

Bang & Olufsen

Beovision 7802

Type 7510, 7511, 7533,
7030

Beovision 8902

Type 7210, 7211, 7233,
7020

Beovision 5502

Type 7710, 7711, 7733,
7090

Beovision 7702

Type 7410, 7411, 7412,
7433, 7070, 7072, 7073

Beovision 8802

Type 7110, 7111, 7112,
7133, 7050, 7052, 7053

Beovision 9002

Type 7003, 7004

TV System

Type: 7710, 7711, 7410,
7411, 7412, 7110, 7111,
7112, 7003, 7510, 7511,
7210, 7211 7430

VHF: B

UHF: G

Colour: Pal

Type: 7072, 7073, 7052,
7053: FTZ: 7090, 7070,
7050, 7030, 7020

VHF: B-S-TUNER

UHF: G

Colour: Pal

Type: 7733, 7433, 7133,
7004, 7533, 7233

UHF: I

Colour: Pal

Installation kits:

Pal/Secam Decoder

NTSC 4.43 MHz

Video In - In/Out

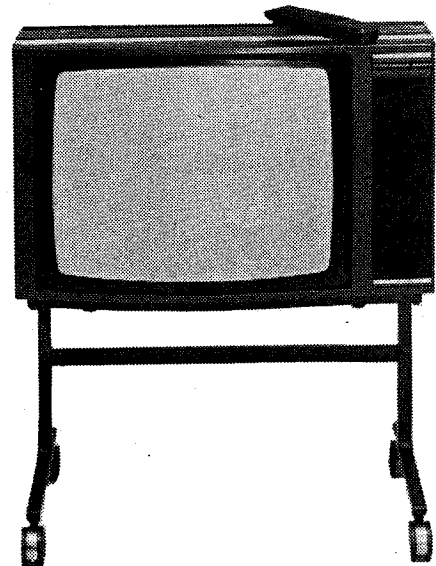
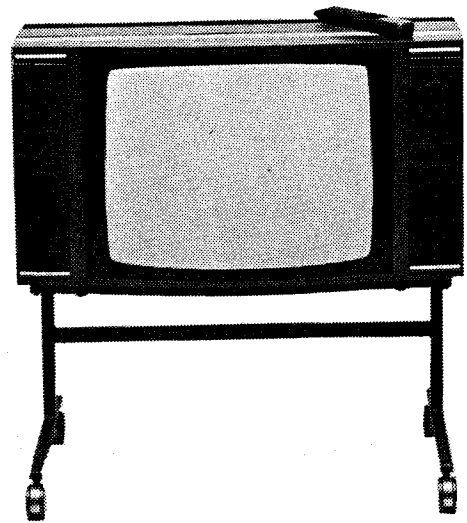
Stereofunction

Teletext

Accessories:

CTV-Stands

Video Stands

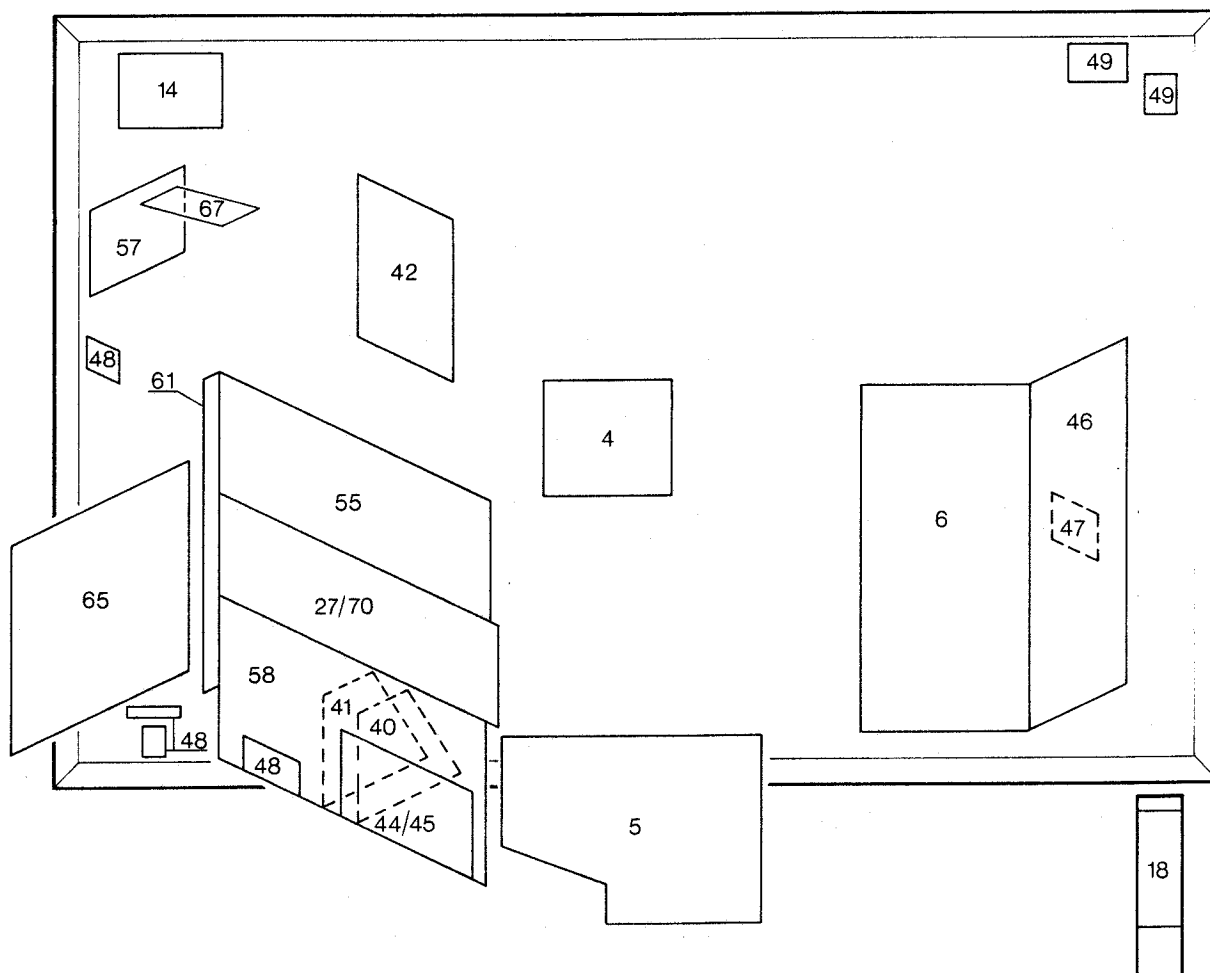


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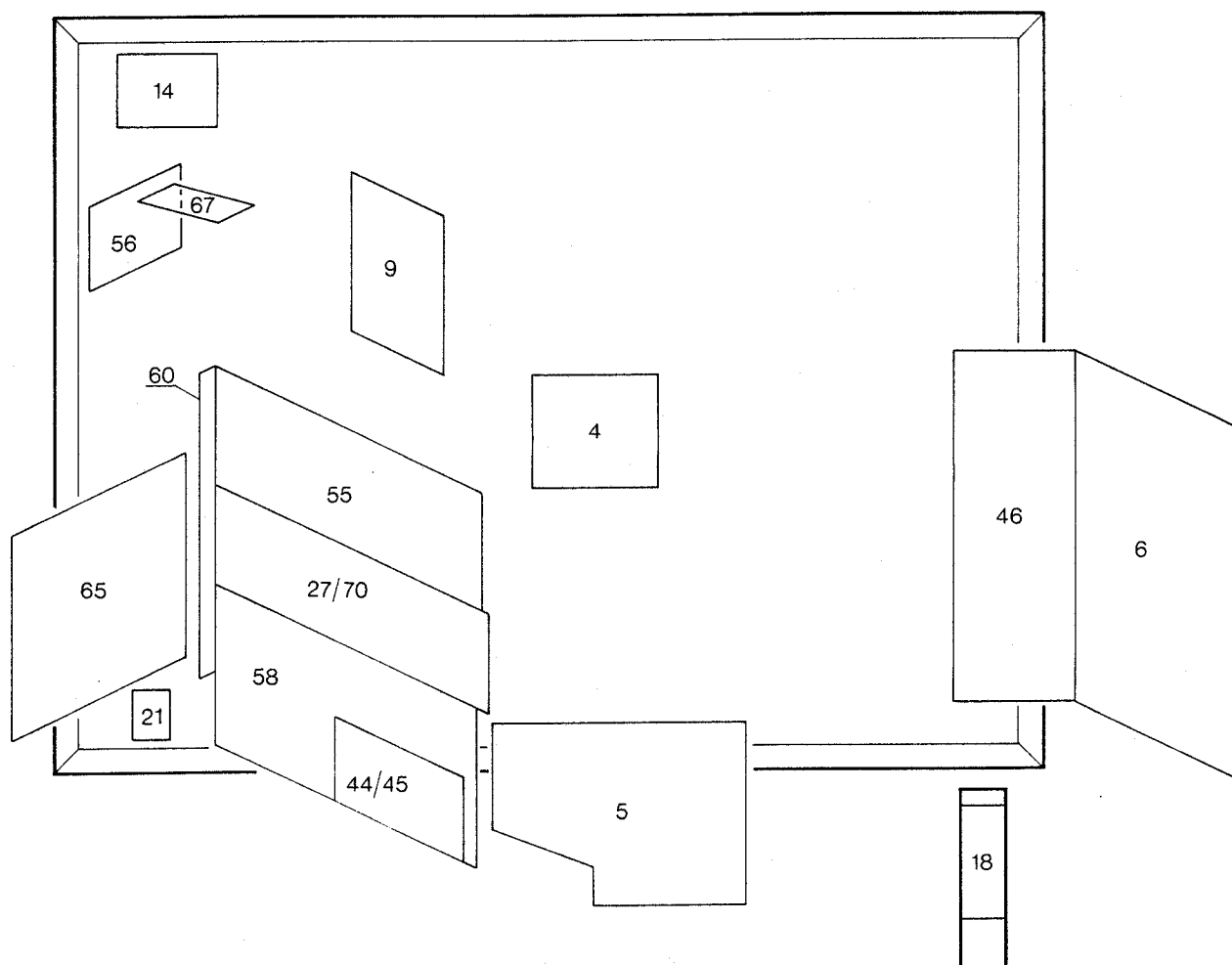
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14	Infra Red Ampl.	diagr. F page 1-13	58	Video IF.	diagr. A, E page 1-6, 12
18	Video Terminal	diagr. J page 1-17	60	Mother Board Digital	diagr. A, D page 1-6, 11
21	Headphone PCB	diagr. B, D page 1-8, 11	65	Teletext Decoder.	diagr. H (Installation Kit) page 1-16
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KEY TO DIAGRAMS

Component print and co-ordinate system

Cable connections in the diagrams

Internal connection on a diagram page

Connection to another diagram page

Ground symbols

Signal paths and IC markings

Each individual diagram page is marked by a letter at the top, e.g. DIAGRAM A.

The PCB units have component print and co-ordinate system both on the print and on the component sides. In the diagrams all components have position and co-ordinate numbers, with the result that it is possible to find a given component in a circuit on the correct PCB unit by means of these numbers.

Some of the cable connections in the diagrams are assembled in »bundles«.

Each individual cable has its own code which tells to where it leads.



Fig. 1

Internal connections on a diagram page are indicated by a number. The break on the cable shows in what direction the other end of the cable is to be found (fig. 1).

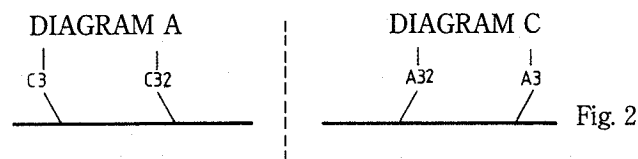
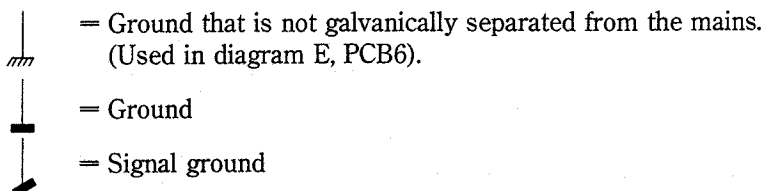


Fig. 2

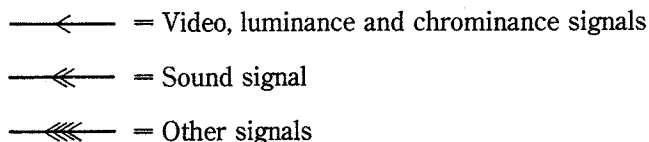
Connections to another diagram page are indicated by a number together with the letter indication of the diagram to which the connection leads (fig. 2).

Three different ground symbols are used in the diagrams:



The signal paths are shown in the diagrams by means of semibold lines and arrow heads.

As shown, three different types of arrow head are used:



The arrow heads shown at the IC pins tell if the pin so indicated is an input or an output.

MEASURING CONDITIONS FOR DIAGRAMS

All DC voltages are measured relative to the chassis and with a voltmeter having an internal resistance of at least 2 Mohm. A VHF aerial signal of approx. 1 mV is applied, and brightness and contrast are adjusted to a nominal picture. This means that the brightness control has to be turned up until light is just visible in the black bar of the test pattern, and contrast is to be adjusted until 40 V_{pp} G. signal on the test point 4TP2 is measured.

The oscilloscope patterns on the diagrams are measured with approx. 1 mV VHF aerial signal with 100% saturated colour bar signal. Brightness and contrast have to be adjusted to a nominal picture as described above, and the colour saturation has to be adjusted to the optimum square signal on 4TP2 so that the colour bar signals correspond to the monochrome levels.

However, the following exceptions apply to the above:

PCB6 (Power supply) diagram E. The voltages and the oscilloscope patterns are measured with a mains voltage of 220V, and with turned down brightness and contrast (0 radiation current).

PCB44 (Video in/out) diagram G. The voltages in brackets apply when the receiver is in »Video in« mode, and voltages without brackets apply in »Video out« mode.

PCB58 (Video IF) diagram A. The voltages in brackets are measured without signal.

SYMBOL FOR SAFETY RESISTORS



When replacing components with this symbol the same type has to be used, also the same values for ohm and watt. The new component is to be mounted in the same way as the replaced one.

DIAGRAM I (NTSC 4.43 MHz) see page 9-3

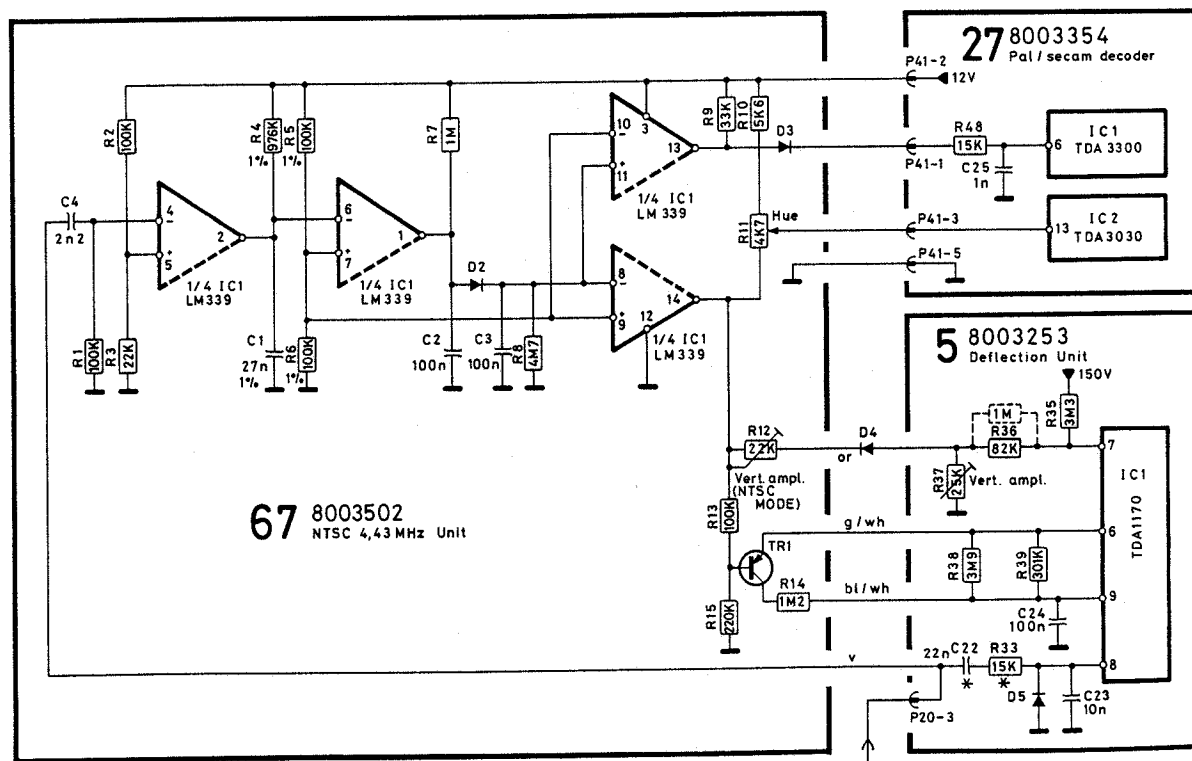
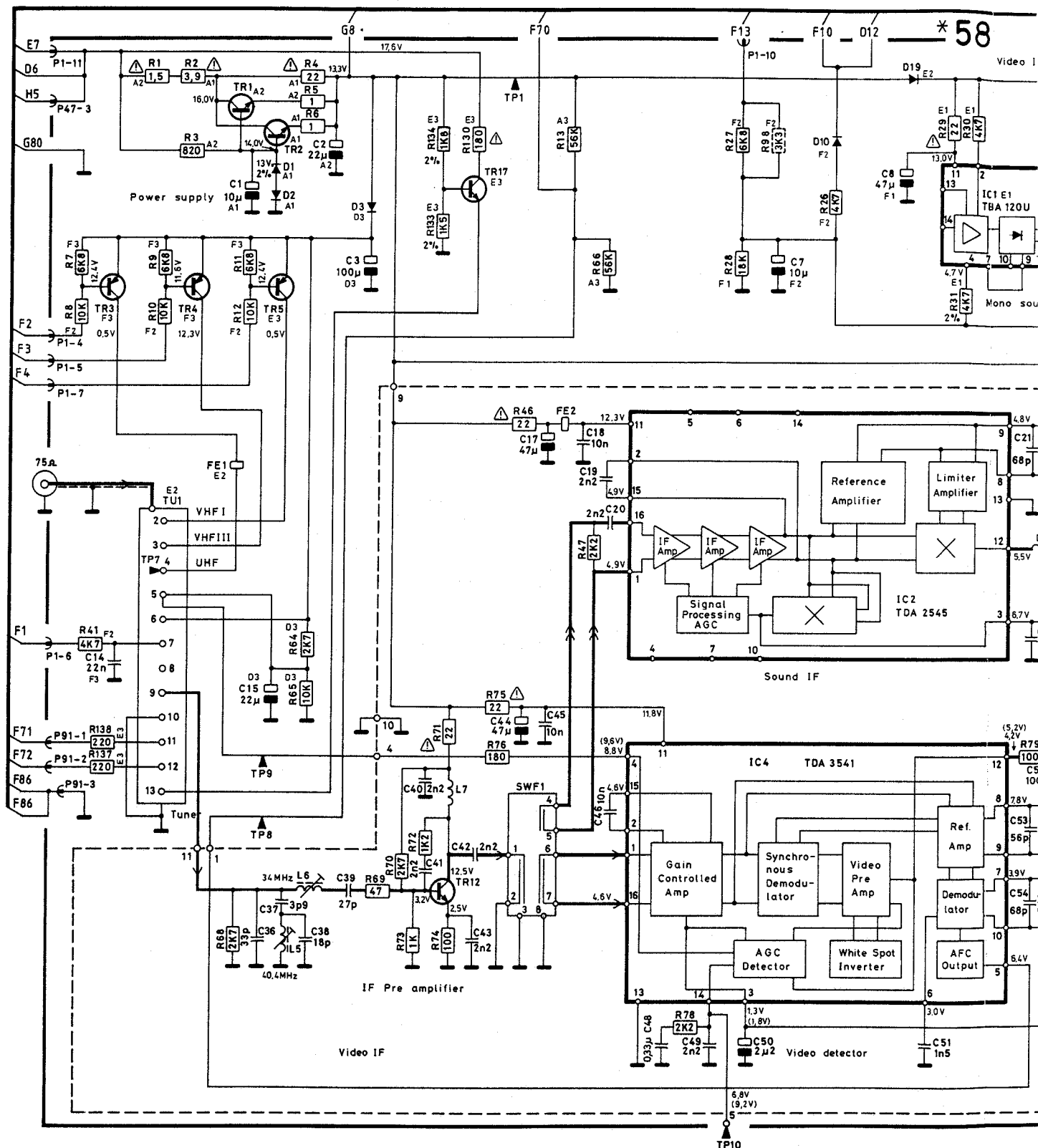
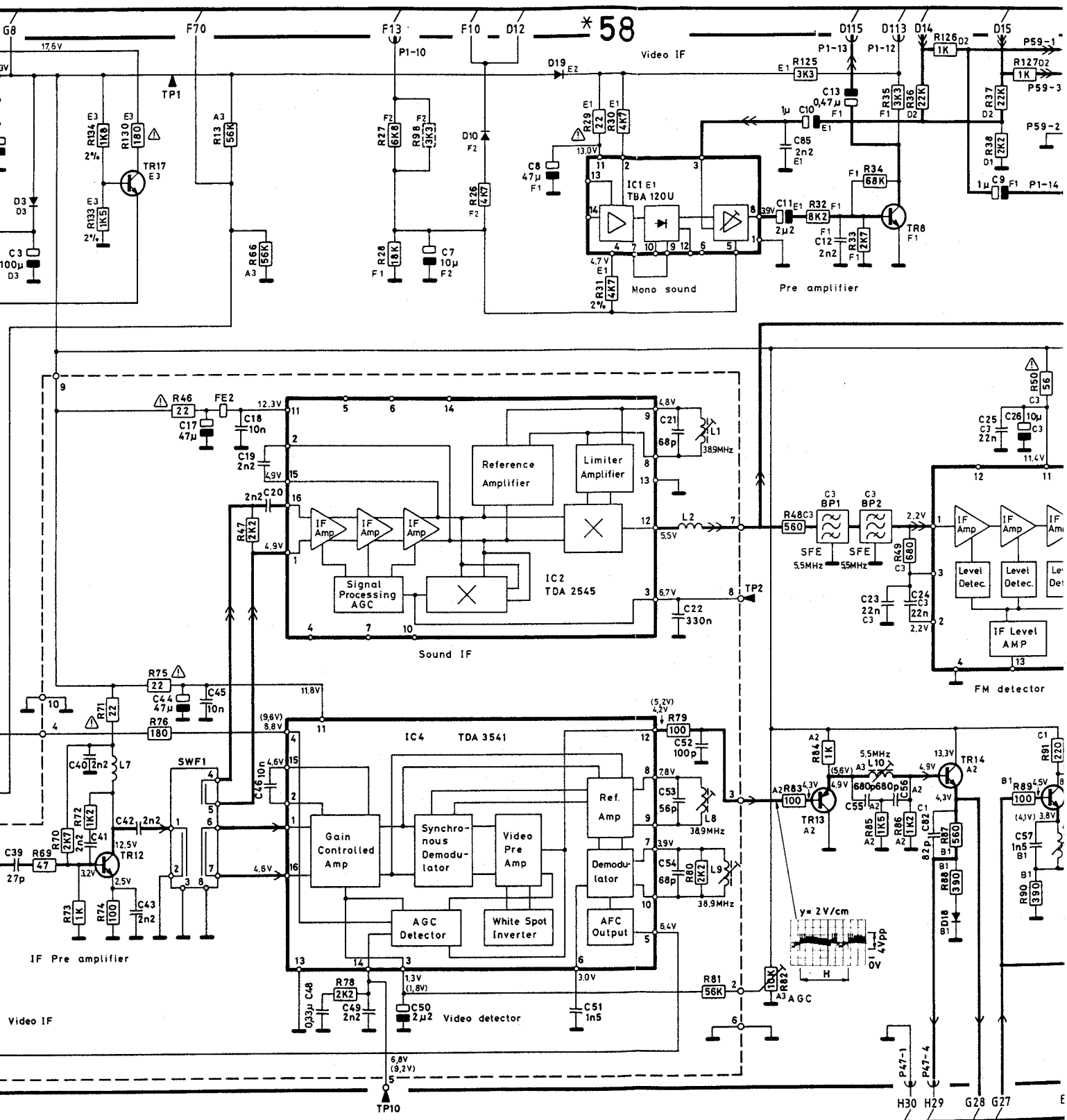


DIAGRAM A STEREO (VIDEO IF, AUDIO IF)

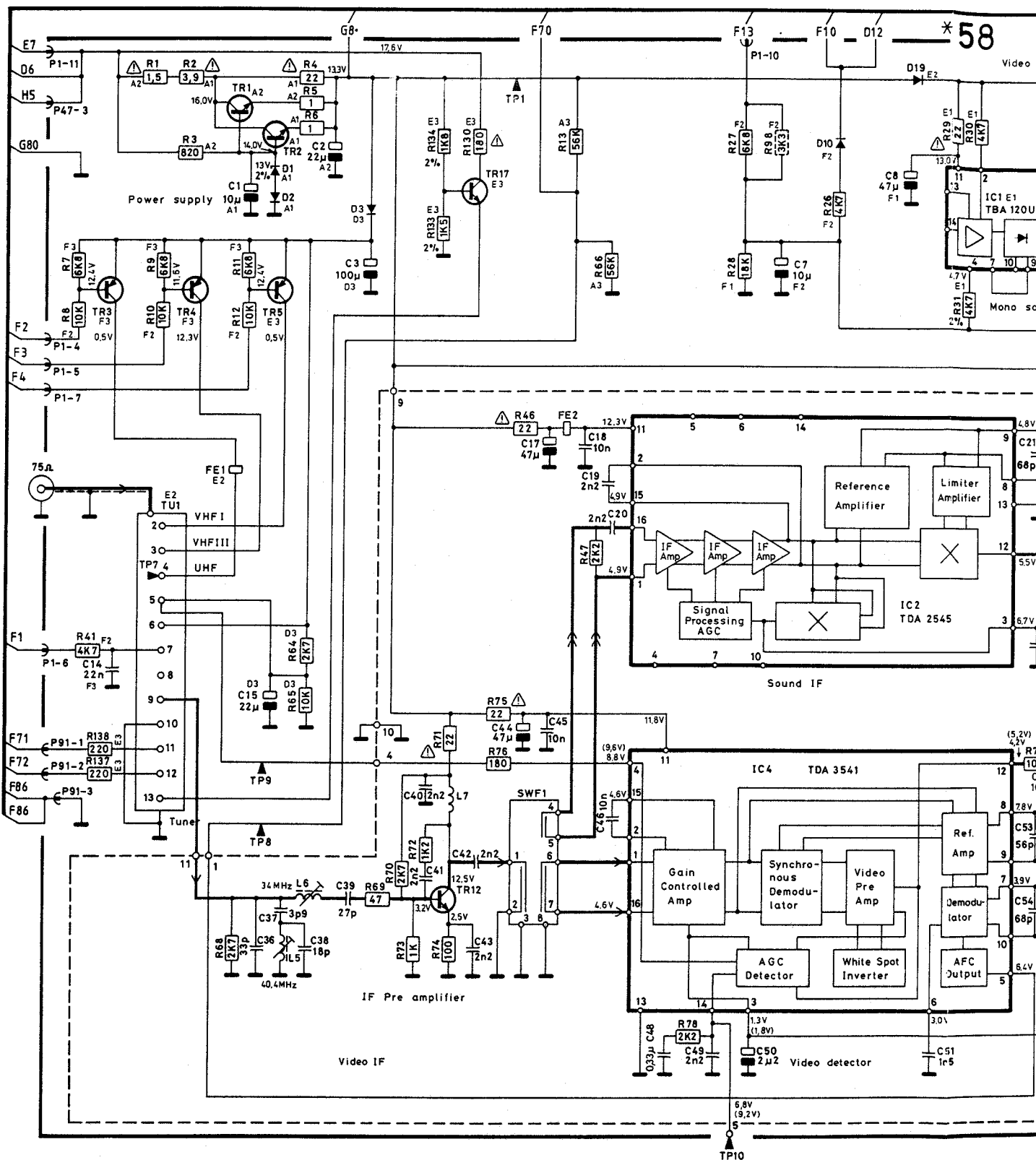


TYPE	PCB58	58TU1	58SWF1	58BP1	58BP2	58R48	58R49	58TR3
7510, 7511, 7210, 7211,	8003462	8050416	8030027	8030021 (5.5 MHz)	x	560 V	680 V	x
7030, 7020,	8003483	8050042	8030027	8030021 (5.5 MHz)	x	560 V	680 V	x
7533, 7233,	8003466	8050419	8030032	8030033 (6 MHz)	Short Circuit	470 V	560 V	Short Circuit



