Clarion

SERVICE MANUAL

Closer Relations through "CLARION SERVICE MANUAL"

MODEL PE-751C

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■SPECIFICATIONS:

(The specifications for this product were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.)

FM TUNER

Receive range: 88MHz to 108MHz
Intermediate frequency: 10.7MHz
Usable sensitivity: 17.9dBf (1.7μV/75Ω)
50dB quieting sensitivity: 24.9dBf (3.8μV/75Ω)
Frequency response: 30Hz to 15,000Hz, ±6dB
Capture ratio: 2dB
Alternate channel selectivity: 70dB
Stereo separation: 35dB at 1kHz
Image response ratio: 50dB at 106MHz
IF response ratio: 85dB at 90MHz

AM TUNER

Receive range: 530kHz to 1,610kHz
Intermediate frequency: 262.5kHz
Usable sensitivity (20dB S/N): 26dB (20μV)
Image response ratio: 60dB at 1,400kHz
IF response ratio: 60dB at 600kHz
Selectivity (at ±10kHz): 35dB
AGC F.O.M: 50dB at 1,000kHz

TAPE SECTION

Frequency response: 60Hz to 15,000Hz, ±3dB
Stereo separation: 35dB
Signal/Noise ratio (A-weighted):
Dolby off −120μs: 52dB
70μs: 54dB
Dolby on −120μs: 61dB
70μs: 63dB
Crosstalk: 50dB
Tape speed: 4.75cm/s (1⅞ in/s)
Fast forward time (C-60): 70s
Rewind time (C-60): 70s

AUDIO SECTION

Power output: 24.5W per channel into 4 ohms 25Hz to 15,000Hz at 1% THD
Frequency response: 30Hz to 23,000Hz, ±3dB
Signal/Noise ratio (A-weighted): 62dB
Tone action (1kHz reference):
±10dB at 100Hz
±8dB at 10kHz
Load impedance: 4 ohms
Line output voltage (R.C.A jacks): 1.1V 30Hz to 15,000Hz 10k ohms load.
Minimum recommended load impedance (for R.C.A jacks): 10k ohms

GENERAL

Power supply voltage: 14.4V (10.8V to 15.6V)
Current consumption: 4A at maximum output
Semiconductors: 2 FETs, 14 Transistors, 10 ICs and 23 Diodes.
Weight: 2.35kg (5.18 lbs)
Dimensions:
Chassis (WxHxD): 180mmx50mmx160mm
Nose pieces (WxHxD): 105mmx44mmx35mm
Shaft spacing: 130mm (5.12")
140mm (5.51")
148mm (5.83")

*Dolby and "DD" mark are the trade name and trade mark of the Dolby Laboratories.

Printed in Japan 298-2542-00 PE-751C

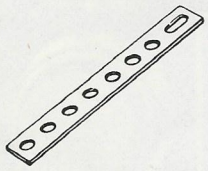
■FEATURES:

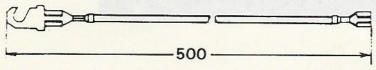
- ○AM/FM-MPX 5pB radio with auto reverse stereo cassette tape player.
- ○Dolby Noise Reduction system incorporated.
- ○A high performance FET front-end is used for the FM tuner.
- ○DX/LO and CrO_2 select switch.
- ○BASS. TREBLE control function.
- ○Fader control volume (4 speaker).

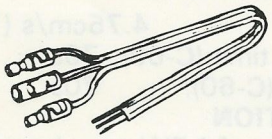
■COMPONENTS VIEW:

●PE-751C-01

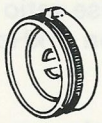
	Main unit	1
300-4976-00	Mounting bracket	1
852-5115-00	Extension lead	1
852-6052-00	Extension lead	2
922-0937-02	Parts bag	1





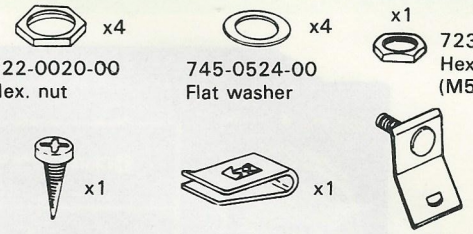


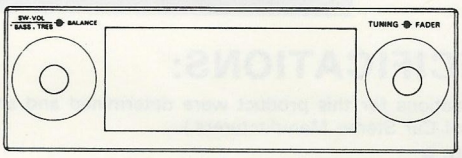
380-3844-01x2
Inside knob

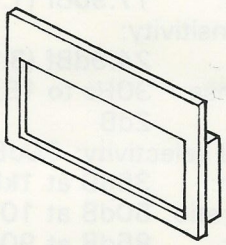


380-3846-00x2
Outside knob

921-6468-01	Parts bag	1
940-2499-01	Escutcheon ass'y	1
383-0007-01	Decorate part	1

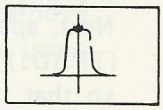
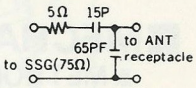
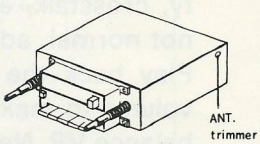




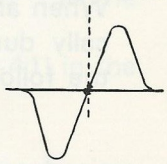
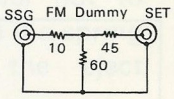
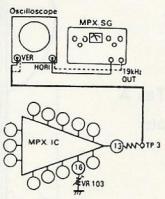
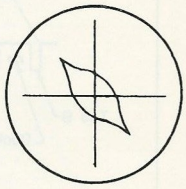


■ADJUSTMENT:

■AM circuit

Item	Input	Frequency	Output	Method of adjustment		Instruments required	Remark
IFT	TP401	262.5KHz	TP402	IFT401~404	Adjust the cores of IFT maximum waveform height with good symmetry	● Sweep generator ● Oscilloscope ● V.T.V.M.	IF curve  Vol: minimum Tone: maximum Balance: center Dial pointer: right end
Tracking	Antenna receptacle	1,620KHz	Meter across the speaker voice coil	①TC403 ②TC402 ③TC401	Adjust the trimmers for maximum indication of V.T.V.M.	● SG ● Speaker ● V.T.V.M.	 Use dummy antenna between SSG and antenna receptacle
Antenna trimmer	Set the receiver volume control to max., tone control to high, and the dial pointer to around 1,400KHz to receive white noise (hissing noise) and adjust the antenna trimmer (screw) so that the noise output becomes maximum.						

