

Adjustment

ELECTRICAL ADJUSTMENTS

ENTERING THE SERVICE MODE: Press the "MENU" button to switch to the "PICTURE" menu, then enter the digits "8 5 0 0" in this menu (this entry is not visible). Exit the Service Mode with the "0" button. When exiting the Service Mode, the software version is briefly indicated and changes will be stored automatically.

1-POWER SUPPLY VOLTAGE

Connect a digital voltmeter to the cathode of D610 diode at the AV1 mode of the TV and set the screen voltage to the minimum. Adjust the main supply voltage +B with P601 potentiometer to the following voltage value.

14 inch	A33LPE02X01	106V DC
20 inch	A4ECR143X51	118V DC
21 inch	A51EER 133X41	118V DC

Adjust the screen potentiometer to the level where a picture is just visible.

2- INTERMEDIATE FREQUENCY ADJUSTMENTS

Before starting this adjustment follow this procedure:

Enter service mode, change "VIDEO" header to "NEW". Then exit from service mode.

ATTENTION!!! : Above procedure must be done after replacing the Video IC (IC101) or EEPROM IC. IF adjustment must be repeated after "VIDEO" header displays "NEW".

For BG, DK, I standard: Adjust the frequency of pattern generator to the 38.9Mhz and switch it to colour bar pattern. Connect the RF output of pattern generator to the pin 1 of F101. Enter service mode. Adjust the "AFT38" item of service menu to read the voltage value 1.45VDC \pm 100mV DC at the pin#23 of IC101. Exit from service mode.

For SECAM LL' Standart : Adjust the frequency of pattern generator to the 33.9 MHz and switch it to colour bar pattern. Connect the RF output of pattern generator to the pin 1 of F101. Enter service mode. Adjust the "AFT33" item of service menu to read the voltage value 1.45VDC \pm 100mV DC at the pin#23 of IC101. Exit from service mode.

3-AGC ADJUSTMENTS

Apply a signal at the channel 32 with 60 \pm 1dBuV level to the antenna input (switch sound carrier Off and switch "Video Ext" On).

Connect an oscilloscope to the pin#11 (IF2) of Tuner and ground.

Enter service mode and go "AGC" header.

Adjust the amplitude to the value given below (which is monitored on oscilloscope) using the Volume+/Volume- key of remote control.

12.5 chassis for BG,DK,I	Standards:	630mVpp \pm 20mVpp
12.5 chassis for LL'	Standards:	450mVpp \pm 20mVpp
12.4 chassis for BG,DK,	Standards:	630mVpp \pm 20mVpp
12.4 chassis for LL'	Standards:	450mVpp \pm 20mVpp
12.4 chassis for I'	Standards:	500mVpp \pm 20mVpp

4- SERVICE MODE SETUP

<u>ITEM</u>	<u>SELECTION</u>
TUNER	SHARP&ALPS PHILLIPS P.SONIC TEMIC FULL BAND UHF ONLY
FULL BAND and UHF ONLY	items are valid only for 12.4 (voltage synthezirs) chassis.
AV2	NO: Single scart YES: Single scart+front AV
CLR.S	PAL PAL/NTSC : SECAM is iden tified automatically.
SND.S	BG I BG+DK BG+LL'
TEXT	DEFAULT : Teletext FASTEXT : Fastext

5- GEOMETRY ADJUSTMENTS

Enter service mode. Select Green Button in Service Menu. "H.POS" is for horizontal position, "V.HEI" is for vertical size, "LNRTY" is for vertical linearity, "S.COR" is for S-correction adjustment.

6- SCREEN ADJUSTMENT

Enter service mode. Select Yellow Button in Service Menu. Select "SCRN" item. Press Vol + or - button. You will see white horizontal line at center of the screen. Adjust the screen potentiometer to the just visiable level of horizontal line. Return to PICTURE MODE by pressing VOL+

7- WHITE BALANCE ADJUSTMENT

Enter the service mode. Select Yellow Button in Service Menu. Select and adjust "G.CUT" to the 128. Adjust "R.CUT" and "B.CUT" for cut off adjustment. Select and adjust "R.DRV" and "B.DRV" for white balace. Exit from service mode.