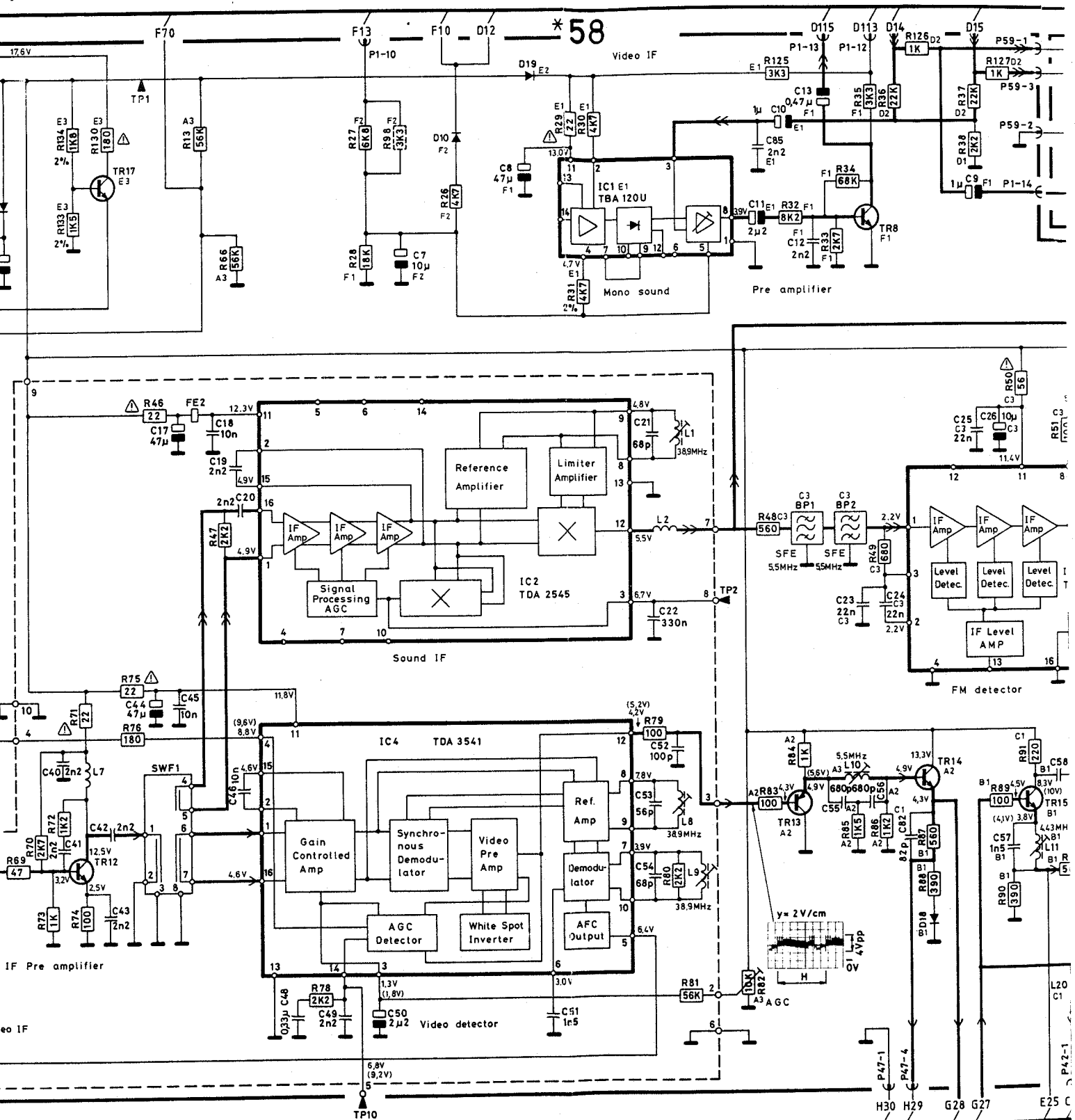
PCB58	58TU1	58SWF1	58BP1	58BP2	58R48	58R49	58TR3	58TR4-5	58R7-12	58C36	58C39	58L20
8003462	8050416	8030027	8030021 (5.5 MHz)	x	560 V	680 V	x	x	x	33p	27p	x
8003483	8050042	8030027	8030021 (5.5 MHz)	x	560 V	680 V	x	x	x	33p	27p	x
8003466	8050419	8030032	8030033 (6 MHz)	Short Circuit	470 V	560 V	Short Circuit	0	0	39p	47p	Short Circuit

DIAGRAM A MONO (VIDEO IF, AUDIO IF)

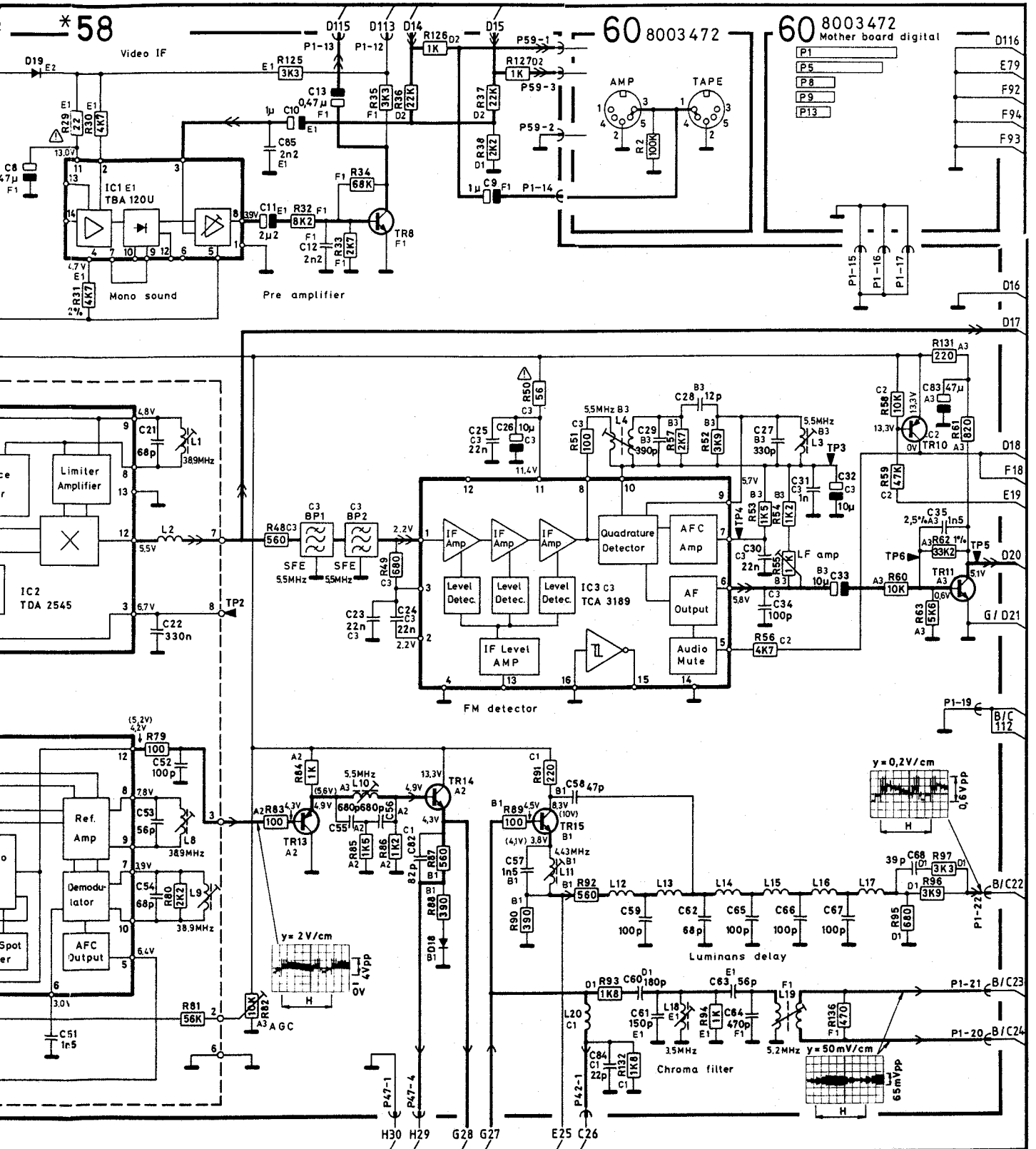


TYPE	PCB58	58TU1	58SWF1	58BP1	58BP2	58R48	58R49	58TR3
7710, 7711, 7410, 7411, 7412, 7110, 7111, 7112, 7003	8003462	8050416	8030027	8030021 (5.5 MHz)	x	560 Ω	680 Ω	x
7090, 7070, 7072, 7073, 7050, 7052, 7053	8003483	8050042	8030027	8030021 (5.5 MHz)	x	560 Ω	680 Ω	x
7733, 7433, 7133, 7004	8003466	8050419	8030032	8030033 (6 MHz)	Short Circuit	470 Ω	560 Ω	Short Circuit

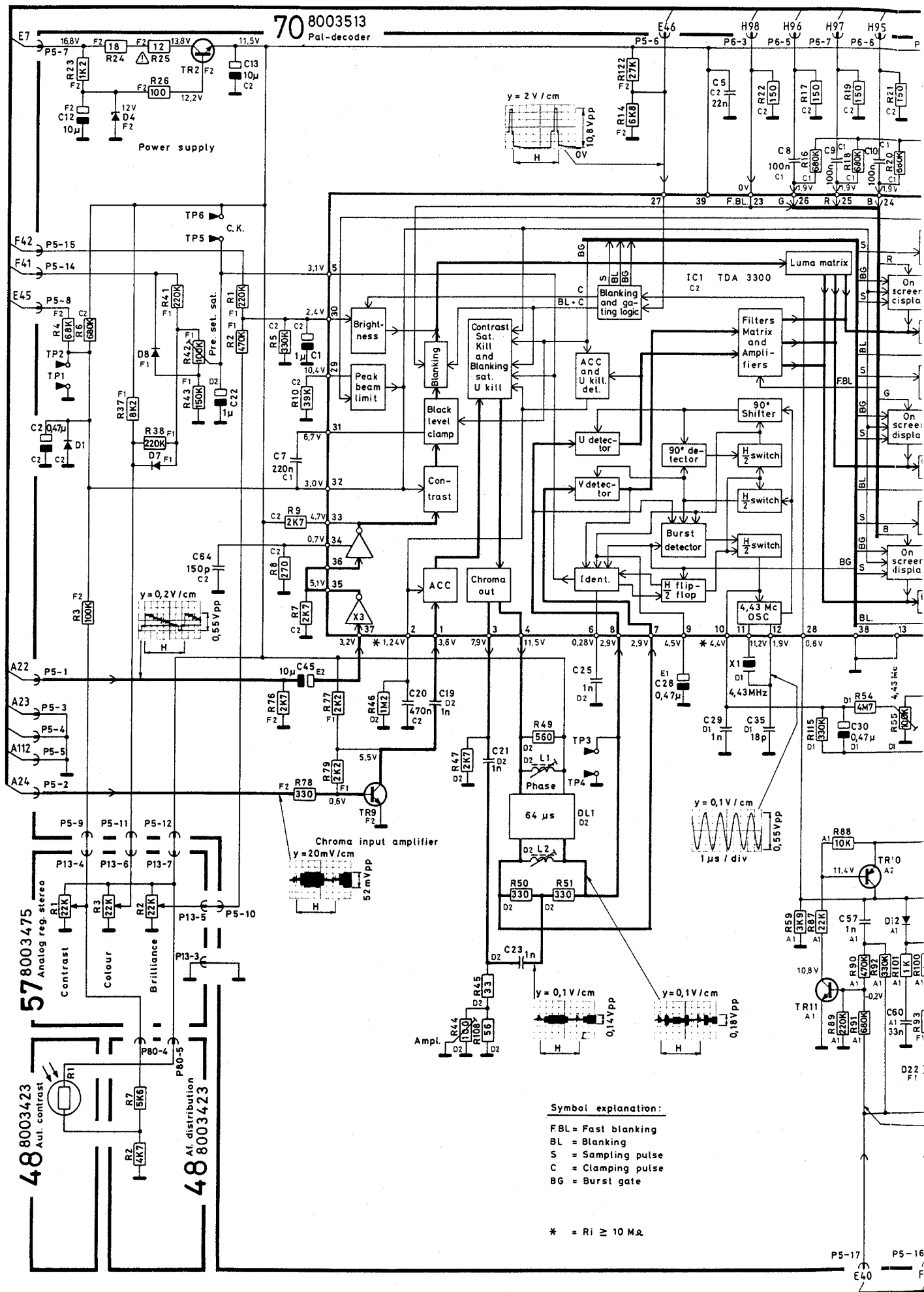
F)

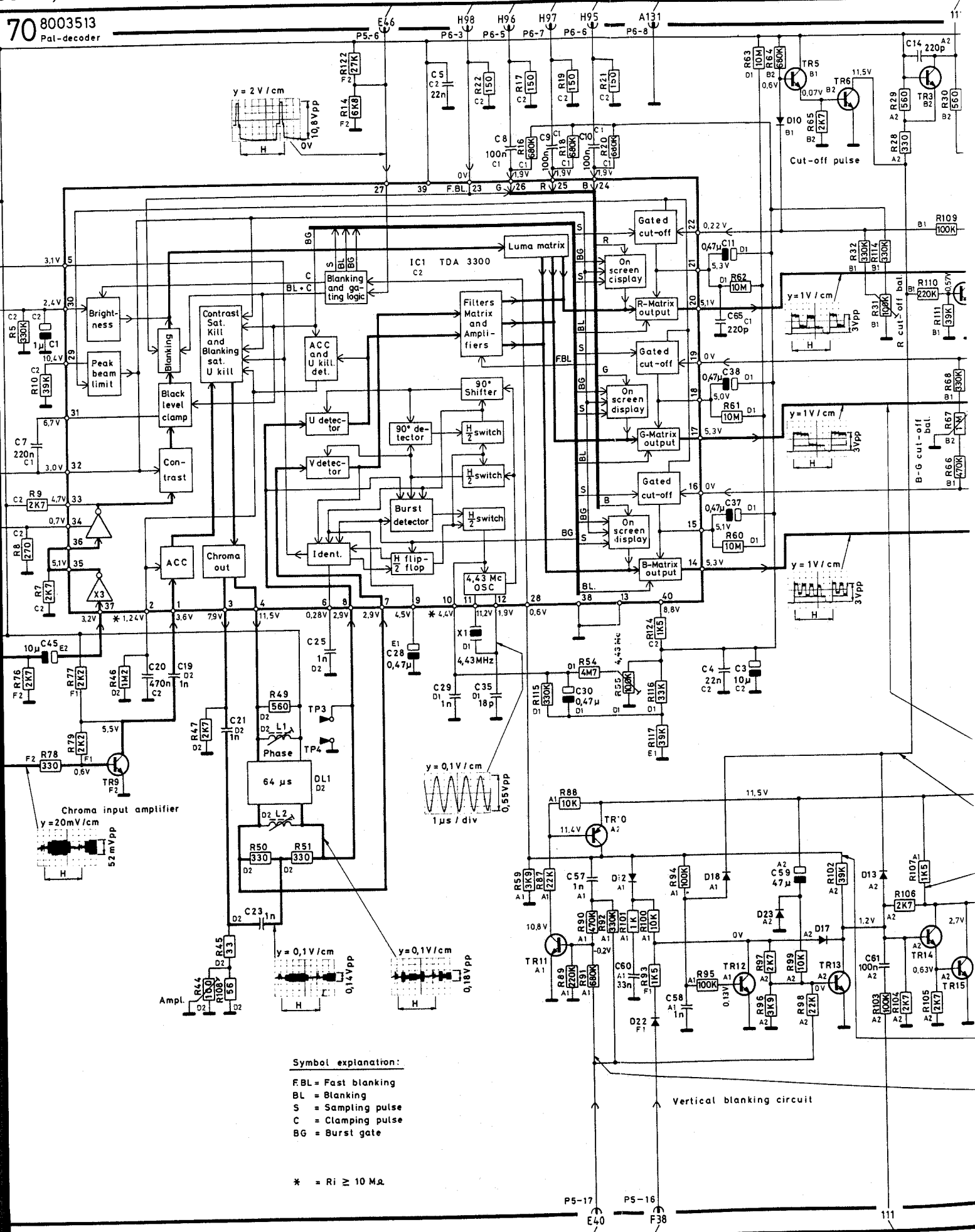


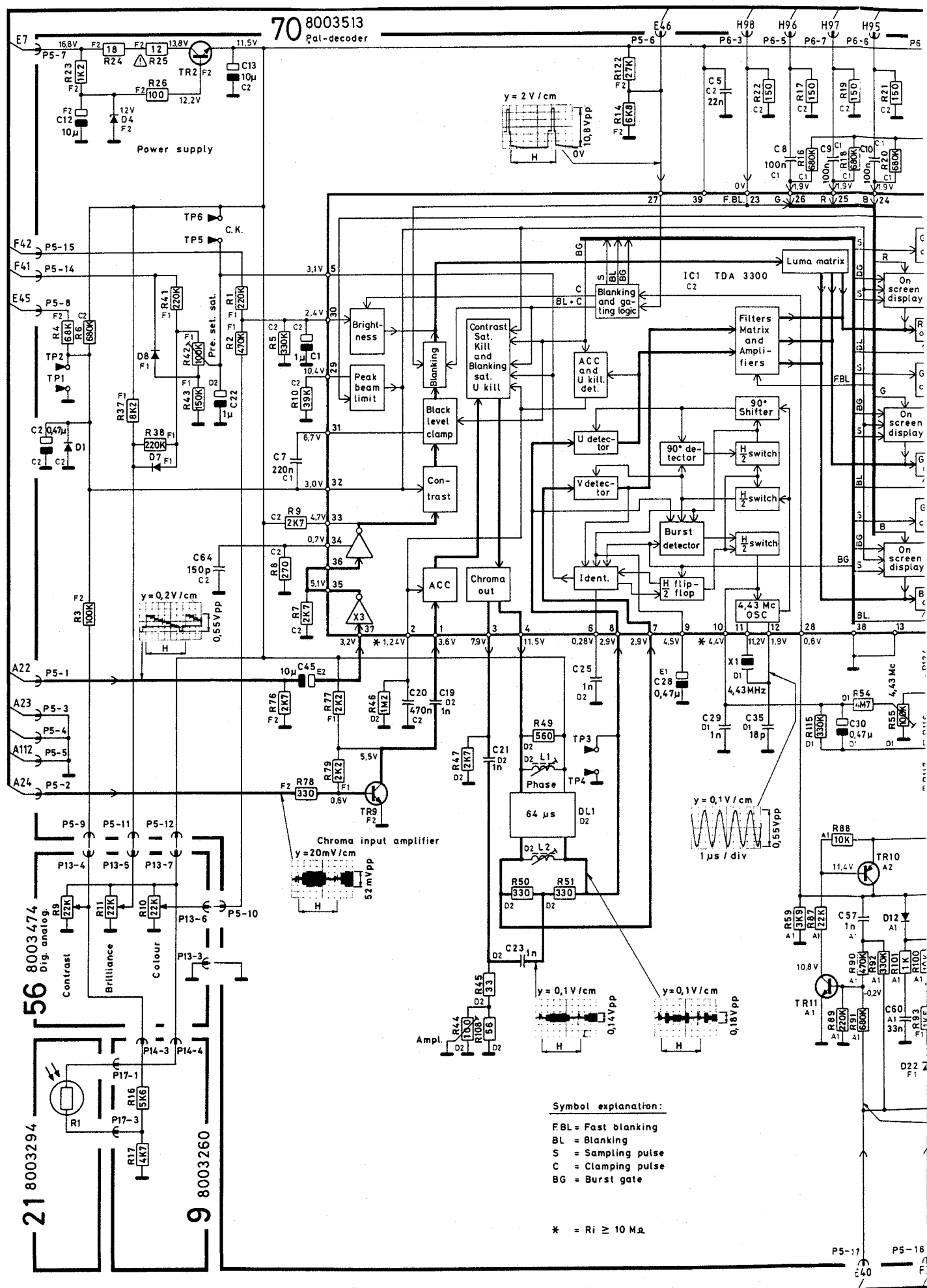
PCB58	58TU1	58SWF1	58BP1	58BP2	58R48	58R49	58TR3	58TR4-5	58R7-12	58C36	58C39	58L20
8003462	8050416	8030027	8030021 (5.5 MHz)	x	560 Ω	680 Ω	x	x	x	33p	27p	x
8003483	8050042	8030027	8030021 (5.5 MHz)	x	560 Ω	680 Ω	x	x	x	33p	27p	x
8003466	8050419	8030032	8030033 (6 MHz)	Short Circuit	470 Ω	560 Ω	Short Circuit	0	0	39p	47p	Short Circuit

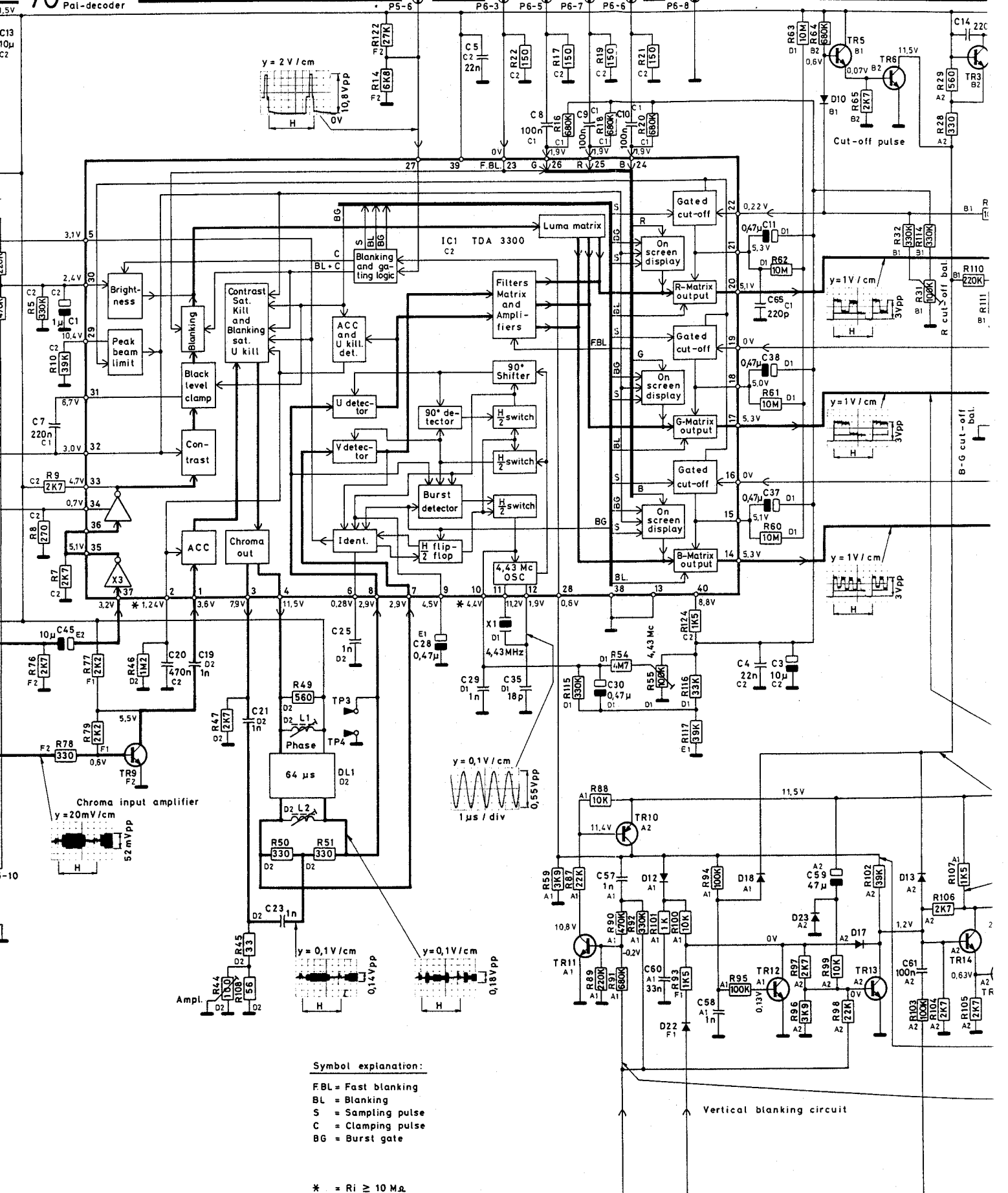


58R49	58TR3	58TR4-5	58R7-12	58C36	58C39	58L20	58C84	58R132	58R96	58L5	58L3,L4,L10
680 Ω	x	x	x	33p	27p	x	x	x	3K9	Adjust to 40.4 MHz	Adjust to 5.5 MHz
680 Ω	x	x	x	33p	27p	x	x	x	3K9	Adjust to 40.4 MHz	Adjust to 5.5 MHz
560 Ω	Short Circuit	0	0	39p	47p	Short Circuit	0	0	3K3	Adjust to 40.9 MHz	Adjust to 6 MHz





