



SERVICE MANUAL

MV-6095G / 6090 4090G / 3090G / 3090

Video Cassette Recorder

Please Reference Model to Chassis Type described herein:

Model	Specification	Chassis Type
MV-6095G	Hi-Fi G-Code	DV-K9A9DG
MV-6090	Hi-Fi	DV-K879D
MV-4090G	4 Head G-Code	DV-K479DG
MV-3090G	2 Head G-Code	DV-K279DG
MV-3090	2 Head	DV-K279D

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SAFETY & PRECAUTIONS

SAFETY CHECK AFTER SERVING

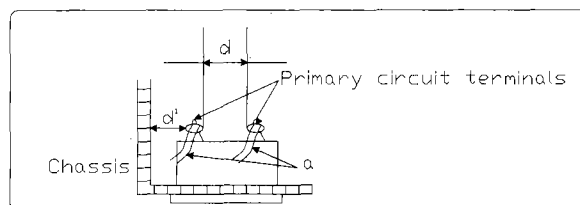
Examine the area surrounding the repaired location for damage or deterioration. Observe that screw, parts and wires have been returned to original positions. Afterwards, perform the following tests and conform the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

Confirm the specified insulation resistance between power cord plug prong and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is greater than values given in table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input output terminals, microphone jack, ear phone jacks, etc.) is greater than values given table 1.



3. Clearance distance

When replacing primary circuit component, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table below.

Rating for selected areas

AC Line Voltage	Region	Insulation Resistance	Dielectric Strength	Clearance Distance(d),(d')
100V	Japan	$\geq 1\text{M}\Omega/500\text{V DC}$	1kV AC 1min.	≥ 3
110 to 130V	USA & Canada	-	900V AC 1min.	≥ 3.2
* 110 to 130V 200 to 240V	Europe Australia Latin America	$\geq 10\text{M}\Omega/500\text{V DC}$	4kV AC 1min.	$\geq 6(d)$ $\geq 8(d')$ (a : Power cord)

* : Class model only

NOTE

This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality

4. Leakage current test

Confirm specified or lower leakage current between B(earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input output terminals, microphone jacks, earphone jacks, etc.)

Measuring method:(Power ON) Insert load Z between B(earth ground, power cord plug prongs) and exposed accessible parts. Use on AC voltmeter to measure across both terminals of load Z. See figure2 and following table.

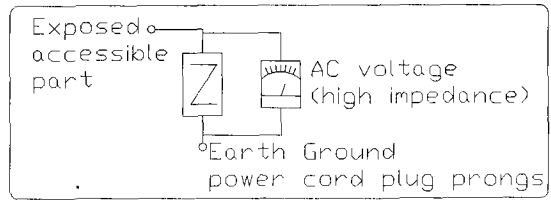






Fig.2

Leakage current ratings for selected are as

AC Line Voltage	Region	Load Z	Leakage Current(I)	Clearance Distance(d),(d')
100V	Japan	 1kΩ	$i \leq 1\text{mArms}$	Exposed accessible parts
110 to 130V	USA & Canada	 15kμF 1kΩ	$i \leq 0.5\text{mArms}$	Exposed accessible parts
110 to 130V 200 to 240V	Europe Australia	 2kΩ	$i \leq 0.7\text{mApeak}$ $i \leq 2\text{mA dc}$	Antenna earth terminals
		 50kΩ	$i \leq 0.7\text{mA peak}$ $i \leq 1\text{mA dc}$	Other terminals

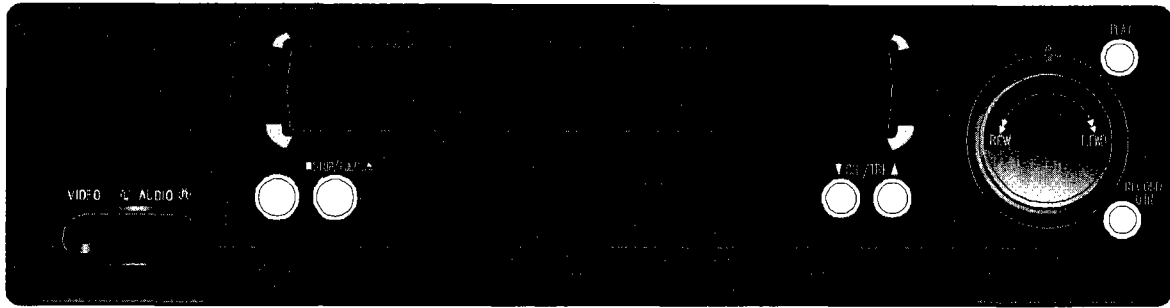
NOTE

This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

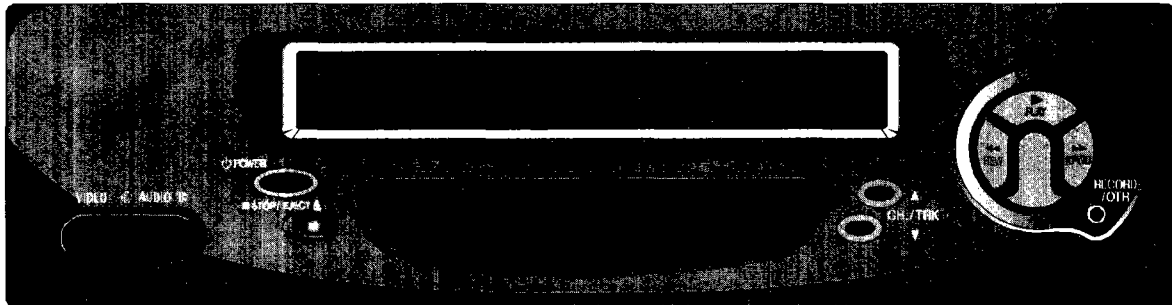
EXTERNAL VIEWS

1. FRONT VIEWS FUNCTION

DV-K9A9D FRONT VIEW



DV-K829D FRONT VIEW

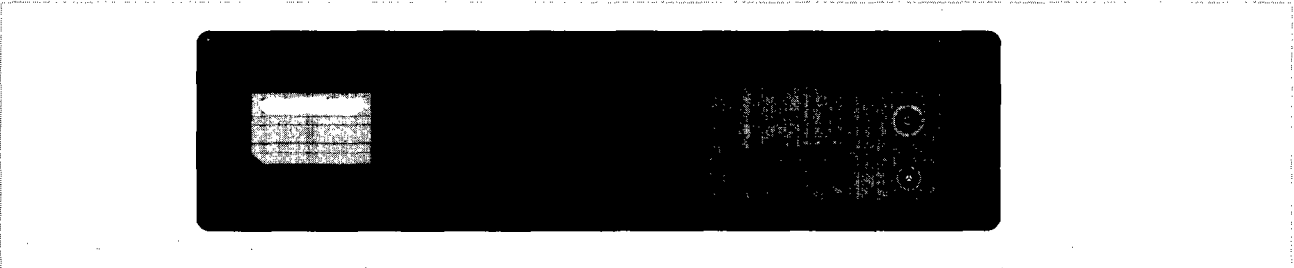


POWER
STOP / EJECT
RECORD
FRONT VIDEO/AUDIO INPUT JACK

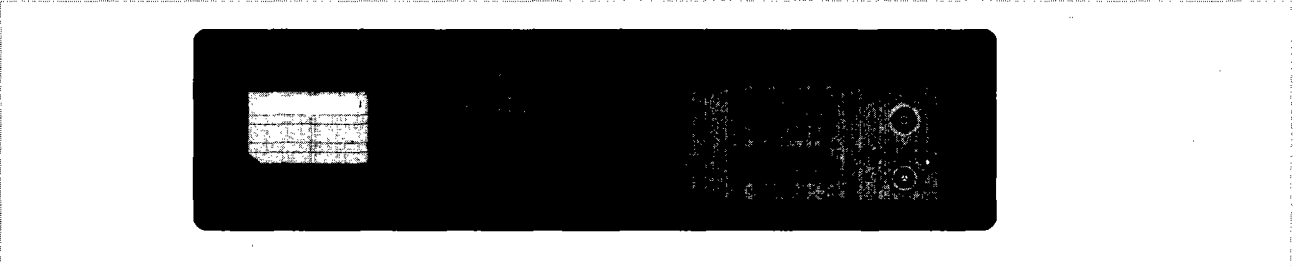
REWIND / REVIEW
FAST FORWARD / CUE
PLAY BACK
CHANNEL UP / DOWN

2. REAR VIEWS FUNCTION

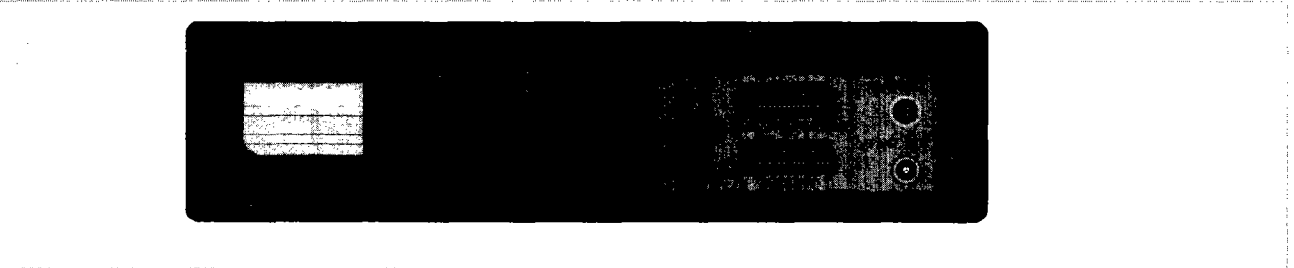
MONO 1 SCART TYPE REAR VIEW



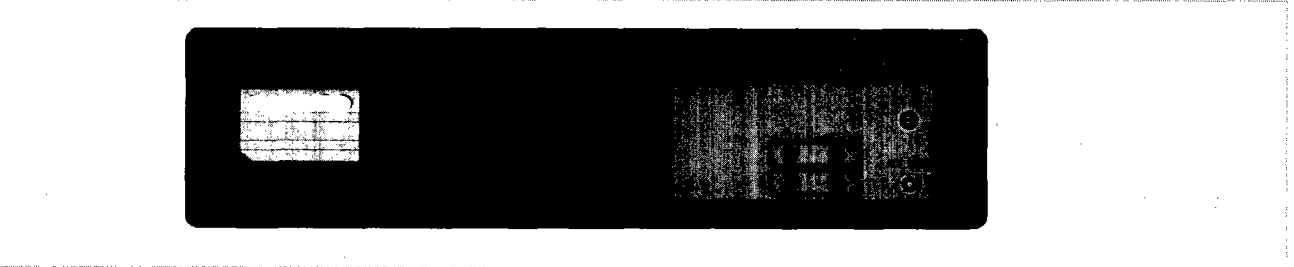
MONO 2 SCART TYPE REAR VIEW



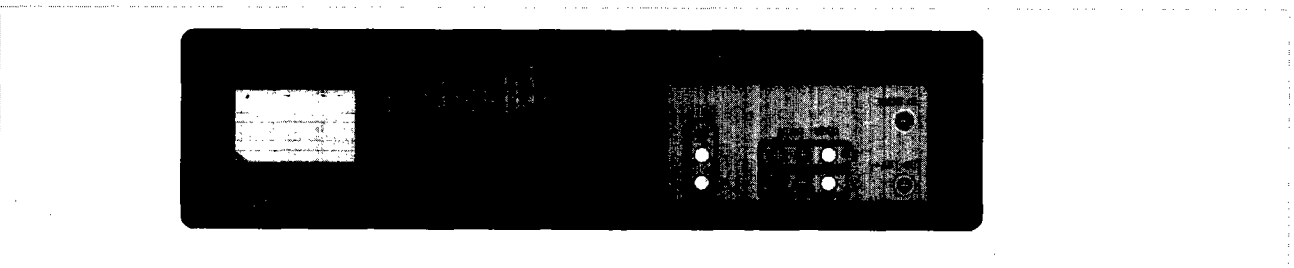
HI-FI 2 SCART TYPE REAR VIEW



MONO RCA TYPE REAR VIEW



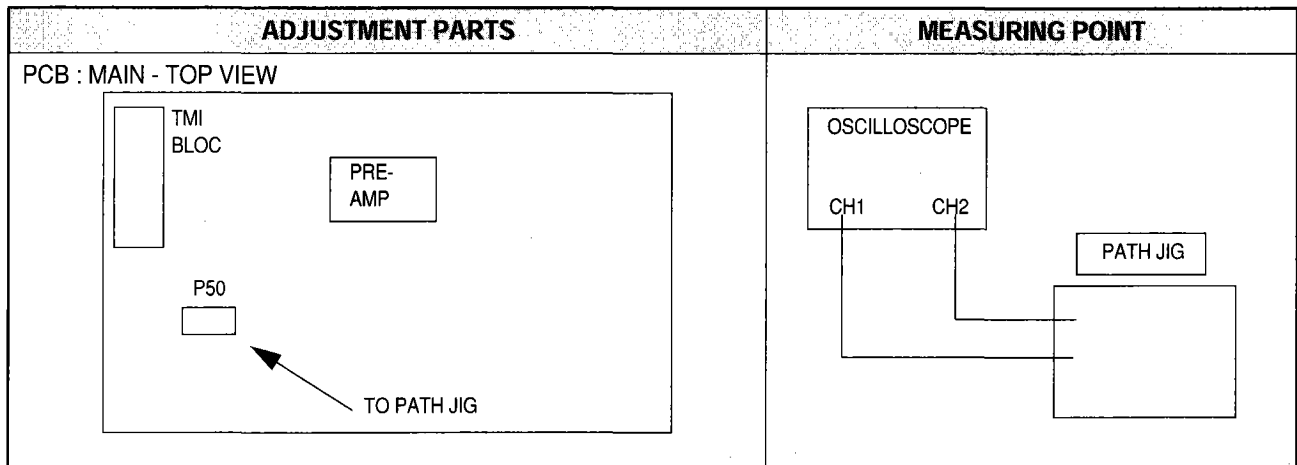
HI-FI RCA TYPE REAR VIEW



ELECTRICAL ADJUSTMENT

1. PLAYBACK PHASE

ITEM	MODE	ADJUSTMENT POINT	CHECK POINT	TEST EQUIPMENT	TEST TAPE	INPUT SIGNAL
6.5H ADJUSTMENT	PLAY	[REC] BUTTON	PIN 4 & PIN 5 OF P504	OSCILLOSCOPE	DP-2	NO SIGNAL

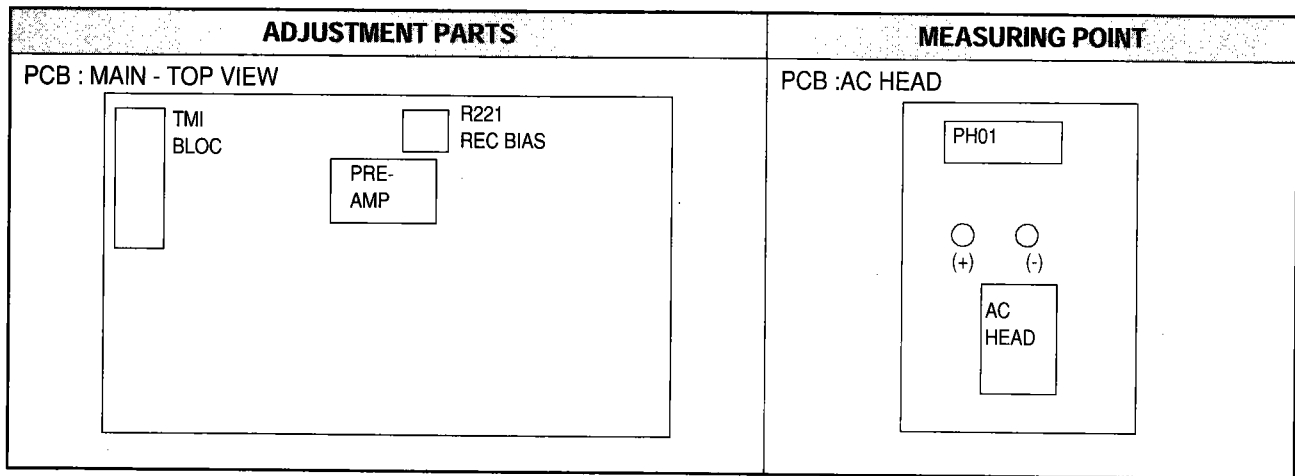


ADJUSTMENT PROCEDURE

1. Play back the test tape. (DP-2)
2. Set the oscilloscope to the CHOP mode. Connect CH1 to the SW PULSE (PIN 4 of P504)
3. Connect CH2 to the ENVE signal (PIN5 of P504)
4. Insert PATH JIG and press "REC" button on the remote control.
5. Check the position of the V-sync from the rising edge of the SW pulse.
(Standard : 6.5H \pm 0.5H)

2. AUDIO REC BIAS

ITEM	MODE	ADJUSTMENT POINT	CHECK POINT	TEST EQUIPMENT	TEST TAPE	INPUT SIGNAL
AUDIO REC BIAS	REC	R221	BOTH ENDS OF R01 IN A/C HEAD	OSCILLOSCOPE	DP-2	NO SIGNAL



ADJUSTMENT PROCEDURE

1. Preparation

- 1) Set the input to LINE mode.
- 2) Disconnect the line input (No Signal).
- 3) Connect the Audio Level Meter to both ends of R01
- 4) Insert a blank tape, and Record in SP mode.

2. Adjustment

- 1) Adjust R221 to obtain [2.8]mVrms.

3. Adjustment Inspection Standard : 2.8mVrms

In confirmation of Recording playback frequency characteristics, compared with 1KHz Recording-Playback output level, [8]KHz Recording-Playback output level is higher than the standard, increase the record bias and if lower, decrease it.

SPECIFICATIONS

GENERAL	
Power Requirement Power Consumption Temperature	AC 230V, 50Hz Max. 18W (in REC mode) 5°C ~ 35°C (Operating) -20°C ~ 60°C
Operating position Dimensions (W x H x D) Weight Format Tape Width Tape Speed	Horizontal only 360 x 90 x 288 (mm) Approx. 3.85 Kg VHS standard 12.65mm (SP) : 23.39mm/sec (LP) : 11.70mm/sec
Maximum Recording Time with full-size cassette	(SP) :240min, with E-240 video cassette (LP) :480min, with E-240 video cassette
VIDEO	
Signal system Recording system	PAL/SECAM colour and CCIR monochrome signals, 625 lines/50 fields Rotary two-head helical scan with a slant double-azimuth combination video head
Input Output Signal-to-Noise ratio	1.0Vp-p, 75ohms, unbalanced 1.0Vp-p, 75ohms, unbalanced 45dB (Rhode & Schwarz noise meter) with NETTETE IMAGE control at center position
Horizontal resolution	240 lines with NETTETE IMAGE control at center position
AUDIO	
Recording system Input Output	Longitudinal track -8dBm, (CENELEC standard), more than 47 k-ohms, unbalanced -6dBm, (CENELEC standard), less than 1k-ohms, unbalanced(100k-ohms, load)
Frequency Range Signal to Noise Ratio Audio Distortion	100Hz to 8,000Hz More than 38dB Less than 3% (SP)
TUNER	
Tuning system RF Output	Voltage synthesized tuner Programmable V/S 99CH (Hyper band) UHF channel 21~69 (52)
TIMER	
Memory programmable Back up time Clock exactness	99 CH Less than 1 Hour In accordance with the exactness of power supply frequency (50Hz)
ACCESSORIES	
Provided Accessories	Remote control unit, RF Cable, Battery

* Design and specification can be subjected to change without notice.

CHANNEL COVERAGE

SYSTEM	SECAM-L PAL, SECAM-B/G, PAL-I/I PAL, SECAM-B/G, D/K, HYPER BAND	PAL-I
CHANNEL	VHF Ch 2~12 UHF Ch 21~69 CATV Ch X,Y,Z S1~S41	UHF Ch 21~69

INPUT/OUTPUT JACK TYPE

Model	EUROPE	Asia, South Africa, Australia
Jack Type	SCART Type	RCA Jack (Phone Jack)

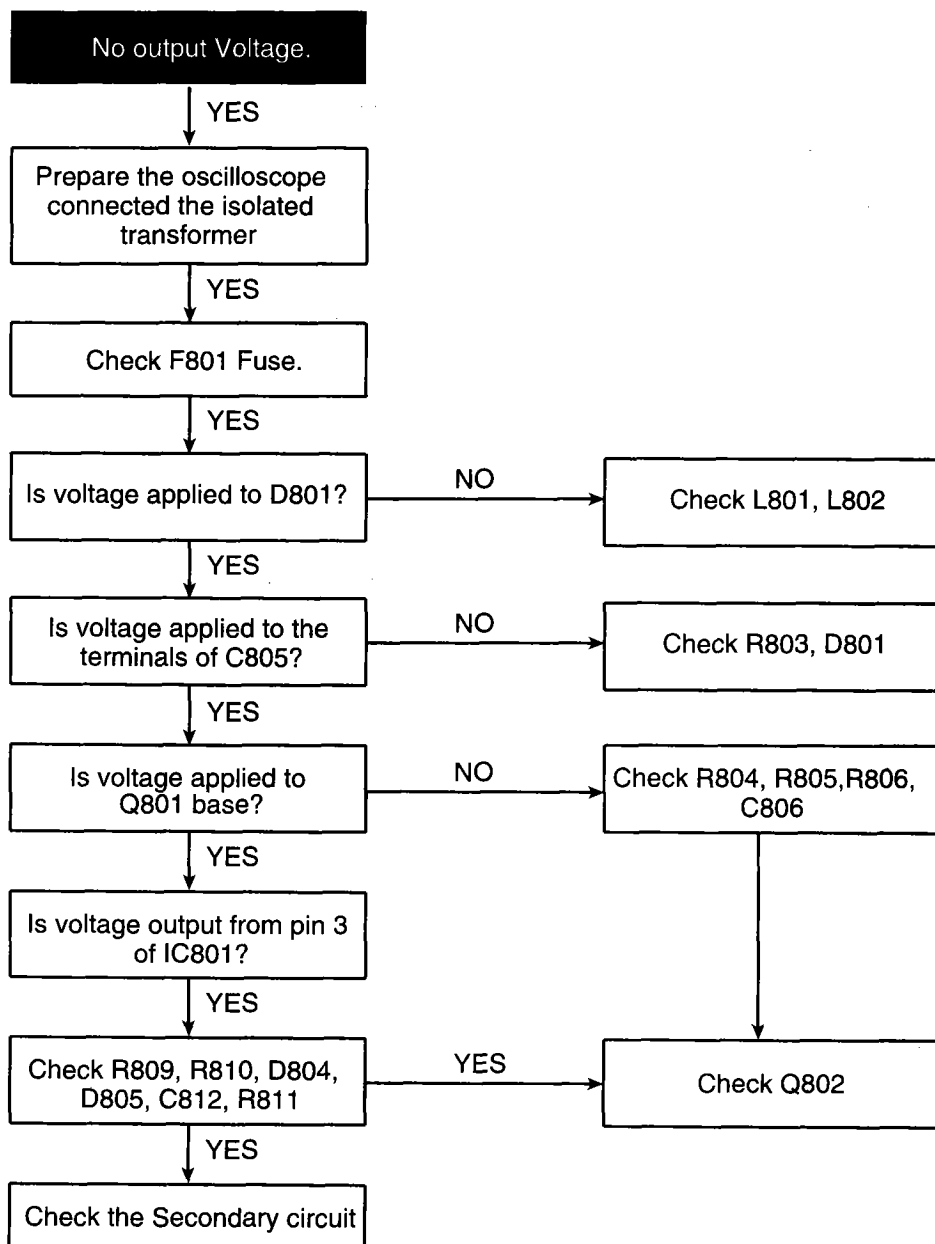
TROUBLE SHOOTING FLOW CHART

1. POWER CIRCUIT

When changing the parts which are broken first, remove the power plug from the socket and then discharge the voltage across the terminals of C805. (Use an external K Ω resistance)

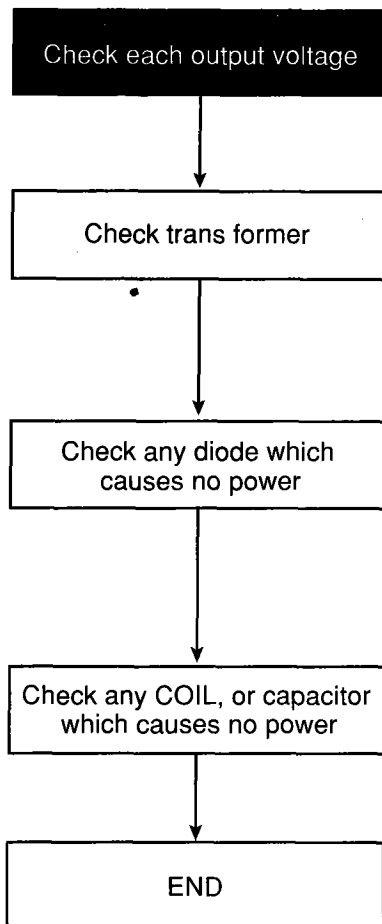
When check the primary circuit , use the oscilloscope isolated properly (Use the isolated transformer) and connect GND to the primary GND, however it is not necessary to isolate the oscilloscope when check the secondary circuit.

A. CHECKING THE PRIMARY CIRCUIT.



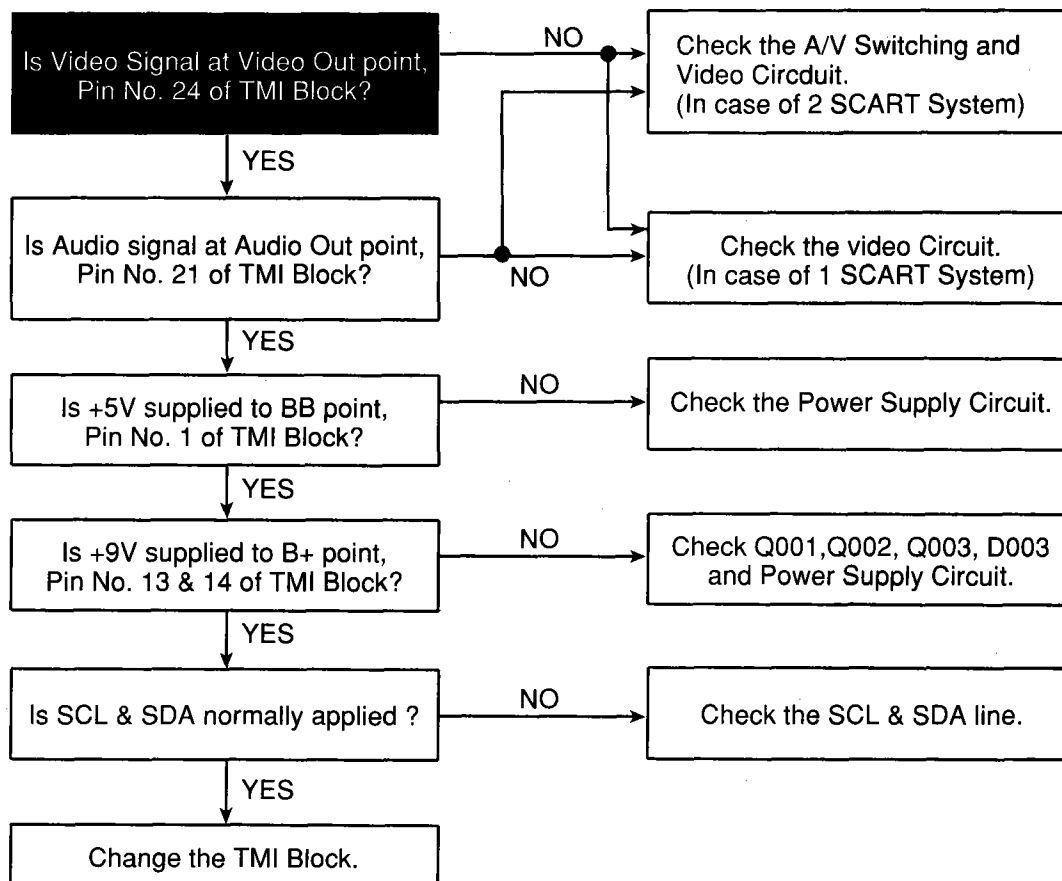
TROUBLESHOOTING FLOW CHART

B. CHECKING THE SECONDARY CIRCUIT.



2. PIF CIRCUIT

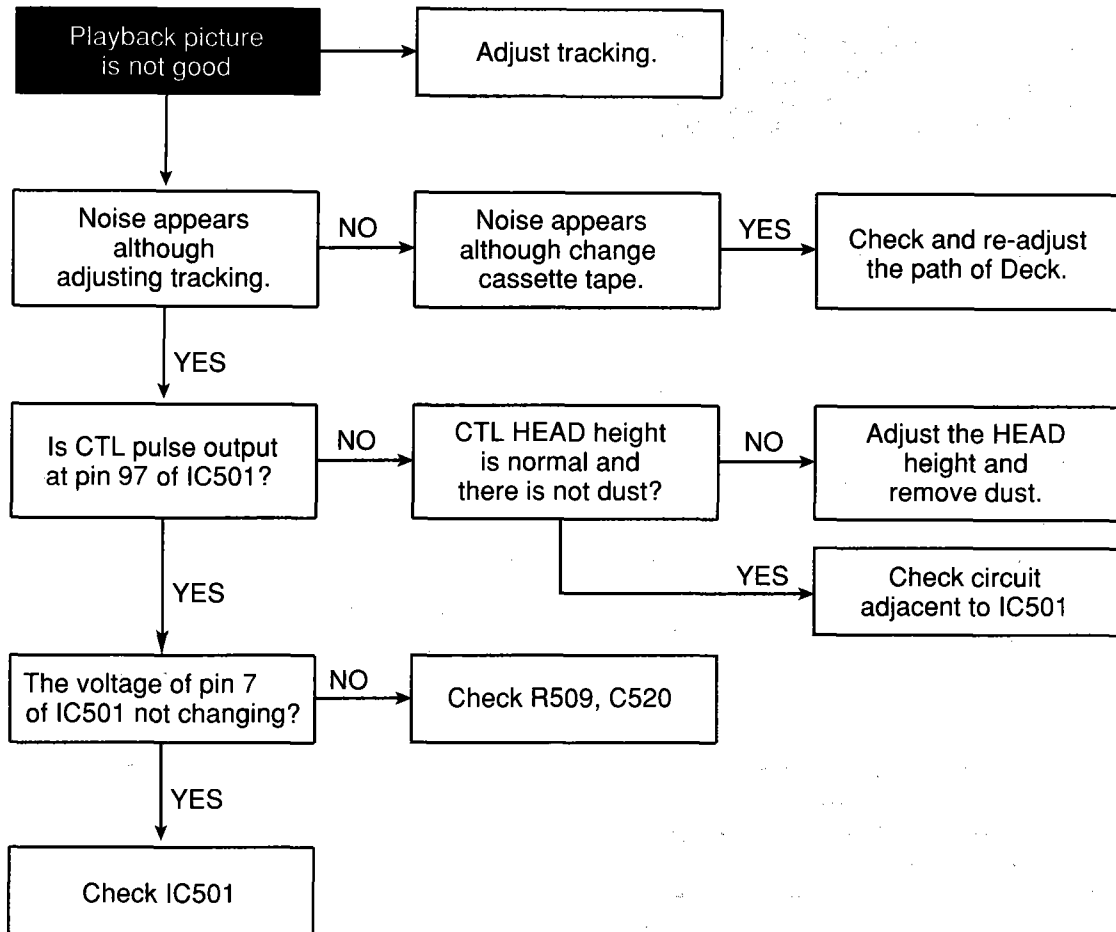
A. TROUBLESHOOTING OF RF RECEIVING CIRCUIT (FOR TMI APPLIED SYSTEM)



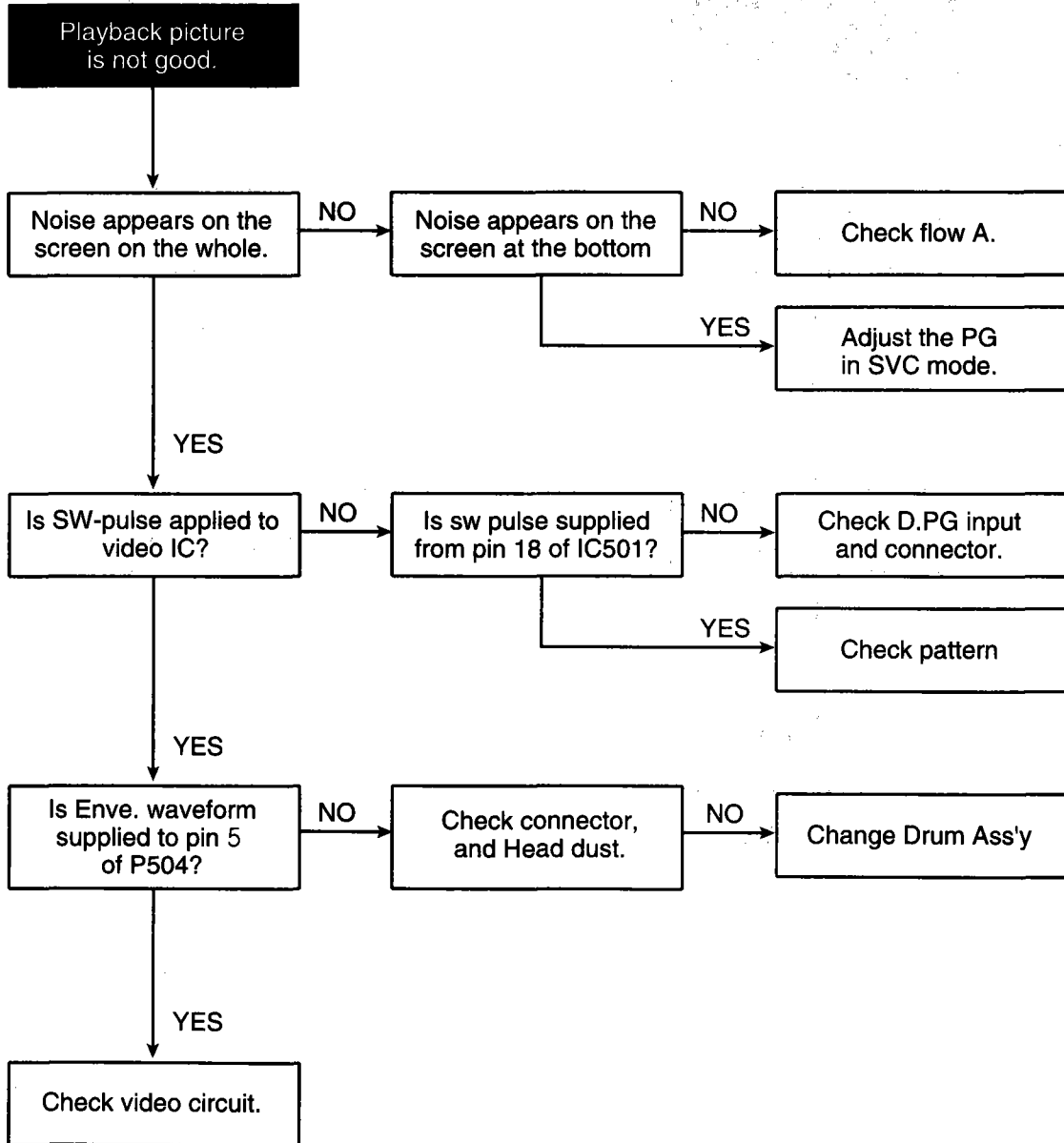
TROUBLESHOOTING FLOW CHART

3. SERVO-SYSCON CIRCUIT

A.

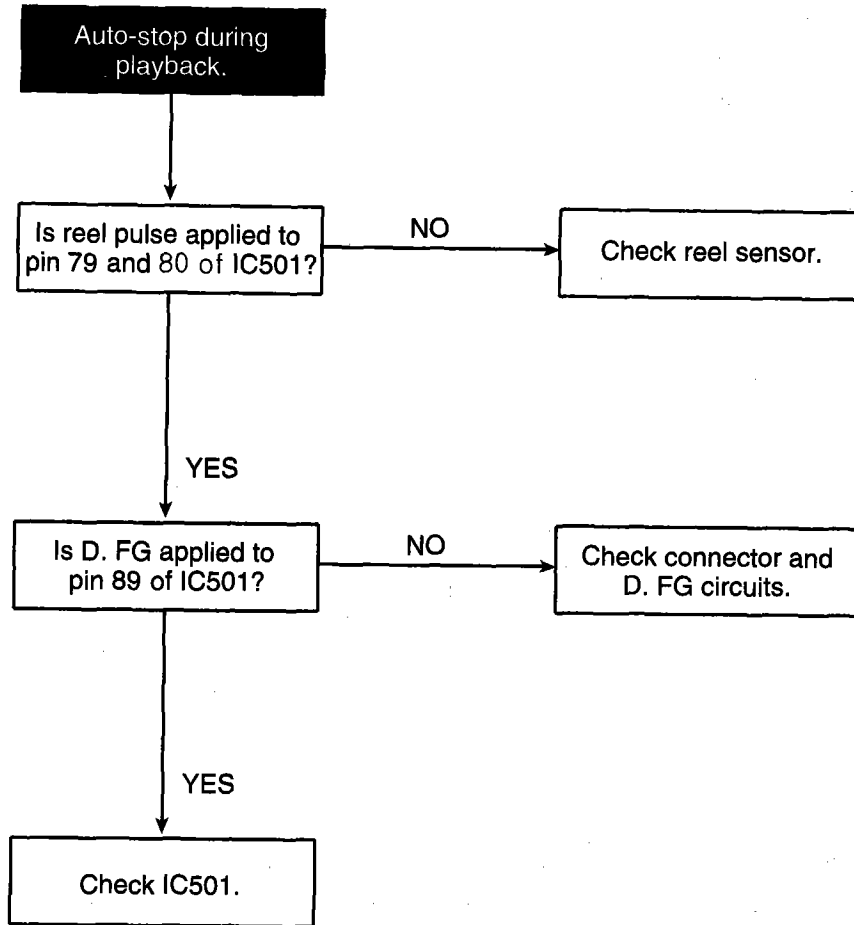


B.

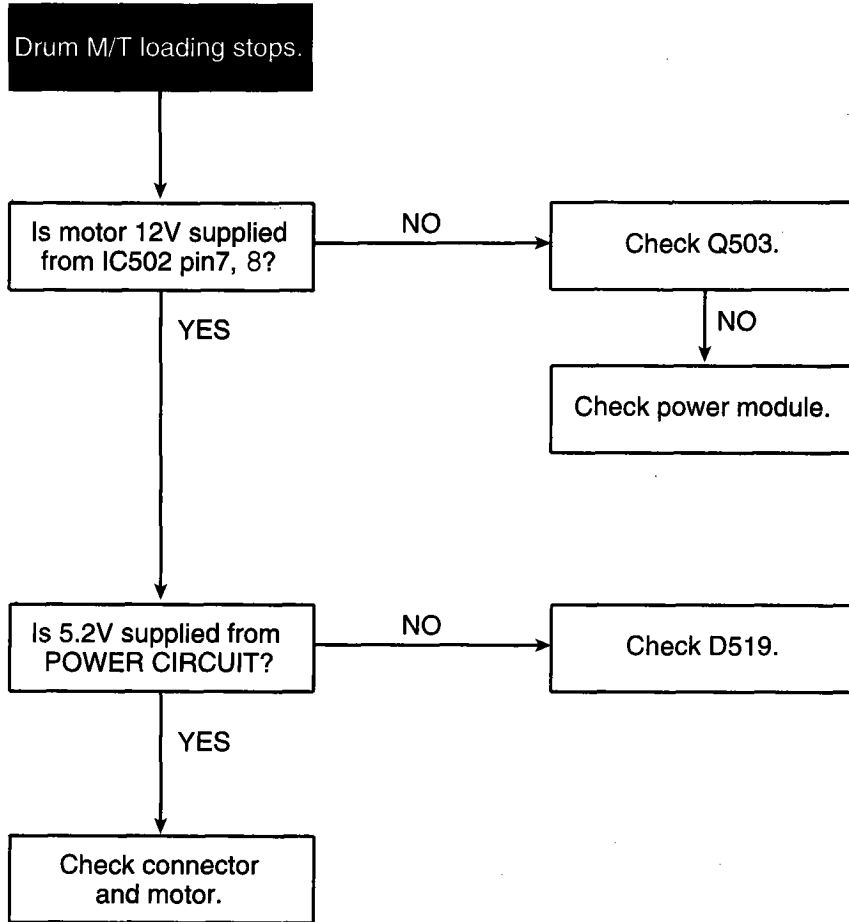


TROUBLESHOOTING FLOW CHART

C.

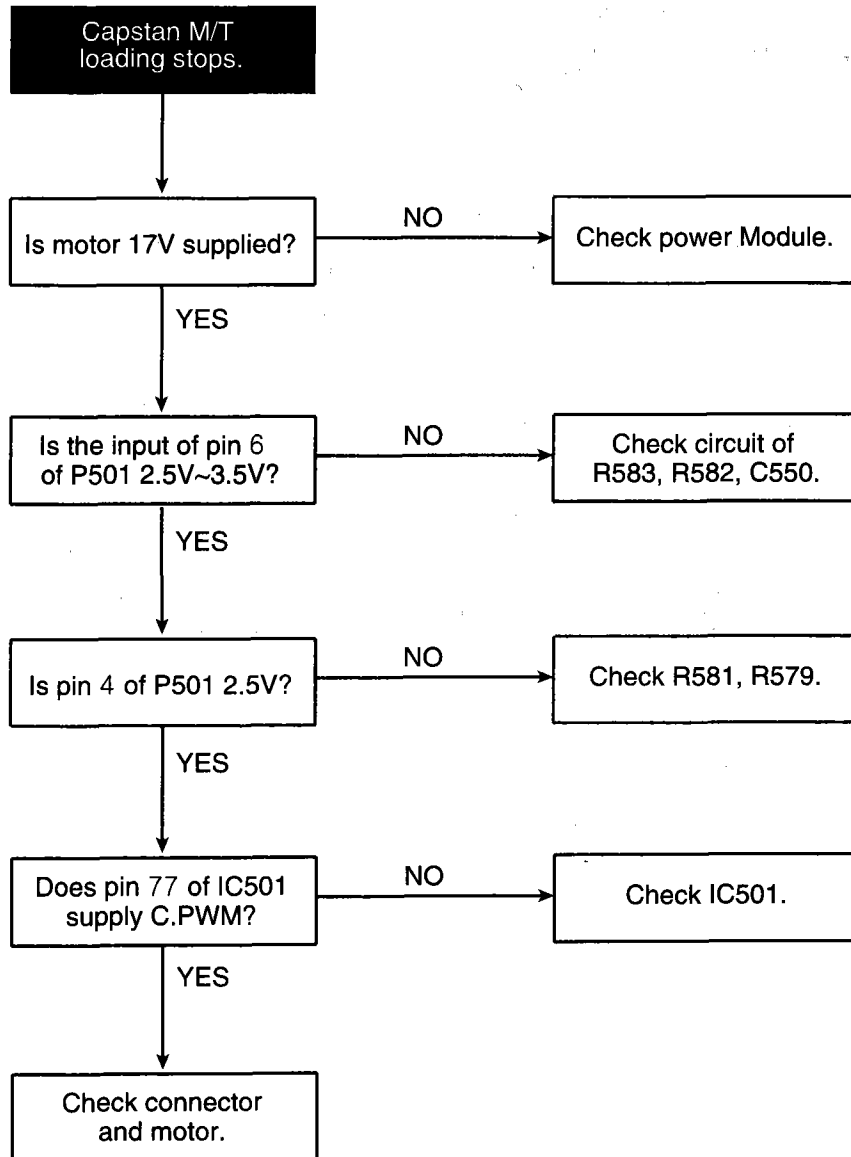


D.

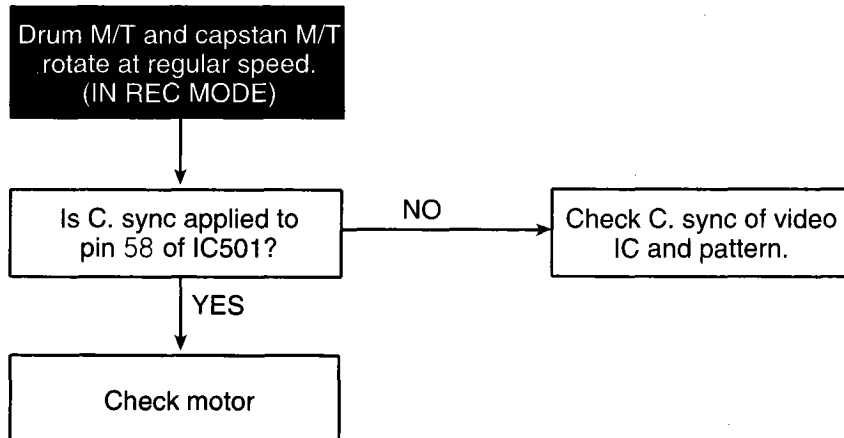


TROUBLESHOOTING FLOW CHART

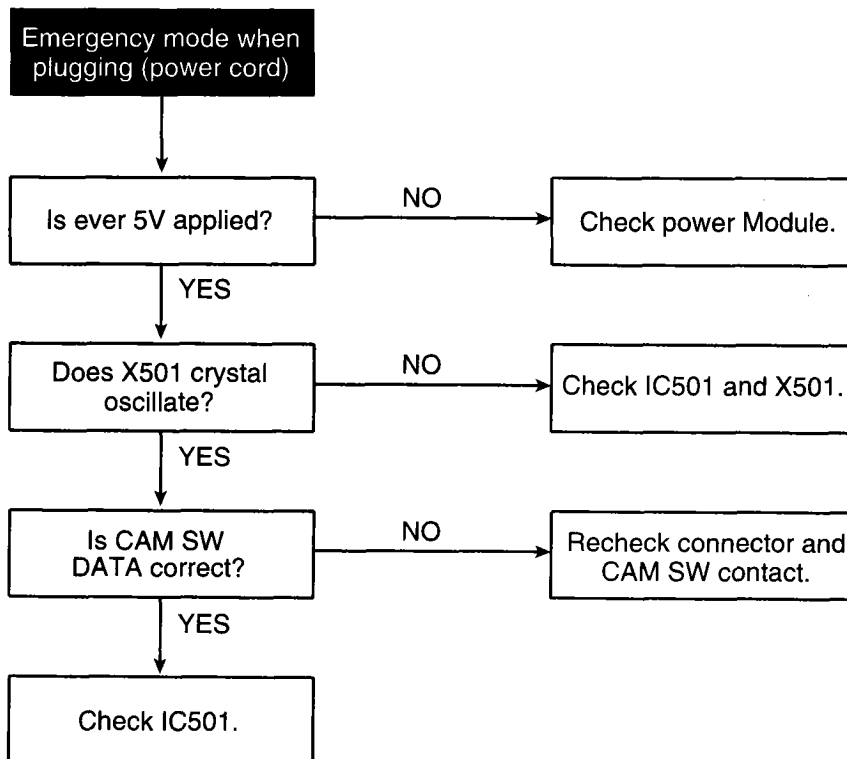
E.



F.

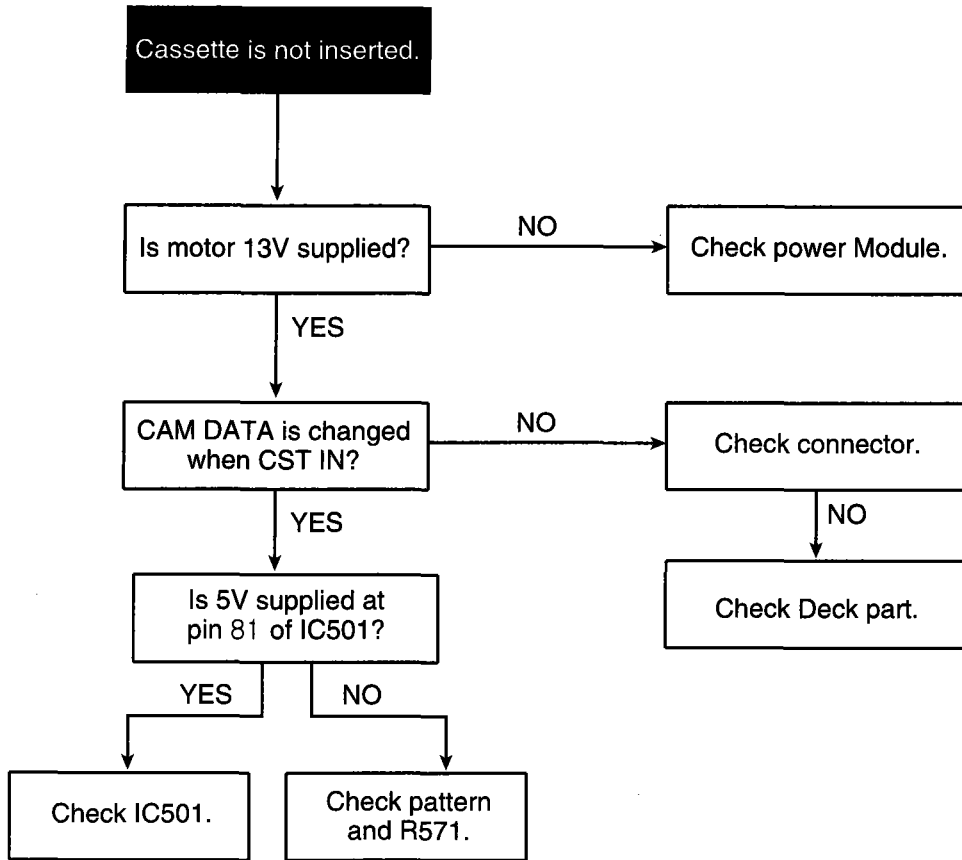


G.

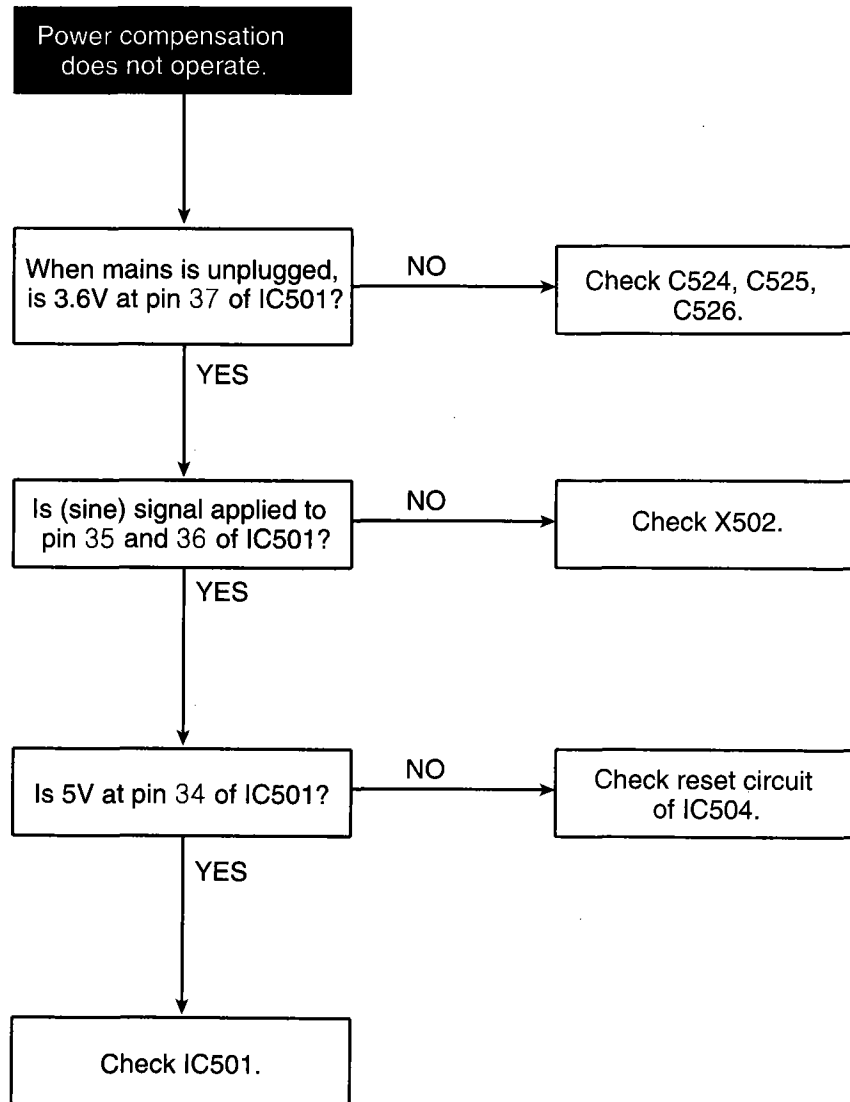


TROUBLESHOOTING FLOW CHART

H.



