3x6		: 92707446
G	ø4x10		: 92707519
H	ø3x10	(Bi-Tap)	: 92707826
I	ø3x16	(Bi-Tap)	: 92707835
K	ø3x8	(Bi-Tap)BLK	: 92707842
L	ø3x10	(Bi-Tap)	: 92707844
M	ø3x10	(Bi-Tap)BLK	: 92707886
N	ø3x10	(Bi-Tap)BLK	: 92708033
P	ø2.6x10	(TP-Tap)	: 92708207
Q	ø3x10	(F-Tap)	: 92708292
R	ø3x18	(Bi-Tap)BLK	: 92708406
S	W		: 92752544
T	M3x6	(Bi) Ni	: 704330061
U	ø3x8		: 92707327
V	ø3x6	(F-Tap) BLK	: 704430061
W	ø3x10	(Bi-Tap)BLK	: 92708374
Y	ø3x10	(F-Tap) BLK	: 92708309

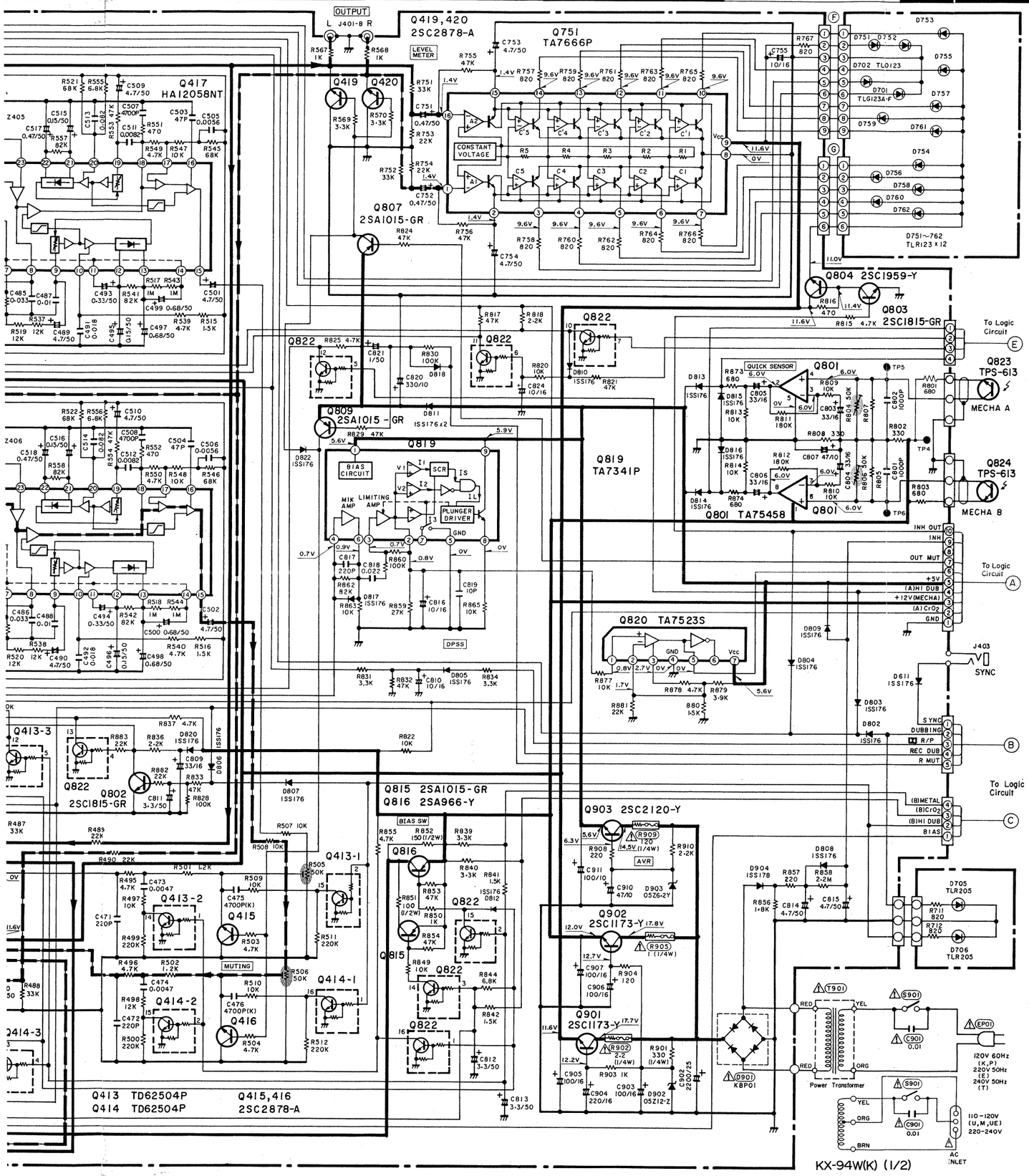
( )IS FOR BLACK VERSION

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

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


INPUT
REC LEVEL
MIC JACK
MIC AMP
Q421 2SC1815 Q401~403 2SC1815-GR
Q425
Q426
Q422 TA7325P
P.B AMP
Q425,426 2SC1815-GR
Q407,408 2SJ103 Q409~412 2SK246-GR
HEAD SW
Q409
Q411
Q407
Q410
Q412
Q408
BIAS OSC
Q701 2SC1627A-Y
HEADPHONE JACK
Q401
Q402
Q403
Q423 TC4016BP
Q405 2SA1015-GR
Q418 HA12058NT
Q404 2SC1815-GR Q406 2SA1015-GR
A-B SW
EQ SW
BUFF. AMP
Q424 TA7639P
REC AMP
H.P AMP
Q413-6
Q413-5
Q413-4
Q413-3
Q413-2
Q413-1
Q414-6
Q414-5
Q414-4
Q414-3
Q414-2
Q414-1
Q413 TD62504P
Q414 TD62504P
Q415,416 2SC2878-A
Q417 HA12058NT
Q822 2SC1815-GR
Q802 2SC1815-GR
Q807 2SA1015-GR
Q809 2SA1015-GR
Q815 2SA1015-GR
Q816 2SA966-Y
Q419,420 2SC2878-A
Q751 TA7666P
Q819 TA7341P
Q801 TA75458
Q820 TA7523S
Q804 2SC1959-Y
Q803 2SC1815-GR
Q903 2SC2120-Y
Q902 2SC1173-Y
Q901 2SC1173-Y
OUTPUT
LEVEL METER
CONSTANT VOLTAGE
BIAS CIRCUIT
DPSS
QUICK SENSOR
AVR
Power Transformer
KBP01
INH OUT
INH
OUT MUT
+5V
(A)H DUB
+12V(MECHA)
(A)CrO2
GND
SYNC
DUBBING
R/P
REC DUB
R MUT
(B)METAL
(B)CrO2
(B)HI DUB
BIAS

KX-94W(K) (1/2)



Q401,402	
E	0V
C	0V

Q403,404	
E	4.3V
C	11.6V
B	4.8V

Q405,406	
E	Dolby ON 5.4V
	Dolby OFF 5.7V
C	5.8V

Q413		
1	——	
2	Hi Dub	4.8V
	Others	0V
3	(B)CrO2	0.1V
	Others	6.2V
4	Rec, Dub Rec Pause	4.8V
	Others	0V
5	(B) Metal	5.1V
	Others	0V
6	Nor	0V
	CrO2	1.8V
	Metal	0.7V
7	Nor	0V
	CrO2	4.4V
	Metal	4.1V
8,9	——	
10~15	0V	
16	——	

Q414		
1	Hi Dub	4.8V
	Others	0V
2	(B) CrO2	0.1V
	Others	6.2V
3	Rec, Dub Rec Pause	4.8V
	Others	0V
4	(B) Metal	5.1V
	Others	0V
5	Nor	0V
	CrO2	1.8V
	Metal	0.7V
6	Nor	0V
	CrO2	4.4V
	Metal	4.1V
7	Dub, Hi Dub	0.3V
	Others	3.1V
8,9	——	
10	Dub, Hi Dub	9.8V
	Others	0.1V
11~15	0V	
16	——	

Q415,416		
E,C	0V	
B	Rec, Dub	
	Hi Dub	0V
	Others	0.7V

Q417,418					
1	11.6V	18	5.7V		
2	5.9V	19	6.0V		
3	5.9V	20	6.0V		
4	0V	21	1.0V		
5	5.7V	22	1.0V		
6	5.9V	23	6.3V		
7	5.7V	24	6.3V		
8	6.2V	25	6.3V		
9	5.9V	26	6.3V		
10	5.9V	27	——		
11	0V	28	——		
12	1.0V		Rec	3.8V	
13	1.0V	29	Rec Pause	3.8V	
14	0V		Others	0V	
15	0V		Dolby OFF	4.3V	
16	6.3V	30	Dolby B	6.4V	
17	5.7V		Dolby C	7.8V	

Q419,420		
E	0V	
C	0V	
B	Hi Dub/Hi Dub Pause Dub Rec/Dub Pause Play/Rec Pause	0V
	Others	0.7V

Q421	
E	0V
C	5.0V
B	0.7V

Q422	
1	1.3V
2	1.3V
3	4.0V
4	9.7V
5	0V
6	4.0V
7	1.3V
8	1.3V
9	0V

Q423					
1	5.9V		9	5.9V	
2	5.9V		10	5.9V	
3	5.9V		11	5.9V	
4	5.9V			(A) Play Dub Pause	9.7V
5	(B) Play Rec	11.6V	12	Hi Dub Pause	
	Others	0V	13	Dub Hi Dub	9.1V
6	——			Others	0V
7	0V		14	11.6V	
8	5.9V				

Q424			
1	5.8V	11	0V
2	5.9V	12	6.4V
3	5.9V	13	5.9V
4	11.6V	14	6.0V
5	5.9V	15	6.0V
6	6.0V	16	5.9V
7	6.0V	17	5.9V
8	5.9V	18	5.9V
9	6.4V	19	5.9V
10	11.6V	20	5.8V

Q425,426		
E	0V	
C	0V	
B	Hi Dub	0V
	Others	0.6V

Q701		
E	Rec Dub Hi Dub	0.3V
	Others	0V
C	Rec Dub Hi Dub	4.6V
	Others	12.0V
B	Rec Dub Hi Dub	0.6V
	Others	0V

Q751			
1	1.4V	9	11.6V
2	1.4V	10	9.6V
3	9.6V	11	9.6V
4	9.6V	12	9.6V
5	9.6V	13	9.6V
6	9.6V	14	9.6V
7	9.6V	15	1.4V
8	0V	16	1.4V

Q801	
1	——
2	6.0V
3	6.0V
4	6.0V
5	0V
6	6.0V
7	6.0V
8	6.0V
9	12.0V

Q802		
E		0V
C	Hi Dub Dub Rec Hi Dub Pause Dub Pause Rec Pause	0V
	Others	10.1V
B	Hi Dub Dub Rec Hi Dub Pause Dub Pause Rec	0.7V
	Others	0V

Q803		
E	0V	
C	11.4V	
B	INH	0.8V
	Others	0V

Q804	
E	11.0V
C	11.6V
B	11.4V

Q807		
E	4.9V	
C	Rec Dub Hi Dub Play Rec Pause Dub Pause Hi Dub Pause	0V
	Others	4.8V
B	Rec Dub Hi Dub Play Rec Pause Dub Pause Hi Dub Pause	4.8V
	Others	4.2V

Q809		
E	4.8V	
C	Rec Dub Hi Dub	0V
	Others	4.8V
B	Rec Dub Hi Dub	4.8V
	Others	4.2V

Q815	
E	12.1V
C	12.0V
B	Nor CrO2	11.9V
	Metal	11.2V

Q816	
E	12.1V
C	12.0V
B	Nor CrO2 Metal	11.9V 11.2V

Q819	
1	5.6V
2	0.8V
3	0.7V
4	0.7V
5	0V
6	0.9V
7	——
8	0V
9	5.9V

Q820	
1	0.8V
2	1.7V
3	2.7V
4	0V
5	0V
6	——
7	5.6V

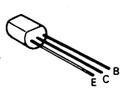
Q822					
1	Nor	0V	7	(A) Play	
	CrO2	1.8V		Dub Hi Dub	0.3V
	Metal	0.7V		Dub Pause Hi Dub Pause	
2	Nor CrO2	0V		Others	0V
	Metal	5.1V	8	——	
3	Nor	0V	9	——	
	CrO2	4.4V	10	Dub Hi Dub	9.1V
	Metal	4.1V		(A) Play Dub Pause	9.7V
4	Rec Dub Hi Dub Rec Pause Dub Pause	0V		Hi Dub Pause	
	Hi Dub Pause			Others	0V
	Others	3.6V	11	Rec	11.6V
5	Hi Dub	4.9V		Others	0V
	Others	0V	12	Hi Dub Others	0V 3.6V
6	Dub Hi Dub	8.4V	13	Hi Dub Pause Dub Pause Rec Pause	9.4V
	(B) Play Rec	0.2V		Hi Dub Dub, Rec	9.2V
	(A) Play Dub Pause Hi Dub Pause	9.0V		Others	0V
	Others	2.4V	14	——	
			15	——	
			16	(B)CrO2 Others	0.1V 6.2V

Q901	
E	11.6V
C	17.7V
B	12.2V

Q902	
E	12.0V
C	17.8V
B	12.7V

Q903	
E	5.6V
C	14.5V
B	6.3V

2SA1015
2SA966
2SC1627A
2SC1815
2SC1959NEW
2SC2120
2SC2878(A)



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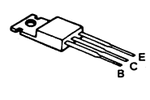

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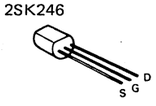

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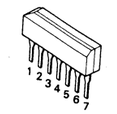

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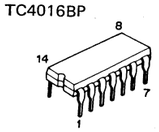

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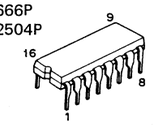
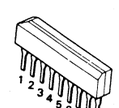


TA7325P
TA7341P
TA75458S



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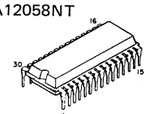

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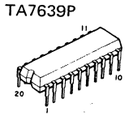

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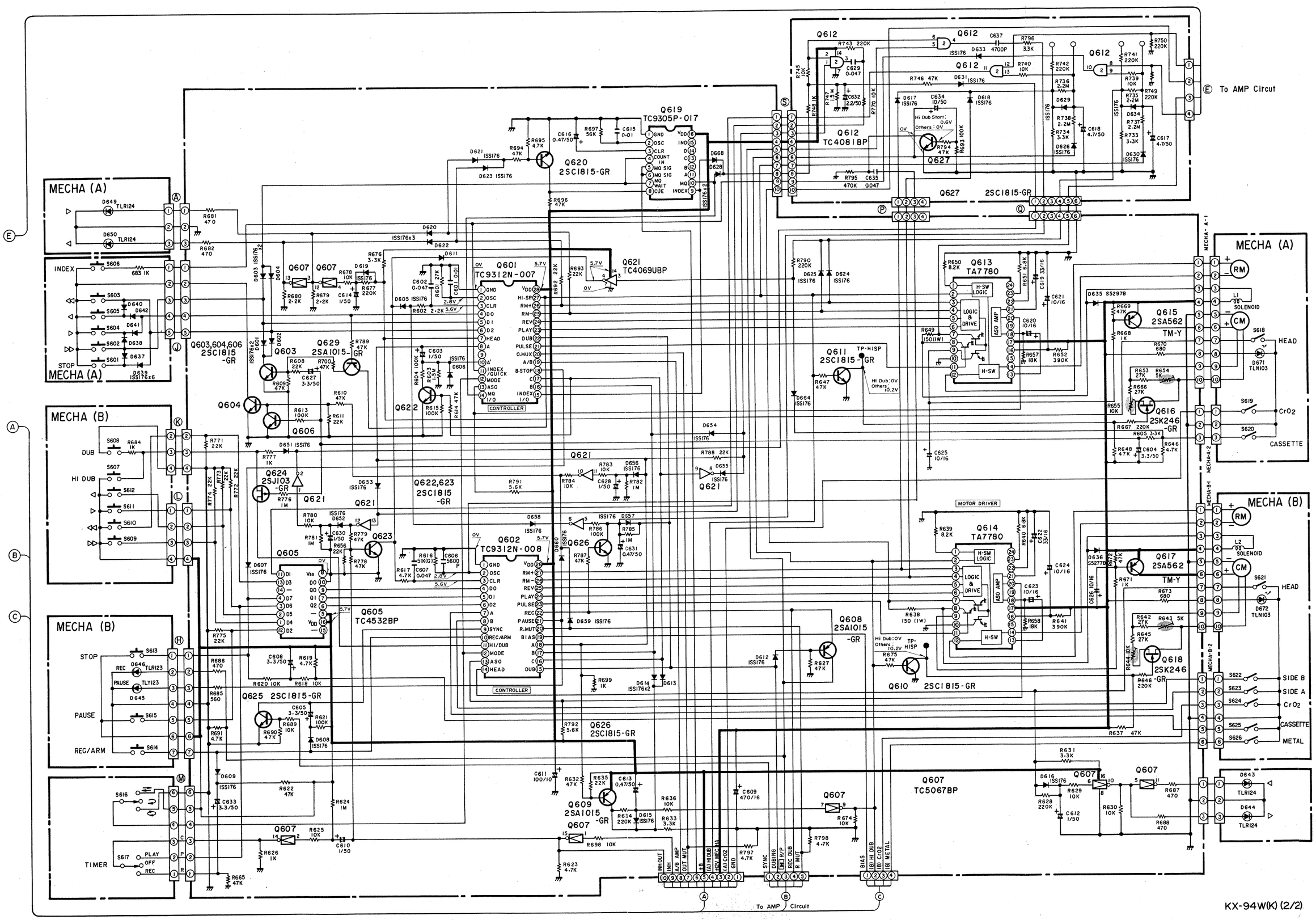
KX-94W

