NOBLEX

COLOR TELEVISION RECEIVER

CHASSIS : KCT12A
MODEL : 14TC616/NOCX
20TC615/NOCX

SERVICE Manual

COLOR TELEVISION RECEIVER

CONTENTS

1. Precautions

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

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people--particularly children--might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

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

4. Leakage Current Hot Check (Figure 1-1):
   Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances)*, and Underwriters Laboratories *(UL Publication UL1410, 59.7).*

5. With the unit completely reassembled, plug the AC line cord directly into the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

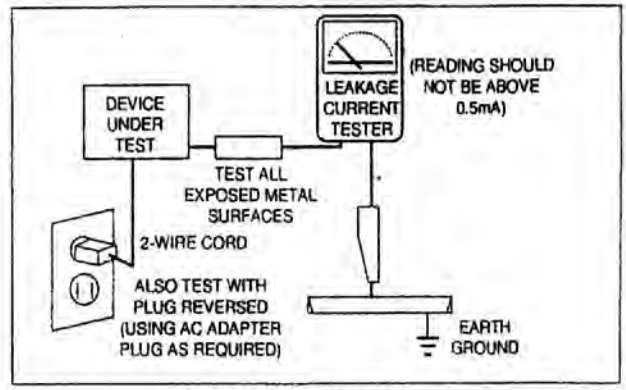


Fig. 1-1 AC Leakage Test

6. Antenna Cold Check:
   With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.

7. X-ray Limits:
   The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.

8. High Voltage Limits:
   High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

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

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.

10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

    To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.

12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, *regardless of the AC plug polarity*. These units can be safely serviced *only* if an isolation transformer inserted between the receiver and the power source.

13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.

15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

16. Picture Tube Implosion Warning:
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.

17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.

18. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.

    Components that are critical for safety are indicated in the circuit diagram by shading, (⚠) or (⚠).
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

WARNING1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

WARNING2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

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

MEMO

2. Specifications

Television System	14"/20" NTSC Color TV Signal
Power Consumption	14" : 62 Watts Nominal, 20" : 80 Watts Nominal
Picture Tube	14" : A34KQV42X 20" : A48KRD82X
Power Requirement	AC 100-240V, 50/60Hz
Operating System	REMOCON System (SSM-126MV)
Tuning Ranges	VHF CH : 2-13, UHF CH : 14-69, CABLE CH : 1,14-125
Antenna Input Impedance	75 ohm Unbalanced for VHF/UHF
Intermediate Frequency	Picture 45.75MHz, Sound 41.25MHz, Color Sub Carrier 42.17MHz
Speaker Impedance	Single: 16 ohm 2.5W Dual: 8 Ohm (3W + 3W) / 16 Ohm (3W + 3W)

2-2 IC Line Up

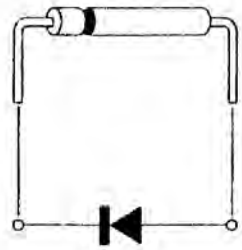
Table 2 - 1 IC Line - Up

Loc No	No	Specification	Description	Remark
HC701	1	SAP201	IC HYBRID (Sound/Video AMP)	
HC801	2	HIS-0169B	Power Control IC	
IC201	3	TD8374A	PAL-N,M/NTSC Decoder (IF/Video/Chroma/Deflection)	
IC202	4	TDA4665	1H Delay IC	
IC101	5	LA7510	Linear IC, SIP	
IC301	6	TDA8356	Vertical Output	
IC602	7	TDA7057Q/7056	Sound Output Amplifier (DUAL AMP/SINGLE AMP)	3W x 2CH/3WX1CH
IC801	8	SMR40000	Power IC (STR)	
IC802	9	KA7630	Multi Regulator (5V, 8V)	5V/8V
IC401	10	KA7812	Regulator (12V)	
IC901	11	SSM-126MV	μ-com (OSD Language: English, Spanish, Portuguese)	
IC501	12	TDA6101Q	R.G.B Drive AMP	
IC502	13	TDA6101Q	R.G.B Drive AMP	
IC503	14	TDA6101Q	R.G.B Drive AMP	
IC504	15	SPK101T	IC HYBRID (SPOT Killer)	
IC902	16	X24C02P	E^2PROM	

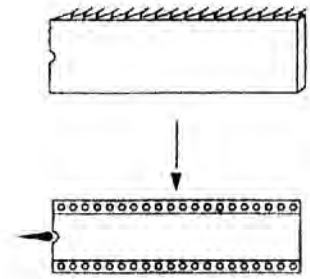
2-3 Semiconductor Base Diagrams

ELECTROLYTIC-
CONDENSER

DIODE

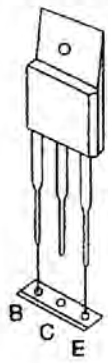


IC



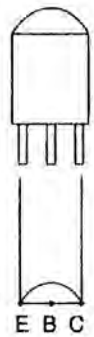
TDA4665 (Pin 16)
X24CO2P (Pin 8)
TDA8374A (Pin 56)
SSM126MV (Pin 42)

TRANSISTOR



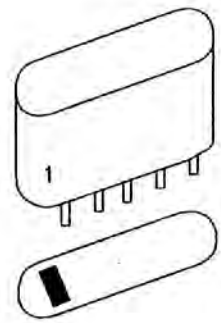
2SD1651
2SD1650
KSD5072
KSD5071
KSD1711

TRANSISTOR



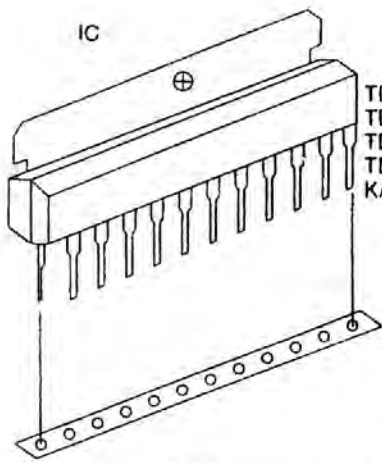
KSA815-Y
KSA539-Y

SAW-FILTER



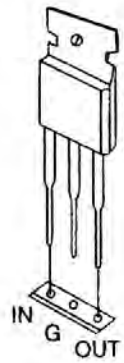
M9260M
M3951M

IC



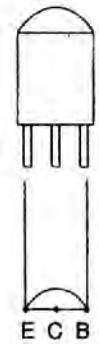
TDA7056
TDA8133
TDA8356
TDA6103Q
KA7630

TRANSISTOR



KA7809
KA7805
KA7812

TRANSISTOR



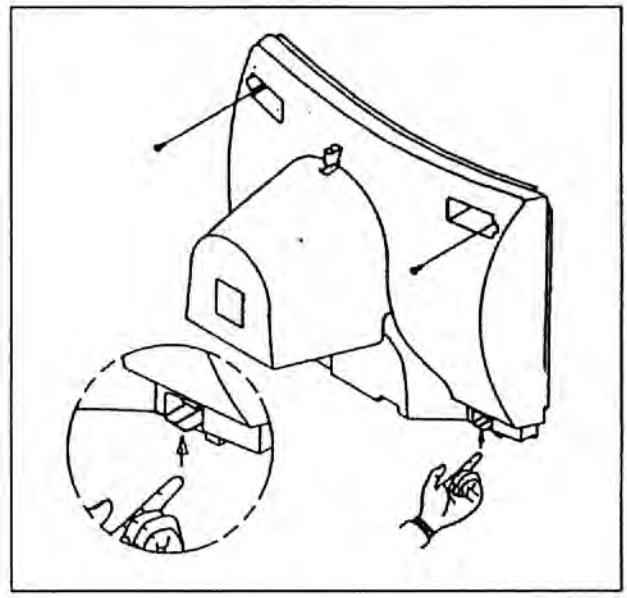
KSR1012
KSR1010
KSR2010
KCT3197

MEMO

3. Disassembly and Reassembly

3-1 Back Cover Removal

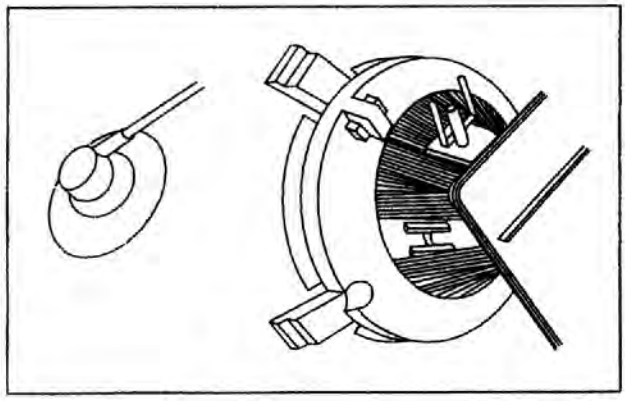
1. Remove the 4 screws located on the side of the back cover.
2. Remove the screws from the A-V jack.
3. Pull the cover backwards to remove.

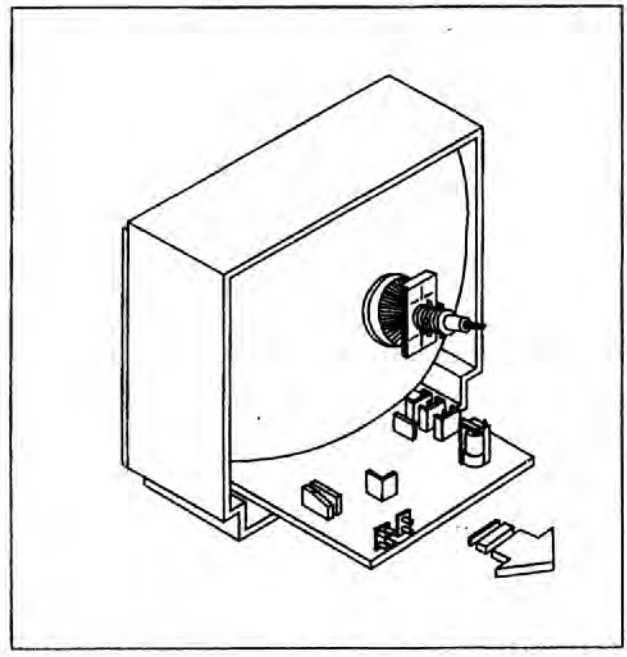


3-2 Main Board Removal

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

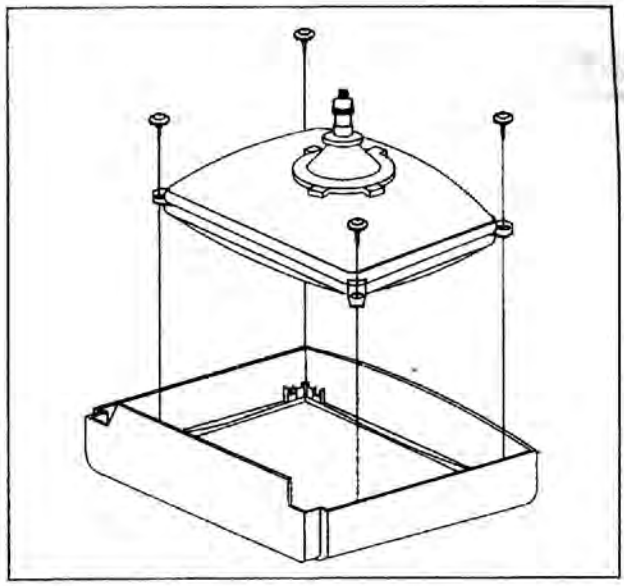
WARNING: The FBT is charged with high voltage. Before removing the Anode Cap, discharge the voltage through one of the heat sinks on the main board.





3-3 CRT Removal

1. Spread a soft mat on the floor. Place the TV set face down.
2. Remove the 4 nuts mounting the CRT to the front cabinet. Lift the CRT.
3. Caution: Due to the high vacuum and large surface area of the picture tube, great care must be exercised when handing: (1) Always lift the picture tube by grasping it firmly around the faceplate, (2) Never Lift the Tube by Its neck. The picture tube must not be scratched or subjected to excessive pressure. Fractures of the glass may cause an implosion.



4. Alignment and Adjustments

4-1 Preadjustment

4-1-1 Factory Mode

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

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

1. When IC902 is replaced all adjustment data revert to their initial values. It is necessary to re-program this data.
2. It is necessary to re-adjust all data except SCT, SCR, and STT in the Factory Adjustment.

4-1-3 When CRT is Replaced

Make the following adjustments AFTER setting up after setting up purity and convergence :

White Balance
Sub-Brightness
Vertical Center
Vertical Size
Horizontal Center

4-2 Factory/Service Mode

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

Since there are no VRs in the KCT12A Chassis, all adjustments after parts replacement must be done in the service mode. Service Mode adjustments are necessary when either EEPROM (IC902) or the CRT is replaced.

1. This mode uses the standard remote control. The Service Mode is activated by (1) pressing the "Service" key on the local-keyboard, or (2) by entering the following remote-control sequence:

STAND-BY → MUTE → 1 → 8 → 2 → POWER

2. The "SERVICE (FACTORY)" message will be displayed. The Service Mode has four components : Adjustment, Test Pattern, Option Bytes and Reset.

← selected (violet)

3. Access the adjustment Mode by pressing the "VOLUME" keys (Up or Down). The adjustment parameters are listed in the accompanying table, and selected by pressing the CHANNEL keys (▲,▼).

4-2-1 Procedure for the "Adjustment" Mode (Continued)

4. Selection sequences for the NTSC system : DOWN or UP key :

   AGC>VCO>SBT>SCT>SCR>STT>RG>GG>BG>SC>NSL>NVS>NVA>NHS

   Selection sequences for the PAL system : DOWN or UP key :

   AGC>VCO>SCT>SCR>STT>RG>GG>BG>SC>PSL>PVS>PVA>PHS

5. The VOLUME keys increase or decrease the adjustment values, which are stored in the non-volatile memory when Adjustment mode is cancelled.

6. Select "RESET" in the Menu Mode and reset with volume +, - keys.

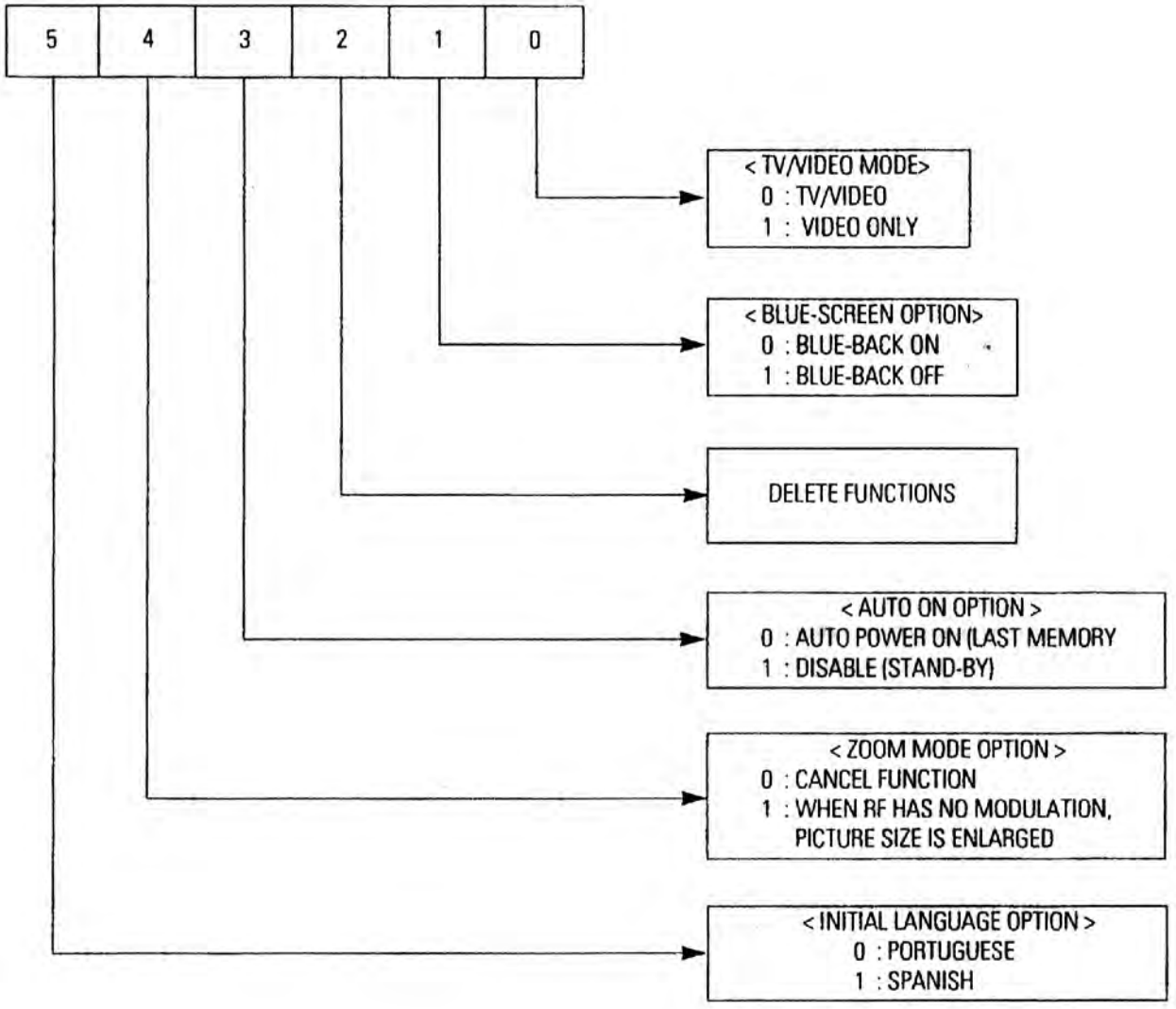
AGC	XX	SC	XX
VCO	XX	PSL	XX
SBT	XX	PVS	XX
SCT	XX	PVA	XX
SCR	XX	PHS	XX
STT	XX	NSL	XX
RG	XX	NVS	XX
GG	XX	NVA	XX
BG	XX	NHS	XX

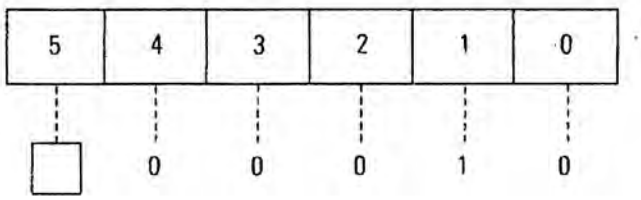
4-2-2 Main Adjustment Parameters

Table 4-1 Main Adjustment Parameter (ZiLOG μ-com) NON TTX

Function	OSD Abbreviation	Range	Initial Data
AUTO GAIN CONTROL	AGC	0 ~ 63 STEP	43
VOLTAGE CONTROL OSCILLATOR	VCO	0 ~ 127 STEP	63
SUB BRIGHT	SBT	0 ~ 13 STEP	7
SUB CONTRAST	SCT	0 ~ 13 STEP	7
SUB COLOR	SCR	0 ~ 13 STEP	7
SUB TINT	STT	0 ~ 13 STEP	7
RED-DRIVE GAIN	RG	0 ~ 63 STEP	32
GREEN-DRIVE GAIN	GG	0 ~ 63 STEP	32
BLUE-DRIVE GAIN	BG	0 ~ 63 STEP	32
PAL VERTICAL SLOPE	PSL	0 ~ 63 STEP	25
PAL VERTICAL SHIFT	PVS	0 ~ 63 STEP	25
PAL VERTICAL AMPLITUDE	PVA	0 ~ 63 STEP	40
PAL HORIZONTAL SHIFT	PHS	0 ~ 63 STEP	40
NTSC VERTICAL SLOPE	NSL	0 ~ 63 STEP	25
NTSC VERTICAL SHIFT	NVS	0 ~ 63 STEP	25
NTSC VERTICAL AMPLITUDE	NVA	0 ~ 63 STEP	40
NTSC HORIZONTAL SHIFT	NHS	0 ~ 63 STEP	40

4-2-3 Option Table





:Basic Option Byte
(Note : No. 5 is a Local Option)

4-3 Other Adjustments

4-3-1 General

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.

