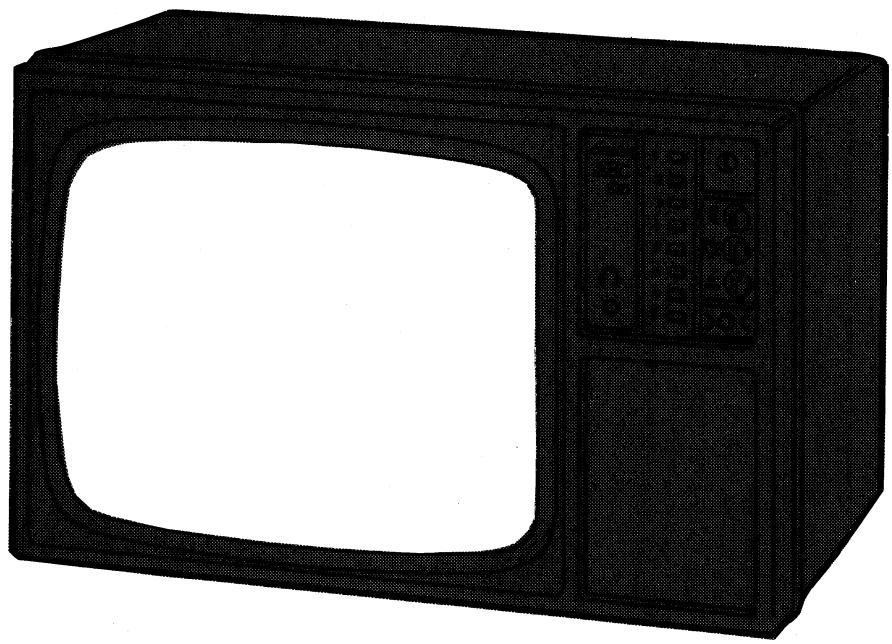
LUXOR Computers

ABC 810 Display Unit 190 9211

Service Manual

Edition 1.0 August 1981



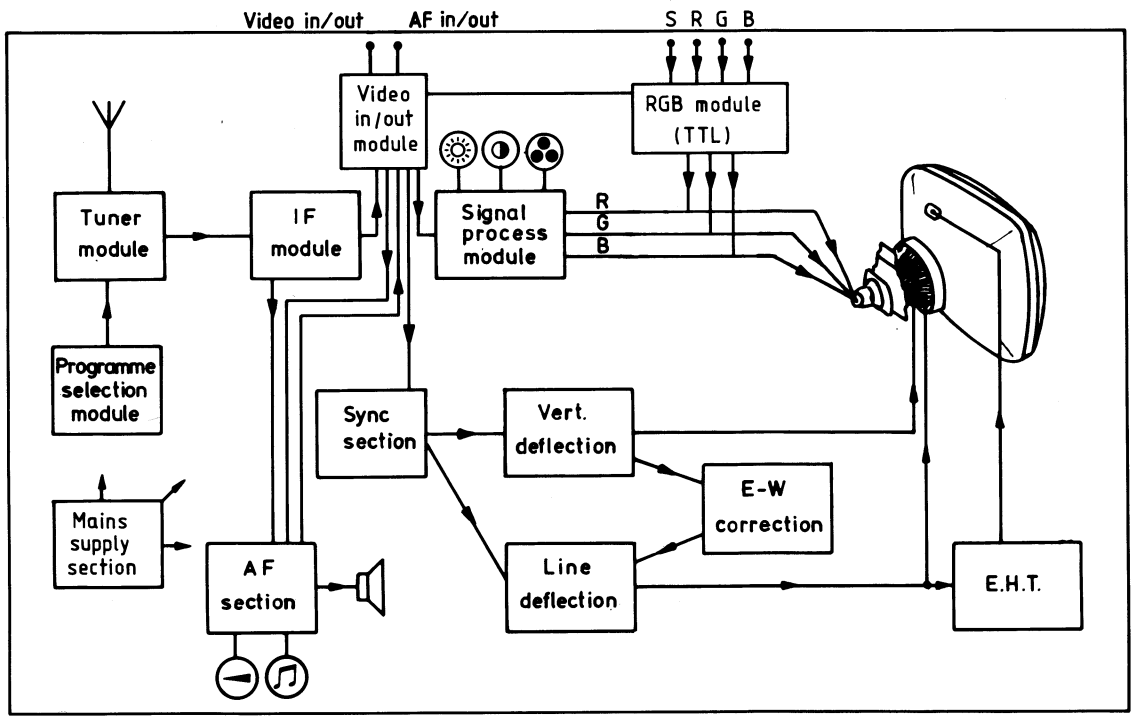
ABC 800®

CONTENTS

TECHNICAL DESCRIPTION

Picture Tube	Size	14" (13V)
	Deflection	90^{o}
	Phosfor	P22 (RGB)
	E.H.T.	22,5 kV
Mains Voltage		AC 185-265 V
frequency		50 Hz
power		50 W
Colours		R,G,B,Y,Cy and Ma
Inputs	Alt. 1	RGB + neg. comp. synk (TTL)
	Alt. 2	Comp. video 1 V_{tt} /75 ohm
	Alt. 3	Normal TV-signal through the aerial input
Outputs	Comp. video 1V/75	+ audio approx. 500 mV_{RMS}

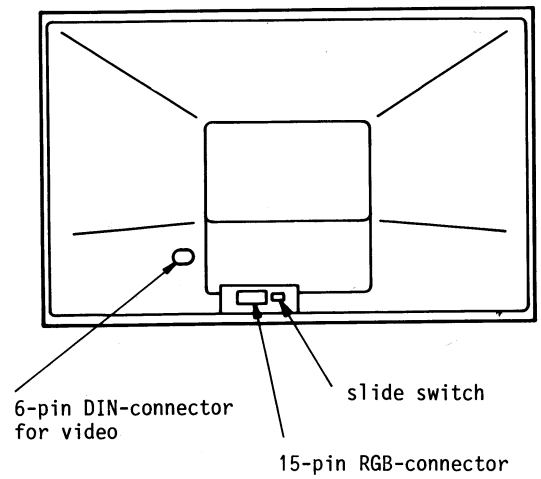
BLOCK DIAGRAM



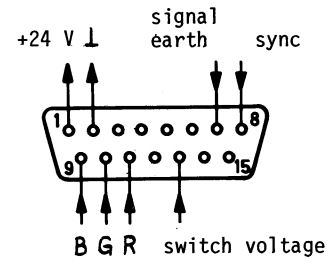
TECHNICAL SPECIFICATIONS

The ABC 810 is an RGB-monitor, that can also be used as a video colour monitor and as a normal colour TV receiver.
The 15-pin connector (D-sub) at the rear of the receiver has inputs for RGB signals and for a sync signal. The connector also has an input for a switch voltage and an output for +24 V.
This +24 V is intended as supply voltage to the computer ABC 800. Max power output is 35 W.
The inputs for the RGB signals and for the sync signal are intended for TTL levels where the sync has negative logic.
Next to the 15-pin connector there is a slider switch for switching between "Monitor" and "TV".
The position "Monitor" is intended for use when RGB signals, which are fed in via the 15-pin connector, are to be shown on the display.
The switch should be in the position "TV" when the ABC 810 is to be used as a normal colour TV receiver or as a video colour monitor.
In the position "TV", the ABC 810 is switched from colour TV receiver to video colour monitor with an external switch voltage of +12 V, which is connected to pin 1 of the 6-pin DIN-socket at the rear of the receiver. A video signal can now be connected to pin 2 and an AF signal to pin 4. Pin 3 is earth. Without switch voltage on pin 1, output signals are present on pin 2, video signal, and pin 4, AF signal. These signals are consequently demodulated aerial signals.
When a switch voltage is connected to pin 13 of the 15-pin connector, the receiver will switch to RGB monitor without operation of the slider switch. In this position, as well as when the slider switch is in position "Monitor", the sound section will be switched off.
The RGB signals, which are connected to the 15-pin connector, will be fed to IZ01 (SN7406) that consists of inverters with open collector on the output. The three inputs are protected by a series resistor and a diode, the latter connected to the supply voltage of the circuit.
By changing the voltage to the collector resistor for the respective inverter that drives the R-,G- and B output stages of the receiver, the light intensity of the information can be varied. This change of voltage is carried out by means of the brightness control, which is the only external control that affects the receiver in position "Monitor".
To avoid overloading of the horizontal output stage and the picture tube, when the greater part of the display is covered by information, there is a beam current limiter that will reduce brightness until an acceptable beam current is obtained.

