

Anmerkungen zu den Stromlaufplänen (Circuit Diagram Details)

Alle angegebenen Spannungen sind mit einem Instrument 100 kΩ/V gegen 0 V gemessen
 (All voltage ratings measured with respect to 0 V with 100 kΩ/V meter).

Die mit "TP" bezeichneten Punkte sind Testpunkte
 (The points marked with "TP" are test points)

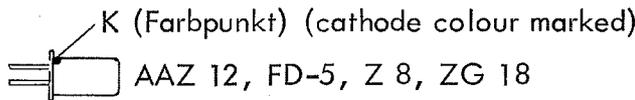
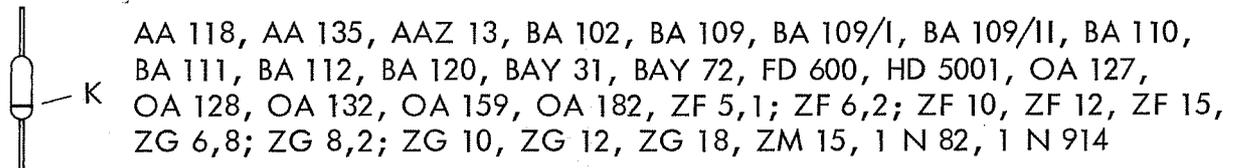
Belastbarkeit der Widerstände (Resistor Ratings)

1/4 W 1/3 W 1/2 W ab 1 W röm. Ziffern (roman numerals upwards from 1 W)

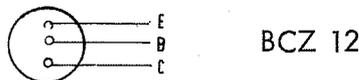
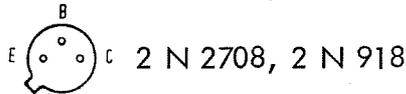
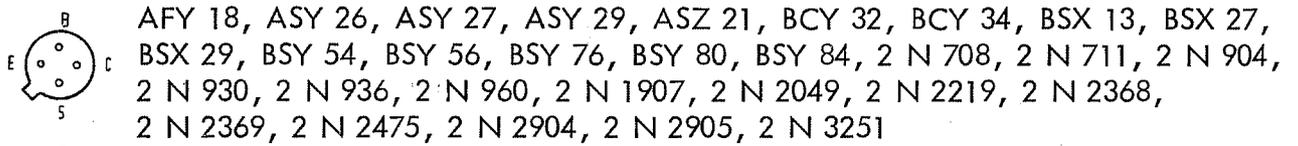


Anschlußschemas (Connection Details)

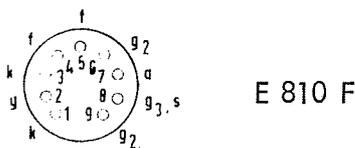
Dioden (Diodes)

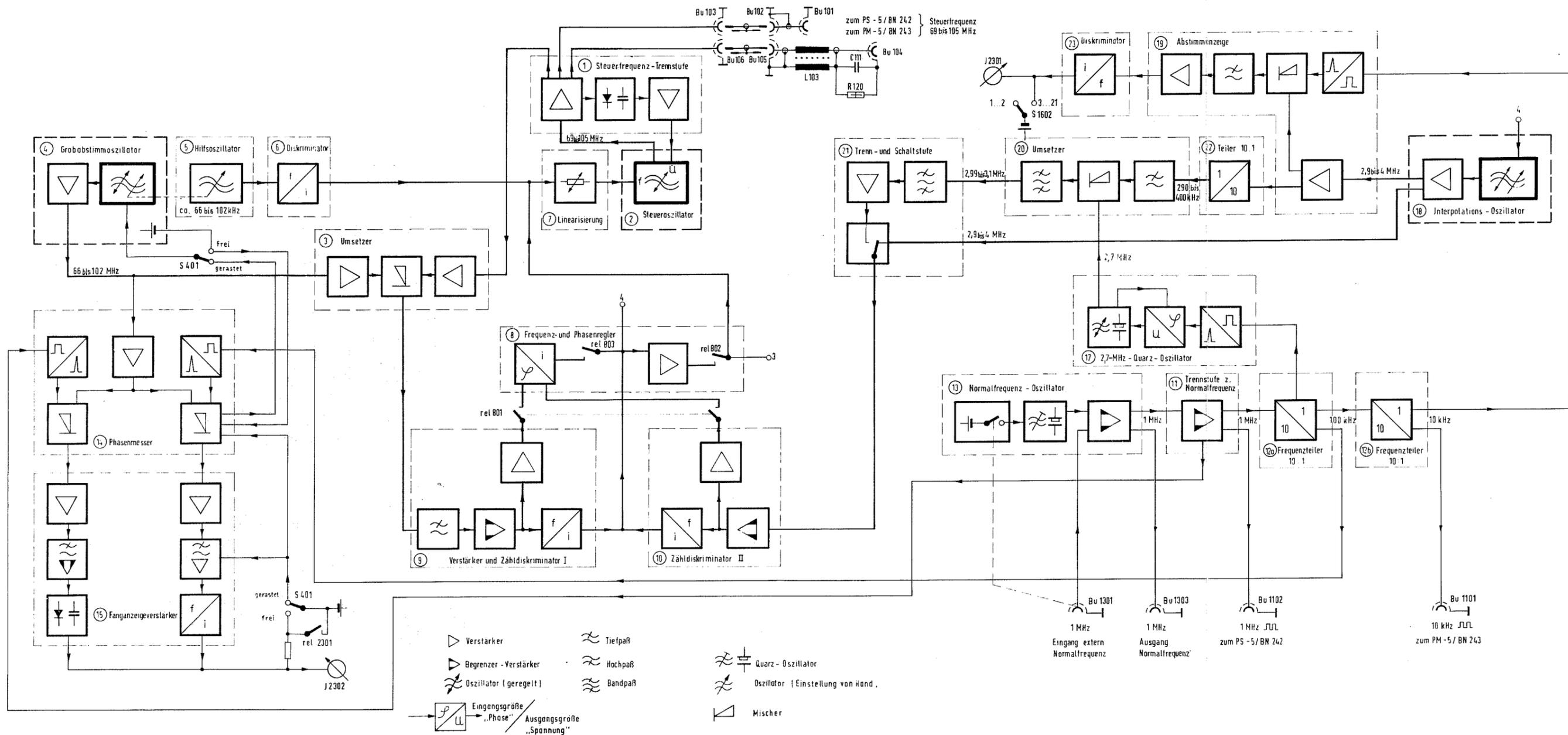


Transistoren (Transistors)

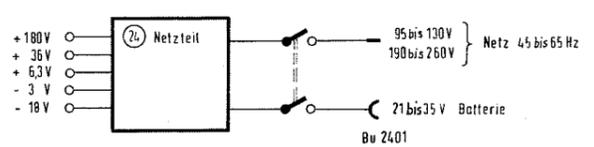
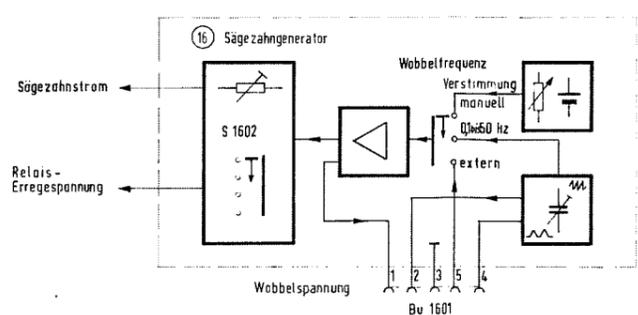


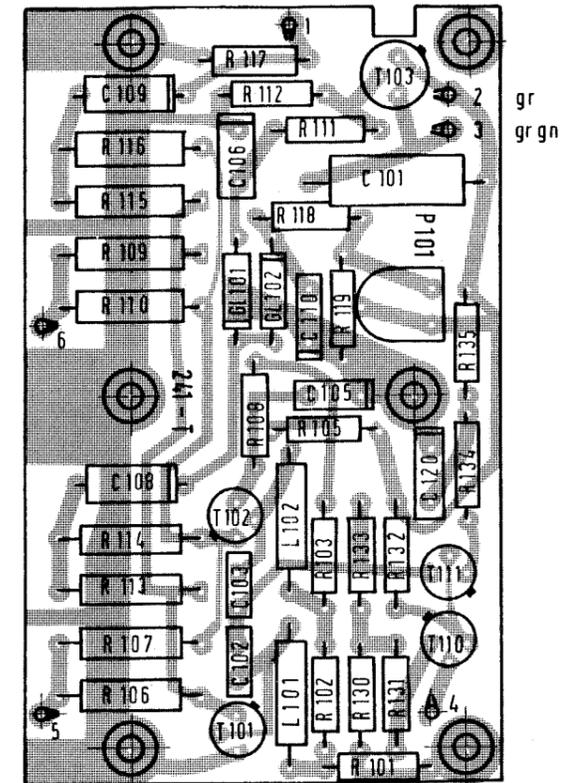
Röhre (Tube)

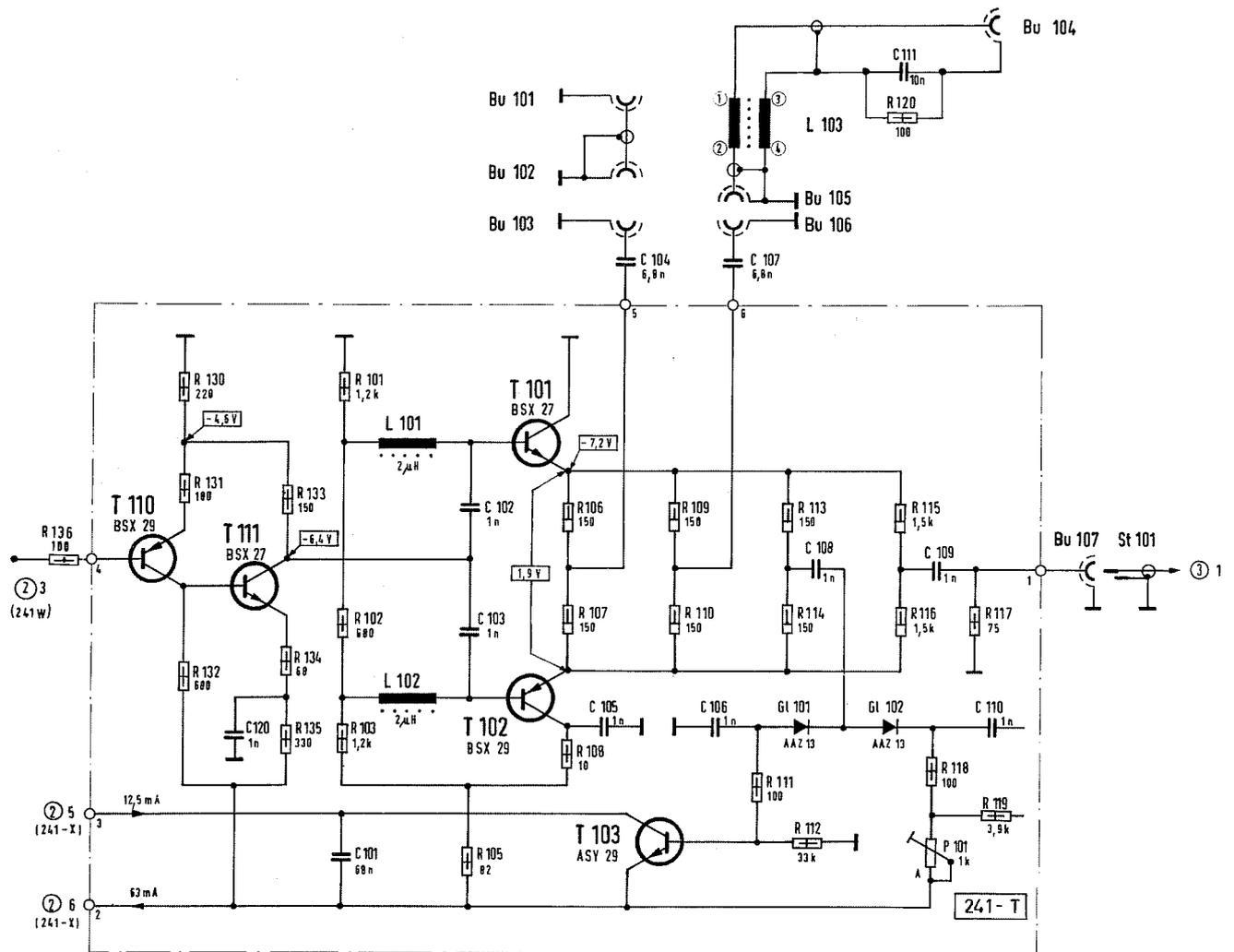




Betriebsart	Normal: Feinere- stimmung	Wobbeln: Frequenzhub																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Schalter S1602 in Stellung:		Hz							kHz							MHz						
		17,5	35	70	175	350	700	1,75	3,5	7	17,5	35	70	175	350	700	1,75	3,5	7	17,5	35	70
Sägezahnstrom geht zu:		Schaltung 18, Punkt 4							Schaltung 8, Punkt 4							Schaltung 8, Punkt 3						
erregt wird Relais		801, 802, 803							802							2301						
Ausgangssignal der Trenn- und Schaltstufe (21)	2,99 bis 3,1 MHz	2,99 bis 3,1 MHz							2,9 bis 4 MHz													



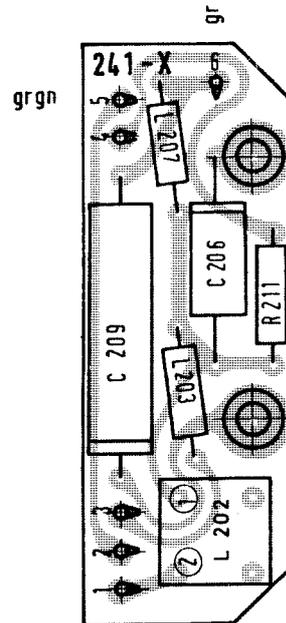
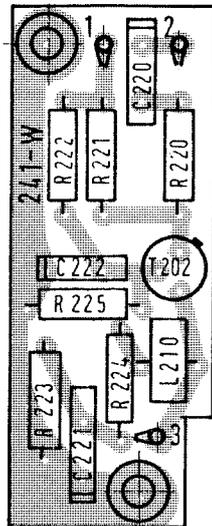
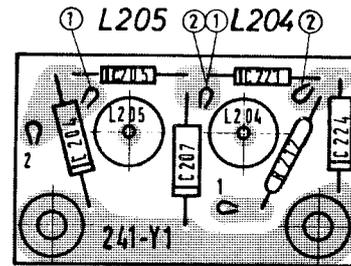
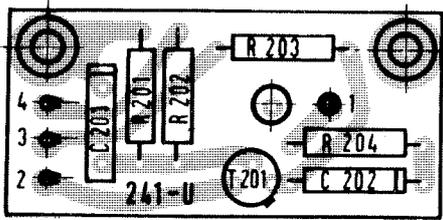


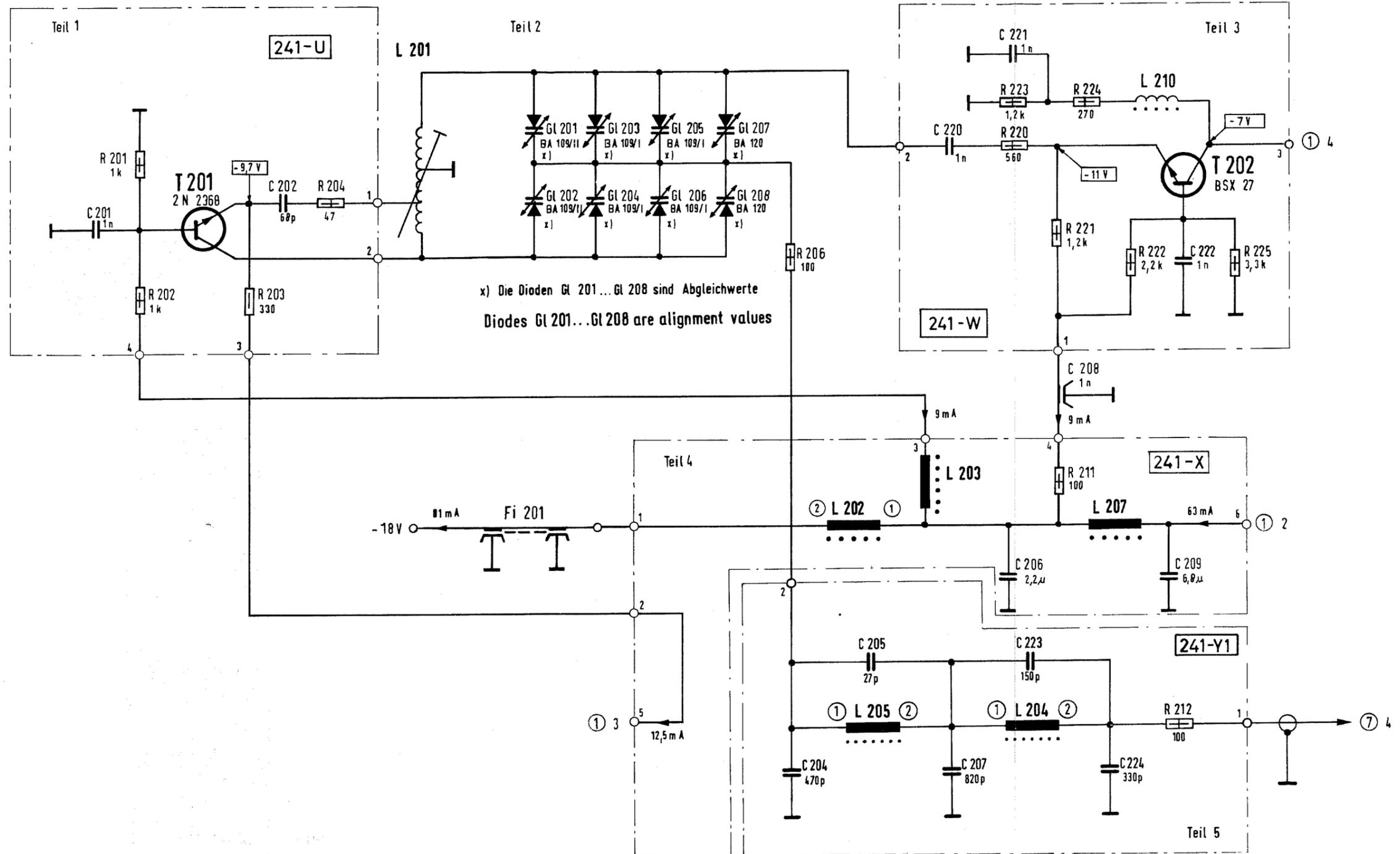


RWO-5/BN 241

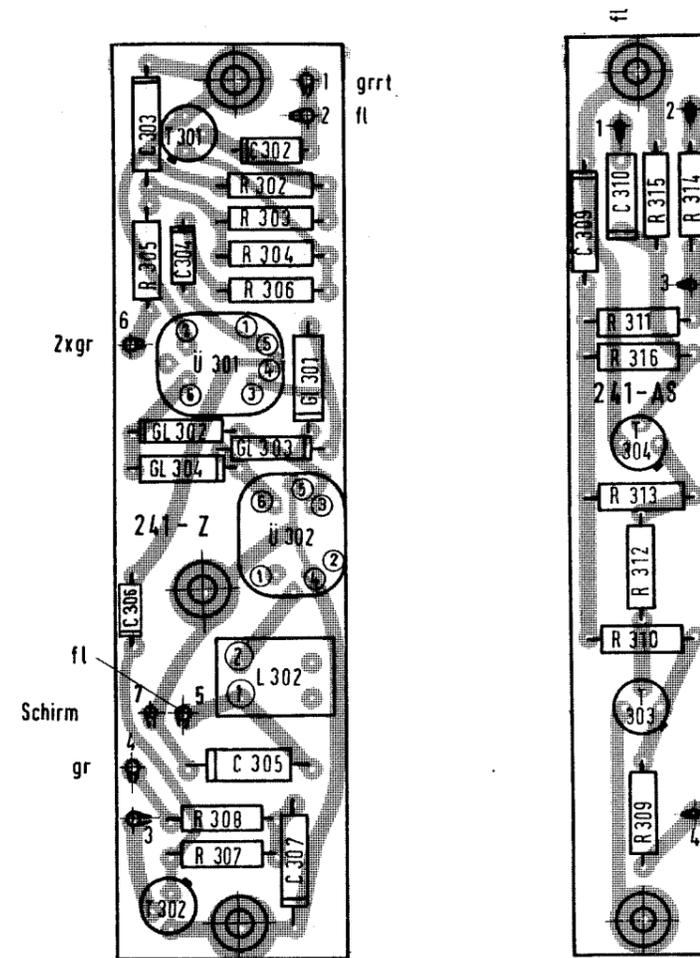
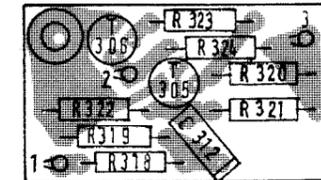
Steuerfrequenz-Trennstufe (1)

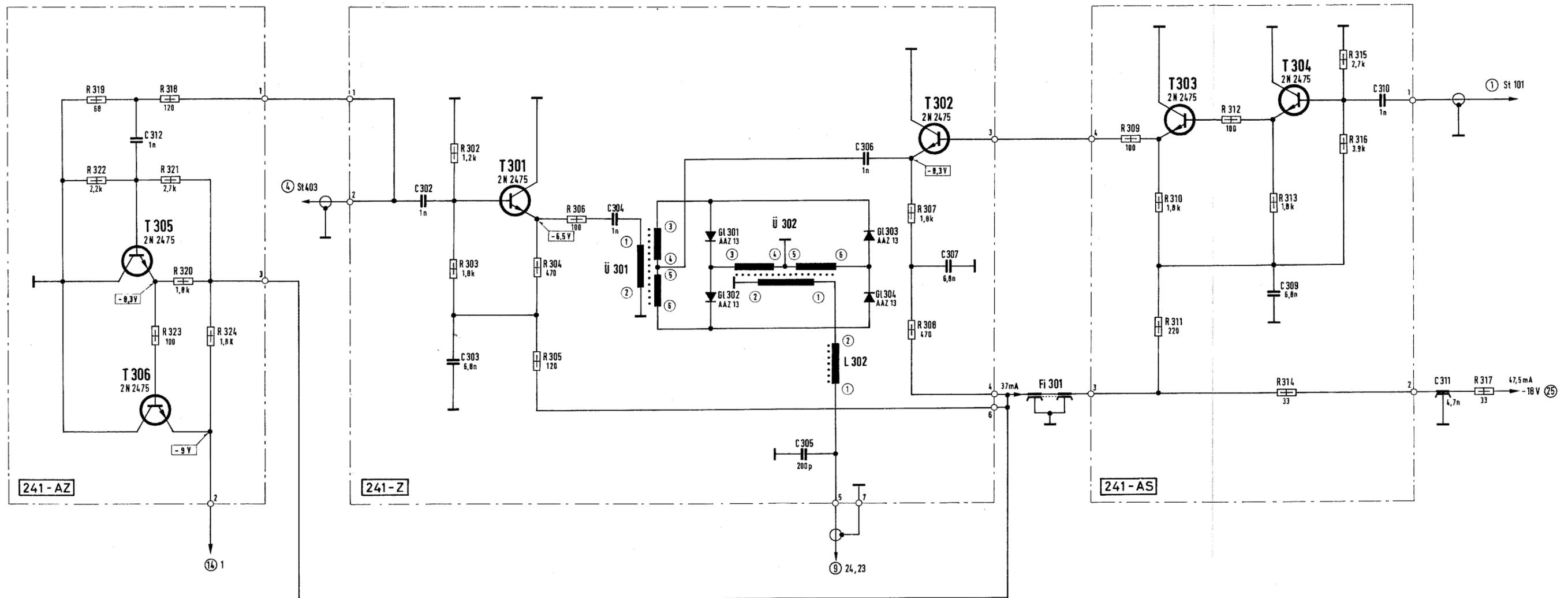
(Control Frequency Buffer-Stage)



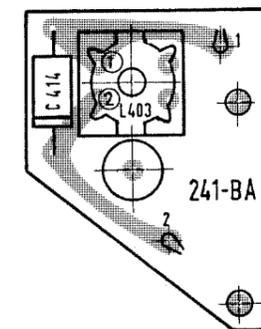
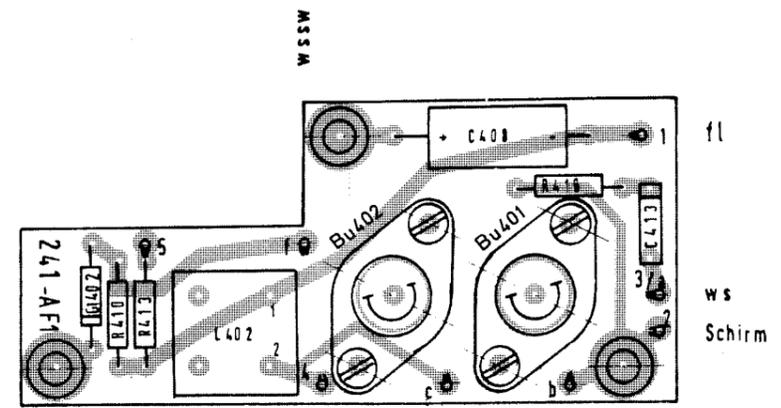


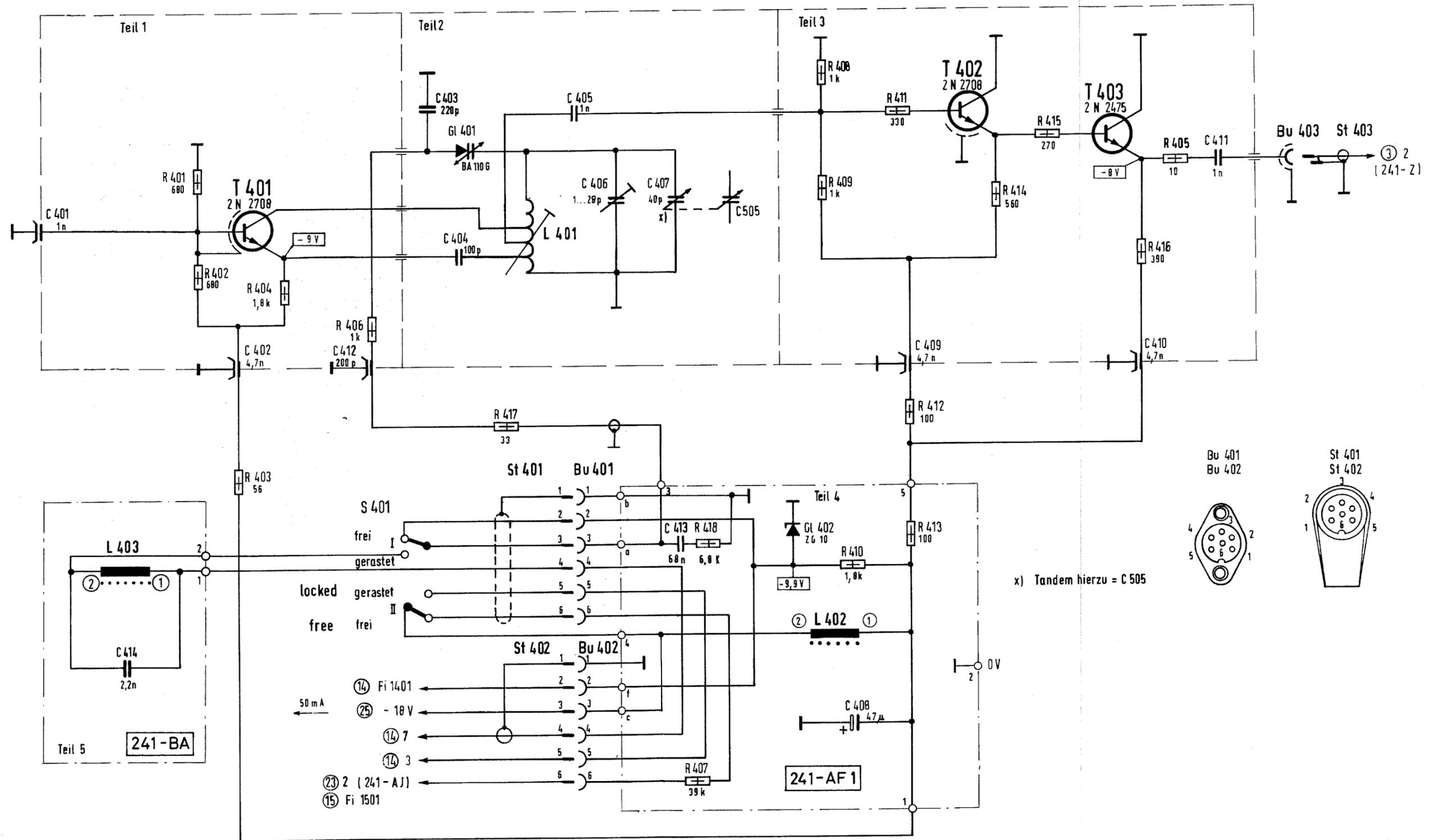
RWO-5/BN 241
 Steueroszillator (2)
 (Control Oscillator)





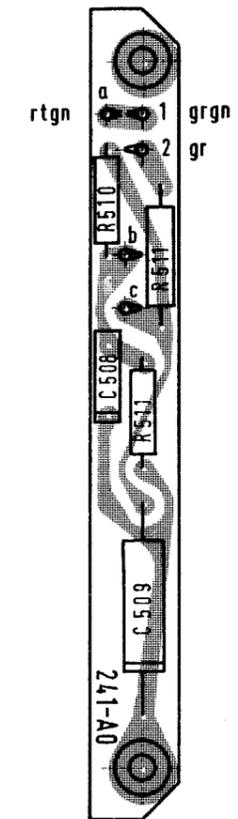
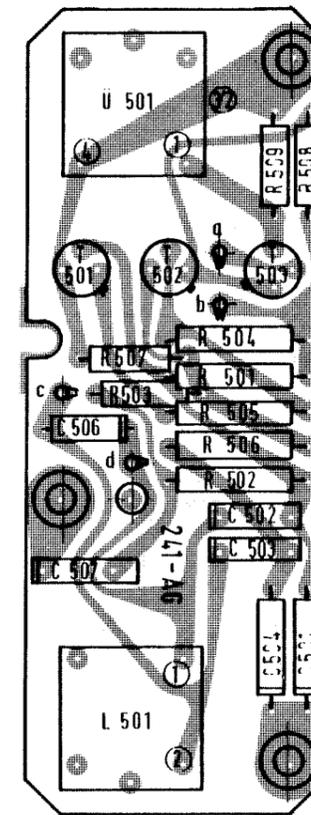
RWO-5/BN 241
 Umsetzer (3)
 (Frequency Converter)

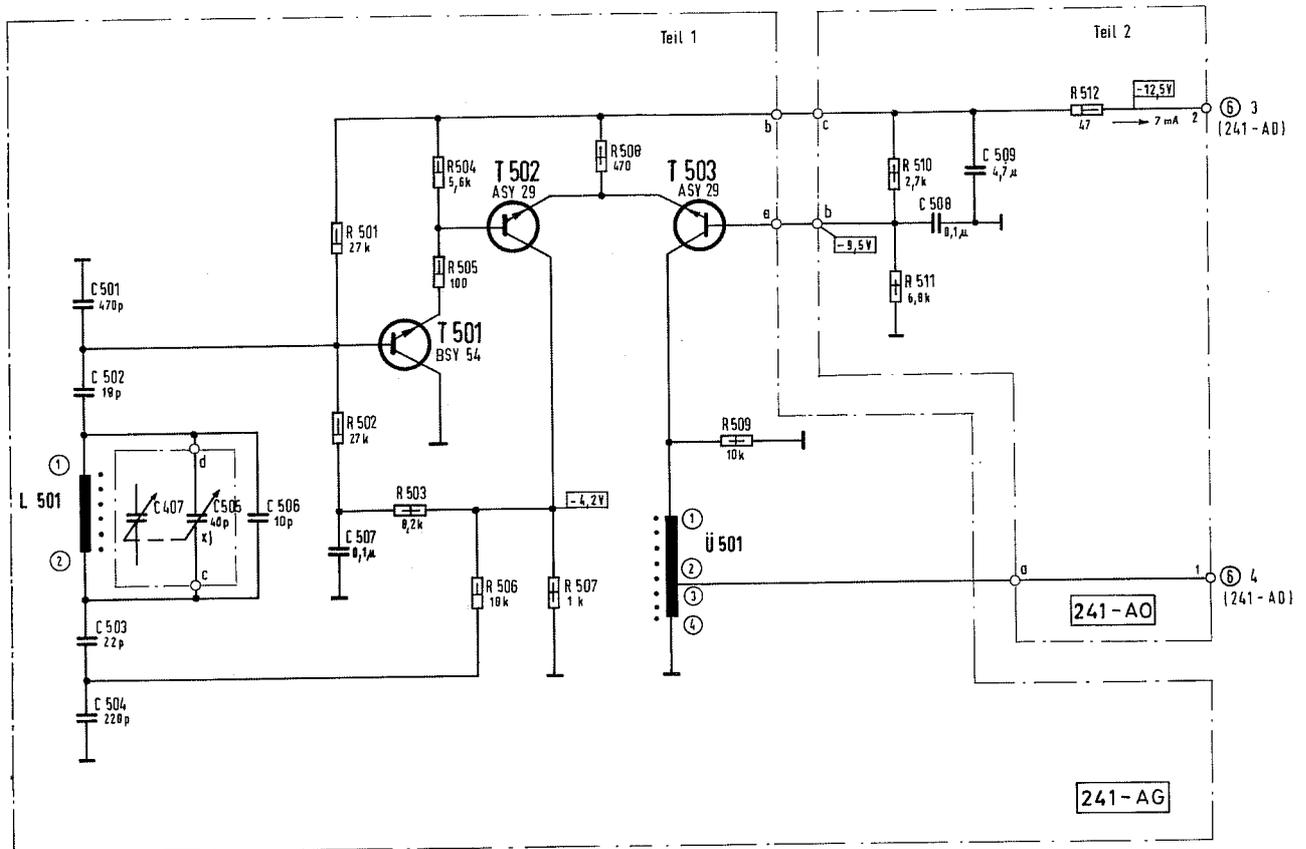




RWO-5/BN 241

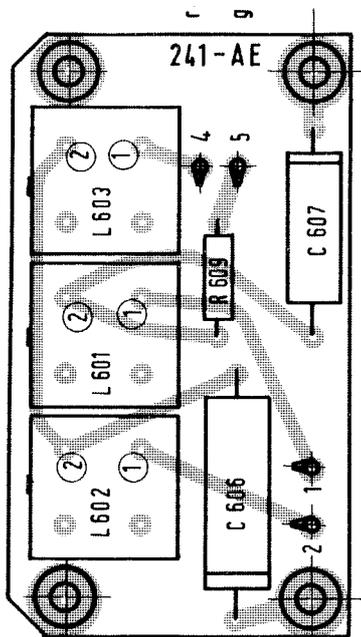
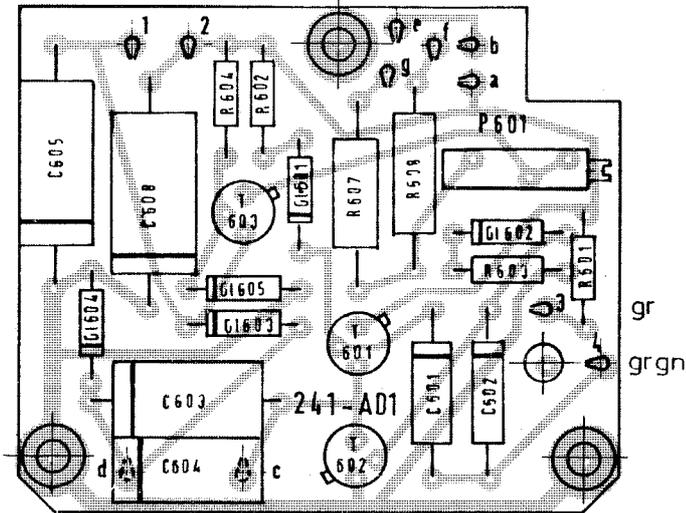
Grobabstimmoszillator (4)
(Coarse-Tuning-Oscillator)

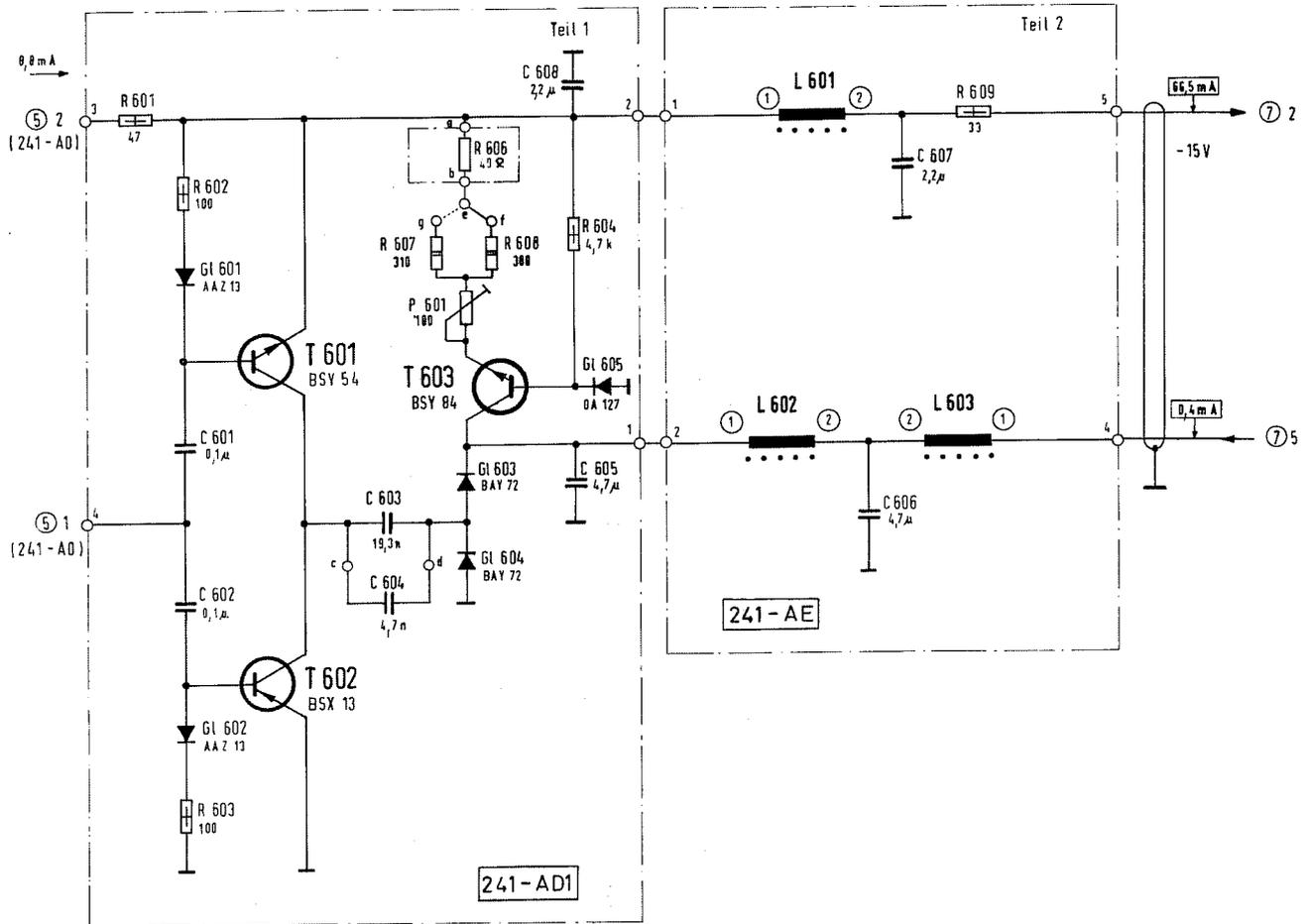




x) C 505 Tandem von C 407

RWO-5/BN 241
 Hilfsoszillator 5
 (Auxiliary Oscillator)



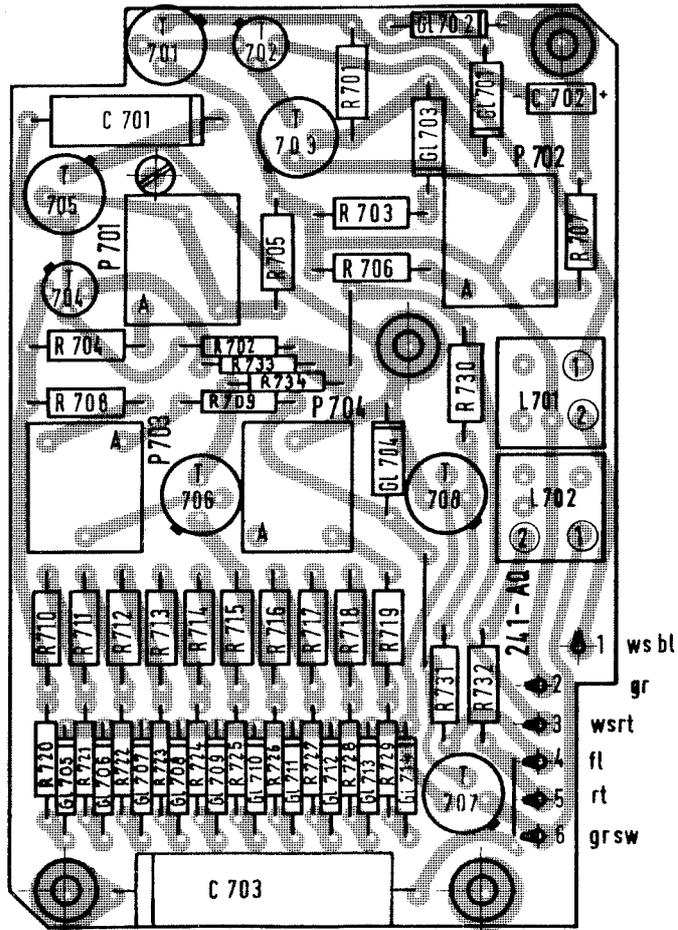


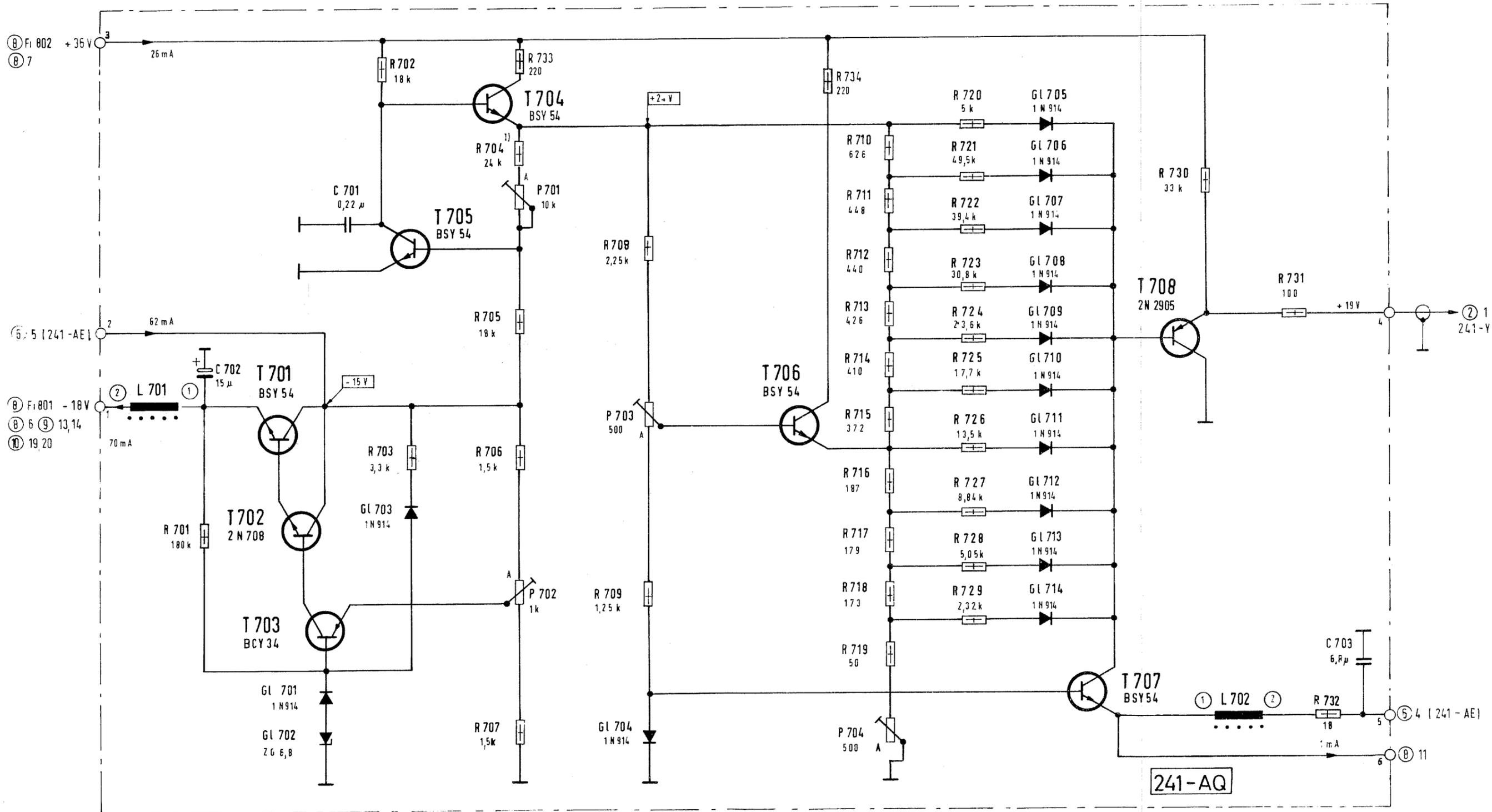
Gleichstromangaben gelten für 103 MHz Grobabstimmoszillator - Frequenz (Anschlag) und abgeglichene Stellung von P 601.

