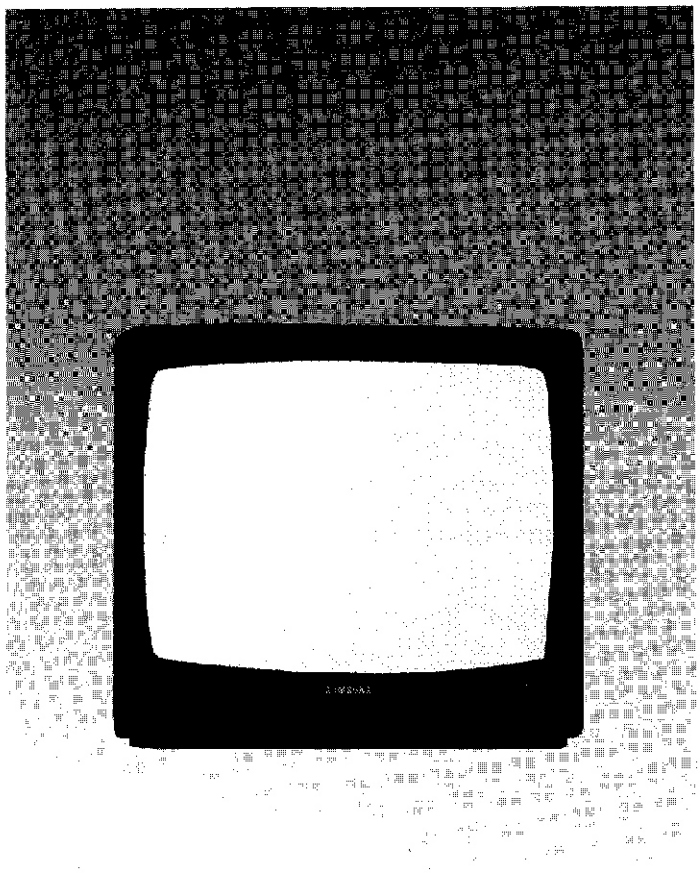
SAMSUNG

COLOR TELEVISION RECEIVER

CHASSIS : P69SA1 & RM135-1, SUPER BOMB (OPTION)
MODEL : CK3335TR1SERX
CK5341TR1SERX

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 a 120V AC 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.

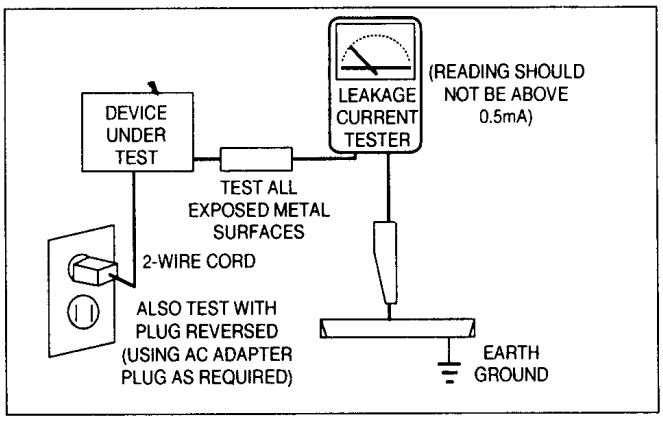


Fig. 1-1 AC Leakage Test

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.

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 the MVCR. 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 an isolation transformer inserted between the receiver and the power source.

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

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

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

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

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

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

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

1-2 Servicing Precautions

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

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

1. Servicing precautions are printed on the cabinet. Follow them.

2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.

5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).

6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

8. Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power--this is an electric shock precaution.)

3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.

4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

6. Use only an anti-static solder removal device. Many solder removal devices are not rated as "anti-static"; these can accumulate sufficient electrical charge to damage ESDs.

7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2. 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
		μF	Microfarad
°C	Degree Celsius	μH	Microhenry
°F	Degree Fahrenheit	μm	Micrometer
°K	degree Kelvin	μs	Microsecond
F	Farad	μW	Microwatt
G	Gauss	mA	Milliampere
GHz	Gigahertz	mg	Milligram
g	Gram	mH	Millihenry
H	Henry	ml	Milliliter
Hz	Hertz	mm	Millimeter
h	Hour	ms	Millisecond
ips	Inches Per Second	mV	Millivolt
kWh	Kilowatt-hour	nF	Nanofarad
kg	Kilogram	Ω	Ohm
kHz	Kilohertz	pF	Picofarad
kΩ	Kilohm	lb	Pound
km	Kilometer	rpm	Revolutions Per Minute
km/h	Kilometer Per Hour	rps	Revolutions Per Second
kV	Kilovolt	s	Second (Time)
kVA	Kilovolt-ampere	V	Volt
kW	Kilowatt	VA	Volt-ampere
l	Liter	W	Watt
MHz	Megahertz	Wh	Watt-hour

Table 2-2 Common Acronyms

ABCL	Automatic Brightness Contrast Limiting	MTS	Multi Television Sound
ABL	Automatic Beam Limiting	NFB	Negative Feedback
AC	Alternating Current	NTSC	National Television System Committee System
ACC	Automatic Color Control	NVRAM	Non-Volatile Random Access Memory
AFC	Automatic Frequency Control	PAL	Phase Alternating by Line System
AFT	Automatic Fine Turning	PCM	Pulse Coded Modulation
AGC	Automatic Gain Control	PIF	Picture Intermediate Frequency
AM	Amplitude Modulation	PLL	Phase Locked Loop
APC	Automatic Phase Control	PWM	Pulse Width Modulation
APL	Average Picture Level	RAM	Random Access Memory
AVC	Automatic Volume Control	RF	Radio Frequency
DB	Decibel	SAW	Surface Acoustic Wave
DC	Direct Current	SIF	Sound intermediate Frequency
DIP	Dual – in – Line Package	S/N	Signal Noise
DY	Deflection Yoke	I²C	Inter Integrated Circuit
D/A	Digital to Analog	DAC	Digital Analog Converter
FB	Fast Blanking	BPE	Band Pass Filter
FBT	Flyback Transformer	OSD	On-Screen Display
FM	Frequency Modulation	SCL	Serial Clock Line
HDT	Horizontal Drive Trans	SDA	Serial Data Line
IC	Integrated Circuit		
IF	Intermediate Frequency		
IFT	Intermediate Frequency Trans		
LLD	Low Level Detector		
LPF	Low Pass Filter		

2-2 IC Line Up

Table 2-3 IC Line - Up

Loc No	Specification	Description	Remarks
IC101	TDA8362B	PAL/NTSC Decoder (VIF/SIF/VIDEO, Chroma/Deflection)	
IC502	TDA8395P	SECAM Decoder	
IC501	TDA4661	1H Delay	
IC301	KA2131	Vertical Output	
RIC01	SIM – 135-2	12K μ – COM	
RIC02	24C02	Non-Volatile Memory	E^2PROM
IC601	TA8216H	Sound output Amplifier	TA8216H --> TA8211H
IC801	STR-S6707	PWM-Controller for SMPS	
XIC01	KS51800 – 54	Remote Control	
IC604	TC4053BP	Audio Switch	
IC605	UPC1406HA	Volume Controller	
TIC04	TEA2014A	Video Switch	
IC603	TDA2614	Sound Out Amplifier	WOOFER

2-3 Semiconductor Base Diagrams

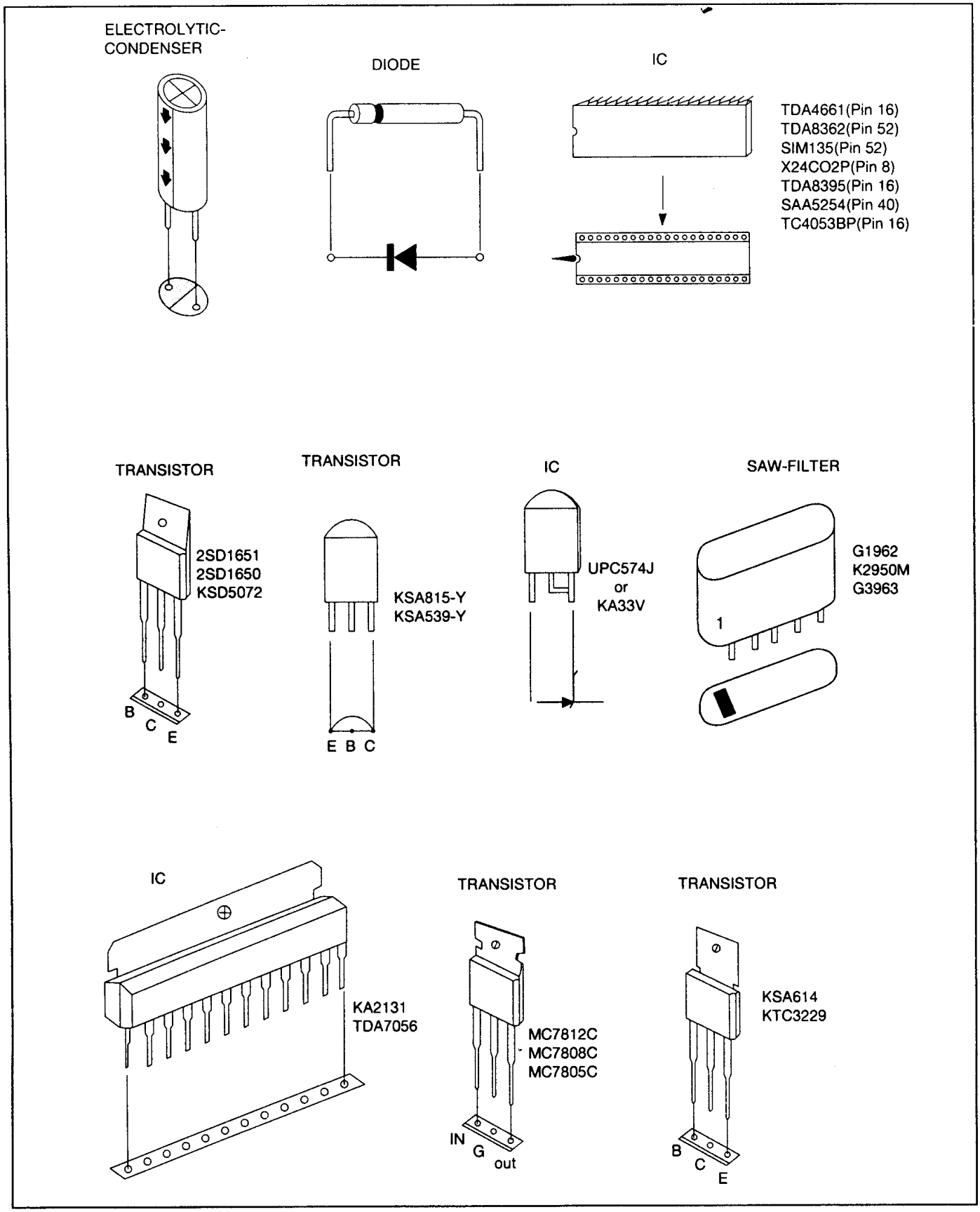


Fig. 2-1 Semiconductor Base Diagrams

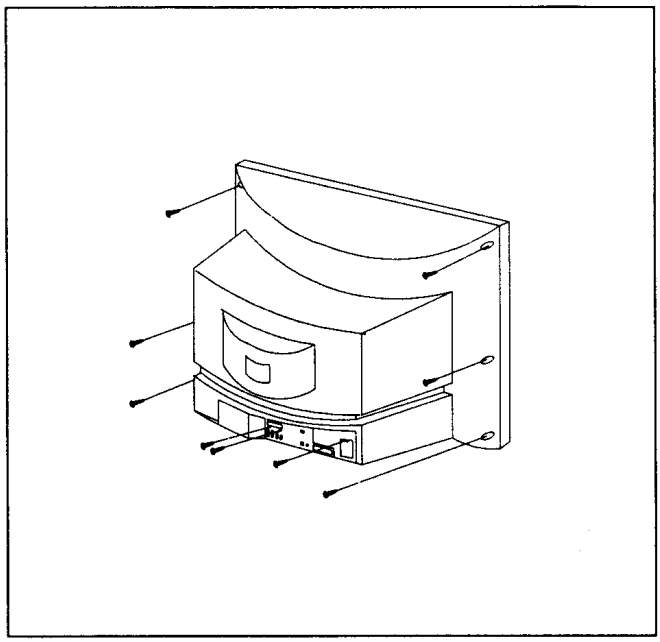
3. Specifications

System	PAL/SECAM-B/G, D/K, NT 4.43, NT 3.58 (MVP)	
Channels	VHF : UHF:	2-12 21-69
IF	Picture: Sound: Color:	38.90MHz 33.40/32.40 MHz 34.47 MHz
Picture Tube	14" 20" 21"	A34KQV42X(B) A48KRD82X(B) A51KRE83X01(U)
Power	AC 100 ~ 260, 50 ~ 60 Hz, 93 Watts	
Antenna Input	VHF/UHF:	75 Ohm (unbalanced)
Speaker	16 Ohms, 3W + 3W Woofer: 8 Ohms, 5W	

	System	IF Sound
CB	PAL-B/G	33.4
CX	PAL/SECAM-B/G	33.4
CK	PAL/SECAM-B/G,D/K	33.4/32.4
CI	PAL-I	32.9
CF	PAL/SECAM-B/G,SECAM-L/L'	33.4/32.4
CW	PAL/SECAM-B/G,D/K,NT4.43 NT3.58 (MVP)	33.4/32.4

4. Disassembly and Reassembly

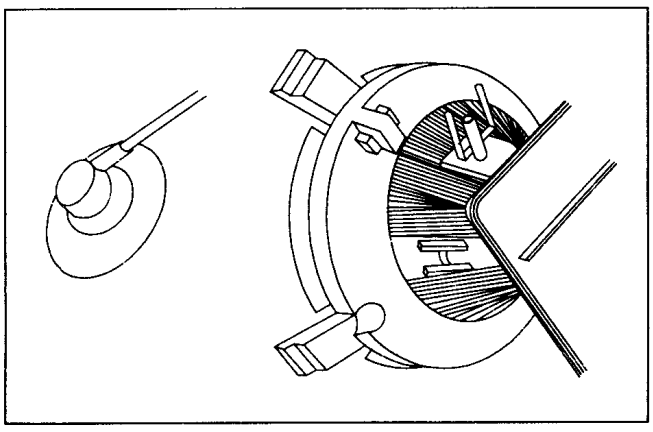
4-1 Back Cover Removal

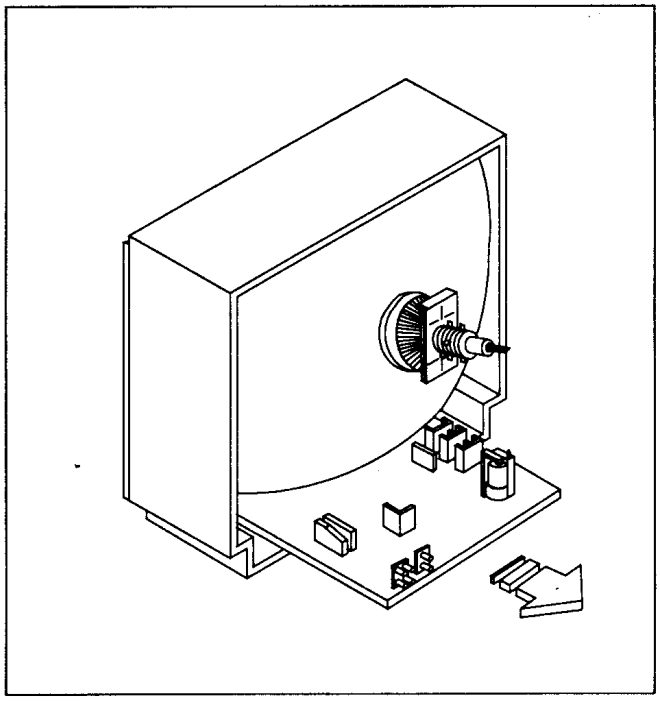


4-2 Main Board Removal

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.

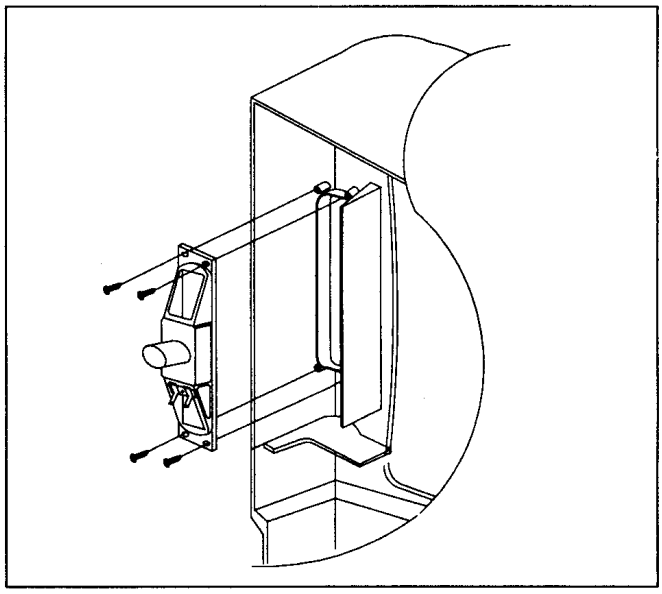
Warning: The FBT is charged with high voltage. Before removing the Anode Cap, discharge the voltage through one of the heat sinks on the main board.





4-3 Speaker Removal

Separate the speaker from cabinet by removing the 4 screws.

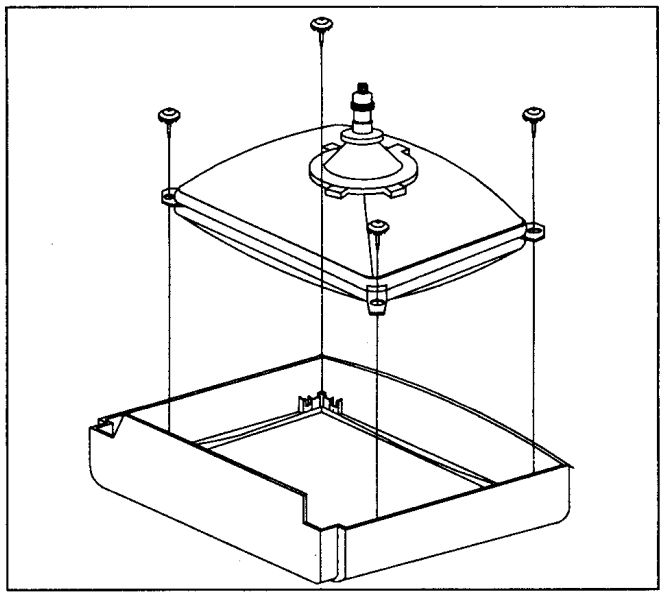


4-4 CRT Removal

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 causean implosion.



5. Alignment and Adjustments

5-1 General

1. Read the following notes before attempting alignment. Usually, a color TV-VCR will need only slight touch-up adjustment upon installation. Check the basic characteristics such as picture height, focus and horizontal and vertical sync.

   Observe the picture for good black and white details; there should be no objectionable color shading. If color shading is present, demagnetize the receiver. If color shading persists, perform the purity and convergence adjustments described below. This should be all that is necessary for optimum TV-VCR performance.

2. Use the specified test equipment or its equivalent.

3. Correct impedance matching is essential.

4. 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 the test results.

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

6. 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.

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

5–2 Installation and Service Adjustment

5-2-1 Automatic Degaussing

The receiver must be properly degaussed upon installation. A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary; automatic degaussing 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. To demagnetize the set, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, andaround the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before turning the TV OFF or disconnecting it from the AC source.

5-2-2 High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply (+125 volts) must be checked to ensure the correct high voltage. The check point is the D809 cathode.

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 be about 24KV.

4. Rotate the Brightness control to both extremes. Ensure that the high voltage does not exceed the 30KV limit under any conditions.

5-2-3 Horizontal Phase Adjustment

To center the picture, adjust Horizontal Phase Control (VR401).

5-2-4 Vertical Height and Location Adjustment

The Size control (VR301 located on the main board) changes the size of the picture, has an equal and simultaneous effect on top and bottom. Adjust the Vertical Location control (VR304) for proper vertical location.

5-2-5 Screen Adjustment

1. Tune in an active channel.

2. Adjust the picture for normal condition (no blooming or flyback line) with the VR Screen Control.

5-2-6 Focus Adjustment

Adjust the Focus control on the FBT for well defined scanning lines in the center area of the screen.

5-2-7 Center Convergence Adjustment

1. Note: Before attempting any convergence adjustment, make sure that the receiver has been powered on for at least 20 minutes.

2. Input a crosshatch pattern from a color bar generator.

3. Adjust the Brightness and Contrast controls for a well-defined pattern.

4. Adjust the two tabs of the 4-pole magnets. Change the angle between the tabs, and superimpose red and blue vertical lines in the center area of the picture screen.

5. Next, turn both tabs at the same time, keeping the angle constant; and superimpose red and blue horizontal lines at the center of the screen.

6. Adjust the two tabs of the 6-pole magnets. Superimpose the red/blue lines with the green. (Adjusting the angle affects the horizontal lines.)

7. Repeat adjustments 4, 5, and 6. Because the 4-pole and 6-pole magnets interact, the dot movement is complex.

5-2-8 RF AGC Adjustment

1. Tune the set in the strongest local station.

2. Turn the AGC control (VR101, located on the IF board) fully clockwise.

3. Adjust the AGC control until noise (snow) disappears from the screen.

5-2-9 Color Purity Adjustment

1. Note: If a magnetic tape beam bender is mounted on the neck of the picture tube, and if center-purity and center-convergence adjustments are required, the beam bender must be replaced with an Adjustable Type Beam Bender (Magnet Assembly). Consult the replacement parts list for the proper part number.

2. Warm up the receiver. Operate it for 20 minutes with the Brightness control set to maximum.

3. Fully degauss the receiver.; use an external degaussing coil.

4. Roughly adjust convergence.

5. Input a black and white signal.

6. Turn the low-light controls (Red and Blue; VR933, VR935) fully counterclockwise to obtain a green field. Adjust the Drive controls for a green field.

7. Loosen the Deflection Yoke clamp screw, and move the Deflection Yoke as close to the purity magnet as possible.

8. Loosen the purity magnet clamp. Adjust the purity magnet to set the vertical green raster precisely at the center of the screen. Tighten the clamp.

9. Slowly move the Deflection Yoke forward, and adjust it for the best overall green screen.

10. Tighten the Deflection Yoke clamp screw.

11 Produce a blue and red raster. Turn the bias controls fully clockwise. Ensure that good purity is obtained on each field.

5-2-10 CRT White Balance Adjustment

PREPARATION

1. Warm up the receiver for at least 20 minutes before attempting the white balance adjustment.
2. Input a monochromesignal.
3. Set the Colour control to the center.
4. Set the Brightness and Contrast controls to maximum.
5. Set the Red, Blue and Green Low Light controls to center position.
6. Set the Blue and Red Drive Controls to the center position.
7. Set the Screen VR Control on FBT to minimum (fully counter-clockwise).
8. Temporarily slide the service switch (SW201, on main board) to the top position. This stops vertical oscillation.

ADJUSTMENT

1. Rotate the Screen control on FBT (T444) gradually clockwise until a horizontal line appears slightly on the screen.
2. Adjust the two Cut-Off controls to obtain a slightly lighted horizontal line in the same levels of three colours (red, green, blue). The line looks white when the Cut-Off controls are adjusted properly.
3. Reset the service switch (SW201) on main board to the bottom position. Obtain a raster.
4. Adjust the Blue and Red Drive Controls to obtain proper white-balanced picture in high light areas.
5. Set the Contrast Control to the minimum position. Turn the Brightness Control slightly counter-clockwise to obtain a dark gray raster. Check the white balance in low brightness. Repeat steps a-d if necessary.

5-2-11 Circumference Convergence Adjustment

1. Tilt the yoke by loosening the clamp screw.
2. Place a temporary mounting wedge. Do not remove the cover paper on the adhesive part of the wedge.
3. Tilt the front of the Deflection Yoke up or down to obtain better convergence in circumference. Push the mounted wedge into the space between the picture tube and the yoke; this will hold the yoke temporarily in place.
4. Place the other wedge into the bottom space and remove the cover paper.
5. Tilt the front of the yoke right or left to obtain better convergence in circumference.
6. Keep the yoke positioned, and put another wedge in the upper space. Remove the cover paper and place the wedge on the picture tube, fixing the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Place it on the picture tube to fix the yoke.
8. After inserting three wedges, recheck overall convergence. Tighten the screws firmly to hold the yoke tightly in place.
9. Place 3 adhesive tabs over the wedges.

