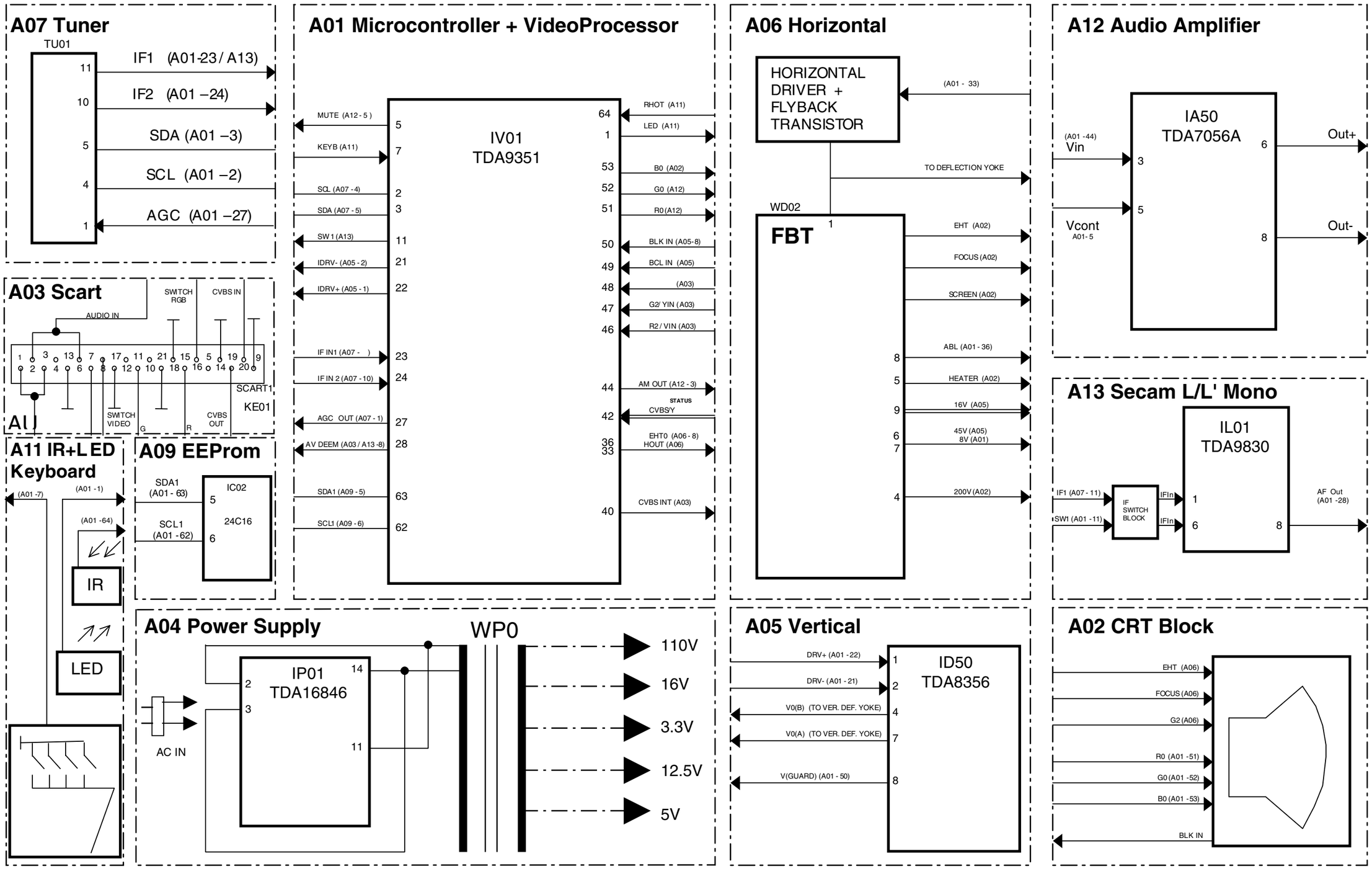
6. Block Diagrams, Test Point Overview, and Waveforms