2. Observe the picture for good black and white details. There should be no objectionable color shading; if color shading is present, perform the purity and convergence adjustments described below.

3. Use the specified test equipment or its equivalent.

4. Correct impedance matching is essential.

5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.

6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.

7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.

8. To protect against shock hazard, use an isolation transformer.

4-3-2 Automatic Degaussing

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

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

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

4-3-3 High Voltage Check

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

1. Connect a digital voltmeter to the second anode of the picture tube.

2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).

3. The high voltage should not exceed 27.5KV.

4. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 27.5KV under any conditions.

4-3-4 FOCUS Adjustment

1. Input a black and white signal.

2. Adjust the tuning control for the clearest picture.

3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-5 Purity Adjustment

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

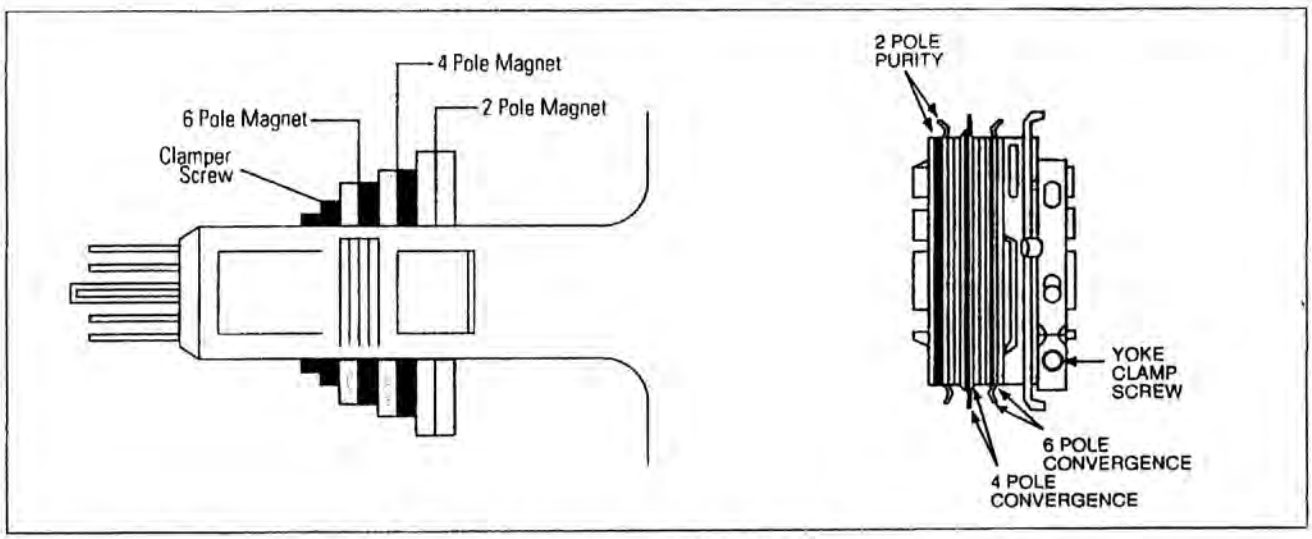


Fig. 4-1 Convergence Magnet Assembly

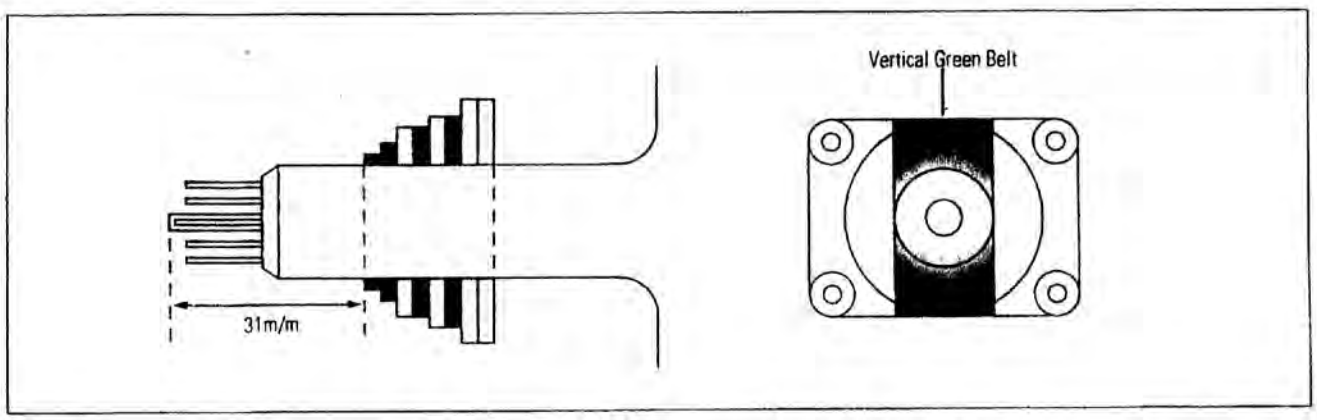


Fig. 4-2 Center Convergence Adjustment

4-3-6 AGC Adjustment

1. Input a COLOR-BAR pattern.
2. Set the RF input signal to 70dBμV.
3. Use Generator for PM5518 and PM5418
4. Adjust AGC in the Factory Mode so that the DC level of TDA8374A Pin 53 is 3.1 (±0.05)V.

4-3-7 AFT (VCO Adjustment)

1. Use AGC adjustment signal.
2. Select Factory Mode VCO and press the MUTE key one time.

4-3-8 White Balance Adjustments

(a) Screen Adjustments

1. Input TOSHIBA pattern.
2. Check the R506 "G" pin on the CRT PCB with an oscilloscope.
3. Enter the horizontal line mode.
4. Adjust the screen on the FBT so that the waveform of the 21st line and the level of DC GND is 2.4 (±0.5)V.

(b) High-Light Adjustment

1. Input a TOSHIBA pattern.
2. Color :
   If a color analyzer is available, adjust high-light to 24F/L290/300 (x,y).

   If a color analyzer is not available, consult the white balance instructions for P63 chassis. Use your eyes to adjust the white balance for local market preferences.

4-3-9 Sub-Brightness Adjustment

1. Input a TOSHIBA pattern.
2. Adjust SBT so that six points are displayed on the gray scale.

4-3-10 Vertical Size Adjustment

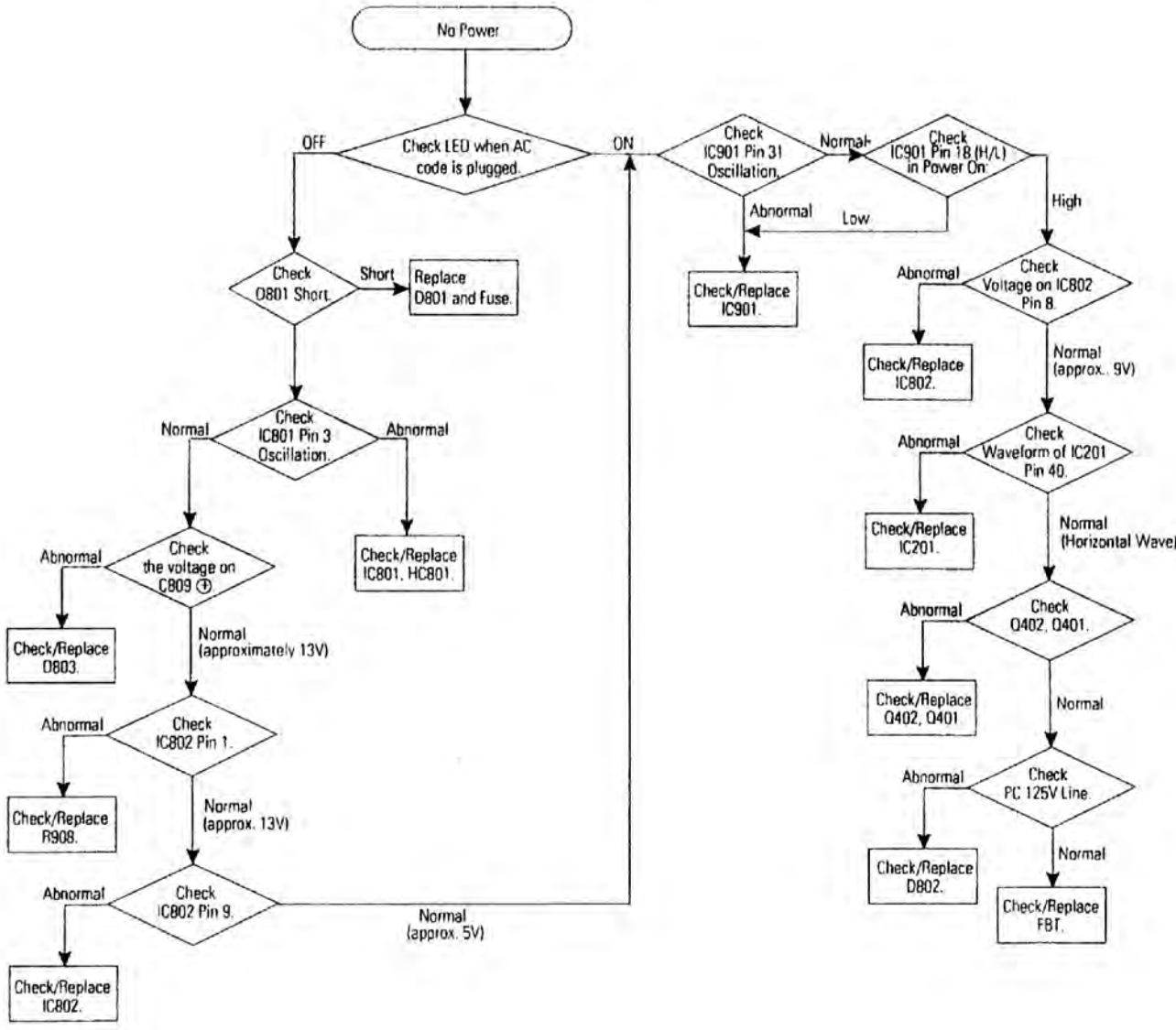
1. Input a lion head pattern.
2. Adjust "VA", SL" so that the top and bottom margins of the screen are 4.0. If the top and bottom values are different, adjust "VA", "SL", "VS" so that the sum of the two values is 8.0.

4-3-11 Horizontal Shift Adjustment

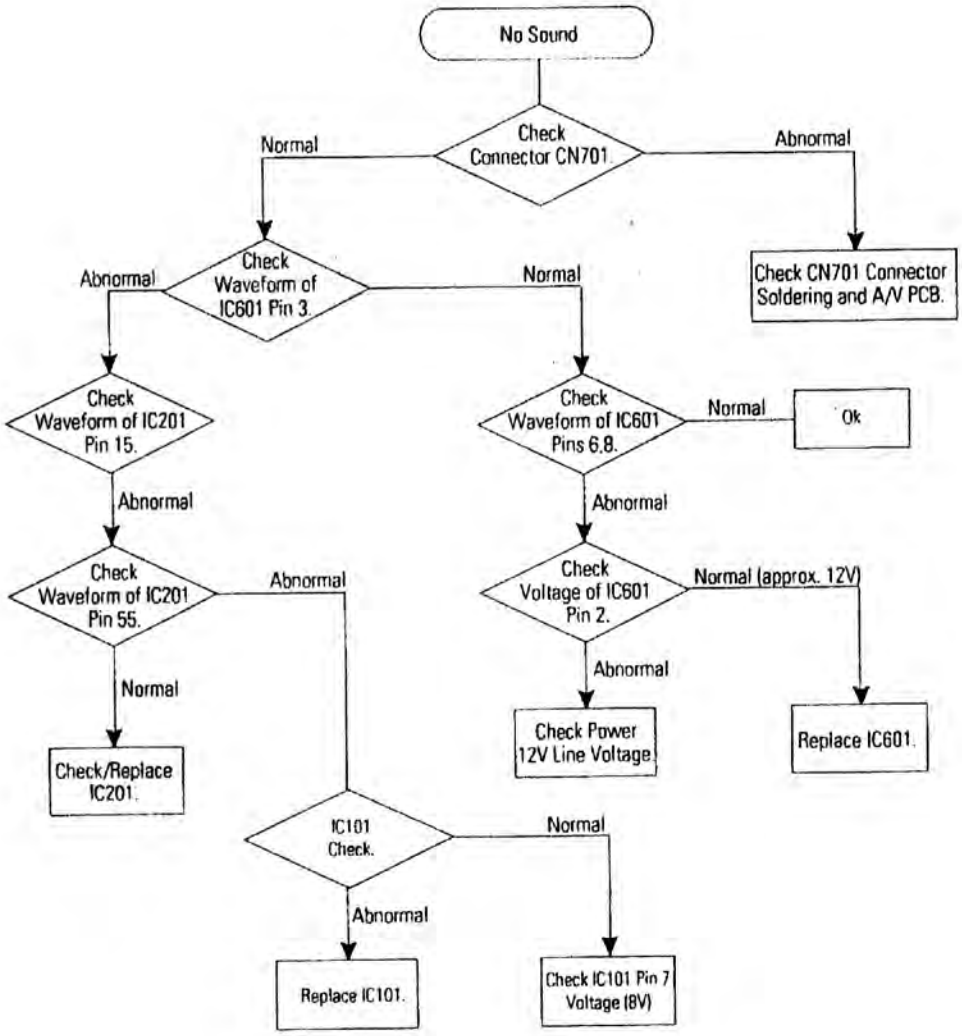
1. Input a lion head pattern.
2. Adjust " HS" in the Service Mode so that the left and right margins are 5.0±0.5.

5. Troubleshooting

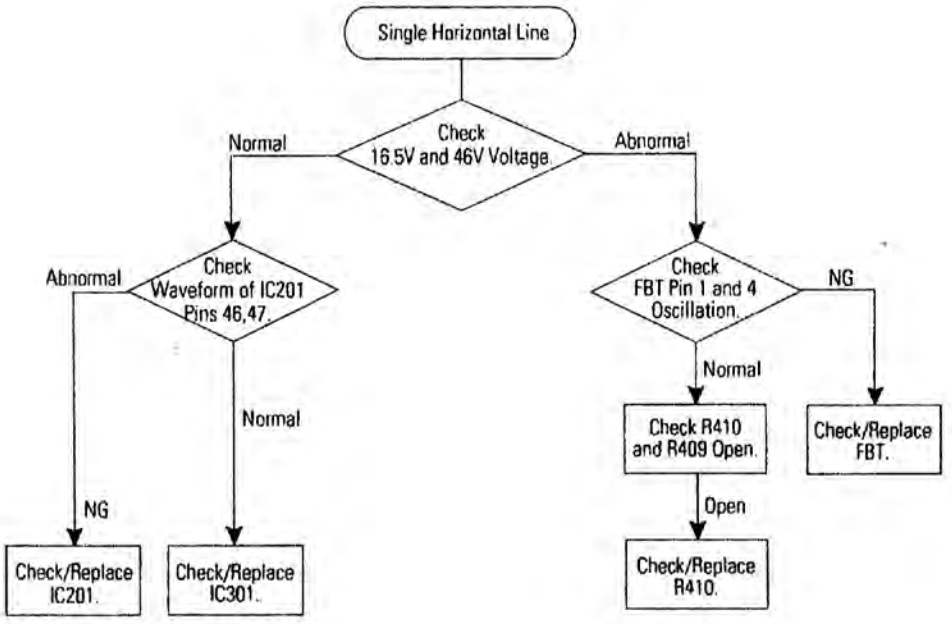
5-1 No Power



5-2 No Sound


No Sound
Check Connector CN701
Normal
Abnormal
Check CN701 Connector Soldering and A/V PCB.
Check Waveform of IC601 Pin 3.
Abnormal
Normal
Check Waveform of IC201 Pin 15.
Check Waveform of IC601 Pins 6,8.
Normal
Ok
Abnormal
Abnormal
Check Waveform of IC201 Pin 55.
Abnormal
Check Voltage of IC601 Pin 2.
Normal (approx. 12V)
Normal
Abnormal
Check/Replace IC201.
Check Power 12V Line Voltage.
Replace IC601.
IC101 Check.
Normal
Abnormal
Replace IC101.
Check IC101 Pin 7 Voltage (8V)

