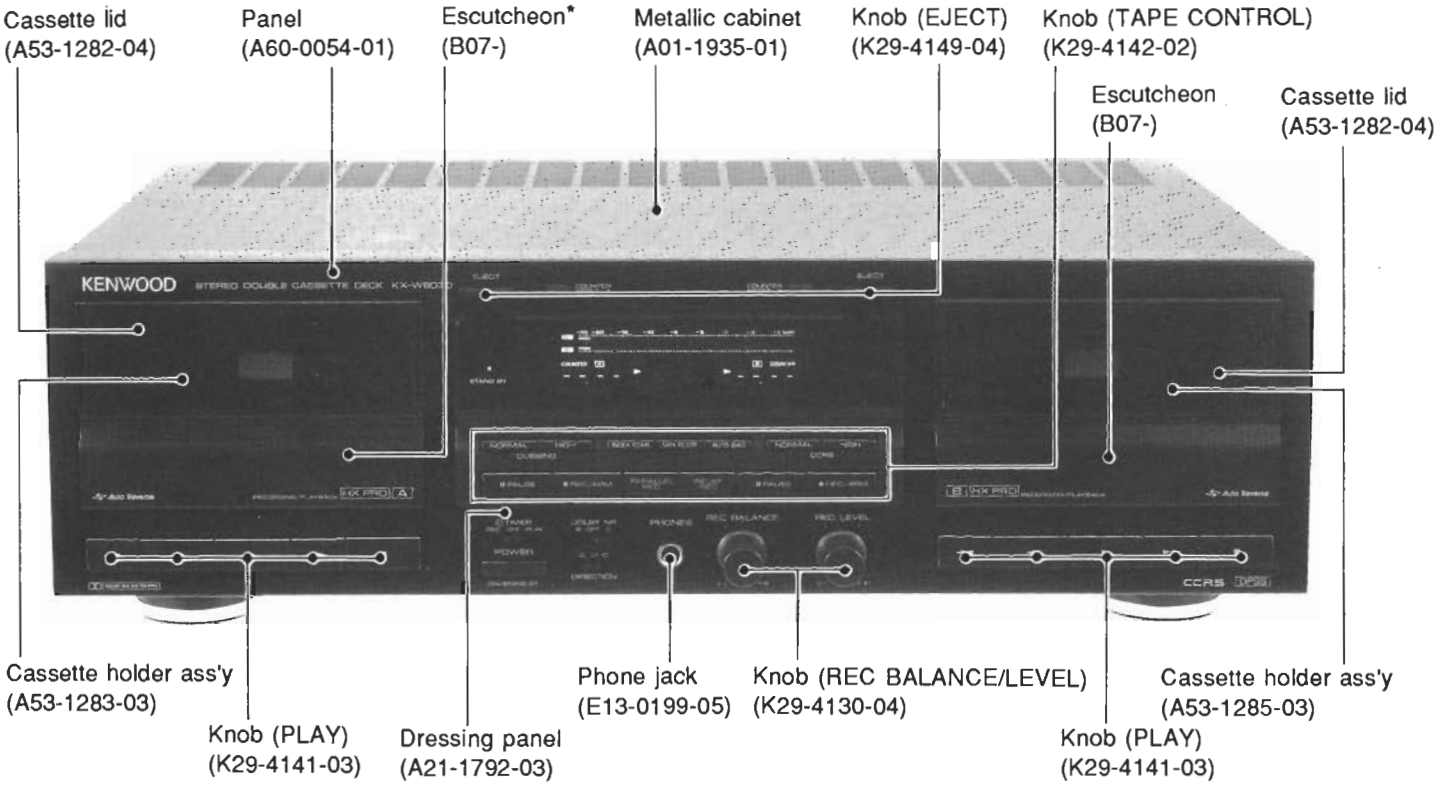
STEREO DOUBLE CASSETTE DECK

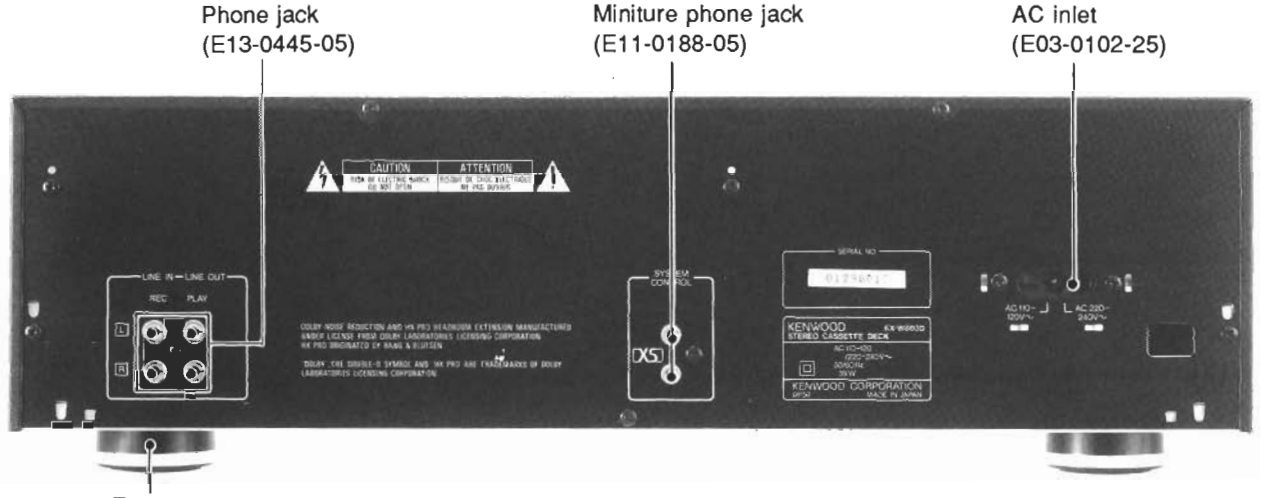
KX-W8030

SERVICE MANUAL

KENWOOD

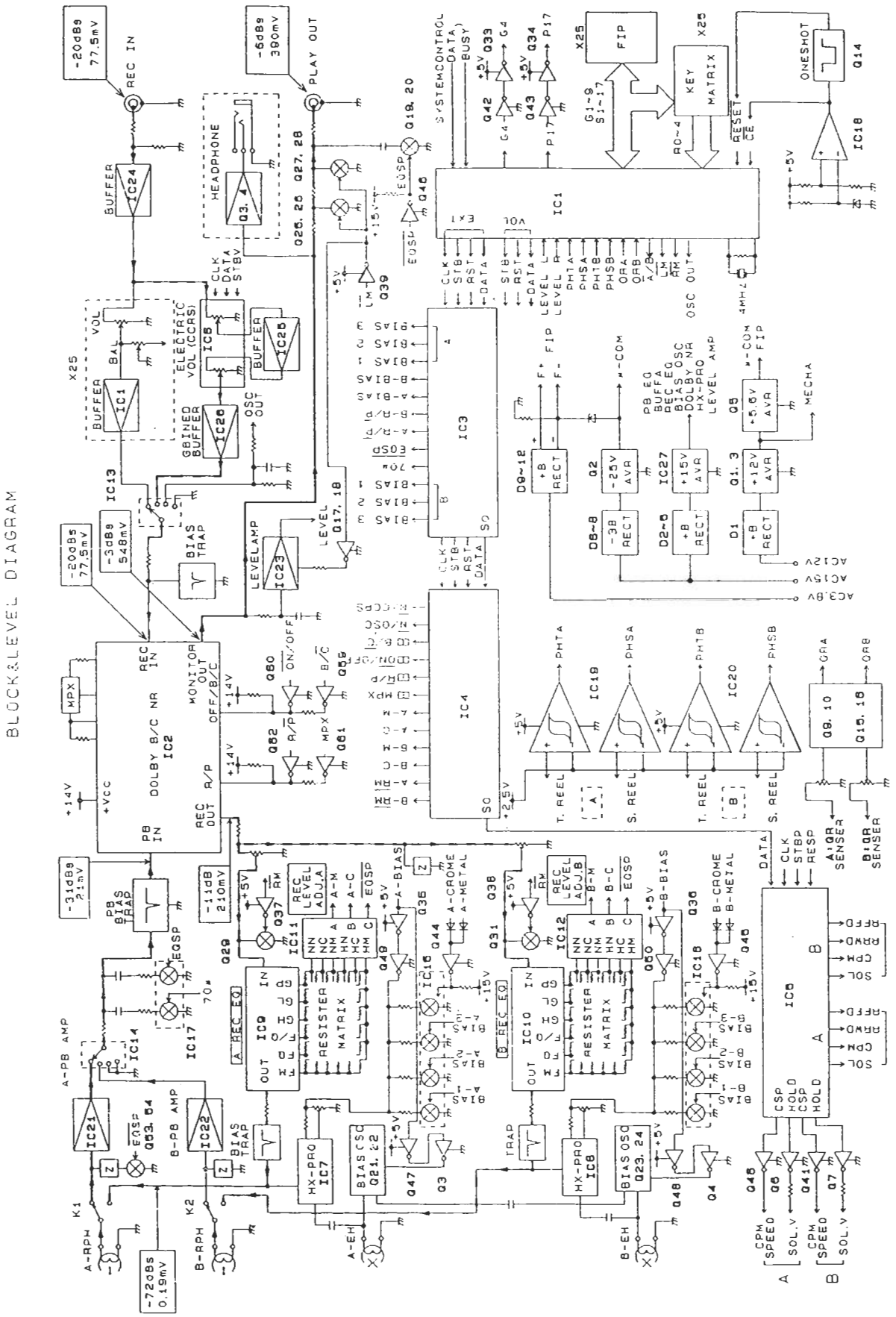
B51-4297-00(S)3678





* Refer to parts list on page 33.
Photo is Y Type.

BLOCK DIAGRAM



CIRCUIT DESCRIPTION

RECORD/PLAYBACK AMPLIFIER UNIT (X28-2310-10)

Parts Description

Ref. No.	Parts Name	Use/Function	Operation/Condition/Interchangeability
Q1	2SD1266(Q, P)	+12V AVR	
Q2	2SA999(E, F)	-22V AVR	
Q3	2SC3940A	BIAS OSC CONTROL (A)	Controlled by Q47 ON: A REC
Q4	2SC3940A	BIAS OSC CONTROL (B)	Controlled by Q48 ON: B REC
Q5	2SC3940A	+5.6V AVR	
Q6	2SC3246	MECHA(A) SOL CONT.	Controlled by IC5 pin 2 ON: Mechanism A runs
Q7	2SC3246	MECHA(B) SOL CONT.	Controlled by IC5 pin 8 ON: Mechanism B runs
Q9,10,15,16	2SA933S(Q,R)	QUICK REV. AMP	Controlled by Q,S. Detects the end of tape
Q11, 12	2SA933S(Q,R)	LEVEL AMP LIMITTER	Controlled by +5V. Since the level amplifier output to +5V.
Q13	2SC1740S(Q,R)	+12V AVR	
Q14	2SA933S(Q,R)	POWER ON RESET	Controlled by IC18 pin 7. Turns on momentarily when the power is switched on.
Q17, 18	2SA933S(Q,R)	LEVEL AMP TIME	Controlled by Q39 ON: Quick search
Q19,20	2SA933S(Q,R)	HIGH DUBBING MUTING	Controlled by Q46 ON: High-speed dubbing
Q21, 22	2SA933S(Q,R)	A-EH BIAS OSC	Controlled by Q3
Q23, 24	2SA933S(Q,R)	B-EH BIAS OSC	Controlled by Q4
Q25~28	2SA933S(Q,R)	PLAY OUT MUTING	Controlled by Q39
Q39, 30	2SA933S(Q,R)	A-REC MUTING	Controlled by Q37 OFF: A REC
Q31, 32	2SA933S(Q,R)	B-REC MUTING	Controlled by Q38 OFF: B REC
Q33, 34	DTA124ES	FL DRIVER	Controlled by Q42 and RQ43
Q35	DTA124ES	A-BIAS CONTROL	Controlled by IC3 pin 5 OFF: A REC
Q36	DTA124ES	B-BIAS CONTROL	Controlled by IC3 pin 4 OFF: B REC
Q37	DTA124ES	A-REC MUTING DRIVER	Controlled by IC4 pin 12 OFF: A REC
Q38	DTA124ES	B-REC MUTING DRIVER	Controlled by IC4 pin 13 OFF: B REC
Q39	DTA124ES	PLAY OUT MUTING DRIVER	Controlled by IC1 pin 14
Q40	DTC124ES	A-CPM SPEED CONTROL	Controlled by IC5 pin 4 OFF: High speed
Q41	DTC124ES	B-CPM SPEED CONTROL	Controlled by IC5 pin 13 OFF: High speed
Q42, 43	DTC124ES	FL, DRIVER	Controlled by IC1 pins 10 and 11
Q44	DTC124ES	A-NORMAL BIAS CONTROL	Controlled by IC4 pins 7 and 2 OFF: A Normal
Q45	DTC124ES	B-NORMAL BIAS CONTROL	Controlled by IC4 pins 9 and 11 OFF: B Normal
Q46	DTC124ES	HIGH-DUBB MUTING DRIVER	Controlled by IC3 pin 8 OFF: High speed only
Q47	DTC124ES	A-EH BIAS OSC CONTROL	Controlled by Q35 OFF: A REC
Q48	DTC124ES	B-EH BIAS OSC CONTROL	Controlled by Q36 OFF: B REC
Q49	DTC124ES	A-BIAS(HX) CONTROL	Controlled by Q35 OFF: A REC
Q50	DTC124ES	B-BIAS (HX) CONTROL	Controlled by Q36 OFF: B REC
Q51	DTC124ES	A-HEAD R/P CONTROL	Controlled by IC3 pin 7 ON: A REC
Q52	DTC124ES	B-HEAD R/P CONTROL	Controlled by IC3 pin 6 ON: A REC
Q52, 54	DTC124ES	HIGH SPEED HEAD EQ	Controlled by IC3 pin 8 OFF: High speed only
Q55	DTC124ES	P.B EQ A/B SW	Controlled by IC1 pin 13 OFF: A playback
Q56	DTC124ES	P.B EQ R/P SW	Controlled by IC4 pin 5 OFF: Recording
Q57	DTC124ES	NOR/CCRS SW	Controlled by IC4 pin 1 ON: CCRS only
Q58	DTC124ES	NOR/OSC SW	Controlled by IC4 pin 2 ON: Auto bias recording
Q59	DTC124ES	DOLBY ON/OFF SW	Controlled by IC4 pin 4 ON: Dolby off
Q60	DTC124ES	DOLBY B/C SW	Controlled by IC4 pin 3 ON: Dolby B
Q61	DTC124ES	MPX ON OFF SW	Controlled by IC4 pin 6 ON: Multiplex filter on
Q62	DTC124ES	DOLBY R/P SW	Controlled by IC4 pin 5 ON: Dolby playback

CIRCUIT DESCRIPTION

RECORD/PLAYBACK AMPLIFIER UNIT (X28-2310-10)

Parts No.	Parts Name	Use/Function	Operation/Condition/Interchangeability
IC1	M50945-091SP	Microprocessor	
IC2	HA12170NT	Dolby IC	
IC3~5	CXD1067P	Extended I/O	
IC6	TC9213P	Electronic volume control	
IC7, 8	UPC1297CA	Dolby HX-PRO	
IC9, 10	CXA1198SP	REC EQ	
IC11, 12	TC4051BP	REC EQ SW	
IC13	TC4052BP	Input SW	
IC14	TC4052BP	P.B A/B SW	
IC15	TD62554S	A-AUTO BIAS SW	
IC16	TD62554S	B-AUTO BIAS SW	
IC17	TD62554S	EQ SW	
IC18	BA10393	C, E	
IC19	BA10393	A-REEL COMP.	
IC20	BA10393	B-REEL COMP.	
IC21	TA8125S	A-P.B EQ	
IC22	TA8125S	B-P.B EQ	
IC23	NJM4558D	LEVEL AMP	
IC24	NJM4565D-D	Input Buffer	
IC25, 26	NJM4565D-D	Electronic volume control Buffer	
IC27	µPC7815HF	+15V AVR	

CIRCUIT DESCRIPTION

1.1 FUNCTION

(1) Features

(a) Recording and auto-reverse on both decks
(b) DPSS
- Track skip (Fast-forward searchg, rewind search)
- One-track repeat
- Rewind play
- Dash and play, full repeat
- Rerec standby
- Index scan
- Auto-recording mute

(c) Relay play
(d) Relay recording, relay CCRS
(e) Parallel recording, parallel CCRS
(f) One-touch dubbing (A to B)
- Normal speed
- High speed

(g) Quick reverse (E.T Type)
(h) Double linear counter
(i) Counter zero-stop
(j) 16-step meter
(k) Timer play, timer recording

(2) Items to be controlled

(a) Cassette mechanism
(b) Recording/playback circuits

1.2 Operation Description

Name	Key Operation	Description
Fast-forward search (skip music scan)	Press the FF key during forward playback, or the RWD key during reverse playback	• Skips forward (relative to the playback direction) the number of tracks (up to 16) equivalent to the number of times the FF (or RWD) key is pressed. • This is inhibited when the other deck is in record mode (no dubbing), record pause mode, or auto bias mode. • If the FF (or RWD) key is pressed during fast-forward search, the number of times the key is pressed is added to the number of tracks to be skipped.
Rewind search (skip music scan)	Press the RWD key during forward playback, or the FF key during reverse playback.	• Skips backward (relative to the playback direction) the number of tracks (up to 16, including the current track) equivalent to the number of times the RWD (or FF) key is pressed. • This is inhibited when the other deck is in record mode (no dubbing), record pause mode, or auto bias mode. • If the RWD (or FF) key is pressed during rewind search, the number of times the key is pressed is added to the number of tracks to be skiped.
One-tone repeat	Press the PLAY key again during playback, or press the PLAY key twice during an operation other than playback and recording.	• The current track is played 16 times, then normal playback resumes. • If the PLAY key is pressed again while a track is being repeated, the repeat sequence starts over. • This is inhibited when the other deck is in record (no dubbing), record pause, or auto bias mode. • If the PLAY key on deck A is pressed during index scan playback or high-speed dubbing playback, normal playback resumes.

CIRCUIT DESCRIPTION

<table>
<tr><th>Name</th><th>Key Operation</th><th>Description</th></tr>
<tr><td>Rewind
Play</td><td>Press the RWD and FWD PLAY keys together, or press the FF and RVS PLAY keys together.</td><td>• If the RWD (◂◂) and FWD PLAY (▸) keys are pressed together, the tape is rewound to its end, then a fast forward search is done on the forward side. When the first track is found, playback starts.
• If the FF (▸▸) and RVS PLAY (◂) keys are pressed together, the tape is fast forwrded to its end, then a fast forward search is done on the reverse side (B).
• This is inhibited when the other deck is in record (no dubbing), record pause, or auto bias mode.</td></tr>
<tr><td>Dash & Play</td><td>Press the FF and RWD keys together.</td><td>• Plays back in the current tape direction.
• Cues and searches for the next track if a blank section continues for ten seconds during playback. If a track is found, it is played back.
The following repeat operations are done according to the direction switch position
<table>
<tr><th>SW</th><th>Operation</th></tr>
<tr><td>⇄</td><td>One-side full repeat, (eight sides)</td></tr>
<tr><td>⊃</td><td>Double-side relay repeat only when the other deck is loaded. Total 29 (31 sides)</td></tr>
<tr><td>↻</td><td>Double side full repeat, eight times (16 sides)</td></tr>
</table>
• This is inhibited when the other deck is in record (no dubbing), record pause, or auto bias mode.
Dashing is not done until the first track ends after reversing the head at the end of tape by ⊃ or ↻, even if there is a blank section for 10 seconds or more.</td></tr>
<tr><td>Rerec
Stand-by</td><td>Press the RWD key during forward recording, or the FF key during reverse recording.</td><td>• If the end of a previous track is found by reviewing, the tape is stopped two seconds after the end.
• The operation is inhibited if both decks A and B are recording or recording is paused.</td></tr>
<tr><td>INDEX
SCAN</td><td>Press the INDEX SCAN key</td><td>• Cues in the current tape direction. If a track is found, it is played back for 14 seconds, then cueing starts again. The process is repeated.</td></tr>
<tr><td>Auto REC
MUTE</td><td>Press the REC key during normal recording, press the DUBBING key during dubbing, or press the HIGH DUBBING key during high-speed dubbing.</td><td>• Turns REC MUTE on for four seconds (three seconds for high-speed dubbing), records,and then record pauses.</td></tr>
</table>

CIRCUIT DESCRIPTION

Name	Key Operation	Description
Counter 0 Stop	Press the FF and STOP keys together or press the RWD and STOP keys together.	Fast forwarding or rewining is stopped when the counter reaches 00.00. The mechanism of this deck has no braking function to stop fast forwarding or rewinding, and overshoot is large. The program outputs a stop signal to the mechanism when the counter reaches 99.59 during fast forwarding and 00.01 during rewinding.
AUTOBIAS	AUTOBIAS key	• A 400Hz signal is recorded with the reference bias, and a 10kHz signal is recorded with five different bias values. The tape is rewound and the recorded part is played back. The 400Hz playback level is input and memorized, then compared with the 10kHz playback level for each bias value. • The bias value for the level nearest to the level of the 400Hz signal is memorized and output as the optimum value. • The 400Hz and 10kHz signals are input as sine waves by outputting square waves from the TO pin of the microprocessor and passing them through a high-cut filter. • The playback output is amplified, rectified to a DC voltage in the range 0 to 5 V, input to the A/D pin of the microprocessor, and digitized. • The AUTOBIAS indicator flashes during the AUTOBIAS operation, and lights continuously when bias setting is complete.
Quick Reverse		• The boundary between the magnetic tape and leader tape is detected by the change in the output of the photo-reflection sensor on the mechanism, and the tape is reversed. • Operating condition 1 The direction switch is ⊃ or ⊂. 2 During playback or recording, except one-track repeat, rerec standby, and auto recording mute 3 More than 10 seconds have elapsed since the mechanism started the current operation. If all these conditions are satisfied and the sensor output changes, it is taken that the end of tape has been reached, and the tape is stopped automatically.

