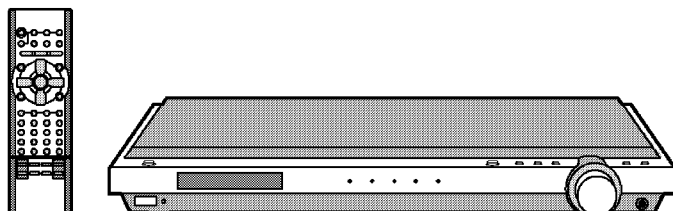


Service Manual

AV Control Receiver



SA-XR10E
SA-XR10EB
SA-XR10EG
SA-XR10GCS
SA-XR10GD
SA-XR10GN

Colour

(S).....Silver Type

Specification

IAMPLIFIER SECTION

Power output [at 240V for (EG, GN) area]

DIN 1kHz (T.H.D. 1%)	2×100W (6Ω)
20Hz-20kHz continuous power output both channels driven	2×80W(6Ω)

Total harmonic distortion

rated power at 20Hz-20kHz	0.09% (6Ω)
half power at 1kHz	0.05% (6Ω)

Power output at 1kHz each channel driven

DIN 1kHz (T.H.D. 1%)	
Front	2×100W (6Ω)
Center	100W (6Ω)
Surround	2×100W (6Ω)

Load impedance

Front	6-16Ω
Center	6-16Ω
Surround	6-16Ω

Frequency response

DVD, VCR, TV, AUX	10Hz-44kHz, ±3dB
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Input sensitivity and impedance

DVD, VCR, TV, AUX	200mV/22kΩ
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S/N at rated power (6Ω)

DVD, TV (DIGITAL INPUT)	80dB (IHF, A: 98dB)
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Output voltage

VCR OUT, LINE OUT	200mV
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Tone controls

BASS

50Hz, +10 to -10dB

TREBLE

20kHz, +10 to -10dB

Channel balance (250Hz-6.3kHz)

±1dB

Channel separation

55dB

Subwoofer frequency response (-6dB)

7-200Hz

Digital input

Optical	2
Coaxial	1

IFM TUNER SECTION

Frequency range

87.50-108.00MHz

Sensitivity

S/N 30dB	1.5μV/75Ω
S/N 26dB	1.3μV/75Ω
S/N 20dB	1.2μV/75Ω

IHF usable sensitivity (IHF'58)

1.5μV/75Ω

IHF 46dB stereo quieting sensitivity

22μV/75Ω

Total harmonic distortion

MONO	0.2%
STEREO	0.3%

S/N

MONO	60dB
STEREO	58dB

Frequency response

20Hz-15kHz	+1dB, -2dB
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Panasonic

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 distribution is a violation of law.

Alternate channel selectivity		IF rejection (at 999kHz)	50dB
±400kHz	65dB		
Capture ratio	1.5dB	IVIDEO SECTION	
Image rejection at 98MHz	40dB	Output voltage at 1V input (unbalanced)	1±0.1Vp-p
IF rejection at 98MHz	70dB	Maximum input voltage	1.5Vp-p
Spurious response rejection at 98MHz	70dB	Input/output impedance	75Ω (unbalanced)
AM suppression	50dB		
Stereo separation		IGENERAL	
1kHz	40dB	Power supply	
Carrir leak		For (E, EG) areas	AC230V, 50Hz
19kHz	-30dB	For (EB, GN) areas	AC230-240V, 50Hz
38kHz	-50dB	For (GD) area	AC220V, 60Hz
Channel balance (250Hz-6.3kHz)	±1.5dB	For (GCS) area	AC220-240V, 50/60Hz
Limiting point	1.2μV	Power consumption	115W
Bandwidth		Dimensions (W×H×D)	430×52×334mm
IF amplifier	180kHz	Mass	3.5kg
FM demodulator	1000kHz		
Antenna terminal	75Ω (unbalanced)	Power consumption in standby mode:	0.5W
IAM TUNER SECTION		Notes:	
Frequency range		1. Specifications are subject to change without notice.	
	522-1611kHz (9kHz steps)	Mass and dimensions are approximate.	
	530-1620kHz (10kHz steps)	2. Total harmonic distortion is measured by the digital spectrum analyzer.	
Sensitivity	20μV, 330μV/m		
Selectivity (at 999kHz)	55dB		

WARNING

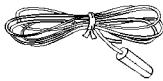
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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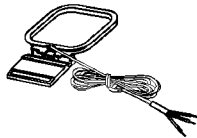
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1 Accessories

- FM indoor antenna.....1pc.
(RSA0007)



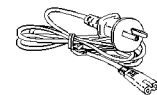
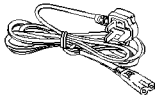
- AM loop antenna set.....1pc.
(RSA0033-C)



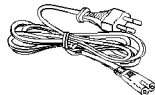
- Remote control transmitter.....1pc.
(N2QAJB000045)



- AC power supply cord.....1pc.
For (EB) area: (RJA0053-3X)



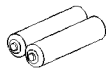
- For (GN) area: (RJA0035-2X)
- For (E,EG,GCS) areas: (RJA0019-2X)
- For (GD) area: (RJA0078-1X)



- Antenna plug adaptor.....1pc.
For (EB) area only
(SJP9009)



- Remote control batteries.....2pcs.
Note: These are available
on sales root.



- Cleaning cloth...1pc.
(RFE0088-1)



2 Before Repair and Adjustment

1. Turn off the power supply. Using a 10Ω , 10W resistor, connect both ends of power supply capacitors (C608,625,707,714) in order to discharge the voltage.
2. Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50/60 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230 V/240 V.