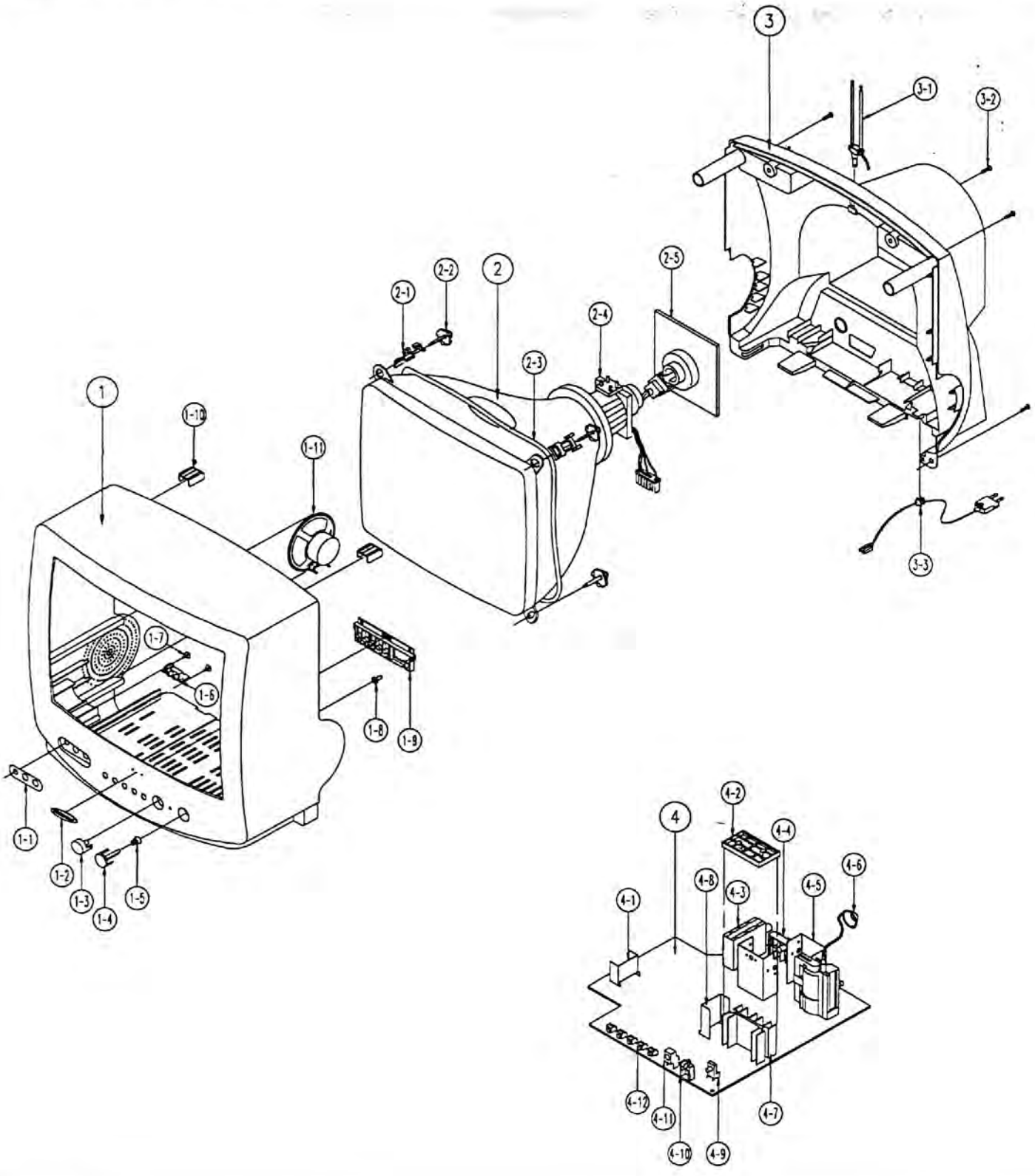
5-3 Horizontal Line Appears



MEMO

6. Exploded View and Parts List

6-1.14TC616/NOCX



No
1
1-1
1-2
1-3
1-4
1-5
1-6
1-7
1-8
1-9
1-10
1-11
2
2-1
2-2
2-3
2-4
2-5
3
3-1
3-2
3-3
4
4-1
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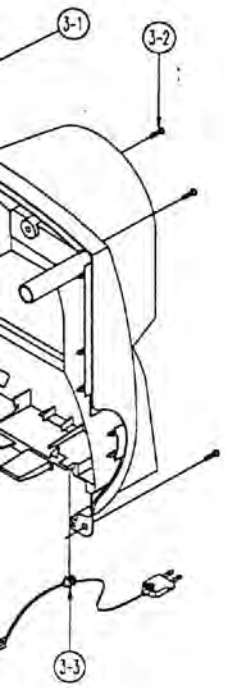
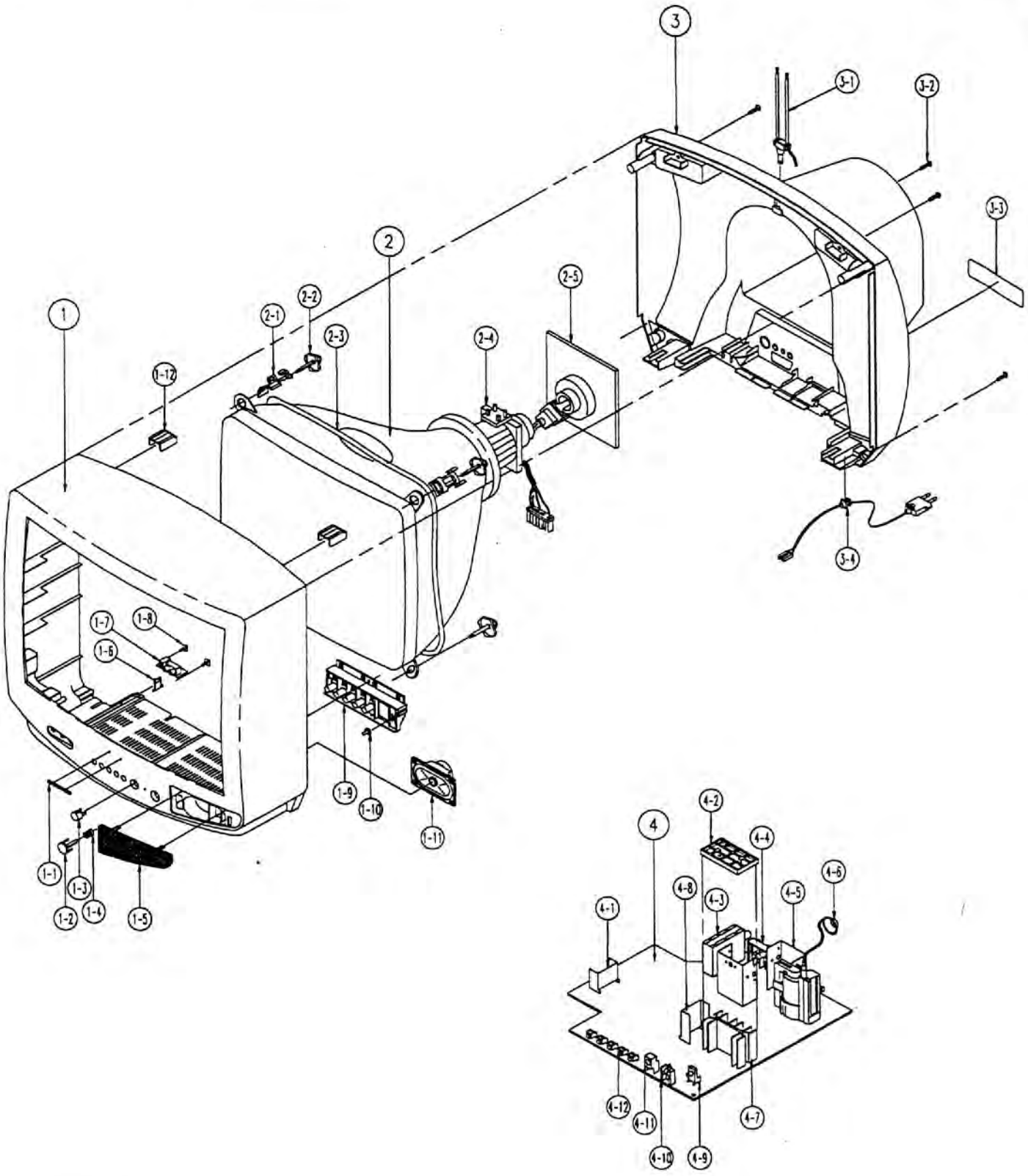
4-11
4-12

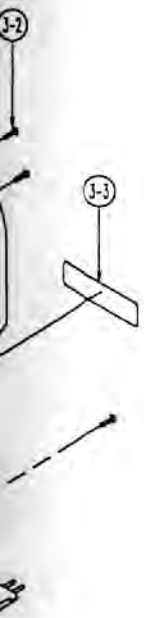


No	New Code No	Old Code No	Description	Specification	Q'ty	Remarks
1	AA64-30126P		CABINET-FRONT	3373,PA100,NOBLEX,HIPS	1	
1-1	3722-000506	A3040-0251	JACK-RCA	2P,3.6MM,AG	1	
1-2	AA64-70111A		BADGE-BRAND	AL,NOBLEX,GOLD,L40	1	
1-3	AA64-40051A	34073-0085-000	WINDOW-REMOCON	ABS,HB,NO-SILK,3373	1	
1-4	AA64-10137E		KNOB-POWER	3373,MASTER,ABS,HB,BLK	1	
1-5	AA61-60003J	36674-137-890	SPRING-CS	SUS304,0.5,0D6,H12,N7	1	
1-6	*AA97-90003U		ASSY-A/V,FRONT	CN33/5038,KCT12A,PAL	1	
1-7	AA60-10002A	37144-001-210	SCREW-TAPPING(PA+CF)	RH,+,M4,L12,ZPC(YEL),0D	2	
1-8	AA64-40184A	34164-0042-000	INDICATOR-LED	3373,ACRYL	1	
1-9	AA64-10043A	34082-0186-000	KNOB-CONTROL	3373,ABS,HB,BLK	1	
1-10	AA61-40010A	33113-0003-001	BOSS-WING	HIPS,HB,NTR	4	
1-11	3001-000275	A1300-0080	SPEAKER	2.5W,160HM,90DB,105HZ	1	
2	AA03-10002N	A1320-0112	CRT-COLOR	A34KQV42X,-300MG,14",90	1	
2-1	AA65-30016A	36635-001-910	CLAMP-D,COIL	NYLON-66,V0,NTR,DADH-360	2	
2-2	AA60-10050D		SCREW-ASSY(CRT+CF)	WC,HH,+,M5,L35,SWRCH18	4	
2-3	AA27-20001L	32479-029-380	COIL-DEGAUSING	14",23.00HM,100T,L940	1	
2-4	AA27-50001K	32439-210-090	DEFLECTION-YOKE	DSE-1422FL,14"	1	
2-5	*AA97-70004D		ASSY-PCB,CRT	KCT12A,14",SEDA	1	
3	AA64-30381A	32001-0136-000	CABINET-BACK	3338,73,HIPS,V0,BLK	1	
3-1	AA42-10001C	34509-223-023	ANT-ROD	4S,620MM,SUS,UL/CSA	1	
3-2	6002-000514		SCREW-TAPPING(CB+CF)	RH,+,M4,L15,ZPC(BLK),SW	4	
3-3	AA39-10002Z	A6006-0258	POWER-CORD	KKP-560N,KLCE-2F,2,286MT	1	
4	*AA97-10043G		ASSY-PCB,MAIN	14TC616/NOCX,KCT12A,ARGEN	1	S.N.A ITEM
4-1	1203-000644		IC-POSI,FIXED(IC802)	KA7630 SIP 10P BULK	1	ASSY-H/S.MAIN
4-2	CHASSIS OPTION ITEM					
4-3	AA40-10005D		TUNER-F/S	TECC1980PK25A,NTSC/USA,TR	1	
4-4			JACK-RCA			
4-5	0502-000294	32159-210-040	TR-POWER(Q401)	KSD5071YD,NPN,50W,TO-3PT	1	ASSY-H/S.VERT
4-6	AA26-30004H		TRANS-FLY BACK	FSV-14A001,14',125V	1	
4-7	AA13-20002C	A4010-0066	IC-HYBRID(IC801)	SMR40000,SIP,5P,SMPS	1	ASSY-H/S,POWER
4-8	1204-000441	B4012-0437	IC-IF CIRCUIT(IC301)	TDA8356,SIP,9P	1	ASSY-H/S.VERT
4-9	3403-000179	A3002-0014	SWITCH-PUSH	250V,5A,DPST	1	
4-10	*AA96-30001B	*3H77-00001-070	ASSY-LED,GUIDE	DLG5RGA	1	
4-11	AA59-60001U	A1294-0035	MODULE-REMOCON	ORC-50VF,38KHZ,940MM,ME	1	
4-12	3404-000244	B3018-0034	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM	5	

6-2.20TC615/NOCX



No	Ne
1	AA6
1-1	AA6
1-2	AA6
1-3	AA6
1-4	AA6
1-5	AA6
1-6	AA6
1-7	*AA
1-8	AA6
1-9	AA6
1-10	AA6
1-11	300
1-12	AA6
2	AA0
2-1	AA6
2-2	AA6
2-3	AA2
2-4	AA2
2-5	*AA
3	AA6
3-1	AA4
3-2	60(
3-3	
3-4	AA3
4	*A
4-1	12
4-2	CH
4-3	AA
4-4	
4-5	05
4-6	AA
4-7	AA
4-8	12
4-9	34
4-10	*A
4-11	AA
4-12	34



No	New Code No	Old Code No	Description	Specification	Q'ty	Remarks
1	AA64-30118N		CABINET-FRONT	5073,PA100,NOBLEX,HIPS	1	
1-1	AA64-70112A		BADGE-BRAND	AL NOBLEX,GOLD,L55	1	
1-2	AA64-10131C		KNOB-POWER	5073,MASTER,ABS,HB,BLK	1	
1-3	AA64-40044A		WINDOW-REMOCON	ABS,HB,NO-SILK,5073	1	
1-4	AA61-60003T		SPRING-CS	SUS304,0.5,OD7,H13.5,N5	1	
1-5	AA63-50095A		GRILLE-WOOFER	SECC,T0.5,PA110 P10	1	
1-6	AA61-40007A		STOPPER-PCB	5038,5358,ABS,HB,NTR	1	
1-7	*AA97-90003U		ASSY-A/V,FRONT	CN33/5038,KCT12A,PAL	1	
1-8	AA60-10002A	37144-001-210	SCREW-TAPPING(PA+CF)	RH,+,M4,L12,ZPC(YEL),OD	2	
1-9	AA64-10039A		KNOB-CONTROL	5073,ABS,HB,BLK	1	
1-10	AA64-40182A		INDICATOR-LED	5073,ACRYL	1	
1-11	3001-001004		SPEAKER	3W,16OHM,90DB,180HZ	1	
1-12	AA61-40010A	33113-0003-001	BOSS-WING	HIPS,HB,NTR	4	
2	AA03-10003V		CRT-COLOR	A48KRD82X01(U),-200MG,2	1	
2-1	AA65-30016A	36635-001-910	CLAMP-D.COIL	NYLON-66,V0,NTR,DADH-360	2	
2-2	AA60-10050D		SCREW-ASSY(CRT+CF)	WC,HH,+,M5,L35,SWRCH18	4	
2-3	AA27-20001Y		COIL-DEGAUSING	'20',150HM,70T,L2300,E	1	
2-4	AA27-50001K	32439-210-090	DEFLECTION-YOKE	DSE-1422FL,14"	1	
2-5	*AA97-70004C		ASSY-PCB,CRT	KCT12A,20",LATIN,PAL	1	
3	AA64-30375A		CABINET-BACK	5073,38,HIPS,V0,BLK	1	
3-1	AA42-10001C	34509-223-023	ANT-ROD	4S,620MM,SUS,UL/CSA	1	
3-2	6002-000514		SCREW-TAPPING(CB+CF)	RH,+,M4,L15,ZPC(BLK),SW	4	
3-3			INLAY-BACK			
3-4	AA39-10002Z	A6006-0258	POWER-CORD	KKP-560N,KLCE-2F,2,286MT	1	
4	*AA97-10043H		ASSY-PCB,MAIN(COM)	20TC615/NOCX,KCT12A	1	S.N.A ITEM
4-1	1203-000644		IC-POSI,FIXED(IC802)	KA7630 SIP 10P BULK	1	ASSY-H/S.MAIN
4-2	CHASSIS OPTION ITEM					
4-3	AA40-10005D		TUNER-F/S	TECC1980PK25A,NTSC/USA,TR	1	
4-4			JACK-RCA			
4-5	0502-000295		TR-POWER(Q401)	KSD5072YD,NPN,1500V,800V	1	ASSY-H/S.VERT
4-6	AA26-30001Y		TRANS-FLY BACK	FSV-20A001,20",125V	1	
4-7	AA13-20002C	A4010-0066	IC-HYBRID(IC801)	SMR40000,SIP,5P,SMPS	1	ASSY-H/S.POWER
4-8	1204-000441	B4012-0437	IC-IF CIRCUIT(IC301)	TDA8356,SIP,9P	1	ASSY-H/S.VERT
4-9	3403-000179	A3002-0014	SWITCH-PUSH	250V,5A,DPST	1	
4-10	*AA96-30001B	*3H77-00001-070	ASSY-LED.GUIDE	DLG5RGA	1	
4-11	AA59-60001U	A1294-0035	MODULE-REMOCON	ORC-50VF,38KHZ,940MM,ME	1	
4-12	3404-000244	B3018-0034	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM	5	

7.Electric Parts List

7-1.14TC616, 20TC615

Loc No	New Code No	Old Code No	Description	Specification	Remark
			ASSY-PCB,MAIN		
	*AA97-10043G		ASSY-PCB,MAIN(COM)	14TC616/NOCX,KCT12A,ARGEN	14TC616
	*AA97-10043H		ASSY-PCB,MAIN(COM)	20TC615/NOCX,KCT12A,ARGEN	20TC615
C-FBT	AA65-30002A	33333-0005-010	CLAMP-FBT	NYLON-66,V0,BLK,-,-,-	
C-FBT	AA65-30009A	36633-101-911	CLAMP-FBT	ABS,V0,BLK,-,-,-	
C-WIRE	AA65-30003A	33333-0011-000	CLAMP-WIRE	NYLON-66,V0,NTR,V-MODEL,-	
C-WIRE	AA65-30010A	36634-111-010	CLAMP-WIRE	NYLON-66,V0,NTR,-,-,-	
C-WIRE	AA65-30018A	36635-112-010	CLAMP-WIRE	NYLON-66,-,-,DATL-600,DON	
C101	2202-000127	A1100-0803	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-,7,	
C102	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C104	2202-000127	A1100-0803	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-,7,	
C108	2401-000480	31607-402-250	C-AL	10UF,20%,50V,GP,5X11MM,5M	
C109	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C111	2401-000962	31607-402-260	C-AL	22UF,20%,50V,GP,5X11,5,TP	
C112	2401-001333	31607-402-200	C-AL	0.47UF,20%,50V,GP,5X11,5,	
C113	2401-001333	31607-402-200	C-AL	0.47UF,20%,50V,GP,5X11,5,	
C114	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C115	2202-000286	A1100-0879	C-CERAMIC,MLC-AXIAL	56PF,5%,50V,SL,1.9X3.5,-,	
C153	2202-000127	A1100-0803	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-,7,	
C155	2202-000295	A1100-0797	C-CERAMIC,MLC-AXIAL	68PF,5%,50V,SL,3.5X19,-,T	
C200	2401-000471	31607-974-003	C-AL	10UF,20%,50V,BP,6X11MM,5M	
C201	2401-001264	31607-803-730	C-AL	4.7UF,20%,50V,BP,6X11MM,5	
C202	2401-000660	31607-402-220	C-AL	2.2UF,20%,50V,GP,5X11MM,5	
C203	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C204	2301-000224	31507-127-008	C-FILM,PEF	22NF,5%,50V,7.4X3.9X13MM,	
C205	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C206	2202-000794	A1100-0607	C-CERAMIC,MLC-AXIAL	18PF,5%,50V,CH,3.5X19MM,-	
C207	2202-000794	A1100-0607	C-CERAMIC,MLC-AXIAL	18PF,5%,50V,CH,3.5X19MM,-	
C208	2202-000794	A1100-0607	C-CERAMIC,MLC-AXIAL	18PF,5%,50V,CH,3.5X19MM,-	
C211	2401-000269	31607-401-470	C-AL	100UF,20%,16V,GP,6X11MM,5	
C212	2401-000480	31607-402-250	C-AL	10UF,20%,50V,GP,5X11MM,5M	
C213	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C214	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C215	2301-000285	31507-127-010	C-FILM,PEF	47NF,5%,50V,7.5X4.0X6.5,5	
C216	2401-000660	31607-402-220	C-AL	2.2UF,20%,50V,GP,5X11MM,5	
C217	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C218	2301-000285	31507-127-010	C-FILM,PEF	47NF,5%,50V,7.5X4.0X6.5,5	
C220	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C224	2401-000480	31607-402-250	C-AL	10UF,20%,50V,GP,5X11MM,5M	
C225	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C226	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C227	2401-001271	31607-402-240	C-AL	4.7UF,20%,50V,GP,5X11MM,5	
C228	2401-000269	31607-401-470	C-AL	100UF,20%,16V,GP,6X11MM,5	
C230	2301-000201	31507-127-002	C-FILM,PEF	2.2NF,5%,50V,7.4X3.9X13MM	
C231	2401-000405	31607-803-120	C-AL	10UF,20%,16V,BP,6X11MM,5M	
C232	2401-000405	31607-803-120	C-AL	10UF,20%,16V,BP,6X11MM,5M	
C233	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C234	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	
C235	2201-000379	31417-109-220	C-CERAMIC,DISC	22NF,+80-20%,50V,Y5V,8.0X	
C236	2201-000379	31417-109-220	C-CERAMIC,DISC	22NF,+80-20%,50V,Y5V,8.0X	
C238	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4,0X5,0M	