DC-current ratings valid for 103 MHz coarse tuning oscillator frequency and aligned position of P 601

RWO-5/BN 241

Diskriminator für Hilfsoszillator (6)
(Discriminator for Aux. Osc.)

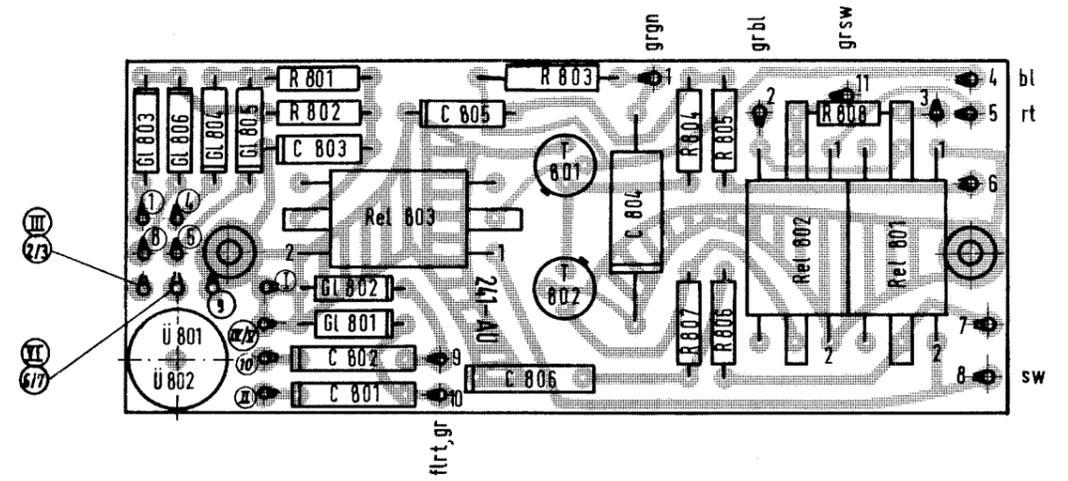


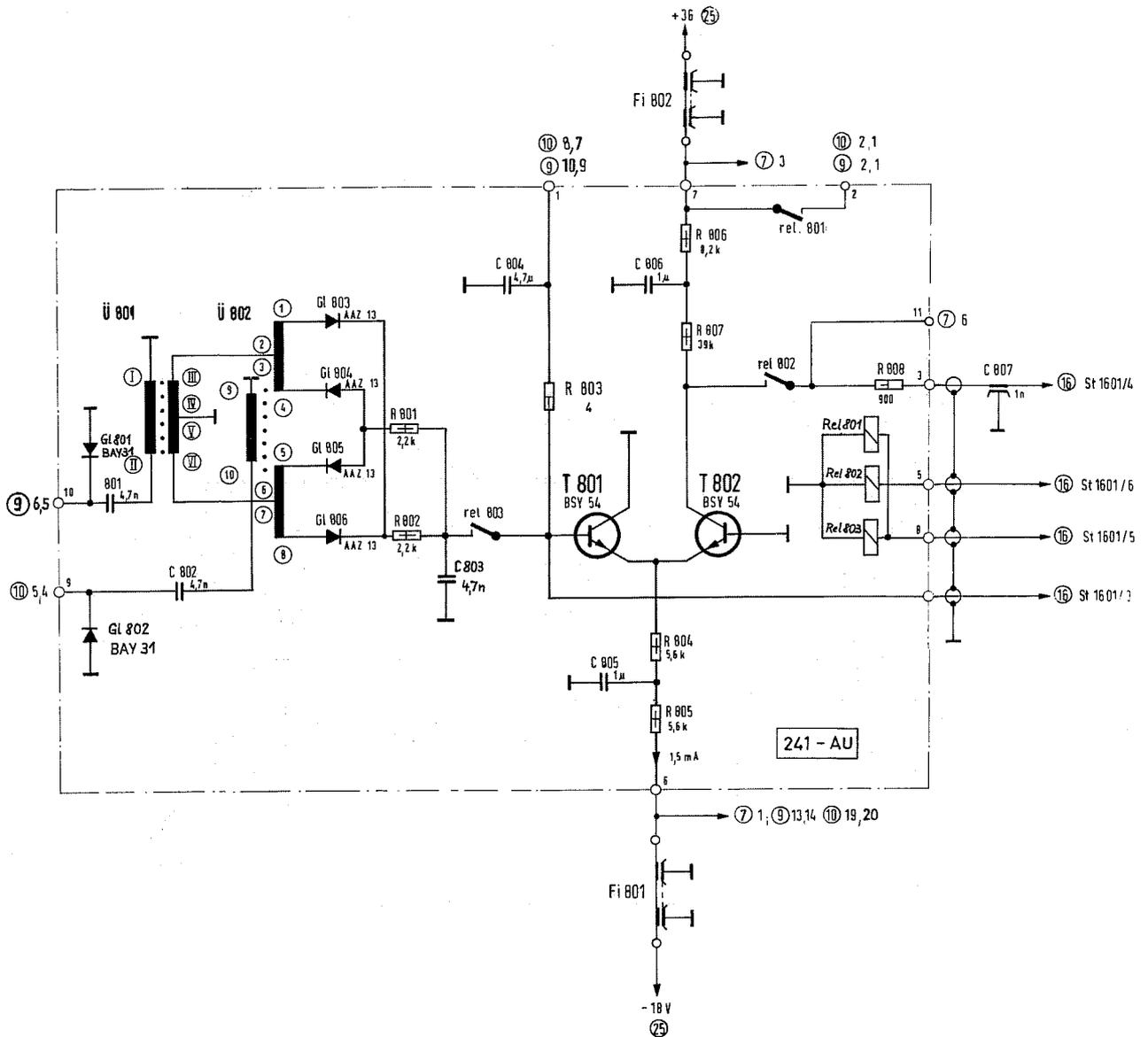


Serienanmerkungen:
(Modifications within the production run series:)

1) Serie A bis E: R704/19,5k

RWO -5/BN 241
Linearisierung ⑦
(Linearizing Network)

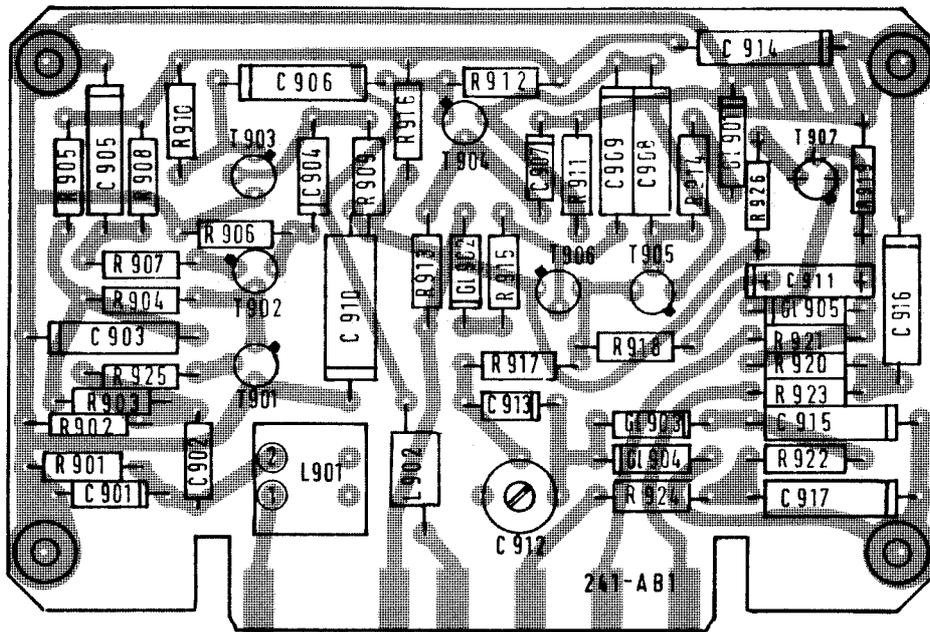




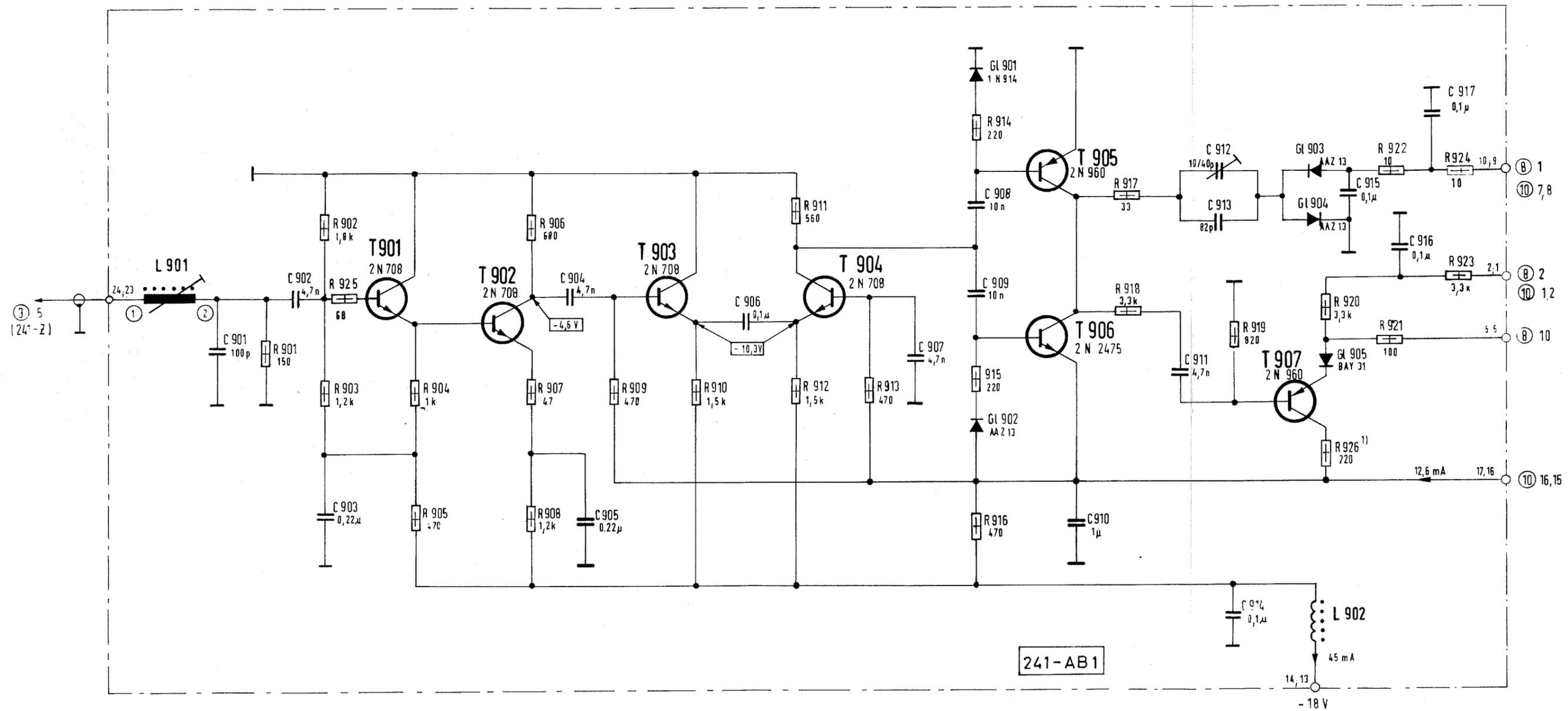
RWO-5/BN 241

Frequenz- und Phasenregler (8)

(Frequency- and Phase Control)



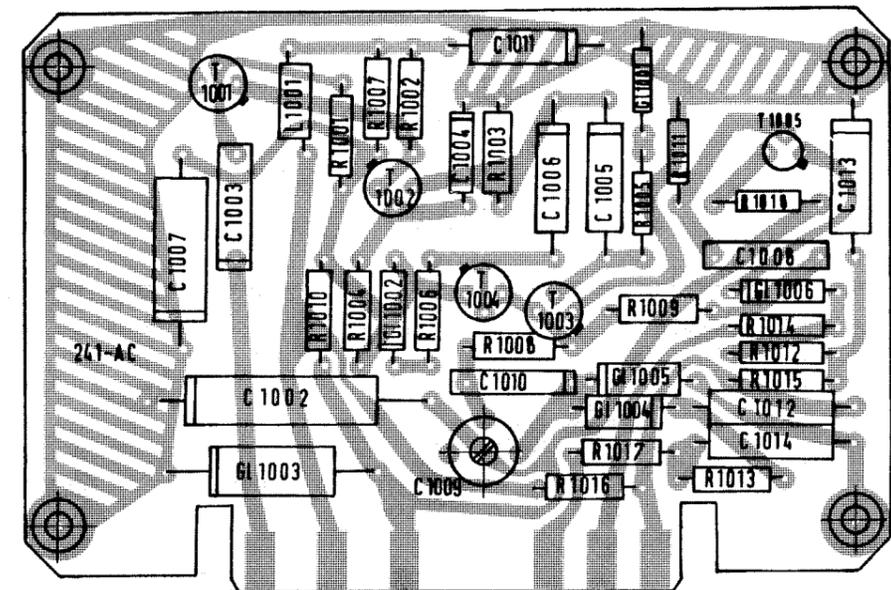
24 / 23 17 / 16 14 / 13 10 / 9 6 / 5 2 / 1



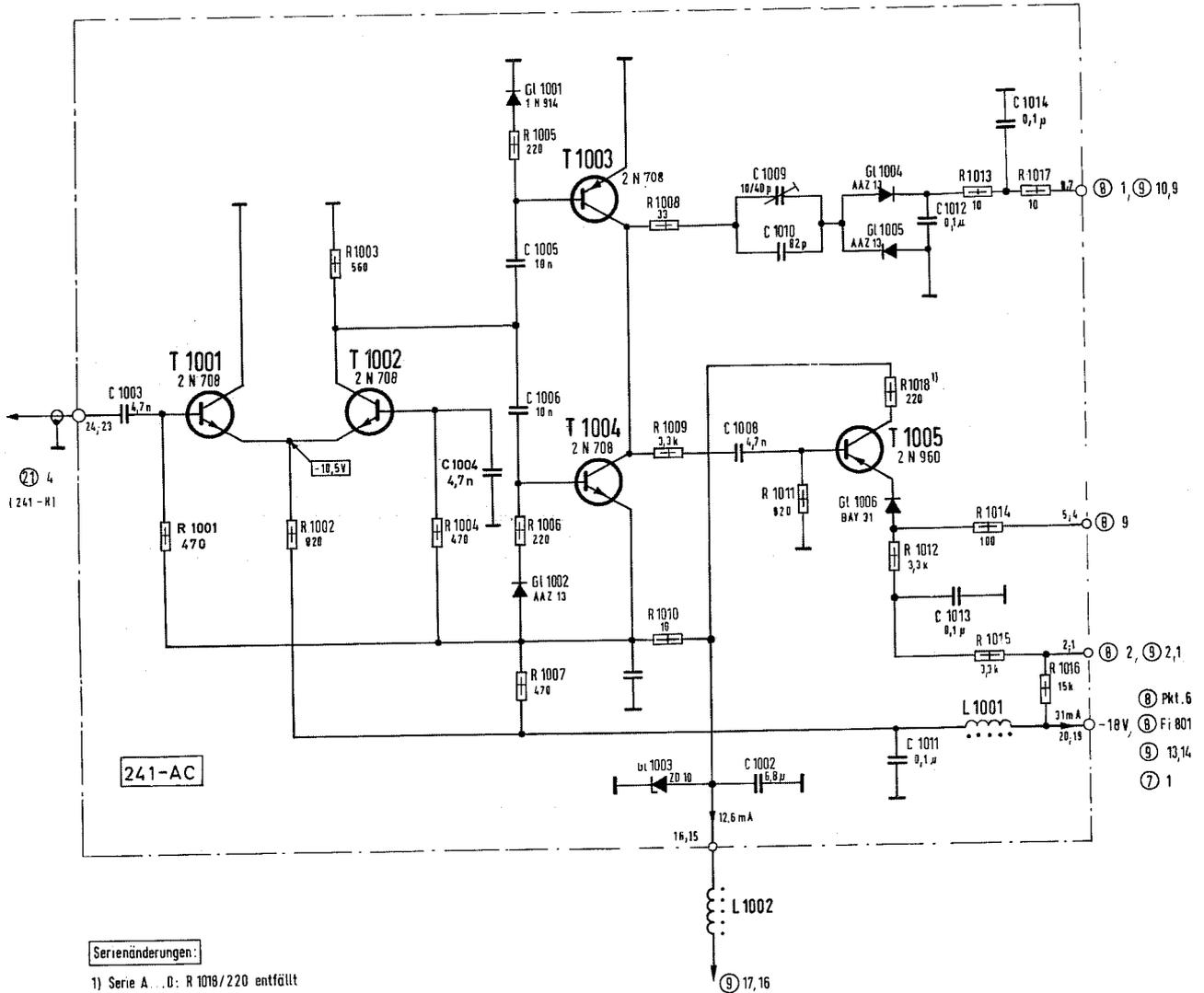
Serienänderungen:
 1) Serie A...D: R926 entfällt.

Modifications within the production run series:
 1) Series A to D: R926 inapplicable

- ⓑ Fi 801, Pkt. 6
- ⓑ 1
- ⓑ 19, 20



24/23 20/19 16/15 8/7 5/4 2/1



Serienänderungen:

1) Serie A...D: R 1018/220 entfällt

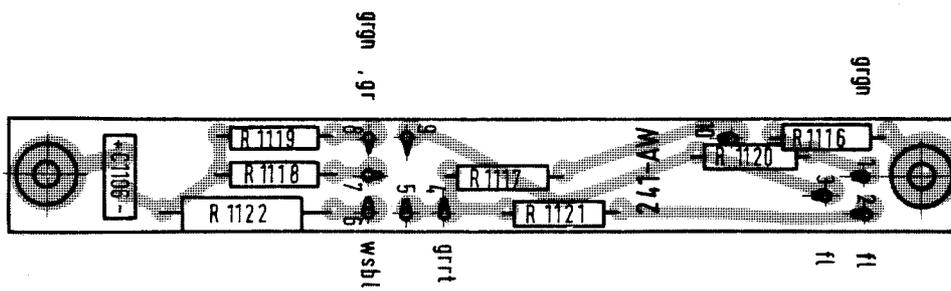
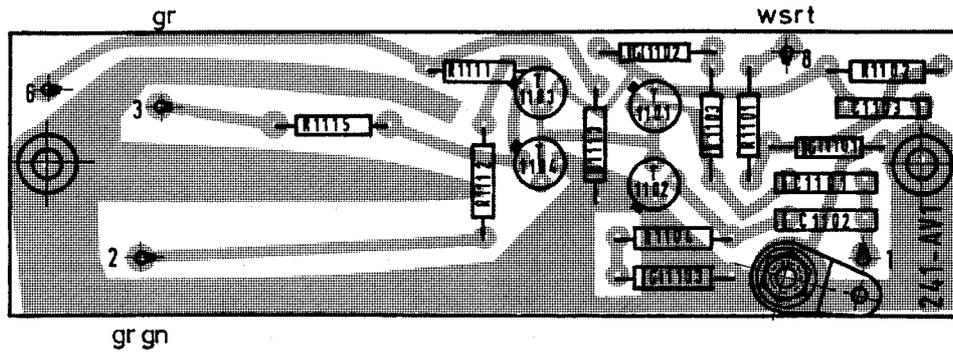
Modifications within the production run series:

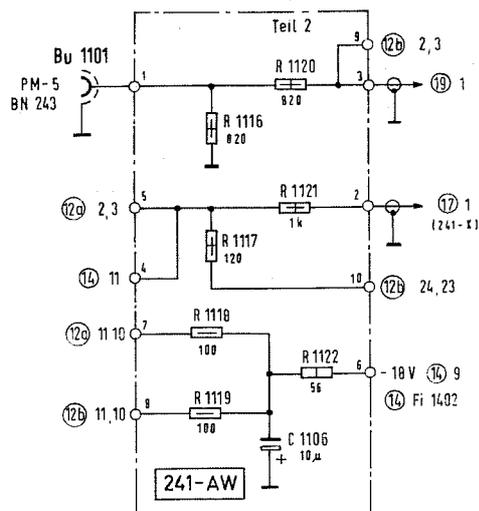
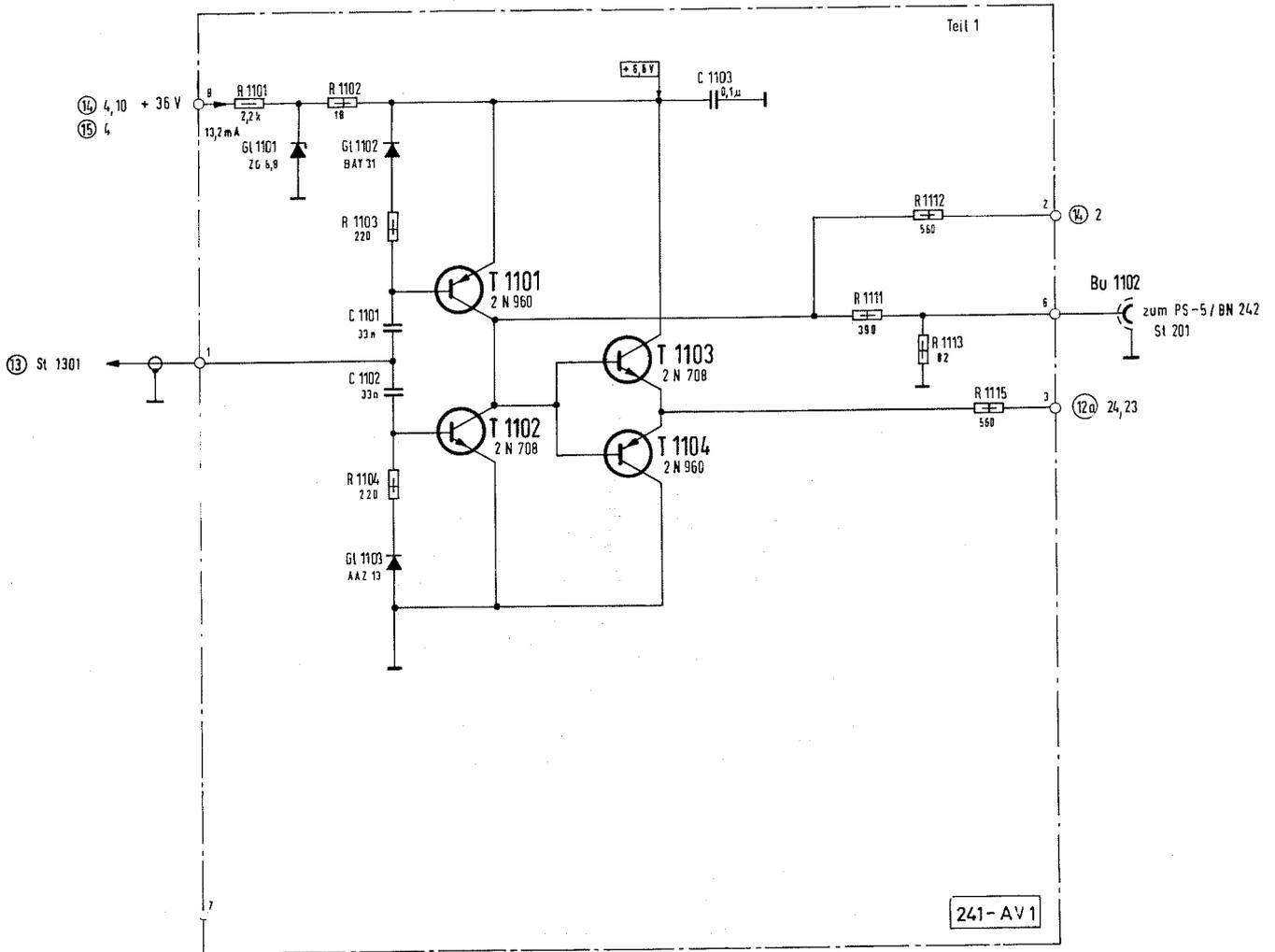
1) Series A to D: R 1018 inapplicable

RWO-5/BN 241

Zähl diskriminator II

(Counting Discriminator II)

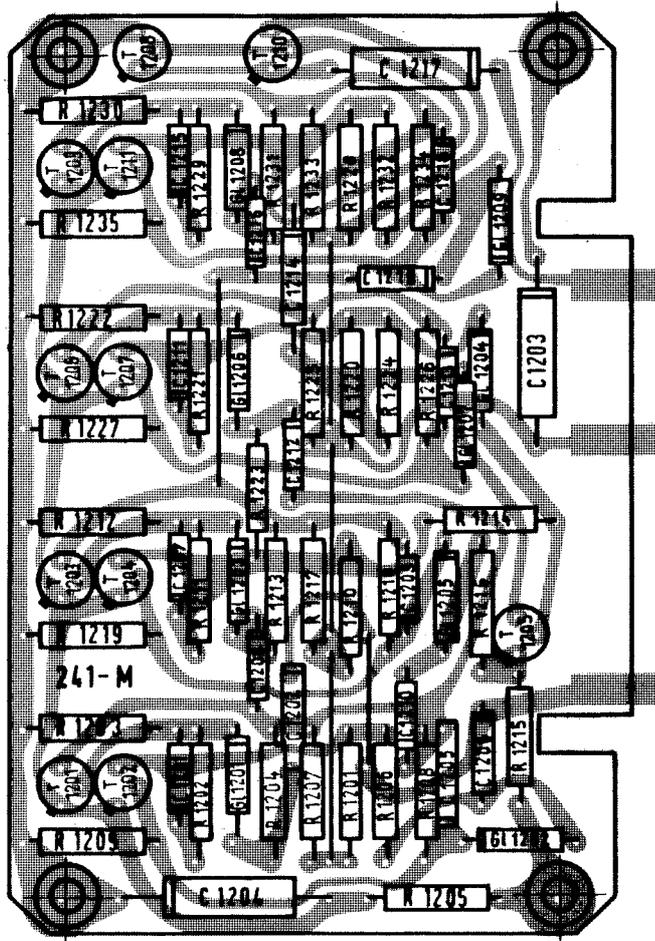


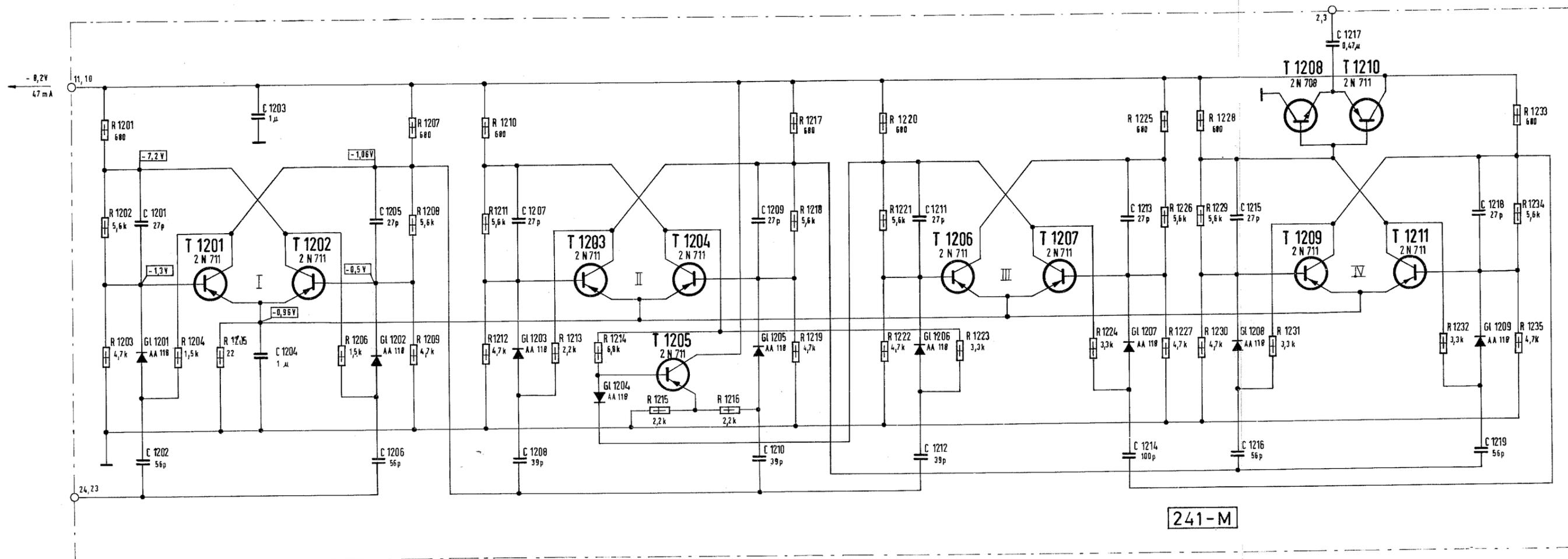


RWO-5/BN 241

Trennstufe z. Normalfrequenz

(Standard Frequency Buffer-Stage)





241-M

connecting points

Flip-Flop	I		II		III		IV	
T	1201	1202	1203	1204	1206	1207	1209	1211
GI	1201	1202	1203	1205	1206	1207	1208	1209
0	+	+	+	-	-	-	-	-
1	-	-	+	+	+	-	+	+
2	+	+	-	-	+	+	+	-
3	-	-	+	+	-	-	+	+
4	+	+	-	-	+	+	+	-
5	-	-	+	+	-	-	+	+
6	+	+	-	-	+	-	-	+
7	-	-	+	+	-	-	+	+
8	+	+	-	-	+	+	-	-
9	-	-	+	+	-	-	+	+
10	+	+	-	-	+	-	-	+

Anschlußpunkte		
Punkt	bei 12a nach	bei 12b nach
2,3	Ⓜ 5 (AW)	Ⓜ 9 (AW)
11,10	Ⓜ 7 (AW)	Ⓜ 8 (AW)
24,23	Ⓜ 3 (AV)	Ⓜ 10 (AW)

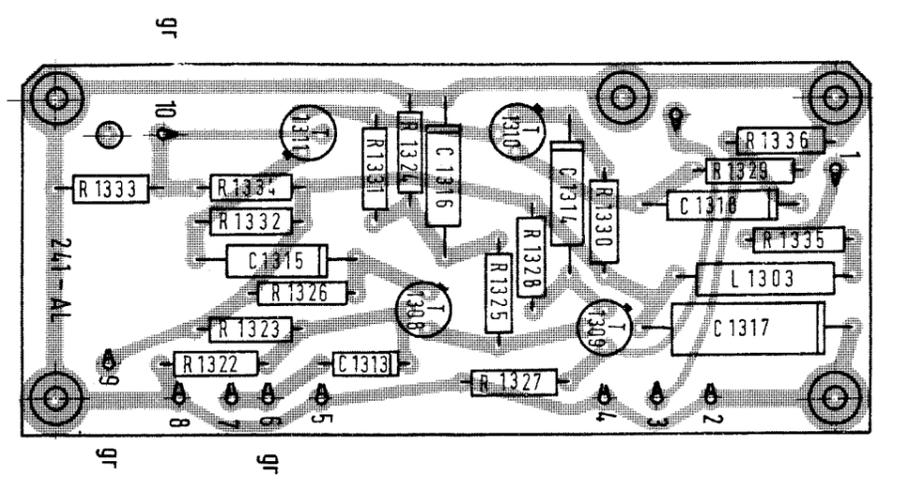
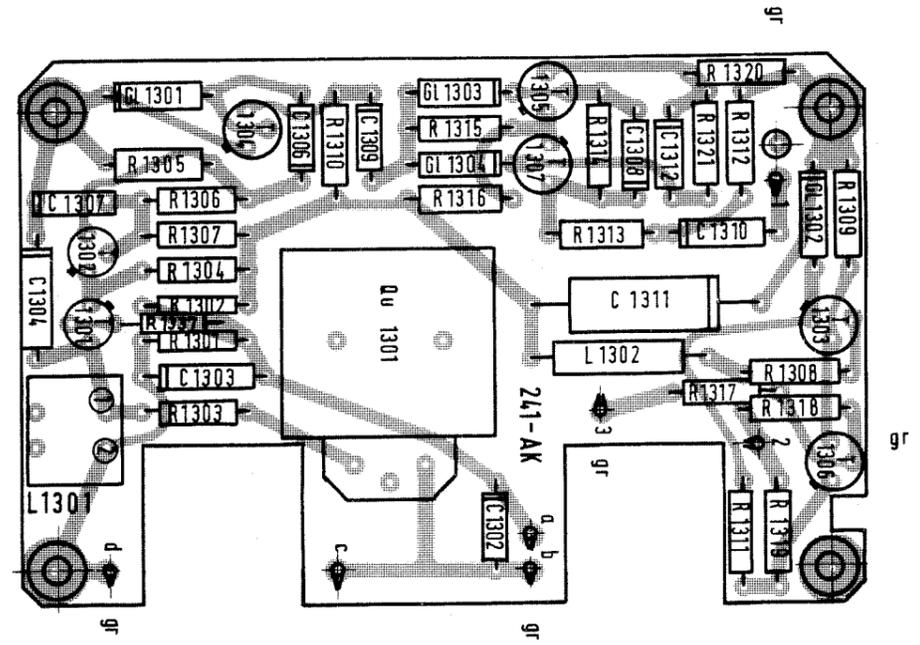
two for each instrument

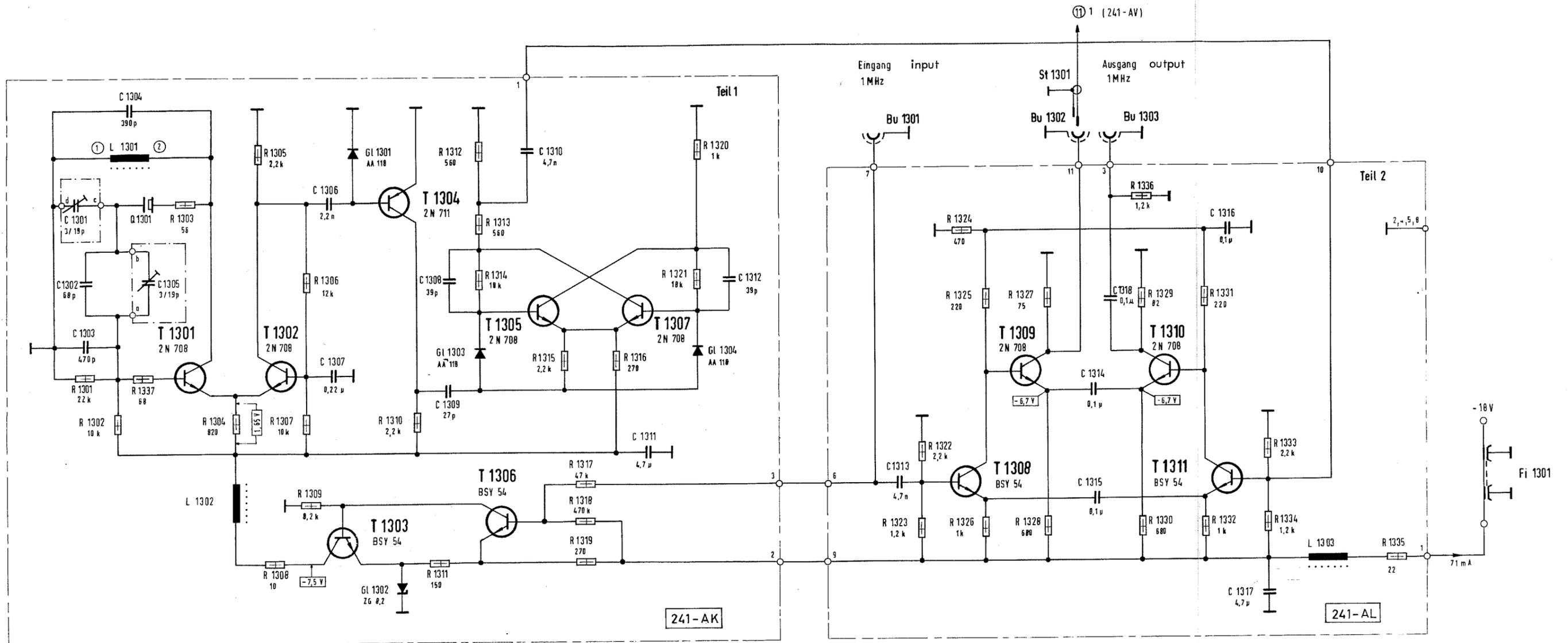
Pro Gerät 2x

+ = Transistor, Diode stromführend transistor or diode conducting
 - = Transistor, Diode gesperrt transistor or diode non-conducting

RWO-5/BN 241

Frequenzteiler 10:1 (12a) (12b)
 (Frequency Divider)