KENWOOD



Q601

1	0
2	2.6
3	5.6
4	5.6
5	5.6
6	5.6
7	For Rev
8	Hi Dub Others
9	—
10	0
11	2.5
12	
13	0.:
14	0
15	5.2
16	(B) Play Others
17	(B) Rec Others

Q602

1	0
2	2.
3	5.
4	NOTE I
5	NOTE I
6	NOTE I
7	With Tal Without
8	With Tc Without
9	Sync Re Others
10	5
11	2
12	
13	0
14	For Rev
15	Dub Others
16	Rec Others
17	Play Others

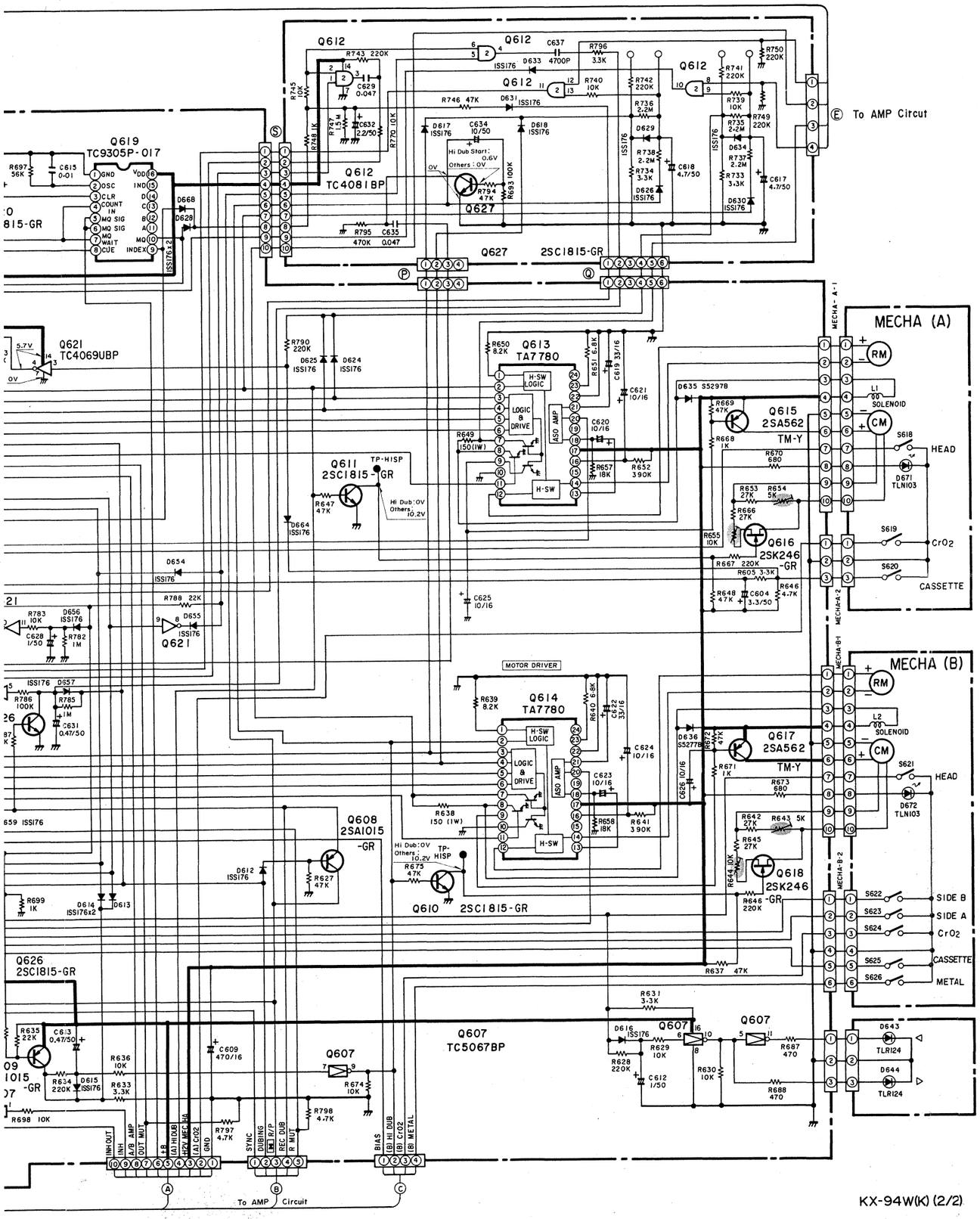
Q603

C	Hi Dub Play Pa Others

Q606

C	NO Cass Others

2SA101
2SA562
2SC181



Q601

					Pulse
1	0 V	18	0 V		
2	2.8V	19	(B) Play, Rec	5.2V	
3	5.6V		Others	0 V	
4	5.6V	20	(A)(B) Play, Rec	5.0V	
5	5.6V		Others	0 V	
6	5.6V	21	Play	5.0V	
7	For 0 V		Others	0 V	
	Rev 5.6V	22	Dub	4.9V	
8	Hi Dub 4.9V		Others	0 V	
	Others 0 V	23	Play	5.0V	
9	——		Others	0 V	
10	0 V		※		
11	2.9 V	24	R, Play	5.1V	
12	5.7V		Others	0 V	
	2.9V	25	Rew R, Play	5.1V	
	0 V		Others	0 V	
13	0.2 V	26	FF F, Play	5.1V	
14	0 V		Others	0 V	
15	5.2 V	27	Hi Dub	5.0V	
16	(B) Play 5.0V		Others	0 V	
	Others 0 V	28	5.7V		
17	(B) Rec 5.0V				
	Others 0 V				

Q602

					Pulse
1	0 V	18	Hi Dub	4.9V	
2	2.8V		Others	0 V	
3	5.6V	19	Rec	5.0V	
4	NOTE 1 (Q605)		Others	0 V	
5	NOTE 1 (Q605)	20	Rec	5.0V	
6	NOTE 1 (Q605)		Others	0 V	
7	With Tab 0 V	21	R, Pause	4.9V	
	Without Tab 5.6V		Others	0 V	
8	With Tab 0 V	22	Dub, Rec	4.9V	
	Without Tab 5.6V		Others	0 V	
9	Sync Rec 0V	23	※ Play, Rec	5.0V	
	Others 5.6V		Others	0V	
10	5.6V	24	Play, Rec	5.0V	
11	2.8V		Others	0V	
12	5.7 V	25	※ R, Play	5.1V	
	2.9V		Others	0 V	
	0V		Rew	5.0V	
13	0.2V	26	P, Play	5.0V	
14	For 0V		Others	0 V	
	Rev 5.6V	27	FF F, Play	5.0V	
15	Dub 4.9V		Others	0 V	
	Others 0V	28	5.7V		
16	Rec 5.0V				
	Others 0 V				
17	Play 5.0V				
	Others 0V				

Q603

C	Hi Dub	0V
	Play Pause	
	Others	5.4V

Q606

C	NO Cassette	0V
	Others	0.6V

Q605

1	0V	9	Note 1	
2	0V	10	0V	
3	0V	11	——	
4	NO Cassette 5.7V	12	0V	
	Others 0V	13	0V	
5	5.7V	14	——	
6	Note 1	15	——	
7	Note 1	16	5.7V	
8	0V			

Q607

1	5.3V	9	Hi Dub	4.8V
2	5.3V		Others	0V
3	(A) For 4.6V	10	(B) For	4.8V
	(A) Rev 0.4V		(B) Rev	0V
4	(A) For 0V	11	(B) For	0V
	(A) Rev 5.5V		(B) Rev	4.8V
5	(B) For 4.8V	12	(A) For	4.6V
	(B) Rev 0V		(A) Rev	0.4V
6	(B) For 0V	13	(A) For	0V
	(B) Rev 5.5V		(A) Rev	4.6V
7	Hi Dub 0V	14	0V	
	Others 5.5V	15	0V	
8	0V	16	5.7V	

Q608

E	Dub, Rec	4.9V
	Others	0V
C	Rec	4.7V
	Others	0V
B	Rec	4.1V
	Dub	4.4V
	Others	0V

Q609

E	5.6V	
C	Hi Dub	0V
	Others	5.6V
B	Hi Dub	5.3V
	Others	5.0V

Q610

C	Hi Dub	0V
	Others	10.2V

Q611

C	Hi Dub	0V
	Others	10.2V

Q612 ※ Pulse

1	※			
	Dub	5.0V		
	Others	0~1.2V		
2	Index MQ	4.8V		
	Others	0 V		
3	※ Index & Dub SW Pushed	5.6V		
	Others	0V		
4	※ Index & Rec SW Pushed	5.6V		
	Others	0V		
5	Rec	4.7V		
	Others	0V		
6	Index MQ	4.8V		
	Others	0V		
7	0 V			
8	0 V			
9	NOTE 3			
10	0 V			
11	0 V			
12	0 V			
13	NOTE 3			
14	5.7V			

Q613 ※ Pulse

1	3.0V	10	0 V	
2	Hi Dub 5.0V	11	※ Play	5.0V
	Others 0 V		Others	0 V
3	FF F, Play 5.1V	12	Rew R, Play	11.1V
	Others 0V		Others	0.2V
4	Rew R, Play 5.1V	13	0.7V	
	Others 0V	14	FF F, Play	11.1V
5	※ R, Play 5.1V		Others	0.2V
	Others 0V	15	——	
6	Play 5.0V	16	11.7V	
	Others 0V	17	12.0V	
7	Play 0.8V	18	2.9V	
	Others 12.0V	19	——	
8	Play 9.5V	20	Note 2	
	Others 12.0V	21	2,9V	
9	Stop 12.0V	22	0V	
	Others 0.7V	23	2.5V	
		24	——	

Q614 ※ Pulse

1	3.0V	10	0V	
2	Hi Dub 4.8V	11	※ Play Rec	5.0V
	Others 0V		Others	0V
3	FF F, Play 5.0V	12	Rew R, Play	11.1V
	Others 0V		Others	0.2V
4	Rew R, Play 5.0V	13	0.8V	
	Others 0V	14	FF F, Play	11.1V
5	※ R, Play 5.1V		Others	0V
	Others 0V	15	——	
6	Play Rec 5.0V	16	11.7V	
	Others 0V	17	12.0V	
7	Play Rec 0.8V	18	2.9V	
	Others 12.0V	19	——	
8	Play Rec 9.5V	20	Note 2	
	Others 12.0V	21	2.9V	
9	Stop Rec / Pause 12.0V	22	0V	
	Others 0.7V	23	2.5V	
		24	——	

Q615

C	Stop	0.7V
	Others	11.8V

Q617

C	Stop	0.7V
	Rec / Pause	
	Others	11.8V

Q619

1	0V	9	Index	5.2V
2	2.8V		Others	0V
3	5.7V	10	0V	
4	5.7V	11	——	
5	0V	12	——	
6	0V	13	——	
7	5.7V	14	——	
8	Cue 5.6V	15	——	
	Others 0V	16	5.7V	

Q620

C	Cue	5.6V
	Others	0V
B	Cue	0.3V
	Others	0.6V

Q621

1	0V	9	Rec	5.0V
2	5.7V		Others	0V
3	0V	10	Hi Dub	0V
4	5.7V		Others	5.6V
5	0V	11	Hi Dub	4.5V
6	5.6V		Others	0V
7	0V	12	0V	
8	Rec 0V	13	5.5V	
	Others 5.6V	14	5.7V	

Q622

C	0 V	
B	(B) Rec	0.6V
	Others	0 V

Q623

C	5.6V	

Q624

D	2.8V	
S	2.8V	
G	No Cassette	10.2V
	Others	2.2V

Q625

C	Sync. Rec	0 V
	Others	5.6V

Q627

E	0V	
C	0V	
B	Hi Dub Start	0.6V
	Others	0V

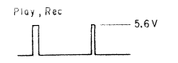
Q629

E	Hi Dub	5.0V
	Others	0 V
C	Hi Dub Pushed Play	4.9V
	Others	0 V
B	Hi Dub Pushed Play	4.3V
	Others	5.5 V

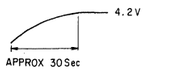
Note 1 (Q605)

Push Key	9	7	6
Stop	5.6V	5.6V	5.6V
▷▷	0V	0V	5.6V
▷	0V	5.6V	5.6V
◁	5.6V	0V	5.6V
◁◁	5.6V	5.6V	0V
Pause	0V	5.6V	0V
Quick Pulse	5.6V	0V	0V

Note 2



Note 3



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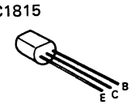

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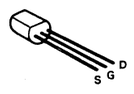

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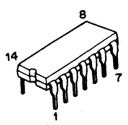

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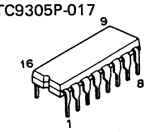

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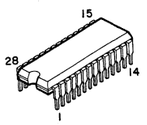

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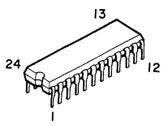

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KX-94W

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PARTS LIST

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

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			KX-94W (Silver)			
202	1C	*	95864438	METALLIC CABINET		
203	2C	*	95899039	PANEL ASSY	K	
203	2C	*	95899040	PANEL ASSY	PXE	
203	2C	*	95899040	PANEL ASSY	UMUE	
203	2C	*	95899053	PANEL ASSY	T	
211	1C	*	95872127	CASSETTE LID		
212	2D	*	95872146	ESCUTCHEON (REC LEVEL)		
213	2D	*	95873307	TAPE COUNTER		
-		*	92904523	INSTRUCTION MANUAL(ENGLISH)	KPEX	
-		*	92904523	INSTRUCTION MANUAL(ENGLISH)	UMUE	
-		*	92904524	INSTRUCTION MANUAL(GERMAN)	E	
-		*	92904525	INSTRUCTION MANUAL(ENGLISH)	T	
-		*	92904527	INSTRUCTION MANUAL(FRENCH)	PEMX	
-		*	92904528	INSTRUCTION MANUAL(SPANISH)	M	
-		*	92904529	INSTRUCTION MANUAL(ARABIC)	M	
-			92957597	WARRANTY CARD	K	
-			92957599	WARRANTY CARD	UUE	
-			92957600	WARRANTY CARD	UUE	
-			92957601	WARRANTY CARD	X	
-			92957605	SERVICE DIRECTORY	UUE	
-			92957606	CAUTION CARD	U	
-			92957607	CAUTION CARD	MUE	
-			92957732	WARRANTY CARD	P	
-			92957793	WARRANTY CARD	T	
-			92957794	WARRANTY CARD	E	
-		*	92957817	WARRANTY CARD	E	
217	2D		95755581	BELT (COUNTER)		
221	1C		92164775	AUDIO CORD		
⚠ 222	1D		92169037	AC INLET	UMUE	
⚠ 223	1D		92176588	AC POWER CORD	X	
⚠ 223	1D		92176628	AC POWER CORD	T	
⚠ 223	1D		92176642	AC POWER CORD	E	
⚠ 223	1D	*	92176658	AC POWER CORD	KP	
⚠ 223	1D		92176680	AC POWER CORD (INLET)	UMUE	
-			92936188	POLYSTYRENE FOAMED FIXTURE(L)		
-			92936189	POLYSTYRENE FOAMED FIXTURE(R)		
-		*	92922326	ITEM CARTON BOX	T	
-		*	92922327	ITEM CARTON BOX	KPEX	
-		*	92922327	ITEM CARTON BOX	UMUE	
-			92941302	PROTECTION BAG	KPETX	
-			92941312	PROTECTION BAG		
-			92941323	PROTECTION BAG		
-			92977003	RUST PREVENTING PAPER	M	
227	3D		95762432	FOOT		
⚠ 228	1D		95844322	POWER CORD BUSHING		
-			92184230	WIRE BAND		
232	1C		95816736	KNOB ASSY(BUTTON) POWER		
233	3D	*	95886519	KNOB(BUTTON) DOLBY NR		
234	2D		95886521	KNOB(SLIDE) REVERSE MODE,TIMER		
235	2D	*	95886522	KNOB(SLIDE) REC LEVEL		