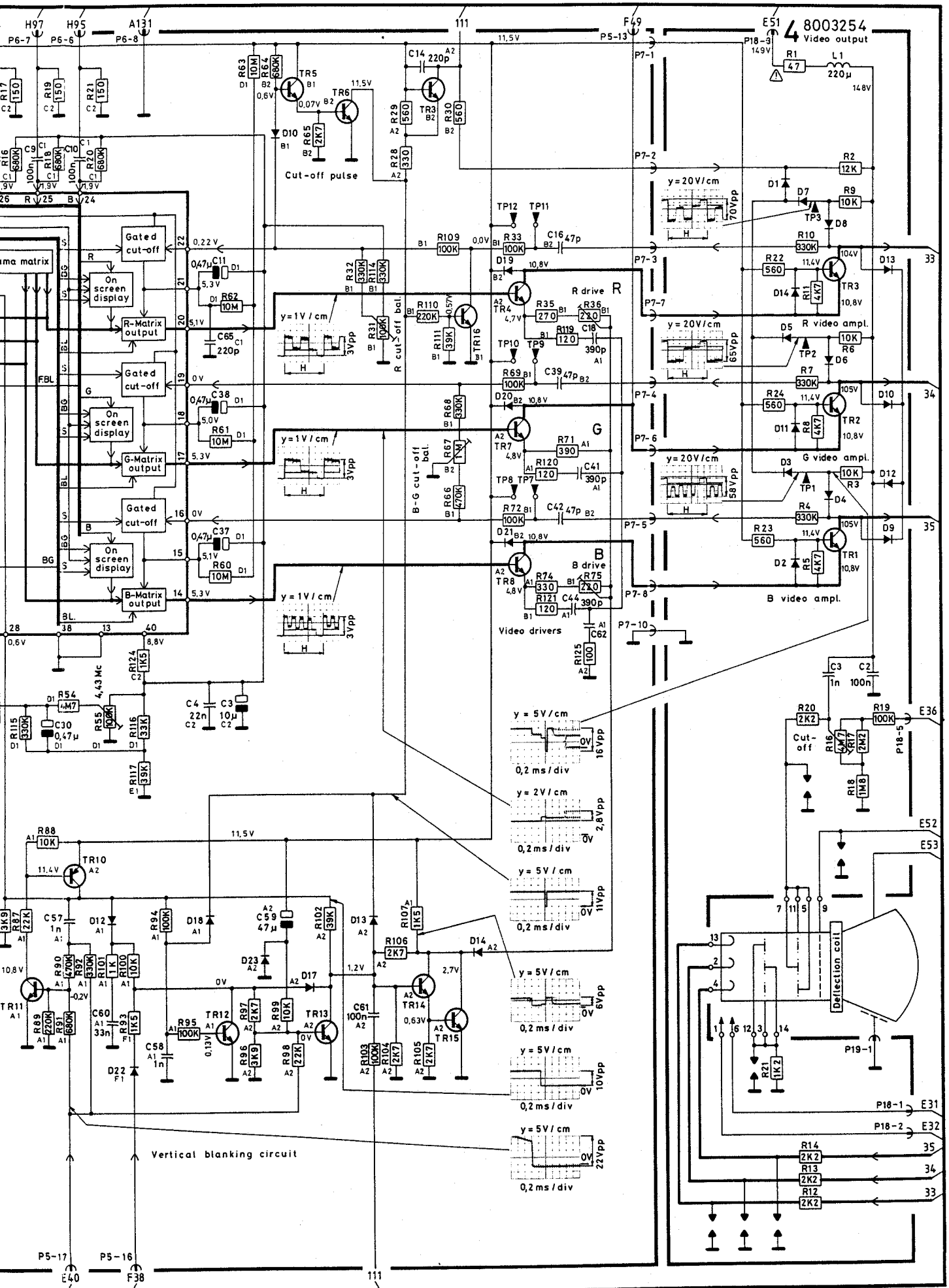


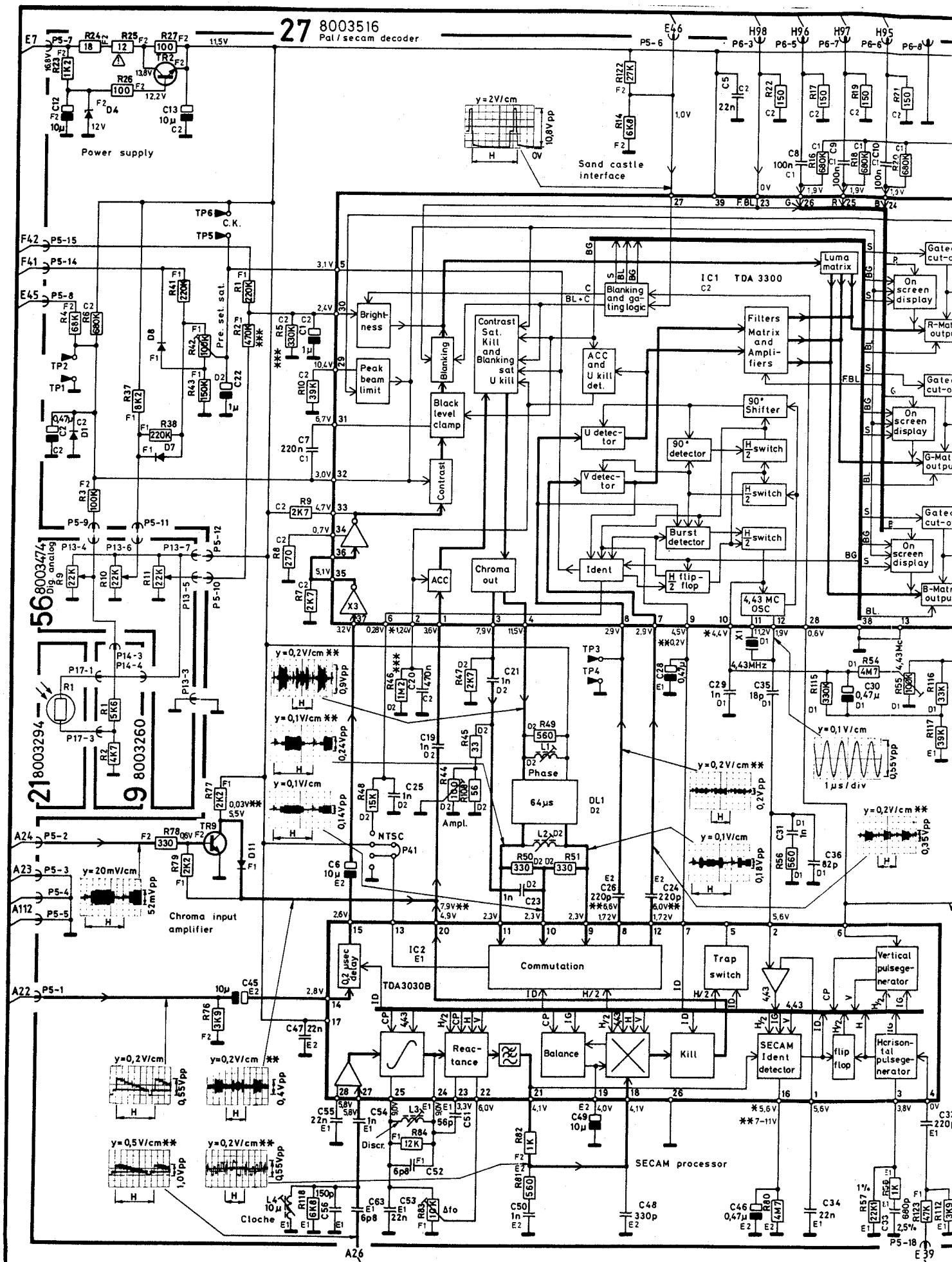


Symbol explanation:

FBL = Fast blanking
BL = Blanking
S = Sampling pulse
C = Clamping pulse
BG = Burst gate

* = $R_i \geq 10 M\Omega$





7 8003516
Pal/secam decoder

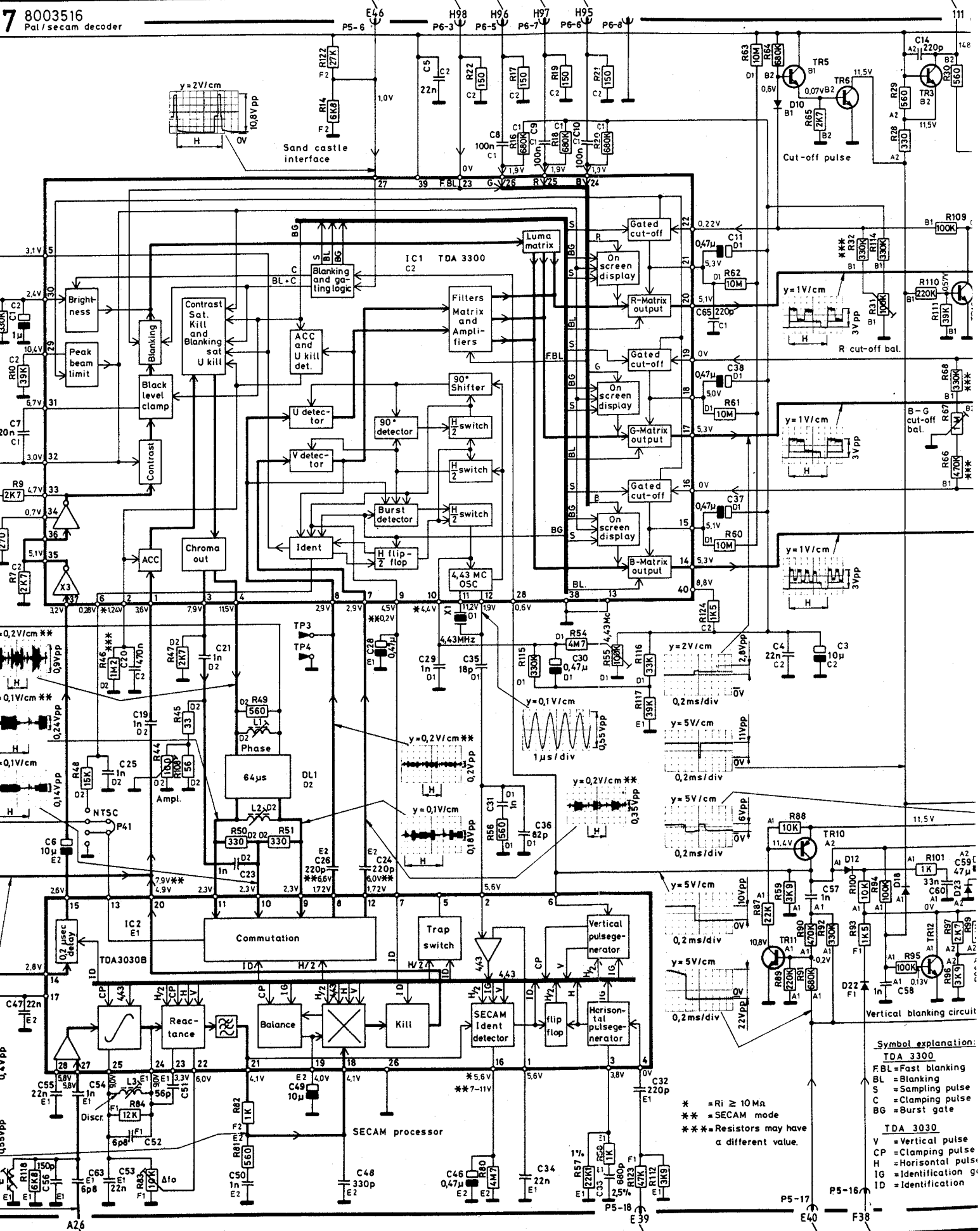
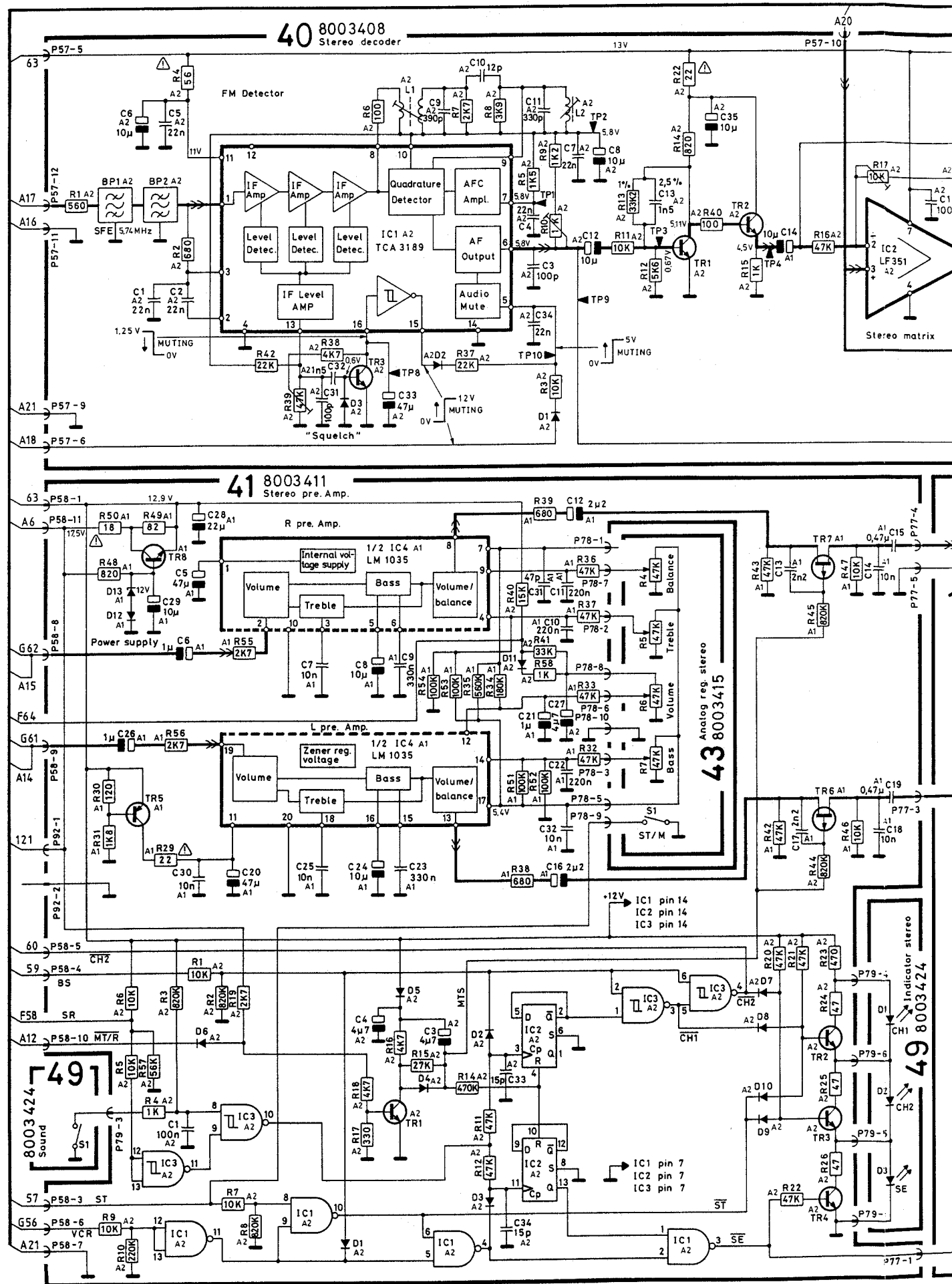
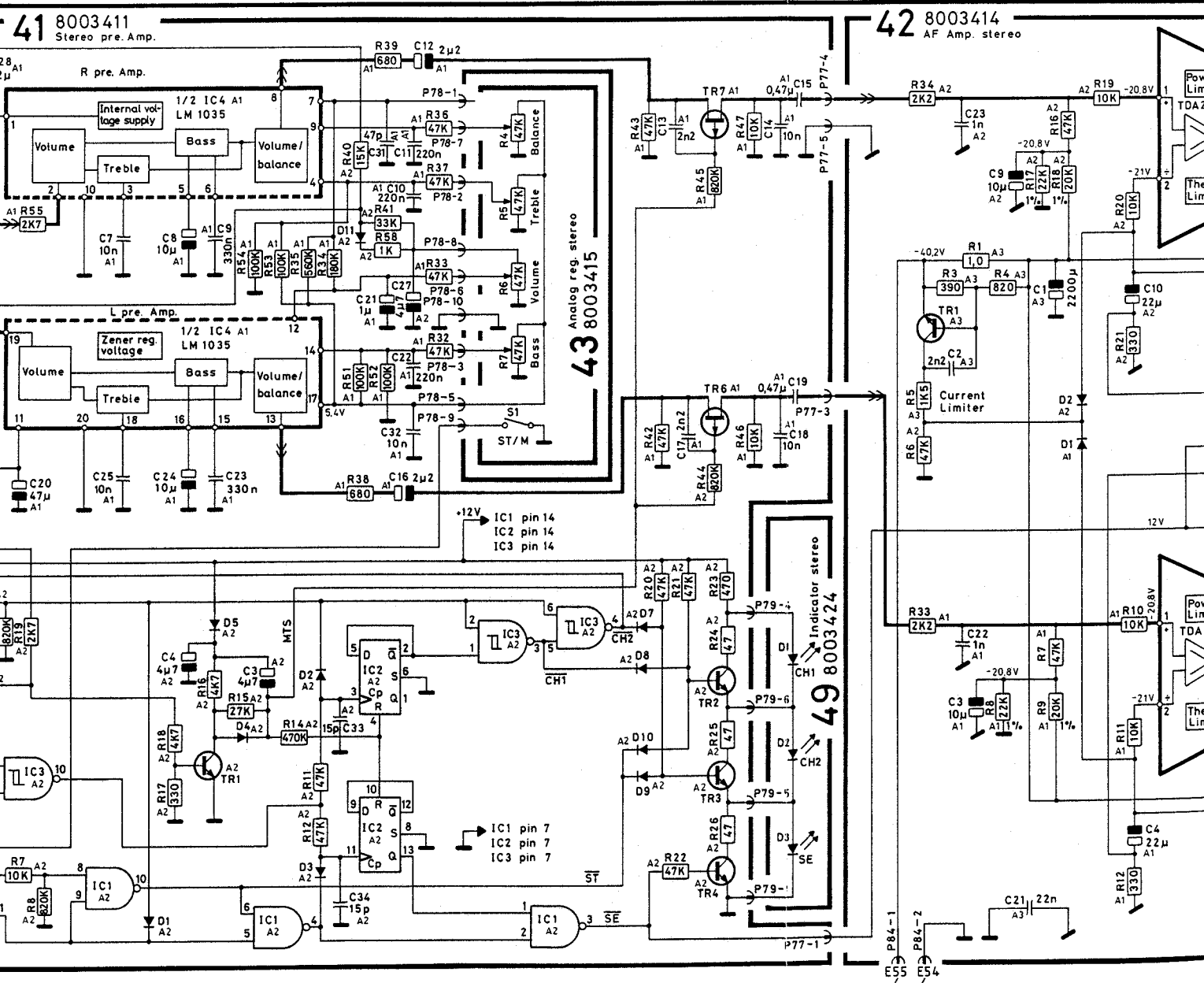
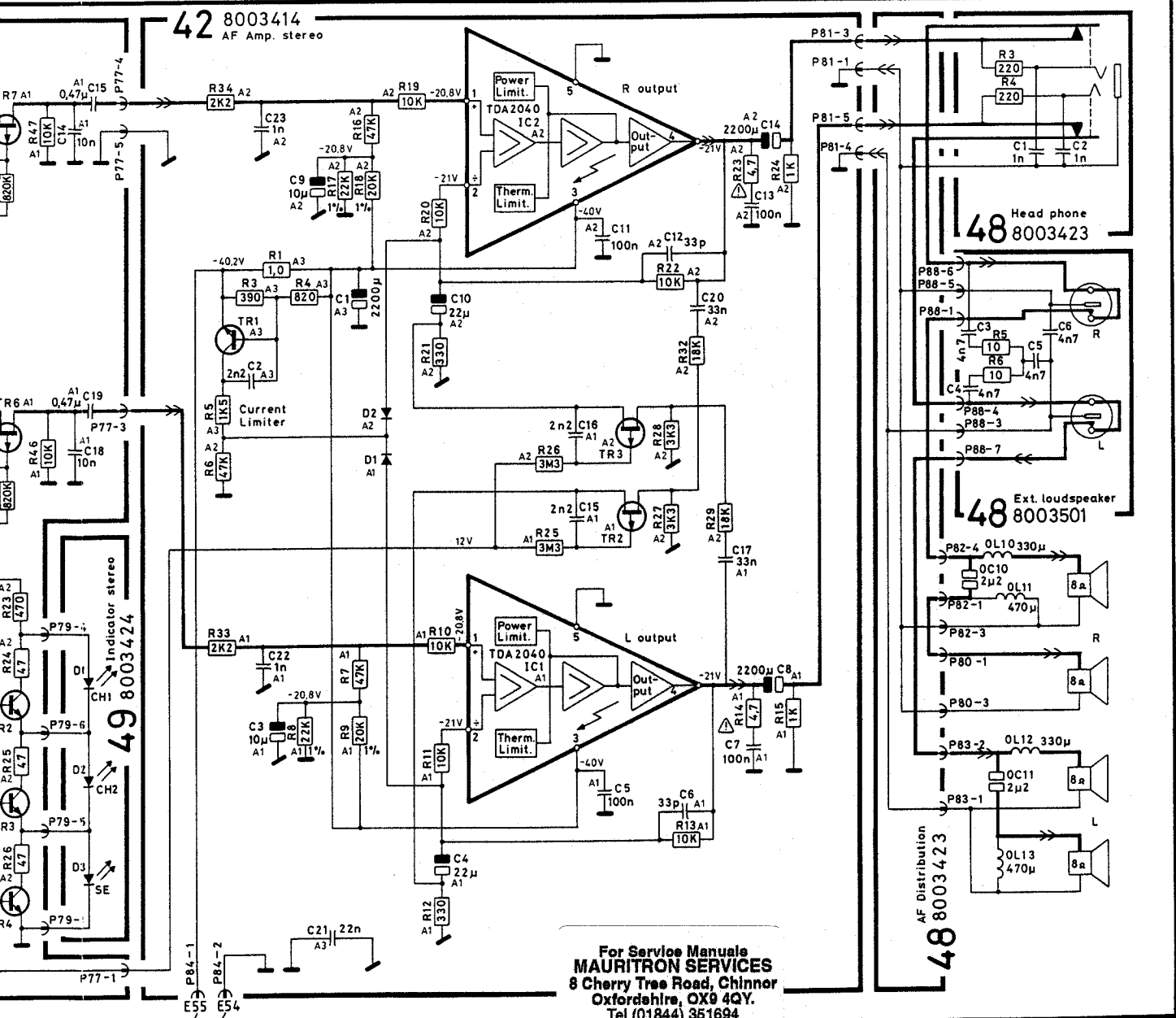
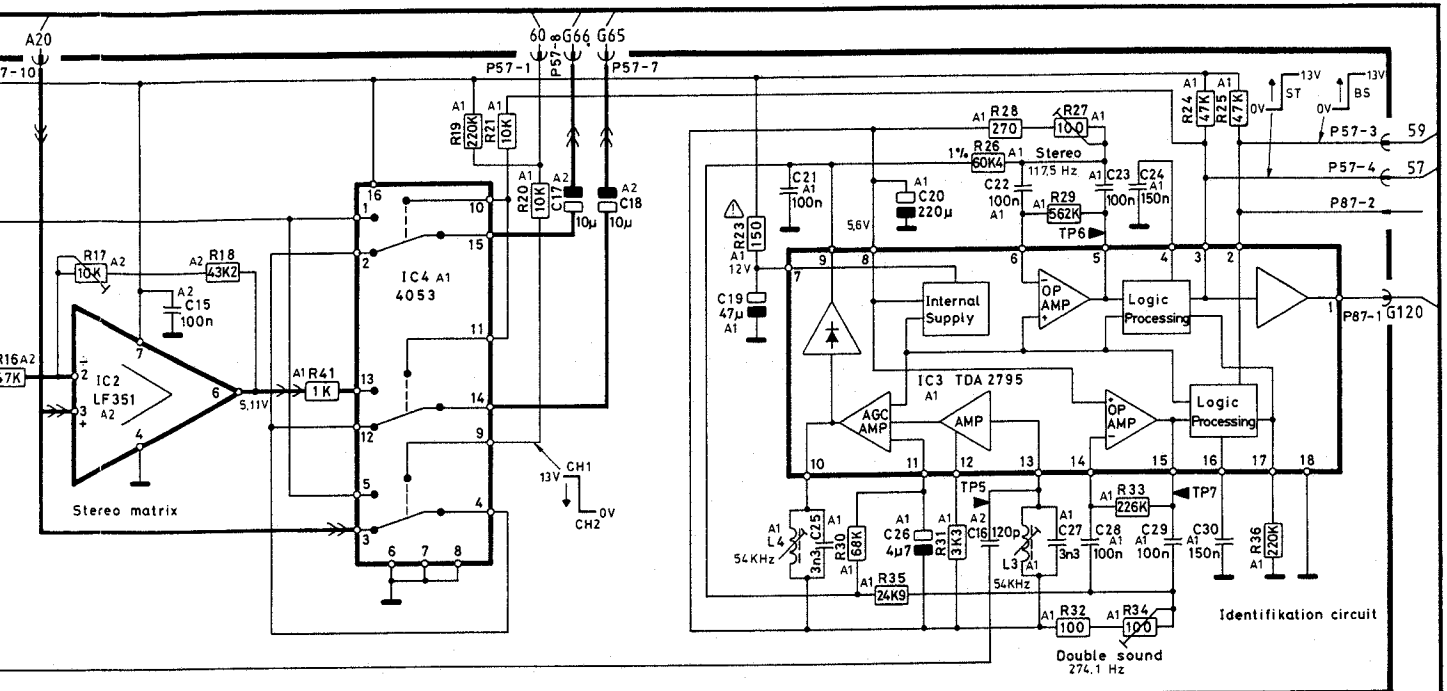


DIAGRAM D STEREO (STEREO DECODER, - PRE AMPL., - AF AMPL.)