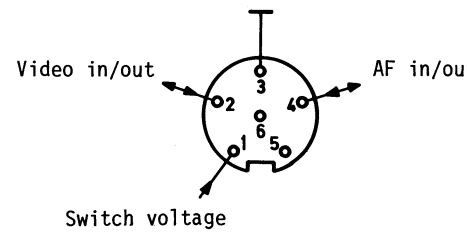
A description of the receiver itself is to be found in the publication "TECHNICAL DESCRIPTION CTV-CHASSIS B1 AND B2" (Part No. 66 90198-02).



RGB-CONNECTOR
15-PIN D-SUB



6-PIN DIN-CONNECTOR
FOR VIDEO

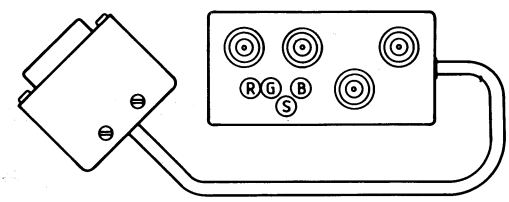


Optional extras:

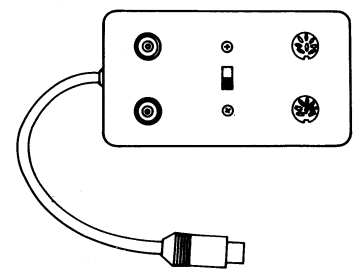
BNC-box, Part No. 190 9411-01; to be connected to the 15-pin D-sub connector.

Video adaptor, Part No. 190 9792-15; to be connected to the 6-pin DIN-connector.