CIRCUIT DESCRIPTION

<table>
<tr><th>Name</th><th>Description</th></tr>
<tr><td>AUTO STOP</td><td>If the signal from the photo-reflection sensor on the rear of the hub mount stays constant for at least two seconds during playback, recording, fast forwarding, rewinding, cueing, or reviewing, it is taken as the end of tape, and the following operation is performed.
<table>
<tr><th colspan="3"></th><th>⇄</th><th>⊃</th><th>↻</th></tr>
<tr><td rowspan="5">Normal operation</td><td colspan="2">FWD PLAY</td><td>STOP OR RWD</td><td>RVS PLAY</td><td>RVS PLAY</td></tr>
<tr><td colspan="2">RVS PLAY</td><td>STOP OR FF</td><td>STOP</td><td>FWD PLAY</td></tr>
<tr><td colspan="2">FF</td><td>STOP</td><td>STOP</td><td>STOP</td></tr>
<tr><td colspan="2">RWD</td><td>STOP</td><td>STOP</td><td>STOP</td></tr>
<tr><td colspan="2">FWD REC</td><td>STOP</td><td>RVS OK-RVSREC
RVS NG-STOP</td><td>RVS OK-RVSREC
RVS NG-STOP</td></tr>
<tr><td rowspan="6">DSPP</td><td colspan="2">RVS REC</td><td>STOP</td><td>STOP</td><td>STOP</td></tr>
<tr><td colspan="2">ONE MUSIC RP
ARM
REREC STANDBY</td><td>STOP</td><td>STOP</td><td>STOP</td></tr>
<tr><td colspan="2">REWIND PLAY</td><td>FF search</td><td>FF search</td><td>FF search</td></tr>
<tr><td colspan="2">FF search
RWD search
INDEX SCAN</td><td>STOP</td><td>Side 1-Reverse and continue
Side 2-Stop</td><td>Side 1-Reverse and continue
Side 2-Stop</td></tr>
<tr><td rowspan="3">DASH & PLAY</td><td>FWD PLAY OR CUE</td><td>RWD</td><td>NOR.-RVS PLAY
RELAY 1-15
REPLAY 16-STOP</td><td>1-15--RVS PLAY
16--STOP</td></tr>
<tr><td>RVS PLAY OR RVW</td><td>FF</td><td>STOP
If the side is not 16 during relay play, the other deck starts dash and play</td><td>1-15-FWD PLAY
16---STOP</td></tr>
<tr><td>RWD</td><td>1-15-FWD CUE
16---STOP</td><td></td><td></td></tr>
<tr><td></td><td>FF</td><td>1-15-RVS RVW
16---STOP</td><td></td><td></td></tr>
</table>
</td></tr>
</table>

CIRCUIT DESCRIPTION

Name	Description					
AUTO STOP				⇄	⊃	↻
	AUTO BIAS		All modes	STOP	STOP	STOP
	DUBBING	A		Same as normal operation. When deck A stops, deck B stops.	Same as normal operation. When deck A stops, deck B stops.	Same as normal operation. When deck A stops, deck B stops.
		B	FWD REC	A---STOP B---STOP	RVSOK-A, BSTOP RVSNG-RVS REC	RVSOK-A, B-STOP RVSNG-RVS REC
			RVS REC	A---STOP B---STOP	A---STOP B---STOP	A---STOP B---STOP
			AUTO REC MUTE	A---STOP B---STOP	A---STOP B---STOP	A---STOP B---STOP

CIRCUIT DESCRIPTION

Name	Description	
RELAY PLAY	Conditions	1 Decks A and B are both loaded with a cassett. 2 The RELAY indicator is lit. 3 The direction switch is set to ⇄ or ⊃. 4 One deck playing normally, not with DPSS, and the other is stopped.
	Operation	1 ⇄ mode --- When the end of tape is reached on the deck playing back, the deck rewinds if it is playing back in the forward direction, and fast forwards if it is playing back in the reverse direction, then the other deck starts playback automatically in the current tape direction. 2 ⊃ mode --- When the end of tape on the reverse side is reached on the deck playing back, the deck stops, and the other deck starts playback in the forward direction.
RELAY REC	Conditions	1 Decks A and B are both loaded with a cassette that can be recorded on in the appropriate current tape direction. 2 The RELAY indicator is lit. 3 The direction switch is set to ⇄ or ⊃. 4 The recording source is the same for both decks. 5 One deck is recording, and the other is in record pause.
	Operation	1 ⇄ mode --- When the end of tape on one side is reached on deck A, the deck stops, and deck B starts recording automatically. 2 ⊃ mode --- When the end of tape on the reverse side is reached on deck A, the deck stops, and deck B starts recording automatically.
RELAY DASH & PLAY	Conditions	1 Decks A and B are both loaded. 2 The RELAY indicator is lit. 3 The direction switch is set to ⇄ or ⊃. 4 One deck is dashing and playing, and the other is stopped.
	Operation	When the end of tape on the reverse side is reached on the deck dashing and playing, the deck stops, and the other deck starts dash and play. The number of repetitions differs with the mode. If a total of 16 sides (comprising both forward and reverse sides) have been played back on one of the decks, the dash and play operation is canceled and the tape is stopped.
RELAY CCRS	Operation	1 Load both decks. 2 Load two discs in the CD player. 3 Press the RELAY key so the RELAY indicator lights. 4 Press the CCRS key.

CIRCUIT DESCRIPTION

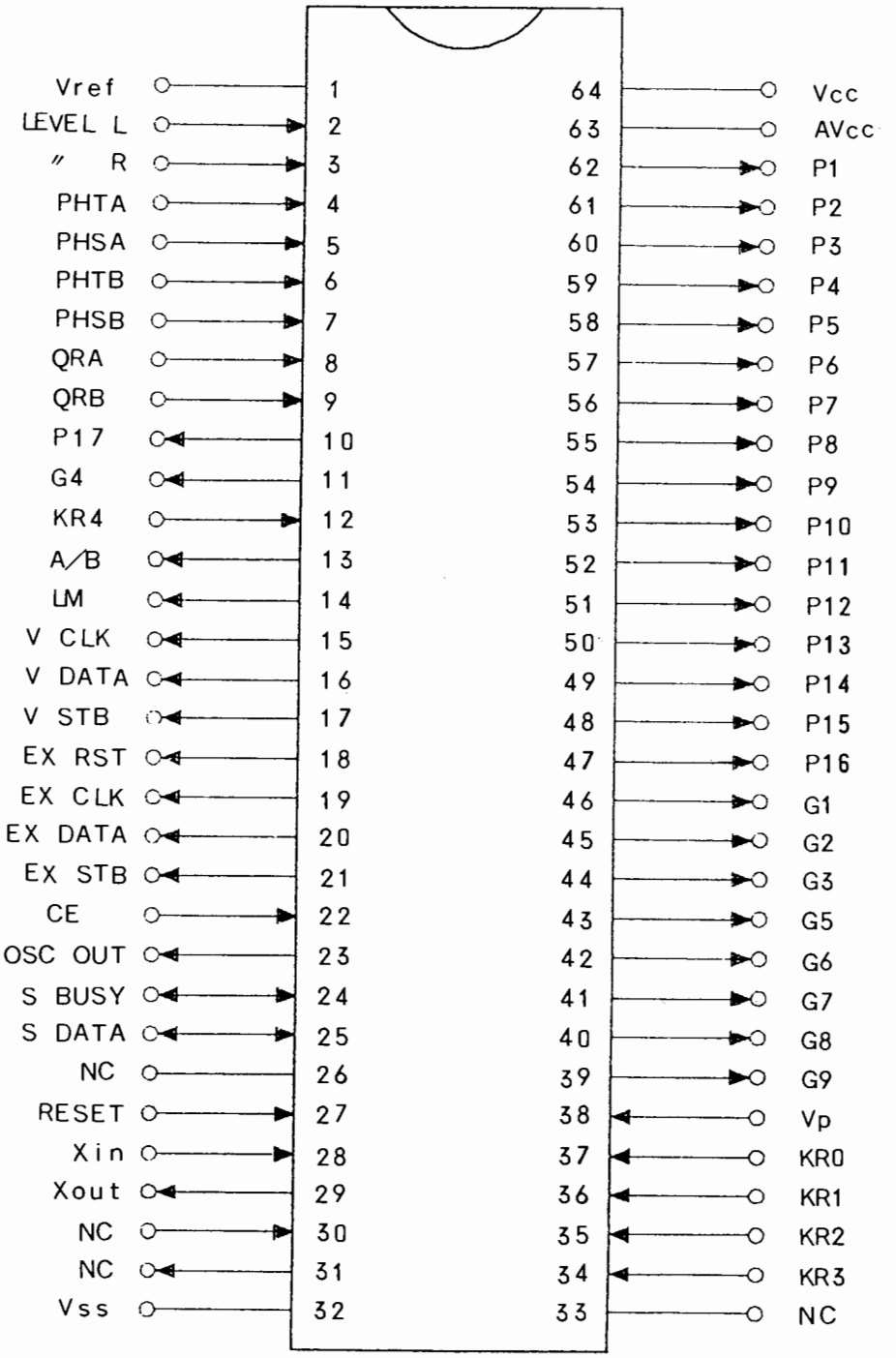
<table>
<tr><th>Name</th><th>Description</th></tr>
<tr><td>RELAY DASH & PLAY</td><td>Operation
1 Output a CCRS START code.
2 When a CD STANDBY code is received, record on deck A and start level sampling.
3 Run deck A under ARM for 10 seconds, and enter pause record.
4 When a CD STANDBY code is received, record on deck A.
5 When a DISC1END code is received and the recording of disc 1 has ended, stop deck A and output a CCRS START code again.
6 When a CD STANDBY code is received, run deck B under ARM for 10 seconds, and enter pause record.
7 When a CD STANDBY code is received, record on deck B.
8 When a CD STOP code is received, stop the deck.</td></tr>
<tr><td>REPLAY CCRS</td><td>If the timer switch has been set to PLAY or REC, and the power is switched on, the specified operation starts after an initial delay (about 3.5 seconds).
<table>
<tr><th colspan="4">Condition / TIMER SW</th><th>TIMER PLAY</th><th>TIMER REC1</th><th>TIMER REC2</th></tr>
<tr><th>A Cassette</th><th>B Cassette</th><th>A INH</th><th>B INH</th><th></th><th>⇄ or ⇉</th><th>↻</th></tr>
<tr><td>×</td><td>×</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>○</td><td>×</td><td>×</td><td></td><td>A PLAY</td><td></td><td></td></tr>
<tr><td>○</td><td>×</td><td>○</td><td></td><td>A PLAY</td><td>A REC</td><td>A REC</td></tr>
<tr><td>×</td><td>○</td><td></td><td>×</td><td>B PLAY</td><td></td><td></td></tr>
<tr><td>×</td><td>○</td><td></td><td>○</td><td>B PLAY</td><td>B REC</td><td>B REC</td></tr>
<tr><td>○</td><td>○</td><td>×</td><td>×</td><td>A PLAY</td><td></td><td></td></tr>
<tr><td>○</td><td>○</td><td>○</td><td>×</td><td>A PLAY</td><td>A REC</td><td>A REC</td></tr>
<tr><td>○</td><td>○</td><td>×</td><td>○</td><td>A PLAY</td><td>B REC</td><td>B REC</td></tr>
<tr><td>○</td><td>○</td><td>○</td><td>○</td><td>A PLAY</td><td>A REC
B RECPAUSE</td><td>A REC</td></tr>
</table>
○.....ON
×.....OFF</td></tr>
<tr><td>Linear counter</td><td>Both decks A and B have a linear couner.

A 0.00 B 0.00

Each linear counter counts from 0.00 to 99.59.</td></tr>
</table>

CIRCUIT DESCRIPTION

Micro processor (M50945-090SP)



CIRCUIT DESCRIPTION

Pin Description

Pin No.	I/O	Name	Function
1	-	VREF	Analog-to-digital converter reference voltage
2	I	LEVEL L	Left-channel signal input
3	I	LEVEL R	Right-channel signal input
4	I	PHTA	Mechanism A takeup hub sensor input
5	I	PHSA	Mechanism A supply hub sensor input
6	I	PHTB	Mechanism B takeup hub sensor input
7	I	PHSB	Mechanism B supply hub sensor input
8	I	QRA	Mechanism A quick-reverse sensor input
9	I	QRB	Mechanism B quick-reverse sensor input
10	O	Sq	Fluorescent segment output q
11	O	P17	Fluorescent grid output 4G
12	I	KR4	Key input H: KEY ON L: KEY OFF
13	O	$\overline{A/B}$	A/B switching output H: B deck L: A deck
14	O	$\overline{L.MUTE}$	Line mute output H: MUTE OFF L: MUTE ON
15	O	VCLK	Electronic volume control clock output
16	O	VDT	Electronic volume control data output
17	O	VST	Electronic volume control strobe output
18	O	EXRST	Extended IC reset output H: Normal L: Reset
19	O	EXCLK	Extended IC clock output
20	O	EXDATA	Extended IC data output
21	O	EXST	Extended IC strobe output
22	I	CE	AC off detection H: AC ON L: AC OFF
23	O	OSC	400-Hz/10-kHz output for auto-bias
24	I/O	SBUSY	Serial busy input/output
25	I/O	SDATA	Serial data input/output
26	-	Vss	Connect to ground
27	I	$\overline{RESET}$	Reset input H: Normal L: Reset
28	I	XIN	4-MHz ceramic-lock connection input
29	O	XOUT	4-MHz ceramic-lock connection input
30	I	XCIN	Connect to GND. Pin for clock pulses for time display
31	O	XCOUT	OPEN. Pin for clock pulses for time display
32	-	Vss	Ground pin
33	O	NC	OPEN
34	I	KR3	Key input H: KEY ON L: KEY OFF
35	I	KR2	Key input H: KEY ON L: KEY OFF
36	I	KR1	Key input H: KEY ON L: KEY OFF
37	I	KR0	Key input H: KEY ON L: KEY OFF
38	I	Vp	Connect to -30 V High-voltage-resistant port pulldown voltage input
39	O	G9	Fluorescent grid output 9G
40	O	G8	Fluorescent grid output 8G
41	O	G7	Fluorescent grid output 7G
42	O	G6	Fluorescent grid output 6G
43	O	G5	Fluorescent grid output 5G
44	O	G3	Fluorescent grid output 3G
45	O	G2	Fluorescent grid output 2G
46	O	G1	Fluorescent grid output 1G

CIRCUIT DESCRIPTION

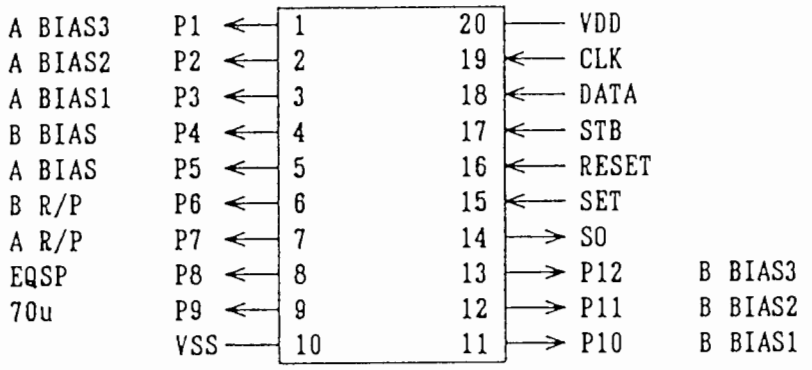
Pin Description

Pin No.	I/O	Name	Function
47	O	Sa	Fluorescent segment output a
48	O	Sb	Fluorescent segment output b
49	O	Sc	Fluorescent segment output c
50	O	Sd	Fluorescent segment output d
51	O	Se	Fluorescent segment output e
52	O	Sf	Fluorescent segment output f
53	O	Sg	Fluorescent segment output g
54	O	Sh	Fluorescent segment output h
55	O	Si	Fluorescent segment output i
56	O	Sj	Fluorescent segment output j
57	O	Sk	Fluorescent segment output k
58	O	Sl	Fluorescent segment output l
59	O	Sm	Fluorescent segment output m
60	O	Sn	Fluorescent segment output n
61	O	So	Fluorescent segment output o
62	O	Sp	Fluorescent segment output p
63	-	Avcc	Analog-to-digital converter power supply. Connect to backed-up +5V.
64	-	Vcc	Power supply pin. Connect to backed-up +5V.

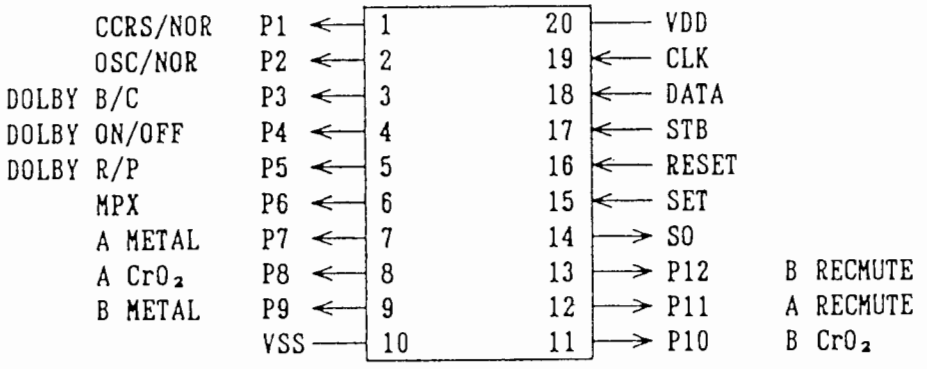
CIRCUIT DESCRIPTION

I/O EXPANDER (CXD1067P)

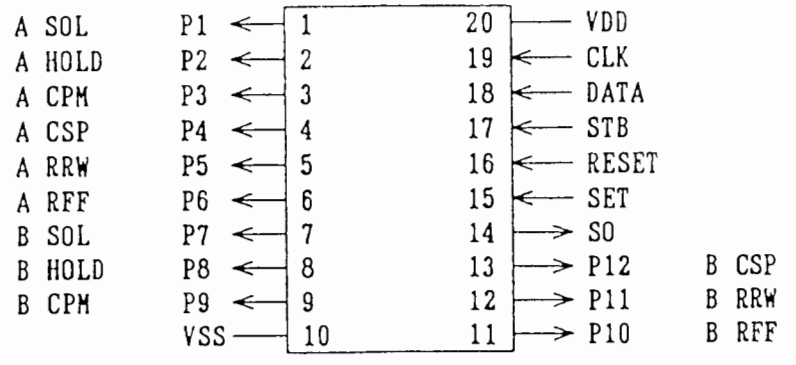
I/O 1



I/O 2



I/O 3



CIRCUIT DESCRIPTION

Pin Description

I/O 1.

Pin No.	I/O	Name	Function
1	O	A BIAS3	For AUTOBIAS for deck A
2	O	A BIAS2	For AUTOBIAS for deck A
3	O	A BIAS1	For AUTOBIAS for deck A
4	O	B BIAS	B bias control H: BIAS ON L: BIAS OFF
5	O	A BIAS	A bias control H: BIAS ON L: BIAS OFF
6	O	B R/P	B REC/PLAY switching H: REC L: PLAY
7	O	A R/P	A REC/PLAY switching H: REC L: PLAY
8	O	EQSP	B record equalization switching H: NORMAL SPEED L: HIGH SPEED
9	O	70u	Playback equalization time-constant switching H: 70us L: 120us
10	-	Vss	Connect to ground.
11	O	B BIAS1	For AUTOBIAS for deck B
12	O	B BIAS2	For AUTOBIAS for deck B
13	O	B BIAS3	For AUTOBIAS for deck B
14	O	SO	Data output pin. Connect to the data pin of I/O expander 2.
15	I	SET	Connect to VDD (+5V). H: NORMAL L: All ports are low H
16	I	RESET	Connect to the EXRST pin of the microprocessor. H: NORMAL L: All ports are low L
17	I	STB	Strobe signal input in. Connect to the EXST pin of the microprocessor.
18	I	DATA	Data input pin. Connect to the EXDATA pin of the microprocessor.
19	I	CLK	Clock input pin. Connect to the EXCLK pin of the microprocessor.
20	-		Power supply pin. Connect to +5V.

I/O 2.

