

SERVICE MANUAL

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MAZDA AUTOMOBILE GENUINE STEREO DECK MODEL PT-862D-01

Manufacturer **CLARION CO., LTD.** /

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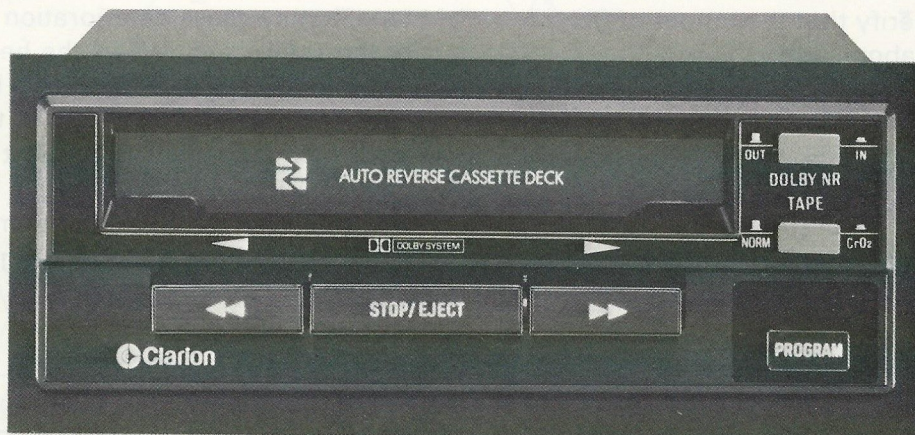
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Tel: 3-690528 Telex: HX64293 CLAHK

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SPECIFICATIONS:

Reproduction system: 4 track, 2 program,
2 channel stereo
reproduction.
(2 track, 2 program,
1 channel monaural
reproduction possible.)
Auto reverse

Tape speed: 4.75cm/s

Wow and flutter: Less than 0.3% (W.R.M.S)

Separation: More than 30dB

Crosstalk: More than 40dB

S/N ratio:

Normal position

DOLBY NR OFF: More than 42dB

ON: More than 50dB

CrO₂ position

DOLBY NR OFF: More than 44dB

ON: More than 52dB

Power output: 115mV to 170mV
(Under 10kΩ load at 0VU)

Power supply voltage: DC 13.2V
Negative ground

Current consumption: Less than 500mA
(Less than 5A at plunger
operated)

Semiconductor: 2 ICs, 1 transistor and
10 diodes

Dimensions: Width 150mm
Height 50mm
Depth 135mm

Weight: 1.3kg

* Noise reduction system manufactured under
licence from Dolby Laboratories.

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

COMPONENTS:

Main unit 1

FEATURES:

1. Auto reverse at play ended.
2. Auto reverse at FF, REW ended.

■ADJUSTMENTS:

1. Adjusting Dolby level

Play the test tape CTT-422-112 (400Hz, 200nWb/m) and adjust VR3 (VR5) and VR4 (VR6) so that the voltage at TP3 and TP4 becomes 775mV.

(Dolby NR switch : OFF)

2. Adjusting playback frequency response

(1) Play the test tape CTT-422-102 (315Hz, -10VU) and take the voltage at TP3, TP4 as reference.

(2) Play the test tape CTT-422-113 (8kHz, -10VU) and adjust VR1, VR2 so that the level becomes the same as in item (1) above.

(Tape Selector: NORM, Dolby NR switch: OFF)

(3) Next switch the Tape Selector to the CrO₂ position and verify that the output of 8kHz decreases by about 4dB.

3. Adjusting Dolby NR effective width

(1) Insert an empty pack into the deck to turn on the electrical circuit.

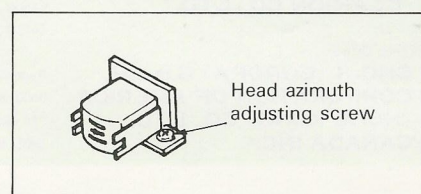
(2) Set the CR oscillator frequency to 5kHz and feed this signal to TP1 (TP2).

(3) Adjust the output of the oscillator so that the level at TP3 (TP4) becomes 59mV when the Dolby NR switch is set to the OFF position.

