

**TOSHIBA**

SERVICE MANUAL

COLOUR TELEVISION

***29VH14P***

## 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.

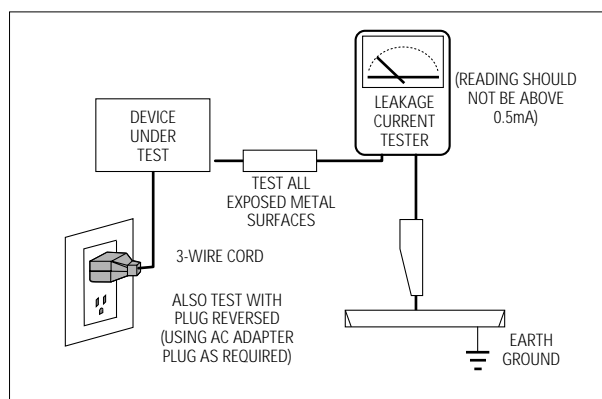




Fig. 1-1 AC Leakage Test

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)

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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.

## 2. Reference Information

### 2-1 Tables of Abbreviations and Acronyms

**Table 2-1 Abbreviations**

A	Ampere	MV	Megavolt
Ah	Ampere-hour	MW	Megawatt
Å	Angstrom	MΩ	Megohm
dB	Decibel	m	Meter
dBm	Decibel Referenced to One Milliwatt	μA	Microampere
°C	Degree Celsius	μF	Microfarad
°F	Degree Fahrenheit	μH	Microhenry
°K	degree Kelvin	μm	Micrometer
F	Farad	μs	Microsecond
G	Gauss	μW	Microwatt
GHz	Gigahertz	mA	Milliampere
g	Gram	mg	Milligram
H	Henry	mH	Millihenry
Hz	Hertz	ml	Milliliter
h	Hour	mm	Millimeter
ips	Inches Per Second	ms	Millisecond
kWh	Kilowatt-hour	mV	Millivolt
kg	Kilogram	nF	Nanofarad
kHz	Kilohertz	Ω	Ohm
kΩ	Kilohm	pF	Picofarad
km	Kilometer	lb	Pound
km/h	Kilometer Per Hour	rpm	Revolutions Per Minute
kV	Kilovolt	rps	Revolutions Per Second
kVA	Kilovolt-ampere	s	Second (Time)
kW	Kilowatt	V	Volt
l	Liter	VA	Volt-ampere
MHz	Megahertz	W	Watt
		Wh	Watt-hour

**Table 2-2 Table of Acronyms**

ABL	Automatic Brightness Limiter	I/O	Input/output
AC	Alternating Current	L	Left
ACC	Automatic Chroma Control	L	Low
AF	Audio Frequency	LED	Light Emitting Diode
AFC	Automatic Frequency Control	LF	Low Frequency
AFT	Automatic Fine Tuning	MOSFET	Metal-Oxide-Semiconductor-Field-Effect-Tr
AGC	Automatic Gain Control	MTS	Multi-channel Television Sound
AM	Amplitude Modulation	NAB	National Association of Broadcasters
ANSI	American National Standards Institute	NEC	National Electric Code
APC	Automatic Phase Control	NTSC	National Television Systems Committee
APC	Automatic Picture Control	OSD	On Screen Display
A/V	Audio-Video	PCB	Printed Circuit Board
AVC	Automatic Volume Control	PLL	Phase-Locked Loop
BAL	Balance	PWM	Pulse Width Modulation
BPF	Bandpass Filter	QIF	Quadrature Intermediate Frequency
B-Y	Blue-Y	R	Right
CATV	Community Antenna Television (Cable TV)	RC	Resistor & Capacitor
CB	Citizens Band	RF	Radio Frequency
CCD	Charge Coupled Device	R-Y	Red-Y
CCTV	Closed Circuit Television	SAP	Second Audio Program
Ch	Channel	SAW	Surface Acoustic Wave(Filter)
CRT	Cathode Ray Tube	SIF	Sound Intermediate Frequency
CW	Continuous Wave	SMPS	Switching Mode Power Supply
DC	Direct Current	S/N	Signal/Noise
DVM	Digital Volt Meter	SW	Switch
EIA	Electronics Industries Association	TP	Test Point
ESD	Electrostatic Discharge	TTL	Transistor Transistor Logic
ESD	Electrostatically Sensitive Device	TV	Television
FBP	Feedback Pulse	UHF	Ultra High Frequency
FBT	Flyback Transformer	UL	Underwriters Laboratories
FF	Flip-Flop	UV	Ultraviolet
FM	Frequency Modulation	VCD	Variable-Capacitance Diode
FS	Fail Safe	VCO	Voltage Controlled Oscillator
GND	Ground	VCXO	Voltage Controlled Crystal Oscillator
G-Y	Green-Y	VHF	Very High Frequency
H	High	VIF	Video Intermediate Frequency
HF	High-Frequency	VR	Variable Resistor
HI-FI	High Fidelity	VTR	Video Tape Recorder
IC	Inductance-Capacitance	VTVM	Vacuum Tube Voltmeter
IC	Integrated Circuit	TR	Transistor
IF	Intermediate Frequency		

## 2-2 IC Line Up

<b>Table 2 - 3 IC Line - Up</b>					
<b>NO</b>	<b>BOARD</b>	<b>LOC. NO</b>	<b>SPEC</b>	<b>DESCRIPTION</b>	<b>REMARK</b>
<b>1</b>	<b>MAIN</b>	IC201S	VDP3140	Video Processor	Refer to Table 2-3-1
			DDP3310	Sipadoss-Module, Video Processor	
			VPC3230		
			SDA9401		
		IC601	MSP3411G	Multistandard Sound Processor	Refer to Table 2-3-2
		IC901	SDA555X	MICOM, TTX(MTP)	
		IC902	KSL51DC	EEPROM	
		IC602	TDA7297	Audio AMP	Refer to Table 2-3-3
		HIC201	DRGB001	RGB Drive AMP Hybrid IC	VM Option
		HIC202			
		HIC203			
		HIC204			
		HIC401	DDR1001	100Hz Horizontal Pulse AMP	Option
		IC301	LA7845	Vertical IC	
		Q402	BUZ73A	Horizontal Drive IC	HC401
		Q401	2SC5446		
		D414	FMP-3FU		
		IC401	LM393	E/W Drive IC	
		Q404	IRF620		
		IC801S	3S1265RD	SPS Controllor	
		D801S	GSIB660	Bridge Diode	
		PC801S	PC123Y	Photo Coupler	
		D805	FML-G12S	Rectifier Diode	HC801
		D806			
		D807			
		D802	FMG-G2CS		
		IC202	KA78RM33	3.3V Regulator	
		IC804	KA7806	6V Regulator	VDPY
		IC803	KA78R08	8V Controlled Regulator	
		IC903	KA78RM33	3.3V Regulator	
		IC904	KIA7025AP	MICOM Reset IC	
		Q909	2N7000	IIC Level Shifter	
		Q910			



**Table 2 - 3 IC Line - Up**

NO	BOARD	LOC. NO	SPEC	DESCRIPTION	REMARK
1	MAIN	TU01S	TCPW3001PD16A	Main Tuner with IF Block	Refer to Table 2-3-4
		T801S	AA26-00046A	Trans Switching	Refer to Table 2-3-6
		T444S	1372, 0079A	Trans FBT(ELDOR)	Refer to Table 2-3-7
2	CRT	IC501	TDA6111Q	Video Output AMP R.G.B Drive	Option
		QF04	2SC2344	Push-Pull (VM)	
		QF05	2SA1011		
		QG02	KSA940	TR-Power (TILT)	
		QG03	KSD2073-H2		
		ICG01	KA4558	OP-AMP (TILT)	
3	V-S/W	ICS01	TEA6425	Video Switching IC with Adder Output	Option

**Table 2-3-1 VIDEO IC (IC201S)**

SPEC	FUNCTION	REMARK
DDP3310	Sipadoss Module AA98-00134B(with SDA9401)	
VPC3230		
SDA9401		

**Table 2-3-2 SOUND IC (IC601)**

SPEC	FUNCTION	REMARK
MSP3411G	Multistandard, A2 Stereo, Nicam, Virtual Dolby	
MSP3410D	Multistandard, A2 Stereo, Nicam	

**Table 2-3-3 SOUND AMP (IC602)**

SPEC	FUNCTION	REMARK
TDA7297	15W x 2CH, 10W x 2CH	

**Table 2-3-4 1<sup>st</sup> TUNER (TU01S)**

SPEC	FUNCTION	REMARK
TCPW3001PD16A	CW	Main

### 3. Specifications

<b>Television System</b>	<b>CW</b>	PAL/SECAM-B/G,D/K,L,I	
<b>Antena Input</b>		75ohms, Coaxial Cable	
<b>Power</b>	<b>Consumption</b>	130W (Applied When 29" Flat)	
	<b>Requirements</b>	220V Only	
	<b>Frequency</b>	50Hz	
	<b>Output</b>	15W x 2CH	
<b>Sound</b>	<b>Effect</b>	Vitual Dolby	Option
		Turbo Sound	
		Pseudo Stereo	
<b>Jacks</b>	<b>Front (AV2)</b>	RCA Input	
		S-VHS	Option
		Head-Phone	
	<b>Back</b>	2Scart Input/Output	AV1 : Scart I/O, RGB Input, RF Out AV2 : Scart I/O, Monitor Out
		AV2 Monitor Audio Output	Option

Specifications are subject to change.

# MEMO

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## 4. Alignment and Adjustments

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### 4-1 General Alignment Instructions

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1. Usually, a color TV-VCR needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.
2. Observe the picture for good black and white details. There should be objectionable color shading; if color shading is present, demagnetize, perform 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.

### 4-2 Automatic Degaussing

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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 is moved or turned in a different direction, the power should be OFF 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 turning power OFF.

If color shading persists, perform the following Color purity and Convergence adjustments.

### 4-3 High voltage Check

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**CAUTION :** There is no high voltage adjustment on this chassis. The B+ power supply should be +135 volts (with 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. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 32 KV under any conditions.

## 4-4 SCREEN Adjustment

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1. Input Toshiba Pattern
2. Enter "Service Mode".(Refer to "Service Mode")
3. Select "G2-Adjust".
4. Set the values as below.

29 Inch
<b>IBRM = 215</b>
<b>WDRV = 44 -&gt; 47</b>
<b>CDL = 235 -&gt; 210</b>
<b>COLR G B = 122 -&gt; 45</b>

5. Turn the SCREEN VR until "MRCR G B" and "MRWDG" are green and those value are about 100.  
(The incorrect SCREEN Voltage may result that "MRCR G B" and "MRWDG" should be red)

**Note 1.** When you do not have Toshiba Pattern, follow this method.

1. Set the TV on the condition that AV mode no signal(black)
2. Enter the "Menu" and set the mode to blue screen off.
3. Enter the "Service Mode".
4. Select " G2-Adjust".
5. Set the values as below.

**IBRM = 215**  
**WDRV = 47**  
**CDL = 210**  
**COLR G B = 45**

6. Turn the SCREEN VR until the value of " MRCR G B" is about 120. Do not mind that the "OSD" Color is red.

◆ After completing G2-Adjust, follow this procedure.

- ① Enter the "Video Adjust 1".
- ② Choose any item in menu. (ex. Select "Red Cutoff")
- ③ Change the value of item you select, and recover the value.

For example, when the value of "Red Cutoff" is 127, change the value to 128 and restore the value to 127.

If you do not follow this procedure, the picture may be abnormal.  
For example, when the TV set is on, the picture becomes brighter gradually.

## 4-5 E<sup>2</sup>PROM (IC902) Replacement

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1. When IC902 is replaced, all adjustment data revert to the initial values. So, all adjustment values when servicing should be readjusted.
2. After IC902 is replaced, connect the AC power supply cord.
3. Turn the power switch ON.
4. In stand-by, warm up the TV for at least 10 seconds.
5. Power on the TV.

## 4-6 White Balance Adjustment

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■ Equipment : Color-Analyzer (CA-100)

■ Input Signal : Pattern signal (Toshiba pattern)

1. Select STANDARD from the menu.
2. Input an 100% White pattern.
3. Enter the "Service Mode". (Refer to "4-8 Service Mode")
4. Warm up the TV set at least for 30 minutes.
5. Input a Toshiba pattern signal.
6. Enter the "Video Adjust1".
  - Adjust "Sub Contrast" so that Y (luminance) becomes  $34 \text{ ft} \pm 3$ .
  - Use "Red Drive" and "Blue Drive" to adjust High-Light (x : 290, y : 300)
  - Adjust "Sub Bright" so that Y (luminance) becomes  $1.3 \text{ ft} \pm 0.3$ .
  - Use "Red Cutoff" and "Blue Cutoff" to adjust Low-Light (x : 290, y : 300).
7. Adjust CA-100 so that the final adjustment value can be fixed.
8. Use the Channel Up/Down (▲/▼) buttons to move the cursor on the adjustment modes.
9. Use the Volume +/- buttons to change the adjustment value.

**Note 2. 29V1 CHANGE**

**ASSY-MAIN**

BEFORE			AFTER			CAUSE	MODEL
LOC NO	CODE NO	SPEC	LOC NO	CODE NO	SPEC		
R226	AZ261102	1KOHM,5%,1/8W	R226	AZ261471	470 OHM,5%,1/8W	A Improvement of TTX Error	All Model
J221	AZ664147	WIRE-NO SHEATH CU	C203	AZ164009	C-AL;50V 10uF		
J908	AZ664147	WIRE-NO SHEATH CU	R944	AZ261392	3.9 KOHM,5%,1/8W		
NONE	NONE	NONE	R954	AZ261473	47 KOHM,5%,1/8W		
NONE	NONE	NONE	R910	AZ261223	22 KOHM,5%,1/8W		
NONE	NONE	NONE	R955	AZ261101	100 OHM,5%,1/8W		
R910	AZ261102	1KOHM,5%,1/8W	R956	AZ261471	470 OHM,5%,1/8W		
R911	AZ261301	300 OHM,5%,1/8W	R911	AZ261331	330 OHM,5%,1/8W		
R912	AZ261301	300 OHM,5%,1/8W	R912	AZ261103	10 KOHM,5%,1/8W		
C923	AZ161102	C-C,AXIAL;50V 1NF	L910	AZ363067	8.2uH AL02		
C926	DELETE	DELETE	C926	AZ664147	C-C,AXIAL;150 PF		
J204	AZ664147	JUMPER	J204	DELETE	DELETE		
NONE	NONE	NONE	J913	AZ664147	JUMPER		
L210	AZ361008	AL02 3.3uH	L210	AZ664147	JUMPER		
J406	AZ362003	F/BEAD ,6MM	J406	AZ664147	JUMPER		
L222	NONE	NONE	L222	AZ361010	4.7uH AL02		
C410	DELELTE	DELETE	C410	AZ162005	C-FILM,PEF;220nF,5%,250V,TP		
J239	AZ664147	JUMPER	J239	DELETE	DELETE		
J817	NONE	NONE	J817	AZ664147	JUMPER		
L413	NONE	NONE	L413	AZ664147	JUMPER		
J709	AZ664147	JUMPER	DELETE	DELETE	DELETE		
J701	NONE	NONE	J701	AZ664147	JUMPER		
L412	NONE	NONE	L412	AZ362003	F/BEAD ,6MM		
			R403	AZ263070	2W 10 ohm		
			D403	AZ462005	DIODE 1N4004		
NONE	NONE	NONE	CN701A	AZ760241	ASSY-LEAD CONNECTOR;3P		
J226	DELETE	DELETE	J226	AZ664147	WIRE-NO SHEATH CU		
J231	AZ261222	2.2KOHM,5%,1/8W	J231	DELETE	DELETE		
R301	AZ268057	1.6KOHM,5%,1/2W	R301	AZ264003	4.7Kohm,1%,1/2W		
R302	AZ268058	7.5Kohm,1%,1/2W	R302	AZ264007	22Kohm,1%,1/2W		
R304	AZ268059	0.68ohm,5%,2W,AG	R304	AZ263061	1.2ohm,5%,2W,AG		
TOP	DELETE	DELETE	R307	AZ263061	1.2ohm,5%,2W,AG		
R314	AZ268048	22Kohm,1%,1/2W	R314	AZ268048	22Kohm,1%,1/2W		
R315	DELETE	DELETE	R315	AZ268041	51Kohm,1%,1/2W		
C303	AZ166050	O.015nF,5%,50V	C303	AZ166032	O.005nF,5%,500V		
R926	NONE	NONE	R926	AZ664147	JUMPER		
Q907	NONE	NONE	Q907	AZ561003	KSC815,NPN,400mW,TO-92,TP		
R902	NONE	NONE	R902	AZ261102	1KOHM,5%,1/8W,AA,		
R952	NONE	NONE	R952	AZ261103	10KOHM,5%,1/8W		
J902	NONE	NONE	J902	AZ664147	JUMPER		
R919	AZ261103	10KOHM,5%,1/8W	R919	AZ261471	470 OHM,5%,1/8W		
TOP	AZ166023	C-C;400V 103	C830	AZ166023	C-C;400V 103		
TOP	AZ263076	2W 27	R826	AZ263076	2W 27		
J630	NONE	NONE	J630	AZ664147	JUMPER		
D405	AZ462001	1N4148	D405	AZ664147	JUMPER		
C415	AZ162031	POLY 50V 222	C415	AZ162031	POLY 50V 272		
C416	AZ166022	POLY 100V 103	C416	AZ162012	POLY 50V 472		
C411	AZ166034	POLY 50V 332	C411	AZ162031	POLY 50V 222		
C212	AZ162006	POLY 50V 223	C212	AZ166022	POLY 100V 103		
R241	AZ664147	JUMPER	R241	AZ261680	68ohm,5%,1/8W		
R242	DELETE	DELETE	R242	AZ261750	75ohm,5%,1/8W		
L208	AZ664147	JUMPER	L208	AZ363060	INDUCTOR-AXIAL;2.2uH,5%		
C246	DELETE	DELETE	C246	AZ161271	C-C,-AXIAL;270PF,10%,50V		
C247	DELETE	DELETE	C247	AZ161999	C-C,-AXIAL;18PF,10%,50V		
C248	DELETE	DELETE	C248	AZ161271	C-C,-AXIAL;270PF,10%,50V		
J829	AZ664147	JUMPER	J829	DELETE	DELETE		
J830	AZ664147	JUMPER	J830	DELETE	DELETE		
F802A	DELETE	DELETE	F802A	AZ664014	FUSE-HOLDER;-,-,30MOHM		
F802B	DELETE	DELETE	F802B	AZ664014	FUSE-HOLDER;-,-,30MOHM		
FD802S	DELETE	DELETE	FD802S	AZ760242	FUSE;800mA		
FD802S	DELETE	DELETE	FD802S	AZ760243	FUSE;1A		
LX801S	AZ363064	28-20MH 1.5A,+,-2.0,1.5K	LX801S	AZ363064	28-20MH 1.5A,+,-2.0,1.5K		
LX802S	DELETE	DELETE	LX802S	AZ363064	28-20MH 1.5A,+,-2.0,1.5K		
CX801S	AZ166013	220nF,20%,250V,TP,-,22.5mm	CX801S	AZ166013	220nF,20%,250V,TP,-,22.5mm		
CX802S	AZ166013	220nF,20%,250V,TP,-,22.5mm	CX802S	AZ166013	220nF,20%,250V,TP,-,22.5mm		
						50Hz : 800mA 100Hz : 1 A	All Model
						Against Conduction	

## ASSY-SIPADOS(9401)

BEFORE			AFTER			CAUSE	MODEL
LOC NO	CODE NO	SPEC	LOC NO	CODE NO	SPEC		
IC201S	AZ760240	Assy-sipados,SDA9401,F5	IC201S	AZ760244	Assy-sipados,SDA9401,F6		
IC3	AZ760222	DDP3310B-E4,PLCC,68P,-,5V,-	IC3	AZ760245	DDP3310B-F6,PLCC,68P,5V,	A Improvement of TTX	ASSY-SIPADOSS MODULE
C29	AZ166044	0.27nF,5%,50V,NP0,TP,1608	C29	DELETE	DELETE	A Improvement of AV CROSSTALK	
C30	AZ166041	0.018nF,5%,50V,NP0,TP,1608	C30	AZ268050	0ohm,5%,1/16W,DA,TP,1608		
C31	AZ166044	0.27nF,5%,50V,NP0,TP,1608	C31	DELETE	DELETE		
R8	AZ268055	75ohm,5%,1/16W,DA,TP,1608	R8	DELETE	DELETE		
R7	AZ268053	68ohm,5%,1/16W,DA,TP,1608	R7	AZ268050	0ohm,5%,1/16W,DA,TP,1608		
L1	AZ363074	2.2uH,10%,6x4mm	L1	DELETE	DELETE		

**Note 3. PCB CORRECTION CONTENTS**

LOC	PCB correction contents	Remark
C242	DELETE	Delete unnecessary materials and locations
C410	DELETE	
J220	DELETE	
J221	DELETE	
J231	delete only material(LOC exist)	
J913	JUMPER added	A Improvement of TTX ERROR
C203	16V 10uF added	
R944	1/8W 3.9K	
R956	1/8W 470 added	
R954	1/8W 47K added	
R955	1/8W 100 added	
C926	C-AXIAL;150P	
L222	JUMPER added	H-OUT LINE
J701	JUMPER added	2H-Noise
CN701A	3P WIRE OPTION(AA39-00306A)	2H-Noise (TO CN702A)
CN702	Polarity changed.(Pattern changed)	Against 2H-Noise
J817	JUMPER added	Against 2H-Noise
J204	JUMPER added	GND JUMPER
CN302	DELETE	Delete if R307 add.
R307	2W 1.2ohm(AG) added	Process changed(E -> V)
L910	8.2uH AL02	



## 4-7 Factory Adjustment

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### 4-7-1 Service Mode

1. To enter the "Service Mode", Press the remote-control keys in this sequence :

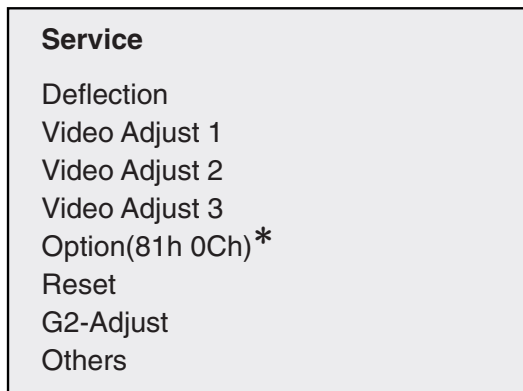
- If you do not have Factory remote-control



- If you have Factory remote-control



2. After the Service Mode is entered, the initial screen is as shown in the figure below.



\* These hexa digits are check sum value which depends on the MICOM.  
If check sum value is changed, the value of E<sup>2</sup>PROM Data newly initialed.

3. Use the Channel Up/Down buttons to move the cursor in the adjustment parameters.

**Note 2.**

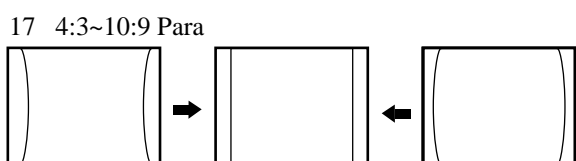
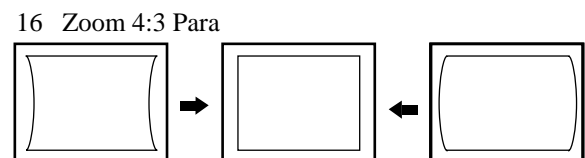
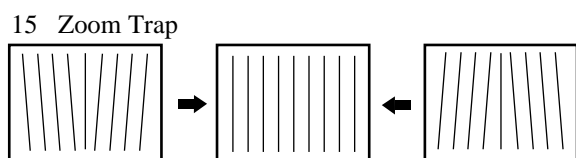
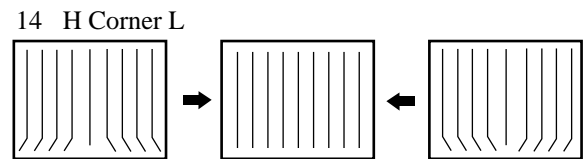
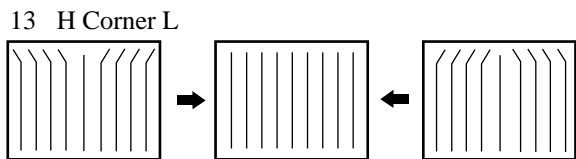
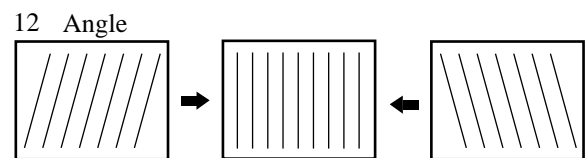
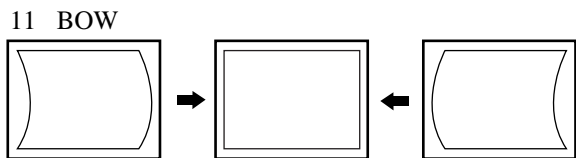
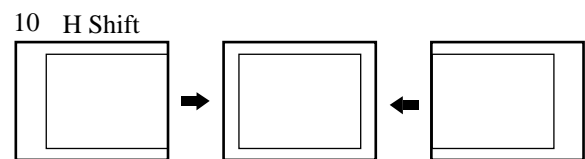
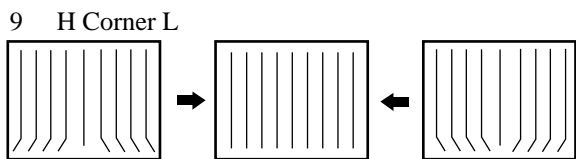
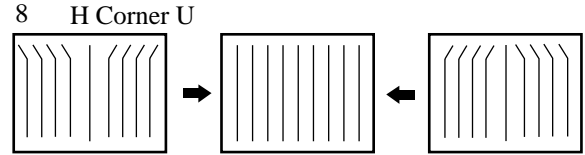
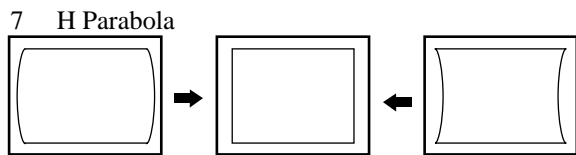
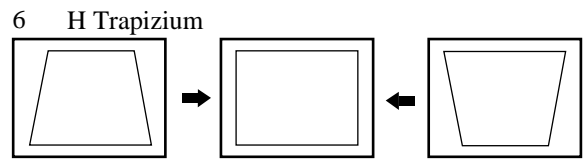
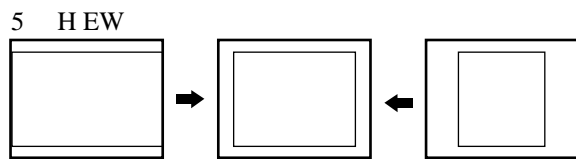
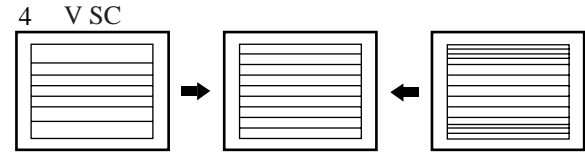
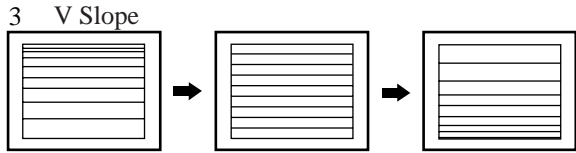
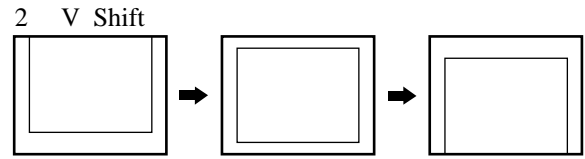
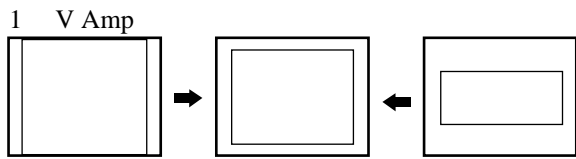
- When CRT, CRT PCB, FBT, E<sup>2</sup>PROM (sometimes MICOM) is replaced, the adjustment values should be controlled.
- After the Service adjustment is completed, Do not select "Reset" in the service mode menu. (After above procedure is done, power is on initially and the "Plug and Play" will be operated.)

