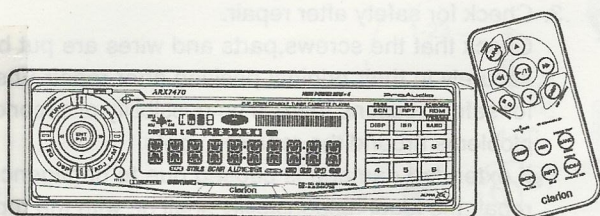


# Service Manual



(PE-1601B)

## AM/FM Cassette Player With CD Changer Control

Model **ARX7470**

(PE-1601B / For North America)

(PE-1601K / For Asia and Oceania)

## ■ ORIGINAL SERVICE MANUAL

This additional service manual is designed to be used together with ARX7370(PE-1540B/PE-1540K).

Original model	Manual No.
ARX7370	298-5557-00

## ■ SPECIFICATIONS

### FM tuner section

Frequency range: 87.9MHz to 107.9MHz  
(PE-1601B)

87.5MHz to 108.0MHz  
(PE-1601K)

Usable sensitivity: 11dBf

50dB quieting sensitivity:

17dBf

Alternate channel selectivity:

75dB

Stereo separation: 35dB(1kHz)

Frequency response: 30Hz to 15kHz(3dB)

### AM tuner section

Frequency range: 530kHz to 1710kHz(PE-1601B)

531kHz to 1629kHz(PE-1601K)

Usable sensitivity: 25  $\mu$ V

### Tape deck section

Wow & flutter: 0.06%

Channel separation: 45dB(1kHz)

Frequency response( $\pm$ 3dB)

120  $\mu$ S(normal): 30Hz to 18kHz

70  $\mu$ S(CrO<sub>2</sub>, FeCr, Metal):

30Hz to 20kHz

Signal to noise ratio

70  $\mu$ S(CrO<sub>2</sub>, FeCr, Metal):

58dB

Dolby B: 67dB

Dolby C: 74dB

### Audio section

Maximum power output:

140W(35W $\times$ 4ch)

Continuous average power output:

14W $\times$ 4

(4 $\Omega$ , 20Hz to 20kHz, 1%THD)

Bass control action:  $\pm$ 15dB(30Hz)

Treble control action:  $\pm$ 10dB(10kHz)

Line output(TAPE): 0.7V

### General

Power supply voltage: 14.4V DC

(10.8 to 15.6V allowable)

negative ground

Current consumption: Less than 10A

Speaker impedance: 4 $\Omega$  (4 $\Omega$  to 8 $\Omega$  allowable)

Dimensions(mm)

Source unit: 178(W) $\times$ 50(H) $\times$ 152(D)

Remote control unit: 40(W) $\times$ 6.5(H) $\times$ 86(D)

Weight

Source unit: 1.7kg

Remote control unit: 20g(including battery)

- ※ Specifications comply with EIA Standards.
- ※ Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
- ※ "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
- ※ Specifications and design are subject to change without notice for further improvement.



## COMPONENTS

### PE-1601B-A/PE-1601K-A

Main unit		1
Remote controller	RCB-114-200	1
Battery(CR2025BC)		1
Mounting bracket	300-9677-00	1
DCP case	335-5331-00	1
Outer escutcheon	370-5658-00	1
Extension lead	854-6316-80	1
Parts bag		
Hook plate	331-0488-00	2
Lead holder	335-0833-01	1
Screw	716-0496-01	1

## DIFFERENCE FROM ORIGINAL MODEL

1. 6 disc MD changer control capability(PE-1601K only)
2. EXPLODED VIEW · PARTS LIST
3. DCP ASS'Y
4. Main PWB and Switch PWB section of ELECTRICAL PARTS LIST

## To engineers in charge of repair or inspection of our products.

Before repair or inspection,make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.

The system uses parts with special safety features against fire and voltage.Use only parts with equivalent characteristics when replacing them.

The use of unspecified parts shall be regarded as remodeling for which we shall not be liable.The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

## ERROR DISPLAYS

Add the follwing error displays.(PE-1601K only)

Error Display	Cause	Measure
MDCH ER2	A MD inside the MD changer is not loaded.	This is a failure of MD changer's mechanism.
MDCH ER3	A MD inside the MD changer cannot be played due to scratches, etc.	Replace with a non-scratched, non-warped disc.
MDCH ER6	A blank(non-recorded) MD is inserted.	Insert a recorded MD.