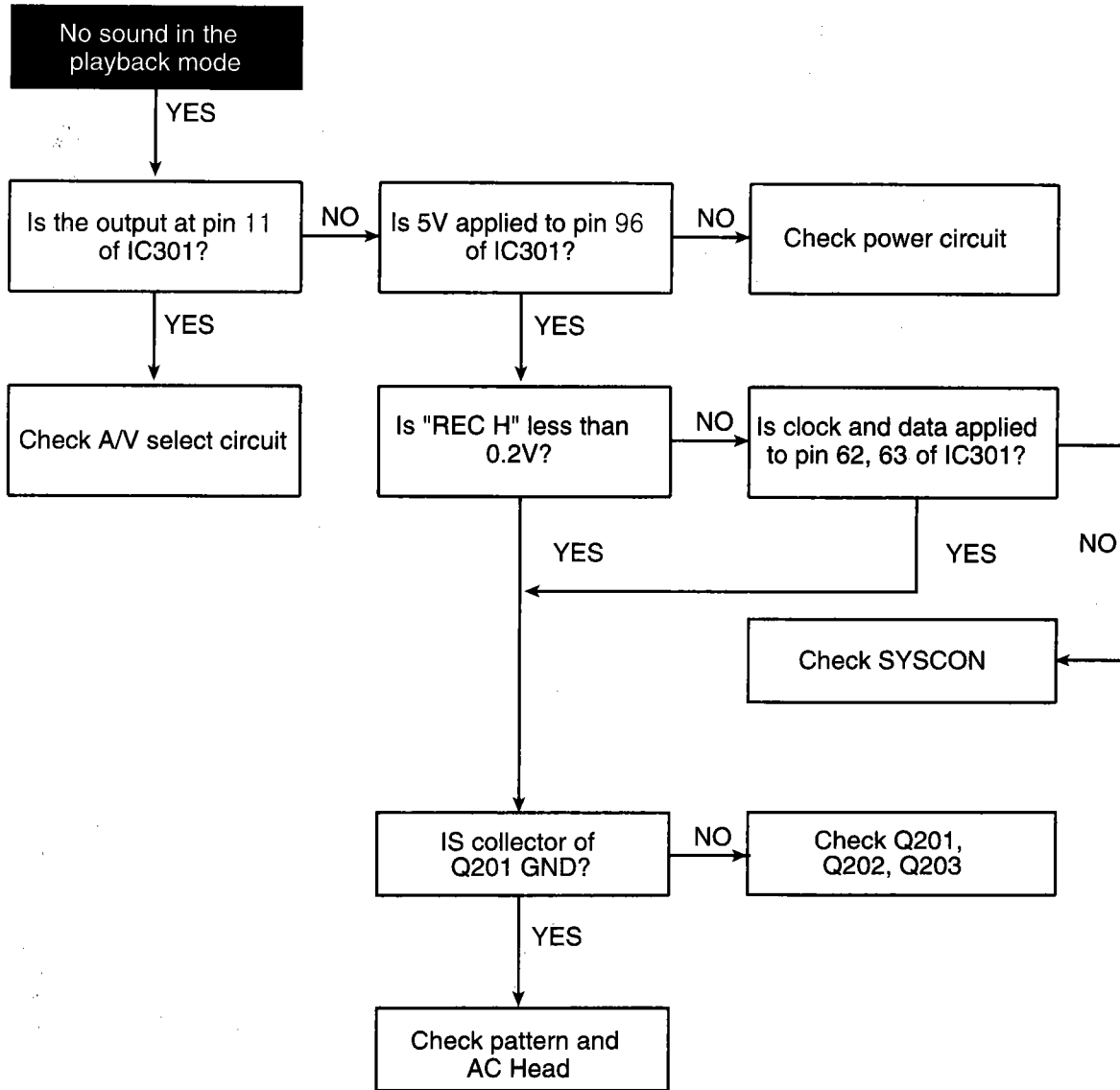
I.



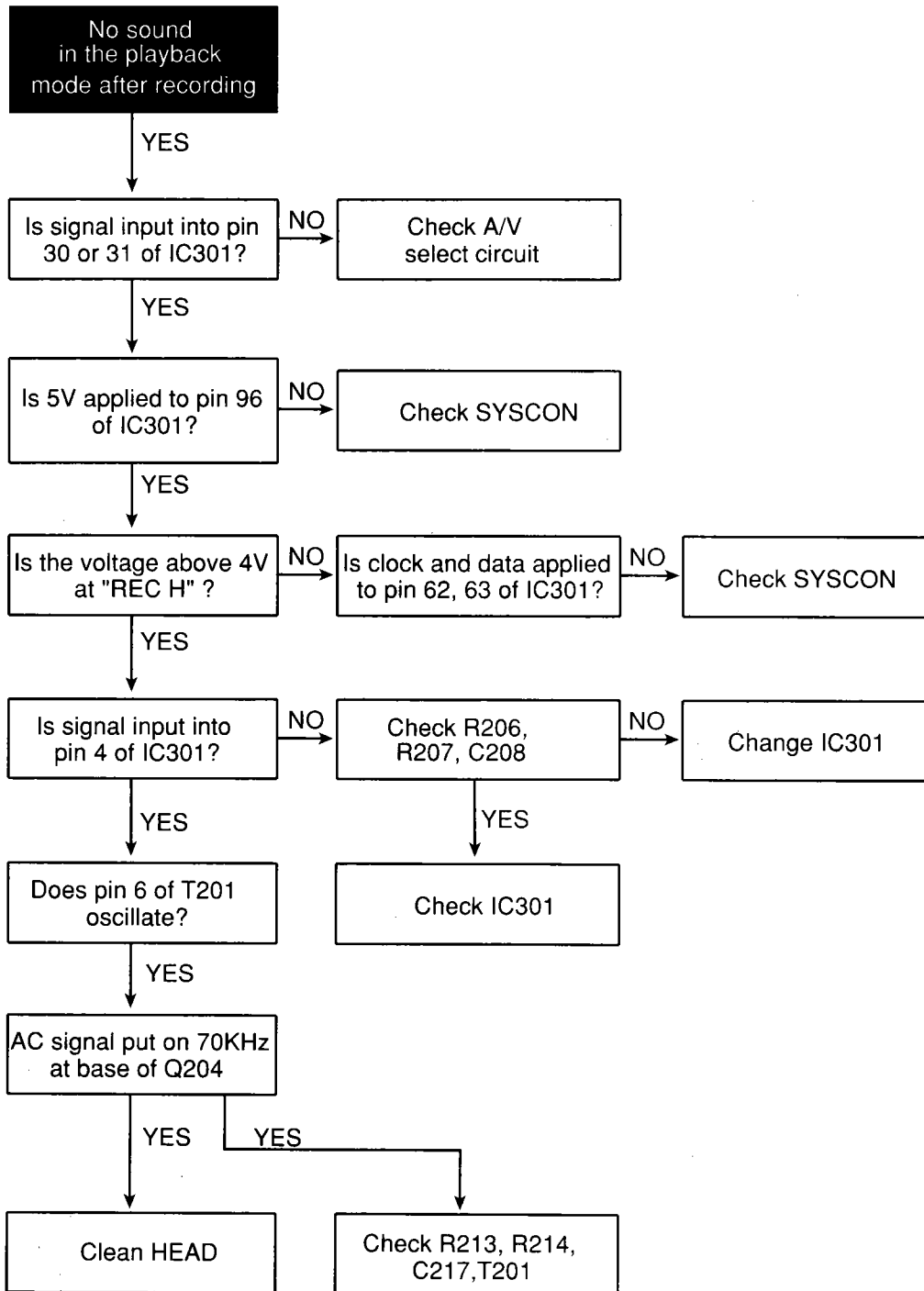
TROUBLESHOOTING FLOW CHART

4. AUDIO CIRCUIT (NORMAL)

A. TROUBLESHOOTING OF PB MODE

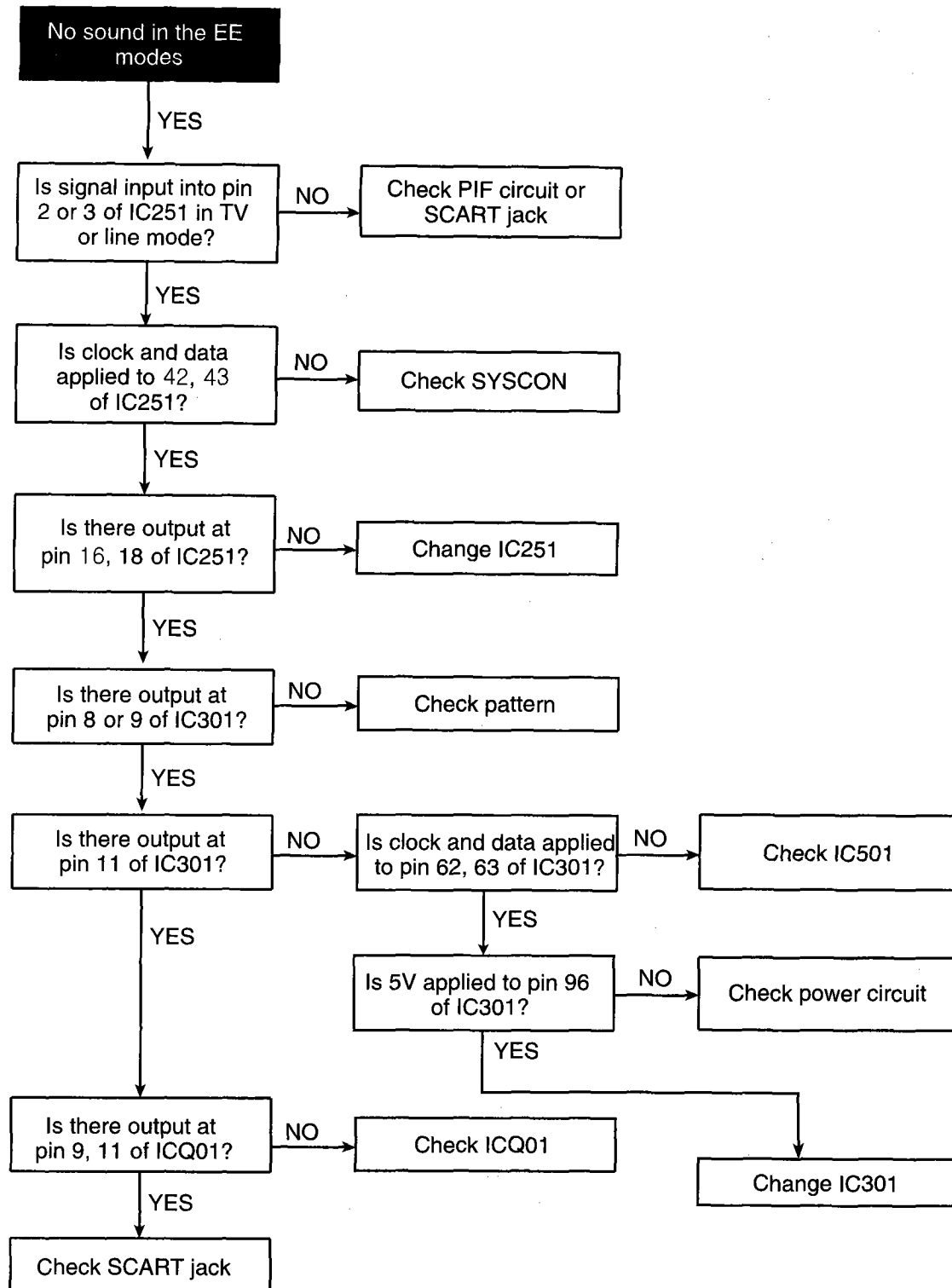


B. TROUBLESHOOTING OF REC MODE



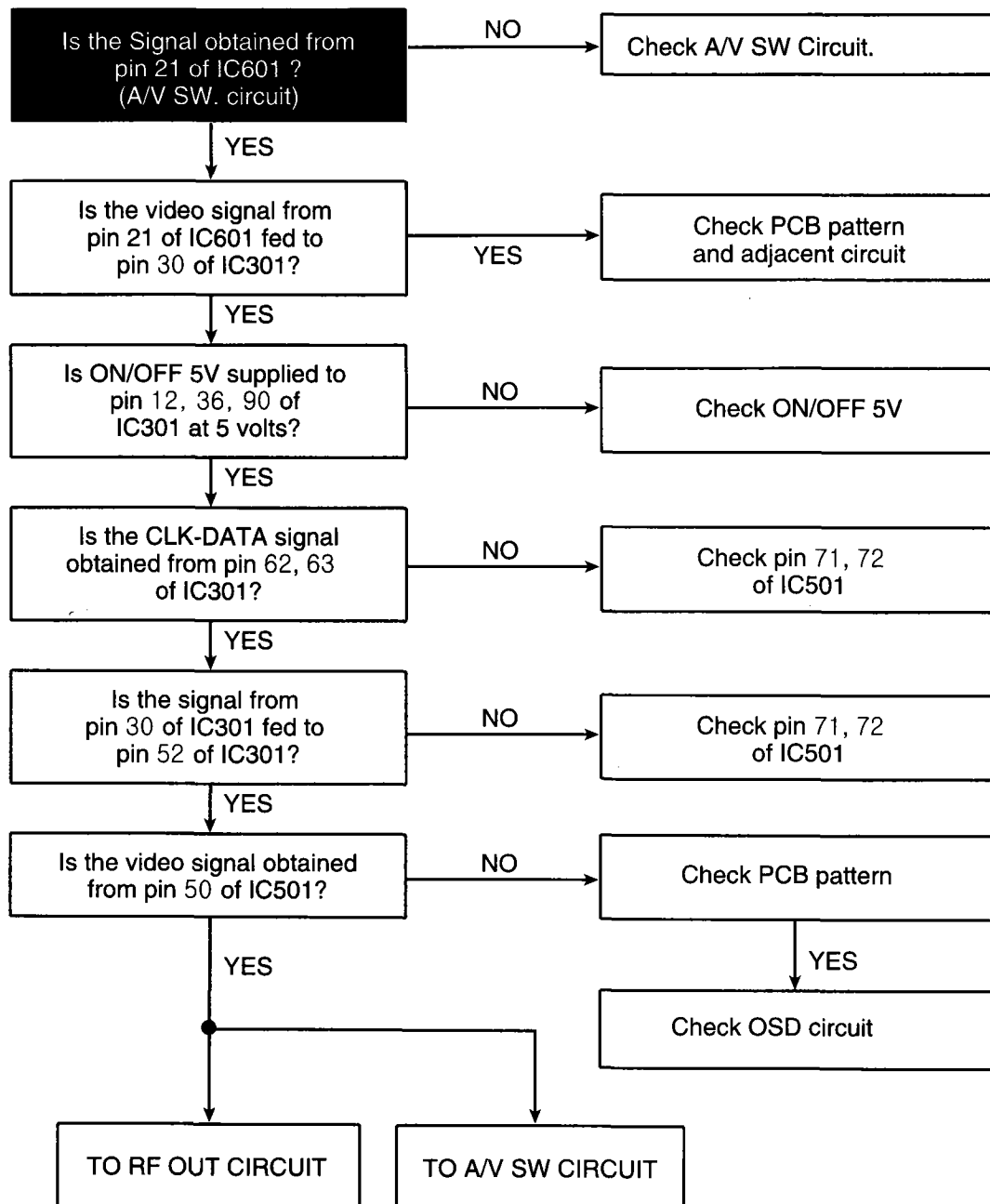
TROUBLESHOOTING FLOW CHART

C. TROUBLESHOOTING OF EE MODE



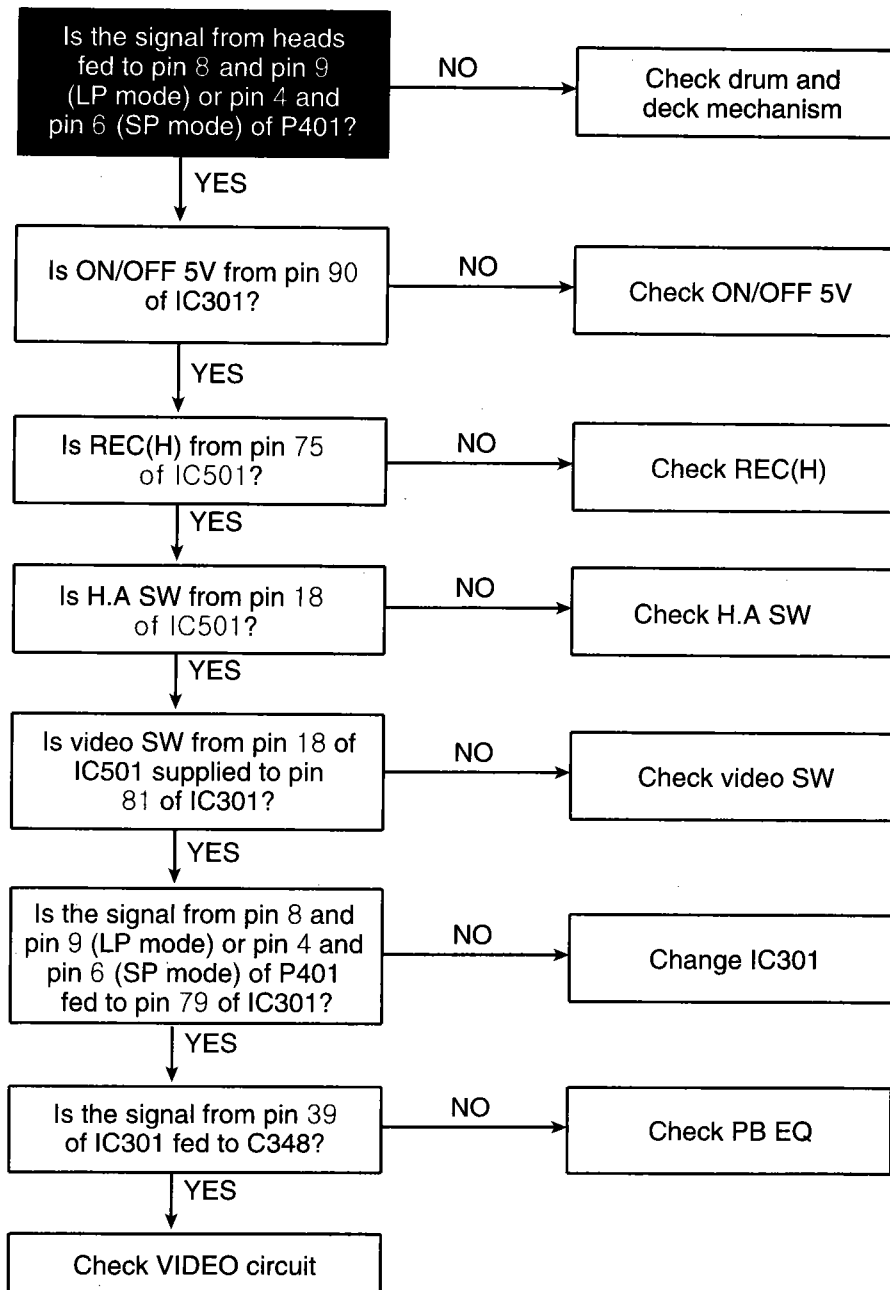
5. VIDEO CIRCUIT

A. TROUBLESHOOTING OF EE MODE

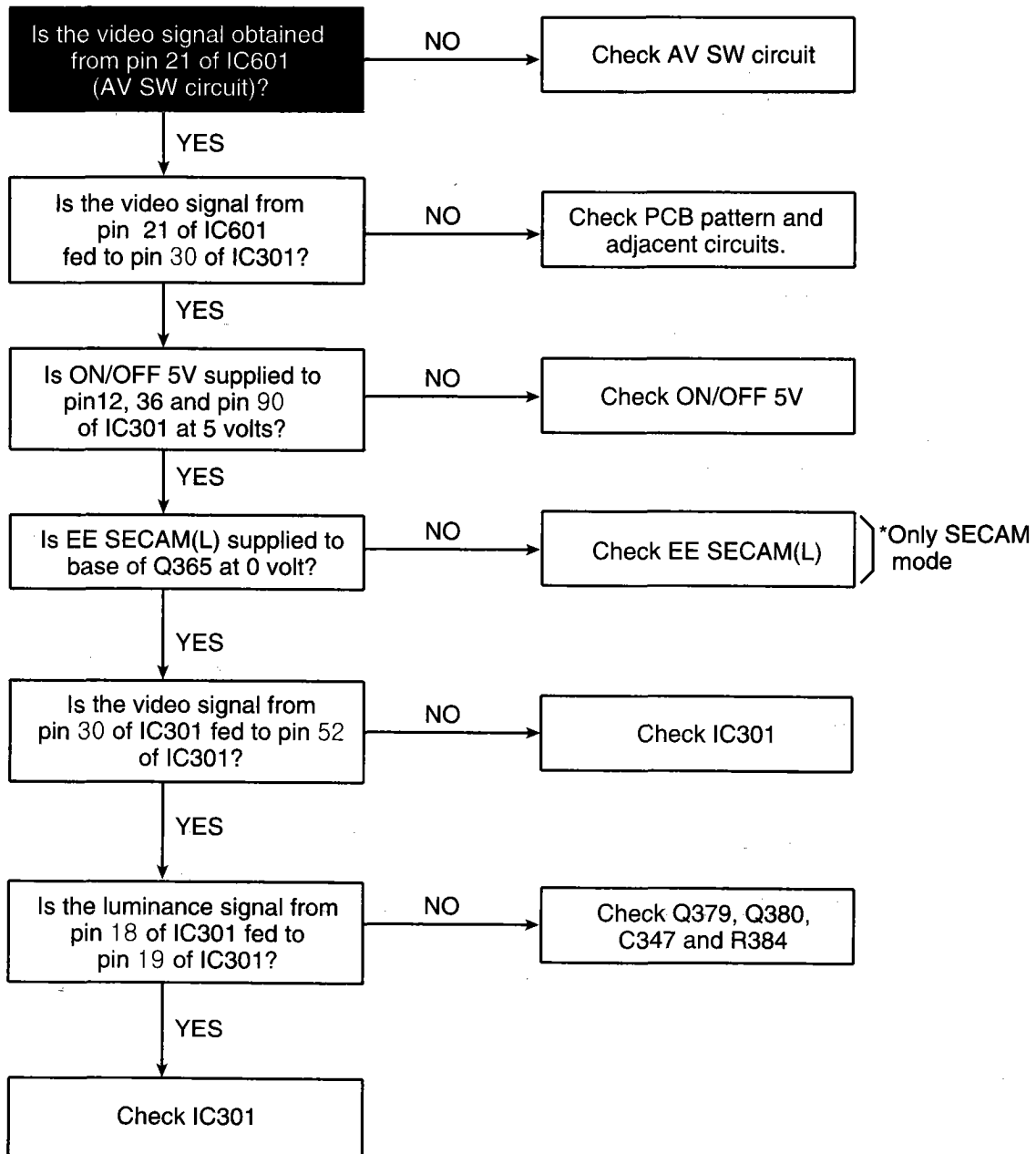


TROUBLESHOOTING FLOW CHART

B. TROUBLESHOOTING OF PREAMP IN THE PLAYBACK MODE

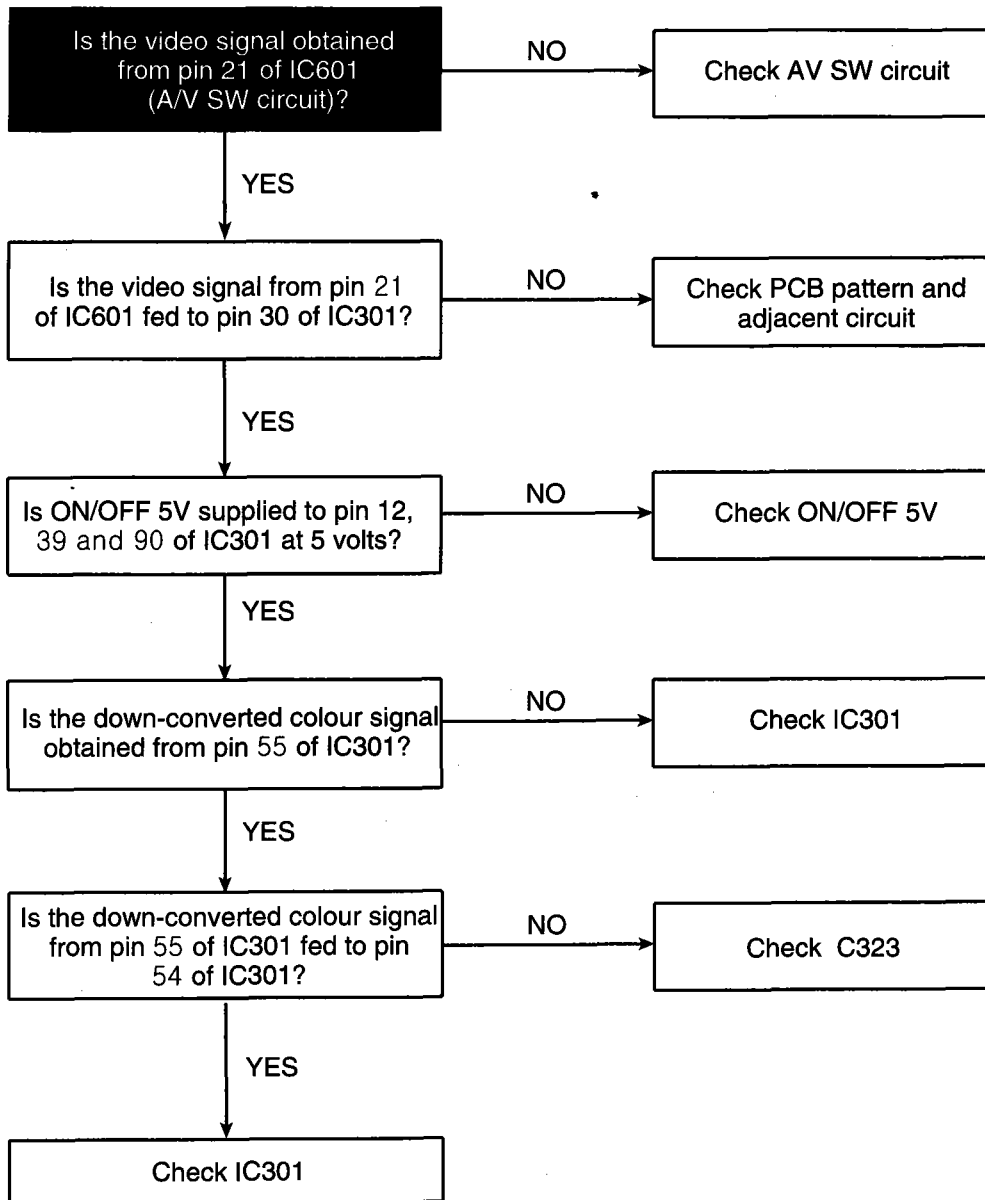


C. TROUBLESHOOTING OF LUMINANCE SIGNAL IN THE RECORD MODE

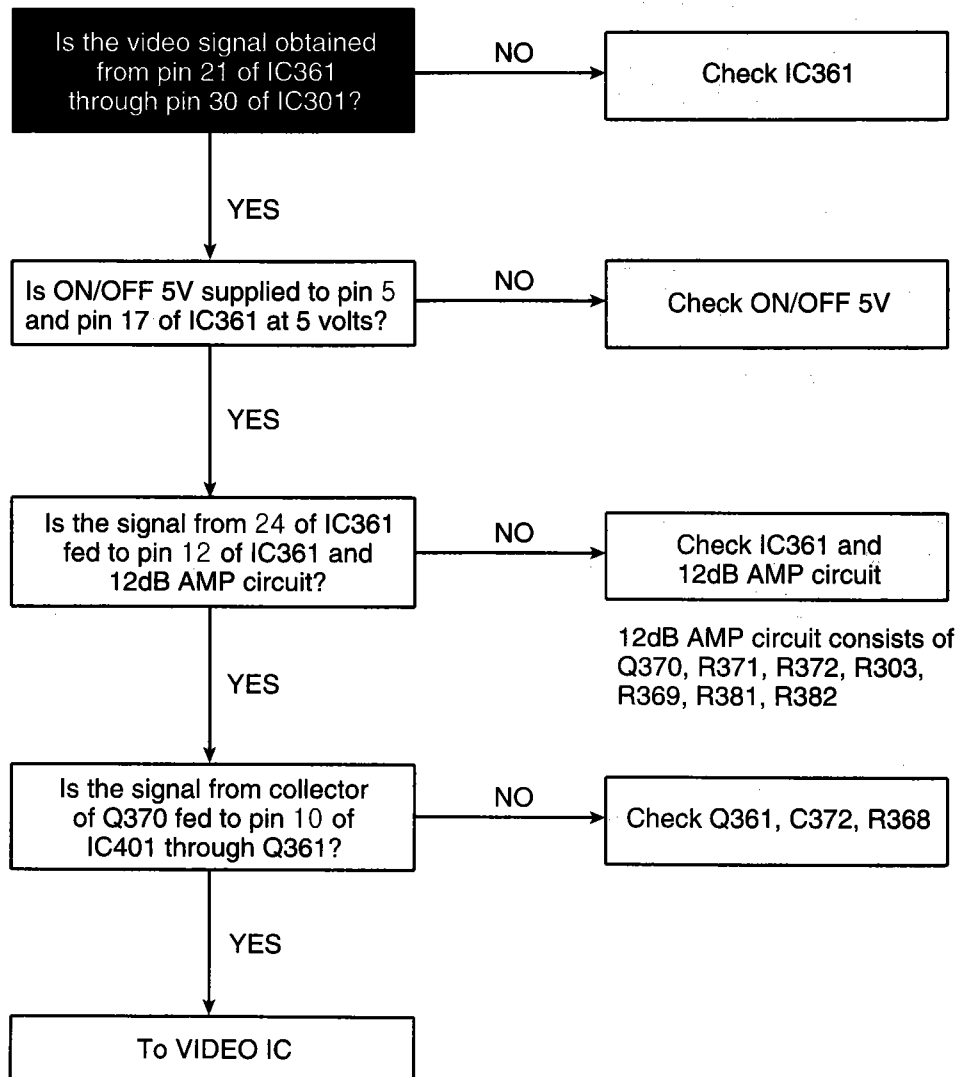


TROUBLESHOOTING FLOW CHART

D. TROUBLESHOOTING OF PAL COLOUR IN THE RECORD MODE

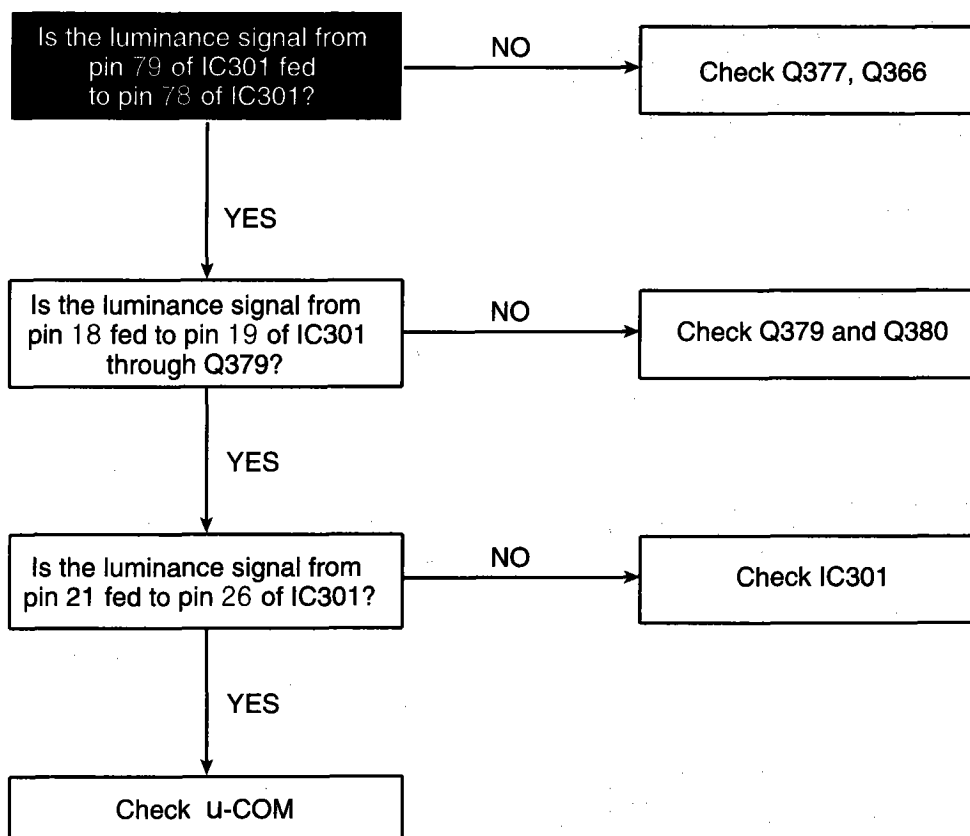


E. TROUBLESHOOTING OF SECAM COLOUR IN THE RECORD MODE

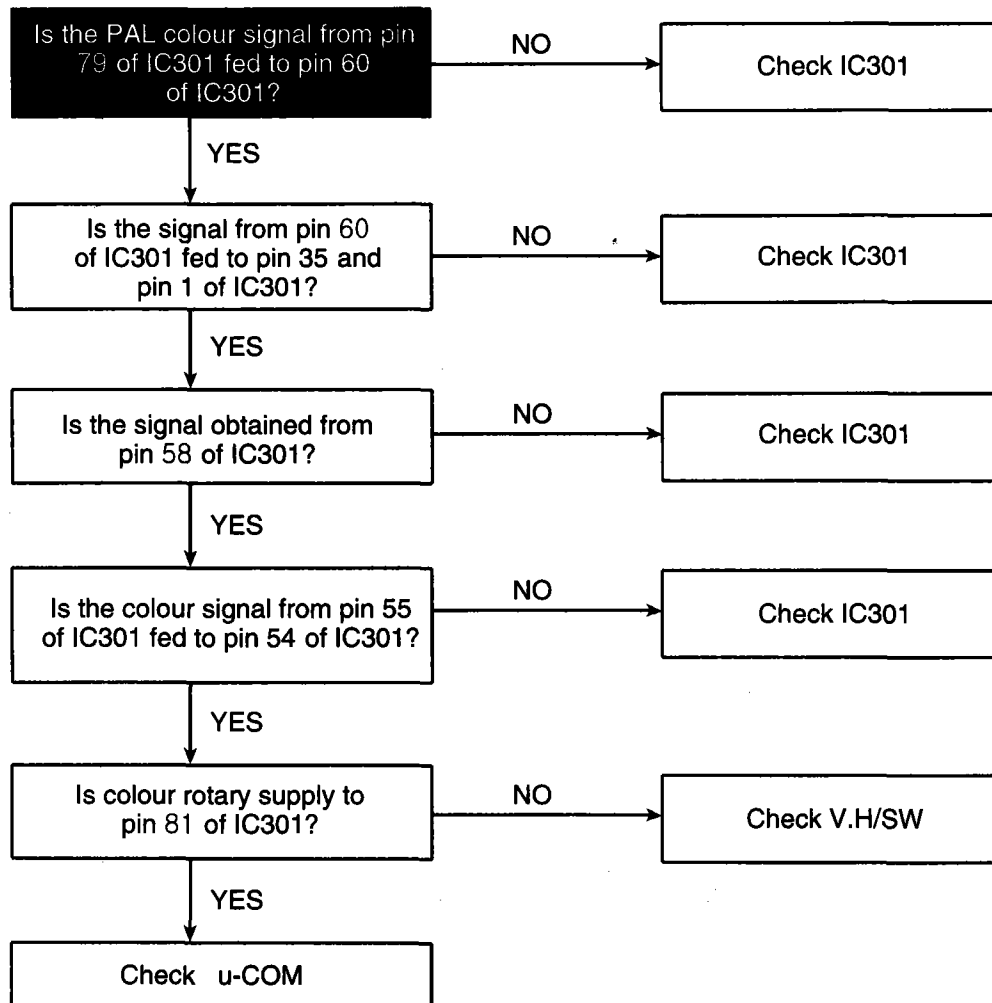


TROUBLESHOOTING FLOW CHART

F. TROUBLESHOOTING OF LUMINANCE IN THE PLAYBACK MODE

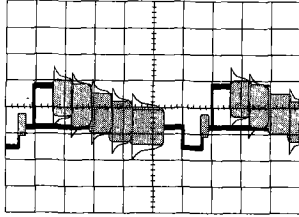


G. TROUBLESHOOTING OF PAL COLOUR IN THE PLAYBACK MODE

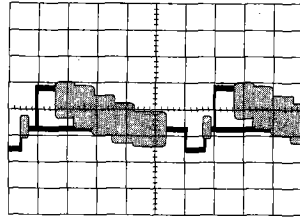


WAVEFORMS ON VIDEO CIRCUIT

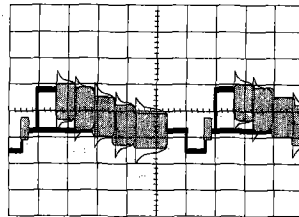
1. WAVEFORMS IN THE EE MODE(COLOR BAR INPUT)



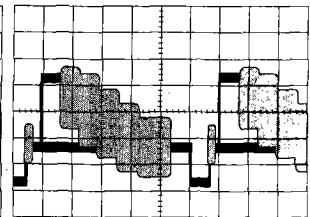
① Pin 30 of IC301
(SECAM color bar input :
1.0Vp-p)



② Pin 30 of IC301
(PAL color bar input :
1.0Vp-p)

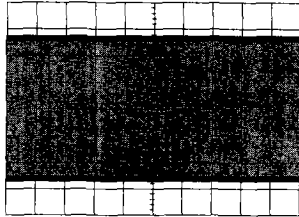


③ Pin 52 of IC301
(SECAM color bar output :
2.0Vp-p)

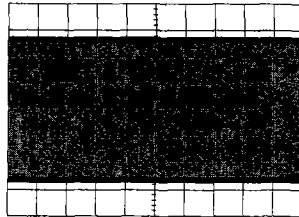


④ Pin 52 of IC301
(PAL color bar output :
2.0Vp-p)

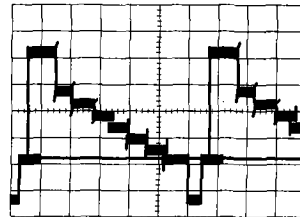
2. WAVEFORMS OF THE LUMINANCE IN THE RECORD MODE(COLOR BAR INPUT)



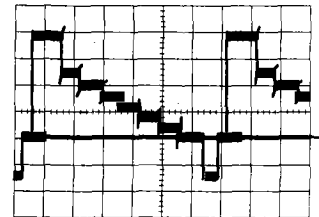
⑤ Pin 98 of IC301(PAL)
(REC luminance :
300mVp-p)



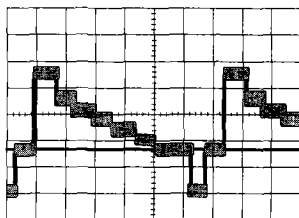
⑥ Pin 98 of IC301(SECAM)
(REC luminance :
300mVp-p)



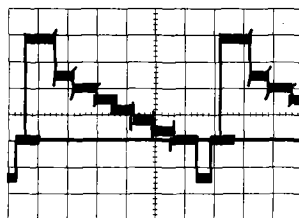
⑦ Pin 18 of IC301
(0.5Vp-p)



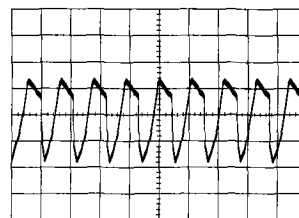
⑧ Pin 19 of IC301
(0.5Vp-p)



⑨ Pin 39 of IC301
(0.4Vp-p)

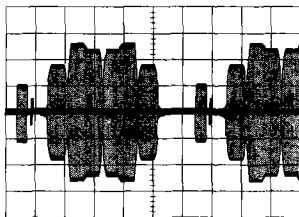


⑩ Pin 42 of IC301
(0.4Vp-p)

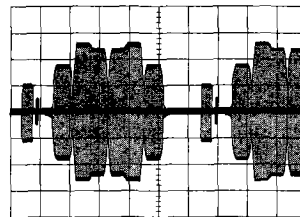


⑪ Pin 44 of IC301
(2fsc=8.86MHz)

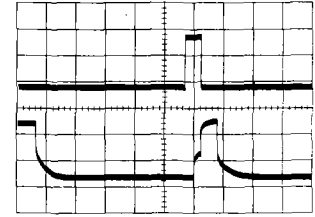
3. WAVEFORM OF THE PAL COLOR IN THE RECORD MODE(COLOR BAR INPUT)



⑫ Pin 60 of IC301
(300mVp-p)

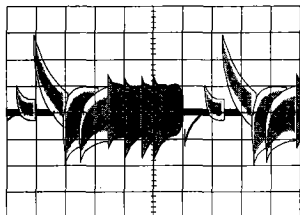


⑬ Pin 58 of IC301
(400mVp-p)

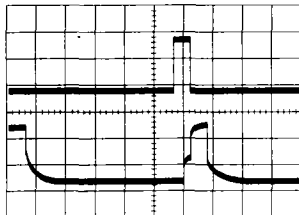


⑭ Pin 50 of IC301
(C.SYNC : 2Vp-p)

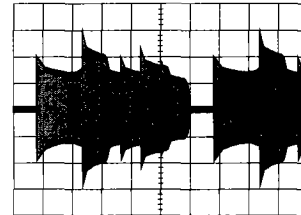
4. WAVEFORM OF THE SECAM COLOR IN THE RECORD MODE(COLOR BAR INPUT)



⑮ Pin 24 of IC361
(SECAM color input :
1.0Vp-p)

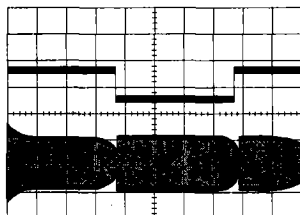


⑯ Pin 50 of IC301
(C.SYNC : 2Vp-p)

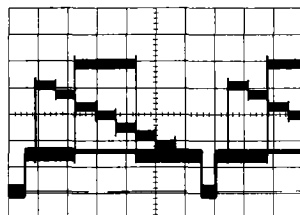


⑰ Pin 12 of IC361
(200mVp-p)

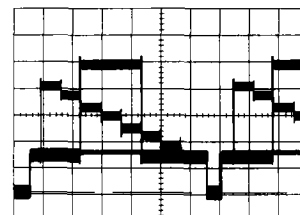
5. WAVEFORMS OF THE LUMINANCE IN THE PB MODE (DP-1 TEST TAPE)



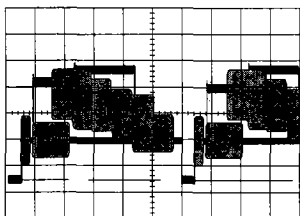
⑱ UP : Pin 81 of IC301(color
rotary : 1Vp-p
DOWN : Pin 79 of IC301
(ENVE : 0.5Vp-p)



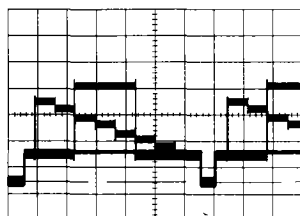
⑲ Pin 18 of IC301
(0.5Vp-p)



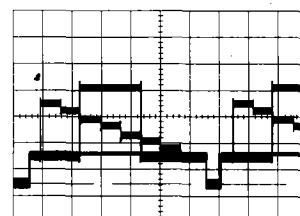
⑳ Pin 19 of IC301
(0.5Vp-p)



㉑ Pin 52 of IC301
(Video out : 2.0Vp-p)



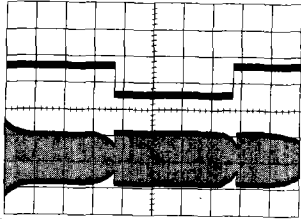
㉒ Pin 26 of IC301
(400mVp-p)



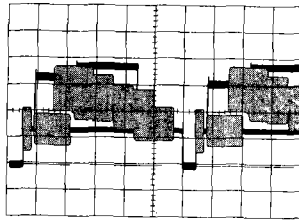
㉓ Pin 21 of IC301
(300mVp-p)

WAVEFORMAS ON VIDEO CIRCUIT

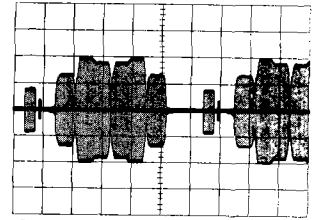
6. WAVEFORMS OF THE PAL COLOR IN THE PB MODE (DP-1 TEST TAPE)



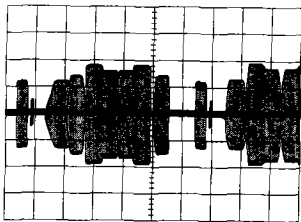
②4 UP : Pin 81 of IC301 (color rotary : 0.5Vp-p)
DOWN : Pin 79 of IC301 (500mVp-p)



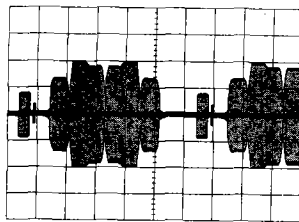
②5 Pin 52 of IC301 (Video out : 2.0Vp-p)



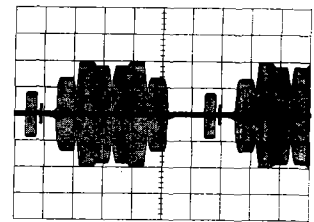
②6 Pin 60 of IC301 (240mVp-p)



②7 Pin 58 of IC301 (300mVp-p)

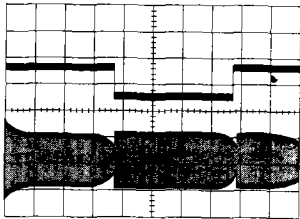


②8 Pin 55 of IC301 (500mVp-p)

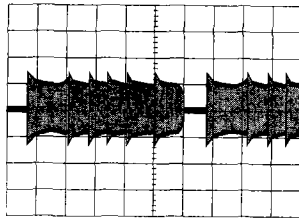


②9 Pin 54 of IC301 (500mVp-p)

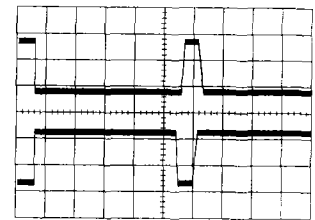
7. WAVEFORMS OF THE SECAM COLOR IN THE PB MODE (DP-1 TEST TAPE)



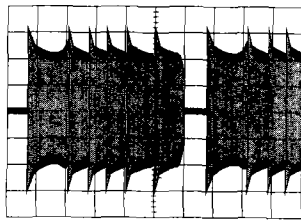
③0 UP : Pin 81 of IC301 (color rotary : 0.5Vp-p)
DOWN : Pin 79 of IC301 (PB color ENVE : 400mVp-p)



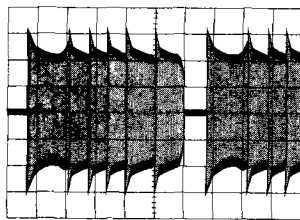
③1 Pin 15 of IC361 (400mVp-p)



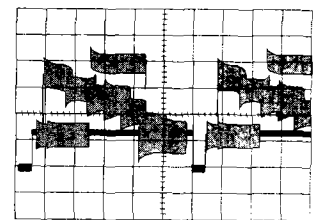
③2 UP : Pin 50 of IC301 (C.SYNC : 2Vp-p)



③3 Pin 21 of IC361 (PB SECAM color in : 400mVp-p)



③4 Pin 54 of IC301 (280mVp-p)



③5 Pin 52 of IC301 (SECAM video out : 2.0Vp-p)

μ-COM PORT DESCRIPTION

NO	NAME	PORT	I/O	ASSIGNMENT	ACTIVE	CN
1	START SENSOR	P110/AN8	I	TAPE START SENSOR DATA INPUT	H	START SENSOR
2	SHUTTLE DATA1	P77/AN7	I	SHUTTLE DATA INPUT	A/D	SHUTTLE A'SSY
3	PWR FAIL	P76/AN6	I	WHEN POWER IS DISCONNECTED THIS PORT DETECTS POWER FAILURE AND THEN GOES INTO POWER COMPENSATION MODE	L	
4	SHUTTLE DATA2	P75/AN5	I	SHUTTLE DATA INPUT	A/D	SHUTTLE A'SSY
5	AGC	P74/AN4	I	AGC ANALOG DATA INPUT FOR AUTO CH SETTING	A/D	PIF
6	END SENSOR	P73/AN3	I	TAPE END SENSOR DATA INPUT	H	END SENSOR
7	PATH ADJUST	P72/AN2	I	USE FOR PATH ADJUST	A/D	PATH JIG
8	AFT	P71/AN1	I	AFT ANALOG DATA INPUT FOR AUTO FINE TUNING	A/D	PIF
9	VIDEO DC ENVE	P70/AN0	I	VIDEO DC ENVE DATA INPUT	A/D	VIDEO
10	Hi-Fi DC ENVE	P67/AN10	I	Hi-Fi DC ENVE DATA INPUT	A/D	Hi-Fi
11	CAP LIM	P66/RTP11	O	THIS PORT IS USUALLY OPEN BUT OUTPUTS THE CAPSTAN STOP STATE OF FRAME ADVANCE	L	DECK(CAPSTAN)
12	FF/REW H	P65/RTP10	O	FF/REW MODE OUTPUT	H	
13	Q V SYNC	P64/RTP03	O	PINOUT THIS SIGNAL DURING TRICK MODE	PULSE	VIDEO
14	REMOCON IN	P63/RTP02	I	REMOCON DATA INPUT	PULSE	REMOCON RECEIVER
15	KEY 1	P62	I	KEY/OPTION DATA INPUT	PULSE	
16	KEY 2	P61	I	KEY/OPTION DATA INPUT	PULSE	
17	SEG 1	P60	O	SEGMENT 1	PULSE	LED DISPLAY
18	VIDEO H/SW	P57/ RTP01(HA SW)	O	TO SELECT SP H'D / LP H'D (VIDEO)	PULSE	VIDEO
19	AUDIO H/SW	P56/ RTP00(AH SW)	O	TO SELECT Hi-Fi H'D (Hi-Fi)	PULSE	Hi-Fi
20	SEG 2	P55/RTP25	O	SEGMENT 2	PULSE	LED DISPLAY
21	SEG 3	P54/RTP24	O	SEGMENT 3	PULSE	LED DISPLAY
22	SEG 4	P53/RTP23	O	SEGMENT 4	PULSE	LED DISPLAY
23	SEG 5	P52/RTP22	O	SEGMENT 5	PULSE	LED DISPLAY
24	SEG 6	P51/RTP21	O	SEGMENT 6	PULSE	LED DISPLAY
25	SEG 7	P50/RTP20	O	SEGMENT 7	PULSE	LED DISPLAY
26	SEG 8	P47	O	SEGMENT 8	PULSE	LED DISPLAY
27	GRID 1	P46	O	GRID 1	PULSE	LED DISPLAY

μ-COM PORT DESCRIPTION

NO	NAME	PORT	I/O	ASSIGNMENT	ACTIVE	CN
28	GRID 2	P45	O	GRID 2	PULSE	LED DISPLAY
29	GRID 3	P44	O	GRID 3	PULSE	LED DISPLAY
30	GRID 4	P43	O	GRID 4	PULSE	LED DISPLAY
31	GRID 5	P42	O	GRID 5	PULSE	LED DISPLAY
32	GRID 6	P41	O	GRID 6	PULSE	LED DISPLAY
33	GRID 7	P40	O	GRID 7	PULSE	LED DISPLAY
34	RESET	RESET	I	RESET INPUT	L	RESET IC
35	Xcin	P31	I	32.768KHz OSC IN		
36	Xcout	P30	O	32.768KHz OSC OUT		
37	Vcc	Vcc		BACK UP 5V		
38	Xin	Xin	I	16MHz OSC IN		
39	Xout	Xout	O	162MHZ OSC OUT		
40	Vss	Vss		GND		
41	OSCin3	P22	I	17.734MHz OSC IN		
42	OSCOut3	P21	O	17.734MHz OSC OUT		
43	CLK SEL	CLK SEL	I	"AFTER RESET, SYSYTEM CLOCK IS SELECTED" DEPENDING UPON CURRENT STATE : "IF L:32.768KHz, H:12MHz IS SELECTED"	L	
44	SECAM DET H	P20	I	SECAM MODE INPUT	H	VIDEO(SECAM)
45	N.C	P17	O	N.C		
46	NUB	NUB		GND	L	
47	LP	P16	I			
48	EE SECAM L	P15	O	EE SECAM MODE OUTPUT	H	VIDEO(SECAM)
49	OSD Vss	OSD Vss		GND		
50	VIDEO IN	P14	I	OSD VIDEO IN		VIDEO
51	LECHA	P13	I	USE FOR OSD LEVEL ADJUST- MENT	A/D	
52	VIDEO OUT	P12	O	OSD VIDEO OUT		
53	OSD Vcc	OSD Vcc		OSD Vcc (ON/OFF 5V)		
54	HLF	P11	I	OSD HLF		
55	V HOLD	P10	I	OSD V HOLD		
56	EDS IN	P07	I	OSD EDS VIDEO INPUT		
57	NUA	NUA		GND		
58	C SYNC	P06	I	COMPOSITE SYNC DATA INPUT	PULSE	VIDEO
59	CAM B	P05	I	CAM B DATA INPUT	L	DECK(CAM)
60	II C DATA	P04/OUT1	I/O	"EEPROM, PDC, NICAM, PIF, SW, HiFi DATA"	SERIAL	

