

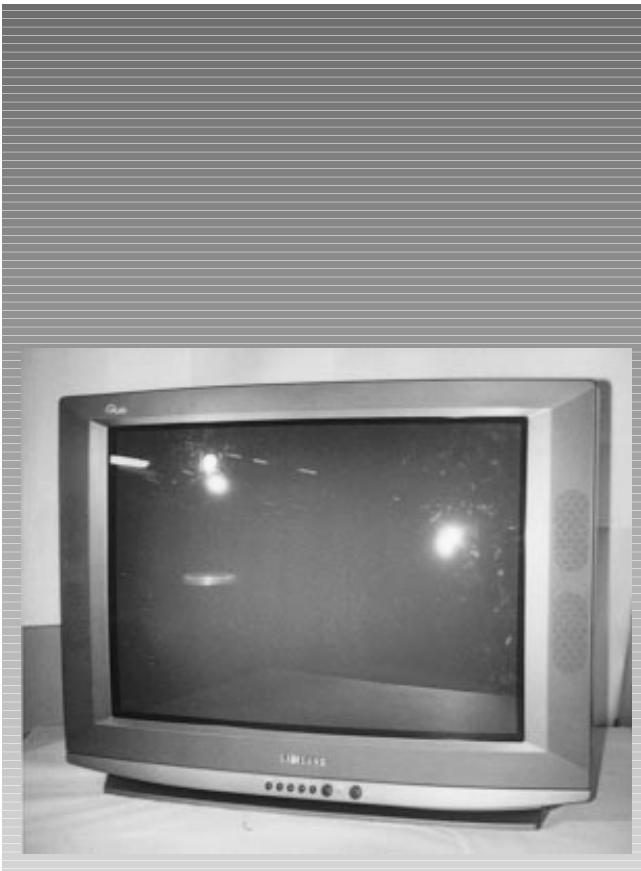
SAMSUNG

COLOR TELEVISION RECEIVER

Chassis : SCT57C
Model: CK765DWT2X/BWT

SERVICE Manual

COLOR TELEVISION RECEIVER



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1. Precautions

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

1-1 Safety Precautions

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

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

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

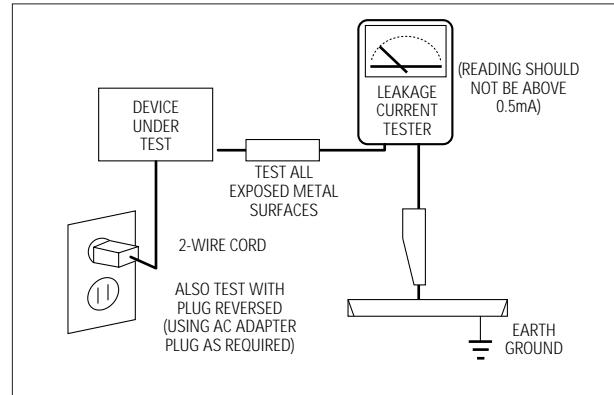


Fig. 1-1 AC Leakage Test

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

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.
 10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
 11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

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

1-2 Servicing Precautions

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

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

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

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

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

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

2. Specifications and IC Data

2-1 Specifications

Television System:

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

Channels:

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

Intermediate Frequencies (MHz) :

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

Picture Tube:

| | | | |
|------------|-----------------|-------------|--|
| 25 Inch | A59KPR84X05 (B) | SED CPT | Quick start, In-line-gun, Black stripe, 110° degree deflection |
| | A59EAK71X01 | PHILIPS CPT | |
| 28/29 Inch | A68KVM74X02 (B) | SED CPT | |
| | A66EAK71X01 | PHILIPS CPT | |
| 30 Inch | A70QBZ791X001 | SED CPT | |

Power Requirements:

AC 100~260V, 50/60Hz

Antenna Input Impedance:

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

Speaker Impedance

8 ohm, 10W+10W

2-2 IC Line Up

Table 2-1 IC Line-Up

| Loc. No | Specification | Description | Remark |
|---------|-----------------|--|-------------|
| HIC101 | PAP102T | IF PRE-AMP | |
| IC201 | TDA8375 N3 | PAL-B/G, SECAM-B/G, NTSC, SECAM-L, E/W ADJ, 16:9 | |
| IC202 | TDA4665 | 1H DELAY | |
| IC203 | TDA8395 | SECAM DECODER | |
| IC301 | TDA8350Q | VERTICAL DEFLECTION AMP | |
| IC401 | KA7812 | REGULATOR (12V) | |
| IC501 | TDA6101Q | RGB DRIVE AMP | |
| IC502 | TDA6101Q | RGB DRIVE AMP | |
| IC503 | TDA6101Q | RGB DRIVE AMP | |
| IC504 | SPK101T | SPOT-KILLER | |
| IC601 | TDA7297 | SOUND-AMP (10W + 10W) | |
| IC701 | TDA9859 | SOUND PROCESS | |
| IC801 | KA3S1265R | POWER IC (STR) | |
| IC802 | KA7630 | CUSTOM REGULATOR (5V, 8V) | |
| IC803 | SE130N | ERROR AMP | SED CPT |
| | SE140N | | PHILIPS CPT |
| IC804 | KA78R05 | REGULATOR (5V) | |
| ICT01 | SAA5281 P/E,P/R | TTX-CHARACTER, GENERATOR | |
| | SAA5261 | TTX-DECODER | |
| ICT04 | X24C02 | E ² -PROM | |
| IC901 | Z8933112 PSC | μ -com | |
| IC902 | AT24C04 | E ² -PROM | |
| ICN02 | TDA9874H | NICAM DECODER | |

2-3 Semiconductor Base Diagrams

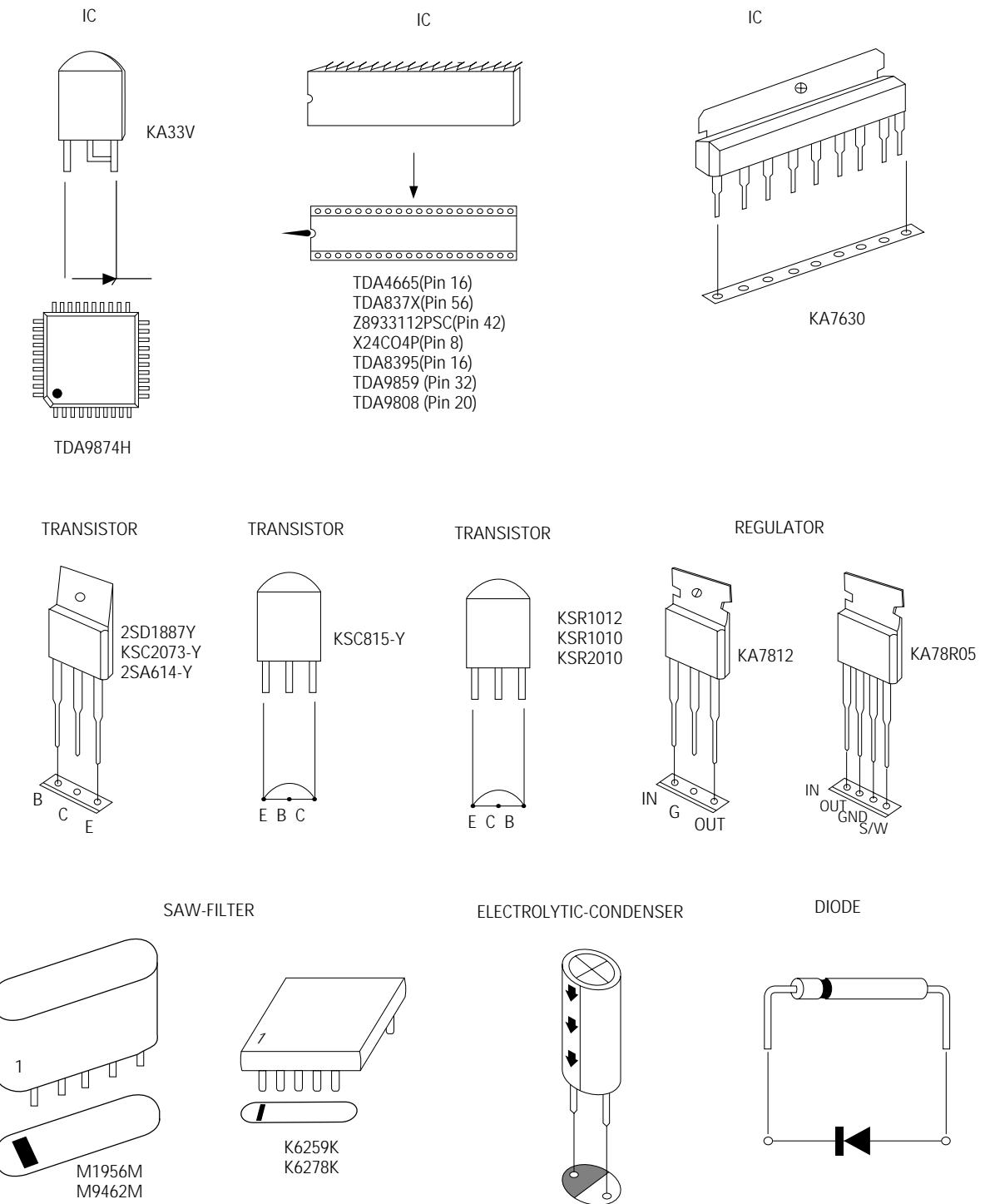


Fig. 2-1 Semiconductor Base Diagrams

MEMO

3. Disassembly and Reassembly

3-1 Back Cover Removal

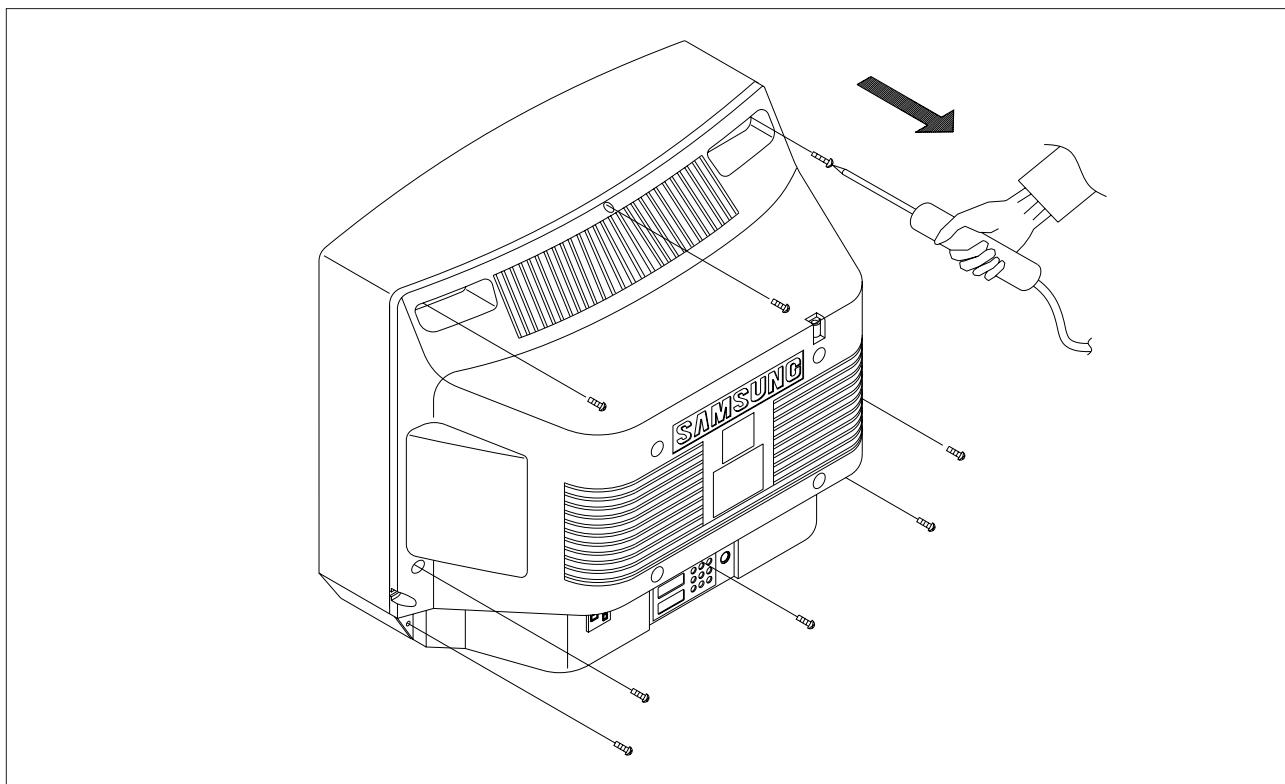


Fig. 3-1

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

3-2 Main Board Removal

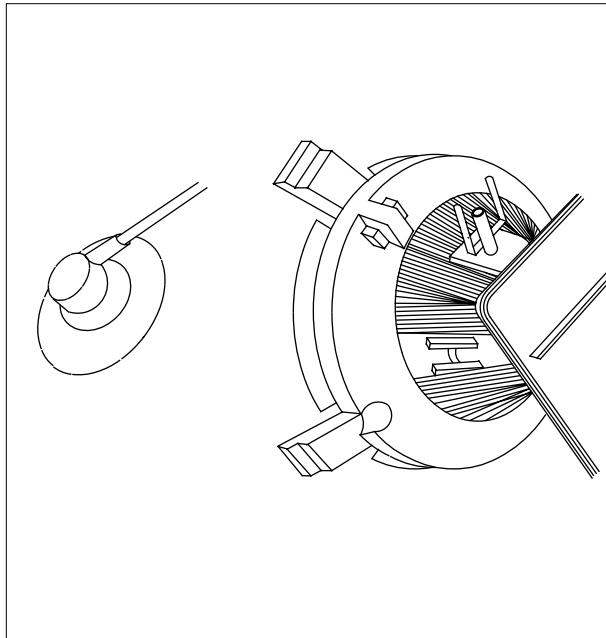


Fig. 3-2

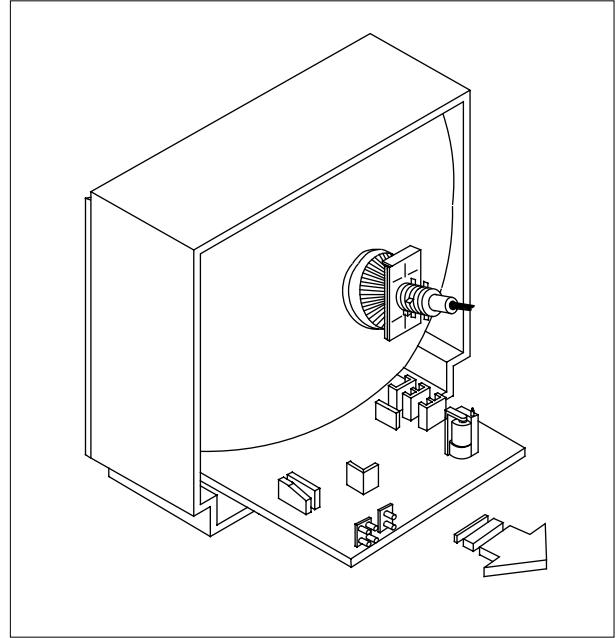


Fig. 3-3

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

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

3-3 Speaker Removal

1. Loosen the screws and remove the speakers.

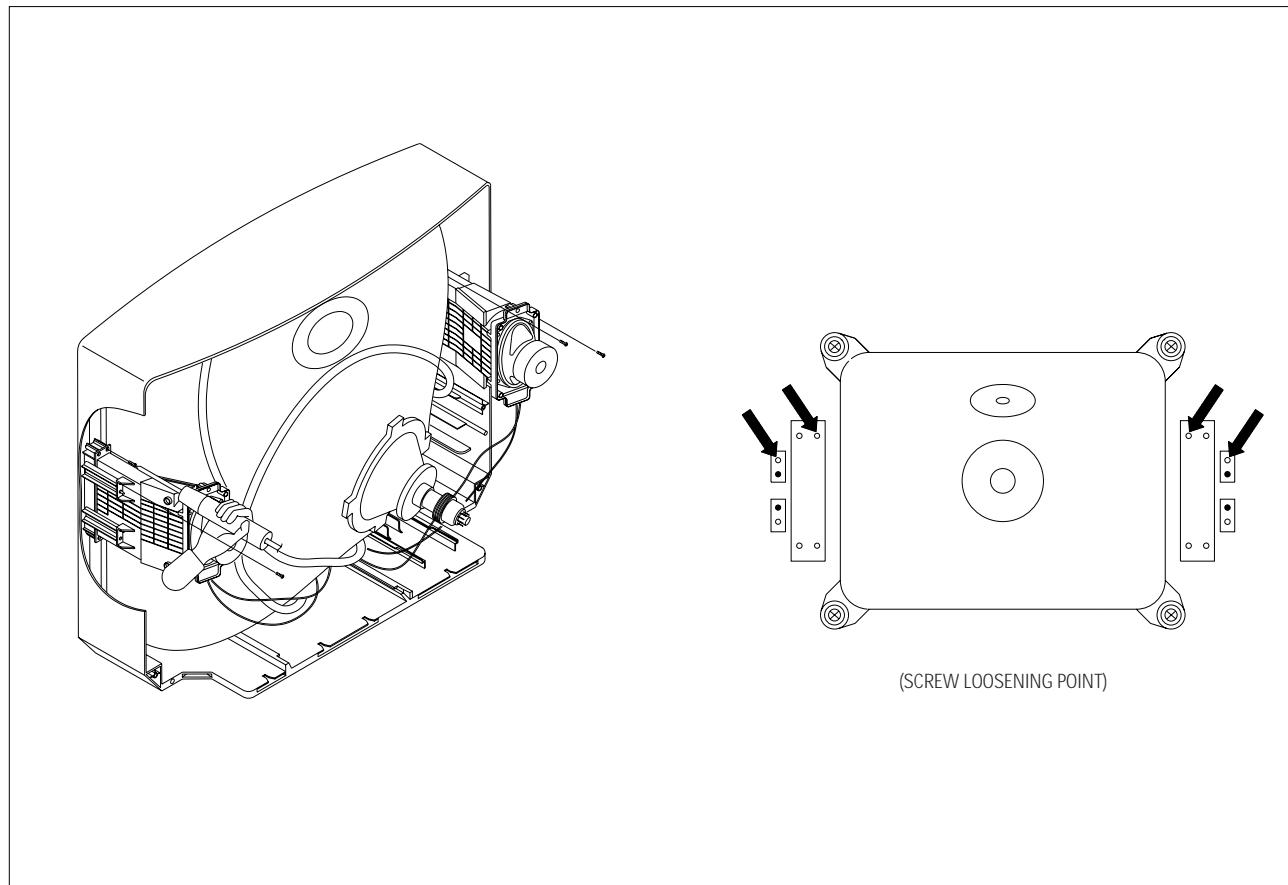


Fig. 3-4

3-4 CRT Removal

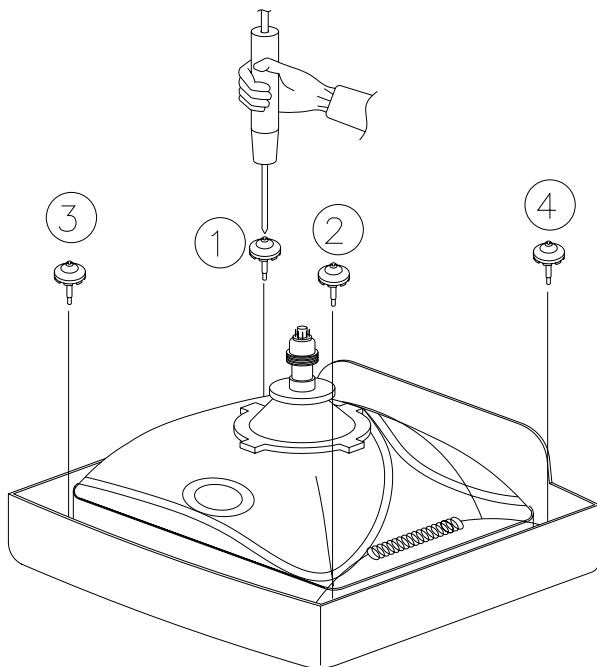


Fig. 3-5

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

4. Alignment and Adjustments

4-1 Preadjustment

4-1-1 Factory Mode

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

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

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

4-2 Factory/Service Mode

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

1. This mode uses the standard remote control. The Service Mode is activated (1) by pressing the (Display → FACTORY) service key or (2) by entering the following remote-control sequence:

STAND-BY → DISPLAY → P-STD → MUTE → POWER ON
2. The "SERVICE (FACTORY)" message will be displayed. The Service Mode has four components: Adjustment, Test Pattern, Option Bytes and Reset.
3. Access the Adjustment Mode by pressing the "VOLUME" keys (Up or Down). The adjustment parameters are listed in the accompanying table. Select them by pressing the CHANNEL keys (▲, ▼).

4-1-3 When CRT Is Replaced

1. Make the following adjustments AFTER setting up after setting up purity and convergence:
 - White Balance
 - Sub-Brightness
 - Vertical Center
 - Vertical Size
 - Horizontal Size
 - Fail Safe (This adjustment must be the last step.)
2. If the eeprom or CRT is replaced, set PSL and PVA to 15 and 63 (Factory Mode).

4. Selection sequences for the PAL system:

down or up key:
AGC>VCO>SBT>SCT>SCR>SC>RG>BG>
CG>STT>VOL>LA>PSL>PVS>PVA>PHS>
PWE>PEP>PEC>PET>CDL>TSC>SA>NSL>
NVS>NVA>NHS>NEW>NEP>NEC>NET

5. Selection sequences for the NTSC system:

down or up key:
NSL>NVS>NVA>NHS>NEW>NEP>NEC>NET

6. The VOLUME keys increase or decrease the adjustment values, (stored in the non-volatile memory when Adjustment Mode is cancelled).
7. Cancel the Adjustment Mode by re-pressing the "Factory" or "Power on" keys.

