

**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

(CCIR ARM at Dolby level)

			Unit
Dolby NR B	9	8.5	dB
Dolby NR C	18	17	dB

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

			Unit
0 VU + 10 dB input	70	65	dB

	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

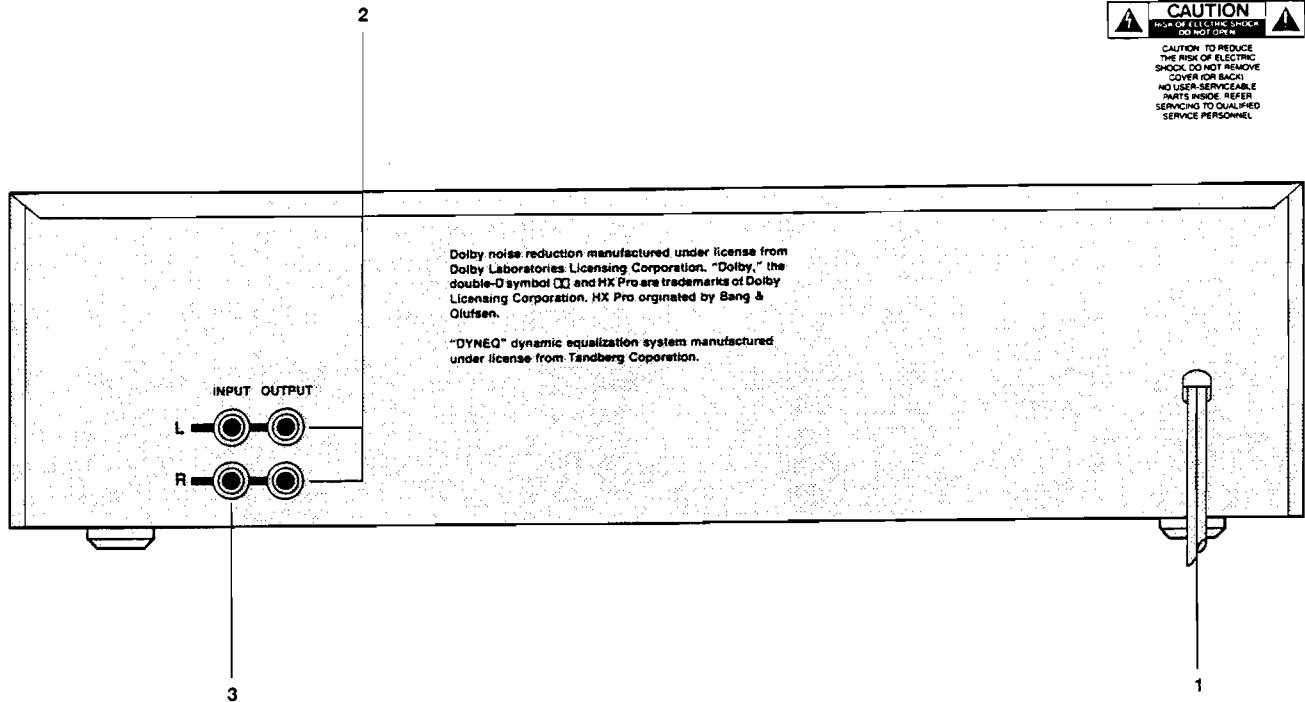
				Unit
Power supply	120 V 60 Hz	(for A,A1,A2)		
	220~240 V 50 Hz	(for B,B1,C,C1,C2)		
Power consumption	22(0.2)			W(A)
Dimensions(W/D/H)				
(include knob and leg)	435/271/122			mm
Net weight	4.5			kg

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.

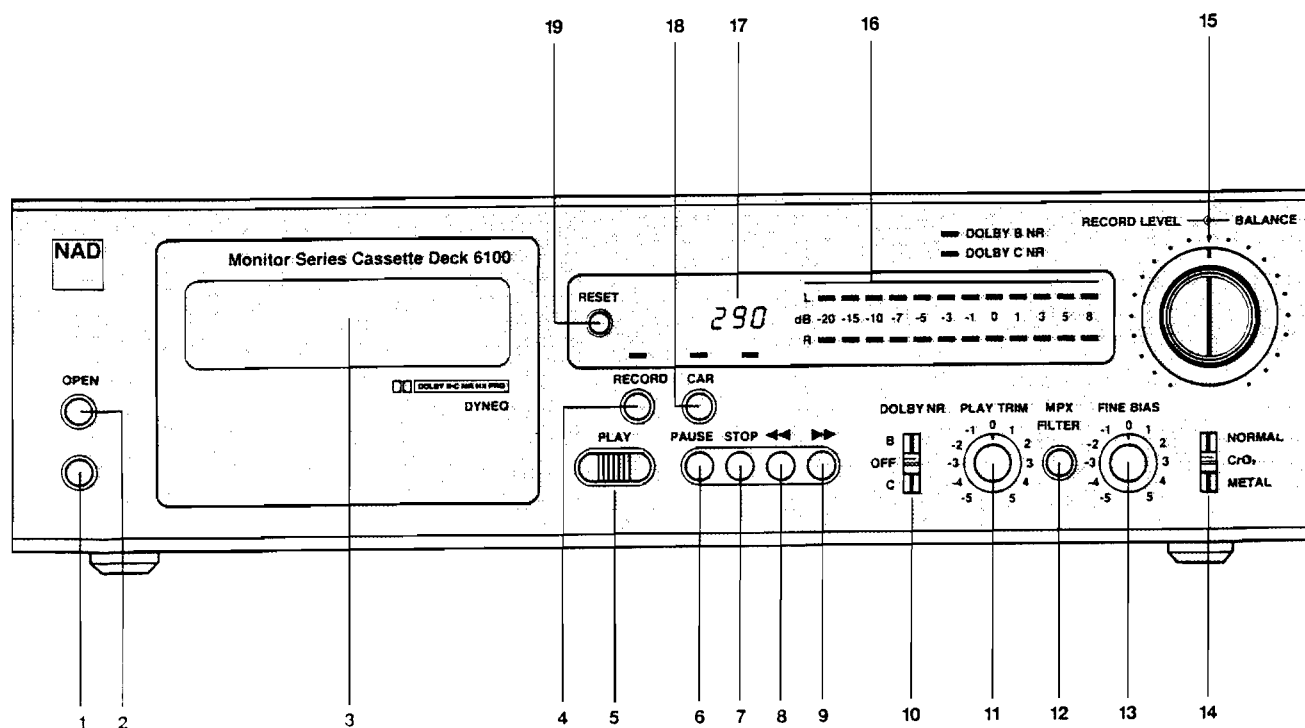
### REAR PANEL

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. Dobby 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

