

**NAD**

**SERVICE  
MANUAL**

**MONITOR SERIES**

**6100**

**CASSETTE DECK**

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## SPECIFICATION

Cassette mechanism: Full logic 2 motor 2 head system

Tack system: 4-track, 2-channel stereo

### Mechanical Performances

		Unit
Tape speed	4.75	cm/sec
Wow and flutter		
PLAYBACK (JIS WRMS)	0.05	%
Tape drive force	100~250	g
Play torque	30~75	g/cm
F.F torque	70~160	g/cm
REW torque	70~160	g/cm
F.F time (C-60)	85~120	sec
REW time (C-60)	85~120	sec

### Electrical Performances

	Nominal	Limit	Unit
Input sens./impedance (to Dolby level)	40±1 dB/10		mV/kΩ

		Unit
Frequency response		
PLAYBACK	40~18k	Hz
Frequency response REC/PLAY (at Dolby level -25 dB, Dolby NR:OFF)		
TYPE I	35~17k	Hz
TYPE II	35~18k	Hz
TYPE IV	35~18k	Hz

Signal to noise ratio at Dolby level, Dolby NR:OFF  
(CCIR ARM weighted / 20~20k Hz B.P.F)

TYPE I	No tape	59/52	56/49	dB
	Virgin tape	54/51	52/48	dB
	Biased tape	50/49	48/46	dB
TYPE II,IV	No tape	63/54	59/51	dB
	Virgin tape	58/53	54/50	dB
	Biased tape	52/50	50/48	dB

Dolby NR effect

			Unit
(CCIR ARM at Dolby level)			
Dolby NR B	9	8.5	dB
Dolby NR C	18	17	dB

Erase effect (with 1 kHz B.P.F)

0 VU + 10 dB input	70	65	dB
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	Nominal	Limit		Unit
Separation (with 1 kHz B.P.F) REC/PLAY				
Dolby level input at 1 kHz	40	35		dB
Cross talk at 1 kHz (with 1 kHz B.P.F)				
0 VU + 10 dB input	70	65		dB
Output level at Dolby level				
MTT-150 PLAY	505	505 ± 1	dB	mV
Distortion (at Dolby level 1 kHz)				
TYPE I	1.0	1.5		%
TYPE II	2.2	2.9		%
TYPE IV	1.2	2.2		%
Transmission distance of remote control				
at directly	7	10		m
Compress effect (boost ratio) at Dolby level -40 dB				
30 Hz	+18	+16/+20		dB
1 kHz	+12	+10/+14		dB
20 kHz	+16	+14/+18		dB

### General

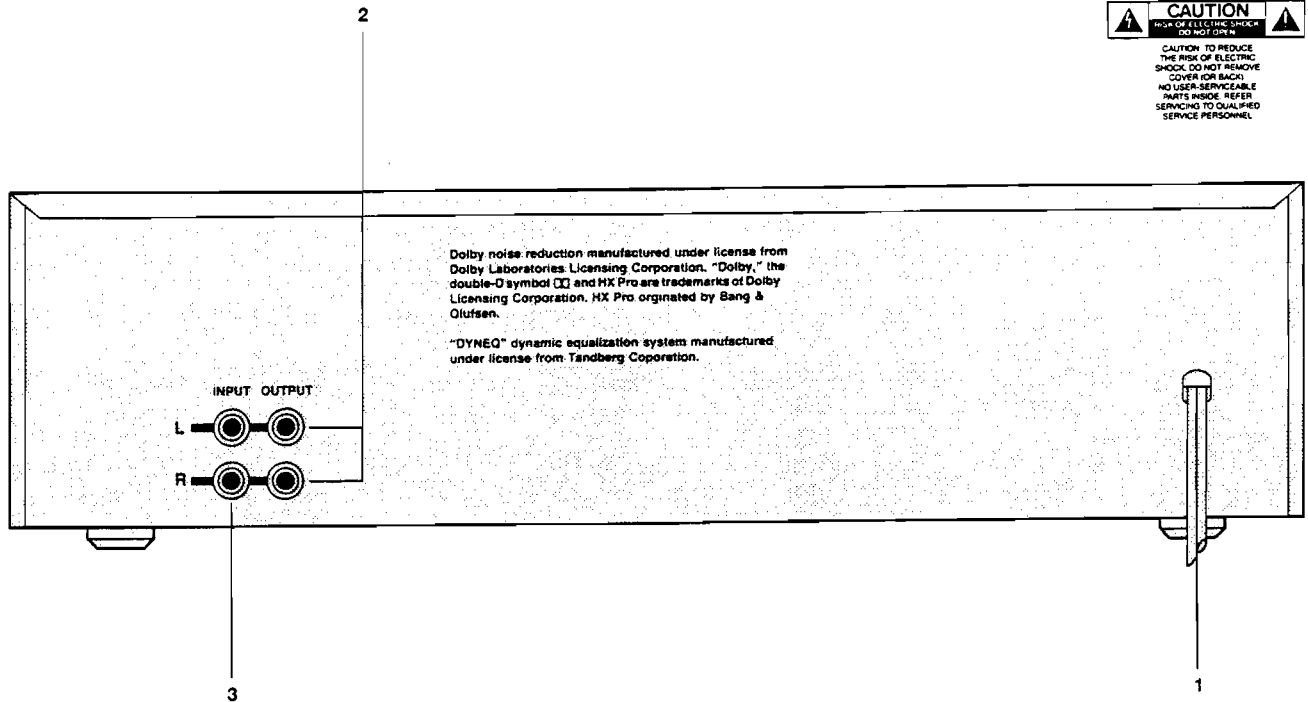
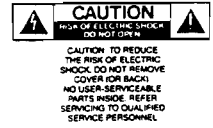
				Unit
Power supply	120 V 60 Hz	(for A,A1,A2)		
	220~240 V 50 Hz	(for B,B1,C,C1,C2)		
Power consumption	22(0.2)			W(A)
Dimensions(W/D/H)				
(include knob and leg)	435/271/122			mm
Net weight	4.5			kg

The specifications are subject to change without prior notice.

- A : USA
- A1 : CANADA
- A2 : TAIWAN
- B : U.K.
- B1 : AUSTRALIA/N.Z.
- C : EUROPE & OTHERS
- C1 : W.GERMANY
- C2 : G.P.M.

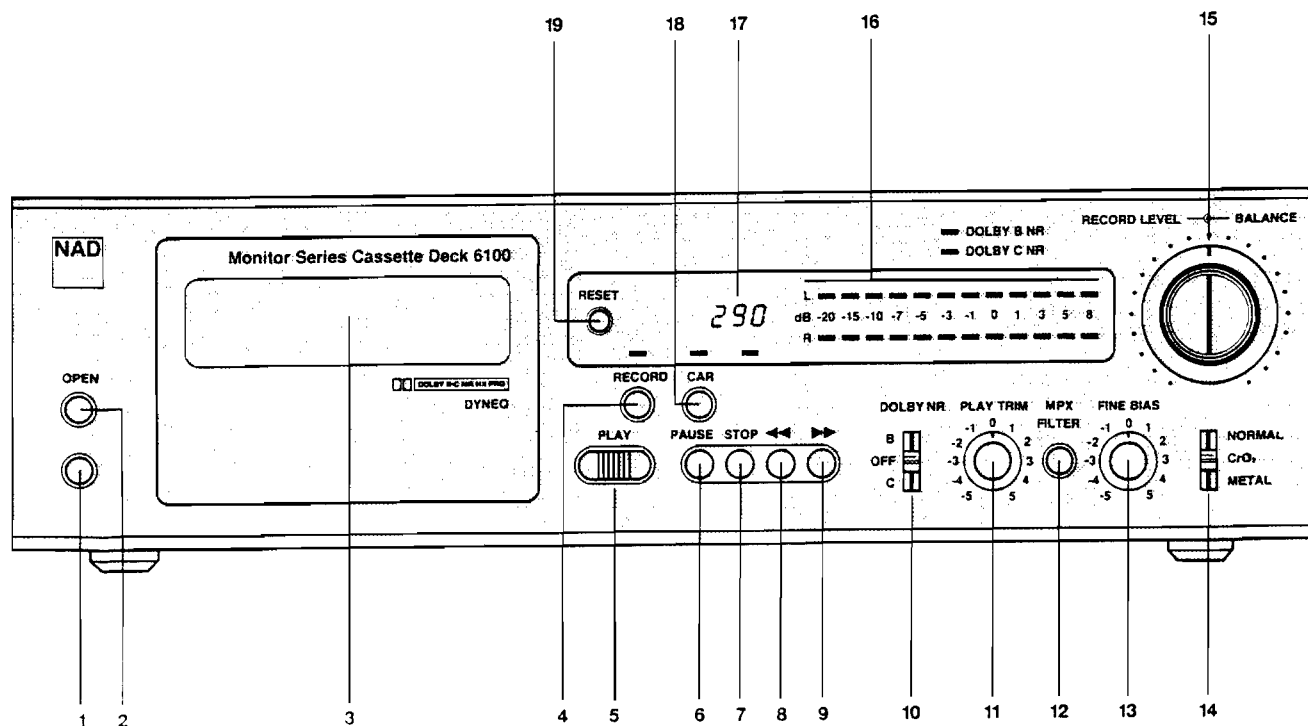
**REAR PANEL**

1. AC Power Cord.
2. Line Input.
3. Line Output.



**FRONT PANEL**

- |                          |                        |                              |
|--------------------------|------------------------|------------------------------|
| 1. Power.                | 8. Rewind( ◀◀ ).       | 15. Recording Level/Balance. |
| 2. Open.                 | 9. Fast Forward( ▶▶ ). | 16. Recording Level Display. |
| 3. Cassette Compartment. | 10. Dolby NR.          | 17. Tape Counter/Timer.      |
| 4. Record.               | 11. Play Trim.         | 18. Reset.                   |
| 5. Play.                 | 12. Multiplex Filter.  | 19. CAR Processor.           |
| 6. Pause.                | 13. Fine Bias.         |                              |
| 7. Stop.                 | 14. Tape Selector.     |                              |



## ALIGNMENT METHOD

### IMPORTANT

The tape path (heads, tape guides, capstan, pinch roller) should be cleaned and degaussed before alignment.

This tape recorder is designed to work well with a variety of tapes, however, maximum performance will be obtained with recommended tapes or similar tape formulations.

Recommended tapes	For North America	For Europe-DIN
Type I	Maxell UDS-I	Maxell UD-I, BASF TP18 no, R723DG
Type II	Maxell XL-II	Maxell XL-II, Teac MTT-5561
Type IV	Maxell MX	Maxell MX, Maxell MX 422

Before adjusting, switch DOLBY NR, MPX FILTER, CAR off; and PLAY TRIM, FINE BIAS to center position.

DOLBY NR level 200 nWb/m = 245 mV RMS on testpoints TP003 (PLAYBACK and RECORDING) on Main PCB; approximately 505 mV at line outputs.

#### 1. TAPE SPEED

Connect one output to Wow and Flutter Meter or Frequency Counter, Play speed test tape TEAC MTT-111 = 3 kHz or TEAC MTT-211 = 3.15 kHz and adjust the semi-variable resistor, for correct reading on Wow and Flutter Meter or Frequency Counter. (See Fig. A)

Tolerance:  $\pm 1\%$

#### 2. AZIMUTH

Connect VTVM's and/or Oscilloscope to outputs. Set tape selector to normal and start playing Azimuth tape TEAC MTT-113 or MTT-114. Rotate azimuth screw for maximum output and/or maximum and in phase on Oscilloscope. Reseal adjustment screw with nail polish or similar (do not use glue). (See Fig. B)

#### 3. PLAYBACK EQ

THIS ADJUSTMENT IS NOT NEEDED UNLESS THE HEAD HAS BEEN REPLACED OR REPAIR HAS BEEN DONE IN HEADAMP CIRCUIT.

Play level/azimuth tape TEAC MTT-256 and adjust SVR001(L) and SVR002(R) for identical output at 315/6300 Hz (MTT-255) or 250/6300 Hz (MTT-256).

Tolerance:  $\pm 0.5$  dB

#### 4. PLAYBACK HIGH FREQUENCY EQ

THIS ADJUSTMENT SHOULD BE DONE ONLY WHEN HEAD HAS BEEN REPLACED.

Play frequency response tape TEAC MTT-256 or MTT-256U and check playback level at 14 kHz.

Before adjust, cut the center of jumper leads E001(L) and E002(R). Adjust by disconnecting E003(L) and E004(R) if 14 kHz is too high and connecting E001(L) and E002(R) if 14 kHz is too low. Leave same component values in both channels.

Tolerance:  $+1.5$  dB  
 $-0.5$

#### 5. PLAYBACK LEVEL

Connect VTVM to testpoints. Play Dolby NR level tape TEAC MTT-150 and adjust SVR003(L) and SVR004(R) for 245 mV RMS at testpoint TP003 on Main PCB.

Tolerance:  $\pm 2.5$  mV RMS

Output should be approximately 505 mV RMS.

#### 6. METER LEVEL

Play Dolby NR level tape MTT-150 and adjust SVR005(L) and SVR006(R) so that 0 dB LED's just turn on.

#### 7. BIAS TRAP

Insert a blank type I tape and start recording. Turn record level all the way down and set tape selector to type IV position. Connect VTVM's and/or oscilloscope probe to testpoint TP201 and adjust F201(L) and F202(R) for minimum.

Tolerance: Less than 300 mV RMS.

#### 8. RECORD LEVEL

Set tape selector to type I tape. Connect audio oscillator to line inputs, turn record levels to maximum (clockwise). Adjust audio oscillator frequency to 400 Hz and output so that VTVM's read 30–40 mV. (Use a convenient reference point on the VTVM's).

Reset tape counter to 0 and release pause to start recording. Record for approximately 5 seconds, rewind to 0 on tape counter and play back while observing the VTVM's. The VTVM's should indicate the same level as when the tape was recorded. Adjust SVR201(L) and SVR202(R) if necessary and repeat the record / play procedure until the readings are the same.

Tolerance:  $\pm 0.5$  dB from record level. Less than 0.5 dB difference between channels.

#### 9. BIAS ADJUST TYPE I TAPE (NORMAL)

Set audio generator to 1.2 kHz without changing output level. Reset tape counter to 0 and start recording. After 5 seconds change audio generator frequency to 12 kHz (do not stop the machine or change levels) and continue recording for another 5 seconds. Stop and rewind to 0 on tape counter. Play back while observing VTVM's. There should be no level difference between the 1.2 kHz and the 12 kHz tone when played back. If 12 kHz is different in level for 1.2 kHz, adjust SVR305(L) and SVR306(R) and repeat the record / play procedure until both frequencies play back at same level.

