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SERVICE TECHNICAL INFORMATION

UTSUNOMIYA, June 16, 1994
REF. NO. : SI-94-013
SERVICE ENGINEERING DIV.

ONE POINT REPAIR

MODEL : TV-1402KE/2002KE/2102KE

SUBJECT : Part Number of EEP ROM (IC002/NVM3060)

SYMPTOM : When you replace EEP ROM (IC002/NVM3060), be sure to use the correct type of IC, as the type of IC differs by model. Part Number of EEP ROM (IC002/NVM3060) in the Service Manual is a **misprint**. Please make correction referring to the chart below.

Model Name	Part Name	Part Number
TV-1402	IC, NVM3060-14INCH	SO-NVM-306-OPA
TV-2002	IC, NVM3060-20INCH	SO-NVM-306-OPB
TV-2102	IC, NVM3060-21INCH	SO-NVM-306-OPC

* When replacement of EEP ROM (IC002/NVM3060) is completed, make adjustments described in the page 22 of the Service Manual. 【 (B) DIGITAL PROCESSING ALIGNMENT 】

* When an incorrect IC is used, **LINERITY, COLOR, CONTRAST** etc. become defective.

SERVICE TECHNICAL INFORMATION

ONE POINT REPAIR

UTSUNOMIYA, OCTOBER 15, 1995

REF. NO. : SI-95-032

CUSTOMER RELATIONS & SERVICE DIV.

MODEL : TV-1402KE / 2002KE / 2102KE

SUBJECT : Precautions when repairing DIGITAL C.B

CONTENTS : For the above models, a large number of ICs (listed below) for Digital C.B have been shipped from the Service Parts Center.

IC701(VCU 2133) / IC703 (VSP 2860) / IC706 (SPU 2243)

To investigate this situation, faulty Digital C.Bs were collected and analysed. As a result, it was determined that a faulty IC was not always the only problem.

The following table shows the results of our investigation. Please refer to this when repairing DIGITAL C.B.

Verification / Cause	No. of Cases	Percentage	
Symptoms did not recur	36	43.9%	
Faulty IC701	8	9.8%	} Faulty IC (19.6%)
Faulty IC703	4	4.9%	
Faulty IC706	4	4.9%	
Faulty X701	10	12.2%	} Faulty Soldering (18.3%)
Faulty X701 soldering	9	11.0%	
Faulty soldering of other parts	6	7.3%	
Cracked board	2	2.4%	
Others (faulty C714/C711/C701)	3	3.7%	

* Sample No. was 80 (some samples had multiple causes).

(Further Considerations)

In the majority of the cases (43%) the symptoms did not recur. It is thought that this is because, in these cases, the jumper line mounted under the IC is connected to the GND pattern. For this reason, symptoms did not occur. For unstable units, perform the following remedy.

1. Remove IC701, IC703, and IC706. (See Fig. 1.)
2. Remove all jumper lines mounted under IC. (See Fig. 1.)

Under IC701:	J718/ J719/ J722/ J723/ J724/ J726	} Total of 22 lines.
Under IC703:	J746/ J747/ J748/ J749/ J751/ J752/ J792	
Under IC706:	J754/ J757/ J758/ J759/ J760/ J761/ J762/ J763/ J764	

3. Attach the removed jumper lines to the pattern surface on the reverse side. (See Fig. 2)

Fig-1

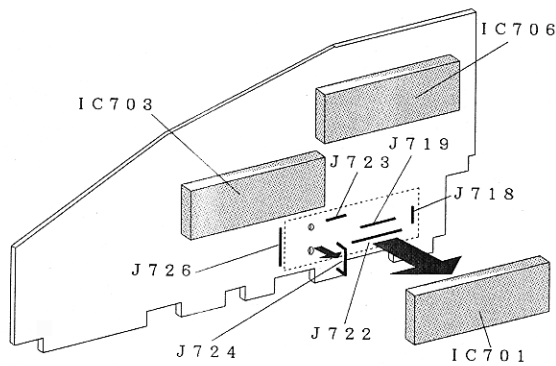
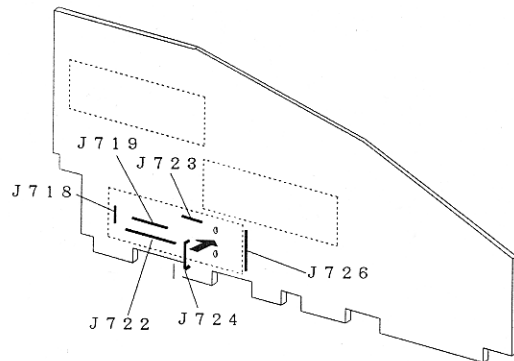


Fig-2

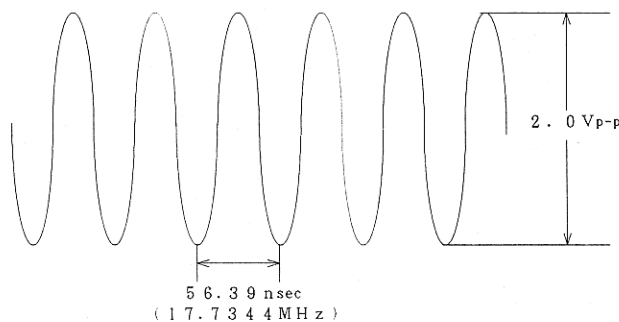


DIGITAL C.B (side with mounted parts)
As shown in the diagram, remove the ICs and then remove each jumper line.

DIGITAL C.B (Pattern side)
Attach the removed jumper lines to the pattern surface and solder. At this time, make sure that jumper lines are not too long that they protrude over to the side with the mounted parts.

There have also been many cases of faulty X701s and faulty soldering. When repairing DIGITAL C.B, always confirm that X701 operates correctly. (See below.)

X701 Waveform



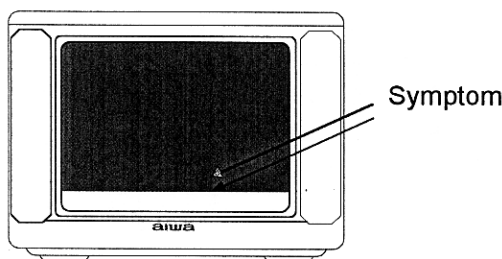
Note: Voltage of the observed waveform changes in accordance with input impedance and the input amount from probes and oscilloscopes used for measurements.

SERVICE TECHNICAL INFORMATION

ONE POINT REPAIR

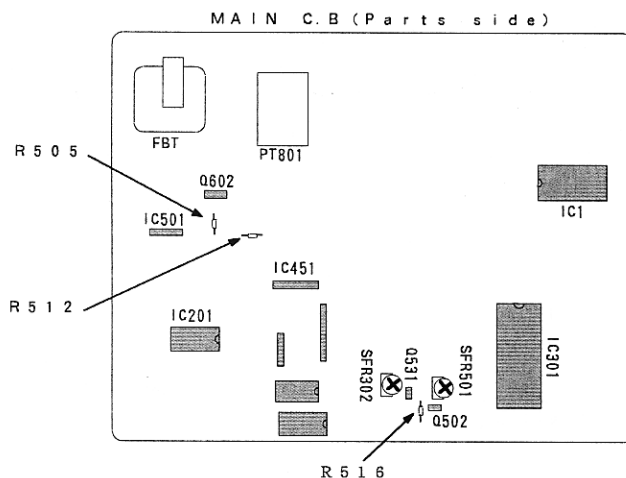
UTSUNOMIYA, NOV. 20, 1998
 REF. NO.: SI-98-032
 CUSTOMER RELATIONS & SERVICE DIV.

- MODEL : TV-A205 KER/TV-A145 KER
 SUBJECT : Horizontal line appears at bottom of screen
 SYMPTOM : The bottom portion of screen has vertical size compression, and a horizontal line appears at bottom of the screen due to degraded vertical linearity characteristics. (The symptom becomes recognizable after long-duration operation or under no-input status.)



- ACTIONS : Replace the three resistors shown below.

	R505	R512	R516	
Existing	82K-1/8W	1.8K-1/8W	180K-1/8W (*)	Correct value is 180K-1/8W. "180-1/8W" in S/M circuit diagram is wrong.
	↓	↓	↓	
After replacement	39K-1/8W	1.2K-1/8W	270K-1/8W	



Ref.	Part name	Part number
R505	RES, 39K-1/8W J	88-121-393-080
R512	RES, 1.2K-1/8W J	88-121-122-080
R516	RES, 270K-1/8W J	88-121-274-080

Service Technical Information

MODEL NO. TV-F2000 / F2400
SUBJECT Notes on repairing flat CRT TV set

REF.No. :G - 99 - 076 - E0

DATE :02. MAR. 2000

<CONTENTS>

Pay attention to the following notes when repairing flat CRT a TV set.
 When repairing a unit, DO NOT LEAVE the degaussing cable disconnected.
 Conventional TV sets allow repairing work with a degaussing cable removed.
 When repairing a TV set with flat CRT, however, the instruction below must be followed.
 The instruction is provided on the service manual also.
 Make this known to all staff concerned.

Notes on repairing:

DO NOT turn on the power of a TV set with a flat CRT when a degaussing coil is removed.

Be sure to connect a dummy load when removing a degaussing coil.

Scheme 1: Use another degaussing coil to be connected for repairing.

Scheme 2: Use a 6.8Ω, 20W resistor, as the jig to be connected to the connector of degaussing coil.

Turning on the power of a unit with neither degaussing coil or dummy load results in opening a fixed resistor R848, which is inserted in parallel to the degaussing coil.

The following shows relations between the models concerned and the cement-resistors:

Model name	R848	Type
TV-F21ST1	33Ω/2W	cement resistor
TV-F25ST1 TV-F2400	27Ω/2W	cement resistor
TV-F2000	56Ω/2W	cement resistor

If the resistor opens, noises appear in horizontal directions on screen.

Also pay attentions to information about the flat CRT models to be released in the future.
 Component values of the dummy resistors will be announced as occasion arises, and will be contained in the service manual. Always take notice of the information.

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-F2000 / F2400	SUFFIX U / U
SUBJECT Notes on repairing	



REF.No. :G - 99 - 076 - E1

DATE :18. FEB. 2002

REVISION : Amended the SUBJECT and the <CONTENTS>.

<CONTENTS>

Pay attention to the following notes when repairing the TV-F2400/F2000.

Do not leave the degaussing cable disconnected when repair a unit.

Conventional TV sets allow repairing work with a degaussing cable removed.

Turning on the power of a TV-F2400 / F2000 with neither degaussing coil results in breaking a cement resistor which is inserted in parallel to the degaussing coil.

Be sure to connect a dummy load when removing a degaussing coil.
 Scheme 1 :Use another degaussing coil to be connected for repairing.
 Scheme 2 :Use a 6.8 -20W resistor, as the jig to be connected to the connector of degaussing coil.
 Turning on the power of a unit with neither degaussing coil or dummy load results in opening a fixed resistor which is inserted in parallel to the degaussing coil.
 The following shows relations between the models concerned and the cement-resistors.

Model	Ref No.	Value	Parts Code	Affected Serial No.
TV-F21ST1	R848	56W/2W	87-A00-659-010	S****9C*****~
TV-F25ST1	R848	27W/2W	87-A00-655-010	S****9C*****~
TV-F2400	R801	27W/2W	87-A00-661-010	All
TV-F2000	R801	56W/2W	87-A00-665-010	All

Note :The cement-resistor is not installed, if the serial number of unit is not included in table above.

If the resistor opens, noises may appear in horizontal directions on screen.

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-CN143 / CN203
SUBJECT The screen is too dark

REF.No. :G - A0 - 032 - E0

DATE :31. MAY. 2000

<CONTENTS>

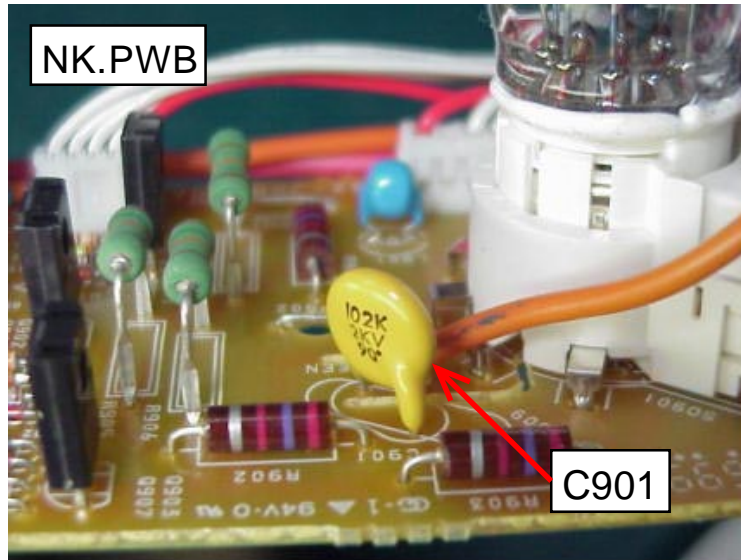
The screen voltage falls down due to an abnormality of the capacitor C901 thereby causing the screen to become dark.

Take the following countermeasure when this problem is pointed out.

<COUNTERMEASURE>

Replace the capacitor C901.

*Always make sure to use the specified part because the manufacturer of this part has been changed.



Parts Name	Parts Code
CAP,CER 1000P-2KB	87-016-037-060

Ref.	Parts Code	Description	Remarks
C901	87-016-037-060	CAP,CER 1000P-2KB	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	S****03*****	-

Service Technical Information

MODEL NO. TV-AT215
SUBJECT The remote control is not effective

REF.No. :G - A0 - 035 - E0

DATE :05. JUN. 2000

<CONTENTS>

In this set, after successive operations of changing the channel are made using the remote control, there are times when the remote control becomes ineffective. Please take the following countermeasures for such sets.

Further, although this condition gets recovered when the AC cord of the main unit is removed and then inserted again in to the power socket, the same condition occurs again if the above operation is made again.

