



COLOR TELEVISION RECEIVER

Chassis : SCT13B
Model: CK333EZR4X/BWT
CK503EZR4X/BWT

SERVICE *Manual*

COLOR TELEVISION RECEIVER



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ELECTRONICS

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 (ANIS 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.

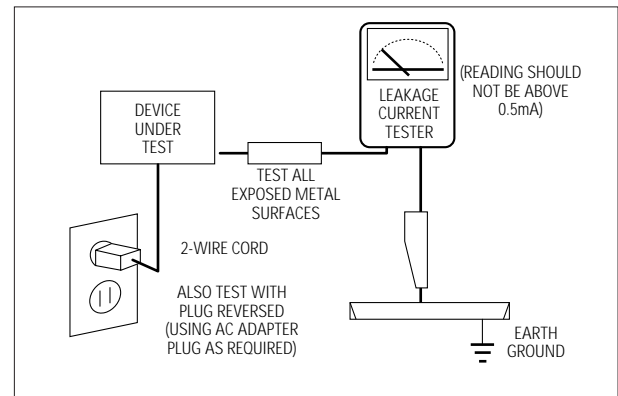


Fig. 1-1 AC Leakage Test



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)

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

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)

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.

2. Specifications and IC Data

2-1 Specifications

Television System:

MODEL	SYSTEM
CI	PAL-I (UHF)
CII	PAL-I (VHF/UHF)
CX	PAL-B/G, SECAM-B/G
CK	PAL-B/G, D/K, SECAM-B/G, D/K
CW	PAL-B/G, D/K, SECAM-B/G, D/K, NT 4.43
CS	PAL-B/G, D/K, SECAM-B/G, D/K, NT4.43, NT3.58

Channels:

System Band	PAL/SECAM-B/G,I	PAL, SECAM- D/K	SECAM-K1, PAL-D	NTSC - M
VHF	2 - 12	1 - 13	2 - 9	2 - 13
UHF	21 - 69	21 - 69	13 - 57	14-69

Intermediate Frequencies (MHz) :

SYSTEM IF Carrier Frequency	PAL/ SECAM- B/G	PAL/SECAM-D/K, SECAM-K1	PAL - I	NTSC - M
Picture IF Carrier	38.90	38.90	38.90	38.90
Sound IF Carrier	33.40	32.40	32.90	34.40
Color Sub Carrier	34.47	34.47	34.47	35.32

Picture Tube:

14 Inch	A34KQV42X	Quick start, in-line-gun, Black stripe, 90°degree deflection
20 Inch	A48KRD82X	
21 Inch	A51KQJ63X	

Power Requirements:

AC 100~260V, 50/60Hz

Antenna Input Impedance:

VHF, UHF : Telescopic dipole antenna (75 ohm unbalanced type)

Speaker Impedance

8 ohm, 5W+5W (Dual Type)
16 ohm, 3W (Monitor Type)

2-2 IC Line Up

Table 2-1 IC Line-Up			
Loc. No	Specification	Description	Remark
HC101	PAP102	IF PRE-AMP	
IC201	TDA8374A N3	PAL-B/G, SECAM-B/G, NTSC	Philips
IC202	TDA4665	1H DELAY	SECAM MODULE
IC203	TDA8395P	SECAM DECODER	
IC301	TDA8356	VERTICAL OUTPUT	
IC501	TDA6107Q	RGB DRIVE AMP	
IC601	TDA7056B	SOUND-AMP (3.5W)	Monitor Type
IC602	TDA7057AQ	SOUND-AMP (5W+5W)	Dual Type
IC801	KA3S0680R	POWER IC (STR)	
IC802	KA7630	CUSTOM REGULATOR (5V, 8V)	
IC901	SZM193EA	W/O TTX, English/French/Arabian	Zilog (Non TTX)
	SZM193EV	W/O TTX, English/Vietnames/Indonesian/Maly/Thai	
	SZM193EC	W/O TTX, English/Chinese	
	SZM191EC	W/O TTX, English/Chinese	
	SZM193EE	W/O TTX, English/German/French/Dutch/Italian/Spanish, Swedish/Romanian/Hungarian/Croatian/Polish/Russian, Czech/Bulgarian/Yugo/Greek	
	SZM191ER	W/O TTX, English/Russian (Only for Oceania model)	Philips (TTX)
	SPM197EE	TTX, West : English/German/French/Dutch/Italian/Spanish/Swedish East : English/Czech/Croatian/Romanian/Hungarian/Polish	
	SPM197ER	TTX, English/Russian/Bulgarian	
	SPM197EP	TTX, English/Iranian	
	SPM197EA	TTX, English/French/Arabian	
	SPM197EG	TTX, English/Greek/Yugo	
IC902	24C04	EEPROM	
IC903	KiA7042P	RESET IC ,W/O TTX Model	Zilog
	KiA7442P	TTX Model	Philips
IC401	KA7812	REGULATOR (12V)	
PC801	LTV817B	PHOTO COUPLER	NEC

2-3 Semiconductor Base Diagrams

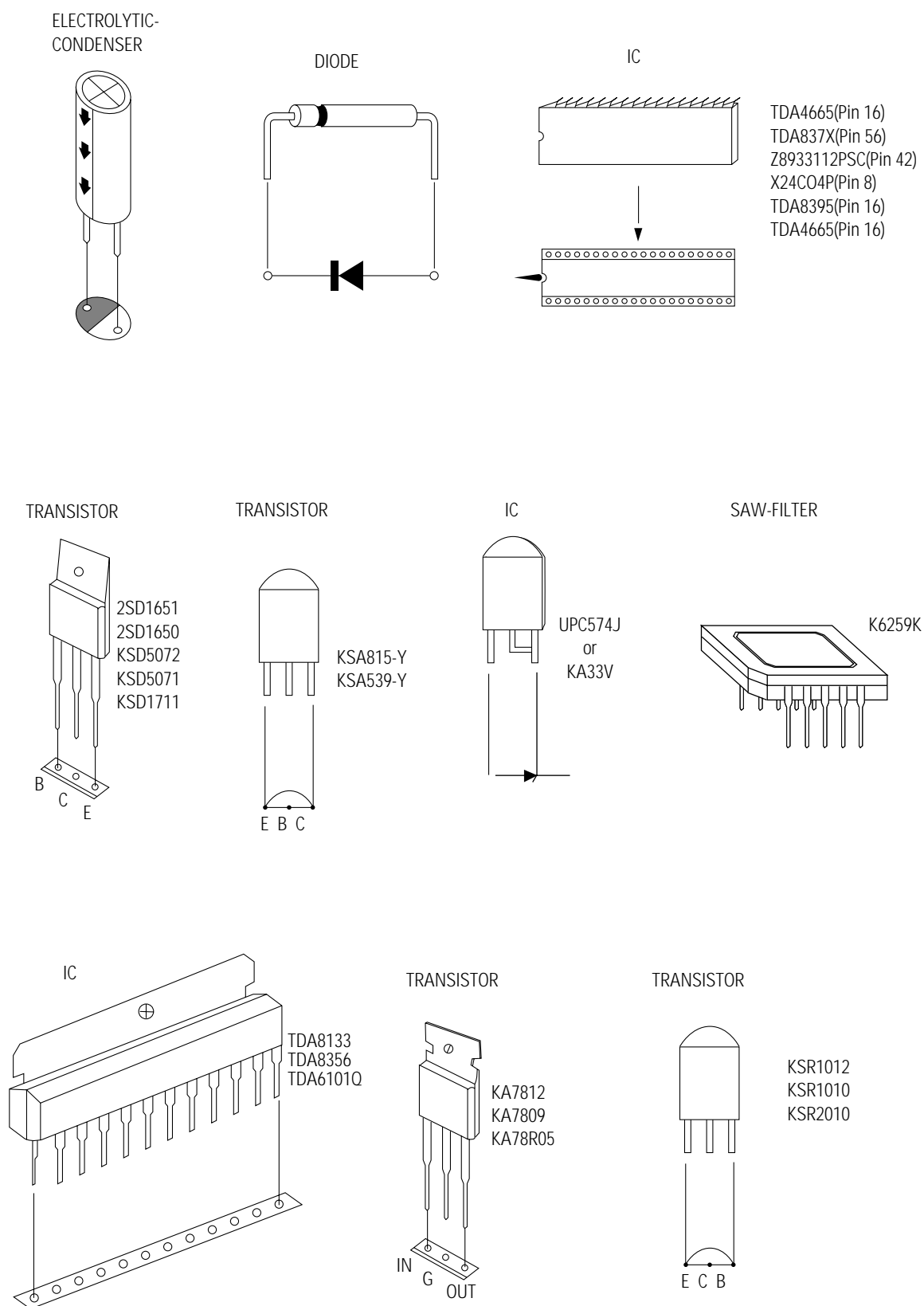
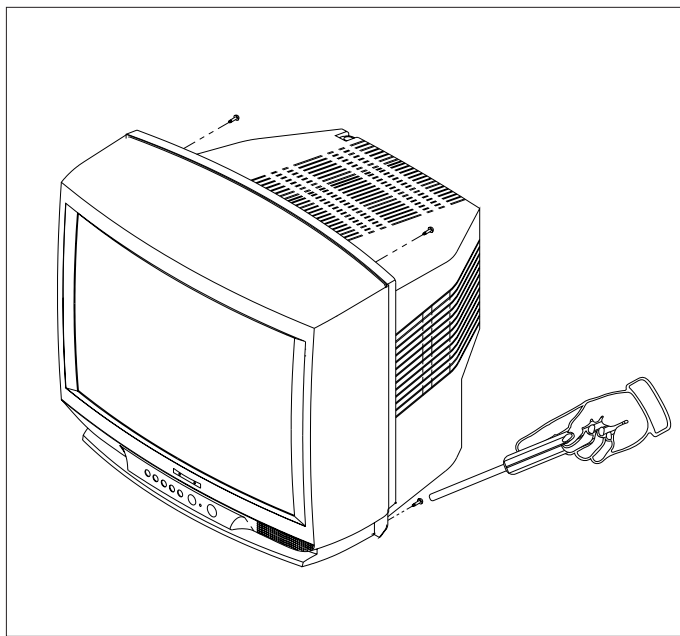


Fig. 2-1 Semiconductor Base Diagrams

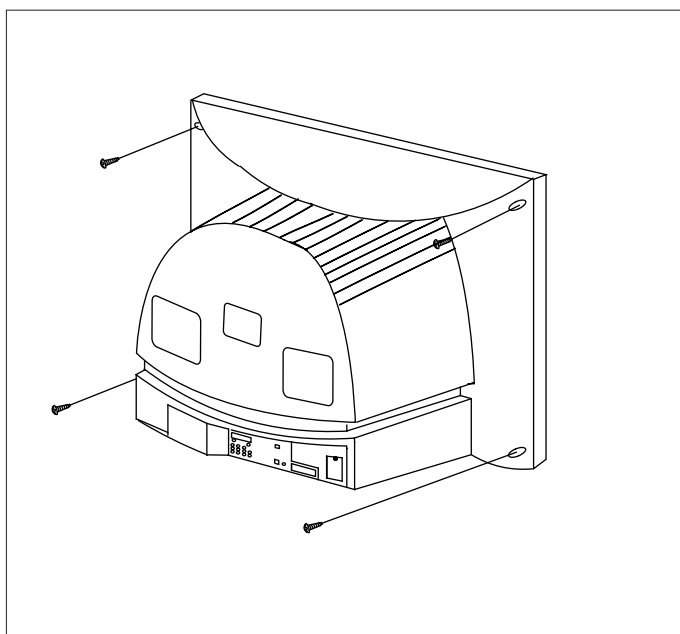
MEMO

3. Disassembly and Reassembly

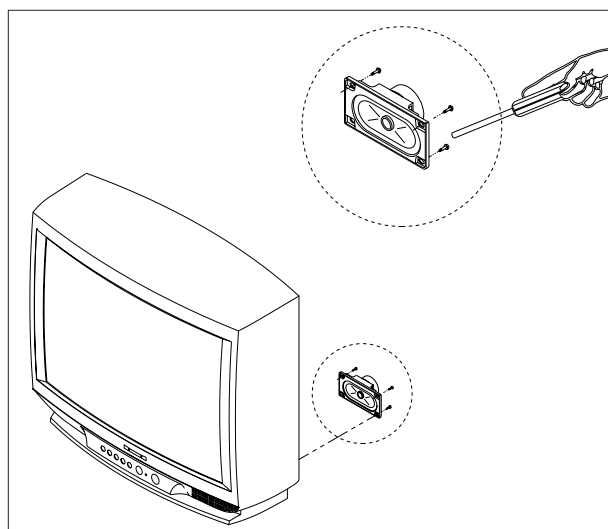
3-1 Back Cover Removal



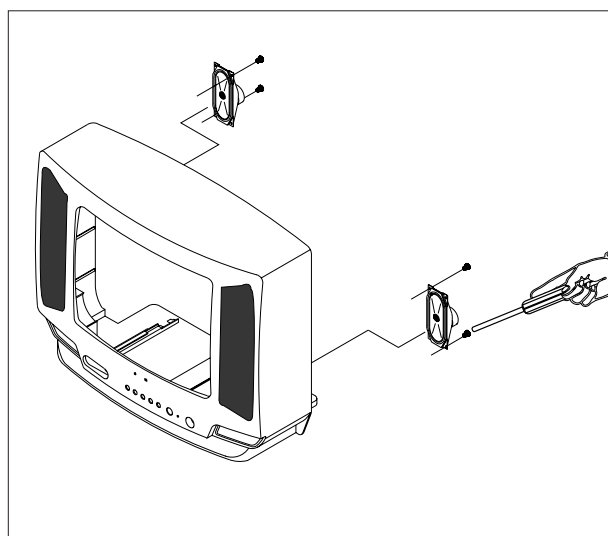
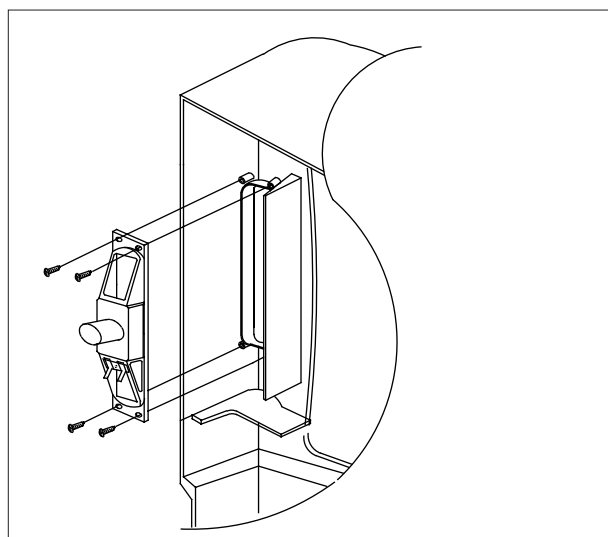
1. After removing the 9 screws, pull the cabinet backwards.



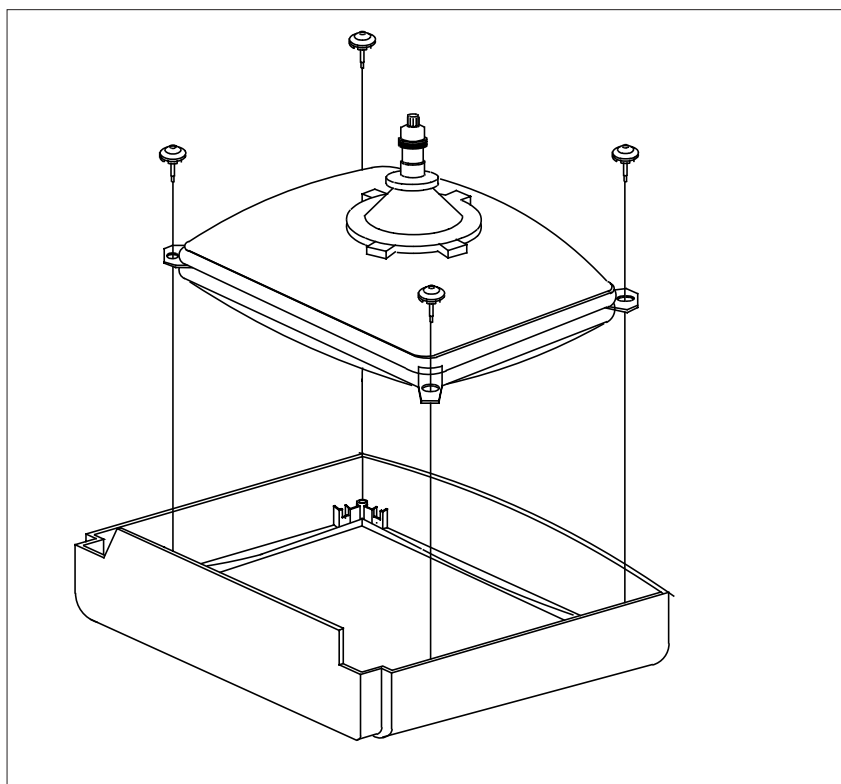
3-2 Speaker Removal



1. Loosen the 4 screws and remove the holder - speakers.



3-3 CRT Removal



1. Spread a soft mat on the floor. Place the TV set face down.
2. Remove the 4 screws mounting the CRT to the front cabinet.
3. Lift the CRT.

MEMO

4. Alignment and Adjustments

4-1 Preadjustment

4-1-1 Factory Mode

1. Do not attempt these adjustments in the Video Mode.
2. The Factory Mode adjustments are necessary when either the EEPROM (IC902) or the CRT is replaced.
3. Do not tamper with the "Adjustment" screen of the Factory Mode menu. This screen is intended only for factory use.

4-1-2 When EEPROM (IC902) Is Replaced

1. When IC902 is replaced all adjustment data revert to initial values. It is necessary to re-program this data.
2. After IC902 is replaced, warm up the TV for 10 seconds.

4-1-3 When CRT Is Replaced

1. Make the following adjustments AFTER setting up after setting up purity and convergence :
 - White Balance
 - Sub-Brightness
 - Vertical Center
 - Vertical Size
 - Horizontal Size
 - Fail Safe (This adjustment must be the last step).
2. If the EEPROM or CRT is replaced, set SC and PVA to 10 and 45 (Factory mode).
 - SC : 14, 16 Inch : 0
 - 20, 21 Inch : 10

4-2 Factory/Service Mode

4-2-1 Procedure for the "Adjustment" Mode

1. This mode uses the standard remote control. The Service Mode is activated by entering the following remote-control sequence :
 - (1) SLEEP→FACTORY.
 - (2) STAND-BY→P.STD→HELP→SLEEP→POWER ON.
2. The "SERVICE (FACTORY)" message will be displayed. The Service Mode has four components: Adjustment, Test Pattern, Option Bytes and Reset.
3. Access the Adjustment Mode by pressing the "VOLUME" keys (Up or Down). The adjustment parameters are listed in the accompanying table, and selected by pressing the CHANNEL keys (▲, ▼).
4. Selection sequences for the PAL system:
 - DOWN or UP key:
 - AGC>VCO>SBT>SCT>SCR>SC>RG>GG>BG>CDL>BLU>PSL>PVS>PVA>PHS
5. Selection sequences for the NTSC system:
 - DOWN or UP key:
 - AGC>VCO>SBT>SCT>SCR>SC>RG>GG>BG>CDL>BLU>NSL>NVS>NVA>NHS
6. The VOLUME keys increase or decrease the adjustment values, (stored in the non-volatile memory when Adjustment Mode is cancelled).
7. Cancel the Adjustment Mode by re-pressing the "FACTORY" or Power OFF.