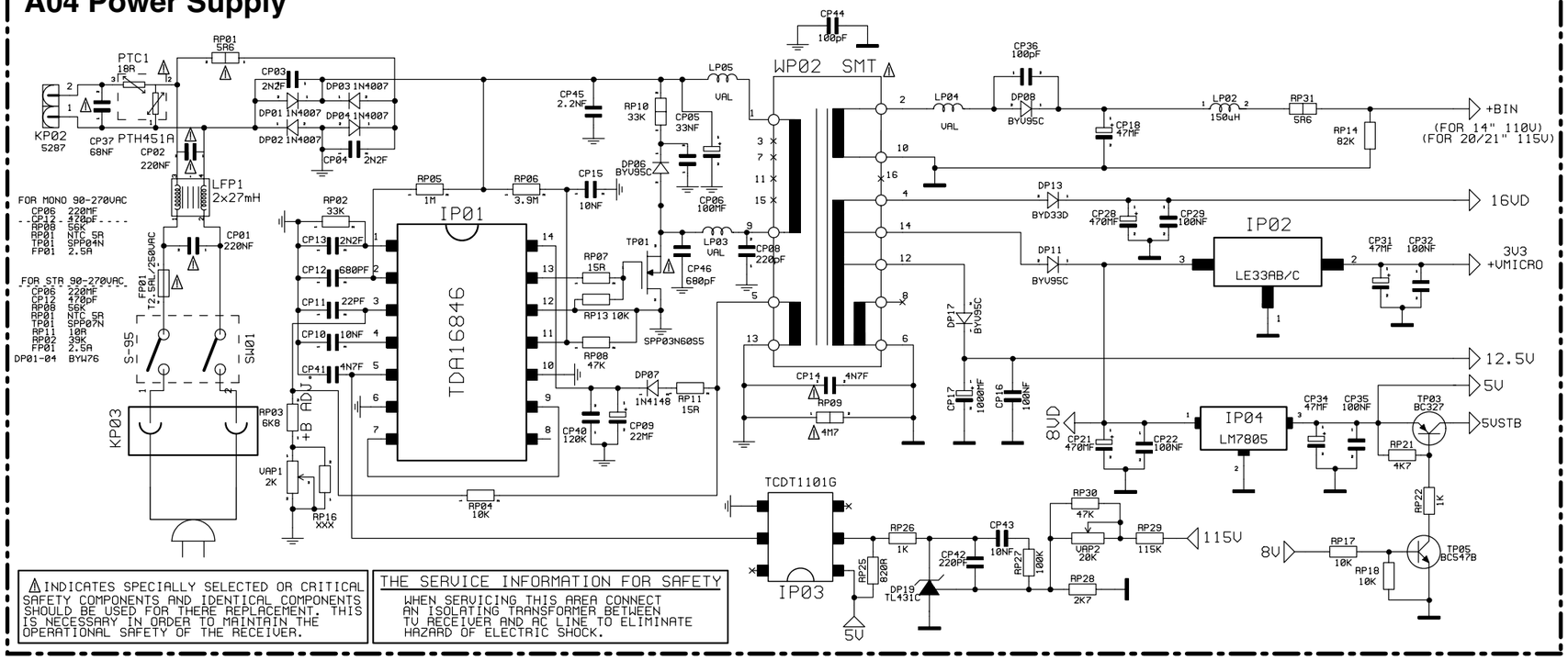
Block Diagram



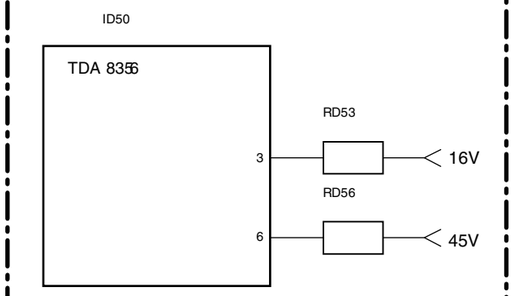
CL 36532010_013.eps
190203

Supply Voltage Diagram

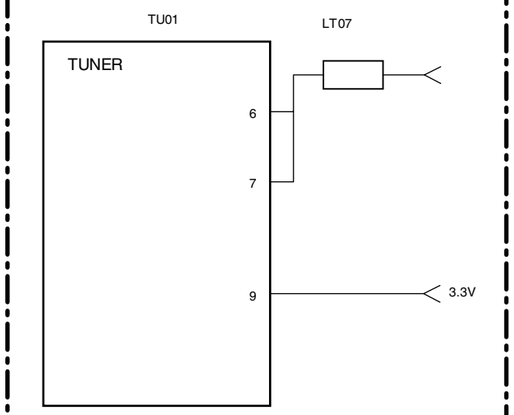
A04 Power Supply



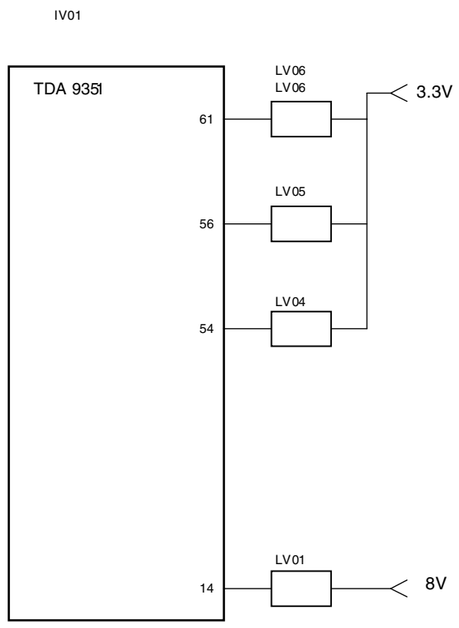
A05 Vertical



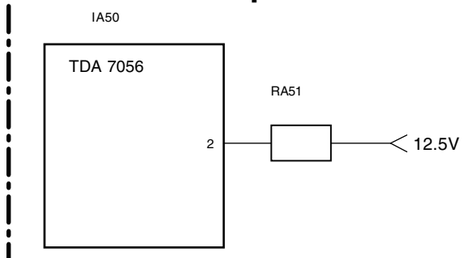
A07 Tuner



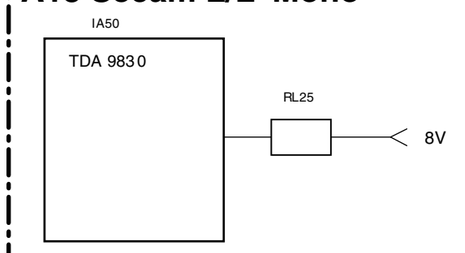
A01 Microcontroller + VideoProcessor



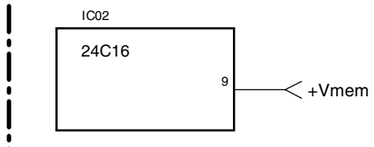
A12 Audio Amplifier



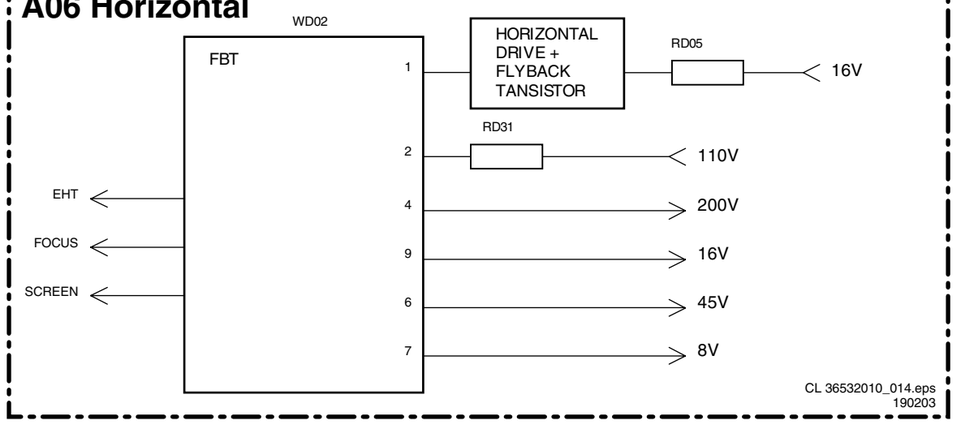
A13 Secam L/L' Mono



A09 EEProm



A06 Horizontal



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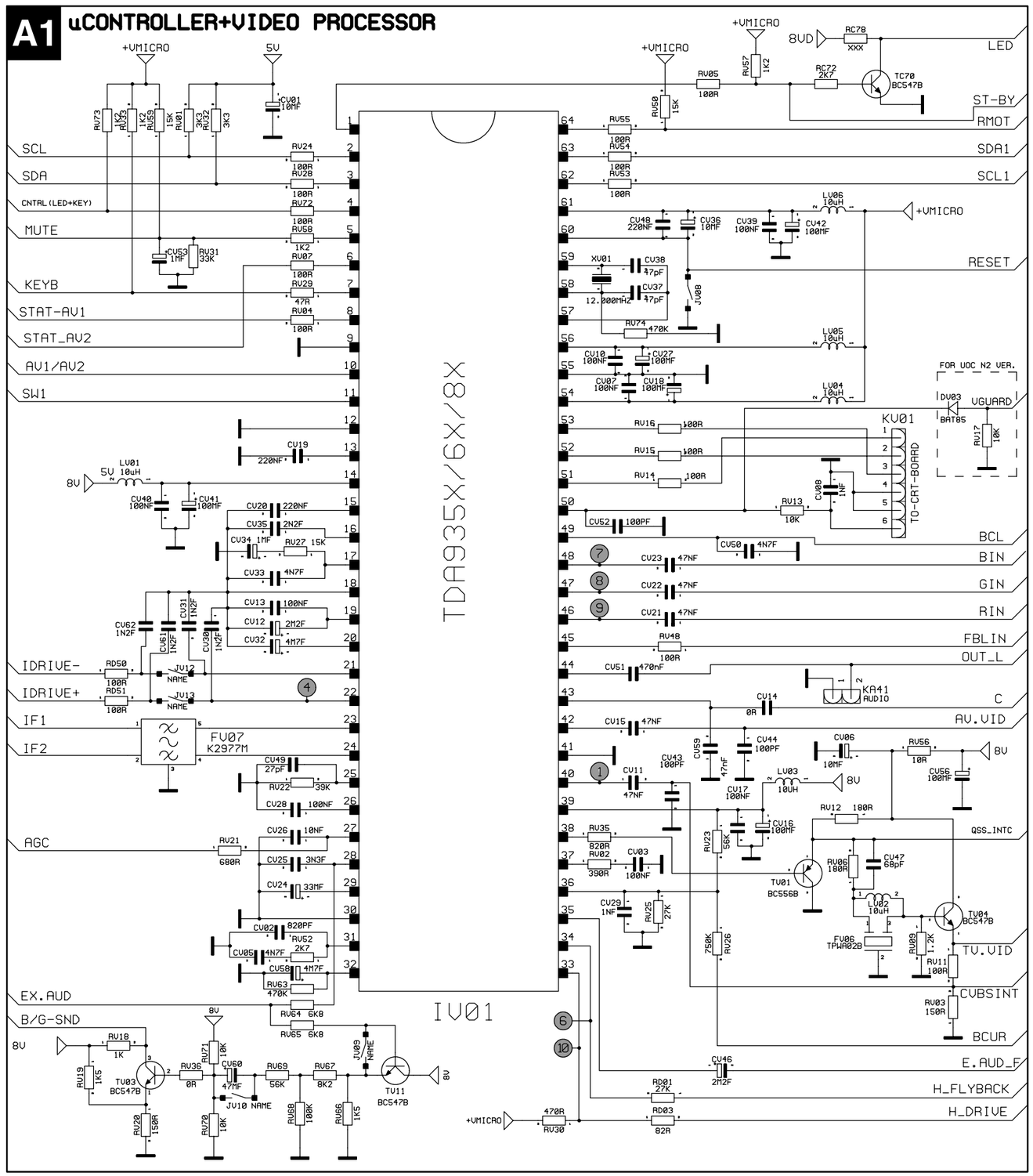
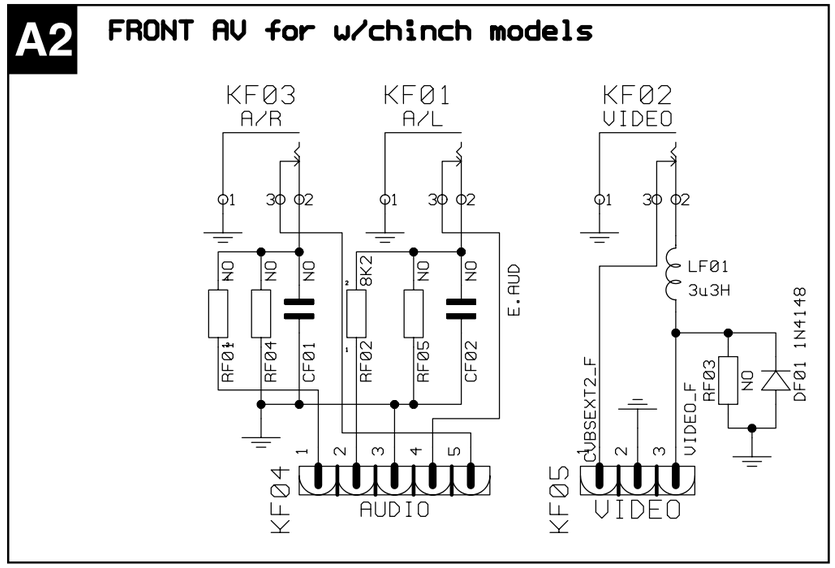
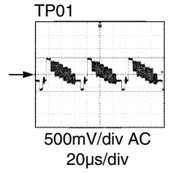
190203

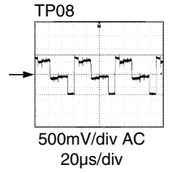
7. Circuit Diagrams and PWB Layouts

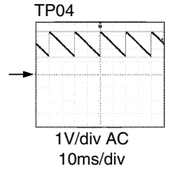
Main Panel: uController + Video Processor and Front AV