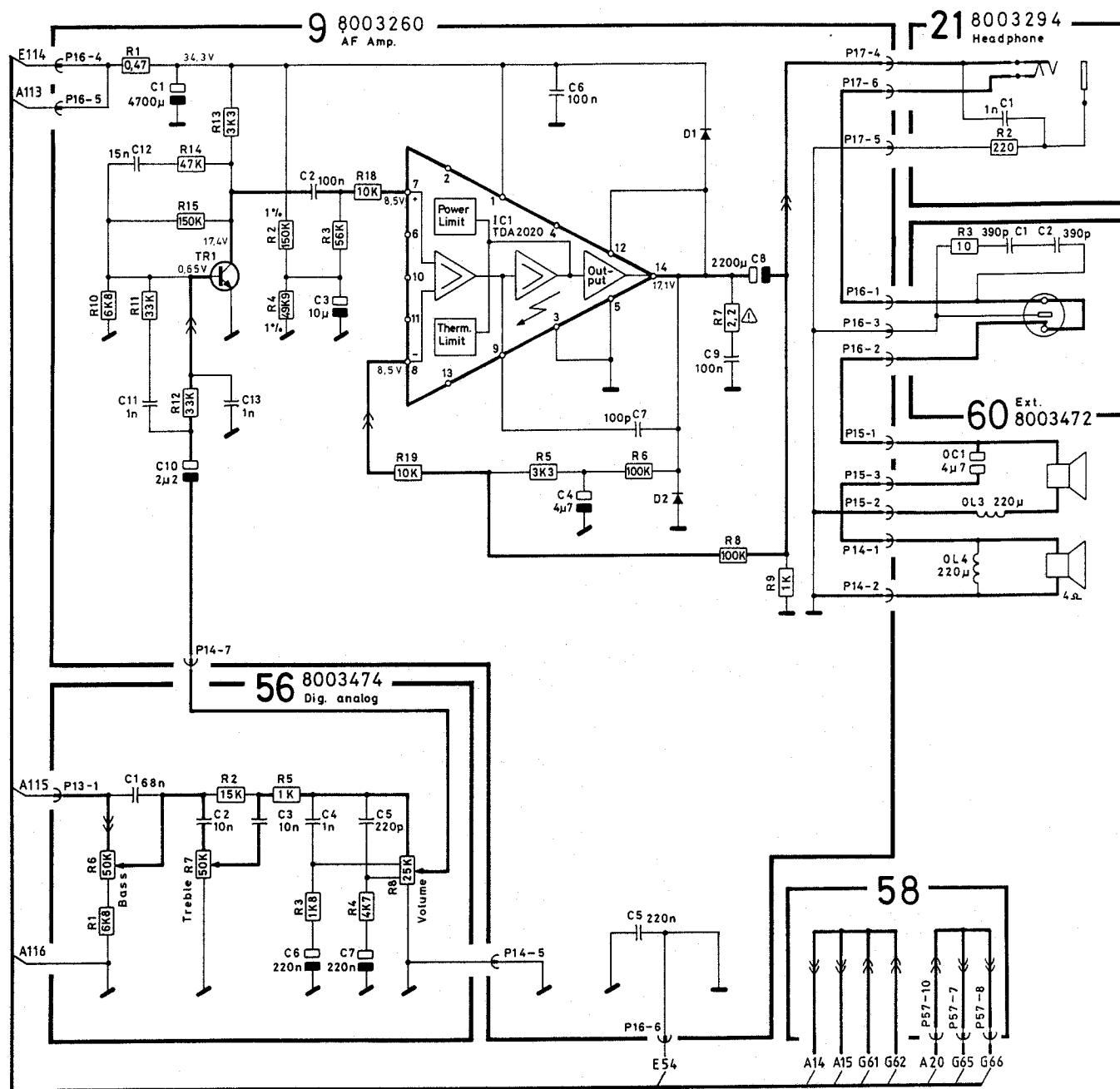
STEREO DECODER, - PRE AMPL., - AF AMPL.)





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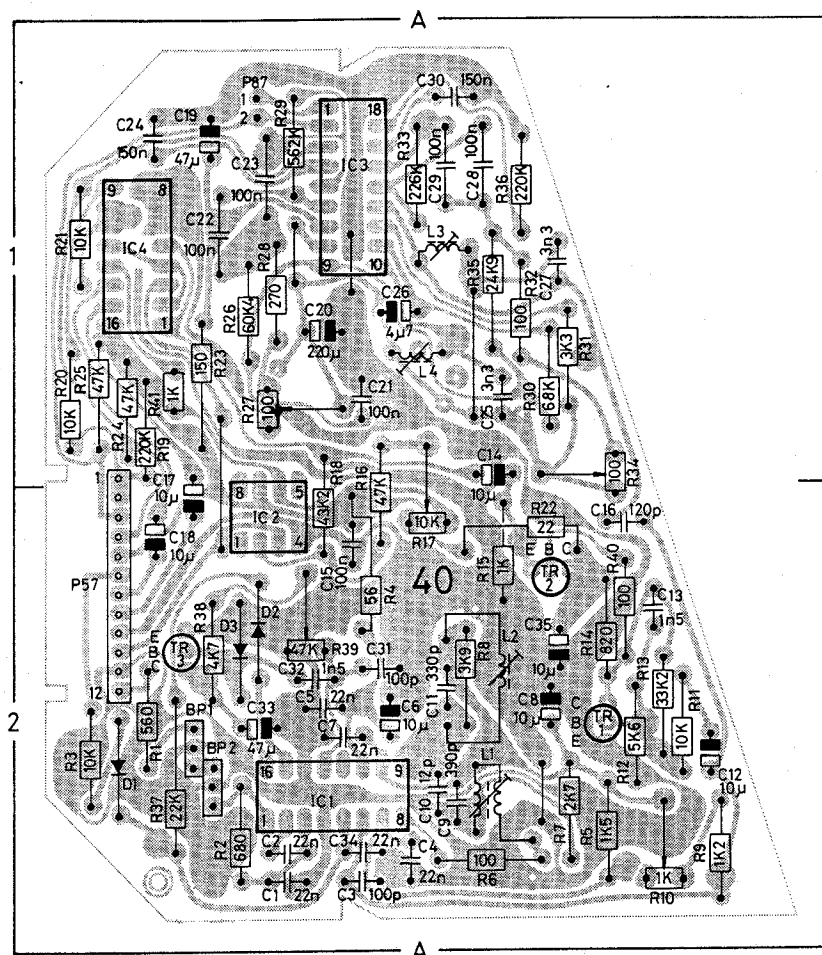
DIAGRAM D MONO (AF AMPL.) (For PCB9 with TDA 2040 see page 1-14A)



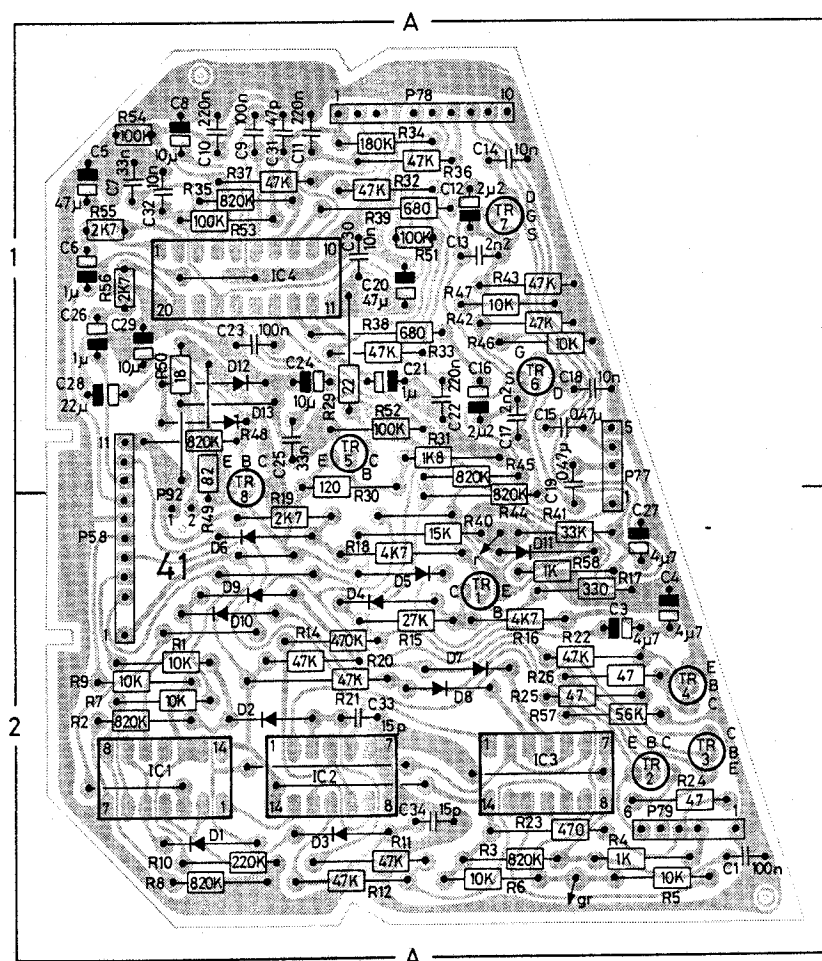
FUNCTION TABLE FOR PC 41

MODE	OPERATIONS		INPUTS / OUTPUTS								INDICATIONS		
	SOUND	STEREO/MONO	41P58				41IC1		41IC3		CH1	SE	CH2
	Manual (49S1)	Remote (57S1)	Pin 3 (ST)	Pin 4 (BS)	Pin 5 (CH2)	Pin 6 (VCR)	Pin 3	Pin 10	Pin 3	Pin 4	(49D1)	(49D3)	(49D2)
Mono	M		0	0	1	0	1	1	1	1			
Stereo	ST		1	0	1	0	1	0	1	1	×		×
			0	0	1	0	1	1	1	1			
	SE	×	1	0	1	0	0	0	1	1	×	×	×
		×	1	0	1	0	0	0	1	1	×	×	×
Bilingual sound			0	0	1	0	1	1	1	1			
	CH1		0	1	1	0	1	1	0	1	×		
VCR (Playback)	CH2		0	1	0	0	1	1	1	0			×
	M		0	0	1	1	1	1	1	1			
	ST		0	0	1	1	1	1	1	1			
	SE	×	0	0	1	1	0	1	1	1		×	

PCB40, Stereo decoder
seen from component side

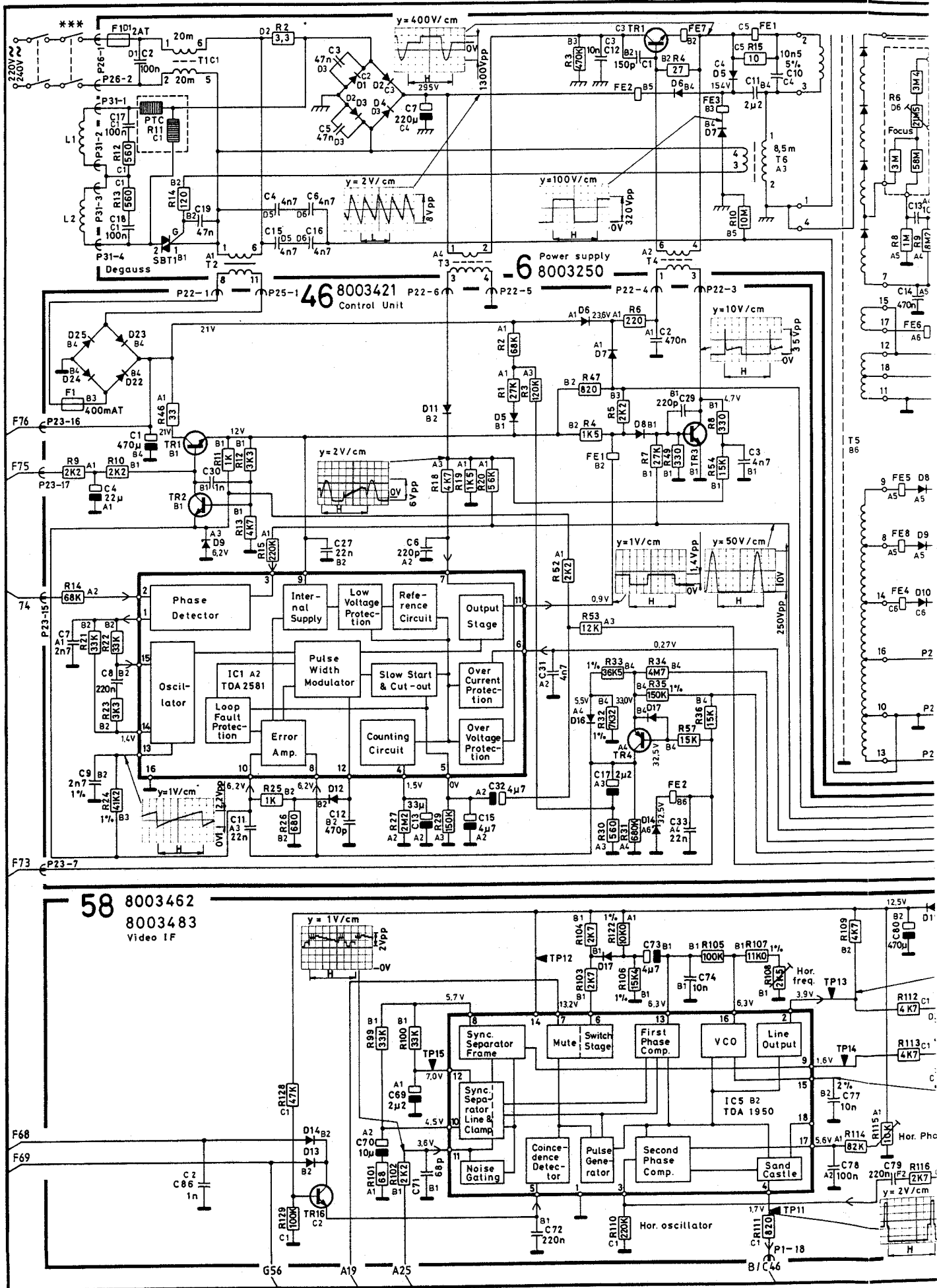


PCB41, Stereo pre. amplifier
seen from copperfoil side



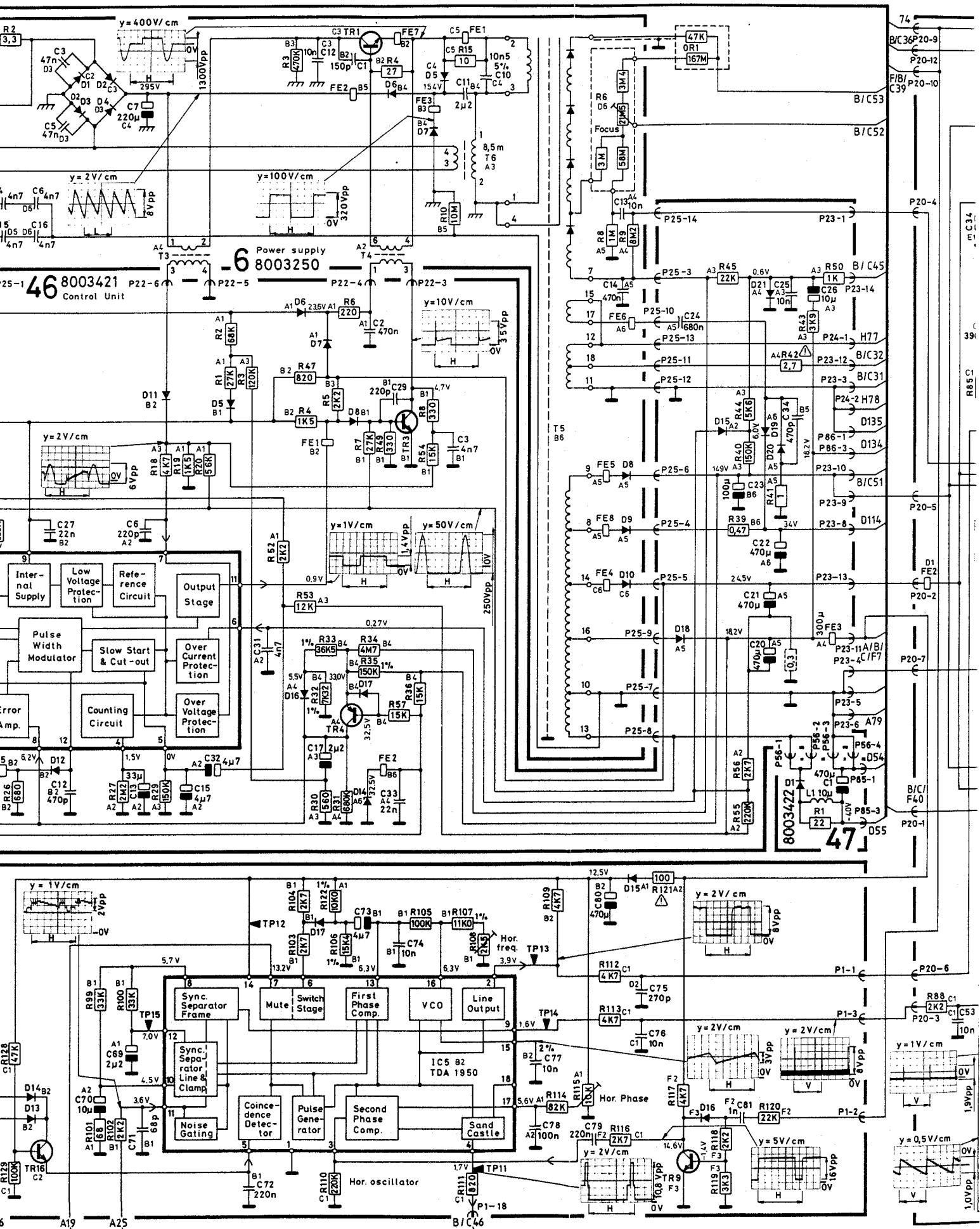
FUNCTION TABLE FOR 40IC4 (CD 4053)			
MODE	SHORTED CONTACTS	ST Pin 10 and 11	CH2 Pin 9
CH1	Pin 3 → 4 2 → 15 12 → 14	0	1
CH2	Pin 5 → 4 2 → 15 12 → 14	0	0
ST	Pin 3 → 4 1 → 15 13 → 14	1	1

DIAGRAM E (POWER SUPPLY, HOR. OSC., DEFLECTION UNIT)

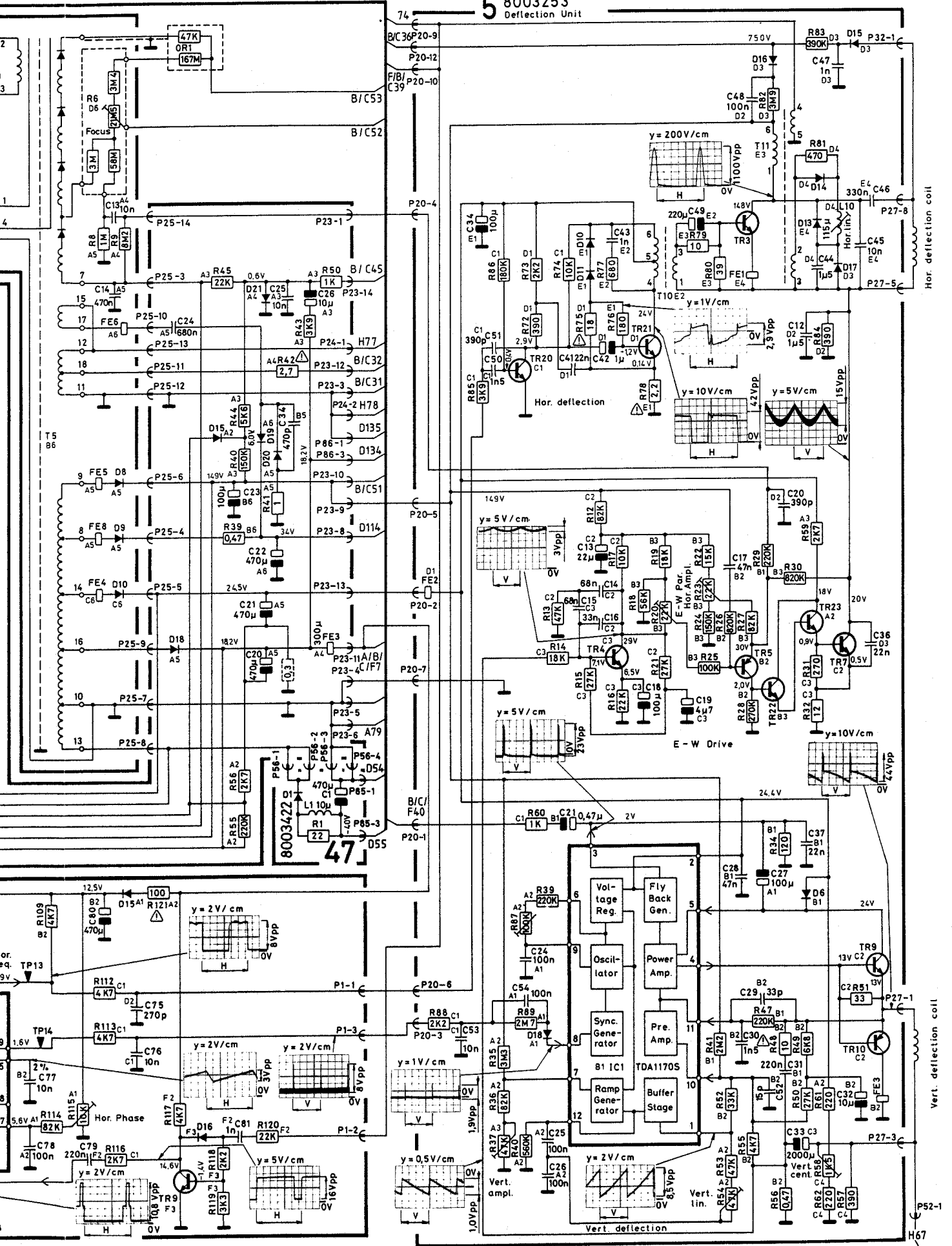


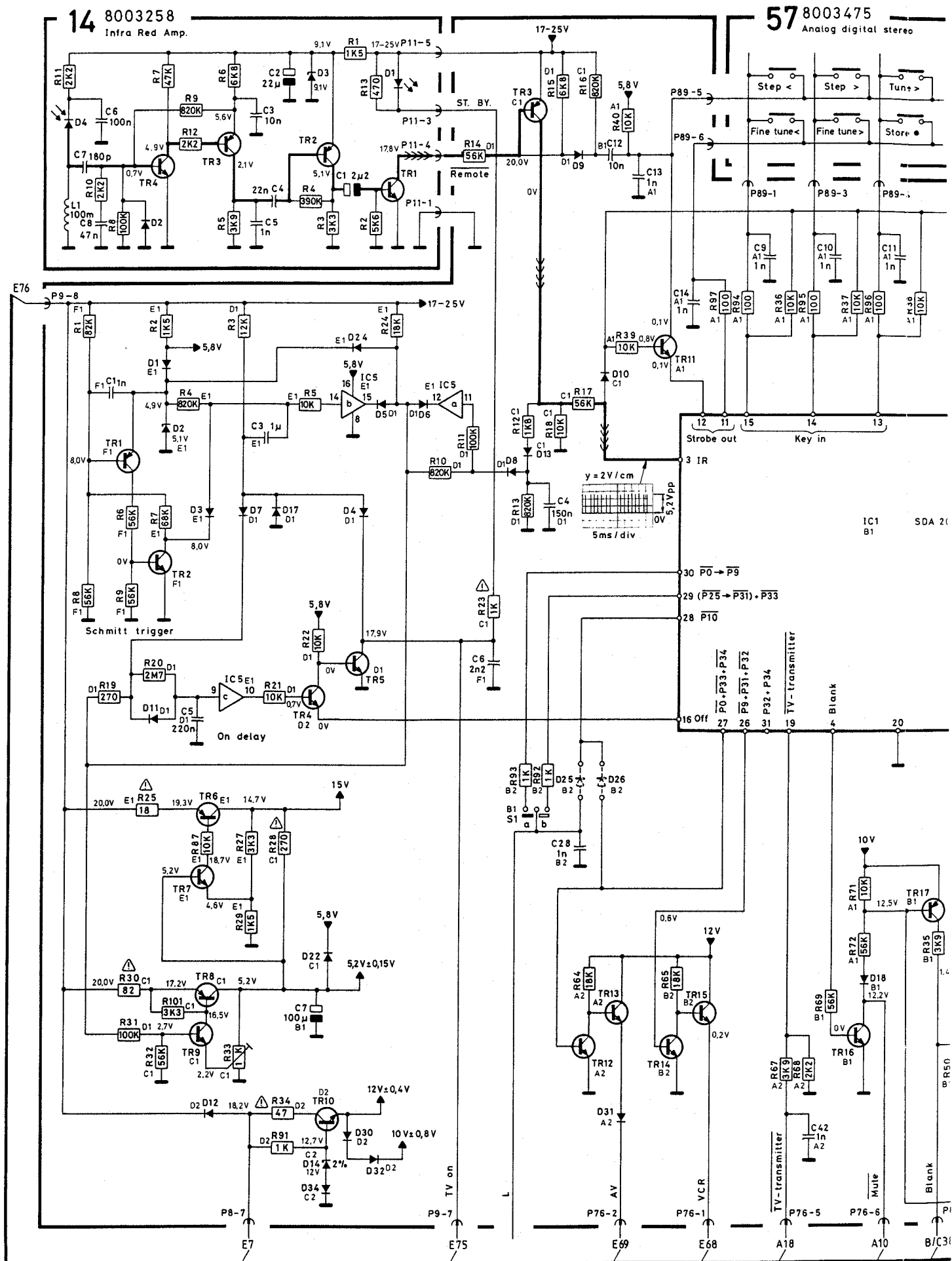
Switch is only used in Beovision 9002

HOR. OSC., DEFLECTION UNIT)