Loc No	New Code No	Old Code No	Description	Specification	Remark
C239	2301-000108	31507-127-001	C-FILM,PEF	1.5NF,5%,50V,6.5X3.0X5.5M	
C240	2401-000603	31607-402-210	C-AL	1UF,20%,50V,GP,5X11MM,5MM	
C241	2301-000264	31507-127-016	C-FILM,PEF	4.7NF,5%,50V,6.5X5,5X3.0X	
C242	2202-000173	A1100-0338	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C243	2202-000173	A1100-0338	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C244	2201-000179	31417-318-103	C-CERAMIC,DISC	10NF,10%,50V,Y5V,12.5X4.0	
C245	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C246	2401-000667	A1104-0808	C-AL	2.2UF,20%,50V,WT,5*11.5MM	
C247	2301-000223	31507-137-016	C-FILM,PEF	22NF,5%,100V,7.2X4.5X9.0M	
C248	2301-000232	31507-127-003	C-FILM,PEF	3.3NF,5%,50V,8.1X4.5X13MM	
C249	2401-000480	31607-402-250	C-AL	10UF,20%,50V,GP,5X11MM,5M	
C251	2201-000138	31417-104-050	C-CERAMIC,DISC	100PF,10%,50V,Y5P,4.0X4.0	
C252	2201-000138	31417-104-050	C-CERAMIC,DISC	100PF,10%,50V,Y5P,4.0X4.0	
C257	2201-000976	31407-105-180	C-CERAMIC,DISC	22PF,5%,50V,NP0,5.0X3.0,5	
C260	2201-000251	31407-101-160	C-CERAMIC,DISC	15PF,5%,50V,SL,4X3.5,5,TP	
C301	2202-000121	A1100-0798	C-CERAMIC,MLC-AXIAL	100PF,10%,50V,Y5P,1.9X3.5	
C302	2401-001662	31607-403-070	C-AL	68UF,20%,100V,GP,10X16MM,	
C304	2305-000470	A1102-0300	C-FILM,MPEF	68NF,5%,100V,-,5MM,TP	
C305	2202-000173	A1100-0338	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C401	2301-000148	31507-137-013	C-FILM,PEF	10NF,5%,100V,7X3.2X7MM,5M	
C402	2306-000237	A1102-0205	C-FILM,MPPF	6.3NF,5%,1.6KV,28.5X18X11	
C403	2201-000406	31417-901-180	C-CERAMIC,DISC	270PF,10%,2KV,Y5P,8X5,7.5	
C404	2305-000382	A1102-0319	C-FILM,MPEF	4.7NF,5%,400V,-,5MM,TP	
C405	2305-000704	31517-390-502	C-FILM,MPEF	100NF,5%,250V,16,5X5,7X10	
C406	2201-000984	31417-901-410	C-CERAMIC,DISC	680PF,10%,2KV,Y5P,-,7.5MM	
C407	2401-001417	31607-402-130	C-AL	470UF,20%,35V,GP,10X20MM,	
C408	2201-000556	31417-106-090	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3.5,	
C409	2401-001662	31607-403-070	C-AL	68UF,20%,100V,GP,10X16MM,	
C410	2201-000599	31417-468-561	C-CERAMIC,DISC	560PF,10%,500V,Y5P,6X4.5,	
C411	2201-000556	31417-106-090	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3.5,	
C412	2401-000927	31607-403-500	C-AL	22UF,20%,250V,GP,13X20MM,	
C413	2301-000223	31507-137-016	C-FILM,PEF	22NF,5%,100V,7.2X4.5X9.0M	
C414	2401-001530	31607-401-670	C-AL	47UF,20%,25V,GP,5X11MM,5M	
C415	2306-000184	31517-333-334	C-FILM,MPPF	330NF,5%,250V,-,7.5MM,TP	
C416	2201-000556	31417-106-090	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3.5,	
C417	2401-002267	31607-403-460	C-AL	2.2UF,20%,250V,GP,8X12MM,	
C418	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C419	2401-000302	31607-401-680	C-AL	100UF,20%,25V,GP,6X11MM,5	
C601	2301-000235	31507-127-015	C-FILM,PEF	3.9NF,5%,50V,6.5X3.0X5.5M	
C603	2401-001397	A1104-0012	C-AL	470UF,20%,25V,GP,10X16MM,	
C611	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C621	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C704	2401-000603	31607-402-210	C-AL	1UF,20%,50V,GP,5X11MM,5MM	
C705	2401-002463	31607-401-500	C-AL	470UF,20%,16V,GP,8X12.5,T	
C800	2201-002002		C-CERAMIC,DISC	4700PF,20%,400V,+20%~-55%	
C801	2401-002298	A1104-0482	C-AL	220UF,20%,400V,GP,25X40MM	
C802	2201-000963	A1100-0991	C-CERAMIC,DISC	1NF,20%,400V,Y5U,11X8MM,1	
C803	2303-000163	A1102-0331	C-FILM,PPF	2.2NF,5%,800V,15X13X8.5,7	
C804	2201-002002		C-CERAMIC,DISC	4700PF,20%,400V,+20%~-55%	
C805	2201-000991	31417-901-400	C-CERAMIC,DISC	560PF,10%,2KV,Y5P,8X5.5,T	
C806	2201-000332	31467-102-010	C-CERAMIC,DISC	2.2NF,20%,250V,Y5U,-,7.5M	
C807	2201-000599	31417-468-561	C-CERAMIC,DISC	560PF,10%,500V,Y5P,6X4.5,	
C808	2201-000991	31417-901-400	C-CERAMIC,DISC	560PF,10%,2KV,Y5P,8X5.5,T	
C809	2401-002294	A1104-0472	C-AL	1000UF,20%,25V,GP,10X20MM	
C810	2305-000665	A1102-0298	C-FILM,MPEF	100NF,5%,63V,7.5X4.0X5.0M	
C811	2401-000269	31607-401-470	C-AL	100UF,20%,16V,GP,6X11MM,5	
C812	2401-000269	31607-401-470	C-AL	100UF,20%,16V,GP,6X11MM,5	
C813	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C814	2306-000318	A1102-0397	C-FILM,MPPF	220NF,20%,250V,-,22.5MM,T	
C815	2201-000332	31467-102-010	C-CERAMIC,DISC	2.2NF,20%,250V,Y5U,-,7.5M	
C817	2401-000302	31607-401-680	C-AL	100UF,20%,25V,GP,6X11MM,5	
C820	2401-002294	A1104-0472	C-AL	1000UF,20%,25V,GP,10X20MM	

Loc No	New Code No	Old Code No	Description	Specification	Remark
C821	2401-000293	31607-403-990	C-AL	100UF,+30-10%,200V,HR,16X	
C822	2401-000302	31607-401-680	C-AL	100UF,20%,25V,GP,6X11MM,5	
C823	2401-000293	31607-403-990	C-AL	100UF,+30-10%,200V,HR,16X	
C851	2401-000947	31607-402-070	C-AL	22UF,20%,35V,GP,5X11MM,-,	
C852	2202-000716	A1100-0908	C-CERAMIC,MLC-AXIAL	1.8NF,20%,16V,Y5R,3.5X19,	
C900	2401-002212	A1104-0809	C-AL	10UF,20%,25V,WT,5X11,5.0M	
C901	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C902	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C903	2401-000962	31607-402-260	C-AL	22UF,20%,50V,GP,5X11,5,TP	
C906	2201-000423	31407-057-270	C-CERAMIC,DISC	27PF,5%,50V,NP0,5.0X3.0,2	
C907	2201-000423	31407-057-270	C-CERAMIC,DISC	27PF,5%,50V,NP0,5.0X3.0,2	
C909	2201-000257	31407-105-150	C-CERAMIC,DISC	16PF,5%,50V,NP0,-,5,TP	
C910	2201-000257	31407-105-150	C-CERAMIC,DISC	16PF,5%,50V,NP0,-,5,TP	
C911	2202-000173	A1100-0338	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C912	2201-000292	31417-104-400	C-CERAMIC,DISC	1NF,10%,50V,Y5P,5X4,5MM,T	
C913	2401-001495	31607-401-460	C-AL	47UF,20%,16V,GP,5X11MM,5M	
C914	2305-000178	A1102-0307	C-FILM,MPEF	10NF,5%,100V,-,5MM,TP	
C940	2202-000173	A1100-0338	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,1.9X3.5,-	
C951	2401-000832	31607-401-690	C-AL	220UF,20%,25V,GP,8X11MM,5	
CN501A	3711-002644	33347-108-180	CONNECTOR-HEADER	BOX,5P,1R,2.5MM,STRAIGHT,	
CN502A	3711-002645	33347-108-140	CONNECTOR-HEADER	BOX,6P,1R,2.5MM,STRAIGHT,	
CN601	3711-002643	33347-114-810	CONNECTOR-HEADER	BOX,4P,1R,2.5MM,STRAIGHT,	
CN703	3711-002646	33347-108-110	CONNECTOR-HEADER	BOX,7P,1R,2,5MM,STRAIGHT,	
D101	0403-000700	A4106-0227	DIODE-ZENER	TZP33A,33V,31-35V,1W,DO-4	
D203	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D204	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D206	0402-000129	32167-201-070	DIODE-RECTIFIER	1N4003,200V,1A,DO-41	
D207	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D208	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D209	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D210	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D211	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D212	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D213	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D401	0402-000129	32167-201-070	DIODE-RECTIFIER	1N4003,200V,1A,DO-41	
D402	0402-000129	32167-201-070	DIODE-RECTIFIER	1N4003,200V,1A,DO-41	
D403	0402-000540	B4102-0068	DIODE-RECTIFIER	RU20A,600V,1.5A,-	
D404	0402-000546	32167-201-170	DIODE-RECTIFIER	TVR10G,400V,1.0A,DO-41	
D412	0402-000546	32167-201-170	DIODE-RECTIFIER	TVR10G,400V,1.0A,DO-41	
D801	0402-000102	B4104-0108	DIODE-BRIDGE	D2SB60,600V,1,5A,-	
D802	0402-000540	B4102-0068	DIODE-RECTIFIER	RU20A,600V,1.5A,-	
D814	0402-000233	32169-101-090	DIODE-RECTIFIER	FML-G12S,200V,5A,-	ASSY-H/S,POWER
D815	0403-000692	32167-401-880	DIODE-ZENER	R2KN,150-170V,-,150V,TP,-	
D901	0403-000296	32167-401-800	DIODE-ZENER	MTZ5.6B,5.6V,5.45-5.73V,5	
D905	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D910	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D951	0402-000129	32167-201-070	DIODE-RECTIFIER	1N4003,200V,1A,DO-41	
DZ203	0403-000295	32167-406-080	DIODE-ZENER	MTZ5,1B,5.1V,4.94-5.20V,5	
DZ205	0403-000563	32167-406-130	DIODE-ZENER	MTZ9,1B,9,1V,8.57-9.01V,5	
DZ301	0403-000690	32167-406-140	DIODE-ZENER	MTZ10C,10V,9.7-10.2V,500M	
DZ302	0403-000690	32167-406-140	DIODE-ZENER	MTZ10C,10V,9.7-10.2V,500M	
DZ303	0403-001039		DIODE-ZENER	MA2560,56V,52-60V,1W,DO-4	
DZ304	2301-000188	31507-137-001	C-FILM,PEF	1NF,5%,100V,10.5X12.5X6,5	14TC616
DZ304	0403-001039		DIODE-ZENER	MA2560,56V,52-60V,1W,DO-4	20TC615
DZ305	0403-000660	32167-406-200	DIODE-ZENER	MTZ22A,22V,20.15-21.2V,50	
DZ402	0403-000668	32167-406-260	DIODE-ZENER	MTZ8.2B,8.2V,7.78-8.19V,5	
DZ620	0403-000657	32167-406-180	DIODE-ZENER	MTZ16C,16V,15.69-16.51V,5	
DZ621	0403-000657	32167-406-180	DIODE-ZENER	MTZ16C,16V,15.69-16.51V,5	
DZ622	0403-000657	32167-406-180	DIODE-ZENER	MTZ16C,16V,15.69-16.51V,5	
DZ701	0403-000563	32167-406-130	DIODE-ZENER	MTZ9,1B,9,1V,8.57-9.01V,5	
DZ801	1405-000152	A1330-0063	VARISTOR	560V,2500A,14X8,5MM,TP	
DZ804	0403-000295	32167-406-080	DIODE-ZENER	MTZ5,1B,5.1V,4.94-5.20V,5	

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DZ904	0403-000296	32167-401-800	DIODE-ZENER	MTZ5.6B,5.6V,5.45-5.73V,5	
EYELET	AA60-40011A	33104-107-210	EYELET	ID2.0,OD2.8,-,-,BST,-	EY401~EY829
EYELET	AA60-40011B	33104-107-220	EYELET	ID2.2,OD3.2,-,-,BSP,-	EL301~EL806
F801	3601-001012		FUSE-FERRULE	250V,4A,SLOW-BLOW,GLASS,5	
F801A	3602-000114	33167-001-001	FUSE-HOLDER	-,-,30MOHM	
F801B	3602-000114	33167-001-001	FUSE-HOLDER	-,-,30MOHM	
GT101	AA39-20010D	33054-834-018	LEAD-CONNECTOR,ASSY	-,YFH800-01,S,1P,400,1617	
HC701	AA13-20004D		IC-HYBRID	-,SAP201,SIP,8P,SOUND/VID	
HC801	AA13-20002Z	A4010-0092	IC-HYBRID	-,HIS-0169A,SIP,7P,SMPS C	
IC	AA13-30012M		IC-MCU	-,KS88C3116-35,8BIT,SDIP,	20TC615
IC101	1204-000506	B4012-0360	IC-IF DETECTOR	LA7510,SIP,9P,-,PLASTIC,1	
IC201	1204-000467	B4012-0546	IC-CHROMA	TDA8374A,DIP,56P,-,PLASTI	
IC202	1209-000214	B4012-0361	IC-DELAY LINE	TDA4665,DIP,16P,300MIL,PL	
IC301	1204-000441	B4012-0437	IC-IF CIRCUIT	TDA8356,SIP,9P,-,PLASTIC,	ASSY-H/SVERT
IC401	1203-000298	A4008-0520	IC-POSI.FIXED REG.	7809,TO-220,3P,-,PLASTIC,	
IC602	1201-000535		IC-AUDIO AMP	7056,SIP,9P,-,SINGLE,40.5	ASSY-H/S,SOUND
IC801	AA13-20002C	A4010-0066	IC-HYBRID	-,SMR40000,SIP,5P,SMPS CO	ASSY-H/S,POWER
IC802	1203-000644		IC-POSI.FIXED REG.	7630,SIP,10P,-,PLASTIC,5,	ASSY-H/S,MAIN
IC901	AA13-30012M		IC-MCU	-,KS88C3116-35,8BIT,SDIP,	
IC902	1103-000189	B4000-0049	IC-EEPROM	24C02,256X8BIT,DIP,8P,300	
J183	2001-000387	31018-177-163	R-CARBON	16KOHM,5%,1/8W,AA,TP,1.8X	
L101	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L102	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L103	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L152	2701-000202	32427-904-944	INDUCTOR-AXIAL	560NH,10%,2.5X3.4MM	
L153	2701-000158	32427-805-878	INDUCTOR-AXIAL	22UH,10%,2.5X3.4MM	
L201	AA26-10005E	A1195-0028	TRANS-IF	-,7MM,IF,0,136UH,7MM,27PF	
L210	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L251	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L252	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L253	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L255	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L301	2701-000116	32427-805-882	INDUCTOR-AXIAL	10UH,10%,4.2X9.8MM	
L302	2701-000116	32427-805-882	INDUCTOR-AXIAL	10UH,10%,4.2X9.8MM	
L402	AA27-10002Y	B1133-0009	COIL-CHOKE	-,100UH,K,10,700MA,T,100U	
L403	AA27-30001B	32446-705-050	COIL-LINEARITY	-,195UH,QIC1010,PI0.4,4.5	
L405	AA27-10001D	32426-833-020	COIL-CHOKE	-,6.8MH,K,50,150MA,ST,6.8	
L801	AA29-30001D	32426-633-160	FILTER-LINE	-,6.0MH,2A,-,SQ1913	
L802	AA27-20001L	32479-029-380	COIL-DEGAUSSING	-,14",23.00HM,100T,L940,D	14TC616
L802	AA27-20001Y		COIL-DEGAUSSING	-,20",150HM,70T,L2300,E	20TC615
L803	AA27-90001G	B1160-0067	COIL-RESONUBBER	RS207,500UH,C04X2X6,39UVS	
L804	3301-000287	34047-019-060	CORE-FERRITE BEAD	AA,3.5X1.0X6.0MM,1500,240	
L805	2901-000297	A1247-0054	FILTER-EMI ON BOARD	-,3A,-,-	
L806	2901-000297	A1247-0054	FILTER-EMI ON BOARD	-,3A,-,-	
L807	3301-000287	34047-019-060	CORE-FERRITE BEAD	AA,3.5X1,0X6.0MM,1500,240	
L808	2701-000141	32427-904-943	INDUCTOR-AXIAL	1MH,5%,2.8X7MM	
L810	AA27-10002Y	B1133-0009	COIL-CHOKE	-,100UH,K,10,700MA,T,100U	
L811	2901-000297	A1247-0054	FILTER-EMI ON BOARD	-,3A,-,-	
L901	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L902	2701-000114	32427-904-924	INDUCTOR-AXIAL	10UH,10%,2.5X3.4MM	
L903	2701-000301	32427-805-874	INDUCTOR-AXIAL	24UH,10%,2.5X3.4MM	
NT801	1404-000187	A1334-0019	THERMISTOR-NTC	4.7OHM,15%,2800K,27,2MW/C	
P801	1404-000179	A1332-0016	THERMISTOR-PTC	180HM,20%,-,290V,25A,-,-	
PIN-GT	AA60-40014A	33124-111-100	PIN-GT,ASSY	1P,-,-,AUTO	PIN-GT,ALL
Q151	0501-000436	32137-301-080	TR-SMALL SIGNAL	KTC3197-AT,NPN,625MW,TO-9	
Q201	0501-000436	32137-301-080	TR-SMALL SIGNAL	KTC3197-AT,NPN,625MW,TO-9	
Q202	0501-000436	32137-301-080	TR-SMALL SIGNAL	KTC3197-AT,NPN,625MW,TO-9	
Q211	0501-000389	32137-301-720	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q212	0501-000389	32137-301-720	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q213	0501-000283	32137-401-530	TR-SMALL SIGNAL	KSA539-Y,PNP,400MW,TO-92,	
Q214	0501-000389	32137-301-720	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q215	0501-000389	32137-301-720	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	