■FM circuit

Item	Input	Frequency	Output	Method of adjustment		Instruments required	Remark
S curve	TP101	10.7MHz	TP102	IFT101, 104	Adjust the cores of IFT maximum waveform height with good symmetry.	● Sweep generator ● Oscilloscope ● V.T.V.M.	 S-curve
Tracking	Antenna receptacle	87.5MHz	Meter across the speaker voice coil	87.5MHz TC103 98.0MHz ①TC102 ②TC101	Adjust the trimmers for maximum indication of V.T.V.M.	● SG ● Speaker ● V.T.V.M.	
<MPX> 19kHz Pilot signal (VCO)	TP103	19kHz Pilot signal	TP103	VR103	Adjust the Lissajuous figure does not move.	MPX stereo SG 	 after adjusted
Separation	Antenna receptacle	Right or left signal (400Hz)	Meter across the speaker voice coil	VR102	Adjust the VR for maximum separation.	MPX stereo SG and SSG.	
SASC	Antenna receptacle	Receive a 98 MHz FM signal. Set the ANT input to 55dB, MOD to 7kHz and the VOL control to a suitable position. Consider this point as 0dB.	Meter across the speaker voice coil	VR101	Adjust VR101 so that the output becomes 3dB down when the ANT input is dropped to 35dB.	● SG ● V.T.V.M. ● Speaker	

■Adjustment of Dolby NR

1. **PLAY calibration**

Connect a milli-valve voltmeter to TP202 (TP302) and play a 400Hz, 200nWb level tape and adjust VR201, 202, 301, 302 so that the milli-valve voltmeter reads 0.775V.
Next, apply audio signal of 5,000Hz to TP201 (TP301) and adjust the level of the oscillator so that the level of TP202 (302) is 59mV.
Turn the Dolby switch ON in this mode, and adjust VR204 so that the level meter reading is 8dB down.

2. **FM Dolby calibration**

Assuming FM SG output; 1mV (60dBμ), ST modulator: L+R 50%, PL 9%, totalling 59%, modulate and set the FM SG so that frequency deviation is 50% (44.25KHz)
Receive this signal and adjust VR203 and 303 so that the milli-valve voltmeter which is connected to TP202 (302) reads 0.775V.

■MECHANISM SECTION:

※METHOD OF ADJUSTING TAPE MECHANISM

1. **Head azimuth adjustment**

When the head azimuth is unsuitable for the tape, it may cause deterioration of tone quality, crosstalk, etc. When the head azimuth is not normal, adjust it as shown below.
Play back the 315Hz—15VU test tape, set volume to maximum and adjust balance with balance VR. Next, play back the 8KHz—10VU test tape, and turn the head azimuth adjusting screw so that the output is roughly maximum in both the normal and reverse directions. (Refer to Fig. 1)

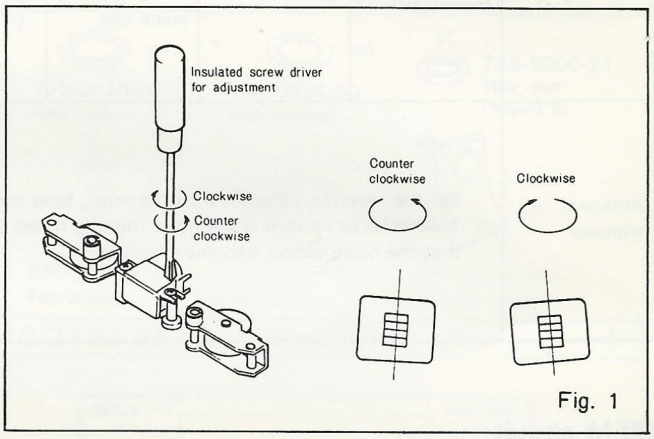


Fig. 1

2. **Adjusting mechanism gears**

When abnormal sound is generated periodically during playback, adjust the gears by the following procedure.

(1) Check whether the sound is coming from the forward or rewind side.
(2) Bend tab A when the abnormal sound comes from the Forward side, and tab B when the abnormal sound comes from the Rewind side. (Refer to Fig. 2)

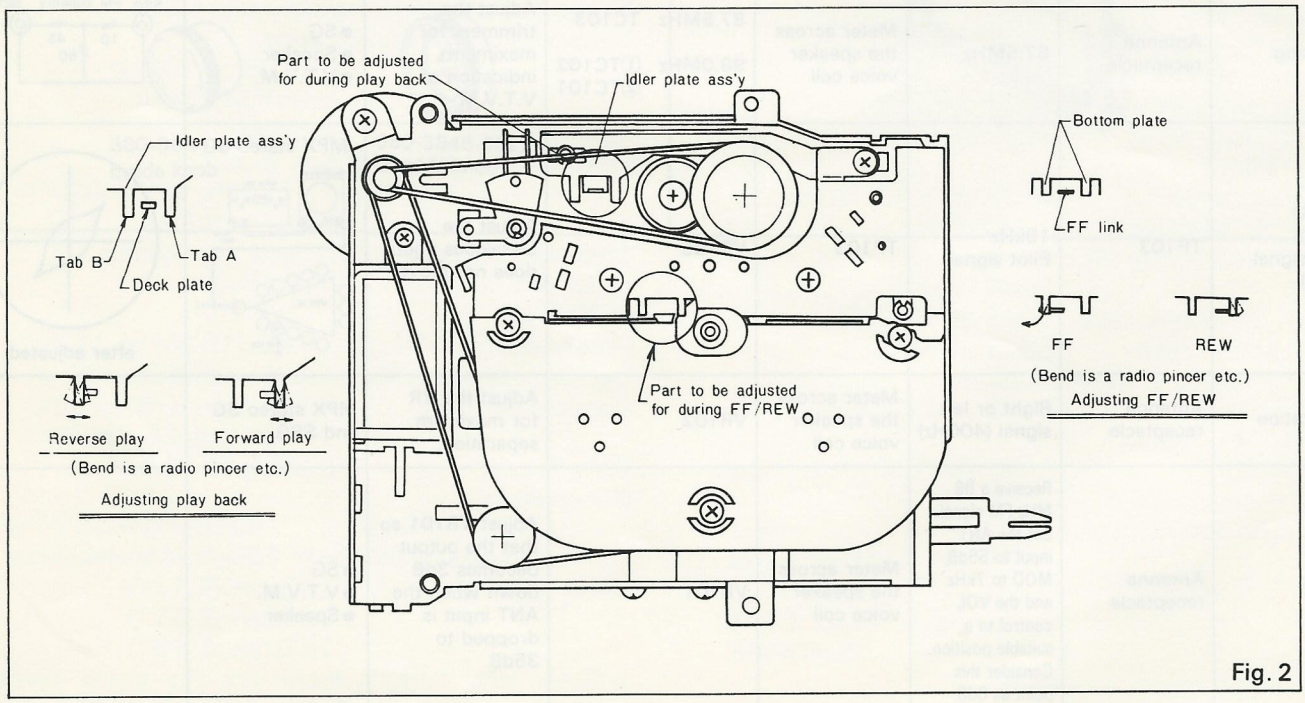


Fig. 2

3. Removing the eject mechanism

Remove the power switch (013-3290-01) after removing the machine screw (714-2008-81).

Remove 2 machine screws (714-2603-11) and 2 machine screws (714-2603-41), and then remove the eject mechanism in one unit by lifting it.

(Refer to Fig. 3 (A), (B))

Note: When removing the left front machine screw (714-2603-11), the slide plate spring will be in the way, so remove it or pull it out of the way using pincers.