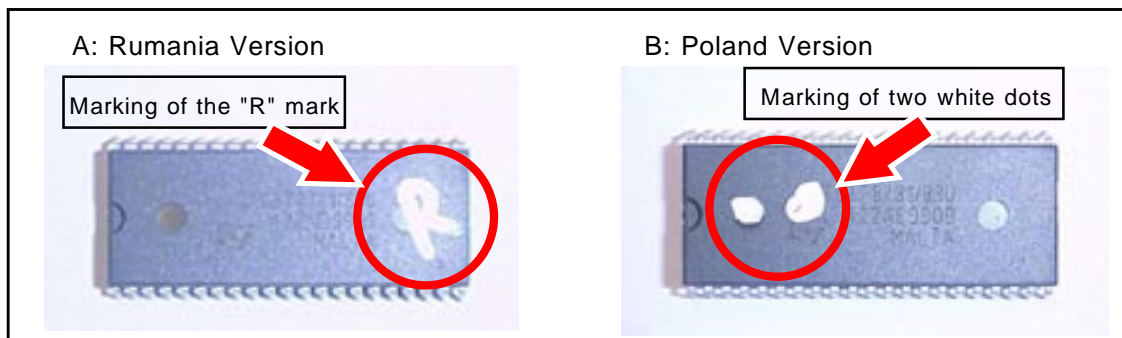
<COUNTERMEASURE>

Please replace the component with the one specified below.

*Take care about the differences between the regional models.

A:IC, ST6387-OTP 6373	Rumania Version	The mark "R" is present on the top surface of the IC.
B:IC, ST6387-OTP 6331	Poland Version	There are marks of two white dots on the top surface of the IC.

Method of discriminating between the microcomputer IC of different regional models



Ref.	Parts Code	Description	Remarks
IC1	87-JB1-626-010	IC, ST6387-OTP 6373	for Romania version
IC1	87-JB1-627-010	IC, ST6387-OTP 6331	for Poland, Czech, Slovakia

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	20.AUG.2000

Service Technical Information

MODEL NO. TV-C202 TV-C202S
SUBJECT No power



REF.No. :G - A0 - 117 - E0

DATE :02. MAR. 2001

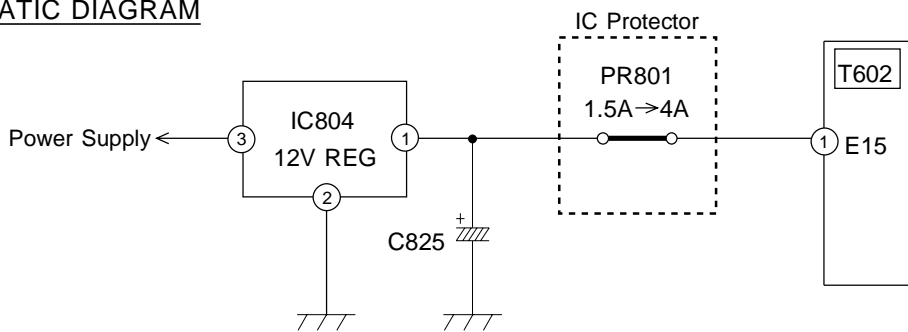
<CONTENTS>

No power due to open IC PROTECTOR (ICP,PR 801) caused by a rush current.

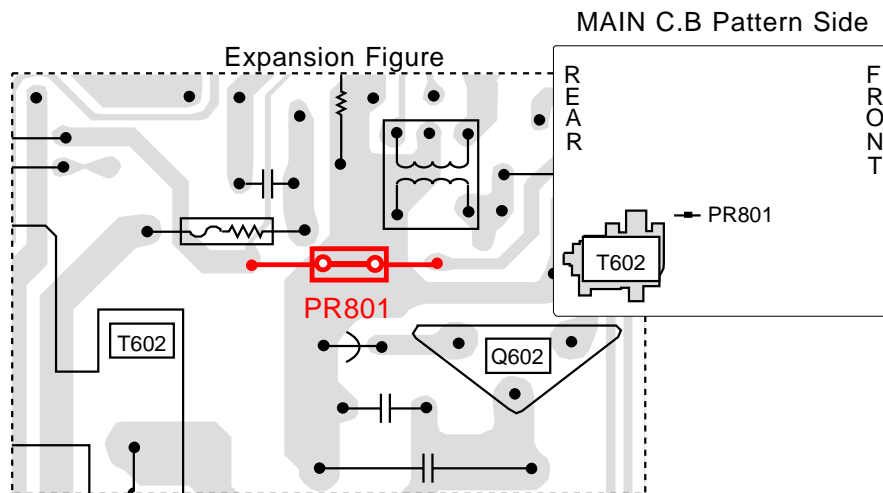
<COUNTERMEASURE>

Replace the IC Protector (PR801 1.5A)with one that has higher current capacity(4A).

SCHEMATIC DIAGRAM



WIRING



Ref.	Parts Code	Description	Remarks
PR801	87-A90-094-080	PROTECTOR,4A 491SERIES 60V	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-SA2151/A2118/A2110/A2018/A2010
SUBJECT Distinction Switch setting up procedure

REF.No. :G – A0 – 125 – E0

DATE :10. APR. 2001

<CONTENTS>

Setup procedure for Distinction Switch was not described in the service manuals below.

- TV-SA2151 09-007-420-8S1
- TV-A2110 / A2118 09-007-416-7S3
- TV-A2010 / A2018 09-007-420-5S1

Please refer to the following procedure when setting Distinction Switches.

<COUNTERMEASURE>

1. Press TEST key of a Jig remote control and set to the AGING mode.
2. Press SYSTEM key of a jig remote control and set to the Distinction Switch mode.
3. Make sure the lower part in the upper row on the screen 1:KE 1 ~ 8:SH4, are shown in red as the below table. If not press the numeric key to make the items in question become red.

Model Name	Item	Key
TV-SA2151	SH3	7
TV-A2118	SH2	6
TV-A2110	KE2	2
TV-A2018	SH2	6
TV-A2010	KE2	2

Fig.1 Items to be selected by model

Fig.2 Screen shot on the distinction switch set up mode (Example : TV-SA2151)

4. Check to see if the data of address 0-1F match the Fig3 (next page) or not.
If not, amend them as follows:
CHANNEL UP/DOWN Select appropriate data (selected data appear in red)
VOLUME UP/DOWN Change value (0 or 1)
5. After data input and/or confirmation is completed, Press TEST key to go back to the AGING mode.

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

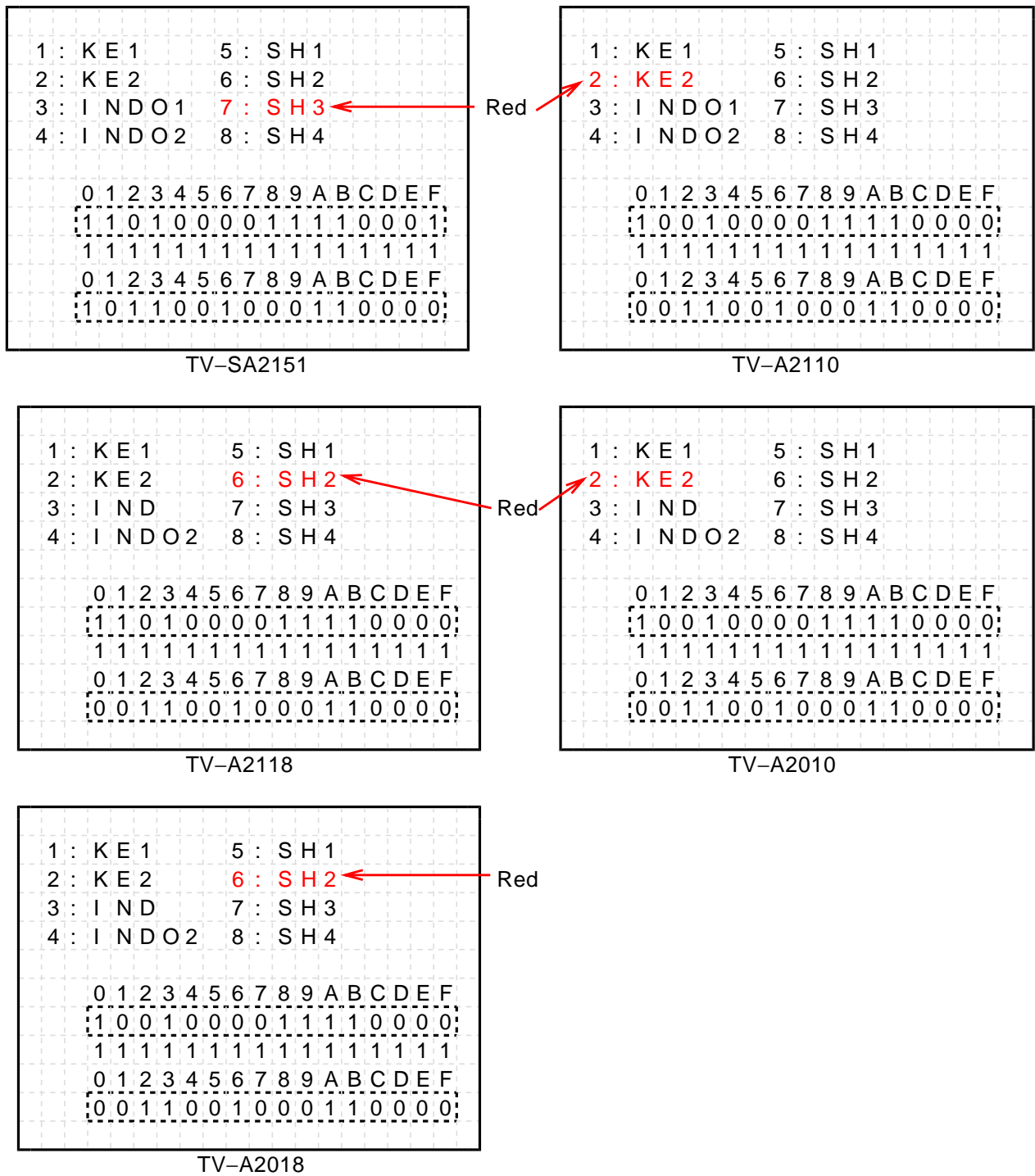


Fig.3 Distinction switch set up data for each model

Service Technical Information

MODEL NO. TV-F2000 / F2100 / F2400 / F2500
SUBJECT Vertical line appears on the screen

REF.No. :G - A1 - 011 - E0

DATE :06. JUN. 2001

<CONTENTS>

A vertical line may appear on TV screen when VCD player or DVD player is connected to input terminal for playback.

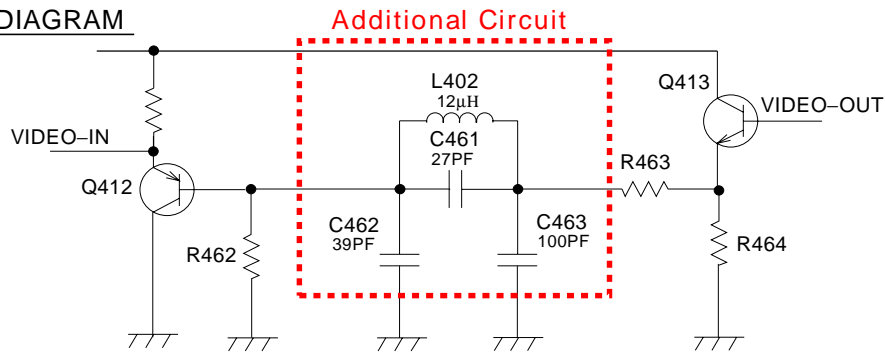
Same problems rarely happen on other equipment, too.

If such problems are experienced, take countermeasure below.

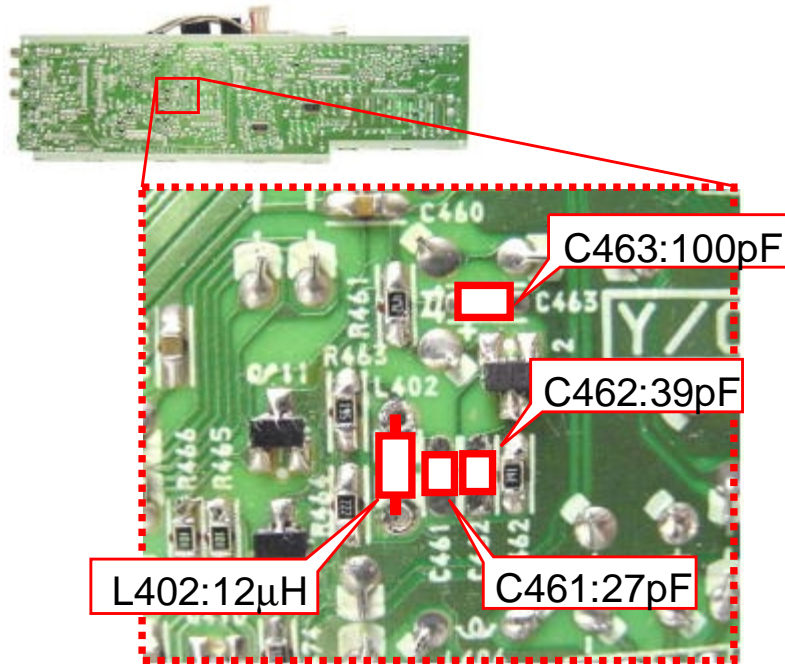
<COUNTERMEASURE>

Add a filter (when fitting L402, remove jumper wire).

SCHEMATIC DIAGRAM



WIRING



Ref.	Parts Code	Description	Remarks
-	SV-T00-117-01J	KIT,TV-F2100/F2500 V NOISE	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	S***12*****~	13.JLY.2001

MODEL NO. TV-SE1430 / SE2130 / C1400
SUBJECT Revised set up procedure

REF.No. :G - A1 - 017 - E0

DATE :11. JUN. 2001

<CONTENTS>

For betterment of the "step by step instructions" on the SET UP procedure in the Service Manuals, we add one more step as described below.

Correction(add the red colored sentence)

Step "No.3" shown in red to be incerted to the procedure.

1. Use the numeric keys on the remote control to set the receiving channel to Pr91.
2. Set Sharpness on the Picture Menu screen to 0.
3. Press MENU button on the remote control twice to back to the normal mode.
(Channel Pr91 appears on the screen).