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Q401	0502-000294	32159-210-040	TR-POWER(14")	KSD5071YD,NPN,50W,TO-3PF,	ASSY-H/S,VERT
Q401	0502-000295		TR-POWER(20")	KSD5072YD,NPN,1500V,800V,	ASSY-H/S,VERT
Q402	0501-000369	32137-301-560	TR-SMALL SIGNAL	KSC2331-Y,NPN,1W,TO-92L,-	
Q906	0501-000389	32137-301-720	TR-SMALL SIGNAL	KSC815-Y,NPN,60V,45V,200M	
Q951	0501-000369	32137-301-560	TR-SMALL SIGNAL	KSC2331-Y,NPN,1W,TO-92L,-	
R102	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R103	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R149	2004-001995	31018-177-912	R-METAL	9.1KOHM,5%,1/8W,AA,TP,1.8	
R152	2001-000221	31018-177-122	R-CARBON	1.2KOHM,5%,1/8W,AA,TP,1.8	
R153	2001-000577	31018-177-202	R-CARBON	2KOHM,5%,1/8W,AA,TP,1.8X3	
R155	2004-001240	31018-177-750	R-METAL	750HM,5%,1/8W,AA,TP,1.8X3	
R156	2001-000666	31018-177-330	R-CARBON	330HM,5%,1/8W,AA,TP,1.8X3	
R157	2202-000127	A1100-0803	C-CERAMIC,MLC-AXIAL	10NF,+80-20%,25V,Y5V,-.7.	
R158	2001-000221	31018-177-122	R-CARBON	1.2KOHM,5%,1/8W,AA,TP,1.8	
R159	2001-000660	31018-177-333	R-CARBON	33KOHM,5%,1/8W,AA,TP,1.8X	
R201	2001-000005	31018-177-391	R-CARBON	3900HM,5%,1/8W,AA,TP,1.8X	
R202	2001-000429	31018-177-102	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R203	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R204	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R205	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R206	2004-001213	31018-177-752	R-METAL	7.5KOHM,5%,1/8W,AA,TP,1.8	
R209	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R211	2001-000793	31018-177-470	R-CARBON	470HM,5%,1/8W,AA,TP,1.8X3	
R212	2001-000628	31018-177-301	R-CARBON	3000HM,5%,1/8W,AA,TP,1.8X	
R213	2001-000490	31018-177-201	R-CARBON	2000HM,5%,1/8W,AA,TP,1.8X	
R214	2001-000490	31018-177-201	R-CARBON	2000HM,5%,1/8W,AA,TP,1.8X	
R215	2001-000490	31018-177-201	R-CARBON	2000HM,5%,1/8W,AA,TP,1.8X	
R216	2001-000780	31018-177-471	R-CARBON	4700HM,5%,1/8W,AA,TP,1.8X	
R217	2001-000793	31018-177-470	R-CARBON	470HM,5%,1/8W,AA,TP,1.8X3	
R218	2001-000440	31018-177-109	R-CARBON	10HM,5%,1/8W,AA,TP,1.8X3,	
R219	2001-000008	31018-177-153	R-CARBON	15KOHM,5%,1/8W,AA,TP,1.8X	
R220	2001-000429	31018-177-102	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R221	2001-000003	31018-177-331	R-CARBON	3300HM,5%,1/8W,AA,TP,1.8X	
R222	2001-000003	31018-177-331	R-CARBON	3300HM,5%,1/8W,AA,TP,1.8X	
R224	2001-000003	31018-177-331	R-CARBON	3300HM,5%,1/8W,AA,TP,1.8X	
R225	2001-000004	31018-177-204	R-CARBON	200KOHM,5%,1/8W,AA,TP,1.8	
R226	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R227	2001-000539	31018-177-243	R-CARBON	24KOHM,5%,1/8W,AA,TP,1.8X	
R228	2001-000766	31018-177-433	R-CARBON	43KOHM,5%,1/8W,AA,TP,1.8X	
R229	2001-000793	31018-177-470	R-CARBON	470HM,5%,1/8W,AA,TP,1.8X3	
R230	2001-000832	31018-177-511	R-CARBON	5100HM,5%,1/8W,AA,TP,1.8X	
R231	2001-000613	31018-177-392	R-CARBON	3.9KOHM,5%,1/8W,AA,TP,1.8	
R232	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R234	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R235	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R236	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R237	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R238	2001-000591	31018-177-332	R-CARBON	3.3KOHM,5%,1/8W,AA,TP,1.8	
R239	2001-000745	31018-177-479	R-CARBON	4.7OHM,5%,1/8W,AA,TP,1.8X	
R240	2001-000273	31018-177-104	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8	
R241	2001-000689	31018-177-394	R-CARBON	390KOHM,5%,1/8W,AA,TP,1.8	
R242	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R243	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R244	2001-000008	31018-177-153	R-CARBON	15KOHM,5%,1/8W,AA,TP,1.8X	
R245	2004-001914	31048-163-902	R-METAL	39KOHM,2%,1/8W,AA,TP,1.8X	
R246	2004-001234	31018-177-753	R-METAL	75KOHM,5%,1/8W,AA,TP,1.8X	
R247	2001-000009	31018-177-203	R-CARBON	20KOHM,5%,1/8W,AA,TP,1.8X	
R248	2003-000993	A1004-0481	R-METAL OXIDE(S)	3.9KOHM,5%,1W,AF,TP,2.5X6	
R249	2001-000613	31018-177-392	R-CARBON	3.9KOHM,5%,1/8W,AA,TP,1.8	
R250	2001-001103	31018-377-203	R-CARBON(S)	20KOHM,5%,1/2W,AA,TP,2.4X	
R253	2001-000429	31018-177-102	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R254	2001-000003	31018-177-331	R-CARBON	3300HM,5%,1/8W,AA,TP,1.8X	

Loc No	New Code No	Old Code No	Description	Specification	Remark
R255	2001-000003	31018-177-331	R-CARBON	330OHM,5%,1/8W,AA,TP,1.8X	
R301	2001-000472	31018-177-272	R-CARBON	2.7KOHM,5%,1/8W,AA,TP,1.8	
R302	2003-000652	A1004-0410	R-METAL OXIDE(S)	330OHM,5%,2W,AF,TP,4X12MM	
R303	2001-001053	31018-377-159	R-CARBON(S)	1.5OHM,5%,1/2W,AA,TP,2.4X	14TC616
R303	2001-001048		R-CARBON(S)	1.2OHM,5%,1/2W,AA,TP,2.4X	20TC615
R304	2001-001077	31018-377-151	R-CARBON(S)	150OHM,5%,1/2W,AA,TP,2.4X	
R401	2003-001035	A1004-0437	R-METAL OXIDE(S)	27OHM,5%,2W,AF,TP,2.4X6.4	
R402	2003-001035	A1004-0437	R-METAL OXIDE(S)	27OHM,5%,2W,AF,TP,2.4X6.4	
R403	2001-001114	31018-377-271	R-CARBON(S)	270OHM,5%,1/2W,AA,TP,2.4X	
R404	2001-001136	31018-377-360	R-CARBON(S)	36OHM,5%,1/2W,AA,TP,2.4X6	
R406	2003-001024	A1004-0445	R-METAL OXIDE(S)	150OHM,5%,2W,AF,TP,3.9X10	
R407	2008-000261	A1010-0062	R-FUSIBLE(S)	150OHM,5%,1W,AF,TP,3.9X10	
R409	2008-000204	A1010-0036	R-FUSIBLE(S)	0.22OHM,10%,1/2W,AF,TP,2.	
R410	2008-000206	A1010-0035	R-FUSIBLE(S)	1OHM,5%,1/2W,AF,TP,2.5X6.	
R413	2001-003019	A1000-0660	R-CARBON(S)	0.39OHM,10%,1/2W,AA,TP,2.	
R414	2001-000022	31018-377-330	R-CARBON(S)	33OHM,5%,1/2W,AA,TP,2.4X6	
R415	2004-001373	31049-375-104	R-METAL(S)	100KOHM,1%,1/2W,AA,TP,2.4	
R416	2003-001024	A1004-0445	R-METAL OXIDE(S)	150OHM,5%,2W,AF,TP,3.9X10	
R417	2008-001015		R-FUSIBLE(S)	1.5OHM,5%,2W,AF,TP,3.9X10	14TC616
R417	2008-000266		R-FUSIBLE(S)	1OHM,5%,2W,AF,TP,3.9X10MM	20TC615
R418	2003-000540	A1004-0404	R-METAL OXIDE(S)	1KOHM,5%,2W,AF,TP,4X12MM	
R420	2001-001410	A1000-0785	R-CARBON(S)	43OHM,5%,1/2W,AA,TP,2.4X6	
R421	2004-002012	31049-311-059	R-METAL(S)	120KOHM,1%,1/2W,AA,BK,2.4	
R422	2001-000085	31018-377-104	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4	
R430	2004-001390	31048-361-001	R-METAL(S)	1KOHM,2%,1/2W,AA,TP,2.4X6	
R601	2008-000266	A1010-0061	R-FUSIBLE(S)	1OHM,5%,2W,AF,TP,3.9X10MM	
R603	2001-000613	31018-177-392	R-CARBON	3.9KOHM,5%,1/8W,AA,TP,1.8	
R604	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R620	2001-000019	31018-377-100	R-CARBON(S)	10OHM,5%,1/2W,AA,TP,2.4X6	
R621	2001-000019	31018-377-100	R-CARBON(S)	10OHM,5%,1/2W,AA,TP,2.4X6	
R630	2008-000266	A1010-0061	R-FUSIBLE(S)	1OHM,5%,2W,AF,TP,3.9X10MM	
R702	2001-001187	31018-377-750	R-CARBON(S)	75OHM,5%,1/2W,AA,TP,2.4X6	
R703	2001-000085	31018-377-104	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4	
R704	2001-000028	31018-377-101	R-CARBON(S)	1000HM,5%,1/2W,AA,TP,2.4X	
R706	2001-000085	31018-377-104	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4	
R801	2006-000335	A1008-0014	R-CEMENT	0.20HM,10%,5W,CJ,TP,5.5X1	
R803	2003-001091	A1004-0405	R-METAL OXIDE(S)	100HM,5%,2W,AF,TP,4X12MM	
R804	2003-001091	A1004-0405	R-METAL OXIDE(S)	100HM,5%,2W,AF,TP,4X12MM	
R805	2002-000331	31028-328-475	R-COMPOSITION	4.7MOHM,10%,1/2W,AA,TP,3.	
R806	2001-001071	31018-377-123	R-CARBON(S)	12KOHM,5%,1/2W,AA,TP,2.4X	
R807	2001-001071	31018-377-123	R-CARBON(S)	12KOHM,5%,1/2W,AA,TP,2.4X	
R808	2008-000206	A1010-0035	R-FUSIBLE(S)	1OHM,5%,1/2W,AF,TP,2.5X6.	
R809	2003-001047	A1004-0470	R-METAL OXIDE(S)	68OHM,5%,2W,AF,TP,3.9X10M	
R810	2003-001047	A1004-0470	R-METAL OXIDE(S)	68OHM,5%,2W,AF,TP,3.9X10M	
R815	2002-000328	31028-378-335	R-COMPOSITION	3.3MOHM,10%,1/2W,AA,TP,3.	
R816	2003-001030	A1004-0465	R-METAL OXIDE(S)	2.4KOHM,5%,1W,AF,TP,2.4X6	
R817	2001-000020	31018-377-220	R-CARBON(S)	22OHM,5%,1/2W,AA,TP,2.4X6	
R852	2001-000019	31018-377-100	R-CARBON(S)	10OHM,5%,1/2W,AA,TP,2.4X6	
R853	2001-001410	A1000-0785	R-CARBON(S)	43OHM,5%,1/2W,AA,TP,2.4X6	
R901	2001-000793	31018-177-470	R-CARBON	47OHM,5%,1/8W,AA,TP,1.8X3	
R902	2001-000723	31018-177-432	R-CARBON	4.3KOHM,5%,1/8W,AA,TP,1.8	
R903	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R904	2001-000281	31018-177-101	R-CARBON	1000HM,5%,1/8W,AA,TP,1.8X	
R905	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R906	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R907	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R908	2001-000723	31018-177-432	R-CARBON	4.3KOHM,5%,1/8W,AA,TP,1.8	
R909	2004-000187	31047-251-053	R-METAL	10.5KOHM,1%,1/4W,AA,TP,2.	
R910	2001-000723	31018-177-432	R-CARBON	4.3KOHM,5%,1/8W,AA,TP,1.8	
R911	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R912	2004-001193	31018-177-681	R-METAL	6800HM,5%,1/8W,AA,TP,1.8X	
R913	2004-001193	31018-177-681	R-METAL	6800HM,5%,1/8W,AA,TP,1.8X	

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R914	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R915	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R916	2001-000429	31018-177-102	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R917	2001-000723	31018-177-432	R-CARBON	4.3KOHM,5%,1/8W,AA,TP,1.8	
R918	2001-000241	31018-177-152	R-CARBON	1.5KOHM,5%,1/8W,AA,TP,1.8	
R924	2001-000003	31018-177-331	R-CARBON	330OHM,5%,1/8W,AA,TP,1.8X	
R925	2001-000003	31018-177-331	R-CARBON	330OHM,5%,1/8W,AA,TP,1.8X	
R926	2001-000003	31018-177-331	R-CARBON	330OHM,5%,1/8W,AA,TP,1.8X	
R927	2001-000003	31018-177-331	R-CARBON	330OHM,5%,1/8W,AA,TP,1.8X	
R928	2001-000449	31018-177-222	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R931	2001-000522	31018-177-223	R-CARBON	22KOHM,5%,1/8W,AA,TP,1.8X	
R932	2001-000429	31018-177-102	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R933	2001-000429	31018-177-102	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R934	2001-000281	31018-177-101	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X	
R935	2001-000281	31018-177-101	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X	
R936	2001-000449	31018-177-222	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R937	2001-000449	31018-177-222	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R938	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R941	2004-001126	31018-177-622	R-METAL	6.2KOHM,1%,1/8W,AA,TP,1.8	
R942	2001-000007	31018-177-302	R-CARBON	3KOHM,5%,1/8W,AA,TP,1.8X3	
R943	2001-000006	31018-177-242	R-CARBON	2.4KOHM,5%,1/8W,AA,TP,1.8	
R944	2001-000613	31018-177-392	R-CARBON	3.9KOHM,5%,1/8W,AA,TP,1.8	
R945	2001-000331	31018-177-123	R-CARBON	12KOHM,5%,1/8W,AA,TP,1.8X	
R946	2004-001104	31018-177-563	R-METAL	56KOHM,5%,1/8W,AA,TP,1.8X	
R947	2001-000290	31018-177-103	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X	
R950	2001-000117	31018-377-680	R-CARBON(S)	68OHM,5%,1/2W,AA,TP,2.4X6	
R951	2001-000734	31018-177-472	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8	
R952	2001-000331	31018-177-123	R-CARBON	12KOHM,5%,1/8W,AA,TP,1.8X	
RL801	3501-000285	34729-004-010	RELAY-POWER	12V,-,10A,-,15MS,5MS	
RM901	AA59-60001U	A1294-0035	MODULE-REMOCON	-,0RC-50VF,38KHZ,940NM,ME	
SF101	2904-000287	B1245-0052	FILTER-SAW AV	45.75MHZ,SIP5P,ST,12.5DB,	
SF102	2904-000289	B1245-0045	FILTER-SAW AV	45.75MHZ,SIP5P,ST,14.4DB,	
SW801	3403-000179	A3002-0014	SWITCH-PUSH	250V,5A,DPST,-	
SW901	3404-000244	B3018-0034	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM	
SW902	3404-000244	B3018-0034	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM	
SW903	3404-000244	B3018-0034	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM	
SW904	3404-000244	B3018-0034	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM	
SW905	3404-000244	B3018-0034	SWITCH-TACT	15V,20MA,90-170GF,7.5X7MM	
T401	AA26-50001B	32846-070-007	HORIZ.DRIVE	-,7.1MH,102UH,10-20UH,YLO	
T444	AA26-30004H		TRANS-FLYBACK	-,FSV-14A001,14",125V	14TC616
T444	AA26-30001Y		TRANS-FLYBACK	-,FSV-20A001,20",125V	20TC615
T801	AA26-20003K	A1206-0067	TRANS-SWITCHING	-,90-280V,-,ER354111,480U	
TU001	AA40-10005D		TUNER-F/S	TECC1980PK25A,NTSC/USA,TR	
X201	2801-003128		CRYSTAL-UNIT	3.575611MHZ,30PPM,28-AAM,	
X202	2801-003125		CRYSTAL-UNIT	3.582056MHZ,30PPM,28-AAM,	
X203	2801-003124		CRYSTAL-UNIT	3.579545MHZ,30PPM,28-AAM,	
X901	2801-000724	34537-071-040	CRYSTAL-UNIT	6MHZ,50PPM,28-AAM,20PF,40	
Z101	2903-000135	B1243-0071	FILTER-CERAMIC	8P,4.5MHZ	
Z201	2903-001022		FILTER-CERAMIC	TR,4.5MHZ	
			ASSY-LED.GUIDE		
LD901	AA96-30001B	3H77-00001-070	ASSY-LED.GUIDE	-,AA61-50055A,DL-G5RGA,-	
			ASSY-ACCESSORY		
MACH/T	AA26-90001C	32759-113-010	TRANS-MATCHING	-,300OHM/75OHM,PAL,40-890	
RCA/CA	AA39-40001B	33394-100-120	CABLE-RCA	-,RCA,1500MM,0.12/10,RED/	
ROD/ANT	AA42-10001C	34509-223-023	ANT-ROD	-,4S,620MM,SUS,UL/CSA	
USER/M	AA68-10974A		MANUAL-USERS	KCT12A,W/P100(G),-,SPA,NO	

