

FERGUSON IDC2 Chassis

94

General Information

Chassis: IDC2
CRT: Super Flat
Remote Control:
10234640RMT122

Matrix

Item	See Model
Safety Notes	Ferguson ICC9 Chassis

Recommended Safety Parts

Item	Part No.	Description
CH400	20153500	Switch Mains On/Off
CJ010	10042930	Mains Lead & 13 Amp Plug ASSY 5AF
CJ100	55570800	Lead ASSY EHT & Cap Yellow
CT010	10146400	CRT A68EES58X01 68cm Super Flat
CT100	47320061	Degauss Coil ASSY 68cm TV
CW010	25093620	Instruction Book DSF59NX DSF68NX
CL08	43324800	CAP 15 nF 5% 400V Film Special
CP09	43325400	CAP 2.2 nF 20% 1000V Film Spec
CP31	10109980	CAP 4.7 nF 20% 400V Ceramic Coup
CP56	14035280CK	CAP 100 pF 20% 1000V Cer Disc 2Z
RF08	1023773077	Posistor 15 ohm 265V
RF20	1306395009	RES 1.5 ohm 5% .3W Fuse Car Film
RH08	1500958002	RES 10 ohm 5% .3W Fuse Carb Film
RH25	1500958009	RES 10 ohm 5% .3W Fuse Carb Film
RH26	1501002009	RES 4.7 ohm 5% .3W Fuse Car Film
RL06	1300023008	RES 1.5K ohm 5% .7W Fuse Car Fil
RL24	1501011002	RES 6.8 ohm 5% .3W Fuse Car Film
RL25	1500973009	RES 1 ohm 5% .3W Fuse Carbon Film
RL31	1300078009	.68 ohm 5% .3W Fuse Car Film
RP01	30093400	PTC Posistor 25'+6K ohm 220V 6A
RP31	1503195002	RES 10 meg ohm 5% .7W Carbon Fil
RP47	1300090003	RES .1 ohm 10% .7W Fuse Met Film
RP80	13000447008	RES 2.2 ohm 5% .5W Fuse Car Film
RV01	1306397002	RES 22 ohm 5% .35W Fuse Car Film
LL01	10042760	LOPT Line Output Trans DST H89
LP02	10111880	Transformer Switch Mode
LP03	47101200	Transformer Overcarrier Driver
CRT BASE 6025U		
RT07	1500958009	RES 10 ohm 5% .3W Fuse Carb Film
0001	11006761	Socket CRT Base
RS56	1500958009	RES 10 ohm 5% .3W Fuse Carb Film
AUDIO POWER AMP 2300U		
RA09, RA10,		
RA11, RA12	1306651008	RES 8.2 ohm 10% .5W Fuse Car Fil
CW05	43170700	CAP 47 nF 5% 250V Film Special
SD01	60432870	Connector Focus Unit
MAINS FILTER 5008S		
CP01, CP02	10313900	CAP 100 nF 20% 275V Metal Paper
LP02	10037370	Coil 30 MH Mains Filter Choke
LP05	47095000	Coil 400 MH Mains Filter Choke
FP05	48064700	Fuse 1.6 Amp Time Lag
RA01, RS22	1500957009	RES 100 ohm 5% .3W Fuse Car Film
RS20, RS21,		
RS23	1500958009	RES 10 ohm 5% .3W Fuse Carb Film
IF 2145 01		
R124	41005202	RES 10 ohm 5% .3W Fuse Car Film
CH400	20153500	Switch Mains On/Off

Service Adjustments

Adjustment Guide

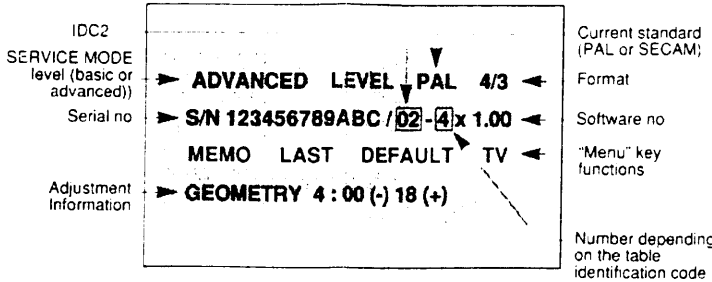
Introduction

The notes below apply to the SERVICE MODE for version V4.XX. The software is applicable to version 01 of the IDC2 chassis and has one EPROM: Version V4.02. The tables with the characteristic functions and configurations show the corresponding

default values. These values are subject to change as technical development occurs. Version V4.XX includes the autoprogramming BIT 0 of CONFIG 1 and 8-bit resolution video signal processing (instead of 7).

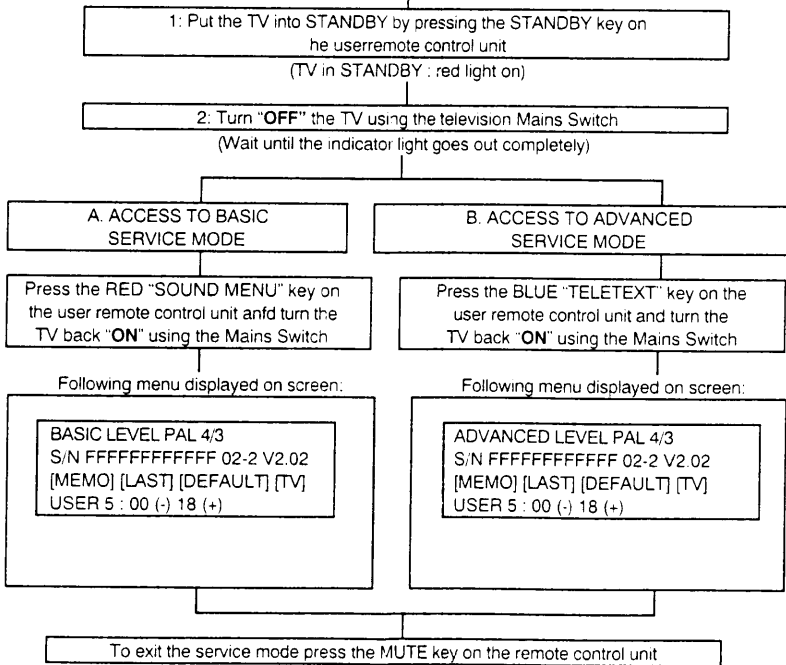
Example of Main Menu Display:

Access to Service Mode



CODE	MENU TYPE	TUBE TYPE	AUDIO
00	TFK	169	DIGITAL
01	THOM	169	DIGITAL
02	TFK	43	DIGITAL
03	THOM	43	DIGITAL
04	TFK	169	ANALOGUE
05	THOM	169	ANALOGUE
06	TFK	43	ANALOGUE
07	THOM	43	ANALOGUE

Ensure that the set is switched on and the green light is on with or without an HF signal * and proceed as follows



* NOTE : The service mode cannot be entered if a peripheral device is in service on one of the TV A/V sockets

Summary of Adjustment and Configuration Menus

CHARACTERISTIC FUNCTIONS					
PAGES	PAGE NO:	FUNCTION NO:	DESCRIPTION	DEFAULT VALUES	
				43	169
MAC	1:	00	DMA - VCO Register	DC	DC
PIP	2:	08	PIP VCO Adjust PAL	80	80
PIP	2:	09	PIP VCO Adjust NTSC	80	80
AUDIO/ VIDEO	2:	03	VCO Adjust	00	00
AUDIO/ VIDEO	3:	04	VCO Adjust NTSC	00	00
GEOMETRY	4:	00	VERTICAL SHIFT	88	88
GEOMETRY	4:	01	WIDTH	6D	72
GEOMETRY	4:	02	HORIZONTAL SHIFT	74	7C
GEOMETRY	4:	03	PARABOLA 1 to 2 (4/3 BSP only)	0F	-
GEOMETRY	4:	04	PARABOLA 2 to 1 (4/3 BSP only)	9A	-
GEOMETRY	4:	05	HEIGHT (16 bit)	0990	0A53
GEOMETRY	4:	06	EAST WEST 1 (16 bit)	2800	2989
GEOMETRY	4:	07	TRAPEZOID 1 (16 bit)	038E	0376
GEOMETRY	4:	08	EAST WEST 2 (4/3 BSP) (16 bit)	1000	-
GEOMETRY	4:	09	TRAPEZOID 2 (4/3 BSP) (16 bit)	0119	-

CONFIGURATION BYTES

CONFIGURATIONS	PAGE NO:	FUNCTION NO:	FUNCTION DESCRIPTION
CONFIG. 1	6:	01 (b1)	ZOOM KEYS FOR TEXT
CONFIG. 4	9:	04 (b4)	3.58 Mhz NTSC AV
CONFIG. 4	9:	06 (b6)	TFK COMBI REMOTE
CONFIG. 5	10:	03 (b3)	G2 ALIGNM.
PR - DATA	11:	06 (b6)	FAST TIME CONSTANT - AV ONLY

Note: The PR - DATA byte is stored in memory by the program. In order to obtain the correct value for the byte, go from SERVICE MODE PR - DATA menu to TV MODE (BLUE "VT" key on the remote control unit), before making any changes, and display the A/V program number on the screen. Then go back to SERVICE MODE and modify the bit as required.