μ-COM PORT DESCRIPTION

NO	NAME	PORT	I/O	ASSIGNMENT	ACTIVE	CN
61	II C CLK	P03/OUT2	O	"EEPROM, PDC, NICAM, PIF, SW, HiFi CLK"	SERIAL	
62	CAP F/R	P02	O	CAPSTAN MOTOR FORWARD(L)/ REVERSE(H)	H/L	DECK(CAPSTAN)
63	NICAM RESET H	P01	O	NICAM SOFTWARE RESET HIGH	H	PIF(NICAM)
64	IF ON H	P00	O	RF MODE 'H' OUTPUT OTHER-WISE 'L' OUTPUT	H	PIF
65	REC SAFETY	P107	I	REC SAFETY TAB IS DETECTED L STATE SO THAT RECORDING IS INHIBITED	L	REC SAFETY SW
66	Q SOUND H	P106	O	Q SOUND MODE OUTPUT	H	Q SOUND
67	TV CONTROL H	P105	O	TV/VCR MODE SWITCHING ON TV "TV MODE : L, VCR MODE : H"	L	A/V SW
68	16:9 CONT H	P104	O	16:9 MODE SWITCHING ON TV "NORMODE : L, 16:9 MODE : H"	H	A/V SW
69	CANAL L	P103	I	LOW INPUT IN CANAL BROADCAST	L	A/V SW
70	AUDIO DUB H	P102	H	AUDIO DUBBING MODE OUTPUT	H	AUDIO
71	II C CLK	P101/SCL	O	"A/V, SECAM CLK"	SERIAL	VIDEO
72	II C DATA	P100/SDA	I/O	"A/V, SECAM DATA"	SERIAL	VIDEO
73	POWER ON H	P97	O	POWER ON/OFF CONTROL PORT	H	POWER
74	SQ PB H	P96	O	SQ PB MODE OUTPUT	H	VIDEO
75	REC H	P95	O	REC MODE OUTPUT	H	AUDIO
76	DRUM PWM	P94/PWM1	O	DRUM MOTOR CONTROL PWM OUTPUT	PULSE	DECK(DRUM)
77	CAPSTAN PWM	P93/PWM0	O	CAPSTAN MOTOR CONTROL PWM OUTPUT	PULSE	DECK(CAPSTAN)
78	AUDIO MUTE H	P92	O	AUDIO MUTE H OUTPUT	H	AUDIO
79	SUPPLY REEL	P91	I	SUPPLY REEL PULSE INPUT	PULSE	DECK(SUPPLY REEL)
80	TAKE UP REEL	P90	I	TAKE UP REEL PULSE INPUT	PULSE	DECK(TAKE UP REEL)
81	L/M F	P87	O	LOADING NOTOR FORWARD CONTROL	H	LOADING MOTOR IC
82	L/M R	P86	O	LOADING NOTOR REVERSE CONTROL	H	LOADING MOTOR IC
83	CAM D	P85	I	CAM D DATA INPUT	L	DECK(CAM)
84	CAM C	P84	I	CAM C DATA INPUT	L	DECK(CAM)
85	N.C	P83				
86	CAM A	P82	I	CAM A DATA INPUT	L	DECK(CAM)
87	CFG	CPFGin	I	CAPSTAN FG INPUT	PULSE	DECK(CAPSTAN)

μ-COM PORT DESCRIPTION

NO	NAME	PORT	I/O	ASSIGNMENT	ACTIVE	CN
88	AMP Vss	AMP Vss		GND		
89	DFG	P81/DRF-Gin	I	DRUM FG INPUT	PULSE	DECK(DRUM)
90	DPG	DRPGin	I	DRUM PG INPUT	PULSE	DECK(DRUM)
91	AMP Vrefout	AMP Vrefout		AMP Vrefout		
92	AMP Vrefin	AMP Vrefin		AMP Vrefin		
93	C	P80/C				
94	CTL-	CTL-		CTL -		
95	CTL+	CTL+		CTL +		
96	AMP C	AMP C				
97	CTL AMP	CTL AMP	O	CTL AMP OUTPUT		PATH JIG
98	AMP Vcc	AMP Vcc		AMP Vcc		
99	Avcc	Avcc		Avcc		
100	ME(M)/S(H)	P111/AN9	I	MESECAM (M) / SUPER (H) INPUT	A/D	VIDEO

VOLTAGE CHART

SECAM.L IC (IC361, TA1238N)

PIN NO.	REC	PB
1	2.48	2.49
2	2.72	2.4
3	2.97	2.96
4	4.1	4.12
5	5.05	5.06
6	4.68	4.69
7	4.75	4.74
8	0	0
9	0.56	0.56
10	0	0
11	3.27	3.27
12	1.84	1.89
13	3.44	3.45
14	0	0
15	1.9	1.9
16	3.24	3.24
17	5.03	5.04
18	2.55	2.65
19	1.74	1.73
20	0	0
21	2.63	2.63
22	2.61	2.63
23	3.45	1.86
24	2.57	2.57

PDC/VPS IC (IC151, LC74793)

PIN NO.	REC	PB
1	0	0
2	2.64	2.68
3	2.68	2.72
4	0	0
5	0	0
6	3.7	3.7
7	3.9	3.9
8	4.98	5.12
9	0	4.74
10	0	0
11	1.63	3.18
12	1.63	3.18
13	0.82	1.35
14	0.01	0.01
15	5.09	5.12
16	2.75	3.02
17	2.55	2.57
18	4.67	4.72
19	5.01	5.02
20	4.99	5.06
21	0	0
22	3.74	3.79
23	5.05	5.11
24	5.08	5.13

EEPROM (IC503, ATM24D08)

PIN NO.	REC	PB
1	0	0
2	0	0
3	0	0
4	0	0
5	3.9	3.9
6	3.9	4
7	0	0
8	5.24	5.29

MOTOR DRIVE IC (IC502, BA6209)

PIN NO.	REC	PB
1	0	0
2	0.55	0.55
3	8.78	0.88
4	6.24	6.24
5	0.01	0.01
6	0.01	0.01
7	12.12	11.74
8	12.12	11.74
9	0.91	0.91
10	0.55	0.55

Q SOUND IC (ICQ01, QX2010)

PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB
1	3.47	3.46	6	4.45	4.44	11	3.49	3.47	16	4.46	4.43
2	0	0	7	4.45	4.43	12	4.47	4.44	17	4.46	4.43
3	4.44	4.43	8	4.45	4.43	13	4.45	4.43	18	4.46	4.43
4	4.45	4.44	9	3.49	3.47	14	4.46	4.43	19	3.46	3.44
5	4.45	4.44	10	0	0	15	4.44	4.41	20	9.41	9.35

VOLTAGE CHART

A/V ICHIP IC (IC301, HA118511F)

PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB
1	2.5	2.5	26	2.1	2.1	51	0	0	76	2.2	2.4
2	2.5	2.5	27	0	0	52	2.4	2.4	77	4.5	4.5
3	0	0	28	2.8	2.8	53	2.8	2.8	78	2.8	2.8
4	2.5	2.5	29	1.9	1.9	54	1.9	1.9	79	3.78	2.1
5	0	0	30	2.8	2.8	55	2.1	2.1	80	2.5	2.6
6	1.4	0	31	2.8	2.8	56	2.8	2.8	81	1.2	2.4
7	2.5	2.5	32	0	0	57	2.5	2.5	82	2.4	2.4
8	2.5	2.5	33	0	0	58	2.8	2.8	83	2.2	2.2
9	2.5	2.5	34	0	0	59	2.8	2.8	84	0	3.3
10	2.5	2.5	35	2.7	2.7	60	2.8	2.8	85	0	0
11	2.5	2.5	36	5	5	61	5	5	86	2.3	2.1
12	5	5	37	0.1	0.1	62	5	5	87	2.3	2.1
13	2.1	1.6	38	5	5	63	5	5	88	2.3	2.1
14	2.1	1.6	39	2.7	2.7	64	4.25	4.25	89	2.3	2.1
15	2.3	2.3	40	5	5	65	2.1	2.3	90	5	5
16	0	0.7	41	5	5	66	5	5	91	2.3	2.1
17	2.5	1.8	42	1.7	1.7	67	5	5	92	2.3	2.1
18	2.1	2.1	43	5	5	68	0	0	93	2.3	2.1
19	2.8	2.8	44	2.5	2.5	69	2.5	2.5	94	2.3	2.1
20	2.8	2.8	45	0	0	70	2.5	2.5	95	2.8	2.8
21	2.1	2.1	46	1.9	1.9	71	2.1	2.1	96	5	5
22	2.4	2.2	47	0	0	72	1.7	1.7	97	0	0
23	2.8	2.8	48	0	0	73	2.1	2.1	98	2	2
24	2.1	2.1	49	0	0	74	2.7	2.1	99	0	0
25	1.4	1.4	50	0.3	0.3	75	2.1	2.1	100	2.5	2.5

A/V SW IC (IC601, LA7148M)

PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB
1	5.89	5.89	10	5.47	5.47	19	2.14	2.06	28	0.09	0.09
2	0.37	0.37	11	0	0	20	2.02	1.87	29	5.25	5.25
3	0	0	12	0	0	21	1.49	1.07	30	0.09	0.09
4	0.08	0.08	13	0	0	22	1.49	1.07	31	5.26	5.26
5	5.89	5.89	14	2.14	2.14	23	2.04	1.15	32	0.09	0.09
6	0	0	15	5.05	5.06	24	0	0	33	0.09	0.09
7	0	0	16	1.73	1.73	25	3.75	3.75	34	6.11	6.11
8	9.36	9.36	17	5.05	5.05	26	4	4	35	5.25	5.25
9	5.89	5.89	18	1.73	1.73	27	0.09	0.09	36	5.89	5.89

VOLTAGE CHART

HI-FI IC (IC251, TDA9005H)

PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB
1	0	0	12	0	0.03	23	3.85	3.81	34	9.42	9.36
2	3.81	3.81	13	3.83	3.83	24	3.86	3.77	35	4.21	0.53
3	3.81	3.81	14	0	0	25	3.86	3.85	36	4.2	0.53
4	0	0	15	3.33	3.31	26	0.74	0.7	37	4.18	0.53
5	0	0	16	4.56	4.56	27	0	0	38	4.2	0.17
6	3.81	3.81	17	4.55	4.56	28	3.82	3.82	39	0	0
7	3.81	3.81	18	3.31	3.29	29	3.85	3.82	40	5.05	5.09
8	3.81	3.81	19	4.56	4.56	30	0.72	0.7	41	0.93	0.94
9	3.81	3.81	20	4.56	4.56	31	3.86	3.81	42	3.75	3.7
10	3.81	3.81	21	4.56	4.56	32	3.86	3.79	43	3.95	4
11	3.81	3.81	22	3.81	3.81	33	3.86	3.77	44	1.74	2.1

NICAM IC (IC051, MSP3415D)

PIN NO.	EE	PIN NO.	EE
1	0.03	27	0
2	2.29	28	0
3	0.01	29	0
4	0.01	30	3.69
5	0	31	3.7
6	4.95	32	0
7	3.95	33	8.25
8	3.7	34	6.57
9	0	35	0
10	0	36	3.66
11	0	37	0
12	0	38	0
13	0	39	3.68
14	0	40	3.68
15	0	41	3.68
16	4.95	42	3.68
17	0	43	2.54
18	0.01	44	3.69
19	0	45	0
20	5.1	46	4.92
21	0	47	1.5
22	0	48	1.5
23	0	49	0

A2 IC (IC051, MSP3405D)

PIN NO.	EE	PIN NO.	EE
1	0.01	27	0
2	0	28	0
3	0.01	29	0
4	0.01	30	3.72
5	0	31	3.73
6	5.02	32	0
7	3.6	33	8.15
8	3.3	34	6.47
9	2.47	35	0
10	2.46	36	3.68
11	2.43	37	0
12	0.02	38	0
13	0.03	39	3.71
14	0.02	40	3.71
15	0.02	41	3.71
16	5.02	42	3.71
17	0	43	2.57
18	0.02	44	3.72
19	0.01	45	0
20	5.12	46	4.98
21	0	47	1.51
22	0	48	1.51
23	0	49	0

VOLTAGE CHART

PIN NO.	EE	PIN NO.	EE
24	1.66	50	0
25	1.69	51	2.32
26	0	52	2.26

PIN NO.	EE	PIN NO.	EE
24	1.69	50	0
25	1.7	51	2.35
26	0	52	2.27

TMI (RF101, LGTMI-SLQ1-S)

PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB	PIN NO.	REC	PB
1	4.83	4.9	7	31.9	31.9	13	4.9	0	19	1.08	0
2	0	0	8	1.91	0	14	4.9	0	20	0.23	0.03
3	3.7	3.7	9	0	0	15	0	0	21	2.43	0
4	4.85	4.9	10	0	0	16	31.9	31.9	22	2.01	0.01
5	4	3.9	11	3.9	4	17	0	0	23	2.69	0
6	0	0	12	3.7	3.7	18	0	0	24	2.74	0

CHIP TR (2412KB, 1037KB)

PIN NO.	EMITTER		COLLECTOR		BASE	
	REC	PB	REC	PB	REC	PB
Q301	3.15	1.46	5.03	5.03	0	2.09
Q305	1.95	1.94	5.01	5.01	2.53	2.55
Q330	3.18	3.18	0	0	2.54	2.36
Q331	2.51	2.51	5.01	5.01	3.18	3
Q366	2.36	1.88	5.03	5.03	3	0.02
Q377	2.36	1.88	5.03	5.04	2.52	2.51
Q379	3.17	1.54	5.03	5.04	2.33	2.15
Q380	3.17	1.54	5.03	5.04	3.83	0.06
Q392	1.7	1.52	5.03	5.04	2.33	2.15
Q502	0	0	20.54	19.85	0.01	0.01
Q517	0.01	0	2.07	1.68	0.16	0.31
Q518	0.01	0	1.71	0.95	0.24	0.39
Q520	0	0	2.08	1.68	0.17	0.33

RESET IC (IC504, KA7533Z)

PIN NO.	REC	PB
1	5.23	5.23
2	0	0
3	5.23	5.23

REGULATOR IC (IC802, KA431AZ)

PIN NO.	REC	PB
1	2.49	2.49
2	0	0
3	4.82	4.82

SERVICE MODE

1. service mode

ITEM	OSD	REMARKS
<p>1. Press the [MENU] button to go to [MAIN MENU] screen and press the number [484] in sequence then go to [SERVICE MODE] screen.</p> <p>2. ENGLISH only for this special menu.</p> <p>3. The [SERVICE MODE] composes the followings.</p> <p>1) SVC MODE FOR REPAIR 2) TIMER CHECK MODE 3) CHANGE OF VIDEO DATA 4) CHANGE OF HI-FI DATA 5) AUTO REPEAT</p>	<p>1</p> <div data-bbox="932 517 1195 780" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">MAIN MENU</p> <p>→Timer Program Timer Review VCR Setup</p> <p>PR +/- : select OK : confirm MENU : end</p> </div> <div data-bbox="932 843 1195 1106" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">WELCOME TO SVC MODE!</p> <p>1 SVC MODE FOR REPAIR 2 TIMER CHECK MODE 3 CHANGE OF VIDEO DATA 4 CHANGE OF HI-FI DATA 5 AUTO REPEAT</p> <p>0 EXIT</p> </div>	

2. SVC MODE FOR REPAIR

2 - 1. ERROR CHECK MODE

ITEM	OSD	REMARKS
<p>1. Press the number 1 button , then OSD 1 is displayed in the initial SVC mode screen.</p>	<p>1</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>SVC MODE FOR REPAIR</p> <p>1 DECK JIG CONNECTION MODE (OFF)</p> <p>2 EE MODE WITHOUT DECK MODE(OFF)</p> <p>3 ERROR CHECK MODE</p> <p>0 RETURN</p> </div> <p>*ERROR CHECK MODE</p>	
<p>2. Press the number 3 button , then OSD 2 is displayed in the initial SVC MODE FOR REPAIR screen. It can be selected in TAPE OUT state only.</p>	<p>2</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>ERROR CHECKING</p> <p>CHECKING</p> <p>PLEASE WAIT . . .</p> </div> <p>* "CHECKING" is blinks for 5 seconds.</p>	
<p>3. PAL TEST TAPE is inserted after guide message is appeared, PLAY → CUE → STILL → SLOW → F.F → REW → PLAY → REV → STOP operations are executed automatically and OSD 4 will be displayed. To press 0 button on OSD 4 will be ejected.</p>	<p>3</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>ERROR CHECK MODE</p> <p>PLEASE INSERT A TEST TAPE FOR ERROR CHECK.</p> </div>	
<p>4. The error state is displayed 'OK' or 'NG' in ERROR CHECK RESULTS screen. * '--' means unchecked state.</p>	<p>4</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>ERROR CHECK RESULTS</p> <p>1. DRUM : OK</p> <p>2. CAPSTAN : OK</p> <p>3. S-REEL : OK</p> <p>4. T-REEL : OK</p> <p>5. CAM : OK</p> <p>6. CTL : NG</p> <p>7. ENVELOPE : --</p> <p>0 RETURN</p> </div>	

2 - 2. DECK JIG CONNECTION MODE

ITEM	OSD	REMARKS
<p>1. Press the number 1 button, OFF ↔ ON is toggled in the SVC MODE FOR REPAIR screen.</p> <p>* The initial state is set to OFF mode.</p>		

2 - 3. EE MODE WITHOUT DECK

ITEM	OSD	REMARKS
<p>1. Press the number 2 button, OFF ↔ ON is toggled in the SVC MODE FOR REPAIR screen.</p> <p>* The initial state is set to OFF mode.</p>		

3. TIMER CHECK MODE**3 - 1. FAST CLOCK OPERATION**

ITEM	OSD	REMARKS
<p>* TIMER CHECK MODE is used to check the TIMER RECORD/SHOWVIEW RECORD and VFD SEGMENT.</p> <p>1. Press the number 2 button, then OSD 1 will be displayed in the initial SVC mode screen.</p> <p>2. Press the number 1 button, FAST CLOCK OPERATION will be selected in the TIMER CHECK MODE screen.</p> <p>* The clock is operated with 60 times (1Min 1Sec.)</p> <p>3. Press the number 1 button, VFD SEGMENT CHECK will be selected in the TIMER CHECK MODE screen.</p> <p>* All segments are lit on VFD for 5 seconds.</p>	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>TIMER CHECK MODE</p> <p>1 FAST CLOCK OPERATION</p> <p>2 VFD SEGMENT CHECK</p> <p>0 RETURN</p> </div>	

4. CHANGE OF EEPROM DATA

ITEM	OSD	REMARKS
<p>* [CHANGE OF EEPROM DATA] is used to change the VIDEO/AUDIO characteristic data.</p> <ol style="list-style-type: none"> 1. Press number [3] button to activate the mode. 2. Press [←] button to move from right to left. 3. Press [→] button to move from up to down. 4. Press [OK] button to toggle the bit of data. 5. Then Press [0] button to confirm the change. <p>* System data can be changed by pressing [PAL/ SECAM] button. Then "A" is changed as "P → M → A" by turn whenever the key is pressed.</p> <p>* For SECAM model, the order is "A → S → P → M → A".</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <pre> 00011101 A 1 11111110 A 2 10000010 A 3 10100010 A 4 11011011 A 5 01001010 A 6 0 RETURN </pre> </div>	

5. CHANGE OF EEPROM DATA DURING PB MODE

ITEM	OSD	REMARKS
<ol style="list-style-type: none"> 1. Press number [3] button to activate the mode during PlayBack. * Press [REC] button to adjust PG (6.5H) 2. Press [←] button to move from right to left. 3. Press [→] button to move from up to down. 4. Press [OK] button to toggle the bit of data. 5. Then Press [0] button to confirm the change. 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <pre> 00011101 A 1 11111110 A 2 10000010 A 3 10100010 A 4 11011011 A 5 01001010 A 6 0 RETURN REC PG (6.5H) </pre> </div>	

6. CHANGE OF EEPROM DATA DURING SLOW MODE

ITEM	OSD	REMARKS
<ol style="list-style-type: none"> 1. Press number [3] button to activate the mode during SLOW mode. 2. Press [← / →] button to adjust SLOW tracking. 3. Adjustment steps : [0 - 99] & [-99 - 0] 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <pre> 00011101 A 1 11111110 A 2 10000010 A 3 10100010 A 4 11011011 A 5 01001010 A 6 0 RETURN - / → SLOW 00 </pre> </div>	

7. THE METHOD TO INITIALIZE THE VIDEO DATA

1. When [484] is sequentially pressed in MENU mode, the SERVICE mode is activated.
2. Choose "CHANGE OF VIDEO DATA" by pressing [3].
3. The input video signal should be PAL or null signal and the speed should be SP.
4. Change A1 bytes to all "1" by the [←], [→], [OK] buttons.
5. The data are stored in EEPROM when [0] button is pressed.
6. Pull out the mains power cord.
7. Instantly short the both leads of C524 on MAIN PCB to reset the VCR.
8. Plug in the mains power cord again.

8. THE METHOD TO CONTROL THE SERIAL DATA

1. Access to the SERVICE MODE by pressing [484] buttons sequentially in MAIN MENU.
2. Choose "CHANGE OF VIDEO DATA" by pressing [3].
3. Then the data table which indicates the current video system (PAL/SECAM) and speed (SP/LP) is displayed on screen, while it detects the system and speed automatically.
4. Select the system and speed using [PAL/SECAM] button and [SP/LP] button on remote control if you need to change.
5. The cursor on the data table moves from right to left when the [←] button is pressed.
6. The cursor on the data table moves from up to down when the [→] button is pressed.
7. Data is toggled whenever the [OK] button is pressed on the cursor position.
8. If you need to change the data related to TRICK PLAY, it can be easily accessed in STILL mode.
9. First, the mode of the system detection should be AUTO mode after you change the data, and then if [0] button is pressed after this, the data of the current status are stored in EEPROM, then the SERVICE MODE MENU is displayed.
10. The data corresponding to the system, speed, input selection, trick play are not changed.

* The group indication part on the data table is changed as in order of A1, A2, ... → P1, P2, ... → M1, M2, ... → S1, S2, ... (SECAM ONLY) → A1, A2, ... whenever the [PAL/SECAM] button on remote control is pressed, the system detection of which are A(AUTO), P(FORCED PAL), M(FORCED MESECAM), S(FROCED SECAM) respectively.

* The data changed to the current system according to the input video signal automatically in case of AUTO mode and if no signal, it changes to PAL system.

* Adjust the correct system by pressing the [PAL/SECAM] button on remote control if the current status of the system is not correspond to the input video signal.

9. SERIAL CONTROL DATA TABLE FOR HITACHI SUPER AV 1 CHIP IC, HA118511F (1)

D1	D2,D3	D4,D5	D6	D7	D8	
0 Y/C REC 1 Y/C PB	00 SP 10 MESECAM SP 01 LP 11 MESECAM LP	00 Audio EE 10 Audio PB 01 Audio REC 11 Prohibit	0 NTSC 1 PAL	0 3.58M 1 4.43M	0 10:4 1 7:3	
D9,D10	D11,D12	D13,D14	D15	D16		
REC Detail Enhancer : PB N.C	YNR LNC REC : PB	REC Copy-G/CLR-Sync. : PB DE	REC C-Comb : PB N->P Conv./JOG	REC APC : PB Y/YD Switching		
00 Off : Lowest 01 Low : Lower 10 Medium : Higher 11 High : Highest	00 Off : Off 01 YNR : YNR 10 MOD fo Fix : LNC(Shallow) 11 MOD Off : LNC(Deep)	00 On/Off : 0.9dB 01 On/On : +2.0dB 10 Off/Off : +1.4dB 11 Off/On : 0dB	0 On : Off/- 1 Off : On/JOG	0 On : Y Main 1 Off : YD Main		
D17	D18	D19	D20,D21	D22,D23	D24	
REC C-Comb CTL:CCD CLK Switching	REC Mix CTL : PB C-Delay	ACK Control	Video Input : PB P-EQ Q-Adj.	Audio Input	REC L-SECAM Switching :	
0 No YL Corr.:Non-Synchronized 2fsc 1 YL Corr.:Synchronized 2fsc Out by fh	0 Mix Off : 0 nsec 1 Mix On : 150 nsec	0 Automatic 1 Forced B/W	00 Input 1 : Highest 01 Input 2 : Higher 10 Input 3 : Lower 11 Prohibit : Lowest	00 Input 1 01 Input 2 10 Input 3 11 A. Mute On	Emphasizing PB-Y Level up 0 Except SECAM : Normal 1 SECAM : Emphasizing Level Up	
D25,D26,D27,D28	D25,D26	D27	D28,D29	D29	D30,D31	D32
REC Y/C Mix Level Adjustment	PB EQ-to Adj.	D.O CTL	PB G-EQ Q-CTL	REC-C In CTL	REC FM Filter Slope Adj. :	S-DET. On/Off CTL
0000 -9.0dB 0110 -12.0dB 1100 -15.0dB 0001 -9.5dB 0111 -12.5dB 1101 -15.5dB 0010 -10.0dB 1000 -13.0dB 1110 -16.0dB 0011 -10.5dB 1001 -13.5dB 1111 -16.5dB 0100 -11.0dB 1010 -14.0dB 0101 -11.5dB 1011 -14.5dB	00 0% 01 -5% 10 +5% 11 +10%	0 Auto 1 Off	00 -1dB 01 0dB 10 +1dB 11 +2dB	0 Compo. In 1 Sepa. In	PB EQ P-EQ to Adj. 00 Low : Lowest 01 Medium : Lower 10 High : Higher 11 Prohibit : Highest	0 On 1 Off(Fixed VHS Mode)
D33	D34,D35,D36,D37			D38	D39	D40
Pre-Amp.	REC-Current Adj. : Trick PB CTL/Enve. Det. CTL			REC Mute : Trick Play	SP/SP	Drum FF Edge Mode
0 PB 1 REC	0000 13mA : PB Normal/0dB 0001 14mA : PB Normal/+3dB 0010 15mA : PB Normal/+6dB 0011 16mA : PB Normal/+9dB 0100 17mA : PB Still/0dB 0101 18mA : PB Still/+3dB	0110 19mA : PB Still/+6dB 0111 20mA : PB Still/+9dB 1000 21mA : PB Search/0dB 1001 22.5mA : PB Search/+3dB 1010 24mA : PB Search/+6dB 1011 25.5mA : PB Search/+9dB	1100 27mA : PB Normal/0dB 1101 28.5mA : PB Normal/+3dB 1110 30mA : PB Normal/+6dB 1111 31.5mA : PB Normal/+9dB	0 Off : Standard Play 1 On : Trick Play	0 SP 1 SP	0 Off 1 On

10. HITACHI AV 1CHIP SERIAL CONTROL TABLE (PAL 4H'D)

- PAL SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	0	1

- PAL LP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	1	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
0	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
0	1	0	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	1	1	0	0	1	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	1	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	1	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows.

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	0	1	1	1	1	0	1
SP SEARCH	0	1	0	1	1	1	0	1
SP SLOW (STOP MODE)	0	0	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	0	0	1	1	0	0	1

MODE	D33	D34	D35	D36	D37	D38	D39	D40
LP STILL	0	0	1	1	1	1	1	1
LP SEARCH	0	1	0	1	1	1	0	1
LP SLOW (STOP MODE)	0	0	1	1	1	1	1	1
LP SLOW (MOVE MODE)	0	0	0	1	1	0	1	1

SERVICE MODE

- MESECAM SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	0	1

- MESECAM LP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	1	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
0	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
0	1	0	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	1	1	0	0	1	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	1	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	1	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	0	1	1	1	1	0	1
SP SEARCH	0	1	0	1	1	1	0	1
SP SLOW(STOP MODE)	0	0	1	1	1	1	0	1
SP SLOW(MOVE MODE)	0	0	0	1	1	0	0	1

MODE	D33	D34	D35	D36	D37	D38	D39	D40
LP STILL	0	0	1	1	1	1	1	1
LP SEARCH	0	1	0	1	1	1	0	1
LP SLOW(STOP MODE)	0	0	1	1	1	1	1	1
LP SLOW(MOVE MODE)	0	0	0	1	1	0	1	1

11. SERIAL CONTROL DATA TABLE OF HITACHI SUPER A/V 1CHIP IC (PAL2H'D SP)

- PAL SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	1	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	0	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	0
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows.

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	1	1	1	1	1	0	1
SP SEARCH	0	1	1	1	1	1	0	1
SP SLOW(STOP MODE)	0	1	1	1	1	1	0	1
SP SLOW(MOVE MODE)	0	1	1	1	1	0	0	1

- MESECAM SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	0	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	0
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows.

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	1	1	1	1	1	0	1
SP SEARCH	0	1	1	1	1	1	0	1
SP SLOW(STOP MODE)	0	1	1	1	1	1	0	1
SP SLOW(MOVE MODE)	0	1	1	1	1	0	0	1

12. SERIAL CONTROL DATA TABLE OF HITACHI SUPER AV 1CHIP IC (PAL 2H'D LP)

- PAL SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	1	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	0
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- PAL LP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	1	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
0	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
0	1	1	0	0	0	1	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows..

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	1	1	1	1	1	0	1
SP SEARCH	0	1	1	1	1	1	0	1
SP SLOW (STOP MODE)	0	1	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	1	1	1	1	0	0	1

MODE	D33	D34	D35	D36	D37	D38	D39	D40
LP STILL	0	1	1	1	1	1	0	1
LP SEARCH	0	1	1	1	1	1	0	1
LP SLOW (STOP MODE)	0	1	1	1	1	1	0	1
LP SLOW (MOVE MODE)	0	1	1	1	1	0	0	1

- MESECAM SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	0
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- MESECAM LP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	1	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
0	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
0	1	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows..

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	1	1	1	1	1	0	1
SP SEARCH	0	1	1	1	1	1	0	1
SP SLOW(STOP MODE)	0	1	1	1	1	1	0	1
SP SLOW(MOVE MODE)	0	1	1	1	1	0	0	1

MODE	D33	D34	D35	D36	D37	D38	D39	D40
LP STILL	0	1	1	1	1	1	0	1
LP SEARCH	0	1	1	1	1	1	0	1
LP SLOW(STOP MODE)	0	1	1	1	1	1	0	1
LP SLOW(MOVE MODE)	0	1	1	1	1	0	0	1

SERVICE MODE

13. HITACHI AV 1CHIP SERIAL CONTROL TABLE(SECAM 4H'D)

- PAL SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	0	1

- PAL LP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	1	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
0	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
0	1	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	1	0	1	0	1	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	1	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	1	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows..

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	0	1	1	1	1	0	1
SP SEARCH	0	1	0	1	1	1	0	1
SP SLOW (STOP MODE)	0	0	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	0	0	1	1	0	0	1

MODE	D33	D34	D35	D36	D37	D38	D39	D40
LP STILL	0	0	1	1	1	1	1	1
LP SEARCH	0	1	0	1	1	1	0	1
LP SLOW (STOP MODE)	0	0	1	1	1	1	1	1
LP SLOW (MOVE MODE)	0	0	0	1	1	0	1	1

- MESECAM SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	1	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	1	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	0	1

- MESECAM LP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	1	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
0	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
0	1	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	1	0	1	0	1	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	1	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	1	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	1	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	1	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows..

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	0	1	1	1	1	0	1
SP SEARCH	0	1	0	1	1	1	0	1
SP SLOW (STOP MODE)	0	0	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	0	0	1	1	0	0	1

MODE	D33	D34	D35	D36	D37	D38	D39	D40
LP STILL	0	0	1	1	1	1	1	1
LP SEARCH	0	1	0	1	1	1	0	1
LP SLOW (STOP MODE)	0	0	1	1	1	1	1	1
LP SLOW (MOVE MODE)	0	0	0	1	1	0	1	1

SERVICE MODE

- SECAM SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	1	0	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	1	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	1	0	0	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	1	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	0	1

- SECAM LP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	1	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
0	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
0	1	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	1	1	1	0	1	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	1	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	0	1	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	1	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	1	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	0	0	1	1	1	1	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows..

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	0	1	1	1	1	0	1
SP SEARCH	0	1	0	1	1	1	0	1
SP SLOW (STOP MODE)	0	0	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	0	0	1	1	0	0	1

MODE	D33	D34	D35	D36	D37	D38	D39	D40
LP STILL	0	0	1	1	1	1	1	1
LP SEARCH	0	1	0	1	1	1	0	1
LP SLOW (STOP MODE)	0	0	1	1	1	1	1	1
LP SLOW (MOVE MODE)	0	0	0	1	1	0	1	1

14. HITACHI AV 1CHIP SERIAL CONTROL TABLE(SECAM 2H'D)

- PAL SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	0	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	1	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	0	0	1	0	1	1	0
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows.

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	1	1	1	1	1	0	1
SP SEARCH	0	1	1	1	1	1	0	1
SP SLOW (STOP MODE)	0	1	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	1	1	1	1	0	0	1

- MESECAM SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	0	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	0
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows.

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	1	1	1	1	1	0	1
SP SEARCH	0	1	1	1	1	1	0	1
SP SLOW (STOP MODE)	0	1	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	1	1	1	1	0	0	1

SERVICE MODE

- SECAM SP

(EE/REC)

D1	D2	D3	D4	D5	D6	D7	D8
0	1	0	0	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	0	0	1	1	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	0	0	1	0	1	1
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	0	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	0	1	1	0	0	0

(PB)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	1
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	1	0	0	0	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	0	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	0	0	0

(TRICK)

D1	D2	D3	D4	D5	D6	D7	D8
1	1	0	1	0	1	1	0
D9	D10	D11	D12	D13	D14	D15	D16
1	0	0	1	0	0	0	0
D17	D18	D19	D20	D21	D22	D23	D24
0	0	1	0	0	1	1	0
D25	D26	D27	D28	D29	D30	D31	D32
1	0	1	0	1	0	0	1
D33	D34	D35	D36	D37	D38	D39	D40
0	1	1	1	1	1	0	1

- 1) In case of switching EE to REC, "00" of D4, D5, "1" of D13 and "0" of D33 are switched to "01", "0" and "1" respectively.
- 2) INPUT SELECT is switched to FRONT AV(10), SCART AV(01), IF AV(00) according to switching part truth table.
- 3) In case of NTSC PB, "1" of D6, "1" of D8 and "0" of D15 are switched to "0", "0" and "1" respectively based on PAL DATA.
- 4) The data in special playback are as follows.

MODE	D33	D34	D35	D36	D37	D38	D39	D40
SP STILL	0	1	1	1	1	1	0	1
SP SEARCH	0	1	1	1	1	1	0	1
SP SLOW (STOP MODE)	0	1	1	1	1	1	0	1
SP SLOW (MOVE MODE)	0	1	1	1	1	0	0	1

1. SERIAL CONTROL DATA TABLE FOR PHILIPS Hi-Fi IC, TDA9605H

TRUTH TABLE (Hi-Fi SW)

BIT		7	6	5	4	3	2	1	0
0000	0000	AFM	DOC	SHH	DETH	NTSC	HAC2	HAC1	HAC0
CONTROL BYTE		audio FM mode	drop-out cancel	S&H time	hi-fi detect	NTSC system standard	playback amplification select		
0 : playback		0 : off	0 : 6us	0 : fast	0 : PAL	000 : 48dB	001 : 51dB	010 : 54dB	010 : 54dB
		1 : on	1 : 8us	1 : slow	1 : NTSC	011 : 57dB	100 : 60dB	101 : 63dB	110 : 66dB
1 : record		000 : mute	001 : 3dB mix	010 : 4.5dB mix	record current select			001 : 30mA	010 : 35mA
		011 : 6dB mix	100 : 8dB mix	101 : 9.5dB mix	000 : 25mA	011 : 42mA	100 : 50mA	101 : 60mA	110 : 71mA
		110 : 11dB mix	111 : 12.5dB mix		110 : 71mA	111 : 84mA			
0000	0001	DOS1	DOS0	s5	s4	NIL3	NIL2	NIL1	NIL0
SELECT BYTE		decoder output select		reserved		normal input level			
00 : Tuner		01 : Ext1		00		0000 : 0dB	0001 : +1dB	0010 : +2dB	0011 : +3dB
10 : Sap		11 : mute				0100 : +4dB	0101 : +5dB	0110 : +6dB	0111 : +7dB
						1000 : +8dB	1001 : +9dB	1010 : +10dB	1011 : +11dB
						1100 : +12dB	1101 : +13dB	1110 : +14dB	1111 : mute
0000	0010	r7	IS2	IS1	IS0	NS2	NS1	NS0	i0
INPUT BYTE		reserved	input select			normal select			reserved
0		000 : Tuner	001 : Cinch	010 : Ext1	000 : input selct	001 : volume	010 : input-left	0	
		011 : Ext2	100 : Sap	101 : dub mix	011 : volume-left	100 : Sap	101 : Tuner		
		110 : Normal	111 : Aux		110 : Ext2	111 : mute			
0000	0011	LOH	OSN	OSR	OSL	EOS	LOS	DOS	RFCM
OUTPUT BYTE		line output high	output select			envelope select	line select	decoder select enable	RFC mute
0 : 0dB		000 : mute	001 : Left	010 : Right	0 : HF envelope	0 : output select	0 : output select	0 : AGC	0 : AGC
1 : +1dB		011 : Stereo	100 : Normal	101 : mix-left	1 : Stereo	1 : Ext2	1 : decoder select	1 : mute	1 : mute
		110 : mix-right	111 : mix-stereo						
0000	0100	r7	VLS	VL5	VL4	VL3	VL2	VL1	VL0
LEFT VOLUME BYTE		reserved	volume left sign	volume left					
0		0 : minus	000000 : 0dB	101111 : -47dB					
		1 : plus	11xxxx : mute	xx0000 : 0dB					
			xx0000 : 0dB	-					
				xx1111 : +15dB					
0000	0101	r7	VRS	VR5	VR4	VR3	VR2	VR1	VR0
RIGHT VOLUME BYTE		reserved	volume right sign	volume right					
0		0 : minus	000000 : 0dB	101111 : -47dB					
		1 : plus	11xxxx : mute	xx0000 : 0dB					
			xx0000 : 0dB	-					
				xx1111 : +15dB					
0000	0110	simultaneous loading of the subaddress 04 and subaddress 05 register							
VOLUME BYTE									
0000	0111	CALS	VCCH	TEST	PORR	HPD	MUTE	STBP	STBA
POWER BYTE		calibration start	Vcc high	test	POR reset	head amp PB disable	power mute	"passive standby, active standby"	
0 :-		0 : 9V	0 :-	0 :-	0 :-	0 :-	0 :-	00 :-	01 : active standby
1 : start calibration		1 : 12V	1 : test	1 : POR reset	1 : head amp disable	1 : mute	1x : passive standby		

1-1. READ MODE (SLAVE ADDRESS : 10111001, B9H)

BIT		7	6	5	4	3	2	1	0
SUB ADDRESS		CALR	AUTN	CALE	POR	0	0	0	0
NO SUBADDRESS		calibration ready	auto-normal	calibration error	power on reset	FIX			

TRUTH TABLE (Hi-Fi SW)

2. DECODER MODE (HI-FI)

MODE	TV/ VCR	PR/ AV/ F.AV	REC	C+ MEM	C+ (L) CTL	TV CTL	line select	input select	decoder output select	decoder select enable	passive/ active standby
POWER OFF	-	-	-	-	H	L	1	000	01	1	active
					L	H	1	000	01	1	active
STANDBY (PDC SCAN)	-	PR	-	-	H	L	0	000	01	1	active
					L	H	1	000	01	1	active
		AV	-	-	H	L	0	010	01	1	active
					L	H	1	011	01	1	active
PLAY	TV	-	-	-	H	L	0	000	01	1	-
	L				H	1	000	01	1	-	
	VCR				-	H	0	000	00	1	-
EE	TV	PR	NO REC	-	H	L	0	000	01	1	-
					L	H	1	000	01	1	-
			REC	NO MEM	H	L	0	000	01	1	-
					L	H	1	000	01	1	-
		MEM		H	L	0	000	00	1	-	
				L	L	0	011	00	1	-	
		AV	-	-	H	L	0	010	01	1	-
					L	H	1	011	01	1	-
		F.AV	-	-	H	L	0	111	01	1	-
					L	H	1	111	01	1	-
	VCR	PR	-	-	H	H	0	000	00	1	-
					L	H	0	011	00	1	-
		AV	-	-	H	H	0	010	01	1	-
					L	H	0	011	01	1	-
		F.AV	-	-	H	H	0	111	00	0	-
					L	H	1	111	00	0	-

3. AV2 MODE (Hi-Fi)

MODE	TV/VCR	PR/ AV1/AV2/ F.AV	C+ (L) CTL	TV CTL	line select	input select	decoder output select	decoder select enable	passive/ active standby
POWER OFF	-	-	H	L	1	000	01	1	active
			L	H	1	000	01	1	active
STANDBY (PDC SCAN)	-	PR	H	L	1	000	01	1	active
			L	H	1	000	01	1	active
		AV1	H	L	1	010	01	1	active
			L	H	1	010	01	1	active
		AV2	H	L	1	011	01	1	active
			L	H	1	011	01	1	active
PLAY	TV	-	-	L	0	000	00	0	-
	VCR	-	-	H	0	000	00	0	-
EE/REC	TV	PR	H	L	0	000	00	0	-
			L	H	1	000	00	0	-
		AV1	H	L	0	010	00	0	-
			L	H	1	010	00	0	-
		AV2	H	L	0	011	00	0	-
			L	H	1	011	00	0	-
	F.AV	H	L	0	111	00	0	-	
		L	H	1	111	00	0	-	
	VCR	PR	-	H	0	000	00	0	-
		AV1	-	H	0	010	00	0	-
		AV2	-	H	0	011	00	0	-
		F.AV	-	H	0	111	00	0	-

4. AV MODE (Hi-Fi IC) - 1 PERI SYSTEM

MODE	TV/VCR	PR/ AV/F.AV	TV CTL	line select	input select	decoder output select	decoder select enable	passive/ active standby
P/OFF	-	-	L	-	-	-	-	active
STANDBY	-	PR	L	0	000	11	1	active
	-	AV	L	0	010	11	1	active
PLAY	TV	-	L	0	-	11	1	-
	VCR	-	H	0	-	11	1	-
EE/REC	TV	PR	L	0	000	11	1	-
		AV	L	0	010	11	1	-
		F.AV	L	0	111	11	1	-
	VCR	PR	H	0	000	11	1	-
		AV	L	0	010	11	1	-
		F.AV	H	0	111	11	1	-

TRUTH TABLE (A/V SW)

1. SERIAL CONTROL DATA TABLE FOR SANYO AV 1 CHIP SW IC (LA7148M)

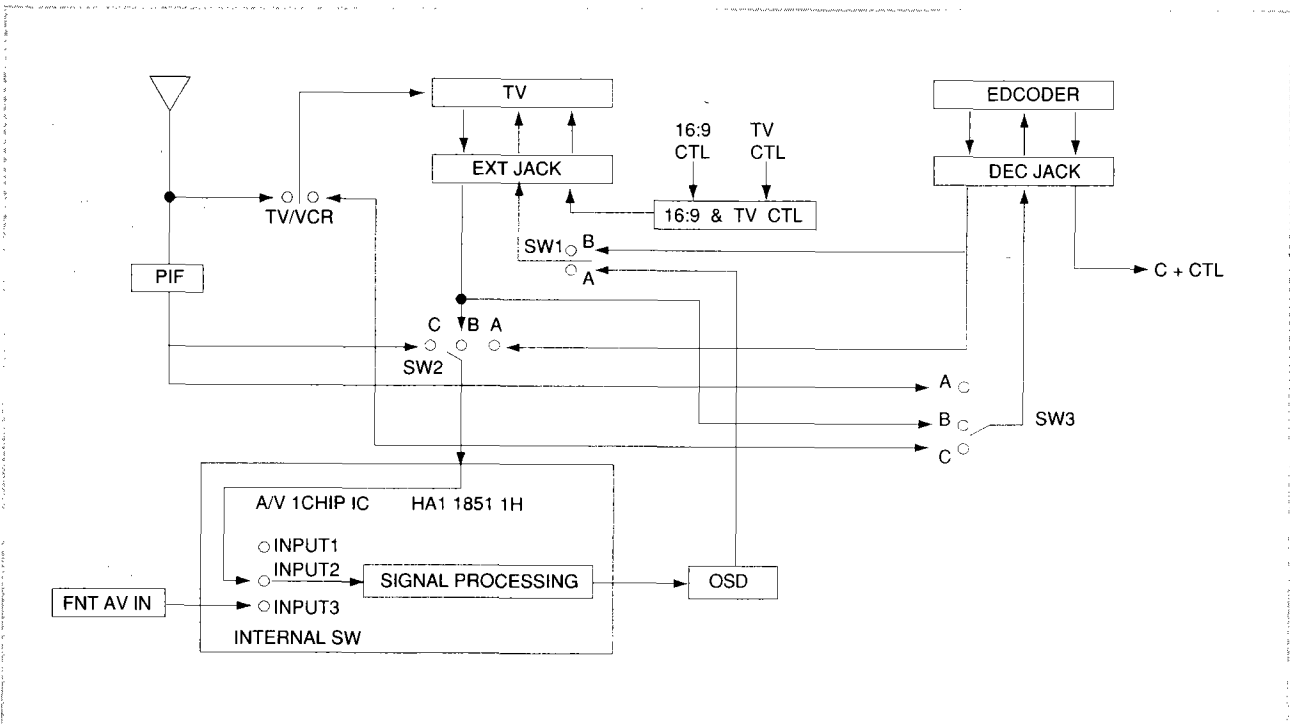
SUB ADDRESS	DATA BYTE (UNDERLINE IS INITIAL SETTING)							LSB D1
	MSB D8	D7	D6	D5	D4	D3	D2	
01 (0000 0001)	SW1 <u>0</u> :B 1:A	SW2 00:C 01:B 10:A <u>11</u> :A		SW3 00:C 01:B <u>10</u> :A 11:A		FSSOUT 00:HIGH 01:HIGH 10:MID <u>11</u> :LOW		*
02 (0000 0001)	MUTE1 #23 PIN 0:- <u>1</u> :MUTE	MUTE2 #29 PIN 0:- <u>1</u> :MUTE	MUTE3 #31 PIN 0:- <u>1</u> :MUTE	MUTE4 #35 PIN 0:- <u>1</u> :MUTE	AUDIO AMP GAIN1 (DEC OUT) 00:0dB <u>01</u> :2dB 10:4dB 11:6dB		AUDIO AMP GAIN2 (EXT OUT) 00:0dB <u>01</u> :2dB 10:4dB 11:6dB	
03 (0000 0001)	EXT CTL1 <u>0</u> :L 1:H	EXT CTL2 <u>0</u> :L 1:H	*	*	*	*	*	*

2. DECODER MODE (AV SW IC)

MODE	TV/VCR	PR/ AV/F.AV	REC	C+ MEM	C+ (L) CTL	TV CTL	SW1	SW2	SW3	INT SW	REMARK
POWER OFF	-	-	-	-	H	L	B	C	B	-	
					L	H	B	C	B	-	
STANDBY (PDC SCAN)	-	PR	-	-	H	L	A	C	B	INPUT 2	
					L	H	B	C	B	INPUT 2	
		AV	-	-	H	L	A	B	B	INPUT 2	
					L	H	B	A	B	INPUT 2	
PLAY	TV	-	-	-	H	L	A	C	B	INPUT 2	
	L				H	B	C	B	INPUT 2		
	VCR				-	H	A	C	A	INPUT 2	

TRUTH TABLE (A/V SW)

MODE	TV/VCR	PR/ AV/F.AV	REC	C+ MEM	C+ (L) CTL	TV CTL	SW1	SW2	SW3	INT SW	REMARK	
EE	TV	PR	NO REC	-	H	L	A	C	B	INPUT 2	CH SEARCH	
					L	H	B	C	B	INPUT 2		
			REC	OFF	H	L	A	C	B	INPUT 2		
					L	H	B	C	B	INPUT 2		
			ON	H	L	A	C	A	INPUT 2			
				L	L	A	A	A	INPUT 2			
	AV	-	-	H	L	A	B	B	INPUT 2			
				L	H	B	A	B	INPUT 2			
	F.AV	-	-	H	L	A	B	B	INPUT 1			
				L	H	B	A	B	INPUT 1			
	VCR	PR	-	-	-	H	H	A	C	A	INPUT 2	CH SEARCH
						L	H	A	A	A	INPUT 2	
		AV	-	-	-	H	H	A	B	B	INPUT 2	
						L	H	A	A	B	INPUT 2	
		F.AV	-	-	-	H	H	A	B	C	INPUT 1	
						L	H	B	A	C	INPUT 1	
		SW1	SW2	SW3							INT SW	
	INPUT A	OSD OUT	DEC OUT	PIF OUT							INPUT 1	FNT OUT
INPUT B	DEC OUT	EXT OUT	EXT OUT							INPUT 2	SW2 OUT	
INPUT C	-	PIF OUT	OSD OUT							INPUT 3	PIF OUT	
OUTPUT	EXT IN	VIDEO IN	DEC IN							OUTPUT	VIDEO IC	



TRUTH TABLE (A/V SW)

3. AV2 MODE (AV SW IC)

MODE	TV/VCR	PR/ AV1/AV2 F.AV	C+ (L) CTL	TV CTL	SW1	SW2	SW3	INT SW	REMARK
POWER OFF		-	H	L	B	C	B	-	
			L	H	B	C	B	-	
STANDBY (PDC SCAN)	-	PR	H	L	B	C	B	INPUT 2	
			L	H	B	C	B	INPUT 2	
		AV1	H	L	B	B	B	INPUT 2	
			L	H	B	B	B	INPUT 2	
		AV2	H	L	B	A	B	INPUT 2	
			L	H	B	A	B	INPUT 2	
PLAY	TV	-	-	L	A	C	C	-	
	VCR	-	-	H	A	C	C	-	
EE/REC	TV	PR	H	L	A	C	C	INPUT 2	CH SEARCH
			L	H	B	C	C	INPUT 2	
		AV1	H	L	A	B	C	INPUT 2	
			L	H	B	B	C	INPUT 2	
		AV2	H	L	A	A	C	INPUT 2	
			L	H	B	A	C	INPUT 2	
	F.AV	H	L	A	C	C	INPUT 1		
		L	H	B	C	C	INPUT 1		
	VCR	PR	-	H	A	C	C	INPUT 2	CH SEARCH
		AV1	-	H	A	B	C	INPUT 2	
		AV2	-	H	A	A	C	INPUT 2	
		F.AV	-	H	A	C	C	INPUT 1	

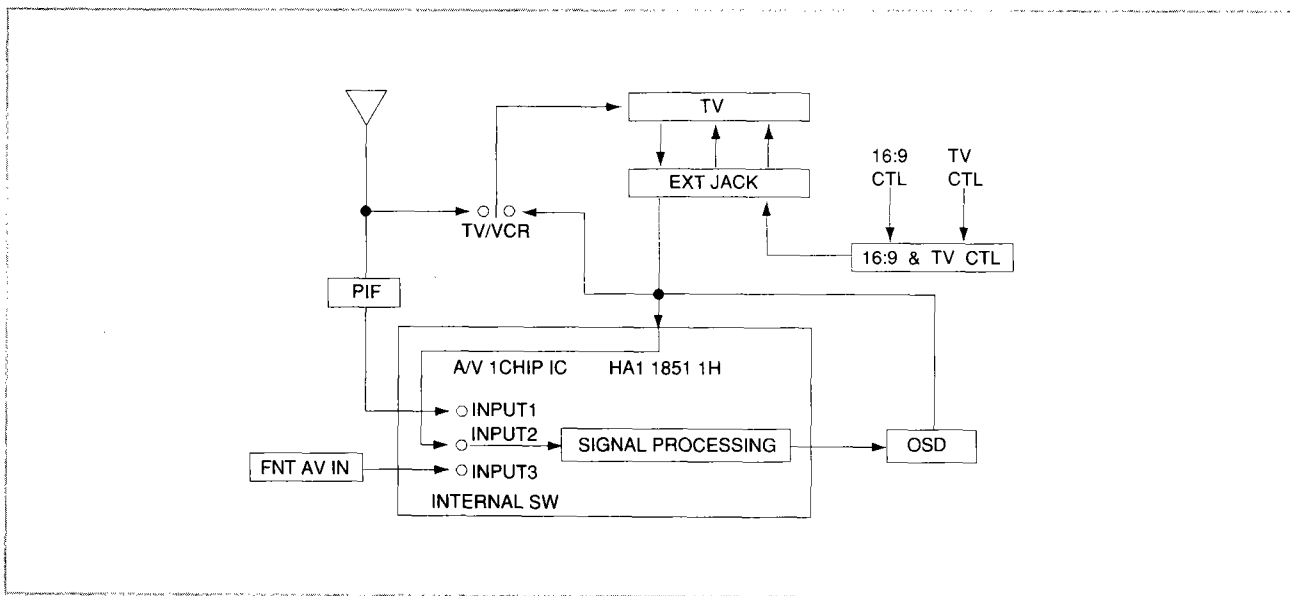
	SW1	SW2	SW3
INPUT A	OSD OUT	DEC OUT	PIF OUT
INPUT B	DEC OUT	EXT OUT	EXT OUT
INPUT C	-	PIF OUT	OSD OUT
OUTPUT	EXT IN	VIDEO IN	DEC IN

	INT SW
INPUT 1	FNT OUT
INPUT 2	SW2 OUT
INPUT 3	PIF OUT
OUTPUT	VIDEO IC

4. AV MODE (AV SW IC) - 1 PERI SYSTEM

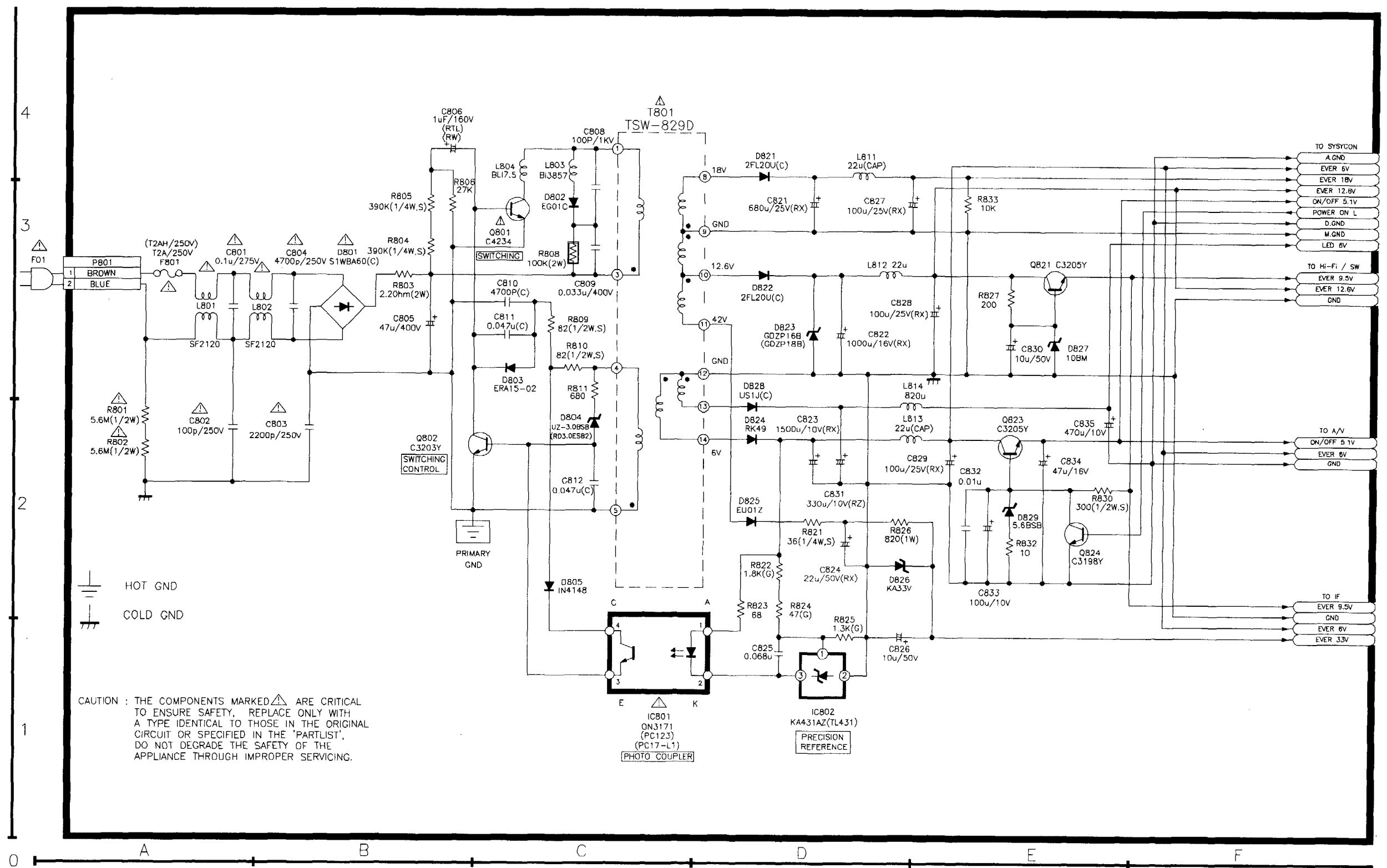
MODE	TV/VCR	PR/ AV/LF	TV CTL	INT SW	REMARK
POWER OFF	-	-	L	-	
STANDBY (PDC SCAN)	-	PR	L	INPUT 3	
	-	AV	L	INPUT 2	
PLAY	TV	-	L	-	
	VCR	-	H	-	
EE/REC	TV	PR	L	INPUT 3	CH SEARCH
		AV	L	INPUT 2	
		F.AV	L	INPUT 1	
	VCR	PR	H	INPUT 3	CH SEARCH
		AV	H	INPUT 2	
		F.AV	H	INPUT 1	

	INT SW
INPUT 3	PIF OUT
INPUT 2	SW2 OUT
INPUT 1	FNT OUT
OUTPUT	VIDEO IC



CIRCUIT DIAGRAM

1. POWER CIRCUIT DIAGRAM (230V ONLY)



- c. When reassembling the L/C BRACKET TOTAL ASSEMBLY on the MAINBASE, make sure that the two triangular marks of CAM SWITCH are aligned with each other as shown in Fig.4-3.