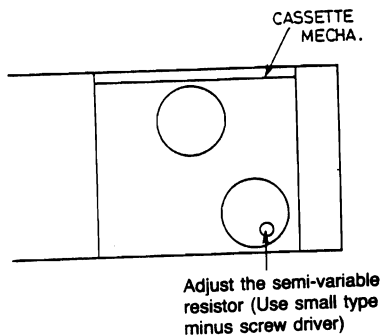


Fig. B FOR ADJUSTING AZIMUTH

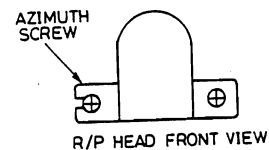
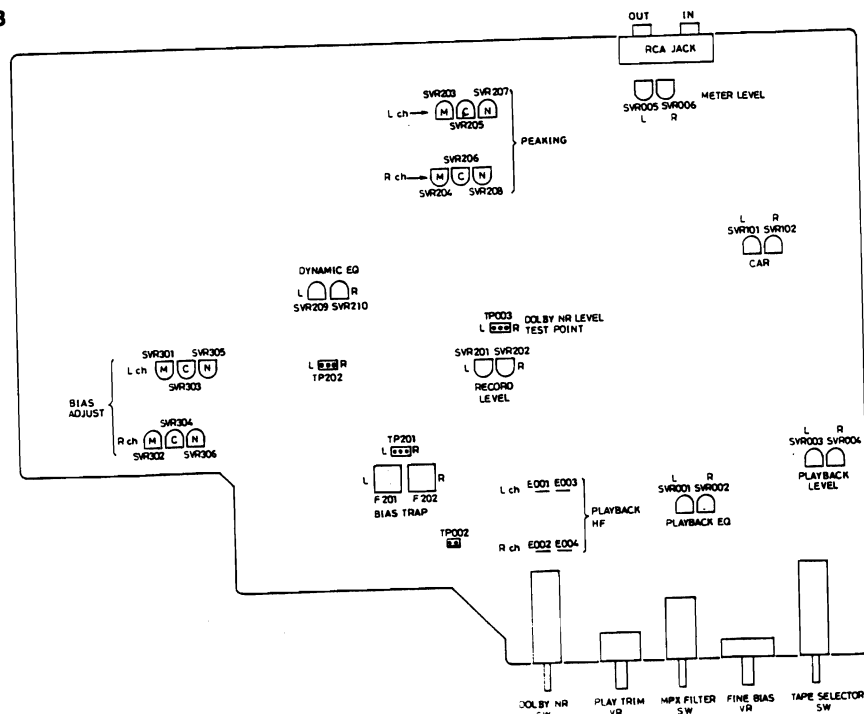
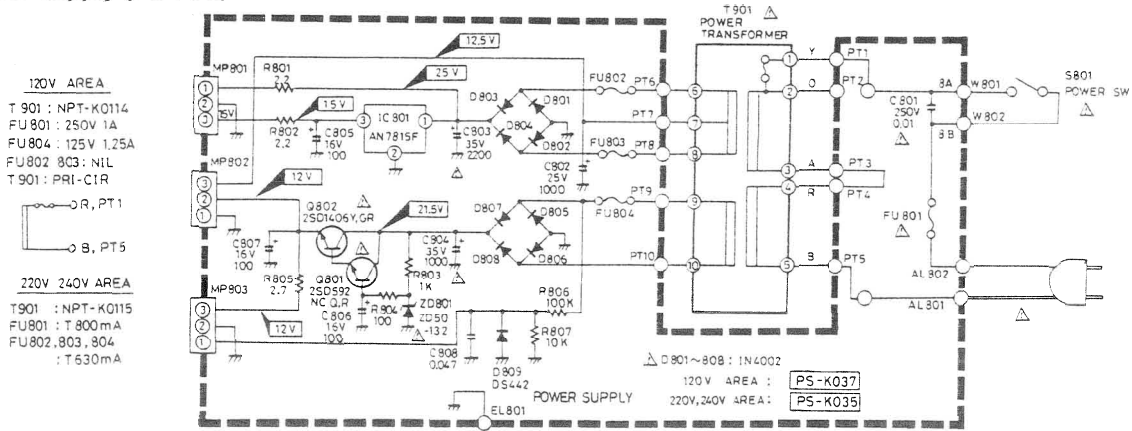


Fig. C FOR MAIN PCB

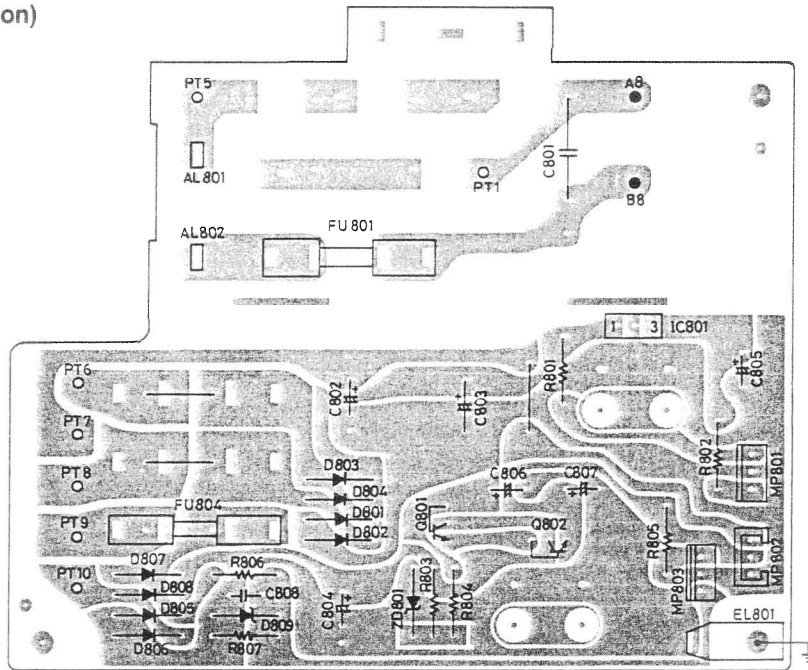


# SCHEMATIC AND PCB LAYOUT (Foil side)

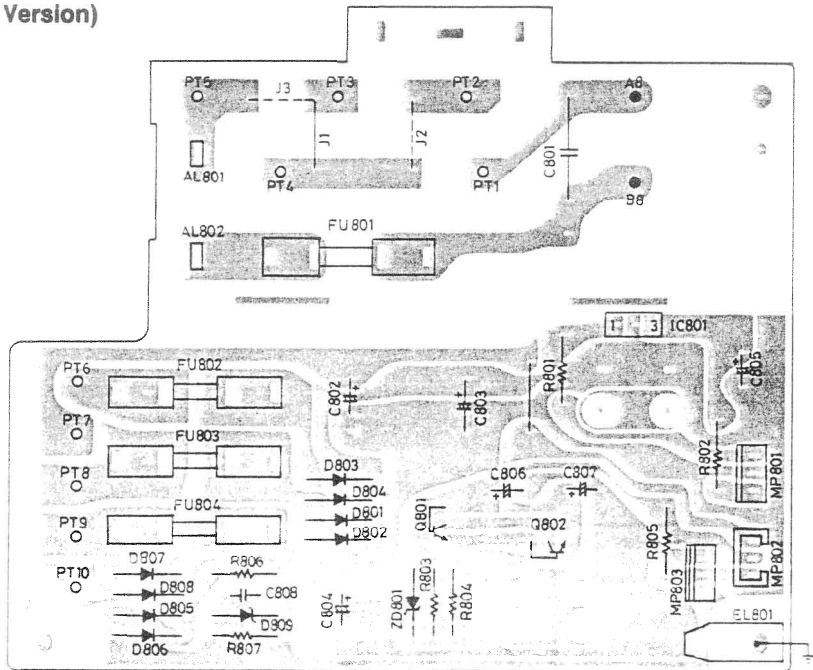
## Power supply (PS-PCB)



(For A,A1,A2 Version)