4. Press the buttons on remote control in the following order:

Skip(R)→ Move(G)→ Menu

The following menu will appear on the TV screen (the menu can be seiched by the " P^/V " button on the remote control).

5. To terminate the menu screen, press the MENU button on the remote control,or the power button on the TV or remote control.

<NOTE>

Pressing three button described in the process 4 above must be done with a second, or it will not get into the Service Mode.

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-SE141 / SE211
SUBJECT Audio malfunction

REF.No. :G - A1 - 024 - E0

DATE :14. JUN. 2001

<CONTENTS>

Noise enters into the data line(SDA/SCK) of IC404(volume controller) and causes the following symptoms.

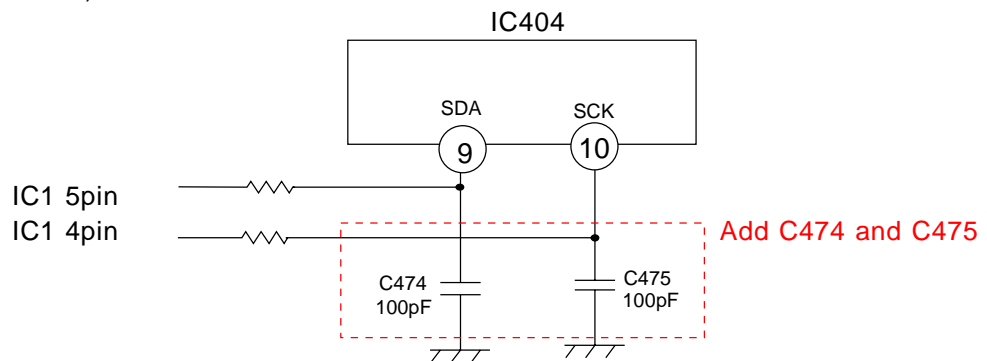
<SYMPTOM>

Sound cuts out intermittently.
One channel becomes louder than the other.

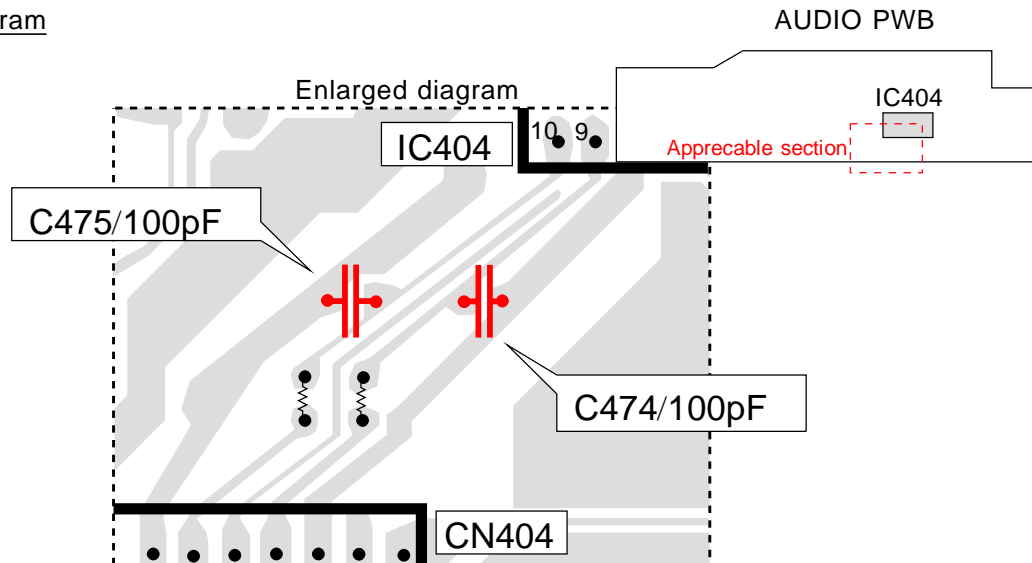
<COUNTERMEASURE>

Add a capacitor to the data line(SDA/SCK) of IC404(volume controller) and compose a noise filter(Lands are available).

Circuit diagram



Pattern diagram



Ref.	Parts Code	Description	Remarks
C475,C474	87-010-322-080	C-CAP,S 100P-50 J CH GR	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-A2110 / A2118 / SA2151	SUFFIX KER(A2110),SH(A2118) SHR(SA2151)
SUBJECT Black marking on screen	

REF No :G - A1 - 031 - E0

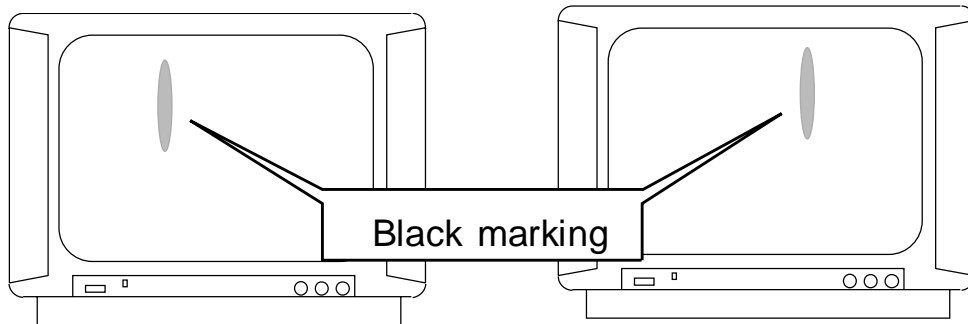
DATE :30. JUL. 2001

<CONTENTS>

Spot remains at power off and black marking may happen on screen.
Take the necessary countermeasure for any pointed symptom corrective countermeasure 1.

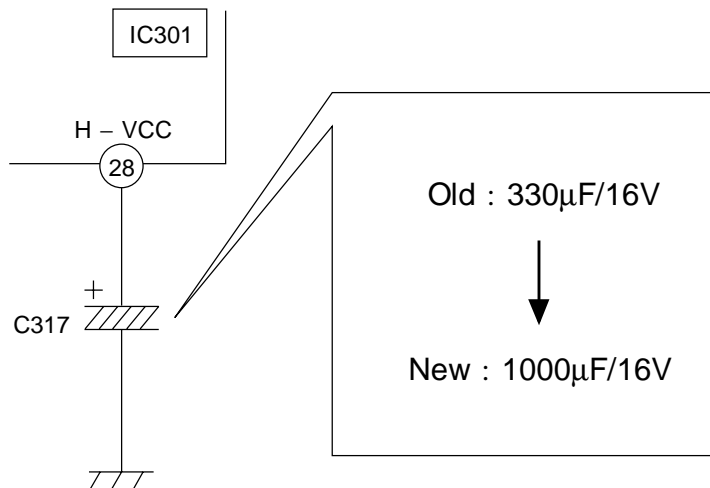
<SYMPTOM>

Black marking appear as shown below.
Appearing point defers according to the set.



<COUNTERMEASURE>

1. Replace C317(330μF/16V) to 1000μF/16V(87-A10-730-080) regardless the symptom.
2. If already CRT burned in, replace to new CRT.



Ref.	Parts Code	Description	Remarks
C317	87-A10-730-080	CAP,E 1000-16V SMG	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	10.SEP.2001

Service Technical Information

MODEL NO. TV-AN2110 / AN2010	SUFFIX NH / NH
SUBJECT No power on	

REF No :G - A1 - 040 - E0

DATE :24. AUG. 2001

<CONTENTS>

No power on due to horizontal output transistor Q601 failure.
Take the following countermeasure in this case.

<COUNTERMEASURE>

Prevent the damage of Q601 by adding the curcuit.

1. Replace Q601 after confirming PR801 is open.
2. Connect condenser, diode, resistor, and wire according to the drawing 1.

Be care to the direction of diode and condensor.

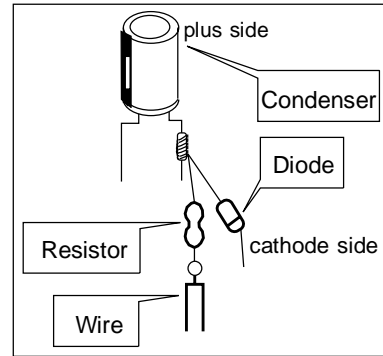
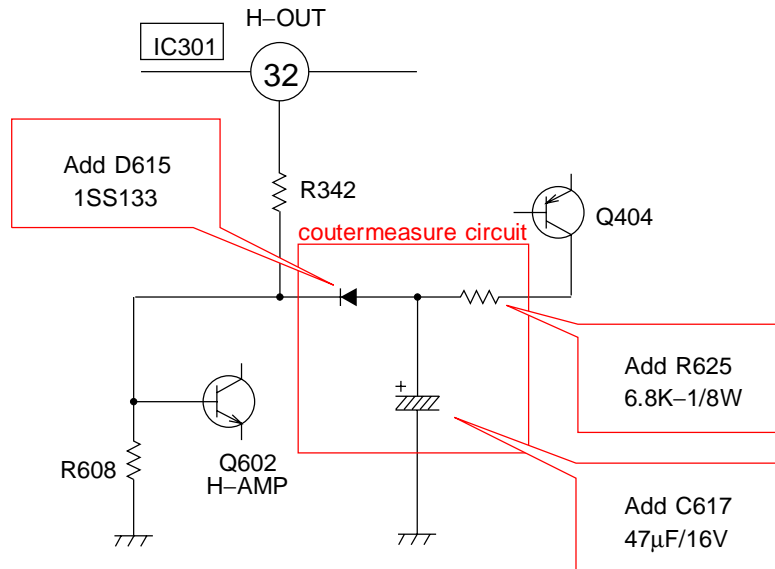


Fig1

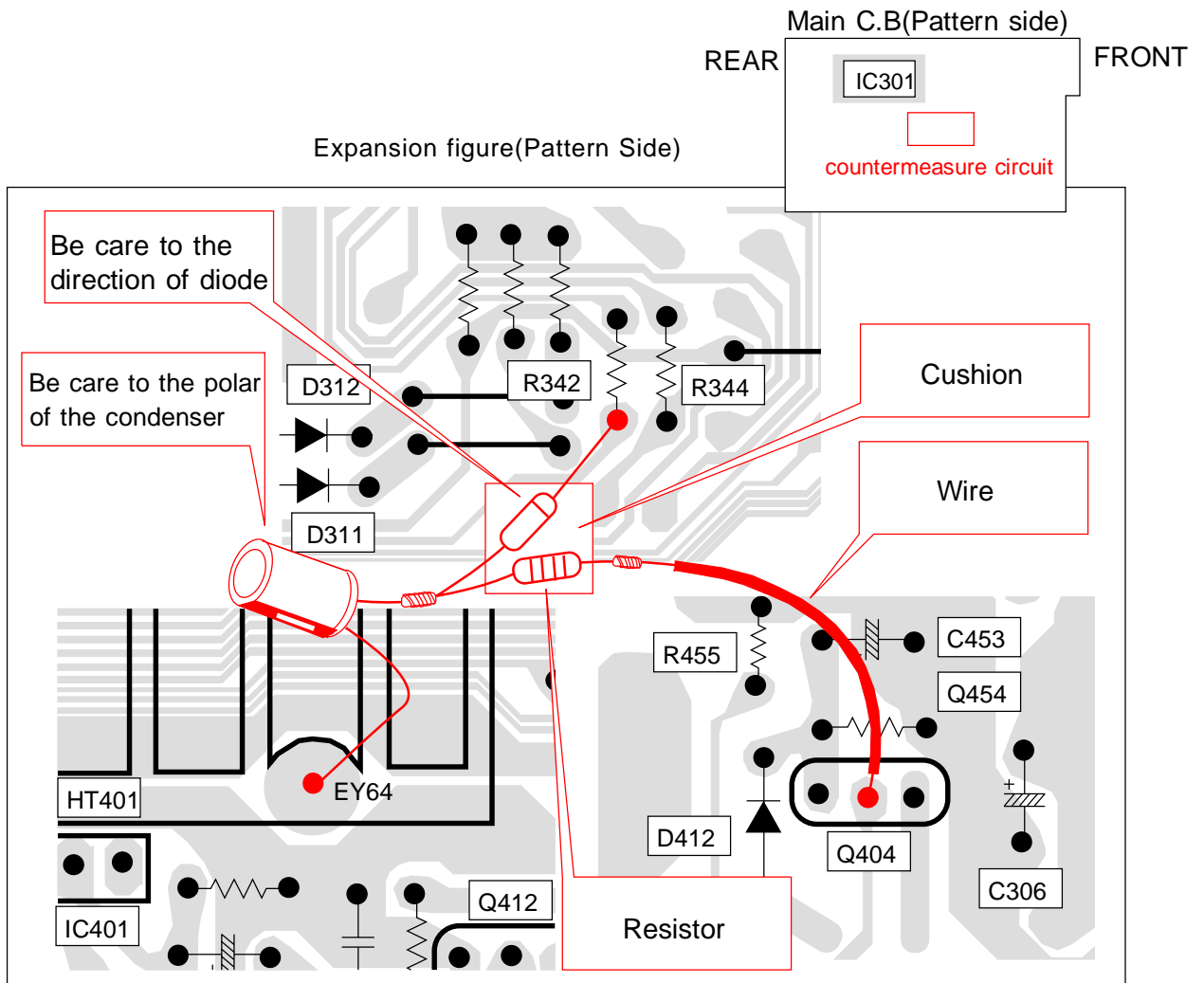
3. Attach the circuit 2 to the rear of main board.(Refer next page)



Ref.	Parts Code	Description	Remarks
-	SV-T00-118-010	KIT,ZJA-19 No Power	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	25.SEP.2001

WIRING



<NOTE>

Be sure to glue (KE-3490) after putting the semiconductor to the board.

Service Technical Information

MODEL NO. TV-C1400	SUFFIX KY,EZY,KHY
SUBJECT OSD does not display, standby LED does not light	



REF No :G - A1 - 052 - E1

DATE :08. NOV. 2001

REVISION : Modified Ser. No. had corrected.

<CONTENTS>

It may happen that " OSD does not display, standby LED does not light " as the flux causes to change the capacity of CC709,CC723.

In such a case, take the following corrective countermeasure.

