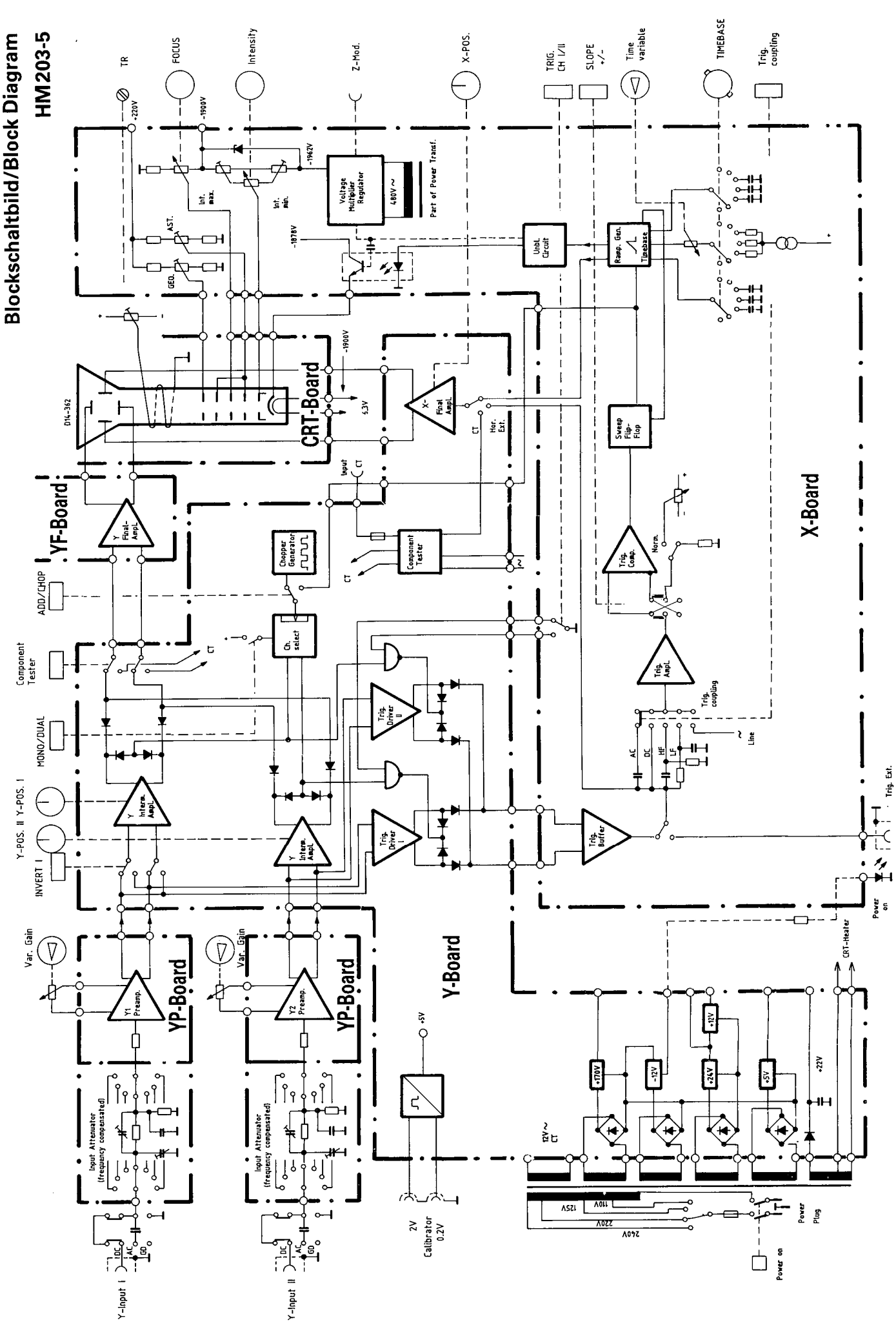
Blockschaltbild/Block Diagram HM203-5



Bezeichnung der Bauteile

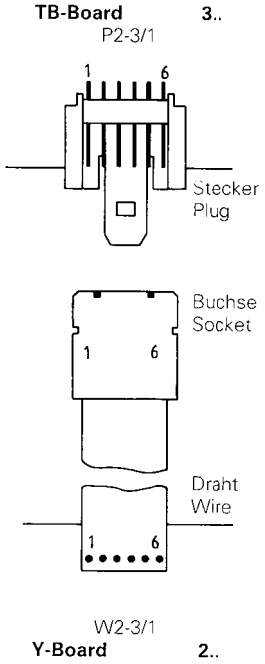
HM 203-5

Identification of electrical components

	Bauteile-Nr. Component-No.		Auf Board # On Board #
Y (Kanal I)	100- 199	Y (Channel I)	EY 1 ①, XY ③
Y (Kanal II)	200- 299	Y (Channel II)	EY 2 ②, XY ③
Y Endverstärker	300- 399	Y Final Amplifier	YF ④
Triggerung	400- 499	Triggering	TB ⑤
Zeitbasis	500- 599	Timebase	TB ⑤
X Endverstärker	700- 799	X Final Amplifier	XY ③
Asigmatismus, Componenten-Tester Calibrator	800- 899	Astigmatism, Component-Tester Calibrator	XY ③
Hochspannung, Helltastung, Strahldrehung	900- 999	High Voltage, Unblanking Trace Rotation	TB ⑤
Netzteil	1000-1099	Power Supply	XY ③, TB ⑤
CRT-Sockel	–	CRT Socket	CRT ⑥

Abkürzungen / Abbreviations

AI...	Gerätestecker	/ Appliance inlet
BR...	Brückengleichrichter	/ Bridge rectifier
C...	Kondensator	/ Capacitor
ChP...	Testpunkt	/ Check point
CN...	Steckverbinder	/ Connector
CRT...	Kathodenstrahlröhre	/ Cathode-ray tube
D...	Diode	/ Diode
E...	Lötöse	/ Eyelet
F...	Sicherung	/ Fuse
IC...	Integr. Schaltung	/ Integrated Circuit
L...	Spule, Drossel	/ Inductor, Coil
LED...	Leuchtdiode	/ Light emittig diode
NTC...	NTC-Widerstand	/ NTC resistor
P...	Stecker	/ Plug
R...	Widerstand	/ Resistor
S...	Schalter	/ Switch
T...	Transistor	/ Transistor
TR...	Transformator	/ Transformer
VC...	Trimmkondensator	/ Variable capacitor
VR...	Potentiometer	/ Variable resistor
VVC...	Kapazitätsdiode	/ Voltage variable capacitor
W...	Draht	/ Wire
Z...	Zenerdiode	/ Z-Diode



