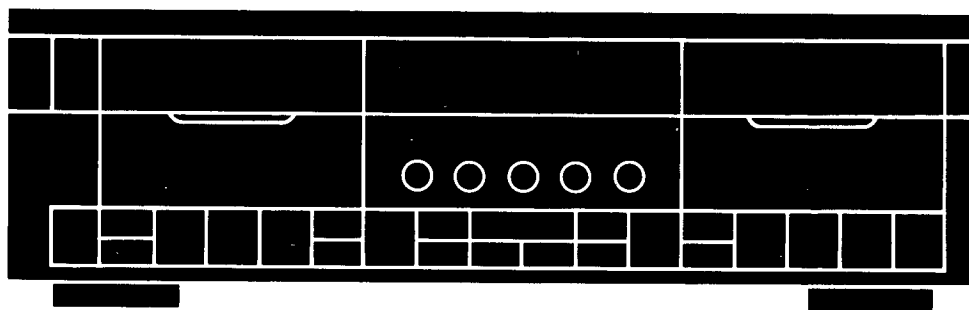


The Harman Kardon Model DC5700 DUAL CASSETTE DECK

Manual 179A

DC5700

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

- BK** : North America area model Black version
- IB** : International model Black version

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harman/kardon

Parts and Service Office
240 Crossways Park West, Woodbury, N.Y. 11797
1112-0030A152 P-129109 2000 Printed in Japan

SPECIFICATIONS

Track Configuration	Nominal	Limit	Dolby C NR	Nominal	Limit
	4-track 2 Channel Stereo		LN	66 dB	
	Cassette Deck		CrO ₂	70 dB	≥ 66 dB
			Metal	70 dB	≥ 66 dB
• MECHANICAL SECTION			Channel Separation	45 dB	≥ 35 dB
Record/Playback Tape Speed			Crosstalk	70 dB	≥ 60 dB
Drift 4.75 cm/sec.	0.2% ≤ 2.0%		Record/Playback Distortion		
Heads (Primary/Secondary)	2/2		(Input 1 kHz)		
Wow and Flutter	NAB	0.05% ≤ 0.1%	LN	0.7%	≤ 2.0%
	CCIR	0.08%	CrO ₂	0.8%	≤ 3.0%
Take Up Torque	50 gr.cm	35 – 70 gr.cm	Metal	0.9%	≤ 2.0%
Back Tension	2 gr.cm	2 – 6 gr.cm	MPX Filter Attenuation		
F. FWD Torque	100 gr.cm	70 – 150 gr.cm	at 15 kHz	0.3 dB	≥ 1 dB
Rew. Torque	100 gr.cm	70 – 150 gr.cm	at 19 kHz	35 dB	≥ 30 dB
F. FWD/Rew Time	85 sec.	≤ 100 sec.	Erase Ratio (Input 80 Hz)		
(C-60 Tape)			LN	70 dB	≥ 60 dB
			Metal	60 dB	≥ 56 dB
• AMPLIFIER SECTION			Input Sensitivity		
Record/Playback Frequency			(Input 1 kHz) at Line Input	43 mV	30 – 80 mV
Response (at -3 dB)	LN	20 – 18 kHz	Input Impedance		
	CrO ₂	20 – 18 kHz	(Input 1 kHz) at Line Input	23 kΩ	15 – 25 kΩ
	Metal	20 – 18 kHz			
Copy Mode Frequency			• DIMENSIONS (WxHxD)	17-3/8" x 5" x 12-5/8"	
Response	LN	40 – 16 kHz		(443 x 134 x 342) mm	
	CrO ₂	40 – 16 kHz	• WEIGHT	17.2 lbs (7.8 kg)	
	Metal	40 – 16 kHz			
Bias Frequency		105 kHz ±5 kHz	• POWER SUPPLY		
Playback Output		700 mV ±1.5 dB	U.S.A and Canada models	AC120V, 60 Hz	
Signal-to-Noise Ratio			International model	AC230V/240V, 50/60 Hz	
(at Line Input)			• POWER CONSUMPTION		
(Input 1 kHz, 100 mV)			U.S.A. and Canada models	29 W	
IHF-A WTD (at Dolby level)			International model	31 W	
Dolby NR off	LN	51 dB			
	CrO ₂	54 dB			
	Metal	54 dB			
Dolby B NR	LN	61 dB			
	CrO ₂	64 dB			
	Metal	64 dB			

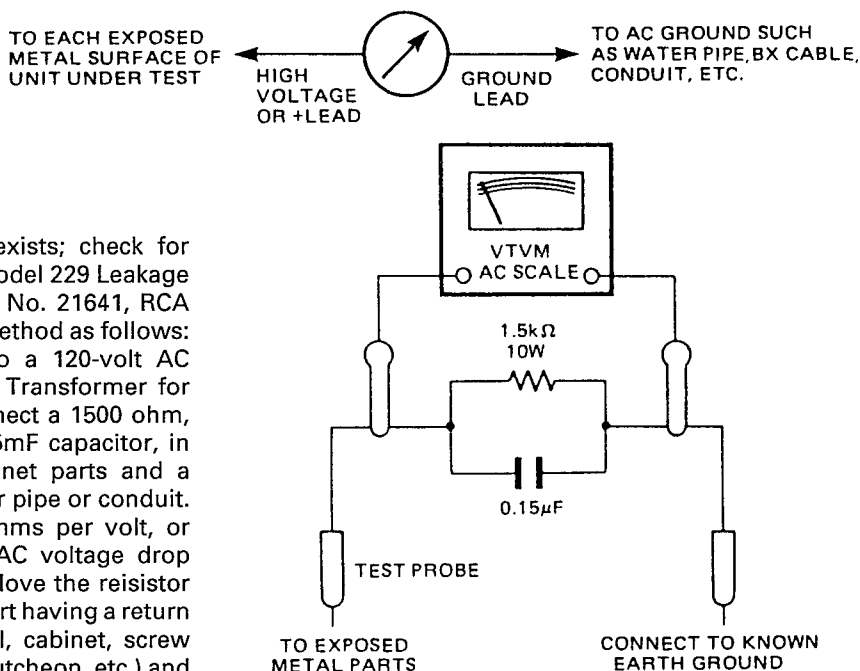
These specifications are service target specs. Specifications and components are subject to change without notice. Overall performance will be maintained or improved.

LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A)

Before returning the unit to the user, perform the following safety checks:

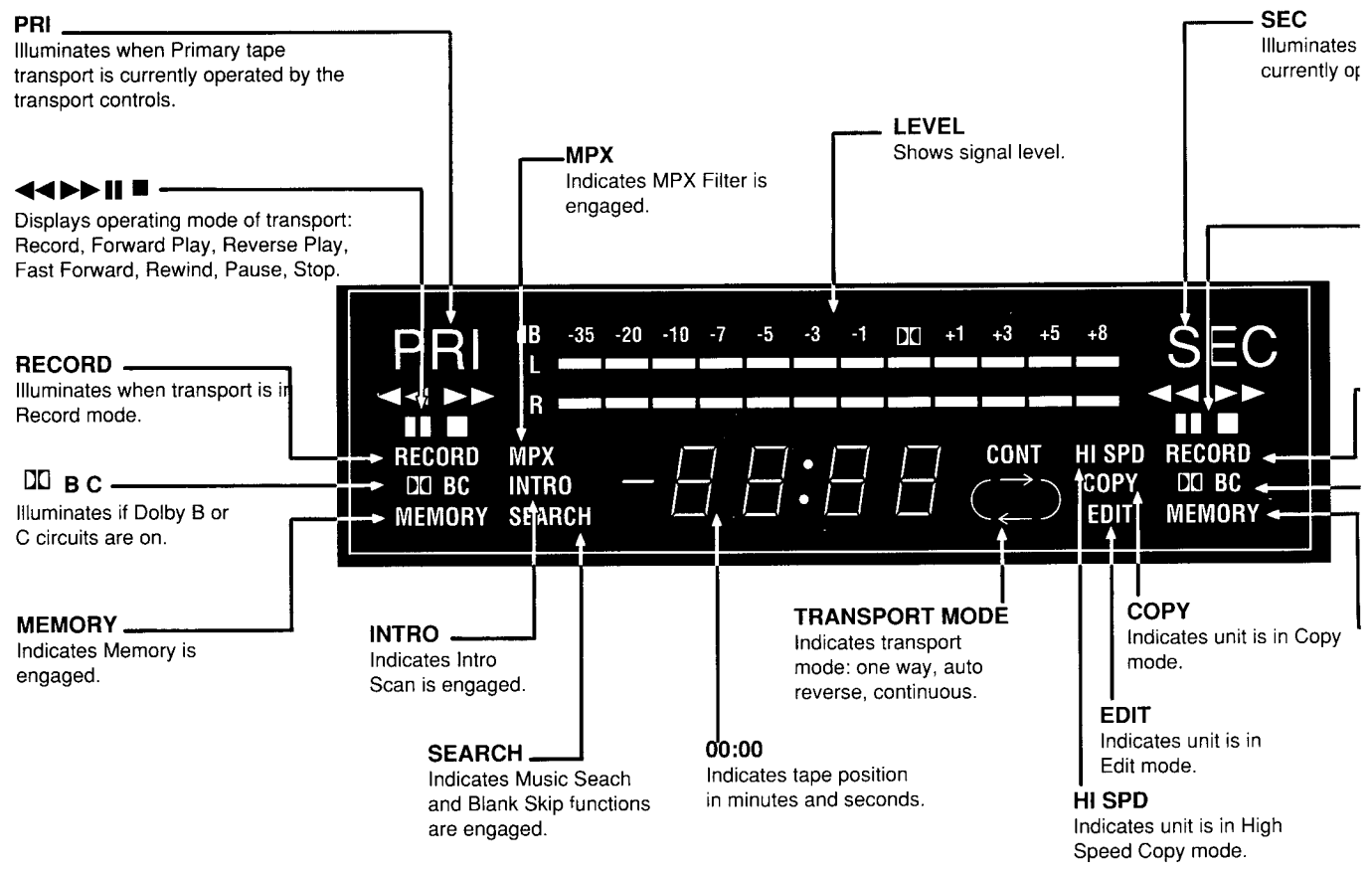
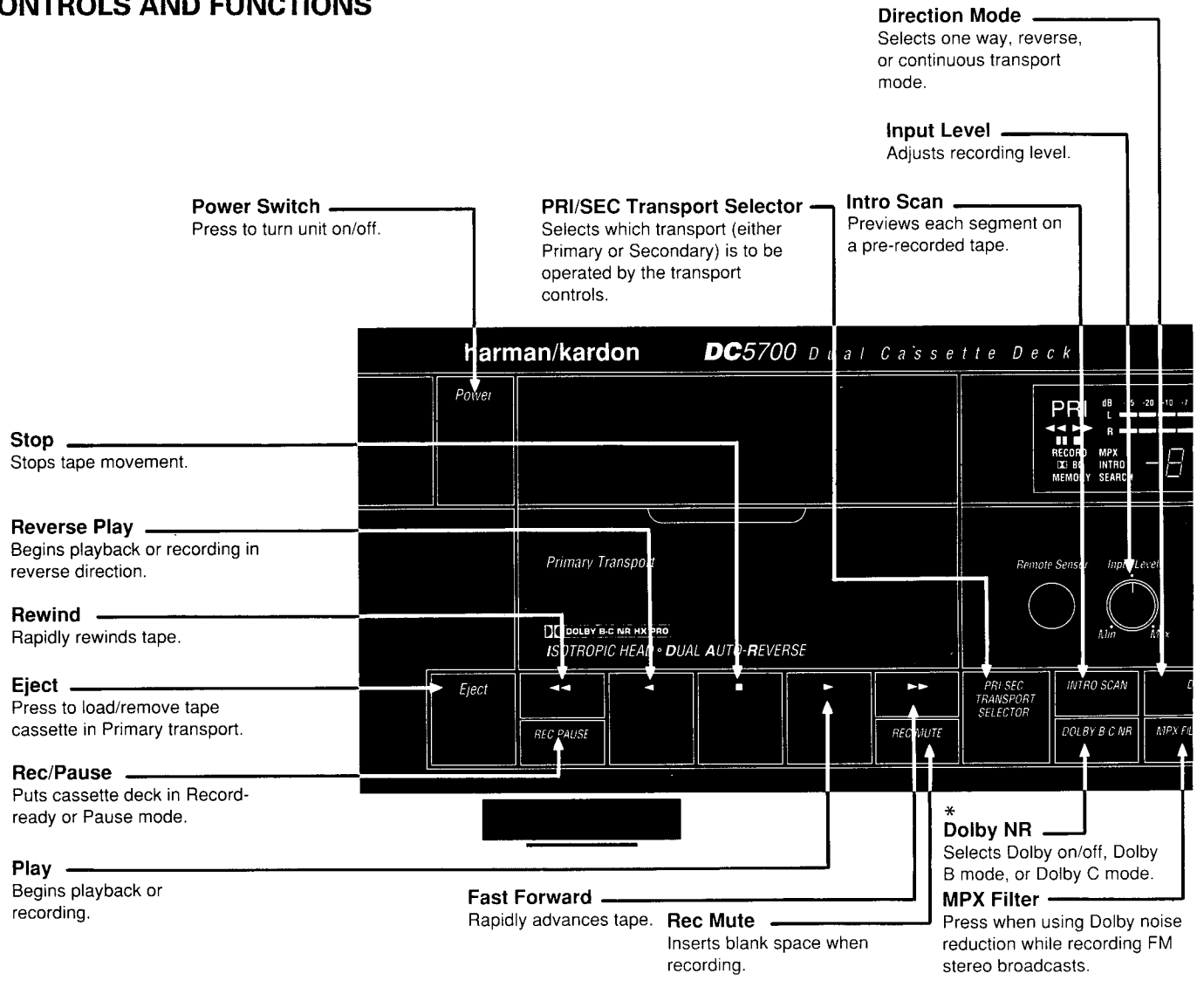
1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
2. Replace all protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, or shields, isolation resistorcapacitor networks, mechanical insulators, etc.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows: Plug the AC line cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 ohm, 10-watt resistor paralleled by a 0.15mF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.)

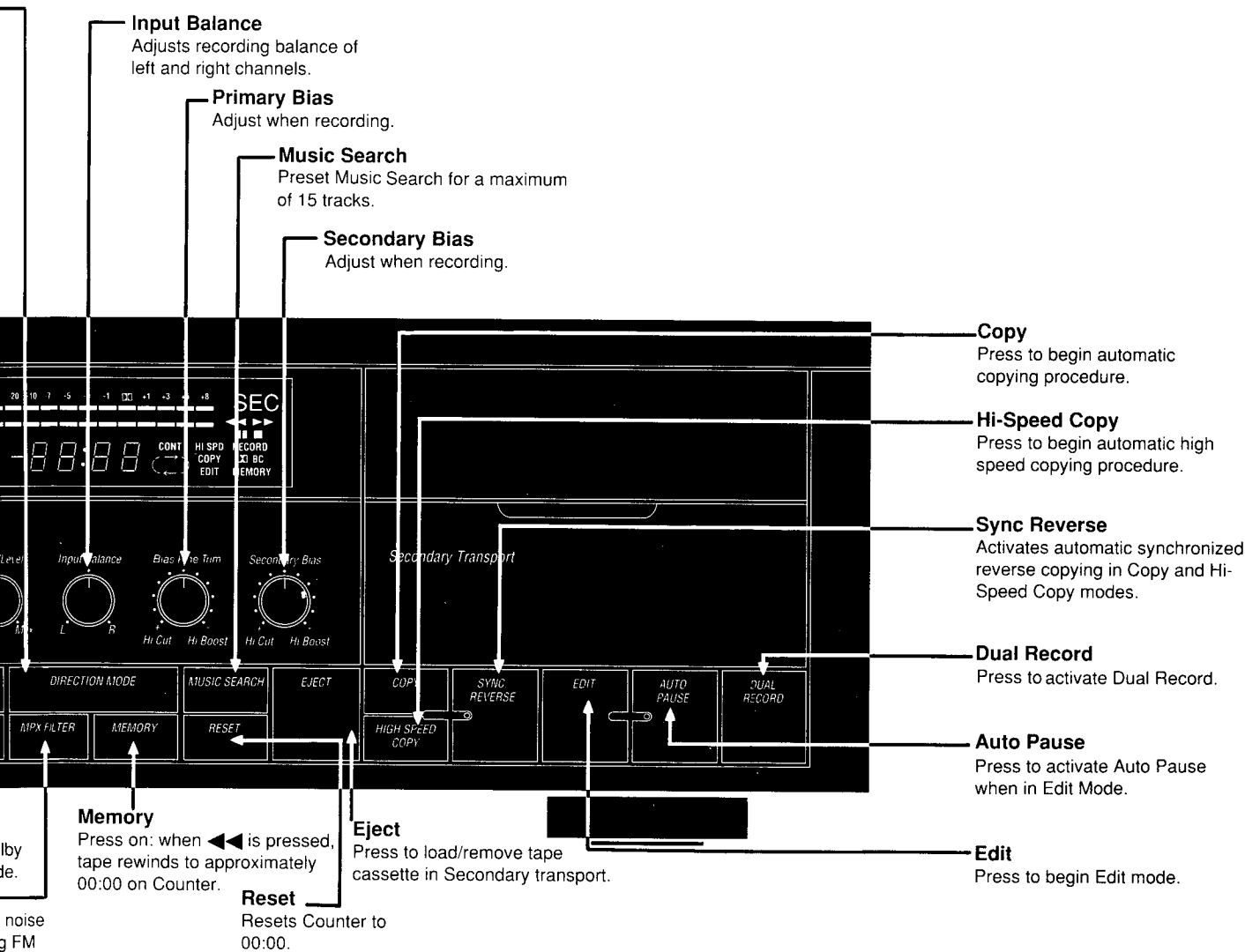
SIMPSON MODEL 229 ETC. FOR LEAKAGE TEST



A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.

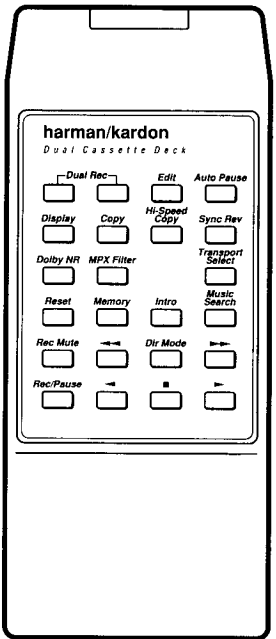
CONTROLS AND FUNCTIONS





terminates when Secondary tape transport is currently operated by the transport controls.

- Displays operating mode of transport: Record, Forward Play, Reverse Play, Fast Forward, Rewind, Pause, Stop.
- RECORD**
Illuminates when transport is in Record mode.
- BC**
Illuminates if Dolby B or C circuits are on.
- MEMORY**
Indicates Memory is engaged.



The control unit includes buttons that function the same way as the corresponding keys on the cassette deck.

*** NOTE**
Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen. "DOLBY" and the double-D symbol and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

DISASSEMBLY PROCEDURES (REFER TO PAGES 10, 11 and 12)**1 TOP COVER (133) REMOVAL**

Remove 4 screws (A) and 2 screws (B), and then remove the Top Cover (133).

2 FRONT PANEL ASSEMBLY (AA) REMOVAL

1. Remove the Top Cover (133).
2. Disconnect 1 connector (JL901) from 1 connector (CN904) on the Main P. C. Board (PCB-1).
3. Remove 6 screws (C) and 3 screws (D), and then remove the Front Panel Assembly (AA).
4. If necessary, unsolder the lead wires.

3 PRIMARY CASSETTE TAPE RECORDER MECHANISM ASSEMBLY (103) REMOVAL

1. Remove the Front Panel Assembly (AA). (Refer to Step 2.)
2. Disconnect 4 connectors (LCN101/351, LCN801, LCN802 and LCN803) on the Primary Transport P. C. Board (103).
3. Remove 4 screws (E), and then the Cassette Tape Recorder Mechanism Assembly (103).

4 SECONDARY CASSETTE TAPE RECORDER MECHANISM ASSEMBLY (103) REMOVAL

1. Remove the Front Panel Assembly (AA). (Refer to Step 2.)
2. Disconnect 4 connectors (LCN304/1101, LCN804, LCN805 and LCN806) on the Secondary Transport P. C. Board (103).
3. Remove 4 screws (F), and then the Cassette Tape Recorder Mechanism Assembly (103).

5 MAIN P. C. BOARD (PCB-1) REMOVAL

1. Remove the Front Panel Assembly (AA). (Refer to step 2).

2. Disconnect 4 connectors (LCN101/351, LCN801, LCN802 and LCN803) on the Primary Transport P. C. Board (103).
3. Disconnect 4 connectors (LCN304/1101, LCN804, LCN805 and LCN806) on the Secondary Transport P. C. Board (103).
4. Disconnect 5 Jumper Leads (JL1, JL2, JL3, JL4 and JL5) from 5 connectors (CN805, CN804, CN803, CN802 and CN801) on the Power P. C. Board (PCB-4).
5. Remove 9 screws (G), 1 screw (H) and 2 screws (I) and then remove the Main P. C. Board (PCB-1).

6 POWER P. C. BOARD (PCB-4) REMOVAL

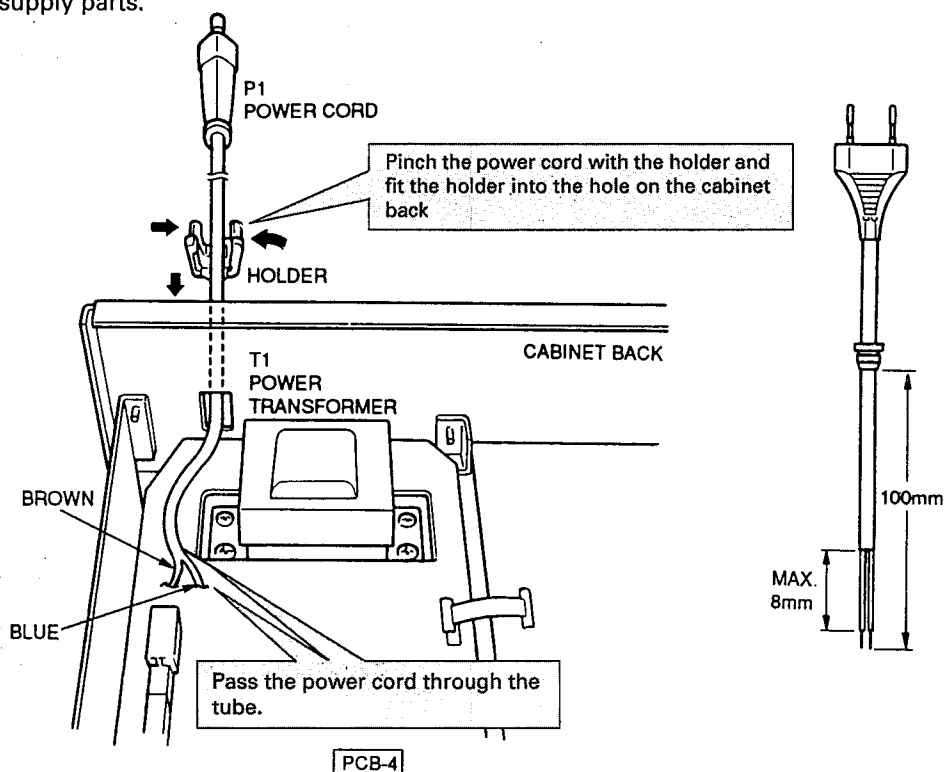
1. Remove the Front Panel Assembly (AA). (Refer to step 2).
2. Disconnect 5 Jumper Leads (JL1, JL2, JL3, JL4 and JL5) on the Power P. C. Board (PCB-4).
3. Disconnect 3 connectors (LCN801, LCN802 and LCN803) on the Primary Transport P. C. Board.
4. Remove 5 screws (J) and 4 screws (K), and then remove the Power P. C. Board (PCB-4).

7 OTHER P.C. BOARDS REMOVAL

1. Remove the Front Panel Assembly (AA). (Refer to step 2).
2. Remove 4 screws (L), and then remove the Cont SW-L P. C. Board (PCB-6).
3. Remove 4 screws (M), and then remove the Cont SW-R P. C. Board (PCB-7).
4. Remove 4 Rotary Knobs (146) and 3 screws (N), and then remove the Volume P. C. Board (PCB-2).
5. Remove 7 screws (O), and then remove the Front P. C. Board (PCB-5).

POWER CORD REPLACEMENT (FOR SERVICE ENGINEERS OTHER THAN NORTH AMERICA)

In order to prevent fire shock hazard when replacing the power cord, follow the Procedure below to replace the part with the standard supply parts.



CIRCUIT DESCRIPTION

PLAYBACK SIGNAL

The signal from the playback head (Primary Transport) is amplified by the playback amplifier Q101, Q103 and Q105 (L ch.), and is applied to the pin 29 (L ch.) and 2 (R ch.) of the Dolby NR IC501 (B/C type). Switching of the playback signal from the record mode (external input signal) to the playback mode is performed inside IC501. IC501 is usually switched to the playback mode. However, the control signal transmitted to the pin 5 of IC501 from IC751 through Q505 and Q506 switches IC501 from the record mode to the playback mode. The input signal to IC501 is output from the pins 25 (Lch.) and 6 (R ch.) and applied to the OUTPUT Jack (J1).

Use the same signal for both the secondary transport and the primary transport.

RECORD SIGNAL

[PRIMARY SIDE]

The signal from the INPUT jack is controlled by the INPUT LEVEL control. It is applied to the pins 30 (L ch.) and 1 (R ch.) of the Dolby NR IC501 (B/C type). Switching of the record signal from the playback mode to the record mode is performed inside IC501. The control signal transmitted to the pin 5 of IC501 from IC751 through Q505 and Q506 switches IC501 from the playback mode to the record mode.

The input signal to the Dolby NR IC is output from the pins 28 (L ch.) and 3 (R ch.) of IC501. Then it is input to the pins 27 (L ch.) and 4 (R ch.) and is output from the pins 24 (L ch.) and 7 (R ch.). The encoded signal is input to the pins 23 (L ch.) and 8 (Rch.) and then it is output from the pins 18 (L ch.) and 13 (R ch.). The signal output from IC501 passes through the record equalizer circuit and is amplified by the record amplifier of IC201. The amplified signal is then applied to the recording head after being synthesized by a bias signal.

[SECONDARY SIDE]

The signal from the INPUT jack is controlled by the INPUT LEVEL control. It is applied to the pins 30 (L ch.) and 1 (R ch.) of the Dolby NR IC551 (B/C type). Switching of the record signal from the playback mode to the record mode is performed inside IC551. The control signal transmitted to the pin 5 of IC551 from IC751 through Q531 and Q532 switches IC551 from the playback mode to the record mode.

The input signal to the Dolby NR IC is output from the pins 28 (L ch.) and 3 (R ch.) of IC551. Then it is input to the pins 27 (L ch.) and 4 (R ch.) and is output from the pins 24 (L ch.) and 7 (R ch.). The encoded signal is input to the pins 23 (L ch.) and 8 (Rch.) and then it is output from the pins 18 (L ch.) and 13 (R ch.). The signal output from IC551 passes through the record equalizer circuit and is amplified by the record amplifier of IC201. The amplified signal is then applied to the recording head after being synthesized by a bias signal.

MUTING OPERATION

The signal that mutes the sound produced at switching to recording or playback is applied from IC751 of the logic control block.

When the "STOP" button is pressed, the mute signal output from the pin 22 of IC751 turns ON Q709 (L ch.) and Q710 (R ch.) to short-circuit the output signals of the Dolby out for muting. For the purpose of preventing generation of noise at power ON/OFF, the mute signal is output from Q51. The muting is done by short circuiting the output signal with Q709 (L ch.) and Q710 (R ch.) turned ON.