4-2-2 Adjustment Parameter

4-2-2 (A) MAIN ADJUSTMENT PARAMETER

Table 4-1 Main Adjustment Parameter (Zilog μ -com)

| FUNCTION | OSD ABBREVIATION | RANGE | ADJUSTMENT DATA | INITIAL |
|----------------------------------|------------------|--------------|-----------------|---------|
| AUTO GAIN CONTROL | AGC | 0 ~ 63 STEP | 26 ~ 33 | 15 |
| VOLTAGE CONTROLLED OSCILLATOR | VCO | 0 ~ 127 STEP | 60 ~ 75 | 63 |
| SUB BRIGHT | SBT | 0 ~ 23 STEP | 6 ~ 10 | 7 |
| SUB CONTRAST | SCT | 0 ~ 23 STEP | 7 ~ 10 | 7 |
| SUB COLOR | SCR | 0 ~ 23 STEP | 10 FIXED | 15 |
| S-CORRECTION | SC | 0 ~ 63 STEP | 16 FIXED | 11 |
| RED DRIVE (GAIN) | RG | 0 ~ 63 STEP | 25 ~ 45 | 31 |
| BLUE DRIVE (GAIN) | BG | 0 ~ 63 STEP | 25 ~ 45 | 31 |
| CATHODE DRIVE LEVEL | CDL | 0 ~ 7 STEP | 7 | 4 |
| SUB TINT | STT | 0 ~ 13 STEP | 4 FIXED | 5 |
| VOLUME CONTROLLED | VOL | 0 ~ 63 STEP | 25 FIXED | 63 |
| SOUND LEVEL ADJUSTMENT (A2 ONLY) | LA | 0 ~ 63 STEP | 5 | 5 |
| PAL VERTICAL SLOPE | PSL | 0 ~ 63 STEP | 25 FIXED | 25 |
| PAL VERTICAL SHIFT | PVS | 0 ~ 63 STEP | 25 ~ 35 | 31 |
| PAL VERTICAL AMPLITUDE | PVA | 0 ~ 63 STEP | 35 | 31 |
| PAL HORIZONTAL SHIFT | PHS | 0 ~ 63 STEP | 35 ~ 45 | 40 |
| PAL EW-WIDTH | PEW | 0 ~ 63 STEP | 35 ~ 45 | 38 |
| PAL EW-PARABOLA | PEP | 0 ~ 63 STEP | 0 ~ 10 | 22 |
| PAL EW CORNER PARABOLA | PEC | 0 ~ 63 STEP | 15 ~ 30 | 22 |
| PAL EW-TRAPEZIUM | PET | 0 ~ 63 STEP | 15 ~ 30 | 30 |
| TTX SUB CONTRAST | TSC | 0 ~ 63 STEP | 10 ~ 30 | 15 |
| SEPARATION ADJUSTMENT (A2 ONLY) | SA | 0 ~ 49 STEP | 25 | 25 |
| NTSC VERTICAL SLOPE | NSL | 0 ~ 63 STEP | 25 FIXED | 25 |

Table 4-1 Main Adjustment Parameter (Zilog μ -com)(Continued)

| FUNCTION | OSD ABBREVIATION | RANGE | ADJUSTMENT DATA | INITIAL |
|-------------------------|------------------|-------------|-----------------|---------|
| NTSC VERTICAL SHIFT | NVS | 0 ~ 63 STEP | 35 ~ 45 | 44 |
| NTSC VERTICAL AMPLITUDE | NVA | 0 ~ 63 STEP | 25 ~ 35 | 28 |
| NTSC HORIZONTAL SHIFT | NHS | 0 ~ 63 STEP | 35 ~ 50 | 45 |
| NTSC EW-WIDTH | NEW | 0 ~ 63 STEP | 35 ~ 45 | 37 |
| NTSC EW PARABOLA | NEP | 0 ~ 63 STEP | 15 ~ 30 | 21 |
| NTSC EW-CORNER PARABOLA | NEC | | 15 ~ 30 | 20 |
| NTSC EW-TRAPEZIUM | NET | | 15 ~ 30 | 30 |

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

4-2-2 (B) PIP FACTORY ADJUSTMENT

Table 4-2 PIP Factory Adjustment (Zilog μ -COM)

| FUNCTION | OSD ABBREVIATION | RANGE | ADJUSTMENT DATA | INITIAL | REMARKS |
|-------------------------|------------------|-------------|-----------------|---------|------------------------|
| PIP SUB-CONTRAST | SCT | 0 ~ 15 STEP | 15 | 10 | |
| PIP SUB-TINT (NTSC) | STT | 0 ~ 63 STEP | 31 | 31 | |
| PIP HORIZONTAL MOVE | PHM | 0 ~ 15 STEP | 8 | 8 | |
| PIP VERTICAL POSITION | PVP | 0 ~ 63 STEP | 31 | 31 | |
| PIP HORIZONTAL POSITION | PHP | 0 ~ 84 STEP | 42 | 42 | |
| LUMINANCE DELAY | LDL | 0 ~ 15 STEP | 0 | 0 | NO USED (USED TDA8844) |
| PLUS EW | QEW | 0 ~ 7 STEP | 6 | 5 | |
| STEEPNESS | SSP | 0 ~ 63 STEP | 31 | 31 | NO USED |
| NON LINEARITY AMPLIFIER | NLA | 0 ~ 63 STEP | 31 | 31 | NO USED |
| GAMMA | GAM | 0 ~ 63 STEP | 31 | 31 | NO USED |
| LINE WIDTH | LWD | 0 ~ 63 STEP | 31 | 31 | NO USED |

4-2-3 Test Pattern

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

◆ RED ◆ GREEN ◆ BLUE

4-2-4 SZM199EX MICOM Option Byte (Integrated)

| BYTE | BIT | | LOW | | | HIGH | | Remark | |
|-------|--------|--------------|--|------------------------|-------------------------------|---------------------------|--|--------------------------------------|--------------------------------------|
| BYTE0 | D7 | D6 | 199EC1 | 199EP | 199EV | 199ER2 | 199EE | 199ET1/199ET2 | 199EA1/199EA |
| | 0 | 0 | English/Chinese | English/Persian | English/Vietnamese | English/Bulgarian | English/Hungarian/Romanian/Croatian/Polish/Czech | English/Thai | English/Arabian |
| | 0 | 1 | English/Chinese | English/French/Persian | English/Vietnamese/Indonesian | English/Russian | English/Hungarian/Romanian/Croatian/Polish/Czech | English/Thai/Malay | English/French/Arabian |
| | 1 | 0 | English | English/French | English/Indonesian | English/Russian/Bulgarian | English/Hungarian/Romanian/Croatian/Polish/Czech | English/Thai | English/French |
| | 1 | 1 | English | English | English | English | English | English | English |
| | D5 | | STANDBY MODE WHEN M/S/WON (ALWAYS) | | | M-S/W OFF | | LAST POWER MEMORY | |
| | SYSTEM | SOUND SYSTEM | | | COLOR SYSTEM | | | | |
| | | D4 | D3 | D2 | OSD | System | RF MODE | | AV1 / AV2 MODE |
| | | | | | | | OSD | System | OSD |
| | | 1 | 1 | 1 | C1 | X | I | X | PAL |
| | | 1 | 1 | 0 | C1I | X | I | X | PAL |
| | | 1 | 0 | 1 | CW | B/G → I → D/K → | | AUTO → PAL → SECAM → NT4.43 → | AUTO → PAL → SECAM → NT4.43 → NT3.58 |
| | | 1 | 0 | 0 | CF | X | B/G, L/L' | X | PAL / SECAM |
| | | 0 | 1 | 1 | CK/CX | D/K → B/G | | AUTO → PAL → SECAM → NT4.43 → | AUTO → PAL → SECAM → NT4.43 → |
| | | 0 | 1 | 0 | CB | X | B/G | X | PAL |
| | | 0 | 0 | 1 | CS 1(FOR CHINA) | B/G → I → D/K → M → | | AUTO → PAL → NT4.43 → NT3.58 | AUTO → PAL → NT4.43 → NT3.58 |
| | | 0 | 0 | 0 | CS 2 | B/G → I → D/K → M → | | AUTO → PAL → SECAM → NT4.43 → NT3.58 | AUTO → PAL → SECAM → NT4.43 → NT3.58 |
| | D1 | | WITH CHILD LOCK (ONLY FOR MIDDLE EAST ASIA) | | | WITHOUT CHILD LOCK | | CHILD LOCK | |
| | D0 | | TTX OFF | | | TTX ON | | TTX | |

| | | | | | | | | | | | | |
|-------|----|-------------------------------------|----|------------------|---|--|--|--|--|--|--|--|
| BYTE1 | D7 | WITHOUT PIP | | | WITH PIP | | PIP | | | | | |
| | D6 | DISPLAY OFF (WHEN USING TDA83XX) | | | DISPLAY ON (WHEN USING TDA88XX) | | NOISE REDUCTION | | | | | |
| | D5 | SCART | | | RCA | | CH UP/DOWN INSULATION IN THE A/V MODE (SCART FUNCTIONAL/RCA NOT FUNCTIONAL) | | | | | |
| | D4 | D4 | D3 | D2 | TV | | A/V | | | | | |
| | | 0 | 0 | 0 | PLUS → NORMAL | | PLUS → NORMAL | | | | | |
| | D3 | 0 | 0 | 1 | PLUS → NORMAL → ZOOM → 16:9 | | PLUS → NORMAL → ZOOM | | | | | |
| | | 0 | 1 | 0 | NORMAL → ZOOM → 16:9 | | NORMAL → ZOOM → 16:9 | | | | | |
| | | 0 | 1 | 1 | NORMAL → ZOOM → 16:9 | | NORMAL → ZOOM | | | | | |
| | D2 | 1 | 0 | 0 | NORMAL → ZOOM | | NORMAL → ZOOM | | | | | |
| | | 1 | 0 | 1 | PLUS → NORMAL → ZOOM | | PLUS → NORMAL → ZOOM | | | | | |
| | D1 | DI | D0 | System | Remark | | | | | | | |
| | | 0 | 0 | B/G | "MEMORY" BY PROGRAM CHANNEL REQUIRED | | | | | | | |
| | | 0 | 1 | I | | | | | | | | |
| | | 1 | 0 | D/K | | | | | | | | |
| | D0 | 1 | 1 | B/G & D/K (?) | APPLIED TO MOMO AND LINE STEREO MODELS (ONLY) (ONLY WHEN OPTION BYTE2 : D7=1, D6=0 BYTE2D : D7=1, D6=1) | | | | | | | |
| | | | | | (1) SOUND SYSTEM COMES FIRST WHEN AUTO SEARCH (2) SOUND SYSTEM WHEN FACTORY MODE RESET (3) MANUAL SEARCH DOES NOT MATTER | | | | | | | |

| BYTE | BIT | LOW | HIGH | REMARK | |
|--|-----|--|--|---|--|
| BYTE2 | D7 | D7 | SYSTEM | IC | |
| | | 0 | STEREO + NICAM | TDA9859 / TDA9874 | |
| | D6 | 0 | STEREO | TDA9859 / TDA9840 | |
| | | 1 | LINE STEREO | TDA9859(A/V SELECT IC) | |
| | | 1 | MONO | TDA8844 | |
| | D5 | NOT USED | USED | LTI FUNCTION (TDA9178 USED) | |
| | | OFF | ON | NICAMERROE CHECK BIT | |
| | | AFT- ON | AFT- OFF | OFF (INDIA ONLY) | |
| | | TDA8375 | TDA8844 | OPTION (DISSIMILAR CONTROL BIT) | |
| | | OFF | ON | RF AUDIO OUT MUTE OFF(ONLY WHEN SHIPPED TO RUSSIA) | |
| | D0 | NOT USED | NOT USED | SPECIFICATION WHEN SZM199EA/EA1/ET/ER2/EC1/EC MICOM IS APPLIED | |
| | | TDA8374, TDA8842 | TDA8375, TDA8844 | 1-CHIP FUNCTION (WHEN APPLYING SZM199EP) | |
| | | TIMER DISPLAY OFF | TIMER DISPLAY ON | SZM199EV ON (ONLY WHEN SHIPPED TO INDONESIA) | |
| | | STAND_BY : LED=RED PICTURE ON : LED=OFF | STAND_BY : LED=OFF PICTURE ON : LED=RED | LED SPECIFICATION WHEN SZM-199EE IS APPLIED (HIGH ONLY WHEN SHIPPED TO POLAND) | |
| FEATURES OF SZM-199EE : | | | | | |
| 1. NO TIMER 2. NO PIP (PIP + TTX MODULE), BUT TTX CAN BE SEPARATELY USED. 3. NO SOUND OUTPUT CONTROL "VOL" (FACTORY MODE) 4. WHEN BYTE2 D0 = HIGH, NICAM MODEL: D/K STEREO F = 6.25 MHz | | | | | |

4-2-5 RESET

The Reset Mode is used during factory inspection.

Function Reset:

1. Channels Added/Erase
2. Sort NON
3. Language Basic (English)
4. System Auto (Non-TTX micom only)

4-3 Other Adjustments

4-3-1 General

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

4-3-2 Automatic Degaussing

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

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

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

4-3-3 High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply must be set to +130/155 volts.
(Full color bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.
2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).
3. The high voltage should not exceed 33KV.
4. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 33KV under any conditions.

4-3-4 FOCUS Adjustment

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

4-3-5 Screen Adjustment

1. Turn to the ACTIVE channel.
2. Adjust the VR screen for a normal picture is (no blooming or flyback line).
3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-6 Purity Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Plug in the CRT deflection yoke and tighten the clamp screw.
3. Plug the convergence yoke into the CRT and set in as shown in Fig. 4-1.
4. Input a black and white signal.
5. Fully demagnetize the receive by applying an external degaussing coil.
6. Turn the CONTRAST and BRIGHTNESS controls to maximum.

7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to provide vertical green belt. (Fig. 4-2).
8. Tighten the convergence yoke.
9. Slowly move the deflection yoke forward, and adjust for the best overall green screen.
10. Temporarily tighten the deflection yoke.
11. Produce blue and red rasters by adjusting the low-light controls. Check for good purity in each field.
12. Tighten the deflection yoke.

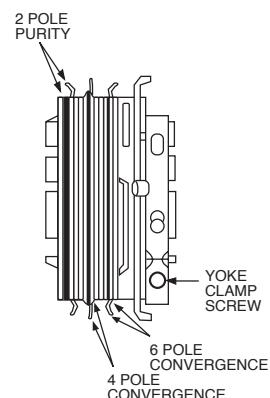
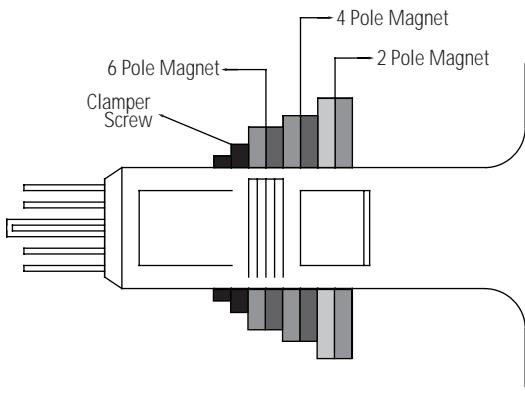


Fig. 4-1 Convergence Magnet Assembly

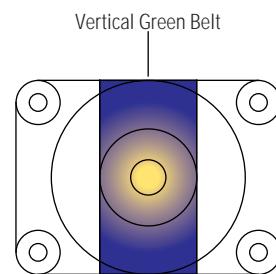
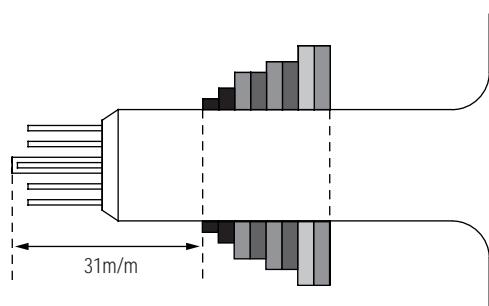


Fig. 4-2 Center Convergence Adjustment

4-3-7 White Balance Adjustment

4-3-7 (A) HIGH-LIGHT ADJUSTMENT

1. Input either a Lion Head or a "pure white" pattern.
2. Warm up the TV for 30 minutes.
3. Check the data in the Service Mode (RG,GG,BG Should be 31, initially)
4. Adjust RG, BG in the Factory Mode.

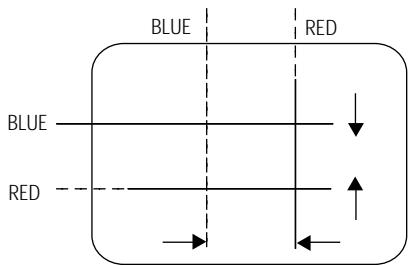
4-3-7 (B) LOW-LIGHT ADJUSTMENT:

1. Automatically accomplished during the high-light adjustment.

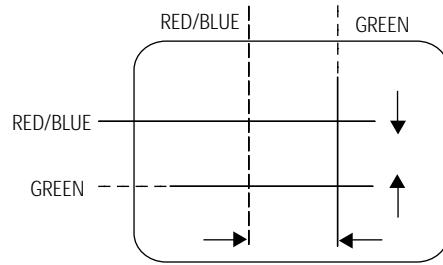
4-3-8 Center Convergence Adjustment

1. Warm up the receiver for at least 20 minutes.
2. Adjust the two tabs of the 4 pole magnets to change the angle between them. Superimpose the red and blue vertical lines in the center area of the screen.
3. Adjust the Brightness and Contrast controls for a well defined picture.
4. Adjust the two-tab pairs of the 4 pole magnets, and change the angle between them. Superimpose the red and the blue vertical lines in the center area of the screen.

5. Turn the both tabs at the same time, keeping the angle constant, and superimpose the red and blue horizontal line in the center of the screen.
6. Adjust the two-tab pairs of the 6-pole magnets to superimpose the red and blue line onto the green. (Changing the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.)
7. Repeat adjustments 2~6, if necessary.
8. Since the 4-pole magnets and 6-pole magnets interact, the dot movement is complex (Fig. 4-3).



4-Pole Magnet Movement



6-Pole Magnet Movement

Fig. 4-3 Center Convergence Adjustment

4-3-9 VCO Adjustment

1. Connect to tuner IF pin.
2. Apply an IF input (38.9MHz) signal.
3. In Factory Mode, adjust the AFC with the VCO tuning bits (AFA, AFB).

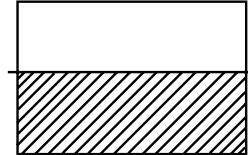
The VCO is correct when the AFA Bit is "INSIDE WINDOW" (The AFB Bit is above~below). The AFC output is available on the I2C-BUS (used for VCO adjustment and feedback).

4-3-10 IF AGC Adjustment

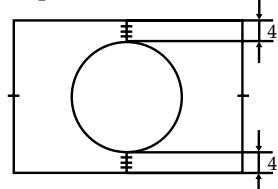
1. Input a UHF Band channel (70~80dB, 479.25MHz).
2. Adjust the AGC in the Factory mode. IC201 Pin 53 to $3.6V \pm 0.05V$ (DC).

4-3-11 Geometry Adjustment (SC -> PVS -> PVA ->PSL -> PHS)

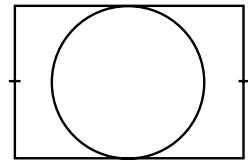
1. Input a Lion Head pattern.
2. SET the SC Data fixed 16 in the Factory Mode.
3. Adjust with PVS (starts blinking) exactly at middle of the screen.