Pin No.	I/O	Name	Function
1	O	A SOL	A solenoid control H: ON L: OFF
2	O	A HOLD	A solenoid hold control H: ON L: OFF
3	O	A CPM	A main motor control. Hub motor speed change. H: ON L: OFF
4	O	A CSP	A main motor speed change H: NORMAL SPEED L: HIGH SPEED
5	O	A RRW	A reel motor control H: REWIND, RVS L: Others
6	O	A RFF	A reel motor control H: FF, FWD L: Others
7	O	B SOL	B solenoid control H: ON L: OFF
8	O	B HOLD	B solenoid hold control H: ON L: OFF
9	O	B CPM	B main motor control. Reel motor speed change. H: ON L: OFF
10	-	Vss	Ground pin. Connect to ground.
11	O	B RFF	B reel motor control H: FF, FWD L: Others
12	O	B RRW	B reel motor control H: REWIND, RVS L: Others
13	O	B CSP	B main motor speed change H: NORMAL L: HIGH SPEED
14	O	SO	Data output pin. OPEN
15	I	SET	Connect to VDD (+5V). H: NORMAL L: All ports are low H
16	I	RESET	Connect to the EXRST pin of the microprocessor. H: NORMAL L: All ports are low.
17	I	STB	Stobe signal input pin. Connect to the EXST pin of the microprocessor.
18	I	DATA	Data input pin. Connect to the S0 pin of I/O expander 2.
19	I	CLK	Clock input pin. Connect to the EXCLK pin of the microprocessor.
20	-	V	Power supply pin. Connect to +5V.

CIRCUIT DESCRIPTION

I/O 3.

Pin No.	I/O	Name	Function
1	O	CCRS/NOR	CCRS/normal switching H: CCR L: NORMAL
2	O	OSC/NOR	AUTOBIAS/normal switching H: AUTOBIAS L: NORMAL
3	O	DOLBY B/C	Dolby B/C switching H: B TYPE L: C TYPE
4	O	DOLBY ON/OFF	Dolby on/off switching H: DOLBY OFF H: DOLBY ON
5	O	DOLBY R/P	Dolby REC/PLAY switching H: PLAY L: REC
6	O	MPX	MPX on/off control H: MPX ON L: MPX OFF
7	O	A METAL	A recording equalization switching (BIAS) H: METAL L: NOT METAL
8	O		A recording equalization switching
9	O	B METAL	B recording equalization switching
10	-	Vss	Ground pin. Connect to ground.
11	O		B recording equalization switching H: CrO2 L: NOT METAL
12	O	A RECMUTE	A recording mute control H: REC MUTE OFF L: REC MUTE ON
13	O	B RECMUTE	B recording mute control H: REC MUTE OFF L: REC MUTE ON
14	O	SO	Data output pin. Connect to the data pin of I/O expander 3.
15	I	SET	Connect to VDD (+5V). H: NORMAL L: ALL ports are low
16	I	RESET	Connect to the EXRST pin of the microprocessor. H: NORMAL L: ALL ports are low
17	I	STB	Strobe signal input pin. Connect to the EXST pin of the microprocessor.
18	I	DATA	Data input pin. Connect to the S0 pin of I/O expander 1.
19	I	CLK	Clock input pin. Connect to the EXCLK pin of the microprocessor.
20	-		Power supply pin. Connect to +5V.

CIRCUIT DESCRIPTION

Test Mode

1. Test 1

(a) Setting

Short test pins (TP 3 -▷|- 4) with a diode, and plug in the AC cord.

(b) Cancel

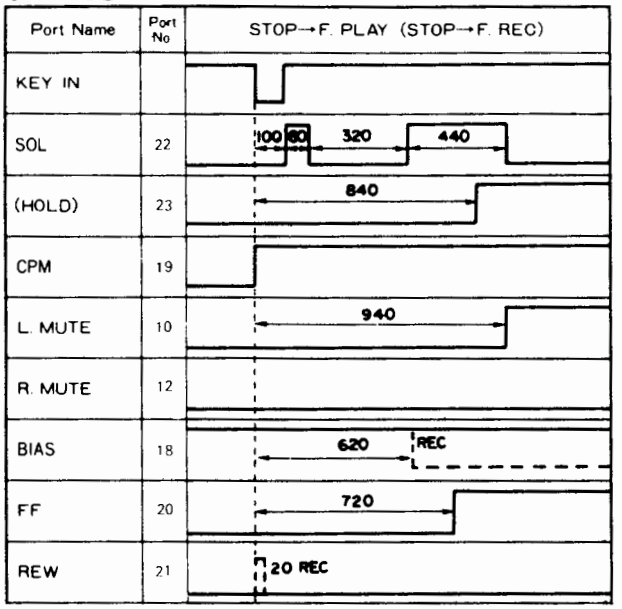
To cancel the test mode, press the PAUSE key on deck A or B, or switch the power off. Note that the direction and counter values while in the test mode are stored in memory. If the AC cord is disconnected while in the test mode, the memory is initialized completely.

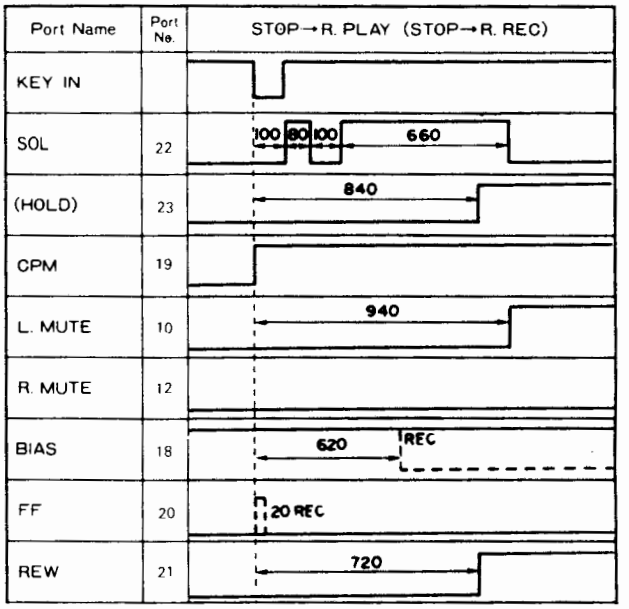
(c) Operation

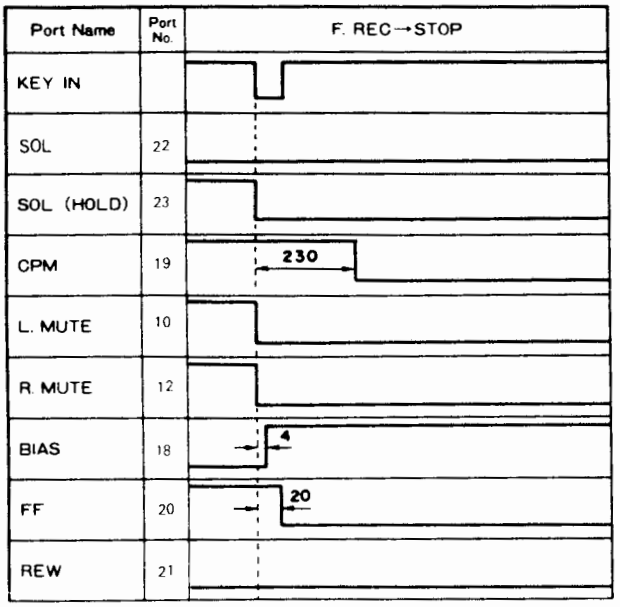
Mode	Operation
All indicators on	All indicators light two seconds after the power is switched on, then the normal display resumes (except for the meter section).
Mechanical switch display (DIRECTION switch)	L INHFA CrO2A METALA INHRA -15 -10 -6 -3 R INHFB CrO2B METALB INHRB 0 +3 +6 
Four-second recording (for decks A and B)	When the REC key is pressed, the counter is reset to 0.000, recording is done for four seconds, then the recorded part is played back from the beginning. • The key is accepted at any time.
Timer play	Deck A high-speed playback 4 seconds Deck A normal-speed playback 12 seconds Deck B high-speed playback 4 seconds Deck B normal-speed playback 12 seconds
Time recording	Deck B recording 15 seconds Rewind to the beginning. Deck B playback 13 seconds Deck B stop Note: Time recording is not done if there is no cassette in deck B.
Sheed change	FWD PLAY key ····· Normal playback (FWD) FF key ····· High-speed playback (FWD) RVS PLAY key ····· Normal playback (RVS) RWD key ····· Rewind Note: If the FWD PLAY and FF keys are pressed altermately, the head dones not retract.
High-speed recording	When the H. CCRS key is pressed, high-speed recording is done on deck B. Note: High-speed recording is not done if there is no cassette in deck B.
Dubbing H ⟷ L	If the H. DUB and N. DUB keys are pressed alternately, the dubbing speed can be changed without retracting the head. Note: The speed cannot be changed if there is no cassette in deck B.
Input level ATT	When the N. CCRS key is pressed, recording pauses, and the level can be input. If the input is excessive (+5 dB or higher), the PWM is changed and the level is set. When the B. REC key is pressed, recording can be done at the specified level. Note that the level is canceled when another operation is performed.
Keys to be inhibited	The DPSS mode is not entered. Note that the display is slightly different from the normal one.

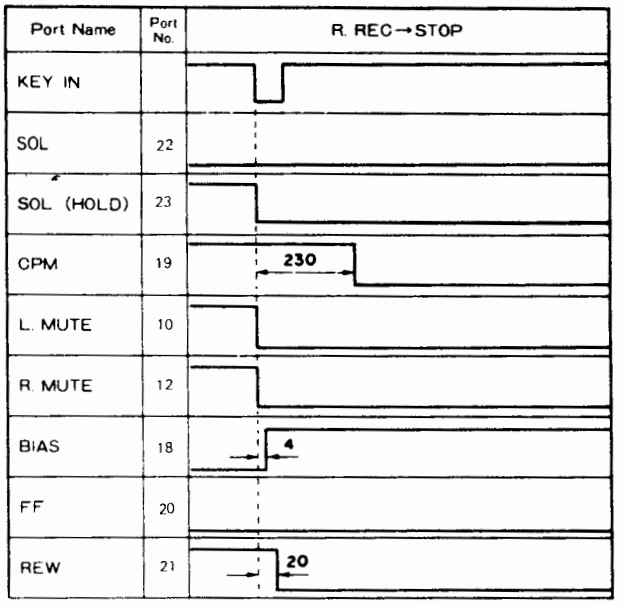
CIRCUIT DESCRIPTION

TIMING CHART









CIRCUIT DESCRIPTION

Port Name	Port No.	STOP→FF→STOP
KEY IN		
SOL	22	
(HOLD)	23	
CPM	19	
L. MUTE	10	
R. MUTE	12	
BIAS	18	
FF	20	
REW	21	

Port Name	Port No.	STOP→REW→STOP
KEY IN		
SOL	22	
(HOLD)	23	
CPM	19	
L. MUTE	10	
R. MUTE	12	
BIAS	18	
FF	20	
REW	21	

Port Name	Port No.	F. PLAY→CUE (R.PLAY→REVIEW)
KEY IN		
SOL	22	40, 130
(HOLD)	23	70
CPM	19	
L. MUTE	10	
R. MUTE	12	
BIAS	18	
FF	20	70
REW	21	

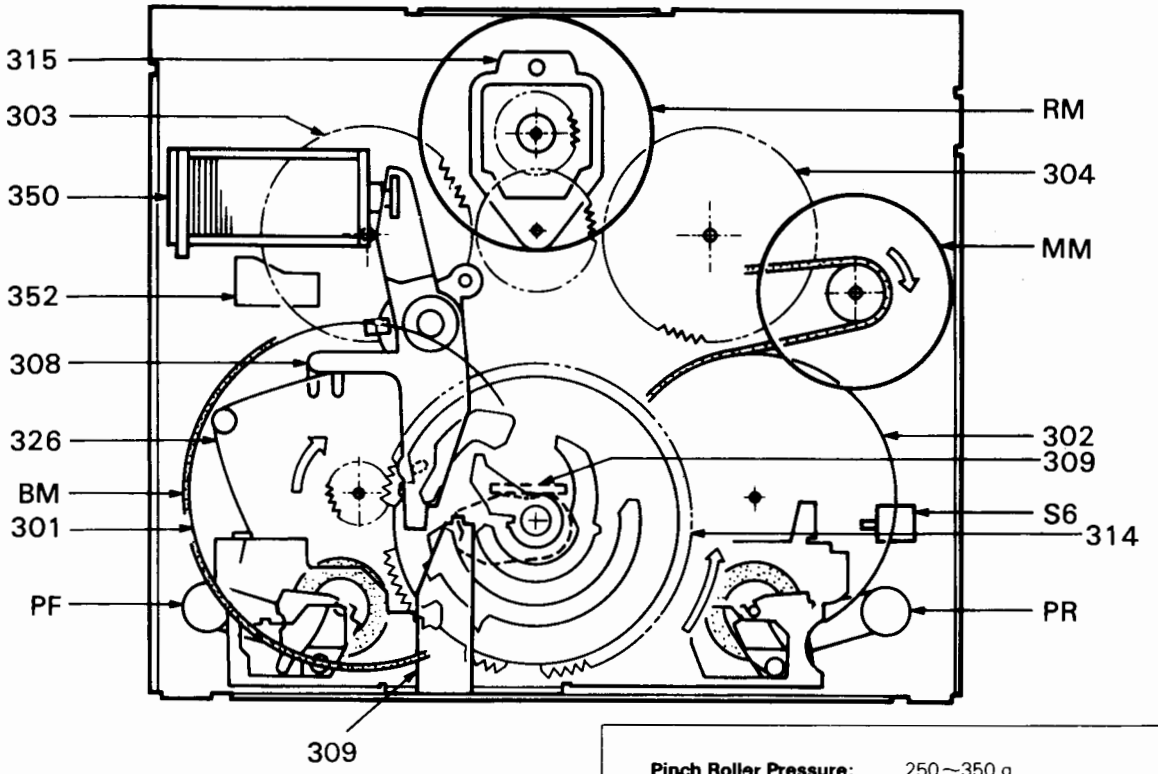
Port Name	Port No.	F. PLAY→REVIEW (R. PLAY→CUE)
KEY IN		
SOL	22	40, 130
(HOLD)	23	70
CPM	19	
L. MUTE	10	
R. MUTE	12	
BIAS	18	
FF	20	
REW	21	70

CIRCUIT DESCRIPTION

Port Name	Port No	F. CUE→STOP (R. REVIEW→STOP)
KEY IN		
SOL	22	340
(HOLD)	23	340
CPM	19	490
L. MUTE	10	
R. MUTE	12	
B. BIAS	18	
FF	20	280, 60
REW	21	160

Port Name	Port No	F. REVIEW→STOP (R. CUE→STOP)
KEY IN		
SOL	22	340
(HOLD)	23	340
CPM	19	490
L. MUTE	10	
R. MUTE	12	
B. BIAS	18	
FF	20	160
REW	21	280, 60

MECHANISM DESCRIPTION



Pinch Roller Pressure:	250~350 g
Take-up Torque:	30~70 g·cm (2.5 V)
FF. REW Torque:	90~180 g·cm (3.8 V)
Back Tension Torque:	2~6 g·cm

Use a Reference number ( ).

STOP to FWD PLAY/REC Operation

Press the PLAY key.

Only in the STOP to REC mode, the REEL MOTOR rotates in the REW direction for 20 msec. to rewind the tape slightly.

By a signal from the microcomputer, the CAPSTAN MOTOR M1 rotates, and the SOLENOID (350) turns ON.

The PLAY ARM (308) swings in the direction of the arrow (➡ Ⓐ).

The pin Ⓑ of the PLAY ARM is released from the stopper section Ⓒ of the CAM GEAR (314).

The CAM GEAR rotates slightly and engages with the gear of the FLYWHEEL (301).

After a while, the SOLENOID turns OFF.

Since the SLIDER (309) is pushed by the torsion spring (326) in the direction of the arrow (➡), the protrusion swings along the orbit Ⓗ.

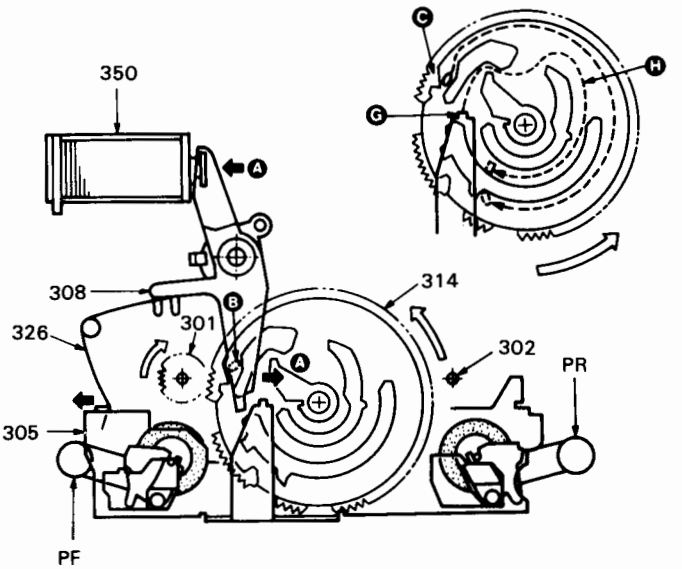


Fig. 2 STOP to FWD (forward) PLAY/REC operation

MECHANISM DESCRIPTION

The bending section Ⓔ of the HEAD BASE (309) is lifted by the cam Ⓕ of the CAM GEAR and begins moving upward.

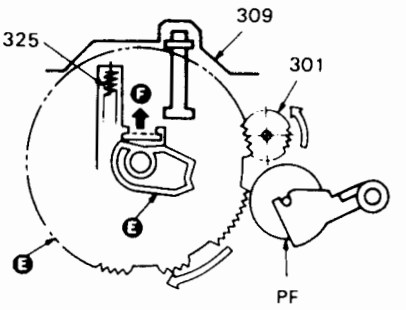


Fig. 3 (Front side view)

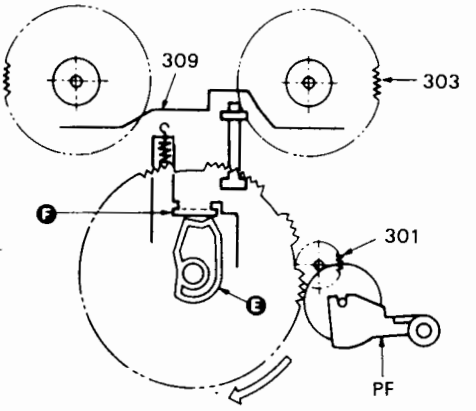


Fig. 4 STOP→PLAY/REC (Front side view)

When the CAM GEAR is rotated by about 3/4 of a revolution, the pin Ⓑ of the PLAY ARM comes into contact with the stopper Ⓓ of the CAM GEAR.
At this time, the non-tooth section of the CAM GEAR reaches the gear of the FLYWHEEL, and the CAM GEAR stops rotating.
When the HEAD BASE comes to the top end the boss Ⓛ of the pinch roller (L) comes into contact with the edge Ⓙ of the SLIDER and it does not press the capstan.
Since the boss Ⓚ of the pinch roller (R) is inserted into the groove of the SLIDER, it is pressed to the capstan and the deck enters the FWD PLAY mode.

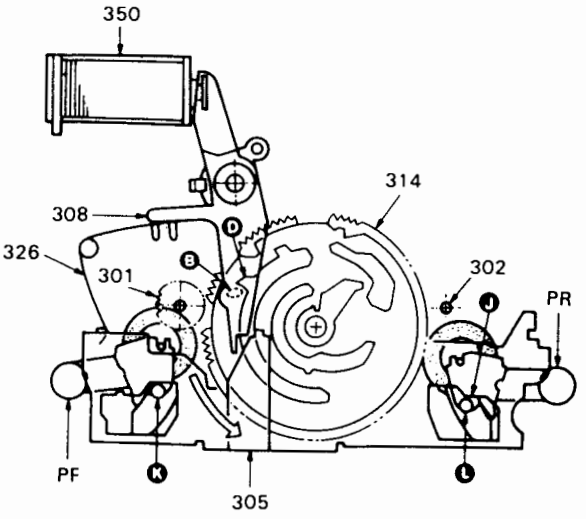


Fig. 5 FWD PLAY status

MECHANISM DESCRIPTION

STOP to RVS (reverse) PLAY/REC Operation

Press the PLAY key.

Only in the STOP to REC mode, the REEL MOTOR rotates in the REW direction for 20 msec. to rewind the tape slightly.

By a signal from the microcomputer, the CAPSTAN MOTOR M1 rotates, and the SOLENOID (350) turns ON.

The PLAY ARM (308) swings in the direction of the arrow Ⓐ.

The pin Ⓑ of the PLAY ARM is released from the stopper section Ⓒ of the CAM GEAR (314).

The CAM GEAR rotates slightly and engages with the gear of the FLYWHEEL (301).

The SOLENOID turns OFF, and CAM GEAR is still rotating.

When the SOLENOID turns ON again, the protrusion Ⓖ is pushed by the edge Ⓛ of the PLAY ARM, and SWINGS along the orbit ➡ Ⓜ

By the cam Ⓝ of the CAM GEAR, the SLIDER moves largely in the direction of the arrow

The bending section Ⓕ of the HEAD BASE (309) is lifted by the cam Ⓔ of the CAM GEAR and begins moving upward.

