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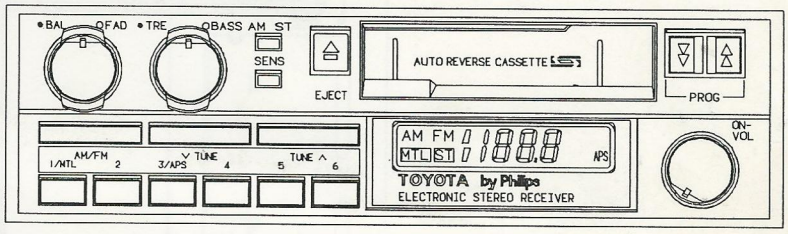


Service Manual

12 V

SERVICE MANUAL
CASSETTE DECK WITH ELECTRONIC TUNER
Model CS206A (TEN Model No.CE-6331PH1)

SPECIFICATIONS

(Radio Section)	(AM)	(FM)
Tuning Range	531 to 1611kHz (9kHz step)	87.5 to 108MHz (100kHz step)
Intermediate Frequency	450kHz	10.7MHz
Sensitivity	35dBμ or better	
Sensitivity at Electronic Tuning	Distant: 30 ± 6dBμ	Distant: 20 ± 6dBμ
Limiting Sensitivity		8 ± 6dBμ
Separation		25dB or better (at 1kHz)
Electrical Fidelity	100Hz: 4 ± 3dB (74dBμ input, Refer. 400Hz) 4kHz: -12 ± 5dB (74dB± input, Refer. 400Hz)	100Hz: 4 ± 3dB (54dBμ input, Refer. 400Hz) 10kHz: -14 ± 5dB (74dBμ input, Refer. 400Hz)

(Cassette Deck Section)	
Number of Tracks	4-track 2-channels
Tape Cartridge	Stereo/monaural compact cassette
Tape Speed	4.76cm/sec. (1-7/8", i.p.s.)
Wow & Flutter	0.3% or less (WRMS)
Crosstalk	40dB or better
Separation	25dB or better
Frequency Response	125Hz: 6 ± 4dB 10kHz: 4 ± 4dB
Equalization	Normal: t_1=3,180μ sec., t_2=120μ sec.
Signal to Noise Ratio	35dB or better (with MTT-112B test tape)
Take-Up Torque	40 to 75g-cm
(Common Section)	
Load Impedance	4ohm
Output Power	5 watts x 4 (THD=10%)
Power Input	12-volt car battery, negative terminal to ground
Voltage	13.2 VDC
Current	Approx. 2.4 ampere (1 watt x 4) Approx. 6.2 ampere (Max.)
Semiconductor	13 ICs, 46 Transistors, 31 Diodes
Dimensions	178 (W) x 50 (H) x 150 (D)mm
Weight	Unit - 1.6kg