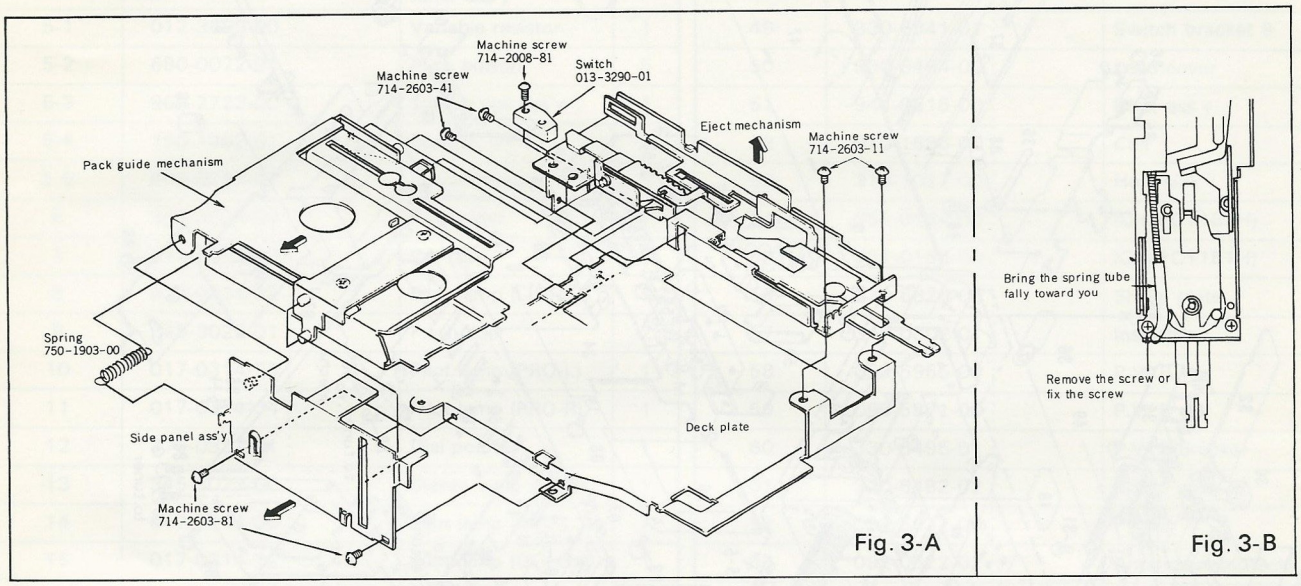


Fig. 3-A Fig. 3-B

4. Installing the eject mechanism

(1) Insert part H of the eject mechanism into the hole in the deck plate. (H—H')

(2) Insert the pin of the cam plate ass'y into the heart shaped hole in the cam. (A—A')

(3) Insert the shaft of the change-plate ass'y into the hole in the change-sub. plate ass'y. (B—B')

(4) Match the single direction starting tab and switch D. (D—D')

(5) Insert the link pin into the hole in the head plate. (F—F')

(6) Press the pinch-rollers on the F and R sides, and insert the F and R pinch-rollers (white plastic) into the change-plate. (C—C', E—E')

(7) Insert the pin of the FF plate ass'y between tabs of the FF sub. plate. (G—G')

(8) Fix the mechanism with:
2 machine screw (714-2603-11) in the front.
2 machine screws (714-2603-41) in the rear.
(Refer to Fig. 3 (A), (B))

Note: When fixing the eject mechanism with screws, be careful not to apply too much force to the spring as when removing the eject mechanism.
(Refer to Fig. 4)

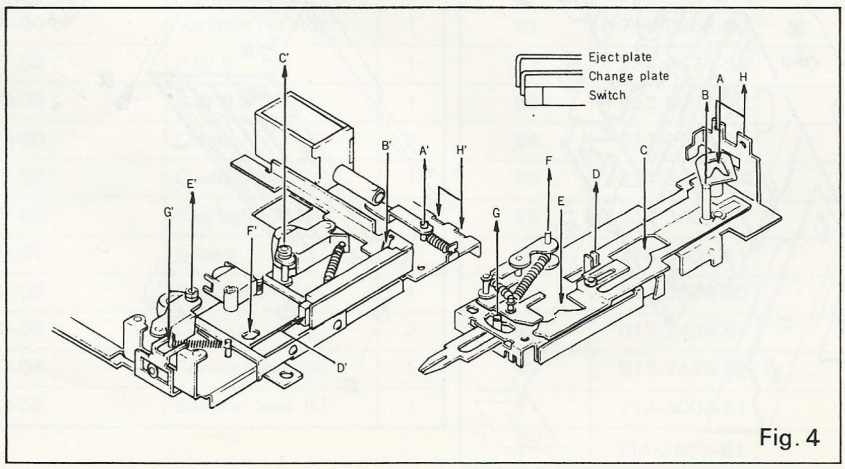
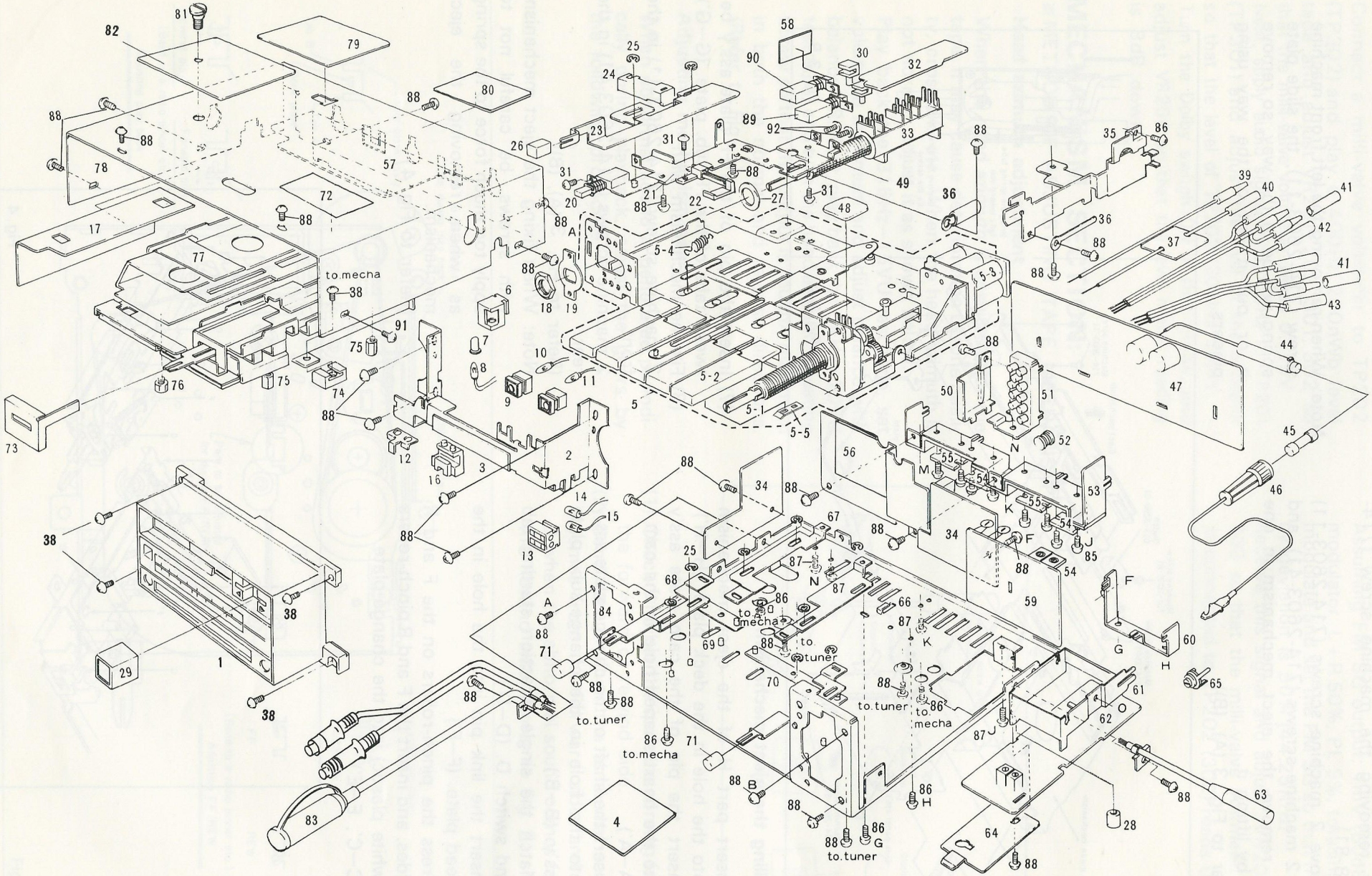