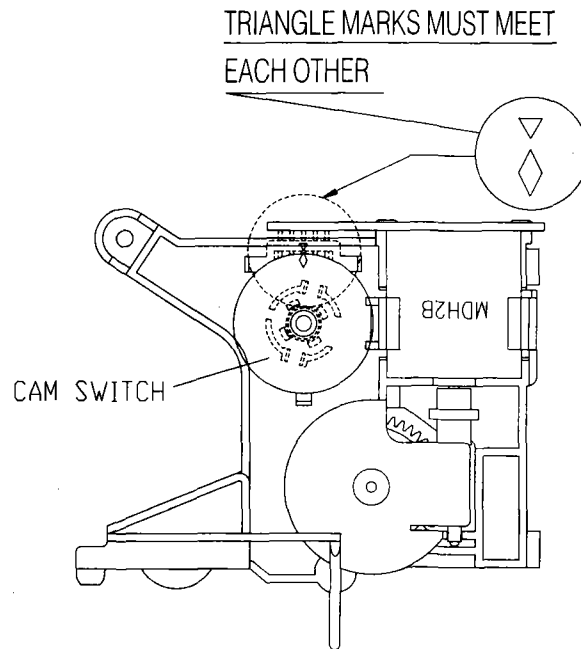


Fig.4-3 DATUM POSITION OF CAM SWITCH TRIANGULAR MARKS

- d. Make sure that boss "A" of the PINCH LEVER TOTAL ASSEMBLY is positioned at point "B" of the CAM GEAR, as shown in Fig.4-4.

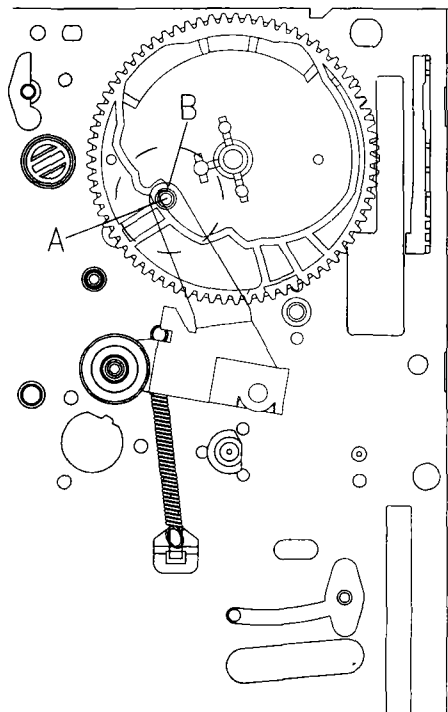


Fig.4-4 DATUM POSITION OF PINCH LEVER TOTAL ASS'Y & CAM GEAR

- e. Make sure that the RIB "A" of the L LOADING ASSEMBLY is aligned with the notch "B" on the R LOADING ASSEMBLY as shown in Fig. 4-5.
- f. Make sure that the teeth of the LOADING RACK ASSEMBLY are aligned with those of the R LOADING ASSEMBLY so that the hole of the LOADING RACK ASSEMBLY aligns with the circular mark on the R LOADING ASSEMBLY, as shown in Fig.4-5.

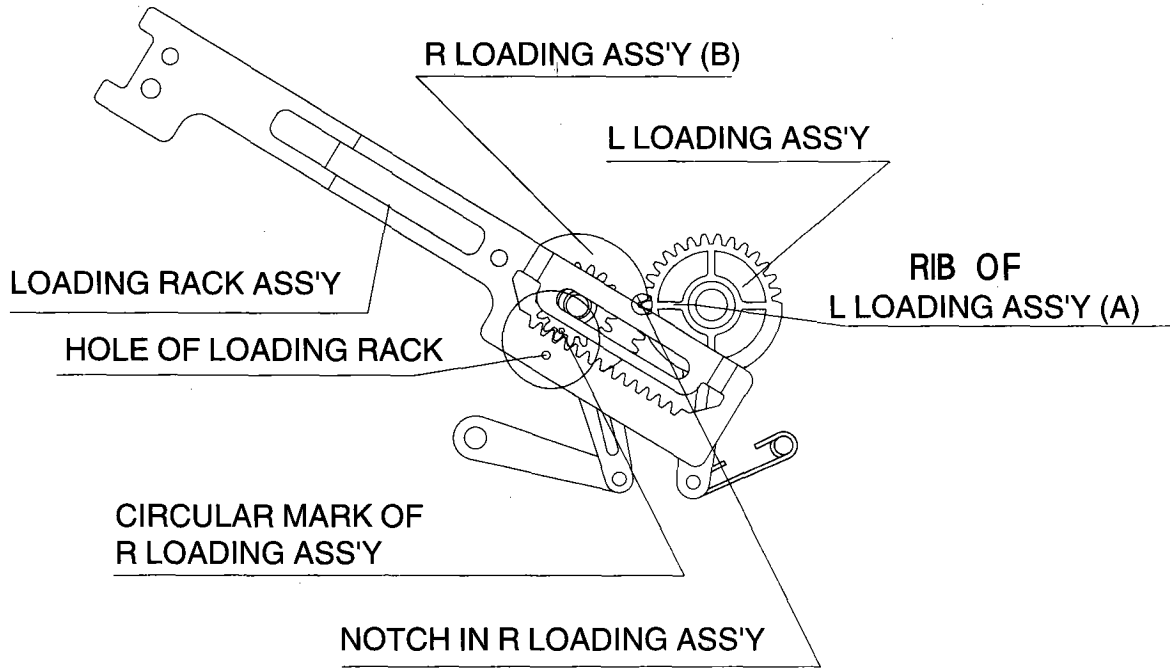


Fig.4-5 DATUM POSITION OF LOADING RACK ASS'Y & R/L LOADING LEVER ASS'YS

4-2. BACK TENSION MEASUREMENT (See Fig.4-6~4-7)

- Confirm that the position of the TENSION POLE is correctly POSITIONED. Refer to the "4-4 TENSION POLE POSITION ADJUSTMENT".
- Play back a T-120 TAPE at its center position without assembling F/L ASSEMBLY and wait until the TAPE running is stabilized (about 5~10 seconds).
- Bring the TENTELOMETER into contact with the TAPE (Fig.4-6) and measure the BACK TENSION. The measuring result should be between 25 and 33 grams.
- If the measuring result is not within this specification, refer to the NOTE below or repeat "4-4 TENSION POLE POSITION ADJUSTMENT". (Fig. 4-7)

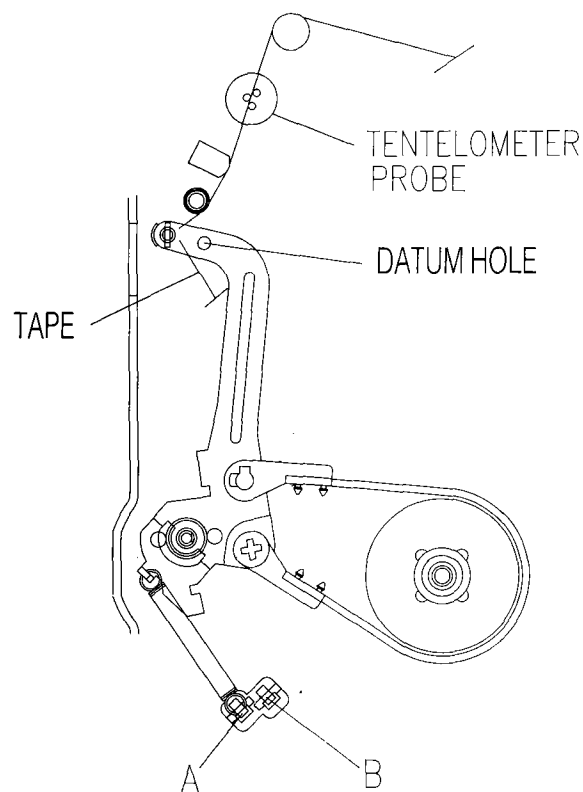


Fig.4-6 BACK TENSION MEASUREMENT

NOTE:

- If the measuring result is not within the specification, change the TENSION SPRING position. (To decrease the result, choose hook A. Otherwise, choose hook B).
- Confirm that all of the three probes of the TENSION METER are in contact with the TAPE. During this process, don't touch any other parts of the MECHANISM (i.e, MAINBASE).
- It is recommended that this measurement be repeated at least three times for an accurate reading.

4-3. MECHANICAL MODE (Operating the VCR Without a Cassette Tape)

- a. Remove the FRONT LOADING MECHANISM from the DECK MECHANISM.
- b. Pull the F/L RACK.
- c. The S/T POLE BASES are loaded and PLAY BACK MODE starts.
- d. Turn off the power when the MECHANISM is in the desired position.

4-4. TENSION POLE POSITION ADJUSTMENT

- a. MAKE MECHANICAL MODE be PLAY MODE. Refer to "4-3 MECHANICAL MODE".
- b. Confirm that the datum hole of TENSION LEVER is aligned with the datum hole of the MAIN BASE.
- c. If requirement "b" is not satisfied, turn the BAND BRAKE ADJUST CAP clockwise or counter-clockwise until the two datum hole are aligned with each other.

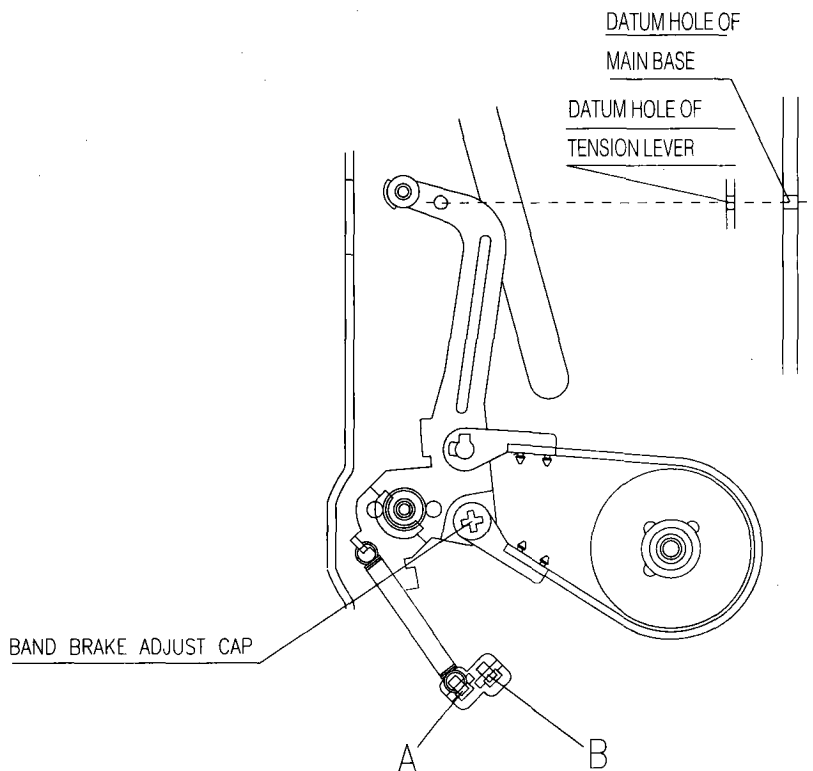


Fig.4-7 TENSION POLE POSITION ADJUSTMENT

5. ADJUSTMENT OF TAPE TRANSPORTING SYSTEM

Generally the TAPE TRANSPORTING SYSTEM has been precisely adjusted in the factory and does not ordinarily require readjustment. But when noise and tape damage take place and part assemblies that compose the TAPE TRANSPORTING SYSTEM are replaced, check and readjust the TAPE TRANSPORTING SYSTEM. Refer to the following FLOW CHART in order to adjust the TAPE TRANSPORTING SYSTEM.

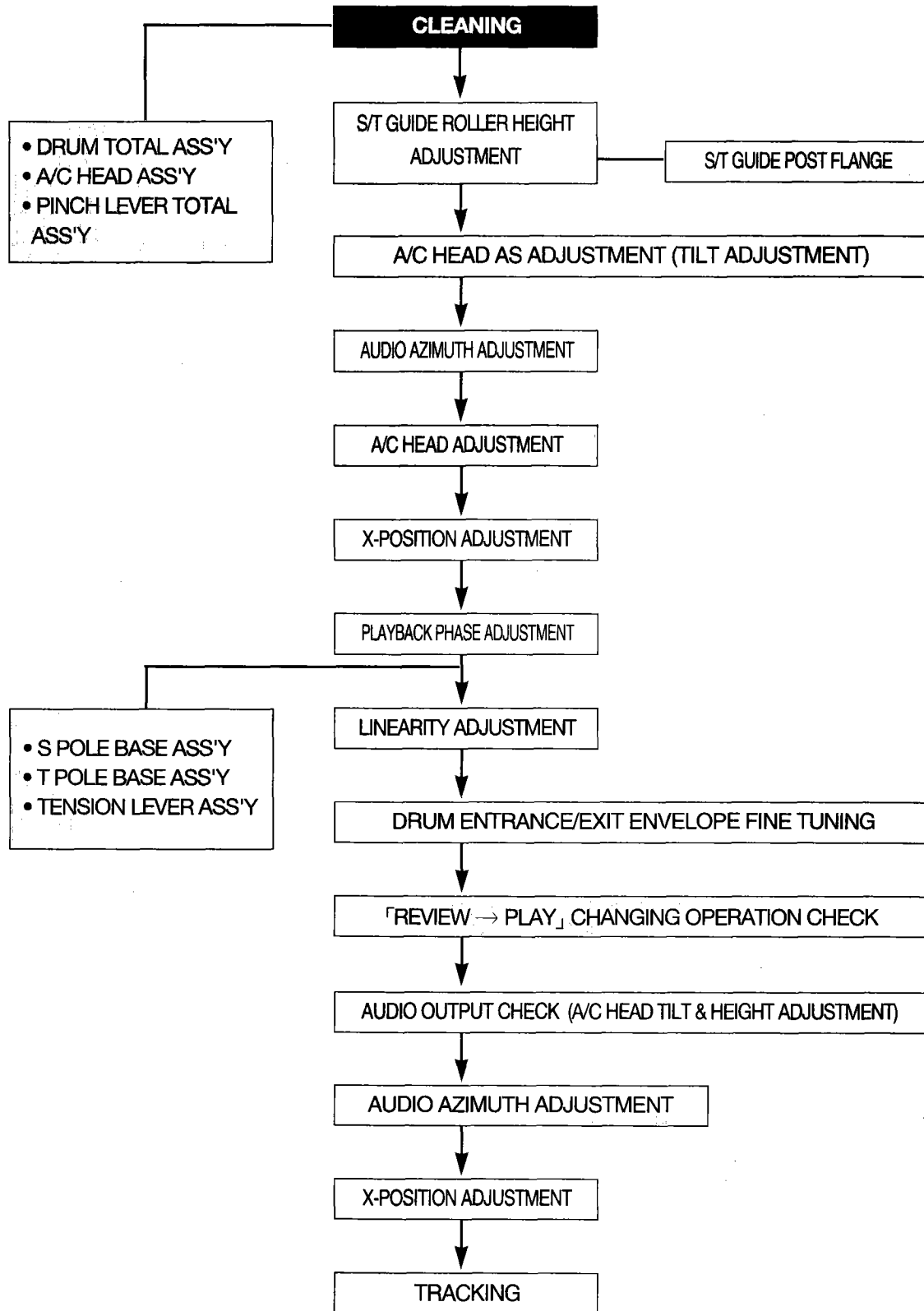


Table.1 ADJUSTMENT FLOW DIAGRAM OF THE TAPE TRANSPORTING SYSTEM

B. ADJUSTMENT OF THE A/C HEAD ASS'Y (TILT ADJUSTMENT)

- Play back a T-120 Tape and check the running condition of the TAPE at the lower flanges of the T GUIDE POST ASS'Y ① in Fig. 5-1.
- Adjust the A/C HEAD TILT SCREW until the TAPE runs stable as shown in Fig. 5-2

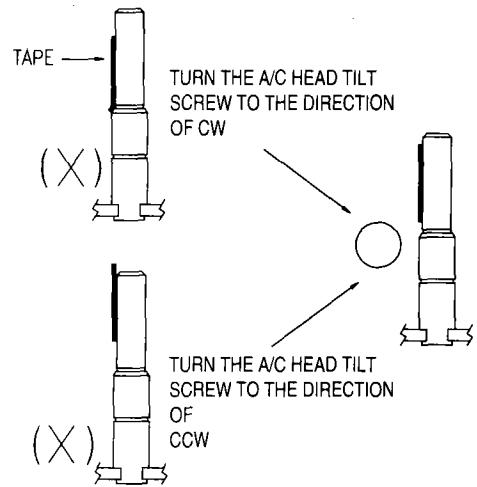
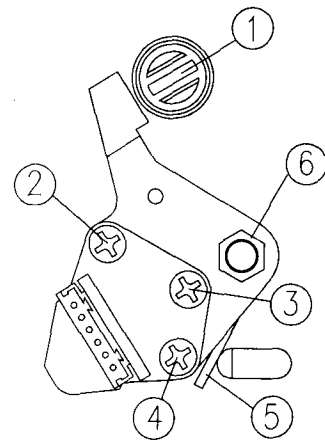


Fig. 5-2 A/C HEAD ASS'Y ADJUSTMENT
(TILT ADJUSTMENT)

C. ADJUSTMENT OF THE AUDIO AZIMUTH (See Fig.5-3)

- Play back the ALIGNMENT CASSETTE TAPE (NTSC: DN2 (SP, 7KHz), PAL: DP2 (SP, 6KHz))
- Observe audio signals on an OSCILLOSCOPE.
- Turn the A/C HEAD AZIMUTH SCREW to obtain the maximum audio output signal (-9~-3dBm).



- | | |
|-------------------------|------------------|
| ① ADJUST BOSS | ④ FIXING SCREW |
| ② AC HEAD AZIMUTH SCREW | ⑤ AC HEAD SPRING |
| ③ AC HEAD TILT SCREW | ⑥ AC HEAD NUT |

Fig. 5-3 A/C HEAD ASS'Y

D. THE HEIGHT ADJUSTMENT OF A/C HEAD

- Play back a T-120 TAPE.
- Make sure that the gap is 0.25mm between the lower end of TAPE and that of A/C HEAD.
- When the gap is longer than 0.25mm, turn the A/C HEAD HEIGHT ADJUST NUT counter-clockwise. When the gap is shorter than 0.25mm, turn it clockwise. Repeat this procedure until 0.25mm is obtained.

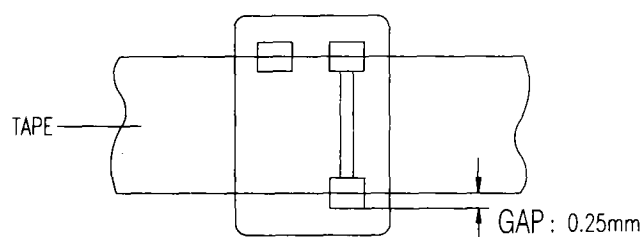


Fig. 5-4 A/C HEAD ASS'Y ADJUSTMENT (HEIGHT ADJUSTMENT)

E. X-POSITION ADJUSTMENT

TEST POINTS	S/W PULSE TEST PIN	PATH ADJ. FIXTURE
	ENVELOPE TEST PIN	PATH ADJ. FIXTURE
MEASURING EQUIPMENT	OSCILLOSCOPE	
ADJUSTMENT	VR CONTROL	PATH ADJ. FIXTURE
	ADJUST BOSS	MAIN BASE.

- Connect the path adjustment fixture to PT01 of the MAIN CIRCUIT BOARD.
- Play back the ALIGNMENT TAPE (COLOR BAR ALIGNMENT).
- Connect channel-1 scope probe to S/W PULSE TEST PIN of PATH ADJ, FIXTURE.
- Connect channel-2 scope probe to ENVELOPE TEST PIN of PATH ADJ, FIXTURE.
- Turn the VR CONTROL to the center point. (If the VR CONTROL is completely turned counter-clockwise, it is positioned on another tracking center.)
- With the VR CONTROL in the center state, turn the ADJUST BOSS by using FLAT TYPE SCREW DRIVER and adjust the X-POSITION to obtain the maximum envelope waveform.

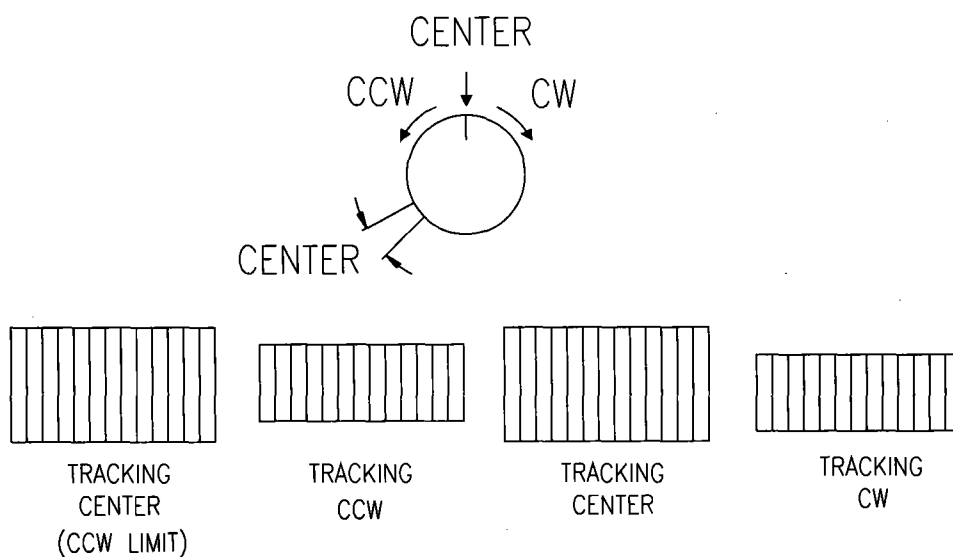


Fig. 5-5 X-POSITION ADJUSTMENT

F. PLAYBACK PHASE ADJUSTMENT (See Fig. 5-6)

TEST POINTS	S/W PULSE TEST PIN	PATH ADJ. FIXTURE
	VIDEO OUT	MAIN CIRCUIT BOARD
MEASURING EQUIPMENT	OSCILLOSCOPE	
ADJUSTMENT	VR595 (PG SHIFTER)	MAIN CIRCUIT BOARD

Phase generator (PG) shifter decides the VIDEO HEAD switching point when a TAPE is played back. In case the Phase generator (PG) shifter isn't correctly tuned, HEAD switching noise or vertical jitter may occur.

- Connect the PATH ADJ. FIXTURE to PT01 of the MAIN CIRCUIT BOARD.
- Play the ALIGNMENT TAPE (COLOR BAR SIGNAL OR MONOSCOPE SIGNAL)
- Connect the channel-1 scope probe to the S/W PULSE TEST PIN of the PATH ADJ. FIXTURE.
- Connect the channel-2 scope probe(1V/div.) to the VIDEO OUT of the MAIN CIRCUIT BOARD.
- Play back the ALIGNMENT TAPE.
- Adjust the PG volume for time interval of $6.5H \pm 0.5$ between switching pulse and V-sync signal.

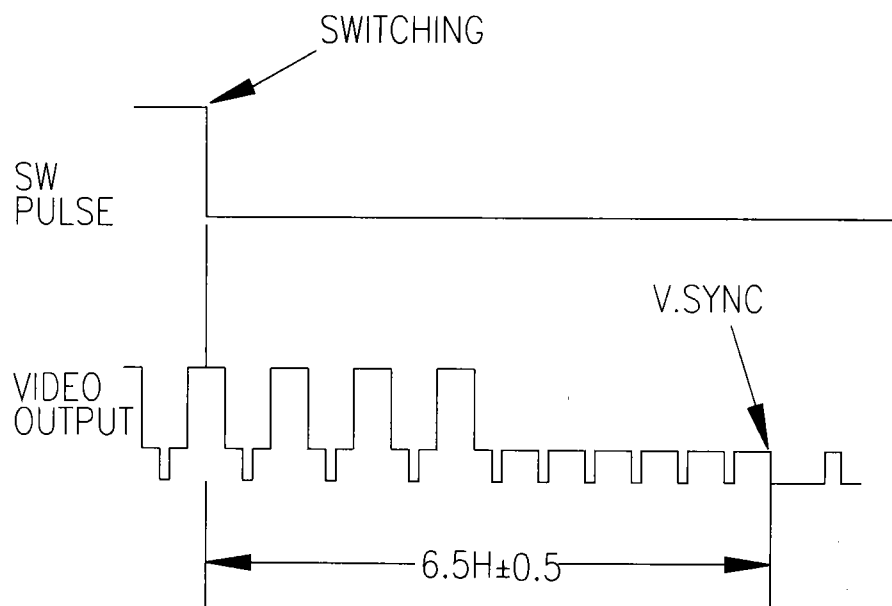


Fig. 5-6 PLAYBACK PHASE ADJUSTMENT

G. LINEARITY ADJUSTMENT

TEST POINTS	S/W PULSE TEST PIN	PATH ADJ. FIXTURE
	ENVELOPE TEST PIN	PATH ADJ. FIXTURE
MEASURING EQUIPMENT	OSCILLOSCOPE	
ADJUSTMENT	VR CONTROL	PATH ADJ. FIXTURE
	S/T GUIDE ROLLER	TAPE TRANSPORTING SYSTEM

- a. Connect the PATH ADJ. FIXTURE to PT01 of the MAIN CIRCUIT BOARD.
- b. Play back the ALIGNMENT TAPE (COLOR BAR SIGNAL).
- c. Connect the channel-1 scope probe to the S/W PULSE TEST PIN of the PATH ADJ. FIXTURE.
- d. Connect the channel-2 scope probe to the ENVELOPE TEST PIN of the PATH ADJ. FIXTURE.
- e. Adjust the VR CONTROL of the PATH ADJ. FIXTURE for maximum envelope signal output of the alignment tape.
- f. Adjust the S/T GUIDE ROLLER until the envelope signal waveforms of the entrance and exit sides are as shown in Fig. 5-7.

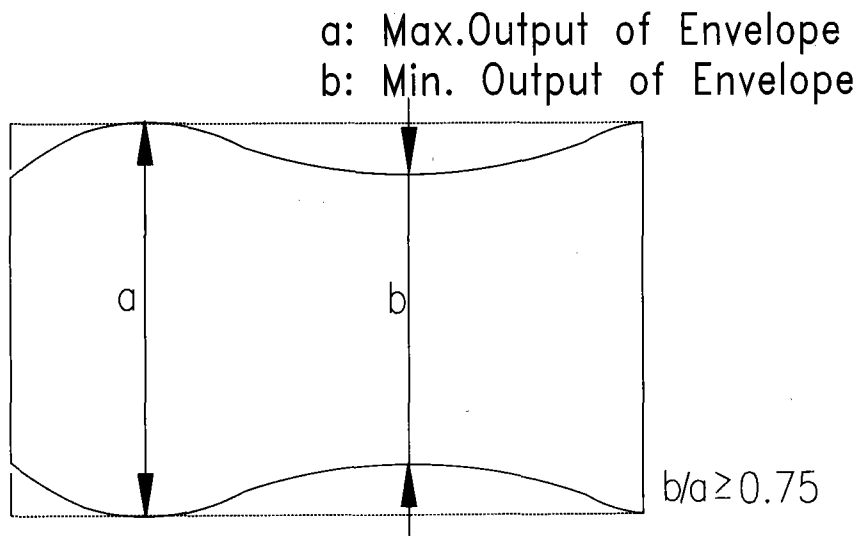


Fig. 5-7 LINEARITY ADJUSTMENT

H. DRUM ENTRANCE /EXIT (See Fig. 5-8, 5-9)

TEST POINTS	S/W PULSE TEST PIN	PATH ADJ. FIXTURE
	ENVELOPE TEST PIN	PATH ADJ. FIXTURE
MEASURING EQUIPMENT	OSCILLOSCOPE	
ADJUSTMENT	VR CONTROL	PATH ADJ. FIXTURE
	S/T GUIDE ROLLER	TAPE TRANSPORTING SYSTEM

- Connect the PATH ADJ. FIXTURE to PT01 the MAIN CIRCUIT BOARD.
- Play back the ALIGNMENT TAPE (COLOR BAR SIGNAL).
- Connect the channel-1 scope probe to the S/W PULSE TEST PIN of the PATH ADJ. FIXTURE.
- Connect the channel-2 scope probe to the ENVELOPE TEST PIN of the PATH ADJ. FIXTURE.
- When turning the VR CONTROL of the PATH ADJ. FIXTURE clockwise or counter-clockwisw, affirm that the envelope thickness changes uniformly.
- If the envelope is not uniform and regular, adjust the S/T GUIDE ROLLER.

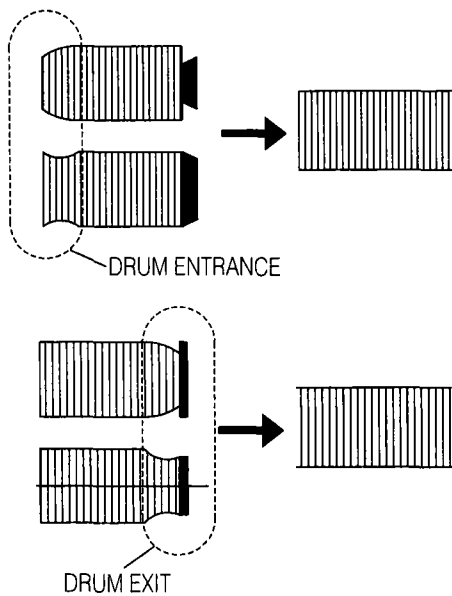


Fig. 5-8 FINE TUNING OF THE ENVELOPE AT THE DRUM ENTRANCE/EXIT (I)

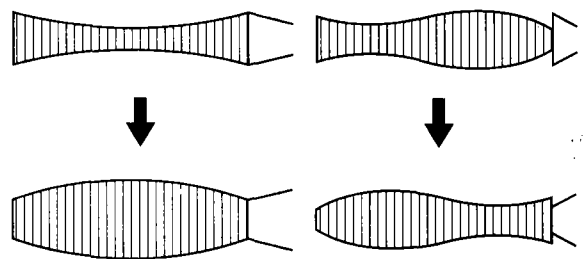


Fig.5-9 FINE TUNING OF THE ENVELOPE AT THE DRUM ENTRANCE/EXIT (II)

I. REVIEW → PLAY (See Fig. 5-10)

TEST POINTS	SW PULSE TEST PIN	PATH ADJ. FIXTURE
	ENVELOPE TEST PIN	PATH ADJ. FIXTURE
MEASURING EQUIPMENT	OSCILLOSCOPE	
ADJUSTMENT	VR CONTROL	PATH ADJ. FIXTURE
	S/T GUIDE ROLLER	TAPE TRANSPORTIN SYSTEM

- a. Connect the PATH ADJ. FIXTURE to PT01 of the MAIN CIRCUIT BOARD.
- b. Play back the ALIGNMENT TAPE (SP, COLOR BAR SIGNAL).
- c. Connect the channel-1 scope probe to the S/W PULSE TEST PIN of the PATH ADJ. FIXTURE.
- d. Connect the channel-2 scope probe to the ENVELOPE TEST PIN of the PATH ADJ. FIXTURE.
- e. Adjust the VR CONTROL of the PATH ADJ. FIXTURE to the center to obtain the maximum envelope signal of the ALIGNMENT TAPE.
- f. After operating the VCR in the REVIEW MODE about 15 secs, change the REVIEW MODE to the PLAY BACK MODE.
- g. Change operation mode from REVIEW MODE to PLAY MODE and then make sure that the envelope waveform is restored to the maximum condition within 3 seconds.
- h. If the requirement is not satisfied, make sure that the TAPE runs normal at the lower part of the T GUIDE POST. Then adjust the S/T GUIDE ROLLER precisely.

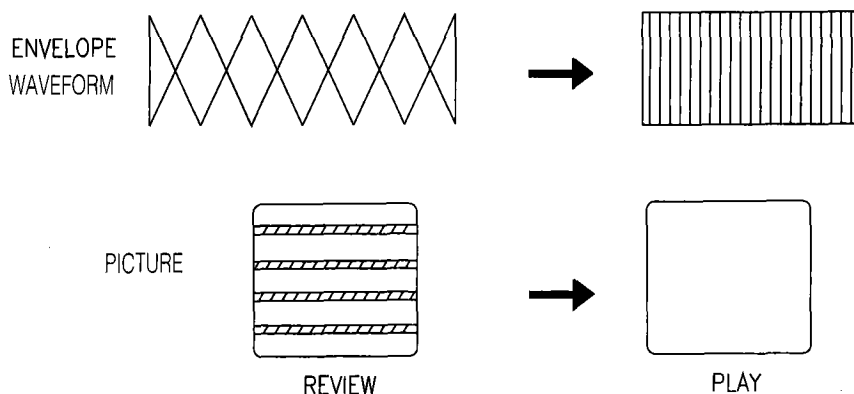


Fig. 5-10 CHECK OF TRANSITIONAL OPERATION (FROM REVIEW WAVEFORM TO PLAY WAVEFORM)

J. AUDIO OUTPUT (A/C HEAD TILT & HEIGHT ADJUSTMENT)

TEST POINTS	AUDIO OUTPUT	AUDIO OUTPUT JACK
MEASURING EQUIPMENT	OSCILLOSCOPE	

- a. Connect the OSCILLOSCOPE to the AUDIO OUTPUT JACK.
- b. Play back the ALIGNMENT TAPE (NTSC: DN1 (SP, 1KHz), PAL: DP1 (SP, 1KHz)).
- c. Check the AUDIO OUTPUT SIGNAL is -9~-3dBm.
- d. If the requirement "c" is not satisfied, adjust the A/C HEAD TILT SCREW and A/C HEAD HEIGHT NUT to obtain the maximum audio output. (Fig. 5-3)

K. A/C HEAD AZIMUTH ADJUSTMENT

- a. Connect the OSCILLOSCOPE to the AUDIO OUTPUT JACK.
- b. Play back the ALIGNMENT TAPE (NTSC: DN2 (SP, 7KHz), PAL: DP2 (SP, 6KHz)).
- c. Adjust the A/C HEAD AZIMUTH SCREW to obtain the audio output -9~-3dBm. (Fig. 5-3)
- d. Repeat the process "H. DRUM ENTRANCE/EXIT".

TEST POINTS	AUDIO OUTPUT	AUDIO OUTPUT JACK
MEASURING EQUIPMENT	OSCILLOSCOPE	

L. X-POSITION (See Fig. 5-11)

TEST POINTS	SW PULSE TEST PIN	PATH ADJ. FIXTURE
	ENVELOPE TEST PIN	PATH ADJ. FIXTURE
MEASURING EQUIPMENT	OSCILLOSCOPE	
ADJUSTMENT	VR CONTROL	PATH ADJ. FIXTURE
	ADJUST BOSS	MAIN BASE.

- Connect the PATH ADJ. FIXTURE to PT01 of the MAIN CIRCUIT BOARD.
- Play back the ALIGNMENT TAPE (COLOR SIGNAL BAR).
- Connect the channel-1 scope probe to the SW PULSE TEST PIN of the of the PATH ADJ. FIXTURE.
- Connect the channel-2 scope probe to the ENVELOPE TEST PIN of the PATH ADJ. FIXTURE.
- Adjust the VR CONTROL to the center position. (When the VR CONTROL is completely turned counter-clockwise, it is set at another tracking center position).
- When the VR CONTROL is fully rotated clockwise or counter-clockwise, turn the ADJUST BOSS of the MAINBASE and adjust the X-POSITION for the envelope waveform to be as shown in Fig. 5-11
- Repeat the process "F. PLAYBACK PHASE ADJUSTMENT".

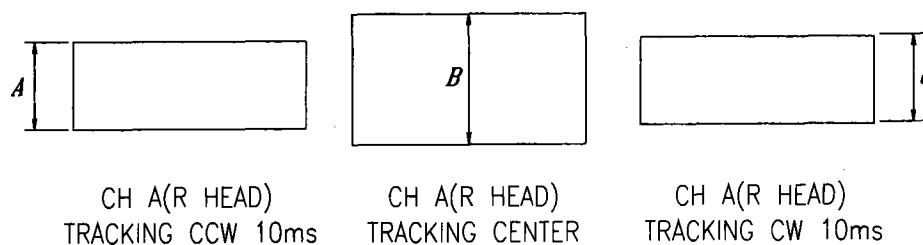
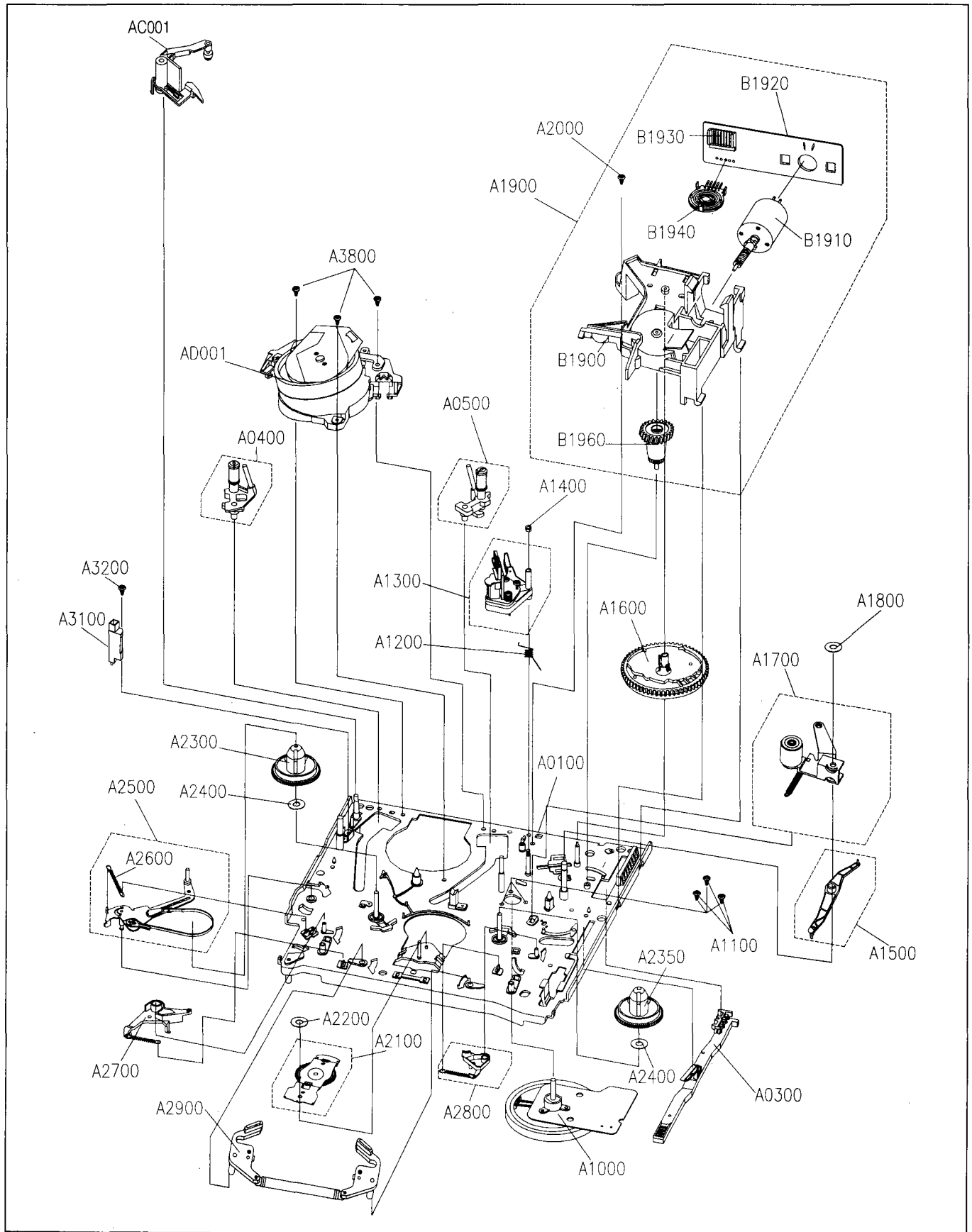


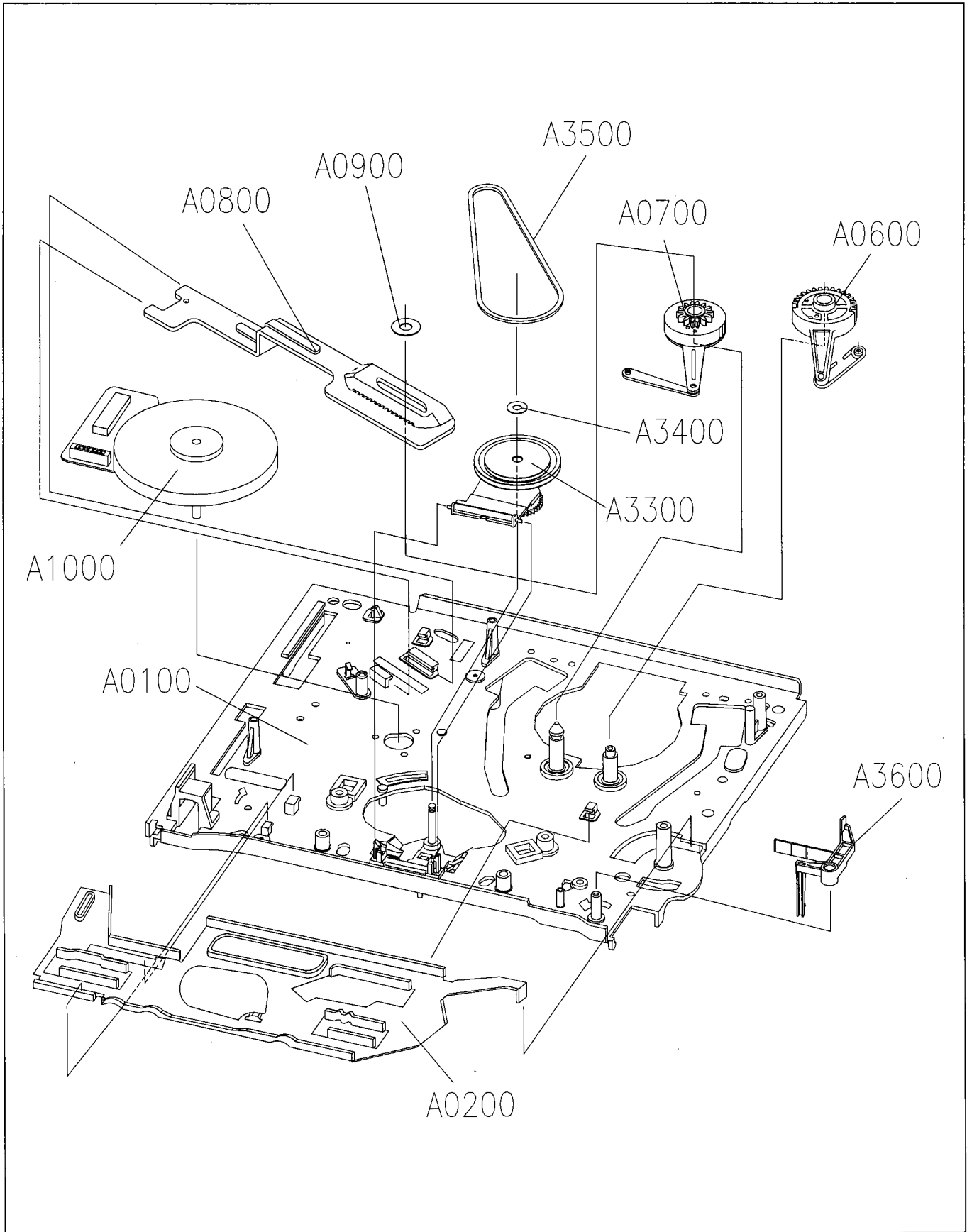
Fig. 5-11 X-POSITION ADJUSTMENT

6. EXPLODED VIEW AND PARTS LIST

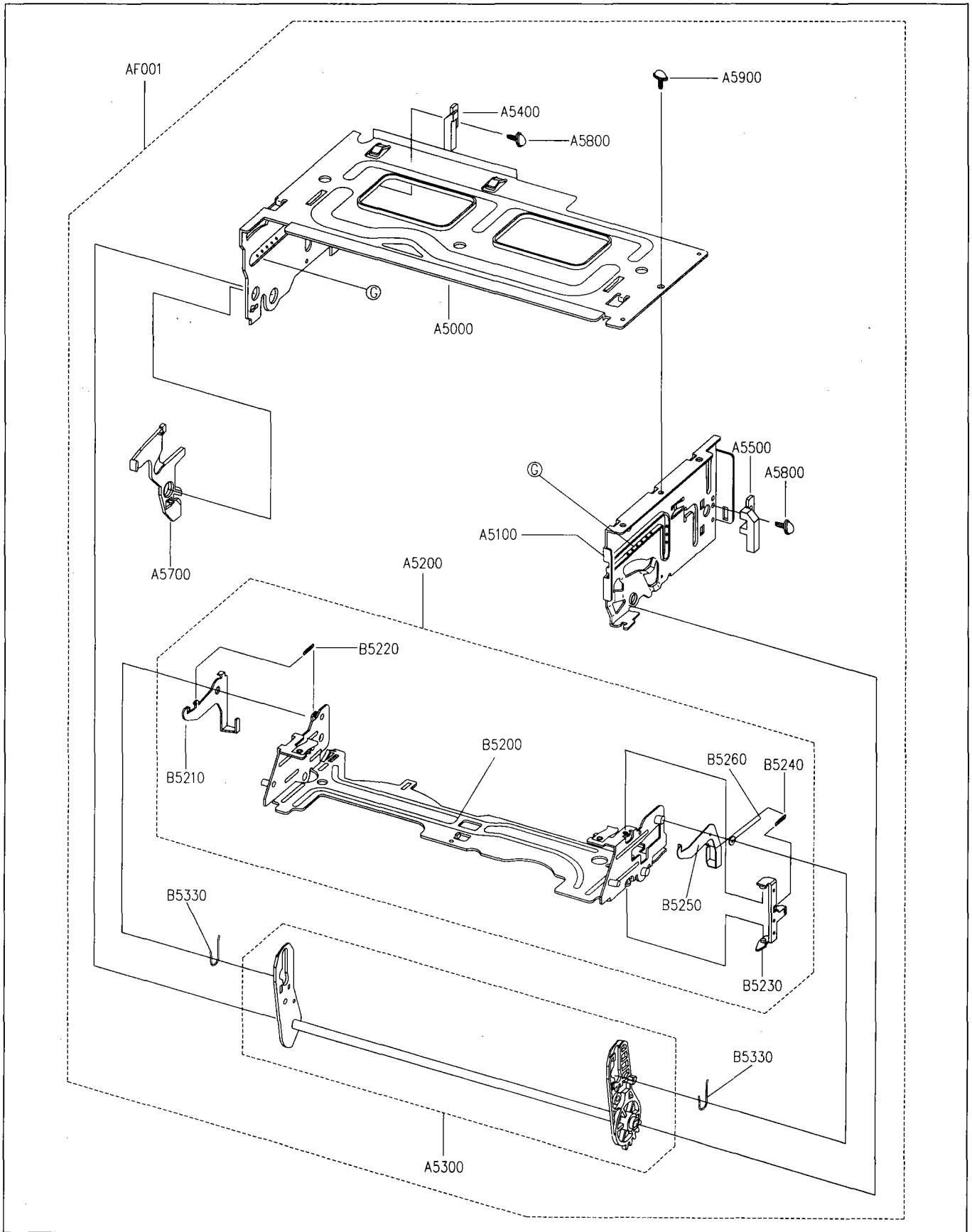
6-1. EXPLODED VIEW OF DECK ASS'Y (TOP VIEW)



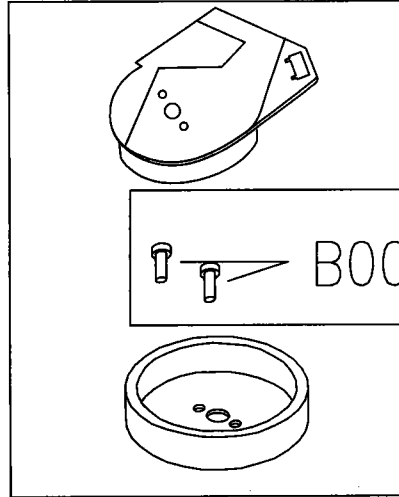
6-2. EXPLODED VIEW OF DECK ASS'Y (BOTTOM VIEW)



