


# COLOR TELEVISION RECEIVER

Chassis : K15A  
Model: TXJ1366  
TXJ1367  
TXJ1396  
TXJ1966  
TXJ1996

# **SERVICE** *Manual*



## COLOR TELEVISION RECEIVER



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## 1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

### 1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.
3. Make sure that there are no cabinet openings through which people—particularly children—might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (Figure 1-1):  
Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).
5. With the unit completely reassembled, plug the AC line cord directly into the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

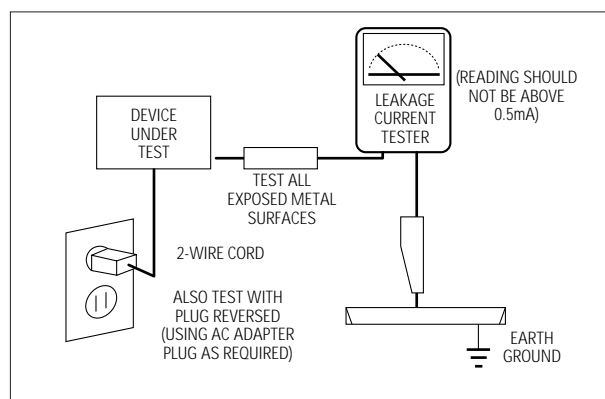




Fig. 1-1 AC Leakage Test

6. Antenna Cold Check:  
With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.
7. X-ray Limits:  
The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.
8. High Voltage Limits:  
High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced.  
(X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

Heed the high voltage limits. These include the X-ray Protection Specifications Label, and the Product Safety and X-ray Warning Note on the service data schematic.

## 1-1 Safety Precautions (Continued)

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9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.
10. Design Alteration Warning:  
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
11. Hot Chassis Warning:  
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.  
  
To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.
12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, regardless of the AC plug polarity. These units can be safely serviced only if an isolation transformer inserted between the receiver and the power source.
13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.
14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.
15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.
16. Picture Tube Implosion Warning:  
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.
17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.
18. Product Safety Notice:  
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original—even if the replacement is rated for higher voltage, wattage, etc.  
  
Components that are critical for safety are indicated in the circuit diagram by shading, () or ().  
Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

## 1-2 Servicing Precautions

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Warning1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

Warning2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.  
  
The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

## 1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

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1. Some semiconductor (“solid state”) devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.
2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power—this is an electric shock precaution.)
3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.
5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.
6. Use only an anti-static solder removal device. Many solder removal devices are not rated as “anti-static”; these can accumulate sufficient electrical charge to damage ESDs.
7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.



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**3K15A-1425**

## 2. Specifications

### 2-1 Specifications

Television System	14"/20"/21" NTSC COLOR TV SIGNAL
Power Consumption	14" : 57 WATTS NOMINAL, 20" : 70 WATTS NOMINAL 21" : 75 WATTS NOMINAL,
Picture Tube	14" : A34KQV42X 20" : A48KRD82X (H) 21" : A51KQJ63X (H)
Power Requirement	AC 120V, 60Hz /AC 100 ~ 240, 50Hz, 60Hz
Operating System	REMOCON SYSTEM (SZM354ET)
Tuning Ranges	VHF CH : 2-13, UHF CH : 14-69, CABLE CH : 1,14-125
Antenna Input Impedance	75 ohm UNBALANCED TYPE FOR VHF/UHF
Intermediate Frequency	PICTURE 45.75MHz, SOUND 41.25MHz, COLOR SUB CARRIER 42.17MHz
Speaker Impedance	Single: 8 ohm 3W Dual : 8 ohm 3W x 2 Dual : 16 ohm , 3W x 2 (CT-33H1, CT-50H1)

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## 3. Disassembly and Reassembly

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### 3-1 Back Cover Removal

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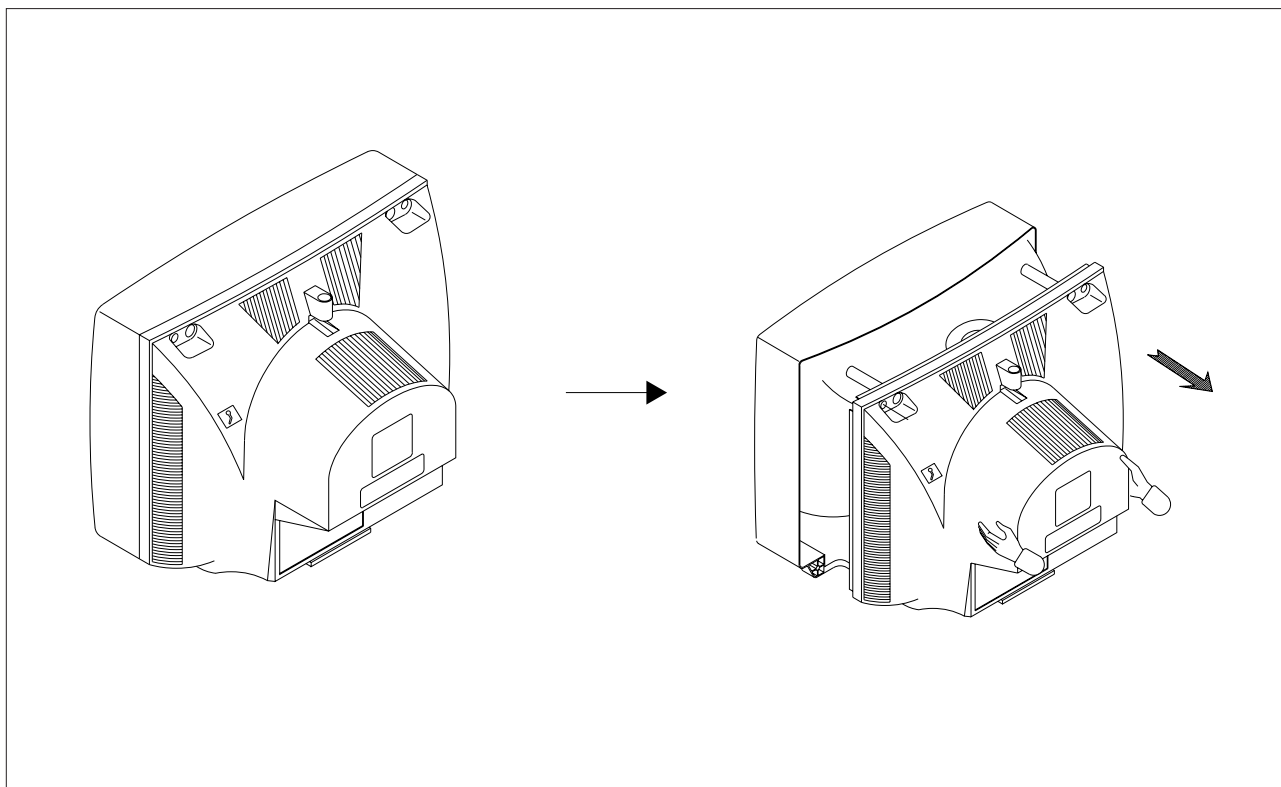


Fig. 3-1

1. After removing the screws, pull the cabinet backwards.



## 3-2 Main Board Removal

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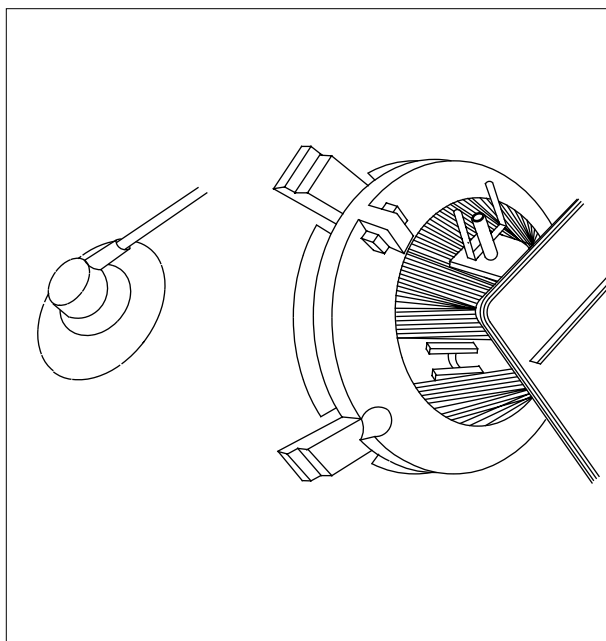


Fig. 3-2

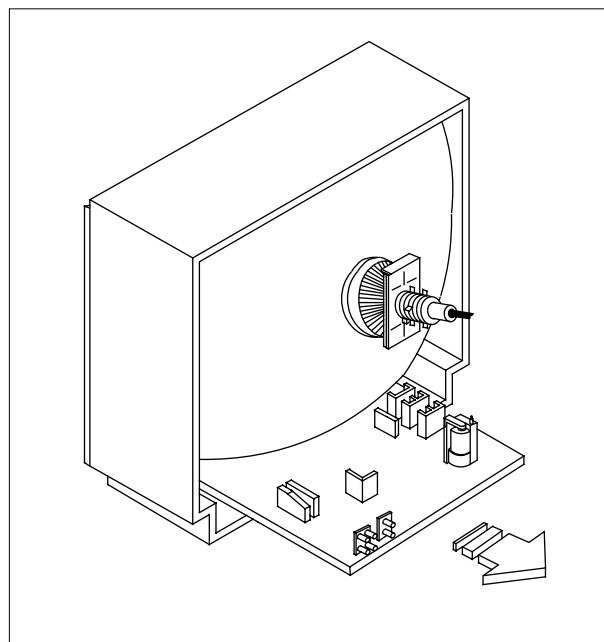


Fig. 3-3

1. Separate the socket board from the CRT neck.
2. Remove the Anode Cap from the CRT.
3. Remove the main board by pulling it with both hands.

Warning: The FBT is charged with high voltage.  
Before removing the Anode Cap, discharge the voltage  
through one of the heat sinks on the main board.

### 3-3 Speaker Removal

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1. Loosen the screws and remove the speakers.

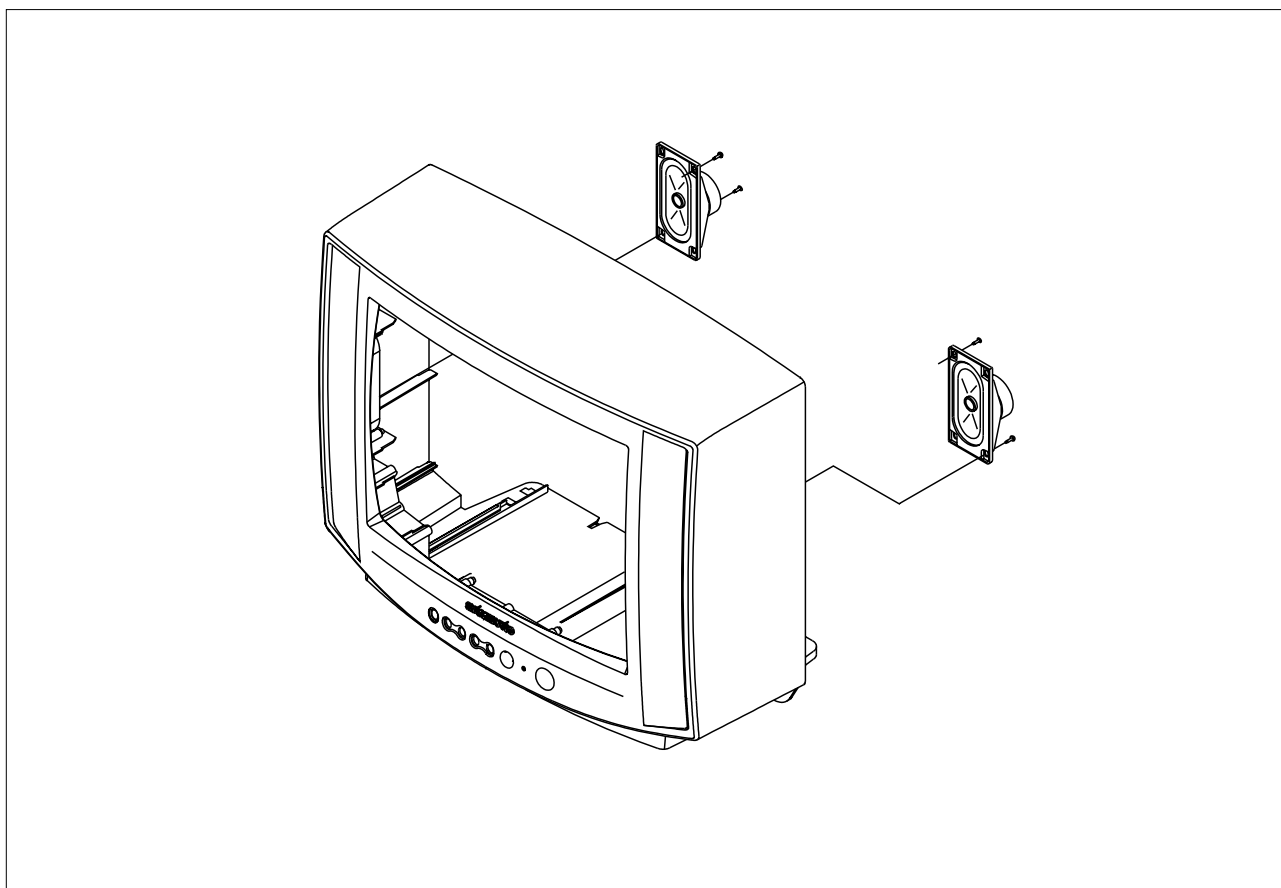


Fig. 3-4

## 3-4 CRT Removal

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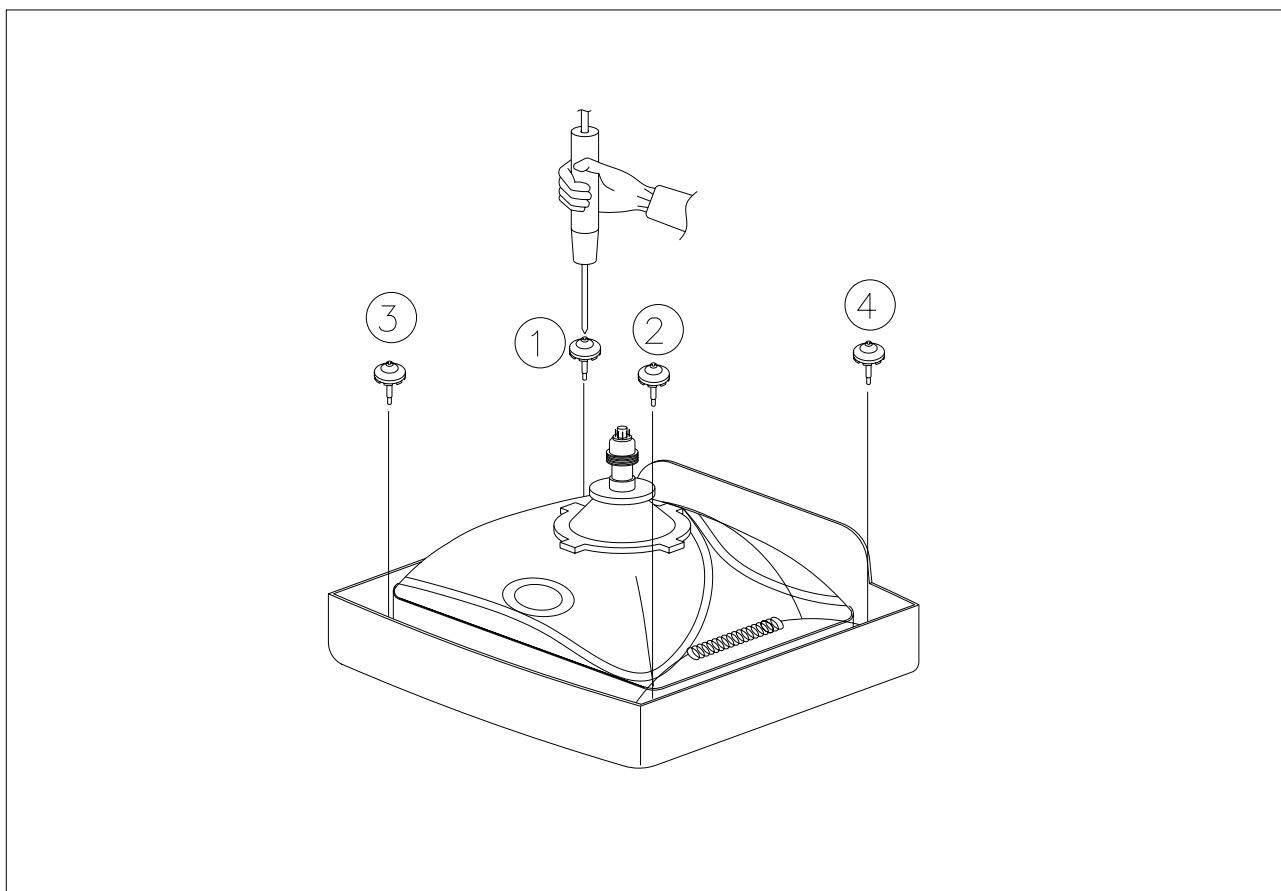


Fig. 3-5

1. Spread a soft mat on the floor. Place the TV set face down.
2. Remove the 4 nuts mounting the CRT to the front cabinet.
3. Lift the CRT.
4. Caution: Because of the high vacuum and large surface area of the picture tube, be careful while handling it:  
(1) Always lift the picture tube by grasping it firmly around the face-plate, (2) Never lift the tube by its neck. (3) Do not scratch the picture tube or apply excessive pressure. Fractures of the glass may cause an implosion.

## 4. Alignment and Adjustments

### 4-1 Service Mode Adjustments

#### 4-1-1 Service Mode Menus

Since there are no VRs in the K15A chassis, all adjustments after parts replacement must be done in the Service Mode. Service Mode adjustments are necessary when either the EEPROM (IC902) or the CRT is replaced.