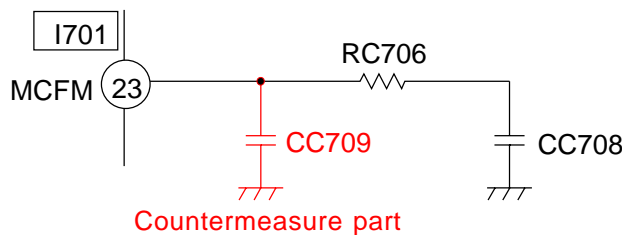
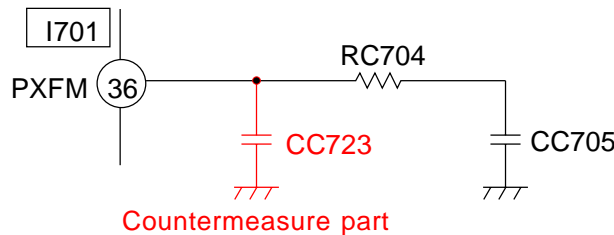
<SYMPTOM>

- OSD does not display
- Standby LED does not light

<COUNTERMEASURE>

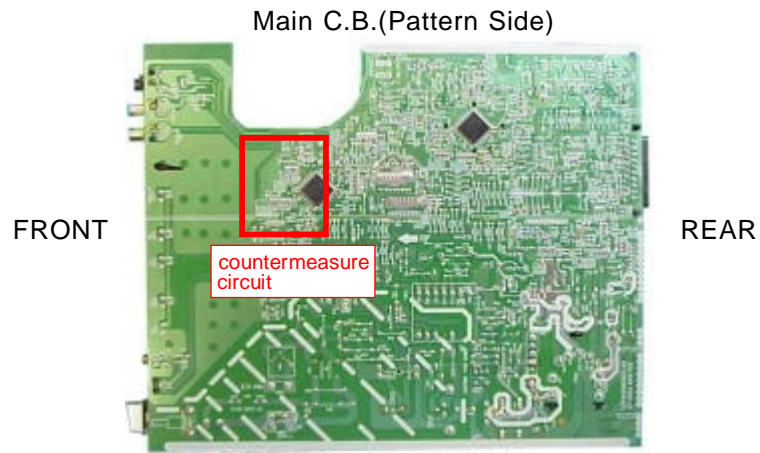
By replacing the condenser CC709,CC723 from chip type to AXIAL type, the effect of flux reduces.(Please refer the next page for actual installation)

Circuit diagram



Ref.	Parts Code	Description	Remarks
CC709,CC723	87-A11-073-080	CAP,TC U 22P-50J CH	

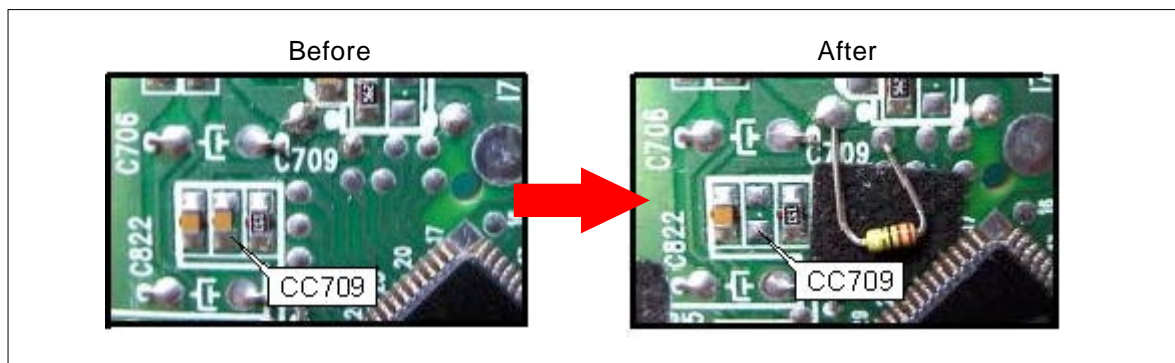
G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	PT0Z*****~	-

Pattern diagram

1. CC709 improvement point

Remove chip type condenser.

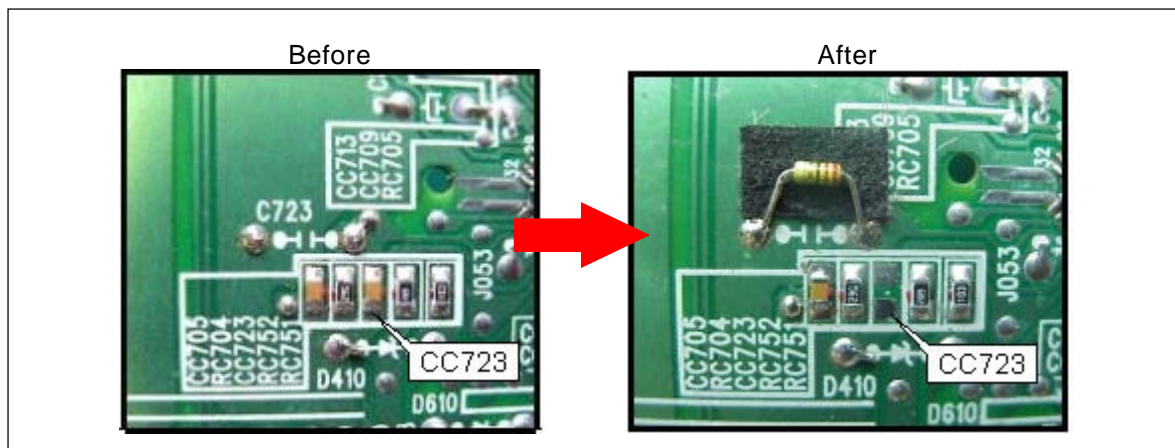
Attach adhesive cloth or cushion and put AXIAL type condenser.



2. CC723 improvement point

Remove chip type condenser.

Attach adhesive cloth or cushion and put AXIAL type condenser.



<NOTE>

After attaching the parts, be sure to glue.

Service Technical Information

MODEL NO. TV-C1300 / S1311 / S2011 / CN140 TV-AN145 / AS145 / AS205 / AS215 / CN140	SUFFIX U NH
SUBJECT Power off	

REF No :G - A1 - 053 - E0

DATE :20. SEP. 2001

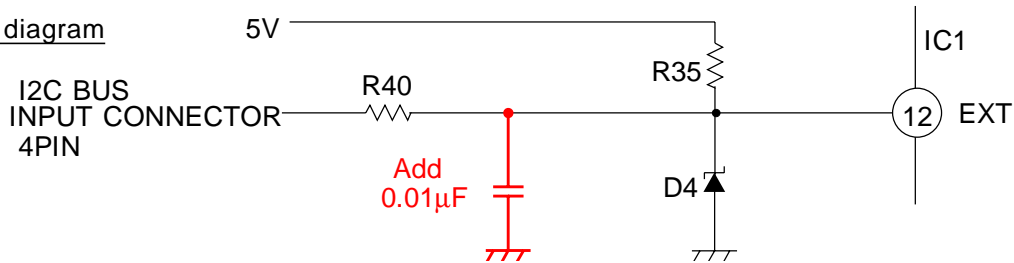
<CONTENTS>

Power may off automatically due to the malfunction of 12 PIN (EXT terminal) of IC 1(micro processor)
In this case, please take the following corrective countermeasure.

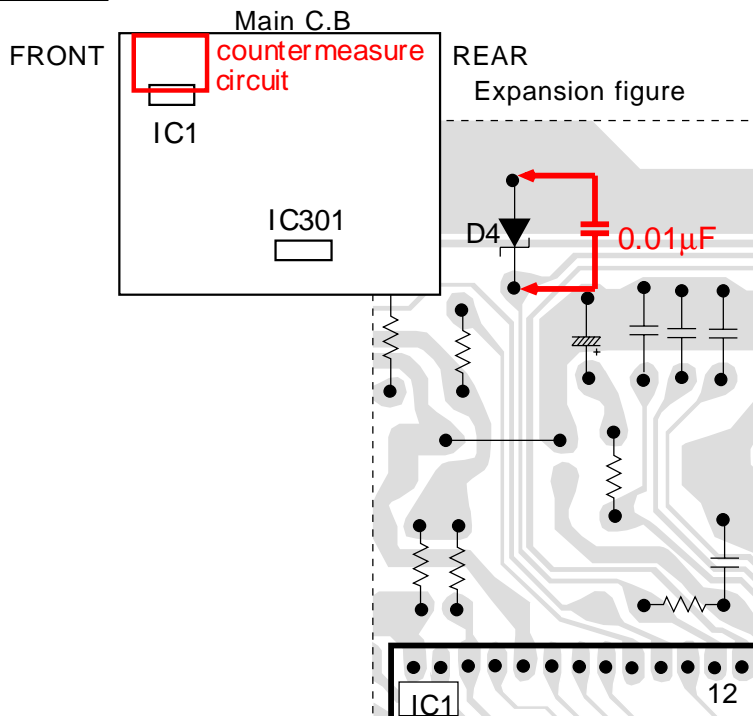
<COUNTERMEASURE>

Micro processor may occur malfunction due to the noise of EXT terminal.
To prevent malfunction, attach the condenser 0.01 μ F parallel to D4 on the reverse side.

Circuit diagram



Pattern diagram



*Be sure with glue after attaching the condenser.

Ref.	Parts Code	Description	Remarks
-	87-A11-132-080	CAP,TC U 0.01-50 K B	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-C143 / C148 / C1418 TV-C208 / C203 / C2018	SUFFIX KE, KER SH, SHR
SUBJECT Remote controller does not works properly	

REF.No. :G - A1 - 057 - E0

DATE :17. OCT. 2001

<CONTENTS>

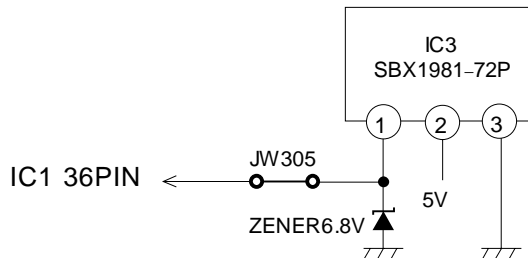
Due to malfunction of sensor part of remote controller(IC3), it may does not work properly.
In this case, take the following corrective countermeasure.
(Corrected set is dotted at the right side of serial No.)

<COUNTERMEASURE>

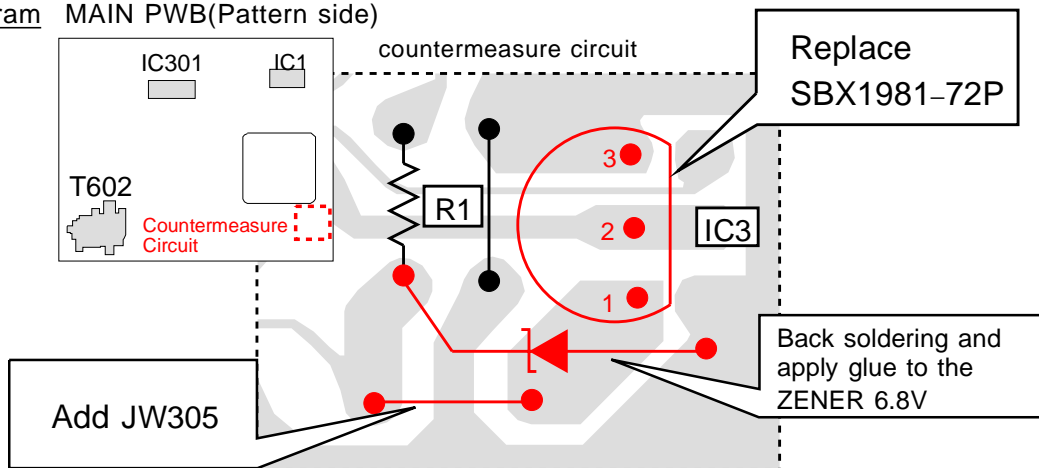
Due to the following corrective countermeasure, it prevents from the fault of sensor part by surge voltage.

1. Replace IC3 from GP1U281Y to SBX1981-72P.
2. Add JW305 following the drawing(land exists).
3. Back solder ZENER,UZ6.8BSC following the drawing.
Glue(KE-3490) on the parts.
4. Put the dot mark at the right side of serial No. after countermeasure.

Circuit diagram



Pattern diagram MAIN PWB(Pattern side)



Serial No. matched to production

- S****16*****~(All model except following suffixed model)
- S****15*****~(TV-C148 SHRJ4C,SHRJLRC,SHJRC)
- S****14*****~(TV-C148 SHRJL1C,SHRJ1C,SHJLRC)

Ref.	Parts Code	Description	Remarks
-	87-A40-754-080	ZENER,UZ6.8BSC	-
IC3	87-A91-538-010	RCR UNIT,SBX1981-72P	-

G	R	Code No	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	mentioned in the above sentence	-

Service Technical Information

MODEL NO. TV-C1400	SUFFIX EZY
SUBJECT Can not receive specific channel	

REF No :G – A1 – 062 – E0

DATE :29. OCT. 2001

<CONTENTS>

Due to unstable of frequency of broadcasting, it may not be able to receive specific channel. In this case, take the following corrective countermeasure.

<SYMPTOM>

Can not receive specific channel in both AUTO TUNE and MANUAL TUNE.

<COUNTERMEASURE>

It becomes possible to preset channel by AUTO TUNE by replacing micro processor. When AUTO TUNE preset is not possible, MANUAL TUNE preset is available.

Parts No.	S1-DW1-95D-E5Q
Parts Name	1DW195DE5Q, IC MAIN

MANUAL TUNE(This is mentioned in instruction book)

Under certain circumstances, you may need, or wish, to use manual tuning method.

1.Select the programme.

Select the programme position to be stored with the number buttons.

2.Show the main menu.

Press MENU; the main menu will appear.

3.Select "Install"

Press \wedge or \vee until "Install" is coloured in yellow, then press \triangleright .

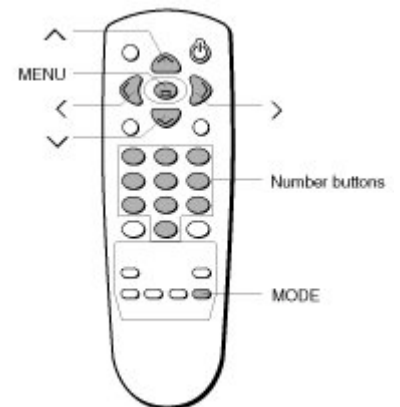
4.Search the channel.