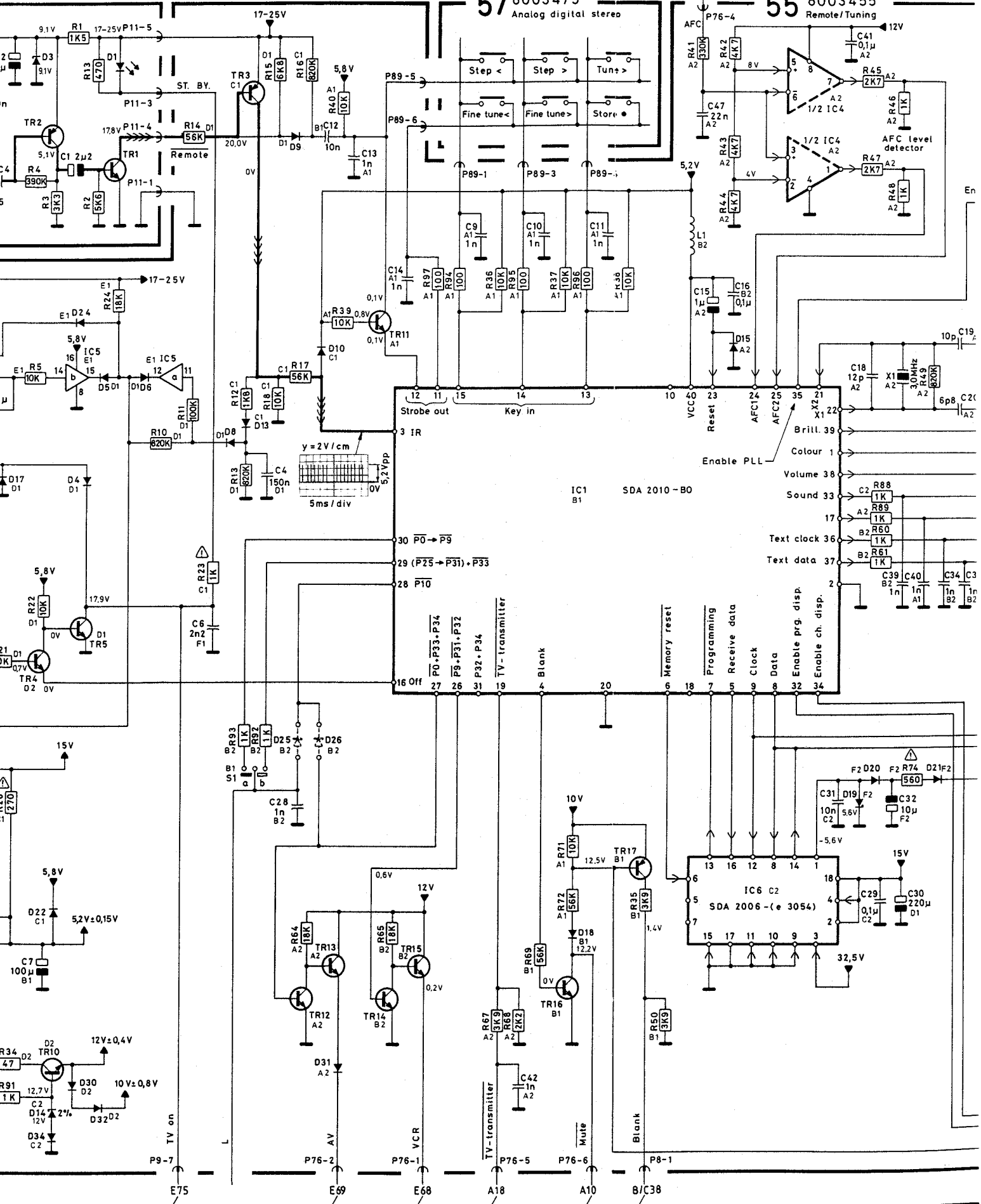
5 8003253
Deflection Unit



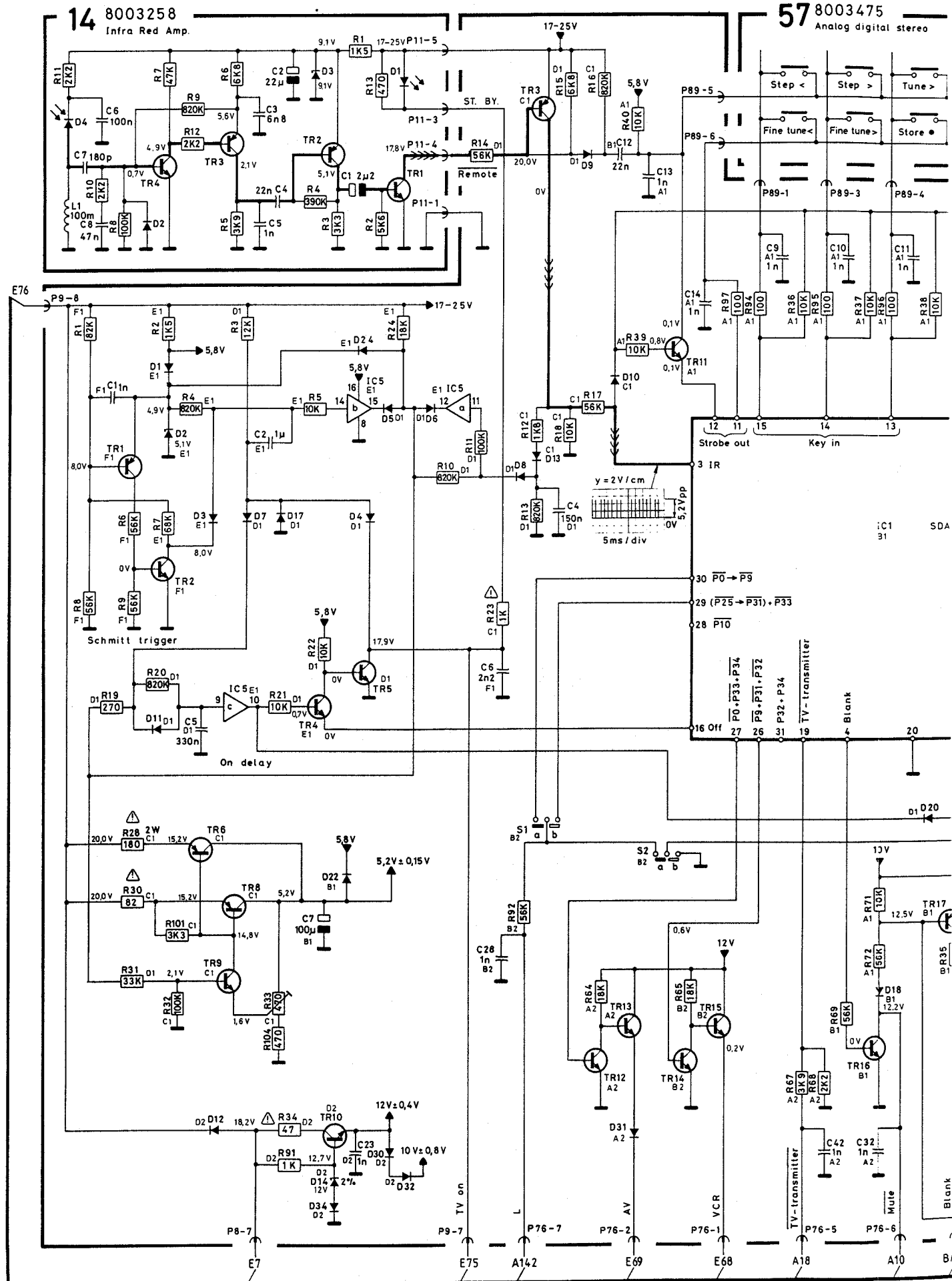


56 8003474
Analog digital mono
57 8003475
Analog digital stereo

55 8003455
Remote/Tuning



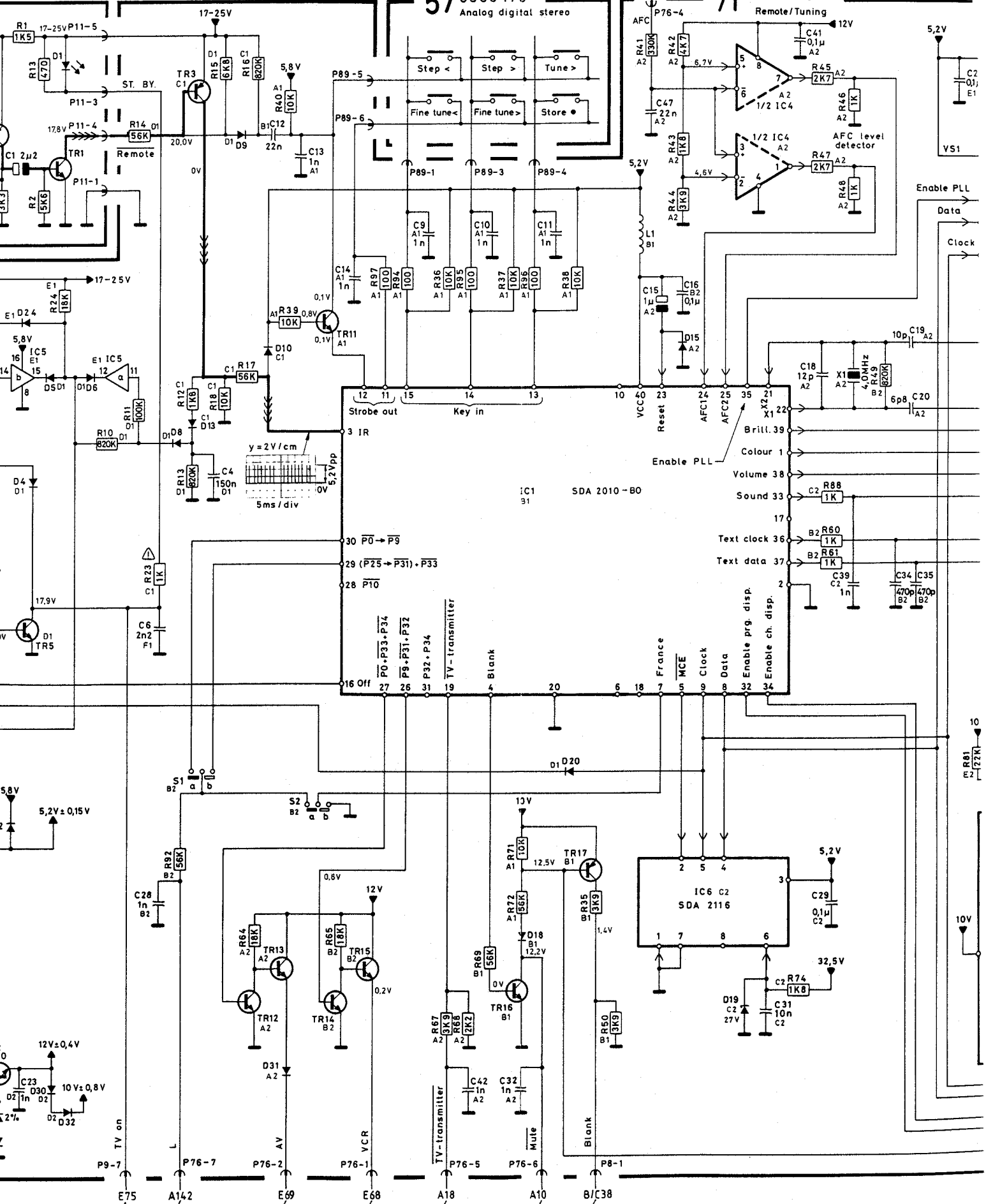




56 8003474
Dig. analog

57 8003475
Analog digital stereo

71 8003519
Remote/Tuning



8003474
Dig. analog

8003475
Analog digital stereo

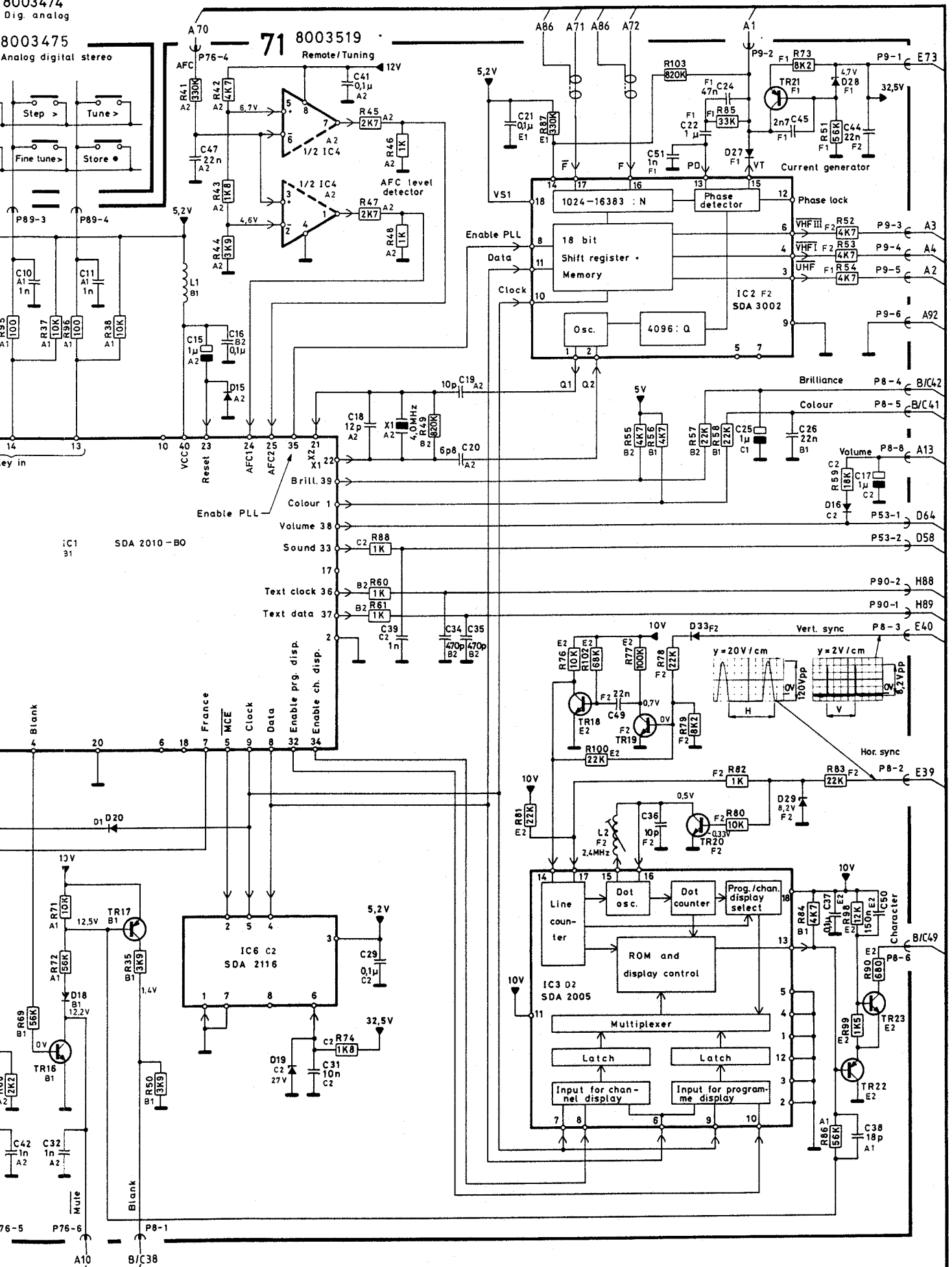
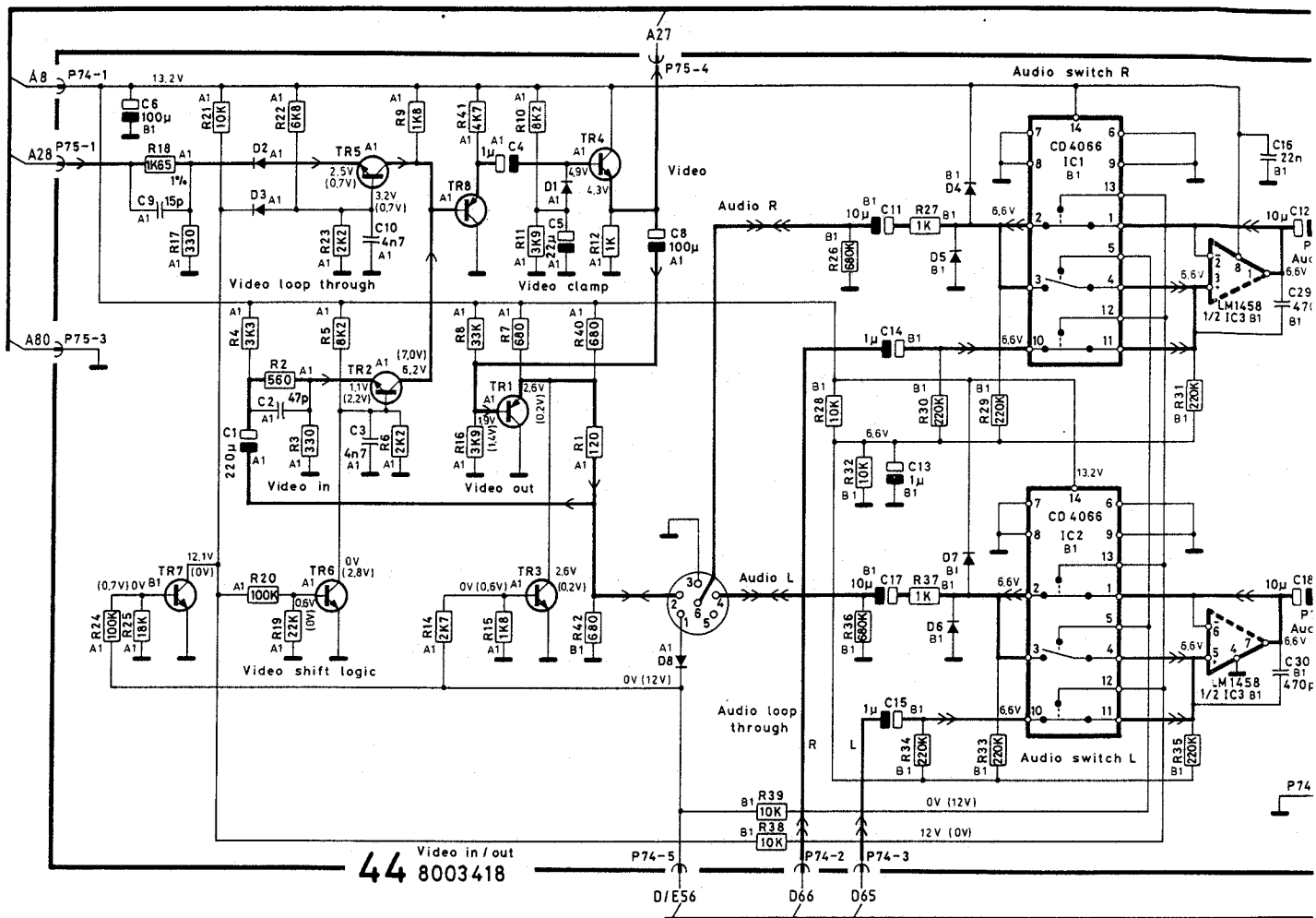
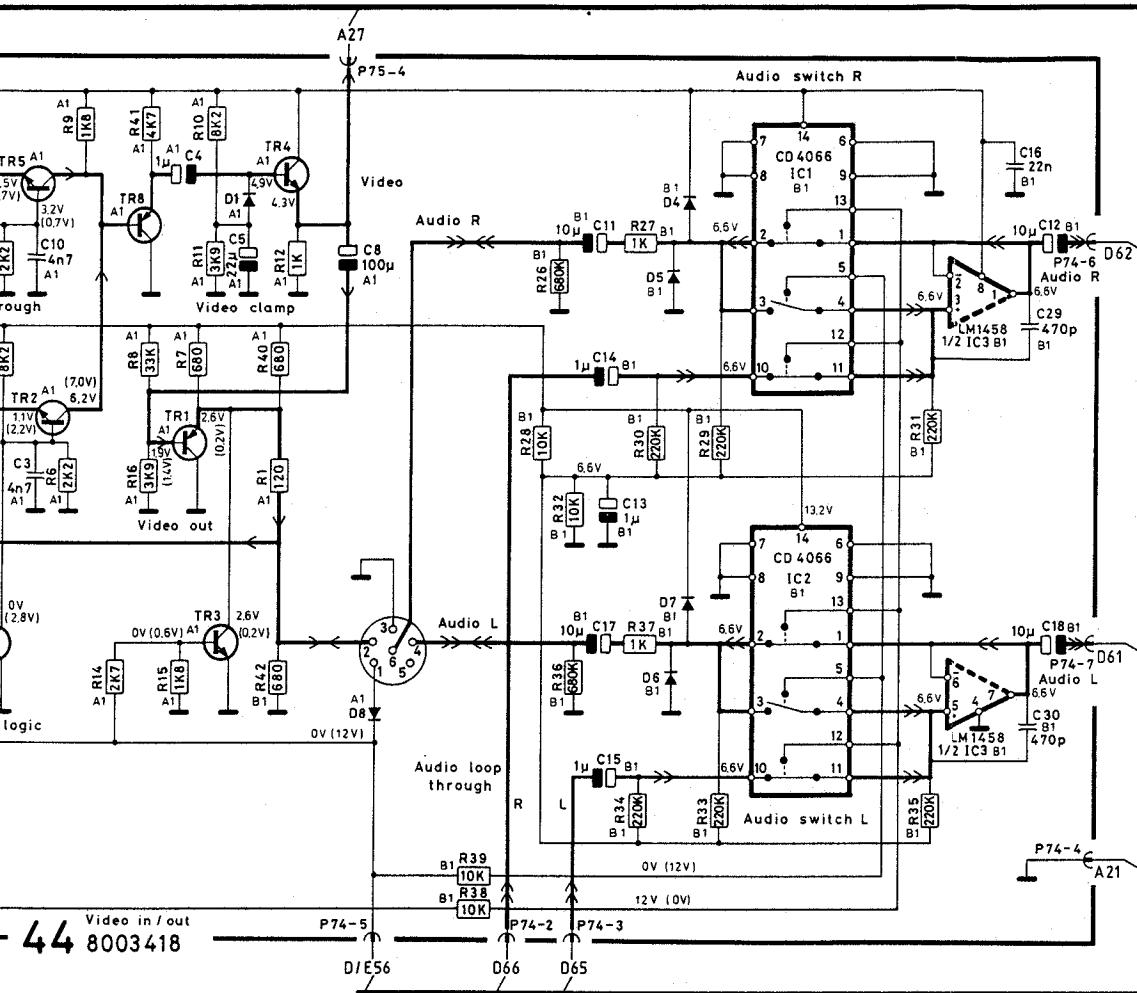
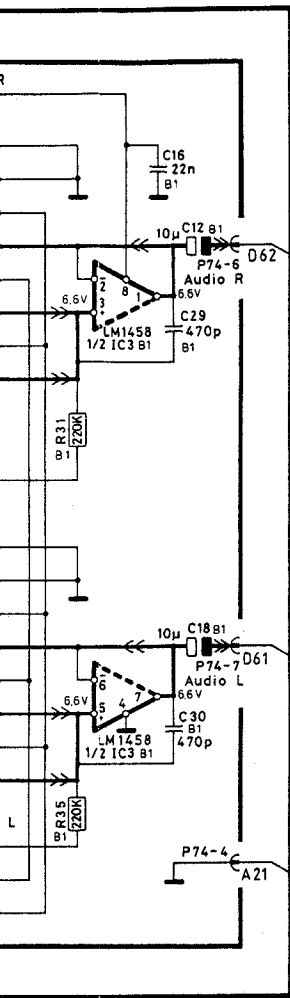


DIAGRAM G (VIDEO IN/OUT)







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DIAGRAM G (VIDEO IN/OUT 21 PINS)

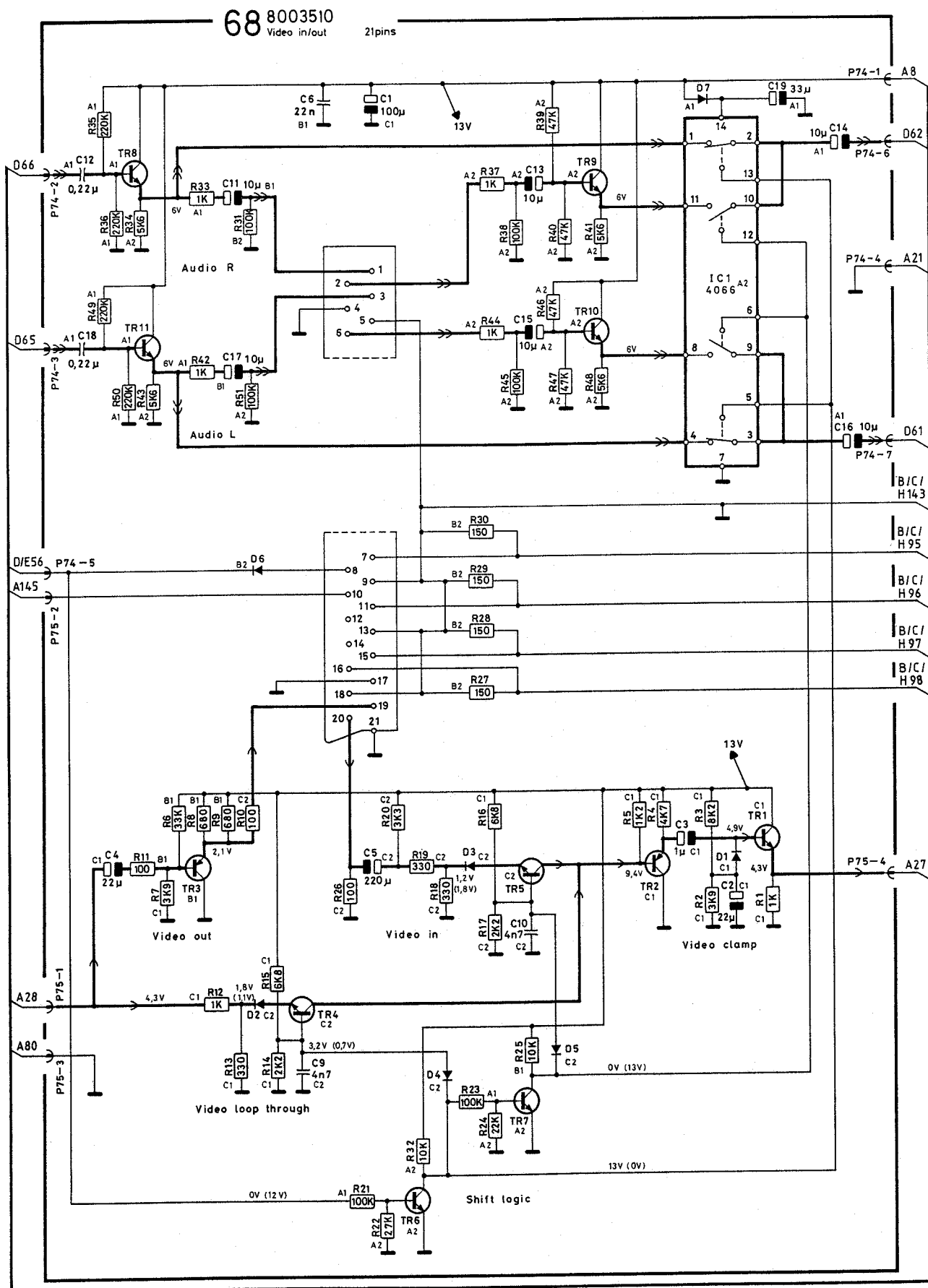


DIAGRAM D MONO (AF AMPL.) (PC9 TDA 2040

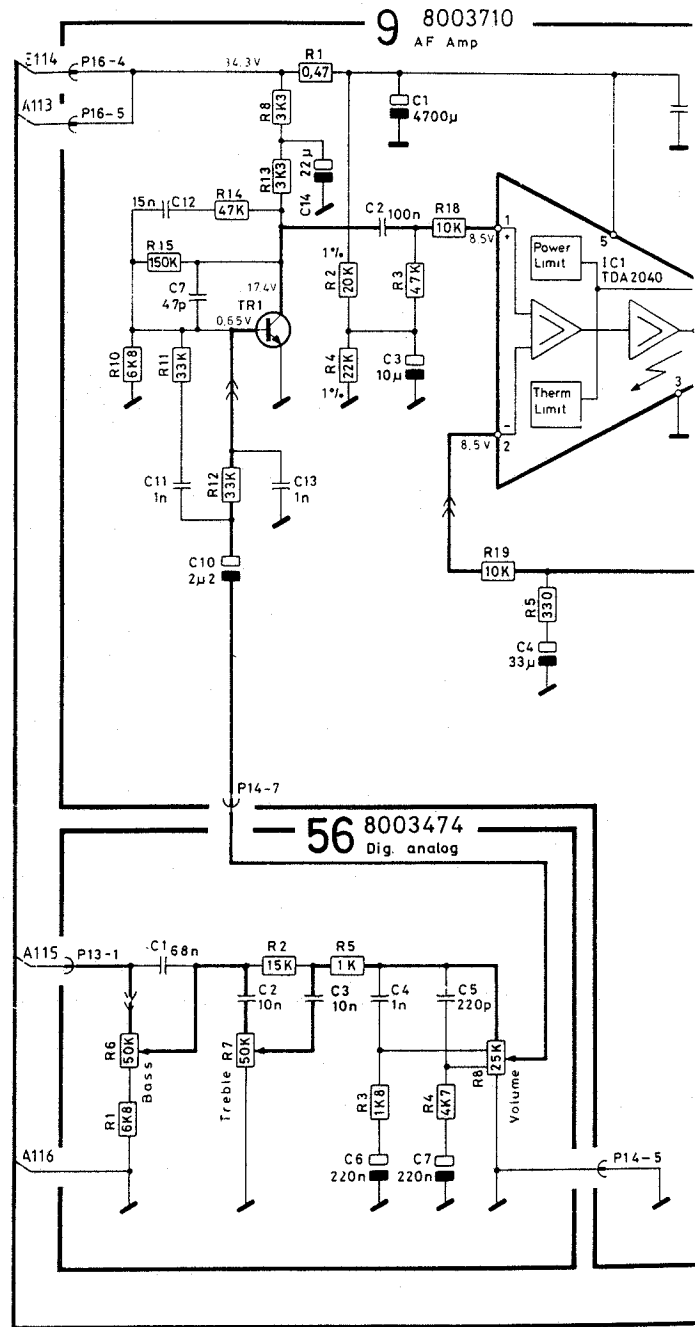
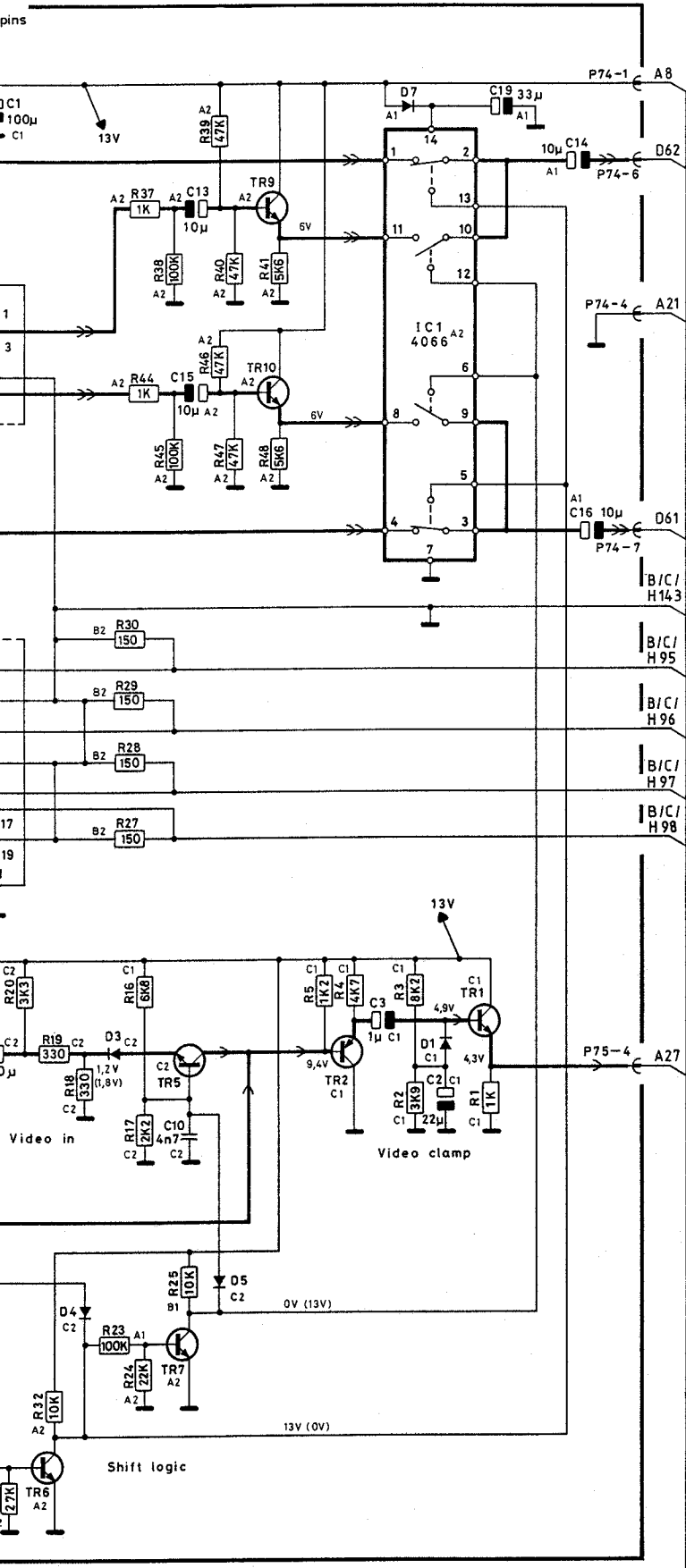