**4-7-2 Memory Data**

## 4-7-2(A) DEFLECTION (GEOMETRIC ADJUSTMENT VALUE)

<b>No.</b>	<b>OSD</b>	<b>Initial Value</b>	<b>Function</b>	<b>Remark</b>
<b>1</b>	V Amp	98	Adjusts Vertical picture size. Adjusts 4:4 upper and lower picture size in a lion head pattern at factory.	<b>GEOM</b>
<b>2</b>	V Shift	143	Adjusts Vertical picture position.	<b>GEOM</b>
<b>3</b>	V Slope	125	Adjusts Vertical Slope Correction.	<b>FIX</b>
<b>4</b>	V SC	230	Adjusts Vertical s-correction.	<b>FIX</b>
<b>5</b>	H EW	193	Horizontal east west width. Adjusts 5:5 left and right picture size in a lion head pattern at factory.	<b>GEOM</b>
<b>6</b>	H Trapizium	72	Adjusts horizontal Trapezium.	<b>GEOM</b>
<b>7</b>	H Parabola	75	Adjusts Horizontal Parabola.	<b>GEOM</b>
<b>8</b>	H Corner U	112	Adjusts the top horizontal corner of picture. Adjusts so that the top of H corner can be linear.	<b>FIX</b>
<b>9</b>	H Corner L	138	Adjusts the bottom horizontal corner of picture. Adjusts so that the bottom of H corner can be linear.	<b>FIX</b>
<b>10</b>	H Shift	161	Adjusts Horizontal Position.	<b>GEOM</b>
<b>11</b>	BOW	128	Adjusts Horizontal BOW.	<b>GEOM</b>
<b>12</b>	Amgle	128	Adjusts Horizontal Angle.	<b>GEOM</b>
<b>13</b>	H Corner U6	140	Adjusts so that the top horizontal corner of picture can be linear.	<b>GEOM</b>
<b>14</b>	H Corner L6	141	Adjusts so that the bottom horizontal corner of picture can be linear.	<b>GEOM</b>
<b>15</b>	V Max	200	Adjusts Max value of vertical amplitude	<b>FIX</b>
<b>16</b>	Zoom1 Amp	175	Adjusts vertical amplitude in zoom1.	<b>FIX</b>
<b>17</b>	Zoom2 Amp	202	SIM-806HEW only.	<b>FIX</b>
<b>18</b>	Zoom Trap	128	Adjusts horizontal Trapezium in Zoom	<b>FIX</b>
<b>19</b>	Zoom 4:3 Para	125	Corrects the vertical linearity in Zoom mode of P-SIZE. The data depends on CRT (see data above).	<b>FIX</b>
<b>20</b>	4:3-16:9 Para	138	Corrects the vertical linearity in 16:9 mode of P-SIZE. The data depends on CRT (see data above).	<b>FIX</b>

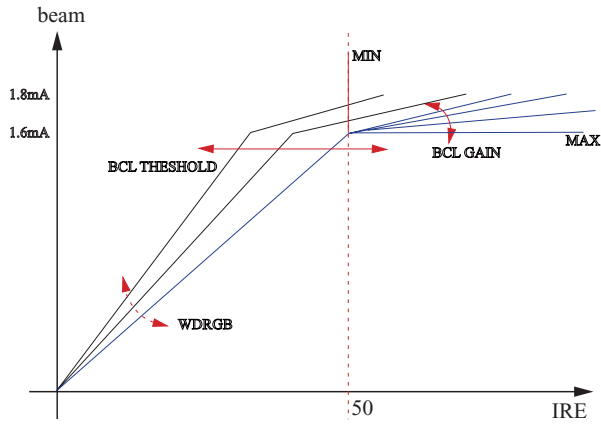
4-7-2(B) SCREEN CHANGE (I2C BUS GEOMETRIC ADJUSTMENT)



## 4-7-2(C) VIDEO ADJUST 1

<b>No.</b>	<b>OSD</b>	<b>Initial Value</b>	<b>Function</b>	<b>Remark</b>
<b>1</b>	Red Cutoff	127	Adjusts the gain of red output from low light.	<b>W/B</b>
<b>2</b>	Green Cutoff	127	Adjusts the gain of green output from low light. Fix this gain to 127.	<b>FIX</b>
<b>3</b>	Blue Cutoff	127	Adjusts the gain of blue output from low light.	<b>W/B</b>
<b>4</b>	Red Drive	127	Adjusts the gain of red output from high light.	<b>W/B</b>
<b>5</b>	Green Drive	127	Adjusts the gain of green output from high light. After "G2-Adjustment" and White Balance adjustments are complete, this data is fixed to 127."	<b>FIX</b>
<b>6</b>	Blue Drive	127	Adjusts the gain of blue output from high light.	<b>W/B</b>
<b>7</b>	Sub Bright	90	Adjust sub brightness level to set the low light luminance in Picture Standard mode.	<b>W/B</b>
<b>8</b>	Sub Contrast	52	Adjust sub brightness level to set the low light luminance in Picture Standard mode. Set the value of sub contrast to near 50. The user control "contrast" depends on this value. User contrast=[sub cont*2/100]If sub contrast data is 10, user contrast changes into 1/5step.	<b>W/B</b>
<b>9</b>	Sub Color	2	Adjusts sub color level to set the gain for color in Picture Standard mode.	<b>FIX</b>
<b>10</b>	Sub Tint	17	Adjusts the sub tint level of NTSC color system.	<b>FIX</b>
<b>11</b>	Sub Threshold	128	Beam Current Limit threshold current if SENSE input used 0...-2048 BCL threshold current if RSW1 input used(max. ADC output ~2047)	<b>FIX</b>
<b>12</b>	BCL Gain	59	Beam Current Limit loop Gain	<b>FIX</b>
<b>13</b>	BCL Time	144	BCL time constant; 0 = off	<b>FIX</b>
<b>14</b>	BCL Time2	1	Teletext Contrast Level	<b>FIX</b>
<b>15</b>	BCL Bri Reduction	125	BCL Brightness Reduction	<b>FIX</b>
<b>16</b>	P.DK.YC Delay	5	PAL-D/K Y/C Delay	<b>FIX</b>
<b>17</b>	P.I.YC Delay	7	PAL-I Y/C Delay	<b>FIX</b>
<b>18</b>	P.L.YC Delay	6	PAL-L Y/C Delay	<b>FIX</b>
<b>19</b>	S.BG.YC Delay	7	SECAM-B/G Y/C Delay	<b>FIX</b>
<b>20</b>	S.DK.YC Delay	2	SECAM-D/K Y/C Delay	<b>FIX</b>
<b>21</b>	S.L.YC Delay	5	SECAM-L Y/C Delay	<b>FIX</b>
<b>22</b>	P.BG.YC Delay	7	PAL-B/G Y/C Delay	<b>FIX</b>
<b>23</b>	P.YC Delay	6	External PAL Y/C Delay	<b>FIX</b>
<b>24</b>	S.YC. Delay	2	SExternal SECAM Y/C Delay	<b>FIX</b>
<b>25</b>	N.YC. Delay	3	External NTSC Y/C Delay	<b>FIX</b>

**Note 3. Beam Control Limit Characteristic**



**Table 1. YC Delay Adjustment Table**

YC Delay	PAL					SECAM					NTSC	
	Def.	BG	DK	I	L	Def.	BG	DK	I	L	Def.	M
<b>Value</b>	4	3	6	6	7	1	1	5	8	5	4	3

🔍 The "Def." means that TV is in AV mode.

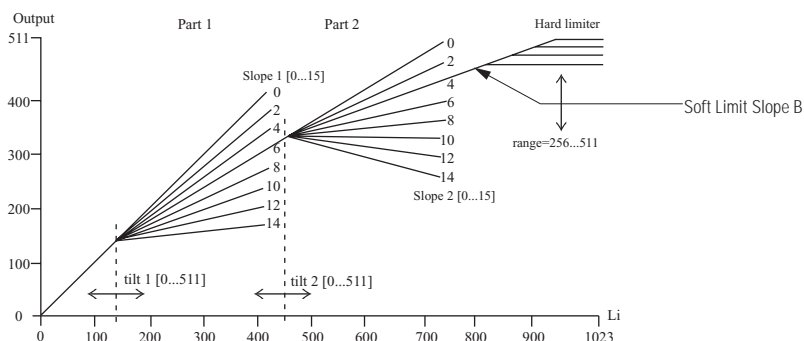
## 4-7-2(D) VIDEO 2 ADJUST

<b>No.</b>	<b>OSD</b>	<b>Initial Value</b>	<b>Function</b>	<b>Remark</b>
<b>1</b>	Coring	0	Luminance peaking filter, coring level	<b>FIX</b>
<b>2</b>	NR Off Value	5	Luminance peaking filter coring.	<b>FIX</b>
<b>3</b>	Melody Volume	6	Sets the level of melody volume in Picture ON. Differently controlled according to buyer and area.	<b>FIX</b>
<b>4</b>	RGB BRIGHT	68	Adjusts RGB input signal brightness	<b>FIX</b>
<b>5</b>	RGB CONTRAST	29	Adjusts RGB input signal contrast	<b>FIX</b>
<b>6</b>	EHT H Time	0	EHT time constant for horizontal phase compensation 0 = off	<b>FIX</b>
<b>7</b>	EHT H Phase	133	EHT compensation coefficient for horizontal phase ( $\approx 1.5\text{ms}$ )	<b>FIX</b>
<b>8</b>	EHT H	100	EHT compensation coefficient for horizontal amplitude( $\approx 100\%$ )	<b>FIX</b>
<b>9</b>	EHT V	70	EHT compensation coefficient for vertical amplitude ( $\approx 25\%$ )	<b>FIX</b>
<b>10</b>	EHT V TIME	10	time constant for control of vertical and horizontal amplitude EHT compensation 0 = off	<b>FIX</b>
<b>11</b>	EHT V THRES	10	threshold for vertical & horizontal amplitude EHT compensation	<b>FIX</b>
<b>12</b>	EHT V2	60	EHT compensation coeff for vertical amplitude valid if beamcurrent > EHTV_THRES"	<b>FIX</b>
<b>13</b>	EHT H2	100	EHT compensation coeff for horizontal amplitude valid if beamcurrent >EHTV_THRES"	<b>FIX</b>
<b>14</b>	TTX Position	5	Adjusts Horizontal Position the TTX	<b>FIX</b>
<b>15</b>	TTX Contrast	160	Adjusts contrast on TTX picture.	<b>FIX</b>
<b>16</b>	VSU	96	Vertical Setup Time. Delays the vertical sync to solve the jitter of OSD and TTX . Check OSD while varying 96 ~ 111 step by step and then an 1H line moves at two points. If the value is set at the first point or second point, an OSD jitter may happen. Also, if the value is set between the first and second points, a TTX jitter may happen. So, the value of VSU should be set after giving some margins (three steps).	<b>FIX</b>

4-7-2(E) VIDEO 3 ADJUST

No.	OSD	Initial Value	Function	Remark
1	Peak White Max	190	Sets Peak White Limit point.	FIX
2	Peak White Tilt	50		FIX
3	VBST	184	Vertical blanking start Picture the bottom position SAG or cut problem countermeasure	FIX
4	VBSOB	25	Vertical blanking stop Picture upside position SAG or cut problem countermeasure	FIX
5	Soft Limit Slope B	29		FIX
6	V Peaking	3	Controls the size of shoot about the horizontal line of Luminance	FIX
7	HBST	24	Horizontal blanking start Picture right edge position SAG or cut problem countermeasure"	FIX
8	Gain1(Video)	63	Velocity video gain	FIX
9	Delay1(Video)	1	Velocity video delay	FIX
10	Velocity Limit	126	Velocity limit	FIX
11	Velocity Delay	7	Velocity delay	FIX
12	Velocity Coring	3	Velocity frequency coring	FIX
13	V Slice Level	1	Allows the sync slice level of sync separate block to be changed. This item corresponds to the case where a vertical bouncing happens according to signal conditions by area (overmodulation, especially). 0: 100% 1: 90% 2: 75% 3: 60%"	FIX

**Note 4. Soft Limit & Hard Limit**



*"Soft Limit" is that Limiting the peak white without feed-back, but "Peak Limit" is that with feed-back for white peak level*

## 4-7-2(F) OPTION

No.	OSD	Initial Value	Function	Remark
1	System CW	CW	Select the Broadcasting System - CZ : PAL/SECAM-B/G,D/K,I,L CW : It is added SECAM-L function in CZ	<b>FIX</b>
2	AV by CH Key	ON	On : It can select AV Mode for CH key when the number of Pannel key is 5. Off : In case AV key is on the panel	<b>FIX</b>
3	Sound	V-DOLBY	Select the sound system, for example A2-Stereo/Nicam,V-dolby,Mono, L-Stereo When using MSP3411G and V-Dolby MSP3400D/MSP3410, select A2-Stereo/Nicam	<b>FIX</b>
4	CRT	WIDE	Select P-Size Mode	<b>FIX</b>
5	AV Mode	2SCART+S	Select EXT Jack (RCA/SCARTS-1,2,S-VIDEO,DVD)	<b>FIX</b>
6	Speaker	NON	Select the Speaker . If Dome speaker, Select 'Dome Spk'. If Non Dome speaker, select 'Non Dome Spk'	<b>FIX</b>
7	X-RAY	OFF	Select X-Ray On/Off (On : USA, Of f: Other )	<b>FIX</b>
8	TTX TOP	OFF	Sets TOP TTX On/Off	<b>FIX</b>
9	Tilt Control	ON	Select Tilt On/Off	<b>FIX</b>
10	Auto FM	ON	On : In Nicam Broadcasting Channel, If it happened 'Nicam Ident check bits error'or 'Sound Noise', Set Auto FM Mode. Of f :In Nicam Broadcasting Channel, Keep Nicam Mode till Nicam Ident Check bits are perfectly Off .	<b>FIX</b>
11	Text Language	WEST	West Europe : English/German/Skandinavian/Italian/French/Spainsh/Czech East Europe : Polish/Czech/Rumanian/Slovenian/Croatian//French/ Skandinavian/German/Italian Russian : Russian/Ukranian/Estonian/Czech/German/Lettish/English Greek-Turkey : English/Turkey/Greek/French/Skandinavian/German/ Spainsh/Italian/ Arabic : English/Arabic/French Farsi : English/Farsi/French Arab-Hebrew : Arabic/Hebrew	<b>FIX</b>

**Note 5.**

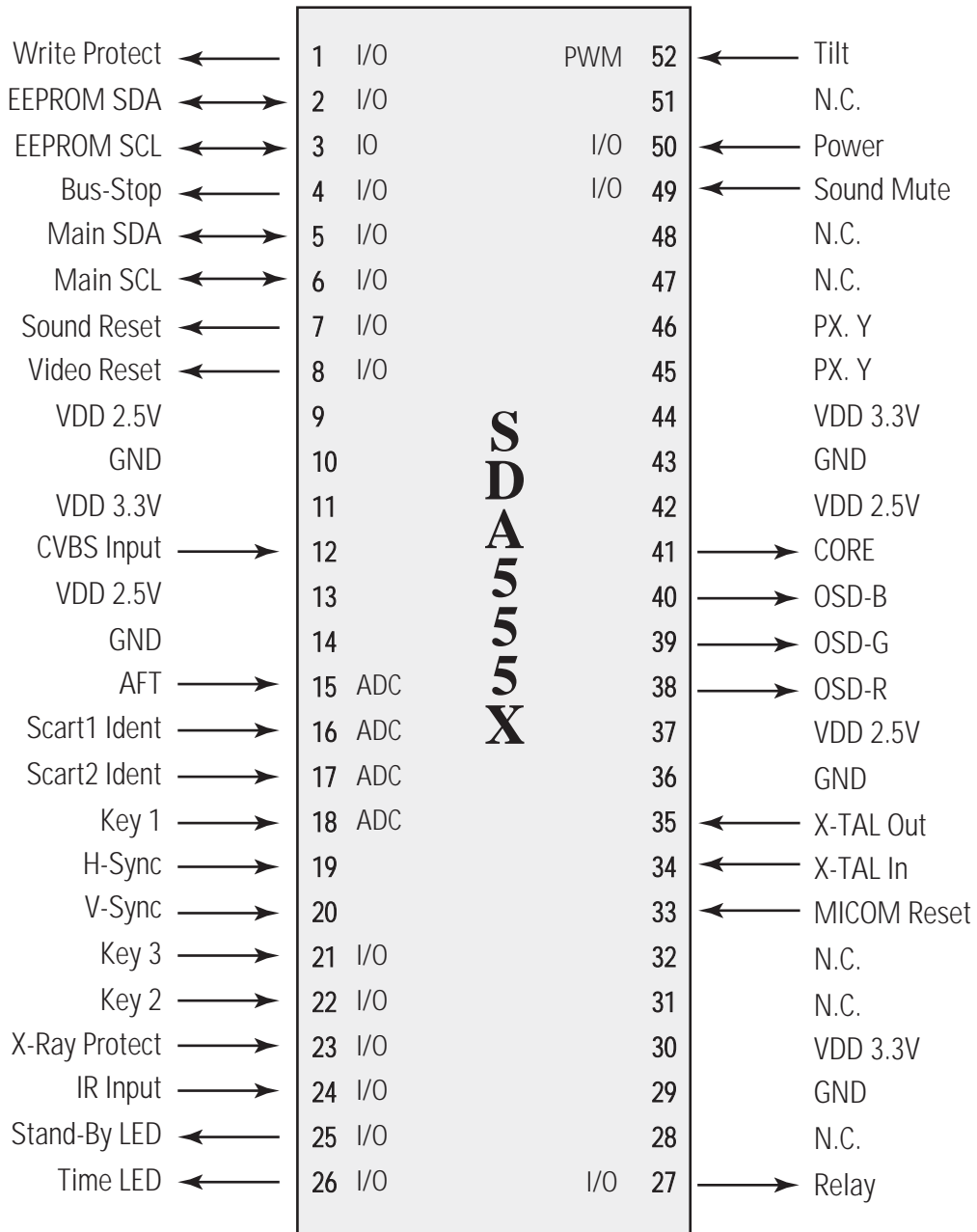
Sound	IC601
A2/NICAM	MSP3400D, MSP3410D
V-DOLBY	MSP3411G



4-7-2(F) RESET

No.	OSD	Initial Value	Function	Remark
1	MRCR		Measurement Result Resisters; Cutoff/Leakage Red	Read Only (110 +/- 10)114
2	MRCG		Measurement Result Resisters; Cutoff/Leakage Green	Read Only (110 +/- 10)
3	MRCB		Measurement Result Resisters; Cutoff/Leakage Blue	Read Only (110 +/- 10)
4	MRWDG		Measurement Result Resisters; White Drive	Read Only (110 +/- 10)120
5	BRM			Vcut-off= 160V
		215	Internal Brightness, Measurement (0 .. 511), the center value is 256, the brightness for measurement can be set to measure at higher cutoff current. The measurement brightness is independent of the drive values.	FIX
6	WDRV	47	White Drive Measurement Control; RGB Values for White Drive Beam Current Measurement	FIX
7	CDL	210	Cathode Drive Level Uses the same register as the RGB drive in Video adjust-1.	FIX
8	COL(R)	45	Cutoff Level Red Uses the same register as the RED cutoff in Video adjust-1.	FIX
9	COL(G)	45	Cutoff Level Green Uses the same register as the GREEN cutoff in Video adjust-1.	FIX
10	COL(B)	45	Cutoff Level Blue Uses the same register as the BLUE cutoff in Video adjust-1.	FIX

## 4-8 MICOM



**4-8-2 Pin Assignment Specification**

<b>PIN NO</b>	<b>FUNCTION</b>	<b>ASSIGN</b>	<b>IN/OUT</b>	<b>ACTIVE H/L</b>	<b>DESCRIPTION</b>
<b>1</b>	I/O	Write Protect	Out	Low	EEPROM Write Protection
<b>2</b>	I/O	ROM SDA	I/O		EEPROM Serial Data Line
<b>3</b>	I/O	ROM SCL	I/O		EEPROM Serial Clock Line
<b>4</b>	I/O	Bus Stop	In	Low	Disable Micom IIC
<b>5</b>	I/O	Main SDA	I/O		Peripheral IC Serial Data Line
<b>6</b>	I/O	Main SCL	I/O	Low	Peripheral IC Serial Clock Line
<b>7</b>	I/O	Sound Reset	Out	Low	MSP IC Initial Control
<b>8</b>	I/O	Video Reset	Out		VDP IC Initial Control
<b>9</b>	Vdd	VDD 2.5V			
<b>10</b>	GND				
<b>11</b>	Vdd	VDD 3.3V			
<b>12</b>	CVBS	CVBS Input	In		TTX CVBS Input
<b>13</b>	Vdd	VDD 2.5V			Analog B+
<b>14</b>	GND				Analog Ground
<b>15</b>	ADC	AFT	In		Auto Fine Tuning Control
<b>16</b>	ADC	SC1-ID	In		Scart1 Ident
<b>17</b>	ADC	SC2-ID	In		Scart2 Ident
<b>18</b>	ADC	Key1	In		Key1 Input
<b>19</b>	HS	H-Sync	In		Horizontal Sync Input
<b>20</b>	VS	V-Sync	In		Vertical Sync Input
<b>21</b>	I/O	Key3	In		Key3 Input
<b>22</b>	I/O	Key2	In		Key2 Input
<b>23</b>	I/O	X-Ray	In		X-Ray Protection
<b>24</b>	I/O	IR-In	In		Remocon Signal Input
<b>25</b>	I/O	STD-LED	Out		LED Drive Output(Red)
<b>26</b>	I/O	TIM-LED	Out		LED Drive Output(Green)

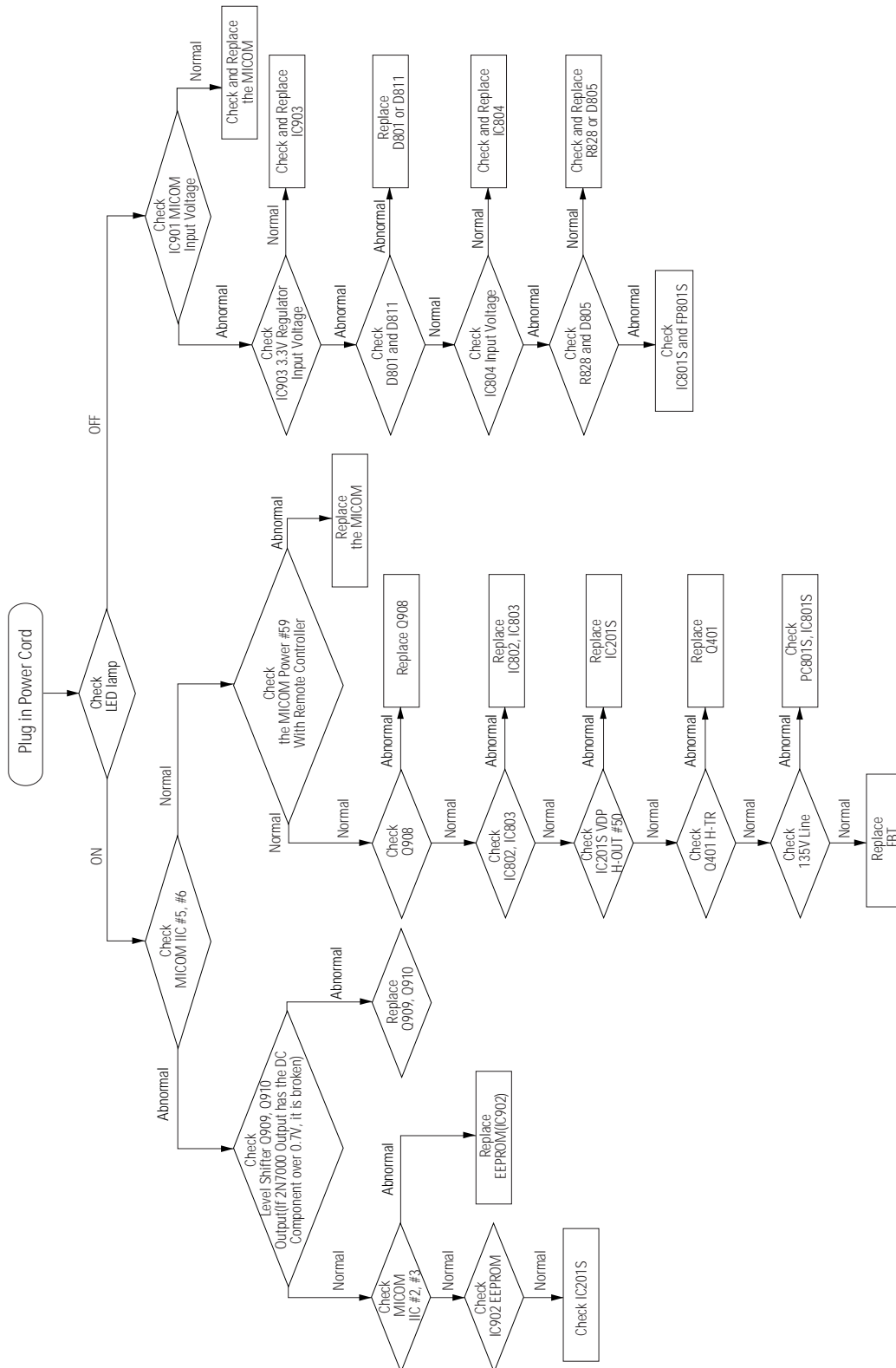
**4-8-2 Pin Assignment Specification (Continued)**