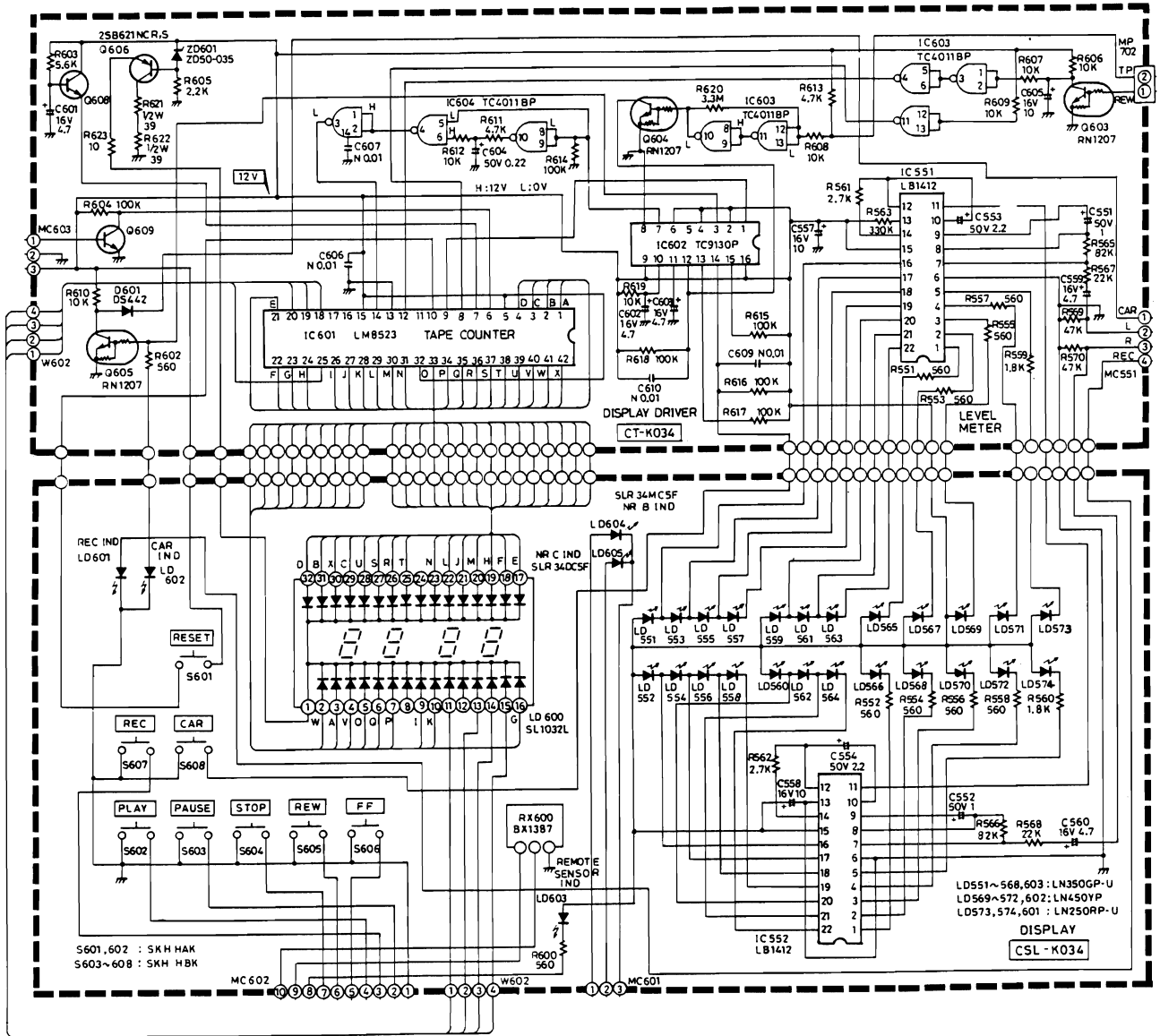


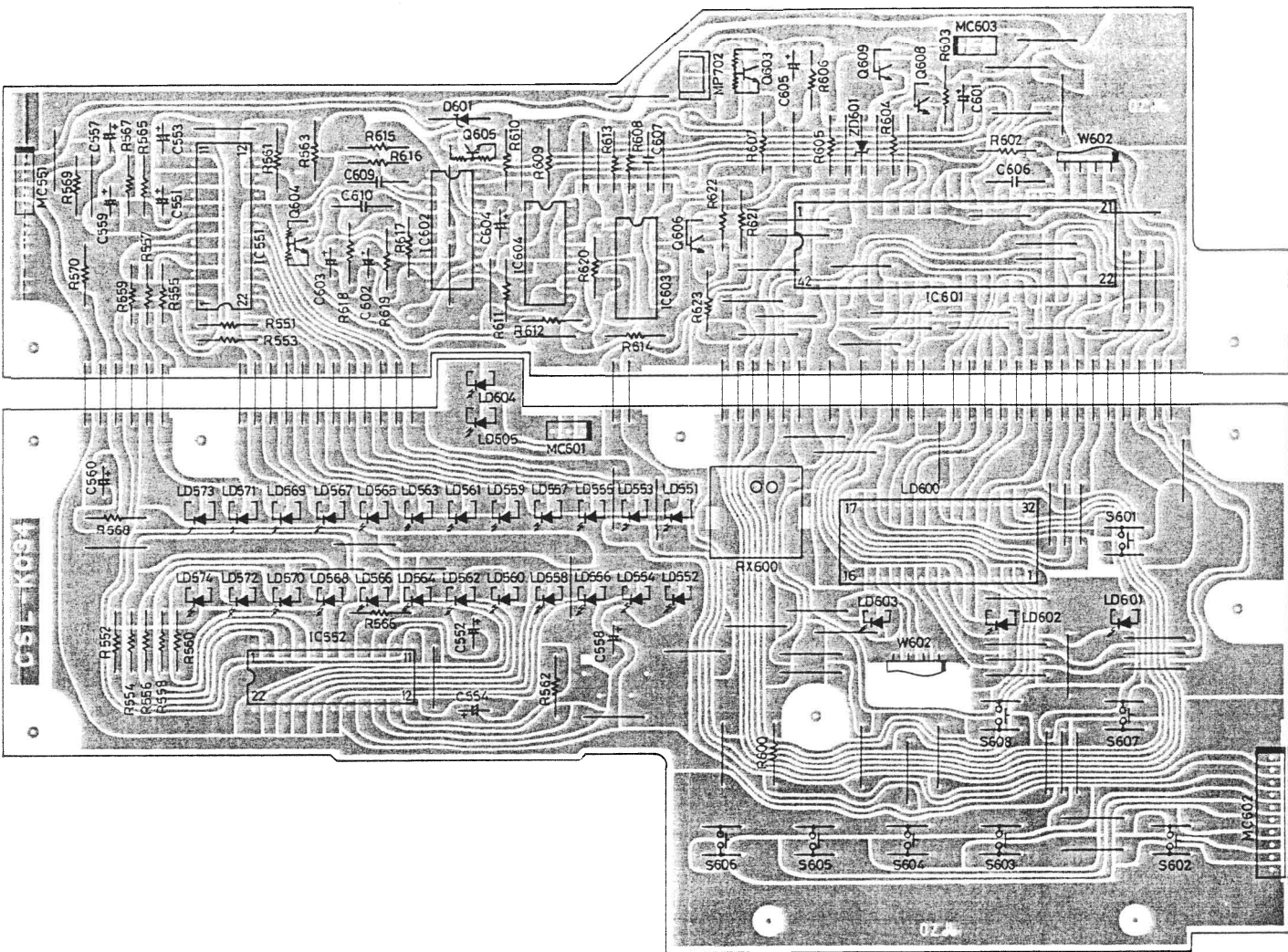
(For B,B1,C,C1,C2 Version)