#### 4-1-2 Entering the Service Mode

Press the following transmitter keys while in STAND-BY mode:

MUTE—>1—>8—>2—>POWER  
“Factory Mode Menu” is displayed

ADJUSTMENT	<---selected (violet)
PATTERN	
OPTION	
RESET	

Enter Service Mode using the Volume +,- keys. Service Mode Menu:

AGC	XX	RC	XXX
VCO	XX	GC	XXX
SBT	XX	BC	XX
SCT	XX	VA	XX
SCR	XX	VS	XX
STT	XXX	HS	XX
GG	XXX	SS	XX
BG	XXX	SVC : MUTE	

Select a mode to be adjusted, using the channel down key. Example: VCO.

AGC	XX	RC	XXX
VCO	XX	GC	XXX
SBT	XX	BC	XX
SCT	XX	VA	XX
SCR	XX	VS	XX
STT	XXX	HS	XX
GG	XXX	SS	XX
BG	XXX	SVC : MUTE	

Change the data with “Volume +, - “ keys.

VCO	71
-----	----

Return to the Service mode by pressing MENU.

AGC	XX	RC	XXX
VCO	XX	GC	XXX
SBT	XX	BC	XX
SCT	XX	VA	XX
SCR	XX	VS	XX
STT	XXX	HS	XX
GG	XXX	SS	XX
BG	XXX	SVC : MUTE	

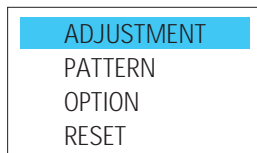
Return to the Factory mode via the MENU key.

ADJUSTMENT
PATTERN
OPTION
RESET

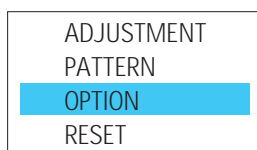
Press POWER to enter the Stand-by mode.

### 4-1-3 Adjustment in Option Mode

This adjustment is necessary whenever the EEPROM is replaced. Input data (as marked on the back cabinet).



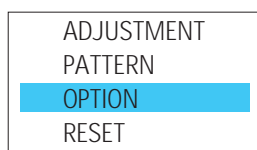
Select "SET OPTION" by pressing the Channel ▼ key twice.



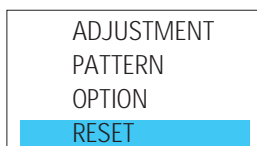
Press the Volume +, - keys to enter the set Option mode.



Press MENU to go back to the factory mode.



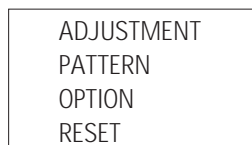
Select RESET with channel ▼ key.



Press volume + key.



### 4-1-4 Service Mode Adjustments



1. The Pattern Adjustment is done only in the factory. Do not attempt to readjust it.
2. Refer to 4-2 for other adjustments.
3. Set OPTION data.

### 4-1-5 Service Mode Adjustment Ratings

No	Item	Function	Range	Initialized MICOM Data
1	AGC	RF AGC Adjustment	0-63	50
2	VCO	PIF VCO Adjustment	0-127	63
3	SCT	SUB-CONTRAST Adjustment	0-63	48
4	SCR	SUB-COLOR Adjustment	0-27	13
5	STT	SUB-TINT Adjustment	0-27	7
6	RC	RED-CUT OFF Adjustment	0-255	0
7	GC	GREEN-CUT OFF Adjustment	0-255	0
8	BC	BLUE-CUT OFF Adjustment	0-255	0
9	SVC	Input a Horiz line pattern		
10	GG	GREEN-GAIN Adjustment	0-255	127
11	BG	BLUE-GAIN Adjustment	0-255	127
12	SBT	SUB-BRIGHTNESS Adjustment	0-63	31
13	VA	VERTICAL SIZE Adjustment	0-63	39
14	VS	VERTICAL CENTER Adjustment	0	0
15	HS	HORIZONTAL Phase Adjustment	0-31	15
16	SS	SUB-SHARPNESS Adjustment	0-31	4

Note : The initial MICOM data values take effect when IC902 is replaced.

## 4-2 Alignment and Adjustment


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### 4-2-1 General Alignment Instructions

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as picture height, focus and a horizontal and vertical sync.
2. Observe the picture and check for good back and white details. There should be no objectionable color shading; If color shading is present, demagnetize the receiver. If color shading persists, perform purity and convergence adjustments described below.
3. To protect against shock hazard, use an isolation transformer.

### 4-2-2 Power Supply Check

Check the following:

- A: Power plug is connected; "Stand-by" mode  
 B: Power On when "Power ON" button is pressed  
 C: Power On by FBT Each supply is marked on its lead-in wire. (  )

### 4-2-3 Focus Adjustment

Adjust the focus control on the FBT for well defined scanning lines.

### 4-2-4 Fail Safe Circuit Check (FS) (OPTION)

1. The failsafe check must be the final step in servicing.
2. Turn the power switch ON and adjust customer controls for normal operation.
3. Temporarily short pin X to pin R on the main board (RX06, RX04) with a jumper wire. Raster will disappear.
4. The TV must remain in this state even after removing the jumper wire. This shows that the failsafe circuit is working properly.
5. To recover picture and sound, temporarily turn off the TV and allow the failsafe circuit more than 30 seconds to reset. Then switch power ON to produce normal picture and sound.

### 4-2-5 IC902 Replacement

1. When IC902 is replaced, all values are reset to "Initialized MICOM Data" and readjustment is necessary.
2. Press the POWER button 10 seconds after plug-in.
3. To enter the Service Mode, refer to Fig. 4-1 (Service Mode Adjustment).

### 4-2-6 PIF VCO Adjustment

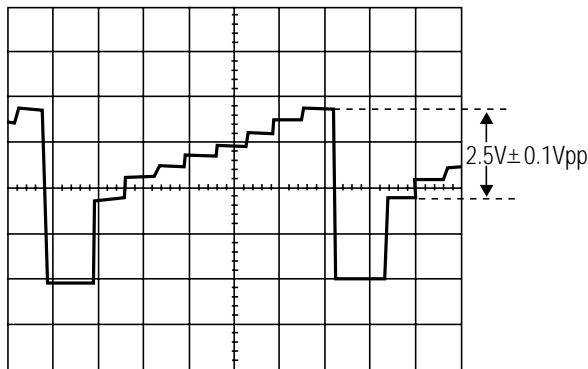
1. Use a Pattern Generator or an off-air signal.
2. Open pin 11 of Micom (IC901) or one side of lead pin for R237.
3. Adjust VCO in the service mode to set IC101 Pin 44 (AFT) to  $2.5V \pm 0.4V$ .
4. Connect the opened site.

### 4-2-7 RF-AGC Adjustment

1. Input a PHILLIPS pattern.
2. Set the input signal to 60 dB.
3. Enter into the AGC in the service mode.
4. Adjust AGC until color bar noise disappears.

### 4-2-8 Sub-Contrast Adjustment

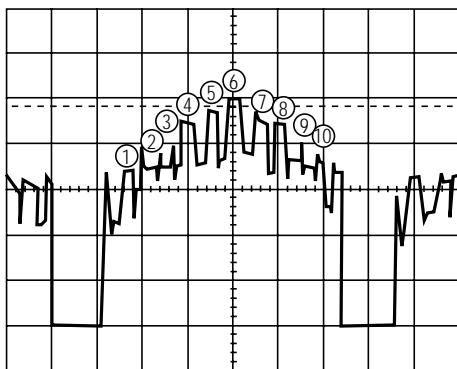
1. Input a gray scale pattern. Use a pattern generator (PM5518).
2. Short D208 to switch off the ABL feed-back.
3. Check CN201 R-OUT with an oscilloscope.
4. Set RC, BC, GC data to 0 in the Service Mode.
5. Adjust SCT to  $2.40 \pm 0.1V_{p-p}$



6. Remove the short across D208 and restore ABL.

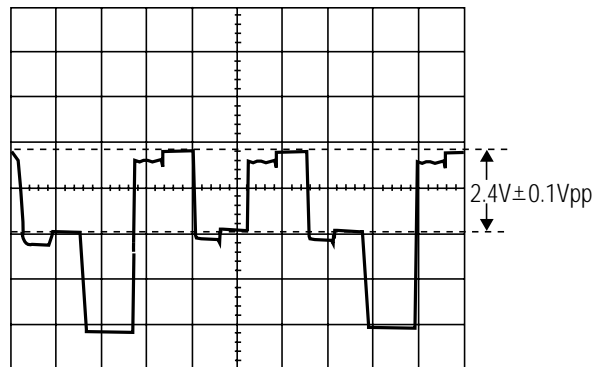
### 4-2-9 Sub-Tint Adjustment

1. Input a rainbow pattern.
2. Check CN201 B-OUT with an oscilloscope.
3. Adjust STT in the service mode until the 6th peak is the highest and the 5th and 7th peaks have equal heights.



### 4-2-10 Sub-Color Adjustment

1. Do sub-color adjustment after the Sub-Contrast and Sub-Tint adjustments.
2. D208 should still be shorted. The ABL should still be switched OFF.
3. Input a color bar pattern. Use a pattern generator (PM5518).
4. Check CN201 R-OUT (use an oscilloscope).
5. Ensure that the RC, GC and BC data are 0. BG are 140 and GG should be 90.
6. Adjust SCR to  $2.4 \pm 0.1V_{p-p}$  (black and red levels).
7. Remove the short across D208 and restore ABL.



### 4-2-11 White Balance Adjustment

#### 4-2-11 (A) LOW-LIGHT ADJUSTMENTS

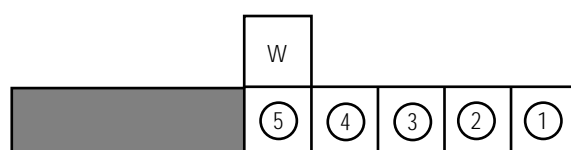
1. Input either a lion head or "pure white" color pattern.
2. Operate the receiver for 30 minutes.
3. Check the data in the service mode:  
RC, GC, BC are 0 and SB is 16;  
Steps BG are 90 and GG are 140.
4. Enter the horizontal line mode by pressing the MUTE key.
5. Adjust the screen VR on the FBT until a dim colored line (red, green or blue) appears on the screen.
6. After pressing the MUTE key, go to RC, BC or GC with channel ▲, ▼ keys. After putting a dim colored line (red, green or blue) in the horizontal line with MUTE key, adjust color with volume ▲, ▼ keys.
7. Exit the horizontal line via the MUTE key.

#### 4-2-11 (B) HIGH-LIGHT ADJUSTMENTS

1. Input a high-light pattern
2. Adjust GG, BG in the Service Mode.
3. Recheck in low light.

### 4-2-12 Sub-Brightness Adjustment

1. Input a Toshiba pattern.
2. Warm up the receiver for 10 minutes.
3. Enter the Service Mode and set SB to the point where the 5th point is brighter in the gray scale.



### 4-2-13 Vertical Size Adjustment

1. Input a lion head pattern.
2. After the vertical center adjustment, enter into the service mode.
3. Adjust VA so that the each top and bottom of the screen is 4.0. If the top and bottom values are different, adjust VA so that the sum of the two values is 8.0.

### 4-2-14 Horizontal Size Adjustment

1. Receive a lion head pattern.
2. Enter into the service mode.
3. Adjust HS to symmetrized right and left.

### 4-2-15 When CRT Is Replaced

Do the following adjustments after the basic purity and convergence adjustments.

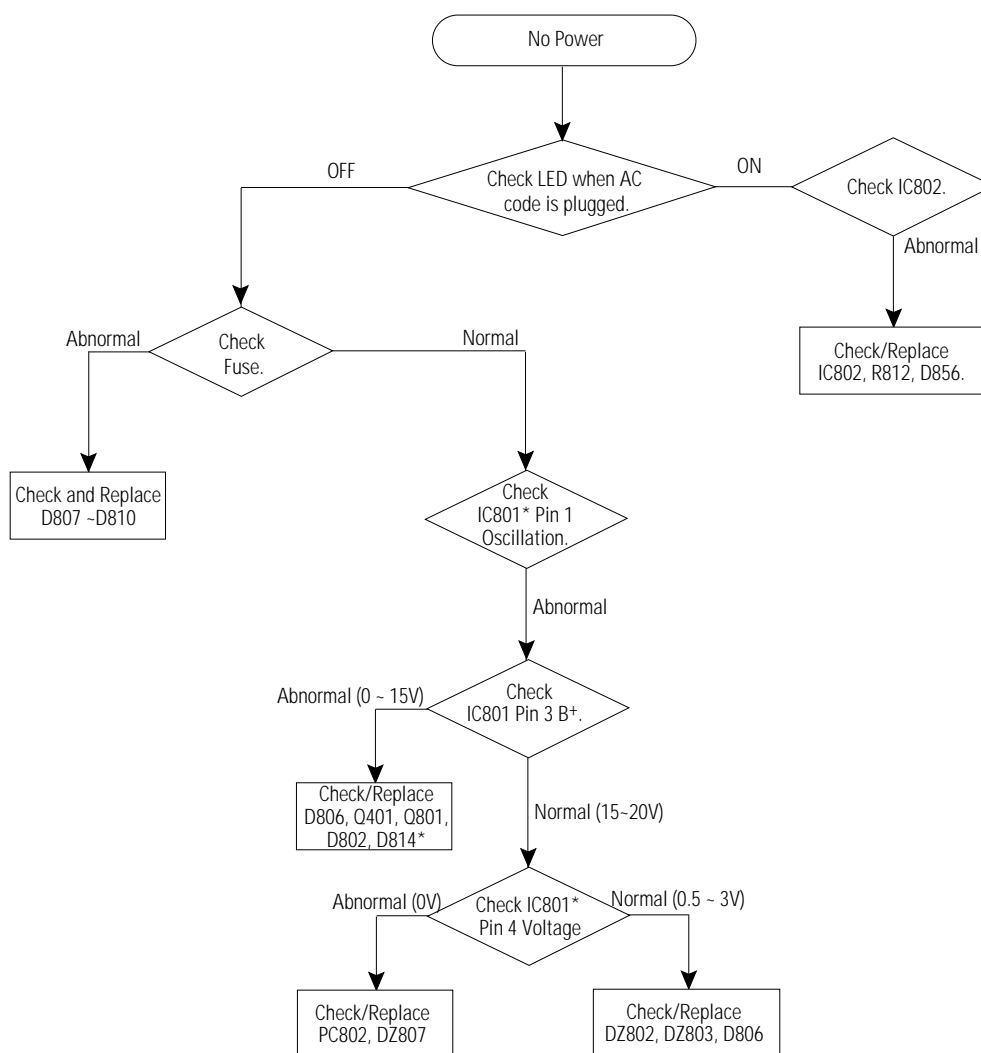
1. White Balance
2. Sub-brightness
3. Vertical Size
4. Horizontal Size
5. Fail safe (should be the final step).