CHARACTERISTIC FUNCTIONS

PAGES	PAGE NO:	FUNCTION NO:	DESCRIPTION	DEFAULT VALUES	
				43	169
MAC	1:	00	DMA - VCO REGISTER	DC	DC
MAC	1:	01	VCO CUTOFF - R Register	7D	7D
MAC	1:	02	VCO CUTOFF - G Register	7D	7D
MAC	1:	03	VCO CUTOFF - B Register	78	78
MAC	1:	04	VCO WHITE DRIVE - R Register	6E	6E
MAC	1:	05	VCO WHITE DRIVE - G Register	6E	6E
MAC	1:	06	VCO WHITE DRIVE - B Register	69	69
MAC	1:	07	DMA COMPOSITE SYNC. DELAY	40	40
MAC	1:	08	DMA BLANK DELAY	FO	FO
MAC	1:	14	DMA LUMA DELAY	OC	OC
PIP	2:	05	PIP DRIVE RED	CO	CO
PIP	2:	06	PIP DRIVE GREEN	CO	CO
PIP	2:	07	PIP DRIVE BLUE	CO	CO
PIP	2:	08	PIP VCO Adjust PAL	80	80
PIP	2:	09	PIP VCO Adjust NTSC	80	80
PIP	2:	10	PIP LUMA DELAY	66	66
PIP	2:	11	PIP CUTOFF RED	50	50
PIP	2:	12	PIP CUTOFF GREEN	50	50
PIP	2:	13	PIP CUTOFF BLUE	50	50
PIP	2:	14	POP HORIZONTAL POSITION	B2	B2
PIP	2:	15	POP VERTICAL POSITION	05	18
PIP	2:	16	CURTAIN LEFT (16/9 only)	-	25
PIP	2:	17	CURTAIN WIDTH (16/9 only)	-	1E
PIP	2:	18	CURTAIN RIGHT (16/9 only)	-	A3
AUDIO/ VIDEO	3:	00	AUDIO IDENTIFICATION	08	08
AUDIO/ VIDEO	3:	02	AUDIO CROSSTALK*	04	04
AUDIO/ VIDEO	3:	03	VCO Adjust PAL	00	00
AUDIO/ VIDEO	3:	04	VCO Adjust NTSC	00	00
AUDIO/ VIDEO	3:	05	MAIN CLK PHASE	00	00
AUDIO/ VIDEO	3:	06	RED OFFSET	54	6D
AUDIO/ VIDEO	3:	07	BLUE OFFSET	54	6D

* Factory setting: the default value is adequate for this function.

Cutoff Adjustment

CHARACTERISTIC FUNCTIONS				DEFAULT VALUES				
GROUP	PAGE NO:	FUNCTION NO:	FUNCTION DESCRIPTION	29" KP & 32"	25" & 29" BSP	29" SF	28"	32"
AUDIO/ VIDEO	3:	08	CUTOFF - REF RED	62	62	5B	45	57
AUDIO/ VIDEO	3:	09	CUTOFF - REF GREEN	32	32	2D	2C	34
AUDIO/ VIDEO	3:	10	CUTOFF - REF BLUE	2A	2A	35	2B	2A

Peak Clipping and White Balance

CHARACTERISTIC FUNCTIONS				DEFAULT VALUES				
GROUP	PAGE NO:	FUNCTION NO:	FUNCTION DESCRIPTION	29" KP & 32"	25" & 29" BSP	29" SF	28"	32"
AUDIO/ VIDEO	3:	11	DRIVE - REF RED	5C	5C	5B	57	68
AUDIO/ VIDEO	3:	12	DRIVE - REF GREEN	41	41	45	3E	54
AUDIO/ VIDEO	3:	13	DRIVE - REF BLUE	35	35	3F	35	47
AUDIO/ VIDEO	3:	14	WHITE CURRENT	E5	E1	E1	E5	E5

Geometry

CHARACTERISTIC FUNCTIONS					DEFAULT VALUES	
PAGES	PAGE NO:	FUNCTION NO:	DESCRIPTION		43	169
GEOMETRY	4:	00	VERTICAL SHIFT		88	88
GEOMETRY	4:	01	WIDTH		6D	72
GEOMETRY	4:	02	HORIZONTAL SHIFT		74	7C
GEOMETRY	4:	03	PARABOLA 1 to 2 (4/3 BSP only)		0F	-
GEOMETRY	4:	04	PARABOLA 2 to 1 (4/3 BSP only)		9A	-
GEOMETRY	4:	05	HEIGHT (16 bit)		0990	0A53
GEOMETRY	4:	06	EAST WEST 1 (16 bit)		2800	2989
GEOMETRY	4:	07	TRAPEZOID 1 (16 bit)		038E	0376
GEOMETRY	4:	08	EAST WEST 2 (4/3 FST) (16 bit)		1000	-
GEOMETRY	4:	09	TRAPEZOID 2 (4/3 FST) (16 bit)		0119	-

Service Adjustments Cont'd.

Contrast Scale

CHARACTERISTIC FUNCTIONS				DEFAULT VALUES				
GROUP	PAGE NO:	FUNCTION NO:	FUNCTION DESCRIPTION	29" KP & 32"	43 25" & 29" BSP	29" SF	28" 169	32"
USER	5.	24	TUNER 1 Contrast offset	C6	C6	I:B2	AC	98
USER	5.	24	TUNER 2 (SAT)	FD	FD	FD	FD	FD

CONFIGURATION BYTES			
CONFIGURATIONS	PAGE NO:	FUNCTION NO:	FUNCTION DESCRIPTION
CONFIG. 1 *	6.	00 (b0)	FULL AUTOPROG.
CONFIG. 1	6.	01 (b1)	ZOOM KEYS FOR TEXT
CONFIG. 1	6.	02 (b2)	DOLBY FITTED b2 = 1
CONFIG. 1	6.	03 (b3)	NTSC XTAL FITTED
CONFIG. 1	6.	04 (b4)	TEXT. DETECT DISABLE
CONFIG. 1	6.	05 (b5)	SPU FITTED
CONFIG. 2	7.	00 (b0)	FREQUENCY TABLE
CONFIG. 2	7.	01 (b1)	FREQUENCY TABLE
CONFIG. 2	7.	02 (b2)	FREQUENCY TABLE
CONFIG. 2	7.	04 (b4)	CABLE MAC TUNER INSTALLED
CONFIG. 2	7.	05 (b5)	UK TUNER (NICAM)
CONFIG. 2	7.	06 (b6)	FRENCH MULTI STANDARD
CONFIG. 2	7.	07 (b7)	MULTI STANDARD
CONFIG. 3	8.	00 (b0)	POWER - UP FORMAT WIDE
CONFIG. 3	8.	02 (b2)	DEMODULATOR 6.0 / 6.5
CONFIG. 3	8.	03 (b3)	DEMODULATOR 4.5 Mhz
CONFIG. 3	8.	05 (b5)	BASS / TREB. MODULE FITTED
CONFIG. 4	9.	02 (b2)	AUTO SOUND IDENT DISPLAY
CONFIG. 4	9.	03 (b3)	CONTINUOUS COLOUR STD SEARCH
CONFIG. 4	9.	04 (b4)	3.58 Mhz NTSC AV
CONFIG. 4	9.	06 (b6)	TFK COMBI REMOTE

Autoprogramming: Config. 1 6: 00(b0)

* V4.XX SERVICE MODE
b0 = 0 → AUTO PROGRAMMING VALID.
b0 = 1 → AUTO PROGRAMMING NOT VALID.

Videotext: Config. 1 6: 04(b4)

b4 = 0 → NORMAL MODE

The software normally detects videotext but not when only one page is transmitted.

b4 = 1 → TELETEXT MODE

Detects and displays normally even when only one page is transmitted.