Areas	(E,EG)		(EB,GN,GCS)		(GD)	
Power supply voltage	AC 230V		AC 240V		AC 220V	
Consumed current	50 Hz	150-250 mA	50 Hz	150-250 mA	60 Hz	150-250 mA

3 About the Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

*No sound is heard when the power is supplied.

*Sound stops during a performance.

The functions of this circuitry is to prevent circuitry damage, for example, the positive and negative speaker connection wires are “shorted”, or if speaker systems with an impedande less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined below:

1. Press the STANDBY  /ON button, switch to STANDBY mode.
2. Determine the cause of the problem and correct it.
3. Press the STANDBY  /ON button once again, supply the power.

Note:

When the protection circuitry functions, the unit will not operate unless the STANDBY  /ON button is first switched STANDBY and then ON again.

4 Caution for AC Main Lead (For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL $\perp$ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF - KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

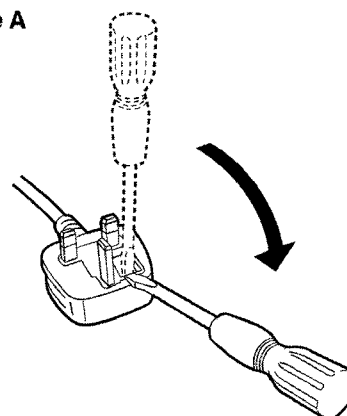
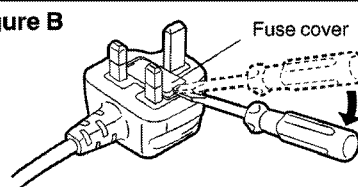


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

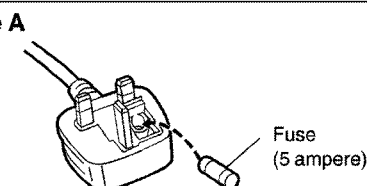
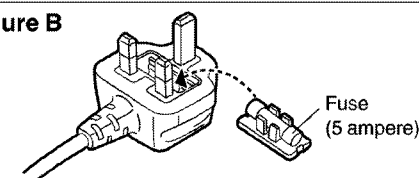
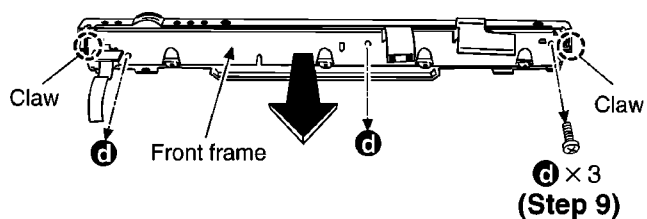


Figure B

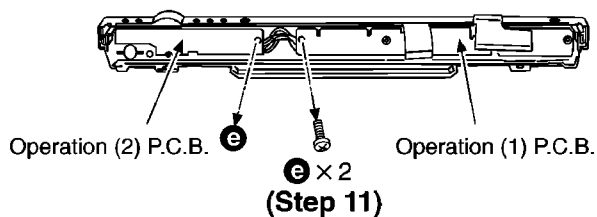


(Step 10)

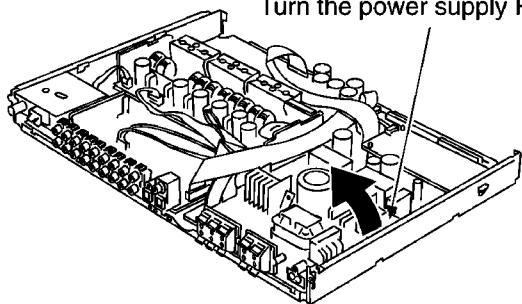
Release the 2 claws, and then remove the front frame.

**(Step 12)**

Remove the operation (1) P.C.B. and operation (2) P.C.B..

**(Step 13)**

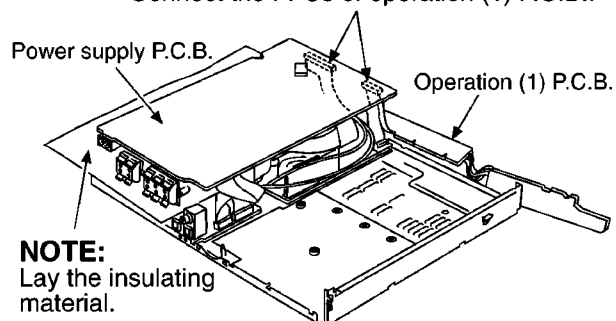
Turn the power supply P.C.B..



- Check the power supply P.C.B. as shown below.

(Step 14)

Connect the FFCs of operation (1) P.C.B..



7 Self-Diagnosis Function

This model is equipped with a self-diagnosis function and shows the following indication on the LCD.

Display contents	Cause	Processing method
F61	Power amp output is abnormal.	Check of power amp and power supply circuit.
F70	Communication error between sub microprocessor and peripheral LSI.	Check between sub microprocessor and peripheral LSI.

8.2. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

- **S951:** Power Standby/on () switch.
- **S952:** Input selector (INPUT SELECTOR) switch.
- **S953:** Channel selection (TUNER MODE) switch.
- **S954:** Tuning ( ,TUNING) switch.
- **S955:** Tuning ( ,TUNING) switch.
- **S956:** FM mode (FM MODE) switch.
- **S957:** Memory (MEMORY) switch.
- **VR901:** Main volume V.R..
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance)with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

No mark: Power ON

- Important safety notice:

Components identified by  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

Caution!

- Secondary trouble can be prevented by taking care during repair.
- IC and LSI are sensitive to static electricity.
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.

• Voltage and signal lines

 : Positive voltage line

 : Negative voltage line

 : FM signal line

 : AM signal line

 : FM/AM signal line

 : FM OSC signal line

 : AM OSC signal line

