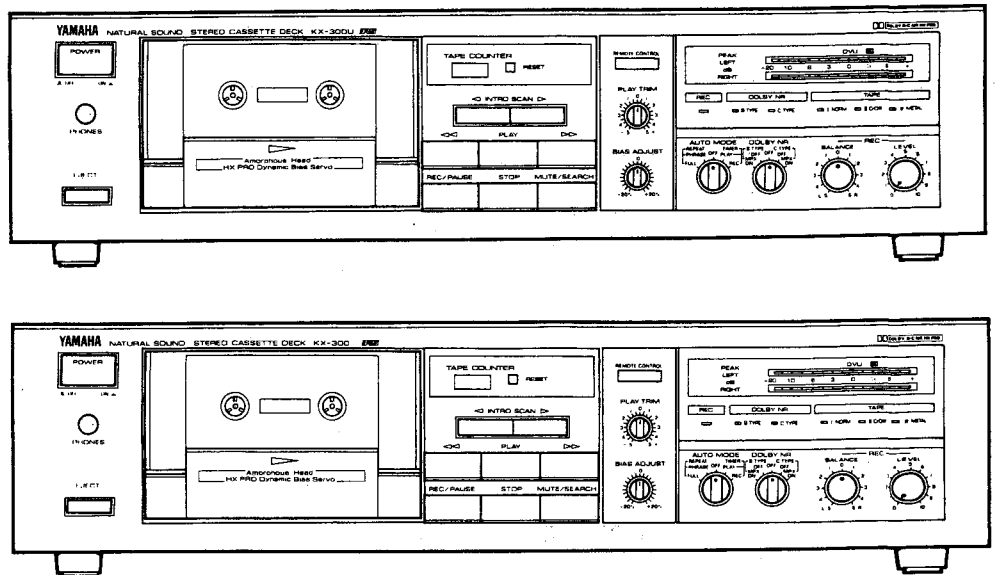
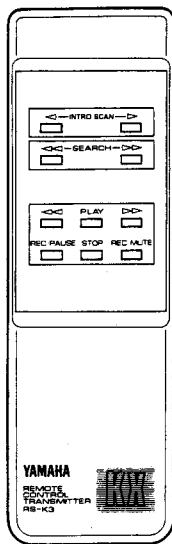


# STEREO CASSETTE DECK KX-300/U

## SERVICE MANUAL



### IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

**WARNING:** Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

**IMPORTANT:** The presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

**WARNING:** Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).


**IMPORTANT:** Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

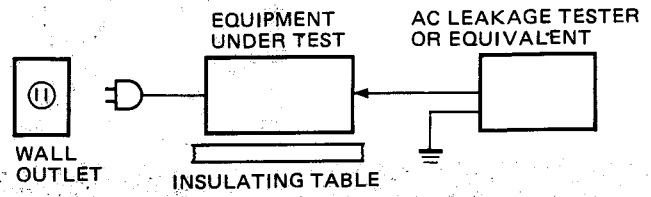
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# KX-300/U

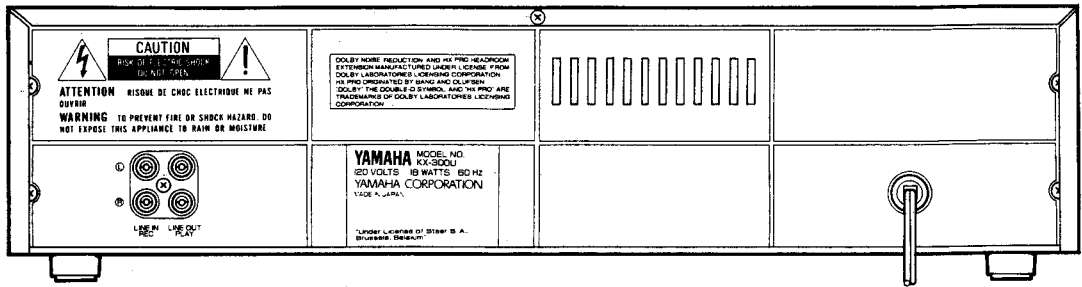
## TO SERVICE PERSONNEL

- Critical Components Information.**  
Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.
- Leakage Current Measurement (For 120V Model Only).**  
When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.
  - Meter impedance should be equivalent to 1500 ohm shunted by 0.15μF.
  - Leakage current must not exceed 0.5mA.
  - Be sure to test for leakage with the AC plug in both polarities.

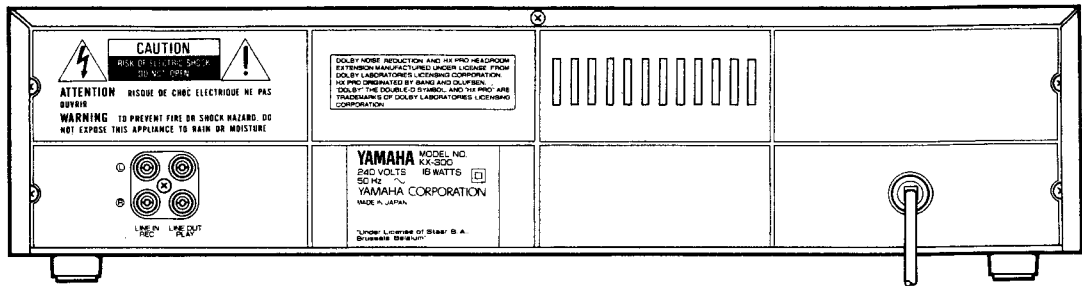


## REAR PANELS

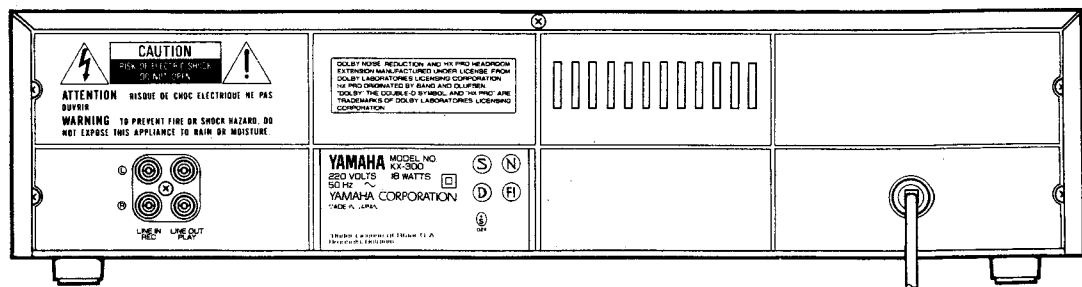
### U, C, models



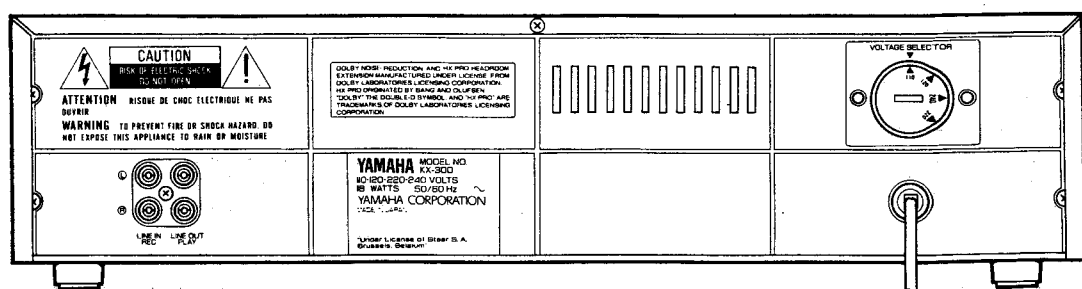
### A, B, models



### G model



### R model



**KX-300/U**

**■ SPECIFICATIONS**

Track Configuration . . . . . 4 track, 2 channel stereo

Motor . . . . . DC servo motor (capstan)  
Flat torque DC motor (reel)

Heads . . . . . Recording/Playback: Amorphous  
Erase: Double Gap Ferrite

Rapid Transport  
(F. Fwd/Rew) . . . . . 90 sec. (C-60)

Wow and Flutter  
WRMS . . . . . less than 0.05%  
W. Peak . . . . . less than ±0.08%

Signal-to-Noise Ratio  
(Off) . . . . . better than 60 dB  
(Dolby B on) . . . . . better than 68 dB  
(Dolby C on) . . . . . better than 76 dB

Frequency Response  
Normal tape (-20 dB) . . . . . 30 - 17,000 Hz ±3 dB  
CrO<sub>2</sub> tape (-20 dB) . . . . . 30 - 19,000 Hz ±3 dB  
Metal tape (-20 dB) . . . . . 30 - 20,000 Hz ±3 dB

Harmonic Distortion (315 Hz, 3rd) . . . . . Nomore than 1%

Input Sensitivity/Impedance  
Line . . . . . 50 mV/50 k-ohms

Output Level  
Line . . . . . 360 mV/1 k-ohms  
Phones . . . . . 0.3 mW/8 ohms

Channel Separation (3150 Hz) . . . . . 40 dB

Cross Talk (125 Hz) . . . . . 55 dB

**GENERAL**

Power Supplies  
U, C models . . . . . 120V, 60Hz  
G model . . . . . 220V, 50Hz  
A, B models . . . . . 240V, 50Hz  
R model . . . . . 110/120/220/240V, 50/60Hz

Power Consumption . . . . . 18 W

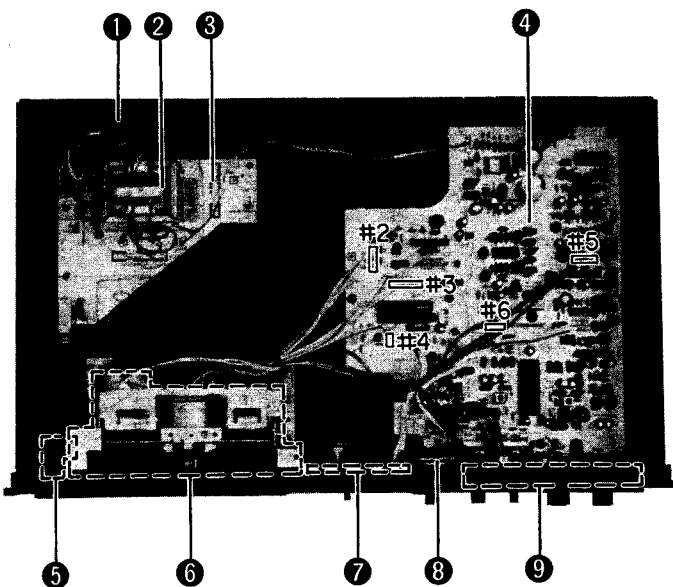
Dimensions (W x H x D) . . . . . 435 x 112 x 273 mm  
(17-1/8" x 4-7/16" x 10-3/4")

Weight . . . . . 4.2 kg (9 lbs. 4 oz)

\* Specifications subject to change without notice.

- (U) . . . . . U.S.A. model
- (C) . . . . . Canadian model
- (A) . . . . . Australian model
- (G) . . . . . European model
- (B) . . . . . British model
- (R) . . . . . Other model

**■ INTERNAL VIEW**



- ① Voltage Selector (R model only)
- ② Power Transformer
- ③ Power Supply C. Board
- ④ Main C. Board (1)
- ⑤ Main C. Board (4)
- ⑥ Cassette Mechanism Unit
- ⑦ Main C. Board (2)
- ⑧ Main C. Board (3)
- ⑨ Meter Unit

**KX-300/U**

**DISASSEMBLY PROCEDURES**

**1. Removal of Top Cover**

Remove 5 screws ( ① ) in Fig. 1.

**2. Removal of Cassette Mechanism Unit**

- a. Remove the Top Cover.
- b. Remove the Lid ( ② ) in Fig. 1.
- c. Detach 5 connectors ( # 2 ~ # 6 ) in Fig. 1.
- d. Remove 6 screws ( ③ ) in Fig. 1 and then pull off the mechanism unit to the back side gently.

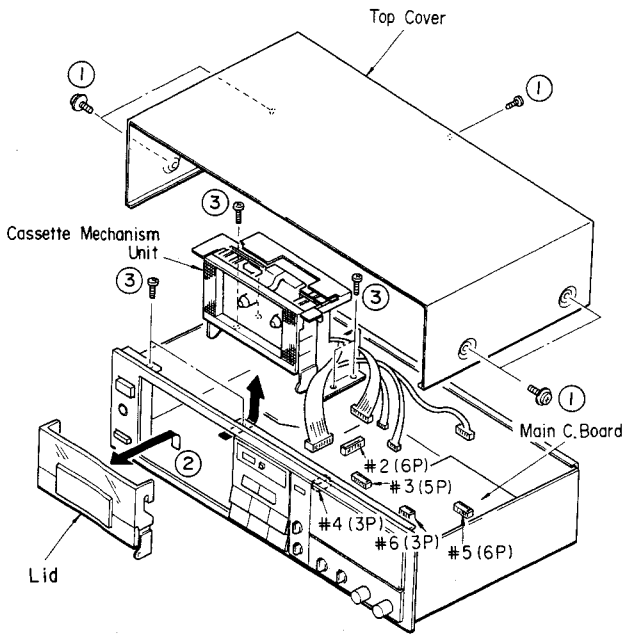


Fig. 1

**3. Removal of Heads and Pinch Roller**

- a. Remove 2 screws ( ④ ) in Fig. 2 and then remove the Recording/Playback Head.
- b. Remove 2 screws ( ⑤ ) in Fig. 2 and then remove the Erase Head.
- c. Detach the hook ( ⑥ ) in Fig. 2 and then remove the Pinch Roller.

