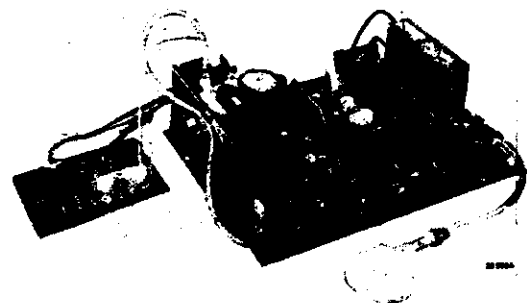


Service
Service
Service



Service Manual

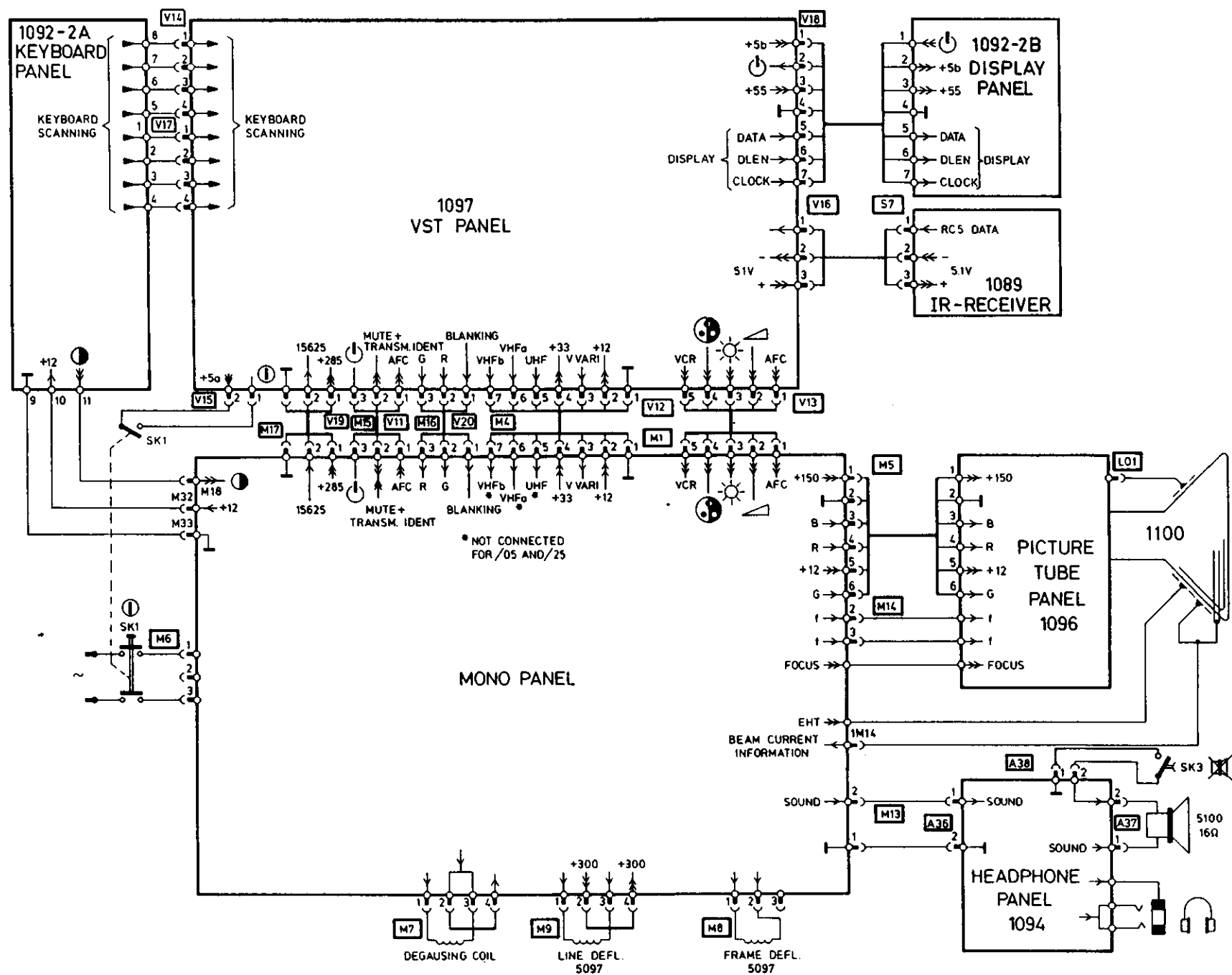
TECHNICAL DATA

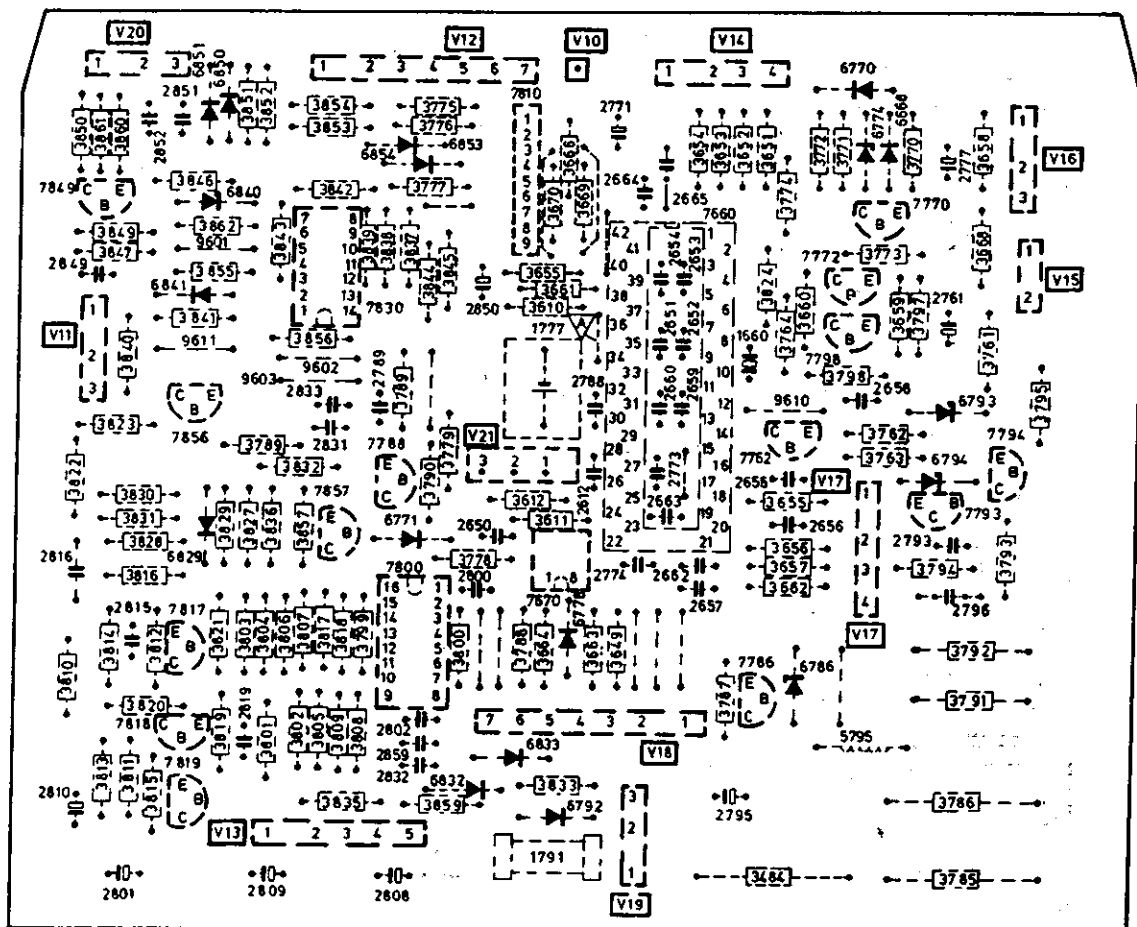
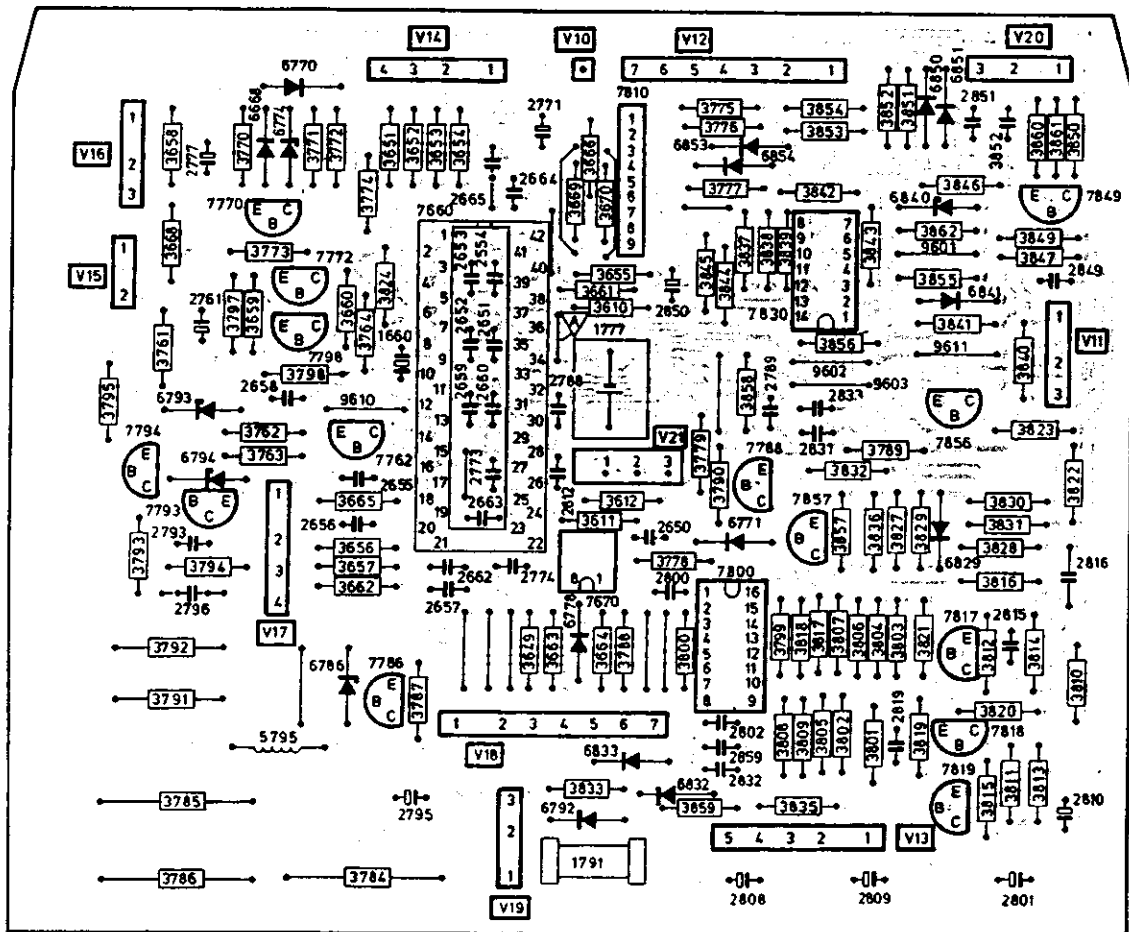
Mains voltage	220-240 V ~ (±10%), 50 Hz		
Power consumption	for 14"-39 W, for 16"-44 W, for 20"-69 W		
Aerial input impedance	75 Ω coax.		
System	PAL B/G	U.K. PAL I	Ir. PAL I1
IF-sound	33.4 MHz	33.5 MHz	32.9 MHz
FM-sound	5.5 MHz	6 MHz	6 MHz
IF-luminance	38.9 MHz	39.5 MHz	38.9 MHz
IF-chrominance	34.47 MHz	35.07 MHz	35.07 MHz
Subcarrier	4.43 MHz	4.43 MHz	4.43 MHz

