

Service
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Service Manual

Contents	Page
1. Technical Specifications, Connection, and Chassis Overview	2
2. Safety Instructions, Warnings, and Notes	3
3. Directions for Use	4
4. Mechanical Instructions	16
5. Service Modes, Error Codes, and Faultfinding	17
6. <i>Block Diagrams, Testpoints Overviews, and Waveforms</i>	
Block Diagram	25
Testpoint Overview Main Carrier	26
7. <i>Circuit Diagrams and PWB Layout's</i>	<i>Diagram PWB</i>
Main Carrier (Overview)	27 32-34
Power Supply (Diagram A1)	28 32-34
Line Deflection (Diagram A2)	29 32-34
Frame Deflection (Diagram A3)	29 32-34
Tuner IF (Diagram A4)	30 32-34
Video and Sound IF (Diagram A5)	30 32-34
Audio Power Amplifier (Diagram A6)	31 32-34
Rear I/O Cinch (Diagram A7)	31 32-34
CRT Panel (Diagram B)	35 35
Side AV Panel (Diagram E)	36 36
8. Alignments	37
9. Circuit Descriptions	40
Abbreviation List	40
IC Data Sheets	41
10. Spare Parts List	43
11. Revision List	46

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1. Technical Specifications, Connection, and Chassis Overview

- Index:
- 1. Technical Specifications.
 - 2. Connections.
 - 3. Chassis Overview.

Note:
Below described specifications are not valid for **one** product, but for the **whole** product range. See Product Survey for **specific** models.
Figures can deviate slightly from the actual situation, due to different set executions.

1.1 Technical Specifications

1.1.1 Reception

Tuning system	: VST
Colour systems	: PAL B/G, D/K, I
	: SECAM B/G, D/K
Sound systems	: Mono
A/V connections	: NTSC 3.58, 4.43
	: PAL 60
Channel selections	: 100 channels
	: U, V, S, H
Aerial input	: 75 Ω, IEC-type

1.1.2 Miscellaneous

Audio output	: 2 x 2 W
Mains voltage	: 90 - 260 V
Mains frequency	: 50 Hz or,
	: 60 Hz
Ambient temperature	: - 10 to + 40 deg. C
Maximum humidity	: 90 %
Power consumption	: 70 W (14") to
	: 80 W (21")
Standby power consumption	: < 3 W

1.2 Connections

1.2.1 Front (or Side) Connections and Front (or Top) Control

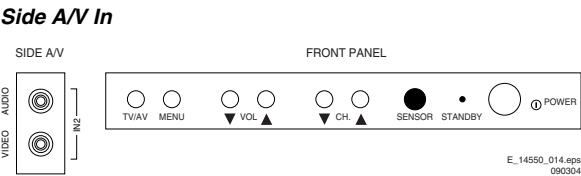


Figure 1-1 Front connections

1	- Video	CVBS (1 Vpp / 75 Ω)	⊕ ⊗
2	- Audio	0.5 Vrms / 10 kΩ	⊕ ⊗

1.2.2 Rear Connections

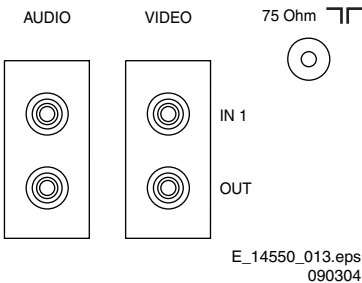


Figure 1-2 Rear connections

AV1 In

1	- Video	CVBS (1 Vpp / 75 Ω)	⊕ ⊗
2	- Audio	0.5 Vrms / 10 kΩ	⊕ ⊗

AV2 In

1	- Video	CVBS (1 Vpp / 75 Ω)	⊕ ⊗
2	- Audio	0.5 Vrms / 10 kΩ	⊕ ⊗

1.3 Chassis Overview

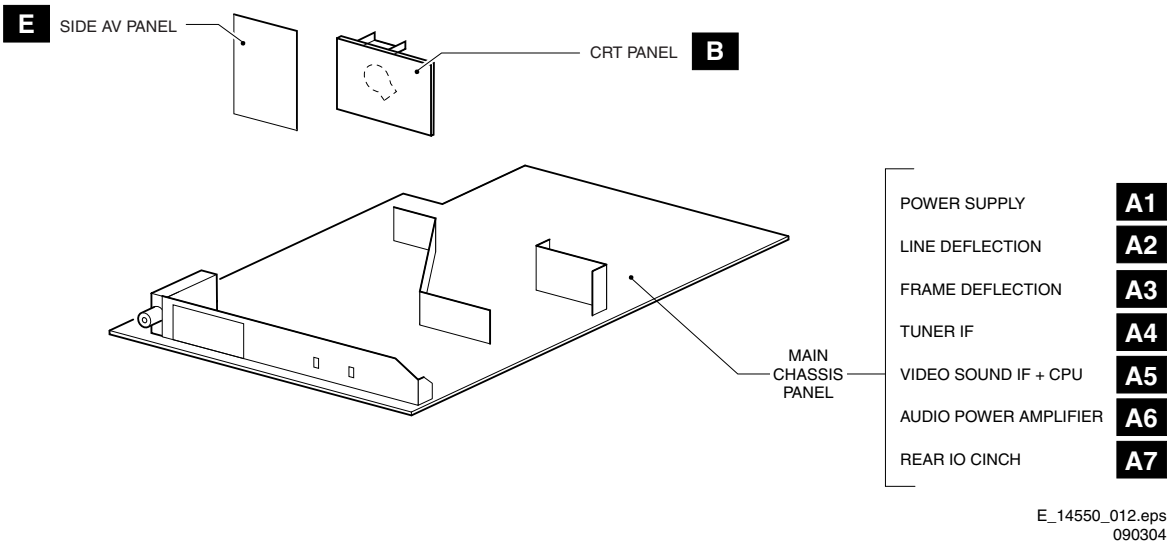


Figure 1-3 PWB Location Drawing

2. Safety Instructions, Warnings, and Notes

2.1 Safety Instructions

Safety regulations require that **during** a repair:

- Due to the chassis concept, a very large part of the circuitry (incl. deflection) is "hot". Therefore, connect the set to the mains via an isolation transformer.
- Replace safety components, indicated by the symbol ▲, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.
- Wear safety goggles when you replace the CRT.

Safety regulations require that **after** a repair, you must return the set in its original condition. Pay, in particular, attention to the following points:

- General repair instruction: as a strict precaution, we advise you to re-solder the solder connections through which the horizontal deflection current is flowing. In particular this is valid for the:
 1. Pins of the line output transformer (LOT).
 2. Fly-back capacitor(s).
 3. S-correction capacitor(s).
 4. Line output transistor.
 5. Pins of the connector with wires to the deflection coil.
 6. Other components through which the deflection current flows.

Note: This re-soldering is advised to prevent bad connections due to metal fatigue in solder connections, and is therefore only necessary for television sets more than two years old.

- Route the wire trees and EHT cable correctly and secure them with the mounted cable clamps.
- Check the insulation of the mains cord for external damage.
- Check the strain relief of the mains cord for proper function, to prevent the cord from touching the CRT, hot components, or heat sinks.
- Check the electrical DC resistance between the mains plug and the secondary side (only for sets that have an isolated power supply). Do this as follows:
 1. Unplug the mains cord and connect a wire between the two pins of the mains plug.
 2. Turn on the main power switch (keep the mains cord unplugged!).
 3. Measure the resistance value between the pins of the mains plug and the metal shielding of the tuner or the aerial connection of the set. The reading should be between 4.5 MΩ and 12 MΩ.
 4. Switch the TV "off" and remove the wire between the two pins of the mains plug.
- Check the cabinet for defects, to prevent the possibility of the customer touching any internal parts.

2.2 Maintenance Instructions

We recommend a maintenance inspection carried out by qualified service personnel. The interval depends on the usage conditions:

- When a customer uses the set under normal circumstances, for example in a living room, the recommended interval is three to five years.
- When a customer uses the set in an environment with higher dust, grease, or moisture levels, for example in a kitchen, the recommended interval is one year.
- The maintenance inspection includes the following actions:
 1. Perform the "general repair instruction" noted above.
 2. Clean the power supply and deflection circuitry on the chassis.
 3. Clean the picture tube panel and the neck of the picture tube.

2.3 Warnings

- In order to prevent damage to ICs and transistors, avoid all high voltage flashovers. In order to prevent damage to the picture tube, use the method shown in Fig. 2-1, to discharge the picture tube. Use a high voltage probe and a multi-meter (position VDC). Discharge until the meter reading is 0 V (after approx. 30 s).

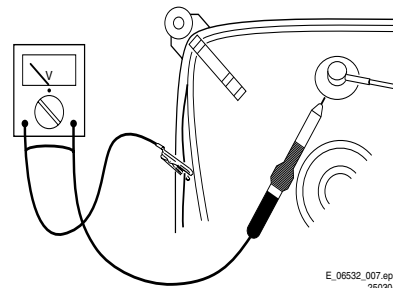


Figure 2-1 Discharge picture tube

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD, ▲). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this potential. Available ESD protection equipment:
 - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and ground cable) 4822 310 10671.
 - Wristband tester 4822 344 13999.
- Together with the deflection unit and any multi-pole unit, flat square picture tubes form an integrated unit. The deflection and the multi-pole units are set optimally at the factory. We do not recommend adjusting this unit during repair.
- Be careful during measurements in the high voltage section and on the picture tube.
- Never replace modules or other components while the unit is "on".
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

2.4 Notes

- Measure the voltages and waveforms with regard to the chassis (= tuner) ground (⊥), or hot ground (↕), depending on the tested area of circuitry.
- The voltages and waveforms shown in the diagrams are indicative. Measure them in the Service Default Mode (see chapter 5) with a colour bar signal and stereo sound (L: 3 kHz, R: 1 kHz unless stated otherwise) and picture carrier at 475.25 MHz (PAL) or 61.25 MHz (NTSC, channel 3).
- Where necessary, measure the waveforms and voltages with (⏏) and without (⏏) aerial signal. Measure the voltages in the power supply section both in normal operation (⏏) and in standby (⏏). These values are indicated by means of the appropriate symbols.
- The picture tube panel has printed spark gaps. Each spark gap is connected between an electrode of the picture tube and the Aquadag coating.
- The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.

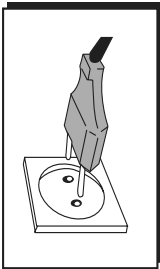
3. Directions for Use

HOOKING UP YOUR TV (BASIC CONNECTION)



Antenna Connection

- Connect the aerial plug to the antenna socket on the backcover.
- Insert the mains plug into the wall socket.



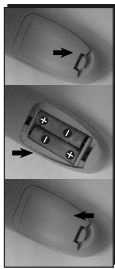
Mains Connection

- For correct mains voltage, refer to type sticker at the rear of the TV set.
 - Consult your dealer if mains supply is different.
- Note :** This diagram is not representative of the actual plug and socket.



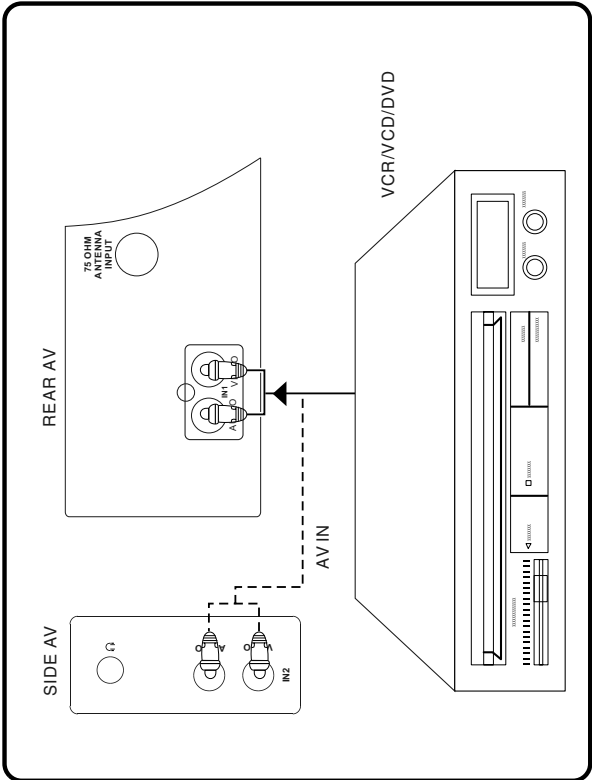
Switch on the set

- Press the main power button to switch on/off the TV.
- If the set is on standby (indicator is red), press the Power button on the remote control to switch on set.



- Insert the correct type of batteries into the compartment.
- Ensure the batteries are placed in the right direction.

CONNECTING THE AUDIO/VIDEO SOCKETS (PLAYBACK)

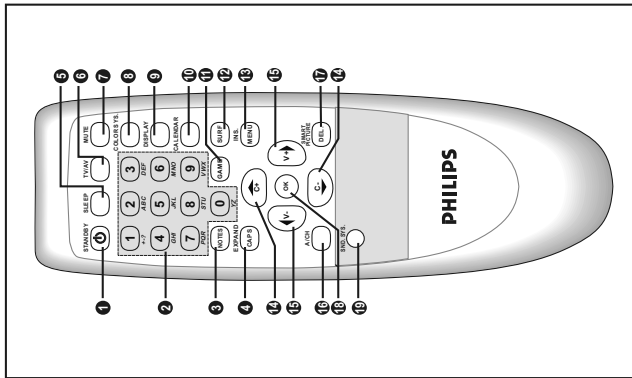


You can view the playback of VCR/VCD/DVD tapes by using the AUDIO and VIDEO INPUT sockets on the side or rear of the TV.
Connect the VIDEO and AUDIO IN sockets on the side or rear of the TV to the VIDEO and AUDIO OUT sockets on the audio/video equipment.

NOTE:

Rear AV input and side AV input can not be used simultaneously. As the Side AV does not have the Auto priority, users will have to manually go to AV2 with the TV/AV button to receive video & audio content of videocam.

FUNCTION OF REMOTE CONTROL



Introduction of key function:

This TV features with a full-function remote control handset. For a more compact remote unit design, some of the keys are multiple with more than one function. The following text describes the function of keys on remote control unit. Function related to notebook operated are marked with a symbol *.

1 Standby button

- Switch the set off temporarily to standby mode. (The red light indicator lights up when the set is on standby mode).
- To switch on set from standby mode, press Channel +/- or TV/AV on the set, or Standby button on the remote control.

2 Digit (0-9) Buttons

- Press 0-9 buttons to select a channel.
- * To select 0-9 digits, A-Z (or a-z) letters, common marks and punctuation marks when write data or information to be stored in notebook.

3 Notes Button

- * To activate the notebook function.

4 Caps/Expand Button

- * To select the input form before data or information writing between capital and small letter.
- To expand the screen display ratio to 4:3.

5 Sleep Button

- Allows you to select a time period after which the set will switch to standby mode automatically. This television can be programmed up to 120 minutes (5 minutes intervals).

6 TV/AV Button

- To switch between TV channel and AV input sources.

7 Mute Button

- Mute sound. To restore sound, press button again.

8 Color System Button

- To select color system without going into submenu.

9 Display Button

- Press to display the current channel No. and function status.
- Press the button once again to display the current time on the screen.

10 Calendar Button

- To enter or exit the perpetual calendar directly.

11 Game Button

- To enter or exit the game directly.

FUNCTION OF REMOTE CONTROL

12 Surf Button

- To browse the preset favorite channels. (This button will not function if you have not set any favorite channel.)

13 Menu/Insert Button

- Display the main menu. Also exits menu from screen.
- * To insert or overwrite a letter, digit or symbol when you edit the information previously stored in notebook.

14 Channel +/- Buttons

- Allows you to select channels in ascending or descending order.
- Allows you to select the next item in the menu.

15 OK Button

- Within the on-screen menu, press to enter some special function such as game, notebook, calendar and etc.

16 Sound System Button

- To directly select sound system without going into submenu.

17 Volume +/- Buttons

- Increases or decreases volume.
- Allows you to access the sub-menus and adjust the settings.

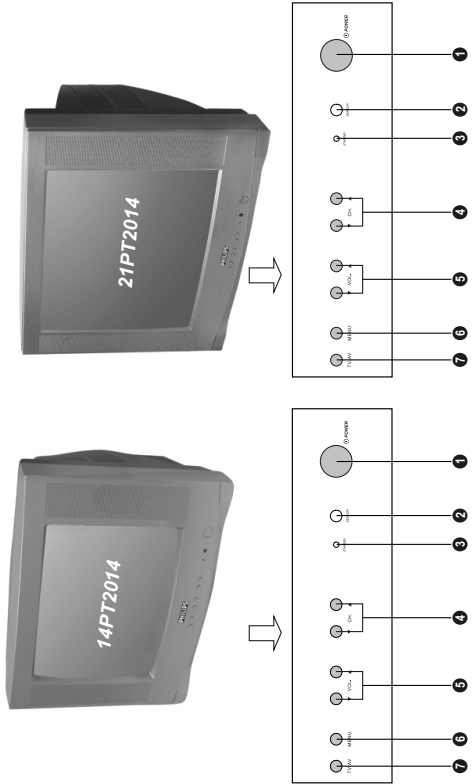
18 A/CH(alternate channel) Button

- Press to switch between the current channel and the previous channel.

19 Delete/Smart Picture Button

- * Within the on-screen menu of Sort, press to delete the undesired channel No..
- * In notebook mode, to delete the word or symbols previously stored.
- Press to cyclically select a Smart Picture option (factory-preset picture controls for different types of video sources and programs.)

FUNCTION OF TV CONTROLS



1	Main Power button	• Switch mains power on or off
2	Remote Sensor	• Acts as a sensor for activating the controls of the TV when remote control handset is aimed at it.
3	Standby light indicator	• Indicate red light when standby mode is activated.
4	Channel down/up button	• Select channel in descending/ascending order. • Turn on the TV when it is in standby mode. • Select the next item on the menu.
5	Volume down/up button	• Adjust sound volume softer/louder. • Access sub-menu and adjusting the settings.
6	Menu button	• Enter the main menu.
7	TV/AV button	• Switch between TV channel and AV input sources. • Turn on the TV when it is in standby mode.

SELECTING THE MAIN MENU

Operating instructions generally explains the operation of the TV set using the buttons on the remote control unless otherwise stated. Please read the following instructions carefully and follow the steps as shown to familiarise yourself with the installations and all features available in your set.

Press the Menu button and Volume +/- buttons to select the main menu PICTURE, FEATURE, TIMER and PRESET.

Step 1	Press button MENU	Press once to enter PICTURE main menu.	Result on screen
2	Press button repeatedly until FEATURE menu is selected. ←v- / v+→	Press button repeatedly until FEATURE menu is selected.	
3	Press button repeatedly until TIMER menu is selected. ←v- / v+→	Press button repeatedly until TIMER menu is selected.	
4	Press button repeatedly until PRESET menu is selected. ←v- / v+→	Press button repeatedly until PRESET menu is selected.	
5	Press button to exit menu from screen. MENU	Press button to exit menu from screen.	

MANUAL TUNING OF CHANNELS

Step

Press button

Result on screen

2

Press button repeatedly until PRESET menu is selected.

3

Press button repeatedly until Channel is selected.

4

Press button repeatedly to select the channel no, e.g. 31.

5

Select Band.

6

Select the frequency band among VHF/L/VHF/H/UHF.

7

Select Manual Store.

8

Press button to manual tune upward. Searching stops once a transmitting signal is found.

9

Press button to stop manual tune.

AUTOMATIC TUNING OF CHANNELS

Step

Press button

Result on screen

1

Press once to enter PICTURE main menu.

2

Press button repeatedly until PRESET menu is selected.

3

Press button repeatedly until Auto Store is selected.

4

Start automatic tuning of channels.

5

Press button to stop tuning.
Note: when the tuning is completed, the menu will quit automatically.

MANUAL TUNING OF CHANNELS

Step

Press button

Result on screen

1

Press once to enter PICTURE main menu.

11

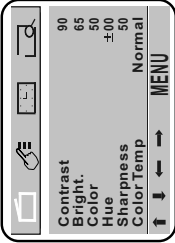
MANUAL TUNING OF CHANNELS

Notes:

- If the searched channel is not as your desired, you can simply restart the searching upward or downward by pressing the $\leftarrow$ or $\rightarrow$ button.
- To stop manual searching, press the $\leftarrow$ button when searching upward, or press $\rightarrow$ button when searching downward.
- The menu will time out and disappear from the screen when you finish, or you can press the MENU button to clear the menu from the screen.

FINE TUNING OF CHANNELS

This feature allows you to adjust picture reception in areas of weak reception.

Step	Press button	Result on screen
1		
2	$\leftarrow$ / $\rightarrow$	Press once to enter PICTURE main menu.
3	$\leftarrow$ / $\rightarrow$	Press button repeatedly until PRESET menu is selected.
4	$\rightarrow$	Press button repeatedly until Fine Tune is selected.
5	$\leftarrow$	Fine tune the channel downward.
6		Press button to exit menu from screen or menu will quit after a few seconds without further action.

CHANNEL SWAP

This feature allows you to rearrange the channel numbers in which the channels are stored.

Step	Press button	Result on screen
1		Press once to enter PICTURE main menu.
2	$\leftarrow$ / $\rightarrow$	Press button repeatedly until FEATURE menu is selected.
3	$\leftarrow$ / $\rightarrow$	Press button repeatedly until CH Swap is selected.
4		Enter CH Swap submenu.
5	$\leftarrow$ / $\rightarrow$	Select From.
6	$\leftarrow$ / $\rightarrow$	Select the channel no. you want to change, e.g. 30.
7	$\leftarrow$ / $\rightarrow$	Select To.
8	$\leftarrow$ / $\rightarrow$	Select the channel no. to be replaced, e.g. 40, that means to replace channel 40 by channel 30.
9	$\leftarrow$ / $\rightarrow$	Select Exchange.
10		Press button to finish the setting.
11		Press button to exit menu from screen or menu will quit after a few seconds without further action.