(4) With the Dolby NR switch set to the ON position, adjust VR7 to set the level 8dB below that of item (3) above.

(Tape Selector : NORM)

4. 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

■PARTS LIST:

◎Main section

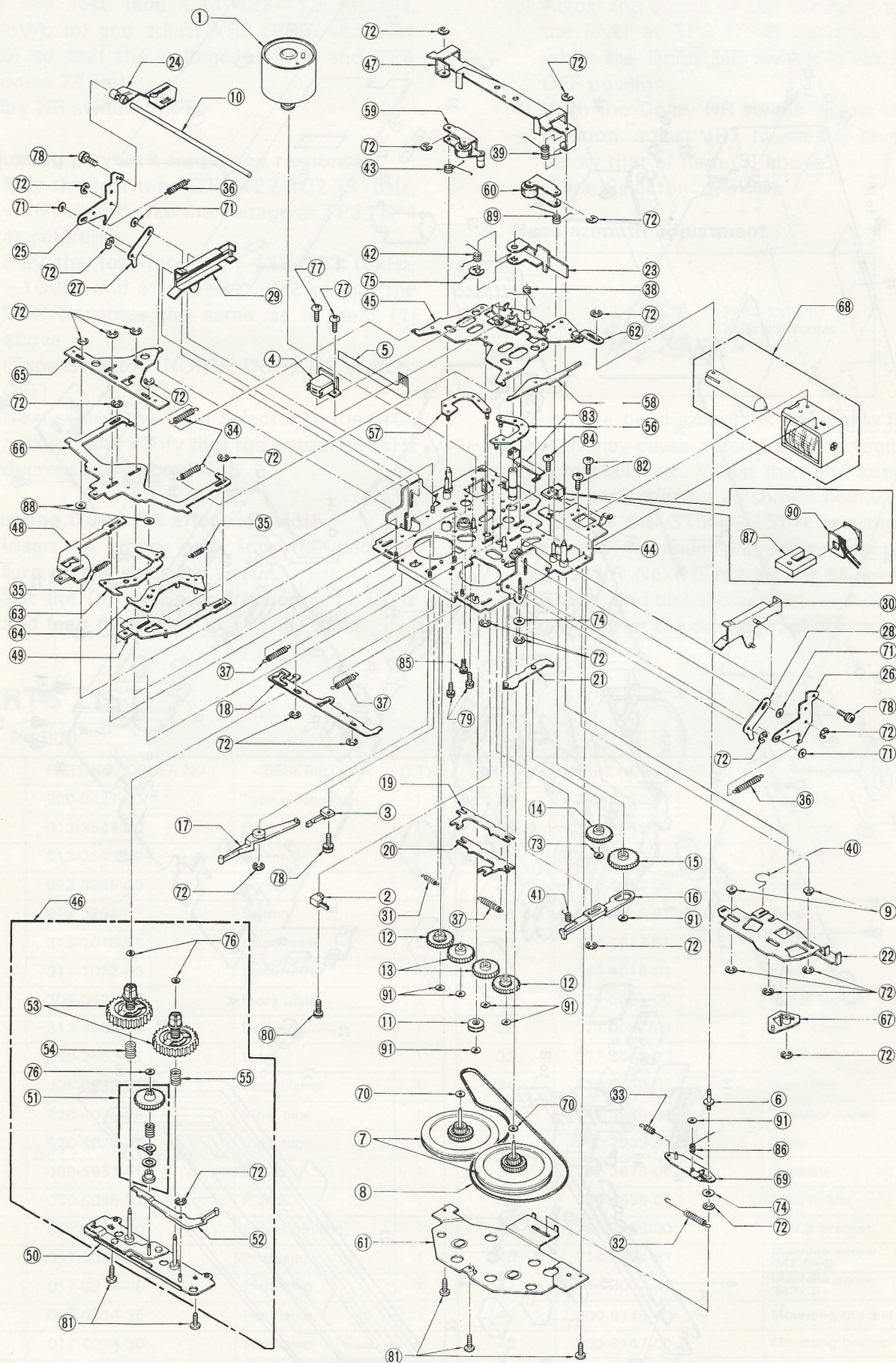
REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
1	930-0477-00	Tape mechanism	1
2	013-3548-00	Switch	1
3	013-3549-00	Switch	1
4	013-3346-03	Switch	2
5	013-3264-01	Switch	1
6	310-1018-01	Upper case	1
7	311-1012-03	Lower case	1
8	309-0427-00	Front plate	1
9	313-1109-00	Heat sink	1
10	290-2567-01	Label	1
11	335-0833-01	Lead clamp	1
12	820-4010-08	Vinyl tube	1
13	820-4025-02	Vinyl tube	1
14	099-5957-01	P.W.B	1
15	099-5956-01	P.W.B	1
16	852-6463-00	Extension lead	1
17	017-0314-21	Pilot lamp	1
18	017-0314-08	Pilot lamp	1
19	017-0314-35	Pilot lamp	1
20	017-0314-30	Pilot lamp	1
21	714-3006-81	Machine screw (M3x6)	1
22	714-3004-81	Machine screw (M3x4)	19
23	940-2549-01	Escutcheon ass'y	1