LOGIC FOR RECORD MODE

[PRIMARY SIDE]

When the "REC" button is pressed, the pin 11 and 13 of IC751 becomes high level and Q109 (L ch.) and Q110 (R ch.) turn ON. The input to the Dolby NR IC is muted. Also Q712 and Q713 turn ON and Q711 turns OFF. Therefore Q701, Q703 (L ch.) and Q702, Q704 (R ch.) turn OFF to release the muting of the outputs from the record amplifiers.

Also, Q505 turns ON and Q506 turns OFF to make the pin 5 of IC501 high level. Therefore the mode is switched to the record mode.

[SECONDARY SIDE]

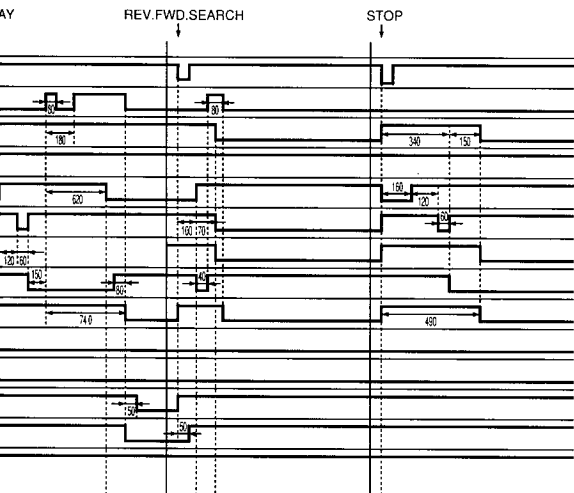
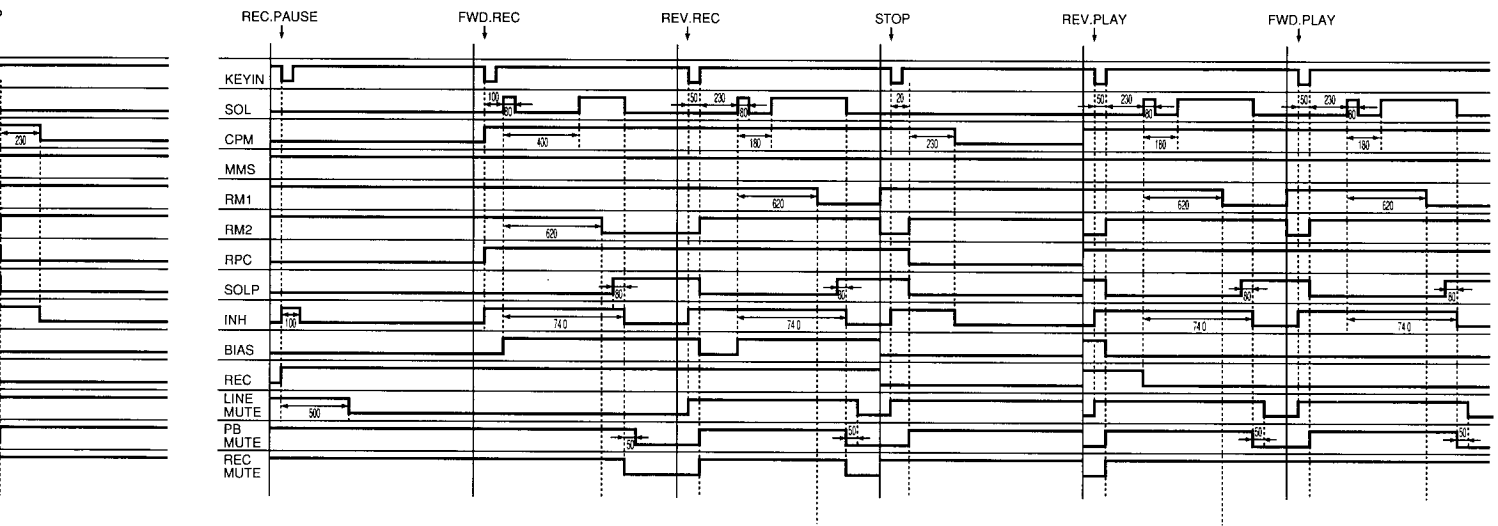
When the "REC" button is pressed, the pin 7 and 9 of IC751 becomes high level and Q1109 (L ch.) and Q1110 (R ch.) turn ON. The input to the Dolby NR IC is muted. Also Q1712 and Q1713 turn ON and Q1711 turns OFF. Therefore Q1701, Q1703 (L ch.) and Q1702, Q1704 (R ch.) turn OFF to release the muting of the outputs from the record amplifiers.

Also, Q531 turns ON and Q532 turns OFF to make the pin 5 of IC551 high level. Therefore the mode is switched to the record mode.

LOGIC FOR RECORD TO PLAYBACK MODE

When the "STOP" button is pressed, the pin 12 of IC751 becomes high level. Q731 turns ON and Q213 (L ch.), Q214 (R ch.) turn ON to mute the inputs to the record amplifiers. Also, Q712 and Q713 turn OFF and Q711 turns ON to turn ON Q701, Q703 (L ch.) and Q702, Q704 (R ch.). Therefore the outputs from the record amplifiers are muted.

Also, Q505 turns OFF and Q506 turns ON to make the pin 5 of IC501 low level. Therefore the mode is switched to the playback mode.



ALIGNMENT PROCEDURES (REFER TO PAGES 13, 14, 27 through and 31)

CASSETTE MECHANISM CONFIRMATION

Make sure to confirm conditions of the cassette mechanism as follows before adjustment.

1. Confirmation of erase prevention function

- The switch should turn ON when a tape with erroneous erase preventive pawl is inserted. (Use a tape which is 0.2 mm smaller than the minimum size of 62.9 mm or a MAZ-0184-C gauge one.)
- When the switch arm is moved back gradually from the ON position, the switch turn OFF.

2. Confirmation of cassette pack detection function

- The switch should turn ON when a tape is inserted. (Use a tape whose minimum size is 63.5 mm or a MAZ-0184-C gauge one.)
- When the switch arm is moved back gradually from the ON position, the switch should turn OFF.

3. Confirmation of eject function

- The cassette compartment opens smoothly and no abnormal noise should be heard while opening and closing.
- The eject lever opens smoothly without contacting the chassis and damper.
- The eject button can not be pressed during playback.

4. Confirmation of playback, fast forward and rewind functions

- The torque used in each of the playback, fast forward and rewind modes should be within specification.

Playback 35 gr.cm – 70 gr.cm

Fast Forward 70 gr.cm – 150 gr.cm

Rewind 70 gr.cm – 150 gr.cm

- No abnormal noise should be heard during operation in any mode. The solenoid switching sound should not be considered as a noise.

5. Confirmation of positions of record/playback heads

- Head height
 - a) Set the M-300 head gauge.
 - b) Set the unit in the playback mode and place the adjustment chip on the head gauge as shown in the Fig. 1.
 - c) The adjustment chip should not contact the tape guide of both record/playback heads.

- Head position
 - a) Set the M-300 head gauge.
 - b) Set the unit in the playback mode and place the adjustment chip on the head gauge as shown in the Fig. 2.
 - c) With both record/playback heads the adjustment chip should be between MIN and MAX of the M-300 head gauge.

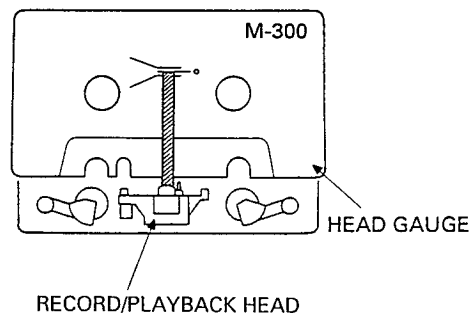


Fig. 2

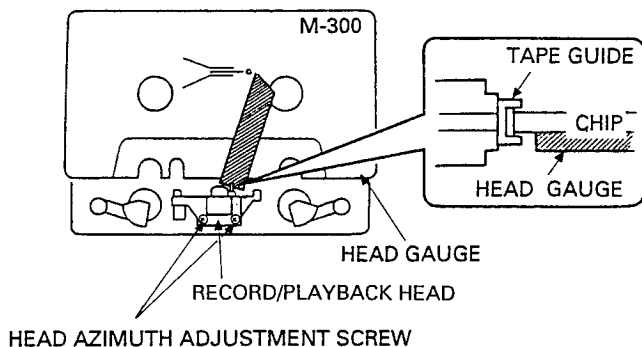


Fig. 1

ELECTRICAL ADJUSTMENT AND CONFIRMATION

1. Before adjustment

- Before electrical adjustment, make sure that confirmations of the cassette mechanism are all completed.
- After the power switch is pushed on, wait for 10 minutes before measuring to be sure of the most stable operation.
- Since head magnetization, dust accumulations, etc. are likely to introduce errors in the various characteristics, it is very important that the heads are properly demagnetized and cleaned before commencing any adjustment, particularly frequency response and head azimuth adjustment.

2. Instruments required

- Low frequency oscillator
- AC VTVM or dual channel AC VTVM
- Oscilloscope
- Wow/flutter meter
- Frequency counter
- Distortion meter

3. Test tapes

- Azimuth adjustment TCC-153
- Tape speed adjustment MTT-111DN
- Playback output level adjustment TCC-130
- Music search adjustment SCC-1425
- Playback frequency characteristic confirmation TCC-1216 or TCC-162C and TCC-262C
- Reference tapes
LN SCC-502
CrO₂ SCC-1360
METAL SCC-565

Note:

C-90 differs with C-60 in the thickness and bias is of unequal, so adjust with the tape whose bias is of Specified Value.

4. General conditions (unless otherwise noted)

Controls and Switches	Settings
Dolby NR	Off
Input Level	Maximum
MPX Filter	Off
Bias Fine Trim	Center
Input Balance	Center

Azimuth Adjustment

When the maximum level point of R channel does not equal that L channel, connect the oscilloscope as shown in Fig. 3 and proceed with azimuth adjustment so that L and R channels are in phase.

- Connect L channel tape out to "X (or V)" and R channel to "Y (or H)". Observe the lissajous waveform.
- Set L and R channels to monaural. Adjust vertical and horizontal gain so that the waveform becomes 45 degree.
- Adjust azimuth so that the measurement of "a" becomes maximum and the measurement of "b" becomes minimum against the 45 degree line.

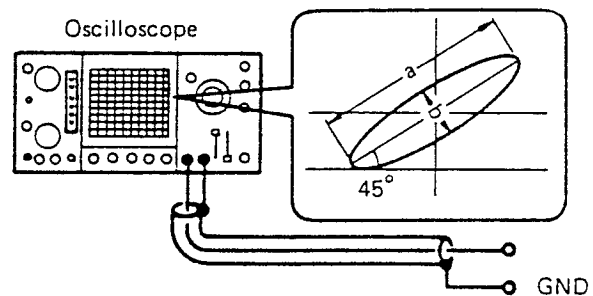
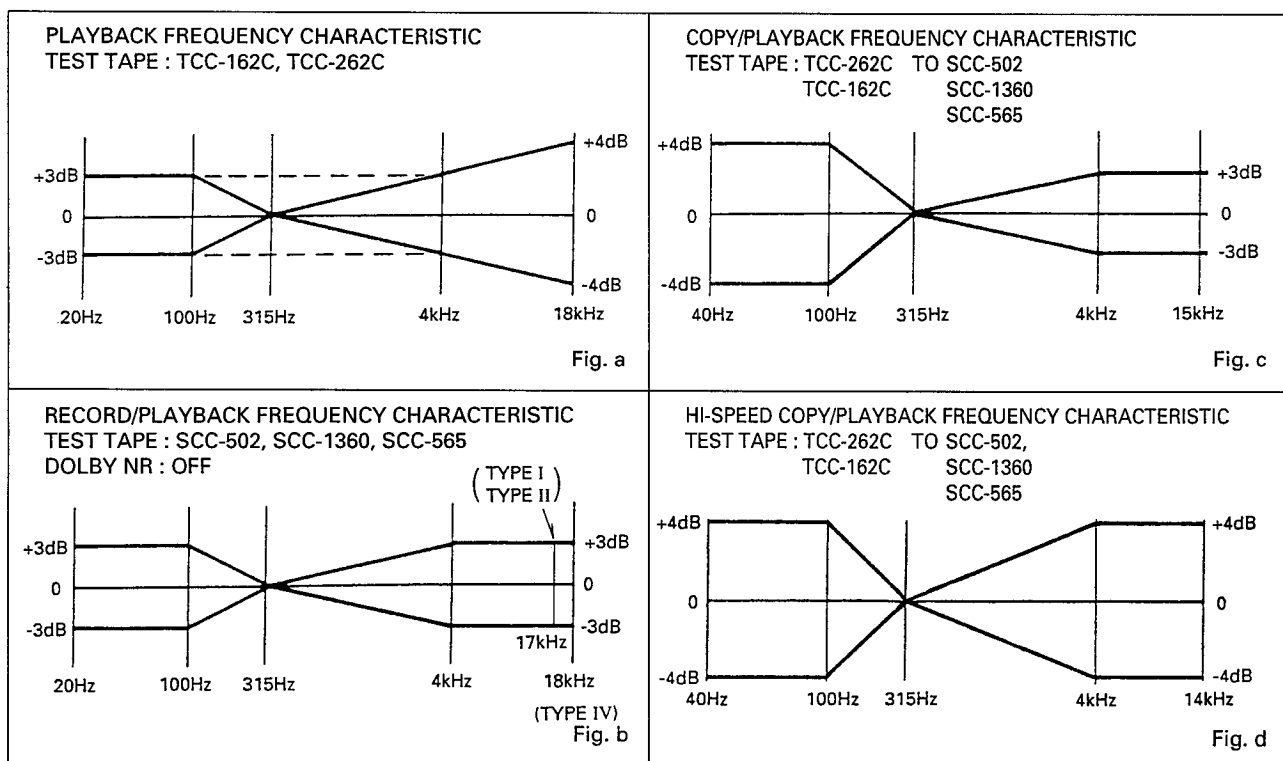
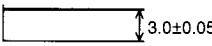
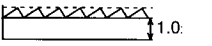


Fig. 3



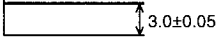
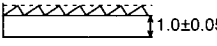
1. PRIMARY DECK SECTION

Step	Alignment	Instrument Required	Input Signal	Mode	
1	Quick sensor	VTVM Black tape (SCC-502)		PB	
2	Azimuth	VTVM Oscilloscope Test tape (TCC-153)		PB	
3	Tape speed (Hi-speed)	Frequency counter Test tape (MTT-111DN)		PB	
4	Tape speed (Normal speed)	Frequency counter Test tape (MTT-111DN)		PB	
5	Playback output level	VTVM Test tape (TCC-130)		PB	
6	Playback frequency characteristic confirmation	VTVM Test tape (TCC-1216 or TCC-162C and TCC-262C)		PB	
7	Music Search	Oscilloscope Test tape (SCC-1425)		FORWARD SEARCH	
8	Blank Search	Oscilloscope Test tape (SCC-1425)		SEARCH PLAYBACK	
9	Bias frequency confirmation	Frequency counter Blank tape (SCC-565)		DUAL REC	
10	Bias trans.	Blank tape (SCC-565)		REC/PB	
11	Bias trap	VTVM Blank tape (SCC-565)		REC/PB	
12	Bias level (pre-adjustment)	VTVM Blank tapes METAL SCC-565 CrO ₂ SCC-1360 Normal SCC-502		REC/PB	
					1
					2
3					
13	Record level (pre-adjustment)	VTVM Blank tapes METAL SCC-565 CrO ₂ SCC-1360 Normal SCC-502	Apply 1 kHz signal to INPUT jack. Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 775 mV in REC-PAUSE mode.	REC/PB	
14	Record/playback frequency characteristic	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502	Apply 1 kHz signal to INPUT jack. The output at TP501 and TP502 are Dolby level -25dB. Then adjust with a 20 Hz to 30 kHz sweep signal.	REC/PB	
					1
					2
3					
15	Record level	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502	Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 775 mV (1 kHz) in REC-PAUSE mode.	REC/PB	
16	Copy level	Test tape TCC-130 (Secondary) Blank tape SCC-1360 (Primary)		EDIT	
17	High speed copy frequency characteristic	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502 Test tape TCC-185C		High Speed Copy Play	
18	High speed copy frequency characteristic	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502 Test tape TCC-285C		High Speed Copy Play	
19	Meter level	VTVM	Apply 1 kHz signal to INPUT jack. Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 1.5 dB below 775 mV.	REC/PAUSE	
20	MPX filter characteristic confirmation	VTVM	Apply 19 kHz, 15 kHz and 1 kHz signal to INPUT jack. Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 775mV.	REC/PAUSE MPX filter ON	

Mode	Test Point	Adjustment	For
PB	TP809	VR803	Adjust VR803 so the voltage at the test point is 0.62V or higher when the leader tape is running and 200 mV or less in the middle of tape.
PB	TP501 (L ch), GND TP502 (R ch), GND	Azimuth screw	Maximum output Refer to "Azimuth Adjustment" on page 6.
PB	TP501 (L ch), GND TP502 (R ch), GND	VR801	6020 Hz \pm 20 Hz (TP806 : GND connection) Adjust at the center of test tape.
PB	TP501 (L ch), GND TP502 (R ch), GND	VR802	3010 Hz \pm 10 Hz Adjust at the center of test tape.
PB	TP501 (L ch), GND TP502 (R ch), GND	VR101 (L ch) VR102 (R ch)	775 mV Tape selector is Normal position. Adjust at Dolby NR off.
PB	TP501 (L ch), GND TP502 (R ch), GND	VR103 VR104	Adjust VR103 and VR104 so the playback frequency response (1 kHz/18 kHz) is +0.6 ~ 0.7 dB. Refer to Fig. a.
FORWARD SEARCH	TP601, GND	VR602	3.0 \pm 0.05V To be adjusted at the beginning of tape winding. 
SEARCH PLAYBACK	TP601, GND	VR601	1.0V or higher To be measured at the low level part of SCC-1425 tape. 
DUAL REC	TP101 (L ch), GND TP102 (R ch), GND	T301	105 kHz \pm 2 kHz Use METAL tape.
REC/PB	TP306, GND TP301, GND (L ch) TP302, GND (R ch)	T302 L301 L302	Connect the oscilloscope to TP306 and GND and adjust T302 so that the waveform is maximum. Connect the oscilloscope to TP301 and GND, TP302 and GND and adjust L301, L302 so that the DC voltage is minimum.
REC/PB	TP201 (L ch), GND TP202 (R ch), GND	LC201 LC202	Minimum output. Use METAL tape. INPUT VR. minimum
REC/PB	TP101 (L ch), GND TP102 (R ch), GND	VR301 VR302	35 mV Test tape is METAL blank tape. Short-circuit R708 and JP699, R707 and JP700.
		VR305 VR306	20 mV Test tape is CrO ₂ blank tape. Short-circuit R708 and JP699, R707 and JP700.
		VR303 VR304	15 mV Test tape is Normal blank tape. Short-circuit R708 and JP699, R707 and JP700.
REC/PB	TP501 (L ch), GND TP502 (R ch), GND	VR201, VR202 VR301 VR302	775 mV Test tape is METAL tape. Adjust variable resistors so that the distortion becomes 0.9% - 1.2%. (Mini. distortion)
		VR305 VR306 (CrO ₂)	775 mV Adjust variable resistors so that the distortion becomes 0.9% (CrO ₂).
		VR303 VR304 (Normal)	Adjust variable resistors so that the distortion becomes 0.8% (Normal). This confirmation should be at each tape selector position.
REC/PB	OUTPUT jack	VR305, VR306 LC201, LC202 (VR301, VR302)	So that the record/playback frequency response is flat (at least within the range in Fig. b.) Test tape is CrO ₂ tape.
		VR301 VR302	So that the record/playback frequency response is flat (at least within the range in Fig. b.) Test tape is METAL tape.
		VR303, VR304 LC201, LC202 (VR301, VR302)	So that the record/playback frequency response is flat (at least within the range in Fig. b.) Test tape is Normal tape.
REC/PB	TP501 (L ch), GND TP502 (R ch), GND	VR201 VR202	775 mV Perform adjustment using CrO ₂ . Perform checking only for Normal and METAL tapes.
EDIT	OUTPUT	VR551 VR552	Perform edit copy and adjust VR551 and VR552 so that the copy output (PLAY output) of PRI DECK is 775 mV.
High Speed Copy Play	OUTPUT	L203, L204	Load TCC-185C in SEC DECK and SCC-565 in PRI DECK and execute high-speed copying, then play the tape in the PRI DECK. Check that the frequency response of the 14 kHz signal is within \pm 3 dB of that of the 1 kHz signal. If this specification cannot be satisfied, adjust L203 and L204. After adjustment is confirmed, also use the SCC-502 and SCC-1360 tapes to check.
High Speed Copy Play	OUTPUT	L203, L204	Load TCC-285C in SEC DECK and SCC-565 in PRI DECK and execute high-speed copying, then play the tape in the PRI DECK. Check that the frequency response of the 14 kHz signal is within \pm 3 dB of that of the 1 kHz signal. If this specification cannot be satisfied, adjust L203 and L204. After adjustment is confirmed, also use the SCC-502 and SCC-1360 tapes to check.
REC/PAUSE	PEAK LEVEL METER	VR401 VR402	Adjust so the -1 dB segments light.
REC/PAUSE MPX filter ON	TP501 (L ch), GND TP502 (R ch), GND	LC501 LC502	Adjust for -0.3 dB at 15 kHz and > 35 dB at 19 kHz.

2. SECONDARY DECK SECTION

Step	Alignment	Instrument Required	Input Signal	Mode	T	
1	Quick sensor	VTVM Black tape (SCC-502)		PB	TP8	
2	Azimuth	VTVM Oscilloscope Test tape (TCC-153)		PB	TP5 TP5	
3	Tape speed (Hi-speed)	Frequency counter Test tape (MTT-111DN)		PB	TP5 TP5	
4	Tape speed (Normal speed)	Frequency counter Test tape (MTT-111DN)		PB	TP5 TP5	
5	Playback output level	VTVM Test tape (TCC-130)		PB	TP5 TP5	
6	Playback frequency characteristic confirmation	VTVM Test tape (TCC-1216 or TCC-162C and TCC-262C)		PB	TP5 TP5	
7	Music Search	Oscilloscope Test tape (SCC-1425)		FORWARD SEARCH	TP6	
8	Blank Search	Oscilloscope Test tape (SCC-1425)		SEARCH PLAYBACK	TP6	
9	Bias frequency confirmation	Frequency counter Blank tape (SCC-565)		DUAL REC	TP1 TP1	
10	Bias trans.	Blank tape (SCC-565)		REC/PB	TP3 TP3 TP3	
11	Bias trap	VTVM Blank tape (SCC-565)		REC/PB	TP2 TP2	
12	Bias level (pre-adjustment)	VTVM Blank tapes METAL SCC-565 CrO ₂ SCC-1360 Normal SCC-502		REC/PB	TP1 TP1	
						1
						3
13	Record level (pre-adjustment)	VTVM Blank tapes METAL SCC-565 CrO ₂ SCC-1360 Normal SCC-502	Apply 1 kHz signal to INPUT jack. Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 775 mV in REC-PAUSE mode.	REC/PB	TP5 TP5	
14	Record/playback frequency characteristic	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502	Apply 1 kHz signal to INPUT jack. The output at TP501 and TP502 are Dolby level -25dB. Then adjust with a 20 Hz to 30 kHz sweep signal.	REC/PB	OUT	
						1
						3
15	Record level	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502	Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 775 mV (1 kHz) in REC-PAUSE mode.	REC/PB	TP5 TP5	
16	Copy level	Test tape TCC-130 (Secondary) Blank tape SCC-1360 (Primary)		EDIT	OUT	
17	High speed copy frequency characteristic	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502 Test tape TCC-185C		High Speed Copy Play	OUT	
18	High speed copy frequency characteristic	VTVM Blank tapes CrO ₂ SCC-1360 METAL SCC-565 Normal SCC-502 Test tape TCC-285C		High Speed Copy Play	OUT	
19	Meter level	VTVM	Apply 1 kHz signal to INPUT jack. Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 1.5 dB below 775 mV.	REC/PAUSE	PEA MET	
20	MPX filter characteristic confirmation	VTVM	Apply 19 kHz, 15 kHz and 1 kHz signal to INPUT jack. Set INPUT LEVEL knob so that TP501 and TP502 to GND voltage is 775mV.	REC/PAUSE MPX filter ON	TP5 TP5	

Item	Test Point	Adjustment	For
	TP859	VR853	Adjust VR853 so the voltage at the test point is 0.62V or higher when the leader tape is running and 200 mV or less in the middle of tape.
	TP501 (L ch), GND TP502 (R ch), GND	Azimuth screw	Maximum output Refer to "Azimuth Adjustment" on page 6.
	TP501 (L ch), GND TP502 (R ch), GND	VR851	6020 Hz \pm 20 Hz (TP856 : GND connection) Adjust at the center of test tape.
	TP501 (L ch), GND TP502 (R ch), GND	VR852	3010 Hz \pm 10 Hz Adjust at the center of test tape.
	TP501 (L ch), GND TP502 (R ch), GND	VR1101 (L ch) VR1102 (R ch)	775 mV Tape selector is Normal position. Adjust at Dolby NR off.
	TP501 (L ch), GND TP502 (R ch), GND	VR1103 VR1104	Adjust VR1103 and VR1104 so the playback frequency response (1 kHz/18 kHz) is +0.6 ~ 0.7 dB. Refer to Fig. a.
RECORD DECK	TP601, GND	VR602	3.0 \pm 0.05V To be adjusted at the beginning of tape winding. 
RECORD DECK JACK	TP601, GND	VR601	1.0V or higher To be measured at the low level part of SCC-1425 tape. 
	TP101 (L ch), GND TP102 (R ch), GND	T301	105 kHz \pm 2 kHz Use METAL tape.
RECORD DECK	TP305, GND TP303, GND (L ch) TP304, GND (R ch)	T303 L303 L304	Connect the oscilloscope to TP305 and GND and adjust T303 so that the waveform is maximum. Connect the oscilloscope to TP303 and GND, TP304 and GND and adjust L303, L304 so that the DC voltage is minimum.
RECORD DECK	TP203 (L ch), GND TP204 (R ch), GND	LC1201 LC1202	Minimum output. Use METAL tape. INPUT VR. minimum
RECORD DECK	TP1101 (L ch), GND TP1102 (R ch), GND	VR311 VR312	35 mV Test tape is METAL blank tape. Short-circuit R708 and JP699, R707 and JP700.
		VR315 VR316	20 mV Test tape is CrO ₂ blank tape. Short-circuit R708 and JP699, R707 and JP700.
		VR313 VR314	15 mV Test tape is Normal blank tape. Short-circuit R708 and JP699, R707 and JP700.
RECORD DECK	TP501 (L ch), GND TP502 (R ch), GND	VR1201, VR1202 VR311 VR312	775 mV Test tape is METAL tape. Adjust variable resistors so that the distortion becomes 0.9% - 1.2%. (Mini. distortion)
		VR315 VR316 (CrO ₂)	775 mV Adjust variable resistors so that the distortion becomes 0.9% (CrO ₂).
		VR313 VR314 (Normal)	Adjust variable resistors so that the distortion becomes 0.8% (Normal). This confirmation should be at each tape selector position.
RECORD DECK	OUTPUT jack	VR315, VR316 LC1201, LC1202 (VR311, VR312)	So that the record/playback frequency response is flat (at least within the range in Fig. b.) Test tape is CrO ₂ tape.
		VR311 VR312	So that the record/playback frequency response is flat (at least within the range in Fig. b.) Test tape is METAL tape.
		VR313, VR314 LC1201, LC1202 (VR311, VR312)	So that the record/playback frequency response is flat (at least within the range in Fig. b.) Test tape is Normal tape.
RECORD DECK	TP501 (L ch), GND TP502 (R ch), GND	VR1201 VR1202	775 mV Perform adjustment using CrO ₂ . Perform checking only for Normal and METAL tapes.
	OUTPUT	VR551 VR552	Perform edit copy and adjust VR551 and VR552 so that the copy output (PLAY output) of PRI DECK is 775 mV.
Speed Play	OUTPUT	L203, L204	Load TCC-185C in SEC DECK and SCC-565 in PRI DECK and execute high-speed copying, then play the tape in the PRI DECK. Check that the frequency response of the 14 kHz signal is within \pm 3 dB of that of the 1 kHz signal. If this specification cannot be satisfied, adjust L203 and L204. After adjustment is confirmed, also use the SCC-502 and SCC-1360 tapes to check.
Speed Play	OUTPUT	L203, L204	Load TCC-285C in SEC DECK and SCC-565 in PRI DECK and execute high-speed copying, then play the tape in the PRI DECK. Check that the frequency response of the 14 kHz signal is within \pm 3 dB of that of the 1 kHz signal. If this specification cannot be satisfied, adjust L203 and L204. After adjustment is confirmed, also use the SCC-502 and SCC-1360 tapes to check.
TAPE METER	PEAK LEVEL METER	VR401 VR402	Adjust so the -1 dB segments light.
TAPE METER	TP501 (L ch), GND TP502 (R ch), GND	LC501 LC502	Adjust for -0.3 dB at 15 kHz and > 35 dB at 19 kHz.