Widerstand- / Resistor identification

- Widerstand / Resistor 0.25 W 2 % (carbon film)
- Widerstand / Resistor 0.25 W 1 % tc = $50 \cdot 10^{-6}$/K (metal film)
- Widerstand / Resistor 0.25 W 0.5 % tc = $50 : 10^{-6}$/K (metal film)
- Widerstand / Resistor 0.5 W 2 % (carbon film)
- 4 Widerstand / Resistor 4 W 2 % tc = $400 \cdot 10^{-6}$/K (metal oxide film)

Beispiel: P2-3/1-5 bzw. W2-3/1-5

P = Flachkabelstecker (auf Board ..)
W = Flachkabelverbindung: eine Seite verlötet, andere Seite Buchsenleiste
2-3 = Verbindung zwischen Board 2 und Board 3
1 = 1. Flachkabelverbindung zwischen Board 2 und 3
5 = Draht-Nummer des Flachkabels

Example: P2-3/1-5 or W2-3/1-5 respectively

P = Flat cable plug (soldered on board)
W = Flat cable wiring (directly soldered on board) with socket (movable)
2-3 = Connection between Board 2 (Y-Board) and Board 3 (TB-Board)
1 = First flat cable connection between Board 2 and 3
5 = Serial number of the wire (in the flat cable)

Farbkennzeichnung der Anschlußdrähte / Color-Abbreviations for insulated wire

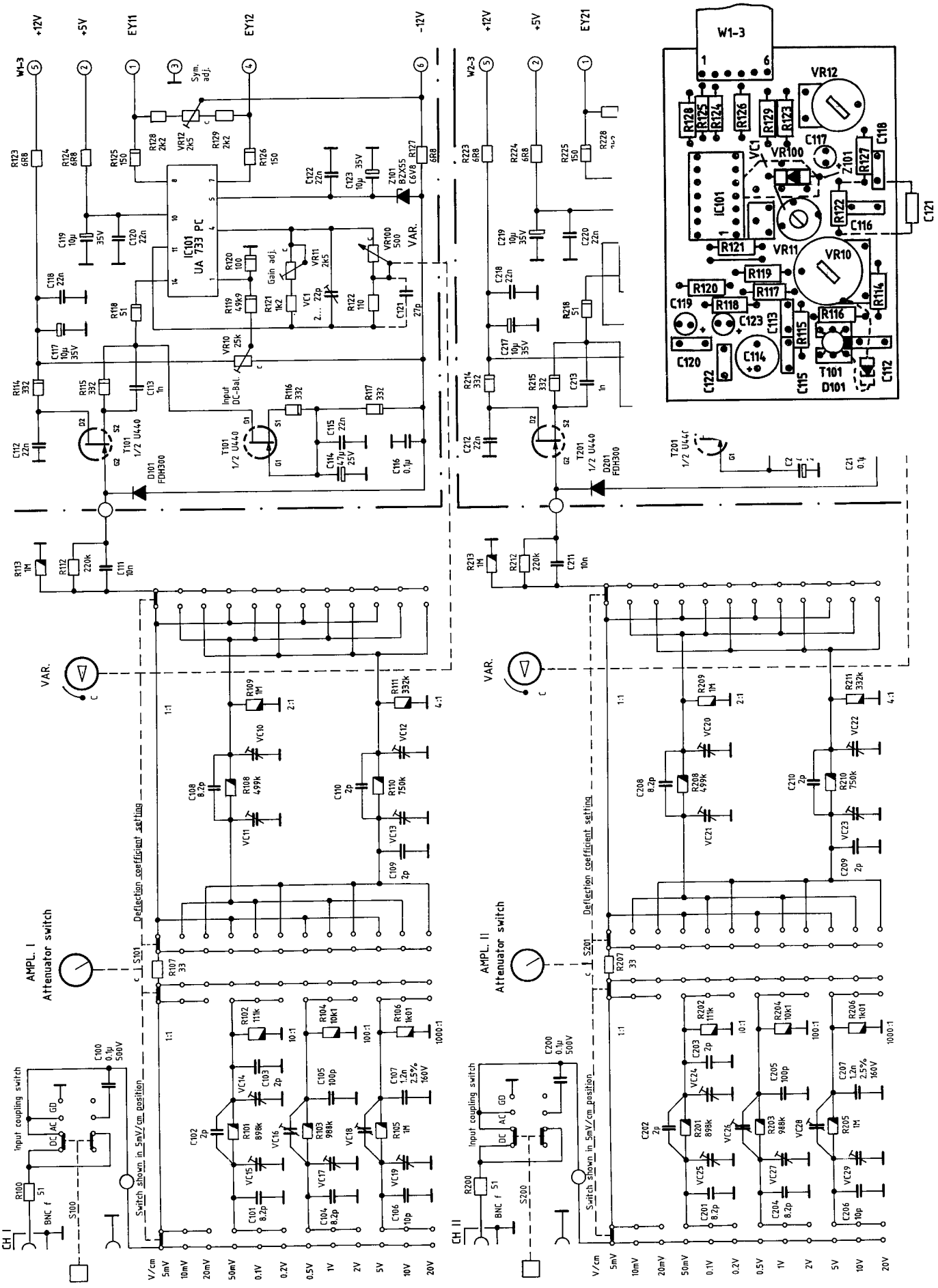
bk	= schwarz	/ black	ye	= gelb	/ yellow	gr	= grau	/ grey
bn	= braun	/ brown	gn	= grün	/ green	wh	= weiß	/ white
rd	= rot	/ red	bl	= blau	/ blue	trp	= transparent	/ transparent
or	= orange	/ orange	vi	= violett	/ violet	gn/ye	= grün-gelb	/ green-yellow stripe