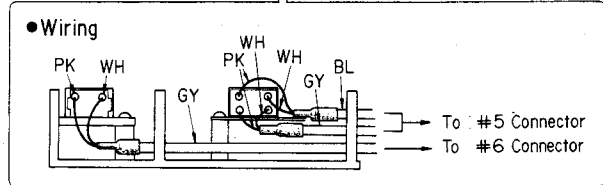
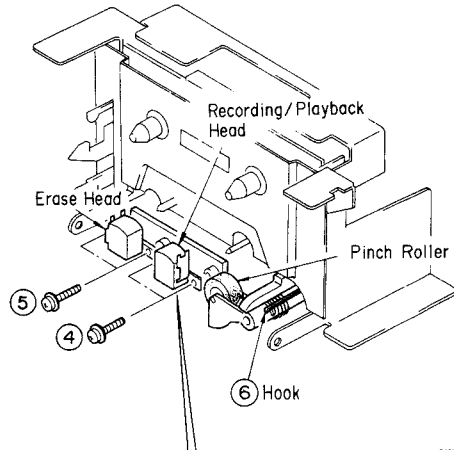


Fig. 2

**4. Removal of Capstan Motor and Flywheel Belt**

- a. Remove 3 screws ( ⑦ ) in Fig. 3 and then remove the back plate.
- b. Remove 2 screws ( ⑧ ) in Fig. 3 and then remove the Capstan Motor

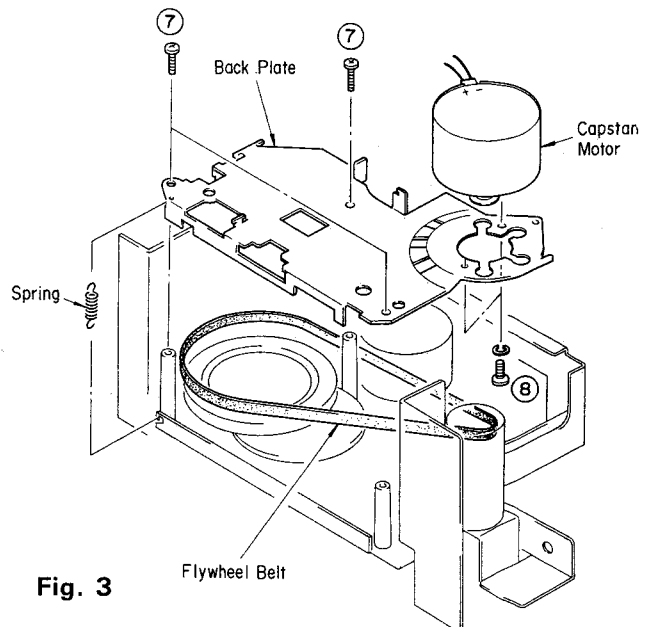


Fig. 3

## ■ ADJUSTMENTS

### 1. Before adjustment:

- Make sure that AC line voltage comes within

Models	AC line voltage
U, C	120V ± 10%
G	220V ± 10%
A, B	240V ± 10%

- Since head magnetization, dust accumulations, etc. are likely to introduce error in the various characteristics, it is very important that the heads are properly demagnetized and cleaned.

### 2. Instruments required

- Audio frequency oscillator (AF OSC)
- ACVM or dual channel ACVM
- Wow/flutter meter
- Oscilloscope
- Torque meter  
 TW-2111 (TX911580)                      TW-2412 (TX911640)  
 TW-2121 (TX911570)                      TW-2422 (TX911630)  
 CT160L (TX911120)

- DCVM
- Mirror Cassette  
 MC-109C(TX911430)

### 3. Test tape required

- MTT-111N (TX911650): Tape Speed (Normal)
- MTT-114N (TX911680): Azimuth
- MTT-212CN (TX911670): Playback Level
- MTT-212N (TX911660): Playback Level
- MTT-256 (TX911300): Playback Frequency Response (LH)
- MTT-356 (TX911310): Playback Frequency Response (CrO<sub>2</sub>)
- Reference tape  
 Normal (LH) : TDK AC223 (TX911600)  
 CrO<sub>2</sub> : TDK SA-60 or TDK AC513 (TX911610)  
 METAL : TDK AC712 (TX911590)

### ● "MECHANICAL ADJUSTMENT"

Step	Item to be Adjusted	Tape	Instrument required	Mode	Adjustment part	Rating	Remarks
1	Check each torque		Torque meter			Take-up torque: 25g·cm ~ 70g·cm FF, REW torque: more than 70g·cm Back tension: 2g·cm ~ 6g·cm	
2	Check FF REW take up times	AC-223 C-60				90seconds ± 15seconds	
3	Check tape movement		Mirror cassette (MC-109C)	PLAY		Tape should move in the center of head smoothly.	
4	Azimuth	MTT-114N 10kHz, -10dB	ACVM Oscilloscope	PLAY	Azimuth adjustment screw. (Fig. A)	Playback output of L and R is maximum and phase difference should be minimum.	After the adjustment, make sure to apply screw lock paint.
5	Tape speed	MTT-111N 3kHz, -10dB	Wow/flutter meter or Frequency counter	PLAY	Semi fixed variable resistor at the back of the capstan motor. (Fig. B)	3000Hz ± 15Hz	• Perform adjustment at the center of the test tape length if possible
6	Wow/flutter	MTT-111N 3kHz, -10dB	Wow/flatter meter	PLAY		Less than 0.1% (JIS WTD)	

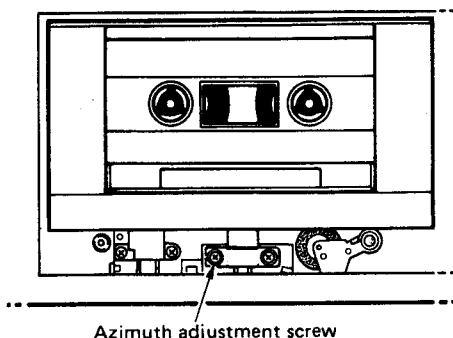


Fig. A

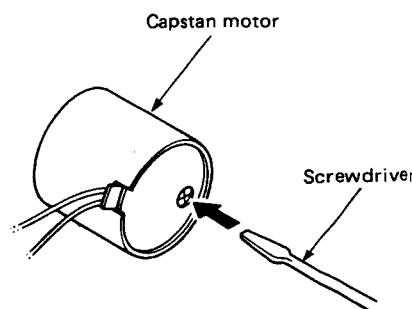


Fig. B

KX/300/U

● ELECTRICAL ADJUSTMENT

- Proceed with the following adjustment after having finished the mechanical adjustment.
- Playback section (160nwb/m=0 dB. 0 VU)

Step	Item to be adjusted	Tape	Instrument required	Mode	Measurement conditions	Points of measurement	Adjustment part	Rating
1	Playback level	MTT-212CN (160nwb/m)	ACVM	PLAY		LINE OUT	VR5 (Lch) VR6 (Rch)	360mV ± 25mV
		MTT-212N (250nwb/m)						560mV ± 35mV
2	Confirmation of playback frequency response	Test tape for frequency check. MTT-256 (LH: 3180µs + 120µs) MTT-356 (CrO <sub>2</sub> : 3180µs + 70µs)	ACVM Oscilloscope	PLAY		LINE OUT		Check that the 10kHz playback level lies within 0dB ± 3dB of the 315Hz playback level. (Fig. C)

● PLAYBACK FREQUENCY RESPONSE

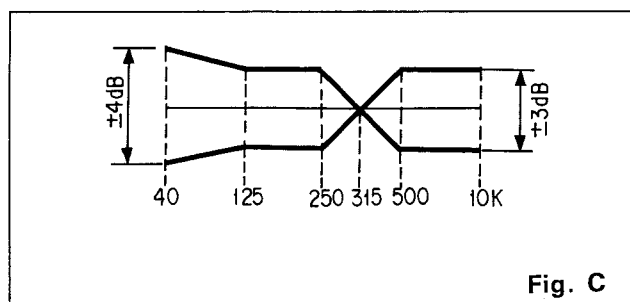


Fig. C

● Recording section

Step	Item to be adjusted	Tape	Instrument required	Mode	Measurement conditions	Points of measurement	Adjustment part	Rating
1	Meter		ACVM AF OSC	REC/ PAUSE	1 REC LEVEL → MAX. 2 Apply a 315Hz or 1kHz signal to LINE IN terminals. Set the AF OSC output level so that LINE OUT voltage is 360mV.	Peak level meter	Pre-set Potentiometer of Meter Circuit Board VRO01(Lch) VRO02(Rch)	Adjust adjustment parts to the lowest level where the 0dB display part of the level meter light up.
2	Bias Oscillation level (HX-PRO)	METAL	ACVM	REC PLAY	1 VR9, 10 → MAX. (Counter Clockwise) 2 BIAS ADJ VR → MAX. (Clockwise)	TP1-GND (Lch) T P 2-GND (Rch)	L7 (Lch) L8 (Rch)	Adjust so that oscillation output is maximum.
3	Recording level		ACVM AF OSC	REC PLAY	1 VR9, 10 → CENTER 2 BIAS ADJ VR → CENTER (Front Panel) 3 Apply a 1kHz signal to LINE IN terminals. Set the REC LEVEL knob so that LINE OUT voltage is 360mV.	LINE OUT	VR7 (Lch) VR8 (Rch)	Set the same level of the record and playback level. (360mV ± 25mV)
4	Record Bias (Total frequency response)	CrO <sub>2</sub>	ACVM AF OSC	REC PLAY	Apply a 15kHz signal to LINE IN terminals. Set the REC LEVEL knob so that LINE OUT voltage is 36mV (-20dB)	LINE OUT	VR9 (Lch) VR10 (Rch)	Set the same level of the record and playback level. (Fig. D)
		NORMAL METAL						Check the Record Bias by Normal Tape & Metal Tape.

● TOTAL FREQUENCY RESPONSE (-20dB)

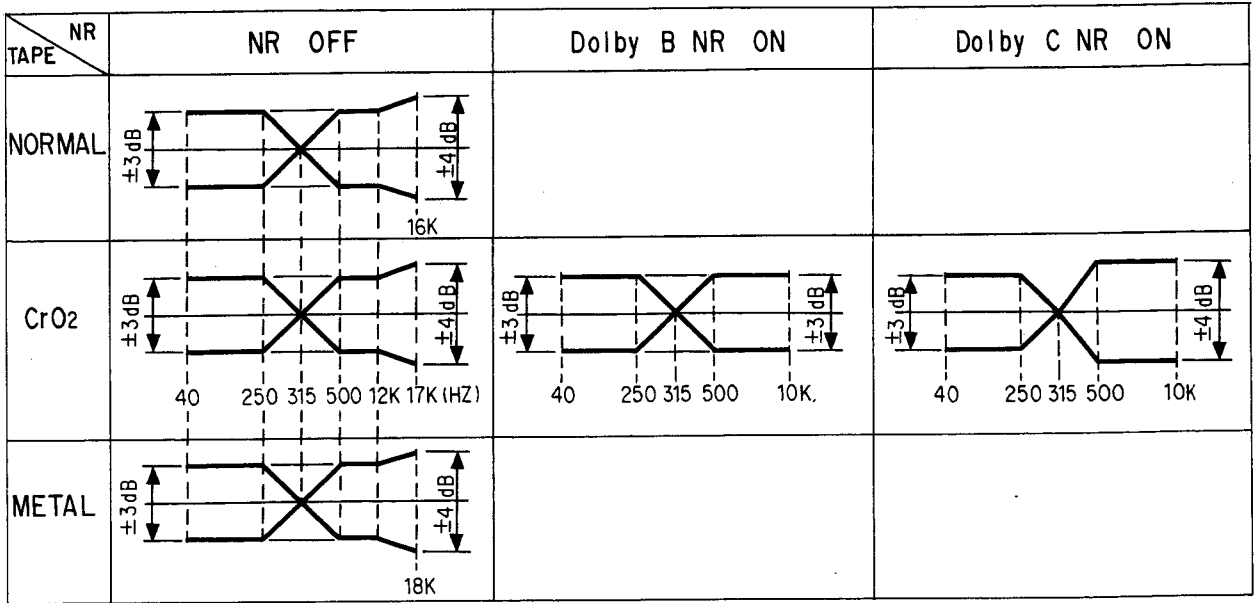
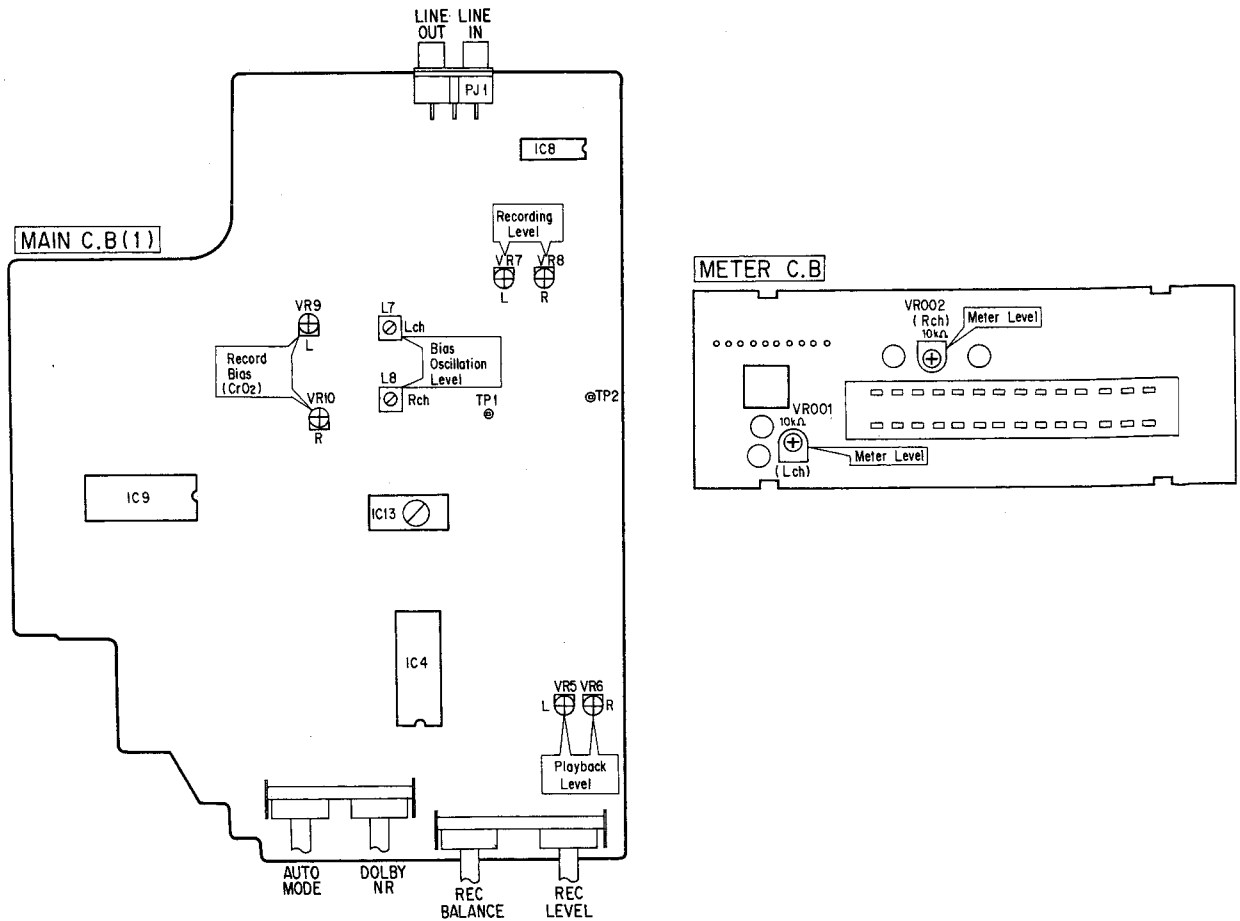