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⚠	239	1C	*	92224482	POWER TRANSFORMER	T	
⚠	239	1C	*	92224483	POWER TRANSFORMER	X	
⚠	239	1C	*	92224504	POWER TRANSFORMER	E	
⚠	239	1C	*	92224505	POWER TRANSFORMER	KP	
⚠	239	1C	*	92224506	POWER TRANSFORMER	UMUE	
	A	3C		7044300611	SCREW (Ø3X6)		
	B	2C	*	7405002508	E TYPE RETAINING RING		
	C	3C	*	90798037	RETAINING RING		
	D	1D	*	92705021	PUSH RIVET (Ø3X3.5)		
	E	1D		92705022	PUSH RIVET (Ø3X5.5)		
	F	1C		92707446	SCREW (M3X6)	ETX	
	F	1C		92707446	SCREW (M3X6)	UMUE	
	G	1C	*	92707519	SCREW (Ø4X10)		
	H	2C,2D		92707826	SCREW (Ø3X10)		
	J	3D		92707835	SCREW (Ø3X16)		
	K	3D		92707842	SCREW (Ø3X8)		
	L	2D	*	92707844	SCREW (Ø3X10)		
	M	1C		92707886	SCREW (Ø3X10)		
	N	1D		92708033	SCREW (Ø3X10)		
	P	1D,2D	*	92708207	SCREW (Ø2.6X10)		
	Q	3C	*	92708292	SCREW (Ø3X10)		
	R	2D	*	92708406	SCREW (Ø3X18)		
	S	2D	*	92752544	WASHER		
⚠	S901	1D	*	92196243	PUSH SWITCH (POWER)	KPEX	
⚠	S901	1D	*	92196243	PUSH SWITCH (POWER)	UMUE	
⚠	S901	1D	*	92196654	PUSH SWITCH (POWER)	T	
	240	1C		92990756	HEAD CLEANER		
	KX-94W (Black)						
	202	1C	*	95864477	METALLIC CABINET		
	203	2C	*	95899041	PANEL ASSY	K	
	203	2C	*	95899042	PANEL ASSY	PXE	
	203	2C	*	95899042	PANEL ASSY	UMUE	
	203	2C	*	95899054	PANEL ASSY	T	
	211	1C	*	95872127	CASSETTE LID		
	212	2D		95872118	ESCUTCHEON (REC LEVEL)		
	213	2D	*	95873307	TAPE COUNTER		
	-		*	92904523	INSTRUCTION MANUAL(ENGLISH)	KPEX	
	-		*	92904523	INSTRUCTION MANUAL(ENGLISH)	UMUE	
	-		*	92904524	INSTRUCTION MANUAL(GERMAN)	E	
	-		*	92904525	INSTRUCTION MANUAL(ENGLISH)	T	
	-		*	92904527	INSTRUCTION MANUAL(FRENCH)	PEMX	
	-		*	92904528	INSTRUCTION MANUAL(SPANISH)	M	
	-		*	92904529	INSTRUCTION MANUAL(ARABIC)	M	
	-			92957597	WARRANTY CARD	K	
	-			92957599	WARRANTY CARD	UUE	
	-			92957600	WARRANTY CARD	UUE	
	-			92957601	WARRANTY CARD	X	
	-			92957605	SERVICE DIRECTORY	UUE	
	-			92957606	CAUTION CARD	U	
	-			92957607	CAUTION CARD	MUE	
	-			92957732	WARRANTY CARD	P	
	-			92957793	WARRANTY CARD	T	
	-			92957794	WARRANTY CARD	E	

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	-		*	92957817	WARRANTY CARD	E	
	217	2D		95755581	BELT (COUNTER)		
	221	1D		92164775	AUDIO CORD		
⚠	222	1D		92169037	AC INLET	UMUE	
⚠	223	1D		92176588	AC POWER CORD	X	
⚠	223	1D		92176628	AC POWER CORD	T	
⚠	223	1D		92176642	AC POWER CORD	E	
⚠	223	1D		92176658	AC POWER CORD	KP	
⚠	223	1D		92176680	AC POWER CORD (INLET)	UMUE	
	-			92936188	POLYSTYRENE FOAMED FIXTURE(L)		
	-			92936189	POLYSTYRENE FOAMED FIXTURE(R)		
	-		*	92922328	ITEM CARTON BOX	T	
	-		*	92922329	ITEM CARTON BOX	KPEX	
	-		*	92922329	ITEM CARTON BOX	UMUE	
	-			92941302	PROTECTION BAG	KPETX	
	-			92941312	PROTECTION BAG		
	-			92941323	PROTECTION BAG		
	-			92977003	RUST PREVENTING PAPER	M	
	227	3D		95762432	FOOT		
⚠	228	1D		95844322	POWER CORD BUSHING		
	-			92184230	WIRE BAND		
	232	1C		95886654	KNOB ASSY(BUTTON) POWER		
	233	3D		95886543	KNOB(BUTTON) DOLBY NR		
	234	2D		95886521	KNOB(SLIDE) REVERSE MODE,TIMER		
	235	2D		95886545	KNOB(SLIDE) REC LEVEL		
⚠	239	1C	*	92224482	POWER TRANSFORMER	T	
⚠	239	1C	*	92224483	POWER TRANSFORMER	X	
⚠	239	1C	*	92224504	POWER TRANSFORMER	E	
⚠	239	1C	*	92224505	POWER TRANSFORMER	KP	
⚠	239	1C	*	92224506	POWER TRANSFORMER	UMUE	
	B	2C	*	7405002508	E TYPE RETAINING RING		
	C	3C	*	90798037	RETAINING RING		
	D	1D	*	92705021	PUSH RIVET (Ø3X3.5)		
	E	1D		92705022	PUSH RIVET (Ø3X5.5)		
	F	1C		92707446	SCREW (M3X6)	TX	
	G	1C	*	92707519	SCREW (Ø4X10)		
	H	2C,2D		92707826	SCREW (Ø3X10)		
	J	3D		92707835	SCREW (Ø3X16)		
	K	3D		92707842	SCREW (Ø3X8)		
	L	2D	*	92707844	SCREW (Ø3X10)		
	N	1D		92708033	SCREW (Ø3X10)		
	P	1D,2D	*	92708207	SCREW (Ø2.6X10)		
	R	2D	*	92708406	SCREW (Ø3X18)		
	S	2D	*	92752544	WASHER		
	V	3C		7044300619	SCREW (Ø3X6)		
	W	1C	*	92708374	SCREW (Ø3X10)		
	Y	3C	*	92708309	SCREW (Ø3X10)		
⚠	S901	1D	*	92196243	PUSH SWITCH (POWER)	KPEX	
⚠	S901	1D	*	92196243	PUSH SWITCH (POWER)	UMUE	
⚠	S901	1D	*	92196654	PUSH SWITCH (POWER)	T	

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240	1C		92990756	HEAD CLEANER		
MAIN (98767414)						
D645	1D		TLY123	LED (REC PAUSE)		
D646	1D		TLR123	LED (REC/ARM)		
D701	2D		TLG123A	LED (DOLBY B)		
D702	2D		TLY123	LED (DOLBY C)		
D705,706	1C		TLR205	LED (DUBBING SPEED)		
D751-762	1D,2D		TLR123	LED (PEAK LEVEL METER)		
C401,402			92488109	ELECTRO 1UF 50WV		
C403,404			CK45B1H221K	CERAMIC 220PF K		
C405,406			92485100	ELECTRO 10UF 16WV		
C407,408			CQ92M1H272J	MYLAR 2700PF J		
C409,410		*	92321049	POLYPRO 330PF J		
C411,412			92488339	ELECTRO 3.3UF 50WV		
C413,414			92321164	POLYPRO 220PF J		
C415,416			CC45SL1H101F	CERAMIC 100PF F		
C417,418			92485330	ELECTRO 33UF 16WV		
C421,422			CQ92M1H103J	MYLAR 0.010UF J		
C423,424			92488479	ELECTRO 4.7UF 50WV		
C425,426			CQ92M1H103J	MYLAR 0.010UF J		
C427,428			92488109	ELECTRO 1UF 50WV		
C429,430			CK45F1H473Z	CERAMIC 0.047UF Z		
C431,432			CC45SL1H180D	CERAMIC 18PF D		
C433,434		*	92321055	POLYPRO 680PF J		
C435,436			92485100	ELECTRO 10UF 16WV		
C437,438			CK45B1H471K	CERAMIC 470PF K		
C439,440			CK45B1H221K	CERAMIC 220PF K		
C441,442			CK45B1H221K	CERAMIC 220PF K		
C443,444			92485330	ELECTRO 33UF 16WV		
C445,446			CQ92M1H103J	MYLAR 0.010UF J		
C447,448			92488479	ELECTRO 4.7UF 50WV		
C449,450			CQ92M1H103J	MYLAR 0.010UF J		
C451-454			92485100	ELECTRO 10UF 16WV		
C455,456			92488108	ELECTRO 0.1UF 50WV		
C457,458			CK45B1H102K	CERAMIC 1000PF K		
C459,460			92488478	ELECTRO 0.47UF 50WV		
C461,462			92485330	ELECTRO 33UF 16WV		
C463,464			CQ92M1H562J	MYLAR 5600PF J		
C465,466			CQ92M1H392J	MYLAR 3900PF J		
C467-470			CK45B1H103K	CERAMIC 0.010UF K		
C471,472			CK45B1H221K	CERAMIC 220PF K		
C473-476			CK45B1H472K	CERAMIC 4700PF K		
C477,478			92485101	ELECTRO 100UF 16WV		
C479,480			92488109	ELECTRO 1UF 50WV		
C481,482			CK45B1H221K	CERAMIC 220PF K		
C483,484			92483221	ELECTRO 220UF 10WV		
C485,486			CQ92M1H333J	MYLAR 0.033UF J		
C487,488			CQ92M1H103J	MYLAR 0.010UF J		
C489,490			92488479	ELECTRO 4.7UF 50WV		
C491,492			CQ92M1H183J	MYLAR 0.018UF J		
C493,494			92480006	ELECTRO 0.33UF 50WV		
C495,496			92488158	ELECTRO 0.15UF 50WV		
C497-500			92480008	ELECTRO 0.68UF 50WV		

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C501,502			92488479	ELECTRO	4.7UF	50WV		
C503,504			CC45SL1H470D	CERAMIC	47PF	D		
C505,506			CQ92M1H562J	MYLAR	5600PF	J		
C507,508			CK45B1H472K	CERAMIC	4700PF	K		
C509,510			92488479	ELECTRO	4.7UF	50WV		
C511,512			CQ92M1H822J	MYLAR	8200PF	J		
C513,514			CQ92M1H823J	MYLAR	0.082UF	J		
C515,516			92488158	ELECTRO	0.15UF	50WV		
C517,518			92488478	ELECTRO	0.47UF	50WV		
C519,520			92488479	ELECTRO	4.7UF	50WV		
C521			92488339	ELECTRO	3.3UF	50WV		
C522			CK45B1H221K	CERAMIC	220PF	K		
C523			92488339	ELECTRO	3.3UF	50WV		
C524			92485330	ELECTRO	33UF	16WV		
C525			92485101	ELECTRO	100UF	16WV		
C527			CK45F1H473Z	CERAMIC	0.047UF	Z		
C528			92483221	ELECTRO	220UF	10WV		
C529			92488339	ELECTRO	3.3UF	50WV		
C530			92485101	ELECTRO	100UF	16WV		
C601			CQ92M1H103J	MYLAR	0.010UF	J		
C602			CK45F1H473Z	CERAMIC	0.047UF	Z		
C603			92488109	ELECTRO	1UF	50WV		
C604,605			92488339	ELECTRO	3.3UF	50WV		
C606			CQ92M1H103J	MYLAR	0.010UF	J		
C607			CK45F1H473Z	CERAMIC	0.047UF	Z		
C608			92488339	ELECTRO	3.3UF	50WV		
C609			92485101	ELECTRO	100UF	16WV		
C610			92488109	ELECTRO	1UF	50WV		
C611			92485471	ELECTRO	470UF	16WV		
C612			92488109	ELECTRO	1UF	50WV		
C613			92488478	ELECTRO	0.47UF	50WV		
C614			92488109	ELECTRO	1UF	50WV		
C615			CQ92M1H103J	MYLAR	0.010UF	J		
C616			92488478	ELECTRO	0.47UF	50WV		
C619			92485330	ELECTRO	33UF	16WV		
C620,621			92485100	ELECTRO	10UF	16WV		
C622			92485330	ELECTRO	33UF	16WV		
C623			92485100	ELECTRO	10UF	16WV		
C624,625			92485100	ELECTRO	10UF	16WV		
C626			92485100	ELECTRO	10UF	16WV		
C627			92488339	ELECTRO	3.3UF	50WV		
C628			92488109	ELECTRO	1UF	50WV		
C630			92488109	ELECTRO	1UF	50WV		
C631			92488478	ELECTRO	0.47UF	50WV		
C633			92488339	ELECTRO	3.3UF	50WV		
C640			CK45B1H221K	CERAMIC	220PF	K		
C641			CK45B1H471K	CERAMIC	470PF	K		
C701			92321275	POLYPRO	0.012UF	J		
C702			92485101	ELECTRO	100UF	16WV		
C703,704			CK45B1H103K	CERAMIC	0.010UF	K		
C705			92485330	ELECTRO	33UF	16WV		
C706			92488109	ELECTRO	1UF	50WV		
C707			92485330	ELECTRO	33UF	16WV		
C751,752			92488478	ELECTRO	0.47UF	50WV		
C753,754			92488479	ELECTRO	4.7UF	50WV		

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C801,802			CK45B1H102K	CERAMIC 1000PF K		
C803-806			92485330	ELECTRO 33UF 16WV		
C807			92483470	ELECTRO 47UF 10WV		
C809			92485330	ELECTRO 33UF 16WV		
C810			92485100	ELECTRO 10UF 16WV		
C811-813			92488339	ELECTRO 3.3UF 50WV		
C814,815			92488479	ELECTRO 4.7UF 50WV		
C816			92485100	ELECTRO 10UF 16WV		
C817			CK45B1H221K	CERAMIC 220PF K		
C818			CQ92M1H223K	MYLAR 0.022UF K		
C820			92483331	ELECTRO 330UF 10WV		
C821			92488109	ELECTRO 1UF 50WV		
C822,823			CK45B1H222K	CERAMIC 2200PF K		
C824			92485100	ELECTRO 10UF 16WV		
C901		*	92340226	CERAMIC 4700PF M	EX	
C901		*	92340226	CERAMIC 4700PF M	UMUE	
C902			92486222	ELECTRO 2200UF 25WV		
C903			92485101	ELECTRO 100UF 16WV		
C904		*	92485221	ELECTRO 220UF 16WV		
C905-907			92485101	ELECTRO 100UF 16WV		
C910			92483470	ELECTRO 47UF 10WV		
C911			92485101	ELECTRO 100UF 16WV		
243	2D		92163887	PHONO JACK(4P) LINE IN/OUT		
247	2D		92198188	MINI STEREO PHONE JACK(SYNCRO)		
248	3D	*	92198181	PHONE JACK		
L401,402			92232278	COIL		
Z403,404		*	92153366	COIL (BIAS TRAP)		
Z405,406			92153277	FILTER (DOLBY C)		
Z407		*	92235263	OSCILLATING COIL		
T	2D,3D		7043300611	SCREW (M3X6)		
U	2D		92707327	SCREW (Ø3X8)		
R405,406	2D		92657360	POTENTIOMETER(50KA) REC LEVEL		
R423,424			92658756	TRIMMING POT.(500B)PB LEVEL A		
R453,454			92658766	TRIMMING POT.(200KB)BIAS CURR		
R457,458			92658756	TRIMMING POT.(500B)PB LEVEL B		
R505,506			92658764	TRIMMING POT.(50K)REC LEVEL		
R601		*	92550597	RD 27K G 1/4W		
R616		*	92550597	RD 27K G 1/4W		
R638			92570264	RS 150 J 1W		
R643		*	92658853	TRIMMING POT.(5K) HI-SPEED B		
R644		*	92658854	TRIMMING POT.(10K) NORM SPD B		
R649			92570264	RS 150 J 1W		
R654		*	92658853	TRIMMING POT.(5K) HI-SPEED A		
R655		*	92658854	TRIMMING POT.(10K) NORM SPD A		
R661			92500333	JUMPER R 0 OHM		
R662		*	92180020	JUMPER R 0 OHM		
R701			92500276	FUSE RESIST 6.8 J 1/4W		
R804			92658764	TRIMMING POT.(50K)QUICK SEN A		
R806			92658764	TRIMMING POT.(50K)QUICK SEN B		
R851			RD14BB2H101J	RD 100 J 1/2W		
R852		*	RD14BB2H151J	RD 150 J 1/2W		
R902			92500167	FUSE RESIST 2.2 J 1/4W		
R905		*	92500404	FUSE RESIST 1.0 J 2E		