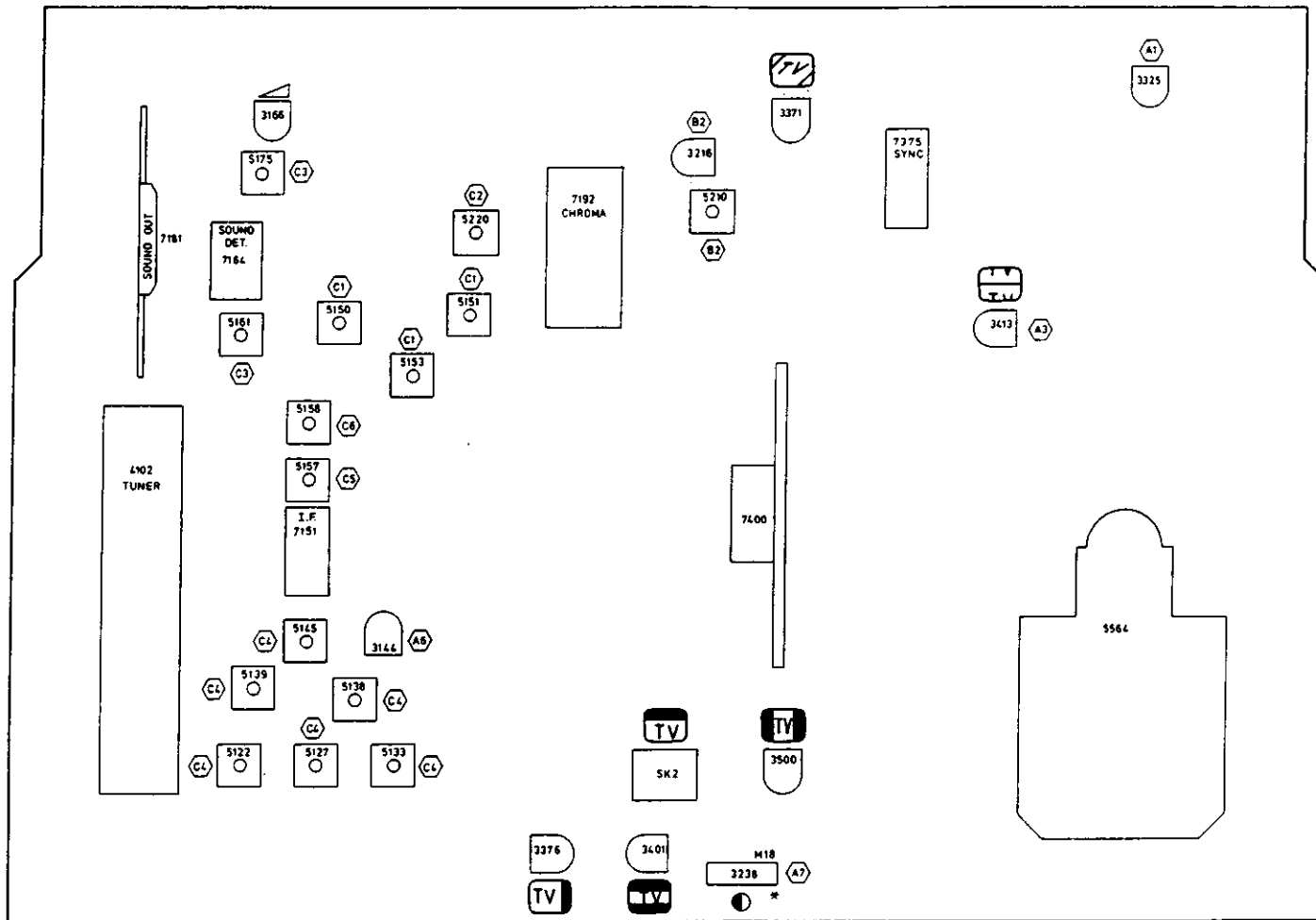
90° picture tube
Automatic degaussing
All transistor
Adapted for video recorder

CONTENTS

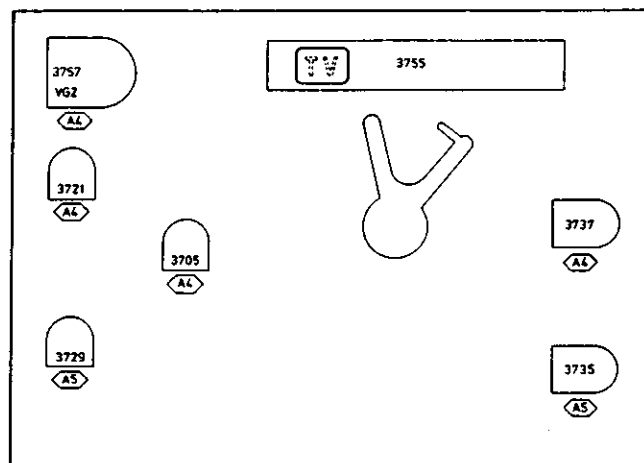
	Page		Page
Technical data	1	Component side mains PCB for 14"/16"	10
Warnings	2	Track side with measurements data for 20"	11
Remarks	2	Component side main PCB for 20"	12
Explication repair methods	2	Diagram A	13
Adjusting the picture	3	Symbols used in circuit diagram	14
Adjustments after repairs	4	Survey of supply voltages	14
Chrominance adjustments	4	Fault-finding tree A	15
Trimming data	4	Fault-finding tree B	16
Connection points channel selectors	5	Fault-finding tree C	17
List of electrical parts	6	Fault-finding tree D	18
Adjustment diagram	7	Index fault-finding tree CTX	19
Picture tube panel	8	Symbols for fault-finding tree	20
Track side with measurements data for 14"/16"	9		