BNC-BOX RGB

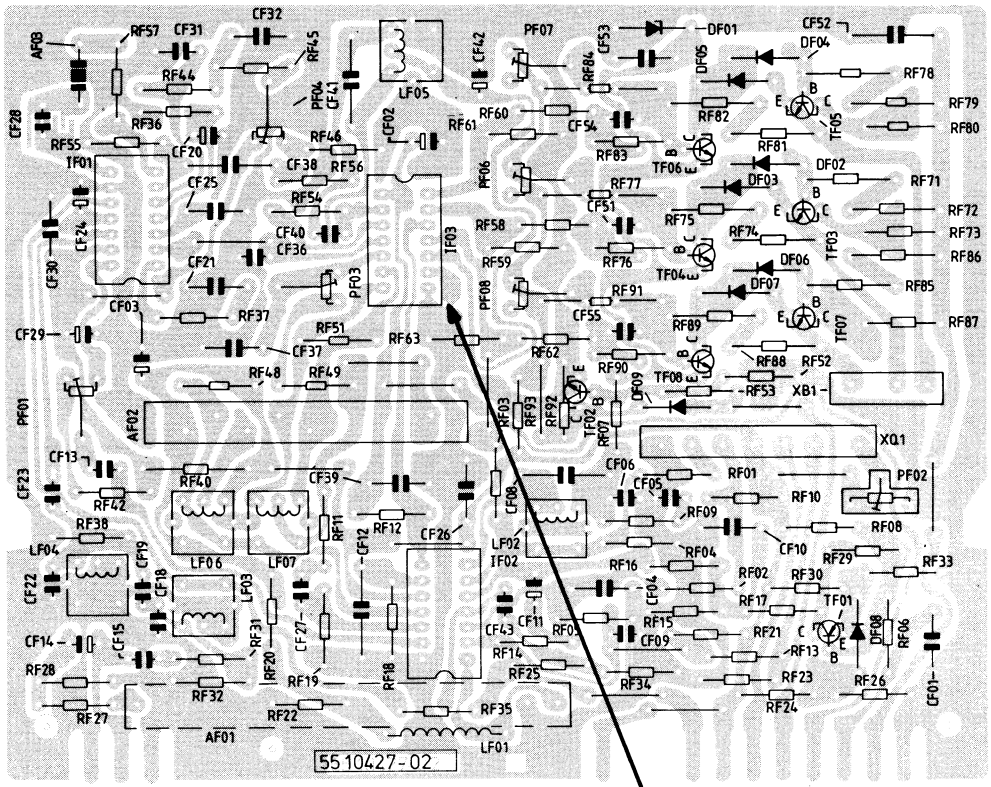


VIDEO ADAPTOR



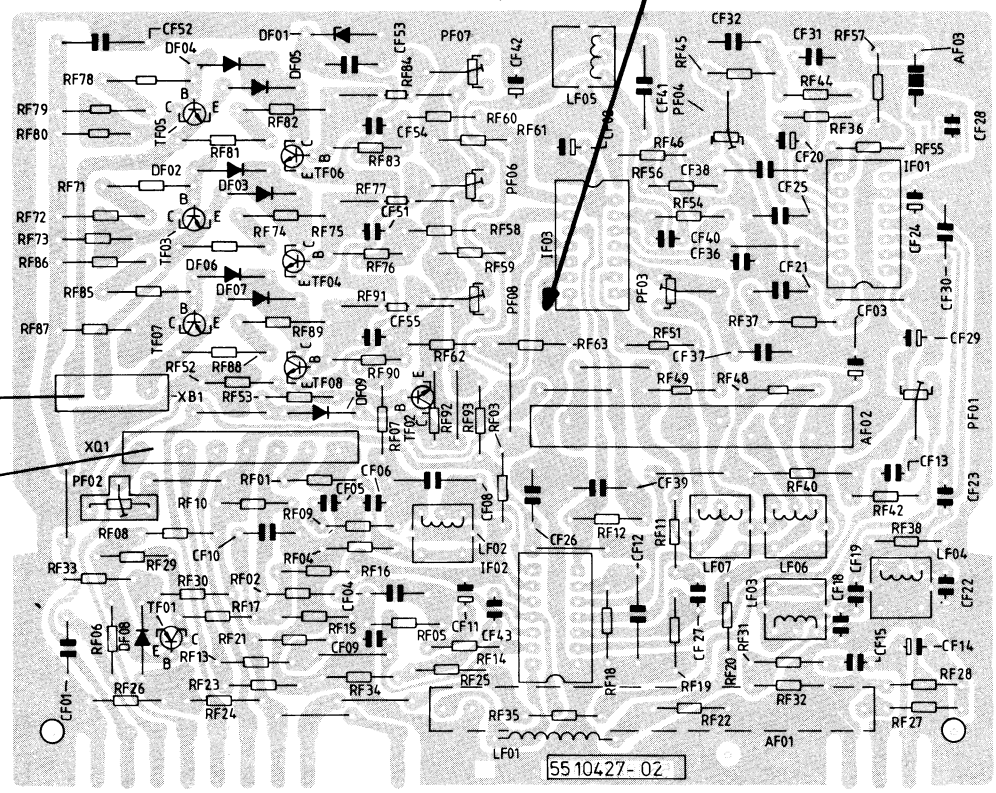
SIGNALPROCESS MODULE

PART NO 55 20427-02



PRINTED SIDE

copper foil cut



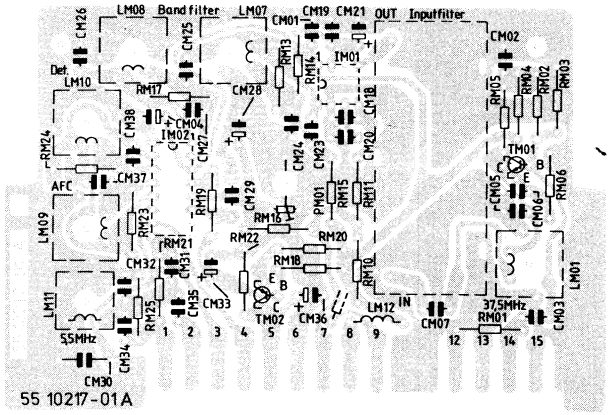
43 60095-01

43 60075-01

COMPONENT SIDE

IF MODULE

PART NO 55 30217-01



FOLIESIDA
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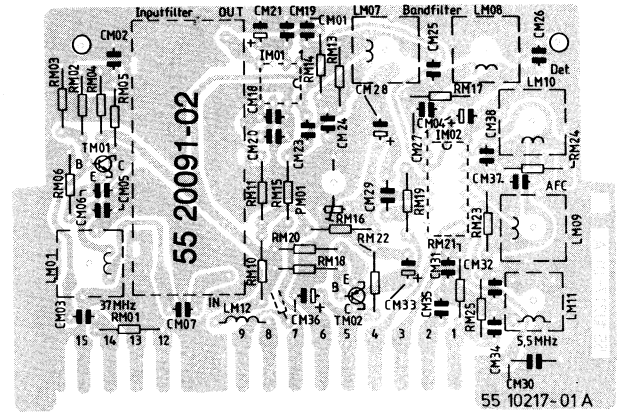
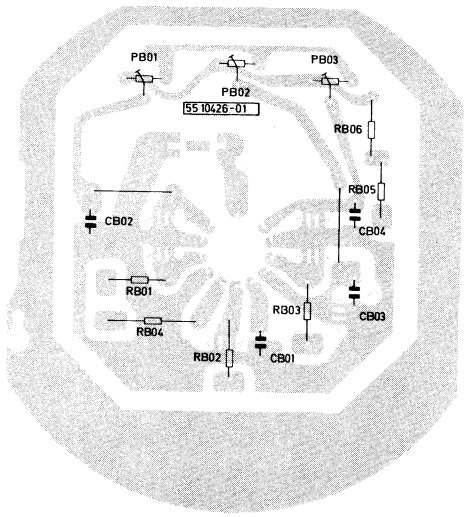
LÖTESEITE



KOMPONENTSIDA
COMPONENT SIDE
BESTÜCKUNGSSEITE

PICTURE TUBE CONNECTION

PART NO 55 30426-01



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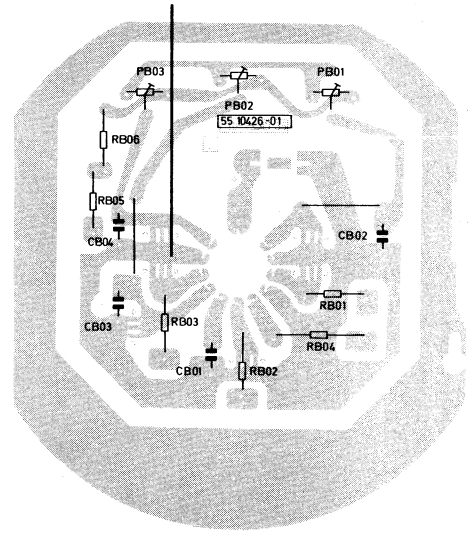
65 10000-01



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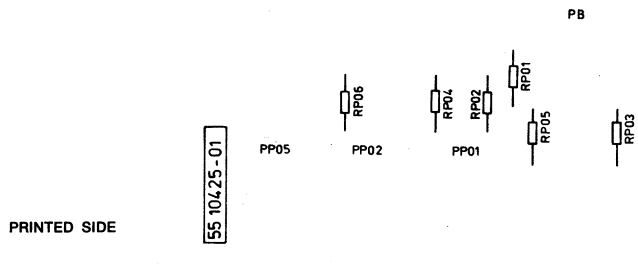
BESTÜCKUNGSSEITE

POTENTIOMETER MODULE

PART NO 55 20425-01



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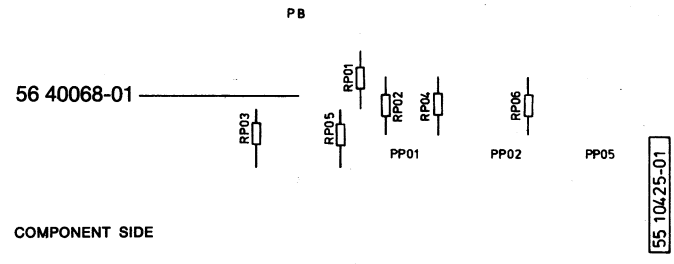
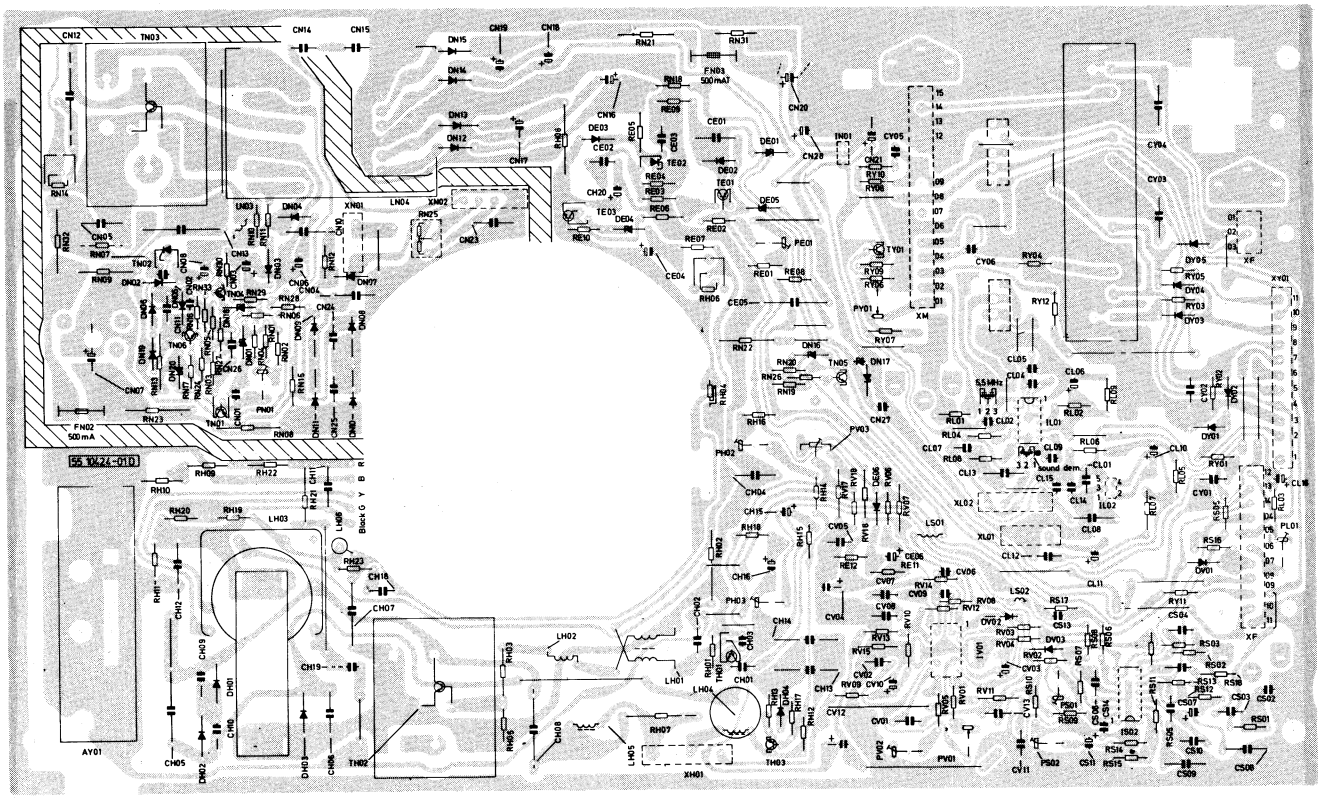