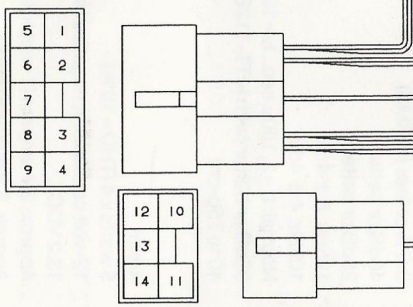
PHILIPS

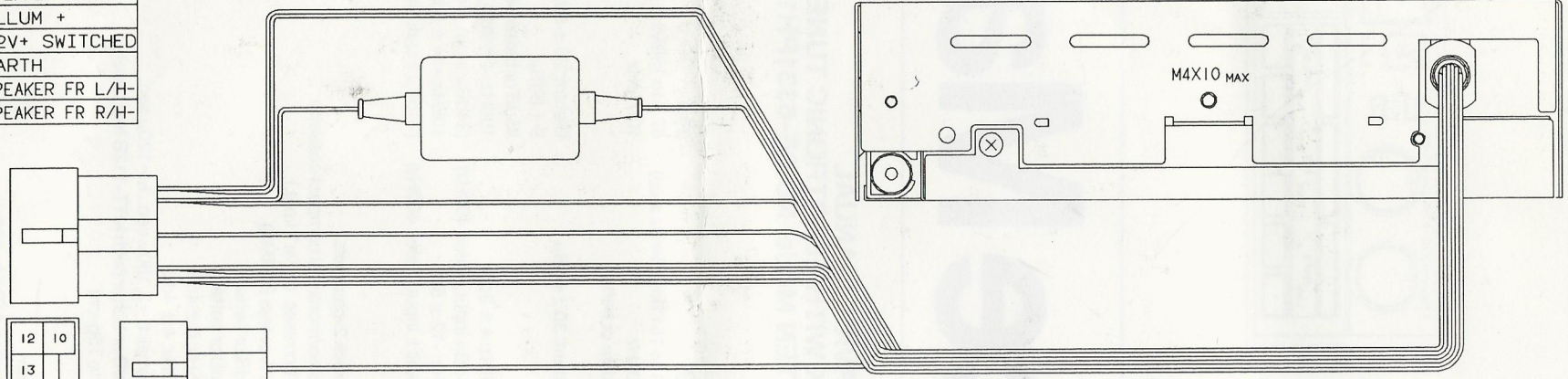
Subject to Modification
4802 725 17168
Printed in Australia

PHILIPS

CONNECTION
CS206A

PIN	9P CONNECTOR
1	PWR ANT
2	ACC 12V+
3	SPEAKER FR L/H+
4	SPEAKER FR R/H+
5	ILLUM +
6	12V+ SWITCHED
7	EARTH
8	SPEAKER FR L/H-
9	SPEAKER FR R/H-