When the CAM GEAR is rotated by about 3/4 of a revolution, the pin Ⓑ of the PLAY ARM comes into contact with the stopper Ⓓ of the CAM GEAR.

At this time, the non-tooth section of the CAM GEAR reaches the gear of the FLYWHEEL, and the CAM GEAR stops rotating.

When the HEAD BASE comes to the top end, the boss Ⓚ of the pinch roller (R) comes into contact with the edge Ⓙ of the SLIDER and it does not press the capstan.

Since the boss Ⓙ of the pinch roller (L) is inseted into the groove of the SLIDER, it is pressed to the capstan and the deck enters the RVS (reverse) PLAY mode.

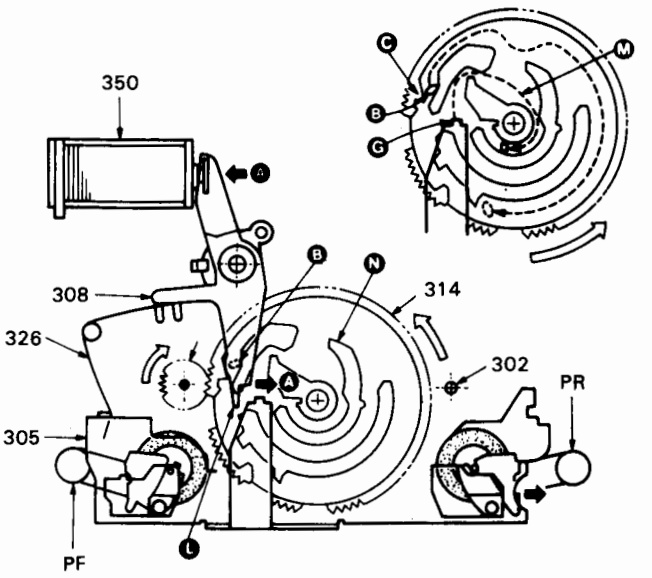


Fig. 6 STOP to RVS PLAY/REC operation

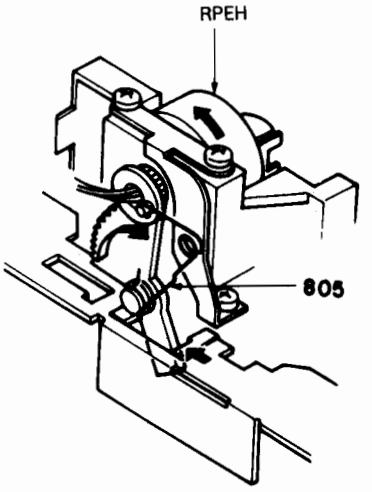


Fig. 7 Head selection (FWD to RVS)

MECHANISM DESCRIPTION

FWD (forward) PLAY/REC to STOP Operation

Press the STOP key.

By a signal from the microcomputer, the SOLENOID (350) turns OFF.

The PLAY ARM (308) is swung in the direction of the arrow ⬅ Ⓐ by the TORSION SPRING (326), and the pin Ⓑ is released from the stopper Ⓓ.

The CAM GEAR is slightly rotated by the HEAD BASE in the direction of the arrow

The CAM GEAR is engaged with the gear of the FLY-WHEEL (4) and continues rotating

The protrusion Ⓖ of the SLIDER (309) passes through the orbit ⋯➡ Ⓟ.

When the pin Ⓑ of the PLAY ARM comes into contact with the stopperr Ⓒ of the CAM GEAR, the CAM GEAR stops rotating

By the signal from the microcomputer, the CAPSTAN MOTOR stops and the deck enters the stop mode.

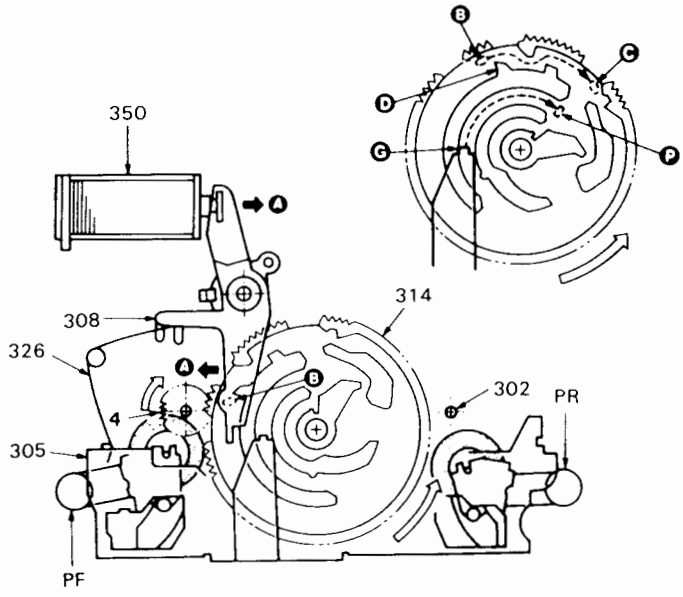


Fig. 8 FWD PLAY/REC to STOP operation

RVS (reverse) PLAY/REC to STOP Operation

Press the STOP key.

By a signal from the microcomputer, the SOLENOID (350) turns OFF.

The PLAY ARM (308) is swung in the direction of the arrow ⬅ Ⓐ by the TORSION SPRING (326), and the pin Ⓑ is released from the stopper Ⓖ.

The CAM GEAR is slightly rotated by the HEAD BASE in the direction of the arrow ⇨

The CAM GEAR is engaged with the gear of the FLY-WHEEL (301) and continues rotating.

The protrusion Ⓓ of the SLIDER (309) passes through the orbit ⋯➡ Ⓠ.

When the pin Ⓑ of the PLAY ARM comes into contact with the stopper Ⓒ of the CAM GEAR, the CAM GEAR stops rotating.

By the signal from the microcomputer, the CAPSTAN MOTOR stops and the deck enters the stop mode.

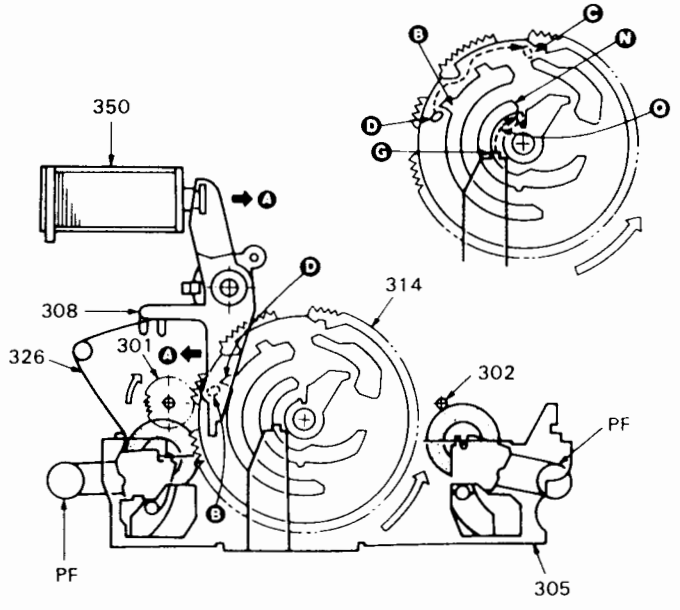


Fig. 9 RVS PLAY/REC to STOP operation

MECHANISM DESCRIPTION

STOP to FF/REW Operation

By a signal from the microcomputer, the SOLENOID (350) turns ON. At the same time, the REEL MOTOR M2 starts rotating in the appropriate direction. (REW: CW ⇦ , FF: ⇨ CCW)

According to the rotating direction of the REEL MOTOR, the IDLER ASS'Y (315) is swung in the appropriate direction. (REW: Ⓑ ⇦ , FF: ⇨ Ⓐ)

When the gear of the IDLER ASS'Y engages with the gear of the REEL ASS'Y (302, 303), the deck enters the FF/REW operation mode.

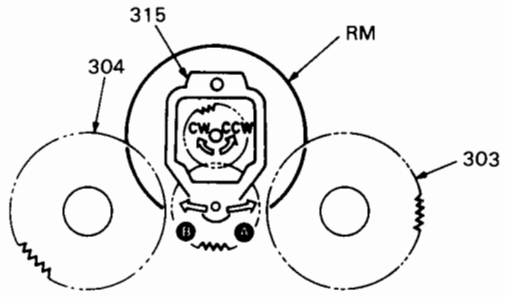


Fig. 10 (FRONT SIDE VIEW)

PLAY to CUE/REVIEW (REV) Operation

Press the FF/REW key during PLAY.

By a signal from the microcomputer, the SOLENOID (350) turns OFF.

The PLAY ARM (308) is swung in the direction of the arrow ⬅ Ⓐ by the TORSION SPRING (326), and the pin Ⓑ is released from the stopper

After approx. 40 msec., the SOLENOID is turned ON again.

The pin Ⓑ of the PLAY ARM passed by the internal orbit, and then comes into contact with the stopper Ⓒ of the CAM GEAR.

At this time, the non-tooth section of the CAM GEAR comes to the gear of the FLYWHEEL, and the CAM GEAR stops rotating at the position where the HEAD BASE (309) is lowered slightly to that position.

The PINCH ROLLER (PF, PR) is released from the CAPSTAN in accompanied with lowering movement of the HEAD BASE.

After a while, the CAPSTAN MOTOR stops rotating, and at the same time, the REEL MOTOR rotates in the appropriate direction to activate the CUE and REVIEW (REV) operations.

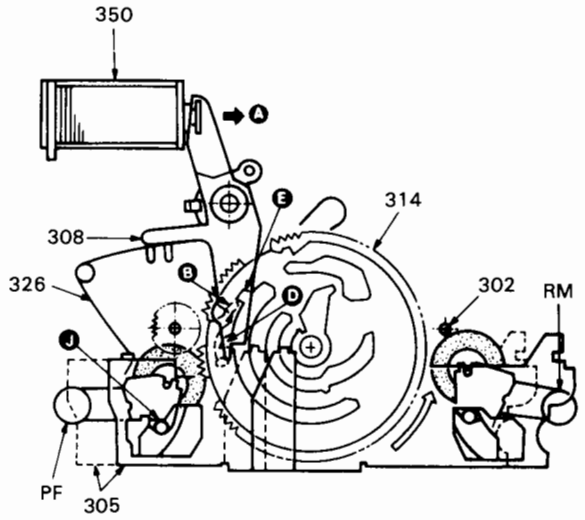


Fig. 11 PLAY to CUE/REV operation

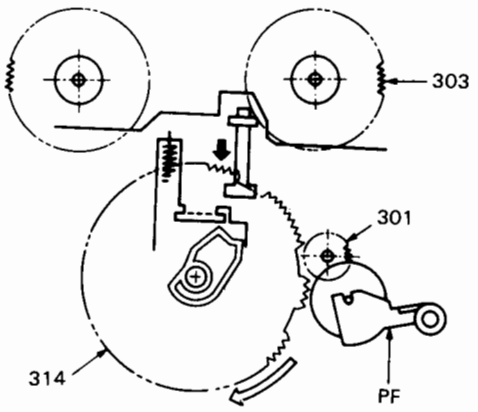


Fig. 12 CUE/REV status (Front side view)

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-114, TCC-153 SCC-1176 10kHz, -10dB	(B)	PLAY	Azimuth adjustment screw	Maximum output.	(a)
II PC BOARD (X28-231)							
(1)	TAPE SPEED (HI SPEED)	MTT-111, TCC-110 SCC-1176 3kHz -4dB	(B)	Connect a jumper between GND and TP3 PLAY	DECK A: DECK B: VR1 on each own mechanism board.	Adjust the tape speed so that a 6kHz signal is produced at the center of the tape.	
(2)	TAPE SPEED (NORMAL)	MTT-111, TCC-110 SCC-1176 3kHz -4dB	(B)	PLAY	DECK A: DECK B: VR2 on each own mechanism board	Adjust the tape speed so that a 3kHz signal is produced at the center of the tape.	
(3)	QUICK REVERSE SENSITIVITY	Use the leader section of the test tape.	Connect a DC voltmeter to TP2 and TP4.	PLAY	DECK A: VR9 DECK B: VR10	Adjust the semi-fixed resistanceso that 0.75V (±0.15V) voltage is obtained.	(b)
III PC BOARD (X28-231)							
<1>	PLAYBACK LEVEL	MTT-150 400Hz(200nWb)	(B)	PLAY	DECK A: VR1(L) VR2(R) DECK B: VR3(L) VR4(R)	Output level: -6.0dBs	
		MTT-256 315Hz(160nWb)				Output level: -9.0dBs	
		MTT-256U, TCC-160 SCC-1176 315Hz(220nWb)				Output level: -5.0dBs	
<2>	BIAS CURRENT	(A) 1kHz, -30dBs 10kHz, -30dBs	(B)	Adjust REC level volume so that the REC monitor output becomes -29dBs at 1kHz, then record and reproduce signal of 1kHz and 10kHz in alaternation.	DECK A: VR5(L) VR6(R) DECK B: VR7(L) VR8(R)	Record 1kHz and 10kHz in alternation and adjust the variable resistors which control the bias current so that the same playback level is obtained.	
<3>	BIAS OSCILLATING FREQUENCY	Load the non recorded tapes on Deck A and B.	Connect the frequency counter between TP1 and GND on Deck A, between TP2 and GND on Deck B.	REC	DECK A: L3 DECK B: L4	Adjust so that the frequency counter shows 105kHz.	(c)
<4>	BIAS LEAK	Load a non recorded tape on Deck A	(B)	Load a metal tape, and dub in a high speed mode.	DECK A: L5(L) L6(R) DECK B: L7(L) L8(R)	Minimum (Point)	

REGLAGE

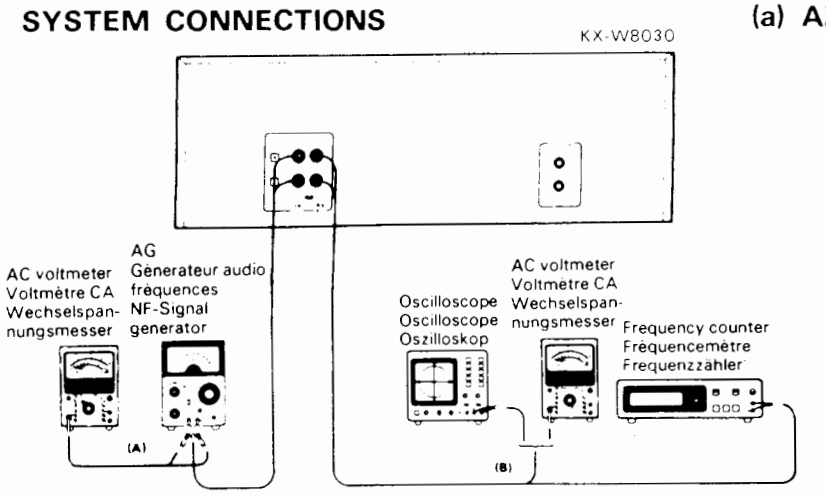
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU MAGNETO -PHONE A CASSETTE	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION DU MAGNETOPHONE		TAPE: NORMAL, DOLBY: OFF, ENTREE: LINE					0dBs = 0,775V
I TETE D'ENREGISTREMENT/LECTURE							
[1]	DEMAGNETISATION	-	-	POWER: OFF Eloigner la porte.	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 tete d'effacement, le cabestan et le galetpresseur avec un coton-tige légèrement imbibé d'alcool.	
[3]	AZIMUT	MTT-114, TCC-153 SCC-1176 10kHz,-10dB	(B)	PLAY	Vis d'azimut	Sortie maximer.	(a)
II PLAQUE IMPRIMEE (X28-231)							
(1)	VITESSE DE DEFILEMENT (HI SPEED)	MTT-111, TCC-110 SCC-1176 3kHz -4dB	(B)	Connecter un cablage entre les GND et TP3 PLAY	DECK A: DECK B: VR1 sur chaque Plaquette de mécanisms	Régler la vitesse de bande de façon qu'un signal de 6kHz soit produit au centre de la bande.	
(2)	VITESSE DE DEFILEMENT (NORMAL)	MTT-111, TCC-110 SCC-1176 3kHz -4dB	(B)	PLAY	DECK A: DECK B: VR2 sur chaque plaquette de mécanisme	Regler la vitesse de bande de facon qu'un signal de 3kHz soit produit au centre de la bande.	
(3)	SENSIBILITE D'INVERSION RAPIDE	Utiliser la section-guide de la bande test	Raccorder un voltmèter CC à TP2 et TP4.	PLAY	DECK A: VR9 DECK B: VR10	Ajuster la résistance semi-fixe pour que la tension 0,75V(±0,15V) soit obtenue.	(b)
III PLAQUE IMPRIMEE (X28-231)							
<1>	NIVEAU DE LECTURE	MTT-150 400Hz(200nWb)	(B)	PLAY	DECK A: VR1(G) VR2(D) DECK B: VR3(G) VR4(D)	Niveau de sortie: -6,0dBs	
		MTT-256 315Hz(160nWb)				Niveau de sortie: -9,0dBs	
		MTT-256U, TCC-160 SCC-1176 315Hz(220nWb)				Niveau de sortie: -5,0dBs	
<2>	COURANT DE POLARISATION	(A) 1kHz,-30dBs 10kHz,-30dBs	(B)	Régler REC de volume de niveau façon que la sortie de moniteur REC soit de -29dBs à 1kHz, puis en registrer et reproduire des signaux de 1kHz et 10kHz en alternance.	DECK A: VR5(G) VR6(D) DECK B: VR7(G) VR8(D)	Enregistrer un signal de 1kHz et 10kHz en alternance et ajuster les résistances variables qui commandent le courant de polarité de façon à obtenir le même niveau de lecture.	
<3>	FREQUENCE D'OSCILLATION DE POLARISATION	Mettre en place des cassettes non enregistrees dans les platines A et B.	Raccorder le compteur de frequence enter TP1 et GND de la platine A, enter TP2 et GND de la platine B.	Enregistrement	DECK A: L 3 DECK B: L 4 (X28-1380-01)	Régler de maniere à ce que le computeur de frequence indique 105kHz.	(c)
<4>	FUITE DE POLARISATION	Mettre en place une cassette non enregistree dans la platine A	(B)	Mettre en place unebande metal et copier en mode de vitesse elevee.	DECK A: L5(G) L6(D) DECK B: L7(G) L8(D)	Minimum (point)	

ABGLEICH

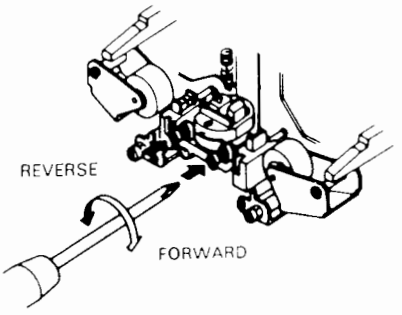
NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	KASSETTENGERÄT EINSTELLUNG	ABGLEICH PUNKTE	ABGLEICHEN FÜR	ABB.
CASSETTEN-DECK-ABTEILUNG		TAPE: NORMAL, DOLBY: OFF, EINGANG: LINE				0dBs=0.775V	
I AUFNAHME/WIEDERGABE KOPF							
[1]	ENTMAGNETI-SIERUNG	–	–	POWER: OFF Den Kassettenfach deckel oben herausziehen.	AUFNAHME/ WIEDERGABE-Kopf	Entmagnetisierung von dem AUFNAHME/WIEDERGABE-Kopf mit einem Tonkopf Entmagnetisierungsdrossel.	
[2]	REINIGUNG	–	–	PLAY	AUFNAHME/ WIEDERGABE-Kopf Loschkopf, Tonwelle, Andruckrolle.	AUFNAHME/WIEDERGABE-Kopf, Loschkopf, Tonwelle und Andruckrolle mit einem leicht mit Alkohol befeuchteten Wattebausch reinigen.	
[3]	AZIMUT EINSTELLUNG	MTT-114, TCC-153 10kHz,-10dB	(B)	PLAY	Azimut-Einstellschraube	Maximal Ausgang.	(a)
II GEDRUCKTE SCHALTPLATTE (X28-231)							
(1)	BANDGESCH-WINDIGKEIT (HI SPEED)	MTT-111, TCC-110 SCC-1176 3kHz -4dB	(B)	Einen Schaltdraht zwischen GND und TP3 anschließen. PLAY	DECK A: DECK B: VR1 anf der jeweils eigenen Mechanismus-Pldtine	Die Bandgeschwindigkeit so justieren, daß ein 6kHz Signal auf der Mitte des Bands erzeugt wird.	
(2)	BANDGESCH-WINDIGKEIT (NORMAL)	MTT-111, TCC-110 SCC-1176 3kHz -4dB	(B)	PLAY	DECK A: DECK B:	Die Bandgeschwindigkeit so justieren, daß ein 3kHz Signal auf der Mitte des Bands erzeugt wird.	
(3)	SCHNELLRUCKLAUF-EMPFINDLICHKEIT	Den Vorspann des Testbandes versenden.	Eine Gleichspannungs-messer an TP2 und TP4 anschließen.	PLAY	DECK A: VR9 DECK B: VR10	Den halbfesten Wiederstand so einstellen, daß, die Spannung 0,75V (±0,15V) beträgt.	(b)
III GEDRUCKTE SCHALTPLATTE (X28-231)							
<1>	WIEDERGABE-PEGEL	MTT-150 400Hz(200nWb)	(B)	PLAY	DECK A: VR1(L) A VR2(R) DECK B: VR3(L) VR4(R)	Ausgangspegel: -6,0dBs	
		MTT-256 315Hz(160nWb)				Ausgangspegel: -9,0dBs	
		MTT-256U, TCC-160 SCC-1176 315Hz(220nWb)				Ausgangspegel: -5,0dBs	
<2>	LEERLAUFSTROM	(A) 1kHz,-30dBs 10kHz,-30dBs	(B)	REC so Pegel Lautstarke justieren, daß der REC Monitorausgang -29dBs bei 1kHz wird, und danach abwechselnd Signal von 1kHz und 10kHz aufnehmen und wiedergeben.	DECK A: VR(L) 5(L) VR(R) 6(R) DECK B: VR(L) 7(L) VR(R) 8(R)	Signale von 1kHz und 10kHz abwechselnd aufnehmen und die Regelwiderstände, die den Vormagnetisierugsstrom regeln, so justieren, daß der gleiche Wiedergabepegel erzielt wird.	
<3>	VORMAGNETISIERUNGS OSZILLATIONS-FREQUENZ	Unbespielte Kassetten in Deck A und B einsetzen.	Den Frequenzzahler zwischen TP1 und GND von Deck A und zwischen TP2 und GND von Deck B anschließen.	REC	DECK A: L 3 DECK B: L 4	So einstellen, daß 105kHz auf dem Frequenzzahler angezeigt wird.	(c)
<4>	VORMAGNETISIE-RUNGSSTREUUNG	Eine unbespielte kassette in Deck A einsetzen.	(B)	Eine Metallband-kassette einsetzen und mit hoher Geschwindigkeit überspielen.	DECK A: L5(L) L6(R) DECK B: L7(L) L8(R)	Minimum (Punkt)	