DIAGRAM D MONO (AF AMPL.) (PC9 TDA 2040 version)

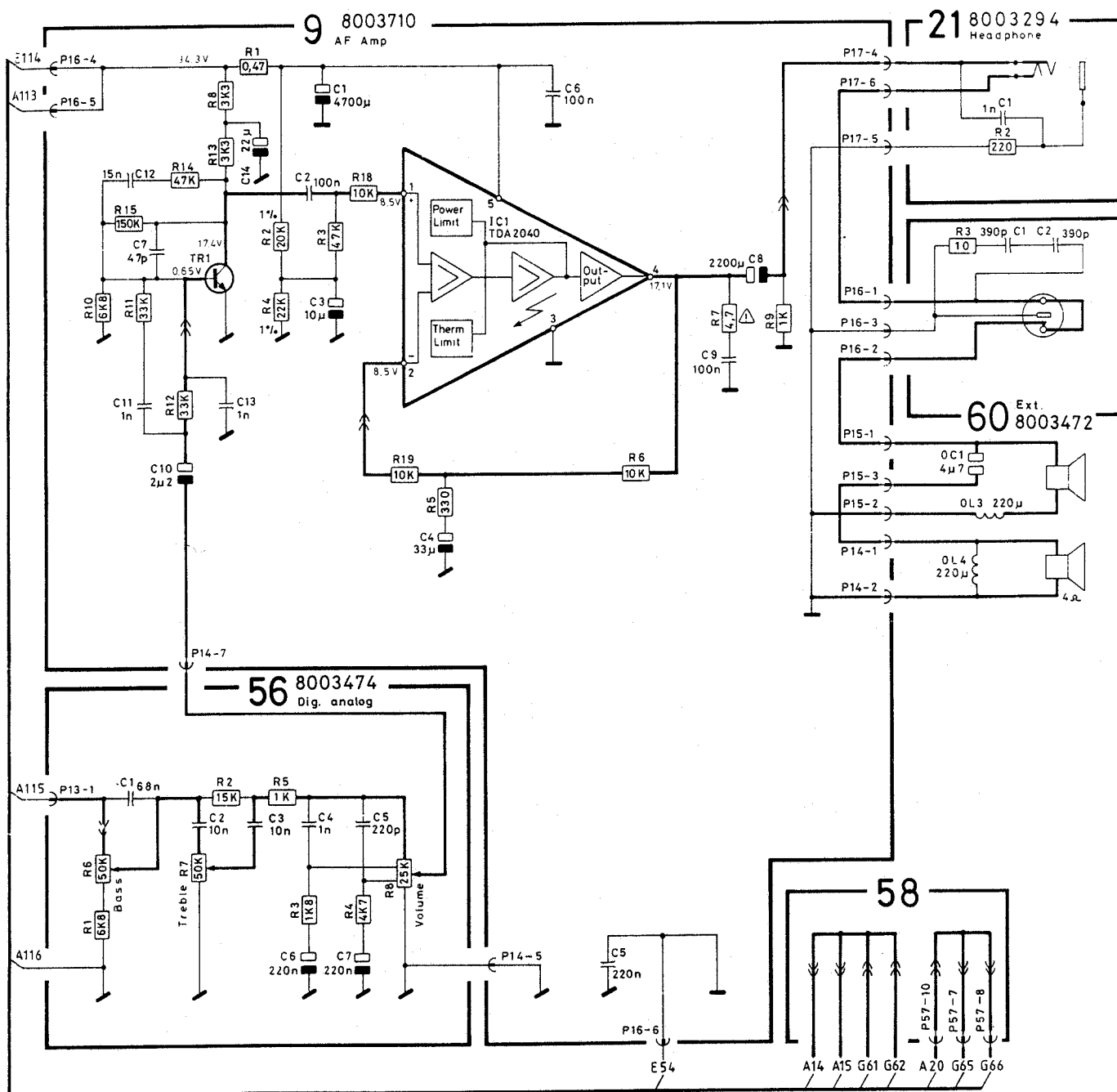
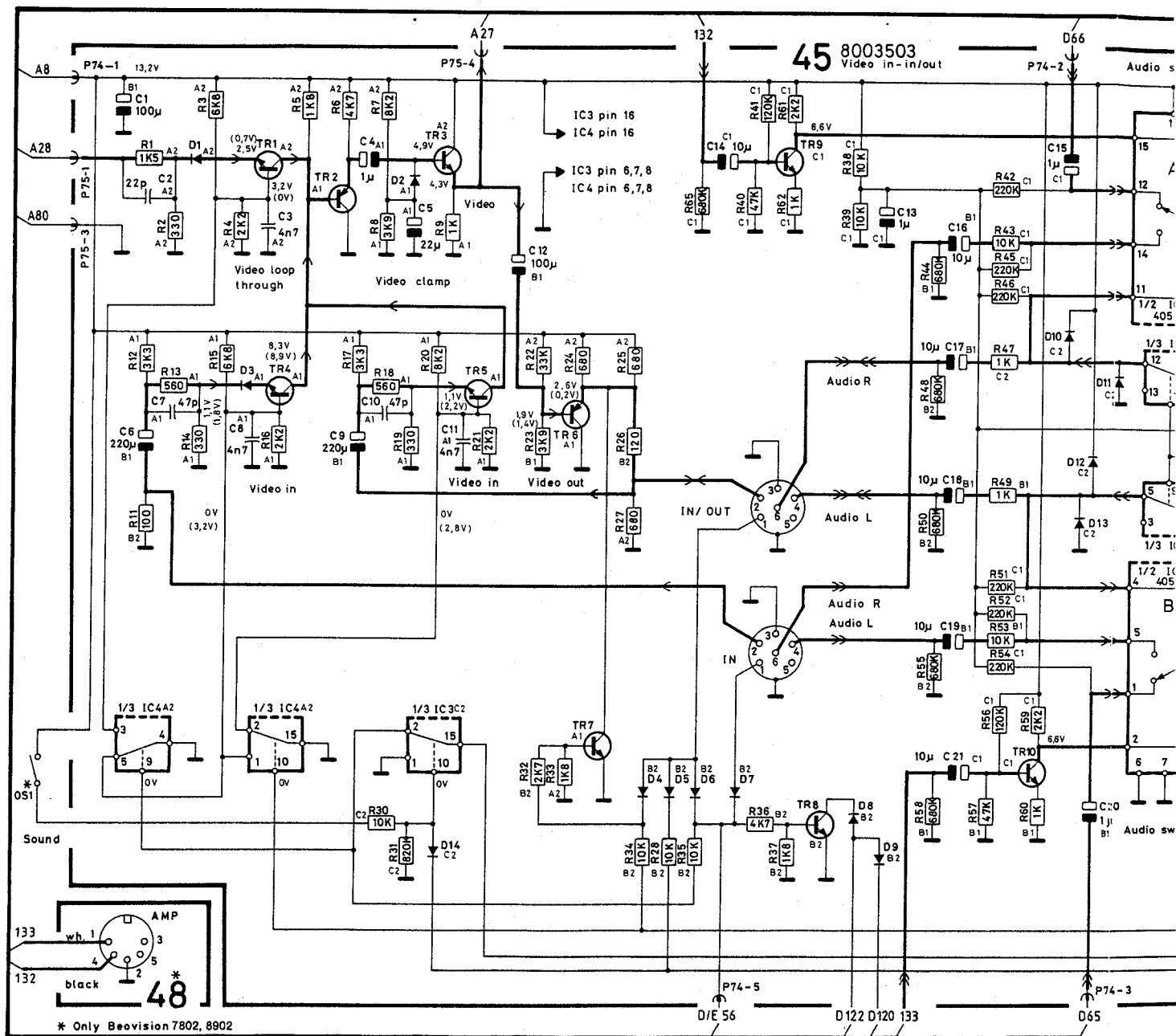
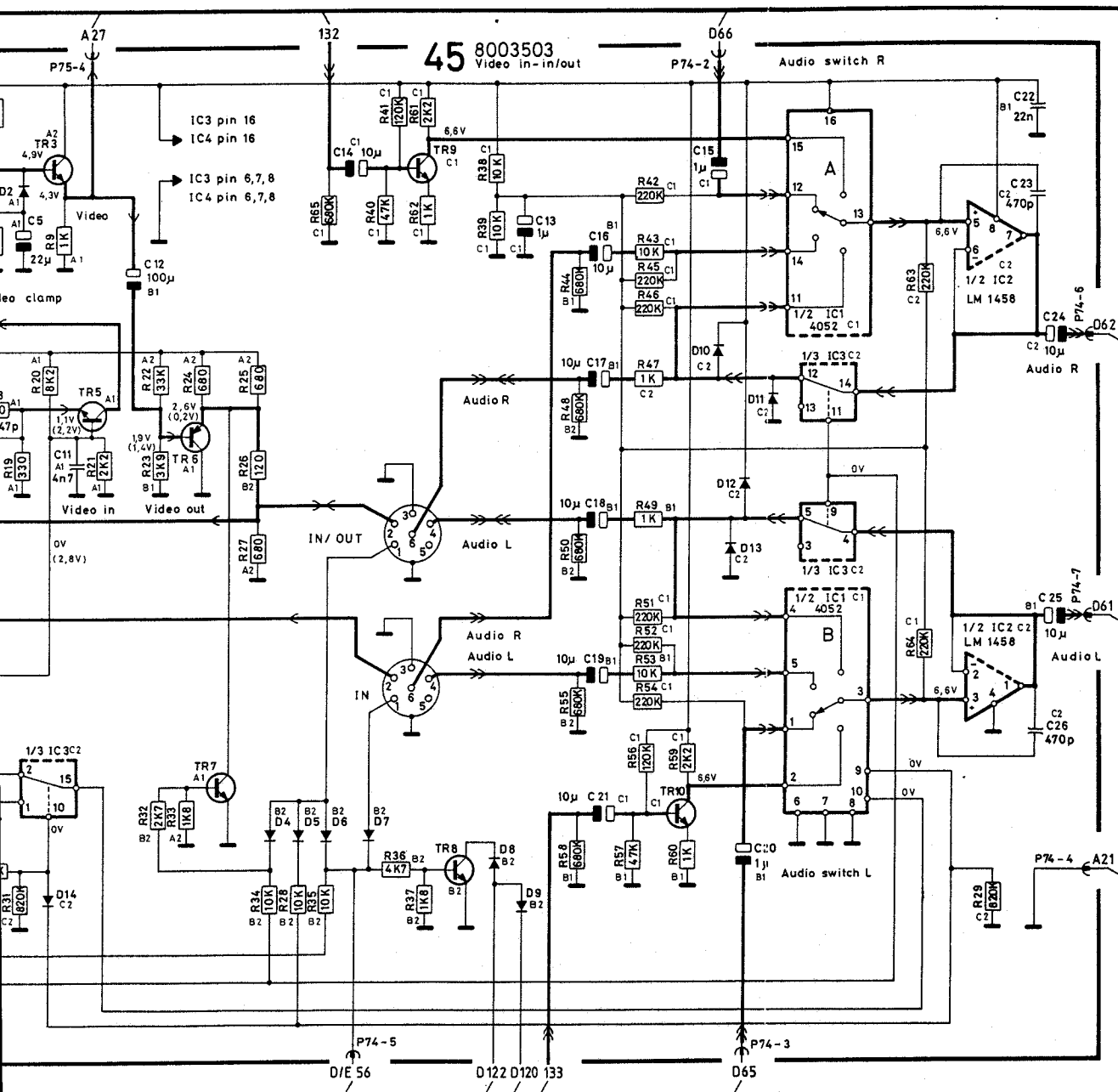


DIAGRAM G (VIDEO IN-IN/OUT) see page 9-3



*The AMP socket is also shown in DIAGRAM A stereo page 1-5.

FUNCTION TABLE FOR 45IC1 (CD4			
FUNCTION			
MODE	DIN-SOCKET		
	VIDEO IN	VIDEO IN/OUT	AMP *
TV (Video OUT)			0
Video IN	×		0
Ext.			×
Video IN		×	1



RAM A stereo page 1-5.

FUNCTION TABLE FOR 45IC1 (CD4052 BC)							
FUNCTION				INPUT STATS		SHORTED CONTACTS	
MODE	DIN-SOCKET			PIN 9	PIN 10	SWITCH A	SWITCH B
	VIDEO IN	VIDEO IN/OUT	AMP**				
TV(Video OUT)				0	0	Pin13→12	Pin 3 → 1
Video IN	×			0	1	Pin13→14	Pin 3 → 5
Ext.			×	1	0	Pin13→15	Pin 3 → 2
Video IN		×		1	1	Pin13→11	Pin 3 → 4

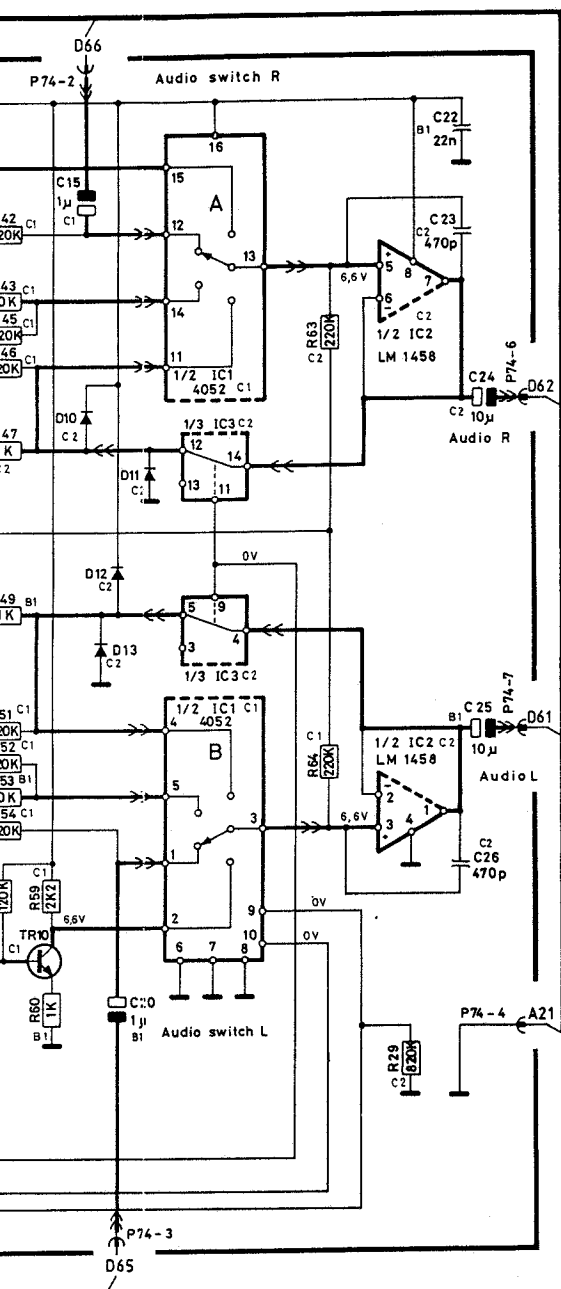
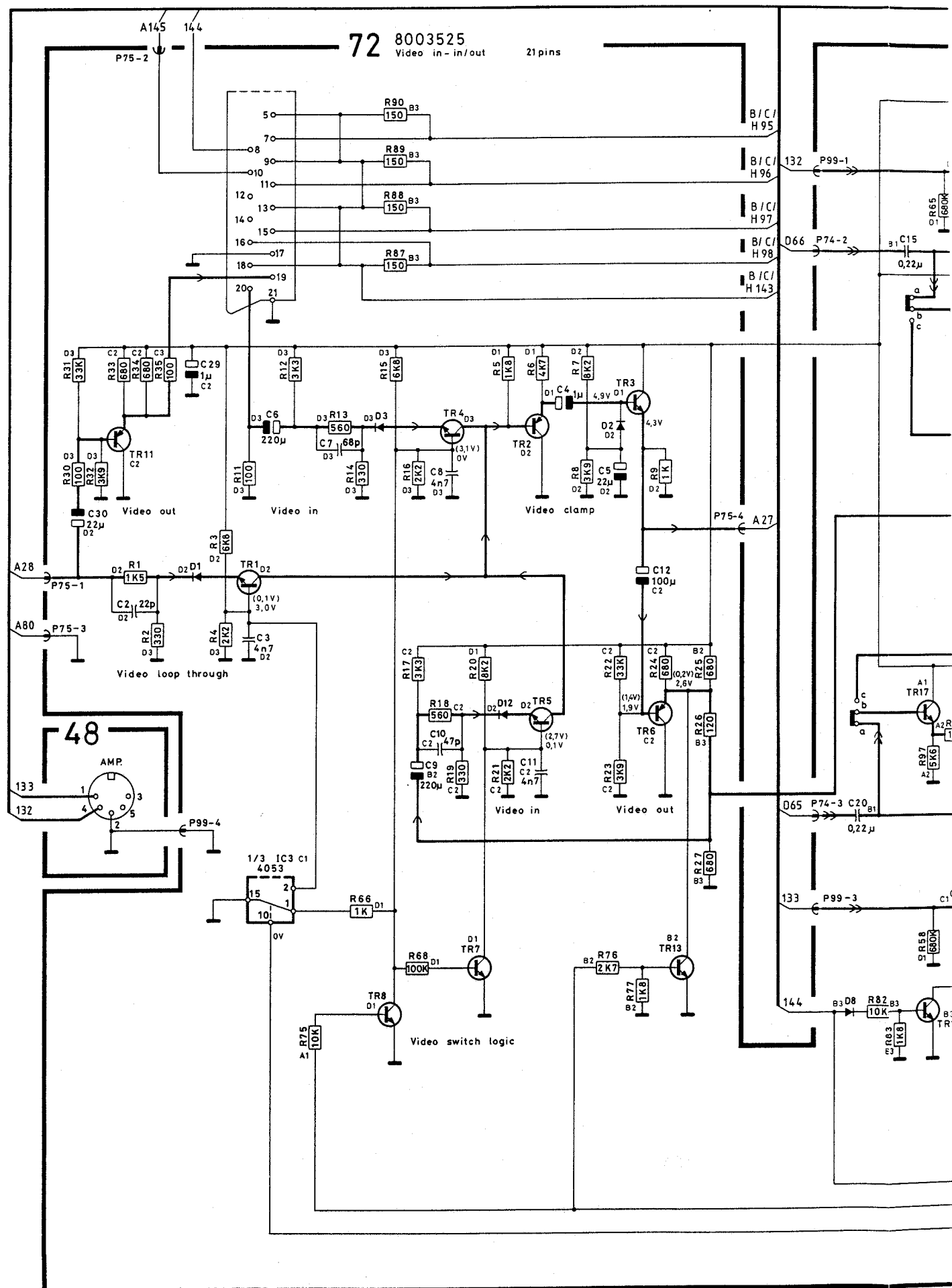
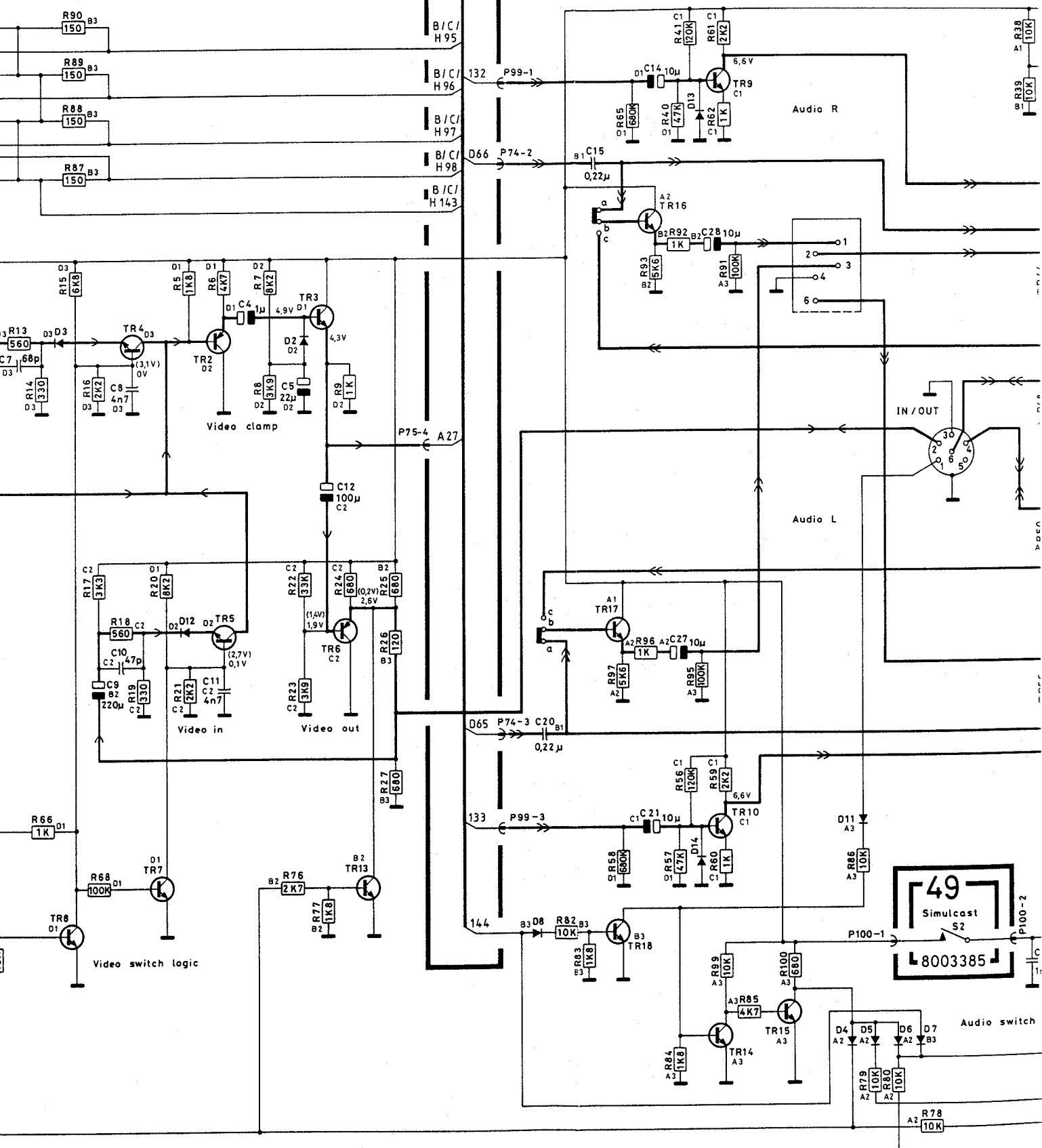


TABLE FOR 451C1 (CD4052 BC)

		INPUT STATS		SHORTED CONTACTS	
N-SOCKET		PIN 9	PIN 10	SWITCH A	SWITCH B
VIDEO IN/OUT	AMP #				
		0	0	Pin 13 → 12	Pin 3 → 1
		0	1	Pin 13 → 14	Pin 3 → 5
	X	1	0	Pin 13 → 15	Pin 3 → 2
X		1	1	Pin 13 → 11	Pin 3 → 4

DIAGRAM G (VIDEO IN-IN/OUT 21 PINS)