<b>PIN NO</b>	<b>FUNCTION</b>	<b>ASSIGN</b>	<b>IN/OUT</b>	<b>ACTIVE H/L</b>	<b>DESCRIPTION</b>
27	I/O	Relay	Out	Low	Activate Degaussing Coil
28	N.C.				Not Used (Programmed Gound Level)
29	GND				Analog Ground
30	Vdd	VDD 3.3V			Not Used (Programmed Gound Level)
31	N.C.				Not Used (Programmed Gound Level)
32	N.C.				Micom Hardware Reset
33	Reset	Reset	In	Low	Crystal Oscillation Input
34	X-In	X-TAL In	In	6MHz	Crystal Oscillation Output
35	X-Out	X-TAL Out	Out	6MHz	Analog Ground
36	GND				Analog B+
37	Vdd	VDD 2.5V			OSD/TTX Output (Red)
38	R	OSD-R	Out		OSD/TTX Output (Green)
39	G	OSD-G	Out		OSD/TTX Output (Blue)
40	B	OSD-B	Out		Fast Blank/Half Contrast Output
41	COR	CORE	Out		
42	Vdd	VDD 2.5V			
43	GND				
44	Vdd	VDD 3.3V			
45	I/O	PX.Y	In		When The Caption Function Adopted, Used.
46	I/O	PX.Y	Out		
47	N.C.				Not Used (Programmed Gound Level)
48	N.C.				
49	I/O	S-Mute	Out	High	Sound Amp Mute
50	I/O	Power	Out	Low	Picture On/Off Control
51	N.C.				Not Used (Programmed Gound Level)
52	I/O	Tilt	Out	PWM	Tilt Control Output

# MEMO

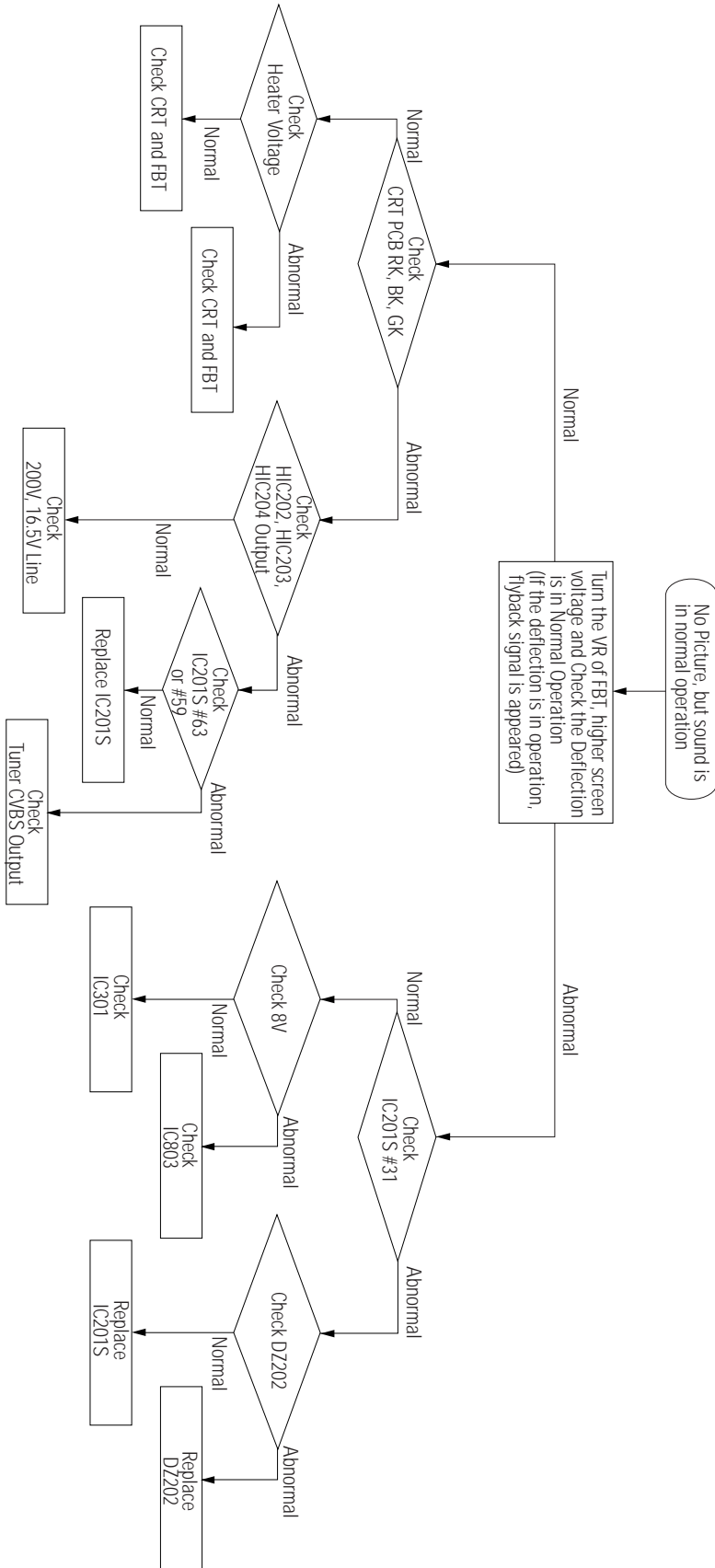
# 5. Troubleshooting

## 5-1 No Power

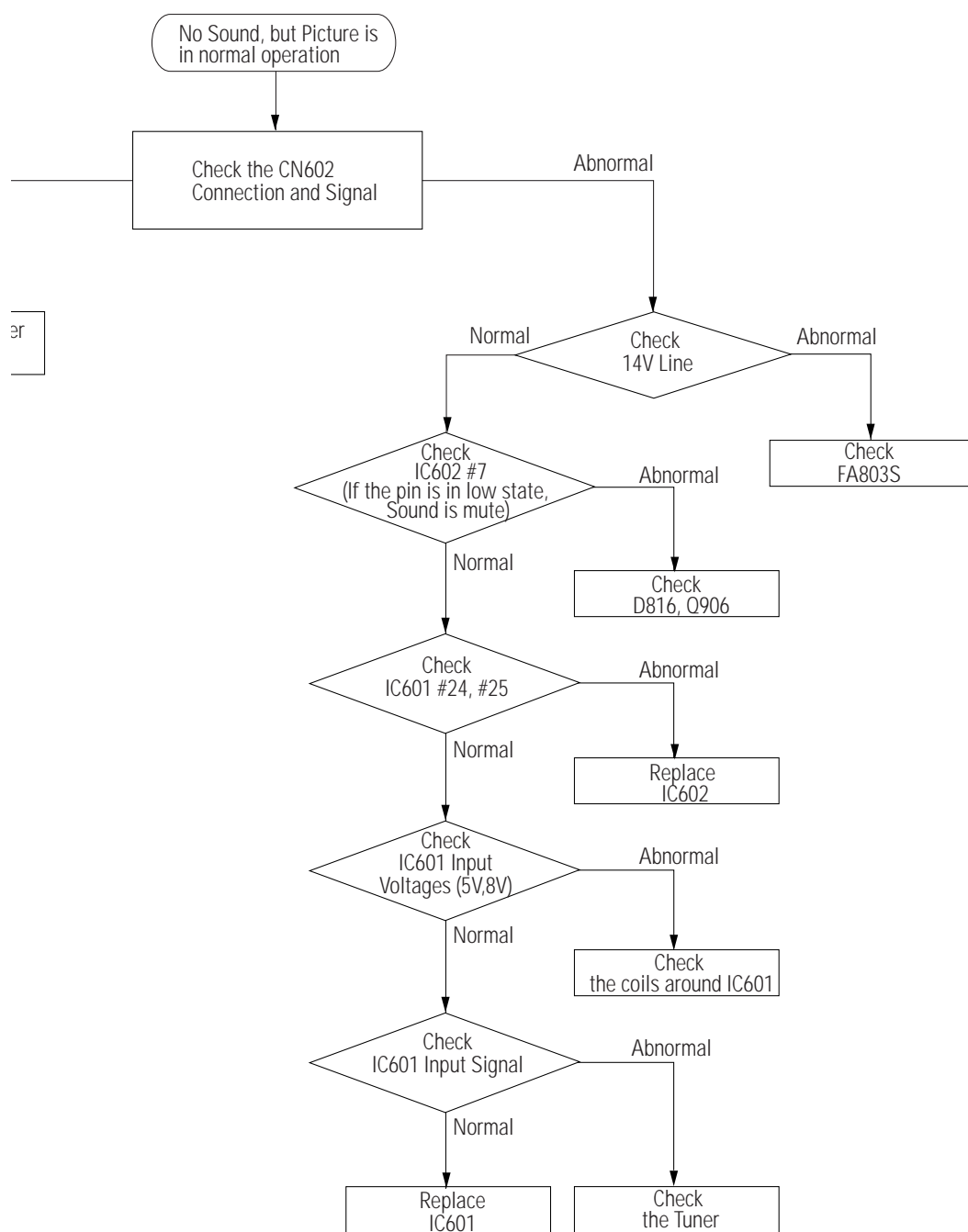


**Note :** When you check whether any component is normal, you must let the output pin be open in order not to be affected by the side of output.

## 5-2 No Picture



## 5-3 No Sound

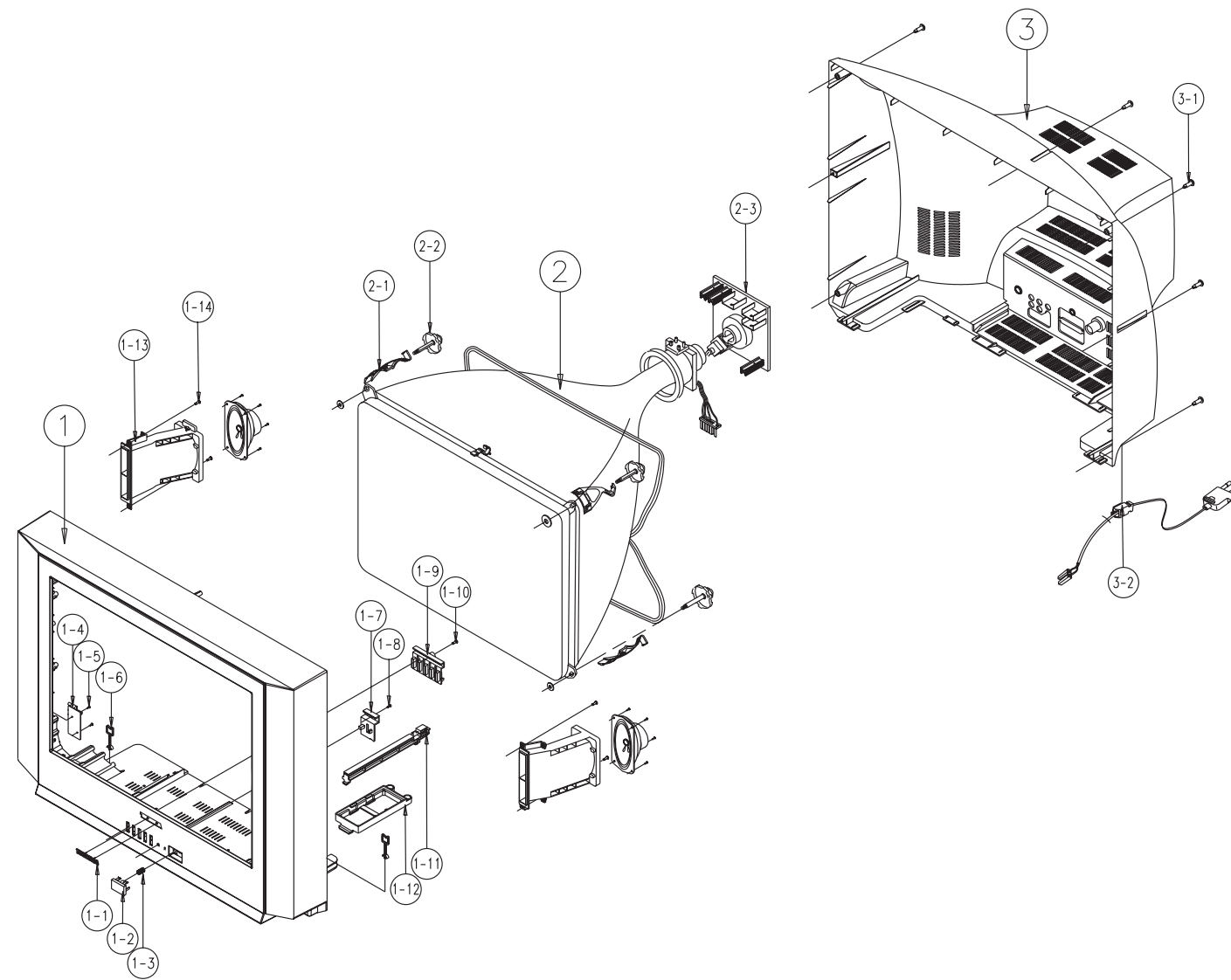




# MEMO

## 6. Exploded View & Parts List

### 6-1 29VH14P



No.	Code No.	Replacement No.	Description;Specification	Q'ty	Remark
1*	HA91-00829A	AZ760162	ASSY CABINET FRONT;29V1,KS2A,FLAT,HIPS	1	
1	AA64-02437B	AZ760166	CABINET-FRONT;29V1,HIPS,HB,KTSA112,WHITE	1	
1-1	AA64-01972A	AZ760128	BADGE BRAND;TOOL,29 TOSHIBA,-,-,-,-,-	1	
1-2	AA64-01970B	AA64-01970B	KNOB POWER;29V1,HIPS,HB,PW-001P,PEARL-WH	1	
1-3	AA61-60003J	AZ760018	SPRING-CS;-SUS304,-,-,OD6,N7,OD6,-,-,-,	1	
1-4	AA95-01513A	AZ760234	ASSY-PCB A/V BOARD;29K8,KS3A,100HZ	1	
1-5	6003-001135	AZ760119	SCREW-TAPTITE;TH,+,B,M4.0,L15,BLK,SWRCH1	2	CF+AV
1-6	AA65-30105A	AZ760035	CLAMP-WIRE;ALL MODEL,NYLON 66,V2,-,NTR,1	2	
1-7	HA64-01971A	AZ760122	WINDOW RMC.LED;SPACE	1	
1-8	6002-000515	AZ760117	SCREW-TAPPING;RH,+,2,M4,L15,ZPC,SWRCH18	2	
1-9	AA64-01969B	AZ760135	KNOB CONTROL;29V1,HIPS,HB,PLANTING-SILVE	1	
1-10	6002-000515	AZ760117	SCREW-TAPPING;RH,+,2,M4,L15,ZPC,SWRCH18	2	CF+KC
1-11	HA61-00711C	AZ760137	HOLDER-PCB;SPACE	1	
1-12	HA61-00987A	AZ760159	HOLDER-PFC;32W8,29A8,28W8,HIPS,ALLFLAT	1	
1-13	AA91-00150B	AZ760228	ASSY-HOLDER,SPK;DP,-,80HM/15W,-,AA91-001	1	
1-14	AA60-10050A	AZ760111	SCREW-ASSY;-SWRCH18A,M4,L25,RH,+,WP,-,Z	4	CF+SPK
2	AA94-05837A	AZ760200	ASSY CRT;A68QCP893X004,+380MG,29,4:3,Y	1	
2-1	AA65-30113A	AZ760107	CLAMP-D,COIL;NYLON 66,V2,BLK,TVI 25-29,-	4	
2-2	AA60-10050V	AZ760110	SCREW-ASSY;-SWRCH18A,M6,L30,HH,+,WC,-,Z	4	CRT+CF
2-3	3704-000114	AZ760188	SOCKET-CRT;14P,29.1,35.5,SN,ISH09SK	1	VA999
3	HA64-02448B	AZ760104	CABINET BACK;29K8,HIPS,V0,GRY	1	
3-1	6003-001025	AZ760109	SCREW-TAPTITE;RH,M4,L20,BLK	5	CB+CF
3-2	AA96-00094A	AZ760177	ASSY-POWER,CORD;DP,CP2/NO(4.0),H/C350MM,	1	

## 7. Electric Parts List

### 7-1 29VH14P

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
<b>ASSY PCB MAIN(OPT)</b>					
	AA94-05920A	ASSY PCB MAIN(OPT):CW29V1DH,KS3A/F,SEB,I	AZ760202	1	
C815	2401-003602	C-AL:220uF,20%,160V,GP,BK,22x25mm,1	AZ166018	1	
CN501	3711-002641	CONNECTOR-HEADER:BOX,10P,1R,2.54MM,STRAI	AZ664184	1	
△ CX801S	2306-000318	C-FILM,MPPF:220nF,20%,250V,TP,-,22.5mm	AZ166013	1	
IC301	HA96-50406B	ASSY-H/S:-,AA62-30180B,LA7845	AZ664185	1	
	1204-000517	IC-VERTIVAL DEF.:LA7845,SIP,7P,-,PLASTIC	AZ661018	1	
	AA62-30180B	HEAT SINK-ES:-,A6063 EXTR.,2,WHT,70MM,-,	AZ664186	1	
	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELYEL)	AZ760146	1	
	0205-000129	GREASE-SILICON:SC102,JAPAN	AZ760065	0.00005	
△ IC401	1202-000103	IC-VOLTAGE COMP.:393,DIP,8P,300MIL,DUAL,	AZ661033	1	
△ IC801S	HA96-50371C	ASSY-H/S:-,AA62-30181H,KA3A1265R,-	AZ664187	1	
	AA13-00101A	IC HYBRID:KA3S1265RD,CN5039,5PIN,-,50T012	AZ664188	1	
	AA61-10386A	BRACKET-IC:-,SECC 100,T1.0,-,KA2S0680,	AZ760147	1	
	AA62-30197D	HEAT SINK-ES:DP:-,AA62-30181H,-,-,-	AZ760148	1	
	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELYEL)	AZ760146	1	
	HA68-02189A	LABEL-WARNING:SPACE	AZ760147	1	
	0205-000129	GREASE-SILICON:SC102,JAPAN	AZ760065	0.00005	
JA701	3722-000195	JACK-SCART:42P,-,SN,BLK,NO	AZ664029	1	
△ NT802S	1404-001045	THERMISTOR-NTC:4.7OHM,15%,2900K,35.0MW,T	AZ664112	1	
△ PC801S	0604-001038	PHOTO-COUPLER:TR,130-260%,200MW,DIP-4,ST	AZ661001	1	
△ PT801S	1404-000002	THERMISTOR-PTC 9ohm,20%,-,-,TR,RECT,-	AZ760203	1	
△ RL801S	3501-001040	RELAY-POWER:12VDC,500mW,10A,1FormA,15mS,	AZ760204	1	
HC801	HA96-00274B	ASSY-H/S:-,COMPLEX,AA62-00066B,FMLG12S	AZ760205	1	
	6003-000334	SCREW-TAPTITE:RH,+2S,M3,L6,ZPC(YE),SWR	AZ760148	5	
	AA62-00066B	HEAT SINK:D2,D3,AL ,T1.0,89,70,-,AA62-00	AZ760206	1	
△ D802	0402-001230	DIODE-RECTIFIER:FMG-G2CS,1000V,3A,TO-220	AZ462020	1	
△ D805	0402-000233	DIODE-RECTIFIER:FML-G12S,200V,5A,-,-	AZ462008	1	
△ D806	0402-000233	DIODE-RECTIFIER:FML-G12S,200V,5A,-,-	AZ462008	1	
△ D807	0402-000233	DIODE-RECTIFIER:FML-G12S,200V,5A,-,-	AZ462008	1	
△ IC805	1203-001006	IC-VOLTAGE REGULATOR:78R05,TO-220F,4P,-,	AZ661012	1	
	0205-000129	GREASE-SILICON:SC102,JAPAN	AZ760065	0.00025	
HC401	HA96-00275E	ASSY-H/S:-,COMPLEX,HA62-00051C,2SC5446	AZ760207	1	
	HA62-00051C	HEAT SINK-PS:-,-,SILVER,HOLE 34mm,29A8	AZ760208	1	
△ D414	0402-001296	DIODE-RECTIFIER:FMP-3FU,1.5KV,5A,TO-3PF,	AZ462021	1	
Q401	0502-001175	TR-POWER:2SC5446,NPN,200000mW,TO-3PL,BK	AZ561021	1	
	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELYEL)	AZ760146	2	
	AA60-30001A	WASHER-PLATE:M3,ID3.5,15X8.5,T1.0,-,SBHG	AZ760149	2	
	AA62-00092A	HEAT SINK-DP:-,AA62-30177A,-,-,-,-	AZ760209	3	
	AA02-00007A	MICA:DPM-04,MICA,22x29x0.15mm	AZ760168	1	
	6003-000334	SCREW-TAPTITE:RH,+2S,M3,L6,ZPC(YE),SWR	AZ760148	3	
	0205-000129	GREASE-SILICON:SC102,JAPAN	AZ760065	0.0001	
△ D801S	0402-001399	DIODE-BRIDGE:GSIB660,600V,6A,SIP-4,BK	AZ462044	1	
IC602	HA96-50369B	ASSY-H/S:-,AA62-30181F,TDA7297,-	AZ760154	1	
	1201-001064	IC-POWER AMP:7297,ZIP,15P,-,DUAL,32DB,PL	AZ661005	1	
	AA62-30181F	HEAT SINK-ES:-,AL6063 EXTR.,2,WHT,50MM,-,	AZ760155	1	
	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELYEL)	AZ760146	1	
	0205-000129	GREASE-SILICON:SC102,JAPAN	AZ760065	0.00005	
IC902	1103-001171	IC-EEPROM:L51DC,16KBit,DIP,8P,300MIL,10m	AZ661031	1	
	HA99-100825	ASSY-PCB,MAIN(ACI):CW29V1,100HZ,KS3A/F	AZ760210	1	
C105	2301-000383	C-FILM,PEF:10nF,5%,50V,TP,6x7x3.2mm,5mm	AZ162012	1	
C103	2301-000383	C-FILM,PEF:10nF,5%,50V,TP,6x7x3.2mm,5mm	AZ162012	1	
C101	2301-000383	C-FILM,PEF:10nF,5%,50V,TP,6x7x3.2mm,5mm	AZ162012	1	
C909	2301-000383	C-FILM,PEF:10nF,5%,50V,TP,6x7x3.2mm,5mm	AZ162012	1	
C228	2301-000356	C-FILM,PEF:47nF,5%,50V,TP,7.5x4.0x6.5,5m	AZ162011	1	
C230	2301-000356	C-FILM,PEF:47nF,5%,50V,TP,7.5x4.0x6.5,5m	AZ162011	1	
C809	2301-000356	C-FILM,PEF:47nF,5%,50V,TP,7.5x4.0x6.5,5m	AZ162011	1	
C810	2301-000356	C-FILM,PEF:47nF,5%,50V,TP,7.5x4.0x6.5,5m	AZ162011	1	
C811	2301-000356	C-FILM,PEF:47nF,5%,50V,TP,7.5x4.0x6.5,5m	AZ162011	1	
C202	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C205	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C920	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C231	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C215	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C630	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C631	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	

Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
C645	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C652	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C603	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C207	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C708	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C239	2401-002235	C-AL:10UF,20%,16V,GP,TP,5X11MM,5MM	AZ164031	1	
C214	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C605	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C620	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C635	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C646	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C829	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C837	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C839	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C916	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C914	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C831	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C825	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C240	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m	AZ162027	1	
C208	2401-001026	C-AL:3.3uF,20%,50V,GP,TP,5x11mm,5mm	AZ164018	1	
C636	2401-001026	C-AL:3.3uF,20%,50V,GP,TP,5x11mm,5mm	AZ164018	1	
C905	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3	AZ161102	1	
C607	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3	AZ161102	1	
C608	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3	AZ161102	1	
C211	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3	AZ161102	1	
C923	2202-000796	C-CERAMIC,MLC-AXIAL:1nF,10%,50V,Y5P,TP,3	AZ161102	1	
C212	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	AZ162006	1	
C213	2301-000247	C-FILM,PEF:33nF,5%,50V,TP,8.1x4.5x13mm,5	AZ162007	1	
C218	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C219	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C220	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C901	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C921	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C922	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C919	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C924	2202-000632	C-CERAMIC,MLC-AXIAL:100nF,20%,50V,Z5U,TP	AZ161703	1	
C907	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
C308	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
C237	2401-000914	C-AL:22uF,20%,16V,GP,TP,5x11,5	AZ164043	1	
C604	2401-000603	C-AL:1uF,20%,50V,GP,TP,5x11,5	AZ164011	1	
C201	2401-000603	C-AL:1uF,20%,50V,GP,TP,5x11,5	AZ164011	1	
C841	2401-000603	C-AL:1uF,20%,50V,GP,TP,5x11,5	AZ164011	1	
C304	2305-000285	C-FILM,MPEF:220nF,5%,100V,TP,20x18x11.5	AZ162020	1	
C305	2305-000149	C-FILM,MPEF:100nF,5%,100V,TP,12x12.5x6.5	AZ162016	1	
C821	2301-000192	C-FILM,PEF:1nF,5%,50V,TP,5.3x10mm,5mm	AZ162003	1	
C902	2301-000192	C-FILM,PEF:1nF,5%,50V,TP,5.3x10mm,5mm	AZ162003	1	
C307	2401-000360	C-AL:100uF,20%,50V,GP,TP,8x11.5,5	AZ164006	1	
C302	2401-000360	C-AL:100uF,20%,50V,GP,TP,8x11.5,5	AZ164006	1	
C401	2201-000556	C-CERAMIC,DISC:0.47nF,10%,500V,Y5P,TP,5	AZ163011	1	
C403	2201-000556	C-CERAMIC,DISC:0.47nF,10%,500V,Y5P,TP,5	AZ163011	1	
C421	2201-000556	C-CERAMIC,DISC:0.47nF,10%,500V,Y5P,TP,5	AZ163011	1	
C402	2401-001397	C-AL:470uF,20%,25V,GP,TP,10x16,5	AZ164024	1	
C404	2401-001397	C-AL:470uF,20%,25V,GP,TP,10x16,5	AZ164024	1	
C408	2305-000382	C-FILM,MPEF:4.7nF,5%,400V,TP,-,5MM	AZ162023	1	
C414	2401-002597	C-AL:220uF,20%,35V,GP,TP,10x12.5,5	AZ164049	1	
C418	2401-002597	C-AL:220uF,20%,35V,GP,TP,10x12.5,5	AZ164049	1	
C422	2401-001527	C-AL:47uF,20%,250V,HR,TP,13x25mm,5m	AZ165010	1	
C424	2201-000132	C-CERAMIC,DISC:0.1nF,10%,500V,Y5P,TP,6.5	AZ163021	1	
C601	2201-000558	C-CERAMIC,DISC:0.47nF,10%,50V,Y5P,TP,5x3	AZ163025	1	
C610	2301-000445	C-FILM,PEF:4.7nF,5%,50V,TP,5.5x7x3mm,5mm	AZ162013	1	
C611	2301-000445	C-FILM,PEF:4.7nF,5%,50V,TP,5.5x7x3mm,5mm	AZ162013	1	
C612	2401-001914	C-AL:1uF,20%,50V,BP,TP,5x11,5	AZ164040	1	
C613	2401-001914	C-AL:1uF,20%,50V,BP,TP,5x11,5	AZ164040	1	
C209	2401-001914	C-AL:1uF,20%,50V,BP,TP,5x11,5	AZ164040	1	
C617	2401-000493	C-AL:10uF,20%,50V,LZ,TP,5x11mm,5mm	AZ164010	1	
C917	2401-000493	C-AL:10uF,20%,50V,LZ,TP,5x11mm,5mm	AZ164010	1	
C413	2401-000493	C-AL:10uF,20%,50V,LZ,TP,5x11mm,5mm	AZ164010	1	
C623	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C624	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C627	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C629	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C642	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C644	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C638	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C639	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C632	2202-000806	C-CERAMIC,MLC-AXIAL:220PF,10%,50V,Y5P,TP	AZ161221	1	
C634	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5	AZ164027	1	