Fig. D

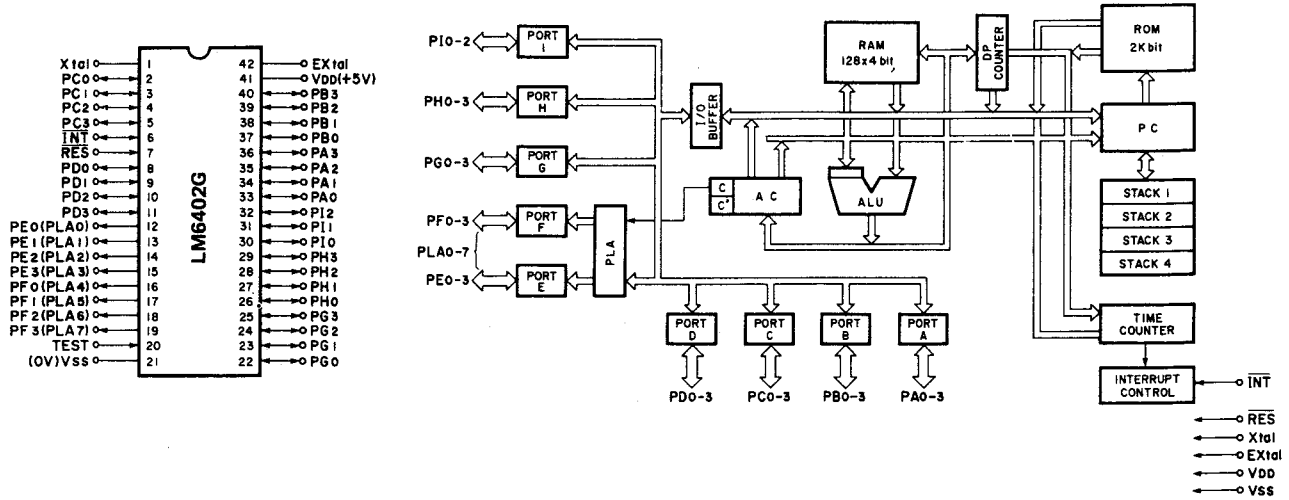
● TEST POINT



KX-300/U

μ-COM DATA

● IC9: LM6402G-2165



PIN NO.	NAME	FUNCTION	PIN NO.	NAME	FUNCTION	
1	Xtal	CLOCK, Microcomputer 4MHz	42	Extal	CLOCK, Microcomputer 4MHz	
2	C <sub>0</sub>	FULL REPEAT SW	41	V <sub>DD</sub>	+5V	
3	C <sub>1</sub>	PHRASE REPEAT SW	40	B <sub>3</sub>	} Key input	
4	C <sub>2</sub>	TIMER PLAY SW	39	B <sub>2</sub>		
5	C <sub>3</sub>	TIMER REC SW	38	B <sub>1</sub>		
6	INT	POWER OFF Detection	37	B <sub>0</sub>		
7	RES	Reset, Microcomputer	36	A <sub>3</sub>		
8	D <sub>0</sub>	Cassette IN SW	35	A <sub>2</sub>		
9	D <sub>1</sub>	Erasure protection detection SW	34	A <sub>1</sub>		
10	D <sub>2</sub>	METAL hole detection SW	33	A <sub>0</sub>		
11	D <sub>3</sub>	CrO <sub>2</sub> hole detection SW	32	I <sub>2</sub>	Pulse input, Reel stand	
12	E <sub>0</sub>	Solenoid drive control	31	I <sub>1</sub>	Hold output, Solenoid	
13	E <sub>1</sub>	Capstan motor drive control	30	I <sub>0</sub>	Pulse input, Music	
14	E <sub>2</sub>	} Reel Motor drive control (FF side) (REW side)	29	H <sub>3</sub>	-	
15	E <sub>3</sub>		28	H <sub>2</sub>	Remote Control input	
16	F <sub>0</sub>	Display output	27	H <sub>1</sub>	70 μs output	
17	F <sub>1</sub>	} Display and tape selector output	26	H <sub>0</sub>	REC BIAS control	
18	F <sub>2</sub>		NORMAL	25	G <sub>3</sub>	} Amp selector output
19	F <sub>3</sub>		METAL	24	G <sub>2</sub>	
20	TEST	Gnd	23	G <sub>1</sub>	} Mute output	LINE
21	V <sub>SS</sub>	Gnd	22	G <sub>0</sub>		REC



● Input Terminal Description

No.	Name	Function
2	FULL REPEAT	Performs one-side repeat play at "L".
3	PHRASE REPEAT	Compare to KX-400.
5	TIMER REC	Starts in record mode after microcomputer was reset, at "L". Playback when mis-erase preventive pawl is broken.
4	TIMER PLAY	Starts in playback mode after microcomputer as reset, at "L".
28	Remote control input	Compare to KX-1200, KX-800 or KX-W900.
6	Power OFF detect	Sets to stop mode at H → L.
8	Cassette in	Inputs "L" if mechanism is equipped with cassette half. Note 1)
9	Mis-erase preventive pawl	Inputs "L" if there is mis-erase preventive pawl of cassette half (recording is possible).
10	Metal hole	Inputs "L" when there is no metal hole of cassette half.
11	Chrome hole	Inputs "L" when there is no chrome hole (70 μsec) of cassette half.
30	Inter-number pulse	Inputs "L" when there is recorded number.
32	Reel base revolution pulse	Inputs pulse according to reel base revolution. Note 2)
33	REW KEY	Inputs "L" when at rewind command.
34	FF KEY	Inputs "L" when at fast forward command.
35	PLAY KEY	Inputs "L" when at play command.
36	REC KEY	Inputs "L" when at Record command.
37	INTRO (F) KEY	Inputs "L" when at into scan on CUE side command.
38	MUTE/SEARCH KEY	Inputs "L" when at mute/search command.
39	INTRO (R) KEY	Inputs "L" when at intro scan on REVIEW side command
40	STOP KEY	Inputs "L" when at stop command.

- Note 1) When this terminal is in "H", KEY input is not received.  
 Note 2) At PLAY: Automatically stopped when no pulse is transmitted for about 3 seconds.  
 At F.F.: Automatically stopped when no pulse is transmitted for about 1.5 seconds.

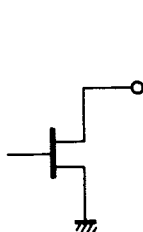
● Output Terminal Description

No.	Name	Function	Output Type	
12	Solenoid attraction	Applies attractive voltage to solenoid at "L"	OD	Mechanism drive
13	Capstan	Runs capstan motor at "L"		
14	Reel (FF)	Runs reel motor toward FF side at "H"		
15	Reel (REW)	Runs reel motor toward REW side at "H"		
31	Solenoid hold	Applies hold voltage to solenoid at "L"	OD	Amplifier control
22	REC mute	REC mute ON at "L"		
23	Line mute	Line mute ON at "L"		
24	Amplifier switching (playback)	"H" at playback, "L" at recording		
25	Amplifier switching (recording)	"L" at playback, "H" at recording	PL	
26	Recording bias	Recording bias oscillation at "H"		
27	70 μs output	70 μs at "H"	OD	
17	Normal tape output	"H" when normal tape is used		
18	Chrome tape output	"H" when chrome tape is used		
19	Metal tape output	"H" when metal tape is used (Also "H" when cassette is not loaded)		

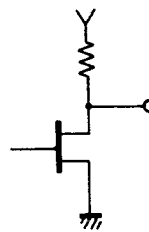
Note) Output Type

OD: Open Drain

PL: Pull UP with resistance



Current: about 40mA flow possible



Resistance: about 1.5k~5k

**KX-300/U**

● **Indicator Output Description**

No.	Name	Function	
16	REC	"L" (ON) when recording, flashing at AUTO REC MUTE.	Common to AMP. Selector
17	NORMAL	"L" (ON) when normal tape cassette is loaded and cassette is not loaded.	
18	CrO <sub>2</sub>	"L" (ON) when chrome tape cassette is loaded.	
19	METAL	"L" (ON) when metal tape cassette is loaded.	

Note) Output type: Open drain, Possible up to 40mA flow

● **MODE VS OUTPUT**

OUTPUT (Pin No.) \ MODE	STOP	PLAY	REC/ PAUSE	REC/ PLAY	FF	REW	CUE	REVIEW
E <sub>1</sub> (13 pin): Capstan motor	H	L	H	L	H	H	H	H
E <sub>2</sub> (14 pin): Reel motor FF	L	H	L	H	H	L	H	L
E <sub>3</sub> (15 pin): Reel motor REW	L	L	L	L	L	H	L	H
G <sub>0</sub> (22 pin): REC mute	L	L	L	H	L	L	L	L
G <sub>1</sub> (23 pin): LINE mute	L	H	H	H	L	L	L	L
G <sub>2</sub> (24 pin): Amp select PB	H	H	L	L	H	H	H	H
G <sub>3</sub> (25 pin): Amp select REC	L	L	H	H	L	L	L	L
H <sub>0</sub> (26 pin): REC bias	L	L	L	H	L	L	L	L
I <sub>1</sub> (31 pin): Solenoid hold	H	L	H	L	L	L	L	L

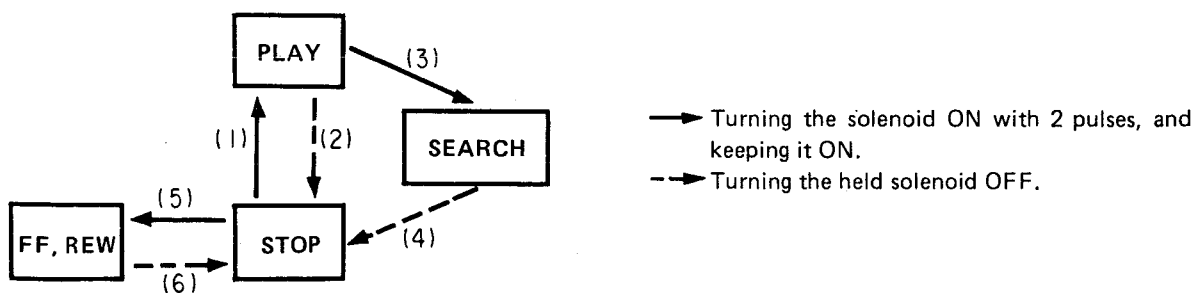
● **MECHANISM DRIVE**

Construction: 2 motors, 1 solenoid.

Operating system: Can assist mechanism triggered when the solenoid turns ON.

Assist: Capstan motor.

● **Mode change**



- (1) When the Stop mode solenoid is turned ON with 2 pulses (for FWD) and the solenoid is then held ON, the mechanism enters Play mode.
- (2) When the solenoid that is held in Play mode is turned OFF, the mechanism enters Stop mode.
- (3) When the Play mode solenoid is turned ON with 1 pulse and is then held ON, the pinch roller is separated from the capstan and the mechanism enters SEARCH mode.
- (4) When the solenoid that is held in REARCH mode is turned OFF, the mechanism returns to Stop mode.
- (5) When the Stop mode solenoid is turned ON with 1 pulse without turning the capstan motor ON and the solenoid is then held ON, the mechanism enters FF/REW mode.
- (6) When the solenoid that is held in FF/REW mode is turned OFF, the mechanism enters Stop mode.

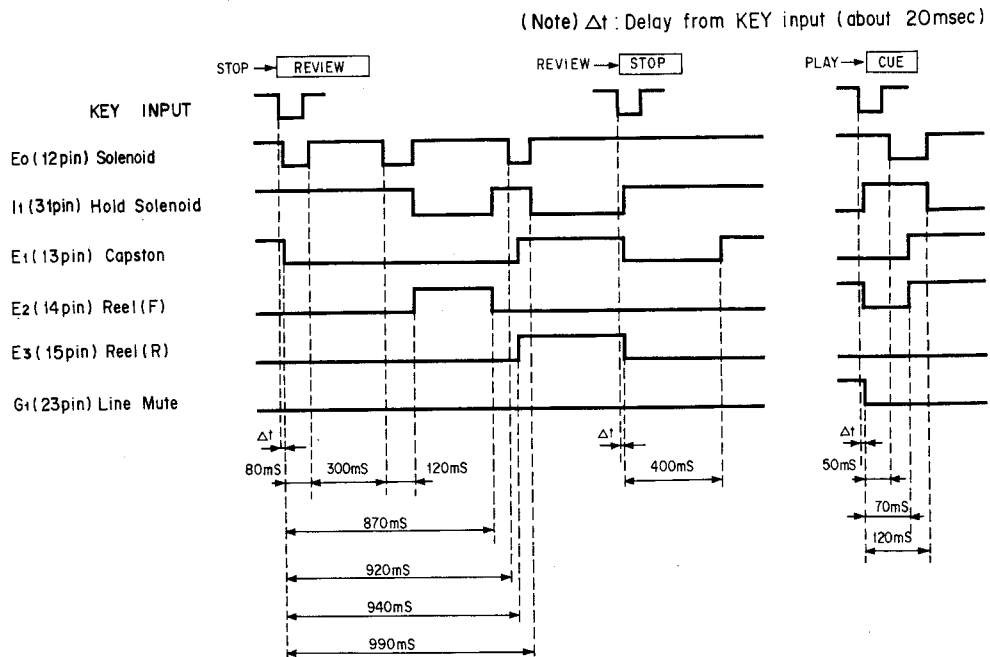
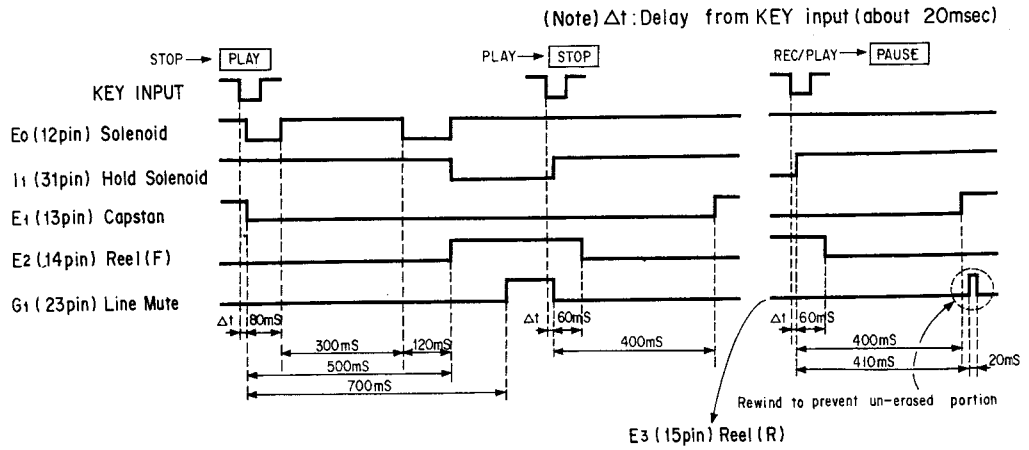
Note: In (1) to (4), the capstan motor is turned ON at the same time as the mode changes.