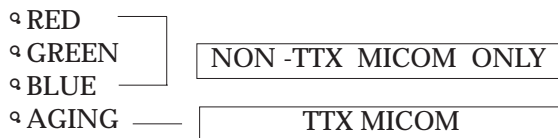
4-2-2 Main Adjustment Parameter

Table 4-1 Main Adjustment Parameter (Zilog, Philips μ -com)				
FUNCTION	OSD ABBREVIATION	RANGE	INITIAL DATA	REMARKS
AUTO GAIN CONTROL	AGC	0 ~ 63 STEP	32	TDA8374
SUB BRIGHT	SBT	0 ~ 23 STEP	7	
SUB CONTRAST	SCT	0 ~ 23 STEP	7	
SUB COLOR	SCR	0 ~ 23 STEP	13	
RED DRIVE GAIN	RG	0 ~ 63 STEP	32	
GREEN DRIVE GAIN	GG	0 ~ 63 STEP	32	
BLUE DRIVE GAIN	BG	0 ~ 63 STEP	32	
PAL VERTICAL SLOPE	PSL	0 ~ 63 STEP	20	
PAL VERTICAL SHIFT	PVS	0 ~ 63 STEP	32	
PAL VERTICAL AMPLITUDE	PVA	0 ~ 63 STEP	45	
PAL HORIZONTAL SHIFT	PHS	0 ~ 63 STEP	32	
NTSC VERTICAL SLOPE	NSL	0 ~ 63 STEP	20	
NTSC VERTICAL SHIFT	NVS	0 ~ 63 STEP	32	
NTSC VERTICAL AMPLITUDE	NVA	0 ~ 63 STEP	45	
NTSC HORIZONTAL SHIFT	NHS	0 ~ 63 STEP	32	
VOLTAGE CONTROL OSCILLATOR	VCO	0 ~ 128 STEP	64	
S-CORRECTION	SC	0 ~ 63 STEP	32	
TTX SUB-CONTRAST	TSS	0 ~ 63 STEP	16	
CATHODE DRIVE LEVEL	CDL	0 ~ 7 STEP	3	TDA8842
BLUE STRETCH MODE	BLU	0 ~ 3 STEP	2	

NOTE : PVS,PVA, PHS, NVS, NVA,NHS parameters must be aligned using both the 50Hz and 60Hz vertical-field rates.

4-2-3 Test Pattern (Aging Mode)

1. This mode can be used during servicing, or for confirming that the convergence and purity adjustments are correct.
2. Access the Test Pattern parameters by pressing a CHANNEL keys (▲, ▼) while the Service Mode is on. The cursor will move to the test pattern. Press the VOLUME keys. On-screen display:



3. AGING Mode (Reference Only)

This pattern is used for pre-heating the CRT during manufacturing—it is accessed in the factory by twice pressing the “SLEEP → FACTORY→FACTORY” key, then white pattern will be displayed.

Even if the TV power is cut off, the Aging Mode is not cancelled. The aging mode is cancelled by repressing the “FACTORY” key or pressing the local “CH UP/DOWN” key.

The patterns are displayed at 5 sec intervals : NON-TTX Micom only.

4-2-4 Option Bytes

In the Service Mode, various can be selected via the Option Bytes (8 bits each). Example:

SYSTEM OSD DISPLAY		BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0 : 8	-			L (BIT : 0)	H (BIT : 8)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)
BYTE 1 : 0	-	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)

TDA8374, CK SYSTEM, RCA JACK SYSTEM OSD DISPLAY

BYTE 0 : 11	—————	L (BIT : 1)	H (BIT : 0)	L (BIT : 0)	H (BIT : 0)	L (BIT : 1)
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4-2-4 (A) OPTION BYTE TABLE

BYTE	BIT	LOW (0)				HIGH (1)				Application MICOM															
B Y T E 0	D7	-								-															
	D6	16:9 not functional during “Zoom” in the A/V Mode								16:9 functional during “Zoom” in the A/V Mode															
	D5	No Child Lock								Child Lock															
	D4	CH Up/down functional in the A/V mode (SCART Jack)								CH Up/down not functional in the A/V mode (RCA Jack)															
	D3	SOUND-I SYSTEM USED								SOUND-I SYSTEM NOT USED															
	D2	D2	D1	COLOR SYSTEM						SOUND SYSTEM															
		0	0	CK : PAL ONLY (NO OSD)						B/G→D/K → I															
		0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58						B/G→D/K → I															
		1	0	CB : -RF : PAL ONLY -A/V : AUTO→PAL →NT4.43→NT3.58						B/G ONLY (No OSD)															
		1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58						B/G→D/K →I→ NT →M															
D0	TDA8374								TDA8842								Onechip								
B Y T E 1	D7	D7	D6	Southeast/Middle East Asia /Africa				Vietnam/India				Thailand/Malaysia				CIS				China					
		0	0	English Only				English Only				English Only				English Only				English only					
		0	1	English/Arabian				English/Vietnamese				English/Thai				English/CIS				English /Chinese					
		1	0	English/Arabian/French				English/Indonesian				English/Malay													
		1	1	English Only				English/Vietnamese /Indonesian				English/Thai /Malay													
	D5	AFT ON (always)								AFT OFF (after fine tuning)															
	D4	Existing sharpness level								Sharpness level Up								March 12, 1997							
	D3	No Auto Power On								Auto Power ON								Last State Memory							
	D2	NTSC : 25KHz (NTSC Table) PAL : 50KHz (PAL Table)								NTSC : 25KHz (NTSC Table) PAL : 50KHZ (PAL Table)								PAL Table always used in the A/V Mode (March 12, 1997)							
	D1					D1	D0	System						Sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)											
						0	0	DIG																	
						0	1	D/K																	
						1	0	I																	
						1	1	NT-M																	
D0																									

4-2-4 (B) TTX MICOM (SPM-197EE/ER/EG) OPTION TABLE (FOR EUROPE)

BYTE	BIT	LOW (0)		HIGH (1)		Application MICOM	
B Y T E 0	D7	3 BAND		UHF ONLY		ALL	
	D6	16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)		16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)		ALL (BASIC : LOW)	
	D5	LED RED AT STAND-BY		LED GREEN AT STAND-BY (POLAND)		ALL (J900 DELETE AT H)	
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)		ALL	
	D3	P-STD MAX		P-STD NORMAL		ALL (BASIC : HIGH)	
	D2	D2	D1	SOUND SYSTEM		COLOR SYSTEM	ALL
	D1	0	0	B/G ↔ D/K : CK MODEL		AUTO (NO OSD)	
		0	1	I ONLY (NO OSD) : CI, CII MODEL			
		1	0	B/G ONLY (NO OSD) : CB, CX MODEL			
		1	1	NOT USED			
D0	TDA8374A		TDA8842		ALL		
B Y T E 1	D7	NOT USED				ALL (FIX : LOW)	
	D6						
	D5	Western OSD :English/German/French/Dutch/ Italian/Spanish/Swedish		Eastern OSD :English/Croatian/Rumanian/ Hungarian/Hungarian/Polish/Czech		SPM- 197EE ONLY used * SPM-197ER : English/Russian/ Bulgarian *SPM-197EG: English/Greek/ Yugosiavian	
	D4	Existing sharpness level (when using TDA6108 RGB AMP)		Sharpness level up (when using TDA6107Q AMP)		ALL (BASIC : HIGH)	
	D3	No Auto Power On		Auto Power On		ALL (BASIC : HIGH)	
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)		ALL (RF VOL. CURVE) BASIC : LOW (AV VOL. CURVE : PAL CURVE)	
	D1	NOT USED (FIX : LOW)				Sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : Available when the sound is B/G ↔ D/K in the Byte 0	
	D0	B/G SOUND		D/K SOUND			

● P-STD Classification (CON./BRI./SHRP.COL.)

D3 BIT	STANDARD MODE	DYAMIC MODE	MOVIE MODE	MILD MODE	CUSTOM MODE
0	100/50/50/50	100/50/75/50	90/50/75/50	60/50/75/50	100/50/50/50
1	90/50/50/50	100/50/50/50	75/55/50/50	60/50/50/50	90/55/25/50

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal)
3. No BLUE SCREEN 4. NO TIMER (CLOCK ON/OFF)

4-2-4 (C) TTX MICOM (SPM-197EP/EPR/EA) OPTION TABLE (FOR MIDDLE EAST)

BYTE	BIT	LOW (0)	HIGH (1)	Application MICOM																				
B Y T E 0	D7	NOT USED		ALL (FIX : LOW)																				
	D6	16:9 not functional during zoom (NORMAL-ZOOM)	16:9 functional during zoom (NORMAL-ZOOM-16:9)	EP is an OPTION during A/V (BASIC : LOW)																				
	D5	NOT USED		ALL (FIX : LOW)																				
	D4	CH Up/down functional in the A/V mode (SCART Jack)	CH Up/down not functional in the A/V mode (RCA Jack)	ALL																				
	D3	SOUND-I SYSTEM USED	SOUND-I SYSTEM NOT USED	ALL																				
	D2	<table><tr><td>D2</td><td>D1</td><td>COLOR SYSTEM</td><td>SOUND SYSTEM</td></tr><tr><td>0</td><td>0</td><td>CK : AUTO (No OSD)</td><td>(?)→B/G→D/K →</td></tr><tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→</td></tr><tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G ONLY (No OSD)</td></tr><tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→ NT → M →</td></tr></table>		D2	D1	COLOR SYSTEM	SOUND SYSTEM	0	0	CK : AUTO (No OSD)	(?)→B/G→D/K →	0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58	(?)→B/G→D/K → I→	1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58	B/G ONLY (No OSD)	1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58	(?)→B/G→D/K → I→ NT → M →	
	D2	D1	COLOR SYSTEM	SOUND SYSTEM																				
	0	0	CK : AUTO (No OSD)	(?)→B/G→D/K →																				
	0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58	(?)→B/G→D/K → I→																				
	1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58	B/G ONLY (No OSD)																				
1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58	(?)→B/G→D/K → I→ NT → M →																					
D1																								
D0	TDA8374A	TDA8842	EP VERSION : TDA8374A ONLY																					
B Y T E 1	D7	NOT USED		ALL (FIX : LOW)																				
	D6																							
	D5																							
	D4	Existing Sharpness level (when using the TDA6108 RGB AMP)	Sharpness level up (when using the TDA6107Q RGB AMP)	ALL (BASIC : HIGH)																				
	D3	No Auto Power On	Auto Power On	ALL (BASIC : HIGH)																				
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)	NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)	ALL (RF VOL. CURVE) BASIC : LOW (AV VOL. CURVE : PAL CURVE)																				
	D1	<table><tr><td>D1</td><td>D0</td><td>SYSTEM</td></tr><tr><td>0</td><td>0</td><td>B/G</td></tr><tr><td>0</td><td>1</td><td>D/K</td></tr><tr><td>1</td><td>0</td><td>I</td></tr><tr><td>1</td><td>1</td><td>?(B/G & D/K OR M) /EP VER. : M</td></tr></table>		D1	D0	SYSTEM	0	0	B/G	0	1	D/K	1	0	I	1	1	?(B/G & D/K OR M) /EP VER. : M	Sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : A single sound in the Byte 0 is unavailable					
	D1	D0	SYSTEM																					
	0	0	B/G																					
	0	1	D/K																					
1	0	I																						
1	1	?(B/G & D/K OR M) /EP VER. : M																						
D0																								

● OSD Language by MiCOM

1. Persian (for Iran) : English/Persian (Iranian)
2. Arab (Middle East, Africa) : English/French/Arabian

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal
3. No BLUE SCREEN

2. AUDIO MUTE (during no signal)
4. No TIMER (CLOCK ON/OFF)

4-2-4 (D) TTX MICOM (SPM-193EE/EER) OPTION TABLE (FOR EUROPE)

BYTE	BIT	LOW (0)		HIGH (1)		REMARK	
B Y T E 0	D7	3 BAND		UHF ONLY		SZM-193EE : H NOT functional SZM-193EER :	
	D6	16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)		16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)		Basic Specification : LOW	
	D5	LED RED AT STAND-BY		LED GREEN AT STAND-BY		POLAND (J900 DELETE AT H)	
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)		BASIC : LOW	
	D3	P-STD MAX		P-STD NORMAL		ALL (BASIC : HIGH)	
	D2	D2	D1	SOUND SYSTEM		COLOR SYSTEM	SOUND SYSTEM OPTION
	D1	0	0	B/G ↔ D/K : CK MODEL		AUTO (NO OSD)	
		0	1	I ONLY (NO OSD) : CI, CII MODEL			
		1	0	B/G ONLY (NO OSD) : CB, CX MODEL			
		1	1	NOT USED			
D0	TDA8374A		TDA8842		IC201 (ONE-CHIP) OPTION		
B Y T E 1	D7	D7	D6	OSD Language		Language Option	
	D6	0	0	English/German/French/Dutch/ Italian/Spanish/Swedish			
		0	1				
		1	0	English/Romanian/Hungarian/ Croatian/Polish/Czech/Russian			
		1	1				English/Bulgarian/Greek/Yugo
	D5	AFT ON (always)		AFT OFF (after fine tuning)		BASIC : LOW	
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)		Sharpness level up (when using TDA6107Q AMP)		BASIC : HIGH	
	D3	No Auto Power On		Auto Power On		BASIC: HIGH	
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (NTSC TABLE)		RF VOL. : CURVE, BASIC : LOW (AV VOL. CURVE:PAL CURVE)	
	D1	NOT USED (FIX : LOW)					Sound system during the Auto search (All should be set for the system which is selected during the Factory Reset.)
	D0	SOUND B/G		SOUND D/K		Note: Only available during the specification of CK model in the Byte 0	

● P-STD Classification (CON./BRI./SHRP./COL.)

D3 BIT	STANDARD MODE	DYAMIC MODE	MOVIE MODE	MILD MODE	CUSTOM MODE
0	100/50/50/50	100/50/75/50	90/50/75/50	60/50/75/50	100/50/50/50
1	90/50/50/50	100/50/50/50	75/55/50/50	60/50/50/50	90/55/25/50

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal)
 3. No BLUE SCREEN during no RF signal (Blue screen during A/V) 4. NO TIMER

4-2-4 (E) TTX MICOM (SZM-193EA/EAR/EV) OPTION TABLE

BYTE	BIT	LOW (0)		HIGH (1)		Application MICOM																
B Y T E 0	D7	LINE STEREO OFF		LINE STEREO ON		ALL																
	D6	16:9 not function during zoom in the A/V mode (Normal-ZOOM)		16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)		BASIC : LOW																
	D5	CHILD LOCK OFF		CHILD LOCK ON		ALL (No SZM193EA)																
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)		ALL																
	D3	SOUND-I SYSTEM USED		SOUND-I SYSTEM NOT USED		ALL																
	D2	D2	D1	COLOR SYSTEM		SOUND SYSTEM																
		0	0	CK : AUTO (No OSD)		B/G→D/K																
		0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58		B/G→D/K → I																
	D1	1	0	CB : -RF : PAL ONLY -A/V : AUTO→PAL →NT4.43→NT3.58		B/G ONLY (No OSD)																
		1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58		B/G→D/K → I→ NT → M →																
D0	TDA8374A			TDA8842		ALL (No SZM193EA)																
B Y T E 1	D7	D7	D6	Middle East/Africa Version	Asia Version (SZM193EV)																	
		0	0	English ONLY	English only																	
		0	1	English/Arabian	English/Indonesian/Malay/Thai/Vietnamese																	
		D6	1	0	English/Arabian/French		English/Vietnamese/Indonesian															
			1	1	English ONLY		English/Thai/Malay															
	D5	AFT ON (always)			AFT OFF after fine tuning (for India)		ALL (No SZM-193EA)															
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)			Sharpness level up (when using TDA6107Q RGB AMP)		ALL (BASIC : HIGH)															
	D3	No Auto Power On			Auto Power On		ALL (BASIC : HIGH)															
	D2	NTSC : 25KHz(NTSC TABLE) PAL : 50 KHz (PAL TABLE)			NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (NTSC TABLE)		ALL (RF VOL.: HIGH) BASIC : LOW (AV VOL. CURVE : PAL CURVE)															
	D1	<table><tr><td>D1</td><td>D0</td><td>SYSTEM</td></tr><tr><td>0</td><td>0</td><td>B/G</td></tr><tr><td>0</td><td>1</td><td>D/K</td></tr><tr><td>1</td><td>0</td><td>I</td></tr><tr><td>1</td><td>1</td><td>NT-M</td></tr></table>					D1	D0	SYSTEM	0	0	B/G	0	1	D/K	1	0	I	1	1	NT-M	Initial sound system during the auto search (All should be for the system which is selected during the Factory Reset.) Note : Unavailable during the CB model in the byte 0
							D1	D0	SYSTEM													
	0						0	B/G														
	0						1	D/K														
1	0						I															
1	1	NT-M																				
D0																						

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal)
3. No BLUE SCREEN 4. TIMER (CLOCK ON/OFF)

4-2-4 (F) TTX MICOM (SZM-191ER) OPTION TABLE (FOR RUSSIA, OCEANIA)

BYTE	BIT	LOW (0)		HIGH (1)	Application MICOM														
B Y T E 0	D7	NOT USED			FIX : LOW														
	D6	16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)		16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)	BASIC : LOW														
	D5	NOT USED			FIX : LOW														
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)															
	D3	SOUND-I SYSTEM USED		SOUND-I SYSTEM NOT USED	BASIC : LOW														
	D2	D2	D1	COLOR SYSTEM	SOUND SYSTEM														
		0	0	CK : AUTO (No OSD)	B/G→D/K														
		0	1	CW : - RF : AUTO→PAL →SECAM→NT4.43 - A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58	B/G→D/K → I														
D1		1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58	B/G OSD														
	1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58	B/G→D/K → I→ NT → M															
D0	TDA8374A		TDA8842		IC201(ONE-CHIP) OPTION														
B Y T E 1	D7	NOT USED			FIX : LOW														
	D6	English ONLY		English/Russian	Language option														
	D5	AFT ON (always)		AFT OFF (after fine tuning)	BASIC : LOW														
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)		Sharpness level up (when using the TDA6107Q RGB AMP)	BASIC : HIGH														
	D3	No Auto Power On		Auto Power On	BASIC : HIGH														
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)	ALL (RF VOL. CURVE) , BASIC :LOW (AV VOL. CURVE: PAL CURVE)														
	D1	<table><tr><td>D1</td><td>D0</td><td>System</td></tr><tr><td>0</td><td>0</td><td>DIG</td></tr><tr><td>0</td><td>1</td><td>D/K</td></tr><tr><td>1</td><td>0</td><td>I</td></tr><tr><td>1</td><td>1</td><td>NT-M</td></tr></table>		D1	D0	System	0	0	DIG	0	1	D/K	1	0	I	1	1	NT-M	Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : Unavailable during the CB model in the Byte 0
				D1	D0	System													
0	0			DIG															
0	1			D/K															
1	0			I															
1	1	NT-M																	
D0																			

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal
2. AUDIO MUTE during no signal
3. BLUE SCREEN ON/OFF
4. No TIMER CLOCK

- The SZM191ER is to be diverted to Australia/New Zealand because of the non-functionality of RGB (of pin 21).
(OPTION BYTE : 55/1C)→ When using TDA8842 N1, the BLOOMING check is required.