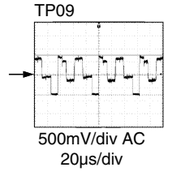


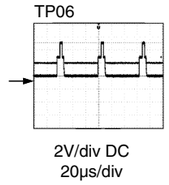


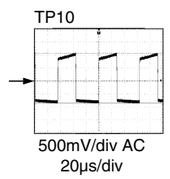


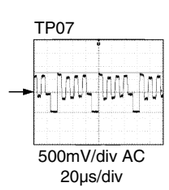






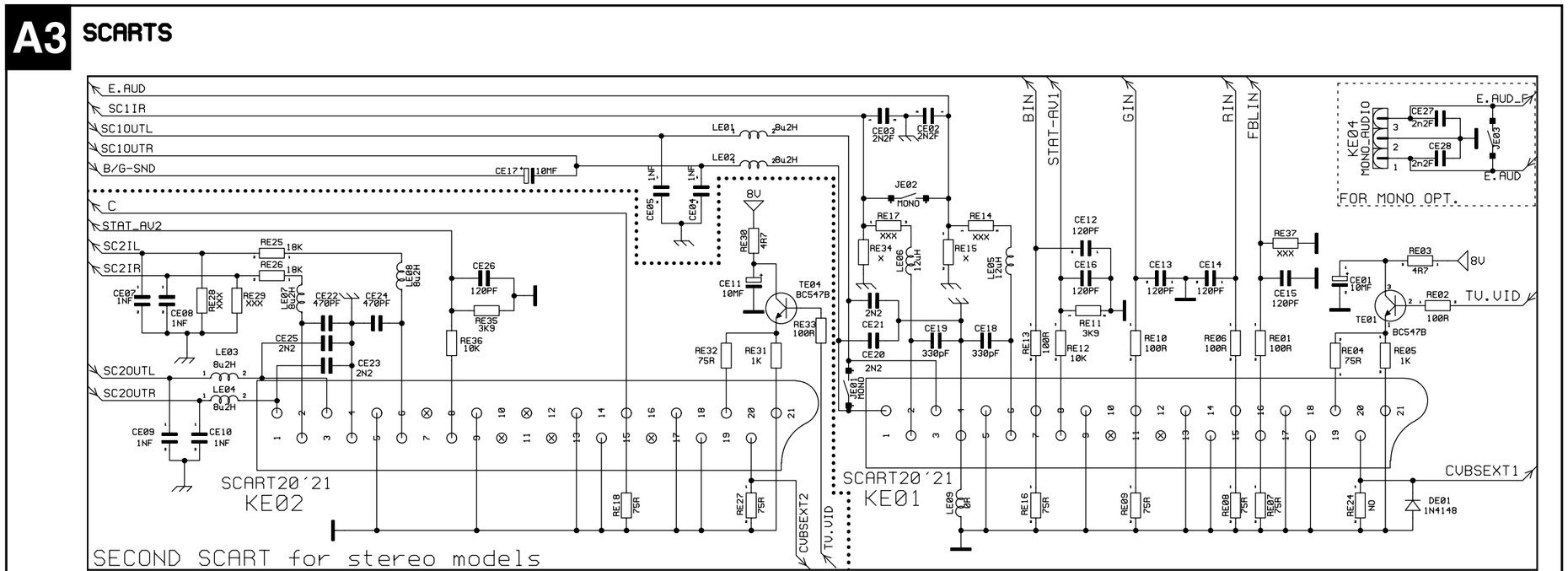


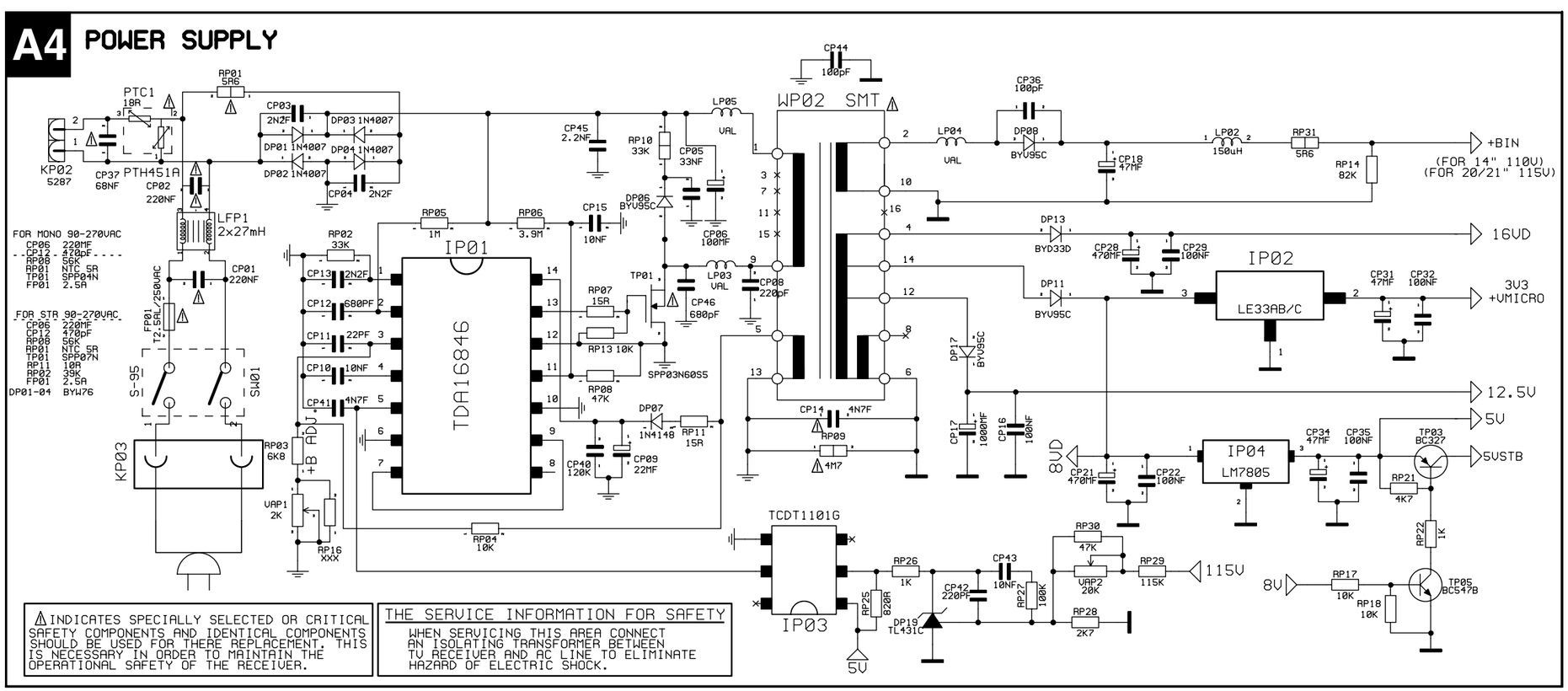




CL 36532010_001.eps
190203