4. Adjustment with PVA : Top and Bottom margins of the picture are 4.



5. Adjustment with PSL : Bottom of picture to bottom of screen.

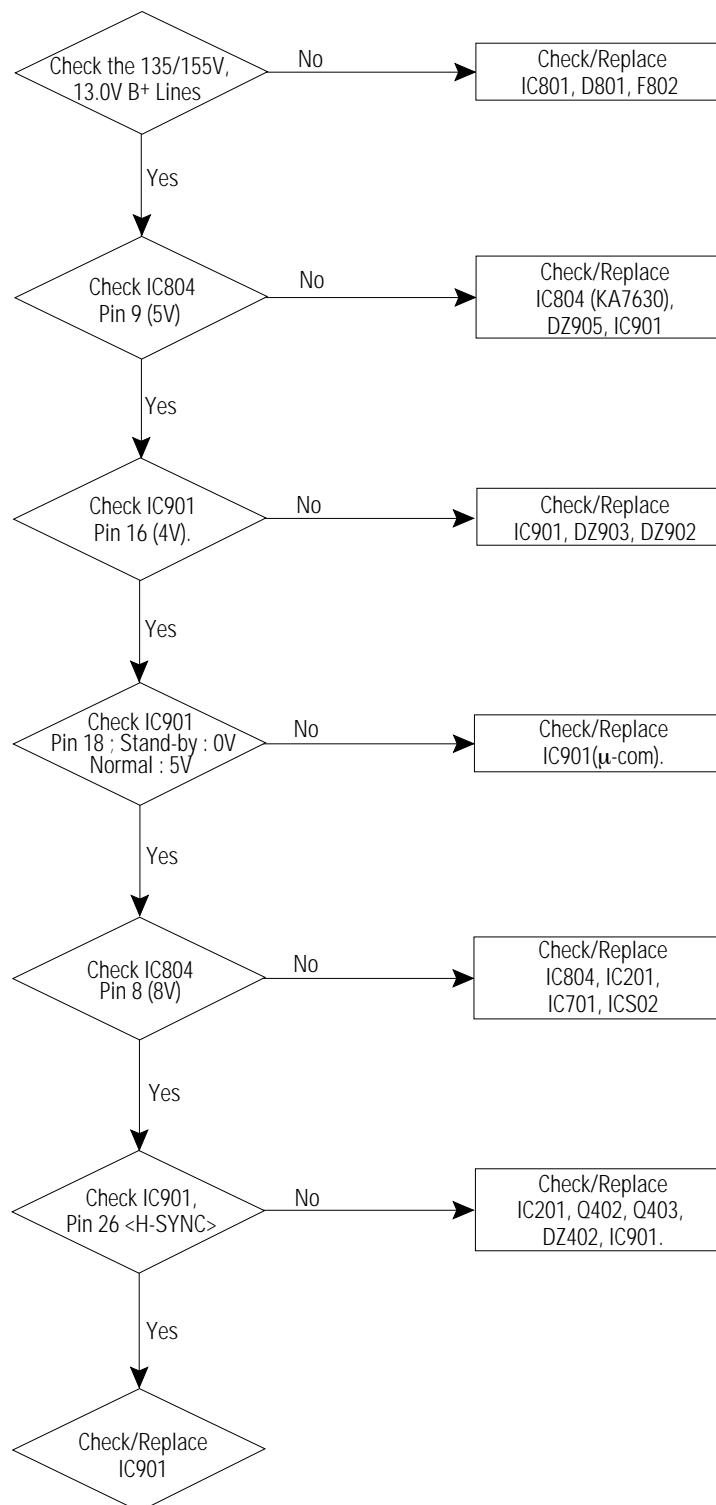


6. Adjust PHS horizontally. Center the picture.

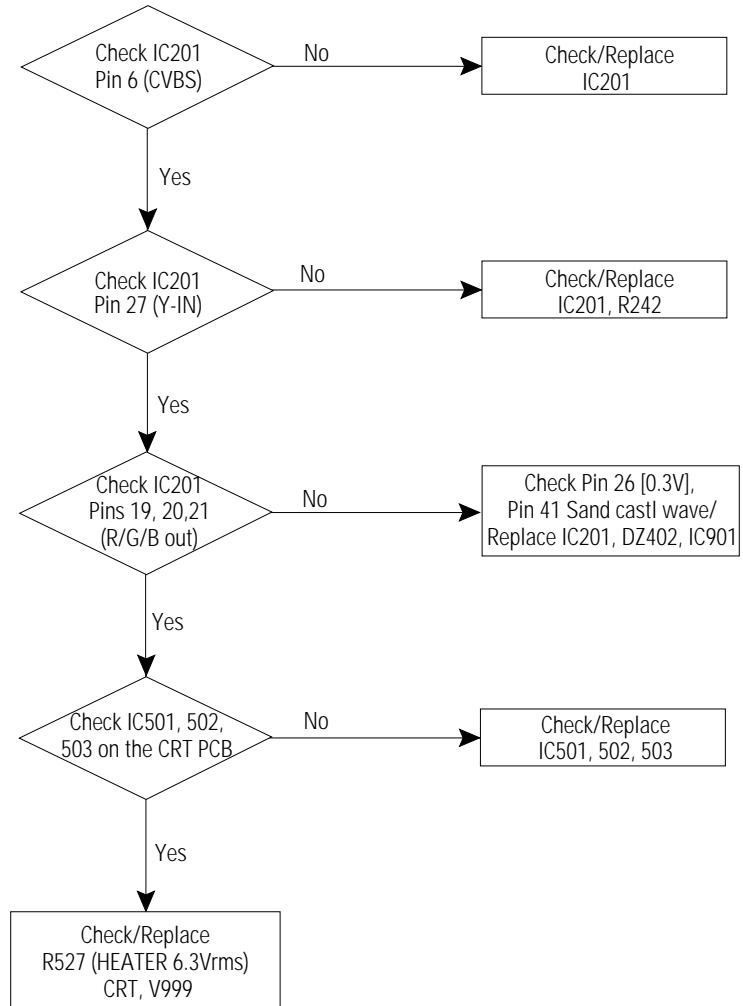
MEMO

5. Troubleshooting

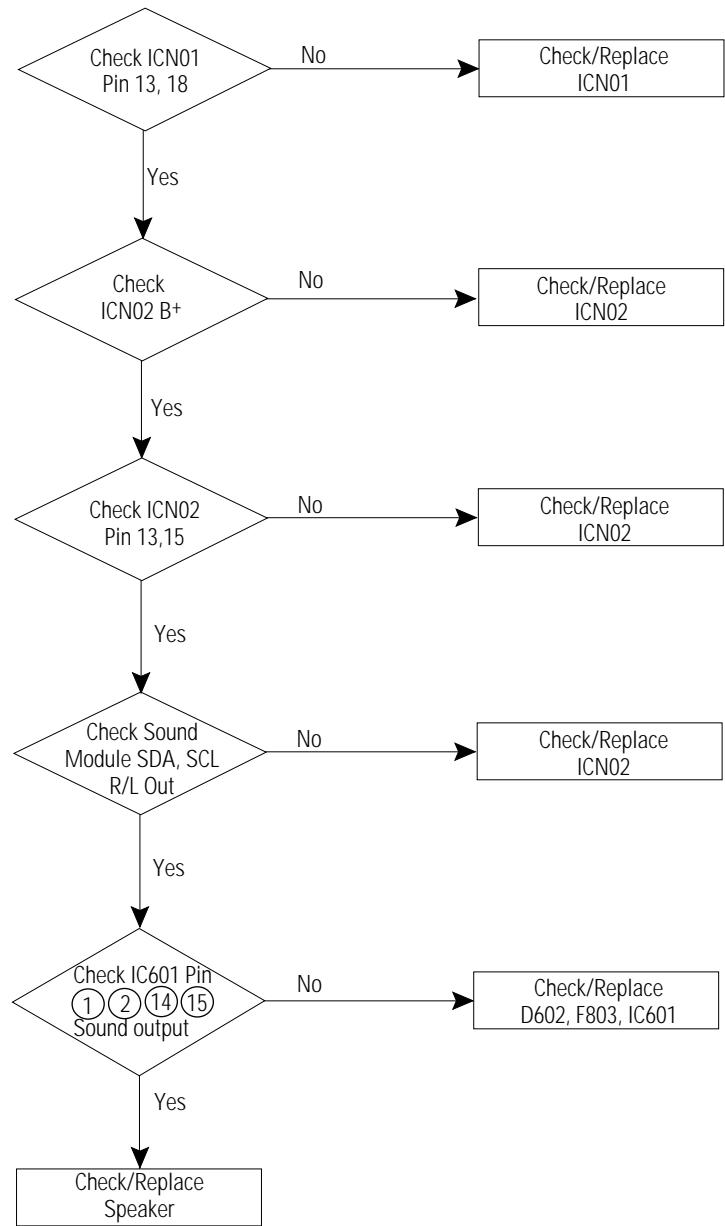
5-1 No Power



5-2 No Video (Sound Ok)



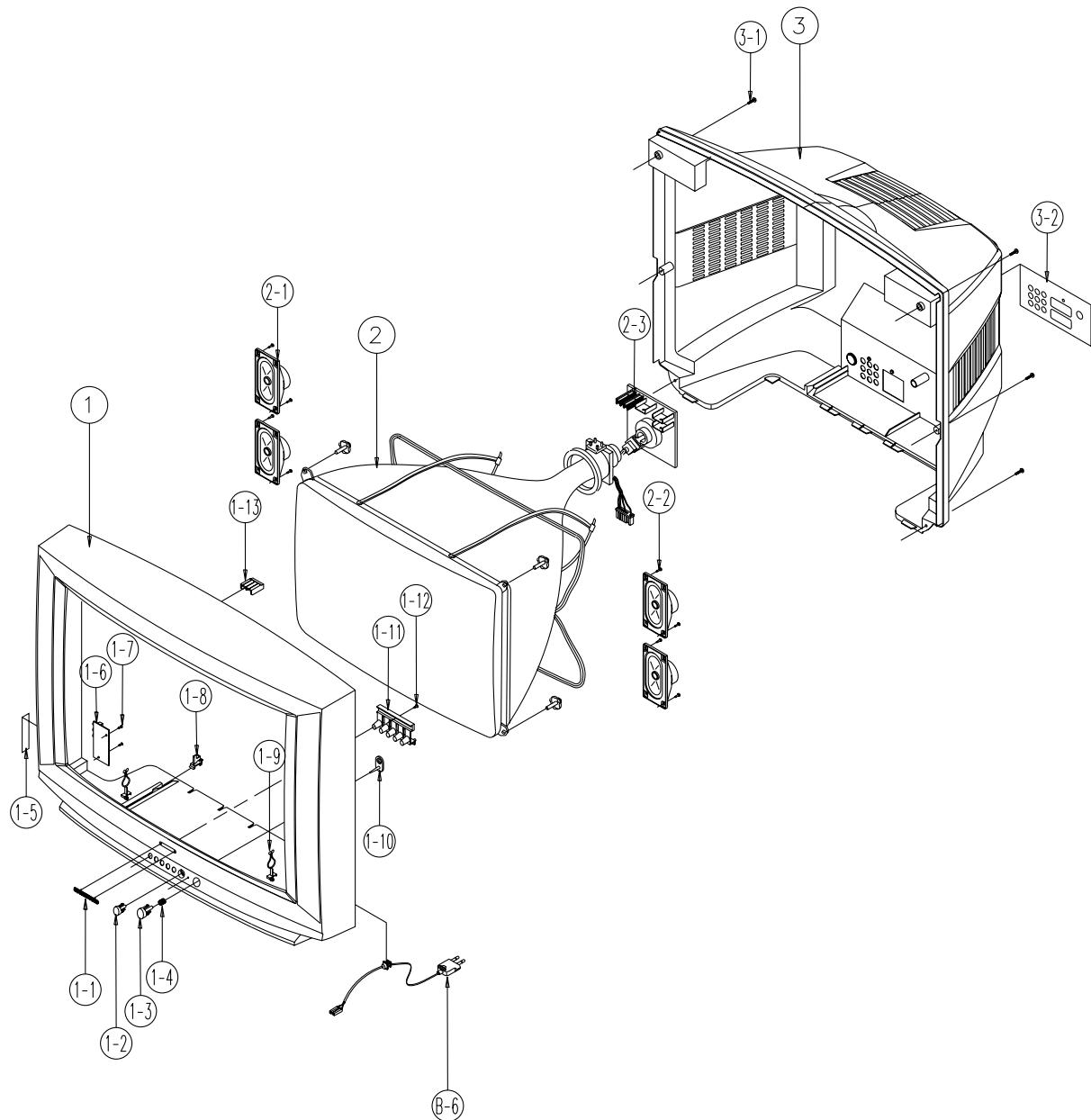
5-3 No Sound (Video Ok)



MEMO

7. Exploded View & Parts List

7-1 CS765DWT2X/BWT



| No. | Code No. | Description & Specification | Q'ty | Remarks |
|------|-------------|---|------|---------|
| 1 | AA64-31160F | CABINET-FRONT;-,CK765DWTR,DG703P BWT ML, | 1 | |
| 1-1 | AA64-70117A | BADGE-BRAND;AL,SS,FLAT,L65,SILVER,-,- | 1 | S.N.A |
| 1-2 | AA64-40479A | WINDOW-REMOCON;-,765D,-,ABS,HB,-,CLR LG4 | 1 | |
| 1-3 | AA64-10740D | KNOB-POWER;-,765D,G3676 NO-SILK,ABS,HB,H | 1 | |
| 1-4 | AA61-60003N | SPRING-CS;-,SUS304,0.6,OD11.2,H27,N9,H27 | 1 | S.N.A |
| 1-5 | AA64-60423K | INLAY-AV;761B,SCT57A L/GRY,PS,T0.3,BLK, | 1 | S.N.A |
| 1-6 | AA95-90027W | ASSY-PCB,A/V SIDE;-,761B,SCT57A,PAL,-,- | 1 | |
| 1-7 | 6002-000514 | SCREW-TAPPING(AV+CF);RH,+,2,M4,L15,ZPC(BLK),SWR | 2 | S.N.A |
| 1-8 | AA61-40053A | STOPPER-PCB;ALL MODEL,HIPS HB,WHT,HB,-,- | 1 | S.N.A |
| 1-9 | AA65-30105A | CLAMP-WIRE;NYLON 66,V2,NTR,15MM,ALL MODE | 2 | S.N.A |
| 1-10 | AA64-40480A | INDICATOR-LED;-,765D,-,ABS,-,CLR,- | 1 | |
| 1-11 | AA64-10741A | KNOB-CONTROL;-,765D,G3676,ABS,HB,HI-GRY | 1 | |
| 1-12 | 6002-000514 | SCREW-TAPPING(KC+CF);RH,+,2,M4,L15,ZPC(BLK),SWR | 1 | S.N.A |
| 1-13 | AA61-40010A | BOSS-WING;-,HIPS,HB,NTR,-,- | 1 | S.N.A |
| 2 | AA03-10029B | CRT-COLOR;-,A70QBZ791X001(B),+500mG,29", | 1 | |
| 2-1 | 3001-000280 | SPEAKER;5W,16ohm,90dB,150Hz | 4 | |
| 2-2 | 6002-000514 | SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWR | 4 | S.N.A |
| 2-3 | AA95-20009S | ASSY-PCB,CRT;-,SCT57A,30",-,- | 1 | |
| 3 | AA64-31180C | CABINET-BACK;-,765D,-,HIPS,V2,GRAY,-,- | 1 | |
| 3-1 | AA60-10050T | SCREW-TAPPING(CB+CF);RH,+,2S,M4,L20,ZPC(BLK),SW | 7 | S.N.A |
| 3-2 | AA64-60052C | INLAY-BACK;-,SCT57A,C SCART(2),PS,T0.5,B | 1 | S.N.A |
| B-6 | AA39-10006X | POWER-CORD;-,KKP419C,KLCE-2F,2.286MT,3P, | 1 | |

| Loc | Part-No | Description & Specification | Remarks |
|-----|---------|-----------------------------|---------|
|-----|---------|-----------------------------|---------|

C809 2301-000224 C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm
 C810 2201-000119 C-CERAMIC,DISC:100nF,+80-20%,50V,Y5V,TP,
 C811 2201-000144 C-CERAMIC,DISC:100pF,5%,50V,CH,TP,8x3.5
 C812 2201-000990 C-CERAMIC,DISC:4.7nF,20%,400V,Y5U,BK,7x1
 C813 2201-000990 C-CERAMIC,DISC:4.7nF,20%,400V,Y5U,BK,7x1
 C814 2201-000991 C-CERAMIC,DISC:560pF,10%,2KV,Y5P,TP,13x7
 C815 2401-003026 C-AL:330uF,20%,200V,GP,ST,22x35mm,1
 C816 2401-000293 C-AL:100uF,+30-10%,200V,HR,TP,16x25
 C817 2201-000599 C-CERAMIC,DISC:560pF,10%,500V,Y5P,TP,7x4
 C818 2401-003047 C-AL:2200uF,20%,25V,WT,TP,16x25,7.5
 C819 2201-000599 C-CERAMIC,DISC:560pF,10%,500V,Y5P,TP,7x4
 C820 2401-003047 C-AL:2200uF,20%,25V,WT,TP,16x25,7.5
 C821 2301-001168 C-FILM,PPF;1nF,5%,200V,TP,11x5.5x10.5
 C823 2401-000302 C-AL:100uF,20%,25V,GP,TP,6.3x11,5mm
 C824 2305-000289 C-FILM,MPEF;220nF,5%,63V,TP,-,5mm
 C825 2306-000122 C-FILM,MPPF;100nF,5%,50V,TP,7.3x4.0x5.0m
 C826 2401-001840 C-AL:100uF,20%,16V,GP,TP,6.3x11,5mm
 C827 2401-000287 C-AL:100uF,20%,16V,WT,TP,6x11mm,5mm
 C828 2401-000832 C-AL:220uF,20%,25V,GP,TP,8x11.5,5mm
 C829 2401-000480 C-AL:10uF,20%,50V,GP,TP,5x11,5
 C830 2401-000603 C-AL:1UF,20%,50V,GP,TP,5X11MM,5MM
 C831 2401-000440 C-AL:10uF,20%,25V,GP,TP,5X11MM,5MM
 C832 2401-001840 C-AL:100uF,20%,16V,GP,TP,6.3x11,5mm
 C833 2401-001495 C-AL:47uF,20%,16V,GP,5x11mm,5mm,TP
 C901 2201-000234 C-CERAMIC,DISC:150pF,5%,50V,CH,TP,9.5x3,
 C902 2301-000108 C-FILM,PEF;1.5nF,5%,50V,TP,6.5x3.0x5.5mm
 C903 2201-000119 C-CERAMIC,DISC:100nF,+80-20%,50V,Y5V,TP,
 C904 2401-000480 C-AL:10uF,20%,50V,GP,TP,5x11,5
 C905 2305-000148 C-FILM,MPEF;100nF,5%,100V,TP,7.5x4.0x5.0
 C906 2305-000148 C-FILM,MPEF;100nF,5%,100V,TP,7.5x4.0x5.0
 C907 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 C908 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 C909 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 C910 2202-000796 C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%
 C911 2202-000796 C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%
 C912 2401-001333 C-AL:470nF,20%,50V,GP,TP,5x11,5
 C913 2301-000264 C-FILM,PEF;4.7nF,5%,50V,TP,6.5X5.5X3.0X5
 C914 2305-000665 C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m
 C915 2401-001495 C-AL:47uF,20%,16V,GP,5x11mm,5mm,TP
 C916 2201-000193 C-CERAMIC,DISC:10pF,0.3pF,50V,CH,TP,5x3,
 C917 2201-000573 C-CERAMIC,DISC:47pF,5%,50V,CH,TP,6.5x3.0
 C918 2301-000192 C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm
 C919 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 C920 2401-000440 C-AL:10UF,20%,25V,GP,TP,5X11MM,5MM
 C921 2202-000796 C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%
 C922 2401-000302 C-AL:100uF,20%,25V,GP,TP,6.3x11,5mm
 C923 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 C924 2401-000440 C-AL:10UF,20%,25V,GP,TP,5X11MM,5MM
 C925 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 C926 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 C927 2202-002037 C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5P
 CN501 3711-002648 CONNECTOR-HEADER:BOX,9P,1R,2.5MM,STRAIGH
 CN502 3711-002645 CONNECTOR-HEADER:BOX,6P,1R,2.5MM,STRAIGH
 CN602 3711-002644 CONNECTOR-HEADER:BOX,5P,1R,2.5mm,STRAIGH
 CN701 3711-002647 CONNECTOR-HEADER:BOX,8P,1R,2.5MM,STRAIGH
 CN802 AA27-20003M COIL-DEGAUSSING:-,29",14OHM,70T,L3300,E
 CN904 3711-002644 CONNECTOR-HEADER:BOX,5P,1R,2.5mm,STRAIGH
 CNW8C AA39-20010B LEAD-CONNECTOR,ASSY:-,YFH800-01,S,1P,500
 CW901 2503-000156 C-NETWORK:100pFx4,20%,50V
 D208 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
 D209 0402-000216 DIODE-RECTIFIER:ERC24-06,600V,1.0A,DO-20
 D217 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
 D301 0402-000132 DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP

| Loc | Part-No | Description & Specification | Remarks |
|-----|---------|-----------------------------|---------|
|-----|---------|-----------------------------|---------|