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LEAD WIRES STYLING DIAGRAM

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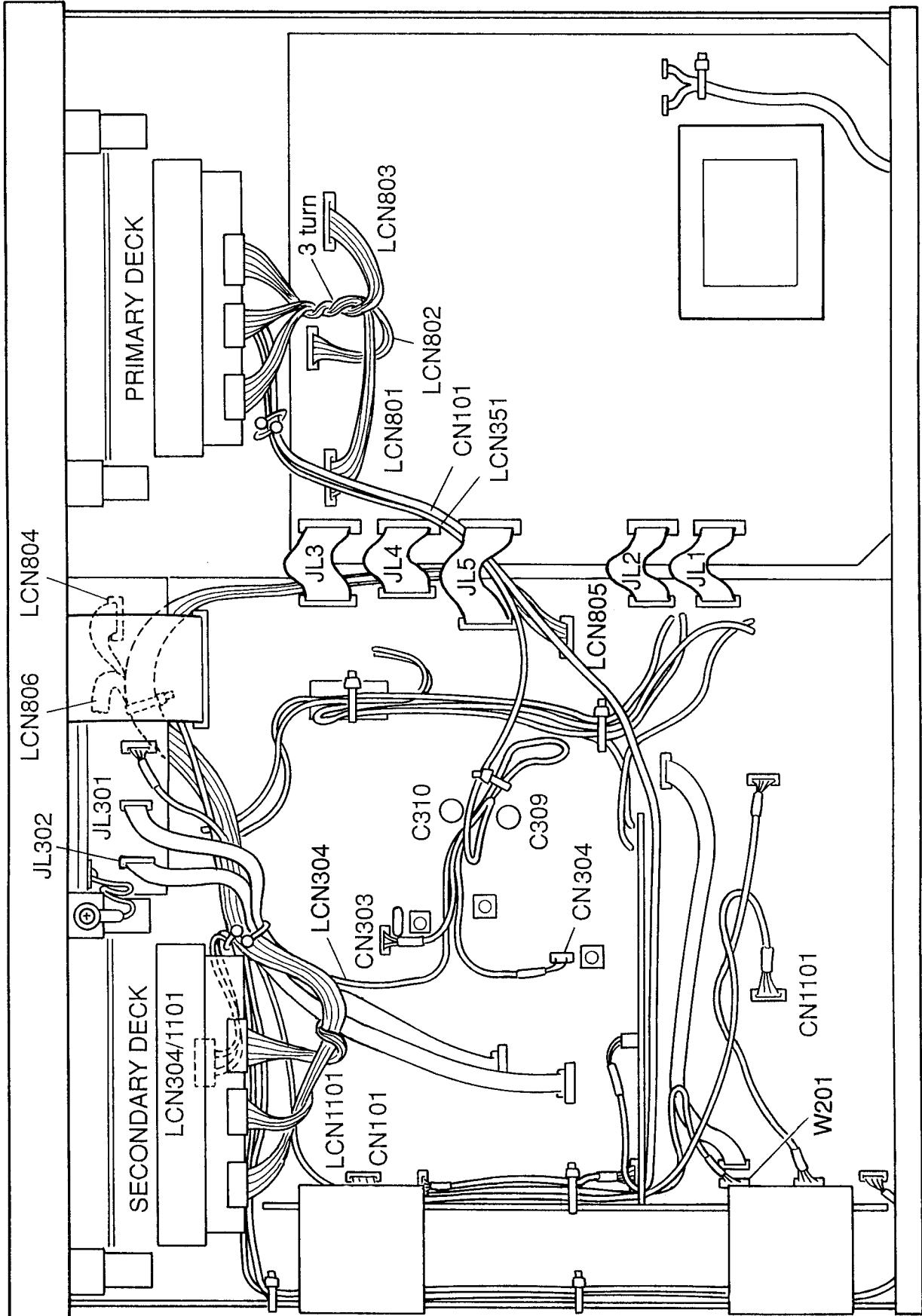
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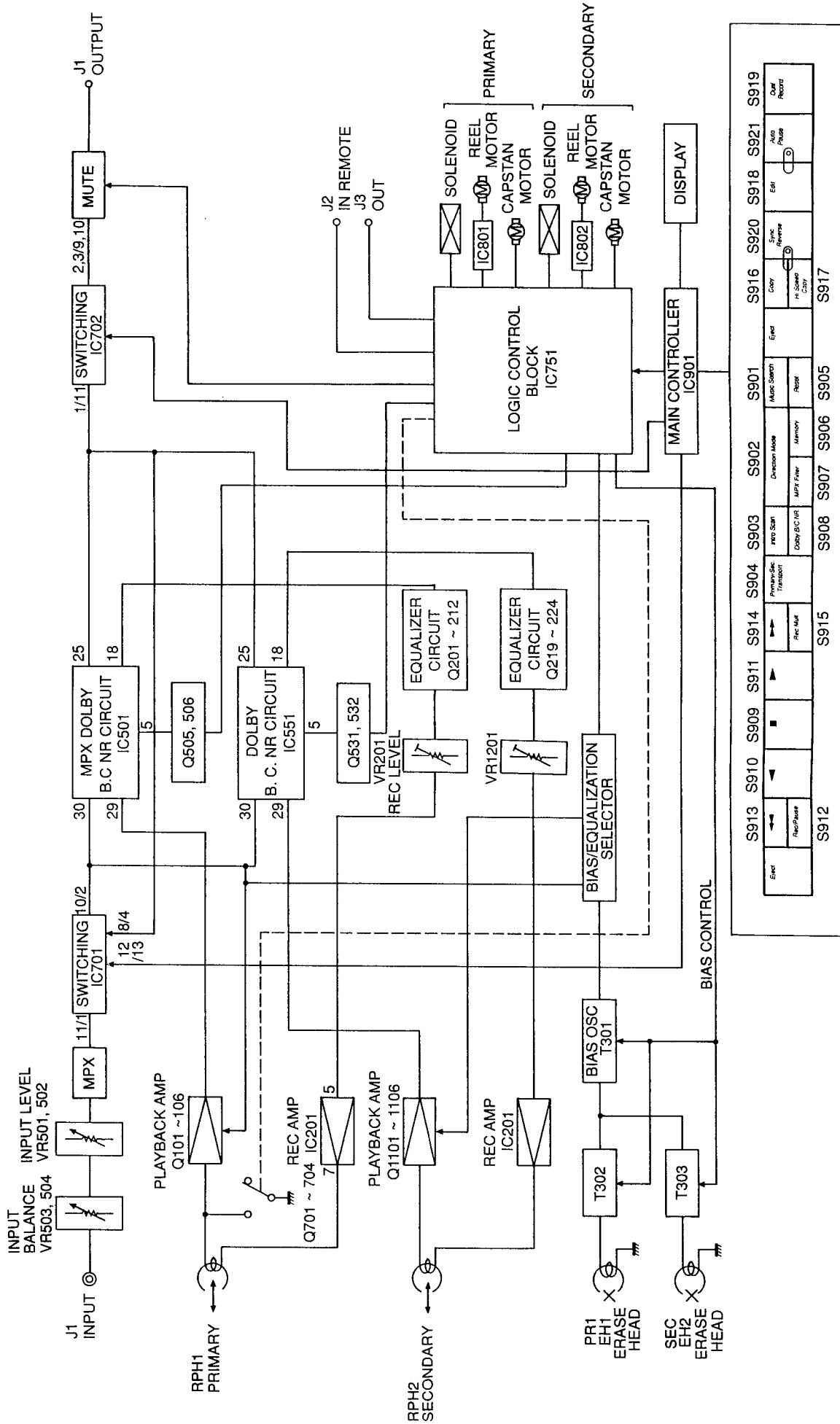
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BLOCK DIAGRAM



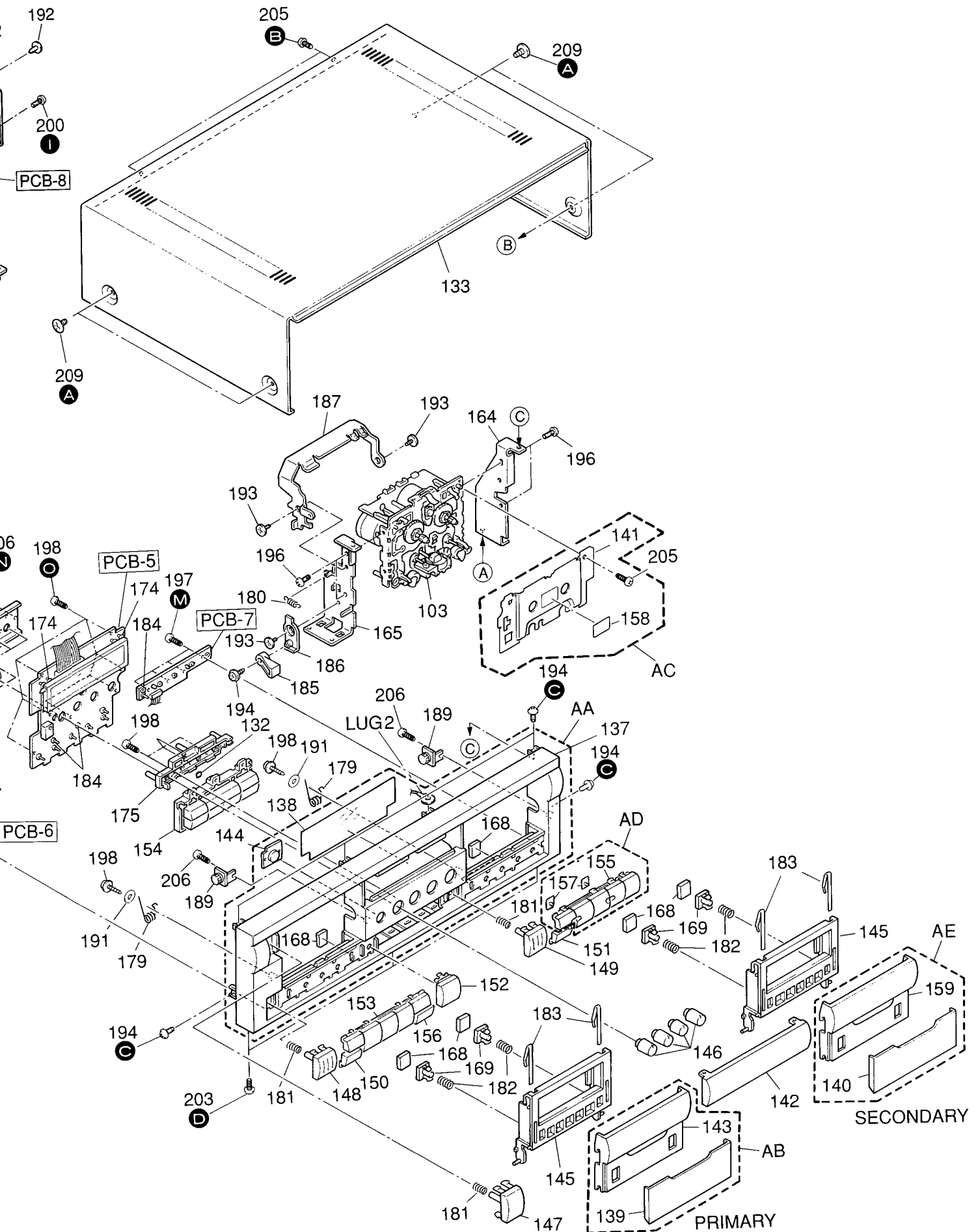
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GENERAL UNIT PARTS LIST

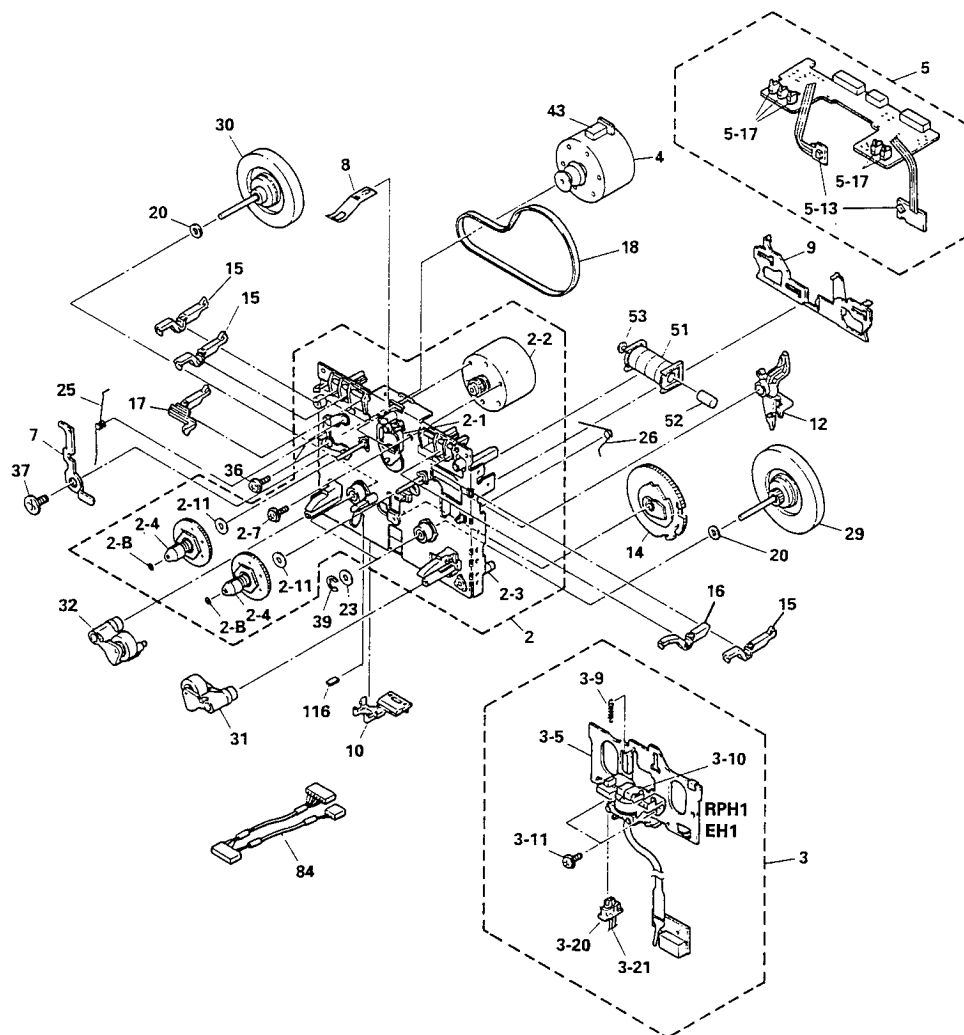
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AA	A442-DC5700B	FRONT PANEL ASSEMBLY	165	2219-8326	METAL FITTG, MECHA L (x2)
AB	A532-DC5700B	WINDOW ASSEMBLY (PRI)	166	2219-8345	METAL FITTG, DOLBY PCB (x2)
AC	A514-DC5700A	PLATE ASSEMBLY, MECHA	168	2114-87143	BUSHING (x6)
AD	A662-DC5700B	PUSH BUTTON ASSEMBLY	169	2240-7371	HOLDER (x4)
AE	A532-DC5700E	WINDOW ASSEMBLY (SEC)	170	2222-7281	HEAT SINK (x2)
103	3112-15905	MECHA ASSEMBLY, PRI AND SEC (REC/PLAY) (x2)	171	2240-7050	HOLDER (x2)
131	1319-03301	LEG (x4)	172	2240-R0101	HOLDER (x9)
132	1751-19702	LABEL	173	2240-364	HOLDER, AC CORD
133	1414-16701	TOP COVER	174	2240-7387	HOLDER, FL (x2)
134	1424-34201	CABINET BOTTOM	175	2240-7391	HOLDER, VR HOLD
135	1424-34303	CABI BACK (BK)	176	2360-7022	BOSS, SPE (x4)
135	1424-34306	CABI BACK (B)	177	2360-7063	BOSS, SPE
137	1442-26803	PANEL, FRONT	178	2601-7199	SHAFT
138	1511-22101	PANEL, DISPLAY	179	2651-059	SPRING, LID EJECT (x2)
139	1512-07507	PLATE, CASS. LID (PRI)	180	2651-11212	SPRING, LEVER (x2)
140	1512-07502	PLATE, CASS. LID (SEC)	181	2651-2101732	SPRING (x3)
141	1514-23501	PLATE, MECHA (x2)	182	2651-2101735	SPRING (x4)
142	1532-20901	WINDOW, DISPLAY	183	2652-105	LEAF SPRING (x4)
143	1532-21001	WINDOW, CASS. LID (PRI)	184	2132-413	SPACER (x3)
144	1532-21101	WINDOW, REMOTE	185	2672-7051	LEVER (x2)
145	1612-07801	CASS LID (x2)	186	2672-7052	LEVER (x2)
146	1632-20401	ROTARY KNOB (x4)	187	2672-7053	LEVER (x2)
147	1662-58401	PUSH BUTTON, POWER	189	2692-015	DAMPER (x2)
148	1662-65001	PUSH BUTTON, EJECT L	191	2401-0216	WASHER, METAL (x2)
149	1662-65101	PUSH BUTTON, EJECT R	192	2459-3004511	RIVET, PLASTIC
150	1662-65201	PUSH BUTTON, REC/PAUSE	193	2320-044	SCREW, SPE+ (x6)
151	1662-65301	PUSH BUTTON, HIGH SPEED COPY	194	2340-7009	SCREW, SPE T+ (x8)
152	1662-65401	PUSH BUTTON, TRANSPORT	196	2347-260527	SCREW, BND T+ (2.6x5mm) (x8)
153	1662-65501	PUSH BUTTON, CASS. L	197	2347-260626	SCREW, BND T+ (2.6x6mm) (x8)
154	1662-65801	PUSH BUTTON, CENTER	198	2347-R0126122	SCREW, BND T+ (2.6x12mm) (x13)
155	1662-66001	PUSH BUTTON, CASS. R	200	2347-R0130062	SCREW, BND T+ (3x6mm) (x15)
156	1662-66301	PUSH BUTTON, REC MUTE	202	2347-R0130082	SCREW, BND T+ (3x8mm) (x4)
157	1732-08201	INDICATOR (x2)	203	2347-R0130082	SCREW, BND T+ (3x8mm) (x17)
158	1741-01601	ORNAMENT (x2)	205	2347-R0130084	SCREW, BND T+ (3x8mm) (x10)
159	1532-21001	WINDOW, CASS. LID (SEC)	206	2347-R0130122	SCREW, BND T+ (3x12mm) (x5)
160	1756-CSA	LABEL (BK)	208	2347-R0140062	SCREW, BND T+ (4x6mm) (x4)
161	2219-8293	METAL FITTG, CENTER PCB	209	2347-R0140064	SCREW, BND T+ (4x6mm) (x4)
162	2219-8323	METAL FITTG, DOLBY PCB (x2)	759	2440-62	SPECIAL NUT (x4)
163	2219-8324	METAL FITTG, VR HOLD	△ P1	4161-71151	CORD W/PLUG (BK)
164	2219-8325	METAL FITTG, MECHA R (x2)	△ P1	4161-7256	CORD W/PLUG (B)

NOTE:



SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

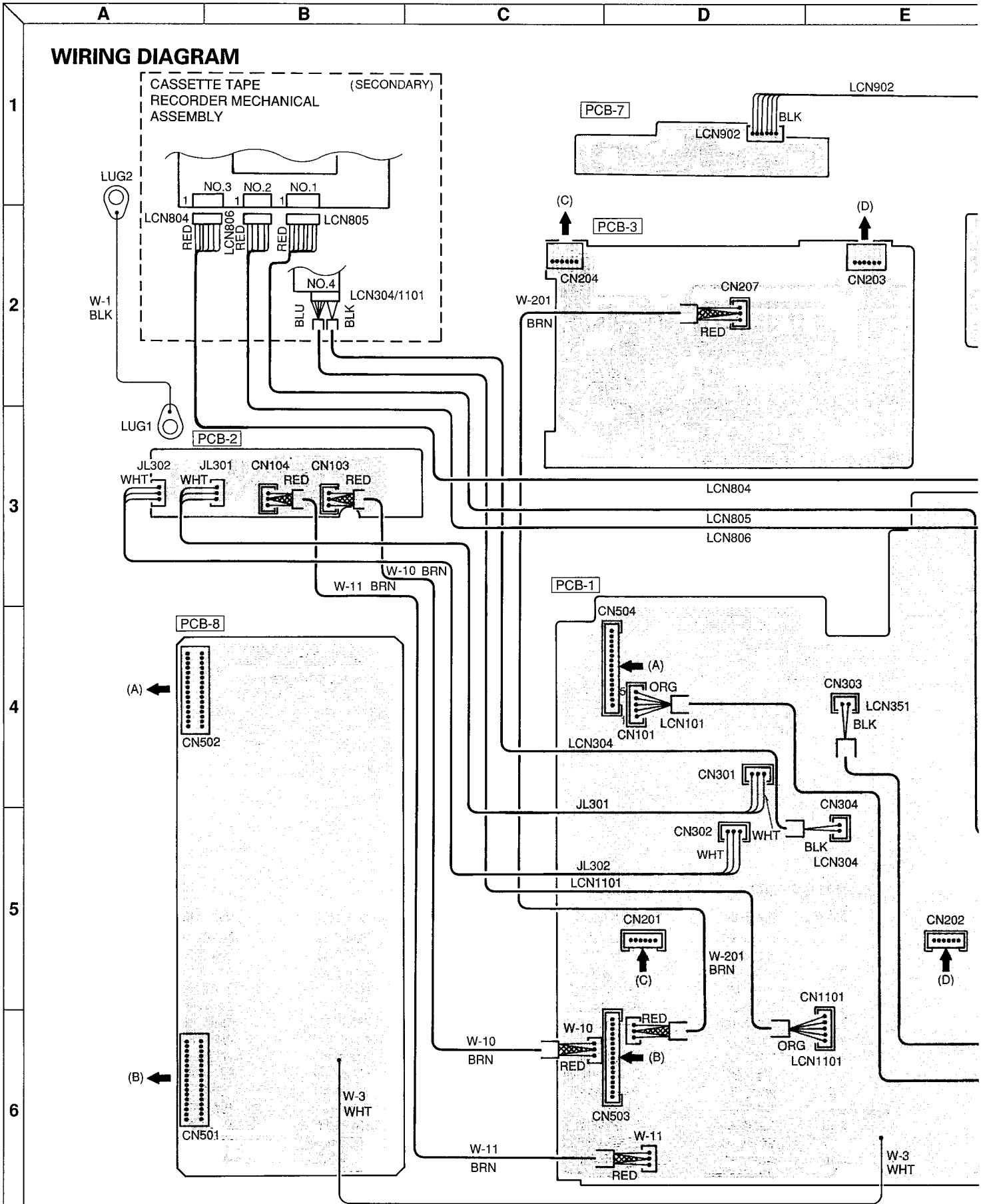
CASSETTE TAPE RECORDER MECHANISM EXPLODED VIEW

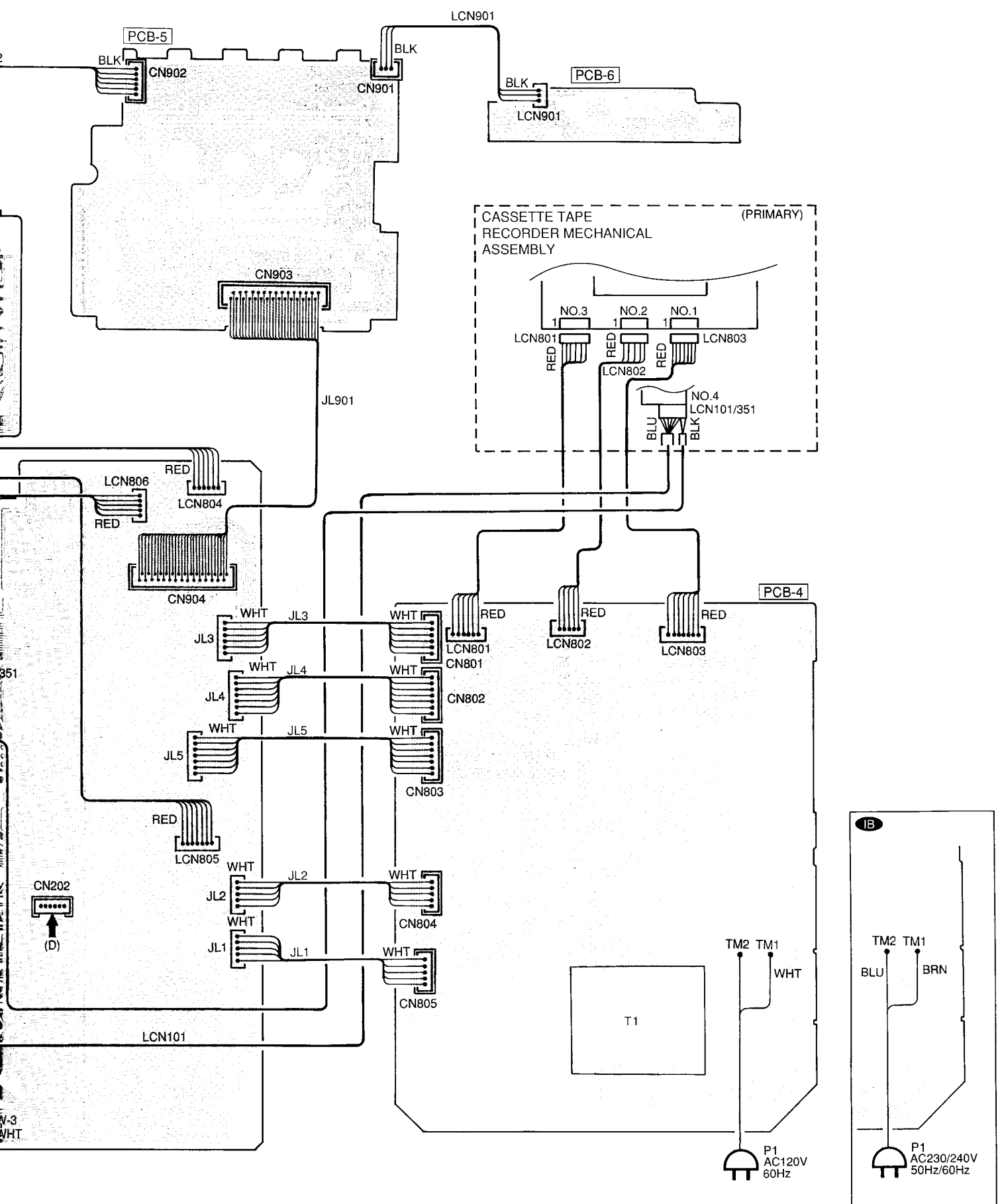


PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
2	F511-496	XPORT CHASSIS (EXCL HEAD)	12	FD45G-12	PLAY ARM
2-1	F517-049	IDLER BLK	14	FD45B-15	CAM GEAR (3R)
2-2	F564-280	MTR REEL BLK	15	FD44T-14	SWITCH ARM, REC
2-3	F612-168	CHASSIS BASE BLK	16	FD44Y-12	SWITCH ARM(R), PACK
2-4	F623-037	REEL BASE BLK	17	FD44V-12	SWITCH ARM(L), METAL
2-7	FG156-11A	SCREW 2.6x6.4 ZN	18	FF17G-21, 31	MAIN BELT
2-8	FJ111-17	WASHER 1.7x0.25	20	FJ111-30	WASHER 2.6x0.25
2-11	UJ12V-11	WASHER 2.1x0.25T	23	FJ111-14	WASHER 2.6x0.5
3	F513-538	PLATE HD BLK	25	FK28M-15	EJECT PREVENTION SPRING (L)
3-5	FC52E-36	HEAD BASE	26	FK28R-11	SLIDE SPRING
3-9	FK26N-14	HB SP	29	FR23B-11	FLYWHEEL ASS'Y (ZDC)
3-10	FU18D-61	HADKH5725B R/P HEAD	30	FR22K-13	FLYWHEEL ASS'Y (RVS)
3-11	UG19D-11	SCREW TT 2.0x5 ZN	31	FR20L-21A	PINCH ROLLER ASS'Y(R)
3-20	AZ13P-00	SPI-320BC	32	FR20M-22	PINCH ROLLER ASS'Y(L)
3-21	WG50M-03A	QS LEAD WIRE	36	FG114-14	SCREW 2.6x5 ZN
4	F525-256	MTR MAIN BLK	37	UG15S-11A	SCREW
5	F567-404	PCB CONTROL BLK	39	UG13U-15	E RING
5-1	F743-065	PCB BASE BLK	43	FF17C-12	HOLDER CUSHION(L)
5-13	AZ15S-00	GP2S04B	51	F765-263	SOLENOID BLK
5-17	UE16E-11	PUSH SWITCH	52	FL39H-12A	FIXED BAR
7	FC39L-70	EJECT PREVENTION ARM(L)	53	FL39K-12	PLANGER
8	FC52H-12	SPRING CASSETTE	84	WH52P-66	WIRE CONNECTOR (R/P)
9	FC52F-15	SLIDE PLATE	116	UT11R-11	REFLECTION PLATE
10	FD45H-15	LEAD HOLDER			