Anschlußfolge der Transistoren / Terminals of Transistors	BC 237 B, BC 550 C, BC 557 B, BC 547 C, BF 297	BF 199, BF 440	BF422, BF 423	BF 458, BF 459, BUX 86/87, BD 232	BSX 19	U 440	78 XXCU
Ansicht von unten / Bottom View	E B C	B E C	B C E	B C E	E B C	G1 S2 D1 D2 S1 G2	2 3 1 Output Input Common
Ansicht von oben / Top View	E B C	B E C	B C E	E C B	E B C	S2 G1 D2 D1 G2 S1	1 3 2 Input Output Common

Y-Eingang, Teilerschalter, Vorverstärker Kanal I/II
Y-Input, Attenuator, Preamplifier Channel I and Channel II

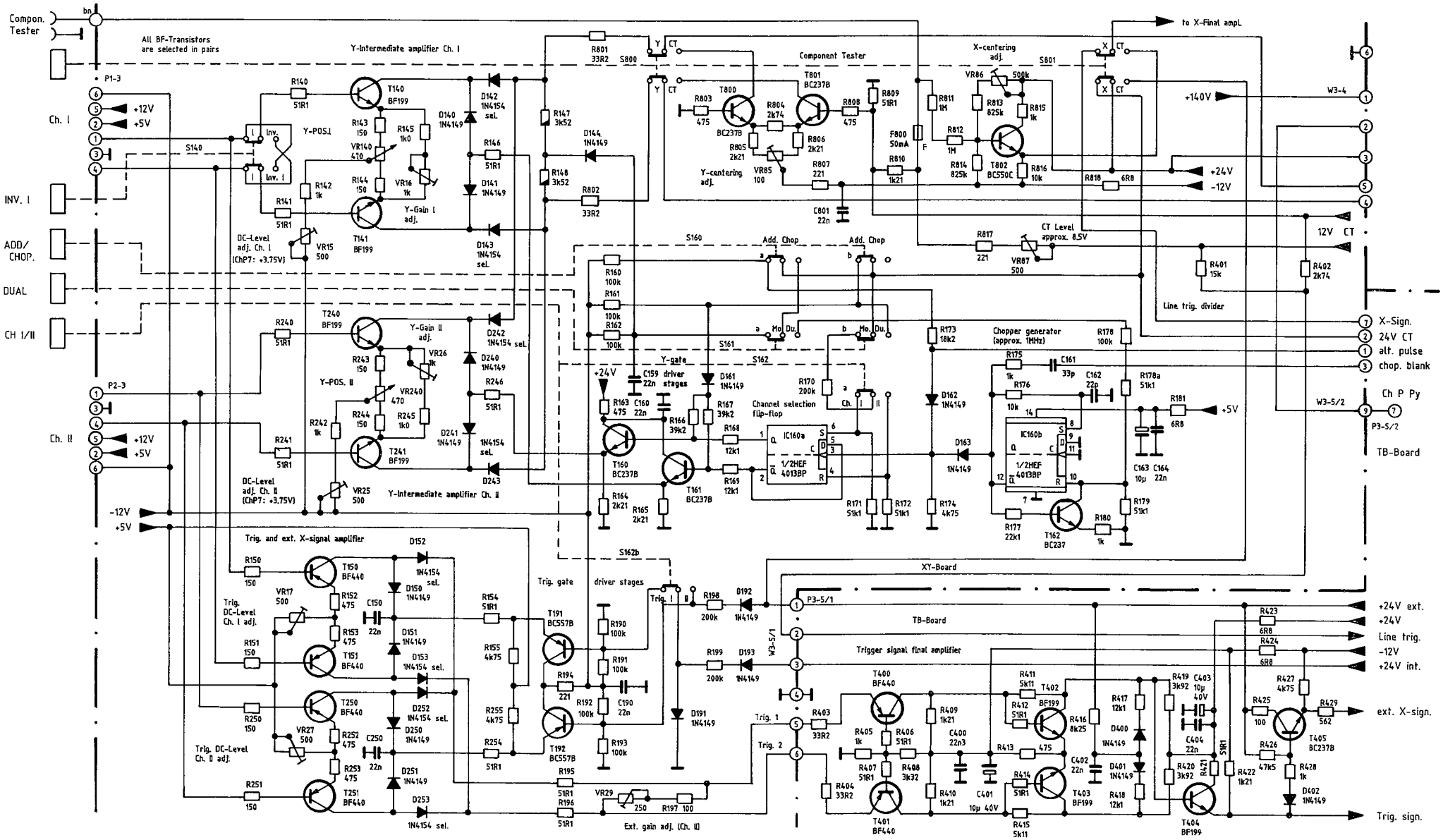
Bestückungsplan EY-Board
Component Locations EY-Board

(Kanal II wie Kanal I, Numerierung jedoch 2..)
(Ch.II like Ch. I, except comp. #: starting with 2..)