- A : USA
- A1 : CANADA
- A2 : TAIWAN
- B : U.K.
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- C : EUROPE & OTHERS
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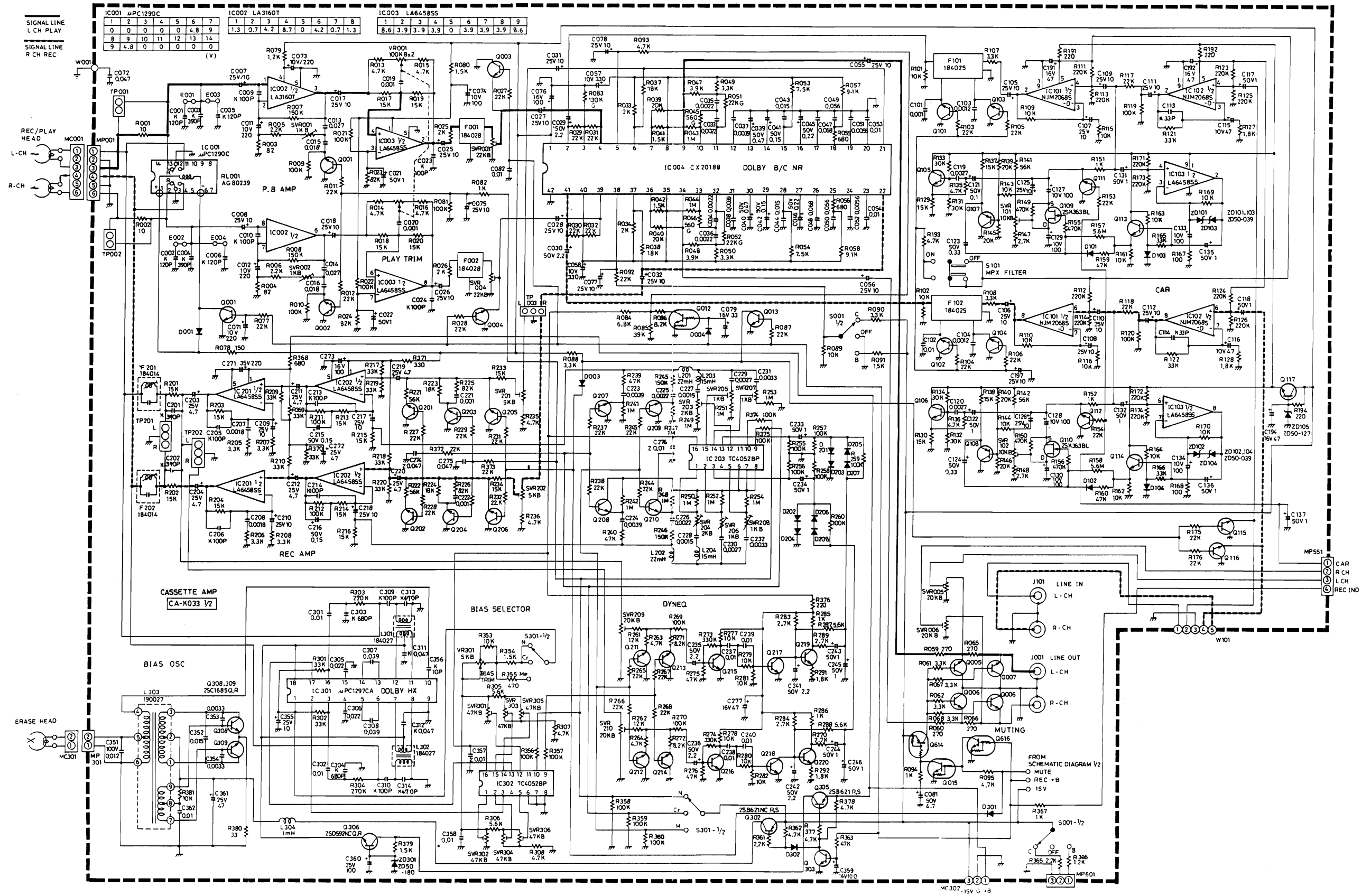
### Control & Display drive (CSL & CT-PCB)