WIRING DIAGRAM





WIRE COLOR ABBREVIATIONS

REC : Red	YEL : Yellow
ORG : Orange	PUP : Purple
BLU : Blue	PIK : Pink
WHT : White	BRN : Brown
BLK : Black	

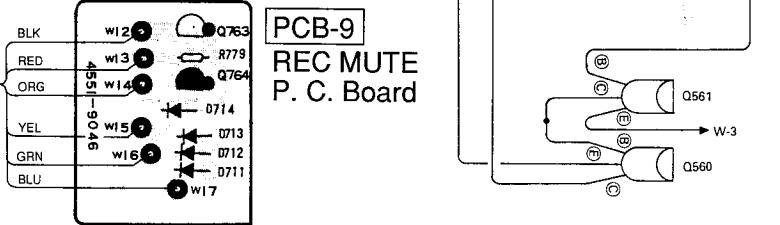
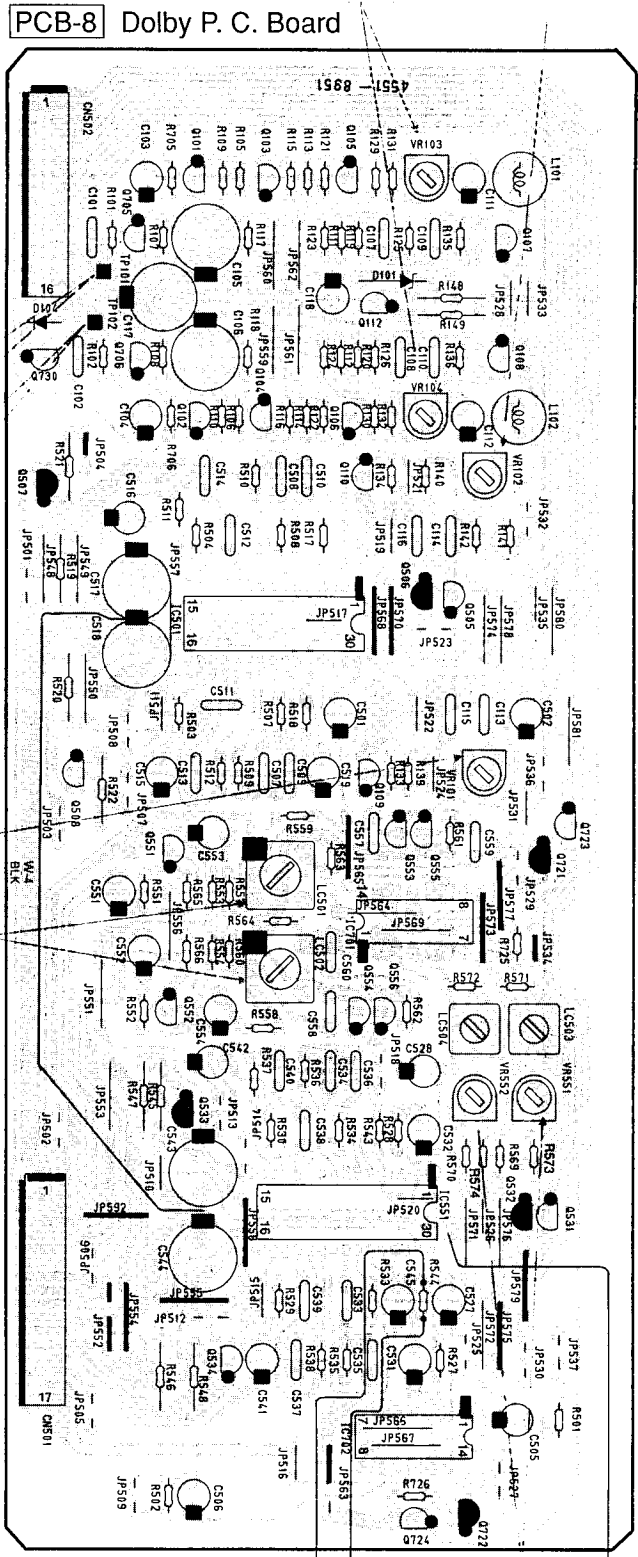
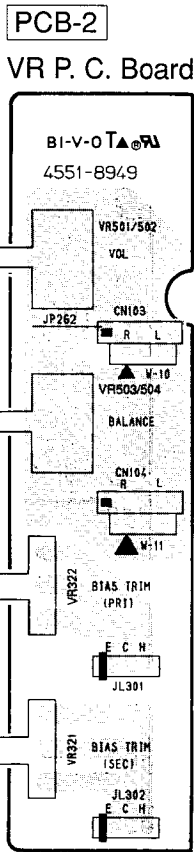
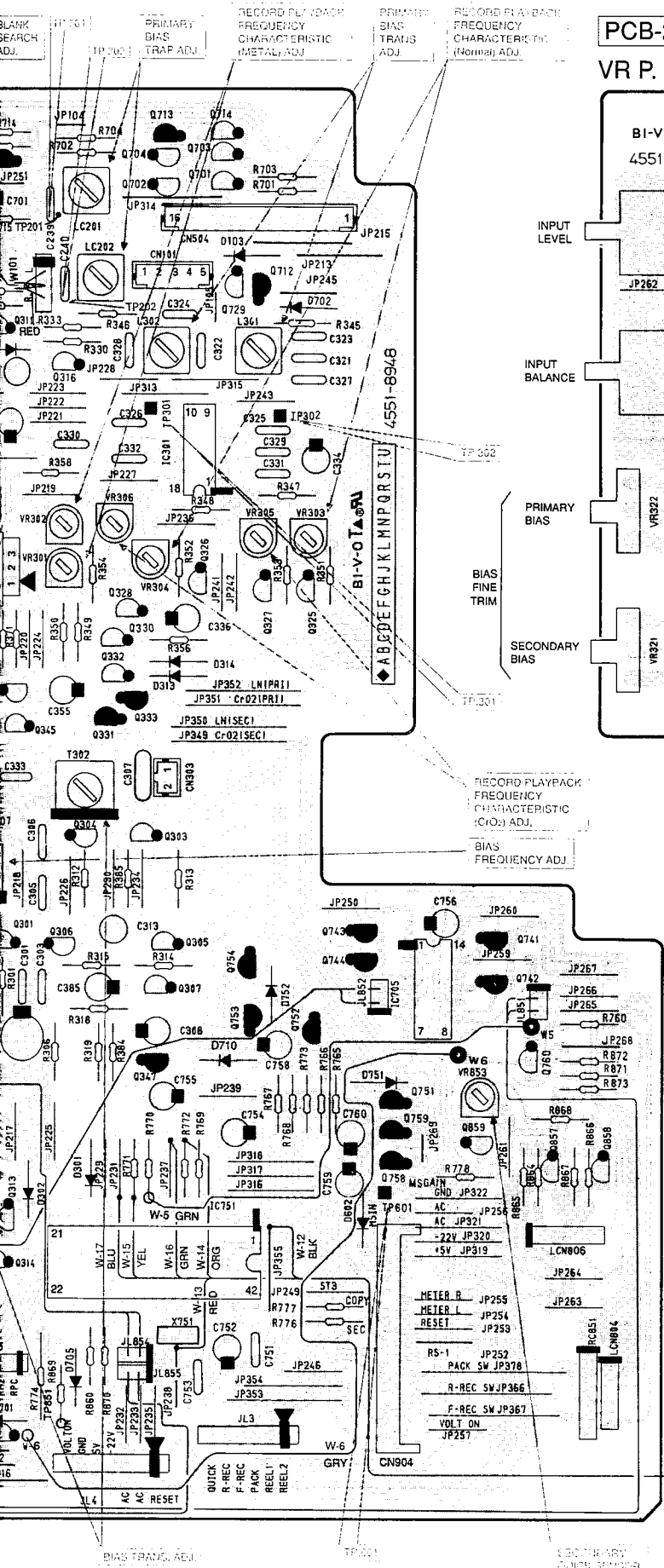
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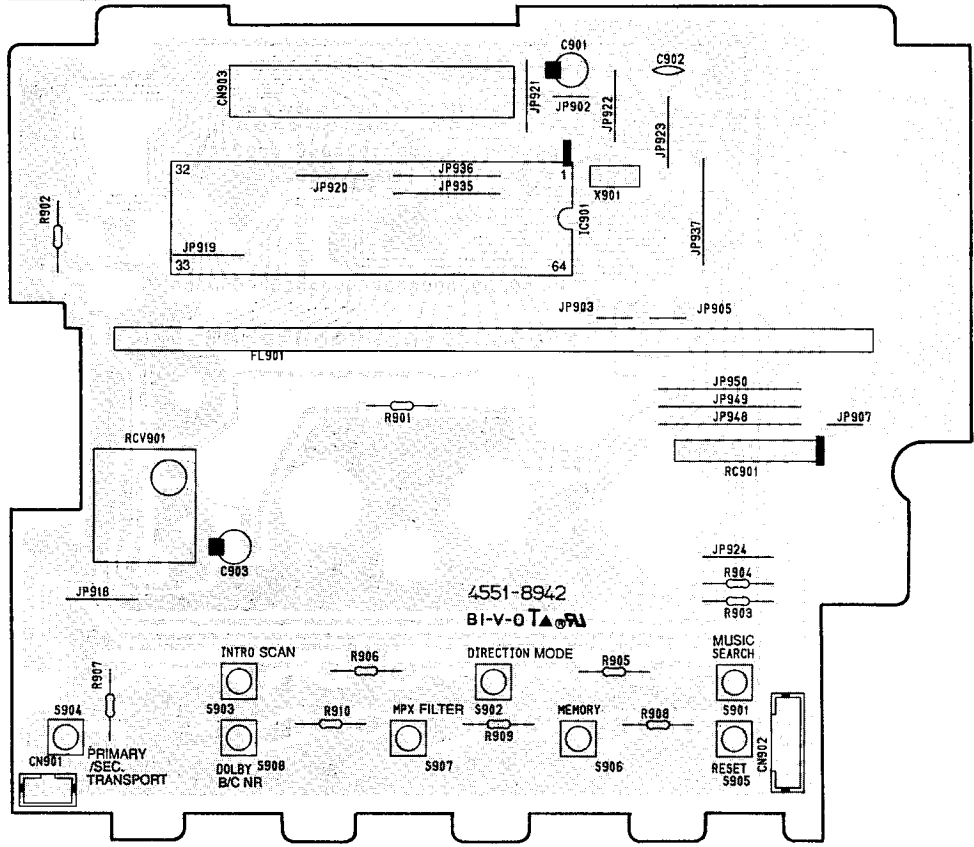
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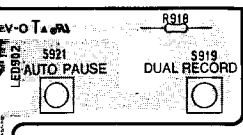
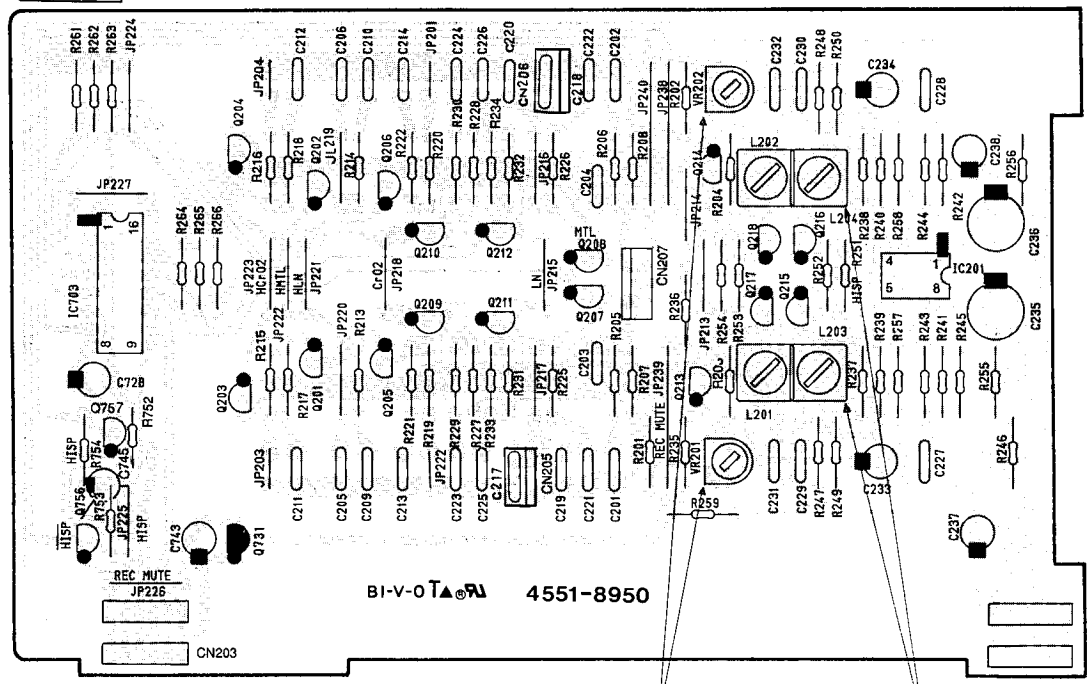
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PCB-5 FRONT P. C. Board



PCB-3 REC EQ P. C. Board



CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING AS INDICATED.



ATTENTION : REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING AS INDICATED.

RECORD LEVEL ADJ.

HIGH SPEED COPY FREQUENCY CHARACTERISTIC ADJ.

ELECTRICAL PARTS LIST

Ser. No.	Ref. No.	Part No.	Description	Ser. No.	Ref. No.	Part No.	Description
PCB-1 MAIN P. C. BOARD							
CAPACITORS							
604	C21	5345-107C041	CAP, MINI ELE 100 μ /16V	957	C605	5345-224F041	CAP, MINI ELE .22 μ /50V
604	C22	5345-107C041	CAP, MINI ELE 100 μ /16V	951	C607	5345-476C041	CAP, MINI ELE 47 μ /16V
415	C239	5361-221KB	CAP, CER 220P	951	C608	5345-476C041	CAP, MINI ELE 47 μ /16V
415	C240	5361-221KB	CAP, CER 220P	691	C701	5345-106E041	CAP, MINI ELE 10 μ /35V
500	C301	5359-S010J102	CAP, PPP 1000P	902	C751	5359-S010J103	CAP, PPP .01 μ
500	C302	5359-S010J102	CAP, PPP 1000P	900	C752	5345-106E041	CAP, MINI ELE 10 μ /35V
501	C303	5359-S010J822	CAP, PPP 8200P	902	C753	5359-S010J103	CAP, PPP .01 μ
499	C304	5359-S010J332	CAP, PPP 3300P	910	C754	5345-107B041	CAP, MINI ELE 100 μ /10V
500	C305	5359-S010J102	CAP, PPP 1000P	910	C755	5345-107B041	CAP, MINI ELE 100 μ /10V
500	C306	5359-S010J102	CAP, PPP 1000P	904	C756	5345-476B041	CAP, MINI ELE 47 μ /10V
502	C307	5354-S070K103	CAP, MYL .01 μ	905	C757	5345-106E041	CAP, MINI ELE 10 μ /35V
504	C308	5345-106E041	CAP, MINI ELE 10 μ /35V	903	C758	5345-105F041	CAP, MINI ELE 1 μ /50V
503	C309	5342-106D041	CAP, ELE BP 10 μ /25V	903	C759	5345-105F041	CAP, MINI ELE 1 μ /50V
505	C310	5345-476D041	CAP, MINI ELE 47 μ /25V	903	C760	5345-105F041	CAP, MINI ELE 1 μ /50V
500	C311	5359-S010J102	CAP, PPP 1000P	902	C851	5359-S010J103	CAP, PPP .01 μ
500	C312	5359-S010J102	CAP, PPP 1000P	316	C1101	5353-101534	CAP, MCA 100P
503	C313	5342-106D041	CAP, ELE BP 10 μ /25V	316	C1102	5353-101534	CAP, MCA 100P
504	C314	5345-106E041	CAP, MINI ELE 10 μ /35V	312	C1103	5345-106C0951	CAP, MINI ELE 10 μ /16V
502	C316	5354-S070K103	CAP, MYL .01 μ	312	C1104	5345-106C0951	CAP, MINI ELE 10 μ /16V
503	C317	5342-106D041	CAP, ELE BP 10 μ /25V	313	C1105	5345-227B0952	CAP, MINI ELE 220 μ /10V
506	C319	5345-475F041	CAP, MINI ELE 4.7 μ /50V	313	C1106	5345-227B0952	CAP, MINI ELE 220 μ /10V
506	C320	5345-475F041	CAP, MINI ELE 4.7 μ /50V	317	C1107	5359-6825851	CAP, PPP 6800P
507	C321	5361-4710423	CAP, CER 470P	317	C1108	5359-6825851	CAP, PPP 6800P
507	C322	5361-4710423	CAP, CER 470P	317	C1109	5359-6825851	CAP, PPP 6800P
508	C323	5361-1010423	CAP, CER 100P	317	C1110	5359-6825851	CAP, PPP 6800P
508	C324	5361-1010423	CAP, CER 100P	312	C1111	5345-106C0951	CAP, MINI ELE 10 μ /16V
510	C325	5354-104593	CAP, MYL .1 μ	312	C1112	5345-106C0951	CAP, MINI ELE 10 μ /16V
510	C326	5354-104593	CAP, MYL .1 μ	320	C1113	5359-S010J562	CAP, PPP 5600P
511	C327	5359-S010J561	CAP, PPP 560P	320	C1114	5359-S010J562	CAP, PPP 5600P
511	C328	5359-S010J561	CAP, PPP 560P	321	C1115	5359-S010J272	CAP, PPP 2700P
512	C329	5359-S010J223	CAP, PPP .022 μ	321	C1116	5359-S010J272	CAP, PPP 2700P
512	C330	5359-S010J223	CAP, PPP .022 μ	315	C1117	5345-477C041	CAP, MINI ELE 470 μ /16V
513	C331	5359-S010J103	CAP, PPP .01 μ	314	C1118	5345-336C041	CAP, MINI ELE 33 μ /16V
513	C332	5359-S010J103	CAP, PPP .01 μ	318	C1121	5359-S010J682	CAP, PPP 6800P
509	C333	5353-070534	CAP, MCA 7P	318	C1122	5359-S010J682	CAP, PPP 6800P
514	C334	5345-106E041	CAP, MINI ELE 10 μ /35V	322	C1130	5345-106E041	CAP, MINI ELE 10 μ /35V
514	C335	5345-106E041	CAP, MINI ELE 10 μ /35V	319	C1153	5359-S010J103	CAP, PPP .01 μ
506	C336	5345-475E041	CAP, MINI ELE 4.7 μ /50V	319	C1154	5359-S010J103	CAP, PPP .01 μ
509	C337	5353-070534	CAP, MCA 7P	453	C1201	5359-S010J332	CAP, PPP 3300P
507	C341	5361-4710423	CAP, CER 470P	453	C1202	5359-S010J332	CAP, PPP 3300P
507	C342	5361-4710423	CAP, CER 470P	459	C1203	5359-S010J182	CAP, PPP 1800P
508	C343	5361-1010423	CAP, CER 100P	459	C1204	5359-S010J182	CAP, PPP 1800P
508	C344	5361-1010423	CAP, CER 100P	450	C1215	5359-S010J222	CAP, PPP 2200P
510	C345	5354-104593	CAP, MYL .1 μ	450	C1216	5359-S010J222	CAP, PPP 2200P
510	C346	5354-104593	CAP, MYL .1 μ	448	C1217	5359-S010J821	CAP, PPP 820P
513	C347	5359-S010J103	CAP, PPP .01 μ	448	C1218	5359-S010J821	CAP, PPP 820P
513	C348	5359-S010J103	CAP, PPP .01 μ	449	C1219	5359-S010J392	CAP, PPP 3900P
511	C349	5359-S010J561	CAP, PPP 560P	449	C1220	5359-S010J392	CAP, PPP 3900P
511	C350	5359-S010J561	CAP, PPP 560P	447	C1221	5359-S010J122	CAP, PPP 1200P
512	C351	5359-S010J223	CAP, PPP .022 μ	447	C1222	5359-S010J122	CAP, PPP 1200P
512	C352	5359-S010J223	CAP, PPP .022 μ	450	C1223	5359-S010J222	CAP, PPP 2200P
514	C353	5345-106E041	CAP, MINI ELE 10 μ /35V	450	C1224	5359-S010J222	CAP, PPP 2200P
514	C355	5345-106E041	CAP, MINI ELE 10 μ /35V	451	C1225	5359-S010J123	CAP, PPP .012 μ
506	C356	5345-475E041	CAP, MINI ELE 4.7 μ /50V	451	C1226	5359-S010J123	CAP, PPP .012 μ
503	C380	5342-106D041	CAP, ELE BP 10 μ /25V	452	C1227	5354-124593	CAP, MYL .12 μ
503	C381	5342-106D041	CAP, ELE BP 10 μ /25V	452	C1228	5354-124593	CAP, MYL .12 μ
504	C383	5345-106E041	CAP, MINI ELE 10 μ /35V	454	C1231	5359-S010J103	CAP, PPP .01 μ
504	C384	5345-106E041	CAP, MINI ELE 10 μ /35V	454	C1232	5359-S010J103	CAP, PPP .01 μ
504	C385	5345-106E041	CAP, MINI ELE 10 μ /35V	455	C1233	5345-105F0951	CAP, MINI ELE 1 μ /50V
504	C386	5345-106E041	CAP, MINI ELE 10 μ /35V	455	C1234	5345-105F0951	CAP, MINI ELE 1 μ /50V
504	C390	5345-106E041	CAP, MINI ELE 10 μ /35V	458	C1235	5345-227C041	CAP, MINI ELE 220 μ /16V
736	C403	5345-476D041	CAP, MINI ELE 47 μ /25V	458	C1236	5345-227C041	CAP, MINI ELE 220 μ /16V
736	C404	5345-476D041	CAP, MINI ELE 47 μ /25V	456	C1237	5345-225F0951	CAP, MINI ELE 2.2 μ /50V
735	C405	5345-475F041	CAP, MINI ELE 4.7 μ /50V	456	C1238	5345-225F0951	CAP, MINI ELE 2.2 μ /50V
735	C406	5345-475F041	CAP, MINI ELE 4.7 μ /50V	460	C1239	5361-221KB	CAP, CER 220P
735	C407	5345-475F041	CAP, MINI ELE 4.7 μ /50V	460	C1240	5361-221KB	CAP, CER 220P
735	C408	5345-475F041	CAP, MINI ELE 4.7 μ /50V	457	C1243	5345-107B041	CAP, MINI ELE 100 μ /10V
736	C409	5345-476D041	CAP, MINI ELE 47 μ /25V	691	C1701	5345-106E041	CAP, MINI ELE 10 μ /35V
955	C601	5359-S010J103	CAP, PPP .01 μ	RESISTORS			
960	C602	5359-S010K101	CAP, PPP 100P	515	R301	5135-105522	RES, CBN 1/2P 1M
956	C603	5359-S010J223	CAP, PPP .022 μ	515	R302	5135-105522	RES, CBN 1/2P 1M
952	C604	5345-225F041	CAP, MINI ELE 2.2 μ /50V	516	R303	5135-101522	RES, CBN 1/2P 100
				517	R305	5135-820522	RES, CBN 1/2P 82
				518	R306	5135-220522	RES, CBN 1/2P 22