8- PRESET VALUES OF SERVICE MENU ITEMS

Below given values are average values and can vary according to the CRT type and chassis type.

	RED Menu Button			GREEN Menu Button						YELLOW Menu Button							BLUE Menu Button	
SIZE	AGC	ST.BY	VIDEO	H.POS	V.POS	V.HEI	LNRT V	S.COR	Y.DLY	G.CUT	R.CUT	B.CUT	R.DRV	B.DRV	SCRN	SECB	AFT38	AFT33
14"	19	NO	OLD	14	4	64	46	0	1	128	127	124	59	53	0	48	40	61
20"	19	NO	OLD	13	4	80	47	0	1	128	128	119	58	59	0	48	40	61
21"	19	NO	OLD	14	4	81	47	0	1	128	128	121	55	56	0	48	40	61

CONVERGENCE ADJUSTMENTS

Note: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

• Centre Convergence Adjustment

1. Receive crosshatch pattern with a colour bar signal generator.
2. Adjust the BRIGHTNESS and CONTRAST Controls for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 16) and superimpose red and blue vertical lines in the centre area of the picture screen. (See figure).
4. Turn the both tabs at the same time keeping the constant angle to superimpose red and blue horizontal lines at the centre of the screen. (See figure)
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3,4,5 to ensure best convergence, the adjustment must be undertaken with great care because of the interaction between 4 and 6 pole magnets.

• Circumference Convergence Adjustment

1. Loosen the clamping screw of deflection yoke to allow the yoke to tilt.
2. Put a wedge as shown in figure 15 temporarily. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick 3 adhesive tapes on wedges.