CHANNEL SKIP

This feature allows you to remove fault channels or restore skipped channels from the channel memory.

Step	Press button	Result on screen
1		
2		
3		
4		
5		
6		
7		

FAVORITE CHANNEL SETTING

This feature allows you to store six favorite channels in memory and preview these channels by pressing SURF button.

Step	Press button	Result on screen
1		
2		
3		
4		
5		
6		
7		
8		

Notes:

- You can delete the undesired channel no. by pressing the DELETE button when this channel is highlighted.

SELECTING THE COLOUR SYSTEM

This feature allows you to select your desired **Color** system. If **Auto** is selected, the respective color system will be automatically selected according to the transmission system.
Note: Select your desired color system manually if reception is poor at **Auto** mode.

Step

1

Press button

MENU

Press once to enter PICTURE main menu.

Result on screen

Contrast

Bright.

Color

Hue

Sharpness

Color Temp

90

65

50

±00

50

Normal

↑ ↓ ← →

MENU

2

←v- / v+→

Press button repeatedly until FEATURE menu is selected.

Settings

CH Swap

Sort

Calendar

Game

↑ ↓

OK

MENU

3

↔ / c-

Press button repeatedly until Settings is selected.

Bluemute

Color Sys

Snd Sys

Language

On

AUTO

BG

English

↑ ↓ ← →

MENU

4

OK

Enter Settings submenu.

Bluemute

Color Sys

Snd Sys

Language

On

AUTO

BG

English

↑ ↓ ← →

MENU

5

↔ / c-

Press button repeatedly until Color-Sys is selected.

Bluemute

Color Sys

Snd Sys

Language

On

AUTO

BG

English

↑ ↓ ← →

MENU

6

←v- / v+→

Select the desired colour system (AUTO, PAL, NTSC3.58, NTSC4.43 or SECAM).

Bluemute

Color Sys

Snd Sys

Language

On

AUTO

BG

English

↑ ↓ ← →

MENU

7

MENU

Press button to exit menu from screen or menu will quit after a few seconds without further action.

Bluemute

Color Sys

Snd Sys

Language

On

AUTO

BG

English

↑ ↓ ← →

MENU

- Notes:** The above procedures are also applicable to the following functions:
- **Bluemute:** sets this function on or off. When **Bluemute** is selected to **On** mode, it will display a solid blue screen when a channel is selected that has no signal. The TV set will turn itself off after 10 minutes without signal.
 - **Snd Sys:** sets the sound system among **BG**, **DK** and **I** by pressing the **←v-** or **v+→** button. As the sound system is not auto-detection, users will then have to go to the menu and switch from **BG** to **DK** or **I**.
 - **Language:** you can select **English** or **Arabic** OSD.

ADJUSTING THE TV PICTURE

This picture menu allows you to make adjustments to the picture.

Step

1

Press button

MENU

Press once to enter PICTURE main menu.

Result on screen

Contrast

Bright.

Color

Hue

Sharpness

Color Temp

90

65

50

±00

50

Normal

↑ ↓ ← →

MENU

2

↔ / c-

Select item.

Contrast

Bright.

Color

Hue

Sharpness

Color Temp

90

65

50

±00

50

Normal

↑ ↓ ← →

MENU

3

←v- / v+→

Adjust level or select desired setting.

Bright.

65

↑ ↓

4

MENU

Press button to exit menu from screen or menu will quit after a few seconds without further action.

Bright.

65

↑ ↓

Picture menu items	Activities
Contrast	Increase or decrease contrast level.
Bright.	Increase or decrease brightness level.
Color	Increase or decrease color level.
Hue (for NTSC only)	Increase or decrease color tone of NTSC picture.
Sharpness	Increase or decrease sharpness level to improve detail in picture.
Color Temp	Set Color Temperature among Cool, Warm and Normal.

SMART PICTURE CONTROL

Whether you are watching a movie or video game, your TV has video control settings matched to your current program source or content. The Smart Picture feature quickly resets your TV's video controls of program for a number of different types of programs and viewing conditions you may have in your home: DVD, Rich, Natural and Soft are preset at the factory to automatically adjust the TV's Contrast, Brightness, Color and Sharpness levels, while Personal mode can be set by user according to your personal preference.

Step	Press button	Result on screen
1		Press button repeatedly to cycle through the 5 settings namely, Personal, DVD, Rich, Natural and Soft and select your desired picture setting.

Personal

DVD

Rich

Natural

Soft

Definition of Smart Picture settings

- Personal** : Picture settings are set to your preference.
- DVD** : It is suggested that you select this mode when inputting external video signals.
- Rich** : Emphasize very vibrant colors. This setting is the optimal setting when you are viewing TV programmes in a brightly-lit room.
- Natural** : Emphasize original colors.
- Soft** : Emphasize warm colors. (Suitable for dimly-lit room condition and gives cinema-like effect when light is switched off).

TIMER FUNCTION

Timer function is provided by the microcomputer of TV set. Once it is set, the Start/Stop time and time displaying functions can start functioning. The TV set will keep the correct time as long as the main power is on, even if the TV has been turned off into standby mode.

Step	Press button	Result on screen
1		Press once to enter PICTURE main menu.
2		Press button repeatedly until TIMER menu is selected.
3		Select Time.
4		Set the current time, e.g. 12:15.
5		Select Stop Time.
6		Select among Off, Once, Daily.
7		If you have selected Once or Daily in step 6, press the button to select 0:00.
8		Set the Stop Time, e.g. 22:00.

TIMER FUNCTION

Step	Press button		Result on screen
9		Select Start Time.	
10		Select among Off, Once, Daily.	
11		If you have selected Once or Daily in step 10, press the button to select 0:00.	
12		Set the Start Time, e.g. 22:59.	
13		Select Channel.	
14		Select your desired channel no., e.g. 11.	
15		Press button to exit menu from screen or menu will quit after a few seconds without further action.	

Notes:

- Off: The Start/Stop Timer is set to off and will not operate.
- Once: The Start/Stop Timer is set to turn on/off the TV at that time only one time.
- Daily: The Start/Stop Timer is set to turn on/off the TV at that time everyday until otherwise adjusted.
- Channel: This is the channel the TV will display at Start Time.
- Stop time should set later than the time set in Time item.

GAME FUNCTION

This TV is built-in a game for enjoying in your leisure time.

How to enter the Game:

Short-cut operation:

Step	Press button		Result on screen
1		Press button to enter the Game.	
Menu operation:			
1		Press once to enter PICTURE main menu.	
2		Press button repeatedly until FEATURE menu is selected.	
3		Press button repeatedly until Game is selected.	
4		Press button to enter the Game.	

GAME FUNCTION

How to play the Game:

Step

Press button

Result on screen

1

Select the level from 1 to 20, e.g. 20.

2

Press button to start the Game.

3

Press the buttons to control the moving direction of the CHILD to push the box into X, and the box will turn into an apple.

4

After having pushing all the boxes into X, and all the boxes change into apples as shown, you win the game for this level, it will enter next higher level automatically.

Notes:

- Playing the game for the first time, only level 1 can be selected and played.
- Only when you win the game of one level, you can enter the next higher level, and pressing the left arrow or right arrow button can select from 1 to the level next higher than that you have passed. For example, if you have passed level 1, pressing left arrow or right arrow button can select from 1 to 12, and the higher levels (13-20) above 12 can not be selected.
- If you finish the game of level 20, it will return to level 1 again.

CALENDAR FUNCTION

This feature allows you to look up days and years very conveniently.

How to enter the Calendar:

Short-cut operation:

Step

Press button

Result on screen

1

Press button to enter the Calendar.

Menu operation:

Step

Press button

Result on screen

1

Press once to enter PICTURE main menu.

2

Press button repeatedly until FEATURE menu is selected.

3

Press button repeatedly until Calendar is selected.

4

Press button to enter the Calendar.

CALENDAR FUNCTION

How to look up days and years:

Step

Press button

Result on screen

1

←v- / v-→

Select your desired month.

2

←c- / c-→

Select your desired year.

JAN		2003	
SU	MO TU WE TH FR SA		
	1 2 3 4		
5	6 7 8 9 10 11		
12	13 14 15 16 17 18		
19	20 21 22 23 24 25		
26	27 28 29 30 31		

NOTEBOOK FUNCTION

This feature allows you to store information such as phone number, leave message and etc, and can be used as a reminder.

How to input and correct information in notebook:

Example: if you want to input the content: aBc@2!cn.com

Step	Press button	
		Press button to enter the Notebook.
		Press button to turn off the capital function, and the color of CAPS on the screen will turn into blue.
		Press twice to input the letter "a". Note: Pressing this button repeatedly can cyclically input "2", "a", "b", and "c". The same procedure is applicable to input other digits or small letters.
		Press again to turn on the capital function, and the color of CAPS on the screen will turn into red.
		Press three times to input the letter "B". Note: Pressing this button repeatedly can cyclically input "2", "A", "B", and "C". The same procedure is applicable to input other digits or capital letters.

NOTEBOOK FUNCTION

Step	6	Press button to turn off the capital function.	Result on screen
	7	Press four times to input the letter "c".	
	8	Press repeatedly until the symbol "@" appears. Note: Pressing this button repeatedly can cyclically select "I", blank space, the common marks and punctuation marks "+", "-", "=", ",", ".", ";", ":", "(", ")", "<", ">", "@", "%", "\$", "#", "!", and "?" as shown.	
	9	Repeat the above steps to input "2 cn.com".	
	10	Press button to store the message. The word "Saving" appears on the screen.	

Notes:

- After finishing information writing, you can use **DELETE** button on the remote control to delete the unwanted or incorrect word. And press **INSERT** button on the remote control to select **INS** or **OVER** mode on the screen, then insert word into the stored information or overwrite it.

NOTEBOOK FUNCTION

How to utilize notebook function:

If you want to display the message when the TV is turned on:

Step

Press button

Result on screen

1

↶ / C-
↷ / V+

Move the cursor to select the sign ☒ .

2

OK

Press button to turn ☒ into ☒ as shown.

Note book

Give your mother a call.

☒ OFF INS CAPS

If you want to display the message at a specified time:

Step

Press button

Result on screen

1

↶ / C-
↷ / V+

Move the cursor to select the sign ⌚ .

2

OK

Press button to turn Off into 0:00.

3

↶ / C-
↷ / V+

Set your desired time, e.g 17:40.

Note book

Meet auntie Li at airport tonight.

☒ 0:00 INS CAPS

Note book

Meet auntie Li at airport tonight.

☒ 17:40 INS CAPS

Notes:

- The time setting in notebook must be based on the time set in **Time** of **TIMER** menu. The time set in notebook must be later than the time set in **Time**.

SPECIFICATION

	14PT2014	21PT2014
Picture tube screen size (diagonal)	370mm	540mm
Audio Output: speaker	2 x 2W	2 x 2W
Set Dimension Width Depth Height	331mm 441mm 367mm	600mm 456mm 372mm
Net weight of Set (approximate)	10kg	21kg
TV system	PAL BG/DK/I SECAM BG SECAM DK AV - NTSC	

Note:

For Operating Voltage, Frequency, Power Consumption, refer to the type number at the rear of the set.

Product is subjected to change without notice.

4. Mechanical Instructions

Index:

1. Rear Cover Removal
2. Service Position Main Panel
3. Side I/O Panel Removal
4. Rear Cover Mounting

Note:

Figures can deviate slightly from the actual situation, due to different set executions.

4.1 Rear Cover Removal

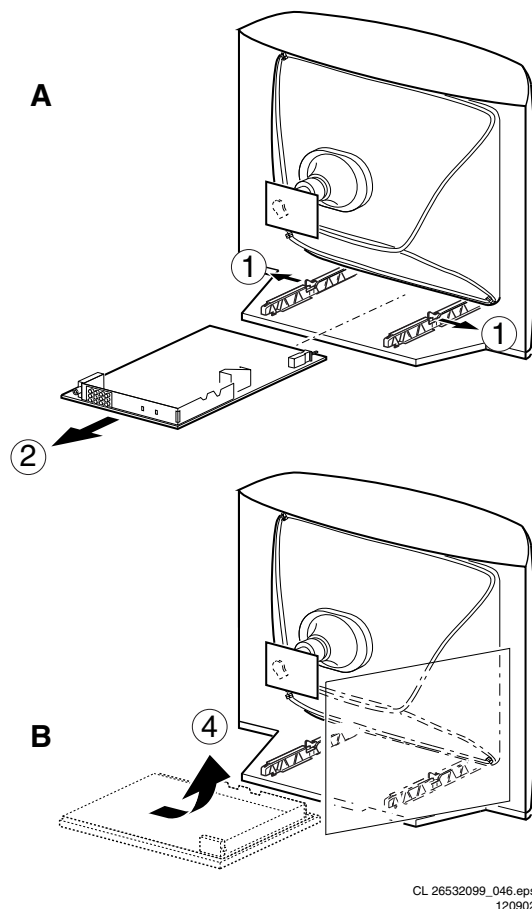
1. Remove all fixation screws of the rear cover.
2. Now pull the rear cover backward to remove it.

4.2 Service Position Main Panel

There are two configurations. With and without panel bracket. Both have a different service position:

Main panel **without** bracket.

1. Disconnect the strain relief of the AC power cord.
2. Remove the main panel, by pushing the two center clips outward [1]. At the same time, pull the panel away from the CRT [2].
3. Disconnect the degaussing coil by removing the cable from connector P801.
4. Flip the panel 90 degrees [4], with the components towards the CRT.

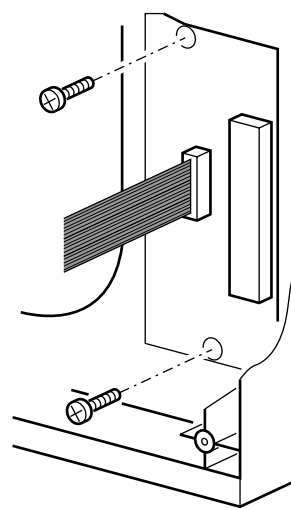


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120902

Figure 4-1

4.3 Side I/O Panel Removal

Remove the complete Side I/O assembly after unscrewing the two fixation screws.



CL 26532099_045.eps
120900

Figure 4-2

4.4 Rear Cover Mounting

Before you mount the rear cover, perform the following checks:

1. Check whether the AC power cord is mounted correctly in its guiding brackets.
2. Replace the strain relief of the AC power cord into the cabinet.
3. Check whether all cables are replaced in their original position.

5. Service Modes, Error Codes, and Fault Finding

Index:

1. Troubleshooting
2. ComPair

5.1 Troubleshooting

5.1.1 No picture, no sound, no raster, Fuse Blown

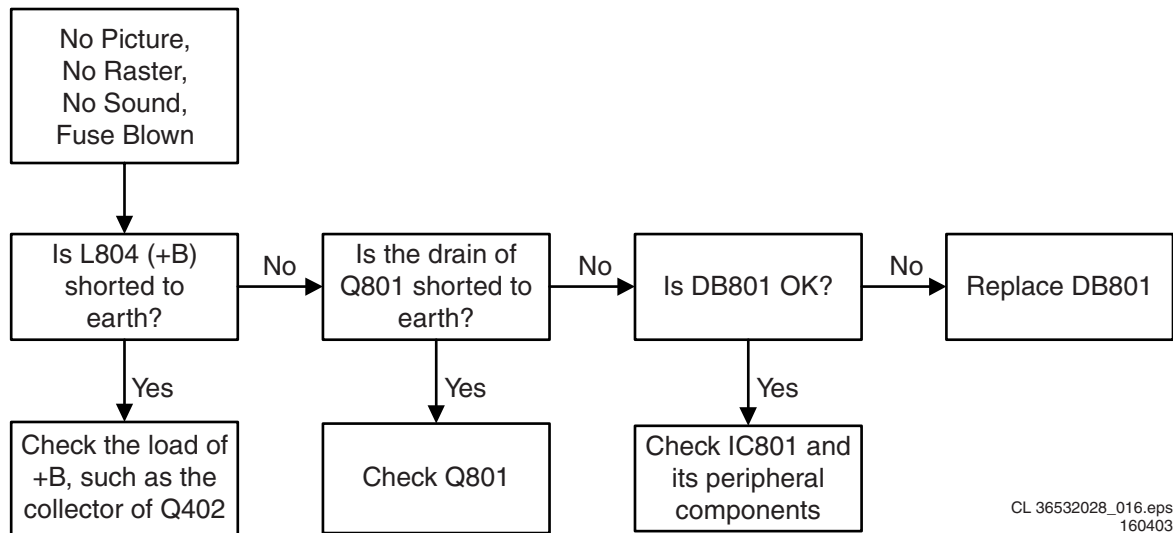


Figure 5-1 No picture, no sound, no raster, and fuse blown

5.1.2 No Picture, No Sound, No Raster, Abnormal, and +B Voltage

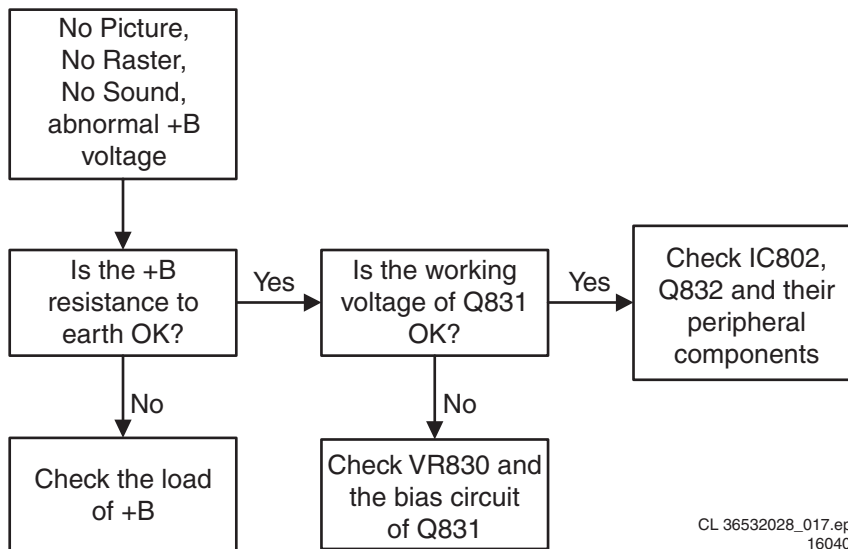
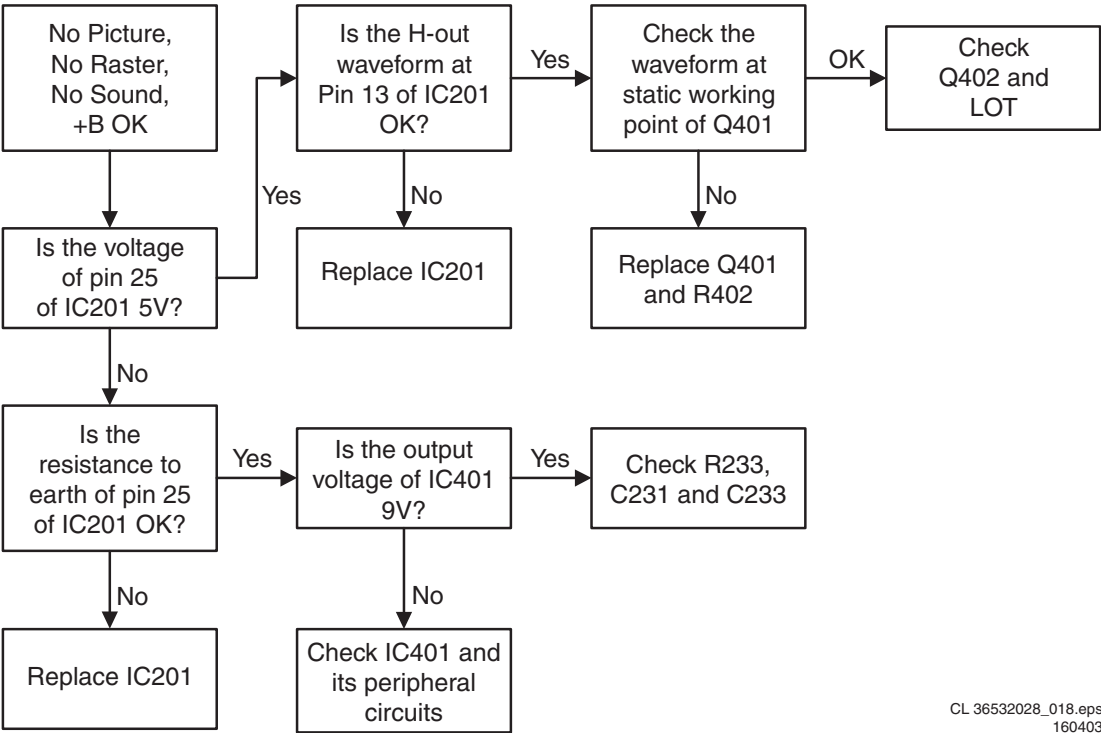