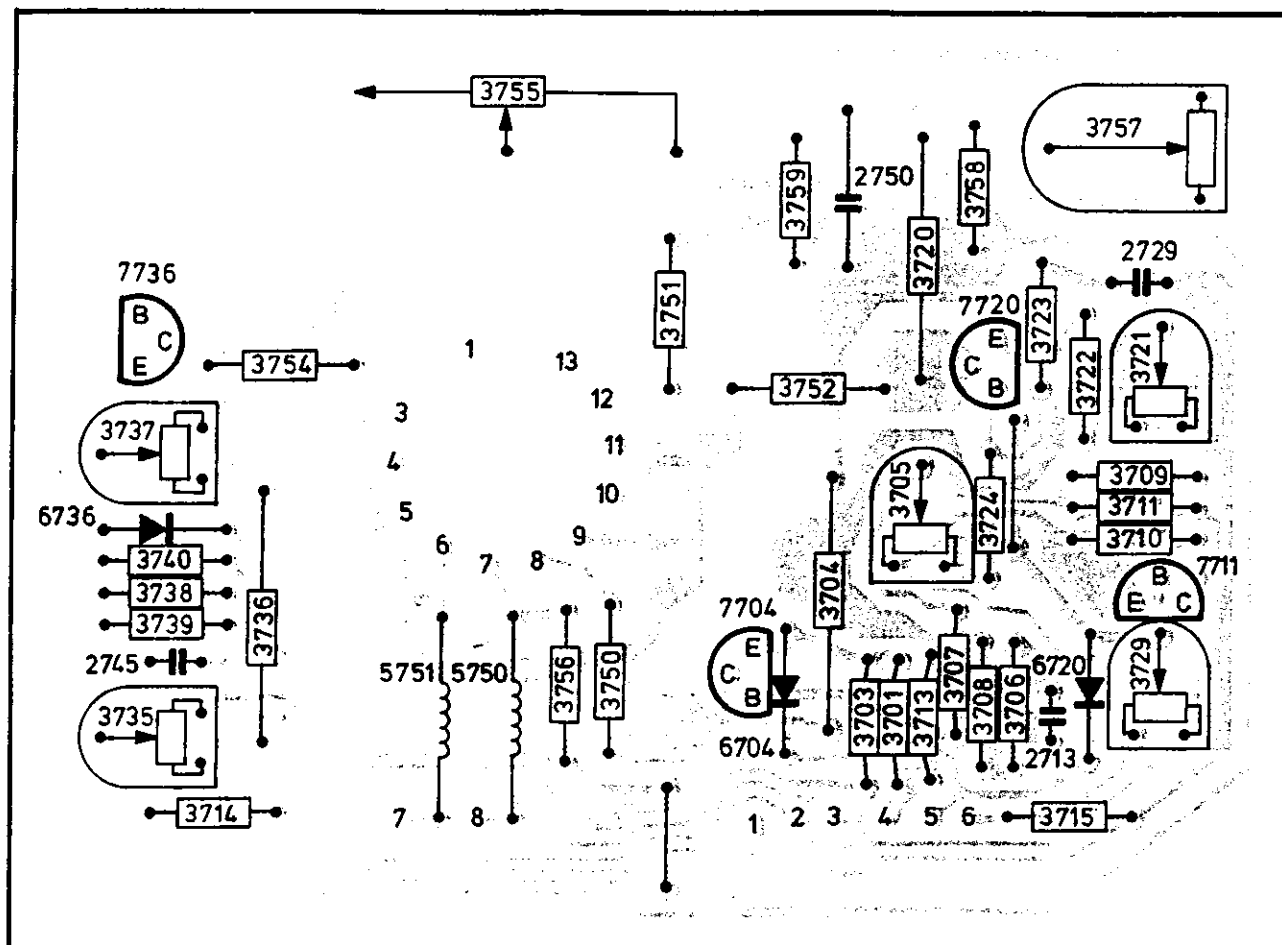




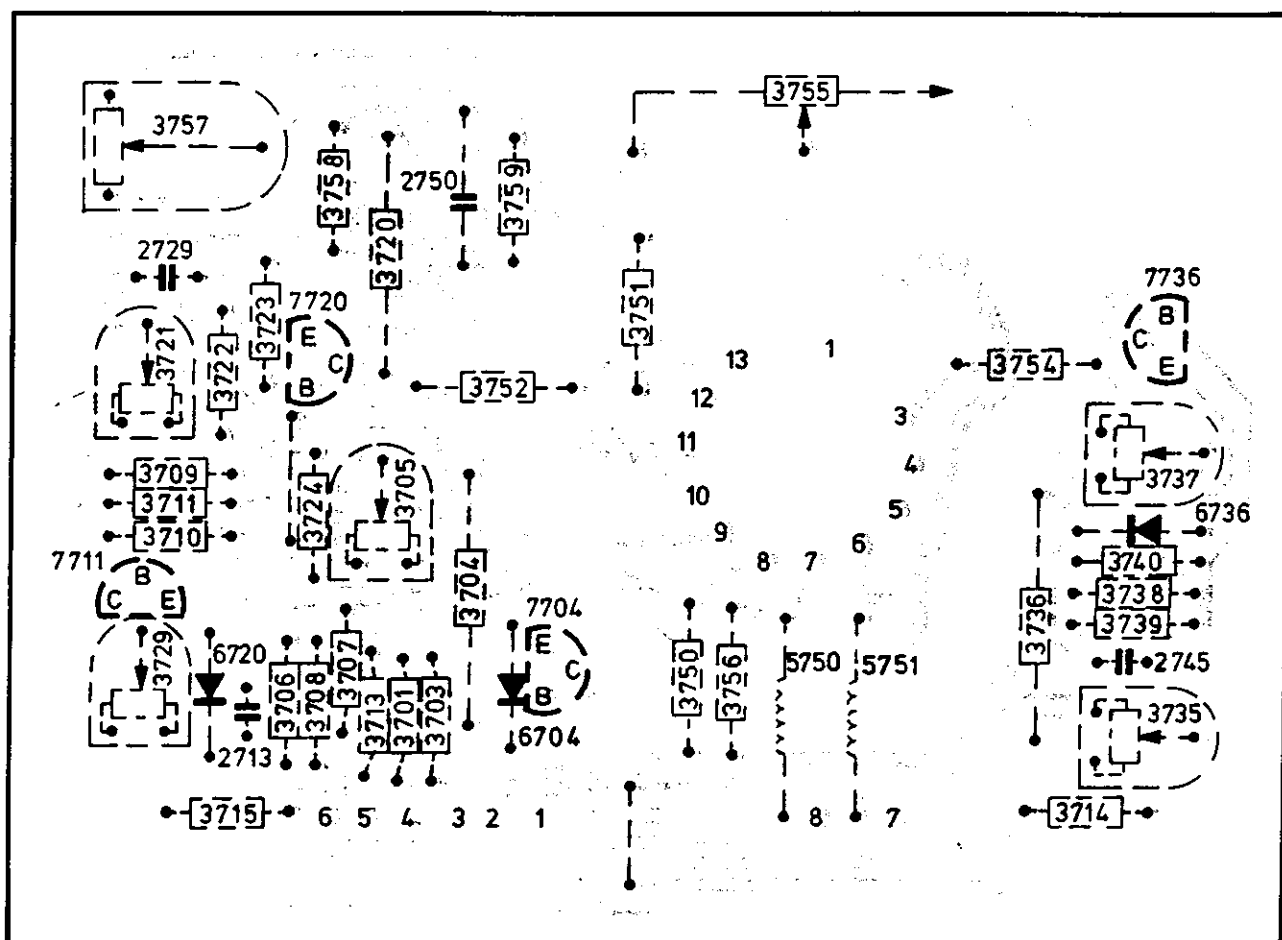


3022502



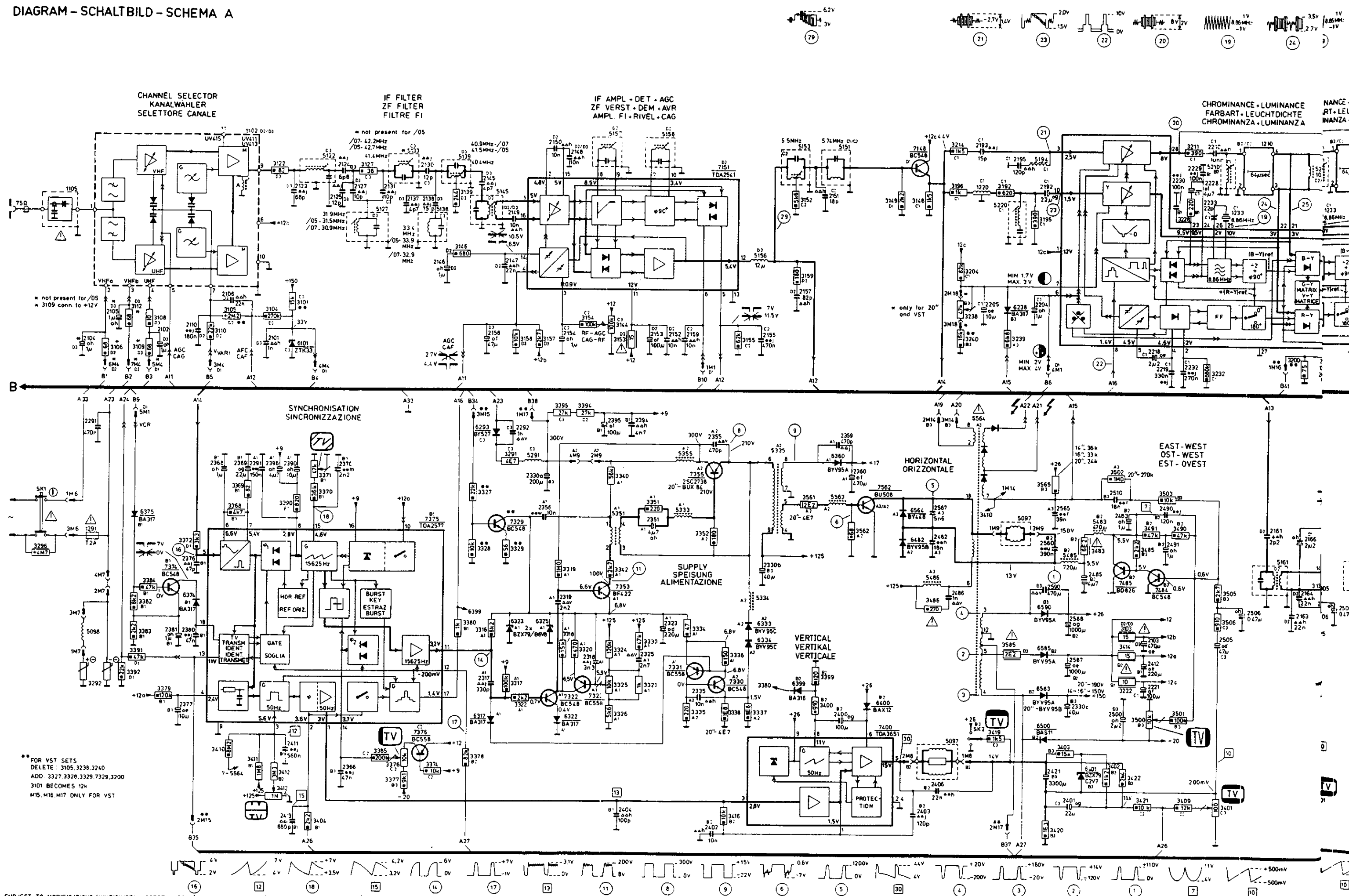


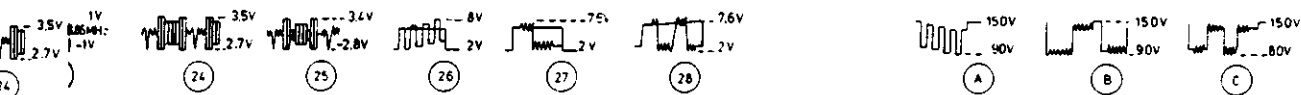
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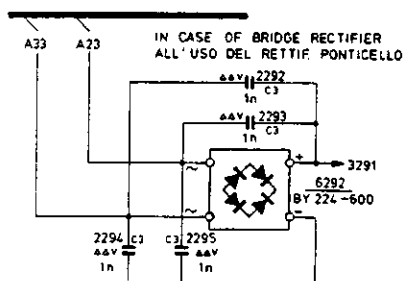
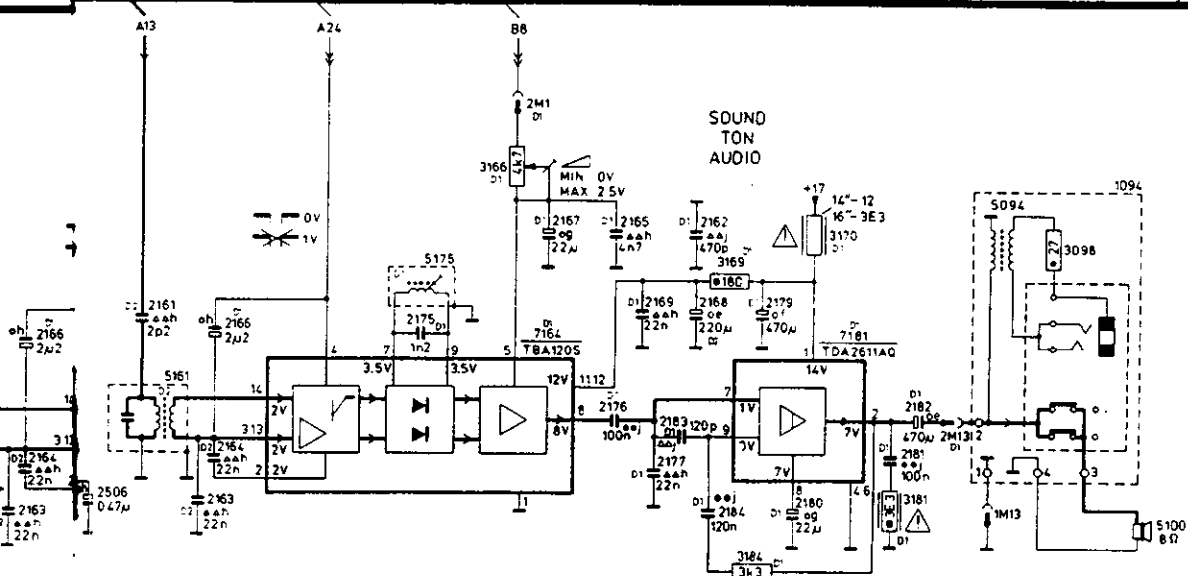
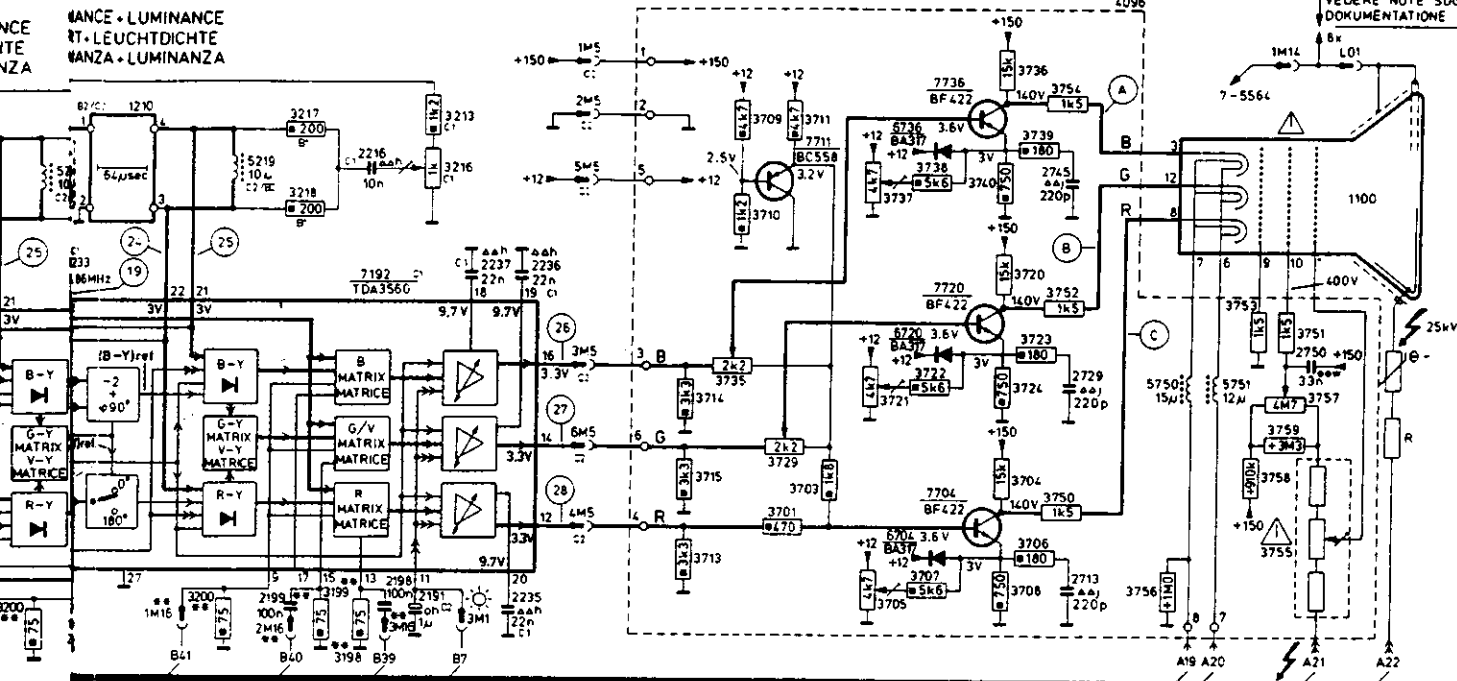
2981082