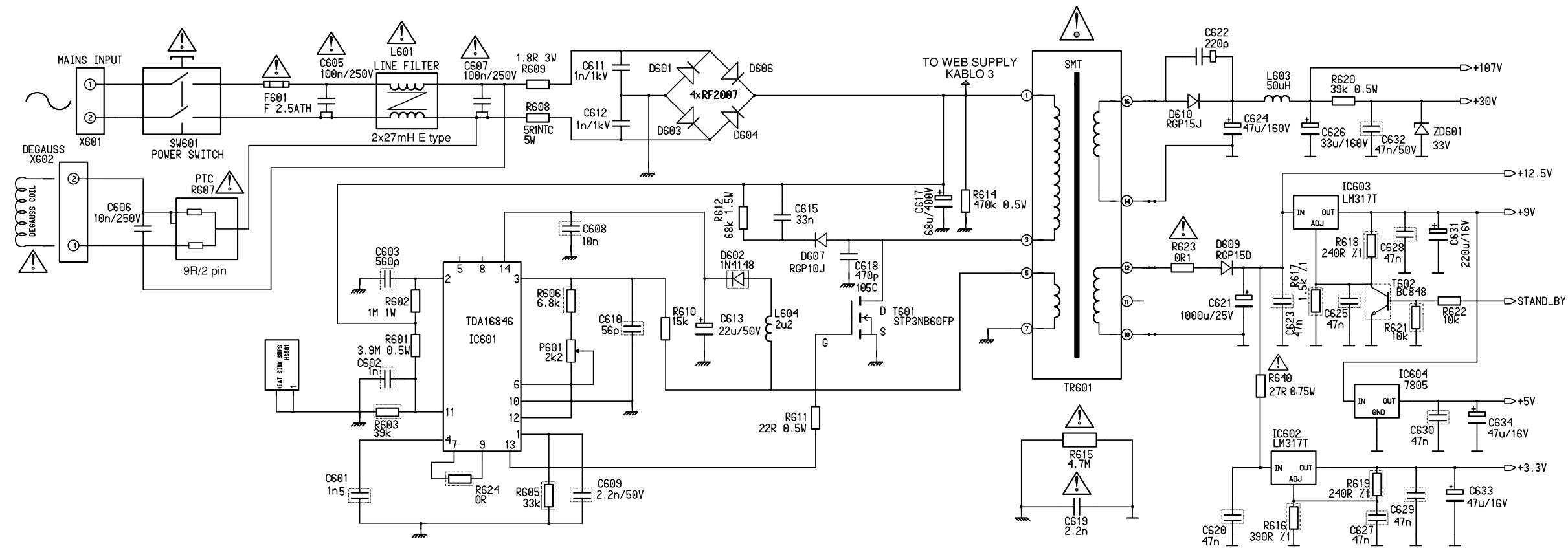
CONVERGENCE COMPENSATOR

Compensators L462A and L462B are used to correct misconvergence (Red-Green) at the top center or bottom center on screen, when the misconvergence is still evident even though the yoke adjustment is tried. Compensator L462C is also used to correct misconvergence (Vertical shift of Red or Blue) at four corners on screen.

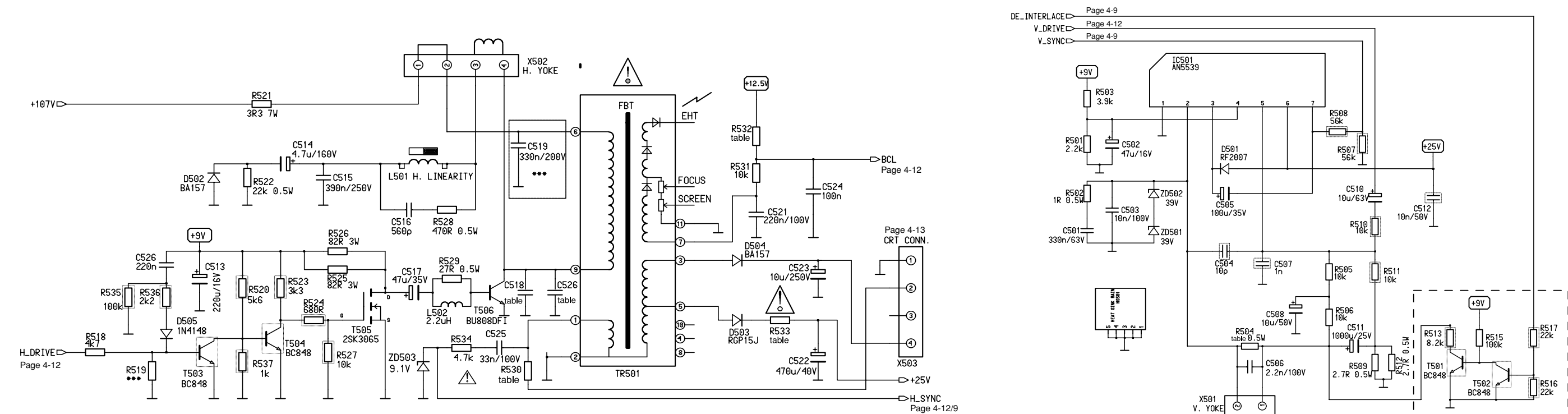
1. To correct horizontal misconvergence (Red-Green), put compensator L462A on the yoke back (see figure right) to find a position for minimizing misconvergence. Mark the position and remove protective paper on the rear of L462A to stick it in place. Apply adhesives on both yoke and L462A.
2. To correct vertical misconvergence (Red-Green), put the tips of compensator L462B into either of the holes on the yoke core and apply adhesives.
3. To correct up or down shift of Red at top right or bottom right corner, put compensator L462C at point 1 or 2 on the picture tube (see figure right.) to find a position for minimizing misconvergence. Mark the position and remove protective paper on the rear of L462C to stick it in place.