Figure 5-2 No picture, no sound, no raster, abnormal, and +B voltage

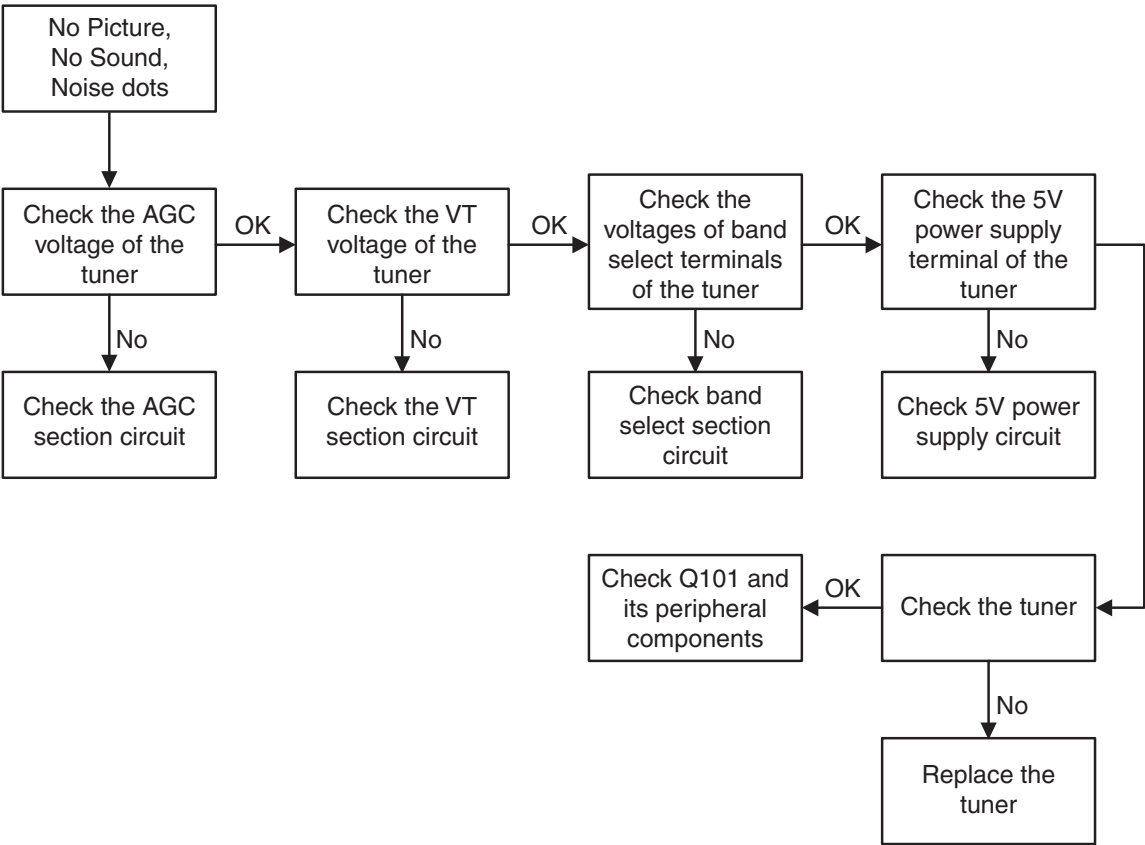
5.1.3 No Picture, No Sound, No Raster, and +B OK



CL 36532028_018.eps
160403

Figure 5-3 No picture, no sound, no raster, and +B OK

5.1.4 No Picture, No Sound, Snow Dots



CL 36532028_027.eps
160403

Figure 5-4 No picture, no sound, snow dots

5.1.5 No Picture, Sound OK

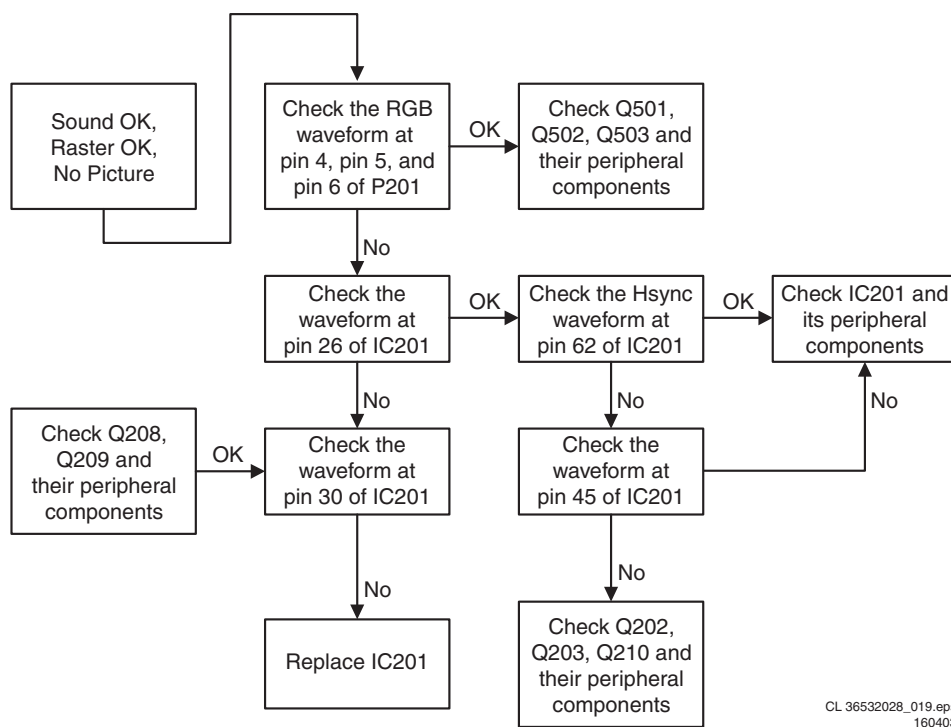


Figure 5-5 No picture, sound OK

5.1.6 No Picture, No Raster, Sound OK

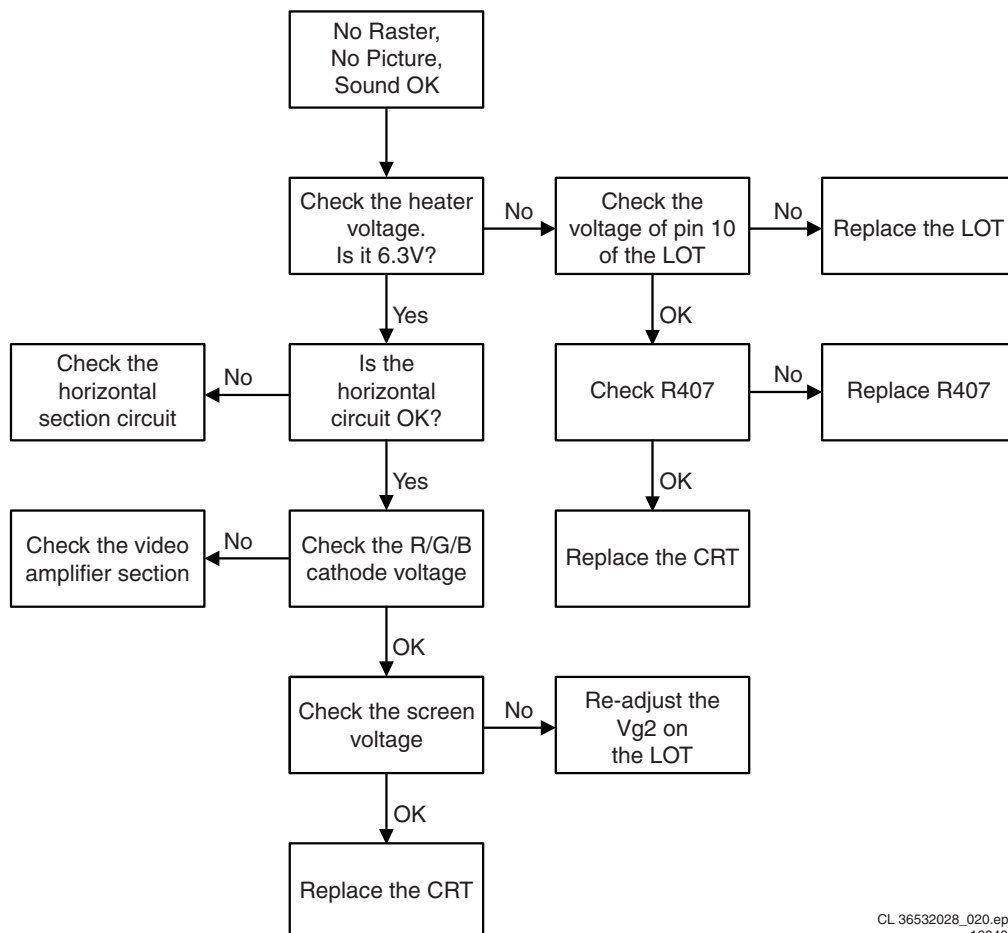


Figure 5-6 No picture, no raster, sound OK

5.1.7 No Sound, Picture OK

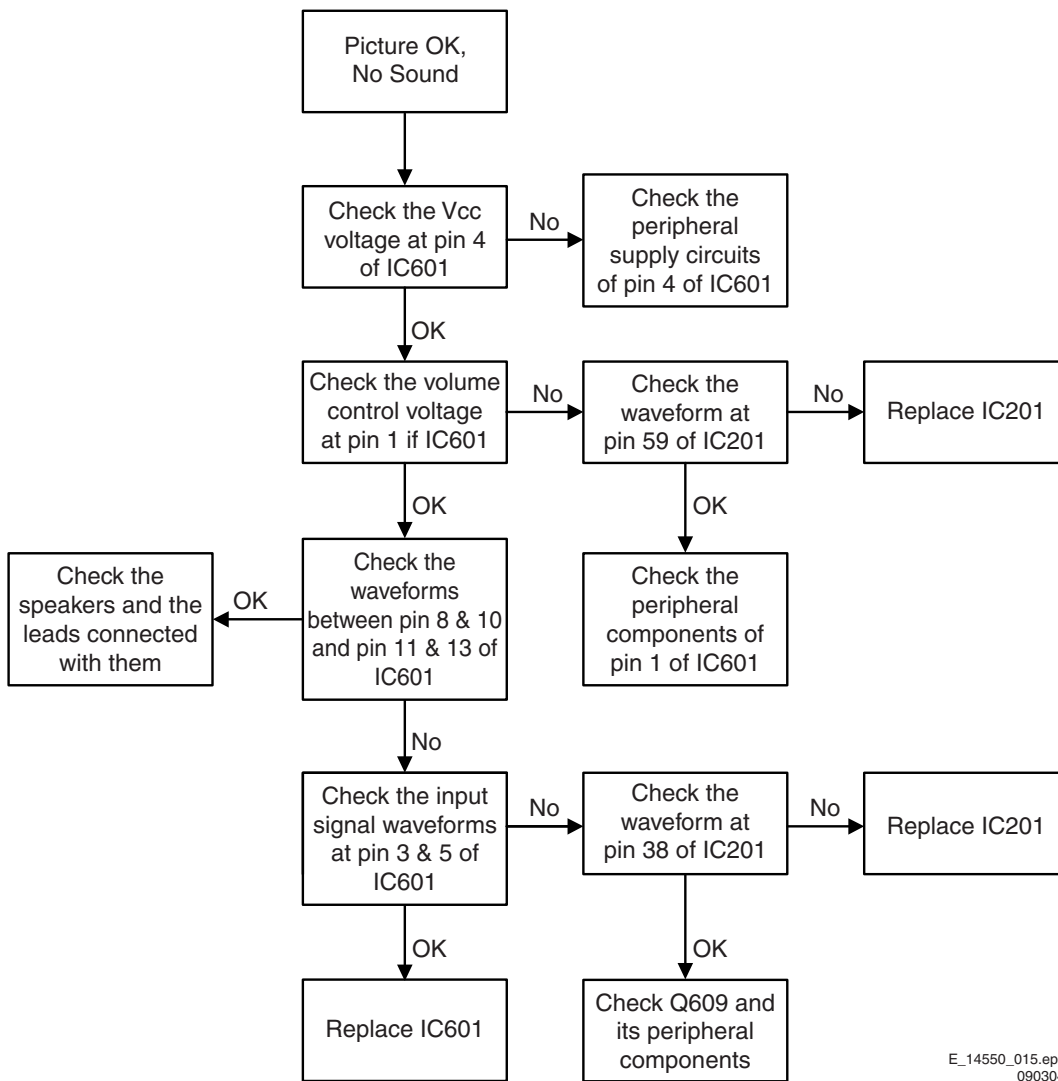
E_14550_015.eps
090304

Figure 5-7 No sound, picture OK

5.1.8 No Tuning Control

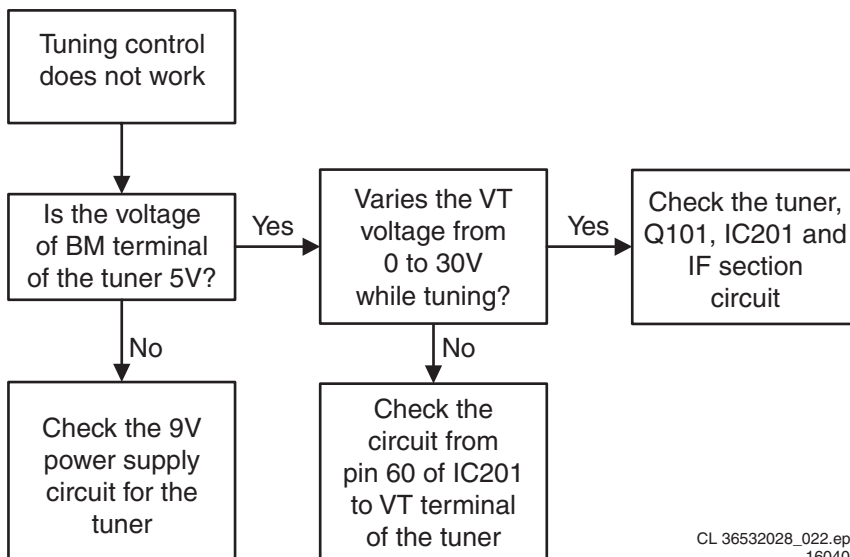
CL 36532028_022.eps
160403

Figure 5-8 No tuning control

5.1.9 Unstorable Channel

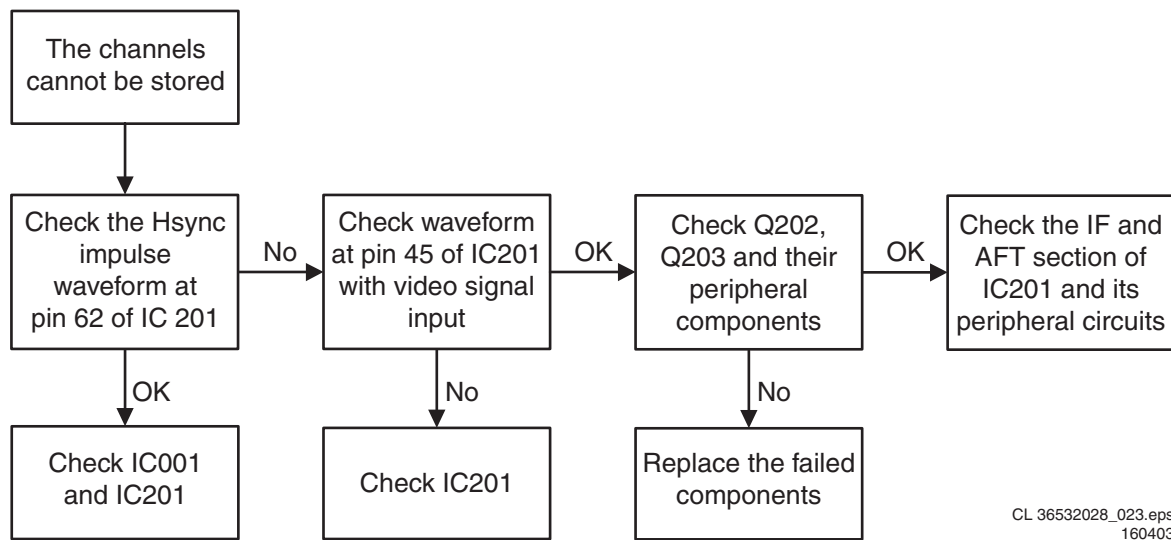


Figure 5-9 Unstorable channel

5.1.10 Unswitchable Channel

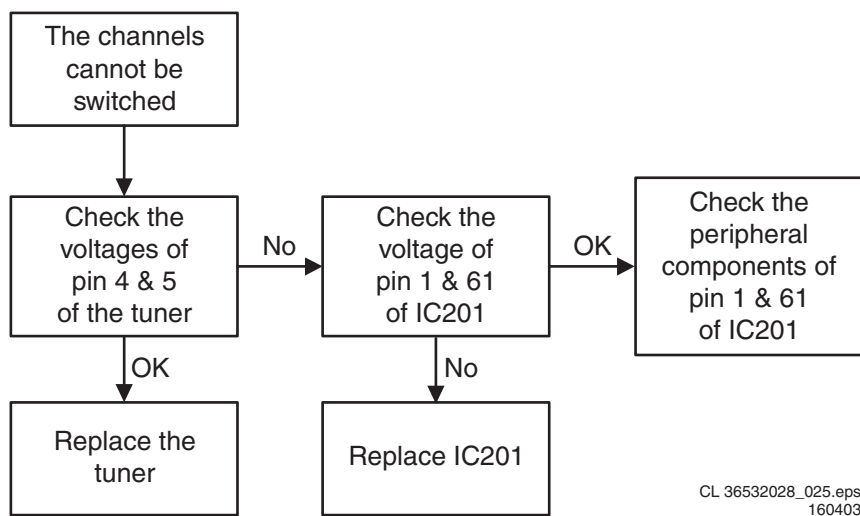
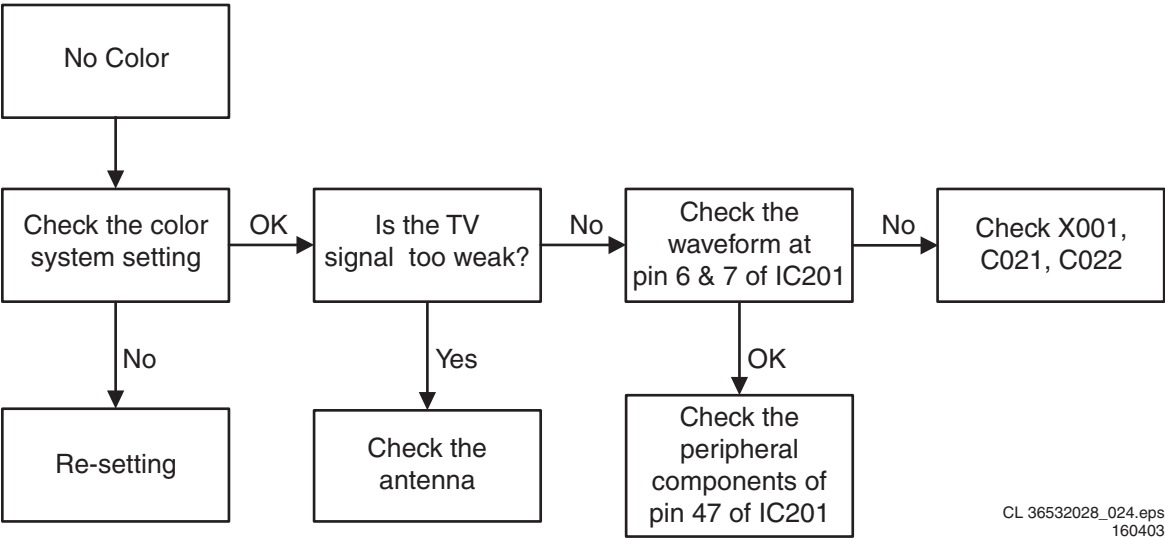


Figure 5-10 Unswitchable channel

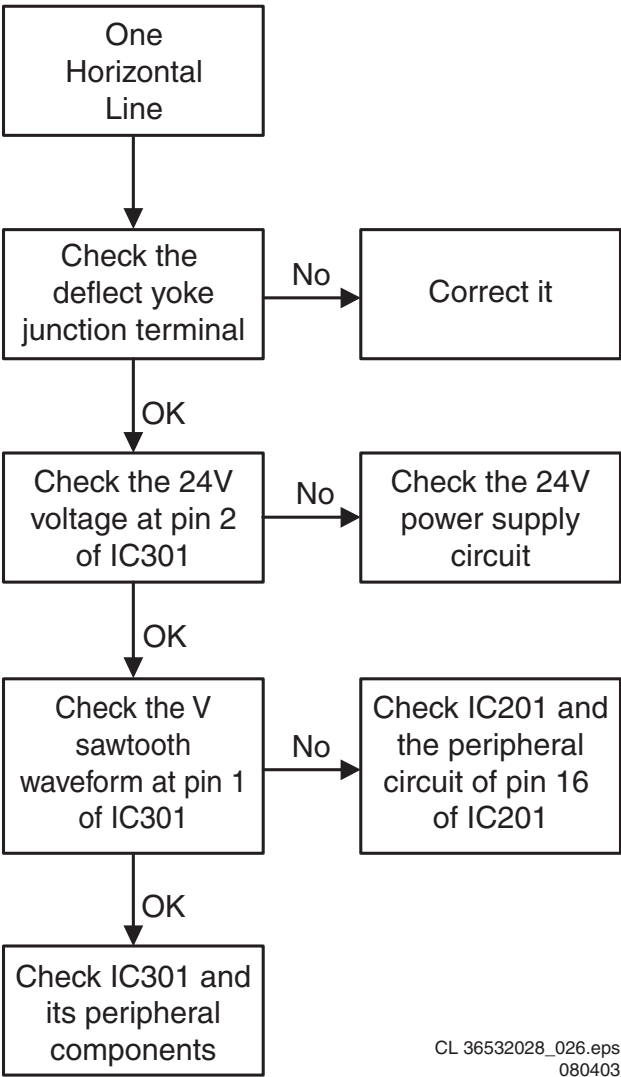
5.1.11 No Color



CL 36532028_024.eps
160403

Figure 5-11 No color

5.1.12 One Horizontal Line



CL 36532028_026.eps
080403

Figure 5-12 One horizontal line

5.2 ComPair

5.2.1 Introduction

ComPair (Computer Aided Repair) is a service tool for Philips Consumer Electronics products. ComPair is a further development on the European DST (service remote control), which allows faster and more accurate diagnostics. ComPair has three big advantages:

ComPair helps you to quickly get an understanding on how to repair the chassis in a short time by guiding you systematically through the repair procedures.

ComPair allows very detailed diagnostics (on I2C level) and is therefore capable of accurately indicating problem areas. You do not have to know anything about I2C commands yourself because ComPair takes care of this.

ComPair speeds up the repair time since it can automatically communicate with the chassis (when the microprocessor is working) and all repair information is directly available. When ComPair is installed together with the SearchMan electronic manual of the defective chassis, schematics and PWBs are only a mouse click away.

5.2.2 Specifications

ComPair consists of a Windows based faultfinding program and an interface box between PC and the (defective) product. The ComPair interface box is connected to the PC via a serial or RS232 cable.