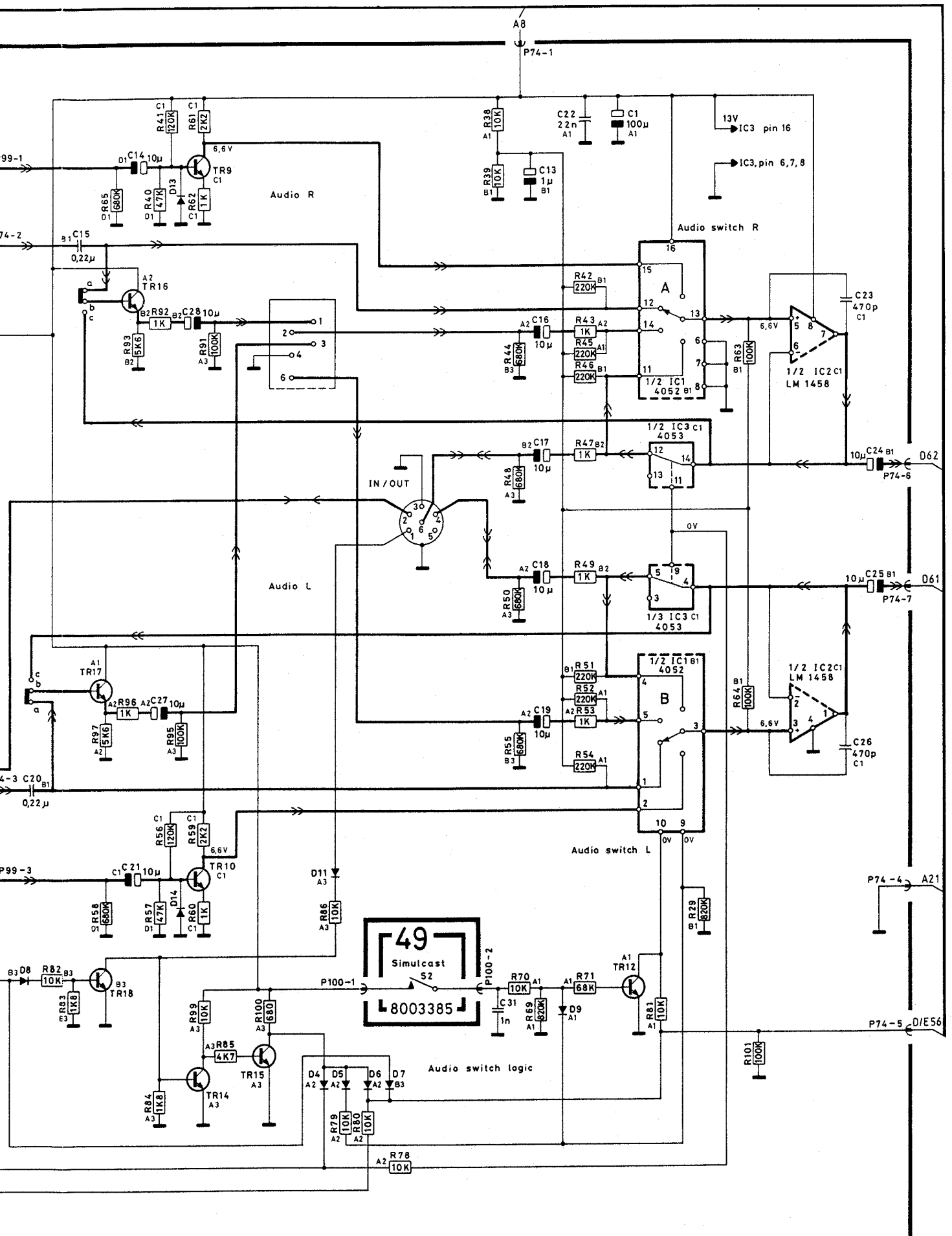
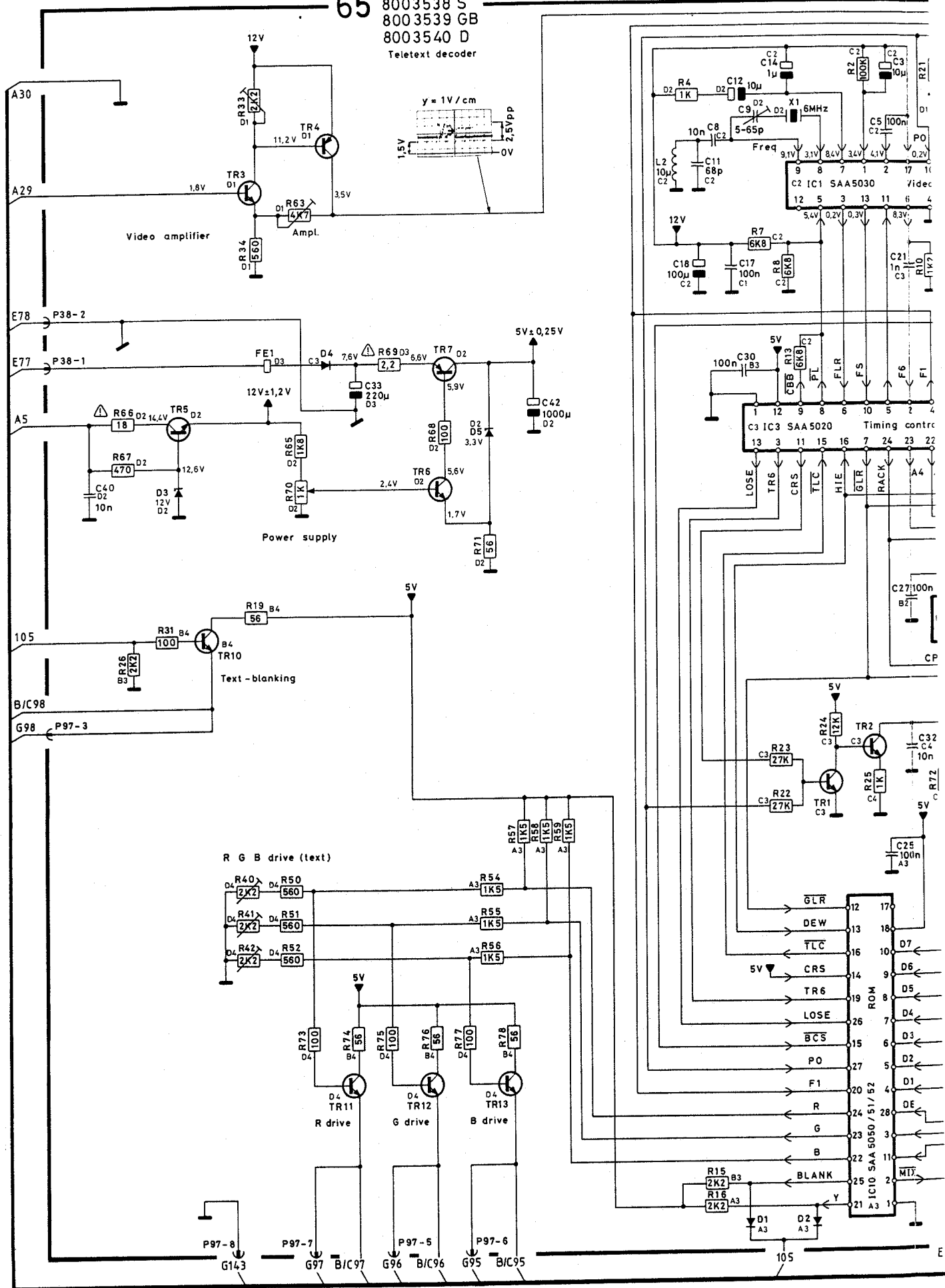
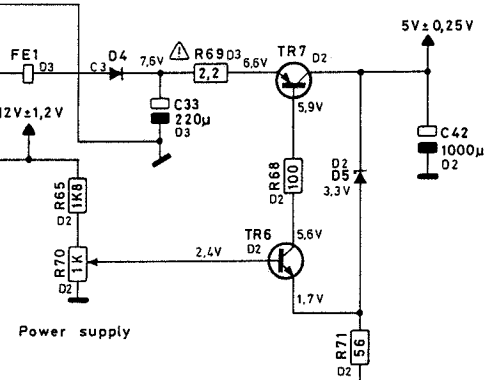
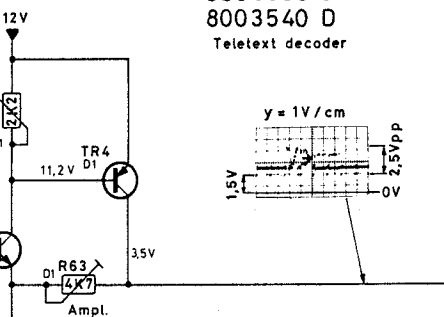


DIAGRAM H (TELETEXT DECODER)



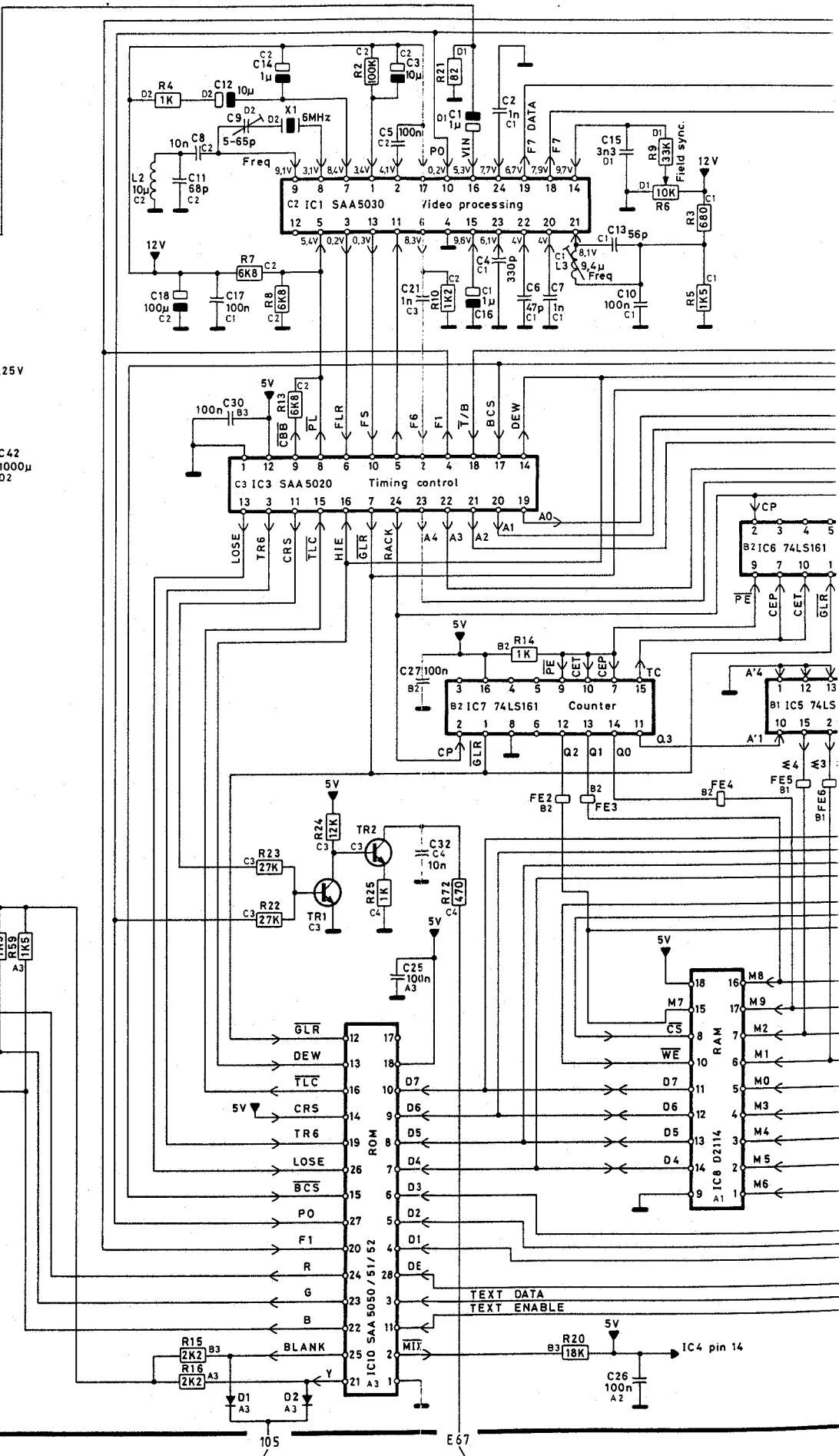
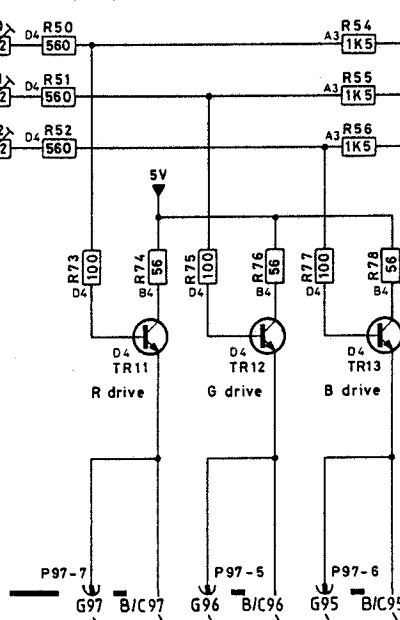
65

8003538 S
8003539 GB
8003540 D
Teletext decoder



blanking

B drive (text)



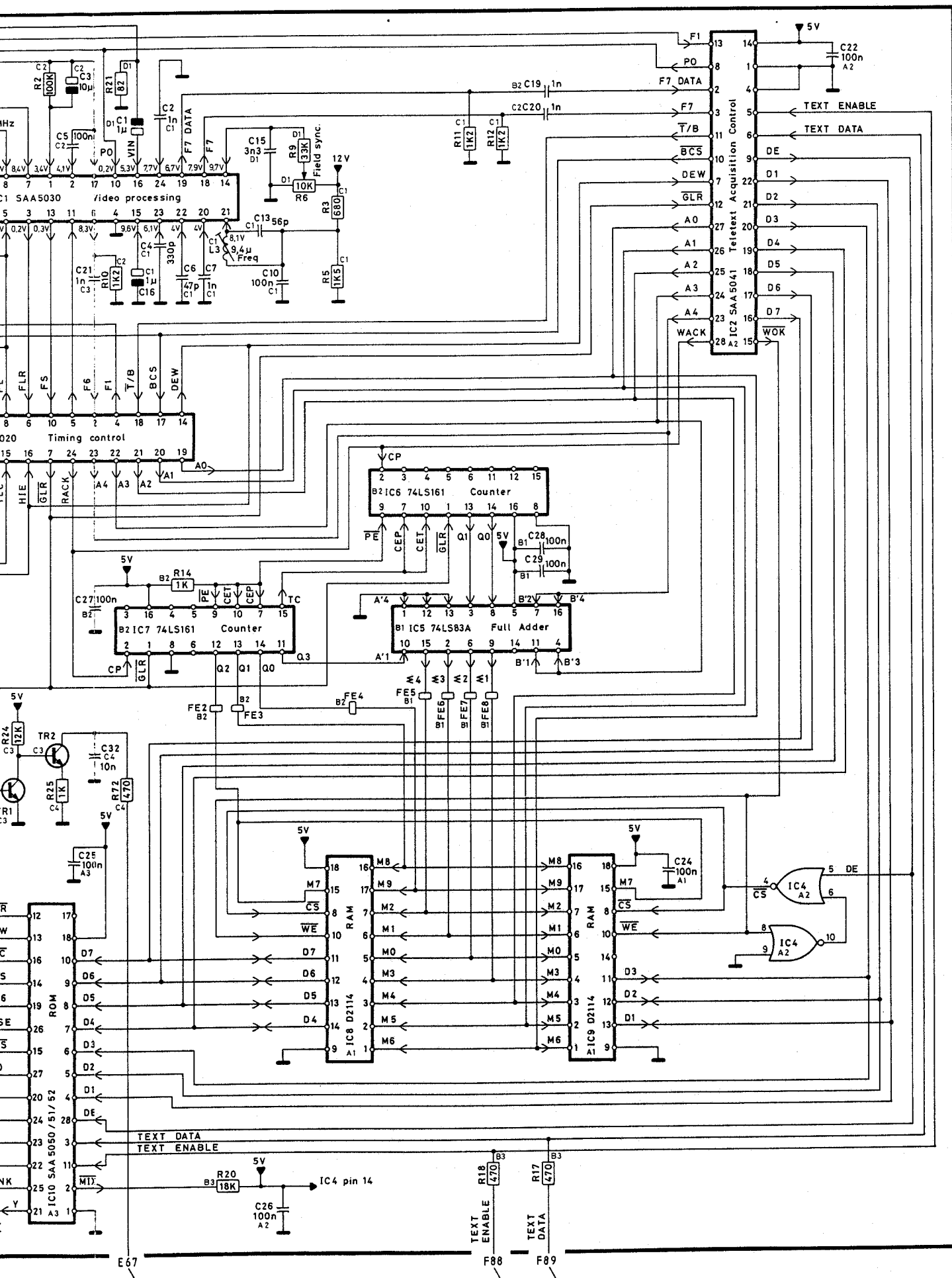
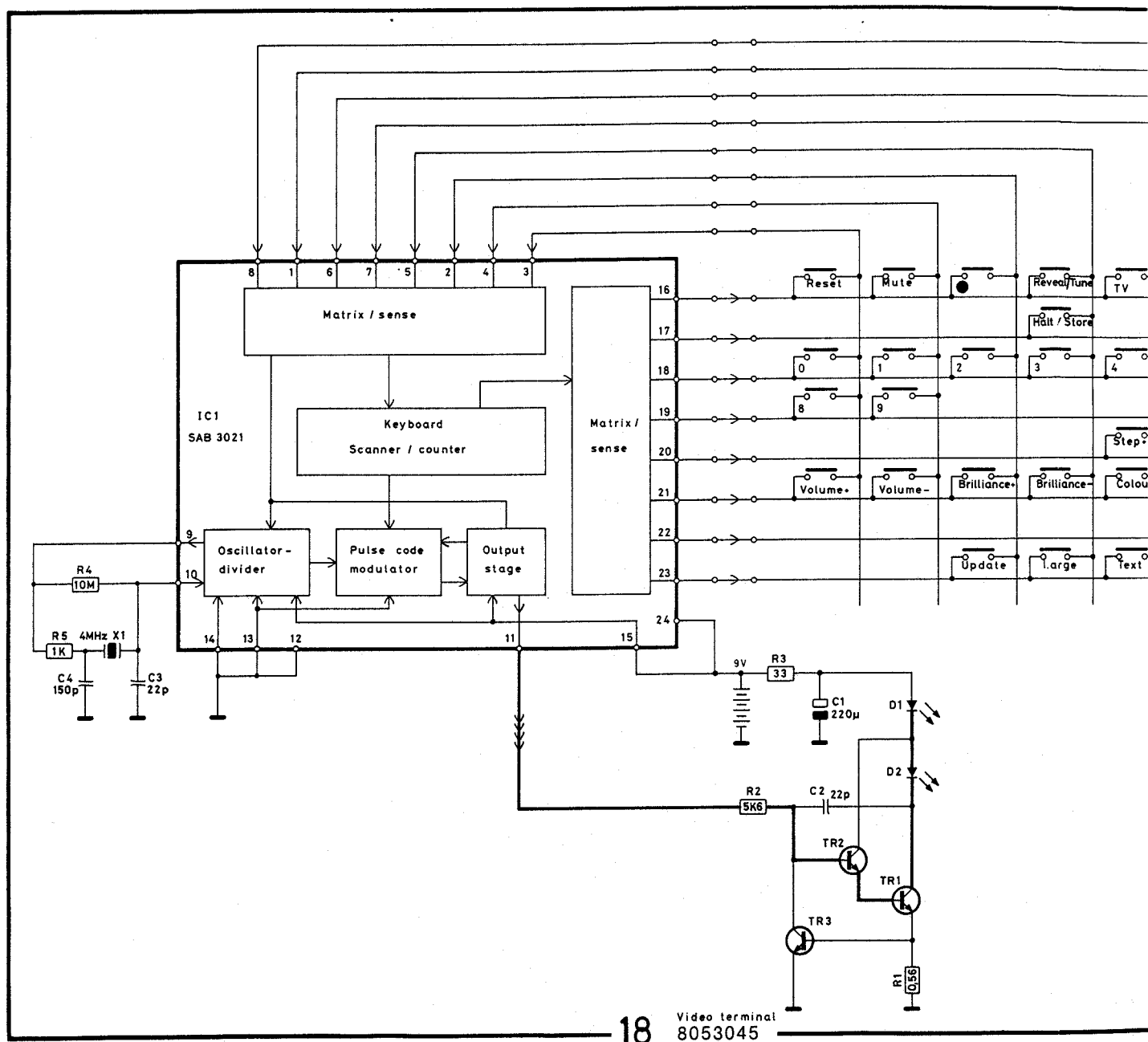
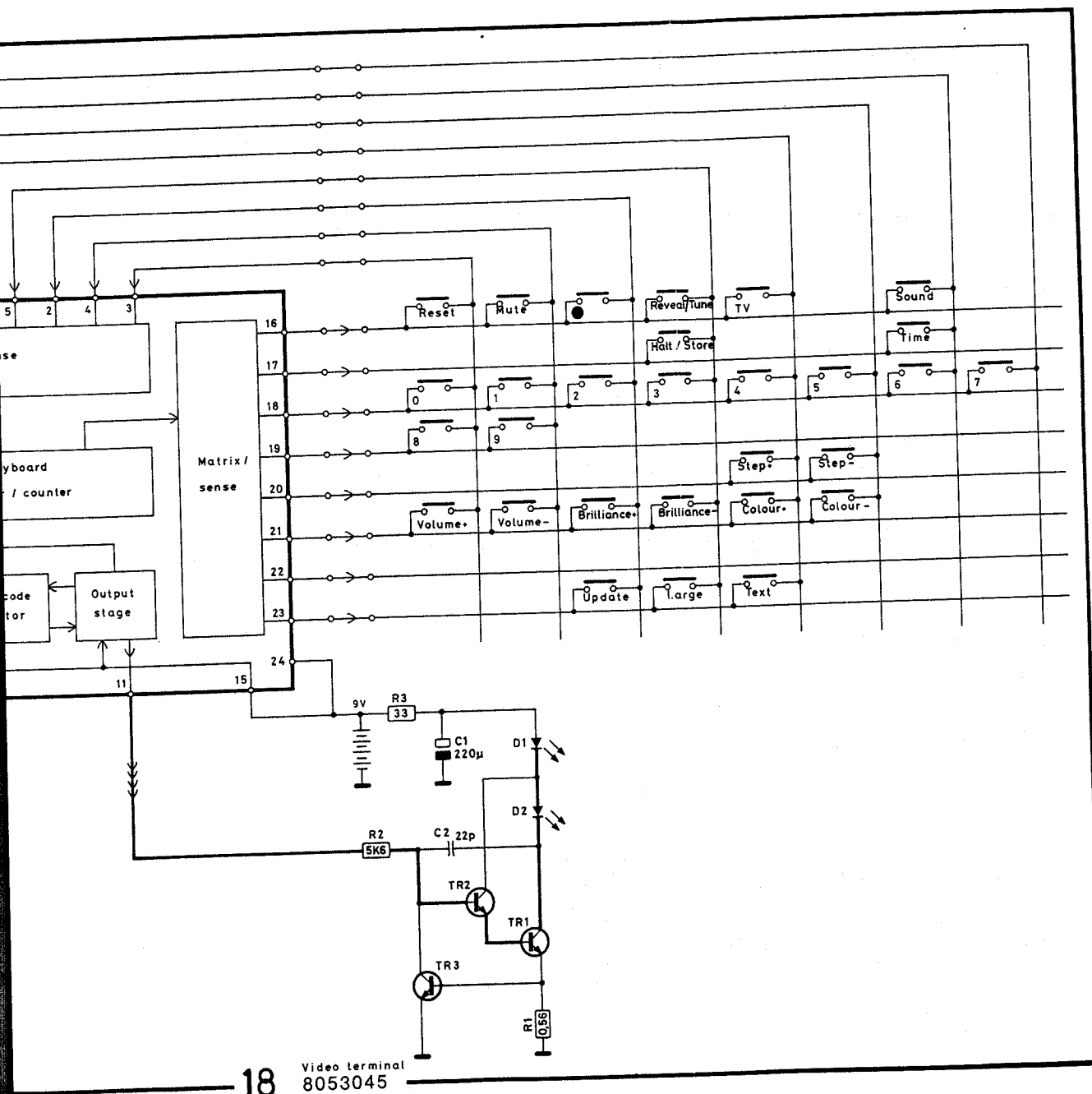


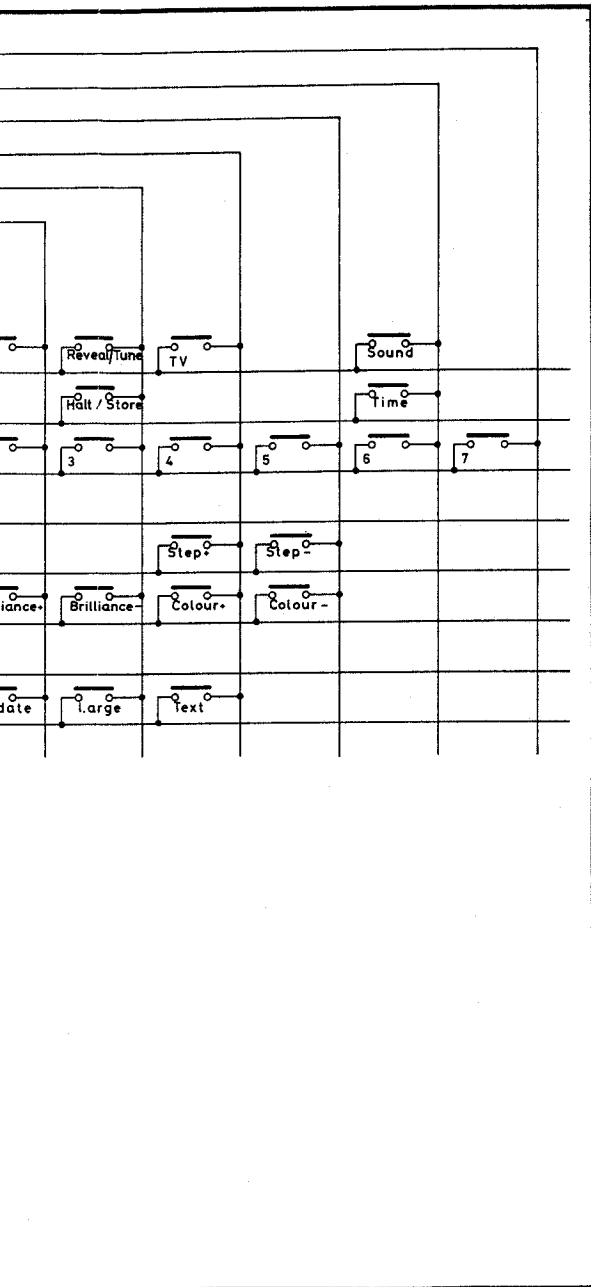
DIAGRAM J (VIDEO TERMINAL)