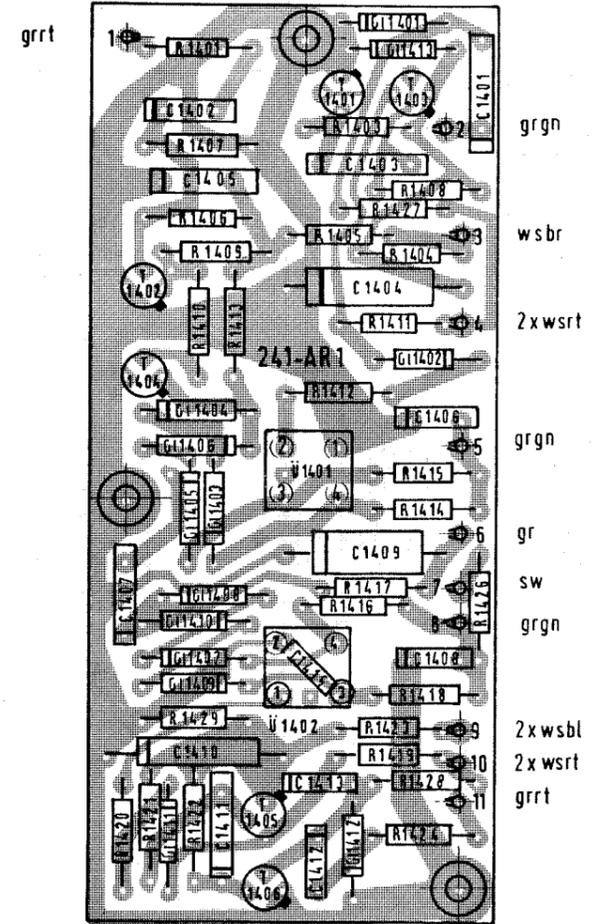


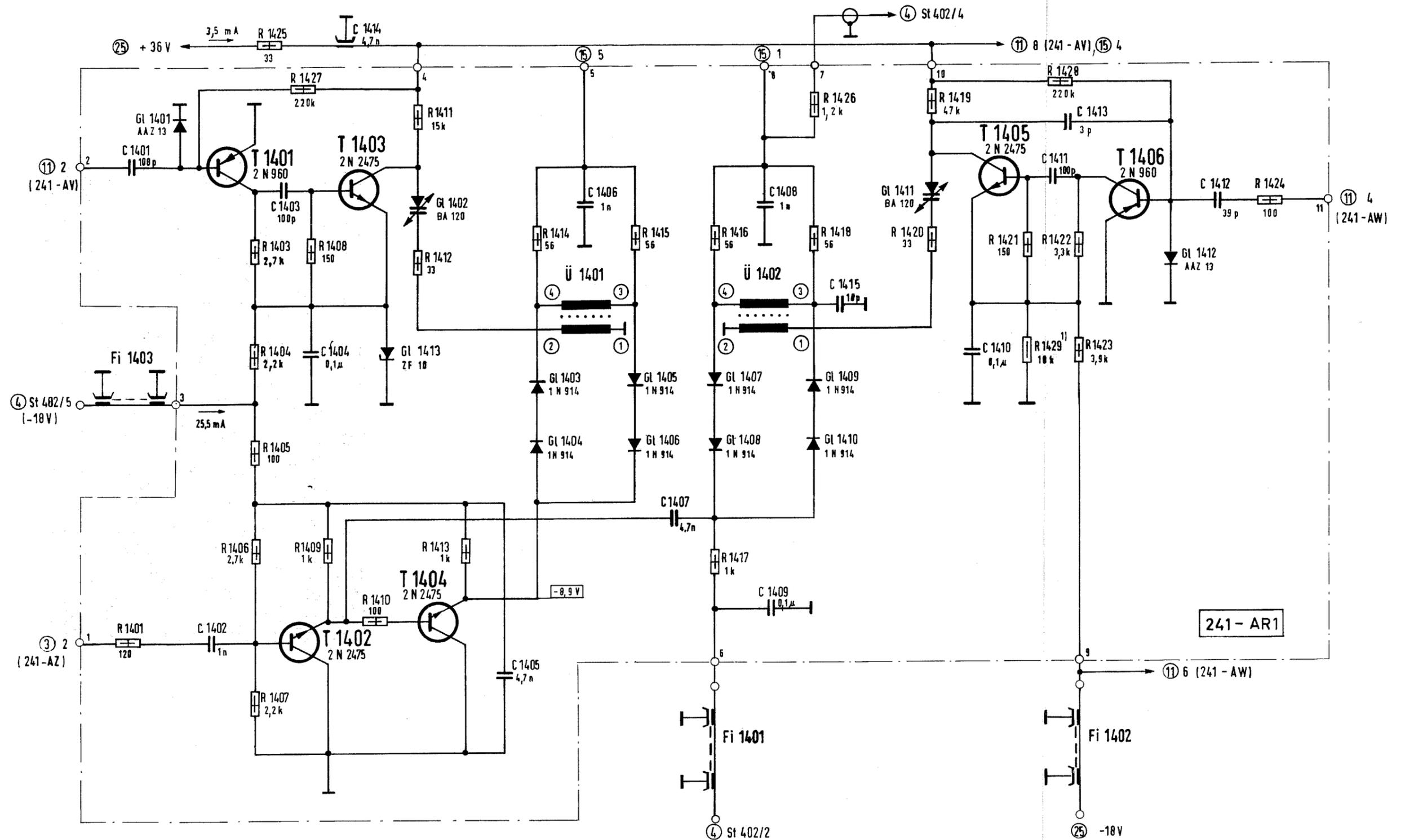


RWO-5/BN 241

Normalfrequenz-Oszillator Teil 13

(Standard Frequency Oscillator)

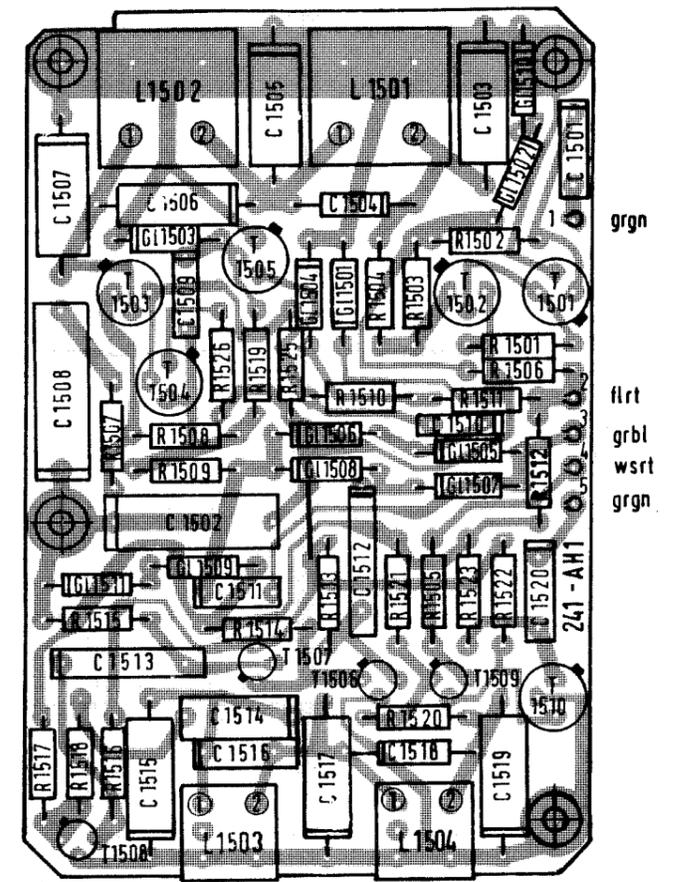


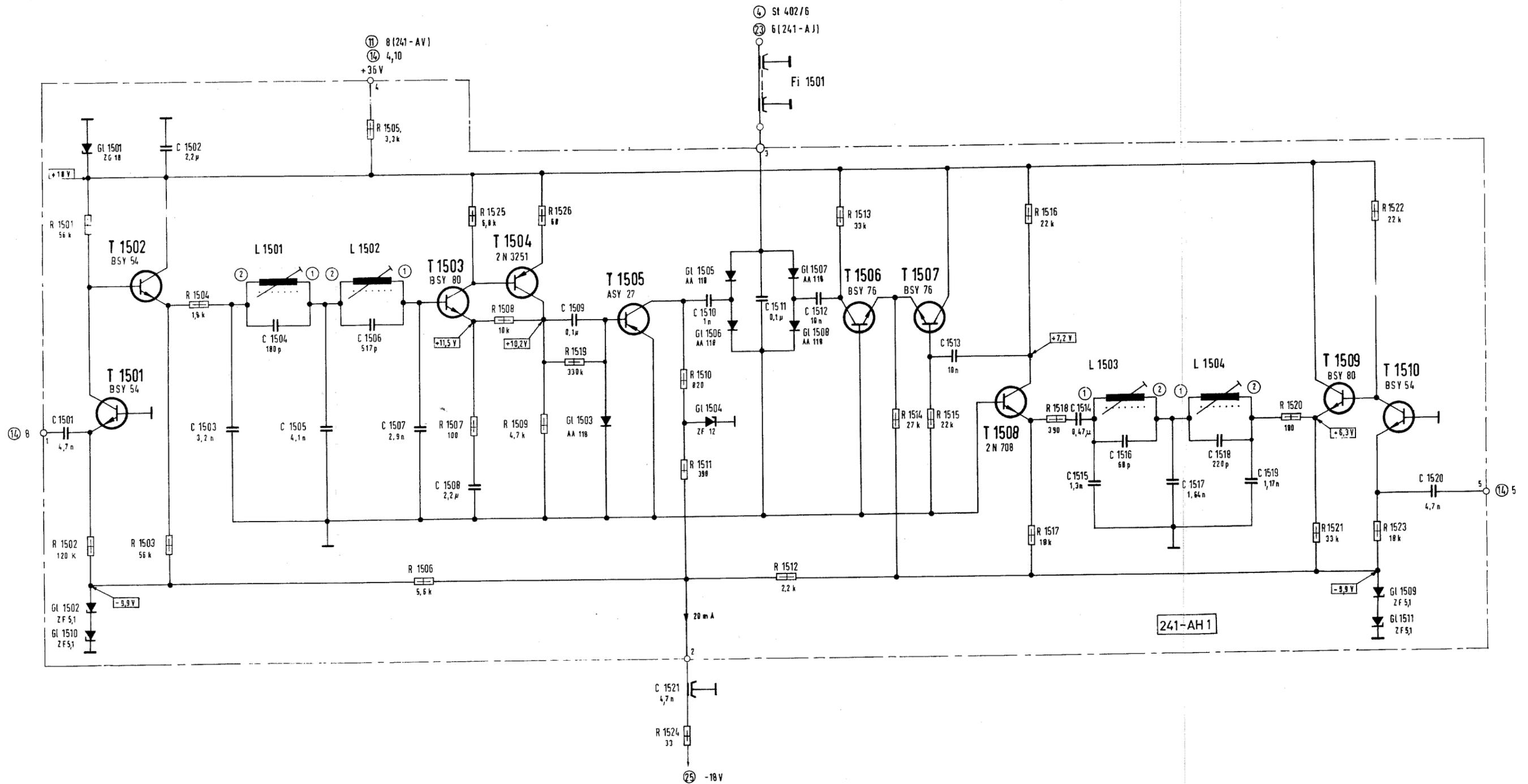


Stromangaben gelten für fehlende Aussteuerung der Impulsformerstufen (Punkt 2 und 11)

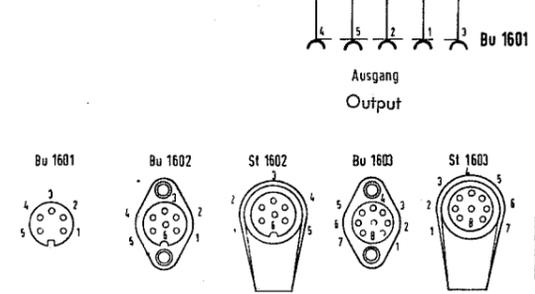
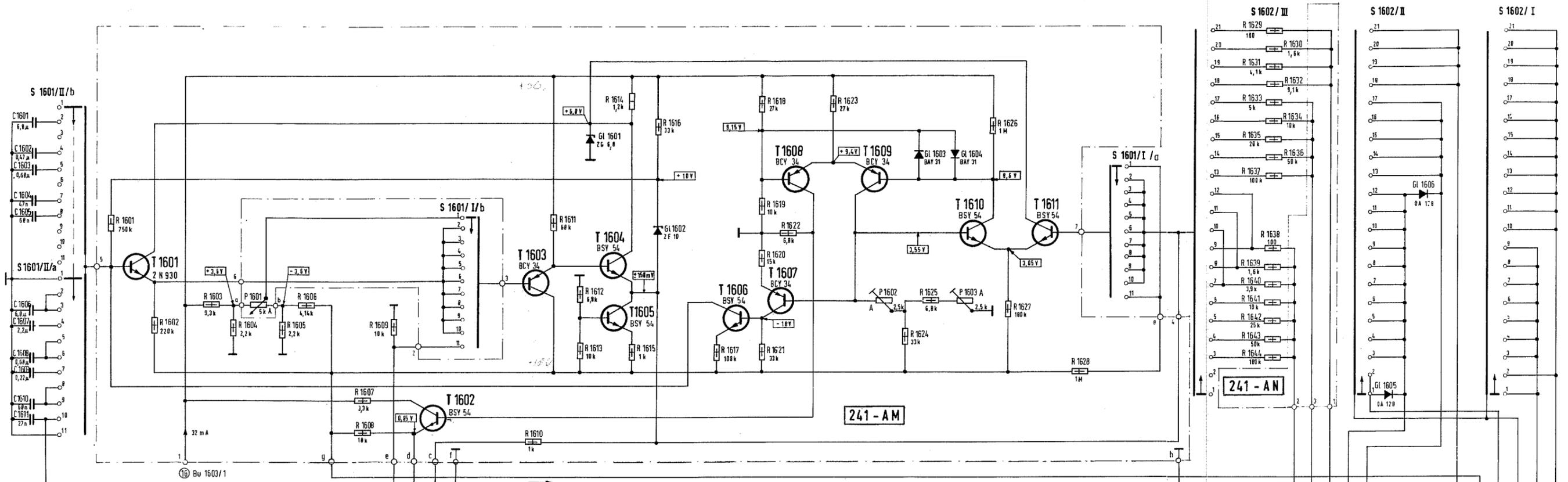
Current ratings valid for no-signal condition of pulse shaper stages (point 2 and 11)

RWO-5/BN 241
Phasenmesser 14
(Phase Meter)

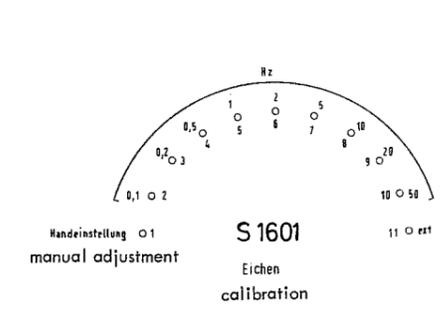
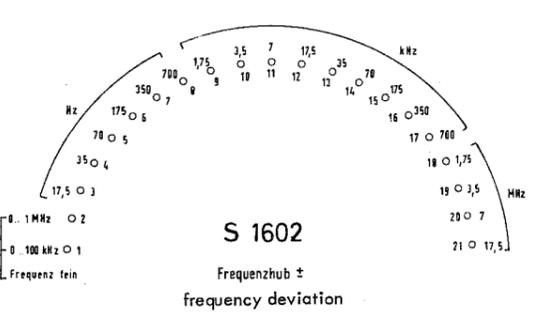




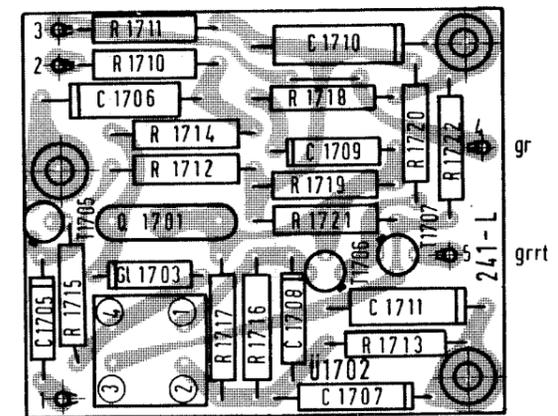
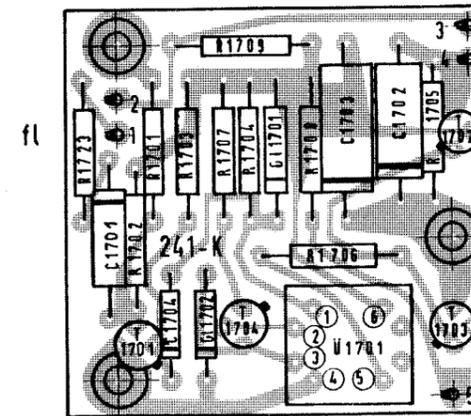
RWO-5/BN 241
 Fanganzeige-Verstärker (15)
 (Lock-In Indication Amplifier)

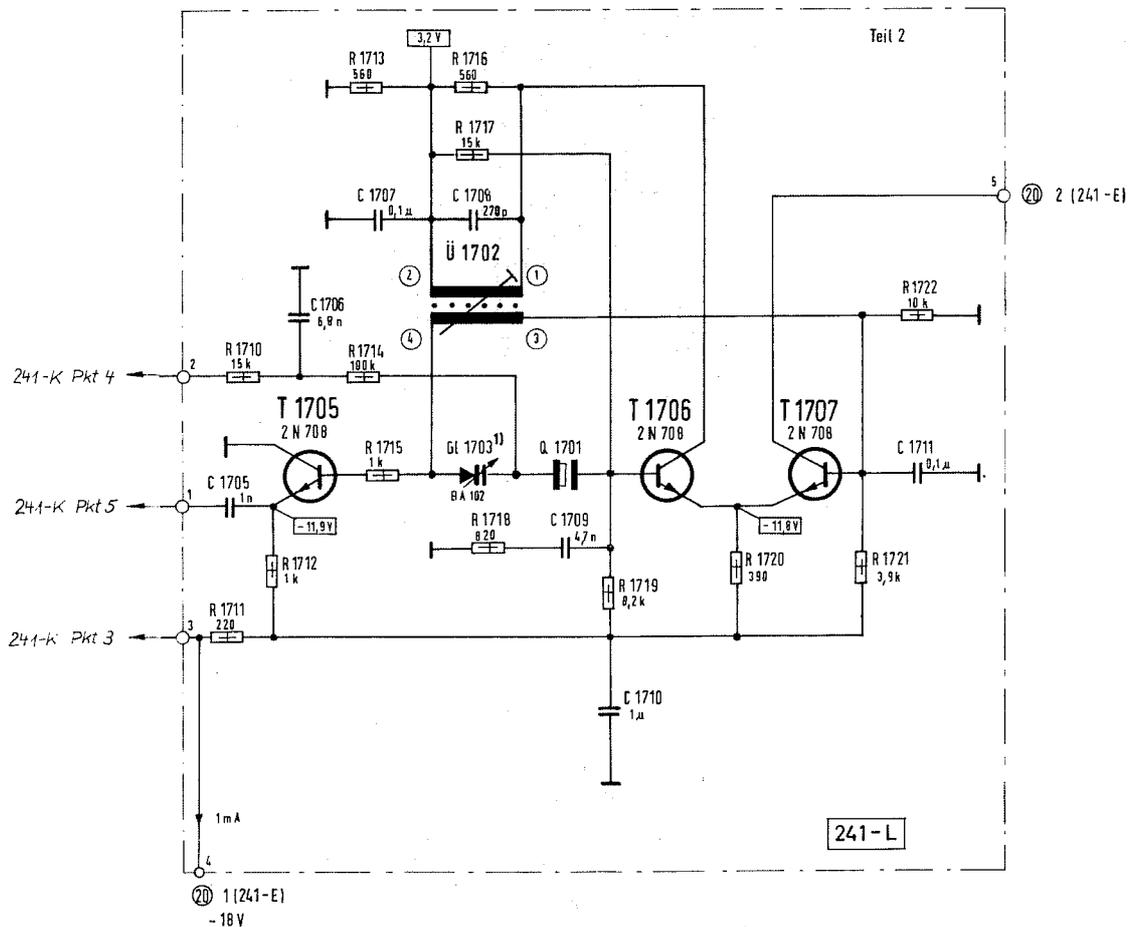
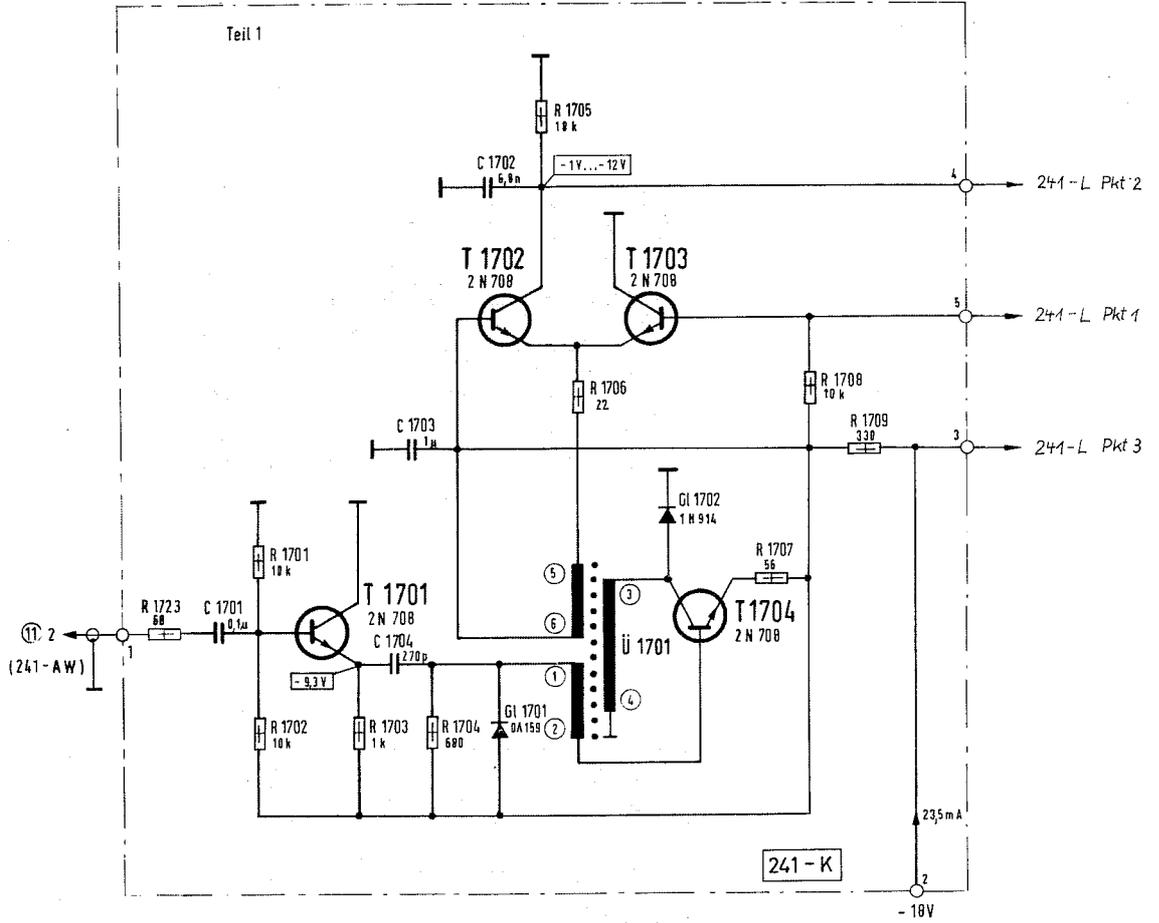


Auf Lotseite gesehen!
view from underneath



Spannungen gegen Masse gemessen mit Instrument 100 k Ω /V
(S 1601 in Stellung 11, ohne Eingangsspannung)
all voltage ratings measured with respect to chassis with 100 k Ω meter
(S 1601 in position 11 in absence of input voltage)





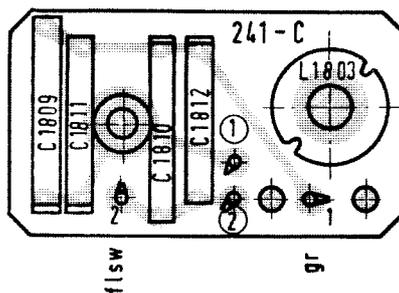
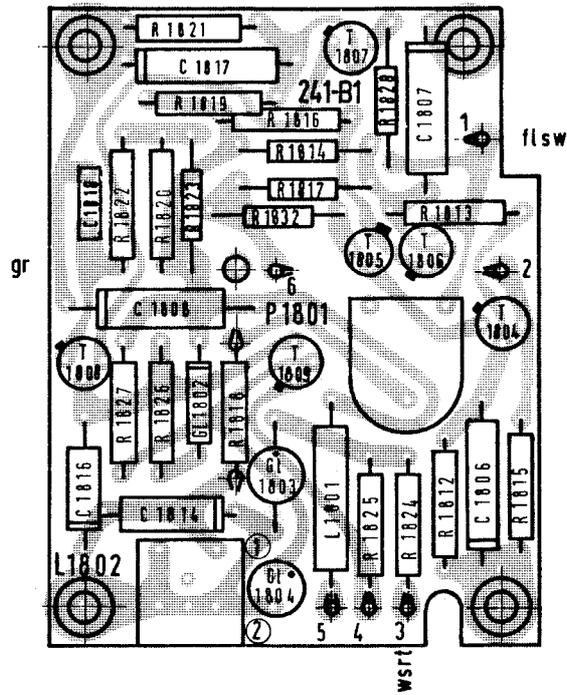
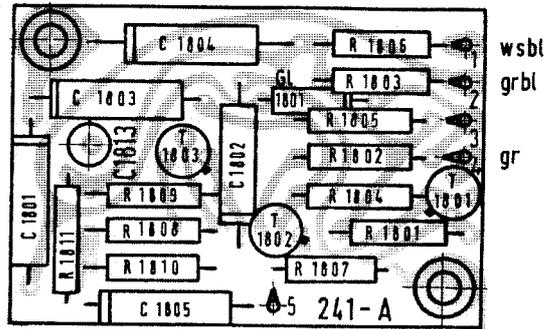
Serienänderungen : (Modifications within the production run series:)

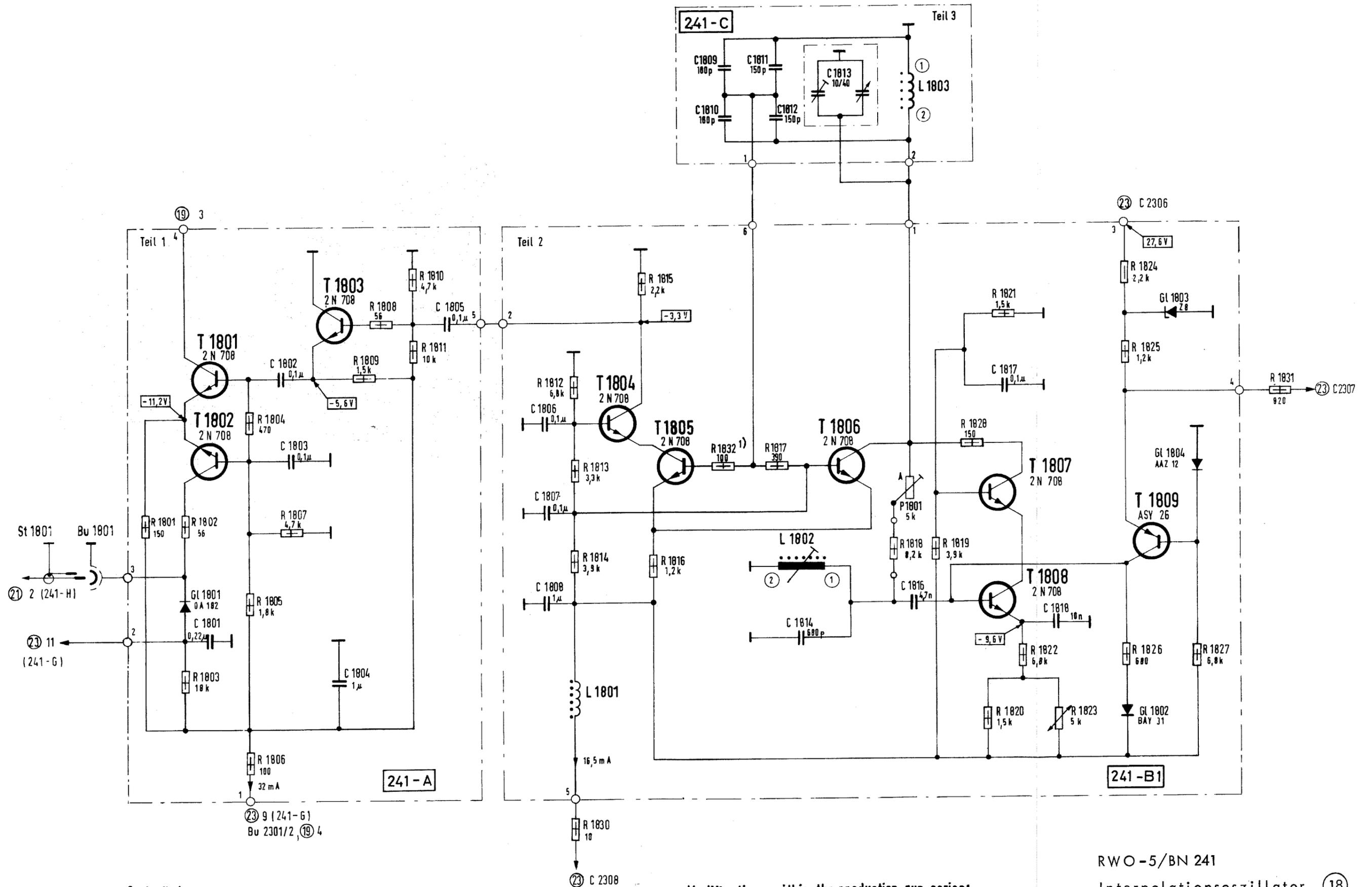
1) Serie A.. E: Gl 1703 / BA 109

RW 0-5 / BN 241

2,7-MHz-Quarz-Oszillator

(2,7 MHz Crystal Oscillator)

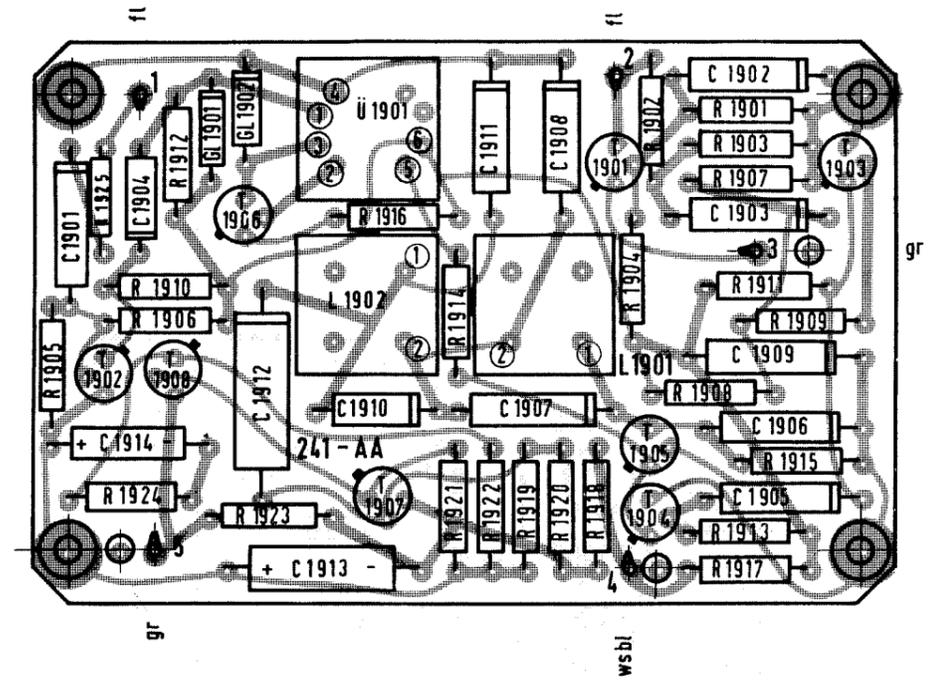


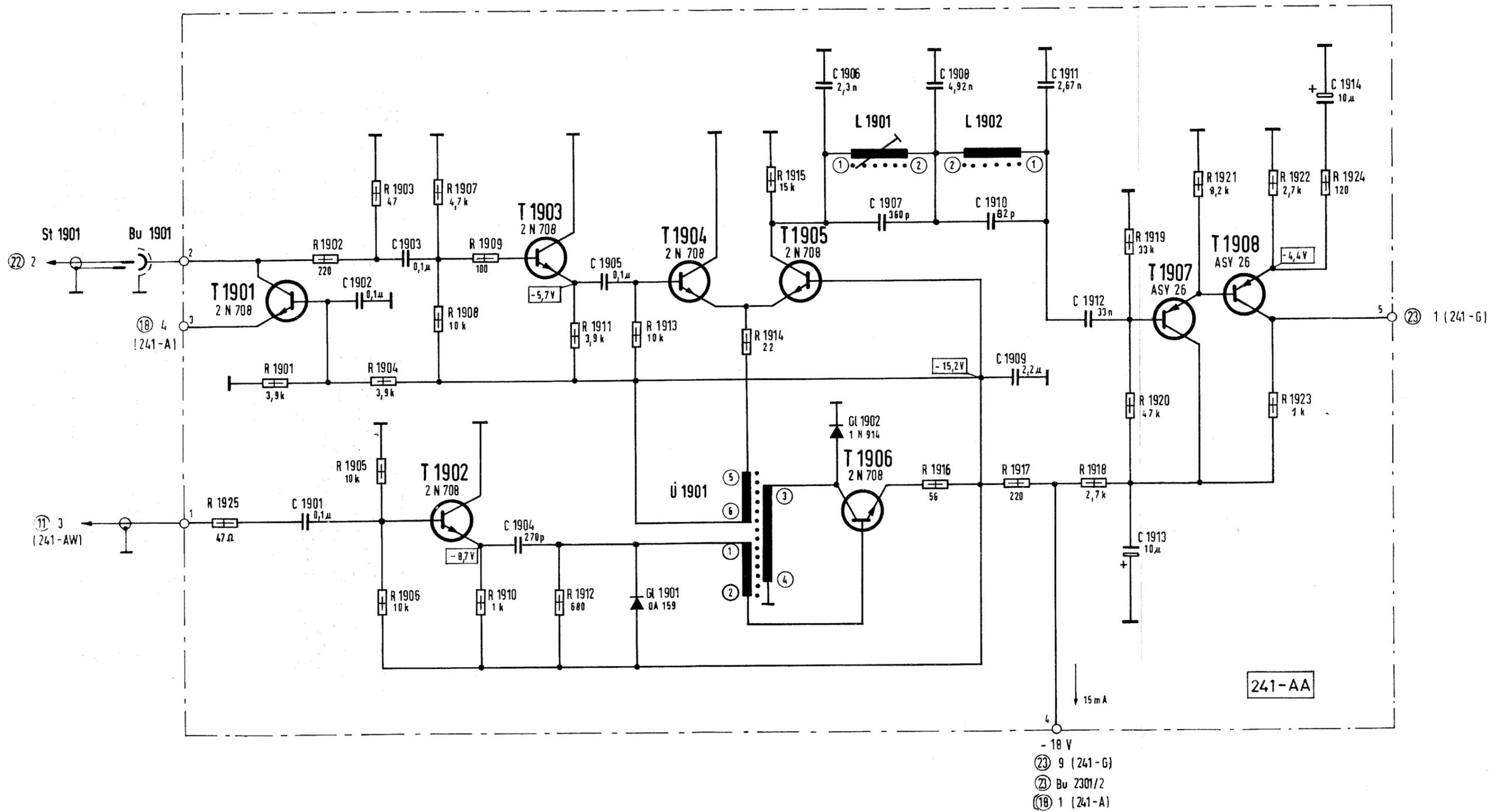


Serienänderungen:
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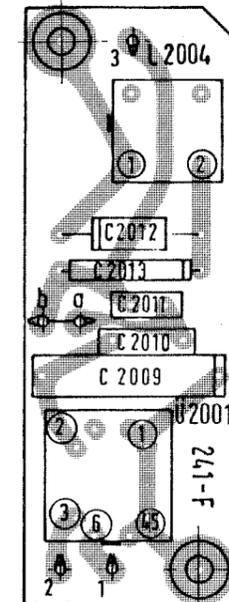
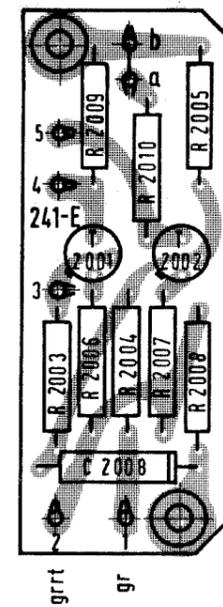
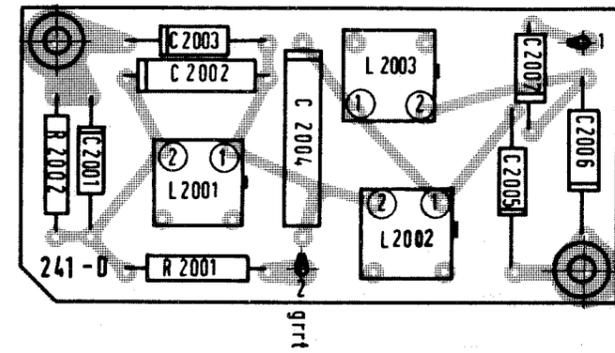
Modifications within the production run series:
1) Series A to D: R 1832 inapplicable

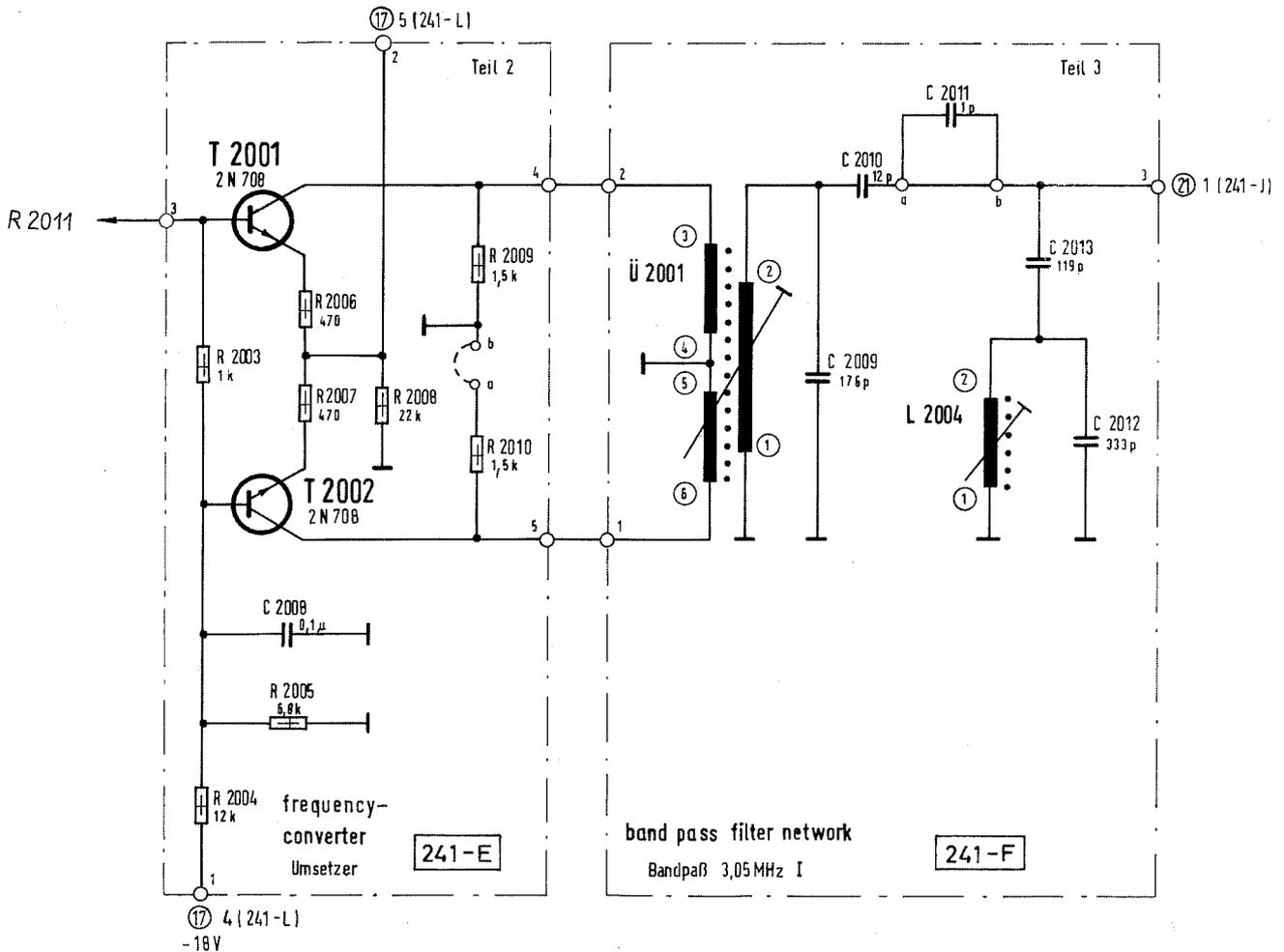
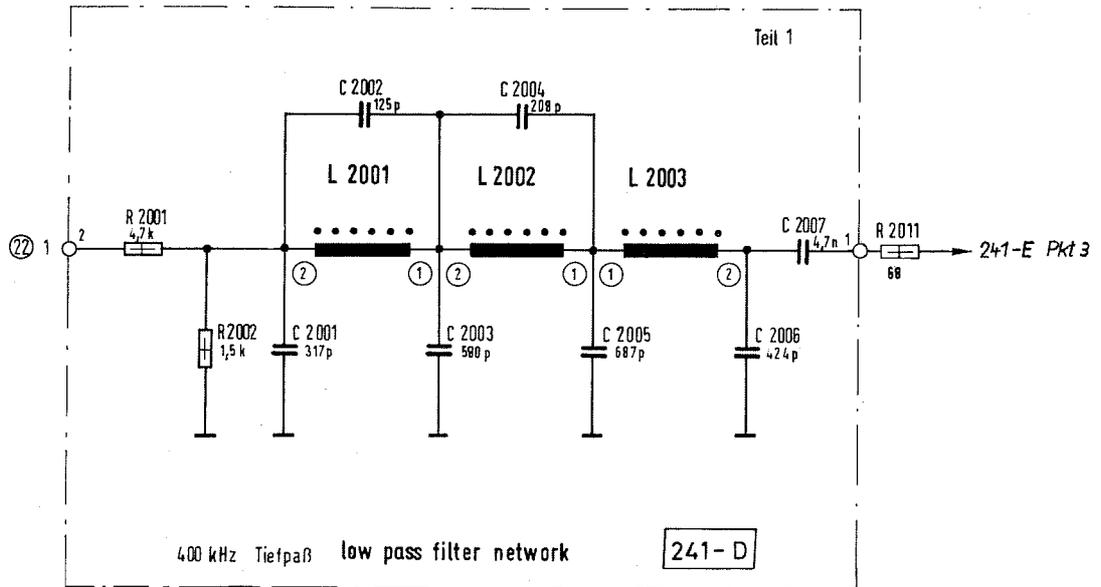
RWO-5/BN 241
Interpolationsoszillator (18)
(Interpolation Oscillator)





RWO-5/BN 241
 Abstimmanzeige ⑰
 (Tuning Indicator Network)