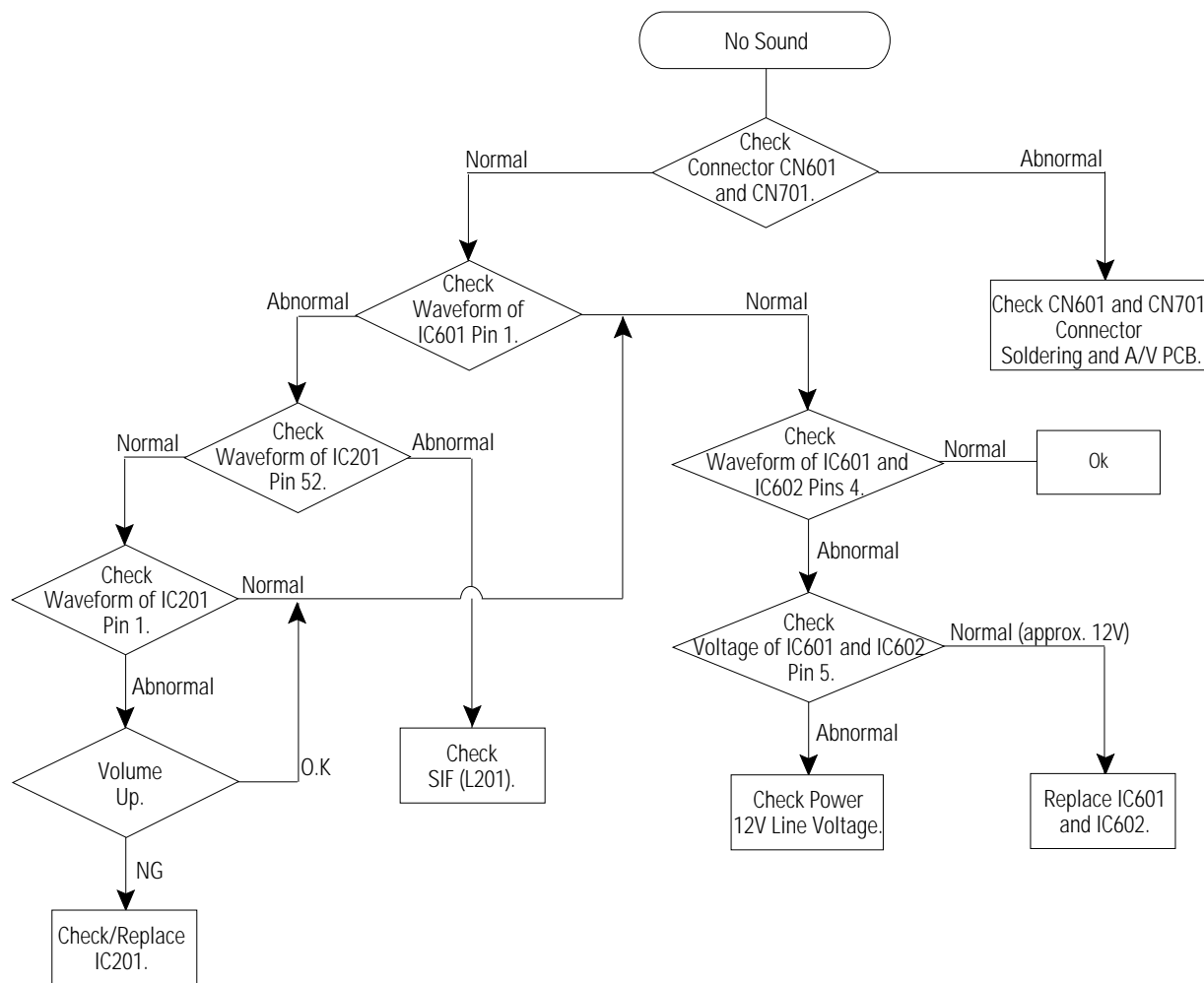
# MEMO

## 5. Troubleshooting

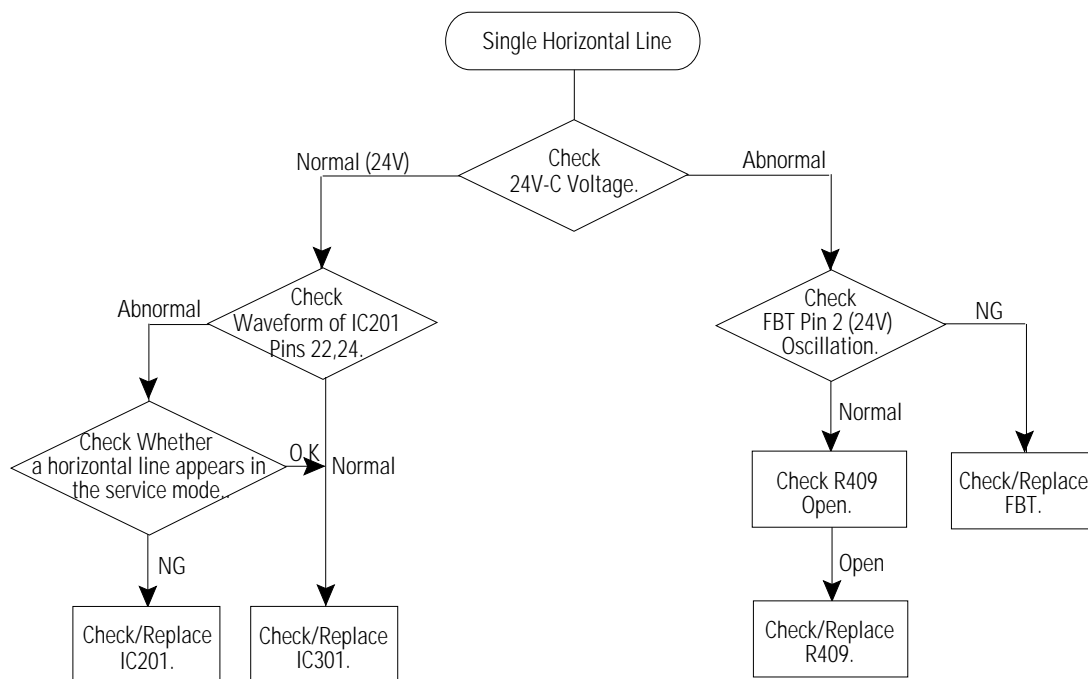
### 5-1 No Power



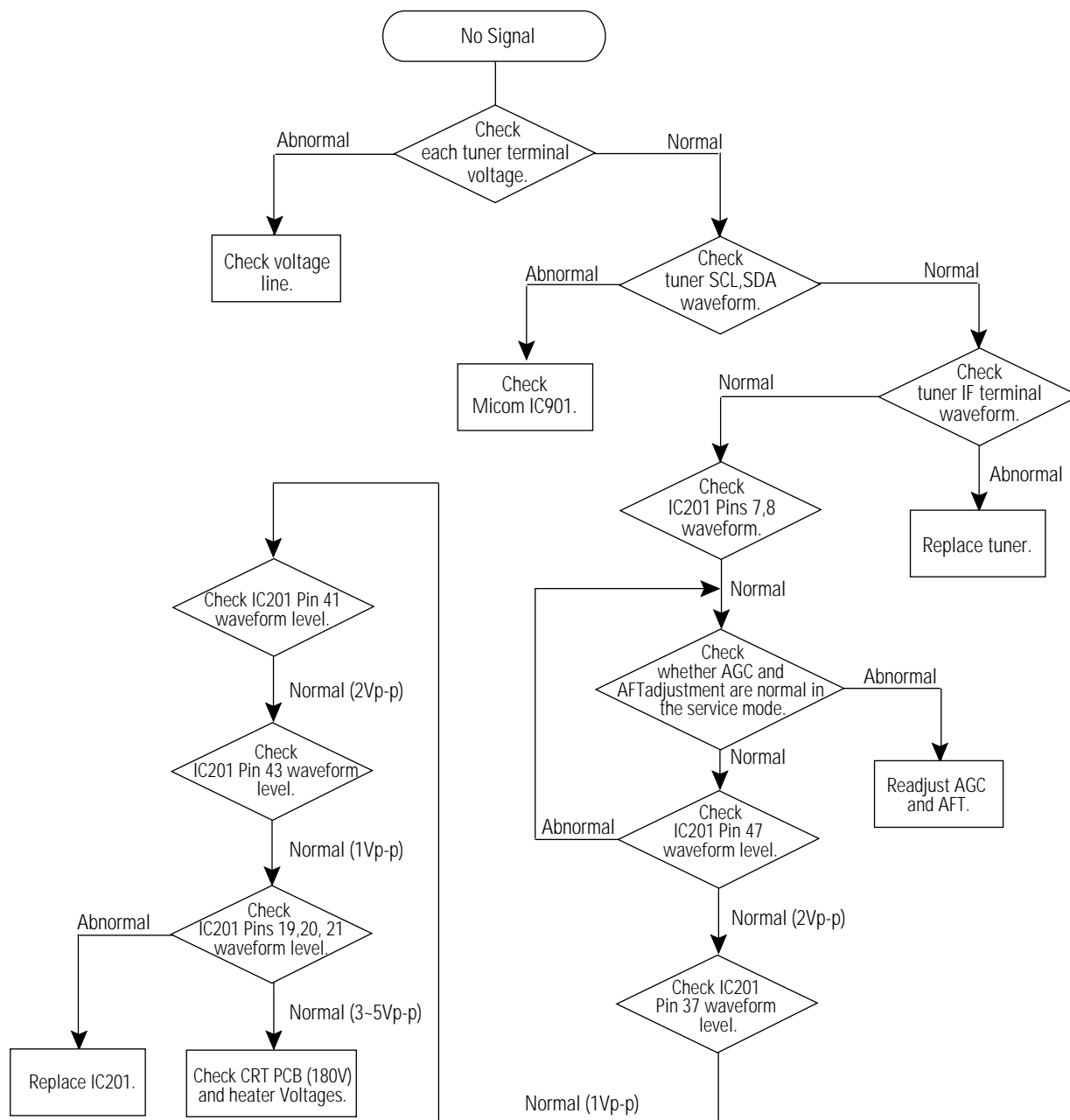
## 5-2 No Sound



### 5-3 Horizontal Line Appears

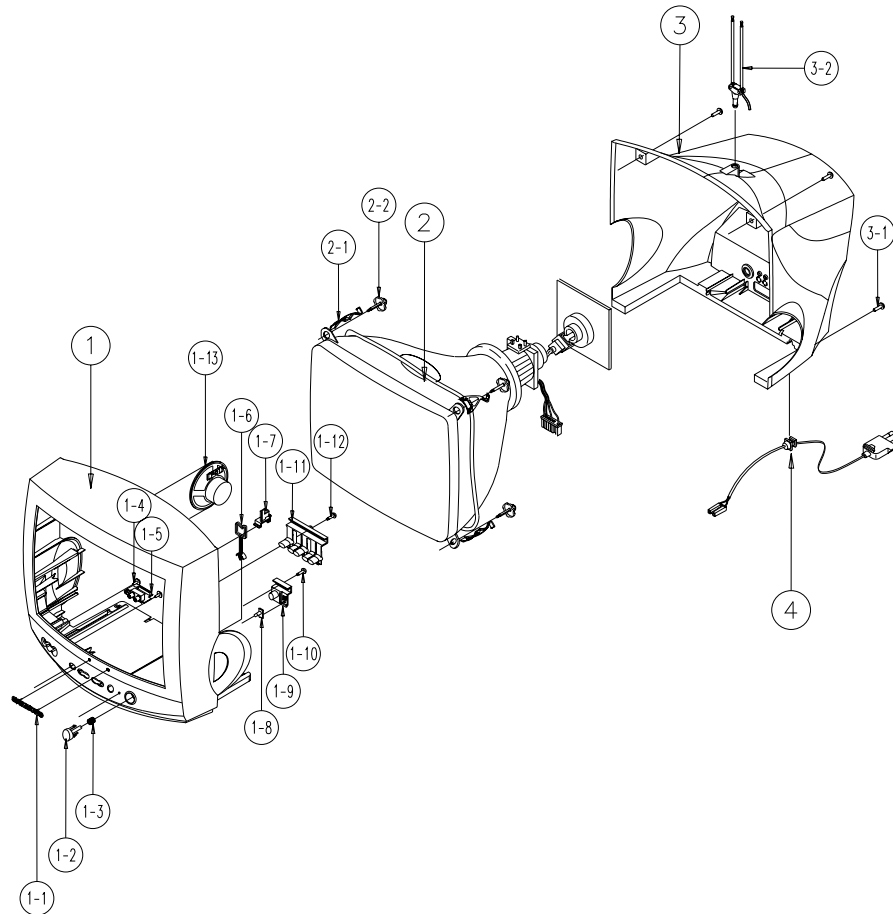


## 5-4 No Signal



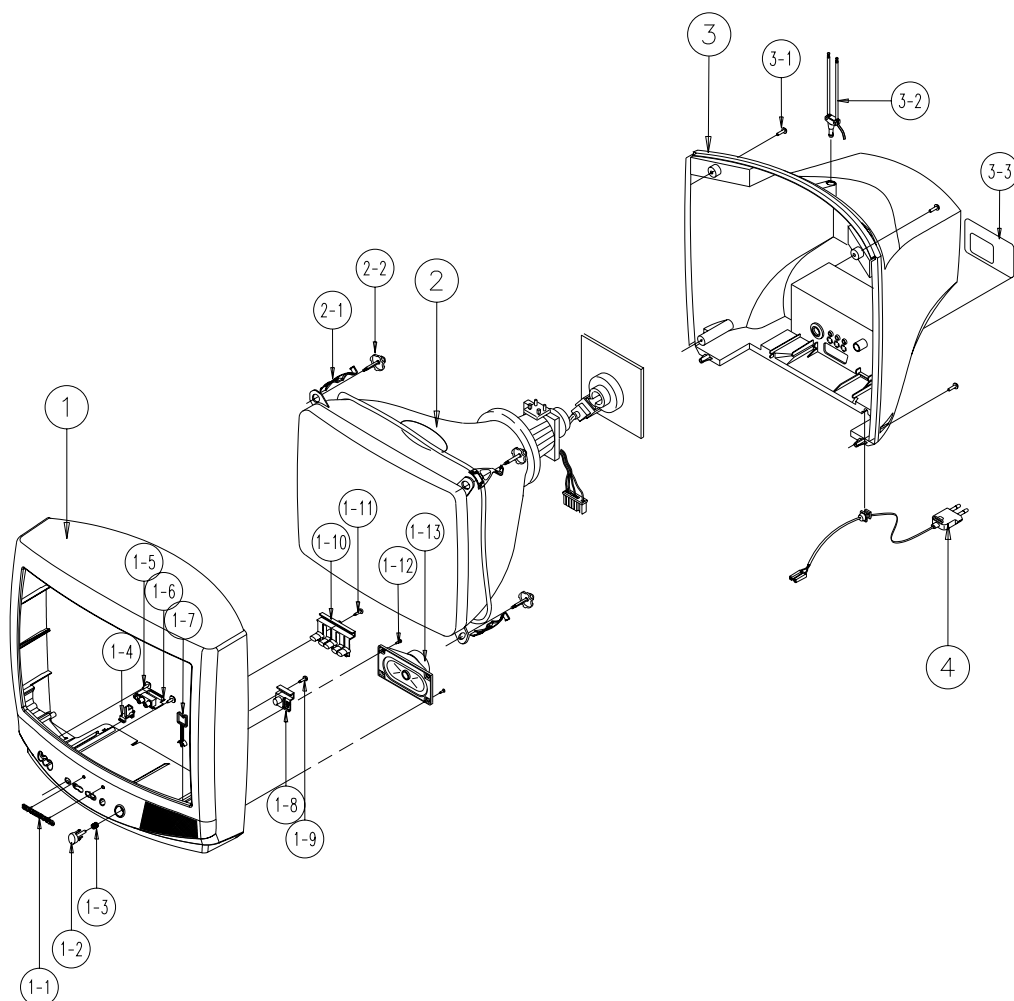
## 6. Exploded Views & Parts List

### 6-1 TXJ1366, TXJ1367, TXJ1396



No	Code No	Description	Specification	Q'ty	Remark
1	AA92-30161EA	ASSY-CABINET,FRONT	TXJ1366,9,V0,S/V,K15A	1	
	AA64-00162A	CABINET-FRONT	14F2,BK708P,HIPS,V0,BLK	1	
1-1	AA64-70127F	BADGE-BRAND	AL,SS,SILVER,R800	1	
1-2	AA64-00165B	KNOB-POWER	14F2,NO-SILK,ABS,HB,BLK	1	
1-3	AA61-60003J	SPRING-CS	-,SUS304,0.5,OD6,H	1	
1-4	AA60-10002A	SCREW-TAPPING	-,RH,+,M4,L12,ZP	2	PA+CF
1-5		ASSY-PCB,A/V FRONT			
1-6	AA65-30105A	CLAMP-WIRE	NYLON 66N,V0,NTR,15MM	1	
1-7	AA61-40113A	STOPPER-PCB	-,ABS,HB,NTR.	1	
1-8	AA64-00167B	INDICATOR-LED	14F2,ACRYL,CLR,	1	
1-9	AA64-00166B	WINDOW-REMOCON	14F2,PC,VIOLET	1	
1-10	6002-000512	SCREW-TAPPING	RH,+,2,M4,L12,ZP	1	WIN+CF
1-11	AA64-00164B	KNOB-CONTROL	14F2,ABS,HB,BLK	1	
1-12	6002-000512	SCREW-TAPPING	RH,+,2,M4,L12,ZP	1	KC+CF
1-13	3001-000281	SPEAKER-GENERAL	2.5W8OHM77MM7	1	
2	AA03-10001D	CRT-COLOR	-,A34KQV42X,+380MG,14,90DEG,5	1	
2-1	L9400-0002	HOLDER-DEGAUSSING	20POLYVINI	2	
2-2	AA60-10050Q	SCREW-ASSY	WC,HH,M5,L26.5,SWRCH,	4	CRT+CF
3	AA64-00259A	CABINET-BACK	-,14F2,-,HIPS,V0,BLK.	1	
3-1	6002-000514	SCREW-TAPPING	RH,+,2,M4,L15,ZP	4	CB+CF
3-2	L7000-0132	ANT-RODVHF	4SDODIPOLE850MMBRN	1	SECA
	AA42-00001A	ANT-ROD	-,3S,650MM,ABS,UL/CSA	1	SEA
4	AA39-10007Y	POWER-CORD	-,EP2/YES,SPT-2 18AWGx2C,2.4m	1	PWR/AC

## 6-2 TXJ1966, TXJ1996



No	Code No	Description	Specification	Q'ty	Remark
1	AA92-30161NA	ASSY-CABINET,FRONT	TXJ1966,9,VO,S/V,K15A	1	
	AA64-00152A	CABINET-FRONT	20F2,BK708P,HIPS,VO,BLK	1	
1-1	AA64-70127F	BADGE-BRAND	AL,SS,SILVER,R800	1	
1-2	AA64-00156B	KNOB-POWER	-,20F2,NO-SILK,ABS,HB,BLK	1	
1-3	AA61-60003J	SPRING-CS	-,SUS304,0.5,OD6,H	1	
1-4	AA61-40113A	STOPPER-PCB	-,ABS,HB,NTR.	1	
1-5		ASSY-PCB,A/V FRONT			
1-6	AA60-10002A	SCREW-TAPPING	-,RH,+,M4,L12,ZP	2	PA+CF
1-7	AA65-30105A	CLAMP-WIRE	NYLON 66N,VO,NTR,15MM	1	
1-8	AA64-00157B	WINDOW-REMOCON	-,20F2,-,PC,VO,VIOLET,-	1	
1-9	6002-000512	SCREW-TAPPING	RH,+,2,M4,L12,ZP	1	WIN+CF
1-10	AA64-00155B	KNOB-CONTROL	-,20F2,-,ABS,HB,BLK	1	
1-11	6002-000512	SCREW-TAPPING	RH,+,2,M4,L12,ZP	1	
1-12	3001-001020	SPEAKER	3W,8ohm,90dB,140Hz	1	
1-13	6002-000514	SCREW-TAPPING	RH,+,2,M4,L15,ZP	2	SPK+CF
2	LB03-10029W	CRT-COLOR	A48KRD82X(H)+380MG,SEMTNT.BZIL	1	
2-1	L9400-0001	HOLDER-DEGAUSSING	25POLYVINYLCHLORIDEFL	4	
2-2	AA60-10050R	SCREW-ASSY	WC,HH,+,M5,L31.5,SWR	4	
3	AA64-00154B	CABINET-BACK	-,20F2 R1,-,HIPS,VO,BLK,-,-	1	
3-1	6002-000514	SCREW-TAPPING	RH,+,2,M4,L15,ZP	4	CB+CF
3-2	AA42-00001A	ANT-ROD	-,3S,650MM,ABS,UL/CSA	1	TXJ1996
	L7000-0132	ANT-RODVHF	4SDODIPOLE850MMBRN	1	TXJ1966
3-3		CABINET OPTION			
4	AA39-10007Y	POWER-CORD	-,EP2/YES,SPT-2 18AWGx2C,2.4m	1	CORD/P