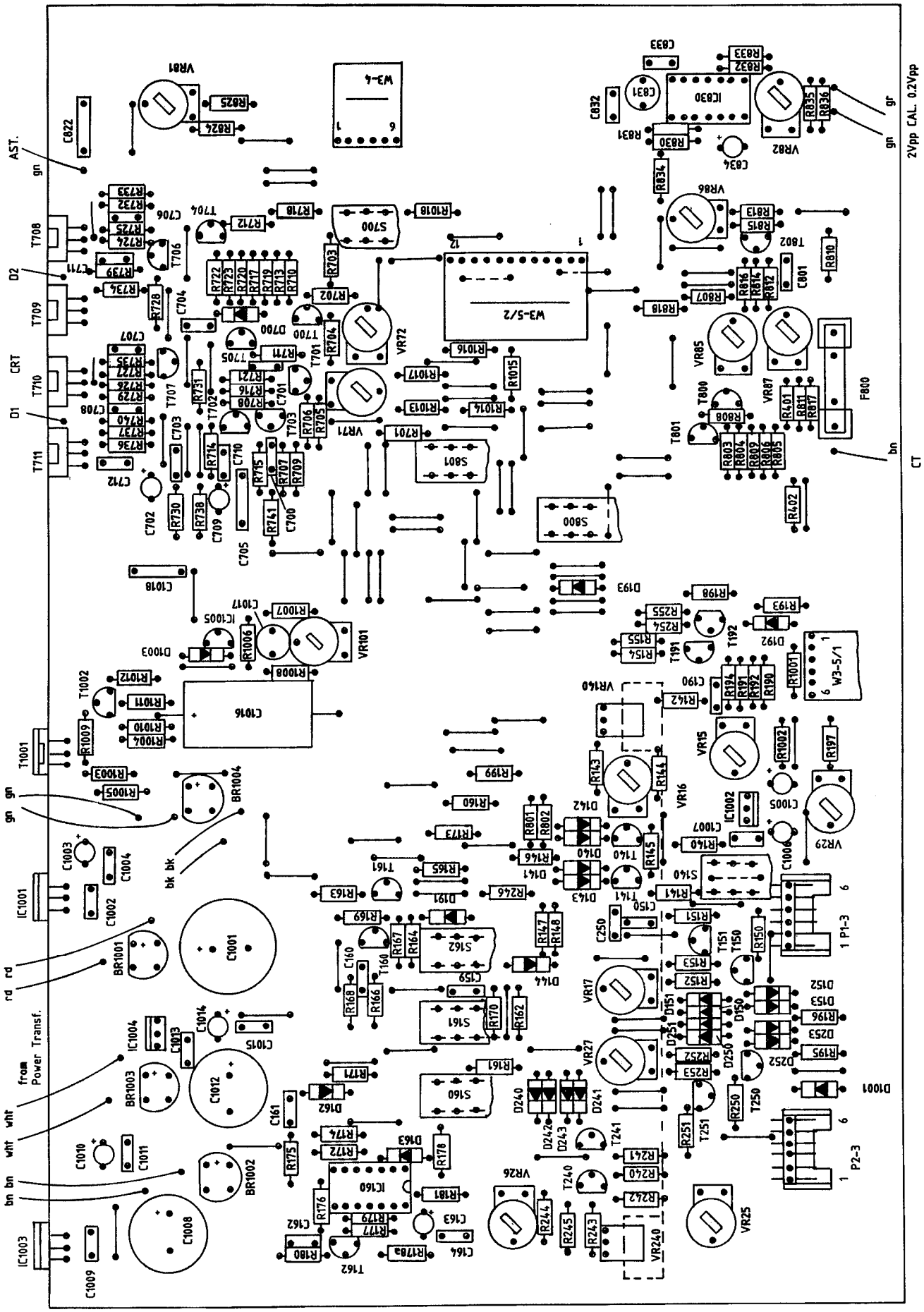


Y-Zwischenverstärker Kanal I u. II, Kanal-Flip-Flop, Chopper Generator, Steuerlogik, Componenten Tester

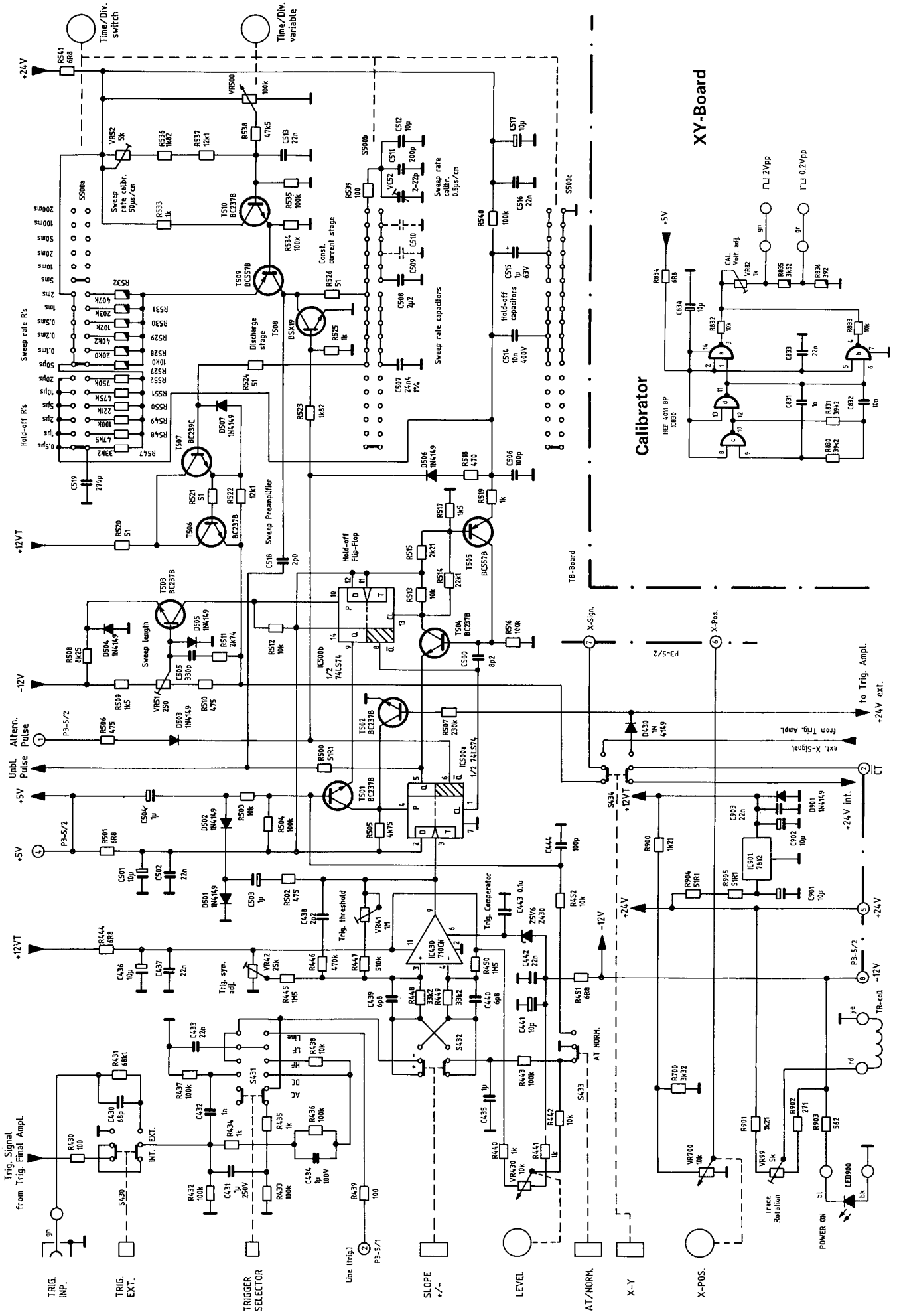
Y-Intermediate Amplifier Ch. I u. Ch. II, Channel Flip-Flop, Chopper Generator, Gates, Component Tester