DIAGRAM - SCHALTBIID - SCHEMA A





SEE SERVICE
MANUAL "REMARKS"
SIEHE ANMERKUNGEN
IN DER SERVICE
DOKUMENTATION
VEDERE NOTE SUG
DOKUMENTAZIONE

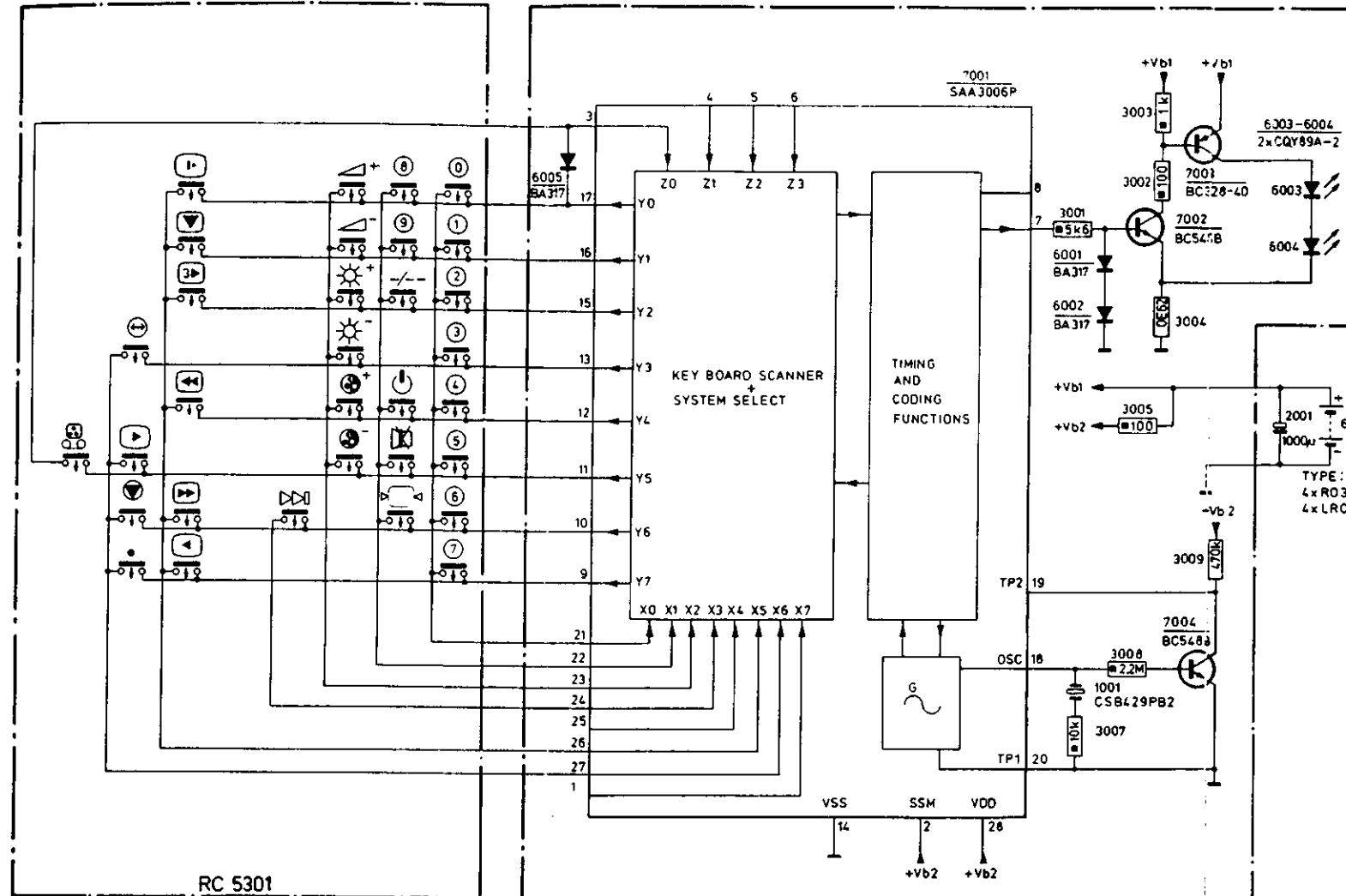


+500mV
-500mV

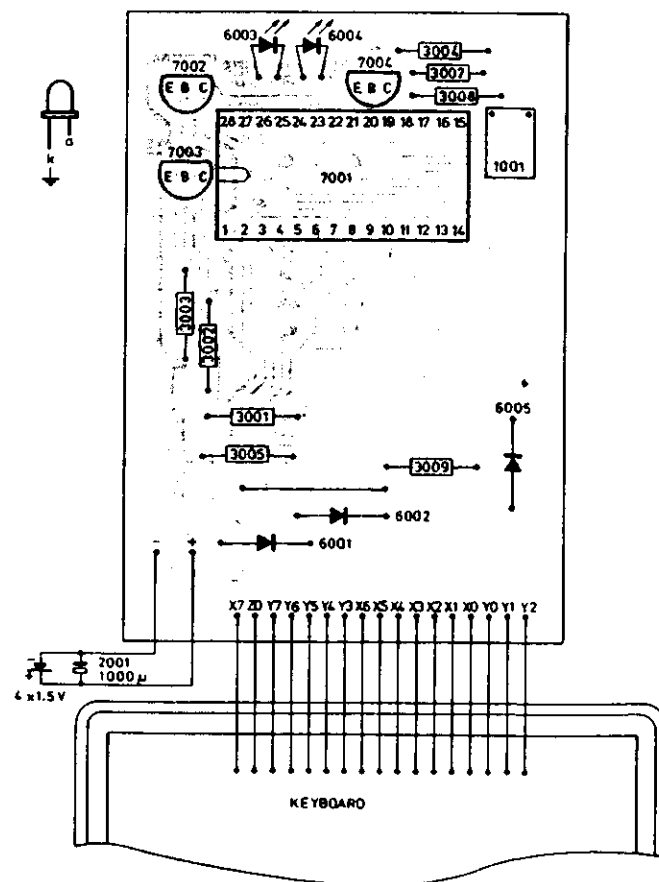
* DELETED FOR /OS
* = ADDED FOR /OS



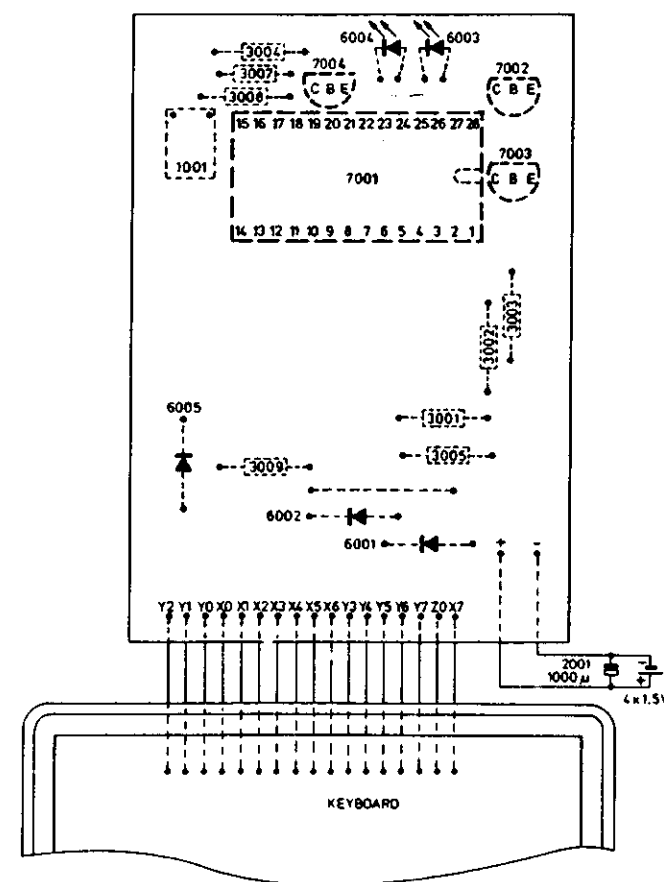
1098 IR-TRANSMITTER



38 384 C12



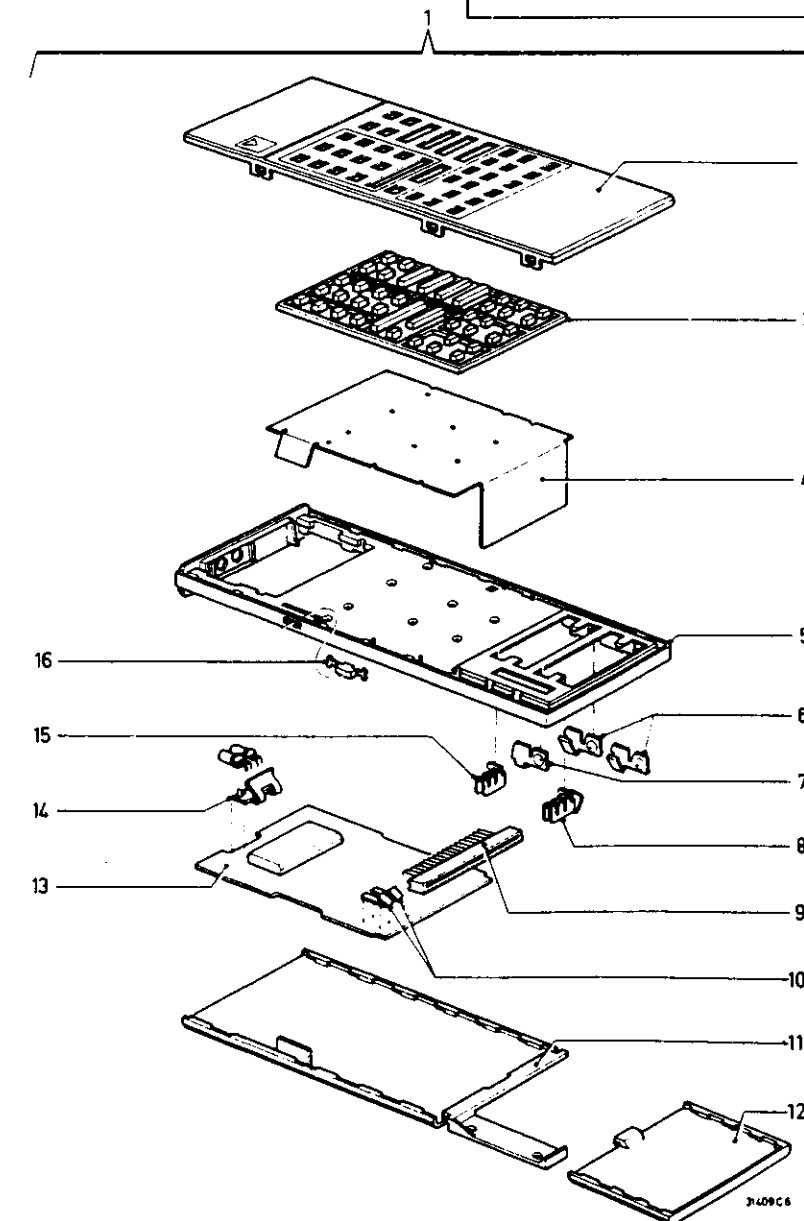
32146 B11

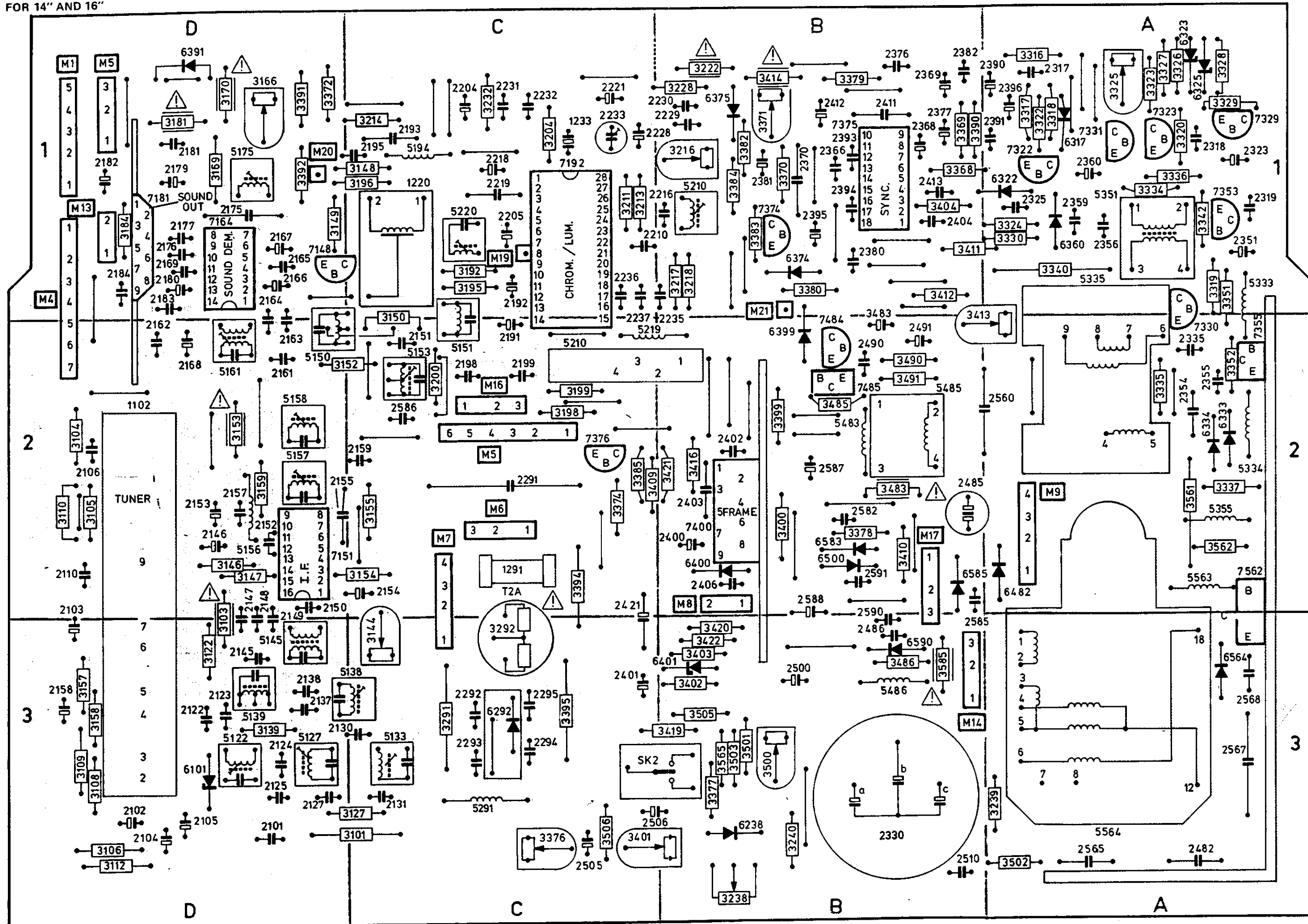


32147 B11

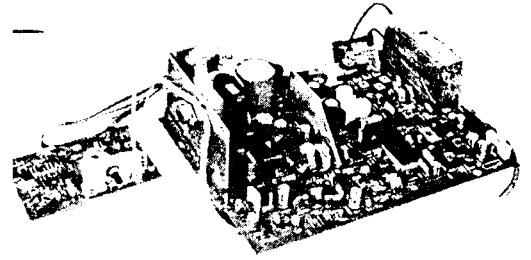
- 1 4822 218 20351
- 2 4822 432 30201
- 3 4822 410 23029
- 4 4822 276 80265