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## 7. Electric Parts List

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## 7-1 Part Differences (by screen size)

No.	Loc. No.	INC H	U.S.A		LATIN		REMARK
			SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
1	CRT	14"	A34KQV42X,+380mG,14"	AA03-10001D			
		20"	A48KRD82X(H),+380mG,21"	AA03-10029W			
2	DY	14"	DSE-1422FL,14"	AA27-50001K	←		
		20"	DSE -1992LL1(H),20"	AA27-50004W	←		
3	CY	14"	22.5MM	AA27-60001E	←		
		20"	-,JH-291-(JH-8210)	AA27-60001D	←		
4	V999	14"	7P,22.5PI,12PI,S,N	3704-001089	←		
		20"	9P,15.24PI,26.5PI,S,N,-	3704-001090	←		CRT SOCKET
5	T444	14"	-,FSV-14A001,14",125V	AA26-30004H	←		B/R
		20"	-,FSV-20A001,20",125V	AA26-30001Y	←		B/R
6	CN802	14"	14",16.4ohm,75T	AA27-20003U	←		D-COIL
		20"	20" JAPAN 6.2Ω	AA27-20003F	20",14.4ohm,48T	AA27-20003X	
7	TBC- WIRE	14"	14" 1P	AA98-70014A	←		
		20"	20" 1P	AA98-70014B	←		
8	ASSY- CRT	14"	A34KQV42X,+380mG,14",BARE	AA94-50014P			
		20"	A48KRD82X(H),+380MG,20",BARE	AA94-50019X			

### 7-1-1 Inch Option

No.	Loc. No.	INC H	U.S.A		LATIN		REMARK
			SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
1	C402	14"	C-C 722 1.6KV	2306-000253	←	←	HORIZONTAL CT CAPACITOR
		20"	C-C 742 1.6KV	2306-000355	←	←	HORIZONTAL CT CAPACITOR
2	C403	14"	C-C 331 2KV	2201-000467	←	←	HORIZONTAL CT CAPACITOR
		20"	C-C 271 2KV	2201-000406	←	←	HORIZONTAL CT CAPACITOR
3	C404	14"	C-MPP 334 250V	2306-000004	←	←	HORIZONTAL CS CAPACITOR
		20"	C-MPP 364 200V	2306-000193	←	←	HORIZONTAL CS CAPACITOR
4	L401	14"	195uH	AA27-30001B	←	←	LINEARITY COIL
		20"	195uH	AA27-30001B	←	←	LINEARITY COIL
5	R404	14"	R-C 22-J 1/2T	2001-000020	←	←	HDT B+ RESISTOR
		20"	R-C 36-J 1/2T	2001-001136	←	←	HDT B+ RESISTOR
6	R411	14"	R-M 120K-F 1/2T	2004-001377	←	←	ABL RESISTOR
		20"	R-M 100K-F 1/2T	2004-001373	←	←	ABL RESISTOR
7	R412	14"	R-M 120K-F 1/2T	2004-001377	←	←	ABL RESISTOR
		20"	R-M 100K-F 1/2T	2004-001373	←	←	ABL RESISTOR
8	R413	14"	R-C 0.39-K 1/2T	2001-003019	←	←	KSD5386 OPTION
		20"	JUMPER	3812-000219	←	←	KSD5386 OPTION
9	C301	14"	C-P 273 100V	2301-000226	←		
		20"	C-P 223 100V	2301-000223	←		
10	C302	14"	C-C 471 50V	2201-000556	C-C 561 50V	2201-000599	
		20"	C-C 471 50V	2201-000556	←		
11	C304	14"	C-E 1uF 50V HR	2401-000553	←		
		20"	C-E 1uF 50V HR	2401-000553	←		
12	C305	14"	C-P 473 100V	2305-000427	←		
		20"	C-P 683-J 50V	2301-000310	C-P 104 100V	2305-000149	

No.	Loc. No.	INC H	U.S.A		LATIN		REMARK
			SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
13	C311	14"	C-E 0.47uF 50V	2401-001333	←		
		20"	C-E 0.47uF 50V	2401-001333	←		
14	R303	14"	R-C 56K-J 1/8T	2001-000864	←		
		20"	R-C 62K-J 1/8T	2004-001990	←		
15	R304	14"	R-M.O 2W 3.3-J	2003-001036	←		
		20"	R-M.O 1W 1.5-J	2003-000436	←		
16	CN501	14"	8P 300MM	AA39-20109D	←		
		20"	8P 400MM	AA39-20109A	←		
17	R305	14"	R-C 33K-J 1/8T	2001-000660	←		
		20"	R-M 7.5K-J 1/8T	2004-001213	←		
18	R306	14"	R-M 82K-J 1/8T	2004-001301	←		
		20"	R-C 43K-J 1/8T	2001-000766	←		
19	R307	14"	R-C 36K-J 1/8T	2001-000679	←		
		20"	R-C 56K-J 1/8T	2001-000864	←		
20	R308	14"	R-C 30K-J 1/8T	2001-000633	←		
		20"	R-M 62K-J 1/8T	2004-001990	←		
21	R309	14"	R-M.O 330-J 1W	2003-000649	←		
		20"	R-M.O 510-J 1W	2003-001043	←		
22	R518	14"	R-F 2W 1.0	2008-000266	R-F 2W 1.5	2008-001015	
		20"	"	"	R-F 2W 1.0	2008-000266	
23	R518A	14"	R-F 2W 1.5	2008-000257	X	X	
		20"	"	"	X	X	
24	J504	14"	X	X	JUMPER	3812-000219	
		20"	X	X	JUMPER	3812-000219	

No.	Loc. No.	INC H	U.S.A		LATIN		REMARK
			SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
25	C216	14"	C-C 20pF(CH)	2201-000354	←		
		20"	C-C 20pF(CH)	2201-000354	X	X	
26	R204	14"	R-C 820-J 1/8T	2004-000995	←		
		20"	R-C 1.2K-J 1/8T	2001-000221	←		
27	R205	14"	R-C 820-J 1/8T	2004-000995	←		
		20"	R-C 1.2K-J 1/8T	2001-000221	←		
28	R206	14"	R-C 820-J 1/8T	2004-000995	←		
		20"	R-C 1.2K-J 1/8T	2001-000221	←		
29	R214	14"	R-C 10K-J 1/8T	2001-000290	←		
		20"	R-C 12K-J 1/8T	2001-000331	←		
30	R222	14"	R-C 470K-J 1/8T	2001-000773	←		DELETE (INCH DOES NOT MATTER : CHANGED TO 4570K)
		20"	R-C 470K-J 1/8T	2001-000773	←		
31	R226	14"	R-C 180K-J 1/8T	2001-000397	←		
		20"	R-C 220K-J 1/8T	2001-000508	←		
32	R257	14"	R-F 1/2W 0.47	2008-000252	R-F 2W 1.0	2008-000266	
		20"	"	"	"	"	
33	RH01	14"	X	X	X	X	
		20"	R-COMP 4.7K1/2T	2002-001006	←	←	
34	RH02	14"	X	X	X	X	
		20"	R-COMP 4.7K1/2T	2002-001006	←	←	
35	RM01	14"	R-COMP 4.7K1/2T	2002-001006	←	←	
		20"	X	X	X	X	
36	RM02	14"	R-COMP 4.7K1/2T	2002-001006	←	←	
		20"	X	X	X	X	
37	T444	14"	FSV-14A001,14",125V	AA26-30004H	←	←	
		20"	FSV-20A001,14",125V	AA26-30001Y	←	←	

## 7-1-2 AC Input Option

No.	Loc. No.	AC 110V ONLY		FREE VOLT		REMARK
		SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
1	C801	C-E:220uF 200V	2401-000822	C-E:220uF 400V	2401-002298	110V/FREE VOLT
2	C804	C-C 400V 222	2201-000987	C-C 400V 332	2201-000446	COUNTERMEASURE ON SMPS NOISE
3	C819	C-C 400V 102	2201-000963	X	X	COUNTERMEASURE ON SMPS NOISE
4	IC801	STR S0765	AA96-50395A	STR S0680	AA96-50298D	VOLTAGE DIFFERENCE (110V/220)
5	R802	R-M,OXIDE 36K1W	2003-002119	R-M,OXIDE 2W33K	2003-000994	VOLTAGE DIFFERENCE (SINGLE VOLT/FREE VOLT)
6	R803	R-M,OXIDE 36K1W	2003-002119	R-M,OXIDE 2W33K	2003-000994	VOLTAGE DIFFERENCE (SINGLE VOLT/FREE VOLT)
7	T801	EER2834	AA27-20007L	EER354311	AA27-20006U	TRANS

## 7-1-3 Relay Option

No.	Loc. No.	RELAY USED		RELAY DELETE		REMARK
		SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
1	CU10	C-E 220uF 25V	2401-000832	X	X	RELAY OPTION
2	J153	X	X	JUMPER	3812-000219	APPLIED WHEN DELETING RELAY
3	JU14	JUMPER	3812-000219	X	X	RELAY OPTION
4	JWU02	X	X	JUMPER	3812-000219	ADDED WHEN DELETING RELAY
5	L910	FERRIE BEAD	2901-000299	X	X	RELAY
6	QU10	TR C2331-Y	0501-000369	X	X	RELAY OPTION
7	P801	X	X	POSISTOR 7BÝ 3P	1404-001048	POSISTOR FREE VOLT
8	P801A	POSISTOR 7BÝ 2P	1404-000208	X	X	POSISTOR SINGLE VOLT (110V)
9	RLU01	RELAY:HR-CR13	3501-001040	X	X	RELAY OPTION
10	RU11	R-C 4.7K-J 1/8T	2001-000734	X	X	RELAY OPTION
11	RU12	R-C 10K-J 1/8T	2001-000290	X	X	RELAY OPTION
12	RU13	R-C 33-J 1/2T	2001-000022	X	X	RELAY OPTION
13	DU01	DIODE 1N4004	0402-000132	X	X	RELAY OPTION

## 7-1-4 X-Ray Option

No.	Loc. No.	X-RAY USED		X-RAY DELETE		REMARK
		SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
1	CX01	C-C 103 25V	2202-000127	X	X	X-RAY
2	CX02	10uF 50V	2401-000480	X	X	X-RAY
3	CX03	10uF 50V	2401-000480	X	X	X-RAY
4	CX04	471 500V	2201-000556	X	X	X-RAY
5	DX01	MTZ6.2B	0403-000297	X	X	X-RAY
6	DX02	1N4004 400V	0402-000132	X	X	X-RAY
7	JX01	JUMPER	3812-000219	X	X	X-RAY
8	QX01	KSA539-Y	0501-000283	X	X	X-RAY
9	RX01	R-C 180K 1/8T	2001-000397	X	X	X-RAY
10	RX02	R-C 18K 1/8T	2001-000411	X	X	X-RAY
12	RX03	R-M 4.3K-F 1/2T	2004-001987	X	X	X-RAY
13	RX04	R-M 11K-F 1/2T	2004-001376	X	X	X-RAY
14	RX05	R-C 22K 1/8T	2001-000522	X	X	X-RAY
15	RX07	JUMPER	3812-000219	X	X	X-RAY
16	RX08	R-C 51K 1/8T	2001-000837	X	X	X-RAY
17	JWX01	X	X	JUMPER	3812-000219	ADDED WHEN DELETING X-RAY

## 7-1-5 Sound Option (MONO/DUAL)

No.	Loc. No.	-73, -38, -1F SYSTEM (1 SPK / 1 AMP)		-1H SYSTEM (2 SPKS / 1 AMP)		-39,-85,-66,-1E,-3E SYSTEM ( 2 SPKS / 2 AMPS)		REMARK
		SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	SPECIFICATION	CODE No.	
1	IC602	X	X	X	X	ASSY-H/S LA4425	AA96-50392A	WHEN USING 2 AMPS
2	C652	X	X	X	X	2.2uF 50V	2401-000660	WHEN USING 2 AMPS
3	C655	X	X	X	X	470uF 16V	2401-001363	WHEN USING 2 AMPS
4	JDW1	X	X	X	X	JUMPER	3812-000219	SOUND L OUT
5	JAW04	X	X	X	X	JUMPER	3812-000219	SOUND L OUT
6	CN603	POST HEADER 3P	3711-002642	X	X	X	X	3P WHEN USING 1 SPEAKER
7	CN601	X	X	POST HEADER 4P	3711-002643	POST HEADER 4P	3711-002643	4P WHEN USING 2 SPEAKERS
<b>7-1-6 Front A/V Option</b>							X	SOUND R/L CONNECTED
9	D814	RG10V 400V	0402-000534	RG10V 400V	0402-000534	RK16	0404-001056	RK16 WHEN USING 2 AMPS
10	R604	R-C 2.2K 1/8T	2001-000449	←	←	R-C 3.3K 1/8T	2001-000591	3.3K 1/8T WHEN USING 2 AMPS

No.	Loc. No.	SPECIFICATION	CODE No.	F-A/V DELETE		F-A/V USED	REMARK
				-1F SYSTEM	-1H SYSTEM	OTHER CABINET	
1	F-A/V	DELETE EARPHONE A/V	AA95-90030M	X		0	DELETE EARPHONE (FROM THE EXISTING F/A/V)
2	CN701	POST HEADER 7P	3711-002646	X		0	ADDED WHEN USING F-A/V
3	JAW01	JUMPER	3812-000219	0		X	ADDED WHEN DELETING F/A/V
4	JAW02	JUMPER	3812-000219	0		X	ADDED WHEN DELETING F/A/V

## 7-2 TXJ1366 (TXJ1996 and TXJ1366 Dissimilar Parts)

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
		TXJ1366X/XAA, TXJ1366X/XAC, TXJ1367/XAC TXJ1396X/XAA, TXJ1396X/XAC					
		<b>ASSY-PCB,MAIN</b>				<b>REMOCON</b>	
				*	AA59-10101M	REMOCON; DP, TM59, -, AA59-10095T	
						<b>ASSY-CABINET</b>	
*	AA94-10133F2	ASSY-PCB,MAIN(COM);K15A(O),S/V,13,BLK,	TXJ1366	*	AA92-30161EA	ASSY-CABINET,FRONT;TXJ1366,9,V0,S/V,K15A	
	AA94-10133F1	ASSY-PCB,MAIN(COM);K15A(O),S/V,13,WHT,	TXJ1367				
C301	2301-000020	C-FILMPEF;27NF,5%,100V,TP,7.3			L3113-0003-011	BOSS-CABINET;HIPSVOLKCT-5073	
C305	2305-000427	C-FILM,MPEF;47NF,5%,100V,7.5X			AA64-00259A	CABINET-BACK,-,14F2,-,HIPS,V0,BLK.	
C402	2306-000253	C-FILM;CF922P1.6KVT722-JBUP			AA64-00162A	CABINET-FRONT;14F2,BK708P,HIPS,V0,BLK	
C404	2306-000004	C-FILM,MPPF;330NF,5%,250V,TP,			AA64-00167B	INDICATOR-LED;14F2,ACRYL,CLR,	
CN501	L6434-0084-030	CONNECTORASSY;B8XB8300M1007#2			AA64-00164B	KNOB-CONTROL;14F2,ABS,HB,BLK	
R304	2003-001036	R-METALOXIDE(S);3.30HM,5%,2W,			AA64-00165B	KNOB-POWER;14F2,NO-SILK,ABS,HB,BLK	
R307	2001-000679	R-CARBON;36KOHM,5%,1/8W,AA,TP			AA60-10050Q	SCREW-ASSY;WC,HH,M5,L26.5,SWRCH,	
R308	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP			AA63-60001Z	SPACER-FELT,-,FELT,T1.0,-,35X	
R309	2003-000649	R-METALOXIDE(S);330OHM,5%,1W,			AA64-00166B	WINDOW-REMOCON;14F2,PC,VIOLET	
R404	2001-001153	R-CARBON(S);470HM,5%,1/2W,AA,					
R411	2004-001377	R-METAL(S);120KOHM,1%,1/2W,AA,TP,2.4X6.4					
R412	2004-001377	R-METAL(S);120KOHM,1%,1/2W,AA,TP,2.4X6.4					
R413	2001-001037	R-CARBON(S);0.390HM,5%,1/2W,A					
T444	L7000-0032	TRANS-FLYBACK;FSV14A00114INCH		*	L9100-000-001	ASSY-CLAMPERS;K1,K15A,13,DUA	
V999	3704-001089	SOCKET CRT;9P,22.5PI,12PI,SN,13			CDCOIL	L9400-0002	HOLDER-DEGAUSSING;20POLYVINI
		<b>ASSY-SPEAKER</b>					
*	AA96-10014A	ASSY-SPEAKER;80HM,2.5W,3(2),F/200					
SPK	3001-000281	SPEAKER-GENERAL;2.5W80HM77MM7					
L/SPK	AA39-20500A	LEAD CONNECTOR-ASSY,-,67096-003,REC,3(2)					
		<b>ASSY-ACCESSORY</b>					
A/ROD	L7000-0132	ANT-RODVHF;4SDODIPOLE850MMBRN	SECA				
	AA68-11252A	INSTRCTION-BOOK;K15A,FRENCH,TM59,205X150	SECA				
		<b>ASSY-CRT</b>					
*	AA97-50001C	ASSY-CRT;A34KQV42X,-,14INCH,ITC,-,MINI(					
CRT	AA03-10001D	CRT-COLOR,-,A34KQV42X,+380MG,14,90DEG,5					
C-Y	AA27-00001A	MAGNET-CONVERGENCE;JH225-06A,225MM					
D-COIL	AA27-20004C	COIL-DEGAUSSING,-,14,4.5ohm,30T,L890,D					
D-Y	L7000-0005	DEFL-YOKE(SEMSA);DSE-1422FL					