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
C832	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5	AZ164027	1	
C838	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5	AZ164027	1	
C826	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5	AZ164027	1	
C637	2401-000027	C-AL:4.7uF,20%,50V,GP,TP,5x11,5	AZ164001	1	
C640	2401-000027	C-AL:4.7uF,20%,50V,GP,TP,5x11,5	AZ164001	1	
C641	2401-000027	C-AL:4.7uF,20%,50V,GP,TP,5x11,5	AZ164001	1	
C643	2401-000027	C-AL:4.7uF,20%,50V,GP,TP,5x11,5	AZ164001	1	
C912	2401-000027	C-AL:4.7uF,20%,50V,GP,TP,5x11,5	AZ164001	1	
C647	2202-000286	C-CERAMIC,MLC-AXIAL:56pF,5%,50V,SL,TP,1.	AZ161560	1	
C649	2301-000108	C-FILM,PEF:1.5nF,5%,50V,TP,6.5x3.0x5.5mm	AZ162001	1	
C804	2201-000332	C-CERAMIC,DISC:2.2nF,20%,250VAC,Y5U,TP,1	AZ163008	1	
C805	2201-000332	C-CERAMIC,DISC:2.2nF,20%,250VAC,Y5U,TP,1	AZ163008	1	
C807	2301-001397	C-FILM,PPF:2.2nF,5%,1.2kV,TP,15x8.5x13.5	AZ166019	1	
C814	2201-000406	C-CERAMIC,DISC:0.27nF,10%,2kV,Y5P,TP,6.3	AZ163023	1	
C817	2201-000599	C-CERAMIC,DISC:0.56nF,10%,500V,Y5P,TP,5.	AZ163013	1	
C819	2201-000599	C-CERAMIC,DISC:0.56nF,10%,500V,Y5P,TP,5.	AZ163013	1	
C822	2201-000599	C-CERAMIC,DISC:0.56nF,10%,500V,Y5P,TP,5.	AZ163013	1	
C818	2401-000722	C-AL:2200uF,20%,25V,WT,TP,16x25,7.5	AZ164014	1	
C910	2201-000980	C-CERAMIC,DISC:30pF,5%,50V,CH,TP,5.0x3.0	AZ163015	1	
C911	2201-000980	C-CERAMIC,DISC:30pF,5%,50V,CH,TP,5.0x3.0	AZ163015	1	
D201	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D202	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D207	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D208	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D209	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D210	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D211	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D602	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
△ D804	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
DZ402	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D906	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
△ D405	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
D604	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
△ D401	0402-000540	DIODE-RECTIFIER:RU20A,600V,1.5A,-,TP	AZ462012	1	
△ D402	0402-000534	DIODE-RECTIFIER:RG10V,400V,1.2A,DO-201,T	AZ462011	1	
△ D404	0402-000534	DIODE-RECTIFIER:RG10V,400V,1.2A,DO-201,T	AZ462011	1	
△ D411	0402-000534	DIODE-RECTIFIER:RG10V,400V,1.2A,DO-201,T	AZ462011	1	
△ D406	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP	AZ462005	1	
△ D808	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP	AZ462005	1	
△ D810	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP	AZ462005	1	
△ D811	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP	AZ462005	1	
D907	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP	AZ462005	1	
△ D403	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP	AZ462005	1	
△ D801	0402-001111	DIODE-RECTIFIER:1N5397GP,600V,1.5A,DO-20	AZ462019	1	
DZ201	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ202	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ802	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ902	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ601	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ603	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ806	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ903	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ904	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ905	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ906	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ907	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ909	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ910	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ604	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ605	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ908	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ204	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ205	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
KEZ1	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ901	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZ203	0403-001321	DIODE-ZENER:MTZJ6.8C,6.66-7.01V,500mW,DO	AZ462029	1	
DZ302	0403-001329	DIODE-ZENER:MTZJ24B,22.61-23.77V,500mW,D	AZ462032	1	
DZ303	0403-001329	DIODE-ZENER:MTZJ24B,22.61-23.77V,500mW,D	AZ462032	1	
DZ304	0403-001329	DIODE-ZENER:MTZJ24B,22.61-23.77V,500mW,D	AZ462032	1	
DZ305	0403-001221	DIODE-ZENER:UZ39BSB,35.36-37.19V,500mW,D	AZ462028	1	
DZ306	0403-000700	DIODE-ZENER:TZP33A,33V,31-35V,1W,DO-41,T	AZ461013	1	
DZ804	0403-000700	DIODE-ZENER:TZP33A,33V,31-35V,1W,DO-41,T	AZ461013	1	
DZ401	0403-001325	DIODE-ZENER:MTZJ15C,14.35-15.09V,500mW,D	AZ462031	1	
DZ801	0403-001322	DIODE-ZENER:MTZJ8.2B,7.78-8.19V,500mW,DO	AZ462030	1	
DZ808	0403-001322	DIODE-ZENER:MTZJ8.2B,7.78-8.19V,500mW,DO	AZ462030	1	
DZ805	1203-001217	IC-POSI.ADJJUST REG.:431,TO-92,3P,4.58MIL	AZ661013	1	
GT101	AA60-40014A	PIN-GT,ASSY:TP,-,AUTO	AZ664172	1	











Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
EY804	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BSP,-	AZ664148	1	
EL401	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL402	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL404	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL406	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL802	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL803	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL805	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL806	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL807	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL808	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL809	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL810	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL811	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL403	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL407	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL408	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
R236	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261221	1	
R237	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261221	1	
R238	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261221	1	
R247	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261221	1	
R235	2001-000515	R-CARBON:220OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261221	1	
R622	2001-000577	R-CARBON:2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261202	1	
R621	2001-000577	R-CARBON:2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261202	1	
R915	2001-000577	R-CARBON:2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261202	1	
R935	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R202	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R205	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R243	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R245	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R246	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R310	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R716	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R715	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R606	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R620	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R919	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R629	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R309	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R206	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R609	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R211	2001-000290	R-CARBON:10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261103	1	
R940	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R941	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R942	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R947	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R948	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R102	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R103	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R203	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R204	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R231	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R232	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R604	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R605	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R610	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R611	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R612	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R613	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R628	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R627	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R723	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R909	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R907	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
J904	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
R925	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
L211	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
J920	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
RY801S	2002-001011	R-COMPOSITION:3.3MOHM,10%,1/2W,AA,TP,3.7	AZ263005	1	
RY802S	2002-001013	R-COMPOSITION:4.7MOHM,10%,1/2W,AA,TP,3.7	AZ263006	1	
VP801S	1405-000187	VARISTOR:750V,1250A,12.5x7mm,TP	AZ664040	1	
VX801S	1405-000187	VARISTOR:750V,1250A,12.5x7mm,TP	AZ664040	1	
X901	2801-003728	CRYSTAL-UNIT:6MHz,30ppm,28-AAAM,20pF,40oh	AZ663005	1	
L103	2701-000115	INDUCTOR-AXIAL:10uH,10%,3x7mm	AZ361002	1	
	0203-001123	TAPE-PAPER:#53131,TO.15,W6.0,L200000,YEL	AZ760062	8,21	
C707	2401-000939	C-AL:22uF,20%,25V,GP,TP,5x11,5	AZ164016	1	
L202	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.4MM	AZ361001	1	

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
L301	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L406	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L907	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L708	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L707	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L711	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L108	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L109	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
R706	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
R707	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
R708	2701-000114	INDUCTOR-AXIAL;10UH,10%,2.5X3.4MM	AZ361001	1	
L902	2701-000184	INDUCTOR-AXIAL;4.7UH,10%,2.5X3.4MM	AZ361010	1	
L302	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L802	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L803	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L804	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L809	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
J901	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L303	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L207	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
J406	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L412	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L407	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
L807	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
L601	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
L609	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
R233	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
L201	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
C233	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
C234	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
C235	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
C236	2901-000297	FILTER-EMI ON BOARD;-;3A,-,-,3.5X5,TP-	AZ362001	1	
L604	2701-000169	INDUCTOR-AXIAL;3.9UH,10%,2.5X3.4MM	AZ361029	1	
Q201	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q202	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q203	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q901	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q906	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q908	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q701	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q204	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
Q601	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400MW,TO-92,T	AZ561003	1	
R244	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261473	1	
R215	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261223	1	
R823	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261223	1	
R216	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R603	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R816	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R817	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R924	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R914	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R936	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R607	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R608	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R252	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R726	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R910	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R209	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R254	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R601	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R602	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R228	2001-000117	R-CARBON(S);680HM,5%,1/2W,AA,TP,2.4X6.4M	AZ261680	1	
R303	2001-000016	R-CARBON(S);10HM,5%,1/2W,AA,TP,2.4X6.4MM	AZ262010	1	
R828	2008-000266	R-FUSIBLE(S);10HM,5%,2W,AF,TP,3.9X10MM	AZ263044	1	
R411	2001-000028	R-CARBON(S);1000HM,5%,1/2W,AA,TP,2.4X6.4	AZ261913	1	
R412	2001-000020	R-CARBON(S);220HM,5%,1/2W,AA,TP,2.4X6.4M	AZ262220	1	
R422	2001-000020	R-CARBON(S);220HM,5%,1/2W,AA,TP,2.4X6.4M	AZ262220	1	
R421	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.4	AZ261922	1	
R913	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261918	1	
R426	2003-000540	R-METAL OXIDE(S);1KOHM,5%,2W,AF,TP,4X12M	AZ263011	1	
R614	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R615	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R616	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R617	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R920	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R226	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R224	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	

Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
R225	2001-000780	R-CARBON:470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R812	2001-000780	R-CARBON:470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R831	2001-000780	R-CARBON:470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R931	2001-000780	R-CARBON:470OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261471	1	
R214	2001-000411	R-CARBON:18KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261914	1	
R704	2001-000969	R-CARBON:75OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261750	1	
R802	2003-001025	R-METAL OXIDE(S):15Kohm,5%,2W,AF,TP,3.9x	AZ263017	1	
R803	2003-001025	R-METAL OXIDE(S):15Kohm,5%,2W,AF,TP,3.9x	AZ263017	1	
R804	2003-001025	R-METAL OXIDE(S):15Kohm,5%,2W,AF,TP,3.9x	AZ263017	1	
R805	2001-001150	R-CARBON(S):470KOHM,5%,1/2W,AA,TP,2.4X6.4	AZ262474	1	
R806	2001-001150	R-CARBON(S):470KOHM,5%,1/2W,AA,TP,2.4X6.4	AZ262474	1	
R813	2001-001153	R-CARBON(S):470HM,5%,1/2W,AA,TP,2.4X6.4M	AZ262470	1	
R832	2001-001153	R-CARBON(S):470HM,5%,1/2W,AA,TP,2.4X6.4M	AZ262470	1	
R810	2001-001178	R-CARBON(S):680OHM,5%,1/2W,AA,TP,2.4X6.4	AZ262681	1	
R418	2001-001178	R-CARBON(S):680OHM,5%,1/2W,AA,TP,2.4X6.4	AZ262681	1	
R819	2004-001983	R-METAL:2.49KOHM,1%,1/2W,AA,TP,2.4X6.4	AZ263034	1	
R415	2004-001983	R-METAL:2.49KOHM,1%,1/2W,AA,TP,2.4X6.4	AZ263034	1	
R820	2001-001096	R-CARBON(S):2.2ohm,5%,1/2W,AA,TP,2.4x6.4	AZ261923	1	
R822	2001-000273	R-CARBON:100KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261104	1	
R824	2001-000273	R-CARBON:100KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261104	1	
R825	2001-000066	R-CARBON(S):10KOHM,5%,1/2W,AA,TP,2.4X6.4	AZ262103	1	
R901	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R903	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R904	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R905	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R906	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R908	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R921	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R927	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R928	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R937	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R938	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R833	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R724	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R725	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R253	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
R248	2001-000003	R-CARBON:330OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261331	1	
R249	2001-000003	R-CARBON:330OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261331	1	
R250	2001-000003	R-CARBON:330OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261331	1	
R922	2001-000924	R-CARBON:680OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261681	1	
R923	2001-000924	R-CARBON:680OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261681	1	
C833	2401-002619	C-AL:47uf,20%,25V,GP,TP,5x11,5	AZ164037	1	
C229	2401-002619	C-AL:47uf,20%,25V,GP,TP,5x11,5	AZ164037	1	
CN602	3711-002644	CONNECTOR-HEADER:BOX,5P,1R,2.5mm,STRSTRA	AZ664019	1	
CW901	2503-000156	C-NETWORK:100pF,4,20%,50V	AZ166005	1	
D203	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
D204	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
D205	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
D206	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
D901	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
D902	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
D903	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
D904	0404-000156	DIODE-SCHOTTKY:RB441Q,10V,100mA,DO-34,TP	AZ462033	1	
DZ803	0403-001167	DIODE-ZENER:MTZJ30D,30V,29.02-30.51V,500	AZ462026	1	
△ FA802S	3601-001086	FUSE-AXIAL LEAD:125V,5A,FAST-ACTING,GLAS	AZ664013	1	
HIC201	AA13-00093A	IC-HYBRID:-,DRGB001A,SIP,5P,-,TP	AZ661042	1	
HIC202	AA13-00093A	IC-HYBRID:-,DRGB001A,SIP,5P,-,TP	AZ661042	1	
HIC203	AA13-00093A	IC-HYBRID:-,DRGB001A,SIP,5P,-,TP	AZ661042	1	
HIC204	AA13-00093A	IC-HYBRID:-,DRGB001A,SIP,5P,-,TP	AZ661042	1	
R409	2003-001018	R-METAL OXIDE(S):220OHM,5%,2W,AF,TP,3.9X	AZ268023	1	
R410	2003-001018	R-METAL OXIDE(S):220OHM,5%,2W,AF,TP,3.9X	AZ268023	1	
R413	2008-001018	R-FUSIBLE(S):0.47OHM,10%,2W,AF,TP,3.9X10	AZ268023	1	
R424	2008-001018	R-FUSIBLE(S):0.47OHM,10%,2W,AF,TP,3.9X10	AZ268023	1	
R827	2008-000284	R-FUSIBLE(S):0.1OHM,10%,2W,AF,TP,3.9X10M	AZ268002	1	
R829	2008-001029	R-FUSIBLE(S):5.6ohm,5%,2W,AF,TP,3.9x10mm	AZ268004	1	
R433	2003-001042	R-METAL OXIDE(S):5.6Kohm,5%,2W,AF,TP,3.9	AZ263069	1	
R717	2001-000702	R-CARBON:39Kohm,5%,1/8W,AA,TP,1.8x3.2mm	AZ261916	1	
R718	2001-000702	R-CARBON:39Kohm,5%,1/8W,AA,TP,1.8x3.2mm	AZ261916	1	
R105	2001-000702	R-CARBON:39Kohm,5%,1/8W,AA,TP,1.8x3.2mm	AZ261916	1	
X601	2801-003903	CRYSTAL-UNIT:18.432MHz,25ppm,28-AAM,12pF	AZ663008	1	
IC904	1203-001943	IC-VOL. DETECTOR:7025,TO-92,3P,-,PLASTIC	AZ661037	1	
PCB	AA41-00168F	PCB-MAIN:CS29A6,FR-1,1L,F,1.6T,330x245,	AZ760157	1	
Q802	0501-000369	TR-SMALL SIGNAL:KSC2331-Y,NPN,1W,TO-92L,	AZ561002	1	
Q909	0505-000109	FET-SILICON:2N7000,N,60V,200mA,5ohm,400m	AZ561015	1	
Q910	0505-000109	FET-SILICON:2N7000,N,60V,200mA,5ohm,400m	AZ561015	1	
R434	2003-002064	R-METAL OXIDE:7.5ohm,5%,2W,AF,TP,10x3.9m	AZ268046	1	
L605	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
L606	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	
L607	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	
L608	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	
L701	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	
L702	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	
L705	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	
L706	2701-000180	INDUCTOR-AXIAL:33UH,5%,2.5X3.4MM	AZ361009	1	
R106	2001-000864	R-CARBON:56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261563	1	
R313	2004-001137	R-METAL:6.8Kohm,1%,1/8W,AA,TP,1.8x3.2m	AZ264001	1	
R710	2001-000938	R-CARBON:68ohm,5%,1/8W,AA,TP,1.8x3.2mm	AZ261680	1	
R709	2001-000938	R-CARBON:68ohm,5%,1/8W,AA,TP,1.8x3.2mm	AZ261680	1	
R811	2004-001408	R-METAL(S):91KOHM,1%,1/2W,AA,TP,2.4X6.4M	AZ264006	1	
R809	2001-000022	R-CARBON(S):33OHM,5%,1/2W,AA,TP,2.4X6.4M	AZ261330	1	
L901	2702-001094	INDUCTOR-RADIAL:10uH,10%,6x4mm	AZ361032	1	
L903	2702-001094	INDUCTOR-RADIAL:10uH,10%,6x4mm	AZ361032	1	
L904	2702-001094	INDUCTOR-RADIAL:10uH,10%,6x4mm	AZ361032	1	
L909	2701-000191	INDUCTOR-AXIAL:47uH,10%,2.5x3.4mm	AZ361031	1	
L908	2701-000191	INDUCTOR-AXIAL:47uH,10%,2.5x3.4mm	AZ361031	1	
R818	2001-001113	R-CARBON(S):270Kohm,5%,1/2W,AA,TP,2.4x6.	AZ261925	1	
CN702	3711-002647	CONNECTOR-HEADER:BOX,8P,1R,2.5mm,STRAIGH	AZ664020	1	
C656	2201-000304	C-CERAMIC,DISC:0.001nF,0.25pF,50V,NP0,TP	AZ163022	1	
C657	2201-000304	C-CERAMIC,DISC:0.001nF,0.25pF,50V,NP0,TP	AZ163022	1	
C306	2301-000342	C-FILM,PEF:2.2nF,5%,50V,TP,7.4x3.9x13mm,	AZ162031	1	
C415	2301-000342	C-FILM,PEF:2.2nF,5%,50V,TP,7.4x3.9x13mm,	AZ162031	1	
C621	2401-002458	C-AL:100uF,20%,35V,GP,TP,16x25,7,5	AZ164048	1	
C824	2401-003046	C-AL:47uF,20%,50V,WT,TP,6.3x11,2,5	AZ164051	1	
C823	2401-003046	C-AL:47uF,20%,50V,WT,TP,6.3x11,2,5	AZ164051	1	
C115	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP	AZ161101	1	
C116	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP	AZ161101	1	
C701	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP	AZ161101	1	
L209	2701-000168	INDUCTOR-AXIAL:3.3 UH 5% 2.5X3.4 MM	AZ361008	1	
L212	2701-000168	INDUCTOR-AXIAL:3.3 UH 5% 2.5X3.4 MM	AZ361008	1	
L801	3301-001223	CORE-FERRITE BEAD:AA,62ohm,3.5x0.8x5mm,-	AZ362014	1	
L806	3301-001223	CORE-FERRITE BEAD:AA,62ohm,3.5x0.8x5mm,-	AZ362014	1	
R945	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261222	1	
R946	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261222	1	
△ RX801S	2002-001010	R-COMPOSITION:1.8Mohm,10%,1/2W,AA,TP,3.7	AZ262753	1	
R821	2004-001891	R-METAL(S):133Kohm,1%,1/2W,AA,TP,2.5x6.5	AZ268025	1	
R210	2001-000812	R-CARBON:5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261562	1	
△ FP801S	3601-000297	FUSE-CARTRIDGE:250V,5A,TIME-LAG,GLASS,5.	AZ664114	1	
F801A	3602-000114	FUSE-HOLDER:-,30MOHM	AZ664014	1	
F801B	3602-000114	FUSE-HOLDER:-,30MOHM	AZ664014	1	
C835	2401-002289	C-AL:470uF,20%,35V,WT,TP,10x20,5	AZ164047	1	
C840	2401-002212	C-AL:10uF,20%,25V,WT,TP,5x11,5	AZ164045	1	
C827	2401-002212	C-AL:10uF,20%,25V,WT,TP,5x11,5	AZ164045	1	
R417	2004-001397	R-METAL(S):4.7Kohm,1%,1/2W,AA,TP,2.4x6.4	AZ264003	1	
R301	2004-001397	R-METAL(S):4.7Kohm,1%,1/2W,AA,TP,2.4x6.4	AZ264003	1	
CN704	3711-002646	CONNECTOR-HEADER:BOX,7P,1R,2.5mm,STRAIGH	AZ760158	1	
CN502	3711-002646	CONNECTOR-HEADER:BOX,7P,1R,2.5mm,STRAIGH	AZ760158	1	
R808	2001-001079	R-CARBON(S):150HM,5%,1/2W,AA,TP,2.4X6.4M	AZ261920	1	
R425	2008-001011	R-FUSIBLE(S):0.18ohm,10%,2W,AF,TP,3.9x10	AZ263049	1	
	HA68-02176A	LABEL:SPACE	AZ760150	1	
R423	2001-001122	R-CARBON(S):3.9KOHM,5%,1/2W,AA,TP,2.4X6.	AZ268021	1	
C654	2201-000611	C-CERAMIC,DISC:56pF,5%,50V,CH,TP,6.5x3,5	AZ163026	1	
C425	2301-001259	C-FILM,MPPF:100nF,5%,400V,TP,19x8x16,7,5	AZ166020	1	
C622	2401-001264	C-AL:4.7uF,20%,50V,BP,TP,5x11,5	AZ164020	1	
C625	2401-001264	C-AL:4.7uF,20%,50V,BP,TP,5x11,5	AZ164020	1	
C626	2401-001264	C-AL:4.7uF,20%,50V,BP,TP,5x11,5	AZ164020	1	
C628	2401-001264	C-AL:4.7uF,20%,50V,BP,TP,5x11,5	AZ164020	1	
C104	2401-002463	C-AL:470uF,20%,16V,GP,TP,8x11,5,5	AZ164035	1	
C808	2401-003046	C-AL:47uF,20%,50V,WT,TP,6.3x11,2,5	AZ164051	1	
D301	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
△ D803	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
△ D816	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
DZ602	0403-000720	DIODE-ZENER:MTZJ9.1B,9.1V,8.57-9.01V,500	AZ462025	1	
R207	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261122	1	
R208	2001-000405	R-CARBON:180OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261181	1	
R414	2008-000253	R-FUSIBLE(S):0.47ohm,5%,1W,AF,TP,3.9x10m	AZ268017	1	
HIC401	AA13-00094A	IC HYBRID:-,DDR1001A,SIP,5P,-,TP	AZ760211	1	
C102	2401-001513	C-AL:47uF,20%,16V,WT,TP,5x11,5	AZ164044	1	
C913	2401-000287	C-AL:100uF,20%,16V,WT,TP,6.3x11,5	AZ164041	1	
C915	2401-000287	C-AL:100uF,20%,16V,WT,TP,6.3x11,5	AZ164041	1	
C918	2401-000287	C-AL:100uF,20%,16V,WT,TP,6.3x11,5	AZ164041	1	
C210	2401-000287	C-AL:100uF,20%,16V,WT,TP,6.3x11,5	AZ164041	1	
L102	2701-000159	INDUCTOR-AXIAL:22UH,10%,4.2X9.8MM	AZ361007	1	
R420	2004-004015	R-METAL(S):9.1Kohm,1%,1/2W,AA,TP,2.5x6.5	AZ268047	1	
R911	2001-000628	R-CARBON:300OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261301	1	

Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
R912	2001-000628	R-CARBON:300OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261301	1	
C106	2401-000611	C-AL:1uF,20%,50V,WT,TP,5x11,5	AZ164042	1	
C303	2201-002022	C-CERAMIC,DISC:0.005nF,0.25pF,500V,NP0,T	AZ166032	1	
C409	2301-001385	C-FILM,PPF:30nF,5%,630V,TP,20x15.5x10.5,	AZ166033	1	
C412	2301-000148	C-FILM,PEF:10nF,5%,100V,TP,7x3.2x7mm,5mm	AZ166022	1	
L905	2001-000995	R-CARBON:820OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261821	1	
R305	2003-002157	R-METAL OXIDE:220OHM,5%,2W,AG,TP,6X16MM	AZ268024	1	
R306	2003-002157	R-METAL OXIDE:220OHM,5%,2W,AG,TP,6X16MM	AZ268024	1	
C411	2301-000232	C-FILM,PEF:3.3nF,5%,50V,TP,8.1x4.5x13mm,	AZ166034	1	
C416	2301-000254	C-FILM,PEF:39nF,5%,50V,TP,7.5x3.5x6.5mm,	AZ162008	1	
L401	2001-001038	R-CARBON(S):0.56OHM,5%,1/2W,AA,TP,2.4X6.	AZ268026	1	
R404	2001-001038	R-CARBON(S):0.56OHM,5%,1/2W,AA,TP,2.4X6.	AZ268026	1	
R212	2004-000218	R-METAL:10KOHM,1%,1/8W,AA,TP,1.8X3.2MM	AZ263025	1	
△ FA803S	3601-001228	FUSE-AXIAL LEAD:125V,10A,FAST-ACTING,EPO	AZ664115	1	
R314	2004-001983	R-METAL(S):22Kohm,1%,1/2W,AA,TP,2.5x6.5m	AZ268048	1	
R302	2004-001984	R-METAL(S):26.7Kohm,1%,1/2W,AA,TP,2.4x6.	AZ264007	1	
R401	2003-000586	R-METAL OXIDE(S):22Kohm,5%,2W,AF,TP,4x12	AZ263067	1	
R402	2003-000586	R-METAL OXIDE(S):22Kohm,5%,2W,AF,TP,4x12	AZ263067	1	
△ D408	0402-000493	DIODE-RECTIFIER:1R5GU41,400V,1.5A,DO-15L	AZ462010	1	
R407	2001-001114	R-CARBON(S):270OHM,5%,1/2W,AA,TP,2.4X6.4	AZ262271	1	
C925	2202-000127	C-CERAMIC,MLC-AXIAL:10nF,+80-20%,25V,Y5V	AZ161103	1	
C113	2202-000127	C-CERAMIC,MLC-AXIAL:10nF,+80-20%,25V,Y5V	AZ161103	1	
KEZI	2001-001035	R-CARBON:91ohm,5%,1/8W,AA,TP,1.8x3.2mm	AZ268006	1	
KEZI	2201-000472	C-CERAMIC,DISC:0.33nF,5%,50V,SL,TP,8.5x3	AZ163024	1	
C828	2201-000376	C-CERAMIC,DISC:0.22nF,5%,50V,SL,TP,6.3x3	AZ166021	1	
R403	2003-000664	R-METAL OXIDE(S):330OHM,5%,2W,AF,TP,4X12M	AZ263002	1	
KEZI	2701-000183	INDUCTOR-AXIAL:39uH,5%,2.5x3.4mm	AZ363061	1	
C410	2301-000213	C-FILM,PEF:220nF,5%,250V,TP,21.5x11.7.5	AZ162005	1	
R304	2008-001013	R-FUSIBLE(S):1.2ohm,5%,2W,AF,TP,3.9x10mm	AZ263061	1	
KEZI	2008-001013	R-FUSIBLE(S):1.2ohm,5%,2W,AF,TP,3.9x10mm	AZ263061	1	
R315	2004-002022	R-METAL(S):51KOHM,1%,1/2W,AA,TP,2.4X6.4M	AZ268041	1	
KEZI	2003-002193	R-METAL OXIDE(S):33Kohm,5%,2W,AG,TP,3.9X	AZ268028	1	
KEZI	2003-001035	R-METAL OXIDE(S):27ohm,5%,2W,AF,TP,3.9x1	AZ263076	1	
KEZI	2201-000795	C-CERAMIC,DISC:10nF,10%,400V,Y5P,15x10mm	AZ166023	1	
C427	2401-002267	C-AL:2.2uF,20%,250V,GP,TP,8x11.5,5	AZ164046	1	
D413	0402-000537	DIODE-RECTIFIER:RH1A,600V,0.6A,DO-204AC	AZ462017	1	
R405	2008-001076	R-FUSIBLE(S):1.8ohm,5%,2W,AF,TP,3.9x10mm	AZ268049	1	
R436	2003-002008	R-METAL OXIDE(S):18Kohm,5%,2W,AF,TP,3.9x	AZ263022	1	
SW901	3404-000244	SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP	AZ662002	1	
SW902	3404-000244	SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP	AZ662002	1	
SW903	3404-000244	SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP	AZ662002	1	
SW904	3404-000244	SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP	AZ662002	1	
SW905	3404-000244	SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP	AZ662002	1	
R916	2001-000007	R-CARBON:3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ161302	1	
R917	2001-000078	R-CARBON:6.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	AZ261917	1	
R918	2001-000009	R-CARBON:20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261203	1	
C904	2401-001495	C-AL:47uF,20%,16V,GP,TP,5x11,5	AZ164025	1	
IC901	AA09-00041A	IC-MCU:SDA555X-OTP,SDA555X-OTP,-,52,SD	AZ661041	1	
IC601	1204-001661	IC-SOUND PROCESSOR:MSP3411G-A2,DIP,52P,-	AZ760212	1	
△ T401	AA26-50001S	TRANS-HORIZ.DRIVE:-,-,6.0mH,-,44uH,-	AZ363070	1	
△ TU01S	AA40-00079A	TUNER-F/S:TCPW3001PD16A(S).PAL,181CH,38.	AZ760160	1	
	HA98-600010	ASSY-SUB,PART:S51A,PCB-MAIN	AZ760151	1	
	0202-000008	SOLDER-WIRE:S63S-W3.0,S63S,D3,SN63/PB37	AZ760060	0.03	
	0202-000187	SOLDER-WIRE FLUX:-,RS60S,D1.2,63SN/37PB	AZ760061	0.001	
	0204-001024	FLUX:DF-98TVS,-,20%,	AZ760064	0.00628	
	0204-000442	SOLVENT:1M-1000,C3H7OH,96,-	AZ760063	0.00837	
△ T801S	AA26-00046A	TRANS-SWITCHING:-,-,AC90-260V,DC135/16	AZ363056	1	
△ IC804	HA96-00243C	ASSY-H/S:-,REGULATOR,AA62-00045A,KA7806	AZ760161	1	
	1203-000284	IC-POSI.FIXED REG.:7806,TO-220,3P,-,PLAS	AZ661034	1	
	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELYEL)	AZ760146	1	
	AA62-00065A	HEAT SINK-PS:DP,-,-,AA62-00045A,-,-,-,	AZ760162	1	
	0205-000129	GREASE-SILICON:SC102,JAPAN	AZ760065	0.00005	
L408	AA27-40003P	COIL-HORIZ.WIDTH:-,120uH/180uH,Th8x20,US	AZ363071	1	
△ LX801S	AA29-00015A	FILTER-LINE NOISE:WS32W8,28-20MH 1.5A,+	AZ363064	1	
L405	AA27-00057A	COIL-HORIZ.WIDTH:-,10mH,YL-9N 15x27.5 C:	AZ362015	1	
△ IC803	1203-001697	IC-VOLTAGE REGULATOR:78R08,TO-220,4P,-,P	AZ661036	1	
Q404	HA96-00437A	ASSY-H/S:AA62-00076A,IRF620	AZ760163	1	
	0505-000156	FET-SILICON:IRF620,N,200V,5A,0.8ohm,50W,	AZ561016	1	
	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELYEL)	AZ760146	1	
	AA62-00076A	HEAT SINK:100Hz,AL ,T1.0,10,40,-,-,-	AZ760164	1	
Q402	0505-001116	FET-SILICON:BUZ73A,N,200V,22A,0.6ohm,40W	AZ561022	1	
△ CY802S	2201-002002	C-CERAMIC,DISC:4.7nF,20%,400V,Y5U,TP,16x	AZ163027	1	
C407	2301-001338	C-FILM,MPE-PPF:0.68nF,5%,1.6kV,TP,28x7x1	AZ162684	1	
C405	2303-001015	C-FILM,PPF:5.5nF,5%,1.6kV,TP,29x9.5x17.2	AZ162686	1	
C406	2303-001015	C-FILM,PPF:5.5nF,5%,1.6kV,TP,29x9.5x17.2	AZ162686	1	
C426	2301-001185	C-FILM,MPPF:620nF,5%,400V,TP,14.5x26x24,	AZ166035	1	
IC903	1203-001944	IC-POSI.FIXED REG.:78RM33,TO-220,3P,-,PL	AZ661038	1	

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
IC202	1203-001944	IC- POSI.FIXED REG.:78RM33,TO-220,3P,-,PL	AZ661038	1	
C806	2401-003031	C-AL:470uF,20%,450V,GP,BK,35x45mm,1	AZ164050	1	
S/W	AA95-01553A	ASSY-PCB SVHS BOARD;ALL WITH SVHS,KS3A	AZ760213	1	
ICS01	1001-001114	IC-VIDEO SWITCH;TEA6425,VIDEO SWITCH ,DI	AZ760214	1	
CNS01	3711-002704	CONNECTOR-HEADER:NOWALL,6P,1R,2.5mm,ANGL	AZ664024	1	
CNS02	3711-002706	CONNECTOR-HEADER:NOWALL,8P,1R,2.5mm,ANGL	AZ664026	1	
	HA99-500031	ASSY-PCB,VIDEO-S/W(ACI);50Hz,32W8,KS3A,F	AZ760215	1	
CS01	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
CS03	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
CS04	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
CS05	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
CS06	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
CS02	2305-000412	C-FILM,MPEF:470nF,5%,63V,TP,-,5mm	AZ162025	1	
CS07	2401-002009	C-AL:100UF,20%,16V,GP,TP;6.3*7.5	AZ166017	1	
JS01	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JS02	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JS03	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JS04	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
RS08	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
RS09	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
QS01	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400MW,TO-92,T	AZ561003	1	
QS02	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400MW,TO-92,T	AZ561003	1	
QS03	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400MW,TO-92,T	AZ561003	1	
RS01	2001-000281	R-CARBON:100OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261101	1	
RS03	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
RS05	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
RS07	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
RS10	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
RS11	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
RS02	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
RS04	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
RS06	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
LS01	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.4MM	AZ361001	1	
PCB	AA41-00153E	PCB-VIDEO SWITCH;CS29A6,FR-1,1L,D,1.6T,2	AZ760216	1	
CS08	2305-000665	C-FILM,MPEF:100nF,5%,63V,TP;7.5x4.0x5.0m	AZ162027	1	
DZS01	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
DZS02	0403-000508	DIODE-ZENER:MTZJ5.6B,5.6V,5.45-5.73V,500	AZ462022	1	
RS12	2001-000969	R-CARBON:75OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261750	1	
RS13	2001-000969	R-CARBON:75OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261750	1	
	HA98-600012	ASSY-SUB,PART:PCB-WIDE,S51A,WIDE	AZ760169	1	
	0202-000008	SOLDER-WIRE:S63S-W3.0,S63S,D3,SN63/PB37	AZ760060	0.007	
	0202-000187	SOLDER-WIRE FLUX:-,RS60S,D1.2,63SN/37PB	AZ760061	0.0001	
	0204-001024	FLUX:DF-98TVS,-,20%,-	AZ760064	0.00322	
	0204-000442	SOLVENT:1M-1000,C3H7OH,96,-	AZ760063	0.006	
C820	2401-003076	C-AL:3300uF,20%,50V,WBP,BK,18x35.5mm	AZ164052	1	
R807	2006-001083	R-CEMENT:120ohm,5%,5W,CJ,TP,14x10x27mm	AZ266001	1	
C423	2306-000235	C-FILM,MPPF:560nF,5%,400V,TP,26*22.5*14,	AZ166036	1	
JA702	3722-001425	JACK-RCA:2P;3.4mm,NI,BLK,-	AZ760165	1	
TOP	AA39-20010B	LEAD CONNECTOR ASSY;1P,YFH800-01,S,500,	AZ660001	1	
L808	AA27-10002L	COIL-CHOKE:-,24UH,K,-,2A,-,24UH-K,10X10M	AZ362016	1	
L402	AA27-10004F	COIL-CHOKE:-,56uH,K,-,2.5A,BK,-,DR12x15,	AZ363072	1	
T444S	AA26-00147A	TRANS FBT:1372.0079A,CT29A5P,3.5MH,135V	AZ363073	1	
IC201S	AA95-01194A	ASSY-SCAN MODULE;:29A7,KS3A,100HZ	AZ760217	1	
	AA95-00989A	ASSY-CHROMA. BODY:DP,-,KS3A,-,100HZ	AZ760218	1	
P1	3711-004782	CONNECTOR-HEADER:NOWALL,32P,1R,1.778mm,S	AZ760219	1	
P2	3711-004782	CONNECTOR-HEADER:NOWALL,32P,1R,1.778mm,S	AZ760219	1	
PCB	AA41-00411A	PCB-SIPADOS BODY;CS29A5,FR-4,2L,A,1.6T,1	AZ760220	1	
	AA95-01163A	ASSY-SIPADOS TOP MODULE;:KS3A,CS29A5	AZ760221	1	
IC3	1204-001599	IC-VIDEO PROCESS:DDP3310B-E4,PLCC,68P,-,	AZ760222	1	
IC1	1204-001789	IC-VIDEO PROCESS:VPC3230D-B3,QFP;80P;787	AZ760223	1	
IC2	1204-001858	IC-PICTURE PROCESS:SDA9401,QFP;64P,-,PLA	AZ760224	1	
JP1	2007-000070	R-CHIP:00HM,5%,1/16W,DA,TP,1608	AZ268050	1	
R17	2007-000070	R-CHIP:00HM,5%,1/16W,DA,TP,1608	AZ268050	1	
R19	2007-000070	R-CHIP:00HM,5%,1/16W,DA,TP,1608	AZ268050	1	
R10	2007-000084	R-CHIP:4.7Kohm,5%,1/16W,DA,TP,1608	AZ268051	1	
R1	2007-000090	R-CHIP:10Kohm,5%,1/16W,DA,TP,1608	AZ268052	1	
R2	2007-000090	R-CHIP:10Kohm,5%,1/16W,DA,TP,1608	AZ268052	1	
R3	2007-000090	R-CHIP:10Kohm,5%,1/16W,DA,TP,1608	AZ268052	1	
R4	2007-000090	R-CHIP:10Kohm,5%,1/16W,DA,TP,1608	AZ268052	1	
R5	2007-000090	R-CHIP:10Kohm,5%,1/16W,DA,TP,1608	AZ268052	1	
R7	2007-001134	R-CHIP:68ohm,5%,1/16W,DA,TP,1608	AZ268053	1	
R13	2007-001166	R-CHIP:75ohm,5%,1/10W,DA,TP,2012	AZ268054	1	
R14	2007-001166	R-CHIP:75ohm,5%,1/10W,DA,TP,2012	AZ268054	1	
R15	2007-001166	R-CHIP:75ohm,5%,1/10W,DA,TP,2012	AZ268054	1	
R6	2007-001167	R-CHIP:75ohm,5%,1/16W,DA,TP,1608	AZ268055	1	
R8	2007-001167	R-CHIP:75ohm,5%,1/16W,DA,TP,1608	AZ268055	1	
R9	2007-001167	R-CHIP:75ohm,5%,1/16W,DA,TP,1608	AZ268055	1	

Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
CD3	2203-000041	C-CERAMIC,CHIP:0.01nF,0.25pF,50V,NP0,TP,	AZ166037	1	
CD4	2203-000041	C-CERAMIC,CHIP:0.01nF,0.25pF,50V,NP0,TP,	AZ166037	1	
C21	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C39	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C42	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C43	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C44	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C51	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C52	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C53	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C54	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C55	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C56	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C57	2203-000181	C-CERAMIC,CHIP:100nF,+80-20%,25V,Y5V,TP,	AZ166038	1	
C27	2203-000236	C-CERAMIC,CHIP:0.1nF,5%,50V,NP0,TP,1608T	AZ166039	1	
C33	2203-000236	C-CERAMIC,CHIP:0.1nF,5%,50V,NP0,TP,1608T	AZ166039	1	
C37	2203-000236	C-CERAMIC,CHIP:0.1nF,5%,50V,NP0,TP,1608T	AZ166039	1	
C16	2203-000257	C-CERAMIC,CHIP:10nF,10%,50V,X7R,1608,-,T	AZ166040	1	
C30	2203-000426	C-CERAMIC,CHIP:0.018nF,5%,50V,NP0,TP,160	AZ166041	1	
C1	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C13	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C17	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C18	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C2	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C24	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C25	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C26	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C5	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C7	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C8	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C9	2203-000491	C-CERAMIC,CHIP:2.2nF,10%,50V,X7R,1608,-,	AZ166042	1	
C20	2203-000552	C-CERAMIC,CHIP:0.02nF,5%,50V,NP0,TP,1608	AZ166043	1	
C29	2203-000659	C-CERAMIC,CHIP:0.27nF,5%,50V,NP0,TP,1608	AZ166044	1	
C31	2203-000659	C-CERAMIC,CHIP:0.27nF,5%,50V,NP0,TP,1608	AZ166044	1	
C6	2203-000659	C-CERAMIC,CHIP:0.27nF,5%,50V,NP0,TP,1608	AZ166044	1	
C23	2203-000975	C-CERAMIC,CHIP:47nF,10%,25V,X7R,TP,1608,	AZ166045	1	
C3	2203-000975	C-CERAMIC,CHIP:47nF,10%,25V,X7R,TP,1608,	AZ166045	1	
C11	2203-001052	C-CERAMIC,CHIP:0.56nF,10%,50V,X7R,TP,160	AZ166046	1	
C14	2203-001052	C-CERAMIC,CHIP:0.56nF,10%,50V,X7R,TP,160	AZ166046	1	
C19	2203-001052	C-CERAMIC,CHIP:0.56nF,10%,50V,X7R,TP,160	AZ166046	1	
C4	2203-001052	C-CERAMIC,CHIP:0.56nF,10%,50V,X7R,TP,160	AZ166046	1	
C22	2203-001256	C-CERAMIC,CHIP:0.008nF,0.25pF,50V,NP0,TP	AZ166047	1	
C38	2203-001603	C-CERAMIC,CHIP:220nF,10%,16V,X7R,2012,2m	AZ166048	1	
C28	2203-002494	C-CERAMIC,CHIP:470nF,10%,16V,X7R,TP,2012	AZ166049	1	
C32	2203-002494	C-CERAMIC,CHIP:470nF,10%,16V,X7R,TP,2012	AZ166049	1	
C34	2203-002494	C-CERAMIC,CHIP:470nF,10%,16V,X7R,TP,2012	AZ166049	1	
C36	2203-002494	C-CERAMIC,CHIP:470nF,10%,16V,X7R,TP,2012	AZ166049	1	
CE1	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5	AZ164009	1	
CE2	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5	AZ164009	1	
CE4	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5	AZ164009	1	
CE5	2401-000480	C-AL:10uF,20%,50V,GP,TP,5x11,5	AZ164009	1	
CE3	2401-001026	C-AL:3.3uF,20%,50V,GP,TP,5x11mm,5mm	AZ164018	1	
L1	2702-001092	INDUCTOR-RADIAL:2.2uH,10%,6x4mm	AZ363074	1	
L2	2702-001092	INDUCTOR-RADIAL:2.2uH,10%,6x4mm	AZ363074	1	
X2	2801-003432	CRYSTAL-UNIT:20.25MHz,30ppm,28-AAA,13pF,	AZ663007	1	
L3	3301-001324	CORE-FERRITE BEAD:AB,15OHM,2X1.25X0.9MM,	AZ760225	1	
L4	3301-001324	CORE-FERRITE BEAD:AB,15OHM,2X1.25X0.9MM,	AZ760225	1	
CN64	3711-004778	CONNECTOR-HEADER:NOWALL,64P,2R,2.0mm,ANG	AZ760226	1	
PCB	AA41-00475A	PCB-SIPADOS TOP:CS29A5,FR-4,4L,A,1.6T,18	AZ760227	1	
L403	AA27-30003Q	COIL-LINEARLITY:-,8.8uH,YL81 15x18,USTCO	AZ363075	1	
CN801	3711-004721	CONNECTOR-HEADER:3WALL,2P,1R,12.5mm,STRA	AZ760166	1	
CN802	3711-004720	CONNECTOR-HEADER:3WALL,2P,1R,12.5mm,STRA	AZ760167	1	
BOT	AA39-20010A	LEAD CONNECTOR-ASSY:,1P,YFH800-01,S,200,	AZ760168	1	
SW801S	3403-000179	SWITCH-PUSH:250V,5A,DPST,-,JPW-2104B	AZ662001	1	
RM901	AA32-00001A	MODULE REMOCON:-,ORC-195VF,38KHZ,940nm,M	AZ664153	1	
LD901	AA96-00461A	ASSY LED GUIDE:-,SL-255D,RED/GRN	AZ760169	1	
<b>ASSY PCB CRT</b>					
*	AA95-01540A	ASSY PCB CRT:,KS3A,28,A8-K8,W8-Z4,100HZ	AZ760229	1	
	AA63-10002A	BAND-TIE:-,NYLON66 V2,-,L100,NTR,-,	AZ760068	1	
CN501A	3711-002641	CONNECTOR-HEADER:BOX,10P,1R,2.54MM,STRAI	AZ664184	1	
CN501A	AA39-00225A	LEAD CONNECTOR ASSY:,10P,67096-010,S,600	AZ760184	1	
CN502A	3711-002646	CONNECTOR-HEADER:BOX,7P,1R,2.5mm,STRAIGH	AZ760158	1	



LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
CN502E	AA39-20029K	LEAD CONNECTOR-ASSY;7P,67096-007,S,400,	AZ760185	1	
CNF01	3711-002642	CONNECTOR-HEADER:BOX,3P,1R,2.5MM,STRAIGH	AZ664017	1	
CNG01	3711-002643	CONNECTOR-HEADER:BOX,4P,1R,2.5mm,STRAIGH	AZ664018	1	
IC501	HA96-50151B	ASSY-H/S;-AMP,AA61-10060A,TDA6111Q,-	AZ760230	1	
IC502	HA96-50151B	ASSY-H/S;-AMP,AA61-10060A,TDA6111Q,-	AZ760230	1	
IC503	HA96-50151B	ASSY-H/S;-AMP,AA61-10060A,TDA6111Q,-	AZ760230	1	
	1201-001131	IC-VIDEO AMP:6111,SIP,9P,-,SINGLE,-,PLAS	AZ760231	3	
	6001-000057	SCREW-MACHINE:RH,+ M3,L6,ZPC(BLK),SWRCHW	AZ760154	3	
	6021-000154	NUT-HEXAGON:2C,M3,ZPC(YEL),SM20C	AZ760155	3	
	AA61-10060A	BRACKET-TR:W3220,CUS-1 1/2H,TO.5,-,-,-,-	AZ760156	3	
ICG01	1201-000191	IC-OP AMP:4558,DIP,8P,300MIL,DUAL,20V/mV	AZ760187	1	
OG03	0502-001007	TR-POWER:KSC2073-H2,NPN,25W,TO-220,ST,6	AZ561013	1	
VA999	3704-000114	SOCKET-CRT:14P;29.1,35.5,SN,ISH09SK	AZ760188	1	
	HA99-200051	ASSY-PCB,CRT(ACI);28W8,KS3A,100HZ,SEB	AZ760232	1	
C502	2305-000704	C-FILM,MPEF:100nF,5%,250V,TP,16.5x10.3x5	AZ162685	1	
C505	2305-000704	C-FILM,MPEF:100nF,5%,250V,TP,16.5x10.3x5	AZ162685	1	
C508	2305-000704	C-FILM,MPEF:100nF,5%,250V,TP,16.5x10.3x5	AZ162685	1	
CF07	2305-000704	C-FILM,MPEF:100nF,5%,250V,TP,16.5x10.3x5	AZ162685	1	
C503	2201-000599	C-CERAMIC,DISC:0.56nF,10%,500V,Y5P,TP,5.	AZ163013	1	
C506	2201-000599	C-CERAMIC,DISC:0.56nF,10%,500V,Y5P,TP,5.	AZ163013	1	
C509	2201-000599	C-CERAMIC,DISC:0.56nF,10%,500V,Y5P,TP,5.	AZ163013	1	
C511	2401-001232	C-AL:4.7uF,20%,250V,GP,TP,10x12.5,5	AZ165009	1	
C512	2401-000914	C-AL:22uF,20%,16V,GP,TP,5x11,5	AZ164043	1	
C515	2401-000914	C-AL:22uF,20%,16V,GP,TP,5x11,5	AZ164043	1	
C526	2401-000914	C-AL:22uF,20%,16V,GP,TP,5x11,5	AZ164043	1	
C514	2401-000430	C-AL:10uF,20%,250V,GP,TP,10X16MM,5M	AZ165004	1	
C518	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	AZ162006	1	
C519	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	AZ162006	1	
C520	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	AZ162006	1	
C521	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	AZ162006	1	
C522	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	AZ162006	1	
C523	2301-000224	C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm	AZ162006	1	
CF01	2201-000180	C-CERAMIC,DISC:10nF,10%,50V,Y5V,TP,6.5*3	AZ163029	1	
CF02	2301-000192	C-FILM,PEF:1nF,5%,50V,TP,5.3x10mm,5mm	AZ162003	1	
C516	2301-000192	C-FILM,PEF:1nF,5%,50V,TP,5.3x10mm,5mm	AZ162003	1	
CF03	2201-000376	C-CERAMIC,DISC:0.22nF,5%,50V,SL,TP,6.3x3	AZ166021	1	
CF04	2201-000653	C-CERAMIC,DISC:68pF,5%,50V,SL,TP,4.0X3.5	AZ166026	1	
CF05	2301-000261	C-FILM,PEF:4.7nF,5%,100V,TP,10.5x12.5x6.	AZ166027	1	
CF06	2201-000516	C-CERAMIC,DISC:4.7nF,+100-0%,500V,Y5U,TP	AZ166028	1	
CF08	2201-000604	C-CERAMIC,DISC:0.056nF,+100-0%,500V,SL,T	AZ166029	1	
CF10	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5	AZ164027	1	
CF12	2401-001840	C-AL:100uF,20%,16V,GP,TP,6.3x11,5	AZ164027	1	
CF14	2401-000832	C-AL:220uF,20%,25V,GP,TP,8x11.5,5	AZ166030	1	
CG01	2401-000832	C-AL:220uF,20%,25V,GP,TP,8x11.5,5	AZ166030	1	
CG04	2401-000832	C-AL:220uF,20%,25V,GP,TP,8x11.5,5	AZ166030	1	
CG02	2305-000149	C-FILM,MPEF:100nF,5%,100V,TP,12x12.5x6.5	AZ162016	1	
CG03	2401-000493	C-AL:10uF,20%,50V,LZ,TP,5x11mm,5mm	AZ164010	1	
D502	0402-000132	DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP	AZ462005	1	
D507	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
D508	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
D509	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
D510	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
D511	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
D512	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
DF02	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
DF03	0402-001105	DIODE-RECTIFIER:ERB43-04SV1,400V,1.0A,-,	AZ462014	1	
DF01	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
DF04	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
DG01	0401-000005	DIODE-SWITCHING:1N4148,100V,200mA,DO-35,	AZ462001	1	
DZ503	0403-001211	DIODE-ZENER:MTZJ12B,11.44-12.03V,500MW,D	AZ462027	1	
KEZ1	0403-001211	DIODE-ZENER:MTZJ12B,11.44-12.03V,500MW,D	AZ462027	1	
DZF01	0403-001039	DIODE-ZENER:MA2560,56V,52-60V,1W,DO-41,T	AZ461014	1	
DZF02	0403-001039	DIODE-ZENER:MA2560,56V,52-60V,1W,DO-41,T	AZ461014	1	
EL81	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL82	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL83	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL84	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL85	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL86	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL87	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL88	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL89	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL91	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
EL92	AA60-40011B	EYELET;ID2.2,OD3.2,-,-,BSP,-	AZ664149	1	
GT504	AA60-40014A	PIN-GT,ASSY:1P,-,-,AUTO	AZ664172	1	
GT505	AA60-40014A	PIN-GT,ASSY:1P,-,-,AUTO	AZ664172	1	
J501	3812-000219	WIRE-NO SHEATH CU;TCWA,300V,52mm(TAPING)	AZ664147	1	

Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
J503	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J505	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J506	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J507	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J508	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J509	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J510	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J511	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JF01	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JF02	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JF03	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JF04	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JF05	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JG01	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J512	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J513	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J514	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J515	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J516	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J517	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J518	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J519	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J520	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J524	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J526	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J527	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J528	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JF06	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
JF07	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J529	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J530	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J521	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J523	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
J531	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
R504	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
R509	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
R539	3812-000219	WIRE-NO SHEATH CU:TCWA,300V,52mm(TAPING)	AZ664147	1	
LF02	2701-000112	INDUCTOR-AXIAL:100uH,10%,3x7mm	AZ363066	1	
LF01	3301-000287	CORE-FERRITE BEAD:AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L505	3301-000287	CORE-FERRITE BEAD:AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L506	3301-000287	CORE-FERRITE BEAD:AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
LF03	3301-000287	CORE-FERRITE BEAD:AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
PCB	AA41-00210D	PCB-CRT:CS29A6,FR-1,1L,D,1.6T,330x245,	AZ760190	1	
O502	0501-000283	TR-SMALL SIGNAL:KSA539,PNP,400MW,TO-92,T	AZ561001	1	
QG01	0501-000283	TR-SMALL SIGNAL:KSA539,PNP,400MW,TO-92,T	AZ561001	1	
O503	0501-000283	TR-SMALL SIGNAL:KSA539,PNP,400MW,TO-92,T	AZ561001	1	
O504	0501-000283	TR-SMALL SIGNAL:KSA539,PNP,400MW,TO-92,T	AZ561001	1	
OF01	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400MW,TO-92,T	AZ561003	1	
OF02	0501-000389	TR-SMALL SIGNAL:KSC815,NPN,400MW,TO-92,T	AZ561003	1	
OF03	0501-000369	TR-SMALL SIGNAL:KSC2331-Y,NPN,1W,TO-92L,	AZ561003	1	
RF10	2001-000241	R-CARBON:1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261152	1	
RF11	2001-000241	R-CARBON:1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261152	1	
R505	2002-001017	R-COMPOSITION:1K,10%,1/2W,AA,TP,3.7x9.0m	AZ268031	1	
R510	2002-001017	R-COMPOSITION:1K,10%,1/2W,AA,TP,3.7x9.0m	AZ268031	1	
R515	2002-001017	R-COMPOSITION:1K,10%,1/2W,AA,TP,3.7x9.0m	AZ268031	1	
R517	2001-001062	R-CARBON(S):10MOHM,5%,1/2W,AA,TP,2.4X6.4	AZ262106	1	
RF18	2003-000458	R-METAL OXIDE(S):100ohm,5%,2W,AF,TP,4x12	AZ263007	1	
R519	2002-001009	R-COMPOSITION:2.7KOHM,10%,1/2W,AA,TP,3.7	AZ263004	1	
R501	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R506	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
R511	2001-000429	R-CARBON:1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261102	1	
RF02	2001-000734	R-CARBON:4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261472	1	
RF03	2001-000362	R-CARBON:150OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261151	1	
RF04	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261222	1	
R522	2001-000449	R-CARBON:2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261222	1	
RF05	2001-000522	R-CARBON:22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261223	1	
RF06	2001-000989	R-CARBON:820KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ268032	1	
RF07	2004-001989	R-METAL:620OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ268033	1	
RF08	2001-000313	R-CARBON:11KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ268034	1	
RF09	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261122	1	
RF12	2001-000221	R-CARBON:1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	AZ261122	1	
RF13	2001-001179	R-CARBON(S):68KOHM,5%,1/2W,AA,TP,2.4X6.4	AZ268035	1	
RF16	2001-001179	R-CARBON(S):68KOHM,5%,1/2W,AA,TP,2.4X6.4	AZ268035	1	
RF14	2001-001071	R-CARBON(S):12KOHM,5%,1/2W,AA,TP,2.4X6.4	AZ268036	1	
RF15	2001-001100	R-CARBON(S):2.7OHM,5%,1/2W,AA,TP,2.4X6.4	AZ268037	1	
RF17	2001-001100	R-CARBON(S):2.7OHM,5%,1/2W,AA,TP,2.4X6.4	AZ268037	1	
RG06	2001-001100	R-CARBON(S):2.7OHM,5%,1/2W,AA,TP,2.4X6.4	AZ268037	1	