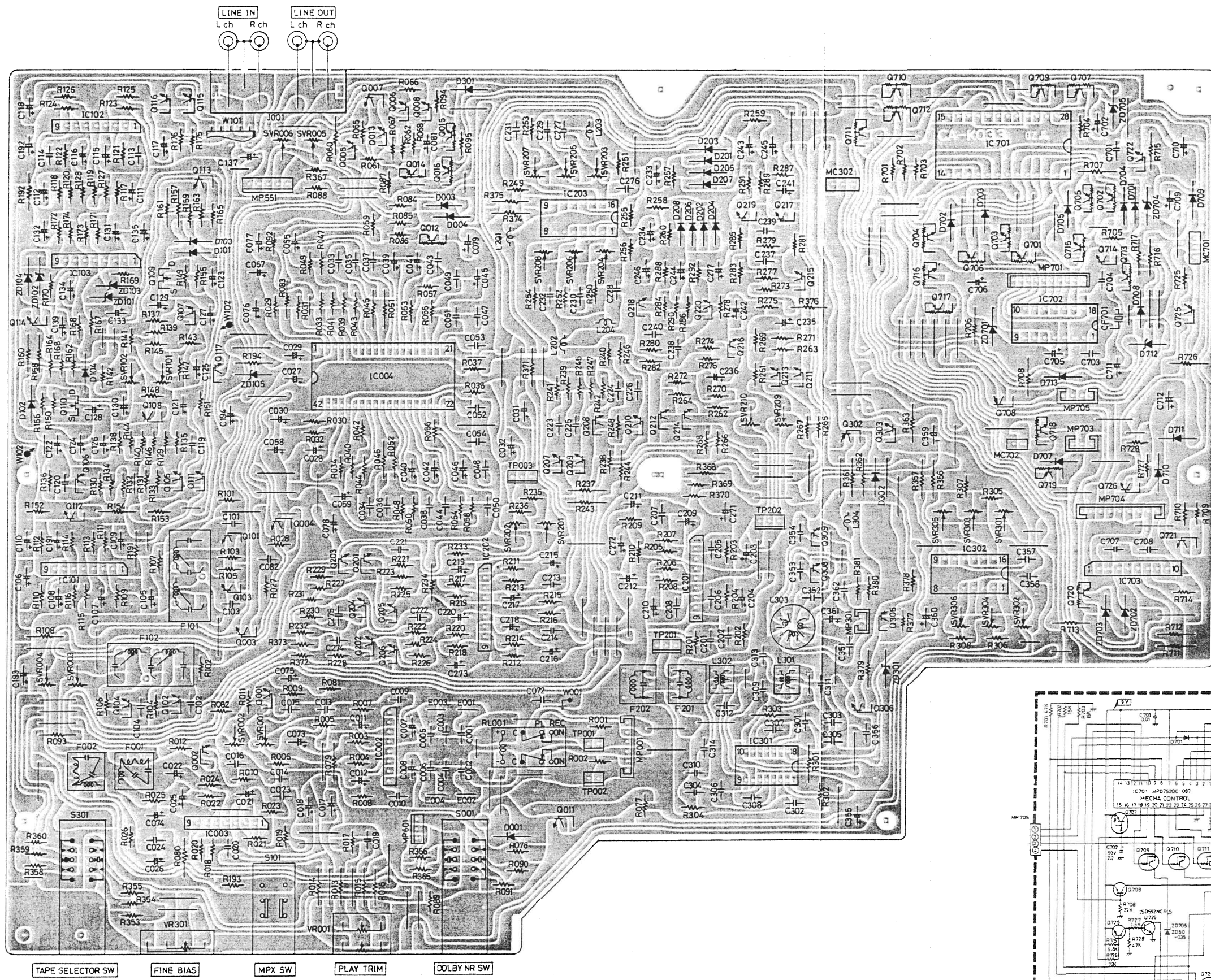




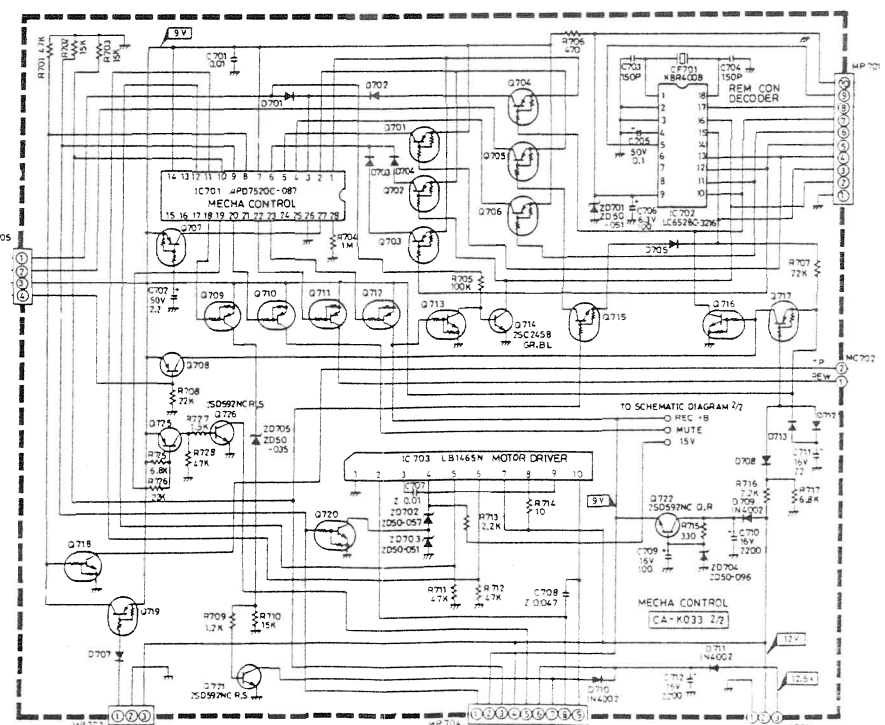
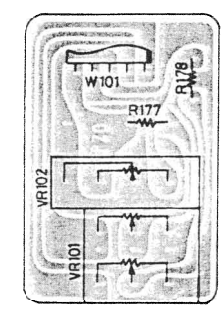
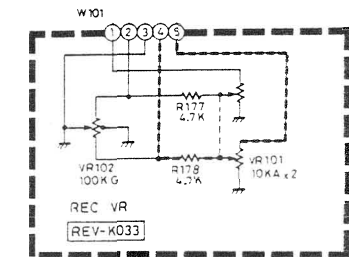


Main (CA-PCB)