6-3. EXPLODED VIEW OF F/L ASS'Y



B0030

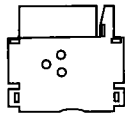


B0040

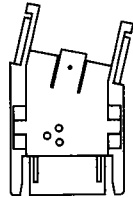
B0080



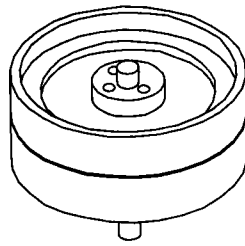
B0060



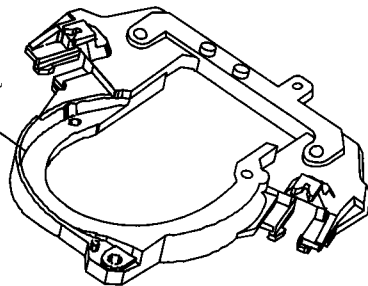
B0050



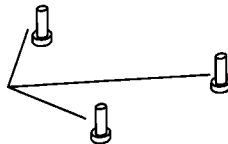
B0020



B0090



B0100



6-4-1. PARTS LIST OF DECK TOTAL ASS'Y

LOC.	STOCK NO.	PART NAME	DESCRIPTION
NTSC			
M1000	97PC0245D-	DECK TOTAL AS	DRN-9200 (2 HD SP/EP NON-DLC)
M1000	97PC0246D-	DECK TOTAL AS	DRN-9201 (2 HD SP/EP NON-DLC, HEAD CLNR, VCP)
M1000	97PC0247D-	DECK TOTAL AS	DRN-9401 (4 HD MONO NON-DLC, HEAD CLNR)
M1000	97PC0248D-	DECK TOTAL AS	DRN-9601 (4 HD HI-FI NON-DLC, HEAD CLNR)
PAL			
M1000	97PC0253D-	DECK TOTAL AS	DRP-9620 (4 HD HI-FI DLC)
SECAM			
M1000	97PC0254D-	DECK TOTAL AS	DRS-9620 (4 HD HI-FI DLC)

6-4-2. PARTS LIST OF DRUM PRICE ASS'Y

LOC.	STOCK NO.	PART NAME	DESCRIPTION
NTSC			
AD001	97PA269201	DRUM PRICE AS	CYN-KT210 (2 HD SP/EP NON-DLC)
AD001	97PA264841	DRUM PRICE AS	CYN-KT213 (2 HD SP/EP DLC-BLK)
AD001	97PA269301	DRUM PRICE AS	CYN-KT410 (4HD MONO NON-DLC)
AD001	97PA269401	DRUM PRICE AS	CYN-KT610 (4 HD HI-FI NON-DLC)

LOC.	STOCK NO.	PART NAME	DESCRIPTION
PAL			
AD001	97PA265871	DRUM PRICE AS	CYP-KT112 (2 HD SP MONO DLC)
AD001	97PA265971	DRUM PRICE AS	CYP-KT212 (2 HD SP/LP MONO DLC)
AD001	97PA266071	DRUM PRICE AS	CYP-KT412 (4 HD MONO DLC)
AD001	97PA253471	DRUM PRICE AS	CYP-KT612 (4 HD HI-FI DLC)
SECAM			
AD001	97PA266171	DRUM PRICE AS	CYS-KT412 (4 HD MONO DLC)
AD001	97PA266371	DRUM PRICE AS	CYS-KT612 (HT 4 HD HI-FI DLC)

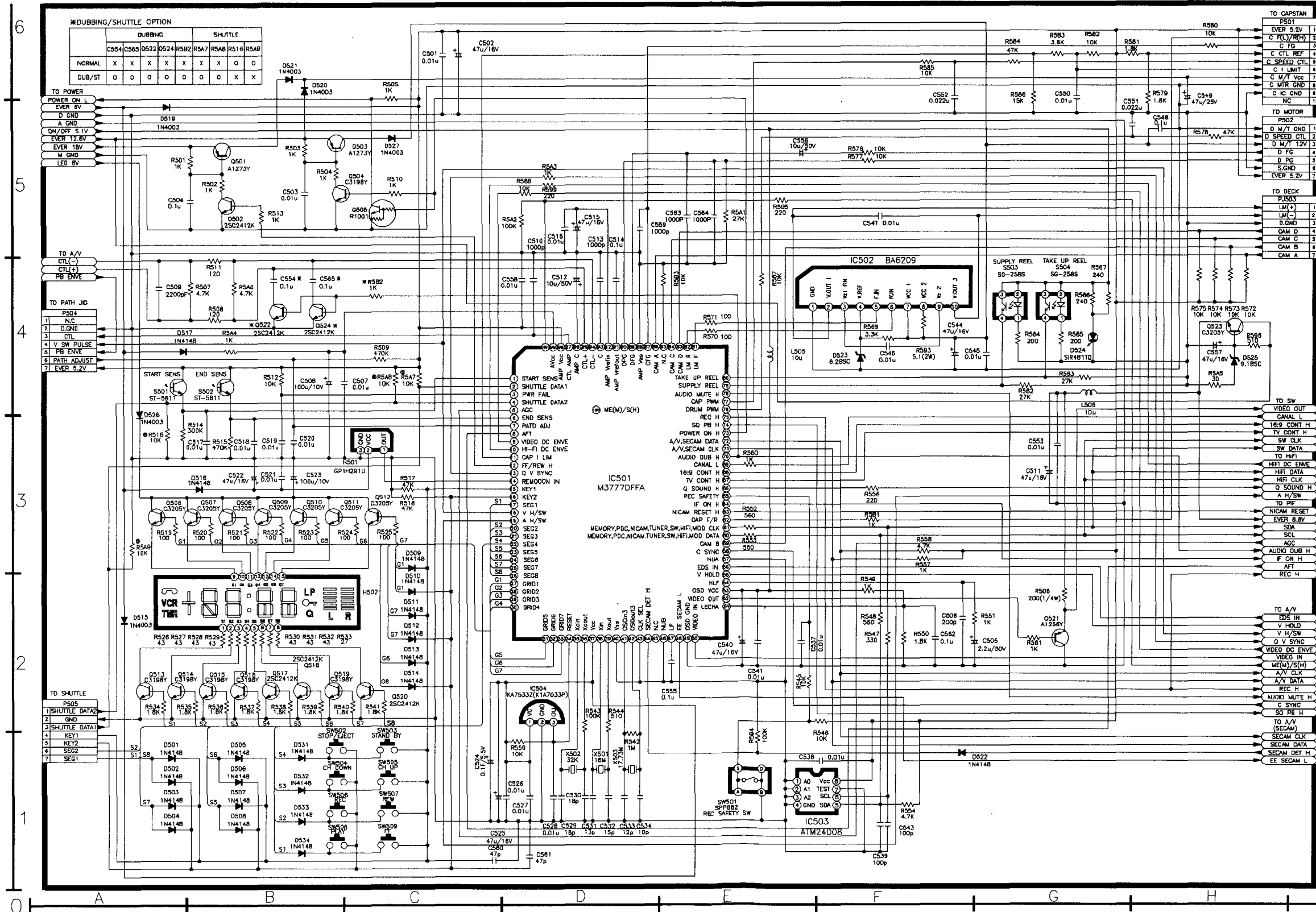
6-4-3. PARTS LIST OF DECK TOTAL ASS'Y

LOC.	STOCK NO.	PART NAME	DESCRIPTION
B0010		DRUM AS	(REFERRING TO LIST OF DRUM PRICE)
B0020	97SA324300	DRUM MOTOR AS	SDV-12B/SDV-12F
	97SA324400	DRUM MOTOR AS	E20XL25
B0030	7001260711	SCREW MACHINE	PAN 2.6 X 7 MFZN
B0040	7001260711	SCREW MACHING	PAN 2.6 X 7 MFZN
B0050	97S2303600	HOLDER MAIN	POM
B0060	97S2303700	HOLDER CAP A	POM(2CH)
B0080	97SA320400	EARTH GROUND AS	K30-DRUM
B0090	97S1401700	BASE DRUM	FM-M(NON-MACHINING, ADC)
B0100	7051300811	SCREW MACHINE	PAN 3 X 8 SW MFZN
F/L AS			
AF001	97SA251400	F/L AS	K30-MECHA
DECK AS			
AM001		DECK AS	(REFERRING TO LIST OF DECK TOTAL ASS'Y)
A0100	97SA309700	MAIN BASE AS	K30-MECHA
A0200	97S0901400	PLATE CONNECY	SECC T1.0
A0300	97S2701800	RACK F/L	PBT(KP213G30) NATURAL
A0400	97SA310900	S SLANT POLE AS	K-MECHA
A0500	97SA311000	T SLANT POLE AS	K-MECHA
A0600	97SA308500	L LOADING AS	K-MECHA
A0700	97SA308600	R LOADING AS	K-MECHA
A0800	97SA308400	LOADING RACK AS	K-MECHA
A0900	97S3101800	WASHER POLY	D3.1XD8XT0.5
A1000	97S8100700	MOTOR CAPSTAN	F2QTB12
	97S8101200	MOTOR CAPSTAN	DMVCMC06ER
A1100	97S3102000	SCREW TAPTITE	TT2 BIN-P 2.6X7 MFZN
A1200	97S3004000	SPG AC HEAD	SUS304WPB D1.2
A1300	97SA311200	AC HEAD AS	K-MECHA
	97SA318700	AC HEAD AS	K-MECHA(KUGAMI)
	97SA311300	AC HEAD AS	K-MECHA(VCP)
A1400	7391300211	NUT HEX	6N-1-5 MFZN
A1500	97S2604100	LEVER RELAY	ZDC-2
A1600	97S2701400	GEAR CAM	DELIN 500 NATURAL
A1700	97SA310700	PINCH LEVER TOT AS	K-MECHA
A1800	97S3117300	WASHER POLY	D3.6XD8XT0.5
A1900	97SA310400	L/C BRKT TOT AS	K-MECHA

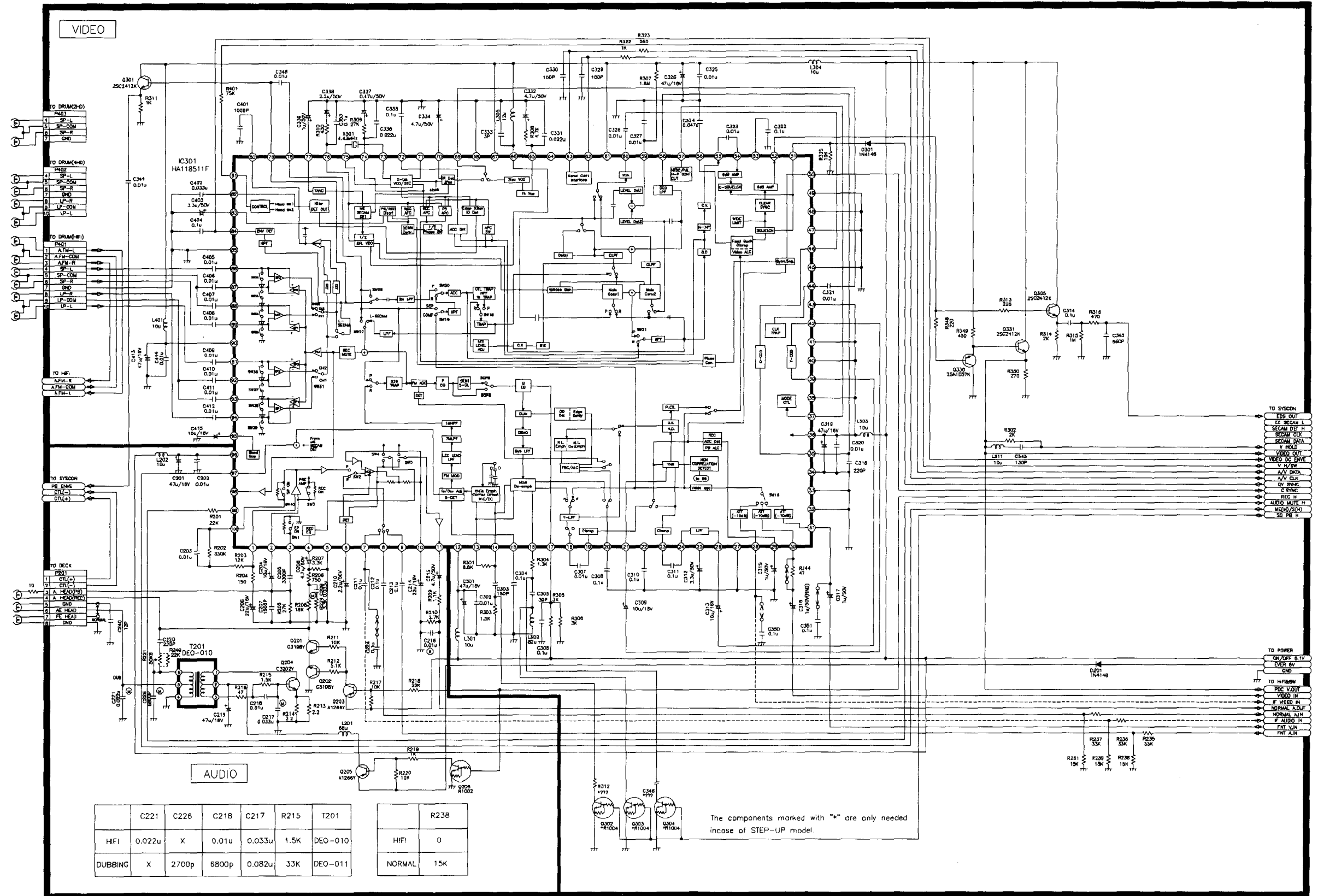
LOC.	STOCK NO.	PART NAME	DESCRIPTION
B1905	97SA414100	L/C BRKT AS	K-MECHA
B1910	97PA409200	L/C MOTOR AS	K-MECHAB1920
	97P6538222	L/C MOTOR PCB	PHENOL T1.6
B1930	97P6271500	CONN WAFER(ANGLE)	00-8283-0711-0000
B1940	5SSFF1DKM10	CAM SWITCH	MMS00320ZMBO
B1960	97S9201500	WORM WHEEL	DELIN 100 NATURAL
A2000	7274300611	SCREW TAPTITE	TT3 RND 3X6 MFZN
A2100	97SA311600	IDLER PLATE AS	K-MECHA(NORMAL)
	97SA311620	IDLER PLATE AS	K30-MECHA(HI-REW)
A2200	97S3108200	WASHER POLY	D2.6XD6XT0.5
A2300	97S2901600	TABLE REEL	F20 BLACK
A2400	97S3903600	POLY SLIDER	D3.1XD6XT0.5
A2500	97SA310800	TENSION BAND AS	K-MECHA
B2500	97SA409800	TENSION LEVER AS	K-MECHA
B2510	97SA409700	BAND BRAKE AS	K-MECHA
B2520	97S0400700	BAND BRAKE CAP	DURACON M90-02 NATURAL
A2600	97S3003500	SPG TENSION	SWPB D0.4
A2700	97SA309300	'S SUB BRAKE AS	K-MECHA
A2800	97SA309400	T SUB BRAKE AS	K-MECHA
A2900	97SA309110	MAIN BRAKE AS	K-MECHA(NORMAL)
	97SA309120	MAIN BRAKE AS	K30-MECHA(HI-REW)
A3100	97S8012900	HEAD FE	HVFHF0004AK
	97S8004500	HEAD FE	MH-132D
A3200	97S3102100	SCREW TAPTITE	TT2 BIN-P 2.6X10 MFZN
A3300	97SA309000	REEL GEAR TOT AS	K-MECHA(NORMAL)
	97SA309020	REEL GEAR TOT AS	K30-MECHA(HI-REW)
A3400	97S3108200	WASHER POLY	D2.6XD6.0XT0.5
A3500	97S5500400	BELT REEL	CR68
A3600	97S2603500	LEVER RECORD SAFETY	F20-03 NATURAL
A3800	7274301011	SCREW TAPTITE	TT3 RND 3X10 MFZN
A4000	7274300611	SCREW TAPTITE	TT3 RND 3X6 MFZN
A4100	2291129004	OIL LUBRICANT	OA-305P
A4200	2291131304	GREASE	DELUX 5221G(NAM-YOUNG)
HEAD CLEANER AS			
AC001	97SA381500	HEAD CLEANER AS	"K,FM-MECHA"

CIRCUIT DIAGRAM

2. SYSCON CIRCUIT DIAGRAM

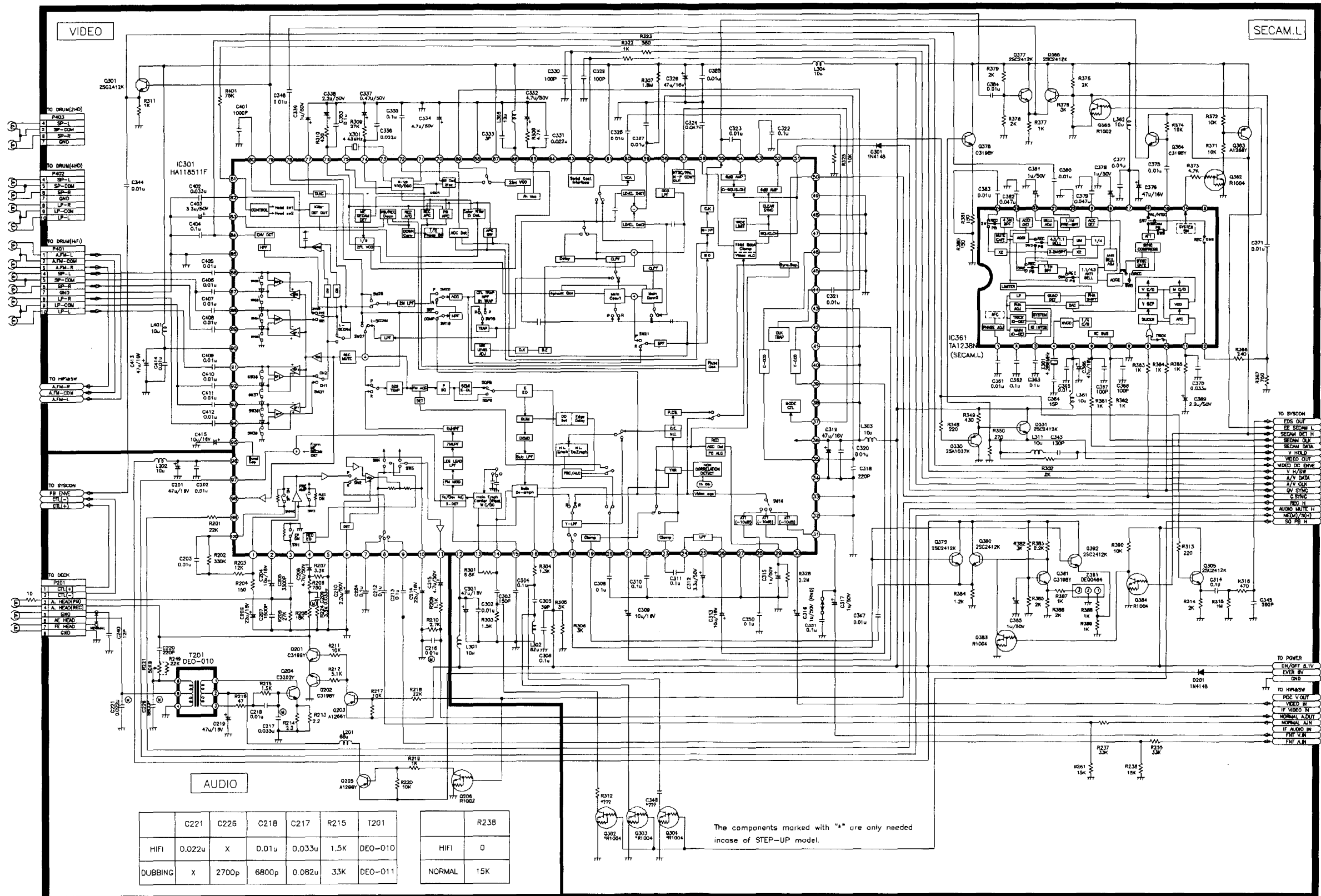


3. AV CIRCUIT DIAGRAM (PAL)

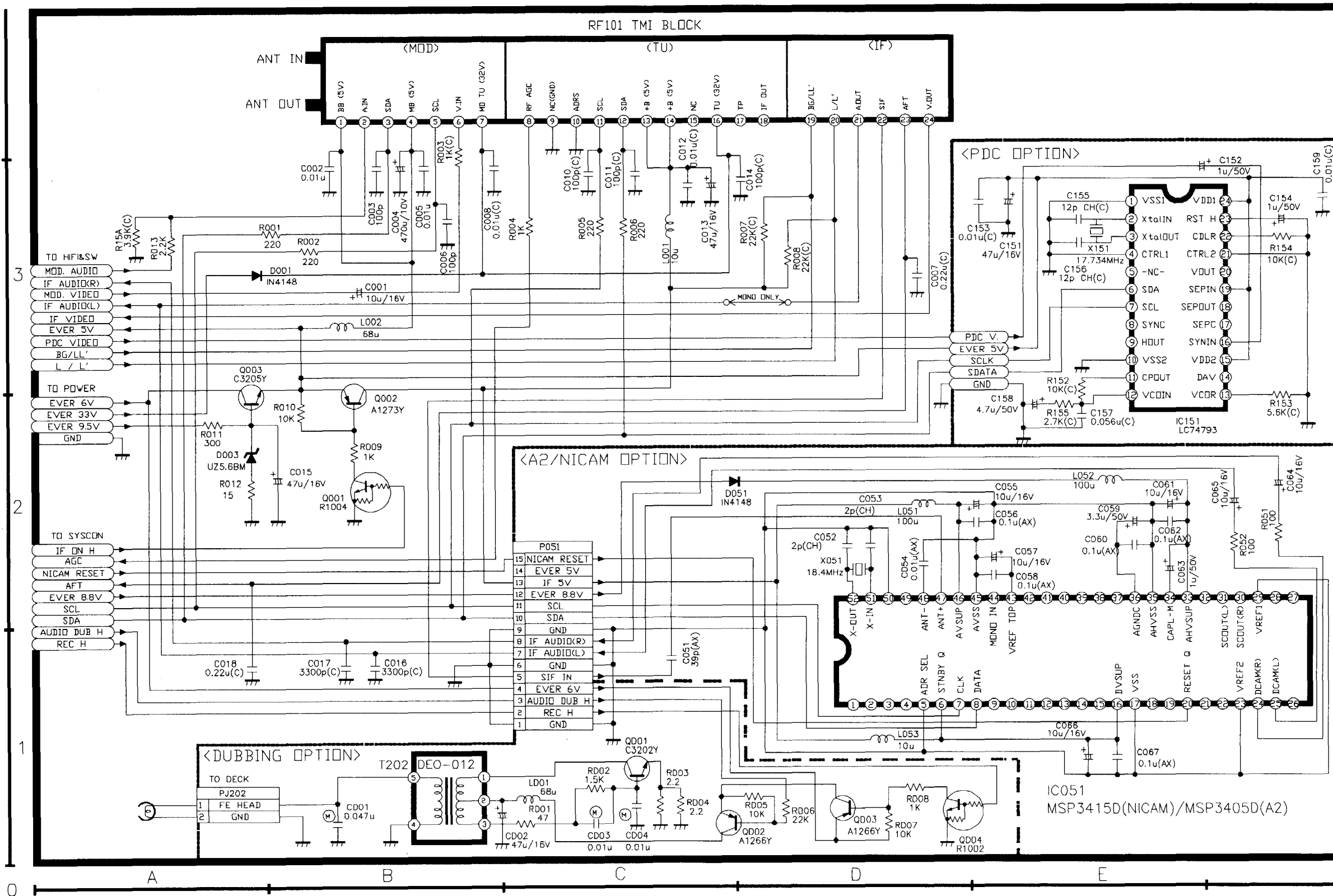


CIRCUIT DIAGRAM

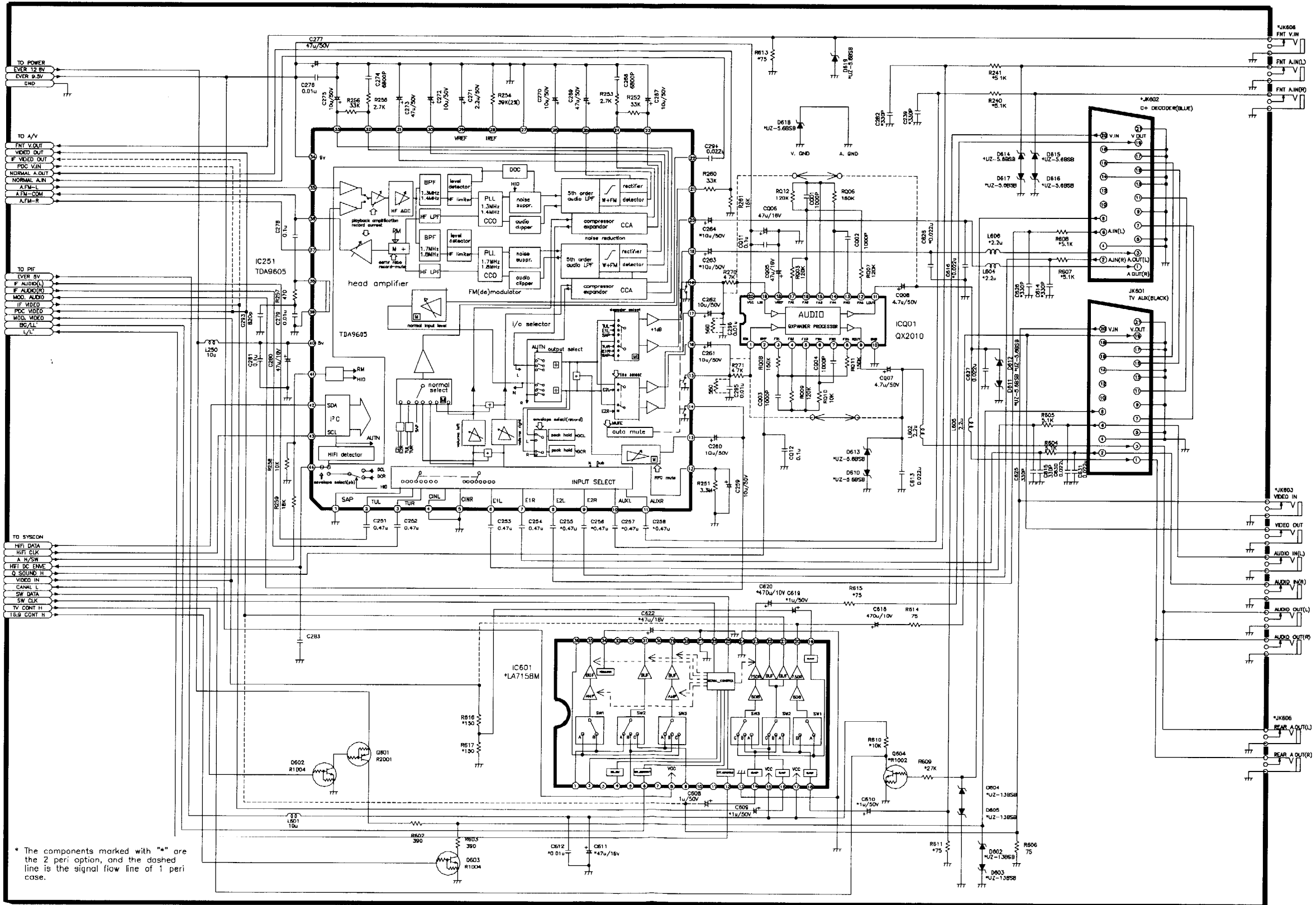
4. AV CIRCUIT DIAGRAM (SECAM)



5. PIF CIRCUIT DIAGRAM

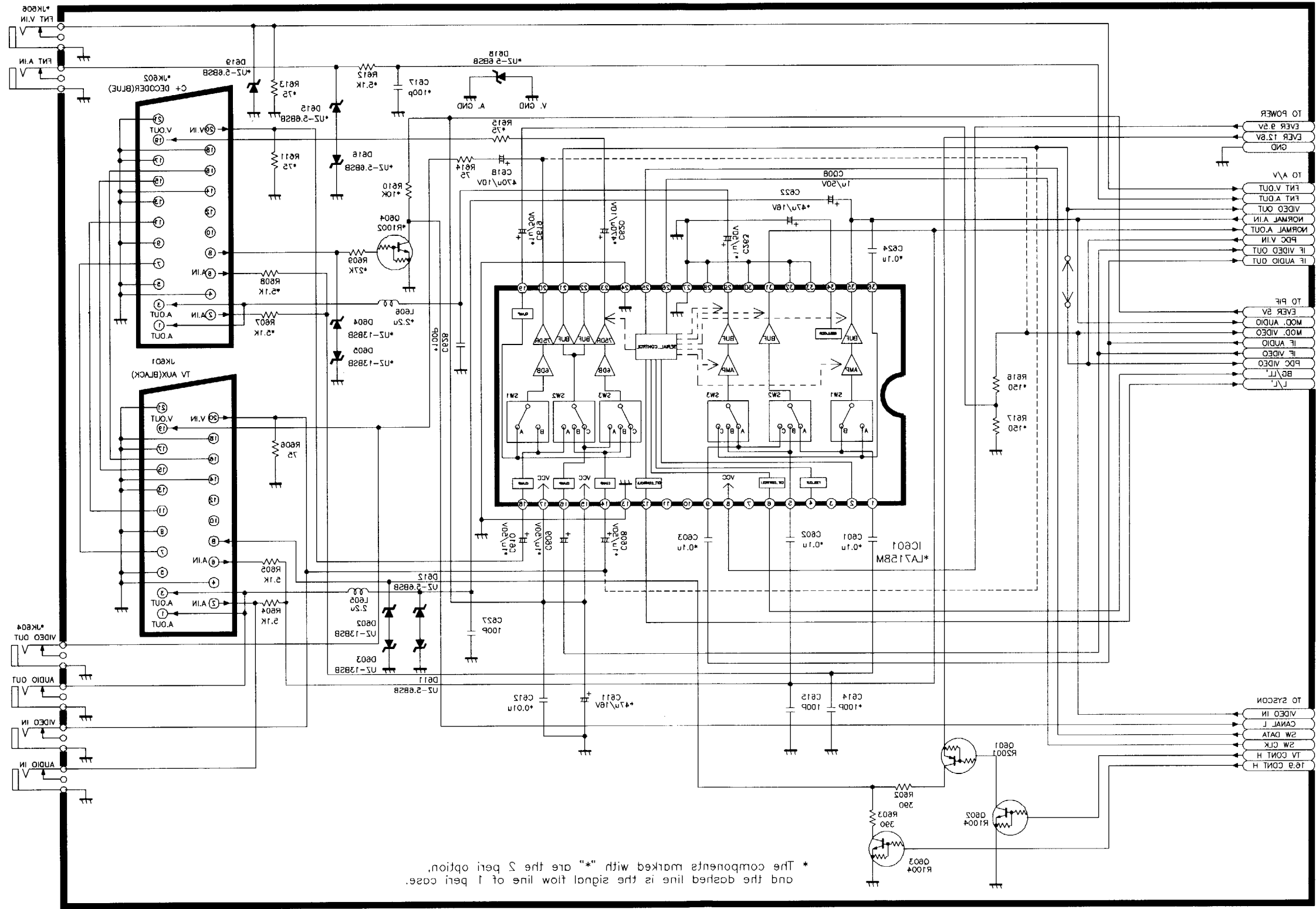


6. HIFI & SW CIRCUIT DIAGRAM



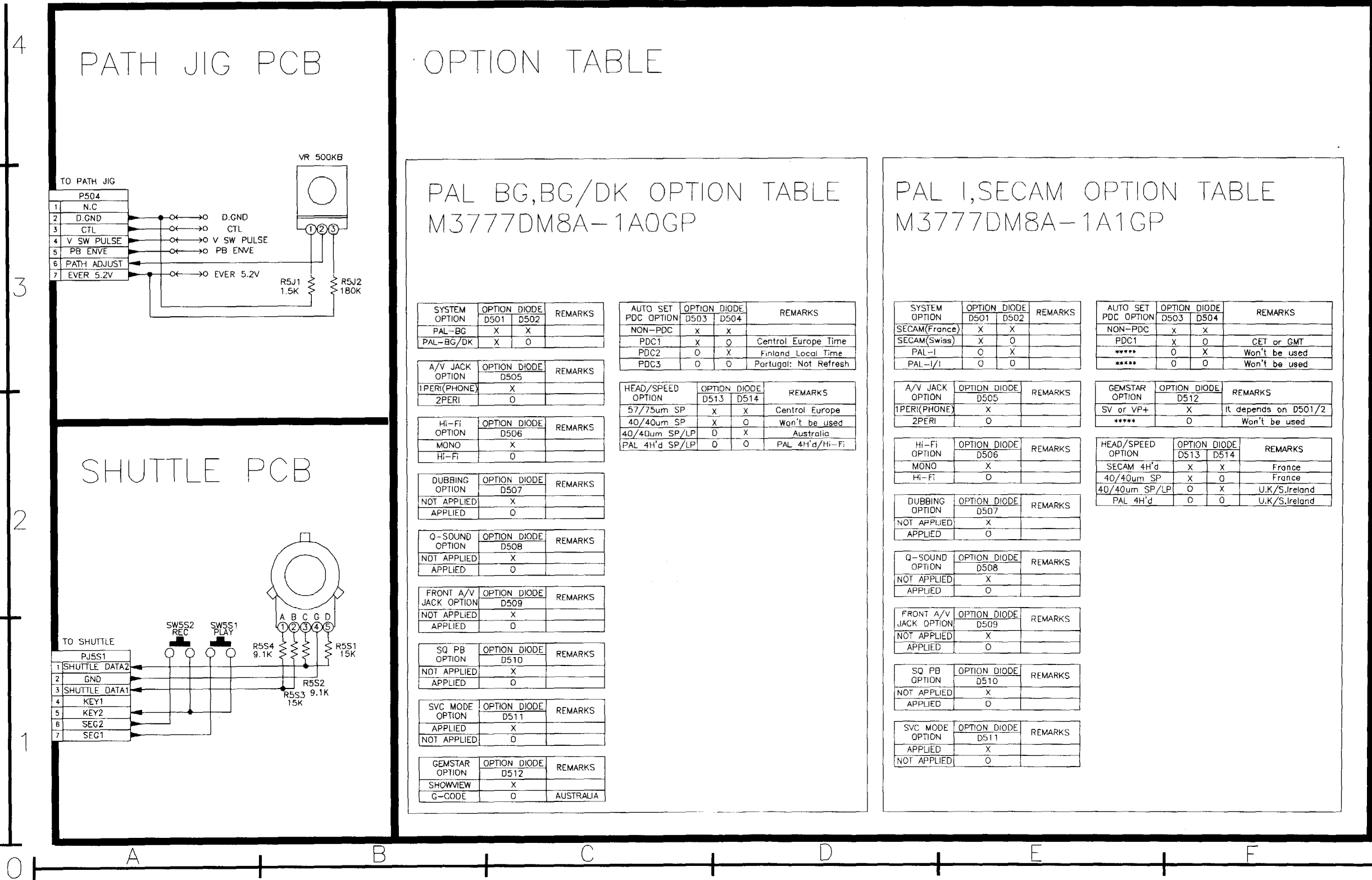
* The components marked with "a" are the 2 peri option, and the dashed line is the signal flow line of 1 peri case.

7. SW CIRCUIT DIAGRAM

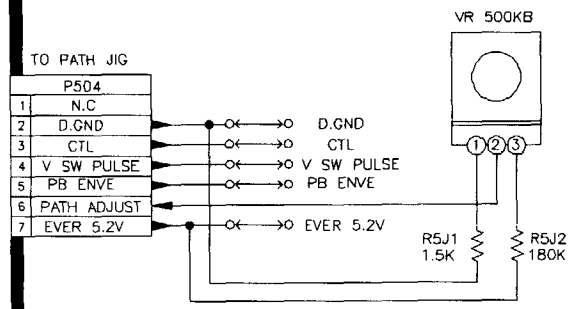


* The components marked with "*" are the 2 beti option.
 and the dashed line is the signal flow line of 1 beti case.

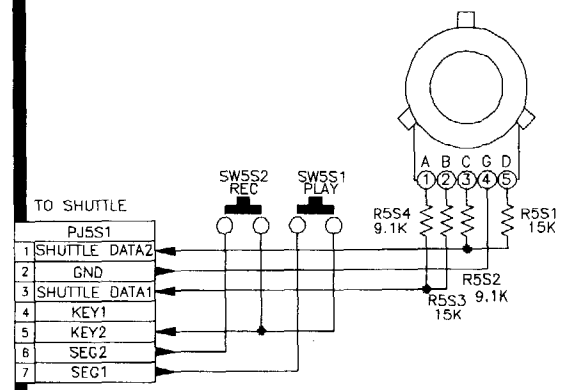
8. SHUTTLE / PATH JIG CIRCUIT DIAGRAM



PATH JIG PCB



SHUTTLE PCB



OPTION TABLE

PAL BG, BG/DK OPTION TABLE
 M3777DM8A-1A0GP

SYSTEM OPTION	OPTION DIODE D501	OPTION DIODE D502	REMARKS
PAL-BG	X	X	
PAL-BG/DK	X	0	

A/V JACK OPTION	OPTION DIODE D505	REMARKS
1PER(PHONE)	X	
2PERI	0	

Hi-Fi OPTION	OPTION DIODE D506	REMARKS
MONO	X	
Hi-Fi	0	

DUBBING OPTION	OPTION DIODE D507	REMARKS
NOT APPLIED	X	
APPLIED	0	

Q-SOUND OPTION	OPTION DIODE D508	REMARKS
NOT APPLIED	X	
APPLIED	0	

FRONT A/V JACK OPTION	OPTION DIODE D509	REMARKS
NOT APPLIED	X	
APPLIED	0	

SQ PB OPTION	OPTION DIODE D510	REMARKS
NOT APPLIED	X	
APPLIED	0	

SVC MODE OPTION	OPTION DIODE D511	REMARKS
APPLIED	X	
NOT APPLIED	0	

GEMSTAR OPTION	OPTION DIODE D512	REMARKS
SHOWVIEW	X	
G-CODE	0	AUSTRALIA

AUTO SET PDC OPTION	OPTION DIODE D503	OPTION DIODE D504	REMARKS
NON-PDC	X	X	
PDC1	X	0	Central Europe Time
PDC2	0	X	Finland Local Time
PDC3	0	0	Portugal: Not Refresh

HEAD/SPEED OPTION	OPTION DIODE D513	OPTION DIODE D514	REMARKS
57/75um SP	X	X	Central Europe
40/40um SP	X	0	Won't be used
40/40um SP/LP	0	X	Australia
PAL 4H'd SP/LP	0	0	PAL 4H'd/Hi-Fi

PAL I, SECAM OPTION TABLE
 M3777DM8A-1A1GP

SYSTEM OPTION	OPTION DIODE D501	OPTION DIODE D502	REMARKS
SECAM(France)	X	X	
SECAM(Swiss)	X	0	
PAL-I	0	X	
PAL-I/I	0	0	

AUTO SET PDC OPTION	OPTION DIODE D503	OPTION DIODE D504	REMARKS
NON-PDC	X	X	
PDC1	X	0	CET or GMT
*****	0	X	Won't be used
*****	0	0	Won't be used

A/V JACK OPTION	OPTION DIODE D505	REMARKS
1PER(PHONE)	X	
2PERI	0	

GEMSTAR OPTION	OPTION DIODE D512	REMARKS
SV or VP+	X	It depends on D501/2
*****	0	Won't be used

Hi-Fi OPTION	OPTION DIODE D506	REMARKS
MONO	X	
Hi-Fi	0	

DUBBING OPTION	OPTION DIODE D507	REMARKS
NOT APPLIED	X	
APPLIED	0	

Q-SOUND OPTION	OPTION DIODE D508	REMARKS
NOT APPLIED	X	
APPLIED	0	

FRONT A/V JACK OPTION	OPTION DIODE D509	REMARKS
NOT APPLIED	X	
APPLIED	0	

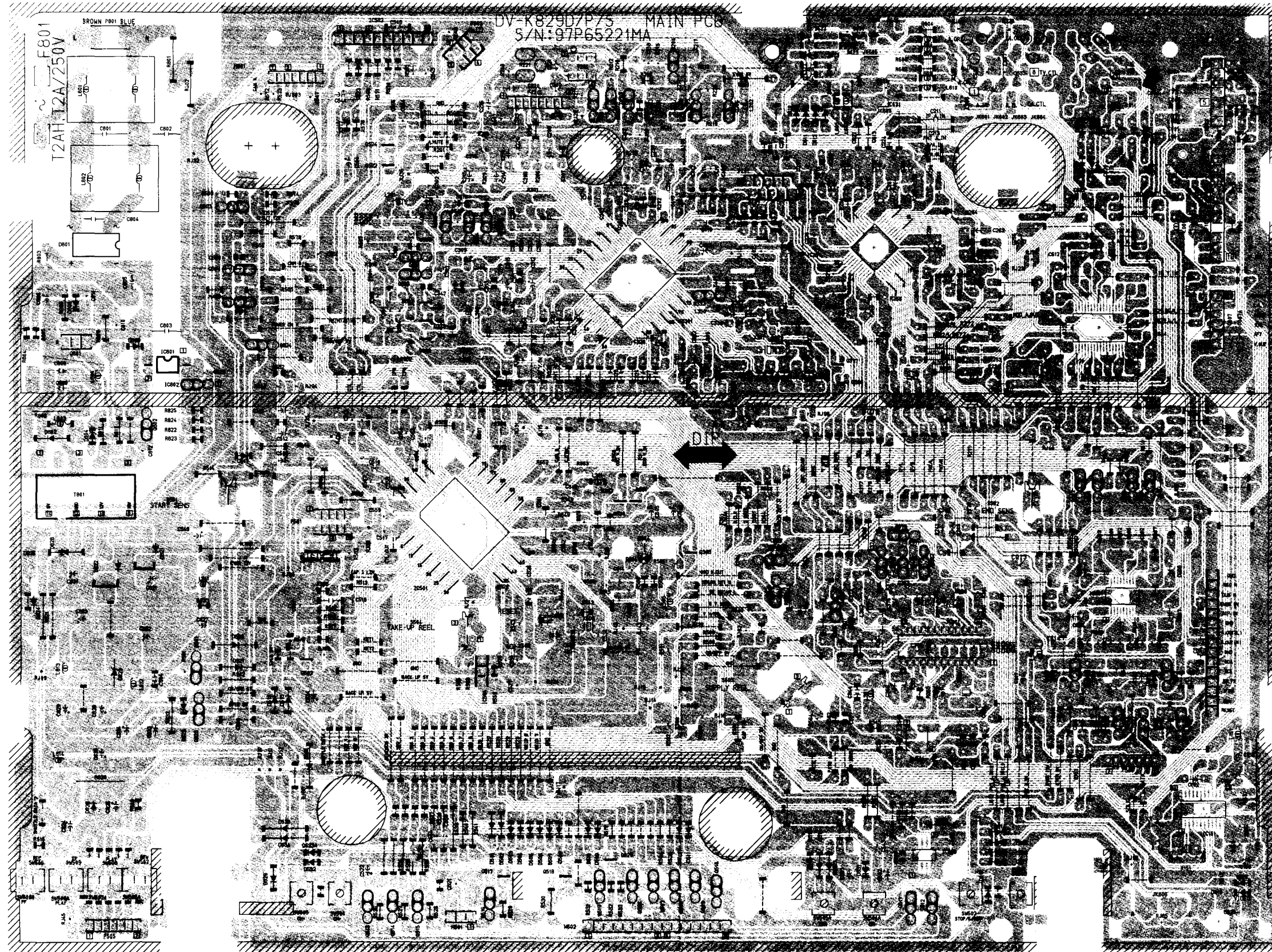
SQ PB OPTION	OPTION DIODE D510	REMARKS
NOT APPLIED	X	
APPLIED	0	

SVC MODE OPTION	OPTION DIODE D511	REMARKS
APPLIED	X	
NOT APPLIED	0	

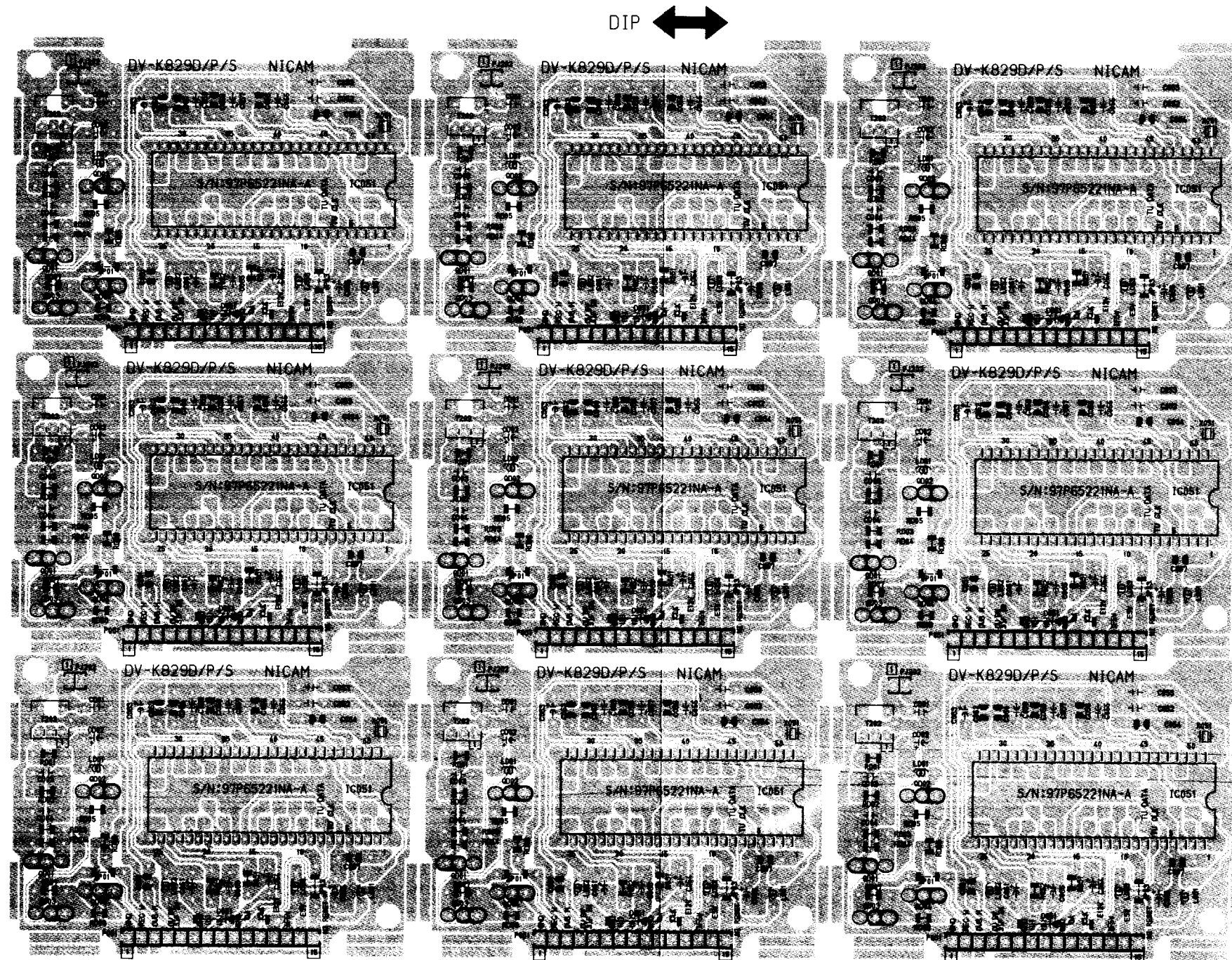
HEAD/SPEED OPTION	OPTION DIODE D513	OPTION DIODE D514	REMARKS
SECAM 4H'd	X	X	France
40/40um SP	X	0	France
40/40um SP/LP	0	X	U.K./S.Ireland
PAL 4H'd	0	0	U.K./S.Ireland

COMPONENTS LOCATION GUIDE ON PCB BOTTOM VIEW

1. PCB MAIN

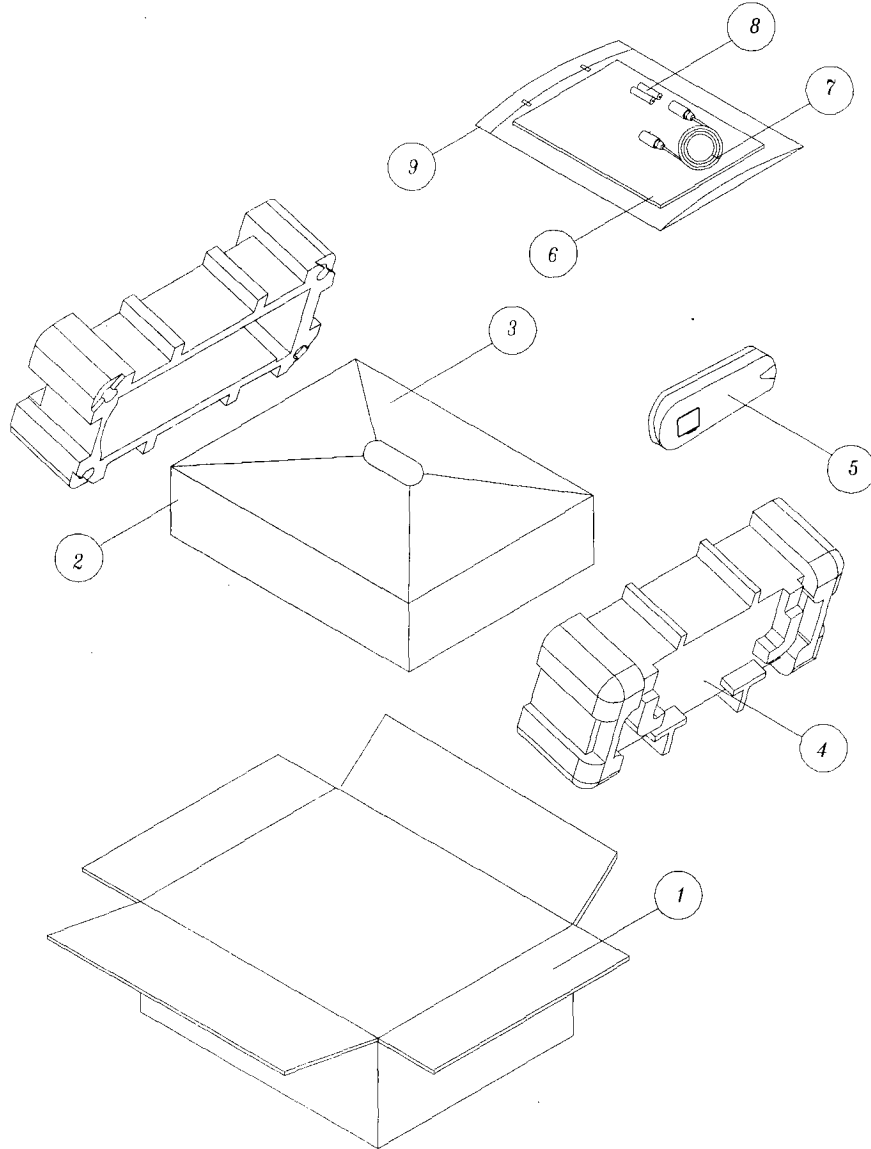


2. PCB NICAM MODULE



DISASSEMBLY

1. PACKING ASS'Y

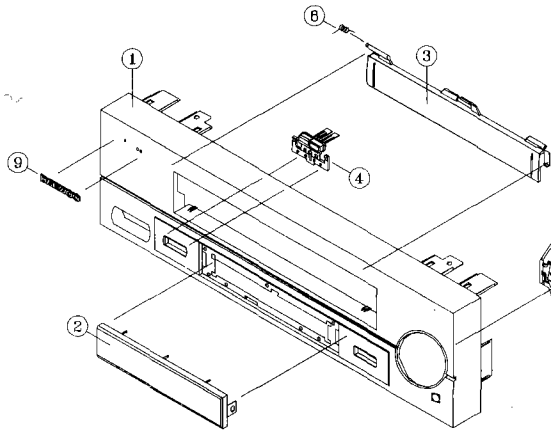


9	97P0424100	COVER ACCESSORY	1	LD-PE T0.1	
8	486A716202	BATTERY	2	AAA 1.5V(SUPERGARD)	
7	97P880RP10	CABLE RF	1	PAL 1.0M	
6	97P9560000	MANUAL OWNERS	1	ALL MODEL	
5	97P1R2GAC0	REMOCON HANDSET AS	1	VR-F2GA	
4	97P4927200	PAD L/R	1	EPS	
3	97P4801300	POLY BAG FOR SET	1	PE-FGRM	
2		SET TOTAL AS	1	DV-K829DY-AQ	
1	97P5043800	BOX CARTON	1	SW-4	
No.	PART No.	PART NAME	QTY	MATERIAL	REMARK