Tolerance:  $\pm 0.5$  dB

**WARNING:** Greater tolerance will grossly affect the Dolby NR tracking and especially the Dolby C tracking.

Record level (step 8) should be checked and if necessary adjusted.

**10. PEAKING CIRCUIT TYPE I TAPE (NORMAL)**

Adjust audio generator to 17 kHz while maintaining the same output level. Record and play back the 17 kHz tone and adjust SVR207(L) and SVR208(R) to the same level as the 1.2 kHz signal.

Tolerance:  $\pm 1$  dB

**WARNING:** If the R/P head is worn, the tape may not have adequate contact with the head, resulting in severe drop outs. A worn head will make this adjustment very difficult or impossible. DO NOT try to adjust the worn R/P head. Leave SVR207(L) and SVR208(R) in the factory preset condition, or if they have already been adjusted, readjust them to their approximate midposition.

**11. FREQUENCY RESPONSE TYPE II TAPE (CrO2)**

Insert a type II tape and set selector to type II position. Adjust audio generator to 1.2 kHz and 12 kHz and repeat process described in step 9 using SVR303(L) and SVR304(R) to adjust both channel simultaneously. After 1.2 kHz and 12 kHz are adjusted properly, set audio generator to 18 kHz and repeat same process as described in step 10 while adjusting SVR205(L) and SVR206(R) to obtain correct reading.

**12. FREQUENCY RESPONSE TYPE IV TAPE (METAL)**

Insert a type IV tape and set selector to type IV position. Repeat procedure as in step 9 while adjusting SVR301(L) and SVR302(R) for correct 12 kHz level in both channels. Set audio generator to 18 kHz and repeat process as in step 10 while adjusting SVR203(L) and SVR204(R) for correct 18 kHz record level.

**13. DYNEQ**

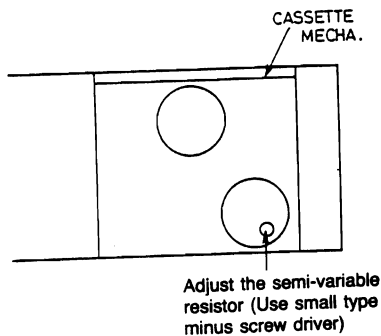
Engage record and play mode. Adjust audio generator to 14 kHz and output so that tape recorder output is -5 dB from Dolby NR level (approximately 280 mV RMS). Set tape selector to type I position and connect VTVM probe to test point TP202 and adjust SVR209(L) and SVR210(R) from fully counterclockwise position until the output on the probe decreases 1 dB.

**14. CAR**

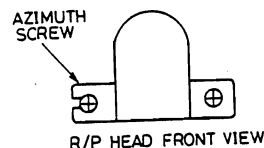
Engage record and pause mode. Adjust audio generator to 1 kHz and output so that voltage at TP003 is 24 mV. Switch CAR on, adjust SVR101(L) and SVR102(R) to increase 5 dB at TP003.

**ALIGNMENT COMPONENTS LAYOUT**

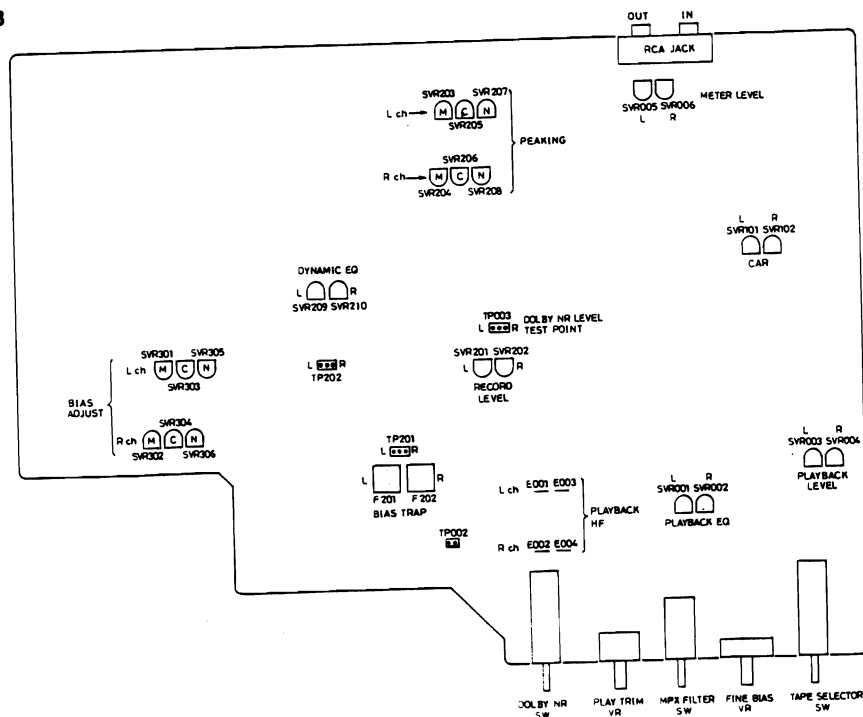
**Fig. A FOR ADJUSTING TAPE SPEED**



**Fig. B FOR ADJUSTING AZIMUTH**

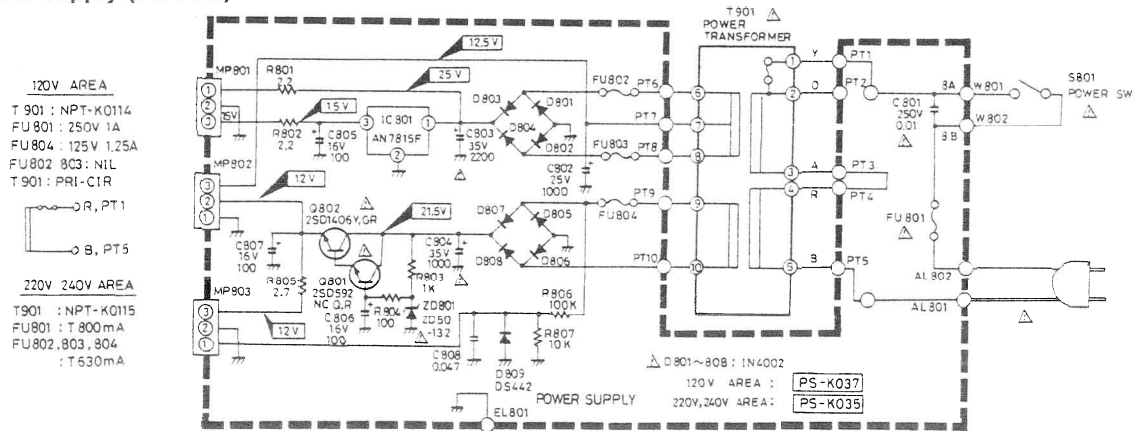


**Fig. C FOR MAIN PCB**

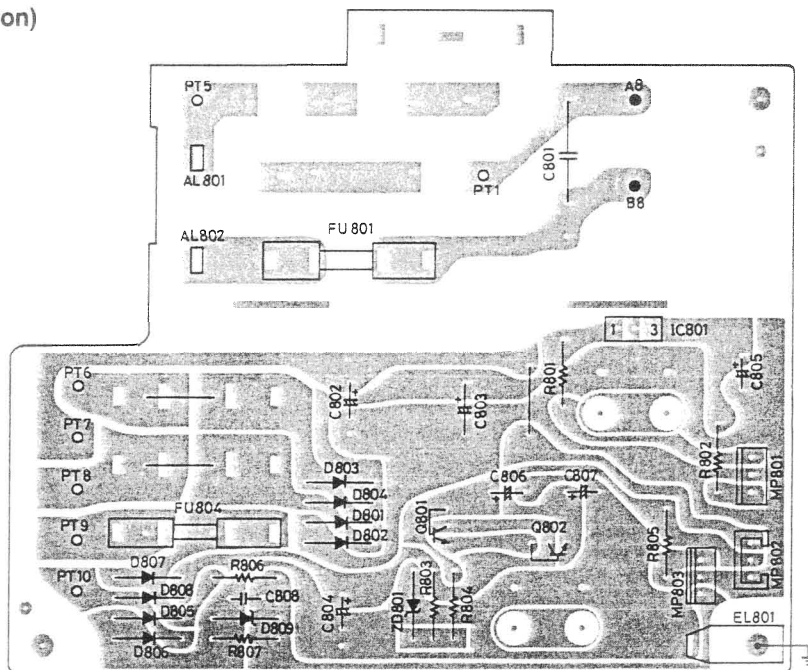


# SCHEMATIC AND PCB LAYOUT (Foil side)

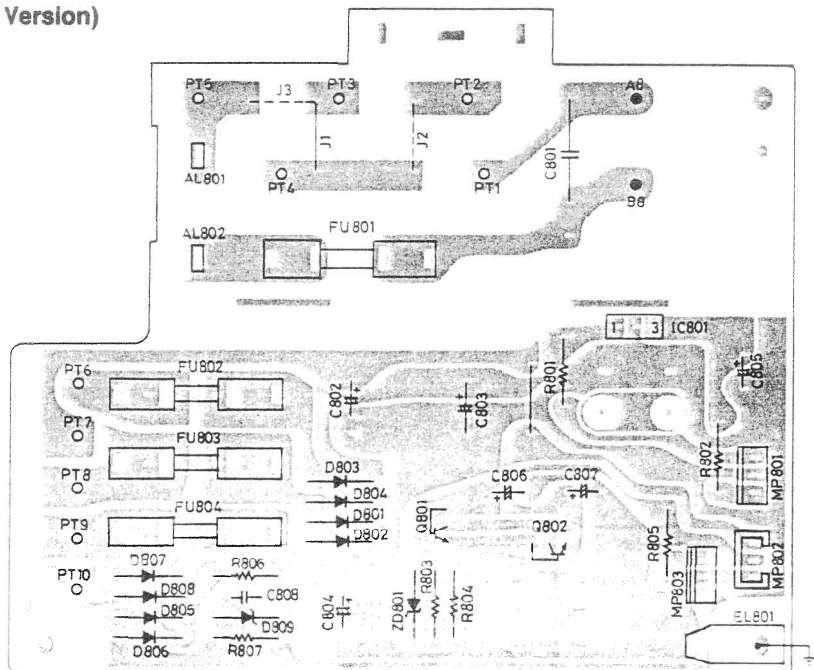
## Power supply (PS-PCB)



(For A,A1,A2 Version)