COMPONENT SIDE

MAIN P.C.BOARD

PART NO 55 30811-01



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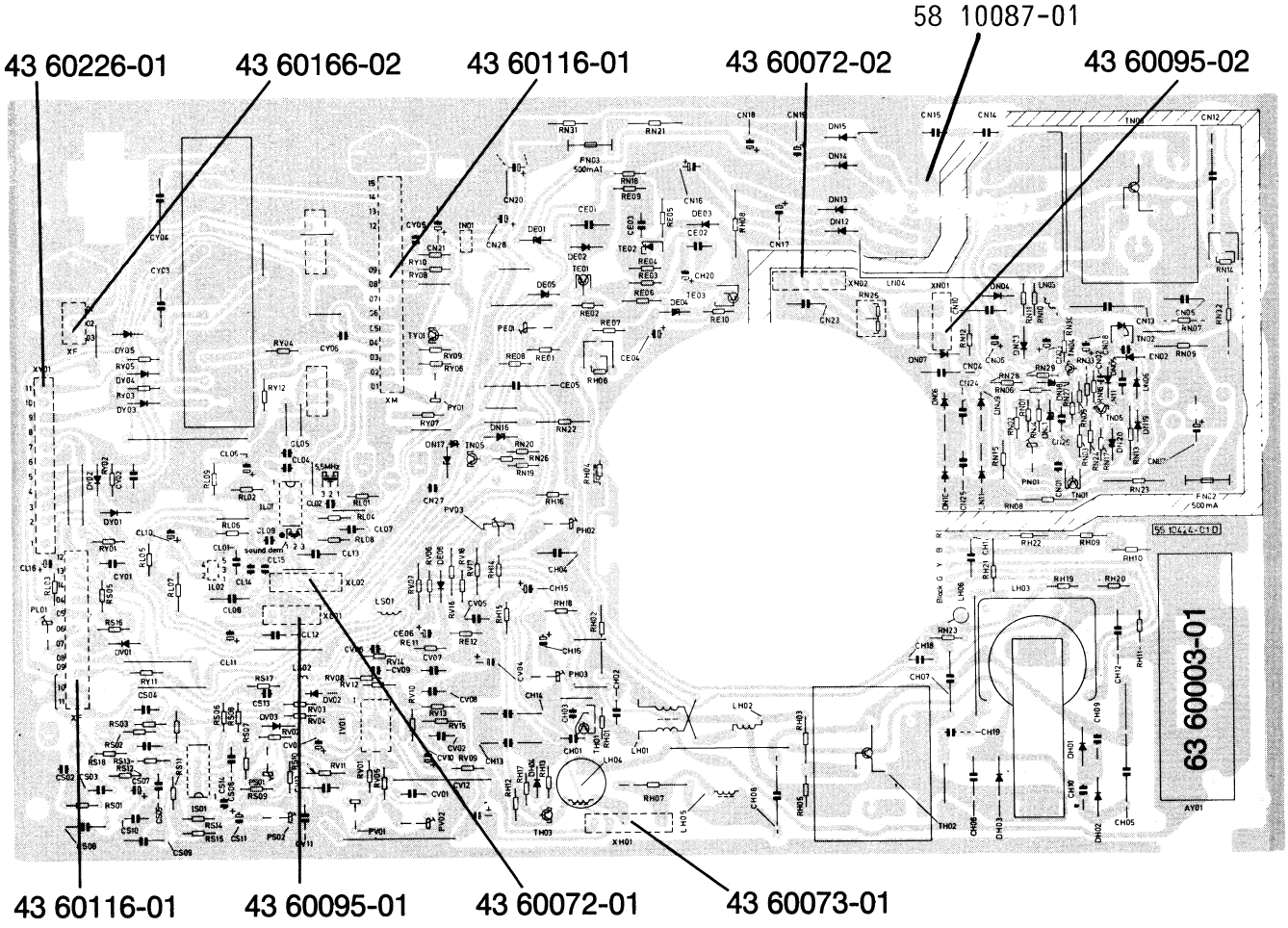
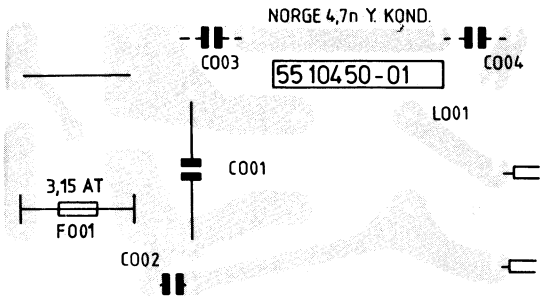


COMPONENT SIDE

MAINS FILTER MODULE, COMPL.

PART NO 55 20450-01



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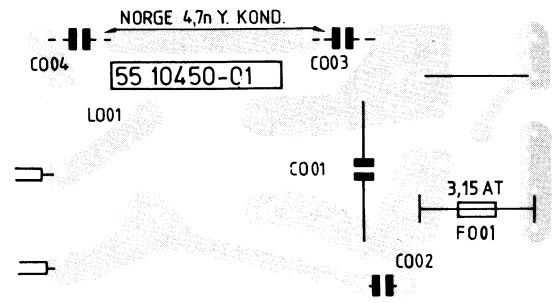
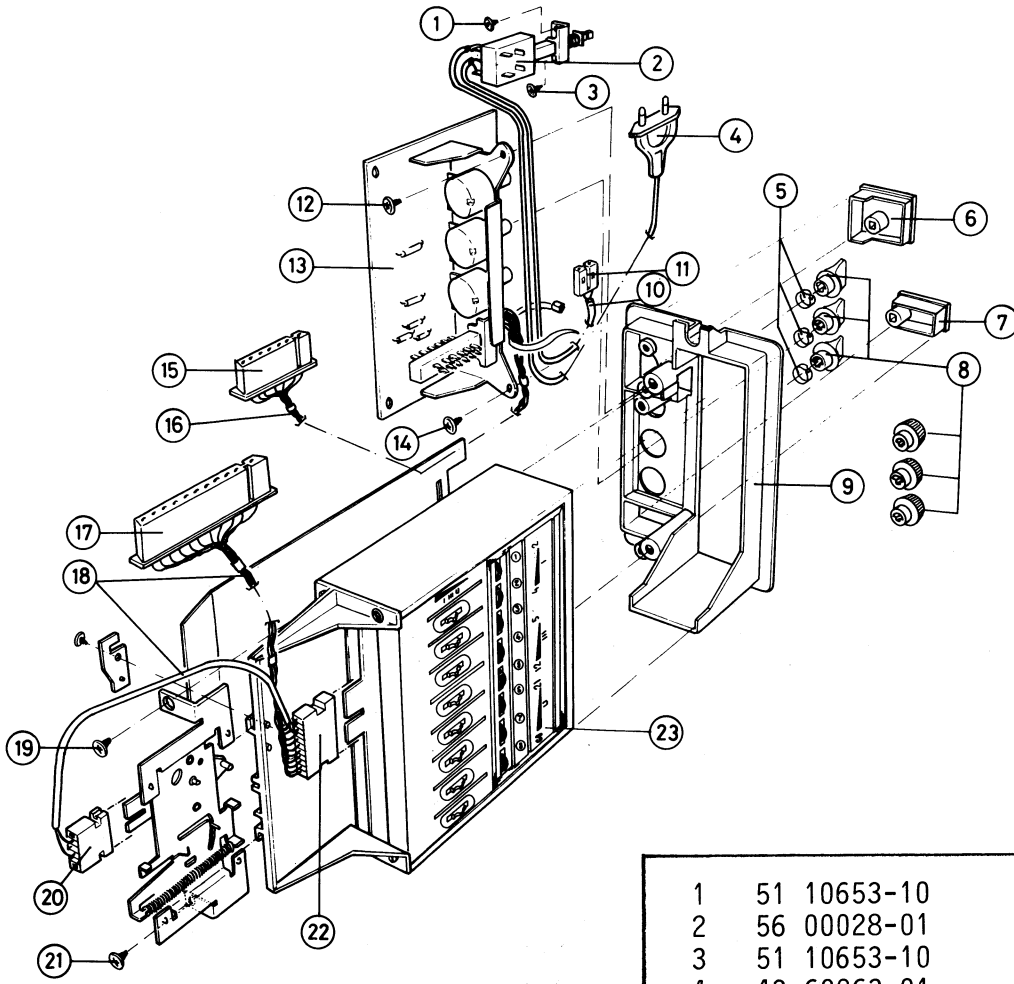