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Configuration Examples

4/3 Televisions
Model References:
DSF68NX
I Standard
29" Tube SF
V4.4 software (TH)
with autoprogramming
NICAM

CONFIG. 1	6:	<> 00101110 <+>
CONFIG. 2	7:	<> 10110000 <+>
CONFIG. 3	8:	<> 01011110 <+>
CONFIG. 4	9:	<> 11001100 <+>

Control & Teletext Diagram Voltage Charts

BR	VOLTS
IT03	
1	1.2
2	0.9
3	4.3
4	4
5	2.5
6	3
7	2.5
8	5
9	0
10	4.3
11	0.9
12	3.7
13	2.9
14	2.9
15	3
16	0

BR	VOLTS
IT02	
1	0
2	2.4
3	4
5	5
6	0.1
7	4.4
8	0
9	2.3
10	2.6
11	2.5
12	2.4
13	2.3
14	2.5
15	2.3
16	4
17	4.4
18	4.2
19	4
20	0.1
21	6
22	3.3
23	0.5
24	3.5
25	1
26	2.3
27	2.4
28	2.7
29	0
30	0
31	1
32	4.9
33	0
34	
35	5
36	5
37	4.8
38	0.3
39	0.2
40	0

Audio Signal Diagram "B" Voltage Charts

BR	VOLTS
IS60	
1	5.5
32	5.5

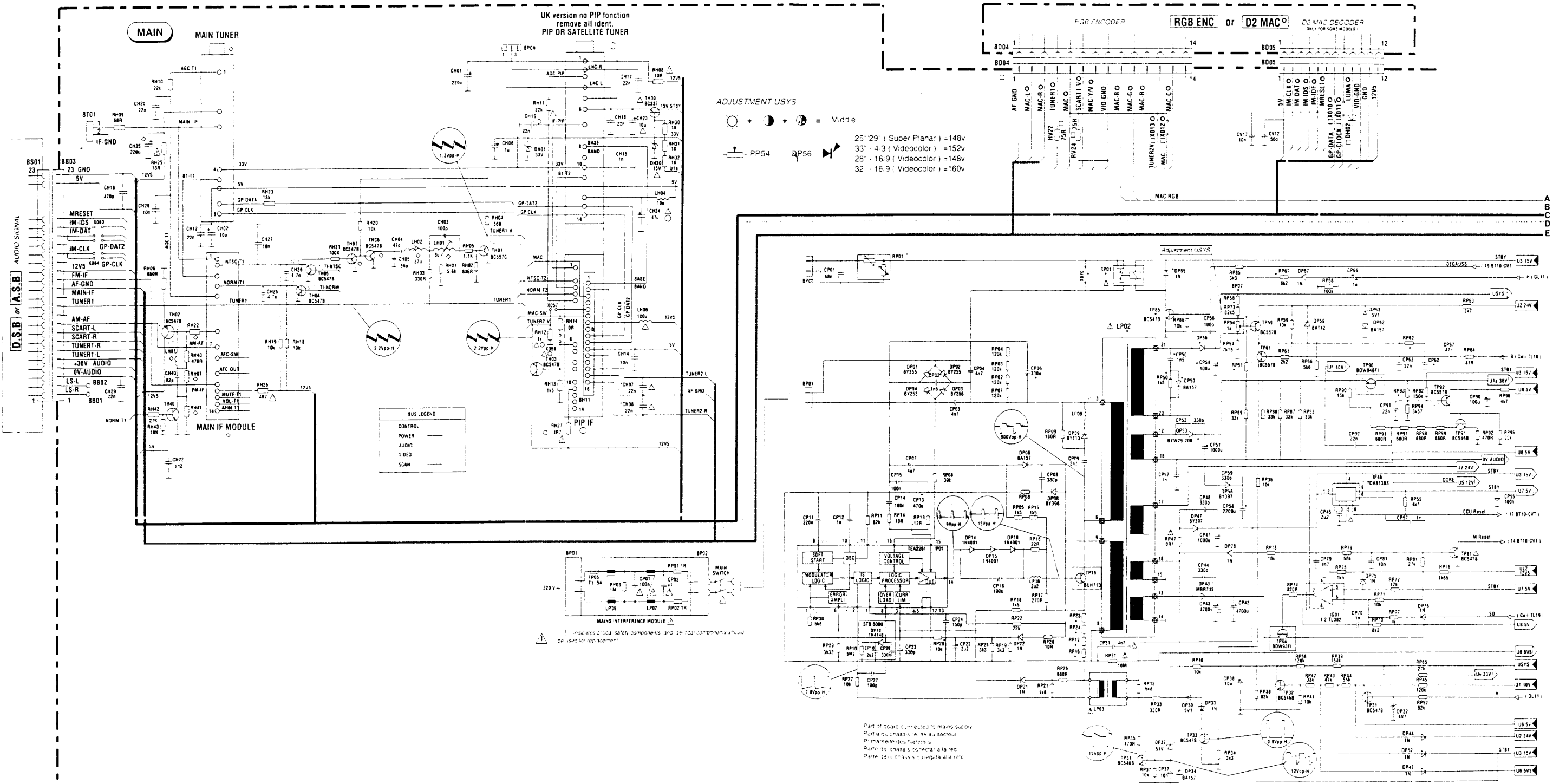
BR	VOLTS
IA01	
1	18
2	16.9
3	16.9
4	0
5	16.9
6	16.9
7	16.9
8	36