DISASSEMBLY

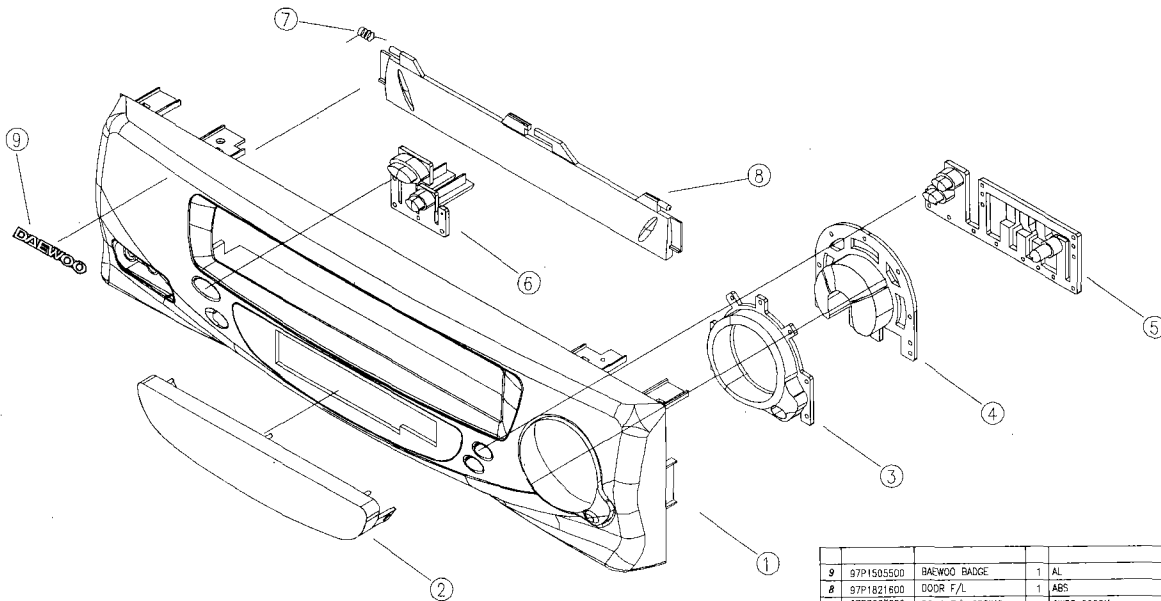
2. FRONT PANEL ASSEMBLY

DV-K819D SERIES



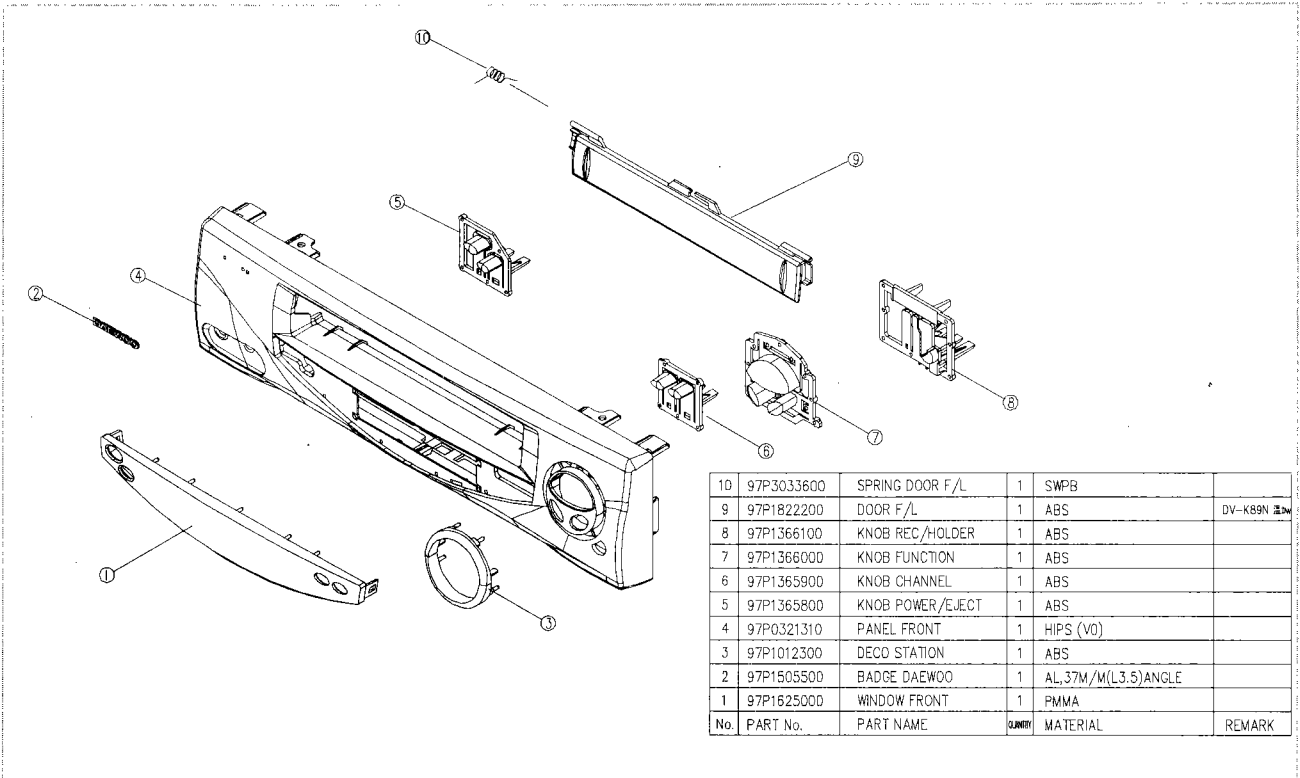
9	BADGE	97P1502800	1	AL	
8	SPRING F/L DOOR	97P3033600	1	SWPB	
7	KNOB CH/REC	97P1367000	1	ABS	
6	KNOB DECO	97P1366900	1	ABS	
5	KNOB FUNCTION	97P1366800	1	ABS	
4	KNOB P/EJECT	97P1366700	1	ABS	
3	DOOR F/L	97P1822300	1	ABS	
2	WINDOW FRONT	97P1625200	1	PMMA	
1	PANEL FRONT	97P0321500	1	HI-PS(HB)	

DV-K829D SERIES

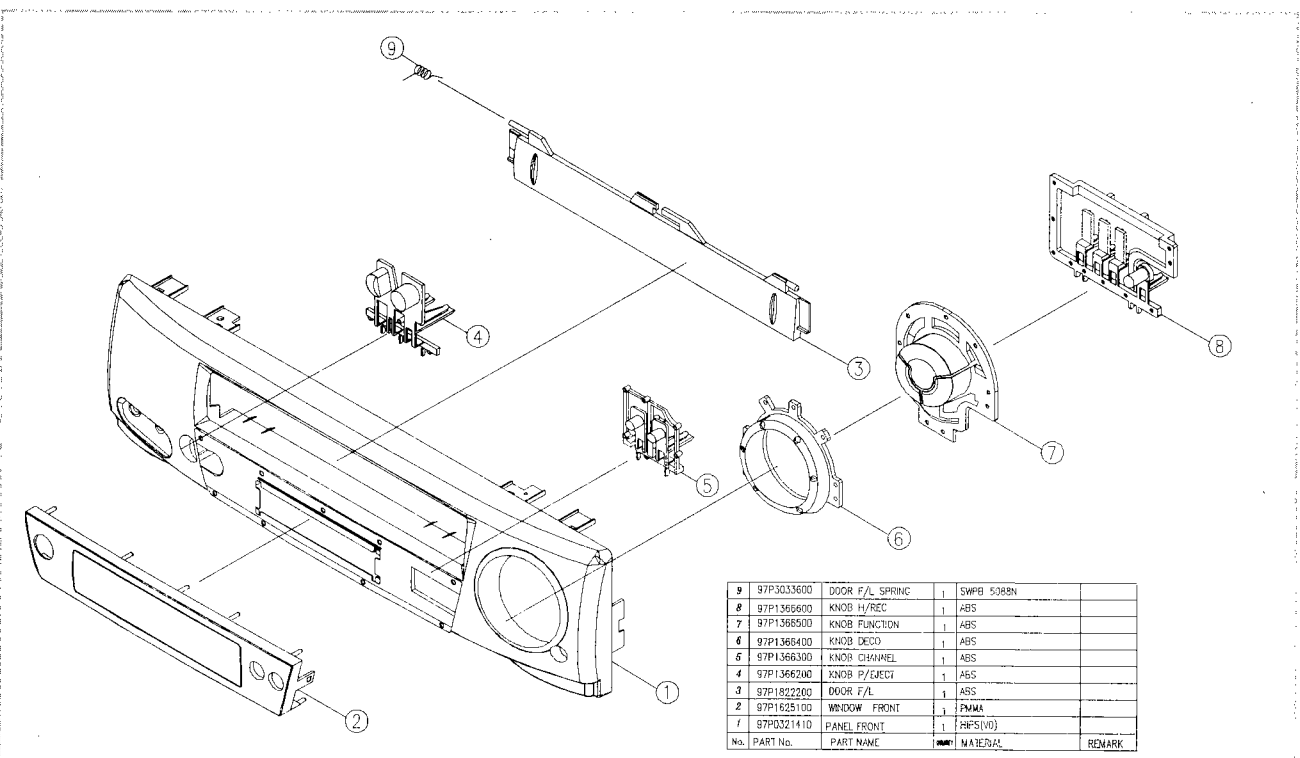


9	97P1505500	BAEWOD BADGE	1	AL	
8	97P1821600	DOOR F/L	1	ABS	
7	97P3033600	DOOR F/L SPRING	1	SWPB 5088M	
6	97P1362500	KNOB P/EJECT	1	ABS	
5	97P1362800	KNOB CHANNEL	1	ABS	
4	97P1362300	KNOB FUNCTION	1	ABS	
3	97P1362400	KNOB DECO	1	ABS	
2	97P1623800	WINDOW FRONT	1	PMMA	
1	97P0320400	PANEL FRONT	1	HI-PS(HB)	
No.	PART No.	PART NAME	QTY	MATERIAL	REMARK

DV-K879D SERIES

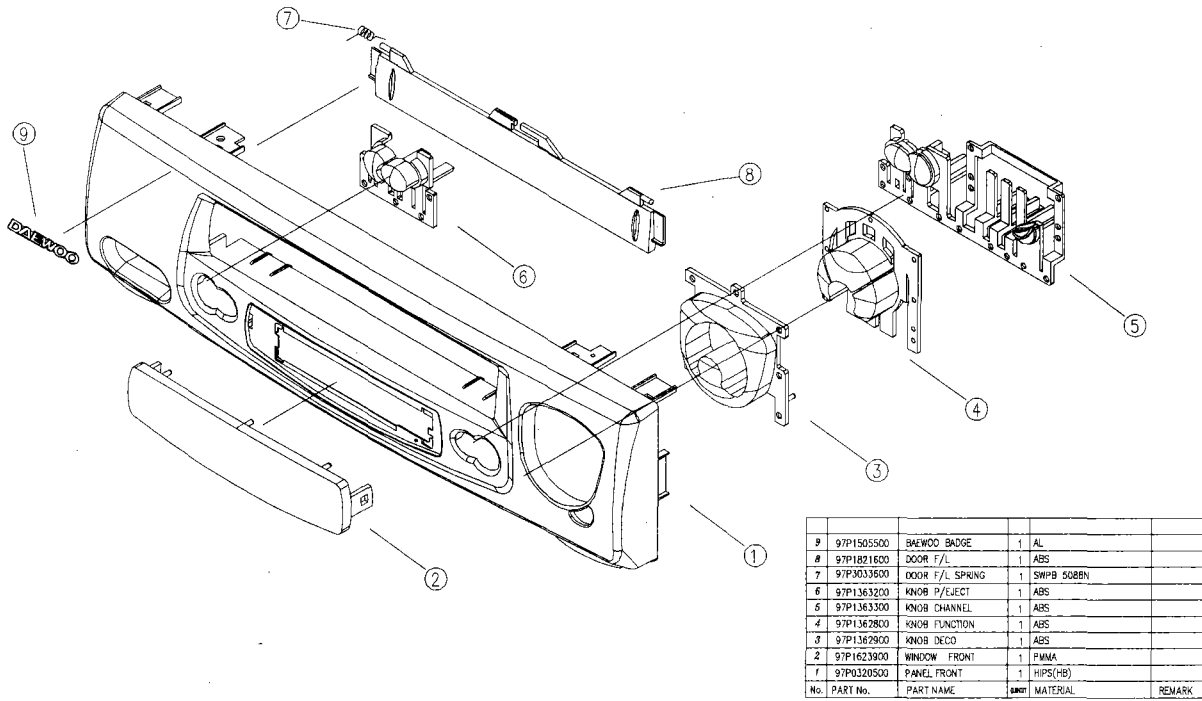


DV-K899D SERIES

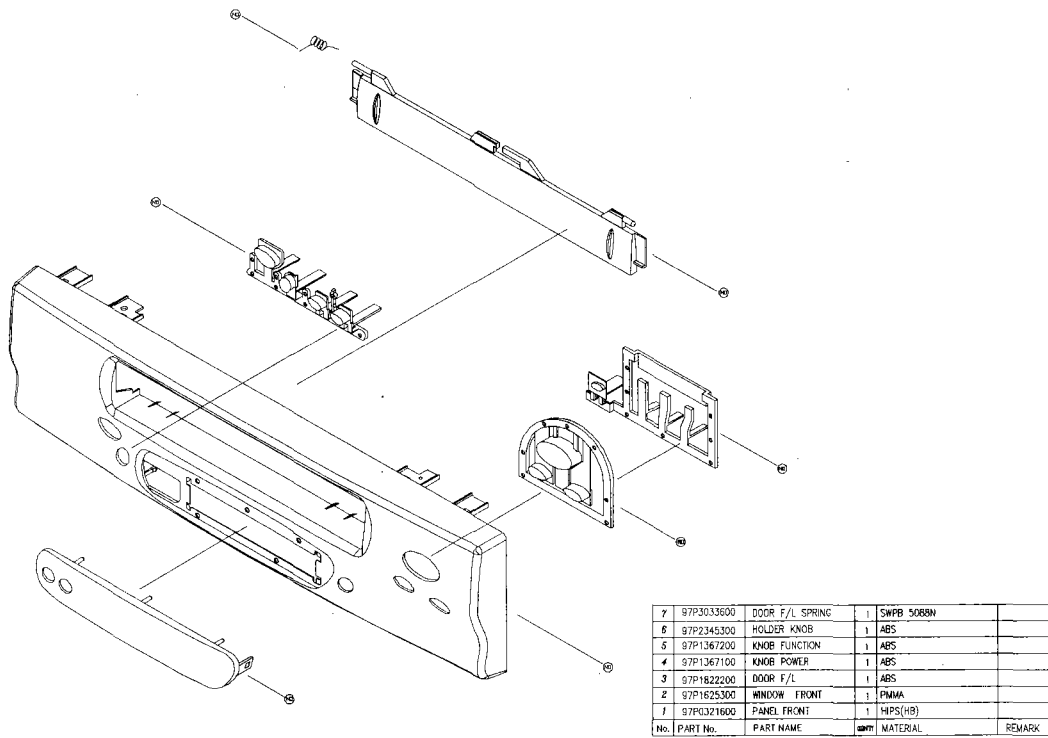


DISASSEMBLY

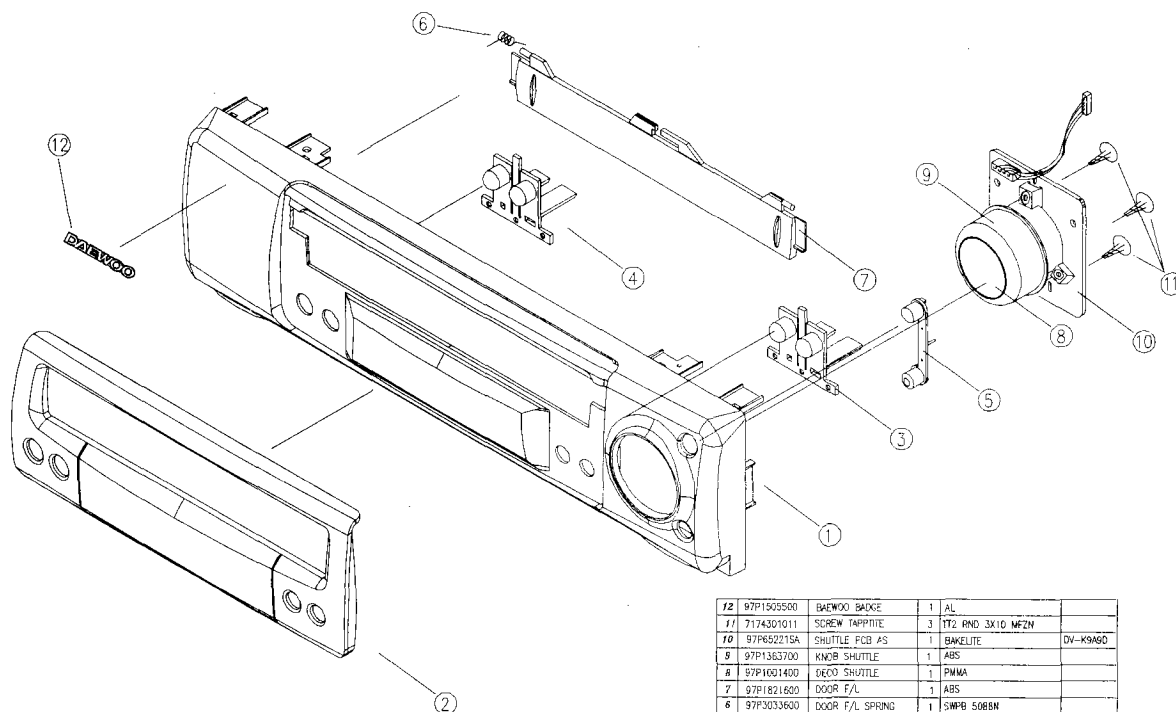
DV-K849D SERIES



DV-K869D SERIES



DV-K9A9D SERIES



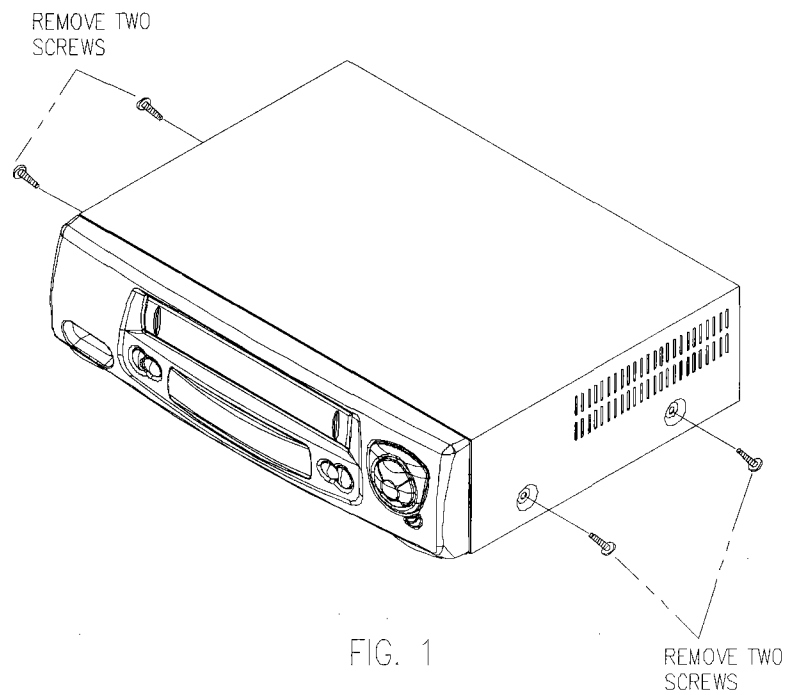
12	97P1505500	BAEWOOD BADGE	1	AL	
11	7174301011	SCREW TAPPITTE	3	TT2 RND 3X10 WFZN	
10	97P652215A	SHUTTLE PCB AS	1	BAKELITE	DV-K9A9D
9	97P1363700	KNOB SHUTTLE	1	ABS	
8	97P1601400	WIND SHUTTLE	1	PMMA	
7	97P1821600	DOOR F/L	1	ABS	
6	97P3033600	DOOR F/L SPRING	1	SMPB 508BN	
5	97P1363800	KNOB PLAY/REC	1	ABS	
4	97P1363900	KNOB P/E	1	ABS	
3	97P1364000	KNOB CH	1	ABS	
2	97P1624200	WINDOW FRONT	1	PMMA	
1	97P0320800	PANEL FRONT	1	HIPS(HB)	
No.	PART No.	PART NAME	QTY	MATERIAL	REMARK

DISASSEMBLY

3. INSTRUMENT DISASSEMBLY

3-1. TOP COVER REMOVAL (FIG.1)

- 1) Remove five (5) screws holding the top cover.
- 2) Carefully lift the back of the top cover and slide to the rear to remove.



3-2. FRONT PANEL REMOVAL (FIG.2)

- 1) Remove the top cover.
- 2) Release seven (7) tabs holding the front panel.
- 3) Remove the front panel.

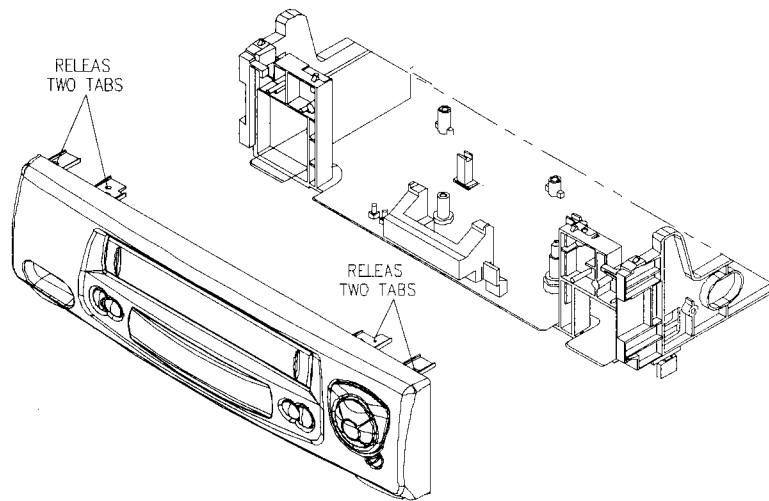


FIG. 2

3-3. BOTTOM COVER REMOVAL (FIG.3)

- 1) Remove the top cover and front panel.
- 2) Remove three (3) screws.
- 3) Release four (4) tabs and lift out the bottom cover.

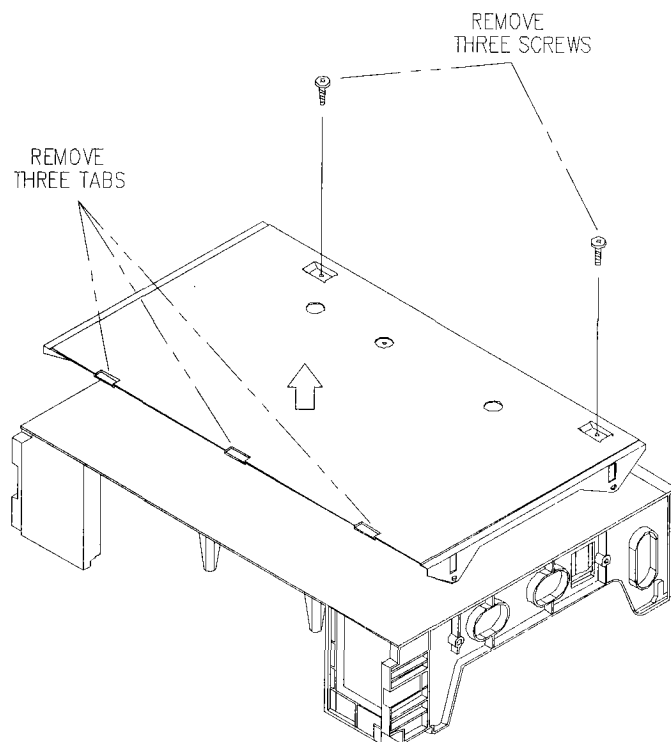


FIG. 3

3-4. F/L DOOR REMOVAL (FIG.4)

- 1) Open the F/L door 90°.
- 2) Remove the F/L door in the direction of arrow.

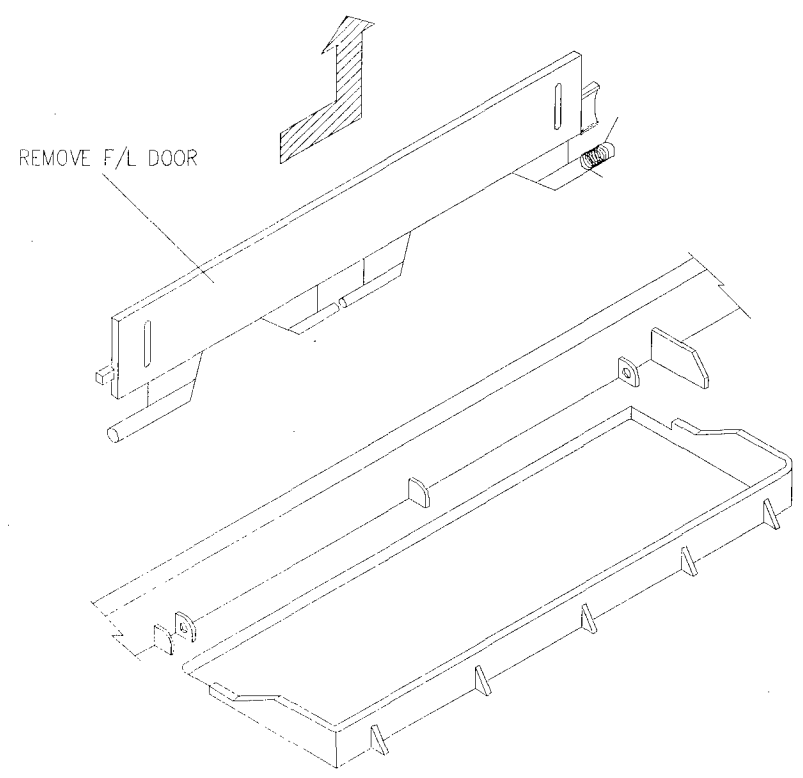


FIG. 4

DISASSEMBLY

3-5. COVER PRE-AMP / DECK AS REMOVAL (FIG.5)

- 1) Remove five (5) screws.
- 2) Disconnect the connector and FPC.
- 3) Pull out the DECK AS and COVER PRE-AMP in the direction of arrow.

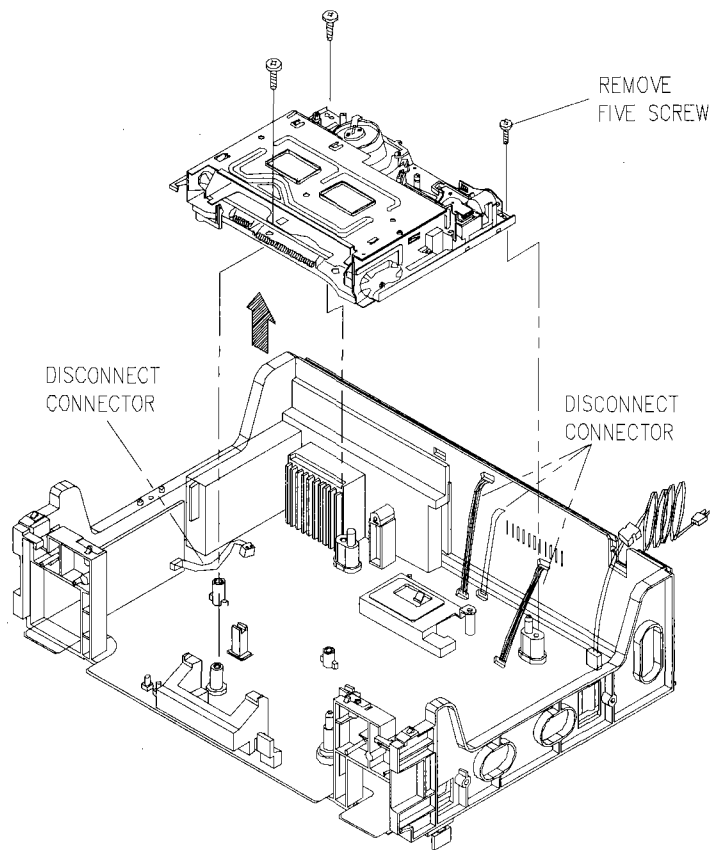


FIG. 5

3-6. PCB MAIN AS REMOVAL (FIG.6)

- 1) Remove two (2) screws.
- 2) Release three (3) tabs and lift out the main PCB in the direction of arrow.

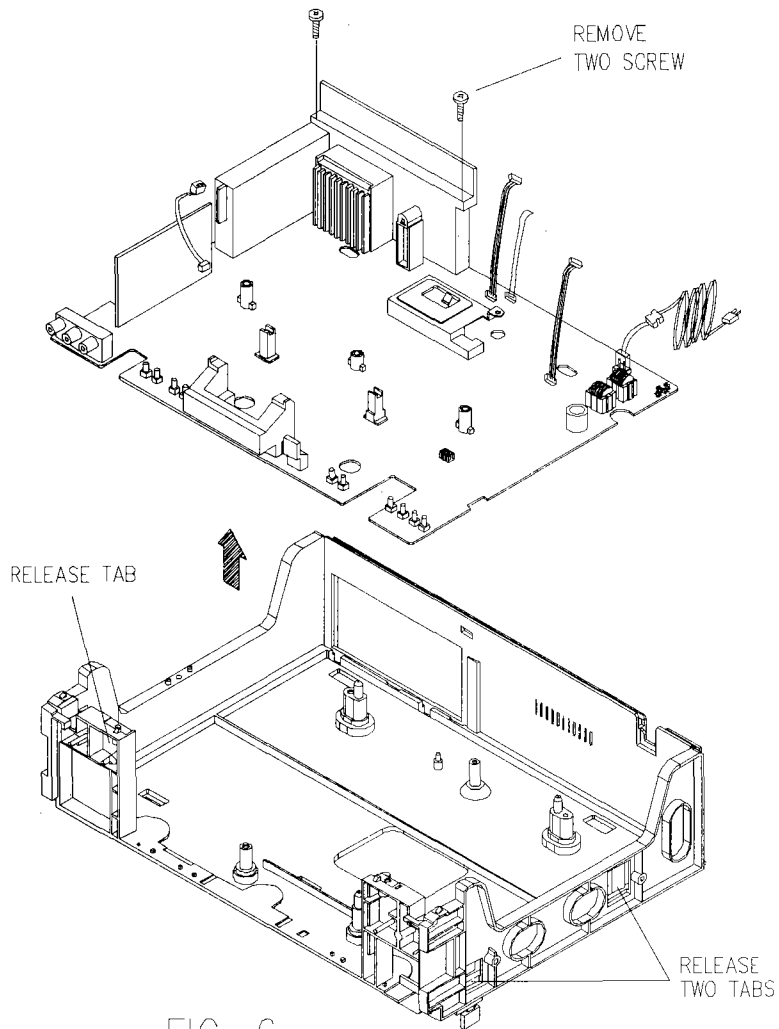


FIG. 6

ELECTRICAL PARTS LIST

1. PCB MAIN AS

LOC.	PART-CODE	PART-NAME	PART-DESC.
001	PVMPMSS078	PCB MAIN MAN-UAL AS	K829SY-AQ(97PE104400)
AM01	2193102005	SOLDER BAR	SN:PB-63:37 S63S-1320
AM02	2193011100	SOLDER WIRE	60 SNA 1.2D
AM03	2291050305	FLUX LIQUID	RF-800KN
AM04	2291050306	THINNER	RF-800ADD
B001	97P0720400	BOARD ANT	HI-PS(HB)
B001A	7175300812	SCREW TAPPTITE	TT2 FLT 3X8 MFZN BK
C801	CL1EE3104M	C LINE ACROSS	AC275V 0.1MF M PCX2 335 W
C802	CH1TFB101K	C CERA AC	4.0KV 100PF K AD AC250V
C803	CH1TFE222M	C CERA AC	4.0KV 2200PF M AD AC250V
C804	CH1CEE472M	C CERA AC	2.5KV 4700PF M DE AC250V
C805	CEXF2G470V	C ELECTRO	400V RSS 47MF 16X25
C808	CBXB3A101J	C CERA SEMI	1KV KR 100PF J
C821	CEXF1E681F	C ELECTRO	25V RX 680MF 13X20
C822	CEXF1C102F	C ELECTRO	16V RX 1000MF 13X20
C823	CEXF1A152F	C ELECTRO	10V RX 1500MF 13X20
D524	DS1R481T--	LED IR	SIR-481T(P-RANK)
D524A	97P2334200	HOLDER LED SEN-SOR	POM
D824	DRK49---F	DIODE SCHOTTKY	RK49 LF-M1
H501	1GP1U291U-	IC UNIT R/RECEIVER	GP1U291U(38KHZ)
H502	DK829D----	LED DISPLAY	K829D-ODM-HT22
IC361	1TA1238N--	IC SECAM.L	TA1238N
IC502	1BA6209---	IC	BA6209
IC801	183Z0N3171	IC PHOTO COU-PLER	0N 3171-R
JK601	97P6313300	JACK DOUBLE SCART	DSAM-9621
JK605	97P6314900	JACK PIN	DPAM-9825
JK606	97P6314400	JACK PIN	DPAZ-9723
L801	5PLFSF2120	FILTER LINE	SF-2120 40MH
L802	5PLFSF2120	FILTER LINE	SF-2120 40MH
M401	97P0474200	CASE SHIELD PREAMP	ET T0.4
M401A	97P0983400	PLATE SHIELD PREAMP	ET T0.4
M801	97P0974300	PLATE EARTH-P	ET T=0.4
PA015	97N1CAM---	PCB NICAM	PVNC5W----
PJ201	97P885X100	CONN AS	6H/2H-8S 140/350(TUBE)MM
PJ503	97P8810712	CONN AS (Y10712)	"7H-7S, 120MM"
P401	97P62G06DA	CONN HOUSING	GF120 FPC 1.25MM 10P
P501	97P62T112A	CONN B/B (PLUG)	TKC-GP PLUG 10P
P502	97P62G06D7	CONN HOUSING	GF120 FPC 1.25MM 7P
P504	97P6269100	CONN WAFER	00-8283-0712-00000
P801	97P62Y02X2	CONN WAFER	YFW800 STR 10MM 2P
Q801	T2SC4234--	TR	2SC4234
Q801A	97P4407501	RADIATOR TR	SPCC T=0.8
Q801B	7063300811	SCREW MACHINE	M/BIN 3*8 HS

LOC.	PART-CODE	PART-NAME	PART-DESC.
RF101	97P7611700	TUNER 3 IN 1	LGTM1-SLQ2-S
R593	RW02B519J-	R WIRE WOUND	2W 5.1 OHM J
R803	RW02B229J-	R WIRE WOUND	2W 2.2 OHM J
R808	RS02F104JS	R M-OXIDE FILM	2W 100K OHM J SMALL
R826	RS01F821J-	R M-OXIDE FILM	1W 820 OHM J
SW501	5S70101059	SW DETECTOR	SPPB62
S501	TST5811---	TR PHOTO	ST-5811(D-RANK)
S501A	97P2343500	HOLDER TR	ABS
S502	TST5811---	TR PHOTO	ST-5811(D-RANK)
S502A	97P2343500	HOLDER TR	ABS
S503	97P0S01900	SENSOR REEL	SG-258S
S504	97P0S01900	SENSOR REEL	SG-258S
T201	560202L697	COIL OSC	DEO-010(BIAS)
T801	57M8282207	TRANS SMPS	TSW-829D
X151	5XJ17R7LAD	CRYSTAL QUARTZ	HC-49/S 17.73447MHZ 25PPM
X301	5XE4R433BB	CRYSTAL QUARTZ	HC-49/U 4.433619MHZ 15PPM
X501	5XJ16R0LAE	CRYSTAL QUARTZ	HC-49/S 16.00000MHZ 30PPM
X502	5XZR03276G	CRYSTAL QUARTZ	SO-26 32.768000KHZ 10PPM
X503	5XJ17R7LAD	CRYSTAL QUARTZ	HC-49/S 17.73447MHZ 25PPM
Z361	5PDEQ0484-	FILTER LC	DELAY EQ 400NS
0011	PVMPJ1S078	PCB MAIN CHIP AS	K829SY-AQ(97PB240900)
CQ01	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ02	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ03	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ04	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ11	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CQ12	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CQ13	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
CQ14	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C007	HCBF224KCA	C CHIP CERA	16V X7R 0.22MF K 2012
C008	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C010	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C011	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C012	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C014	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C016	HCBK332KCA	C CHIP CERA	50V X7R 3300PF K 2012
C017	HCBK332KCA	C CHIP CERA	50V X7R 3300PF K 2012
C018	HCBF224KCA	C CHIP CERA	16V X7R 0.22MF K 2012
C153	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C154	HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
C155	HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
C156	HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
C157	HCBK563KCA	C CHIP CERA	50V X7R 0.056MF K 2012
C159	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C202	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C203	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C205	HCBK332KCA	C CHIP CERA	50V X7R 3300PF K 2012
C207	HCBK152KCA	C CHIP CERA	50V X7R 1500PF K 2012

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
C212	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C218	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C239	HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C251	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C252	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C253	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C254	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C255	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C256	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C257	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C258	HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C268	HCBK682KCA	C CHIP CERA	50V X7R 6800PF K 2012
C274	HCBK682KCA	C CHIP CERA	50V X7R 6800PF K 2012
C276	HCTAF339MB	C CHIP TANTAL	16V 3.3MF M 3216
C277	HCTDG330MC	C CHIP TANTAL	20V 33MF M 6032
C278	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C279	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C281	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C282	HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C293	HCLK821JCA	C CHIP CERA	50V SL 820PF J 2012
C294	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C295	HCBK153KCA	C CHIP CERA	50V X7R 0.015MF K 2012
C296	HCBK153KCA	C CHIP CERA	50V X7R 0.015MF K 2012
C302	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C303	HCLK151JCA	C CHIP CERA	50V SL 150PF J 2012
C304	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C305	HCLK390JCA	C CHIP CERA	50V SL 39PF J 2012
C306	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C308	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C314	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C318	HCLK221JCA	C CHIP CERA	50V SL 220PF J 2012
C320	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C325	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C329	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C330	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C331	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C333	HCQK309CCA	C CHIP CERA	50V CH 3PF C 2012
C336	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C343	HCQK131JCA	C CHIP CERA	50V CH 130PF J 2012
C345	HCLK561JCA	C CHIP CERA	50V SL 560PF J 2012
C348	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C350	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C353	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C361	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C362	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C363	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C364	HCLK150JCA	C CHIP CERA	50V SL 15PF J 2012
C365	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C367	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C368	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012

LOC.	PART-CODE	PART-NAME	PART-DESC.
C370	HCFK333ZCA	C CHIP CERA	Y5V 50V 0.033MF Z 2012
C375	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C377	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C379	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
C380	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C382	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
C383	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C384	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C401	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
C402	HCFK333ZCA	C CHIP CERA	Y5V 50V 0.033MF Z 2012
C404	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C414	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C501	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C506	HCLK201JCA	C CHIP CERA	50V SL 200PF J 2012
C507	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C509	HCBK222KCA	C CHIP CERA	50V X7R 2200PF K 2012
C510	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
C513	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
C514	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C516	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C517	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C520	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C521	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C527	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C528	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C529	HCQK180JCA	C CHIP CERA	50V CH 18PF J 2012
C530	HCQK180JCA	C CHIP CERA	50V CH 18PF J 2012
C531	HCQK130JCA	C CHIP CERA	50V CH 13PF J 2012
C532	HCQK150JCA	C CHIP CERA	50V CH 15PF J 2012
C533	HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
C543	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C545	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C547	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C548	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C551	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C553	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C555	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C558	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C559	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
C560	HCQK470JCA	C CHIP CERA	50V CH 47PF J 2012
C561	HCQK470JCA	C CHIP CERA	50V CH 47PF J 2012
C562	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C563	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
C564	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
C612	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C615	HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C616	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C625	HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C628	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C630	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
C631	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C632	HCQK330JCA	C CHIP CERA	50V CH 33PF J 2012
C633	HCQK330JCA	C CHIP CERA	50V CH 33PF J 2012
C634	HCQK330JCA	C CHIP CERA	50V CH 33PF J 2012
C635	HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C810	HCBK472KCA	C CHIP CERA	50V X7R 4700PF K 2012
C811	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
C812	HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
C825	HCBK683KCA	C CHIP CERA	50V X7R 0.068MF K 2012
C832	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
D801	DS1WBA60-C	DIODE BRIDGE	S1WBA60 4072 CHIP
D821	DDFL20U-C	DIODE CHIP	D2FL20U 4073
D822	DDFL20U-C	DIODE CHIP	D2FL20U 4073
D828	DUS1J----	DIODE CHIP	US1J 600V 1A
ICQ01	1QX2010---	IC AUDIO(QSOUND)	QX2010(MM1326)
IC151	1LC74793--	IC VPS(PDC)	LC74793
IC251	1TDA9605H-	IC HI-FI	TDA9605H
IC301	1HA118511F	IC SUPER AV	HA118511F
IC501	168KK8ZXTS	IC MICOM	M3777DM8A-1A1GP
IC503	14ATM24D08	IC EEPROM	ATM24D08
IC601	1LA7148M--	IC A/V SW	LA7148M
L607	HLX1210001	BEAD CHIP	TB201209Z121
L608	HLX1210001	BEAD CHIP	TB201209Z121
L611	HLX1210001	BEAD CHIP	TB201209Z121
Q301	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q305	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q330	T2SA1037KB	TR CHIP	2SA1037K-T146-R
Q331	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q366	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q377	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q379	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q380	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q392	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q502	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q517	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q518	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q520	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
RJ09	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ10	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ11	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ12	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ13	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ14	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ15	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ16	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ17	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ18	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ19	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ20	HRF8000-EA	R CHIP	1/8 0 OHM 3216

LOC.	PART-CODE	PART-NAME	PART-DESC.
RJ23	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ24	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ27	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ28	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ29	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ30	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ31	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ32	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ33	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ34	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ35	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ36	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ37	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ40	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ41	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ42	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ43	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ44	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ46	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ80	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ83	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ84	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ85	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ86	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ87	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ88	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ90	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ91	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ93	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ94	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ95	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ98	HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ99	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RQ03	HRFT124JCA	R CHIP	1/10 120K OHM J 2012
RQ06	HRFT164JCA	R CHIP	1/10 160K OHM J 2012
RQ08	HRFT154JCA	R CHIP	1/10 150K OHM J 2012
RQ09	HRFT124JCA	R CHIP	1/10 120K OHM J 2012
RQ10	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RQ11	HRFT154JCA	R CHIP	1/10 150K OHM J 2012
RQ12	HRFT124JCA	R CHIP	1/10 120K OHM J 2012
R003	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R007	HRFT223JCA	R CHIP	1/10 22K OHM J 2012
R008	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R15A	HRFT392JCA	R CHIP	1/10 3.9K OHM J 2012
R152	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R153	HRFT562JCA	R CHIP	1/10 5.6K OHM J 2012
R154	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R155	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
R204	HRFT151JCA	R CHIP	1/10 150 OHM J 2012
R205	HRFT273JCA	R CHIP	1/10 27K OHM J 2012

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
R206	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R209	HRFT821JCA	R CHIP	1/10 820 OHM J 2012
R210	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
R211	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R212	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R213	HRFT229JCA	R CHIP	1/10 2.2 OHM J 2012
R214	HRFT229JCA	R CHIP	1/10 2.2 OHM J 2012
R215	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
R219	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R220	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R224	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
R238	HRFT000-CA	R CHIP	1/10 0 OHM 2012
R240	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R241	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R251	HRFT335JCA	R CHIP	1/10 3.3M J 2012
R252	HRFT333JCA	R CHIP	1/10 33K OHM J 2012
R253	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
R256	HRFT333JCA	R CHIP	1/10 33K OHM J 2012
R257	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
R259	HRFT183JCA	R CHIP	1/10 18K OHM J 2012
R260	HRFT333JCA	R CHIP	1/10 33K OHM J 2012
R270	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R301	HRFT682JCA	R CHIP	1/10 6.8K OHM J 2012
R302	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R303	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
R304	HRFT132JCA	R CHIP	1/10 1.3K OHM J 2012
R305	HRFT302JCA	R CHIP	1/10 3K OHM J 2012
R306	HRFT302JCA	R CHIP	1/10 3K OHM J 2012
R307	HRFT185JCA	R CHIP	1/10 1.8M OHM J 2012
R311	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R314	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R315	HRFT105JCA	R CHIP	1/10 1M OHM J 2012
R316	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
R325	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R326	HRFT225JCA	R CHIP	1/10 2.2M OHM J 2012
R349	HRFT431JCA	R CHIP	1/10 430 OHM J 2012
R350	HRFT271JCA	R CHIP	1/10 270 OHM J 2012
R365	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R367	HRFT751JCA	R CHIP	1/10 750 OHM J 2012
R373	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R374	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R375	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R377	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R378	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R379	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R380	HRFT151JCA	R CHIP	1/10 150 OHM J 2012
R381	HRFT151JCA	R CHIP	1/10 150 OHM J 2012
R382	HRFT302JCA	R CHIP	1/10 3K OHM J 2012
R383	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
R384	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012

LOC.	PART-CODE	PART-NAME	PART-DESC.
R385	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R386	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R387	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R388	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R389	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R5A2	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
R5A5	HRFT300JCA	R CHIP	1/10 30 OHM J 2012
R5A6	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R5B3	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R501	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R504	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R507	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R509	HRFT474JCA	R CHIP	1/10 470K OHM J 2012
R510	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R518	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
R543	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
R544	HRFT511JCA	R CHIP	1/10 510 OHM J 2012
R549	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R550	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012
R551	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R552	HRFT561JCA	R CHIP	1/10 560 OHM J 2012
R553	HRFT561JCA	R CHIP	1/10 560 OHM J 2012
R557	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R558	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R560	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R561	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R563	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
R564	HRFT201JCA	R CHIP	1/10 200 OHM J 2012
R565	HRFT201JCA	R CHIP	1/10 200 OHM J 2012
R572	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R573	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R583	HRFT362JCA	R CHIP	1/10 3.6K OHM J 2012
R587	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R589	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
R590	HRFT393JCA	R CHIP	1/10 39K OHM J 2012
R594	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
R596	HRFT511JCA	R CHIP	1/10 510 OHM J 2012
R605	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R606	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
R611	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
R613	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
R616	HRFT151JCA	R CHIP	1/10 150 OHM J 2012
R617	HRFT151JCA	R CHIP	1/10 150 OHM J 2012
0012	PVMPJRS078	PCB MAIN RADIAL AS	K829SY-AQ(97PC315000)
CQ05	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
CQ06	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
CQ07	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
CQ08	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
C001	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C004	CEXF1A471V	C ELECTRO	10V RSS 470MF 8X11.5
C013	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C015	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C151	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C152	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C158	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
C201	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C204	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C206	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)
C208	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
C209	CMXM2A333J 79TD1641	C MYLAR	100V 0.033MF J (TP)
C210	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP
C214	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)
C215	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
C216	CMXM2A153J	C MYLAR	100V 0.015MF J (TP)
C217	CMXM2A333J 79TD1641	C MYLAR	100V 0.033MF J (TP)
C219	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C220	CCXB2H221K	C CERA	500V B 220PF K (TAPPING)
C221	CMXM2A223J 79TD1386	C MYLAR	100V 0.022MF J TP
C259	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C260	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C261	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C262	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C263	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C264	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C267	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C269	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C270	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C271	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP
C272	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C273	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C275	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7

LOC.	PART-CODE	PART-NAME	PART-DESC.
C280	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C301	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C309	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C312	CEXF1H339A	C ELECTRO	50V RSM 3.3MF 4X7
C313	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C315	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C316	CEXE1H109F	C ELECTRO	50V RMB 1MF 47
C317	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C319	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C326	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C332	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
C334	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
C337	CEXF1H478A 79TD0564	C ELECTRO	50V RSM 0.47MF 4X7
C338	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP
C339	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C366	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C369	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP
C376	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C378	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C381	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C385	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C403	CEXF1H339A	C ELECTRO	50V RSM 3.3MF 4X7
C413	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C415	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C502	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C505	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP
C508	CEXF1A101A	C ELECTRO	10V RSM 100MF 6.3X7
C511	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C512	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
C515	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C522	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C523	CEXF1A101A	C ELECTRO	10V RSM 100MF 6.3X7
C524	CDXA0H104K	C SUPER	5.5V 0.1F TAPING
C525	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C540	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C544	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
C549	CEXF1E470V	C ELECTRO	25V RSS 47MF (5X11) TP
C556	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
C557	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C608	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C609	CEXF1H109F	C ELECTRO	50V RMB 1MF 4*7
C610	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C611	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C618	CEXF1A471V	C ELECTRO	10V RSS 470MF 8X11.5
C619	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C620	CEXF1A471V	C ELECTRO	10V RSS 470MF 8X11.5
C622	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C806	CEXD2C109A	C ELECTRO	160V RTL 1MF 8X11.5
C809	CMXL2G333K	C MYLAR	400V MEU 0.033MF K
C824	CEXF1H220F	C ELECTRO	50V RX 22MF 6.3X11
C826	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
C827	CEXF1E101F	C ELECTRO	25V RX 100MF 8X11.5
C828	CEXF1E101F	C ELECTRO	25V RX 100MF 8X11.5
C829	CEXF1E101F	C ELECTRO	25V RX 100MF 8X11.5
C830	CEXF1H100A	C ELECTRO	50V RSM 10MF (5X7) TP
C831	CEXF1A331D	C ELECTRO	10V RZ 330MF 8X11.5
C833	CEXF1A101A	C ELECTRO	10V RSM 100MF 6.3X7
C834	CEXF1C470A 79TD0562	C ELECTRO	16V RSM 47MF (5X7) TP
C835	CEXF1A471V	C ELECTRO	10V RSS 470MF 8X11.5
D826	1KA33V----	IC ZENER	KA33V
F801	5FSPS2022L	FUSE PLASTIC TUBE	SEMKO 2A 250V TL(ETF2AP)
IC504	1KA7533Z--	IC SWITCH RESET	KA7533Z
IC802	1KA431AZ--	IC REGULATOR	KA431AZ
L001	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L002	5CPX680J2T	COIL PEAKING	68UH(BLU-BLK)
L201	5CPX680J2T	COIL PEAKING	68UH(BLU-BLK)
L202	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L301	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L303	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L304	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L361	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L362	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L401	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L505	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L506	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L804	56X0000009	COIL BEAD	BLI 7.5 TAPPING
L811	56C220K695	COIL CHOKE(CAP TYPE)	22UH K (CAP TYPE) 9X11.1
L812	56C220K686	COIL CHOKE	22UH K 27.5X0.4D
L813	56C220K695	COIL CHOKE(CAP TYPE)	22UH K (CAP TYPE) 9X11.1
L814	56C821K700	COIL CHOKE	820MF TAPPING
Q001	TZRC104M--	TR	KRC104M AUTO

LOC.	PART-CODE	PART-NAME	PART-DESC.
Q002	TZTA1273Y-	TR	KTA1273Y(966Y)
Q003	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q201	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q202	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q203	TZTA1266Y-	TR	KTA1266Y- (AUTO)(1015Y)
Q204	TZTC3202Y-	TR	KTC3202Y (AUTO)(1959Y)
Q205	TZTA1266Y-	TR	KTA1266Y- (AUTO)(1015Y)
Q206	TZRC102M--	TR	KRC102M(KEC)
Q362	TZRC104M--	TR	KRC104M AUTO
Q363	TZTA1266Y-	TR	KTA1266Y- (AUTO)(1015Y)
Q364	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q365	TZRC102M--	TR	KRC102M(KEC)
Q378	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q381	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q383	TZRC104M--	TR	KRC104M AUTO
Q384	TZRC104M--	TR	KRC104M AUTO
Q501	TZTA1273Y-	TR	KTA1273Y(966Y)
Q503	TZTA1273Y-	TR	KTA1273Y(966Y)
Q504	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q505	TZSR1001--	TR	KSR1001 (AUTO)
Q506	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q507	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q508	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q509	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q510	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q511	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q512	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q513	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q514	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q515	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q516	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q519	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q521	TZTA1266Y-	TR	KTA1266Y- (AUTO)(1015Y)
Q523	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q601	TZSR2001--	TR	KSR2001 (AUTO)
Q602	TZRC104M--	TR	KRC104M AUTO
Q603	TZRC104M--	TR	KRC104M AUTO
Q604	TZRC102M--	TR	KRC102M(KEC)
Q802	TZTC3203Y-	TR	KTC3203Y (2120Y)
Q821	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q823	TZTC3205Y-	TR	KTC3205Y (2236Y)
Q824	TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
R221	RV5426503M	R SEMI FIXED	H50K-5X3-6Y-PC-MS
SW502	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
SW503	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
SW504	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
SW505	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
SW506	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
SW507	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
SW508	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
SW509	5S50101Z97	SW TACT	SKHV10914B 9.5M AUTO
X361	5XJ4R286UC	CRYSTAL QUARTZ	HC-49/S 4.286000MHZ 20PPM
0013	PVMPJAS078	PCB MAIN AXIAL AS	K829SY-AQ(97PA496900)
AM31	2TM1456000	TAPE MASKING	SI-602
AM31A	2TM110620R	TAPE MASKING	SI-600N RED
AM31B	2TM1106200	TAPE MASKING	SI-600N
C002	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C003	CCZB1H101K	C CERA	50V B 100PF K
C005	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C006	CCZB1H101K	C CERA	50V B 100PF K
C213	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C224	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C310	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C311	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C321	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C322	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C323	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C324	CCZF1H473Z	C CERA	50V F 0.047MF Z
C327	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C328	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C335	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C344	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C347	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C371	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C405	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C406	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C407	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C408	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C409	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C410	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C411	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C412	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C503	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C504	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C518	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M