KOMPONENTSIDA
COMPONENT SIDE
BESTÜCKUNGSSEITE

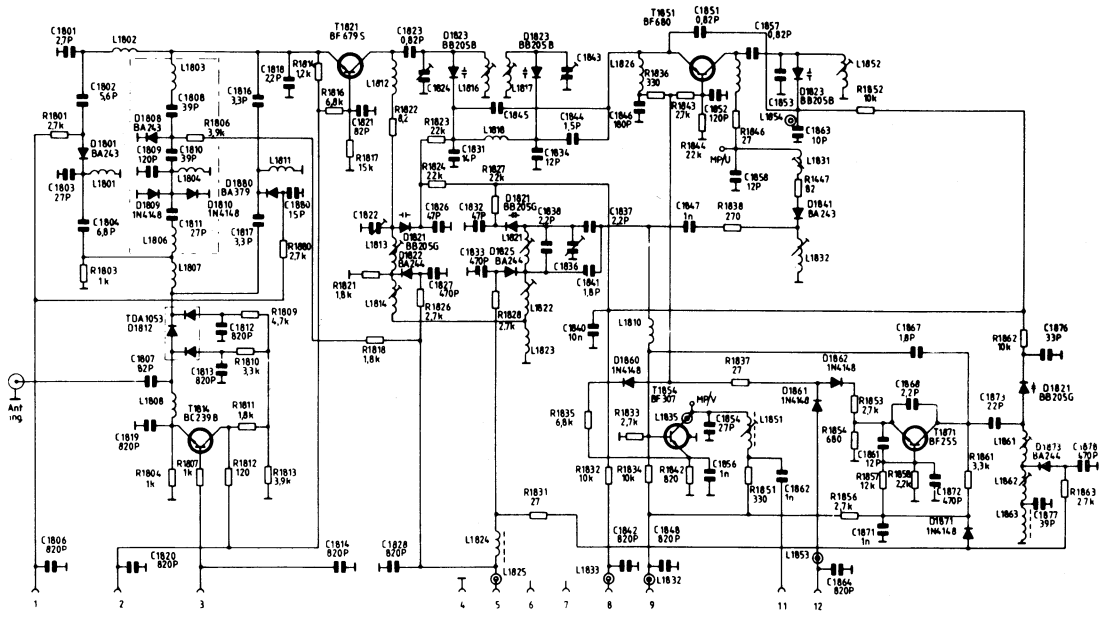
CONTROL PANEL ASSY

PART NO 56 93781-80



1	51 10653-10	13	55 20425-01
2	56 00028-01	14	51 10653-10
3	51 10653-10	15	43 60071-01
4	43 60263-01	16	43 70871-01
5	49 82627-01	17	43 60225-01
6	42 70067-01	18	43 71084-01
7	42 70066-01	19	51 00009-10
8	42 10010-01	20	43 60288-01
9	53 30288-01	21	51 00009-10
10	43 70974-01	22	43 60289-01
11	43 60175-01	23	56 60036-08
12	51 10653-10		