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
RG07	2001-001100	R-CARBON(S):2.70HM,5%,1/2W,AA,TP,2.4X6.4	AZ268037	1	
RF19	2003-001023	R-METAL OXIDE(S):120ohm,5%,2W,AF,TP,3.9x	AZ268038	1	
RF20	2003-002214	R-METAL OXIDE(S):680ohm,5%,2W,AG,TP,3.9x	AZ268039	1	
RF21	2003-002214	R-METAL OXIDE(S):680ohm,5%,2W,AG,TP,3.9x	AZ268039	1	
RF22	2003-002214	R-METAL OXIDE(S):680ohm,5%,2W,AG,TP,3.9x	AZ268039	1	
RF23	2003-000746	R-METAL OXIDE(S):560HM,5%,2W,AF,TP,4X12M	AZ268040	1	
RF24	2003-000746	R-METAL OXIDE(S):560HM,5%,2W,AF,TP,4X12M	AZ268040	1	
RF25	2003-002009	R-METAL OXIDE(S):390ohm,5%,2W,AF,TP,3.9x	AZ263023	1	
RG02	2004-002022	R-METAL(S):51KOHM,1%,1/2W,AA,TP,2.4X6.4M	AZ268041	1	
RG04	2004-002022	R-METAL(S):51KOHM,1%,1/2W,AA,TP,2.4X6.4M	AZ268041	1	
RG05	2001-001163	R-CARBON(S):560OHM,5%,1/2W,AA,TP,2.4X6.4	AZ268043	1	
RG08	2001-001163	R-CARBON(S):560OHM,5%,1/2W,AA,TP,2.4X6.4	AZ268043	1	
L503	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5X5,TP,-	AZ362001	1	
L504	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5X5,TP,-	AZ362001	1	
LF04	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5X5,TP,-	AZ362001	1	
LF05	2901-000297	FILTER-EMI ON BOARD:-,3A,-,-,3.5X5,TP,-	AZ362001	1	
R502	2001-001093	R-CARBON(S):2.2KOHM,5%,1/2W,AA,TP,2.4X6.	AZ261922	1	
R507	2001-001093	R-CARBON(S):2.2KOHM,5%,1/2W,AA,TP,2.4X6.	AZ261922	1	
R512	2001-001093	R-CARBON(S):2.2KOHM,5%,1/2W,AA,TP,2.4X6.	AZ261922	1	
R503	2001-000085	R-CARBON(S):100KOHM,5%,1/2W,AA,TP,2.4X6.	AZ268030	1	
R508	2001-000085	R-CARBON(S):100KOHM,5%,1/2W,AA,TP,2.4X6.	AZ268030	1	
R513	2001-000085	R-CARBON(S):100KOHM,5%,1/2W,AA,TP,2.4X6.	AZ268030	1	
R526	2004-000500	R-METAL:2.7KOHM,1%,1/8W,AA,TP,1.8X3.2MM	AZ268044	1	
R527	2004-000433	R-METAL:1Kohm,1%,1/8W,AA,TP,1.8x3.2mm	AZ268045	1	
R518	2003-002171	R-METAL OXIDE(S):150ohm,5%,2W,AG,TP,3.9x	AZ268013	1	
R542	2001-000832	R-CARBON:510OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261511	1	
R543	2001-000832	R-CARBON:510OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261511	1	
R544	2001-000832	R-CARBON:510OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261511	1	
R546	2001-000832	R-CARBON:510OHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261511	1	
L501	2701-000178	INDUCTOR-AXIAL:33uH,10%,3x7mm	AZ363076	1	
R521	2001-000660	R-CARBON:33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	AZ261333	1	
RG01	2004-001397	R-METAL(S):4.7Kohm,1%,1/2W,AA,TP,2.4x6.4	AZ264003	1	
RG03	2004-001987	R-METAL:4.3Kohm,1%,1/2W,AA,TP,2.4x6.4m	AZ268042	1	
DZG501	0403-001328	DIODE-ZENER:MTZJ22A,20.15-21.20V,500mW,D	AZ462039	1	
L507	2701-000215	INDUCTOR-AXIAL:8.2UH,10%,2.5X3.4MM	AZ363067	1	
SG501	AA27-00084A	COIL:S-23,-,-,-,-,-,S-23,5000Mohm	AZ363068	1	
SG502	AA27-00084A	COIL:S-23,-,-,-,-,-,S-23,5000Mohm	AZ363068	1	
SG503	AA27-00084A	COIL:S-23,-,-,-,-,-,S-23,5000Mohm	AZ363068	1	
SG504	AA27-00084A	COIL:S-23,-,-,-,-,-,S-23,5000Mohm	AZ363068	1	
SG505	AA27-00084A	COIL:S-23,-,-,-,-,-,S-23,5000Mohm	AZ363068	1	
KEZ1	2008-001079	R-FUSIBLE:4.70HM,5%,2W,AF,TP,3.9X10MM	AZ268056	1	
	HA98-00054A	ASSY SUB PART:KS3A,PCB,CRT,ALL,-	AZ760157	1	
	0202-000008	SOLDER-WIRE:S63S-W3.0,S63S,D3,SN63/PB37	AZ760060	0.0064	
	0202-000187	SOLDER-WIRE FLUX:-,RS60S,D1.2,63SN/37PB	AZ760061	0.00012	
	0204-000442	SOLVENT:1M-1000,C3H7OH,96,-	AZ760063	0.00092	
	0204-001024	FLUX:DF-98TVS,-,20%, -	AZ760064	0.0007	
QF04	HA96-50149A	ASSY-H/S:-,AA62-30013A,2SC2344,-	AZ760191	1	
	0502-000153	TR-POWER:2SC2344-D,NPN,1.2W,TO-220,-,60	AZ561018	1	
SCR09	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELVEL)	AZ760146	1	
H/S09	AA62-30013A	HEAT SINK-ES:-,A6063 EXTR,-,-,45(21) T02	AZ760192	1	
QF05	HA96-50149B	ASSY-H/S:-,TR,AA62-30013A,2SA1011,-	AZ760193	1	
QV10	0502-000131	TR-POWER:2SA1011-D,PNP,1.2W,TO-220,-,60	AZ561019	1	
SCR10	6003-000333	SCREW-TAPTITE:RH,+2S,M3,L10,ZPC(YELVEL)	AZ760146	1	
H/S10	AA62-30013A	HEAT SINK-ES:-,A6063 EXTR,-,-,45(21) T02	AZ760192	1	
C510	2401-001525	C-AL:47uF,20%,250V,GPBK,16x25mm,7.	AZ166031	1	
CF11	2401-000927	C-AL:22UF,20%,250V,GP,TP,13X20MM,5M	AZ165008	1	
JA501	3722-001503	JACK-PIN:1P,1PI,NI,RED,SCR-JACK	AZ760194	1	
CNF01	AA39-20033C	LEAD CONNECTOR-ASSY:,3(2)P,67096-003,S,2	AZ760233	1	
OG02	0502-000244	TR-POWER:KSA940,PNP,1.5W,TO-220,-,40-14	AZ561020	1	
C513	2201-000723	C-CERAMIC,DISC:4.7nf,20%,3KV,Y5U,TP,16x5	AZ163033	1	

### ASSY-PCB A/V BOARD

*	AA95-01513A	ASSY-PCB A/V BOARD:-,29K8,KS3A,100HZ	AZ760234	1	
JH701	3722-000143	JACK-PHONE:1P(VER),3.4mm,AG,BLK,NO	AZ664027	1	
JA701	3722-001031	JACK-RCA:3P,3.6MM,#18,AU	AZ664031	1	
JS701	3722-001163	JACK-VHS:4P,12mm,AU,BLK,N	AZ760235	1	
CN704	AA39-00070A	LEAD CONNECTOR-ASSY:,4P,YBNH250-04,35184	AZ664178	1	
CN705	AA39-20009E	LEAD CONNECTOR-ASSY:,1P,YFH800-01,600,16	AZ664179	1	
CN701	AA39-20068G	LEAD CONNECTOR-ASSY:,8P,YBNH025-08,67096	AZ664180	1	
CN703	AA39-20069A	LEAD CONNECTOR-ASSY:,5P,YBNH025-05,67096	AZ664055	1	
CN702	AA39-20070J	LEAD CONNECTOR-ASSY:,7P,YBNH250-07,67096	AZ760236	1	
	AA63-10002A	BAND-TIE:-,NYLON66 V2,-,-,L100,NTR,-,-	AZ760068	1	
	HA98-600011	ASSY-SUB,PART,CONTROL,S51A,WIDE	AZ760145	1	

Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
	0202-000008	SOLDER-WIRE:S63S-W3.0,S63S,D3,SN63/PB37	AZ760060	0.0015	
	0202-000187	SOLDER-WIRE FLUX:-,RS60S,D1.2,63SN/37PB	AZ760061	0.00045	
	0204-001024	FLUX:DF-98TVS,-,20%,-	AZ760064	0.000245	
	0204-000442	SOLVENT:1M-1000,C3H7OH,96,-	AZ760063	0.000352	
	HA99-200090	ASSY-PCB,A/V SIDE(ACI):-,CT-294D,K51A,NT	AZ760237	1	
R701	2001-000028	R-CARBON(S):1000HM,5%,1/2W,AA,TP2.4X6.4	AZ261913	1	
R702	2001-000028	R-CARBON(S):1000HM,5%,1/2W,AA,TP2.4X6.4	AZ261913	1	
C701	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP	AZ161101	1	
C702	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP	AZ161101	1	
C707	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP	AZ161101	1	
C708	2202-000121	C-CERAMIC,MLC-AXIAL:100pF,10%,50V,Y5P,TP	AZ161101	1	
C703	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C704	2202-000231	C-CERAMIC,MLC-AXIAL:330pF,10%,50V,Y5P,TP	AZ161331	1	
C705	2401-002009	C-AL:100UF,20%,16V,GP,TP:6.3*7.5	AZ166017	1	
C706	2401-002009	C-AL:100UF,20%,16V,GP,TP:6.3*7.5	AZ166017	1	
L701	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.4MM	AZ361001	1	
L702	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.4MM	AZ361001	1	
L703	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.4MM	AZ361001	1	
L704	2701-000114	INDUCTOR-AXIAL:10UH,10%,2.5X3.4MM	AZ361001	1	
L705	2701-000168	INDUCTOR-AXIAL:3.3 UH 5% 2.5X3.4 MM	AZ361008	1	
L706	2701-000168	INDUCTOR-AXIAL:3.3 UH 5% 2.5X3.4 MM	AZ361008	1	
L707	3301-000287	CORE-FERRITE BEAD:AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
L708	3301-000287	CORE-FERRITE BEAD:AA,3.5x1.0x6.0mm,1500,	AZ362003	1	
PCB	AA41-00345A	PCB-SIDE A/V:CS29K1,FR-1,1L,A,1.6T,245x2	AZ664182	1	
	AA65-30018A	CLAMP-WIRE:DONG-A,NYLON-66,-,-,DATL-60	AZ760050	3	

**ASSYPCB-PFC**

*	HA94-05783A	ASSYPCB-PFC:32W8/Z4,50HZ,973B	AZ760238	1	
	HA99-200068	ASSY-PCB,PFC(ACI):32W8,KS3A	AZ760239	1	
EYP07	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP08	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP09	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP10	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP11	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP12	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP13	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP14	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP15	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP16	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP17	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP18	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP19	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP20	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP21	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP22	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP23	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP24	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP25	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
EYP26	AA60-40011A	EYELET;ID2.0,OD2.8,-,-,BST,-	AZ664148	1	
PCB	AA41-00404A	PCB-PFC:CS2539,FR-1,1L,A,1.6T,330x245,5,	AZ760197	1	
CNP02	AA39-00236A	LEAD CONNECTOR ASSY:,3(2)P,YHL500-03A BL	AZ760198	1	
TOP	AA39-00235A	LEAD CONNECTOR ASSY:,3(2)P,YHL500-03A BL	AZ760199	1	
PFT01	AA27-00121A	COIL CHOKE:CODE_NO,SP43J5HP,15mH,-0%,+5%	AZ363077	1	
PFT02	AA27-00121A	COIL CHOKE:CODE_NO,SP43J5HP,15mH,-0%,+5%	AZ363077	1	
	HA98-600020	ASSY-SUB,PART:KS4A,PFC PCB	AZ760158	1	
	0202-000008	SOLDER-WIRE:S63S-W3.0,S63S,D3,SN63/PB37	AZ760060	0.00282	
	0202-000187	SOLDER-WIRE FLUX:-,RS60S,D1.2,63SN/37PB	AZ760061	0.00005	
	0204-001024	FLUX:DF-98TVS,-,20%,-	AZ760064	0.001412	
	0204-000442	SOLVENT:1M-1000,C3H7OH,96,-	AZ760063	0.001557	
	HA61-00987A	HOLDER-PFC:32W8,29A8,28W8,HIPS,ALLFLAT	AZ760159	1	
	HA83-00006A	LP-RESIN:HIPS:,BASf495F,NTR,HB	AZ760125	0.03344	
	HA83-00011A	LP-RESIN:M BATCH,WILSON 6007-GY-60,GRY	AZ760160	0.00068	
CNP02	3711-004721	CONNECTOR-HEADER:3WALL,2P1R,12.5mm,STRA	AZ760166	1	
TOP	3711-004720	CONNECTOR-HEADER:3WALL,2P1R,12.5mm,STRA	AZ760167	1	
	6003-001023	SCREW-TAPTITE:RWH,+B,M3,L10,ZPC(YEL)SWR	AZ760161	4	

**ASSY CABINET FRONT**

*	HA91-00829A	ASSY CABINET FRONT:29V1,KS2A,FLAT,HIPS	AZ760162	1	
	HA64-01971A	WINDOW RMC.LED:SPACE	AZ760122	1	

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
	HA83-00010A	LP-RESIN; OROGLAS, VM-100 ZHN 2	AZ760123	0.001	
	AA64-01970B	KNOB POWER; 29V1, HIPS, HB, PW-001P, PEARL-WH	AZ760163	1	
	HA83-00042A	LP-MARKING PAINT; K TSA112, PEARL WHITE, TS	AZ760164	0.001	
	HA83-00006A	LP-RESIN HIPS; BASF495F, NTR, HB	AZ760125	0.001	
	HA83-00016A	LP-RESIN; M BATCH, WILSON 213-WT-60, WHIT	AZ760126	0.001	
	AA64-01972A	BADGE BRAND; TOOL, 29 TOSHIBA, -, -, -, -, -	AZ760128	1	
	HA83-00049A	LP-ADHESIVE-HM; SPACE	AZ760129	0.28	
	AA61-60003J	SPRING-CS; SUS304, -, OD6, N7, OD6, -, -, -	AZ760018	1	
	AA65-30105A	CLAMP-WIRE; ALL MODEL, NYLON 66, V2, -, NTR, 1	AZ760035	2	
	AA64-01510E	INLAY AV; 29V1, PS SHEET, TO.3, KS3A SILVER	AZ760165	1	
	AA64-02437B	CABINET-FRONT; 29V1, HIPS, HB, K TSA112, WHITE	AZ760166	1	
	HA83-00042A	LP-MARKING PAINT; K TSA112, PEARL WHITE, TS	AZ760164	0.07	
	HA83-00018A	LP-MARKING PAINT; LIGHTGRAY, TPC180	AZ760167	0.00008	
	HA83-00043A	LP-MARKING PAINT; OXIDIZED SILVER, VPAA52	AZ760136	0.091	
	HA83-00006A	LP-RESIN HIPS; BASF495F, NTR, HB	AZ760125	0.001	
	HA83-00016A	LP-RESIN; M BATCH, WILSON 213-WT-60, WHIT	AZ760126	0.001	
	AA61-10054A	BRACKET-CRATER; 6277, STS304, TO.5, -, -, -	AZ760134	2	
	AA64-01969B	KNOB CONTROL; 29V1, HIPS, HB, PLANTING-SILVE	AZ760135	1	
	HA83-00043A	LP-MARKING PAINT; OXIDIZED SILVER, VPAA52	AZ760136	0.001	
	HA83-00006A	LP-RESIN HIPS; BASF495F, NTR, HB	AZ760125	0.001	
	HA83-00016A	LP-RESIN; M BATCH, WILSON 213-WT-60, WHIT	AZ760126	0.001	
	6002-000515	SCREW-TAPPING; RH, +, 2, M4, L15, ZPC, SWRCH18	AZ760117	2	
	HA61-00711C	HOLDER-PCB; SPACE	AZ760137	1	

### ASSY-CABINET(COM)

*	AA90-01096A	ASSY-CABINET(COM); KS3A, 29V1, KS3A, FLAT, TS	AZ760103	1	
	HA64-02448B	CABINET BACK; 29K8, HIPS, V0, GRY	AZ760104	1	
	HA83-00013A	LP-RESIN HIPS; NTR, HB, DOW A-TECH, IEC65	AZ760105	0.001	
	HA83-00012A	LP-RESIN; M BATCH, WILSON 6053-GY-60, GRY	AZ760106	0.001	
	AA65-30113A	CLAMP-D, COIL; NYLON 66, V2, BLK, TVI 25-29, -	AZ760107	4	
	AA65-30008A	CLAMP-CORD; PE, HB, BLK, -, -, -	AZ760108	1	
CB+CF	6003-001025	SCREW-TAPTITE; RH, M4, L20, BLK	AZ760109	5	
CB+TBA	6003-001025	SCREW-TAPTITE; RH, M4, L20, BLK	AZ760109	5	
TB+JAC	6003-001025	SCREW-TAPTITE; RH, M4, L20, BLK	AZ760109	2	
CRT+CF	AA60-10050V	SCREW-ASSY; -, SWRCH18A, M6, L30, HH, +, WC, -, Z	AZ760110	4	
CF+SPK	AA60-10050A	SCREW-ASSY; -, SWRCH18A, M4, L25, RH, +, WP, -, Z	AZ760111	4	
	AA65-30009A	CLAMP-FBT; ABS, V0, BLK, -, -, -	AZ760070	1	
	AA65-30110A	CLAMP-WIRE; ALL MODEL, NYLON 66, V2, -, BLK, P	AZ760112	2	
	HA68-02177A	LABEL-POS; SPACE	AZ760113	1	
	HA83-00046A	LP-TAPE INK; WIDTH 105 MM	AZ760114	0.23	
	HA68-02179A	LABEL-RATING; 58MM, 54MM, WHITE	AZ760115	1	
	HA83-00052A	LP-TAPE-INK; SPACE	AZ760116	0.06	
CF+KC	6002-000515	SCREW-TAPPING; RH, +, 2, M4, L15, ZPC, SWRCH18	AZ760117	2	
	AA63-10002A	BAND-TIE; NYLON66 V2, -, -, L100, NTR, -, -	AZ760068	5	
	AA65-30104B	CLAMP-WIRE; ALL MODEL, NYLON 66, V2, -, BLK, W	AZ760118	2	
CF+AV	6003-001135	SCREW-TAPTITE; TH, +, B, M4.0, L15, BLK, SWRCH1	AZ760119	2	
	AA64-00894J	INLAY BACK; KS3A, 29V1, PS SHEET, TO.3, BLK, T	AZ760120	1	


### ASSY PACKING

*	AA90-01137A	ASSY PACKING; 29V1	AZ760138	1	
	AA60-40006A	PIN-STAPLE; -, H18, 33X17.8X2.4, -, AUTO	AZ760008	24	
	HA69-00722B	PACKING CASE; 29V1, TSB	AZ760139	1	
	AA69-30032F	BAG-SHEET; HDPE+PE FOAM, -, W1400, H1400, -, -	AZ760140	1	
	HA68-02178A	LABEL-BOX; 250MM, 90MM, WHITE	AZ760141	2	
	HA83-00046A	LP-TAPE INK; WIDTH 105 MM	AZ760142	0.5	
	HA69-01110A	CUSHION SET; TOOL, 29 TOSHIBA, CASTING	AZ760143	1	
	HA01-030006	RESIN-EPS; CHEIL SF-301V, WHT	AZ760072	0.001	
	HA02-030012	TAPE-CELLULOSE; -, TO.046, W75, L990M	AZ760144	2.5	

### ASSY CRT

*	AA94-05837A	ASSY CRT; A68QCP893X004, +380MG, 29, 4:3, Y	AZ760200	1	
	AA03-00301A	CRT COLOR; A68QCP893X004, +380MG, 0.315MH, 7	AZ760201	1	
	AA27-00128A	COIL DEGAUSSING; -, -, -, 50T, 7, -, 29inch, 2	AZ760180	1	
	AA98-70011A	ASSY-TBC, WIRE(P); -, 29INCH, NTSC, PAL, 2P-WH	AZ760181	1	

Electric Parts List

LOC NO	PARTS NO	Description & Specification	REPLACEMENT NO	Q'ty	REMARKS
<b>REMOCON</b>					
*	AA59-00236A	REMOCON;TM57,37,KS3A,TOSHIBA,L/GRAY,G66	AZ760176	1	
<b>ASSY-POWER,CORD</b>					
 *	AA96-00094A	ASSY-POWER,CORD;DP,CP2/NO(4.0),H/C350MM,	AZ760177	1	
<b>ASSY-HOLDER,SPK</b>					
*	AA91-00150B	ASSY-HOLDER,SPK;DP,-,80HM/15W,-,AA91-001	AZ760228	1	
<b>ASSY ACCESSORY</b>					
*	AA94-05874A	ASSY ACCESSORY;29,50-100HZ,KS3A,P,TSB	AZ760170	1	
	4301-000121	BATTERY-MN;1.5V,-,AAA,10.5x44.5m,HOHOLDE	AZ760171	2	
	HA83-00047A	LP-TAPEACETATE;SPACE	AZ760152	0.07	
	HA69-00276A	VINYL-BAG;HDPE,T0.025,L400,W240,-,W/O LO	AZ760088	1	
	HA68-02123A	LABEL;A/P 120(G),94,45,BLACK,29KV-X	AZ760153	1	
	HA68-01992B	MANUAL USERS;ENG,W/P80(G),,KS3A,29V1,T	AZ760172	1	
	HA68-01993B	MANUAL USERS;GER,W/P80(G),,KS3A,29V1,T	AZ760173	1	
	HA68-01994B	MANUAL USERS;DUT,W/P80(G),,KS3A,29V1,T	AZ760174	1	
	HA68-01995B	MANUAL USERS;FRA,W/P80(G),,KS3A,29V1,T	AZ760175	1	