In this chassis, the ComPair interface box and the TV communicate via a bi-directional service cable via the service connector.

The ComPair faultfinding program is able to determine the problem of the defective television. ComPair can gather diagnostic information in two ways:

- **Automatic** (by communication with the television): ComPair can automatically read out the contents of the entire error buffer. Diagnosis is done on I2C level. ComPair can access the I2C bus of the television. ComPair can send and receive I2C commands to the micro controller of the television. In this way, it is possible for ComPair to communicate (read and write) to devices on the I2C busses of the TV-set.
- **Manually** (by asking questions to you): Automatic diagnosis is only possible if the micro controller of the television is working correctly and only to a certain extend. When this is not the case, ComPair will guide you through the faultfinding tree by asking you questions (e.g. *Does the screen give a picture? Click on the correct answer: YES / NO*) and showing you examples (e.g. *Measure test-point 17 and click on the correct waveform you see on the oscilloscope*). You can answer by clicking on a link (e.g. text or a waveform picture) that will bring you to the next step in the faultfinding process.

By a combination of automatic diagnostics and an interactive question / answer procedure, ComPair will enable you to find most problems in a fast and effective way.

Beside fault finding, ComPair provides some **additional features** like:

- Up- or downloading of pre-sets.
- Managing of pre-set lists.
- Emulation of the Dealer Service Tool (DST).
- If both ComPair and SearchMan (Electronic Service Manual) are installed, all the schematics and the PWBs of the set are available by clicking on the appropriate hyperlink.

Example: *Measure the DC-voltage on capacitor C2568 (Schematic/Panel) at the Mono-carrier.*

- Click on the 'Panel' hyperlink to automatically show the PWB with a highlighted capacitor C2568.
- Click on the 'Schematic' hyperlink to automatically show the position of the highlighted capacitor.

5.2.3 How To Connect

1. First, install the ComPair Browser software (see the Quick Reference Card for installation instructions).
2. Connect the RS232 interface cable between a free serial (COM) port of your PC and the PC connector (marked with 'PC') of the ComPair interface.
3. Connect the mains adapter to the supply connector (marked with 'POWER 9V DC') of the ComPair interface.
4. Switch the ComPair interface "off".
5. Switch the television set "off" with the mains switch.
6. Connect the ComPair interface cable between the connector on the rear side of the ComPair interface (marked with 'I2C') and the ComPair (or *Service*) connector at the rear side of the TV (for its location see figure 8-1 in chapter "Alignments").
7. Plug the mains adapter in a mains outlet, and switch the interface "on". The green and red LEDs light up together. The red LED extinguishes after approx. 1 second while the green LED remains lit.
8. Start the ComPair program and read the 'Introduction' chapter.

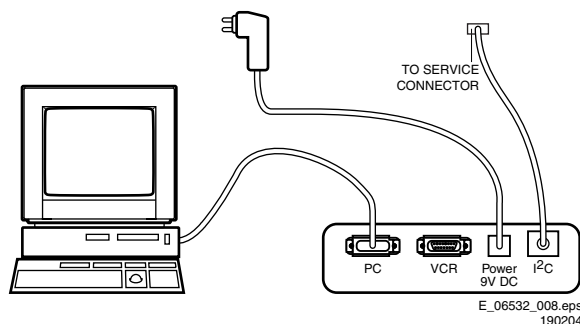


Figure 5-13 ComPair Interface connection

5.2.4 How To Order

ComPair order codes (EU/AP/LATAM):

- Starter kit ComPair32/SearchMan32 software and ComPair interface (excl. transformer): 3122 785 90450.
- ComPair interface (excluding transformer): 4822 727 21631.
- Starter kit ComPair32 software (registration version): 3122 785 60040.
- Starter kit SearchMan32 software: 3122 785 60050.
- ComPair32 CD (update): 3122 785 60070 (year 2002, 3122 785 60110 (year 2003)).
- SearchMan32 CD (update): 3122 785 60080 (year 2002), 3122 785 60120 (year 2003).
- ComPair interface cable: 3122 785 90004.
- ComPair firmware upgrade IC: 3122 785 90510.
- Transformer (non-UK): 4822 727 21632.
- Transformer UK: 4822 727 21633.

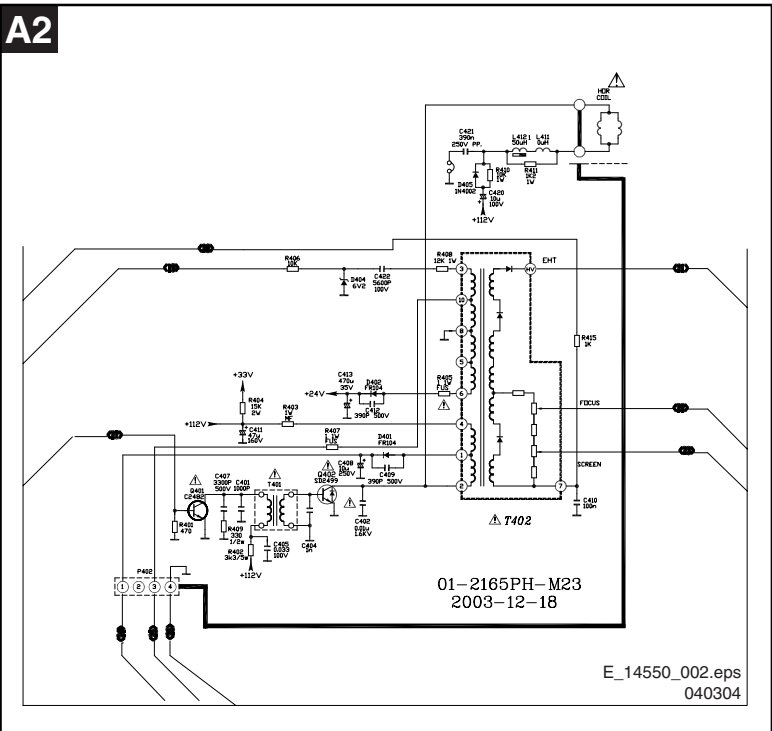
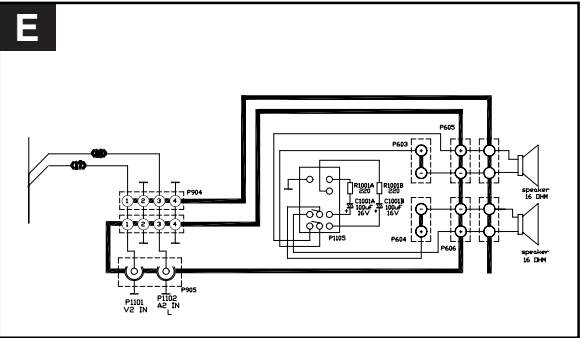
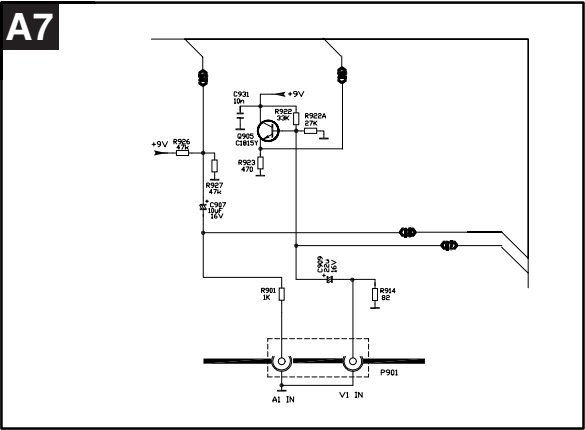
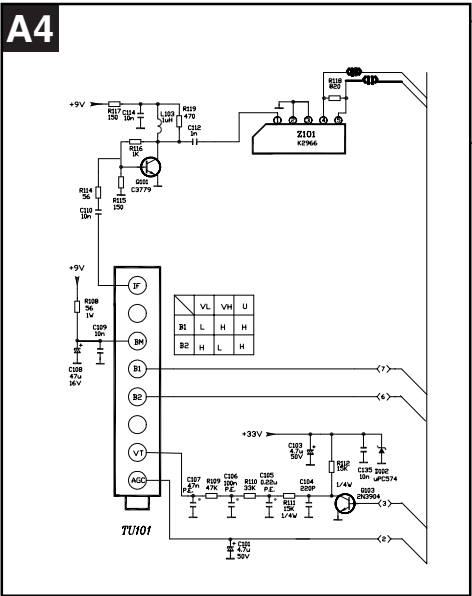
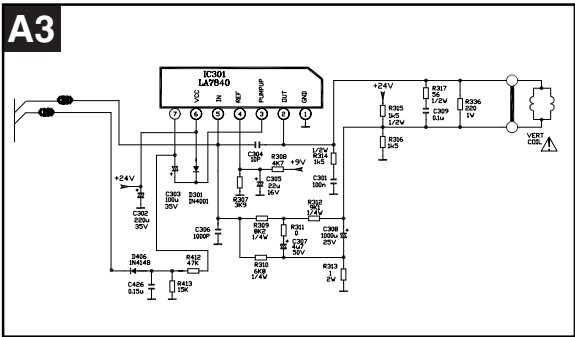
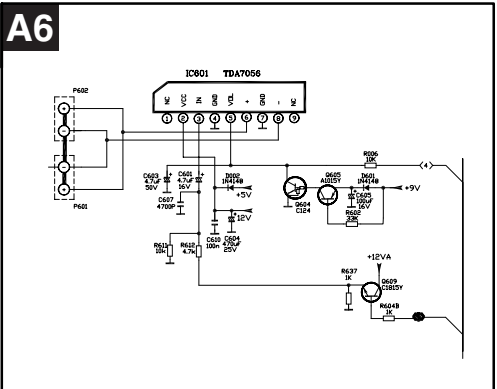
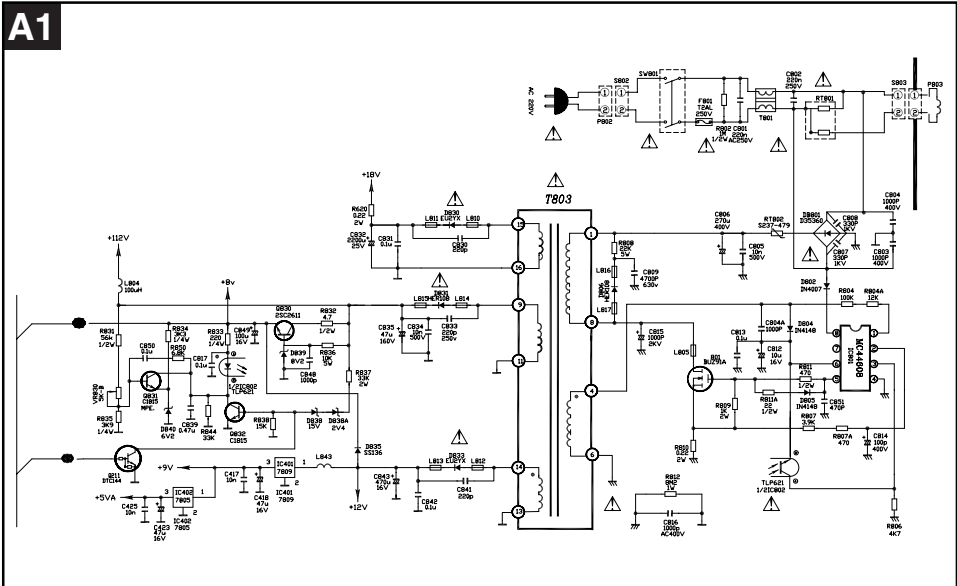
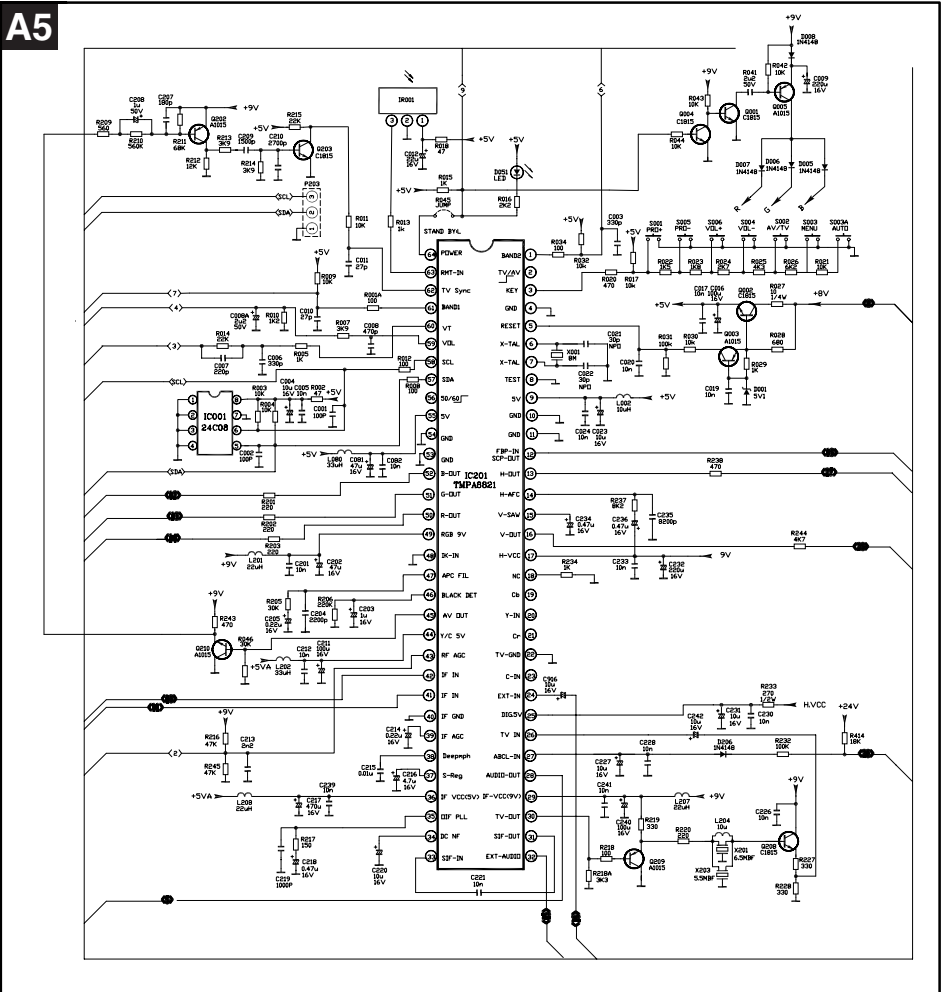
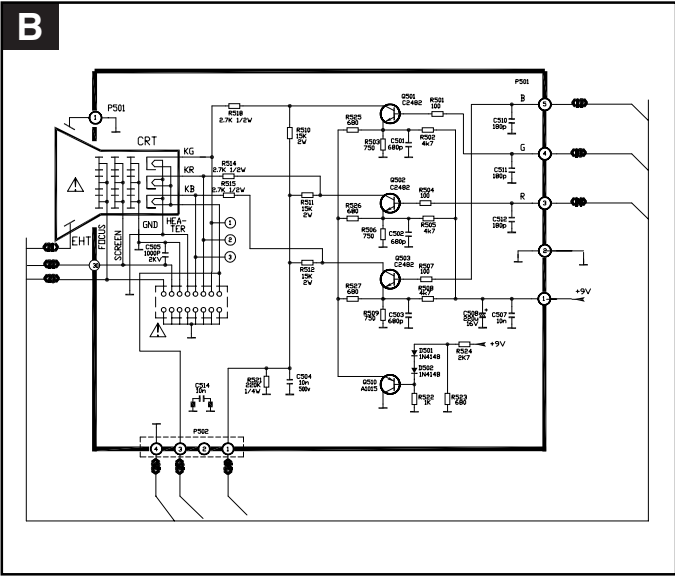
Note: If you encounter any problems, contact your local support desk.

Personal Notes:

6. Block Diagrams, Testpoint Overview, and Waveforms

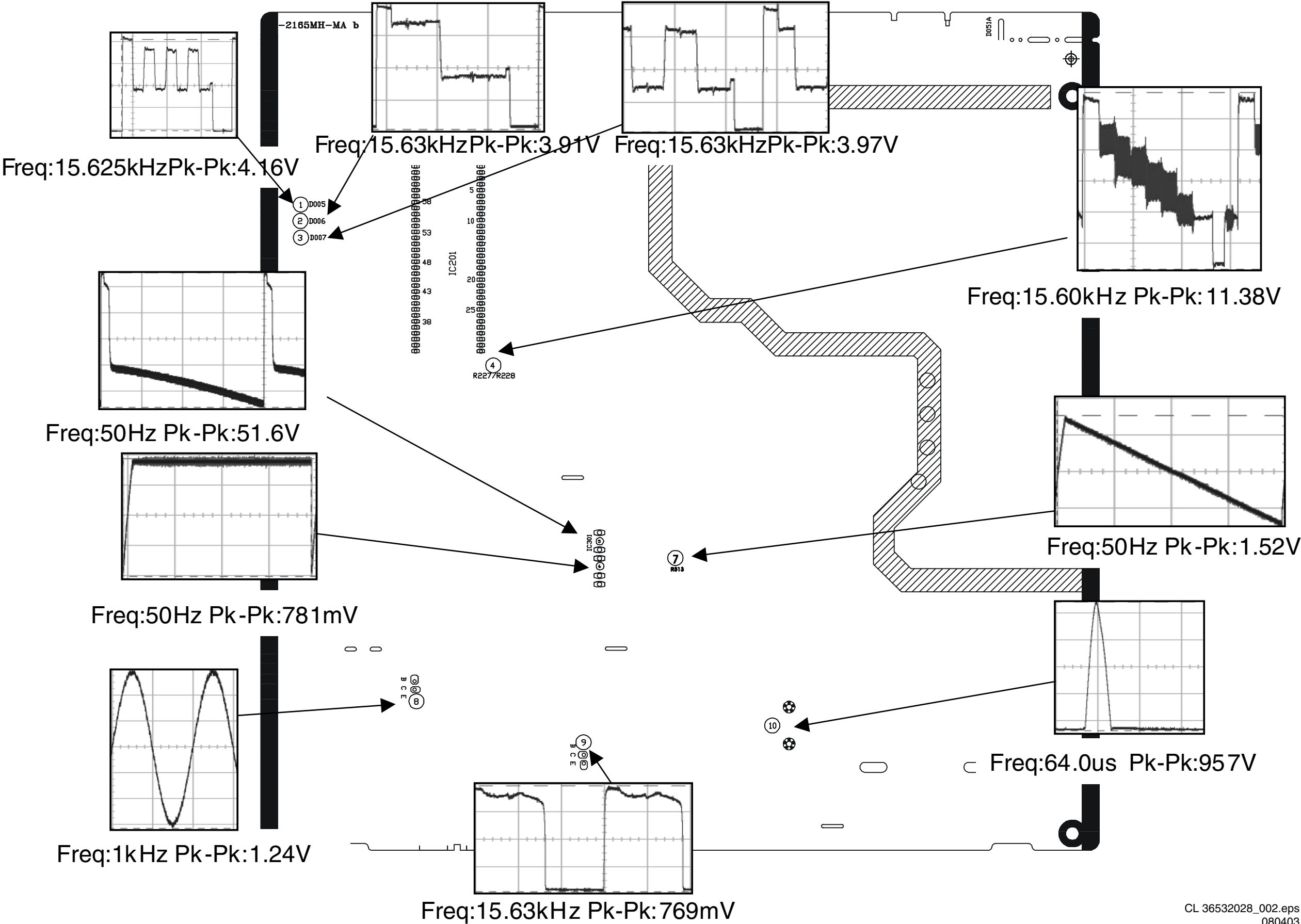
Block Diagram

Block Diagram



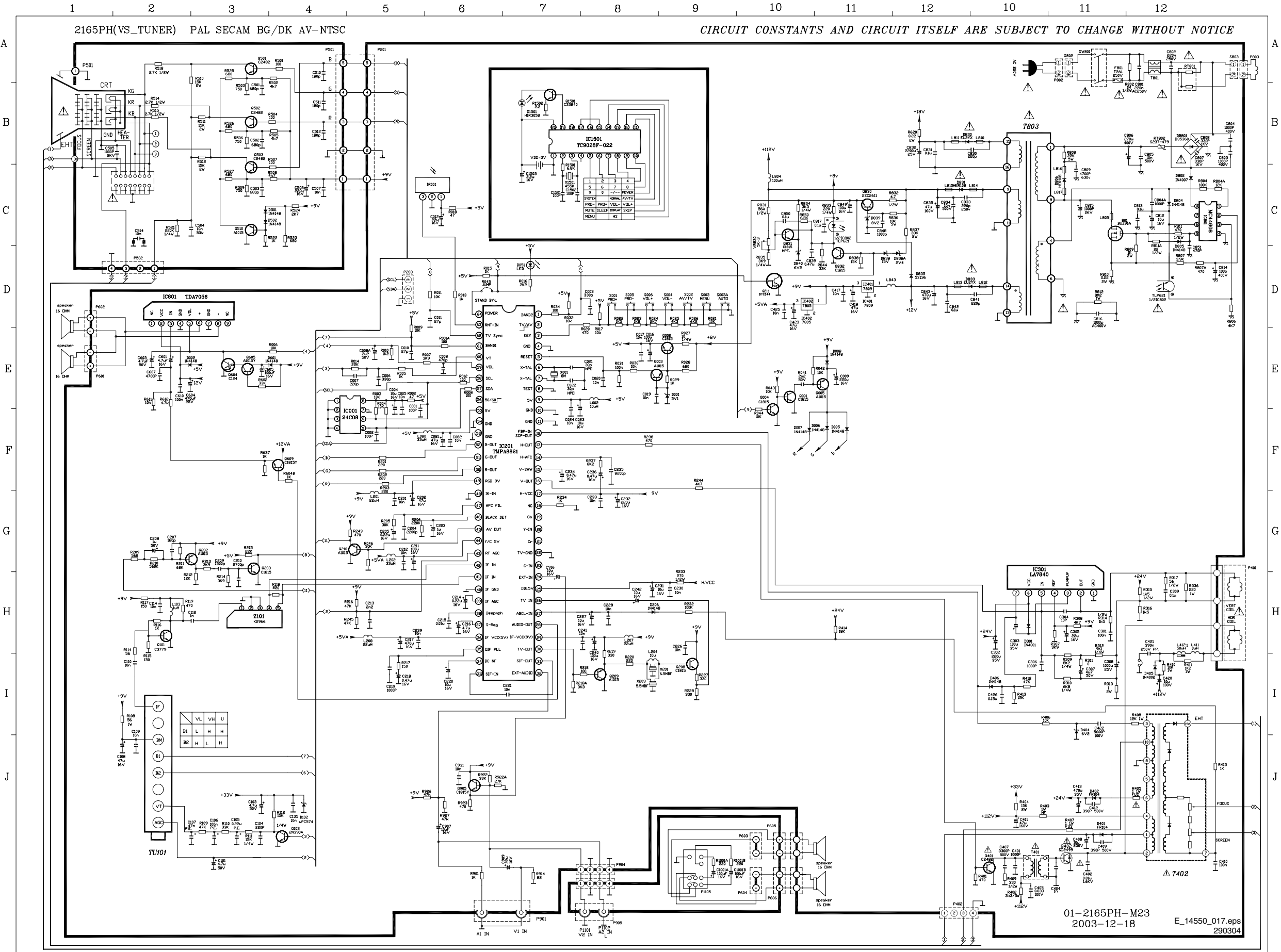
Testpoint Overview Main Carrier

Testpoint Overview

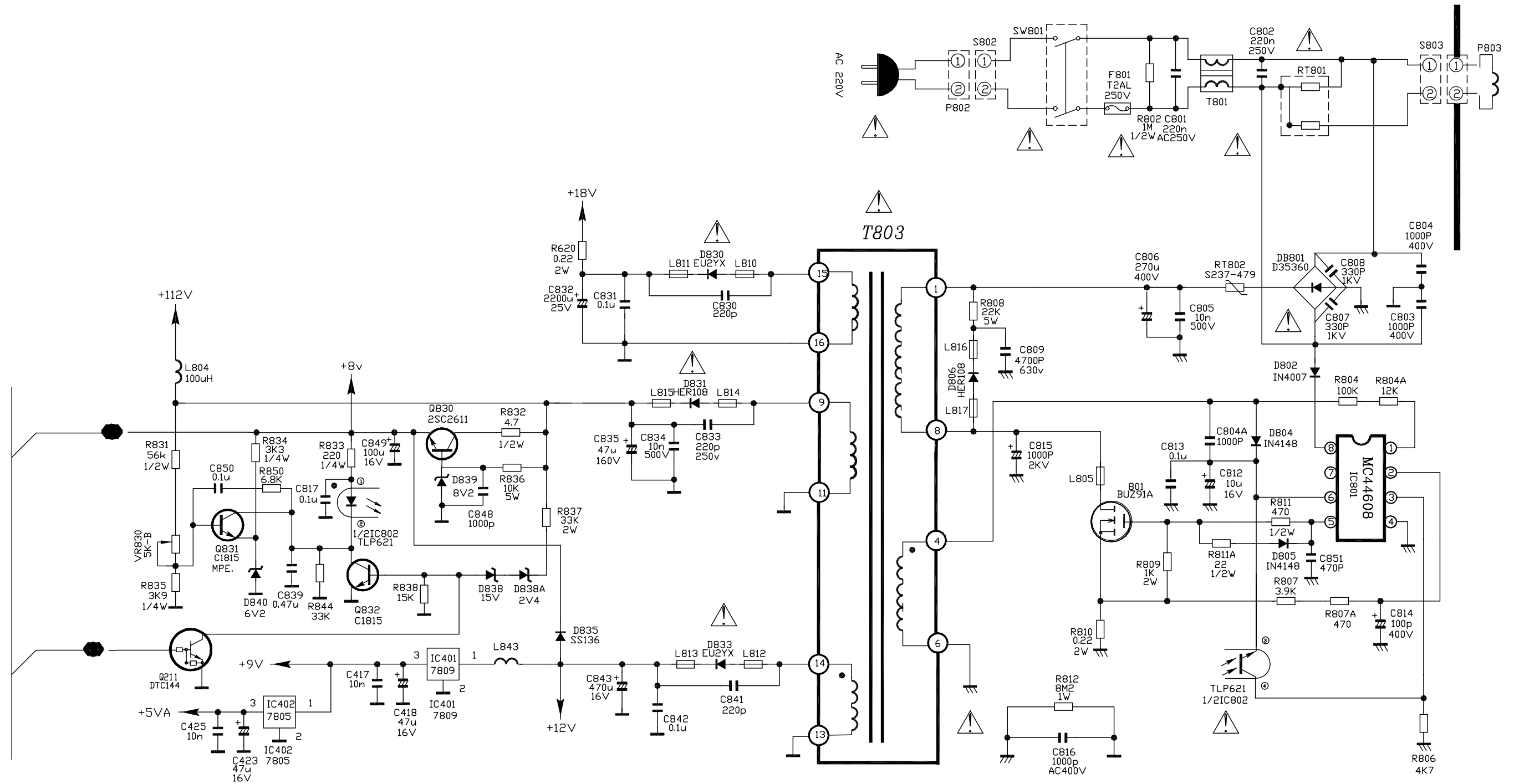


7. Circuit Diagrams and PWB Layouts

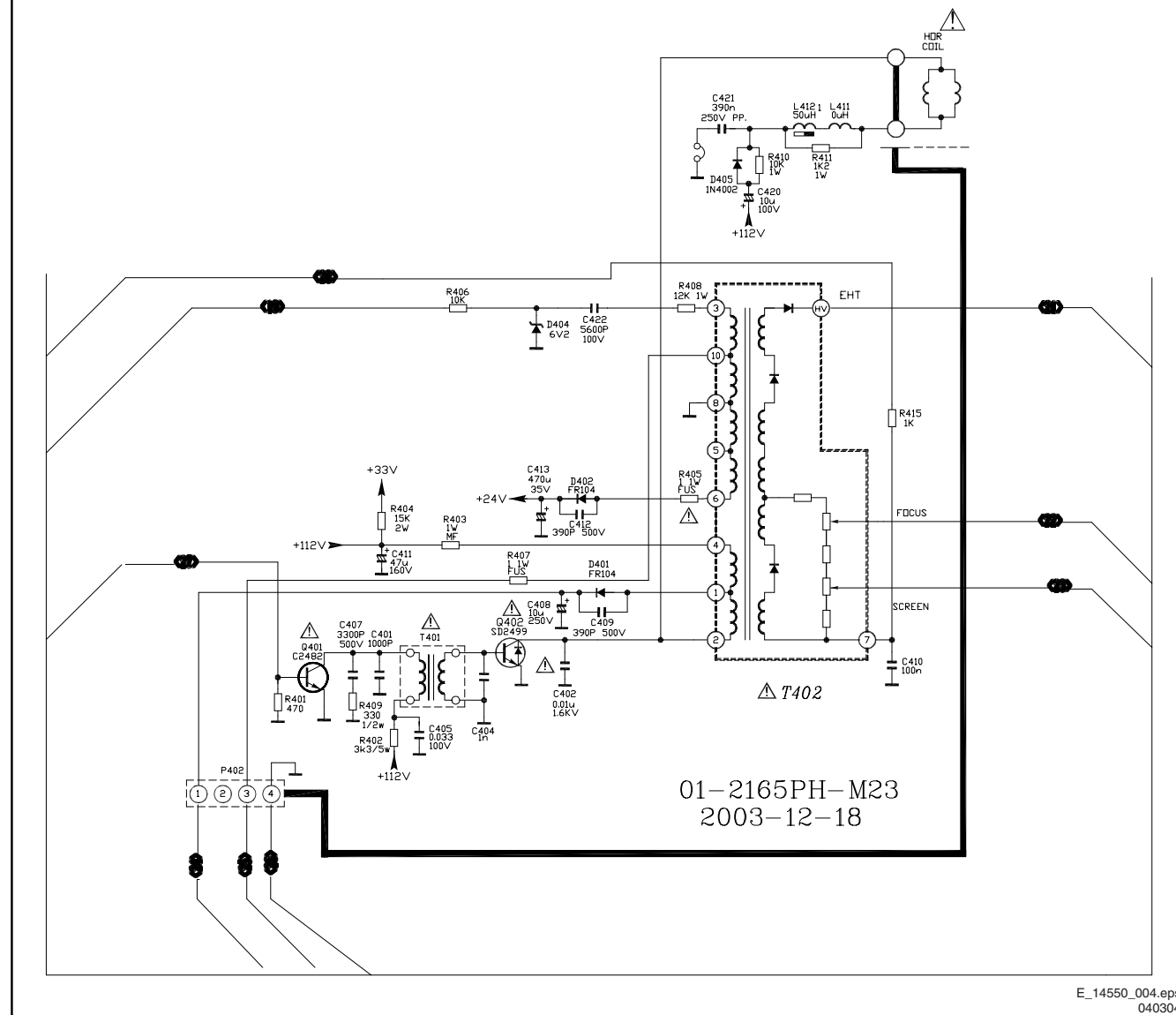
Main Carrier (Overview)