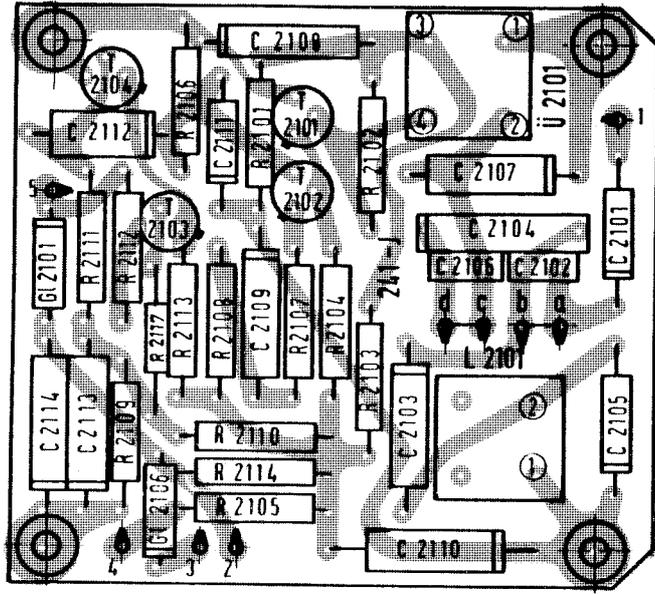




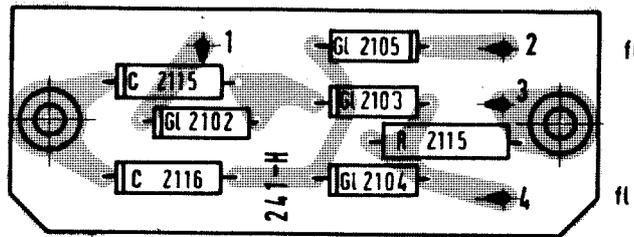
RWO-5/BN 241

Umsetzer (20)

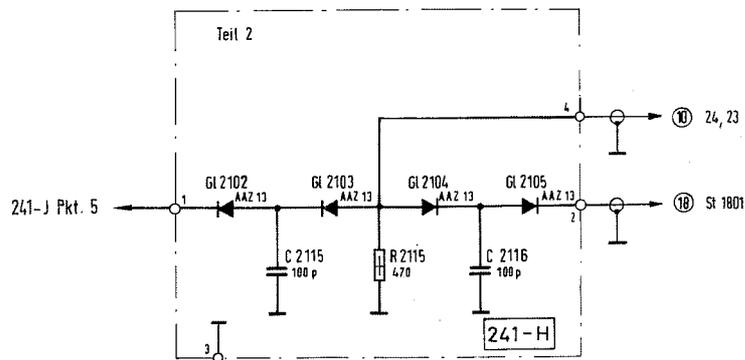
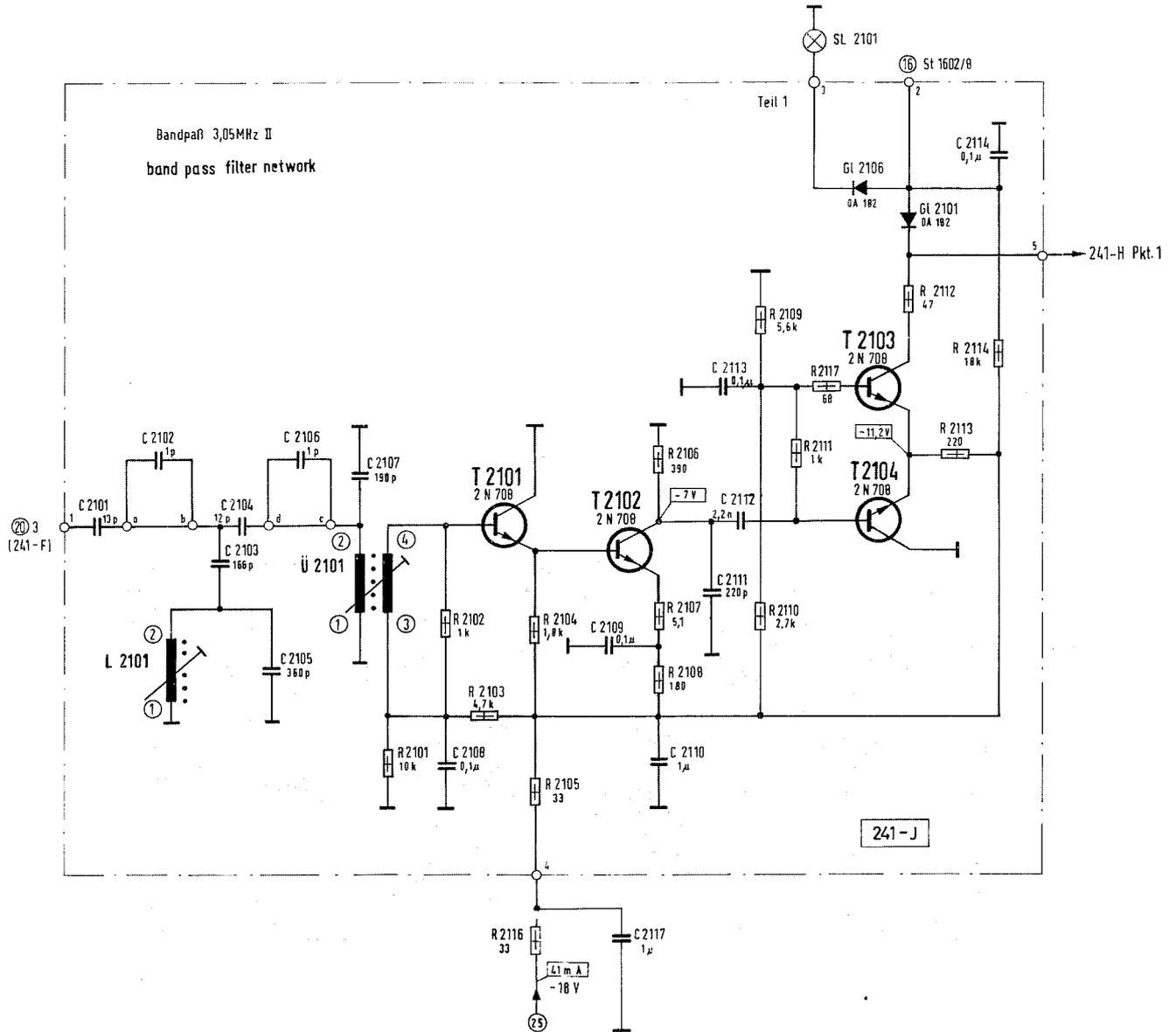
(Frequency Converter)



WS b1
979N
9F

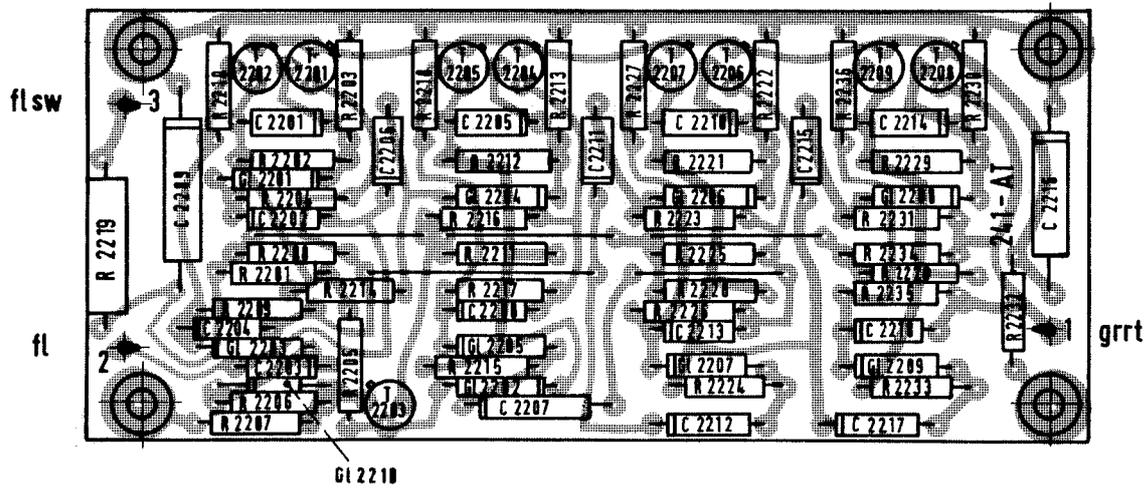


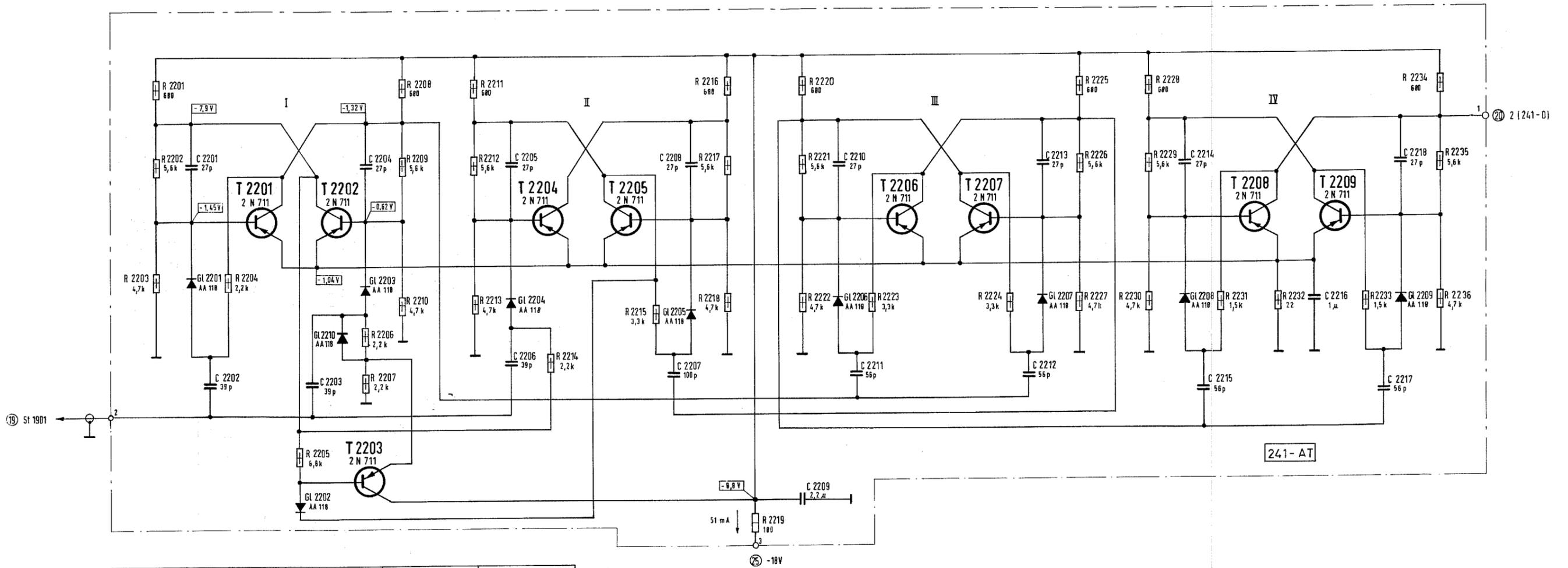
fl
fl



RWO-5/BN 241

Trenn- und Schaltstufe (21)
(Buffer and Switching Stage)





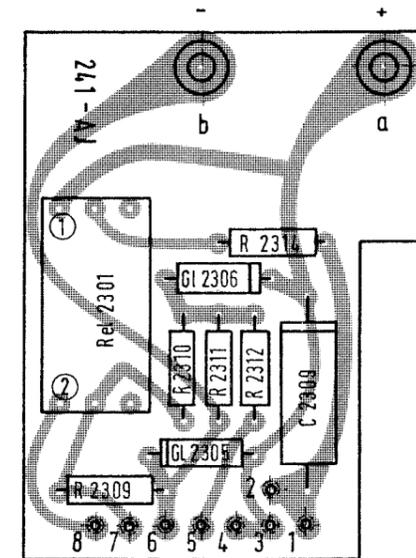
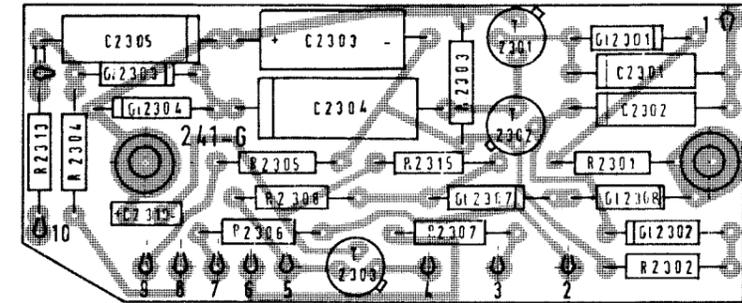
Flip-Flop	I		II			III		IV				
	T	2201	2202	2203	2204	2205	2206	2207	2208	2209		
G1	2201	2201	2202	2203	2204	2205	2206	2207	2208	2209		
Eingangsimpulse input pulse	0	+	+	-	-	+	-	-	+	+	-	-
	1	-	-	+	-	+	+	-	+	+	-	-
	2	-	-	+	+	+	-	+	+	+	-	-
	3	+	+	-	-	-	+	+	-	-	+	+
	4	-	-	+	+	+	+	+	-	-	+	+
	5	+	+	-	-	-	+	+	-	-	-	+
	6	-	-	+	-	+	-	+	-	-	-	+
	7	-	-	+	+	+	-	+	+	-	-	+
	8	+	+	-	-	-	+	+	-	+	+	-
	9	-	-	+	+	+	-	+	-	+	+	-
	10	+	+	-	-	-	+	+	-	+	+	-

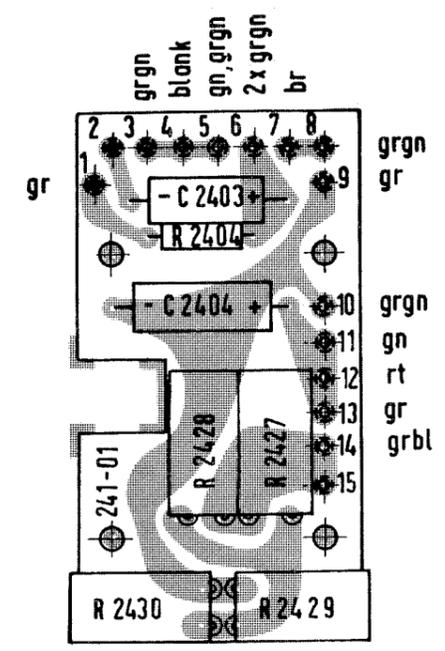
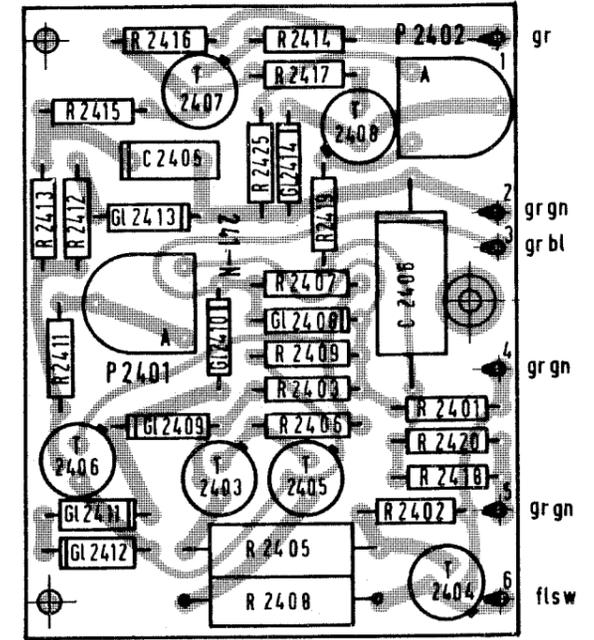
+ = Transistor Diode stromführend transistor or diode conducting
 - = Transistor, Diode gesperrt transistor or diode non conducting

RWO-5/BN 241

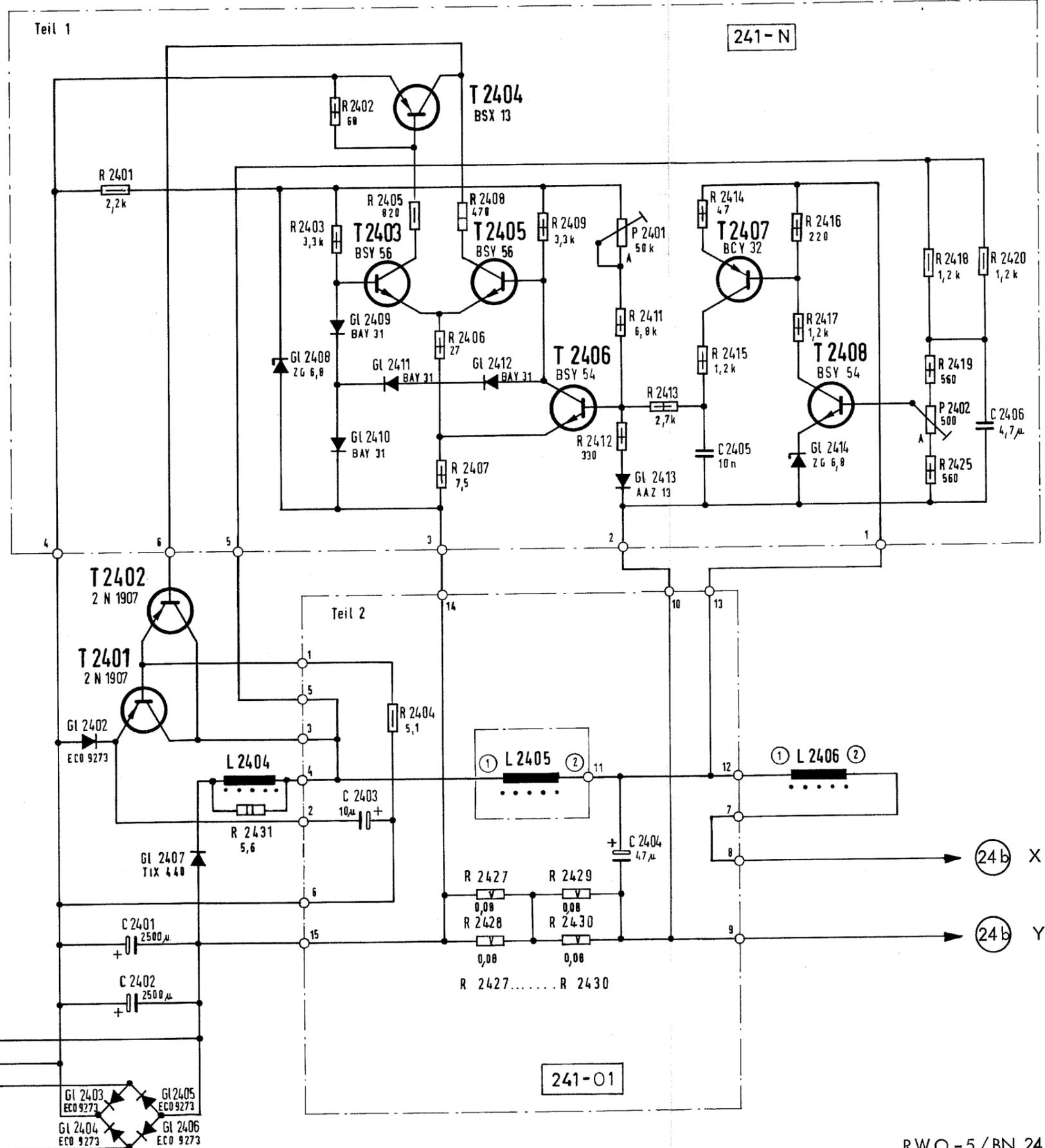
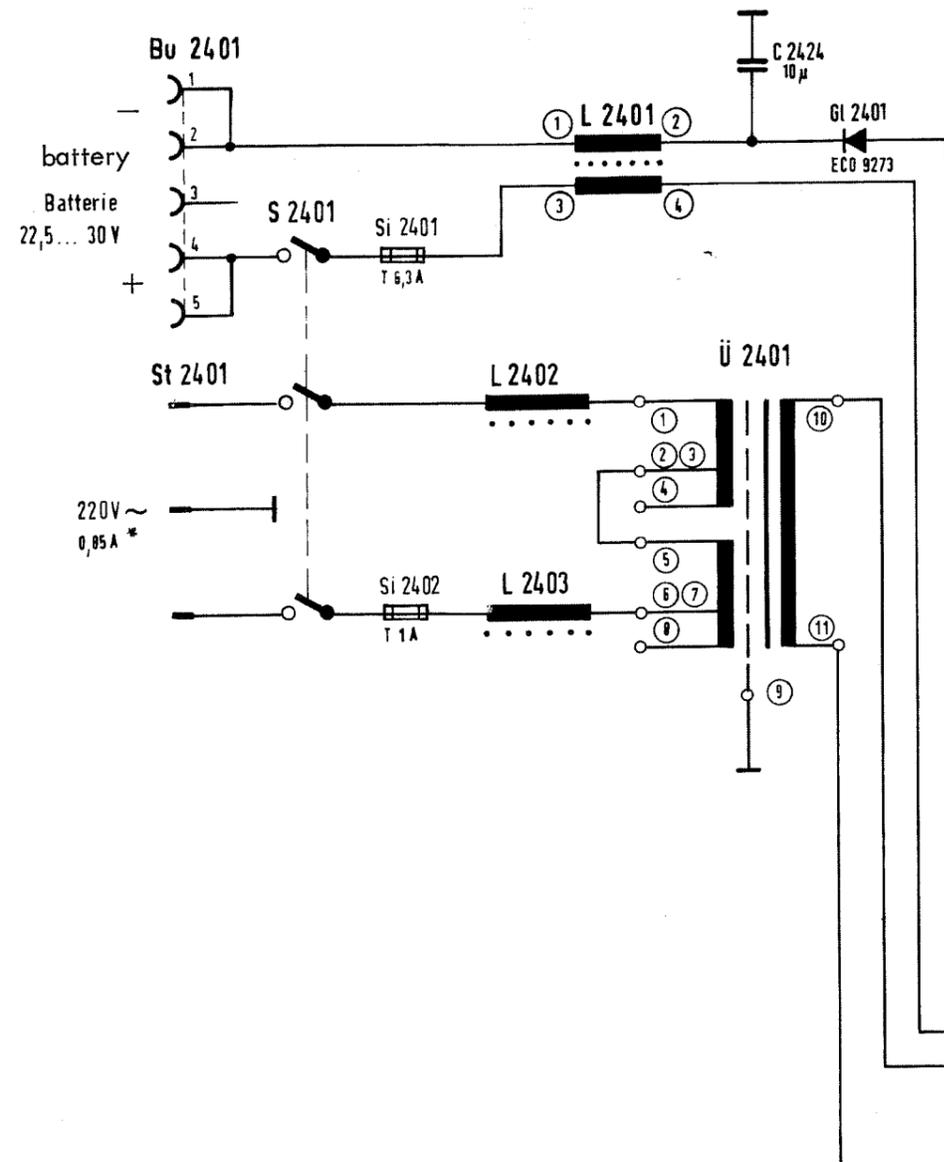
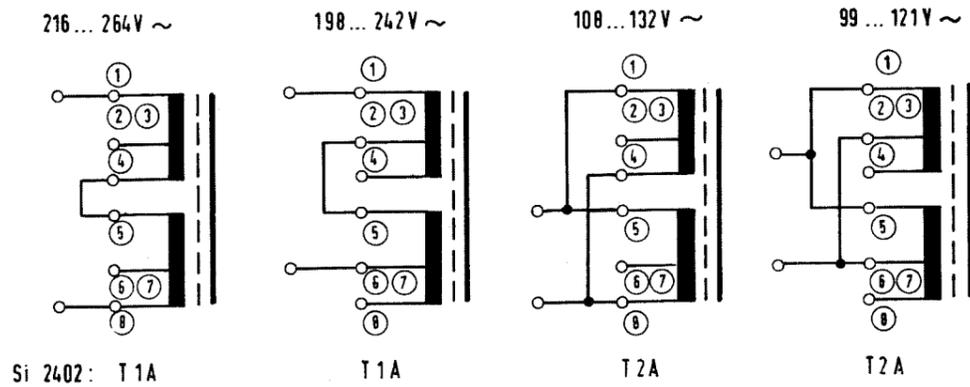
Teiler 10:1 (22)

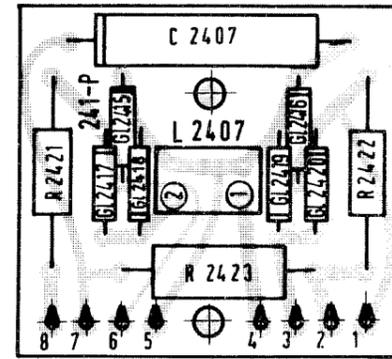
(Frequency Divider)



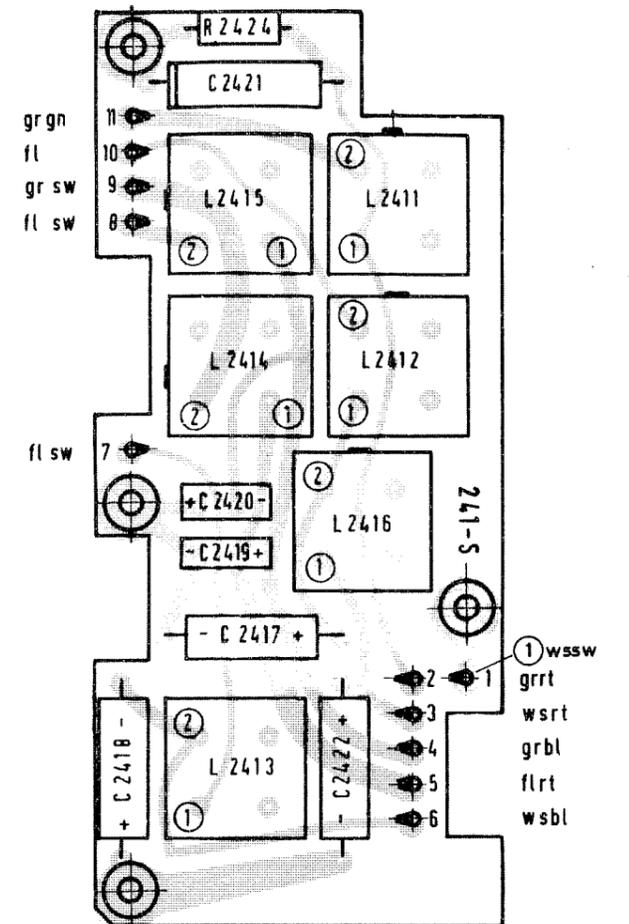
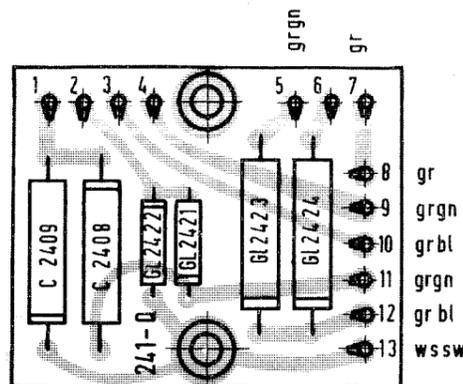
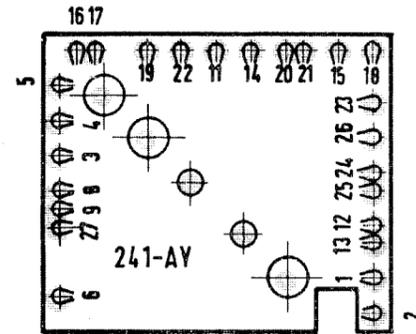
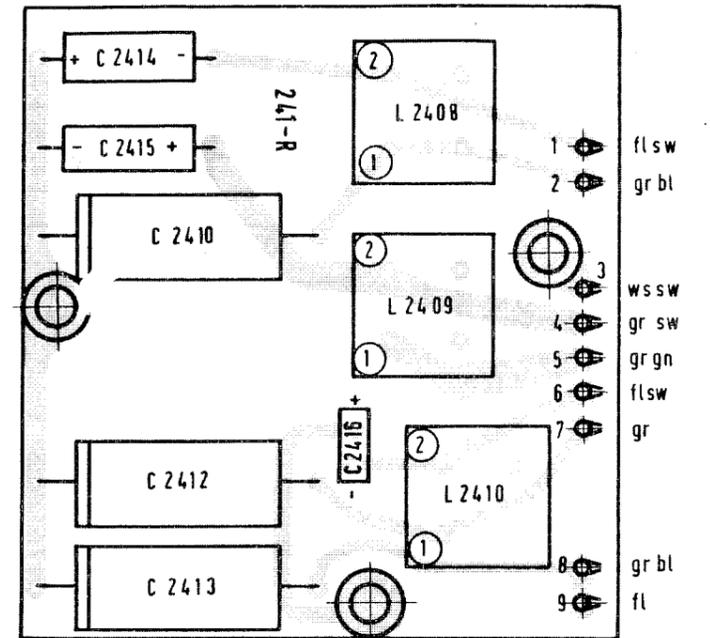


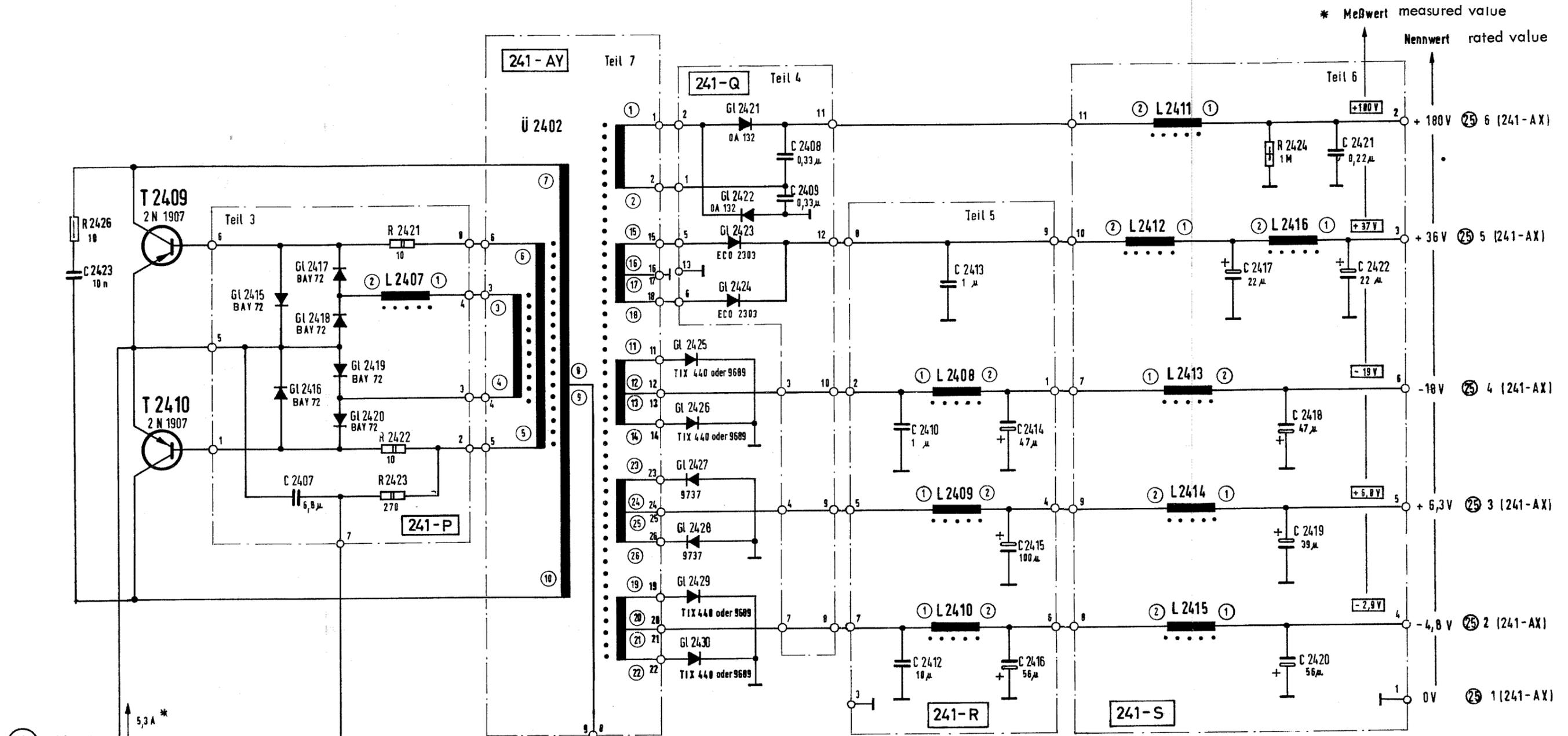
Anschluß - Schema: connection details





grgn

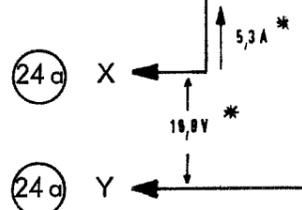




* Meßwert measured value
 Nennwert rated value

measured values for load condition

* Meßwerte bei Lastfall PSM - 5



2 N 1907

BCV 32
 BSY 54
 BSY 56
 BSX 13

AAZ 13

ECO 9273

BAY 72

OY 5061

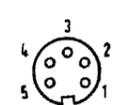
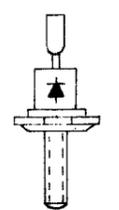
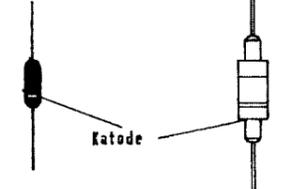
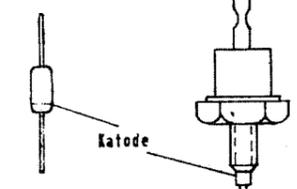
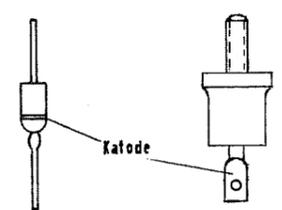
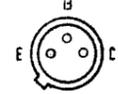
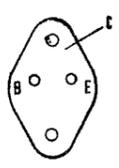
BAY 31

ECO 2303

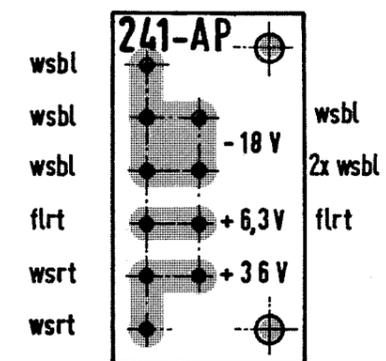
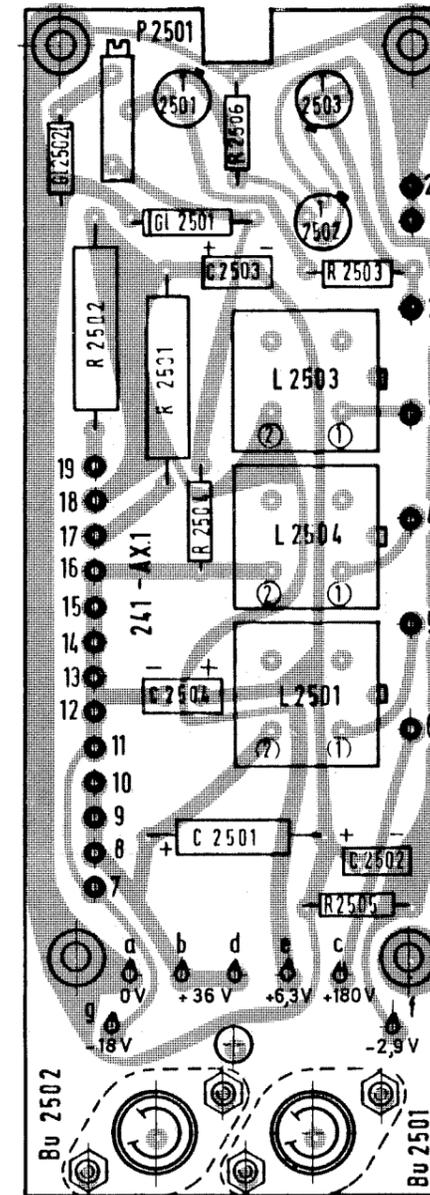
(ECO 9689)
 TIX 440
 G1 2430
 G1 2429
 G1 2425
 G1 2426
 G1 2407

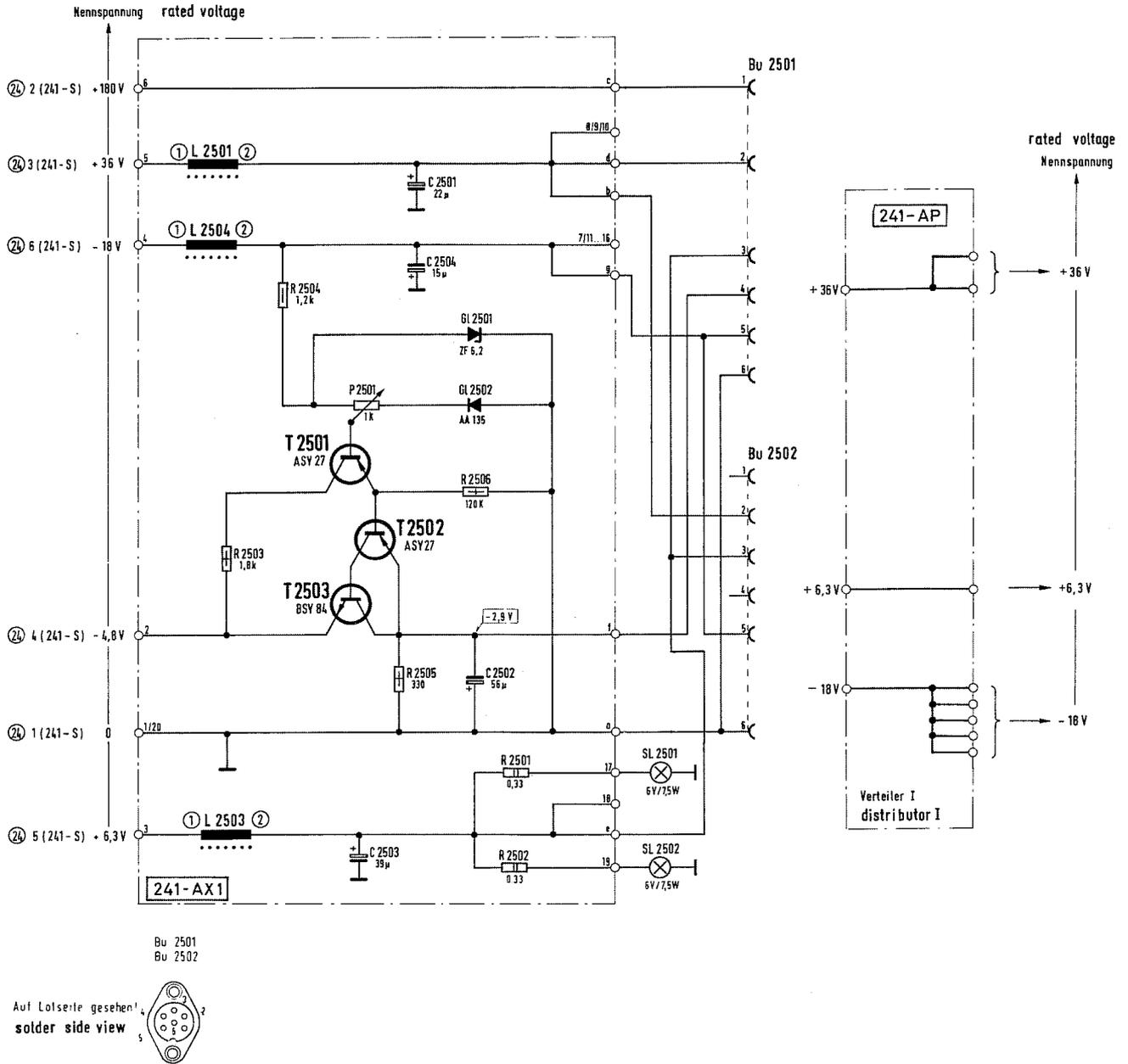
ECO 9737
 (ECO 9690)
 TIX 440
 G1 2427
 G1 2428

Bu 2401



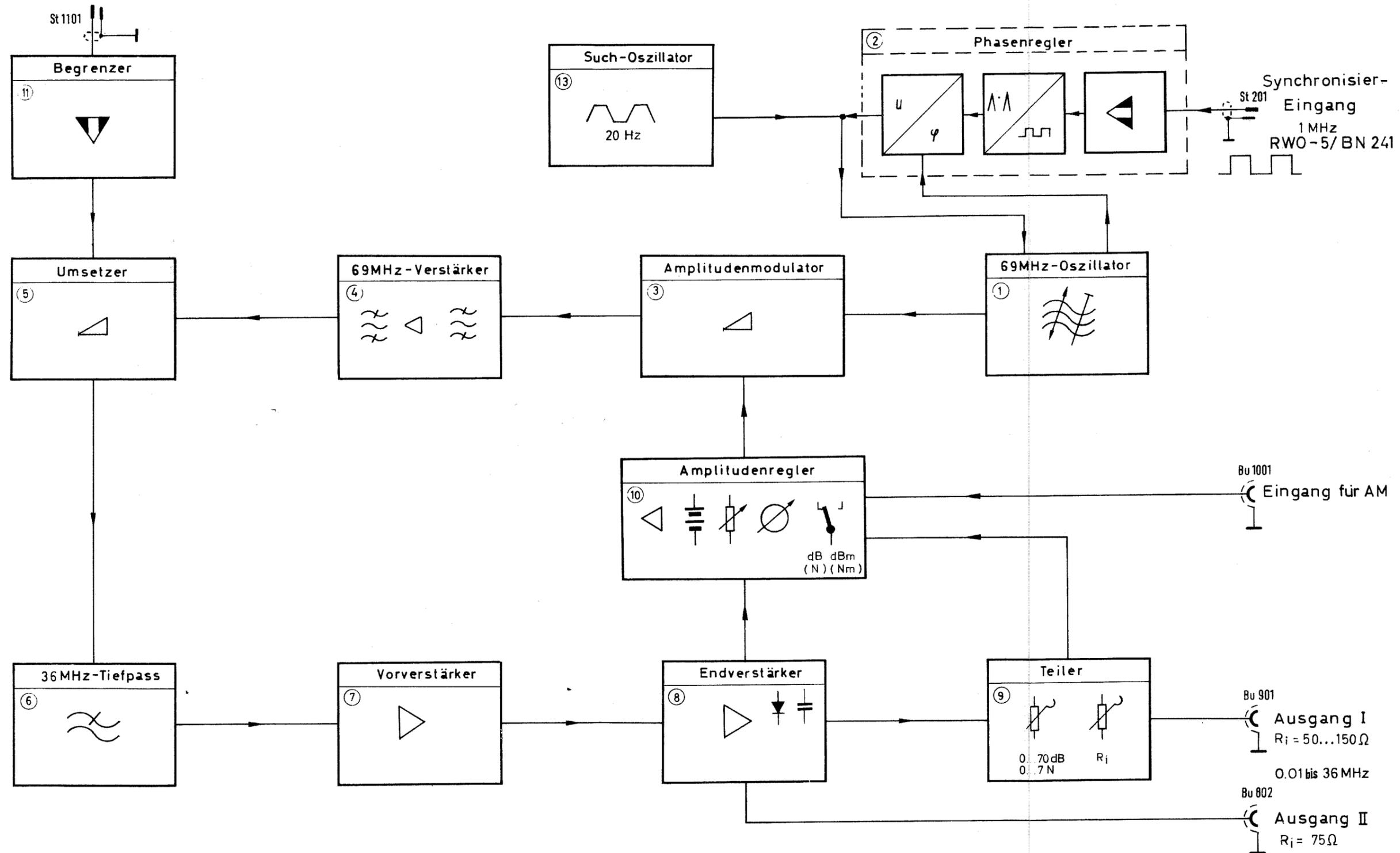
RWO-5/BN 241
 Netzteil (24b)
 (Power Supply)