ADJUSTMENT/REGLAGE/ABGLEICH

SYSTEM CONNECTIONS

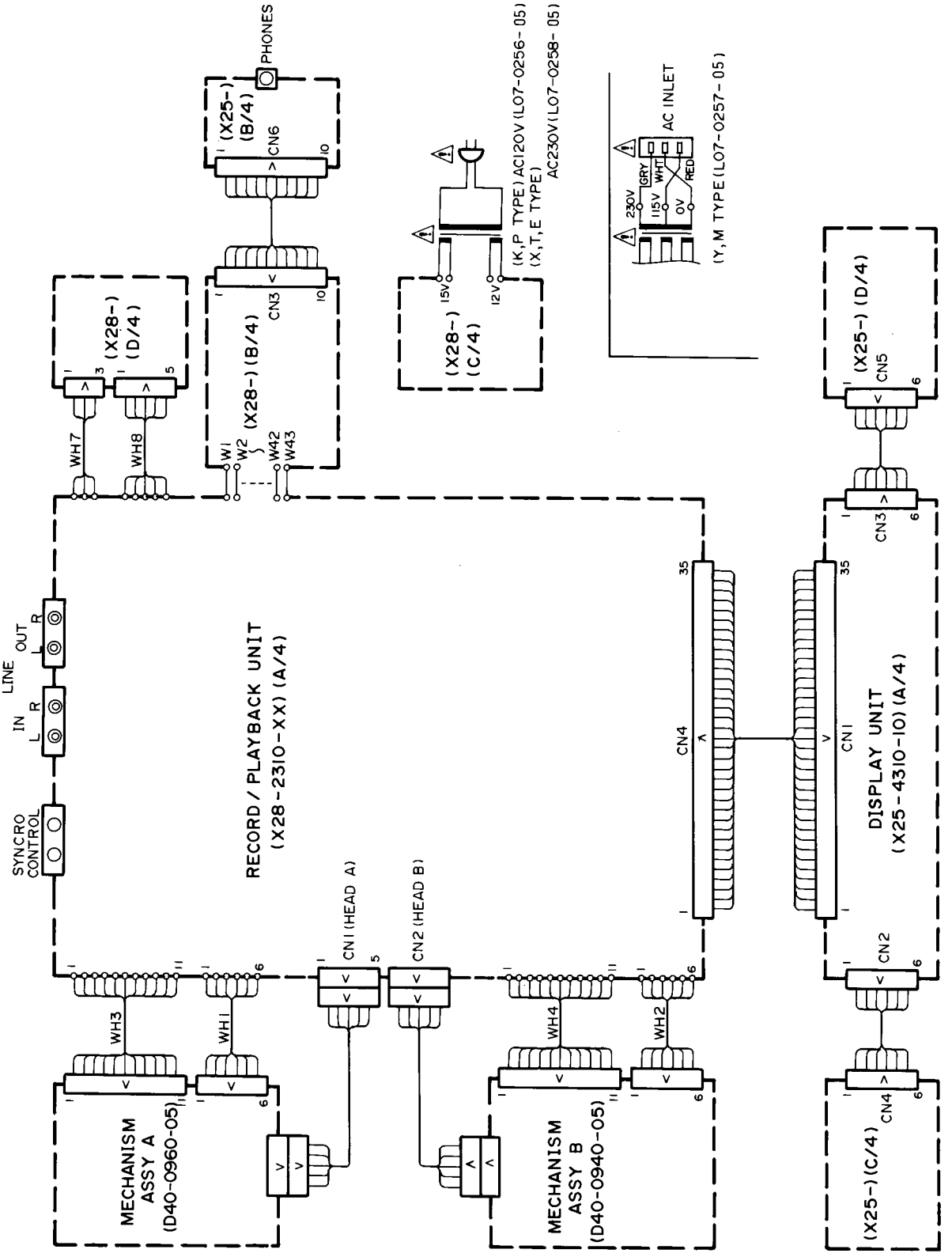


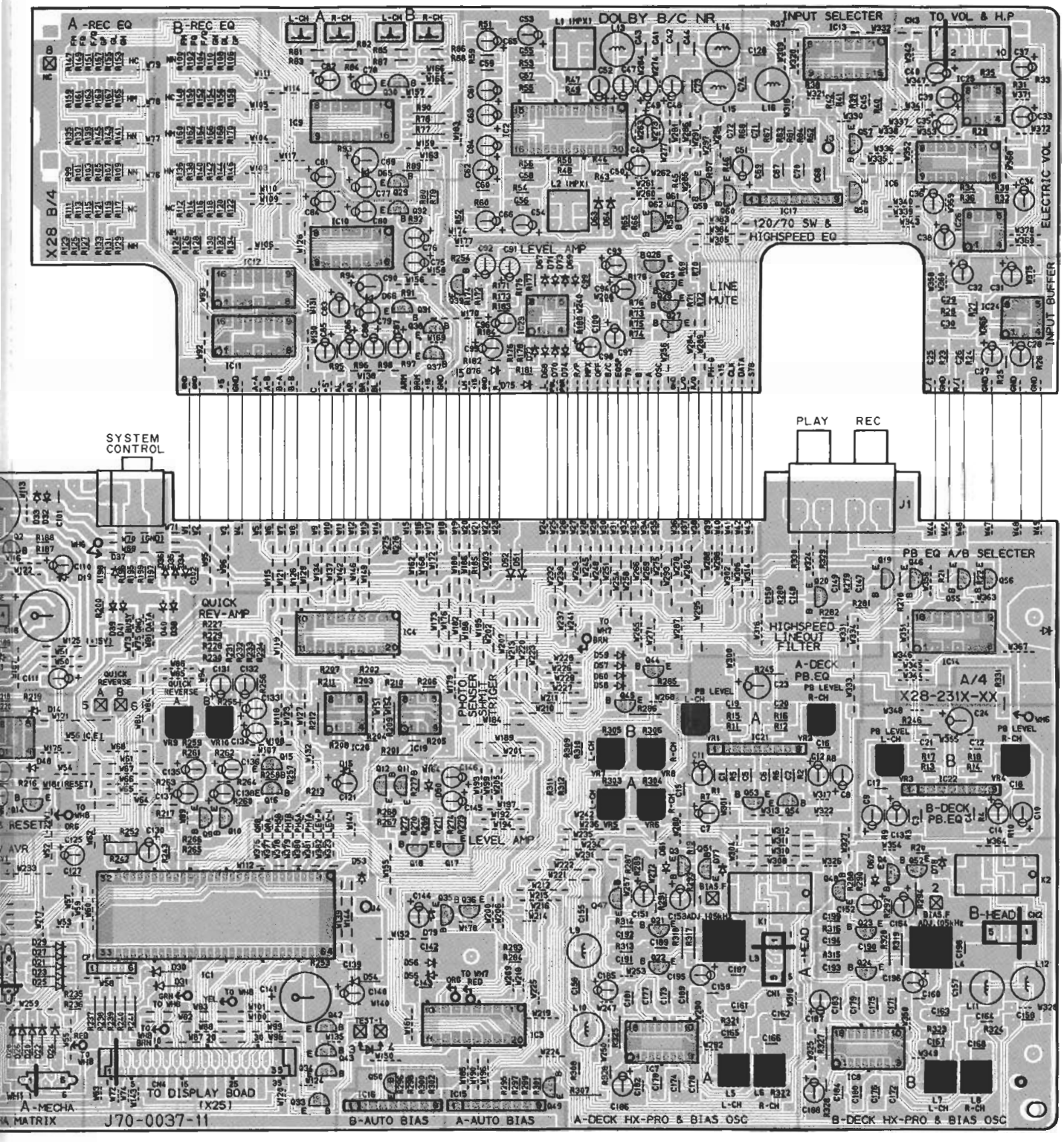
(a) AZIMUTH ADJUSTMENT SCREW



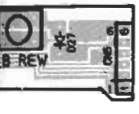
CREW

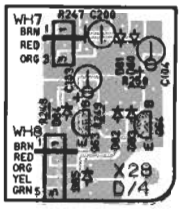
WIRING DIAGRAM

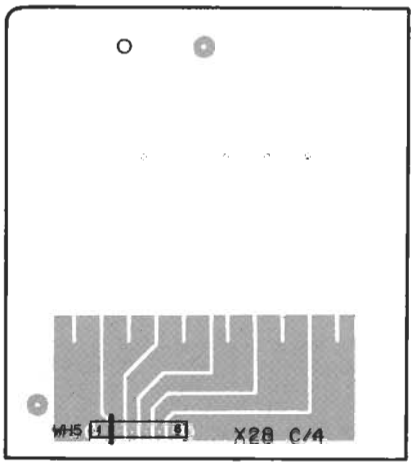


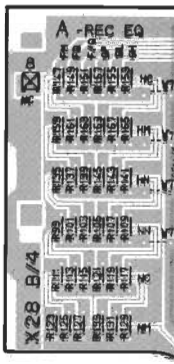


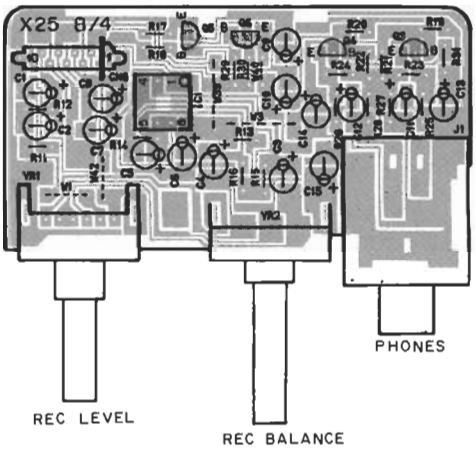
Refer to the schematic diagram for the values of resistors and capacitors.

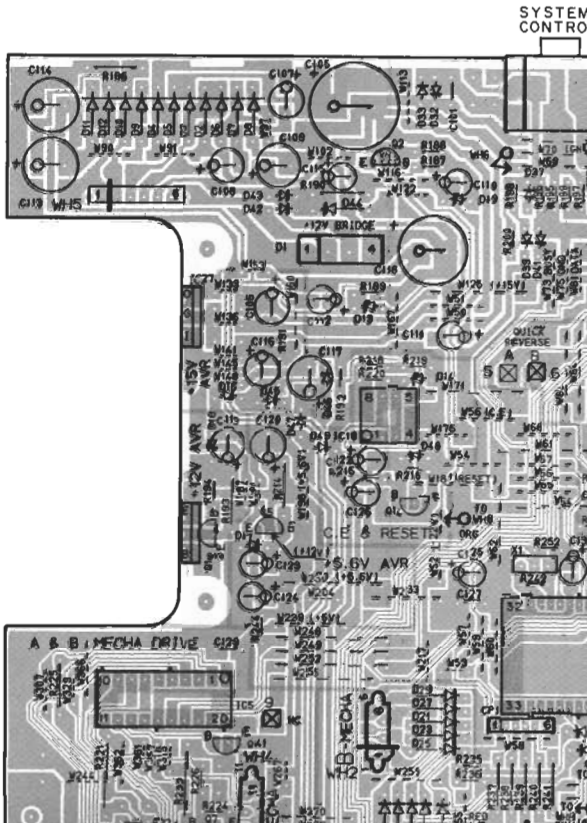


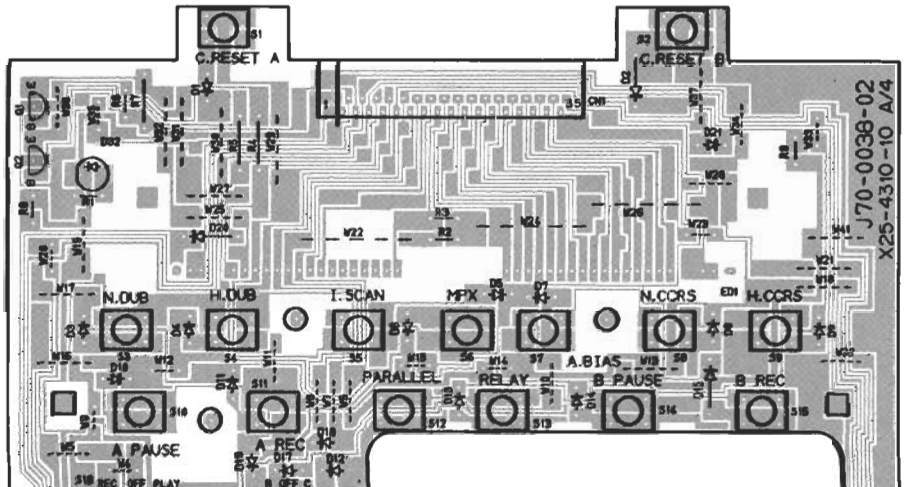

WH7
BRN
RED
ORG
WH8
BRN
RED
ORG
YEL
GRN
X28
D/4

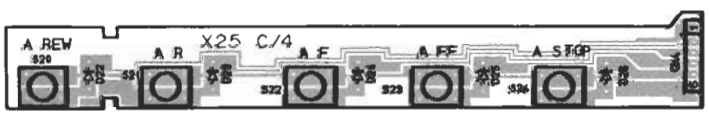

WH5
X28 C/4

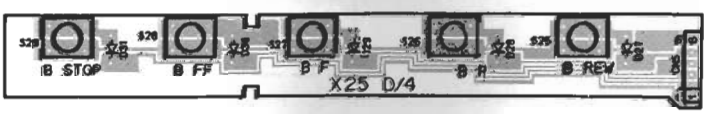

A-REC EQ
X28 B/4


X25 B/4
PHONES
REC LEVEL
REC BALANCE


SYSTEM
CONTRO
+12V BRIDGE
+12V AVR
+5.6V AVR
C.E & RESET
A & B MECHA DRIVE
A-MECHA
MECHA MATRIX


C.RESET A
C.RESET B
J70-0038-02
X25-4310-10 A/4
N.DUB
H.DUB
I.SCAN
MPX
N.CCRS
H.CCRS
A.BIAS
PARALLEL
RELAY
B PAUSE
B REC
A PAUSE
A REC
POWER


A REW
A R
A F
A FF
A STOP
X25 C/4


B STOP
B FF
B F
B R
B REW
X25 D/4

A B C D E

1 2 3 4 5 6 7

X28-2310-XX

A DECK

B DECK

W2 W1 CN1 CN2 K1 K2 TP1 TP2

NC R.REC HALF COM1 CrO2 F.REC METAL COM2

NC QR REEL S-V REEL V M.REEL M.REEL KICK CPM GND +B SP SOL

R/P HEAD L ch R ch ERASE HEAD

S1 S2 S3 S4 S5

METAL CrO2 F.REC PACK R.REC

TA7291S SPI-320 SPI-335-34 HZ-4A3 HZ-783

REEL MOTOR CPM MOTOR

2SC3377 2SA933 2SC4202

HI-SP OFF TAPE SPEED VR1 10K VR2 10K

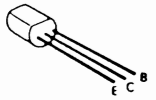
A-DECK BIAS ERG (105KHz) B-DECK BIAS FREQ (105KHz)

A-DECK ERASE CONT B-DECK ERASE CONT

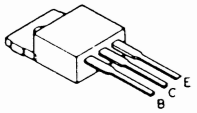
D77 D78 D61 D62 Q47 Q48 Q51 Q52 Q53 Q54

IC21 IC22

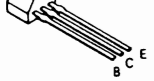
2SA999
2SC1845
2SC3246
2SC3940A



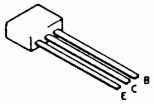
2SD1266



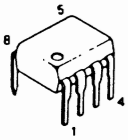
DTA124ES
DTC124ES
UN4112
2SA933S
2SC1740S