D401 0402-000493 DIODE-RECTIFIER;1R5GU41,400V,1.5A,DO-15L
 D402 0402-000132 DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP
 D403 0402-000132 DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP
 D404 0402-001012 DIODE-RECTIFIER;FMP-3FU,1500V,5A,TO-3PF
 D405 2001-001142 R-CARBON(S);3Kohm,5%,1/2W,AA,TP,2.4x6.4m
 D406 0402-000546 DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41
 D407 0402-000216 DIODE-RECTIFIER;ERC24-06,600V,1.0A,DO-20
 D410 0402-000231 DIODE-RECTIFIER;FMG-G26S,600V,4A,TO-220F
 D602 0403-000296 DIODE-ZENER:MTZ5.6B,5.6V,5.45-5.73V,500m
 D701 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D801 0402-000213 DIODE-RECTIFIER;ERB12-06,600V,1.0A,DO-41
 D802 0402-001160 DIODE-BRIDGE:D5SB60,600V,2.8A,SIP-4,ST
 D803 0402-001105 DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,
 D804 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D805 0402-000231 DIODE-RECTIFIER;FMG-G26S,600V,4A,TO-220F
 D807 0402-000233 DIODE-RECTIFIER;FML-G12S,200V,5A,-,
 D808 0402-000132 DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP
 D809 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D810 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D812 0402-000233 DIODE-RECTIFIER;FML-G12S,200V,5A,-,
 D901 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D902 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D903 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D904 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D905 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D906 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 D907 0401-000005 DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T
 DV801 1405-000152 VARISTOR;560V,2500A,14x8.5mm,TP
 DV802 1405-000152 VARISTOR;560V,2500A,14x8.5mm,TP
 DZ101 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ201 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ204 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ301 0403-000660 DIODE-ZENER:MTZ22A,22V,20.15-21.2V,500mW
 DZ302 0403-000700 DIODE-ZENER:TZP33A,33V,31-35V,1W,DO-41,T
 DZ303 0403-000656 DIODE-ZENER:MTZ15C,15V,14.35-15.09V,500m
 DZ304 0403-001039 DIODE-ZENER:MA2560,56V,52-60V,1W,DO-41,T
 DZ401 0403-000700 DIODE-ZENER:TZP33A,33V,31-35V,1W,DO-41,T
 DZ402 0403-000300 DIODE-ZENER:MTZ8.2B,7.78-8.19V,500mW,DO-
 DZ601 0403-000545 DIODE-ZENER:MTZ24B,24V,22.61-23.77V,500m
 DZ602 0403-000545 DIODE-ZENER:MTZ24B,24V,22.61-23.77V,500m
 DZ603 0403-000545 DIODE-ZENER:MTZ24B,24V,22.61-23.77V,500m
 DZ604 0403-000545 DIODE-ZENER:MTZ24B,24V,22.61-23.77V,500m
 DZ701 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ702 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ703 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ704 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ705 0403-000563 DIODE-ZENER:MTZ9.1B,9.1V,8.57-9.01V,500m
 DZ801 0403-000297 DIODE-ZENER:MTZ6.2B,6.2V,5.96-6.27V,500m
 DZ802 0403-000294 DIODE-ZENER:MTZ4.7B,4.55-4.80V,500mW,DO-
 DZ803 0403-000296 DIODE-ZENER:MTZ5.6B,5.6V,5.45-5.73V,500m
 DZ805 1203-001217 IC-POSI.AJUST REG.;431,TO-92,3P,4.58MIL
 DZ807 0403-000296 DIODE-ZENER:MTZ5.6B,5.6V,5.45-5.73V,500m
 DZ901 1203-000451 IC-VOLTAGE REGULATOR;33,TO-92,3P,-,PLAST
 DZ902 0403-000295 DIODE-ZENER:MTZ5.1B,5.1V,4.94-5.20V,500m
 DZ903 0403-000297 DIODE-ZENER:MTZ6.2B,6.2V,5.96-6.27V,500m
 DZ904 0403-000299 DIODE-ZENER:MTZ7.5C,7.5V,7.29-7.67V,500m
 DZ905 0403-000296 DIODE-ZENER:MTZ5.6B,5.6V,5.45-5.73V,500m
 DZ906 0403-000296 DIODE-ZENER:MTZ5.6B,5.6V,5.45-5.73V,500m
 F801 3601-000281 FUSE-FERRULE;250V,4A,TIME LAG,GLASS,5x20
 F801A 3602-000114 FUSE-HOLDER;-,30mohm
 F801B 3602-000114 FUSE-HOLDER;-,30mohm
 F802 3601-000120 FUSE-FERRULE;125V,2.5A,QUICK ACTING,GLAS
 F803 3601-001086 FUSE-FERRULE;125V,5A,QUICK-ACTING,CERAMI
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HC101 AA13-20004A IC-HYBRID:-,PAP102T,SIP,6P,PRE-AMP,TP
 IC201 1204-001193 IC-CHROMA;TDA8375,DIP,56P,-,PLASTIC,8V,9
 IC301 1204-000426 IC-VERTICAL PROCESSOR;TDA8350Q/N4,SIP,13P
 IC401 1203-000243 IC-POSI.FIXED REG.;7812A,TO-220,3P,-,PLA
 IC601 1201-001064 IC-POWER AMP;7297,ZIP,15P,-,DUAL,32DB,PL
 IC701 1204-000473 IC-AUDIO PROCESSOR;TDA9859,DIP,32P,-,PLA
 IC801 1203-001482 IC-PWM CONTROLLER;3S1265R,TO-3P,5P,210,P
 IC802 0604-001038 PHOTO-COUPLER;TR,130-260%,200mW,DIP,4,S
 IC803 1203-001006 IC-VOLTAGE REGULATOR;78R05,TO-220F,4P,-,
 IC804 1203-000644 IC-POSI.FIXED REG.;7630,SIP,10P,-,PLASTI
 IC901 AA13-30019R IC-MCU:-,Z8933212PSC-R3719,16BIT,SDIP
 IC902 1103-000156 IC-EEPROM:24C04,512X8BIT,DIP,8P,300MIL,1
 J408 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J413 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J414 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J415 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J416 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J420 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J421 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J425 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 J426 2001-001043 R-CARBON(S);0ohm,5%,1/2W,AA,TP,2.4x6.4mm
 JA701 3722-000195 JACK-SCART;42P,-,SN,BLK,NO
 L101 2701-000189 INDUCTOR-AXIAL;470nH,10%,2.5x3.4mm
 L102 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L103 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L204 2701-000184 INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm
 L204 2701-000208 INDUCTOR-AXIAL;6.8uH,10%,2.5x3.4mm
 L205 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L206 2701-000142 INDUCTOR-AXIAL;1uH,10%,2.5x3.4mm
 L207 2701-000142 INDUCTOR-AXIAL;1uH,10%,2.5x3.4mm
 L208 2701-000142 INDUCTOR-AXIAL;1uH,10%,2.5x3.4mm
 L301 2701-001040 INDUCTOR-AXIAL;10uH,10%,14x4.5mm
 L302 2701-001040 INDUCTOR-AXIAL;10uH,10%,14x4.5mm
 L303 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L304 2701-000178 INDUCTOR-AXIAL;33uH,10%,2.8x7mm
 L401 AA27-40003J COIL-HORIZ,WIDTH:-,3MH,ER14 20,PI0.35,ST
 L402 AA27-30003J COIL-LINERITY:-,50uH,DR14x20,PI0.2x10,18
 L404 AA27-40001V COIL-HORIZ,WIDTH:-,600uH,DR1420,PI0.45,-
 L601 3301-000287 CORE-FERRITE BEAD;AA,3.5x1x6mm,1500,2400
 L603 3301-000287 CORE-FERRITE BEAD;AA,3.5x1x6mm,1500,2400
 L701 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L702 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L703 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L704 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L705 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L706 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L707 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L708 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L709 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L801 AA29-30001Q FILTER-LINE:-,20MH,1.26A,-,BSF3050
 L803 3301-000287 CORE-FERRITE BEAD;AA,3.5x1x6mm,1500,2400
 L804 2901-000297 FILTER-EMI ON BOARD:-,3A,-,-,3.5x5,TP,-
 L805 2701-001032 INDUCTOR-AXIAL;100uH,10%,5x14mm
 L806 2901-000297 FILTER-EMI ON BOARD:-,3A,-,-,3.5x5,TP,-
 L807 3301-000287 CORE-FERRITE BEAD;AA,3.5x1x6mm,1500,2400
 L901 2701-000189 INDUCTOR-AXIAL;470nH,10%,2.5x3.4mm
 L903 2701-000197 INDUCTOR-AXIAL;5.6uH,10%,2.5x3.4mm
 L904 2701-000211 INDUCTOR-AXIAL;68uH,10%,2.5x3.4mm
 L905 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 L906 2701-000114 INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
 LD901 AA96-30001B ASSY-LED,GUIDE:-,AA61-50055A,DL-G5RGA,-
 Q204 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T
 Q207 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T

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Q209 0501-000283 TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T
 Q401 0502-000242 TR-POWER;KSA614,PNP,25W,TO-220,TP,40-24 H/SINK
 Q402 0502-001007 TR-POWER;KSC2073-H2,NPN,25W,TO-220,ST,6
 Q403 0502-000450 TR-POWER;2SD1887YD,NPN,1500V,800V,10A,7 H/SINK
 Q701 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T
 Q702 0501-000283 TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T
 Q703 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T
 Q704 0501-000283 TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T
 Q801 0501-000369 TR-SMALL SIGNAL;KSC2331-Y,NPN,1W,TO-92L,
 Q901 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T
 Q902 0504-000123 TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T
 Q903 0504-000123 TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T
 Q904 0504-000123 TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T
 Q905 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T
 Q906 0501-000283 TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T
 Q907 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T
 Q908 0501-000389 TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T
 R101 2003-001035 R-METAL OXIDE(S);27ohm,0.05,2W,AF,TP,3.9
 R212 2001-000005 R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R214 2001-000793 R-CARBON;47ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R215 2001-000780 R-CARBON;470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R218 2001-000515 R-CARBON;220ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R219 2001-000309 R-CARBON;110ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R220 2001-000281 R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R221 2001-000281 R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R222 2001-000440 R-CARBON;1ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R223 2001-000225 R-CARBON;1.2Mohm,5%,1/8W,AA,TP,1.8x3.2mm
 R224 2001-000832 R-CARBON;510ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R225 2001-000857 R-CARBON;560ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R226 2001-000793 R-CARBON;47ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R228 2001-001062 R-CARBON(S);10Mohm,5%,1/2W,AA,TP,2.4x6.4
 R230 2001-000429 R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R233 2001-000780 R-CARBON;470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R234 2001-000780 R-CARBON;470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R235 2001-000780 R-CARBON;470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R236 2001-000780 R-CARBON;470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R237 2004-001234 R-METAL;75Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R238 2001-000010 R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM
 R239 2001-000387 R-CARBON;16Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R241 2001-000429 R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R245 2001-000773 R-CARBON;470Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R246 2001-000273 R-CARBON;100Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R250 2001-000302 R-CARBON;10ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R251 2001-000281 R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R252 2001-000563 R-CARBON;27Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R253 2001-000591 R-CARBON;3.3Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R255 2001-000290 R-CARBON;10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R256 2001-000397 R-CARBON;180Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R257 2004-001234 R-METAL;75Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R258 2004-001914 R-METAL;39Kohm,2%,1/8W,AA,TP,1.8x3.5mm
 R259 2001-000281 R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R260 2001-000660 R-CARBON;33Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R261 2001-000331 R-CARBON;12Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R262 2004-001995 R-METAL;9.1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R267 2001-000281 R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R301 2004-000869 R-METAL;3Kohm,1%,1/8W,AA,TP,1.8x3.2mm
 R302 2004-001370 R-METAL(S);1.3ohm,1%,1/2W,AA,TP,2.4x6.4m
 R303 2004-001370 R-METAL(S);1.3ohm,1%,1/2W,AA,TP,2.4x6.4m
 R304 2004-002019 R-METAL(S);33Kohm,1%,1/2W,AA,TP,2.5x6.5m
 R305 2003-002009 R-METAL OXIDE(S);390ohm,5%,2W,AF,TP,3.9x
 R306 2003-002009 R-METAL OXIDE(S);390ohm,5%,2W,AF,TP,3.9x
 R307 2001-000449 R-CARBON;2.2Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R308 2003-002009 R-METAL OXIDE(S);390ohm,5%,2W,AF,TP,3.9x

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R401 2001-001152 R-CARBON(S):47Kohm,5%,1/2W,AA,TP,2.4x6.4
 R402 2001-000028 R-CARBON(S):100ohm,5%,1/2W,AA,TP,2.4x6.4
 R403 2001-001155 R-CARBON(S):5.6Kohm,5%,1/2W,AA,TP,2.4x6.
 R404 2008-001018 R-FUSIBLE(S):0.47ohm,10%,2W,AF,TP,3.9x10
 R405 2001-001138 R-CARBON(S):390ohm,5%,1/2W,AA,TP,2.4x6.4
 R406 2003-002008 R-METAL OXIDE(S):18Kohm,5%,2W,AF,TP,3.9x
 R407 2003-002007 R-METAL OXIDE(S):4.7KOHM,5%,2W,AF,TP,3.9
 R408 2008-000179 R-FUSIBLE(S):10ohm,5%,1/2W,AA,TP,2.5x6.5
 R409 2008-000264 R-FUSIBLE(S):1ohm,5%,1W,AF,TP,3.9x10mm
 R410 2001-001114 R-CARBON(S): .270ohm,5%,1/2W,AA,TP,2.4x
 R411 2001-000022 R-CARBON(S):33ohm,5%,1/2W,AA,TP,2.4x6.4m
 R412 2001-000020 R-CARBON(S):22ohm,5%,1/2W,AA,TP,2.4x6.4m
 R413 2008-000251 R-FUSIBLE(S):0.27ohm,10%,2W,AF,TP,3.9x10
 R414 2008-001033 R-FUSIBLE(S):10ohm,5%,2W,AF,TP,3.9x10mm
 R415 2008-000266 R-FUSIBLE(S):1ohm,5%,2W,AF,TP,3.9x10mm
 R416 2004-001089 R-METAL:560Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R417 2004-001967 R-METAL(S):68Kohm,1%,1/2W,AA,TP,6.5x2.5m
 R418 2004-001967 R-METAL(S):68Kohm,1%,1/2W,AA,TP,6.5x2.5m
 R419 2004-001390 R-METAL(S):1Kohm,2%,1/2W,AA,TP,2.4x6.4mm
 R420 2001-001126 R-CARBON(S):300ohm,5%,1/2W,AA,TP,2.4x6.4
 R421 2001-001037 R-CARBON(S):0.39ohm,5%,1/2W,AA,TP,2.4x6.
 R422 2008-001018 R-FUSIBLE(S):0.47ohm,10%,2W,AF,TP,3.9x10
 R603 2001-000734 R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R604 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R605 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R606 2001-000734 R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R607 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R701 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R702 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R703 2001-000515 R-CARBON:220ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R704 2001-000515 R-CARBON:220ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R705 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R706 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R707 2001-000515 R-CARBON:220ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R708 2001-000515 R-CARBON:220ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R709 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R710 2001-000628 R-CARBON:3000HM,5%,1/8W,AA,TP,1.8X3.2MM
 R711 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R712 2001-000539 R-CARBON:24Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R713 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R714 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R715 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R716 2001-000660 R-CARBON:33Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R717 2001-000539 R-CARBON:24Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R718 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R719 2001-000527 R-CARBON:22ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R725 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R726 2001-000591 R-CARBON:3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R727 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R728 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R729 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R730 2001-000591 R-CARBON:3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R731 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R733 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R734 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R735 2001-000969 R-CARBON:75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R736 2001-000660 R-CARBON:33Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R738 2001-000812 R-CARBON:5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R739 2001-000812 R-CARBON:5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R740 2001-000780 R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R741 2001-000780 R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R742 2001-000563 R-CARBON:27Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R743 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm

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R744 2001-000362 R-CARBON:150ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R745 2001-000362 R-CARBON:150ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R746 2001-000780 R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R747 2001-000793 R-CARBON:47ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R748 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R749 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R801 2002-001011 R-COMPOSITION:3.3Mohm,10%,1/2W,AA,TP,3.7
 R802 2003-000994 R-METAL OXIDE(S):33Kohm,5%,2W,AF,TP,3.9x
 R803 2003-000994 R-METAL OXIDE(S):33Kohm,5%,2W,AF,TP,3.9x
 R804 2001-001150 R-CARBON(S):470Kohm,5%,1/2W,AA,TP,2.4x6.
 R805 2001-001150 R-CARBON(S):470Kohm,5%,1/2W,AA,TP,2.4x6.
 R806 2004-002019 R-METAL(S):33Kohm,1%,1/2W,AA,TP,2.5x6.5m
 R807 2004-001373 R-METAL(S):100Kohm,1%,1/2W,AA,TP,2.4x6.4
 R808 2002-001011 R-COMPOSITION:3.3Mohm,10%,1/2W,AA,TP,3.7
 R809 2002-001013 R-COMPOSITION:4.7Mohm,10%,1/2W,AA,TP,3.7
 R810 2003-000782 R-METAL OXIDE(S):7.5Kohm,5%,2W,AA,TP,4x1
 R811 2003-000462 R-METAL OXIDE(S):10Kohm,5%,2W,AA,TP,4x12
 R812 2006-001029 R-CEMENT:3.3OHM,5%,5W,CJ,TP,10.5X14X27M
 R813 2001-000241 R-CARBON:1.5Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R814 2001-000449 R-CARBON:2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R815 2004-001891 R-METAL(S):133Kohm,1%,1/2W,AA,TP,2.5x6.5
 R816 2004-001983 R-METAL:2.49Kohm,1%,1/2W,AA,TP,2.4x6.4
 R817 2001-000117 R-CARBON(S):68ohm,5%,1/2W,AA,TP,2.4x6.4m
 R818 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R819 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R820 2008-000299 R-FUSIBLE(S):47ohm,5%,2W,AF,TP,3.9x10mm
 R822 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R823 2006-001029 R-CEMENT:3.3OHM,5%,5W,CJ,TP,10.5X14X27M
 R824 2001-001125 R-CARBON(S):300Kohm,5%,1/2W,AA,TP,2.4x6.
 R901 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R902 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R903 2001-000066 R-CARBON(S):10Kohm,5%,1/2W,AA,TP,2.4x6.4
 R904 2004-000218 R-METAL:10Kohm,1%,1/8W,AA,TP,1.8x3.2mm
 R905 2004-000218 R-METAL:10Kohm,1%,1/8W,AA,TP,1.8x3.2mm
 R906 2004-000218 R-METAL:10Kohm,1%,1/8W,AA,TP,1.8x3.2mm
 R908 2001-000241 R-CARBON:1.5Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R909 2001-000472 R-CARBON:2.7Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R910 2004-001193 R-METAL:680ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R911 2001-000214 R-CARBON:1.1Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R912 2001-000449 R-CARBON:2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R913 2001-000241 R-CARBON:1.5Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R914 2001-000472 R-CARBON:2.7Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R916 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R917 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R918 2001-000734 R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R919 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R920 2001-000273 R-CARBON:100Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R921 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R922 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R923 2001-000290 R-CARBON:10Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 R924 2001-000734 R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R925 2004-001193 R-METAL:680ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R926 2004-001193 R-METAL:680ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R927 2001-000003 R-CARBON:330ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R928 2001-000003 R-CARBON:330ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R929 2001-000003 R-CARBON:330ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R930 2001-000003 R-CARBON:330ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R931 2001-001111 R-CARBON(S):240ohm,5%,1/2W,AA,TP,2.4x6.4
 R932 2001-000780 R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R933 2001-000449 R-CARBON:2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R934 2001-000449 R-CARBON:2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m
 R935 2001-000780 R-CARBON:470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 R936 2001-000449 R-CARBON:2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m

| Loc | Part-No | Description & Specification | Remarks |
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R937 2001-001062 R-CARBON(S);10Mohm,5%,1/2W,AA,TP,2.4x6.4
R938 2001-000832 R-CARBON:510ohm,5%,1/8W,AA,TP,1.8x3.2mm
R939 2001-000786 R-CARBON:47Kohm,5%,1/8W,AA,TP,1.8x3.2mm
R940 2001-001062 R-CARBON(S);10Mohm,5%,1/2W,AA,TP,2.4x6.4
R942 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
R943 2001-000793 R-CARBON:47ohm,5%,1/8W,AA,TP,1.8x3.2mm
R944 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
R945 2001-000734 R-CARBON:4.7Kohm,5%,1/8W,AA,TP,1.8x3.2mm
R946 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
R948 2001-000449 R-CARBON:2.2Kohm,5%,1/8W,AA,TP,1.8x3.2mm
R949 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
R951 2001-000449 R-CARBON:2.2Kohm,5%,1/8W,AA,TP,1.8x3.2mm
R952 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
R953 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
R954 2001-000281 R-CARBON:100ohm,5%,1/8W,AA,TP,1.8x3.2mm
R955 2001-000429 R-CARBON:1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
RL801 3501-001040 RELAY-POWER:12VDC,500mW,10A,1FormA,15mS,
RM901 AA59-60003S MODULE-REMOCON:,_ORC-50VFM/SR-12VM,38KHz
RP802 1404-001045 THERMISTOR-NTC:4.7OHM,15%,2900K,35.0MW,T
RP803 1404-001087 THERMISTOR-PTC:7ohm,30%,220V,270V,19A,-,
SF102 2904-001063 FILTER-SAW AV:38.9MHz,SIP5K,TP,17dB,PAL-
SW801 3403-001020 SWITCH-PUSH:250V,5A,DPST,OFF-ON-OFF
SW901 3404-000244 SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP
SW902 3404-000244 SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP
SW903 3404-000244 SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP
SW904 3404-000244 SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP
SW905 3404-000244 SWITCH-TACT:15V,20mA,90-170gf,7.5x7mm,SP
T201 AA26-10005G TRANS-IF:-,7MG,VIF,150nH,7mm,8pF,74.2MH
T401 AA26-50001R TRANS-HORIZ DRIVE:-,80MH,580UH,4UH,G11A
T444 AA26-30005C TRANS-FLYBACK:-,FTH-29A013(S),29",130V
T801 AA26-20007R TRANS-SWITCHING:-,90V~260VAC,135V/15V/12
TU101 AA40-10003K TUNER-V/S:TELE1-002,PAL-B/G,-,105CH
X202 2801-00332 CRYSTAL-UNIT:4.433619MHz,30ppm,28-AAM,72
X203 2801-000231 CRYSTAL-UNIT:3.579545MHz,30ppm,28-AAM,84
X901 2801-003224 CRYSTAL-UNIT:32.768KHZ,20PPM,28-AAY,12.5
Z208 2903-000199 FILTER-CERAMIC:TR,6.5MHz,70KHz,-,-,TP,-
Z209 2903-000181 FILTER-CERAMIC:TR,5.5MHz,-,-,TP,TPS5.5
Z210 2903-000181 FILTER-CERAMIC:TR,5.5MHz,-,-,TP,TPS5.5