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R909		*	92500181	FUSE RESIST 120 J 2E		
S601-615	1C,1D	*	92196490	SWITCH (0P KEY)		
S616,617	1C,2C		92196628	SLIDE SWITCH (REV M0DE,TIMER		
S701	3D		92196630	PUSH SWITCH (D0LBY NR)		
D401-406			1SS178	DI0DE		
D409			05Z5.6X	ZENER DI0DE		
D601-609			1SS176	DI0DE		
D611-616			1SS176	DI0DE		
D619-625			1SS176	DI0DE		
D628			1S1555V	DI0DE		
D635,636			S5277B	DI0DE		
D637-642			1SS176	DI0DE		
D651-660			1SS176	DI0DE		
D664			1SS176	DI0DE		
D668			1S1555V	DI0DE		
D703,704			1SS176	DI0DE		
D802-818			1SS176	DI0DE		
D820			1S1555V	DI0DE		
D821			1SS176	DI0DE		
D822			1S1555V	DI0DE		
D901			KBP01	DI0DE		
D902			05Z12Z	ZENER DI0DE		
D903			05Z6.2Y	ZENER DI0DE		
D904			1SS178	DI0DE		
Q401-404			2SC1815(Y,GR)	TRANSISTOR		
Q405,406			2SA1015(GR)	TRANSISTOR		
Q407,408			2SJ103(GR)	FET		
Q409-412			2SK246(GR)	FET		
Q413,414			TD62504P	IC(7CH TRANSISTOR ARRAY)		
Q415,416			2SC2878(A)	TRANSISTOR		
Q417,418			HA12058NT	IC(D0LBY B/C N0ISE REDUCTI0N)		
Q419,420			2SC2878(A)	TRANSISTOR		
Q421			2SC1815(BL)	TRANSISTOR		
Q422			TA7325P	IC(2CH PRE-AMPRIFIRE)		
Q423			TC4016BP	IC(BILATERAL SWITCH X4)		
Q424			TA7639P	IC(PREAMP F0R CASSETTE DECK X2		
Q425,426			2SC1815(Y,GR)	TRANSISTOR		
Q601		*	TC9312N-007	IC(L0GIC CONTR0LLER)		
Q602		*	TC9312N-008	IC(L0GIC CONTR0LLER)		
Q603,604			2SC1815(Y,GR)	TRANSISTOR		
Q605			TC4532BP	IC(8BIT PRIORITY ENC0DER)		
Q606			2SC1815(Y,GR)	TRANSISTOR		
Q607			TC5067BP	IC(INV BUFFER X7)		
Q608,609			2SA1015(GR)	TRANSISTOR		
Q610,611			2SC1815(Y,GR)	TRANSISTOR		
Q613,614		*	TA7780AN	IC(MECHANISM DRIVER)		
Q615			2SA562TM(Y)	TRANSISTOR		
Q616			2SK246(GR)	FET		
Q617			2SA562TM(Y)	TRANSISTOR		
Q618			2SK246(GR)	FET		
Q619			TC9305P-017	IC(L0GIC CONT/T ADV BLANK DET)		
Q620			2SC1815(Y,GR)	TRANSISTOR		
Q621			TC4069UBP	IC(INVERTER X6)		
Q622,623			2SC1815(Y,GR)	TRANSISTOR		

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Q624			2SJ103(GR)	FET		
Q625,626			2SC1815(Y,GR)	TRANSISTOR		
Q629			2SA1015(GR)	TRANSISTOR		
Q701			2SC1627A(Y)	TRANSISTOR		
Q751			TA7666P	IC(5PT LED DRIVER X2)		
Q801			TA75458S	IC(OP AMP X2)		
Q802,803			2SC1815(Y,GR)	TRANSISTOR		
Q804			2SC1959NEW(Y)	TRANSISTOR		
Q807			2SA1015(GR)	TRANSISTOR		
Q809			2SA1015(GR)	TRANSISTOR		
Q815			2SA1015(GR)	TRANSISTOR		
Q816			2SA966(Y)	TRANSISTOR		
Q819			TA7341P	IC(TAPE ADVANCE BLANK DETECT)		
Q820			TA7523S	IC(COMPARATOR)		
Q822			TD62504P	IC(7CH TRANSISTOR ARRAY)		
Q901,902			2SC1173(Y)	TRANSISTOR		
Q903			2SC2120(Y)	TRANSISTOR		
INDICATOR (98767597)						
D643,644	3C		TLR124	LED (DIRECTION) A DECK		
D649,650	3C		TLR124	LED (DIRECTION) B DECK		
QUICK (98767836)						
C617,618			92488479	ELECTRO 4.7UF 50WV		
C629			CQ92M1H473J	MYLAR 0.047UF J		
C632		*	92488229	ELECTRO 2.2UF 50WV		
C634		*	92488229	ELECTRO 2.2UF 50WV		
C635			CK45F1H473Z	CERAMIC 0.047UF Z		
C637			CK45B1H472K	CERAMIC 4700PF K		
D617,618			1SS176	DIODE		
D626			1SS176	DIODE		
D629-631			1SS176	DIODE		
D633,634			1SS176	DIODE		
Q612			TC4081BP	IC(AND X4)		
Q627			2SC1815(Y,GR)	TRANSISTOR		
CASSETTE MECHANISM ASS'Y (95709188 : A) (95709187 : B) →						
1A	3A	*	95791900	MOTOR ASSY (MAIN)		
1B	3B		95791904	MOTOR ASSY (REEL)		
3	3B	*	95759043	BELT		
4	2B	*	92217473	COMBINATION HEAD (R/P,ERASE)		A
4	2B	*	92219011	COMBINATION HEAD (R/P,ERASE)		B
6A	2B		95717600	LEVER ASSY (PINCH R)		
6B	2A		95797022	LEVER ASSY (PINCH L)		
7	1A,1B		95754483	REEL DRUM		
9A	3B		95797069	FLYWHEEL ASSY (R)		
9B	3A		95797070	FLYWHEEL ASSY (L)		
10	3A,3B		95725456	BEARING		
11	3A		95737115	MOUNTING HARDWARE (MOTOR T)		
12	3A		95761238	CUSHION (MOTOR)		
13	2B		95761450	CUSHION (MOTOR)		
14	2B		95761481	CUSHION (PLATE)		
15	2A,3B		95764486	WASHER (2.5X5X0.25)		
17	2A,3B		95777071	SPRING (FORWARD)		
18	2A		95778190	SPRING (P LEVER L)		
19	2B		95778198	SPRING (P LEVER R)		

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20	1A,2B		95783226	BUSHING		
21	2B		95784212	LEVER (ASSIST P R)		
22	2A		95784213	LEVER (ASSIST P L)		
23	1A		95756486	GEAR ASSY		
24	1A,1B		95754436	COLLAR (REEL DISK)		
26	1A,1B		95766050	WASHER (4X1.6X0.5)		
27	1A		95766223	WASHER (2.1X5X0.5)		
28	1A,1B		95777418	SPRING (REEL)		
30	1B		95757132	STEEL BALL (DG)		
31	2A		95776721	SPRING (ASSIST)		
32	1B		95777404	SPRING (T-GUIDE)		
33	2A	*	95778211	SPRING (PLAY LEVER A)		
34	1B		95779427	SPRING (HOLD)		
35	1B		95783258	NUT (ADJUST)		
36	1B		95783391	TAPE GUIDE		
37	2B		95797037	SLIDER ASSY (HEAD)		
38	2A	*	95749097	SLIDER (SUB EJECT G)		
40	1B		95778199	SPRING (HOLDER)		
41	1B		95784206	LEVER (HOLDER A)		
43	1B		95734532	STOPPER (T UP)		
44	3A		90798033	RING		
46	3A		95749060	SLIDER (REVERSE)		
47	2A		95749061	SLIDER (DPSS)		
48	3A		95756454	GEAR ASSY (CAM)		
49	2A		95776769	SPRING (DPSS)		
50	2A		95776860	SPRING (REVERSE LEVER)		
51	3A		95776772	SPRING (REVERSE)		
52	2B		95776773	SPRING (SHIFT)		
53	2B		95776793	SPRING (CAM LOCK)		
54	2A		95778192	SPRING (PLAY LOCK)		
55	3A,2B		95783239	BUSHING		
56	2B		95791936	LEVER (CAM LOCK ASSY)		
57	2A		95784192	LEVER (REVERSE)		
58	2A		95784208	LEVER (PLAY LOCK G)		
59	3A		95784209	LEVER (PLAY)		
60	3B		92184188	WIRE HOLD		
61	3A		7400104011	WASHER (Ø4)		
62	3B		92707350	SCREW (2.6X5)		
63	2A		92707825	SCREW (2.6X6)		
64	3A		92707747	SCREW		
65	1B		92702173	SCREW (1.4X6)		
66	1B,2B		92708040	SCREW (2X5)		
67	2B		7043200311	SCREW (2X3)		
68	2B		7043260411	SCREW (2.6X4)		
69	2B		92701285	SCREW (2.6X6)		
70	2A,1B		92192702	PRINTED WIRING BOARD (LED)		
71	3A,3B		92707876	SCREW (2.6X12)		
72	3A		7400103011	WASHER (Ø3)		
73	2A		95761459	CUSHION (HK)		
74	3B		92707301	SCREW (2.6X8)		
75	2A,2B		95726762	SPACER (PR)		
76	3A,3B		95766043	WASHER (2.5X6X0.5)		
77	3B		92192644	PRINTED WIRING BOARD (MAIN)		
78	2B		95726665	SPACER (G ASS)		
80	2A		95726753	SPACER (STOP)		

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B1	3A		95737141	MOUNTING HARDWARE (MECH)		
B2	3A		95726757	SPACER (M MOUNT)		
B3	1A,3A		92707913	SCREW (2.6X6)		
B4	2A		95761535	CUSHION (PR)		
B5	3B		92708382	SCREW (2.6X3)		
B7	2A		95732380	GUIDE (WIRE)		
B8	2A		92708423	SCREW (2X6)		
B9	1A	*	92708477	SCREW		
B0	1A	*	95747250	LEVER		
B1	1A	*	95737140	MOUNTING HARDWARE		
B2	1A	*	95753384	COLLAR (EJECT)		
B3	1A	*	95778270	SPRING (EJECT)		
B4	1A	*	95747251	LEVER		
B5	2B	*	92708399	SCREW (2.6X6)		
B6	3A	*	95779532	SPRING		
B7	3A		92707366	SCREW (2.6X6)		
L1	2B	*	92147278	SOLENOID		A
L2	2B	*	92147278	SOLENOID		B
S618	2A		92196597	LEAF SWITCH		A
S619,620	2B		92196538	SWITCH (CASSETTE)		A
S621	2A		92196597	LEAF SWITCH		B
S622-625	2B		92196538	SWITCH (CASSETTE)		B
S626	2B		92196539	SWITCH (METAL)		B
D671	2A		TLN103	LED		A
D672	2A		TLN103	LED		B
Q823	1B		TPS613	PHOTO TRANSISTOR		A
Q824	1B		TPS613	PHOTO TRANSISTOR		B

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SPECIFICATIONS

Type	Auto reverse double cassette deck
Track System	4-track, 2-channel stereo/mono, recording/playback
Recording System	AC bias system (Bias frequency: 105 kHz)
Erasing System	AC system
Tape Speed	4.76 cm/sec (1-7/8 ips)
Heads	Hard permalloy playback and record/Double gap ferrite erasing head x 1 Hard permalloy playback head x 1
Motor	Electronically-controlled DC motor x 2 (for capstan) DC motor x 2 (for reel)
Fast Winding Time	Approx. 95 seconds with C-60 tape
Frequency Response:	
Normal Tape	20 Hz to 15,000 Hz (30 Hz to 14,000 Hz, ± 3 dB)
CrO_2 Tape	20 Hz to 16,000 Hz (30 Hz to 15,000 Hz, ± 3 dB)
Metal Tape	20 Hz to 18,000 Hz (30 Hz to 16,000 Hz, ± 3 dB)
Signal-to Noise Ratio:	
Dolby C Type NR ON	73 dB (Metal tape)
Dolby B Type NR ON	63 dB (Metal tape)
Dolby NR OFF	56 dB (Metal tape)
Harmonic Distortion	0.5% (at 1 kHz, 0 VU with metal tape)
Wow and Flutter	0.06% (W.R.M.S), ± 0.16% (DIN)
Input sensitivity/Impedance:	
LINE x 2	70 mV/47 kohms
MIC x 1	0.5 mV/4 kohms
Output Level/Load Impedance:	
LINE x 2	360 mV/2.5 kohms
Headphone x 1	0.1 mW/8 ohms
Power Consumption	24W
Power Requirements	AC 120V, 60 Hz: U.S.A. and Canada models AC 240V, 50 Hz: UK and Australia models AC 220V, 50 Hz: European models AC 120V/220 – 240V (Switchable), 50/60 Hz: Other countries
Dimensions	W: 420 mm (16-17/32") H: 115 mm (4-17/32") D: 270 mm (10-5/8")
Weight	4.6 kg (10.1 lb)
Supplied Accessories	Audio connection cords x 2
Reference Tapes	Normal: KENWOOD ND/ND-x60, TDK AD/AD-x60 CrO_2: KENWOOD CD-60, TDK SA-60 Metal: KENWOOD MD-60, TDK MA-R-60

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For this reason specifications may be changed without notice.
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Le système de réduction du bruit de fond est fabriqué sous license des Dolby Laboratories.

Kenwood strebt ständige Verbesserungen in der Entwicklung an.
Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.
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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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KENWOOD

KX-94W

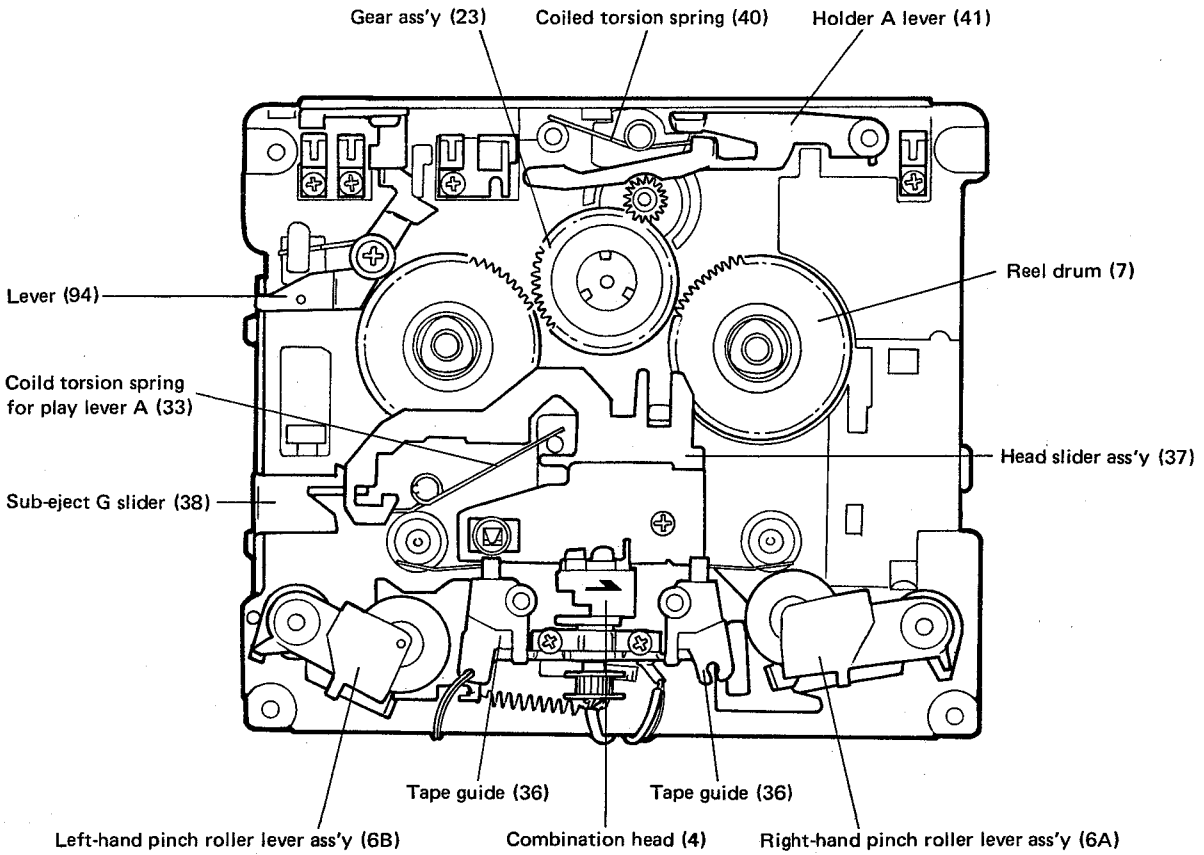
SERVICE MANUAL SUPPLEMENT

DESCRIPTION OF MECHANISM OPERATION

The KX-94W has the auto-reverse mechanism. It is driven by two motors and one solenoid.