# 7-17 TXJ1996

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
TXJ1966X/XAA, TXJ1966X/XAC, TXJ1996X/XAA							
<b>ASSY-PCB,MAIN</b>							
A/MAIN	AA94-10133Z	ASSY-PCB,MAIN(COM):K15A(O),S/V,19,MONO,		C445	2201-000441	C-CERAMIC,DISC:3.3nF,10%,500V,Y5P,TP,10x	
C101	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2		C501	2202-000863	C-CERAMIC:CKOAX7R50VT561-KUP050561	
C102	2401-000660	C-ELECTROLYTIC:CE04WTAPG50V2.2		C502	2202-000862	C-CERAMIC:CCOASL50VT391-JUP050	
C104	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2		C503	2202-000825	C-CERAMIC,MLC-AXIAL:680PF,10%,50V,Y5P,TP	
C108	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M		C505	2201-002063	C-CERAMIC,DISC:10nF,+80-20%,3KV,Y5V,TP,1	
C110	2401-002594	C-AL:220uF,20%,16V,GP,TP,8x11.5,5		C601	2401-000962	C-AL:22uF,20%,50V,GP,TP,5x11,5	
C151	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2		C603	2301-000289	C-FILM,PEF:5.6NF,5%,50V,6.5X5.	
C153	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2		C604	2401-000660	C-ELECTROLYTIC:CE04WTAPG50V2.2	
C201	2201-000292	C-CERAMIC,DISC:1NF,10%,50V,Y5P		C605	2305-000665	C-FILM:CF922N63VT104-J-40/1053	
C202	2401-001333	C-ELECTROLYTIC:CE04WTAPG50V0.4		C609	2401-000133	C-AL:1000UF,20%,16V,GP,13X20MM	
C203	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11,5		C611	2202-000279	C-CERAMIC,MLC-AXIAL:47PF,5%,50	
C204	2301-000188	C-FILM,PEF:1NF,5%,100V,10.5X12		C612	2202-000279	C-CERAMIC,MLC-AXIAL:47PF,5%,50	
C205	2401-001333	C-ELECTROLYTIC:CE04WTAPG50V0.4		C651	2401-000660	C-ELECTROLYTIC:CE04WTAPG50V2.2	
C206	2305-001011	C-FILM,MPEF:22NF,5%,100V,3.5X12.5X7.5MM,		C654	2401-001363	C-AL:470UF,20%,16V,GP,TP,10X12	
C207	2401-001333	C-ELECTROLYTIC:CE04WTAPG50V0.4		C701	2305-000665	C-FILM:CF922N63VT104-J-40/1053	
C209	2305-000665	C-FILM:CF922N63VT104-J-40/1053		C702	2401-000471	C-AL:10UF,20%,50V,BP,6X11MM,5M	
C210	2305-000665	C-FILM:CF922N63VT104-J-40/1053		C703	2202-000183	C-CERAMIC:CKOAX7R16VT222-MEP05	
C211	2305-000665	C-FILM:CF922N63VT104-J-40/1053		C705	2202-000183	C-CERAMIC:CKOAX7R16VT222-MEP05	
C212	2201-000982	C-CERAMIC,DISC:10NF,+80-20%,50		C801	2401-000822	C-ELECTROLYTIC:CE04W200V220U-H	
C213	2201-000193	C-CERAMIC,DISC:10PF,0.25PF,50V		C802	2201-000119	C-CERAMIC,DISC:100NF,+80-20%,5	
C214	2401-000660	C-ELECTROLYTIC:CE04WTAPG50V2.2		C803	2303-000163	C-FILM,PPF:2.2NF,5%,800V,-,T	
C215	2401-001840	C-AL:100UF,20%,16V,GP,TP,6.3X1		C804	2201-000987	C-CERAMIC,AC:CK45PE400V222-M(T	
C216	2201-000354	C-CERAMIC,DISC:20PF,5%,50V,NPO		C805	2201-000991	C-CERAMIC,HIC:CK45(T)B2KV561-K	
C218	2301-000395	C-FILM,PEF:18nF,5%,50V,TP,6.5x12.5x3.5mm		C806	2401-000262	C-AL:100UF,20%,160V,GP,16X25MM,5MM,	
C219	2401-000603	C-AL:1UF,20%,50V,GP,5X11MM,5MM		C807	2201-000599	C-CERAMIC,DISC:560PF,10%,500V,	
C220	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M		C808	2301-000016	C-FILM,MPEF:22NF,5%,100V,TP,7.2X	
C221	2401-002462	C-ELECTROLYTIC:CE04WTAPG16V33M		C809	2401-001998	C-AL:1000UF,20%,25V,GP,TP,10X20	
C222	2305-000665	C-FILM:CF922N63VT104-J-40/1053		C810	2305-000412	C-FILM,MPEF:470NF,5%,63V,-,5MM	
C225	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M		C812	2401-001840	C-AL:100UF,20%,16V,GP,TP,6.3X1	
C226	2401-000603	C-AL:1UF,20%,50V,GP,5X11MM,5MM		C813	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11,5	
C227	2305-000665	C-FILM:CF922N63VT104-J-40/1053		C814	2306-000318	C-FILM,MPPF:220NF,20%,250V,-,2	
C229	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2		C815	2401-000223	C-AL:100NF,20%,50V,LL,5X11MM,5MM,TP	
C230	2305-000665	C-FILM:CF922N63VT104-J-40/1053		C816	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M	
C231	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11,5		C817	2401-001840	C-AL:100UF,20%,16V,GP,TP,6.3X1	
C232	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11,5		△C819	2201-000963	C-CERAMIC:CK45Y5U400VACT102-MH	
C233	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M		C820	2401-001998	C-AL:1000UF,20%,25V,GP,TP,10X20	
C234	2301-000445	C-FILM,PEF:4.7nF,5%,50V,TP,5.5x7x3mm,5mm		C821	2401-001486	C-AL:47UF,20%,160V,HR,13X20MM,5MM,T	
C235	2202-000279	C-CERAMIC,MLC-AXIAL:47PF,5%,50		C822	2301-000192	C-FILM,PEF:1NF,5%,50V,5.3X10MM	
C236	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2		C823	2201-000370	C-CERAMIC,DISC:220PF,10%,50V,Y5P,TP	
C237	2202-000791	C-CERAMIC,MLC-AXIAL:150pF,10%,50V,Y5P,TP		C851	2401-001571	C-ELECTROLYTIC:CE04WTAPG50V47-	
C301	2301-000016	C-FILMPEF:22NF,5%,100V,TP,7.2X		C852	2301-000310	C-FILM,PEF:68NF,5%,50V,8.0X8.5	
C302	2201-000556	C-CERAMIC,DISC:470PF,10%,500V,		C901	2401-002144	C-AL:47uF,20%,16V,GP,TP,5x11,5	
C303	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2		C902	2202-000796	C-CERAMIC,MLC-AXIAL:1NF,10%,50	
C304	2401-000553	C-AL:1UF,10%,50V,GP,5X11MM,5MM		C903	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M	
C305	2301-000310	C-FILM,PEF:68NF,5%,50V,8.0X8.5		C904	2202-000796	C-CERAMIC,MLC-AXIAL:1NF,10%,50	
C306	2401-002458	C-AL:1000UF,20%,35V,GP,16X25MM		C905	2401-001333	C-ELECTROLYTIC:CE04WTAPG50V0.4	
C308	2301-000310	C-FILM,PEF:68NF,5%,50V,8.0X8.5		C907	2401-000027	C-AL:4.7UF,20%,50V,GP,5*11MM,5MEA	
C309	2401-000360	C-AL:100UF,20%,50V,GP,8X11MM,5		C908	2201-000193	C-CERAMIC,DISC:10PF,0.25PF,50V	
C310	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M		C909	2201-000573	C-CERAMIC,DISC:47PF,5%,50V,NPO	
C311	2401-001333	C-ELECTROLYTIC:CE04WTAPG50V0.4		C911	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M	
C312	2401-000553	C-AL:1UF,10%,50V,GP,5X11MM,5MM		C912	2301-000310	C-FILM,PEF:68NF,5%,50V,8.0X8.5	
C313	2305-000470	C-FILM,MPEF:68NF,5%,100V,-,5MM		C914A	2401-000962	C-AL:22uF,20%,50V,GP,TP,5x11,5	
C401	2301-000224	C-FILM,PEF:22NF,5%,50V,7.4X3.9		C915	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2	
C402	2306-000255	C-FILM:CF922P1.6KV7742-HBUP		CE01	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M	
△C403	2201-000991	C-CERAMIC,HIC:CK45(T)B2KV561-K		CLW/HS	AA65-30104C	CLAMP-WIRE:NYLON 66,V2,NTR,W1 Z4,ALL MOD	
C404	2306-000193	C-FILM,MPPF:360NF,5%,200V,-,7.		CN501	L6434-0084-000	CONNECTORASSY:B8XB8400MM1007#26	
C405	2305-000704	C-M,POLYESTER:CF922MTAPG250V1		CN603	3711-002642	POST-HEADER:67094-003(AUTO)	
C406	2201-000556	C-CERAMIC,DISC:470PF,10%,500V,		CN701	3711-002646	POST-HEADER:67094-007(AUTO)	
C407	2401-001429	C-ELECTROLYTIC:CE04WTAPG50V470		CN704	L6434-0010-040	CONNECTORASSY:B7XS7150MM1007#2	
C408	2201-000556	C-CERAMIC,DISC:470PF,10%,500V,		CORD/H	AA61-20284A	HOLDER P CORD:PP,VO,BLK,KE-002	
C409	2401-001998	C-AL:1000UF,20%,25V,GP,TP,10X20		△CORD/P	AA39-10007Y	POWER-CORD:-,EP2/YES,SPT-2 18AWGx2C,2.4m	
C410	2301-000224	C-FILM,PEF:22NF,5%,50V,7.4X3.9		CU02	2305-000665	C-FILM:CF922N63VT104-J-40/1053	
C411	2201-000556	C-CERAMIC,DISC:470PF,10%,500V,		CU10	2401-000832	C-AL:220UF,20%,25V,GP,8X11MM,5	
C412	2401-000927	C-AL:22UF,20%,250V,GP,13X20MM,		CX01	2202-000127	C-CERAMIC,MLC-AXIAL:10NF,+80-2	
C413	2401-000560	C-AL:1UF,20%,160V,GP,GT,6.3,11MM		△CX02	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M	
C444	2201-000441	C-CERAMIC,DISC:3.3nF,10%,500V,Y5P,TP,10x		△CX03	2401-000480	C-AL:10UF,20%,50V,GP,5X11MM,5M	
				△CX04	2201-000556	C-CERAMIC,DISC:470PF,10%,500V,	
				D101	0403-000700	DIODE-ZENER:TZP33A,33V,31-35V,	
				D102	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(	
				D103	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41	
				D201	0403-000663	DIODE-ZENER:MTZ3.3B,3.3V,3.32-	
				D202	0401-000005	DIODE:1N4148TAPG	
				D203	0401-000005	DIODE:1N4148TAPG	

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
D204	0401-000005	DIODE:1N4148TAPG		L503	2701-000184	INDUCTOR-AXIAL:4.7UH,10%,2.5X3.4MM	
D205	0403-000355	DIODEZENER:UZ5.1BSB,4.97-5.17V,0.5UA,500		L602	2701-000158	INDUCTOR-AXIAL:22UH,10%,2.5X3.	
D206	0401-000005	DIODE:1N4148TAPG		L801	AA29-30001R	FILTER-LINE:-,6MH,2.0A,-,SO191	
D207	0401-000005	DIODE:1N4148TAPG		L802	3301-000287	CORE-FERRITEBEAD:AA,3.5X1.0X6.	
D208	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41		L803	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5x5,TP-	
D210	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-		L804	3301-000287	CORE-FERRITEBEAD:AA,3.5X1.0X6.	
D299	0403-000654	DIODE-ZENER:MTZ12,12V,11.4-12.		L810	AA27-10002Y	COIL-CHOKE:-,100UH,K,10,700MA,	
D301	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,40		L811	2901-000299	FILTER-EMIBEAD-BL02RN2-R65T2DB	
D302	0403-000654	DIODE-ZENER:MTZ12,12V,11.4-12.		L901	2701-000197	INDUCTOR-AXIAL:5.6UH,10%,2.5X3	
D401	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41		L902	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.	
D402	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41		L910	2901-000299	FILTER-EMIBEAD-BL02RN2-R65T2DB	
D403	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,40		L999	2701-000115	INDUCTOR-AXIAL:10UH,10%,2.8X7M	
D404	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,40		LD901	AA96-30007A	ASSY-LED,GUIDE:AA61-50055A,DL-G7GA,GREEN	
D405	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,40		△ NT801	1404-000187	THERMISTOR:KL11L4R7-3.5A4.7OHM	
D407	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,40		△ P801A	1404-000208	POSITOR:PTH631D02BF7ROM140TDE	
D601	0401-000005	DIODE:1N4148TAPG		△ PC802	0604-001038	PHOTOCOUPLER:TR,130-260%,200MW	
D701	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-		PWR/AC	AA96-20129A	ASSY-POWER,CORD:-,EP2/YES,H/C300,ME301P,	
D703	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-		Q151	0501-000436	TR-SMALLSIGNAL:KTC3197,NPN,30V	
D704	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-		Q201	0501-002183	TR-SMALL SIG:KTC9014,NPN,625MW,TO-92,100	
D802	0402-000540	DIODE-RECTIFIER:RU20A,600V,1.5		Q202	0501-002183	TR-SMALL SIG:KTC9014,NPN,625MW,TO-92,100	
D803	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,40		Q203	0501-002183	TR-SMALL SIG:KTC9014,NPN,625MW,TO-92,100	
D805	0402-000213	DIODE-RECTIFIER:ERB12-06,600V,		△ Q401	0502-001160	TR-POWER:2SD2499,NPN,50000mV,TO-3PB,K,8	
D806	0401-000005	DIODE:1N4148TAPG		Q402	0501-000369	TRANSISTOR:KSC2331-Y(TAPG)	
△ D807	0402-000213	DIODE-RECTIFIER:ERB12-06,600V,		Q501	0501-002014	TR-SMALLSIGNAL:KSC2330-RNPN	
△ D808	0402-000213	DIODE-RECTIFIER:ERB12-06,600V,		Q502	0501-002014	TR-SMALLSIGNAL:KSC2330-RNPN	
△ D809	0402-000213	DIODE-RECTIFIER:ERB12-06,600V,		Q503	0501-002014	TR-SMALLSIGNAL:KSC2330-RNPN	
△ D810	0402-000213	DIODE-RECTIFIER:ERB12-06,600V,		Q601	0502-000242	TR-POWER:KSA614,PNP,-80V,-55V,	
D814	0402-000534	DIODE-RECTIFIER:RG10V,400V,1.5		Q602	0501-002183	TR-SMALL SIG:KTC9014,NPN,625MW,TO-92,100	
D855	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		Q801	1203-001217	IC-POST,ADJUSTREG:431,TO-92,3P,4.58MIL,P	
D856	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		Q902	0501-002183	TR-SMALL SIG:KTC9014,NPN,625MW,TO-92,100	
D901	0401-000005	DIODE:1N4148TAPG		Q903	0501-002183	TR-SMALL SIG:KTC9014,NPN,625MW,TO-92,100	
D902	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		QU01	0504-000123	TR-DIGITAL:KSR1010,NPN,300MW,1	
D903	0401-000005	DIODE:1N4148TAPG		QU10	0501-000369	TRANSISTOR:KSC2331-Y(TAPG)	
D904	0401-000005	DIODE:1N4148TAPG		△ QX01	0501-000283	TRANSISTOR:KSA539-Y(TAPG)/YTAM	
D905	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		R101	2001-000812	R-CARBON:5.6KOHM,5%,1/8W,AA,TP,1.8x3.2mm	
D906	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		R102	2001-001000	R-CARBON :82KOHM,5%,1/8W,AA,TP,1.8x3.2mm	
△ DU01	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41		R104	2003-000592	R-METALOXIDE(S):220HM,5%,2W,AD	
△ DX01	0403-000297	DIODE-ZENER:EQA02-06D/MTZ6.2B(		R105	2003-000592	R-METALOXIDE(S):220HM,5%,2W,AD	
DX02	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41		R106	2003-000664	R-METAL OXIDE(S):330HM,5%,2W,AF,TP,4X12M	
DZ601	0403-000654	DIODE-ZENER:MTZ12,12V,11.4-12.		R107	2003-000664	R-METAL OXIDE(S):330HM,5%,2W,AF,TP,4X12M	
DZ801	1405-000152	VARIATOR:560V,2500A,14X8.5MM,T		R152	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP	
DZ802	0403-000300	DIODE-ZENER:MTZ8.2B,7.78-19V,		R153	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP	
DZ803	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		R154	2001-000780	R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm	
DZ804	1405-000152	VARIATOR:560V,2500A,14X8.5MM,T		R155	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,	
DZ806	0403-000294	DIODE-ZENER:MTZ4.7B,4.55-4.80V,500MV,DO-		R156	2001-000793	R-CARBON:470HM,5%,1/8W,AA,TP,1	
DZ807	0403-000297	DIODE-ZENER:EQA02-06D/MTZ6.2B(		R157	2001-000568	R-CARBON:220HM,5%,1/8W,AA,TP,1	
DZ901	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		R158	2001-000007	R-CARBON:3KOHM,5%,1/8W,AA,TP,1	
DZ902	0403-000296	DIODE-ZENER:EQA02-06A/MTZ5.6B(		R159	2001-000007	R-CARBON:3KOHM,5%,1/8W,AA,TP,1	
DZ903	0403-000355	DIODEZENER:UZ5.1BSB,4.97-5.17V,0.5UA,500		R201	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
F801	3601-000144	FUSE-FERRULE:125V,4A,SLOWBLOW,		R202	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP	
△ F801A	3602-000114	FUSE-HOLDER:-,30MOHM		R203	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP	
△ F801B	3602-000114	FUSE-HOLDER:-,30MOHM		R204	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP	
GT101A	AA39-20010D	LEAD-CONNECTOR,ASSY:-,YFH800-01,S,1P,400		R205	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP	
IC201	1204-001296	IC-CHROMA:KA2163B,DIP,56P,-,PL		R206	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP	
△ IC301	1204-000475	IC:KA2131	H/SINK	R207	2001-001111	R-CARBON(S):240OHM,5%,1/2W,AA,	
△ IC601	1201-001298	IC-POWER AMP:4425,SIP,5P,9.5MIL,MONO,45D	H/SINK	R208	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,	
△ IC801	1203-001493	IC-PEM CONTROLLER:3S0765RF,TO3PF-5L,5,21	H/SINK	R209	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,	
IC802	1203-000576	IC-S/WREGU:TDA8139SIP7POUT-9.5		R210	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,	
IC901	AA13-30020A	IC-MCU:-,Z8933412PSC-R3757,16BIT,SDIP		R211	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,	
IC902	1103-001107	IC-EEPROM:24C020,256X8BIT,DIP,8P,300MIL		R212	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,	
JA601	3722-000143	JACK-PHONE:1P,3.4MM,-,MBAG		R213	2001-000837	R-CARBON:51KOHM,5%,1/8W,AA,TP,	
JA701	3722-000162	JACK-PIN:2P,3.4MM,-,SN		R214	2001-000331	R-CARBON:12KOHM,5%,1/8W,AA,TP,	
JA703	3722-000184	JACK-RCA:2P,3.4MM,-,AG		R215	2001-000331	R-CARBON:12KOHM,5%,1/8W,AA,TP,	
L102	2701-000207	INDUCTOR-AXIAL:56UH,5%,2.5X3.4		R218	2001-000591	R-CARBON:3.3KOHM,5%,1/8W,AA,TP	
L152	2701-000202	INDUCTOR-AXIAL:560NH,10%,2.5X3		R219	2001-000674	R-CARBON:360OHM,5%,1/8W,AA,TP,	
L201	AA26-10004K	TRANS-IF:-,7MG,SIF,-,7MM,100PF		R222	2001-000773	R-CARBON:470KOHM,5%,1/8W,AA,TP	
L202	2701-000207	INDUCTOR-AXIAL:56UH,5%,2.5X3.4		R223	2001-000780	R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm	
L203	2701-000158	INDUCTOR-AXIAL:22UH,10%,2.5X3.		R226	2001-000508	R-CARBON:220KOHM,5%,1/8W,AA,TP	
L204	2701-000207	INDUCTOR-AXIAL:56UH,5%,2.5X3.4		R227	2001-000508	R-CARBON:220KOHM,5%,1/8W,AA,TP	
L205*	AA26-10004C	TRANS-IF:-,7MG,VIF,0.37UH,7MM,		R228	2001-000258	R-CARBON:1.8Kohm,5%,1/8W,AA,TP,1.8x3.2m	
L206	2701-000111	INDUCTOR-AXIAL:100UH,10%,2.5X3		R229	2001-000258	R-CARBON:1.8Kohm,5%,1/8W,AA,TP,1.8x3.2m	
L208	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.		R230	2001-000591	R-CARBON:3.3KOHM,5%,1/8W,AA,TP	
L301	2701-000116	INDUCTOR-AXIAL:10UH,10%,4.2X9.		R231	2001-000660	R-CARBON:33KOHM,5%,1/8W,AA,TP,	
△ L401	AA27-30001B	COIL-LINEARITY:-,195UH,QIC1010		R233	2004-001234	R-METAL:75KOHM,5%,1/8W,AA,TP,1	
△ L402	2701-001032	INDUCTOR-AXIAL:100UH,10%,5X14MM		R234	2001-000405	R-CARBON:180OHM,5%,1/8W,AA,TP,	
L501	2701-000184	INDUCTOR-AXIAL:4.7UH,10%,2.5X3.4MM		R235	2001-000273	R-CARBON:100KOHM,5%,1/8W,AA,TP	
L502	2701-000184	INDUCTOR-AXIAL:4.7UH,10%,2.5X3.4MM		R236	2001-000548	R-CARBON:270KOHM,5%,1/8W,AA,TP	