Press \wedge or \vee to select "Manual tune", then press \triangleleft or \triangleright to search the channel.

The channel will be searched from the band area of current programme.

After searching a station, the tuning screen will disappear. To stop searching, press MENU.

5.Press MENU repeatedly to remove the on screen display.



Changing the system

Press MODE repeatedly after searching the channel in step 4.

The system will be changed as following;

Auto \rightarrow France \rightarrow Euro \rightarrow E/Euro

Ref.	Parts Code	Description	Remarks
-	S1-DW1-95D-E5Q	1DW195DE5Q, IC MAIN	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-C1400	SUFFIX KY,EZY KHY
SUBJECT Notice of replacing EEPROM(remote control code change)	

REF No :G - A1 - 067 - E0

DATE :29. OCT. 2001

<CONTENTS>

Remote control may cause malfunction after replaced EEPROM.
Change the remote control code after replaced EEPROM.

<SYMPTOM>

Press volume key then the channel will be changed.(For example)

<COUNTERMEASURE>

Change the remote control code by the following step 1 ~ 9.
Use jig remote control for countermeasure.

Jig remote control : S4-8B3-740-A01 (RC UNIT,R-40A01)

1. Select channel 91.
2. Set SHARPNESS 0 by PICTURE MENU.
3. Delete MENU screen (status of channel 91)
4. Press key button in the order of RED(SKIP) → GREEN(MOVE) → MENU.
5. Will be appear ADJUSTMENT on the display, set cursor to the lowest REMOCON.
6. Press " → " (right cursor) button, and set to A.(display change by the order of D → J → A).
7. Turn power off.

Use original remote control from next step.

8. Turn power on.
9. Resume the position of SHARPNESS of PICTURE MENU by original remote control.

<NOTE>

Do not set " J " in changing remote control code. (code may not be able to set)

Replace EEPROM again if you set " J " by mistake.

When press remote control key in the order of RED(SKIP) → GREEN(MOVE) → MENU
press each button within around 1 second.

Service mode does not operate if you press slowly.

Ref.	Parts Code	Description	Remarks
-	S4-8B3-740-A01	RC UNIT,R-40A01	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-FA21T2 / FA2110 / F21T1	SUFFIX KER / SH / SHR
SUBJECT Notes on repairing Buzz noise(TV-F21T1 only)	

REF No :G - A1 - 111 - E0

DATE :08. APR. 2002

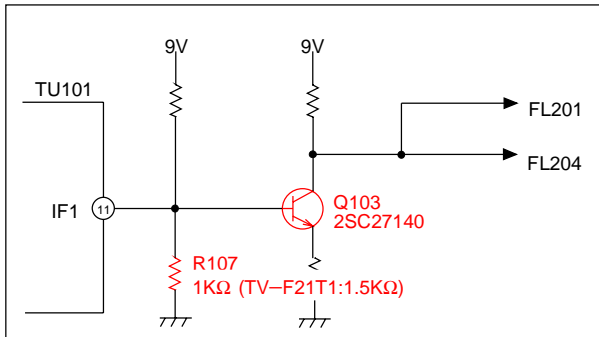
<CONTENTS>

The peripheral circuit that is connected to Pin 34 of IC301 in TUNER block has been changed. Please confirm the circuit construction(Circuit or Circuit 2), and use the appropriate parts for each type of the circuit.

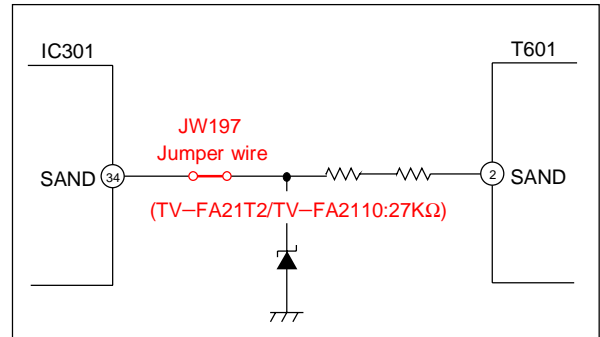
Modifications			
Ref No.	Circuit 1	Circuit 2	Affected Models
Q101	No mounting	TR,2SC3779	All models(On tuner block)
Q103	C-TR,2SC27140	No mounting	All models(On tuner block)
R107	C-RES,U 1K-1/16W	C-RES,U 1.5K-1/16W	TV-FA21T2 / FA2110 only (On tuner block)
JW197	Jumper wire	RES,27K-1/8W	TV-F21T1 only (On the line of IC301 Pin34)

Schematic diagram (Wiring diagrams are shown on the next page.)

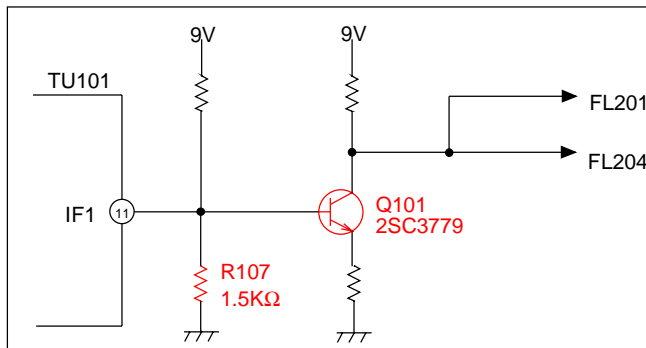
Circuit 1 Tuner Block



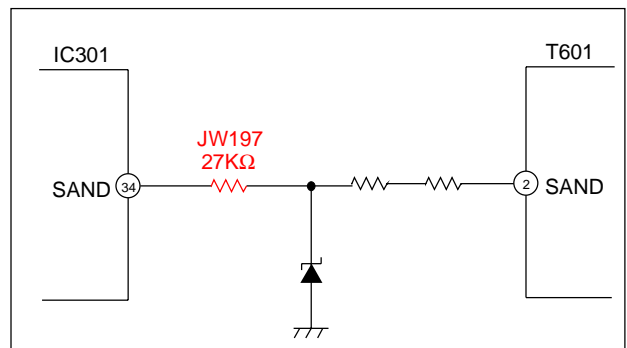
The line of Pin34 of IC301(SAND)



Circuit 2 Tuner Block



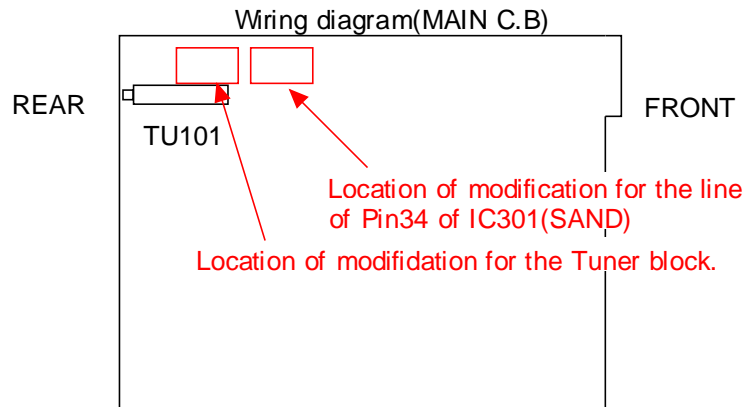
The line of Pin34 of IC301(SAND)



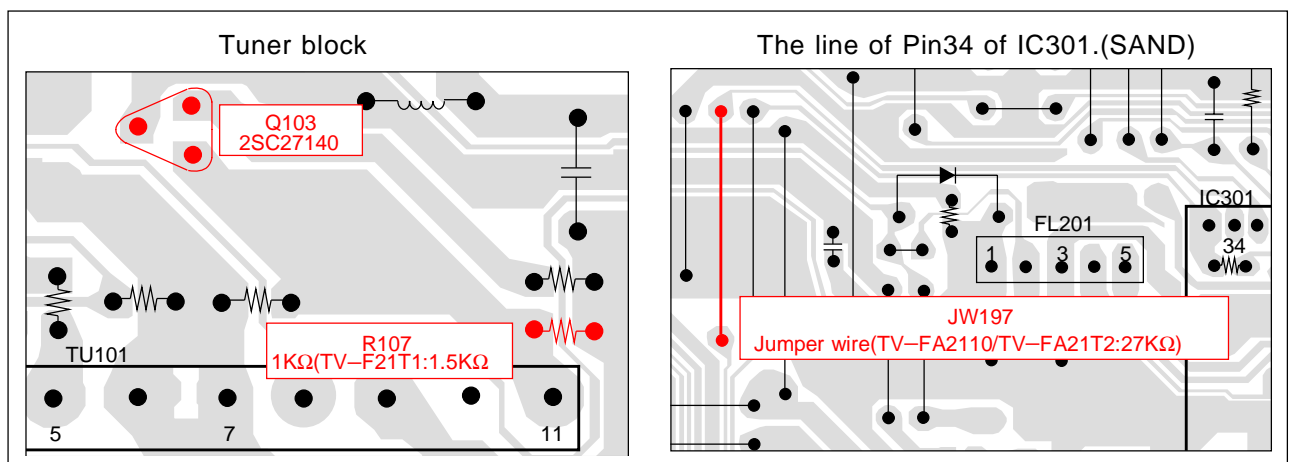
Ref.	Parts Code	Description	Remarks
JW197	88-121-273-080	RES,27K-1/8W J	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

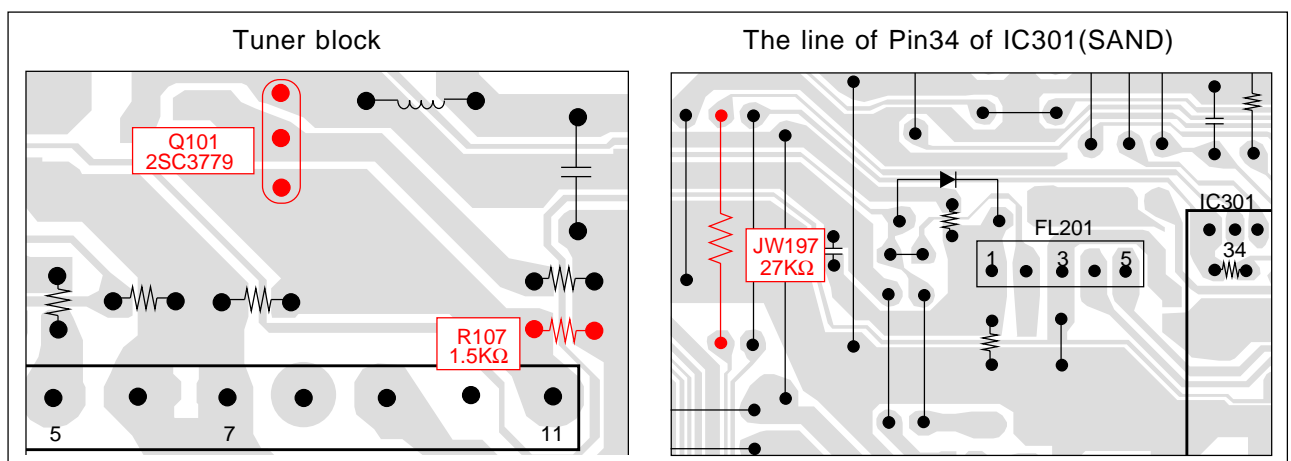
Wiring diagram



Circuit 1



Circuit 2



<NOTE>

The improper use of spare parts will be cause of the beat noise on Aerial.

When the buzz noise arises on Aerial or line input of TV-F21T1(Circuit 1), mount the 27KΩ instead of JW197.

Service Technical Information

MODEL NO. TV-C1421 / C1422 TV-C2121	SUFFIX KER / KE SHR
SUBJECT A beat noise problem	

REF No :G-A2-002-E0

DATE :30.MAY.2002

<CONTENTS>

A beat noise problem may arise by influence of the power supply circuit.
Especially, this problem will happen in low electric field or VHF LOW channel.

<COUNTERMEASURE>

To avoid being influenced, modify the power circuit as following countermeasure.