5-2-12 VIF and SIF Adjustment

1. Equipment: Pattern Generator (PM5518), Digital voltmeter
2. Set the supply voltage to 220V
3. Set the RF output frequency to 38.9 MHz
4. Set the output pattern to Multi-burst
5. Connect the RF output to the tuner IF Pin
6. Connect the DV voltmeter to R111
7. Vary T104 and adjust the DC voltage on R111 to 4V

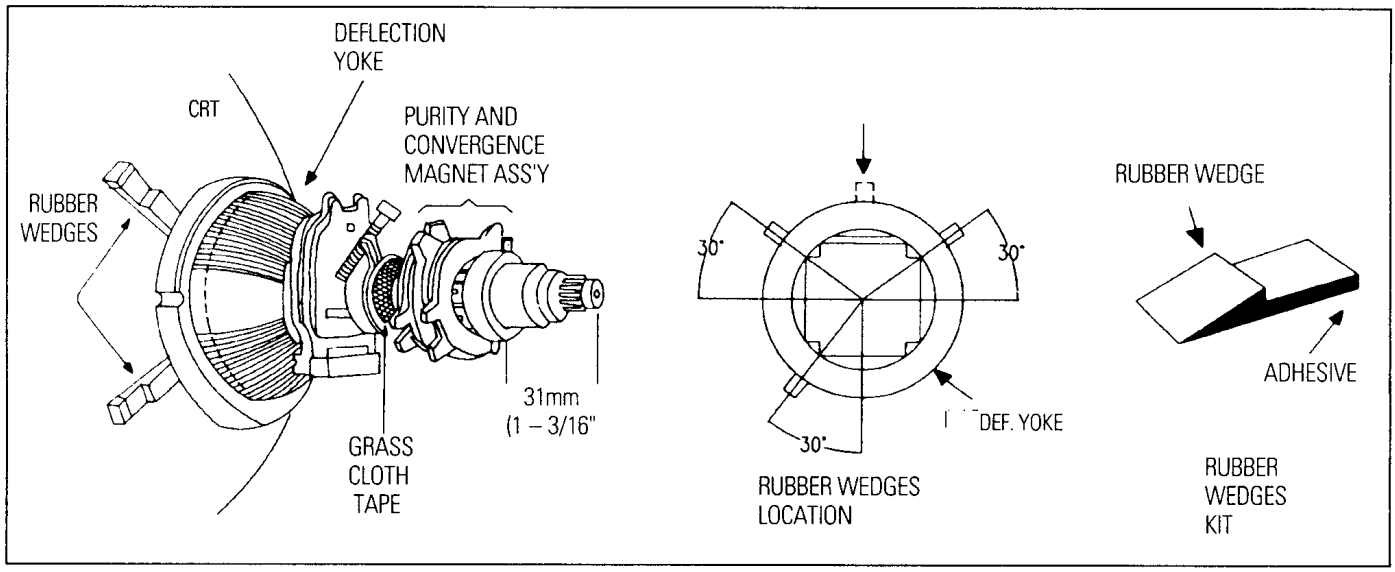


Fig. 5-1 Tube Assembly

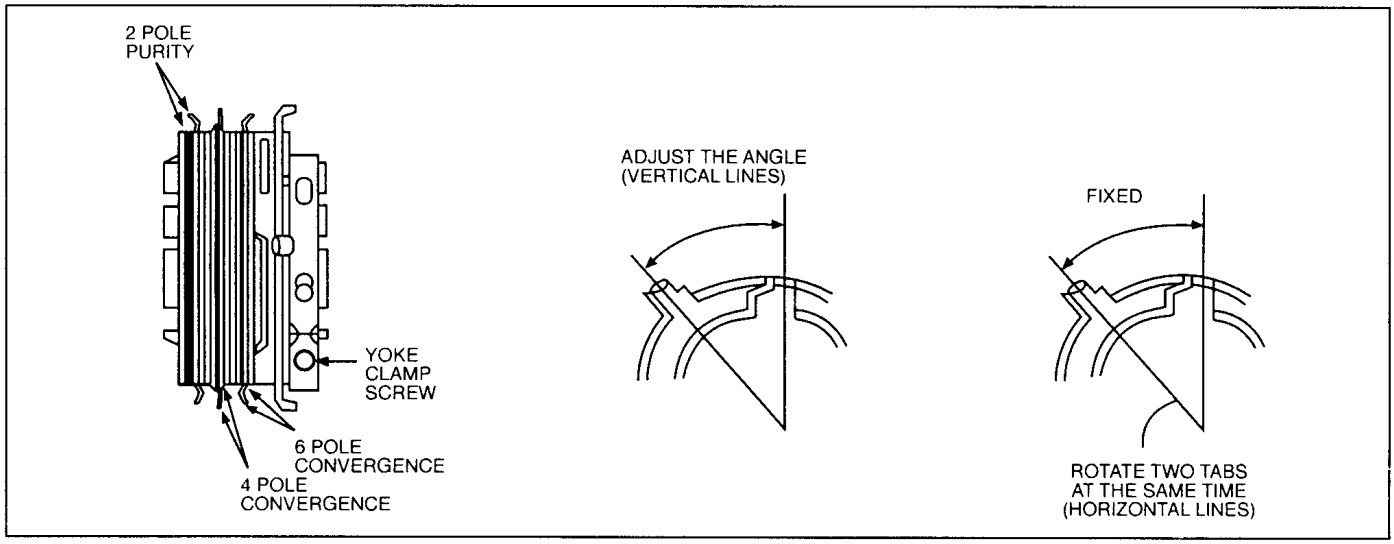


Fig. 5-2 Purity and Convergence Magnets

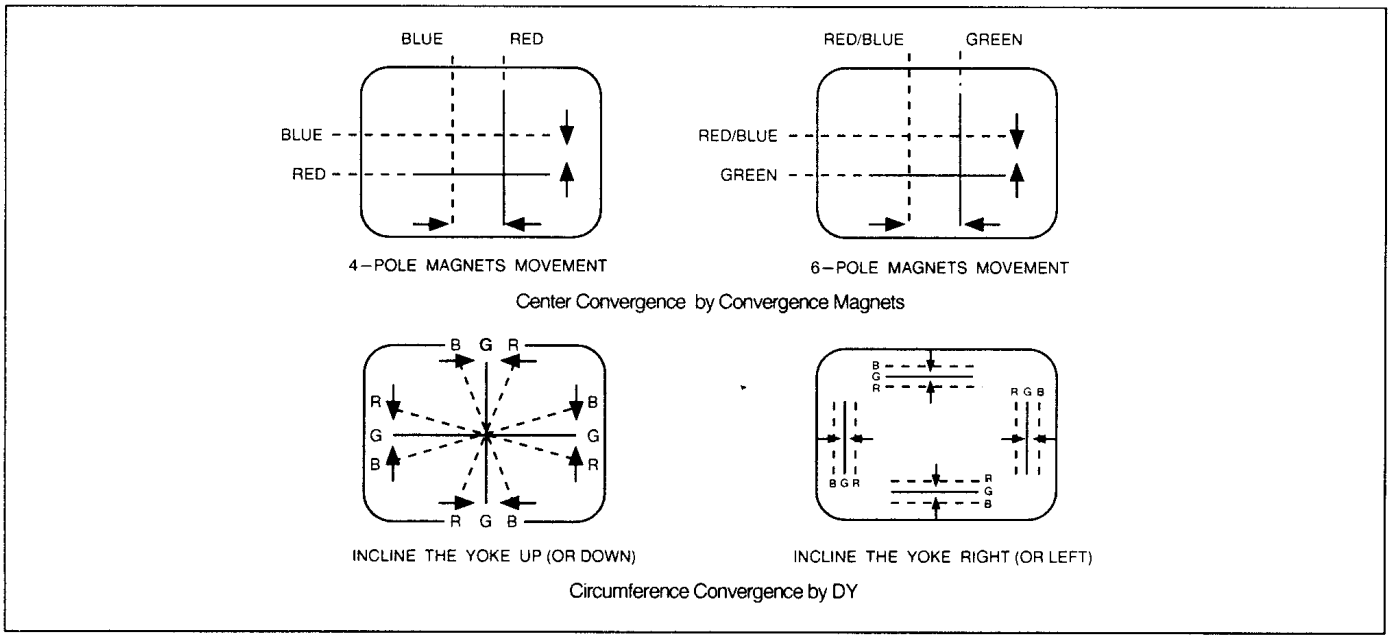
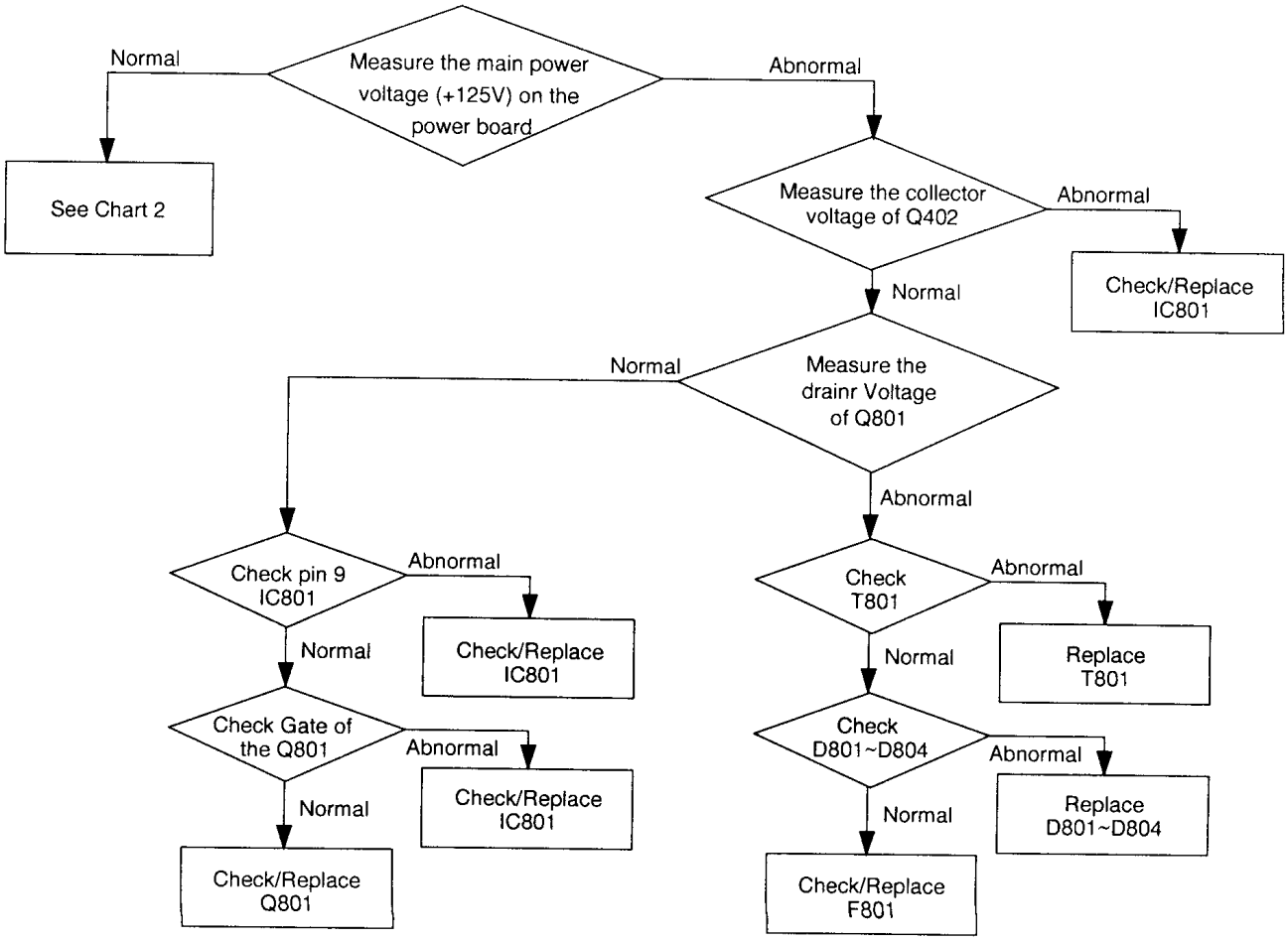


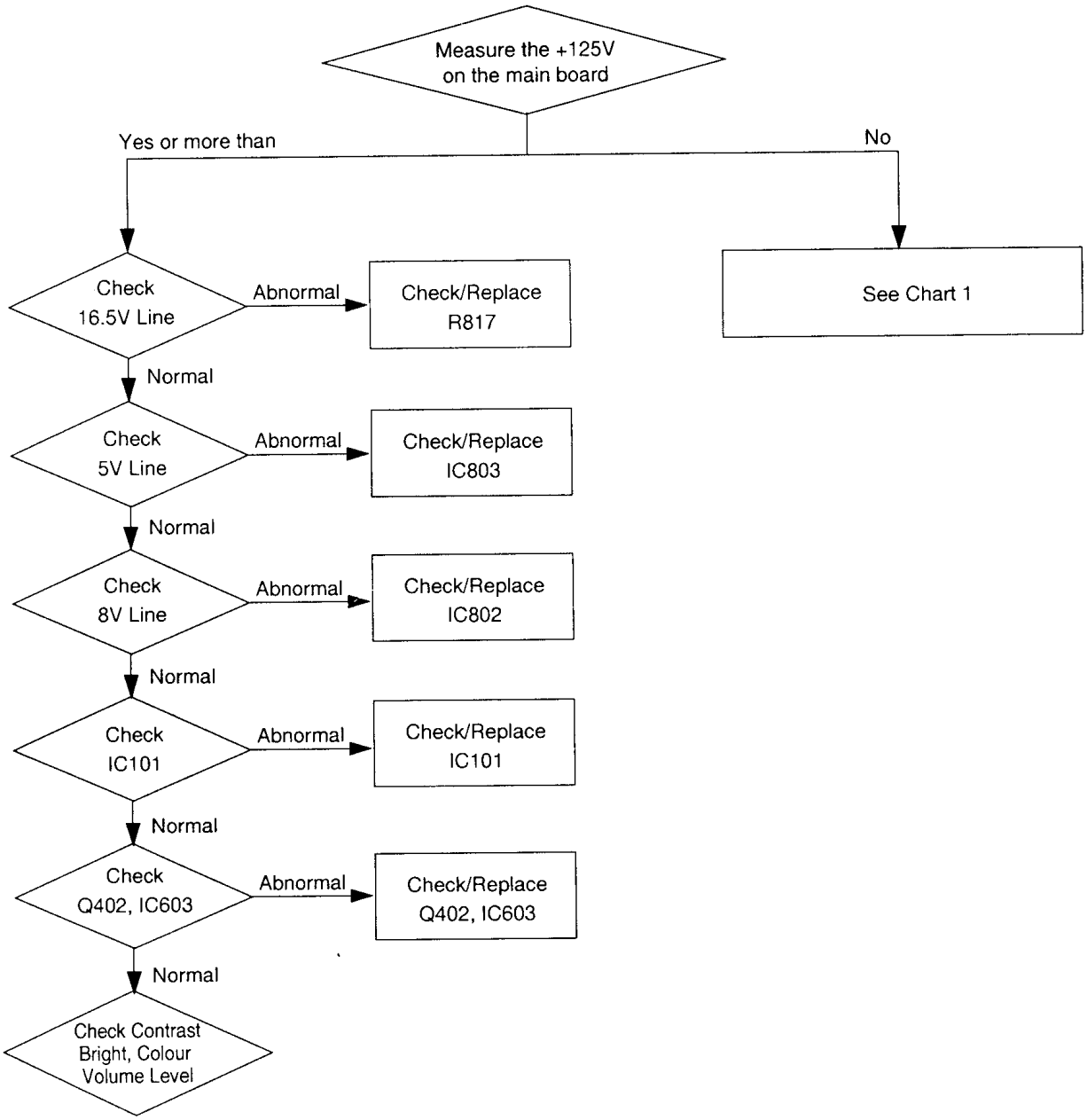
Fig. 5-3 Dot Movement Pattern

6. Troubleshooting

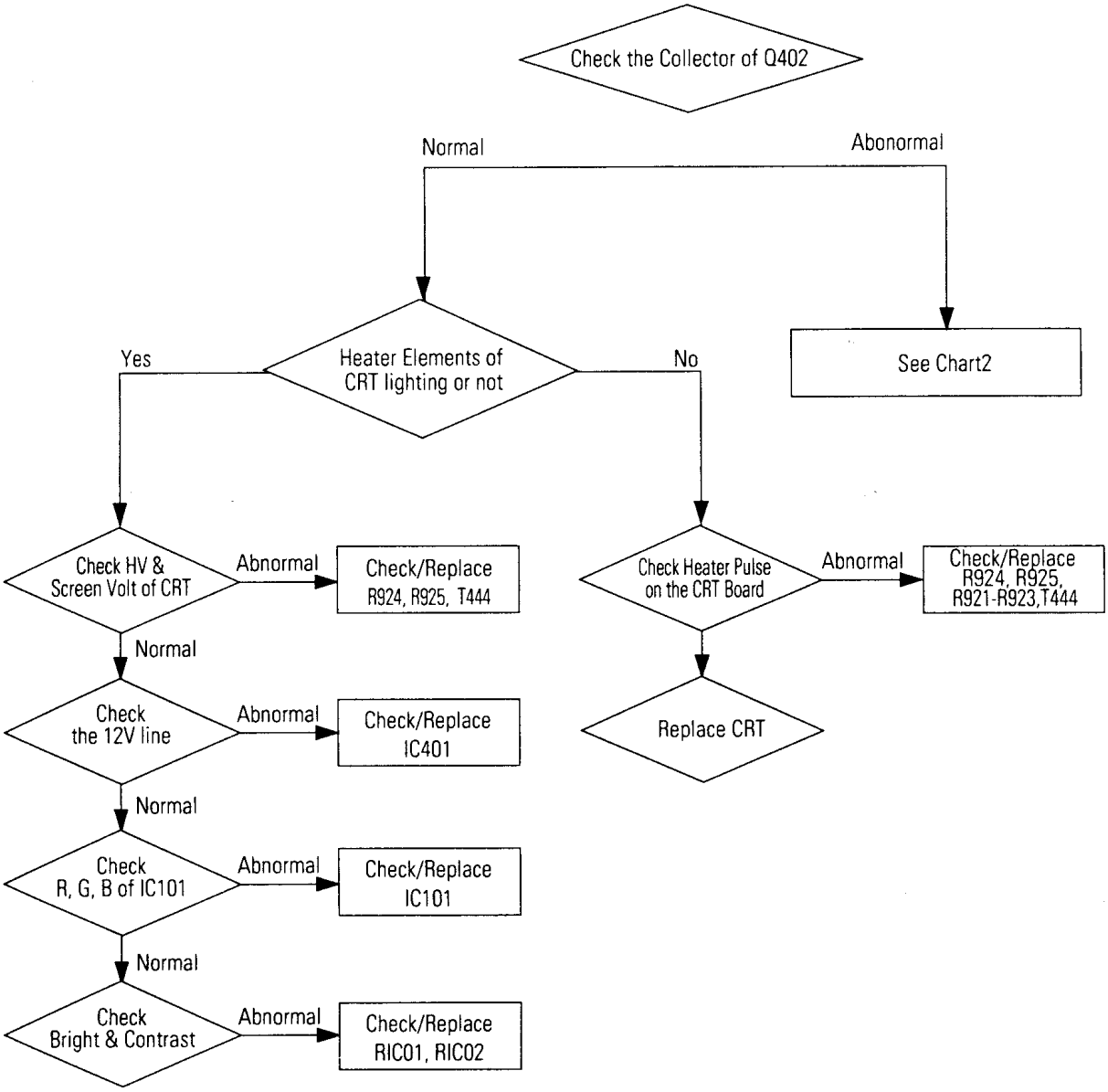
6-1 No Power : Chart 1



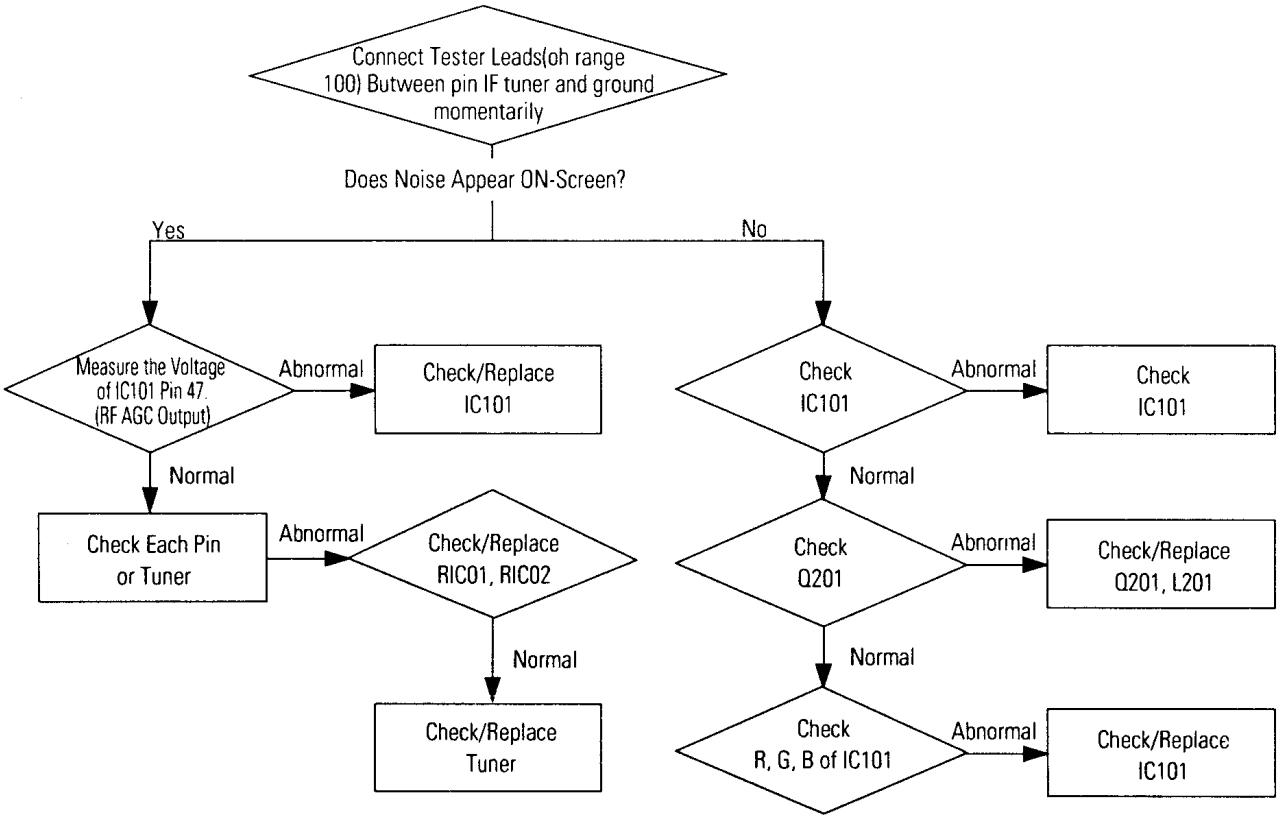
6-2 No Raster and No Sound : Chart 2



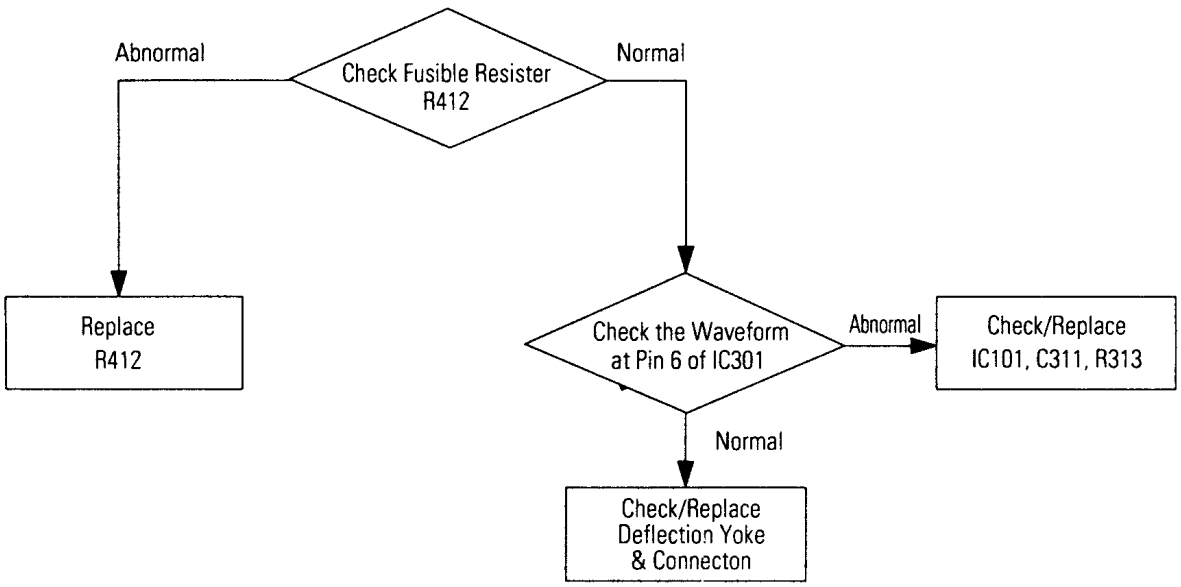
6-3 No Raster (Sound OK) : Chart 3



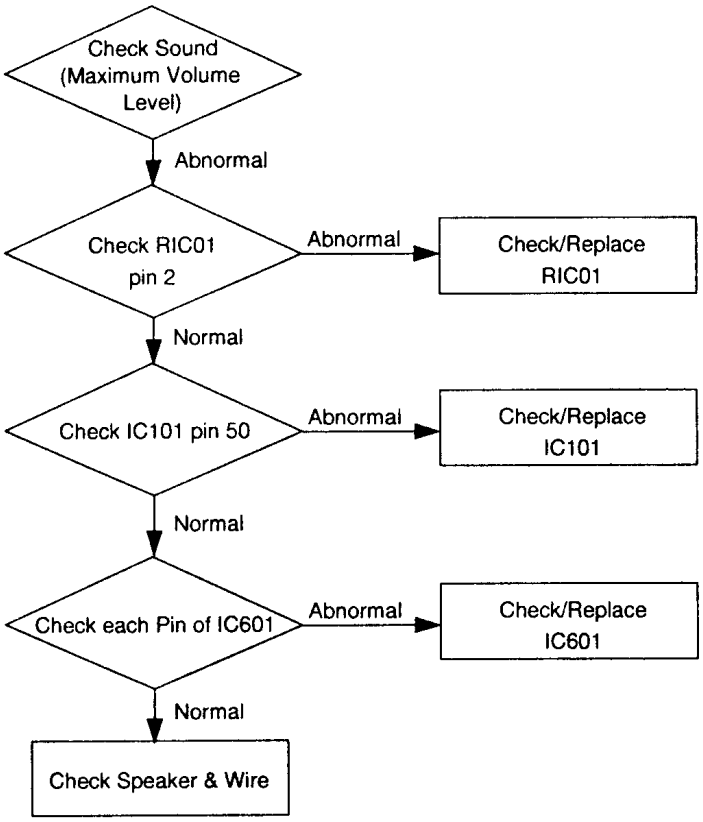
6-4 No Picture (Raster OK) : Chart 4



6-5 No Vert Scan (One Horiz, Line Raster) : Chart 5

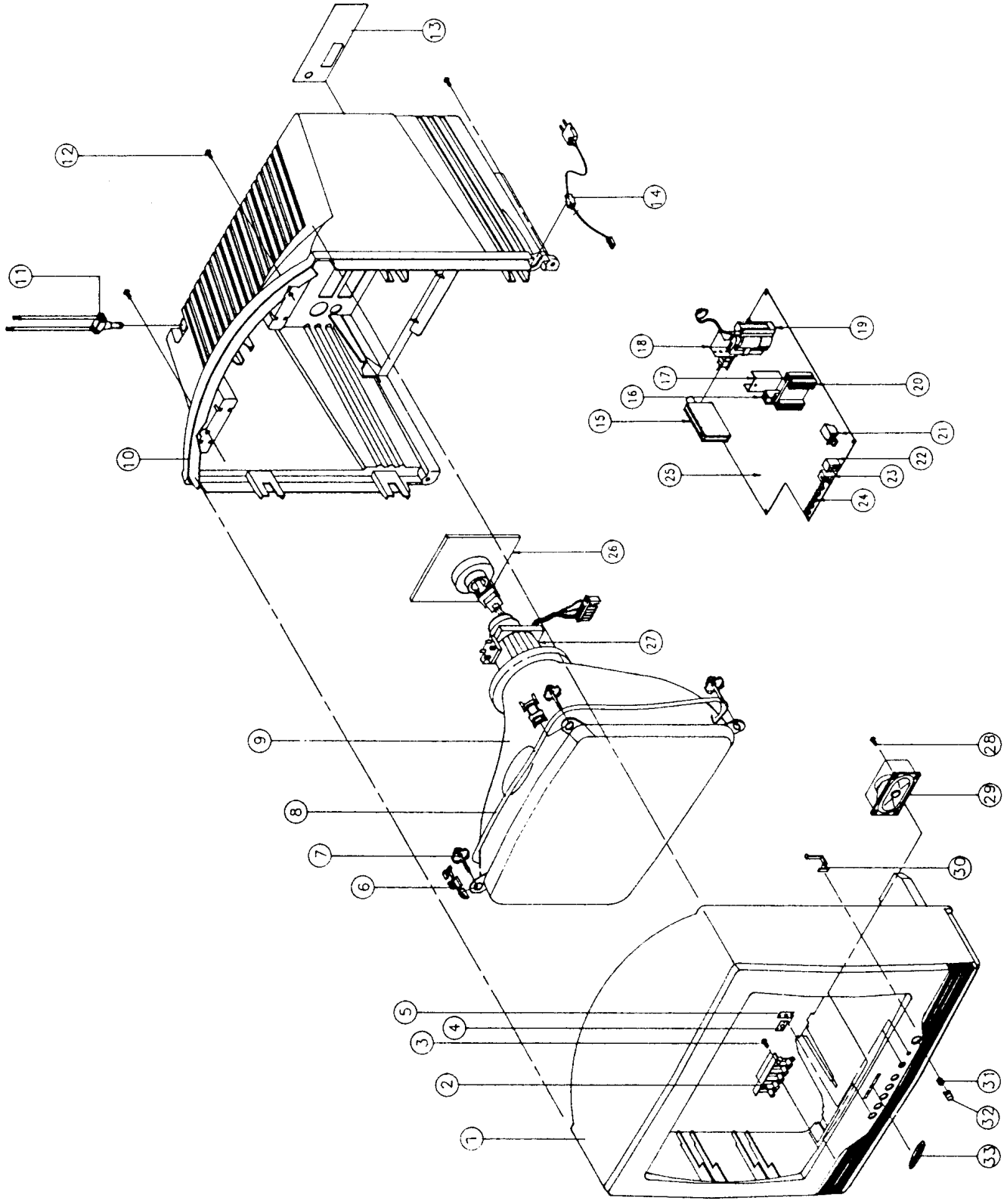


6-6 No Sound (Picture OK) : Chart 6



7. Exploded Views and Parts List

7-1 Exploded View and Parts List



CK3335TR1SERX

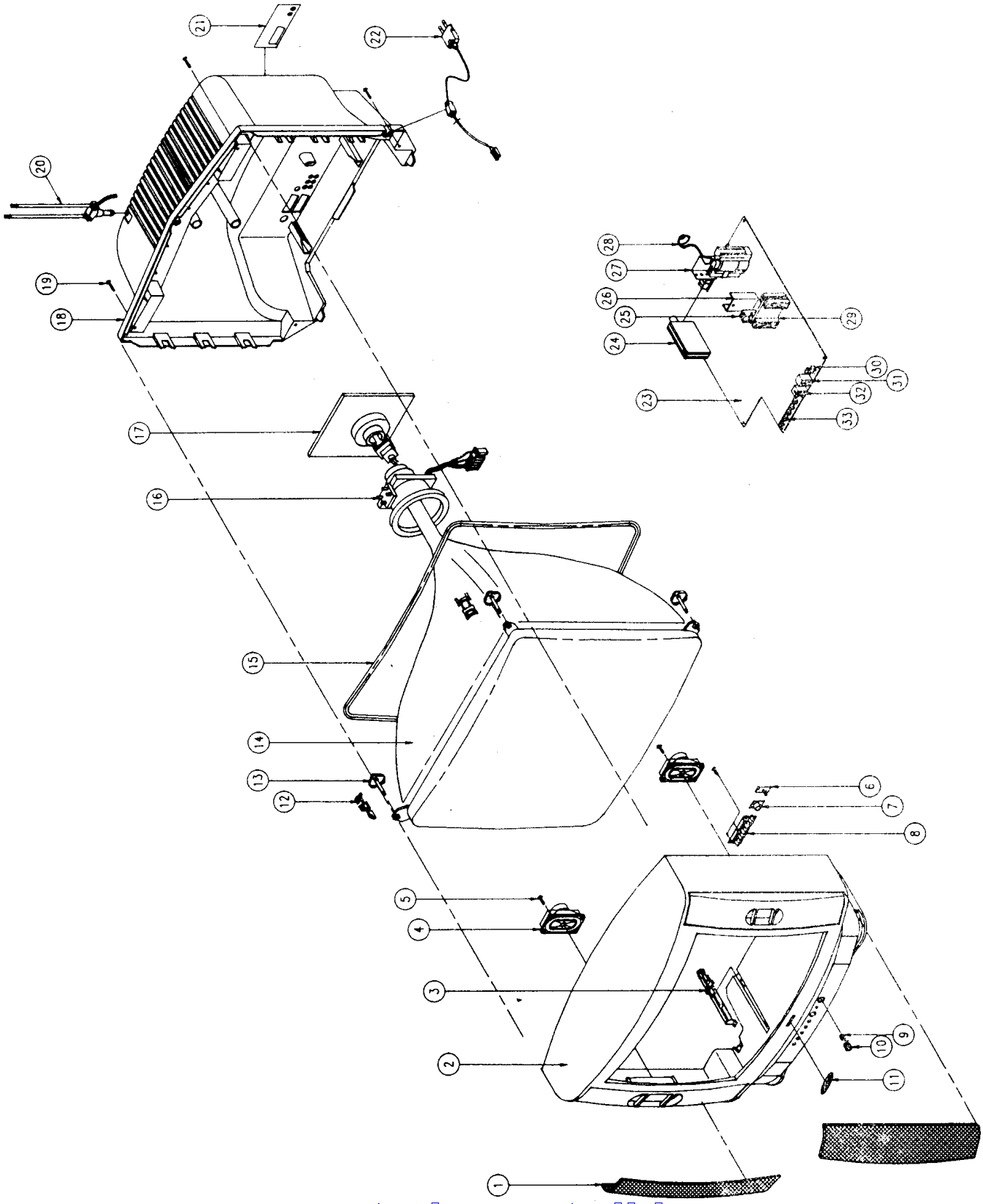
The items with "*" are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items.