PIN	5P CONNECTOR
10	SPEAKER RR L/H+
11	SPEAKER RR B/H+
12	SPEAKER RR L/H-
13	MEMORY
14	SPEAKER RR R/H-

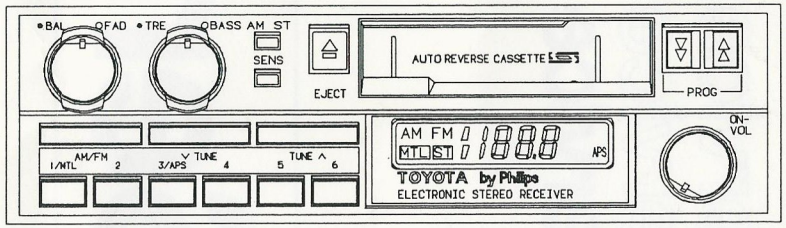


Fig. 1

WIRING ON PC BOARD
CS206A

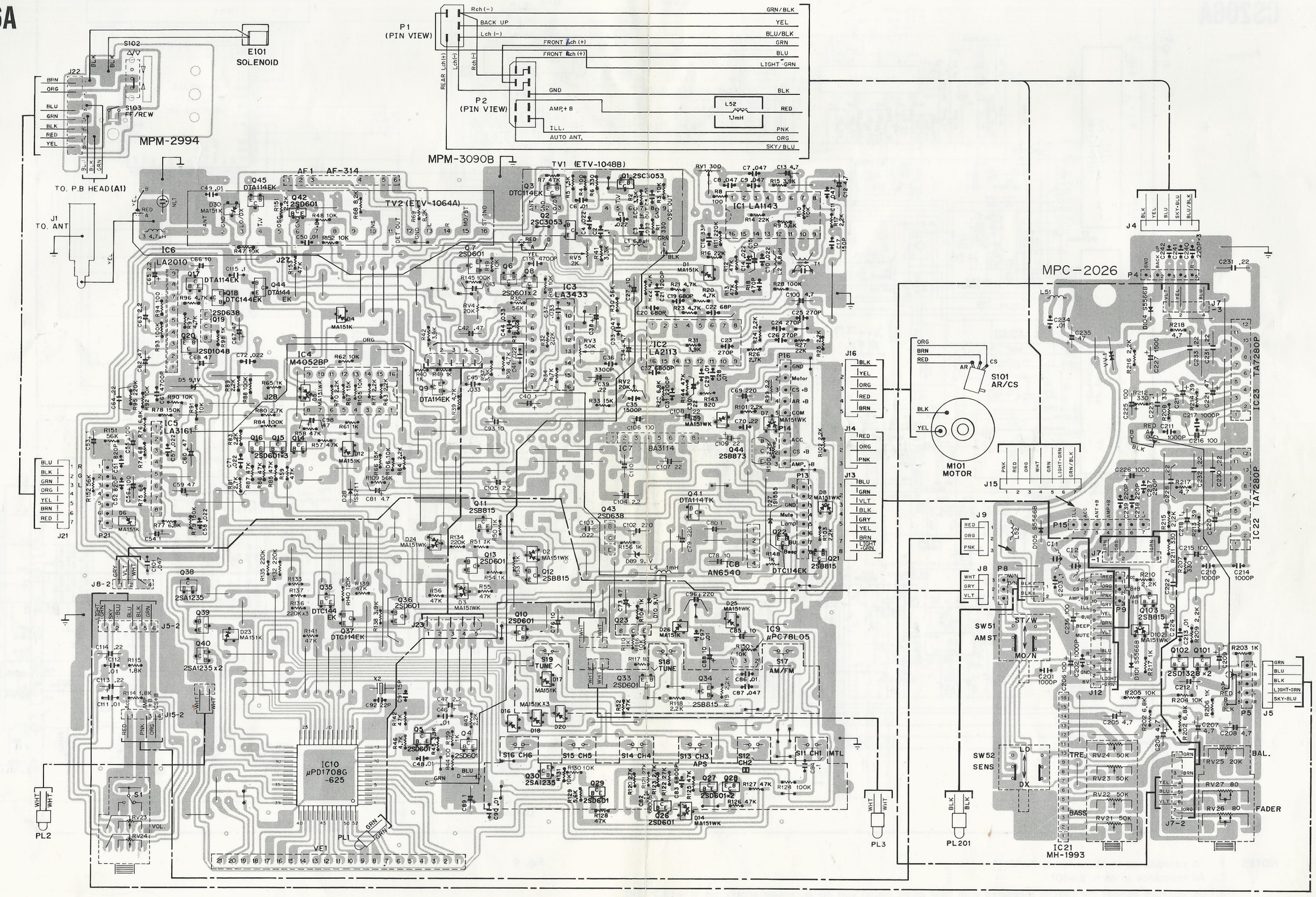
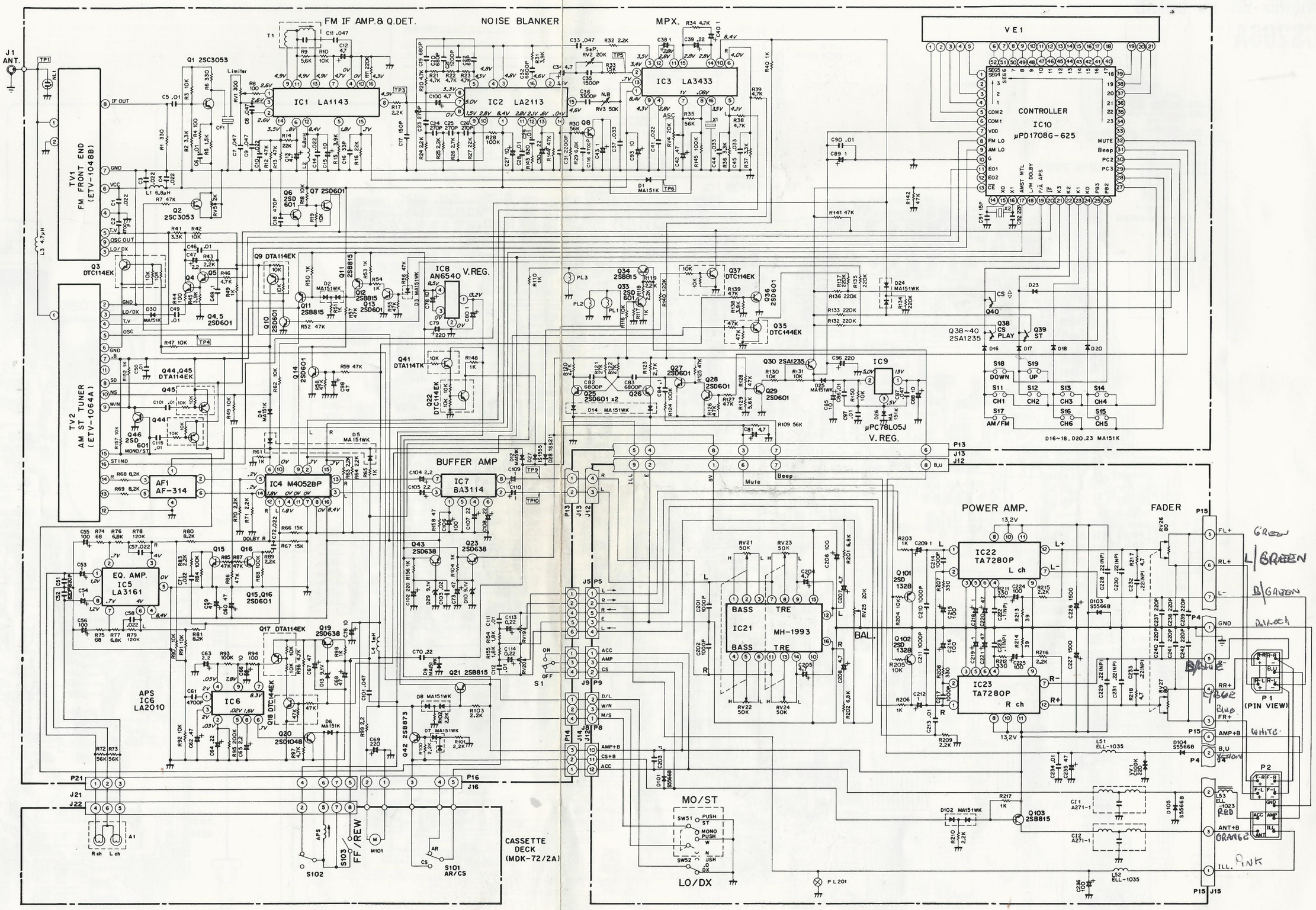