Electric Parts List

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
R237	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,		R812	2008-000252	R-FUSIBLE(S):0.470HM,10%,1/2W,	
R239	2001-000947	R-CARBON:7.5KOHM,5%,1/8W,AA,TP		R813	2008-001058	R-FUSIBLE(S):0.180HM,10%,1W,AF	
R240	2001-000577	R-CARBON:2KOHM,5%,1/8W,AA,TP,1		R814	2001-001135	R-CARBON(S):36KOHM,5%,1/2W,AA,	
R241	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R815	2004-001408	R-METAL(S):91KOHM,1%,1/2W,AA,T	
R242	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP		R816	2001-001134	R-CARBON(S):360OHM,5%,1/2W,AA,TP,2.4X6.4	
R251	2001-000591	R-CARBON:3.3KOHM,5%,1/8W,AA,TP		R817	2001-001134	R-CARBON(S):360OHM,5%,1/2W,AA,TP,2.4X6.4	
R252	2001-000591	R-CARBON:3.3KOHM,5%,1/8W,AA,TP		R818	2001-001134	R-CARBON(S):360OHM,5%,1/2W,AA,TP,2.4X6.4	
R253	2001-000591	R-CARBON:3.3KOHM,5%,1/8W,AA,TP		R819	2008-001011	R-FUSIBLE(S):0.180HM,10%,2W,AF	
R257	2008-000252	R-FUSIBLE(S):0.470HM,10%,1/2W,		R821	2004-004089	R-METAL:123KOHM,1%,1/2W,AA,TP,2.5X6.5	
R301	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R822	2001-000022	R-CARBON(S):330HM,5%,1/2W,AA,T	
R302	2001-000003	R-CARBON:330OHM,5%,1/8W,AA,TP,		R823	2001-001178	R-CARBON(S):680OHM,5%,1/2W,AA,	
R303	2001-000908	R-CARBON :62Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R824	2001-001125	R-CARBON(S):300KOHM,5%,1/2W,AA	
R304	2003-000436	R-METALOXIDE(S):1.50HM,5%,1W,A		R852	2001-001088	R-CARBON(S):1KOHM,5%,1/2W,AA,TP,2.4X6.4	
R305	2001-000947	R-CARBON:7.5KOHM,5%,1/8W,AA,TP		R853	2001-001054	R-CARBON(S):1.6KOHM,5%,1/2W,AB,TP,2.4X6.	
R306	2001-000766	R-CARBON:43KOHM,5%,1/8W,AA,TP,		R854	2004-001983	R-METAL:2.49KOHM,1%,1/2W,AA,TP,2.4X6.4	
R307	2001-000864	R-CARBON:56Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R901	2001-000793	R-CARBON:470HM,5%,1/8W,AA,TP,1	
R308	2001-000908	R-CARBON :62Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R902	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R309	2003-001043	R-METALOXIDE(S):510OHM,5%,1W,A		R903	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,	
R401	2001-000780	R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm		R904	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,	
R402	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,		R905	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R403	2001-001114	R-CARBON(S):270OHM,5%,1/2W,AA,		R906	2001-000472	R-CARBON:2.7KOHM,5%,1/8W,AA,TP	
R404	2001-001165	R-CARBON(S):56OHM,5%,1/2W,AB,T		R907	2001-000995	R-CARBON:820OHM,5%,1/8W,AA,TP,	
R405	2003-000540	R-METALOXIDE(S):1KOHM,5%,2W,AD		R908	2001-000232	R-CARBON:1.3KOHM,5%,1/8W,AA,TP	
R406	2003-001024	R-METALOXIDE(S):150OHM,5%,2W,A		R910	2001-000995	R-CARBON:820OHM,5%,1/8W,AA,TP,	
R406A	2003-001024	R-METALOXIDE(S):150OHM,5%,2W,A		R911	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R407	2003-000994	R-METALOXIDE(S):33KOHM,5%,2W,AF,TP,3.9X1		R913	2001-000924	R-CARBON:680ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R408	2004-001390	R-METAL(S):1KOHM,2%,1/2W,AA,TP		R914	2001-000577	R-CARBON:2KOHM,5%,1/8W,AA,TP,1	
R409	2008-000253	R-FUSIBLE(S):0.470HM,5%,1W,AF,		R915	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP	
R410	2008-000206	R-FUSIBLE(S):10HM,5%,1/2W,AF,T		R916	2001-000947	R-CARBON:7.5KOHM,5%,1/8W,AA,TP	
R411	2004-001373	R-METAL FILM:RM1/2T100K-F		R917	2001-000947	R-CARBON:7.5KOHM,5%,1/8W,AA,TP	
R412	2004-001373	R-METAL FILM:RM1/2T100K-F		R918	2001-000947	R-CARBON:7.5KOHM,5%,1/8W,AA,TP	
R415	2003-000755	R-METALOXIDE(S):6.8KOHM,5%,2W,AD,TP,4X12		R919	2001-000977	R-CARBON:8.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R416	2001-000022	R-CARBON(S):330HM,5%,1/2W,AA,T		R920	2001-000522	R-CARBON:22KOHM,5%,1/8W,AA,TP,	
R417	2001-001410	R-CARBON:RD1/2T(S)430-J43R		R921	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R444	2001-001099	R-CARBON/METALFILM:RD1/2T2.7K-		R922	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,	
R501	2001-000007	R-CARBON:3KOHM,5%,1/8W,AA,TP,1		R923	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,	
R502	2001-000007	R-CARBON:3KOHM,5%,1/8W,AA,TP,1		R924	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP	
R503	2001-000007	R-CARBON:3KOHM,5%,1/8W,AA,TP,1		R925	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP	
R504	2003-000784	R-METAL OXIDE(S):7.5KOHM,5%,2W,AF,TP,3.7		R926	2001-000008	R-CARBON:15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R504A	2003-000784	R-METAL OXIDE(S):7.5KOHM,5%,2W,AF,TP,3.7		R927	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R505	2003-000784	R-METAL OXIDE(S):7.5KOHM,5%,2W,AF,TP,3.7		R928	2001-000864	R-CARBON:56Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R505A	2003-000784	R-METAL OXIDE(S):7.5KOHM,5%,2W,AF,TP,3.7		R929	2001-000232	R-CARBON:1.3KOHM,5%,1/8W,AA,TP	
R506	2003-000784	R-METAL OXIDE(S):7.5KOHM,5%,2W,AF,TP,3.7		R930	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R506A	2003-000784	R-METAL OXIDE(S):7.5KOHM,5%,2W,AF,TP,3.7		R931	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R507	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,		R932	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R508	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,		R933	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R509	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,		R934	0401-000005	DIODE:1N4148TAPG	
R510	2001-000628	R-CARBON:300OHM,5%,1/8W,AA,TP,		R937	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R511	2001-000628	R-CARBON:300OHM,5%,1/8W,AA,TP,		R938	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R512	2001-000628	R-CARBON:300OHM,5%,1/8W,AA,TP,		R940	2001-000708	R-CARBON:390HM,5%,1/8W,AA,TP,1.8X3.4MM	
R513	2001-000666	R-CARBON:330HM,5%,1/8W,AA,TP,1		R951	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP	
R514	2001-000666	R-CARBON:330HM,5%,1/8W,AA,TP,1		R952	2001-000472	R-CARBON:2.7KOHM,5%,1/8W,AA,TP	
R515	2002-001006	R-COMPOSITION:RC1/2T4.7KK/ERC-		R988	2001-000508	R-CARBON:220KOHM,5%,1/8W,AA,TP	
R517	2001-000666	R-CARBON:330HM,5%,1/8W,AA,TP,1		RE01	2001-000117	R-CARBON(S):68ohm,5%,1/2W,AA,TP,2.4x6.4m	
R518	2008-000266	R-FUSIBLE(S):10HM,5%,2W,AF,TP,		RE02	2001-000117	R-CARBON(S):68ohm,5%,1/2W,AA,TP,2.4x6.4m	
R599	2008-000226	R-FUSIBLE:220HM,5%,1/2W,AA,TP,4.7X11MM		RH01	2002-001006	R-COMPOSITION:RC1/2T4.7KK/ERC-	
R602	2001-000786	R-CARBON:47KOHM,5%,1/8W,AA,TP,		RH02	2002-001006	R-COMPOSITION:RC1/2T4.7KK/ERC-	
R603	2001-000786	R-CARBON:47KOHM,5%,1/8W,AA,TP,		△RLU01	3501-001040	RELAYPOWER:12VDC,500MW,10A,1FO	
R604	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP		RM901	AA59-60001U	MODULE-REMOCON:-ORC-50VF,38KH	
R605	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,		△RU01	2002-001010	R-COMPOSITION:1.8MOHM,10%,1/2W,AA,TP,3	
R610	2001-000577	R-CARBON:2KOHM,5%,1/8W,AA,TP,1		RU02	2001-000780	R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R611	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm		RU06	2001-000397	R-CARBON:180KOHM,5%,1/8W,AA,TP	
R614	2001-001152	R-CARBON/METALFILM:RD1/2T47K-J		RU07	2001-001062	R-CARBON(S):10MOHM,5%,1/2W,AA,	
R615	2001-001088	R-CARBON(S):1KOHM,5%,1/2W,AA,TP,2.4X6.4		RU10	2001-000924	R-CARBON:680ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R701	2001-001187	R-CARBON(S):75OHM,5%,1/2W,AA,T		RU11	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,	
R702	2001-000085	R-CARBON(S):100KOHM,5%,1/2W,AA		RU12	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP	
R703	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP		RU13	2001-000022	R-CARBON(S):330HM,5%,1/2W,AA,T	
R801	2001-001150	R-CARBON(S):470KOHM,5%,1/2W,AA		△RX01	2001-000397	R-CARBON:180KOHM,5%,1/8W,AA,TP	
R802	2003-002119	R-METAL OXIDE(S):36KOHM,5%,1W,AF,TP,2.5X		RX02	2001-000411	R-CARBON:18KOHM,5%,1/8W,AA,TP,	
R803	2003-002008	R-METAL OXIDE(S):18KOHM,5%,2W,AF,TP,3.9X		RX03	2004-001987	R-METAL:4.3KOHM,1%,1/2W,AA,TP,	
R804	0403-000555	DIODE-ZENER:MTZ30D,30V,29.02-3		△RX04	2004-001376	R-METAL(S):11KOHM,1%,1/2W,AA,T	
R805	2002-001013	R-COMPOSITION:4.7MOHM,10%,1/2W,AA,TP,3.7		RX05	2001-000522	R-CARBON:22KOHM,5%,1/8W,AA,TP,	
R806	2001-001071	R-CARBON(S):12KOHM,5%,1/2W,AA,		△RX08	2001-000837	R-CARBON:51KOHM,5%,1/8W,AA,TP,	
R807	2001-001071	R-CARBON(S):12KOHM,5%,1/2W,AA,		SF101	2904-000304	FILTER-SAW:M1859MNTSC/USAVIFST	
R808	2001-001150	R-CARBON(S):470KOHM,5%,1/2W,AA		SW901	3404-000244	SWITCH-TACT:15V,20MA,90-170GF,	
R809	2008-000205	R-FUSIBLE(S):10OHM,5%,1/2W,AF,		SW902	3404-000244	SWITCH-TACT:15V,20MA,90-170GF,	
R811	2001-001170	R-CARBON(S):6.8OHM,5%,1/2W,AB,		SW903	3404-000244	SWITCH-TACT:15V,20MA,90-170GF,	