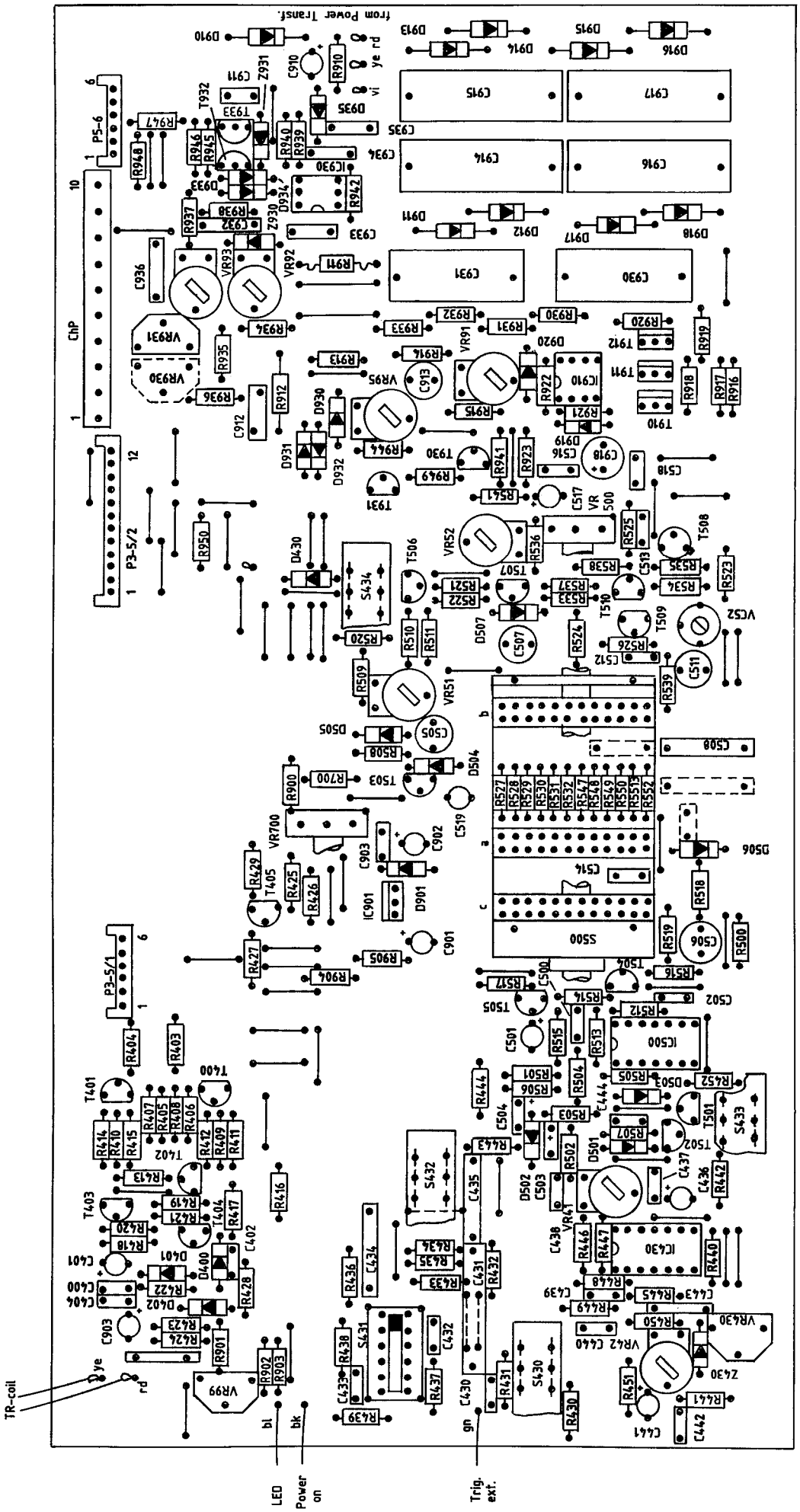
Bestückungsplan, XY-Board
Component Locations, XY-Board