Fig. 3

SCHEMATIC
CS206A



NOTES:
1. All capacitance in Micro farad, $P=10^{-12}$
2. All resistance in ohm, $K=10^{3}$
3. DC voltages against the chassis measured with 10M ohms digital volt meter, power supply set at +13.2 VDC, no signal input.

Fig. 2

EXPLODED VIEW
CS206A

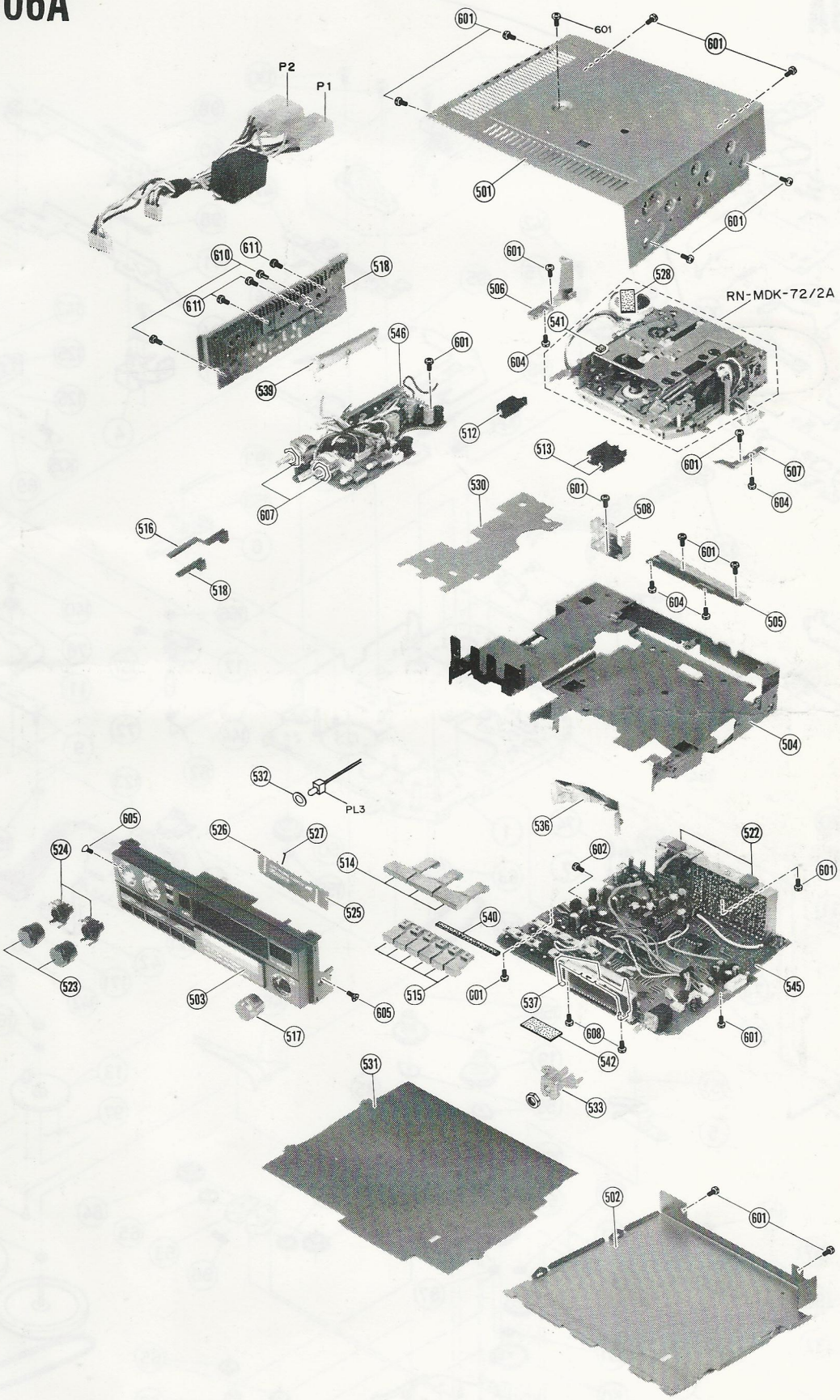


Fig. 4

NOTE : Printed circuit board does not include component parts to be mounted.

EXPLODED VIEW (CASSETTE DECK) MDK-72/2A
CS206A

TWO PCS of THIS PART.!!