CIRCUIT DIAGRAM TUNER



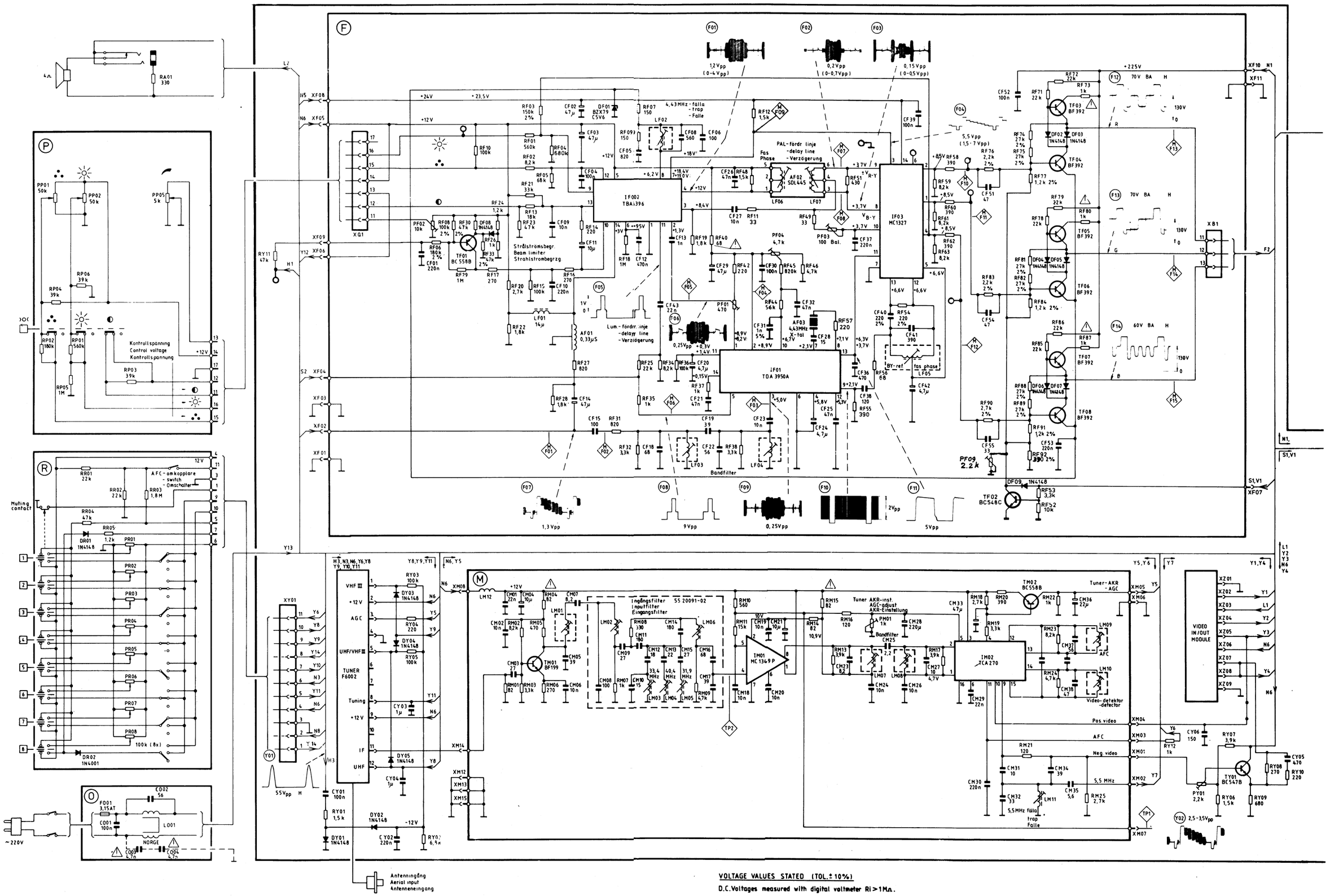
DC VOLTAGES

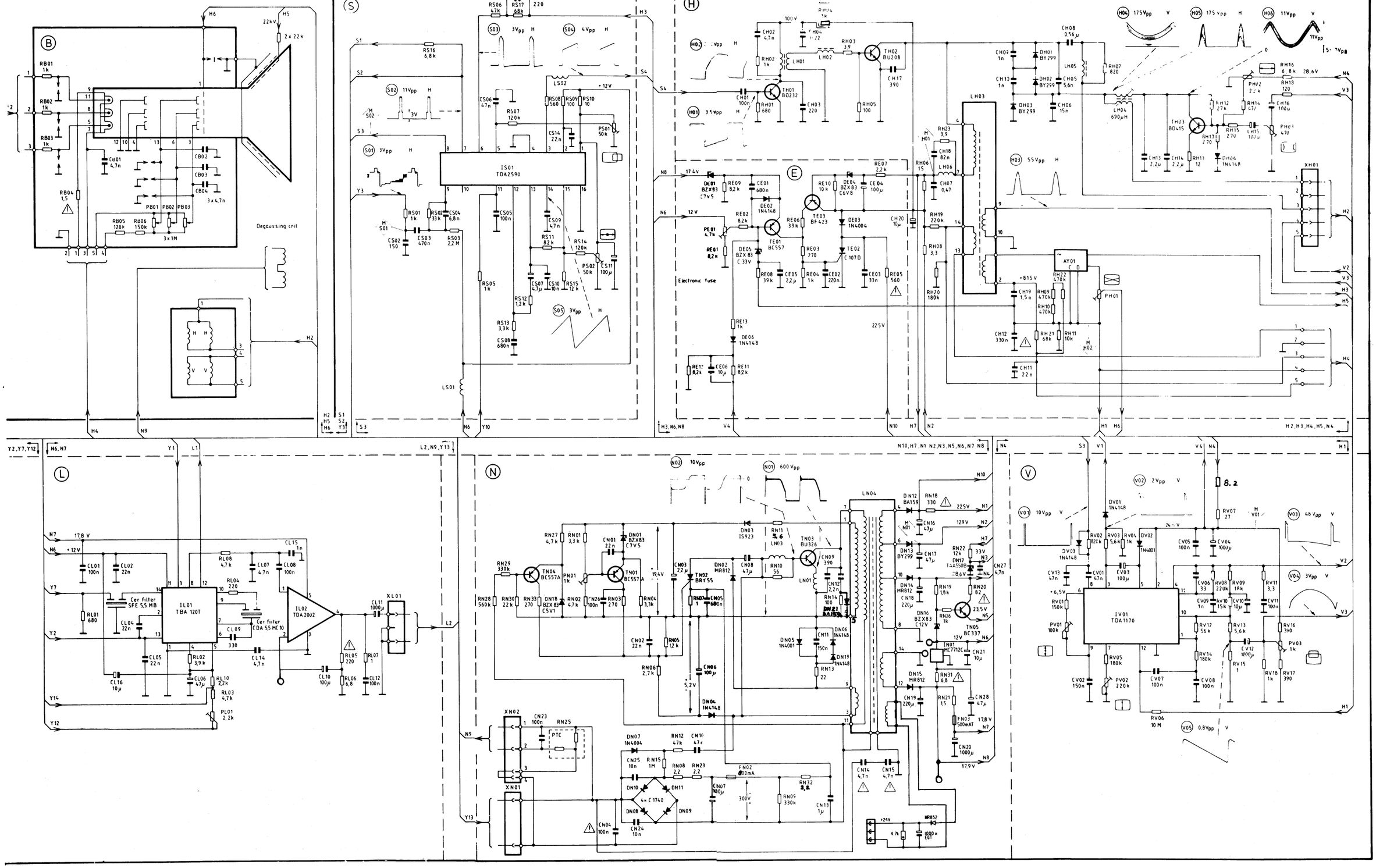
Tuner pin	BI	BIII	BIV/V
1	-12V ± 50%	+12V	-12V ± 50%
2	+12V	+12V	+12V
3	0 - 9V ×		
5	-12V ± 50%	+12V	+12V
8	0 - 30V ××		
9	+12V	+12V	+12V
12	-12V ± 50%	0	+12V

× Beroende på insignal (utan signal ≥ 8V)
Dependent on signal strength (without signal ≥ 8V)
Abhängig von Signalstärke (ohne Signal ≥ 8V)

×× Beroende på kanal
Dependent on channel
Abhängig von Kanal

CIRCUIT DIAGRAM



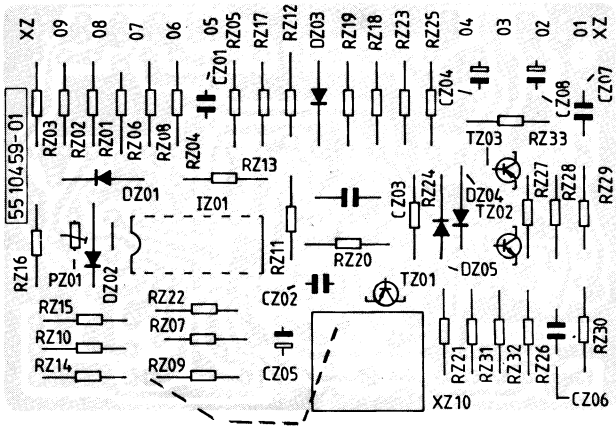


NOTE:

This chassis is galvanically mains separated by means of the mains transformer LN04, which is part of the mains unit. The primary side of the mains unit therefore has galvanic contact with the mains. This part of the P.C. Board is framed by bash lines.