S.N.A=SERVICE NOT AVAILABLE. *LOCAL=LOCAL PURCHASE*

No	Code No	Description	Specification	Remarks	Q'TY
1	*3G90-33350-131	ASSY-CABINET,FRONT	HB PA-100 P69SA L-GRAY		1
	32001-0036-130	CABINET-FRONT	HIPS HB BLK PA-100 3335 P		1
2	34082-0027-000	KNOB-CONTROL	ABS HB BLK 3335		1
3	37148-530-123	SCREW-TAP,RH	2S-3X12 FE FZB		2
4	34073-0017-000	WINDOW-REMOCON	PC V0 VIDLET 3335		1
5	34073-0018-001	WINDOW-LED	ACRYL HB TRP 3335		1
6	36635-001-910	CLAMPER-D,COIL	NYLON 6.6 DONG-A		4
7	37124-100-830	SCREW-CRT	RH 5X35 FE FZY		4
8	32479-029-380	COIL-DEGAUSSING	14INCH/23OHM/T100/L940MM/		1
9	32019-400-083	CRT-COLOR	A34KQV42X		1
10	32001-0037-031	CABINET-BACK	HIPS V0 BLK NON-PBDE 3335		1
11	34509-223-023	ANTENNA-ROD	4S-4X15 FE FZB		1
12	37148-540-153	SCREW-TAP,RH	2S-4X15 FE FZB		4
13	34012-0078-010	INLAY-COVER(BACK)	PVC SHEET T0.5 BLK 3335 P		1
14	33323-0001-010	HOLDER-CORD	PP V0 BLK		1
15	34519-600-030	TUNER	TECC-0985VA14A		1
16	*3H84-00160-000	ASSY-H/S,TR	35684-122-130,KA7805 ST	IC803	1
17	*3H82-00530-000	ASSY-H/S,VERT	31124-0014-000 KA2131 ROB	IC301	1
18	*3H82-00530-003	ASSY-H/S,VERT(HORI)	31124-0014-000 KSD5071YD	Q402	1
19	A1201-0007	TRANS-FLYBACK	FTK-14A004P 14INCH 125V/1		1
20	*3H83-00630-001	ASSY-H/S,POWER	35682-112-030,STRS6707	IC801	1
21	33526-401-002	SWITCH-PUSH,PWR	JPW-2104 250V 5/80A		1
22	32306-101-160	LED-ASSY	DL-G4RGA ST		1
23	A1294-0018	MODULE-REMOCON	SR-20M/ORC-60VRF 38KHZ 94		1
24	B3018-0034	SWITCH-TACT,V	EVQ-PB1-05K 7.5X7.1MM		5
25	*3T30-02665-290	ASSY-CHASSIS,MAIN	CK3335TR1SERX P69SA1		1
	36029-0248-000	PWB-MAIN <S.N.A>	T1.6 W330 L245 P69SA1	S.N.A	1
26	A3047-0013	SOCKET-CRT	ISMS01S PI14.3 HI-FOCUS 6		1
27	32439-210-090	DEFL-YOKE	DSE-1422FL		1
28	37148-530-123	SCREW-TAP,RH	2S-3X12 FE FZB		4
29	A1300-0033	SPEAKER-GENERAL	3W 16OHM 90X50MM 05F14CRA		1
30	CABINET OPTION				
31	36674-138-170	SPRING-COIL	SUS 0.04		1
32	34083-0029-000	KNOB-POWER,MASTER	ABS HB BLK 3335		1
33	34533-0073-010	BADGE-BRAND	AL FORGING T1.4 L40 SAMSU		1

7. Exploded Views and Parts List

7-1 Exploded View and Parts List



CK5341TR1SERX

The items with "*" are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items.

S.N.A=SERVICE NOT AVAILABLE. *LOCAL=LOCAL PURCHASE*

No	Code No	Description	Specification	Remarks	Q'TY
1	34002-0029-000	GRILLE-SPEAKER	SECC T0.5 3R PA-110 5341		2
2	*3G90-53410-031	ASSY-CABINET,FRONT	HB PA-100 P69SA MASTER		1
	32001-0063-000	CABINET-FRONT	HIPS HB BLK PA-100 5341 P		1
3	CABINET-FRONT OPTION				
4	34209-169-550	SPEAKER-GENERAL	115BR03A,8R,3W		2
5	37148-530-123	SCREW-TAP,RH	2S-3X12 FE FZB		8
6	34163-0015-000	INDICATOR-LED	ACRYL HB CLEAR CW5341		1
7	34073-0035-000	WINDOW-REMOCON	PC GE21051 V0 CW5341		1
8	34083-0054-000	KNOB-CONTROL	ABS HB BLK CW5341		1
9	36674-140-890	SPRING-LOIL	SUS P10.6		1
10	34083-0090-000	KNOB-MASTER	ABS HB BLK CW5341		1
11	34533-0074-010	BADGE-BRAND	AL FORGING T1.4 L50 SAMSU		1
12	36635-112-110	CLAMPER-D.COIL	NYLON 6.6 DONG-A DADH-460		4
13	37124-100-830	SCREW-CRT	RH 5X35 FE FZY		4
14	A1320-0190	CRT-COLOR	A51KRE83X(U) 21INCH 90DEG		1
15	A1149-0012	COIL-DEGAUSSING	21INCH 14.5OHM T35 L2500M		1
16	32439-310-028	DEFL-YOKE	DSE-2192GL		1
17	A3047-0010	SOCKET-CRT	ISHS09S P125.5 HI-FOCUS 9		1
18	32001-0064-020	CABINET-BACK	HIPS V0 BLK NON-PBDE 5341		1
19	37148-540-153	SCREW-TAP,RH	2S-4X15 FE FZB		4
20	ASSY-ACCESSORY OPTION				
21	34012-0008-041	INLAY-BACK	PS SHEET T0.5 BLK P69 21P		1
22	33053-816-510	POWER-CORD,ASSY	KKD-419C KLCE-2F,F,BLK-HO		1
23	*3T30-02665-370	ASSY-CHASSIS(OPTION)	CK5341TR1SERX P69SA1		1
	36029-0248-000	P.C.B-MAIN	T1.6 W330 L245 P69SA STER	S.N.A	
24	34519-600-030	TUNER	TECC-0985VA14A		1
25	*3H84-00160-000	ASSY-H/S,TR	35684-122-130,KA7805 ST	IC803	1
26	*3H82-00530-000	ASSY-H/S,VERT	31124-0014-000 KA2131 ROB	IC301	1
27	*3H82-00530-002	ASSY-H/S,VERT(HORI)	31124-0014-000 KSD5072YD	Q402	1
28	32859-200-000	TRANS-FLYBACK	FOM-20A015		1
29	*3H83-00630-001	ASSY-H/S,POWER	35682-112-030,STRS6707	IC801	1
30	CHASSIS-MAIN OPTION				
31	32306-101-160	LED-ASSY	DL-G4RGA ST		1
32	A1294-0018	MODULE-REMOCON	SR-20M/ORC-60VRF 38KHZ 94		1
33	B3018-0034	SWITCH-TACT,V	EVQ-PB1-05K 7.5X7.1MM		5

8. Electric Parts List

Loc No	Parts No	Description	Specification	Remark

CK3335TR1SERX OPTION

ASSY-PWB,MAIN (COMMON)

	• 3T30-02665-290	ASSY-CHASSIS(OPTION)	CK3335TR1SERX P69SA1	
PCB	36029-0248-000	P.C.B-MAIN	T1.6 W330 L245 P69SA STER	S.N.A
C101	31417-109-140	C-CERAMIC,HK	CK45 TAPG F 50V 103-Z	
C102	31407-105-110	C-CERAMIC,TEMP	CC45 TAPG CH 50V 120-J	
C103	31417-109-140	C-CERAMIC,HK	CK45 TAPG F 50V 103-Z	
C105	31417-109-140	C-CERAMIC,HK	CK45 TAPG F 50V 103-Z	
C107	31607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M VENT	
C108	31417-109-220	C-CERAMIC,HK	CK45 TAPG F 50V 223-Z	
C109	31607-402-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M	
C110	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C115	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C116	31507-127-016	C-POLYESTER	ECQ B1 H 472J F3	
C117	31607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C118	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
C119	31607-401-500	C-ELECTROLYTIC	CE04W TAPG 16V 470M-M(SG)	
C120	31607-902-250	C-ELECTROLYTIC	CE04W TAPG 50V 0.22M	
C121	31607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C122	31607-972-005	C-ELECTROLYTIC	CE04W TAPG 16V 22M-M(5X5)	
C123	31607-402-200	C-ELECTROLYTIC	CE04W TAPG 50V 0.47M	
C124	31607-402-160	C-ELECTROLYTIC	CE04W TAPG 50V 0.33UF	
C125	31607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C201	31507-127-010	C-POLYESTER	ECQ B1H 473J F3/2E 63V 47	
C202	31607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
C203	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C204	31607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C205	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C206	31607-401-500	C-ELECTROLYTIC	CE04W TAPG 16V 470M-M(SG)	
C207	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C208	31607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M VENT	
⚠ C209	31517-003-020	C-M,POLYESTER	CFS922M TAPG 400V 104-J	
C210	31607-401-430	C-ELECTROLYTIC	CE04W TAPG 25V 10M	
C302	31507-137-007	C-POLYESTER	ECQ-B 1 332J F3	
C303	31507-127-011	C-POLYESTER	ECQ B1H 683J F3/2E 63V 68	
C304	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C305	31607-904-332	C-ELECTROLYNC	CE04W TAPG 25V 3300M-M(18	
C306	31607-402-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M	
C307	31607-402-290	C-ELECTROLYTIC	CE04W TAPG 50V 100M-M(SG)	
C309	31507-127-003	C-POLYESTER	ECQ B1 H 332J F3	
C310	A1102-0301	C-FILM	CF 922 N 100V T 513-J -40	
C311	A1102-0330	C-FILM	CQ 922 M+P 50V T 104-J -2	
C312	31507-127-016	C-POLYESTER	ECQ B1 H 472J F3	
C400	31417-344-104	C-CERAMIC,HK	CK45 TAPG F 50V 104-Z	

Loc No	Parts No	Description	Specification	Remark
C401	31607-402-210	C-ELECTROLYTIC	CE04W TAPG 50V 1M	
C402	31507-127-002	C-POLYESTER	ECQ B1H 222J F3	
C403	31417-109-220	C-CERAMIC,HK	CK45 TAPG F 50V 223-Z	
C404	31417-104-490	C-CERAMIC,HK	CK45 TAPG D 50V 272-M	
C405	31507-127-003	C-POLYESTER	ECQ B1 H 332J F3	
C409	31507-127-006	C-POLYESTER	ECQ B1 H 103J F3	
C411	A1102-0205	C-FILM	CF 922 P 1.6KV T 632-J BU	
C414	31607-402-710	C-ELECTROLYTIC	CE04W TAPG 35V 1000M-M	
C415	31417-901-410	C-CERAMIC,HIC	CK45(T) B2KV 681-K	
C416	31607-403-500	C-ELECTROLYTIC	CE04W TAPG 250V 22M-M	
⚠ C417	31516-391-000	C-M,POLYPROPYLENE	CFS922M TAPG 400V 364-J	
C418	31607-403-450	C-ELECTROLYTIC	CE04W TAPG 250V 1M	
C419	31607-401-720	C-ELECTROLYTIC	CE04W TAPG 25V 1000M-M	
C420	31607-401-500	C-ELECTROLYTIC	CE04W TAPG 16V 470M-M(SG)	
C422	31417-106-090	C-CERAMIC,HK	CK45 TAPG B 500V 471-K	
C423	31417-106-090	C-CERAMIC,HK	CK45 TAPG B 500V 471-K	
C424	31417-106-090	C-CERAMIC,HK	CK45 TAPG B 500V 471-K	
C501	31407-057-180	C-CERAMIC,TEMP	CC45(T) CH 50V 180-J	
C503	31507-127-016	C-POLYESTER	ECQ B1 H 472J F3	
C504	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C505	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C506	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C507	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
C508	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
C509	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C510	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C511	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C512	31507-127-008	C-POLYESTER	ECQ B1 H 223J F3	
C513	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C515	31417-104-400	C-CERAMIC,HK	CK45 TAPG B 50V 102-K	
C516	31417-104-400	C-CERAMIC,HK	CK45 TAPG B 50V 102-K	
C517	31507-127-008	C-POLYESTER	ECQ B1 H 223J F3	
C518	31607-401-460	C-ELECTROLYTIC	CE04W TAPG 16V 47M	
C519	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C520	A1102-0291	C-FILM	CF 922 N 63V T 224-J -40/	
C521	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
C550	31607-401-500	C-ELECTROLYTIC	CE04W TAPG 16V 470M-M(SG)	
C601	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C602	A1104-0012	C-ELEC	CE 04 C 25V T 471-M W SG	
C606	31607-402-220	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M	
C607	31507-127-014	C-POLYESTER	ECQ B1 H 272J F3	
C609	31607-974-003	C-ELECTROLYTIC	CE04W TAPG 50V 10M-M(N.P)	
C610	31607-803-730	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M-NP	
C612	31607-402-240	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M	
C615	31507-127-016	C-POLYESTER	ECQ B1 H 472J F3	
C624	31507-127-014	C-POLYESTER	ECQ B1 H 272J F3	
C625	31407-105-260	C-CERAMIC,TEMP	CC45(T) CH 50V 470-J	
C627	31407-105-660	C-CERAMIC,TEMP	CC45(T) CH 50V 101-J	
C628	31407-105-660	C-CERAMIC,TEMP	CC45(T) CH 50V 101-J	
C629	31407-105-660	C-CERAMIC,TEMP	CC45(T) CH 50V 101-J	
C630	31407-105-260	C-CERAMIC,TEMP	CC45(T) CH 50V 470-J	
C630	31407-105-260	C-CERAMIC,TEMP	CC45(T) CH 50V 470-J	
C638	31607-401-490	C-ELECTROLYTIC	CE04W TAPG 16V 330M-M(SG)	
C639	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	

Loc No	Parts No	Description	Specification	Remark
C642	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C643	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
C666	31607-902-250	C-ELECTROLYTIC	CE04W TAPG 50V 0.22M	
C800	31606-403-840	C-ELECTROLYTIC	CE04W 400V 220M-M(30X40)	
⚠C801	31569-204-200	C-M,POLYESTER	250V 0.22M-K/KNB1530	
C801	A1102-0316	C-FILM	CFS 992 MPP 250V 224-M -4	
C803	31467-502-220	C-CERAMIC,AC	CK45P TAPG E250V 222-Z(1.	
C804	31467-502-220	C-CERAMIC,AC	CK45P TAPG E250V 222-Z(1.	
C805	31467-502-220	C-CERAMIC,AC	CK45P TAPG E250V 222-Z(1.	
C806	31467-502-220	C-CERAMIC,AC	CK45P TAPG E250V 222-Z(1.	
⚠C807	31509-391-090	C-POLYPROPYLENE	CQ922M 1600V 0.0022-J	
C808	31607-401-690	C-ELECTROLYTIC	CE04W TAPG 25V 220M-M(SG)	
C809	31417-344-104	C-CERAMIC,HK	CK45 TAPG F 50V 104-Z	
C810	31417-901-400	C-CERAMIC,HIC	CK45(T) B2KV 561-K	
C811	31417-901-400	C-CERAMIC,HIC	CK45(T) B2KV 561-K	
C814	31607-401-690	C-ELECTROLYTIC	CE04W TAPG 25V 220M-M(SG)	
C815	31607-403-200	C-ELECTROLYTIC	CE04W TAPG 160V 4.7M-M(GA	
C816	31417-104-400	C-CERAMIC,HK	CK45 TAPG B 50V 102-K	
C830	31466-504-060	C-CERAMIC,AC	ECK-ZNS 472MEX(RO)	
C831	31466-504-060	C-CERAMIC,AC	ECK-ZNS 472MEX(RO)	
C837	31607-401-500	C-ELECTROLYTIC	CE04W TAPG 16V 470M-M(SG)	
C853	31607-403-250	C-ELECTROLYTIC	CE04W TAPG 160V 100M-M	
C854	31607-403-250	C-ELECTROLYTIC	CE04W TAPG 160V 100M-M	
C855	31607-401-720	C-ELECTROLYTIC	CE04W TAPG 25V 1000M-M	
C857	31607-402-250	C-ELECTROLYTIC	CE04W TAPG 50V 10M	
C858	31607-401-290	C-ELECTROLYTIC	CE04W TAPG 10V 220U	
C901	31407-047-221	C-CERAMIC,TEMP	CC45(T) RH 50V 221-J	
C902	31407-105-120	C-CERAMIC,TEMP	CC45(T) CH 50V 121-J	
C903	31407-047-221	C-CERAMIC,TEMP	CC45(T) RH 50V 221-J	
C904	31417-104-250	C-CERAMIC,HK	CK45 TAPG B 50V 471-K	
C905	31417-104-250	C-CERAMIC,HK	CK45 TAPG B 50V 471-K	
C906	31417-104-250	C-CERAMIC,HK	CK45 TAPG B 50V 471-K	
C907	A1100-0783	C-CERAMIC	CK 45 F 3KV 103-Z CK45FZ3	
C908	31607-403-450	C-ELECTROLYTIC	CE04W TAPG 250V 1M	
C909	31607-401-470	C-ELECTROLYTIC	CE04W TAPG 16V 100M VENT	
C910	31607-403-580	C-ELECTROLYTIC	CE04W TAPG 315V 2.2M-M(GA	
CN201	33347-108-310	POST-HEADER	67094-003(AUTO)	
CN402	33347-114-810	POST-HEADER	YW025-04(AUTO)	
CN44	33124-111-100	GT-PIN	1P AUTO	
CN601	33347-108-310	POST-HEADER	67094-003(AUTO)	
CN801	33124-111-100	GT-PIN	1P AUTO	
⚠CN802	32479-029-380	COIL-DEGAUSSING	14INCH/23OHM/T100/L940MM/	
CN802	33124-111-100	GT-PIN	1P AUTO	
CN803	33347-108-140	POST-HEADER	67094-006 (AUTO)	
CN901	33058-372-014	LEAD-CONNECTOR,ASSY	B10XB10/F/350	
D201	32167-201-070	DIODE	1N 4003/LTIN 4003	
D202	32167-406-480	DIODE	1N4148 TAPG	
D203	32167-406-480	DIODE	1N4148 TAPG	
D301	32167-406-480	DIODE	1N4148 TAPG	
D302	32167-201-170	DIODE	TVR10G(TAPG)	
D401	32167-208-510	DIODE	ERB 43-04 TAPG	
D402	32167-208-510	DIODE	ERB 43-04 TAPG	
D403	32167-208-510	DIODE	ERB 43-04 TAPG	
D404	32167-201-070	DIODE	1N 4003/LTIN 4003	

Loc No	Parts No	Description	Specification	Remark
D405	32167-201-070	DIODE	1N 4003/LTIN 4003	
D410	32167-406-480	DIODE	1N4148 TAPG	
D411	32167-406-480	DIODE	1N4148 TAPG	
D513	32167-406-480	DIODE	1N4148 TAPG	
D515	32167-406-480	DIODE	1N4148 TAPG	
D601	32167-406-480	DIODE	1N4148 TAPG	
⚠ D800	A1330-0060	VARISTOR	INR10D471K 470V 400MW 250	
D801	32167-201-650	DIODE	ERC13-08V1(TAPG)	
D802	32167-201-650	DIODE	ERC13-08V1(TAPG)	
D803	32167-201-650	DIODE	ERC13-08V1(TAPG)	
D804	32167-201-650	DIODE	ERC13-08V1(TAPG)	
D805	32167-201-170	DIODE	TVR10G(TAPG)	
D806	B4102-0068	DIODE-FR	RU20A 600V 1.5A 400NS T	
D808	32167-201-170	DIODE	TVR10G(TAPG)	
D809	32167-207-120	DIODE	1R5GU41(TAPG)	
D810	32167-406-480	DIODE	1N4148 TAPG	
D811	32167-201-170	DIODE	TVR10G(TAPG)	
D812	32167-201-650	DIODE	ERC13-08V1(TAPG)	
D824	32167-201-170	DIODE	TVR10G(TAPG)	
D901	32167-201-070	DIODE	1N 4003/LTIN 4003	
DZ102	32167-406-260	DIODE-ZENER	MTZ8.2	
DZ201	32167-406-130	DIODE-ZENER	MTZ 9.1B	
DZ501	32167-406-080	DIODE-ZENER	MTZ 5.1B	
DZ801	32167-441-009	DIODE-ZENER	MTZ7.5C	
DZ803	32167-406-260	DIODE-ZENER	MTZ8.2	
DZ804	32119-101-360	IC	KA 33V(TAPG)	
F801	33167-001-001	CLIP-FUSE	PFC 5000-0202	
⚠ F801	34709-084-730	FUSE	FST 250V 3.15A 20MM SEMKO	
FM601	33347-108-310	POST-HEADER	67094-003(AUTO)	
GT01	33124-111-100	GT-PIN	1P AUTO	
GT02	33124-111-100	GT-PIN	1P AUTO	
GT03	33054-834-018	LEAD-CONNECTOR,ASSY	P1XP1 DIW 1617#22 400	
GT03	33124-111-100	GT-PIN	1P AUTO	
IC101	B4012-0188	IC-LINEAR	TDA8362B/N3 DIP	
⚠ IC402	A4008-0106	IC-VOLT REGU	KIA7812PI TO-220	
IC501	32119-110-089	IC	TDA4661	
IC502	B4012-0469	IC-LINEAR	TDA8395P/N1 DIP BULK SECA	
L101	32427-904-918	COIL-PEAKING	AL02-1R0K	
L103	32427-904-922	COIL-PEAKING	AL02-5R6K	
L106	32427-904-919	COIL-PEAKING	AL02-1R2K	
L201	32427-904-923	COIL-PEAKING	AL02-8R2K	
L401	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
⚠ L403	32426-833-020	COIL-PEAKING	6.8MH-K ROBOT	
L404	32449-730-010	COIL-LINEARITY	230UH	
L405	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L503	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L602	32427-904-918	COIL-PEAKING	AL02-1R0K	
L802	32426-633-090	COIL-LINE,FILTER	39MHX2(U) ST	
L804	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L805	B1133-0009	COIL-FILTER	100UH-K AX SPT0508A Q10 F	
L806	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L807	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L808	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L809	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	