Fig. 4

■EXPLODED VIEW:

◎Main section



■PARTS LIST:

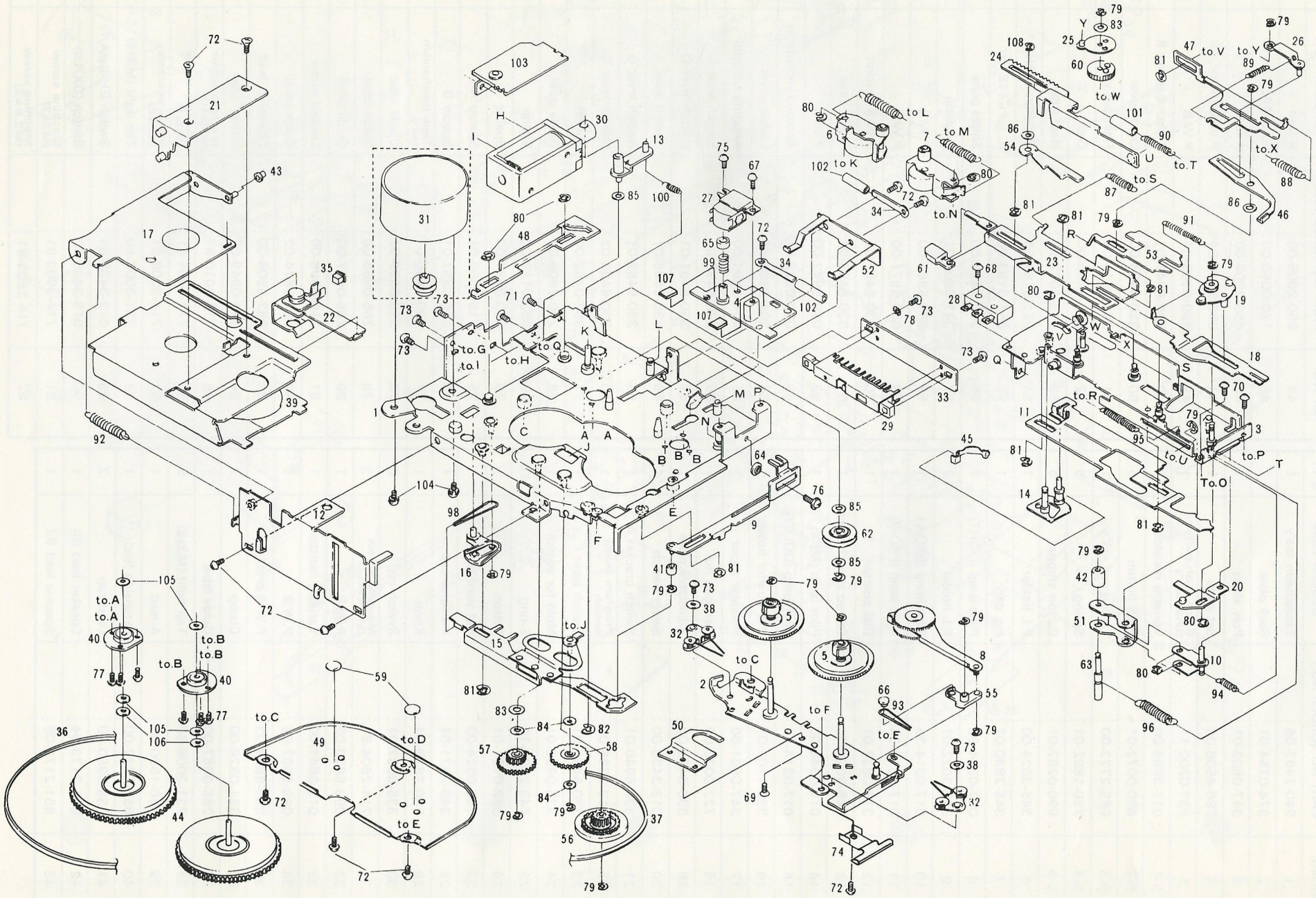
◎Main section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
1	940-2467-06	Escutcheon ass'y	1
2	374-0754-01	Back plate	1
3	347-0803-01	Poly slider	1
4	286-4506-00	Set plate	1
5	937-0200-11	6 coil push button tuner ass'y	1
5-1	012-3699-00	Variable resistor	1
5-2	680-0072-01	Push button	5
5-3	965-2723-00	Tuning coil ass'y	1
5-4	750-1882-01	Spring	5
5-5	690-0287-01	Button stopper	5
6	345-3024-00	P.L holder	1
7	345-2830-02	P.L cap	1
8	017-0314-32	Pilot lamp (LIGHT)	1
9	345-3022-01	P.L holder	2
10	017-0314-35	Pilot lamp (PRO-L)	1
11	017-0314-34	Pilot lamp (PRO-R)	1
12	376-0837-01	Dial pointer	1
13	345-3023-00	Stereo lamp holder	1
14	017-0344-00	Pilot lamp (MPX)	1
15	017-0314-12	Pilot lamp (DOLBY)	1
16	335-1101-01	Dial pointer holder	1
17	347-0801-00	Insulator paper	1
18	722-0020-00	Hexagon nut	1
19	330-6483-00	Adjustable plate	1
20	013-3439-00	Select switch	1
21	330-6940-01	Switch bracket A	1
22	013-3395-00	Program select switch	1
23	330-6497-01	Switch lever F	1
24	335-0986-01	Mold for switch	1
25	743-2000-10	E-ring	10
26	382-0151-01	Button	1
27	745-0524-00	Flat washer	1
28	345-2671-01	Insulator cap	1
29	380-3839-04	Knob	1
30	335-0987-01	Switch cap	2
31	714-2604-81	Machine screw (M2.6x4)	3
32	099-5620-02	P.W.B	1
33	012-3641-00	Variable resistor	1
34	099-5567-02	P.W.B	1
35	330-6819-03	P.W.B bracket	1
36	321-0828-00	Clamp	2
37	285-0667-00	Guide label	1
38	731-3008-80	Tap tight (M3x8)	5
39	850-1580-01	A-lead	1
40	852-5322-00	Extension lead	1
41	335-0950-00	Lead cap	2
42	851-2173-04	Speaker lead (R)	1
43	851-2173-05	Speaker lead (L)	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
44	850-2005-00	A-lead	1
45	120-0050-00	Fuse (5A)	1
46	850-2004-00	A-lead	1
47	099-5563-04	P.W.B	1
48	099-5565-01	P.W.B	1
49	330-6941-01	Switch bracket B	1
50	330-6494-00	Lead cover	1
51	944-0516-00	Filter ass'y	1
52	010-1686-00	Coil	1
53	313-1027-00	Heat sink	1
54	051-0184-00	IC (μPC1182H)	2
55	051-0183-00	IC (μPC1181H)	2
56	330-6828-00	Shield plate	1
57	347-0802-01	Insulator	1
58	099-5965-00	P.W.B	1
59	099-5971-00	P.W.B	1
60	330-6495-01	P.W.B bracket	1
61	330-6482-02	Shield case	1
62	099-5972-00	P.W.B	1
63	092-0522-02	Antenna receptacle	1
64	304-0306-00	Lower cover	1
65	004-1494-00	Antenna trimmer	1
66	330-6492-01	Switch lever E	1
67	330-6491-01	Switch lever D	1
68	330-6488-01	Switch lever A	2
69	330-6489-01	Switch lever B	1
70	330-6490-02	Switch lever C	1
71	382-0152-00	Button	2
72	290-2909-01	Guide label	2
73	353-0119-00	Shade	1
74	340-0421-00	Spacer	1
75	716-0356-01	Spacer A	1
76	716-0357-01	Spacer B	1
77	930-0460-07	Tape mechanism ass'y	1
78	310-0939-02	Upper case	1
79	285-0868-00	Guide label	1
80	285-0897-00	Guide label	1
81	716-0308-00	Locked screw	1
82	285-0674-02	Guide label	1
83	852-6506-00	Extension lead	1
84	311-0949-02	Lower case	1
85	714-3010-81	Machine screw (M3x10)	8
86	714-3004-81	Machine screw (M3x4)	6
87	714-3006-81	Machine screw (M3x6)	4
88	731-3005-80	Tap tight (M3x5)	33
89	013-3439-01	Switch (Dolby-A/F)	1
90	013-3439-02	Switch (DX/Lo)	1
91	714-3003-81	Machine screw (M3x3)	1
92	714-2603-81	Machine screw (M2.6x3)	2