● **Operation when power is turned ON**

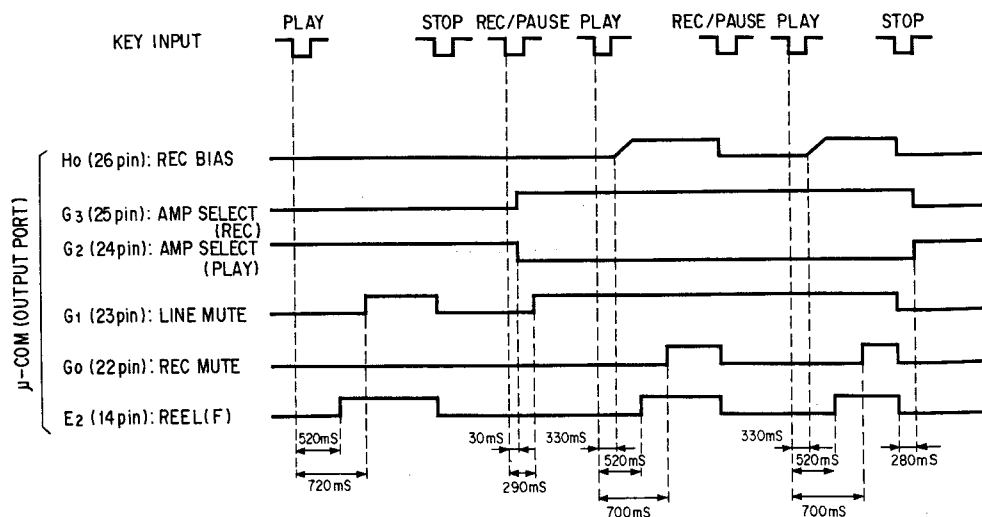
The capstan motor is driven for 1 second in order to assure that the head base falls.

# TIMING CHART

## MECHANISM DRIVE TIMING



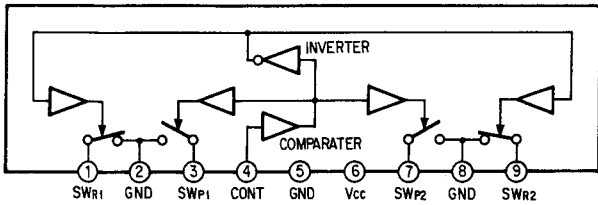
## AMP SELECTOR TIMING



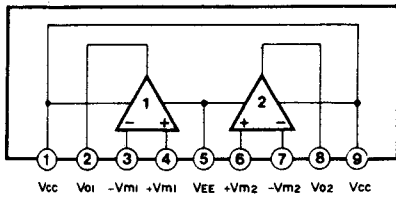
KX-300/U

■ IC BLOCK

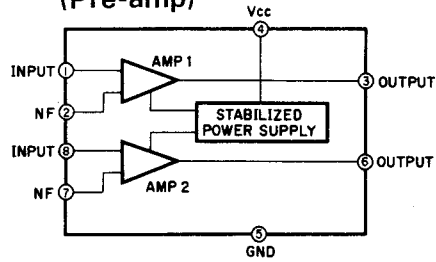
IC1:  $\mu$ PC1330HA  
(PB/REC Head Switch IC)



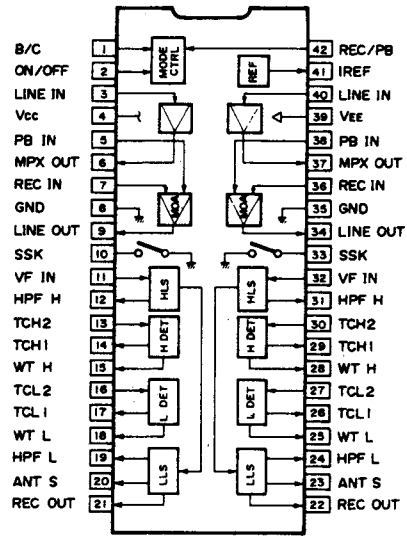
IC3, 6, 7: AN6551, NJM4558S, BA715  
IC5: NJM4556S  
(Dual Ope-amp)



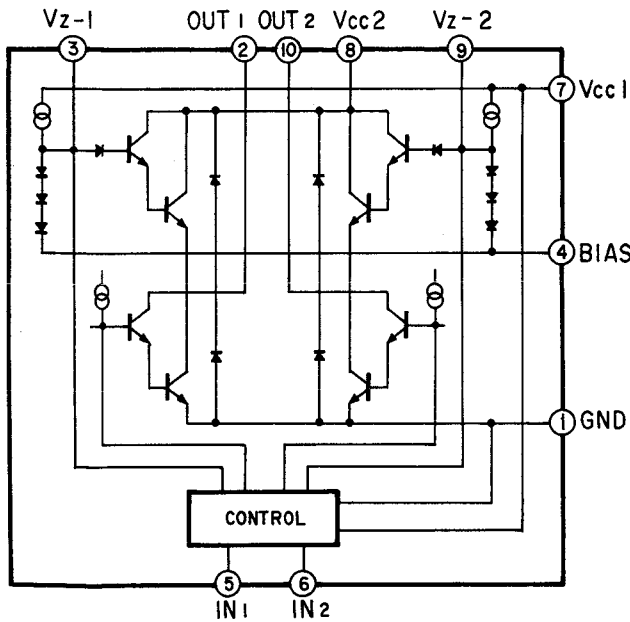
IC2: LA3161  
(Pre-amp)



IC4: CX20187  
(Dolby NR)

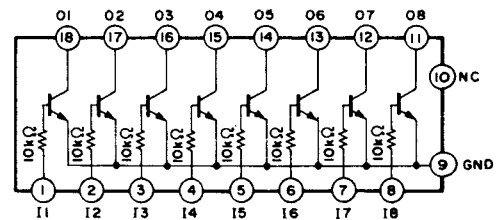


IC11: BA6229  
(Motor Tuning IC)

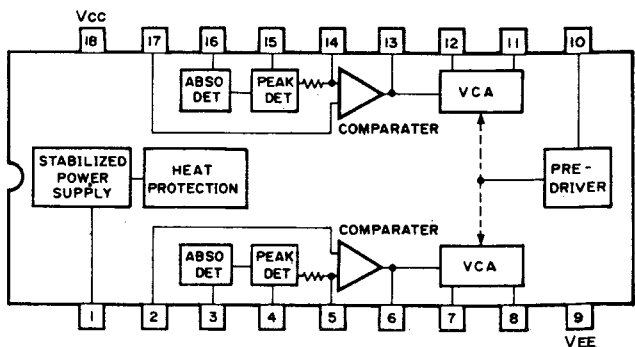


INPUT		OUTPUT		MODE
IN1 (5pin)	IN2 (6pin)	OUT1 (2pin)	OUT2 (10pin)	
L	L	OPEN	OPEN	STOP
H	L	H	L	FWD
L	H	L	H	RVS
H	H	L	L	BRAKE

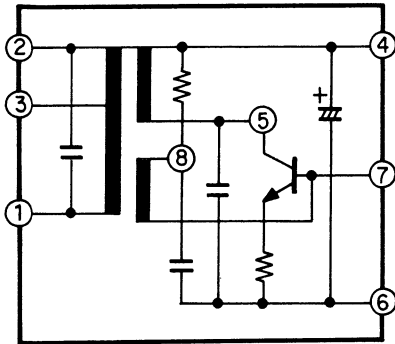
IC8: AN90B20  
(Transistor Array)



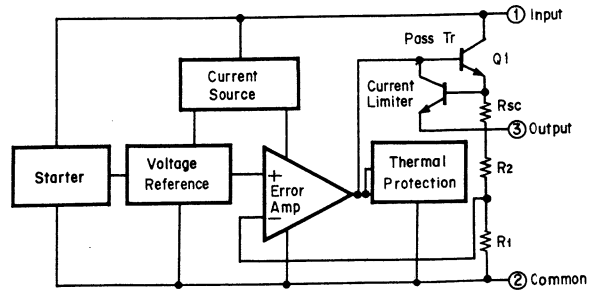
IC10:  $\mu$ PC1297CA  
(Dolby HX PRO)



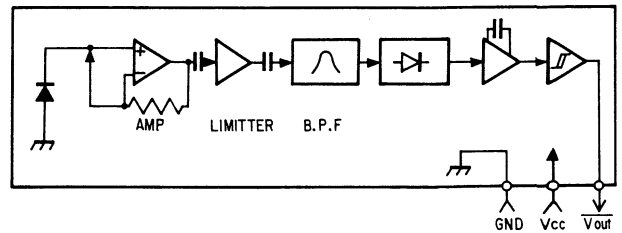
IC13 : VC61670  
(OSC Block)



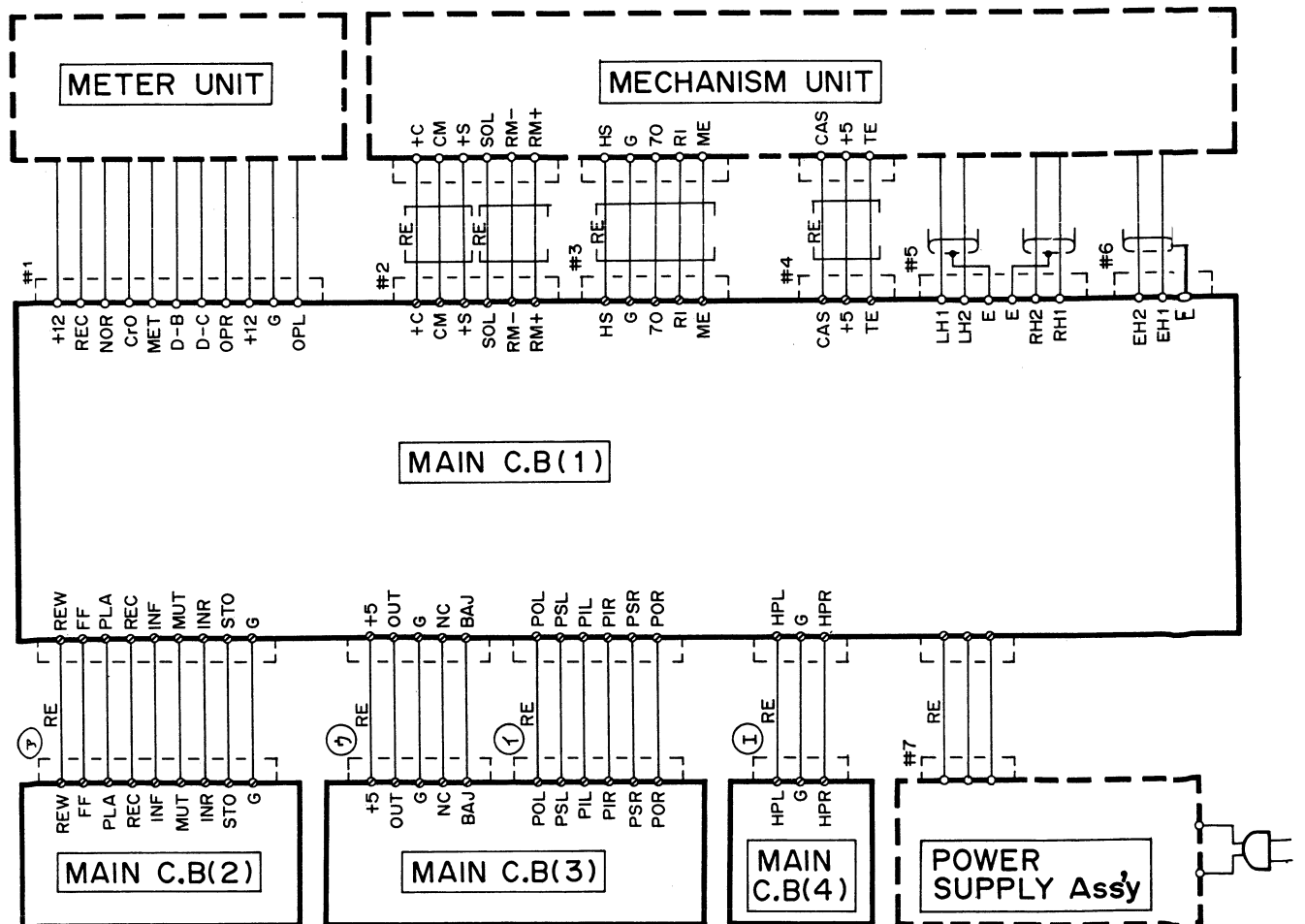
IC12 : L78N05, AN78N05  
(Regulator)



U1 : GP1U521  
(Remote Control Receptor)