4-2-4 (G) TTX MICOM (SZM-193EVR) OPTION TABLE (FOR ASIA)

BYTE	BIT	LOW (0)		HIGH (1)		Application MICOM
B Y T E 0	D7	LINE STEREO OFF		LINE STEREO ON		
	D6	16:9 not function during zoom in the A/V mode (Normal-ZOOM)		16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)		BASIC : LOW
	D5	CHILD LOCK OFF		CHILD LOCK ON		
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)		BASIC : HIGH
	D3	SOUND-I SYSTEM USED		SOUND-I SYSTEM NOT USED		
	D2	D2	D1	COLOR SYSTEM		SOUND SYSTEM
		0	0	CK : AUTO (No OSD)		B/G→D/K
		0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58		B/G→D/K → I
	D1	1	0	CB : -RF : PAL ONLY -A/V : AUTO→PAL →NT4.43→NT3.58		B/G ONLY (No OSD)
		1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58		B/G→D/K → I→ NT → M →
D0	TDA8374A			TDA8842		IC201 (ONE-CHIP) OPTION
B Y T E 1	D7	D7	D6	OSD Language		Language option
		0	0	English ONLY		
		0	1	English/Indonesian/Malay/Thai/Vietnamese		
		1	0	English/Vietnamese/Indonesian		
		1	1	English/Thai/Malay		
	D6					
	D5	AFT ON (always)		AFT OFF (after fine tuning)		BASIC : LOW(India : HIGH)
	D4	CLOCK DISPLAY OFF		CLOCK DISPLAY ON		BASIC : LOW Indonesia : HIGH
	D3	No Auto Power On		Auto Power On		BASIC : HIGH
	D2	NTSC : 25KHz(NTSC TABLE) PAL : 50 KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (NTSC TABLE)		ALL (RF VOL.: HIGH) BASIC : LOW (AV VOL. CURVE : PAL CURVE)
D1			D1	D0	SYSTEM	Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : Unavailable during the CB model in the Byte 0
			0	0	B/G	
			0	1	D/K	
			1	0	I	
			1	1	NT-M	
D0						

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal
2. AUDIO MUTE during no signal
3. BLUE SCREEN On/off
4. TIMER CLOCK ON/OFF

4-2-4 (H) NON TTX MICOM (SZM-193EV2) OPTION TABLE (FOR ASIA)

BYTE	BIT	LOW (0)		HIGH (1)		Application MICOM
B Y T E 0	D7	LINE STEREO OFF		LINE STEREO ON		
	D6	16:9 not function during zoom (Normal-ZOOM)		16:9 functional during zoom (NORMAL-ZOOM-16:9)		BASIC : LOW
	D5	CHILD LOCK OFF		CHILD LOCK ON		
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)		BASIC : HIGH
	D3	SOUND-I SYSTEM USED		SOUND-I SYSTEM NOT USED		
	D2	D2	D1	COLOR SYSTEM		SOUND SYSTEM
		0	0	CK : AUTO (No OSD)		(?)→B/G→D/K →
		0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58		(?)→B/G→D/K → I→
D1	1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58		B/G ONLY (No OSD)	
	1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58		(?)→B/G→D/K → I→ NT → M →	
D0	TDA8374A			TDA8842		IC201 (ONE-CHIP) OPTION
B Y T E 1	D7	D7	D6	OSD Language		Language option
		0	0	English ONLY		
		0	1	English/Indonesian/Malay/Thai/Vietnamese		
		1	0	English/Vietnamese/Indonesian		
		1	1	English/Thai/Malay		
	D6					
	D5	AFT ON (always)		AFT OFF (after fine tuning)		BASIC : LOW(India : HIGH)
	D4	CLOCK DISPLAY OFF		CLOCK DISPLAY ON		BASIC : LOW Indonesia : HIGH
	D3	No Auto Power On		Auto Power On		BASIC : HIGH
	D2	NTSC : 25KHz(NTSC TABLE) PAL : 50 KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (NTSC TABLE)		RF VOL.CURVE BASIC : LOW (AV VOL. CURVE : PAL CURVE)
D1			D1	D0	SYSTEM	Initial sound system during the auto search (All should be set for the system which is selected dur- ing the Factory Reset.) Note: Unavailable during the CB model in the Byte 0
			0	0	B/G	
			0	1	D/K	
			1	0	I	
			1	1	?) B/G & D/K OR M	
D0						

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal
2. AUDIO MUTE during no signal
3. BLUE SCREEN On/off
4. TIMER Clock On/Off

4-2-4 (I) TTX MICOM (SPM-193EA2) OPTION TABLE (FOR MIDDLE EAST ASIA/AFRICA)

BYTE	BIT	LOW (0)		HIGH (1)		Application MICOM	
B Y T E 0	D7	LINE STEREO OFF		LINE STEREO ON			
	D6	16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)		16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)		BASIC : LOW	
	D5	CHILD LOCK OFF		CHILD LOCK ON			
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)			
	D3	SOUND-I SYSTEM USED		SOUND-I SYSTEM NOT USED			
	D2	D2	D1	COLOR SYSTEM		SOUND SYSTEM	
		0	0	CK : AUTO (No OSD)		(?)→B/G→D/K →	
	D1	0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58		(?)→B/G→D/K → I→	
		1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58		B/G ONLY (No OSD)	
		1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58		(?)→B/G→D/K → I→ NT → M →	
D0	TDA8374A		TDA8842		IC201 (ONE-CHIP) OPTION		
B Y T E 1	D7	NOT USED				FIX : LOW	
	D6						
	D5	AFT ON (always)		AFT OFF (after fine tuning)		BASIC : LOW	
	D4	Existing Sharpness level (when using the TDA6108 RGB AMP)		Sharpness level up (when using the TDA6107Q RGB AMP)		BASIC : HIGH	
	D3	No Auto Power On		Auto Power On		BASIC : HIGH	
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)		ALL (RF VOL. CURVE) BASIC : LOW (AV VOL. CURVE : PAL CURVE)	
	D1	D1	D0	SYSTEM		Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : Unavailable during the CB model in the Byte 0	
		0	0	B/G			
	D0	0	1	D/K			
		1	0	I			
1		1	? B/G & D/K OR M				

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal)
3. BLUE SCREEN On/Off 4. No Timer Clock On/Off

4-2-4 (J) TTX MICOM (SZM-193EC) OPTION TABLE (FOR CHINA)

BYTE	BIT	LOW (0)		HIGH (1)		Remark	
B Y T E 0	D7	LINE STEREO OFF		LINE STEREO ON		BASIC : LOW	
	D6	16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)		16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)		BASIC : LOW	
	D5	CHILD LOCK OFF		CHILD LOCK ON			
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)		BASIC : LOW	
	D3	SOUND-I SYSTEM USED		SOUND-I SYSTEM NOT USED		BASIC : HIGH	
	D2	D2	D1	COLOR SYSTEM		SOUND SYSTEM	
		0	0	CK : AUTO (No OSD)		B/G→D/K	
	D1	0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58		B/G→D/K → I	
1		0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58		B/G OSD		
1		1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58		B/G→D/K → I→ NT → M		
D0	TDA8374A		TDA8842		IC201(ONE-CHIP) OPTION		
B Y T E 1	D7	NOT USED				FIX : LOW	
	D6	English ONLY		English/Russian		Language option	
	D5	AFT ON (always)		AFT OFF (after fine tuning)		BASIC : LOW	
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)		Sharpness level up (when using the TDA6107Q RGB AMP)		BASIC : HIGH	
	D3	No Auto Power On		Auto Power On		BASIC : HIGH	
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)		ALL (RF VOL. CURVE) , BASIC:LOW (AV VOL. CURVE: PAL CURVE)	
	D1			D1	D0	System	Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : Unavailable during the CD model in the Byte 0
				0	0	DIG	
0	1			D/K			
D0	1			0	I		
	1			1	NT-M		

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal
2. AUDIO MUTE during no signal
3. BLUE SCREEN On/Off
4. TIMER CLOCK On/Off

4-2-4 (K) NON TTX MICOM (SZM-191EC) OPTION TABLE (FOR CHINA)

BYTE	BIT	LOW (0)		HIGH (1)		Application MICOM	
B Y T E 0	D7	NOT USED				FIX : LOW	
	D6	16:9 not functional during zoom (NORMAL-ZOOM)		16:9 functional during zoom (NORMAL-ZOOM-16:9)		BASIC : LOW	
	D5	NOT USED				FIX : LOW	
	D4	CH Up/down functional in the A/V mode (SCART Jack)		CH Up/down not functional in the A/V mode (RCA Jack)			
	D3	SOUND-I SYSTEM USED		SOUND-I SYSTEM NOT USED		BASIC : LOW	
	D2	D2	D1	COLOR SYSTEM		SOUND SYSTEM	
		0	0	CK : AUTO (No OSD)		B/G→D/K	
		0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58		B/G→D/K → I	
	D1	1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58		B/G OSD	
		1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58		B/G→D/K → I→ NT → M	
D0	TDA8374A		TDA8842		IC201(ONE-CHIP) OPTION		
B Y T E 1	D7	NOT USED				FIX : LOW	
	D6	English ONLY		English/Russian		Language option	
	D5	AFT ON (always)		AFT OFF (after fine tuning)		BASIC : LOW	
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)		Sharpness level up (when using the TDA6107Q RGB AMP)		BASIC : HIGH	
	D3	No Auto Power On		Auto Power On		BASIC : HIGH	
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)		NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)		ALL (RF VOL. CURVE) , BASIC :LOW (AV VOL. CURVE: PAL CURVE)	
	D1		D1	D0	System		Initial sound system during the auto search (All should be set for the system which is selected dur- ing the Factory Reset.) Note : Unavailable during the CD model in the Byte 0
			0	0	DIG		
			0	1	D/K		
D0	1		0	I			
	1		1	NT-M			

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE during no signal
3. BLUE SCREEN ON/OFF 4. No TIMER CLOCK

4-2-5 RESET

The Reset Mode is used during factory inspection.
Function Reset:

1. Channels	Add/Erase
2. Sort	Non
3. System	Auto
4. Timer	off
5. Blue Screen	off
6. Child Lock	off
7. Picture	standard
8. Volume	26
9. CH. Skip	Erased

4-3 Other Adjustments

4-3-1 General

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.
2. The picture should have good black and white details. There should be no objectionable color shading; if color shading is present, perform the purity and convergence adjustments described below.
3. Use the specified test equipment or its equivalent.
4. Correct impedance matching is essential.
5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.
6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.
7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
8. To protect against shock hazard, use an isolation transformer.

4-3-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set has been moved or turned in a different direction, disconnect its AC power for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before removing power.

4-3-3 High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply must be set to +125 volts (Full color bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.
2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).
3. The high voltage should not exceed 27.5KV.
4. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 27.5KV under any conditions.

4-3-4 FOCUS Adjustment

1. Input a black and white signal.
2. Adjust the tuning control for the clearest picture.
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-5 Cathode Voltage Adjustment (Screen Adjustment)

1. Connect CRT socket pin GK to an oscilloscope probe.
2. Input a gray scale pattern. (Use a pattern generator, PM5518)
3. Use the P mode key (on the remote control) for the STANDARD picture.
4. Adjust the Screen VR (on the FBT) so that the voltage on the oscilloscope becomes $130 \pm 2.5V$ (See Fig. 4-1).

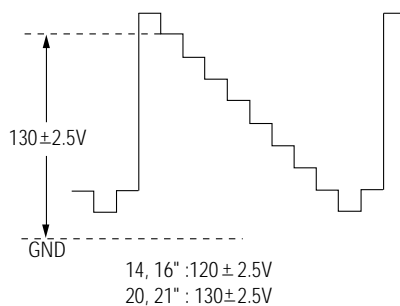


Fig. 4-1

4-3-6 Purity Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Plug in the CRT deflection yoke and tighten the clamp screw.
3. Plug the convergence yoke into the CRT and set in as shown in Fig. 4-2.
4. Input a black and white signal.
5. Fully demagnetize the receive by applying an external degaussing coil.
6. Turn the CONTRAST and BRIGHTNESS controls to maximum.
7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to provide vertical green belt. (Fig. 4-3).
8. Tighten the convergence yoke.
9. Slowly move the deflection yoke forward, and adjust for the best overall green screen.
10. Temporarily tighten the deflection yoke.
11. Produce blue and red rasters by adjusting the low-light controls. Check for good purity in each field.
12. Tighten the deflection yoke.

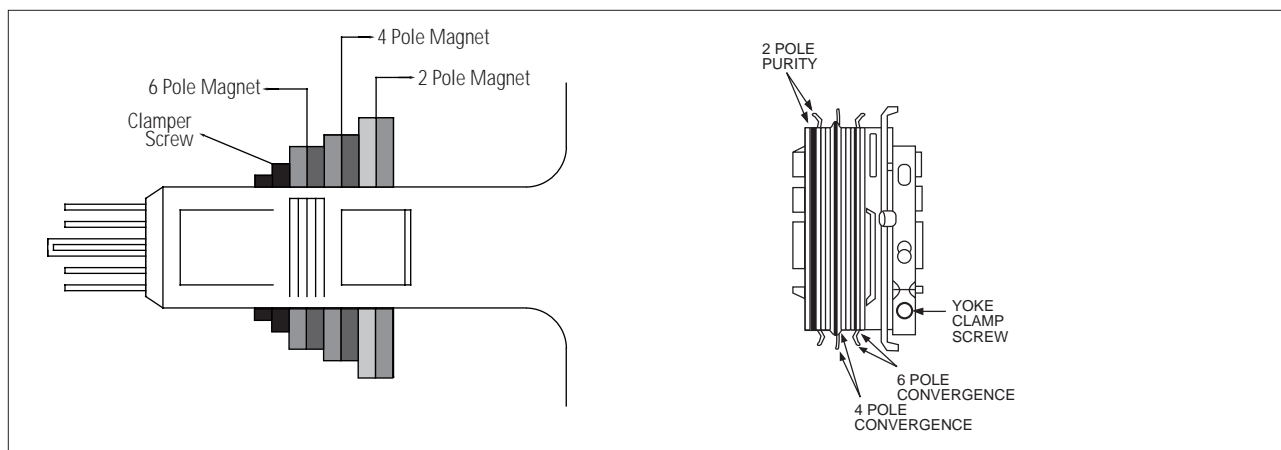


Fig. 4-2 Convergence Magnet Assembly

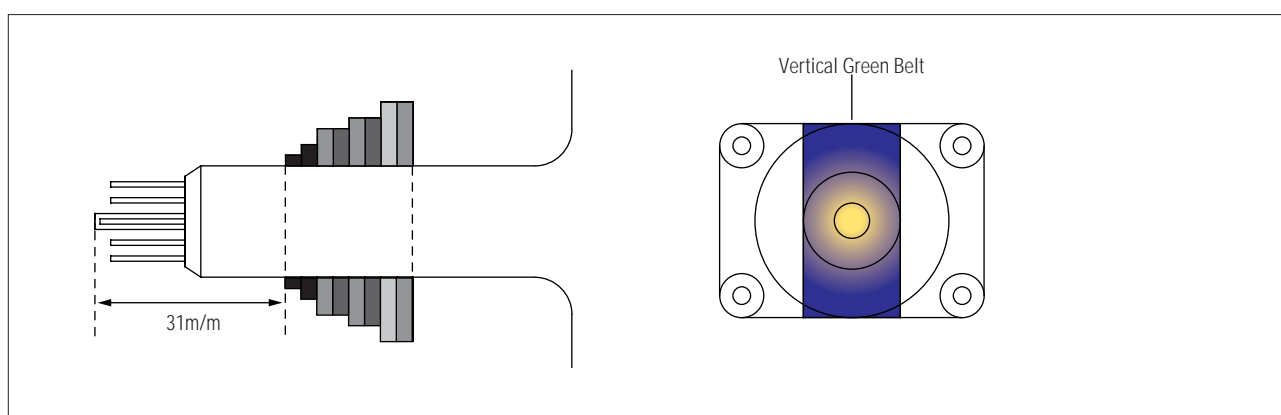


Fig. 4-3 Center Convergence Adjustment

4-3-7 White Balance Adjustment

(a) Set up

1. Warm up the TV for at least 30 minutes in the Aging Mode (OSD White). This mode is displayed by entering the following sequence:

SLEEP → FACTORY → FACTORY

2. Input a Toshiba pattern.

(b) High-Light Adjustment

1. Set SBT to 2.0 fL in the Factory Service Mode with using CA100. See Fig. 4-4 ②.
2. Adjust RG,BG so that the levels are suitable to each local area.

(c) Low-Light Adjustment

1. Set SCT to 50.0 fL in the Factory Service Mode with using CA100. See Fig. 4-4 ①.

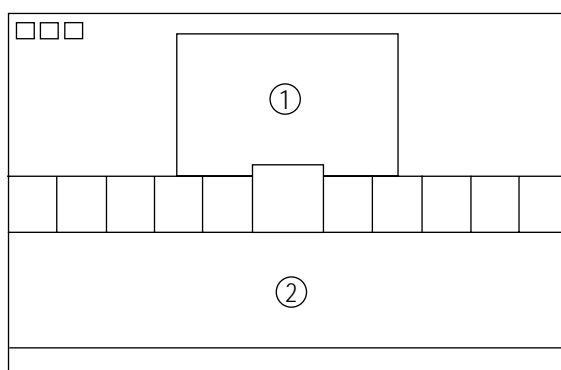


Fig. 4-4

4-3-8 Center Convergence Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Adjust the two tabs of the 4 pole magnets to change the angle between them. Superimpose the red and blue vertical lines in the center area of the screen.
3. Adjust the Brightness and Contrast controls for a well defined picture.
4. Adjust the two-tab pairs of the 4 pole magnets, and change the angle between them. Superimpose the red and the blue vertical lines in the center area of the screen.
5. Turn the both tabs at the same time, keeping the angle constant, and superimpose the red and blue horizontal line in the center of the screen.
6. Adjust the two-tab pairs of the 6-pole magnets to superimpose the red and blue line onto the green. (Changing the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.)
7. Repeat adjustments 2~6, if necessary.
8. Since the 4-pole magnets and 6-pole magnets interact, the dot movement is complex (Fig. 4-5).



Fig. 4-5 Center Convergence Adjustment

4-3-9 VCO Adjustment

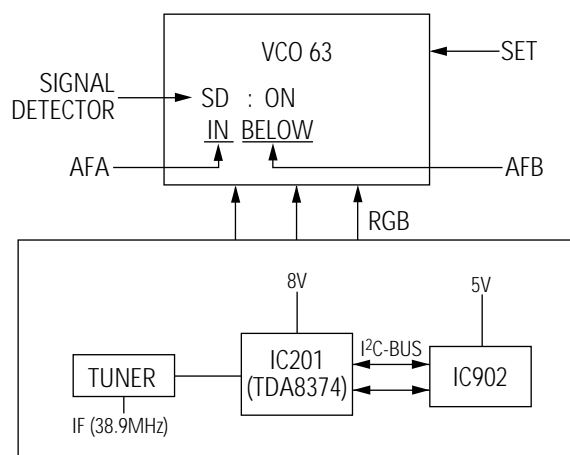


Fig. 4-6

1. Turn on the TV.
2. Set IF port of tuner to 38.9MHz. (Use a pattern generator).
3. Input a color bar pattern (PAL-B/G system).
4. In the Factory Service Mode, select "Adjustment → VCO" and set VCO data to 63.
5. Ensure "SD On" (Signal Input) and "SD Off" (No Signal).
6. Adjust T201 (connected to TDA8374A pins 3,4) so that AFA Bit is "INSIDE WINDOW" (the AFB Bit is above~below).