■EXPLODED VIEW:

◎Mechanism section



■PARTS LIST:

◎Mechanism section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
1	960-3125-02	Deck plate ass'y	1
2	960-3124-01	Bottom plate ass'y	1
3	960-3126-02	Frame ass'y	1
4	960-3286-00	Head plate ass'y	1
5	960-3128-03	Reel base ass'y	2
6	960-3129-01	Roller F ass'y	1
7	960-3130-00	Roller R ass'y	1
8	960-3131-01	F.F idler ass'y	1
9	960-3132-00	F.F subplate ass'y	1
10	960-3133-01	F.F lock ass'y	1
11	960-3134-00	Change plate ass'y	1
12	960-3135-02	Side panel ass'y	1
13	960-3136-00	Cam plate ass'y	1
14	960-3137-00	Cam ass'y	1
15	960-3138-01	Idler plate ass'y	1
16	960-3139-00	Change arm ass'y	1
17	960-3140-00	Guide arm ass'y	1
18	960-3141-02	Eject L ass'y	1
19	960-3142-02	F.F plate A ass'y	1
20	960-3143-00	Off plate ass'y	1
21	960-3144-00	Guide plate ass'y	1
22	960-3145-02	Pack holder ass'y	1
23	960-3146-02	Eject P ass'y	1
24	960-3147-00	Slide plate ass'y	1
25	960-3148-01	Gear arm ass'y	1
26	960-3149-02	Arm plate ass'y	1
27	011-0271-01	Head	1
28	013-3290-01	Switch	1
29	013-3397-00	Switch	1
30	015-0225-00	Plunger	1
31	960-3257-00	D.C motor ass'y	1
32	073-0557-02	Terminal	2
33	099-5174-02	P.W.B	1
34	330-4896-00	Lead clamp	2
35	345-3016-00	Rubber cushion	1
36	602-0050-00	Belt A	1
37	602-0051-00	Belt B	1
38	740-2600-31	Flat washer (M2.6)	2
39	606-0064-00	Pack guide	1
40	609-0055-01	Bearing	2
41	610-0078-00	F.F roller	1
42	610-0079-00	Link roller	1
43	610-0080-00	Roller	1
44	611-0054-00	Flywheel	2
45	630-0931-00	Plate spring	1
46	630-1138-00	Link plate	1
47	630-1139-00	Power plate	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
48	630-1140-00	Change S plate	1
49	630-1141-00	Flywheel plate	1
50	630-1142-00	Guide plate B	1
51	630-1143-00	Head link	1
52	630-1144-00	Plate spring	1
53	630-1145-01	Off plate	1
54	630-1146-01	Lock plate	1
55	631-0289-00	F.F arm	1
56	631-0290-02	Gear pulley	1
57	631-0291-02	Sub gear	1
58	631-0292-01	Idler gear	1
59	631-0293-00	Thrust washer	2
60	631-0294-00	Guide gear	1
61	631-0295-00	Switch cap	1
62	632-0868-00	Tension pulley	1
63	632-0869-00	Link pin	1
64	632-0870-00	Spacer	1
65	632-0871-00	Spacer	1
66	632-0872-00	F.F arm pin	1
67	714-2004-81	Machine screw (M2x4)	1
68	714-2008-81	Machine screw (M2x8)	1
69	714-2304-41	Machine screw (M2.3x4)	1
70	714-2603-11	Machine screw (M2.6x3)	2
71	714-2603-41	Machine screw (M2.6x3)	2
72	714-2603-81	Machine screw (M2.6x3)	11
73	714-2604-81	Machine screw (M2.6x4)	7
74	630-1221-00	Plate spring	1
75	716-0286-00	Screw(M2x4)	1
76	716-0344-01	Sems screw(M2x3)	1
77	716-0345-00	Screw(M2x2.2)	6
78	742-2600-20	Toothed washer (M2.6)	1
79	743-1500-10	E-ring	17
80	743-2000-10	E-ring	7
81	743-2500-10	E-ring	8
82	743-3000-10	E-ring	1
83	745-0586-00	Flat washer	2
84	746-0617-00	Flat washer	3
85	746-0624-00	Flat washer	3
86	746-0664-00	Flat washer	2
87	750-1898-01	Eject plate spring	1
88	750-1899-00	Power plate spring	1
89	750-1900-00	Arm plate spring	1
90	750-1901-00	Slide plate spring	1
91	750-1902-00	Eject lever spring	1
92	750-1903-00	Side panel spring	1
93	750-1904-00	F.F arm spring	1
94	750-1905-00	F.F lock spring	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
95	750-1906-00	Off plate spring	1
96	750-1907-00	Head plate link spring	1
97	750-1908-00	Pinch rolller spring	2
98	750-1909-01	Change arm spring	1
99	750-1910-00	Head azimuth spring	1
100	750-1911-00	Cam plate spring	1
101	825-0230-00	Vinyl tube	1
102	820-4025-02	Vinyl tube	2