- 5 4822 432 30166
- 6 4822 492 62879
- 7 4822 492 62881
- 8 4822 492 62883
- 9 4822 267 50418
- 10 4822 492 62904
- 11 4822 432 30165
- 12 4822 432 30164
- 13 4822 212 21643
- 14 4822 256 90506
- 15 4822 492 62882
- 16 4822 410 23057

7001	SAA3006P	4822 209 81587
BC328-40		4822 130 41715
BC548B		4822 130 40937
BA317		4822 130 30847
CQY89A/II		4822 130 31332
1001	CSB429PB2	4822 242 70675
2001	1000 µF 8 V	4822 124 21341



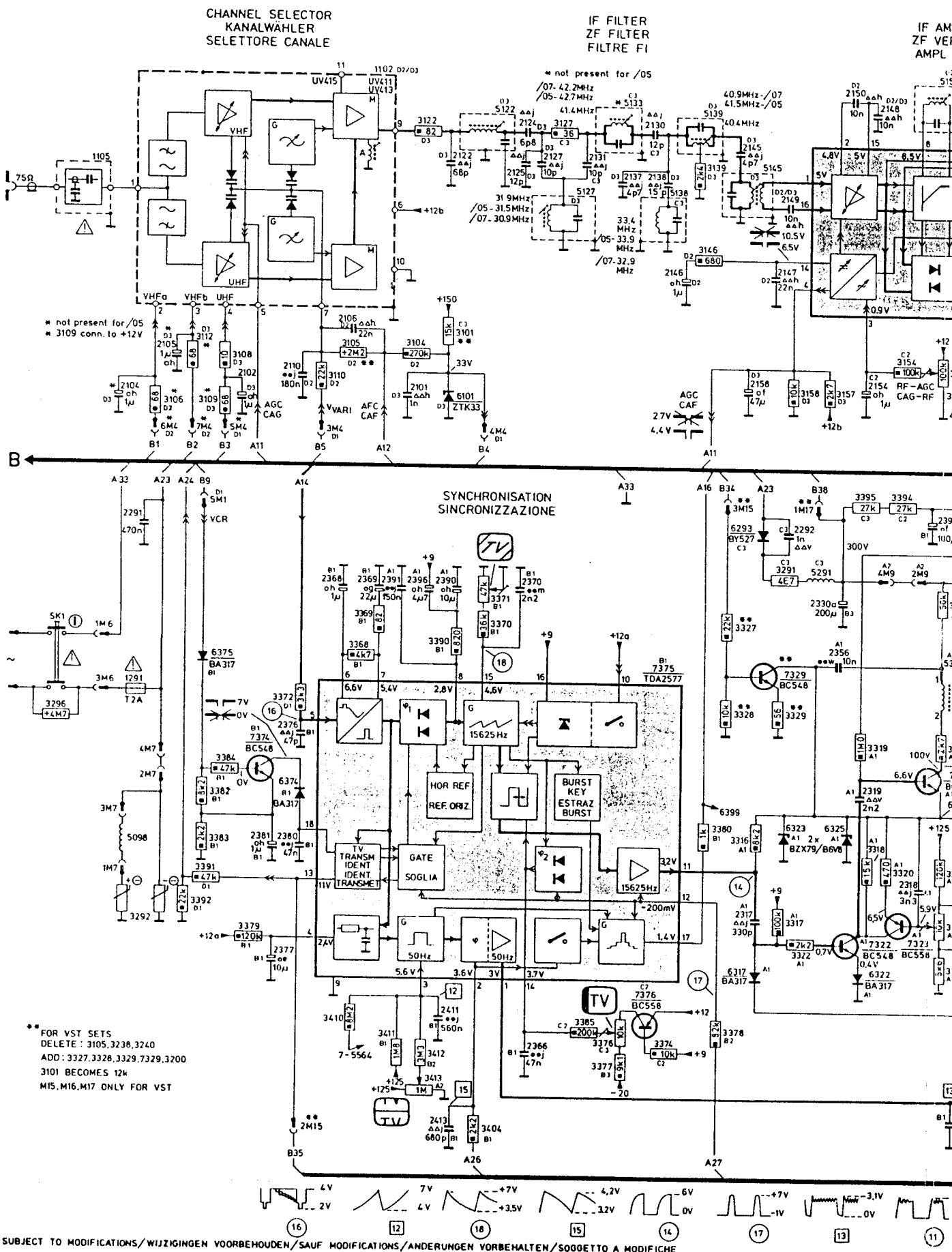


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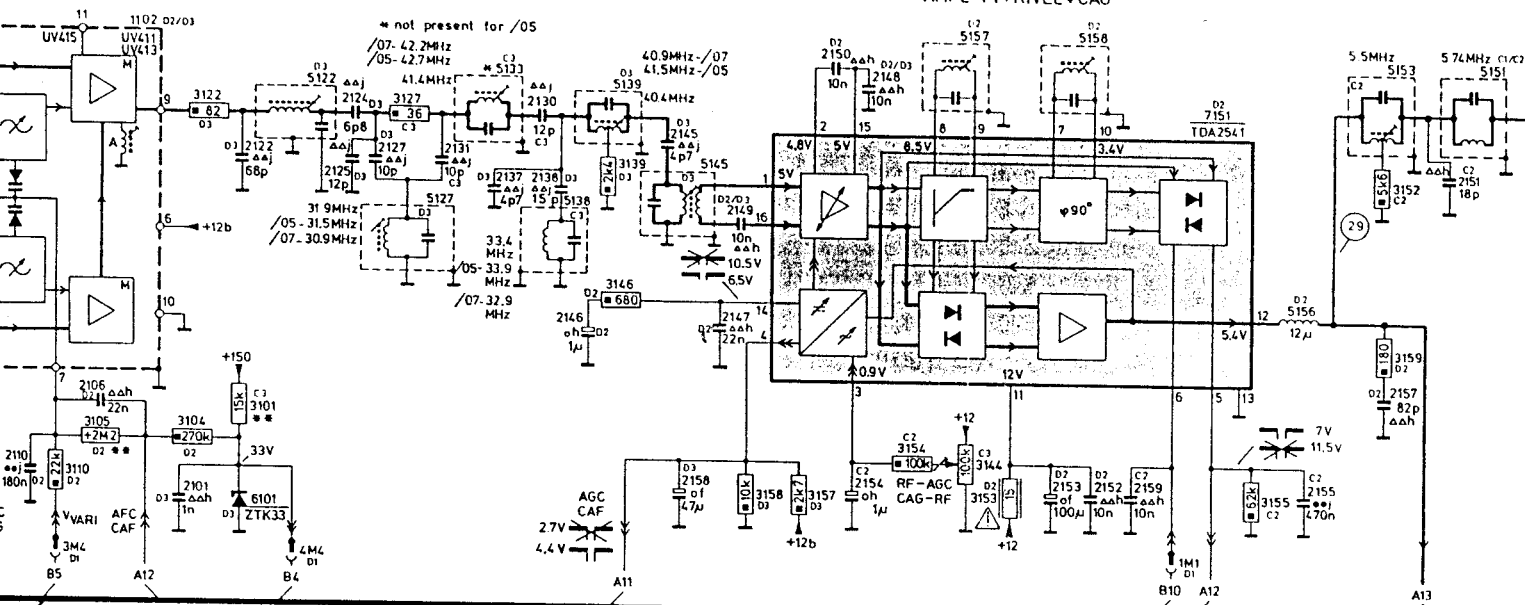
DIAGRAM - SCHALTBIID - SCHEMA A