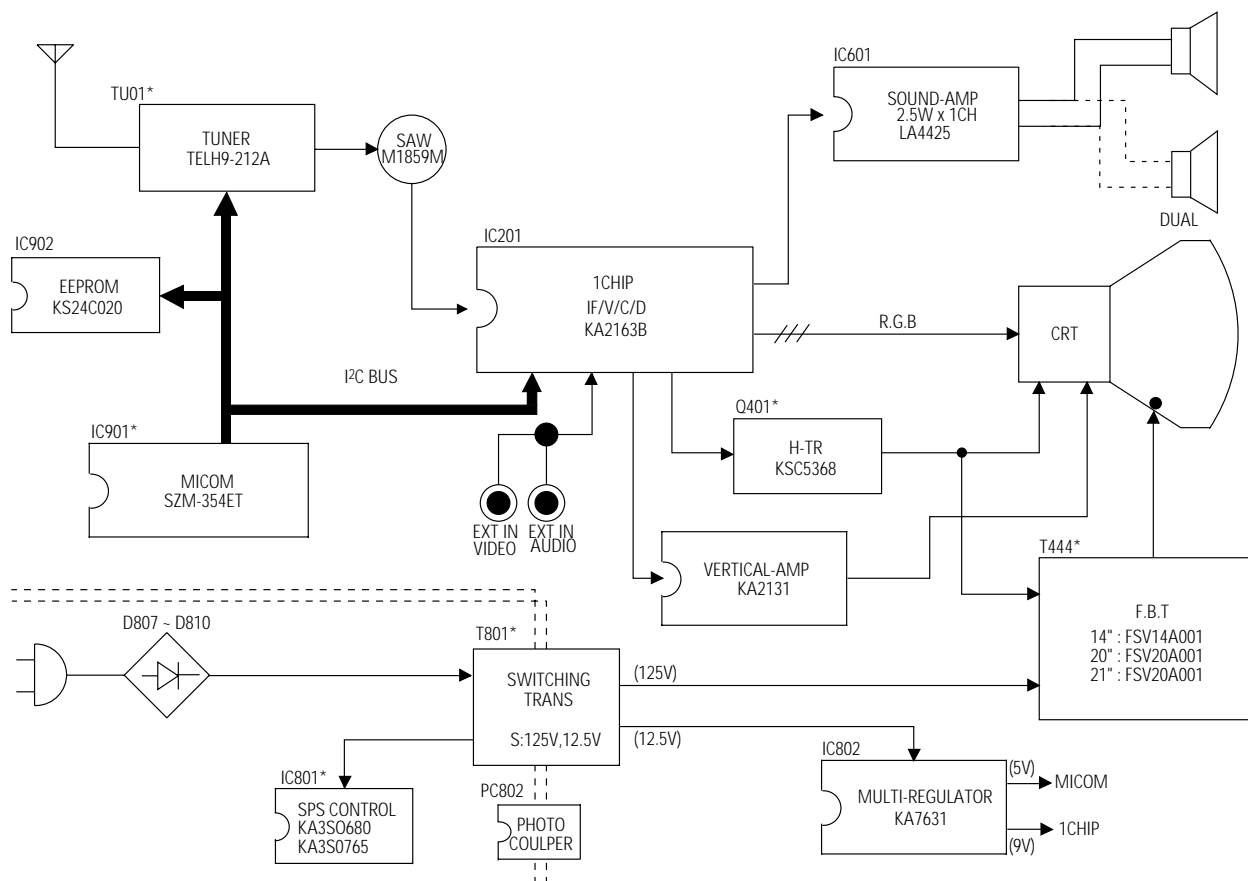
Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
SW904	3404-000244	SWITCH-TACT;15V,20MA,90-170GF,					
SW905	3404-000244	SWITCH-TACT;15V,20MA,90-170GF,					
SW906	3404-000295	SW-TACT,V;KPT1122R1KEYSTT=0.3M					
△ T401	AA26-50001B	HORIZ.DRIVE;-;7.1MH,102UH,10-2					
△ T444	AA26-30001Y	TRANS-FRYBACK;-;FSV-20A001,20,125V					
△ T801	AA26-20007L	TRANS-SWITCHING;120V,125/12.5,UL/CSA,EAE					
△ TU01	AA40-10006U	TUNER-F/S;TECC1070PG31A(S)					
△ V999	3704-001090	SOCKET-CRT;9P,15,24PI,26,5PI,SN					
X201	2801-000226	CRYSTAL-UNIT;3.579545MHZ,20PPM					
X202	2802-000172	RESONATOR-CERAMIC;503.5KHZ,0.5					
X901*	2801-003224	CRYSTAL-UNIT;32.768KHZ,20PPM,2					
Z201	2903-001022	FILTER-CERAMIC;TR,4.5MHZ					
Z601	2903-000135	FILTER-CERAMIC;BP,4.5MHZ					
		ASSY-CRT					
A/CRTP	AA94-50014I	ASSY-CRT;A48KRD82X(H)+380MG,SEMTNT.BZIL					
△ CRT	LB03-10029W	CRT-COLOR;A48KRD82X(H)+380MG,SEMTNT.BZIL					
C-Y	AA27-00002A	MAGNET-CONVERGENCE;JH291-SC-OB,29.1M					
D-Y	AA27-50004W	-DSE-1992LL(1H),20'/A48KRD82X					
S-GUM	AA63-60004G	SPACER-GUM,CRT;-;NTRRUBBER,T3.					
SPACER	AA63-60028A	SPACER-DY;-;NEOPRENE,-;BLK,V0W					
<b>ASSY-ACCESSORY</b>							
A/ACCS	AA97-20009E	ASSY-ACCESSORY;TM58,BLK,W-ANT,USA					
A/ROD	AA42-00001A	ANT-ROD;-;3S,650MM,ABS,UL/CSA	TXJ1996				
I/B	AA68-11252D	INSTRUCTION-BOOK;K15A,ENG,TM58-9,205X150	TXJ1996				
	L7000-0132	ANT-RODVHF;4SDODIPOLE850MMBRN	TXJ1966				
	AA68-11252A	INSTRUCTION-BOOK;K15A,FRENCH,TM59,205X150	TXJ1966				
<b>ASSY-CLAMPERS</b>							
A/CLMP	L9100-000-005	ASSY-CLAMPERS;K15A,19,;F/V					
AC+BC	AA65-30008A	CLAMP-CORD;-;PE,HB,BLK,-;-					
FBT	AA65-30109A	CLAMP-FBT;NYLON-66,V2,BLK,-;-					
CWIRE1	AA65-30018A	CLAMP-WIRE;-;NYLON6.6,-;-;DATL					
CWIRFC	AA65-30105A	CLAMP-WIRE;NYLON 66N,VO,NTR,15MM					
CDCOIL	L9400-0001	HOLDER-DEGAUSSING;25POLYVINYLCHLORIDEFL					
<b>REMOCON</b>							
RMT	AA59-10102B	REMOCON;DPTM58,AA59-10100B,	TXJ1996				
RMT	AA59-10101M	REMOCON; DPTM59,-;-;AA59-10095T	TXJ1966				
<b>ASSY-CABINET</b>							
A/BACK	AA92-10034BA	ASSY-CABINET,(COM);TXH1966,9,VO,S/V,K15A					
CB+CF	6002-000514	SCREW-TAPPING;RH,+;2,M4,L15,ZP					
B/C	AA64-00154B	CABINET-BACK;-;20F2 R1,-;HIPS,VO,BLK,-;-					
<b>ASSY-CABINET,FRONT</b>							
A/FRNT	AA92-30161NA	ASSY-CABINET,FRONT;TXJ1966,9,VO,S/V,K15A					
SPK+CF	6002-000514	SCREW-TAPPING;RH,+;2,M4,L15,ZP					
PA+CF	AA60-10002A	SCREW-TAPPING;-;RH,+;M4,L12,ZP					
STOPPER	AA61-40113A	STOPPER-PCB;-;ABS,HB,NTR.					
BADGE	AA64-70127F	BADGE-BRAND;AL,SS,SILVER,R800					
D-COIL	AA27-20004B	COIL-DEGAUSSING;-;20.5.7ohm,30T,L2170,E					
CRT+CF	AA60-10050R	SCREW-ASSY;WC,HH,+M5,L31.5,SWR					
<b>ASSY-SPEAKER</b>							
A/SPK	AA96-10141A	ASSY-SPEAKER;3W,8OHMX1,700					
SPK	3001-001020	SPEAKER;3W,8ohm,90dB,140Hz					
L/SPK	AA39-20501C	LEAD CONNECTOR-ASSY;-;67096-003,REC,3(2)					

## CABINET-FRONT

F/C	AA64-00152A	CABINET-FRONT;20F2,BK708P,HIPS,VO,BLK	
INDLED	AA64-00158B	INDICATOR-LED;20F2,ACRYL,CLR,	
KNOCON	AA64-00155B	KNOB-CONTROL;-;20F2,-;ABS,HB,BLK	
KNOPOW	AA64-00156B	KNOB-POWER;-;20F2,NO-SILK,ABS,HB,BLK	
WR+CF	6002-000512	SCREW-TAPPING;RH,+;2,M4,L12,ZP	
IL+CF	6002-000512	SCREW-TAPPING;RH,+;2,M4,L12,ZP	
SPRING	AA61-60003J	SPRING-CS;-;-;SUS304,0.5,OD6,H	
WINDOW	AA64-00157B	WINDOW-REMOCON;-;20F2,-;PC,VO,VIOLET,-	

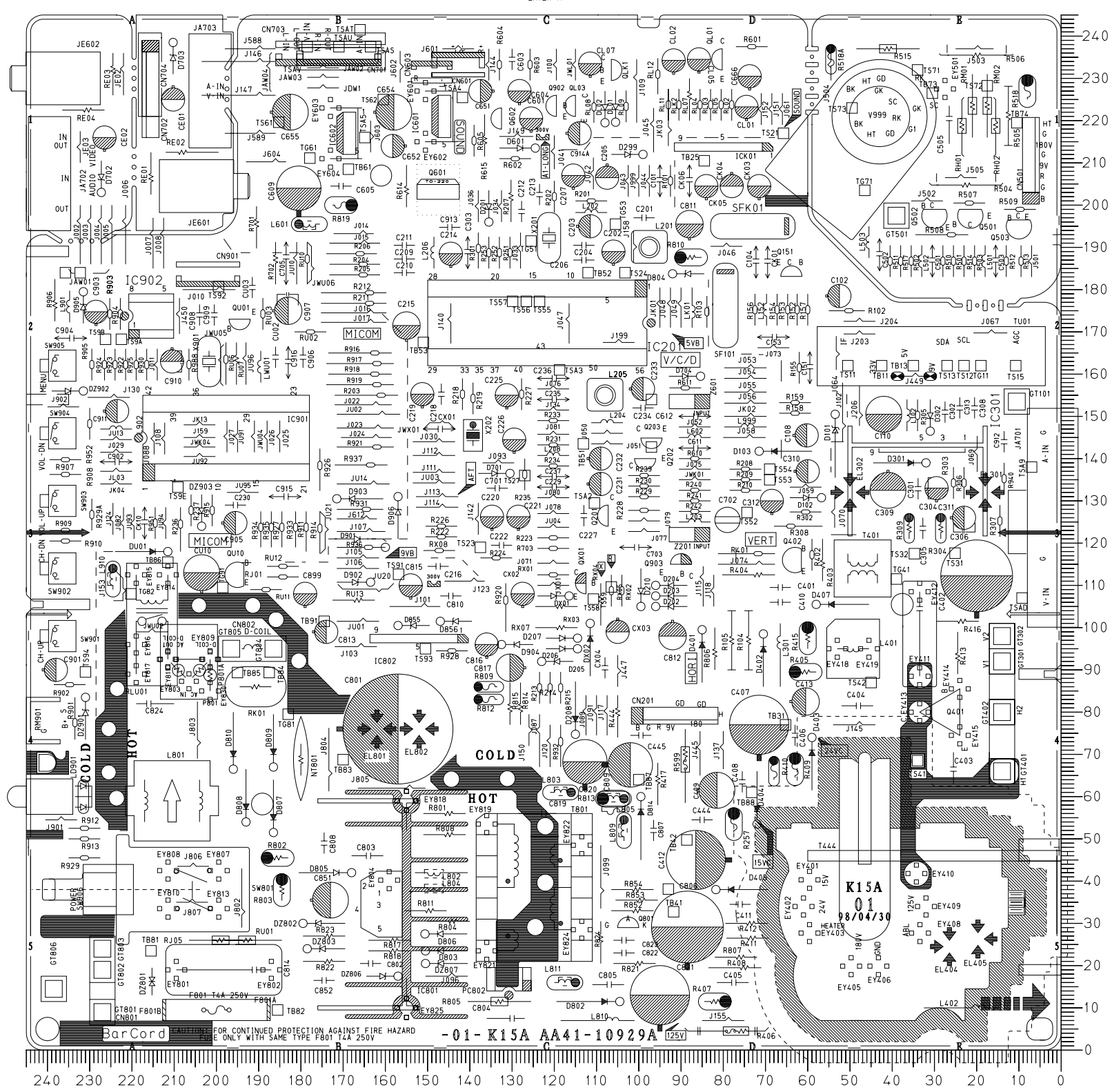
# MEMO

## 8. Block Diagram



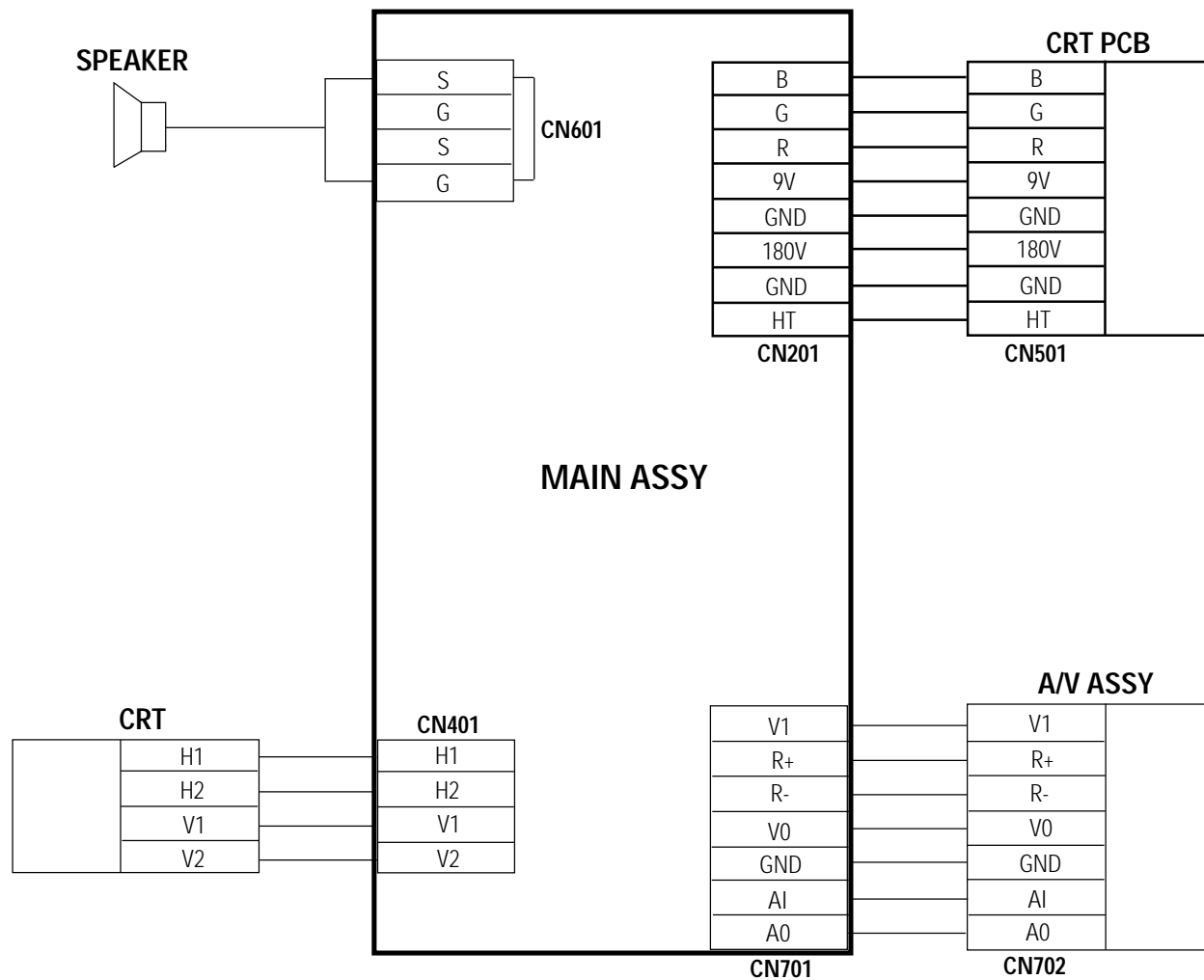
# 9. PCB Layout

## 9-1 PCB-MAIN



Loc. No.	X	Y	Loc. No.	X	Y
<b>DIODE</b>			<b>IC</b>		
D101	53	150	IC201	100	164
D102	56	130	IC301	50	132
D103	71	141	IC601	146	225
D201	135	196	IC602	168	221
D202	96	105	IC801	155	10
D203	96	107	IC802	141	97
D204	96	110	IC901	215	153
D205	123	92	IC902	219	178
D206	114	95	ICK01	69	213
			<b>TRANSISTOR</b>		
D207	114	97	Q151	61	183
D208	115	74	Q201	107	129
D210	99	105	Q202	101	140
D299	99	212	Q203	99	144
D301	32	139	Q401	24	85
D302	31	146	Q402	63	118
D401	85	99	O501	24	197
D402	70	98	O502	32	197
D403	59	74	O503	12	195
D404	72	53	O601	145	203
D405	81	38	O602	132	223
D407	58	105	O801	100	29
D601	124	213	O902	119	226
D701	130	136	O903	87	115
D702	227	203	QL01	80	237
D703	210	238	QL03	115	226
D704	85	159	QLK1	106	229
D802	104	11	QU01	197	173
D803	150	23	QU10	195	115
D804	92	183	OX01	112	113
D805	168	42			
D806	150	27			
D807	186	51			
D808	193	54			
D809	186	67			
D810	196	66			
D814	99	60			
D855	157	100			
D856	147	101			
D901	160	119			
D902	163	110			
D903	171	130			
D904	132	96			
D905	231	179			
D906	157	131			
DL01	105	219			
DL02	108	219			
DU01	211	118			
DX01	116	107			
DX02	111	101			
DZ801	215	20			
DZ802	179	30			
DZ803	178	24			
DZ806	157	17			
DZ807	150	20			
DZ901	231	83			
DZ902	231	156			
DZ903	203	124			