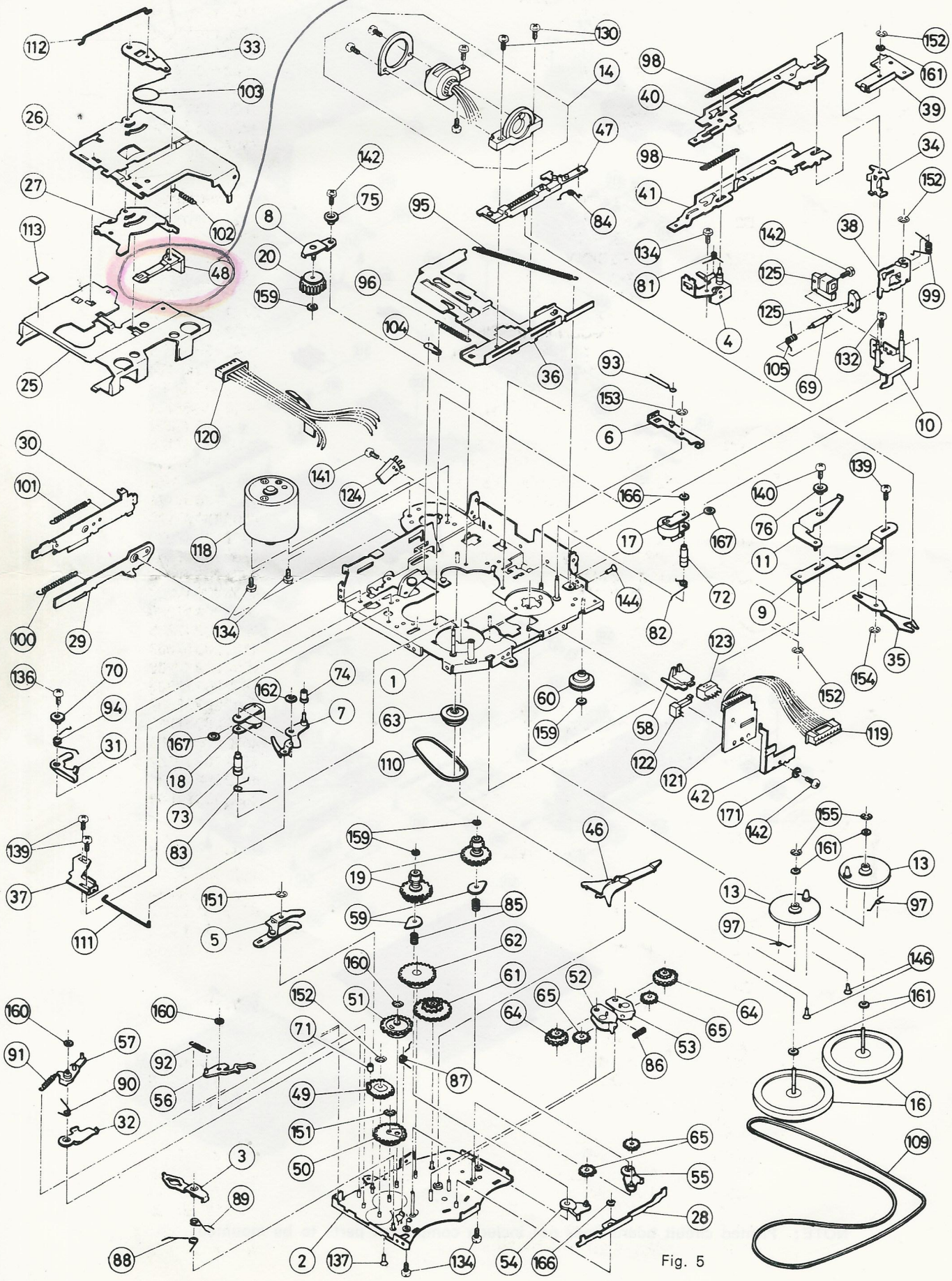


Fig. 5

MECHANICAL PARTS

503	ESCUTCHEON ASSY	4802 459 47546
512	BUTTON EJECT	4802 410 37175
513	BUTTON FF REW	4802 410 37176
514	BUTTON AM/FM TUNE	4802 410 37184
515	BUTTON PRESET	4802 410 37183
516	BUTTON AM ST	4802 410 37185
517	KNOB	4802 413 17231
518	BUTTON SENS	4802 410 37186
523	KNOB	4802 413 17228
524	KNOB	4802 413 17227
525	DOOR	4802 423 57108
607	NUT VOL	4802 505 17386

SEMICONDUCTORS

D1	MA151K/TY DIODE	4822 130 31742
D2	MA151WK/TY DIODE	4822 130 31742
D10	RD9R1EB3 DIODE	4802 130 37841
D27	1S1555 DIODE	4822 130 30621
D28	1SS211 DIODE	4802 130 37862
D101	S5566B/TP DIODE	4802 103 37007
Q1	2SC3053-CD/TY TRANSISTOR	4802 130 47542
Q2	2SC3053-CD/TY TRANSISTOR	4802 130 47542
Q4	2SD601-QR/TY TRANSISTOR	4802 130 67058
Q9	DTA114EK/TY TRANSISTOR	4802 130 67124
Q11	2SB815-67/TY TRANSISTOR	4802 130 67054
Q18	DTC144EK/TY TRANSISTOR	4802 130 67051
Q19	2SD638-QR TRANSISTOR	4822 130 41324
Q20	2SD1048-678/TY TRANSISTOR	4802 130 67133
Q22	DTC114EK/TY TRANSISTOR	4802 130 67049
Q30	2SA1235-EF/TY TRANSISTOR	4802 130 47973
Q41	DTA114T TRANSISTOR	4802 130 67124
Q42	2SB873-QR TRANSISTORS	4802 130 67129
Q101	2SD1328-RST/TZ TRANSISTOR	4802 130 47978
Q103	2SB815-67/TZ TRANSISTOR	4802 130 67054
IC1	LA1143 FM IF	4802 209 17002
IC2	LA2113 N.B.	4802 209 17227
IC3	LA3433 MPX	4802 209 17229
IC4	M4052BP MIXING	4802 209 17233
IC5	LA3161 HAD EQ	4802 209 87658
IC6	LA2010 APS.	4802 209 17226
IC7	BA3114 20DB AMP.	4802 209 17225
IC8	AN6540 8V REG.	4802 209 87559
IC9	UPC78L05J 5V REG.	4802 209 17232
IC10	UPD1708G-625 U-COM.	4802 209 27158
IC21	MH-1993 BASS/TREBLE I.C.	4802 209 77052
IC22	TA7280P POWER I.C.	4802 209 17231
VE1	LQD CRYST. EVE-1021ENT	4802 130 97065