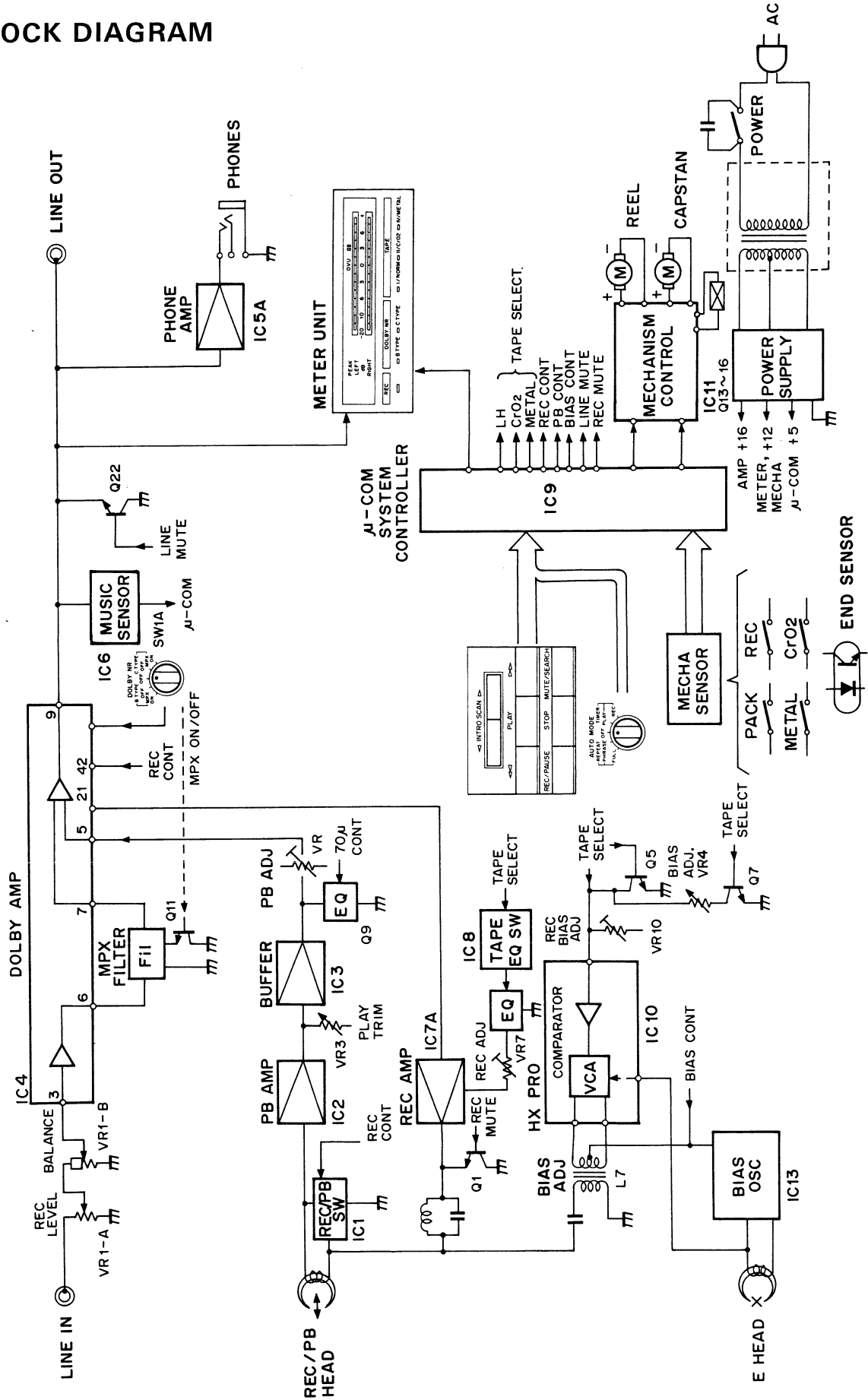


WIRING

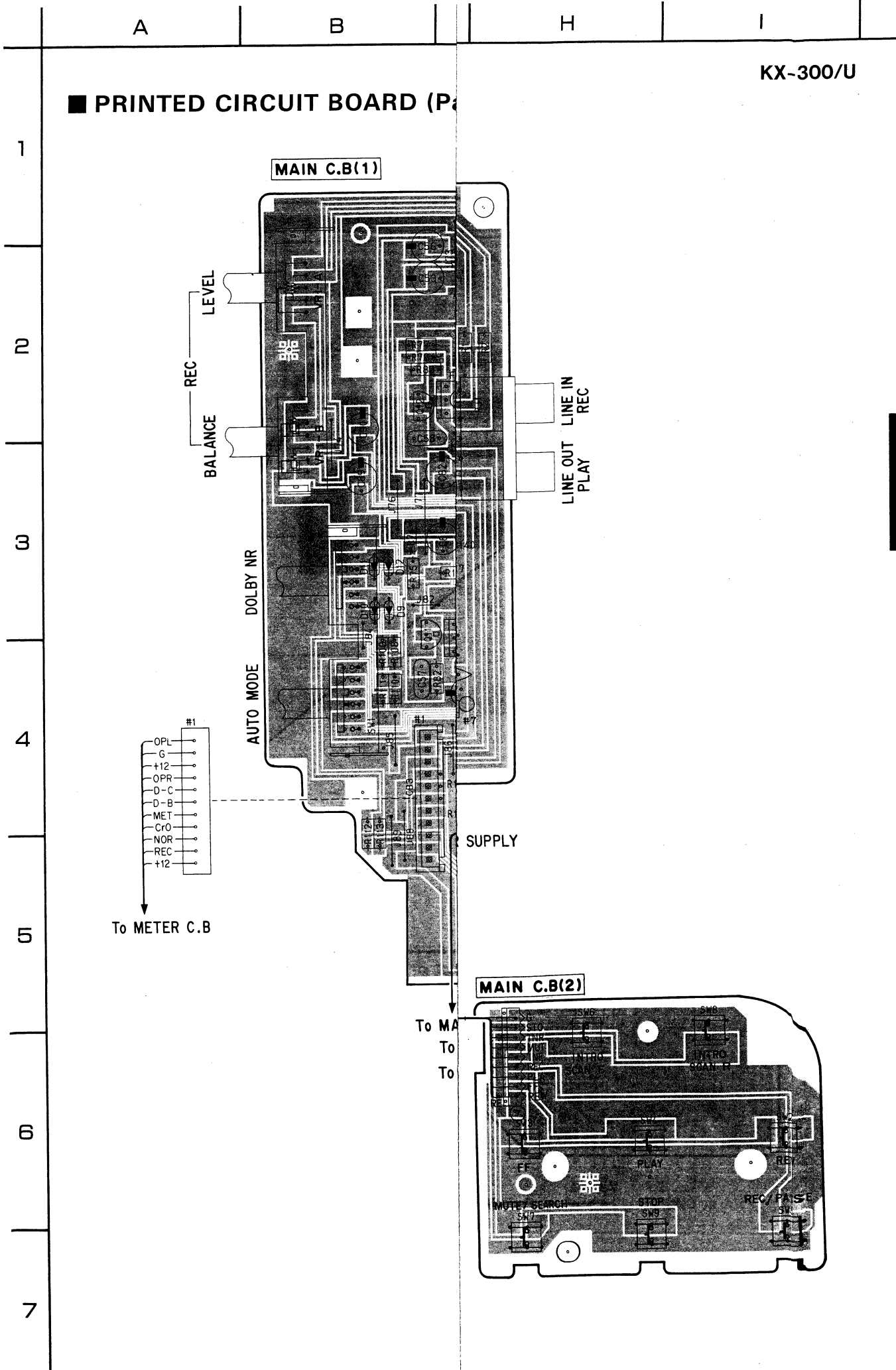


KX-300/U

■ BLOCK DIAGRAM



KX-300/U



■ PRINTED CIRCUIT BOARD (P

KX-300/U

MAIN C.B(1)

MAIN C.B(2)

To METER C.B

SUPPLY

To MA  
To  
To

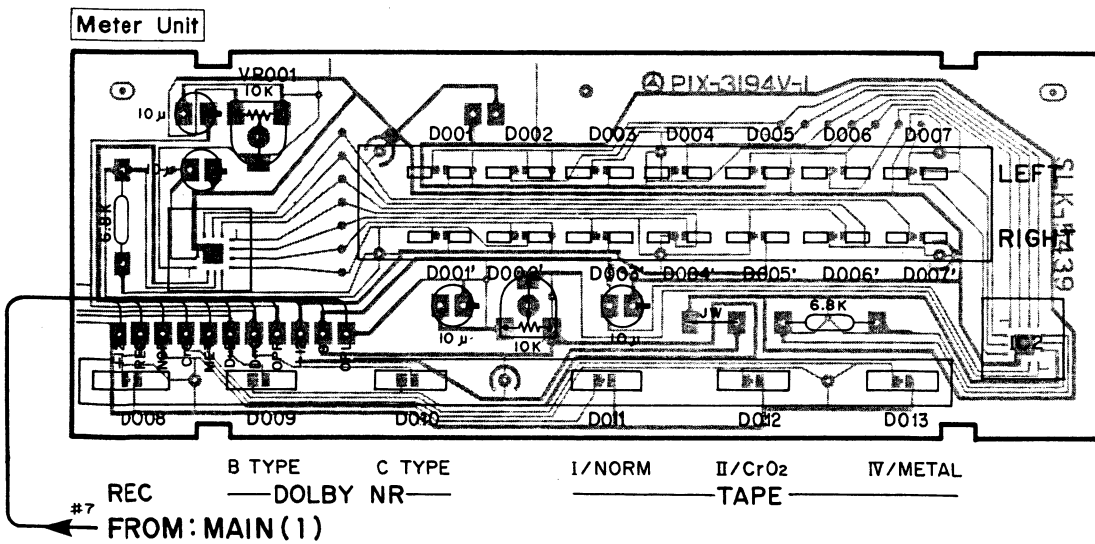
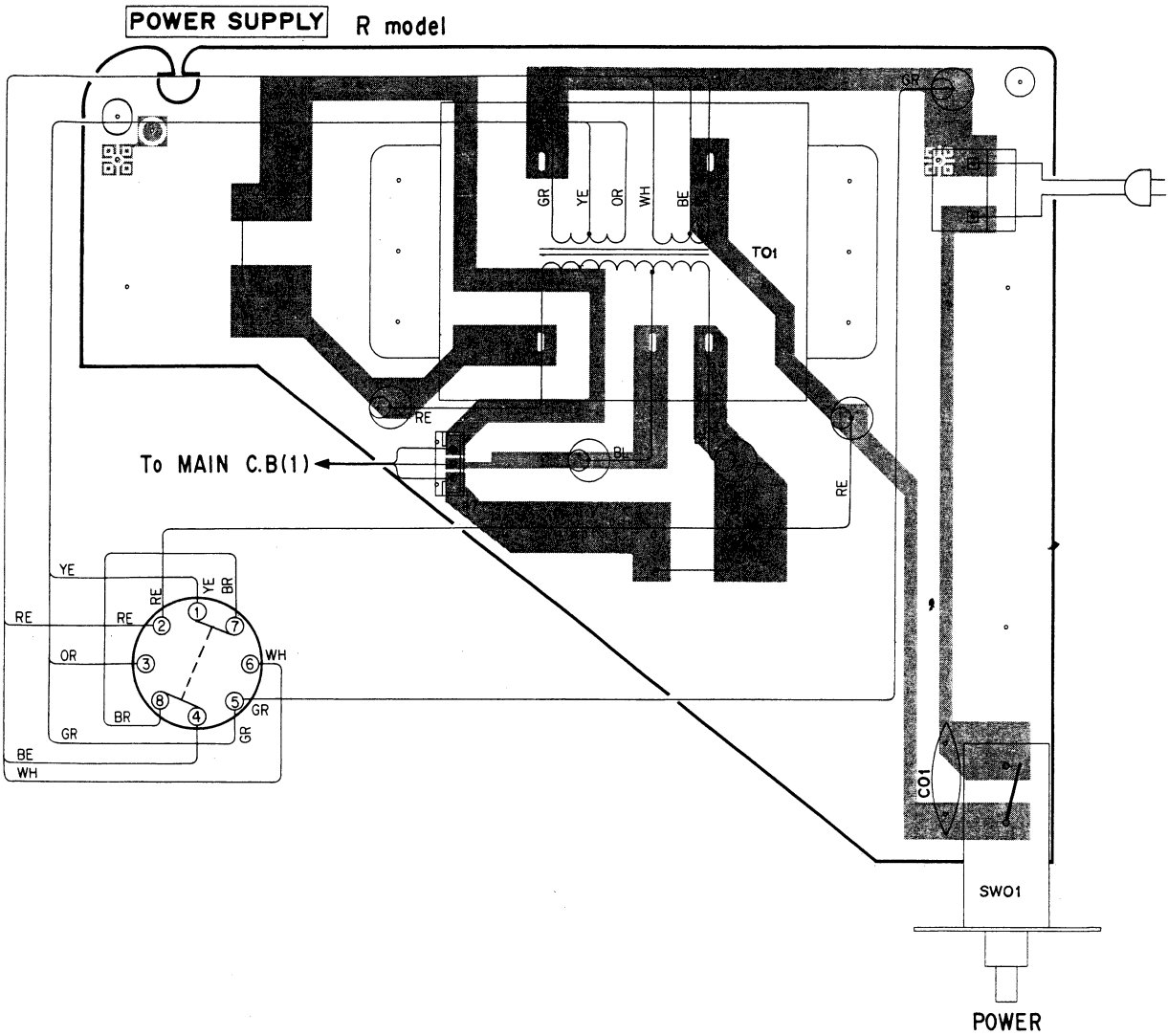
F