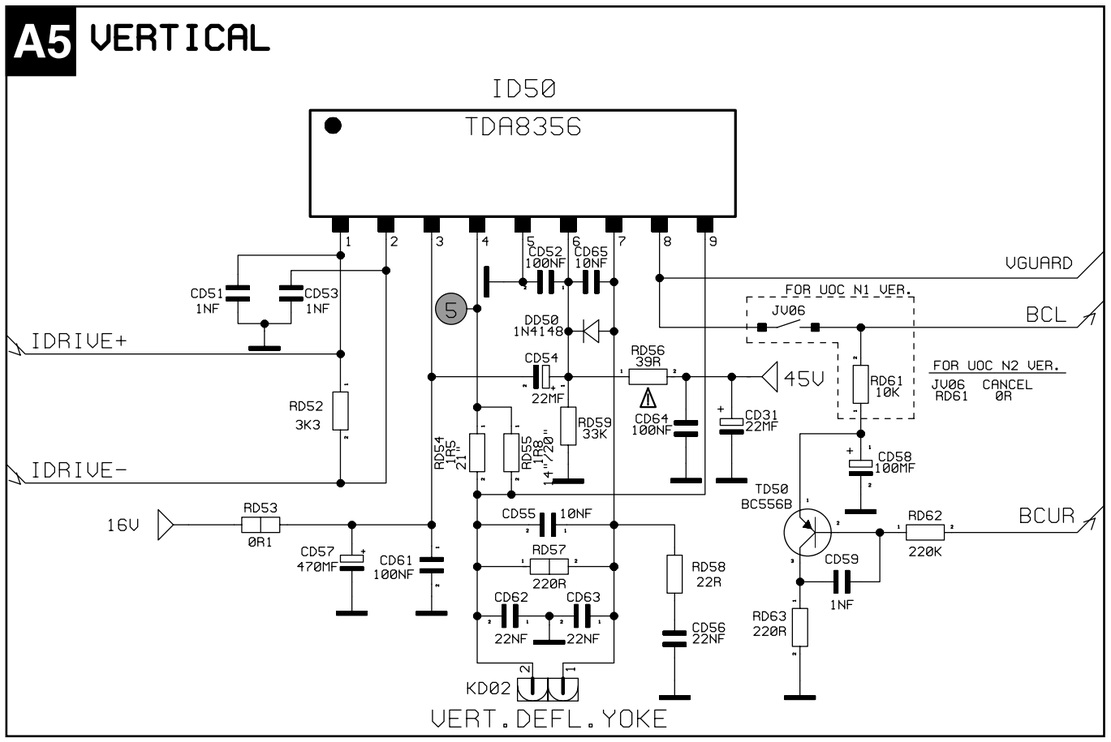
Main Panel: SCARTS and Power Supply

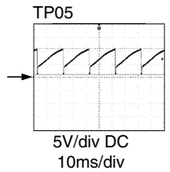


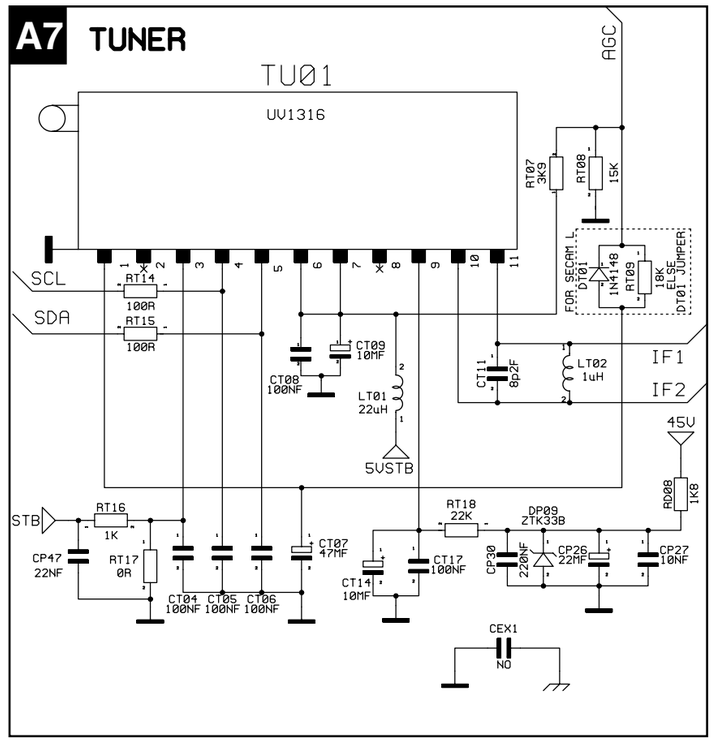


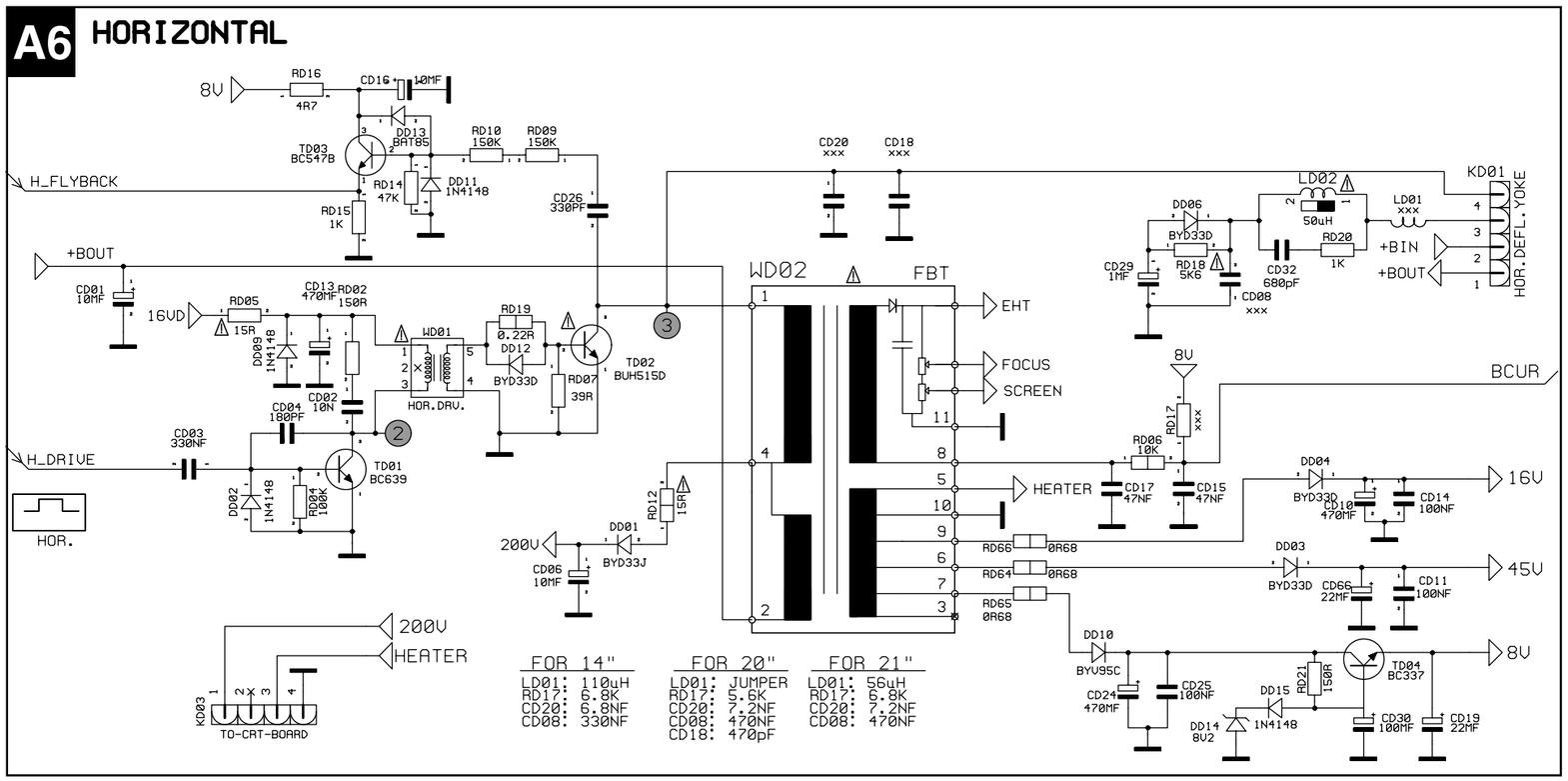
CL 36532010_002.eps
190203

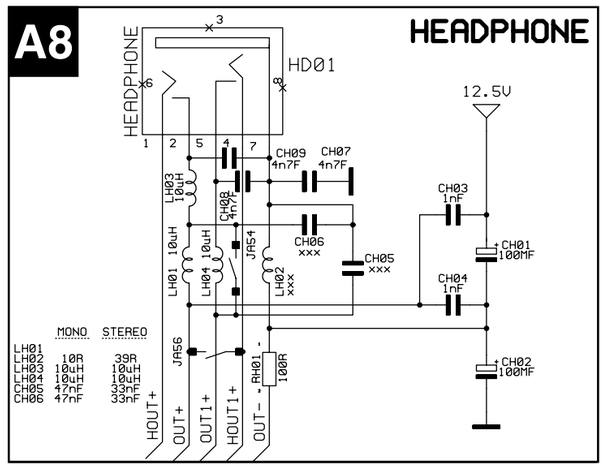
Main Panel: Vertical, Horizontal, Tuner and Headphone