- Reel motor ass'y
  The reel motor drives the reel drum to take up tape.
- Main motor ass'y
  This motor drives the flywheel, head slider, and right-hand and left-hand pinch roller levers, and selects the rotary head position.
- Solenoid
  The solenoid is interlocked with the main motor ass'y. It selects and maintains the action of the mechanism.

This Service Manual describes the operations of the mechanism in the KX-94W B Deck. Please file this additional manual together with the basic Service Manual.



Front view of Mechanism

OPERATIONS IN EACH MODE

Wind Mechanism

1. Forward play (FF)

1) When electricity is supplied to the reel motor ass'y (1B), the motor gear rotates in the direction of the arrow.
2) This rotates the gear ass'y (23) in the direction of the arrow. The force of the coiled torsion spring (40) in the gear ass'y (23) (free cushioning force) is applied to the winding lever. The force of the motor gear rotation automatically moves the winding lever in the direction of the arrow (A).
   The gear ass'y (23) is engaged with either or both of the right-hand and left-hand reel drums (7). The load of the reel drums (7) (SVP load) and tape load moves the gear ass'y (23) in the direction of the arrow (A).

Note : Earlier models have no free cushioning function.

3) This motion applies the winding load and the right-hand reel drum (7) is rotated.
   PLAY or FF is selected by the difference of voltage applied to the reel motor ass'y (1B).
   The play torque, FF time and FF torque are set by the logic. So, they require no setting or adjustment. (See Fig. 1).

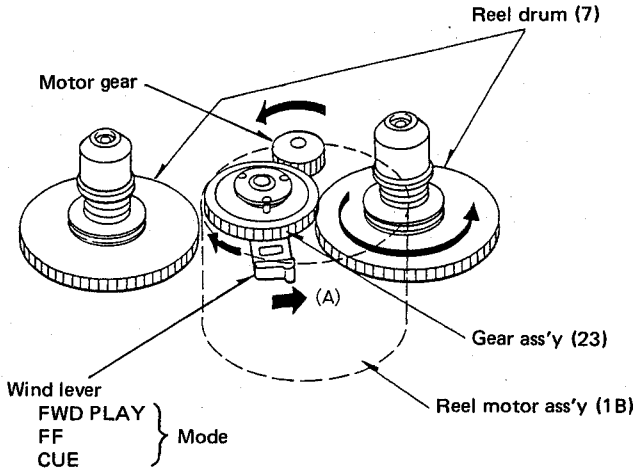


Fig. 1

2. Reverse play (REW)

1) When the direction of electricity supplied to the reel motor ass'y (1B) is reversed, the motor rotates in the opposite direction to drive the left-hand reel drum (7).
   Play torque, REW time and REW torque are set by the logic as in forward play mode.

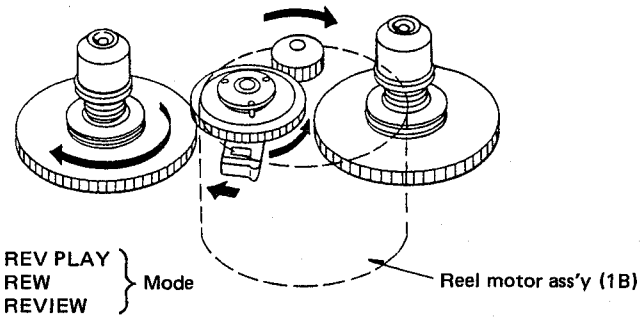


Fig. 2

3. Structure of Reel drum

1) Fig. 3 shows the structure of the reel drum (7). The coiled compression spring for the reel stand secures backward tension and provides clearance for the hub when the cassette is loaded.
2) If the plain washer (27) is not mounted in the mechanism ass'y, uneven torque will be applied during operation.
3) Apply molibdenum grease to the contact surfaces between the reel stand collar (24) and plain washer (26). Apply grease to the reel stand shaft.

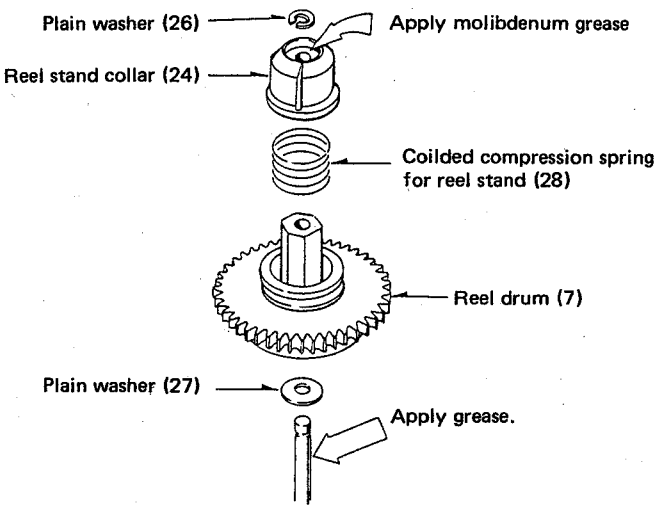


Fig. 3

Head Slider Drive Mechanism

1. Forward play

Fig. 4 illustrates the head slider mechanism immediately after half-mounting of the cassette. At this time, the combination head B (4) faces in the forward direction. The boss (a) on the cam lock ass'y lever (56) comes to the wall (a) of the cam gear ass'y (48) and stops there, as seen in Fig. 5. The notch (near (k)) in the cam gear ass'y is positioned at the gears for the flywheel ass'y (R.H.) (9A). In this condition, the gears are not engaged.

1) If the forward play button is pressed, electricity is supplied to the main motor ass'y (1A), and the R.H. and L.H. flywheel assemblies (9A) and (9B) start rotating.

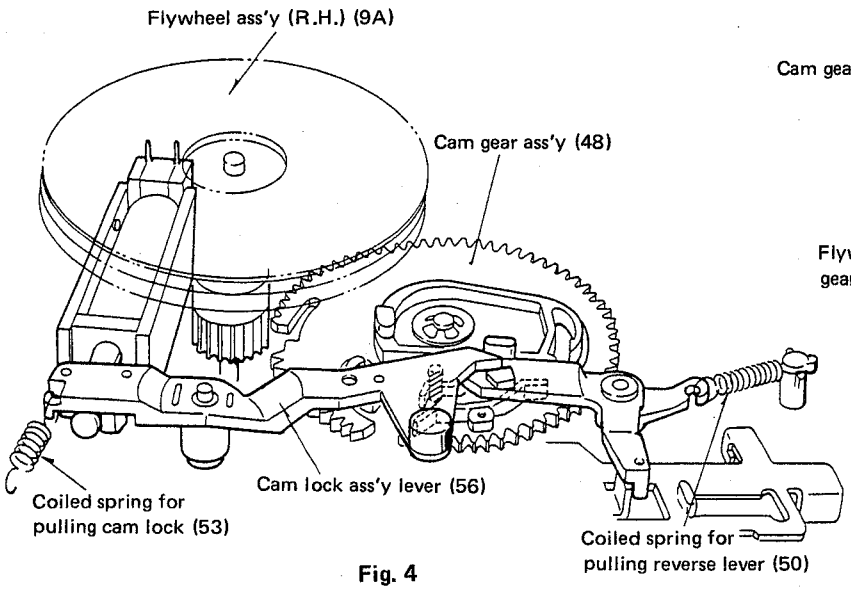


Fig. 4

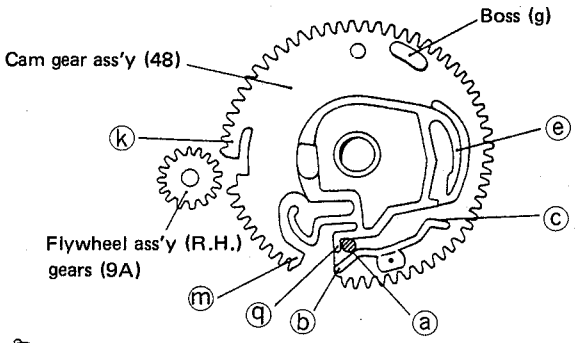
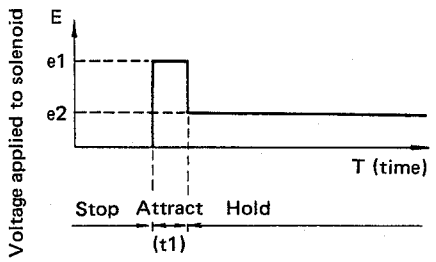


Fig. 5

2) At the same time, voltage shown in Fig. 7 is applied to the solenoid (L2). The iron core of the solenoid (L2) is attracted and the cam lock ass'y lever (56) rotates clockwise, as shown in Fig. 6.
3) The boss of the cam lock ass'y lever (56) kicks the portion (b) of the outer wall to rotate the cam gear ass'y (48) a little in the direction of the arrow, as shown in Fig. 7.
4) As the cam gear ass'y (48) rotates a little, the portion (k) of the gear meshes with the R.H. flywheel ass'y gear (9A). As a result, the cam gear ass'y (48) is rotated by the R.H. flywheel ass'y (9A).



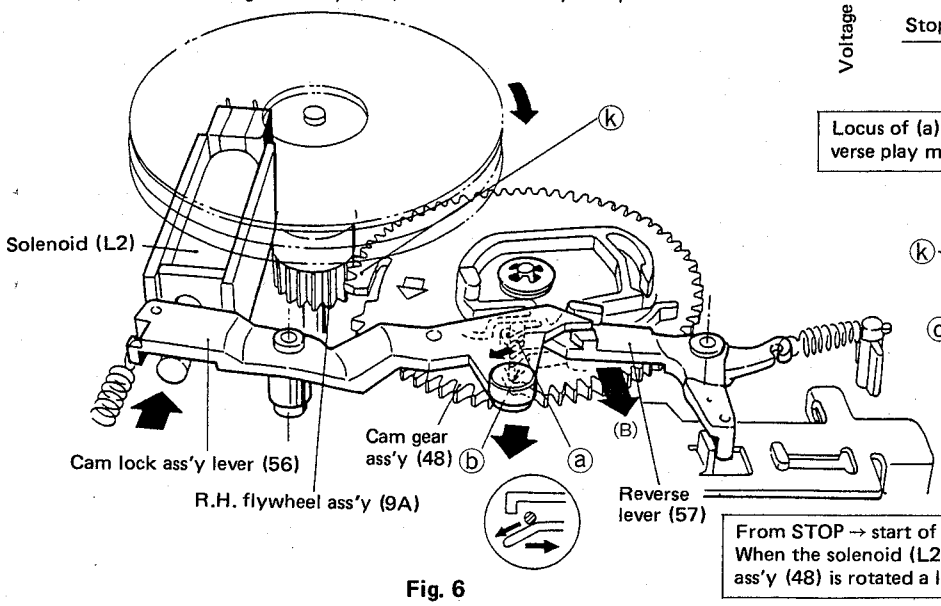


Fig. 6

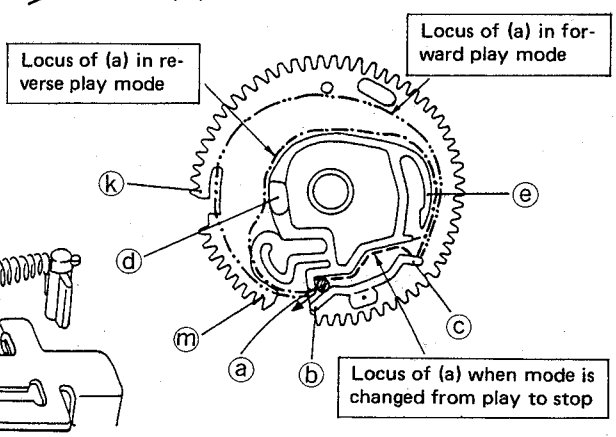


Fig. 7

From STOP → start of PLAY
When the solenoid (L2) is turned on, the cam gear ass'y (48) is rotated a little.

5) In addition to the action described in 3) above, the cam lock ass'y lever (56) rotates the reverse lever (57) counterclockwise. After the voltage e1 is applied to the solenoid (L2) for the time t1, holding voltage e2 is applied. As a result, the cam lock ass'y lever (56) and reverse lever (57) are held at that position. (See Figs. 8, 14 and 15.)

6) As the cam gear ass'y (48) rotates as described in 4) above, the cam portion (1) lifts the play lever (59) (See Fig. 9) and at the same time the auxiliary coiled spring (31) pulls the head slider ass'y (37) upwards. (See Fig. 10.)

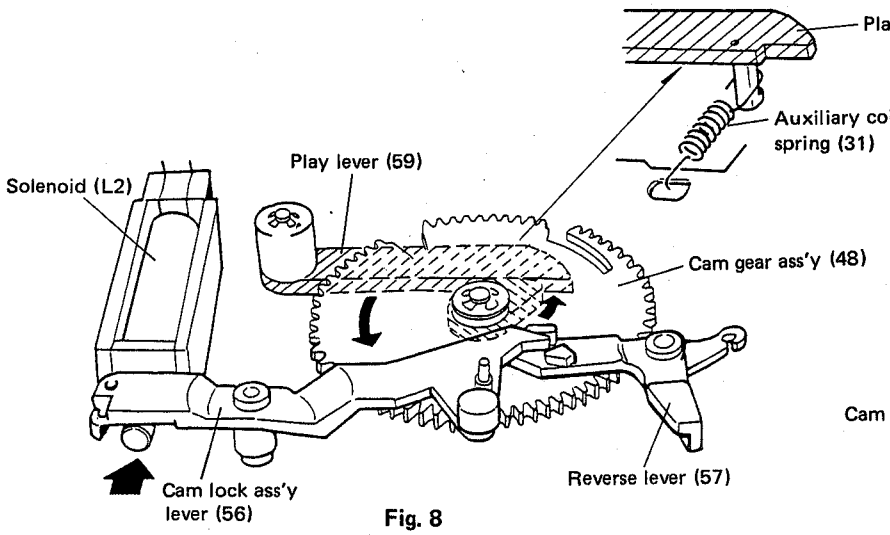
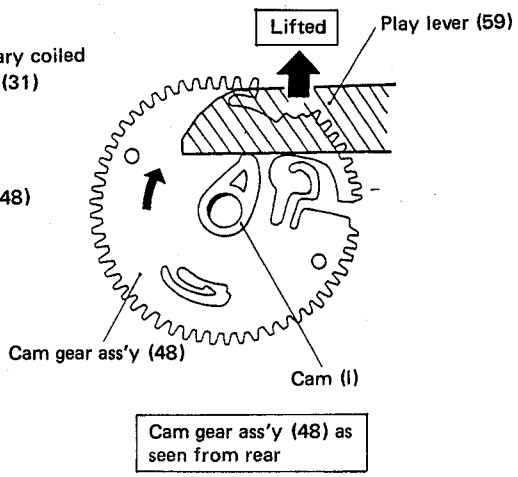


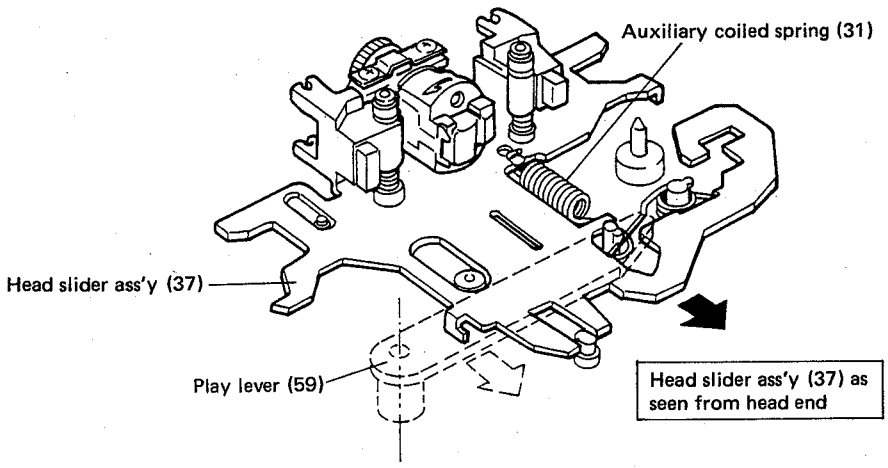
Fig. 8

The cam gear ass'y (48) continues to rotate in forward play mode. (In reverse play mode, the cam gear ass'y (48) starts rotating after reversing.) This lifts the play lever (59). The auxiliary coiled spring (31) on the boss at the bottom of the play lever (59) pulls the head slider ass'y (37) upwards.



Cam gear ass'y (48) as seen from rear

Fig. 9



Head slider ass'y (37) as seen from head end

Fig. 10

7) At this time, the head slider ass'y (37) lifts the R.H. pinch roller lever ass'y (6A), as illustrated in Figs. 11 and 12.