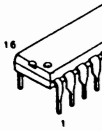
UN4212
2SA1309A
2SC3311A



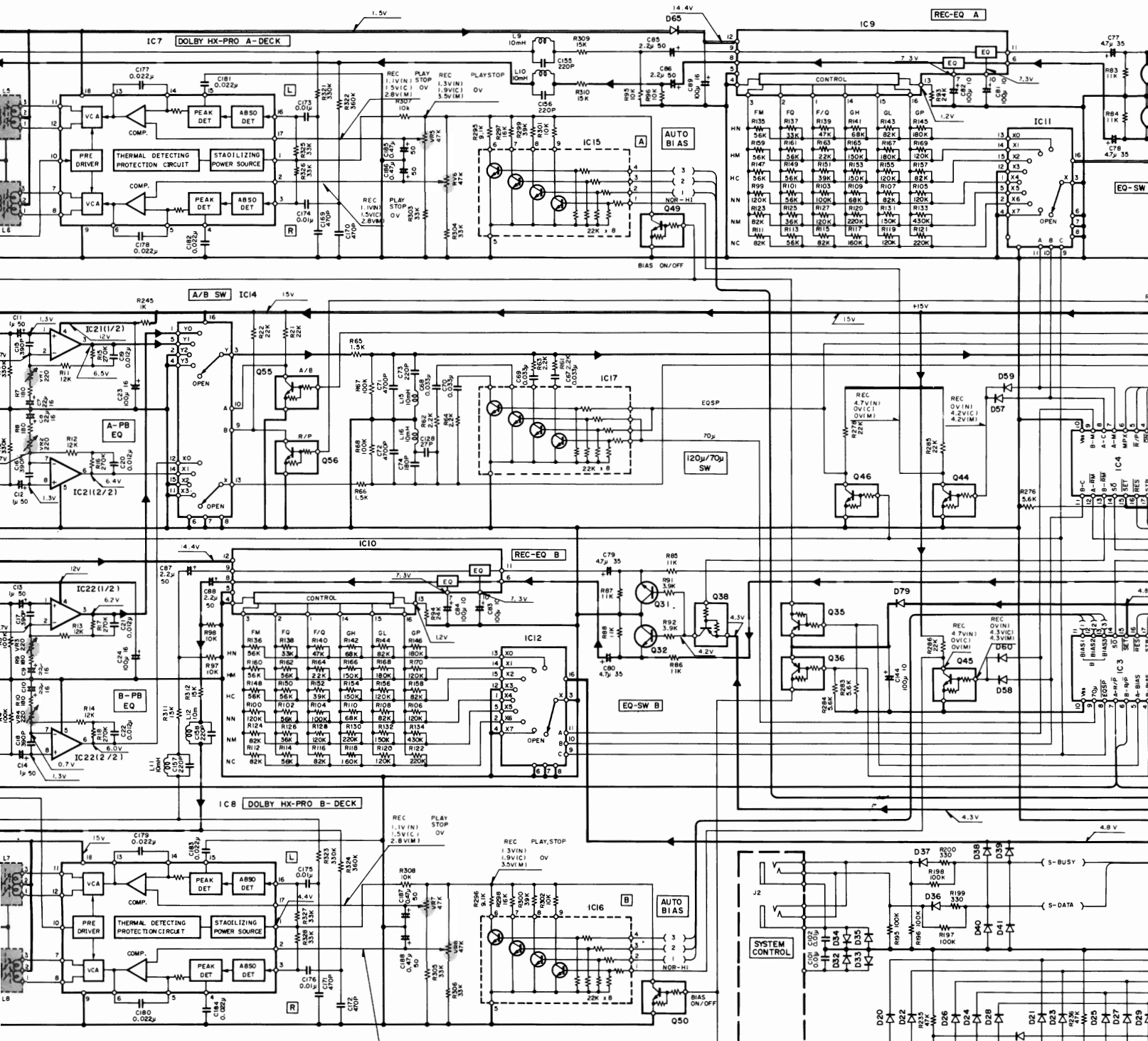
NJM4558D
NJM4565D-D



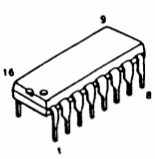
CXA119
XRU405



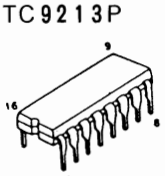
F G H I J



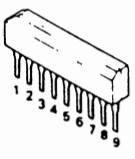
CXA1198AP
XRU4051B



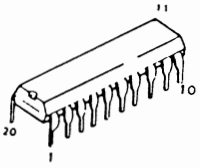
TC4051BP
TC4052BP
TC9213P



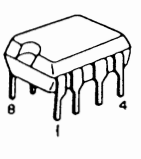
TA8125S
TD62554S



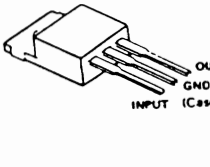
CXD1067P



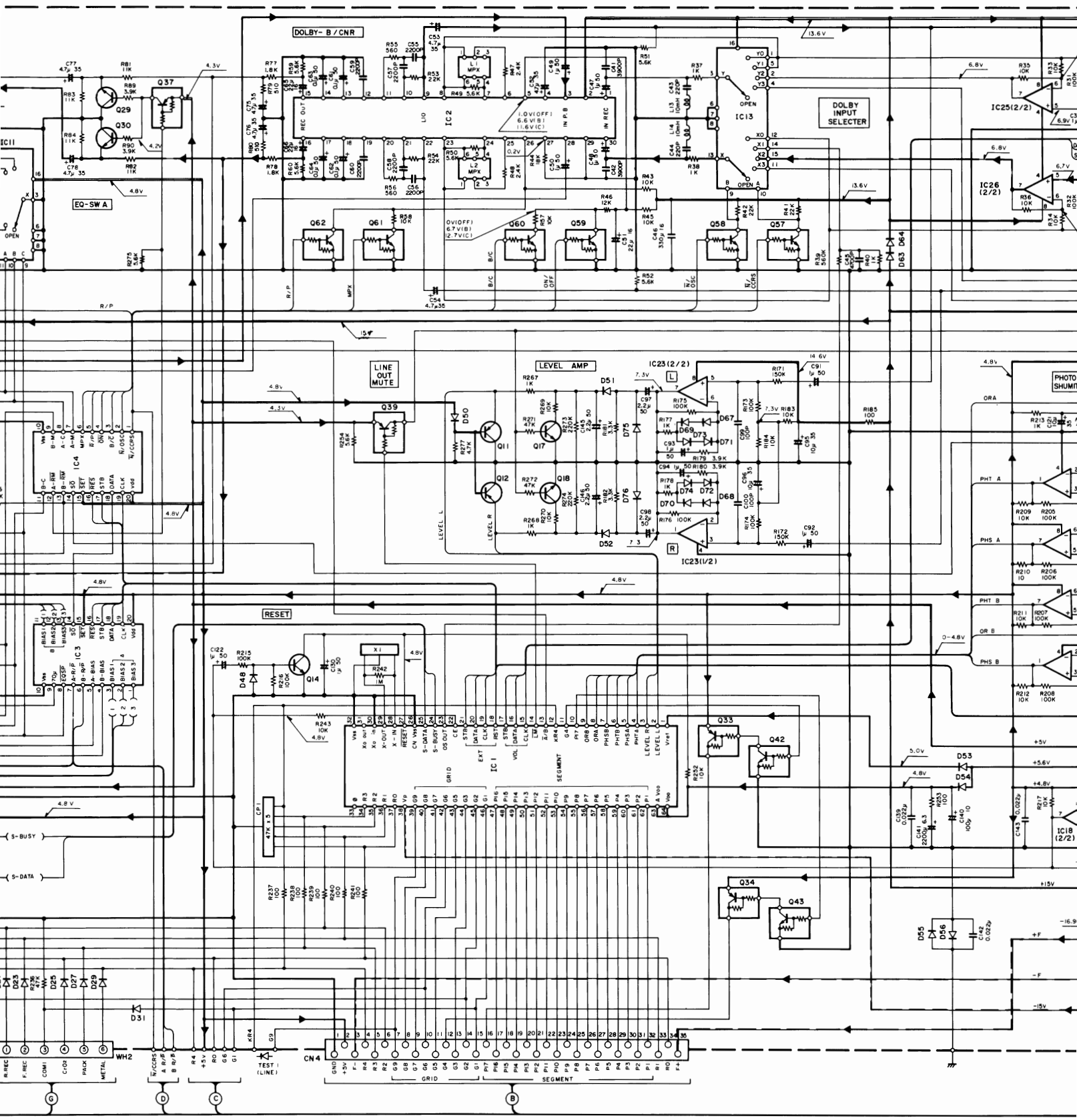
BA10393
RC4565D-D



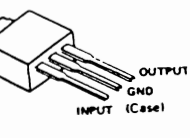
UPC7815HF



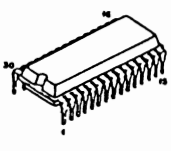
J K L M N O



C7815HF



HA12170NT



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

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

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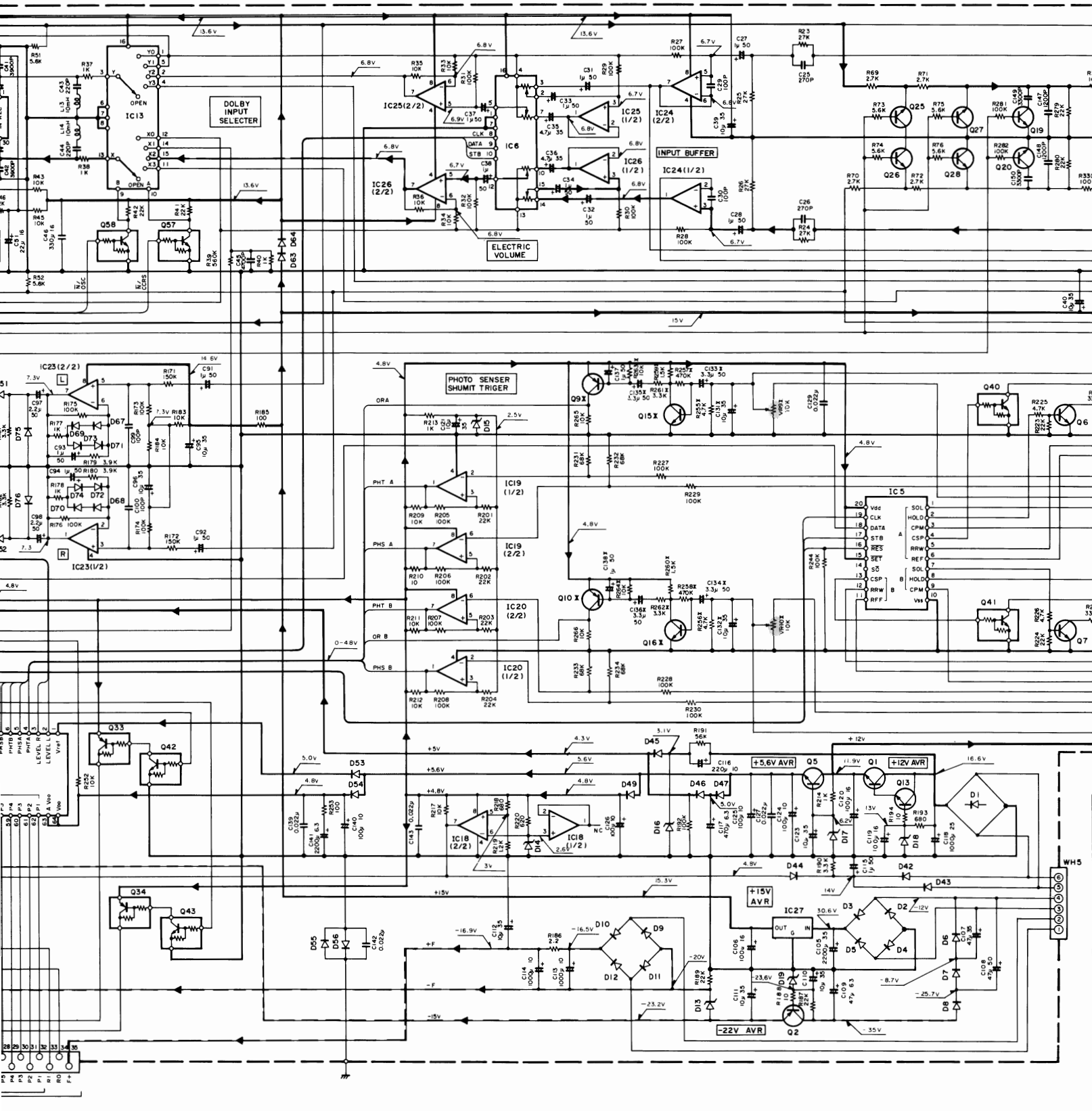
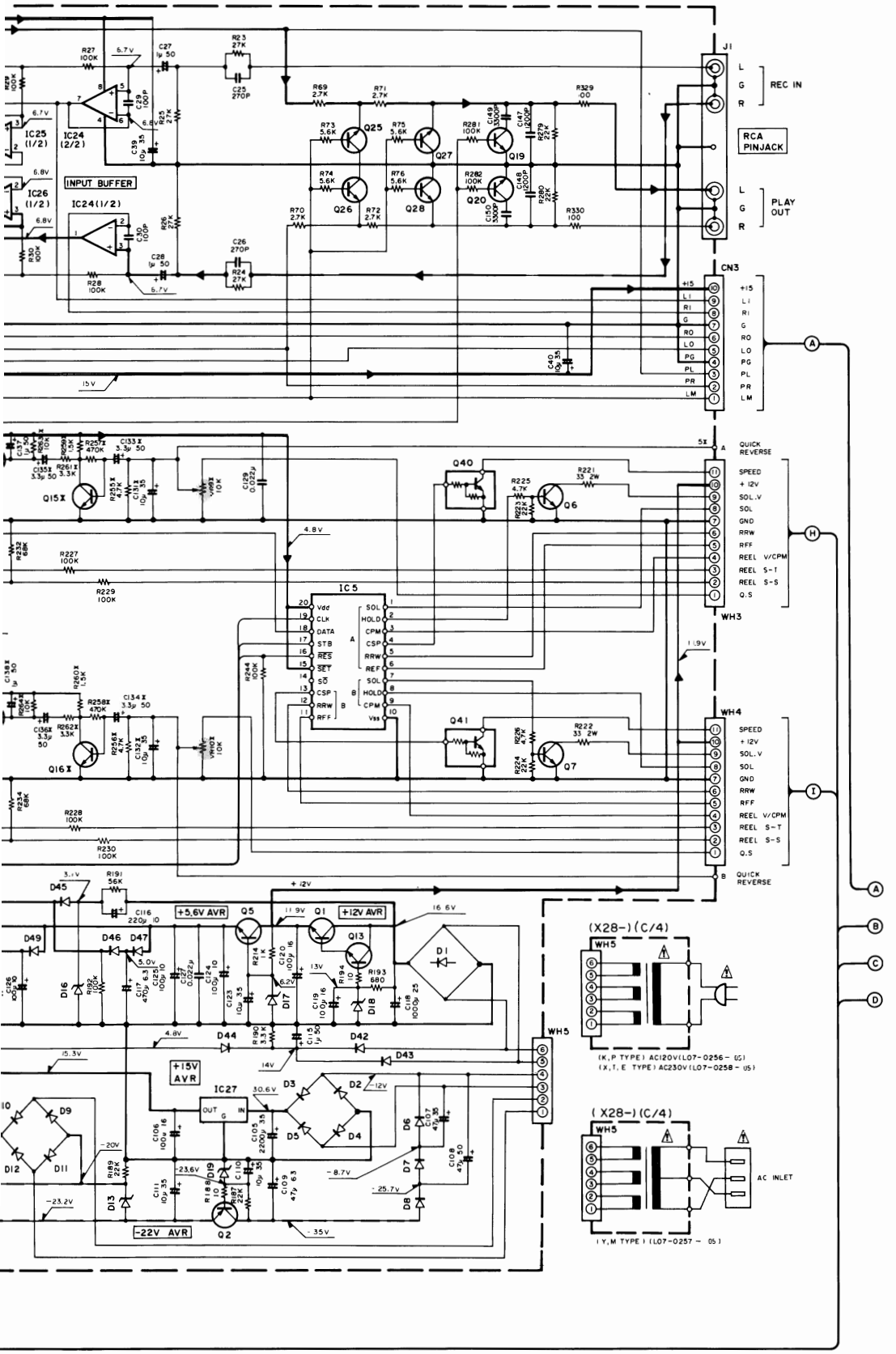


DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

CAUTION: For continued safety,
nents only with manufacturer's
parts list). ⚠ Indicates safety critic
risk of electric shock, leakage-curre
shall be carried out (exposed parts
the supply circuit) before the applia
er.



IC1:	M50945-090SP or
1	M50945-091SP
IC2:	HA12170NT
IC3. 4. 5:	CXD1067P
IC6:	TC9213P
IC7. 8:	UPC1297CA
IC9. 10:	CXA1198AP
IC11. 12:	XRU4051B or TC4051BP
IC13. 14:	XRU4052B or TC4052BP
IC15. 16. 17:	TD62554S
IC18. 19. 20:	BA10393
IC21. 22:	TA8125S
IC23	NJM4658D
IC24. 25. 26:	RC4565D-D or NJM4565D-D
IC27:	UPC7815HF
Q1	2SD1266(Q,P)
Q2	2SA999(E,F)
Q3. 4. 5:	2SC3940A
Q6. 7:	2SC3246
Q9~12:	2SA1309A(Q,R)or 2SA933S(Q,R)
Q13~32	2SC3311A(Q,R)or 2SC1740S(Q,R)
Q33~39:	UN4112 or DTA124ES
Q40~62:	UN4212 or DTC124ES
Q63. 64:	UN4117 2
D1:	KBP02ML-6127
D2~5:	1SR139-100 or
D9~12:	S5688B
D13. 14. 15:	RD2,7ES(B2) or HZS2,7N(B2)
D16:	RD4,7ES(B) or HZS2,7N
D17:	RD6,2ES(B2) or HZS6,2N(B2)
D18:	RD13ES(B2) or HZS13N(B2)
D19:	RD24ES(B) or HZS24N(B)
D30. 31:	RB721Q
D6~8:	
D20~29	1S5133 or HS5104
D32~85: 1	

SIGNAL LINE
REC LINE
GND LINE
+B LINE

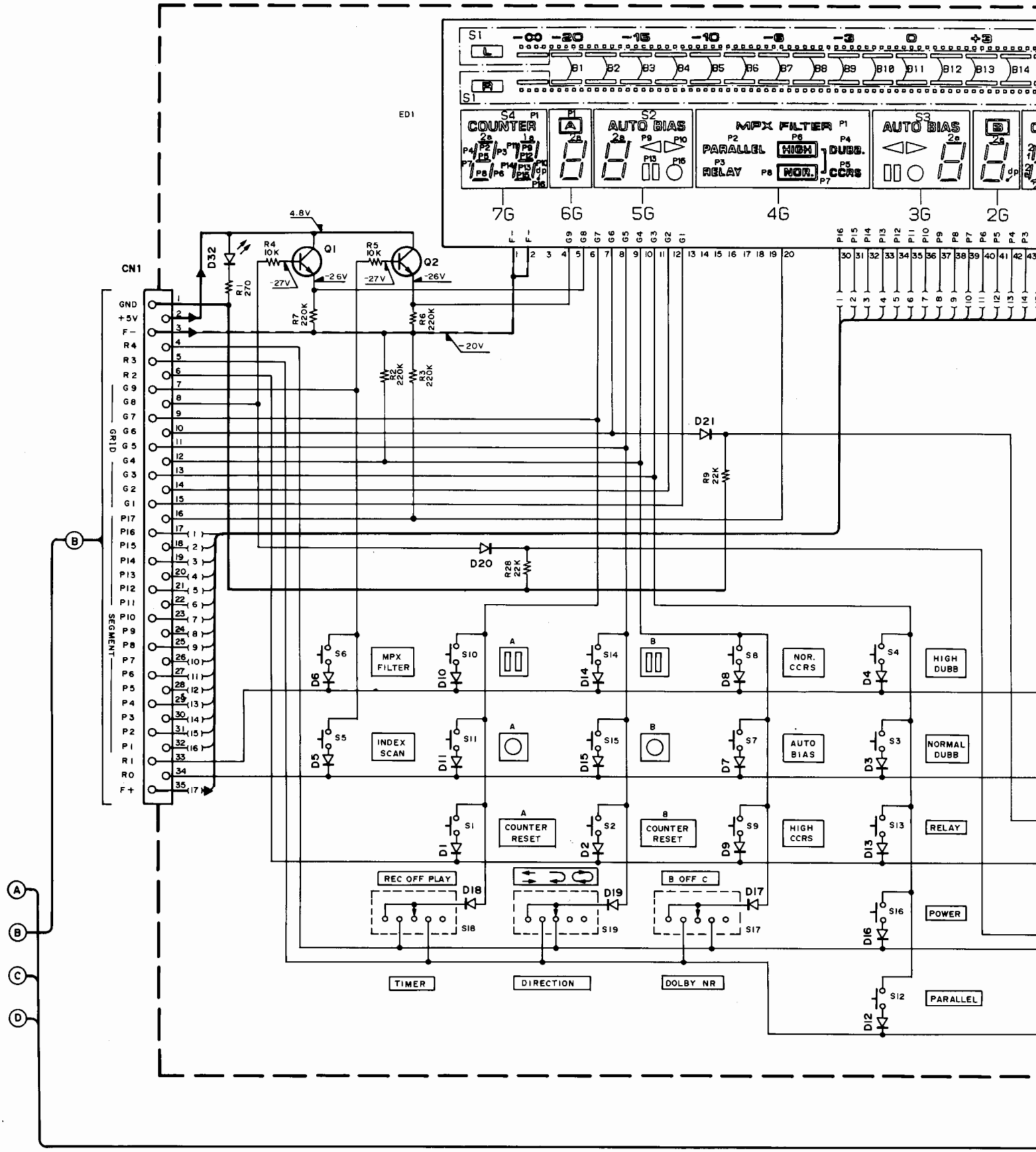
CODE	0-10	0 11
QUIC REVERSE	○	×
R331*	×	100 1/4W
VR9*, VR10*	○	×
Q9*, Q10*		
Q15*, Q16*		
C131*~C138*		
R255*~R264*		
PINS*, 6*		

spannungswerte wurden mit einem smesser gemessen. Dabei schwan- nd von Unterschieden zwischen ein- Geräten u. U. geringfügig.