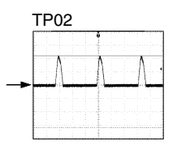


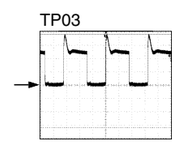






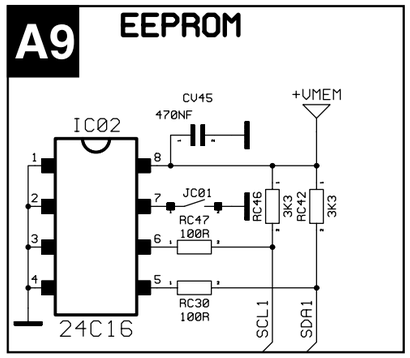


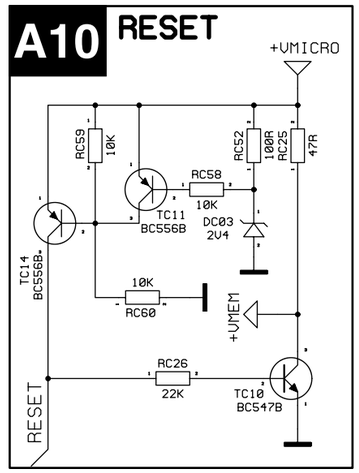


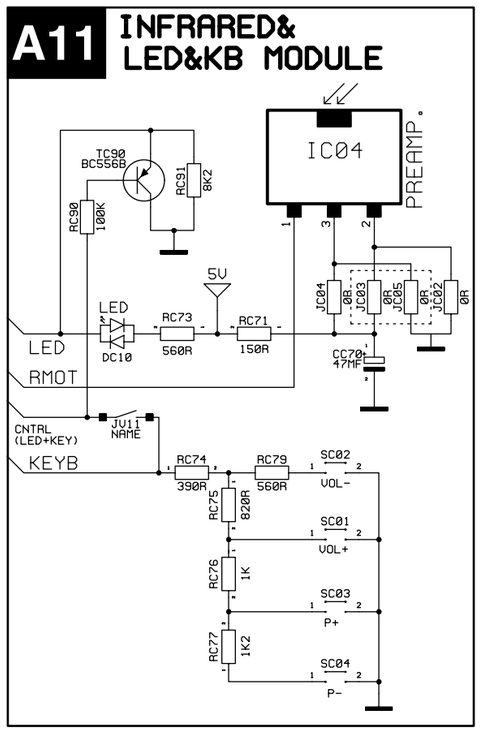


CL 36532010_003.eps
190203

Main Panel: Eeprom, Reset and Infrared & LED & KB

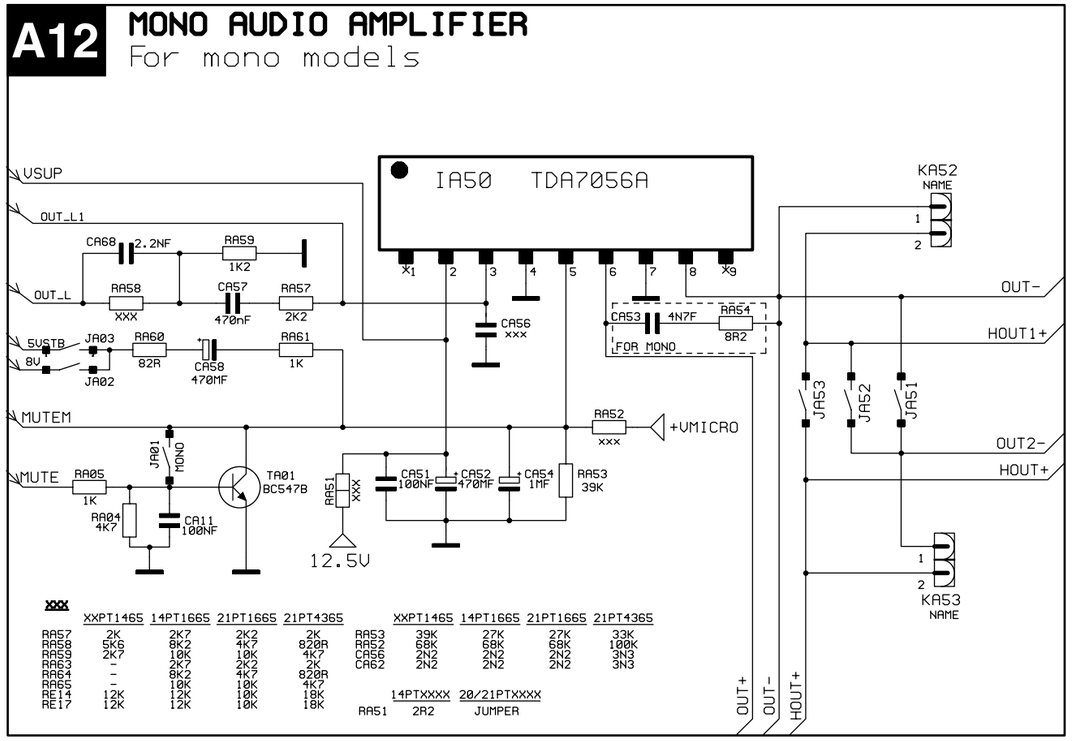


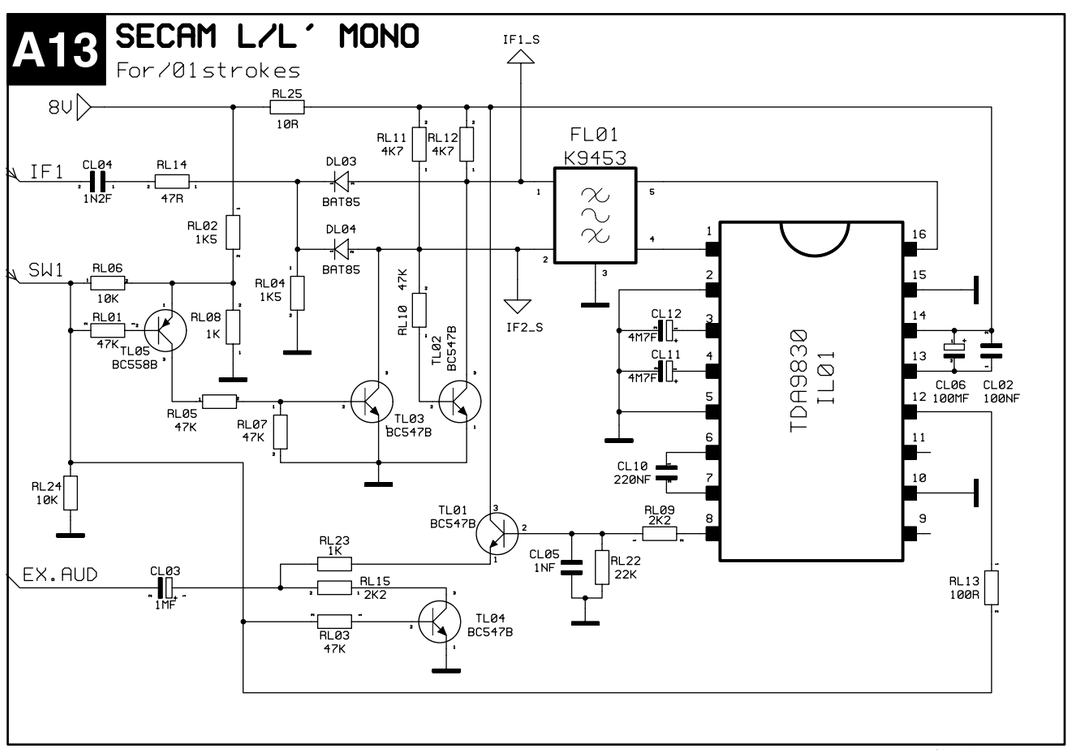




CL 36532010_004.eps
250203

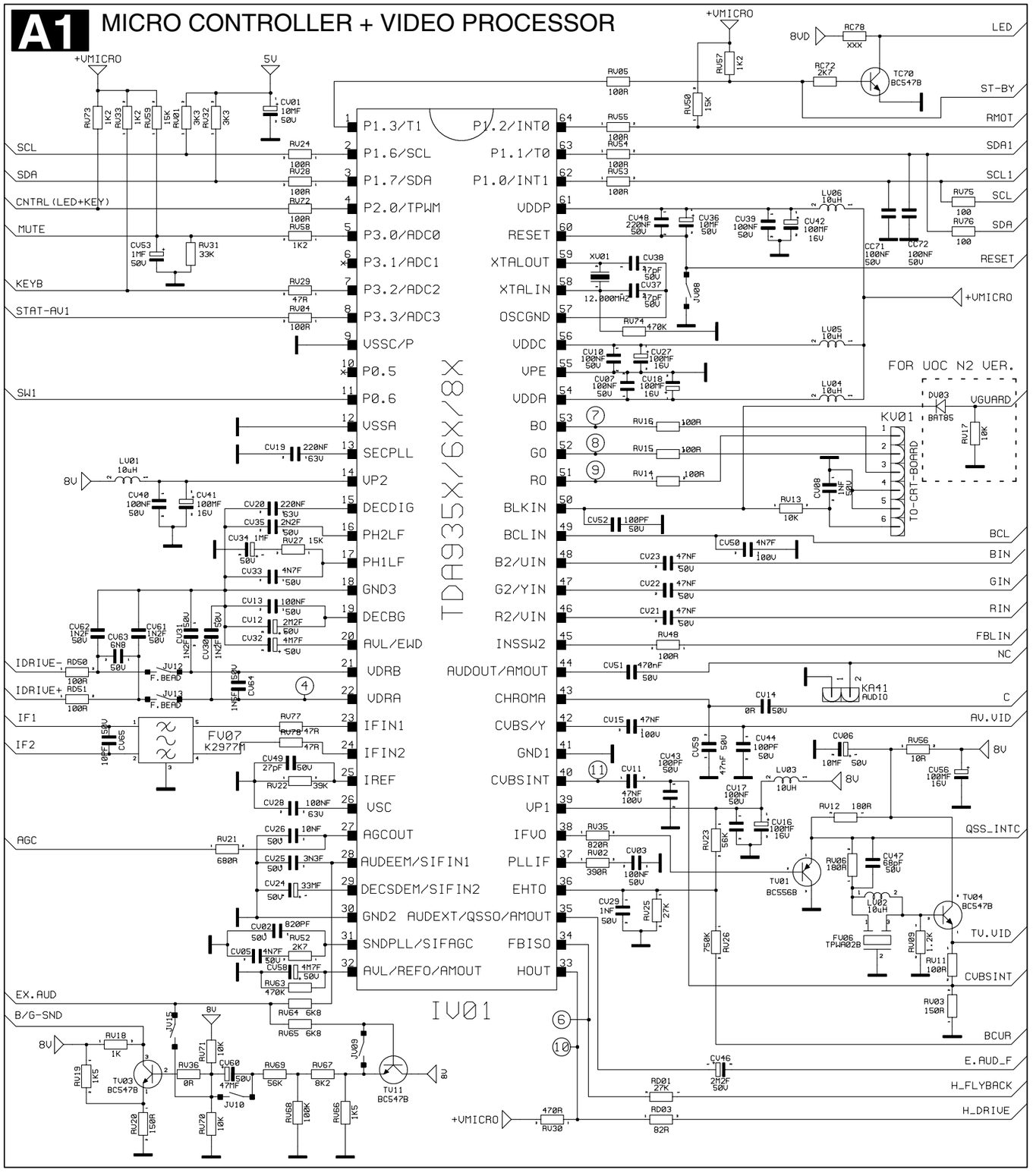
Main Panel: Mono Audio Amplifier and SECAM L/L' Mono

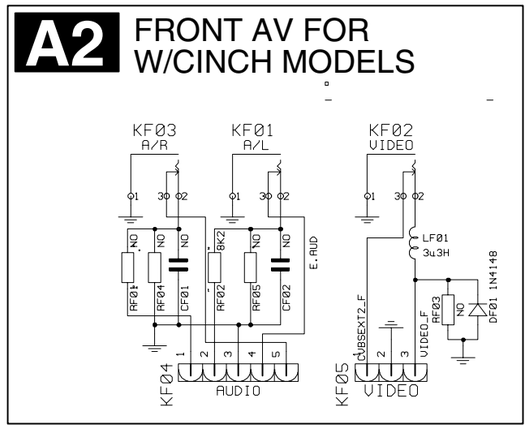




CL 36532010_022.eps
250203

Main Panel: 2W Version (From DC1B Onwards) Micro controller + Video Processor and Front AV