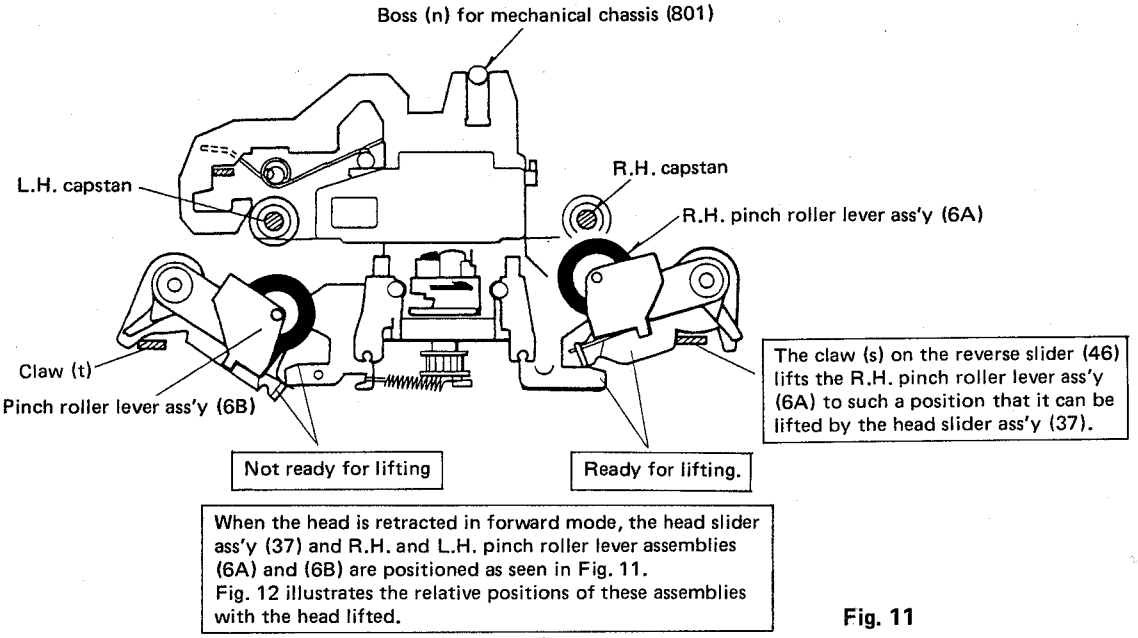


Fig. 11

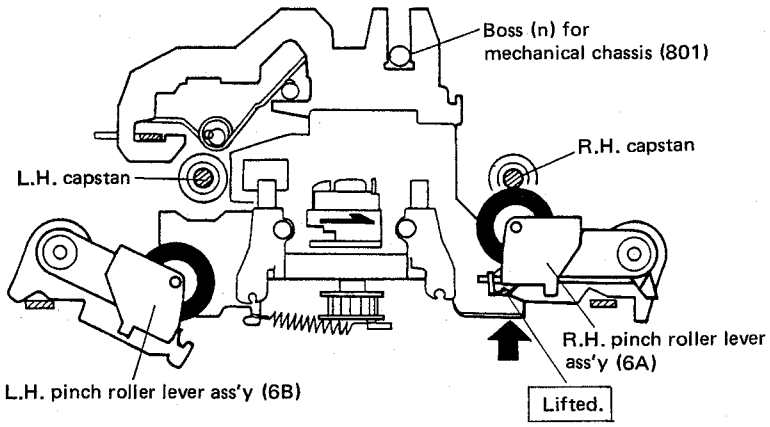


Fig. 12

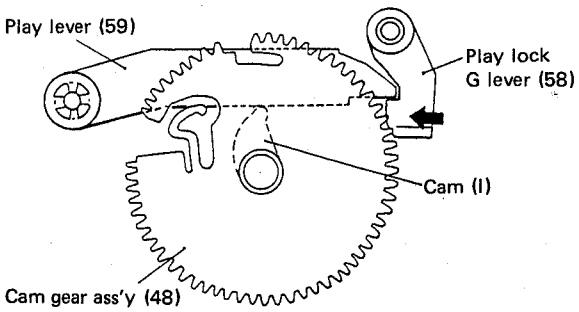


Fig. 13

8) When the cam (1) on the cam gear ass'y (48) lifts the play lever (59) to the highest position, the play lever (59) is locked by the play lock G lever (58), as seen in Fig. 13.

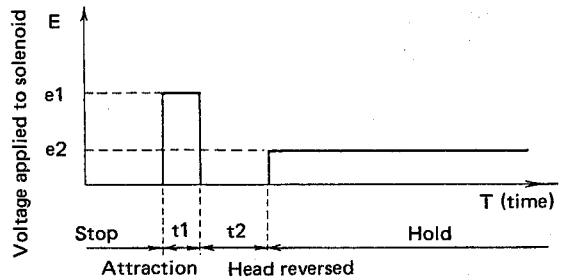
9) As the cam gear ass'y (48) rotates further, its wall (c) is brought into contact with the boss (a) on the cam lock ass'y lever (56). The notch (near (m)) in the gear of the cam gear ass'y (48) approaches the gear of the R.H. flywheel ass'y (9A) until the rotation of the R.H. flywheel ass'y (9A) ceases to be transmitted to the cam gear ass'y (48). Thus, the cam gear ass'y (48) stops rotating. (See Fig. 18).

10) As a result, the head slider ass'y (37) is closely fitted to the boss (n) of the mechanical chassis (801) while the R.H. pinch roller lever ass'y (6A) is closely fitted to the capstan. Now, the mechanism is ready for forward play. (See Fig. 12.)
Fig. 7 shows the locus of the boss (a) for the cam lock ass'y lever (56) with respect to the cam gear ass'y (48).

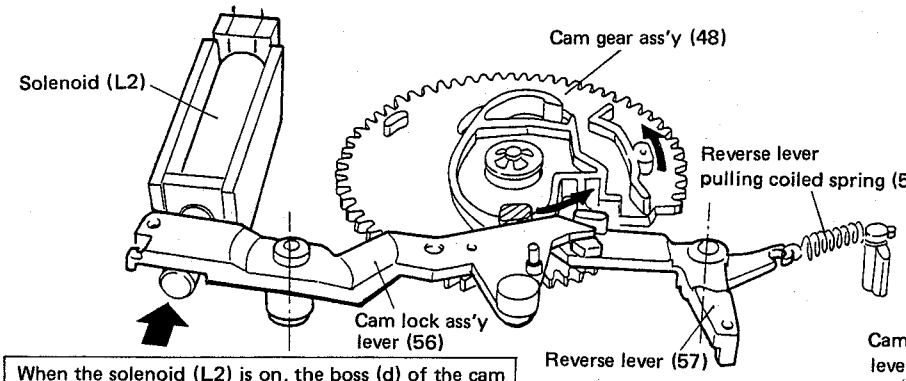
2. Reverse Play Mode

This chapter describes reverse play immediately after the half-mounting of the cassette. (The head faces forward.)

1) When the reverse play button is pressed, electricity is supplied to the main motor ass'y (1A) as in forward play mode and the R.H. and L.H. flywheel assemblies (9A) and (9B) start rotating.
2) At the same time, voltage e1 shown in the figure below is applied to the solenoid (L2) for the time t1. The iron core of the solenoid (L2) is attracted and the cam lock ass'y lever (56) rotates clockwise, as shown in Fig. 6.



3) As in forward play mode, the boss (a) of the cam lock ass'y lever (56) kicks the external wall (b) of the cam gear ass'y (48) to rotate the cam gear ass'y (48) a little in the direction of the arrow shown in Fig. 7.
4) Then, the gear (k) on the cam gear ass'y (48) meshes with the gear on the flywheel ass'y (9A) and the latter starts rotating. (See Fig. 6.)
5) As the operation described in 3) above is performed, the cam lock ass'y lever (56) rotates the reverse lever (57) counterclockwise. The voltage is applied to the solenoid (L2) for the time t1 and then is turned off for the time t2. As a result, the cam lock ass'y lever (56) is returned to the original position by the coiled spring (53). Also, the reverse lever (57) is returned to the original position by the coiled spring (50). (See Fig. 16.)
6) When the reverse lever (57) is returned to the original position, the boss (d) of the cam gear ass'y (48) is forced against the reverse lever (57) to rotate the reverse lever (57) in the direction of the arrow (D) shown in Fig. 17.
(Fig. 15 shows the relative positions of the boss (d) of the cam gear assembly (48), reverse lever (57), and cam lock ass'y lever (56) in forward play mode. The boss (d) passes above (57) and (56).)
7) As the reverse lever (57) rotates in the direction of the arrow (D), it moves the reverse slider (46) in the direction "E", as seen in Fig. 16.



When the solenoid (L2) is on, the boss (d) of the cam gear ass'y (48) passes the end of the reverse lever (57) and the mechanism gets ready for forward play.

Fig. 14

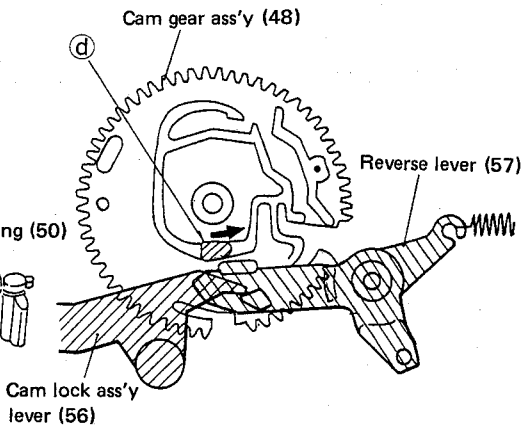
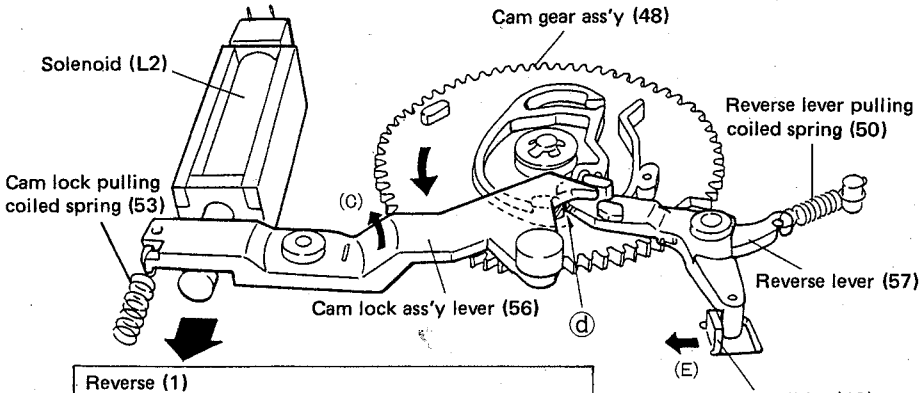


Fig. 15



Reverse (1)
When the solenoid (L2) is off, the boss (d) of the cam gear ass'y (48) is forced to the end of the reverse lever (57) and the mechanism gets ready for reverse play.

Fig. 16

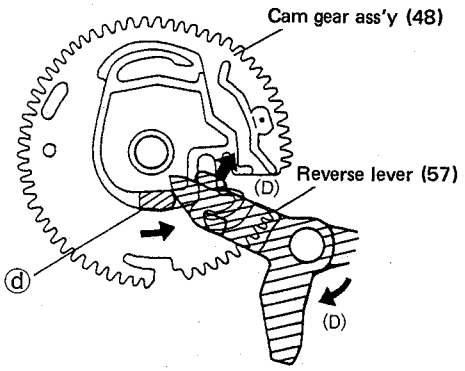


Fig. 17

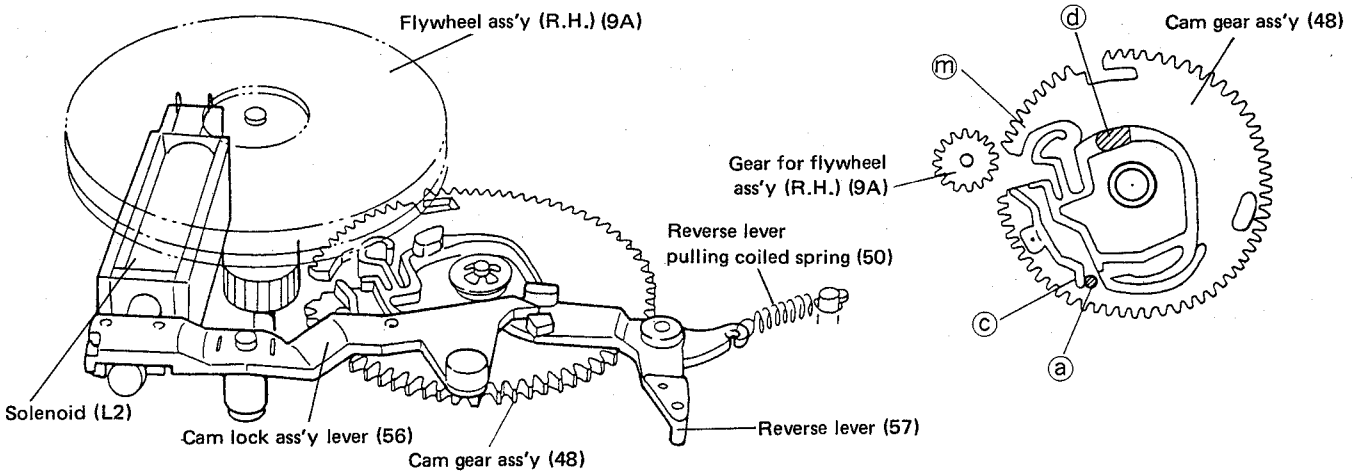
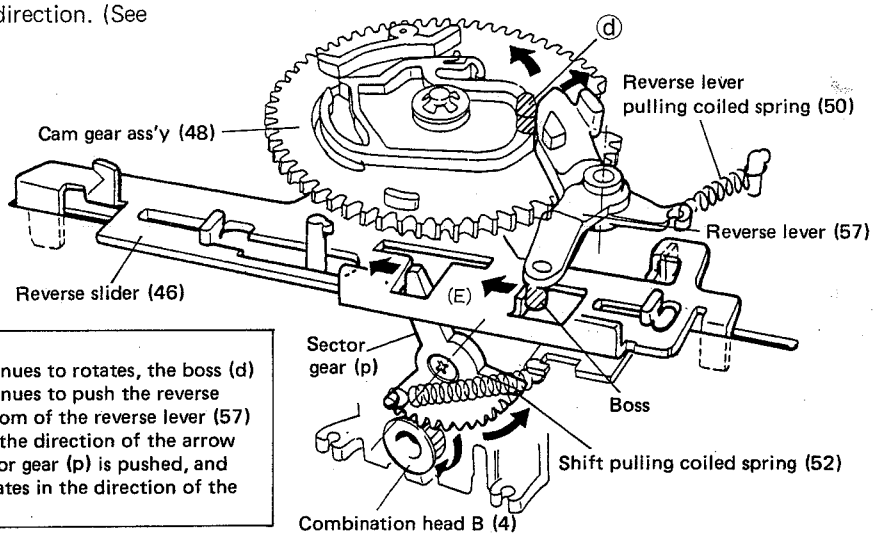


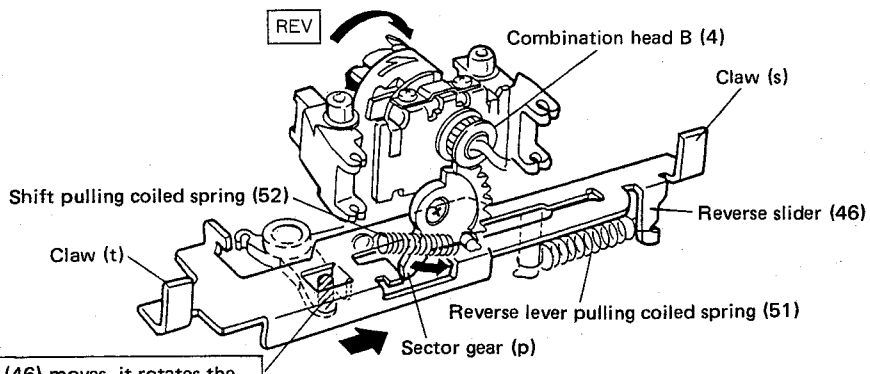
Fig. 18

8) As the reverse slider (46) moves in the directio "E", the sector gear (p) on the head slider ass'y (37) is rotated by the reverse slider (46). The combination head (B) rotates in the reverse direction. (See Figs. 19 and 20.)



Reverse (2)
As the cam gear ass'y (48) continues to rotates, the boss (d) on the cam gear ass'y (48) continues to push the reverse lever (57). The boss on the bottom of the reverse lever (57) moves the reverse slider (46) in the direction of the arrow "E". At the same time, the sector gear (p) is pushed, and the combination head B (4) rotates in the direction of the arrow.

Fig. 19



As the reverse slider (46) moves, it rotates the combination head B (4) in the reverse direction. (Ordinarily, the reverse slider pulling coiled spring (51) pulles the reverse slider (46) in the forward direction.)