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

KX-W8030

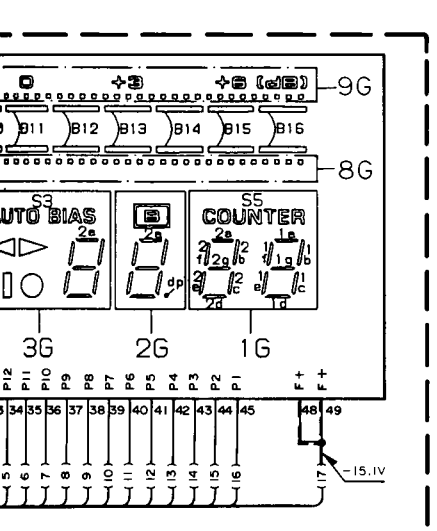
KENWOOD

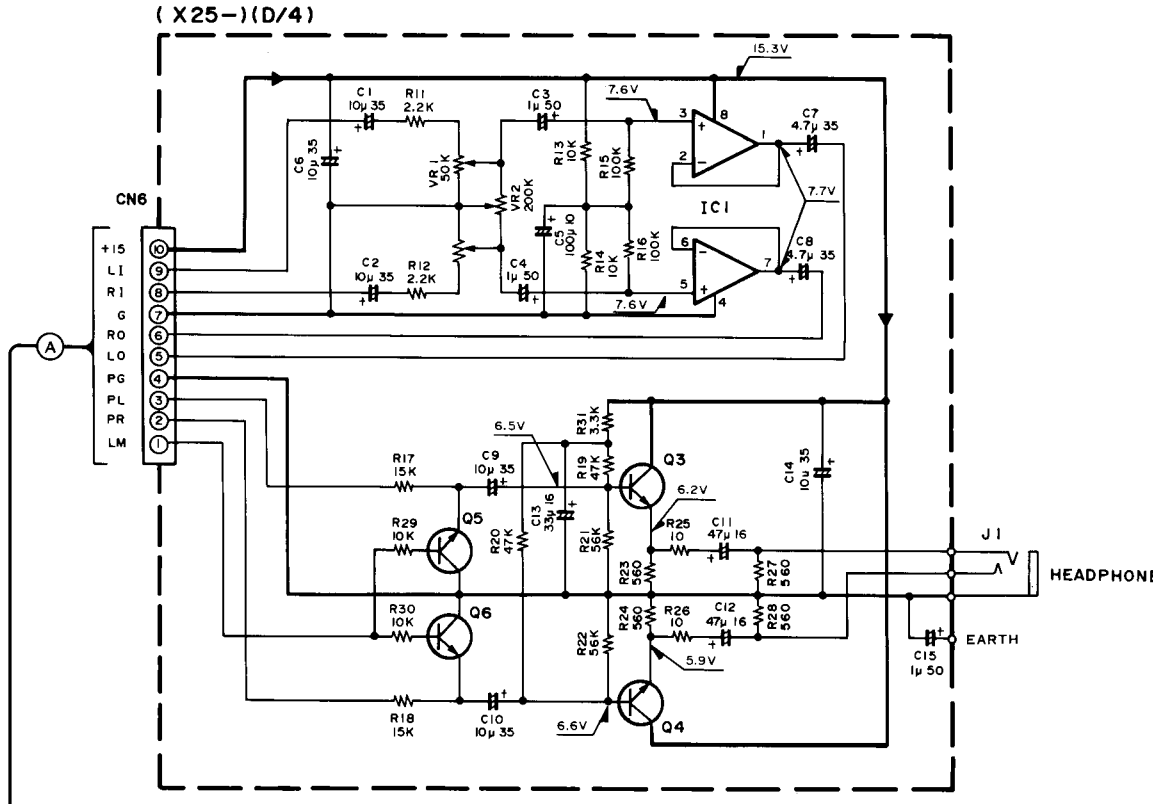


DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

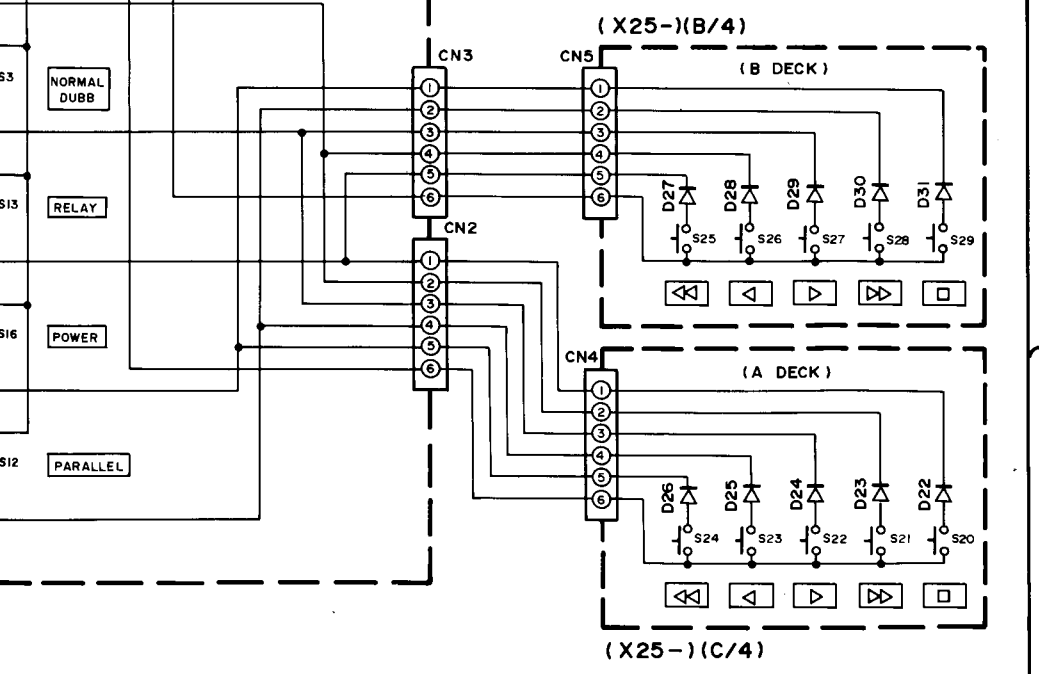
Die angegebenen Gleich
hochohmigen Spannung
ken die Meßwerte aufgru
zelnen Instrumenten oder

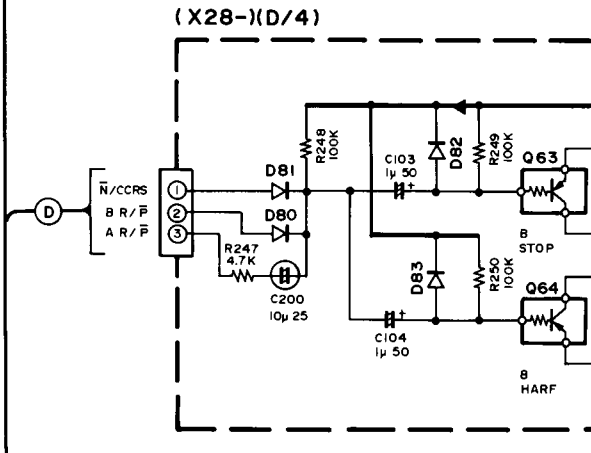




D1~D31	1SS133 or HSS104
D32	B30-1291-05
Q1,Q2	2SC3311(A) (Q,R) or
Q5,Q6	2SC1740S (Q,R)
Q3,Q4	2SC1845 (F,E)
IC1	RC4565D-D or NJM4565D-D
ED1	BG-952GK

CPU	X28-D/4
M50945-090SP	○
M50945-091SP	×





Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

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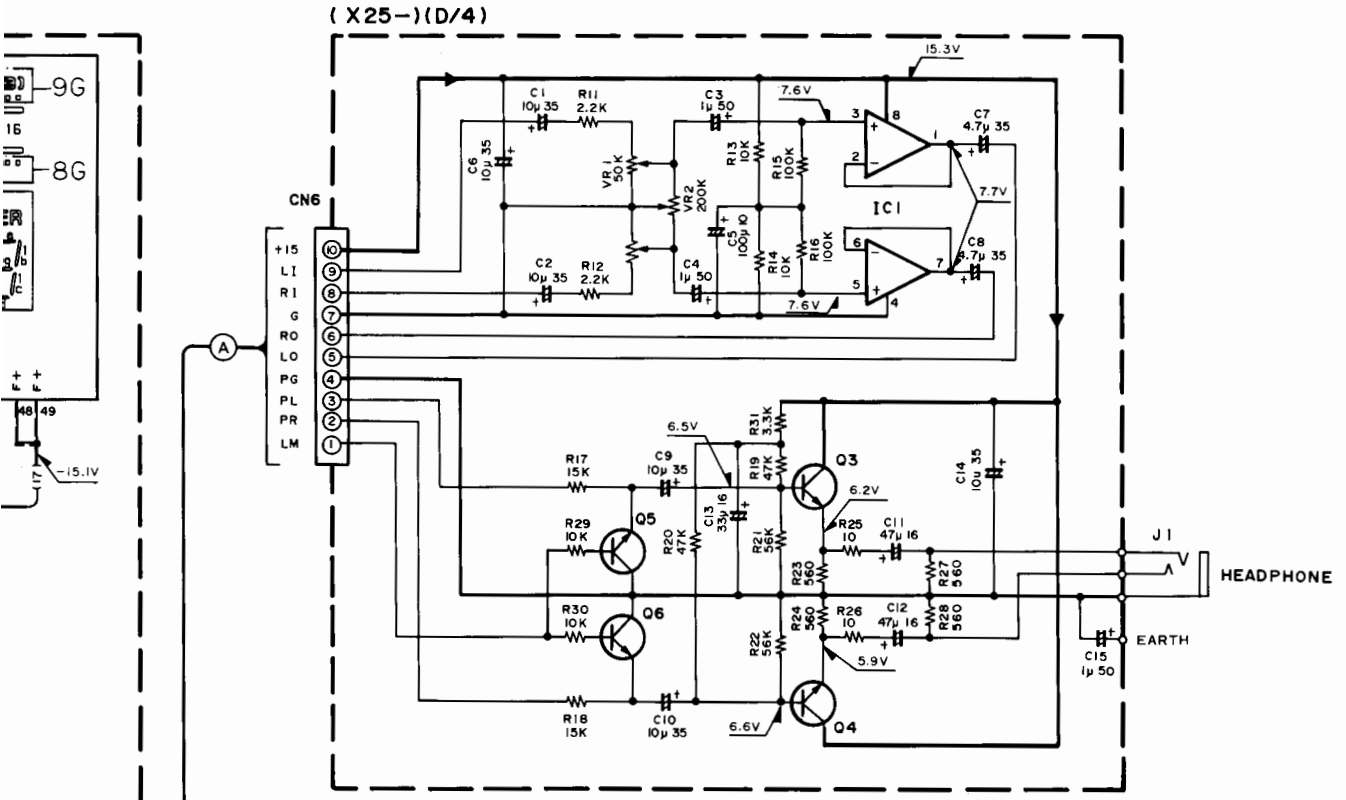
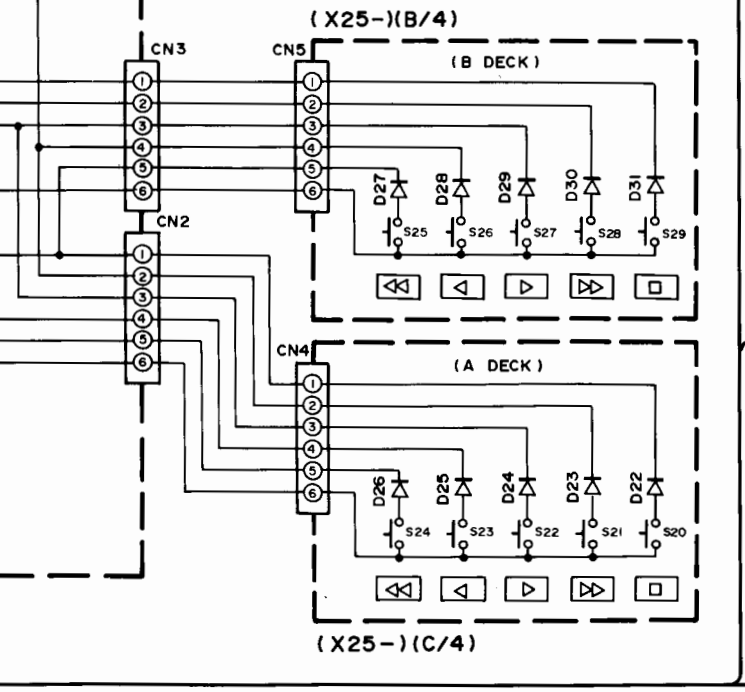
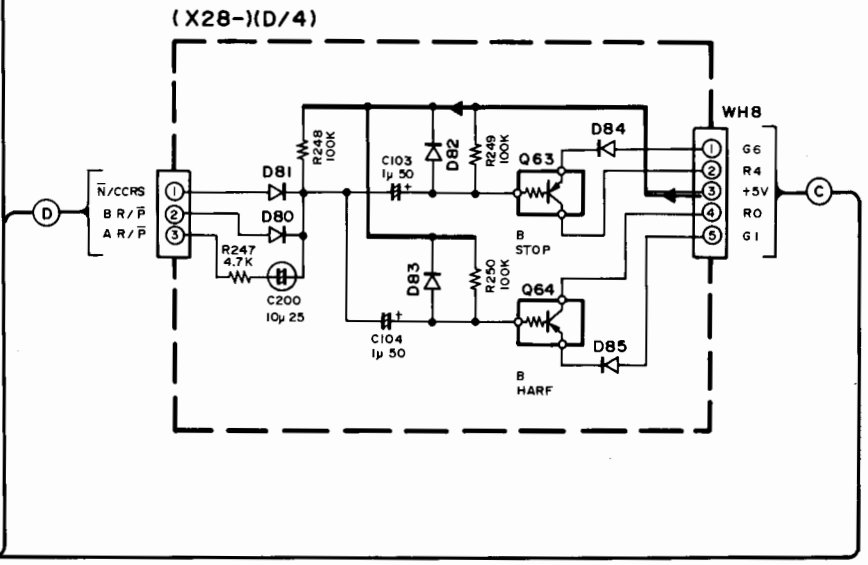


D1~D31	1SS133 or HSS104
D32	B30-1291-05
Q1,Q2	2SC3311(A) (Q,R) or
Q5,Q6	2SC1740S (Q,R)
Q3,Q4	2SC1845 (F,E)
IC1	RC4565D-D or NJM4565D-D
ED1	BG-952GK

C P U	X28- D/4
M50945-090SP	○
M50945-091SP	×





ngswerte wurden mit einem
r gemessen. Dabei schwan-
Unterschieden zwischen ein-
u. U. geringfügig.

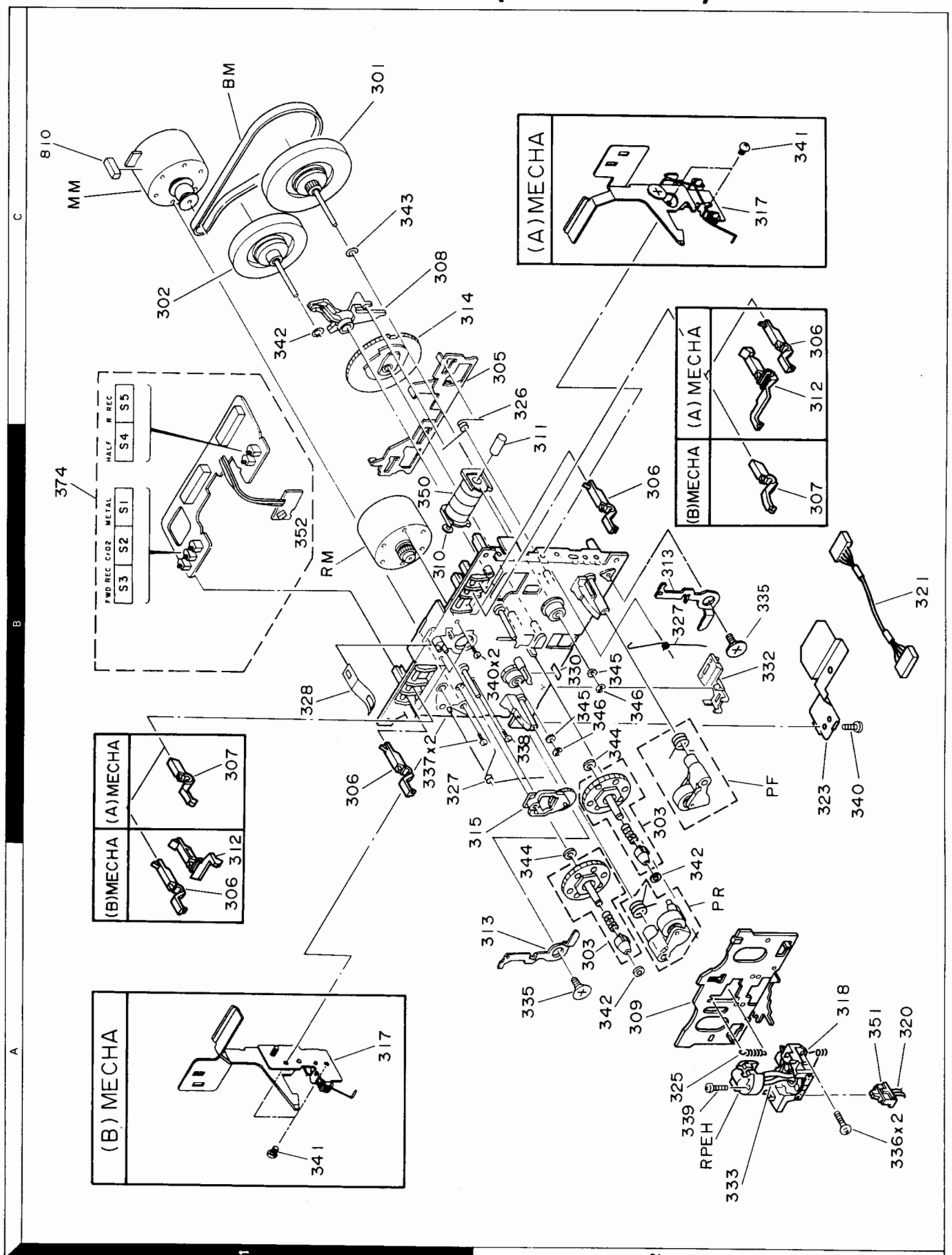
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably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

KX-W8030

KENWOOD

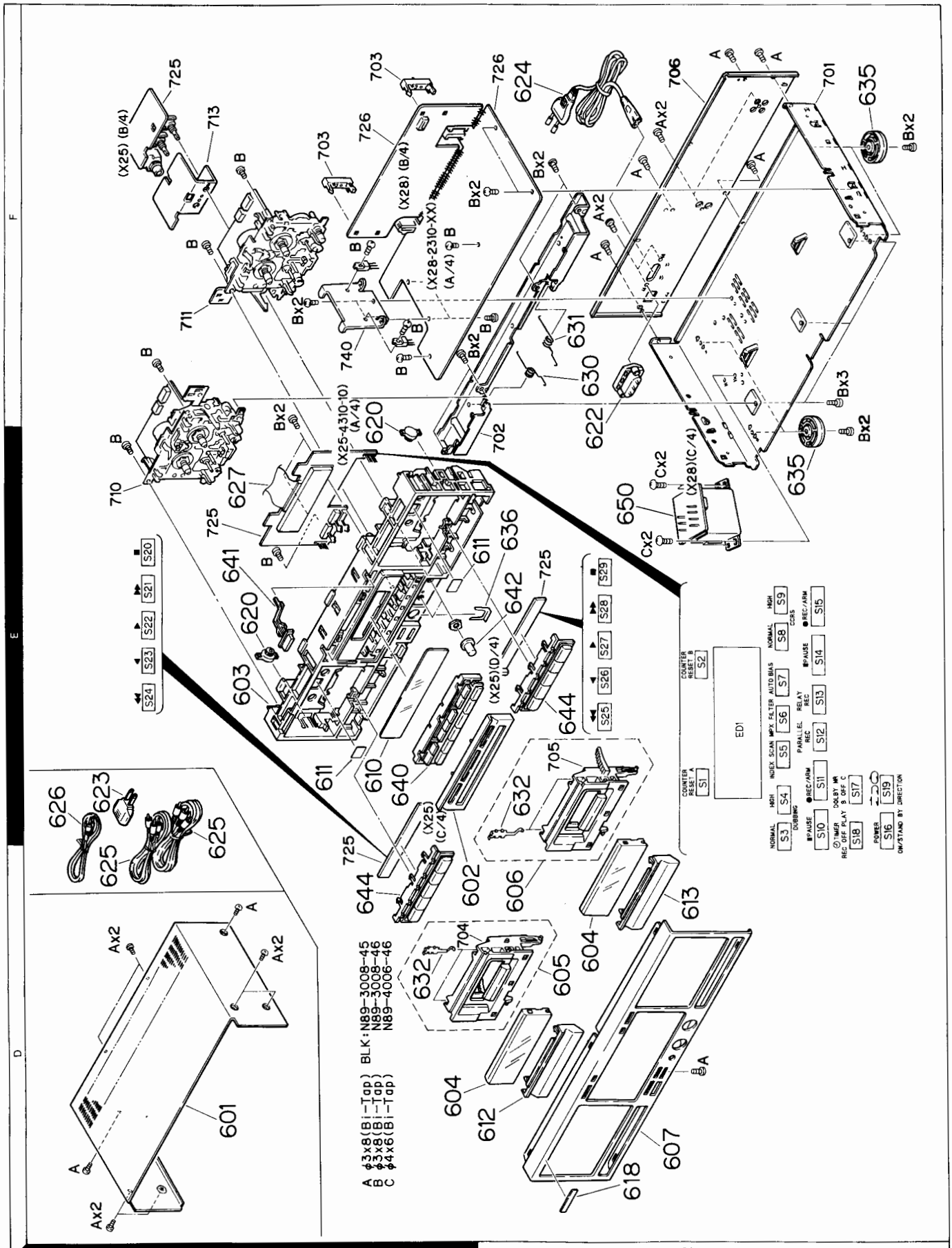
KX-W8030

EXPLODED VIEW (MECHANISM)



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

EXPLODED VIEW (UNIT)



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

× 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.