Loc No	Parts No	Description	Specification	Remark
L824	B1133-0007	COIL-FILTER	43UH-K AX SPT0508A Q10 F9	
L851	34047-019-060	CORE-FERRITE,BEAD	3.5X6X1.0	
L901	32427-805-846	COIL-PEAKING	AL03 330-K	
LED	32306-101-160	LED-ASSY	DL-G4RGA ST	
MR001	31018-377-122	R-CARBON/METAL FILM	RD 1/2T 1.2K-J	
MR002	31018-377-122	R-CARBON/METAL FILM	RD 1/2T 1.2K-J	
⚠P801	32186-609-430	POSISTOR	2C14R(D) ST	
⚠PR01	A1294-0018	MODULE-REMOCON	SR-20M/ORC-60VRF 38KHZ 94	
Q101	32137-301-090	TRANSISTOR	2SC388ATM(TAPG)	
Q102	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
Q103	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
Q104	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
Q201	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
Q203	A4060-0038	TR-W/RESISTOR	KSR1012 300MW 100MA 40V B	
⚠Q401	32137-301-560	TRANSISTOR	KSC 2331-Y(TAPG)	
Q601	32137-301-240	TRANSISTOR	KSC 1507-Y (AUTO)	
Q602	32137-301-240	TRANSISTOR	KSC 1507-Y (AUTO)	
Q603	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
⚠Q801	32137-103-710	TRANSISTOR	KSA708-Y(T)	
⚠Q803	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
⚠Q805	A4052-0057	TR-HIGH POWER	KSA614-Y 25W -3A -80V SI/	
⚠Q806	32137-301-560	TRANSISTOR	KSC 2331-Y(TAPG)	
Q901	A4052-0051	TR-HIGH POWER	KTC3229-CU 2W 100MA 95MHZ	
Q902	A4052-0051	TR-HIGH POWER	KTC3229-CU 2W 100MA 95MHZ	
Q903	A4052-0051	TR-HIGH POWER	KTC3229-CU 2W 100MA 95MHZ	
Q905	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
Q907	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
Q908	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
Q909	32137-401-530	TRANSISTOR	KSA 539-Y(TAPG)/YTAM	
R100	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R101	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R102	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R103	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R104	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R105	31018-177-330	R-CARBON/METAL FILM	RD 1/8T 33-J	
R106	31018-177-391	R-CARBON/METAL FILM	RD 1/8T 390-J	
R107	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R108	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R109	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R110	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R111	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R112	31018-177-682	R-CARBON/METAL FILM	RD 1/8T 6.8K-J	
R113	31018-177-333	R-CARBON/METAL FILM	RD 1/8T 33K-J/ERD-S2TJ 33	
R114	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
R115	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
R116	31018-177-561	R-CARBON/METAL FILM	RD 1/8T 560-J/ERD-S2TJ 56	
R117	31018-377-101	R-CARBON/METAL FILM	RD 1/2T 100-J	
R118	31018-177-822	R-CARBON/METAL FILM	RD 1/8T 8.2K-J	
R119	31018-177-242	R-CARBON/METAL FILM	RD 1/8T 2.4K-J	
R122	31018-177-473	R-CARBON/METAL FILM	RD 1/8T 47K-J	
R123	31018-177-473	R-CARBON/METAL FILM	RD 1/8T 47K-J	
R124	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
R201	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R202	31018-177-181	R-CARBON/METAL FILM	RD 1/8T 180-J	

Loc No	Parts No	Description	Specification	Remark
R203	31018-177-131	R-CARBON/METAL FILM	RD 1/8T 130-J	
R204	31018-177-109	R-CARBON/METAL FILM	RD 1/8T 1-J	
R205	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R207	31018-177-823	R-CARBON/METAL FILM	RD 1/8T 82K-J	
R208	31018-177-511	R-CARBON/METAL FILM	RD 1/8T 510-J	
⚠R209	31048-361-001	R-METAL,FILM	RM 1/2T 1K-G	
⚠R210	31049-375-194	R-METAL,FILM	RM 1/2T 190K-F	
R211	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
R212	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
R213	31018-177-202	R-CARBON/METAL FILM	RD 1/8T 2K-J/ERD-S2TJ 202	
R214	31018-177-470	R-CARBON/METAL FILM	RD 1/8T 47-J	
R215	31018-177-223	R-CARBON/METAL FILM	RD 1/8T 22K-J/ERD-S2TJ 22	
R254	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
⚠R301	31048-361-001	R-METAL,FILM	RM 1/2T 1K-G	
⚠R302	31049-275-162	R-METAL,FILM	RM 1/4T 1.6K-F	
R303	31018-177-331	R-CARBON/METAL FILM	RD 1/8T 330-J/ERD-S2TJ 33	
R304	31018-377-681	R-CARBON/METAL FILM	RD 1/2T 680-J	
R305	31018-177-203	R-CARBON/METAL FILM	RD 1/8T 20K-J	
R306	31018-377-229	R-CARBON/METAL FILM	RD 1/2T 2.2-J	
R307	31018-177-513	R-CARBON/METAL FILM	RD 1/8T 51K-J	
R308	31018-177-183	R-CARBON/METAL FILM	RD 1/8T 18K-J	
R309	31018-377-271	R-CARBON/METAL FILM	RD 1/2T 270-J	
R310	31018-177-153	R-CARBON/METAL FILM	RD 1/8T 15K-J	
R311	31018-177-224	R-CARBON/METAL FILM	RD 1/8T 220K-J	
R312	31018-177-333	R-CARBON/METAL FILM	RD 1/8T 33K-J/ERD-S2TJ 33	
R313	31018-377-105	R-CARBON/METAL FILM	RD 1/2T 1M-J	
R401	31018-177-153	R-CARBON/METAL FILM	RD 1/8T 15K-J	
R402	31018-177-273	R-CARBON/METAL FILM	RD 1/8T 27K-J	
R404	31018-177-332	R-CARBON/METAL FILM	RD 1/8T 3.3K-J/ERD-S2TJ 3	
R405	A1000-0756	R-CARBON	RD 1/2 T(S) 390-J 39R 6.4	
R407	31018-377-154	R-CARBON/METAL FILM	RD 1/2T 150K-J	
R408	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R410	31018-377-271	R-CARBON/METAL FILM	RD 1/2T 270-J	
R411	A1000-0756	R-CARBON	RD 1/2 T(S) 390-J 39R 6.4	
⚠R412	31057-002-130	R-FUSIBLE	RF 1/2T 0.47-K	
⚠R413	31046-567-330	R-METAL,OXIDE	RS 2T 33-J(AUTO)	
R414	A1010-0048	R-FUSIBLE	RF 1 T 151-J 10X3.9	
⚠R415	31046-467-102	R-METAL,OXIDE	RS 1T 1K-J (AUTO)	
R416	31018-377-432	R-CARBON/METAL FILM	RD 1/2T 4.3K-J	
⚠R418	31057-002-130	R-FUSIBLE	RF 1/2T 0.47-K	
R419	A1010-0015	R-FUSIBLE	RF 1 T 150-J 15R	
R420	31018-177-824	R-CARBON/METAL FILM	RD 1/8T 820K-J	
R501	31018-177-362	R-CARBON/METAL FILM	RD 1/8T 3.6K-J	
R502	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R503	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
R504	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R505	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R506	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R507	31018-177-182	R-CARBON/METAL FILM	RD 1/8T 1.8K-J	
R508	31018-177-470	R-CARBON/METAL FILM	RD 1/8T 47-J	
R510	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
R511	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
R512	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
R513	31018-177-473	R-CARBON/METAL FILM	RD 1/8T 47K-J	

Loc No	Parts No	Description	Specification	Remark
R514	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R515	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R516	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R517	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R518	31018-377-101	R-CARBON/METAL FILM	RD 1/2T 100-J	
R519	31018-177-750	R-CARBON/METAL FILM	RD 1/8T 75-J/ERD-S2TJ 750	
R520	31018-177-154	R-CARBON/METAL FILM	RD 1/8T 150K-J	
R525	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R526	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R527	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R528	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R601	31018-177-222	R-CARBON/METAL FILM	RD 1/8T 2.2K-J/ERD-S2TJ 2	
R602	31018-177-162	R-CARBON/METAL FILM	RD 1/8T 1.6K-J	
R605	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R606	A1010-0060	R-FUSIBLE	RF 2 T 1R8-J	
R607	31018-177-243	R-CARBON/METAL FILM	RD 1/8T 24K-J	
R609	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R610	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R611	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R612	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R622	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R639	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R640	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R642	31018-177-100	R-CARBON/METAL FILM	RD 1/8T 10-J	
R643	31018-177-100	R-CARBON/METAL FILM	RD 1/8T 10-J	
R654	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
R661	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R666	31018-177-393	R-CARBON/METAL FILM	RD 1/8T 39K-J	
R699	A1010-0060	R-FUSIBLE	RF 2 T 1R8-J	
R704	31018-177-104	R-CARBON/METAL FILM	RD 1/8T 100K-J/ERD-S2TJ 1	
R705	31018-177-244	R-CARBON/METAL FILM	RD 1/8T 240K-J	
R709	31018-177-822	R-CARBON/METAL FILM	RD 1/8T 8.2K-J	
R710	31018-177-123	R-CARBON/METAL FILM	RD 1/8T 12K-J	
R712	31018-177-242	R-CARBON/METAL FILM	RD 1/8T 2.4K-J	
⚠ R801	31028-378-335	R-COMPOSITION	RC 1/2T 3.3M-K/ERC-12GK 3	
⚠ R802	31036-787-339	R-CEMENT,WIRE	RW 10H 3.3-J ST	
⚠ R803	31046-567-180	R-METAL,OXIDE	RS 2T 18-J(AUTO)	
⚠ R804	31046-567-153	R-METAL,OXIDE	RS 2T 15K-J(AUTO)	
⚠ R805	31046-567-153	R-METAL,OXIDE	RS 2T 15K-J(AUTO)	
⚠ R806	31035-578-228	R-METAL,PLATE	MPC 71 0.22-K	
R807	31018-377-102	R-CARBON/METAL FILM	RD 1/2T 1K-J	
R809	31018-377-682	R-CARBON/METAL FILM	RD 1/2T 6.8K-J	
R810	A1000-0390	R-CARBON	RD 1/2 T(S) 222-J 2.2K	
R811	A1000-0756	R-CARBON	RD 1/2 T(S) 390-J 39R 6.4	
R812	31018-377-681	R-CARBON/METAL FILM	RD 1/2T 680-J	
R814	31018-377-103	R-CARBON/METAL FILM	RD 1/2T 10K-J	
R815	31018-377-330	R-CARBON/METAL FILM	RD 1/2T 33-J	
R816	31018-377-332	R-CARBON/METAL FILM	RD 1/2T 3.3K-J	
R817	A1010-0057	R-FUSIBLE	RF 2 T R27-K	
⚠ R818	31046-567-220	R-METAL,OXIDE	RS 2T 22-J(AUTO)	
R819	31018-377-472	R-CARBON/METAL FILM	RD 1/2T 4.7K-J	
⚠ R820	31046-567-752	R-METAL,OXIDE	RS 2T 7.5K-J(AUTO)	
R821	31018-177-391	R-CARBON/METAL FILM	RD 1/8T 390-J	
⚠ R822	31046-567-103	R-METAL,OXIDE	RS 2T 10K-J(AUTO)	

Loc No	Parts No	Description	Specification	Remark
⚠R824	31046-567-101	R-METAL,OXIDE	RS 2T 100-J(AUTO)	
⚠R826	31057-002-130	R-FUSIBLE	RF 1/2T 0.47-K	
R827	31018-177-331	R-CARBON/METAL FILM	RD 1/8T 330-J/ERD-S2TJ 33	
⚠R828	31046-567-120	R-METAL,OXIDE	RS 2T 12-J(AUTO)	
⚠R830	31028-378-335	R-COMPOSITION	RC 1/2T 3.3M-K/ERC-12GK 3	
⚠R831	31028-378-335	R-COMPOSITION	RC 1/2T 3.3M-K/ERC-12GK 3	
R832	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
R901	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R902	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R903	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
R904	31018-177-751	R-CARBON/METAL FILM	RD 1/8T 750-J	
R905	31018-177-751	R-CARBON/METAL FILM	RD 1/8T 750-J	
R906	31018-177-751	R-CARBON/METAL FILM	RD 1/8T 750-J	
R907	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R908	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R909	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
R910	31018-377-752	R-CARBON/METAL FILM	RD 1/2T 7.5K-J	
R911	31018-177-751	R-CARBON/METAL FILM	RD 1/8T 750-J	
R912	31018-377-105	R-CARBON/METAL FILM	RD 1/2T 1M-J	
R913	31018-177-112	R-CARBON/METAL FILM	RD 1/8T 1.1K-J	
R914	31018-377-561	R-CARBON/METAL FILM	RD 1/2T 560-J	
R915	31018-377-104	R-CARBON/METAL FILM	RD 1/2T 100K-J	
R916	31018-377-104	R-CARBON/METAL FILM	RD 1/2T 100K-J	
R917	31018-377-104	R-CARBON/METAL FILM	RD 1/2T 100K-J	
⚠R918	31046-567-183	R-METAL,OXIDE	RS 2T 18K-J(AUTO)	
⚠R919	31046-567-183	R-METAL,OXIDE	RS 2T 18K-J(AUTO)	
⚠R920	31046-567-183	R-METAL,OXIDE	RS 2T 18K-J(AUTO)	
⚠R921	31028-327-182	R-COMPOSITION	RC 1/2T 1.8K-J/ERC-12GJ 1	
⚠R922	31028-327-182	R-COMPOSITION	RC 1/2T 1.8K-J/ERC-12GJ 1	
⚠R923	31028-327-182	R-COMPOSITION	RC 1/2T 1.8K-J/ERC-12GJ 1	
R924	A1010-0047	R-FUSIBLE	RF 1 T R47-K 10X3.9	
R925	A1010-0060	R-FUSIBLE	RF 2 T 1R8-J	
R926	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R927	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
R928	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
RC01	31507-127-001	C-POLYESTER	ECQ B1 H 152J F3	
RC02	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
RC03	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
RC04	31607-402-580	C-ELECTROLYTIC	CE04W TAPG 50V 2.2M-K	
RC05	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
RC06	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
RC07	31607-401-435	C-ELECTROLYTIC	CE04W TAPG 16V 10M-M	
RC08	31507-127-002	C-POLYESTER	ECQ B1H 222J F3	
RC09	31407-105-150	C-CERAMIC,TEMP	CC45(T) CH 50V 160-J	
RC10	31607-401-520	C-ELECTROLYTIC	CE04W TAPG 16V 68M-M	
RC11	31407-105-150	C-CERAMIC,TEMP	CC45(T) CH 50V 160-J	
RC12	31607-401-840	C-ELECTROLYTIC	CE04W TAPG 10V 100M-M	
RC14	31407-105-270	C-CERAMIC,TEMP	CC45(T) CH 50V 300-J	
RC15	31417-109-140	C-CERAMIC,HK	CK45 TAPG F 50V 103-Z	
RC16	31607-401-840	C-ELECTROLYTIC	CE04W TAPG 10V 100M-M	
RC17	31407-105-700	C-CERMAIC,TEMP	CC45(T) CH 50V 151-J	
RC18	31826-105-610	C-TRIMMER	LA030E53R/TZ03R300TR169	
RC21	31417-104-400	C-CERAMIC,HK	CK45 TAPG B 50V 102-K	
RC23	31507-127-011	C-POLYESTER	ECQ-B1H 683J F3/2E 63V 68	

Loc No	Parts No	Description	Specification	Remark
RC24	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
RC25	31417-109-140	C-CERAMIC,HK	CK45 TAPG F 50V 103-Z	
RCJ01	33136-103-030	RECEPTACLE-PERI	HXC-1510-01-300A ST	
RCT02	A1113-0015	C-NETWORK	VEND	
RCT03	31497-009-430	C-NETWORK	EXF-FP3 331MDV(4P 331)	
RD05	32167-406-480	DIODE	1N4148 TAPG	
RD07	32167-406-480	DIODE	1N4148 TAPG	
RD11	32167-406-480	DIODE	1N4148 TAPG	
RD12	32167-406-480	DIODE	1N4148 TAPG	
RD13	32167-406-480	DIODE	1N4148 TAPG	
RDZ01	32167-401-800	DIODE-ZENER	EQA02-06A/MTZ5.6B(TAPG)	
RDZ03	32167-401-800	DIODE-ZENER	EQA02-06A/MTZ5.6B(TAPG)	
RIC01	B4002-0616	IC-MCU	TMS73C167-SIM135-2R CTV S	
RIC02	B4000-0135	IC-EEPROM	AT24C04-10PC DIP 8P	
RIC03	32119-110-061	IC	KIA7033P-AT	
RL01	A1132-0041	COIL-PEAKING	47UH-K AX AL02 Q50 F6.3MH	
RL02	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
RL03	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
RL04	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
RL05	32427-904-924	COIL-PEAKING	AL02-100K(10UH)	
RQ01	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
RQ02	A4060-0037	TR-W/RESISTOR	KSR1009 300MW 100MA 40V B	
RQ03	A4060-0037	TR-W/RESISTOR	KSR1009 300MW 100MA 40V B	
RQ05	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
RQ09	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
RQ10	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
RQ11	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
RR01	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR02	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR04	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR06	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR07	31018-177-113	R-CARBON/METAL FILM	RD 1/8T 11K-J	
RR08	31018-177-512	R-CARBON/METAL FILM	RD 1/8T 5.1K-J	
RR09	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR10	31018-177-202	R-CARBON/METAL FILM	RD 1/8T 2K-J/ERD-S2TJ 202	
RR11	31018-177-302	R-CARBON/METAL FILM	RD 1/8T 3K-J	
RR12	31018-177-512	R-CARBON/METAL FILM	RD 1/8T 5.1K-J	
RR13	31018-177-622	R-CARBON/METAL FILM	RD 1/8T 6.2K-J	
RR14	31018-177-752	R-CARBON/METAL FILM	RD 1/8T 7.5K-J	
RR15	31018-177-823	R-CARBON/METAL FILM	RD 1/8T 82K-J	
RR16	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR17	31018-177-682	R-CARBON/METAL FILM	RD 1/8T 6.8K-J	
RR18	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR19	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR22	31018-377-103	R-CARBON/METAL FILM	RD 1/2T 10K-J	
RR24	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR25	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR26	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR27	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR28	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR31	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
RR32	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
RR33	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR34	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	

Loc No	Parts No	Description	Specification	Remark
RR35	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
RR36	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
RR39	31018-177-223	R-CARBON/METAL FILM	RD 1/8T 22K-J/ERD-S2TJ 22	
RR47	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
RR48	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
RR49	31018-177-223	R-CARBON/METAL FILM	RD 1/8T 22K-J/ERD-S2TJ 22	
RR50	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR51	31018-177-622	R-CARBON/METAL FILM	RD 1/8T 6.2K-J	
RR52	31018-177-222	R-CARBON/METAL FILM	RD 1/8T 2.2K-J/ERD-S2TJ 2	
RR53	31018-177-222	R-CARBON/METAL FILM	RD 1/8T 2.2K-J/ERD-S2TJ 2	
RR54	31018-177-222	R-CARBON/METAL FILM	RD 1/8T 2.2K-J/ERD-S2TJ 2	
RR55	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
RR56	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR57	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
RR58	31018-177-470	R-CARBON/METAL FILM	RD 1/8T 47-J	
RR59	31018-177-223	R-CARBON/METAL FILM	RD 1/8T 22K-J/ERD-S2TJ 22	
RR60	31018-177-102	R-CARBON/METAL FILM	RD 1/8T 1K-J/ERD-S2TJ 102	
RR61	31018-177-681	R-CARBON/METAL FILM	RD 1/8T 680-J/ERD-S2TJ 68	
RR62	31018-177-681	R-CARBON/METAL FILM	RD 1/8T 680-J/ERD-S2TJ 68	
RR64	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
RR74	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RR80	31018-177-152	R-CARBON/METAL FILM	RD 1/8T 1.5K-J	
RR81	31018-177-202	R-CARBON/METAL FILM	RD 1/8T 2K-J/ERD-S2TJ 202	
RR82	31018-177-333	R-CARBON/METAL FILM	RD 1/8T 33K-J/ERD-S2TJ 33	
RR83	31018-177-103	R-CARBON/METAL FILM	RD 1/8T 10K-J/ERD-S2TJ 10	
RX01	34537-001-003	CRYSTAL	4.0MHZ	
SC601	31417-109-140	C-CERAMIC,HK	CK45 TAPG F 50V 103-Z	
SW02	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW03	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW04	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW05	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW07	B3018-0034	SW-TACT,V	EVQ-PB1-05K 7.5X7.1MM G 1	
SW801	33526-401-002	SWITCH-PUSH,PWR	JPW-2104 250V 5/80A	
⚠ T104	32717-513-800	TRANS-VIF	38.9MHZ(S-60)	
⚠ T401	32846-070-007	TRANS-HORIZ,DRIVE	7.3MH/105UH ST	
⚠ T444	A1201-0007	TRANS-FLYBACK	FTK-14A004P 14INCH 125V/1	
⚠ T801	A1206-0060	TRANS-SWITCHING	P:85-280V S:125/15V DO ER	
TC01	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
TC02	31407-105-090	C-CERMAIC,TEMP	CC45(T) CH 50V 100-C	
TC03	31407-057-151	C-CERAMIC,TEMP	CC45 TAPG CH 50V 150-J	
TC04	31417-104-400	C-CERAMIC,HK	CK45 TAPG B 50V 102-K	
TC05	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
TC06	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
TC07	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
TC08	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
TC09	B1102-0318	C-FILM	CF 922 N 50V T 104-J -40/	
TC12	31417-104-330	C-CERAMIC,HK	CK45 TAPG B 50V 331-K	
TC21	31607-402-530	C-ELECTROLYTIC	CE04W TAPG 50V 0.47U-NP	
TC22	31607-402-530	C-ELECTROLYTIC	CE04W TAPG 50V 0.47U-NP	
TC23	31417-344-222	C-CERAMIC,HK	CK45 TAPG F 50V 222-Z	
TD01	32167-406-480	DIODE	1N4148 TAPG	
TD04	32167-406-480	DIODE	1N4148 TAPG	
TD05	32167-406-480	DIODE	1N4148 TAPG	
TD06	32167-406-480	DIODE	1N4148 TAPG	

Loc No	Parts No	Description	Specification	Remark
TD07	32167-406-480	DIODE	1N4148 TAPG	
TIC01	B4012-0375	IC-LINEAR	SAA5254P/H DIP 40P TTX	
TIC04	32119-101-010	IC	TEA2014A	
TL01	32427-805-835	COIL-PEAKING	AL03 3R9-K	
TQ01	32137-301-720	TRANSISTOR	KSC 815-Y(TAPG)/YTAM	
TR01	31018-177-332	R-CARBON/METAL FILM	RD 1/8T 3.3K-J/ERD-S2TJ 3	
TR02	31018-177-181	R-CARBON/METAL FILM	RD 1/8T 180-J	
TR03	31018-177-471	R-CARBON/METAL FILM	RD 1/8T 470-J	
TR04	31018-177-273	R-CARBON/METAL FILM	RD 1/8T 27K-J	
TR05	31018-177-272	R-CARBON/METAL FILM	RD 1/8T 2.7K-J/ERD-S2TJ 2	
TR06	31018-177-272	R-CARBON/METAL FILM	RD 1/8T 2.7K-J/ERD-S2TJ 2	
TR07	31018-177-272	R-CARBON/METAL FILM	RD 1/8T 2.7K-J/ERD-S2TJ 2	
TR08	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
TR09	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
TR10	31018-177-101	R-CARBON/METAL FILM	RD 1/8T 100-J/ERD-S2TJ 10	
TR11	31018-177-682	R-CARBON/METAL FILM	RD 1/8T 6.8K-J	
TR13	31018-177-272	R-CARBON/METAL FILM	RD 1/8T 2.7K-J/ERD-S2TJ 2	
TR16	31018-177-682	R-CARBON/METAL FILM	RD 1/8T 6.8K-J	
TR17	31018-177-472	R-CARBON/METAL FILM	RD 1/8T 4.7K-J/ERD-S2TJ 4	
⚠ TU01	34519-600-030	TUNER	TECC-0985VA14A	
TX01	B1280-0090	CRYSTAL	27MHZ(30006) HC-49/U-A 25	
⚠ V999	A3047-0013	SOCKET-CRT	ISMS01S P114.3 HI-FOCUS 6	
VR101	31249-128-005	VR-SEMI	EVN DJA A03 B53/EVN CYA A	
VR201	31249-128-008	VR-SEMI	EVN DJA A03 B54/EVN CYA A	
VR301	31249-128-004	VR-SEMI	EVN DJA A03 B13/EVN CYA A	
VR401	31249-128-001	VR-SEMI	EVN DJA A03 B14/EVN CYA A	
VR402	31249-128-005	VR-SEMI	EVN DJA A03 B53/EVN CYA A	
VR801	31249-128-005	VR-SEMI	EVN DJA A03 B53/EVN CYA A	
VR901	31249-128-004	VR-SEMI	EVN DJA A03 B13/EVN CYA A	
VR902	31249-128-004	VR-SEMI	EVN DJA A03 B13/EVN CYA A	
VR903	31249-128-004	VR-SEMI	EVN DJA A03 B13/EVN CYA A	
VR904	31249-128-004	VR-SEMI	EVN DJA A03 B13/EVN CYA A	
VR905	31249-128-004	VR-SEMI	EVN DJA A03 B13/EVN CYA A	
X501	34537-011-010	CRYSTAL	4.433619MHZ(00262) HC-49/	
Z101	B1245-0063	FILTER-SAW	G3956M PAL-B/G VIF ST	
Z201	B1243-0052	FILTER-CERAMIC	TR 5.5M TPS5.5MWATF21	
Z201	B1243-0052	FILTER-CERAMIC	TR 5.5M TPS5.5MWATF21	
Z601	34527-460-030	FILTER-CERAMIC	SFSH5.5MC8-TF21	
Z602	34527-460-050	FILTER-CERAMIC	SFSH6.5MC8-TF21	
	ASSY-H/S,VERT(STICK)			
	* 3H82-00270-003	ASSY-H/S,VERT(STICK)	35684-116-211,TDA7056	
⚠ IC601	B4012-0472	IC-LINEAR	TDA7056/N2 SIP POWER AMP	
	ASSY-H/S,VERT			
	* 3H82-00530-000	ASSY-H/S,VERT	31124-0014-000 KA2131 ROB	
⚠ IC301	32119-102-300	IC	KA 2131	
	ASSY-H/S,VERT(HORI)			
	* 3H82-00530-003	ASSY-H/S,VERT(HORI)	31124-0014-000 KSD5071YD	
⚠ Q402	32159-210-040	TRANSISTOR	KSD 5071 YD	
	ASSY-H/S,POWER			
	* 3H83-00630-001	ASSY-H/S,POWER	35682-112-030,STRS6707	

Loc No	Parts No	Description	Specification	Remark
⚠ IC801	B4010-0034	IC-HYBRID	STRS6707 SMPS-CONTROL DIP	
	ASSY-H/S,TR			
	* 3H84-00090-003	ASSY-H/S,TR	35684-119-710 FMLG 12	
⚠ D807	32169-101-090	DIODE	FMLG12	
	ASSY-H/S,TR			
	* 3H84-00160-000	ASSY-H/S,TR	35684-122-130,KA7805 ST	
⚠ IC803	A4008-1092	IC-VOLT REGU	KA7805A TO-220AB 1A 0/125	
	ASSY-PWB,SIF			
	* 3D39-00001-280	ASSY-PWB,SIF	P69SA1,D/K-CONVERTER	
PCB	36029-0256-000	P.C.B-SUB	T1.6 W50 L30 P69SA S-L'/L	S.N.A
DZ001	32167-403-780	DIODE-ZENER	MTZ15C	
HC601	31607-402-240	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M	
HC602	31407-105-260	C-CERAMIC,TEMP	CC45(T) CH 50V 470-J	
HT601	32717-513-800	TRANS-VIF	38.9MHZ(S-60)	
IC602	B4012-0310	IC-LINEAR	TDA3845 DIP QUASISPLIT SO	
SC603	31607-402-240	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M	
SC604	31607-402-240	C-ELECTROLYTIC	CE04W TAPG 50V 4.7M	
SZ601	34529-700-006	FILTER-SIF,SAW	OFW K 9253 M	
	ASSY-CRT			
⚠ V999	32019-400-083	CRT-COLOR	A34KQV42X	
⚠	32439-210-090	DEFL-YOKE	DSE-1422FL	
	33309-0020-000	SPACER-DY	NEOPLENE V0 BLK W 12MM	
	A1155-0004	MAGNET-CONVERGENCE	NY-225 P122.5	
	ASSY-TRANSMITTER			
	* 3F14-00037-041	ASSY-TRANSMITTER	TM37 RM135-1 44 BLK STD	
	ASSY-SPEAKER			
	33058-003-016	LEAD-CONNECTOR,ASSY	S3(2)/F/400	
	A1300-0033	SPEAKER-GENERAL	3W 16OHM 90X50MM 05F14CRA	
	ASSY-POWER,CORD			
⚠	33053-816-510	POWER-CORD,ASSY	KKD-419C KLCE-2F,F,BLK-HO	
	33323-0001-010	HOLDER-CORD	PP V0 BLK (DO)	
	ASSY-ACCESSORY			
	32759-113-010	TRANS-MATCHING	R300-R75,MATCH W/BALUN	
	34509-223-023	ANTENNA-ROD	4S N/UL DIPOLE 620MM BRN	
	34709-0445-000	INSTRUCTION-BOOK	A/P120(G) RUSSIAN P69AT T	
	34709-0493-000	INSTRUCTION-BOOK	A/P120(G) ENG P69SA TM37	
	34719-035-410	BATTERY	AAM-1.5V(R6)	
	38124-135-010	C/W	W/P 180 CIS-ALL S/S RUS	
	38653-108-191	PE-BAG	HDPE,T0.015 230X400 L-TYP	