## EXPLANATION OF IC

The device No.  $\mu$ PD178016GC-517-3B9(052-1309-01) is an improvement made on No.  $\mu$ PD178016GC-511-3B9(052-1309-00). For terminal descriptions of the former, please refer to those of the latter since all terminal functions of both devices are indential.

2. Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction,use of insulation tubes,bonding,gaps to PWB,etc,is involved.The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts.Ensure that they are placed back in their original positions after repair or inspection.

If extended damage is caused due to negligence during repair,the legal responsibility shall be with the repairing company.

3. Check for safety after repair.

Check that the screws,parts and wires are put back securely in their original position after repair.Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.

If extended damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.

4. Caution in removal and making wiring connection to the parts for the automobile.

Disconnect the battery terminal after turning the ignition key off.If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur.If extensive damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.

5. Cautions regarding chips.

Do not reuse removed chips even when no abnormality is observed in their appearance.Always replace them with new ones.(The chip parts include resistors,capacitors,diodes,transistors,etc).The negative pole of tantalum capacitors is highly susceptible to heat,so use special care when replacing them and check the operation afterwards.

6. Cautions in handling flexible PWB

Before working with a soldering iron,make sure that the iron tip temperature is around 270°C.Take care not to apply the iron tip repeatedly(more than three times)to the same patterns.Also take care not to apply the tip with force.

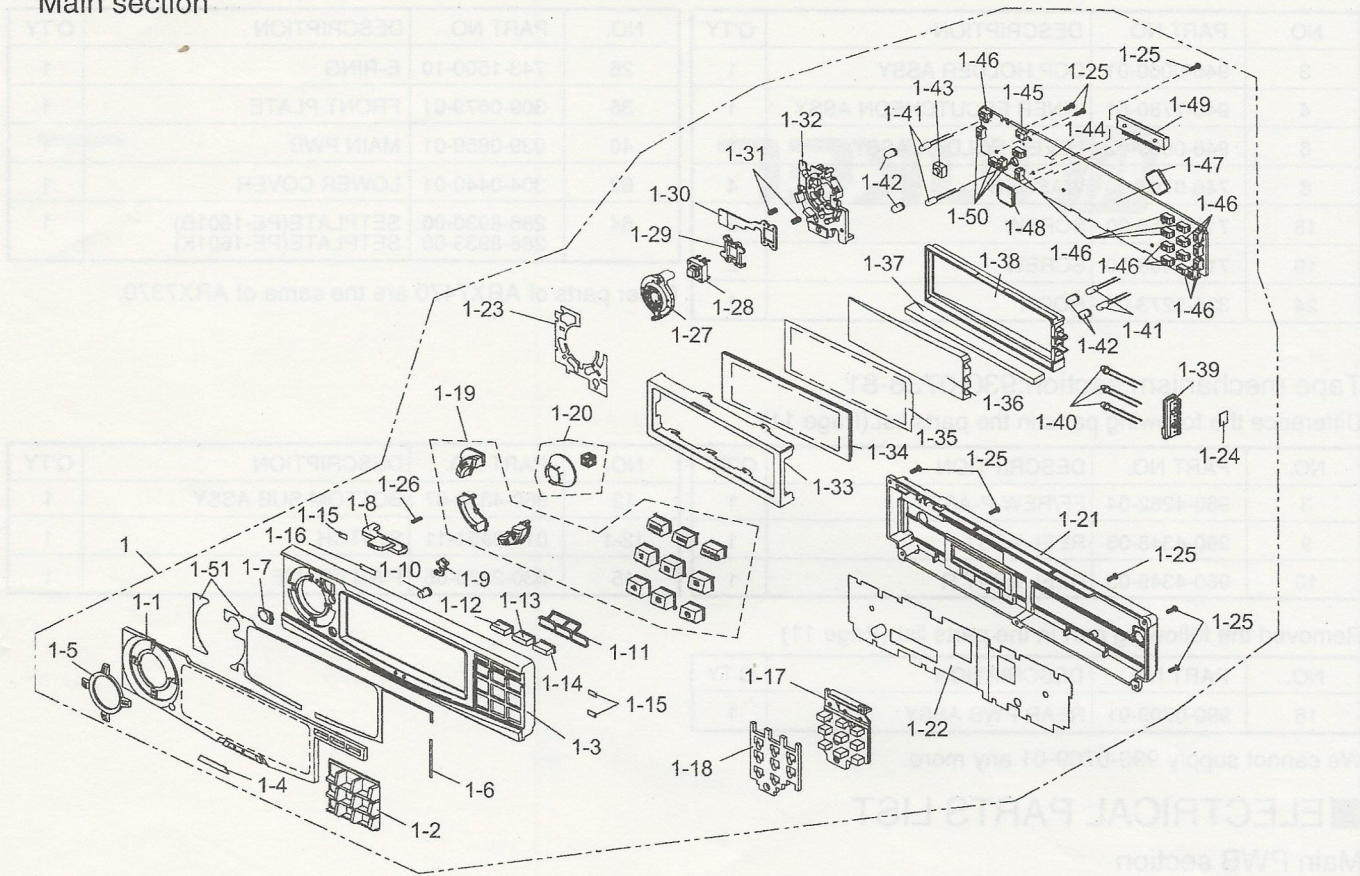
7. Turn the unit OFF during disassembly and parts replacement.Recheck all work before you apply power to the unit.