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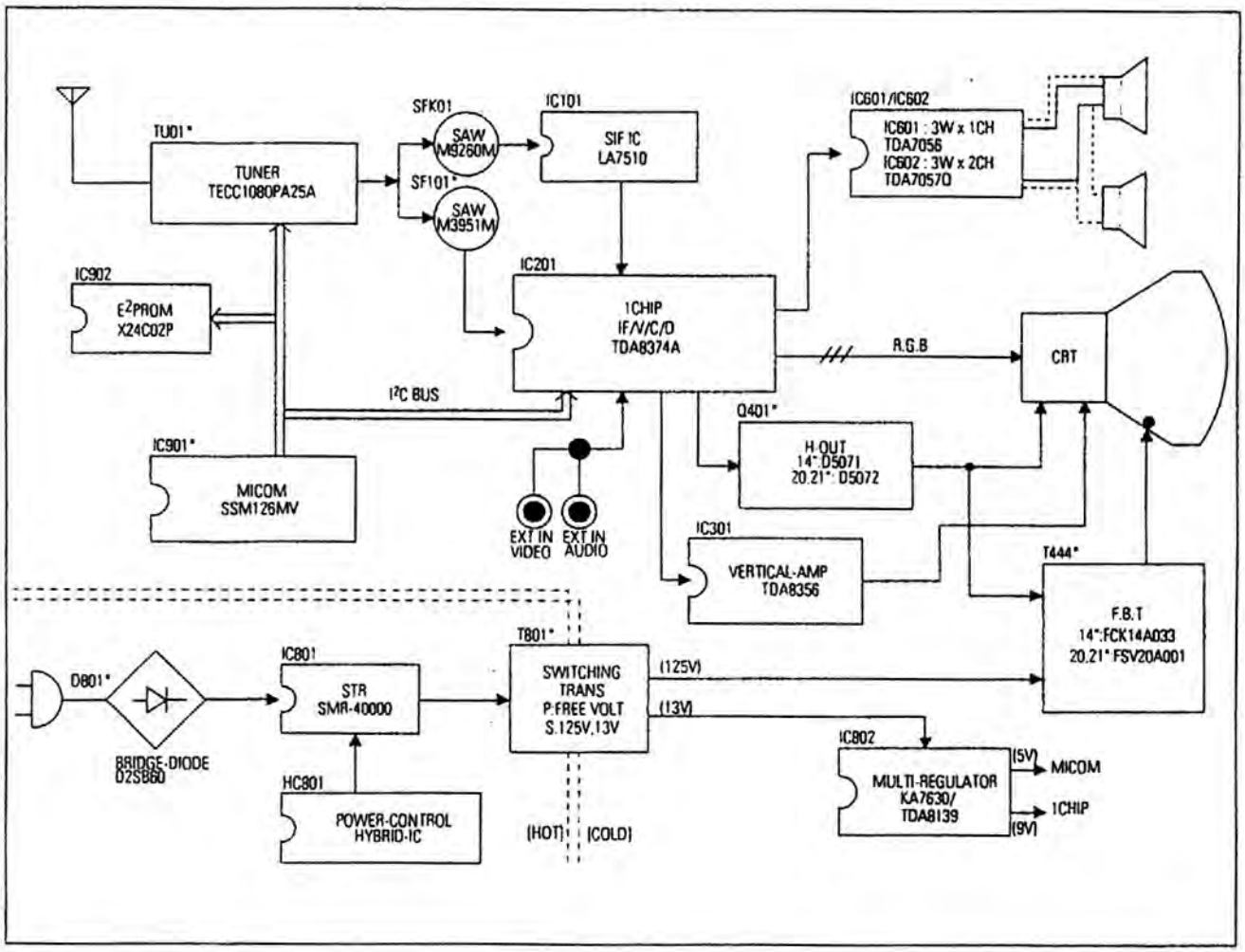
			ASSY-CRT		
CRT	AA03-10002N	A1320-0112	CRT-COLOR	-,A34KQV42X,-300MG,14",90	14TC616
CRT	AA03-10003V		CRT-COLOR	-,A48KRD82X01(U),-200MG,2	20TC615
D/Y	AA27-50001K	32439-210-090	DEFLECTION-YOKE	-,DSE-1422FL,14"/A34KQV42	
C/Y	AA27-60001F	34099-027D010	MAGNET-CONVERGENCE	-,JH-225,22.5MM	
SP-DY	AA63-60028A	33309-0020-000	SPACER-DY	-,NEOPRENE,-,BLK,VO W12,-	
			ASSY-PCB,CRT		
	*AA97-70004D		ASSY-PCB,CRT	-,KCT12A,14",SEDA,-	14TC616
	*AA97-70004C		ASSY-PCB,CRT	-,KCT12A,20",LATIN PAL SE	20TC615
C501	2301-000285	31507-127-010	C-FILM,PEF	47NF,5%,50V,7.5X4.0X6.5,5*	
C502	2305-000288	31507-127-024	C-FILM,MPEF	220NF,5%,50V,7.3X4.8X5.5M	
C503	2401-000480	31607-402-250	C-AL	10UF,20%,50V,GP,5X11MM,5M	
C504	2202-000162	A1100-0824	C-CERAMIC,MLC-AXIAL	15PF,5%,50V,SL,3.5X19,-,T	
C505	2202-000861	A1100-0977	C-CERAMIC,MLC-AXIAL	12PF,5%,50V,CH,3.5X1.9MM,	
C506	2202-000162	A1100-0824	C-CERAMIC,MLC-AXIAL	15PF,5%,50V,SL,3.5X19,-,T	
C507	2201-000556	31417-106-090	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3.5,	
C508	2201-000556	31417-106-090	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3.5,	
C509	2201-000556	31417-106-090	C-CERAMIC,DISC	470PF,10%,500V,Y5P,6X3.5,	
C510	2401-001232	31607-403-480	C-AL	4.7UF,20%,250V,GP,10X12.5	
C514	2301-000223	31507-137-016	C-FILM,PEF	22NF,5%,100V,7.2X4.5X9.0M	
C515	2401-000430	31607-403-490	C-AL	10UF,20%,250V,GP,10X16MM,	
C516	2301-000213	31517-002-224	C-FILM,PEF	220NF,5%,250V,21.5X11.7.5	
C517	2201-000158	A1100-0783	C-CERAMIC,DISC	10NF,+80-20%,3KV,Y5V,-,10	
C519	2401-000832	31607-401-690	C-AL	220UF,20%,25V,GP,8X11MM,5	
CN501A	AA39-20020J	33058-009-176	LEAD-CONNECTOR,ASSY	-,67096-005,S,5P,400,1007	
CN501B	3711-002644	33347-108-180	CONNECTOR-HEADER	BOX,5P,1R,2.5MM,STRAIGHT,	14TC616
CN501B	AA39-20020C		LEAD-CONNECTOR,ASSY	-,67096-005,S,5P,500,1007	20TC615
CN502B	AA39-20027C		LEAD-CONNECTOR,ASSY	-,67096-006,S,6P,500,1007	20TC615
CN502A	AA39-20027B	33058-017-016	LEAD-CONNECTOR,ASSY	-,67096-006,S,6P,400,1007	14TC616
CN502B	3711-002645	33347-108-140	CONNECTOR-HEADER	BOX,6P,1R,2.5MM,STRAIGHT,	
D501	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D502	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
D503	0402-000132	32167-201-080	DIODE-RECTIFIER	1N4004,400V,1A,DO-41	
D504	0401-000005	32167-406-480	DIODE-SWITCHING	1N4148,75V,150MA,500MW,4N	
DZ501	0403-000655	32167-406-150	DIODE-ZENER	MTZ13A,13V,12.11-12.75V,5	
DZ502	0403-000655	32167-406-150	DIODE-ZENER	MTZ13A,13V,12.11-12.75V,5	
DZ503	0403-000655	32167-406-150	DIODE-ZENER	MTZ13A,13V,12.11-12.75V,5	
GT501	AA60-40014A	33124-111-100	PIN-GT,ASSY	1P,-,-,AUTO	
IC501	1201-000539		IC-VIDEO AMP	6101,ZIP,9P,-,SINGLE,-,PL	
IC502	1201-000539		IC-VIDEO AMP	6101,ZIP,9P,-,SINGLE,-,PL	
IC503	1201-000539		IC-VIDEO AMP	6101,ZIP,9P,-,SINGLE,-,PL	
IC504	AA13-20003C	A4010-0095	IC-HYBRID	-,SPK101T,SIP,6P,SPOT KIL	
R501	2001-000429	31018-177-102	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3	
R502	2004-001402	A1006-0672	R-METAL(S)	6.8KOHM,1%,1/2W,AA,TP,2.4	
R503	2004-001981	31049-275-162	R-METAL	1.6KOHM,1%,1/4W,AA,TP,2.4	
R505	2001-000449	31018-177-222	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R506	2001-000449	31018-177-222	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R507	2001-000449	31018-177-222	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8	
R508	2004-004030	31049-276-182	R-METAL	1.8KOHM,2%,1/4W,AA,TP,2.5	
R509	2004-004030	31049-276-182	R-METAL	1.8KOHM,2%,1/4W,AA,TP,2.5	
R510	2004-004030	31049-276-182	R-METAL	1.8KOHM,2%,1/4W,AA,TP,2.5	
R511	2004-001373	31049-375-104	R-METAL(S)	100KOHM,1%,1/2W,AA,TP,2.4	
R512	2004-001373	31049-375-104	R-METAL(S)	100KOHM,1%,1/2W,AA,TP,2.4	
R513	2004-001373	31049-375-104	R-METAL(S)	100KOHM,1%,1/2W,AA,TP,2.4	
R514	2001-000515	31018-177-221	R-CARBON	220OHM,5%,1/8W,AA,TP,1.8X	
R515	2001-000515	31018-177-221	R-CARBON	220OHM,5%,1/8W,AA,TP,1.8X	
R516	2001-000515	31018-177-221	R-CARBON	220OHM,5%,1/8W,AA,TP,1.8X	

Loc No	New Code No	Old Code No	Description	Specification	Remark
R517	2002-000327	31028-328-272	R-COMPOSITION	2.7KOHM,10%,1/2W,AA,TP,3,	
R518	2002-000327	31028-328-272	R-COMPOSITION	2.7KOHM,10%,1/2W,AA,TP,3,	
R519	2002-000327	31028-328-272	R-COMPOSITION	2.7KOHM,10%,1/2W,AA,TP,3,	
R520	2001-000096	31018-377-105	R-CARBON(S)	1MOHM,5%,1/2W,AA,TP,2.4X6	
R522	2001-001107	31049-377-221	R-CARBON(S)	220OHM,5%,1/2W,AA,TP,2.4X	
R523	2003-000458	A1004-0430	R-METAL OXIDE(S)	100OHM,5%,2W,AF,TP,4X12MM	
R524	2008-001015		R-FUSIBLE(S)	1.5OHM,5%,2W,AF,TP,3,9X10	14TC616
R524	2008-000266		R-FUSIBLE(S)	1OHM,5%,2W,AF,TP,3,9X10MM	20TC615
V999	3704-000103	A3047-0013	SOCKET-CRT	10P,22.5PI,14.3PI,SN	14TC616
V999	3704-000109		SOCKET-CRT	14P,29.1PI,22.5PI,SN	20TC615
			ASSY-A/V FRONT		
	*AA97-90003U		ASSY-A/V FRONT	-,CN33/5038,KCT12A,PAL,-,	
RE01	2001-000117	31018-377-680	R-CARBON(S)	68OHM,5%,1/2W,AA,TP,2.4X6	
RE02	2001-000117	31018-377-680	R-CARBON(S)	68OHM,5%,1/2W,AA,TP,2.4X6	
CE01	2401-000480	31607-402-250	C-AL	10UF,20%,50V,GP,5X11MM,5M	
JE601	3722-000143	33339-521-070	JACK-PHONE	1P,3.4MM,MBAG,BLACK,-	
JA703	3722-000506	A3040-0251	JACK-RCA	2P,3.6MM,-,AG	
CN704	AA39-20070D	36434-0010-040	LEAD-CONNECTOR,ASSY	-,YBNH025-07,67096-007,7P	
			ASSY-SPEAKER		
SPK	3001-000275	A1300-0080	SPEAKER	2.5W,16OHM,90DB,105HZ	14TC616
LEAD/C	AA39-20127B	36434-0107-010	LEAD-CONNECTOR,ASSY	-,YSH025-04,#205/#110,4(2	14TC616
SPK	3001-001004		SPEAKER	3W,16OHM,90DB,180HZ	20TC615
LEAD/C	AA39-20510A		LEAD CONNECTOR-ASSY	-,YSH025-04,REC,4(2)P,600	20TC615
			ASSY-POWER,CORD		
P-CORD	AA39-10002Z	A6006-0258	POWER-CORD	-,KKP-560N,KLCE-2F,2.286M	
H-CORD	AA61-20070A	33329-0119-000	HOLDER-CORD	-,-,PP,V0,BLK,KE-0002	
			REMOCON		
	*AA59-10081T		REMOCON	-,TM51,SZM126MV,27,L/G,NO	
			ASSY-CABINET		
	*AA92-30153W		ASSY-CABINET,FRONT	14TC616/NOCX	14TC616
	*AA92-30173P		ASSY-CABINET,FRONT	20TC615/NOCX	20TC615
CB+CF	6002-000514		SCREW-TAPPING	RH,+,2.M4,L15,ZPC(BLK),SW	
PA+CF	AA60-10002A	37144-001-210	SCREW-TAPPING	RH,+,M4,L12,ZPC(YEL),-,OD	
CRT+CF	AA60-10050D		SCREW-ASSY	WC,HH,+,M5,L35,SWACH18,-,	
STOPPER	AA61-40007A		STOPPER-PCB	5038,5368,ABS HB,NTR,-,-,	20TC615
BOSS	AA61-40010A	33113-0003-001	BOSS-WING	-,HIPS,HB,NTR,-,-	
SPRING	AA61-60003J	36674-137-890	SPRING-CS	-,SUS304,0.5,OD6,H12,N7,-	14TC616
KNOPOW	AA61-60003T		SPRING-CS	-,SUS304,0.5,OD7,H13.5,N5	20TC615
GRILLE	AA63-50095A		GRILLE-WOOFER	-,SECC,-,T0.5,-,PA110 P10	20TC615
KNOCONT	AA64-10039A		KNOB-CONTROL	-,5073,-,ABS,HB,BLK	20TC615
KNOCONT	AA64-10043A	34082-0186-000	KNOB-CONTROL	-,3373,-,ABS,HB,BLK	14TC616
KNOPOW	AA64-10131C		KNOB-POWER	-,5073,MASTER,ABS,HB,BLK	20TC615
KNOPOW	AA64-10137E		KNOB-POWER	-,3373,MASTER,ABS,HB,BLK	14TC616
FRONT	AA64-30126P		CABINET-FRONT	-,3373,PA100 NOBLEX,HIPS,	14TC616
FRONT	AA64-30118N		CABINET-FRONT	-,5073,PA100 NOBLEX,HIPS,	20TC615
BACK	AA64-30381A	32001-0136-000	CABINET-BACK	-,3338,73,-,HIPS,V0,BLK,-	
WIN/RE	AA64-40051A	34073-0085-000	WINDOW-REMOCON	-,ABS,HB,-,-,NO-SILK,3373	14TC616
WIN/RE	AA64-40044A		WINDOW-REMOCON	-,ABS,HB,-,-,NO-SILK,5073	20TC615
IND/LED	AA64-40184A	34164-0042-000	INDICATOR-LED	-,3373,-,ACRYL,-,-,-	14TC616

Loc No	New Code No	Old Code No	Description	Specification	Remark
IND/LED	AA64-40182A		INDICATOR-LED	-,5073,-,ACRYL,-,-,-	20TC615
BADGE	AA64-70111A		BADGE-BRAND	AL,NOBLEX,GOLD,L40.-,-,-	14TC616
BADGE	AA64-70112A		BADGE-BRAND	AL,NOBLEX,GOLD,L55,-,-,-	20TC615
C-CORD	AA65-30008A	36633-101-610	CLAMP-CORD	PE,HB,BLK,-,-,-	
C-WIRE	AA65-30010A	36634-111-010	CLAMP-WIRE	NYLON-66,V0,NTR,-,-,-	
C-D,COIL	AA65-30016A	36635-001-910	CLAMP-D,COIL	NYLON-66,V0,NTR,DADH-360	
BACK	AA64-30375A		CABINET-BACK	-,5073,38,-,HIPS,V0,BLK,-	20TC615

8. Block Diagram

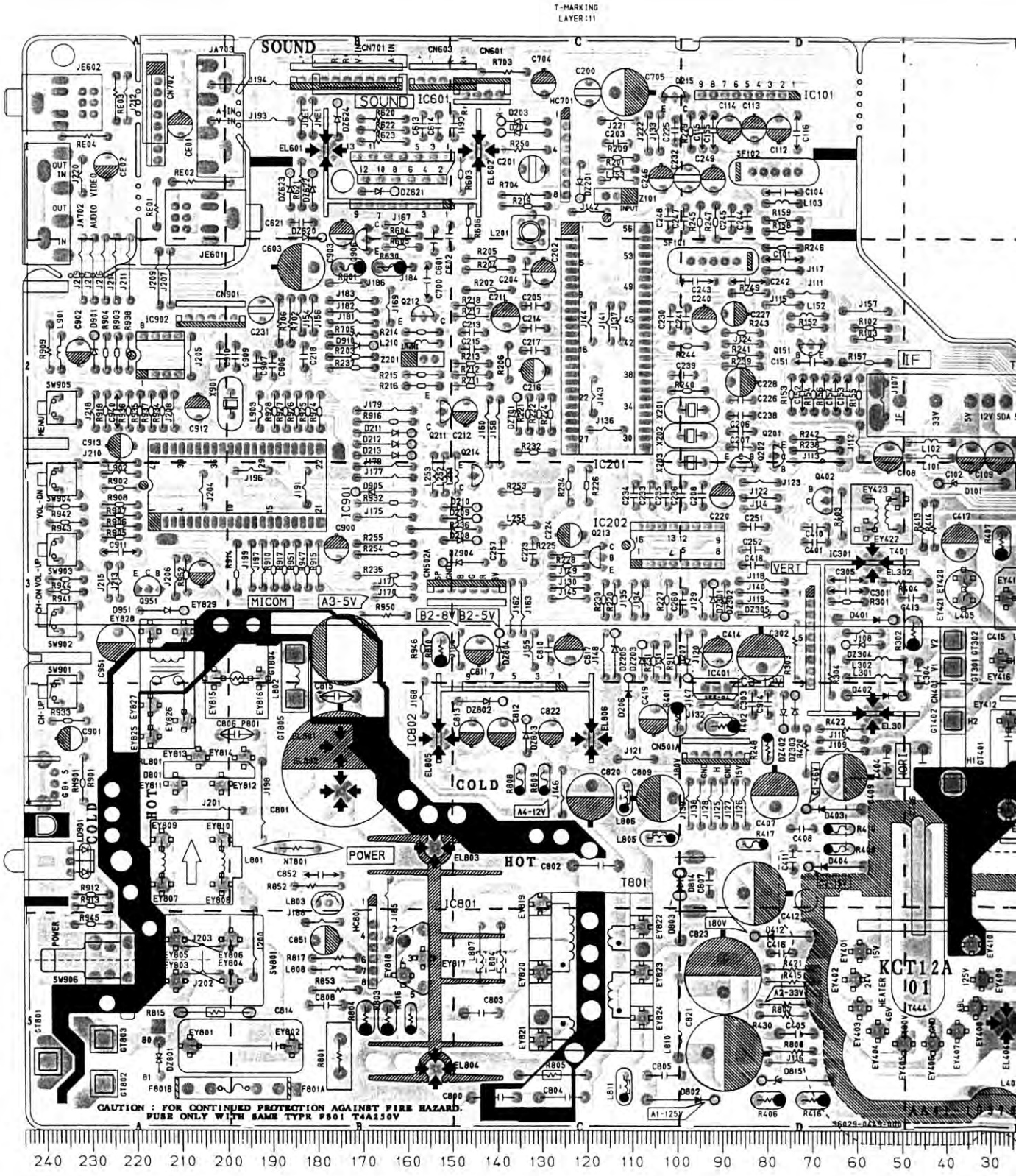
8-1 KCT12A Block-Diagram (PAL-N/M, NTSC System)