1. Replace the FB830 and FB831 in the secondary stage of the power supply to the jumper wires. (see fig.2)
2. Remove the JW606 and JW608 which connect the GND traces.(see fig.3)
3. Replace the JW801 at the primary stage of the power circuit to the ferrite beading.(see fig.4)

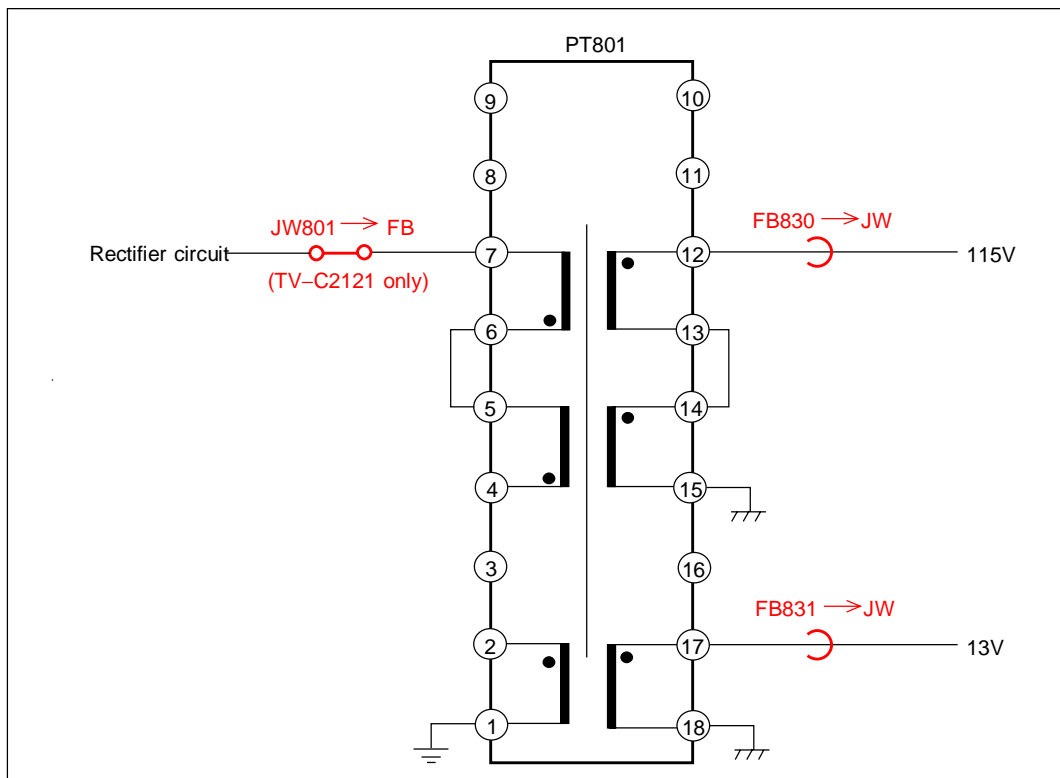
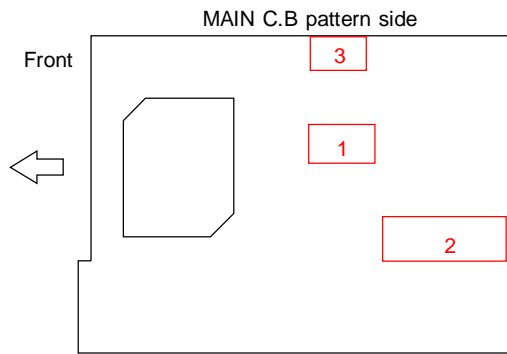


fig.1

Ref.	Parts Code	Description	Remarks
JW801	87-003-320-080	F-BEAD,FBR07HA121NB	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-



1. Replace the FB830 and FB831 of the secondary stage of the power supply to the jumper wire.

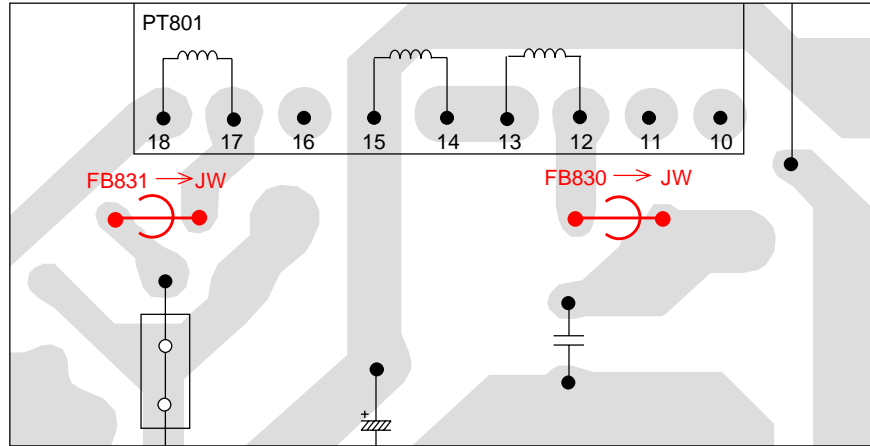


fig.2

2. Remove the JW606 and JW608 which connect the GND traces.

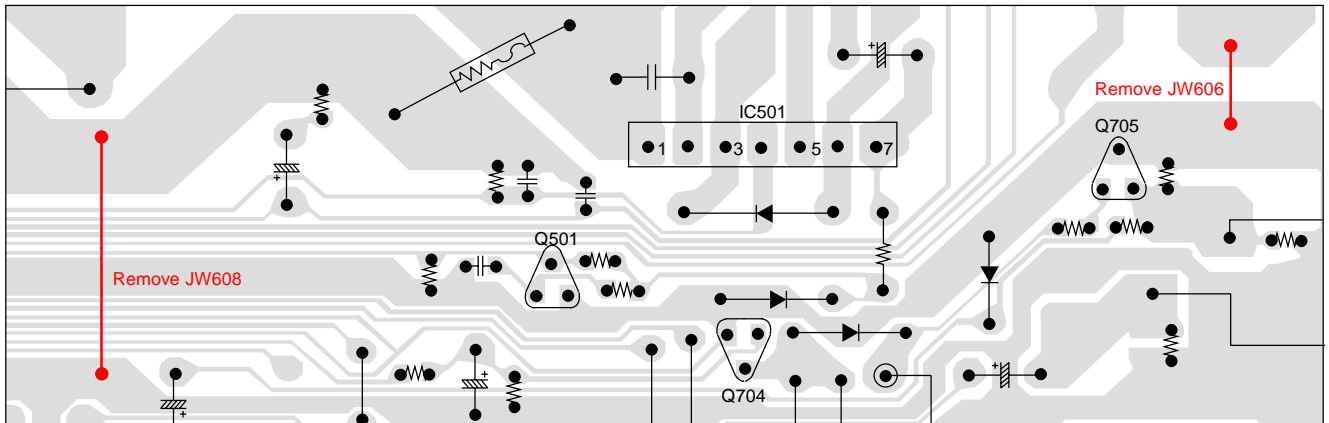


fig.3

3. Replace the JW801 at the primary stage of the power circuit to the ferrite beading.

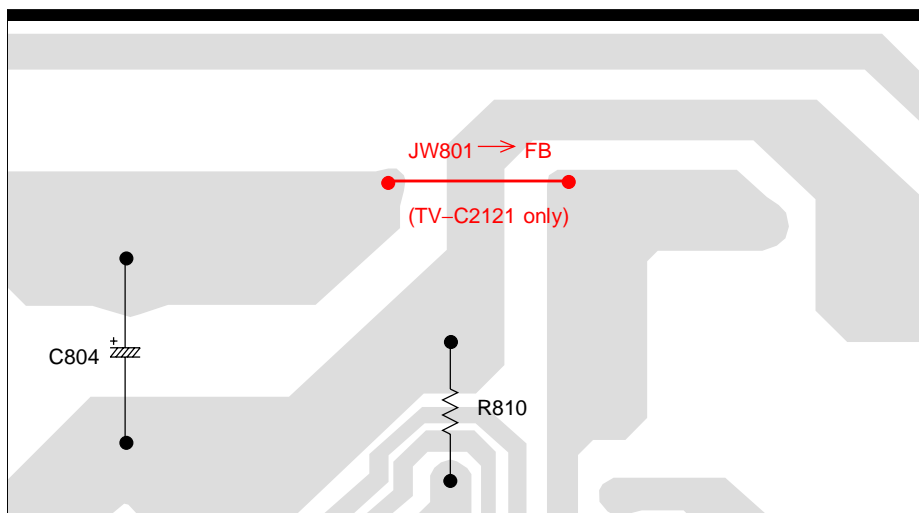


fig.4

Service Technical Information

MODEL NO. TV-SE1430 / SE2130	SUFFIX K,EZ / K,EZ,KH
SUBJECT Notes on repairing(Replacing CRT / Failure of R556)	

REF No :G-A2-011-E0

DATE :16.JUL.2002

<CONTENTS>

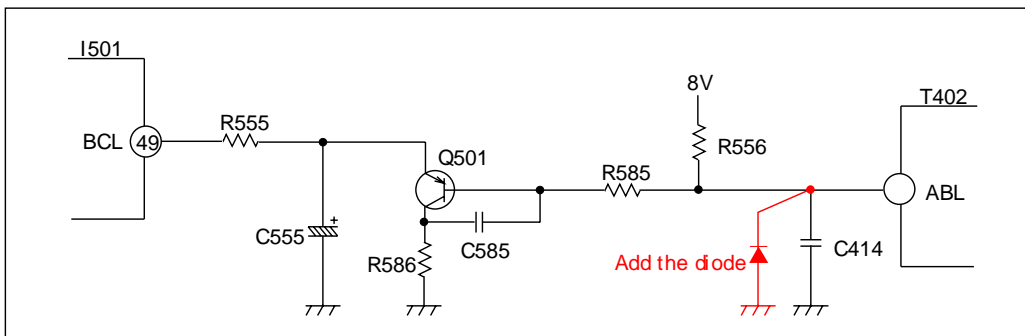
In the cases listed below, take the following countermeasure.

- 1) Replaced a CRT.
- 2) A failure of R556 was confirmed.

For example, a variation of resistance, and the discoloring of coating.

<COUNTERMEASURE>

1. Add the diode between C414 and C305(GND) as the picture below.
2. Fix it with a glue.
3. Confirm a value of resistor, a color of R556, and replace it if found any defect.



Ref.	Parts Code	Description	Remarks
-	87-017-781-080	DIODE,1N4004	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

Service Technical Information

MODEL NO. TV-SE1430 / SE2130 / C1400	SUFFIX K,EZ / K,EZ,KH / KH
SUBJECT Changing the component value when replacing CRT	

REF No :G-A2-026-E0

DATE :03.SEP.2002

<CONTENTS>

If you need to replace the CRT to the other type, change the value of components as listed below. The parts will be supplied as a kit.

TV-SE2130 -----

KIT1(SE2130): Change from A51EBV13X081 to A51EAL155X17

Ref No	Type	Description	Action
R350	R Metal	1/4W-2KΩ	Replace
R351	R Metal	1/4W-2KΩ	Replace
R823	R Carbon	1/4W-3KΩ	Replace
R841	R Carbon	1/2W-2.4Ω	Replace
R920	R Fusible	1W 2JA	Replace
C404	C Mylar	1.6KV-8200pF	Replace
C408	C Mylar	200V-0.36μF	Replace
L401	Coil Linearity	L-102	Replace

KIT2(SE2130): Change from A51EAL155X17 to A51EBV13X081

Ref No	Type	Description	Action
R350	R Metal	1/4W-1.5KΩ	Replace
R351	R Metal	1/4W-1.5KΩ	Replace
R823	R Carbon	1/4W-5.1KΩ	Replace
R841	R Carbon	1/2W-4.7Ω	Replace
R920	R Fusible	1W 1JA	Replace
C404	C Mylar	1.6KV-7500pF	Replace
C408	C Mylar	200V-0.27μF	Replace
L401	Coil Linearity	TRL341G	Replace

Ref.	Parts Code	Description	Remarks
-	S5-4CR-T00-500	21"CRT T/POLCOLOR>PHILIPS	KIT1(SE2130)
-	S5-4CR-T00-600	21"CRT PHILIPS>T/POLCOLOR	KIT2(SE2130)
-	S5-4CR-T00-200	14"CRT PHILIPS>CHUNGHWA STEREO	KIT1(SE1430)
-	S5-4CR-T00-400	14"CRT CHUNGHWA>PHILIPS STEREO	KIT2(SE1430)
-	S5-4CR-T00-100	14"CRT PHILIPS>CHUNGHWA MONO	KIT1(C1400)
-	S5-4CR-T00-300	14"CRT CHUNGHWA>PHILIPS MONO	KIT2(C1400)
-	S5-4CR-T00-700	14"CRT OEC T30>CHUNGHWA	KIT3(C1400)
-	S5-4CR-T00-800	14"CRT OEC T30>PHILIPS	KIT4(C1400)
-	S5-4CR-T01-100	14"CRT CHUNGHWA>OEC T30	KIT5(C1400)

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

TV-SE1430 -----

KIT1(SE1430): Change from A34EAC01X06 to A34AGT14X71

Ref No	Type	Description	Action
R823	R Carbonfilm	1/4W-1K Ω	Replace
P402	Conn Wafer	-	Replace

KIT2(SE1430): Change from A34AGT14X71 to A34EAC01X06

Ref No	Type	Description	Action
R823	Jumper	-	Replace
P402	Conn Wafer	-	Replace

TV-C1400 -----

KIT1(C1400): Change from A34EAC01X06 to A34AGT14X71

Ref No	Type	Description	Action
C401	C Mylar	200V-0.3 μ F	Replace
P401	Conn Wafer	-	Replace

KIT2(C1400): Change from A34AGT14X71 to A34EAC01X06

Ref No	Type	Description	Action
C401	C Mylar	200V-0.27 μ F	Replace
P401	Conn Wafer	-	Replace

KIT3(C1400): Change from A34JLL90X89 to A34AGT14X71

Ref No	Type	Description	Action
R401	R Metal	1W-2.7K Ω	Replace
R403	R M-Oxide Film	2W-3.9 Ω	Replace
C401	C Mylar	200V-0.3 μ F	Replace
C404	C Mylar	1.6KV-7200pF	Replace
C407	C Cera	500V-560pF	Replace
L402	Coil H-Linearity	TRL-781B	Replace
P401	Conn Wafer	-	Replace
J008	Jumper	-	Remove

KIT3(C1400): Change from A34JLL90X01 to A34AGT14X71

Ref No	Type	Description	Action
R401	R Metal	1W-2.7K Ω	Replace
R403	R M-Oxide Film	2W-3.9 Ω	Replace
C401	C Mylar	200V-0.3 μ F	Replace
C404	C Mylar	1.6KV-7200pF	Replace
C407	C Cera	500V-560pF	Replace
L402	Coil H-Linearity	TRL-781B	Replace
P401	Conn Wafer	-	Replace

KIT4(C1400): Change from A34JLL90X89 to A34EAC01X06

Ref No	Type	Description	Action
R401	R Metal	1W-2.7K Ω	Replace
R403	R M-Oxide Film	2W-3.9 Ω	Replace
C401	C Mylar	200V-0.27 μ F	Replace
C404	C Mylar	1.6KV-7200pF	Replace
C407	C Cera	500V-560pF	Replace
L402	Coil H-Linearity	TRL-781B	Replace
P401	Conn Wafer	-	Replace
J008	Jumper	-	Remove

KIT4(C1400): Change from A34JLL90X01 to A34EAC01X06

Ref No	Type	Description	Action
R401	R Metal	1W-2.7K Ω	Replace
R403	R M-Oxide Film	2W-3.9 Ω	Replace
C401	C Mylar	200V-0.27 μ F	Replace
C404	C Mylar	1.6KV-7200pF	Replace
C407	C Cera	500V-560pF	Replace
L402	Coil H-Linearity	TRL-781B	Replace
P401	Conn Wafer	-	Replace

KIT5(C1400): Change from A34AGT14X71 to A34JLL90X89

Ref No	Type	Description	Action
R403	R M-Oxide Film	2W-4.3 Ω	Replace
C401	C Mylar	200V-0.36 μ F	Replace
C404	C Mylar	1.6KV-6900pF	Replace
P401	Conn Wafer	-	Replace
R401	R Metal	1W-2.7K Ω	Remove
C407	C Cera	500V-560pF	Remove
L402	Coil Linearity	TRL-781B	Remove
J008	Jumper	-	Addition

KIT5(C1400): Change from A34EAC01X06 to A34JLL90X89

Ref No	Type	Description	Action
R403	R M-Oxide Film	2W-4.3 Ω	Replace
C401	C Mylar	200V-0.36 μ F	Replace
C404	C Mylar	1.6KV-6900pF	Replace
P401	Conn Wafer	-	Replace
R401	R Metal	1W-2.7K Ω	Remove
C407	C Cera	500V-560pF	Remove
L402	Coil Linearity	TRL-781B	Remove
J008	Jumper	-	Addition

Service Technical Information

MODEL NO. TV-C2121 / A21T1 / A2126	SUFFIX KERJ2C,KEJ2C / SHJ2C / SHJ2C
SUBJECT NO POWER	



REF No :G-A2-028-E0

DATE :05.SEP.2002

<SYMPTOM>

There may be a case of not turning on the power reason of DY coil defective.