**TOSHIBA CORPORATION**

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**TOSHIBA**

SERVICE MANUAL

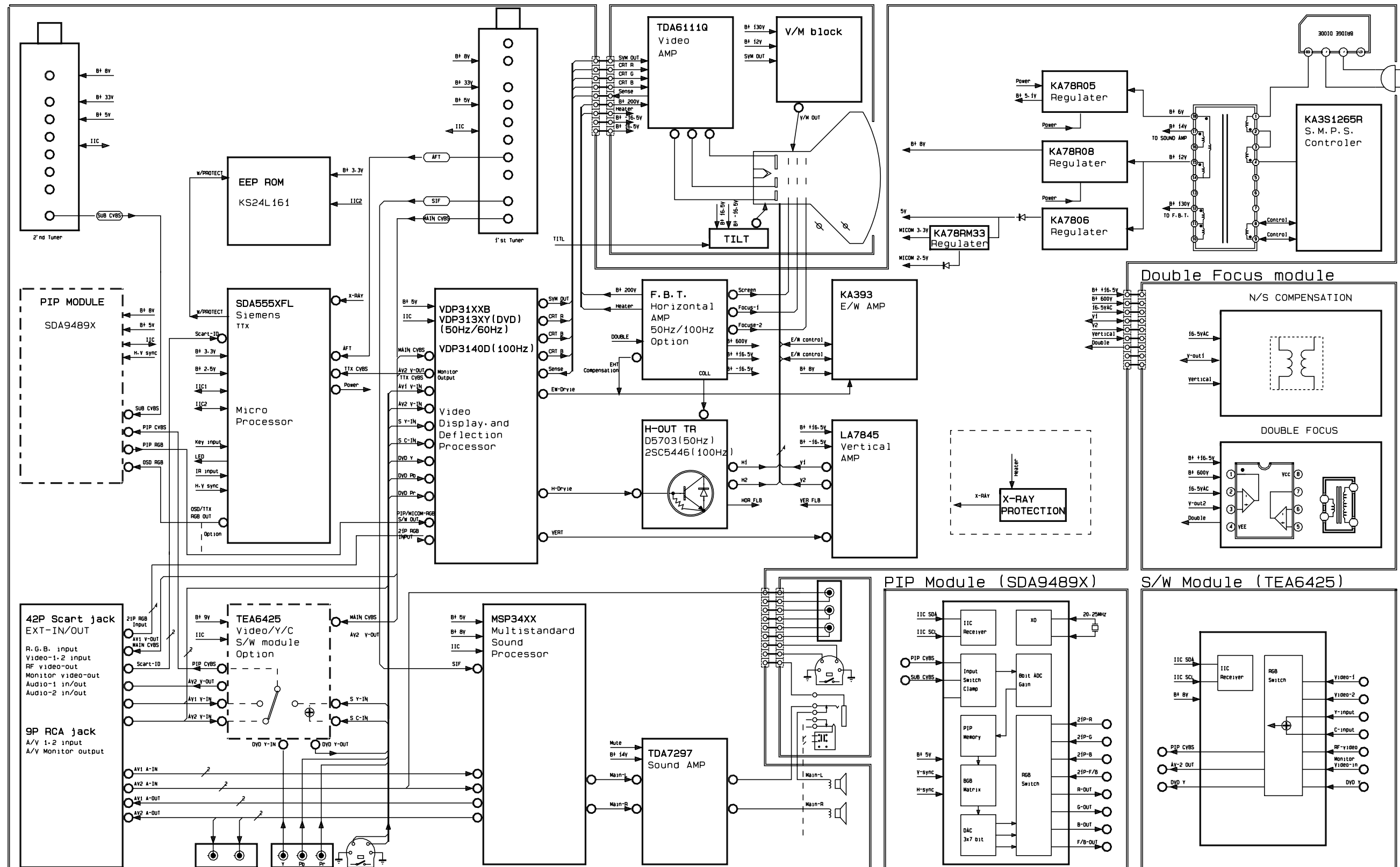
COLOUR TELEVISION

***29VH14P***

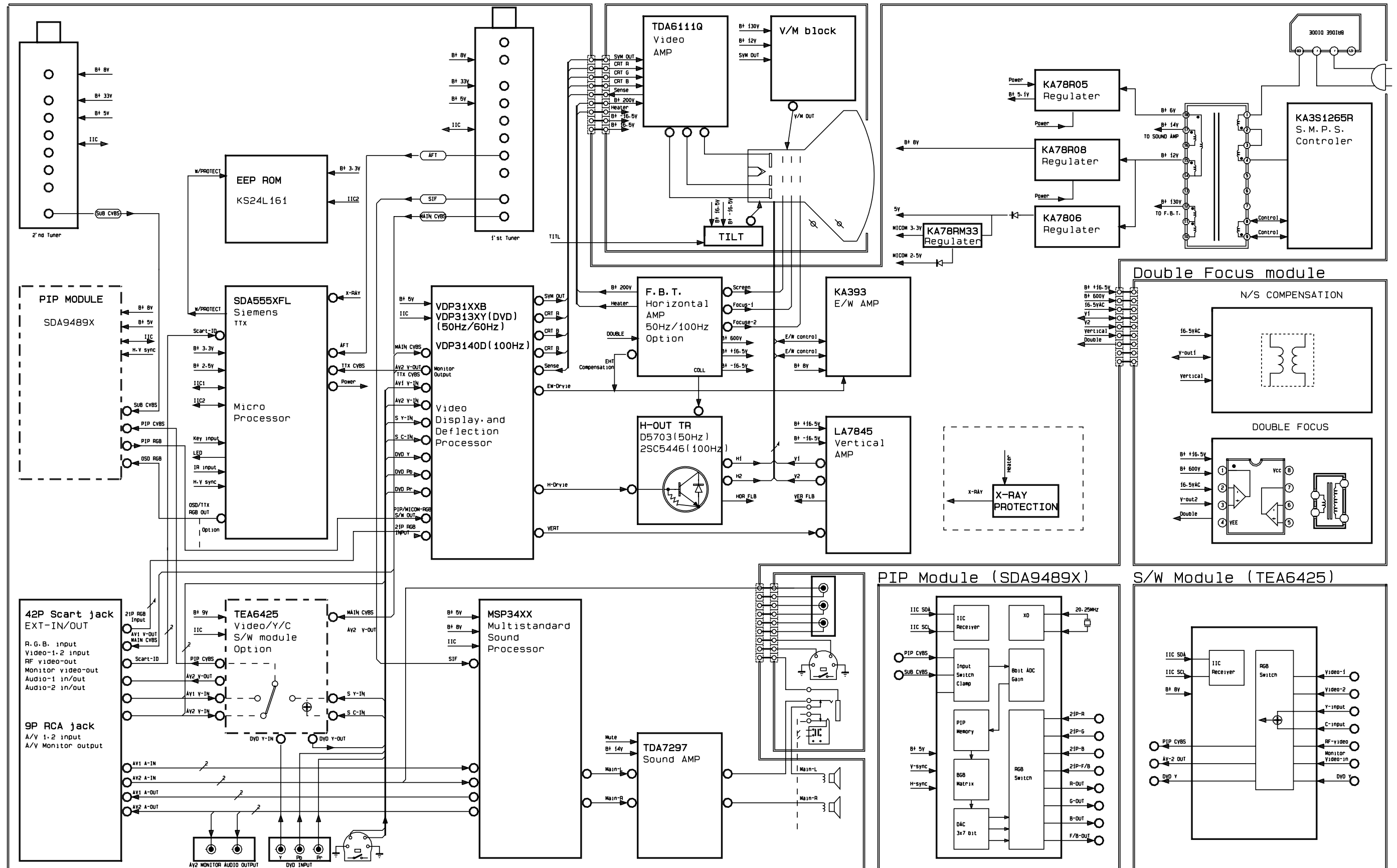


# 8. Block Diagrams

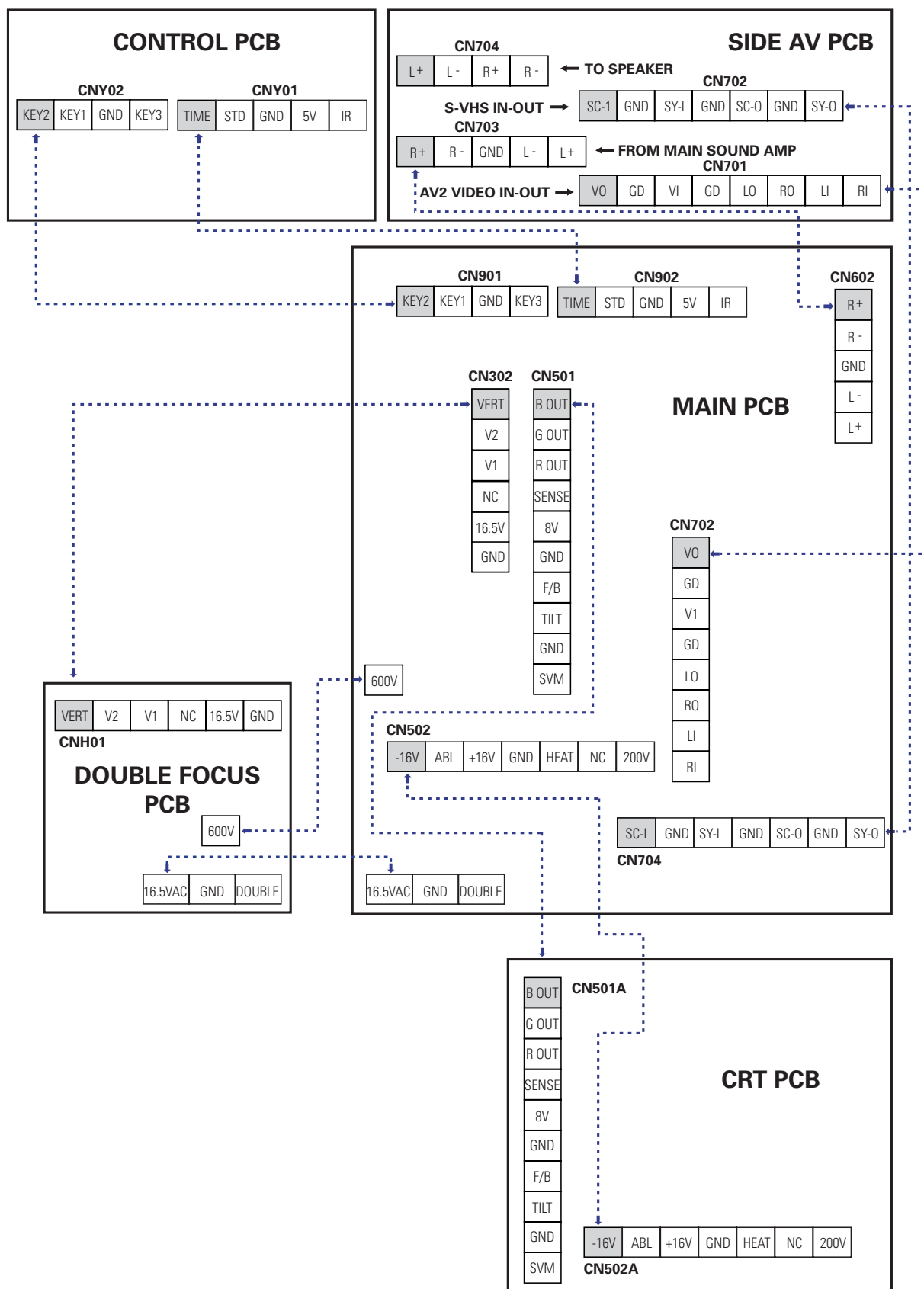
## 8-1 Power Diagram



### 8-2 Block Diagram



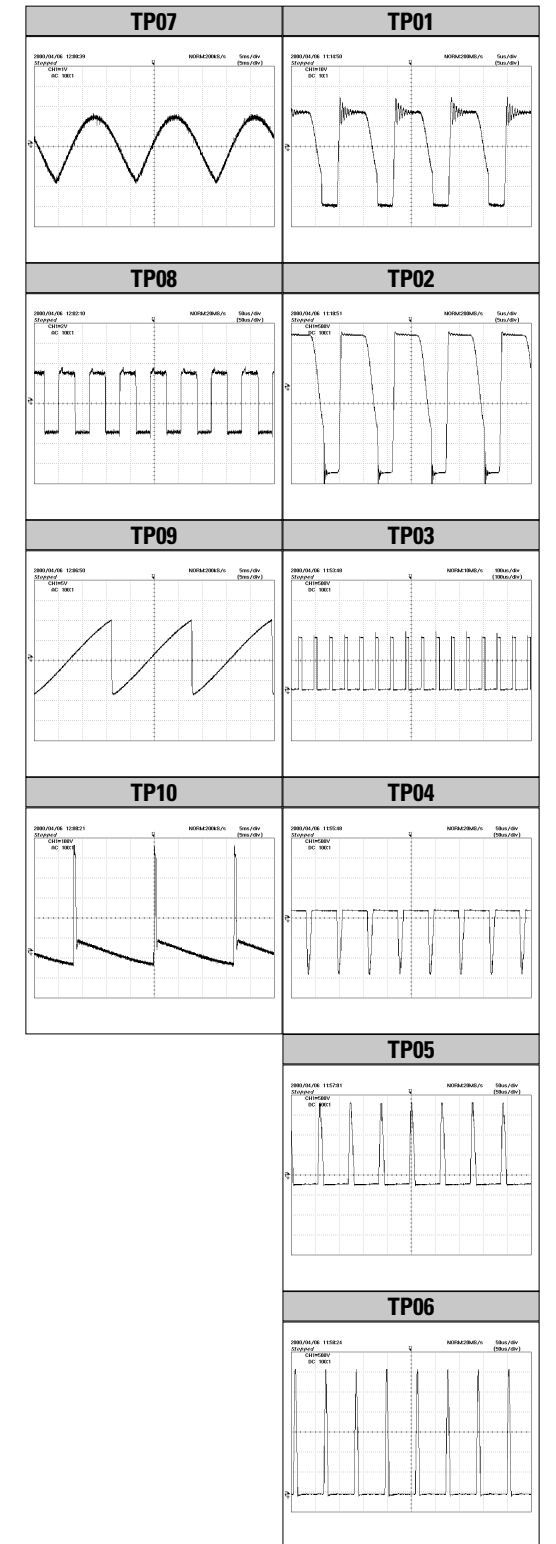
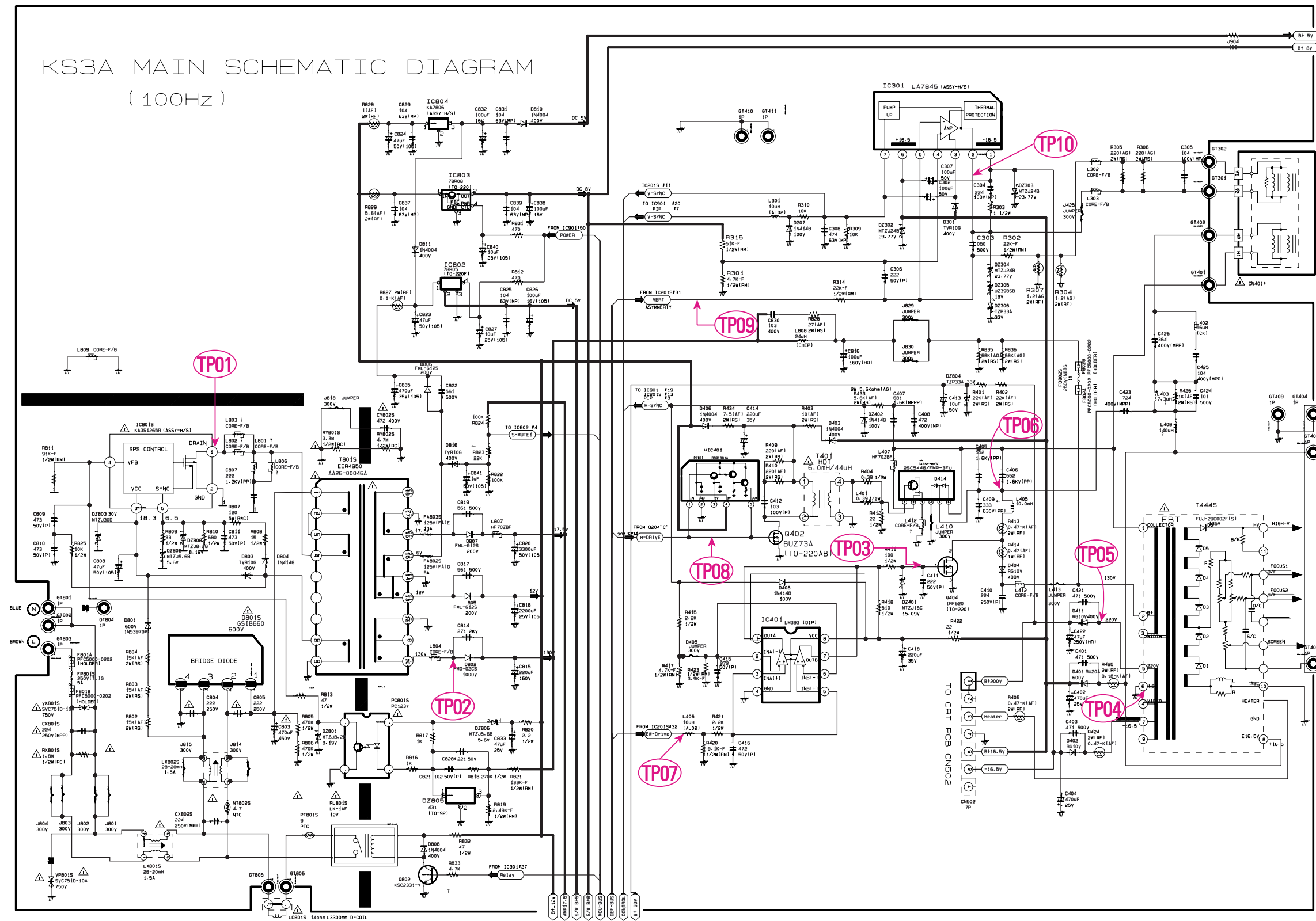
## 9. Wiring Diagram



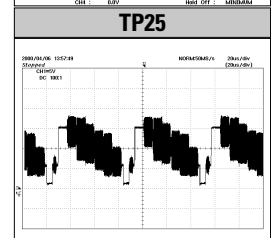
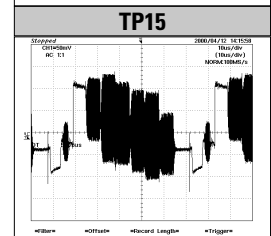
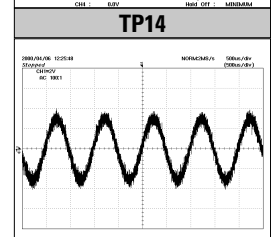
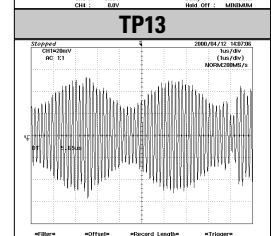
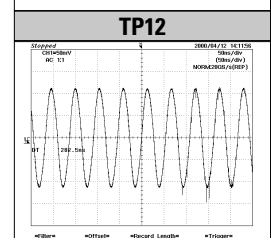
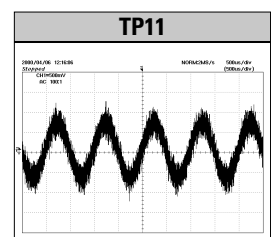
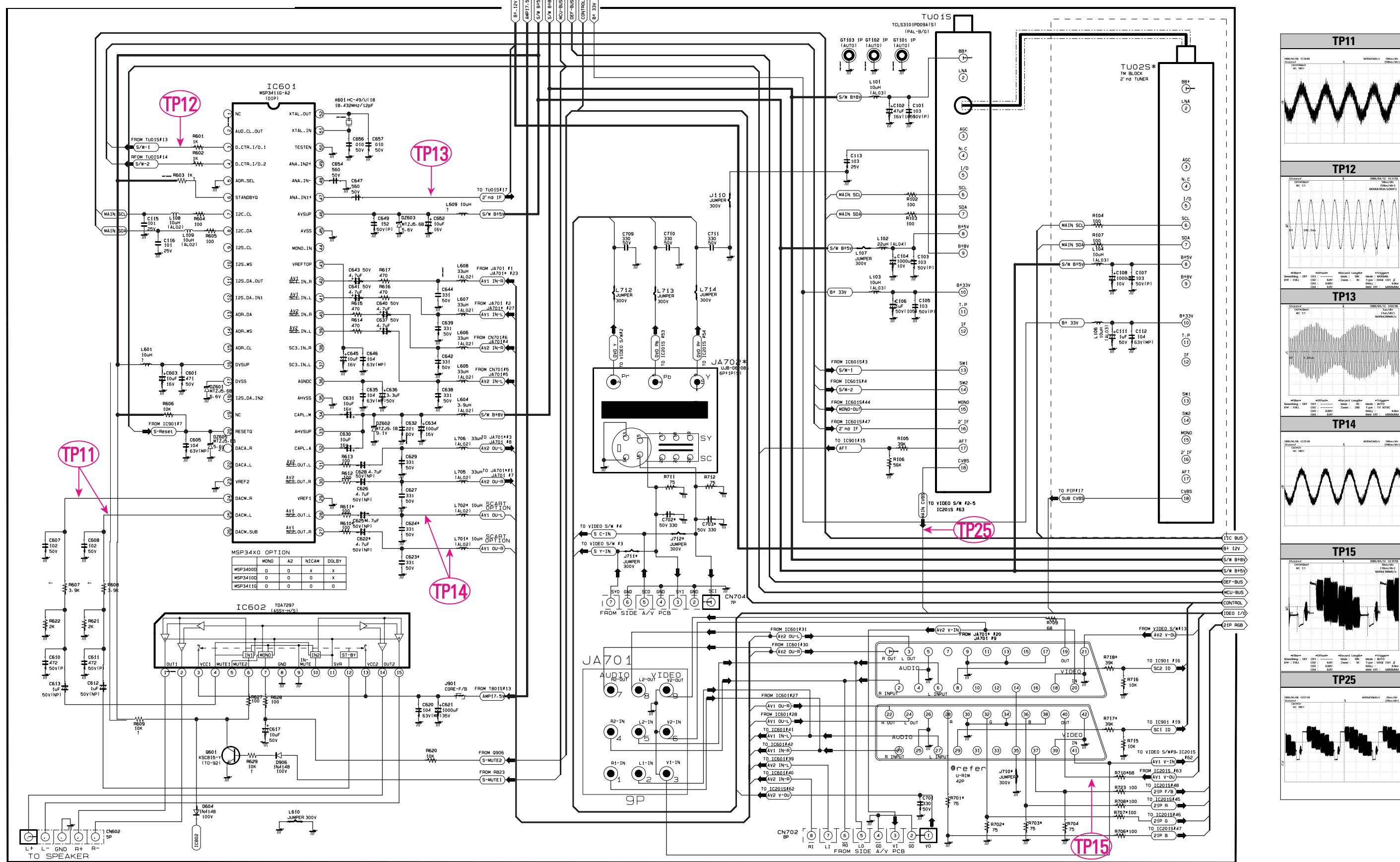
# MEMO

# 10. Schematic Diagrams

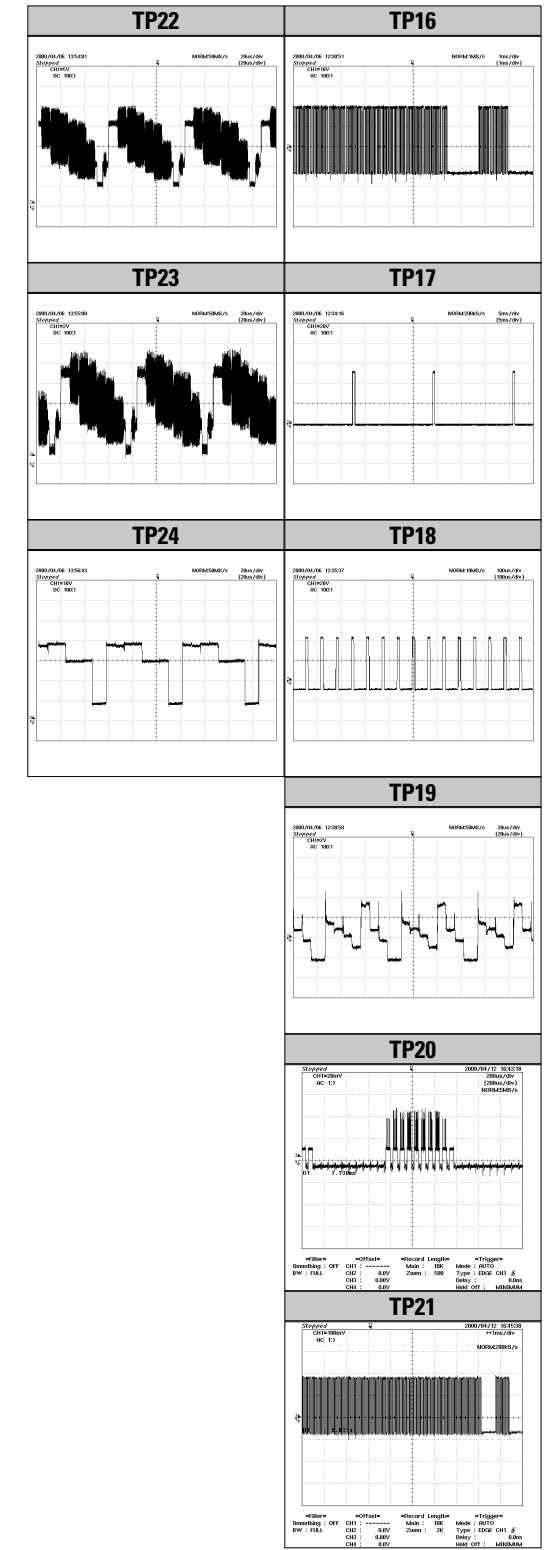
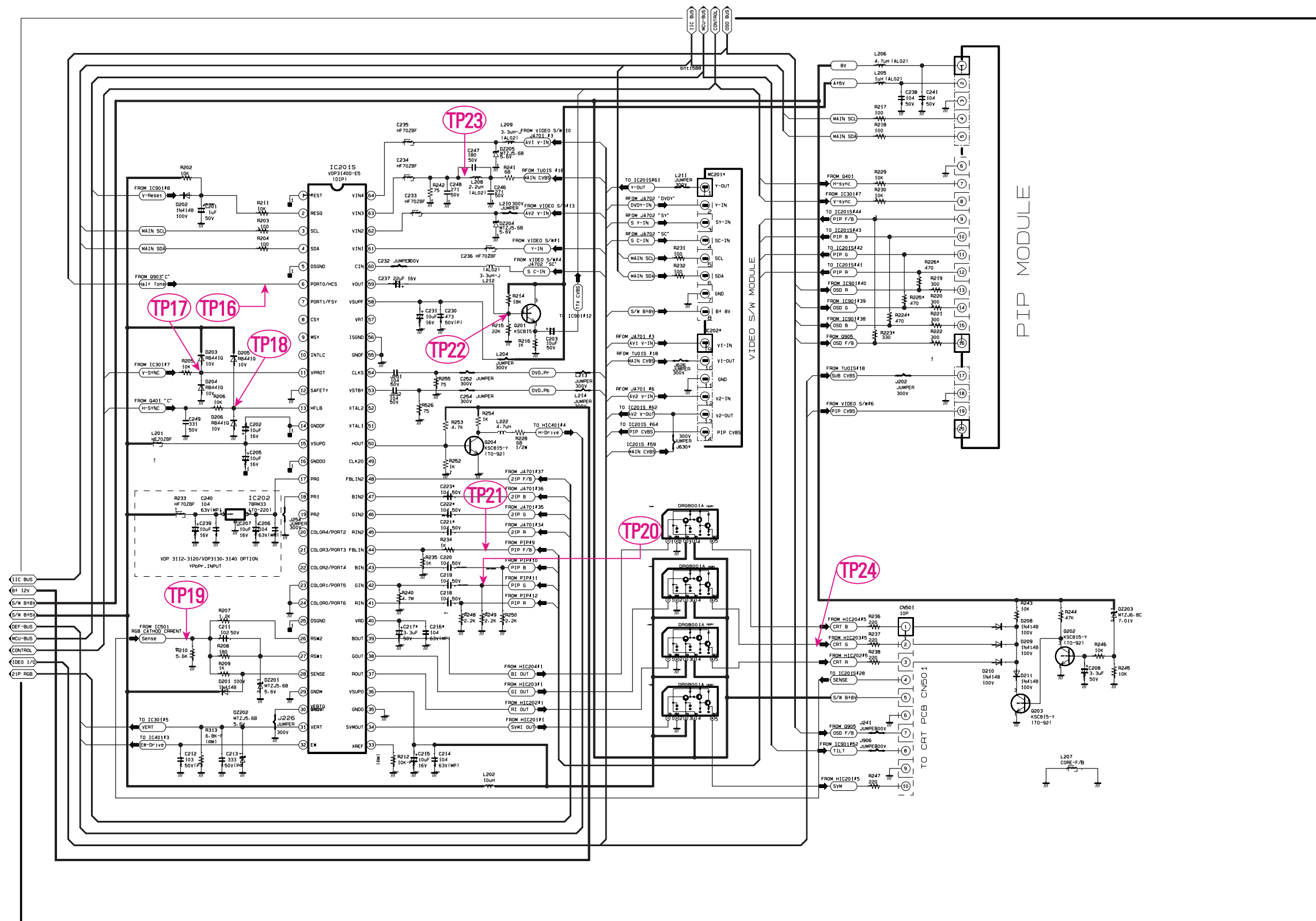
## 10-1 MAIN 1