Layout of the PCBs and Circuit Diagrams

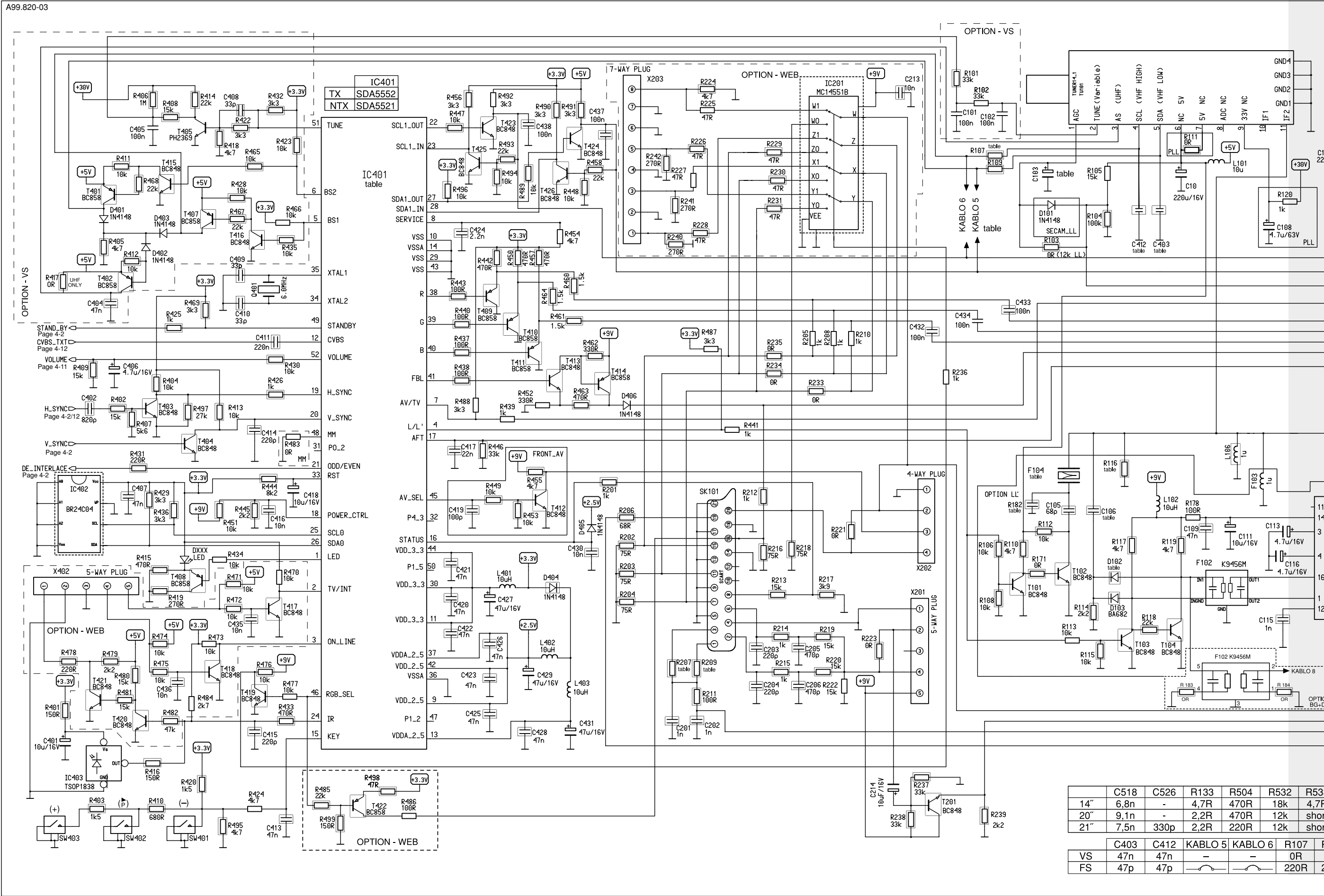
Mains Section