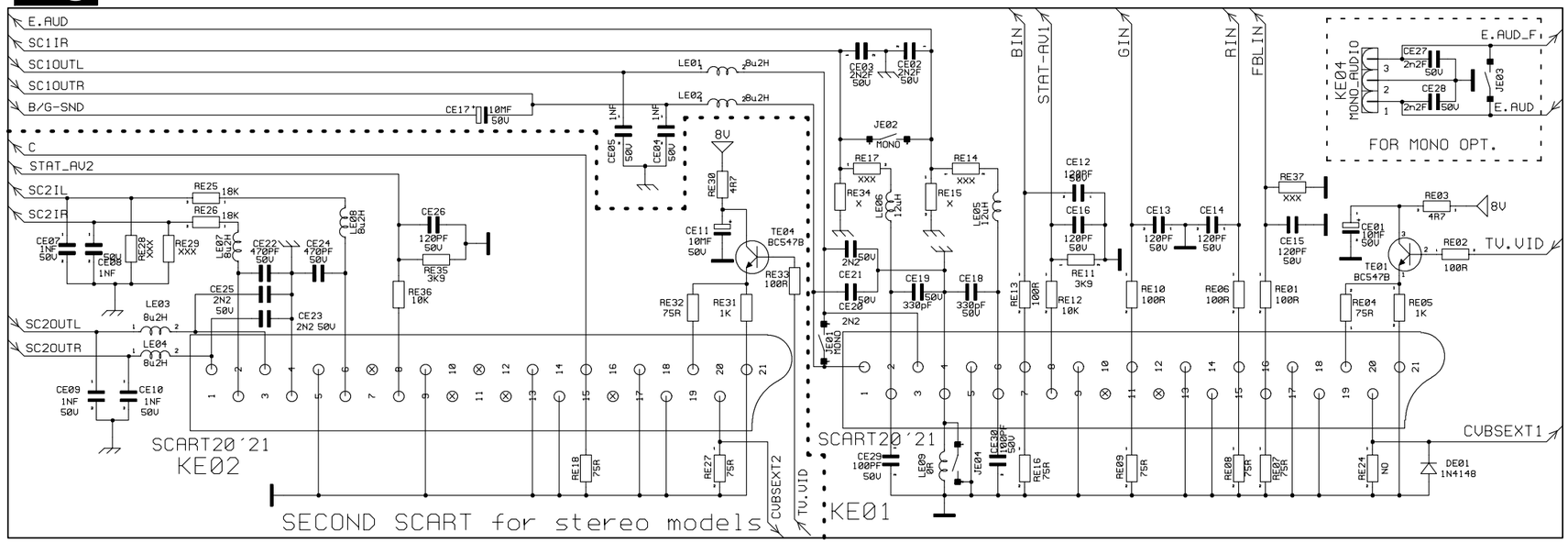




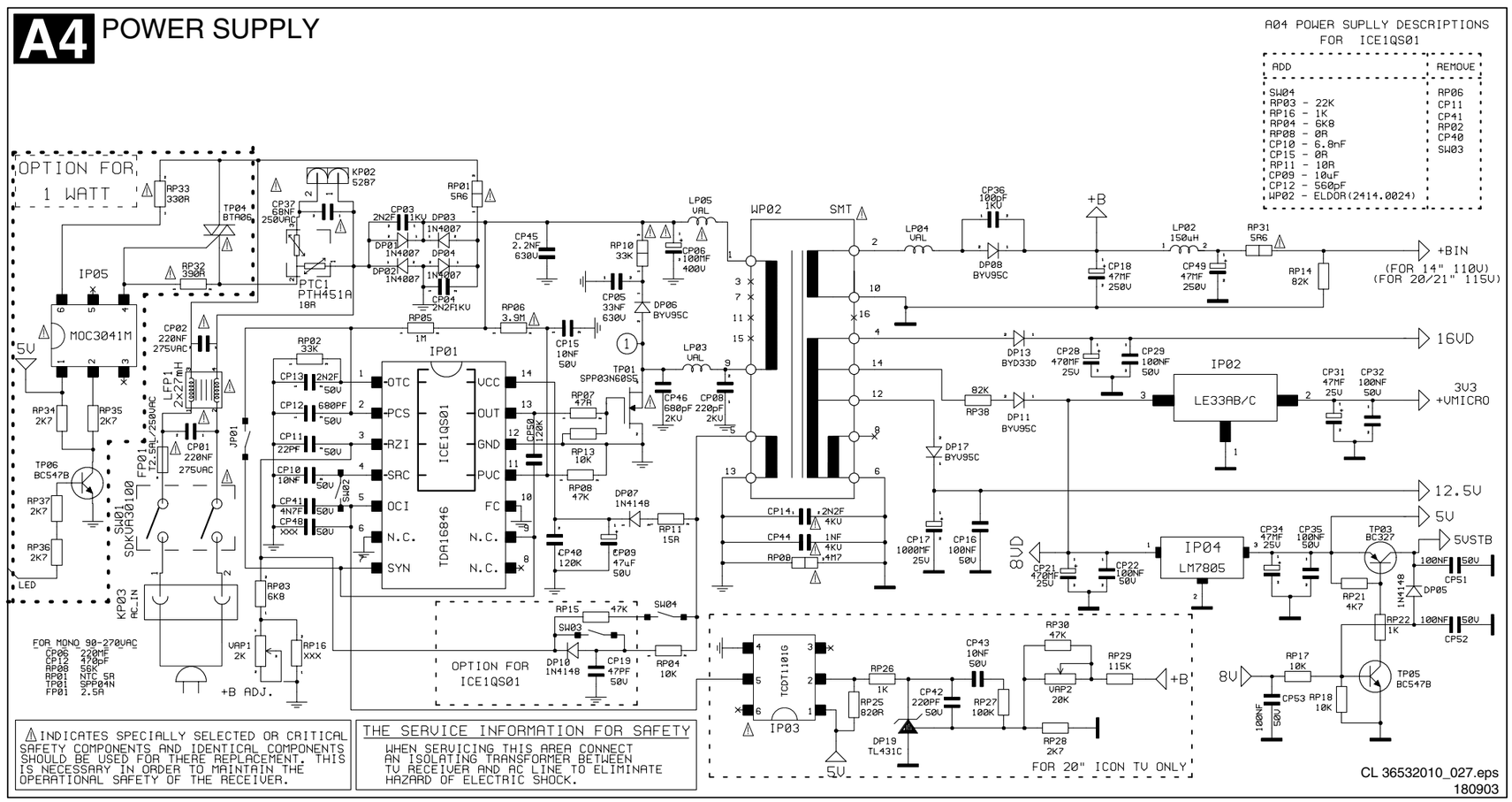
CL 36532010_026.eps
180903

Main Panel: 2W Version (From DC1B Onwards) Scarts and Power Supply

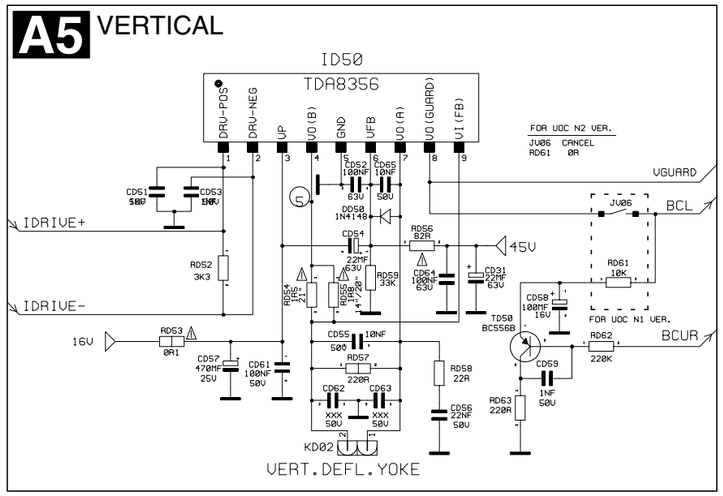
A3 SCARTS

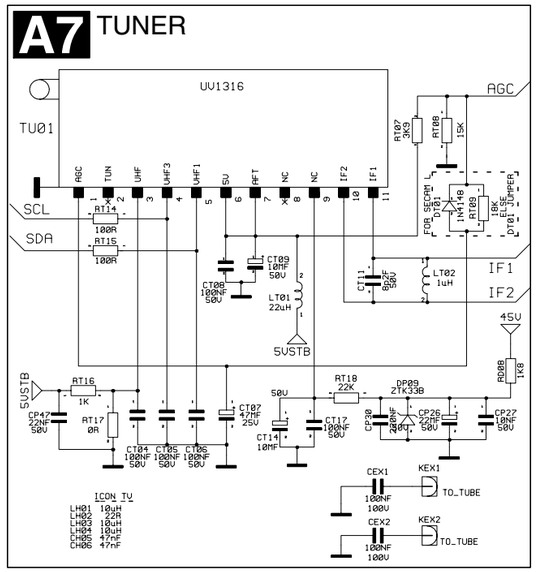


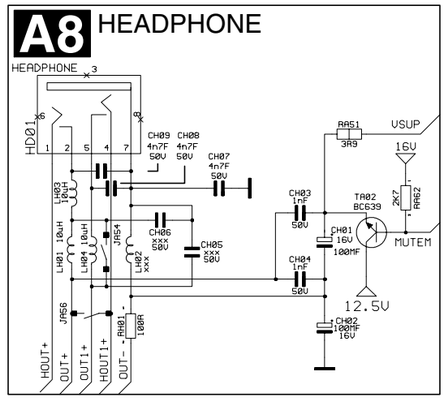
A4 POWER SUPPLY

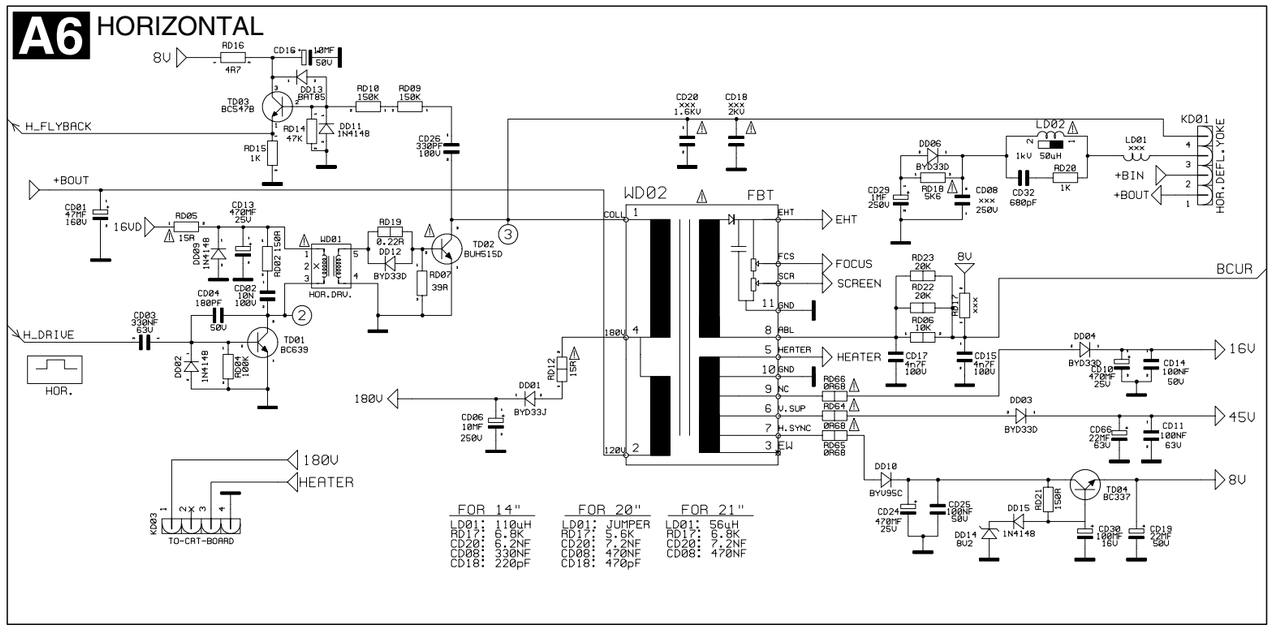


Main Panel: 2W Version (From DC1B Onwards) Vertical , Horizontal,Tuner, and Headphone