ASSY-ACCESSORY

RCA/C AA39-40001B CABLE-RCA:,-,RCA,1500mm,0.12/10,RED/WHT/Y
USER/I AA68-11204A MANUAL-USERS:SCT57B,RUSSIA,TM51,B5,W/P 1

ASSY-CRT

CRT AA03-10029B CRT-COLOR:,-,A70QBZ791X001(B),,+500mG,29",

ASSY-PCB,CRT

* AA95-20009S ASSY-PCB,CRT:,-,SCT57A,30",,-

C501 2201-000247 C-CERAMIC,DISC:15pF,5%,50V,CH,TP,5x3.5
C502 2201-000247 C-CERAMIC,DISC:15pF,5%,50V,CH,TP,5x3.5
C503 2201-000247 C-CERAMIC,DISC:15pF,5%,50V,CH,TP,5x3.5
C504 2305-000665 C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m
C505 2305-000665 C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m
C506 2305-000665 C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m
C507 2301-000224 C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm
C508 2301-000224 C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm
C509 2301-000224 C-FILM,PEF:22nF,5%,50V,TP,7.4x3.9x13mm
C510 2305-000011 C-FILM,MPEF:470nF,5%,250V,TP,21.5X13.0X7
C511 2305-000011 C-FILM,MPEF:470nF,5%,250V,TP,21.5X13.0X7

| Loc | Part-No | Description & Specification | Remarks |
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C512 2305-000011 C-FILM,MPEF:470nF,5%,250V,TP,21.5X13.0X7
C513 2201-000556 C-CERAMIC,DISC:470pF,10%,500V,Y5P,TP,7x4
C514 2201-000556 C-CERAMIC,DISC:470pF,10%,500V,Y5P,TP,7x4
C515 2201-000556 C-CERAMIC,DISC:470pF,10%,500V,Y5P,TP,7x4
C517 2201-000158 C-CERAMIC,DISC:10nF,+80-20%,3KV,Y5V,BK,-
C518 2401-000430 C-AL:10uF,20%,250V,GP,TP,10x16mm,5m
C519 2401-000910 C-AL:22uF,20%,16V,GP,TP,5x5mm,5mm
C522 2401-001177 C-AL:33uF,20%,25V,GP,TP,6.3x11.5mm
C527 2401-001527 C-AL:47uF,20%,250V,HR,TP,13x25mm,5m
C528 2401-001527 C-AL:47uF,20%,250V,HR,TP,13x25mm,5m
C529 2401-000832 C-AL:220uF,20%,25V,GP,TP,8x11.5,5mm
CN07A 3711-002648 CONNECTOR-HEADER:BOX,9P,1R,2.5MM,STRAIGH
CN08A 3711-002645 CONNECTOR-HEADER:BOX,6P,1R,2.5MM,STRAIGH
CNV01 3711-002642 CONNECTOR-HEADER:BOX,3P,1R,2.5MM,STRAIGH
CNW07 AA39-20031D LEAD-CONNECTOR,ASSY:,-,67096-009,S,9P,500
CNW08 AA39-20027B LEAD-CONNECTOR,ASSY:,-,67096-006,S,6P,400
CV01 2401-000832 C-AL:220uF,20%,25V,GP,TP,8x11.5,5mm
CV02 2301-000380 C-FILM,PEF:10nF,5%,50V,TP,6.5x3mm,5mm
CV03 2305-000665 C-FILM,MPEF:100nF,5%,63V,TP,7.5x4.0x5.0m
CV04 2201-000611 56pF,5%,50V,CH,TP,6.5x3.5
CV05 2301-000232 C-FILM,PEF:3.3nF,5%,50V,TP,8.1x4.5x13mm,
CV06 2201-000144 C-CERAMIC,DISC:100pF,5%,50V,CH,TP,8x3.5
CV07 2201-000606 C-CERAMIC,DISC:56pF,10%,50V,RH,TP,6.5x3,
CV08 2201-000980 C-CERAMIC,DISC:30pF,5%,50V,CH,TP,5.0x3.0
CV09 2201-000441 C-CERAMIC,DISC:3.3nF,10%,500V,Y5P,TP,10x
CV10 2401-000430 C-AL:10uF,20%,250V,GP,TP,10x16mm,5m
CV11 2401-000440 C-AL:10UF,20%,25V,GP,TP,5X11MM,5MM
CV12 2401-000440 C-AL:10UF,20%,25V,GP,TP,5X11MM,5MM
CV15 2201-000604 C-CERAMIC,DISC:56pF,+100-0%,500V,SL,TP,7
CV16 2401-000395 C-AL:10uf,20%,160V,GP,TP,10x12.5mm,
CV17 2201-000441 C-CERAMIC,DISC:3.3nF,10%,500V,Y5P,TP,10x
CV18 2201-000441 C-CERAMIC,DISC:3.3nF,10%,500V,Y5P,TP,10x
CV19 2401-000404 C-AL:10uF,20%,16V,BP,TP,6x11mm,5mm
CV20 2401-000440 C-AL:10UF,20%,25V,GP,TP,5X11MM,5MM
CV21 2401-001495 C-AL:47uF,20%,16V,GP,5x11mm,5mm,TP
D501 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
D503 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
D504 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
D505 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
D506 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
D507 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
D508 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
D511 0402-000132 DIODE-RECTIFIER:1N4004,400V,1A,DO-41,TP
D512 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
DV01 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
DV02 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
DV03 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
DV04 0402-000546 DIODE-RECTIFIER:TVR10G,400V,1.0A,DO-41
DV05 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
DV06 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
DV07 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
DV08 0401-000005 DIODE-SWITCHING:1N4148,75V,300mA,DO-35,T
DZ501 0403-000654 DIODE-ZENER:MTZ12B,12V,11.44-12.03V,500m
DZ502 0403-000654 DIODE-ZENER:MTZ12B,12V,11.44-12.03V,500m
DZ503 0403-000654 DIODE-ZENER:MTZ12B,12V,11.44-12.03V,500m
DZ504 0403-000654 DIODE-ZENER:MTZ12B,12V,11.44-12.03V,500m
DZ505 0403-000654 DIODE-ZENER:MTZ12B,12V,11.44-12.03V,500m
DZ506 0403-000654 DIODE-ZENER:MTZ12B,12V,11.44-12.03V,500m
DZ507 0403-000655 DIODE-ZENER:MTZ13A,13V,12.11-12.75V,500m
IC501 1201-000539 IC-VIDEO AMP:6101,ZIP,9P,-,SINGLE,-,PLAS
IC502 1201-000539 IC-VIDEO AMP:6101,ZIP,9P,-,SINGLE,-,PLAS
IC503 1201-000539 IC-VIDEO AMP:6101,ZIP,9P,-,SINGLE,-,PLAS
IC504 AA13-20002S IC-HYBRID:,-,SPK101,SIP,6P,SPOT KILLER

| Loc | Part-No | Description & Specification | Remarks | Loc | Part-No | Description & Specification | Remarks |
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RT27 2001-000628 R-CARBON;300OHM,5%,1/8W,AA,TP,1.8X3.2MM
 RT28 2007-000468 R-CHIP;1Kohm,5%,1/10W,DA,TP,2012
 RT29 2007-000468 R-CHIP;1Kohm,5%,1/10W,DA,TP,2012
 RT30 2007-000468 R-CHIP;1Kohm,5%,1/10W,DA,TP,2012
 RT31 2001-000969 R-CARBON;75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 RT32 2001-000969 R-CARBON;75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 RT33 2001-000969 R-CARBON;75ohm,5%,1/8W,AA,TP,1.8x3.2mm
 RT34 2007-000300 R-CHIP;10Kohm,5%,1/10W,DA,TP,2012
 RT35 2007-000300 R-CHIP;10Kohm,5%,1/10W,DA,TP,2012
 RT36 2007-000300 R-CHIP;10Kohm,5%,1/10W,DA,TP,2012
 RT37 2001-000780 R-CARBON;470ohm,5%,1/8W,AA,TP,1.8x3.2mm
 RT38 2001-000429 R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm
 XT01 2801-001118 CRYSTAL-UNIT;9.8304MHZ,50PPM,28-AAM,30PF
 XT02 2801-000214 CRYSTAL-UNIT;27MHz,40ppm,28-AAM,S,40ohm,

ASSY-POWER,CORD

* AA96-20109C ASSY-POWER,CORD:-,CP2/NO(4.0),H/C300,KKP
 P-COR AA39-10006X POWER-CORD:-,KKP419C,KLCE-2F,2.286MT,3P,
 HOLD AA61-20284A HOLDER:-,P-CORD,PP,VO,BLK,KE-002

REMOCON

* AA59-10075K REMOCON:-,TM48,SZM157ETX,43,L/GRY,SS

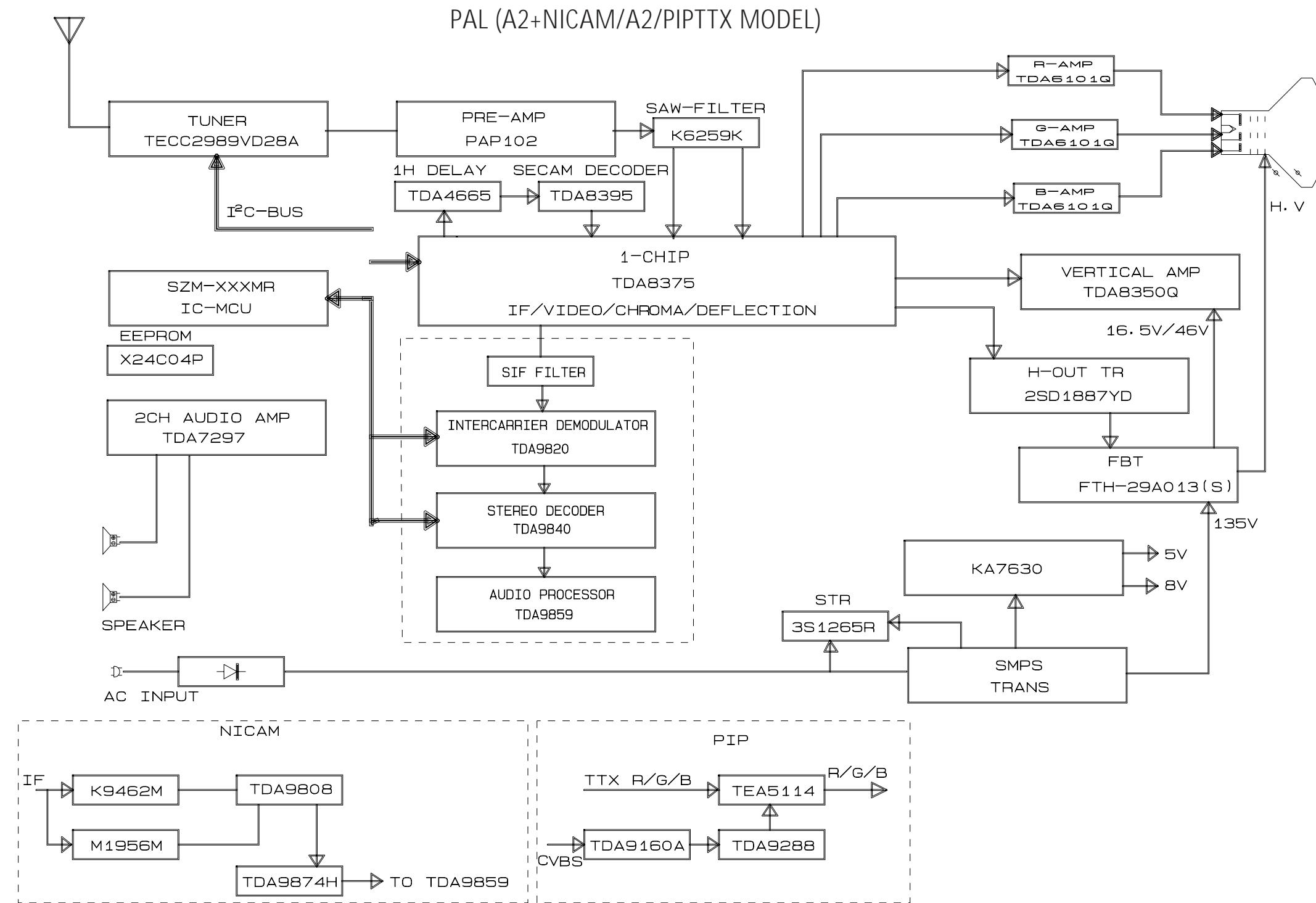
ASSY-CABINET

| | | |
|--------------------|--|-------|
| * AA91-10367E | ASSY-CABINET,FRONT:-,CK765DWTR,DG703P BW | S.N.A |
| CB+21 6002-000512 | SCREW-TAPPING:RH,+,2,M4,L12,ZPC(BLK),SWR | S.N.A |
| AV+CF 6002-000514 | SCREW-TAPPING:RH,+,2,M4,L15,ZPC(BLK),SWR | S.N.A |
| IND+CI 6002-000514 | SCREW-TAPPING:RH,+,2,M4,L15,ZPC(BLK),SWR | S.N.A |
| KC+CF 6002-000514 | SCREW-TAPPING:RH,+,2,M4,L15,ZPC(BLK),SWR | S.N.A |
| SPK+C 6002-000514 | SCREW-TAPPING:RH,+,2,M4,L15,ZPC(BLK),SWR | S.N.A |
| CRT+C AA60-10050R | SCREW-ASSY:WC,HH,+,M5,L31.5,SWRCH18A,ZPC | S.N.A |
| CB+CF AA60-10050T | SCREW-TAPPING:RH,+,2S,M4,L20,ZPC(BLK),SW | S.N.A |
| BOSS-1 AA61-40010A | BOSS-WING:-,HIPS,HB,NTR,-, | S.N.A |
| STOPP AA61-40053A | STOPPER-PCB;ALL MODEL,HIPS HB,WHT,HB,-, | S.N.A |
| KNOPC AA61-60003N | SPRING-CS:-,SUS304,0.6,OD11.2,H27,N9,H27 | S.N.A |
| CABBA AA63-60001X | SPACER-FELT;FELT,T0.5,BLK,330X15,-, | S.N.A |
| KNOPC AA64-10740D | KNOB-POWER:-,765D,G3676 NO-SILK,ABS,HB,H | |
| KNOC C AA64-10741A | KNOB-CONTROL:-,765D,G3676,ABS,HB,HI-GRY | |
| FRONT AA64-31160F | CABINET-FRONT:-,CK765DWTR,DG703P BWT ML, | |
| BACK AA64-31180C | CABINET-BACK:-,765D,-,HIPS,V2,GRAY,-, | |
| WIN-Rf AA64-40479A | WINDOW-REMOCON:-,765D,-,ABS,HB,-,CLR LG4 | |
| INDLEI AA64-40480A | INDICATOR-LED:-,765D,-,ABS,-,CLR,- | |
| IN-BA AA64-60052C | INLAY-BACK:-,SCT57A,C SCART(2),PS,T0.5,B | S.N.A |
| IN-AV AA64-60423K | INLAY-AV:761B,SCT57A L/GRY,PS,T0.3,BLK, | S.N.A |
| BADGE AA64-70117A | BADGE-BRAND:AL,SS,FLAT,L65,SILVER,-, | S.N.A |
| C-D,CC AA65-30004A | CLAMP-D,COIL:NYLON-66,V0,WHT,25,29INCH,- | S.N.A |
| C-COR AA65-30008A | CLAMP-CORD:PE,HB,BLK,-,-, | S.N.A |
| C-WIRf AA65-30105A | CLAMP-WIRE:NYLON 66,V2,NTR,15MM,ALL MODE | S.N.A |

ASSY-SPEAKER

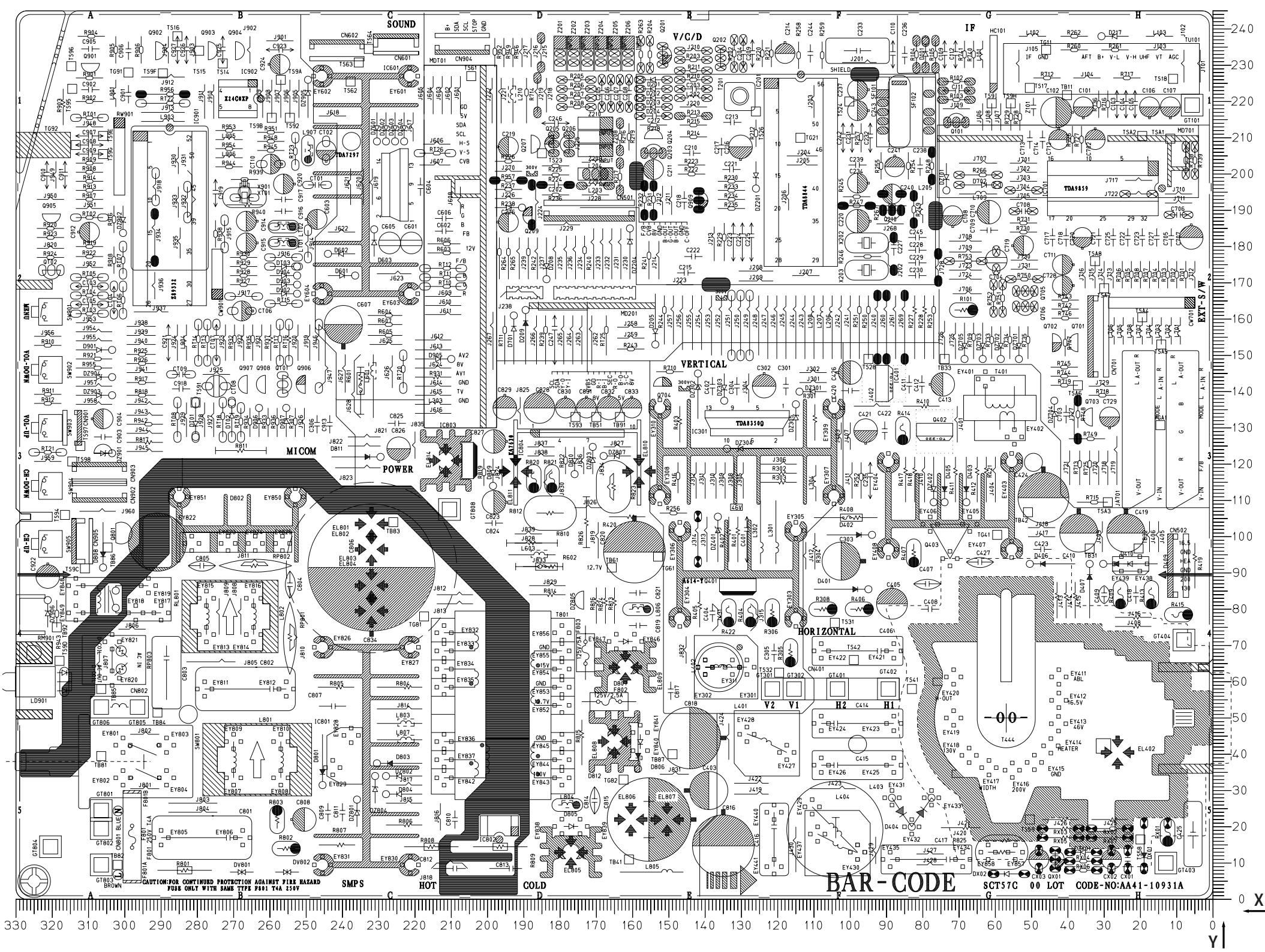
* AA96-10145A ASSY-SPEAKER:-,8R,5W,000280x4,YB/R,RB/L,
 SPK 3001-000280 SPEAKER:5W,16ohm,90dB,150Hz
 LEAD/C AA39-20583A LEAD CONNECTOR-ASSY:-,YSH025-04,REC,REC,

8. Block Diagram

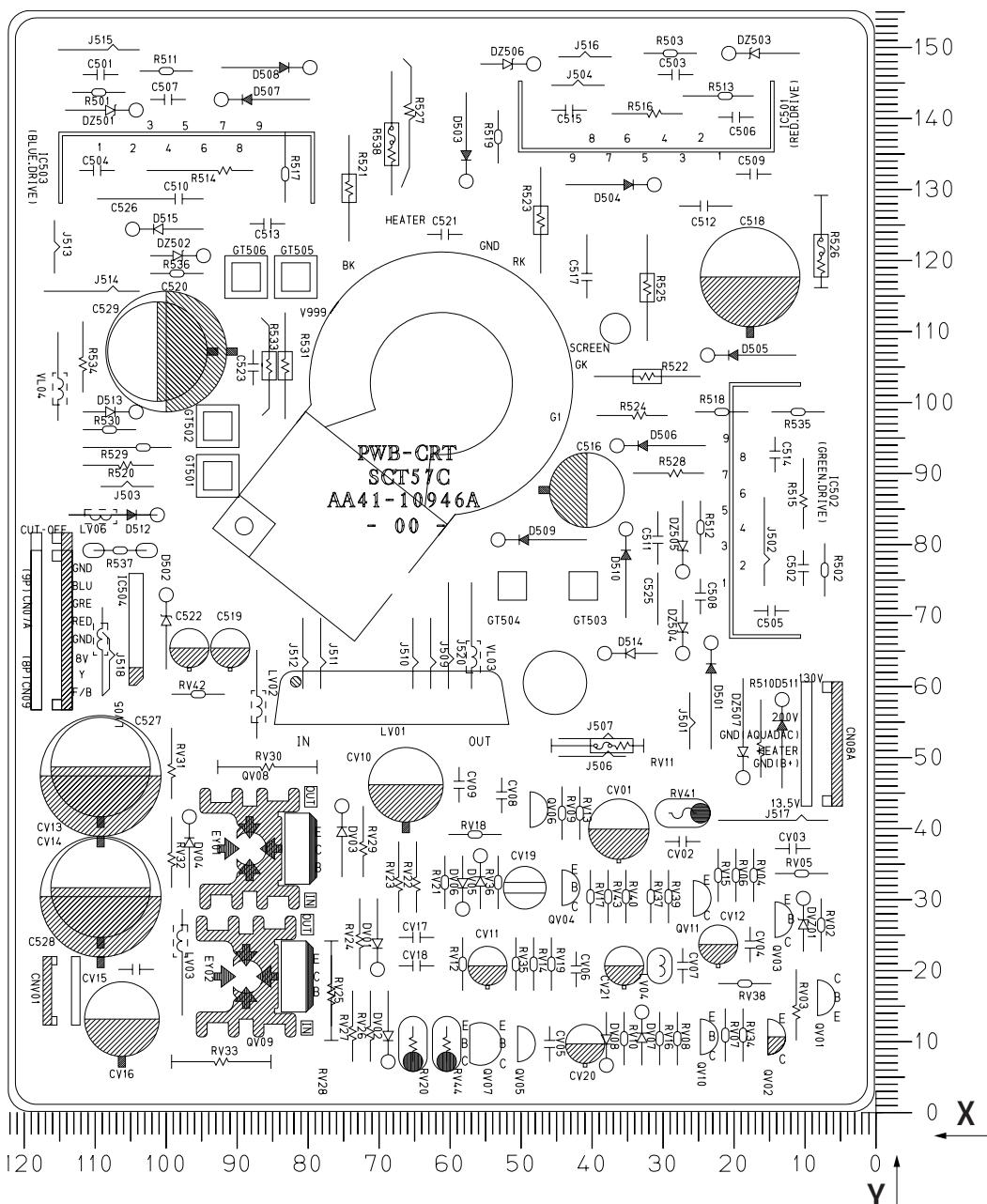
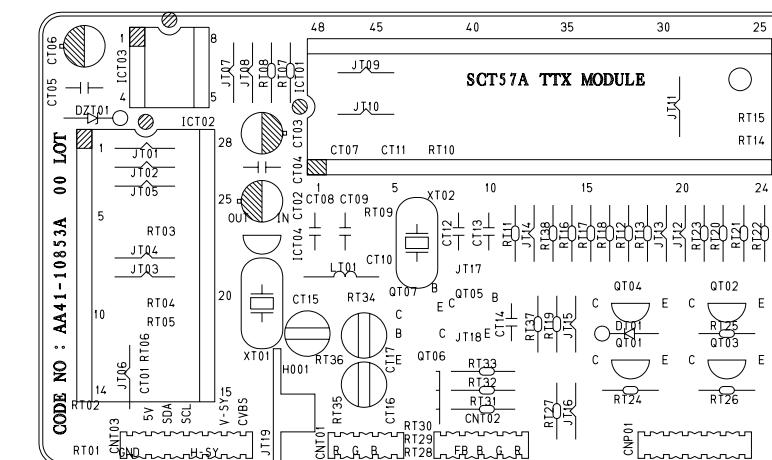
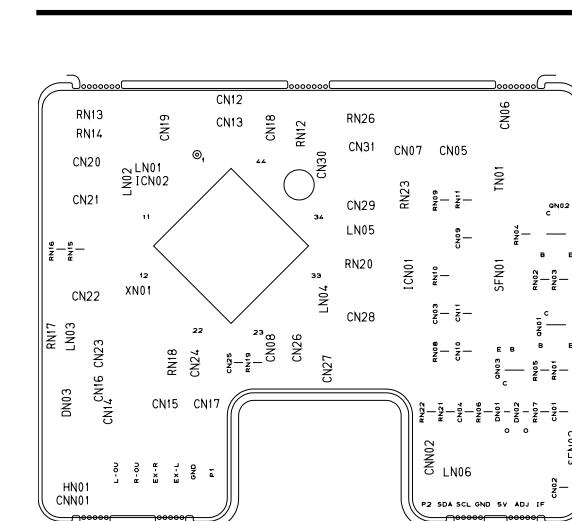
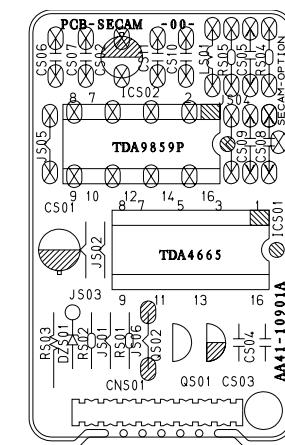
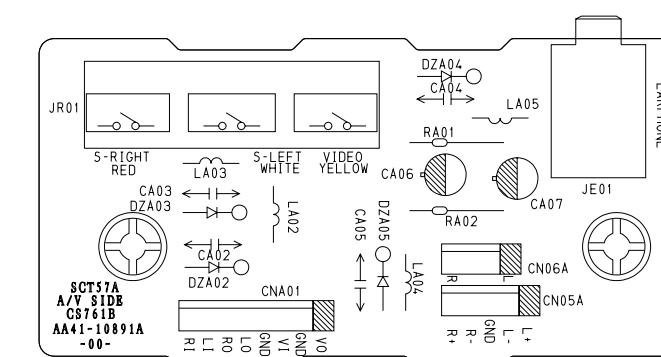