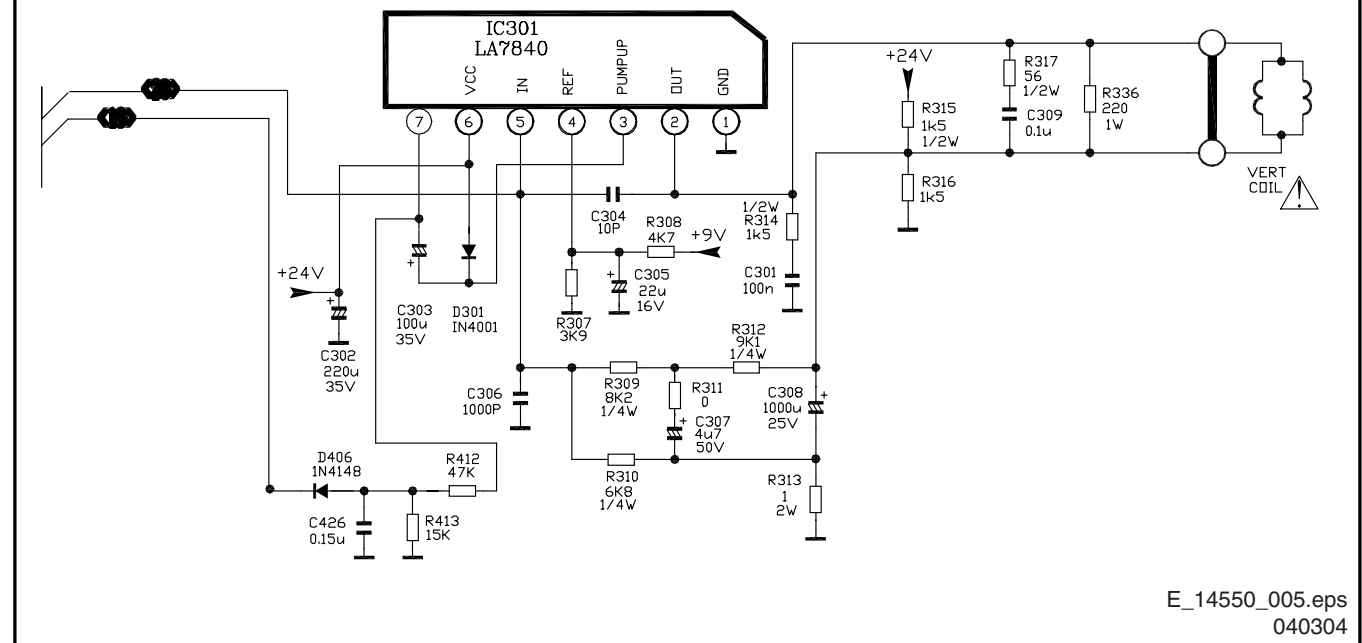
Main Carrier: Power Supply

A1 POWER SUPPLY

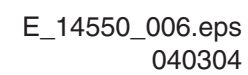
A2 LINE DEFLECTION



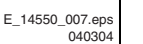
A3 FRAME DEFLECTION



A4 TUNER IF

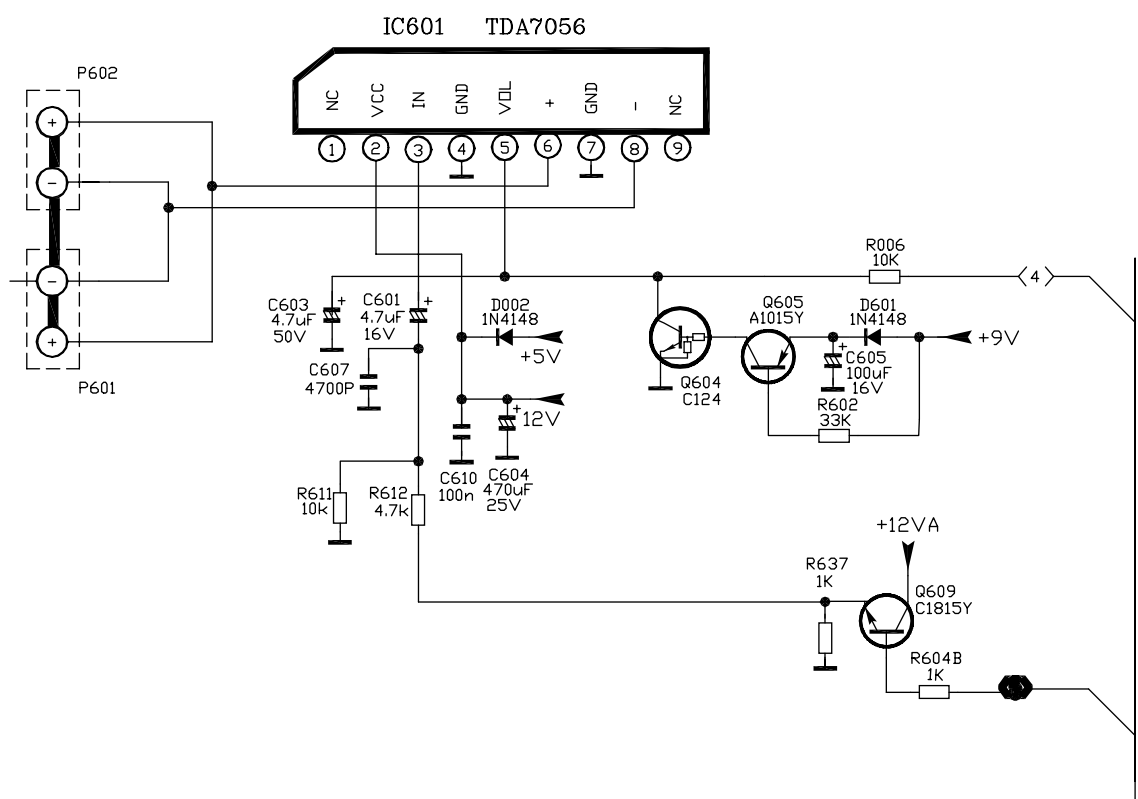


A5 VIDEO SOUND IF AND CPU



Main Carrier: Audio Power Amplifier

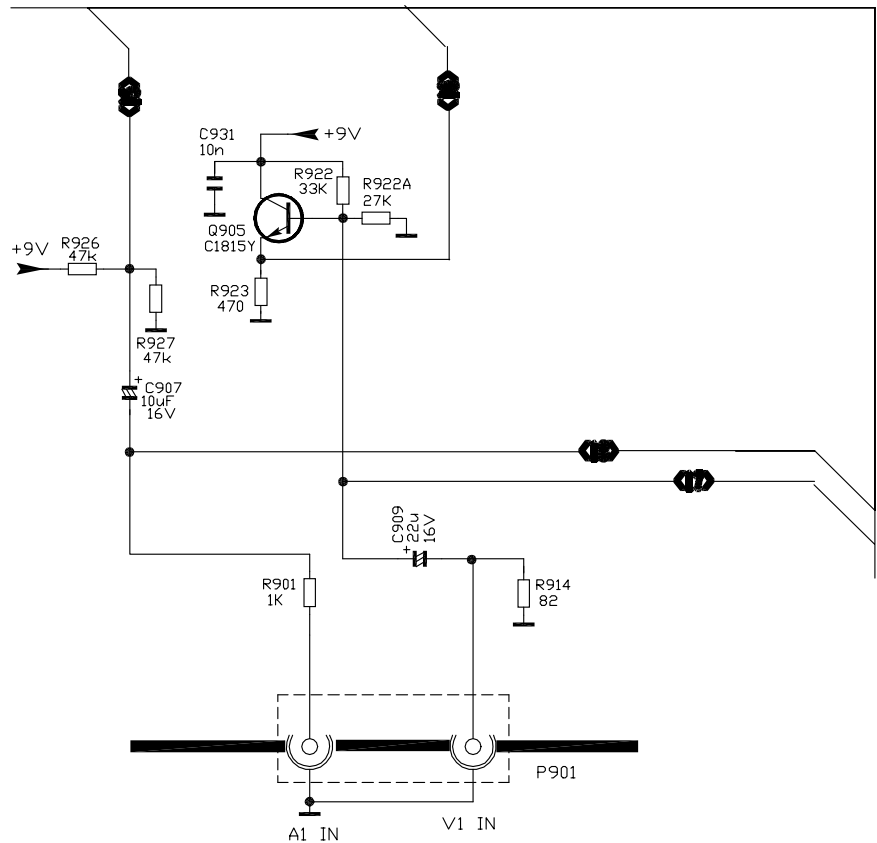
A6 AUDIO POWER AMPLIFIER



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040304

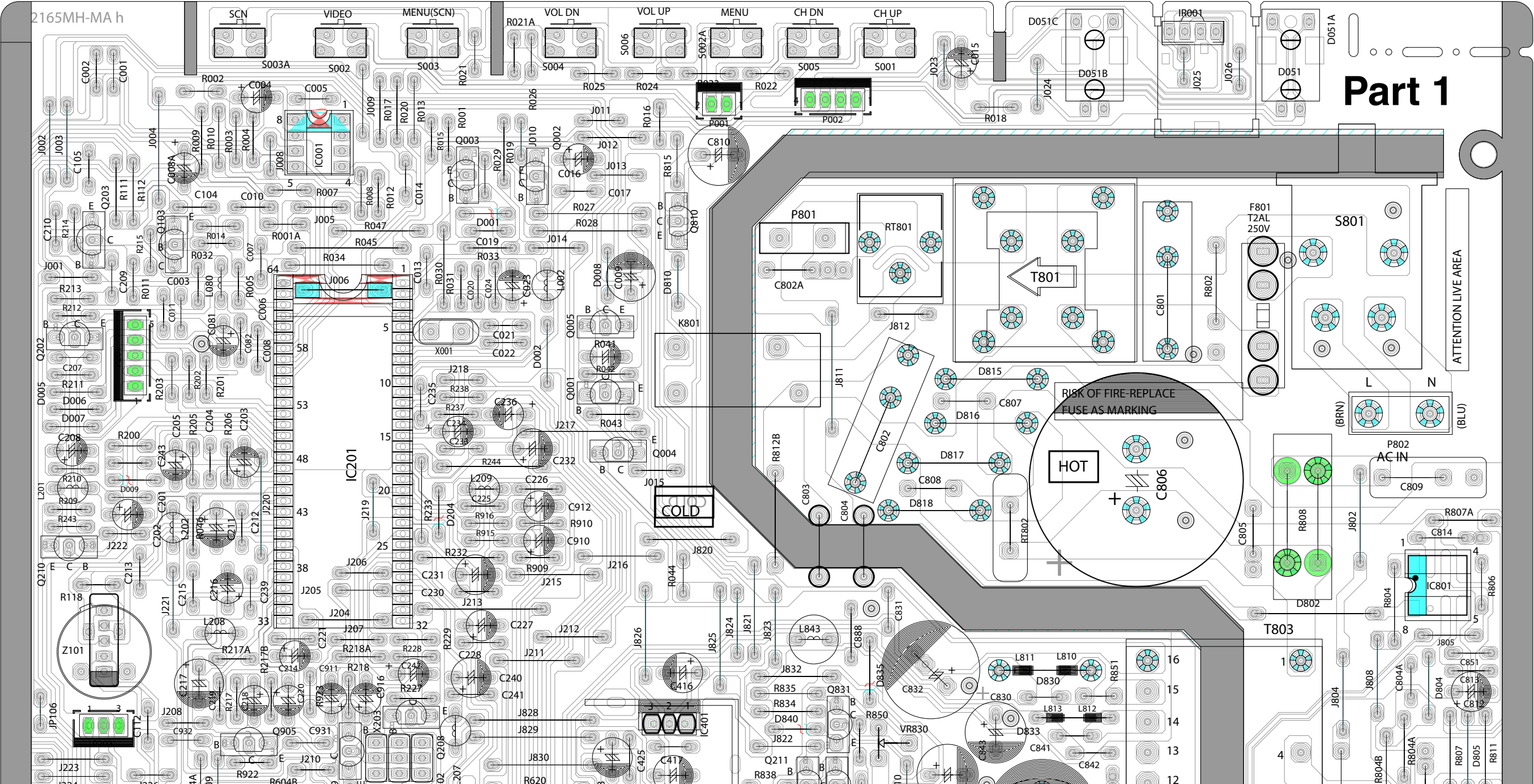
Main Carrier: Rear IO Cinch

A7 REAR IO CINCH

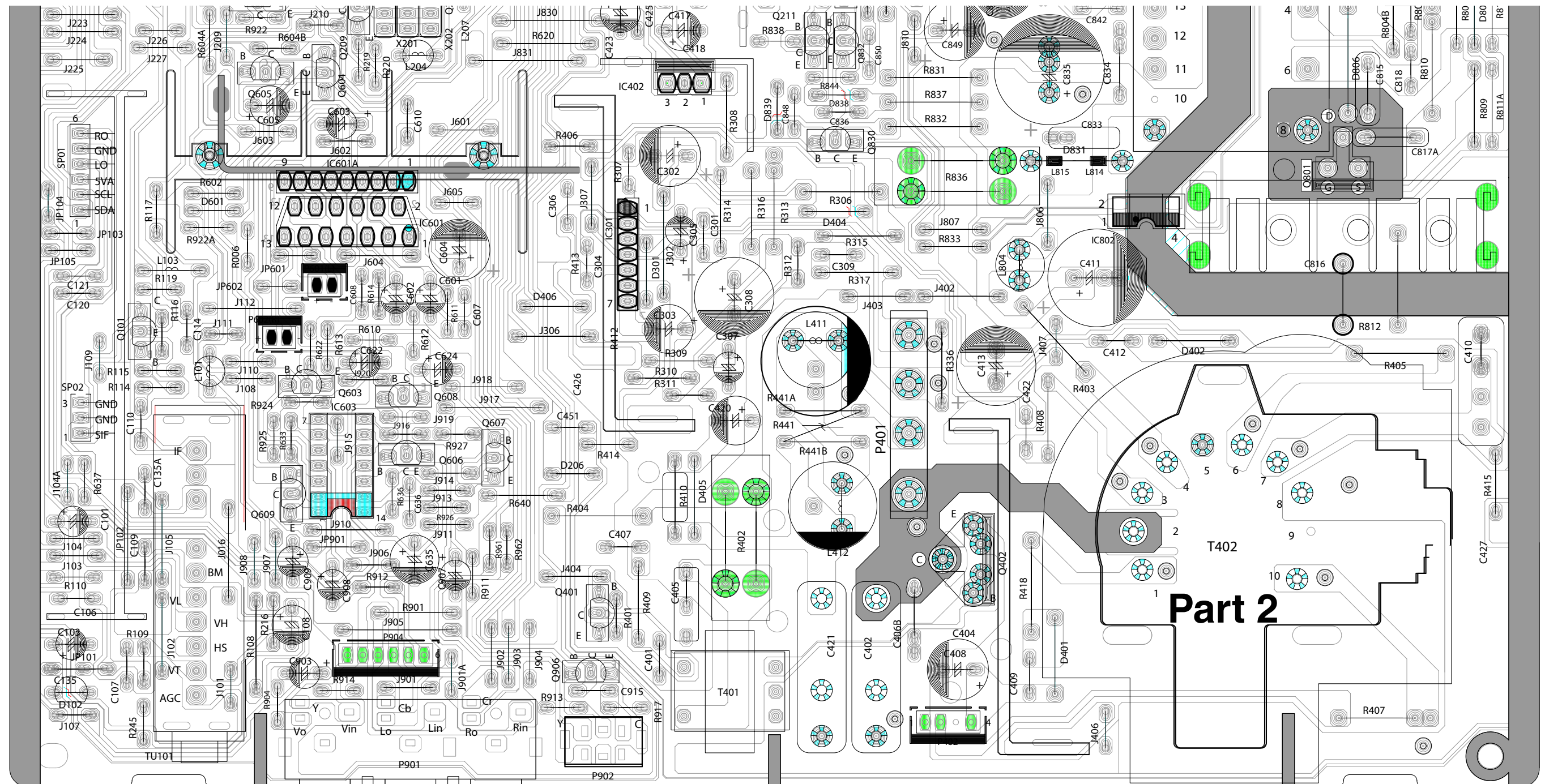


E_14550_009.eps
040304

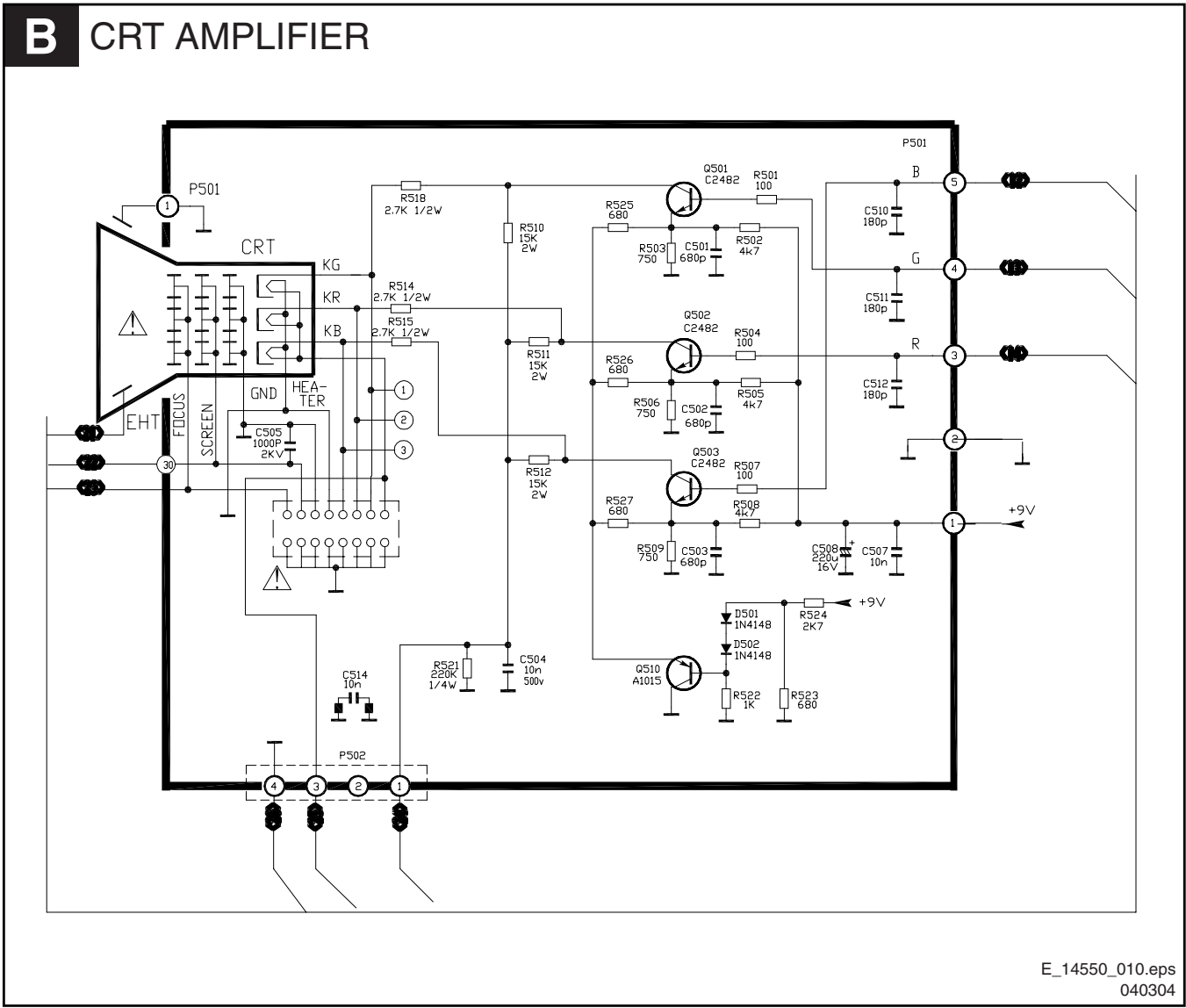
Layout Main Carrier (Part 1)



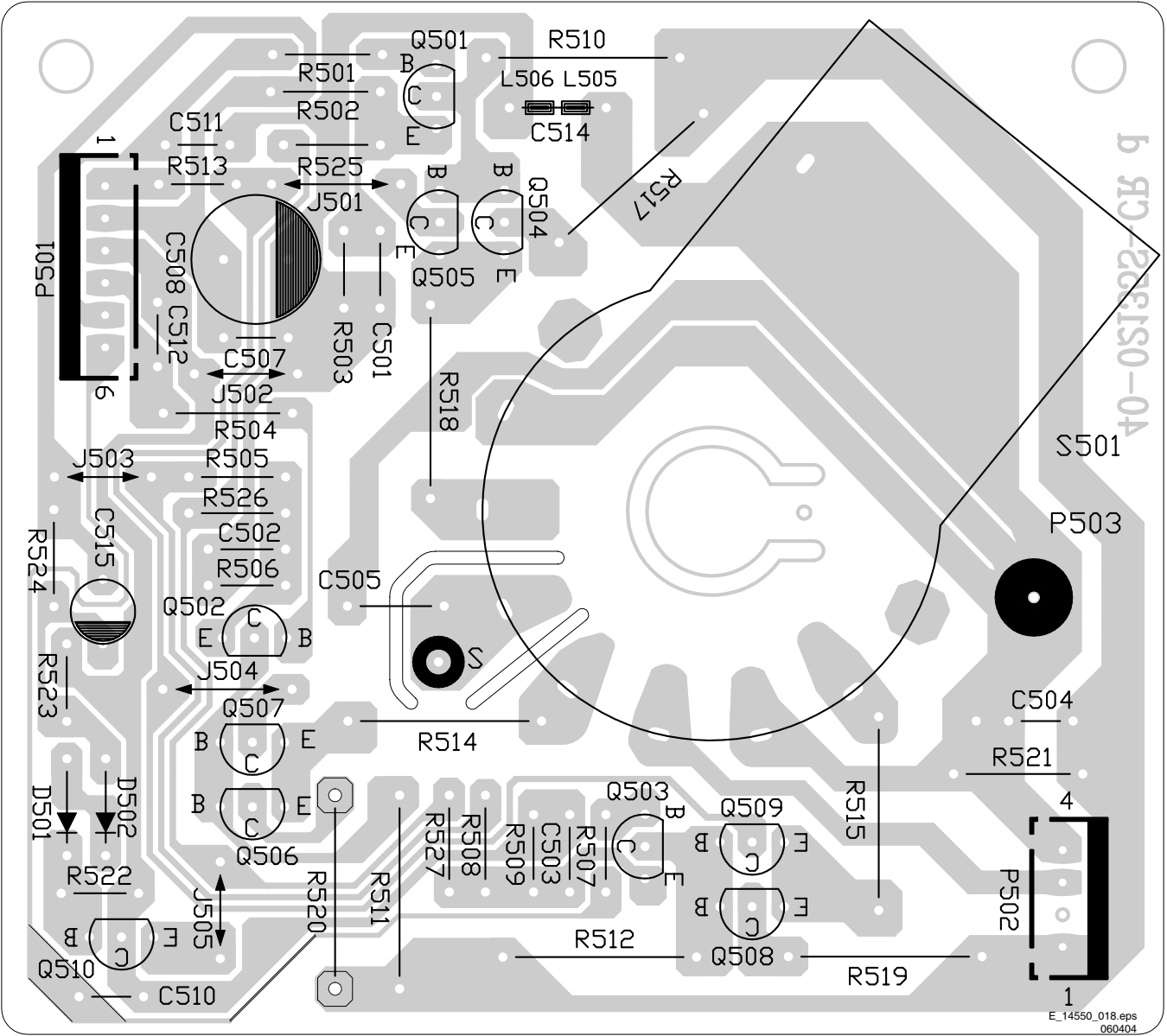
Layout Main Carrier (Part 2)



CRT Panel

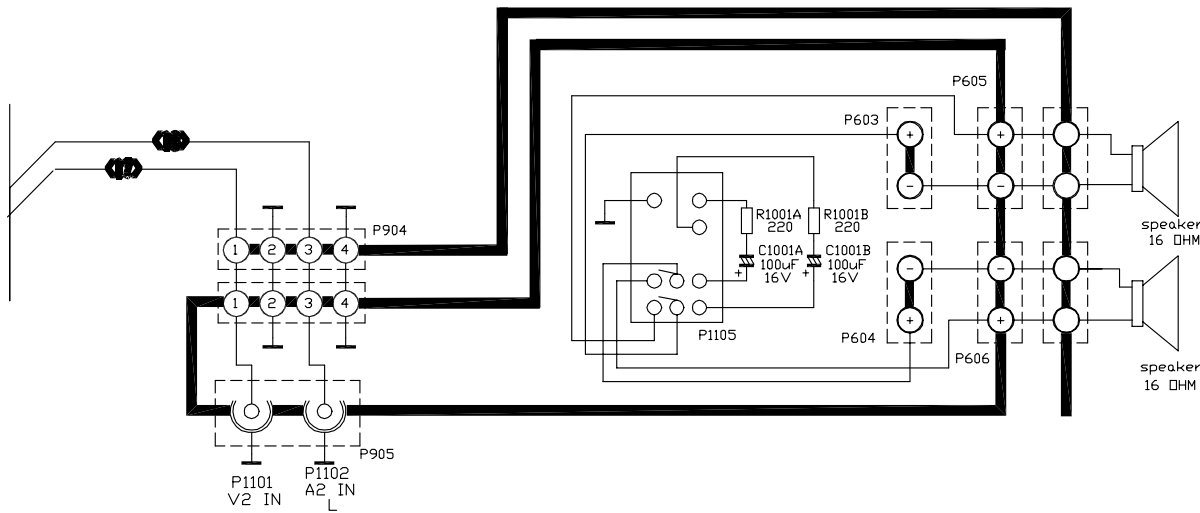


Layout CRT Panel



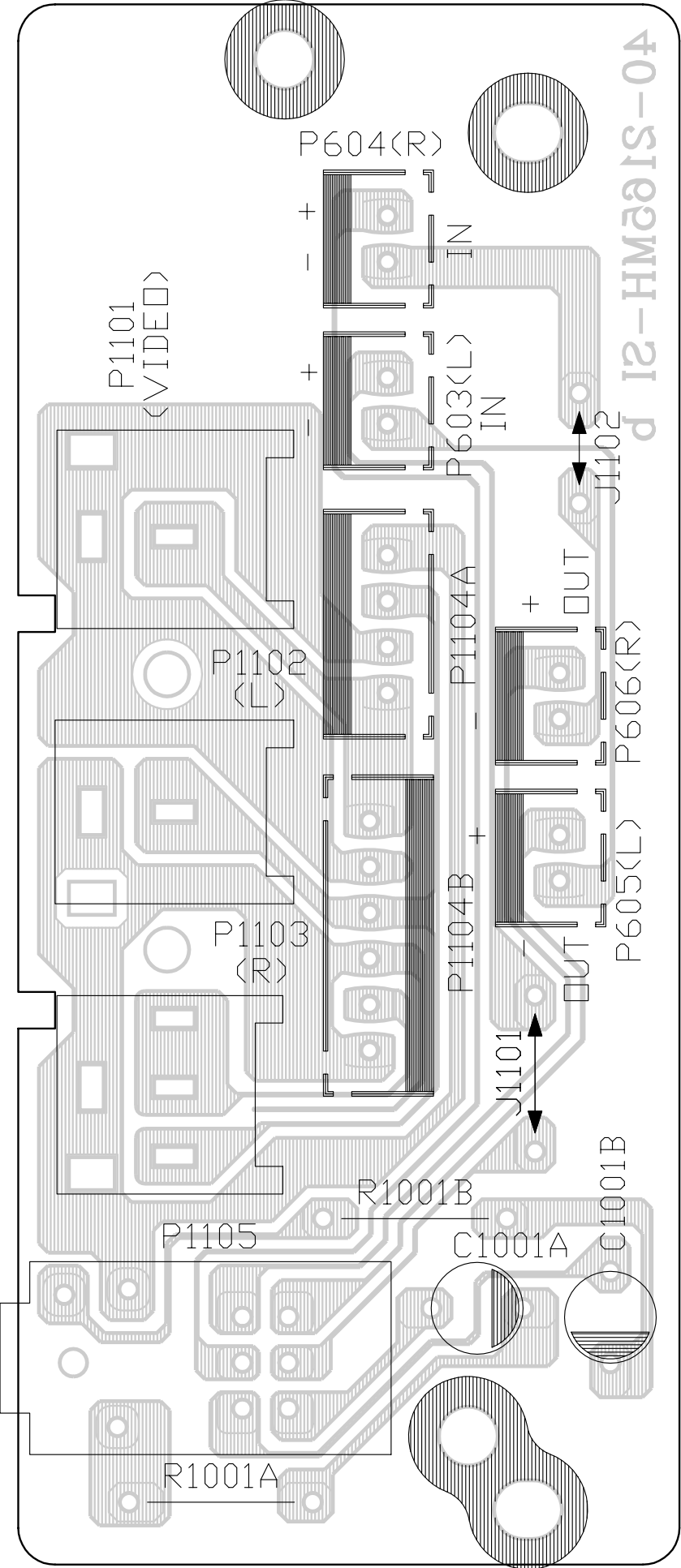
Side AV Panel

E SIDE AV PANEL



E_14550_011.eps
040304

Layout Side AV Panel



E_14550_020.eps
060404

8. Alignments

Index of this chapter

1. Hardware alignments
2. Software alignments

8.1 Hardware Alignments

8.1.1 Flowchart of Alignment Procedure:

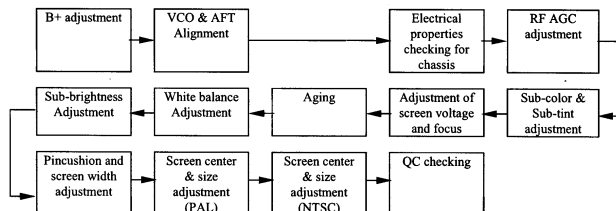


Figure 8-1 Alignment procedure

8.1.2 Adjustment of the B+ Voltage

1. Apply 110-240VAC ($\pm 5V$) to the mains power input, and Philips standard testing pattern to the RF input.
2. Adjust VR830 in STANDARD mode until the voltage at TP2 (B+) is $112V \pm 0.5V$.

8.1.3 NICAM Adjustment (for NICAM model only)

1. Apply a 38.9MHz colour bar with NICAM signal to the IF input.
2. Monitor the DC voltage at pin 15 of IC1101.
3. Adjust T1101 until the voltage at pin 15 of IC1101 becomes $2.5 \pm 0.1V$.
4. Then check the waveform at pin 4 and 6 of P1103 and it must show a correct audio signal.

8.1.4 RFAGC Alignment

1. Connect the detector shown below to the collector of Q101.
2. Apply a grey scale signal with 70dB V amplitude.
3. Adjust RFAGC item until the output of the detector becomes 0.8Vpp

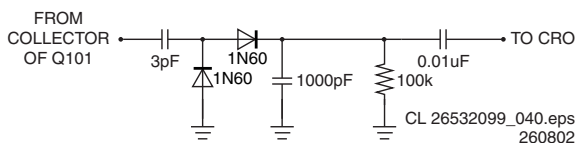


Figure 8-2 RFAGC Alignment

8.1.5 Adjustment of Sub-contrast, Sub-tint and Sub-colour for NTCS and PAL Signal.

1. Enter the D-mode, and connect the probe of an oscilloscope to the conjunction between R201 and P201 (B-out).
2. Apply the Grey-scale/Colour-bar (NTSC signal) to the AV input, in STANDARD status.
3. Select CNTC to adjust the sub-contrast, until that the amplitude "A" is 2.5V pp as shown below.
4. Select COLC to adjust the sub-colour by tuning the amplitude of "a" and "d" to the same level.
5. Select TNTC to adjust the sub-tint by tuning the amplitude of "b" and "c" to the same level.
6. Apply the Grey-scale/Colour-bar (PAL signal) to the AV input, in STANDARD status.

7. Select COLP to adjust the sub-colour by tuning the amplitude of "a", "b", "c" and "d" to the same level.

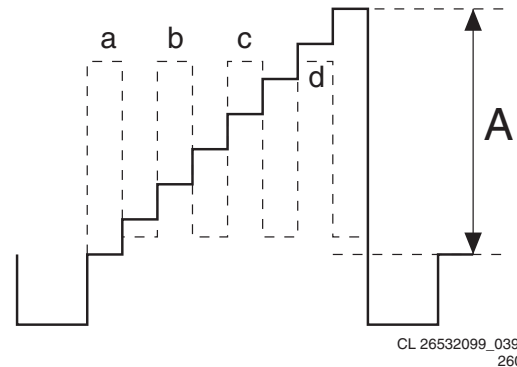


Figure 8-3

8.1.6 Adjustment of Focus, Screen Voltage and Sub-brightness

1. Apply a crosshatch pattern.
2. Adjust the "FOCUS" VR on the flyback transformer to make the picture clear.
3. Enter the D-mode and press the "MUTE" key and the screen will become a horizontal line. Then adjust the "SCREEN" VR on the flyback transformer to set the intensity of the line to a minimum visible level (the line can just be seen).
4. Press the "MUTE" key again and the screen will show a full raster.
5. Select BRTC to adjust the sub-brightness, until that the 2nd dark bar of 8 level grey scales just can be seen.

8.1.7 Adjustment of White balance

1. Apply a black and white pattern at STANDARD status.
2. Use a colour analyser to measure the black side of the screen. By changing the value of BB and GB, set the reading of the colour analyser to $x=284, y=299$.
3. Then measure the white side of the screen. By changing the value of BD and GD, set the reading of the colour analyser to $x=284, y=299$.
4. Repeat step 2 and 3 until you can get the correct reading for both black and white sides.

8.1.8 Adjustment of Pincushion and Picture Width (for pure flat model only)

1. Apply a crosshatch pattern.
2. Adjust VR302 until the vertical line becomes straight.
3. Adjust VR303 for horizontal size.

8.1.9 Adjustment of Picture Geometry (PAL)

1. Apply a crosshatch pattern (PAL signal) to the RF input, in STANDARD status.
2. Select HPOS to adjust the Horizontal centre.
3. Select VP50 to adjust the Vertical centre.
4. Select HIT to adjust the Vertical amplitude.
5. Select VLIN to adjust the vertical linearity.
6. Select VSC to adjust the vertical S-correction.

8.1.10 Adjustment of Picture Geometry (NTSC)

1. Apply a crosshatch pattern (NTSC signal) to the RF input, in STANDARD status.
2. Select HPS to adjust the Horizontal centre.
3. Select VP60 to adjust the Vertical centre.

4. Select HITS to adjust the Vertical amplitude.
5. Select VLIS to adjust the vertical linearity.
6. Select VSS to adjust the vertical S-correction.