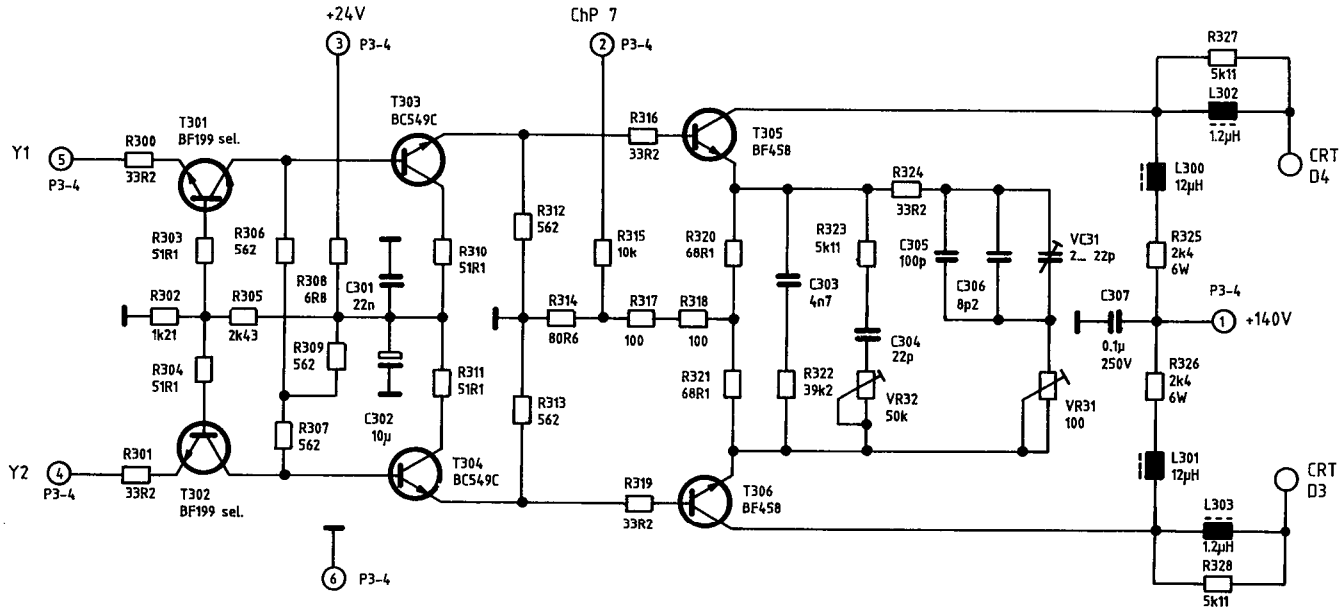


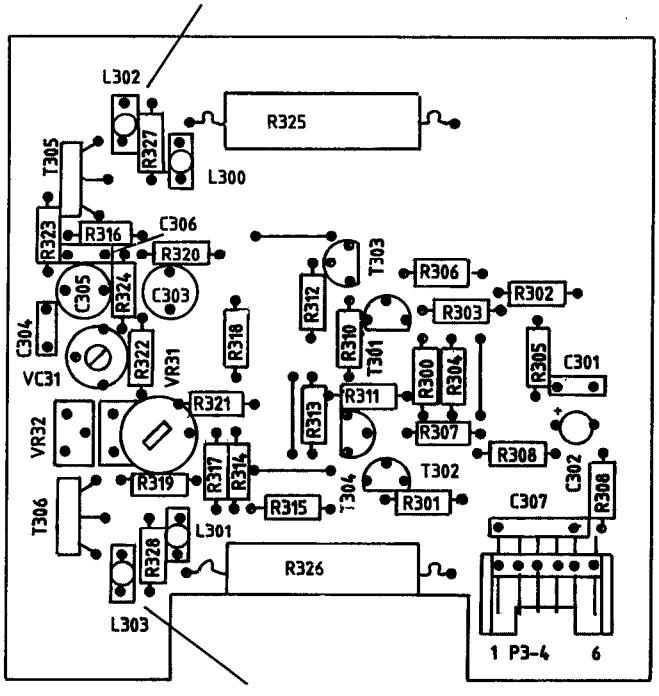
Trigger-Schaltung, Zeitbasis, Spannung 12 VT, Strahldrehung, Calibrator
Trigger Circuit, Timebase Circuit, LV-Power 12 VT, Trace Rotation, Calibrator