9. PCB Layout

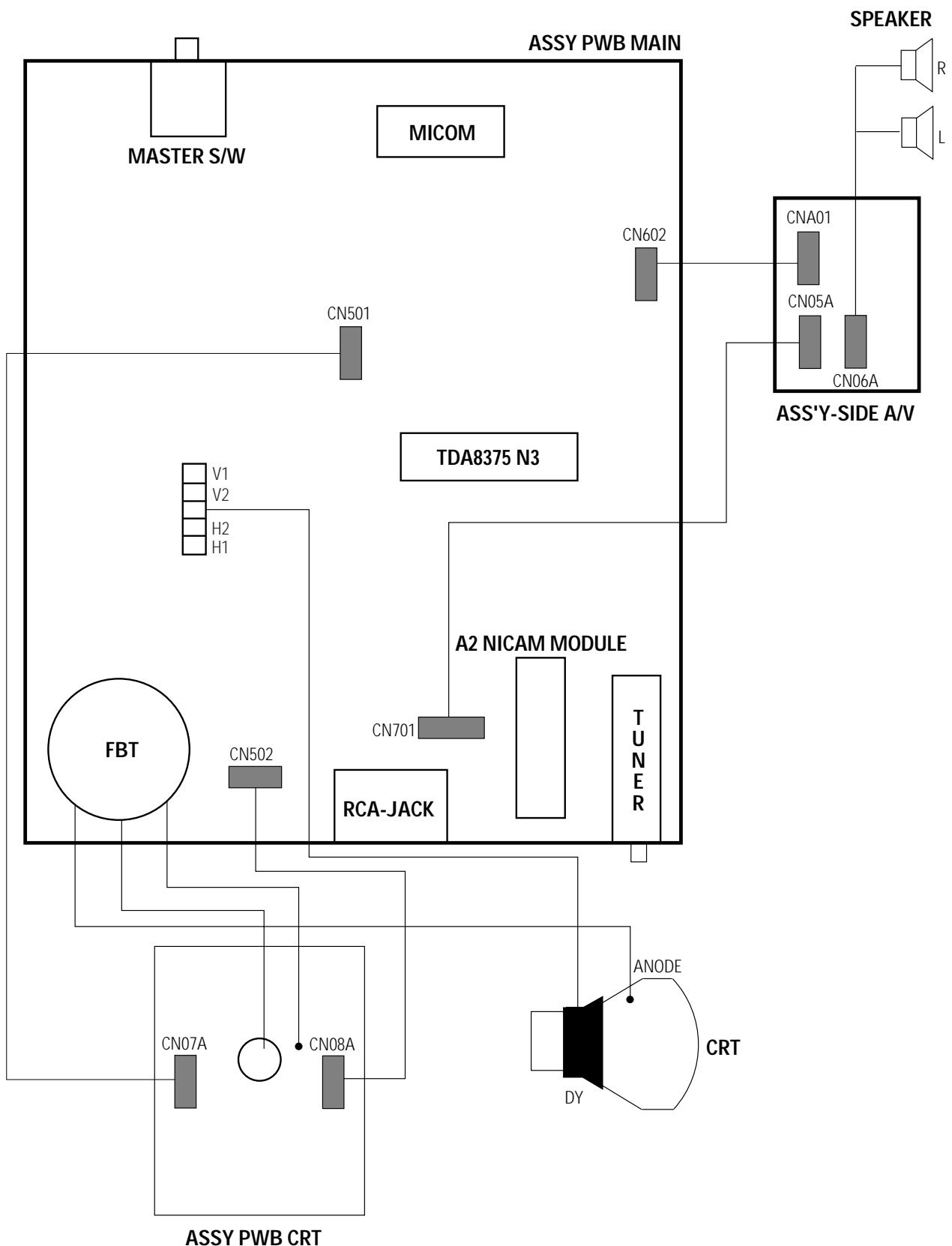
9-1 PCB-MAIN



| Loc. No. | X | Y | Loc. No. | X | Y |
|-------------------|-----|-----|----------|-----|-----|
| DIODE | | | | | |
| D101 | 79 | 236 | DZ703 | 63 | 149 |
| D201 | 158 | 226 | DZ704 | 43 | 137 |
| D202 | 158 | 223 | DZ705 | 68 | 149 |
| D203 | 158 | 221 | DZ801 | 236 | 27 |
| D204 | 158 | 218 | DZ802 | 228 | 34 |
| D205 | 153 | 153 | DZ803 | 171 | 124 |
| D208 | 183 | 171 | DZ804 | 231 | 34 |
| D209 | 189 | 162 | DZ805 | 173 | 85 |
| D217 | 30 | 238 | DZ807 | 168 | 122 |
| D401 | 95 | 85 | DZ901 | 303 | 123 |
| D402 | 94 | 100 | DZ902 | 300 | 183 |
| D403 | 68 | 109 | DZ903 | 303 | 139 |
| D404 | 88 | 28 | DZ904 | 303 | 144 |
| D405 | 74 | 109 | DZ905 | 249 | 226 |
| D406 | 50 | 92 | DZ906 | 321 | 82 |
| DZ01 | 39 | 13 | DZX01 | 39 | 13 |
| IC | | | | | |
| IC201 | 105 | 224 | IC301 | 152 | 135 |
| IC401 | 90 | 139 | IC601 | 221 | 227 |
| IC701 | 17 | 190 | IC801 | 245 | 9 |
| IC802 | 201 | 19 | IC803 | 211 | 121 |
| IC804 | 192 | 118 | IC901 | 279 | 210 |
| IC902 | 265 | 216 | IC902 | 265 | 216 |
| TRANSISTOR | | | | | |
| O101 | 68 | 214 | O201 | 151 | 230 |
| O202 | 162 | 64 | O202 | 135 | 229 |
| O208 | 306 | 91 | O203 | 151 | 205 |
| O209 | 198 | 114 | O204 | 151 | 209 |
| O210 | 176 | 117 | O205 | 181 | 210 |
| O212 | 165 | 43 | O206 | 177 | 210 |
| O901 | 303 | 151 | O207 | 188 | 205 |
| O902 | 252 | 167 | O209 | 187 | 191 |
| O903 | 252 | 169 | O210 | 91 | 190 |
| O904 | 252 | 172 | O401 | 115 | 77 |
| O905 | 210 | 149 | O402 | 79 | 129 |
| O906 | 263 | 135 | O403 | 55 | 96 |
| O907 | 255 | 135 | O701 | 37 | 156 |
| DT01 | 280 | 127 | O702 | 44 | 151 |
| DT02 | 270 | 137 | O703 | 33 | 135 |
| DT03 | 252 | 174 | O704 | 149 | 141 |
| DV801 | 264 | 7 | O705 | 54 | 167 |
| DV802 | 251 | 7 | O706 | 54 | 163 |
| DX01 | 19 | 8 | O801 | 301 | 98 |
| DX02 | 60 | 7 | O901 | 312 | 230 |
| DZ101 | 73 | 195 | O902 | 291 | 231 |
| DZ201 | 126 | 196 | O903 | 277 | 231 |
| DZ204 | 160 | 185 | O904 | 269 | 231 |
| DZ301 | 114 | 140 | O905 | 322 | 189 |
| DZ302 | 142 | 145 | O906 | 250 | 144 |
| DZ303 | 134 | 137 | O907 | 266 | 144 |
| DZ304 | 134 | 124 | O908 | 261 | 144 |
| DZ305 | 115 | 136 | O909 | 141 | 190 |
| DZ401 | 136 | 105 | OT01 | 256 | 139 |
| OT02 | 77 | 109 | OT02 | 322 | 173 |
| DZ601 | 230 | 209 | OX01 | 43 | 8 |
| DZ602 | 228 | 209 | T201 | 130 | 221 |
| DZ603 | 225 | 209 | T401 | 59 | 127 |
| DZ604 | 223 | 209 | T444 | 57 | 50 |
| DZ701 | 53 | 149 | T801 | 179 | 73 |
| DZ702 | 58 | 149 | | | |
| OTHER | | | | | |

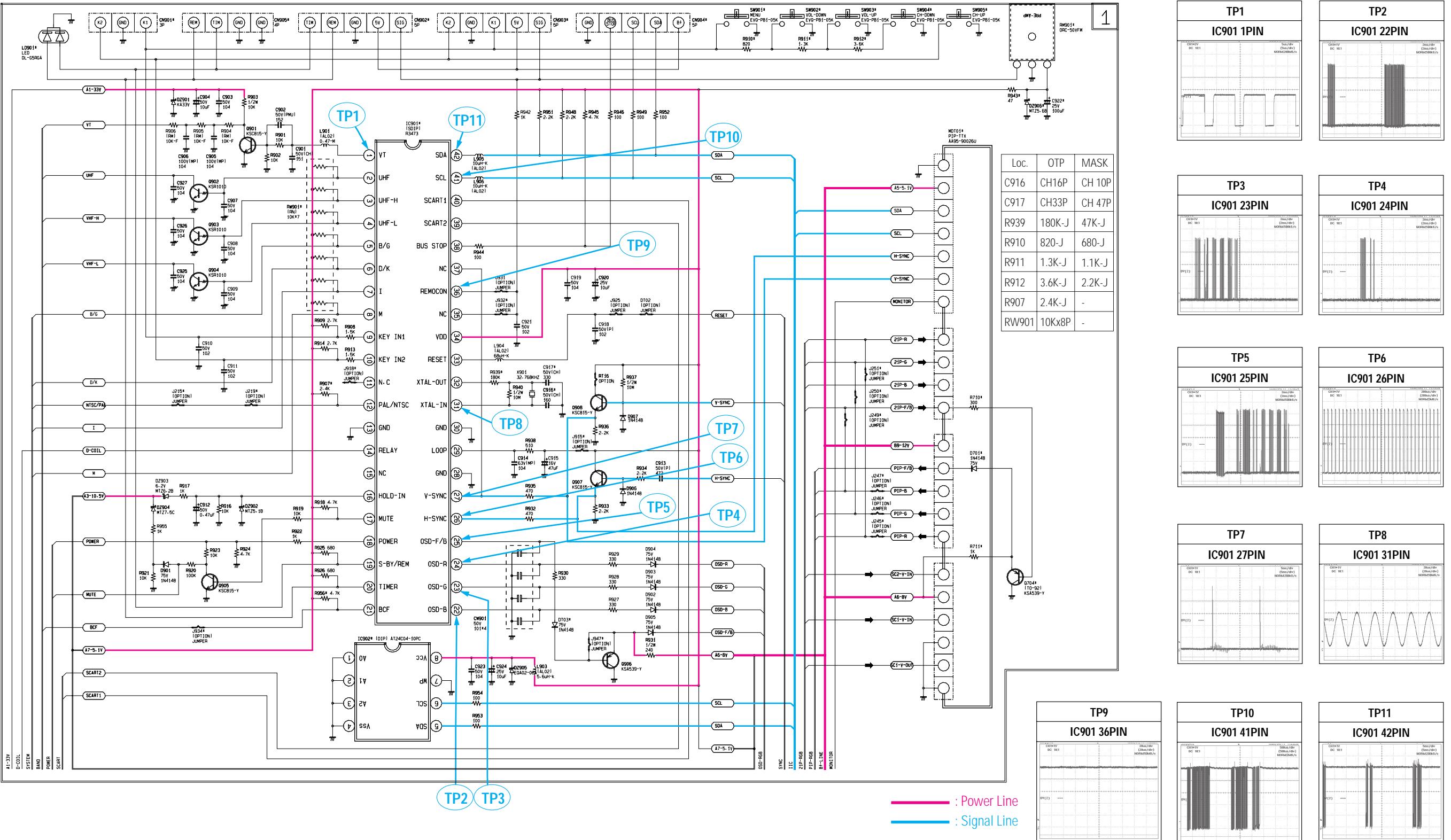
10-2 PCB-CRT**10-3 PCB-TTX****10-4 PCB-NICAM****10-6 PCB-SECAM****10-5 PWB-A/V**

10. Wiring Diagram

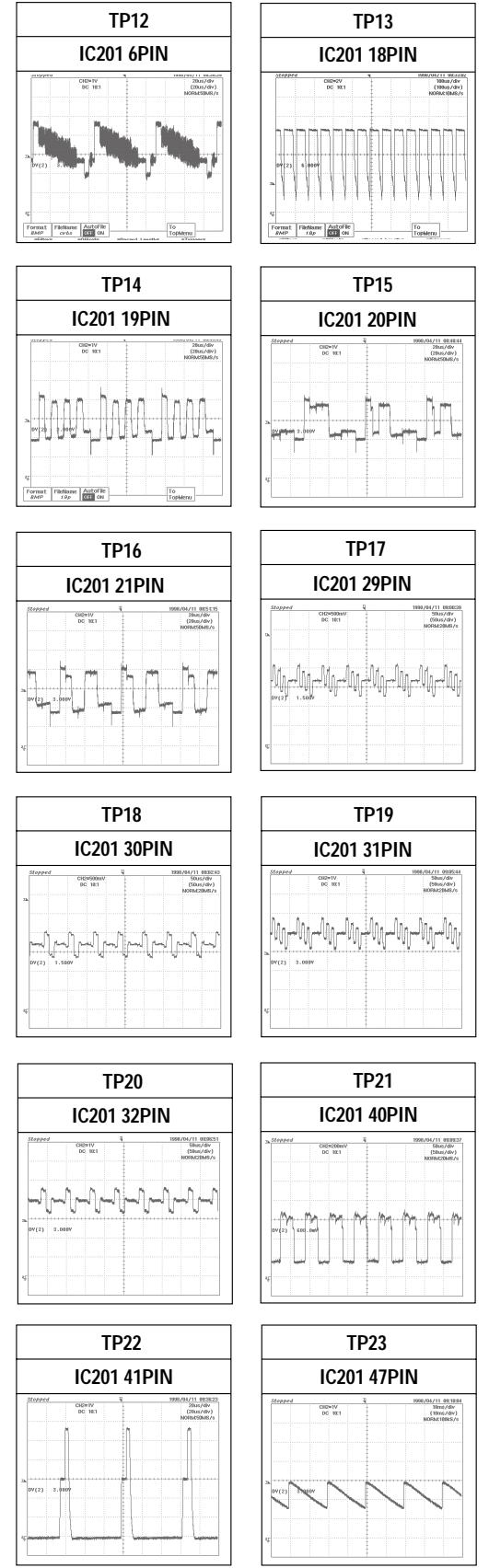
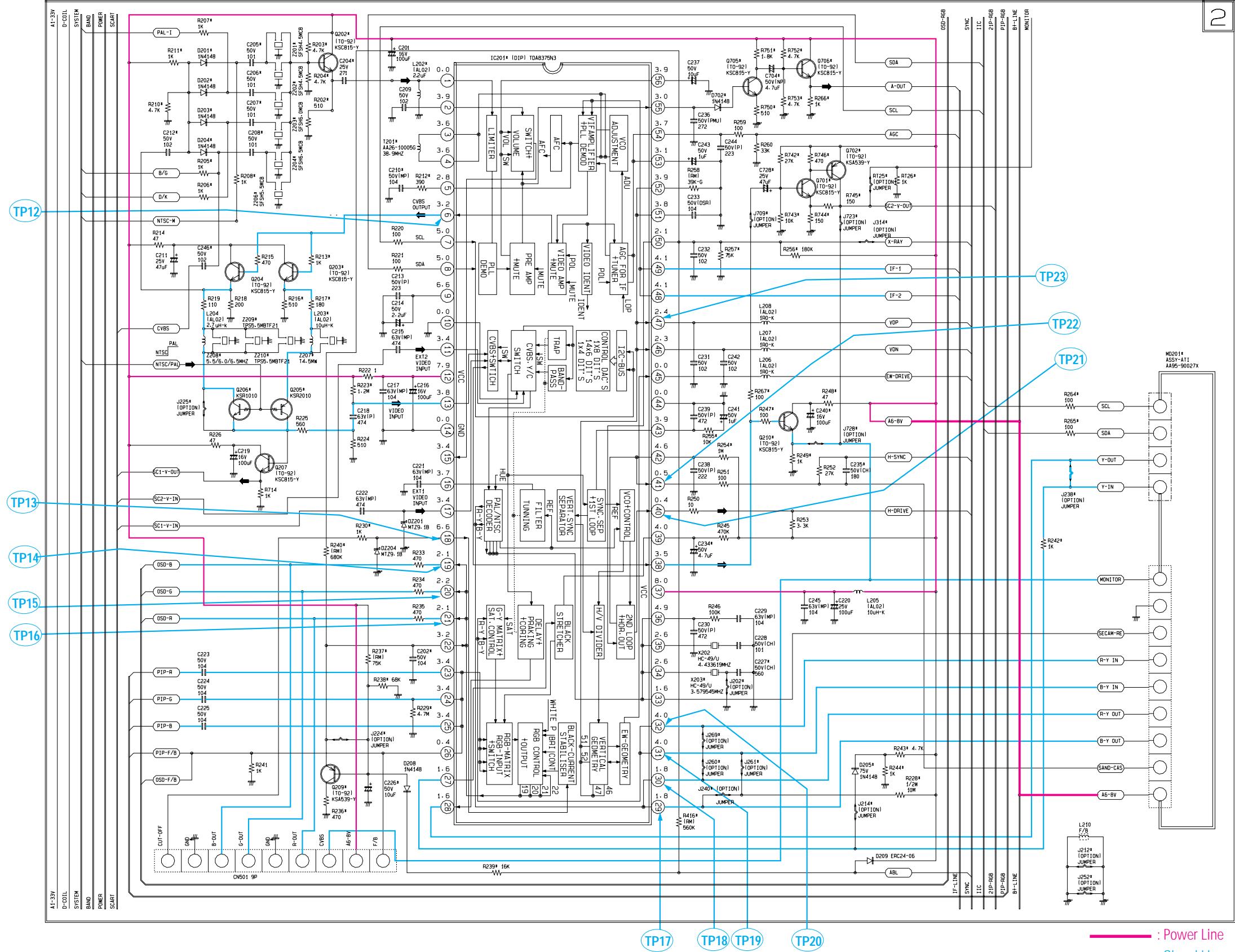