Fig. 20

9) As the operation described in 8) is performed, the claw (t) of the reverse slider (46) lifts the L.H. pinch roller lever ass'y (6B) to such a position that the head slider ass'y (37) can lift the L.H. pinch roller lever ass'y (6B). The other claw (s) lowers the R.H. pinch roller lever (6A) to such a position that the R.H. pinch roller cannot be lifted by the head slider ass'y (37). Thus, reverse operation is almost completed.
10) At this time (when t_2 has passed since the iron core of the solenoid ceased to be attracted), the holding voltage e_2V is applied to the solenoid (L2).
However, the solenoid (L2) is not attracted because the voltage is still lower at this point.
11) Because the cam gear ass'y (48) continues to rotate, the cam (1) lifts the play lever (59) as in forward mode. (See Fig. 9.) At the same time, it lifts the head slider ass'y (37) through the auxiliary coiled spring (31) to lift the head slider ass'y (37). (See Fig. 10.)
12) At that time, the head slider ass'y (37) lifts the L.H. pinch roller lever ass'y (6B) and locks the reverse slider (46), which is always trying to return in the forward (H) direction, as shown in Fig. 23.
13) When the cam (1) of the cam gear ass'y (48) has lifted the play lever (59) to the highest position, the play lock G lever (58) locks the play lever (59). (See Fig. 13.)
14) On the other hand, the mold spring (e) of the cam gear ass'y (48) pushes the boss (a) of the cam lock ass'y lever (56). This rotates the cam lock ass'y lever (56) and depresses the iron core of the solenoid (L2). (See Fig. 7.)
Because holding voltage e_2 is applied to the solenoid (L2), the iron core is held and consequently the cam lock ass'y lever (56) is held.
15) As the cam gear ass'y (48) rotates further, its wall (c) is forced against the boss (a) of the cam lock ass'y lever (56). The notch (near (m)) in the gear of the cam gear ass'y (48) is moved to the position of the gear of the R.H. flywheel ass'y (9A) and the rotation of the R.H. flywheel ass'y (9A) ceases to be transmitted to the cam gear ass'y (48). As a result, the cam gear ass'y (48) stops rotating. (See Fig. 18.)
16) Consequently, the slider ass'y (37) is closely fitted to the boss (n) of the mechanical chassis (801), as shown in Fig. 22. The R.H. pinch roller lever ass'y (6B) is closely fitted to the capstan. The combination head (B) (4) faces in the reverse direction.
Thus, the mechanism is ready for reverse play.
The locus of the boss (a) of the cam ass'y lever (56) with respect to the cam gear ass'y (48) is shown in Fig. 7.

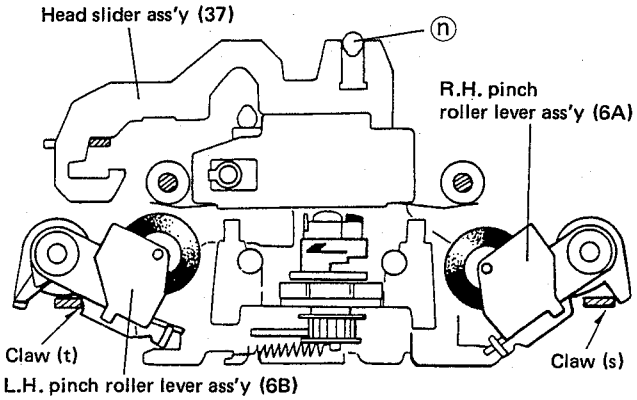


Fig. 21

When the combination head B (4) has been retracted in reverse mode, the head slider ass'y (37) and R.H. and L.H. pinch roller lever assemblies (6A) and (6B) are positioned as seen in Fig. 21. They are placed as seen in Fig. 22 when the combination head B (4) moves forward.

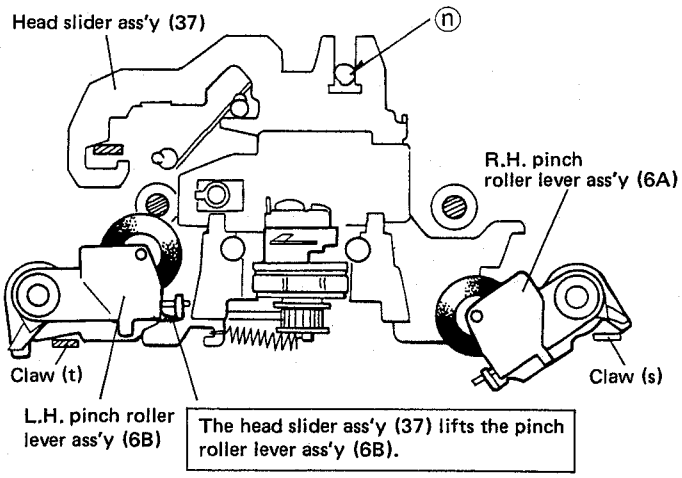


Fig. 22

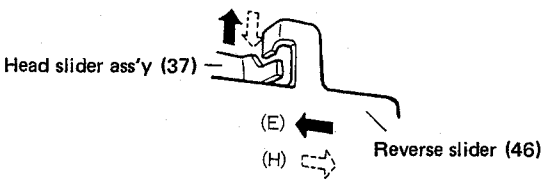


Fig. 23

3. Stop after play

1) When the stop button is pressed with the deck playing, electricity supplied to the solenoid (L2) is cut off. The cam lock ass'y lever (56) is returned in the direction (c) in Fig. 16 by the coiled spring (53).
2) As a result, the boss (a) of the cam lock ass'y lever (56) kicks the inner wall (f) of the cam gear ass'y. As the cam gear ass'y (48) rotates a little, the gear (m) meshes with the gear of the R.H. flywheel ass'y (9A) and the cam gear ass'y (48) starts rotating. (See Fig. 7.)
3) As the cam gear ass'y (48) rotates, the boss (g) moves the play lock G lever (58) to unlock the play lever (59). (See Figs. 24 and 25) As a result, the head slider ass'y (37) moves downward and the pinch roller moves away from the capstan. However, the head slider ass'y (37) is hooked and stopped by the portion (h) of the DPSS slider (47). (Earliest stage in Fig. 26.)
   At this position, the head can be depressed in DPSS mode (music piece selection mode.)
   Whenever forward or reverse play is performed after mounting of the cassette half, the mechanism is put to this position.
4) After release of the play lever (59), the cam gear ass'y (48) rotates further. The wall (q) of the cam gear ass'y (48) is forced against the boss (a) of the cam lock ass'y lever (56) and the notch (k) in the gear of the cam gear ass'y (9A) is moved to the gear position.
   As a result, the cam gear ass'y (48) stops rotating. Fig. 7 shows the locus of the boss (a) of the cam lock ass'y lever (56) with respect to the cam gear ass'y (48).
5) After this, electricity supplied to the main motor ass'y (1A) is cut off and the combination head B (4) is put in the stop status at the DPSS position.

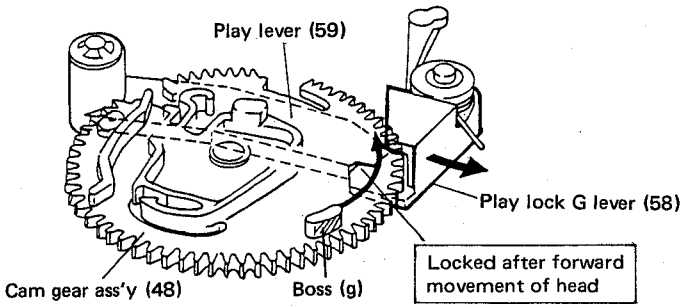


Fig. 24

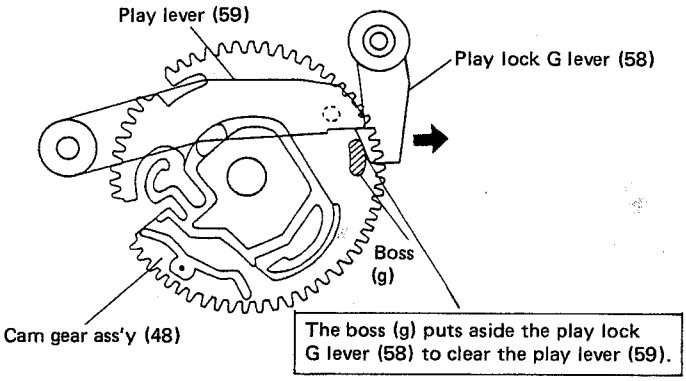


Fig. 25

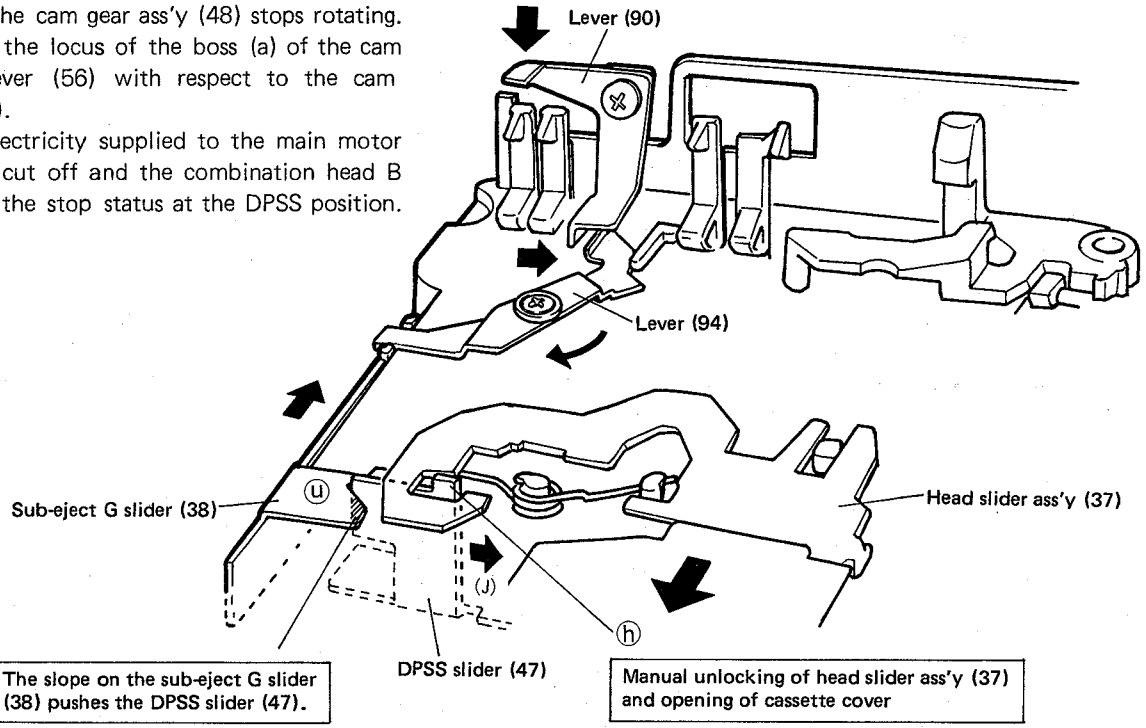


Fig. 26

4. Play after play and stop

In play after forward play and stop, the following operations are performed between 1-4) and 1-5) and 2-4) and 2-5).

1) As the cam gear ass'y (48) rotates, the boss (g) moves aside the DPSS slider (47) to unlock the head slider ass'y (37) put to the DPSS position and moves the head slider ass'y (37) downward until it reaches the position to which it was put immediately after mounting of the cassette half (See Fig. 26 and 27.)
In play after reverse play and stop, the following operations are performed after step 1) above.

2) As the head slider ass'y (37) is mvoed downward until it reaches the position to which it was put immediately after mounting of the cassette half, the reverse slider (46) is unlocked and the combination head B (4) is inverted from the reverse to the forward direction.
Upon this, the reverse slider (46) moves the R.H. pinch roller lever ass'y (6A) to such a position that the latter can be lifted by the head slider ass'y (37). The reverse slider (46) moves the L.H. pinch roller lever ass'y (6B) to such a position that the latter cannot be lifted by the head slider ass'y (37).

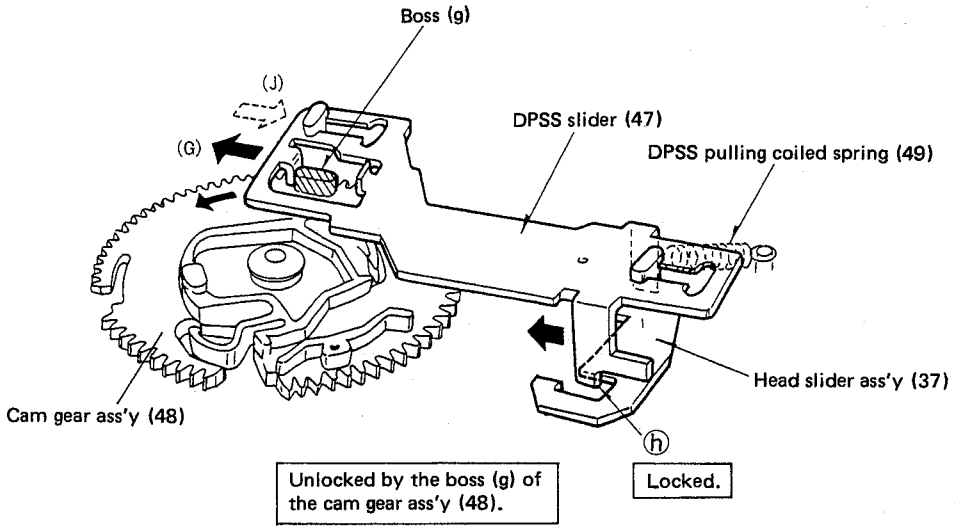


Fig. 27

5. Selection of Musical Piece

If the FF or REW button is pressed after the PLAY button is pressed, operations of stop after play described in paragraph 3 above are performed. the combination head B (4) is put to the DPSS position. High voltage (9~12V) is applied to the reel motor ass'y (1B) and musical piece selection is performed.

Eject

In play after stop, the head slider ass'y (37) remains at the DPSS position and the combination head B (4) is put in the cassette half. To eject the cassette half, the combination head B (4) must be moved downward to take out the cassette half.

Operations for ejection of the cassette half are described below. (See Fig. 26.)

1) when the left top of the cassette lid (211) is pushed, the lever (90) moves in the direction of the arrow. This moves the lever (94) and lifts the sub-eject G slider (38). The slope (u) of the sub-eject G sldier (38) pushes the DPSS slider (47) in the direction of the arrow (J) and lower the head slider ass'y (37) from the DPSS position to the position to which it was put immediately after mounting of the cassette.

This puts the combination head B (4) out of the cassette half. If the left top of the cassette lid (211) is pushed during playing, the portion (h) of the DPSS slider (47) is forced against claw of the head slider ass'y (37) to prevent the cassette lid from being opened.

Forward/Reverse Sensing Mechanism

Fig. 28 illustrates the forward/reverse sensing mechanism in forward mode.

In reverse mode, the reverse slider (46) moves in the direction of the arrow so that the direction sensing switch (S621) is turned off. For display of forward/reverse, turning on and off of this switch (S621) is utilized.

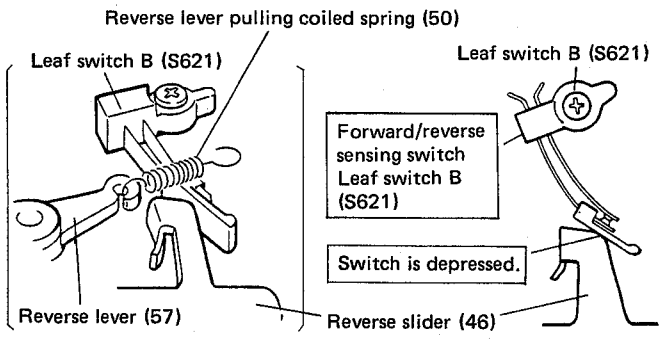


Fig. 28

Quick Reverse Sensing Mechanism

This mechanism senses the leader tape portion in start and end of winding of the tape and inverts the combination head B (4) instantaneously. The cross section of this mechanism is shown in Fig. 30.

If no tape is present at the tape guide (36), current is supplied to the LED B (D672). The light passes through the transparent resin reference pin. It is reflected by a 45° plane and reaches the photo-transistor B (Q824) inside the tape guide (36).

If the magnetic surface of the tape is positioned at the tape guide (36), the light from the LED B (D672) is blocked by the magnetic surface to prevent the light reaching the photo-transistor B (Q824). As the leader tape portion of the tape comes to the tape guide (36), the light from the LED B (D672) passes through the transparent or semi-transparent leader tape portion. The light reaches the photo-transistor B (Q824) and current flows through the photo-transistor B (Q824).

Turning on and off of this current is sensed by the quick reverse circuit and the combination head B (4) is inverted instantaneously.