Loc No	Parts No	Description	Specification	Remark

CK5341TR1SERX OPTION

ASSY-CHASSIS(OPTION)

	• 3T30-02665-370	ASSY-CHASSIS(OPTION)	CK5341TR1SERX P69SA1	
C409	31507-127-005	C-POLYESTER	ECQ B1 H 822J F3	
C415	31417-767-331	C-CERAMIC,HIC	CK45(T) B2KV 331-K	
C417	31516-400-020	C-M,POLYPROPYLENE	CFS922M TAPG 400V 434-J	
⚠ CN802	A1149-0012	COIL-DEGAUSSING	21INCH 14.5OHM T35 L2500M	
L402	32449-412-680	COIL-HORIZ,WIDTH	90UH/260UH	
L404	32446-705-040	COIL-LINEARITY	157UH ST	
R213	31018-177-332	R-CARBON/METAL FILM	RD 1/8T 3.3K-J/ERD-S2TJ 3	
R304	31018-377-331	R-CARBON/METAL FILM	RD 1/2T 330-J	
R312	31018-177-223	R-CARBON/METAL FILM	RD 1/8T 22K-J/ERD-S2TJ 22	
R405	31018-377-470	R-CARBON/METAL FILM	RD 1/2T 47-J	
R411	31018-377-330	R-CARBON/METAL FILM	RD 1/2T 33-J	
R421	A1000-0660	R-CARBON	RD 1/2 T(S) R39-K 0.39R	
R501	31018-177-562	R-CARBON/METAL FILM	RD 1/8T 5.6K-J/ERD-S2TJ 5	
R924	A1010-0070	R-FUSIBLE	RF 1 T 010-J	
R925	A1010-0070	R-FUSIBLE	RF 1 T 010-J	
RR17	31018-177-272	R-CARBON/METAL FILM	RD 1/8T 2.7K-J/ERD-S2TJ 2	
⚠ T444	32859-200-000	TRANS-FLYBACK	FOM-20A015	
⚠ V999	A3047-0010	SOCKET-CRT	ISHS09S P125.5 HI-FOCUS 9	
	ASSY-H/S,VERT(HORI)			
	• 3H82-00530-002	ASSY-H/S,VERT(HORI)	31124-0014-000 KSD5072YD	
⚠ Q402	32139-410-020	TRANSISTOR	KSD5072YD	

ASSY-CRT

⚠ V999	A1320-0190	CRT-COLOR	A51KRE83X(U) 21INCH 90DEG
⚠	32439-310-028	DEFL-YOKE	DSE-2192GL
	A1155-0003	MAGNET-CONVERGENCE	NY-291 P129.1

ASSY-SPEAKER

	33058-003-024	LEAD-CONNECTOR,ASSY	S3(2)/F/600
	34209-169-550	SPEAKER-GENERAL	115BR03A,8R,3W

9. Block Diagrams

9-1 System Block Diagram

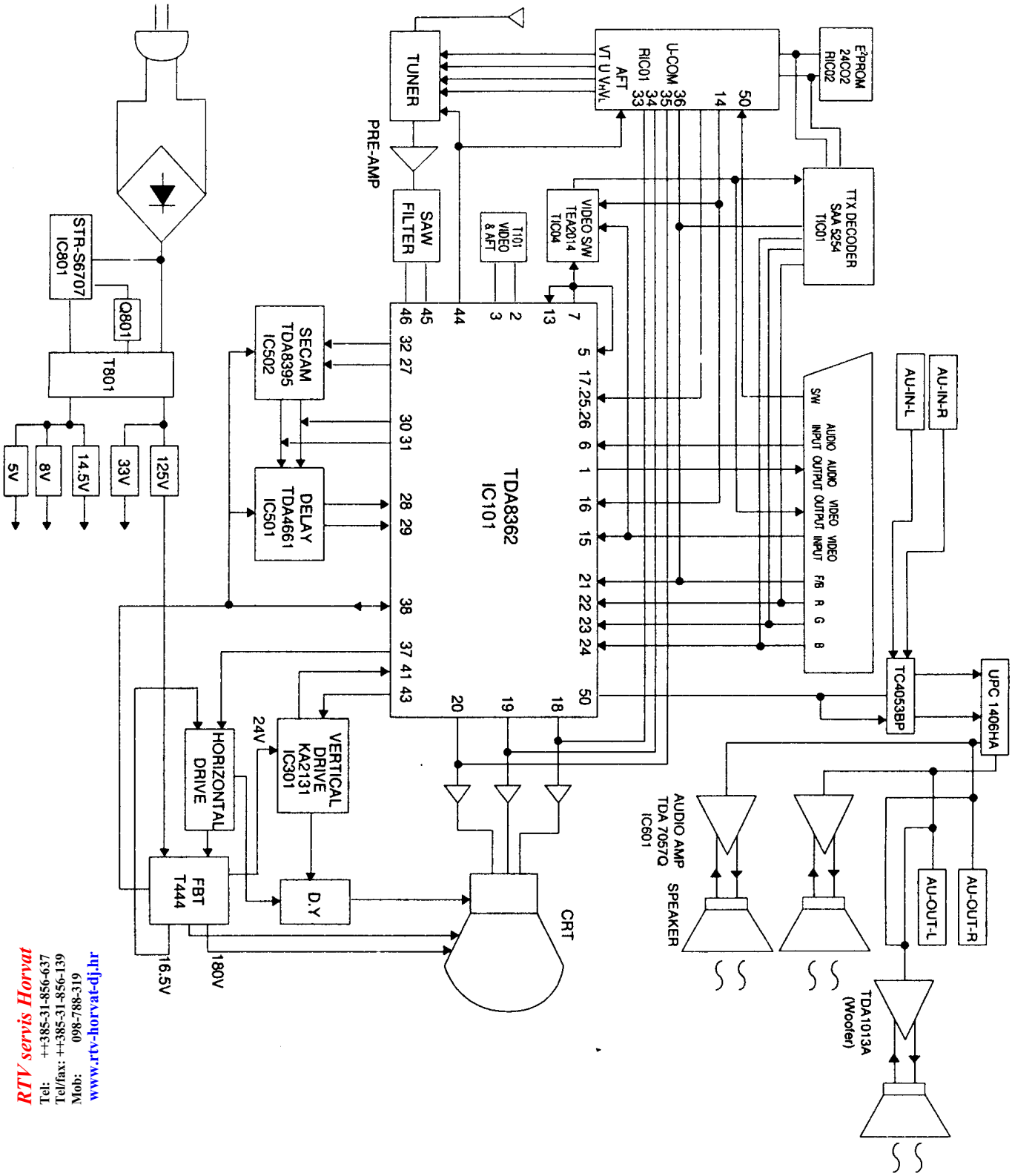


Fig. 9-1 System Block Diagram

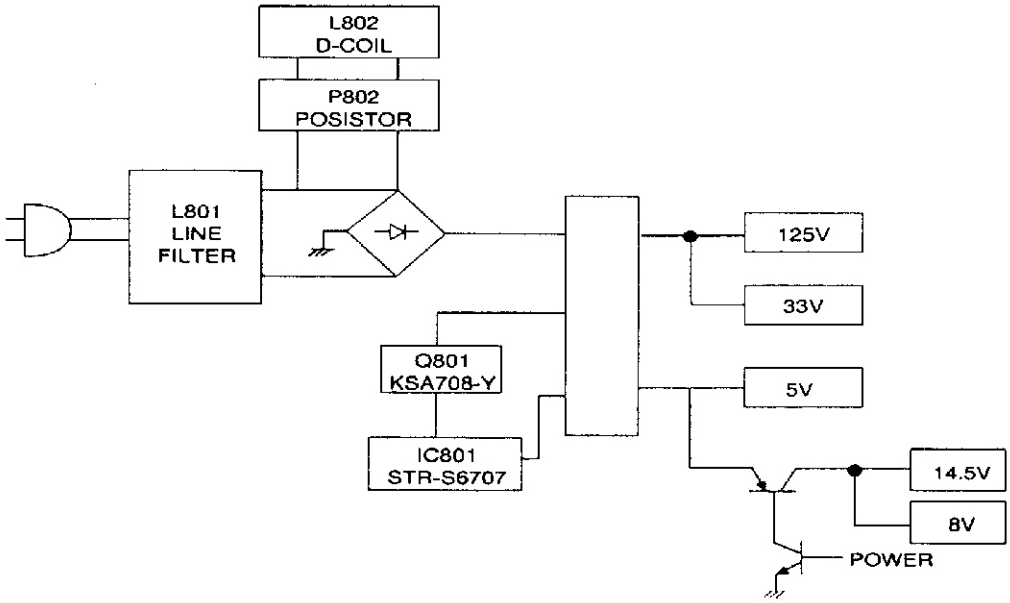


Fig. 9-2 Block Diagram

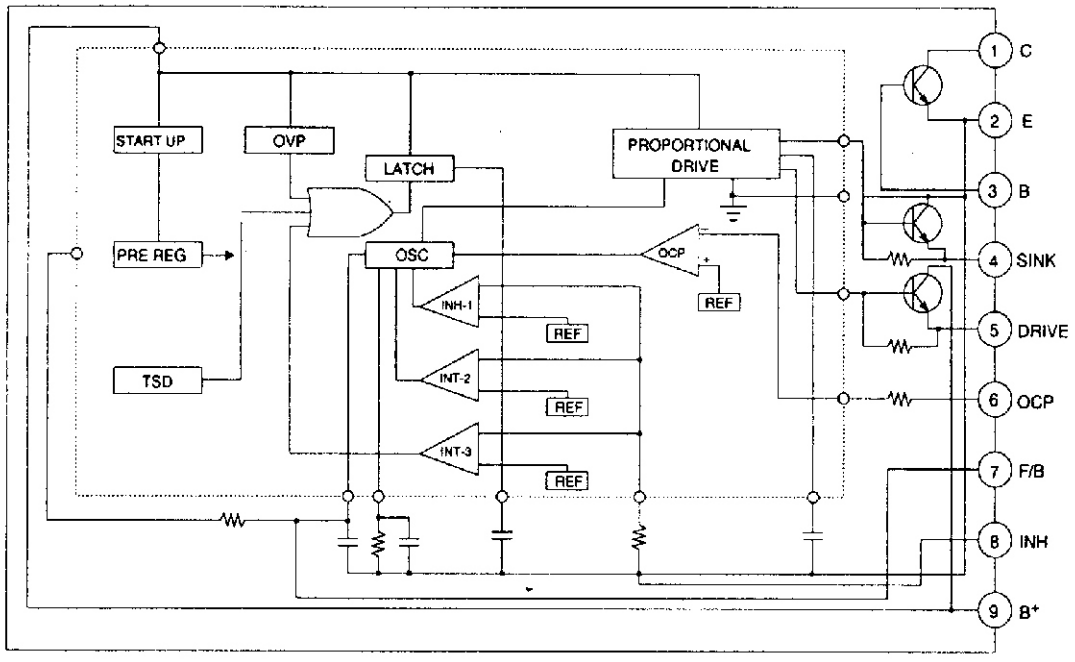


Fig. 9-3 Power Control Circuit, STR S6707

9-3 IC Block Diagram, TDA8362

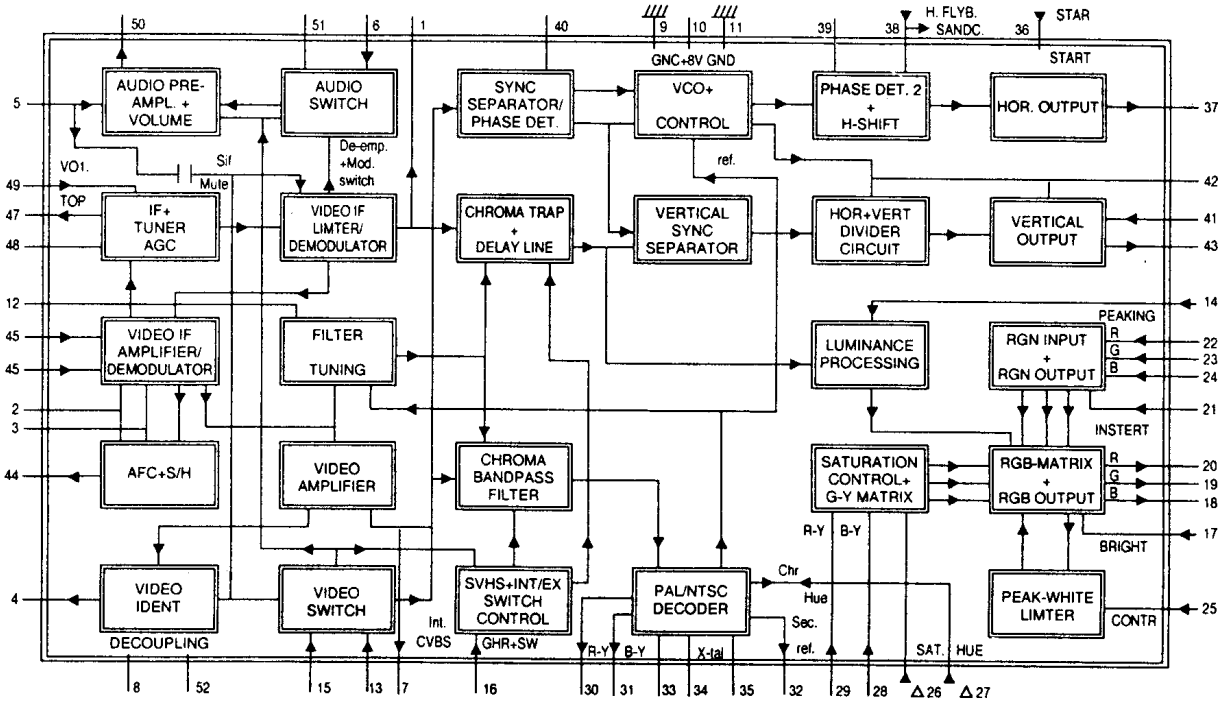


Fig. 9-4 Block Diagram

Table 9-1 Pin Function

No	Function	No	Function
1	Audio deemphasis	52	Decoupling bandgap supply
2	IF – demodulator tuned circuit	51	Decoupling sound demodulator
3	IF – demodulator tuned circuit	50	Audio output
4	Video identification output	49	Tuner take over adjustment
5	Sound IF in plus volume control	48	AGC decoupling capacitor
6	External audio input	47	Tuner AGC output
7	IF video output	46	IF – input
8	Decoupling digital supply	45	IF – AFC output
9	Ground	44	AFC output
10	Positive supply (8V)	43	Vertical output
11	Ground	42	Vertical ramp generator
12	Decoupling filter tuning	41	Vertical feedback input
13	Internal CVBS input	40	Φ – 1 loop filter
14	Peaking control input, Sync ident	39	Φ – 1 loop filter
15	External CVBS input	38	Flyback input/sandcastle output
16	Chroma+A/V switch input	37	Horizontal output
17	Brightness control input	36	Start horizontal oscillator
18	B – output	35	4.43MHz crystal connection
19	G – output	34	3.58MHz crystal connection
20	R – output	33	Loop filter burst phase detector
21	RGB – insertion and blanking input	32	4.43MHz output for TDA8395
22	R – input for insertion	31	B – Y output signal
23	G – input for insertion	30	R – Y output signal
24	B – input for insertion	29	R – Y input signal
25	Contrast control input	28	B – Y input signal
26	Saturation control input	27	Hue control input (or chroma out)

9-4-1 IC Block Diagram (TDA8395)

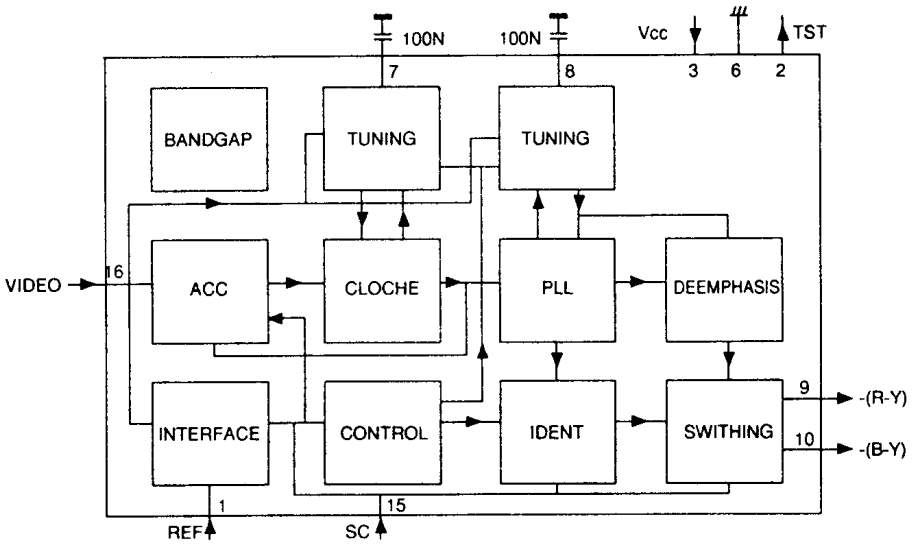


Fig. 9-5 Chroma Block-Diagram

Table 9-2 Pin Function		
NO.	Symbol	Function
1	freq/IDENT	Reference frequency input/identification input Test output
2	TEST	Positive supply voltage
3	Vp	Not connected
4	n.c.	Not connected
5	n.c.	Ground
6	GND	Cloche reference filter
7	CLOCHE ref	PLL reference
8	PLLref	– (R – Y) output
9	– (R – Y)	– (B – Y) output
10	– (B – Y)	Not connected
11	n.c.	Not connected
12	n.c.	Not connected
13	n.c.	Not connected
14	n.c.	Sandcastle pulse input
15	SAND	Video(chrominance) input
16	CVBS	

9-4-2 IC Block Diagram (TDA8362)

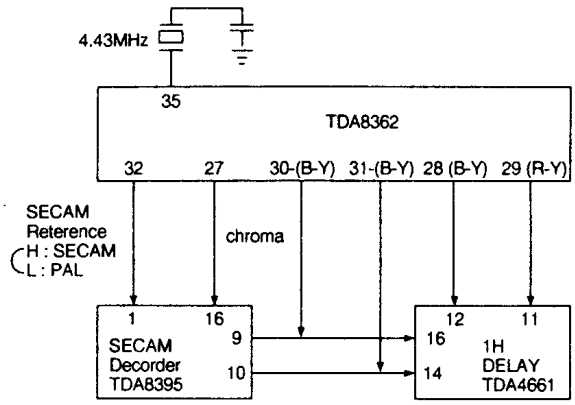


Fig. 9-6 TDA8362

9-4-3 IC TDA8362, Chroma Subsystem

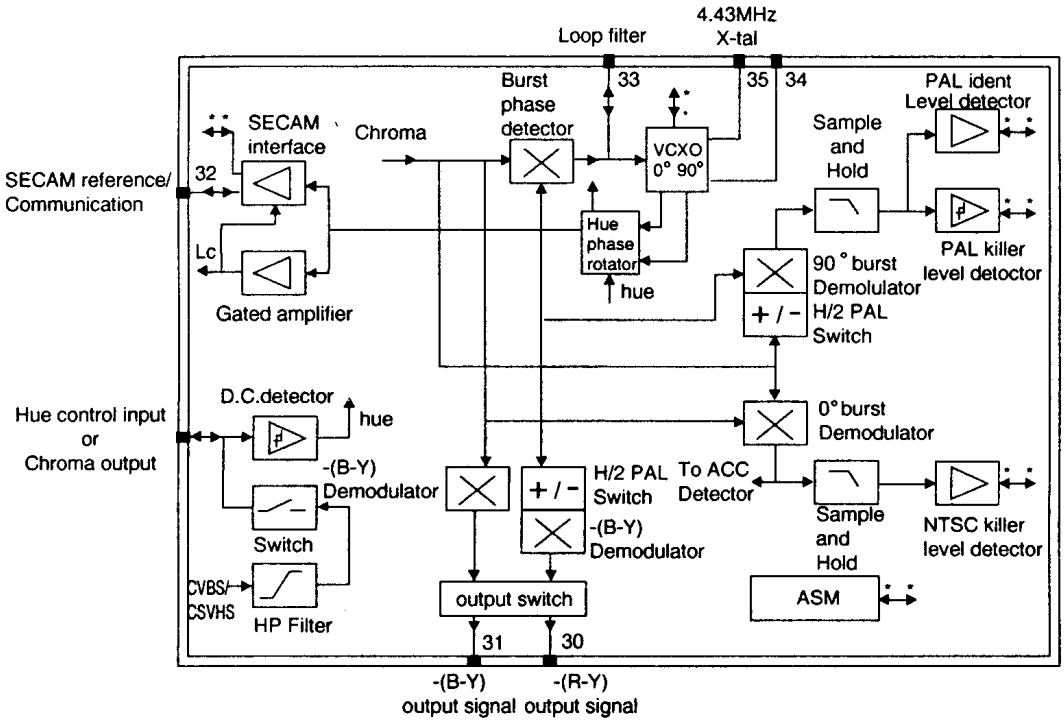


Fig. 9-7 TDA8362

9-4-4 IC TDA4661, Luminance Delay Block

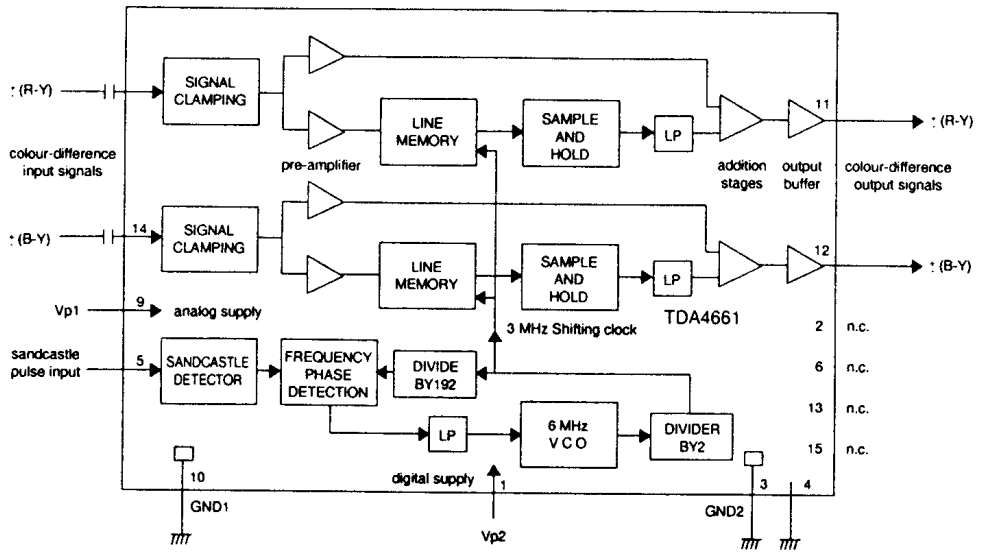


Fig. 9-8 Block Diagram, TDA4661

Table 9-3 Pin Functions

No	Symbol	Function	No	Symbol	Function
1	Vp2	+8V Supply Voltage for analogue part	9	Vp1	+8V Supply Voltage for analogue part
2	n.c.	Not connected	10	GND1	Ground for analog part (0V)
3	GND2	Ground for digital part (0V)	11	Vo(R – Y)	±(R – Y) output signal
4	i.c.	Internally connected	12	Vo(B – Y)	±(B – Y) output signal
5	SAND	Sandcastle pulse input	13	n.c.	Not connected
6	n.c.	Not connected	14	Vi(B – Y)	±(B – Y) input signal
7	i.c.	Internally connected	15	n.c.	Not connected
8	i.c.	Internally connected	16	Vi(R – Y)	±(R – Y) input signal