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
24	345-3264-01	P.L holder	1
25	345-3265-01	P.L holder	1
26	345-3308-00	P.L holder	2
27	380-4012-00	Knob	2
28	380-4016-01	Knob	1
29	380-4017-01	Knob	1
30	380-4018-01	Knob	1
31	074-0635-00	Outlet socket	1
32	077-0081-01	Fuse holder	1
33	077-0081-03	Fuse holder	1
34	120-0050-02	Fuse (5A)	1
35	347-0935-01	Insulator paper	1
36	290-2909-01	Label	1
37	286-3678-00	Set plate	1
38	330-4896-00	Lead holder	1
39	330-7185-00	P.W.B bracket	1
40	714-2604-81	Machine screw (M2.6x4)	4
41	714-3003-81	Machine screw (M3x3)	1
42	300-6146-00	Mounting bracket	1
43	300-6147-00	Mounting bracket	1
44	300-6148-00	Mounting bracket	1
45	716-0417-00	Machine screw	2

©Main section

EXPLODED VIEW:

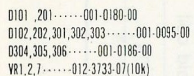
©Mechanism section



PARTS LIST:

©Mechanism section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY	REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
1	658-0123-01	Motor ass'y	1	47	658-0123-46	Lever ass'y	1
2	658-0123-02	End detecting switch	1	48	658-0123-47	F.F lever	1
3	658-0123-03	Hold switch	1	49	658-0123-48	REW lever	1
4	658-0123-04	Head	1	50	658-0123-49	Reel base plate	1
5	658-0123-05	Head P.W.B	1	51	658-0123-50	Detecting gear	1
6	658-0123-70	Plunger pin	1	52	658-0123-51	End detecting arm	1
7	658-0123-07	Flywheel	2	53	658-0123-52	Reel base ass'y	2
8	658-0123-08	Belt	1	54	658-0123-53	Back tension spring (L)	1
9	658-0123-09	Selector plate shaft roller	2	55	658-0123-54	Back tension spring (R)	1
10	658-0123-10	Cassette guide link bar	1	56	658-0123-55	Idler plate (L)	1
11	658-0123-11	Idler pulley	1	57	658-0123-56	Idler plate (R)	1
12	658-0123-12	Idler gear	2	58	658-0123-57	F.R release plate	1
13	658-0123-13	F.R gear	2	59	658-0123-58	Pinch roller (L) ass'y	1
14	658-0123-14	Double gear	1	60	658-0123-59	Pinch roller (R) ass'y	1
15	658-0123-15	Gear	1	61	658-0123-60	Flywheel plate	1
16	658-0123-16	End detecting Hook	1	62	658-0123-61	Pressure cam	1
17	658-0123-17	Link	1	63	658-0123-62	F.R gear plate (L)	1
18	658-0123-18	Switch lever	1	64	658-0123-63	F.R gear plate (R)	1
19	658-0123-19	F.F cam plate (1)	1	65	658-0123-64	Lever lock plate	1
20	658-0123-20	F.F cam plate (2)	1	66	658-0123-65	Eject lever	1
21	658-0123-21	Timing plate	1	67	658-0123-66	Selector cam	1
22	658-0123-22	Selector plate	1	68	658-0123-67	Plunger ass'y	1
23	658-0123-23	Play lock plate	1	69	658-0123-68	Plunger lever	1
24	658-0123-24	Actuator	1	70	658-0123-77	Polyslider	2
25	658-0123-25	Cassette guide link (1L)	1	71	658-0123-78	Snap ring	4
26	658-0123-26	Cassette guide link (1R)	1	72	743-2000-00	E-ring	7
27	658-0123-27	Cassette guide link (2L)	1	73	658-0123-79	Snap ring	1
28	658-0123-28	Cassette guide link (2R)	1	74	658-0123-80	Flat washer	2
29	658-0123-29	Cassette guide (L)	1	75	743-3000-00	E-ring	1
30	658-0123-30	Cassette guide (R)	1	76	658-0123-81	Snap ring	3
31	658-0123-31	F.R roller spring	1	77	658-0123-82	Screw	2
32	658-0123-32	Plunger spring	1	78	732-2006-11	Sems screw (M2x6)	2
33	658-0123-33	Plunger lever spring	1	79	732-2604-11	Sems screw (M2.6x4)	2
34	658-0123-34	Head chassis spring	2	80	732-2606-11	Sems screw (M2.6x6)	1
35	658-0123-35	F.F lever spring	2	81	714-2606-81	Machine screw (M2.6x6)	7
36	658-0123-36	Cassette toading spring	2	82	714-3004-81	Machine screw (M3x4)	1
37	658-0123-37	Look plate spring	3	83	658-0123-71	Cord clasper	1
38	658-0123-38	Pressure spring	1	84	714-2606-81	Machine screw (M2.6x6)	2
39	658-0123-39	Eject arm return spring	1	85	732-2605-11	Sems screw (M2.6x5)	1
40	658-0123-40	Spring	1	86	658-0123-69	Plunger lever selector spring	1
41	658-0123-41	Detecting Hook spring	1	87	658-0123-72	Solenoid core	1
42	658-0123-42	Flapper spring	1	88	658-0123-73	Shaft collar	2
43	658-0123-43	Spring	1	89	658-0123-74	Spring	1
44	658-0123-44	Chassis ass'y	1	90	658-0123-75	Solenoid coil	1
45	658-0123-45	Head chassis ass'y	1	91	658-0123-84	Snap ring	7
46	658-0123-76	Reel ass'y	1				



VR3,4,5,6.....012-3733-09(33k)

PARTS LIST:

ⓈElectrical section

REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY	REF.NO.	PART NO. (ORDER NO.)	DESCRIPTION	Q'TY
D ^{102,202,301,302} ₃₀₃	001-0095-00	Diode (1S2076)	5	R _{119,219}	111-2231-22	Film resistor ($\frac{1}{4}$ Ws22k Ω)	2
D _{101,201}	001-0180-00	Diode (1S188FM)	2	R ₃₀₂	111-2241-22	Film resistor ($\frac{1}{4}$ Ws220k Ω)	1
D _{304,305,306}	001-0186-00	Diode (10E2)	3	R ₃₁₁	111-2291-22	Film resistor ($\frac{1}{4}$ Ws2.2k Ω)	1
L ₂	009-0470-02	Choke	1	R _{107,207}	111-2721-21	Film resistor ($\frac{1}{4}$ Ws2.7k Ω)	2
L ₃	009-0625-00	Choke	1	R _{115,116,215,216}	111-2741-22	Film resistor ($\frac{1}{4}$ Ws270k Ω)	4
VR _{1,2,7}	012-3733-07	Variable resistor (10k Ω)	3	R _{105,205}	111-3341-21	Film resistor ($\frac{1}{4}$ Ws330k Ω)	2
VR _{3,4,5,6}	012-3733-09	Variable resistor (33k Ω)	4	R _{102,202}	111-3901-21	Film resistor ($\frac{1}{4}$ Ws39 Ω)	2
RY ₁	014-0454-00	Relay (G2V2)	1	R _{106,206}	111-3921-21	Film resistor ($\frac{1}{4}$ Ws3.9k Ω)	2
R ₃₀₇	032-0018-00	Fuse resistor (2.2 Ω)	1	R _{109,209}	111-4731-22	Film resistor ($\frac{1}{4}$ Ws47k Ω)	2
R _{110,210}	032-0037-00	Solid resistor (3.9k Ω)	2	R _{304,308,309}	114-1511-51	Film resistor (1W150 Ω)	3
R _{108,208}	032-0059-01	Solid resistor (1k Ω)	2	C _{101,201}	141-1022-10	Polyester capacitor (50V0.001 μ F)	2
R _{117,217}	032-0059-03	Solid resistor (4.7k Ω)	2	C ₃₀₄	141-1032-10	Polyester capacitor (50V0.01 μ F)	1
C _{107,207}	042-0140-00	Electrolytic capacitor (50V0.22 μ F)	2	C _{115,215}	141-1041-10	Polyester capacitor (50V0.1 μ F)	2
C _{110,210}	043-0068-00	Ceramic capacitor (50V0.0047 μ F)	2	C ₃₀₅	141-1042-10	Polyester capacitor (50V0.1 μ F)	1
C _{109,112,209,212}	043-0093-00	Ceramic capacitor (50V0.015 μ F)	4	C _{106,206}	141-1832-10	Polyester capacitor (50V0.018 μ F)	2