VOLTS			
TRANS.	E	B	C
TS40	11	11	0
TS41	4.5	5	0
TS42	0	0	11.5
TS43	0	0	11
TS90	11.5	12	32.5

CPT Parts List

Component Picture Tube Part List								
Size	4 3				16 9			
Glass DIAG	29" BSP VC	33" VC	29" SF VC	29" KP VC	25-29" FST	25" BSP VC	28" VC	32" VC
Pict. DIAG	27"	31"	27"	27"	23-27"	23"	26"	30"
U SYST	148 v	152 v	148 v	148 v	148 v	148 v	148 v	160 v
U AUDIO	32 V	32 V	32 V	32 V	32 V	32 V	32 V	32 V
U AUDIO *	23 V	23 V	23 V	23 V	23 V	23 V	23 V	23 V
SP 01	-	With	-	-	-	-	-	With
X 070	With	-	With	With	With	With	With	-
CP 01	68 nF	-	68 nF	68 nF	68 nF	68 nF	68 nF	-
TP 85	-	BC 547 B	-	-	-	-	-	BC 547 B
DP 85	-	1N	-	-	-	-	-	1N
CP 06	330 uF	330 uF	330 u	330 uF	330 uF	330 uF	330 uF	330 u
CP DP RP 50	With	With	-	With	With	With	With	With
CP 54	100 uF	100 uF	100 uF	100 uF	100 uF	100 uF	100 uF	100 uF
CP 62	1 uF	1 uF	1 uF	1 uF	1 uF	1 uF	1 uF	1 uF
CP 66	1 uF	1 uF	1 uF	1 uF	1 uF	1 uF	1 uF	1 uF
RP 08	0 R	0 R	0 R	0 R	0 R	0 R	0 R	0 R
RP 12	10 mm	10 mm	10 mm	10 mm	10 mm	10 mm	10 mm	10 mm
RP 13	12 R - 7W	12 R - 7W	12 R - 7W	12 R - 7W	12 R - 7W	12 R - 7W	12 R - 7W	12 R - 7W
RP 23/24.46	20 mm	20 mm	20 mm	20 mm	20 mm	20 mm	20 mm	20 mm
RP 28	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%
RP 56	127 K - 1%	127 K - 1%	127 K - 1%	127 K - 1%	127 K - 1%	127 K - 1%	127 K - 1%	127 K - 1%
RP 62	1 K	1 K	1 K	1 K	1 K	1 K	1 K	1 K
RP 67	8.2 K	8.2 K	8.2 K	8.2 K	8.2 K	8.2 K	8.2 K	8.2 K
RP 93	28 K - 1%	28 K - 1%	28 K - 1%	28 K - 1%	28 K - 1%	28 K - 1%	28 K - 1%	28 K - 1%
RP 93 *	24.3 K - 1%	24.3 K - 1%	24.3 K - 1%	24.3 K - 1%	24.3 K - 1%	24.3 K - 1%	24.3 K - 1%	24.3 K - 1%
DP 43	MBR 745	MBR 745	MBR 745	MBR 745	MBR 745	MBR 745	MBR 745	MBR 745
DP 53	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200
DP 56	BY 399	BY 399	BYT 13 - 1000	BY 399	BY 399	BY 399	BY 399	BY 399
CG 05	680 pF	820 pF	1 nF	820 pF	680 pF	680 pF	560 pF	390 pF
CG 10	470 nF	470 nF	470 nF	470 nF	-	470 nF	470 nF	470 nF
DG 10	BA 157	BA 157	BA 157	BA 157	-	BA 157	BA 157	BA 157
RG 01	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%	10 K - 1%
RG 03	33 K	27 K	33 K	33 K	33 K	33 K	39 K	39 K
RG 04	820 K	820 K	1M	820 K	820 K	820 K	680 K	820 K
RG 05	100 K	120 K	180 K	120 K	100 K	180 K	180 K	220 K
X 040	With	With	With	With	-	With	With	With
X 041	-	-	-	-	With	-	-	-
CF 04	22 nF	22 nF	22 nF	22 nF	22 nF	22 nF	22 nF	22 nF
RF 02	267 R	267 R	267 R	267 R	267 R	267 R	332 R	332 R
RF 07	1 R - 1%	1 R - 1%	1 R - 1%	1 R - 1%	1 R - 1%	1 R - 1%	1.2 R - 1%	1.2 R - 1%
RF 12	100 R	100 R	100 R	100 R	100 R	100 R	100 R	100 R
RF 16	470 R	470 R	470 R	470 R	470 R	470 R	470 R	470 R
CL 04	15 nF	15 nF	6.8 nF	15 nF	15 nF	15 nF	15 nF	15 nF
CL 06	11.5 nF	12 nF	13.7 nF	11.5 nF	11.5 nF	12 nF	11.5 nF	12.4 nF
CL 07	330 nF	330 nF	360 nF	330 nF	1 uF	330 nF	360 nF	360 nF
CL 08	12 nF	15 nF	15 nF	12 nF	22 nF	15 nF	15 nF	15 nF
CL 13	220 nF	220 nF	220 nF	220 nF	220 nF	220 nF	100 nF	100 nF
DL 05	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200	BYW 29 - 200
DL 34	Strap	Strap	1N	Strap	Strap	Strap	Strap	Strap
LL 02	39 uH	39 uH	15 uH	39 uH	39 uH	39 uH	39 uH	39 uH
LL 03	70 uH	70 uH	70 uH	70 uH	70 uH	70 uH	70 uH	70 uH
LL 06	2.2 uF	2.2 uF	2.2 uF	2.2 uF	2.2 uF	2.2 uF	2.2 uF	2.2 uF
RL 05	8.2 R	8.2 R	8.2 R	8.2 R	8.2 R	8.2 R	8.2 R	8.2 R
RL09	43.2 K - 1%	82.5 K - 1%	100 K - 1%	100 K - 1%	43.2 K - 1%	43.2 K - 1%	100 K - 1%	82.5 K - 1%
RL 12	5.9 K - 1%	5.6 K - 1%	5.23 K - 1%	5.23 K - 1%	5.9 K - 1%	5.9 K - 1%	5.23 K - 1%	5.6 K - 1%
LT 05	28 uH	30 uH	28 uH	28 uH	28 uH	28 uH	28 uH	32 uH
D.F.B	-	-	6004	-	-	-	-	6001
TV 20	-	-	With	With	-	-	-	With
RV 21	-	-	4.7 K	4.7 K	-	-	-	4.7 K
NS	ZNS 6013	-	-	ZNS 6012	-	ZNS 6011	-	-
BL 02	-	-	-	-	-	-	-	With
BD 11	-	-	With	With	-	-	-	With
BG 01	With	-	With	With	-	With	-	-