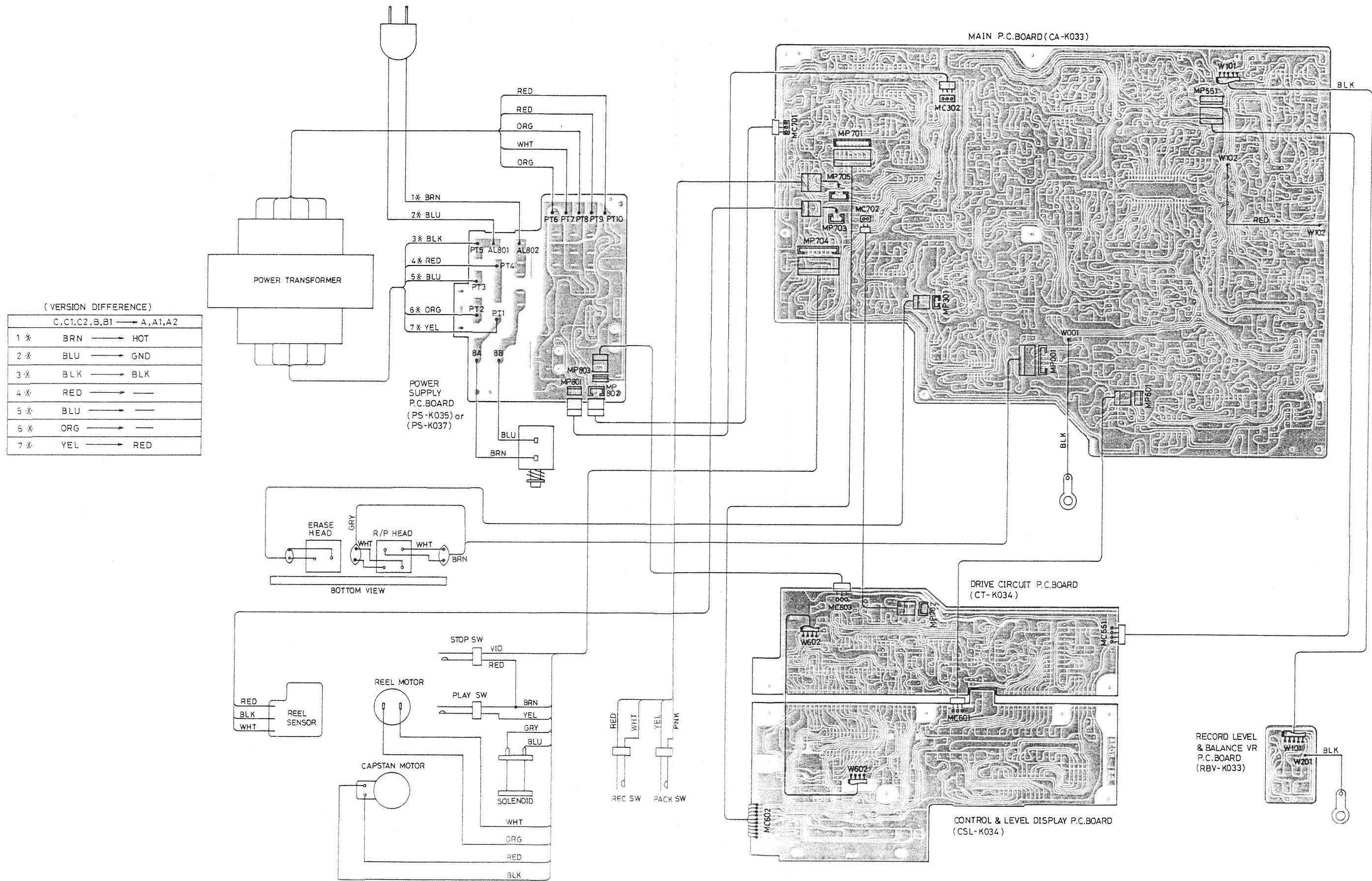




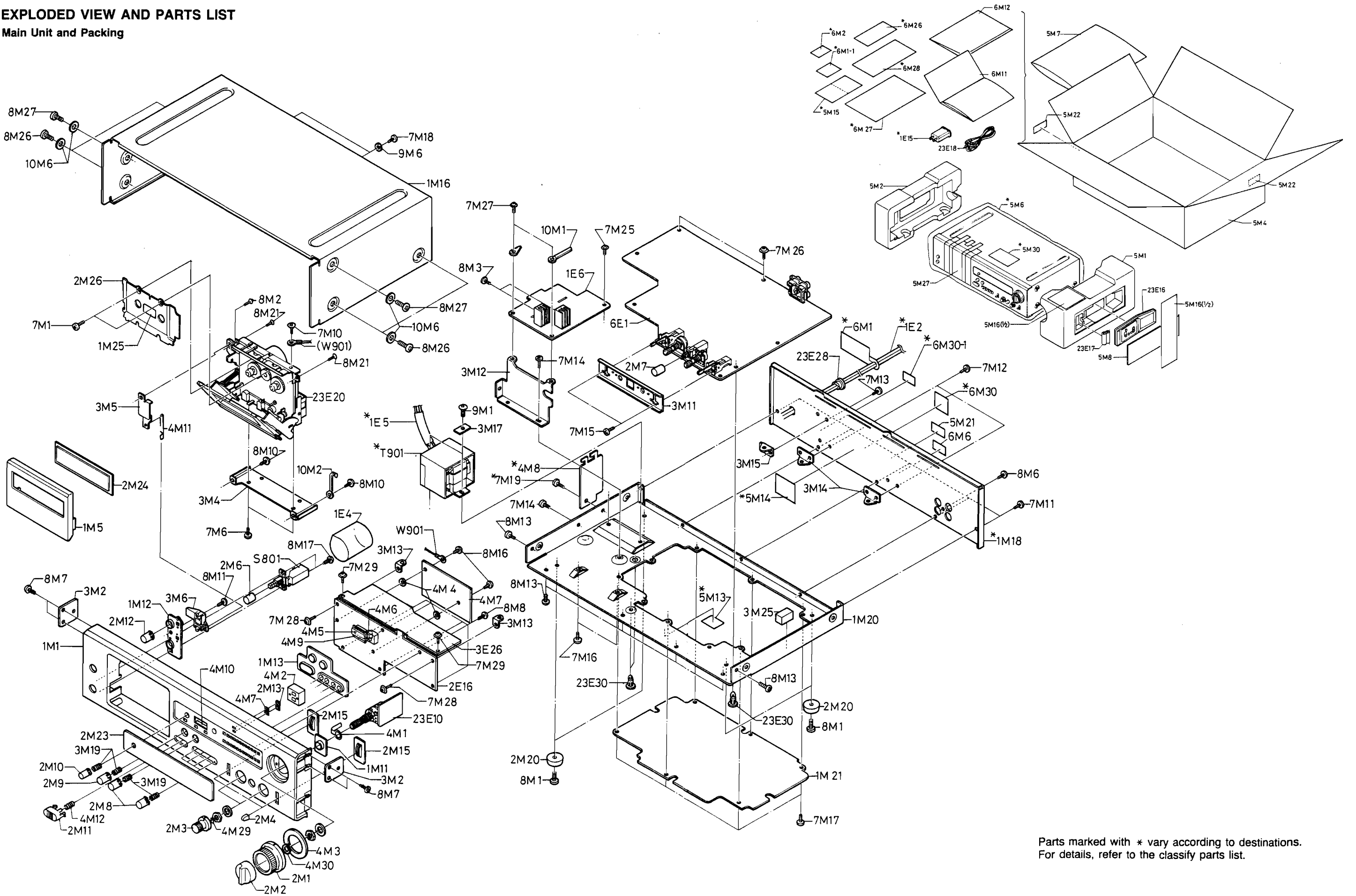
Rec. & Balance (RBV-PCB)



WIRING DIAGRAM (Component side)

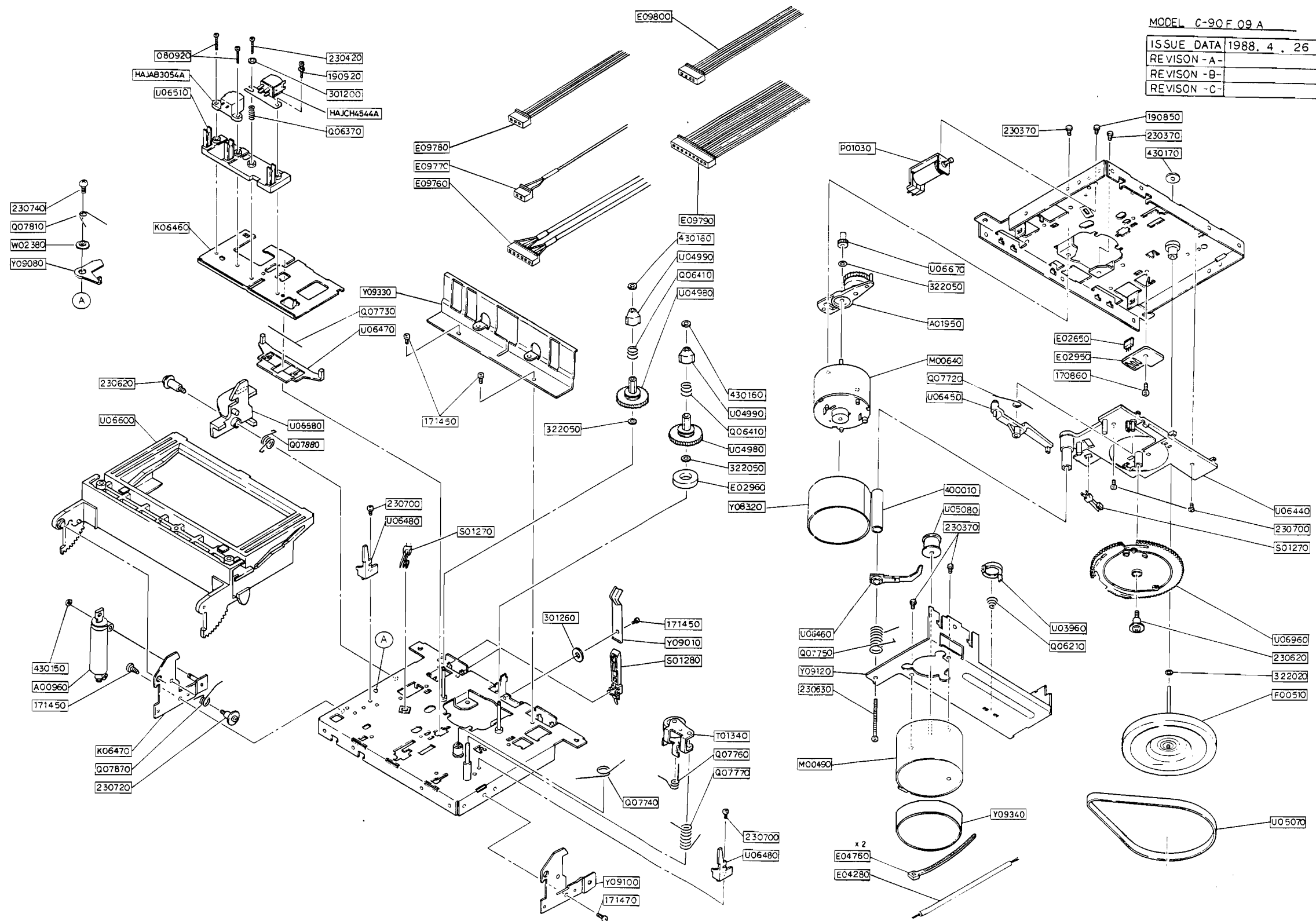


**EXPLODED VIEW AND PARTS LIST**  
**Main Unit and Packing**



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

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 8RA
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