The device No.  $\mu$ PD78058FGC-064-3B9(052-3330-01) is an improvement made on No.  $\mu$ PD78058FGC-044-3B9(052-3330-00). For terminal descriptions of the former, please refer to those of the latter since all terminal functions of both devices are indential.



EXPLODED VIEW • PARTS LIST

Main section



NO.	PART NO.	DESCRIPTION	Q'TY
1	DCP-137-600 940-1881A	DCP ASSY(PE-1601B) DCP ASSY(PE-1601K)	1
1-1	373-0855-01 373-0855-03	DIAL COVER(PE-1601B) DIAL COVER(PE-1601K)	1
1-2	373-0861-00	DIAL COVER	1
1-3	370-5708-19 370-5708-24	ESCUTCHEON(PE-1601B) ESCUTCHEON(PE-1601K)	1
1-4	378-0152-00	BADGE	1
1-5	373-0863-00	JOG RING	1
1-6	347-5588-00	DOUBLE FACE	1
1-7	335-5352-00	IR FILTER	1
1-8	382-4385-01	BUTTON(OPEN)	1
1-9	335-5257-00	BUTTON HOLDER	1
1-10	382-4715-00	BUTTON(TITLE)	1
1-11	335-5570-00	BUTTON HOLDER	1
1-12	382-4714-00	BUTTON(SCN)	1
1-13	382-4714-01	BUTTON(RPT)	1
1-14	382-4714-02	BUTTON(RDM)	1
1-15	347-5645-00	SHADE	3
1-16	347-5646-00	SHADE	1
1-17	335-5575-00	ILLUMI PLATE(R)	1
1-18	345-8003-00	SPONGE(R)	1
1-19	947-0449-00	BUTTON ASSY	1
1-20	947-0436-00	KNOB ASSY	1
1-21	335-5261-00	REAR COVER	1
1-22	347-5419-00	FILM	1
1-23	347-5579-00	SHADE(L)	1
1-24	347-5429-00	FILM	1
1-25	716-0872-11	SCREW	8