LOC.	PART-CODE	PART-NAME	PART-DESC.
C519	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C526	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C537	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C538	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C541	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C546	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C550	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C552	CBZF1E223Z	C CERA SEMI	25V Y5V 0.022MF Z
C613	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C614	CCZB1H331K	C CERA	50V B 330PF K
C626	CCZB1H331K	C CERA	50V B 330PF K
C627	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
D001	DZN4148---	DIODE	1N4148 AUTO 52MM
D003	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D201	DZN4148---	DIODE	1N4148 AUTO 52MM
D301	DZN4148---	DIODE	1N4148 AUTO 52MM
D504	DZN4148---	DIODE	1N4148 AUTO 52MM
D505	DZN4148---	DIODE	1N4148 AUTO 52MM
D506	DZN4148---	DIODE	1N4148 AUTO 52MM
D508	DZN4148---	DIODE	1N4148 AUTO 52MM
D509	DZN4148---	DIODE	1N4148 AUTO 52MM
D515	DZN4003---	DIODE	IN4003(DAEO)
D516	DZN4148---	DIODE	1N4148 AUTO 52MM
D517	DZN4148---	DIODE	1N4148 AUTO 52MM
D519	DZN4003---	DIODE	IN4003(DAEO)
D520	DZN4003---	DIODE	IN4003(DAEO)
D521	DZN4003---	DIODE	IN4003(DAEO)
D522	DZN4148---	DIODE	1N4148 AUTO 52MM
D523	DZUZ6R2BSC	DIODE ZENER	UZ-6.2BSC(6.16-6.40)
D525	DZUZ9R1BSC	DIODE ZENER	UZ-9.1BSC(8.89-9.29V)
D526	DZN4003---	DIODE	IN4003(DAEO)
D527	DZN4003---	DIODE	IN4003(DAEO)
D531	DZN4148---	DIODE	1N4148 AUTO 52MM
D532	DZN4148---	DIODE	1N4148 AUTO 52MM
D533	DZN4148---	DIODE	1N4148 AUTO 52MM
D534	DZN4148---	DIODE	1N4148 AUTO 52MM
D602	DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D603	DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D604	DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D605	DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D610	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D611	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D612	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
D613	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D614	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D615	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D616	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D617	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D618	DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D619	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D621	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D622	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D623	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D624	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D625	DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D626	DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D802	DZEG01C---	DIODE	EG01C
D803	DZRA15----	DIODE	ERA15-02 52MM TAPPING
D804	DZUZ3R0BSB	DIODE ZENER	UZ-3.0BSB(3.01-3.22V)
D805	DZN4148---	DIODE	1N4148 AUTO 52MM
D823	DZGDZP16B-	DIODE ZENER	GDZP16B1
D825	DZEU01Z---	DIODE	EU01Z
D827	DZZ10BM---	DIODE ZENER	UZ-10BM
D829	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
JP545	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP555	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP556	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP557	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP558	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP576	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP579	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP580	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP581	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP591	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP592	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP593	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP594	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP595	85801060TA	WIRE COPPER	0.6X52MM TAPING
JP596	85801060TA	WIRE COPPER	0.6X52MM TAPING
L250	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L302	5CPZ820K02	COIL PEAKING	82UH K (AXIAL 3.5MM)
L305	5CPZ120K02 79TD1658	COIL PEAKING	12UH K (AXIAL 3.5MM)
L311	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L601	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L602	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L604	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L605	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L606	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L609	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L610	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L612	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L613	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)

LOC.	PART-CODE	PART-NAME	PART-DESC.
L803	5PB13857--	COIL BEAD	B13857(AXIAL)
RQ07	RD-AZ124J- 79TD0115	R CARBON FILM	1/6 120K OHM J
R001	RD-AZ221J- 79TD0111	R CARBON FILM	1/6 220 OHM J
R002	RD-AZ221J- 79TD0111	R CARBON FILM	1/6 220 OHM J
R004	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
R005	RD-AZ221J- 79TD0111	R CARBON FILM	1/6 220 OHM J
R006	RD-AZ221J- 79TD0111	R CARBON FILM	1/6 220 OHM J
R009	RD-AZ102J- 79TD2015	R CARBON FILM	1/6 1K OHM J
R010	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
R011	RD-AZ301J- 79TD0125	R CARBON FILM	1/6 300 OHM J
R012	RD-AZ150J-	R CARBON FILM	1/6 15 OHM J
R15B	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R151	85801060TA	WIRE COPPER	0.6X52MM TAPING
R201	RD-AZ223J- 79TD0357	R CARBON FILM	1/6 22K OHM J
R202	RD-AZ334J- 79TD0177	R CARBON FILM	1/6 330K OHM J
R203	RD-AZ133J-	R CARBON FILM	1/6 13K OHM J
R207	RD-AZ333J- 79TD0094	R CARBON FILM	1/6 3.3K OHM J
R208	RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
R216	RD-AZ470J- 79TD0621	R CARBON FILM	1/6 47 OHM J
R217	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
R218	RD-AZ223J- 79TD0357	R CARBON FILM	1/6 22K OHM J
R254	RD-AZ393G-	R CARBON FILM	1/6 39K OHM G
R255	RD-AZ272J- 79TD0105	R CARBON FILM	1/6 2.7K OHM J
R258	RD-AZ103J- 79TD2016	R CARBON FILM	1/6 10K OHM J
R261	RD-AZ153J- 79TD2022	R CARBON FILM	1/6 15K OHM J
R271	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
R272	RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R273	RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R274	RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R275	RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R276	RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R277	RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R308	RD-AZ472J- 79TD0117	R CARBON FILM	1/6 4.7K OHM J
R309	RD-AZ273J- 79TD0124	R CARBON FILM	1/6 27K OHM J

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
R310	RD-AZ431J-79TD0594	R CARBON FILM	1/6 430 OHM J
R313	RD-AZ221J-79TD0111	R CARBON FILM	1/6 220 OHM J
R322	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R323	RD-AZ561J-79TD0110	R CARBON FILM	1/6 560 OHM J
R348	RD-AZ221J-79TD0111	R CARBON FILM	1/6 220 OHM J
R361	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R362	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R363	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R364	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R366	RD-AZ241J-79TD0896	R CARBON FILM	1/6 240 OHM J
R371	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R372	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R376	RD-AZ302J-79TD0133	R CARBON FILM	1/6 3K OHM J
R390	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R401	RD-AZ753J-79TD0140	R CARBON FILM	1/6 75K OHM J
R5A1	RD-AZ273J-79TD0124	R CARBON FILM	1/6 27K OHM J
R5A3	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R5A4	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R5A9	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R5B1	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R502	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R503	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R505	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R506	RD-4Z201J-	R CARBON FILM	1/4 200 OHM J
R508	RD-AZ121J-79TD0191	R CARBON FILM	1/6 120 OHM J
R511	RD-AZ121J-79TD0191	R CARBON FILM	1/6 120 OHM J
R512	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R513	RD-AZ102J-79TD2015	R CARBON FILM	1/6 1K OHM J
R514	RD-AZ304J-79TD1565	R CARBON FILM	1/6 300K OHM J

LOC.	PART-CODE	PART-NAME	PART-DESC.
R515	RD-AZ474J-79TD0881	R CARBON FILM	1/6 470K OHM J
R516	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R517	RD-AZ473J-79TD2034	R CARBON FILM	1/6 47K OHM J
R519	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R520	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R521	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R522	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R523	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R524	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R525	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R526	RD-AZ430J-	R CARBON FILM	1/6 43 OHM J
R527	RD-AZ430J-	R CARBON FILM	1/6 43 OHM J
R528	RD-AZ430J-	R CARBON FILM	1/6 43 OHM J
R529	RD-AZ430J-	R CARBON FILM	1/6 43 OHM J
R530	RD-AZ430J-	R CARBON FILM	1/6 43 OHM J
R531	RD-AZ430J-	R CARBON FILM	1/6 43 OHM J
R532	RD-AZ430J-	R CARBON FILM	1/6 43 OHM J
R533	RD-AZ270J-79TD0108	R CARBON FILM	1/6 27 OHM J
R534	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R535	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R536	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R537	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R538	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R539	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R540	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R541	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R542	RD-AZ105J-79TD0092	R CARBON FILM	1/6 1M OHM J
R545	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R546	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R547	RD-AZ331J-79TD0122	R CARBON FILM	1/6 330 OHM J
R548	RD-AZ561J-79TD0110	R CARBON FILM	1/6 560 OHM J

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
R554	RD-AZ472J-79TD0117	R CARBON FILM	1/6 4.7K OHM J
R556	RD-AZ221J-79TD0111	R CARBON FILM	1/6 220 OHM J
R559	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R562	RD-AZ273J-79TD0124	R CARBON FILM	1/6 27K OHM J
R566	RD-AZ241J-79TD0896	R CARBON FILM	1/6 240 OHM J
R567	RD-AZ241J-79TD0896	R CARBON FILM	1/6 240 OHM J
R569	RD-AZ332J-79TD0094	R CARBON FILM	1/6 3.3K OHM J
R570	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R571	RD-AZ101J-79TD0106	R CARBON FILM	1/6 100 OHM J
R574	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R575	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R576	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R577	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R578	RD-AZ473J-79TD2034	R CARBON FILM	1/6 47K OHM J
R579	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R580	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R581	RD-AZ182J-79TD0167	R CARBON FILM	1/6 1.8K OHM J
R582	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R584	RD-AZ473J-79TD2034	R CARBON FILM	1/6 47K OHM J
R585	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R586	RD-AZ153J-79TD2022	R CARBON FILM	1/6 15K OHM J
R588	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R595	RD-AZ221J-79TD0111	R CARBON FILM	1/6 220 OHM J
R599	RD-AZ221J-79TD0111	R CARBON FILM	1/6 220 OHM J
R602	RD-AZ391J-79TD0179	R CARBON FILM	1/6 390 OHM J
R603	RD-AZ391J-79TD0179	R CARBON FILM	1/6 390 OHM J
R604	RD-AZ512J-79TD0749	R CARBON FILM	1/6 5.1K OHM J
R607	RD-AZ512J-79TD0749	R CARBON FILM	1/6 5.1K OHM J

LOC.	PART-CODE	PART-NAME	PART-DESC.
R608	RD-AZ512J-79TD0749	R CARBON FILM	1/6 5.1K OHM J
R609	RD-AZ273J-79TD0124	R CARBON FILM	1/6 27K OHM J
R610	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
R614	RD-AZ750J-79TD0883	R CARBON FILM	1/6 75 OHM J
R615	RD-AZ750J-79TD0883	R CARBON FILM	1/6 75 OHM J
R618	RD-AZ470J-	R CARBON FILM	1/6 47 OHM J
R619	RD-AZ470J-	R CARBON FILM	1/6 47 OHM J
R801	RC-2Z565K0	R CARBON COMP	1/2 5.6M OHM K
R802	RC-2Z565K0	R CARBON COMP	1/2 5.6M OHM K
R804	RD-4Z394JS	R CARBON FILM	1/4 390K OHM J SMALL
R805	RD-4Z394JS	R CARBON FILM	1/4 390K OHM J SMALL
R806	RD-AZ273J-79TD0124	R CARBON FILM	1/6 27K OHM J
R809	RD-2Z820JS	R CARBON FILM	1/2 82 OHM J SMALL
R810	RD-2Z820JS	R CARBON FILM	1/2 82 OHM J SMALL
R811	RD-AZ681J-79TD0922	R CARBON FILM	1/6 680 OHM J
R821	RD-4Z360JS	R CARBON FILM	1/4 36 OHM J SMALL
R822	RD-AZ182G-	R CARBON FILM	1/6 1.8K OHM G
R823	RD-AZ680J-	R CARBON FILM	1/6 68 OHM J
R824	RD-AZ470G-	R CARBON FILM	1/6 47 OHM G
R825	RD-AZ132G-	R CARBON FILM	1/6 1.3K OHM G
R827	RD-AZ201J-79TD0894	R CARBON FILM	1/6 200 OHM J
R830	RD-2Z301JS	R CARBON FILM	1/2 300 OHM J SMALL
R832	RD-AZ100J-79TD1959	R CARBON FILM	1/6 10 OHM J
R833	RD-AZ103J-79TD2016	R CARBON FILM	1/6 10K OHM J
U001	97P65221MA	PCB MAIN	330X246X1.6T (K829D)
0014	PVMPJVD579	PCB MAIN J/V ONLY AS	"K829DY-AQ(221MA,HIFI)"
JP002	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP003	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP004	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP005	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP006	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP007	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP008	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP009	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP010	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP011	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP014	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP015	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP016	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP017	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP018	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP019	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING

ELECTRICAL PARTS LIST

LOC.	PART-CODE	PART-NAME	PART-DESC.
JP570	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP571	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP572	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP573	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP574	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP575	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP577	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP582	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP583	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP590	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP598	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
0PA15	PVNC SWS078	PCB NICAM MANUAL AS	"K829SY-AQ(B241000,M-IN)"
AM01	2193102005	SOLDER BAR	SN:PB-63:37 S63S-1320
AM02	2193011100	SOLDER WIRE	60 SNA 1.2D
AM03	2291050305	FLUX LIQUID	RF-800KN
AM04	2291050306	THINNER	RF-800ADD
IC051	1MSP3415D-	IC NICAM	MSP3415D
P051	97P6285000	CONN WAFER	YFAW025-115 ANGLE 3.5X4.5
X051	5XE18R4LBE	CRYSTAL QUARTZ	HC-49/U 18.432MHZ 30PPM
0021	PVNCJRD579	PCB NICAM RADIAL AS	K829DY-AQ(97PC315200)
C052	CXCH1H209C	C CERA	50V CH 2PF C
C053	CXCH1H209C	C CERA	50V CH 2PF C
C055	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C057	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C059	CEXF1H339A	C ELECTRO	50V RSM 3.3MF 4X7
C061	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7

LOC.	PART-CODE	PART-NAME	PART-DESC.
C063	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C064	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C065	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
C066	CEXF1C100A 79TD0561	C ELECTRO	16V RSM 10MF 4X7
L051	5CPX101J2T	COIL PEAKING	100UH(BRN-BRN)
L052	5CPX101J2T	COIL PEAKING	100UH(BRN-BRN)
L053	5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
0022	PVNCJAD579	PCB NICAM AXIAL AS	K829DY-AQ(97PA497100)
AM31	2TM1456000	TAPE MASKING	SI-602
AM31A	2TM110620R	TAPE MASKING	SI-600N RED
AM31B	2TM1106200	TAPE MASKING	SI-600N
C051	CZSL1H390J	C CERA	50V SL 39PF J
C054	CBZP1C103M 421C3461	C CERA SEMI	16V Y5S 0.01MF M
C056	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C058	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C060	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C062	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C067	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
D051	DZN4148---	DIODE	1N4148 AUTO 52MM
JP03	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
R051	RD-AZ101J- 79TD0106	R CARBON FILM	1/6 100 OHM J
R052	RD-AZ101J- 79TD0106	R CARBON FILM	1/6 100 OHM J
U101	97P65221NA	PCB NICAM	247X197X1.6T/9 (K829D)

2. TABLE OF DIFFERENT PART LIST FOR PCB MAIN AS

2-1. HI-FI OPTION

LOC.	MONO			HIFI		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
0PA15				PVNCWS078	PCB NICAM MANUAL AS	K829SY-AQ
B001	97P0720300	BOARD ANT	HI-PS(HB)	97P0720400	BOARD ANT	HI-PS(HB)
B001A				7175300812	SCREW TAPPTITE	TT2 FLT 3X8 MFSN BK
C016				HCBK332KCA	C CHIP CERA	50V X7R 3300PF K 2012
C017				HCBK332KCA	C CHIP CERA	50V X7R 3300PF K 2012
C239				HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C251				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C252				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C253				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C254				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C255				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C256				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C257				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C258				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C259				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C260				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C261				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C262				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C263	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP			
C264				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C267				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C268				HCBK682KCA	C CHIP CERA	50V X7R 6800PF K 2012
C269				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
C270				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C271				CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP
C272				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C273				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
C274				HCBK682KCA	C CHIP CERA	50V X7R 6800PF K 2012
C275				CEXF1C100A	C ELECTRO	16V RSM 10MF 4X7
C276				HCTAF339MB	C CHIP TANTAL	16V 3.3MF M 3216
C277				HCTDG330MC	C CHIP TANTAL	20V 33MF M 6032
C278				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C279				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C280				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
C281				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C282				HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C293				HCLK821JCA	C CHIP CERA	50V SL 820PF J 2012
C294				HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C295				HCBK153KCA	C CHIP CERA	50V X7R 0.015MF K 2012
C296				HCBK153KCA	C CHIP CERA	50V X7R 0.015MF K 2012
C317				CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C351	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z			
C601	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012			
C602	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z			
∅603	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012			

ELECTRICAL PARTS LIST

LOC.	MONO			HI-FI		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
C613				CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M
C616				HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
C624	HCBF224KCA	C CHIP CERA	16V X7R 0.22MF K 2012			
C625				HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C626				CCZB1H331K	C CERA	50V B 330PF K
C634				HCBK330JCA	C CHIP CERA	50V CH 33PF J 2012
C635				HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
CQ01				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ02				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ03				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ04				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ05				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
CQ06				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
CQ07				CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
CQ08	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP			
CQ11				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CQ12				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CQ13				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
CQ14				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
D506				DZN4148---	DIODE	1N4148 AUTO 52MM
D508				DZN4148---	DIODE	1N4148 AUTO 52MM
D509				DZN4148---	DIODE	1N4148 AUTO 52MM
D610				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D613				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D614				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D615				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D616				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D617				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D618				DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D619				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D621				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D622				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D626				DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
H502	DK429D----	LED DISPLAY	K429D-ODM-HT22	DK829D----	LED DISPLAY	K829D-ODM-HT22
IC251				1TDA9605H-	IC HI-FI	TDA9605H
ICQ01				1QX2010---	IC AUDIO(Q SOUND)	QX2010(MM1326)
JK605				97P6314900	JACK PIN	DPAM-9825
JK606				97P6314400	JACK PIN	DPAZ-9723
JP040				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP180				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP501	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP503	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP504	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP509	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP512				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP513				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP515	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP522	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP524	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			

ELECTRICAL PARTS LIST

LOC.	MONO			HIFI		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
JP535	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP536				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP538				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP540				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP541				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP542				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP543				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP544				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP546				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP549				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP550				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP551				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP552				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP553				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP562				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP563				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP566				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP568				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP574				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP577				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP590				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
L250				5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L602				5CPZ229K02	COIL PEAKING	2.2UH K (AXIAL 3.5MM)
L604				5CPZ229K02	COIL PEAKING	2.2UH K (AXIAL 3.5MM)
L611				HLX1210001	BEAD CHIP	TB201209Z121
L612				5CPZ229K02	COIL PEAKING	2.2UH K (AXIAL 3.5MM)
L613				5CPZ229K02	COIL PEAKING	2.2UH K (AXIAL 3.5MM)
P401	97P62G06D7	CONN HOUSING	GF120 FPC 1.25MM 7P	97P62G06DA	CONN HOUSING	GF120 FPC 1.25MM 10P
PA015				97N1CAM---	PCB NICAM	PVNCSW----
R236	85801060TA	WIRE COPPER	0.6X52MM TAPING			
R237	RD-AZ333J-	R CARBON FILM	1/6 33K OHM J			
R240				HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R241				HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R251				HRFT335JCA	R CHIP	1/10 3.3M J 2012
R252				HRFT333JCA	R CHIP	1/10 33K OHM J 2012
R253				HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
R254				RD-AZ393G-	R CARBON FILM	1/6 39K OHM G
R255				RD-AZ272J-	R CARBON FILM	1/6 2.7K OHM J
R256				HRFT333JCA	R CHIP	1/10 33K OHM J 2012
R257				HRFT471JCA	R CHIP	1/10 470 OHM J 2012
R258				RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R259				HRFT183JCA	R CHIP	1/10 18K OHM J 2012
R260				HRFT333JCA	R CHIP	1/10 33K OHM J 2012
R270				HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R271				RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R272				RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R273				RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R274				RD-AZ821J-	R CARBON FILM	1/6 820 OHM J
R275				RD-AZ821J-	R CARBON FILM	1/6 820 OHM J

ELECTRICAL PARTS LIST

LOC.	MONO			HIFI		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
R276				RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R277				RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R556				RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R599				RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R613				HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RJ25	HRF8000-EA	R CHIP	1/8 0 OHM 3216			
RJ81	HRFT000-CA	R CHIP	1/10 0 OHM 2012			
RJ82	HRFT000-CA	R CHIP	1/10 0 OHM 2012			
RJ85				HRFT000-CA	R CHIP	1/10 0 OHM 2012
RJ96	HRFT000-CA	R CHIP	1/10 0 OHM 2012			
RQ03				HRFT124JCA	R CHIP	1/10 120K OHM J 2012
RQ06				HRFT164JCA	R CHIP	1/10 160K OHM J 2012
RQ07				RD-AZ124J-	R CARBON FILM	1/6 120K OHM J
RQ08				HRFT154JCA	R CHIP	1/10 150K OHM J 2012
RQ09				HRFT124JCA	R CHIP	1/10 120K OHM J 2012
RQ10				HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RQ11				HRFT154JCA	R CHIP	1/10 150K OHM J 2012
RQ12				HRFT124JCA	R CHIP	1/10 120K OHM J 2012

ELECTRICAL PARTS LIST

2-2. SECAM OPTION

LOC.	PAL			SECAM		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
C307	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012			
C347				CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M
C361				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C362				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C363				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
C364				HCLK150JCA	C CHIP CERA	50V SL 15PF J 2012
C365				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C366				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
C367				HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C368				HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
C369				CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP
C370				HCFK333ZCA	C CHIP CERA	Y5V 50V 0.033MF Z 2012
C371				CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M
C375				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C376				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
C377				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C378				CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C379				HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
C380				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C381				CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C382				HCBK473KCA	C CHIP CERA	50V X7R 0.047MF K 2012
C383				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C384	HRFT000-CA	R CHIP	1/10 0 OHM 2012	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C385				CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
D513	DZN4148---	DIODE	1N4148 AUTO 52MM			
D514	DZN4148---	DIODE	1N4148 AUTO 52MM			
D522				DZN4148---	DIODE	1N4148 AUTO 52MM
IC361				1TA1238N--	IC SECAM.L	TA1238N
IC501	168KK8ZWTS	IC MICOM	M3777DM8A-1A0GP	168KK8ZXTS	IC MICOM	M3777DM8A-1A1GP
JP545				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP555				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP556				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP557				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP558				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP576				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP579				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP580				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP581				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP591				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP592				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP593				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP594				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP595				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP596				85801060TA	WIRE COPPER	0.6X52MM TAPING
L361				5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
L362				5CPX100J2T	COIL PEAKING	10UH(BRN-BLK)
Q362				TZRC104M--	TR	KRC104M AUTO

ELECTRICAL PARTS LIST

LOC.	PAL			SECAM		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
Q363				TZTA1266Y-	TR	KTA1266Y- (AUTO)(1015Y)
Q364				TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q365				TZRC102M--	TR	KRC102M(KEC)
Q366				T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q377				T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q378				TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q379				T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q380				T2SC2412KB	TR CHIP	2SC2412K-T146-BR
Q381				TZTC3198Y-	TR	KTC3198Y-(1815Y) (AUTO)
Q383				TZRC104M--	TR	KRC104M AUTO
Q384				TZRC104M--	TR	KRC104M AUTO
Q392				T2SC2412KB	TR CHIP	2SC2412K-T146-BR
R007				HRFT223JCA	R CHIP	1/10 22K OHM J 2012
R008				HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R326				HRFT225JCA	R CHIP	1/10 2.2M OHM J 2012
R361				RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R362				RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R363				RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R364				RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R365				HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R366				RD-AZ241J-	R CARBON FILM	1/6 240 OHM J
R367				HRFT751JCA	R CHIP	1/10 750 OHM J 2012
R371				RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R372				RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R373				HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R374				HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R375				HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R376				RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
R377				HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R378				HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R379				HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R380				HRFT151JCA	R CHIP	1/10 150 OHM J 2012
R381				HRFT151JCA	R CHIP	1/10 150 OHM J 2012
R382				HRFT302JCA	R CHIP	1/10 3K OHM J 2012
R383				HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
R384				HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012
R385				HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R386				HRFT202JCA	R CHIP	1/10 2K OHM J 2012
R387				HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R388				HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R389				HRFT102JCA	R CHIP	1/10 1K OHM J 2012
R390				RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R589				HRFT473JCA	R CHIP	1/10 47K OHM J 2012
R590				HRFT393JCA	R CHIP	1/10 39K OHM J 2012
RF101	97P7611100	TUNER 3 IN 1	LGTM-BGQ1-S	97P7611700	TUNER 3 IN 1	LGTM-SLQ2-S
RJ92	HRFT000-CA	R CHIP	1/10 0 OHM 2012			
X361				5XJ4R286UC	CRYSTAL QUARTZ	HC-49/S 4.286000MHZ 20PPM
Z361				5PDEQ0484-	FILTER LC	DELAY EQ 400NS

ELECTRICAL PARTS LIST

2-3. PDC/VPS OPTION

LOC.	BASIC			PDC/VPS		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
X151				5XJ17R7LAD	CRYSTAL QUARTZ	HC-49/S 17.73447MHZ 25PPM
C153				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
C154				HCTAF109MB	C CHIP TANTAL	16V 1MF M 3216
C155				HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
C156				HCQK120JCA	C CHIP CERA	50V CH 12PF J 2012
C157				HCBK563KCA	C CHIP CERA	50V X7R 0.056MF K 2012
C159				HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
IC151				1LC74793--	IC VPS(PDC)	LC74793
R152				HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R153				HRFT562JCA	R CHIP	1/10 5.6K OHM J 2012
R154				HRFT103JCA	R CHIP	1/10 10K OHM J 2012
R155				HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
C151				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
C152				CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C158				CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
D504				DZN4148---	DIODE	1N4148 AUTO 52MM
R151				85801060TA	WIRE COPPER	0.6X52MM TAPING
JP570				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP571				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP572				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP573				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP598				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING

ELECTRICAL PARTS LIST

2-4. QSOUND OPTION

LOC.	BASIC			QSOUND		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
CQ01				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ02				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ03				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ04				HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CQ05				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
CQ06				CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP
CQ07				CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7
CQ08	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP			
CQ11				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CQ12				HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CQ13				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
CQ14				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
D508				DZN4148---	DIODE	1N4148 AUTO 52MM
ICQ01				1QX2010---	IC AUDIO(Q SOUND)	QX2010(MM1326)
JP511	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP538				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP539				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP540				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP566				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
R270				HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
R271				RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R556				RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
RJ22	HRF8000-EA	R CHIP	1/8 0 OHM 3216			
RQ03				HRFT124JCA	R CHIP	1/10 120K OHM J 2012
RQ06				HRFT164JCA	R CHIP	1/10 160K OHM J 2012
RQ07				RD-AZ124J-	R CARBON FILM	1/6 120K OHM J
RQ08				HRFT154JCA	R CHIP	1/10 150K OHM J 2012
RQ09				HRFT124JCA	R CHIP	1/10 120K OHM J 2012
RQ10				HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RQ11				HRFT154JCA	R CHIP	1/10 150K OHM J 2012
RQ12				HRFT124JCA	R CHIP	1/10 120K OHM J 2012

ELECTRICAL PARTS LIST

2-5. FRONT AV OPTION

LOC.	BASIC			FRONT AV		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
C239				HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C257				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C258				HCFK474ZCA	C CHIP CERA	Y5V 50V 0.47MF Z 2012
C282				HCLK331JCA	C CHIP CERA	50V SL 330PF J 2012
C317				CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP
C351	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z			
C634				HCBK330JCA	C CHIP CERA	50V CH 33PF J 2012
C634				HCBK330JCA	C CHIP CERA	50V CH 33PF J 2012
C635				HCLK101JCA	C CHIP CERA	50V SL 100PF J 2012
D509				DZN4148---	DIODE	1N4148 AUTO 52MM
D614				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D615				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D616				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D617				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
D618				DZUZ13BSB-	DIODE ZENER	UZ-13BSB(12.59-13.16V)
D619				DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)
JK606				97P6314400	JACK PIN	DPAZ-9723
JP536				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP541				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP542				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP550				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP551				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP562				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP563				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP574				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP577				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
L611				HLX1210001	BEAD CHIP	TB201209Z121
L612				5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
L613				5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)
R240				HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R241				HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
R613				HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RJ85				HRFT000-CA	R CHIP	1/10 0 OHM 2012

2-6. 2HD OPTION

LOC.	4HD			2HD		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
C409	CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M			
C410	CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M			
C411	CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M	85801060TA	WIRE COPPER	0.6X52MM TAPING
C412	CBZP1C103M	C CERA SEMI	16V Y5S 0.01MF M	85801060TA	WIRE COPPER	0.6X52MM TAPING
C416				HCBK103KCA	C CHIP	50V X7R 0.01MF K 2012
C417				85801060TA	C CHIP	50V X7R 0.01MF K 2012
P401	97P62G06D7	CONN HOUSING	GF120 FPC 1.25MM 7P	97P62G06D4	CONN HOUSING	GF120 FPC 1.25MM 4P

ELECTRICAL PARTS LIST

2-7. 1 PERI OPTION

LOC.	2PERI			1PERI		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
B001	97P0720300	BOARD ANT	HI-PS(HB)	97P0720200	BOARD ANT	HI-PS(HB)
C211				CCZF1H104Z	C CERA	50V HIKF 0.1MF Z
C224	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z			
C263	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP			
C601	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012			
C602	CCZF1H104Z	C CERA	50V HIKF 0.1MF Z	85801060TA	WIRE COPPER	0.6X52MM TAPING
C603	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012			
C608	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP			
C610	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP			
C611	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP			
C612	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012	HRFT000-CA	R CHIP	1/10 0 OHM 2012
C614	CCZB1H331K	C CERA	50V B 330PF K			
C619	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP			
C620	CEXF1A471V	C ELECTRO	10V RSS 470MF 8X11.5			
C622	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP			
C624	HCBF224KCA	C CHIP CERA	16V X7R 0.22MF K 2012	HRFT000-CA	R CHIP	1/10 0 OHM 2012
D505				DZN4148---	DIODE	1N4148 AUTO 52MM
D603	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)			
D604	DZUZ5R6BSB	DIODE ZENER	UZ-5.6BSB(5.46-5.70V)			
IC601	1LA7148M--	IC A/V SW	LA7148M			
JK601	97P6313300	JACK DOUBLE SCART	DSAM-9621			
JK602				97P6313400	JACK SCART	DSAM-9622
JP002	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP011	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP024	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP078	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP089	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP176	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP504	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP506	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP507	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP508	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP509	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP510	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP515	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP519	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP521				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP522	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP523	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP524	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP525	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP526	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP528				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP531	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP532	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP559	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			

ELECTRICAL PARTS LIST

LOC.	2PERI			1PERI		
	PART-CODE	PART-NAME	PART-DESC.	PART-CODE	PART-NAME	PART-DESC.
JP560	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING			
JP586				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JP597				85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
L601	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	85801060TA	WIRE COPPER	0.6X52MM TAPING
L606	5CPZ229K02	COIL PEAKING	2.2UH K(AXIAL 3.5MM)			
L608	HLX1210001	BEAD CHIP	TB201209Z121			
Q604	TZRC102M--	TR	KRC 102M(KEC)			
R236	85801060TA	WIRE COPPER	0.6X52MM TAPING	RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R607	RD-AZ512J-	R CARBON FILM	1/6 5.1K OHM J			
R608	RD-AZ512J-	R CARBON FILM	1/6 5.1K OHM J			
R609	RD-AZ273J-	R CARBON FILM	1/6 27K OHM J			
R610	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J			
R611	HRFT750JCA	R CHIP	1/10 75 OHM J 2012			
R616	HRFT151JCA	R CHIP	1/10 150 OHM J 2012			
R617	HRFT151JCA	R CHIP	1/10 150 OHM J 2012			
R618	RD-AZ470J-	R CARBON FILM	1/6 47 OHM J			
RJ25	HRF8000-EA	R CHIP	1/8 0 OHM 3216			
RJ26				HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ38				HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ39				HRF8000-EA	R CHIP	1/8 0 OHM 3216
RJ82	HRFT000-CA	R CHIP	1/10 0 OHM 2012			

Service Manual

VCR MECHANISM UNIT

(K30-MECHA DECK)

CONTENTS

1. MECHANISM DESCRIPTION	2
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4. MECHANICAL ADJUSTMENT	22
5. ADJUSTMENT OF TAPE TRANSPORTING SYSTEM	27
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1. DESCRIPTION OF THE MECHANISM

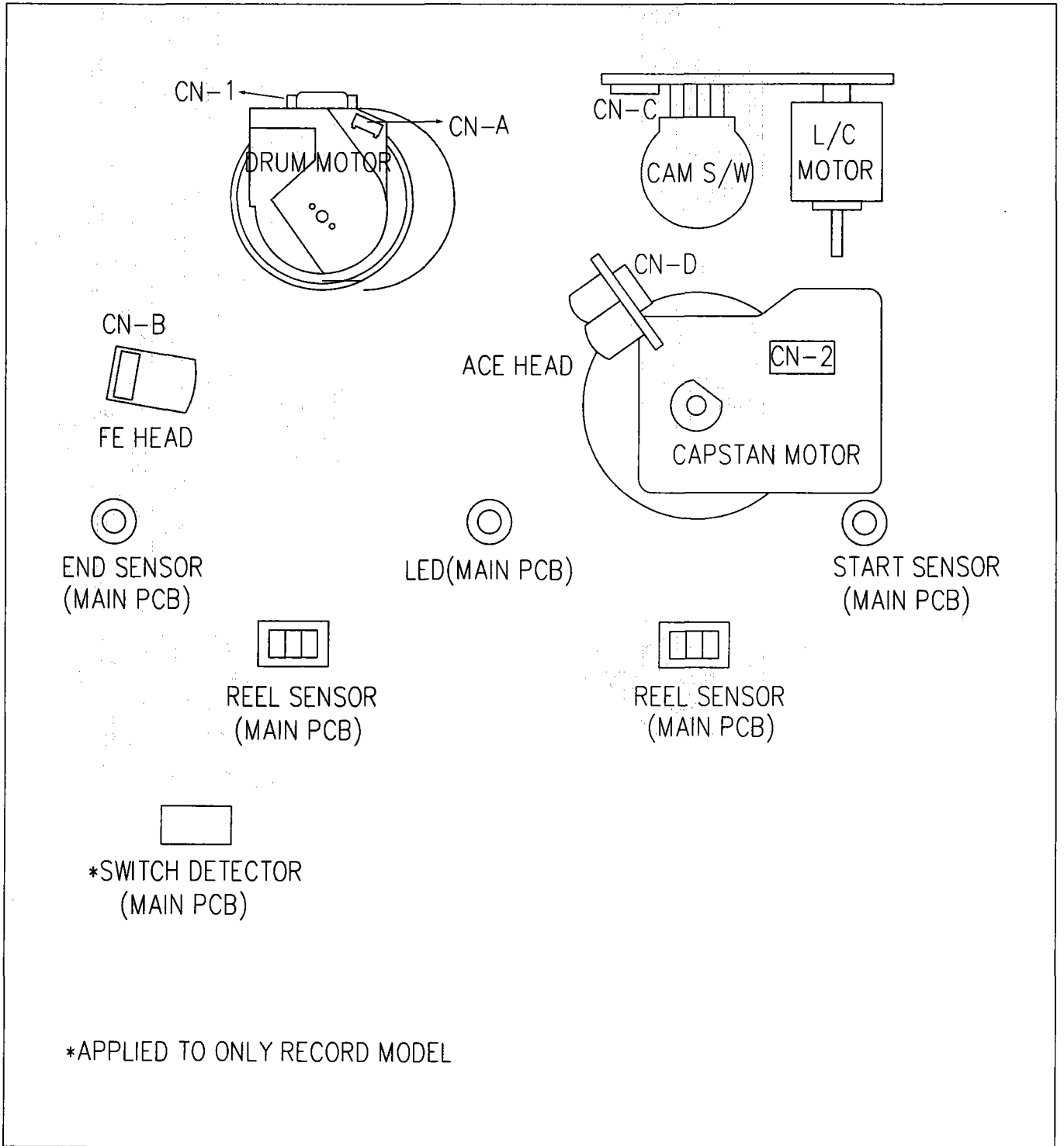
1-1 CHARACTERISTIC OF THE K30-DECK MECHANISM

- 1) K30-MECHA DECK follows the VHS standard.
- 2) K30-MECHA DECK uses three motors (DRUM MOTOR, CAPSTAN MOTOR and L/C MOTOR)
- 3) K30-MECHA DECK uses L/C MOTOR to drive FRONT LOADING.
- 4) K30-MECHA DECK recognizes each mode by using a 4-BIT MODE signal. This 4-BIT MODE signal is generated by the CAM SWITCH which is driven by the L/C MOTOR.
- 5) K30-MECHA DECK is operated by 7 MODES (EJECT/INITIAL/REV/IDLE/PLAY, STOP, SLOW/BRAKE/FF & REW).
- 6) K30-MECHA DECK reduces the mode shifting time, that is, picture playing time by using the FULL LOADING SYSTEM that has the DRUM wrapped by the tape.
- 7) K30-MECHA DECK is seperated from the Main PCB. When assembling, it is connected by B-B TYPE CONNECTOR.

The CAPSTAN MOTOR and DRUM OUTPUT of K30-MECHA DECK and the MAIN PCB DECK are directly connected without using cable.

1-2 WIRE DIAGRAM

1-2-1) WIRE DIAGRAM



1-2-2) CONNECTOR PIN ARRANGEMENT

CN-1 (2 HEAD MONO)

1	SP-L
2	COMMON
3	SP-R
4	GND

CN-A

1	GND
2	DRUM SPD CTL
3	Vcc
4	DRUM FG
5	DRUM PG
6	NON CONNECT
7	NON CONNECT

CN-B

1	FE HEAD
2	GND

CN-1 (4 HEAD MONO)

1	SP-L
2	COMMON
3	SP-R
4	GND
5	EP-R
6	COMMON
7	EP-L

CN-C

1	L/C MT (+)
2	L/C MT (-)
3	GND
4	CAM D
5	CAM C
6	CAM B
7	CAM A

CN-2

1	EVER 5V
2	CAPSTAN F/R
3	CAPSTAN FG
4	CTL-REF
5	CTL
6	I-LIMIT
7	CAPSTAN M/T 12V/18V
8	GND
9	IC GND
10	NON CONTACT

CN-1 (4 HEAD HI-FI)

1	A-L
2	COMMON
3	A-R
4	SP-L
5	COMMON
6	SP-R
7	GND
8	EP-R
9	COMMON
10	EP-L

CN-D

1	CTL
2	CTL
3	AUDIO
4	AUDIO
5	ERASE
6	GND

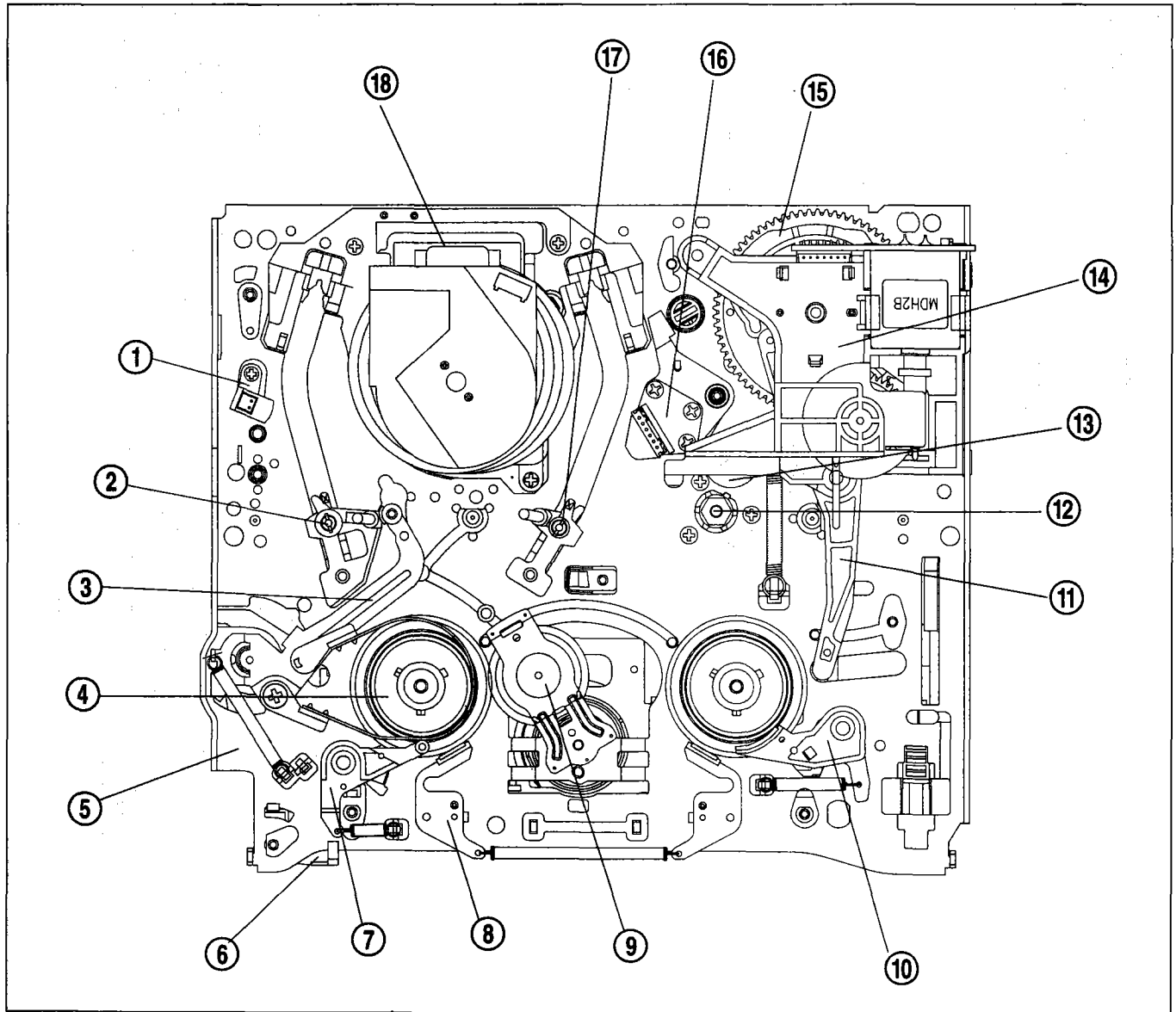
* Capstan M/T Voltage of No.7 is 12V for normal model and 18V for HI-REW model.

2. ASSEMBLY DIAGRAM & MAJOR PARTS CHECK

2-1. ASSEMBLING DIAGRAM

2-1-1) ASSEMBLING DIAGRAM OF DECK ASS'Y

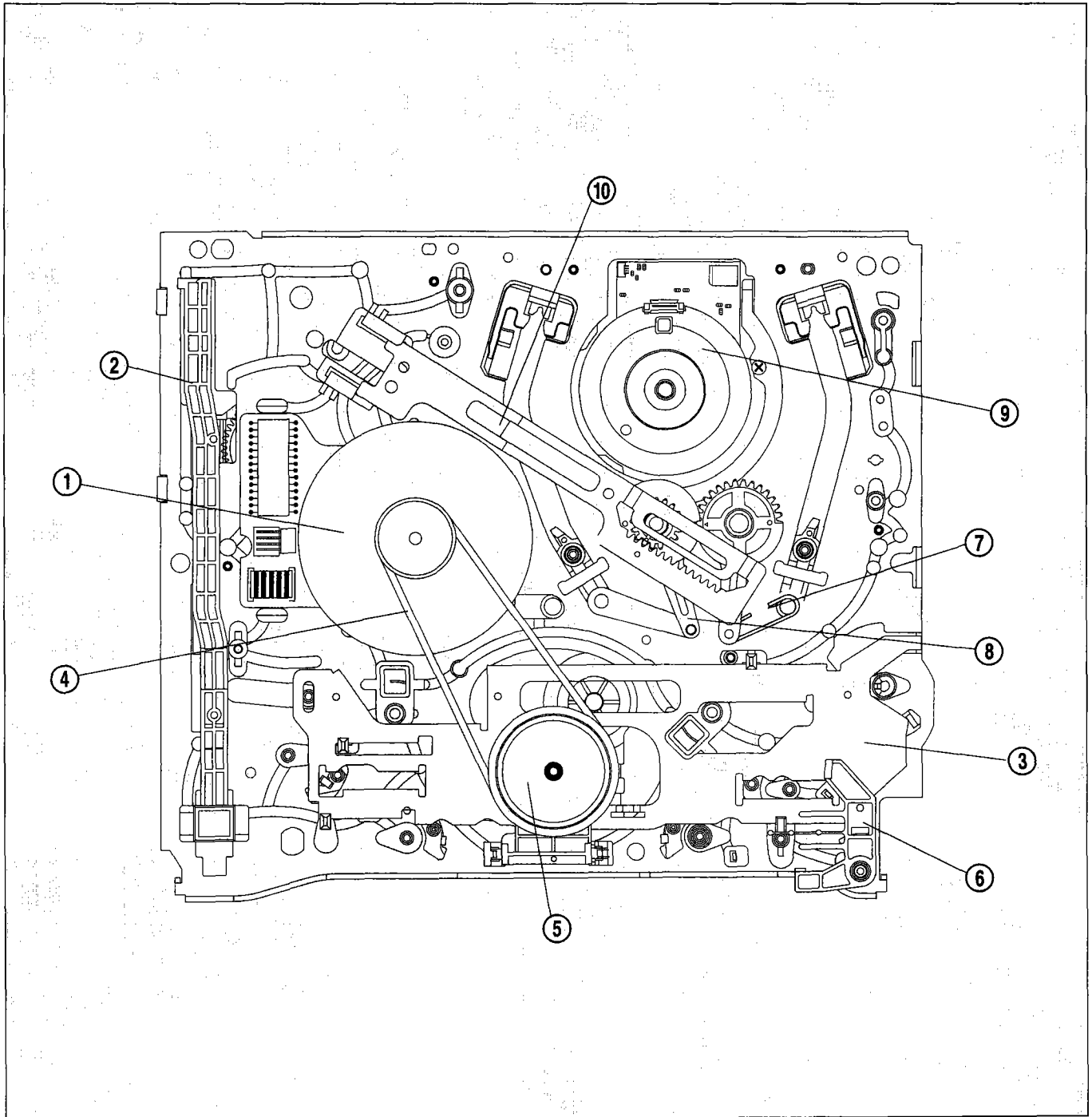
A. TOP VIEW



1. FE HEAD
2. S SLANT POLE ASS'Y
3. TENSION BAND ASS'Y
4. REEL TABLE
5. MAIN BASE ASS'Y
6. RECORD SAFETY LEVER
7. S SUB BRAKE ASS'Y
8. S, T MAIN BRAKE ASS'Y
9. IDLER PLATE TOTAL ASS'Y

10. T-SUB BRAKE ASS'Y
11. RELAY LEVER
12. CAPSTAN MOTOR
13. PINCH LEVER TOTAL ASS'Y
14. L/C BRKT TOTAL ASS'Y
15. CAM GEAR
16. A/C HEAD TOTAL ASS'Y
17. T SLANT POLE ASS'Y
18. DRUM TOTAL ASS'Y

B. BOTTOM VIEW

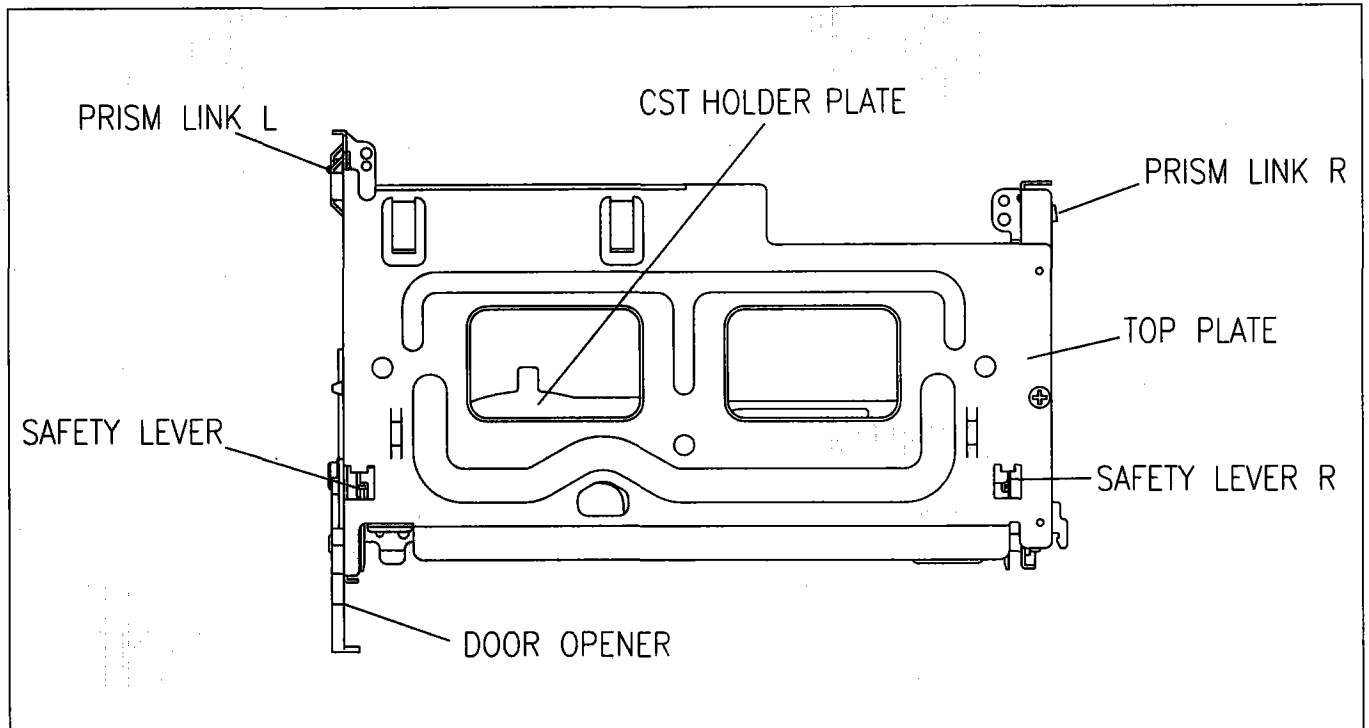


1. CAPSTAN MOTOR
2. F/L RACK
3. CONNECT PLATE
4. REEL BELT
5. REEL GEAR TOTAL ASS'Y

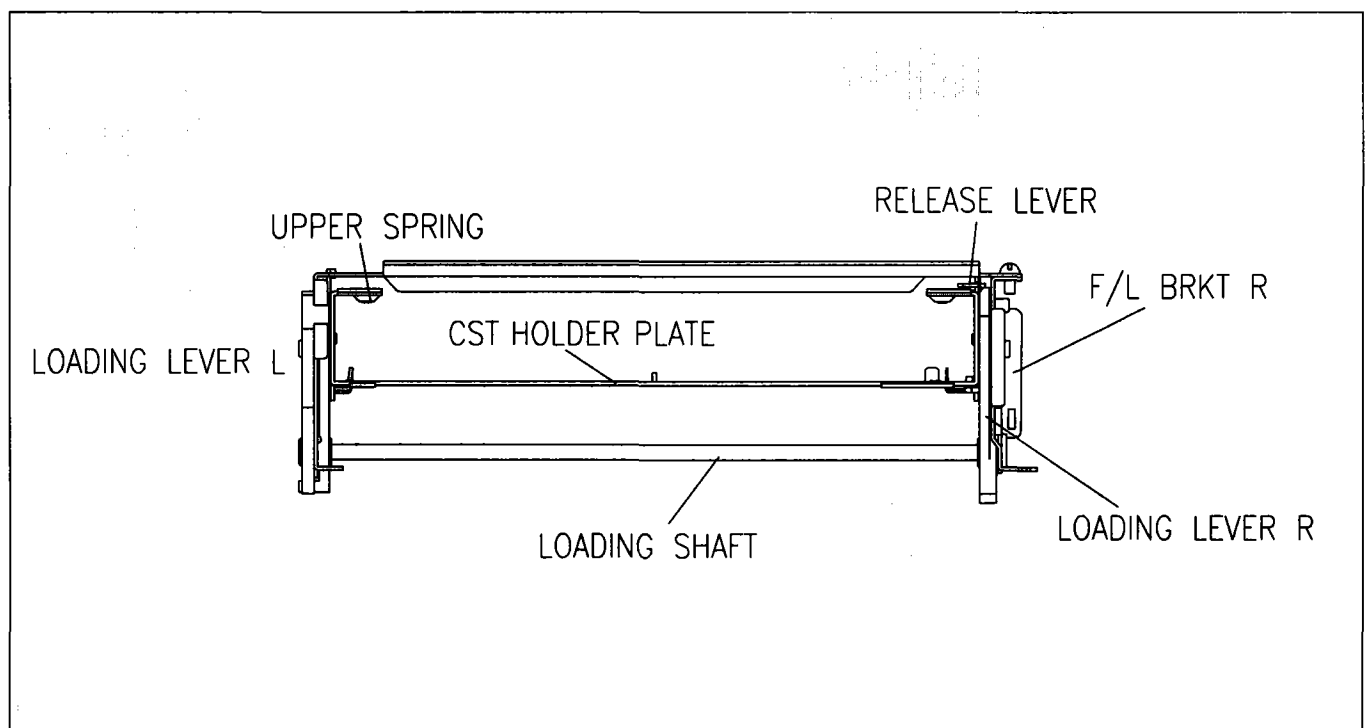
6. RECORD SAFETY LEVER
7. L LOADING ASS'Y
8. R LOADING ASS'Y
9. DRUM TOTAL ASS'Y
10. LOADING RACK ASS'Y

2-1-2) PARTS LOCATION OF FRONT LOADING ASS'Y

A. TOP VIEW



B. FRONT VIEW



2-2. PERIODIC MAINTENANCE AND SERVICE SCHEDULE

2-2-1) PERIODIC MAINTENANCE AND SERVICE SCHEDULE

- A. In order to effectively maintain the excellent performance and fully utilize the features of this apparatus, and to lengthen the life of the mechanism and tapes, we strongly urge you to perform periodic maintenance and inspection, as described below.
- ※ After repairing, do the maintenance described below, irrespective of the length of time in use.
- B. Cleaning of the Head Drum Ass'y
- Clean the Drum assembly with a cleaning cloth soaked in liquid cleaner (alcohol) by placing lightly against the Drum and slowly revolving the rotating HEAD DRUM Ass'y by hand (Do not rotate the upper Drum by applying electric power to the motor when cleaning).
 - Do not move the cleaning cloth in the vertical direction against the heat-tip.
- C. Cleaning the tape transporting section.
- Clean the tape transporting parts with a cleaning cloth soaked in alcohol.
- D. Cleaning of driving section
- Clean the driving section with a cloth soaked in alcohol.
- E. Routine inspection
- Perform maintenance and inspection as separately described depending on the period of time in use.
 - Refer to the table of 2-2-3.