4-3-10 RF AGC Adjustment

1. Connect a pattern generator (PM5418) RF signal to tuner RF.
2. Select a gray scale pattern and PAL-B/G system. Set to 479.25MHz.
3. Connect IC201 (ONECHIP) pin 53 to a digital multimeter.
4. Adjust AGC (using volume keys) in the Factory Service Mode. Set IC201 (ONECHIP) pin 54 to $3.7 \pm 0.05V$ (DC).
5. Adjust AGC within 20 seconds after power ON.

4-3-11 Sub-Color Adjustment

Set the SCR data steps to 15 in the Factory Mode.

4-3-12 Geometry Adjustment

(SC → PVA → PVS → PSL → PHS)

1. Input a lion head pattern (in the PAL channel).
2. Set the SC (S-Correction) 10 data steps and PSL 20 data steps so that the lion head circle becomes oval.
3. Adjust with PVS (Vertical-shift) : Lion head pattern and mechanical centers must be aligned.
4. Adjust with PVA (Vertical-Amplitude) : Top margin of the picture is 4.

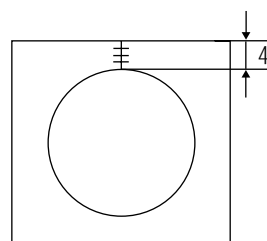


Fig. 4-7

5. Adjust with PSL (Vertical-Slope) : Bottom margin of the picture is 4.

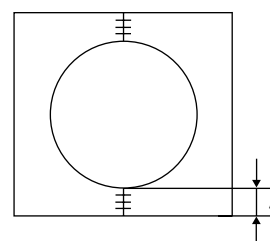


Fig. 4-8

6. Adjust with PHS (Horizontal Shift) : Lion head pattern and CRT centers are aligned.

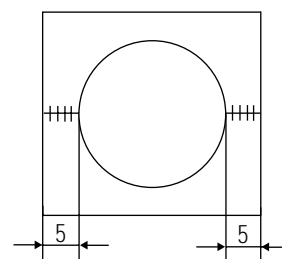


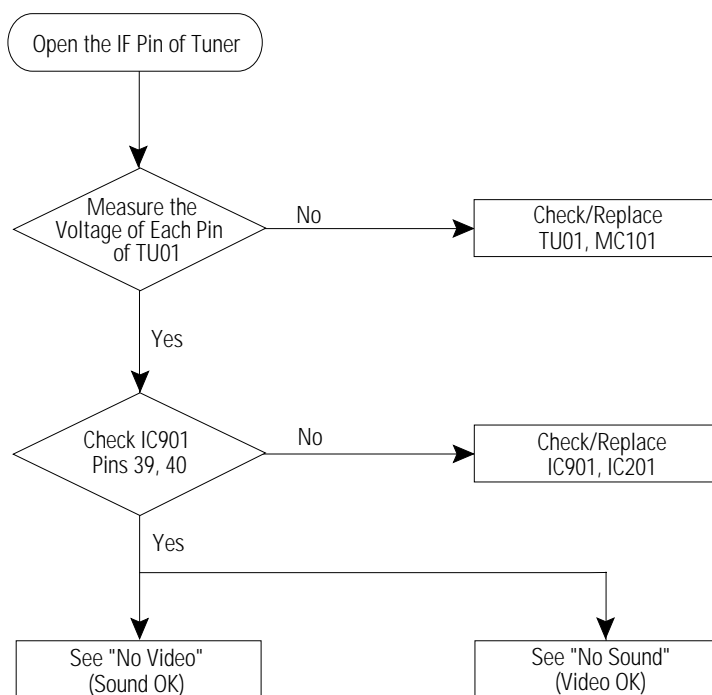
Fig. 4-9

7. Adjust PHS (using the width coil) so that left and right margins of the picture are 5.

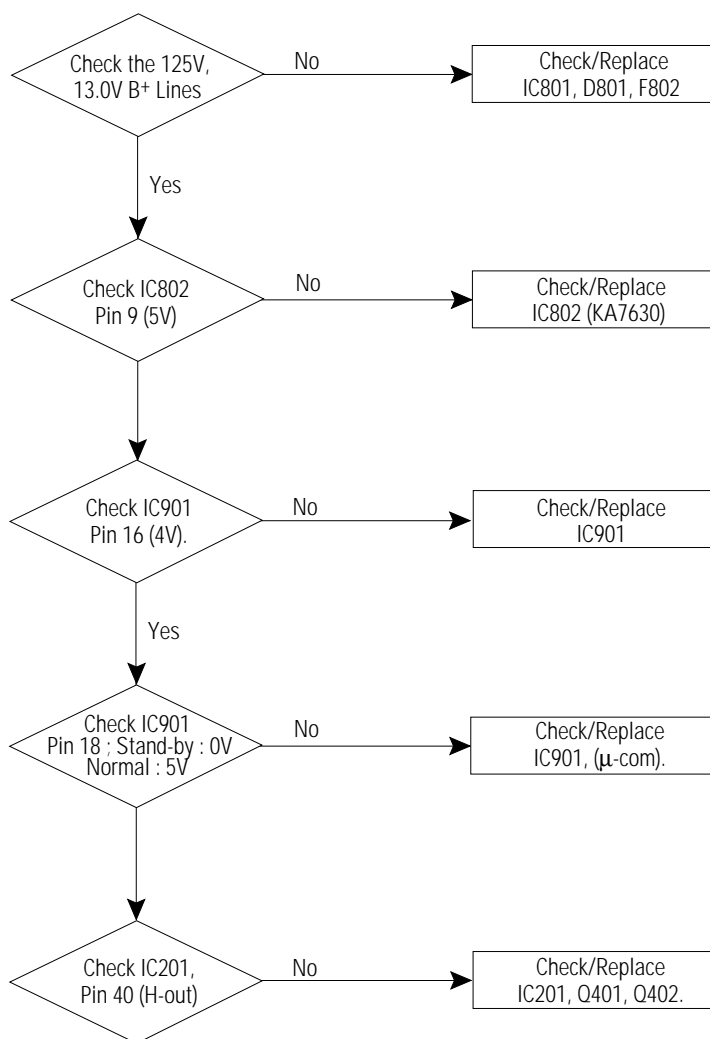
MEMO

5. Troubleshooting

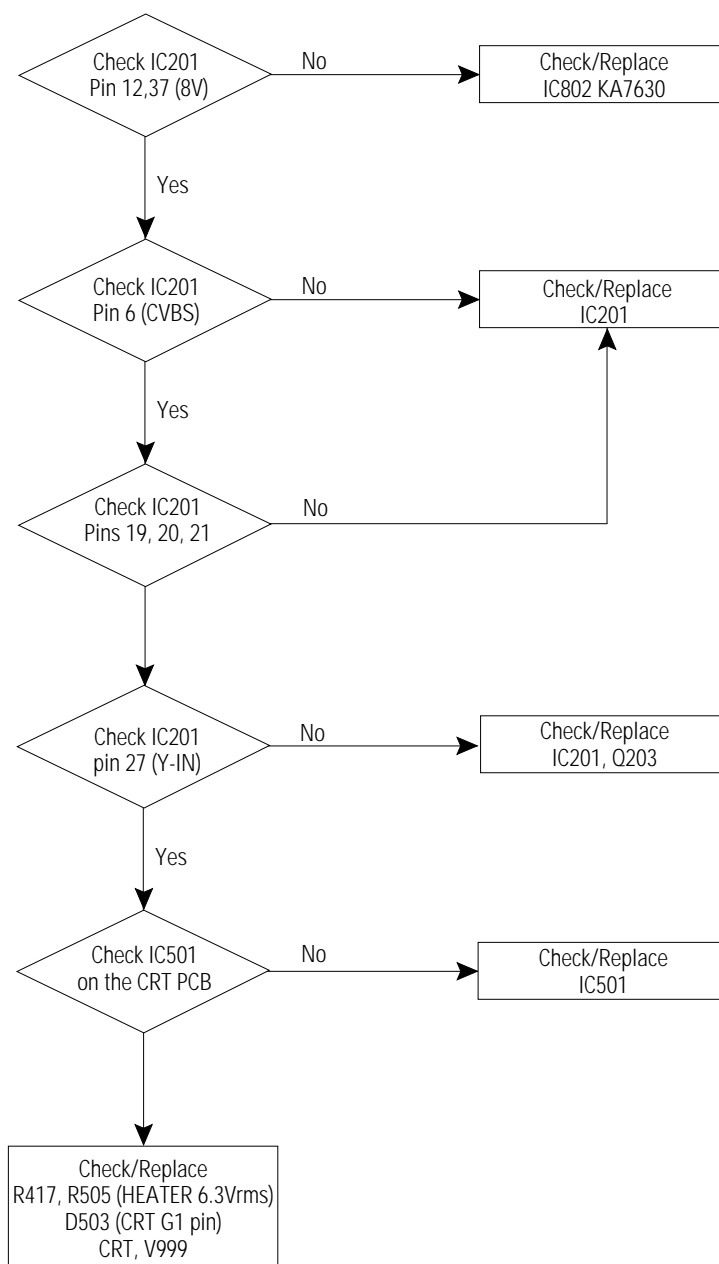
5-1 No Video (Raster On, No Sound)



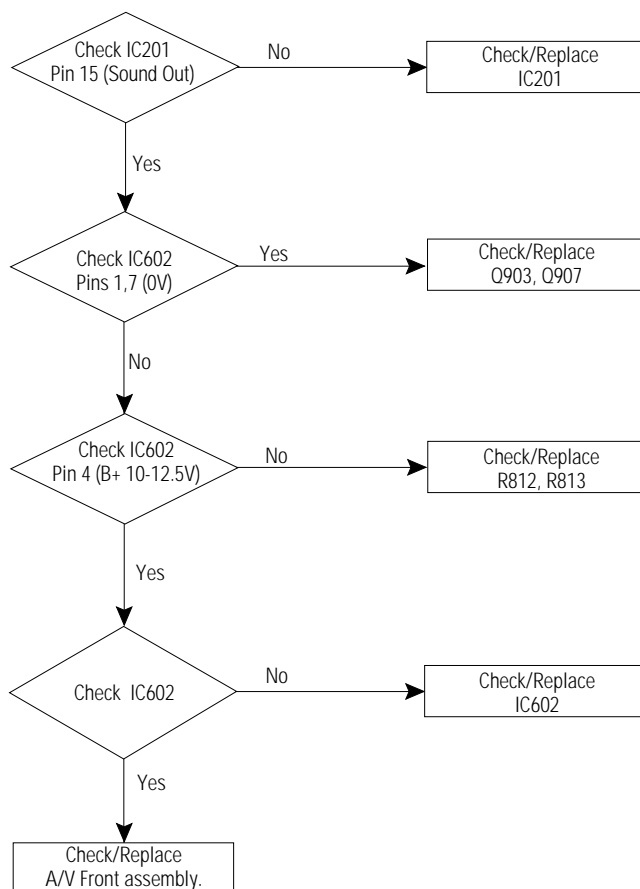
5-2 No Power



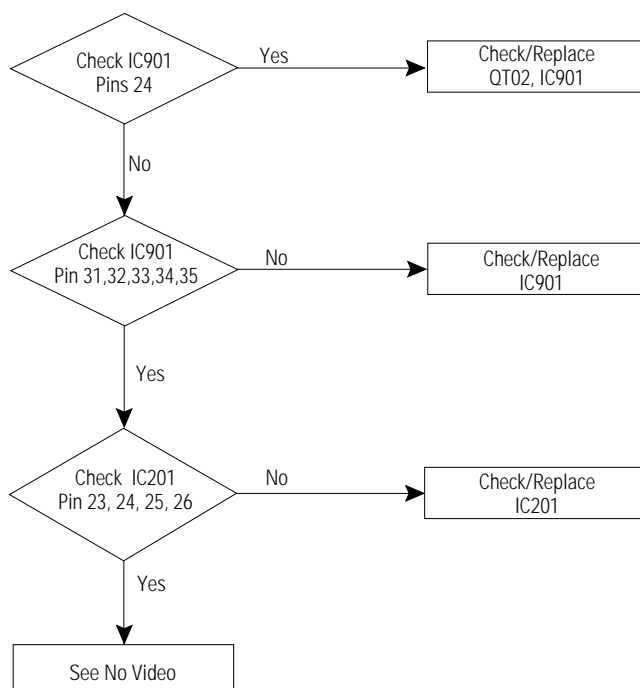
5-3 No Video (Sound OK)



5-4 No Sound (Video OK)

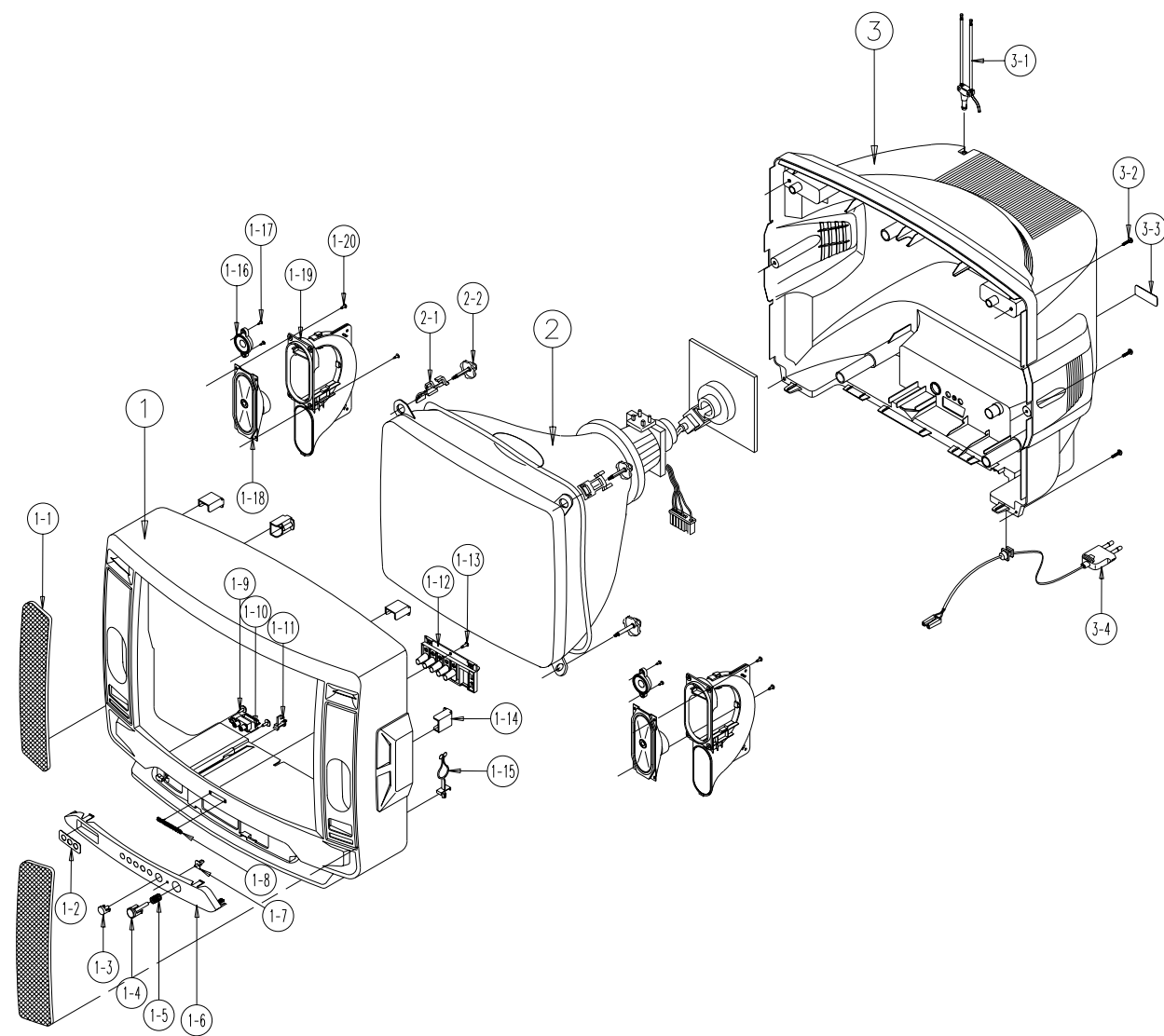


5-5 No TTX



6. Exploded View & Parts List

6-1 CK503EZR4X/BWT



No	Code No	Description	Specification	Q'ty	Remark
1	AA91-10323D	ASSY-CABINET,FRONT	-,CK-503EZR,PA100 MLN	1	
	AA64-31037A	CABINET-FRONT	-,503E,-,HIPS,HB,BLK,-,-	1	
1-1	AA63-50319A	GRILLE-WOOFER	-,503E,PA110 3R,SECC-1,T0.	2	
1-2	AA64-60404B	INLAY-AV,HEAD	333E,-,PS,T0.5,-,-,-	1	
1-3	AA64-40431A	WINDOW-REMOCON	-,503E,-,ABS,HB,LG41338,-	1	
1-4	AA64-10670A	KNOB-POWER	-,503E,-,ABS,HB,MET-BROWN	1	
1-5	AA61-60003T	SPRING-CS	-,SUS304,0.5,OD7,H13.5,N5,-,-,	1	
1-6	AA63-30192D	COVER-CONTROL	-,CK-503EZR,ML,HIPS,HB,-,-	1	
1-7	AA64-40432A	INDICATOR-LED	-,503E,-,PMMA,HB,CLR,-	1	
1-8	AA64-70010B	BADGE-BRAND	AL,SS R2000 25,SILVER,L50,-,	1	
1-9	AA60-10002A	SCREW-TAPPING	RH,+,M4,L12,ZPC(YEL),-,OD1	2	
1-10	AA95-90026E	ASSY-PCB,A/V FRONT	-,1E,3E,SCT13B,LINE-S	1	
1-11	AA61-40053A	STOPPER-PCB	ALL MODEL,HIPS HB,WHT,HB,-,-	1	
1-12	AA64-10669A	KNOB-CONTROL	-,503E,-,ABS,HB,MET-BROWN	1	
1-13	6002-000512	SCREW-TAPPING	RH,+,2,M4,L12,ZPC(BLK),SWR	1	
1-14	AA61-40015A	BOSS-CABINET	-,HIPS,HB,NTR,-,-	4	
1-15	AA65-30010A	CLAMP-WIRE	NYLON-66,V0,NTR,-,-,-	1	
1-16	AA91-60268A	ASSY-HOLDER,SPK	-,ABS,HB,3001-001050,150	2	
1-17	6002-000512	SCREW-TAPPING	RH,+,2,M4,L12,ZPC(BLK),SWR	4	
1-18	AA91-60269A	ASSY-HOLDER,SPK	-,PP,AA91-60244A,8ohm,6W	1	
1-19	AA60-10002A	SCREW-TAPPING	RH,+,M4,L12,ZPC(YEL),-,OD1	2	
1-20	6002-000522	SCREW-TAPPING	TH,+,2,M4,L15,ZPC(BLK),SWR	4	
2	AA03-10003L	CRT-COLOR	-,A48KRD82X(U),+380MG,20,90DE	1	
2-1	AA65-30019A	CLAMP-D,COIL	NYLON-66,V0,NTR,DADH-460 20	4	
2-2	AA60-10050D	SCREW-ASSY	WC,HH,+,M5,L33,SWRCH18,ZPC(YE	4	
3	AA64-31039B	CABINET-BACK	-,503E,-,HIPS,V2,BLK,-,-	1	
3-1	AA42-10001V	ANT-ROD	-,3S,620mm,BRN,UL/CSA	1	
3-2	6002-000514	SCREW-TAPPING	RH,+,2,M4,L15,ZPC(BLK),SWR	6	
3-3		ASSY-CHASSIS OPTION			
3-4	AA39-10001G	POWER-CORD	-,KKP-419C,KLCE-2F,2.286M,HOU	1	