9-5 IF Subsystem

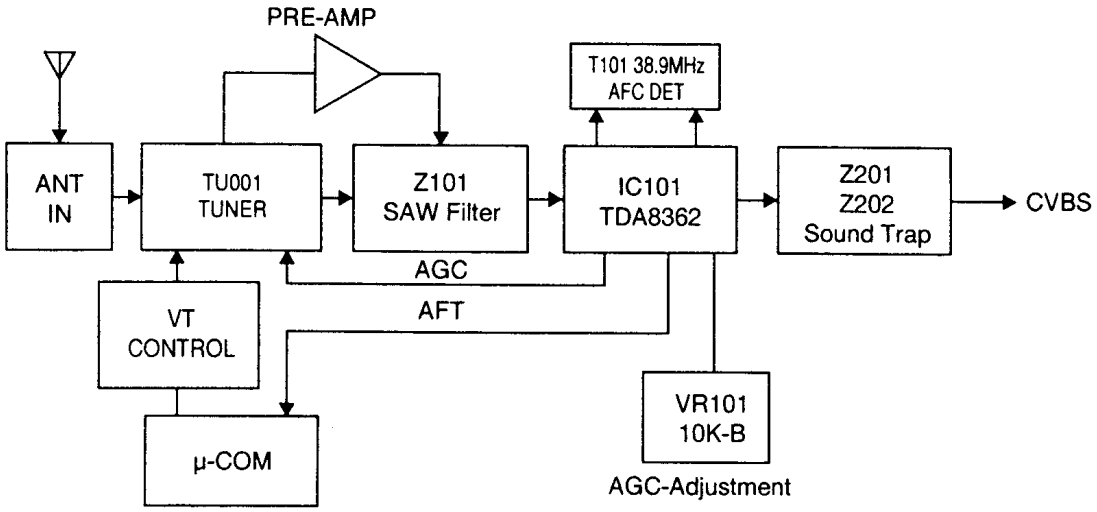


Fig. 9-9 IF Block Diagram

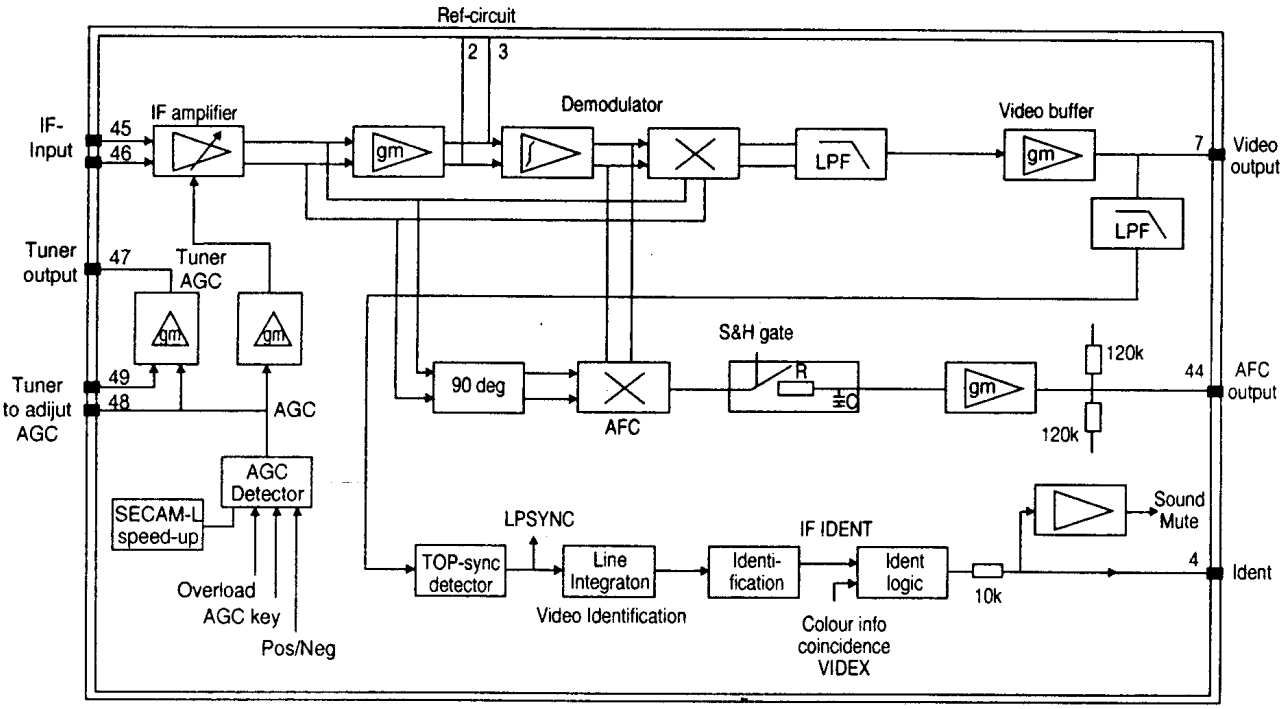


Fig. 9-10 TDA8362 IF Subsystem

9-6-1 Sound Subsystem

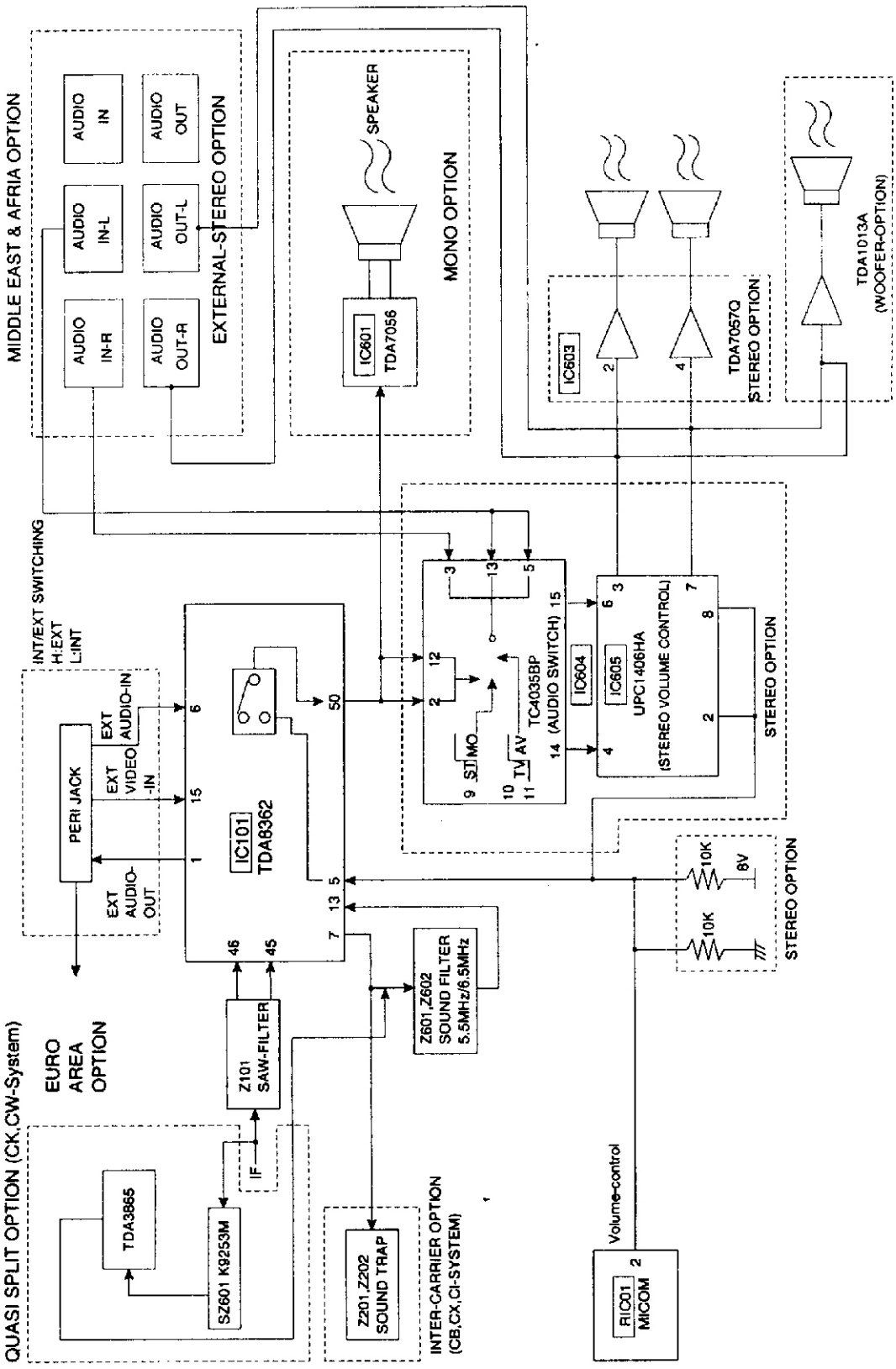


Fig. 9-11 Block-Diagram, Sound System

9-6-2 IC Block Diagram (TDA8362)

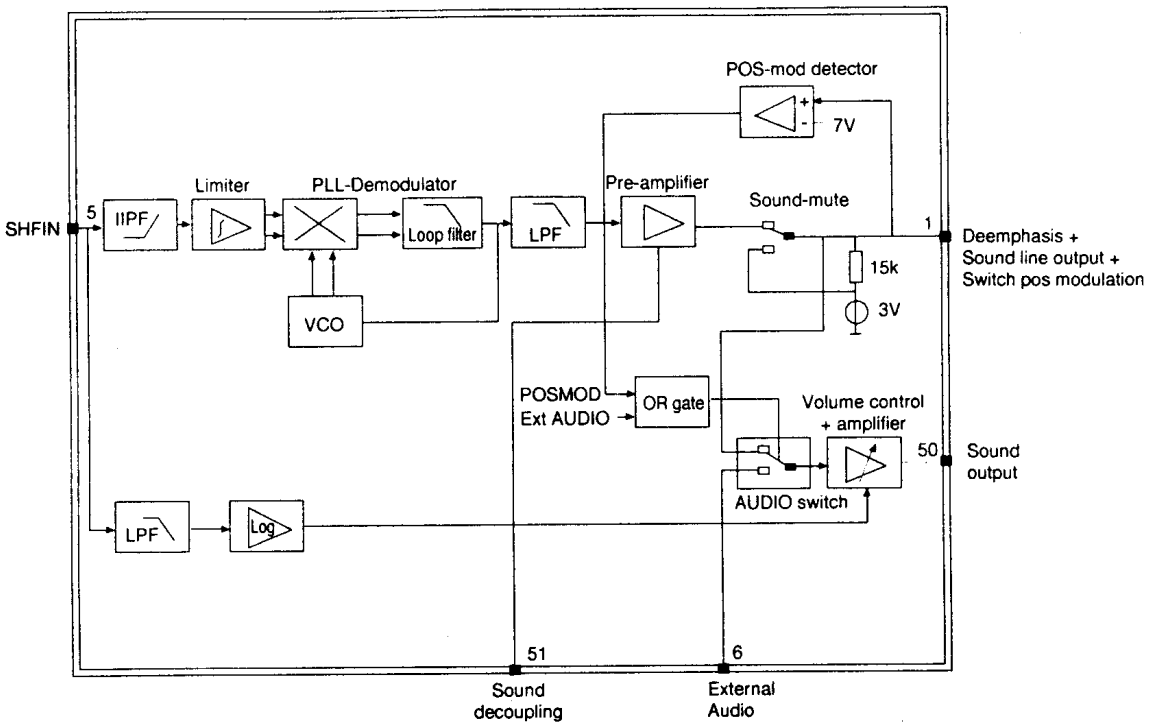


Fig. 9-12 Block Diagram

9-6-3 IC Specification (TDA7056) : Mono Sound

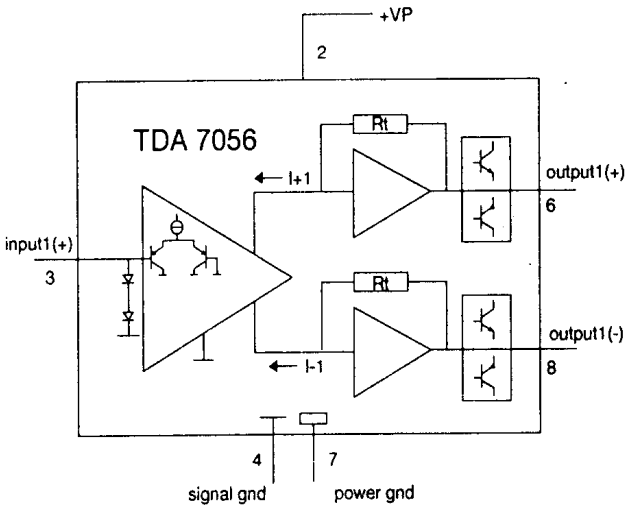


Fig. 9-13 Block Diagram

9-6-3 IC Specification (TDA7057Q) : Stereo

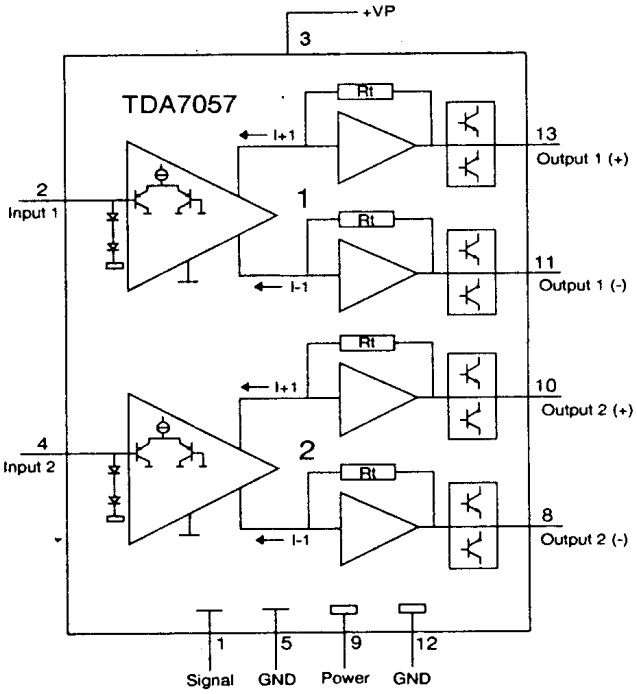


Fig.9-14 Block Diagram

9-7-1 Block-Diagram

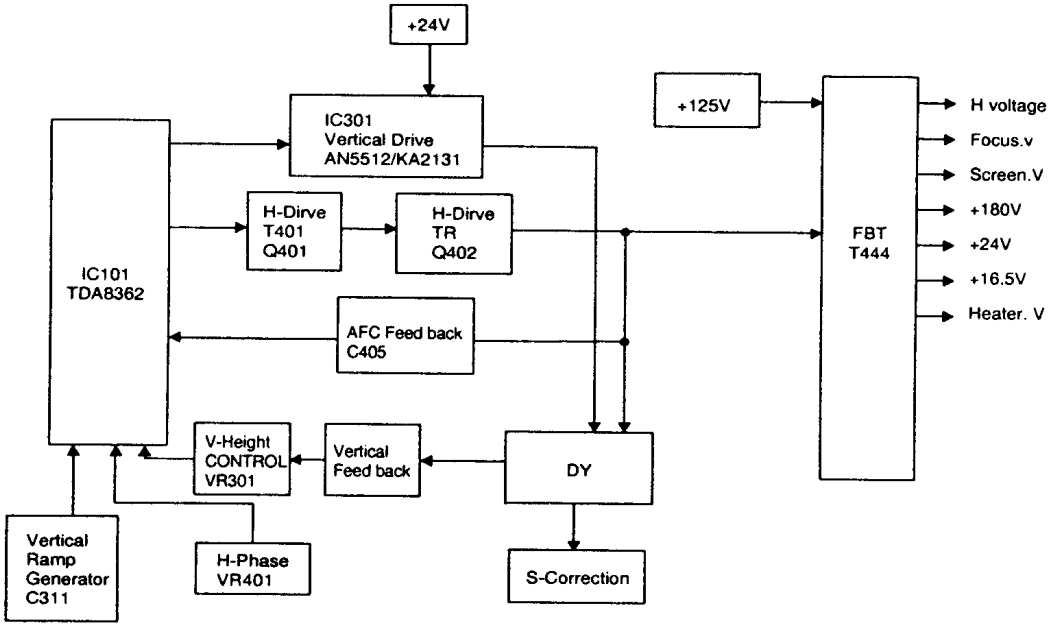


Fig. 9-15 Block Diagram

9-7-2 Vertical Output Driver, KA1231

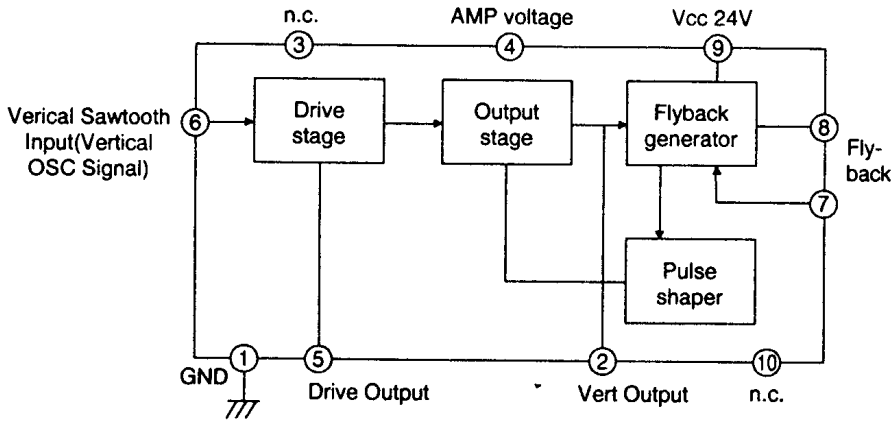


Fig. 9-16 Block Diagram

9-7-3 Deflection Subsystem, IC TDA8362

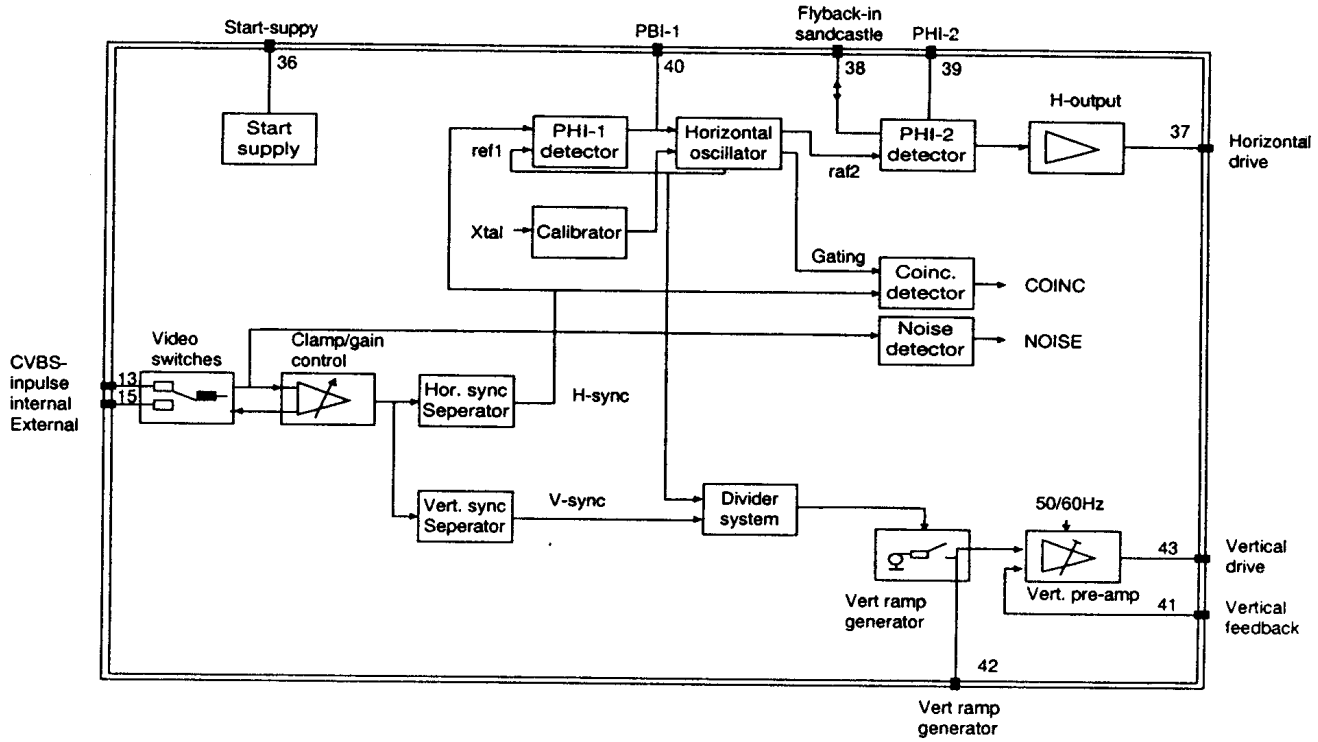


Fig. 9-17 Block Diagram of TDA 8362

9-8 Remote Control Block, Microcontroller Pinout

● External Interface Requirements

9-8-1 Microcontroller pinout

Table 9-4 Pin Functions

Pin No.	Pin Name	Signal Name	I/O	Function
1	PWM 0	Signal Name	O	Tuning voltage control out (14bit)
2	PWM1—0	Volume	O	Volume control out (6bit)
3	PWM1—1	Bright	O	Bright control out (6bit)
4	PWM1—2	Colour	O	Colour control out (6bit)
5	PWM1—3	Contrast	O	Contrast control out (6bit)
6	PWM1—4	Tint	O	Tint control out (6bit)
7	PWM1—5	Woofer Vol	O	Woofer volume control out (6bit)
8	PWM1—6	Stereo	O	Stereo control out (6bit) TV mode:Lo fix AV mode:High =Stereo Lo =mono
9	PWM1—7	SECAM—L'	O	System control out Hi =SECAM—L'
10	PWM1—8	SECAM—L	O	System control out Hi =SECAM—L
11	B0	VHF—L	O	Band Switching Control Lo =VHF—L
12	B1	VHF—H	O	Band Switching Control Lo =VHF—H
13	B2	VHF—L	O	Band Switching Control Lo =UHF
14	B3	AV1	O	AV1 Source selection output Hi =AV1
15	B4	AV2	O	AV2 Source selection output Lo =AV2
16	B5	NTSC OUT	O	System Control Output, Active Hi Active when NTSC Ident becomes active
17	B6	Standby LED	O	Standby off =Hi On =Lo
18	B7	RMC/Timer LED	O	Standby of:∫RMC LED, Blink Standby on:Timer on =Lo off =Hi

Table 9-4 Pin Functions (Continued)

Pin No.	Pin Name	Signal Name	I/O	Function
19	A0	AFC	I	Analogue AFC input
20	C0	Key 0	I/O	Local key scan line
21	C1	Key 1	I/O	Local key scan line
22	C2	Key 2	I/O	Local key scan line
23	C3	Key 3	I/O	Local key scan line
24	C4	Key 4	I/O	Local key scan line
25	C5	Option 1	O	Option check out 1 Lo = check, Hi = Normal
26	C6	Option 2	O	Option check out 2 Lo = check, Hi = Normal
27	Vss	Vss	I	Ground
28	C7	Sync Ident		Sync Ident Valid only at AV mode Lo = Valid sync
29	D0			Reserved
30	D1			Reserved
31	D2			Reserved
32	D3			Reserved
33	RED	RED	O	RED OSD output, active Lo
34	GREEN	GREEN	O	GREEN OSD output, active Lo
35	BLUE	BLUE	O	BLUE OSD output, active Lo
36	Yout	Yout	O	Fast Blanking output, active Lo
37	HSYNC	HSYNC	I	Horizontal OSD sync input Polarity : active Lo
38	VSYNC	VSYNC	I	Vertical OSD sync input Polarity : active Lo
39	OSD OSC IN	OSD OSC IN	I	OSD clock input
40	OSD OSC OUT	OSD OSC OUT	O	OSD clock output
41	A2	RF Ident	I	RF Ident Hi = valid Ident
42	TEST	GND		
43	OSC IN	OSC IN	I	Input 4MHz Crystal
44	OSC OUT	OSC OUT	O	Output 4MHz Crystal
45	RESET	RESET	I	Microcontroller reset Input Lo = Status pin active
46	A1	AV2 Ident	I	Input Status pin 8 AV2 source Hi = Status pin active
47	A3	RMC	I	RC—5 Remote control input Active Lo
48	A4	Peaking	O	Peaking control output Active Hi
49	A5	NTSC Ident	I	NTSC Ident signal Active Hi

Table 9-4 Pin Functions (Continued)				
Pin No	Pin Name	Signal Name	I/O	Function
50	A6	AV1 Ident	I	Input Status pin 8 AV1 source Hi =Status pin active
51	SDA	SDA	I/O	IIC BUS Data
52	SCL	SC1	O	IIC BUS Clock
53	A7	Power	O	Power Supply standby output Power Supply on =Hi Power Supply off =Lo
54	Vcc	Vcc	I	Power supply voltage

9-8-2 Local keyboard commands

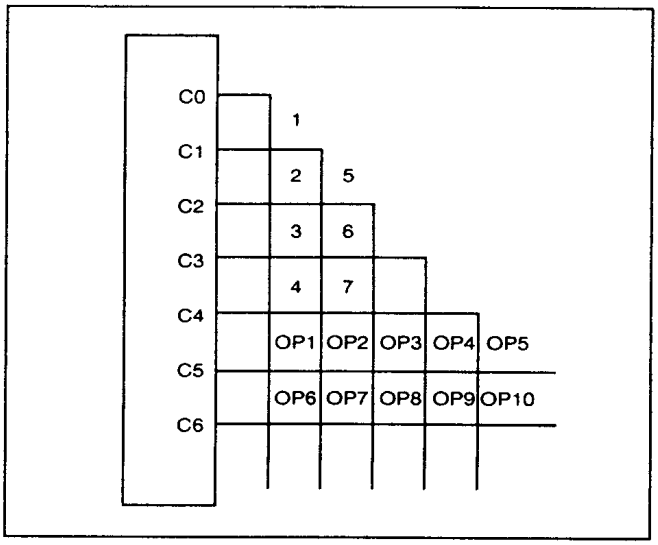


Fig. 9-18

Key No.	key Name	TV	TTX
01	Power	Standby on/off	Standby on/off
02	Up	Menu Up/Program Up	Menu Up/TTX page up
03	Right	Menu Right/Volume Up	Menu Right/Volume Up
04	Function	Function	
05	Down	Menu Down/Prog Down	Menu down/TTX page Down
06	Left	Menu Left/Volume Down	Menu Left/Volume down
07	Status	Status	Status

Opt No	Opt Name	Description	Opt No	Opt Name	Description
01	TTX	Lo =TTX installed	06	Band	Hi =3 Band Lo =UHF Only
02	AV	Hi =1 AV system Lo =2 AV system	07	Woofer	Lo =Woofer volume installed
03	SYSTEM	Hi =SECAM—L Lo =Single system	08	Auto Power	Hi =Auto power on Lo =No Auto power on
04	Peaking	Hi =Peaking installed	09		Reserved
05	TTX Mode	Hi =LIST when power on Lo =FLOF when power on	10	NTSC	Hi =NTSC control enabled

9-9 TELETEXT Section(Option)

9-9-1 SAA5254 Reference Data

SYMBOL	PARAMETER	MIN.	TYP.	MAX.	UNIT
V_{DD}	Supply	4.5	5.0	5.5	volts
I_{DD}	Supply current	—	74	148	mA
V_{syn}	Sync amplitude	0.1	0.3	0.6	volts
V_{vid}	Video amplitude	0.7	1.0	1.4	volts
Temp	Operating ambient temperature	-20	—	+70	°C

9-9-2 SAA5254 Pin Function

Table 9-5 SAA5254 PIN Function

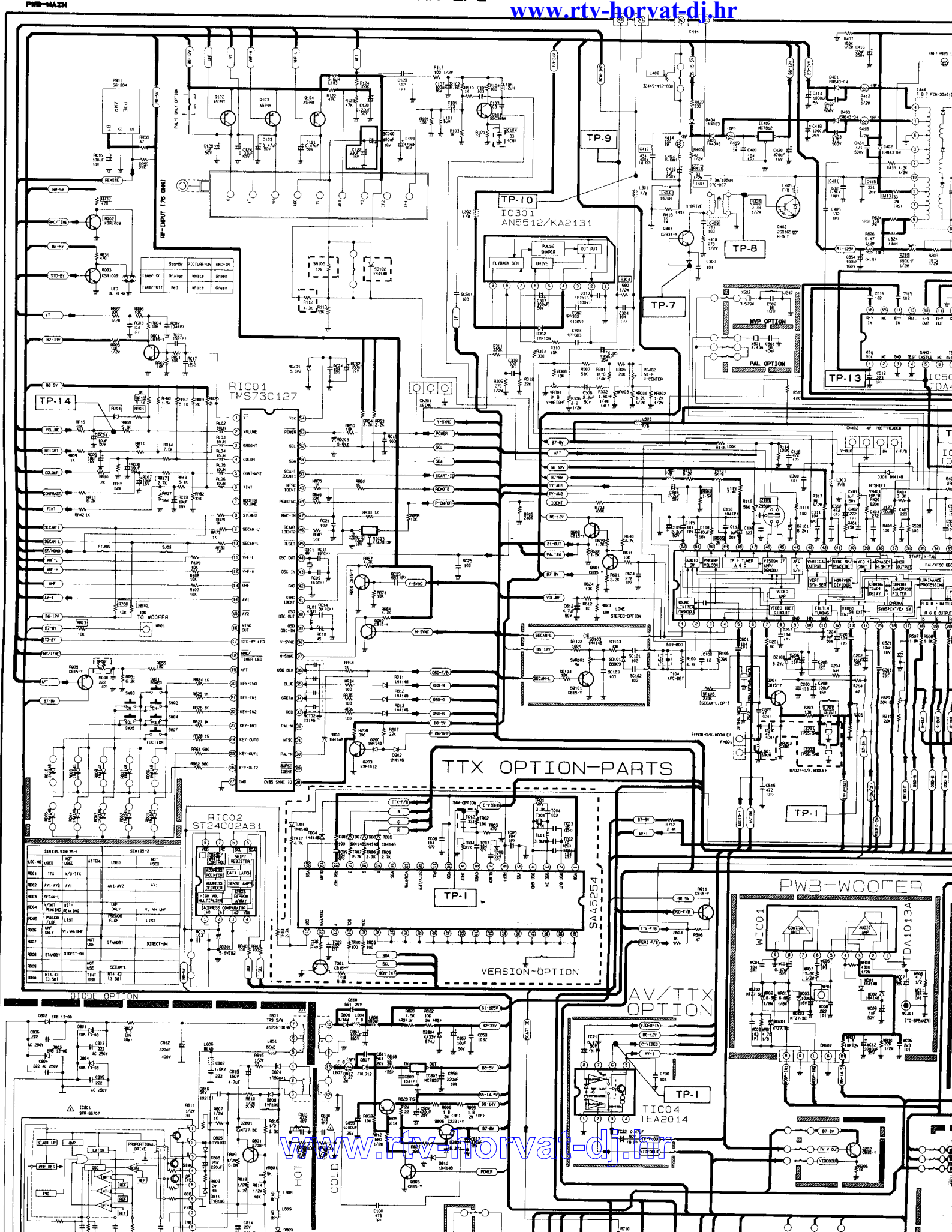
PIN	SYMBOL	FUNCTION	PIN	SYMBOL	FUNCTION
1	VDD	+5V SUPPLY	22	ODD/EVEN	25HZ OUTPUT SYNCHRONIZED TO INPUT CVBS FIELD SYNC PULSES; TO PRODUCES A NON-INTERLACED FIELD ADJUSTMENT OF VERTICAL DEFLECTION CURRENTS.
2	OSC OUT	27MHz CRYSTAL OSCILLATOR OUTPUT			
3	OSC IN	27MHz CRYSTAL OSCILLATOR INPUT			
4	OSC GND	OV CRYSTAI OSCILLATOR GROUND			
5	VSS	OV GROUND	23	Y	DOT RATE CHARACTER OUTPUT OF TELETEXT (FOR BACKGROUND COLOUR INFORMATION)
6	REF+	POSITIVE REFERENCE VOLTAGE FOR ADC			
7	BLACK	VIDEO BLACK LEVEL STORAGE PIN			SERIAL CLOCK INPUT FOR I²C BUS
8	CVBS	COMPOSITE VIDEO INPUT PIN	24	SCL	SERIAL DATA PORT FOR I²C BUS
9	IREF	REFERENCE CURRENT INPUT PIN.	25	SDA	INTERNALLY CONNECTED
10	VDD	+5V SUPPLY	26	I.C	INTERNALLY CONNECTED
11	POL	STTV/LFB/FFB POLARITY SELECTION PIN.	27	I.C	INTERNALLY CONNECTED
12	STTV/LFB	SYNC TO TV OUTPUT PIN	28	I.C	INTERNALLY CONNECTED
13	VCR/FFB	PLL TIME CONSTANT SWITCH/FIELD INPUT PIN.	29	I.C	INTERNALLY CONNECTED
14	VSS	GROUND	30	I.C	INTERNALLY CONNECTED
15	R	RED OUTPUT	31	I.C	INTERNALLY CONNECTED
16	G	GREEN OUTPUT	32	I.C	INTERNALLY CONNECTED
17	B	BLUE OUTPUT	33	I.C	INTERNALLY CONNECTED
18	RGB REF	INPUT DC VOLTAGE (DEFINES THE OUTPUT HIGH LEVEL ON THE RGB PINS).	34	I.C	INTERNALLY CONNECTED
			35	I.C	INTERNALLY CONNECTED
19	BLAN	DOT RATE FAST BLANKING OUTPUT	36	I.C	INTERNALLY CONNECTED
20	VSS	GROUND	37	I.C	INTERNALLY CONNECTED
21	COR	PROGRAMMABLE OUTPUT TO PROVIDE CONTRAST REDUCTION OF THE TV PICTURE FOR MIXED TEXT AND PICTURE DISPLAYS OR WHEN VIEWING. NEWSFLASH/SUBTITLE PAGES. OPEN DRAIN OUTPUT	38	I.C	INTERNALLY CONNECTED
			39	I.C	INTERNALLY CONNECTED