G

H

I

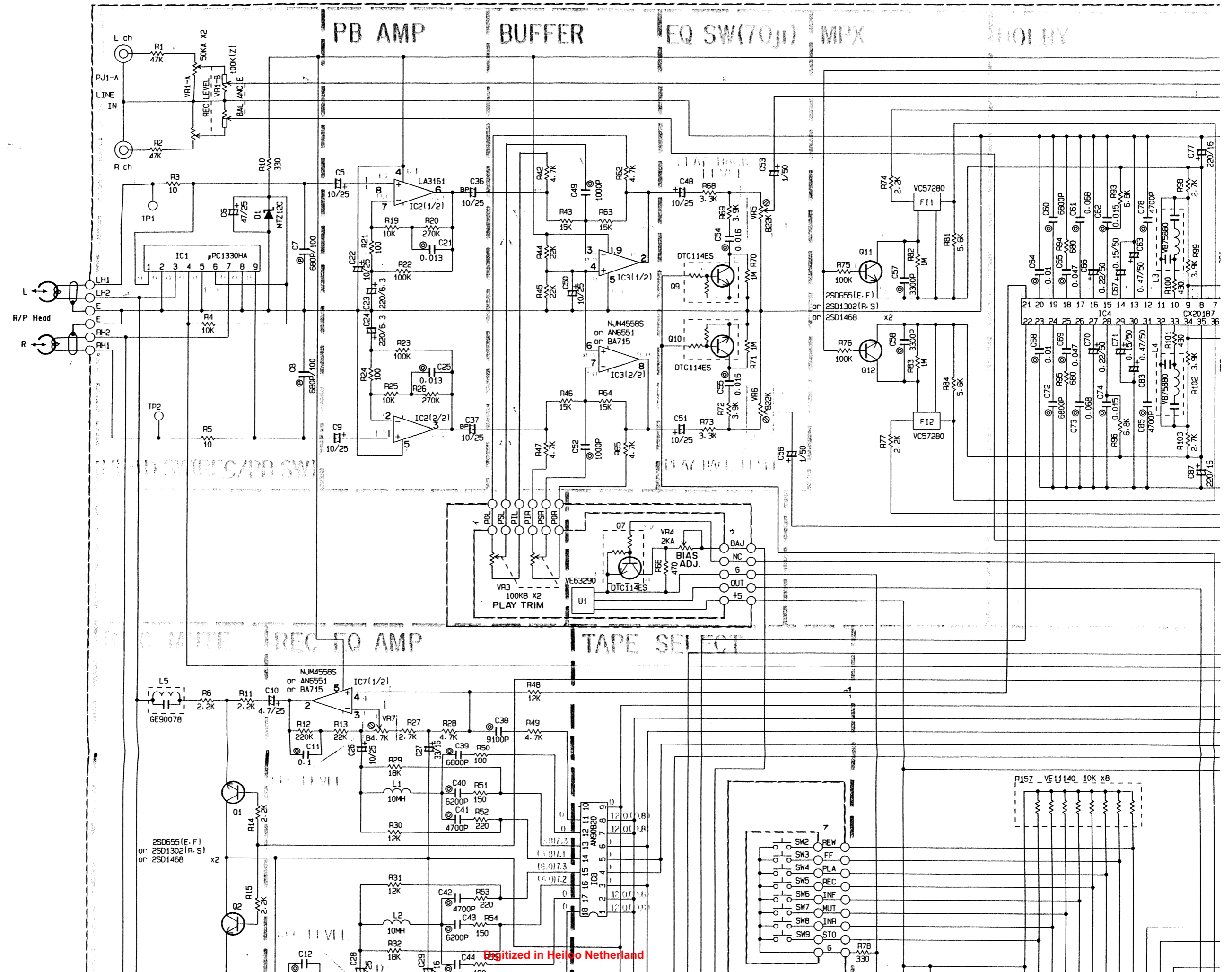
J

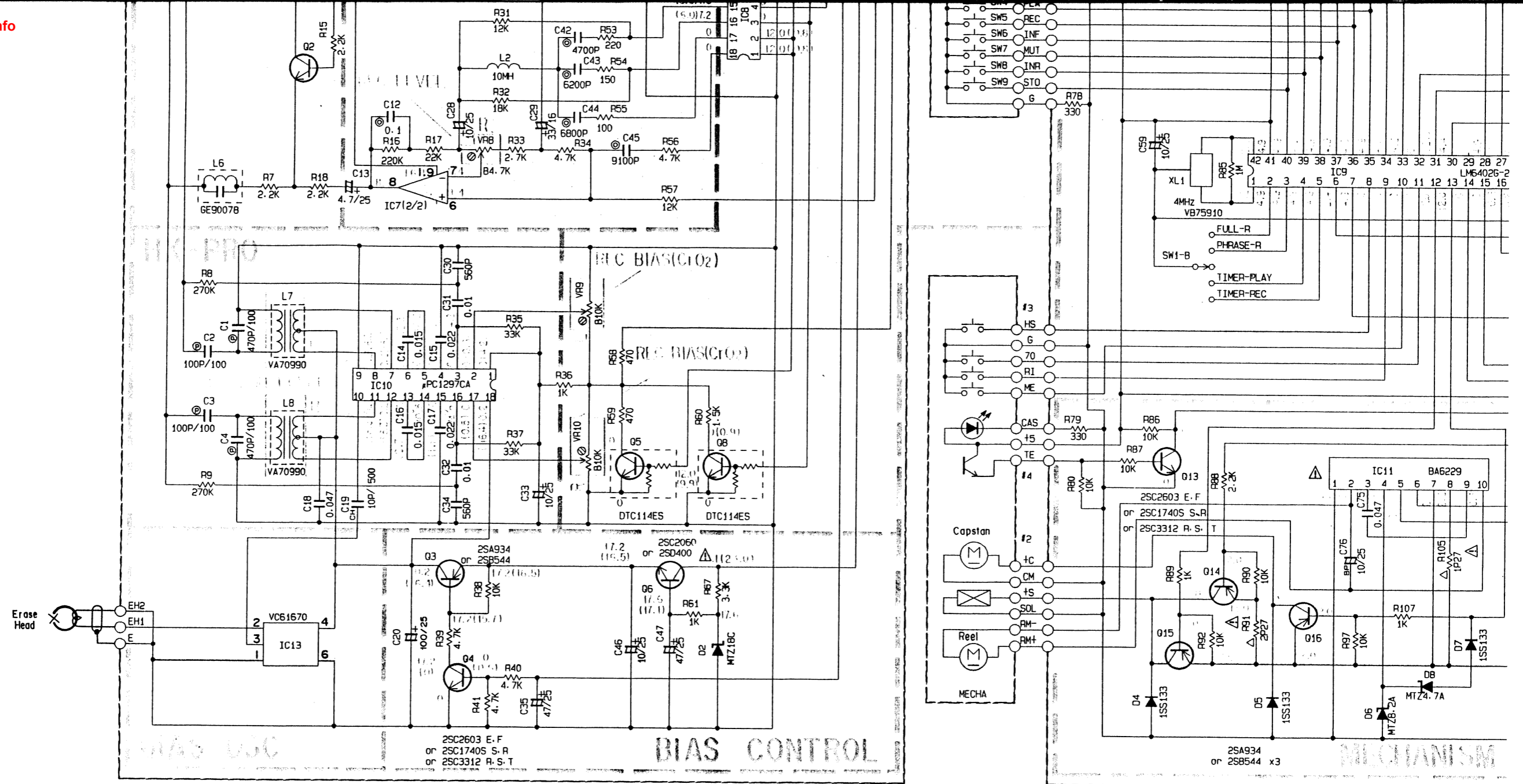




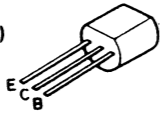
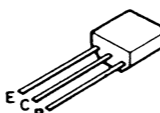
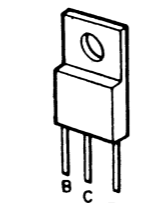
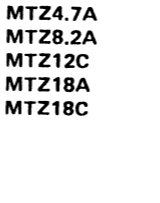
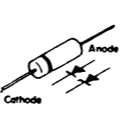
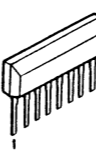
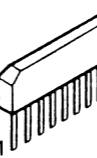
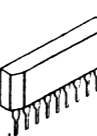
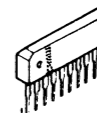
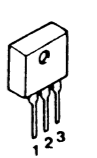
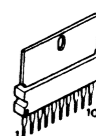
SCHEMATIC DIAGRAM

1  
2  
3  
4  
5  
6

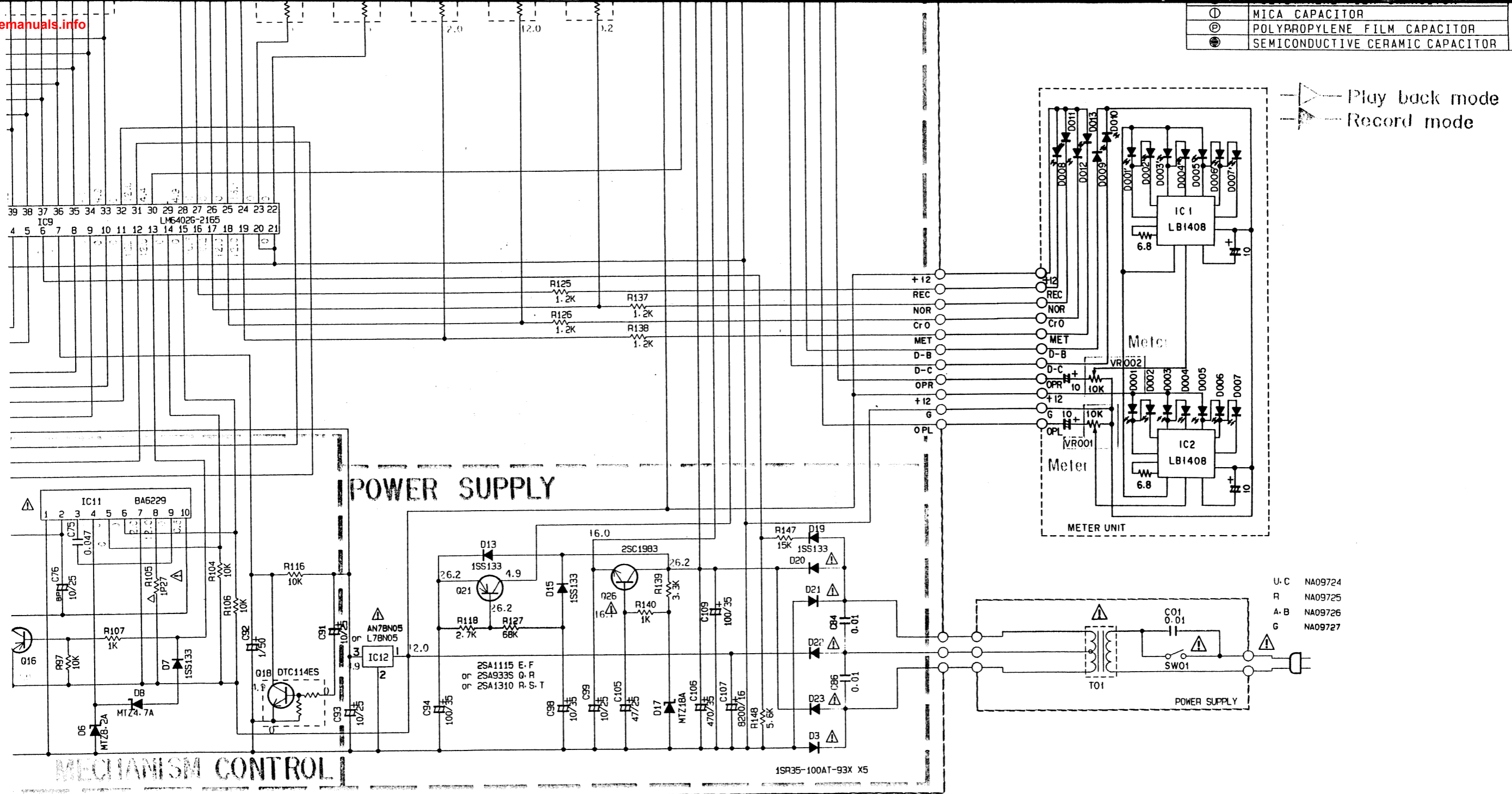




( ) Measured of Recording mode and Normal Position

<p>2SA934 2SB544 2SC1740S (N, R) 2SC2603 (E, F) 2SC3312 (R, S, T) 2SD655 (E, F) 2SD1302 (R, S) 2SD1468 (Q, R, S)</p> 	<p>2SC2060 2SD400</p> 	<p>2SA933S (Q, R) 2SA1115 (E, F) 2SA1310 (R, S, T) DTA114ES DTC114ES</p> 	<p>2SC1983</p> 	<p>1SS133 1SR35-100AT-93X MTZ4.7A MTZ8.2A MTZ12C MTZ18A MTZ18C</p> 	<p>μPC1330HA</p> 	<p>LA3161</p> 	<p>AN6551 NJM4558S BA715</p> 	<p>NJM4556S</p> 	<p>AN78N05 L78N05</p> 	<p>BA6229</p> 
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▶ Play back mode  
 ▶ Record mode

- U-C NA09724
- R NA09725
- A-B NA09726
- G NA09727

**MECHANISM CONTROL**

**POWER SUPPLY**

**METER UNIT**

**POWER SUPPLY**

<p><b>AN78N05</b> L78N05</p>	<p><b>BA6229</b></p>	<p><b>AN90B20</b></p>	<p><b>μPC1297CA</b></p>	<p><b>CX20187</b></p>	<p><b>LM6402G-2165</b></p>
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**CAUTION**

- Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.
- All voltages are measured with a 10M $\Omega$ /V DC electric volt meter.
- Schematic diagram is subject to change without notice.

# PARTS LIST

KX-300/U

## ■ WARNING

- Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.
- Carbon resistors 1/6 W are not included in the ELECTRICAL PARTS list. For the parts No. of the carbon resistor, refer to P. 32.

## ■ ELECTRICAL PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※	<b>NA:09:71:90</b>	<b>Main Circuit Board</b>	メ イ ン シ ー ト				
	FG 11 25 60	Ceramic Cap.	セ ラ コ ン	C30,34			
	FG 24 41 00	//	//	C31,32,84,86			
	FG 24 41 50	//	//	C14,16			
	FG 24 42 20	//	//	C15,17			
	FG 24 44 70	//	//	C18,75,101			
	FH 61 11 00	//	//	C19			
	FA 15 31 00	Mylar Cap.	マ イ ラ ー コ ン	C49,52			
	FA 15 33 30	//	//	C57,58			
	FA 15 34 70	//	//	C41,42,78,85			
	FA 15 36 20	//	//	C40,43			
	FA 15 36 80	//	//	C39,60,72			
	FA 15 39 10	//	//	C38,45			
	FA 15 41 00	//	//	C64,68,97			
	FA 15 41 30	//	//	C21,25			
	FA 15 41 50	//	//	C62,74			
	FA 15 41 60	//	//	C54,55			
	FA 15 44 70	//	//	C65,69			
	FA 15 46 80	//	//	C61,73			
	FA 15 51 00	//	//	C11,12			
	UH 13 73 30	Electrolytic Cap.	ケ ミ コ ン	C27,29,79,108			
	UH 14 81 00	//	//	C20			
	UJ 13 82 20	//	//	C77,87			
	UH 14 64 70	//	//	C81,82,100,103			
	UH 14 71 00	//	//	C26,28,33,46,48,50,51,59,88,91,93,95,96,99,102			
	UH 14 74 70	//	//	C6,35,47,105			
	UH 15 71 00	//	//	C98			
	UH 15 81 00	//	//	C94,109			
	UH 16 54 70	//	//	C63,83			
	UH 16 61 00	//	//	C53,56,80,92,104			
	UH 16 62 20	//	//	C89,90			
	Ui 93 98 20	//	//	C107			
※	VE 80 16 00	//	ケ ミ コ ン (DUOREX)	C106			
	UW 56 51 50	//	ケ ミ コ ン	C67,71			
	UJ 16 52 20	//	//	C66,70			
	UK 34 71 00	//	B P コ ン	C36,37,76			
	UT 45 21 00	Polypropylene Cap.	ポ リ プ ロ コ ン	C2,3			
	UT 45 24 70	//	//	C1,4			
	UT 45 26 80	//	//	C7,8			
	VE 01 66 00	Electrolytic Cap.	ケ ミ コ ン (DUOREX)	C23,24			
	VE 01 82 00	//	//	C10,13			
	VE 01 83 00	//	//	C5,9,22			
	VC 57 28 00	MPX Filter	M P X フ ィ ル タ ー	Fil,2			
	VA 70 99 00	Coil	ス テ ッ プ ア ッ プ コ イ ル	L7,8			
	GE 90 07 80	Bias Trap Coil	バ イ ア ス ト ラ ッ プ コ イ ル	L5,6			
	VB 75 88 00	Coil	ス キ ュ ー イ ン グ コ イ ル	L3,4			
	GE 90 16 30	//	固 定 コ イ ル	L1,2			
	VB 75 91 00	Ceramic Resonator	セ ラ ミ ッ ク 振 動 子	XL1			
	HL 31 42 70	Metal Oxid Film Resistor	酸 金 抵 抗	R105			
	HL 32 42 70	//	//	R91			

※ New Parts (新規部品)