VIDEO IN/OUT MODULE

PART NO 55 20459-01



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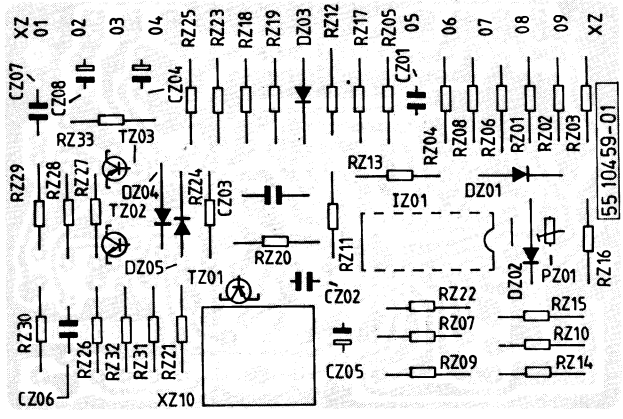
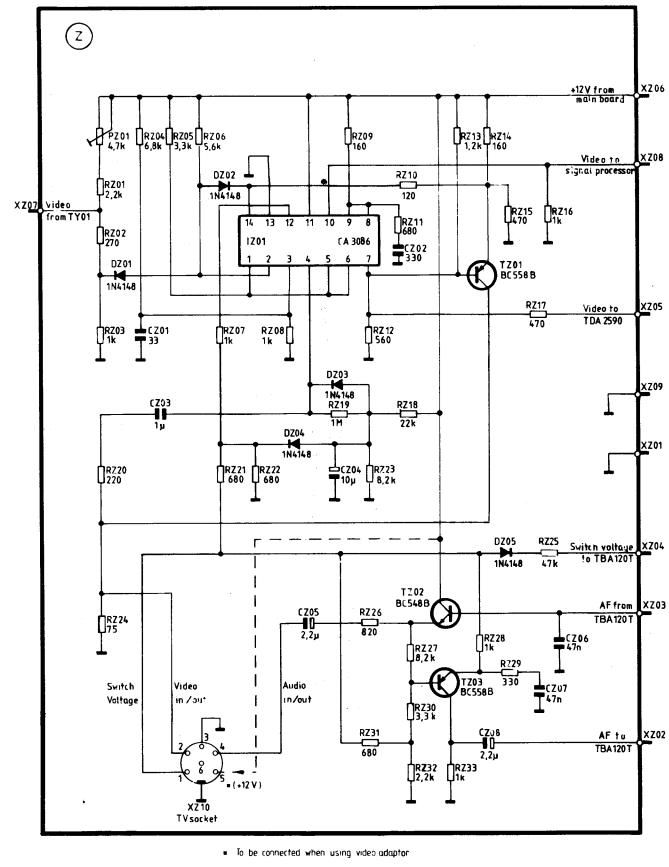
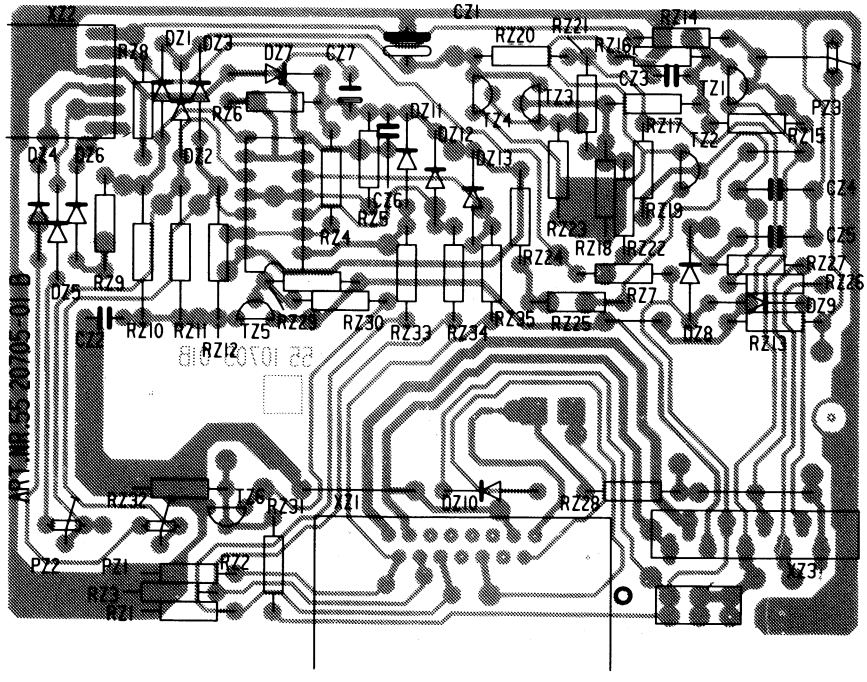


COMPONENT SIDE



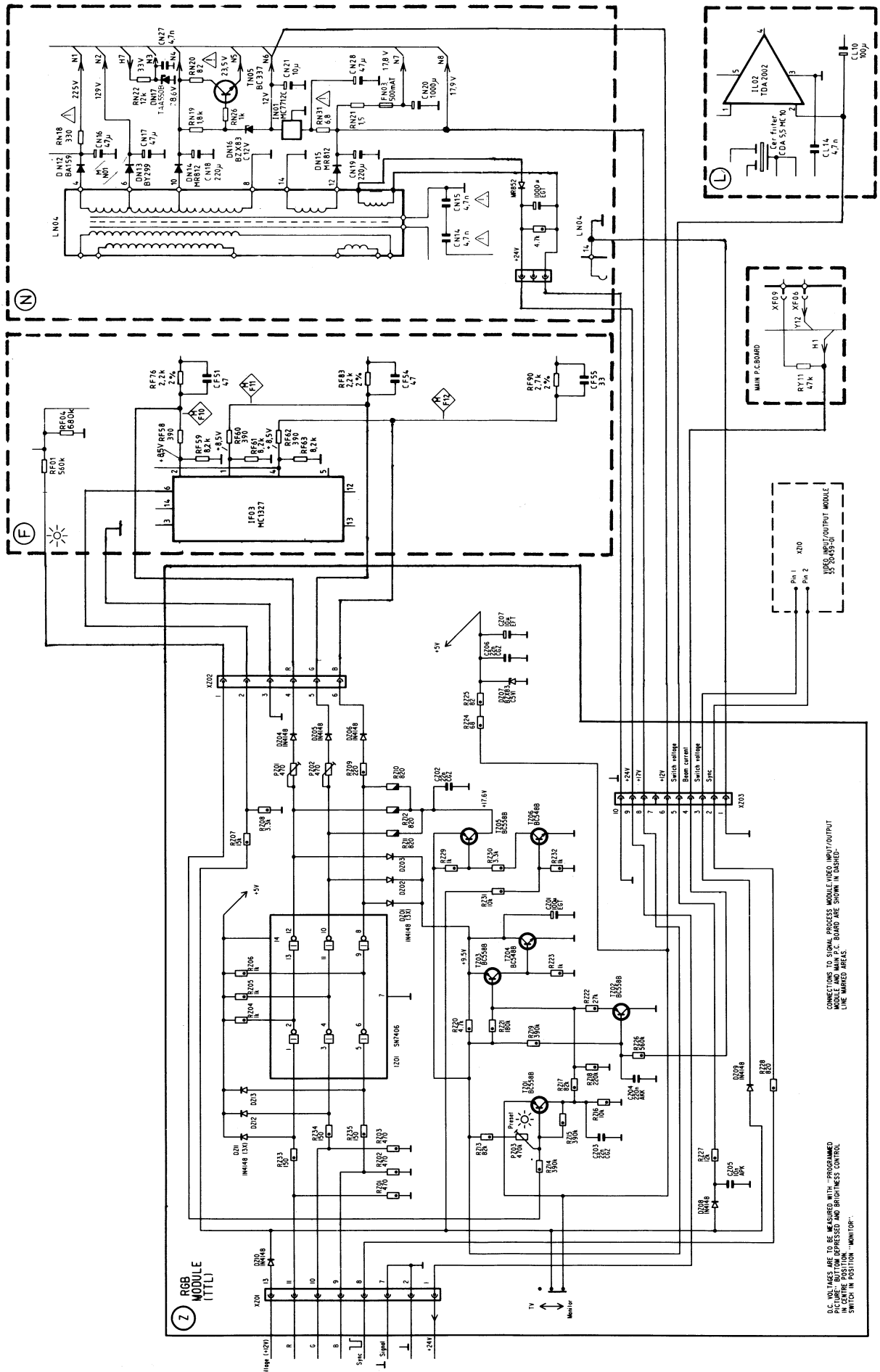
RGB-MODULE

PART NO 55 20705-01

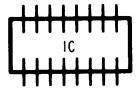


COMPONENT SIDE

CIRCUIT DIAGRAM, RGB-MODULE

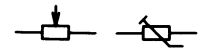


CIRCUIT COMPONENTS

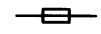


IF		
01	64 20003-01	TDA 3950A
02	64 20001-01	TBA 396
03	64 20000-01	MC 1327 AP
IL		
01	64 00027-01	TBA 120TL
IM		
01	64 00012-01	MC 1349P
IN		
01	64 50006-01	UA 78M12 CU
IS		
01	64 30006-01	TDA 2591
IV		
01	64 30005-01	TDA 1170
IZ		
01	64 10009-01	CA3086
01	64 40000-01	SN 7406N