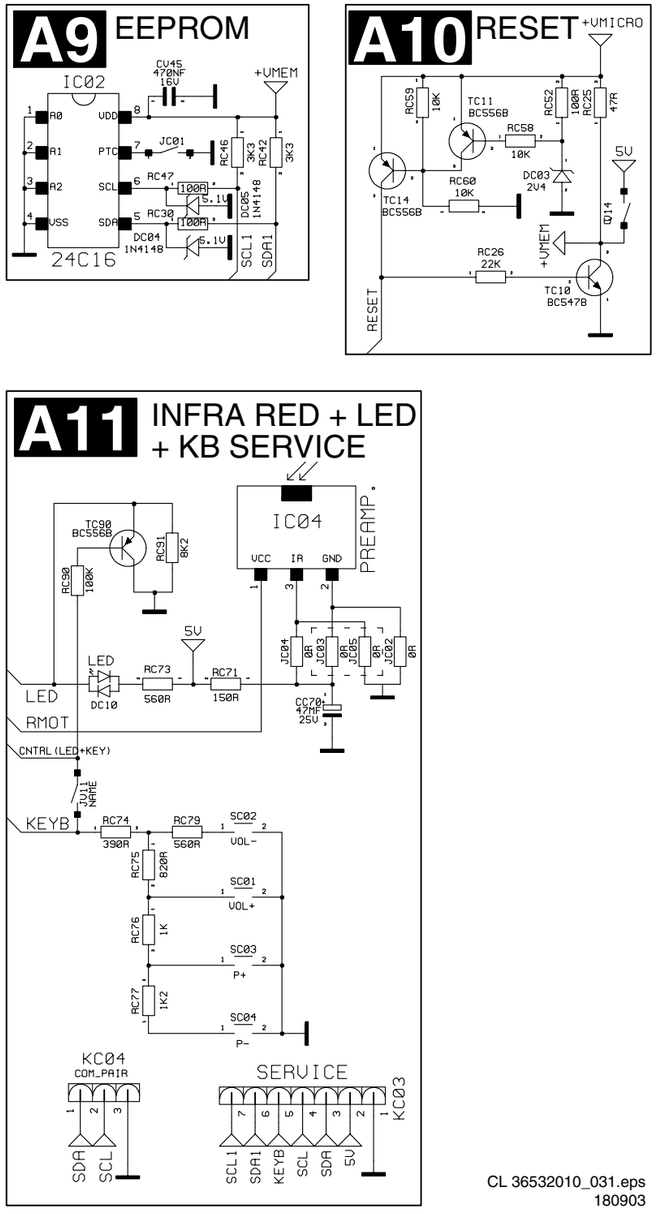






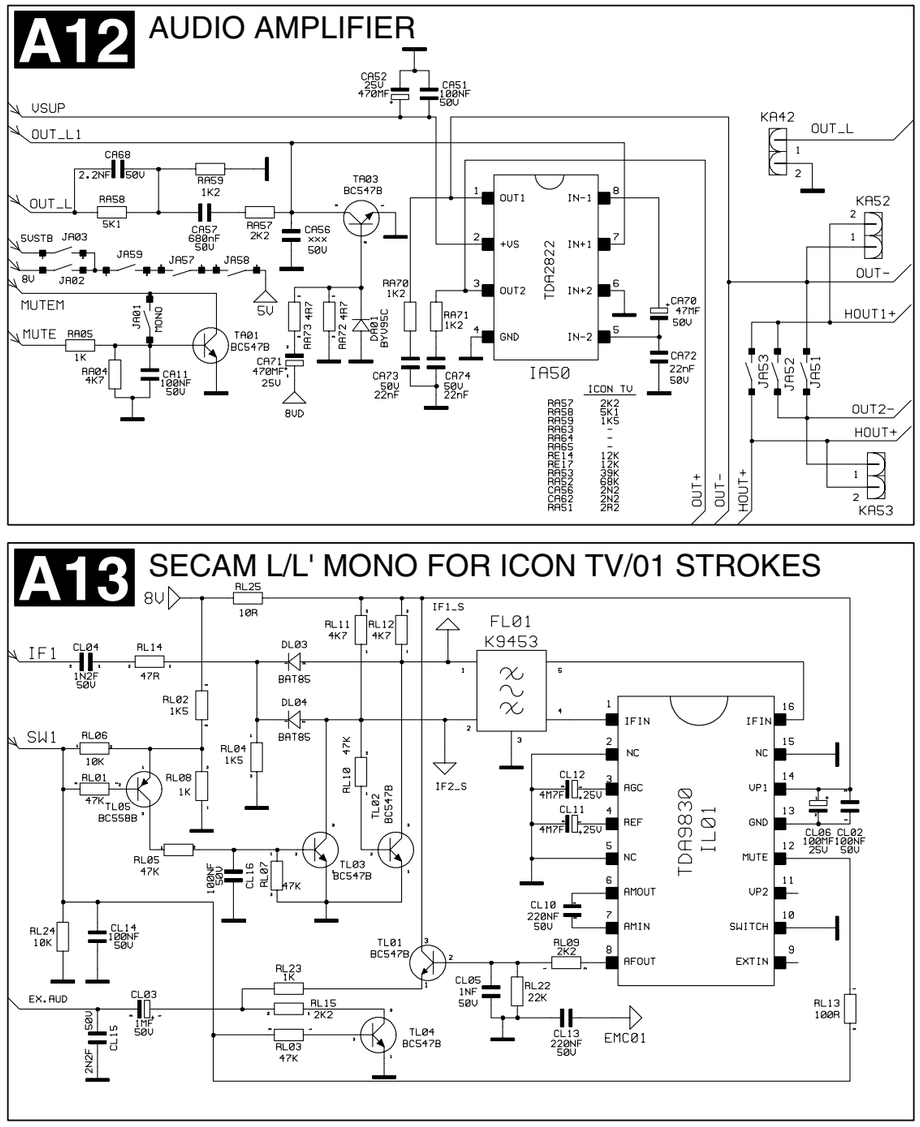
CL 36532010_032.eps
180903

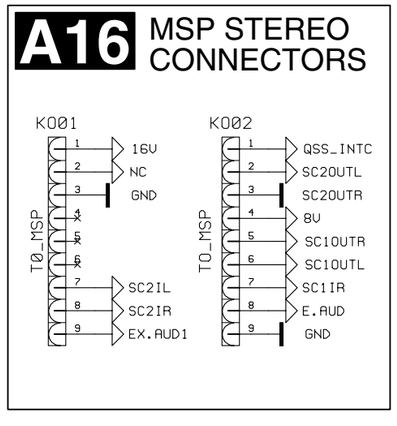
Main Panel: 2W Version (From DC1B Onwards) EEPROM, Reset, and Infra Red



CL 36532010_031.eps
180903

Main Panel: 2W Version (From DC1B Onwards) Audio Amplifier, SECAM L/L"Mono for Icon TV Strokes, and Stereo Connectors