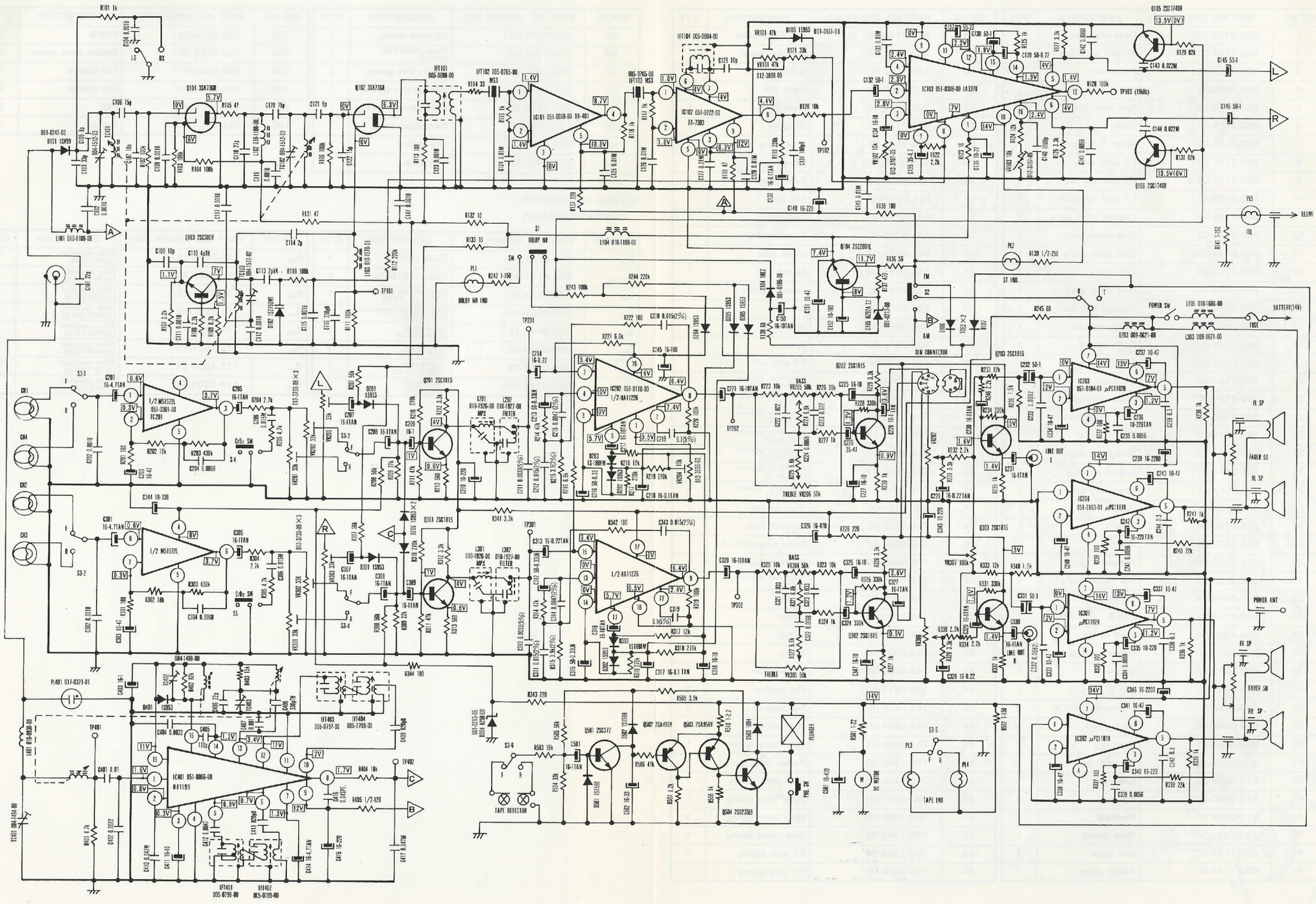
REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
103	099-5319-02	P.W.B	1
104	716-0347-00	Double sems screw	2
105	746-0688-01	Flat washer	4
106	746-0691-00	Flat washer	2
107	631-0326-00	Pad	2
108	744-0017-00	E-ring	1

◎Tape mechanism
Electrical section

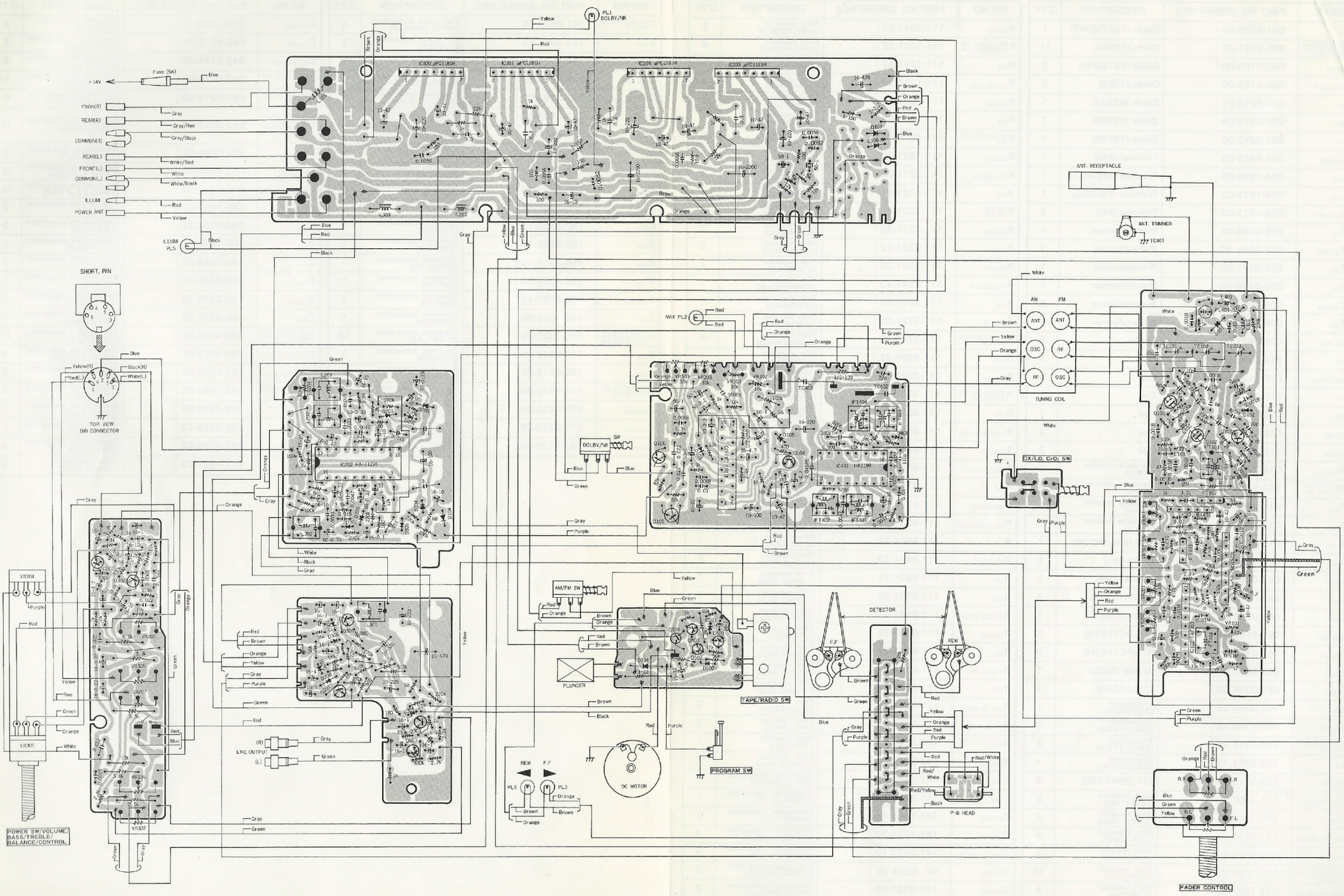
REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
D_{503}	001-0077-00	Diode (10D4)	1
$D_{501,502}$	001-0112-00	Diode (1S1588)	2
C_{502}	042-0239-00	Electrolytic capacitor (16V1μF TAN)	1
C_{503}	042-0259-00	Electrolytic capacitor (16V33μF)	1
Q_{502}	100-0495-25	Transistor (2SA495Y)	1
Q_{503}	100-0950-25	Transistor (2SA950Y)	1
Q_{501}	102-0372-15	Transistor (2SC372-O)	1
Q_{504}	103-0235-99	Transistor (2SD235)	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
R_{508}	111-1021-12	Film resistor (⅛W1KΩ)	1
R_{507}	111-1221-21	Film resistor (¼W1.2KΩ)	1
R_{504}	111-3331-12	Film resistor (⅛W33KΩ)	1
R_{509}	111-3921-12	Film resistor (⅛W3.9KΩ)	1
R_{506}	111-4731-12	Film resistor (⅛W47KΩ)	1
R_{505}	111-5631-12	Film resistor (⅛W56KΩ)	1
R_{503}	111-1831-21	Film resistor (¼W18KΩ)	1
R_{510}	114-2201-51	Film resistor (1W22Ω)	1