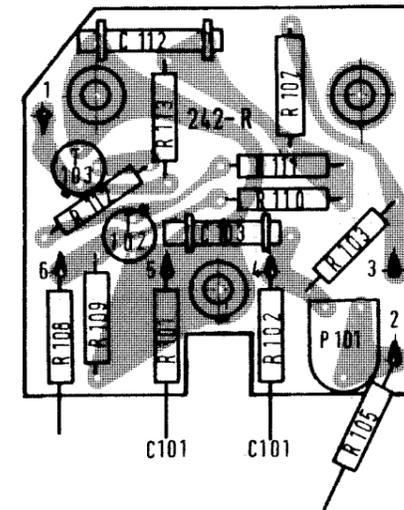


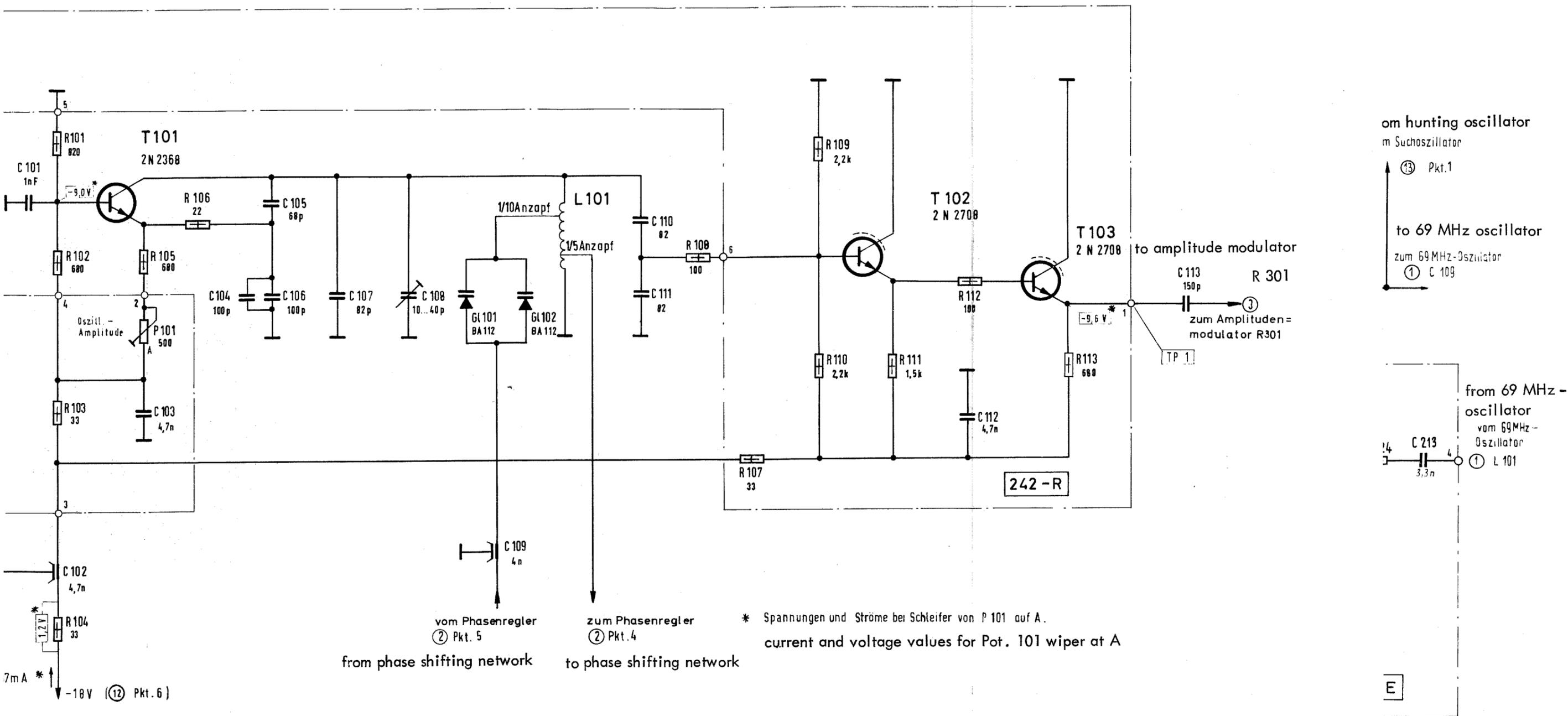


RWO-5/BN 241
Zusatzsiegung (25)
(Filter Attachment Network)

Trägerfrequenz-Eingang 69,01MHz bis 105 MHz
RWO-5/BN 241







om hunting oscillator
m Suchoszillator
⑬ Pkt.1
to 69 MHz oscillator
zum 69 MHz-Oszillator
① C 109

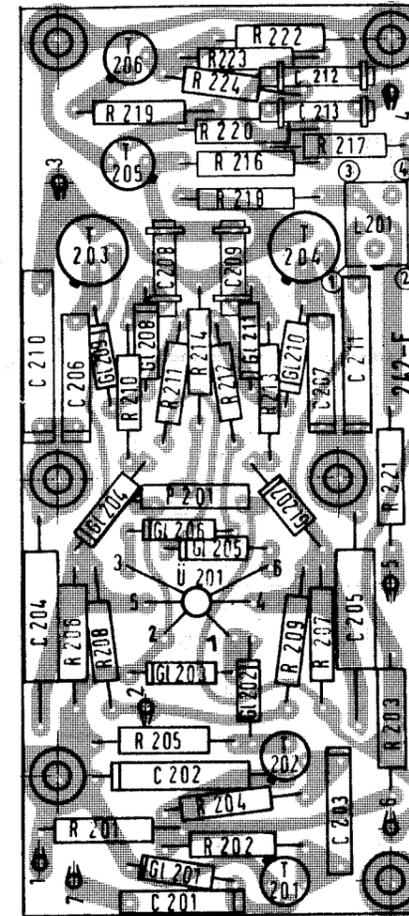
from 69 MHz -
oscillator
vom 69 MHz -
Oszillator
① L 101
C 213
3,3n

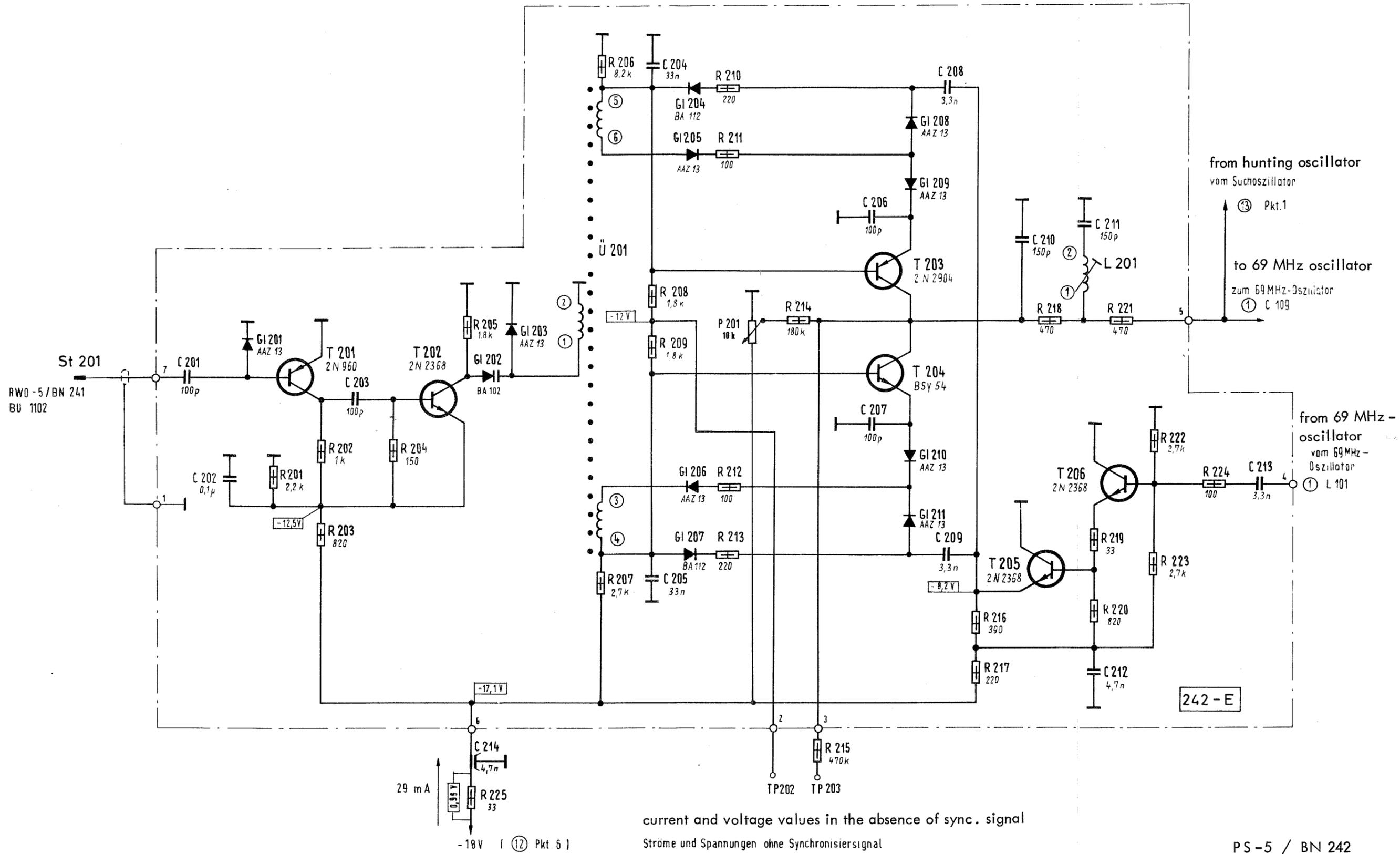
from phase shifting network
vom Phasenregler
② Pkt. 5
zum Phasenregler
② Pkt. 4
to phase shifting network

* Spannungen und Ströme bei Schleifer von P 101 auf A.
current and voltage values for Pot. 101 wiper at A

PS-5 / BN 242
69-MHz-Oszillator ①
(69 MHz Oscillator)

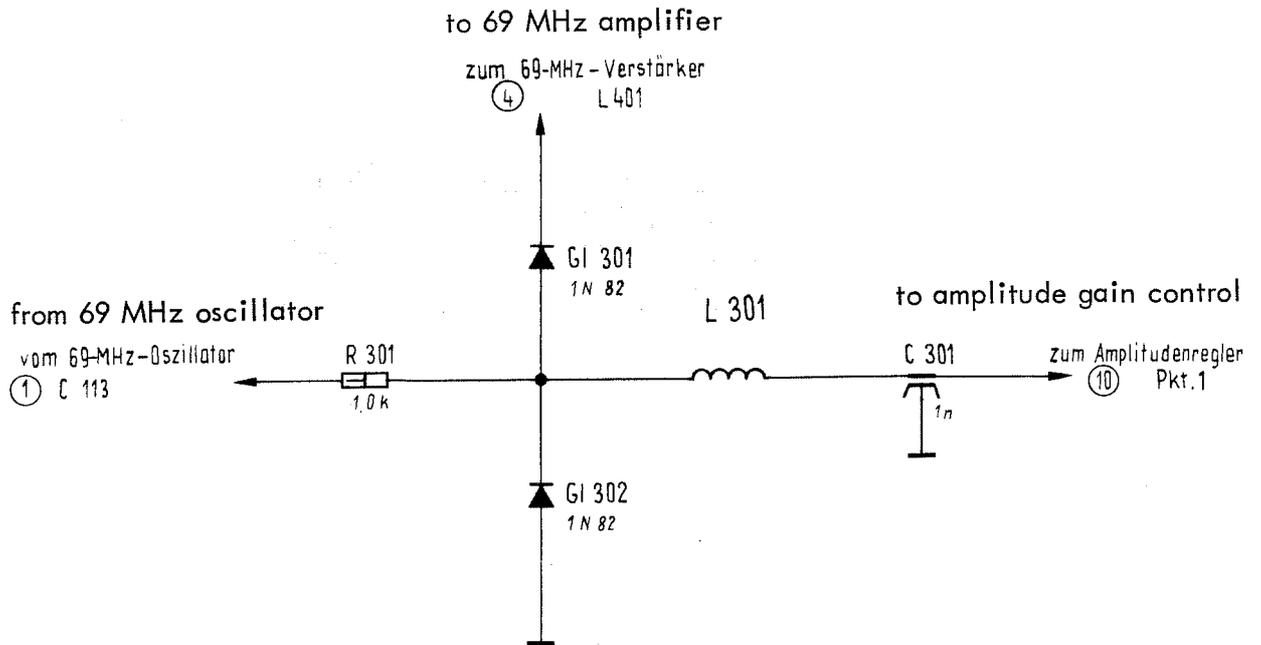
PS-5 / BN 242
Phasenregler ②
(Phase Control)





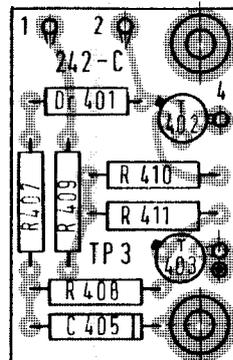
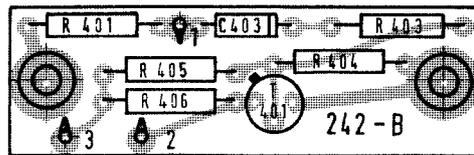
current and voltage values in the absence of sync. signal
 Ströme und Spannungen ohne Synchronisierungssignal

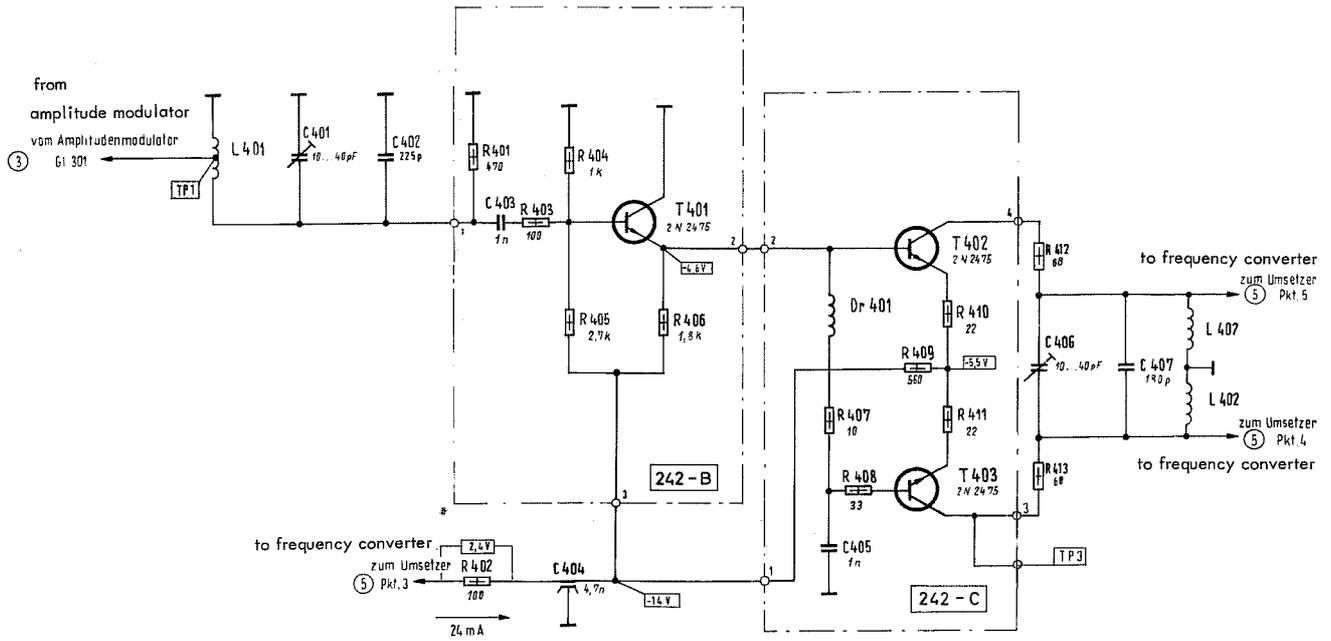
PS-5 / BN 242
 Phasenregler (2)
 (Phase Control)



PS-5/BN 242

Amplitudenmodulator (3)
(Amplitude Modulator)

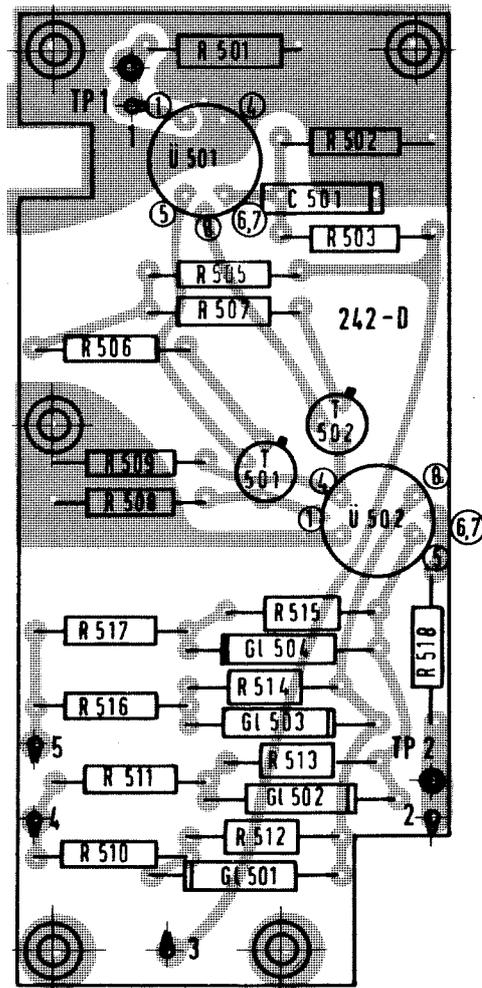


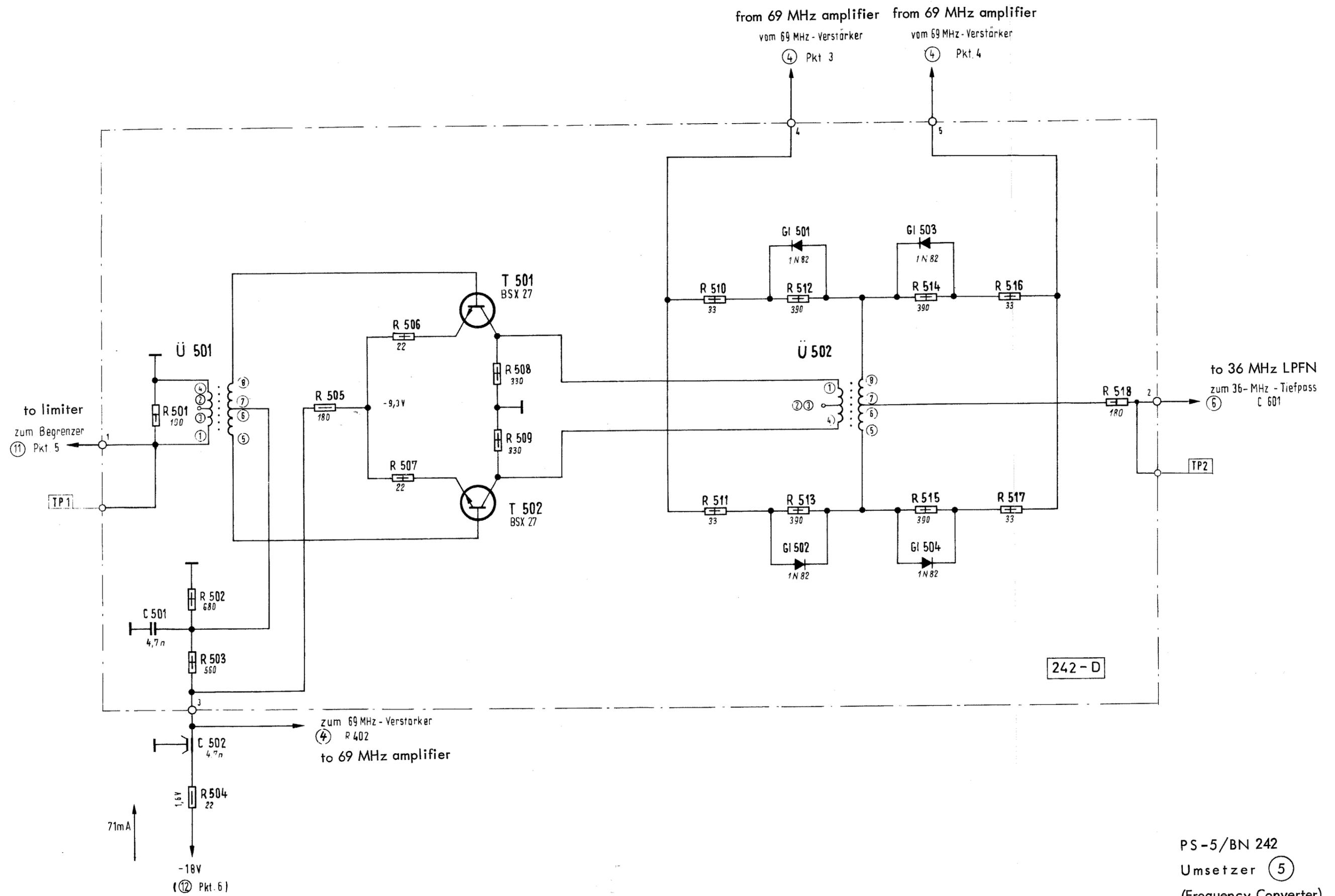


PS-5/BN 242

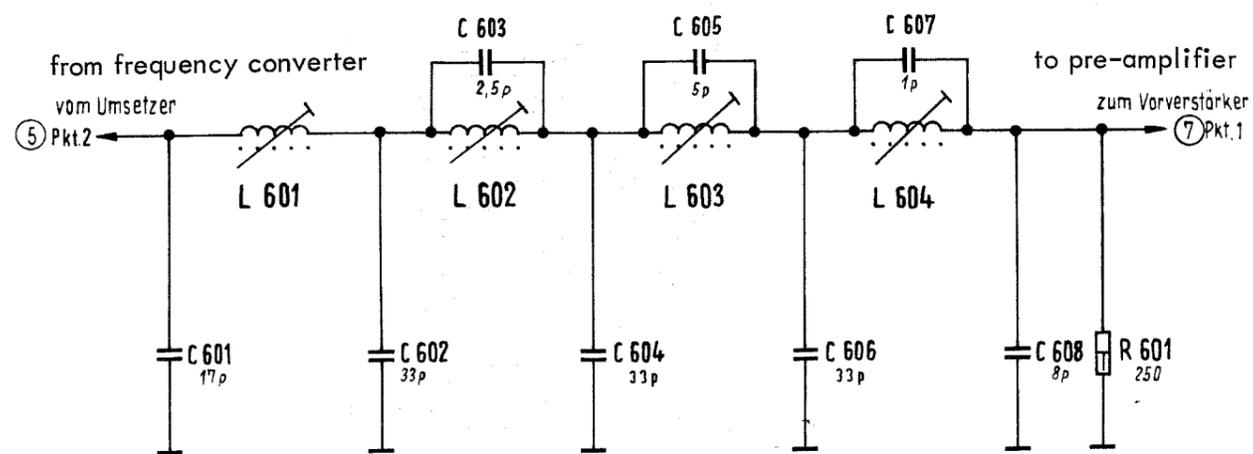
69-MHz-Verstärker (4)

(69 MHz Amplifier)

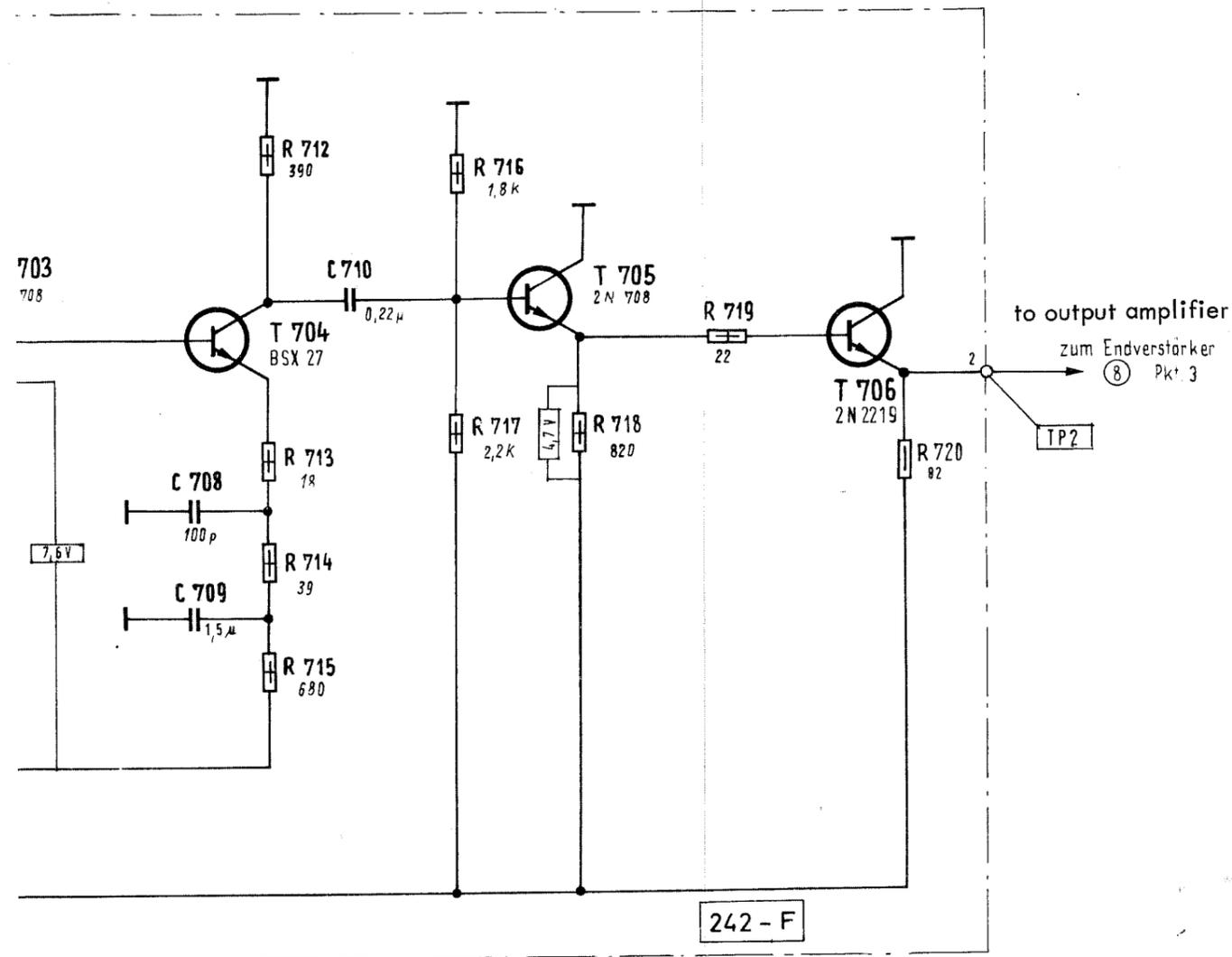




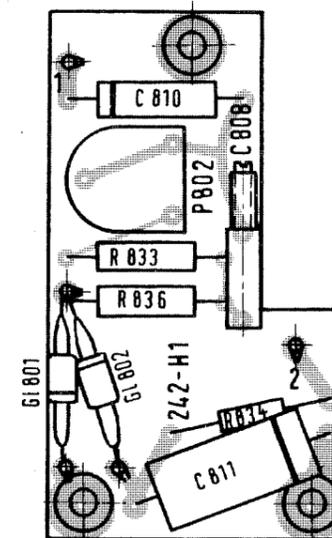
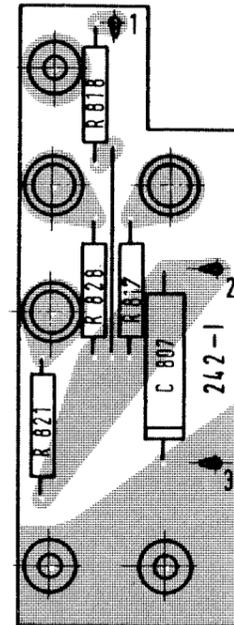
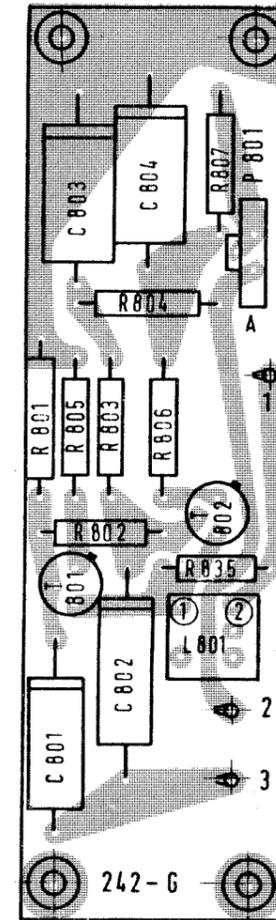
PS-5/BN 242
 Umsetzer (5)
 (Frequency Converter)

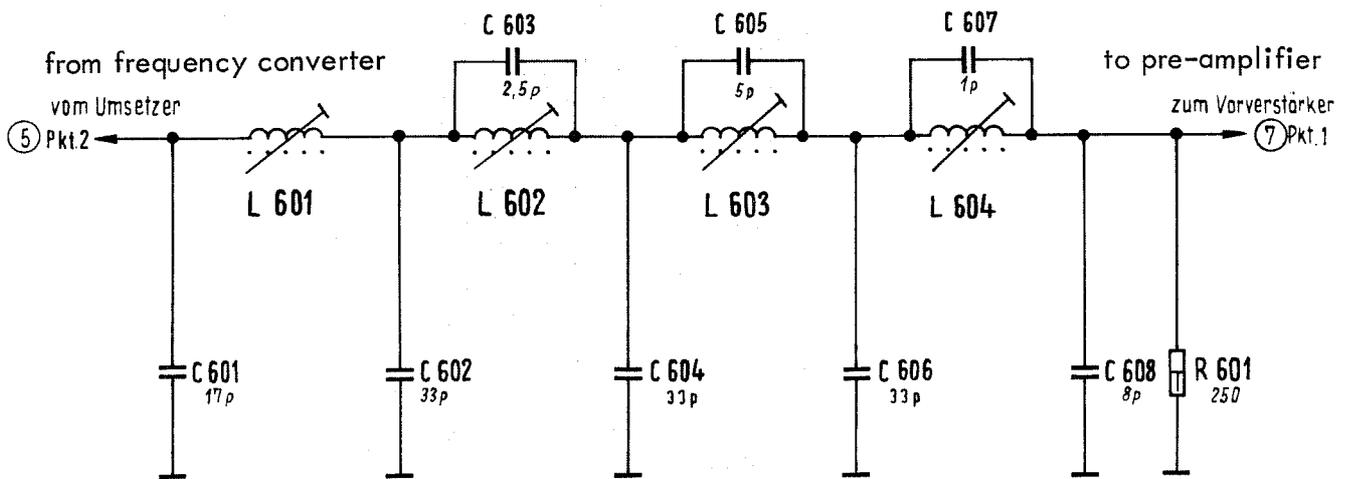


PS-5/BN 242
36-MHz-Tiefpaß (6)
(36 MHz Low Pass Filter)



PS-5/BN 242
Vorverstärker (7)
(Pre-Amplifier)

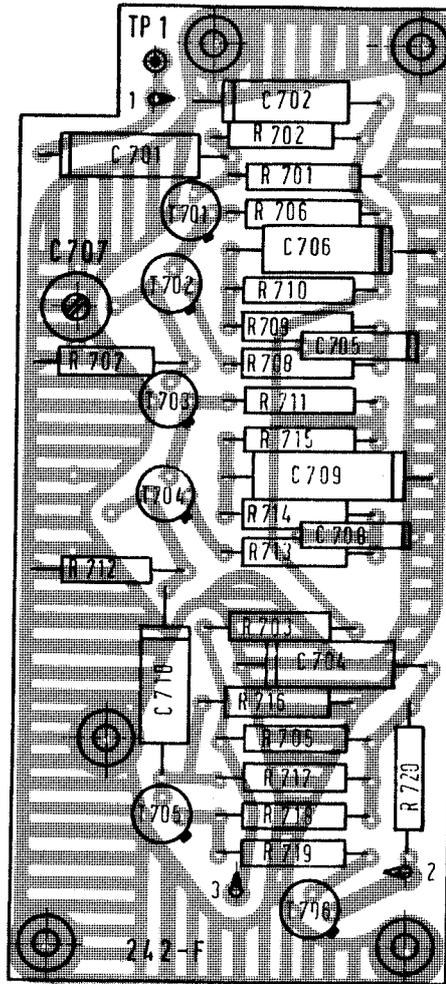


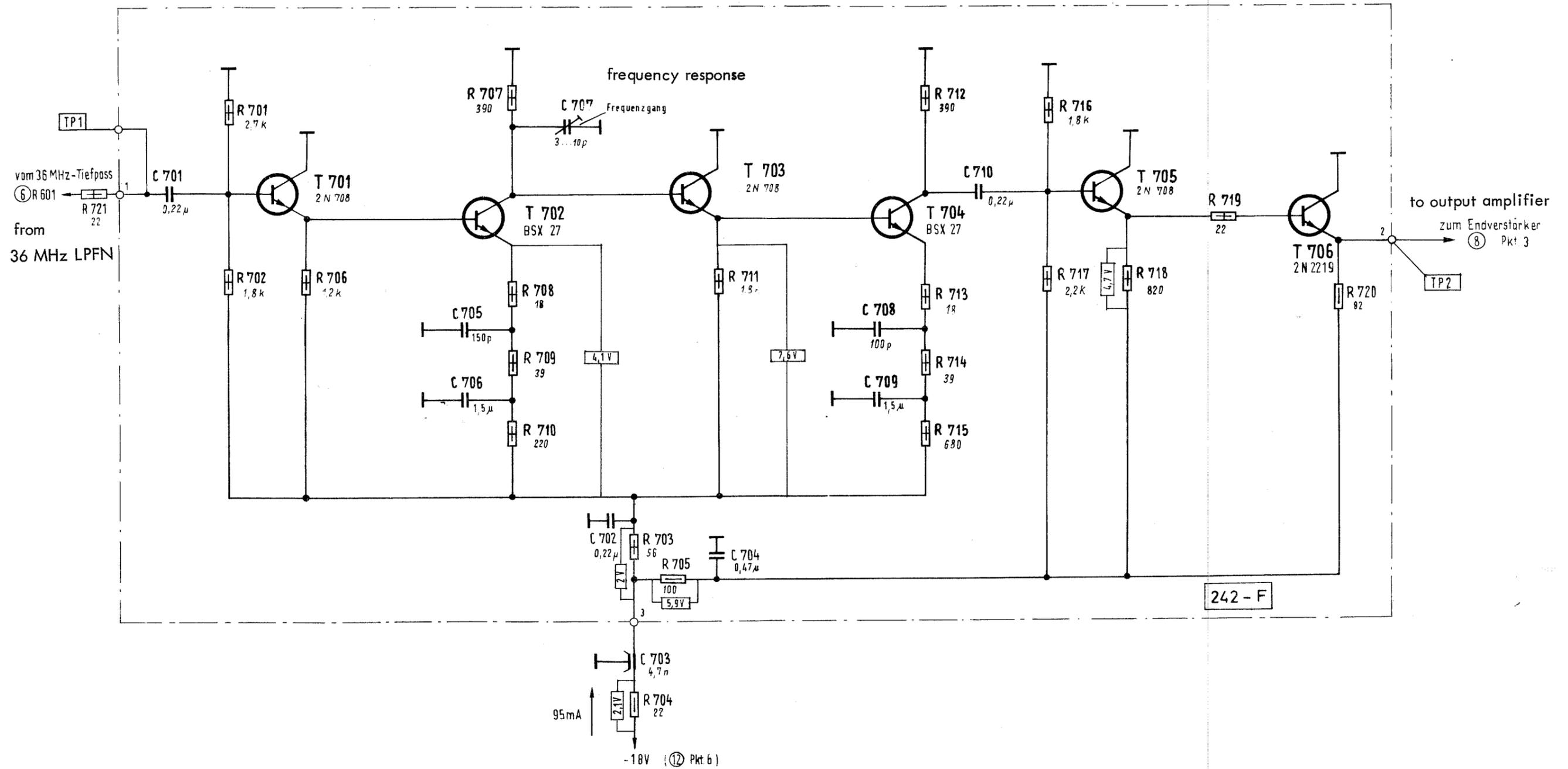


PS-5/BN 242

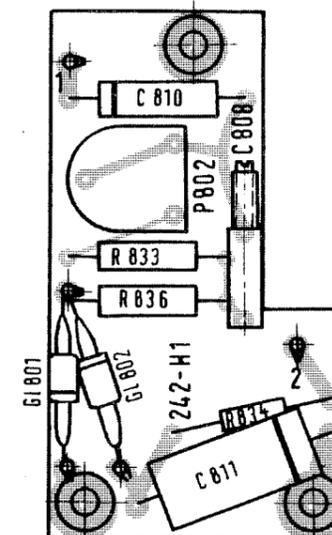
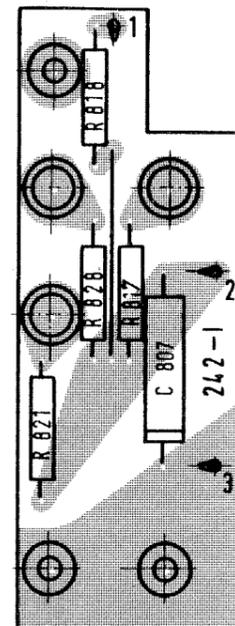
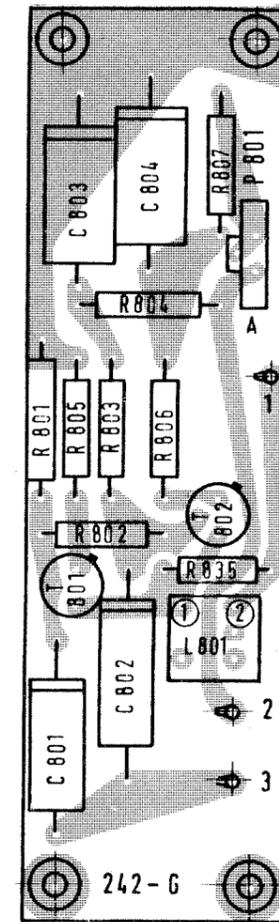
36-MHz-Tiefpaß (6)

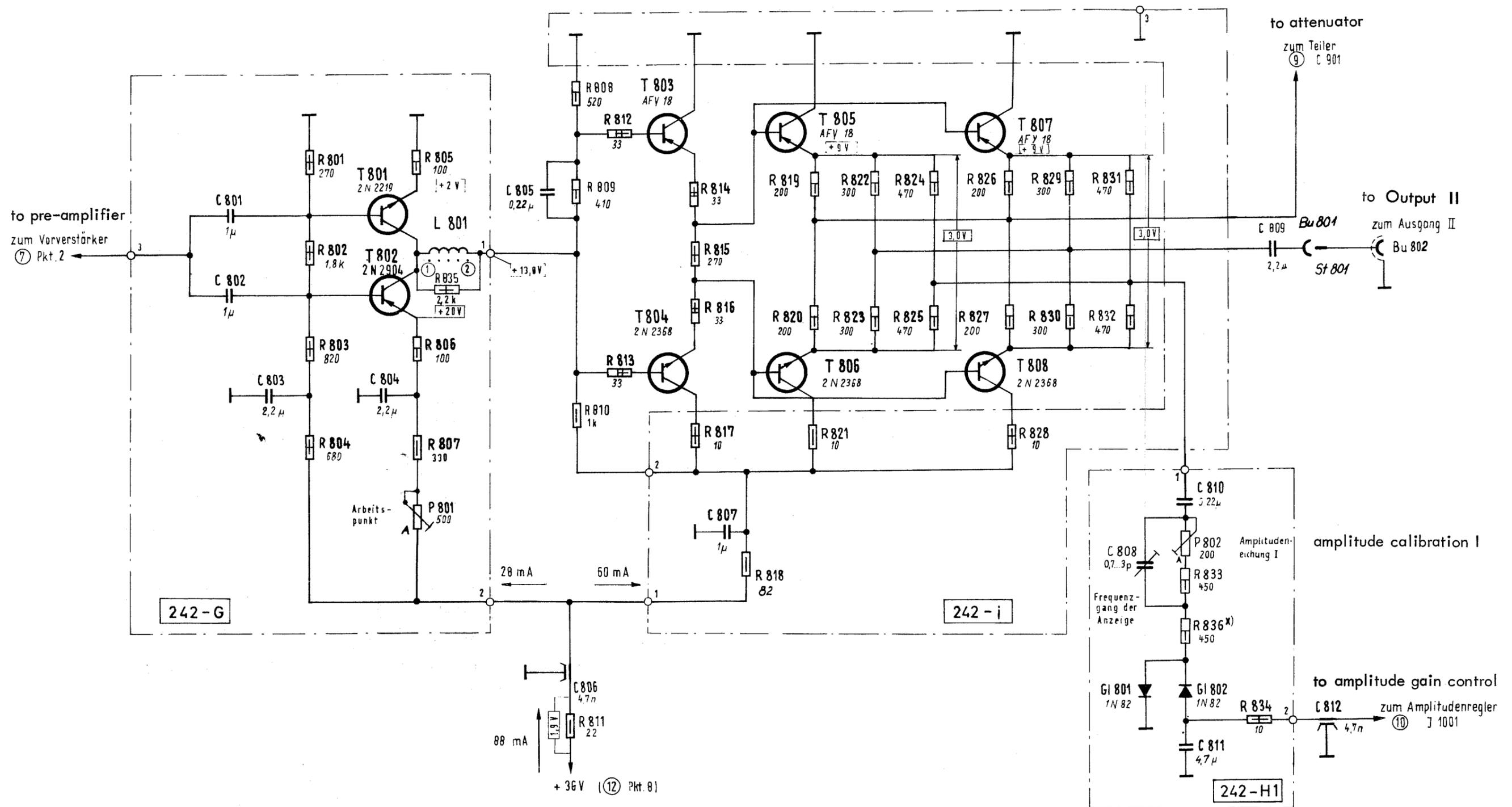
(36 MHz Low Pass Filter)