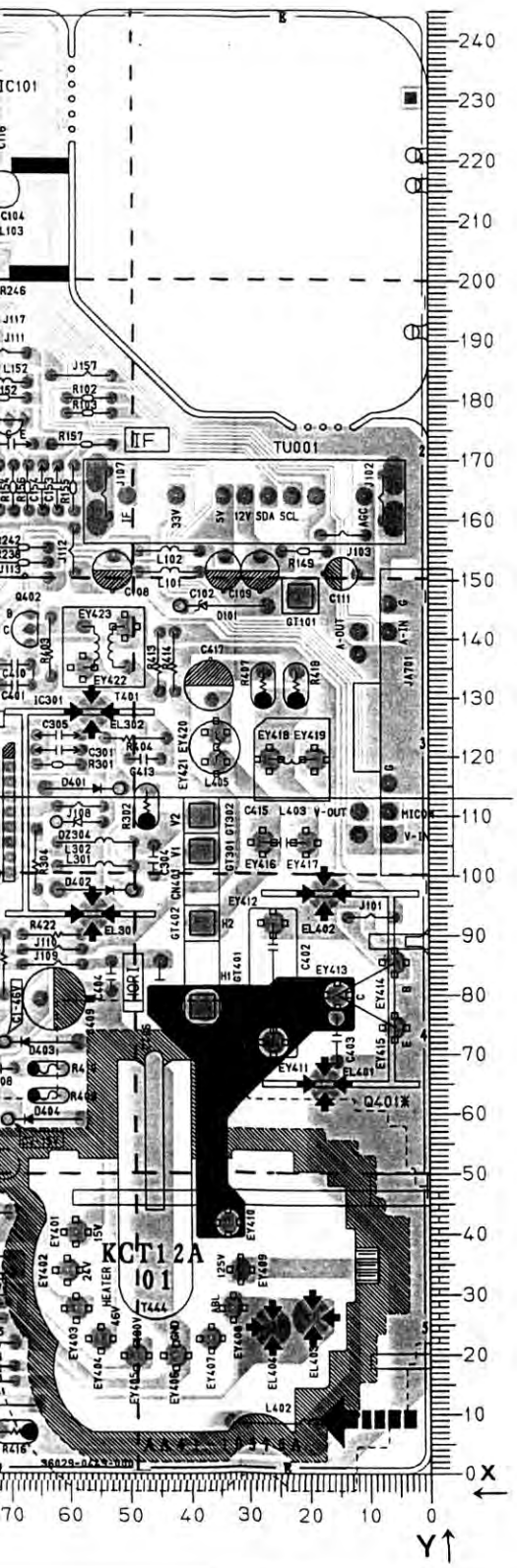


MEMO

9. PCB Layout Diagram

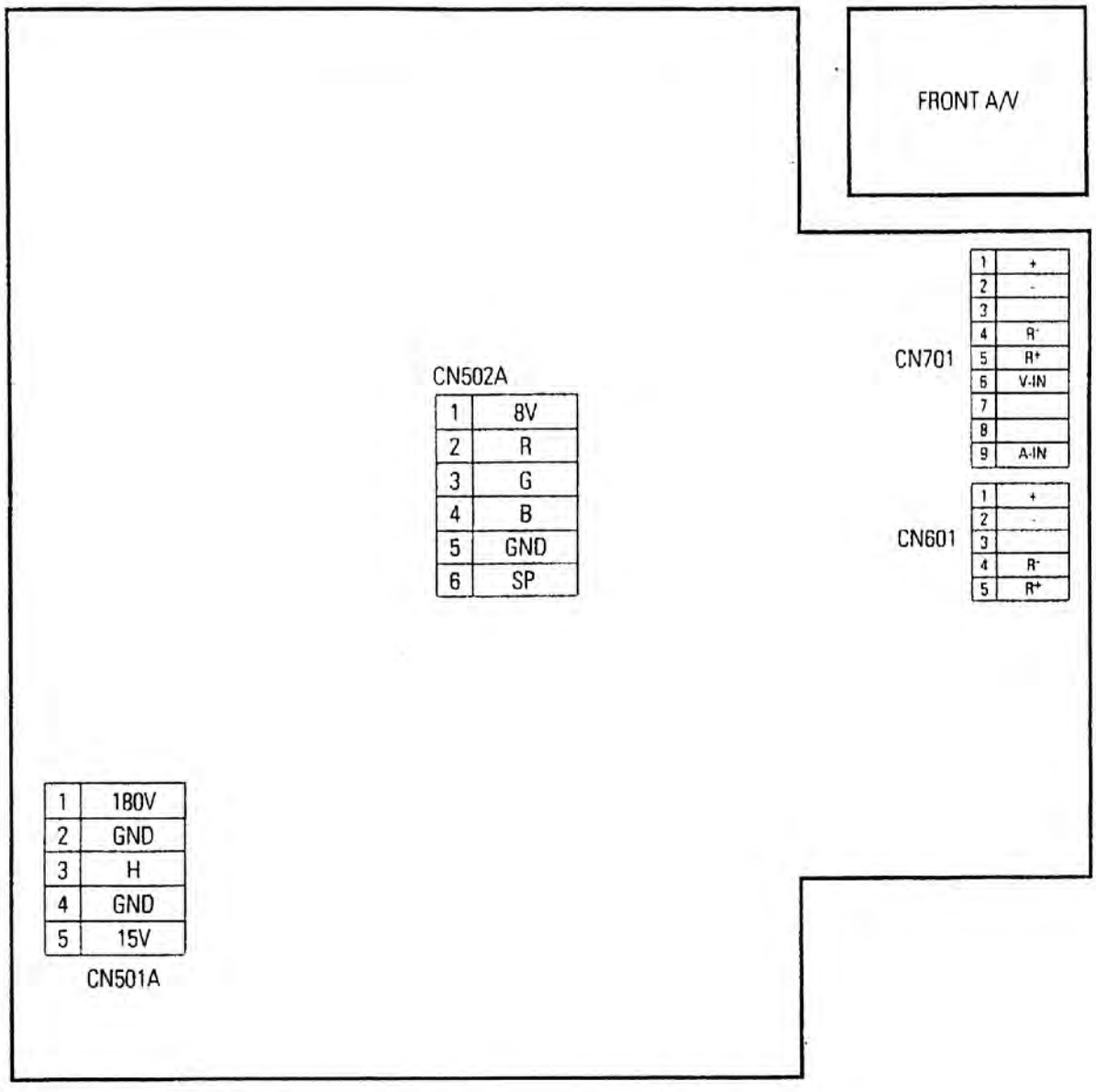
9-1 PCB-Main





LOC NO	X	Y	LOC NO	X	Y
DIODE			**I. C**		
D101	42	145	IC101	74	232
D203	139	226	IC201	107	201
D204	139	223	IC202	108	135
D206	110	101	IC301	56	93
D207	97	101	IC401	94	99
D208	144	132	IC601	144	219
D209	144	137	IC801	154	14
D210	144	139	IC802	153	87
D211	159	156	IC901	215	153
D212	159	154	IC902	218	178
D213	159	151	**TRANSISTOR**		
D401	52	114	Q151	73	176
D402	50	97	Q201	78	149
D403	71	72	Q202	83	149
D404	71	59	Q211	152	158
D412	83	43	Q212	154	182
D801	196	83	Q213	117	131
D802	92	7	Q214	145	144
D803	99	57	Q215	98	231
D814	99	57	Q401*	17	97
D815	81	11	Q402	67	144
D901	229	178	Q906	169	202
D905	171	143	Q951	215	121
D910	167	176	**OTHER**		
D951	209	116	P801	193	101
DZ201	121	209	T401	58	135
DZ203	107	108	T444	46	34
DZ205	113	111	T801	108	50
DZ301	89	115	TU001	10	164
DZ302	92	122	X201	99	161
DZ303	74	97	X202	99	156
DZ304	62	108	X203	99	150
DZ305	76	115	X901	199	165
DZ402	76	90	Z101	111	209
DZ620	178	200	Z201	159	173
DZ621	162	210			
DZ622	181	214			
DZ623	186	214			
DZ624	175	230			
DZ701	135	164			
DZ801	215	20			
DZ802	138	96			
DZ803	133	92			
DZ804	139	111			
DZ904	152	127			

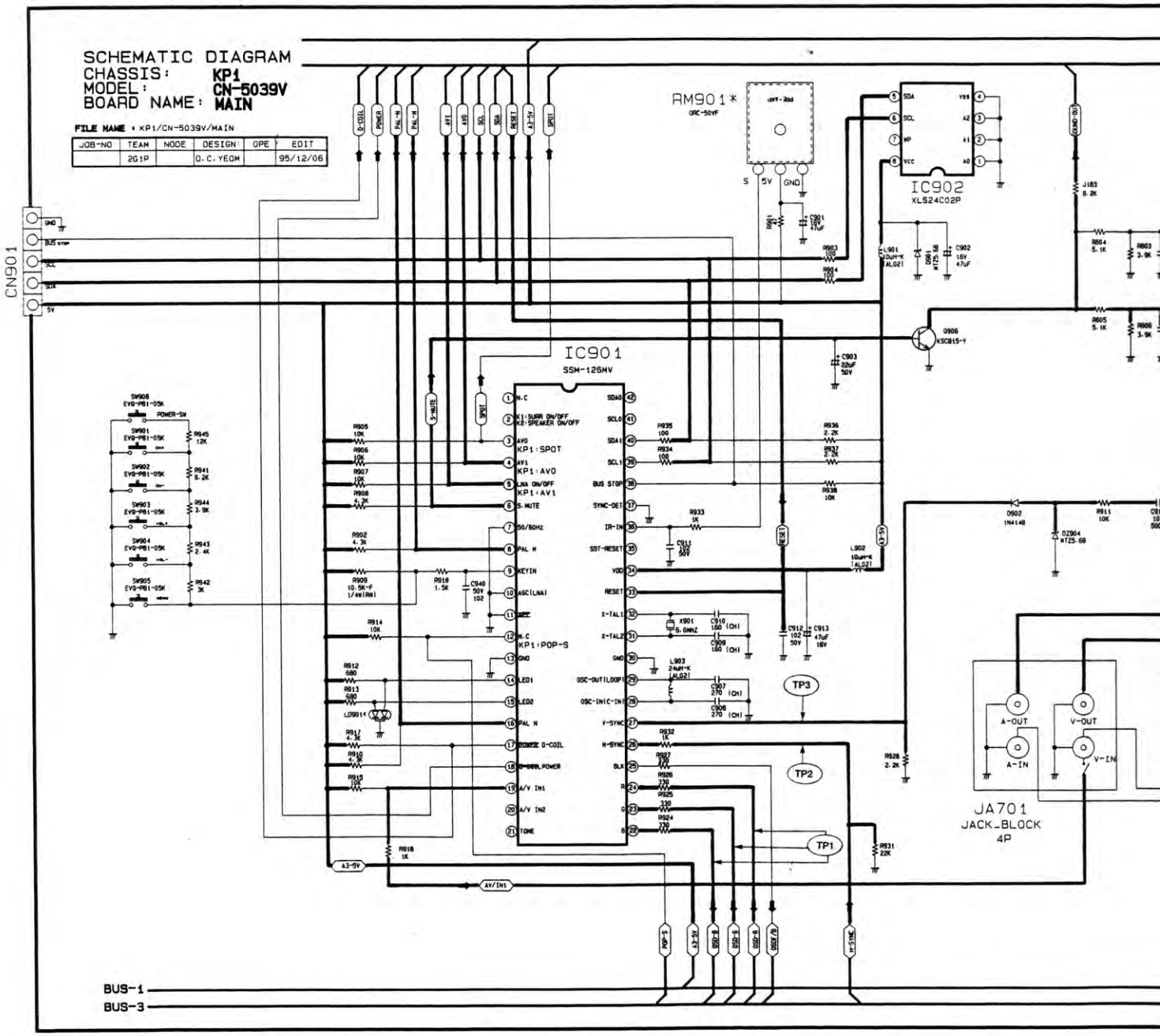
10. Wiring Diagram

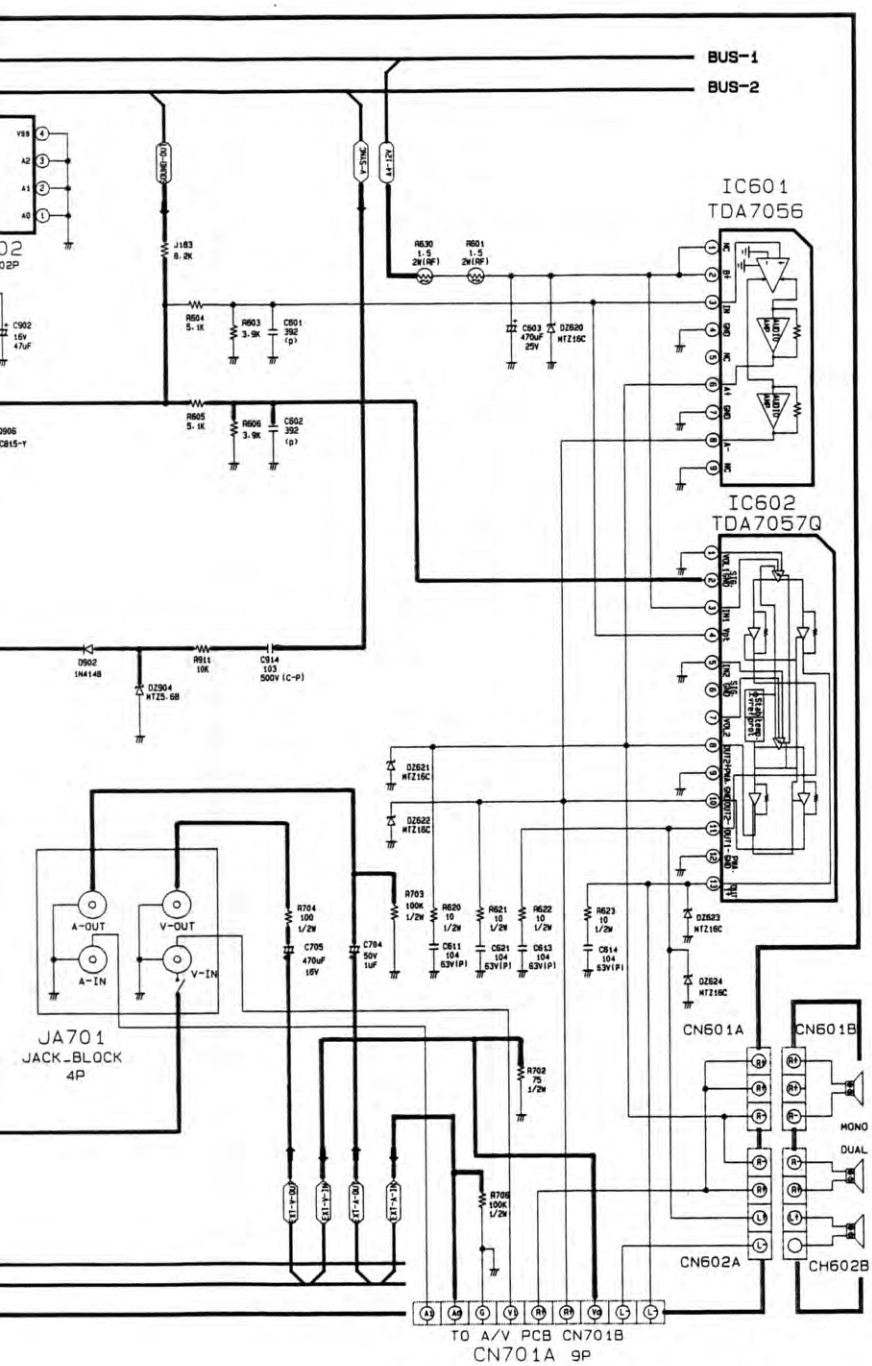


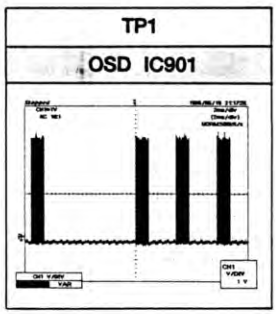
MEMO

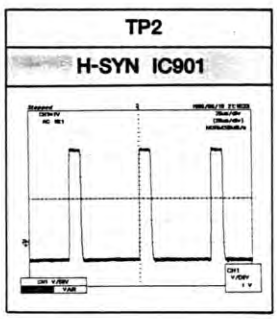
11. Schematic Diagrams

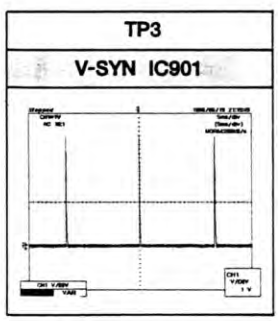
11-1 MAIN(1/4)