8.1.11 Adjustment of OSD position

1. Enter the D-mode and press key "1", then choose the OSDH (OSDHS) item and adjust the OSD vertical position.
2. Enter the D-mode and press the "NOTE" key, then choose the OSD1 item and adjust the OSD horizontal position (volume bar, picture bar half blue panel OSD).
3. Enter the D-mode and press the "NOTE" key, then choose the OSD2 item and adjust the OSD horizontal position except OSD1 item.

8.2 Software Alignments

8.2.1 D-mode:

Enter the D-Mode by pressing the D-Mode ON/OFF key.

8.2.2 S-mode:

Enter the S-Mode by pressing the "VOLUME DOWN" key on **the local keyboard** until the volume decreases to minimum level, then press the "DISPLAY" key on **the remote control** (don't release the volume key).

After entering the D-mode or the S-mode, you can adjust the settings according to the following procedure:

Press "0" to enter the white balance alignment menu.

Item	Description	Default value
RB	Red cut off	80
GB	Green cut off	80
BB	Blue cut off	80
GD	Green drive	40
BD	Blue drive	40

Press "1" to enter the picture geometry alignment menu.

Item	Description	Default value
HPOS/	Horizontal Position 50Hz	0D
HIT/	Height 50Hz	29
VP50	Vertical Position 50Hz	5
VLIN	V. linearity 50Hz	7
VSC	V-S correction 50Hz	3
VBLK	V Blanking Start / Stop	0
VCEN	V Centring	16
OSDH	OSD vertical position 50Hz	25

Press "3" to enter the picture alignment menu.

Item	Description	Default value
CNTX	Contrast max.	59
CNTN	Contrast min.	8
BRTX	Brightness max. (delta from centre position)	20
BRTN	Brightness min. (delta from centre position)	25
COLX	Colour max. (delta from centre position)	4F
COLN	Colour min. (delta from centre position)	0
TNTX	Tint max. (delta from centre position)	4A
TNTN	Tint min. (delta from centre position)	4A

Press "4" to enter the sharpness setting menu.

Item	Description	Default value
BRTC	Brightness centre	50
COLC	Colour centre NTSC	4F
COLS	Colour centre SECAM	50
COLP	Colour centre PAL (shift data from COLC)	0
SCOL	Sub colour	4
SCNT	Sub contrast	0F
CNTC	Contrast centre	40
TNTC	Tint centre	4F

Press "5" to enter the sound alignment menu.

Item	Description	Default value
ST3	Sharpness centre 3.58 NTSC TV	20
SV3	Sharpness centre 3.58 NTSC Video	20
ST4	Sharpness centre other TV	18
SV4	Sharpness centre other Video	18
SVD	Sharpness centre DVD	19
ASSH	Asymmetry sharpness	4
SHPX	Sharpness max. (delta from centre position)	1A
SHPN	Sharpness min. (delta from centre position)	1A

Press "6" to enter the AGC and volume setting menu.

Item	Description	Default value
OPT	Option data	87
FLG0	System setting	6
FLG1	System setting	3E
STBY	System setting	2F
HD DELAY	System setting	0C
MODE0	System setting	12
MODE1	System setting	D5
MUTT	Standby -> wake up time	0
STAT	Contrast up timer after standby off	0

Press "7" to enter the system setting menu.

Item	Description	Default value
RF AGC	RF AGC	D0
SBY	SECAM B-Y black adjustment	8
SRY	SECAM R-Y black adjustment	8
BRTS	Sub brightness (shift data of BRTC)	0
TXCX	TXT RGB contrast max.	1F
RGCN	TXT RGB contrast min.	0
SECD	SECAM mode	8

Press "8" to enter the volume alignment menu 1.

Item	Description	Default value
V25	Volume output level at 25%	50
V50	Volume output level at 50%	5C
V100	Volume output level at 100%	70

Press "9" to enter the picture alignment menu 2.

Item	Description	Default value
SVM	SVM	0
PYNX	Normal Horizontal sync max.	28
PYNN	Normal Horizontal sync min.	18
PYXS	Search Horizontal sync max.	22
PYNS	Search Horizontal sync min.	1E

Press "CALENDAR" to enter the OSD setting menu.

Item	Description	Default value
CLTO	TV mode & sound system M	4B
CLTM	TV mode & sound system = M	4C
CLVO	Video	4D
CLVD	YUV mode	48
ABL	ABL setup	27
DCBS	Video data setup	33
DEF	V AGC select	1

Press "NOTE-BOOK" to enter the OSD setting menu.

Item	Description	Default value
OSD1	OSD horizontal position (volume bar, picture bar, half blue panel OSD)	0B
OSDF1	OSD horizontal position (volume bar, picture bar, half blue panel OSD)	55
OSD2	OSD horizontal position except OSD1 items	48
OSDF2	OSD PLL data except OSDF1 items	75
HAFC	HAFC gain	9
NOIS	HAFC data	1
UCOM	MCU data	0

9. Circuit Descriptions, List of Abbreviations, and IC Data Sheets

9.1 Circuit Descriptions

Not applicable

9.2 Abbreviation list

AFC Automatic Frequency Control: control signal used to tune to the correct frequency

AFT Automatic Fine Tuning

AGC Automatic Gain Control.

AM Amplitude Modulation

AP Asia Pacific

ATS Automatic Tuning System

AV External Audio Video

BC-PROT Beam Current Protection

BCL Beam Current Limitation

B/G Monochrome TV system. Sound carrier distance is 5.5 MHz

BTSC Broadcast Television Standard Committee. Multiplex FM stereo sound system, riginating from the USA and used e.g. in LATAM and AP-NTSC countries

CRT Cathode Ray Tube or picture tube

CVBS Composite Video Blanking and Synchronisation

DAC Digital to Analogue Converter

DBE Dynamic Bass Enhancement: extra low frequency amplification

DBX Dynamic Bass Expander

D/K Monochrome TV system. Sound carrier distance is 6.5 MHz

DVD Digital Versatile Disc

EEPROM Electrically Erasable and Programmable Read Only Memory

EHT Extra High Tension

EU Europe

EW East West, related to horizontal deflection of the set

EXT External (source), entering the set via SCART or Cinch

FBL Fast Blanking: DC signal accompanying RGB signals

FILAMENT Filament of CRT

FM Frequency Modulation

HFB Horizontal Flyback Pulse: horizontal sync pulse from large signal deflection

Hue Colour phase control for NTSC (not the same as "Tint")

I Monochrome TV system. Sound carrier distance is 6.0 MHz

IF Intermediate Frequency

LATAM Latin America

LED Light Emitting Diode

L/L" Monochrome TV system. Sound carrier distance is 6.5 MHz. L" is Band I, L is all bands except for Band I

LNA Low Noise Amplifier

LS Large Screen

LS Loudspeaker

LSP Large signal panel

M/N Monochrome TV system. Sound carrier distance is 4.5 MHz

MSP Multi-standard Sound Processor:

MUTE Mute-Line

NC Not Connected

NTSC National Television Standard Committee. Colour system mainly used in North America and Japan.

NVM

OC
OSD
PAL

PCB
PLL
PTP
RAM
RC
RGB
ROM
SC

S/C
SCL
SDA
SECAM

SIF
SS
STBY
SVHS
SW
THD
VA
VBAT

VCR
WYSIWYR

XTAL
YC

Colour carrier NTSC M/N = 3.579545 MHz, NTSC 4.43 = 4.433619 MHz (this is a VCR norm, it is not transmitted off-air)

Non Volatile Memory: IC containing TV related data e.g. alignments

Open Circuit

On Screen Display

Phase Alternating Line. Colour system mainly used in West Europe (colour carrier = 4.433619 MHz) and South America (colour carrier PAL M = 3.575612 MHz and PAL N = 3.582056 MHz)

Printed Circuit board

Phase Locked Loop. Used for e.g. Picture Tube Panel (or CRT-panel)

Random Access Memory

Remote Control handset

Red Green Blue

Read Only Memory

Sandcastle: pulse derived from sync signals

Short Circuit

Serial Clock

Serial Data

SEquence Couleur Avec Memoire. Colour system mainly used in France and East Europe. Colour carriers = 4.406250 MHz and 4.250000 MHz

Sound Intermediate Frequency

Small Screen

Standby

Super Video Home System

Software

Total Harmonic Distortion

Vertical Acquisition

Main supply voltage for the deflection stage ?

Video Cassette Recorder

What You See Is What You Record: record selection that follows ma picture and sound

Quartz crystal

Luminance (Y) and Chrominance (C) signal

9.3 IC Pin Description

9.3.3 LA7840

9.3.1 HCF4066

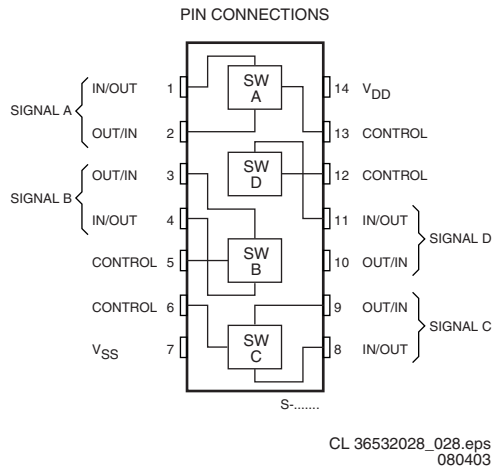
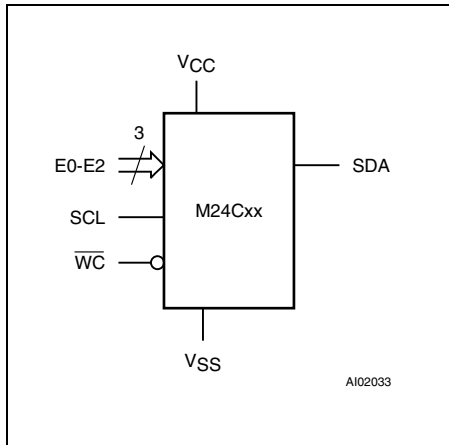


Figure 9-1 Pin connections HCF4066

9.3.2 M24C08

Logic Diagram



Signal Names

E0, E1, E2	Chip Enable
SDA	Serial Data
SCL	Serial Clock
WC	Write Control
VCC	Supply Voltage
VSS	Ground

DIP, SO and TSSOP Connections

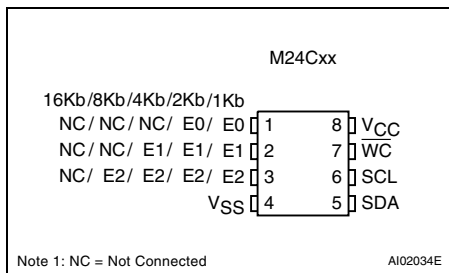


Figure 9-2 Block Diagram and Pin connections M24C08

9.3.4 MC44608P-40p

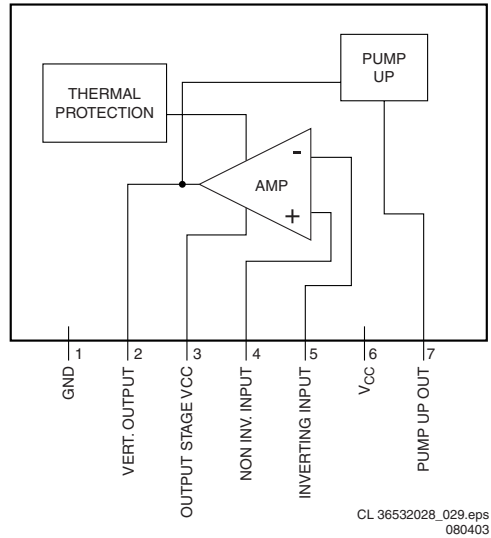
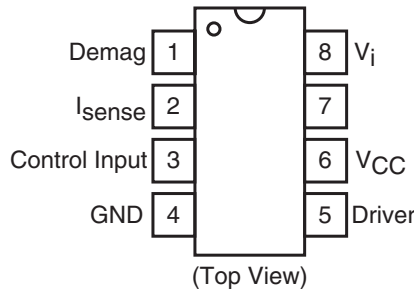


Figure 9-3 Block Diagram LA7840

PIN CONNECTIONS AND MARKING DIAGRAM



AWL = Manufacturing Code
YYWW = Date Code

CL 36532028_031.eps
080403

Figure 9-4 Pin connections MC44608P-40p

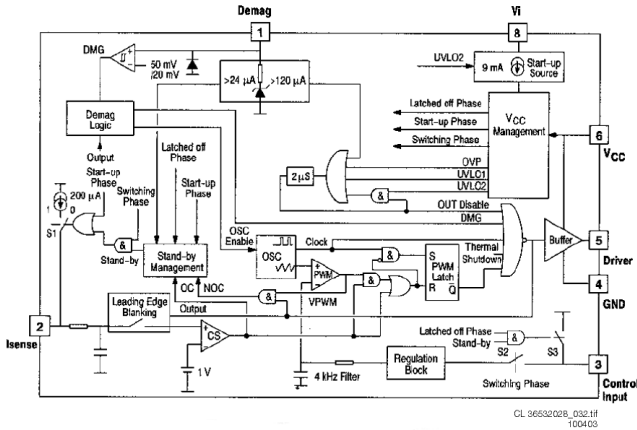


Figure 9-5 Block Diagram MC44608P-40p

9.3.5 TDA7057AQ-4

9.3.6 TMPA8821

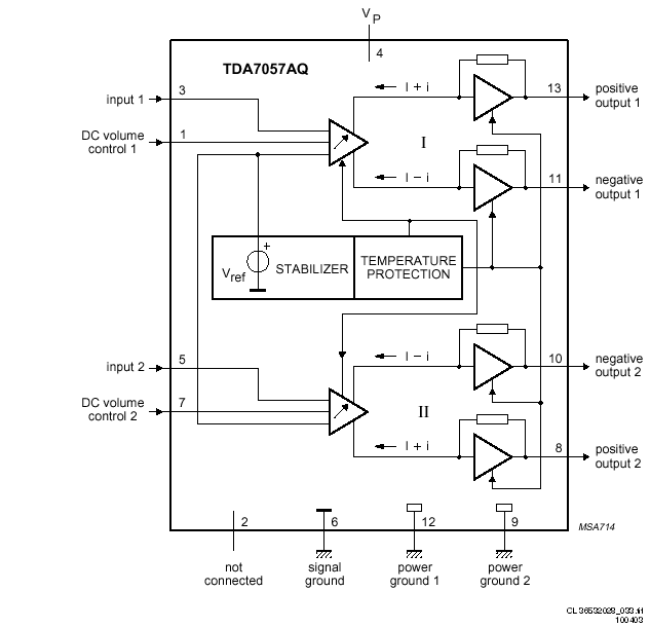


Figure 9-6 Block Diagram TDA7057AQ-4

PINNING		
SYMBOL	PIN	DESCRIPTION
VC1	1	DC volume control 1
n.c.	2	not connected
V _I (1)	3	voltage input 1
V _P	4	positive supply voltage
V _I (2)	5	voltage input 2
SGND	6	signal ground
VC2	7	DC volume control 2
OUT2 +	8	positive output 2
PGND2	9	power ground 2
OUT2 -	10	negative output 2
OUT1 -	11	negative output 1
PGND1	12	power ground 1
OUT1 +	13	positive output 1

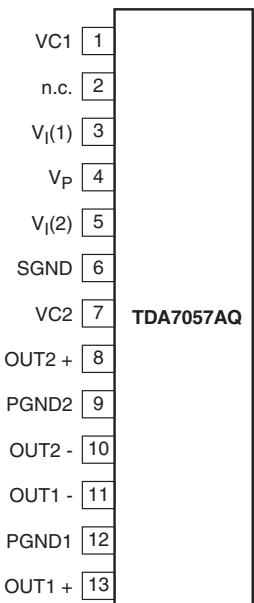


Figure 9-7 Pin connections TDA7057AQ-4

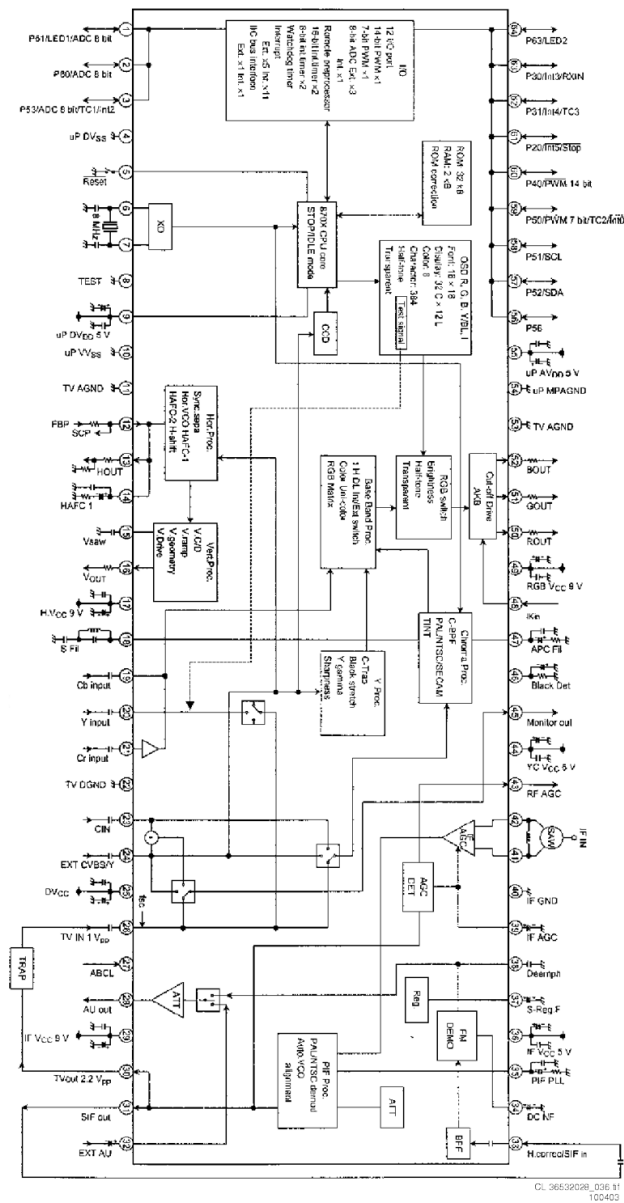


Figure 9-8 Block Diagram TMPA8821

10. Spare Parts List

Main Carrier [A]

Various

0000	9965 000 14925	Ferrite bead BF60 for C508
0000	9965 000 14928	Cable 4P 280mm
0000	9965 000 14945	Cable 2P 450mm
0000	9965 000 15147	Led holder
0000	9965 000 15148	Cable holder for LOT
0000	9965 000 15202	Fuse holder
0000	9965 000 15210	LOT support
0000	9965 000 15412	Cable 4P 460mm
0000	9965 000 15413	Cable 5P 450mm
0000	9965 000 17631	Cable 5P 320mm
0000	9965 000 17922	Cable 2P 350mm
0000	9965 000 17929	Cable 2P 260mm
0000	9965 000 17981	Cable 2P 700mm
F801	4822 070 32002	Fuse 2A
IR001	9965 000 14969	IR receiver
		GP1UM281QK
P1104B	9965 000 14913	Cable 24P 320mm
P1104B	9965 000 17977	Cable 6P 400mm
P1105	9965 000 17923	Socket headphone
P201	9965 000 15150	Connector 5P TJC3-5A
P203	9965 000 17689	Connector
P401	9965 000 15142	Connector 4P TJC1-4A
P401H	9965 000 14944	Cable 4P 360mm
P401H	9965 000 15422	Cable 4P 400mm
P402	9965 000 17832	Connector TJC3-4A
P601	9965 000 15144	Connector 2P TJC3-2A
P602	9965 000 15144	Connector 2P TJC3-2A
P605	9965 000 15144	Connector 2P TJC3-2A
P606	9965 000 15144	Connector 2P TJC3-2A
P801	9965 000 15197	Connector 2P TJC2-2A
P802	9965 000 15198	Connector 2P TJC1-2A
P901	9965 000 17889	Socket cinch 6P Ye/Wh/Re
P904	9965 000 15151	Connector 6P TJC3-6A
S001	9965 000 15146	Tact switch
S002	9965 000 15146	Tact switch
S003	9965 000 15146	Tact switch
S004	9965 000 15146	Tact switch
S005	9965 000 15146	Tact switch
S006	9965 000 15146	Tact switch
S801	9965 000 17918	Mains switch
TU101	9965 000 14970	Tuner UV1355-BK2
X001	9965 000 15136	Crystal 8.0MHz
X201	9965 000 15140	Filter 6.5MHz TPS
X202	9965 000 17888	Filter 6.0MHz TPS
X203	9965 000 15139	Filter 5.5MHz TPS
Z101	9965 000 15137	SAW38.9MHzK2966M

—II—

C003	9965 000 15690	330pF 5% 50V
C004	9965 000 14579	10μF 20% 16V
C005	9965 000 15099	0.01μF+80%~-20%50V
C006	9965 000 15690	330pF 5% 50V
C007	9965 000 13963	220pF 5% 50V
C008	9965 000 17876	470pF 10% 50V
C008A	9965 000 15087	2.2μF 20% 50V
C009	9965 000 14069	100μF 20% 16V
C010	9965 000 17878	27pF 5% 50V
C011	9965 000 17878	27pF 5% 50V
C015	9965 000 15084	22μF 20% 16V
C016	9965 000 14069	100μF 20% 16V
C017	9965 000 15099	0.01μF+80%~-20%50V
C019	9965 000 15099	0.01μF+80%~-20%50V
C020	9965 000 15099	0.01μF+80%~-20%50V
C021	9965 000 17875	39pF 5% 50V
C022	9965 000 17875	39pF 5% 50V
C023	9965 000 14579	10μF 20% 16V
C024	9965 000 15099	0.01μF+80%~-20%50V
C081	9965 000 13961	47μF 20% 16V
C101	9965 000 14039	4.7μF 20% 50V
C103	9965 000 14039	4.7μF 20% 50V
C104	9965 000 13963	220pF 5% 50V
C105	9965 000 17519	0.22μF 5% 63V
C106	9965 000 15112	0.1μF 5% 50V
C107	9965 000 17884	0.047μF 5% 63V
C108	9965 000 13961	47μF 20% 16V
C109	9965 000 15099	0.01μF+80%~-20%50V
C110	9965 000 15099	0.01μF+80%~-20%50V
C112	9965 000 14923	1000pF 10% 50V
C114	9965 000 15099	0.01μF+80%~-20%50V
C135	9965 000 15099	0.01μF+80%~-20%50V
C201	9965 000 15099	0.01μF+80%~-20%50V