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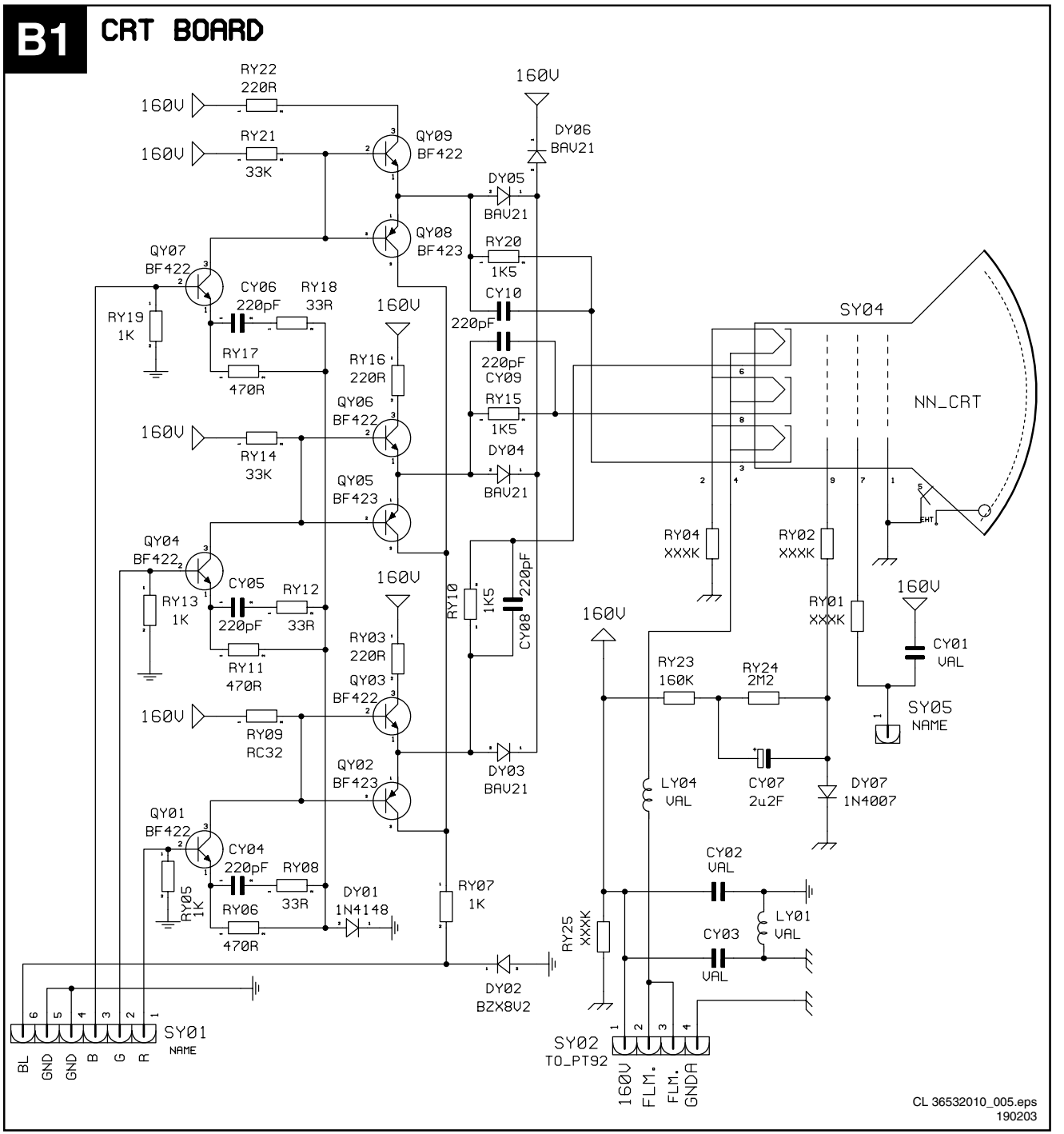
180903

CRT Board


B1
CRT BOARD
RY22
220R
160V
RY21
33K
QY09
BF422
DY06
BAV21
DY05
BAV21
QY08
BF423
RY20
1K5
QY07
BF422
CY06
220pF
RY18
33R
RY19
1K
RY17
470R
CY10
220pF
220pF
CY09
RY16
220R
QY06
BF422
RY15
1K5
RY14
33K
DY04
BAV21
QY05
BF423
SY04
NN_CRT
QY04
BF422
CY05
220pF
RY12
33R
RY13
1K
RY11
470R
RY10
1K5
CY08
220pF
RY04
XXXK
RY02
XXXK
RY01
XXXK
CY01
VAL
RY03
220R
QY03
BF422
RY09
RC32
RY23
160K
RY24
2M2
SY05
NAME
DY03
BAV21
QY02
BF423
LY04
VAL
CY07
2u2F
DY07
1N4007
QY01
BF422
CY04
220pF
RY08
33R
RY05
1K
RY06
470R
DY01
1N4148
RY07
1K
CY02
VAL
LY01
VAL
CY03
VAL
RY25
XXXK
DY02
BZX8V2
SY01
NAME
BL
GND
GND
B
G
R
SY02
TO_PT92
160V
FLM.
FLM.
GNDA
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8. Electrical Alignments

Index of this chapter

8.1 Hardware Alignments

8.1.1 System Voltage Adjustment

- Switch the TV in AV mode by pressing the AV button on the remote control unit (minimum beam current condition).
- Adjust the VAP1 potentiometer until you measure 110Vdc for 14" or 115 Vdc for 20" on the cathode of diode DP08.

8.2 Software Alignments/Settings

Enter the Service Mode (see chapter 5). The Service Mode menu will now appear on the screen.
The first screen that is displayed is of the IF adjustment. With the CURSUR DOWN key the next menu item will be displayed. The value can be changed with the LEFT/RIGHT CURSOR keys.

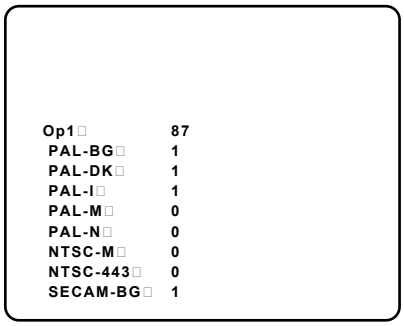
8.2.1 Adjustments

IF: You can select the following IF frequencies: 38.9, 38.0, 58.8 and 45.8 MHz
Default value is 38.9 for PAL BG, DK and L and 33.4 for PAL L'.
IFL1: You can select the following IF frequencies: 33.4 and 33.9 MHz
Default value is 33.9
Connect a PLL pattern generator to the TV and select a crosshatch pattern. Enter the service menu as described in chapter 5 and perform the geometry adjustments HP, HB, HS, VA, VS and VSH.
Press the MENU or OSD key to leave the service menu.
HP: Horizontal Parallelogram. Default value is 31.
HB: Horizontal Bow. Default value is 31.
HS: Horizontal Shift. Default value is 33.
VS: Vertical Slope. Default value is 29.
VA: Vertical Amplitude. Default value is 51.
SC: S-Correction. Default value is 15.
VSD: Vertical Scan Disable. Default value is off. With this bit the G2 can be adjusted. When this item is selected information about the G2 is displayed (INCR, OK, DECR). Turn the G2 potentiometer on the LOT until the screen displays "OK". "INCR" means the G2 must be increased and "DECR" means the G2 must be decreased.
VSH: Vertical Shift. Default value is 41.
Connect a pattern generator to the TV and select a colour bar. Set the contrast to 70%, brightness in the middle and the colour saturation in the middle. Enter the service menu as described in chapter 5 and perform the video adjustments BLR, BLG, WPR, WPG, WPB, Ys, Yn, Yp and Yo.
Press the MENU or OSD key to leave the service menu.
BLR: Black Level Red. Default value is 32.
BLG: Black Level Green. Default value is 31.
WPR: White Point Red. Default value is 40.**WPG: White Point Green.** Default value is 32.**WPB: White Point Blue.** Default value is 32.**Ys: Y-delay for SECAM.** Default value is 5.
Yn: Y-delay for NTSC. Default value is 5.
Yp: Y-delay for PAL. Default value is 5.
Yo: Y-delay for external. Default value is 5.
AGC: Automatic gain control. Default value is 30.
CL: Cathode Drive level. Default value is 6.
Bits0 00: ACL, FCO, SVO, HP2, FSL, OSO:
These bits are control bits of the video processor. The default value is 0.
It is advised to keep these bits on the default value.
Bits1 18: FFI, BTSC, FMWS, BKS, IFS:
These bits are control bits of the video processor.
The default values are:
FFI = 0
BTSC = 0
FMWS = 0
BKS = 1
IFS = 1
It is advised to keep these bits on the default value.
TXT-CL: Teletext Cathode Drive level. Default value is 5

8.2.2 Options

Options are used to control the presence/absence of certain features and hardware.
An Option byte represents a number of different options. All options are controlled via six option bytes.

How to change an Option byte
Use a LEFT/RIGHT CURSOR keys to change the option byte. The byte values will change from 00 to FF.



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200203

Figure 8-1 Option Code Screen

Option byte 1 (Op1)

PAL-BG
1: PAL BG available
0: PAL BG not available
Default setting = 1
PAL-DK
1: PAL DK available
0: PAL DK not available
Default setting = 1
PAL-I
1: PAL I available
0: PAL I not available
Default setting = 1
PAL-M
1: PAL M available
0: PAL M not available
Default setting = 0
PAL-N
1: PAL N available
0: PAL N not available
Default setting = 0
NTSC-M
1: NTSC M available
0: NTSC M not available
Default setting = 1
NTSC-443
1: NTSC 4.43 available
0: NTSC 4.43 not available
Default setting = 1
SECAM_BG
1: SECAM BG available
0: SECAM BG not available