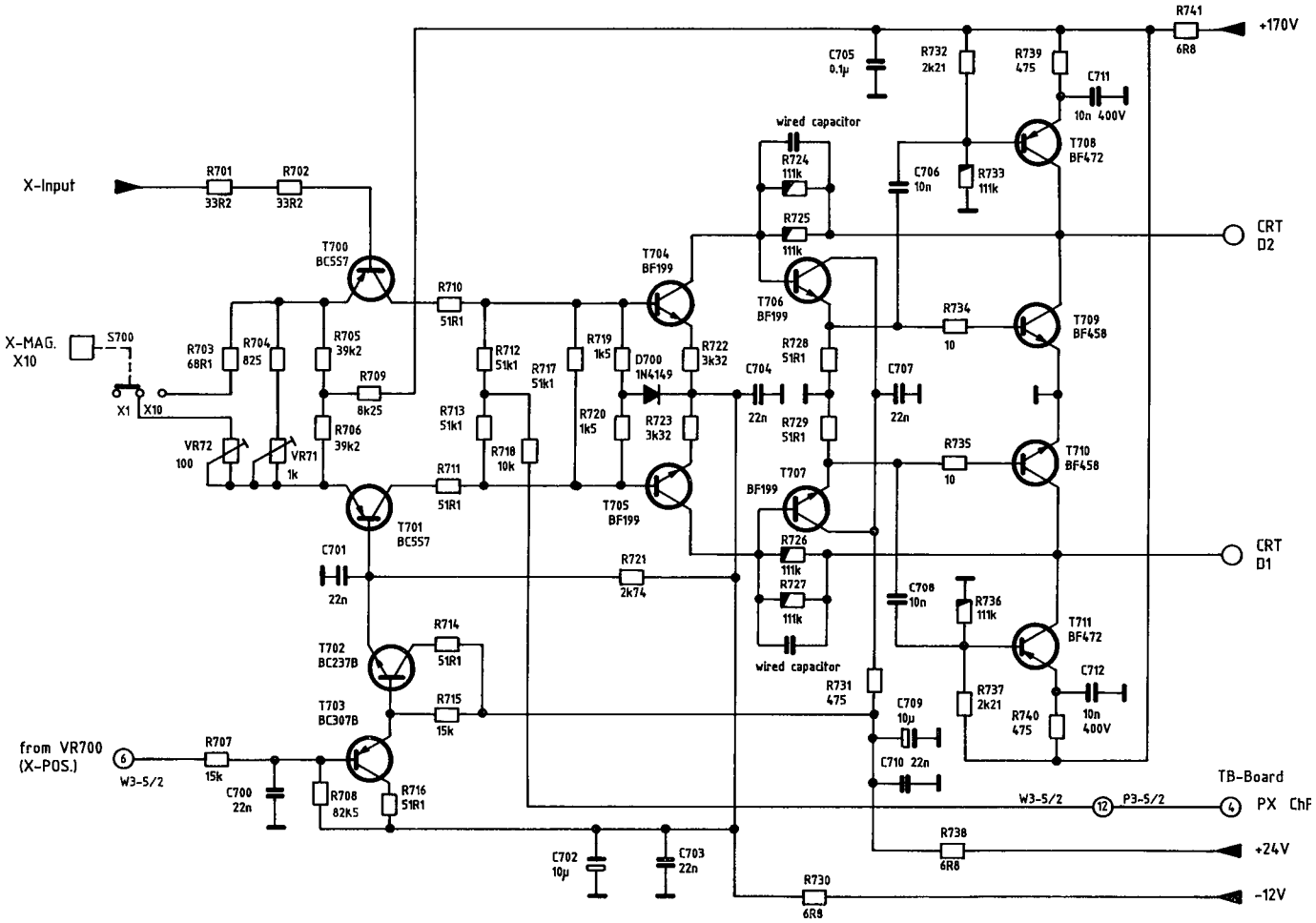


Bestückungsplan TB-Board
Component Locations TB-Board

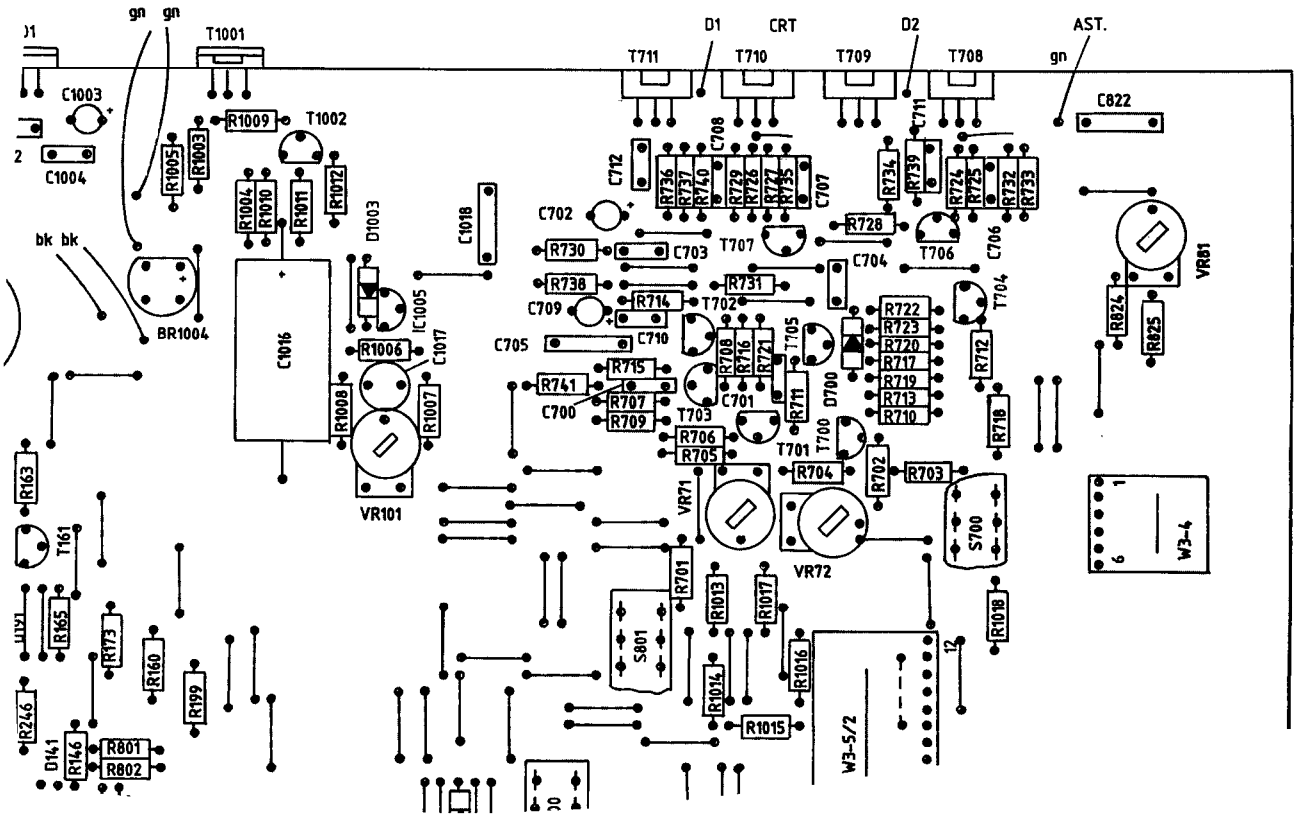




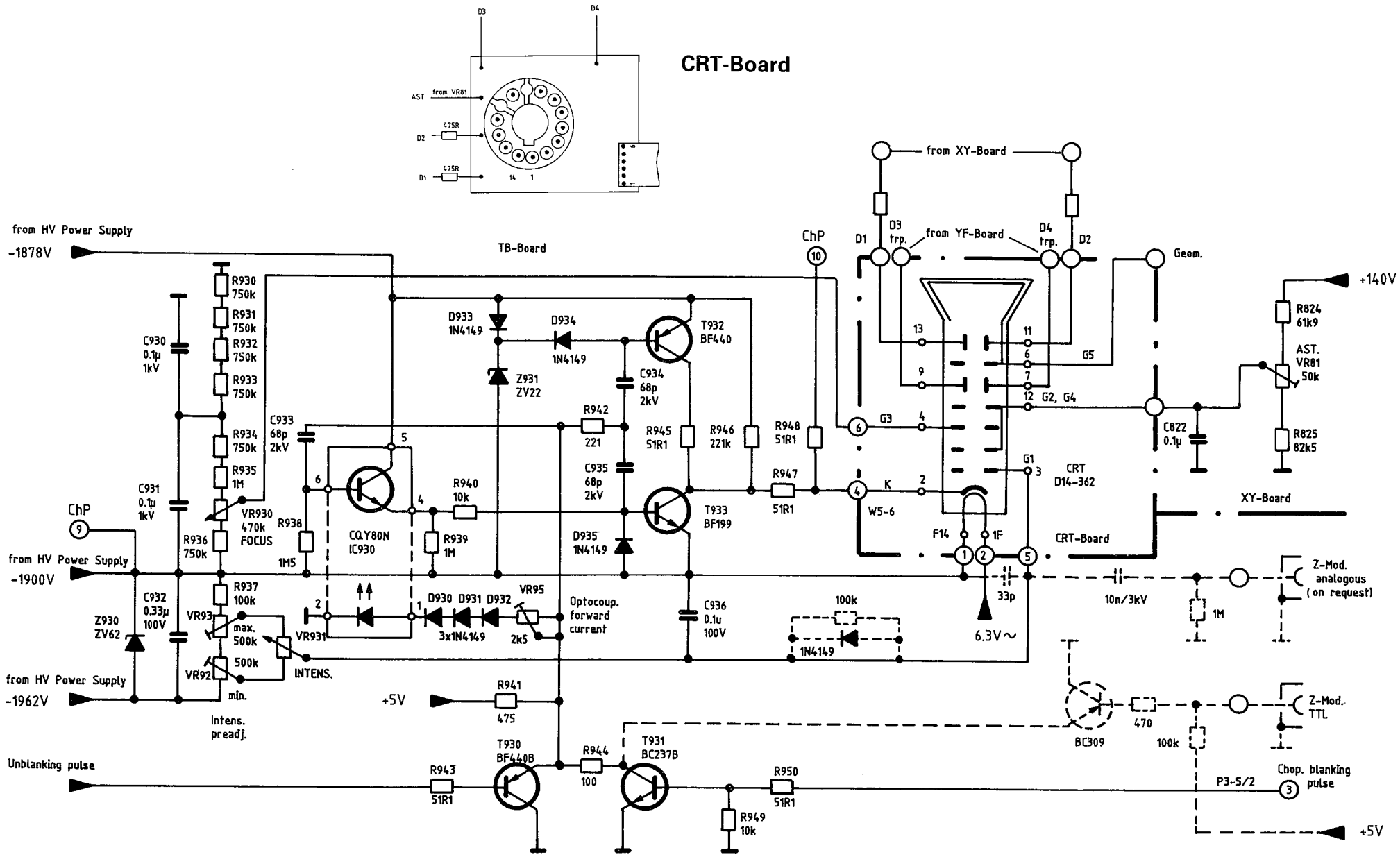


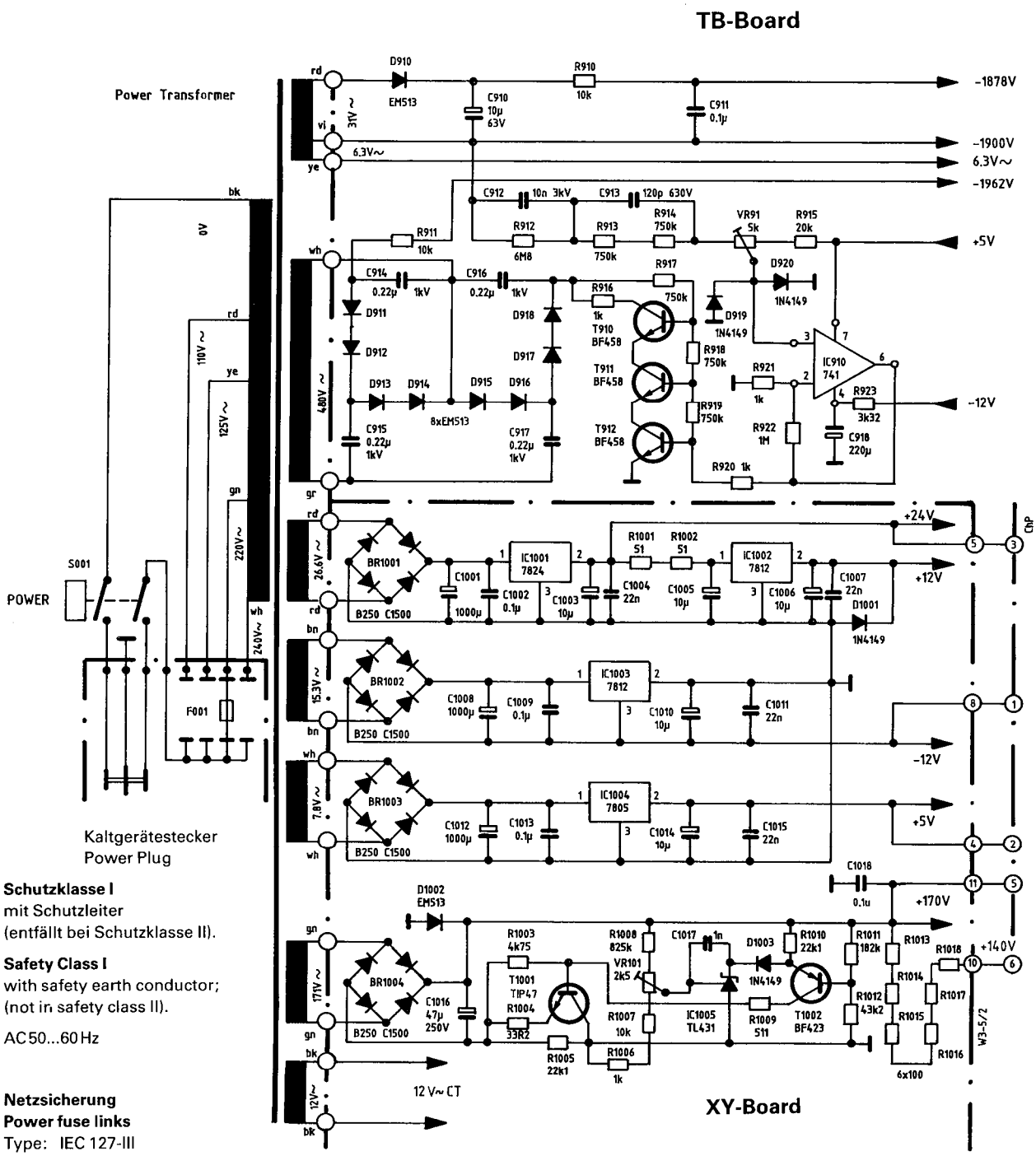


Bestückungsplan (auf XY-Board)
Component Locations (on XY-Board)



Kathodenstrahlröhre, Helltastung
CRT-Circuit, Unblanking





Schutzklasse I
mit Schutzleiter
(entfällt bei Schutzklasse II).

Safety Class I
with safety earth conductor;
(not in safety class II).

AC 50...60 Hz

Netzsicherung
Power fuse links
Type: IEC 127-III
DIN 41 662
SEV 1064
BS 4265

110 V **125 V**	**T 0.63 A**	5x20 mm, träge; 5x20 mm, time lag.
220 V **240 V**	**T 0.315 A**	

max. Leistung: 38 W
bei 220 V/50 Hz.

WATTS (max.): 38
at 220 V 50 Hz.