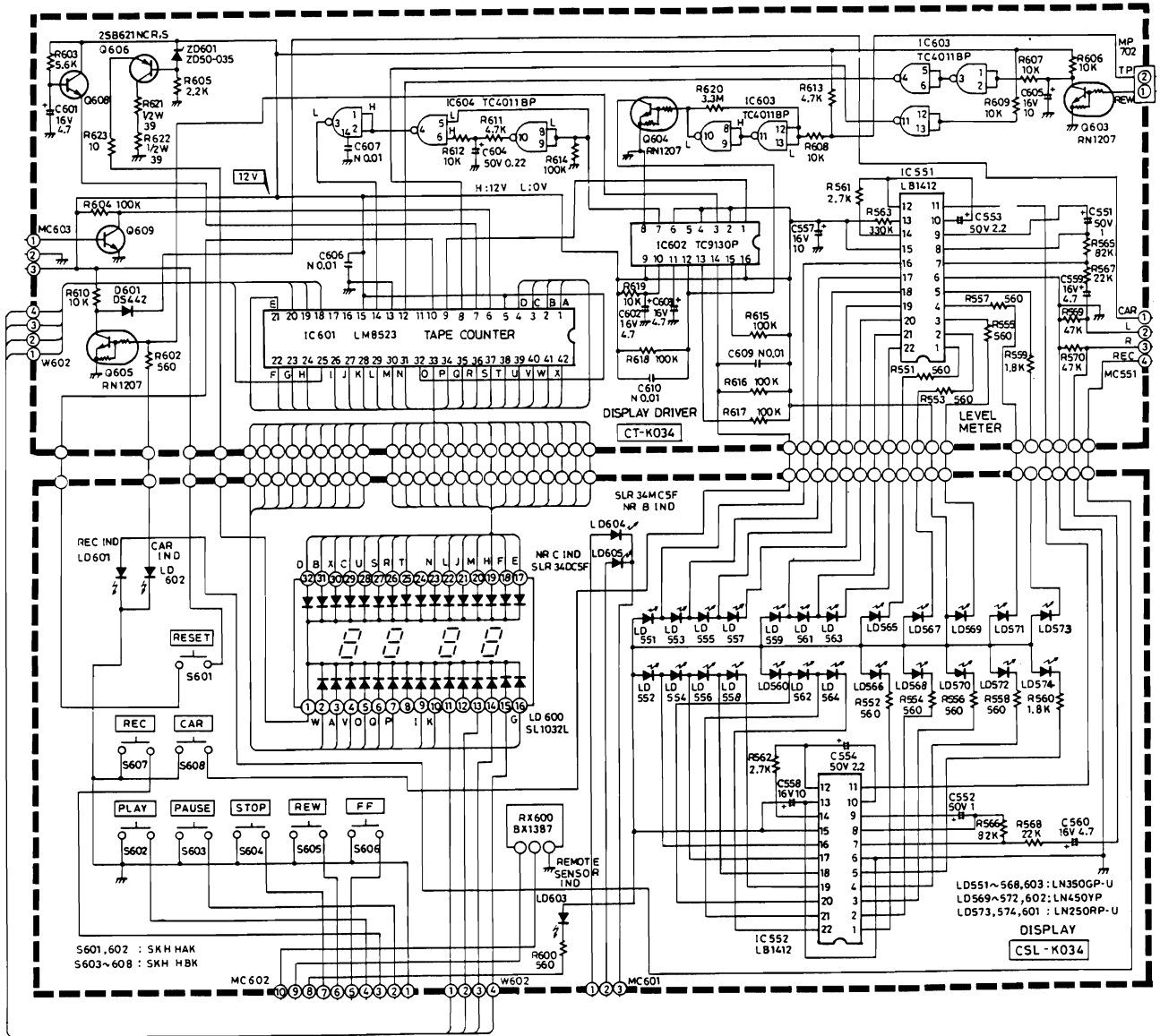


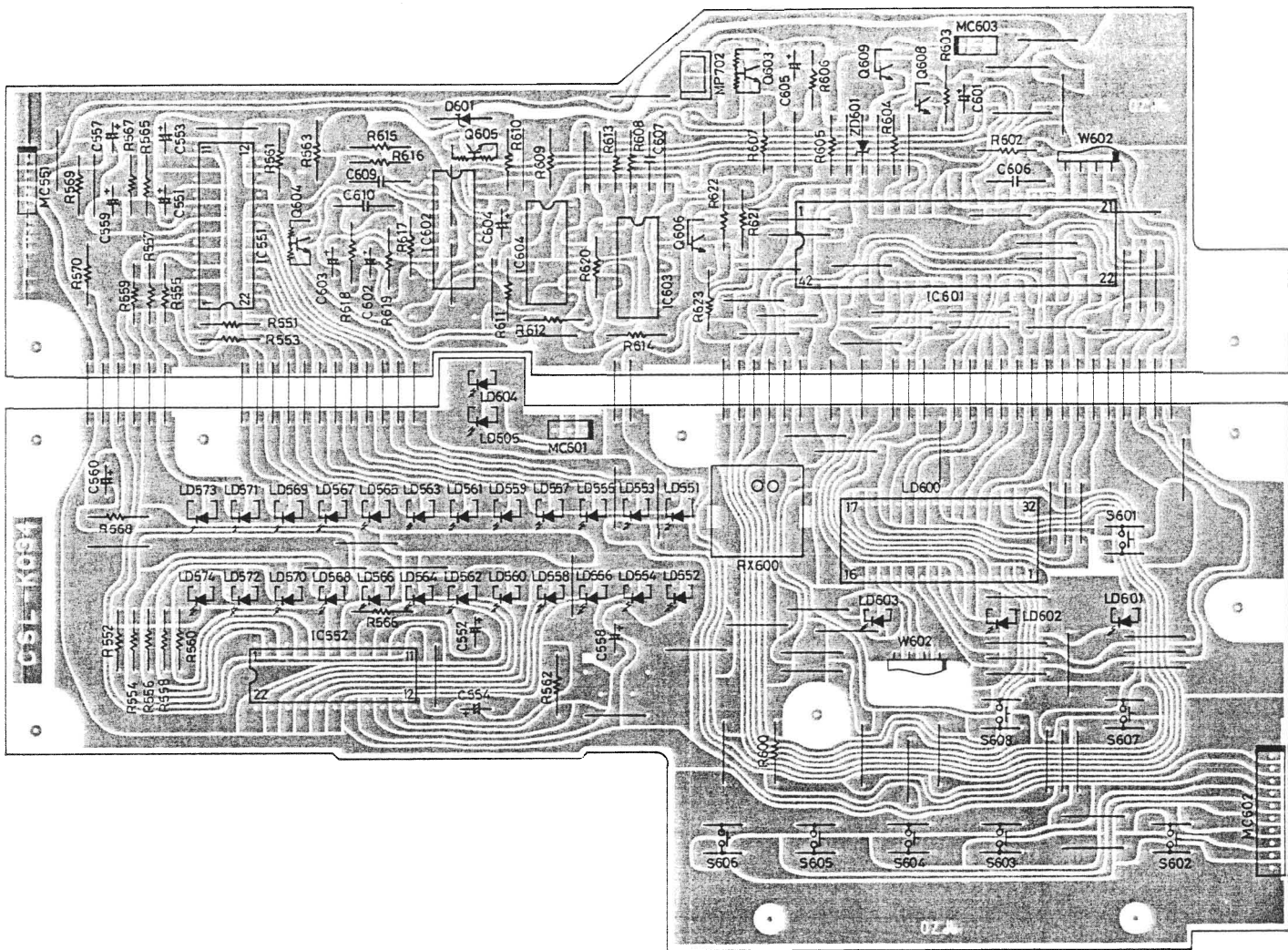
(For B,B1,C,C1,C2 Version)



- A : USA
- A1 : CANADA
- A2 : TAIWAN
- B : U.K.
- B1 : AUSTRALIA/N.Z.
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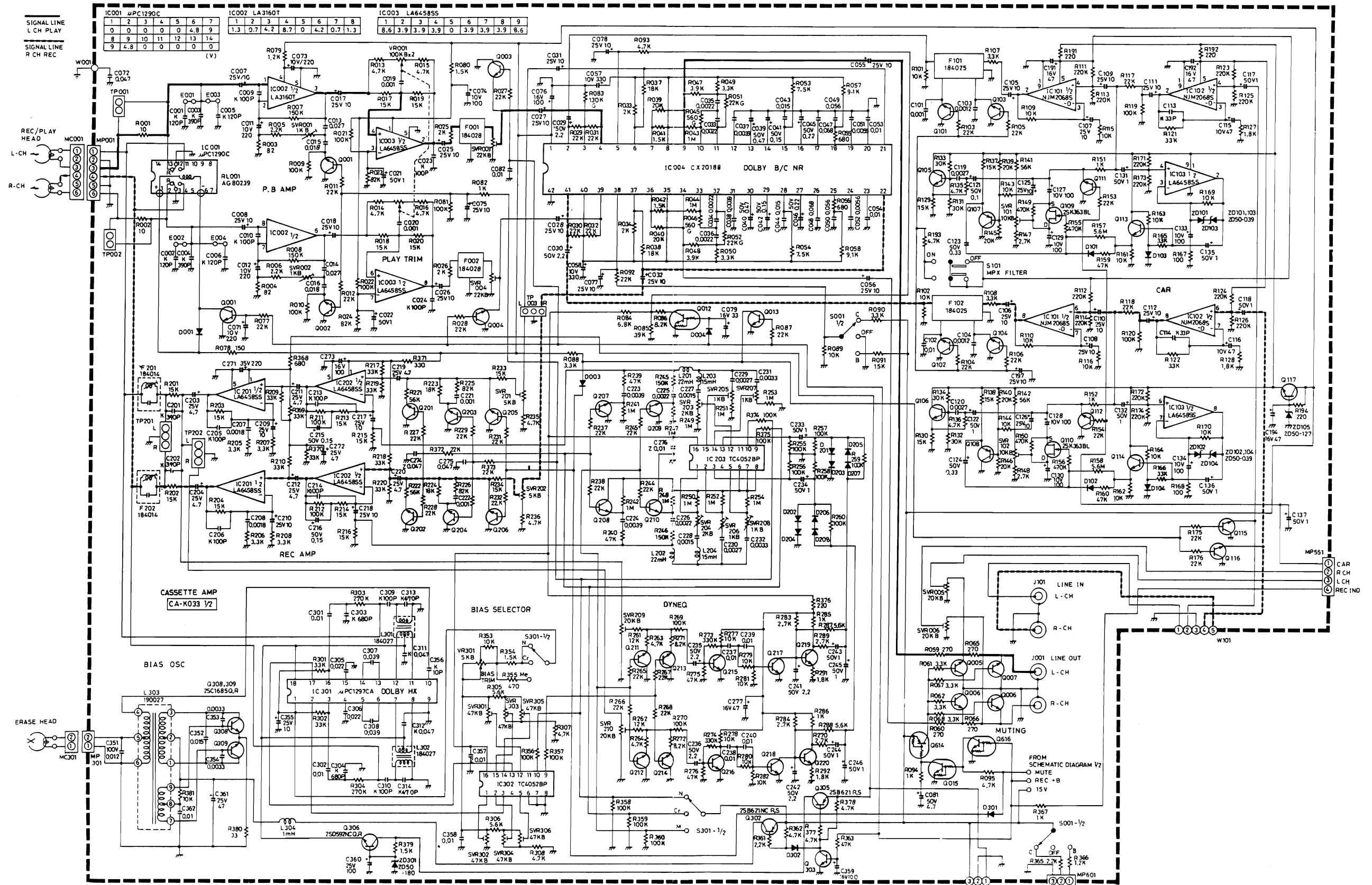
### Control & Display drive (CSL & CT-PCB)

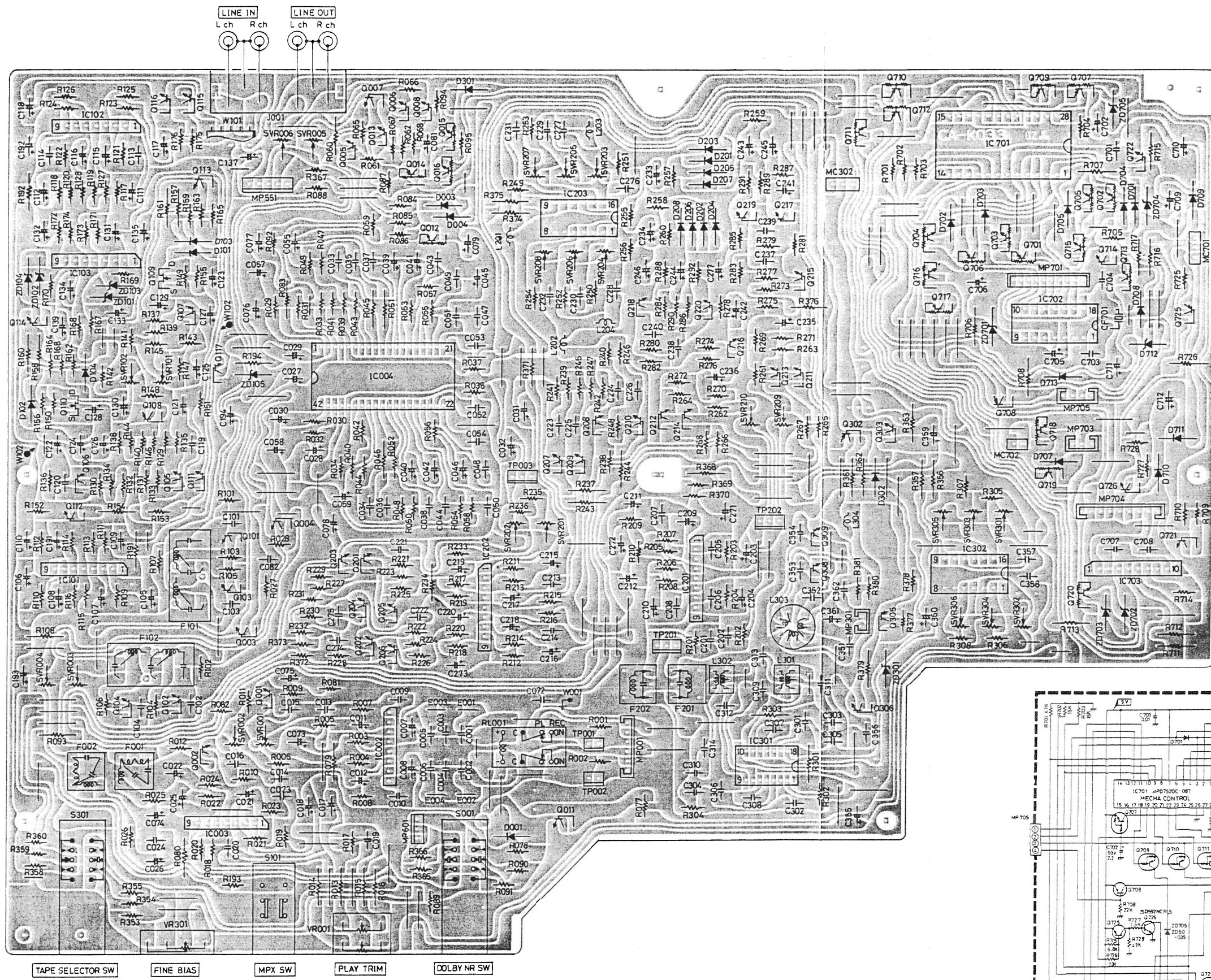




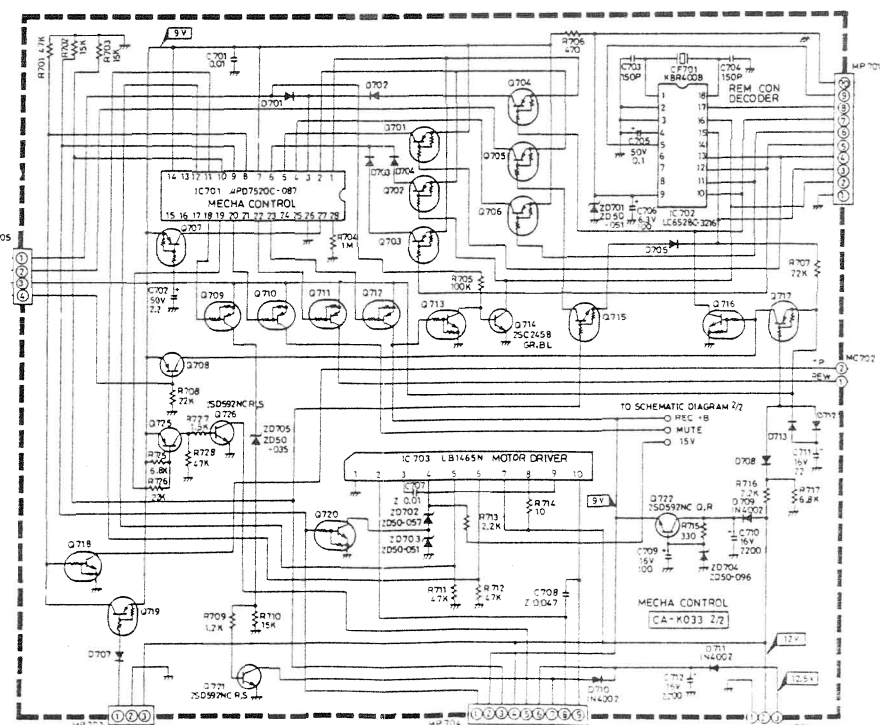
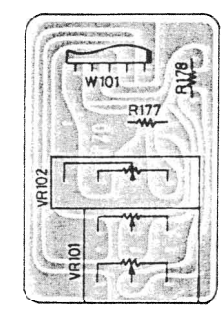
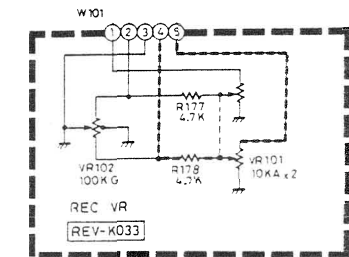


Main (CA-PCB)