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520	R307	5135-103522	RES, CBN 1/2P 10K	746	R415	5135-223522	RES, CBN 1/2P 22K
519	R312	5135-474522	RES, CBN 1/2P 470K	746	R416	5135-223522	RES, CBN 1/2P 22K
519	R313	5135-474522	RES, CBN 1/2P 470K	660	R567	5135-102522	RES, CBN 1/2P 1K
520	R314	5135-103522	RES, CBN 1/2P 10K	660	R568	5135-102522	RES, CBN 1/2P 1K
520	R315	5135-103522	RES, CBN 1/2P 10K	969	R601	5135-563522	RES, CBN 1/2P 56K
520	R318	5135-103522	RES, CBN 1/2P 10K	963	R602	5135-104522	RES, CBN 1/2P 100K
524	R319	5135-100522	RES, CBN 1/2P 10	965	R603	5135-331522	RES, CBN 1/2P 330
525	R320	5135-104522	RES, CBN 1/2P 100K	963	R604	5135-104522	RES, CBN 1/2P 100K
535	R324	5135-222522	RES, CBN 1/2P 2.2K	966	R605	5135-822522	RES, CBN 1/2P 8.2K
533	R325	5135-223522	RES, CBN 1/2P 22K	967	R606	5135-102522	RES, CBN 1/2P 1K
533	R326	5135-223522	RES, CBN 1/2P 22K	967	R607	5135-102522	RES, CBN 1/2P 1K
520	R327	5135-103522	RES, CBN 1/2P 10K	968	R608	5135-103522	RES, CBN 1/2P 10K
520	R328	5135-103522	RES, CBN 1/2P 10K	964	R609	5135-332522	RES, CBN 1/2P 3.3K
520	R329	5135-103522	RES, CBN 1/2P 10K	963	R610	5135-104522	RES, CBN 1/2P 100K
537	R330	5135-472522	RES, CBN 1/2P 4.7K	965	R613	5135-331522	RES, CBN 1/2P 330
537	R331	5135-472522	RES, CBN 1/2P 4.7K	965	R614	5135-331522	RES, CBN 1/2P 330
537	R332	5135-472522	RES, CBN 1/2P 4.7K	704	R701	5135-103522	RES, CBN 1/2P 10K
538	R333	5135-822522	RES, CBN 1/2P 8.2K	704	R702	5135-103522	RES, CBN 1/2P 10K
538	R334	5135-822522	RES, CBN 1/2P 8.2K	701	R703	5135-392522	RES, CBN 1/2P 3.9K
519	R335	5135-474522	RES, CBN 1/2P 470K	701	R704	5135-392522	RES, CBN 1/2P 3.9K
519	R336	5135-474522	RES, CBN 1/2P 470K	708	R707	5135-472522	RES, CBN 1/2P 4.7K
538	R337	5135-822522	RES, CBN 1/2P 8.2K	707	R710	5232-183J16P	RES, CBN 1/6P 18K
520	R338	5135-103522	RES, CBN 1/2P 10K	702	R711	5135-222522	RES, CBN 1/2P 2.2K
520	R339	5135-103522	RES, CBN 1/2P 10K	702	R712	5135-222522	RES, CBN 1/2P 2.2K
531	R341	5135-471522	RES, CBN 1/2P 470	702	R713	5135-222522	RES, CBN 1/2P 2.2K
520	R342	5135-103522	RES, CBN 1/2P 10K	704	R714	5135-103522	RES, CBN 1/2P 10K
524	R343	5135-100522	RES, CBN 1/2P 10	704	R715	5135-103522	RES, CBN 1/2P 10K
525	R344	5135-104522	RES, CBN 1/2P 100K	706	R727	5135-394522	RES, CBN 1/2P 390K
526	R345	5135-154522	RES, CBN 1/2P 150K	706	R728	5135-394522	RES, CBN 1/2P 390K
526	R346	5135-154522	RES, CBN 1/2P 150K	715	R729	5135-102522	RES, CBN 1/2P 1K
527	R347	5135-333522	RES, CBN 1/2P 33K	715	R730	5135-102522	RES, CBN 1/2P 1K
527	R348	5135-333522	RES, CBN 1/2P 33K	711	R760	5135-562522	RES, CBN 1/2P 5.6K
528	R349	5135-102522	RES, CBN 1/2P 1K	712	R761	5135-221522	RES, CBN 1/2P 220
528	R350	5135-102522	RES, CBN 1/2P 1K	713	R762	5135-273522	RES, CBN 1/2P 27K
529	R351	5135-121522	RES, CBN 1/2P 120	714	R763	5135-473522	RES, CBN 1/2P 47K
529	R352	5135-121522	RES, CBN 1/2P 120	714	R764	5135-473522	RES, CBN 1/2P 47K
534	R353	5135-152522	RES, CBN 1/2P 1.5K	715	R765	5135-102522	RES, CBN 1/2P 1K
534	R354	5135-152522	RES, CBN 1/2P 1.5K	715	R766	5135-102522	RES, CBN 1/2P 1K
532	R356	5135-123522	RES, CBN 1/2P 12K	715	R767	5135-102522	RES, CBN 1/2P 1K
532	R357	5135-123522	RES, CBN 1/2P 12K	715	R768	5135-102522	RES, CBN 1/2P 1K
527	R358	5135-333522	RES, CBN 1/2P 33K	719	R769	5232-102J16P	RES, CBN 1/6P 1K
533	R359	5135-223522	RES, CBN 1/2P 22K	715	R770	5135-102522	RES, CBN 1/2P 1K
526	R361	5135-154522	RES, CBN 1/2P 150K	719	R771	5232-102J16P	RES, CBN 1/6P 1K
526	R362	5135-154522	RES, CBN 1/2P 150K	715	R772	5135-102522	RES, CBN 1/2P 1K
527	R363	5135-333522	RES, CBN 1/2P 33K	715	R773	5135-102522	RES, CBN 1/2P 1K
527	R364	5135-333522	RES, CBN 1/2P 33K	719	R774	5232-102J16P	RES, CBN 1/6P 1K
529	R365	5135-121522	RES, CBN 1/2P 120	715	R776	5135-102522	RES, CBN 1/2P 1K
530	R366	5232-121J16P	RES, CBN 1/6P 120	715	R777	5135-102522	RES, CBN 1/2P 1K
534	R367	5135-152522	RES, CBN 1/2P 1.5K	702	R778	5135-222522	RES, CBN 1/2P 2.2K
540	R368	5232-152J16P	RES, CBN 1/6P 1.5K	923	△ R851	5102-1005116	RES, FUSE 10
523	R369	5232-102J16P	RES, CBN 1/6P 1K	935	R853	5232-103J16P	RES, CBN 1/6P 10K
528	R370	5135-102522	RES, CBN 1/2P 1K	926	R854	5135-150522	RES, CBN 1/2P 15
531	R371	5135-471522	RES, CBN 1/2P 470	926	R856	5135-150522	RES, CBN 1/2P 15
533	R372	5135-223522	RES, CBN 1/2P 22K	926	R857	5135-150522	RES, CBN 1/2P 15
532	R373	5135-123522	RES, CBN 1/2P 12K	926	R858	5135-150522	RES, CBN 1/2P 15
532	R374	5135-123522	RES, CBN 1/2P 12K	925	R860	5135-103522	RES, CBN 1/2P 10K
527	R375	5135-333522	RES, CBN 1/2P 33K	931	R861	5174-S010F243	RES, MTL 1/4P 24K
524	R381	5135-100522	RES, CBN 1/2P 10	929	R862	5174-S010F113	RES, MTL 1/4P 11K
539	R382	5135-220522	RES, CBN 1/2P 22	934	R863	5135-224522	RES, CBN 1/2P 220K
539	R383	5135-220522	RES, CBN 1/2P 22	924	R864	5135-222522	RES, CBN 1/2P 2.2K
524	R384	5135-100522	RES, CBN 1/2P 10	927	R865	5135-223522	RES, CBN 1/2P 22K
522	R385	5135-150522	RES, CBN 1/2P 15	924	R866	5135-222522	RES, CBN 1/2P 2.2K
522	R386	5135-150522	RES, CBN 1/2P 15	927	R867	5135-223522	RES, CBN 1/2P 22K
740	R401	5135-103522	RES, CBN 1/2P 10K	922	R868	5135-471522	RES, CBN 1/2P 470
740	R402	5135-103522	RES, CBN 1/2P 10K	936	R869	5135-103522	RES, CBN 1/2P 10K
741	R403	5135-222522	RES, CBN 1/2P 2.2K	925	R870	5135-103522	RES, CBN 1/2P 10K
741	R404	5135-222522	RES, CBN 1/2P 2.2K	930	R871	5135-273522	RES, CBN 1/2P 27K
742	R405	5135-102522	RES, CBN 1/2P 1K	930	R872	5135-273522	RES, CBN 1/2P 27K
742	R406	5135-102522	RES, CBN 1/2P 1K	930	R873	5135-273522	RES, CBN 1/2P 27K
743	R407	5135-331522	RES, CBN 1/2P 330	895	R881	5135-392522	RES, CBN 1/2P 3.9K
743	R408	5135-331522	RES, CBN 1/2P 330	897	R882	5135-470522	RES, CBN 1/2P 47
744	R409	5135-334522	RES, CBN 1/2P 330K	896	R883	5135-271522	RES, CBN 1/2P 270
744	R410	5135-334522	RES, CBN 1/2P 330K	898	R884	5135-473522	RES, CBN 1/2P 47K
743	R411	5135-331522	RES, CBN 1/2P 330	325	R1101	5135-470522	RES, CBN 1/2P 47
745	R413	5135-104522	RES, CBN 1/2P 100K	325	R1102	5135-470522	RES, CBN 1/2P 47
745	R414	5135-104522	RES, CBN 1/2P 100K	326	R1105	5174-S010F223	RES, MTL 1/4P 22K

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326	R1106	5174-S010F223	RES, MTL 1/4P 22K	704	R1705	5135-103522	RES, CBN 1/2P 10K
327	R1107	5174-S010F331	RES, MTL 1/4P 330	704	R1706	5135-103522	RES, CBN 1/2P 10K
327	R1108	5174-S010F331	RES, MTL 1/4P 330	702	R1713	5135-222522	RES, CBN 1/2P 2.2K
328	R1109	5135-224522	RES, CBN 1/2P 220K	705	R1714	5135-103522	RES, CBN 1/2P 10K
328	R1110	5135-224522	RES, CBN 1/2P 220K	705	R1715	5135-103522	RES, CBN 1/2P 10K
329	R1111	5135-332522	RES, CBN 1/2P 3.3K				
329	R1112	5135-332522	RES, CBN 1/2P 3.3K				
330	R1113	5135-562522	RES, CBN 1/2P 5.6K	441	IC202	5653-UPC4570C	IC, LINEAR
330	R1114	5135-562522	RES, CBN 1/2P 5.6K	481	IC301	5653-U1297CA	IC, LINEAR
331	R1115	5135-470522	RES, CBN 1/2P 47	481	IC302	5653-U1297CA	IC, LINEAR
331	R1116	5135-470522	RES, CBN 1/2P 47	721	IC401	5652-NJM4558D	IC, MONO
332	R1117	5135-681522	RES, CBN 1/2P 680	722	IC402	5653-BA6138	IC, LINEAR
332	R1118	5135-681522	RES, CBN 1/2P 680	941	IC601	5652-NJM4558D	IC, MONO
333	R1119	5135-684522	RES, CBN 1/2P 680K	665	IC704	5654-TC4052BP	IC, DIGITAL
333	R1120	5135-684522	RES, CBN 1/2P 680K	662	IC705	5654-TC4011BP	IC, DIGITAL
334	R1121	5135-101522	RES, CBN 1/2P 100	871	IC751	5654-MN15542	IC, DIGITAL
334	R1122	5135-101522	RES, CBN 1/2P 100	874	IC802	5653-BA6229	IC, LINEAR
335	R1123	5135-102522	RES, CBN 1/2P 1K				
335	R1124	5135-102522	RES, CBN 1/2P 1K				
336	R1125	5232-822J16P	RES, CBN 1/6P 8.2K	442	Q219	5613-C114YS	XISTOR, NPN R
336	R1126	5232-822J16P	RES, CBN 1/6P 8.2K	442	Q220	5613-C114YS	XISTOR, NPN R
339	R1129	5135-101522	RES, CBN 1/2P 100	442	Q221	5613-C114YS	XISTOR, NPN R
339	R1130	5135-101522	RES, CBN 1/2P 100	442	Q222	5613-C114YS	XISTOR, NPN R
329	R1133	5135-332522	RES, CBN 1/2P 3.3K	442	Q223	5613-C114YS	XISTOR, NPN R
338	R1134	5232-332J16P	RES, CBN 1/6P 3.3K	442	Q224	5613-C114YS	XISTOR, NPN R
341	R1135	5135-392522	RES, CBN 1/2P 3.9K	443	Q225	5613-2878(B)	XISTOR, NPN R
341	R1136	5135-392522	RES, CBN 1/2P 3.9K	443	Q226	5613-2878(B)	XISTOR, NPN R
340	R1139	5135-103522	RES, CBN 1/2P 10K	482	Q301	5613-2320(F)	XISTOR, NPN R
340	R1140	5135-103522	RES, CBN 1/2P 10K	482	Q302	5613-2320(F)	XISTOR, NPN R
342	R1141	5135-104522	RES, CBN 1/2P 100K	482	Q303	5613-2320(F)	XISTOR, NPN R
324	R1142	5232-104J16P	RES, CBN 1/6P 100K	482	Q304	5613-2320(F)	XISTOR, NPN R
344	R1149	5135-102522	RES, CBN 1/2P 1K	482	Q305	5613-2320(F)	XISTOR, NPN R
343	R1150	5135-222522	RES, CBN 1/2P 2.2K	482	Q306	5613-2320(F)	XISTOR, NPN R
337	R1153	5135-331522	RES, CBN 1/2P 330	483	Q307	5613-C114YS	XISTOR, NPN R
337	R1154	5135-331522	RES, CBN 1/2P 330	484	Q308	5611-950(Y)	XISTOR, PNP R
461	R1201	5135-222522	RES, CBN 1/2P 2.2K	484	Q309	5611-950(Y)	XISTOR, PNP R
461	R1202	5135-222522	RES, CBN 1/2P 2.2K	484	Q310	5611-950(Y)	XISTOR, PNP R
462	R1203	5135-272522	RES, CBN 1/2P 2.7K	486	Q311	5613-2120(Y)	XISTOR, NPN R
462	R1204	5135-272522	RES, CBN 1/2P 2.7K	484	Q312	5611-950(Y)	XISTOR, PNP R
463	R1205	5135-393522	RES, CBN 1/2P 39K	485	Q313	5613-C114YS	XISTOR, NPN R
463	R1206	5135-393522	RES, CBN 1/2P 39K	485	Q314	5613-C114YS	XISTOR, NPN R
464	R1207	5135-103522	RES, CBN 1/2P 10K	485	Q315	5613-C114YS	XISTOR, NPN R
464	R1208	5135-103522	RES, CBN 1/2P 10K	486	Q316	5613-2120(Y)	XISTOR, NPN R
466	R1225	5135-683522	RES, CBN 1/2P 68K	482	Q317	5613-2320(F)	XISTOR, NPN R
466	R1226	5135-683522	RES, CBN 1/2P 68K	482	Q318	5613-2320(F)	XISTOR, NPN R
467	R1227	5135-563522	RES, CBN 1/2P 56K	482	Q319	5613-2320(F)	XISTOR, NPN R
467	R1228	5135-563522	RES, CBN 1/2P 56K	482	Q320	5613-2320(F)	XISTOR, NPN R
468	R1229	5135-153522	RES, CBN 1/2P 15K	483	Q321	5613-C114YS	XISTOR, NPN R
468	R1230	5135-153522	RES, CBN 1/2P 15K	487	Q325	5613-C114YS	XISTOR, NPN R
464	R1231	5135-103522	RES, CBN 1/2P 10K	487	Q326	5613-C114YS	XISTOR, NPN R
464	R1232	5135-103522	RES, CBN 1/2P 10K	487	Q327	5613-C114YS	XISTOR, NPN R
469	R1233	5135-472522	RES, CBN 1/2P 4.7K	487	Q328	5613-C114YS	XISTOR, NPN R
469	R1234	5135-472522	RES, CBN 1/2P 4.7K	488	Q329	5613-2320(F)	XISTOR, NPN R
469	R1235	5135-472522	RES, CBN 1/2P 4.7K	488	Q330	5613-2320(F)	XISTOR, NPN R
469	R1236	5135-472522	RES, CBN 1/2P 4.7K	490	Q331	5611-A143ES	XISTOR, PNP R
470	R1237	5135-104522	RES, CBN 1/2P 100K	485	Q332	5613-C114YS	XISTOR, NPN R
470	R1238	5135-104522	RES, CBN 1/2P 100K	491	Q333	5611-A114YS	XISTOR, PNP R
461	R1239	5135-222522	RES, CBN 1/2P 2.2K	487	Q335	5613-C114YS	XISTOR, NPN R
461	R1240	5135-222522	RES, CBN 1/2P 2.2K	487	Q336	5613-C114YS	XISTOR, NPN R
465	R1241	5135-273522	RES, CBN 1/2P 27K	487	Q337	5613-C114YS	XISTOR, NPN R
465	R1242	5135-273522	RES, CBN 1/2P 27K	487	Q338	5613-C114YS	XISTOR, NPN R
467	R1243	5135-563522	RES, CBN 1/2P 56K	48	Q339	5613-2320(F)	XISTOR, NPN R
467	R1244	5135-563522	RES, CBN 1/2P 56K	488	Q340	5613-2320(F)	XISTOR, NPN R
464	R1245	5135-103522	RES, CBN 1/2P 10K	490	Q341	5611-A143ES	XISTOR, PNP R
464	R1246	5135-103522	RES, CBN 1/2P 10K	485	Q342	5613-C114YS	XISTOR, NPN R
473	R1247	5135-221522	RES, CBN 1/2P 220	491	Q343	5611-A114YS	XISTOR, PNP R
473	R1248	5135-221522	RES, CBN 1/2P 220	487	Q345	5613-C114YS	XISTOR, NPN R
471	R1249	5135-121522	RES, CBN 1/2P 120	487	Q346	5613-C114YS	XISTOR, NPN R
471	R1250	5135-121522	RES, CBN 1/2P 120	491	Q347	5611-A114YS	XISTOR, PNP R
472	R1255	5135-331522	RES, CBN 1/2P 330	491	Q348	5611-A114YS	XISTOR, PNP R
472	R1256	5135-331522	RES, CBN 1/2P 330	943	Q601	5613-C114YS	XISTOR, NPN R
470	R1259	5135-104522	RES, CBN 1/2P 100K	672	Q701	5613-2240(BL)	XISTOR, NPN R
704	R1701	5135-103522	RES, CBN 1/2P 10K	672	Q702	5613-2240(BL)	XISTOR, NPN R
704	R1702	5135-103522	RES, CBN 1/2P 10K	672	Q703	5613-2240(BL)	XISTOR, NPN R
701	R1703	5135-392522	RES, CBN 1/2P 3.9K	672	Q704	5613-2240(BL)	XISTOR, NPN R
701	R1704	5135-392522	RES, CBN 1/2P 3.9K	674	Q709	5613-2878(B)	XISTOR, NPN R

Ser. No.	Ref. No.	Part No.	Description	Ser. No.	Ref. No.	Part No.	Description
818	JL851	4132-R0202231	CORD, 2C	437	C229	5359-3025851	CAP, PPP 3000P
818	JL852	4132-R0202231	CORD, 2C	437	C230	5359-3025851	CAP, PPP 3000P
817	JL853	4132-R0202101	CORD, 2C	409	C231	5359-S010J103	CAP, PPP .01μ
824	JL854	4132-R0200151	CORD, 2C	409	C232	5359-S010J103	CAP, PPP .01μ
824	JL855	4132-R0200151	CORD, 2C	410	C233	5345-105F0951	CAP, MINI ELE 1μ/50V
396	LC201	5214-13801	LC COMPOSITE	410	C234	5345-105F0951	CAP, MINI ELE 1μ/50V
396	LC202	5214-13801	LC COMPOSITE	413	C235	5345-227C041	CAP, MINI ELE 220μ/16V
445	LC1201	5214-13801	LC COMPOSITE	413	C236	5345-227C041	CAP, MINI ELE 220μ/16V
445	LC1202	5214-13801	LC COMPOSITE	411	C237	5345-225F0951	CAP, MINI ELE 2.2μ/50V
807	LCN804	4163-S0206201	CONNECTOR W/W	411	C238	5345-225F0951	CAP, MINI ELE 2.2μ/50V
808	LCN805	4163-S0207351	CONNECTOR W/W	416	C728	5345-106E041	CAP, MINI ELE 10μ/35V
806	LCN806	4163-S0205201	CONNECTOR W/W	412	C743	5345-107B041	CAP, MINI ELE 100μ/10V
894	PH801	5624-PC817	PHOTO COUPLER	417	C745	5345-477B041	CAP, MINI ELE 470μ/10V
911	RC851	5212-S0305273	R COMPOSITE				
781	TM701	4214-132	TERMINAL				
781	TP203	4214-132	TERMINAL	418	R201	5135-222522	RES, CBN 1/2P 2.2K
781	TP204	4214-132	TERMINAL	418	R202	5135-222522	RES, CBN 1/2P 2.2K
781	TP301	4214-132	TERMINAL	419	R203	5135-272522	RES, CBN 1/2P 2.7K
781	TP302	4214-132	TERMINAL	419	R204	5135-272522	RES, CBN 1/2P 2.7K
781	TP303	4214-132	TERMINAL	420	R205	5135-393522	RES, CBN 1/2P 39K
781	TP304	4214-132	TERMINAL	420	R206	5135-393522	RES, CBN 1/2P 39K
781	TP305	4214-132	TERMINAL	421	R207	5135-103522	RES, CBN 1/2P 10K
781	TP306	4214-132	TERMINAL	421	R208	5135-103522	RES, CBN 1/2P 10K
781	TP501	4214-132	TERMINAL	429	R213	5135-472522	RES, CBN 1/2P 4.7K
781	TP502	4214-132	TERMINAL	429	R214	5135-472522	RES, CBN 1/2P 4.7K
781	TP601	4214-132	TERMINAL	426	R215	5135-393522	RES, CBN 1/2P 39K
801	TP859	4214-132	TERMINAL	426	R216	5135-393522	RES, CBN 1/2P 39K
781	TP1101	4214-132	TERMINAL	422	R217	5135-332522	RES, CBN 1/2P 3.3K
781	TP1102	4214-132	TERMINAL	422	R218	5135-332522	RES, CBN 1/2P 3.3K
909	X751	5693-CST4MGW	OSC, CER	424	R219	5135-822522	RES, CBN 1/2P 8.2K
				424	R220	5135-822522	RES, CBN 1/2P 8.2K
				425	R221	5135-152522	RES, CBN 1/2P 1.5K
				425	R222	5135-152522	RES, CBN 1/2P 1.5K
				420	R225	5135-393522	RES, CBN 1/2P 39K
				420	R226	5135-393522	RES, CBN 1/2P 39K
				427	R227	5135-563522	RES, CBN 1/2P 56K
				427	R228	5135-563522	RES, CBN 1/2P 56K
				428	R229	5135-153522	RES, CBN 1/2P 15K
				428	R230	5135-153522	RES, CBN 1/2P 15K
				421	R231	5135-103522	RES, CBN 1/2P 10K
				421	R232	5135-103522	RES, CBN 1/2P 10K
				429	R233	5135-472522	RES, CBN 1/2P 4.7K
				429	R234	5135-472522	RES, CBN 1/2P 4.7K
				429	R235	5135-472522	RES, CBN 1/2P 4.7K
				429	R236	5135-472522	RES, CBN 1/2P 4.7K
				430	R237	5135-104522	RES, CBN 1/2P 100K
				430	R238	5135-104522	RES, CBN 1/2P 100K
				418	R239	5135-222522	RES, CBN 1/2P 2.2K
				418	R240	5135-222522	RES, CBN 1/2P 2.2K
				423	R241	5135-273522	RES, CBN 1/2P 27K
				423	R242	5135-273522	RES, CBN 1/2P 27K
				427	R243	5135-563522	RES, CBN 1/2P 56K
				427	R244	5135-563522	RES, CBN 1/2P 56K
				421	R245	5135-103522	RES, CBN 1/2P 10K
				421	R246	5135-103522	RES, CBN 1/2P 10K
				433	R247	5135-102522	RES, CBN 1/2P 1K
				433	R248	5135-102522	RES, CBN 1/2P 1K
				431	R249	5135-121522	RES, CBN 1/2P 120
				431	R250	5135-121522	RES, CBN 1/2P 120
				418	R251	5135-222522	RES, CBN 1/2P 2.2K
				418	R252	5135-222522	RES, CBN 1/2P 2.2K
				418	R253	5135-222522	RES, CBN 1/2P 2.2K
				418	R254	5135-222522	RES, CBN 1/2P 2.2K
				432	R255	5135-331522	RES, CBN 1/2P 330
				432	R256	5135-331522	RES, CBN 1/2P 330
				435	R257	5135-221522	RES, CBN 1/2P 220
				435	R258	5135-221522	RES, CBN 1/2P 220
				430	R259	5135-104522	RES, CBN 1/2P 100K
				436	R261	5135-473522	RES, CBN 1/2P 47K
				436	R262	5135-473522	RES, CBN 1/2P 47K
				436	R263	5135-473522	RES, CBN 1/2P 47K
				436	R264	5135-473522	RES, CBN 1/2P 47K
				436	R265	5135-473522	RES, CBN 1/2P 47K
				436	R266	5135-473522	RES, CBN 1/2P 47K
				709	R752	5135-221522	RES, CBN 1/2P 220
				710	R753	5135-472522	RES, CBN 1/2P 4.7K

PCB-2 VR P. C. BOARD**CONTROLS**

762	VR321	5113-S1104502	RES, V CBN 16 5K
762	VR322	5113-S1104502	RES, V CBN 16 5K
758	VR501/502	5113-S1102503	RES, V CBN 16 50K
760	VR503/504	5113-S1103104	RES, V CBN 16 100K

MISCELLANEOUS

792	CN103	4443-030185	CONNECTOR
792	CN104	4443-030185	CONNECTOR
815	JL301	4242-R0503221	JUMPER LEAD
815	JL302	4242-R0503221	JUMPER LEAD

PCB-3 REC. EQ P. C. BOARD**CAPACITORS**

408	C201	5359-S010J332	CAP, PPP 3300P
408	C202	5359-S010J332	CAP, PPP 3300P
414	C203	5359-S010J182	CAP, PPP 1800P
414	C204	5359-S010J182	CAP, PPP 1800P
400	C205	5359-S010J272	CAP, PPP 2700P
400	C206	5359-S010J272	CAP, PPP 2700P
398	C209	5359-S010J472	CAP, PPP 4700P
398	C210	5359-S010J472	CAP, PPP 4700P
399	C211	5359-S010J682	CAP, PPP 6800P
399	C212	5359-S010J682	CAP, PPP 6800P
401	C213	5359-S010J153	CAP, PPP .015μ
401	C214	5359-S010J153	CAP, PPP .015μ
405	C215	5359-S010J222	CAP, PPP 2200P
405	C216	5359-S010J222	CAP, PPP 2200P
403	C217	5359-S010J821	CAP, PPP 820P(ADJUST)
403	C218	5359-S010J821	CAP, PPP 820P(ADJUST)
404	C219	5359-S010J392	CAP, PPP 3900P
404	C220	5359-S010J392	CAP, PPP 3900P
414	C221	5359-S010J182	CAP, PPP 1800P
414	C222	5359-S010J182	CAP, PPP 1800P
405	C223	5359-S010J222	CAP, PPP 2200P
405	C224	5359-S010J222	CAP, PPP 2200P
406	C225	5359-S010J123	CAP, PPP .012μ
406	C226	5359-S010J123	CAP, PPP .012μ
407	C227	5354-124593	CAP, MYL .12μ
407	C228	5354-124593	CAP, MYL .12μ