7. Electric Parts List

7-1 CK333EZR4X/BWT (CK503EZR4X AND CK333EZR4X Dissimilar Parts)

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
ASSY-PCB,MAIN(OPT) BUYER : SALSC (ALMATY)				ASSY-CRT			
*	AA94-10111J	ASSY-PCB,MAIN(OPT);CK333EZR4X/BWT,SCT13B			AA03-10001D	CRT-COLOR:-,A34KQV42X,+380MG,14,90DEG,5	
C409	2306-000353	C-FILM,MPPF:6.3nF,5%,1.6KV,BK,26.5x8.5x1			AA27-50001K	DEFLECTION-YOKE:-,DSE-1422FL,14/A34KQV4	
C416	2306-000194	C-FILM,MPPF:360nF,5%,400V,BK,26x21x14,20			AA27-60001L	MAGNET-CONVERGENCE:-,NY-225,22.5MM	
CN501	AA39-20122B	LEAD-CONNECTOR,ASSY:-,YBNH025-08,YBNH025		ASSY-CABINET			
CN802	AA27-20001L	COIL-DEGAUSSING:-,14,23.00HM,100T,L940,			AA91-10328B	ASSY-CABINET,FRONT:-,CK-333EZR,PA100	
Q401	0502-000294	TR-POWER:KSD5071YD,NPN,50W,TO-3PF,ST,8			AA64-31060A	CABINET-FRONT:-,333E,-,HIPS,HB,BLK,-,-	
R253	2001-000305	R-CARBON:110Kohm,5%,1/8W,AA,TP,1.8x3.2m			AA64-31061B	CABINET-BACK:-,333E,-,HIPS,V2,BLK,-,-	
R302	2003-000649	R-METAL-OXIDE(S):330ohm,5%,1W,AF,TP,3.3x			AA65-30016A	CLAMP-D,COIL:NYLON-66,V0,NTR,DADH-360	
R305	2004-004087	R-METAL(S):1.50HM,1%,1/2W,AA,TP,2.5X6.5M			AA63-30198B	COVER-CONTROL:-,CK-333EZR,ML,HIPS,HB,MET	
R410	2004-002011	R-METAL(S):110Kohm,1%,1/2W,AA,TP,2.4x6.4			AA63-50324A	GRILLE-WOOFER:-,333E,3R	
R411	2004-002011	R-METAL(S):110Kohm,1%,1/2W,AA,TP,2.4x6.4			AA64-70009F	BADGE-BRAND:AL,SS	
R505	2008-000266	R-FUSIBLE(S):1ohm,5%,2W,AF,TP,3.9x10mm					
T444	AA26-30004H	TRANS-FLYBACK:-,FSV-14A001,14,125V					
V999	3704-000103	SOCKET-CRT;10P,22.5,14.3,SN,ISMS01S/BK					

7-2 CK503EZR4X/BWT Parts List

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
ASSY-PCB,MAIN(OPT) BUYER : SALSC (ALMATY)							
*	AA94-10114D	ASSY-PCB,MAIN(OPT);CK503EZR4X/BWT,SCT13B		C235	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	
C101	2401-000914	C-AL:22uF,20%,16V,-,TP,5x11,5mm		C238	2401-001537	C-AL:47UF,20%,25V,GP,TP,6.3X7MM,5MM	
C102	2401-001082	C-AL:330NF,20%,50V,GP,TP,5X11MM,5MM		C239	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	
C103	2401-000808	C-AL:220uF,20%,16V,GP,8x11mm,5mm,TP		C240	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	
C104	2401-000758	C-AL:220NF,20%,50V,GP,TP,5X11MM,5MM		C247	2202-000109	C-CERAMIC,MLC-AXIAL:100nF,+80-20%,50V,Y5	
C113	2401-000947	C-AL:22uF,20%,35V,GP,TP,5x11mm,-		C248	2309-000138	C-FILM,PE-PF:100nF,5%,50V,TP,20x16x8.5,	
C201	2305-000149	C-FILM,MPEF:100nF,5%,100V,TP,12x12.5x6.5		C249	2401-000603	C-AL:1UF,20%,50V,GP,TP,5X11MM,5MM	
C202	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5mm		C250	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	
C203	2401-000660	C-AL:2.2uF,20%,50V,GP,TP,5x11mm,5mm		C251	2301-000204	C-FILM,PEF:2.7nF,5%,50V,TP,7.4x3.9x13mm,	
C205	2305-000411	C-FILM,MPEF:470nF,5%,50V,TP,7.3x4.8x5.5m		C252	2301-000264	C-FILM,PEF:4.7nF,5%,50V,TP,6.5X5.5X3.0X5	
C206	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm		C253	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	
C207	2305-000196	C-FILM,MPEF:150nF,5%,63V,TP,-,5mm		C254	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	
C208	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5		C255	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	
C209	2202-000794	C-CERAMIC,MLC-AXIAL:18PF,5%,50V,CH,TP,3.		C301	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3	
C210	2301-000264	C-FILM,PEF:4.7nF,5%,50V,TP,6.5X5.5X3.0X5		C302	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3	
C211	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m		C303	2401-003028	C-AL:100uF,20%,25V,WT,TP,6.3x11,5mm	
C212	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3		C304	2401-002293	C-AL:68UF,20%,100V,WT,TP,10X20,5	
C213	2201-000257	C-CERAMIC,DISC:16pF,5%,50V,CH,TP,5x3,5		C306	2305-000149	C-FILM,MPEF:100nF,5%,100V,TP,12x12.5x6.5	
C214	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m		C307	2305-000149	C-FILM,MPEF:100nF,5%,100V,TP,12x12.5x6.5	
C215	2301-000201	C-FILM,PEF:2.2nF,5%,50V,TP,7.4x3.9x13mm,		C308	2305-000450	C-FILM,MPEF:56NF,5%,100V,-,5MM,TP	
C216	2401-001271	C-AL:4.7UF,20%,50V,GP,TP,4X7,5MM		C401	2301-000380	C-FILM,PEF:10nF,5%,50V,TP,6.5x3mm,5mm	
C219	2401-000603	C-AL:1UF,20%,50V,GP,TP,5X11MM,5MM		C402	2201-000599	C-CERAMIC,DISC:56OpF,10%,500V,Y5P,TP,7x4	
C221	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP		C403	2201-000556	C-CERAMIC,DISC:47OpF,10%,500V,Y5P,TP,7x4	
C222	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5		C404	2401-002288	C-AL:470UF,20%,25V,WT,TP,10X20,5	
C224	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP		C405	2305-000354	C-FILM,MPEF:330NF,5%,50V,TP,7.3X4.8X5.5MM	
C226	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm		C406	2401-000440	C-AL:10UF,20%,25V,GP,TP,5X11MM,5MM	
C227	2401-001537	C-AL:47UF,20%,25V,GP,TP,6.3X7MM,5MM		C407	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	
C230	2401-001537	C-AL:47UF,20%,25V,GP,TP,6.3X7MM,5MM		C408	2401-001537	C-AL:47UF,20%,25V,GP,TP,6.3X7MM,5MM	
C231	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5		C409	2306-000253	C-FILM,MPPF:7.2nF,5%,1.6KV,TP,28.5x18.5x	
C232	2401-000302	C-AL:100uF,20%,25V,GP,TP,6.3x11,5mm		C410	2201-000406	C-CERAMIC,DISC:27OpF,10%,2KV,Y5P,TP,8x6,	
C234	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m		C411	2401-002278	C-AL:22uF,20%,250V,WT,TP,13x21,5	
				C413	2305-000382	C-FILM,MPEF:4.7nF,5%,400V,TP,-,5mm	
				C414	2305-000154	C-FILM,MPEF:100nF,5%,400V,TP,21.5x6.5x11	
				C415	2401-000560	C-AL:1uF,20%,160V,GP,TP,6.3*11,5mm	
				C416	2306-000204	C-FILM,MPPF:430nF,5%,400V,TP,26x20.5x12.	

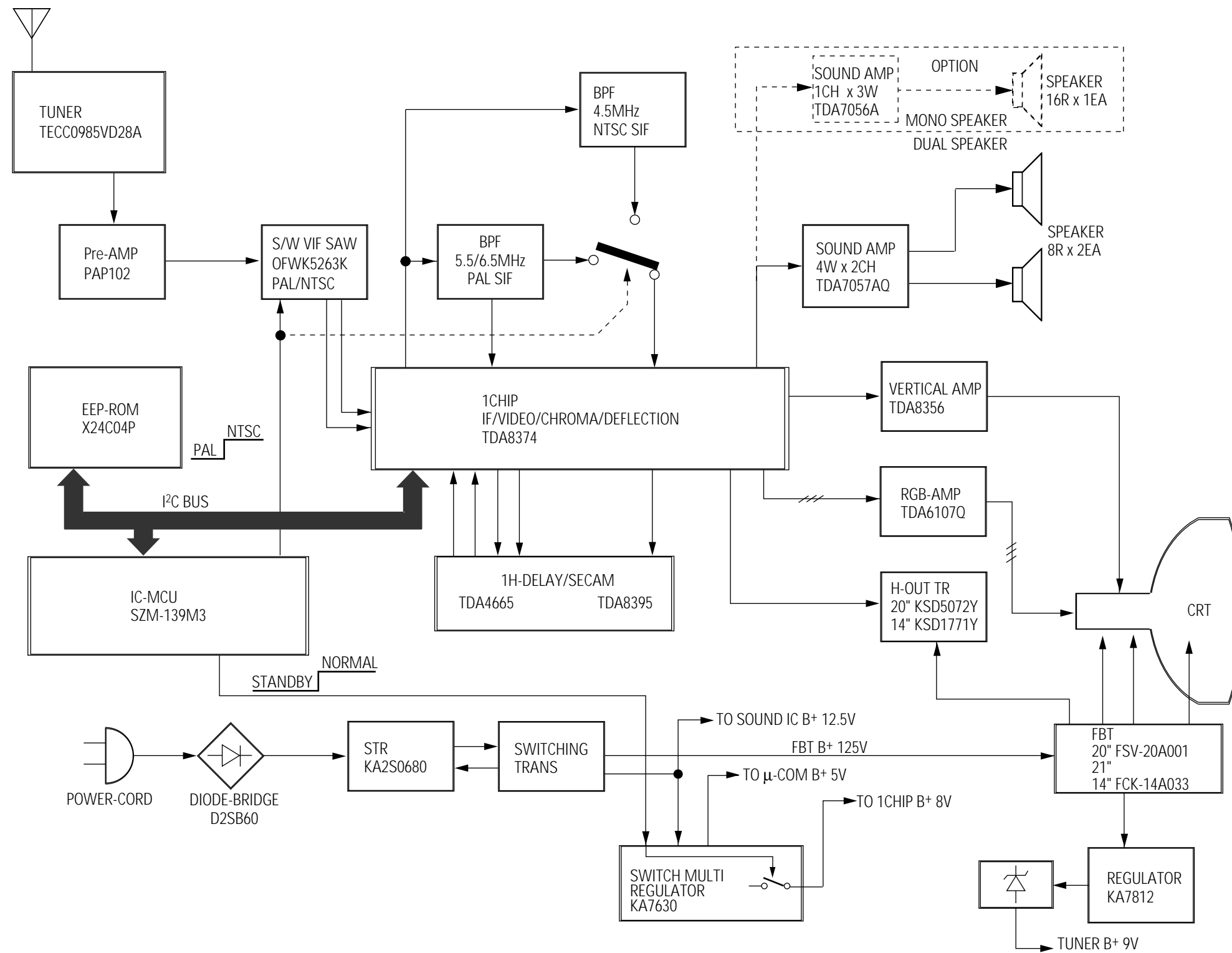
Electric Parts List

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
C417	2201-000556	C-CERAMIC,DISC:470pF,10%,500V,Y5P,TP,7x4		D217	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C418	2401-002293	C-AL:68uF,20%,100V,WT,TP,10X20,5		D401	0402-000129	DIODE-RECTIFIER:1N4003,200V,1A,DO-41	
C419	2201-000984	C-CERAMIC,DISC:680pF,10%,2KV,Y5P,TP,11x6		D402	0402-000129	DIODE-RECTIFIER:1N4003,200V,1A,DO-41	
C502	2301-000213	C-FILM,PEF:220nF,5%,250V,TP,21.5x11,7.5		D403	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-	
C503	2201-000158	C-CERAMIC,DISC:10nF,+80-20%,3KV,Y5V,BK,-		D404	0402-000534	DIODE-RECTIFIER:RG10V,400V,1.2A,DO-201,T	
C504	2401-001232	C-AL:4.7uF,20%,250V,GP,TP,10x12.5mm		D405	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-	
C506	2401-000430	C-AL:10uF,20%,250V,GP,TP,10x16mm,5m		D406	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-	
C601	2202-000199	C-CERAMIC,MLC-AXIAL:22nF,+80-20%,25V,Y5V		D501	0402-000216	DIODE-RECTIFIER:ERC24-06,600V,1.0A,DO-20	
C602	2401-000947	C-AL:22uF,20%,35V,GP,TP,5x11mm,-		D502	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-	
C603	2301-000264	C-FILM,PEF:4.7nF,5%,50V,TP,6.5X5.5X3.0X5		D503	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-	
C604	2401-001323	C-AL:470nF,20%,50V,BP,TP,5x11,5mm		D504	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-	
C610	2401-001998	C-AL:1000uF,20%,25V,GP,TP,10x20,5mm		D701	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C611	2301-000264	C-FILM,PEF:4.7nF,5%,50V,TP,6.5X5.5X3.0X5		D800	1405-000152	VARISTOR:560V,2500A,14x8.5mm,TP	
C612	2401-001323	C-AL:470nF,20%,50V,BP,TP,5x11,5mm		D801	0402-000102	DIODE-BRIDGE:D2SB60,600V,1.5A,-	
C613	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3		D802	0402-000540	DIODE-RECTIFIER:RU20A,600V,1.5A,-	
C614	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP		D803	0402-000430	DIODE-RECTIFIER:FML-G02S,200V,3.0A,TO-22	
C702	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP		D804	0402-000213	DIODE-RECTIFIER:ERB12-06,600V,1.0A,DO-41	
C703	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP		D809	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C704	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP		D810	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-	
C705	2401-001264	C-AL:4.7uF,20%,50V,BP,TP,5X11,5MM		D901	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C706	2401-001264	C-AL:4.7uF,20%,50V,BP,TP,5X11,5MM		D903	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C800	2306-000321	C-FILM,MPPF:470nF,5%,250V,TP,-,22.5mm		D905	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C801	2401-002213	C-AL:150uF,+30-10%,450V,GPBK,25x35		D906	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C802	2401-002284	C-AL:33uF,20%,50V,GP,TP,5x11mm,5mm		D907	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C803	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm		D908	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T	
C804	2201-000139	C-CERAMIC,DISC:100pF,2%,50V,CH,TP,8x3,5		DZ201	0403-000295	DIODE-ZENER:MTZ5.1B,5.1V,4.94-5.20V,500m	
C805	2303-000163	C-FILM,PPF:2.2nF,5%,800V,TP,15x13x8.5,7.		DZ203	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C806	2201-000446	C-CERAMIC,DISC:3.3nF,20%,400V,Y5U,TP,18x		DZ207	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C807	2201-000991	C-CERAMIC,DISC:560pF,10%,2KV,Y5P,TP,13x7		DZ208	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C808	2401-000262	C-AL:100uF,20%,160V,HR,TP,16X25,7.5		DZ301	0403-000660	DIODE-ZENER:MTZ22A,22V,20.15-21.2V,500mW	
C809	2401-001527	C-AL:47uF,20%,250V,HR,TP,13x25mm,5m		DZ302	0403-001039	DIODE-ZENER:MA2560,56V,52-60V,1W,DO-41,T	
C810	2201-000991	C-CERAMIC,DISC:560pF,10%,2KV,Y5P,TP,13x7		DZ401	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C811	2401-003141	C-AL:2200uF,20%,25V,WT,TP,13X25,5MM		DZ501	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C812	2401-001998	C-AL:1000uF,20%,25V,GP,TP,10x20,5mm		DZ502	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C813	2305-000382	C-FILM,MPEF:4.7nF,5%,400V,TP,-,5mm		DZ503	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C814	2301-000264	C-FILM,PEF:4.7nF,5%,50V,TP,6.5X5.5X3.0X5		DZ504	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C815	2401-000832	C-AL:220uF,20%,25V,GP,TP,8x11,5,5mm		DZ701	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C818	2401-001495	C-AL:47uF,20%,16V,GP,5x11mm,5mm,TP		DZ702	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C819	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5mm		DZ703	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C820	2201-000119	C-CERAMIC,DISC:100nF,+80-20%,50V,Y5V,TP		DZ704	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C901	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5mm		DZ705	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C902	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3		DZ802	0403-000297	DIODE-ZENER:MTZ6.2B,6.2V,5.96-6.27V,500m	
C904	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3		DZ803	1203-001217	IC-POS:ADJUST REG.:431,TO-92,3P,4.58MIL	
C905	2401-001333	C-AL:470nF,20%,50V,GP,TP,5x11,5		DZ804	0403-000294	DIODE-ZENER:MTZ4.7B,4.75-4.80V,500mW,DO-	
C907	2201-000119	C-CERAMIC,DISC:100nF,+80-20%,50V,Y5V,TP		DZ805	0403-000692	DIODE-ZENER:R2KN,150-170V,-,150V,TP-	
C908	2201-000193	C-CERAMIC,DISC:10pF,0.3pF,50V,CH,TP,5x3		DZ807	0403-000297	DIODE-ZENER:MTZ6.2B,6.2V,5.96-6.27V,500m	
C909	2201-000573	C-CERAMIC,DISC:47pF,5%,50V,CH,TP,6.5x3.0		DZ901	0403-000563	DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m	
C910	2201-000119	C-CERAMIC,DISC:100nF,+80-20%,50V,Y5V,TP		DZ902	0403-000295	DIODE-ZENER:MTZ5.1B,5.1V,4.94-5.20V,500m	
C911	2401-000440	C-AL:100uF,20%,25V,GP,TP,5X11MM,5MM		DZ903	1203-000451	IC-VOLTAGE REGULATOR:33,TO-92,3P,-,PLAST	
C912	2201-000234	C-CERAMIC,DISC:150pF,5%,50V,NPO,10x3.5mm		DZ905	0403-000296	DIODE-ZENER:MTZ5.6B,5.6V,5.45-5.73V,500m	
C913	2301-000108	C-FILM,PEF:1.5nF,5%,50V,TP,6.5x3.0x5.5mm		DZ907	0403-000296	DIODE-ZENER:MTZ5.6B,5.6V,5.45-5.73V,500m	
C914	2305-000149	C-FILM,MPEF:100nF,5%,100V,TP,12x12.5x6.5		F801	3601-000261	FUSE-FERRULE:250V,3.15A,TIME LAG,GLASS,5	
C915	2305-000149	C-FILM,MPEF:100nF,5%,100V,TP,12x12.5x6.5		F801A	3602-000114	FUSE-HOLDER:-,30mohm	
C916	2301-000188	C-FILM,PEF:1nF,5%,100V,TP,10.5x12.5x6.5		F801B	3602-000114	FUSE-HOLDER:-,30mohm	
C917	2202-000109	C-CERAMIC,MLC-AXIAL:100nF,+80-20%,50V,Y5		F802	3601-000120	FUSE-FERRULE:125V,2.5A,QUICK ACTING,GLAS	
C919	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3		GT801	AA39-20010H	LEAD-CONNECTOR,ASSY:-,YFH800-01,S,1P,300	
C920	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5		HC101	AA13-20004A	IC-HYBRID:-,PAP102T,SIP,6P,PRE-AMP,TP	
C922	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m		IC201	1204-001191	IC-PAL/NTSC PROCESS:TDA8374A(N3),DIP,56P	
C923	2202-000109	C-CERAMIC,MLC-AXIAL:100nF,+80-20%,50V,Y5		IC301	1204-000441	IC-IF CIRCUIT:TDA8356,SIP,9P,-,PLASTIC,4	
C924	2202-000109	C-CERAMIC,MLC-AXIAL:100nF,+80-20%,50V,Y5		IC501	1201-001159	IC-VIDEO AMP:6107,ZIP,9P,300MIL,SINGLE,-	
C925	2401-001495	C-AL:47uF,20%,16V,GP,5x11mm,5mm,TP		IC602	1201-000537	IC-AUDIO AMP:7057,ZIP,13P,-,DUAL,40DB,PL	
C926	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3		IC801	1203-001218	IC-PWM CONTROLLER:2S0680,TO-3,5P,32.5MIL	
CN01	2202-000127	C-CERAMIC,MLC-AXIAL:10nF,+80-20%,25V,Y5V		IC802	1203-000644	IC-POS:FIXED REG.:7630,SIP,10P,-,PLASTI	
CN501	AA39-20122A	LEAD-CONNECTOR,ASSY:-,YBNH025-08,YBNH025		IC805	1203-000243	IC-POS:FIXED REG.:7812A,TO-220,3P,-,PLA	
CN602	3711-002643	CONNECTOR-HEADER:BOX,4P,1R,2.5MM,STRAIGH		IC901	AA13-30017U	IC-MCU:-,Z8933212PSC-R3474,16BIT,SDIP	
CN701	3711-000628	CONNECTOR-HEADER:AUTO,11P,1R,2.5mm,STRAI		IC902	1103-000156	IC-EEPROM:24C04,512X8BIT,DIP,8P,300MIL,1	
CN802	AA27-20002A	COIL-DEGAUSSING:-,20,13.5OHM,35T,L2300,		IC903	1203-000515	IC-VOL. DETECTOR:7042,TO-92,3P,177MIL,PL	
CW901	2503-000156	C-NETWORK:100pF,4.20%,50V		JS701	3722-000183	JACK-SCART:21P,4mm,SN,BLK,NO	
D201	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L101	2701-000171	INDUCTOR-AXIAL:330nH,10%,2.5x3.4mm	
D204	0402-000216	DIODE-RECTIFIER:ERC24-06,600V,1.0A,DO-20		L102	2701-000114	INDUCTOR-AXIAL:10uH,10%,2.5x3.4mm	
D205	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L103	2701-000114	INDUCTOR-AXIAL:10uH,10%,2.5x3.4mm	
D209	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L202	2701-000197	INDUCTOR-AXIAL:5.6uH,10%,2.5x3.4mm	
D210	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L206	2701-000114	INDUCTOR-AXIAL:10uH,10%,2.5x3.4mm	
D211	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L301	2701-000114	INDUCTOR-AXIAL:10uH,10%,2.5x3.4mm	
D213	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L302	2701-000114	INDUCTOR-AXIAL:10uH,10%,2.5x3.4mm	
D215	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L304	2701-000116	INDUCTOR-AXIAL:10uH,10%,4.2x9.8mm	
D216	0401-000005	DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T		L305	2701-000116	INDUCTOR-AXIAL:10uH,10%,4.2x9.8mm	