KX-300/U

KX-300/U

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	VE 11 14 00	Resistor, Array	10KΩ × 8	抵 抗 ア レ ー	R157		
	VB 86 14 00	Per-set Potentiometer	B4.7KΩ	半 固 定 抵 抗	VR7,8		
	VB 86 15 00	//	B10KΩ	//	VR9,10		
	VB 86 16 00	//	B22KΩ	//	VR5,6		
※	VE 63 37 00	Potentiometer Unit	100KΩ A50KΩ × 2	可 変 抵 抗 器	VR1		
※	VE 63 35 00	Rotary VR	A 2KΩ	ロ ー タ リ ー ボ リ ュ ム	VR4		
※	VE 63 36 00	//	B100KΩ × 2	//	VR3		
	iA 09 34 00	Transistor	2SA934	ト ラ ン ジ ス タ ー	Q3,14~16	Inter-changeable	
	iB 05 44 10	//	2SB544	//	//		
	iA 09 33 70	//	2SA933S(Q,R)	//	Q21	Interchangeable	
	iA 11 15 10	//	2SA1115(E,F)	//	//		
	iA 13 10 00	//	2SA1310(R,S,T)	//	//		
	iC 20 60 00	//	2SC2060	//	Q6	Interchangeable	⚠
	iD 04 00 10	//	2SD400	//	//		
	iC 17 40 70	//	2SC1740S(S,R)	//	Q4,13	Interchangeable	
	iC 26 03 10	//	2SC2603(E,F)	//	//		
	iC 33 12 00	//	2SC3312(R,S,T)	//	//		
	iD 06 55 10	//	2SD655(E,F)	//	Q1,2,11,12,22,23	Inter-changeable	
	iD 13 02 00	//	2SD1302(R,S)	//	//		
	VA 71 00 00	//	2SD1468(Q,R,S)	//	//		
	iC 19 83 00	//	2SC1983	//	Q26		⚠
	VD 67 85 00	Digital Transistor	DTA114ES	デ ジ タ ル ト ラ ン ジ ス タ ー	Q17,19,20,24,25		
	VD 67 87 00	//	DTC114ES	//	Q5,7~10,18		
	iF 00 61 30	Diode	ISS133	ダ イ オ ー ド	D4,5,7,9~16,18,19		
	iF 00 84 80	//	ISR35-100A	//	D3,20~23		⚠
	iF 01 06 50	Zener Diode	MTZ4.7A	ツ ェ ナ ー ダ イ オ ー ド	D8		
	iF 01 08 20	//	MTZ8.2A	//	D6		
※	iF 00 88 70	//	MTZ12C	//	D1		
	iF 00 89 60	//	MTZ18A	//	D17		
	iF 00 89 80	//	MTZ18C	//	D2		
	iG 03 47 00	IC	AN6551	I C	IC3,6,7	Inter-changeable	
	iG 07 68 00	//	NJM4558	//	//		
	iG 13 22 00	//	BA715	//	//		
	iG 07 74 00	//	NJM4556S	//	IC5		
	iG 14 55 00	//	LA3161	//	IC2		
	XA 50 60 01	//	L78N05	//	IC12	Interchangeable	⚠
	XA 50 70 01	//	AN78N05	//	//		
	iG 15 25 00	//	BA6229	//	IC11		⚠
	iG 08 99 00	//	AN90B20	//	IC8		⚠
	XA 30 00 01	//	μPC1297CA	//	IC10		
	XD 86 40 01	//	μPC1330HA	//	IC1		
※	XB 29 80 01	//	CX20187	//	IC4		
	XD 86 50 01	//	LM6402G-2165	//	IC9		
	VC 61 67 00	Bias OSC Block		バ イ ア ス O S C ブ ロ ッ ク	IC13		
※	VE 63 29 00	Remote Control Receptor Unit		リ モ コ ン 受 光 ユ ニ ッ ト	U1		

※ New Parts (新規部品)

KX-300/U

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Medel	Markets	ランク
	VE 32 73 00	Switch	KHH-MA901	タクトスイッチ	SW2~6,8,9		
	KA 90 63 80	//	5MEVQ-QRB-04M	タッチスイッチ	//		
	KA 90 63 50	//	KHH-10902	タクトスイッチ	SW7	Inter-changeable	
	VB 79 90 00	//	5MEVQ-QSL-04M	タッチスイッチ	//		
	VA 87 73 00	Rotary Switch	SD1612	ロータリースイッチ	SW1		
	VB 09 73 00	Head Phone Jack		ヘッドホンジャック	JK1		
	LB 40 10 50	Pin Jack	4P	ピンジャック	PJ1		
	LB 91 80 30	Base Pin	3P i-Type	ベースピン	CB1		
	LB 91 80 60	//	6P //	//	CB2		
	LB 91 81 10	//	11P i-Type	//	CB3		
	LA 00 41 20	Pin, Test Point		テストポイントピン			
	CB 65 02 70	Bracket, P.C Board		PCBブラケット (B)			
						K-540	
*	NA 09 72 40	Power Transformer Ass'y		パワートランスAss'y	U,C		
*	NA 09 72 50	//		//	R		
*	NA 09 72 60	//		//	A,B		
*	NA 09 72 70	//		//	G		
	Fi 41 41 00	Ceramic Cap	0.01 μF VA-1	フォーミングセラコン	CO1	Interchangeable	
	Fi 51 41 00	//	0.01 μF DNS	//	//		
	VA 89 08 00	Capacitor	0.01 μF 400V	コンデンサー	//		
	VE 22 57 00	Post	2P	ベース付ポスト			
	LB 92 50 30	Short Plug	3P i-Type	ショートプラグ			
	KA 80 51 50	Switch, Power	ESB8215V-F	パワースイッチ	SW01		
	GA 68 72 10	Power Transformer		電源トランス	TO1 (R)		
	GA 68 71 00	//		//	// (U,C)		
	GA 68 74 00	//		//	// (A,B)		
	GA 68 73 00	//		//	// (G)		



\*New Parts (新規部品)





EXPLODED VIEW PARTS

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
* 1	VE 64 49 00	Cassette Mechanism Unit	カセット ノブ	Silver	K-720		
* 1-1	VE 60 92 00	Cassette Deck Mechanism	カセット //	Black	//		
1-2	NB 62 53 50	Housing Ass'y	ハウジング ノブ	Silver	K-520		
1-2-1	CB 62 85 70	Cassette Guide (L)	カセット //	Black	//		
1-2-2	CB 60 98 80	// (R)	//	Silver			
1-3	AA 60 88 70	Housing Spring	ハウジング //	Black			
1-4	NB 60 33 40	Damper Ass'y	ダンパー カバー		K-320		
1-5	AA 62 89 90	Blind Plate	ブラインド パネル	Silver			
1-6	CB 09 96 00	Plastic Rivet	プラスチック //	Black			
1-7	CB 60 14 20	//	プラスチック カバー	Silver	K-340		
1-8	CB 65 04 00	Belt, Counter	カウチ //	Black	//		
1-9	EX 60 02 10	BW Head Tapping Screw	2.5×12 FCRM3 B1 BWヘッド チックリベット			R	
2	VE 64 50 00	Panel Unit	パネル //				
* //	VE 64 51 00	//	ドッキングネジ				
* //	VE 64 52 00	//	//	Pack			
* //	VE 64 53 00	//	ドッキングネジ	Pack			
2-1	CB 62 52 10	Button, Eject	イジェクト 付 座 金	Pack			
//	CB 62 52 20	//	ヘッド コネジ	Silver			
2-2	AA 61 04 30	Eject Spring	イジェクト //	Black			
2-3	PB 06 55 30	Tape Counter	テープ 切 換 器			R	
2-4	AA 62 87 10	Holder, Counter	カウチ ユロックタイ	PACK			
* 2-5	VE 60 83 00	Sub Panel	サブ //				
* //	VE 60 84 00	//	属 品				
2-6	CB 64 01 70	Filter	フイルター コード		KX-800	U.C.R.A	
* 2-7	VE 60 91 00	Holder, P.C.Board	シートランスミッター			U.C.R.A	
2-8	CB 06 88 80	Plastic Rivet	プラスチック //			U.C.R.A	
2-9	CB 60 56 20	//	乾 電 池				
2-10	CB 64 24 90	Damper	ダンパー				
2-11	EX 60 08 20	BW Head Tapping Screw	2×5 ZMC2-Y BWヘッド				
2-12	EI 02 60 56	Binding Head Tapping Screw	2.6×5 ZMC2-Y バインディング				
* 2-13	CB 62 95 70	Button	ボタンの				
* //	CB 62 95 80	//	//				
* 2-14	AA 62 89 70	Spring	スプリング				
* 3	NA 09 71 90	Main Circuit Board	メイン //				
* 4	NA 09 72 40	Power Transformer Ass'y	パワー //				
* //	NA 09 72 50	//	//				
* //	NA 09 72 60	//	//				
* //	NA 09 72 70	//	//				
* 5	CB 61 68 10	Cord Stopper	CM-22A	コー //			
//	CB 62 01 90	//	CM-22B				
6	VA 87 72 00	Meter Unit	メーター //				
//	VA 91 56 00	//	//				
7	VE 64 00 00	Power Cord Ass'y	パワー //				
//	VE 22 29 00	//	//				
//	VE 04 29 00	//	//				
//	VE 04 31 00	//	//				
//	VE 04 34 00	//	//				
8	NB 63 05 30	Chassis	シ //				
//	NB 63 05 50	//	//				
9	CB 63 42 80	Rod	ロッド				
10	CB 63 67 50	Button	ボタンの				
//	CB 65 20 60	//	//				

\*New Parts(新規部品)

## KX-300/U

## MECHANISM PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks/Markets	Common Model	ランク	
※	VE 60 92 00	Cassette Deck Mechanism	カセットデッキメカ				
1	XX 64 17 10	Screw	F ロ ッ ク ネ ジ		K-220	FG137-18	
2	XX 64 17 20	Spring, Azimuth	アジマススプリング		K-220	FK21U-11	
3	XX 67 05 10	Connecor	ワイヤーコネクター	R/P Head	K-340	WH30T-03	
※	4	GX 60 17 50	R/P Head	HAJCH4702	録 再 ヘ ッ ド	FU18K-11	
5	XX 68 52 30	Connector	ワイヤーコネクター	E-Head	KX-200	WH44S-00	
6	XX 64 17 30	Erase Head	消 去 ヘ ッ ド		K-200	FU11K-11	
7	XX 64 17 40	Spacer Head	ヘッドスペーサー		//	FD33C-11	
※	8	AX 60 24 80	Base Head			FC38N-81	
9	XX 64 18 90	Spring Head Base	ヘッドベーススプリング		K-220	FK22L-11	
10	XX 68 53 20	Screw	2 × 13	ウ ェ ー ブ ネ ジ	KX-400	UG15U-11	
※	11	NX 60 16 50	Pinch Roller Ass'y			FR20L-11	
12	XX 67 02 50	Washer	ワ ッ シ ャ ー		K-222	FJ141-11	
13	XX 64 18 50	//	ポリスライダー		K-220	UJ12V-11	
14	XX 69 51 50	Brake Ass'y	ブ レ ー キ 組 立 品		KX-W900	F028-034	
15	XX 64 19 40	Spring, Hold	ホールズスプリング		K-220	FK22E-11	
16	XX 63 66 10	Washer	1.7 × 0.25	ポリスライダー	K-220/07	FJ111-17	
17	XX 64 18 40	Reel Ass'y	リ ー ル 組 立 品		K-220	F105-027	
18	XX 63 89 20	Reel Ass'y, Take Up	テイクアップリール組立品		K-600	F123-037	
19	XX 69 51 60	Solenoid Pin	ソレノイドピン		KX-W900	PL366-11	
20	AX 60 03 80	Solenoid Coil	PKA16145	ソレノイドコイル		F265-252	
※	21	AX 60 24 90	Chassis			F112-109	
※	22	AX 60 25 00	Screw	段 付 ネ ジ		UG15S-11	
※	23	AX 60 25 10	EJECT Stop Arm (L)	イジェクト防止アーム(L)		FC39S-33	
※	24	AX 60 25 20	Spring, EJECT Stop	イジェクト防止スプリング		FK22P-16	
25	XX 68 44 80	Idler Ass'y	アイドラー組立品		KX-W500	F017-047	
※	26	CX 60 31 20	Cam Gear	カ ム ギ ャ ー		FD39C-25	
※	27	CX 60 31 30	Sensor Lever, PACK	P A C K 検 知 レ バ ー		FD39T-12	
※	28	CX 60 31 40	// , REC	R E C 検 知 レ バ ー		FD38S-12	
※	29	CX 60 31 50	// , METAL	メタル検知レバー		FD38U-12	
30	XX 64 19 70	Spring, Cassette Hold	カセット押えスプリング		K-220	FC39H-15	
※	31	AX 60 25 30	Spring, Play Arm	プレイアームスプリング		FK22G-14	
32	XX 63 68 10	Washer	2.6 × 0.25	ポリスライダー	K-220/07	FJ111-30	
33	XX 68 53 40	Flywheel Ass'y	フライホイール組立品		KX-400	FRI9V-22	
34	XX 69 52 40	Spacer	角 ス ペ ー サ ー		KX-W900	UJ13L-11	
※	35	AX 60 25 40	Bracket, Flywheel	フライホイールブラケット		FC47D-13	
※	36	AX 60 25 50	Play Arm(F)	ブレイアーム(F)		FD38M-13	
※	37	JX 60 01 90	Motor, Reel	リ ー ル モ ー タ ー		F064-258	
38	XX 64 20 70	Motor, Main	メ イン モ ー タ ー		k-220	F064-157	
39	XX 67 05 40	Belt	メ イン ベ ル ト		K-340	FF16K-11	
※	40	AX 60 25 60	Screw	タ ッ プ タ イ ト ネ ジ		UG15V-12	
41	XX 64 19 30	Screw with Washer	ワ ッ シ ャ ー 付 ネ ジ		K-220	UG11S-14	
42	XX 64 90 90	Pan Head Tapping Screw	2.6 × 6	ナベタッピングネジ	K-420	FG114-20	
43	EJ 03 00 56	//	3 × 5 ZMC2-Y	ナベタッピングネジ	PACK	KG194-11	
44	XX 68 48 90	//	2.6 × 8	ウ ェ ー ブ ネ ジ	K-M77	UG12H-14	
※	45	LX 60 11 20	Connector	コ ネ ク タ ー		F067-182	
※	45-1	NX 60 16 60	Relay C・Board	中 継 シ ー ト		FPI6R-71	
※	45-2	KX 60 10 80	Push Switch	プッシュスイッチ		UE16E-11	
45-3	XX 69 51 90	Sensor, Reel	GP2S09B	リ ー ル セ ン サ ー	KX-W900	AZ13A-00	
※	45-4	LX 60 11 30	Connector Socket	コネクターソケット		UY15B-15	
45-5	LX 60 11 40	//	//			UY15B-14	
※	45-6	XX 68 48 30	Connector	B3B-EH	コ ネ ク タ ー	K-M77	UY15B-12