Ser. No.	Ref. No.	Part No.	Description	Ser. No.	Ref. No.	Part No.	Description
886	Q808	5613-2320(F)	XISTOR, NPN R	858	R903	5135-221522	RES, CBN 1/2P 220
886	Q809	5613-2320(F)	XISTOR, NPN R	858	R904	5135-221522	RES, CBN 1/2P 220
DIODES				859	R905	5135-472522	RES, CBN 1/2P 4.7K
579	△ D1	5632-S5566B	DIODE, RECT	860	R906	5135-682522	RES, CBN 1/2P 6.8K
579	△ D2	5632-S5566B	DIODE, RECT	861	R907	5135-183522	RES, CBN 1/2P 18K
579	△ D3	5632-S5566B	DIODE, RECT	859	R908	5135-472522	RES, CBN 1/2P 4.7K
579	△ D4	5632-S5566B	DIODE, RECT	860	R909	5135-682522	RES, CBN 1/2P 6.8K
579	△ D7	5632-S5566B	DIODE, RECT	861	R910	5135-183522	RES, CBN 1/2P 18K
579	△ D8	5632-S5566B	DIODE, RECT	INTEGRATED CIRCUIT			
581	D9	5635-HZ12B2L	DIODE, ZENER	841	IC901	5654-MN187167	IC, DIGITAL
581	D10	5635-HZ12B2L	DIODE, ZENER	MISCELLANEOUS			
581	D11	5635-HZ12B2L	DIODE, ZENER	787	CN901	4443-0301140	CONNECTOR
582	D12	5635-HZ6B2L	DIODE, ZENER	788	CN902	4443-0601140	CONNECTOR
583	D13	5635-HZ22-2L	DIODE, ZENER	793	CN903	4443-05401030	CONNECTOR
584	D14	5635-RD5R1EB3	DIODE, ZENER	765	FL901	5722-058	TUBE DISPLAY
579	△ D15	5632-S5566B	DIODE, RECT	855	RC901	5212-S0307123	R COMPOSITE
579	△ D16	5632-S5566B	DIODE, RECT	845	RCV901	6143-00802	RECEIVE BLOCK
579	△ D17	5632-S5566B	DIODE, RECT	752	S901	4437-00704	SWITCH, PU-TC
579	△ D18	5632-S5566B	DIODE, RECT	752	S902	4437-00704	SWITCH, PU-TC
700	△ D51	5632-S5566B	DIODE, RECT	752	S903	4437-00704	SWITCH, PU-TC
700	△ D52	5632-S5566B	DIODE, RECT	752	S904	4437-00704	SWITCH, PU-TC
685	D53	5631-1S2473	DIODE, DET	752	S905	4437-00704	SWITCH, PU-TC
689	D54	5635-RD5R1EB2	DIODE, ZENER	752	S906	4437-00704	SWITCH, PU-TC
688	D55	5635-HZ11A2L	DIODE, ZENER	752	S907	4437-00704	SWITCH, PU-TC
700	D56	5632-S5566B	DIODE, RECT	752	S907	4437-00704	SWITCH, PU-TC
700	D57	5632-S5566B	DIODE, RECT	752	S908	4437-00704	SWITCH, PU-TC
686	D58	5635-HZ16-2L	DIODE, ZENER	847	X901	5693-CST4MGW	OSC, CER
687	D71	5635-HZ3B2	DIODE, ZENER	PCB-6 CONT SW-L.P. C. BOARD			
892	D801	5632-S5566B	DIODE, RECT	RESISTORS			
890	D802	5635-HZ5C2	DIODE, ZENER	863	R911	5135-472522	RES, CBN 1/2P 4.7K
888	D803	5635-HZ7C3	DIODE, ZENER	864	R912	5135-682522	RES, CBN 1/2P 6.8K
TRANSFORMERS				863	R913	5135-472522	RES, CBN 1/2P 4.7K
591	△ T1	5584-S9401	XFORMER, POWER BK	864	R914	5135-682522	RES, CBN 1/2P 6.8K
591B	△ T1	5584-S9402	XFORMER, POWER IB	865	R915	5135-183522	RES, CBN 1/2P 18K
CONTROLS				MISCELLANEOUS			
914	VR801	5101-S0801103	RES, SEMI FIX 10K	809	LCN901	4163-S0103500	CONNECTOR W/W
914	VR802	5101-S0801103	RES, SEMI FIX 10K	753	S909	4437-01301	SWITCH, PU-TC
912	VR803	5101-S0801502	RES, SEMI FIX 5K	753	S910	4437-01301	SWITCH, PU-TC
MISCELLANEOUS				753	S911	4437-01301	SWITCH, PU-TC
797	CN801	4443-060185	CONNECTOR	754	S912	4437-00704	SWITCH, PU-TC
798	CN802	4443-070185	CONNECTOR	753	S913	4437-01301	SWITCH, PU-TC
798	CN803	4443-070185	CONNECTOR	753	S914	4437-01301	SWITCH, PU-TC
796	CN804	4443-050185	CONNECTOR	754	S915	4437-00704	SWITCH, PU-TC
796	CN805	4443-050185	CONNECTOR	PCB-7 CONT SW-R.P. C. BOARD			
614	△ F1	5732-801031	FUSE BK	RESISTORS			
614B	△ F1	5732-251030	FUSE IB	867	R916	5135-472522	RES, CBN 1/2P 4.7K
615	△ F2	5732-202031	FUSE BK	868	R917	5135-682522	RES, CBN 1/2P 6.8K
615B	△ F2	5732-202030	FUSE IB	869	R918	5135-183522	RES, CBN 1/2P 18K
613	△ HL1	4472-04501	HOLDER, FUSE	MISCELLANEOUS			
613	△ HL2	4472-04501	HOLDER, FUSE	810	LCN902	4163-S0106800	CONNECTOR W/W
613	△ HL3	4472-04501	HOLDER, FUSE	843	LED901	5637-SEL2410E	LED
613	△ HL4	4472-04501	HOLDER, FUSE	843	LED902	5637-SEL2410E	LED
804	LCN801	4163-S0206101	CONNECTOR W/W	755	S916	4437-01301	SWITCH, PU-TC
803	LCN802	4163-S0205101	CONNECTOR W/W	756	S917	4437-00704	SWITCH, PU-TC
805	LCN803	4163-S0207101	CONNECTOR W/W	755	S918	4437-01301	SWITCH, PU-TC
908	RC701	5212-S0305273	R COMPOSITE	755	S919	4437-01301	SWITCH, PU-TC
907	RC702	5212-S0303273	R COMPOSITE	755	S920	4437-01301	SWITCH, PU-TC
751	△ SW1	4433-01301	SWITCH, PU-PW	755	S921	4437-01301	SWITCH, PU-TC
041B	△ SW2	4411-00501102	SWITCH, ROTARY IB	PCB-8 DOLBY P. C. BOARD			
786	TM1	4214-122	TERMINAL	CAPACITORS			
786	TM2	4214-122	TERMINAL	361	C101	5353-101534	CAP, MCA 100P
PCB-5 FRONT P. C. BOARD				361	C102	5353-101534	CAP, MCA 100P
CAPACITORS				357	C103	5345-106C0951	CAP, MINI ELE 10μ/16V
849	C901	5345-106D0356	CAP, MINI ELE 10μ/25V	357	C104	5345-106C0951	CAP, MINI ELE 10μ/16V
852	C902	5359-S010J103	CAP, PPP .01μ	358	C105	5345-227B0952	CAP, MINI ELE 220μ/10V
850	C903	5345-476C0356	CAP, MINI ELE 47μ/16V	358	C106	5345-227B0952	CAP, MINI ELE 220μ/10V
RESISTORS				362	C107	5359-6825851	CAP, PPP 6800P
862	R901	5135-101522	RES, CBN 1/2P 100				
866	R902	5135-102522	RES, CBN 1/2P 1K				

Ser. No.	Ref. No.	Part No.	Description	Ser. No.	Ref. No.	Part No.	Description
362	C108	5359-6825851	CAP, PPP 6800P	378	R124	5232-102J16P	RES, CBN 1/6P 1K
362	C109	5359-6825851	CAP, PPP 6800P	379	R125	5232-822J16P	RES, CBN 1/6P 8.2K
362	C110	5359-6825851	CAP, PPP 6800P	379	R126	5232-822J16P	RES, CBN 1/6P 8.2K
357	C111	5345-106C0951	CAP, MINI ELE 10 μ /16V	382	R129	5232-101J16P	RES, CBN 1/6P 100
357	C112	5345-106C0951	CAP, MINI ELE 10 μ /16V	382	R130	5232-101J16P	RES, CBN 1/6P 100
365	C113	5359-S010J123	CAP, PPP .012 μ	381	R131	5232-561J16P	RES, CBN 1/6P 560
365	C114	5359-S010J123	CAP, PPP .012 μ	381	R132	5232-561J16P	RES, CBN 1/6P 560
366	C115	5359-S010J272	CAP, PPP 2700P	383	R133	5232-103J16P	RES, CBN 1/6P 10K
366	C116	5359-S010J272	CAP, PPP 2700P	383	R134	5232-103J16P	RES, CBN 1/6P 10K
360	C117	5345-477C041	CAP, MINI ELE 470 μ /16V	384	R135	5232-392J16P	RES, CBN 1/6P 3.9K
359	C118	5345-336C041	CAP, MINI ELE 33 μ /16V	384	R136	5232-392J16P	RES, CBN 1/6P 3.9K
640	C501	5345-106C0951	CAP, MINI ELE 10 μ /16V	383	R139	5232-103J16P	RES, CBN 1/6P 10K
640	C502	5345-106C0951	CAP, MINI ELE 10 μ /16V	383	R140	5232-103J16P	RES, CBN 1/6P 10K
640	C505	5345-106C0951	CAP, MINI ELE 10 μ /16V	385	R141	5232-104J16P	RES, CBN 1/6P 100K
640	C506	5345-106C0951	CAP, MINI ELE 10 μ /16V	385	R142	5232-104J16P	RES, CBN 1/6P 100K
644	C507	5359-S010J222	CAP, PPP 2200P	386	R148	5135-4R7522	RES, CBN 1/2P 4.7
644	C508	5359-S010J222	CAP, PPP 2200P	387	R149	5135-102522	RES, CBN 1/2P 1K
644	C509	5359-S010J222	CAP, PPP 2200P	654	R501	5232-221J16P	RES, CBN 1/6P 220
644	C510	5359-S010J222	CAP, PPP 2200P	654	R502	5232-221J16P	RES, CBN 1/6P 220
642	C511	5354-564593	CAP, MYL .56 μ	654	R503	5232-221J16P	RES, CBN 1/6P 220
642	C512	5354-564593	CAP, MYL .56 μ	654	R504	5232-221J16P	RES, CBN 1/6P 220
643	C513	5354-334593	CAP, MYL .33 μ	649	R507	5232-243J16P	RES, CBN 1/6P 24K
643	C514	5354-334593	CAP, MYL .33 μ	649	R508	5232-243J16P	RES, CBN 1/6P 24K
640	C515	5345-106C0951	CAP, MINI ELE 10 μ /16V	650	R509	5232-561J16P	RES, CBN 1/6P 560
640	C516	5345-106C0951	CAP, MINI ELE 10 μ /16V	650	R510	5232-561J16P	RES, CBN 1/6P 560
641	C517	5345-227B041	CAP, MINI ELE 220 μ /10V	651	R511	5232-273J16P	RES, CBN 1/6P 27K
641	C518	5345-227B041	CAP, MINI ELE 220 μ /10V	657	R512	5232-102J16P	RES, CBN 1/6P 1K
667	C519	5345-476D041	CAP, MINI ELE 47 μ /25V	655	R517	5232-223J16P	RES, CBN 1/6P 22K
639	C527	5345-106C0951	CAP, MINI ELE 10 μ /16V	652	R518	5232-123J16P	RES, CBN 1/6P 12K
639	C528	5345-106C0951	CAP, MINI ELE 10 μ /16V	648	R519	5135-682522	RES, CBN 1/2P 6.8K
640	C531	5345-106C0951	CAP, MINI ELE 10 μ /16V	648	R520	5135-682522	RES, CBN 1/2P 6.8K
640	C532	5345-106C0951	CAP, MINI ELE 10 μ /16V	647	R521	5135-392522	RES, CBN 1/2P 3.9K
644	C533	5359-S010J222	CAP, PPP 2200P	647	R522	5135-392522	RES, CBN 1/2P 3.9K
644	C534	5359-S010J222	CAP, PPP 2200P	654	R527	5232-221J16P	RES, CBN 1/6P 220
644	C535	5359-S010J222	CAP, PPP 2200P	654	R528	5232-221J16P	RES, CBN 1/6P 220
644	C536	5359-S010J222	CAP, PPP 2200P	654	R529	5232-221J16P	RES, CBN 1/6P 220
642	C537	5354-564593	CAP, MYL .56 μ	654	R530	5232-221J16P	RES, CBN 1/6P 220
642	C538	5354-564593	CAP, MYL .56 μ	649	R533	5232-243J16P	RES, CBN 1/6P 24K
643	C539	5354-334593	CAP, MYL .33 μ	649	R534	5232-243J16P	RES, CBN 1/6P 24K
643	C540	5354-334593	CAP, MYL .33 μ	650	R535	5232-561J16P	RES, CBN 1/6P 560
640	C541	5345-106C0951	CAP, MINI ELE 10 μ /16V	650	R536	5232-561J16P	RES, CBN 1/6P 560
640	C542	5345-106C0951	CAP, MINI ELE 10 μ /16V	651	R537	5232-273J16P	RES, CBN 1/6P 27K
641	C543	5345-227B041	CAP, MINI ELE 220 μ /10V	657	R538	5232-102J16P	RES, CBN 1/6P 1K
641	C544	5345-227B041	CAP, MINI ELE 220 μ /10V	655	R543	5232-223J16P	RES, CBN 1/6P 22K
667	C545	5345-476D041	CAP, MINI ELE 47 μ /25V	652	R544	5232-123J16P	RES, CBN 1/6P 12K
639	C551	5345-106C0951	CAP, MINI ELE 10 μ /16V	648	R545	5135-682522	RES, CBN 1/2P 6.8K
639	C552	5345-106C0951	CAP, MINI ELE 10 μ /16V	648	R546	5135-682522	RES, CBN 1/2P 6.8K
639	C553	5345-106C0951	CAP, MINI ELE 10 μ /16V	647	R547	5135-392522	RES, CBN 1/2P 3.9K
639	C554	5345-106C0951	CAP, MINI ELE 10 μ /16V	647	R548	5135-392522	RES, CBN 1/2P 3.9K
645	C557	5359-S010J182	CAP, PPP 1800P	657	R551	5232-102J16P	RES, CBN 1/6P 1K
645	C558	5359-S010J182	CAP, PPP 1800P	657	R552	5232-102J16P	RES, CBN 1/6P 1K
644	C559	5359-S010J222	CAP, PPP 2200P	657	R553	5232-102J16P	RES, CBN 1/6P 1K
644	C560	5359-S010J222	CAP, PPP 2200P	657	R554	5232-102J16P	RES, CBN 1/6P 1K
		RESISTORS		653	R557	5232-332J16P	RES, CBN 1/6P 3.3K
368	R101	5232-470J16P	RES, CBN 1/6P 47	653	R558	5232-332J16P	RES, CBN 1/6P 3.3K
368	R102	5232-470J16P	RES, CBN 1/6P 47	656	R559	5232-105J16P	RES, CBN 1/6P 1M
369	R105	5178-223481	RES, MTL 1/6P 22K	656	R560	5232-105J16P	RES, CBN 1/6P 1M
369	R106	5178-223481	RES, MTL 1/6P 22K	656	R561	5232-105J16P	RES, CBN 1/6P 1M
370	R107	5178-331481	RES, MTL 1/6P 330	646	R563	5232-103J16P	RES, CBN 1/6P 10K
370	R108	5178-331481	RES, MTL 1/6P 330	646	R564	5232-103J16P	RES, CBN 1/6P 10K
371	R109	5232-224J16P	RES, CBN 1/6P 220K	658	R565	5232-104J16P	RES, CBN 1/6P 100K
371	R110	5232-224J16P	RES, CBN 1/6P 220K	630	R566	5135-104522	RES, CBN 1/2P 100K
372	R111	5232-332J16P	RES, CBN 1/6P 3.3K	659	R569	5232-563J16P	RES, CBN 1/6P 56K
372	R112	5232-332J16P	RES, CBN 1/6P 3.3K	659	R570	5232-563J16P	RES, CBN 1/6P 56K
373	R113	5232-562J16P	RES, CBN 1/6P 5.6K	652	R571	5232-123J16P	RES, CBN 1/6P 12K
373	R114	5232-562J16P	RES, CBN 1/6P 5.6K	652	R572	5232-123J16P	RES, CBN 1/6P 12K
368	R115	5232-470J16P	RES, CBN 1/6P 47	670	R573	5232-222J16P	RES, CBN 1/6P 2.2K
368	R116	5232-470J16P	RES, CBN 1/6P 47	670	R574	5232-222J16P	RES, CBN 1/6P 2.2K
375	R117	5232-681J16P	RES, CBN 1/6P 680	716	R705	5232-103J16P	RES, CBN 1/6P 10K
375	R118	5232-681J16P	RES, CBN 1/6P 680	716	R706	5232-103J16P	RES, CBN 1/6P 10K
376	R119	5232-684J16P	RES, CBN 1/6P 680K	717	R725	5232-473J16P	RES, CBN 1/6P 47K
376	R120	5232-684J16P	RES, CBN 1/6P 680K	717	R726	5232-473J16P	RES, CBN 1/6P 47K
377	R121	5232-101J16P	RES, CBN 1/6P 100				
377	R122	5232-101J16P	RES, CBN 1/6P 100				
378	R123	5232-102J16P	RES, CBN 1/6P 1K	631	IC501	5653-CXA1330S	IC, LINEAR
						INTEGRATED CIRCUITS	

Ser. No.	Ref. No.	Part No.	Description
631	IC551	5653-CXA1330S	IC, LINEAR
661	IC701	5654-TC4066BP	IC, DIGITAL
663	IC702	5654-LC4966	IC, DIGITAL
TRANSISTORS			
347	Q101	5613-1775(F)	XISTOR, NPN R
347	Q102	5613-1775(F)	XISTOR, NPN R
347	Q103	5613-1775(F)	XISTOR, NPN R
347	Q104	5613-1775(F)	XISTOR, NPN R
348	Q105	5613-2320L(F)	XISTOR, NPN R
348	Q106	5613-2320L(F)	XISTOR, NPN R
349	Q107	5613-C114YS	XISTOR, NPN R
349	Q108	5613-C114YS	XISTOR, NPN R
350	Q109	5613-2878(B)	XISTOR, NPN R
350	Q110	5613-2878(B)	XISTOR, NPN R
352	Q112	5613-2320(F)	XISTOR, NPN R
634	Q505	5613-C114YS	XISTOR, NPN R
633	Q506	5611-A114YS	XISTOR, PNP R
632	Q507	5611-950(Y)	XISTOR, PNP R
635	Q508	5613-2120(Y)	XISTOR, NPN R
634	Q531	5613-C114YS	XISTOR, NPN R
633	Q532	5611-A114YS	XISTOR, PNP R
632	Q533	5611-950(Y)	XISTOR, PNP R
635	Q534	5613-2120(Y)	XISTOR, NPN R
669	Q551	5613-2320L(F)	XISTOR, NPN R
669	Q552	5613-2320L(F)	XISTOR, NPN R
634	Q553	5613-C114YS	XISTOR, NPN R
634	Q554	5613-C114YS	XISTOR, NPN R
634	Q555	5613-C114YS	XISTOR, NPN R
634	Q556	5613-C114YS	XISTOR, NPN R
634	Q560	5613-C114YS	XISTOR, NPN R
633	Q561	5611-A114YS	XISTOR, PNP R
666	Q705	5613-2878(B)	XISTOR, NPN R
666	Q706	5613-2878(B)	XISTOR, NPN R
668	Q721	5611-A124ES	XISTOR, PNP R
668	Q722	5611-A124ES	XISTOR, PNP R
679	Q723	5613-C124ES	XISTOR, NPN R
679	Q724	5613-C124ES	XISTOR, NPN R
690	Q730	5613-C114TS	XISTOR, NPN R
DIODES			
353	D101	5635-HZ11B2L	DIODE, ZENER
345	D104	5631-1SS133	DIODE, DET
COILS			
354	L101	5995-S160J472	COIL W/CORE
354	L102	5995-S160J472	COIL W/CORE
CONTROLS			
355	VR101	5101-S0801203	RES, SEMI FIX 20K
355	VR102	5101-S0801203	RES, SEMI FIX 20K
356	VR103	5101-S0801501	RES, SEMI FIX 500
356	VR104	5101-S0801501	RES, SEMI FIX 500
638	VR551	5101-S0801103	RES, SEMI FIX 10K
638	VR552	5101-S0801103	RES, SEMI FIX 10K
MISCELLANEOUS			
833	CN501	4443-01701017	CONNECTOR
839	CN502	4443-01701016	CONNECTOR
637	LC501	5214-13701	LC COMPOSITE
637	LC502	5214-13701	LC COMPOSITE
636	LC503	5214-13801	LC COMPOSITE
636	LC504	5214-13801	LC COMPOSITE
785	TP101	4214-132	TERMINAL
785	TP102	4214-132	TERMINAL
PCB-9 REC MUTE P. C. BOARD			
RESISTORS			
720	R779	5232-223J16P	RES, CBN 1/6P 22K
TRANSISTOR			
693	Q763	5613-C124ES	XISTOR,NPN R
694	Q764	5611-C124ES	XISTOR,PNP R

Ser. No.	Ref. No.	Part No.	Description
DIODES			
536	D711	5631-1SS133	DIODE, DET
536	D712	5631-1SS133	DIODE, DET
536	D713	5631-1SS133	DIODE, DET
536	D714	5631-1SS133	DIODE, DET

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE	: Electrolytic
CAP, CER	: Ceramic
CAP, PPP	: Polypropylene
CAP, MYL	: Mylar
CAP, MCA	: Mica
	470 μ F
	6800P : 6800pF
	.047 μ : 0.047 μ F

RESISTORS

RES, CBN	1/6P : Carbon 1/6W
	2.2K : 2.2k Ω
	220 : 220 Ω
RES, FUSE	: Fuse
RES, CEM	5P : Cement 5W
RES, MTL	1P : Metal 1W

TRANSISTORS

XISTOR	: Transistor
FET	: Field Effect Transistor

CONTROLS

RES, V CBN	: Variable Carbon Resistor
RES, SEMI FIX	: Semi - fixed Resistors

CHASSIS MISCELLANEOUS

766	Δ P1	4161-71151	CORD W/PLUG BK
766B	Δ P1	4161-7256	CORD W/PLUG IB
767		4161-71184	CORD W/PLUG, RCA TYPE (ACCESSORY) (x2)
789	LUG1	4211-4	LUG, CABINET FRONT
789	LUG2	4211-4	LUG, CABINET FRONT
814	JL901	4242-S0330151	JUMPER LEAD

PACKAGE PARTS LIST

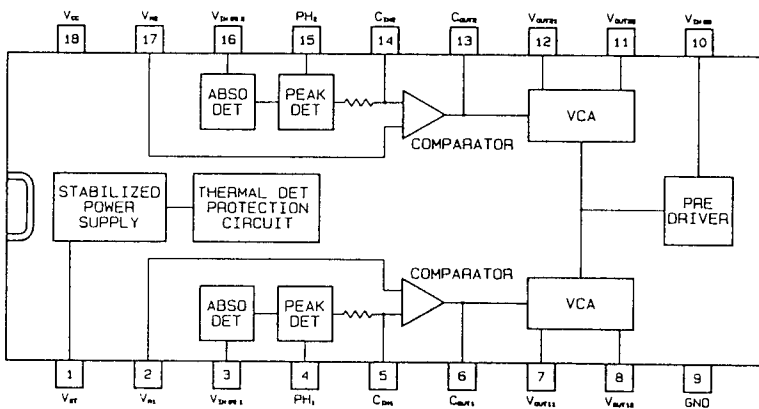
021B		1756-03108	LABEL (x2) IB
022B		1756-06304	LABEL IB
109		1111-J30355	OWNER GUIDE BK
109B		1111-J30356	OWNER GUIDE IB
110		1113-02501	OWNER CARD BK
112		1116-03801	WARRANTY CARD BK
113		1119-04501	ATTACH SHEET, SERVICE STATION BK
114		1119-01201	ATTACH SHEET, SAFETY BK
117A		1221-30205	CARTON BOX
118		1222-7384	CUSHION, R
119		1222-7385	CUSHION, L
121		1223-R0220055	SOFT SHEET, SET FRONT
122		1223-00403012	SOFT SHEET, CASS. LID (x2)
123		1241-R0160600	POLYETHY BAG, SET
124		1241-R0123350	POLYETHY BAG, OG
768		6142-02707	CONTROL UNIT
769		4191-0355	BATTERY, DAY

NOTE:

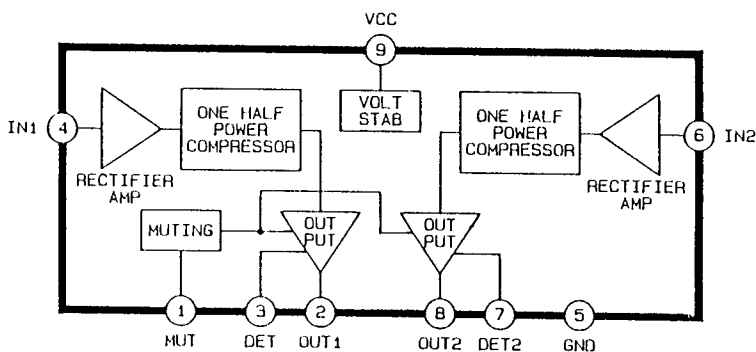
Δ SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