No. 1

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
KX-W8030						
601	1C	*	A01-1935-01	METALLIC CABINET		
602	1C,1D	*	A21-1792-03	DRESSING PANEL		
603	1D	*	A22-1479-01	SUB PANEL		
604	1C,2C	*	A53-1282-04	CASSETTE LID		
605	1C,2C	*	A53-1283-03	CASSETTE HOLDER ASSY		A
606	2C,2D	*	A53-1285-03	CASSETTE HOLDER ASSY		B
607	2C	*	A60-0054-02	PANEL		
610	1D	*	B03-2704-03	DRESSING PLATE		
611	1D		B07-1720-04	ESCUTCHEON		
612	2C	*	B07-1990-03	ESCUTCHEON	KPYMX	A
612	2C	*	B07-1995-03	ESCUTCHEON	TE	A
613	2C	*	B07-1991-03	ESCUTCHEON	KPYMX	B
613	2C	*	B07-1996-03	ESCUTCHEON	TE	B
618	2C		B43-0287-04	KENWOOD BADGE		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-23	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-0437-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B60-0438-00	INSTRUCTION MANUAL (FRENCH)	PE	
-		*	B60-0439-00	INSTRUCTION MANUAL (SPA,CHI)	M	
-		*	B60-0440-00	INSTRUCTION MANUAL (GE,DU,IT)	E	
620	1D,1E		D39-0176-05	DAMPER		
⚠ 622	2E		E03-0102-25	AC INLET	YM	
⚠ 623	1D		E03-0115-05	AC PLUG ADAPTER	M	
⚠ 624	2E		E30-0459-05	AC POWER CORD	E	
⚠ 624	2E		E30-0780-05	AC POWER CORD	KP	
⚠ 624	2E		E30-1305-15	AC POWER CORD (INLET)	Y	
⚠ 624	2E		E30-1329-05	AC POWER CORD (INLET)	M	
⚠ 624	2E		E30-1341-05	AC POWER CORD	X	
⚠ 624	2E		E30-1416-05	AC POWER CORD	T	
625	1C,1D		E30-0505-05	AUDIO CORD		
626	1C,1D		E30-1392-05	CORD WITH PLUG		
627	1D	*	E35-0083-05	FLAT CABLE		
630	2E	*	G01-3417-04	TORSION COIL SPRING		A
631	2E	*	G01-3418-04	TORSION COIL SPRING		B
632	1C,2D		G02-0944-04	FLAT SPRING		
		*	H50-0043-04	ITEM CARTON CASE		
-		*	H10-5101-12	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5102-12	POLYSTYRENE FOAMED FIXTURE		
-			H20-0554-04	PROTECTION COVER	M	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0330-04	PROTECTION BAG	KPYXTE	
635	2D,2E		J02-1034-05	FOOT		
636	1D,2D		J21-3326-05	JACK MOUNTING HARDWARE		
⚠ 637	2E		J42-0083-05	POWER CORD BUSHING	KPXTE	

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A: A DECK
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⚠ indicates safety critical components

Destination list

	JAPAN MADE
KX-W8030	K,P,Y,M,X,T,E

Record/Play back amplifier unit

X28-2310-10	KX-W803K,P,Y,M,X
K28-2310-11	KX-W8030T,E

Display unit

X25-4310-10	KX-W8030K,P,Y,M,X,T,E

Mechanism ass'y

D40-0965-05	KX-W8030A deck
D40-0965-05	KX-W8030B deck

A & B Deck · D40-0965-05

* New Parts
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No.2

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
-			J61-0307-05	WIRE BAND	T	-
640	1D	*	K29-4142-02	KNOB TAPE CONTROL		
641	1D	*	K29-4149-04	KNOB EJECT		
642	1D,2D	*	K29-4130-04	KNOB REC BALANCE,REC LEVEL		
644	1C,2D	*	K29-4141-03	KNOB MECHANISM CONTROL		
⚠650	2D		L07-0256-05	POWER TRANSFORMER	KP	
⚠650	2D		L07-0257-05	POWER TRANSFORMER	YM	
⚠650	2D		L07-0258-05	POWER TRANSFORMER	XTE	
B	1D,1E		N89-3008-45	BINDING HEAD TAPTITE SCREW		
C	2D		N89-3008-46	BINDING HEAD TAPTITE SCREW		
D			N09-1532-05	POWER TRANSFORMER		
DISPLAY UNIT (X25-4310-10)						
D32			B30-1291-05	LED		
C1 ,2			CE04KW1V100M	ELECTRO 10UF 35WV		
C3 ,4			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C5			CE04KW1A101M	ELECTRO 100UF 10WV		
C6			CE04KW1V100M	ELECTRO 10UF 35WV		
C7 ,8			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C9 ,10			CE04KW1V100M	ELECTRO 10UF 35WV		
C11 ,12			CE04KW1C470M	ELECTRO 47UF 16WV		
C13			CE04KW1C330M	ELECTRO 33UF 16WV		
C14			CE04KW1V100M	ELECTRO 10UF 35WV		
C15			CE04KW1H010M	ELECTRO 1.0UF 50WV		
J1			E11-0199-05	PHONE JACK HEAD PHONE		
VR1			R06-4079-05	POTENTIOMETER(50K) LEVEL		
VR2			R01-5065-05	POTENTIOMETER(200K) BALANCE		
S1 -16			S40-1064-05	PUSH SWITCH KEY BOAD		
S17 -19			S31-1036-05	SLIDE SWITCH DOLBY,TIMER,DRE		
S20 -29			S40-1064-05	PUSH SWITCH KEY BOAD		
D1 -31			HSS104	DIODE		
D1 -31			1SS133	DIODE		
ED1		*	BG-952GK	FLUORESCENT INDICATOR TUBE		
IC1			NJM4565D-D	IC(OP AMP X2)		
IC1		*	RC4565D-D	IC(OP AMP X2)		
Q1 ,2			2SC1740S(Q,R)	TRANSISTOR		
Q1 ,2			2SC3311A(Q,R)	TRANSISTOR		
Q3 ,4			2SC1845(F,E)	TRANSISTOR		
Q5 ,6			2SC1740S(Q,R)	TRANSISTOR		
Q5 ,6			2SC3311A(Q,R)	TRANSISTOR		
RECORD/PLAYBACK AMPLIFIER UNIT(X28-2310-10:K,P,Y,M,X,O-11:T,E)						
C1 ,2			CC45FSL1H151J	CERAMIC 150PF J		
C3 ,4			CK45FB1H681K	CERAMIC 680PF K		
C5 ,6			CK45FB1H561K	CERAMIC 560PF K		
C7 -10			CE04KW1C220M	ELECTRO 22UF 16WV		
C11 -14			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C15 -18			CK45FB1H391K	CERAMIC 390PF K		
C19 -22		*	CQ92FM1H123J	MYLAR 0.012UF J		
C23 ,24			CE04KW1C101M	ELECTRO 100UF 16WV		
C25 ,26			CC45FSL1H271J	CERAMIC 270PF J		
C27 ,28			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C29 ,30			CC45FSL1H101J	CERAMIC 100PF J		

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

A: A DECK
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No.3

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C31 -34			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C35 ,36			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C37 ,38			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C39 ,40			CE04KW1V100M	ELECTRO 10UF 35WV		
C41 ,42		*	CK45FB1H392K	CERAMIC 3900PF K		
C43 ,44			CC45FSL1H221J	CERAMIC 220PF J		
C45			CQ92FM1H472J	MYLAR 4700PF J		
C46			CE04KW1C331M	ELECTRO 330UF 16WV		
C47 -50			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C51			CE04KW1C220M	ELECTRO 22UF 16WV		
C52 -54			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C55 -60			CQ92FM1H222J	MYLAR 2200PF J		
C61 -64			CE04KW1H0R1M	ELECTRO 0.1UF 50WV		
C65 ,66			CE04KW1C220M	ELECTRO 22UF 16WV		
C67 ,68			CF92FV1H333J	MF 0.033UF J		
C69 ,70		*	CK45FF1H333Z	CERAMIC 0.033UF Z		
C71 ,72			CK45FF1H472Z	CERAMIC 4700PF Z		
C73			CC45FSL1H221J	CERAMIC 220PF J		
C74			CC45FSL1H181J	CERAMIC 180PF J		
C75 -80			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C81 -84			CE04KW1A101M	ELECTRO 100UF 10WV		
C85 -88			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C89 ,90			CE04KW1C101M	ELECTRO 100UF 16WV		
C91 -94			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C95 ,96			CE04KW1V100M	ELECTRO 10UF 35WV		
C97 ,98			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C99 ,100			CC45FSL1H101J	CERAMIC 100PF J		
C101,102			CK45FF1H103Z	CERAMIC 0.010UF Z		
C103,104			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C105			CE04KW1V222M	ELECTRO 2200UF 35WV		
C106			CE04KW1C101M	ELECTRO 100UF 16WV		
C107			CE04KW1V470M	ELECTRO 47UF 35WV		
C108			CE04KW1H470M	ELECTRO 47UF 50WV		
C109			CE04KW1J470M	ELECTRO 47UF 63WV		
C110-112			CE04KW1V100M	ELECTRO 10UF 35WV		
C113,114			CE04KW1A102M	ELECTRO 1000UF 10WV		
C115			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C116			CE04KW1A221M	ELECTRO 220UF 10WV		
C117			CE04KW0J471M	ELECTRO 470UF 6.3WV		
C118			CE04KW1E102M	ELECTRO 1000UF 25WV		
C119,120			CE04KW1C101M	ELECTRO 100UF 16WV		
C121			CE04KW1V100M	ELECTRO 10UF 35WV		
C122			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C123			CE04KW1V100M	ELECTRO 10UF 35WV		
C124-126			CE04KW1A101M	ELECTRO 100UF 10WV		
C127			CK45FF1H223Z	CERAMIC 0.022UF Z		
C128			CC45FSL1H270J	CERAMIC 27PF J		
C129			CK45FF1H223Z	CERAMIC 0.022UF Z		
C130			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C131,132			CE04KW1V100M	ELECTRO 10UF 35WV	TE	
C133-136			CE04KW1H3R3M	ELECTRO 3.3UF 50WV	TE	
C137,138			CE04KW1H010M	ELECTRO 1.0UF 50WV	TE	
C139			CK45FF1H223Z	CERAMIC 0.022UF Z		
C140			CE04KW1A101M	ELECTRO 100UF 10WV		
C141			CE04KW0J222M	ELECTRO 2200UF 6.3WV		

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B: B DECK

⚠ indicates safety critical components.

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No.4

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
C142,143			CK45FF1H223Z	CERAMIC 0.022UF Z		
C144			CE04KW1A101M	ELECTRO 100UF 10WV		
C145,146			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C147,148			CK45FB1H122K	CERAMIC 1200PF K		
C149,150			CK45FB1H332K	CERAMIC 3300PF K		
C151,152			CE04KW1C220M	ELECTRO 22UF 16WV		
C153,154			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C155-158			CC45FSL1H221J	CERAMIC 220PF J		
C159,160			CC45FSL2H100D	CERAMIC 10PF D		
C161-164		*	C91-1434-05	FILM 150PF J		
C165-168		*	C91-1436-05	FILM 220PF J		
C169-172			CK45FB1H471K	CERAMIC 470PF K		
C173-176			CK45FF1H103Z	CERAMIC 0.010UF Z		
C177-184			CK45FF1H223Z	CERAMIC 0.022UF Z		
C185-188			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C189,190			CK45FF1H103Z	CERAMIC 0.010UF Z		
C191-194		*	CK45FB1H392K	CERAMIC 3900PF K		
C195,196			CE04KW1C220M	ELECTRO 22UF 16WV		
C197,198			CQ93HP2A103J	MYLAR 0.010UF J		
C199			CK45FF1H103Z	CERAMIC 0.010UF Z		
C200			C90-1332-05	NP-ELEC 10UF 25WV		
⚠ J1			E13-0445-05	PHONO JACK (4P) LINE IN/OUT		
J2			E11-0188-05	MINIATURE PHONE JACK SYNCRO		
-			J11-0098-05	WIRE CLAMPER		
L1 ,2			L79-0720-05	LC FILTER		
L3 ,4			L32-0388-05	BIAS OSCILATING COIL		
L5 -8			L32-0377-05	BIAS OSCILATING COIL		
L9 -16			L40-1035-29	SMALL FIXED INDUCTOR(10MH, J)		
X1			L78-0244-05	RESONATOR 4MHz		
B	1E		N89-3008-45	BINDING HEAD TAPTITE SCREW		
CP1			R90-0B18-05	MULTIPLE RESISTOR		
R221,222			RS14KB3D330J	FL-PROOF RS 33 J 2W		
VR1 -4		*	R12-0605-05	TRIMMING POT.(220)		
VR5 -8		*	R12-3688-05	TRIMMING POT.(47K)		
VR9 ,10		*	R12-3685-05	TRIMMING POT.(1K)	TE	
K1 ,2			S51-2089-05	MAGNETIC RELAY		
D1			KBP02ML-6127	DIODE		
D2 -5			S5688B	DIODE		
D2 -5			1SR139-100	DIODE		
D6 -8			HSS104	DIODE		
D6 -8			1SS133	DIODE		
D9 -12			S5688B	DIODE		
D9 -12			1SR139-100	DIODE		
D13 -15			HZS2.7N(B2)	ZENER DIODE		
D13 -15			RD2.7ES(B2)	ZENER DIODE		
D16			HZS4.7N(B)	ZENER DIODE		
D16			RD4.7ES(B)	ZENER DIODE		
D17			HZS6.2N(B2)	ZENER DIODE		
D17			RD6.2ES(B2)	ZENER DIODE		
D18			HZS13N(B2)	ZENER DIODE		
D18			RD13ES(B2)	ZENER DIODE		

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* New Parts
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No.5

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
D19			HZS24N(B)	ZENER DIODE		
D19			RD24ES(B)	ZENER DIODE		
D20 -29			HSS104	DIODE		
D20 -29			1SS133	DIODE		
D30 ,31		*	RB721Q	DIODE		
D32 -85			HSS104	DIODE		
D32 -85			1SS133	DIODE		
IC1		*	M50945-091SP	IC		
IC2			HA12170NT	IC(DOLBY B/C NR)		
IC3 -5			CXD1067P	IC(SERIAL-PARALLEL CONVERTER)		
IC6			TC9213P	IC(2CH ELECTRONIC VOLUME)		
IC7 ,8			UPC1297CA	IC(DOL HX PRO SYSTEM)		
IC9 ,10			CXA1198AP	IC(CASSETTE DECK REC EQUALIZER		
IC11,12			TC4051BP	IC(8CH MPX/ DE-MPX)		
IC11,12			XRU4051B	IC(MULTIPLEXERS/DEMULTIPLEXERS		
IC13,14			TC4052BP	IC(4CH MPX/DE-MPX)		
IC13,14		*	XRU4052B	IC(4CH MPX/DE-MPX)		
IC15-17			TD62554S	IC(4CH TRANSISTOR ARRAY)		
IC18-20			BA10393	IC(DUAL COMPALATOR)		
IC21,22			TA8125S	IC(2CH PRE AMP)		
IC23			NJM4558D	IC(OP AMP X2)		
IC24-26			NJM4565D-D	IC(OP AMP X2)		
IC24-26		*	RC4565D-D	IC(OP AMP X2)		
IC27			UPC7815HF	IC(VOLTAGE REGULATOR/ +15V)		
Q1			2SD1266(Q,P)	TRANSISTOR		
Q2			2SA999(E,F)	TRANSISTOR		
Q3 -5			2SC3940A	TRANSISTOR		
Q6 ,7			2SC3246	TRANSISTOR		
Q9 -12		*	2SA1309A(Q,R)	TRANSISTOR	TE	
Q9 -12			2SA933S(Q,R)	TRANSISTOR	TE	
Q11 ,12		*	2SA1309A(Q,R)	TRANSISTOR	KPYMX	
Q11 ,12			2SA933S(Q,R)	TRANSISTOR	KPYMX	
Q13 -32			2SC1740S(Q,R)	TRANSISTOR	TE	
Q13 -32			2SC3311A(Q,R)	TRANSISTOR	TE	
Q13 ,14			2SC1740S(Q,R)	TRANSISTOR	KPYMX	
Q13 ,14			2SC3311A(Q,R)	TRANSISTOR	KPYMX	
Q17 -32			2SC1740S(Q,R)	TRANSISTOR	KPYMX	
Q17 -32			2SC3311A(Q,R)	TRANSISTOR	KPYMX	
Q33 -39			DTA124ES	DIGITAL TRANSISTOR		
Q33 -39			UN4112	TRANSISTOR		
Q40 -62			DTC124ES	DIGITAL TRANSISTOR		
Q40 -62			UN4212	TRANSISTOR		
Q63 ,64		*	UN4117	TRANSISTOR		
MECHANISM ASSY (D40-096X-XX)						
301	1C		D01-0118-08	FLY WHEEL ASSY		
302	1C		D01-0119-08	FLY WHEEL ASSY		
303	2A,2B		D03-0231-08	REEL DISK ASSY		
305	1C		D10-3201-08	SLIDER ASSY		
306	1A,2B		D10-3121-08	LEVER (REC,Cr02)		
307	1B,2B		D10-2336-08	LEVER (METAL)		B
307	2B		D10-2369-08	LEVER (METAL)		A
308	1C		D10-3202-08	PLAY ARM		
309	2A	*	D10-3205-08	SLIDER		
310	1B		R0D (PLUNGER)			

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No.6

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
311	2B		D10-2341-08	ROD (CORE)		
312	1B,2B		D10-2342-08	LEVER (PACK)		B
312	1B,2B		D10-2476-08	LEVER (PACK)		A
313	2A,2B		D10-2474-08	TENSION ARM		B
313	2A,2B		D10-2475-08	TENSION ARM		A
314	1C		D13-0941-08	GEAR ASSY		
315	2B		D14-0304-08	IDLER ASSY		
317	2C		D32-0192-08	EJECT LEVER ASSY		A
317	1A		D32-0193-08	EJECT LEVER ASSY		B
318	2A		D40-0928-08	HEAD BASE		
319	2A	*	D10-3204-08	HEAD BASE ASSY	TE	
319	2A	*	D10-3206-08	HEAD BASE ASSY	KPYMX	
320	2A		E31-7444-08	QS LEAD WIRE	TE	
321	2B		E31-7945-08	CONNECTING WIRE		
323	2B		F10-0780-08	SHIELDING PLATE		
325	2A		G01-2398-08	TENSION SP		
326	2C		G01-2400-08	TORSION SP		
327	1B,2B		G01-2422-08	TENSION SP		B
327	1B,2B		G01-3341-08	TENSION SP		A
328	1B		G02-0947-08	FLAT SPRING		
330	2B		G16-0764-08	REFLECTING PLATE		
332	2B		J19-3253-08	LEAD HOLDER		
333	2A		J25-6285-08	HEAD WIRE		
335	2A	*	N09-2863-08	SCREW		
336	2A		N09-2585-08	SCREW (M2X 5)		
337	1B,2B		N09-2700-08	SCREW (M2.6X 5)		
338	2B		N09-2701-08	SCREW (3X 8)		
339	2A		N09-2710-08	SCREW (M1.6X 6)		
340	1B,2B		N09-2698-08	SCREW (M2.6X 6.4)		
341	1A,2C		N09-2730-08	SCREW (M2X 9)		
342	2A		N19-0904-08	FLAT WASHER (1.7X 0.25)		
343	1C		N19-0905-08	FLAT WASHER (2.6X 0.25)		
344	2A,2B		N19-1095-08	FLAT WASHER (2.1X 0.25)		
345	2B		N19-1214-08	FLAT WASHER (2.6X 0.5)		
346	2B		N29-0205-04	E TYPE RETAINING RING		
350	1B,2B		T94-0216-08	SOLENOID		
351	2A		T95-0117-08	QUICK SENSOR		
352	1B		T95-0120-08	PHOTO SENSOR		
374	1B	*	W02-1123-08	PRINTED WIRING BOARD	TE	A
374	1B	*	W02-1124-08	PRINTED WIRING BOARD	TE	B
374	1B	*	W02-1125-08	PRINTED WIRING BOARD	KPYMX	A
374	1B	*	W02-1126-08	PRINTED WIRING BOARD.	KPYMX	B
BM	1C		D16-0287-08	BELT		
MM	1C		T42-0535-08	DC MOTOR ASSY (MAIN)		
PF	2B		D14-0311-08	PINCH ROLLER ASSY		
PR	2A		D14-0312-08	PINCH ROLLER ASSY		
RM	1B		T42-0534-08	DC MOTOR ASSY (REEL)		
RPEH	2A	*	T39-0019-08	REC/PB/ERASE HEAD		
S1 -S5	1B,1C		S90-0105-08	PUSH SWITCH		
VR1			RH0615C14J	TRIMMING POT. 10K		
VR1			R12-3126-05	TRIMMING POT. 10K		
VR2			RH0615CJ4J	TRIMMING POT. 22K		
VR2			R12-3128-05	TRIMMING POT. 22K		
D1 -6			ERA15-01V5	DIODE		

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No.7

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D7		*	HZS7B3	DIODE		
D8		*	HZS4A3	DIODE		
D9			ERA15-01V5	DIODE		
IC1			TA7291S	IC		
Q1			2SC3377	TRANSISTOR		
Q2		*	2SC4204	TRANSISTOR		

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SERVICE TECHNICAL REPORT

KENWOOD
KENWOOD CORPORATION

☑ Home ☐ Car ☐ A.R ☐ LMR/Marine

NO.E 1 6 - 9 2 - 0 0 1 1/1

MODEL	KX-W8030	DATE	January 21, 1991

SUBJECT Deck A starts playing with no cassette half inside

CONTENTS | REFERENCE: B 1 6 - 9 2 - 0 0 1

〔Symptom〕Deck A starts playing even when no cassette half is in the cassette deck, if the selector on the amplifier is set to TAPE or the power is turned on with TIMER PLAY.

〔Cause〕Microcomputer programming error.

〔Countermeasure〕Replace with the microcomputer dedicated to the KX-W8040.

M 5 0 9 4 5 - 1 0 2 S P

↓

M 5 0 9 4 5 - 1 2 9 S P

Remarks

Prod. change S/N

Application ☐ All repair units ☑ Defectives only ☐

Parts included ☑ No ☐ Yes ☐ Mail

Service code A: 99 B: X28-2310 C: IC1 D: 91

Distribution

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MANAGER T. Nagashima

WRITER