※ New Parts (新規部品)



A

B

C

D

E

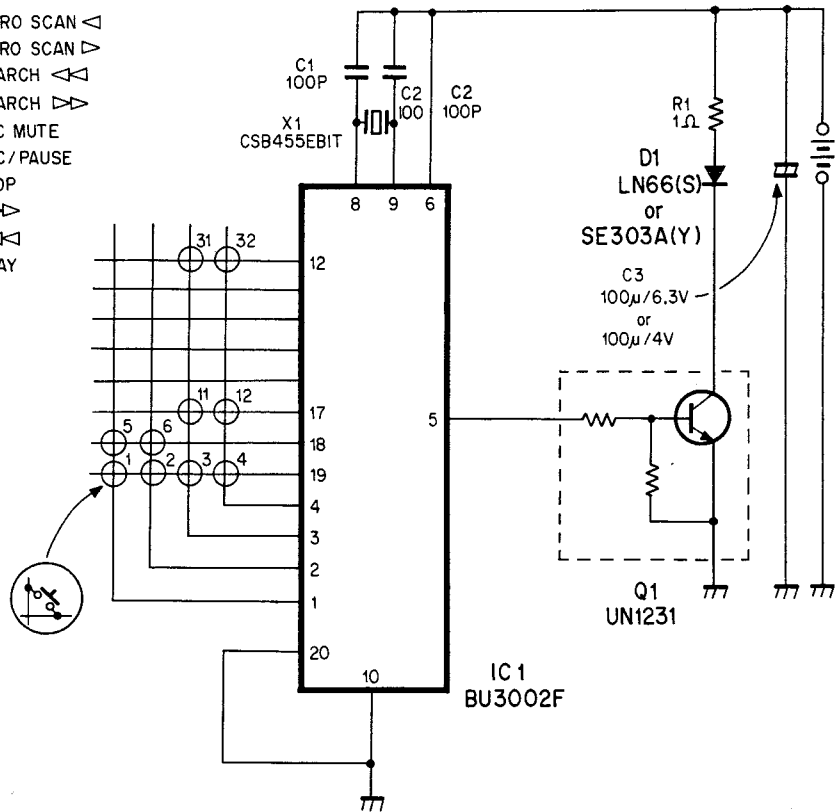
KX-300/U

REMOTE CONTROL TRANSMITTER

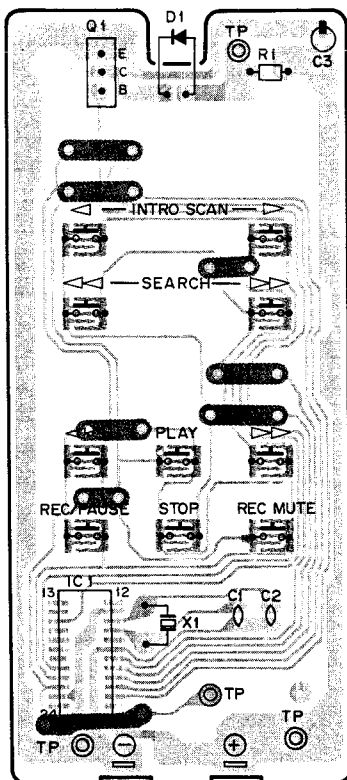
SCHEMATIC DIAGRAM

KEY NO.	FUNCTION	DATA CODE
1	PLAY	00
2	◀▶	01
3	▶▶	02
4	STOP	03
5	REC/PAUSE	04
6	REC MUTE	05
11	SEARCH	0A
12	SEARCH	0B
31	INTRO SCAN	1E
32	INTRO SCAN	1F
CUSTOM CODE		7F

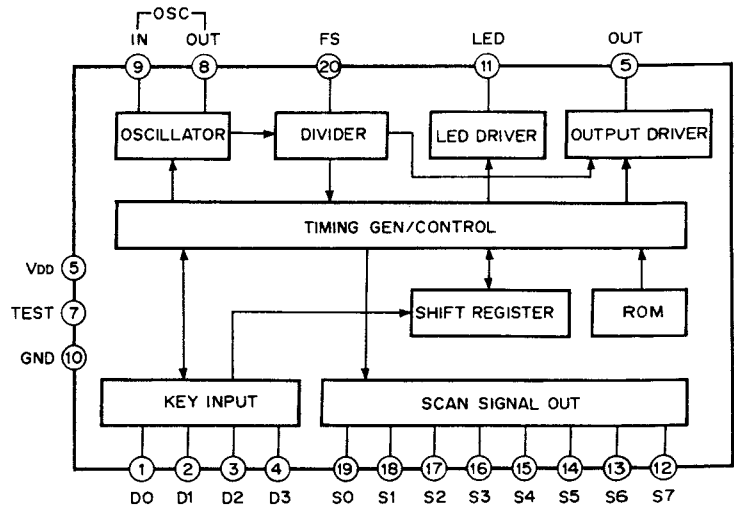
- 32: INTRO SCAN ◀
- 31: INTRO SCAN ▶
- 12: SEARCH ◀▶
- 11: SEARCH ▶▶
- 6: REC MUTE
- 5: REC/PAUSE
- 4: STOP
- 3: ▶▶
- 2: ◀▶
- 1: PLAY

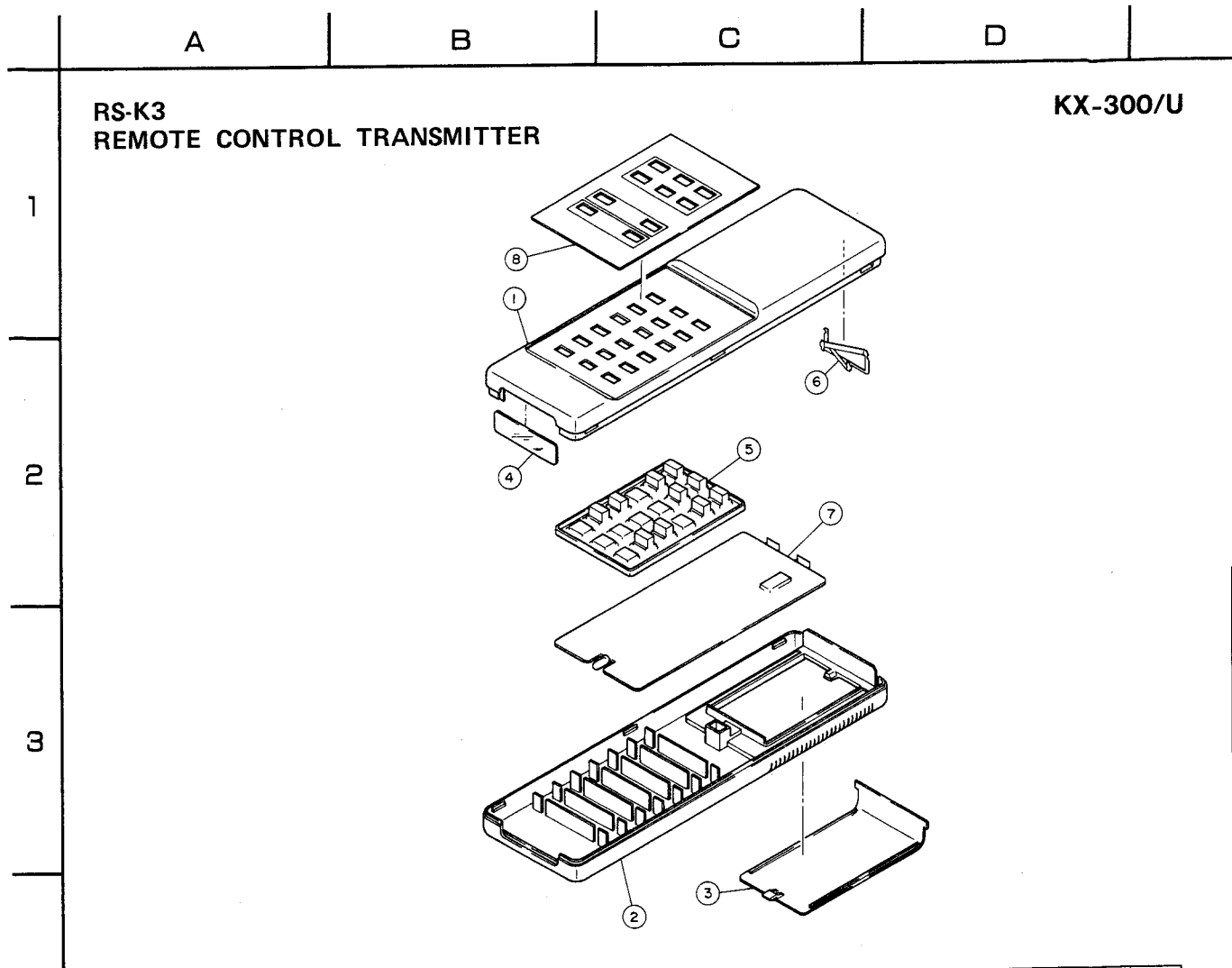


PRINTED CIRCUIT BOARD



IC1 BU3002F





Ref. No.	Part No.	Description	部 品 名	Remarks/Markets	Common Model	ランク
※	VE 71 88 00	Remote Control Transmitter	RS-K3	リモートコントロールトランスミッター	Silver	EUR-614 14
※	VE 71 87 00	//	RS-K3	//	Black	EUR-614 15
※	1 CX 60 34 00	Case (A)		ケ ー ス (A)	Silver	UR64C262J
※	// CX 60 34 10	//		//	Black	UR64C262H
2	CX 60 04 70	Case (B)		ケ ー ス (B)	Silver	UR64C263A
//	CX 60 04 80	//		//	Black	UR64C263
3	CX 60 04 90	Cover, Battery		電 池 カ バ ー	Silver	UR64E264A
//	CX 60 05 00	//		//	Black	UR64C264
4	CX 60 50 10	Filter		ス モ ー ク 板		UR52B327
※	5 CX 60 34 20	Rubber		ゴ ム 接 点	Silver	UR64C266K
※	// CX 60 34 30	//		//	Black	UR64C266L
6	LX 60 02 80	Battery Terminal		電 池 電 極 板 (A)		UR52D 101
※	7 NX 60 18 60	P. C Board Ass'y		プ リ ン ト 基 板 Ass'y		UR64B 501
※	8 CX 60 34 40	Panel		パ ネ ル	Silver	UR64P78 5BA
※	// CX 60 34 50	//		//	Black	UR64P78 5BB
※	NX 60 18 60	P. C Board Ass'y		プ リ ン ト 基 板 Ass'y		
	iX 60 86 20	IC	BU3002F	I C	IC I	
	QX 60 00 20	Ceramic Resonator	CSB455EB1	セ ラ ミ ッ ク 振 動 子	X I	
	iX 60 53 10	Transistor	UN1231	ト ラ ン ジ ス タ ー	Q I	
	iF 00 47 00	LED	SE303A	赤 外 線 LED	D I	
	FG 21 21 00	Ceramic Cap.	100 pF 50V	セ ラ コ ン	C I, 2	
	HJ 35 31 00	Carbon Film Resistor	1 Ω	カ ー ボ ン 抵 抗	R I	
	LX 60 02 90	Battery Terminal (B)		電 池 電 極 板 (B)		

※New Parts (新規部品)

KX-300/U

# Parts List for Carbon Resistor

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ353100	HF853100	12K Ω	HJ357120	HF857120
1.8 "	HJ353180	*	15 "	HJ357150	HF857150
2.2 "	HJ353220	HF853220	18 "	HJ357180	HF857180
3.3 "	HJ353330	HF853330	22 "	HJ357220	HF857220
4.7 "	HJ353470	HF853470	27 "	HJ357270	HF857270
5.6 "	HJ353560	HF853560	33 "	HJ357330	HF857330
10 "	HJ354100	HF854100	39 "	HJ357390	HF857390
15 "	HJ354150	HF854150	47 "	HJ357470	HF857470
22 "	HJ354220	HF854220	56 "	HJ357560	HF857560
27 "	HJ354270	HF854270	68 "	HJ357680	HF857680
33 "	HJ354330	HF854330	82 "	HJ357820	HF857820
39 "	HJ354390	HF854390	91 "	HJ357910	HF857910
47 "	HJ354470	HF854470	100 "	HJ358100	HF858100
56 "	HJ354560	HF854560	120 "	HJ358120	HF858120
68 "	HJ354680	HF854680	150 "	HJ358150	HF858150
82 "	HJ354820	HF854820	180 "	HJ358180	HF858180
100 "	HJ355100	HF855100	220 "	HJ358220	HF858220
110 "	HJ355110	HF855110	270 "	HJ358270	HF858270
120 "	HJ355120	HF855120	330 "	HJ358330	HF858330
150 "	HJ355150	HF855150	390 "	HJ358390	HF858390
160 "	HJ355160	*	470 "	HJ358470	HF858470
180 "	HJ355180	HF855180	560 "	HJ358560	HF858560
220 "	HJ355220	HF855220	680 "	HJ358680	HF858680
270 "	HJ355270	HF855270	820 "	HJ358820	HF858820
330 "	HJ355330	HF855330	1.0M Ω	HJ359100	HF859100
390 "	HJ355390	HF855390	1.2 "	HJ359120	*
470 "	HJ355470	HF855470	1.5 "	HJ359150	HF859150
510 "	*	HF855510	1.8 "	HJ359180	HF859180
560 "	HJ355560	HF855560	2.2 "	HJ359220	HF859220
680 "	HJ355680	HF855680	3.3 "	HJ359330	HF859330
820 "	HJ355820	HF855820	3.9 "	HJ359390	*
910 "	HJ355910	HF855910	4.7 "	HJ359470	HF859470
1.0K Ω	HJ356100	HF856100			
1.2 "	HJ356120	HF856120			
1.5 "	HJ356150	HF856150			
1.8 "	HJ356180	HF856180			
2.0 "	HJ356200	HF856200			
2.2 "	HJ356220	HF856220			
2.4 "	HJ356240	HF856240			
2.7 "	HJ356270	HF856270			
3.0 "	HJ356300	HF856300			
3.3 "	HJ356330	HF856330			
3.6 "	HJ356360	HF856360			
3.9 "	HJ356390	HF856390			
4.7 "	HJ356470	HF856470			
5.1 "	HJ356510	HF856510			
5.6 "	HJ356560	HF856560			
6.8 "	HJ356680	HF856680			
8.2 "	HJ356820	HF856820			
9.1 "	HJ356910	HF856910			
10 "	HJ357100	HF857100			