ELECTOR
HLER
CANALE

IF FILTER
ZF FILTER
FILTRE FI

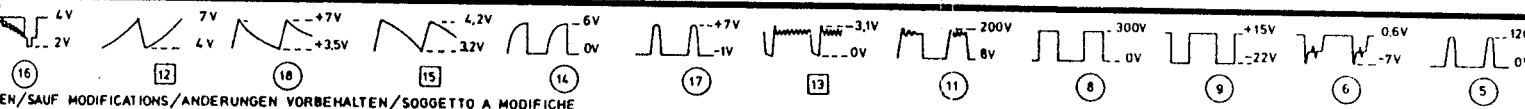
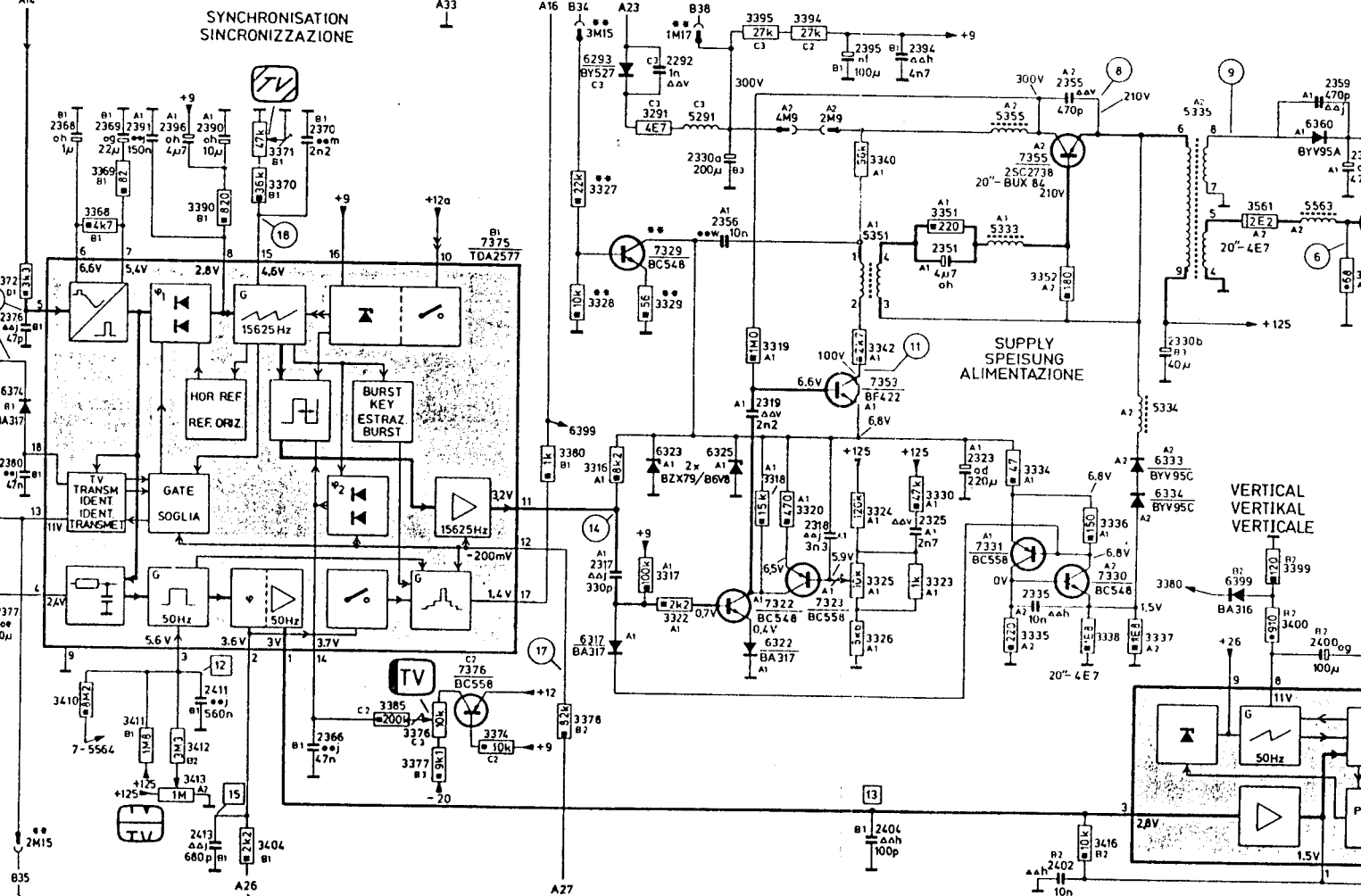
IF AMPL. • DET. • AGC
ZF VERST. • DEM. • AVR
AMPL FI • RIVEL. • CAG