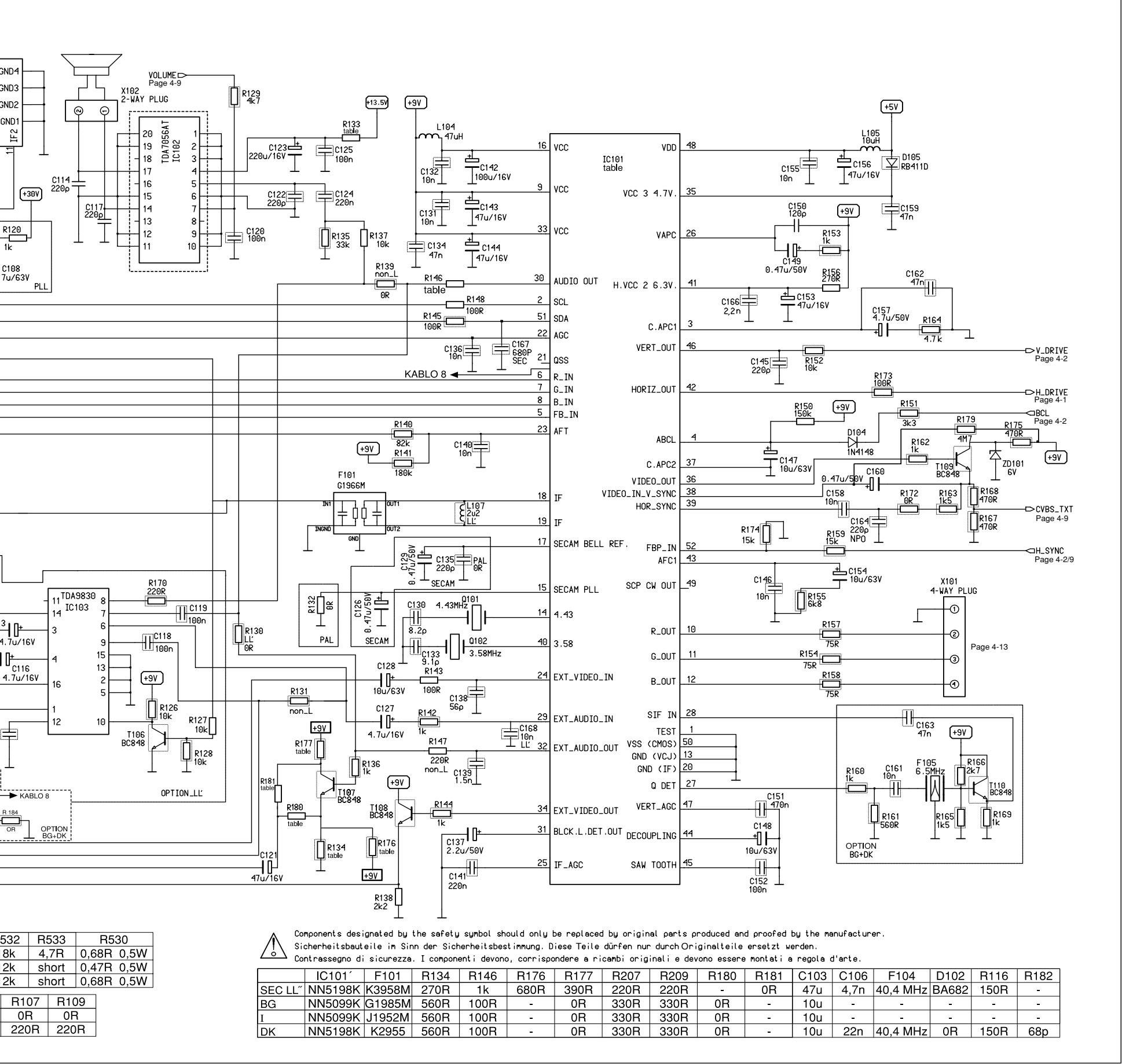


Deflection



Circuit Diagram





Subject to change without notice