2-2-2) CLEANING AND LUBRICATION

A. Cleaning of Tape Transporting section and Driving section

a. Cleaning of Tape Transporting section

— The following parts should be cleaned after every 500 hours of use.

- | | | |
|------------------|-------------------|-------------------|
| • TENSION POLE | • S SLANT POLE | • AC HEAD/AE HEAD |
| • S GUIDE POST | • VIDEO HEAD/DRUM | • T GUIDE POST |
| • FE HEAD | • T SLANT POLE | • CAPSTAN SHAFT |
| • S GUIDE ROLLER | • T GUIDE ROLLER | • PINCH ROLLER |
| • VERTICAL POST | | |

— As the above parts contact with the video tape, they tend to collect dust particles. If they are stained with dust or foreign substance it has a bad effect on the picture and may lead to damage of the tape.

— After cleaning with alcohol, allow the parts to dry thoroughly before using a cassette tape.

b. Cleaning of Driving section

- | | | |
|--------------|---------------------------|---------------|
| • REEL TABLE | • CAPSTAN FLYWHEEL/PULLEY | • REEL PULLEY |
|--------------|---------------------------|---------------|

B. LUBRICATION

- | | | |
|---------------|---------------------|------------------|
| • S REEL POST | • T REEL TABLE POST | • REEL GEAR POST |
|---------------|---------------------|------------------|

— After cleaning these parts with alcohol, lubricate these with one or two drops of oil.

2-2-3) SERVICE SCHEDULE FOR THE MAJOR PARTS

The following parts should receive periodic service, according to the recommended intervals.

NAME	PERIODIC SERVICE (TIME)				
	1000	2000	3000	4000	5000
DRUM TOTAL ASS'Y	★	⊙	★	⊙	★
CAPSTAN MOTOR		⊙		⊙	
L/C BRKT TOTAL ASS'Y		⊙		⊙	
REEL BELT		⊙		⊙	
IDLER PLATE TOTAL ASS'Y		⊙		⊙	
REEL TABLE			⊙		
T SUB BRAKE ASS'Y		⊙	⊙	⊙	
TENSION BAND ASS'Y		⊙	⊙	⊙	
S, T MAIN BRAKE ASS'Y		⊙		⊙	
PINCH ROLLER ASS'Y		★	⊙	★	
AC HEAD ASS'Y			⊙		
FE HEAD					⊙
REEL GEAR TOTAL ASS'Y		⊙		⊙	

★ : Check and Replace if necessary. ⊙ : Replace

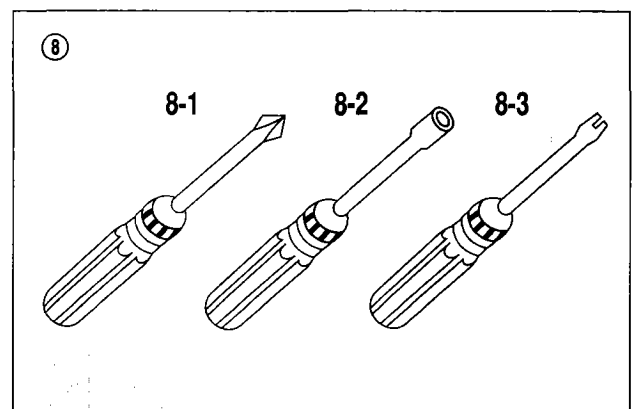
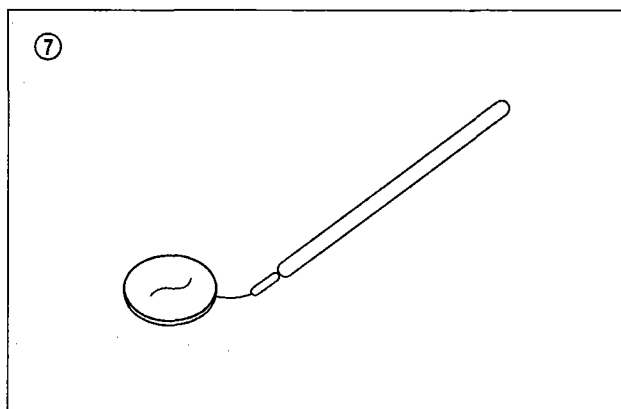
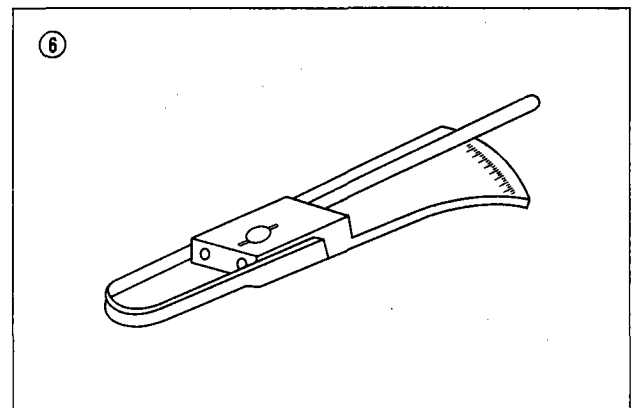
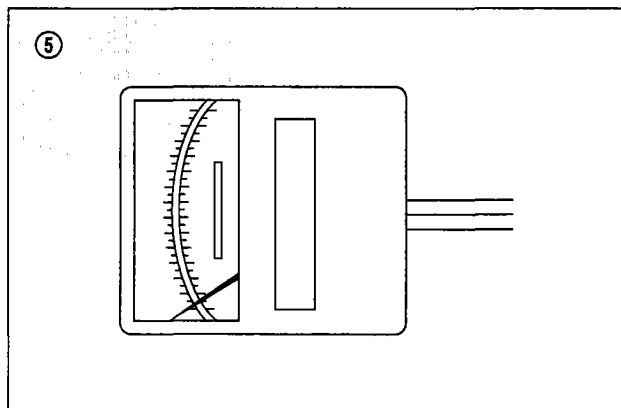
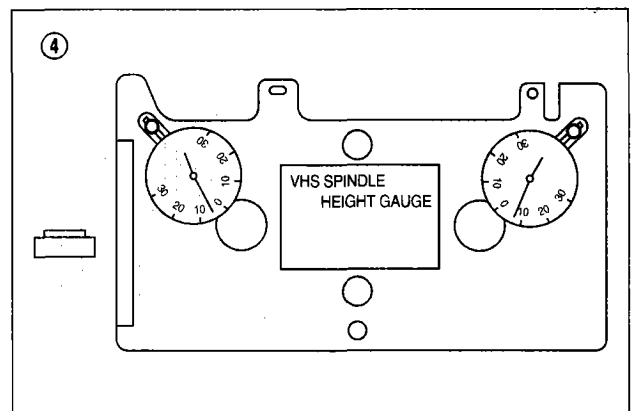
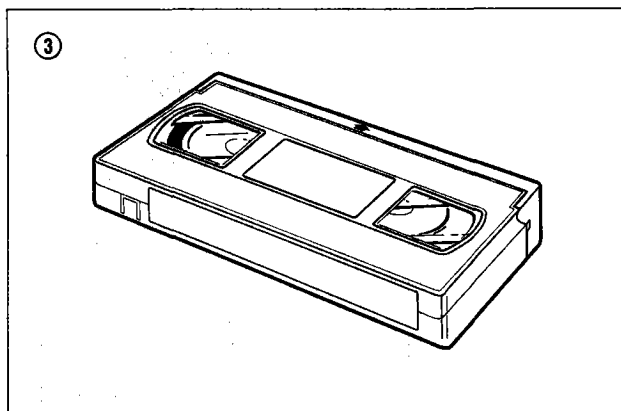
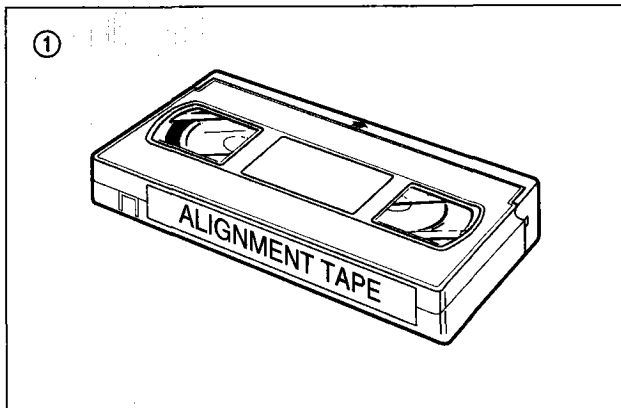
Note: Even though the unit is not used frequently, cleaning, lubrication and replacement of the belt should be undertaken every 2 years.

2-3. JIGS AND TOOLS

2-3-1) LIST OF JIGS AND TOOLS

NO	ITEMS	MODEL	FIG. NO	REMARKS
1	ALIGNMENT TAPE	NTSC: SP MONOSCOPE 7KHz SP COLORBAR 1KHz (EP MONOSCOPE) PAL/SCAM: SP MONOSCOPE 6KHz SP COLORBAR 1KHz (LP MONOSCOPE)	①	CHECKING OF THE TAPE TRANSPORTING SYSTEM
2	CLEANING TAPE (DAEWOO)	DHC-602V	②	CHECKING OF THE TAPE TRANSPORTING SYSTEM
3	CASSETTE TAPE (KOKUSAI)	KT-300NV KT-300RV	②	MEASUREMENT OF REEL TORQUE
4	VHS SPINDLE HEIGHT GAUGE	TSH-V4	④	MEASUREMENT OF REEL HEIGHT
5	TENTELO METER (TENTELO)	T2-H7-UM	⑤	MEASUREMENT OF THE BACK TENSION
6	FAN TYPE TENSION METER	BELOW 3KG	⑥	MEASUREMENT OF THE PRESSING FORCE FOR THE PINCH ROLLER
7	DENTAL MIRROR		⑦	CHECKING OF THE TAPE TRANSPORTING SYSTEM
8	+DRIVER		⑧-1	ASSEMBLY, DISASSEMBLY AND ADJUSTMENT
	HEX DRIVER		⑧-2	
	ADJUSTMENT DRIVER		⑧-3	

2-3-2) SKETCH OF JIGS AND TOOLS



3. DISASSEMBLY AND REPLACEMENT

3-1. FRONT LOADING ASS'Y REMOVAL (See Fig. 3-1)

NOTE:

The FRONT LOADING ASSEMBLY can be removed only in the eject position.

- a. Remove 2 screws ① fixing the Front Loading ASS'Y.
- b. Lift the rear of the front loading assembly to separate it from the Main Base.

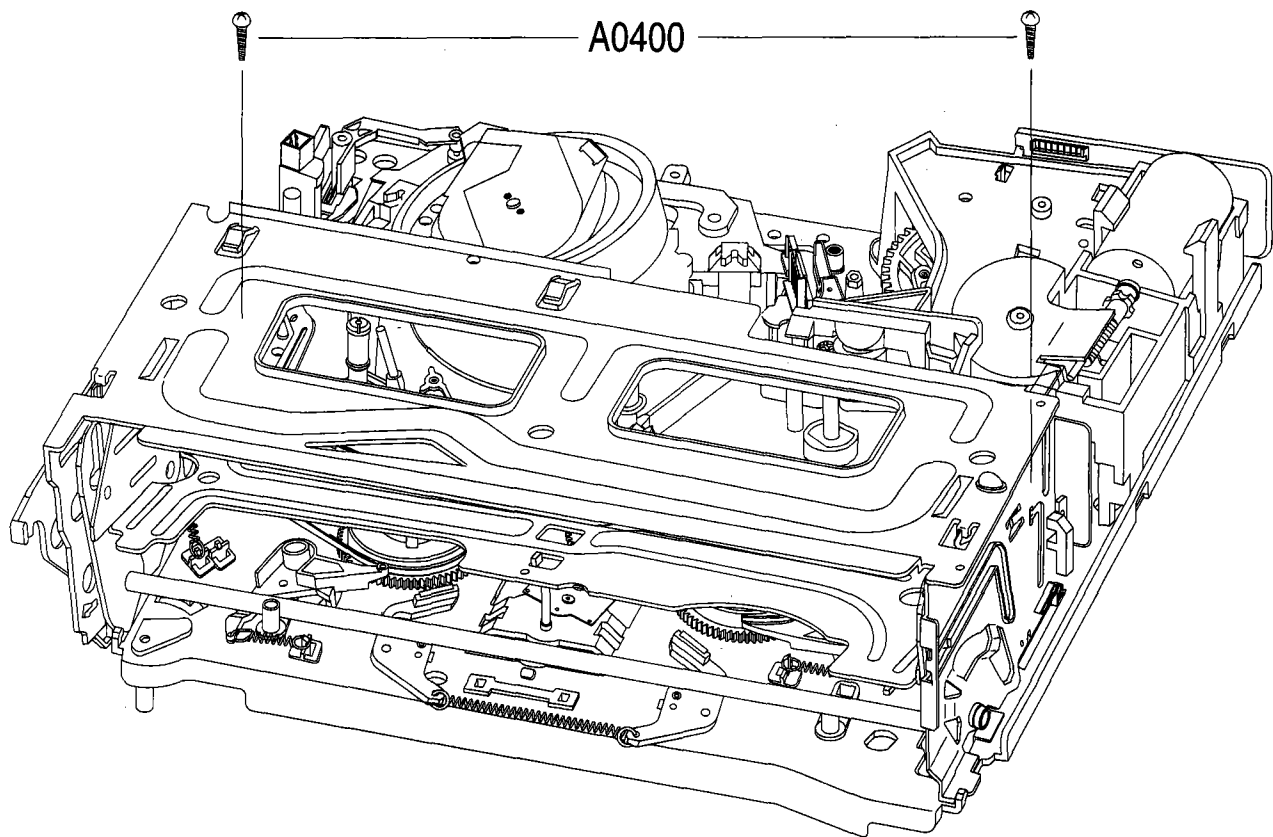


Fig.3-1 FRONT LOADING ASS'Y SEPARATION

3-2. DISASSEMBLY OF THE FRONT LOADING ASS'Y (See Fig. 3-2-3-6)

- a. Remove one screw holding the F/L bracket R and move the F/L bracket R in the direction of arrow to separate it from the top plate and cassette holder assembly.
- b. Remove the cassette holder assembly. (Fig. 3-2)

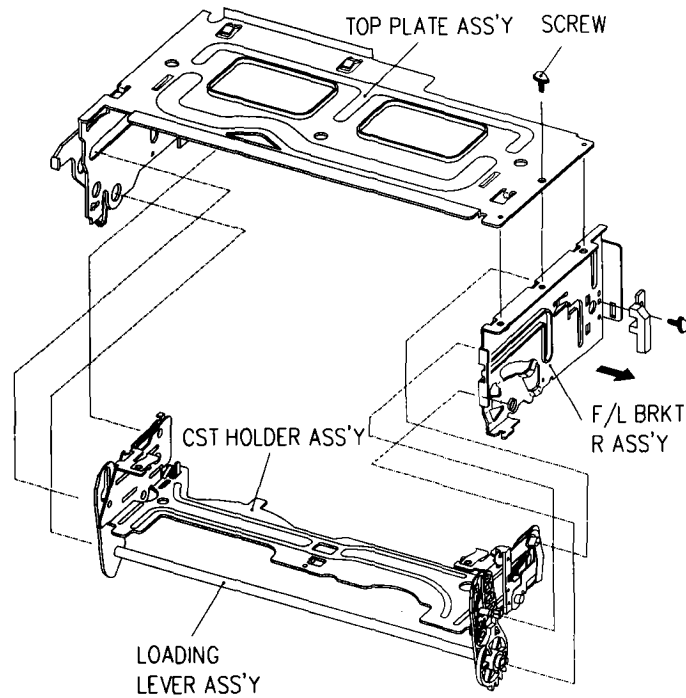


Fig.3-2 DISASSEMBLY OF THE FRONT LOADING ASS'Y

- c. Remove one screw holding the prism link R and remove the prism link R from the F/L bracket R. (Fig. 3-3)

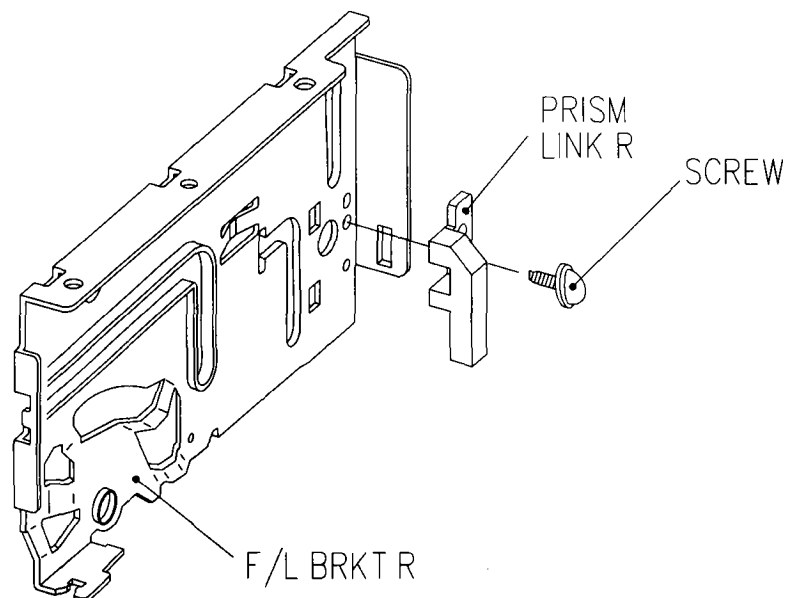


Fig.3-3 DISASSEMBLY OF THE F/L BRKT R

- d. Remove one screw holding the PRISM LINK L. (Fig. 3-4)
- e. Release the hook B by pushing it in the direction of the arrow and remove the DOOR OPENER. (Fig. 3-4)

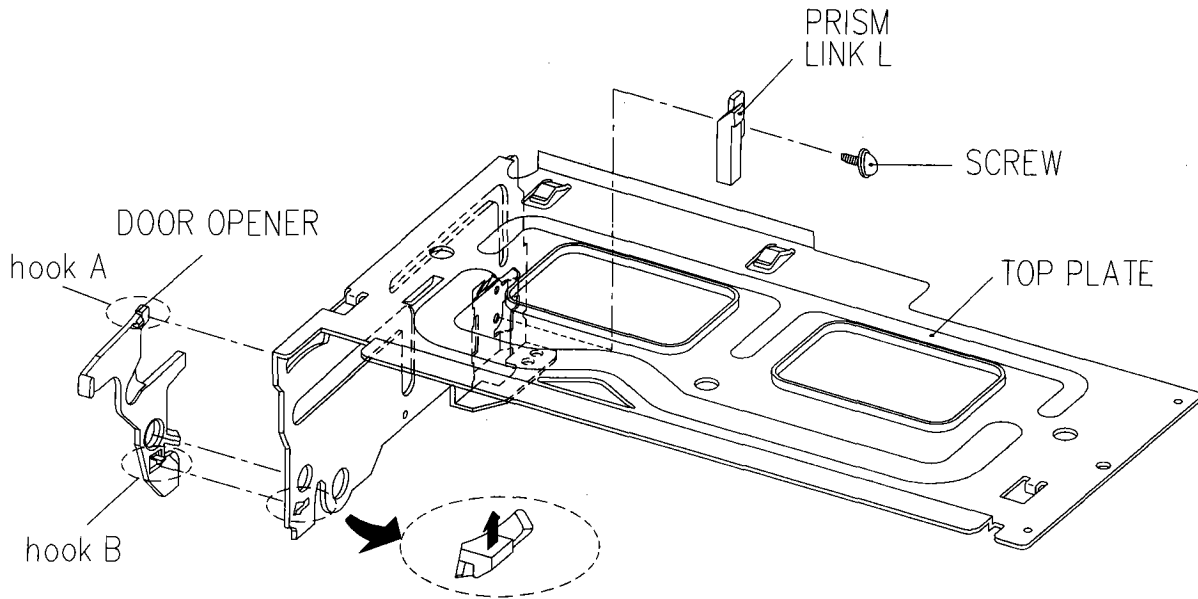


Fig. 3-4 DISASSEMBLY OF THE TOP PLATE

- f. Remove the LOADING LEVER ASSEMBLY by pressing the connected section of the loading lever assembly in the directions of the arrows. (Fig. 3-5)
- g. Remove the SAFETY SPRING between the SAFETY LEVER and the CASSETTE HOLDER PLATE. (Fig. 3-5)
- h. Remove the RELEASE SPRING between the RELEASE LEVER and the SAFETY LEVER R. (Fig. 3-5)

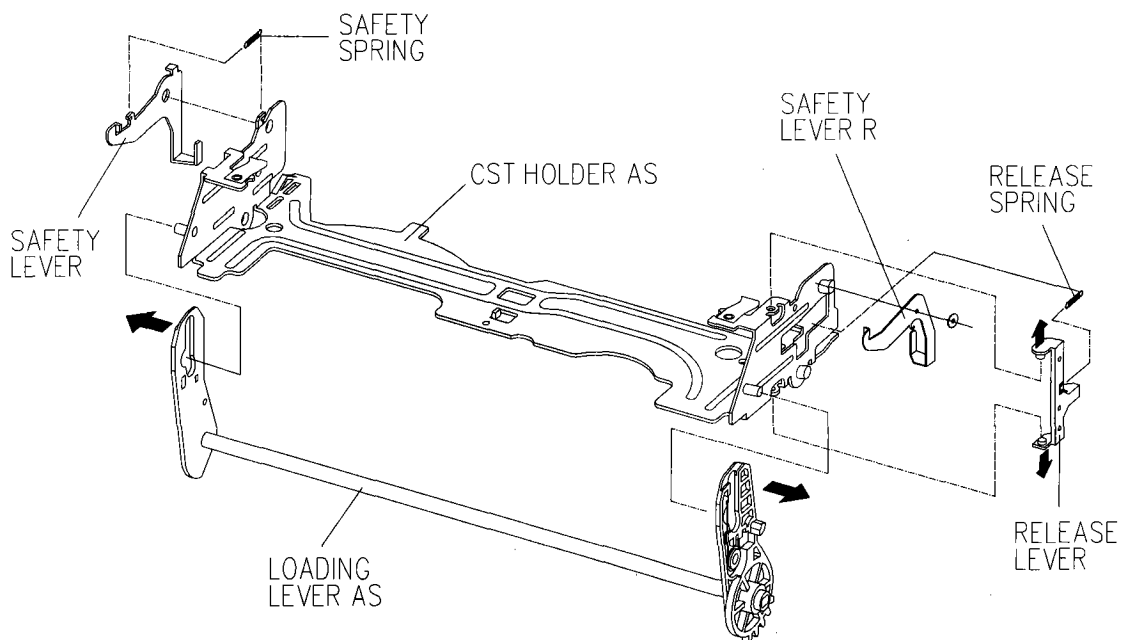


Fig.3-5 DISASSEMBLY OF THE CASSETTE HOLDER ASS'Y

NOTE:

Reassemble the **FRONT LOADING MECHANISM** in the reverse order. Confirm that the two bosses on the left side of the **CASSETTE HOLDER AS** are inserted into the groove on the left side of the top plate. Insert the two bosses on the right side of the cassette holder into the groove of the **F/L BRACKET R** (Fig. 3-6)

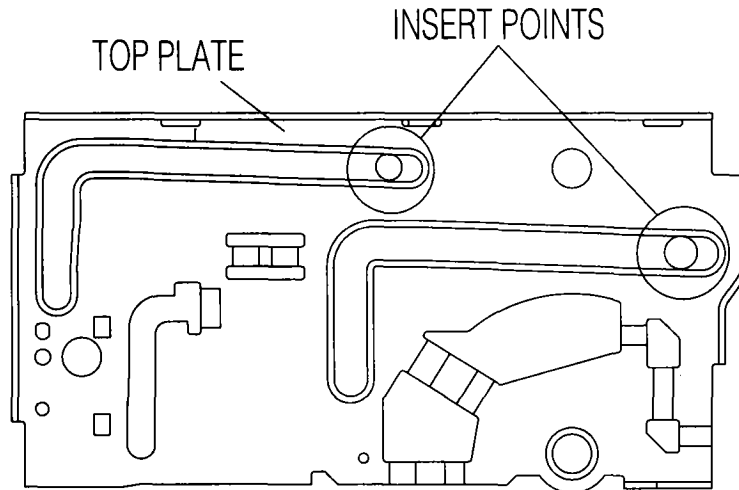


Fig.3-6 ASSEMBLY OF THE F/L ASS'Y

3-3. DRUM ASS'Y/EARTH BRACKET ASS'Y REMOVAL (See Fig.3-7)

- a. Remove three screws ① fixing the **DRUM TOTAL ASSEMBLY**.
- b. Carefully lift the **DRUM TOTAL ASSEMBLY** ② from the **DECK MECHANISM**, taking care not to damage or touch the **VIDEO HEAD**.

NOTE:

- After assembling the **DRUM TOTAL ASSEMBLY**, confirm that the **TAPE** runs smooth and refer to chapter 5 "ADJUSTMENT OF THE TAPE TRANSPORTING SYSTEM".

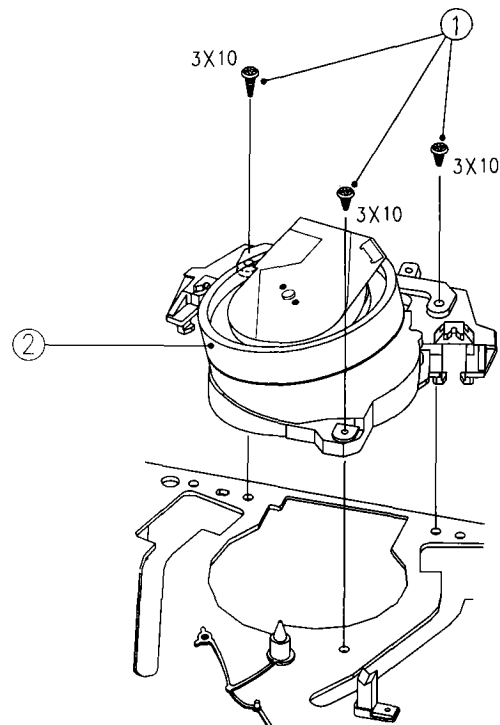


Fig.3-7 DRUM TOTAL ASS'Y & EARTH BRKT ASS'Y REMOVAL

3-4. REEL BELT, LOADING RACK ASS'Y, LOADING ASS'Y, S/T SLANT POLE ASS'Y REMOVAL (See Fig.3-8)

- a. Turn over the DECK MECHANISM and remove the REEL BELT ①.
- b. Remove one POLY WASHER ②.
- c. Remove the LOADING RACK ASS'Y ③.
- d. Remove R & L LOADING ASS'YS ④ and ⑤.
- e. Remove the S and T SLANT POLES ⑥ and ⑦ by pulling them in the directions of the arrows.

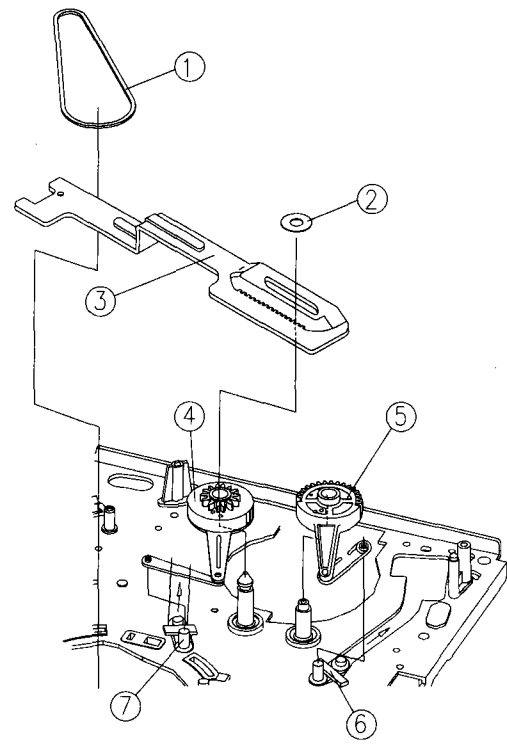


Fig.3-8 REEL BELT, LOADING RACK ASS'Y, R & L LOADING ASS'YS, S/T SLANT POLE ASS'Y REMOVAL

CAUTION:

- Take care not to get the GUIDE ROLLERS of the S/T SLANT POLES stained with GREASE
- When reassembling, refer to Fig. 3-9

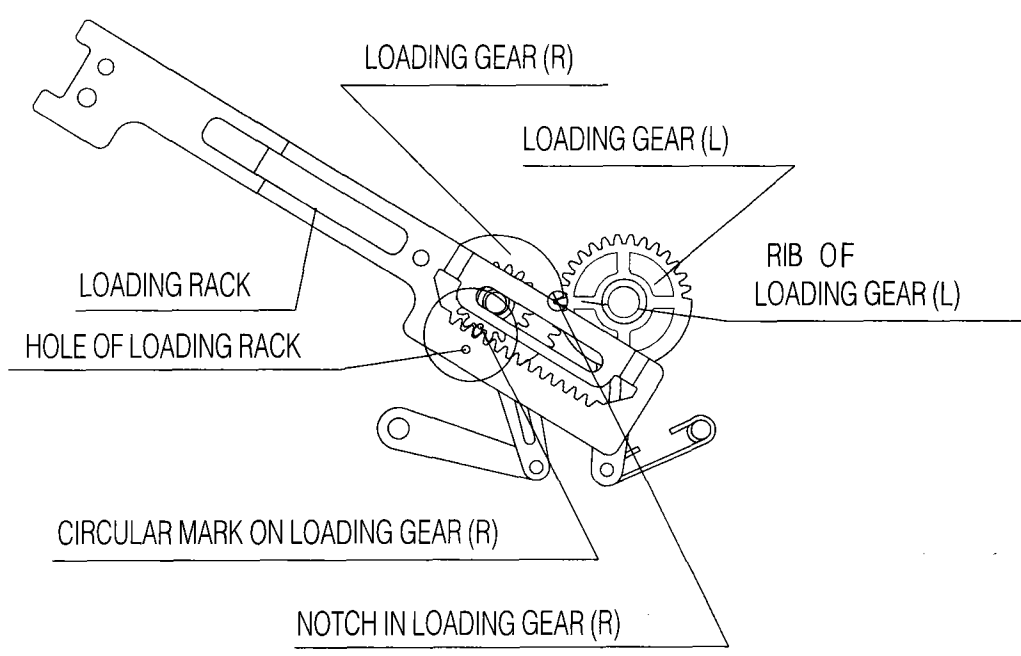


Fig.3-9 ASSEMBLY OF the R,L LOADING ASS'Y & LOADING RACK ASS'Y

3-5. A/C HEAD ASS'Y REMOVAL (See Fig.3-10)

- a. Remove one nut hex ① from the A/C HEAD POST ④ of the MAINBASE.
- b. Remove the A/C HEAD ASSEMBLY ② from the MAINBASE.
- c. Remove the A/C HEAD SPRING ③ from the A/C HEAD ASSEMBLY ②.

NOTE:

- After reassembling, adjust the TAPE TRANSPORTING SYSTEM referring to chapter 5 "ADJUSTMENT OF THE TAPE TRANSPORTING SYSTEM".
- After adjusting the TAPE TRANSPORTING SYSTEM, spread the A/C HEAD/NUT, AZIMUTH SCREW, and TILT SCREW with LOCKING PAINT.

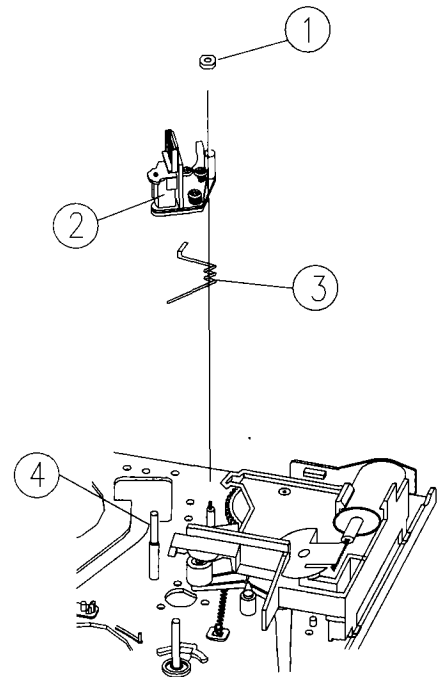


Fig.3-10 DISASSEMBLY OF THE AC HEAD ASS'Y

3-6. L/C BRACKET ASS'Y REMOVAL (See Fig.3-11)

- a. Remove one screw ① from the L/C BRACKET ASSEMBLY ②.
- b. Remove the L/C BRACKET ASSEMBLY ② from the MAINBASE.

3-7. PINCH LEVER TOTAL ASS'Y REMOVAL (See Fig.3-11)

- a. Remove one POLY WASHER ③ from the PINCH LEVER POST of the MAINBASE.
- b. Unhook the PINCH LEVER SPRING ④ from the hook of MAINBASE ⑤ and remove the PINCH LEVER TOTAL ASSEMBLY ⑨.

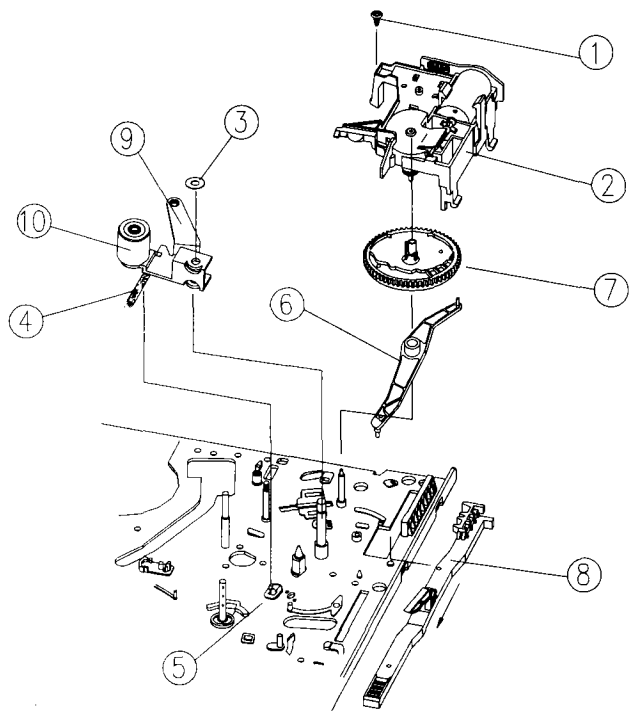


Fig.3-11 L/C BRKT, PINCH LEVER, CAM GEAR, RELAY LEVER, F/L RACK REMOVAL

CAUTION:

Take care not to coat GREASE, OIL or other substances on the surface of the PINCH ROLLER ⑩.

3-8. CAM GEAR, RELAY LEVER AND F/L RACK REMOVAL (See Fig.3-11)

- Remove the CAM GEAR ⑦ from the MAINBASE. (Fig.3-11)
- Remove the RELAY LEVER ⑥ from the MAINBASE. (Fig. 3-11)
- Remove the F/L RACK ⑧ from the MAINBASE by pulling it in the direction of the arrow.

NOTE:

When reassembling, refer to Fig. 3-12, 13.

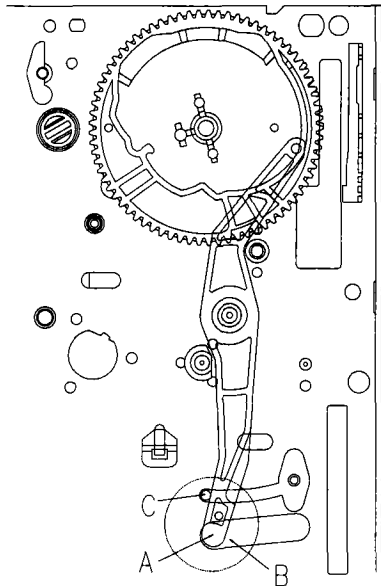


Fig.3-12 ASSEMBLY OF THE CAM GEAR & RELAY LEVER

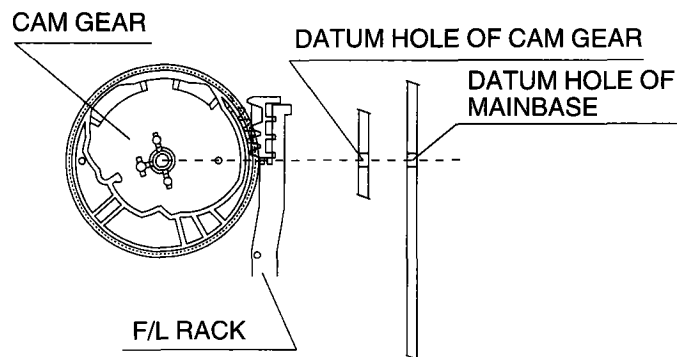


Fig.3-13 ASSEMBLY OF THE CAM GEAR & F/L RACK

3-9. S/T MAIN & SUB BRAKE ASS'Y REMOVAL (See Fig.3-14)

- Remove the S, T MAIN BRAKE Assembly from the MAIN VASE ⑦.
- Unhook the S SUB BRAKE SPRING ③ from the MAINBASE and remove the S SUB BRAKE LEVER ASSEMBLY ④ from the MAIN BASE ⑦.
- Unhook the T SUB BRAKE SPRING ⑤ from the MAINBASE and remove the T SUB BRAKE LEVER ASSEMBLY ⑥.

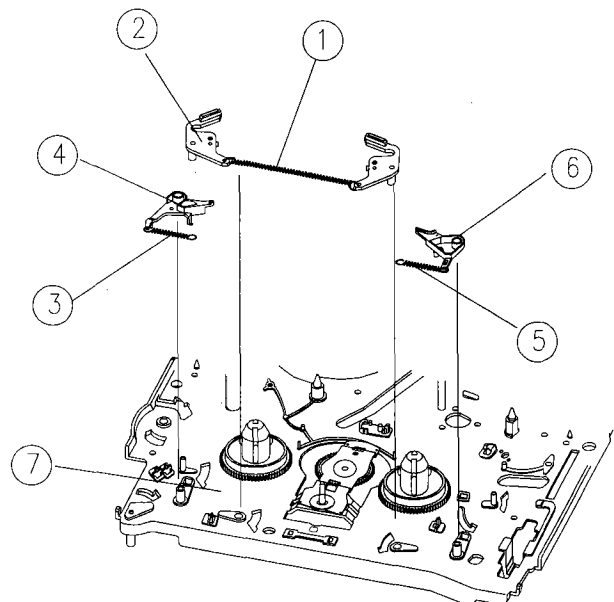


Fig.3-14 S/T MAIN & SUB BRAKES REMOVAL

3-10. TENSION BAND ASS'Y REMOVAL (See Fig.3-15, 3-16)

- Remove the TENSION SPRING ② from the MAINBASE ①. (Fig.3-15)
- Turn the DECK MECHANISM over. (Fig.3-16)
- After separating the tab of hook 'A', remove the TENSION BAND ASSEMBLY ③. (Fig.3-16)

NOTE:

- After assembling the TENSION BAND ASSEMBLY on the MAINBASE, adjust the position of TENSION POLE as shown Fig. 3-17.
- Avoid getting GREASE, OIL or foreign substance on the FELT of the BAND BRAKE.
- Take care not to deform tab 'A' when separating it .

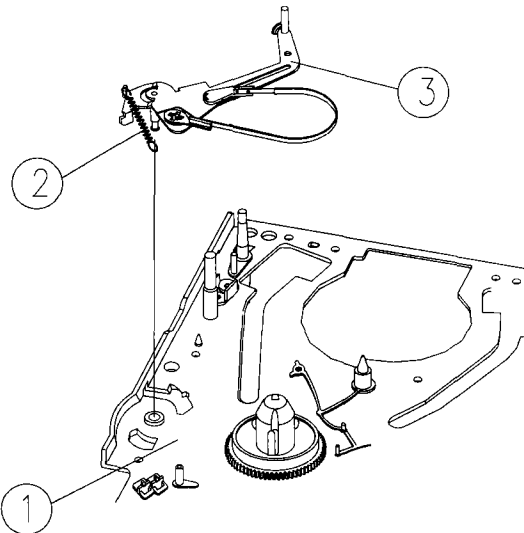


Fig.3-15 TENSION BAND ASS'Y REMOVAL (I)

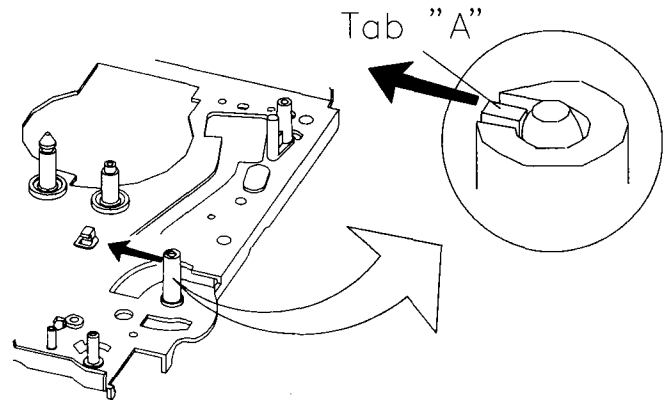


Fig.3-16 TENSION BAND ASS'Y REMOVAL (II)

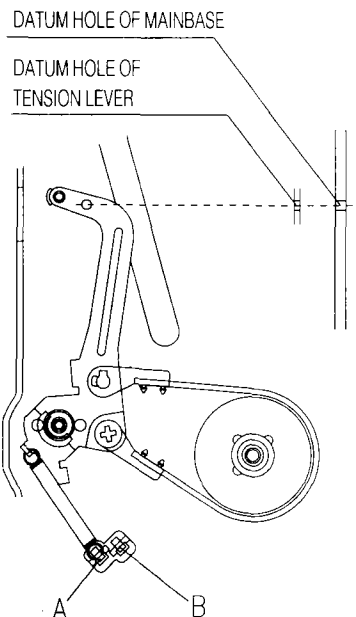


Fig.3-17 ADJUSTMENT OF THE TENSION POLE POSITION

3-11. CAPSTAN MOTOR REMOVAL (See Fig.3-18)

Remove 3 screws fixing the CAPSTAN MOTOR and separate the CAPSTAN MOTOR.

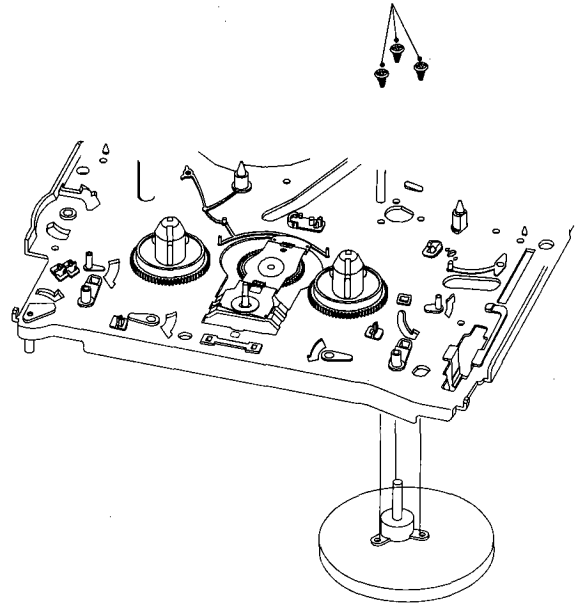


Fig.3-18 CAPSTAN MOTOR REMOVAL

3-12. IDLER PLATE TOTAL ASS'Y & S/T REEL TABLE REMOVAL (See Fig.3-19)

- a. Remove one POLY WASHER ① from the REEL GEAR POST ② and remove the IDLER PLATE TOTAL ASSEMBLY ③ from the MAIN BASE.
- b. Remove the S/T REEL TABLES ④ and two POLY SLIDERS ⑤ from the DECK MECHANISM.

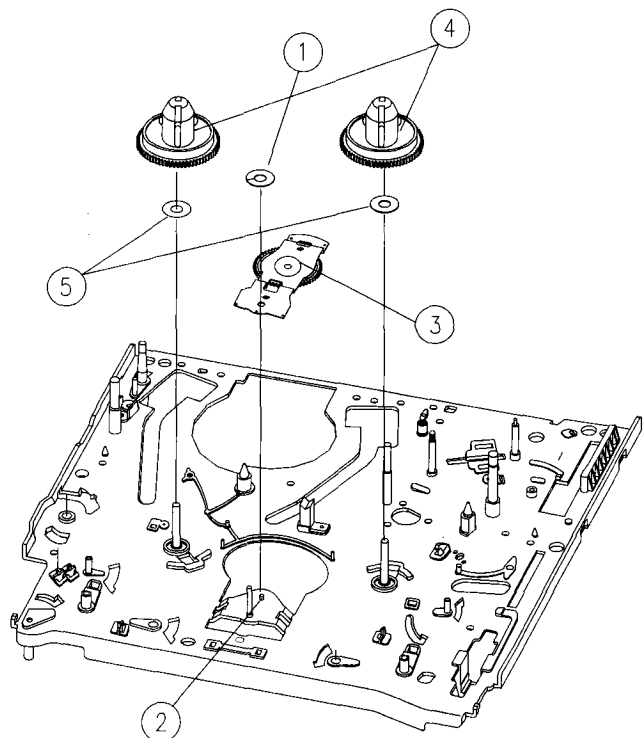


Fig.3-19 IDLER PLATE TOTAL ASS'Y & S/T REEL TABLES REMOVAL

CAUTION:

- When disassembling or assembling the IDLER PLATE TOTAL ASSEMBLY, take care not to bend it.

3-13. FE HEAD REMOVAL (See Fig.3-20)

Remove one screw ① fixing the FE HEAD and remove the FE HEAD ② from the MAINBASE.

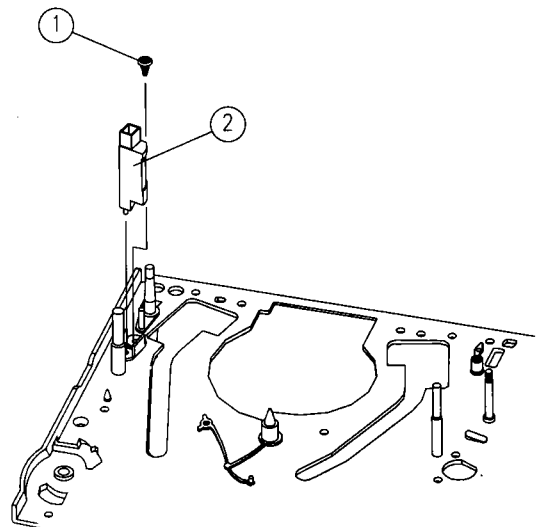


Fig.3-20 FE HEAD REMOVAL

3-14. REEL GEAR TOTAL ASS'Y & CONNECT PLATE REMOVAL (Fig.3-21)

- Turn over the DECK MECHANISM and remove one POLY WASHER ① from the REEL GEAR POST ②.
- After separating tab 'B' of the MAINBASE, remove the REEL GEAR TOTAL ASSEMBLY ③ from the MAINBASE.
- Remove the CONNECT PLATE ④ from the MAINBASE by pushing it in the direction of the arrow.

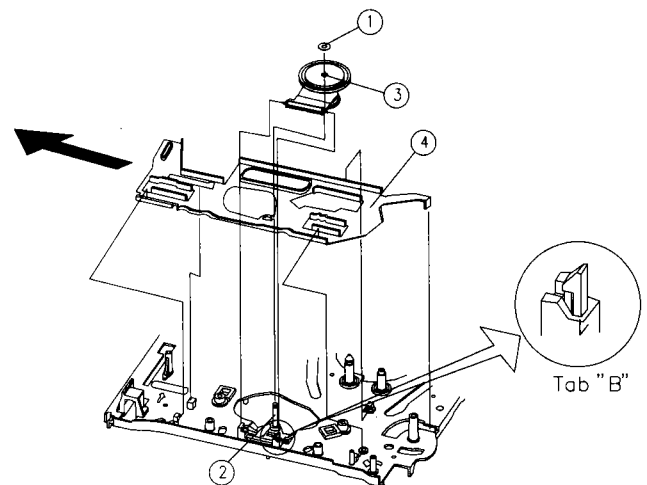


Fig.3-21 REEL GEAR TOTAL ASS'Y & CONNECT PLATE REMOVAL

NOTE:

- When removing the CONNECT PLATE with the F/L RACK installed, take care not to damage or bend the CONNECT PLATE.
- After assembling or disassembling the REEL GEAR TOTAL ASSEMBLY, take care not to get OIL, GREASE or other substances on the REEL BELT.
- Take care not to deform or break tab "B".
- Check the assembly state & the operating state of the REEL GEAR TOTAL ASSEMBLY before assembling.
- After reassembling, check the FF, REW, PLAY and REVIEW MODES and the existence of noise when operating the MODES.

4. MECHANICAL ADJUSTMENT

4-1. MECHANICAL ADJUSTMENT (See Fig.4-1~4-5)

When operational problems occur or the mechanism is reassembled, be sure to confirm the following INSTRUCTIONS.

- a. Make sure that the DATUM HOLE of the CAM GEAR is aligned with the DATUM HOLE in the MAINBASE in the EJECT mode, as shown in Fig.4-1.

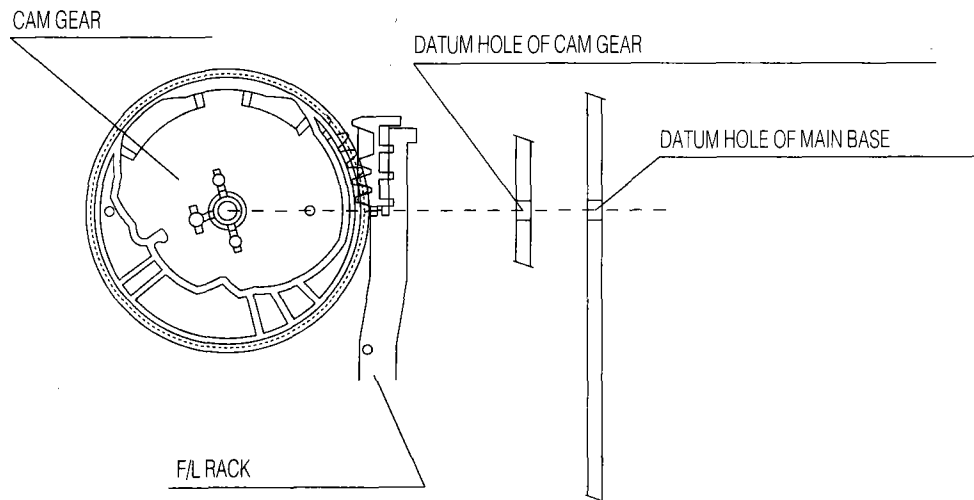


Fig.4-1 DATUM POSITION OF F/L RACK & CAM GEAR

- b. Make sure that part "A" of the RELAY LEVER, when assembled in the CONNECT PLATE, is fully rotated to the left side of "B" of the MAINBASE, and is touching boss "C" of the MAINBASE as, shown in Fig.4-2.

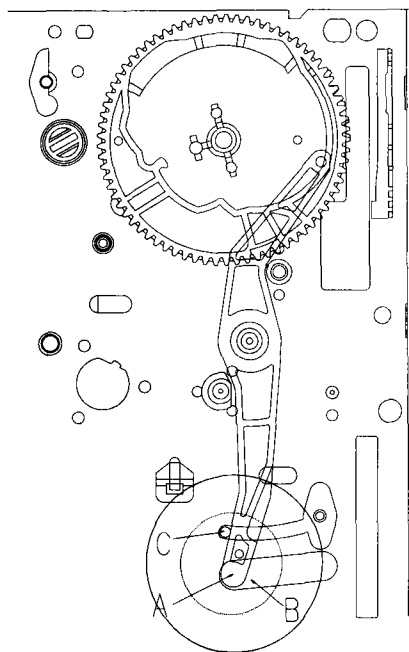


Fig.4-2 DATUM POSITION OF RELAY LEVER & CAM GEAR