11. Schematic Diagrams

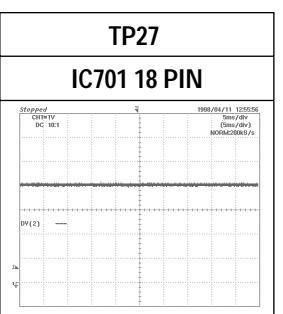
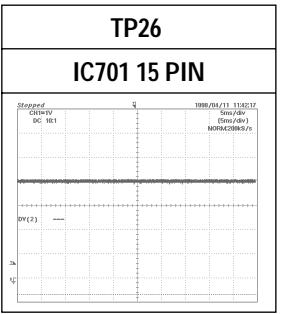
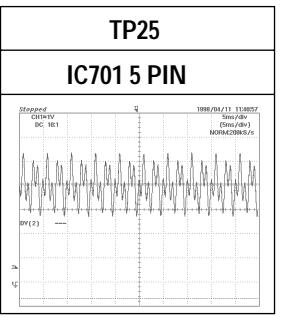
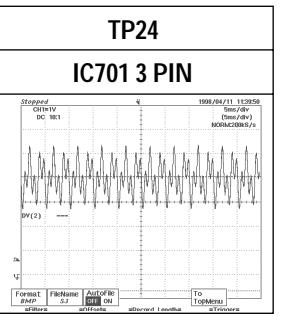
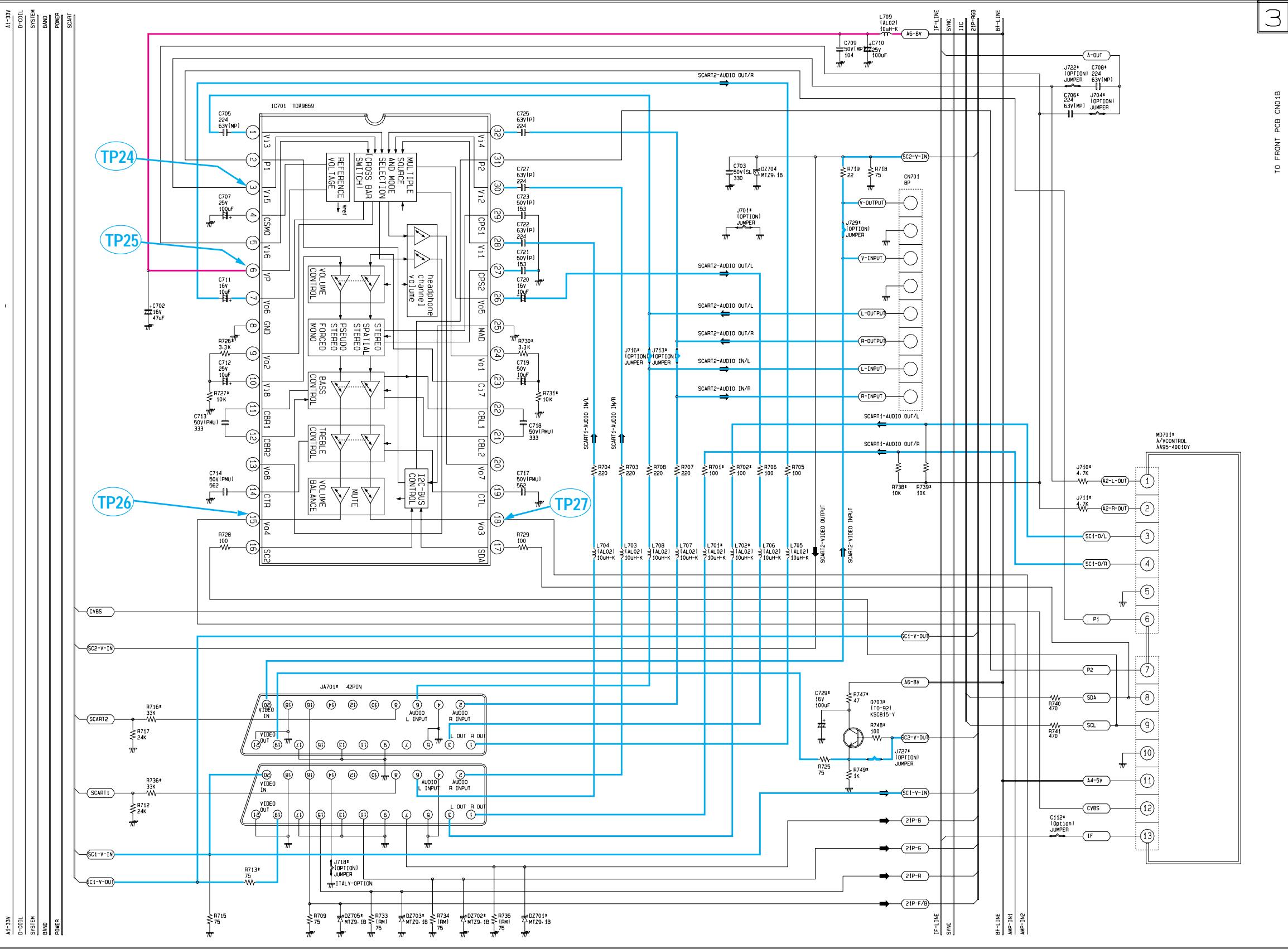
11-1 PWB-MAIN (μ -COM)



11-2 PWB-MAIN (ONE-CHIP)

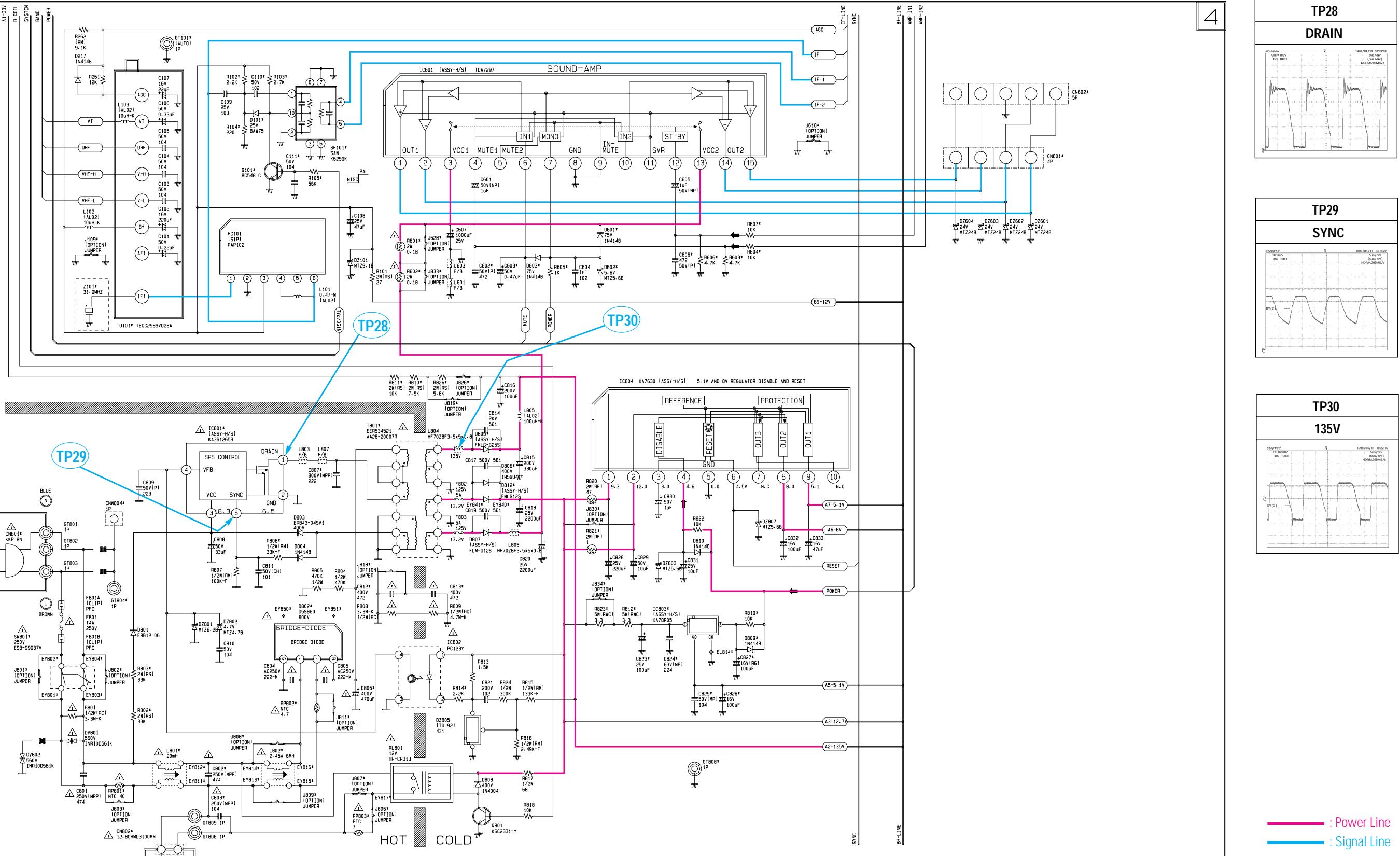


11-3 PWB-MAIN (SOUND)

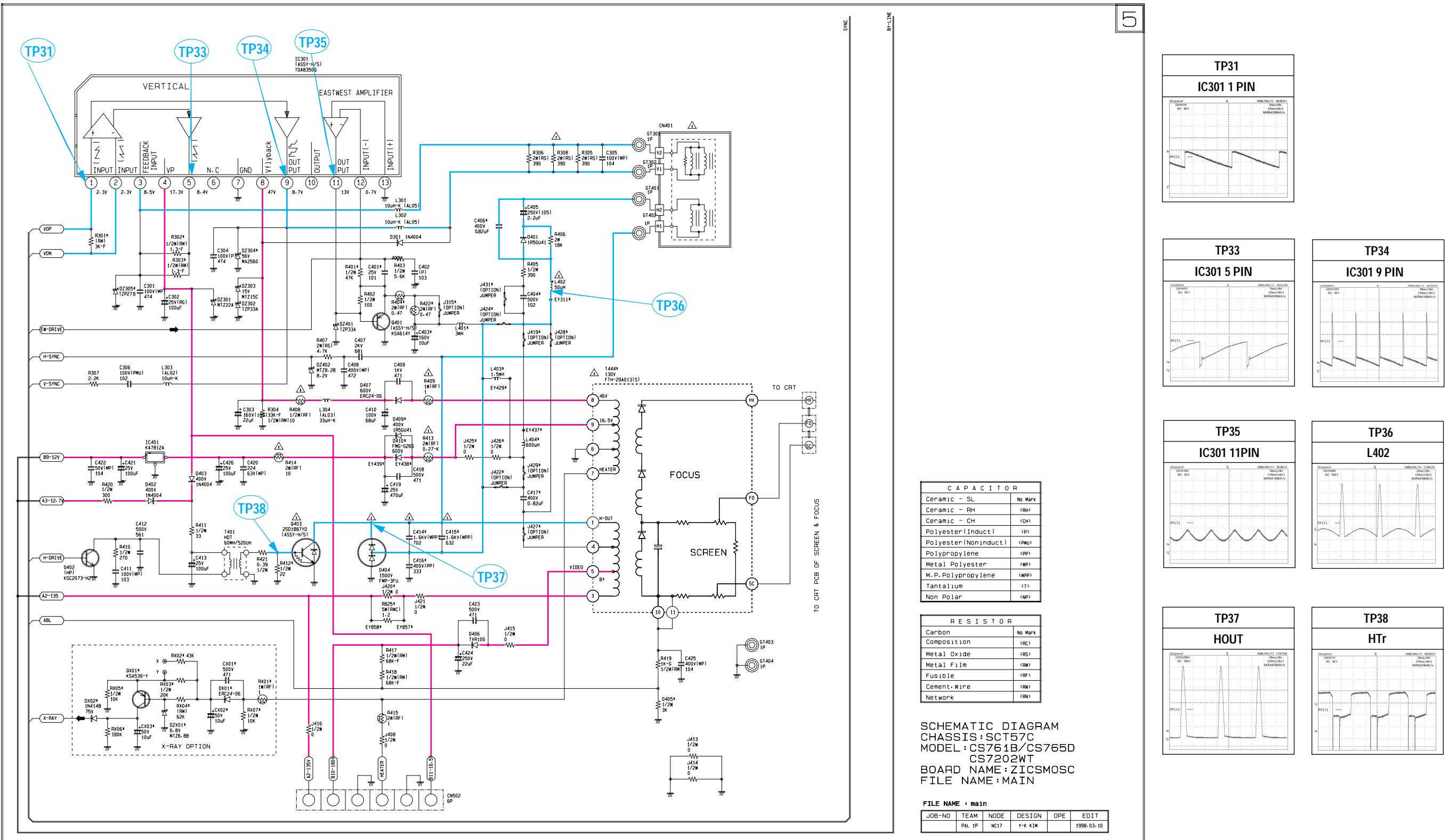


: Power Line
: Signal Line

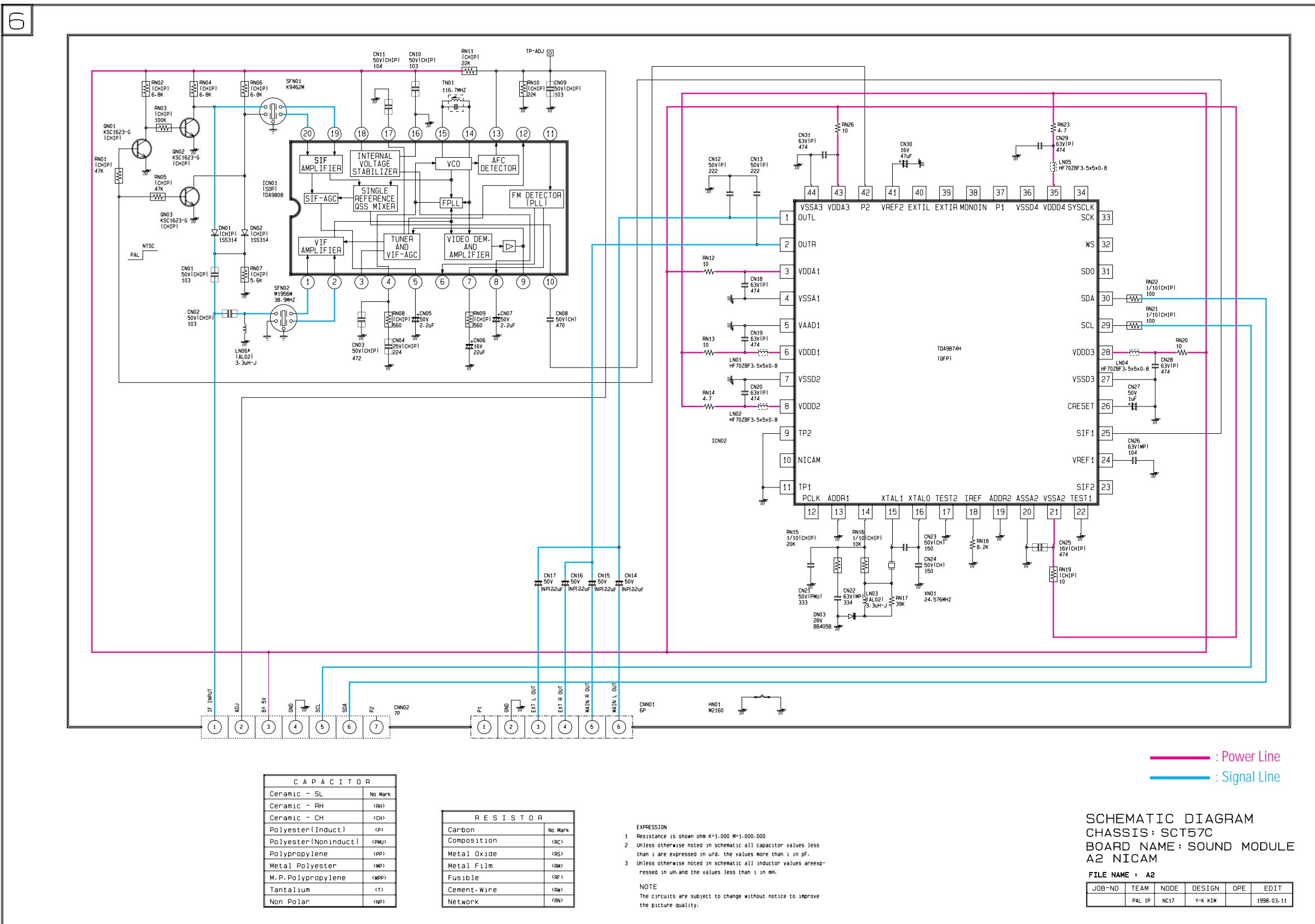
11-4 PWB-MAIN (POWER)



11-5 PWB-MAIN (Vertical)

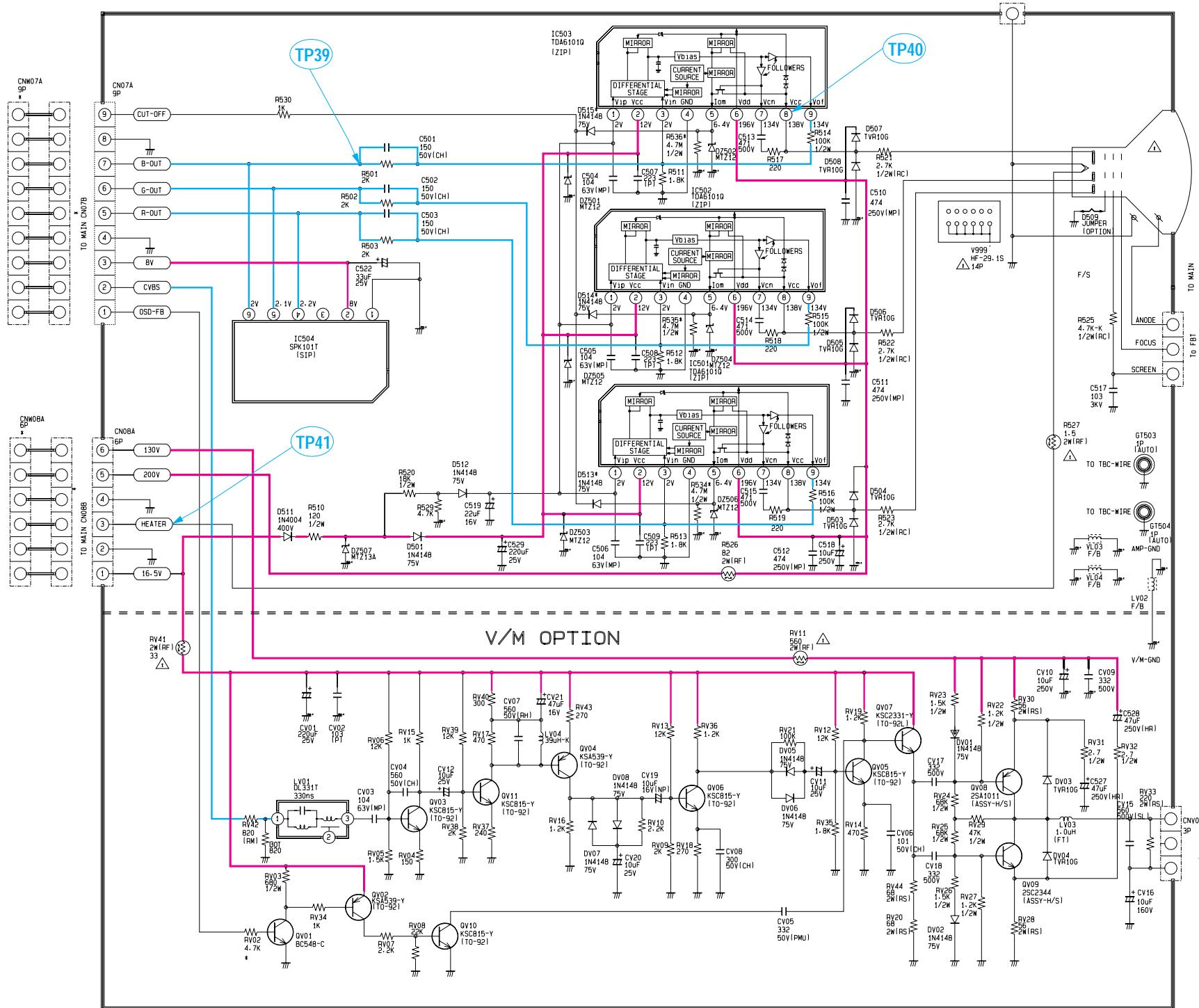


11-6 SOUND-MODULE (A2+NICAM)



11-7 PWB-CRT

SCHEMATIC DIAGRAM
CHASSIS: SCT57C
BOARD NAME:PWB-CRT. V/M
MODEL:CS761B/CS765D/CS301B/CS305D



| C A P A C I T O R | |
|----------------------|---------|
| Ceramic - SL | No Mark |
| Ceramic - RH | (RH) |
| Ceramic - CH | (CH) |
| Polyester(Induct) | (P) |
| Polyester(Noninduct) | (PMU) |
| Polypropylene | (PP) |
| Metal Polyester | (MP) |
| M.P.Polypropylene | (MP) |
| Tantalum | (T) |
| Non Polar | (NP) |

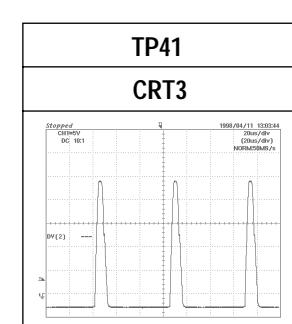
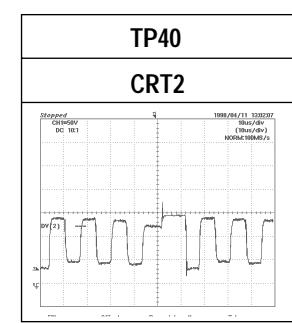
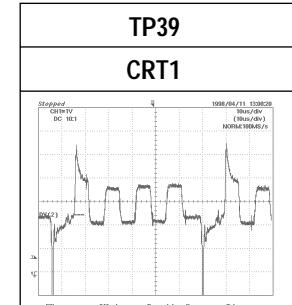
| R E S I S T O R | |
|-----------------|---------|
| Carbon | No Mark |
| Composition | (RC) |
| Metal Oxide | (RM) |
| Metal Film | (MF) |
| Fusible | (RF) |
| Cement-Wire | (RW) |
| Network | (RN) |

- EXPRESSION**
- Resistance is shown ohm K=1.000 M=1.000.000
 - Unless otherwise noted in schematic all capacitor values less than 1 are expressed in uF. the values more than 1 in pF.
 - Unless otherwise noted in schematic all inductor values are expressed in uH and the values less than 1 in mH.