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	EC9U2A103MN	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

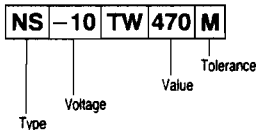
## Classify Parts List

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

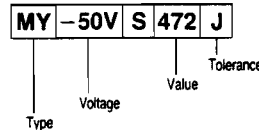
Ref.No.	Description	A	A1	A2	B	B1	C/C1	C2
<b>EXPLODED VIEW</b>								
1E 2	LINE CORD	ACC-033D3-4EC1	ACC-033D3-4EC1	ACC-033D3-4EC1	ACC-013D3-4EC4	ACC-030D3-4EC1	ACC-005D3-4EC1	ACC-005D3-4EC1
1E 5	UL TUBE	Nil	U9-#03B14	Nil	Nil	Nil	Nil	Nil
1E15	CONVERSION PLUG	Nil	Nil	Nil	Nil	Nil	Nil	S-I6115#01
1M18	REAR 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

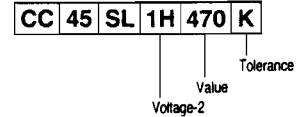
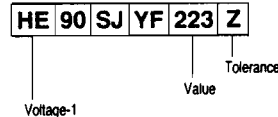
### • Electrolytic



### • Mylar - Styrol

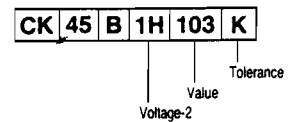


### • Ceramic



### • Electrolytic

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



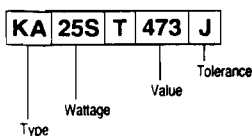
### • Mylar - Styrol

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

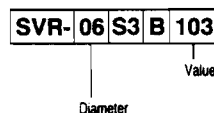
Voltage-1	Voltage-2	Value	Tolerance
HC: 25V	1E: 25V	4R7: 4.7pF	C: $\pm$ 0.25pF
HE: 50V	1H: 50V	470: 47pF	D: $\pm$ 0.5pF
H: 100V	2H: 500V	471: 470pF	F: $\pm$ 1pF
HK: 250V		472: 4700pF	J: $\pm$ 5%
HM: 500V		473: 0.047 $\mu$ F	K: $\pm$ 10%
		474: 0.47 $\mu$ F	M: $\pm$ 20%
		(1000pF=0.001 $\mu$ F)	Z: +80~-20%