IC BLOCK DIAGRAM

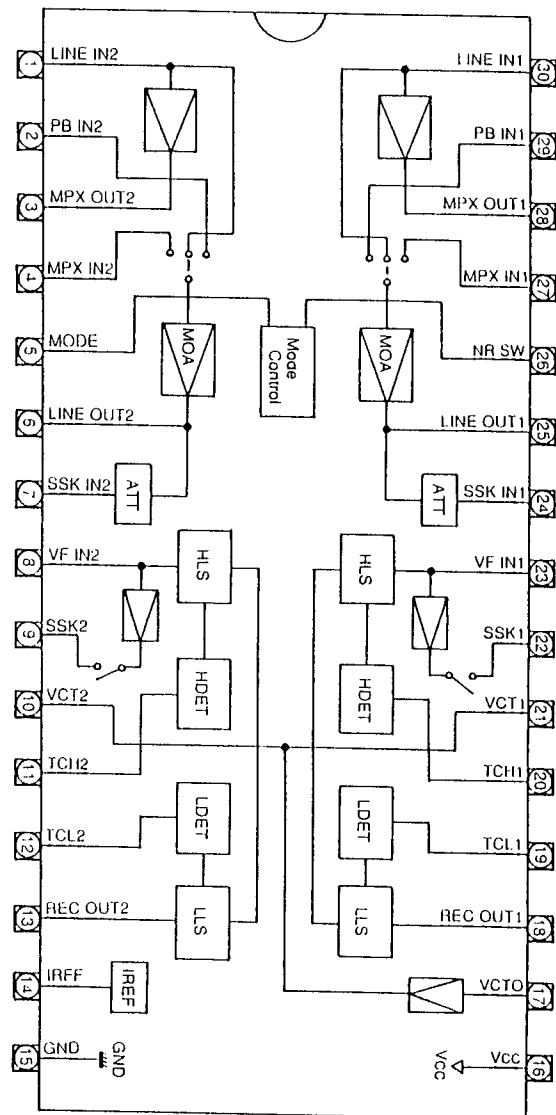
IC301, IC302 : μ PC1297CA
Dolby HX Pro



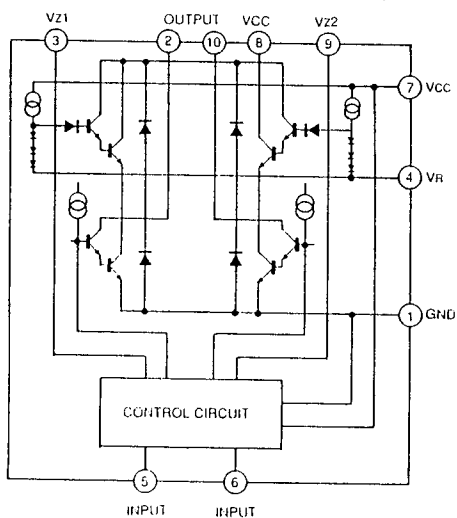
IC402 : BA6138
Signal Level Meter



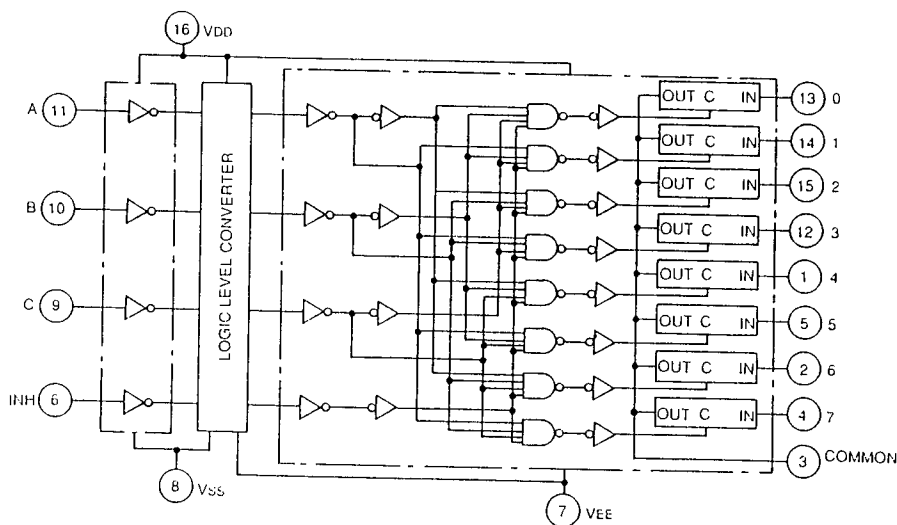
IC501, IC551 : CXA1330S
Dolby B/C NR



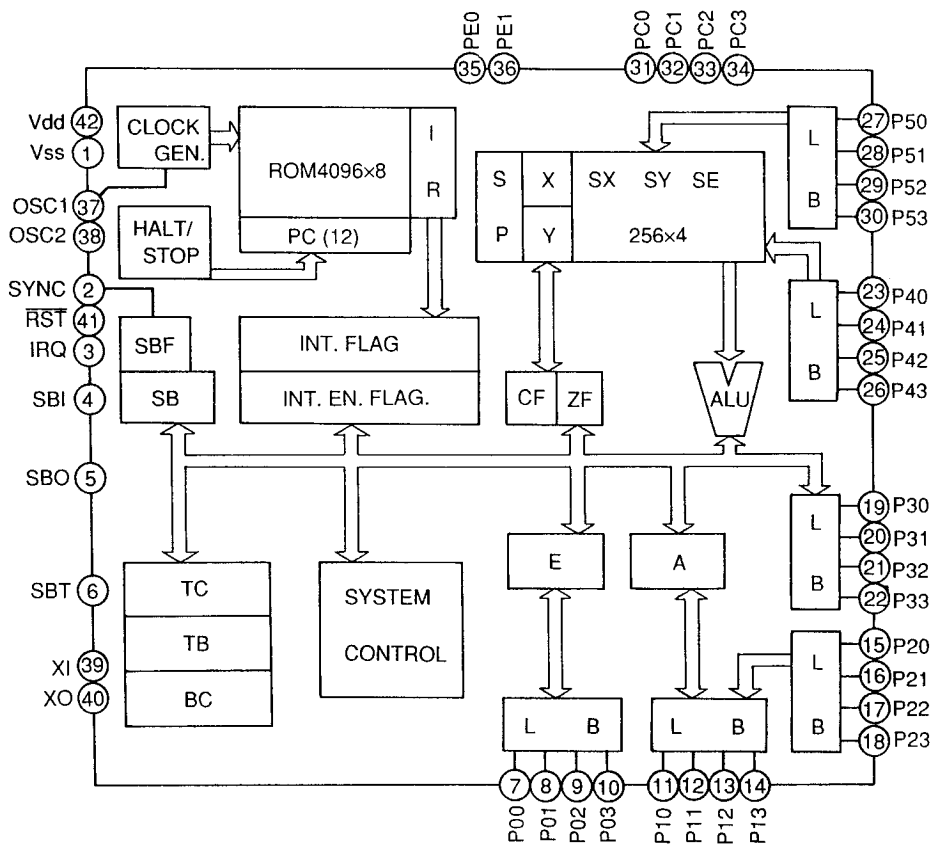
IC801, 802 : BA6229
Motor Driver



IC703 : TC4051BP



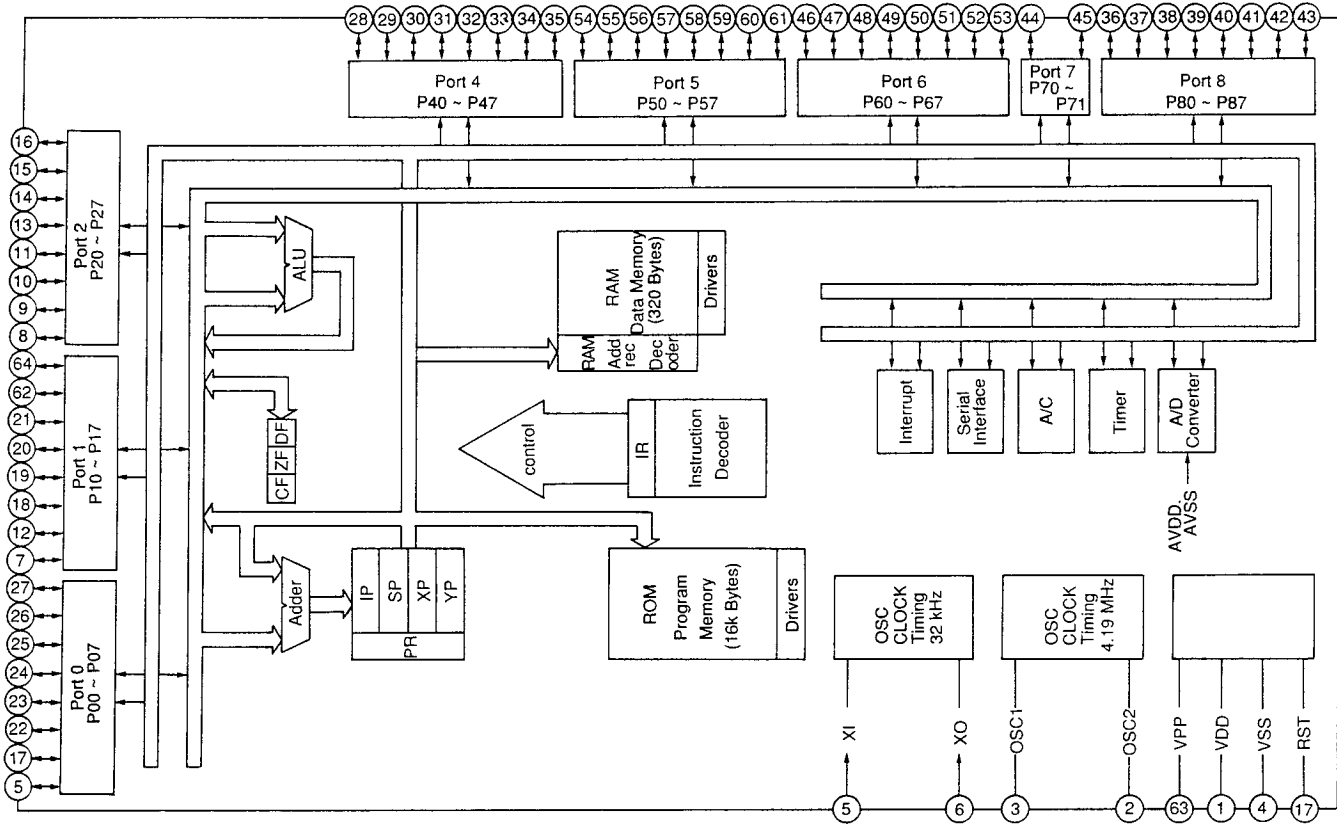
IC751 : MN15542
Logic Control Block



TERMINAL FUNCTIONS

NO.	Name	Functional Name	I/O	Description	NO.	Name	Functional Name	I/O	Description
1	Vss	Vss		GND	22	P33	LINE MUTE	0	Line mute output
2	SYNC			Not used	23	P40	SEC-RPC	0	SEC reel motor drive voltage change-over
3	IRQ	STB IN	i	STB input from MAIN	24	P41	SEC-RM2	0	SEC reel motor reverse drive output
4	SBI	DATA IN	i	Data input from MAIN	25	P42	SEC-RM1	0	SEC reel motor forward drive output
5					26	P43	SEC-SOLP	0	SEC solenoid retaining output
6	SBT	CLK IN/OUT	I/O	Clock input/output for data communication with SUB	27	P50	SEC-SOL	0	SEC solenoid trigger output
7	P00	SEC-RE MUTE	0	SEC playback mute output	28	P51	SEC-CPM	0	SEC capstan motor drive output
8	P01	SEC-REC MUTE	0	SEC REC mute output	29	P52	SEC-MMS	0	SEC capstan motor rpm change-over
9	P02	SEC-REC	0	SEC REC change-over output	30	P53	HI SPD	0	EQ change-over at high-speed copy
10	P03	SEC-BIAS	0	SEC bias drive output	31	PC0	PRI-DOLBY C	0	PRI Dolby C drive output
11	P10	PRO-PB MUTE	0	PRI playback mute output	32	PC1	PRI-DOLBY B	0	PRI Doby B drive output
12	P11	PRI-REC MUTE	0	PRI recording mute output	33	PC2	PRI-MPX	0	PRI MPX filter drive output
13	P12	PRI-REC	0	PRI recording mute change-over	34	PC3	SEC-DOLBY C	0	SEC Dolby C drive output
14	P13	PRI-BIAS	0	PRI bias drive output	35	PE0	SEC-DOLBY B	0	SEC Dolby B drive output
15	P20	PRI-RPC	0	PRI reel motor drive voltage change-over	36	PE1	BUSY OUT	0	
16	P21	PRI-RM2	0	PRI reel motor reverse drive output	37	OSC1	OSC1		Ceramic resonator connection
17	P22	PRI-RM2	0	PRI reel motor forward DRIVE output	38	OSC2	OSC2		Transmitting frequency : 4.0 MHz
18	P30	PRI-SOLP	0	PRI solenoid retaining power	39	XI			Not used
19	P23	PRI-SOL	0	PRI solenoid trigger output	40	XO			
20	P31	PRI-CPM	0	PRI capstan motor drive output	41	RST	RESET	i	Reset
21	P32	PRI-MMS	0	PRI capstan motor rpm change-over	42	Vdd	Vdd		5V DC power connection

IC901 : MN187167
Main Controller



TERMINAL FUNCTIONS

NO.	Name	Functional Name	I/O	Description	NO.	Name	Functional Name	I/O	Description	NO.	Name	Functional Name	I/O	Description
1	Vdd	Vdd		5V DC power supply	22	P05	R-SI	I	Remote control input	39	P84	S. R. LED	O	H when SYNC. REVERSE LED is on
2	OSC	OSC OUT		Ceramic resonator connection Transmitting frequency : 4.0 MHz	23	P04	VOLT-DN	I	Power OFF detection ; L when OFF	40	P83	A. P. LED	O	H when AUTO PAUSE LED is on
3	OSC	OSC IN			24	P03	MS GAIN	I	MS amplifier gain control ; H when the gain is small	41	P82	G0	O	FL display grid drive output
4	Vss	Vss		25	P02	CLK IN/OUT	I/O	Clock input/output terminal for data communication with SUB	42	P81	G1	O		
5	P06	BUSY IN	I	26	P01	DATA IN	I	Serial data input from SUB	43	P80	G2	O		
6	X0			27	P00	DATA OUT	O	Serial data output to SUB	44	P71	G3	O		
7	P17	SYNC. REV. KEY	I	28	P47	SEC-F. REC	I	SEC tape front hook detection ; L when REC enabled	45	P70	G4	O		
12	P16	A-PAUSE KEY	I	29	P46	SEC-R. REC	I	SEC tape rear hook detection	46	P67	G5	O		
8	AD7	KEY IN 5	I	30	P45	PRI-REEL 2	I	PRI right reek pulse input	47	P66	G6	O		
9	AD6	KEY IN 4	I	31	P44	PRI-REEL 1	I	PRI left reel pulse input	48	P65	G7	O		
10	AD5	KEY IN 3	I	32	P43	PRI-PACK DET	I	PRI pack detection	49	P64	G8	O		
11	AD4	KEY IN 2	I	33	P42	PRI-QUICK DET	I	PRI quick photo detection	50	P63	a	O	FL display anode drive output	
13	AD3	KEY IN 1	I	34	P41	PRI-R. REC	I	PRI tape rear hook detection	51	P62	b	O		
14	AD2	MS IN	I	35	P40	PRI-F. REC	I	PRI tape front hook detection	52	P61	c	O		
15	AD1	METER R	I	36	P87	STB OUT	O	STB output to SUB	53	P60	d	O		
16	AD0	METER L	I	37	P86	COPY	O	H when copying from SEC to PRI	54	P57	e	O		
17	RST	RESET	I	38	P85	SEC	O	Voice output to LINE OUT and MS amplifier: H when SEC output and L when PRI output	55	P56	f	O		
18	P15	SEC-REEL 2	I					56	P55	g	O			
19	P14	SEC-REEL 1	I					57	P54	h	O			
20	P13	SEC-PACK DET	I					58	P53	i	O			
21	P12	SEC-QUICK DET	I					59	P52	j	O			
								60	P51	k	O			
								61	P50	l	O			
								62	P11	INI SET B	I	Initial setting SW B connection		
								63	Vpp	Vpp		Negative voltage load terminal for FL		
								64	P10	INI SET A		Initial setting SW A connection		

SCHEMATIC DIAGRAM (1)

NOTES:

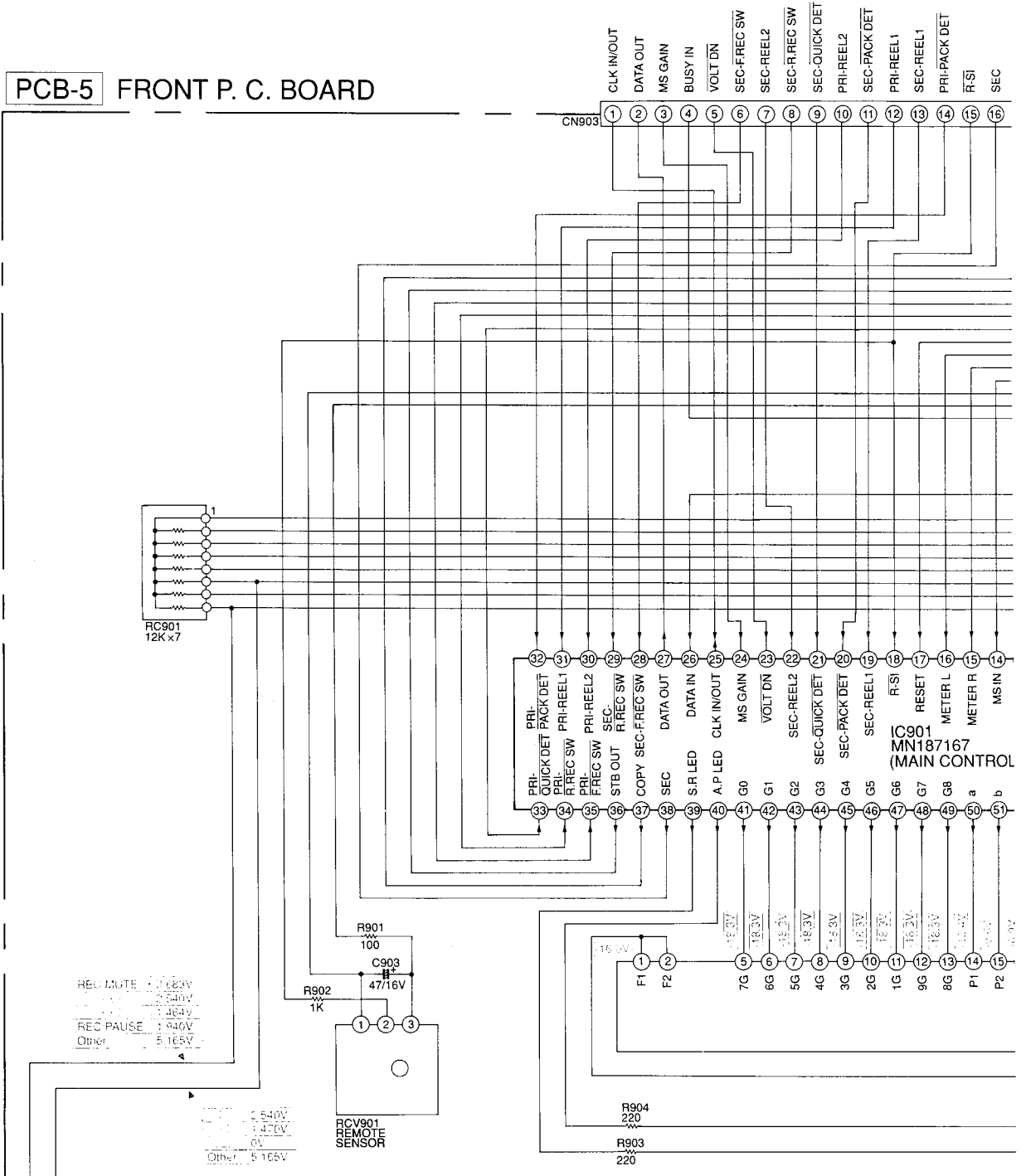
1. ALL RESISTANCES VALUES ARE IN Ω
 $k\Omega = 1000\Omega$, $M\Omega = 1000k\Omega$
2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS

OTHERWISE NOTED.

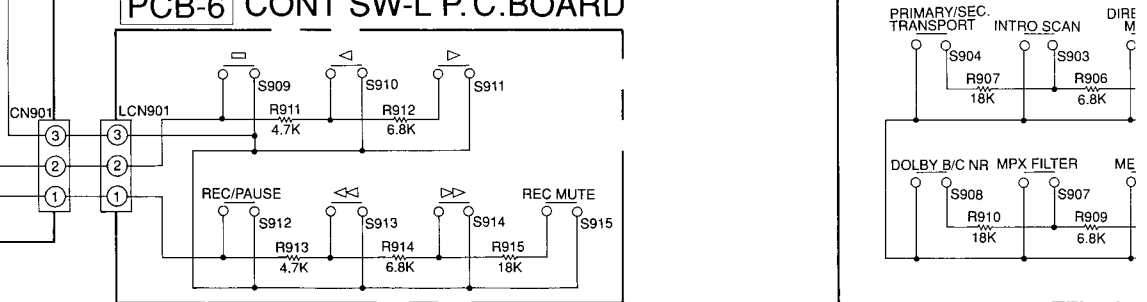
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P = $\mu\mu F$.
4. V : DC VOLTAGE AT NO SIGNAL

Page 31

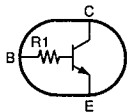
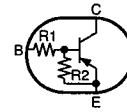
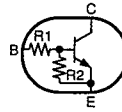
PCB-5 FRONT P. C. BOARD



PCB-6 CONT SW-L P. C. BOARD



E F G H I J



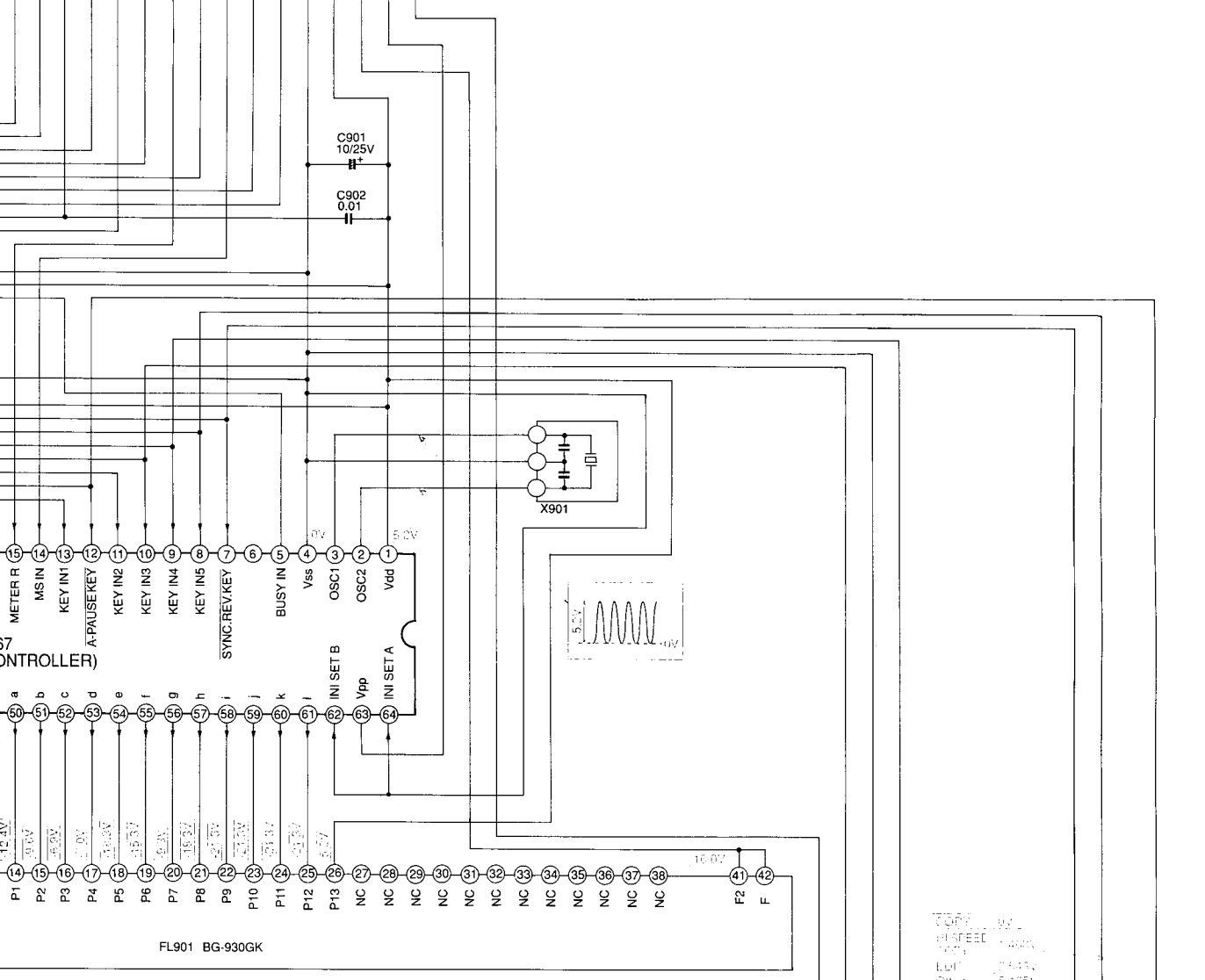
Type	R1	R2
DTC114YS	10K	47K
DTC124ES	22K	22K

Type	R1	R2
DTA114YS	10K	10K
DTA124ES	22K	22K
DTA143ES	4.7K	4.7K

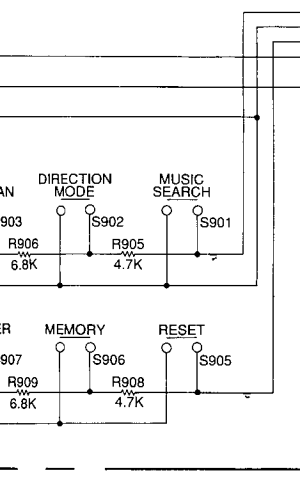
Type	R1
DTC114TS	10K

RSI
SEC
RESET
COPY
METER L
STB OUT
METER R
PRI-FREC SW
MS IN
PRI-FREC SW
PRI-QUICK DET
GND
+5V
AC4V
-22V
AC4V

15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



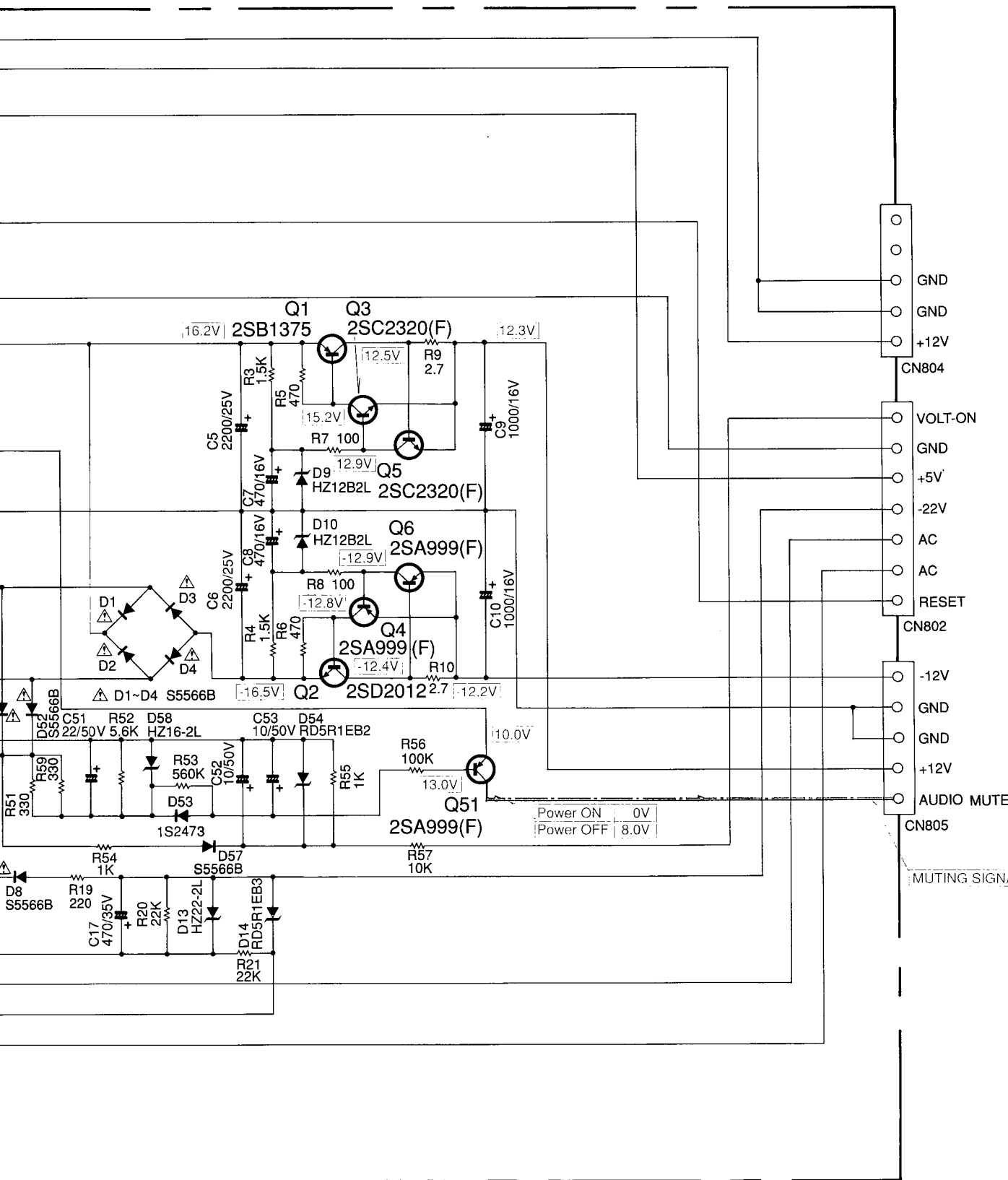
TOPPED BY
PREFEED
LUT
CUT
CUT



PCB-7 CONT SW-R P.C. BOARD

DIRECTION MODE 1.40V
MEMORY 1.40V
RESET 0V
COPY FILTER 1.00V
DUAL REC 0.60V
B.C.NR 0.10V
Other 0.10V

AND REFER TO
Other 5.10V



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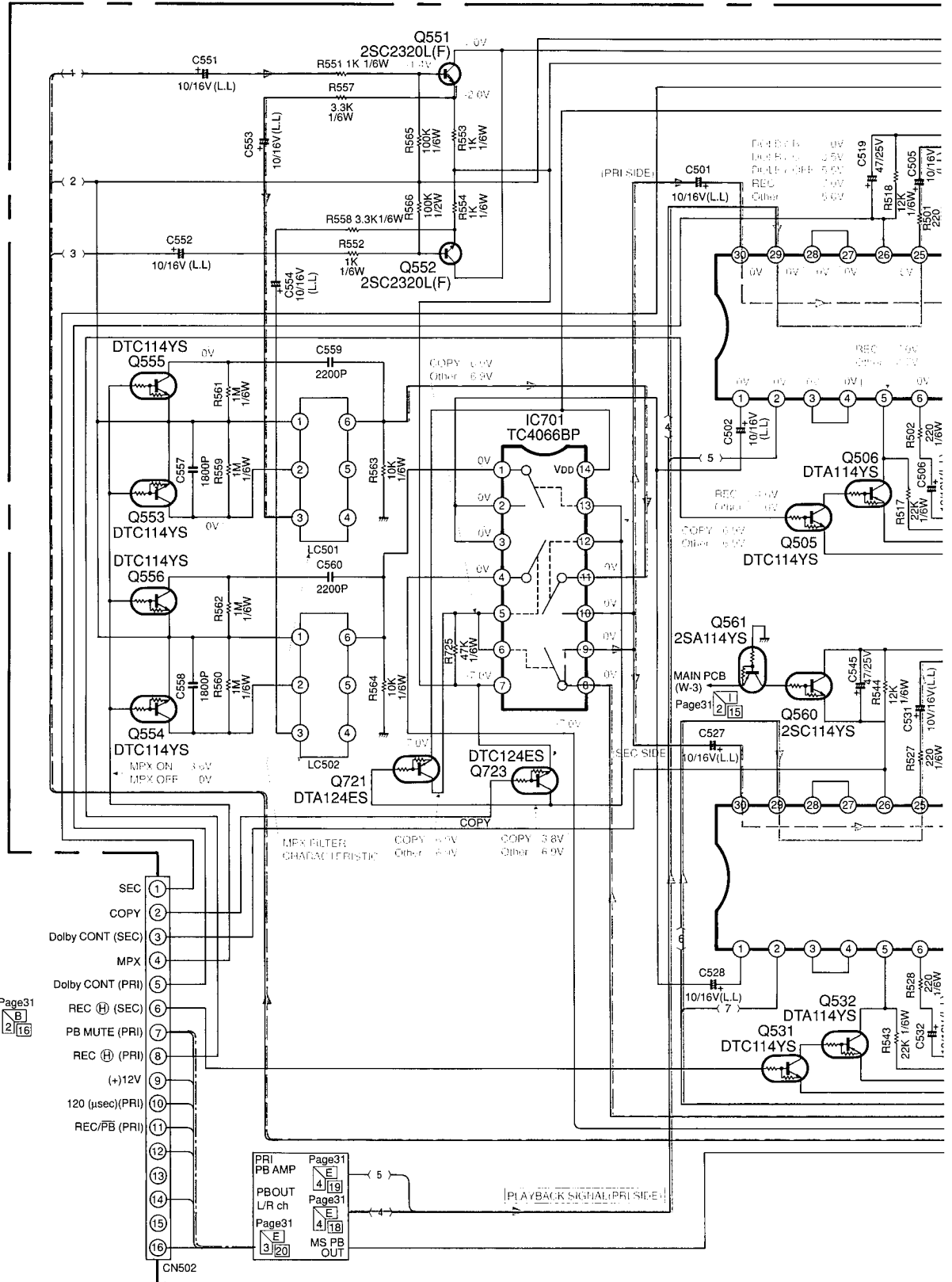
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MUTING SIGNAL:

SCHEMATIC DIAGRAM (3)

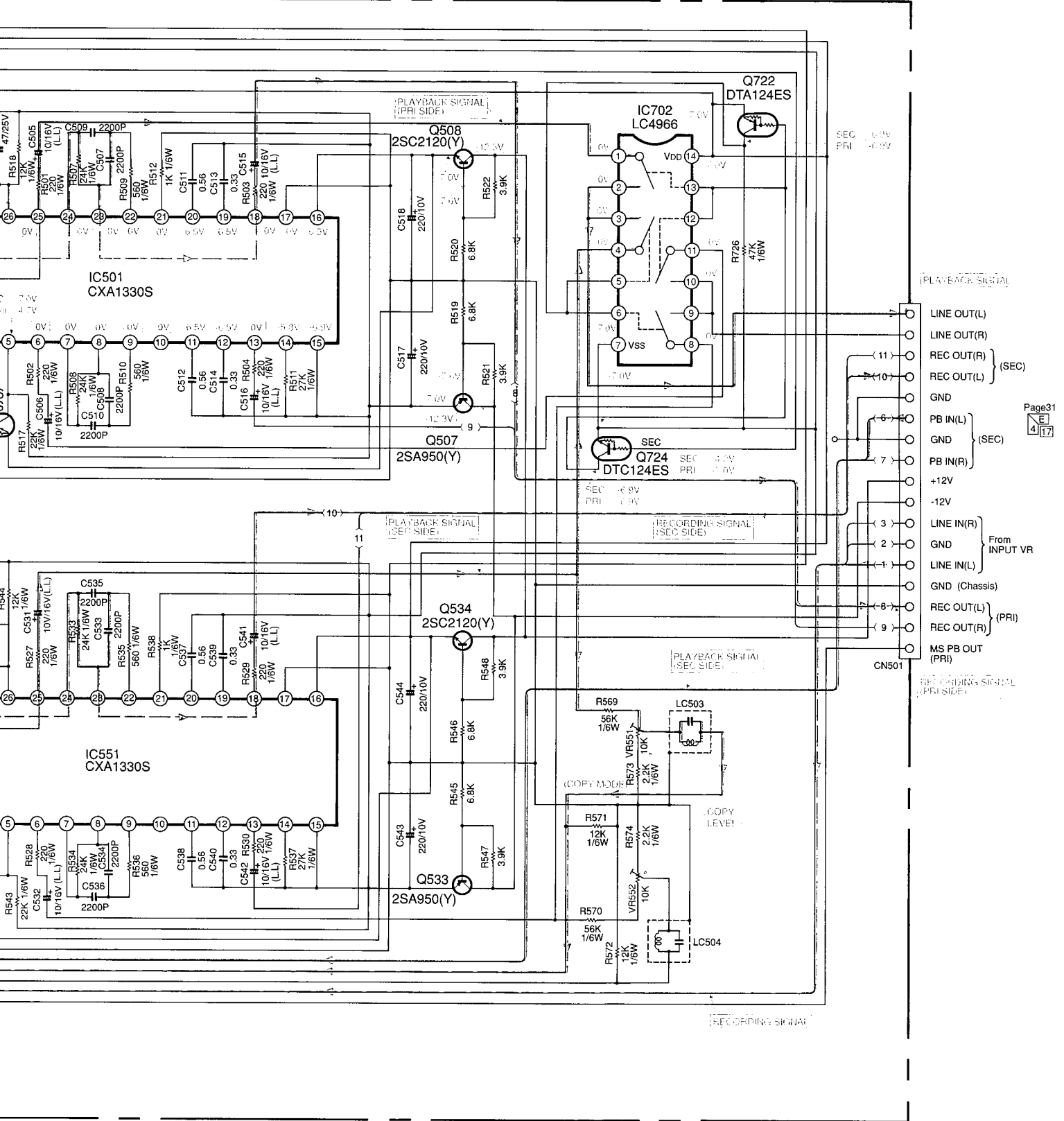
PCB-8 DOLBY P. C. BOARD(2/2)



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E
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E
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E
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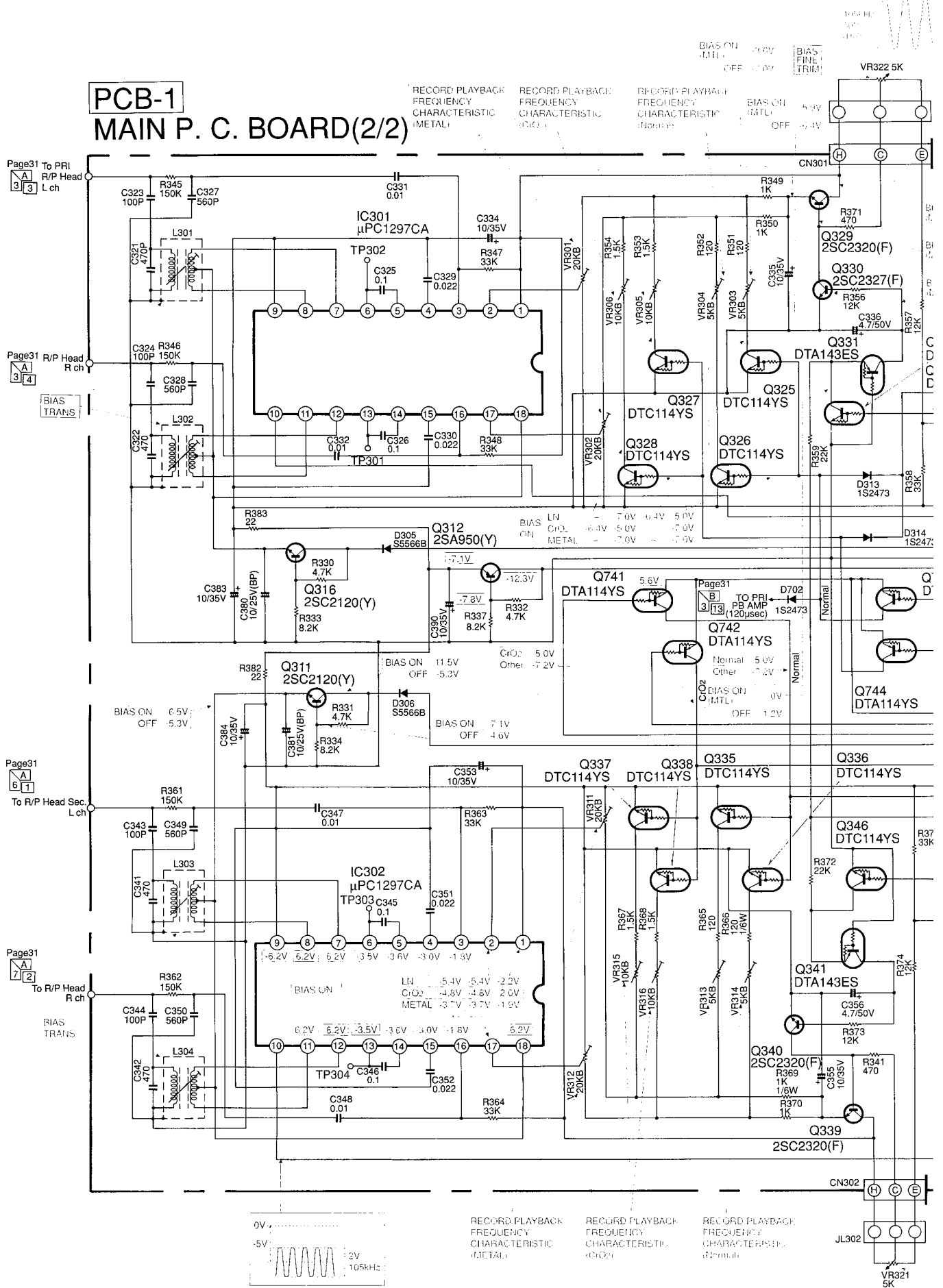
E F G H I J



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4
T7

SCHEMATIC DIAGRAM (4)

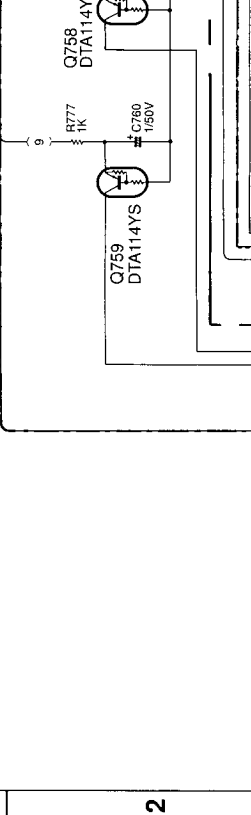
PCB-1 MAIN P. C. BOARD(2/2)



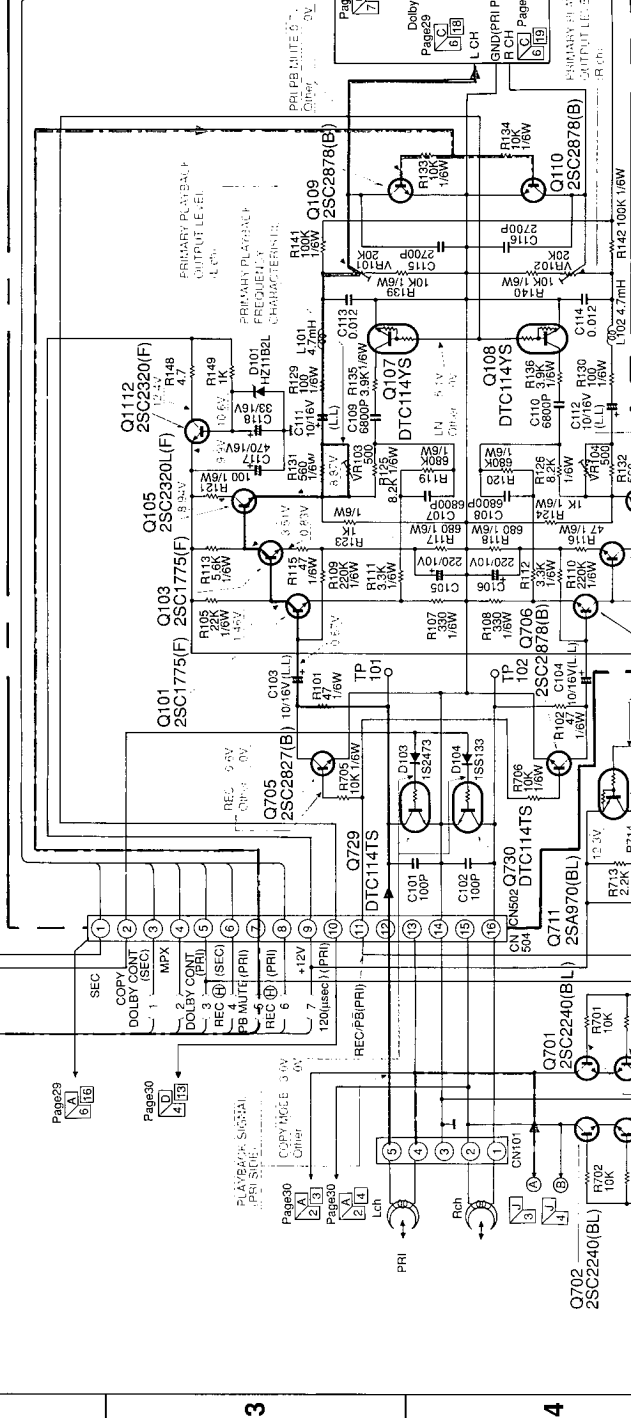
SCHEMATIC DIAGRAM (5)

1

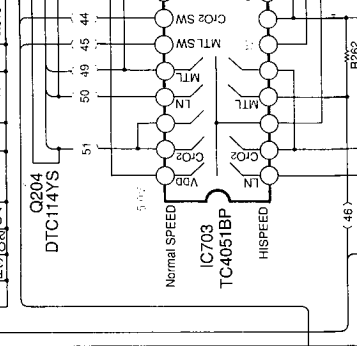
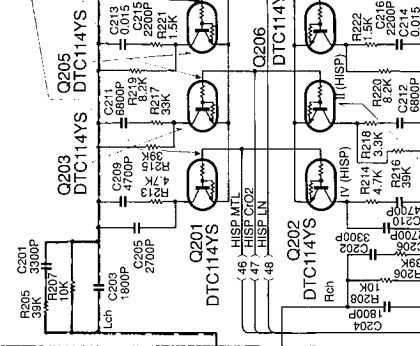
PCB-1 MAIN P. C. BOARD (1/2)



PCB-8 DOLBY P. C. BOARD (1/2)

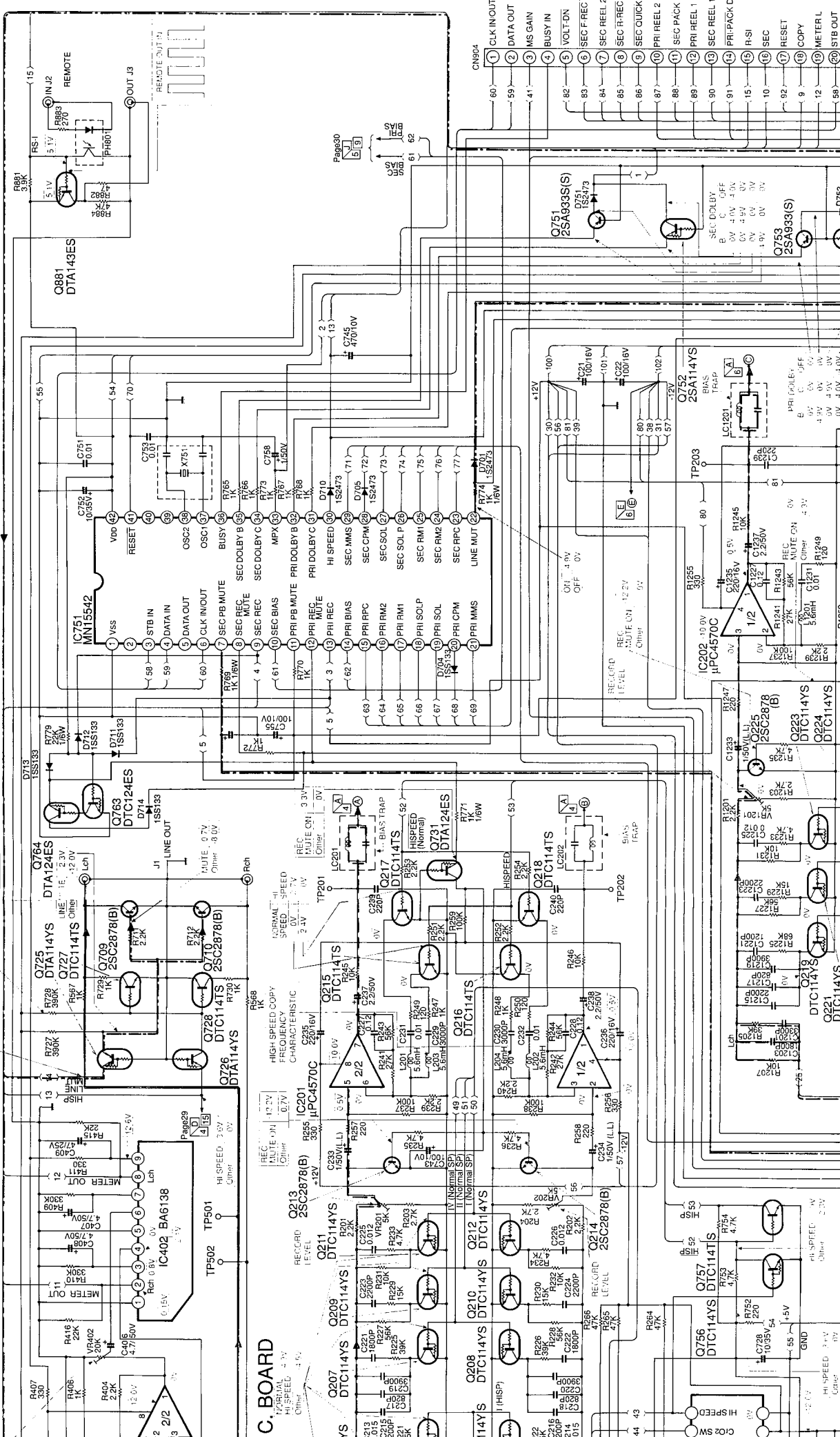


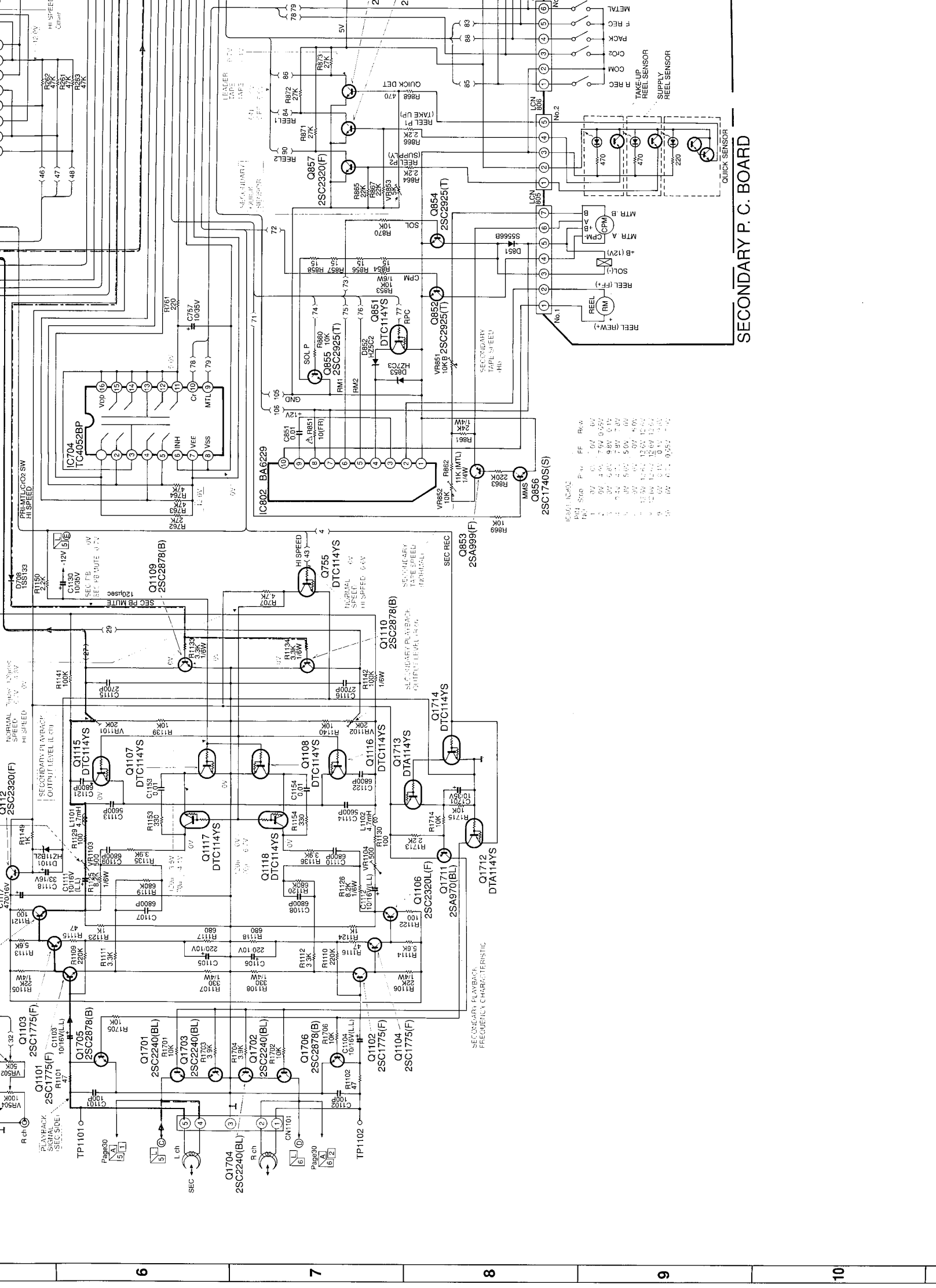
PCB-3 REC EQ P. C.



N M L K J I H

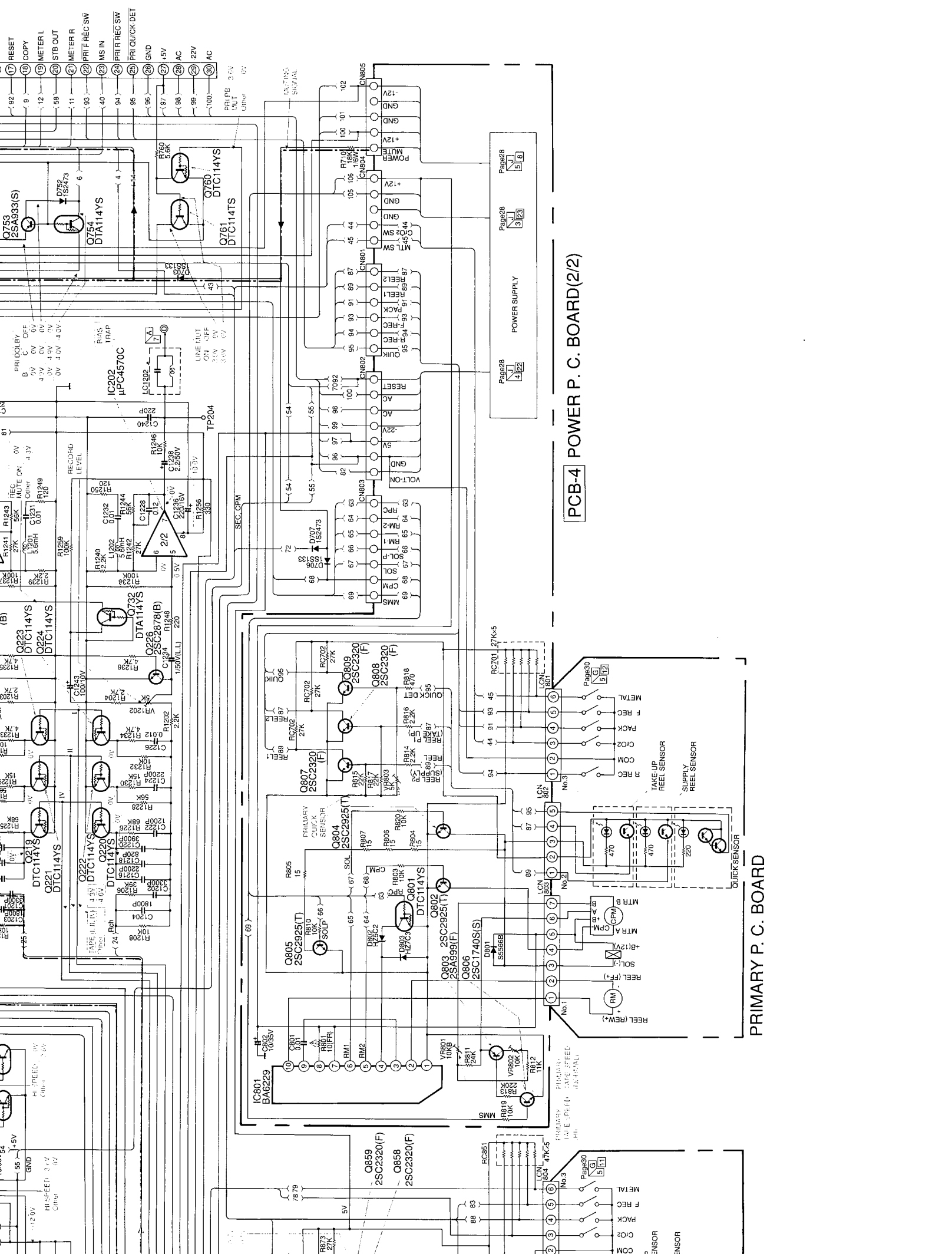
PCB-9 REC MUTE P. C. BOARD





IC No.	Part No.	Spec	FF	Rev
1	Q1	7.0V	0.7	0.7
2	Q2	7.5V	0.55V	
3	Q3	8.8V	0.1V	
4	Q4	7.8V	7.0V	
5	Q5	5.0V	4.0V	
6	Q6	13.0V	13.0V	
7	Q7	15.0V	15.0V	
8	Q8	10.5V	10.5V	
9	Q9	0.55V	0.55V	
10	Q10	0.55V	0.55V	

SECONDARY P. C. BOARD



PCB-4 POWER P. C. BOARD(2/2)

PRIMARY P. C. BOARD