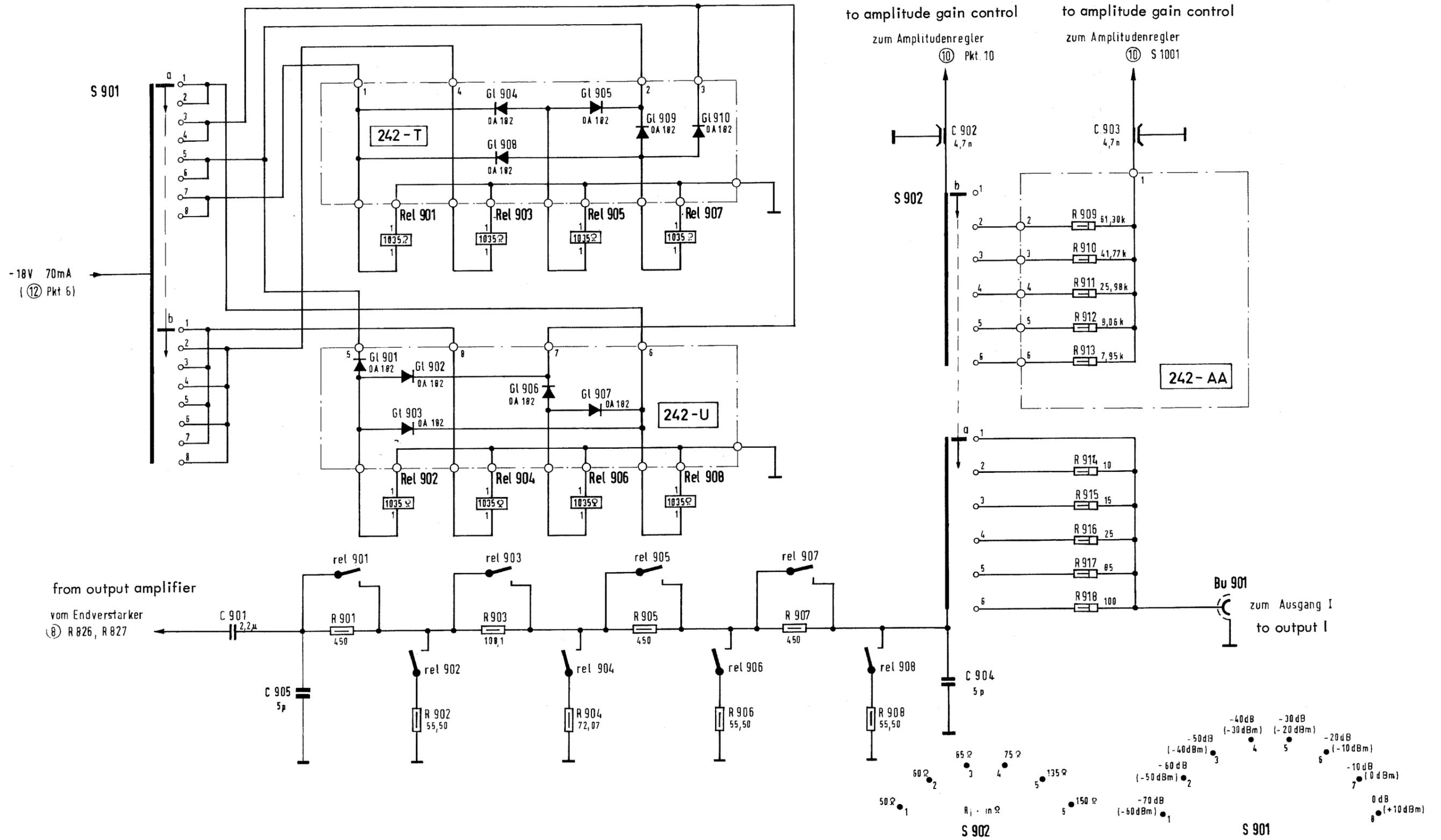
PS-5/BN 242
 Vorverstärker (7)
 (Pre-Amplifier)



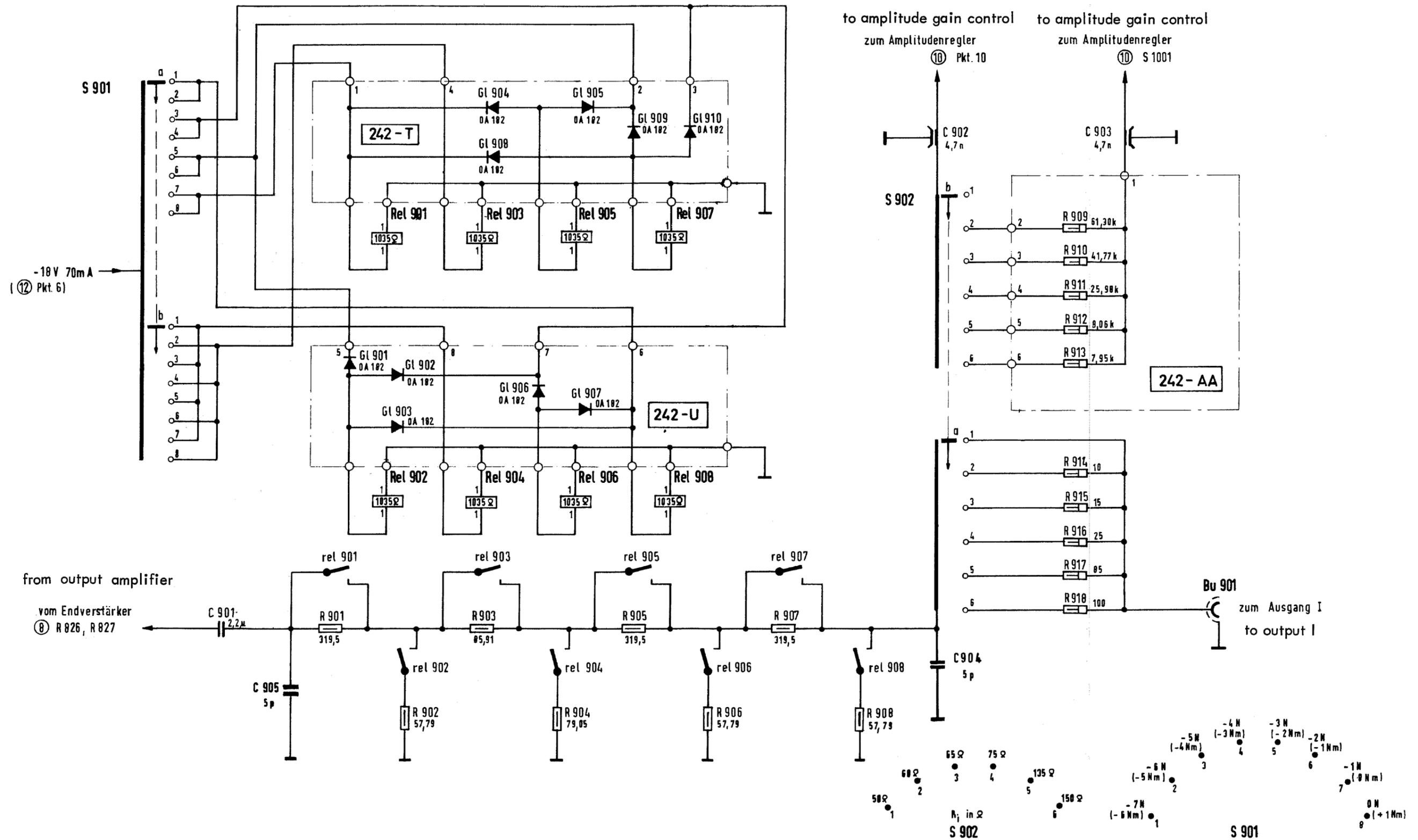


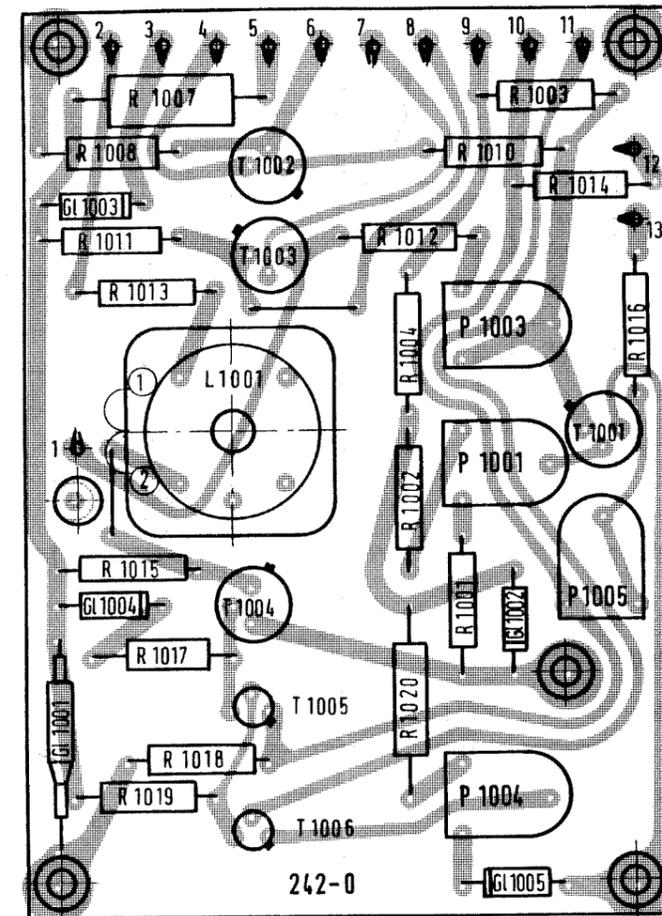
Spannungen sind gegen Masse gemessen.
voltage measured with respect to chassis

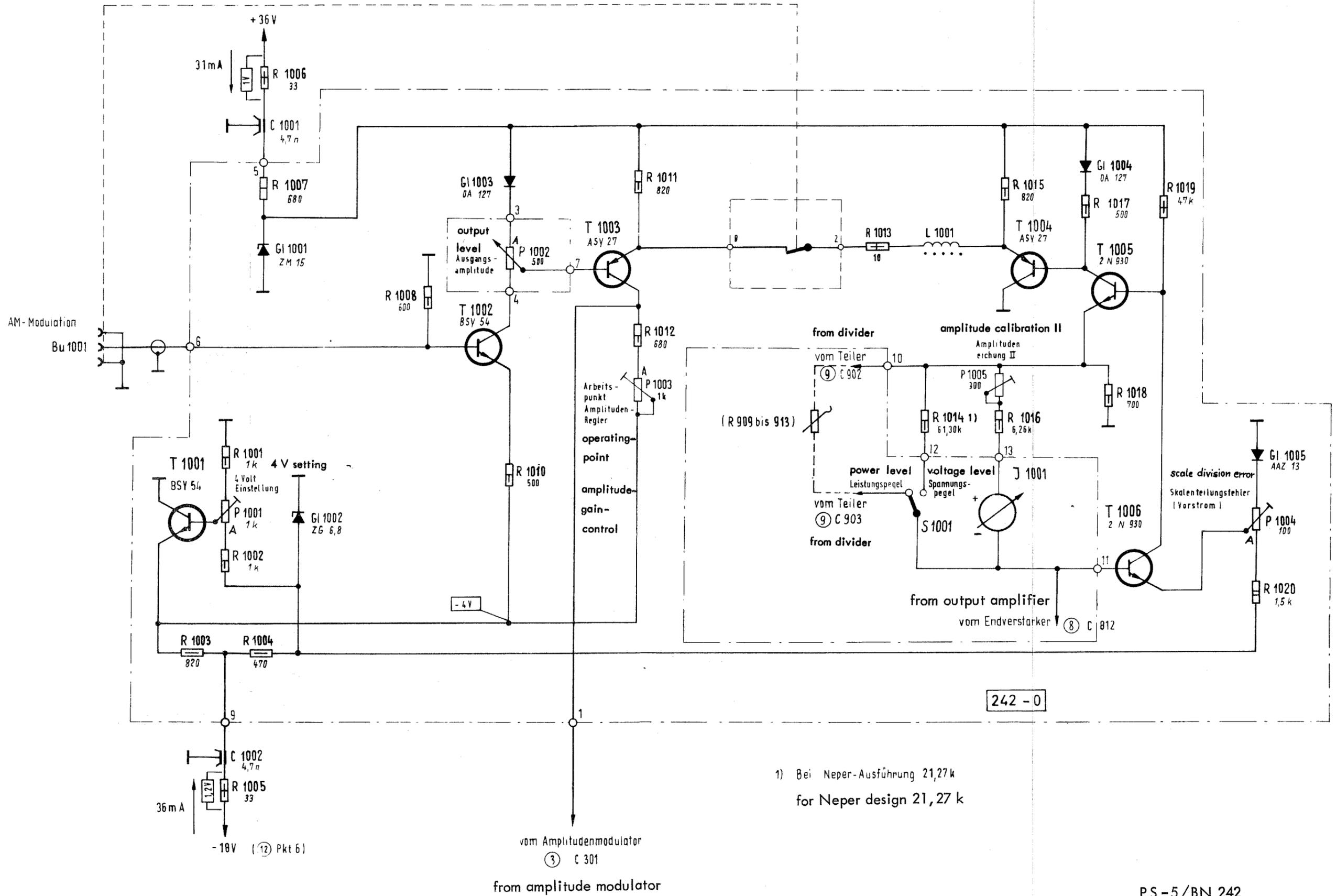
x) Bei Neper-Ausführung : R 836/250 Ω
for Neper design : R 836/250 Ω



PS-5/BN 242
Teiler dB (9)
(Attenuator)

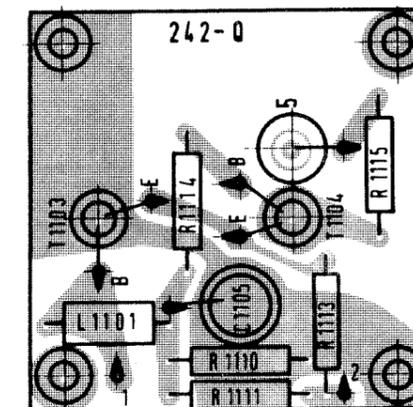
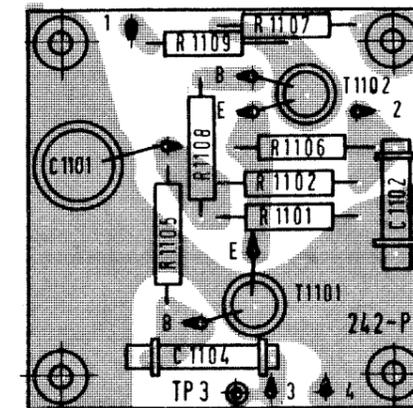


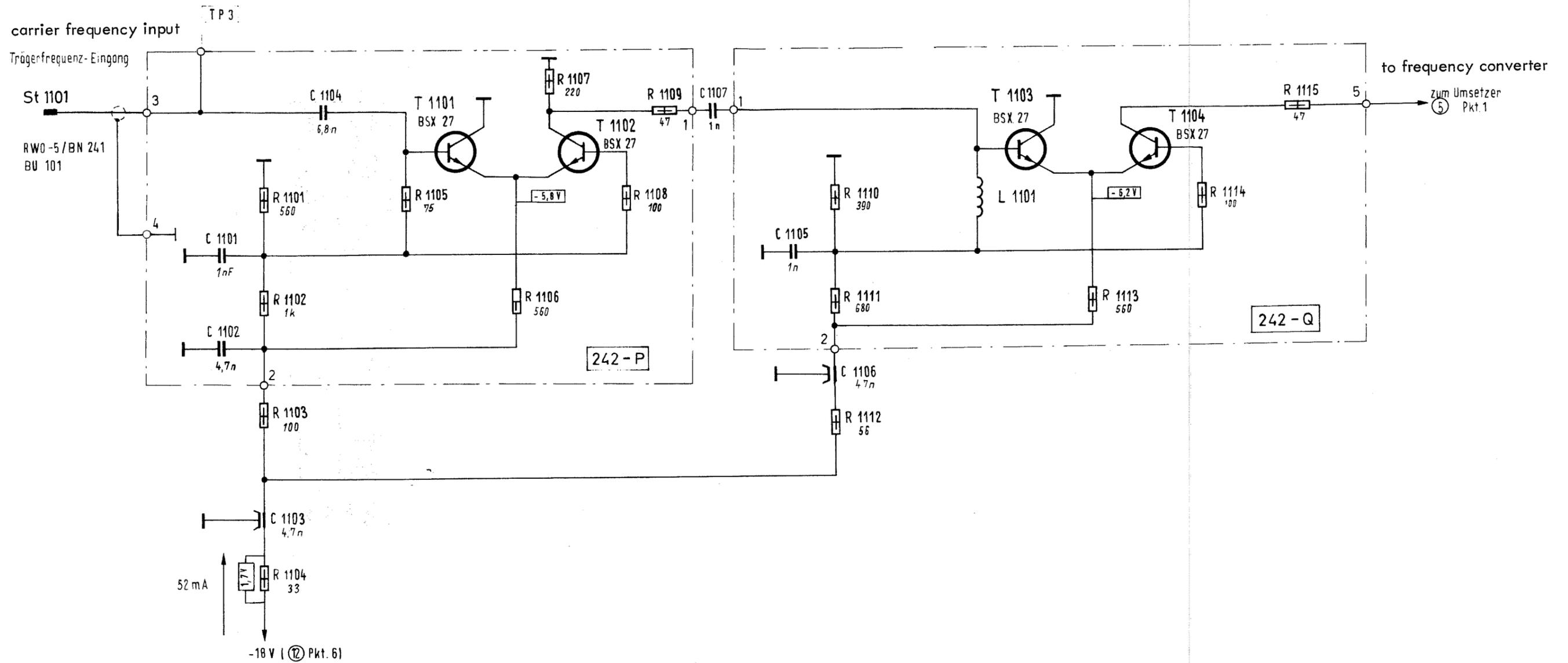




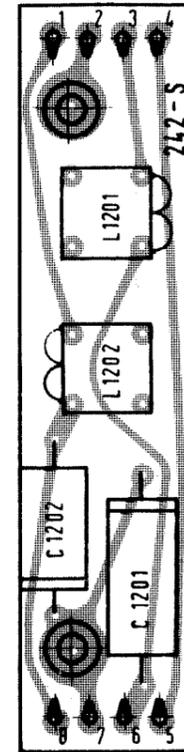
1) Bei Neper-Ausführung 21,27 k
for Neper design 21,27 k

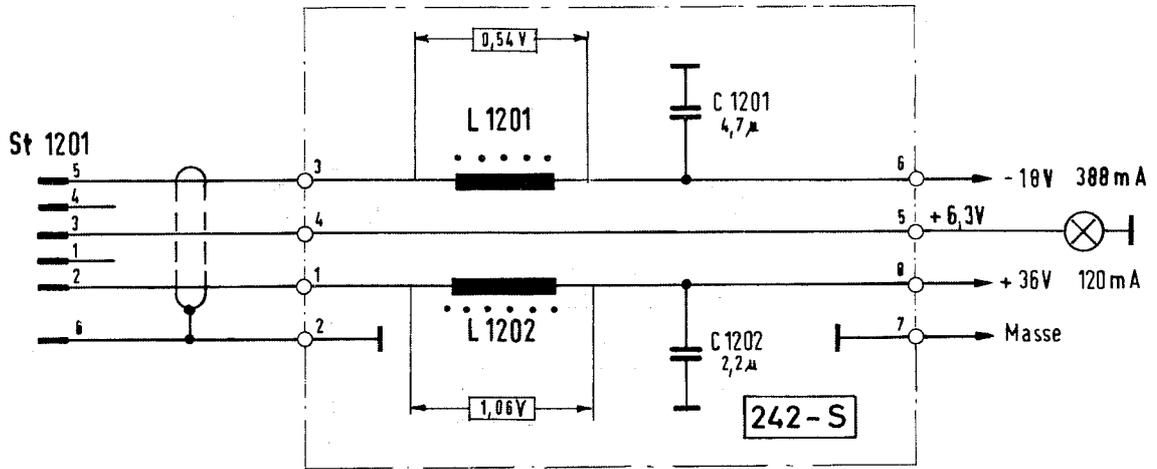
PS-5/BN 242
Amplitudenregler (10)
(Amplitude Control)





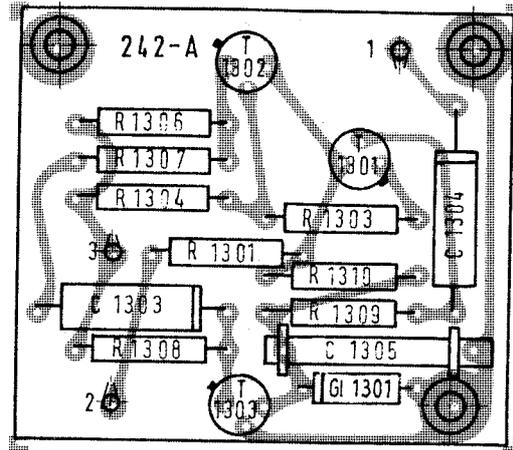
PS-5/BN 242
 Begrenzer (11)
 (Amplitude Limiter)

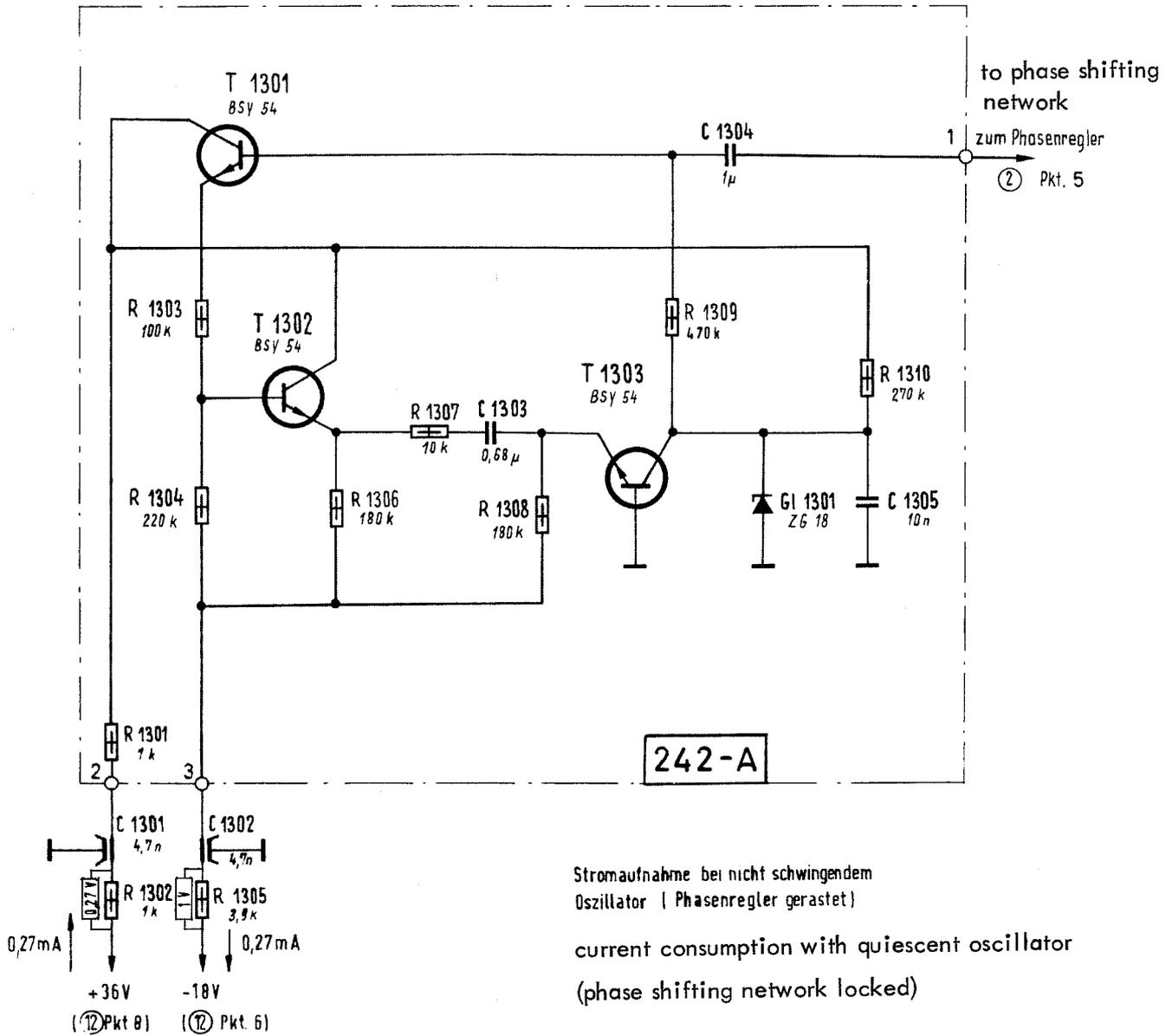




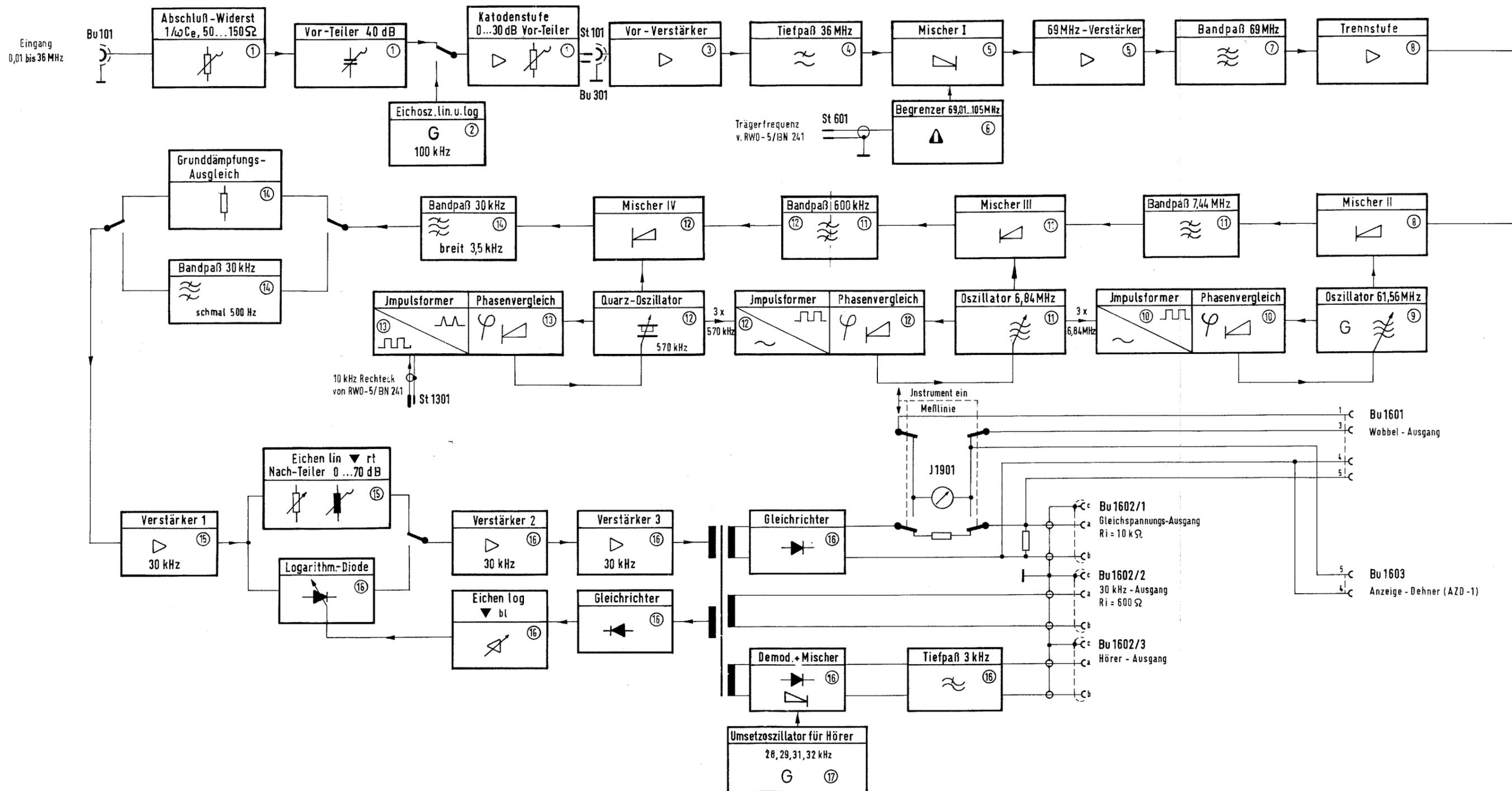
PS-5/BN 242

Spannungs-Verdrosselung
(Voltage Filter Network)

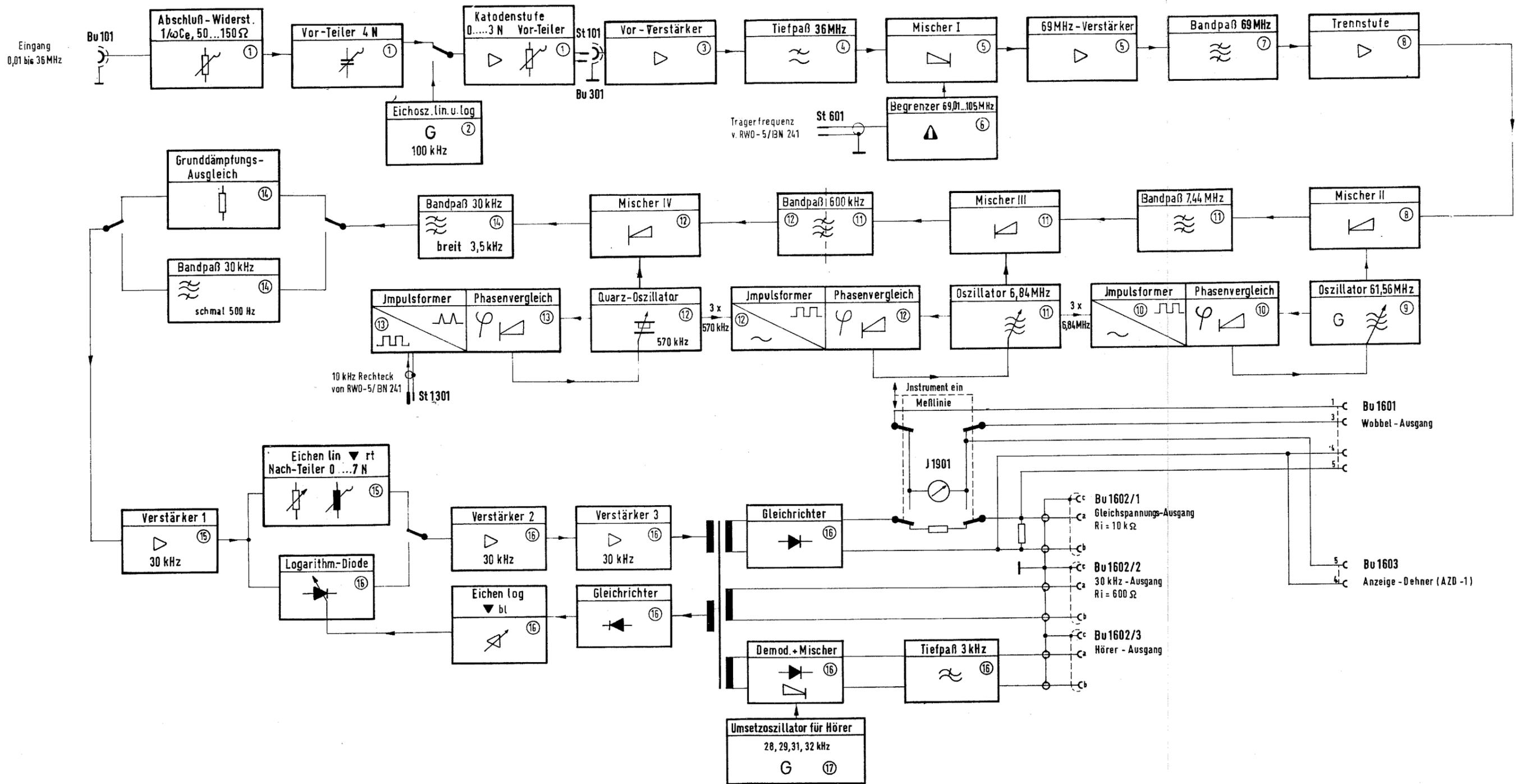




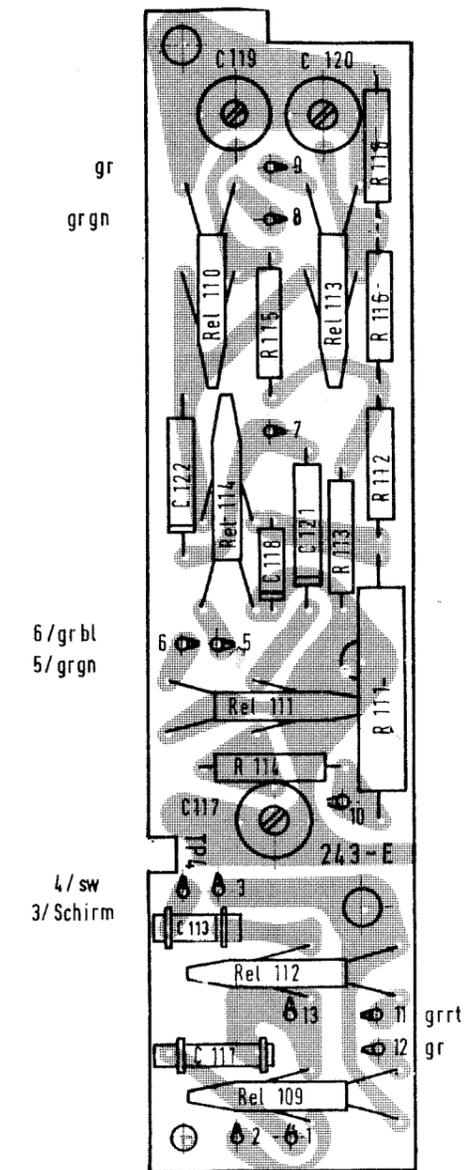
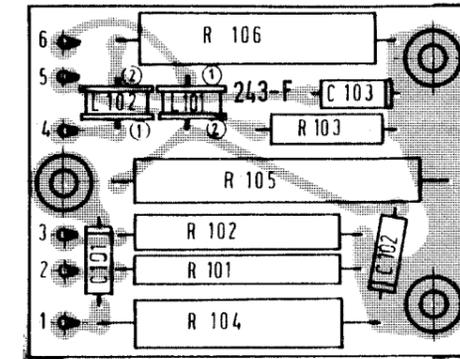
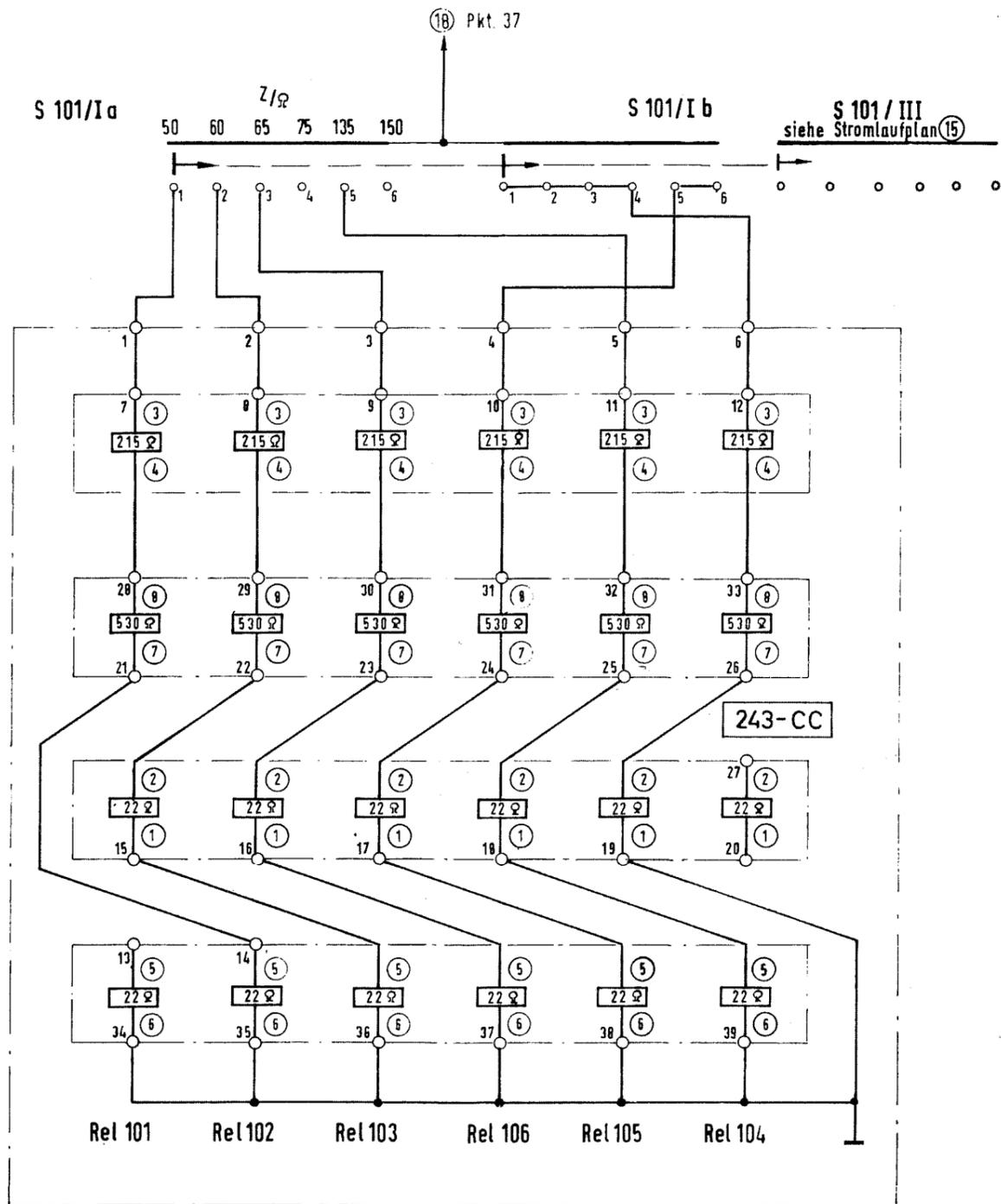
PS-5/BN 242
Such-Oszillator
(Hunting Oscillator)