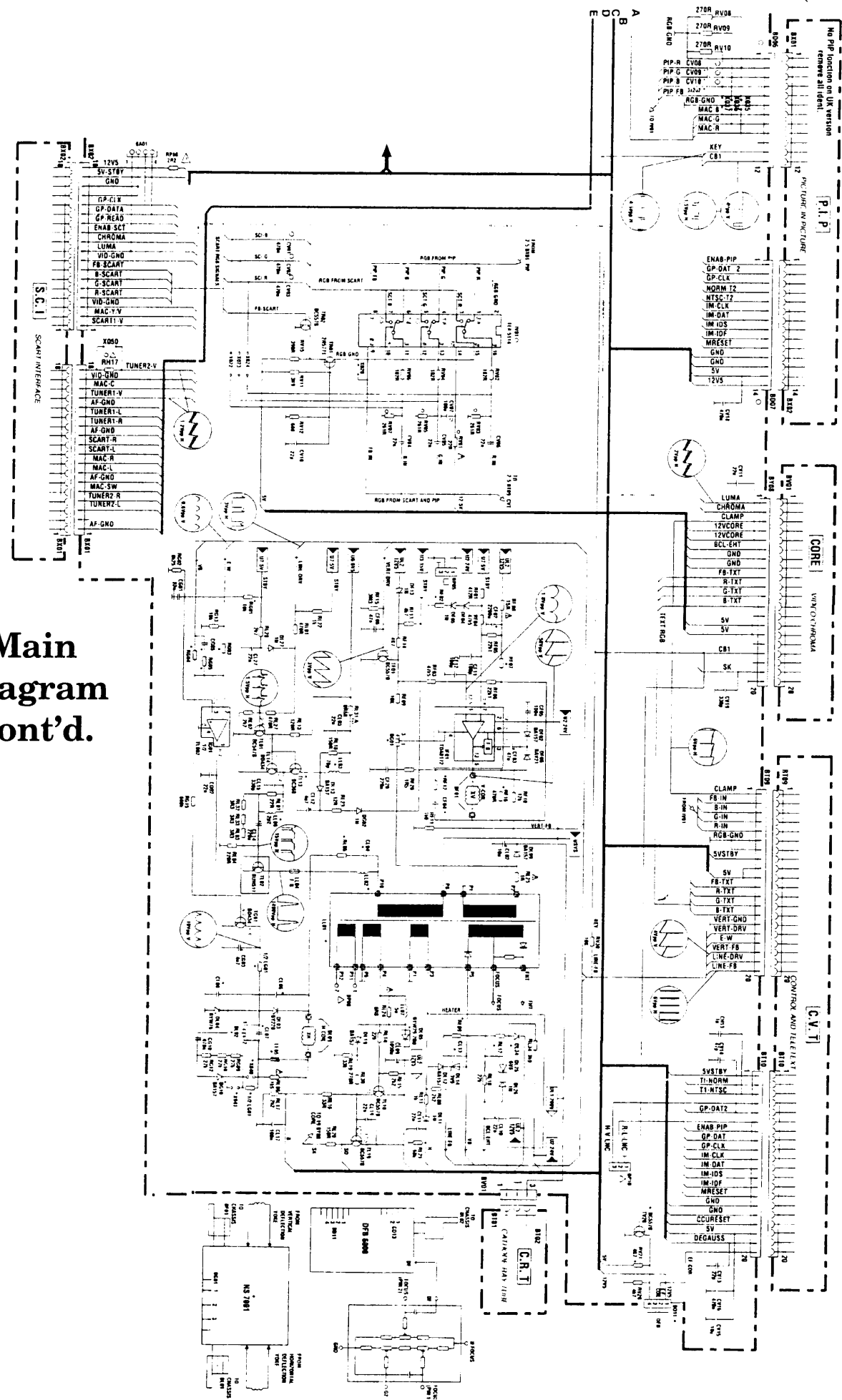
Main Diagram



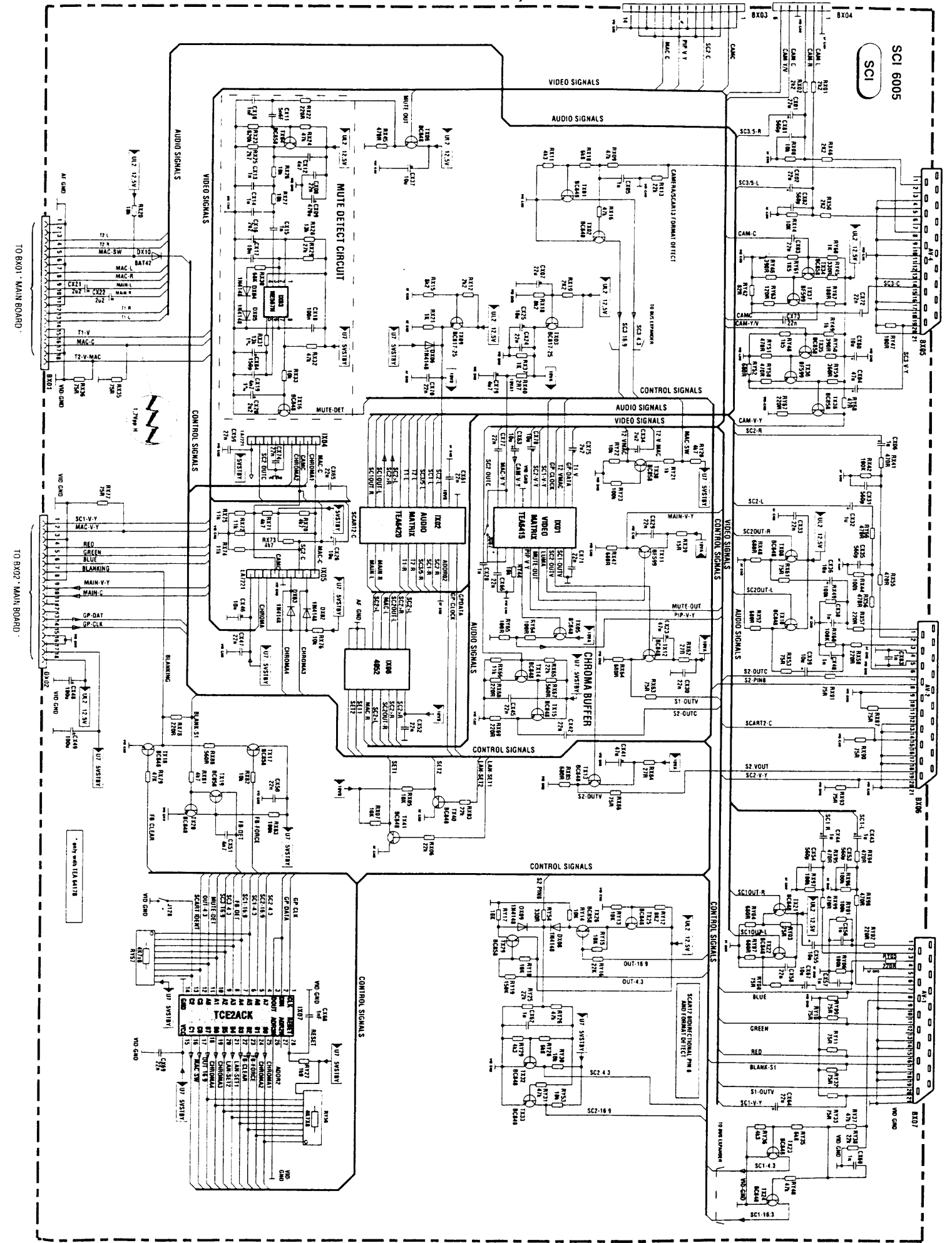
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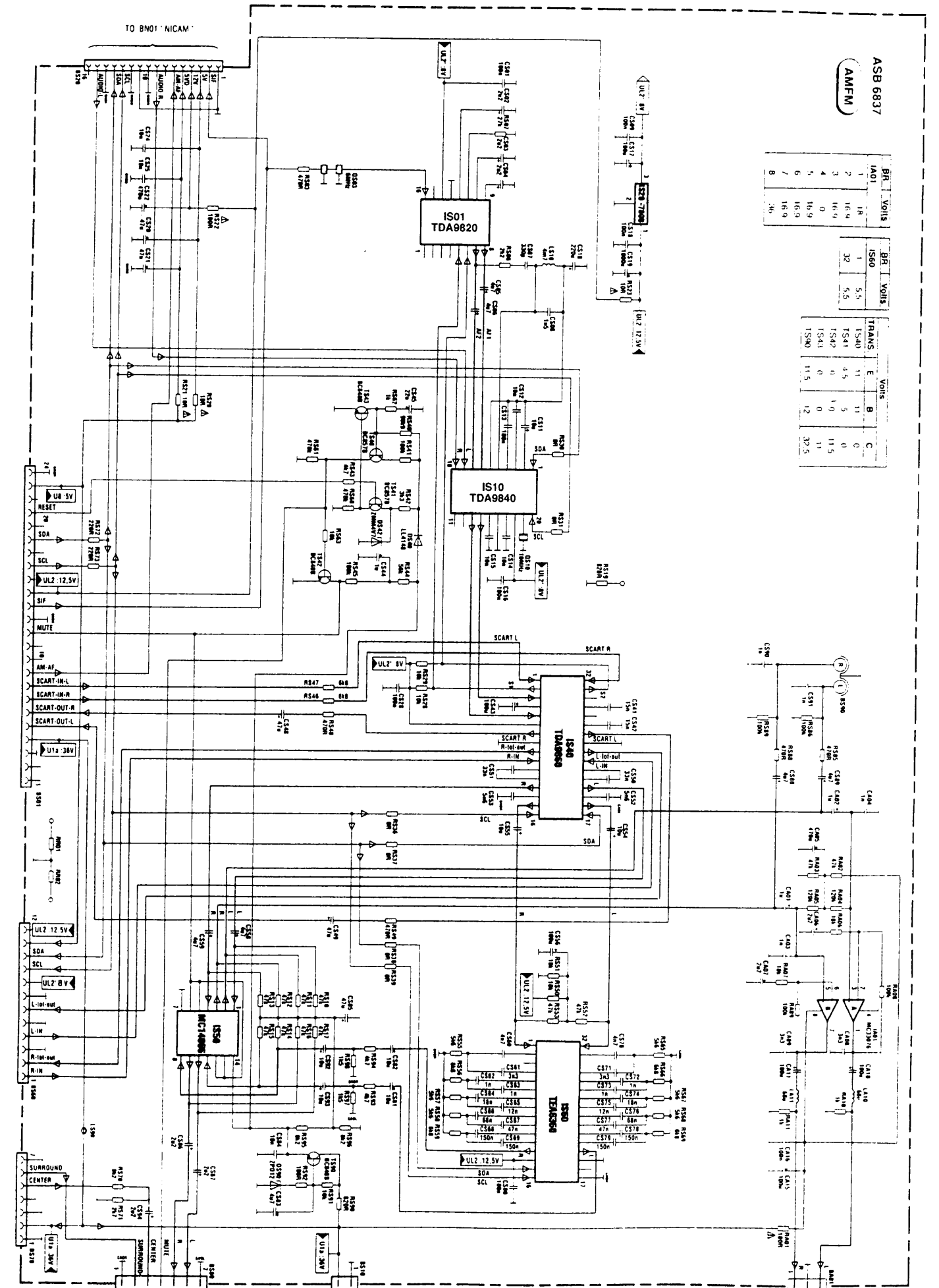
Main Diagram Cont'd.