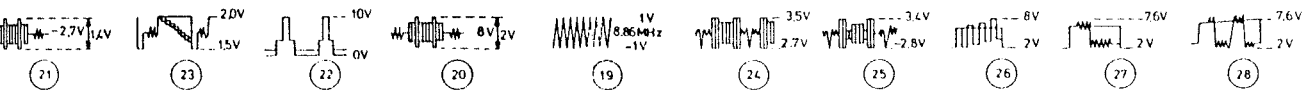


SYNCHRONISATION
SINCRONIZZAZIONE

SUPPLY SPEISUNG
ALIMENTAZIONE

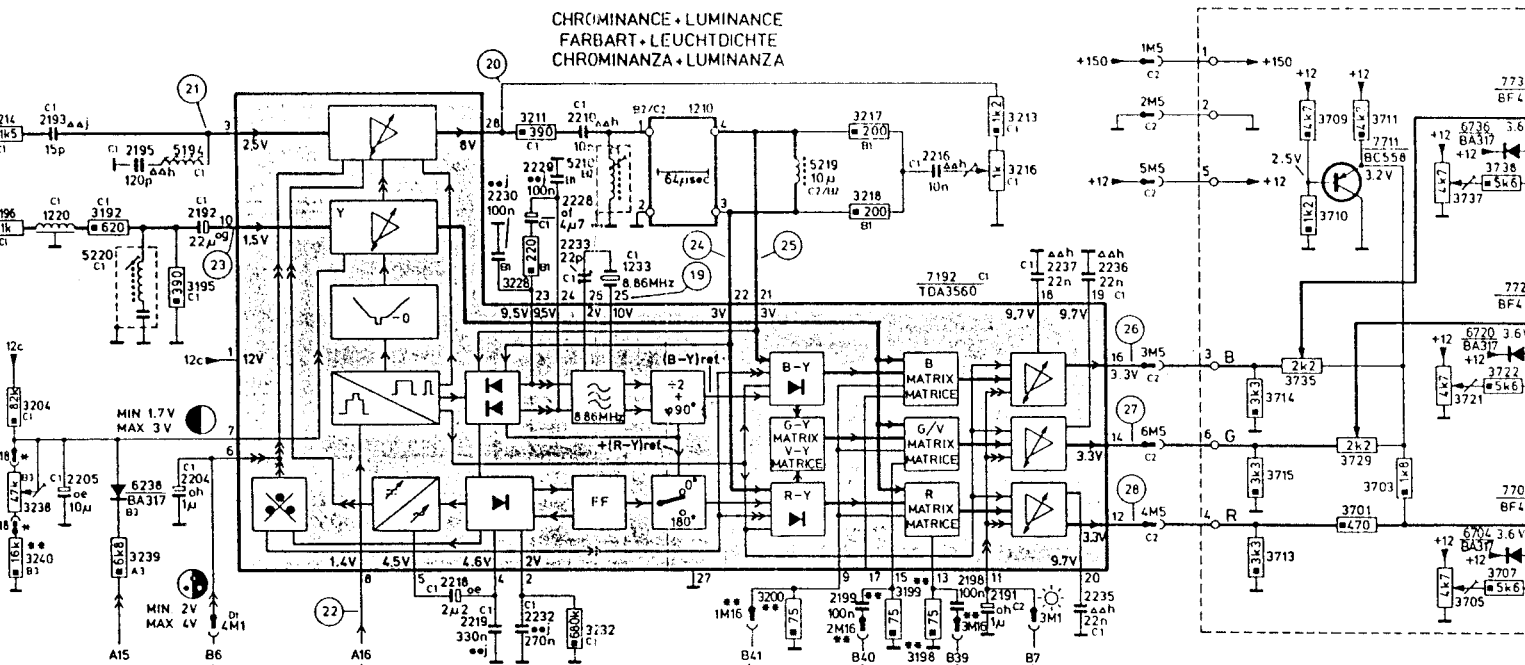
VERTICAL
VERTIKAL
VERTECALE





R-G-B AMPLIFIER
R-G-B VERSTÄRKER
AMPLIFICATORE R-G-B

CHROMINANCE • LUMINANCE
FARBART • LEUCHTDICHTE
CHROMINANZA • LUMINANZA



EAST-WEST
OST-WEST
EST-OVEST

SOUND
TON
AUDIO

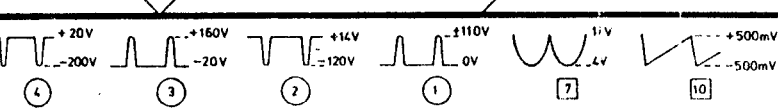
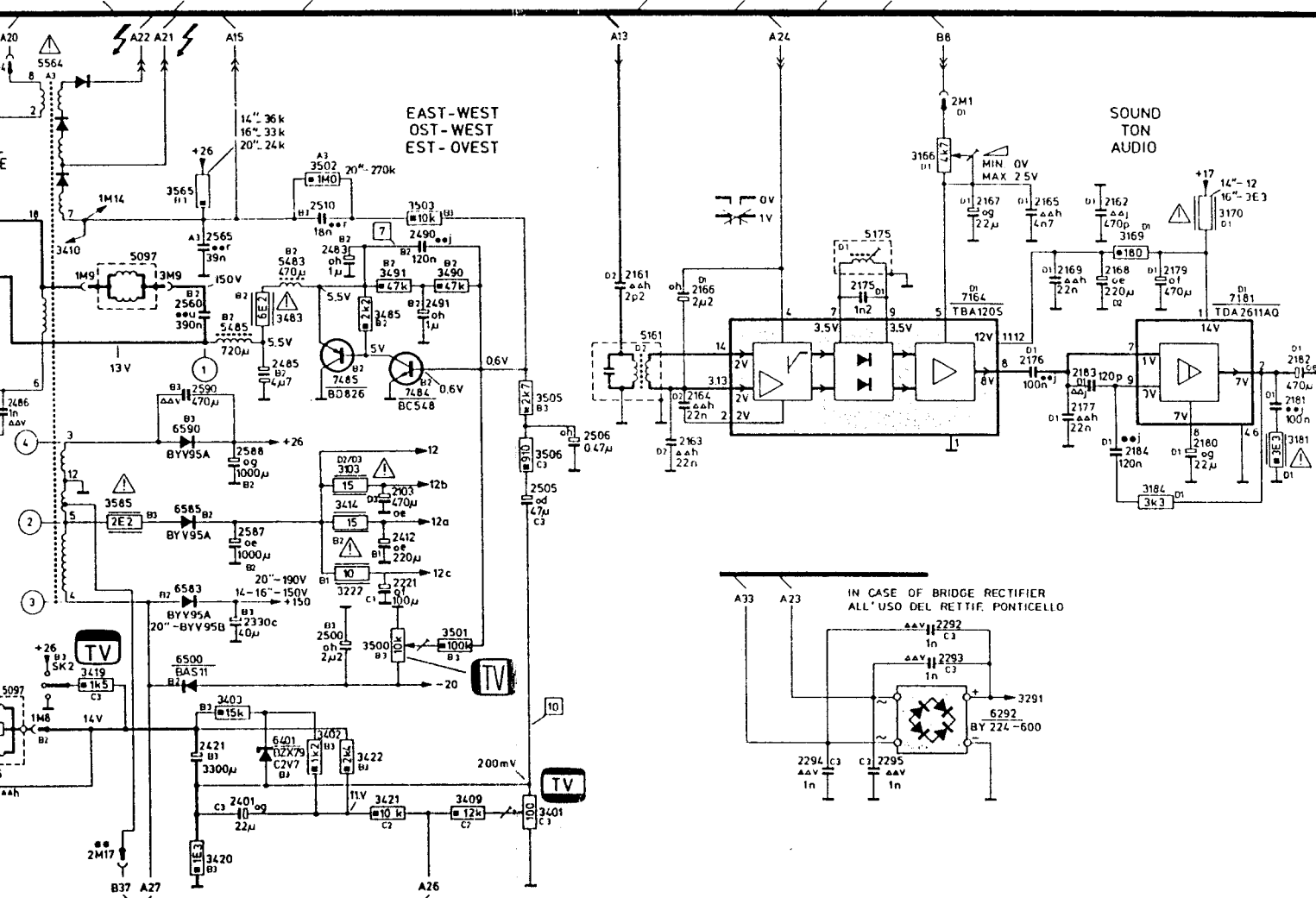
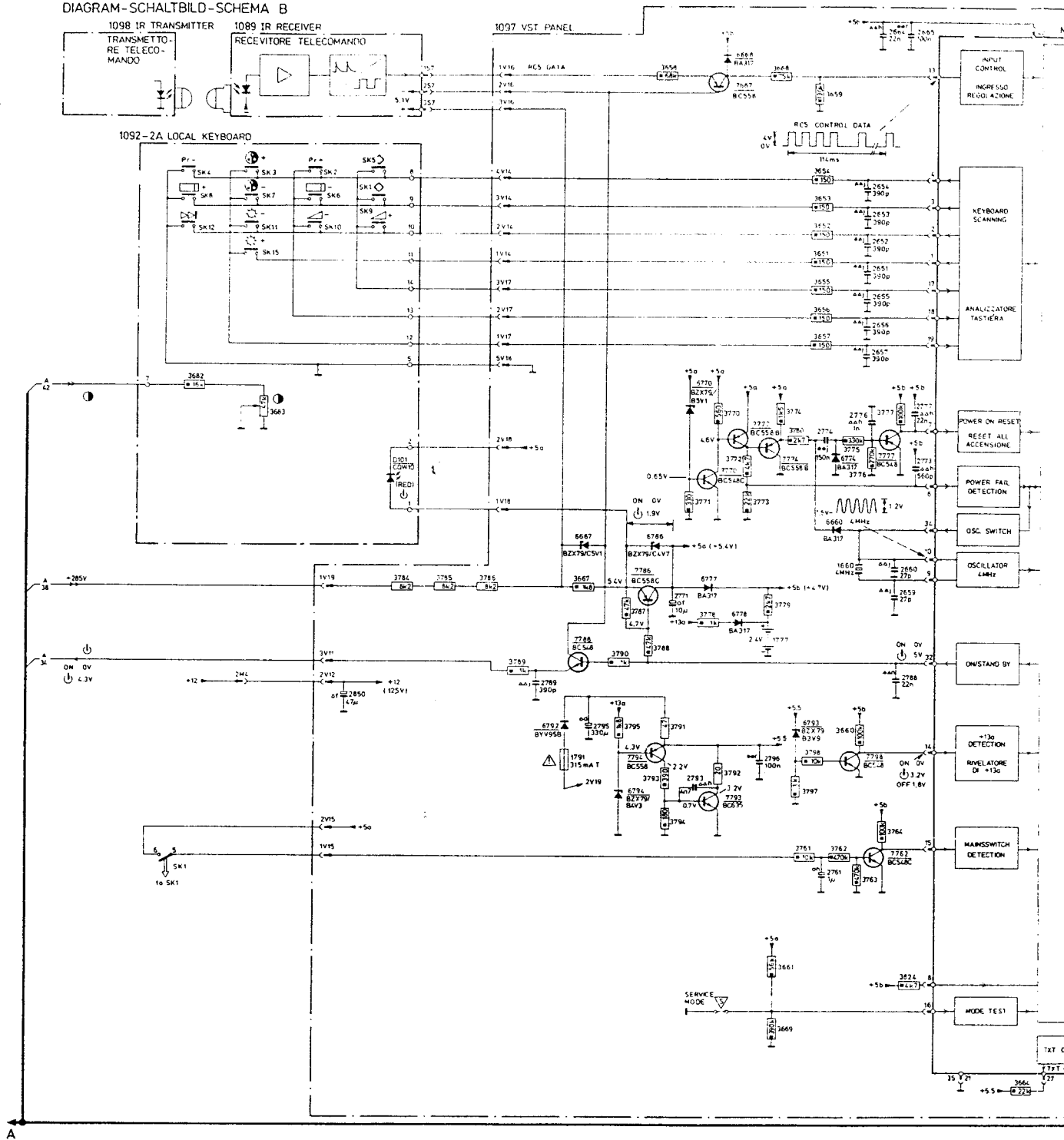
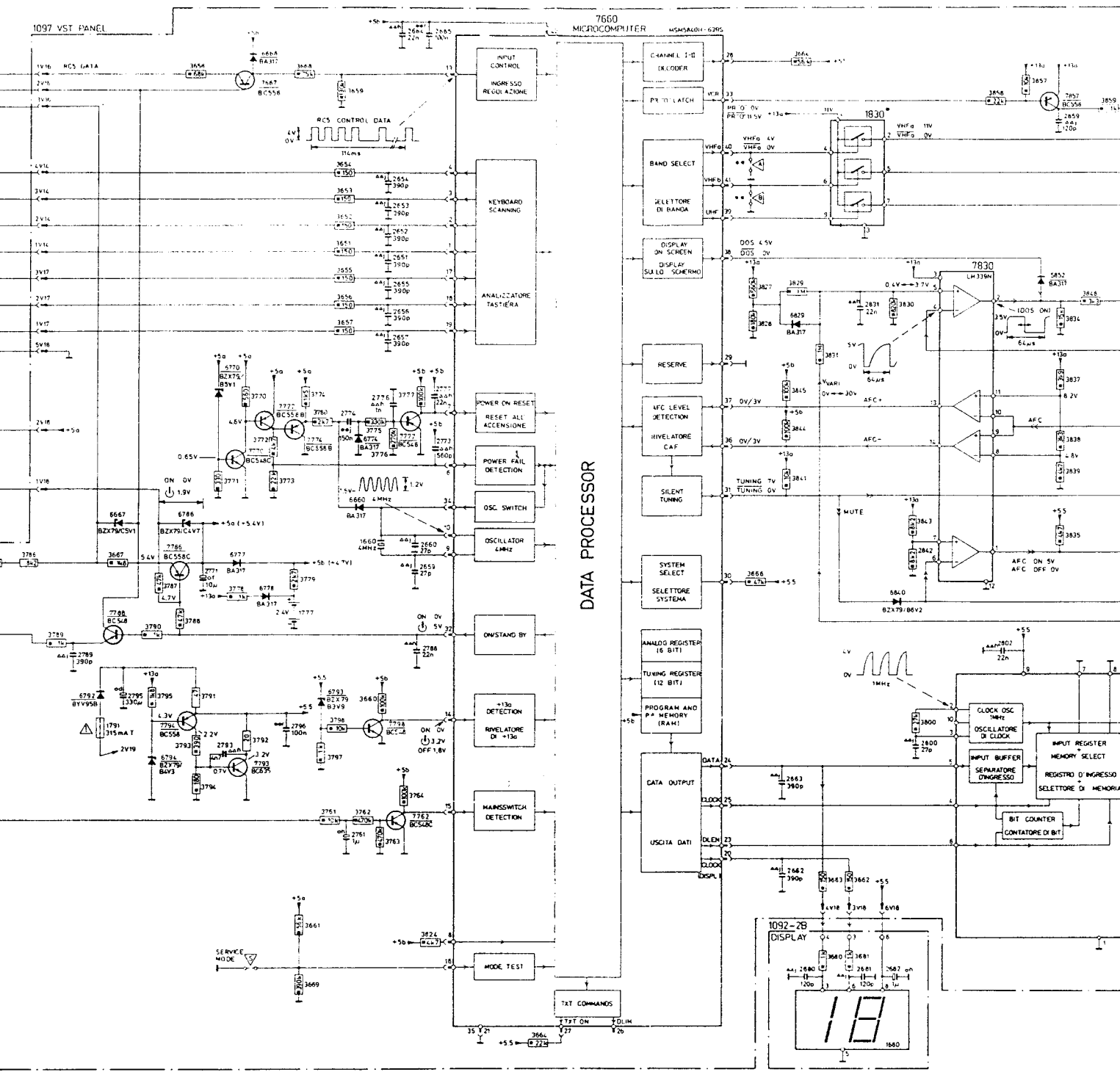
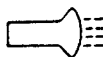


DIAGRAM-SCHALTBILO-SCHEMA B





INDEX FAULT FINDING TREE CTX

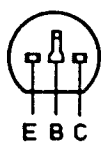
Fault			see	Fault			see
	Geen licht	A-1			Vertikale lineariteit niet goed	C-8	
	Te weinig licht	A-2			Horizontale amplitude niet goed	C-9	
	Geen of zwak geluid	B-1			Horizontale centrering niet goed	C-10	
	Vervormd geluid	B-2			Vertikale centrering niet goed	D-1	
	Geen of zwak beeld	B-3			Horizontale en verticale amplitude niet goed	D-2	
	Voedingsspanning hikt	C-1			Geen kleuren	D-3	
	Geen horizontale synchronisatie	C-2			Een of twee kleuren zwak of niet aanwezig	D-4	
	Geen synchronisatie	C-3			Beeld egaal verkleurd	D-5	
	Geen verticale synchronisatie	C-4			Geen kleuren synchronisatie	D-6	
	Geen verticale afbuiging	C-5			Lijnenraster (venetian blinds)	D-7	
	Beeldhoogte niet goed	C-6			Sterke kleurenruis in zwart/wit beeld	D-8	
	Vertikale lijnen links en rechts zijn krom (oost-west-fout)	C-7			Kleurvlekken in zwart/wit beeld	D-9	

SYMBOLENLIJST VOOR FOUTZOEKBOMEN

	Meetpunt		Plug verwijderen		Geen verticale afbuiging
	Antennesignaal toevoeren (Zwart/Wit)		Verbind de punten A en B		Geen verticale synchronisatie
	Antennesignaal verwijderen		Verwijder de verbinding tussen de punten A en B		Geen horizontale synchronisatie
	Generator aansluiten (kleursignaal)		Instelling (Algemeen)		Horizontale centrering niet goed
	Spanningsmetingen verrichten		Instelling heeft geen resultaat		Vertikale centrering niet goed
	Weerstandsmetingen verrichten		Gloeidraad beeldbuis gloeit		Vertikale lineariteit niet goed
	Kontroleer circuit van ... en ...		Gloeidraad beeldbuis gloeit niet		Vert. lijnen links en rechts zijn krom
	Geen afwijking		Normaal licht		Sterke zwart/wit ruis
	Wel afwijking		Weinig licht		Zwakke of geen ruis
	Kleiner dan		Geen licht		Kleurvlekken in zwart-wit beeld
	Groter dan		Normaal geluid		Sterke kleurenruis in zwart/wit beeld
	Kontroleer circuit tussen ... en ...		Zwak geluid		Kleurenbeeld in orde
	Stel de helderheidsregelaar in op maximum		Geen geluid		Rood en groen soms verwisseld
	Stel de helderheidsregelaar in op minimum		Vervormd geluid		Kleuren liggen door elkaar (geen kleurensync.)
	Stel de contrastregelaar in op maximum		Sterke luidsprekerruis		Lijnenraster (Venetian blinds)
	Stel de contrastregelaar in op minimum		Geen of zwakke luidsprekerruis		Kleuren
	Spanning regelbaar door afstemming		Goed zwart-wit beeld		Een of twee kleuren zwak of afwezig
	Verwijder unit		Geen of zwak beeld		Zwakke kleuren
	Unit insteken		Egaal verkleurd raster met geen of zwak beeld		Geen kleuren
	Unit vervangen		Beeld egaal verkleurd		Schakel SK2 in stand 2
	Voedingsspanning "hikt"		Vertikale amplitude te klein of te groot		Schakel het apparaat in
	Plug insteken		Horizontale amplitude te klein of te groot		Schakel het apparaat uit

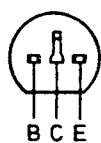
	Omvormer, algemeen		Bandsper-filter		Versterker, algemeen
	Storingsonderdrukker		Banddoorlaatfilter		Stand-by
	Synchronisatiescheider		Pulsbreedte modulator		Aan/uit
	Deler		90° faseverschuivend netwerk		Uitgangstrap
	Gelijkrichter		Elektronische schakelaar		Geregelde versterker
	Automatische versterkingsregeling		Variabele weerstand		Verschilversterker
	Flip-flop op halve lijnfrequentie		Indikator		Versterker met begrenzer
	Blokspanningsgenerator		Vertragingselement		Positieve piekbegrenzer
	Zaagtandgenerator		Detektor		Zwart niveau hersteller
	Sinus-generator		Fase detector		Coaxiale antenne-ingang
	Instelbare sinus-generator		Spanningsstabilisator		RC-netwerk (integrator)
	Onderdrukkingsfilter		FM-detektor		Decodeer matrix
	Laagdoorlaatfilter		Fasediskriminator		Infra-rood zender
	Hoogdoorlaatfilter		Kleurdoover		Infra-rood ontvanger

T0-92(2)



BC548 A,B,C
BC558 A,B,C

T0-92(3)



BF422

T0-220(1)



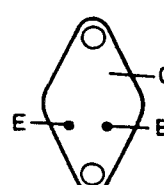
BUX84

T0-202



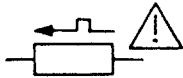
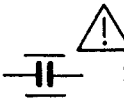
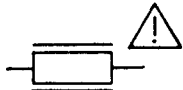
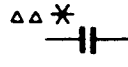
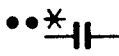
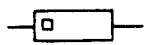
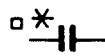
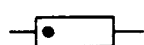
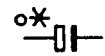
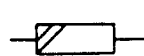
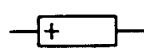
BD826
BF869