INDUCTORS

T1	FM IF TRANSFORMER	4802 146 27317
AF1	ACTIVE FILTER	4802 150 27008
L1	CHOKE	4802 158 17423
L3	CHOKE	4802 157 47223
L4	CHOKE	4802 157 47222
L51	CHOKE	4802 157 47224

CAPACITORS

C226	1500MF/16V ELECT.	4802 124 27084

POTENTIOMETERS

RV21	BASS,TRE	4802 102 37195
RV23	SW-VOL	4802 102 47058
RV25	FADER, BAL	4802 102 97004

SWITCHES

SW51	PUSH SWITCH	4802 276 17272
S11	PUSH SWITCH	4802 276 17315
S17	PUSH SWITCH	4802 276 17314
S101	MICRO SWITCH,AR/CS	4802 278 97139
S102	SLIDE SWITCH	4802 277 27217
S103	LEAF SWITCH, FF/REW	4802 278 97137

LEADS/CONNECTORS

P1	LEAD ASSEMBLY	4802 321 17117
P13	CONNECTOR	4802 290 47229
J22	7P CONNECTOR AND LEAD ASSY	4802 290 47231
J1	ANTENNA RECEPTACLE	4802 267 37075

OTHERS

VS1	VARISTOR	4802 116 27014
NL1	NEON LAMP	4802 134 27047
PL1	LAMP ASSEMBLY	4802 134 47332
PL2	LAMP ASSEMBLY	4802 134 47335
PL201	LAMP ASSEMBLY	4802 134 47336
TV1	FRONT END	4802 210 17163
TV2	FRONT END	4802 210 17164
CF1	CERAMIC FILTER	4802 242 77155
CI1	FILTER	4802 125 57126
X1	CER. OSC. EXB-CSB456FG15	4802 242 77383
X2	CRYSTAL	4802 242 77347

CASSETTE PARTS

14	HOLDER (INCLUDES P B HEAD)	4802 403 57777
16	FLYWHEEL	4802 528 67147
17	PINCHROLLER ASSEMBLY (F)	4802 403 47163
18	PINCHROLLER ASSEMBLY (R)	4802 403 47164
19	SLIP MECHANISM	4802 528 27143
20	SLIP MECHANISM	4802 528 27144
25	SLIDE PLATE ASSEMBLY	4802 403 37154
49	GEAR	4802 522 37314
50	GEAR	4802 522 37315
51	GEAR	4802 522 37316
64	GEAR	4802 522 37317
65	GEAR	4802 522 37318
82	SPRING	4802 492 37786
83	SPRING	4802 492 37787
103	SPRING	4802 492 37788
109	BELT	4802 358 27051
110	BELT	4802 358 27052
M101	MOTOR	4802 361 27237
161	WASHER	4802 532 57235
D1	CASSETTE DECK	4802 691 27122
E101	PLUNGER SOLENOID	4802 281 57057

NO TAPE – NO VOLTS TO MOTOR.

CHECK: D7 (SURFACE MOUNT DIODE) BASE of Q44

NO DISPLAY – LAMP OK

CHECK: L51 ON AMP PCB for o/c (in line with B/UP input)