<REPAIR>

1. Replace CRT Ass'y and Q601.
2. Making necessary adjustments (ex. White Balance, etc.) after replacing CRT.
(Refer to the service manual)

Note. The below mentioned CRTs are pre-adjusted PURITY and CONVERGENCE.

<CAUTION>

Must discharge residual anode voltage before replacing CRT. If failed to do, there is a possibility to cause electric shock hazard. Refer to the service manual for discharging.

Ref.	Parts Code	Description	Remarks
V901	8Z-JB9-611-010	CRT,A51QAE320X45CQMA	TV-C2121(KERJ2C)
V901	8B-JAN-650-010	CRT,A51QAE320X45CMMA(0,35)	TV-A21T1, TV-A2126, TV-C2121(KEJ2C)
Q601	87-A30-633-010	TR,2SD2627LS-YB	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-



AIWA CO., LTD
UTSUNOMIYA FACTORY
2620, TOKUJIROU-MACHI, UTSUNOMIYA-SHI, TOCHIGI 321-21, JAPAN

SERVICE TECHNICAL INFORMATION

ONE POINT REPAIR

UTSUNOMIYA, AUG . 30, 1997
REF. NO.: S1-97-022
CUSTOMER RELATIONS & SERVICE DIV.
(Revised)

MODELS: TV-C142 / C202
A145 / A205 / A215
SUBJECT: Resetting the TV time calculation display when refurbishing these models.

Note: This operation should only be performed when refurbishing these models.

CONTENTS: The Service Modes of the above models have a function to calculate and record the amount of time that has elapsed when the power is ON.
This function can be used to understand total amount of time that the TV was used before breakdown.
This function is very valuable when making explanations to the customer and when providing feedback for quality control.

When refurbishing these models, remember that they are to be shipped as new items and so the time calculating function must be reset in accordance with the following procedure.

<Reset Procedure>

1. Press the TEST key on the JIG remote control to activate the Service Mode.
2. Press the FINISH key.

The word "INITIALIZING" appears on the screen for a few seconds, then the power is automatically turned OFF and RESET operations are complete.

Note 1: Use the TV-C142 remote control for the JIG remote control.
This remote control can be used for all of the above models.

Note 2: Refer to each service manual for JIG remote control key positions, and other such information.

After performing this reset operation, all of the settings (screen quality, sound, etc.) will be reset to the factory settings (except tune-up reset data).

Product Distribution

TV-C142, C202, A215 . . . KER, KE
TV-A145, A205 . . . KER

SERVICE TECHNICAL INFORMATION

ONE POINT REPAIR

UTSUNOMIYA, NOVEMBER 20, 1997
REF. NO.: SI-97-047
CUSTOMER RELATIONS & SERVICE DIV.

MODELS : TV-C202 or TV-A215
SUBJECT : Irregular color phases
SYMPTOMS: Irregular color phases or disabled degaussing

Take the following check and repair steps

CHECKS :

1. Demagnetize the TV tube by the degausser and check that the screen still has irregular color phases.
2. Check whether there is an external magnetic field strong enough to affect the color phases.
3. Check whether the yoke (DY assembly) is firmly seated.

REMEDIES : Replace the thermistor (POSISTER TH801) by the following:

The new thermistor is "300N" (marked on its cover) (while the old thermistor is "180N").

Ref.	Parts name	Parts number
TH801	POS-THMS, PTH451C272B	87-A90-759-010

* Wait about 5 minutes after replacing the thermistor, turn on power to the system, and then make sure that the screen can be completely demagnetized.

Note : The following TV sets have been already improved:

- Serial numbers PMA7A***** or later and S**EB7A or later
- Serial numbers followed by a blue dot "•"

SERVICE TECHNICAL INFORMATION

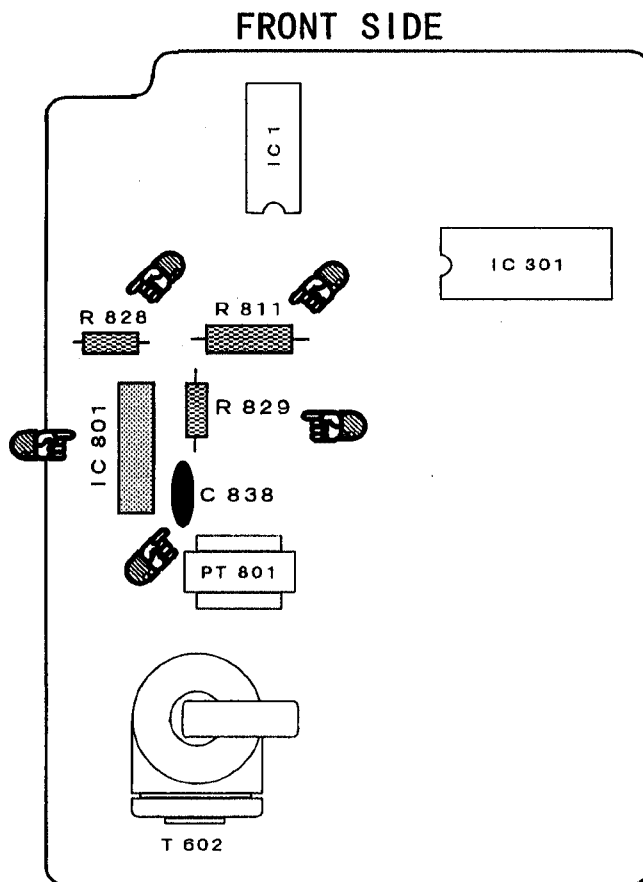
ONE POINT REPAIR

UTSUNOMIYA, DECEMBER 30, 1997
 REF. NO.: SI-97-055
 CUSTOMER RELATIONS & SERVICE DIV.
 (Revised)



MODEL S : TV-A145, TV-A205, TV-A215
 SUBJECT : No power is turned on.
 DESCRIPTION : The power may not be turned on due to a fault of the ceramics capacitor (C838) on the power circuit. Regardless of the indicated phenomenon of faulty details, exchange the object capacitor (C838) with one of the specified type. If any peripheral part is damaged and the equipment cannot be operated at the same time, exchange the part with a new one.

Countermeasures :



- Specified capacitor: C838
 1000P • 1K K → 1000P • 1K K R

- When the equipment does not operate due to a faulty peripheral part, exchange the following parts with new ones.
 IC801, R811, R828, R829

* Note that the equipment is different from TV-C142 and TV-C202 in some parts.

Ref.	Part Name	Part No.	Remarks
C838	CAP, CER 1000P-1K K R	87-A10-832-01/08	CHANGED FROM 87-016-515-080
IC801	IC, STR-S6707	87-A20-517-010	
R811	RES, M/F 0.33-2W J	87-A00-216-090	
R828	RES, 100-1/8W J	87-121-101-080	
R829	RES, 1.8K-1/8W J	88-121-182-080	

SERVICE TECHNICAL INFORMATION

ONE POINT REPAIR

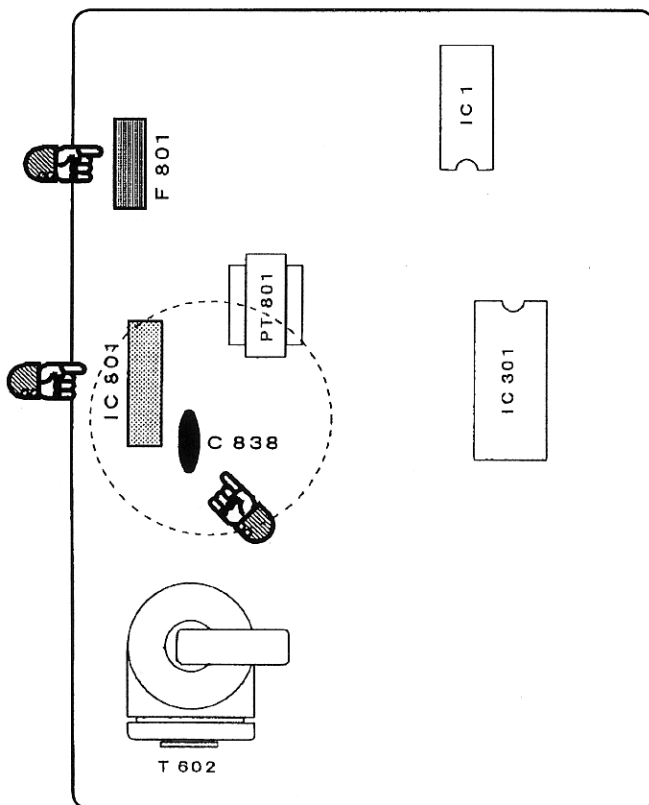
UTSUNOMIYA, DECEMBER 30, 1997
 REF. NO.: SI-97-057
 CUSTOMER RELATIONS & SERVICE DIV.

MODEL S : TV-C142, TV-C202
 SUBJECT : No power is turned on.
 DESCRIPTION : The power may not be turned on due to a faulty ceramics capacitor (C838) on the power circuit. Regardless of the indicated phenomenon of faulty details, exchange the undesirable capacitor (C838) with a one of the specified type. At the same time, if any peripheral part is damaged and the equipment cannot be operated, exchange the part with a new one.

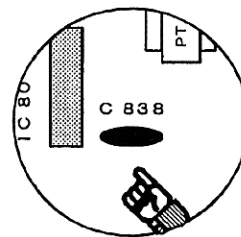


Countermeasures :

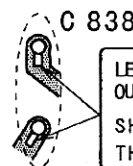
FRONT SIDE



- Specified capacitor: C838
 1000P • 1K K → 1000P • 1K K R
- When the equipment does not operate due to a faulty peripheral part, exchange the following parts with new ones.
 IC801, F801
- * The position of C838 is slightly different between boards with the end numbers 11 and 12. Therefore, take the following precautions on installation.



- C838 is mounted perpendicularly to IC801.



LEAD WIRE OF C838 SHOULD NOT BE OUT OF TRACK PATTERN.
 SHOULD BE CUT LEAD LESS THAN 3mm. (2 POINTS)

* Note that the equipment is different from TV-A145, TV-A205, and TV-A215 in some parts.

Ref.	Part Name	Part No.	Remarks
C838	CAP, CER 1000P-1K K R	87-A10-832-01/08	CHANGED FROM 87-016-515-080
IC801	IC, STR-S6707	87-A20-517-010	
F801	FUSE, 4A 250V T 218	87-035-458-010	

Parts other than the aforementioned part numbers cannot be used.

SERVICE TECHNICAL INFORMATION

ONE POINT REPAIR

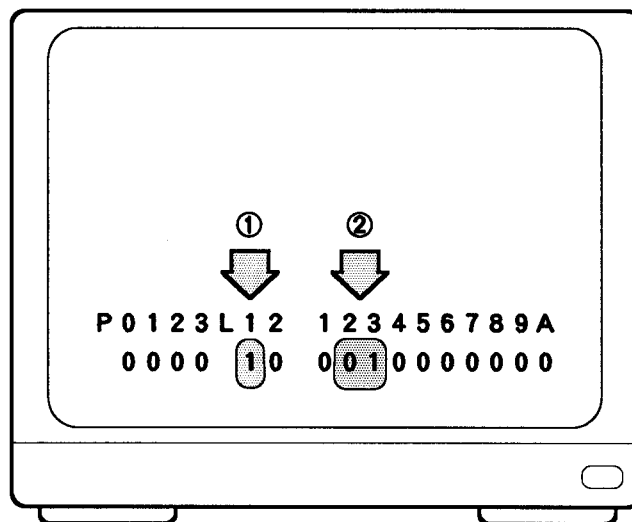
UTSUNOMIYA, NOV. 01, 1998
REF. NO.: SI-98-029
CUSTOMER RELATIONS & SERVICE DIV.

MODEL : TV-AR215 RH

SUBJECT : Service manual of the model in question contains an error in service-mode setting values to be specified after replacing EEP ROM. Setting of erroneous value may lead to a failure in Portuguese OSD display.

CORRECTIVE ACTION:

- Correct the service manual setting of OSD display into values shown in the following figure.
- After a repair, set to the specified values .



The correct values for ① and ② of TV-A215RH must be set as shown in the figure. After repairing the EEP ROM ,set the values as shown in the figure.