NO.	PART NO.	DESCRIPTION	Q'TY
1-26	750-3224-00	SPRING	1
1-27	335-5567-01	JOG HOLDER	1
1-28	013-9901-00	JOG SWITCH	1
1-29	335-5276-00	SPACER	1
1-30	039-0857-00	PWB	1
1-31	750-3248-00	SPRING	2
1-32	335-5578-00	ILLUMI PLATE(L)	1
1-33	331-1977-00	LCD COVER	1
1-34	379-1078-41	LCD	1
1-35	347-5408-00	CCS FILM	1
1-36	335-5262-00	LCD ILLUMI	1
1-37	345-7864-00	RUBBER CONNECTOR	1
1-38	335-5260-00	LCD HOLDER	1
1-39	335-5263-00	LED HOLDER	1
1-40	001-7030-00	LED	3
1-41	017-0444-00	PILOT LAMP	4
1-42	345-4441-37	LAMP CAP	4
1-43	013-6006-00	SWITCH	1
1-44	039-0860-00	SWITCH PWB	1
1-45	060-4008-00	IR RECEIVER	1
1-46	013-6302-51	SWITCH	14
1-47	051-6013-00	IC(LC75854W)	1
1-48	051-6022-00	IC(LC75824W)	1
1-49	076-0535-00	PLUG(15P)	1
1-50	013-6305-00	SWITCH	4
1-51	347-5584-00	DOUBLE FACE	1



Difference the following parts in the parts list.(Page 9)  
The lever(NO.25) is included in the lever holder ass'y(NO.6).

NO.	PART NO.	DESCRIPTION	Q'TY
3	946-0060-01	DCP HOLDER ASSY	1
4	940-7780-61	INNER ESCUTCHEON ASSY	1
6	946-0059-02	LEVER HOLDER ASSY	1
8	746-0761-00	WASHER	4
18	716-1556-00	SCREW	2
19	716-1468-00	SCREW	2
24	335-5273-01	HOOK	1

NO.	PART NO.	DESCRIPTION	Q'TY
26	743-1500-10	E-RING	1
36	309-0679-01	FRONT PLATE	1
40	039-0859-01	MAIN PWB	1
63	304-0440-01	LOWER COVER	1
64	286-8930-00 286-8933-00	SETPLATE(PE-1601B) SETPLATE(PE-1601K)	1

Other parts of ARX7470 are the same of ARX7370.

**Tape mechanism section:930-0738-81**

Difference the following parts in the parts list.(Page 11)

NO.	PART NO.	DESCRIPTION	Q'TY
3	960-4262-04	FF/REW-P-ASSY	1
9	960-4348-03	REEL ASSY F	1
10	960-4349-03	REEL ASSY R	1

NO.	PART NO.	DESCRIPTION	Q'TY
12	960-4338-07	BOTTOM SUB ASSY	1
12-1	013-3951-11	SWITCH	1
45	630-2626-05	PWB FRAME	1

Removed the following part in the parts list.(Page 11)

NO.	PART NO.	DESCRIPTION	Q'TY
16	990-0709-01	REAR PWB ASSY	1

We cannot supply 990-0709-01 any more.

**■ ELECTRICAL PARTS LIST**

**Main PWB section**

Difference the following parts in the parts list.(Page 12)

REF No.	PART No.	DESCRIPTION
C 253	042-0452-01	10V220 $\mu$ F
C 412	178-2222-78	2200pF
C 413	178-2222-78	2200pF
C 414	178-2222-78	2200pF
C 415	178-2222-78	2200pF

REF No.	PART No.	DESCRIPTION
C 511	178-4722-78	4700pF
C 512	178-5632-78	0.056 $\mu$ F
C 513	178-4722-78	4700pF
C 525	178-4722-78	4700pF
C 526	178-5632-78	0.056 $\mu$ F

REF No.	PART No.	DESCRIPTION
C 527	178-4722-78	4700pF
IC 601	052-1309-01	$\mu$ PD178016GC-517-3B9
IC 901	052-3330-01	$\mu$ PD78058FGC-064-3B9

**Switch PWB section**

Difference the following parts in the parts list.(Page 13)

REF No.	PART No.	DESCRIPTION
S 712	013-6305-00	
S 721	013-6305-00	
S 722	013-6305-00	
S 723	013-6305-00	

Other electrical parts of ARX7470 are the same of ARX7370.

1	930-0738-81	TAPE MECHANISM ASSY	1
2	930-0738-81	TAPE MECHANISM ASSY	1
3	930-0738-81	TAPE MECHANISM ASSY	1
4	930-0738-81	TAPE MECHANISM ASSY	1
5	930-0738-81	TAPE MECHANISM ASSY	1
6	930-0738-81	TAPE MECHANISM ASSY	1
7	930-0738-81	TAPE MECHANISM ASSY	1
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