■CIRCUIT DIAGRAM:



■PRINTED WIRING BOARD:



■PARTS LIST:

◎Electrical section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
D_{102}	001-0130-00	Diode (1S2790WT)	1
$D_{205,206,301,302,305,306,401}^{103,201,202,204}$	001-0151-00	Diode (1S953)	11
$D_{203,303}$	001-0180-00	Diode (1S188FM)	2
$D_{104,106,107}$	001-0186-00	Diode (10E2)	3
D_{105}	001-0213-01	Diode (HZ9A2)	1
D_{304}	001-0213-05	Diode (HZ9B3)	1
D_{101}	001-0242-00	Diode (1SV99)	1
$TC_{402,403}$	004-1488-00	Trimmer (AM)	1
TC_{401}	004-1494-00	Trimmer (AM-ANT)	1
TC_{103}	004-1512-02	Trimmer (FM-OSC)	1
$TC_{101,102}$	004-1512-03	Trimmer (FM)	2
IFT_{101}	005-0698-00	IF-transformer	1
$IFT_{102,103}$	005-0765-00	IF-transformer	2
IFT_{403}	005-0797-00	IF-transformer	1
IFT_{401}	005-0798-00	IF-transformer	1
$IFT_{402,404}$	005-0799-00	IF-transformer	2
IFT_{104}	005-0804-00	IF-transformer	1
$L_{203,303}$	009-0621-00	Choke	2
L_{401}	010-0930-00	Coil	1
$L_{101,102,104}$	010-1180-00	Coil	3
L_{103}	010-1570-01	Coil	1
L_{105}	010-1686-00	Coil	1
$L_{201,301}$	010-1926-00	Coil	2
$L_{202,302}$	010-1927-00	Coil	2
$VR_{102,103}$	012-3707-05	Variable resistor (10kΩ)	2
$VR_{301,302,303}^{201,202,203}$	012-3733-09	Variable resistor (33kΩ)	6
VR_{204}	012-3550-02	Variable resistor (10kΩ)	1
VR_{101}	012-3808-09	Variable resistor (47kΩ)	1
PL_{401}	017-0321-01	Pilot lamp (NEON)	1
IC_{101}	051-0058-00	IC (BA401)	1
IC_{401}	051-0066-00	IC (HA1199)	1
IC_{202}	051-0118-00	IC (HA11226)	1
IC_{102}	051-0122-00	IC (TA7303)	1
$IC_{204,302}$	051-0183-01	IC (μPC1181H)	2
$IC_{203,301}$	051-0184-01	IC (μPC1182H)	2
IC_{201}	051-0301-00	IC (M51522L)	1
IC_{103}	051-0308-00	IC (LA3370)	1
Q_{103}	102-0380-25	Transistor (2SC380Y)	1
$Q_{105,106}$	102-1740-18	Transistor (2SC1740R)	2
$Q_{302,303}^{201,202,203,301}$	102-1815-25	Transistor (2SC1815Y)	6
Q_{104}	102-2001-12	Transistor (2SC2001L)	1
$Q_{101,102}$	124-0073-28	FET (3SK73GR)	2
$R_{123,132,133}$	111-1001-22	Film resistor (¼Ws10Ω)	3
$R_{113,135}$	111-1011-22	Film resistor (¼Ws100Ω)	2
$R_{237,239,335,337}$	111-1011-32	Film resistor (¼W100Ω)	4
R_{101}	111-1021-21	Film resistor (¼Ws1kΩ)	1
$R_{227,230,235,238,241,324}^{115,116,117,125}$	111-1021-22	Film resistor (¼Ws1kΩ)	10
$R_{327,332,336,339}$	111-1021-32	Film resistor (¼W1kΩ)	4
$R_{120,223,404}$	111-1031-21	Film resistor (¼Ws10kΩ)	3
$R_{226,320,323}$	111-1031-22	Film resistor (¼Ws10kΩ)	3