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
L401	AA27-30001B	COIL-LINEARITY:-,195UH,QIC1010,PI0.4,4.5		R241	2001-000734	R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
L402	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5x5,TP,-		R242	2001-000734	R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
L601	2701-000197	INDUCTOR-AXIAL:5.6uH,10%,2.5x3.4mm		R250	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
L702	AA27-10003X	COIL-CHOKE:-,4.7uH,K,40,190mA,TP,AL02TB4		R251	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
L703	AA27-10003X	COIL-CHOKE:-,4.7uH,K,40,190mA,TP,AL02TB4		R252	2004-001914	R-METAL:39Kohm,2%,1/8W,AA,TP,1.8x3.5mm	
L704	AA27-10003X	COIL-CHOKE:-,4.7uH,K,40,190mA,TP,AL02TB4		R253	2001-000319	R-CARBON:120Kohm,5%,1/8W,AA,TP,1.8x3.2m	
L705	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5x5,TP,-		R254	2001-000755	R-CARBON:430Kohm,5%,1/8W,AA,TP,1.8x3.2m	
L706	AA27-10003X	COIL-CHOKE:-,4.7uH,K,40,190mA,TP,AL02TB4		R255	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
L801	AA29-30001G	FILTER-LINE:-,27MH,0.6A,-,-		R256	2001-000290	R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
L804	3301-000287	CORE-FERRITE BEAD:AA,3.5x1x6mm,1500,2400		R260	2001-000347	R-CARBON:13Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
L805	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5x5,TP,-		R301	2004-001983	R-METAL:2.49Kohm,1%,1/2W,AA,TP,2.4x6.4	
L807	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5x5,TP,-		R302	2008-001033	R-FUSIBLE(S):10ohm,5%,2W,AF,TP,3.9x10mm	
L808	1203-001006	IC-VOLTAGE REGULATOR:78R05,TO-220F,4P,-,		R303	2001-000273	R-CARBON:100Kohm,5%,1/8W,AA,TP,1.8x3.2m	
L808	6003-000333	SCREW-TAPTITE:RH,+,2S,M3,L10,ZPC(YEL),SW		R305	2004-001370	R-METAL(S):1.3ohm,1%,1/2W,AA,TP,2.4x6.4m	
L808	AA62-30012C	HEAT SINK-ES:-,A6063 EXTR,-,-,45(21) T02		R306	2008-000254	R-FUSIBLE(S):0.68ohm,5%,2W,AF,TP,3.9x10mm	
L809	AA27-10002Y	COIL-CHOKE:-,100UH,K,10,700MA,T,100UH-K(R307	2003-001043	R-METAL OXIDE(S):510ohm,5%,1W,AF,TP,2.5x	
L810	AA27-10002Y	COIL-CHOKE:-,100UH,K,10,700MA,T,100UH-K(R401	2001-001103	R-CARBON(S):20Kohm,5%,1/2W,AA,TP,2.4x6.4	
L902	2701-000189	INDUCTOR-AXIAL:470nH,10%,2.5x3.4mm		R403	2001-001114	R-CARBON(S):270ohm,5%,1/2W,AA,TP,2.4x6.4	
L903	2701-000136	INDUCTOR-AXIAL:18uH,10%,2.5x3.4mm		R404	2008-001033	R-FUSIBLE(S):10ohm,5%,2W,AF,TP,3.9x10mm	
LD901	AA96-30001B	ASSY-LED,GUIDE:-,AA61-50055A,DL-G5RGA,-		R405	2001-001410	R-CARBON(S):43ohm,5%,1/2W,AA,TP,2.4x6.4m	
NT801	1404-000187	THERMISTOR-NTC:4.7ohm,15%,2800K,27.2mW/C		R406	2001-001410	R-CARBON(S):43ohm,5%,1/2W,AA,TP,2.4x6.4m	
P801	1404-000180	THERMISTOR-PTC:14ohm,20%,-,290V,25A,-,ST		R407	2001-003019	R-CARBON(S):0.39ohm,10%,1/2W,AA,TP,2.4x6	
PC801	0604-001038	PHOTO-COUPLER:TR,130-260%,200MW,DIP-4,ST		R408	2001-000022	R-CARBON(S):33ohm,5%,1/2W,AA,TP,2.4x6.4m	
Q201	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R409	2008-000204	R-FUSIBLE(S):0.22ohm,10%,1/2W,AF,TP,2.5x	
Q202	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R410	2004-001408	R-METAL(S):91Kohm,1%,1/2W,AA,TP,2.4x6.4m	
Q203	0501-000283	TR-SMALL SIGNAL:KSA539,PNP,400mW,TO-92,T		R411	2004-001408	R-METAL(S):91Kohm,1%,1/2W,AA,TP,2.4x6.4m	
Q204	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R412	2003-001035	R-METAL OXIDE(S):27ohm,0.05,2W,AF,TP,3.9	
Q206	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R413	2003-000784	R-METAL OXIDE(S):7.5Kohm,5%,2W,AF,TP,4x1	
Q251	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R414	2003-000540	R-METAL OXIDE(S):1Kohm,5%,2W,AF,TP,4x12m	
Q401	0502-000295	TR-POWER:KSD5072YD,NPN,1500V,800V,5A,60		R415	2008-000206	R-FUSIBLE(S):1ohm,5%,1/2W,AF,TP,2.5x6.5m	
Q402	0501-000369	TR-SMALL SIGNAL:KSC2331-Y,NPN,1W,TO-92L,-		R416	2008-000277	R-FUSIBLE:68ohm,5%,1/2W,AA,TP,4.7x11mm	
Q701	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R417	2008-000256	R-FUSIBLE(S):1.5ohm,5%,2W,AA,TP,3.9x10mm	
Q703	0501-000283	TR-SMALL SIGNAL:KSA539,PNP,400mW,TO-92,T		R501H	2002-001008	R-COMPOSITION:1.8Kohm,5%,1/2W,AA,TP,3.7x	
Q901	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R502H	2002-001008	R-COMPOSITION:1.8Kohm,5%,1/2W,AA,TP,3.7x	
Q902	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R503	2002-001008	R-COMPOSITION:1.8Kohm,5%,1/2W,AA,TP,3.7x	
Q903	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400mW,TO-92,T		R504	2001-001062	R-CARBON(S):10Mohm,5%,1/2W,AA,TP,2.4x6.4	
Q904	0504-000123	TR-DIGITAL:KSR1010,NPN,300mW,10K,TO-92,T		R505	2008-001011	R-FUSIBLE(S):0.18ohm,10%,2W,AF,TP,3.9x10	
Q905	0504-000123	TR-DIGITAL:KSR1010,NPN,300mW,10K,TO-92,T		R510	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
Q906	0504-000123	TR-DIGITAL:KSR1010,NPN,300mW,10K,TO-92,T		R511	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
Q907	0504-000125	TR-DIGITAL:KSR1012,NPN,300mW,47K,TO-92,T		R512	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
Q908	0504-000123	TR-DIGITAL:KSR1010,NPN,300mW,10K,TO-92,T		R603	2001-000241	R-CARBON:1.5Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R200	2001-000780	R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm		R604	2001-000734	R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R201	2001-000005	R-CARBON:390ohm,5%,1/8W,AA,TP,1.8x3.2mm		R605	2001-000522	R-CARBON:22Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R202	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R606	2001-000605	R-CARBON:3.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R203	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R610	2001-000522	R-CARBON:22Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R204	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R611	2001-000605	R-CARBON:3.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R205	2001-000793	R-CARBON:47ohm,5%,1/8W,AA,TP,1.8x3.2mm		R701	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R207	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R703	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R208	2001-000832	R-CARBON:510ohm,5%,1/8W,AA,TP,1.8x3.2mm		R705	2001-000003	R-CARBON:330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R209	2001-000016	R-CARBON(S):1ohm,5%,1/2W,AA,TP,2.4x6.4mm		R706	2001-000221	R-CARBON:1.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R210	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R713	2004-001027	R-METAL:5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R211	2001-000331	R-CARBON:12Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R714	2001-000429	R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R212	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R715	2004-001027	R-METAL:5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R213	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R717	2004-001027	R-METAL:5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R214	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R801	2003-000994	R-METAL OXIDE(S):33Kohm,5%,2W,AF,TP,3.9x	
R215	2004-001995	R-METAL:9.1Kohm,5%,1/8W,AA,TP,1.8x3.2m		R802	2003-000994	R-METAL OXIDE(S):33Kohm,5%,2W,AF,TP,3.9x	
R216	2001-000490	R-CARBON:200ohm,5%,1/8W,AA,TP,1.8x3.2mm		R803	2004-001373	R-METAL(S):100Kohm,1%,1/2W,AA,TP,2.4x6.4	
R217	2001-001411	R-CARBON:5.6Mohm,5%,1/8W,AA,TP,1.7x3.2m		R805	2004-001967	R-METAL(S):68Kohm,1%,1/2W,AA,TP,6.5x2.5m	
R218	2001-000591	R-CARBON:3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m		R806	2002-000328	R-COMPOSITION:3.3Mohm,10%,1/2W,AA,TP,3.5	
R219	2001-000008	R-CARBON:15Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R807	2002-000328	R-COMPOSITION:3.3Mohm,10%,1/2W,AA,TP,3.5	
R220	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R810	2003-001090	R-METAL OXIDE(S):10Kohm,5%,2W,AF,TP,4x12	
R221	2001-000660	R-CARBON:33Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R811	2003-000784	R-METAL OXIDE(S):7.5Kohm,5%,2W,AF,TP,4x1	
R222	2001-000397	R-CARBON:180Kohm,5%,1/8W,AA,TP,1.8x3.2m		R812	2008-000299	R-FUSIBLE(S):47ohm,5%,2W,AF,TP,3.9x10mm	
R223	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R813	2008-000299	R-FUSIBLE(S):47ohm,5%,2W,AF,TP,3.9x10mm	
R224	2001-000563	R-CARBON:27Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R814	2008-000189	R-FUSIBLE:0.47OHM,10%,2W,AA,TP,6X15.5MM	
R225	2001-000857	R-CARBON:560ohm,5%,1/8W,AA,TP,1.8x3.2mm		R815	2008-000189	R-FUSIBLE:0.47OHM,10%,2W,AA,TP,6X15.5MM	
R226	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R816	2004-004089	R-METAL:123KOHM,1%,1/2W,AA,TP,2.5X6.5M	
R227	2004-001234	R-METAL:75Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R817	2004-001983	R-METAL:2.49Kohm,1%,1/2W,AA,TP,2.4x6.4	
R228	2001-000832	R-CARBON:510ohm,5%,1/8W,AA,TP,1.8x3.2mm		R818	2001-001050	R-CARBON(S):1.5Kohm,5%,1/2W,AA,TP,2.4x6.	
R230	2001-000793	R-CARBON:47ohm,5%,1/8W,AA,TP,1.8x3.2mm		R819	2001-001088	R-CARBON(S):1Kohm,5%,1/2W,AA,TP,2.4x6.4m	
R231	2001-000563	R-CARBON:27Kohm,5%,1/8W,AA,TP,1.8x3.2mm		R820	2008-000299	R-FUSIBLE(S):47ohm,5%,2W,AF,TP,3.9x10mm	
R232	2001-000273	R-CARBON:100Kohm,5%,1/8W,AA,TP,1.8x3.2m		R821	2008-000264	R-FUSIBLE(S):1ohm,5%,1W,AF,TP,3.9x10mm	
R234	2001-000281	R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm		R822	2001-001150	R-CARBON(S):470Kohm,5%,1/2W,AA,TP,2.4x6.	
R235	2004-001089	R-METAL:560Kohm,5%,1/8W,AA,TP,1.8x3.2m		R823	2001-001150	R-CARBON(S):470Kohm,5%,1/2W,AA,TP,2.4x6.	
R236	2003-000634	R-METAL OXIDE(S):3.9Kohm,5%,1W,AA,TP,3.3		R824	2009-000022	R-METAL PLATE:0.47ohm,10%,5W,CL,TP,5x14x	
R237	2001-000793	R-CARBON:47ohm,5%,1/8W,AA,TP,1.8x3.2mm		R901	2001-000793	R-CARBON:47ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R240	2001-000832	R-CARBON:510ohm,5%,1/8W,AA,TP,1.8x3.2mm		R902	2001-000734	R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	

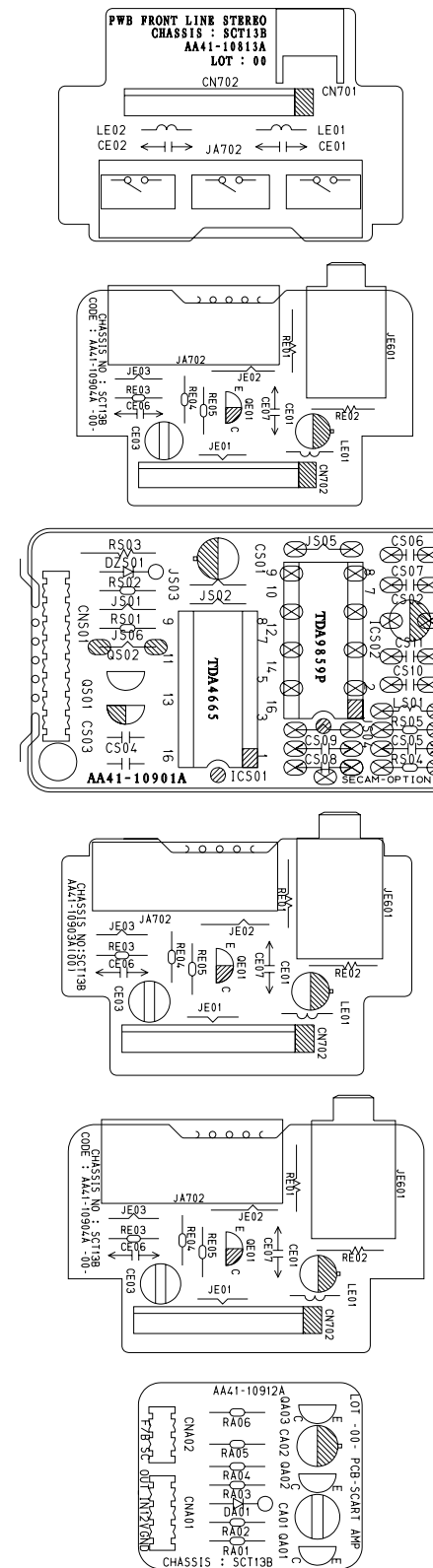
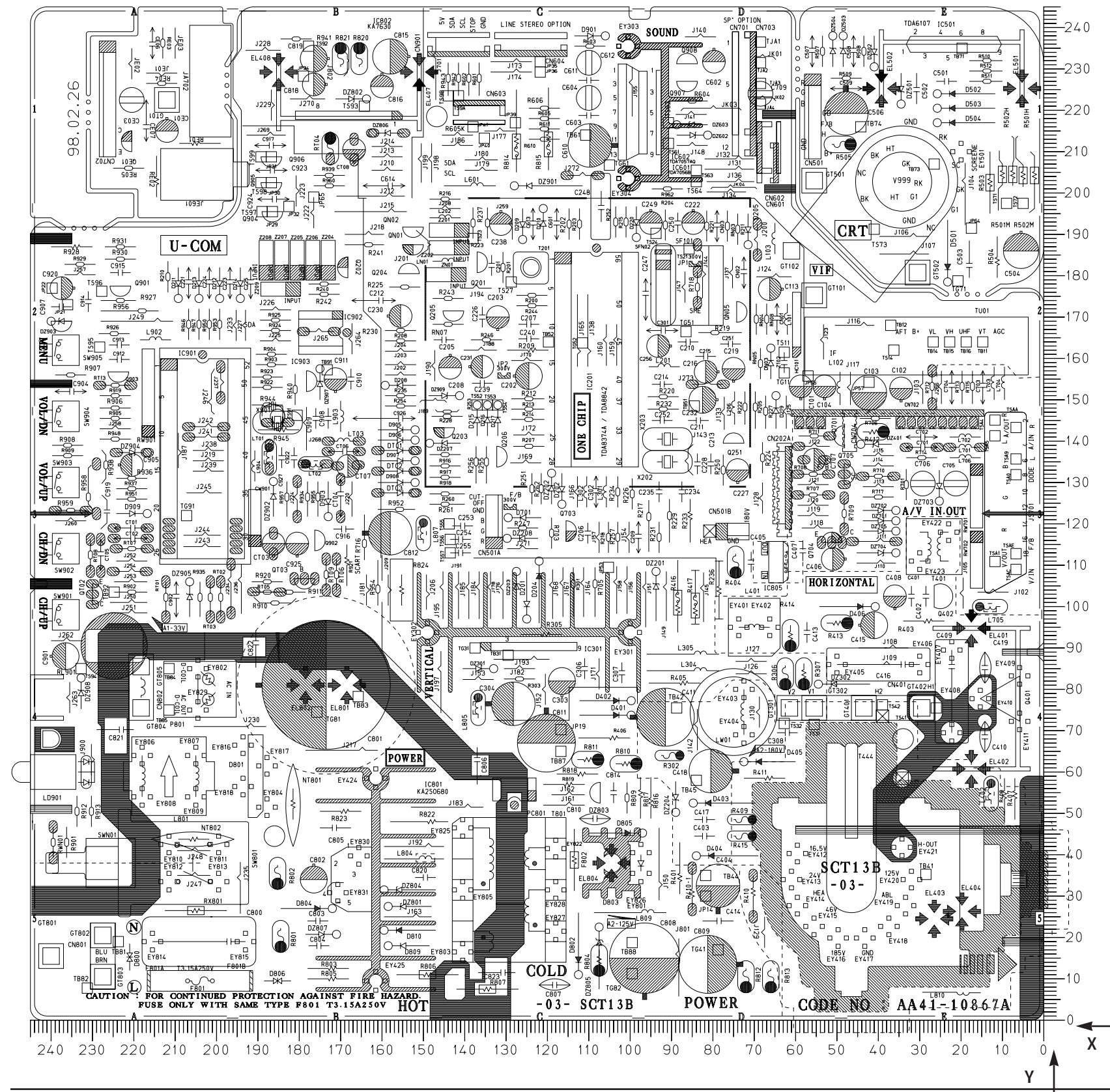
8. Block Diagram