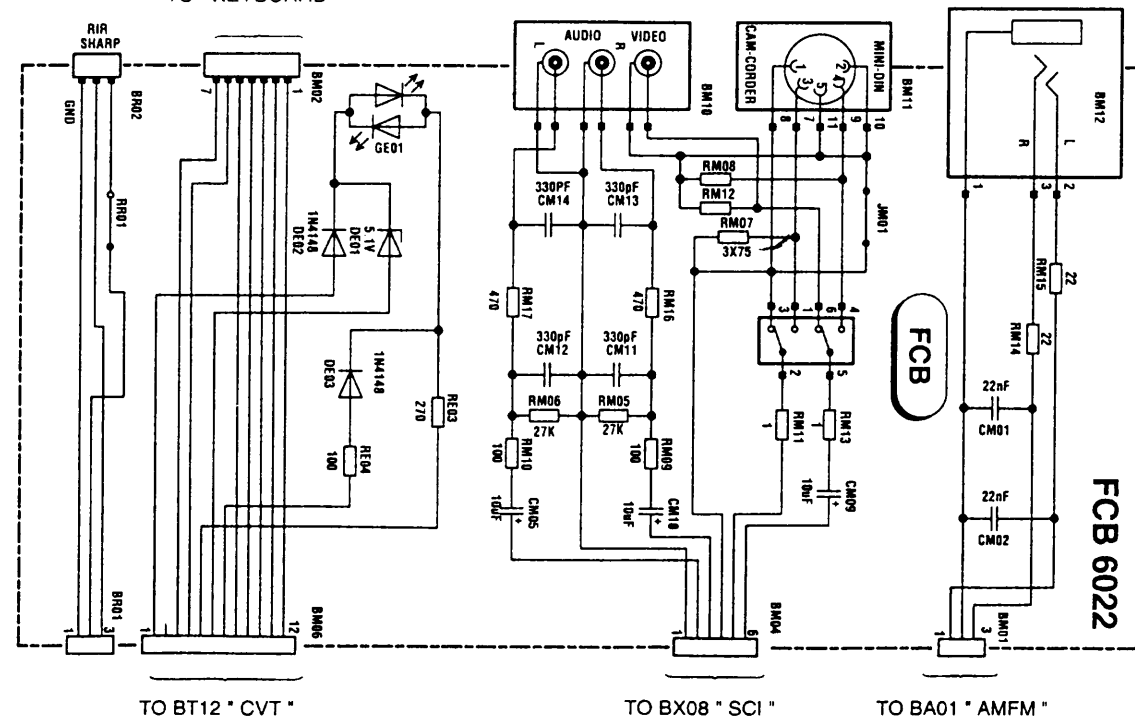
Scart Diagram



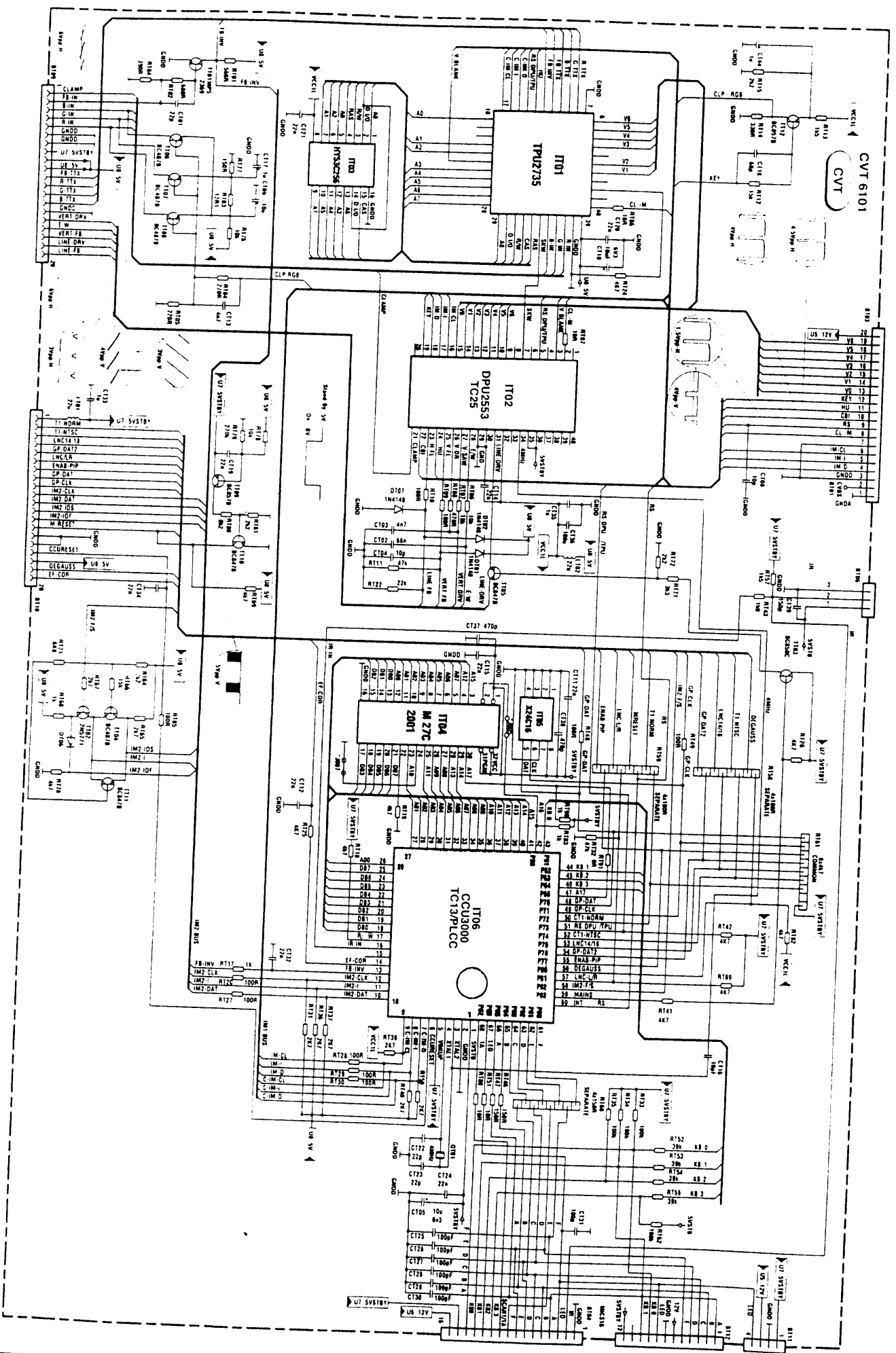
Audio Signal Diagram “B”



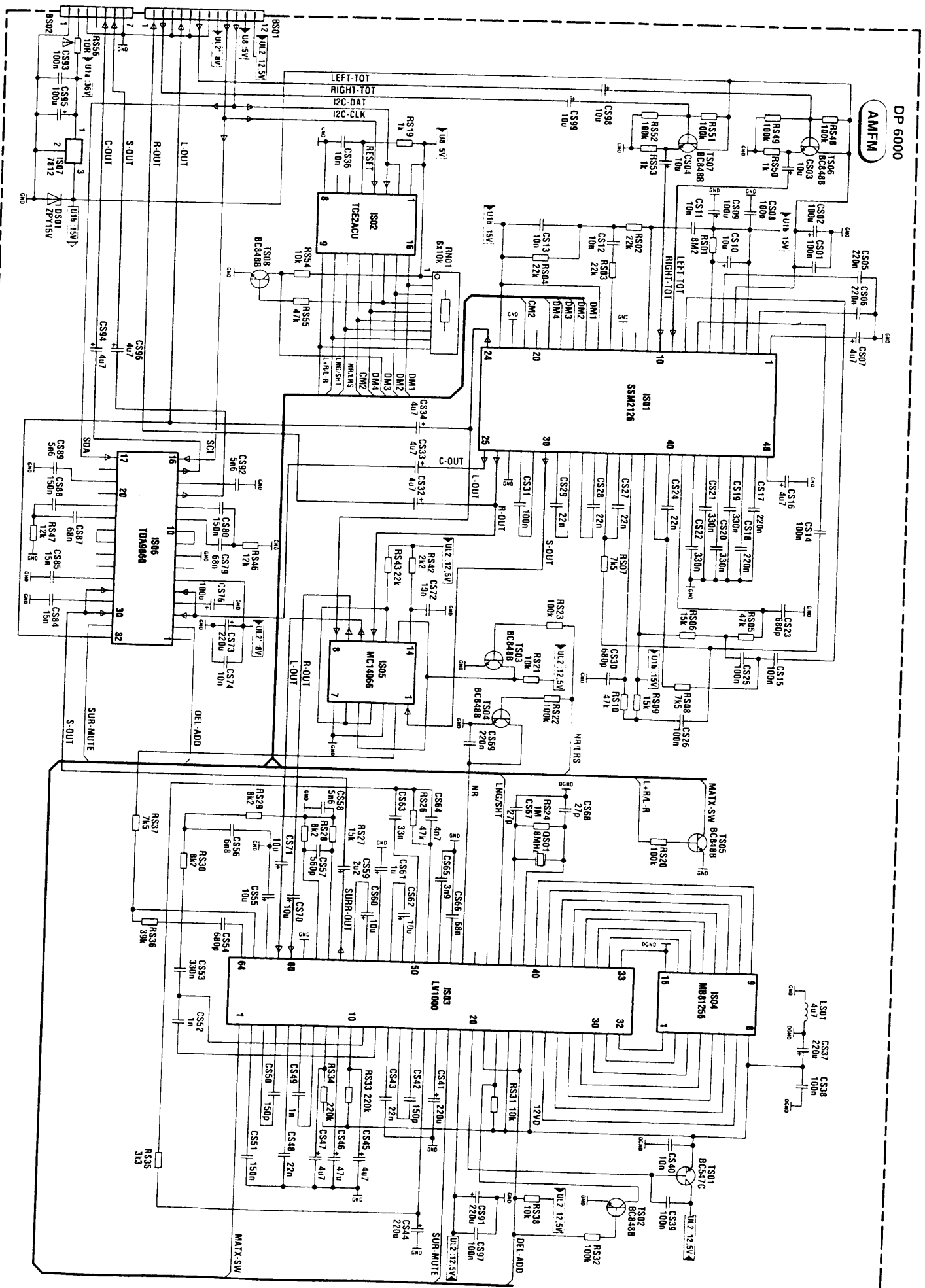
TO " KEYBOARD "