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
$R_{111,128}$	111-1041-21	Film resistor (¼Ws100kΩ)	2
$R_{110,220,243,319}^{102,103,104,106}$	111-1041-22	Film resistor (¼Ws100kΩ)	8
R_{405}	111-1211-41	Film resistor (½W120Ω)	1
$R_{124,218,317}$	111-1231-22	Film resistor (¼Ws12kΩ)	3
$R_{233,333}$	111-1231-32	Film resistor (¼W12kΩ)	2
R_{403}	111-1531-22	Film resistor (¼Ws15kΩ)	1
$R_{344}^{201,222,301,342}$	111-1811-22	Film resistor (¼Ws180Ω)	5
$R_{202,302}$	111-1831-22	Film resistor (¼Ws18kΩ)	2
$R_{134,328,343}$	111-2211-22	Film resistor (¼Ws220Ω)	3
R_{330}	111-2221-21	Film resistor (¼Ws2.2kΩ)	1
$R_{122,232}^{107,108}$	111-2221-22	Film resistor (¼Ws2.2kΩ)	4
$R_{246,340}$	111-2221-32	Film resistor (¼W2.2kΩ)	2
$R_{209,309}$	111-2231-22	Film resistor (¼Ws22kΩ)	2
$R_{240,338}$	111-2231-32	Film resistor (¼W22kΩ)	2
$R_{112,119,244}$	111-2241-22	Film resistor (¼Ws220kΩ)	3
R_{139}	111-2511-41	Film resistor (½W250Ω)	1
$R_{204,304}$	111-2721-22	Film resistor (¼Ws2.7kΩ)	2
$R_{316,318}^{210,217,219,310}$	111-2741-22	Film resistor (¼Ws270kΩ)	6
R_{114}	111-3301-22	Film resistor (¼Ws33Ω)	1
$R_{231,329}$	111-3321-21	Film resistor (¼Ws3.3kΩ)	2
$R_{312,326,341}^{126,127,212,229}$	111-3321-22	Film resistor (¼Ws3.3kΩ)	7
R_{121}	111-3331-22	Film resistor (¼Ws33kΩ)	1
$R_{228,234,325,331}$	111-3341-22	Film resistor (¼Ws330kΩ)	4
$R_{203,303}$	111-4341-22	Film resistor (¼Ws430kΩ)	2
$R_{105,118,131}$	111-4701-22	Film resistor (¼Ws47Ω)	3
R_{137}	111-4711-22	Film resistor (¼Ws470Ω)	1
$R_{205,305,401}$	111-4721-21	Film resistor (¼Ws4.7kΩ)	3
$R_{211,214,311,314}$	111-4731-22	Film resistor (¼Ws47kΩ)	4
R_{136}	111-5601-22	Film resistor (¼Ws56Ω)	1
$R_{213,313}$	111-5611-22	Film resistor (¼Ws560Ω)	2
R_{225}	111-5621-21	Film resistor (¼Ws5.6kΩ)	1
R_{322}	111-5621-22	Film resistor (¼Ws5.6kΩ)	1
$R_{207,208,307,308}$	111-5631-22	Film resistor (¼Ws56kΩ)	4
$R_{138,245}$	111-6801-22	Film resistor (¼Ws68Ω)	2
R_{224}	111-6821-21	Film resistor (¼Ws6.8kΩ)	1
$R_{216,221,321}$	111-6821-22	Film resistor (¼Ws6.8kΩ)	3
R_{109}	111-8221-22	Film resistor (¼Ws8.2kΩ)	1
$R_{129,130,402}$	111-8231-22	Film resistor (¼Ws82kΩ)	3
$R_{140,242,502}$	114-1511-51	Film resistor (1W150Ω)	3
R_{501}	114-2292-51	Film resistor (1W2.2Ω)	1
$R_{215,315}$	032-0037-00	Film resistor (¼Ws3.9kΩ)	2
C_{407}	141-1023-10	Polyester capacitor (50V0.001μF)	1
C_{401}	141-1033-10	Polyester capacitor (50V0.01μF)	1
$C_{219,319}$	141-1041-10	Polyester capacitor (50V0.1μF)	2
$C_{402,404}$	141-2223-10	Polyester capacitor (50V0.0022μF)	2
$C_{222,223,321,323}$	141-2233-10	Polyester capacitor (50V0.022μF)	4
$C_{233,332}$	141-8223-10	Polyester capacitor (50V0.0082μF)	2
$C_{211,310}$	141-3321-10	Polyester capacitor (50V0.0033μF)	2
C_{412}	141-4723-10	Polyester capacitor (50V0.0047μF)	1
$C_{235,241,334,339}$	141-5623-10	Polyester capacitor (50V0.0056μF)	4

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
$C_{304,323}^{141,142,204,224}$	141-6823-10	Polyester capacitor (50V0.0068μF)	6
C_{140}	143-1021-50	Polyester capacitor (1000pF)	1
C_{405}	144-1112-10	Mica capacitor (110pF)	1
$C_{215,314}$	043-0068-00	Ceramic capacitor (50V0.0047μF)	2
$C_{212,220,311,343}$	043-0093-00	Ceramic capacitor (50V0.015μF)	4
$C_{224,238,336,342}$	043-0122-00	Ceramic capacitor (12V0.3μF)	4
C_{416}	043-0151-00	Ceramic capacitor (0.04μF)	1
$C_{107,109,129}$	150-1007-13	Ceramic capacitor (10pFCH)	3
$C_{106,120,122}$	150-1502-13	Ceramic capacitor (15pFCH)	3
C_{114}	150-2096-13	Ceramic capacitor (2pFCH)	1
C_{113}	150-2097-64	Ceramic capacitor (2pFVK)	1
C_{118}	150-2702-13	Ceramic capacitor (27pFCH)	1
C_{103}	150-3302-13	Ceramic capacitor (33pFCH)	1
C_{408}	150-3311-50	Ceramic capacitor (330pFTH)	1
C_{110}	150-4096-50	Ceramic capacitor (4pFTH)	1
$C_{105,121}$	150-8097-13	Ceramic capacitor (8pFCH)	2
C_{131}	160-1012-05	Ceramic capacitor (100pFB)	1
$C_{123,147,202,302}^{102,104,108,111,112,115,117,119}$	160-1022-05	Ceramic capacitor (0.001μFB)	12
C_{116}	160-3312-05	Ceramic capacitor (330pFB)	1
$C_{409,413}$	160-8212-05	Ceramic capacitor (820pFB)	2
$C_{128,133,149}^{124,125,126,127}$	171-1033-06	Ceramic capacitor (0.01μFM)	7
$C_{206,306}$	171-1533-06	Ceramic capacitor (0.015μFM)	2
$C_{143,144}$	171-2233-06	Ceramic capacitor (0.022μFM)	2
$C_{410,417}$	171-4733-06	Ceramic capacitor (0.047μFM)	2

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
$C_{101,406}$	174-2200-13	Ceramic capacitor (22pFCH)	2
$C_{326,501}$	042-0173-00	Electrolytic capacitor (16V470μF)	2
$C_{201,301,414}$	042-0174-00	Electrolytic capacitor (16V4.7μFTAN)	3
$C_{320}^{150,217,221,316}$	042-0176-00	Electrolytic capacitor (16V10μFTAN)	5
$C_{340,345}^{210,236,242,335}$	042-0219-00	Electrolytic capacitor (10V220μFTAN)	6
$C_{228,230,231,305,307,308,309,327,329,330,403}^{205,207,208,209}$	042-0239-00	Electrolytic capacitor (16V1μFTAN)	15
$C_{239,346}$	042-0246-01	Electrolytic capacitor (16V2200μF)	2
$C_{130,218,317}$	042-0248-00	Electrolytic capacitor (16V0.1μFTAN)	3
$C_{214,229,313,328}$	042-0249-00	Electrolytic capacitor (16V0.22μFTAN)	4
$C_{232,331}$	180-1054-62	Electrolytic capacitor (50V1μF)	2
$C_{318,411}$	180-1064-32	Electrolytic capacitor (16V10μF)	2
C_{152}	180-1074-22	Electrolytic capacitor (10V100μF)	1
C_{245}	180-1074-32	Electrolytic capacitor (16V100μF)	1
C_{136}	180-2264-22	Electrolytic capacitor (10V22μF)	1
$C_{148,415}$	180-2274-32	Electrolytic capacitor (16V220μF)	2
C_{344}	180-3374-22	Electrolytic capacitor (10V330μF)	1
$C_{240,243,303,333,337,338,341}^{151,203,234,237}$	180-4764-22	Electrolytic capacitor (10V47μF)	11
$C_{213,216,312,315}$	181-3343-62	Electrolytic capacitor (50V0.33μFLN)	4
$C_{132,138,145,146}$	182-1053-62	Electrolytic capacitor (50V1μF)	4
$C_{347}^{134,225,227,325}$	182-1063-32	Electrolytic capacitor (16V10μF)	5
C_{139}	182-2243-62	Electrolytic capacitor (50V0.22μF)	1
C_{137}	182-2253-62	Electrolytic capacitor (50V2.2μF)	1
$C_{135,226,324}$	182-4753-52	Electrolytic capacitor (35V4.7μF)	3
$R_{236,334}$	111-1521-22	Film resistor (¼Ws1.5kΩ)	2