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

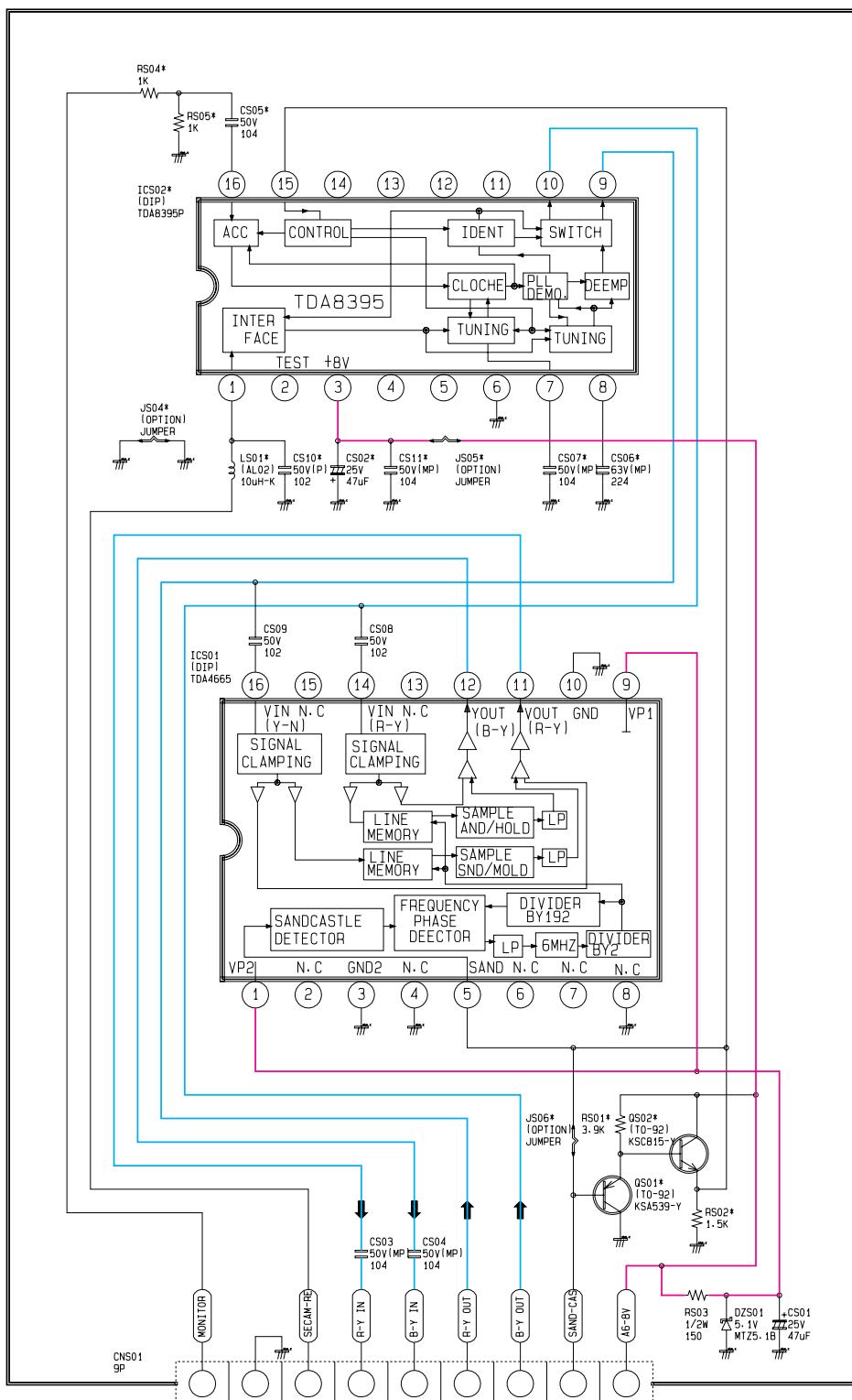
| FILE NAME :SCT57C/CS761/SUB/CRT | | | | | |
|---------------------------------|------|------|--------|-----|------|
| JOB-NO | TEAM | NODE | DESIGN | OPE | EDIT |
| | | | | | |

— : Power Line
— : Signal Line

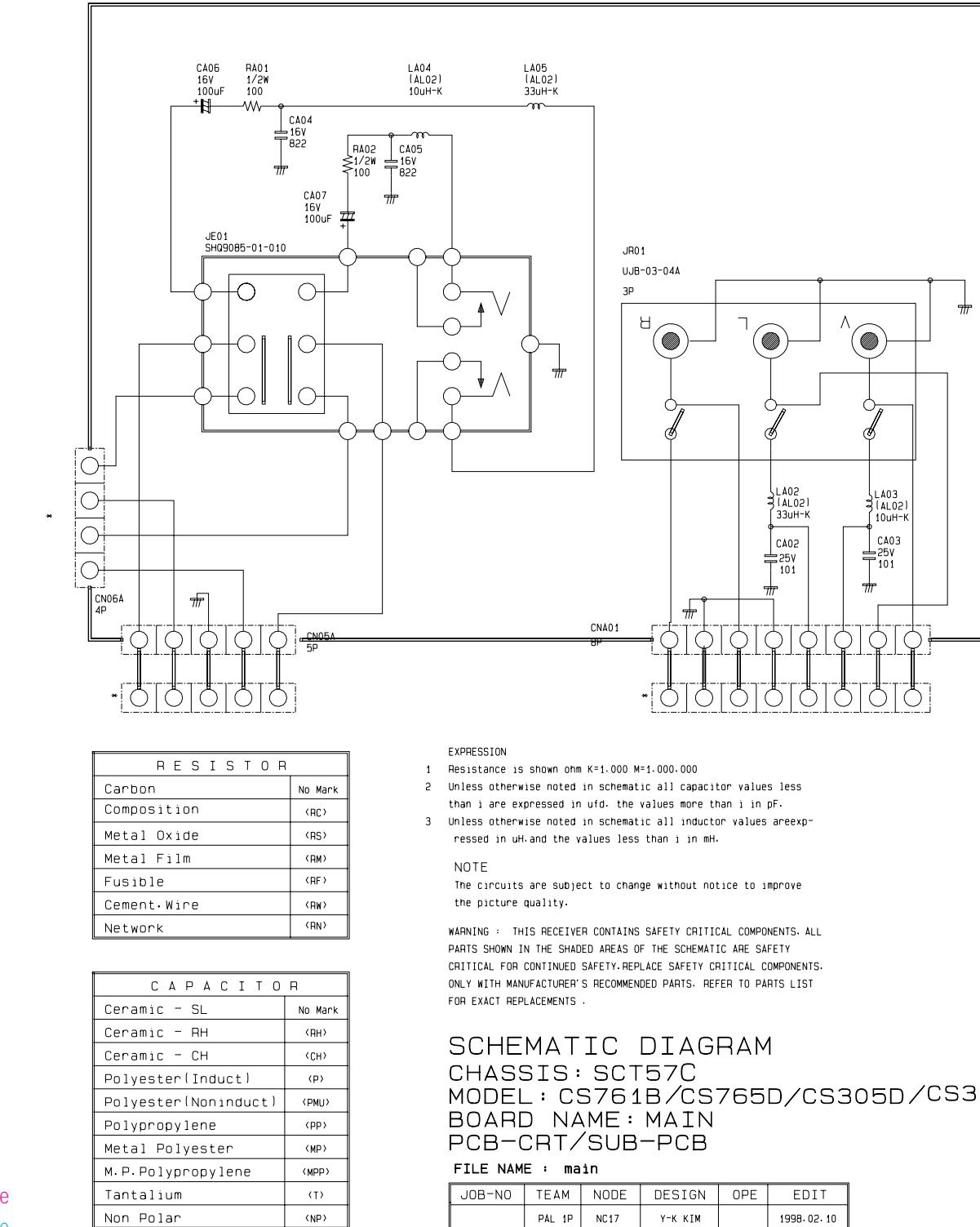


11-8 SECAM-MODULE

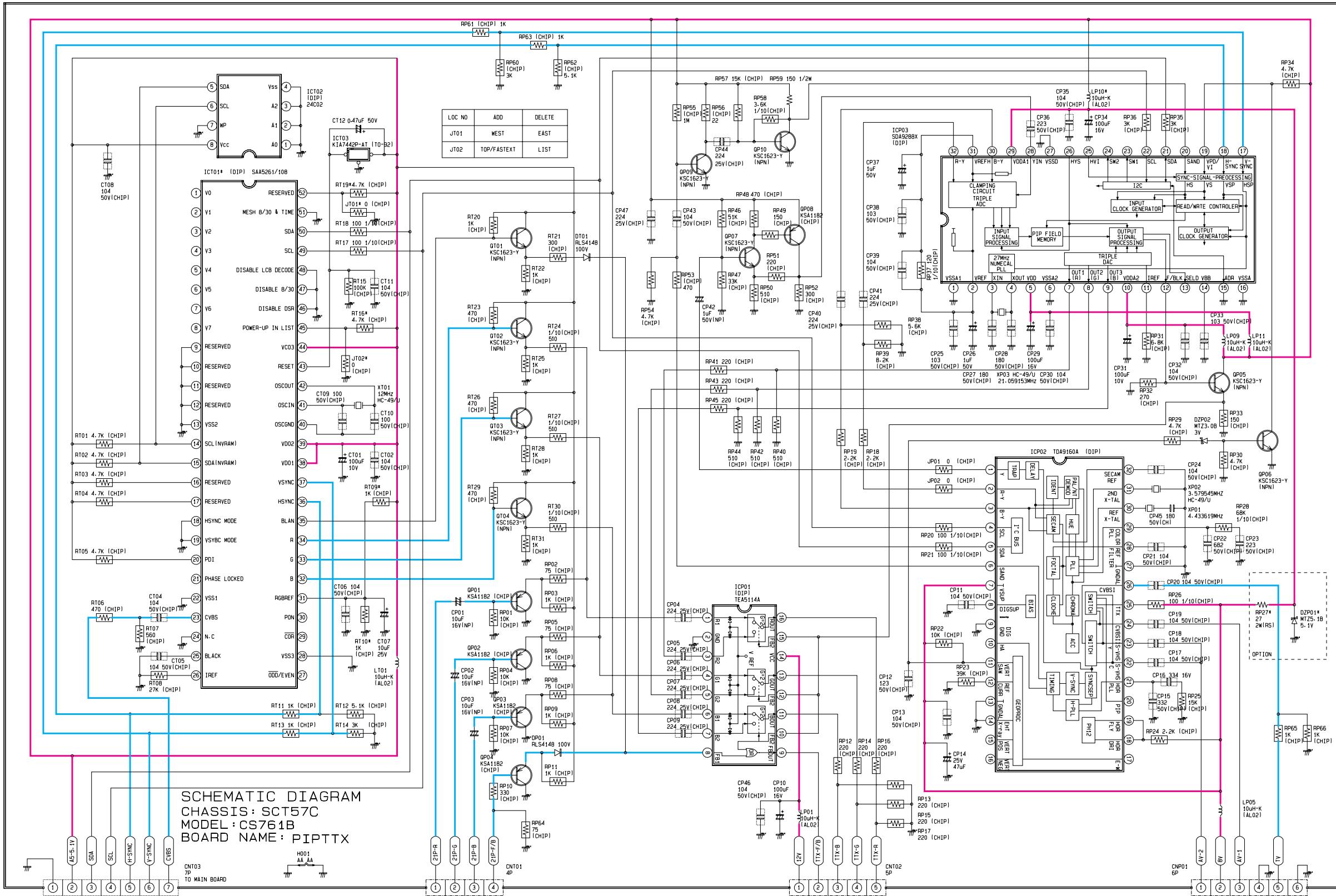
SCHEMATIC DIAGRAM
CHASSIS: SCT57C
MODEL: 761B, 765D, 7202
BOARD NAME: SECAM

**11-9 PWB A/V**

ASS' Y-SIDE A/V

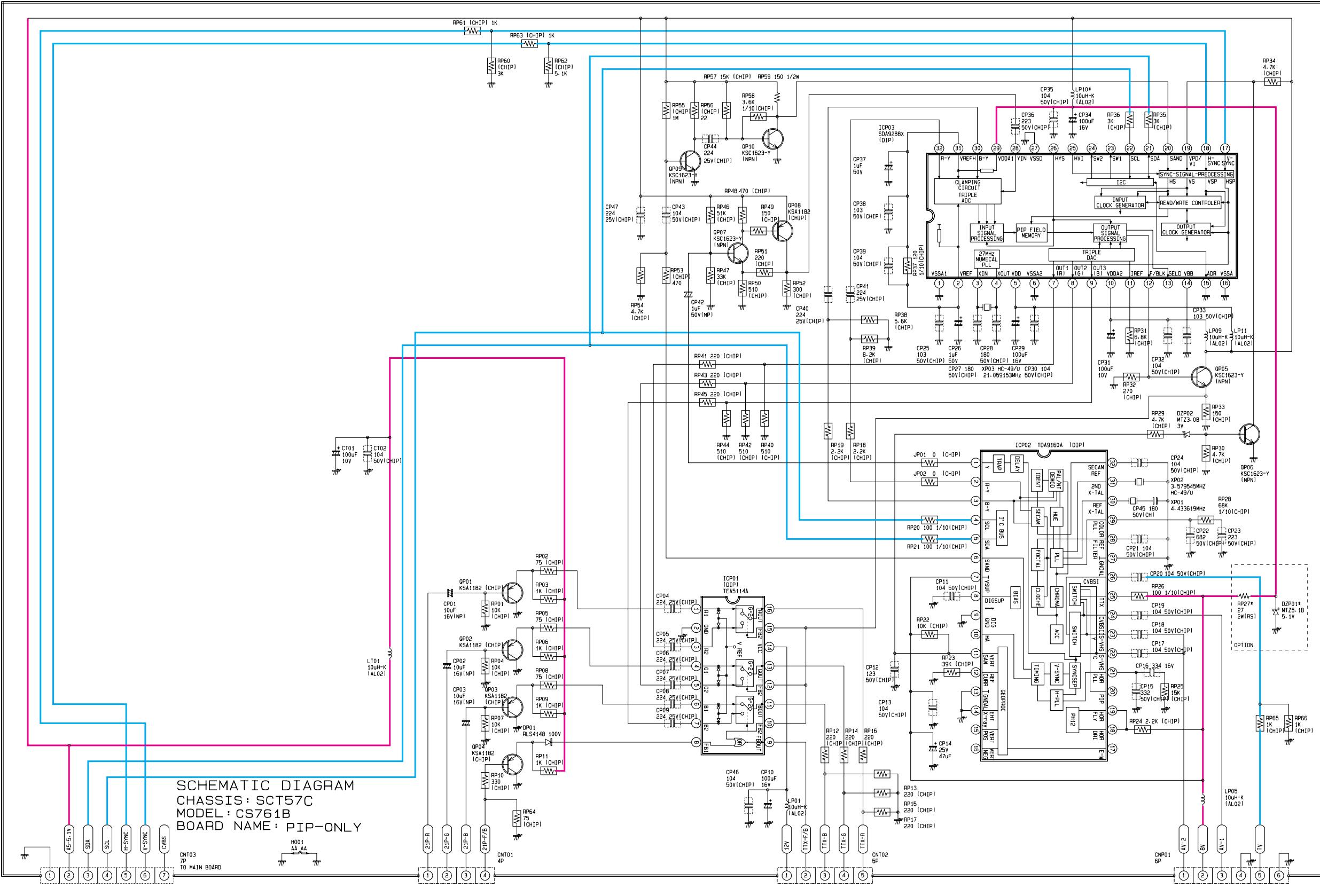


11-10 PIPTTX

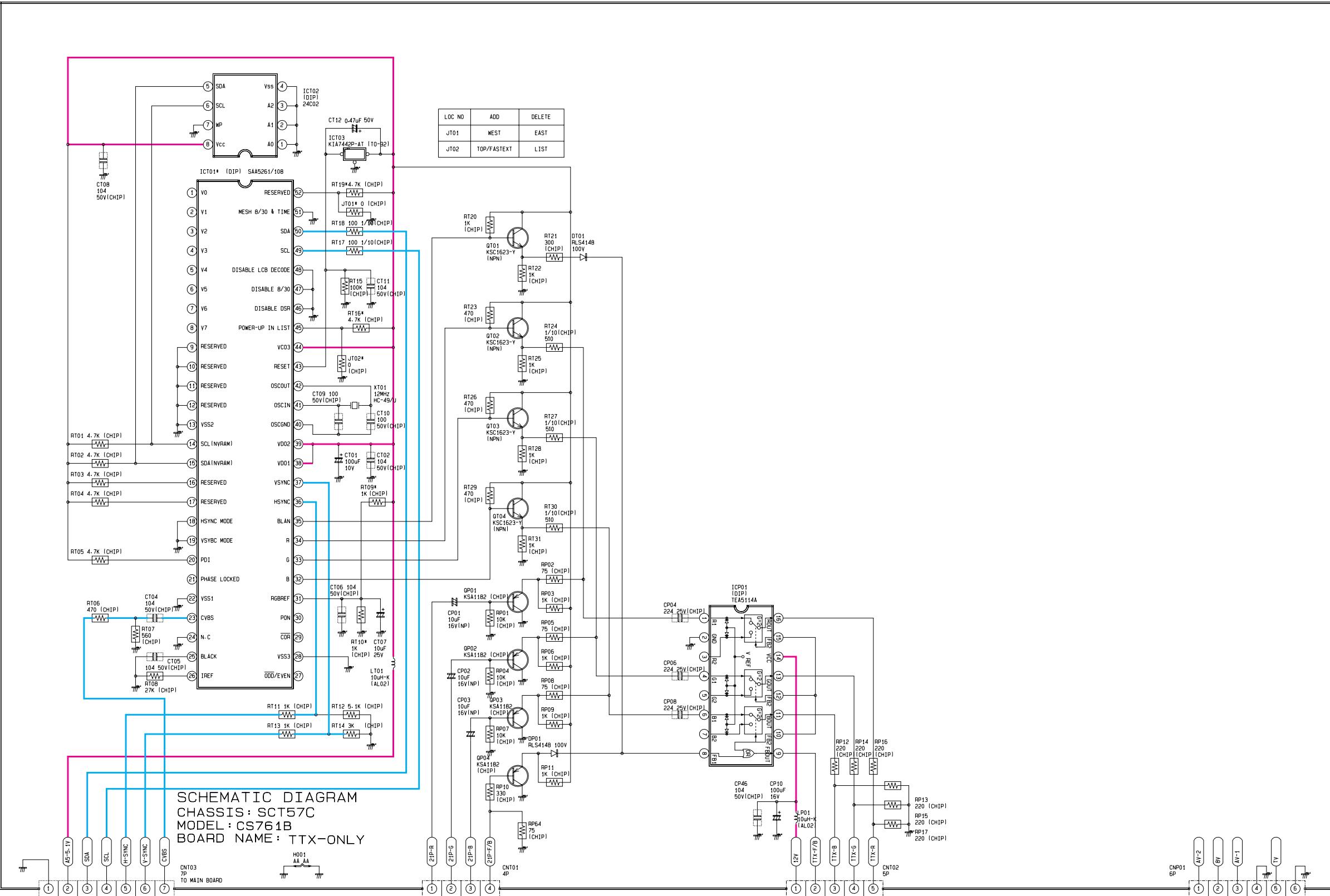


: Power Line
 : Signal Line

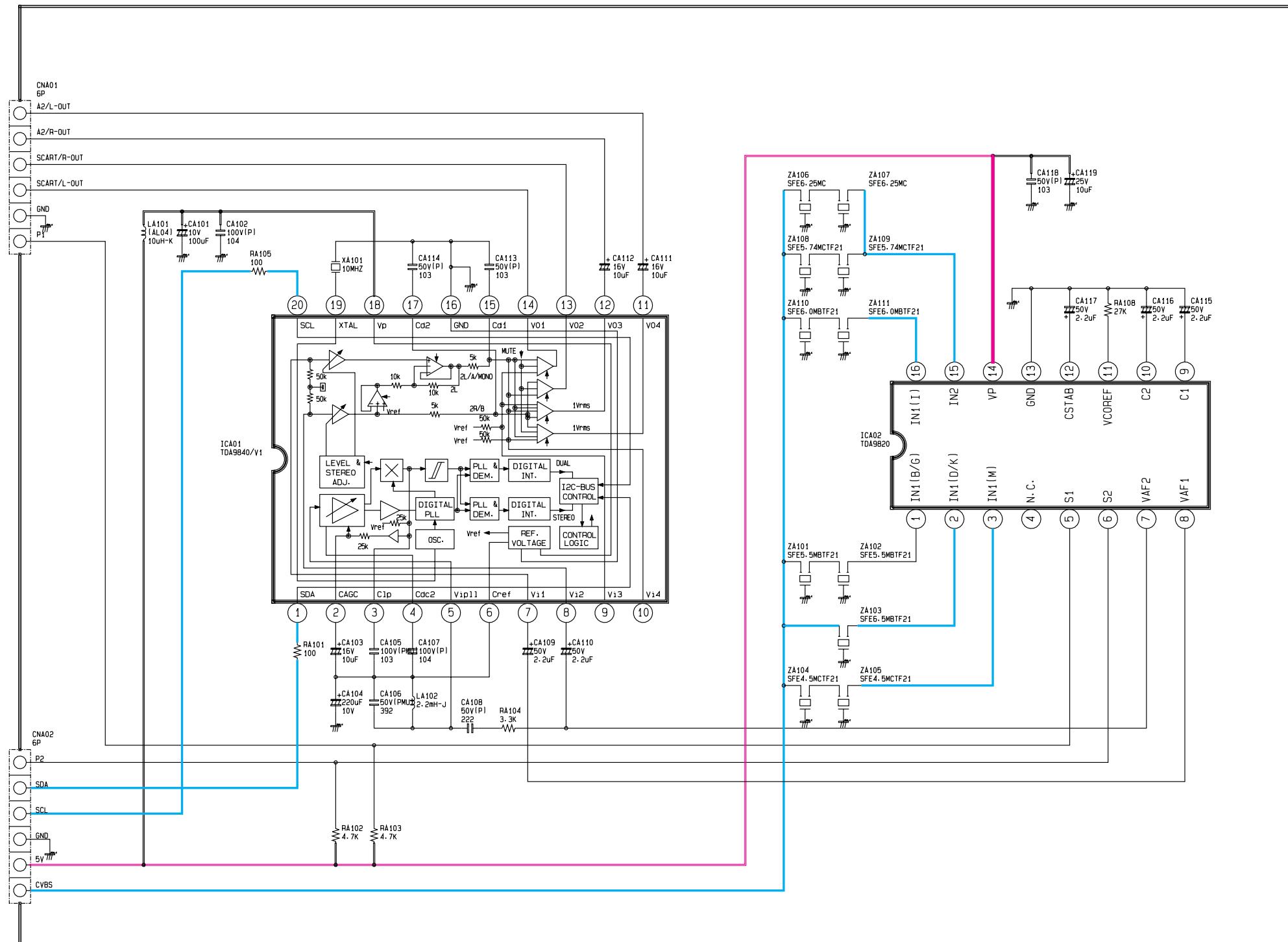
11-11 PIP-ONLY



11-12 TTX-ONLY



11-13 A2 STEREO



| C A P A C I T O R | |
|----------------------|---------|
| 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) |
| Tantalum | (T) |
| Non Polar | (NP) |

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

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

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

SCHEMATIC DIAGRAM
 CHASSIS: SCT57C
 MODEL : CS761B
 BOARD NAME : SOUND MODULE
 A2 STEREO

: Power Line
 : Signal Line

11-14 TTX MODULE