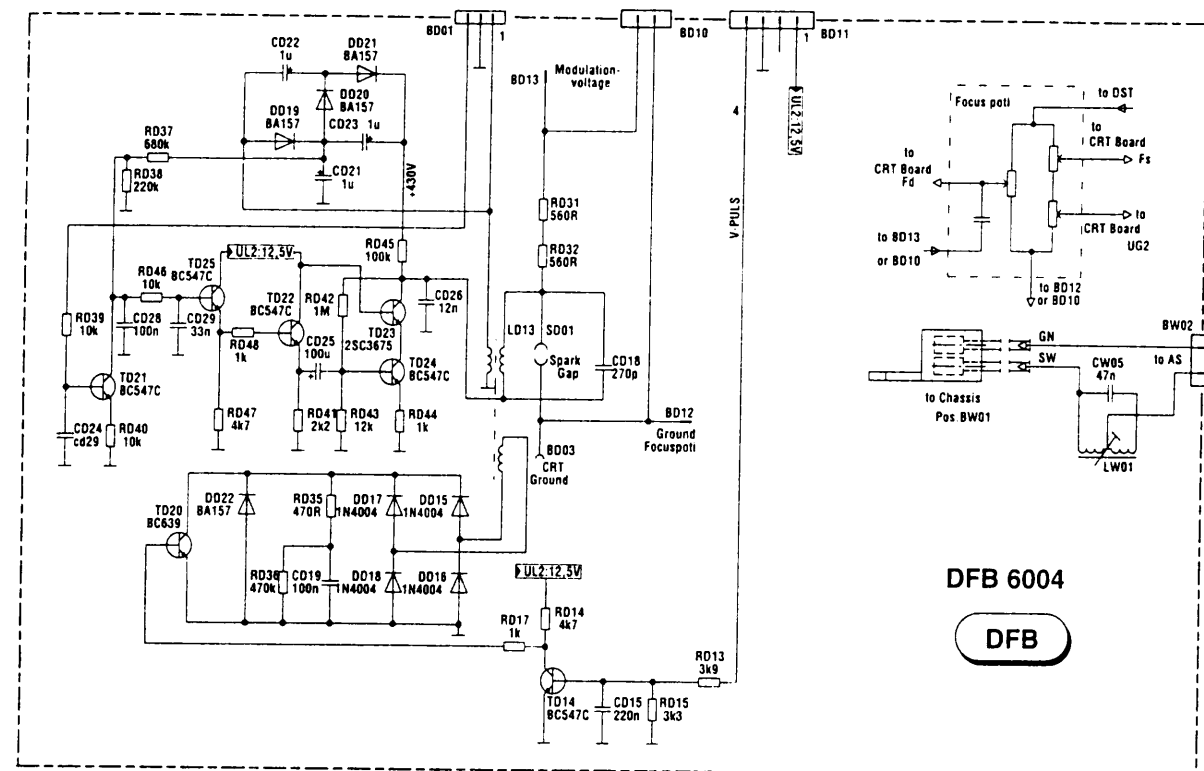
Control & Teletext Diagram



Dolby Diagram



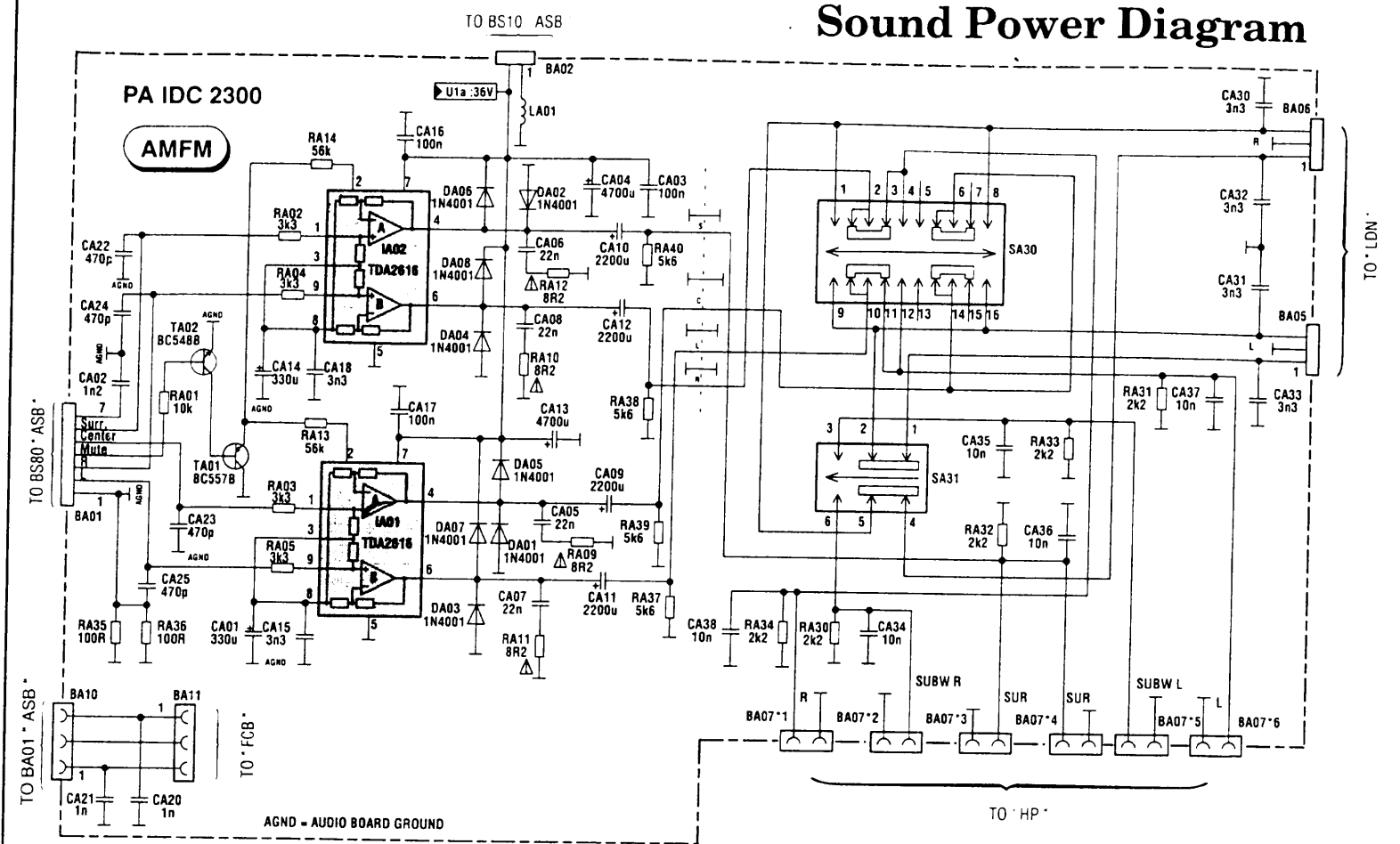
Dynamic Focus Diagram



DFB 6004

DFB

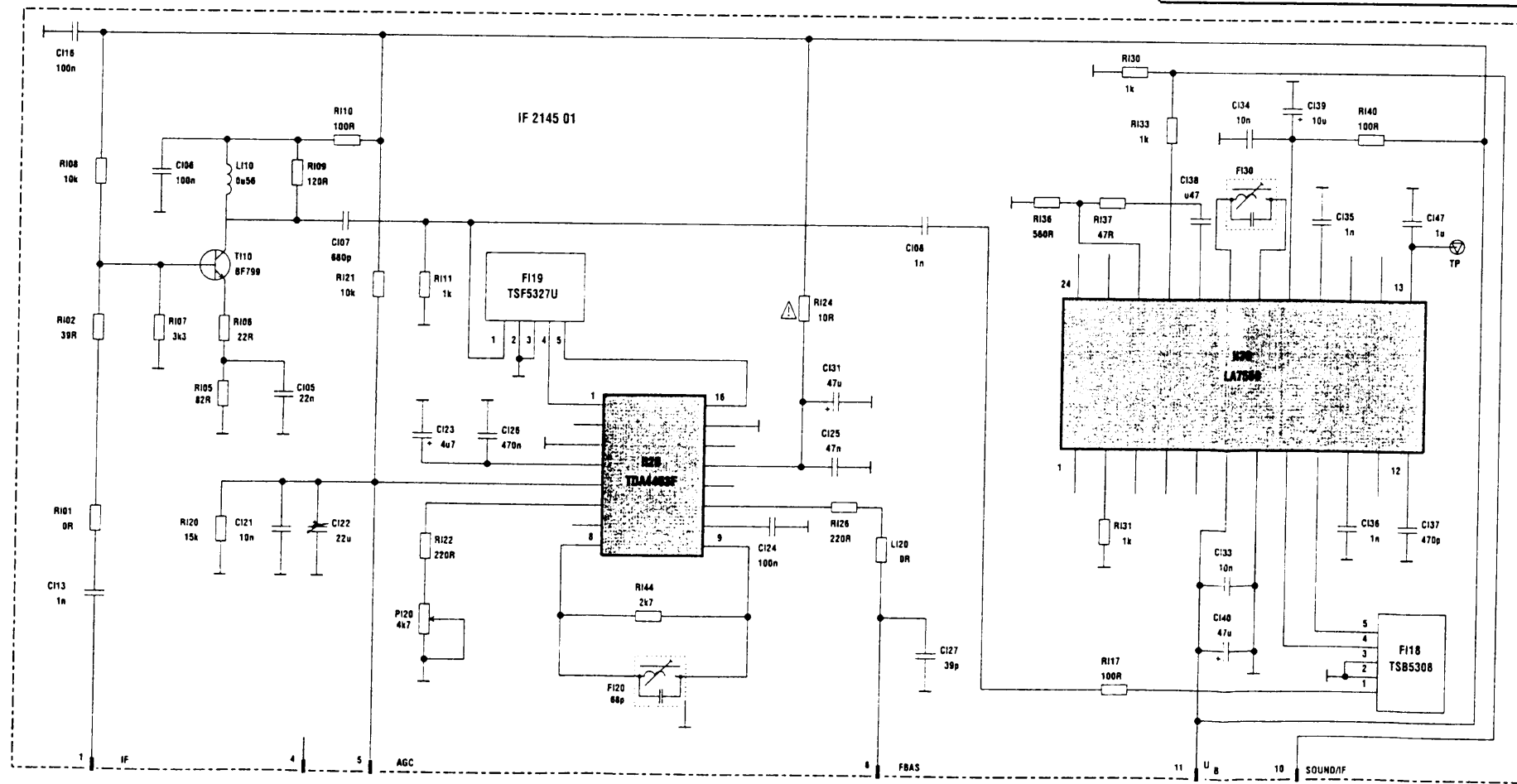
Sound Power Diagram



AGND = AUDIO BOARD GROUND