C202	9965 000 13961	47μF 20% 16V
C203	9965 000 14037	1μF 20% 50V
C204	9965 000 15115	2200pF 5% 50V
C205	9965 000 17873	0.22μF 20% 50V
C207	9965 000 17877	180pF 5% 50V
C208	9965 000 14037	1μF 20% 50V
C209	9965 000 17881	0.0015μF 5% 63V
C210	9965 000 17883	0.0027μF 5% 63V
C211	9965 000 14069	100μF 20% 16V
C212	9965 000 15099	0.01μF+80%~-20%50V
C213	9965 000 15115	2200pF 5% 50V
C214	9965 000 14037	1μF 20% 50V
C215	9965 000 15192	0.01μF 5% 50V
C216	9965 000 14039	4.7μF 20% 50V
C217	9965 000 14599	470μF 20% 16V
C218	9965 000 15088	0.47μF 20% 50V
C219	9965 000 14923	1000pF 10% 50V
C220	9965 000 14579	10μF 20% 16V
C221	9965 000 15099	0.01μF+80%~-20%50V
C225	9965 000 15102	22pF 5% 50V
C226	9965 000 13962	0.1μF 5% 50V
C227	9965 000 14599	10μF 20% 16V
C228	9965 000 15099	0.01μF+80%~-20%50V
C230	9965 000 15099	0.01μF+80%~-20%50V
C231	9965 000 14069	100μF 20% 16V
C232	9965 000 14070	220μF 20% 16V
C233	9965 000 15099	0.01μF+80%~-20%50V
C234	9965 000 15088	0.47μF 20% 50V
C235	9965 000 17886	0.0082μF 5% 63V
C236	9965 000 15088	0.47μF 20% 50V
C239	9965 000 15099	0.01μF+80%~-20%50V
C240	9965 000 14069	100μF 20% 16V
C241	9965 000 15099	0.01μF+80%~-20%50V
C242	9965 000 14579	10μF 20% 16V
C301	9965 000 15112	0.1μF 5% 50V
C302	9965 000 15684	220μF 20% 35V
C303	9965 000 14598	100μF 20% 35V
C304	9965 000 15098	10pF 5% 50V
C305	9965 000 15084	22μF 20% 16V
C306	9965 000 14923	1000pF 10% 50V
C307	9965 000 14039	4.7μF 20% 50V
C308	9965 000 15085	1000μF 20% 25V
C309	9965 000 15112	0.1μF 5% 50V
C401	9965 000 15094	1000pF 10% 500V
C402	9965 000 15111	9200pF 5% 1.6kV
C402	9965 000 15445	0.01μF 5% 1.6kV
C404	9965 000 15094	1000pF 10% 500V
C405	9965 000 17874	0.47μF 20% 160V
C406B	9965 000 15097	330pF 5% 2kV
C406B	9965 000 17974	330pF 10% 2kV
C407	9965 000 15095	3300pF 10% 500V
C408	9965 000 14921	10μF 20% 250V
C409	9965 000 15096	390pF 10% 500V
C410	9965 000 17880	0.056μF 5% 250V
C411	9965 000 15090	100μF 20% 160V
C412	9965 000 15096	390pF 10% 500V
C413	9965 000 14073	470μF 20% 35V
C416	9965 000 14069	100μF 20% 16V
C417	9965 000 15099	0.01μF+80%~-20%50V
C418	9965 000 13961	47μF 20% 16V
C420	9965 000 15089	10μF 20% 100V
C421	9965 000 17879	0.39μF 5% 250V
C422	9965 000 17885	0.0056μF 5% 63V
C423	9965 000 13961	47μF 20% 16V
C425	9965 000 15099	0.01μF+80%~-20%50V
C426	9965 000 17882	0.15μF 5% 63V
C427	9965 000 13963	220pF 5% 50V
C601	9965 000 14039	4.7μF 20% 50V
C602	9965 000 14039	4.7μF 20% 50V
C603	9965 000 14039	4.7μF 20% 50V
C604	9965 000 14071	470μF 20% 25V
C605	9965 000 14069	100μF 20% 16V
C607	9965 000 15117	4700pF 5% 50V
C608	9965 000 15117	4700pF 5% 50V
C610	9965 000 15112	0.1μF 5% 50V
C622	9965 000 14037	1μF 20% 50V
C624	9965 000 14037	1μF 20% 50V
C635	9965 000 14070	220μF 20% 16V
C636	9965 000 15099	0.01μF+80%~-20%50V
C801	9965 000 17915	0.22μF 20% 250V
C802	9965 000 17915	0.22μF 20% 250V
C802A	9965 000 15190	0.1μF 10% 400V
C803	9965 000 17914	470pF 10% 400V
C804	9965 000 17914	470pF 10% 400V
C804A	9965 000 14923	1000pF 10% 50V
C805	9965 000 15184	0.01μF 10% 500V
C806	9965 000 15181	270μF 20% 400V
C807	9965 000 17911	4700pF 10% 500V
C808	9965 000 17911	4700pF 10% 500V

C809	9965 000 17916	4700pF 5% 630V
C812	9965 000 17906	10μF 20% 35V
C813	9965 000 15806	0.1μF+80-20% 50V
C814	9965 000 17907	100pF 5% 50V
C815	9965 000 15590	1000pF 10% 2kV
C816	9965 000 17913	2200pF 20% 400V
C830	9965 000 17910	220pF 10% 250V
C831	9965 000 15806	0.1μF+80-20% 50V
C832	9965 000 17905	2200μF 20% 25V
C833	9965 000 17912	220pF 10% 1kV
C834	9965 000 15184	0.01μF 10% 500V
C835	9965 000 15090	100μF 20% 160V
C836	9965 000 15112	0.1μF 5% 50V
C841	9965 000 17908	220pF 5% 50V
C842	9965 000 15806	0.1μF+80-20% 50V
C843	9965 000 14599	470μF 20% 16V
C848	9965 000 14923	1000pF 10% 50V
C849	9965 000 14067	1000μF 20% 16V
C850	9965 000 15112	0.1μF 5% 50V
C851	9965 000 17909	470pF 5% 50V
C903	9965 000 14070	220μF 20% 16V
C907	9965 000 14579	10μF 20% 16V
C908	9965 000 14579	10μF 20% 16V
C909	9965 000 15084	22μF 20% 16V
C916	9965 000 14037	1μF 20% 50V
C931	9965 000 15099	0.01μF+80%~-20%50V

—WW—

R001	9965 000 14050	10k 5% 0.16W
R001A	9965 000 14049	100Ω 5% 0.16W
R002	9965 000 12593	47Ω 5% 0.16W
R003	9965 000 14050	10k 5% 0.16W
R004	9965 000 14050	10k 5% 0.16W
R005	9965 000 12519	1k 5% 0.16W
R006	4822 111 31041	8.2k 5% 0.16W
R007	4822 111 31038	3.9k 5% 0.16W
R009	9965 000 14050	10k 5% 0.16W
R01	9965 000 17926	10M 5% 0.25W
R010	9965 000 17649	1.2k 5% 0.16W
R011	9965 000 15057	4.7k 5% 0.16W
R013	9965 000 12519	1k 5% 0.16W
R014	4822 111 31033	22k 5% 0.16W
R015	9965 000 12519	1k 5% 0.16W
R016	9965 000 12515	2.2k 5% 0.16W
R017	9965 000 14050	10k 5% 0.16W
R018	9965 000 12593	47Ω 5% 0.16W
R019	9965 000 14050	10k 5% 0.16W
R020	9965 000 13960	470Ω 5% 0.16W
R021	9965 000 14050	10k 5% 0.16W
R022	9965 000 15044	1.5k 5% 0.16W
R023	9965 000 12620	1.8k 5% 0.16W
R024	4822 111 31034	2.7k 5% 0.16W
R025	9965 000 15662	4.3k 5% 0.16W
R026	4822 111 31046	6.2k 5% 0.16W
R027	9965 000 15066	10Ω 5% 0.25W
R028	4822 116 82086	680Ω 5% 0.16W
R029	9965 000 12519	1k 5% 0.16W
R030	9965 000 14050	10k 5% 0.16W
R031	9965 000 15041	100k 5% 0.16W
R032	9965 000 14050	10k 5% 0.16W
R033	9965 000 14049	100Ω 5% 0.16W
R034	9965 000 14049	100Ω 5% 0.16W
R042	9965 000 12515	2.2k 5% 0.16W
R046	4822 111 31036	3.3k 5% 0.16W
R047	9965 000 14049	100Ω 5% 0.16W
R1001A	9965 000 12549	220Ω 55 0.16W
R1001B	9965 000 12549	220Ω 55 0.16W
R108	9965 000 17871	56Ω 5% 1W
R109	4822 111 31023	47k 5% 0.16W
R110	4822 050 13303	33k 1% 0.4W
R111	4822 111 31028	15k 5% 0

R214	4822 111 31038	3.9k 5% 0.16W	R962	9965 000 12519	1k 5% 0.16W	Q830	9965 000 17893	2SC2688L
R215	4822 111 31033	22k 5% 0.16W	RT801	9965 000 17904	PTC 20Ω 20%	Q831	4822 130 41947	2SC1815Y
R216	4822 111 31023	47k 5% 0.16W	RT802	9965 000 15782	NTC 4.7Ω 18%	Q832	4822 130 41947	2SC1815Y
R217	9965 000 12485	150Ω 5% 0.16W	VR830	9965 000 17903	Potmeter B10K	Q905	4822 130 41947	2SC1815Y
R218	9965 000 14049	100Ω 5% 0.16W				Picture Tube Panel [B]		
R218A	4822 111 31036	3.3k 5% 0.16W				Various		
R219	9965 000 12592	330Ω 5% 0.16W				0000	9965 000 17937	CRT panel 14"
R220	9965 000 12549	220Ω 55 0.16W	L002	9965 000 15123	10μH 5%	0000	9965 000 17964	CRT panel 21"
R227	9965 000 12592	330Ω 5% 0.16W	L080	9965 000 15126	33μH 5%	0000	9965 000 17970	Picture tube socket 21"
R228	9965 000 12592	330Ω 5% 0.16W	L103	9965 000 15121	1μH 10%	S501	9965 000 17942	Picture tube socket 14"
R232	4822 050 13303	33k 1% 0.4W	L201	9965 000 15124	22μH 5%			
R233	9965 000 15050	270Ω 5% 0.16W	L204	9965 000 15123	10μH 5%			
R237	4822 111 31041	8.2k 5% 0.16W	L207	9965 000 15124	22μH 5%			
R238	9965 000 13960	470Ω 5% 0.16W	L208	9965 000 15124	22μH 5%			
R243	9965 000 13960	470Ω 5% 0.16W	L209	9965 000 15238	27μH 5%			
R244	9965 000 15057	4.7k 5% 0.16W	L411	9965 000 15130	Coil 40μH			
R245	4822 111 31023	47k 5% 0.16W	L412	9965 000 15129	Linearity coil 50μH			
R307	4822 111 31038	3.9k 5% 0.16W	L804	9965 000 15193	100μH 10%	C501	9965 000 13964	680pF 5% 50V
R308	9965 000 15057	4.7k 5% 0.16W	L843	9965 000 15126	33μH 5%	C501	9965 000 17968	680pF 5% 50V
R309	9965 000 17866	8.2k 5% 0.25W	T401	9965 000 17887	Transf. Hor. Drive	C502	9965 000 13964	680pF 5% 50V
R310	9965 000 17865	6.8k 5% 0.25W	T402	9965 000 15131	LOT 14" BSC250-231	C502	9965 000 17968	680pF 5% 50V
R312	9965 000 12562	9.1k 5% 0.16W	T402	9965 000 17975	LOT 21" BSC25-0299D	C503	9965 000 13964	680pF 5% 50V
R313	9965 000 17870	1.8Ω 5% 1W	T801	9965 000 15195	Line filter LCL-2821A	C503	9965 000 17968	680pF 5% 50V
R313	9965 000 17973	1.2Ω 5% 2W	T803	9965 000 17917	Transf. BCK-4001-72B	C504	9965 000 15184	0.01μF 10% 500V
R314	9965 000 15070	1Ω 5% 0.5W				C505	9965 000 17941	330pF 10% 2kV
R315	9965 000 17867	2.7k 5% 0.5W				C505	9965 000 17969	220pF 10% 2kV
R317	9965 000 17971	56Ω 5% 0.5W				C506	9965 000 17940	1μF 20% 250V
R336	9965 000 15081	680Ω 5% 1W	D001	4822 130 34233	BZX79-B5V1	C507	9965 000 15099	0.01μF +80%~-20% 50V
R336	9965 000 15675	220Ω 5% 1W	D002	4822 130 30621	1N4148	C507	9965 000 17966	0.01μF +80-20% 50V
R401	9965 000 13960	470Ω 5% 0.16W	D005	4822 130 30621	1N4148	C508	9965 000 14070	220μF 20% 16V
R402	9965 000 17872	3.3k 5% 5W	D006	4822 130 30621	1N4148	C510	9965 000 17877	180pF 5% 50V
R403	9965 000 15075	1Ω 5% 1W	D007	4822 130 30621	1N4148	C510	9965 000 17967	180pF 5% 50V
R404	9965 000 15409	15k 5% 2W	D008	4822 130 30621	1N4148	C511	9965 000 17877	180pF 5% 50V
R405	9965 000 15075	1Ω 5% 1W	D051B	9965 000 17862	REDB205	C511	9965 000 17967	180pF 5% 50V
R406	9965 000 14050	10k 5% 0.16W	D102	9965 000 15436	UPC574J	C512	9965 000 17877	180pF 5% 50V
R407	9965 000 17868	0.68Ω 5% 1W	D206	4822 130 30621	1N4148	C512	9965 000 17967	180pF 5% 50V
R407	9965 000 17972	1.5Ω 5% 2W	D301	4822 130 31438	1N4001G	C514	9965 000 15099	0.01μF +80%~-20% 50V
R408	9965 000 17869	12k 5% 1W	D401	3141 018 51230	FR104			
R409	9965 000 15073	330Ω 5% 0.5W	D402	3141 018 51230	FR104			
R410	9965 000 15076	10k 5% 1W	D404	9965 000 15818	BZX79-C6V2			
R412	4822 111 31023	47k 5% 0.16W	D405	5322 130 30684	1N4002RL	R501	9965 000 14049	100Ω 5% 0.16W
R413	4822 111 31028	15k 5% 0.16W	D406	4822 130 30621	1N4148	R502	9965 000 15057	4.7k 5% 0.16W
R414	9965 000 08285	18k 5% 0.16W	D601	4822 130 30621	1N4148	R503	9965 000 17938	750Ω 5% 0.16W
R414	9965 000 12516	12k 5% 0.16W	D802	3141 018 51230	FR104	R504	9965 000 14049	100Ω 5% 0.16W
R415	9965 000 12519	1k 5% 0.16W	D804	4822 130 11443	1SS136	R505	9965 000 15057	4.7k 5% 0.16W
R418	9965 000 15075	1Ω 5% 1W	D805	4822 130 30621	1N4148	R506	9965 000 17938	750Ω 5% 0.16W
R441	9965 000 15077	1.2k 5% 1W	D806	3141 018 51160	HER108	R507	9965 000 14049	100Ω 5% 0.16W
R602	4822 050 13303	33k 1% 0.4W	D815	9965 000 17892	TERC05-10	R508	9965 000 15057	4.7k 5% 0.16W
R604A	9965 000 12519	1k 5% 0.16W	D816	9965 000 17892	TERC05-10	R509	9965 000 17938	750Ω 5% 0.16W
R610	9965 000 12519	1k 5% 0.16W	D817	9965 000 17892	TERC05-10	R510	9965 000 15409	15k 5% 2W
R611	9965 000 14050	10k 5% 0.16W	D818	9965 000 17892	TERC05-10	R510	9965 000 17965	15k 5% 3W
R612	9965 000 15057	4.7k 5% 0.16W	D830	3141 018 51230	FR104	R511	9965 000 15409	15k 5% 2W
R613	9965 000 15057	4.7k 5% 0.16W	D831	3141 018 51160	HER108	R511	9965 000 17965	15k 5% 3W
R614	9965 000 14050	10k 5% 0.16W	D833	3141 018 51230	FR104	R512	9965 000 15409	15k 5% 2W
R620	9965 000 15780	0.22Ω 5% 2W	D835	4822 130 11443	1SS136	R512	9965 000 17965	15k 5% 3W
R622	9965 000 12519	1k 5% 0.16W	D838	9965 000 17890	16HSC	R514	9965 000 14916	2.7k 10% 0.5W
R633	4822 111 31033	22k 5% 0.16W	D839	4822 130 34382	BZX79-B8V2	R514	9965 000 15588	2.7k 5% 0.5W
R636	4822 111 31033	22k 5% 0.16W	D840	9965 000 17891	BZX79-C6V2	R515	9965 000 14916	2.7k 10% 0.5W
R637	9965 000 12519	1k 5% 0.16W				R515	9965 000 15588	2.7k 5% 0.5W
R640	9965 000 15773	4.7Ω 5% 0.25W				R518	9965 000 14916	2.7k 10% 0.5W
R802	9965 000 17901	1M 5% 0.5W				R518	9965 000 15588	2.7k 5% 0.5W
R804	9965 000 17577	0.1M 1% 0.25W				R521	9965 000 17939	100k 5% 0.25W
R804A	9965 000 17897	12k 5% 0.25W	IC001	9965 000 17857	M24C08	R522	9965 000 12519	1k 5% 0.16W
R806	9965 000 15057	4.7k 5% 0.16W	IC201	9965 000 17858	8821KPNG4GD9/ 8821CPNG4GD9	R523	4822 116 82086	680Ω 5% 0.16W
R807	9965 000 17896	3.6k 5% 0.16W	IC301	9965 000 17860	LA7840	R524	4822 111 31034	2.7k 5% 0.16W
R808	9965 000 17900	22k 10% 5W	IC401	9965 000 17859	L7809CV	R525	4822 116 82086	680Ω 5% 0.16W
R809	9965 000 12519	1k 5% 0.16W	IC402	9965 000 17861	UA7805C	R526	4822 116 82086	680Ω 5% 0.16W
R810	9965 000 15780	0.22Ω 5% 2W	IC601	4822 209 13646	TDA7057AQ/N2	R527	4822 116 82086	680Ω 5% 0.16W
R811	9965 000 15667	470Ω 5% 0.25W	IC603	9965 000 14978	HEF4066			
R811A	9965 000 14059	22Ω 5% 0.25W	IC801	9322 136 56682	MC44608P40			
R812	9965 000 17902	8.2M 5% 1W	IC802	9965 000 17895	HPC922-C			
R831	9965 000 15776	56k 5% 0.5W	Q002	4822 130 41947	2SC1815Y	L505	9965 000 14925	Ferrite bead BF60 for C508
R832	9965 000 15074	4.7Ω 5% 0.5W	Q003	4822 130 42959	2SA1015Y	L506	9965 000 14925	Ferrite bead BF60 for C508
R833	9965 000 17898	220Ω 5% 0.25W	Q005	4822 130 42959	2SA1015Y			
R834	4822 111 31036	3.3k 5% 0.16W	Q101	9965 000 14974	2SC3779D			
R835	9965 000 15666	3.9k 5% 0.25W	Q103	5322 130 40217	2N3904			
R836	9965 000 17899	10k 10% 5W	Q202	4822 130 42959	2SA1015Y			
R837	9965 000 15409	15k 5% 2W	Q203	9965 000 15654	2SK2541			
R838	4822 050 13303	33k 1% 0.4W	Q208	4822 130 41947	2SC1815Y			
R844	9965 000 14050	10k 5% 0.16W	Q209	4822 130 42959	2SA1015Y			
R850	4822 111 31046	6.2k 5% 0.16W	Q210	4822 130 42959	2SA1015Y			
R901	9965 000 12519	1k 5% 0.16W	Q211	4822 130 42594	DTC144ES			
R904	4822 111 31025	75Ω 5% 0.16W	Q401	4822 130 60578	2SC2482			
R912	9965 000 12519	1k 5% 0.16W	Q402	9965 000 14972	3DD1555			
R914	9965 000 12623	82Ω 5% 0.16W	Q603	4822 130 41947	2SC1815Y			
R917	4822 111 31025	75Ω 5% 0.16W	Q604	4822 130 42683	DTC124ES			
R922	4822 050 13303	33k 1% 0.4W	Q605	4822 130 42959	2SA1015Y			
R922A	9965 000 17647	27k 5% 0.16W	Q606	4822 130 42594	DTC144ES			
R923	9965 000 13960	470Ω 5% 0.16W	Q607	4822 130 42594	DTC144ES			
R924	4822 111 31023	47k 5% 0.16W	Q608	4822 130 41947	2SC1815Y			
R925	4822 111 31023	47k 5% 0.16W	Q609	4822 130 41947	2SC1815Y			
R926	4822 111 31023	47k 5% 0.16W	Q801	9965 000 17894	2SK2996			
R927	4822 111 31023	47k 5% 0.16W						
R961	9965 000 12519	1k 5% 0.16W						

Side AV Panel [E]

Various

0000	9965 000 17921	Side AV panel 14"
0000	9965 000 17976	Side AV panel 21"
P1101	9965 000 17924	Socket Ye/Wh/Re
P605	9965 000 15144	Connector2P TJC3-2A
P606	9965 000 15144	Connector2P TJC3-2A



C1001A	9965 000 14069	100µF 20% 16V
C1001B	9965 000 14069	100µF 20% 16V



R1001A	9965 000 12549	220Ω 55 0.16W
R1001B	9965 000 12549	220Ω 55 0.16W

11. Revision List

First release