8-1 SCT13B



9. PCB Layout

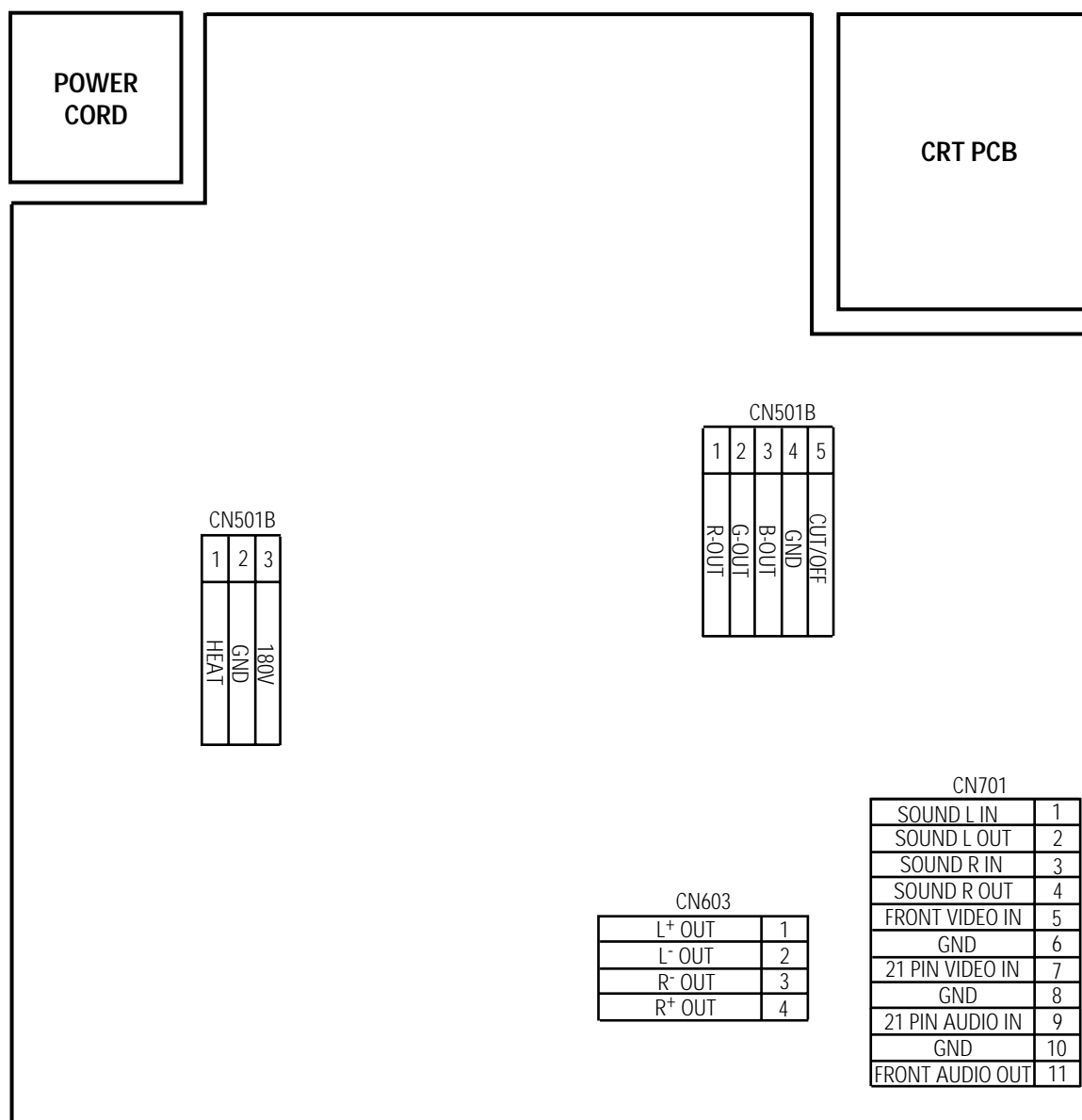
9-1 PCB MAIN



Loc. No.	X	Y	Loc. No.	X	Y
DIODE			DZ603	88	216
D201	125	97	DZ701	35	120
D202	116	124	DZ702	35	123
D204	122	111	DZ703	25	125
D205	71	187	DZ704	35	113
D208	159	153	DZ705	35	118
D209	126	188	DZ801	158	27
D210	121	196	DZ802	163	222
D211	209	174	DZ803	107	57
D212	199	174	DZ804	159	31
D213	204	174	DZ805	107	22
D214	194	174	DZ806	162	214
D215	137	148	DZ807	171	20
D216	134	148	DZ901	128	201
D217	132	148	DZ902	186	130
D219	64	151	DZ903	240	169
D220	98	189	DZ904	216	137
D401	99	73	DZ905	206	106
D402	99	77	DZ907	175	157
D403	84	52	DZ908	232	82
D404	84	39	DZ909	141	151
D405	72	62	IC		
D406	40	100	HC101	59	161
D501	23	178	IC201	100	183
D502	25	224	IC301	100	93
D503	25	220	IC501	39	225
D504	25	217	IC601	100	235
D701	129	121	IC602	100	235
D800	221	19	IC801	161	9
D801	188	51	IC802	151	229
D802	112	11	IC805	64	108
D803	104	38	IC901	195	158
D804	172	27	IC902	171	162
D805	97	45	IC903	178	152
D806	181	9	TRANSISTOR		
D809	158	18	Q201	137	180
D810	159	21	Q202	168	184
D901	106	238	Q203	147	143
D903	173	121	Q204	151	180
D905	152	142	Q205	145	171
D906	152	140	Q206	132	133
D907	152	135	Q251	72	139
D908	152	130	Q401	17	94
D909	216	122	Q402	25	100
DN03	66	162	Q701	48	143
DT01	152	137	Q703	115	115
DT02	152	132	Q704	48	115
DT03	152	127	Q705	48	129
DZ201	93	108	Q901	225	177
DZ202	119	132	Q902	176	113
DZ203	127	108	Q903	226	156
DZ204	89	50	Q904	189	195
DZ207	148	139	Q905	189	202
DZ208	129	116	Q906	189	208
DZ301	133	85	Q907	88	227
DZ302	54	81	Q908	83	231
DZ401	44	139	QE01	220	215
DZ501	34	221	QN01	155	187
DZ502	41	230	QN02	155	191
DZ503	48	238			
DZ504	51	238			
DZ602	81	214			

10. Wiring Diagram

10-1 SCT13B



MEMO

11. Schematic Diagrams

11-1 TTX Micom

MICOM OPTION

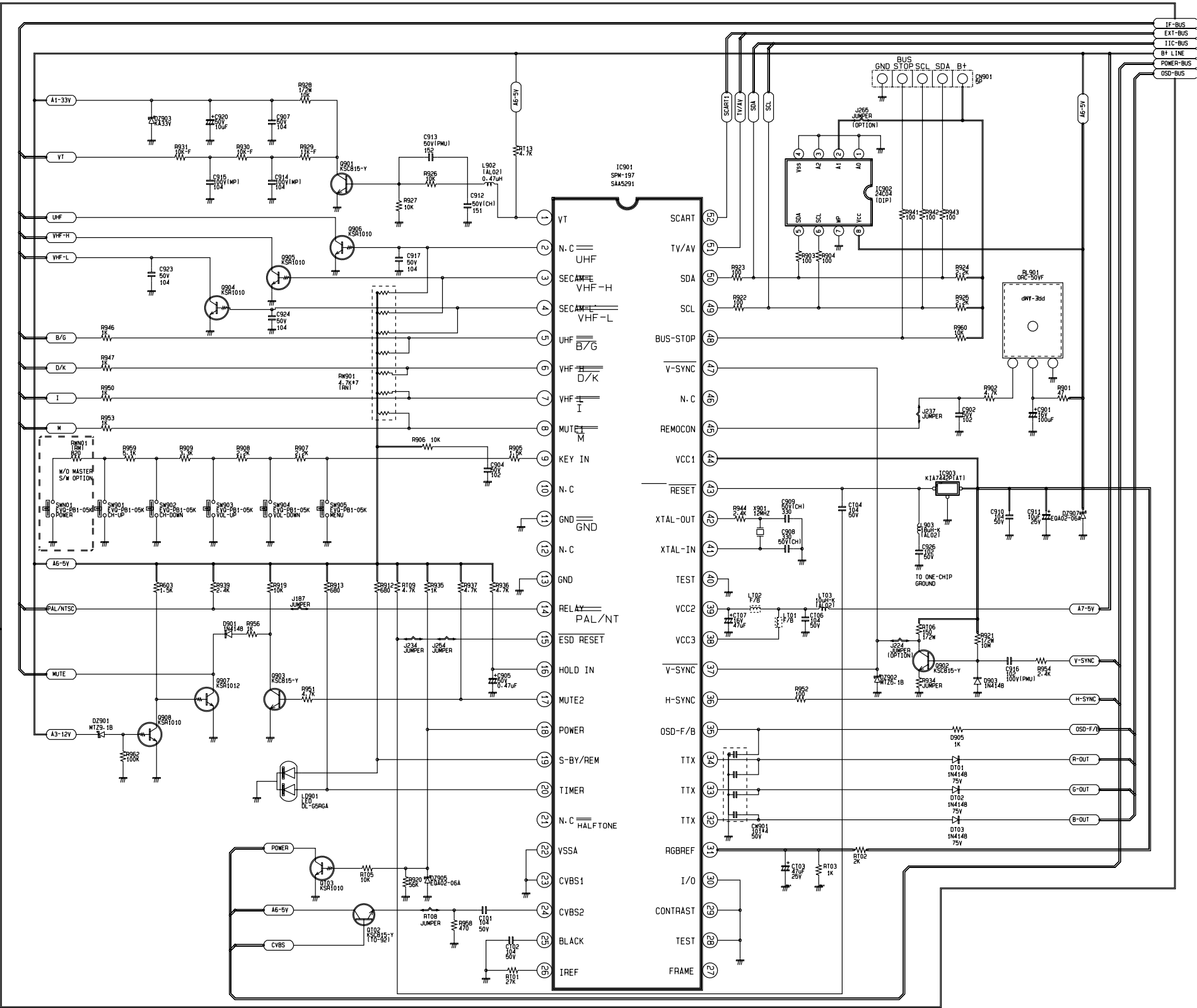
LOC	NON TTX u-COM		TTX u-COM	
LOC	CODE-NO	SPEC	CODE-NO	SPEC
C908	2201-000193	C-C : 10PF 50V CH	2201-000980	C-C : 30PF 50V CH
C909	2201-000573	C-C : 47PF 50V CH	2201-000980	C-C : 30PF 50V CH
C919	2202-000796	C-AXIAL : 1NF 50V		DELETE
C922	2305-000665	C-FILM : 104 63V		DELETE
C925	2401-001495	C-AL : 47UF 16V		DELETE
C101	DELETE	DELETE	2202-000109	C-AXIAL : 104 50V
C102	DELETE	DELETE	2202-000109	C-AXIAL : 104 50V
C103	DELETE	DELETE	2401-001495	C-AL : 47UF 16V
C104	DELETE	DELETE	2202-000109	C-AXIAL : 104 50V
C106	DELETE	DELETE	2202-000109	C-AXIAL : 104 50V
C107	DELETE	DELETE	2401-001495	C-AL : 47UF 16V
D905	0401-000005	DIODE 1N4148	2001-000429	R-CARBON : 1K 1/8W
D906	0401-000005	DIODE 1N4148		DELETE
D907	0401-000005	DIODE 1N4148		DELETE
D908	0401-000005	DIODE 1N4148		DELETE
IC901		S2M193		SPM-197
IC903	1203-000515	K1A7042P-AT	1203-000641	K1A7442P-AT
J111			3812-000219	JUMPER
J184	3812-000219	JUMPER	2001-000857	R-CARBON 560 1/8W
J185	3812-000219	JUMPER	2001-000857	R-CARBON 560 1/8W
J191	3812-000219	JUMPER	2001-000857	R-CARBON 560 1/8W
J234	DELETE	DELETE	3812-000219	JUMPER
J237	DELETE	DELETE	3812-000219	JUMPER
J239	3812-000219	JUMPER		DELETE
J246	3812-000219	JUMPER		DELETE
J254	DELETE	DELETE	3812-000219	JUMPER
J264	3812-000219	JUMPER		DELETE
J265	DELETE	DELETE	3812-000219	JUMPER
L101	DELETE	DELETE	2901-000297	FERRITE-BEAD
L102	DELETE	DELETE	2901-000297	FERRITE-BEAD
L103	DELETE	DELETE	2701-000114	COIL AL02 10uH
Q104	DELETE	DELETE	0501-000293	KS4539
Q102	DELETE	DELETE	0501-000389	KS0315-Y
Q103	DELETE	DELETE	0504-000123	KS01010
R905	2001-000472	R-CARBON : 2.7K 1/8W	2001-000290	R-CARBON : 10K 1/8W
R907	2004-001291	R-CARBON : 820 1/8W	2001-000449	R-CARBON : 2.2K 1/8W
R908	2001-000214	R-CARBON : 1.1K 1/8W	2001-000449	R-CARBON : 2.2K 1/8W
R909	2001-000449	R-CARBON : 2.2K 1/8W	2001-000591	R-CARBON : 3.3K 1/8W
R910	2001-000290	R-CARBON : 10K 1/8W		DELETE
R916	2001-000281	R-CA : 1/8T 68K-J		DELETE
R917	2001-000281	R-CA : 1/8T 10K-J		DELETE
R918	2001-000281	R-CA : 1/8T 510-J		DELETE
R934	2001-000449	R-CARBON : 2.2K 1/8W	3812-000212	JUMPER
R938	2001-000472	R-CARBON : 2.7K 1/8W		DELETE
R940	2001-001234	R-CARBON : 75K 1/8W		DELETE
R944	2004-001291	R-CARB : 65K 1/8W	2001-000005	R-CARB 2.4K 1/8W
R945	2001-001052	R-CARB : 10K 1/8W		DELETE
R948	2001-000241	R-CARB : 1.1K 1/8W		DELETE
R955	2001-000429	R-CARB : 1.1K 1/8W		DELETE
R957	2001-000832	R-CARB : 1510 1/8W		DELETE
R958	DELETE	DELETE	2001-000793	R-CARB : 470 1/8W
R959	DELETE	DELETE	2001-000800	R-CARB : 5.1K 1/8W
R101	DELETE	DELETE	2001-000563	R-CARB : 27K 1/8W
R102	DELETE	DELETE	2001-000577	R-CARB : 2K 1/8W
R103	DELETE	DELETE	2001-000429	R-CARB : 1K 1/8W
R104	DELETE	DELETE	2008-001052	R-FUSIBLE : 39 2W
R105	DELETE	DELETE	2001-000290	R-CARB : 10K 1/8W
R106	3812-000219	JUMPER	2001-000362	R-CARB : 150 1/8W
R108	DELETE	DELETE	3812-000219	JUMPER
R109	DELETE	DELETE	2001-000734	R-CARB : 4.7K 1/8W
R113	DELETE	DELETE	2001-000734	R-CARB : 4.7K 1/8W
D101	DELETE	DELETE	0401-000005	DIODE 1N4148
D102	DELETE	DELETE	0401-000005	DIODE 1N4148
D103	DELETE	DELETE	0401-000005	DIODE 1N4148
X901	2801-003224	32.768KHz	2801-001476	12MHz
R820	2008-000299	R-FUSIBLE 47 2W	2008-001052	R-FUSIBLE 2W 39
R821	2008-000264	R-FUSIBLE 1 1W		DELETE
J802	DELETE	DELETE	3812-000219	JUMPER
D7805	DELETE	DELETE	2003-000705	R-METAL 47K 2W AA
D7806	DELETE	DELETE	0403-000295	DIODE M725-1B
R406	2001-0001410	R-CARBON 43 1/2W	2001-001126	R-CARB 300 1/2W