TO HP

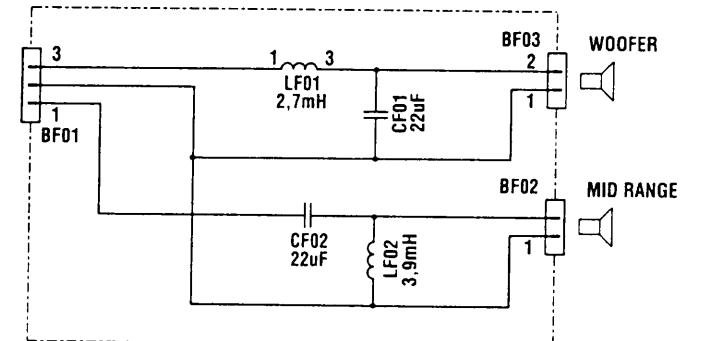
IF Amp Diagram



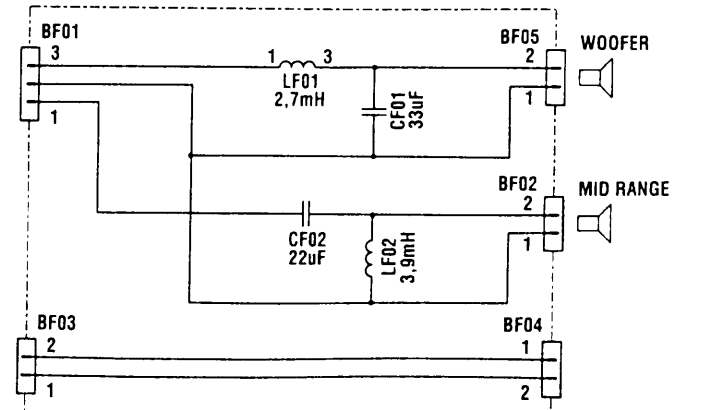
TO MAIN BOARD

LDN Diagrams

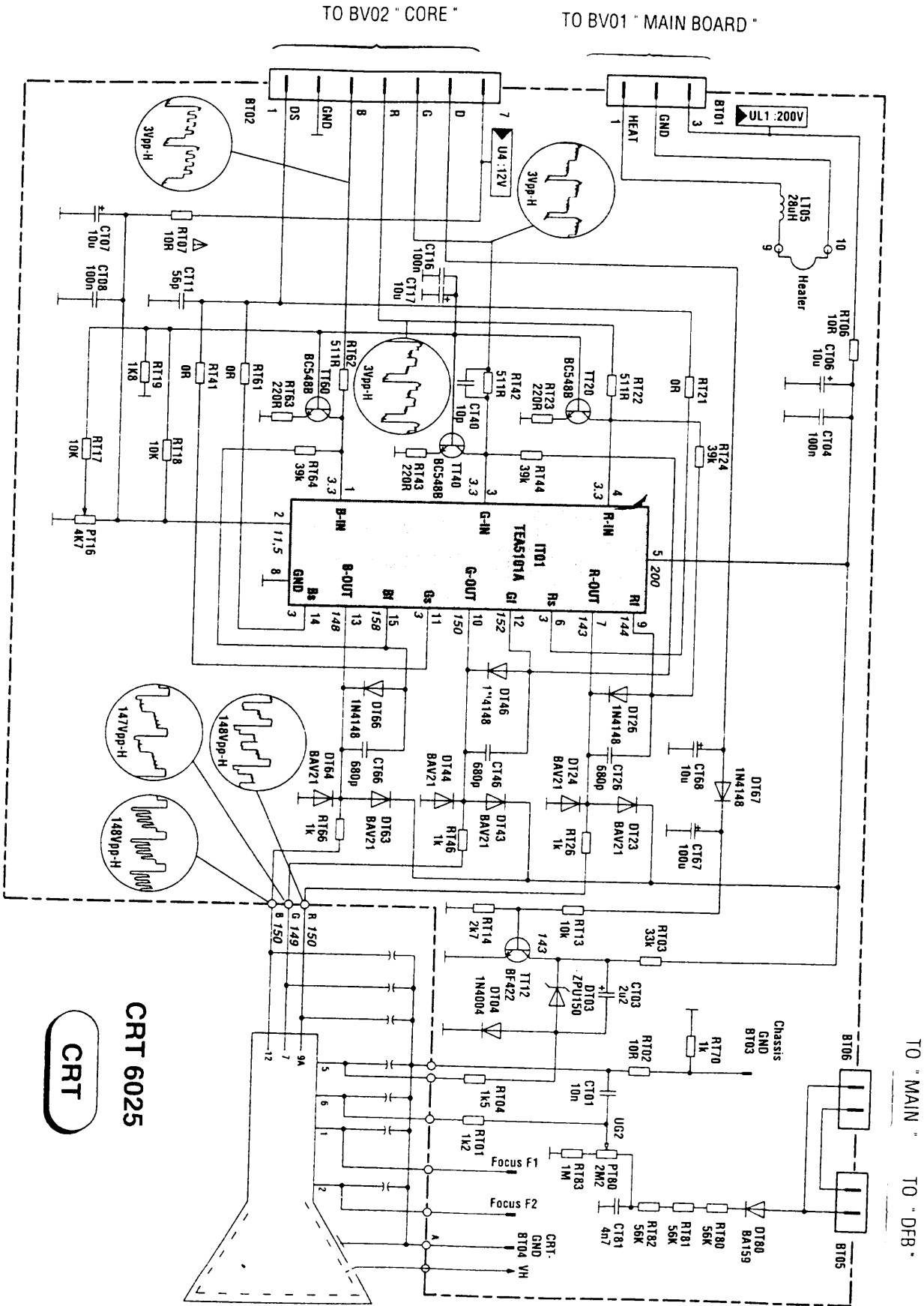
LDN 6026



LDN 6028



Video Amplifier Diagram



Video Chroma Diagram