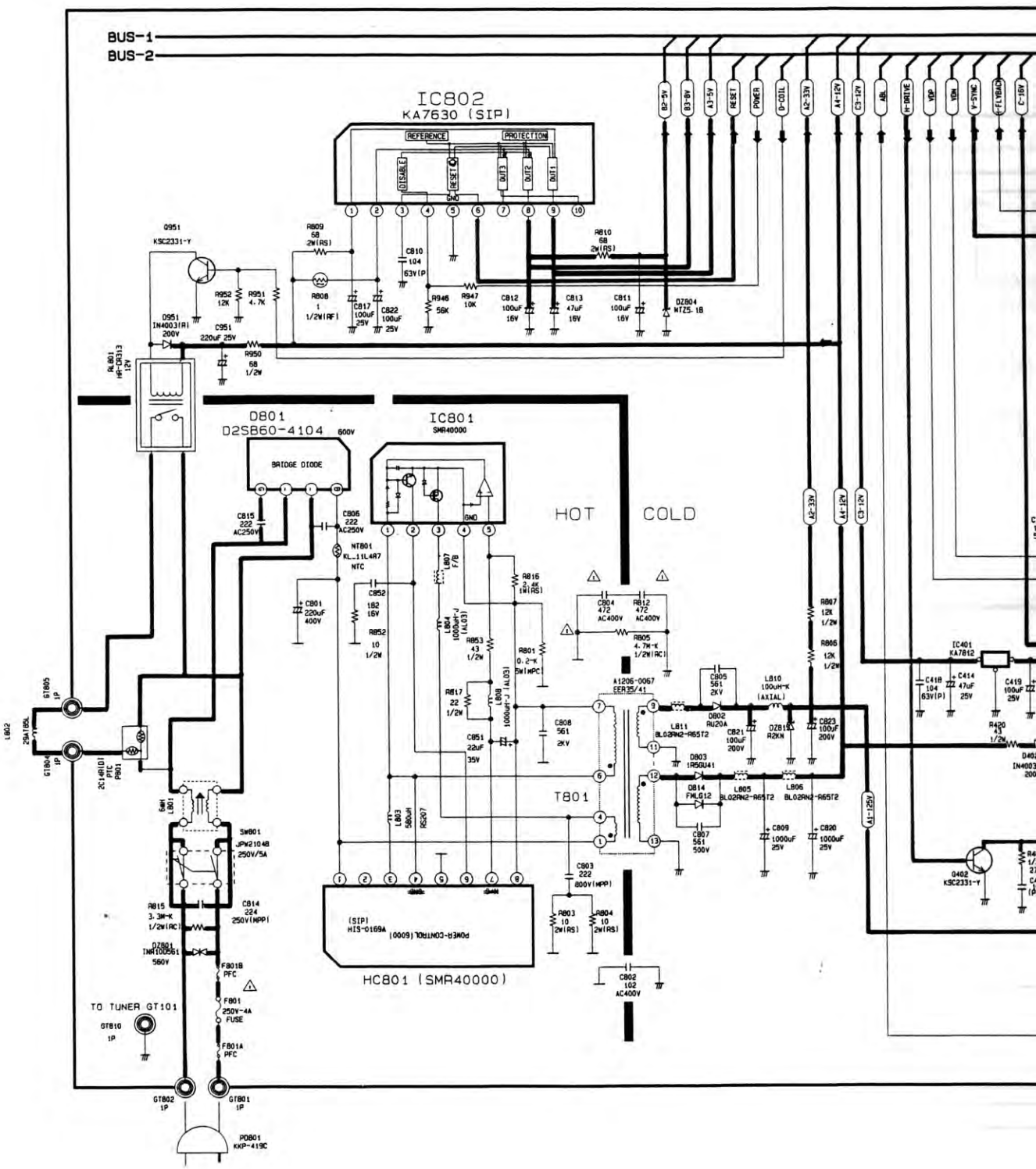


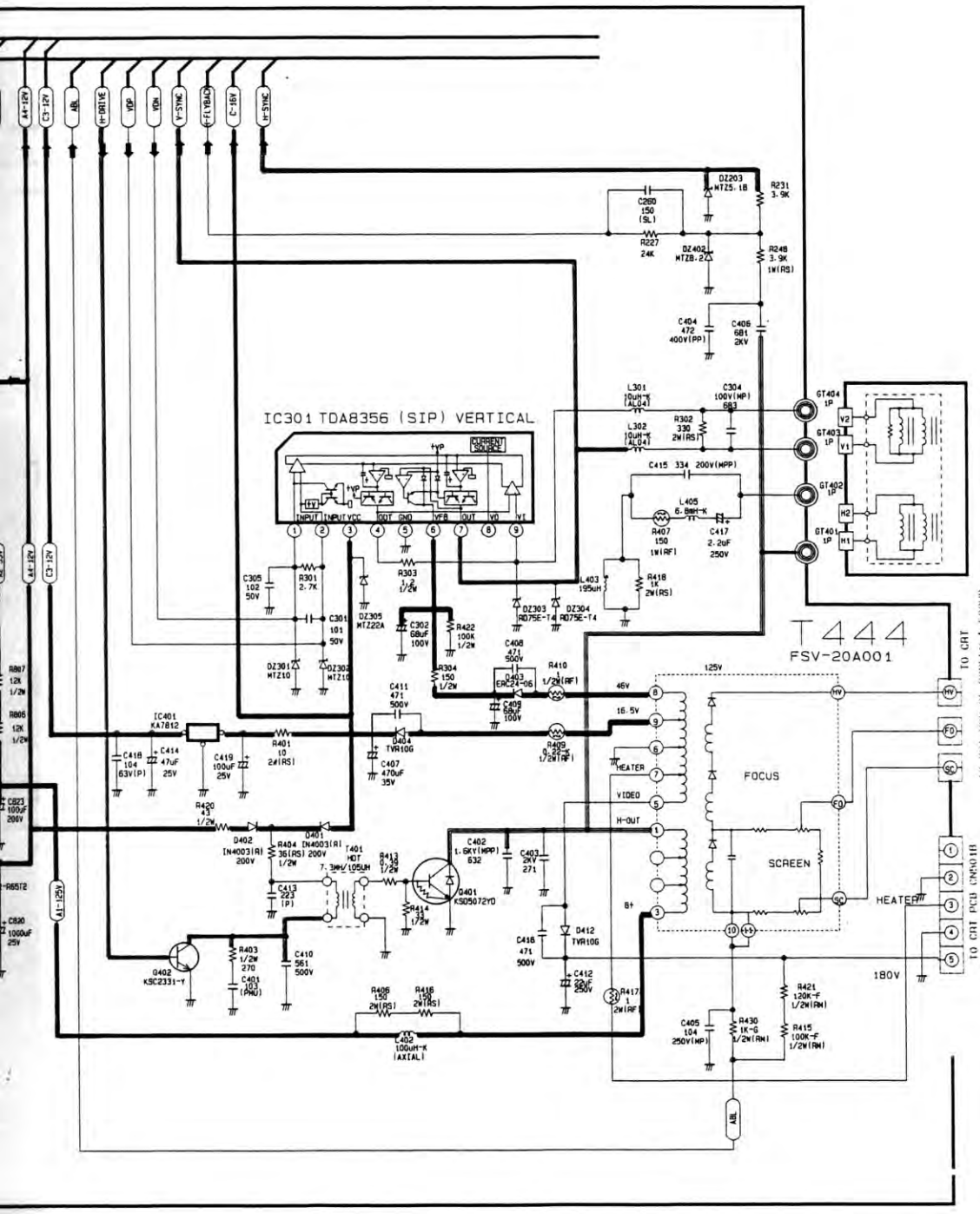


: Power Line

: Signal Line

11-2 MAIN PCB (2/4)

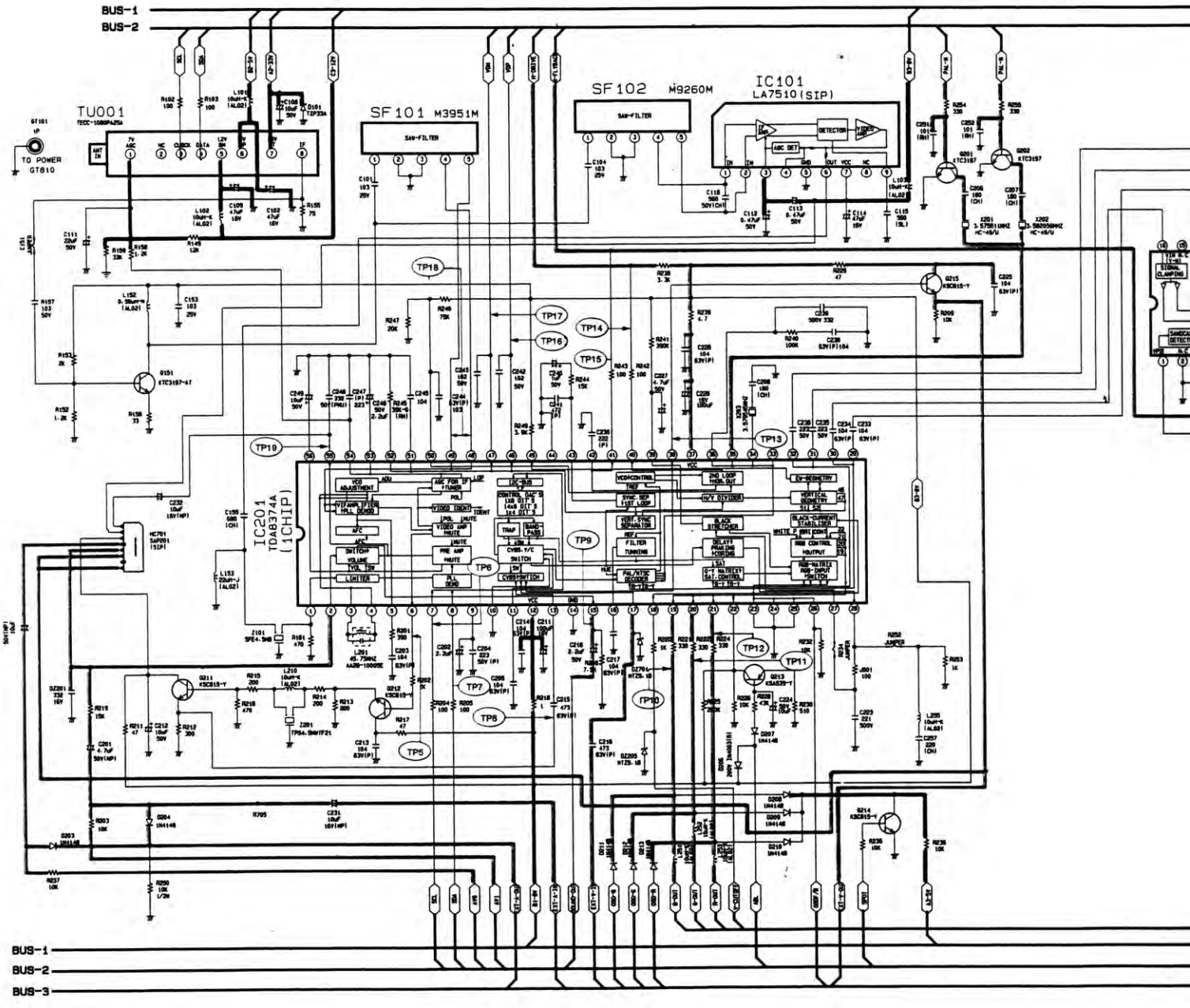


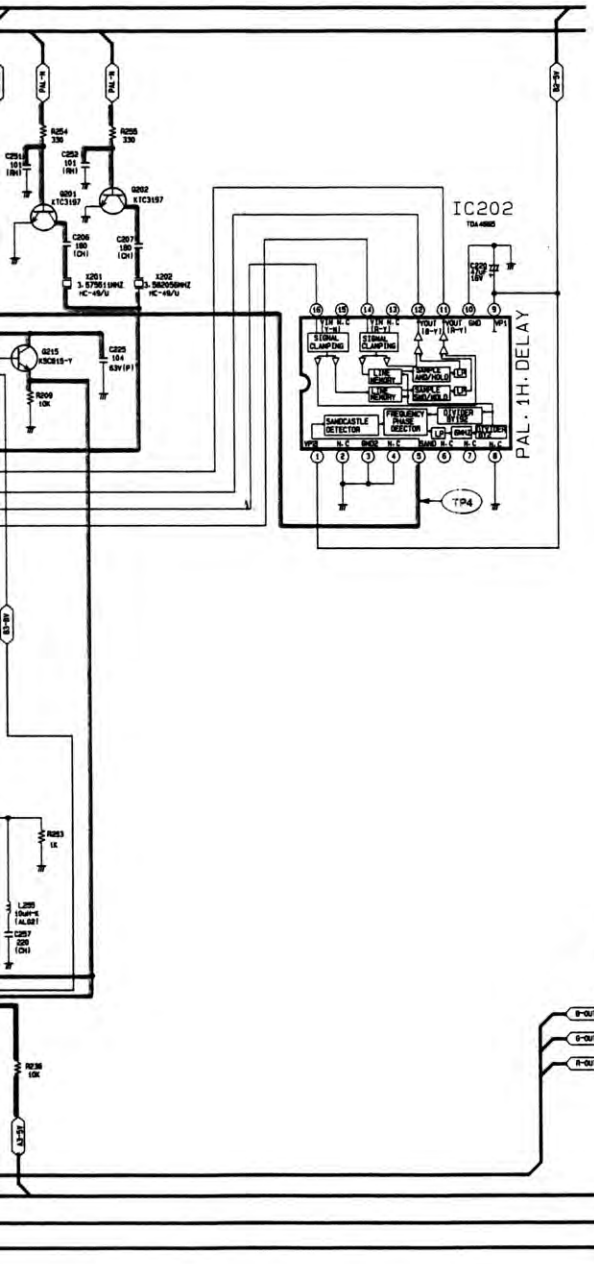


Power Line

Signal Line

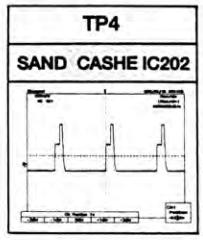
11-3 MAIN(3/4)

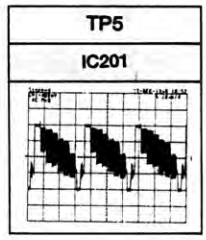

BUS-1
BUS-2
TU001
SF101 M3951M
SF102 M9260M
IC101
LA7510(SIP)
IC201
TDA8374A
(1CHIP)
TO POWER
GT810
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
BUS-1
BUS-2
BUS-3

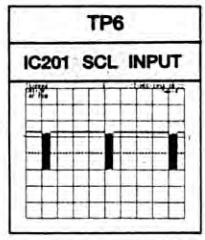


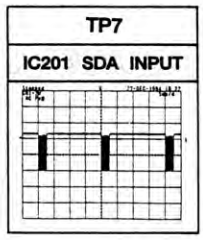
: Signal Line

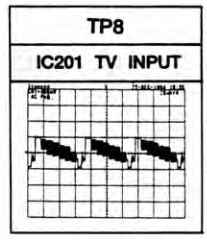
: Power Line

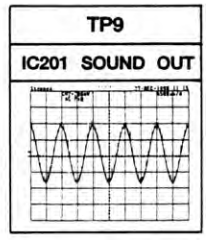


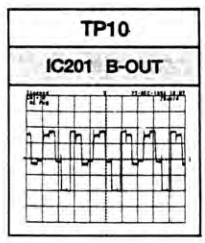


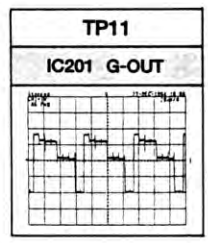


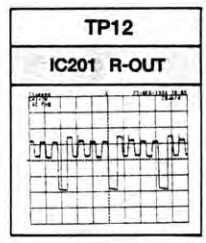


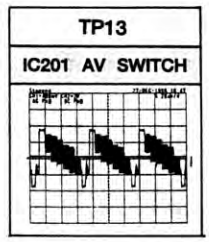


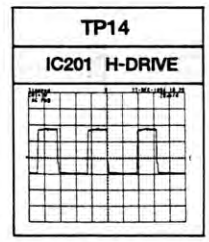


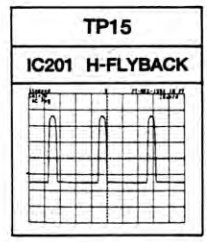


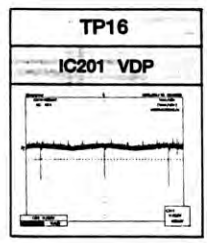


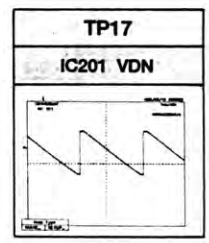


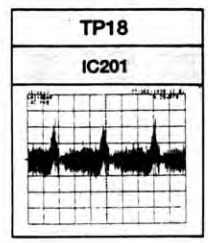


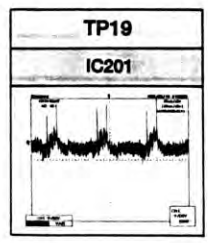












11-4 MAIN (4/4)

EXPRESSION

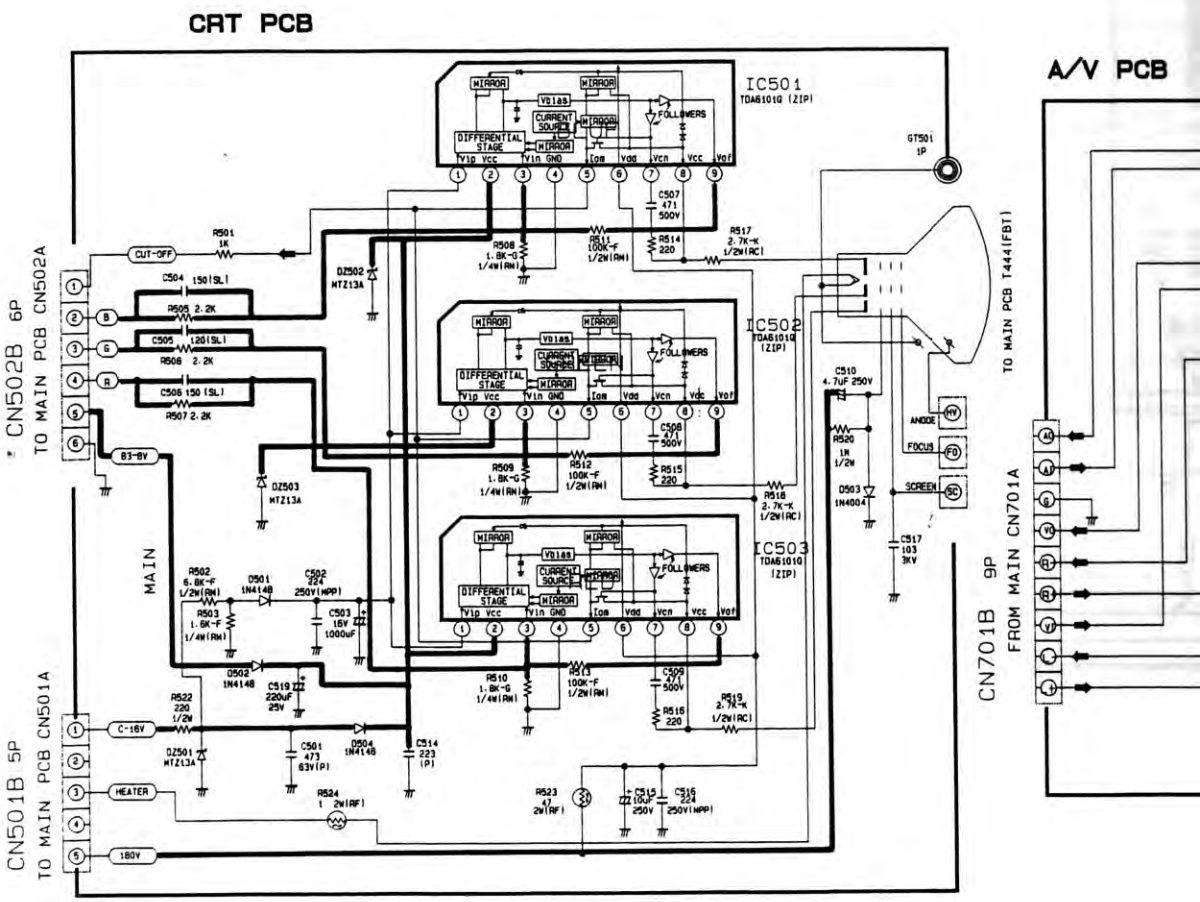
1 Resistance is shown ohm K=1.000 M=1.000.000
2 Unless otherwise noted in schematic all capacitor values less than 1 are expressed in ufd. the values more than 1 in pF.
3 Unless otherwise noted in schematic all inductor values areexpressed in uH. and the values less than 1 in mH.

NOTE

The circuits are subject to change without notice to improve the picture quality.

WARNING : THIS RECEIVER CONTAINS SAFETY CRITICAL COMPONENTS. ALL PARTS SHOWN IN THE SHADED AREAS OF THE SCHEMATIC ARE SAFETY CRITICAL FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS. ONLY WITH MANUFACTURER'S RECOMMENDED PARTS. REFER TO PARTS LIST FOR EXACT REPLACEMENTS .

CAPACITOR	
Ceramic - SL	No Mark
Ceramic - RH	(RH)
Ceramic - CH	(CH)
Polyester(Induct)	(P)
Polyester(Noninduct)	(PMU)
Polypropylene	(PP)
Metal Polyester	(MP)
M.P.Polypropylene	(MPP)
Tantalium	(T)
Non Polar	(NP)

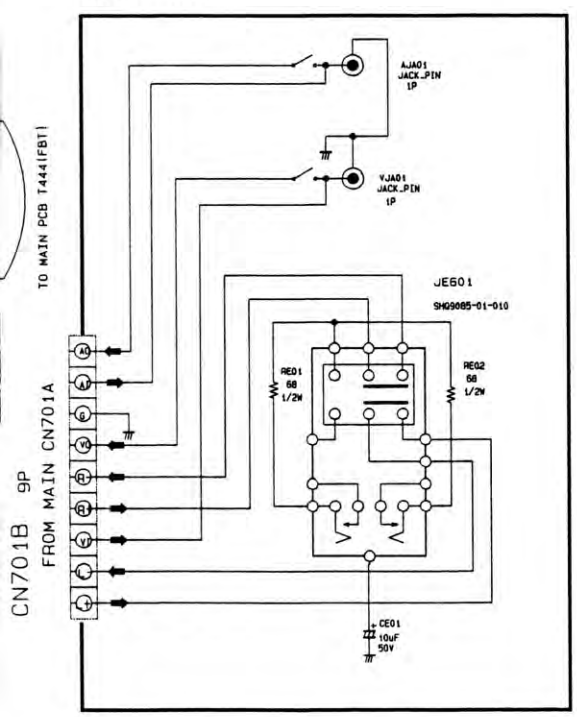


P A C I T O R	
SL	No Mark
RH	(RH)
CH	(CH)
Induct)	(P)
Noninduct)	(PHU)
lene	(PP)
yester	(MP)
opylene	(MPP)
	(T)
	(NP)

R E S I S T O R	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RN)
Fusible	(RF)
Cement Wire	(RW)
Network	(RN)

METAL PLATE CEMENT	MPC
HIGH RIPPLE	HR

A/V PCB



: Signal Line

Power Line

NOBLEX

DEC. 1996
3KCT12A-73-01