IC ₂	051-0118-00	IC (HA11226)	1	C _{104,204}	141-2232-10	Polyester capacitor (50V0.022 μ F)	2
IC ₁	051-0187-00	IC (μ PC1032H)	1	C _{102,202}	179-1073-22	Electrolytic capacitor (10V100 μ F)	2
Q ₁	102-1959-25	Transistor (2SC1959Y)	1	C ₃₀₇	179-1083-33	Electrolytic capacitor (16V1000 μ F)	1
R ₃₁₃	111-1011-22	Film resistor ($\frac{1}{4}$ Ws100 Ω)	1	C ₃₀₁	179-2273-33	Electrolytic capacitor (16V220 μ F)	1
R _{118,218,303}	111-1031-22	Film resistor ($\frac{1}{4}$ Ws10k Ω)	3	C ₃₀₆	179-4773-33	Electrolytic capacitor (16V470 μ F)	1
R _{101,113,201}	111-1041-21	Film resistor ($\frac{1}{4}$ Ws100k Ω)	3	C ₂₀₅	180-1054-61	Electrolytic capacitor (50V1 μ F)	1
R _{111,211,213,301}	111-1041-22	Film resistor ($\frac{1}{4}$ Ws100k Ω)	4	C ₁₀₅	180-1054-62	Electrolytic capacitor (50V1 μ F)	1
R _{114,214}	111-1231-22	Film resistor ($\frac{1}{4}$ Ws12k Ω)	2	C _{113,213,302}	180-1064-32	Electrolytic capacitor (16V10 μ F)	3
R ₃₁₀	111-1511-41	Film resistor ($\frac{1}{2}$ W150 Ω)	1	C ₃₀₃	180-3364-32	Electrolytic capacitor (16V33 μ F)	1
R ₂₀₄	111-1541-21	Film resistor ($\frac{1}{4}$ Ws150k Ω)	1	C _{114,214}	181-1043-62	Electrolytic capacitor (50V0.1 μ F LN)	2
R ₁₀₄	111-1541-22	Film resistor ($\frac{1}{4}$ Ws150k Ω)	1	C _{108,111,208,211}	181-3343-62	Electrolytic capacitor (50V0.33 μ F LN)	4
R ₃₀₆	111-1591-21	Film resistor ($\frac{1}{4}$ Ws1.5 Ω)	1	C _{103,203}	182-1053-62	Electrolytic capacitor (50V1 μ F)	2
R _{112,212}	111-1811-22	Film resistor ($\frac{1}{4}$ Ws180 Ω)	2	C _{116,216}	182-1063-32	Electrolytic capacitor (16V10 μ F)	2
R _{203,312}	111-2221-21	Film resistor ($\frac{1}{4}$ Ws2.2k Ω)	2	C ₃₁₀	182-3363-32	Electrolytic capacitor (16V33 μ F)	1
R ₁₀₃	111-2221-22	Film resistor ($\frac{1}{4}$ Ws2.2k Ω)	1	C ₃₀₉	182-4763-32	Electrolytic capacitor (16V47 μ F)	1