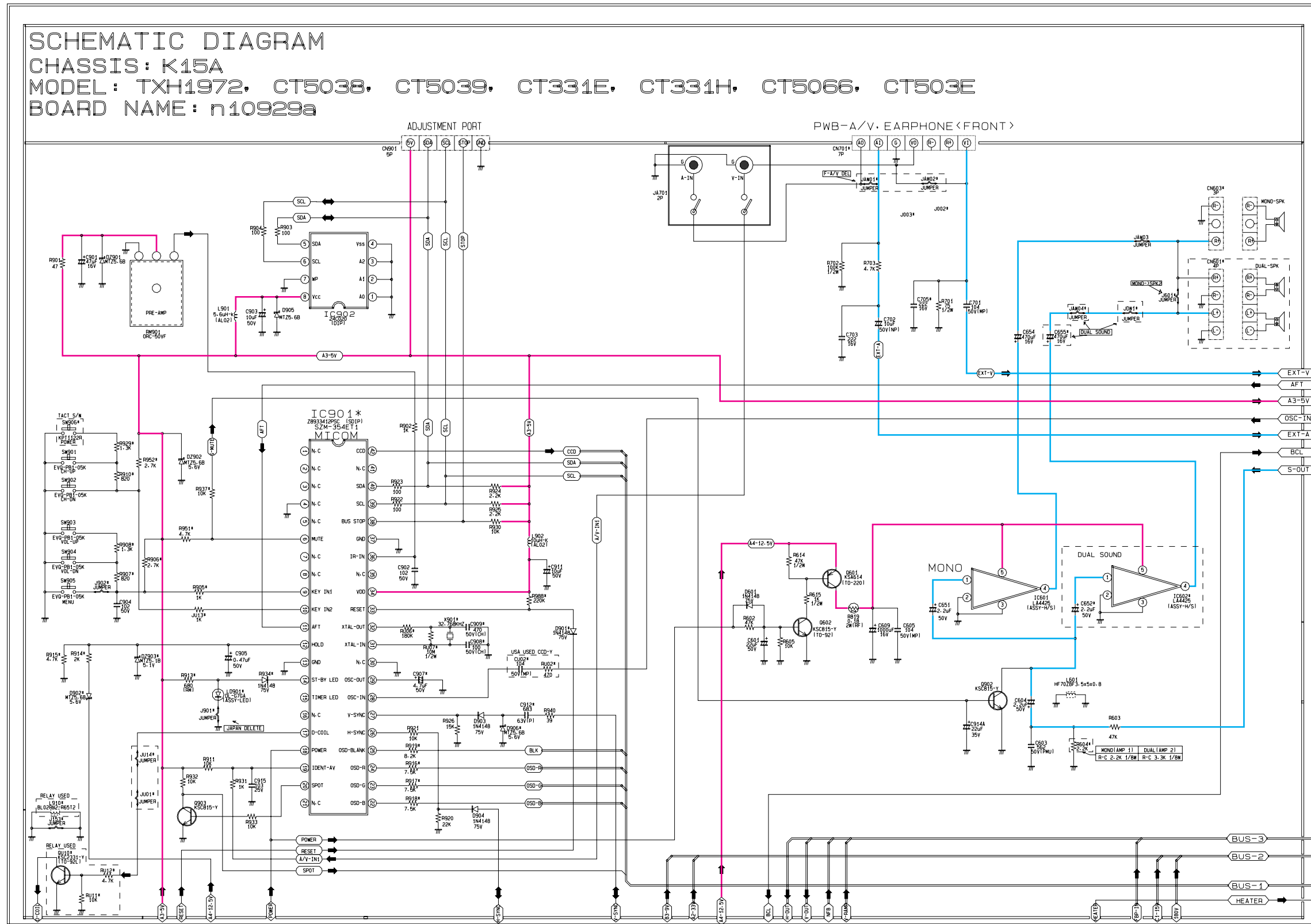
# 10. Wiring Diagram



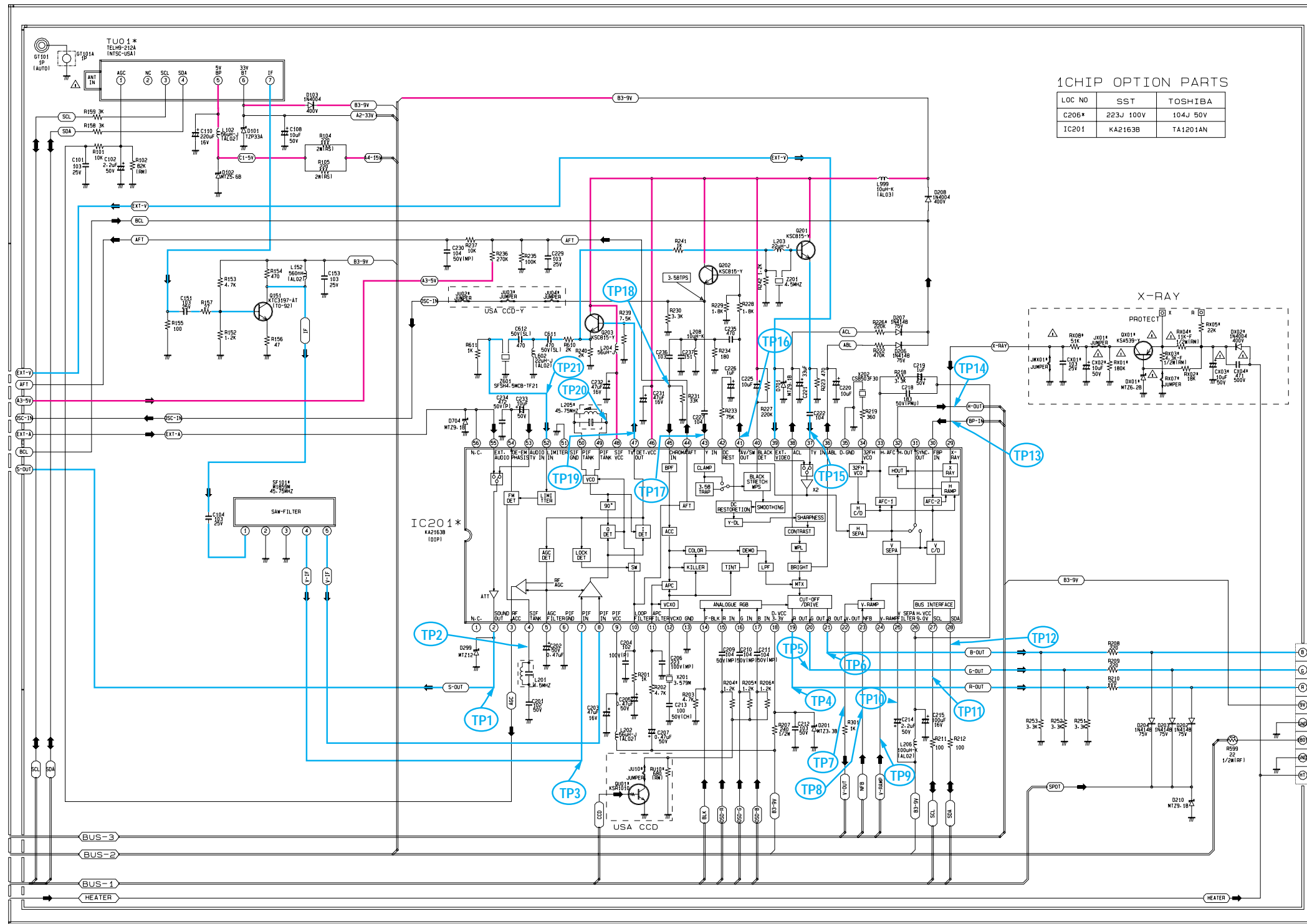


# 11. Schematic Diagrams

## 11-1 MAIN 1/4

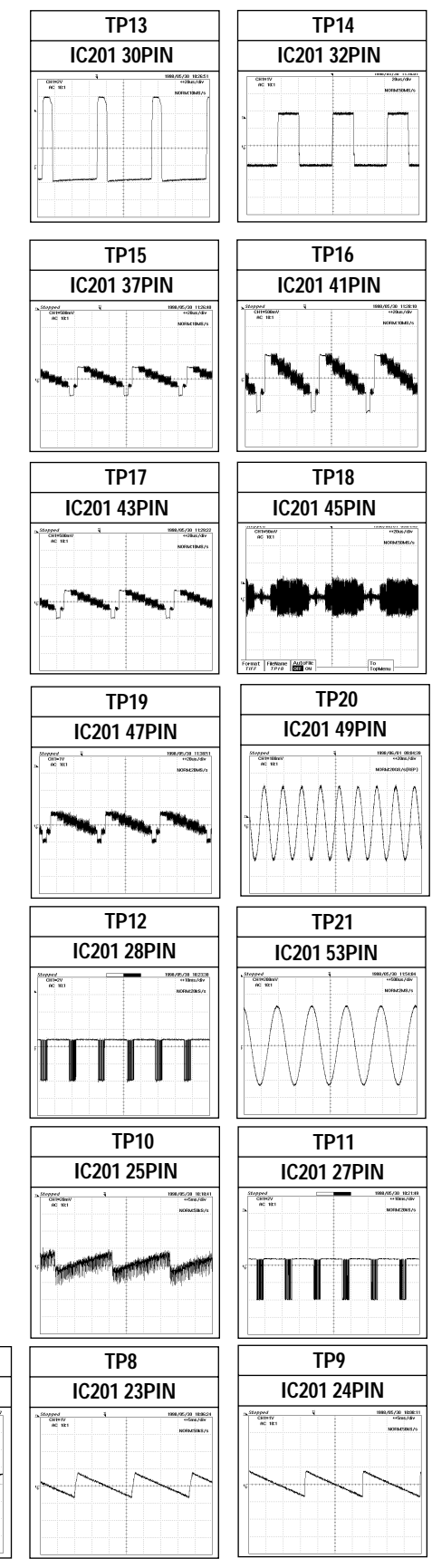


11-2 MAIN 2/4

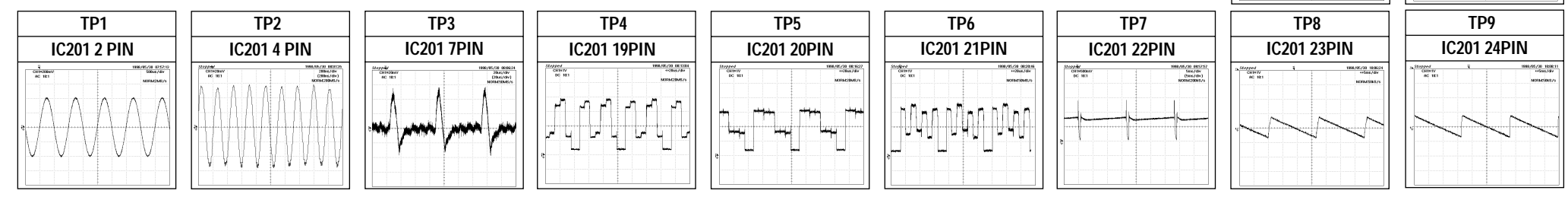


1CHIP OPTION PARTS

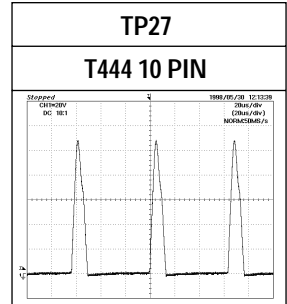
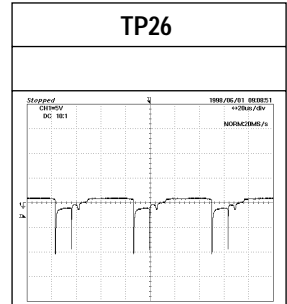
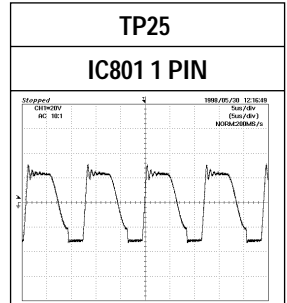
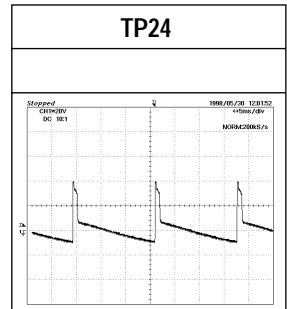
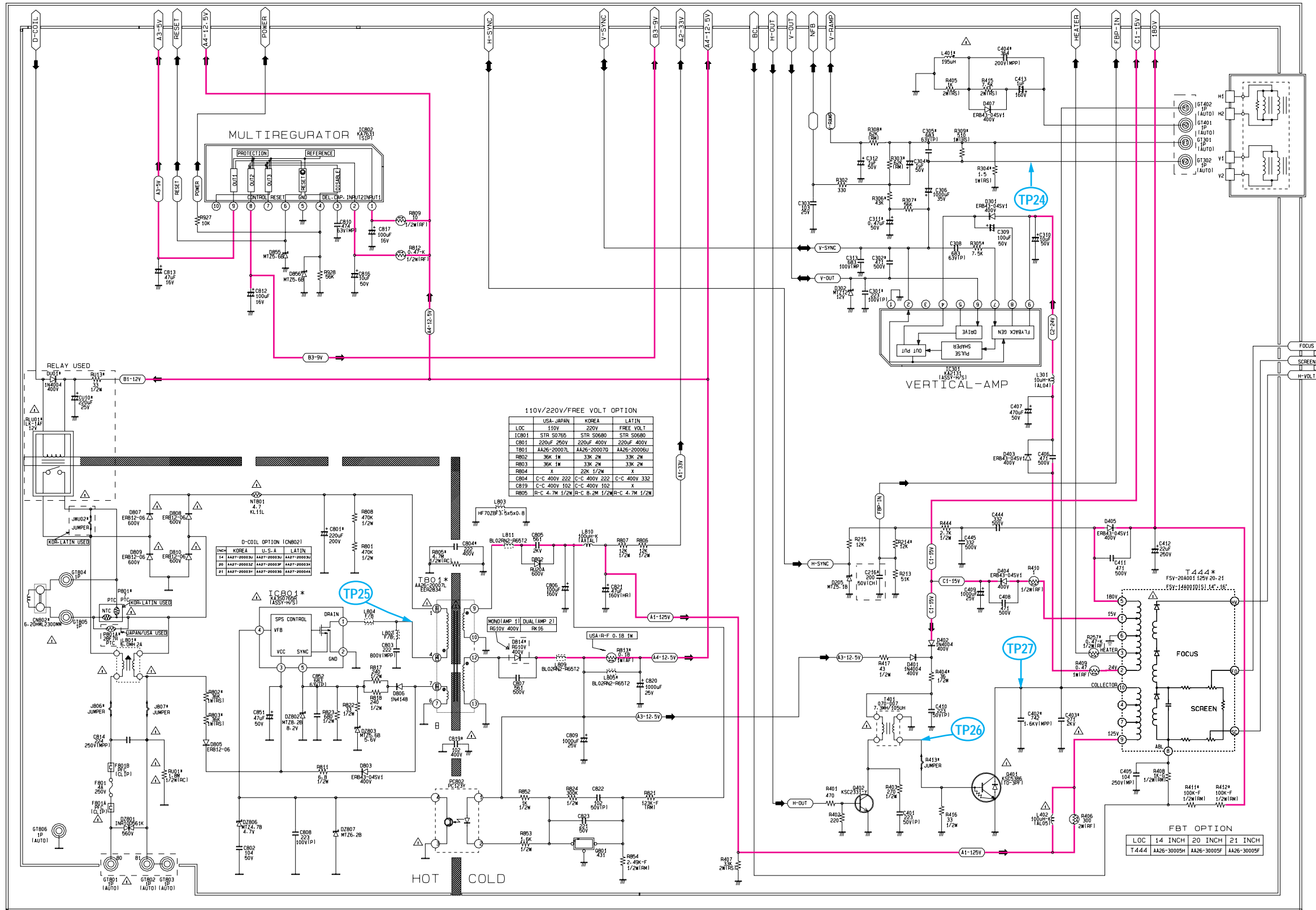
LOC NO	SST	TOSHIBA
C206*	223J 100V	104J 50V
IC201	KA2163B	TA1201AN



— : Power Line  
— : Signal Line

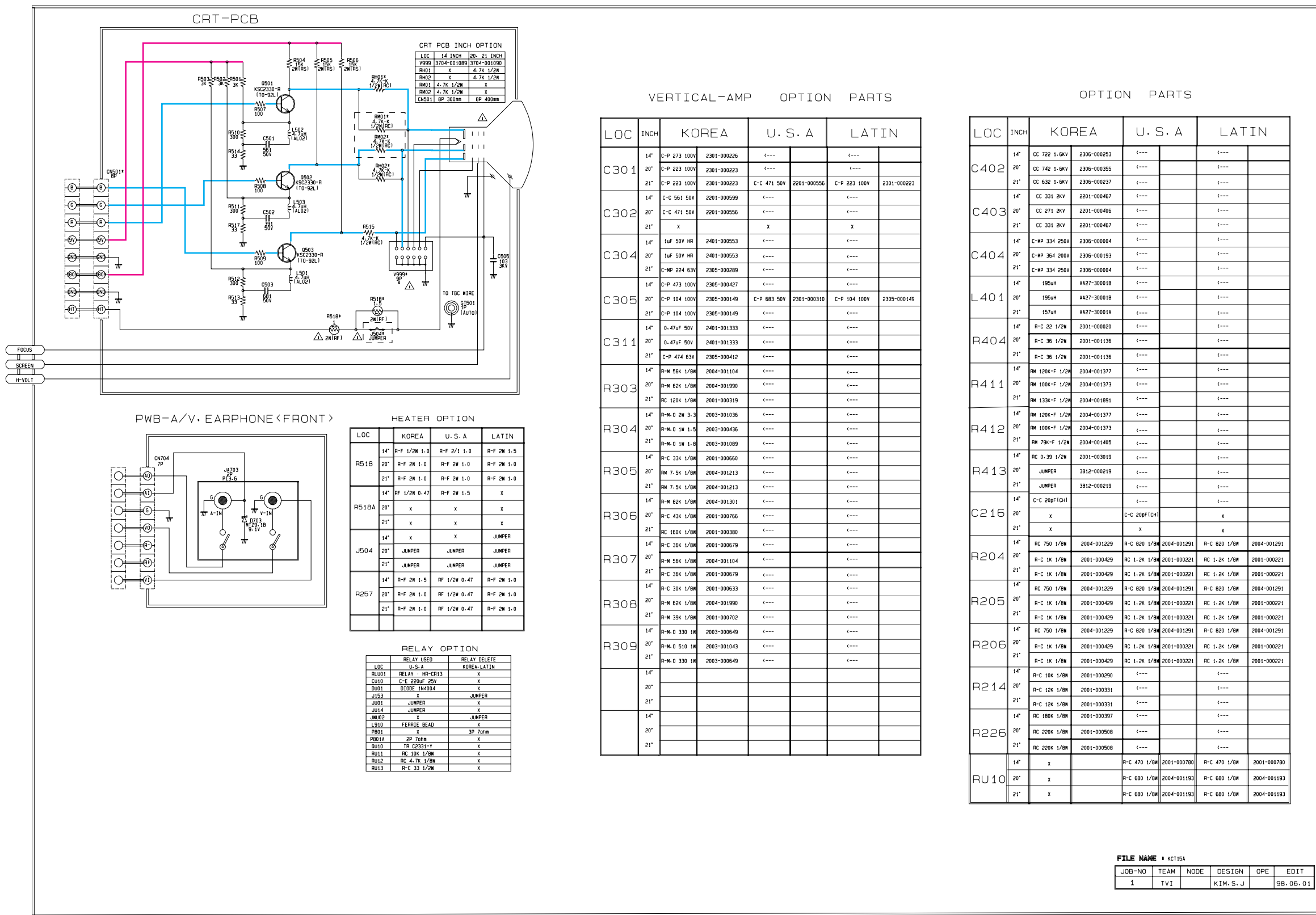


11-3 MAIN 3/4



— : Power Line

11-4 MAIN 4/4



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