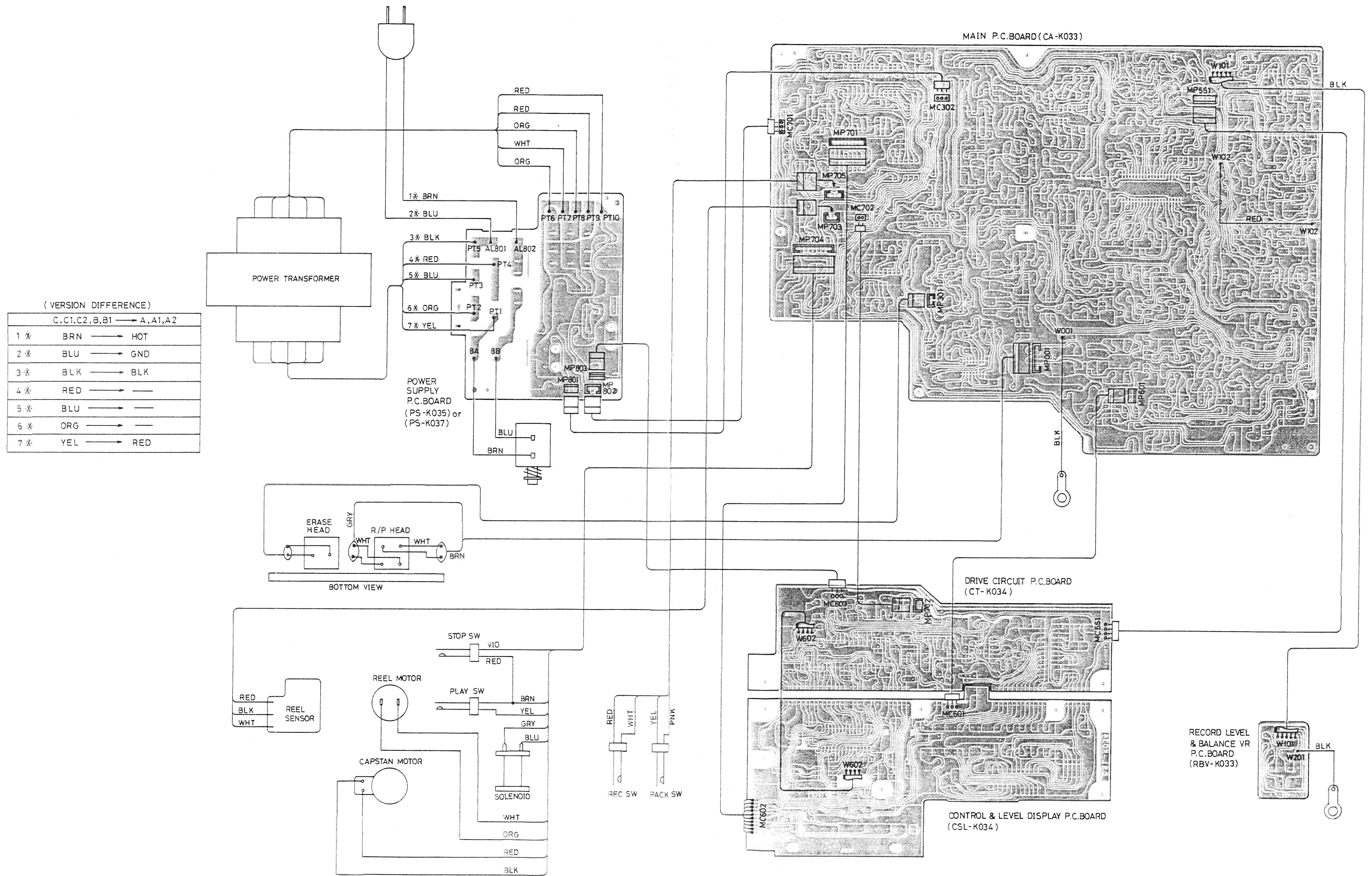




Rec. & Balance (RBV-PCB)



WIRING DIAGRAM (Component side)

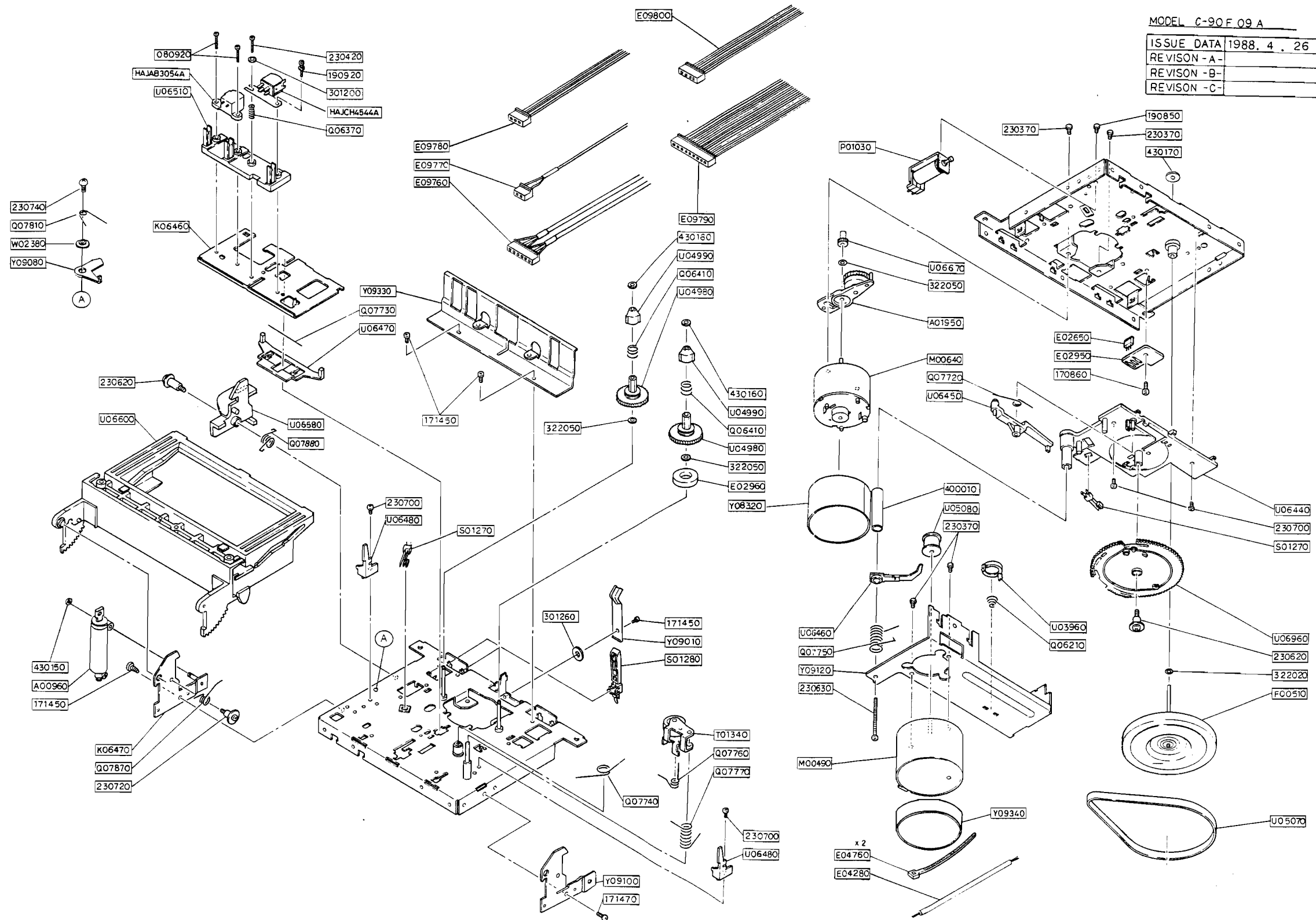


(VERSION DIFFERENCE)

C, C1, C2, B, B1 → A, A1, A2		
1 *	BRN	HOT
2 *	BLU	GND
3 *	BLK	BLK
4 *	RED	—
5 *	BLU	—
6 *	ORG	—
7 *	YEL	RED



Cassette Mechanism



Q'TY	PART NO.	DESCRIPTION
1	A00960	SOFT DAMP ASSY 3B
1	A01950	RF ASSY 90A
1	E02650	HALL IC DN6838-A
1	E02950	PCB, IC-20
1	E02960	MAGNET 15X7.2X3-12
1	E04280	WIRE,1571(RE) 35X3X3#28
2	E04760	HARNESS BAND PL-100
1	E09760	CONNECTOR ASSY 25C-06F-05
1	E09770	CONNECTOR ASSY 25C-02F-04
1	E09780	CONNECTOR ASSY 25C-03F-04
1	E09790	CONNECTOR ASSY 25C-09F-05
1	E09800	CONNECTOR ASSY 25C-04F-05
1	F00510	FLYWHEEL 90B
1	HAJCH4544A	REC/PLAY HEAD
1	HAJAB3054A	ERASE HEAD
1	T01340	PINCH ROLLER ASSY 90A
1	K06460	HEAD PANEL CALKING 90A
1	K06470	CASE HOLDER CALKING 90A-L
1	M00490	MOTOR EG500AD-2B
1	M00640	MOTOR RF-510T-081200-N
1	P01030	SOLENOID NS0-4-00102-12V19
1	Q06210	SP, CAPSTAN SUPPORT 88A
1	Q06370	SP, HEAD 9FA
2	Q06410	SP, REEL SUPPORT 9FA
1	Q07720	SP, LEVER TRIGER 90A
1	Q07730	SP, ARM BRAKE 90A
1	Q07740	SP, HEAD PANEL 90A
1	Q07750	SP, ARM GEAR 90A
1	Q07760	SP, PINCH ROLLER 90A
1	Q07770	SP, PINCH RET 90A
1	Q07810	SP, ARM SAFETY 90A
1	Q07870	SP, CASSETTE CASE 90B
1	Q07880	SP, CASE LOCK 90B
2	S01270	LEAF SW LSA-1119R-1
2	S01280	LEAF SW LSA-1132FAU
1	U03960	CAPSTAN SUPPORT 9B
2	U04980	GEAR,REEL PLATE 9FA
2	U04990	REEL DLIVE 9FA
1	U05070	FLAT BELT 58.5X3.5X0.4
1	U05080	MOTOR PULLEY 2X9.2R-U
1	U06440	GEAR,BASE 90A
1	U06450	LEVER,TRIGER 90A
1	U06460	ARM,GEAR 90A
1	U06470	ARM,BRAKE 90A
2	U06480	CASSETT GUIDE 90A
1	U06510	HEAD BASE 90B
1	U06580	LEVER, CASE LOCK 90A
1	U06600	CASSETTE CASE 90A
1	U06670	GEAR,RF PULLEY 90A
1	U06960	GEAR,DRIVE 90A
1	W02380	COLLAR,ARM SAFTY 90A
1	Y08320	SHIELD PLATE T-2.0 30X17
1	Y09010	SP PLATE,PACK 90A
1	Y09080	ARM,SAFTY 90A
1	Y09100	CASE HOLDER 90A-R
1	Y09120	BRACKET,FLYWHEEL 90A
1	Y09330	COVER,SW 90B
1	Y09340	SHIELD PLATE T-2.0 34X17
2	080920	SCREW,BIND 2.0X11
1	170860	SCREW,TAP TITE 2.0X5
4	171450	SCREW,TAP TITE 2.6X4
1	171470	SCREW,TAP TITE 2.6X6
1	190850	SCREW,2.0X4W/SPRING WASHER
1	190920	SCREW,2.0X11W/SPRING WASHER
4	230370	SCREW,2.6X2.5
1	230420	SCREW,BIND 2.0X10
2	230620	SCREW,SHOULDECK 2.6X9
1	230630	SCREW,TAP TITE 2.6X23.5
4	230700	SCREW,BIND TAP TITE 2.0X4
1	230720	SCREW,SHOULDECK 2.6X5
1	230740	SCREW,TRUSS TAP TITE 2.6X6
1	301200	FW 2.2X6.0X0.4
1	301260	FW 2.8X7.5X0.5
1	322020	PSW 2.1X4.0X0.25
3	322050	PSW 2.1X4.0X0.5
1	400010	SPACER M2.6X20 ZMC
1	430150	PSW 2.1X4.0X0.4C
2	430160	PSW 1.6X3.2X0.40C
1	430170	NLW 1.9X7.0X0.5

# Parts list

• Parts marked with \* vary according to destinations. For details, refer to the classify parts list.

MAIN PCB ASS'Y

REF. NO.	Q'TY	PART NO.	DESCRIPTION
<b>P.C. BOARD</b>			
6E 1	1	CA-K033	PRINTED CIRCUIT BOARD
<b>SEMICONDUCTORS</b>			
D001,003,004,101~104,201~208,301,302,701~705,707,708	24	DS442-UA	DIODE
D709~711	3	1N4002-UA	DIODE
D712,713	2	DS442-UA	DIODE
Q001-008,011	9	2SC2458-GRBL	TRANSISTOR
Q012	1	RN-1209	TRANSISTOR
Q013	1	2SC2458-GRBL	TRANSISTOR
Q014	1	RN-1209	TRANSISTOR
Q015,016	2	RN-1209	TRANSISTOR
Q101-106	6	2SC2458-GRBL	TRANSISTOR
Q107,108	2	2SA1048-GRBL	TRANSISTOR
Q109,110	2	2SK363-8L	TRANSISTOR
Q111~117,201~220	27	2SC2458-GRBL	TRANSISTOR
Q302	1	2SB621NC-R,S	TRANSISTOR
Q303	1	2SC2458-GRBL	TRANSISTOR
Q305	1	2SB621NC-R,S	TRANSISTOR
Q306	1	2SD592NC-Q,R	TRANSISTOR
Q308,309	2	2SC1485-Q,R	TRANSISTOR
Q701-707	7	RN-1209	TRANSISTOR
Q708	1	2SA1048-Y,GR	TRANSISTOR
Q709~712	4	RN-1209	TRANSISTOR
Q713	1	RN-1209	TRANSISTOR
Q714	1	2SC2458-GRBL	TRANSISTOR
Q715,716	2	RN-1209	TRANSISTOR
Q717	1	RN-1209	TRANSISTOR
Q718	1	RN-1209	TRANSISTOR
Q719	1	RN-1209	TRANSISTOR
Q720	1	RN-1209	TRANSISTOR
Q721	1	2SD592NC-R,S	TRANSISTOR
Q722	1	2SD592NC-Q,R	TRANSISTOR
Q725	1	2SA1048-Y,GR	TRANSISTOR
Q726	1	2SD592NC-R,S	TRANSISTOR
IC002	1	LA3160T	IC
IC003	1	LA64585S	IC
IC004	1	CX20188	IC
IC101,102	2	NJM20685-D	IC
IC103,201,202	3	LA64585S	IC
IC203	1	TC4052BP	IC
IC301	1	UPC1297CA	IC
IC302	1	TC4052BP	IC
IC701	1	UPD7520C-087	IC
IC702	1	LC6528C-3216	IC
IC703	1	LBI645N	IC
ZD101-104	4	ZD50-039-UA	ZENER DIODE,1/2W,3.9V
ZD105	1	ZD50-127-UA	ZENER DIODE,1/2W,12.7V
ZD301	1	ZD50-180-UA	ZENER DIODE,1/2W,18.0V
ZD701	1	ZD50-051-UA	ZENER DIODE,1/2W,5.1V
ZD702	1	ZD50-057-UA	ZENER DIODE
ZD703	1	ZD50-051-UA	ZENER DIODE,1/2W,5.1V
ZD704	1	ZD50-096-UA	ZENER DIODE,1/2W,9.6V
ZD705	1	ZD50-035-UA	ZENER DIODE,1/2W,3.5V
<b>CAPACITORS</b>			
C001,002	2	HE405JYB121K	CERAMIC CAPACITOR
C003,004	2	HE405JYB391K	CERAMIC CAPACITOR
C005,006	2	HE405JYB121K	CERAMIC CAPACITOR
C007,008	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C009,010	2	HE405JYB101K	CERAMIC CAPACITOR
C011,012	2	NS-10TW221M	ELECTROLYTIC CAPACITOR
C013,014	2	MY-50VS273J	MYLAR CAPACITOR
C015,016	2	MY-50VS183J	MYLAR CAPACITOR
C017,018	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C019,020	2	MY-50VS102J	MYLAR CAPACITOR
C021,022	2	NS-50TW1R0M	ELECTROLYTIC CAPACITOR
C023,024	2	HE405JYB101K	CERAMIC CAPACITOR
C025-028	4	NS-25TW100M	ELECTROLYTIC CAPACITOR
C029,030	2	NS-50TW2R2M	ELECTROLYTIC CAPACITOR
C031,032	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C033-036	4	MY-50VS222J	MYLAR CAPACITOR
C037,038	2	MY-50VS392J	MYLAR CAPACITOR
C039,040	2	NS-50TW4R7M	ELECTROLYTIC CAPACITOR
C041,042	2	NS-50TW1R15M	ELECTROLYTIC CAPACITOR
C043,044	2	MY-50VS153J	MYLAR CAPACITOR
C045,046	2	NS-50TW2R2M	ELECTROLYTIC CAPACITOR
C047,048	2	MY-50VS663J	MYLAR CAPACITOR
C049,050	2	MY-50VS563J	MYLAR CAPACITOR
C051,052	2	MY-50VS562J	MYLAR CAPACITOR
C053,054	2	MY-50VS103J	MYLAR CAPACITOR
C055,056	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C057,058	2	NS-10TW331M	ELECTROLYTIC CAPACITOR
C071	1	NS-10TW221M-KF	ELECTROLYTIC CAPACITOR
C072	1	HC10SJZF473Z	CERAMIC CAPACITOR
C073	1	NS-10TW221M	ELECTROLYTIC CAPACITOR
C074	1	NS-10TW101M	ELECTROLYTIC CAPACITOR