T0-3

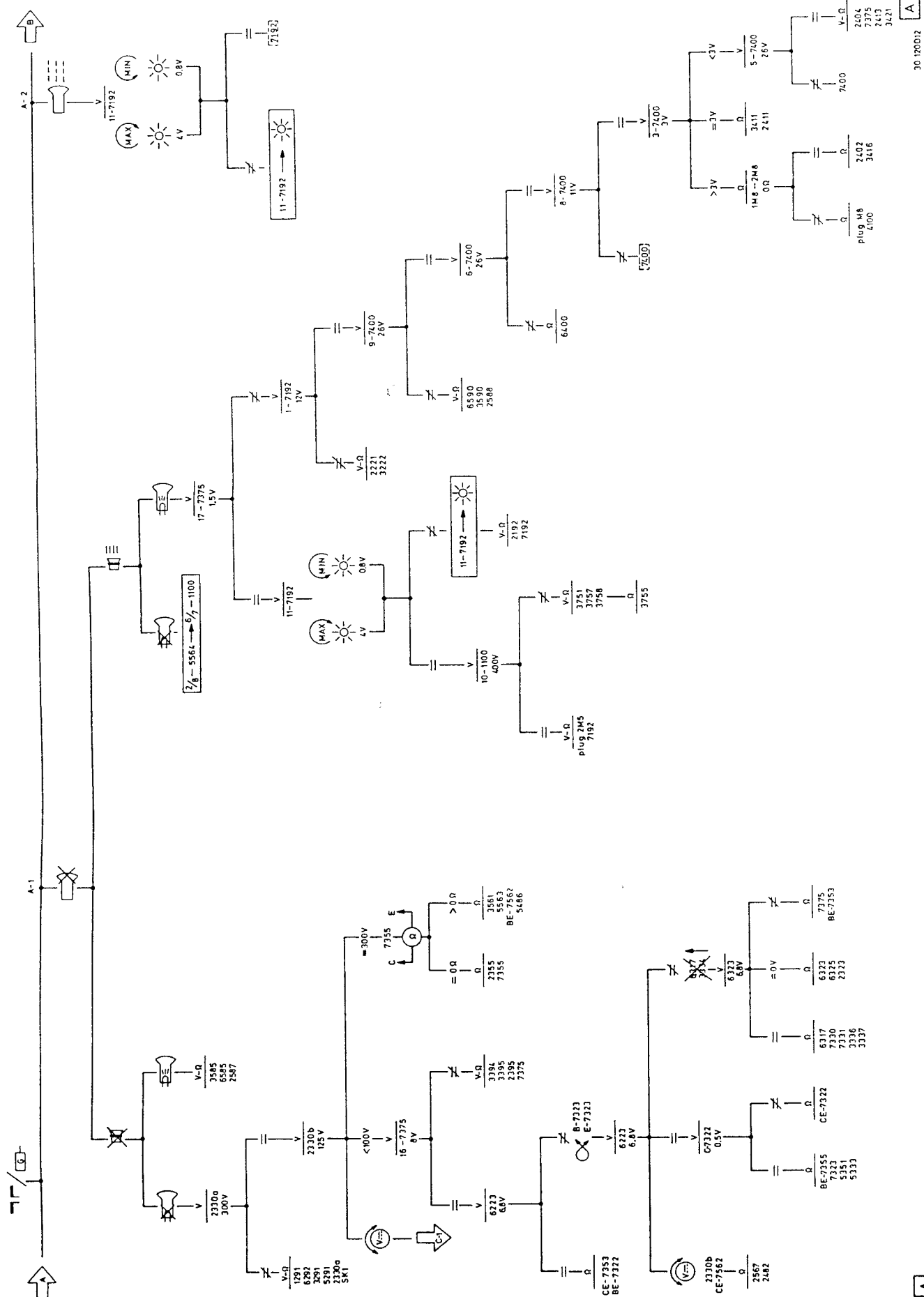


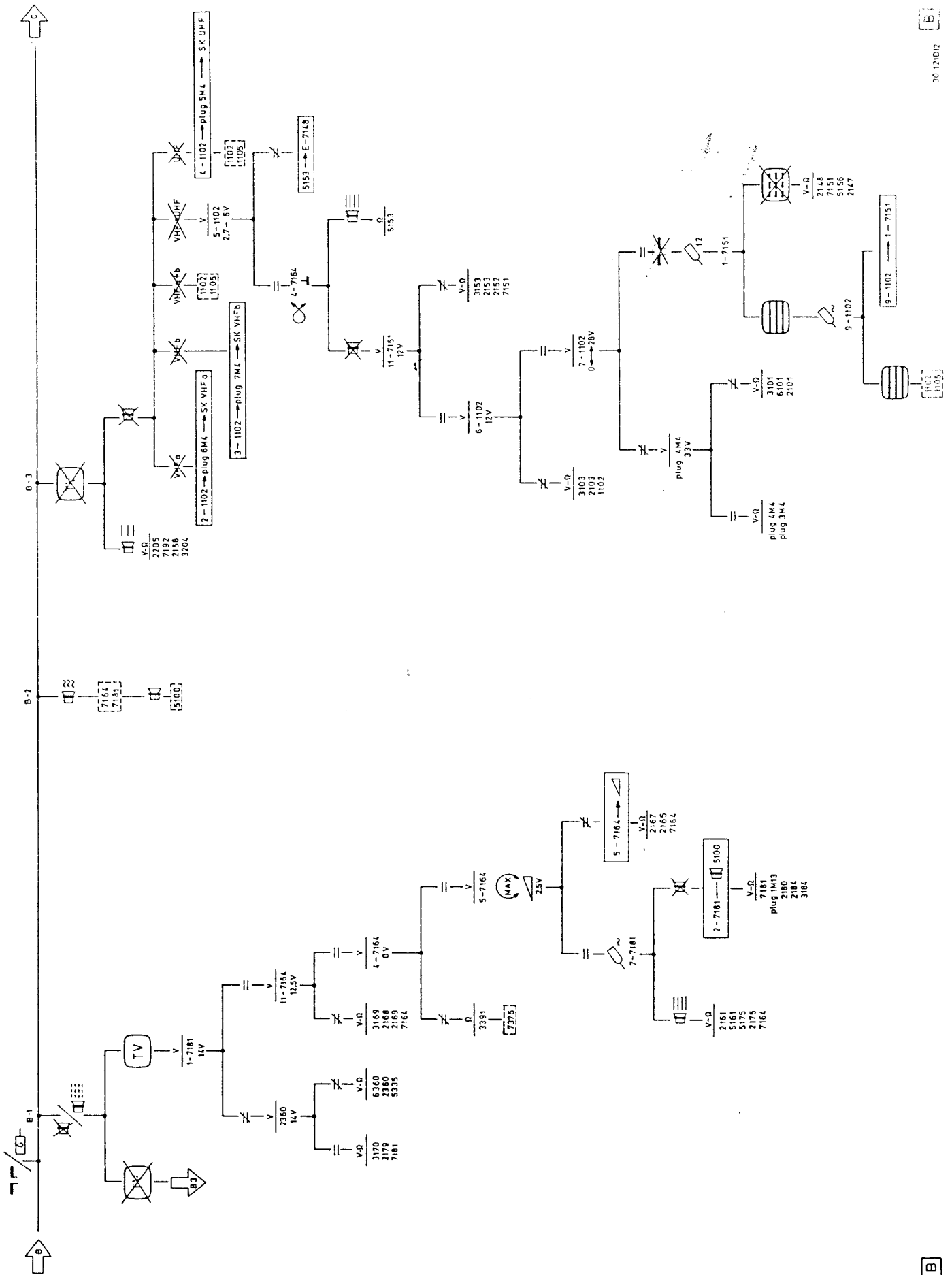
2SD350A

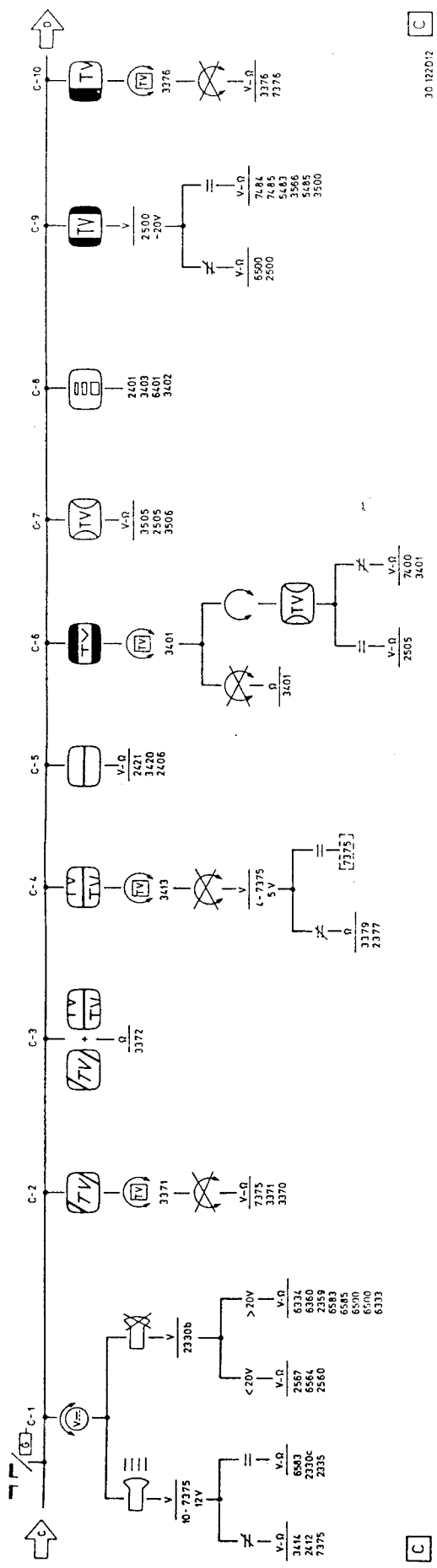
28 843A12

	SPRING RESISTOR		SAFETY CAPACITOR																					
	SAFETY RESISTOR		CERAMIC PLATE																					
	SFR 25		POLYESTER FLAT FILM																					
	0.125W $\leq 1M\Omega$ 5 % (CR25) $> 1M\Omega$ 10 %		POLYESTER MEPOLESCO																					
	0.25W $\leq 1M\Omega$ 5 % (CR37) $> 1M\Omega$ 10 %		SINGLE ELCO																					
	0.5W $\leq 1M\Omega$ 5 % (CR52) $> 1M\Omega$ 10 %	<table><tr><td>* a = 2.5V</td><td>g = 40V</td><td>r = 250V</td></tr><tr><td>b = 4V</td><td>h = 63V</td><td>s = 350V</td></tr><tr><td>c = 6.3V</td><td>j = 100V</td><td>u = 400V</td></tr><tr><td>d = 10V</td><td>l = 125V</td><td>v = 500V</td></tr><tr><td>e = 16V</td><td>m = 150V</td><td>w = 630V</td></tr><tr><td>f = 25V</td><td>q = 200V</td><td>x = 1000V</td></tr><tr><td></td><td></td><td>y = 1600V</td></tr></table>		* a = 2.5V	g = 40V	r = 250V	b = 4V	h = 63V	s = 350V	c = 6.3V	j = 100V	u = 400V	d = 10V	l = 125V	v = 500V	e = 16V	m = 150V	w = 630V	f = 25V	q = 200V	x = 1000V			y = 1600V
* a = 2.5V	g = 40V	r = 250V																						
b = 4V	h = 63V	s = 350V																						
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d = 10V	l = 125V	v = 500V																						
e = 16V	m = 150V	w = 630V																						
f = 25V	q = 200V	x = 1000V																						
		y = 1600V																						
	1W $\leq 1.6M\Omega$ 5 % (CR68) $> 1.6M\Omega$ 10 %																							
	0.5W HIGH VOLTAGE (VR37) RESISTOR																							
	4W WIRE WOUND (WR0617) RESISTOR																							
	5W WIRE WOUND (WR0825) RESISTOR																							
	10W WIRE WOUND (WR0842) RESISTOR		AC  50 Hz																					
			DC  15625 Hz																					

24014B2







30 122012