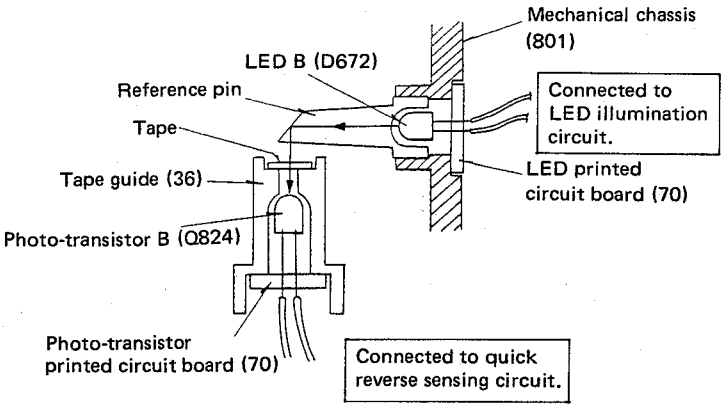


Fig. 30

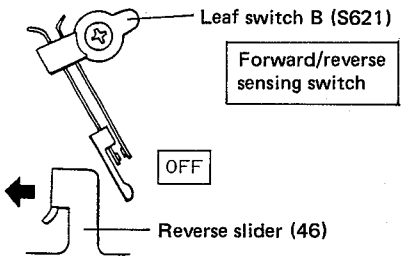


Fig. 29

REPLACING AND ADJUSTING MAJOR PARTS

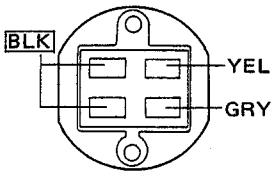
Replacing Head

Loosen the two head retaining screws (65). Remove the combination head (4) as seen in Fig. 32. Remove the head lead wire.

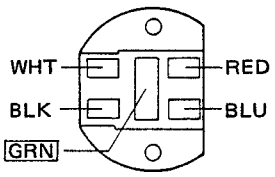
During assembly, be sure to pass the head lead wire through the motor cushion (13). A different head lead wire is used according to the had employed. Solder it as shown in Fig. 31.

Note : Fix the UL tube with adhesive agent.

Wires marked with "□" should not be routed through the motor cushion (13).



Playback on KX-94W (Deck A)



Recording, Playback, Erase on KX-94W (Deck B)

Fig. 31

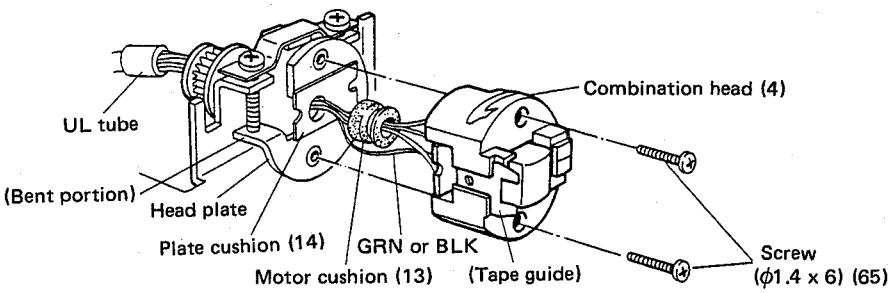


Fig. 32

Adjustng Tape Path

Whenever tape has been replaced, the path of the tape must be adjusted.

1) Align the adjusting nuts (35) on the right-hand and left-hand tape guides (36) to the upper end of shaft as shown in Fig. 33-A.
2) Play back a 6.3kHz or 10kHz test tape in forward play mode, turn the R.H. azimuth adjusting screw for adjustment. (See Fig. 33.) Then, play back the test tape in reverse play mode and turn the L.H. azimuth adjusting screw for adjustment (See Fig. 34.)
3) Using the mirror tape, check that the tape runs normally in forward and reverse play modes and that the tape is not curled at the tape guide on the combination head (4).
4) If the tape is found to be curled, turn the adjusting nuts (35) on the R.H. and L.H. tape guides (36) to adjust the tape.
5) Repeat steps 2) and 3) above.
6) When running of the tape has been adjusted, tighten and lock the adjusting nuts (35) and azimuth adjusting screws.

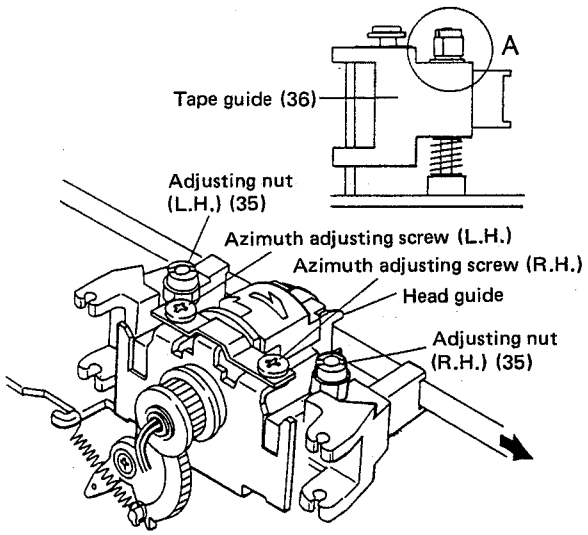


Fig. 33

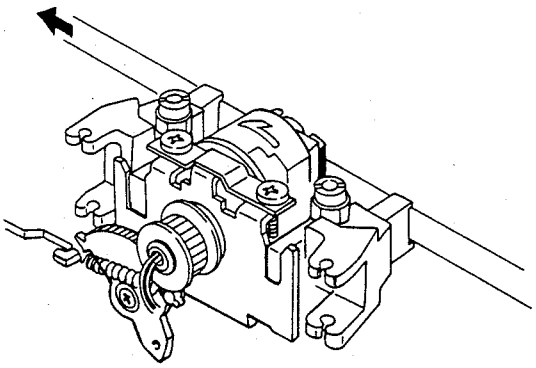
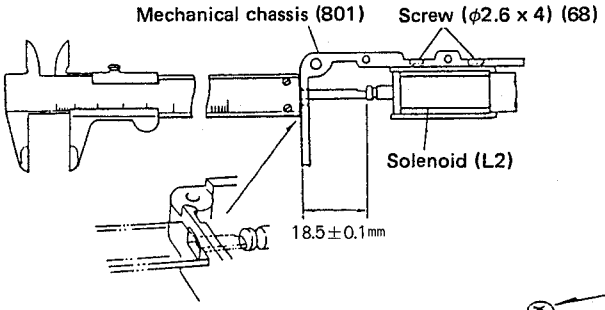


Fig. 34

Adjusting Solenoid Position

When a solenoid is replaced, its mounting position must be adjusted correctly.

1) Mount the solenoid (L2) on the mechanical chassis (801). Put calipers through the rectangular hole at the lower side of the mechanical chassis (801). Adjust the position of the solenoid (L2) from under the mechanical chassis (801) so that the distance of the iron core is 18.5±0.1mm.
   Secure the solenoid and check its position. Then, tighten and lock the screw (68).



Replacing Main Motor Ass'y and Belt

1. Replacing Main Motor ass'y

1) Remove the belt (3) and loosen one motor retaining screw (64).
   Remove the retaining two screws by turning the main motor ass'y (1A) counterclockwise.

2. Replacing Belt

1) Loosen four motor T fitting retaining screws (71). Also, remove the belt (3).
2) In removing the motor T fitting (11), be careful not to omit the flywheel bearing (10) and plain washer (76).

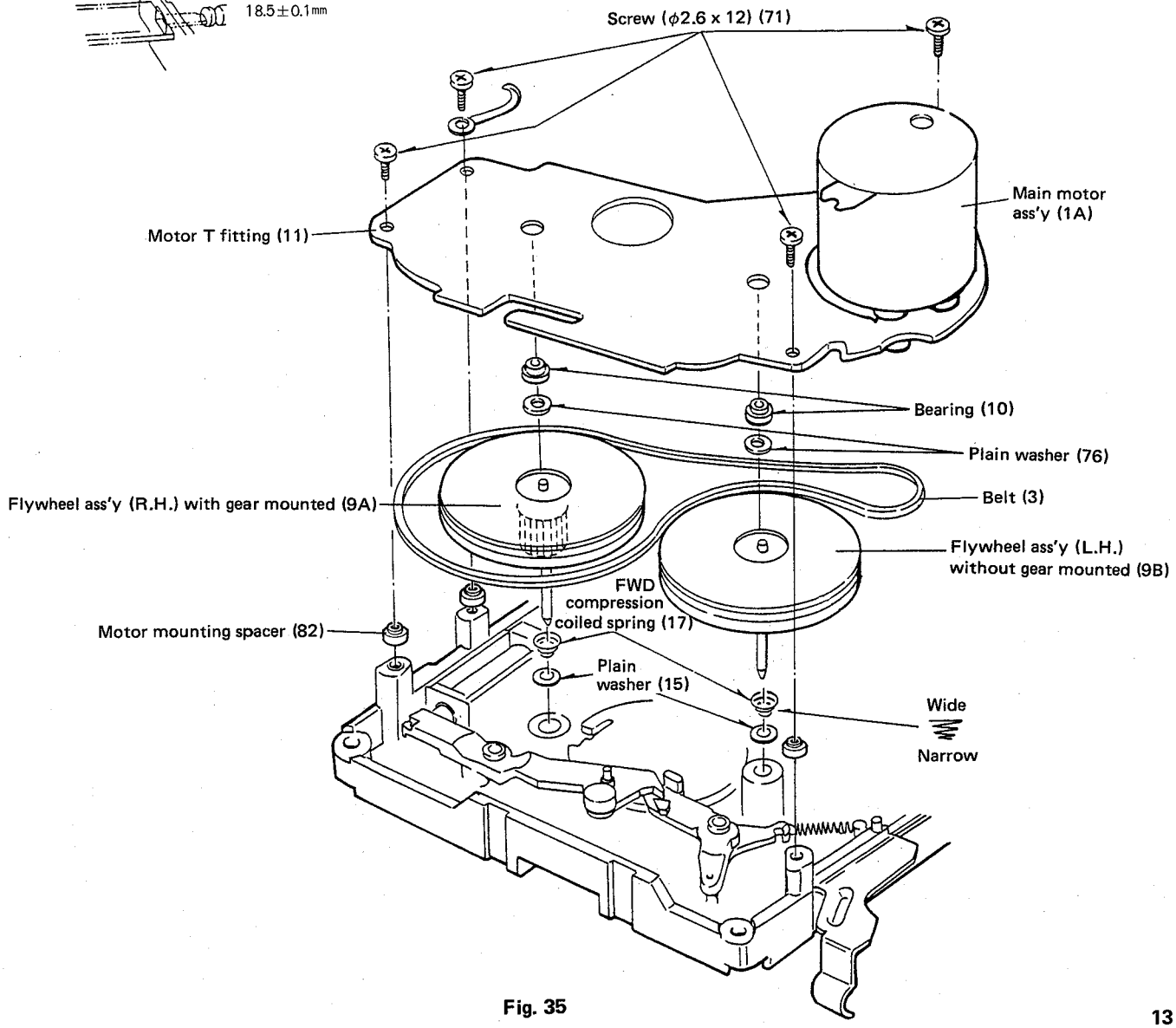


Fig. 35

Mounting flywheel end springs

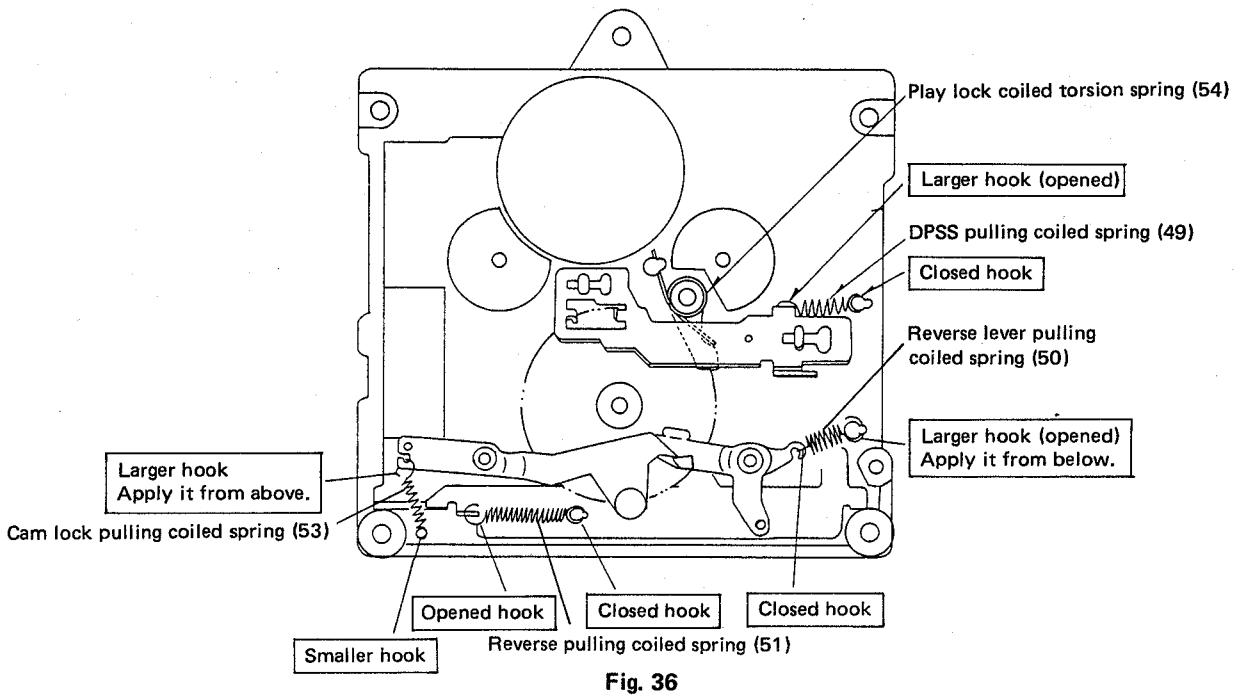


Fig. 36

Position of head end springs

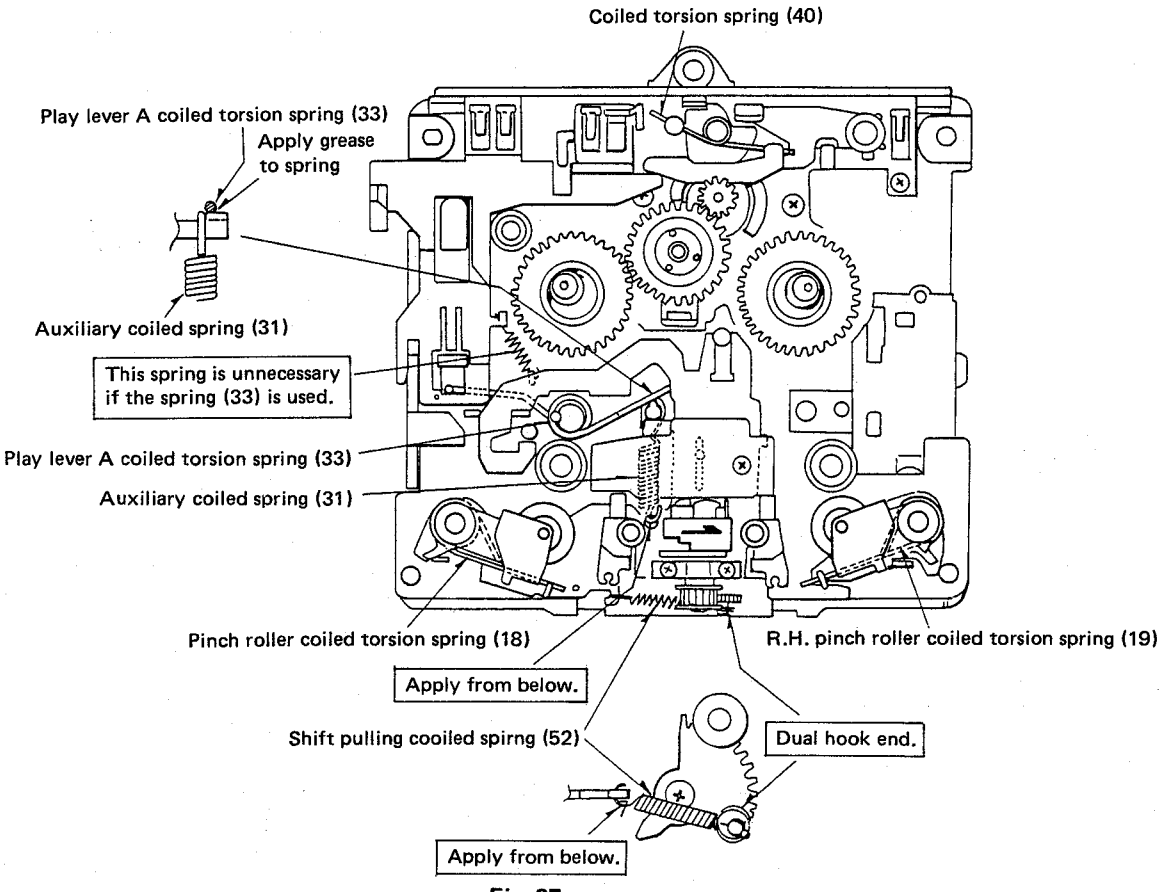


Fig. 37

Bunding wires (on KX-94W deck)