REF. NO.	Q'TY	PART NO.	DESCRIPTION
C075	1	NS-25TW100M	ELECTROLYTIC CAPACITOR
C076	1	NS-16TW101M	ELECTROLYTIC CAPACITOR
C077,078	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C079	1	NS-16TW330M	ELECTROLYTIC CAPACITOR
C081	1	NS-50TW4R7M	ELECTROLYTIC CAPACITOR
C082	1	HE70SJYF103Z	CERAMIC CAPACITOR
C101,102	2	MY-50VS102J	MYLAR CAPACITOR
C103,104	2	MY-50VS122J	MYLAR CAPACITOR
C105~112	8	NS-25TW100M	ELECTROLYTIC CAPACITOR
C113,114	2	HE405JSL330K	CERAMIC CAPACITOR
C115,116	2	NS-10TW470M	ELECTROLYTIC CAPACITOR
C117,118	2	NS-50TW1R0M	ELECTROLYTIC CAPACITOR
C119,120	2	MY-50VS272J	MYLAR CAPACITOR
C121,122	2	NS-50TW1R10M	ELECTROLYTIC CAPACITOR
C123,124	2	NS-50TW33M	ELECTROLYTIC CAPACITOR
C125,126	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C127~130	4	NS-10TW101M	ELECTROLYTIC CAPACITOR
C131,132	2	NS-50TW1R0M	ELECTROLYTIC CAPACITOR
C133,134	2	NS-10TW101M	ELECTROLYTIC CAPACITOR
C135~137	3	NS-50TW1R0M	ELECTROLYTIC CAPACITOR
C191,192	2	NS-16TW470M	ELECTROLYTIC CAPACITOR
C193	1	NS-25TW100M	ELECTROLYTIC CAPACITOR
C194	1	NS-16TW470M	ELECTROLYTIC CAPACITOR
C201,202	2	HE405JYB391K	CERAMIC CAPACITOR
C203,204	2	NS-25TW4R7M	ELECTROLYTIC CAPACITOR
C205,206	2	HE405JYB101K	CERAMIC CAPACITOR
C207,208	2	MY-50VS182J	MYLAR CAPACITOR
C209,210	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C211,212	2	NS-25TW4R7M	ELECTROLYTIC CAPACITOR
C213,214	2	HE405JYB101K	CERAMIC CAPACITOR
C215,216	2	NS-50TW1R15M	ELECTROLYTIC CAPACITOR
C217,218	2	NS-25TW100M	ELECTROLYTIC CAPACITOR
C219,220	2	NS-25TW4R7M	ELECTROLYTIC CAPACITOR
C221,222	2	MY-50VS102J	MYLAR CAPACITOR
C223,224	2	MY-50VS392J	MYLAR CAPACITOR
C225,226	2	MY-50VS222J	MYLAR CAPACITOR
C227,228	2	MY-50VS152J	MYLAR CAPACITOR
C229,230	2	MY-50VS272J	MYLAR CAPACITOR
C231,232	2	MY-50VS332J	MYLAR CAPACITOR
C233,234	2	NS-50TW1R0M	ELECTROLYTIC CAPACITOR
C235,236	2	NS-50TW2R2M	ELECTROLYTIC CAPACITOR
C237~240	4	MY-50VS103J	MYLAR CAPACITOR
C241,242	2	NS-50TW2R2M	ELECTROLYTIC CAPACITOR
C243~246	4	NS-50TW1R0M	ELECTROLYTIC CAPACITOR
C271	1	NS-35TW221M-KF	ELECTROLYTIC CAPACITOR
C272	1	NS-25TW470M	ELECTROLYTIC CAPACITOR
C273	1	NS-16TW101M	ELECTROLYTIC CAPACITOR
C274,275	2	HC10SJZF473Z	CERAMIC CAPACITOR
C276	1	HE70SJYF103Z	CERAMIC CAPACITOR
C277	1	NS-16TW470M	ELECTROLYTIC CAPACITOR
C301,302	2	MY-50VS103J	MYLAR CAPACITOR
C303,304	2	HE405JYB681K	CERAMIC CAPACITOR
C305,306	2	MY-50VS223J	MYLAR CAPACITOR
C307,308	2	MY-50VS393J	MYLAR CAPACITOR
C309,310	2	HE405JYB101K	CERAMIC CAPACITOR
C311,312	2	MY-50VS473K	MYLAR CAPACITOR
C313,314	2	HE405JYB471K	CERAMIC CAPACITOR
C351	1	MY100VS123J	MYLAR CAPACITOR
C352	1	MY-50VS153J	MYLAR CAPACITOR
C353,354	2	MY-50VS332J	MYLAR CAPACITOR
C355	1	NS-25TW100M	ELECTROLYTIC CAPACITOR
C356	1	HE405JSL1000	CERAMIC CAPACITOR
C357,358	2	HE70SJYF103Z	CERAMIC CAPACITOR
C359	1	NS-16TW101M	ELECTROLYTIC CAPACITOR
C360	1	NS-25TW101M	ELECTROLYTIC CAPACITOR
C361	1	NS-25TW470M	ELECTROLYTIC CAPACITOR
C362	1	MY-50VS103J	MYLAR CAPACITOR
C701	1	HE70SJYF103Z	CERAMIC CAPACITOR
C702	1	NS-50TW2R2M	ELECTROLYTIC CAPACITOR
C703,704	2	HE405JYB151K	CERAMIC CAPACITOR
C705	1	NS-50TW1R10M	ELECTROLYTIC CAPACITOR
C706	1	NS6R3TW101M	ELECTROLYTIC CAPACITOR
C707	1	HE70SJYF103Z	CERAMIC CAPACITOR
C708	1	HC10SJZF473Z	CERAMIC CAPACITOR
C709	1	NS-16TW101M	ELECTROLYTIC CAPACITOR
C710	1	NS-16TW222M-KF	ELECTROLYTIC CAPACITOR
C711	1	NS-16TW220M	ELECTROLYTIC CAPACITOR
C712	1	NS-16TW222M-KF	ELECTROLYTIC CAPACITOR
<b>RESISTORS</b>			
R001,002	2	KA16ST100J-UA	CARBON RESISTOR
R003,004	2	KA16ST820J-UA	CARBON RESISTOR
R005,006	2	KA16ST222J-UA	CARBON RESISTOR
R007,008	2	KA16ST154J-UA	CARBON RESISTOR
R009,010	2	KA16ST104J-UA	CARBON RESISTOR
R011,012	2	KA16ST223J-UA	CARBON RESISTOR
R013~016	4	KA16ST472J-UA	CARBON RESISTOR
R017~020	4	KA16ST153J-UA	CARBON RESISTOR
R021,022	2	KA16ST104J-UA	CARBON RESISTOR
R023,024	2	KA16ST823J-UA	CARBON RESISTOR
R025,026	2	KA16ST202J-UA	CARBON RESISTOR
R027~032	6	KA16ST223J-UA	CARBON RESISTOR
R033,034	2	KA16ST202J-UA	CARBON RESISTOR
R037,038	2	KA16ST183J-UA	CARBON RESISTOR
R039,040	2	KA16ST203J-UA	CARBON RESISTOR
R041,042	2	KA16ST152J-UA	CARBON RESISTOR
R043,044	2	KA16ST105J-UA	CARBON RESISTOR
R045,046	2	MF25ST561G-UA	METAL FILM RESISTOR
R047,048	2	KA16ST392J-UA	CARBON RESISTOR

REF. NO.	Q'TY	PART NO.	DESCRIPTION
R049,050	2	KA16ST332J-UA	CARBON RESISTOR
R051,052	2	MF25ST223G-UA	METAL FILM RESISTOR
R053,054	2	KA16ST752J-UA	CARBON RESISTOR
R055,056	2	KA16ST681J-UA	CARBON RESISTOR
R057,058	2	KA16ST912J-UA	CARBON RESISTOR
R059,060	2	KA16ST271J-UA	CARBON RESISTOR
R061,062	2	KA16ST332J-UA	CARBON RESISTOR
R065,066	2	KA16ST271J-UA	CARBON RESISTOR
R067,068	2	KA16ST332J-UA	CARBON RESISTOR
R077	1	KA16ST223J-UA	CARBON RESISTOR
R078	1	KA16ST151J-UA	CARBON RESISTOR
R079	1	KA16ST122J-UA	CARBON RESISTOR
R080	1	KA16ST152J-UA	CARBON RESISTOR
R081	1	KA16ST104J-UA	CARBON RESISTOR
R082	1	KA16ST102J-UA	CARBON RESISTOR
R083	1	MF25ST134G-UA	METAL FILM RESISTOR
R084	1	KA16ST682J-UA	CARBON RESISTOR
R085	1	KA16ST393J-UA	CARBON RESISTOR
R086	1	KA16ST822J-UA	CARBON RESISTOR
R087	1	KA16ST223J-UA	CARBON RESISTOR
R088	1	KA16ST332J-UA	CARBON RESISTOR
R089	1	KA16ST103J-UA	CARBON RESISTOR
R090	1	KA16ST332J-UA	CARBON RESISTOR
R091	1	KA16ST153J-UA	CARBON RESISTOR
R092	1	KA16ST472J-UA	CARBON RESISTOR
R093	1	KA16ST223J-UA	CARBON RESISTOR
R094	1	KA16ST102J-UA	CARBON RESISTOR
R095	1	KA16ST472J-UA	CARBON RESISTOR
R101,102	2	KA16ST103J-UA	CARBON RESISTOR
R103-106	4	KA16ST223J-UA	CARBON RESISTOR
R107,108	2	KA16ST332J-UA	CARBON RESISTOR
R109,110	2	KA16ST103J-UA	CARBON RESISTOR
R111-114	4	KA16ST224J-UA	CARBON RESISTOR
R115,116	2	KA16ST103J-UA	CARBON RESISTOR
R117,118	2	KA16ST223J-UA	CARBON RESISTOR
R119,120	2	KA16ST104J-UA	CARBON RESISTOR
R121,122	2	KA16ST333J-UA	CARBON RESISTOR
R123-126	4	KA16ST224J-UA	CARBON RESISTOR
R127,128	2	KA16ST182J-UA	CARBON RESISTOR
R129,130	2	KA16ST153J-UA	CARBON RESISTOR
R131-134	4	KA16ST303J-UA	CARBON RESISTOR
R135,136	2	KA16ST472J-UA	CARBON RESISTOR
R137,138	2	KA16ST153J-UA	CARBON RESISTOR
R139,140	2	KA16ST203J-UA	CARBON RESISTOR
R141,142	2	KA16ST563J-UA	CARBON RESISTOR
R143,144	2	KA16ST103J-UA	CARBON RESISTOR
R145,146	2	KA16ST203J-UA	CARBON RESISTOR
R147,148	2	KA16ST272J-UA	CARBON RESISTOR
R149,150	2	KA16ST474J-UA	CARBON RESISTOR
R151,152	2	KA16ST102J-UA	CARBON RESISTOR
R153,154	2	KA16ST223J-UA	CARBON RESISTOR
R155,156	2	KA16ST474J-UA	CARBON RESISTOR
R157,158	2	KA16ST565J-UA	CARBON RESISTOR
R159,160	2	KA16ST473J-UA	CARBON RESISTOR
R161-164	4	KA16ST103J-UA	CARBON RESISTOR
R165,166	2	KA16ST333J-UA	CARBON RESISTOR
R167,168	2	KA16ST101J-UA	CARBON RESISTOR
R169,170	2	KA16ST103J-UA	CARBON RESISTOR
R171-174	4	KA16ST224J-UA	CARBON RESISTOR
R175,176	2	KA16ST223J-UA	CARBON RESISTOR
R191,192	2	KA16ST221J-UA	CARBON RESISTOR
R193	1	KA16ST472J-UA	CARBON RESISTOR
R194	1	KA16ST221J-UA	CARBON RESISTOR
R201-204	4	KA16ST153J-UA	CARBON RESISTOR
R205-208	4	KA16ST332J-UA	CARBON RESISTOR
R209,210	2	KA16ST333J-UA	CARBON RESISTOR
R211,212	2	KA16ST104J-UA	CARBON RESISTOR
R213-216	4	KA16ST153J-UA	CARBON RESISTOR
R217-220	4	KA16ST333J-UA	CARBON RESISTOR
R221,222	2	KA16ST563J-UA	CARBON RESISTOR
R223,224	2	KA16ST183J-UA	CARBON RESISTOR
R225,226	2	KA16ST823J-UA	CARBON RESISTOR
R227-232	6	KA16ST223J-UA	CARBON RESISTOR
R233,234	2	KA16ST153J-UA	CARBON RESISTOR
R235,236	2	KA16ST472J-UA	CARBON RESISTOR
R237,238	2	KA16ST223J-UA	CARBON RESISTOR
R239,240	2	KA16ST473J-UA	CARBON RESISTOR
R241,242	2	KA16ST105J-UA	CARBON RESISTOR
R243,244	2	KA16ST223J-UA	CARBON RESISTOR
R245,246	2	KA16ST154J-UA	CARBON RESISTOR
R247-254	8	KA16ST105J-UA	CARBON RESISTOR
R255-260	6	KA16ST104J-UA	CARBON RESISTOR
R261,262	2	KA16ST123J-UA	CARBON RESISTOR
R263,264	2	KA16ST472J-UA	CARBON RESISTOR
R265-268	4	KA16ST223J-UA	CARBON RESISTOR
R269,270	2	KA16ST104J-UA	CARBON RESISTOR
R271,272	2	KA16ST822J-UA	CARBON RESISTOR
R273,274	2	KA16ST334J-UA	CARBON RESISTOR
R275,276	2	KA16ST473J-UA	CARBON RESISTOR
R277-282	6	KA16ST103J-UA	CARBON RESISTOR
R283,284	2	KA16ST272J-UA	CARBON RESISTOR
R285,286	2	KA16ST102J-UA	CARBON RESISTOR
R287,288	2	KA16ST562J-UA	CARBON RESISTOR
R289,290	2	KA16ST272J-UA	CARBON RESISTOR
R291,292	2	KA16ST182J-UA	CARBON RESISTOR
R301,302	2	KA16ST333J-UA	CARBON RESISTOR
R303,304	2	KA16ST274J-UA	CARBON RESISTOR
R305,306	2	KA16ST562J-UA	CARBON RESISTOR
R307,308	2	KA16ST472J-UA	CARBON RESISTOR