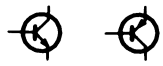
CE		
05	62 21073-01	2,2µF 100V Poly.
CF		
24,42	62 50020-01	4,7µF -20+50% 25V
46,47	62 20184-01	100nF 10% 63V
CH		
11	62 20155-01	22nF 10% 1000V
13,14	62 21073-01	2,2µF 100V Poly.
18	62 20015-01	82nF 250V Poly.
CL		
01	62 20045-01	470nF 100V Poly.
11	62 50078-01	1000µF 16V Electrolyte
CM		
30	62 21297-02	220nF 100V
CO		
01	62 10008-01	0,1µF 630V
02	62 00119-01	56pF 500V
03	62 20047-01	1µF 5% 100V Ceramic
CV		
02	62 20082-02	150nF 5% 100V
07,08	62 20016-01	100nF 5% 250V
CZ		
05,08	62 50108-01	2,2µF 63V



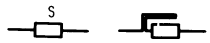
PB		
03	61 80030-01	1MΩ 10% 0,3W
PE		
01	61 17960-01	4,7kΩ 0,1W
PF		
01	61 82037-01	470Ω 10% 0,1W
02	61 80029-01	10kΩ
03	61 17468-01	100Ω 0,1W
04	61 17960-01	4,7kΩ 0,1W
PH		
02	61 17703-01	2,2kΩ 0,1W
03	61 17701-01	470Ω 0,1W
PL		
01	61 17703-01	2,2kΩ 0,1W
PM		
01	61 17488-01	1kΩ 0,1W
PN		
01	61 17702-01	1kΩ 0,1W
PS		
01-02	61 17705-01	47kΩ 0,1W
PV		
02	61 17707-01	220kΩ 0,1W
03	61 80031-01	1kΩ 2W
PY		
01	61 17703-01	2,2kΩ 0,1W
PZ		
01	61 82051-01	4,7kΩ 0,1W
01-02	61 80019-01	470Ω
03	61 80026-01	470kΩ Pot.



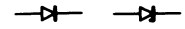
FN		
02	65 15103-01	800mA
03	65 88084-01	500mAT
FO		
01	65 89567-01	3,15AT



TE		
01	63 10013-01	BC 557A
02	63 70004-01	C107D
03	63 00036-01	BF423
TF		
01	63 10041-01	BC 558B
02	63 10021-01	BC 548C
03-08	63 00027-01	BF 392
TH		
01	63 20010-01	BD 232
02	63 20011-01	BU 208
03	63 20035-01	BD 415-5
TM		
01	63 00005-01	BF 199
02	63 10041-01	BC 558B
TN		
01	63 10013-01	BC 557A
02	63 70002-01	BRY 55
03	63 20043-01	BU 326A
04	63 10013-01	BC 557A
05	63 10012-01	BC 337
TY		
01	63 10011-01	BC 547B
TZ		
01,02, 03	63 10041-01	BC 558B
02,04	63 10056-01	BC 548B
05	63 10041-01	BC 558B
06	63 10056-01	BC 548B



RF		
09	61 17703-01	2.2kΩ Pot. 0,1W
91	61 00108-01	1,3kΩ 2% 1/3W
RH		
04	61 10090-01	1kΩ 5%
07	61 00017-01	820Ω 4W 5%
RN		
07	61 10032-01	1Ω 1W 5%



DE		
01	63 40038-01	BZX83 C7V5
02	63 08824-01	1N4148
03	63 40070-01	1N4004
04	63 40025-01	BZX83 C6V8
05	63 40087-01	BZX83 C33V
06	63 08824-01	1N4148
DF		
01	63 40077-01	BZX79 C5V6
02-09	63 08824-01	1N4148
DH		
02-03	63 40080-01	BY299
04	63 08824-01	1N4148
DN		
01	63 40038-01	BZX83 C7V5
02	63 40058-01	MR812
03	63 08818-01	1S923
04	63 08824-01	1N4148
05	63 40004-01	1N4001
06	63 08824-01	1N4148
07	63 40070-01	1N4004
08-11	63 08857-01	C1740
12	63 08751-01	BA159
13	63 40080-01	BY299
14-15	63 40058-01	MR812
16	63 40034-01	BZX83 C12
17	63 08731-02	TAA 550B
18	63 40060-01	BZX83 C5V1
19	63 08824-01	1N4148
21	63 08751-01	BA159
51	63 40074-01	MR852
DV		
01	63 08824-01	1N4148
02	63 40004-01	1N4001
03	63 08824-01	1N4148
DY		
01	63 08824-01	1N4148
DZ		
01-06	63 08824-01	1N4148
07	63 40060-01	BZX83 C5V1
08-13	63 08824-01	1N4148

SPARE PARTS LIST

AF		
01	59 60054-01	Luminance delay line
02	59 60059-01	Pal delay line
03	63 62662-01	4,43 MHz-crystal
LF		
01	58 00022-01	Choke 14UH
02	59 40294-02	4,43 MHz-trap
03	59 40299-01	Bandfilter, coil
04	59 40299-01	Bandfilter, coil
05	59 40350-01	Phase
06	59 40351-01	
07	59 40352-01	
LH		
01	58 10011-03	Driver transf.
02	59 00039-01	4UH
03	58 10041-01	Flyback
04	59 00366-01	690UH
05	59 60065-01	Lin unit
06	59 00100-01	77UH 1A
LM		
01	59 01024-25	
07	59 01014-31	
08	59 01014-31	
09	59 01008-31	
10	59 01008-31	
11	59 01055-10	
12	58 35600-01	
LN		
01	59 17480-01	
03	59 00374-01	9,0UH
04	58 10087-01	SMPS Transf. ABC 810
LO		
01	59 30054-01	Drossel
LS		
01	58 35600-01	Choke
02	59 00237-01	220UH
03	58 30038-01	
LV		
01	58 00022-01	14UH

Miscellaneous

63 60003-01	Tripler unit
63 80003-02	IC
63 80006-01	IC-socket 16 pin
63 90005-01	Ceramic filter SFE 5,5 MB
63 90010-01	Ceramic filter CDA 5,5 MC10
65 84692-01	Fuse holder

Part no.	DESCRIPTION
40 03781-15	Cabinet assembly
40 43781-05	Back cover assembly
40 53782-08	Front lac.
40 63782-08	Polyether front
42 50004-01	Shaft, pot.
43 01322-01	Earth wire assembly
43 60304-01	Socket, headphones
44 10104-15	Handel barrer
44 20285-05	Earth spring
44 20451-05	Earth spring
44 20497-15	Chassis lock
47 00115-01	Draw spring
48 04604-01	Loud-speaker
53 30257-01	Holder, mains filter module
53 30285-01	Plastic hinge
53 90094-02	Holder
55 20427-02	Signal process module
55 20450-01	Mains filter assembly
55 20459-01	Video in/out module
55 20705-01	RGB module (TTL)
55 30217-01	IF-module
55 30426-01	P.C board assembly
55 30811-01	Chassis 90 DEG ABC 810
56 90064-02	Tuner unit
56 93781-80	Control panel assembly
58 90010-01	Magnetic shield
59 30014-20	Degaussing coil
65 00027-01	Picture tube
66 73782-10	Instruction manual

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