SYSTEM OPTION

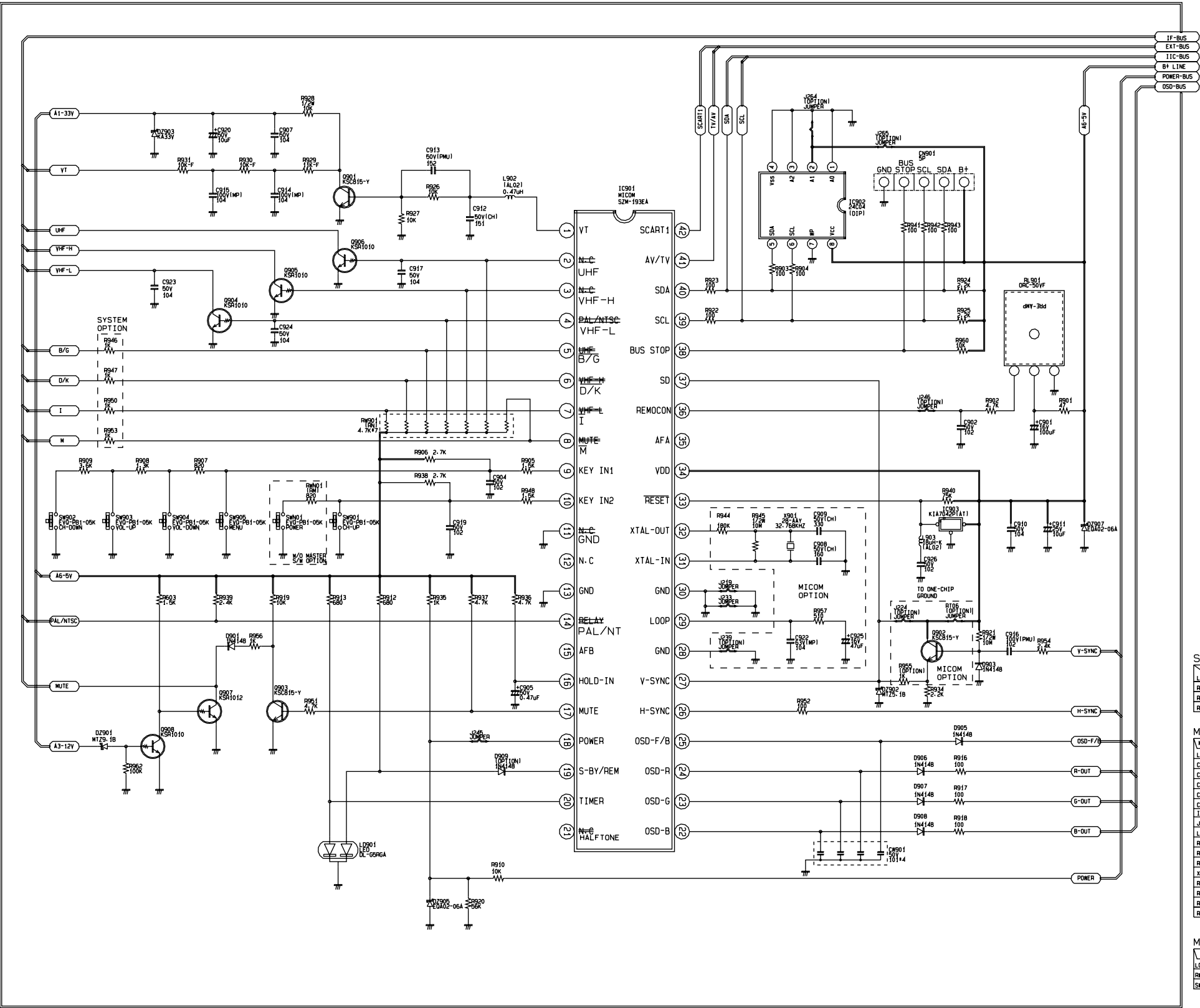
SYSTEM	CS-SYSTEM	OK-SYSTEM	CB-SYSTEM
LOC	CODE-NO	SPEC	CODE-NO
R947	R-CA: 1/8T 1K-J	R-CA: 1/8T 1K-J	DELETE
R950	R-CA: 1/8T 1K-J	DELETE	DELETE
R953	R-CA: 1/8T 1K-J	DELETE	DELETE

MASTER/TACT-S/W OPTION

S/W	MASTER-S/W	TACT-S/W
LOC	CODE-NO	SPEC
R9901	DELETE	R-CA: 1/8T 820-J
SW01	DELETE	SWITCH-TACT-15W-20MA



11-2 W/O TTX Micom

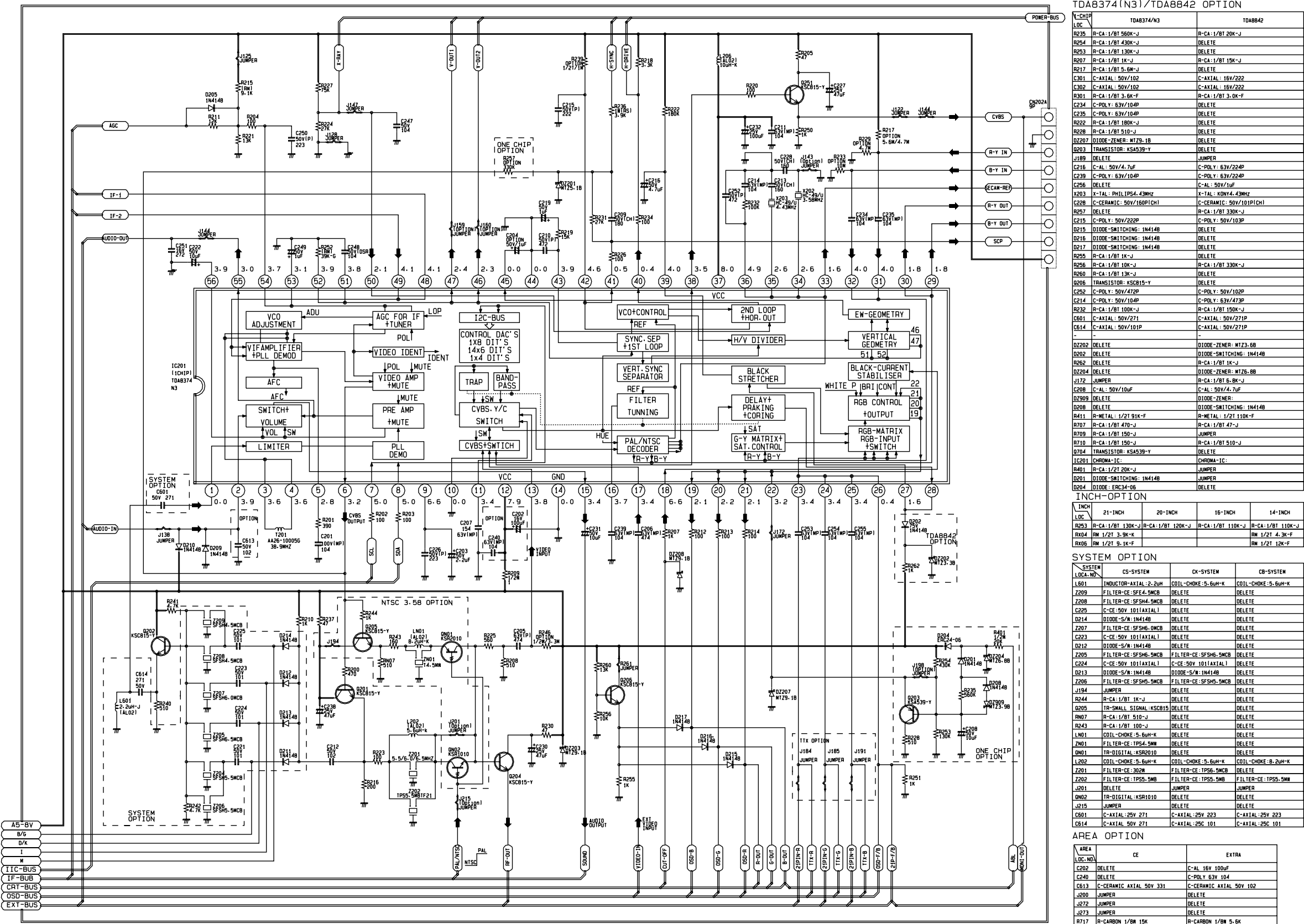


SYSTEM	CS-SYSTEM	CK-SYSTEM	CB-SYSTEM
LOCAL NO.			
R947	R-CA:1/8T 1K-J	R-CA:1/8T 1K-J	DELETE
R950	R-CA:1/8T 1K-J	DELETE	DELETE
R953	R-CA:1/8T 1K-J	DELETE	DELETE

MICOM	289331 0TP	289332 MASK	290211 0TP	290212 MASK
LOC				
C908	C-CE:50V 16P(CH)	C-CE:50V 10P(CH)	C-CE:50V 10P(CH)	C-CE:50V 10P(CH)
C909	C-CE:50V 33P(CH)	C-CE:50V 47P(CH)	C-CE:50V 47P(CH)	C-CE:50V 47P(CH)
C922	DELETE	C-POLY:63V 104-J	C-CE:50V 47P(CH)	C-CE:50V 47P(CH)
C925	DELETE	C-AL:16V 47uF	DELETE	DELETE
C927	DELETE	DELETE	C-CE:50V 47P(CH)	C-CE:50V 47P(CH)
IC901	289331(2P)S/1789	289332(2P)S/MASK	290211(0P)S/0TP	290212(0P)S/MASK
J239	DELETE	JUMPER	DELETE	DELETE
L904	DELETE	DELETE	COIL-CHKE:13uH-K	COIL-CHKE:13uH-K
R944	R-CA:1/8T 100K-J	R-CA:1/8T 60K-J	JUMPER	JUMPER
R946	R-CA:1/2T 10K-J	R-CA:1/2T 10K-J	DELETE	DELETE
R957	DELETE	R-CA:1/8T 510-J	DELETE	DELETE
X901	X-TAL:32.768KHZ	X-TAL:32.768KHZ	X-TAL:6.0MHZ	X-TAL:6.0MHZ
R908	R-CA:1/8T 1.3K-J	R-CA:1/8T 1.1K-J	R-CA:1/8T 1.3K-J	R-CA:1/8T 1.1K-J
R909	R-CA:1/8T 3.6K-J	R-CA:1/8T 2.2K-J	R-CA:1/8T 3.6K-J	R-CA:1/8T 2.2K-J
R901	R-NET:4.7K*7.8P	DELETE	R-NET:4.7K*7.8P	DELETE
R939	R-CA:1/8T 2.4K-J	DELETE	R-CA:1/8T 2.4K-J	DELETE

S/W	MASTER-S/W	TACT-S/W
LOC		
R901	DELETE	R-CA:1/8T 820-J
SW901	DELETE	SWITCH-TACT:15V,20mA

11-3 ONE CHIP/CHROMA Block



11-4 IF/Sound . EXT-A/V Block

AUDIO-AMP OPTION

LOC. NO.	COMPONENT	VALUE	DELETE
OB11	C-FILM-PEP-50V	472-J	DELETE
OB12	C-AL-50V/0.47uF		DELETE
OB601	CONNECTOR-HEADER-BOX-4P		DELETE
OB602	CONNECTOR-HEADER-AUTO-12P		DELETE
OB701	CONNECTOR-HEADER-AUTO-9P		DELETE
OB703	DIODE-RECTIFIER-FM-GDS		DELETE
OB805	DIODE-RECTIFIER-RGP-15G		DELETE
IC601	ASSY-H/S-SOUND-TDA7057AQ		DELETE
IC602	ASSY-H/S-SOUND-TDA7056B		DELETE
J131	JUMPER		DELETE
J134	JUMPER		DELETE
J177	JUMPER		DELETE
R605	R-CA-1/8T 22K-J		DELETE
R606	R-CA-1/8T 3.6K-J		DELETE
R814	R-FUS:2T 0.47-J		DELETE
R815	R-FUS:2T 0.47-J		DELETE

LINE STEREO FRONT-A/V OPTION

LOC.	COMPONENT	VALUE	DELETE
CE01	C-CERAMIC-50V 101AXIAL		DELETE
CE02	C-CERAMIC-50V 101AXIAL		DELETE
CN701	CONNECTOR-HEADER-3WALL-3P-ANGLE		DELETE
CN702	LEAD CONNECTOR-ASSY-YBWHP50-11-300MM		DELETE
JA701	JACK-RCA:3P-3.6MM		DELETE
LE01	INDUCTOR-AXIAL:10uH-K-AL02		DELETE
LE02	INDUCTOR-AXIAL:10uH-K-AL02		DELETE
PCB	PCB FRONT-A/V:111.5x72x1.61-.66		DELETE
PCB	PCB-LINE STEREO:35x51x1.61-.1E-.2E-.3E		DELETE

MONO/21PIN/LINE STEREO OPTION

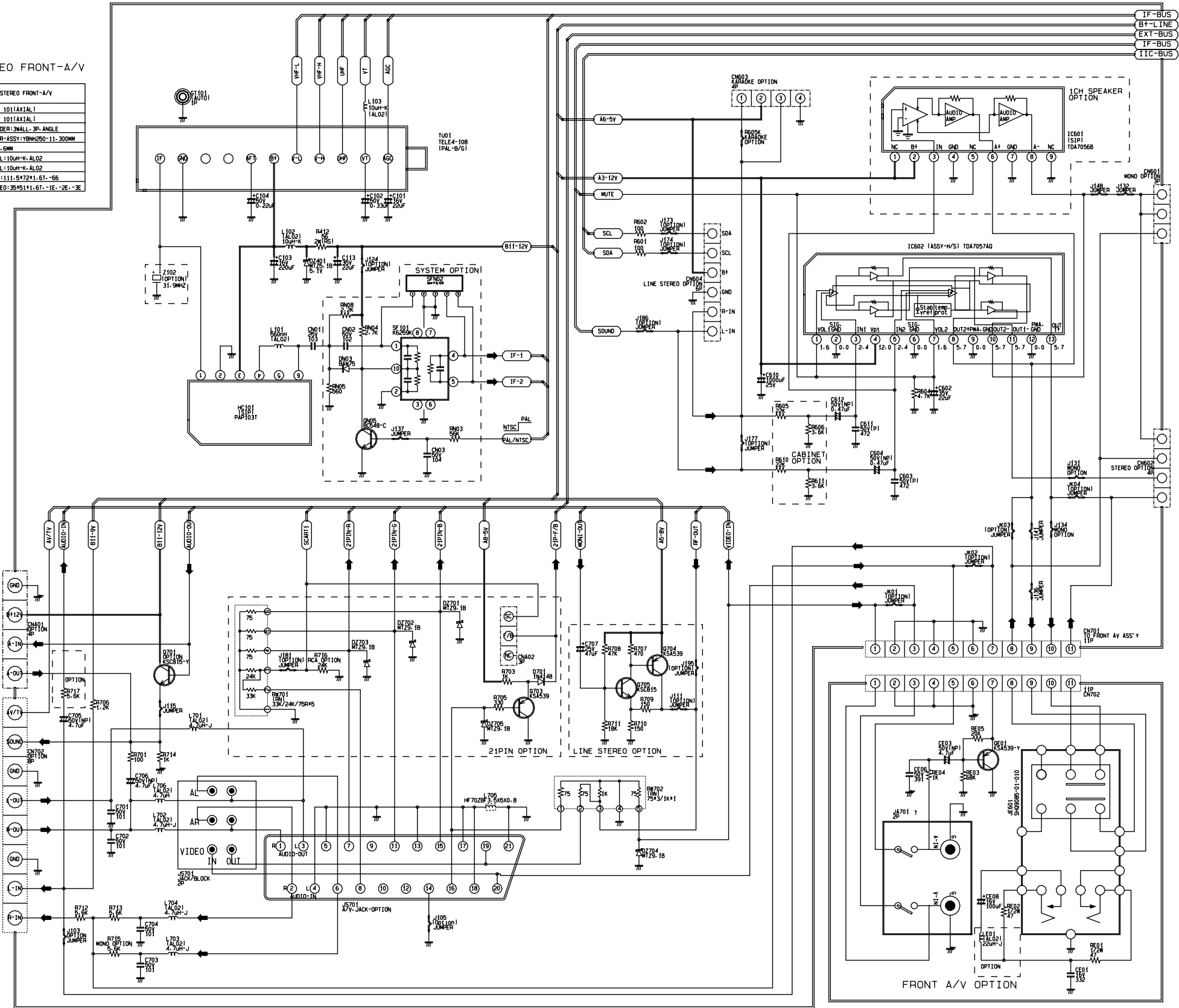
SYSTEM	MONO RCA-4P	LINE STEREO RCA-6P	21-PIN SCART
C701	DELETE	C-CE:50V 101AXIAL	DELETE
C705	C-AL-50V 0.47uF(NP)	DELETE	C-AL:50V 0.47uF(NP)
C706	C-AL-50V 0.47uF(NP)	DELETE	C-AL:50V 0.47uF(NP)
C707	DELETE	C-AL-25V 47uF	DELETE
CH604	DELETE	POST-HEADER-6P	DELETE
CN702	DELETE	ASSY-LINE STEREO	DELETE
J196	JUMPER	DELETE	JUMPER
J177	JUMPER	DELETE	JUMPER
J186	JUMPER	DELETE	JUMPER
J111	DELETE	JUMPER	DELETE
JS701	JACK-PIN-RCA-4P	JACK-PIN-RCA-6P	JACK-RCA:21P-SCART
L701	DELETE	COIL-CHOK:4.7uH-K	DELETE
L706	COIL-CHOK:4.7uH-K	DELETE	COIL-CHOK:4.7uH-K
Q704	DELETE	TRANSISTOR:KSA539-Y	DELETE
Q705	DELETE	TRANSISTOR:KSC815-Y	DELETE
R601	DELETE	R-CA:1/8T 100-J	DELETE
R712	DELETE	R-CA:1/8T 5.6K-J	DELETE
R713	DELETE	R-CA:1/8T 5.6K-J	DELETE
L704	DELETE	COIL-CHOK:4.7uH-K	DELETE
C704	DELETE	C-CE:50V 101AXIAL	DELETE
R602	DELETE	R-CA:1/8T 100-J	DELETE
R701	R-CA:1/8T 100-J	DELETE	R-CA:1/8T 100-J
R706	R-CA:1/8T 1.2K-J	DELETE	R-CA:1/8T 1.2K-J
R707	DELETE	R-CA:1/8T 470-J	DELETE
R708	DELETE	R-CS:1/8T 47K-J	DELETE
R709	DELETE	R-CA:1/8T 150-J	DELETE
R710	DELETE	R-CA:1/8T 150-J	DELETE
R711	DELETE	R-CA:1/8T 18K-J	DELETE
R712	DELETE	R-CA:1/8T 5.6K-J	DELETE
J173	DELETE	JUMPER	DELETE
J174	DELETE	JUMPER	DELETE
ASSY			
RW701	DELETE	DELETE	R-NET:33K/24K/75x3-6P
DZ701	DELETE	DIODE-ZENER:W729-1B	DELETE
DZ702	DELETE	DIODE-ZENER:W729-1B	DELETE
DZ703	DELETE	DIODE-ZENER:W729-1B	DELETE
Q703	DELETE	TRANSISTOR:KSA539-Y	DELETE
R703	DELETE	R-CA:1/8T 1K-J	DELETE
D701	DELETE	DIODE-S/W 1N4148	DELETE
R705	DELETE	R-CA:1/8T 330-J	DELETE
DZ705	DELETE	DIODE-ZENER:W729-1B	DELETE
R716	R-CA:1/8T 24K-J	R-CA:1/8T 24K-J	DELETE

SYSTEM OPTION

SYSTEM	CS-SYSTEM	OK-SYSTEM	CB-SYSTEM
J124	JUMPER	DELETE	DELETE
RN08	R-CA:1/8T 2.2K-J	DELETE	DELETE
RN04	R-CA:1/8T 2.7K-J	DELETE	DELETE
CN02	C-CE:50V 101AXIAL	JUMPER	JUMPER
CN03	DIODE-S/W:BAW75	DELETE	DELETE
RN05	R-CA:1/8T 2.2K-J	DELETE	DELETE
CN05	TR-SMALL SIGNAL:BC548	DELETE	DELETE
J137	JUMPER	DELETE	DELETE
CN03	C-CE:50V 101AXIAL	DELETE	DELETE
RN03	R-CA:1/8T 56K-J	DELETE	DELETE
SF101	FILTER-SAW AV-K6259K	DELETE	DELETE
SF102	DELETE	FILTER-SAW AV-K2971M	FILTER-SAW AV-G1963M

FRONT-A/V DELETE OPTION

LOC.	FRONT-A/V	DELETE
J401	DELETE	JUMPER
C709	DELETE	C-ELEC 50V 4.7uF NP
J403	DELETE	JUMPER
J404	DELETE	JUMPER
J141	JUMPER	DELETE
J136	JUMPER	DELETE
J134	JUMPER	DELETE
CN701	POST-HEADER:11P-85-39	DELETE
POST-HEADER:9P-73-38		DELETE



11-5 Power /Vertical /Horizontal /CRT