REF. NO.	Q'TY	PART NO.	DESCRIPTION
R353	1	KA16ST103J-UA	CARBON RESISTOR
R354	1	KA16ST152J-UA	CARBON RESISTOR
R355	1	KA16ST471J-UA	CARBON RESISTOR
R356-360	5	KA16ST104J-UA	CARBON RESISTOR
R361	1	KA16ST222J-UA	CARBON RESISTOR
R362	1	KA16ST472J-UA	CARBON RESISTOR
R363	1	KA16ST473J-UA	CARBON RESISTOR
R365	1	KA16ST222J-UA	CARBON RESISTOR
R366	1	KA16ST122J-UA	CARBON RESISTOR
R367	1	KA16ST102J-UA	CARBON RESISTOR
R368	1	KA16ST691J-UA	CARBON RESISTOR
R369,370	2	KA16ST333J-UA	CARBON RESISTOR
R371	1	KA16ST331J-UA	CARBON RESISTOR
R372,373	2	KA16ST223J-UA	CARBON RESISTOR
R374,375	2	KA16ST104J-UA	CARBON RESISTOR
R376	1	KA16ST221J-UA	CARBON RESISTOR
R377,378	2	KA16ST472J-UA	CARBON RESISTOR
R379	1	KA16ST152J-UA	CARBON RESISTOR
R380	1	KA16ST330J-UA	CARBON RESISTOR
R381	1	KA16ST103J-UA	CARBON RESISTOR
R701	1	KA16ST473J-UA	CARBON RESISTOR
R702,703	2	KA16ST153J-UA	CARBON RESISTOR
R704	1	KA16ST105J-UA	CARBON RESISTOR
R705	1	KA16ST104J-UA	CARBON RESISTOR
R706	1	KA16ST471J-UA	CARBON RESISTOR
R707,708	2	KA16ST223J-UA	CARBON RESISTOR
R709	1	KA16ST122J-UA	CARBON RESISTOR
R710	1	KA16ST153J-UA	CARBON RESISTOR
R711,712	2	KA16ST473J-UA	CARBON RESISTOR
R713	1	KA16ST222J-UA	CARBON RESISTOR
R714	1	KA16ST100J-UA	CARBON RESISTOR
R715	1	KA16ST331J-UA	CARBON RESISTOR
R716	1	KA16ST222J-UA	CARBON RESISTOR
R717,725	2	KA16ST682J-UA	CARBON RESISTOR
R726	1	KA16ST223J-UA	CARBON RESISTOR
R727	1	KA16ST152J-UA	CARBON RESISTOR
R728	1	KA16ST473J-UA	CARBON RESISTOR
VR001	1	EMGG1A385B15	ROTARY POTENTIOMETER
VR301	1	EMHHXA840B53	VARIABLE RESISTOR
SVR001,002	2	SVR-06T3B102	SEMI-VARIABLE
SVR003-006	4	SVR-06T3B203	SEMI-VARIABLE
SVR101,102	2	SVR-06T3B103	SEMI-VARIABLE
SVR201,202	2	SVR-06T3B502	SEMI-VARIABLE
SVR203,204	2	SVR-06T3B202	SEMI-VARIABLE
SVR205-208	4	SVR-06T3B102	SEMI-VARIABLE
SVR209,210	2	SVR-06T3B203	SEMI-VARIABLE
SVR301-306	6	SVR-06T3B503	SEMI-VARIABLE
<u>COILS</u>			
F001,002	2	184028	FILTER BLOCK
F101,102	2	184025	FILTER BLOCK
F201,202	2	184014	FILTER BLOCK
L201,202	2	RC875-223J	INDUCTOR
L203,204	2	RC875-153J	INDUCTOR
L301,302	2	184027	FILTER BLOCK
L303	1	190027	OSC COIL
L304	1	RC875-192J	INDUCTOR
<u>SWITCHES</u>			
S001	1	SW-42350180	SLIDE SWITCH
S101	1	SW-1101220	PUSH SWITCH
S301	1	SW-42350180	SLIDE SWITCH
<u>MISCELLANEOUS</u>			
W001	1	R-020-30	CABLE ASS'Y
W102	1	0075240R10-J-J	SOLDER-PLATED WIRE
CF701	1	KBR-4008	CERAMIC OSCILLATOR UNIT
MC302	1	MC03-K073	MICRO SOCKET ASS'Y
MC701	1	MT03-PI25-K074	MICRO SOCKET ASS'Y
MC702	1	HK02-K069	MICRO SOCKET ASS'Y
MP001	1	PI25C-06M	MICRO PLUG
MP301	1	PI25C-02M	MICRO PLUG
MP551	1	171825-4	MICRO PLUG
MP601	1	171825-3	MICRO PLUG
MP701	1	1L-510PS2T2-EF	CONNECTOR
MP703	1	PI25C-03M	MICRO PLUG
MP704	1	PI25C-09M	MICRO PLUG
MP705	1	PI25C-04M	MICRO PLUG
RL001	1	AG80239	RELAY
TP001,002	2	171825-2	MICRO PLUG
TP003,201,202	3	171825-3	MICRO PLUG
16E 1	1	YKC21-0018A	RCA JACK 4P
23E 7	102	E100-UA	JUMP WIRE
23E 8	26	E050-UA	JUMP WIRE

REC. & BALANCE PCB ASS'Y

REF. NO.	Q'TY	PART NO.	DESCRIPTION
<u>P.C. BOARD</u>			
23E10	1	R9V-K033	PRINTED CIRCUIT BOARD
<u>RESISTORS</u>			
R177,178	2	KA16ST472J-UA	CARBON RESISTOR
VR101	1	EWG-PEAW02196	VARIABLE RESISTOR
<u>MISCELLANEOUS</u>			
W101	1	468S245B30-J-J	5-LEAD, FLAT CABLE
W201	1	0075240B07-C-C	SOLDER-PLATED WIRE

POWER SUPPLY PCB ASS'Y

REF. NO.	Q'TY	PART NO.	DESCRIPTION
<u>P.C. BOARD</u>			
* 1E 6	1	PS-K037	PRINTED CIRCUIT BOARD
<u>SEMICONDUCTORS</u>			
D801~808	8	1N4002	DIODE
D809	1	05442	DIODE
Q801	1	2SD592NC-Q,R	TRANSISTOR
Q802	1	2SD1406-Y,GR	TRANSISTOR
IC801	1	AN7815F	IC
ZD801	1	ZD50-132	ZENER DIODE,1/2W,13.2V
<u>CAPACITORS</u>			
* C801	1	EC02A103MN	METALLIZED FILM CAPACITOR
C802	1	NS-25TW102M-KF	ELECTROLYTIC CAPACITOR
C803	1	NS-35TW222M-KF	ELECTROLYTIC CAPACITOR
C804	1	NS-35TW102M-KF	ELECTROLYTIC CAPACITOR
C805~807	3	NS-16TW101M-KF	ELECTROLYTIC CAPACITOR
C808	1	HC10SJZF473ZKF	CERAMIC CAPACITOR
<u>RESISTORS</u>			
R801,802	2	KA25ST2R2J-KF	CARBON RESISTOR
R803	1	KA25ST102J-KF	CARBON RESISTOR
R804	1	KA25ST101J-KF	CARBON RESISTOR
R805	1	KA25ST2R7J-KF	CARBON RESISTOR
R806	1	KA25ST104J-KF	CARBON RESISTOR
R807	1	KA25ST103J-KF	CARBON RESISTOR
<u>MISCELLANEOUS</u>			
1E10	4	23165102-BB-C	FUSE HOLDER
1E12	7	RP-001	TERMINAL PIN
1E14	3	1P5-1041-4	JUMP WIRE
AL801,802	2	59854795	GND LUG
EL801	1	59851692	GND LUG
* FU801	1	FU-521024-GGS	FUSE
* FU804	1	FU-511224-GGS	FUSE
MP801	1	171825-3	MICRO PLUG
MP802	1	PI25C-03M	MICRO PLUG
MP803	1	B3P-SHF-1AA	MICRO PLUG
23E25	2	OSH-1625-MP	HEAT SINK

CONTROL & DISPLAY PCB ASS'Y

REF. NO.	Q'TY	PART NO.	DESCRIPTION
<u>P.C. BOARD</u>			
2E16	1	CSL-K034	PRINTED CIRCUIT BOARD
<u>SEMICONDUCTORS</u>			
IC552	1	LB1412	IC
LD551~568	18	LN350GP-U	LED
LD569~572	4	LN450YP	LED
LD573~574	2	LN250RP-U	LED
LD600	1	SL-1032L	LED
LD601	1	LN250RP-U	LED
LD602	1	LN450YP	LED
LD603	1	LN350GP-U	LED
LD604	1	SLR-34MCSF	LED
LD605	1	SLR-34YCSF	LED
<u>CAPACITORS</u>			
C552	1	S5-50TW1R0M	ELECTROLYTIC CAPACITOR
C554	1	S5-50TW2R2M	ELECTROLYTIC CAPACITOR
C558	1	S5-16TW100M	ELECTROLYTIC CAPACITOR
C560	1	S5-16TW4R7M	ELECTROLYTIC CAPACITOR
<u>RESISTORS</u>			
R552,554,556,558	4	KA16ST561J-UA	CARBON RESISTOR
R560	1	KA16ST182J-UA	CARBON RESISTOR
R562	1	KA16ST272J-UA	CARBON RESISTOR
R566	1	KA16ST823J-UA	CARBON RESISTOR

REF. NO.	Q'TY	PART NO.	DESCRIPTION
R568	1	KA16ST223J-UA	CARBON RESISTOR
R600	1	KA16ST561J-UA	CARBON RESISTOR
<u>SWITCHES</u>			
S601,602	2	SKHMAK	TACT SWITCH
S603~608	6	SKHMBV	TACT SWITCH
<u>MISCELLANEOUS</u>			
3E24	85	E100-UA	JUMP WIRE
MC601	1	MC03-K071	MICRO SOCKET ASS'Y
MC602	1	MK10-K072	MICRO SOCKET ASS'Y
RX600	1	BX1387	REMOTE SIGNAL RECEIVING UNIT

DRIVE CIRCUIT PCB ASS'Y

REF. NO.	Q'TY	PART NO.	DESCRIPTION
<u>P.C. BOARD</u>			
3E26	1	CT-K034	PRINTED CIRCUIT BOARD
<u>SEMICONDUCTORS</u>			
D601	1	05442-UA	DIODE
Q603~605	3	RN1207	TRANSISTOR
Q606	1	2SB621NC-R,S	TRANSISTOR
Q608,609	2	2SC2458-GRBL	TRANSISTOR
IC551	1	LB1412	IC
IC601	1	LM8523	IC
IC602	1	TC9130P	IC
IC603,604	2	TC4011BP	IC
ZD601	1	ZD50-035-UA	ZENER DIODE,1/2W,3.5V
<u>CAPACITORS</u>			
C551	1	S5-50TW1R0M	ELECTROLYTIC CAPACITOR
C553	1	S5-50TW2R2M	ELECTROLYTIC CAPACITOR
C557	1	S5-16TW100M	ELECTROLYTIC CAPACITOR
C559,601~603	4	S5-16TW4R7M	ELECTROLYTIC CAPACITOR
C604	1	S5-50TW2R2M-KF	ELECTROLYTIC CAPACITOR
C605	1	S5-16TW100M	ELECTROLYTIC CAPACITOR
C606,607,609,610	4	TP125X103N-UA	CERAMIC CAPACITOR
<u>RESISTORS</u>			
R551,553,555,557	4	KA16ST561J-UA	CARBON RESISTOR
R559	1	KA16ST182J-UA	CARBON RESISTOR
R561	1	KA16ST272J-UA	CARBON RESISTOR
R563	1	KA16ST334J-UA	CARBON RESISTOR
R565	1	KA16ST823J-UA	CARBON RESISTOR
R567	1	KA16ST223J-UA	CARBON RESISTOR
R569,570	2	KA16ST473J-UA	CARBON RESISTOR
R602	1	KA16ST561J-UA	CARBON RESISTOR
R603	1	KA16ST563J-UA	CARBON RESISTOR
R604	1	KA16ST104J-UA	CARBON RESISTOR
R605	1	KA16ST222J-UA	CARBON RESISTOR
R606~610	5	KA16ST103J-UA	CARBON RESISTOR
R611	1	KA16ST472J-UA	CARBON RESISTOR
R612	1	KA16ST103J-UA	CARBON RESISTOR
R613	1	KA16ST473J-UA	CARBON RESISTOR
R614~618	5	KA16ST104J-UA	CARBON RESISTOR
R619	1	KA16ST103J-UA	CARBON RESISTOR
R620	1	KA16ST335J-UA	CARBON RESISTOR
R621,622	2	KA50XT390J-UA	CARBON RESISTOR
R623	1	KA25ST100J-UA	CARBON RESISTOR
<u>MISCELLANEOUS</u>			
W602	1	468S264818-J-Z	4-LEAD, FLAT CABLE
5E21	41	E100-UA	JUMP WIRE
MC551	1	MC04-K070	MICRO SOCKET ASS'Y
MC603	1	MC03-K068	MICRO SOCKET ASS'Y
MP702	1	1L-S02PS2T2-EF	CONNECTOR