10-2 MAIN 2

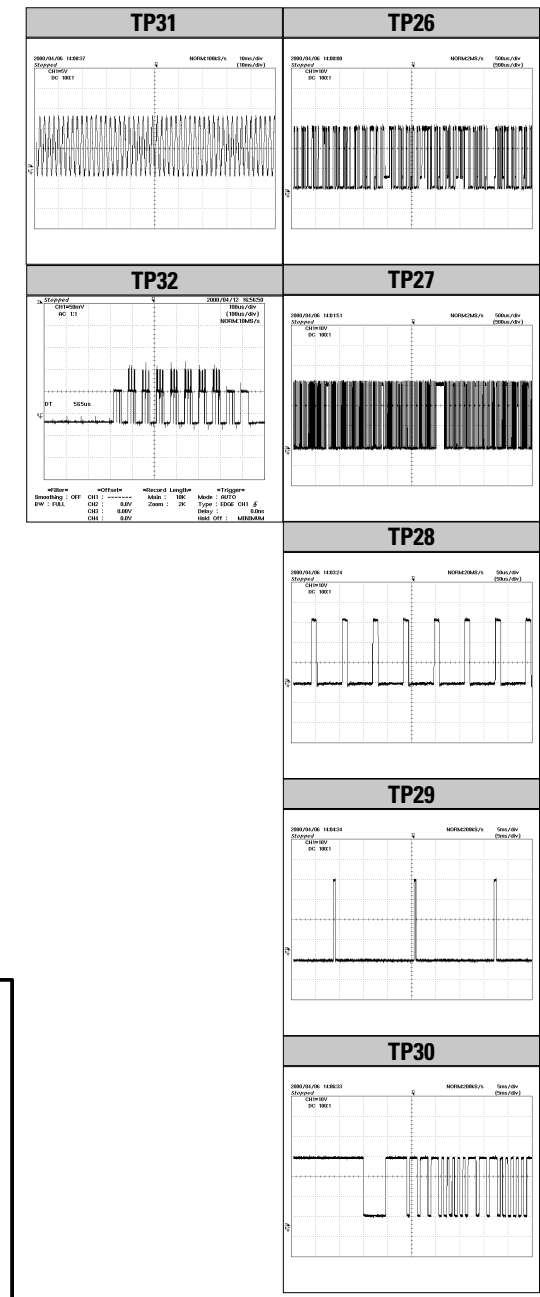
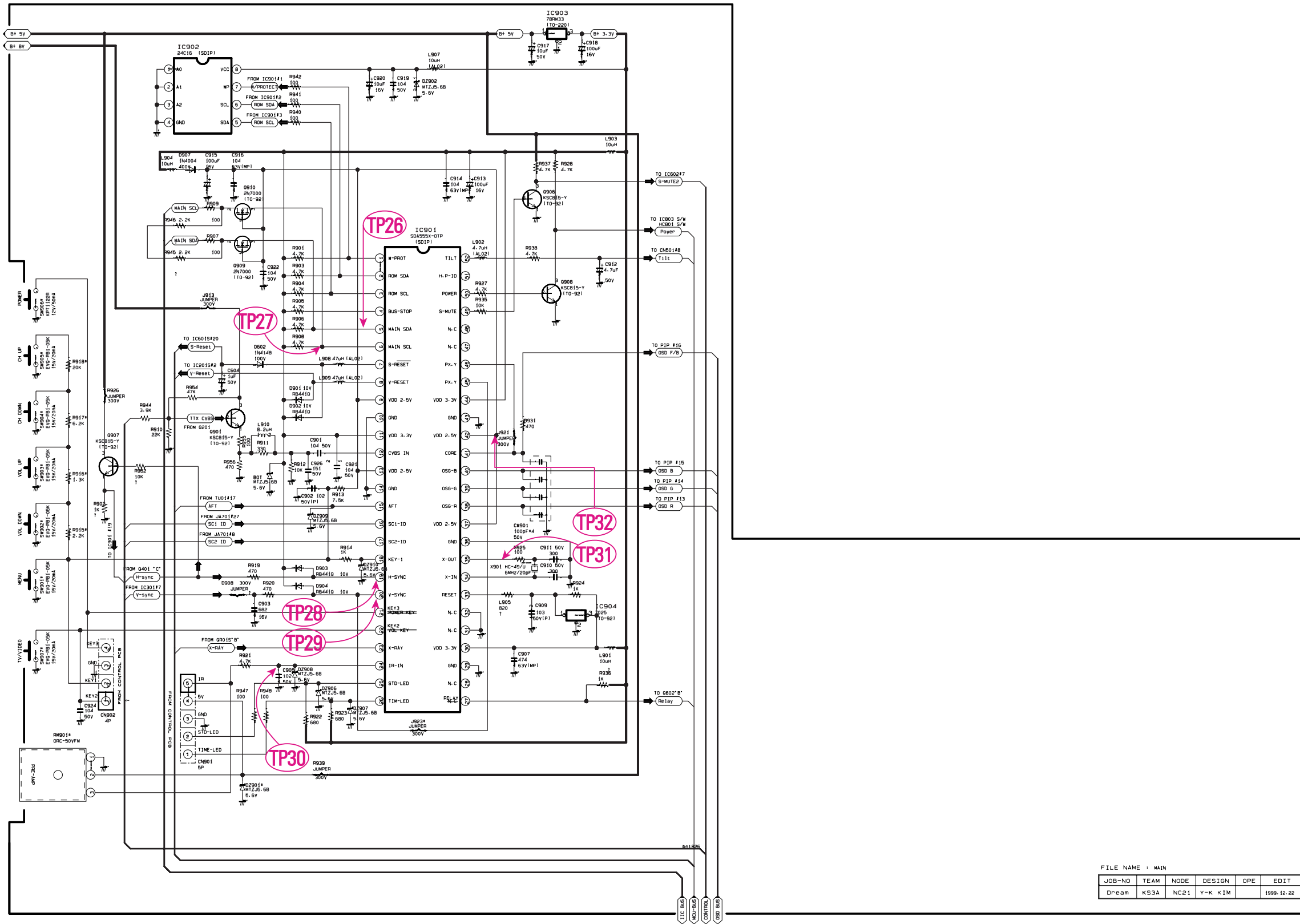


10-3 MAIN3





10-4 MAIN 4

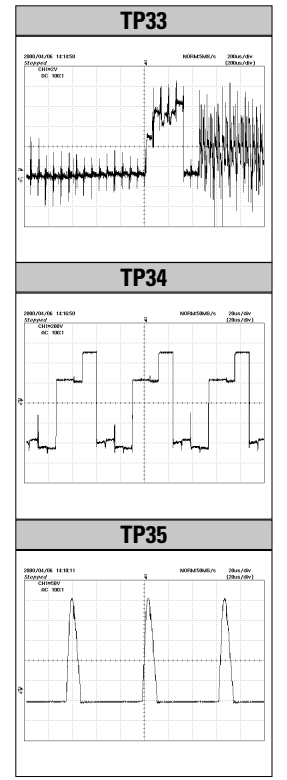
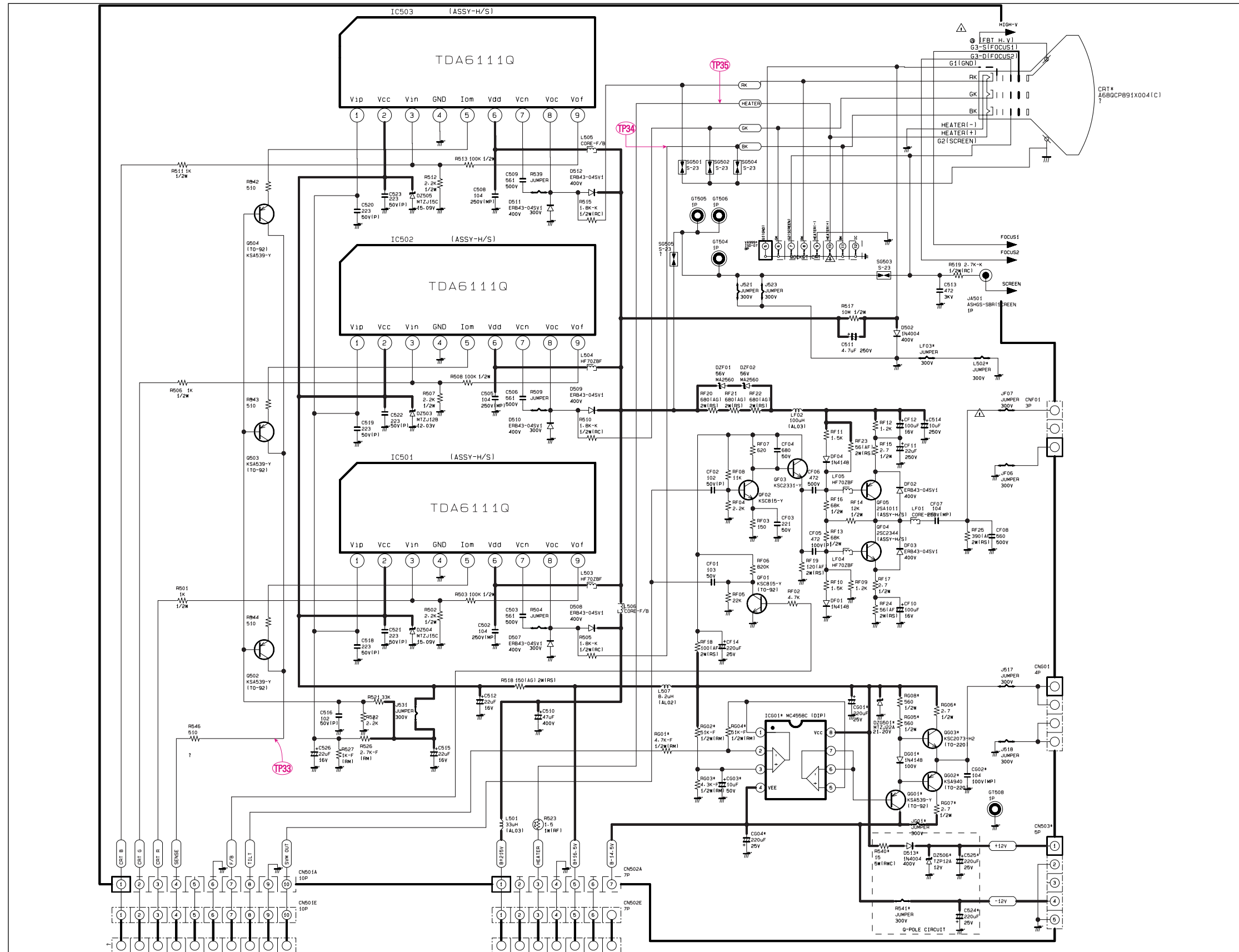


FILE NAME : MAIN

JOB-NO	TEAM	NODE	DESIGN	OPE	EDIT
Dream	KS3A	NC21	Y-K KIM		1999-12-22

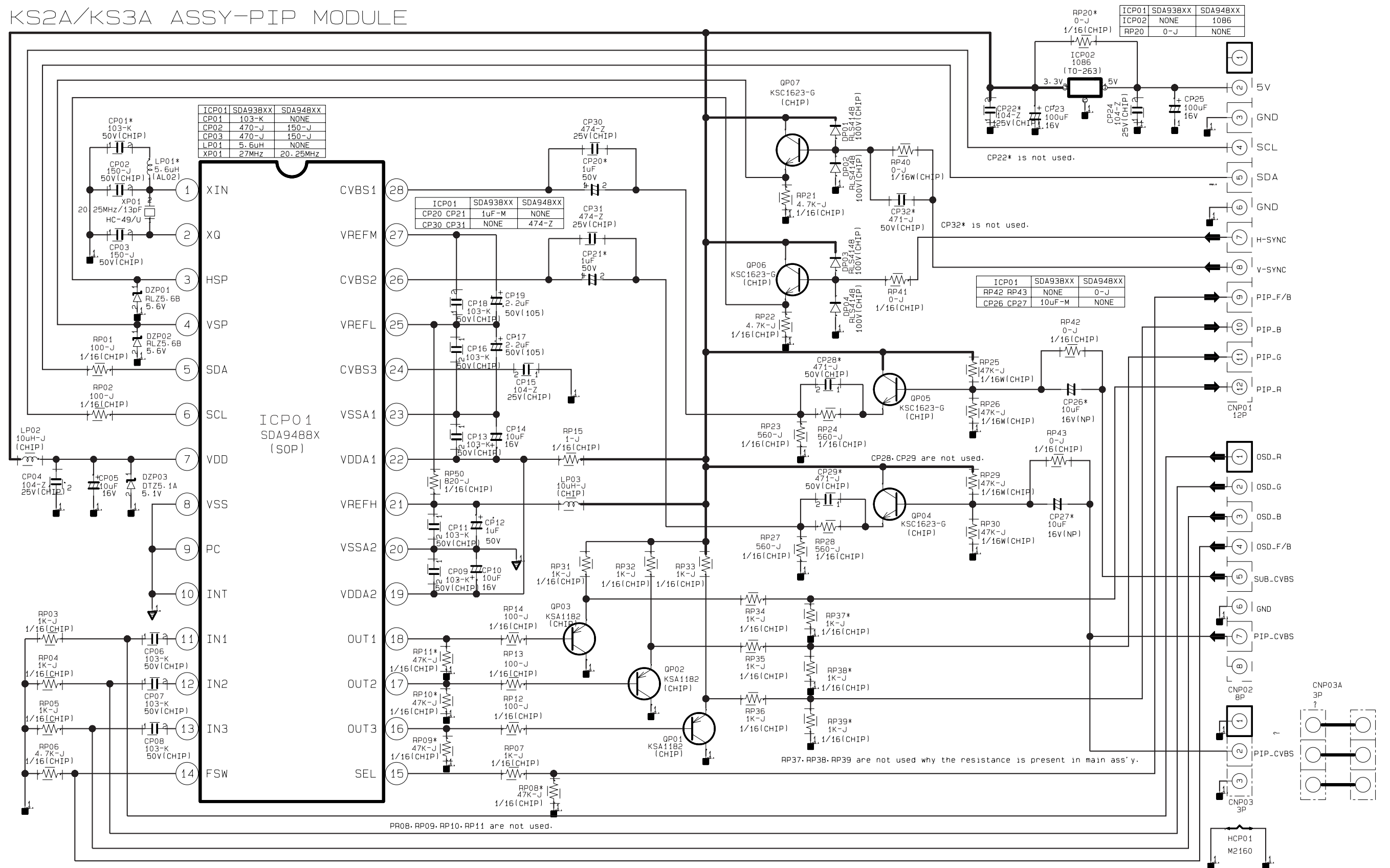


10-5 CRT

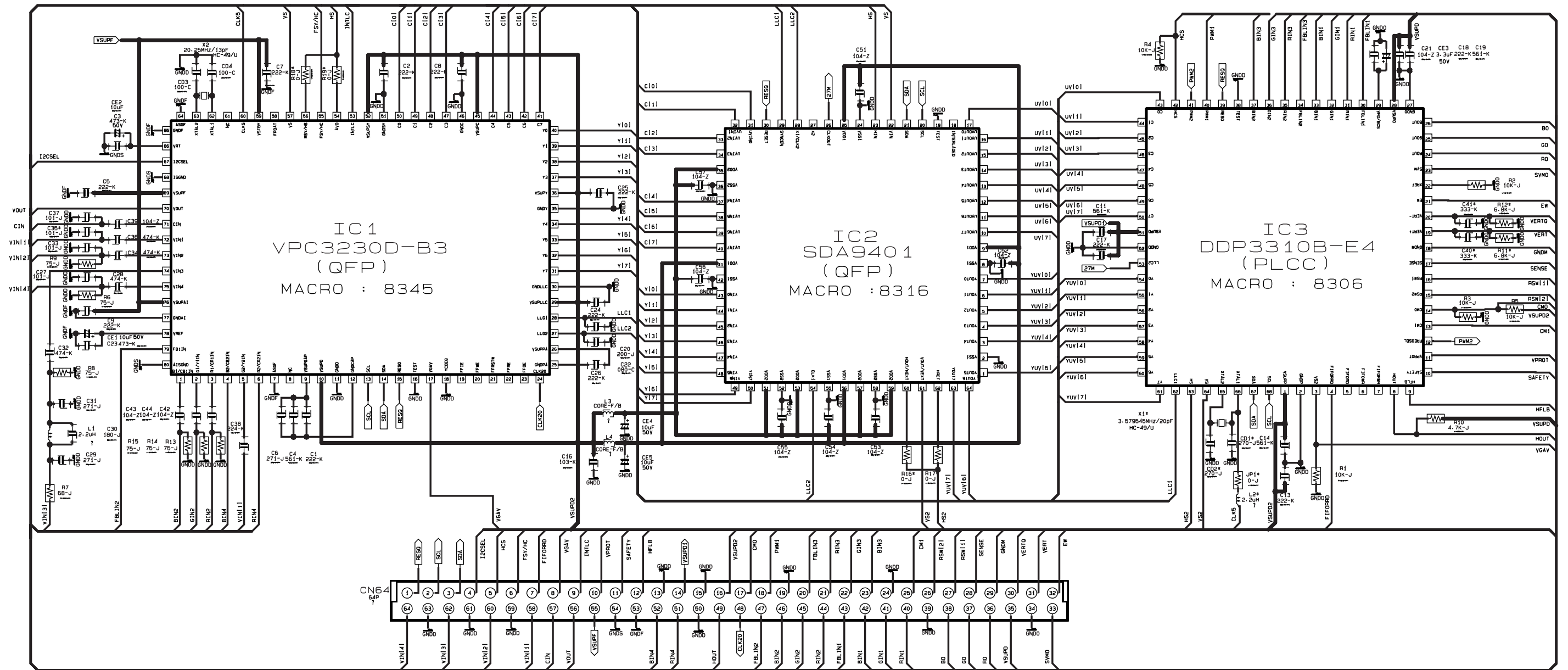


10-6 PIP MODULE

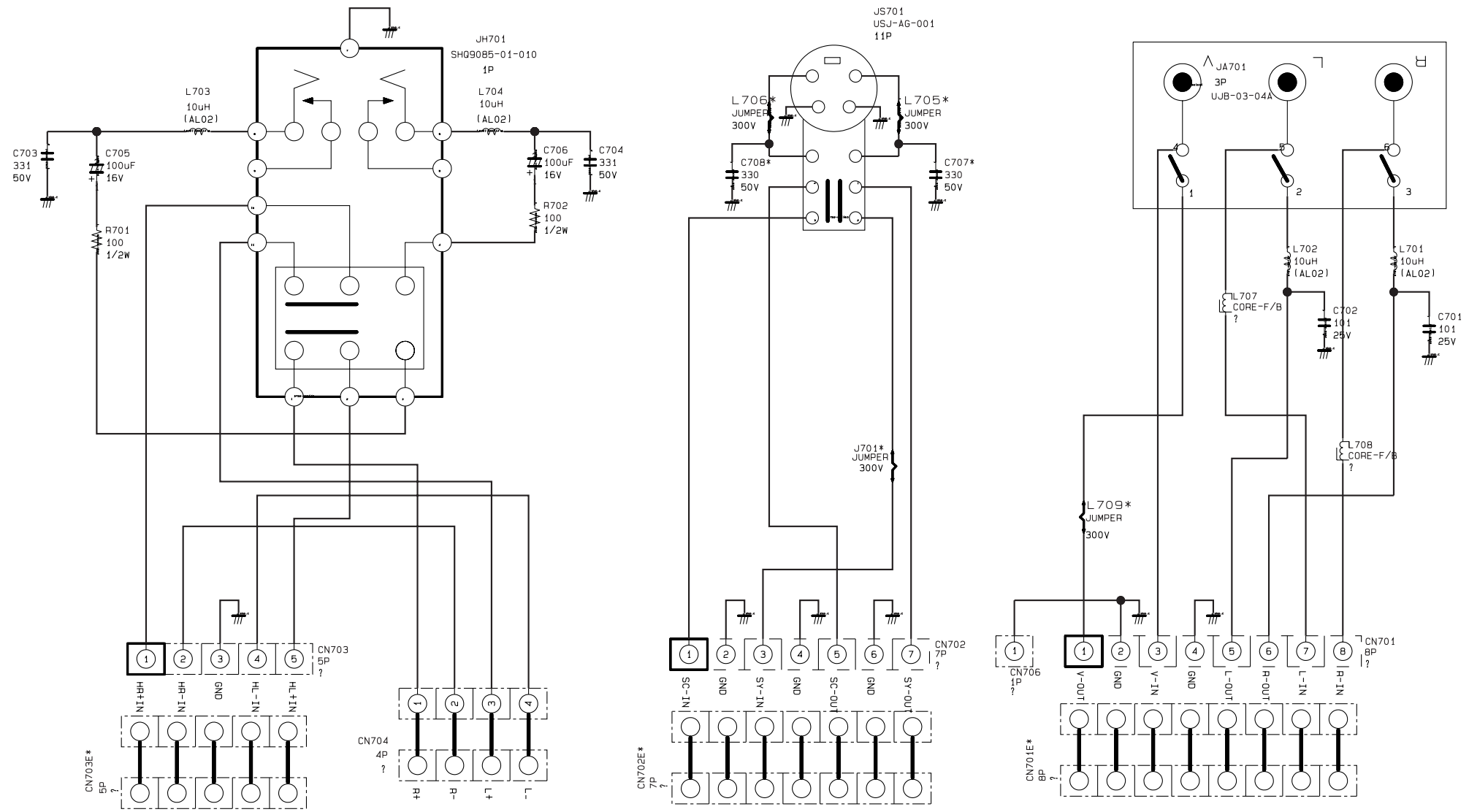
KS2A/KS3A ASSY-PIP MODULE



10-7 SCAN MODULE



10-8 SIDE A/V

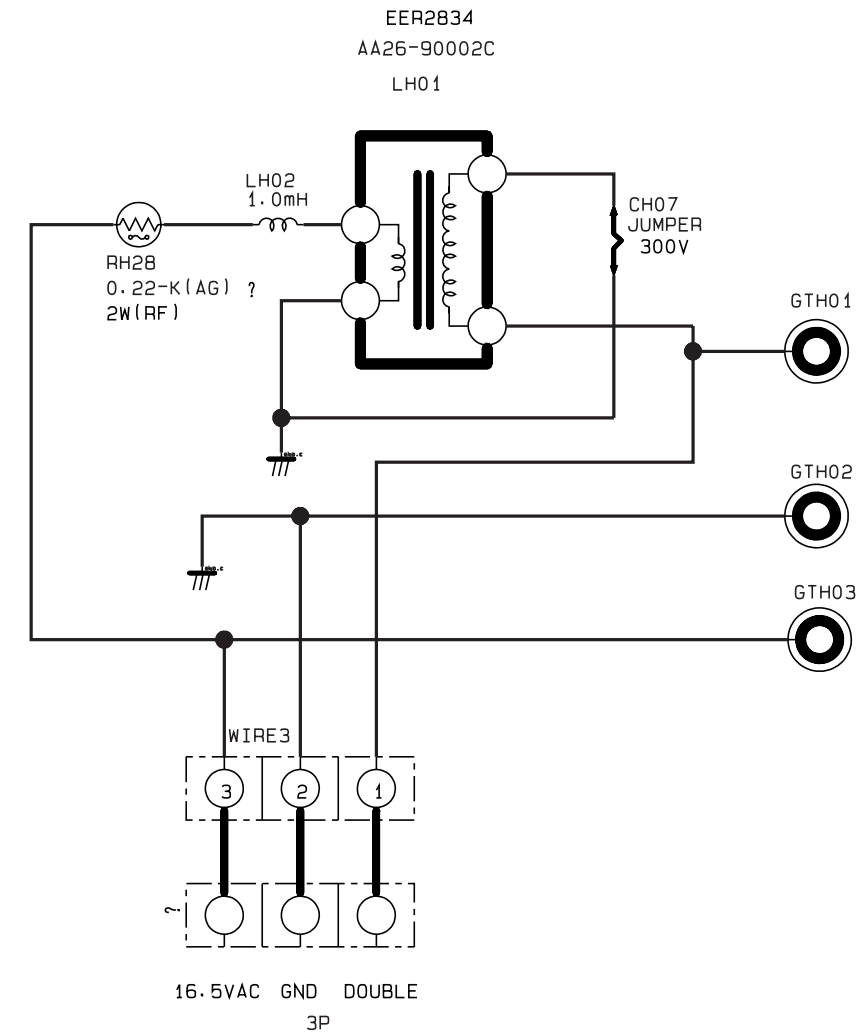
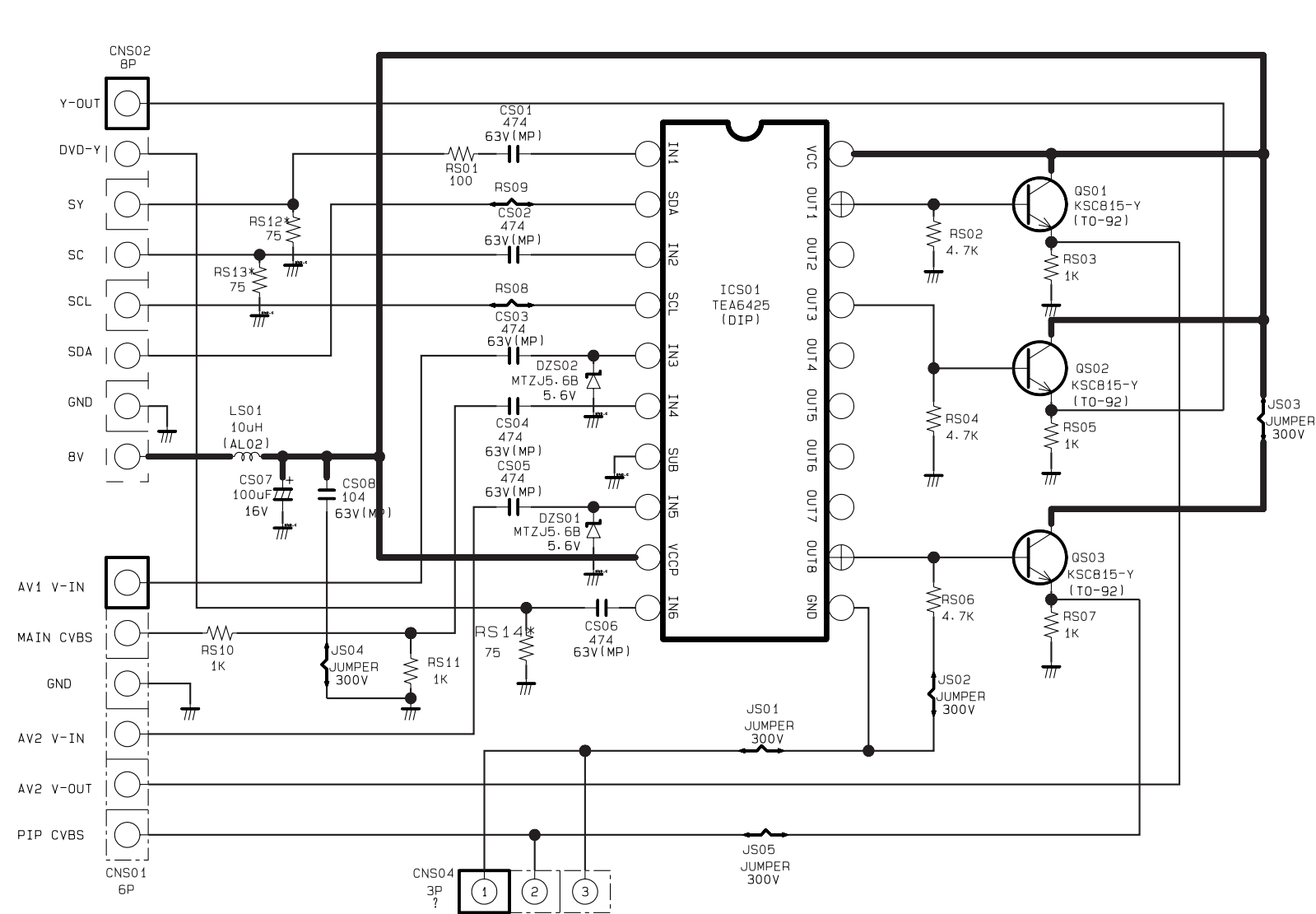


10-9 VIDEO S/W MODULE, DOUBLE FOCUS

VIDEO S/W MODULE

DOUBLE FOCUS

KS2A/KS3A VIDEO S/W MODULE (TEA6425)



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