## Resistors Description

### • Fixed

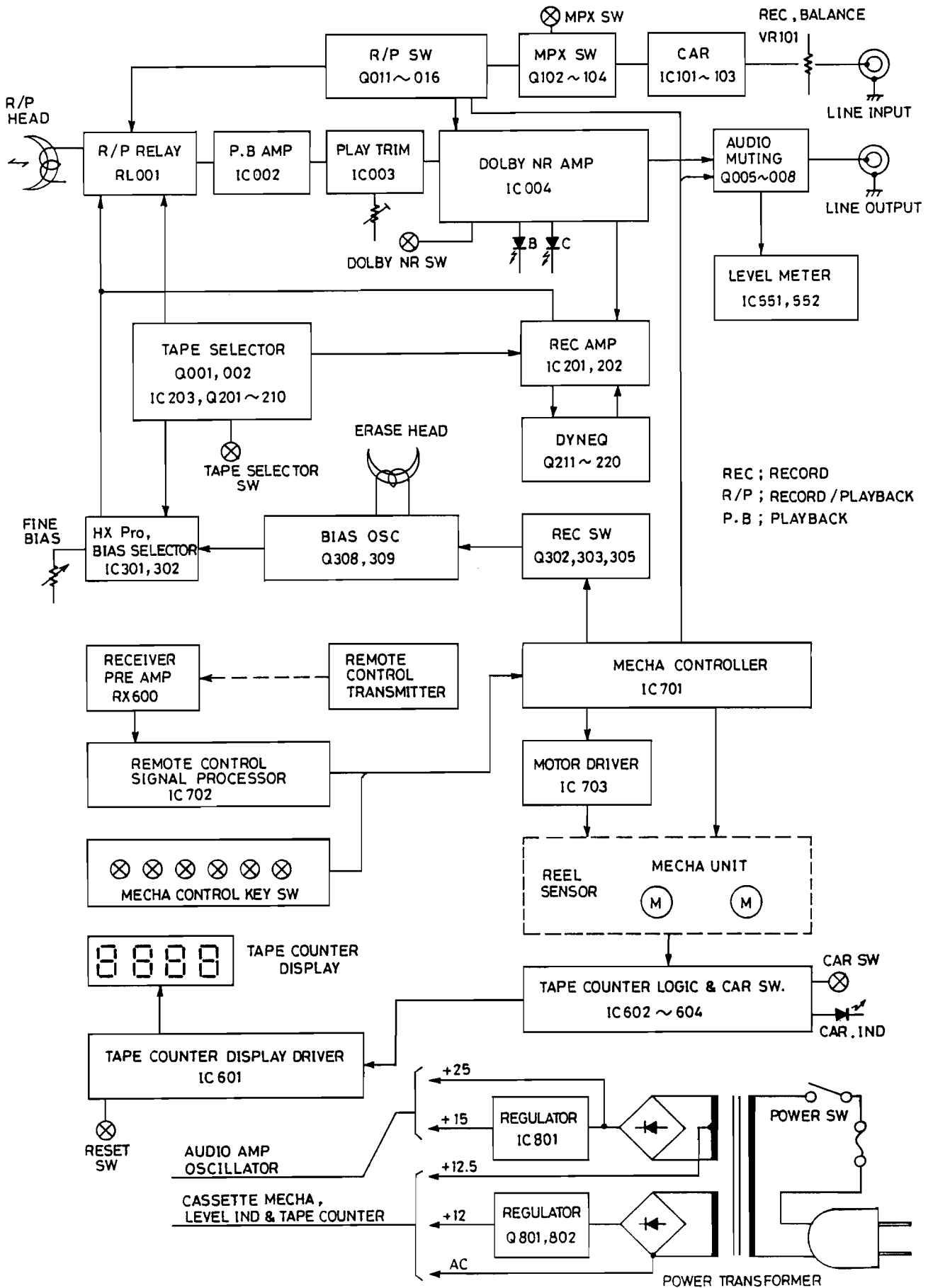


### • Semi-Variable

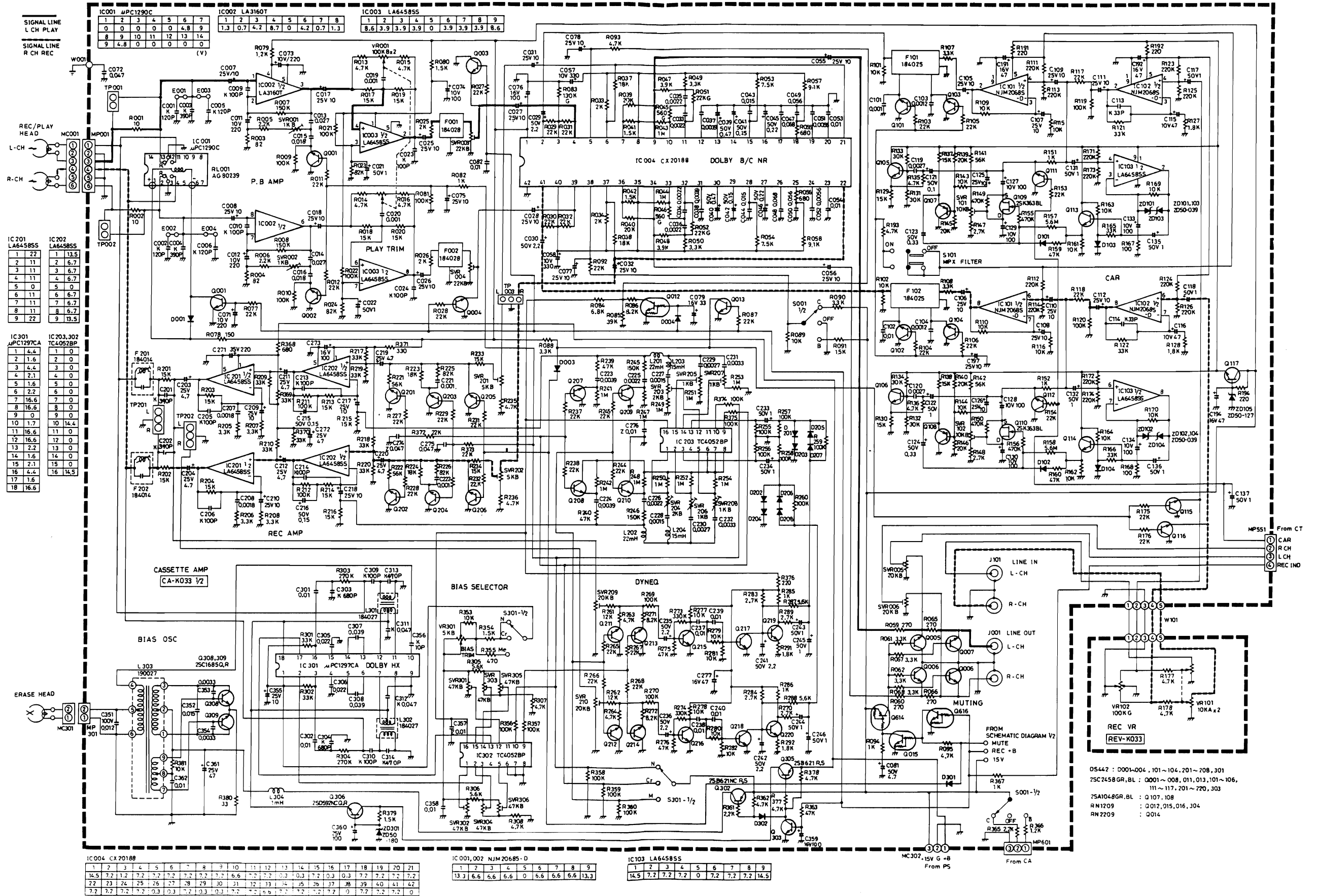


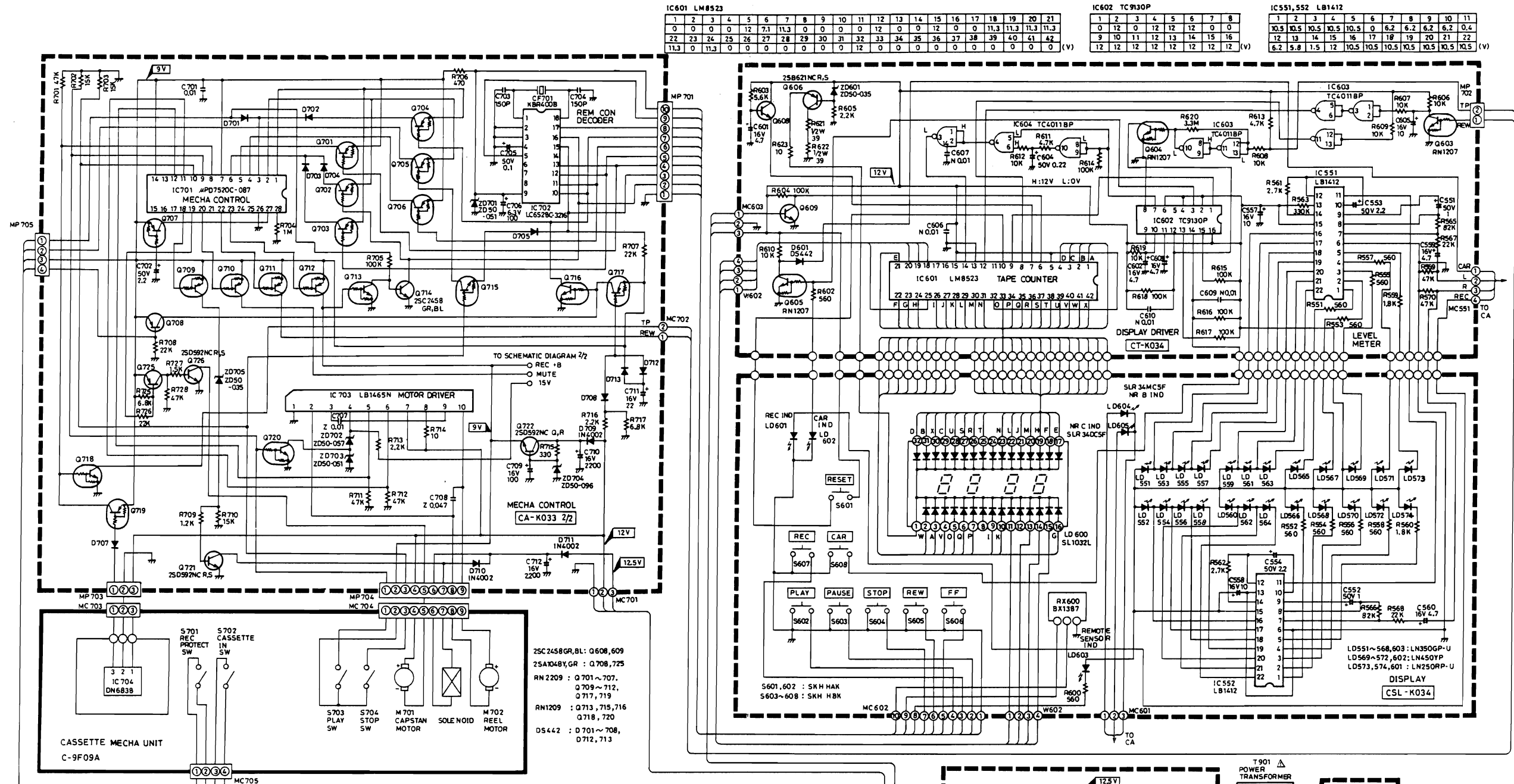
Type	Wattage	Value	Tolerance	Diameter
CE: Cement Case	-2W: 2W	R47: 0.47 $\Omega$	M: $\pm$ 20%	08: 8 $\phi$
FR: Flame Proof	10W: 10W	4R7: 4.7 $\Omega$	K: $\pm$ 10%	10: 10 $\phi$
KA: Carbon	16S: 1/6W	470: 47 $\Omega$	J: $\pm$ 5%	06: 6 $\phi$
MF: Metal Film	20S: 1/5W	471: 470 $\Omega$	G: $\pm$ 2%	
RF: Fusible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

# 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	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.

**CAUTION:** 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

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

**ATTENTION:** LES FUSIBLES MARQUES

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