OTHER PARTS

REF. NO.	Q'TY	PART NO.	DESCRIPTION
<u>MISCELLANEOUS</u>			
W801	1	672S220T20-C-0	SOLDER-PLATED WIRE
W802	1	672S220A20-C-0	SOLDER-PLATED WIRE
23E23	5	BK-1	CORD CLAMP
23E24	6	NO.5167	CORD CLAMP



## EXPLODED VIEW

REF. NO.	Q'TY	PART NO.	DESCRIPTION
<u>COILS</u>			
* T901	1	NPT-K0114	POWER TRANSFORMER
<u>SWITCHES</u>			
5801	1	SW-1101221	POWER SWITCH
<u>MISCELLANEOUS</u>			
W901	1	R-024-10	TERMINAL WITH WIRE
* 1E 2	1	ACC-03303-4EC1	LINE CORD
1E 4	1	U9-7/8B04	UL TYPE TUBE
1M 1	1	N10495-1	FRONT PANEL
1M 5	1	N31044-1A	CASSETTE LID
1M11	1	N45348-BK	BUTTON GUIDE
1M12	1	N31046-BK	BUTTON GUIDE
1M13	1	N31047-BK	BUTTON GUIDE
1M16	1	N21653	CABINET
* 1M18	1	N21654-1	REAR PANEL
1M20	1	N21655	BOTTOM CHASSIS
1M21	1	N31045	BOTTOM PLATE
1M25	1	N45349A	CASSETTE MIRROR
2M 1	1	KN80451-0227	KNOB 43 (POTENTIOMETER)
2M 2	1	KN8-0450	KNOB 25 (POTENTIOMETER)
2M 3	2	KN80448-0226	KNOB 18 (POTENTIOMETER)
2M 4	2	KN8-0449A	LEVER KNOB
2M 6	1	62-1111-1-0	PUSH BUTTON
2M 7	1	62-1111-0-0	PUSH BUTTON
2M 8	5	N44957-BK	PUSH BUTTON
2M 9	1	N44989-RD	PUSH BUTTON
2M10	1	N44956-BK	PUSH BUTTON
2M11	1	N44958-6Y	PUSH BUTTON
2M12	1	N45361-BK	PUSH BUTTON
2M13	2	N44882A	LED CHIP
2M15	2	SPA-0124	LEVER KNOB GUIDE
2M20	4	NO.7102	FOOT
2M23	1	N31043-1	DISPLAY GLASS
2M24	1	N44948-1	CASSETTE GLASS
2M26	1	N31048	COVER,CASSETTE MECH.
3M 2	2	N44919-0S	JOINT ANGLE
3M 4	1	N45351	BRACKET,CASSETTE MECH.
3M 5	1	N45352	EJECT PLATE
3M 6	1	N45353	OPERATION PLATE,EJECT
3M11	1	N44915-0S	FITTINGS (POTENTIOMETER)
3M12	1	N44922-0S	BRACKET, PCB
3M13	2	N44961-0S	FITTINGS (P.C.B.)
3M14	2	N44963-0S	FITTINGS (P.C.B.)
3M15	1	N42635-0S	FITTINGS (P.C.B.)
3M17	2	2A9-258-0S	REINFORCEMENT (P.T.)
3M19	7	N44959-0S	KNOB SPRING
3M25	1	N44844-0S	CUSHION
4M 1	1	N41622A	LUG (TUNING)
4M 2	1	N45350	GUIDE,LED
4M 3	1	N45002	SPACER
4M 4	2	N42800	SPACER
4M 5	1	N45334	SPACER

REF. NO.	Q'TY	PART NO.	DESCRIPTION
4M 6	1	N45428	SPACER
4M 7	2	N45092	TAPE,DOUBLE FACED
4M 9	1	N45440	CUSHION
4M10	1	N45441	BLIND
4M11	1	N45354	COUPLER
4M12	1	N44960	KNOB SPRING
4M17	1	N45355	SHIELD SHEET
4M29	2	N40848G	SHAFT TAPE
4M30	1	N45476GL	SPACER,SHAFT
5M 1	1	N21658-R	PACKING PAD R
5M 2	1	N21658-L	PACKING PAD L
5M 4	1	N21656	INNER CARTON
* 5M 6	1	N41319-1-0S	POLYETHYLENE BAG (UNIT)
5M 7	1	N40487-0S	POLYETHYLENE BAG (ACCESSORIES)
5M 8	1	N45000-0S	PACKING PAD
* 5M13	1	N44043-0S	LABEL, SA1965(LIGHTNING FLASH)
* 5M14	1	N44525-0S	LABEL, FUSE
* 5M15	1	N45359	CARD,WARRANTY REGISTRATION
5M16	1	N44894-0S	TAPE,PACKING MATERIAL
5M21,M22	3	N45330	SERIAL LABEL
5M27	1	N45481	PROTECTION SHEET
6M 6	1	N45447	LABEL,CHINA
6M11	1	OM-850	INSTRUCTION MANUAL (COVER)
6M12	1	TEXT-850-E	INSTRUCTION MANUAL (TEXT)
* 6M26	1	N44687A	CAUTION SHEET,POLARIZED PLUG
* 6M27	1	BK3035	SAFETY INSTRUCTION SHEET
* 6M28	1	N45475	SHEET,PORTABLE CART WARNING
* 6M30	1	N44934A	LABEL, UL
7M 1	2	TSB+26X05-B	TAP SCREW S, BIND HEAD, B
7M 6	2	TSB+30X05-Y	TAP SCREW S, BIND HEAD, Y
7M10-M18	23	TSB+30X06-B	TAP SCREW S, BIND HEAD, B
7M25-M29	9	TSC+30X06-Y	TAP SCREW S, WASHER FACED, Y
8M 1,M 2	5	TSC+30X08-B	TAP SCREW S, WASHER FACED, B
9M 3	2	TSB+30X08-Y	TAP SCREW S, BIND HEAD, Y
8M 4-M 8, M10,M11, M13	19	TPM+30X08-B	TAP SCREW P, ROUND HEAD, B
8M16,M17	4	TPM+30X10-Y	TAP SCREW P, ROUND HEAD, Y
9M21	2	TPS+30X10-Y	TAP SCREW P,FLAT HEAD, Y
8M26,M27	6	TSB+40X08-B	TAP SCREW S, BIND HEAD, B
9M 1	2	TST+40X08-Y	TAP SCREW S, TRUSS, Y
9M 6	2	2AWX0830-05-B	PLAIN WASHER, B
10M 1,M 2	2	VJR-3	SNAKE LUG
10M 6	6	2AWX0840-05-B	PLAIN WASHER, B
23E16	1	RC-1001-D	REMOTE CONTROL TRANSMITTER
23E17	1	UH-3-2	BATTERY
23E18	2	PC-060	RCA PIN CORD ASS'Y
23E20	1	C-90F09A	CASSETTE MECHANISM
23E28	1	SR-4N-4	CORD STOPPER
23E30	3	KGLS-10RT	SPACER

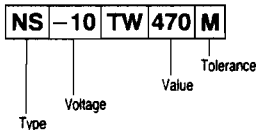
### Classify Parts List

A : USA      A2: TAIWAN      B1: AUSTRALIA/N.Z.      C1: W.GERMANY  
 A1: CANADA      B : U.K.      C : EUROPE & OTHERS      C2: G.P.M

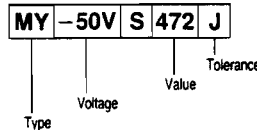
Ref.No.	Description	A	A1	A2	B	B1	C/C1	C2
<b>EXPLODED VIEW</b>								
1E 2	LINE CORD	ACC-033D3-4EC1	ACC-033D3-4EC1	ACC-033D3-4EC1	ACC-013D3-4EC4	ACC-030D3-4EC1	ACC-005D3-4EC1	ACC-005D3-4EC1
1E 5	UL TUBE	Nil	U9-#03B14	Nil	Nil	Nil	Nil	Nil
1E15	CONVERSION PLUG	Nil	Nil	Nil	Nil	Nil	Nil	S-I6115#01
1M18	REAR PANEL	N21654-1	N21654-1	N21654-1	N21654-2	N21654-2	N21654-3	N21654-3
4M 3	COVER, INSULATION	Nil	Nil	Nil	N45424	N45424	N45424	N45424
5M 6	POLYETHYLENE BAG (UNIT)	N41318-1-OS	N41318-1-OS	N41318-1-OS	N44660-OS	N41318-1-OS	N41318-1-OS	N41318-1-OS
5M13	LABEL, SA1965(LIGHTNING FLASH)	N44043-OS	N44043-OS	N44043-OS	Nil	Nil	Nil	Nil
5M14	LABEL, FUSE	N44525-OS	N44525-OS	N44525-OS	Nil	Nil	Nil	Nil
5M15	CARD, WARRANTY REGISTRATION	N45359	Nil	N45359	Nil	Nil	Nil	Nil
5M30	STICKER, WARNING	Nil	Nil	Nil	N45418	Nil	Nil	Nil
6M 1	TAG (AC CORD)	Nil	Nil	Nil	N41117	Nil	Nil	Nil
6M 1-1	NON-WARRANTY CARD	Nil	LEN-200	Nil	Nil	Nil	Nil	Nil
6M 2	CARD, WARRANTY	Nil	LEN-201	Nil	Nil	Nil	Nil	Nil
6M26	CAUTION SHEET, POLARIZED PLUG	N44687A	N44687A	N44687A	Nil	Nil	Nil	Nil
6M27	SAFETY INSTRUCTION SHEET	BK3035	Nil	BK3035	Nil	Nil	Nil	Nil
6M28	SHEET, PORTABLE CART WARNING	N45475	Nil	N45475	Nil	Nil	Nil	Nil
6M30	LABEL, UL	N44934A	Nil	Nil	Nil	Nil	Nil	Nil
6M30-1	LABEL, CSA FILE NO.	Nil	N45429	Nil	Nil	Nil	Nil	Nil
7M19	TAP SCREW S, BIND HEAD, B	Nil	Nil	Nil	TSB+30X06-B	TSB+30X06-B	TSB+30X06-B	TSB+30X06-B
T901	POWER TRANSFORMER	NPT-K0114	NPT-K0114	NPT-K0114	NPT-K0115	NPT-K0115	NPT-K0115	NPT-K0115
<b>POWER SUPPLY PCB</b>								
1E 6	PRINTED CIRCUIT BOARD	PS-K037	PS-K037	PS-K037	PS-K035	PS-K035	PS-K035	PS-K035
C301	METALLIZED FILM CAPACITOR	ECQU1A103MH	ECQU1A103MH	ECQU1A103MH	ECQU2A103MF	ECQU2A103MF	ECQU2A103MF	ECQU2A103MF
FU801	FUSE	FU-521024-GGS	FU-521024-GGS	FU-521024-GGS	FU-528017T	FU-528017T	FU-528017T	FU-528017T
FU802,803	FUSE	Nil	Nil	Nil	FU-526317T	FU-526317T	FU-526317T	FU-526317T
FU804	FUSE	FU-511224-GGS	FU-511224-GGS	FU-511224-GGS	FU-526317T	FU-526317T	FU-526317T	FU-526317T

### Capacitors Description

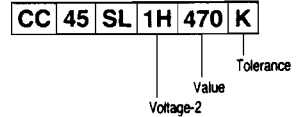
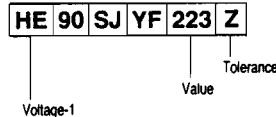
#### • Electrolytic



#### • Mylar - Styrol

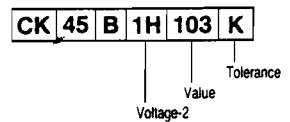


#### • Ceramic



#### • Electrolytic

Type	Voltage	Value	Tolerance
LL: Low Leak	-10: 10V	R47: 0.47µF	K: ±10%
NP: Non-Pole	-50: 50V	4R7: 4.7µF	M: ±20%
NS: Standard	6R3: 6.3V	470: 47µF	
		471: 470µF	
		472: 4700µF	



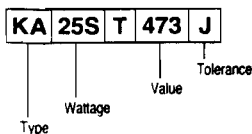
#### • Mylar - Styrol

Type	Voltage	Value	Tolerance
MY: Mylar	-25V: 25V	4R7: 4.7pF	G: ±2%
ST: Styrol	125V: 125V	470: 47pF	J: ±5%
	-63T: 63V	471: 470pF	K: ±10%
		472: 4700pF	M: ±20%
		473: 0.047µF	
		474: 0.47µF	
		(1000pF=0.001µF)	

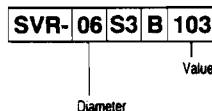
Voltage-1	Voltage-2	Value	Tolerance
HC: 25V	1E: 25V	4R7: 4.7pF	C: ±0.25pF
HE: 50V	1H: 50V	470: 47pF	D: ±0.5pF
H: 100V	2H: 500V	471: 470pF	F: ±1pF
HK: 250V		472: 4700pF	J: ±5%
HM: 500V		473: 0.047µF	K: ±10%
		474: 0.47µF	M: ±20%
		(1000pF=0.001µF)	Z: +80~-20%