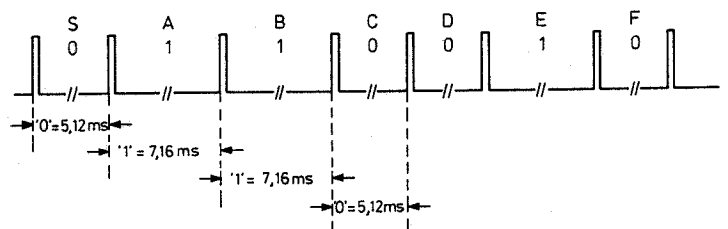


VIDE TERMI FUNC
RESE
MUTE
●
TV
REVEA
SOUND
HALT
TIME
0
1
2
3
4
5
6
7
8
9
STEP
STEP
VOLU
VOLU
BRIGH
BRIGH
COLO
COLO
UPDA
LARG
TEXT

For Service Manuals
MAURITRON SERVICES
 8 Cherry Tree Road, Chinnor
 Oxfordshire, OX9 4QY.
 Tel (01844) 351694
 Fax (01844) 352554
 email: - mauritron@dial.pipex.com

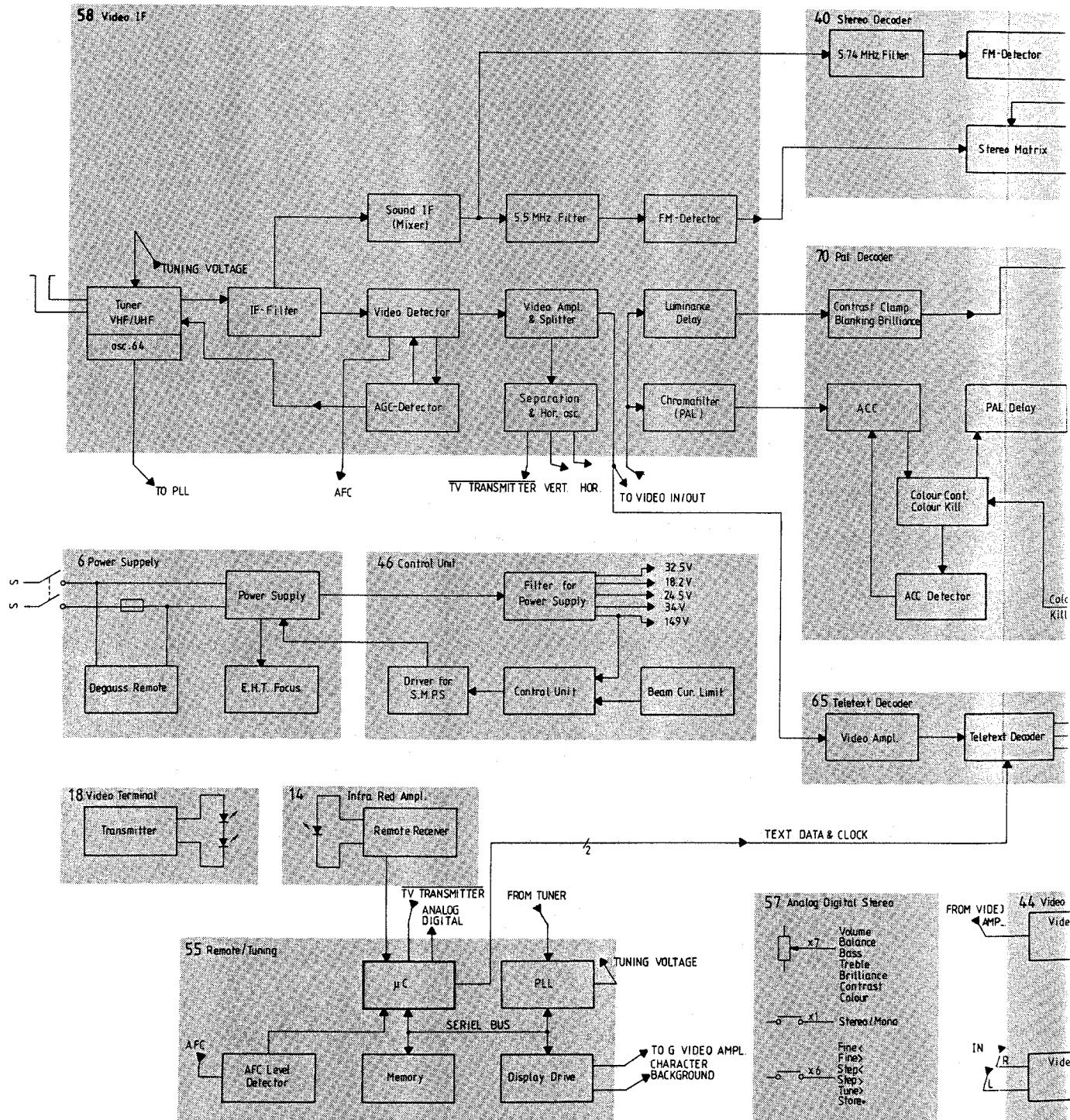


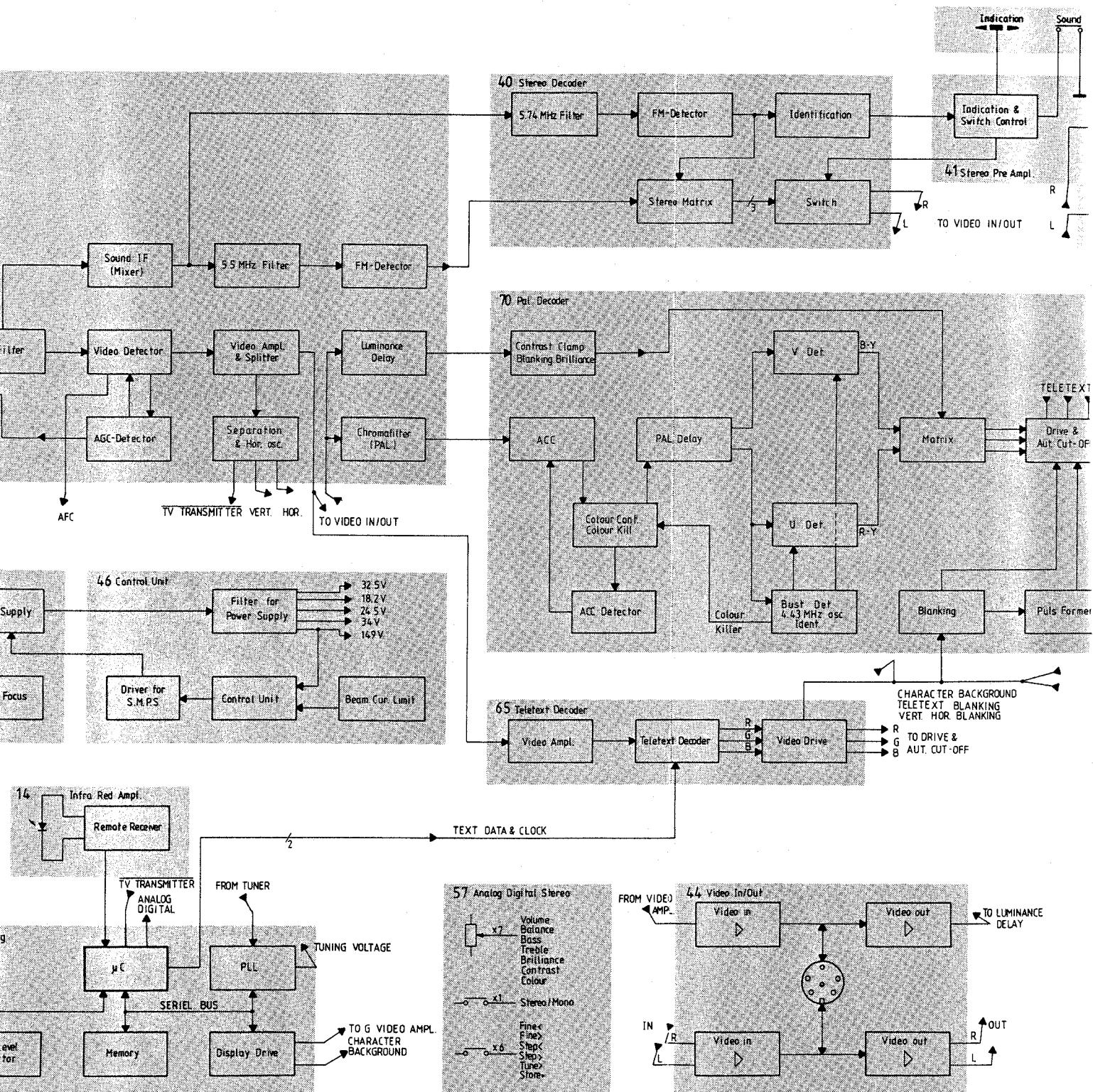
VIDEO TERMINAL FUNCTION	OUTPUT INSTRUCTIONS 18IC1 PIN 11						
	F	E	D	C	B	A	S
RESET	0	0	0	0	0	0	0
MUTE	0	0	0	0	0	1	0
●	0	0	0	0	1	0	0
TV	0	0	0	1	0	0	0
REVEAL	0	0	0	0	1	1	0
SOUND	0	0	0	1	1	0	0
HALT	0	0	1	0	1	1	0
TIME	0	0	1	1	1	0	0
0	0	1	0	0	0	0	0
1	0	1	0	0	0	1	0
2	0	1	0	0	1	0	0
3	0	1	0	0	1	1	0
4	0	1	0	1	0	0	0
5	0	1	0	1	0	1	0
6	0	1	0	1	1	0	0
7	0	1	0	1	1	1	0
8	0	1	1	0	0	0	0
9	0	1	1	0	0	1	0
STEP +	1	0	0	1	0	0	0
STEP -	1	0	0	1	0	1	0
VOLUME +	1	0	1	0	0	0	0
VOLUME -	1	0	1	0	0	1	0
BRIGHTNESS+	1	0	1	0	1	0	0
BRIGHTNESS-	1	0	1	0	1	1	0
COLOUR +	1	0	1	1	0	0	0
COLOUR -	1	0	1	1	0	1	0
UPDATE	1	1	1	0	1	0	0
LARGE	1	1	1	0	1	1	0
TEXT	1	1	1	1	0	0	0

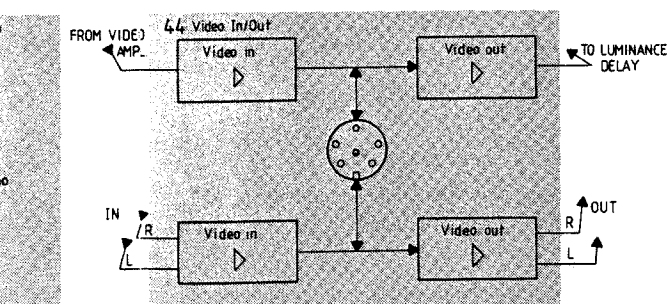
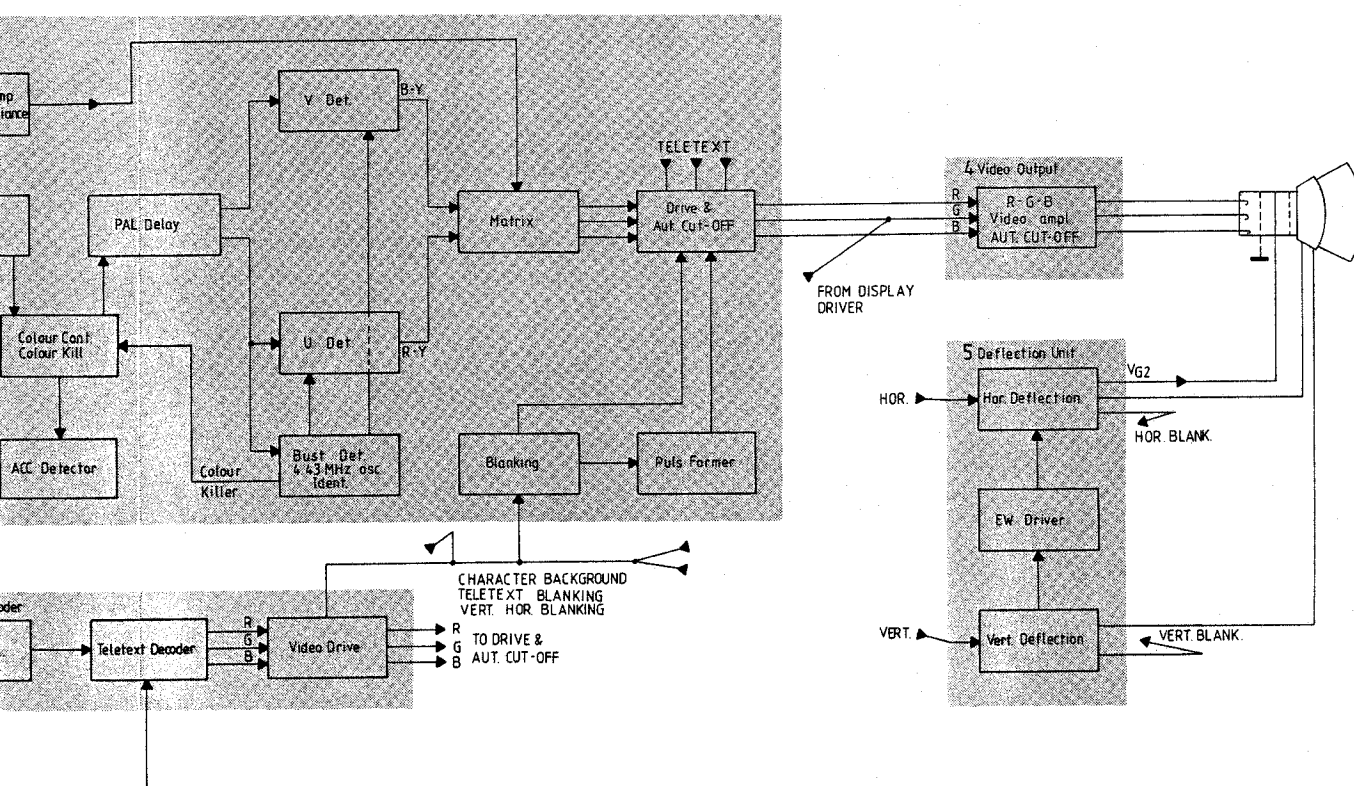
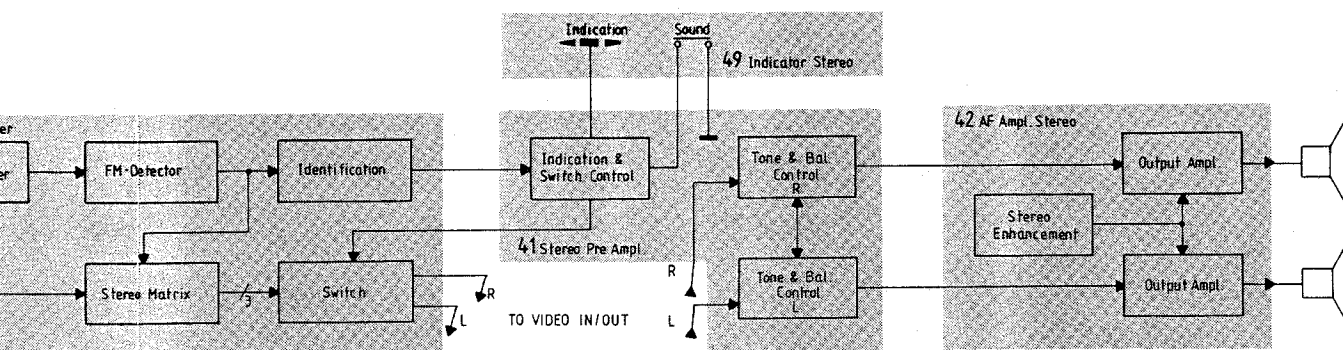


Bang & Olufsen

Blockdiagram for Beovision 7802, 8902 (Stereo)

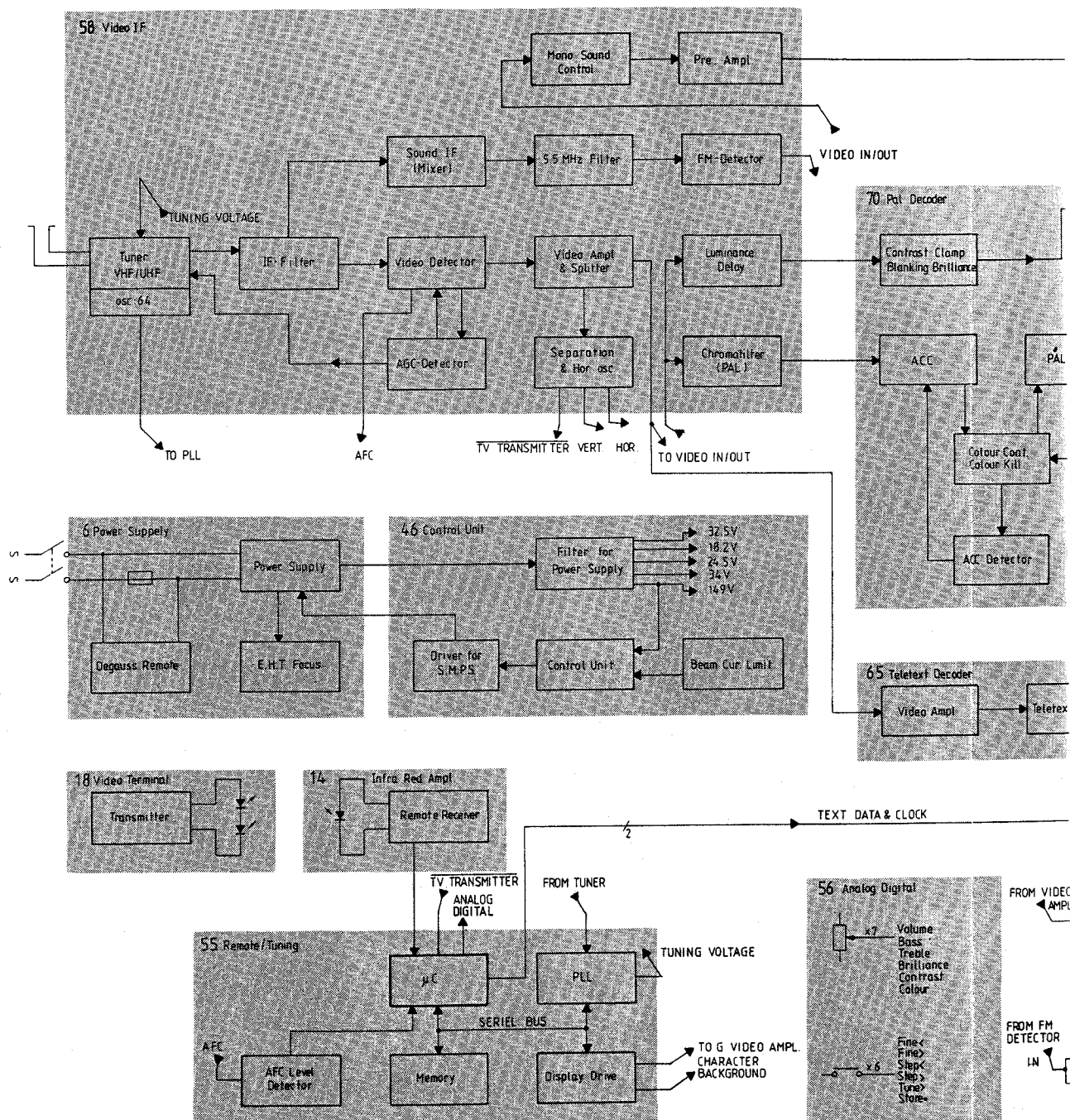


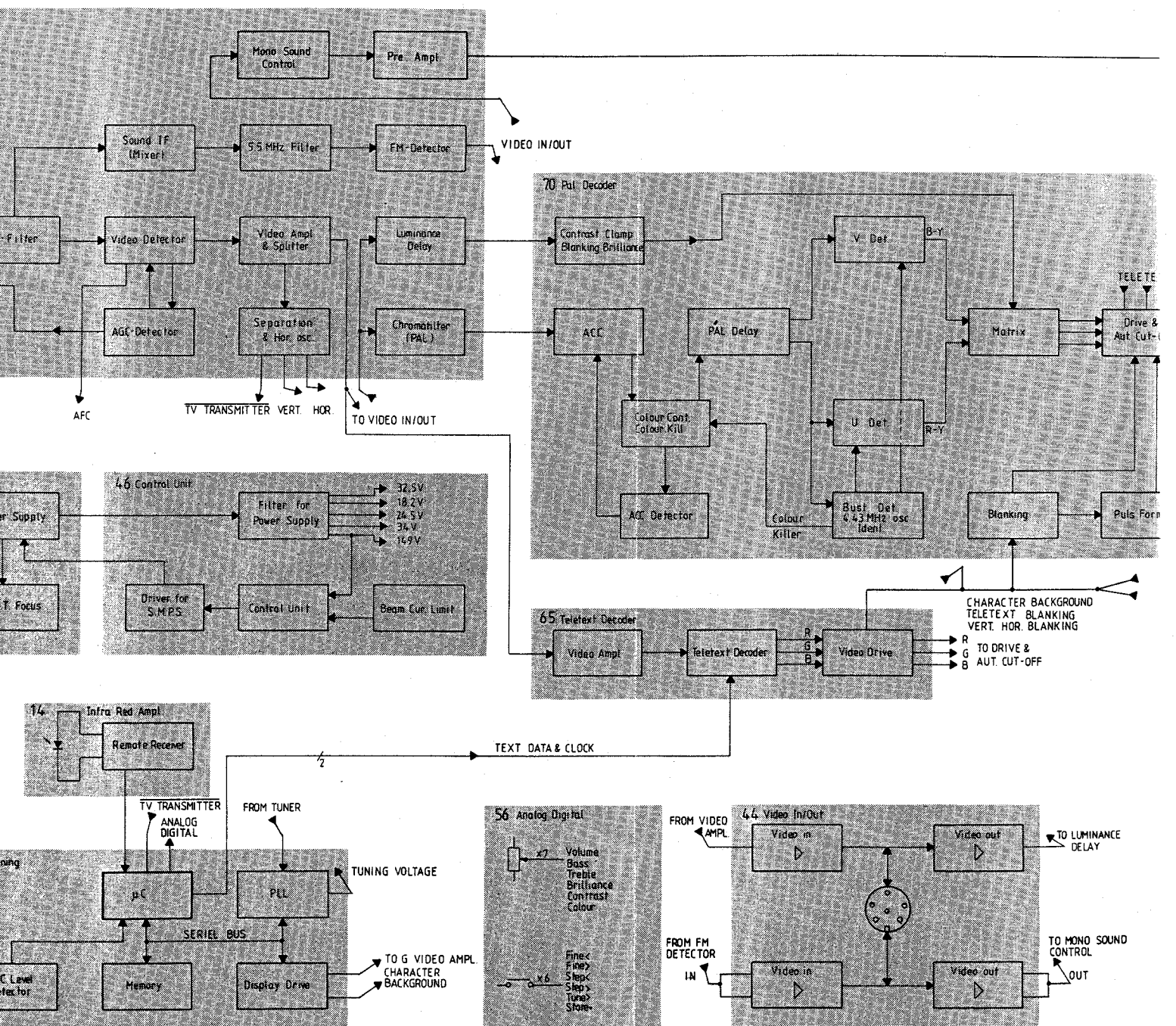




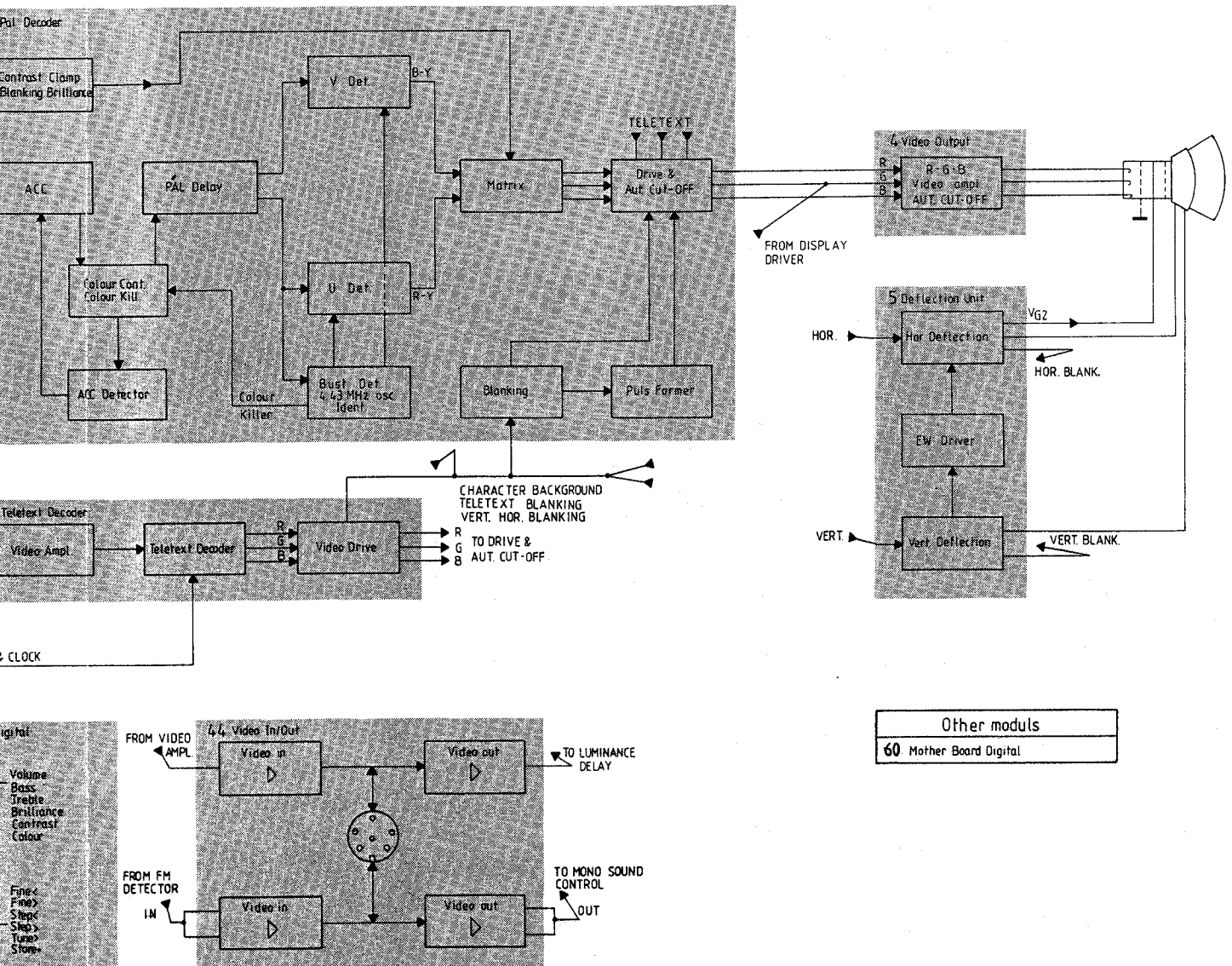
Other moduls	
47	AF Ampl. Supply Stereo
48	AF Distribution
61	Mother Board Digital Stereo

Blockdiagram for Beovision 5502, 7702, 8802, 9002 (Mono)





UT



**Diagram of 58TU1 VHF-UHF
tuner (type UV412), 8050416**