SERVICE TECHNICAL INFORMATION

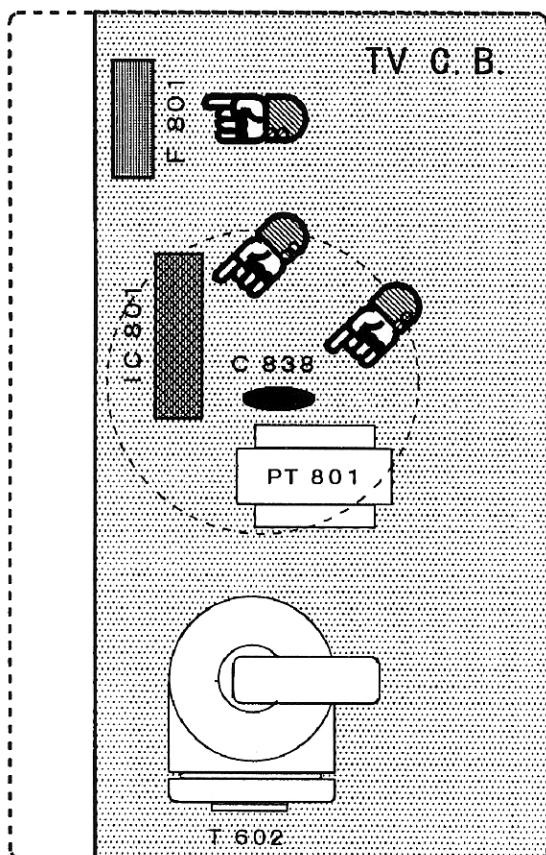
ONE POINT REPAIR

UTSUNOMIYA, DECEMBER 20, 1997
 REF. NO.: SI-97-062
 CUSTOMER RELATIONS & SERVICE DIV.

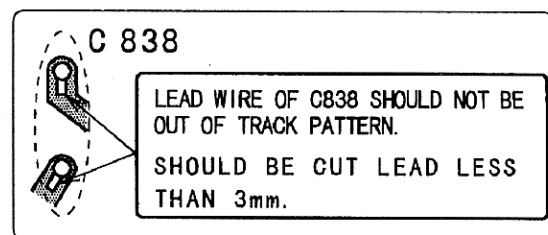
MODEL : TV-C2120 DH
 SUBJECT : No power is turned on.
 DESCRIPTION : The power may not be turned on due to a faulty ceramics capacitor (C838) on the power circuit. Regardless of the indicated phenomenon of faulty details, exchange the undesirable capacitor (C838) with a one of the specified type. At the same time, if any peripheral part is damaged and the equipment cannot be operated, exchange the part with a new one.



Countermeasures :



- Specified capacitor: C838
 1000P • 1K K → 1000P • 1K K R
- When the equipment does not operate due to a faulty peripheral part, exchange the following parts with new ones.
 IC801, F801
- During soldering, take great care to the following respects.



Ref.	Part Name	Part No.	Remarks
C838	CAP, CER 1000P-1K K R	87-A10-832-01/08	CHANGED FROM 87-016-515-080
IC801	IC, STR-S6707	87-A20-517-010	
F801	FUSE, 4A 250V T 218	87-035-458-010	

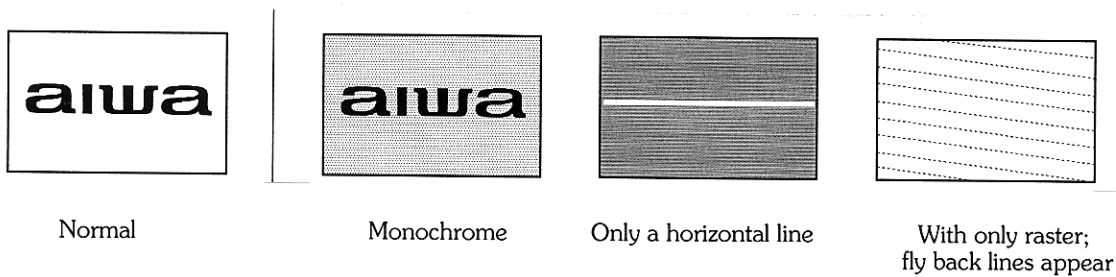
Parts other than the aforementioned part numbers cannot be used.

SERVICE TECHNICAL INFORMATION

ONE POINT REPAIR

UTSUNOMIYA, September 30, 1994
 REF. NO. : SI-94-027
 SERVICE ENGINEERING DIV.

MODEL : TV-1452 NH
 SUBJECT : Abnormal screen display
 CONTENT : Electric discharge on the CRT may damage the CRT C. B transistor (2SC2482, 2SC1815Y) and the TV C. B IC201 (TA8825AN). In these cases, the following symptoms are present.
 *As electric discharge on the CRT seldom occurs, it is therefore not caused by a malfunction in the CRT.



REMEDY : Replace the damaged parts. Then, to prevent a repetition of those problems, follow steps (1- 5) for the circuit modification described below.

1. Connect 9.0 V ZENER DIODE (KIT, A TV-1452) between IC201's PIN23 and GND, PIN24 and GND, PIN25 and GND, PIN39 and GND (See Figures 1 & 2).
2. Connect 12 V ZENER DIODE (KIT, A TV-1452) between IC201's PIN26 and GND (See Figures 1 & 2).

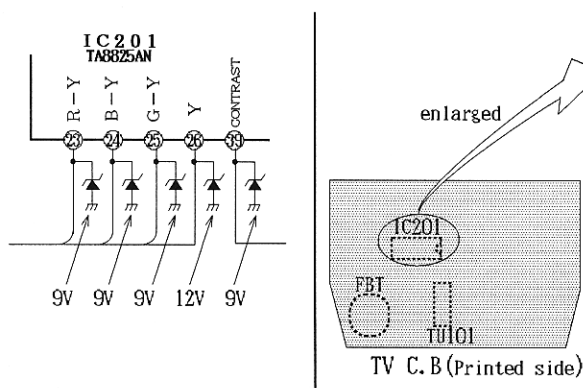


Fig-1

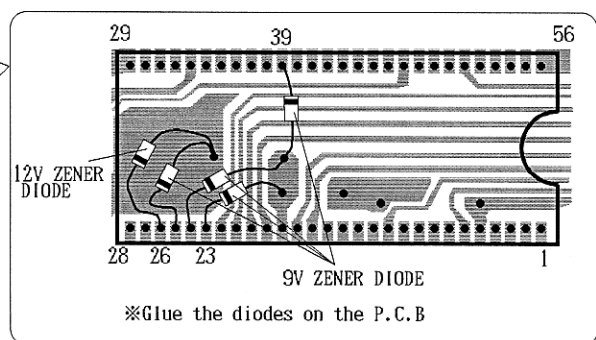
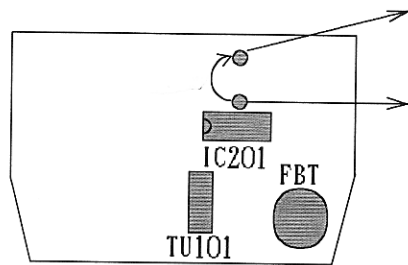


Fig-2

3. Move C206 to the position designated in Figure 3.



Removed capacitor must be mounted here.
"C206" is displayed. Make sure the polarity is correct.

Part to be removed

*Both the above two positions are marked "C206" before and after movement.

Figure 3: TV C. B (Parts side)

4. Remove C506 mounted on the parts side, and affix it to the printed side as shown in Figure 4.

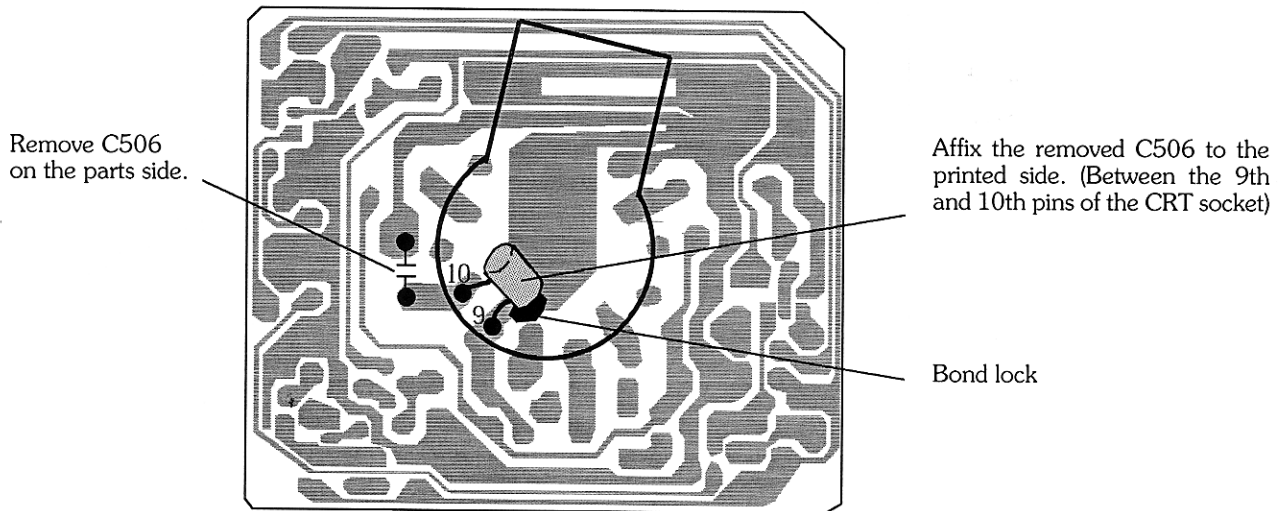


Figure 4: CRT C. B (Printed side)

5. Exchange R411 (1Ω/1W) with the resistor (1Ω/1W) on KIT, A (TV-1452) (See Figure 5).

Note: Although the exchanged resistor has the same resistance and wattage as R411, they have different fusing characteristics. Be sure to use the resistor supplied for KIT, A (TV-1452).

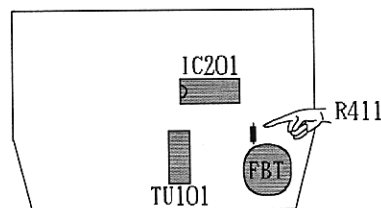


Fig-5 TV C. B

Parts & Cautions

Ref.	Part Name	Part Number
IC201	TA8825AN	ST-A88-25A-NP0
Q501, Q511, Q521	2SC2482	SS-C24-820-B10
Q502, Q512, Q522	2SC1815Y	89-318-155-080
—	KIT, A (TV-1452)	09-001-338-010

Note 1: The above ICs and transistors can easily be damaged from the electric discharge on the CRT. If not damaged, do not replace.

Note 2: KIT, A (TV-1452) has 1 resistor (1Ω/1W) and 5 ZENER DIODES (9.0V × 4, 12V × 1).

Service Technical Information

MODEL NO. TV-AT215 KH
SUBJECT No power



REF.No. :G - A0 - 091 - E0

DATE :07. DEC. 2000

<CONTENTS>

The power may not be supplied to the model indicated above due to faulty C813 or C814.
In this case, take the following countermeasures.

<COUNTERMEASURE>

Replace C813 and C814 with new parts.
Replace both together even if only one of them is faulty.

OLD PARTS	NEW PARTS
87-A10-832-010 CAP,CER 1000P-1K R	87-A12-119-010 CAP,CER 560P-2K HR SL

Ref.	Parts Code	Description	Remarks
C813	87-A12-119-010	CAP,CER 560P-2K HR SL	-
C814	87-A12-119-010	CAP,CER 560P-2K HR SL	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	25.DEC.2000

Service Technical Information

MODEL NO. TV-SE141 K,EH /SE211 K,EH
SUBJECT No power(Notes on replacing EEPROM)



REF.No. :G - A0 - 089 - E1

DATE :30. JAN. 2001

REVISION : Additional description in Countermeasure

<CONTENTS>

Take the following measures with regard to complaints that the power shuts off or cannot be turned on in relation to the model above.

<COUNTERMEASURE>

1. Check the condition of the TV set (whether it is in the protection mode against a power supply error) by the following steps a ~ e.
 - a. Check that the power cannot be turned on from either the power button on the TV set or the remote controller (stand-by: a red LED goes on).
 - b. Press the "TEST" key on the jig remote controller to see if the power comes on (if it does not come on, the microprocessor may be broken).
If the protection function is on during power supply error detection, pressing the "TEST" key makes the LED flash in green and an AGING display is shown.
Pressing the keys on the remote controller in the following order instead of pressing the "TEST" key will also bring up the AGING display.
"ENTER" → "AV MODE" → "SLEEP" → "MENU" → "POWER"
 - c. Once the AGING display is shown, press the "TEST" key to erase the AGING display and disconnect the power supply cord.
*If you have had no problem in operation up to this point, there is no problem with the microprocessor and the EEPROM.
 - d. Connect the power supply cord.
Check that the power is turned on by pressing the "Power" button on the TV set / remote controller (complete the procedure by performing steps 2 and 3 below).
 - e. If the TV-set is still in stand-by status, the protection function is on during detecting an error, so check if there is a problem with the power supply system.

2. Check the R617 resistance (when the resistance is excessive or OPEN, a power supply error is detected).

When R617 is 1/8 W, change it to 1/4 W (this has already been changed for models with Serial No.S****0C**** or later).

*When replacing the EEPROM (IC3), refer to the "Description" in the table below to select an appropriate EEPROM. Different models/specifications require different EEPROMs.

Refer to the NOTE below.

NOTE

Turning on the power after replacing EEPROM activates data writing between microcomputer and EEPROM. (The writing takes approximately 1 minute.)

After completion of data writing, power is automatically turned on.(Do not disconnect the AC cable while data is being written.)

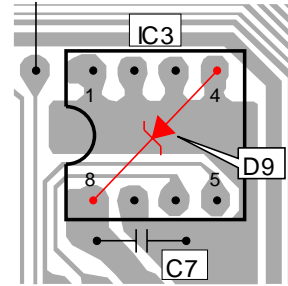
After replacing EEPROM, readjust and verify electrical adjustment to the service manual.

Ref.	Parts Code	Description	Remarks
R617	88-130-394-080	RES,390K-1/4W J	-
D9	87-A40-235-080	ZENER,MTZJ9.1C	-
IC3	SV-T00-102-010	IC,SLA24C04-D(TV-SE211 K)	-
IC3	SV-T00-103-010	IC,SLA24C04-D(TV-SE141 K)	-
IC3	SV-T00-104-010	IC,SLA24C04-D(TV-SE211 EH)	-
IC3	SV-T00-105-010	IC,SLA24C04-D(TV-SE141 EH)	-

G	R	Code No.	Access Code	Modified Ser. No.	Parts Schedule
-	-	-	-	-	-

- Put a zener diode (ZENER, MTZJ9, 1C) in place between the 4th and 8th pins of the EEPROM (be careful to install it in the proper direction).

The diode is already in place on models with Serial No.S****9C**** or later.



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