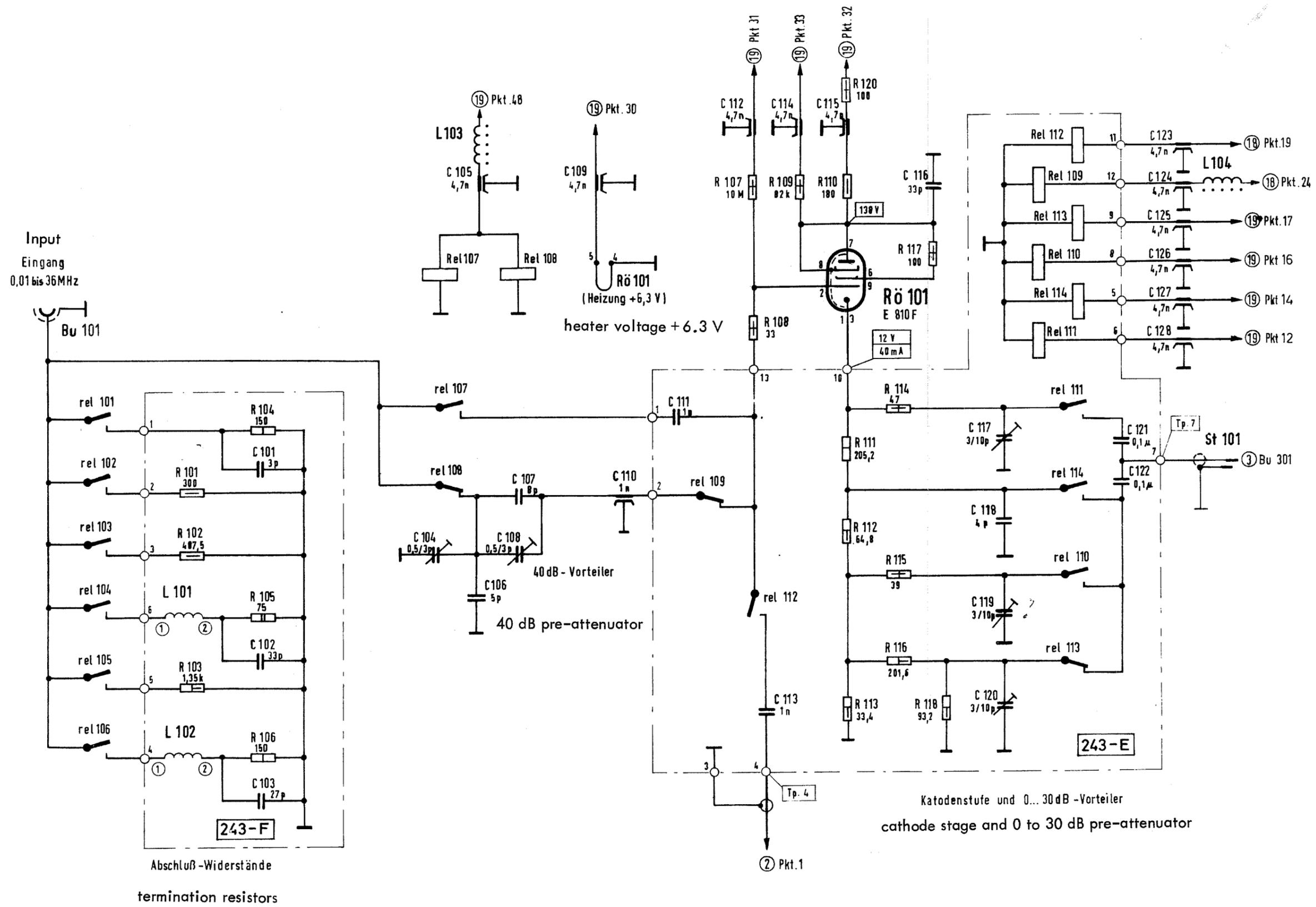


PM-5/BN 243
Blockschaltplan dB

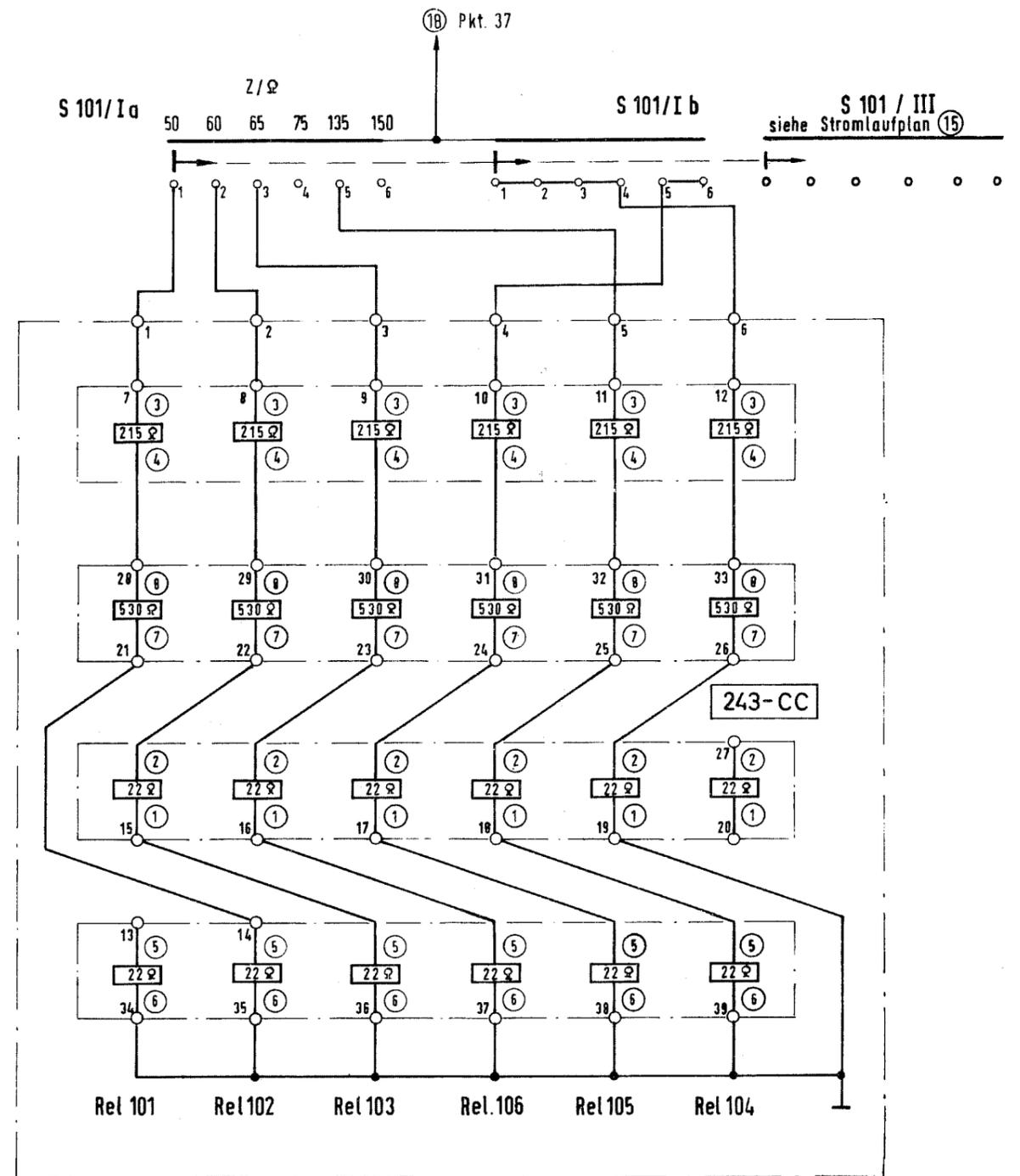


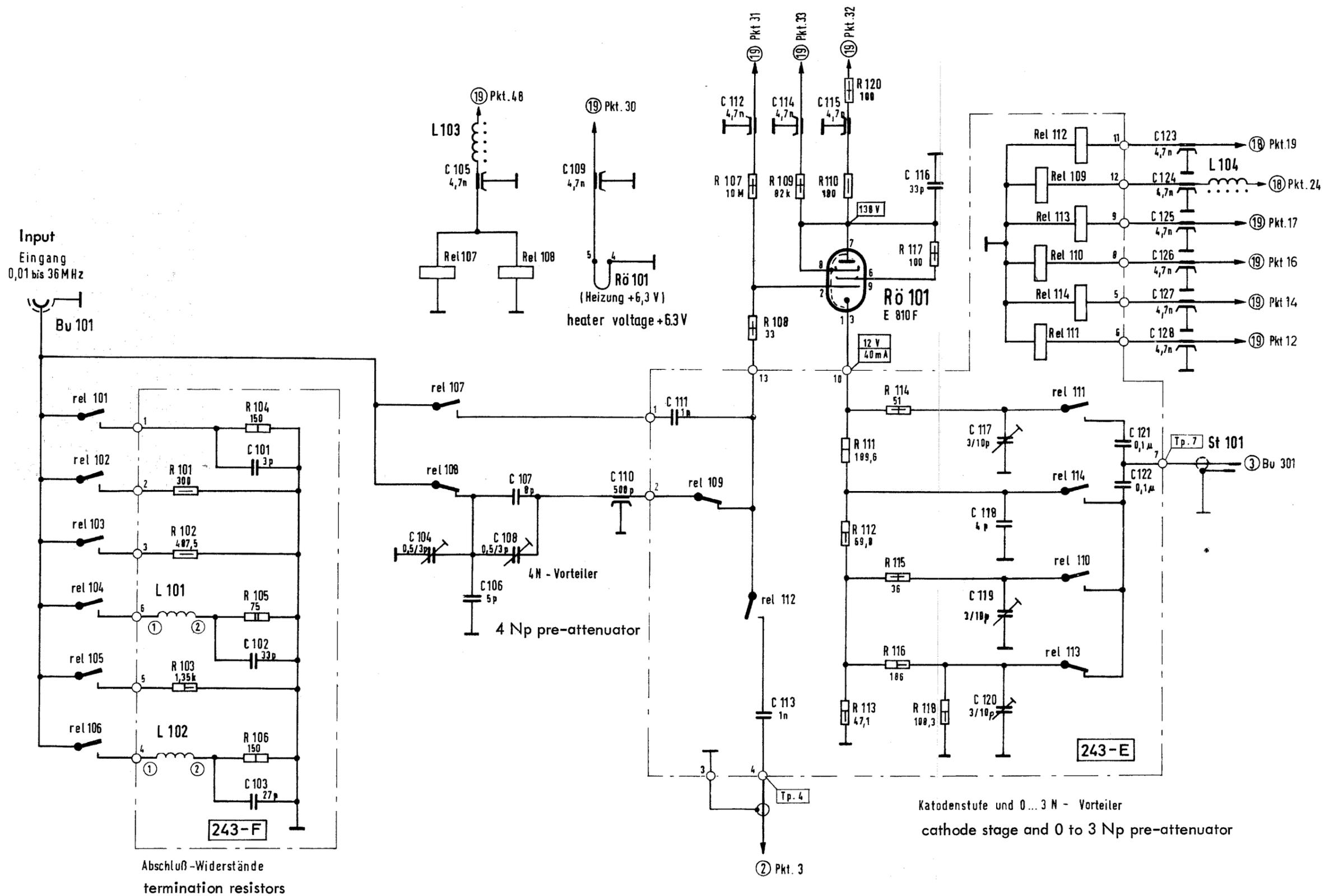
PM-5/BN 243/1
Blockschaltplan Np



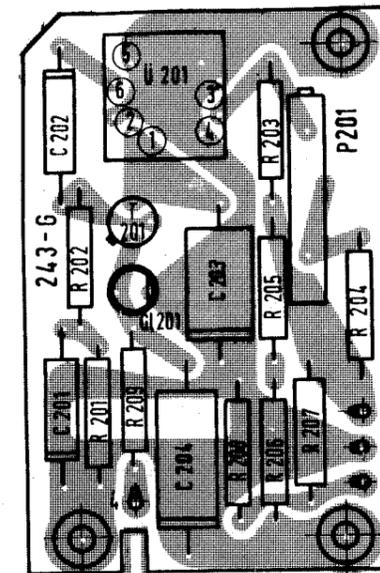


PM-5/BN 243
 Eingangsteil dB ①
 (Input Unit)



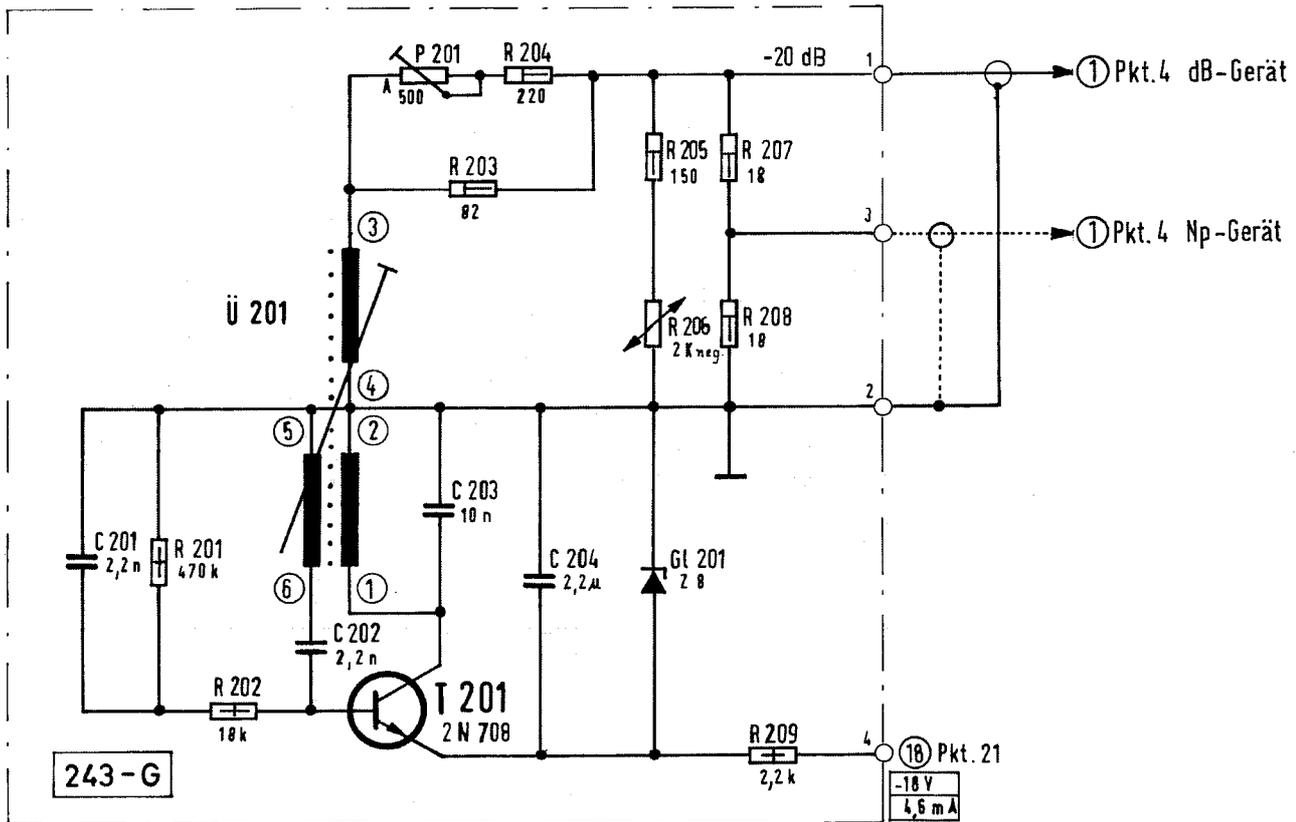


PM-5/BN 243/1
Eingangsteil Np ①
(Input Unit)



Neper Ausführung:

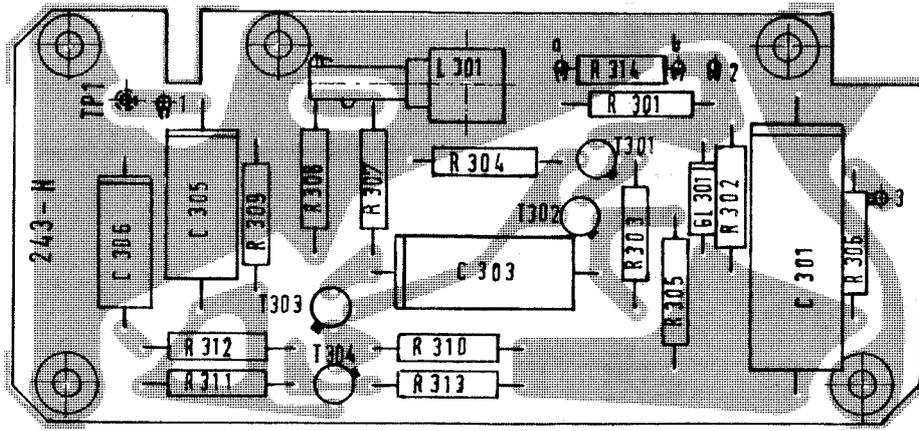
1	sw	frei
2	Schirm	Schirm
3	frei	sw

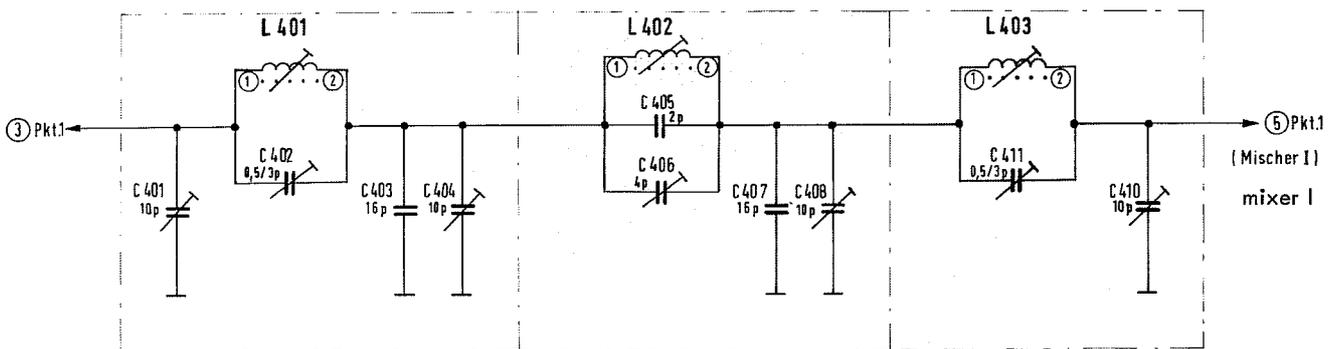
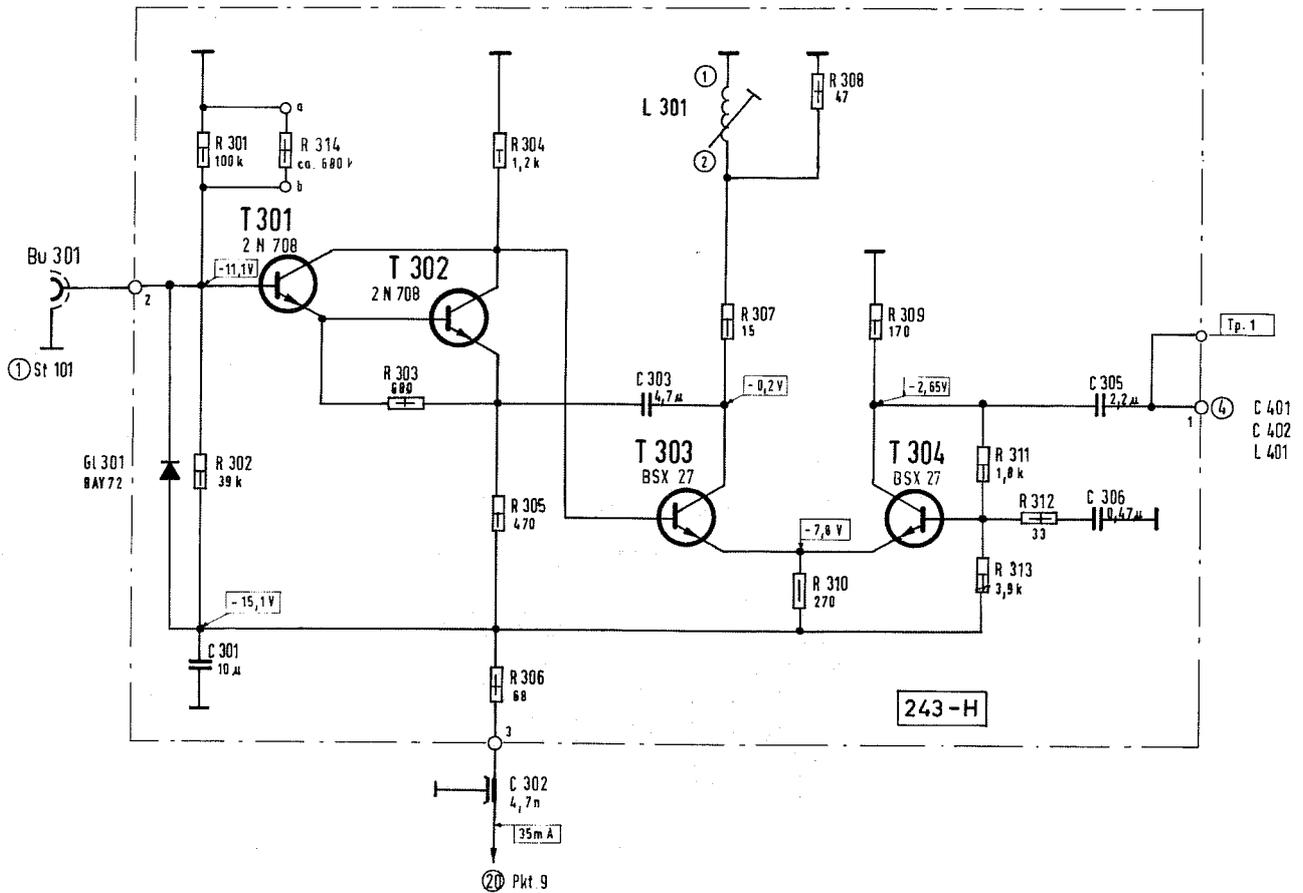


PM-5/BN 243 und 243/1

Eichoszillator 100 kHz dB, Np (2)

(Cal. Oscillator)

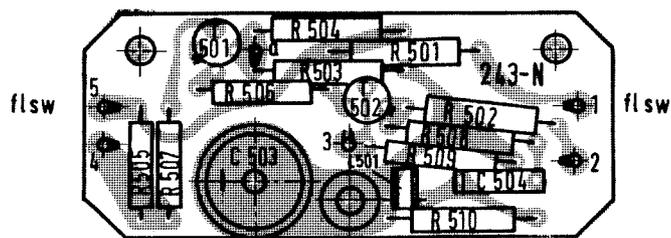
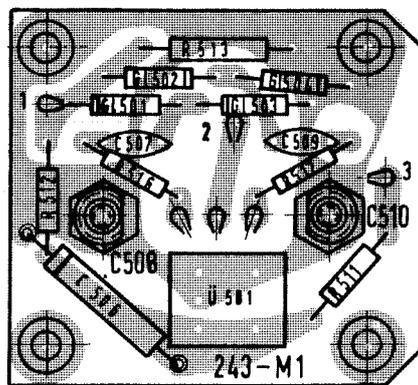


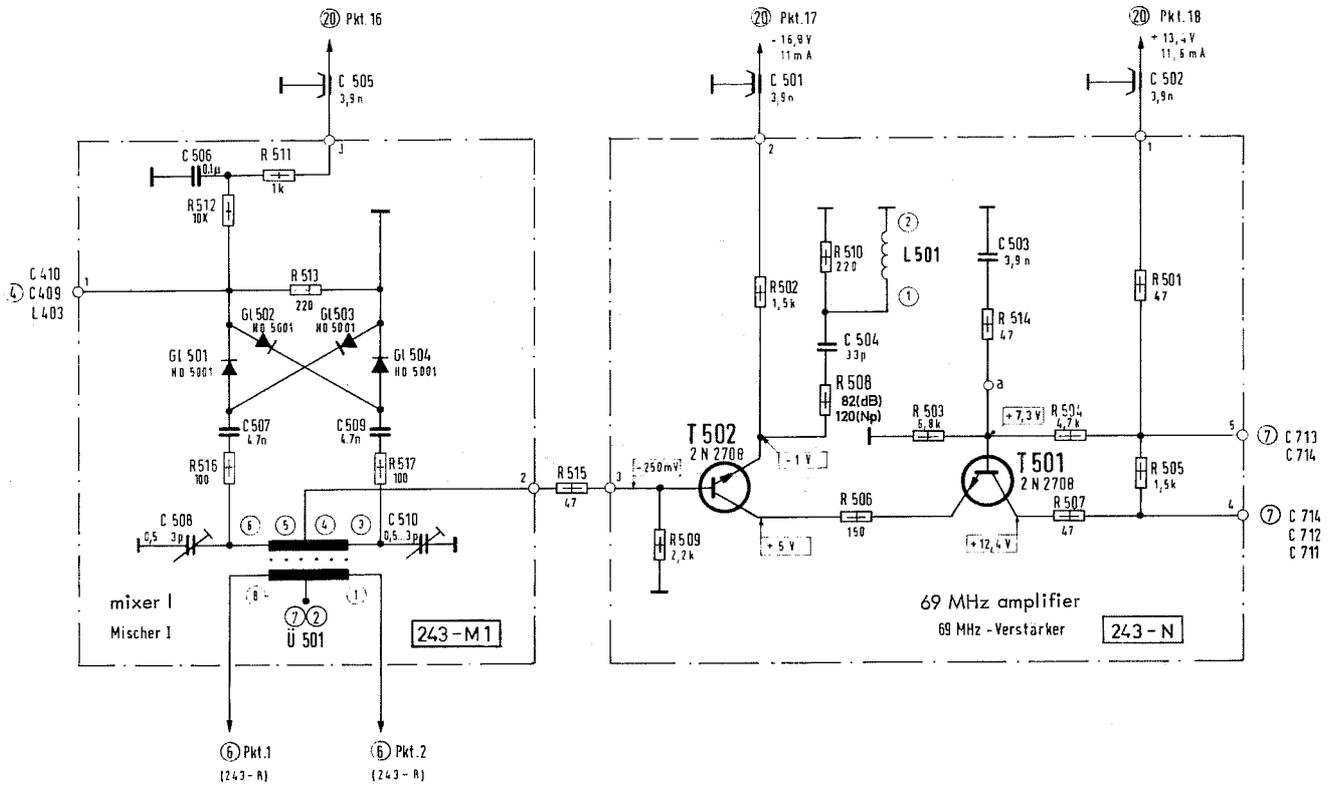


PM-5/BN 243

Vorverstärker 10 kHz bis 36 MHz (3)
(Pre-Amplifier)

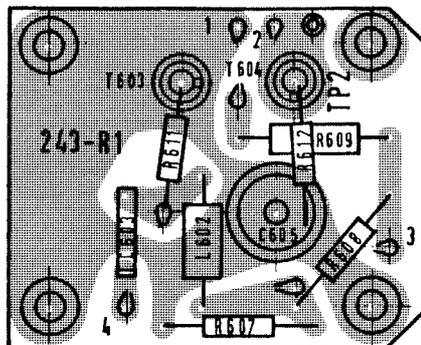
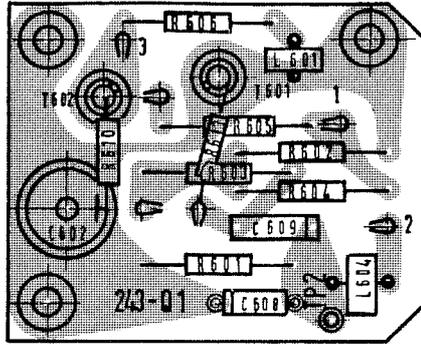
Tiefpaß 36 MHz (4)
(Low Pass Filter)

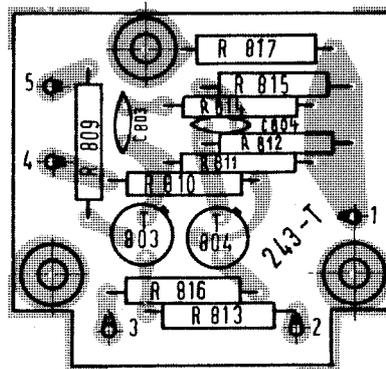
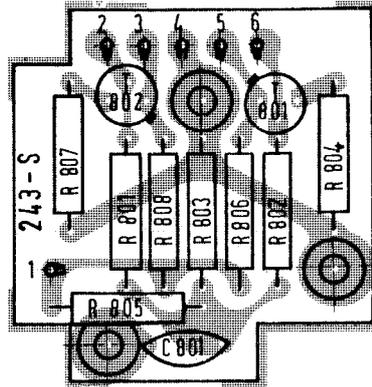


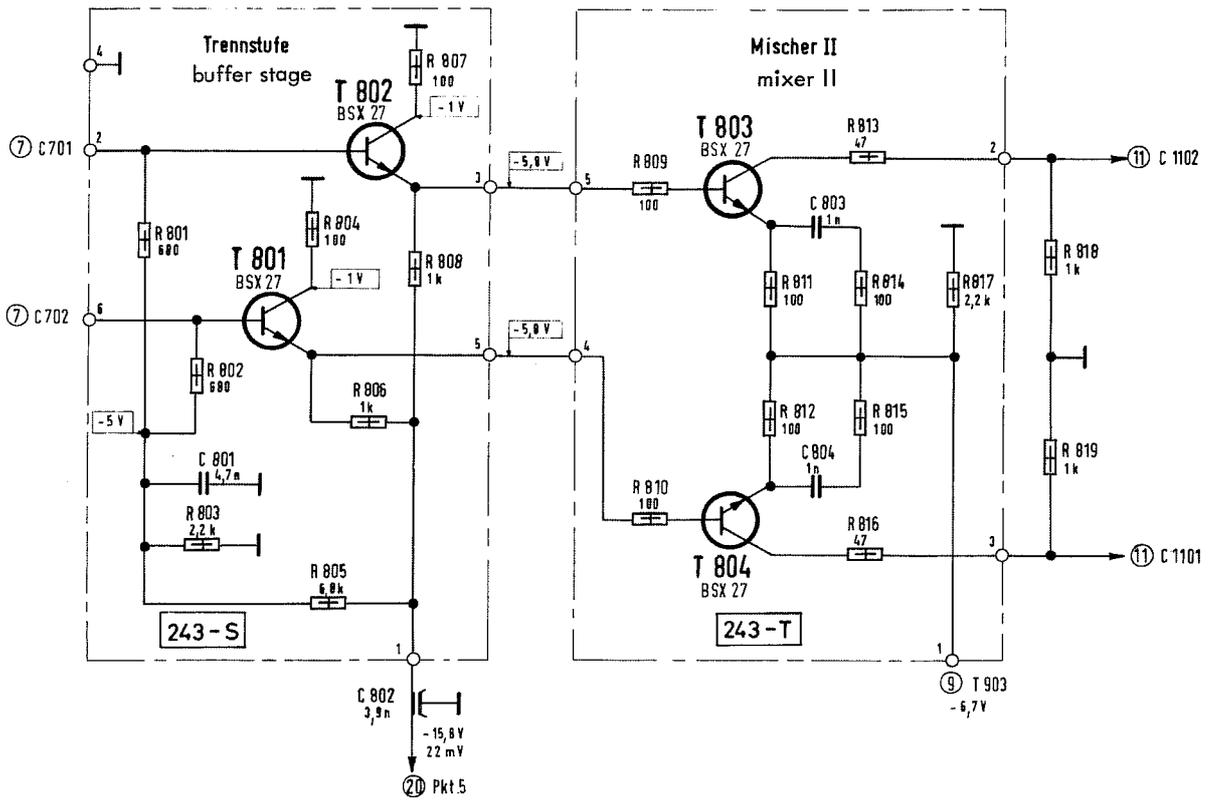
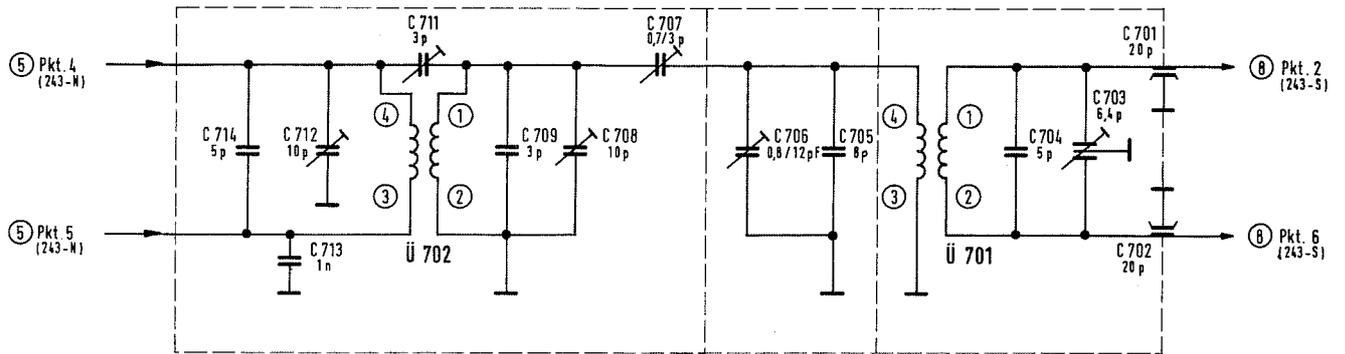


PM-5/BN 243 und 243/1

Mischer I und 69-MHz-Verstärker dB, Np
 (Mixer I and 69 MHz-Amplifier)







PM-5/BN 243

Bandpaß 69 MHz (7)

(Band Pass Filter)

Mischer II (8)

(Mixer II)

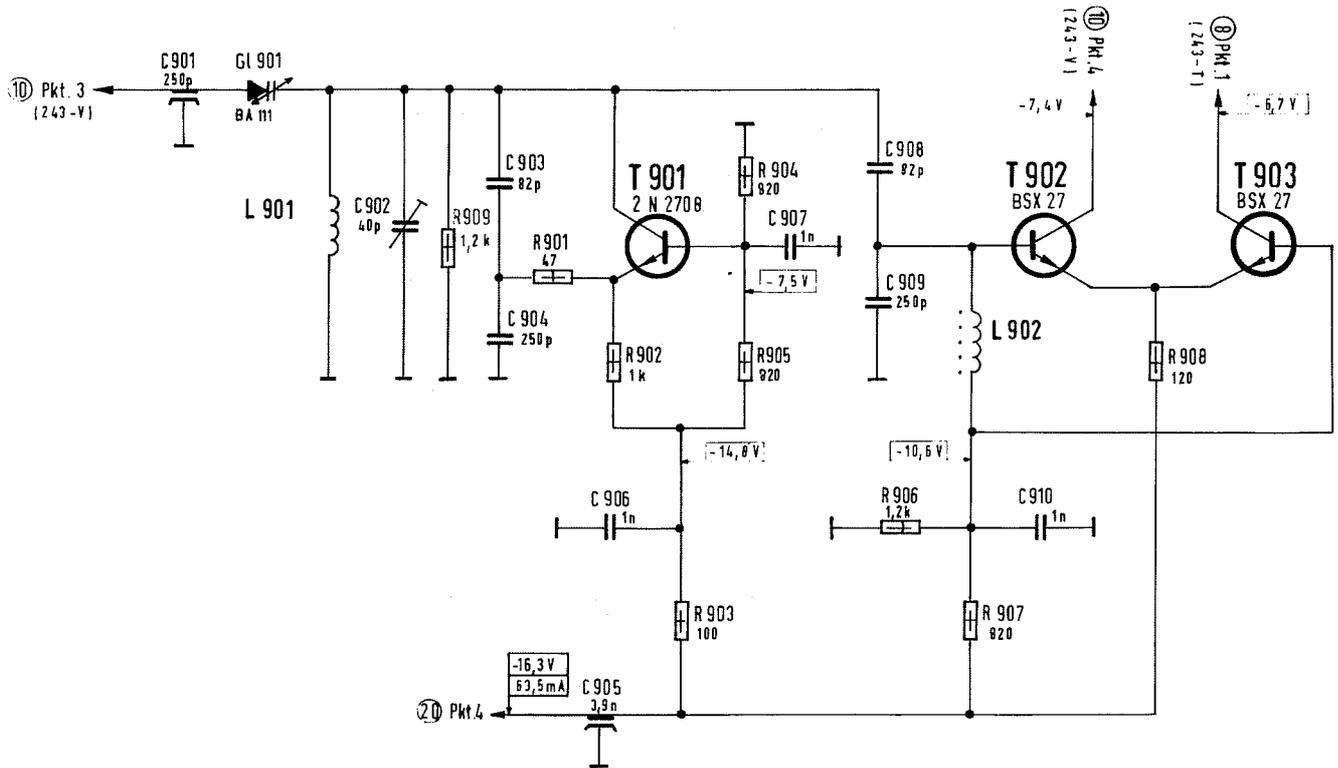
BR-2 (BR-2-M)

BR-2 (BR-2-M)

(BR-2-M)

BR-2 (BR-2-M)

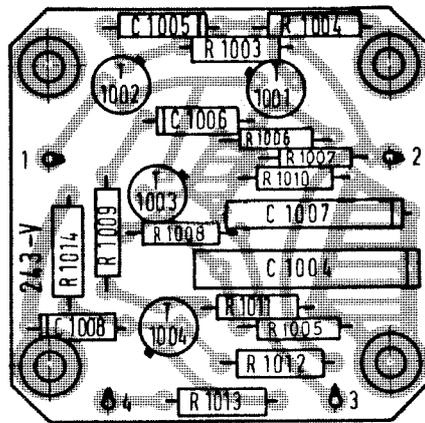
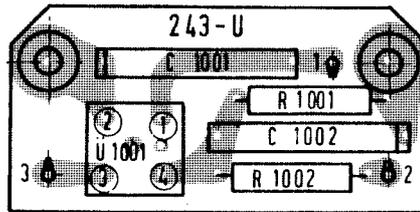
(BR-2-M)

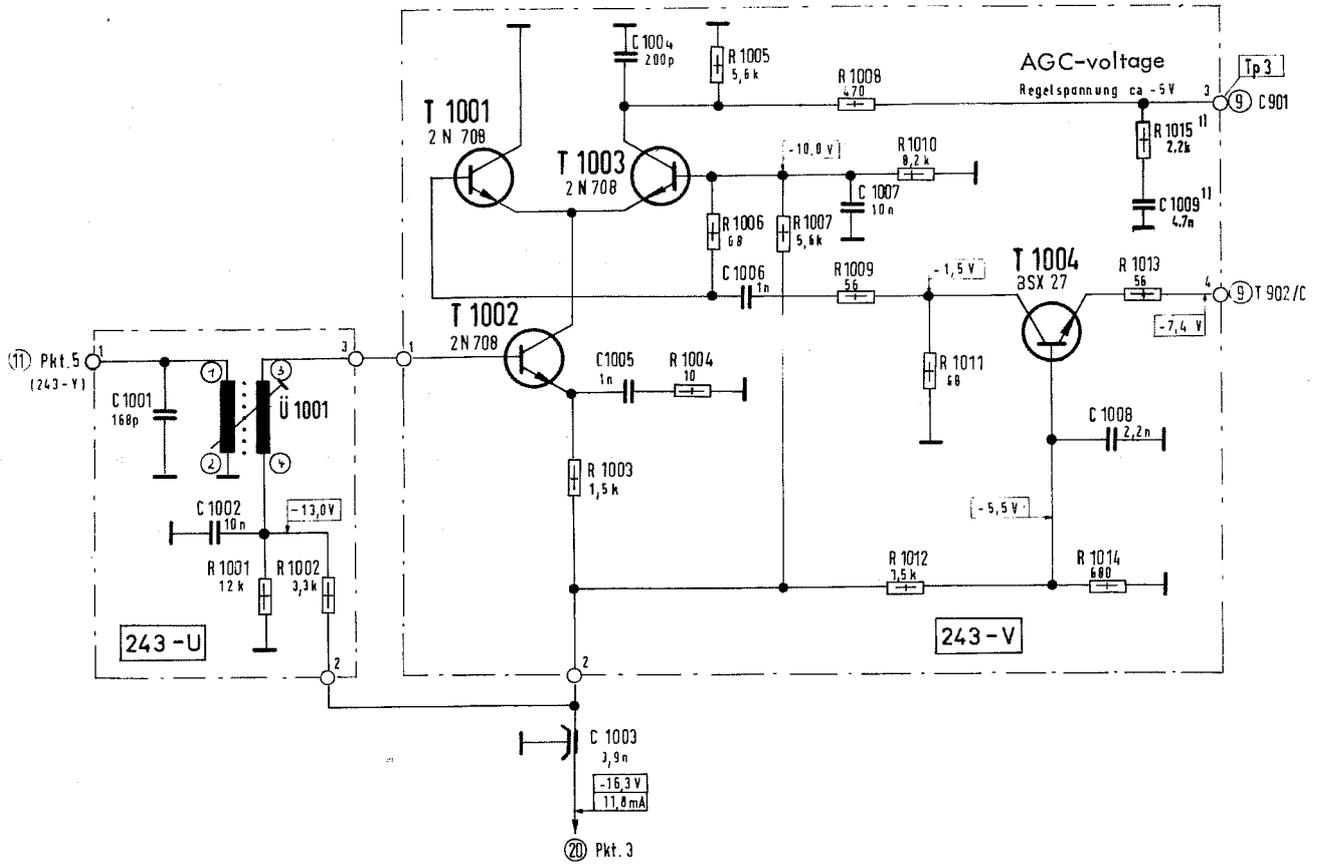


PM-5/BN 243

Oszillator und Begrenzer 61,56 MHz

(Oscillator and Limiter)

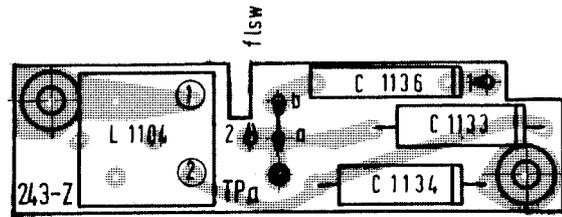
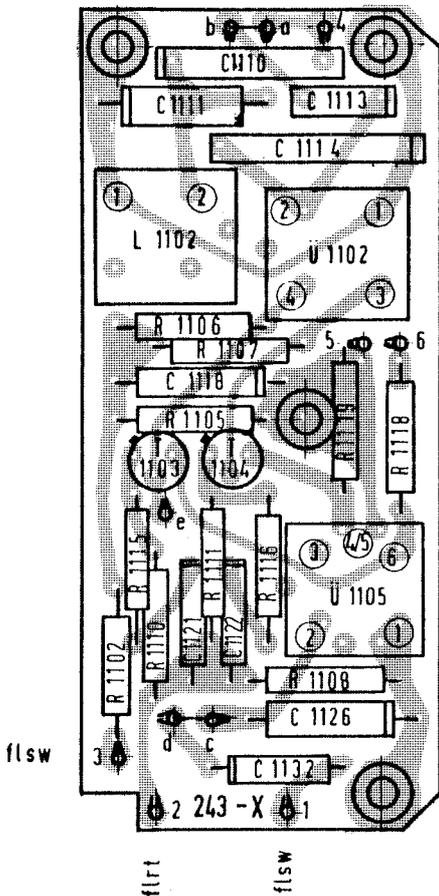
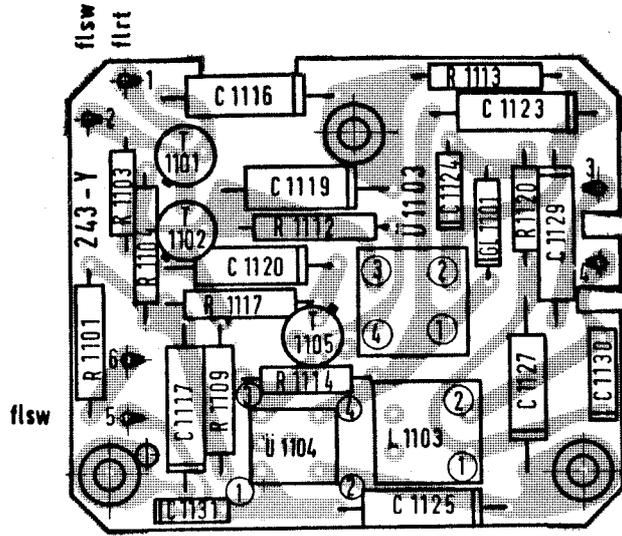
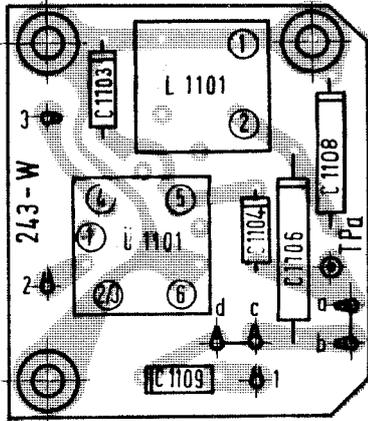