### Resistors Description

#### • Fixed

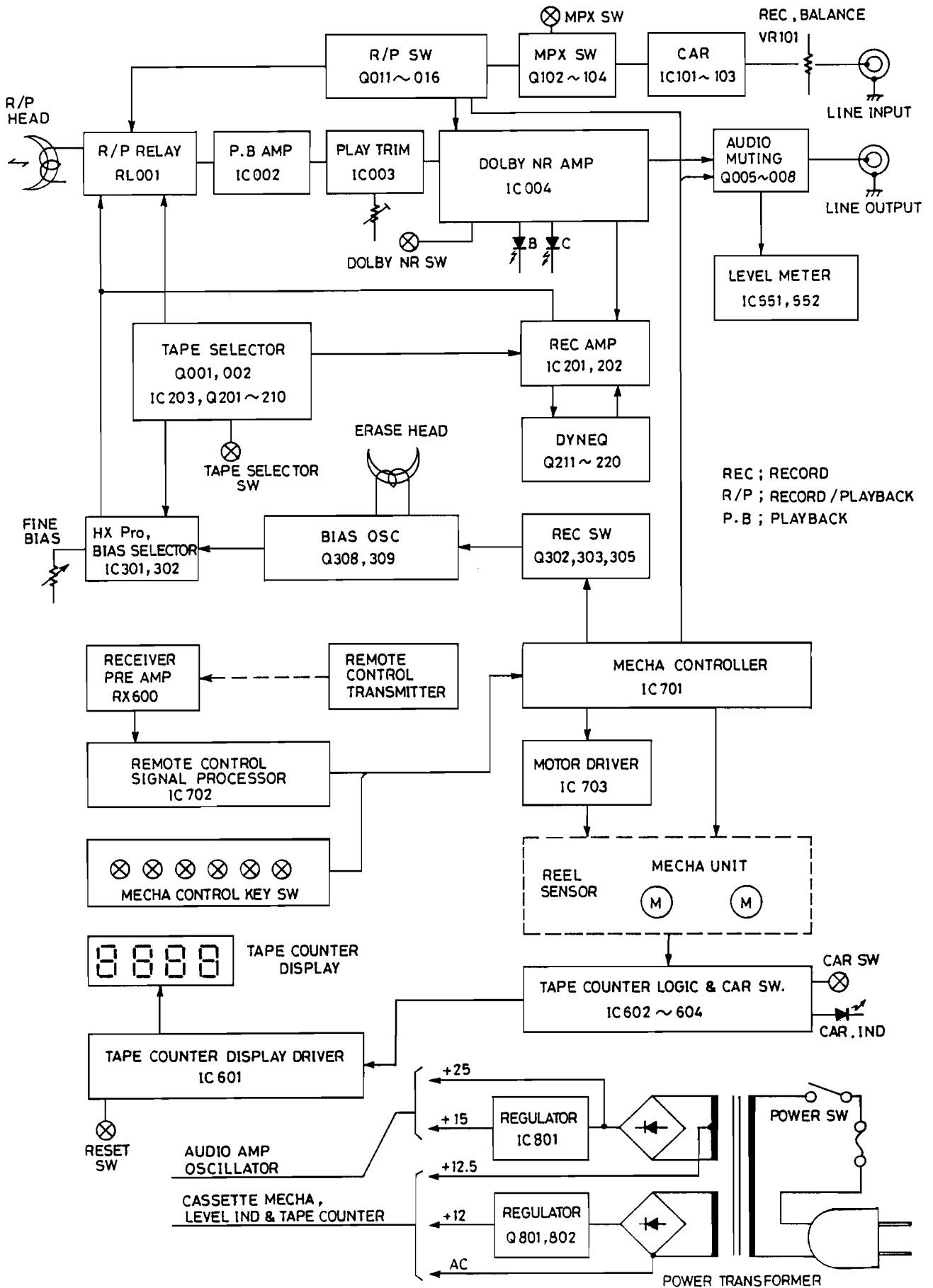


#### • Semi-Variable

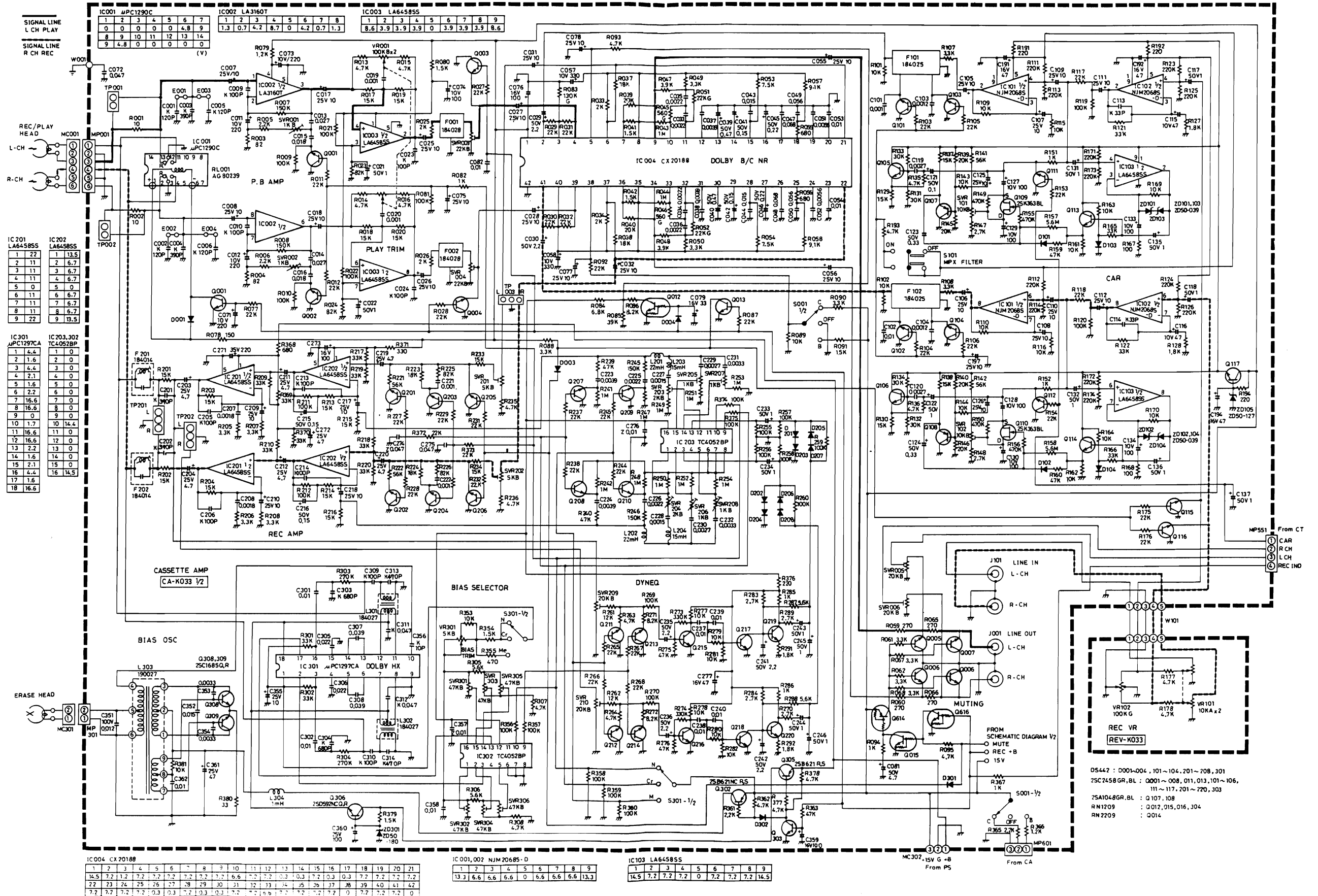


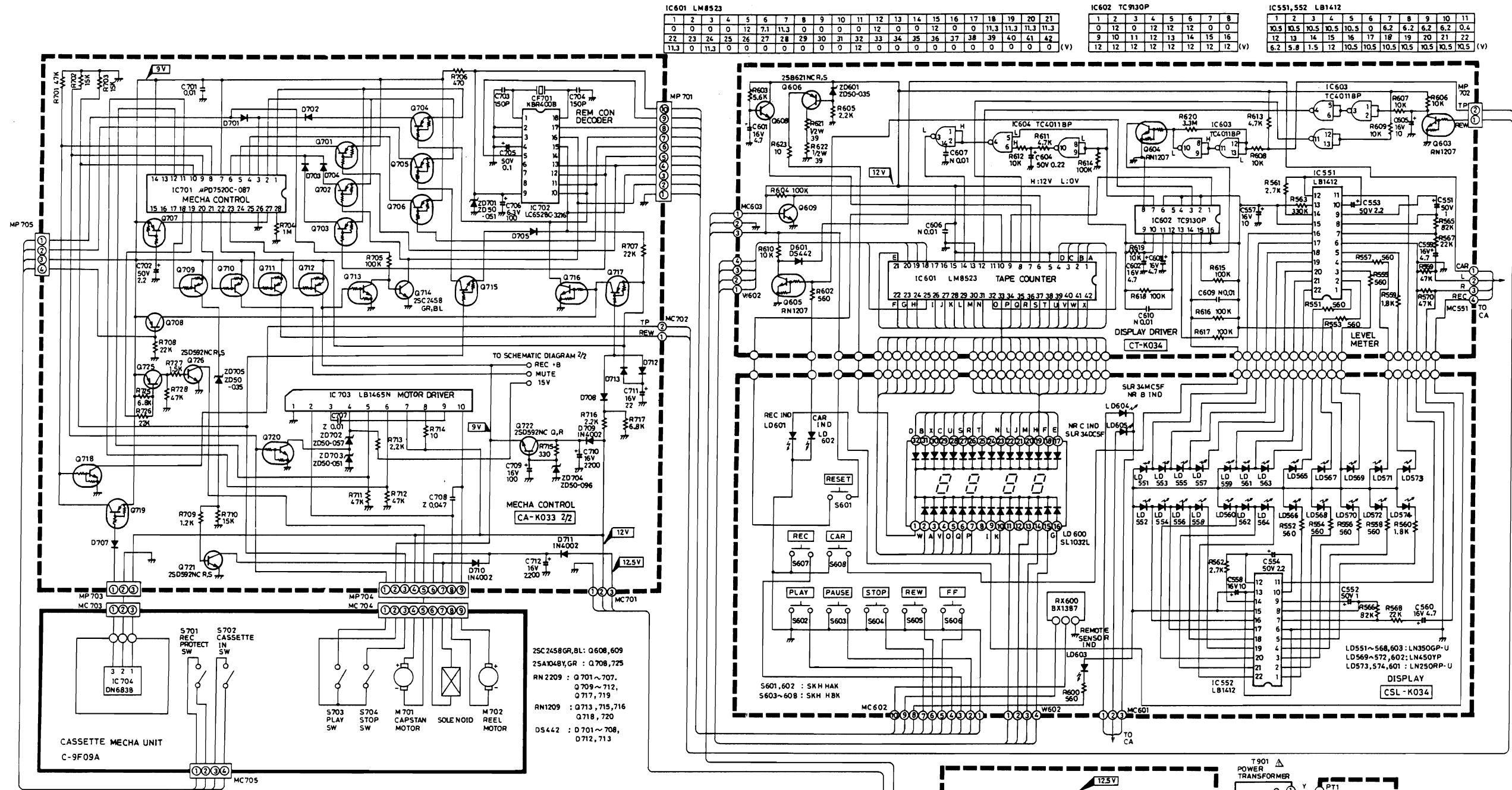
Type	Wattage	Value	Tolerance	Diameter
CE: Cement Case	-2W: 2W	R47: 0.47Ω	M: ±20%	08: 8φ
FR: Flame Proof	10W: 10W	4R7: 4.7Ω	K: ±10%	10: 10φ
KA: Carbon	16S: 1/6W	470: 47Ω	J: ±5%	06: 6φ
MF: Metal Film	20S: 1/5W	471: 470Ω	G: ±2%	
RF: Fusible	25S: 1/4W	472: 4.7kΩ	F: ±1%	
SA: Metal Oxide	50S: 1/2W	473: 47kΩ	D: ±0.5%	
	50X: 1/2W	474: 470kΩ		
	S3W: 3W	475: 4.7MΩ		

# BLOCK DIAGRAM



# SCHEMATIC DIAGRAM





IC601 LM8523

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
0	0	0	0	12	7.1	11.3	0	0	0	0	12	0	0	12	0	0	11.3	11.3	11.3	11.3
22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
11.3	0	11.3	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0

IC602 TC9130P

1	2	3	4	5	6	7	8
0	12	0	12	12	12	0	0
9	10	11	12	13	14	15	16
12	12	12	12	12	12	12	12

IC551,552 LB1412

1	2	3	4	5	6	7	8	9	10	11
10.5	10.5	10.5	10.5	10.5	0	6.2	6.2	6.2	6.2	0.4
12	13	14	15	16	17	18	19	20	21	22
6.2	5.8	1.5	12	10.5	10.5	10.5	10.5	10.5	10.5	10.5

IC701 MPD7520C-087

1	2	3	4	5	6	7	8	9	10	11	12	13	14
8.6	0.6	0	0	0	0	9.2	0	0	0	0	0	0	9.2
15	16	17	18	19	20	21	22	23	24	25	26	27	28
0	0	0	9.2	9.2	2.1	9.2	9.2	9.2	9.2	0	0	0	7.0

IC702 LC6528C-3216

1	2	3	4	5	6	7	8	9
2	0	0	4.8	4.8	4.9	4.9	0	4.9
10	11	12	13	14	15	16	17	18
8.6	9.1	8.6	9.1	0	9.2	0.6	10.4	2.4

IC703 LB1465N

1	2	3	4	5	6	7	8	9	10
0	0	0.6	0	9.7	0	0	12	7.5	0.6

NOTE: VOLTAGE MEASUREMENT TAKEN WITH A HIGH IMPEDANCE VOLTMETER.

**WARNING:** Parts marked with the symbol  $\Delta$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:** Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp, or if the resistance from chassis to either side of the power cord is less than 500K ohms, the unit is defective.

**WARNING- DO NOT** return the unit to the customer until the problem is located and corrected.

**TOLERANCE AND UNIT:**

CAPACITOR  $\pm 20\%$  ( $\mu F$ ) NOT Specify  
 $\pm 15\%$  ( $\mu F$ )  
 $\pm 10\%$  ( $\mu F$ )  
 $\pm 30\%$  ( $\mu F$ )  
 $\pm 80\%$  ( $\mu F$ )  
 $-20\%$  ( $\mu F$ )

RESISTOR  $\pm 5\%$  ( $\Omega$ ) 1/4W AND 1/8W - NOT Specify  
 $\pm 2\%$  ( $\Omega$ ) 1/4W

**FOR CANADIAN VERSION**

**CAUTION:** THOSE FUSES WITH SYMBOL MARKS

$\Delta$  250V 1A AND  $\Delta$  125V 1.2A

ARE FAST BLOW TYPE REPLACE WITH SAME TYPE 1A 250V AND 1.2A 125V FUSE.

**ATTENTION** LES FUSIBLES MARQUÉS

$\Delta$  250V 1A ET  $\Delta$  125V 1.2A

SONT DE TYPE A FUSION RAPIDE UTILISER UN FUSIBLE DE REMPLACEMENT DE MEME TYPE DE 1A 250V ET 1.2A 125V

**120V AREA**

T901: NPT-K0114  
FU801: 250V 1A  
FU804: 125V 1.25A  
FU802, 803: NIL  
T901: PRI-CIR

**220V 240V AREA**

T901: NPT-K0115  
FU801: T 800mA  
FU802, 803, 804: T630mA