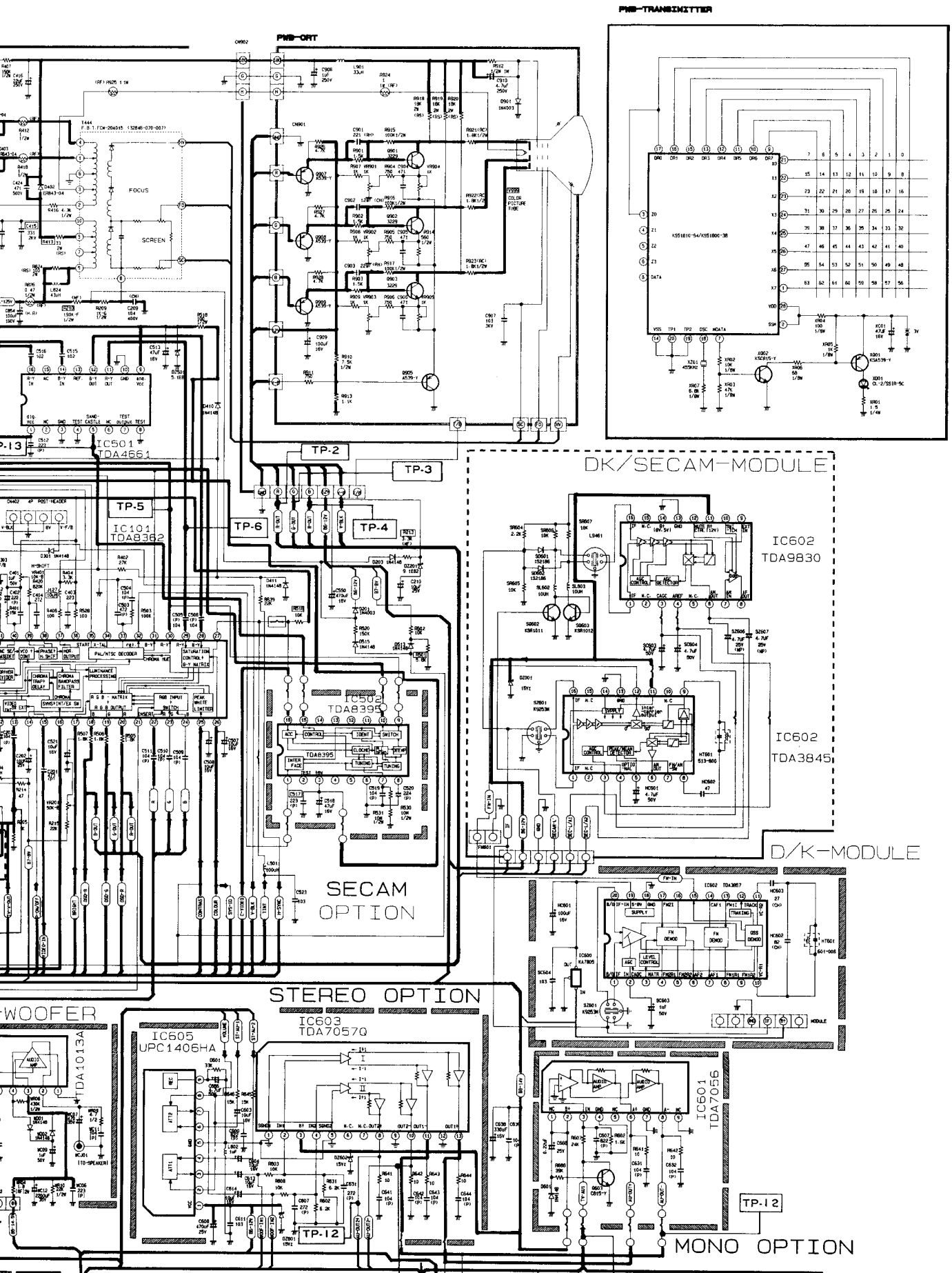
SCHEMATIC DIAGRAM

CHASSIS:P69SA1

SYSTEM: PAL/SECAM – B/G, D/K, PAL-I,
NT4.43, NT3.58(MVP), SECAM-L/L'

PWB-MAIN




PWB-TRANSMITTER
PWB-CRT
FOCUS
SCREEN
IC501
TDA4661
TP-2
TP-3
TP-5
TP-6
TP-4
IC101
TDA8362
DK/SECAM-MODULE
IC602
TDA9830
IC602
TDA3845
D/K-MODULE
IC502
TDA8395
SECAM
OPTION
STEREO OPTION
IC603
TDA7057Q
IC605
UPC1406HA
TDA1013A
IC601
TDA7056
TP-12
MONO OPTION
TP-11
www.rtv-horvat-dj.hr

DIFERENTIAL PARTS FOR SYSTEM

	PAL-B/G	PAL/SEC-B/G	PAL/SECAM B/G.D/K	PAL-I	PAL-II	PAL/SECAM B/G.D/K.N4.N3	PAL-B/G.VIT
C123	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF	DELETE	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF
C121	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF	DELETE	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF	C-ELEC: 50V 0.47uF
C125	C-ELEC: 50V 1uF	C-ELEC: 50V 1uF	C-ELEC: 50V 1uF	DELETE	C-ELEC: 50V 1uF	C-ELEC: 50V 1uF	C-ELEC: 50V 1uF
L201	COIL-PEAK 8.2uH	COIL-PEAK 8.2uH	JUMPER	COIL-PEAK 5.6uH	COIL-PEAK 5.6uH	JUMPER	COIL-PEAK 8.2uH
L601	COIL-PEAK 12uH	COIL-PEAK 12uH	DELETE	COIL-PEAK 10uH	COIL-PEAK 10uH	DELETE	COIL-PEAK 12uH
Q102	TR:539Y	TR:539Y	TR:539Y	DELETE	TR:539Y	TR:539Y	TR:539Y
Q103	TR:539Y	TR:539Y	TR:539Y	DELETE	TR:539Y	TR:539Y	TR:539Y
Q104	TR:539Y	TR:539Y	TR:539Y	DELETE	TR:539Y	TR:539Y	TR:539Y
R107	1/8T 10K	1/8T 10K	1/8T 10K	DELETE	1/8T 10K	1/8T 10K	1/8T 10K
R108	1/8T 10K	1/8T 10K	1/8T 10K	DELETE	1/8T 10K	1/8T 10K	1/8T 10K
R109	1/8T 10K	1/8T 10K	1/8T 10K	DELETE	1/8T 10K	1/8T 10K	1/8T 10K
RD06	DELETE	DELETE	DELETE	DIODE 1N4148	DELETE	DELETE	DELETE
Z101	SAW:G1956M	SAW:G1956M	SAW:G3963	SAW:K2950M	SAW:K2950M	SAW:G3963	SAW:G1956M
Z201	FILTER-CER. TPS5.5MW	FILTER-CER. TPS5.5MW	DELETE	DELETE	DELETE	DELETE	FILTER-CER. TPS5.5MW
Z202	DELETE	DELETE	DELETE	FILTER-CER. TPS6.0MB	FILTER-CER. TPS6.0MB	DELETE	DELETE
Z601	FILTER-CER. SFSH 5.5MCB	FILTER-CER. SFSH 5.5MCB	FILTER-CER. SFSH 5.5MCB	DELETE	DELETE	FILTER-CER. SFSH 5.5MCB	FILTER-CER. SFSH 5.5MCB
Z602	DELETE	DELETE	FILTER-CER. SFSH 6.5MCB	FILTER-CER. SFE 6.0MB	FILTER-CER. SFE 6.0MB	FILTER-CER. SFSH 6.5MCB	DELETE
C517	DELETE	C-POLY:50V 223	C-POLY:50V 223	DELETE	DELETE	C-POLY:50V 223	C-POLY:50V 223
C518	DELETE	C-ELEC:16V 47uF	C-ELEC:16V 47uF	DELETE	DELETE	C-ELEC:16V 47uF	C-ELEC:16V 47uF
C519	DELETE	C-POLY:63V 104	C-POLY:63V 104	DELETE	DELETE	C-POLY:63V 104	C-POLY:63V 104
C520	DELETE	C-POLY:63V 224	C-POLY:63V 224	DELETE	DELETE	C-POLY:63V 224	C-POLY:63V 224
IC502	DELETE	IC:TDA8395	IC:TDA8395	DELETE	DELETE	IC:TDA8395	IC:TDA8395
TU001							
C630	C-CERA:CH 47	C-CERA:CH 47	DELETE	C-CERA:CH 47	C-CERA:CH 47	DELETE	C-CERA:CH 47
MODULE	DELETE	DELETE	3D39-00001-280	DELETE	DELETE	3D39-00001-280	DELETE
FM601	DELETE	DELETE	POST-HEAD.:3P	DELETE	DELETE	POST-HEAD.:3P	DELETE
SC601	DELETE	DELETE	C-CERA:50V 103	DELETE	DELETE	C-CERA:50V 103	DELETE
C523	DELETE	DELETE	C-CERA:50V 103	DELETE	DELETE	C-CERA:50V 103	C-CERA:50V 103
L501	DELETE	DELETE	COIL-PEAK AL02-101K	DELETE	DELETE	COIL-PEAK AL02-101K	COIL-PEAK AL02-101K
R516	1/8T 10K-J	1/8T 10K-J	1/8T 10K-J	1/8T 10K-J	1/8T 10K-J	DELETE	DELETE
RC19	DELETE	DELETE	DELETE	DELETE	DELETE	C-ELEC:16V10uF	C-ELEC:16V10uF
RD10	DELETE	DELETE	DELETE	DELETE	DELETE	DIODE:1N4148	DIODE:1N4148
RL06	DELETE	DELETE	DELETE	DELETE	DELETE	COIL-PEAK AL02-100K	COIL-PEAK AL02-100K
RR20	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 2.4K-J	1/8T 2.4K-J
RR37	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 56K-J	1/8T 56K-J
RR42	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 1K-J	1/8T 1K-J
RR43	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 5.1K-J	1/8T 5.1K-J
X502	DELETE	DELETE	DELETE	DELETE	DELETE	X-TAL:3.579545	X-TAL:3.579545
R513	1/8T 47K-J	1/8T 47K-J	1/8T 47K-J	1/8T 47K-J	1/8T 47K-J	DELETE	DELETE
A-A	DELETE	DELETE	DELETE	DELETE	DELETE	1/2T 10M-J	DELETE
B-B	DELETE	DELETE	DELETE	DELETE	DELETE	1/2T 10M-J	DELETE

	PAL/SEC-B/G 21PIN SCART	PAL/SEC-B/G SECAM-L'/L
C117	C-ELEC 50V 1uF	C-ELEC 50V 4.7uF
C124	C-ELEC 50V 0.33uF	C-ELEC 50V 1uF
C609	C-ELEC 50V 10uF(NP)	C-ELEC 25V 22uF(NP)
C615	C-POLY:63V 472	C-CERA:50V 471
C706	DELETE	C-ELEC 50V 10uF(NP)
IC101	TDA8362B/N3	TDA8362/N3
IC504	DELETE	TC4053BP
MODULE	DELETE	3D39-00001-290
R609	1/8T 5.6K-J	1/8T 6.2K-J
R661	1/8T 5.6K-J	1/8T 6.2K-J
R708	DELETE	1/8T 10K-J
RD03	DELETE	DIODE:1N148
RR30	DELETE	1/8T 1K-J
RR70	DELETE	1/8T 5.1K-J
RR73	DELETE	1/8T 100-J
SC101	DELETE	C-CERA:50V 102
SC102	DELETE	C-CERA:50V 102
SC103	DELETE	C-CERA:50V 103
SC601	DELETE	C-CERA:50V 103
SD101	DELETE	VARACTOR:BB809
SD102	DELETE	DIODE:1N148
SD103	DELETE	DIODE:1N148
SQ101	DELETE	TR:C815-Y
SQ701	DELETE	TR:C815-Y
SR101	DELETE	1/8T 100K-J
SR102	DELETE	1/8T 100K-J
SR103	DELETE	1/8T 33K-J
SR104	DELETE	1/8T 10K-J
SR105	DELETE	1/8T 12K-J
SR612	DELETE	1/8T 9.1K-J
SR702	DELETE	1/8T 10K-J
SR703	DELETE	1/8T 51K-J
SVR101	DELETE	VR:50K-J
****	DELETE	C-ELEC. 50V 22uF
J128	JUMPER (Q602 EMITTER)	DELETE
J128A	DELETE	JUMPER (21PIN 1.3)
J130	DELETE	JUMPER (21PIN 2.4)
J130B	JUMPER (21PIN 2.4)	DELETE
STJ10	DELETE	JUMPER (4053#2)
STJ19	DELETE	JUMPER (4053#5)
SJ09	DELETE	JUMPER (4053#4)
J142	DELETE	JUMPER (4053#11)
J360	DELETE	JUMPER (MICOM#8)
J148	DELETE	JUMPER (4053#10)
STJ20	DELETE	JUMPER (4053#2)
SJ02	DELETE	JUMPER (MICOM#10)
STJ01D	DELETE	JUMPER (Q602 EMITTER)
J166	DELETE	JUMPER (AU-IN-L)
J161	DELETE	JUMPER (4053#9)
Z101	G1956	K2960
C122	16V.22uF	16V.100uF
SC000	DEL	16V.100uF

	21PIN-JACK	AV-IN/OUT-JACK
C627	C-CERA:CH 101	DELETE
C628	C-CERA:CH 101	DELETE
C629	C-CERA:CH 101	DELETE
RCJ01	FERI-JACK	A3040-0103
RCJ02	DELETE	A3040-0108
J098	JUMPER	DELETE
J121	DELETE	JUMPER

	STEREO	WOOFER
RR23	DELETE	1/8T 10K-J
WP01	DELETE	GT-PIN:1PIN
CN602	DELETE	POST-HEAD:5PIN
J140	DELETE	JUMPER
WJ001	DELETE	JUMPER

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.

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)

RESISTOR	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RM)
Fusible	(RF)
Cement.Wire	(RW)
Network	(RN)

DIFERENTIAL PARTS FOR CRT

	14INCH-SED	14INCH-PHILIPS	20INCH-SED	20INCH-WF	21INCH-SED
CRT	A34KQV42X	A34EAC01X06	A48KRD82X	A48ECR11X16	A51KTB83X:1R A51KQJ63X:1.7R
R925	R-FUSE:2T 1.8-J	R-FUSE:2T 1.8-J	R-FUSE:1T 1.0-J	R-FUSE:1T 1.0-J	R-FUSE:1T 1.0-J
R924	R-FUSE:1T 0.47-J	R-FUSE:1T 1.0-J	R-FUSE:1T 1.0-J	R-FUSE:1T 1.0-J	R-FUSE:1T 1.0-J
C417	C-M.POLY:400V 364	C-M.POLY:400V 364	C-M.POLY:400V 434	C-M.POLY:400V 434	C-M.POLY:400V 434
R213	R-CAR.:1/8T 2K-J	R-CAR.:1/8T 2K-J	R-CAR.:1/8T 3.3K-J	R-CAR.:1/8T 3.3K-J	R-CAR.:1/8T 3.3K-J
Q402	2SD1650 2SD1711	2SD1650 2SD1711	KSD5072YD	KSD5072YD	KSD5072YD
T444	FTK14A004P	FTK14A004P	FCM20A015	FCM20A015	FCM20A015
L404	32449-730-010	32449-730-010	32446-705-040	32446-705-040	32446-705-040
CN802	32479-029-380	32479-029-380	A1149-0011:FREEVOLT A1149-0013:220VOLT	A1149-0011:FREEVOLT A1149-0013:220VOLT	A1149-0010:FREEVOLT A1149-0012:220VOLT
C411	C-FILM:1.6KV 632	C-FILM:1.6KV 722	C-FILM:1.6KV 632	C-FILM:1.6KV 722	C-FILM:1.6KV 632
C415	C-CERA:2KV 681	C-CERA:2KV 331	DELETE	C-CERA:2KV 331	C-CERA:2KV 331
R501	R-CAR.:1/8T 3.6K-J	R-CAR.:1/8T 3.6K-J	R-CAR.:1/8T 5.6K-J	R-CAR.:1/8T 5.6K-J	R-CAR.:1/8T 5.6K-J
C409	C-POLY:63V 103	C-POLY:63V 103	C-POLY:63V 822	C-POLY:63V 822	C-POLY:63V 822
V999	A3047-0013(MINI)	A3047-0013(MINI)	A3047-0010(HIBI)	A3047-0010(HIBI)	A3047-0010(HIBI)
L402	JUMPER	WIDTH-COIL(412-650)	JUMPER	WIDTH-COIL(412-680)	WIDTH-COIL(412-680)
R411	R-CAR.:1/2T 10-J	R-CAR.:1/2T 10-J	R-CAR.:1/2T 33-J	R-CAR.:1/2T 33-J	R-CAR.:1/2T 33-J
R304	R-CAR.:1/2T 680-J	R-CAR.:1/2T 330-J	R-CAR.:1/2T 330-J	R-CAR.:1/2T 680-J	R-CAR.:1/2T 330-J
R421	JUMPER	JUMPER	R-CAR.:1/2T 0.39-J	R-CAR.:1/2T 0.39-J	R-CAR.:1/2T 0.39-J
R405	R-CAR.:1/2T 12-J	R-CAR.:1/2T 12-J	R-CAR.:1/2T 47-J	R-CAR.:1/2T 47-J	R-CAR.:1/2T 47-J
R312	R-CAR.:1/8T 33K-J	R-CAR.:1/8T 33K-J	R-CAR.:1/8T 22K-J	R-CAR.:1/8T 22K-J	R-CAR.:1/8T 22K-J
RR17	R-CAR.:1/8T 6.8K-J	R-CAR.:1/8T 6.8K-J	R-CAR.:1/8T 2.7K-J	R-CAR.:1/8T 2.7K-J	R-CAR.:1/8T 2.7K-J

DIFERENTIAL PARTS FOR FUNCTION

(*OPP.=OPPOSITE)

	AV-IN/OUT (TV-OUT.MONO)	LINE-STEREO (MONITOR-OUT)
IC601	TDA7056	DELETE
IC603	DELETE	TDA7057Q
IC605	DELETE	UPC1406HA
IC604	DELETE	TC4053BP
C666	C-ELEC. 25V 0.22uF	C-ELEC. 50V 4.7uF(OPP)
D601	DIODE:1N4148	1/8T 39K-J
R666	1/8T 39K-J	JUMPER
Q603	TR:C815-Y	DELETE
C606	C-ELEC. 50V 2.2uF	DELETE

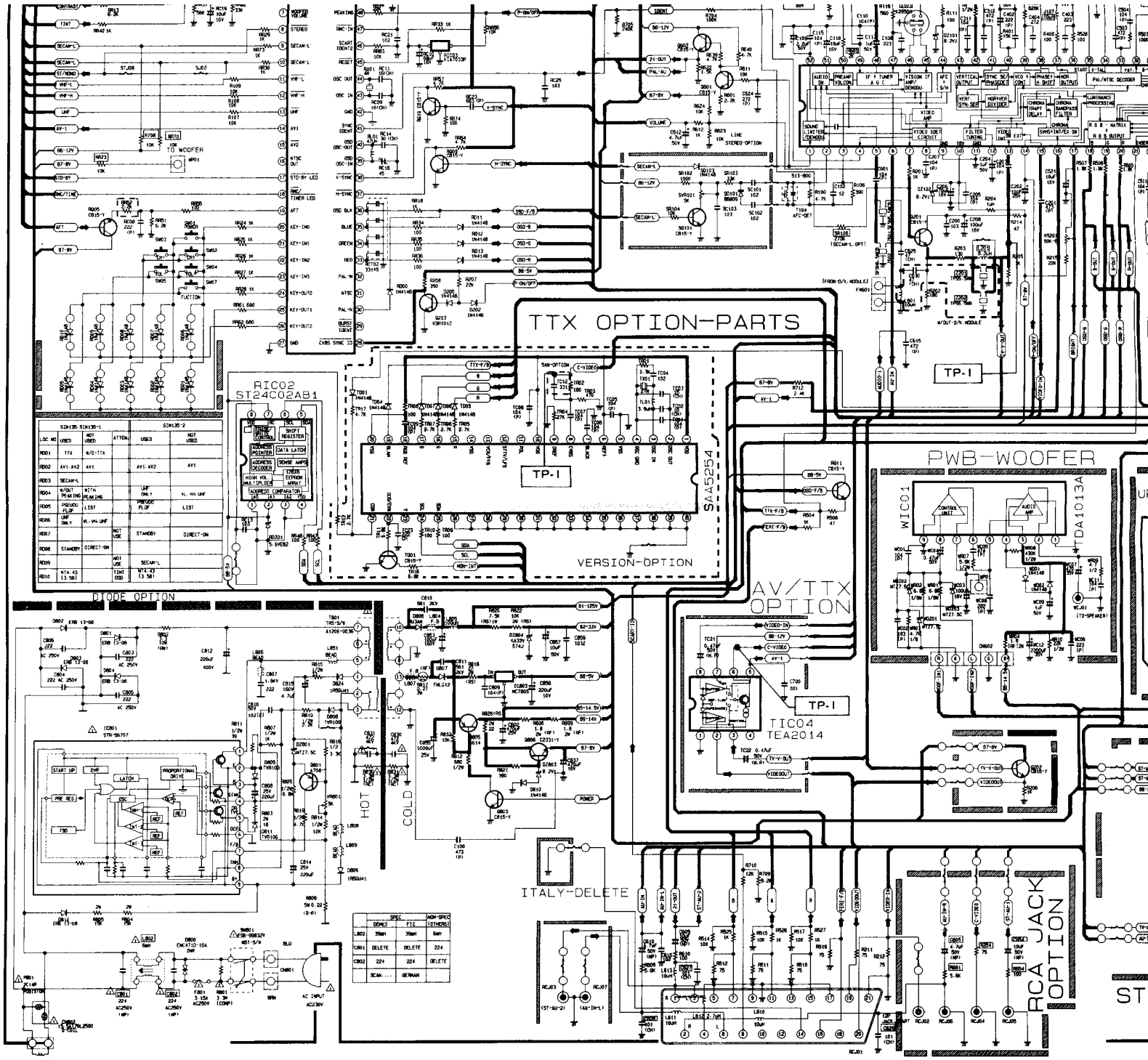
	AV-IN/OUT (TV-OUT.MONO)	LINE-STEREO (MONITOR-OUT)
R646	DELETE	1/8T 39K-J
RC04	C-ELEC. 50V 2.2uF	C-ELEC. 50V 10uF
R662	DELETE	1/8T 47K-J
R605	1/8T 1K-J	1/8T 24K-J
STJ21	DELETE	JUMPER (8362#50SHORT)
J139	JUMPER (8362#50LONG)	DELETE
STJ20D	DELETE	JUMPER (4053#12)
STJ07	DELETE	JUMPER (4053#13)

	TELETEXT	W/O-TELETEXT
RCT03	C-NETWORK 331*4	DELETE
RD01	DIODE:1N4148	DELETE
RD05	DIODE:1N4148 (OPTION)	DELETE
TC01	C-POLY:63V 104	DELETE
TC02	C-CERA. 50V CH 100-J	DELETE
TC03	C-CERA. 50V CH 150-J	DELETE
TC04	C-CERA. 50V 102-K	DELETE
TC05	C-POLY. 63V 104-J	DELETE
TC06	C-POLY. 63V 104-J	DELETE

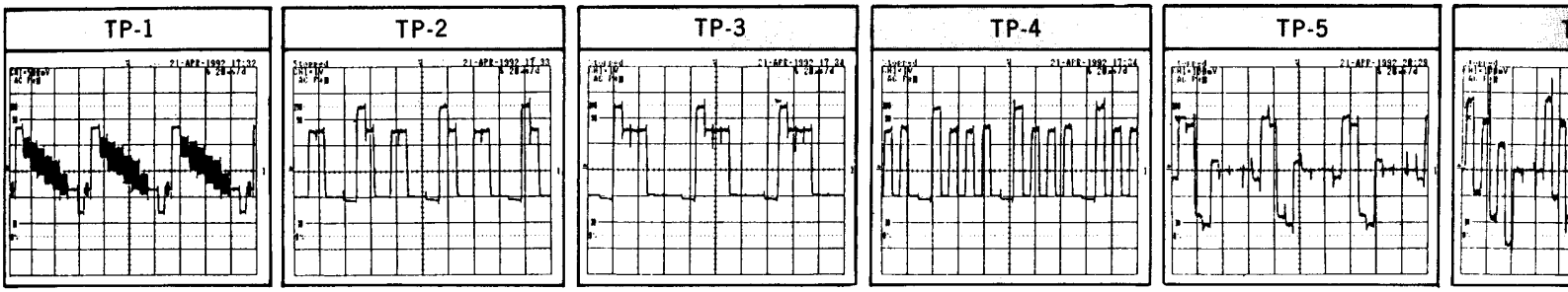
	LINE-STEREO (MONITOR-OUT)	SECAM-L'/L
IC601	DELETE	IC:TDA7056
IC603	TDA7057Q	DELETE
IC605	UPC1406HA	DELETE
R654	1/8T 100-J	DELETE
C666	C-ELEC. 50V 4.7uF(OPP)	C-ELEC. 25V 0.22uF
D601	1/8T 33K-J	DIODE:1N4148
R666	JUMPER	1.8T 39K-J
Q603	DELETE	TR:C815-Y
C606	DELETE	C-ELEC. 50V 2.2uF

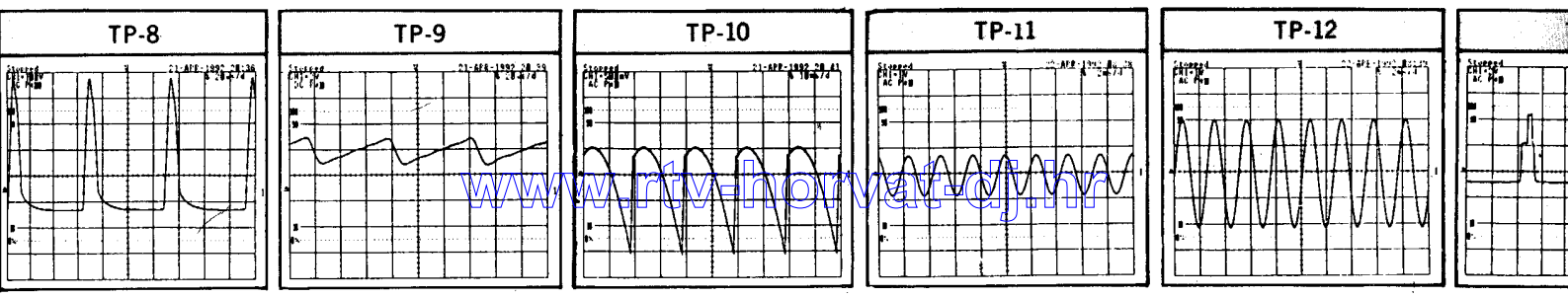
	LINE-STEREO (MONITOR-OUT)	SECAM-L'/L
R646	1/8T 39K-J	DELETE
R699		
R606		
R662	1/8T 47K-J	DELETE
R605	1/8T 24K-J	1/8T 1K-J
MODULE	3D39-00001-280	3D39-00001-290
RR73	DELETE	1/8T 100-J
RR30	DELETE	1/8T 1K-J
R708	DELETE	1/8T 10K-J

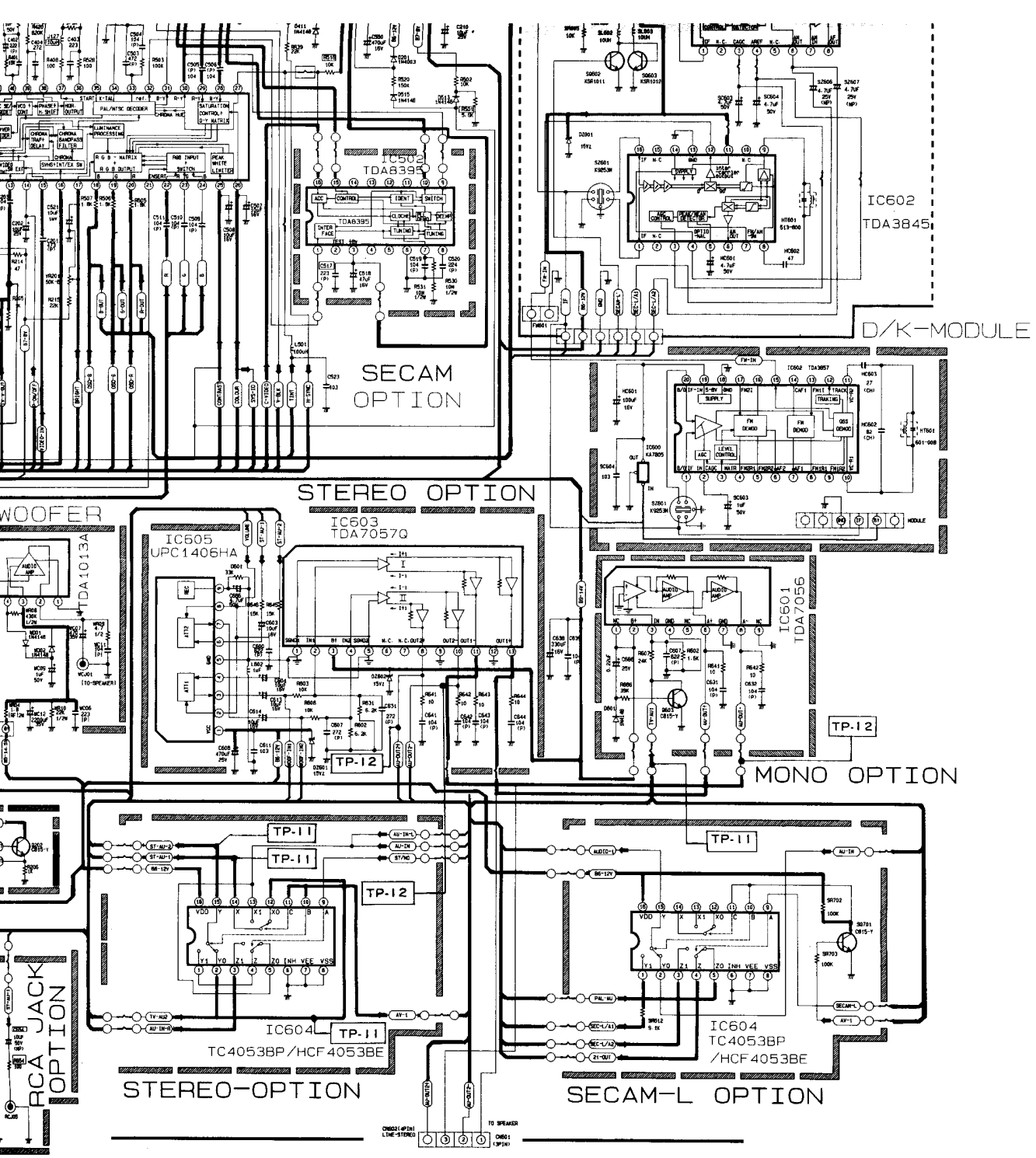
	LINE-STEREO (MONITOR-OUT)	SECAM-L'/L
STJ01	JUMER (4053#13)	DELETE
STJ06	JUMER (4053#15)	DELETE
STJ04	JUMER (AU-IN-R)	DELETE
STJ03	JUMER (AU-OUT-L)	DELETE
STJ15	JUMER (AU-OUT-L)	DELETE
STJ05	JUMER (AU-IN-R)	DELETE
J121	DELETE	JUMPER (21PIN #2/4)
J271	JUMPER (1406HA#2.8)	DELETE
J150	JUMPER (J271 PAT)	DELETE

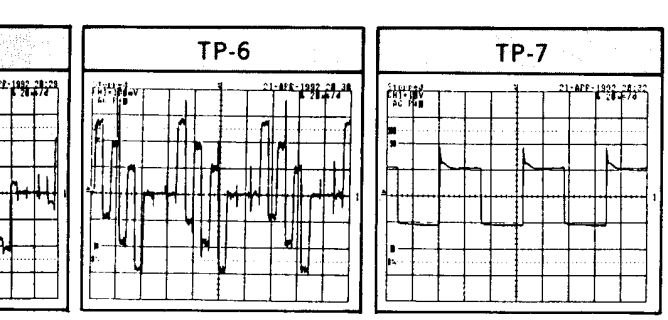


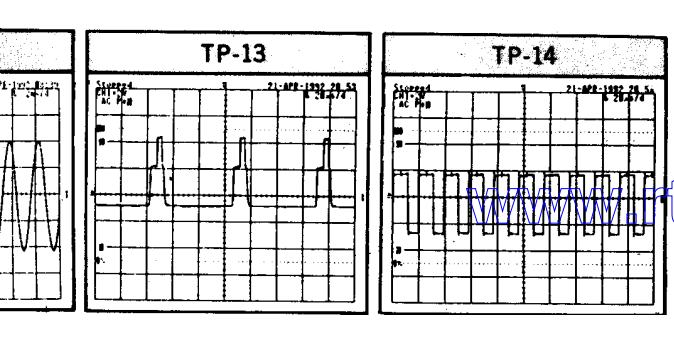
TESTPOINT WAVEFROM











DIFE

	A (TV
IC501	
IC603	
IC605	
IC604	
C666	(N
D601	DI
R666	1/
Q603	TI
C606	5/
R607	1/
C604	
C603	
C614	
C613	
R608	
R603	
R631	
C631	
DZ602	
DZ601	
C608	
C611	
R643	
R644	
C643	
C644	
CN601	P
CN603	
CN602	
R623	
R624	
C612	C 50
RR29	
RR16	1/
R661	
C605	
C654	
R611	1/8
R601	1/8
R639	1/8
R640	1/8
Q601	TR
Q602	TR
R622	1/8T
RR70	DE
R602	
R645	DE

AL06	DELETE	DELETE	DELETE	DELETE	DELETE	COIL-PEAK AL02-100K	COIL-PEAK AL02-100K
RR20	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 2.4K-J	1/8T 2.4K-J
RR37	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 56K-J	1/8T 56K-J
RR42	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 1K-J	1/8T 1K-J
RR43	DELETE	DELETE	DELETE	DELETE	DELETE	1/8T 5.1K-J	1/8T 5.1K-J
X502	DELETE	DELETE	DELETE	DELETE	DELETE	X-TAL-3.579545	X-TAL-3.579545
R513	1/8T 47K-J	1/8T 47K-J	1/8T 47K-J	1/8T 47K-J	1/8T 47K-J	DELETE	DELETE
A-A	DELETE	DELETE	DELETE	DELETE	DELETE	1/2T 10M-J	DELETE
B-B	DELETE	DELETE	DELETE	DELETE	DELETE	1/2T 10M-J	DELETE

SVR101	DELETE	VR-50K-J
****	DELETE	C-ELEC. 50V 22uF
J128	JUMPER (Q602 EMITTER)	DELETE
J128A	DELETE	JUMPER (21PIN 1.3)
J130	DELETE	JUMPER (21PIN 2.4)
J130B	JUMPER (21PIN 2.4)	DELETE
STJ10	DELETE	JUMPER (4053#2)
STJ19	DELETE	JUMPER (4053#5)
SJ09	DELETE	JUMPER (4053#4)
J142	DELETE	JUMPER (4053#11)
J360	DELETE	JUMPER (MICOM#8)
J148	DELETE	JUMPER (4053#10)
STJ20	DELETE	JUMPER (4053#2)
SJ02	DELETE	JUMPER (MICOM#10)
STJ010	DELETE	JUMPER (Q602 EMITTER)
J166	DELETE	JUMPER (AU-IN-L)
J161	DELETE	JUMPER (4053#9)
Z101	61956	K2960
C122	16V-22uF	16V-100uF
SC000	DEL	16V-100uF

RESISTOR	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RM)
Fusible	(RF)
Cement Wire	(RW)
Network	(RN)

DIFERENTIAL PARTS FOR CRT

	14INCH-SEC	14INCH-PHILIPS	20INCH-SEC	20INCH-WF	21INCH-SEC
CRT	A34KGV42X	A34EAC01X06	A48KRD82X	A48ECR11X16	A51KTB83X+1R A51KGJ63X+1.7R
R925	R-FUSE-2T 1.8-J	R-FUSE-2T 1.8-J	R-FUSE-1T 1.0-J	R-FUSE-1T 1.0-J	R-FUSE-1T 1.0-J
R924	R-FUSE-1T 0.47-J	R-FUSE-1T 1.0-J	R-FUSE-1T 1.0-J	R-FUSE-1T 1.0-J	R-FUSE-1T 1.0-J
C417	C-M.POLY-400V 364	C-M.POLY-400V 364	C-M.POLY-400V 434	C-M.POLY-400V 434	C-M.POLY-400V 434
R213	R-CAR.-1/8T 2K-J	R-CAR.-1/8T 2K-J	R-CAR.-1/8T 3.3K-J	R-CAR.-1/8T 3.3K-J	R-CAR.-1/8T 3.3K-J
Q402	2SD1650 2SD1711	2SD1650 2SD1711	KSD5072YD	KSD5072YD	KSD5072YD
T444	FTK14A004P	FTK14A004P	FCM20A015	FCM20A015	FCM20A015
L404	32449-730-010	32449-730-010	32446-705-040	32446-705-040	32446-705-040
CN802	32479-029-380	32479-029-380	A1149-0011-FREEVOLT A1149-0013-220VOLT	A1149-0011-FREEVOLT A1149-0013-220VOLT	A1149-0010-FREEVOLT A1149-0012-220VOLT
C411	C-FILM-1.6KV 632	C-FILM-1.6KV 722	C-FILM-1.6KV 632	C-FILM-1.6KV 722	C-FILM-1.6KV 632
C415	C-CERA-2KV 681	C-CERA-2KV 331	DELETE	C-CERA-2KV 331	C-CERA-2KV 331
R501	R-CAR.-1/8T 3.6K-J	R-CAR.-1/8T 3.6K-J	R-CAR.-1/8T 5.6K-J	R-CAR.-1/8T 5.6K-J	R-CAR.-1/8T 5.6K-J
C409	C-POLY-63V 103	C-POLY-63V 103	C-POLY-63V 822	C-POLY-63V 822	C-POLY-63V 822
V999	A3047-0013(MINI)	A3047-0013(MINI)	A3047-0010(HIBI)	A3047-0010(HIBI)	A3047-0010(HIBI)
L402	JUMPER	WIDTH-COIL(412-650)	JUMPER	WIDTH-COIL(412-680)	WIDTH-COIL(412-680)
R411	R-CAR.-1/2T 10-J	R-CAR.-1/2T 10-J	R-CAR.-1/2T 33-J	R-CAR.-1/2T 33-J	R-CAR.-1/2T 33-J
R304	R-CAR.-1/2T 680-J	R-CAR.-1/2T 330-J	R-CAR.-1/2T 330-J	R-CAR.-1/2T 680-J	R-CAR.-1/2T 330-J
R421	JUMPER	JUMPER	R-CAR.-1/2T 0.39-J	R-CAR.-1/2T 0.39-J	R-CAR.-1/2T 0.39-J
R405	R-CAR.-1/2T 12-J	R-CAR.-1/2T 12-J	R-CAR.-1/2T 47-J	R-CAR.-1/2T 47-J	R-CAR.-1/2T 47-J
R312	R-CAR.-1/8T 33K-J	R-CAR.-1/8T 33K-J	R-CAR.-1/8T 22K-J	R-CAR.-1/8T 22K-J	R-CAR.-1/8T 22K-J
RR17	R-CAR.-1/8T 6.8K-J	R-CAR.-1/8T 6.8K-J	R-CAR.-1/8T 2.7K-J	R-CAR.-1/8T 2.7K-J	R-CAR.-1/8T 2.7K-J

DIFERENTIAL PARTS FOR FUNCTION

(*OPP.=OPPOSITE)

	AV-IN/OUT (TY-OUT-MONO)	LINE-STEREO (MONITOR-OUT)
IC601	TDA7056	DELETE
IC603	DELETE	TDA7057Q
IC605	DELETE	UPC1406HA
IC804	DELETE	TC40538P
C666	C-ELEC. 25V 0.22uF	C-ELEC. 50V 4.7uF(OPP)
D601	DIODE-1N4148	1/8T 39K-J
R666	1/8T 39K-J	JUMPER
Q603	TR-C815-Y	DELETE
C606	C-ELEC. 50V 2.2uF	DELETE
R607	1/8T 24K-J	DELETE
C604	DELETE	C-ELEC. 16V 10uF
C603	DELETE	C-ELEC. 16V 10uF
C614	DELETE	C-ELEC. 16V 10uF
C613	DELETE	C-ELEC. 16V 10uF
R608	DELETE	1/8T 13K-J
R603	DELETE	1/8T 13K-J
R631	DELETE	1/8T 12K-J
C631	DELETE	C-POLY 63V 272
DZ602	DELETE	DIODE-ZENER MTZ15C
DZ601	DELETE	DIODE-ZENER MTZ15C
C608	DELETE	C-ELEC. 25V 470uF
C611	DELETE	C-CERA. 50V 103
R643	DELETE	1/8T 10-J
R644	DELETE	1/8T 10-J
C643	DELETE	C-POLY. 63V 104
C644	DELETE	C-POLY. 63V 104
CN601	POST-3PIN	DELETE
CN603	DELETE	POST-4PIN
CN602	DELETE	POST-5PIN (FOR WOOFER)
R623	DELETE	1/8T 10K-J
R624	DELETE	1/8T 10K-J
C612	C-ELEC. 50V 4.7uF	DELETE
RR29	DELETE	1/8T 1K-J
RR16	1/8T 1K-J	1/8T 9.1K-J
R661	DELETE	1/8T 5.6K-J
C605	DELETE	C-ELEC. 50V 4.7uF(NP)
C654	DELETE	C-ELEC. 50V 10uF(NP)
R611	1/8T 10K-J	DELETE
R601	1/8T 2.2K-J	DELETE
R639	1/8T 4.7K-J	DELETE
R640	1/8T 4.7K-J	DELETE
Q601	TR-C815-Y	DELETE
Q602	TR-C815-Y	DELETE
R622	1/8T 1.5K-J	DELETE
RR70	DELETE	1/8T 10K-J
R602		1/8T 12K-J
R645	DELETE	1/8T 39K-J

	AV-IN/OUT (TV-OUT-MONO)	LINE-STEREO (MONITOR-OUT)
R646	DELETE	1/8T 39K-J
RC04	C-ELEC. 50V 2.2uF	C-ELEC. 50V 10uF
R662	DELETE	1/8T 47K-J
R605	1/8T 1K-J	1/8T 24K-J
STJ21	DELETE	JUMPER (8362#50SHORT)
J139	JUMPER (8362#50LONG)	DELETE
STJ20D	DELETE	JUMPER (4053#12)
STJ07	DELETE	JUMPER (4053#13)
J166	DELETE	JUMPER (AU-IN-L)
STJ11	DELETE	JUMPER (4053#14)
STJ16	DELETE	JUMPER (1406HA#2-8)
STJ10	DELETE	JUMPER (4053#2)
STJ12	DELETE	JUMPER (4053#3)
STJ19	DELETE	JUMPER (4053#5)
STJ09	DELETE	JUMPER (4053#4)
STJ25	DELETE	JUMPER (4053#1)
J360	DELETE	JUMPER (MICOM#8)
J161	DELETE	JUMPER (4053#9)
J148	DELETE	JUMPER (4053#10.11)
J601	DELETE	JUMPER (1406HA#8)
J147	JUMPER (7056#2)	DELETE
J361	JUMPER (7056#6)	DELETE
STJ01	DELETE	JUMPER (4053#13)
STJ04	DELETE	JUMPER (AU-IN-R)
J130	DELETE	JUMPER (AU-IN-L)
J130B	JUMPER (AU-IN)	DELETE
STJ03	DELETE	JUMPER (AU-OUT-L)
STJ15	DELETE	JUMPER (AU-OUT-L)
STJ05	DELETE	JUMPER (AU-IN-R)
J121	JUMPER (21PIN 2-6)	DELETE
J271	DELETE	JUMPER (1406HA#2-8)
J150	DELETE	JUMPER (J271 PATTERN)
J149	JUMPER (J150 PATTERN)	DELETE
J143	JUMPER (J149 PATTERN)	DELETE
J209	JUMPER (8362#1)	DELETE
J208	JUMPER (8362#6)	DELETE
J666	DELETE	JUMPER (7057#1)
RCJ01	JACK-PIN-2PIN	DELETE
RCJ02	JACK-BLOCK-2PIN	JACK-BLOCK-6PIN

	TELETEXT	W/O-TELETEXT
RC103	C-NETWORK 33144	DELETE
RD01	DIODE-1N4148	DELETE
RD05	DIODE-1N4148 (OPTION)	DELETE
TC01	C-POLY-63V 104	DELETE
TC02	C-CERA. 50V CH 100-J	DELETE
TC03	C-CERA. 50V CH 150-J	DELETE
TC04	C-CERA. 50V 102-K	DELETE
TC05	C-POLY. 63V 104-J	DELETE
TC06	C-POLY. 63V 104-J	DELETE
TC07	C-POLY. 63V 104-J	DELETE
TC08	C-POLY. 63V 104-J	DELETE
TC09	C-POLY. 63V 104-J	DELETE
TC12 (CB-CX)	C-CERA. 50V 331-J	DELETE
TC12 (CK-CW)	C-CERA. 50V RH 181-J	DELETE
TD01	DIODE-1N4148	DELETE
TD04	DIODE-1N4148	DELETE
TD05	DIODE-1N4148	DELETE
TD06	DIODE-1N4148	DELETE
TD07	DIODE-1N4148	DELETE
TIC01	SAA5254P/E	DELETE
TIC01	SAA5254P/H	DELETE
TIC01	SAA5254P/T	DELETE
TL01	COIL-3.9UH	DELETE
TQ01	TR-C815-Y	DELETE
TR01	1/8T 3.3K	DELETE
TR02	1/8T 180	DELETE
TR03	1/8T 470 -	DELETE
TR04	1/8T 27K	DELETE
TR05	1/8T 2.7K	DELETE
TR06	1/8T 2.7K	DELETE
TR07	1/8T 2.7K	DELETE
TR08	1/8T 100	DELETE
TR09	1/8T 100	DELETE
TR10	1/8T 100	DELETE
TR11	1/8T 6.8K	DELETE
TR13	1/8T 2.7K	DELETE
TR16	1/8T 6.8K	DELETE
TR17	1/8T 4.7K	DELETE
TX01	X-TAL(27MHz (PHILIPS)	DELETE
TC23	C-CERA. 50V 222-Z	DELETE

	LINE-STEREO (MONITOR-OUT)	SECAM-L'/L
IC601	DELETE	IC-TDA7056
IC603	TDA7057Q	DELETE
IC605	UPC1406HA	DELETE
R654	1/8T 100-J	DELETE
C666	C-ELEC. 50V 4.7uF(OPP)	C-ELEC. 25V 0.22uF
D601	1/8T 33K-J	DIODE-1N4148
R666	JUMPER	1-8T 39K-J
Q603	DELETE	TR-C815-Y
C606	DELETE	C-ELEC. 50V 2.2uF
R607	DELETE	1/8T 24K-J
C604	C-ELEC. 16V 10uF	DELETE
C603	C-ELEC. 16V 10uF	DELETE
C614	C-ELEC. 16V 10uF	DELETE
C613	C-ELEC. 16V 10uF	DELETE
R608	1/8T 13K-J	DELETE
R603	1/8T 13K-J	DELETE
R631	1/8T 12K-J	DELETE
C631	C-POLY. 63V 272	DELETE
DZ602	DIODE-ZENER MTZ15C	DELETE
DZ601	DIODE-ZENER MTZ15C	DELETE
C608	C-ELEC. 25V 470uF	DELETE
C611	C-CERA. 50V 103	DELETE
R643	1/8T 10-J	DELETE
R644	1/8T 10-J	DELETE
C643	C-POLY. 63V 104	DELETE
C644	C-POLY. 63V 104	DELETE
CN601	DELETE	POST-3PIN
CN603	POST-4PIN	DELETE
CN602	POST-5PIN (FOR WOOFER)	DELETE
R623	1/8T 10K-J	DELETE
R624	1/8T 10K-J	DELETE
C612	DELETE	C-ELEC. 50V 4.7uF
RR29	1/8T 1K-J	DELETE
RR16	1/8T 9.1K-J	1/8T 1K-J
R661	1/8T 5.6K-J	1/8T 6.2K-J
C605	C-ELEC. 50V 10uF(NP)	DELETE
C654	C-ELEC. 50V 10uF(NP)	DELETE
R611	DELETE	1/8T 10K-J
R601	DELETE	1/8T 2.2K-J
R639	DELETE	1/8T 4.7K-J
R640	DELETE	1/8T 4.7K-J
Q601	DELETE	TR-C815-Y
Q602	DELETE	TR-C815-Y
R622	DELETE	1/8T 1.5K-J
RR70	1/8T 10K-J	1/8T 5.1K-J
R602	1/8T 12K-J	1/8T 1.6K-J
R645	1/8T 39K-J	DELETE

	LINE-STEREO (MONITOR-OUT)	SECAM-L'/L
R646	1/8T 39K-J	DELETE
R699		
R606		
R662	1/8T 47K-J	DELETE
R605	1/8T 24K-J	1/8T 1K-J
MODULE	3D39-00001-280	3D39-00001-290
RR73	DELETE	1/8T 100-J
RR30	DELETE	1/8T 1K-J
R708	DELETE	1/8T 10K-J
SR104	DELETE	1/8T 10K-J
SR702	DELETE	1/8T 10K-J
SR101	DELETE	1/8T 100K-J
SR102	DELETE	1/8T 100K-J
SR105	DELETE	1/8T 12K-J
SR103	DELETE	1/8T 33K-J
SR703	DELETE	1/8T 51K-J
R609	1/8T 5.6K-J	1/8T 6.2K-J
SR612	DELETE	1/8T 9.1K-J
SVR101	DELETE	VR-50K
C615	C-POLY-63V 472	C-CERA. 50V 471-K
SC101	DELETE	C-CERA 50V 102
SC102	DELETE	C-CERA 50V 102
SC103	DELETE	C-CERA 50V 103
C124	C-ELEC 50V 0.33uF	C-ELEC 50V 1uF
C117	C-ELEC 50V 1uF	C-ELEC 50V 4.7uF
****	DELETE	C-ELEC 50V 22uF
C609	C-ELEC 50V 10uF(NP)	C-ELEC 25V 22uF(NP)
C706	DELETE	C-ELEC 50V 10uF(NP)
SD701	DELETE	TR-C815-Y
SD101	DELETE	TR-C815-Y
SD103	DELETE	DIODE 1N4148
RD03	DELETE	DIODE 1N4148
SD102	DELETE	DIODE 1N4148
SD101	DELETE	VARACTOR-BB809
IC101	TDA8362B	TDA8362
STJ21	JUMPER (8362#50SHORT)	DELETE
J139	DELETE	JUMPER (8362#50LONG)
STJ20D	JUMPER (4053#12)	DELETE
STJ07	JUMPER (4053#13)	DELETE
STJ11	JUMPER (4053#14)	DELETE
STJ16	JUMPER (1406HA#2-8)	DELETE
STJ12	JUMPER (4053#3)	DELETE
STJ09	JUMPER (4053#4)	DELETE
STJ25	JUMPER (ONTO SR612)	DELETE
J601	JUMPER (1406HA#8)	DELETE
J147	DELETE	JUMPER (7056#2)
J361	DELETE	JUMPER (7056#6)

	LINE-STEREO (MONITOR-OUT)	SECAM-L'/L
STJ01	JUMPER (4053#13)	DELETE
STJ06	JUMPER (4053#15)	DELETE
STJ04	JUMPER (AU-IN-R)	DELETE
STJ03	JUMPER (AU-OUT-L)	DELETE
STJ15	JUMPER (AU-OUT-L)	DELETE
STJ05	JUMPER (AU-IN-R)	DELETE
J121	DELETE	JUMPER (21PIN #2/4)
J271	JUMPER (1406HA#2-8)	DELETE
J150	JUMPER (J271 PAT')	DELETE
J149	DELETE	JUMPER (J150 PAT')
J143	DELETE	JUMPER (J149 PAT')
J209	DELETE	JUMPER (8362#1)
J208	DELETE	JUMPER (8362#6)
J666	JUMPER (7057#1)	DELETE
SJ09	DELETE	JUMPER (4053#4)
STJ20	DELETE	JUMPER (4053#2.12)
SJ02	DELETE	JUMPER (MICOM #10)
STJ010	DELETE	JUMPER (Q602 EMITTER)
RCJ01	DELETE	JACK-PERI
RCJ02	JACK-6PIN	DELETE