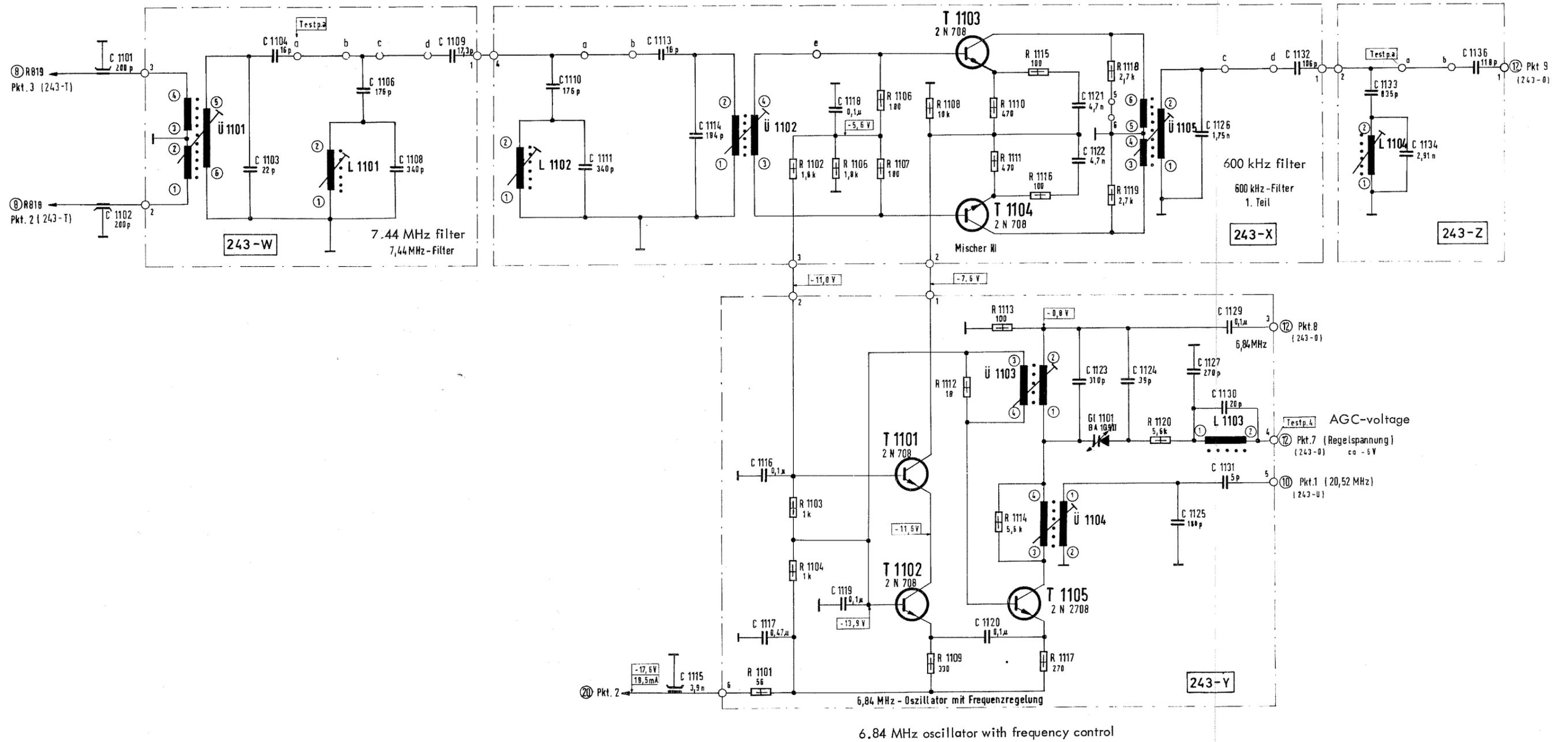


PM-5 /BN 243

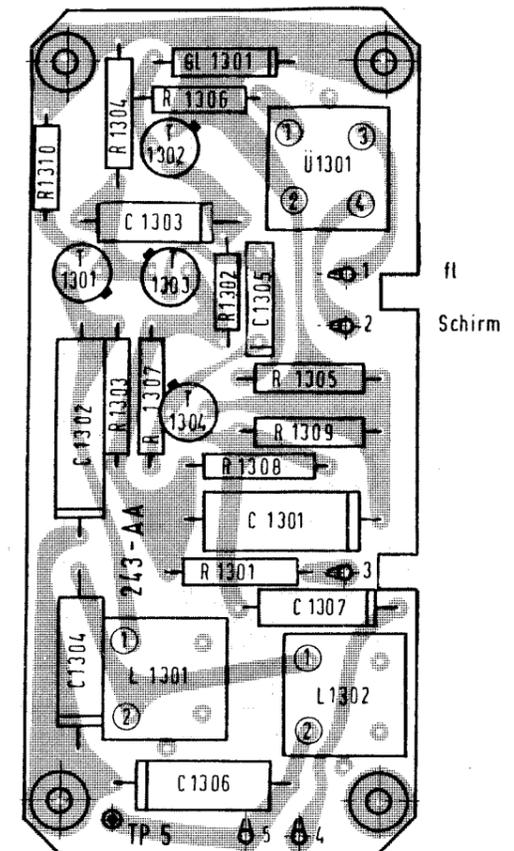
Rasteinrichtung 20,52/61,56 MHz

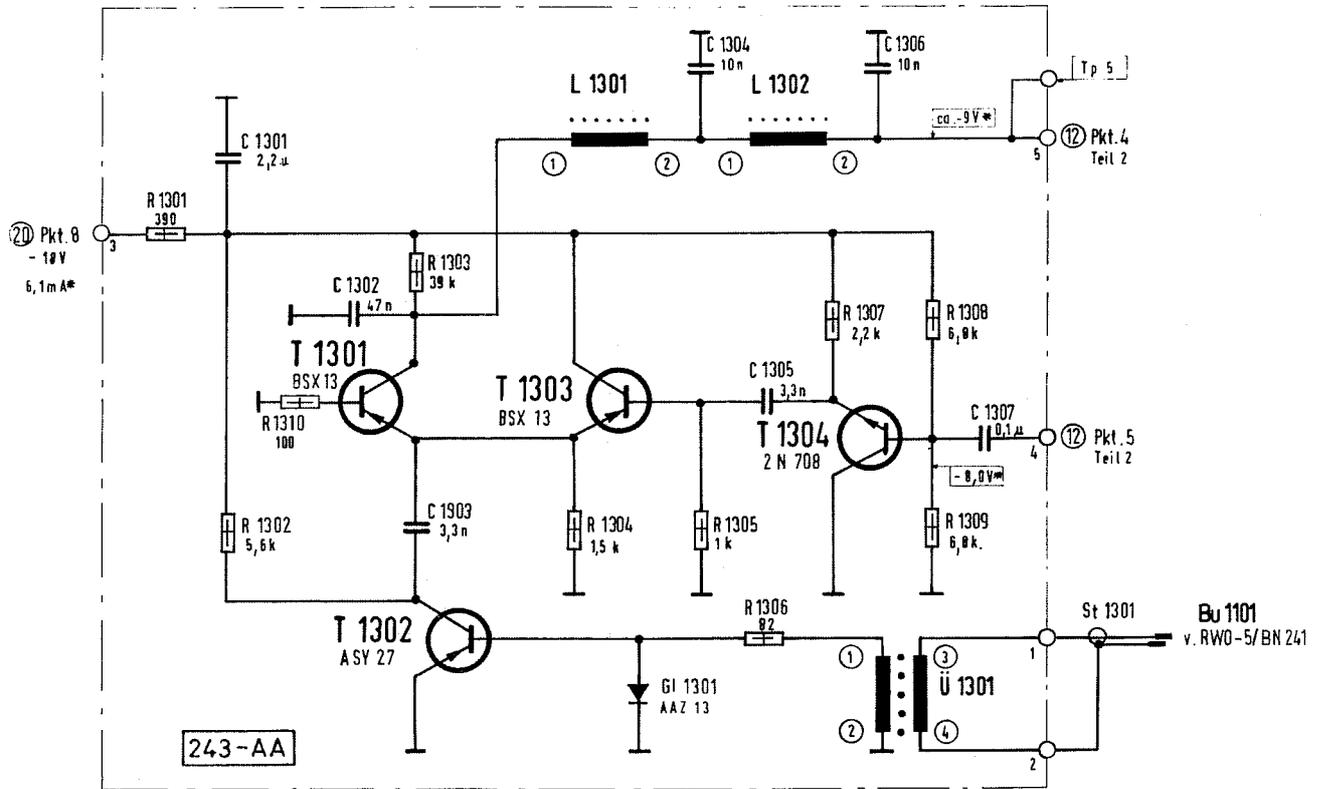
(Synchronizing Unit)





PM-5/BN 243
 Umsetzung 7,44 MHz/600 kHz (11)
 (Frequency Converter)





* Angaben mit 10 kHz - Rechteck

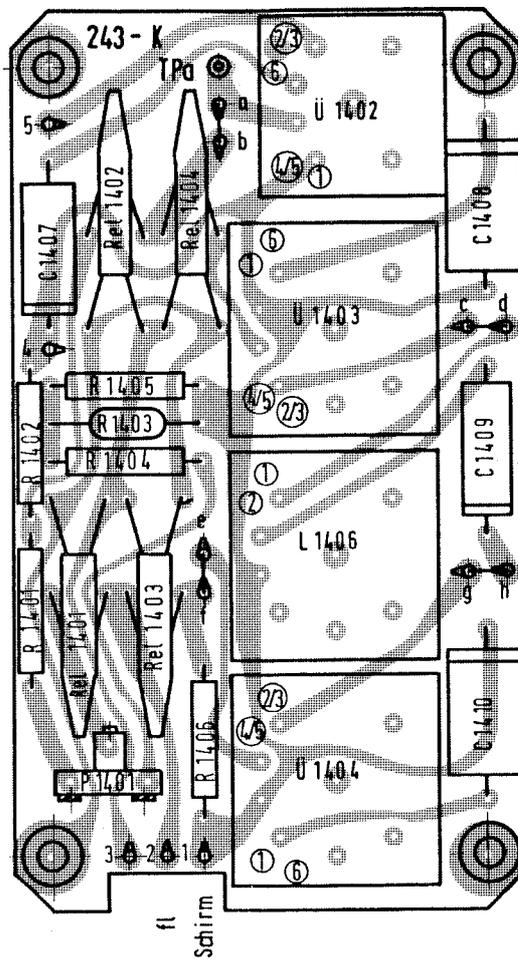
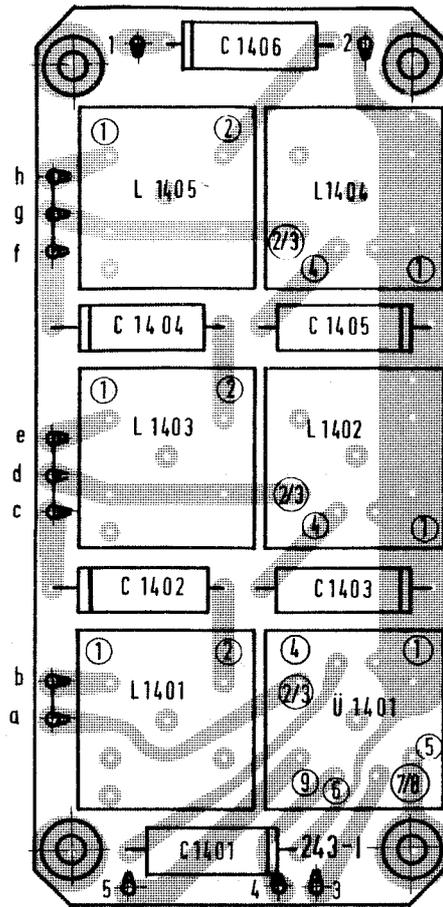
values rated to 10 kHz square wave voltage modulation

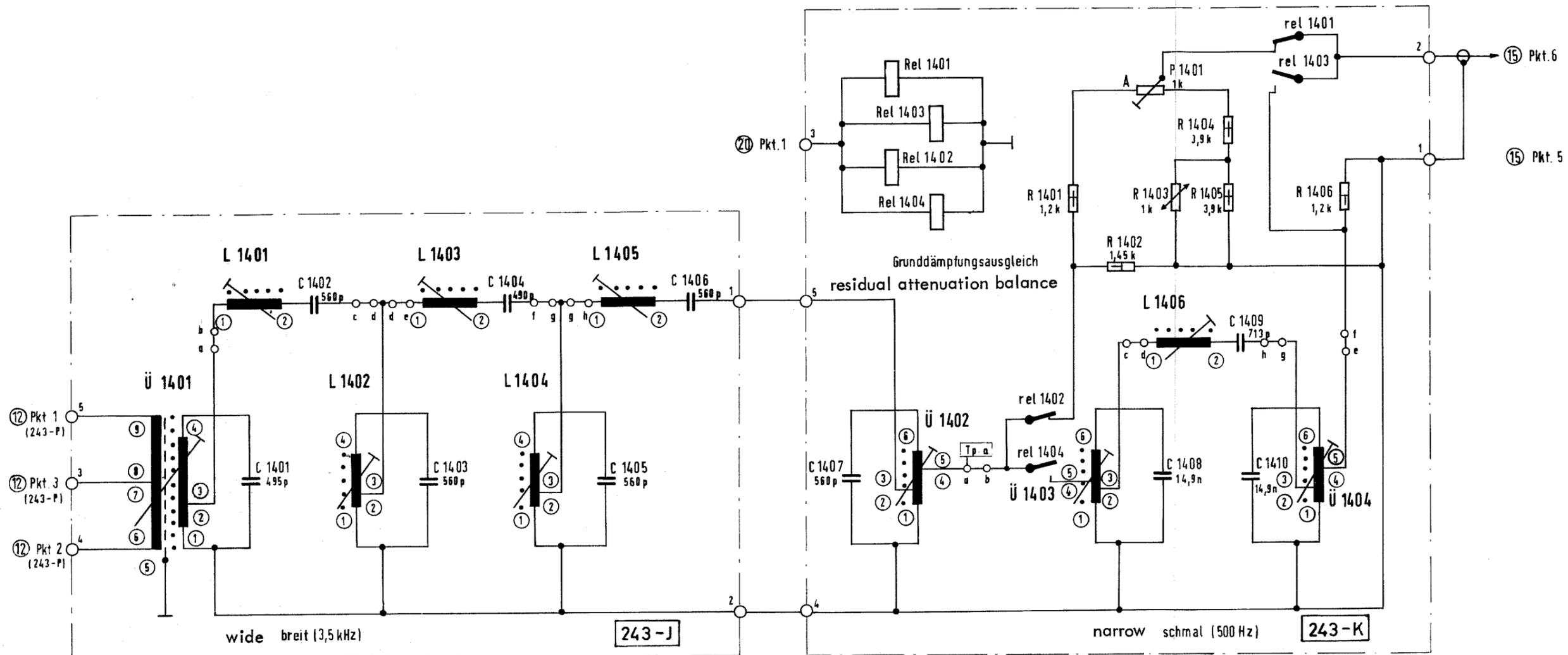
PM-5/BN 243

Rasteinrichtung 10/570 kHz

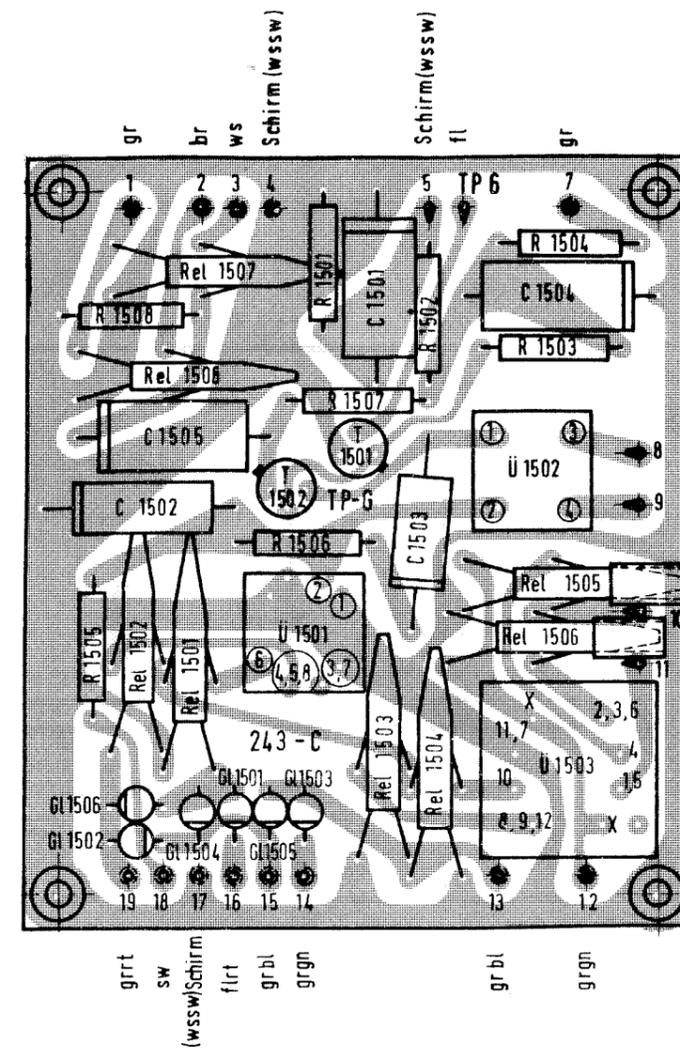
13

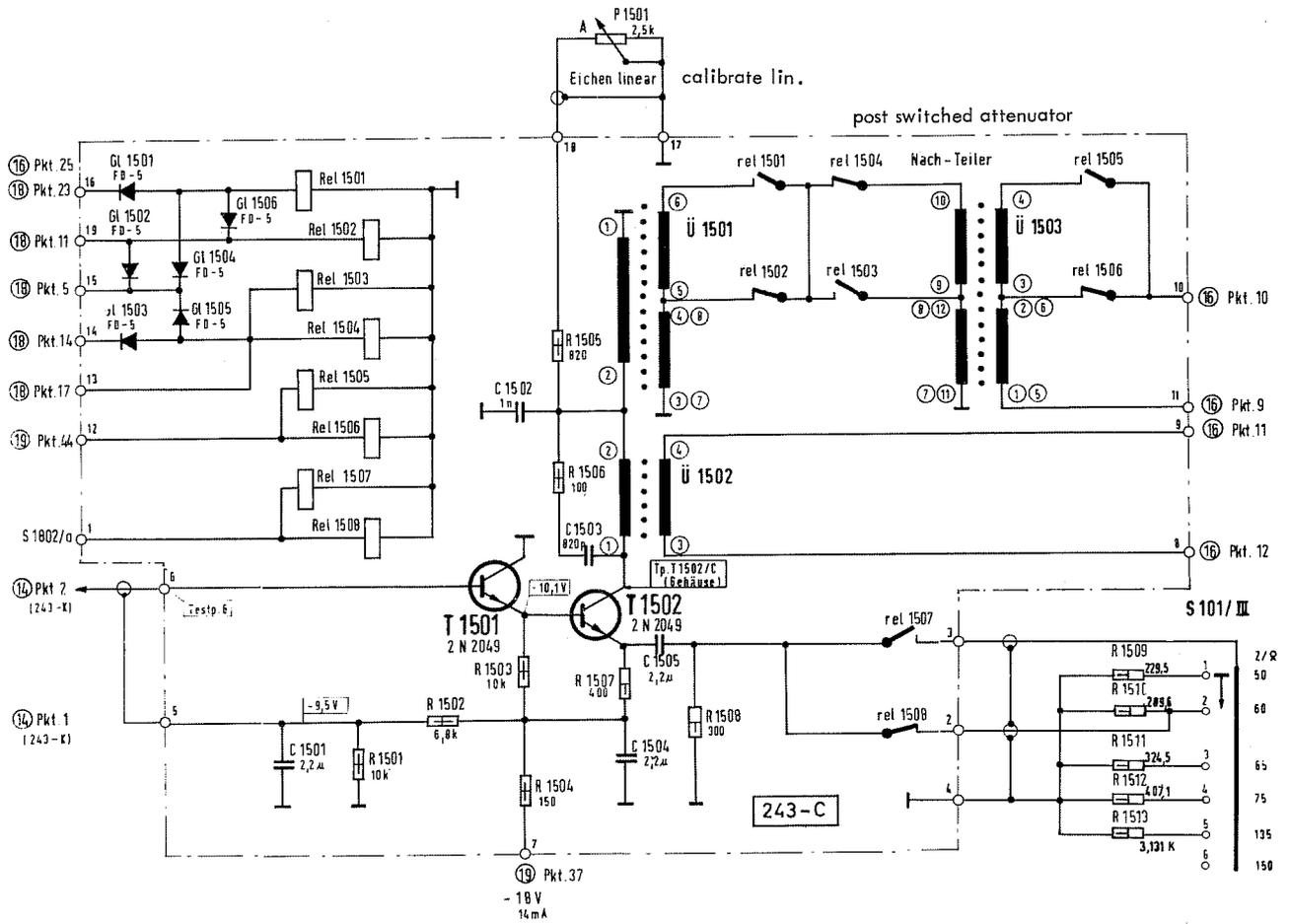
(Synchronizing Unit)





PM-5/BN 243
 30-kHz-Bandpaß (14)
 (30 kHz Band Pass Filter)





post switched attenuator

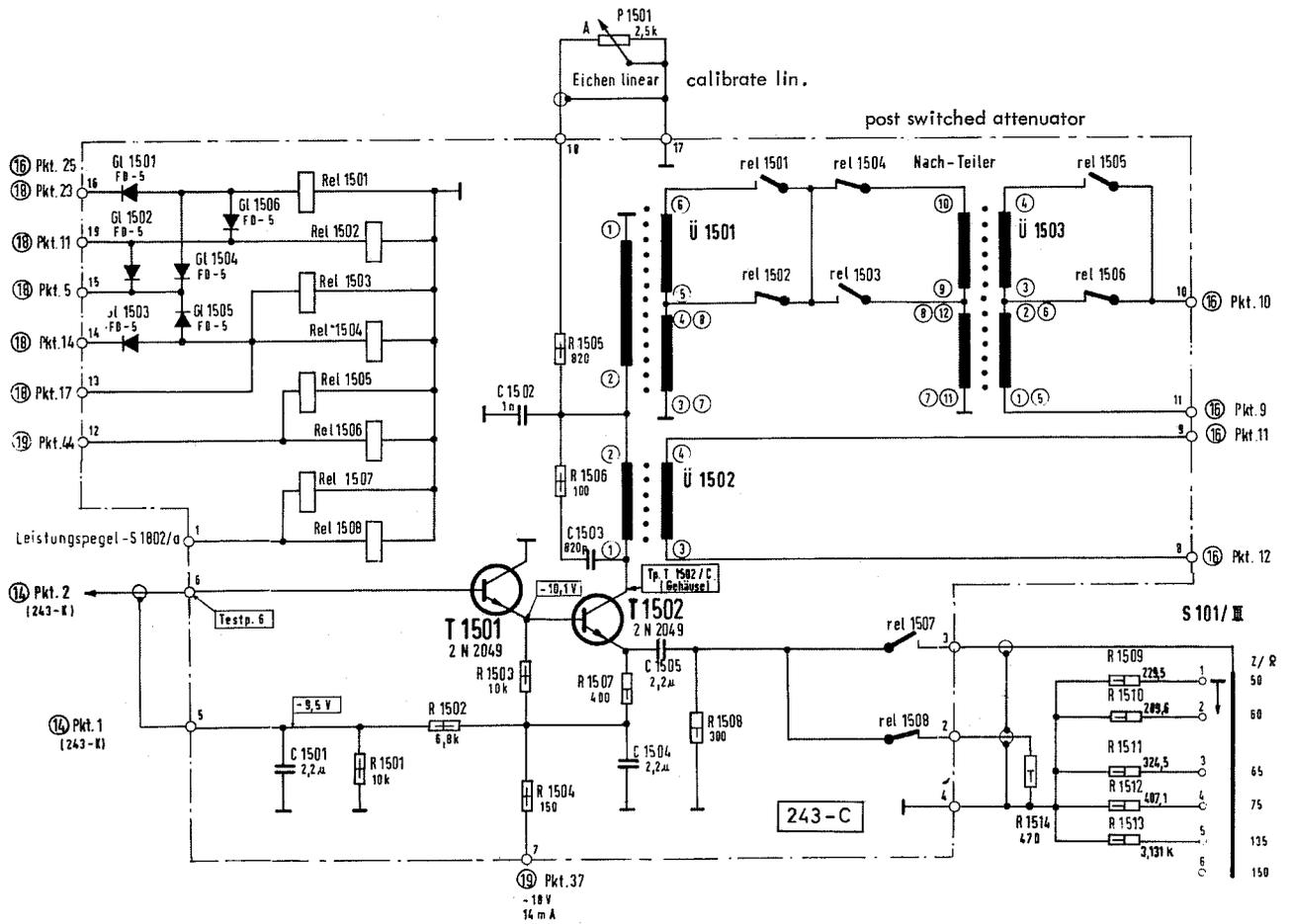
attenuation Nach-Teiler relay energized

Dämpfung	erregte Relais
0 dB	Rel 1501... 1506
10 dB	Rel 1501,1502,1505,1508
20 dB	Rel 1503... 1506
30 dB	Rel 1505,1506
40 dB	Rel 1501... 1504
50 dB	Rel 1501,1502
60 dB	Rel 1503,1504
70 dB	—

PM-5/BN 243

30-kHz-Verstärker 1 und Nach-Teiler dB

(30 kHz Amplifier 1 and Output Attenuator)



post switched attenuator

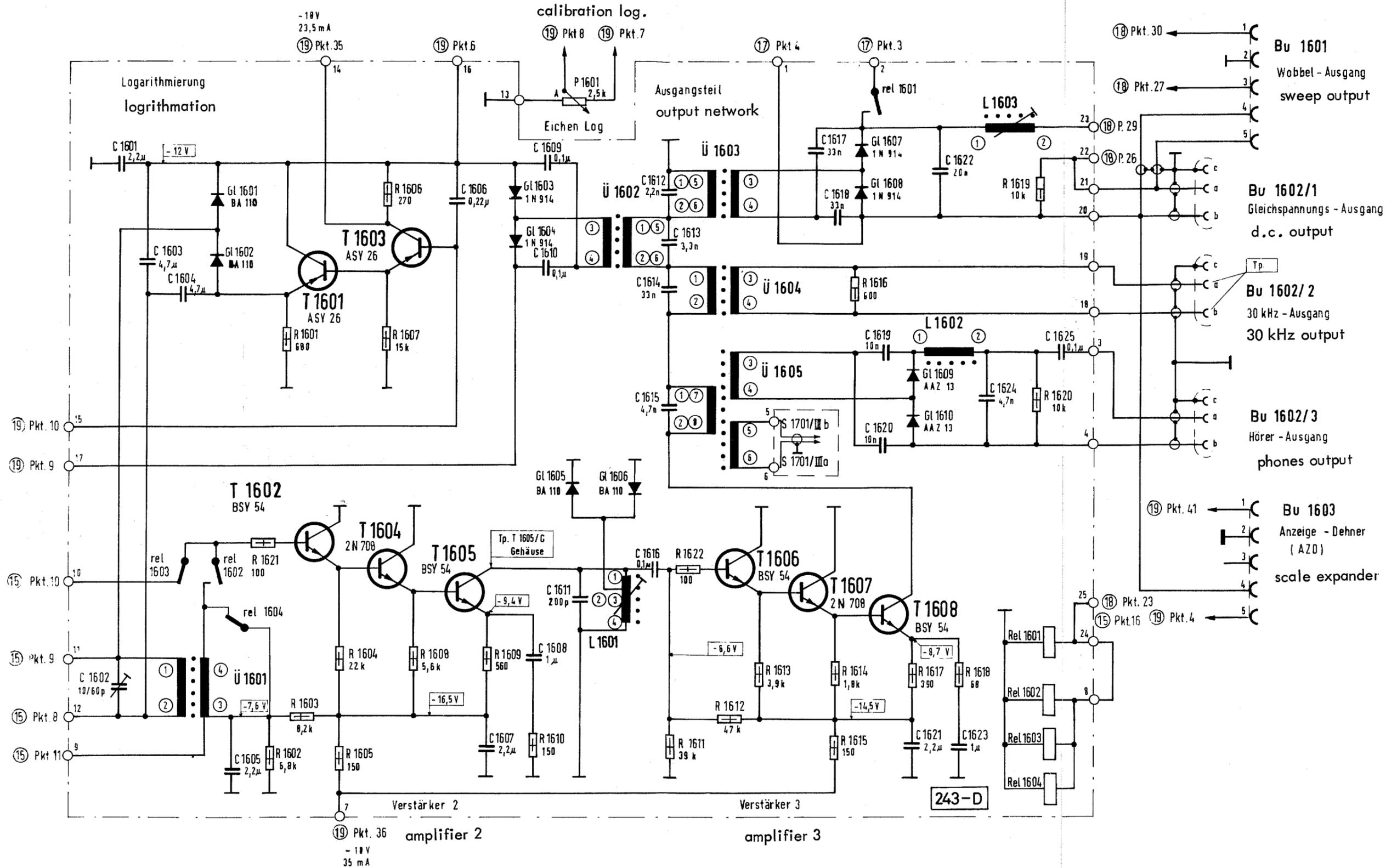
attenuation Nach-Teiler relay energized

Dämpfung	erregte Relais
0 Np	Rel 1501... 1506
1 Np	Rel 1501,1502,1505,1506
2 Np	Rel 1503... 1506
3 Np	Rel 1505,1506
4 Np	Rel 1501...1504
5 Np	Rel 1501,1502
6 Np	Rel 1503,1504
7 Np	—

PM-5/BN 243/1

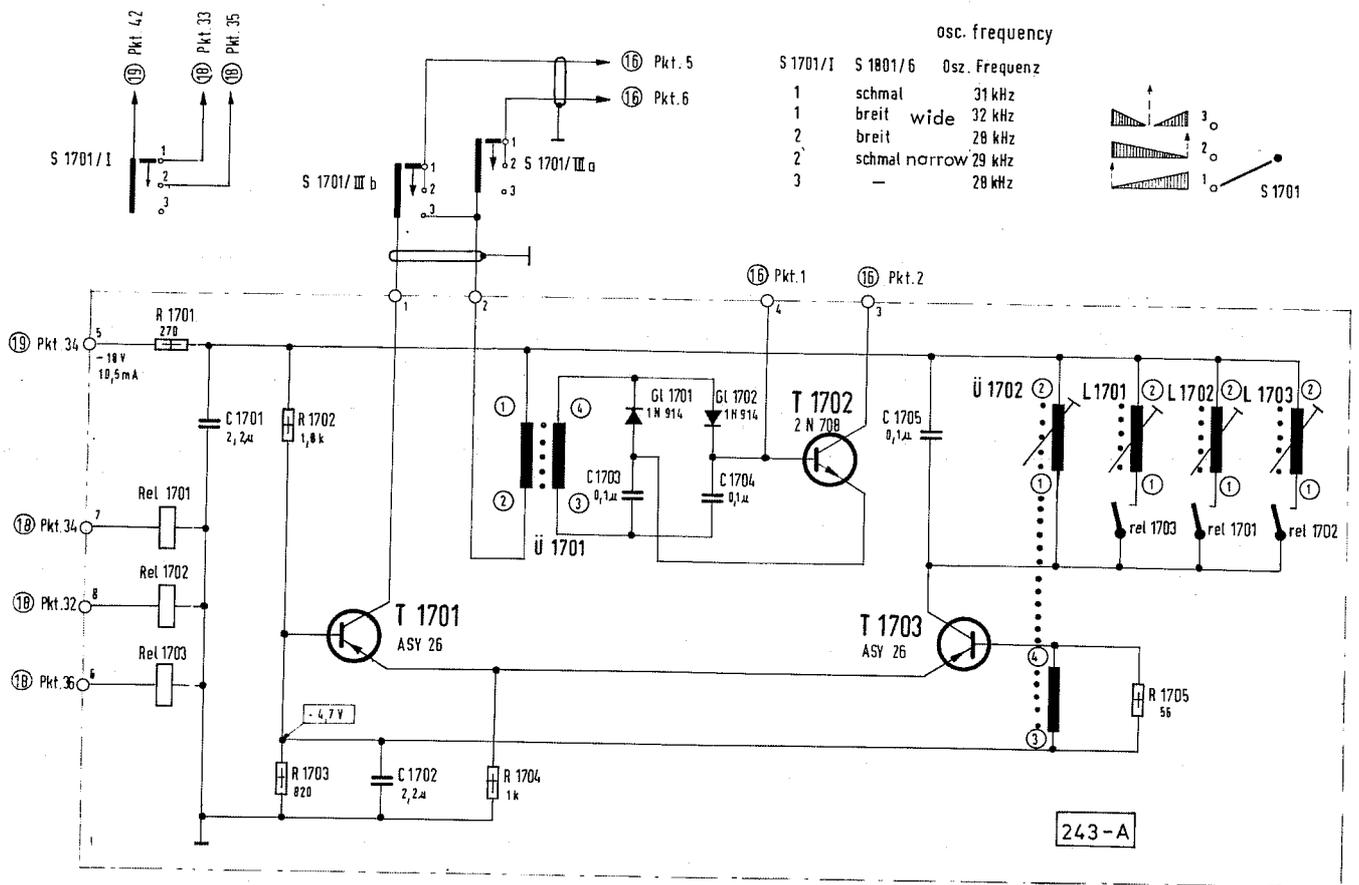
30-kHz-Verstärker I und Nach-Teiler Np

(30 kHz Amplifier I and Output Attenuator)



PM-5/BN 243 und 243/1

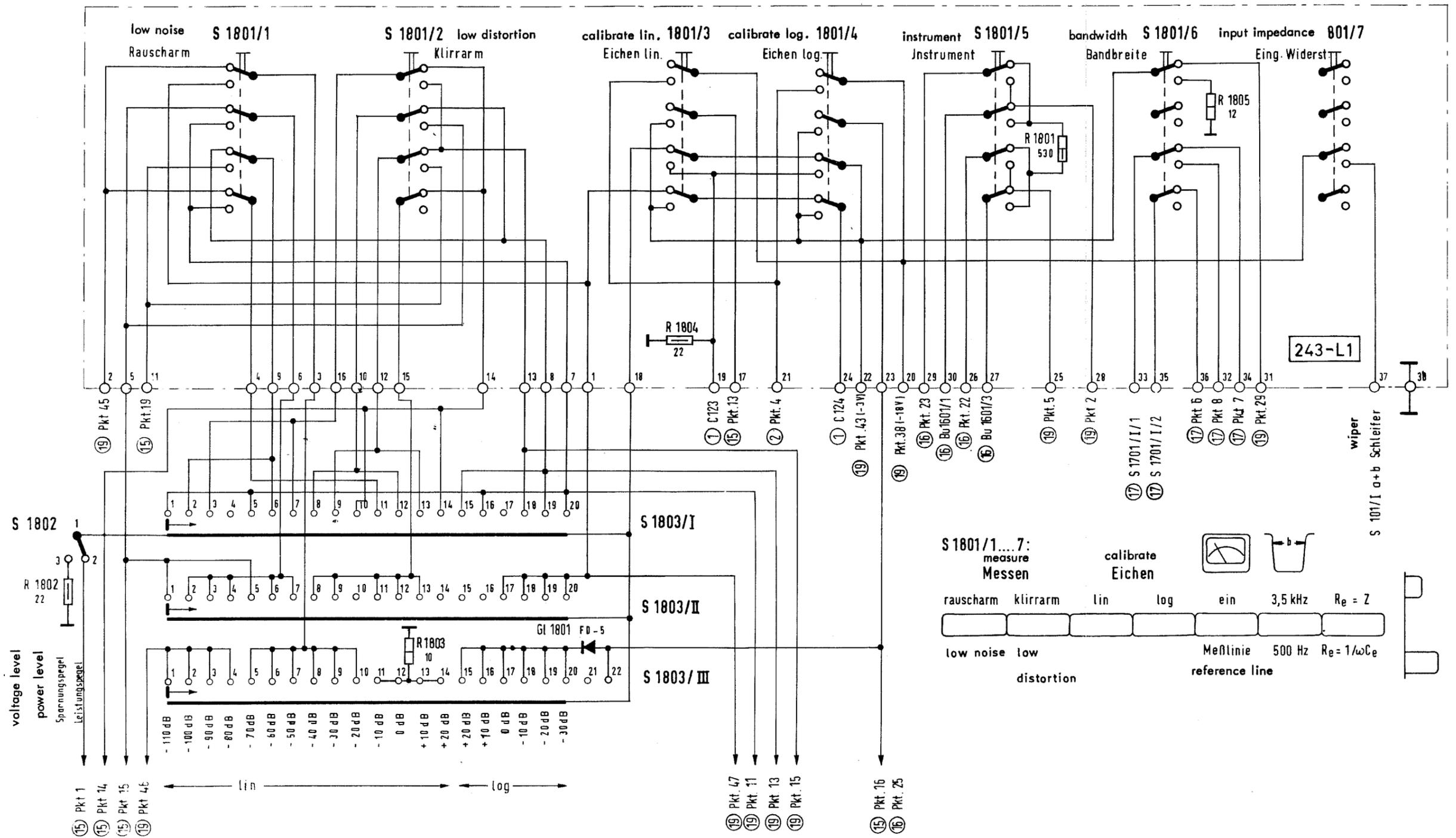
30-kHz-Verstärker 2 und 3 mit Ausgangsteil dB, Np
 (30 kHz Amplifier 2 and 3 with Output Unit)



PM-5/BN 243 und 243/1

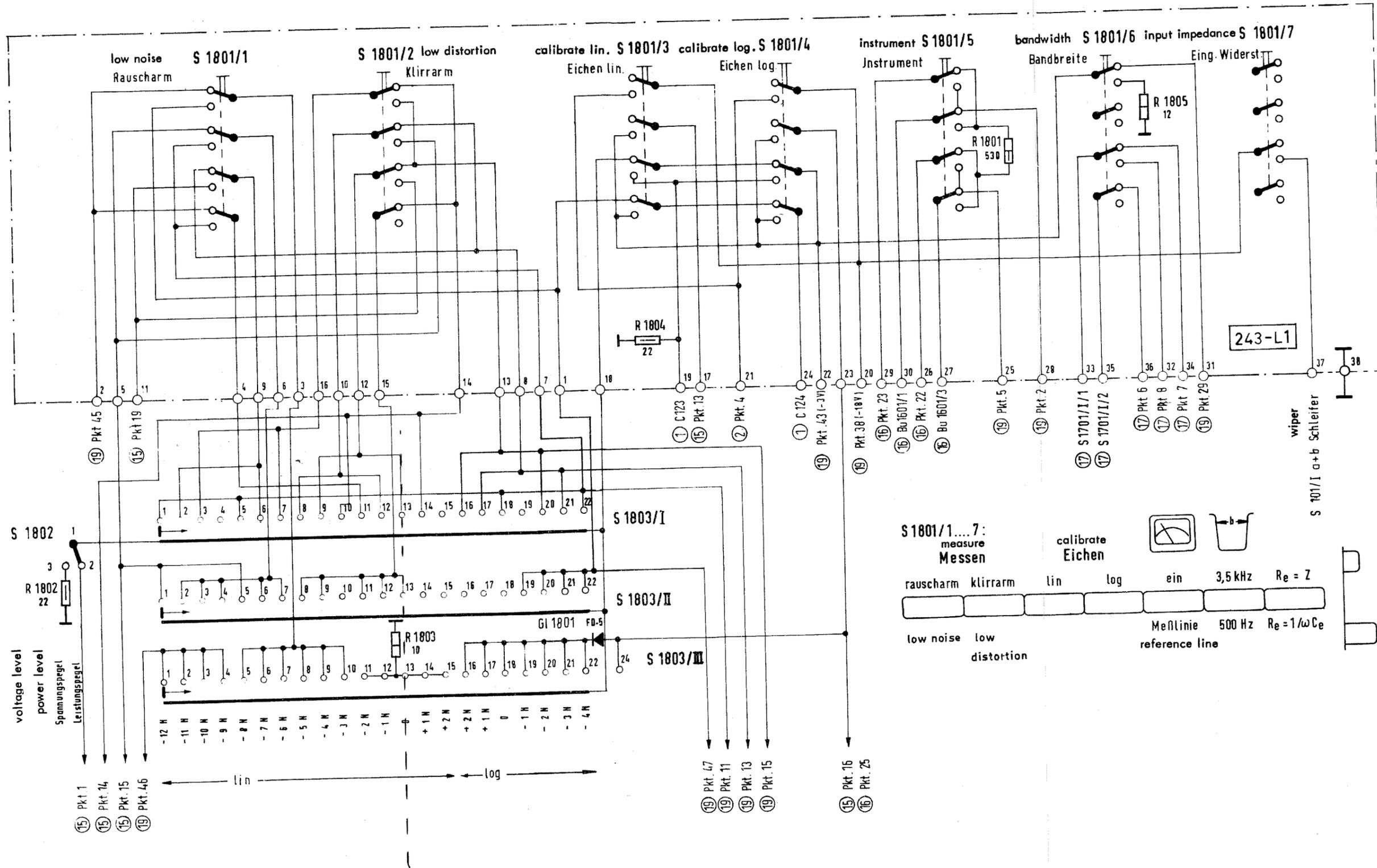
Umsetzoszillator für Hörer dB, Np

(Carrier Oscillator for Headset-Demodulator)



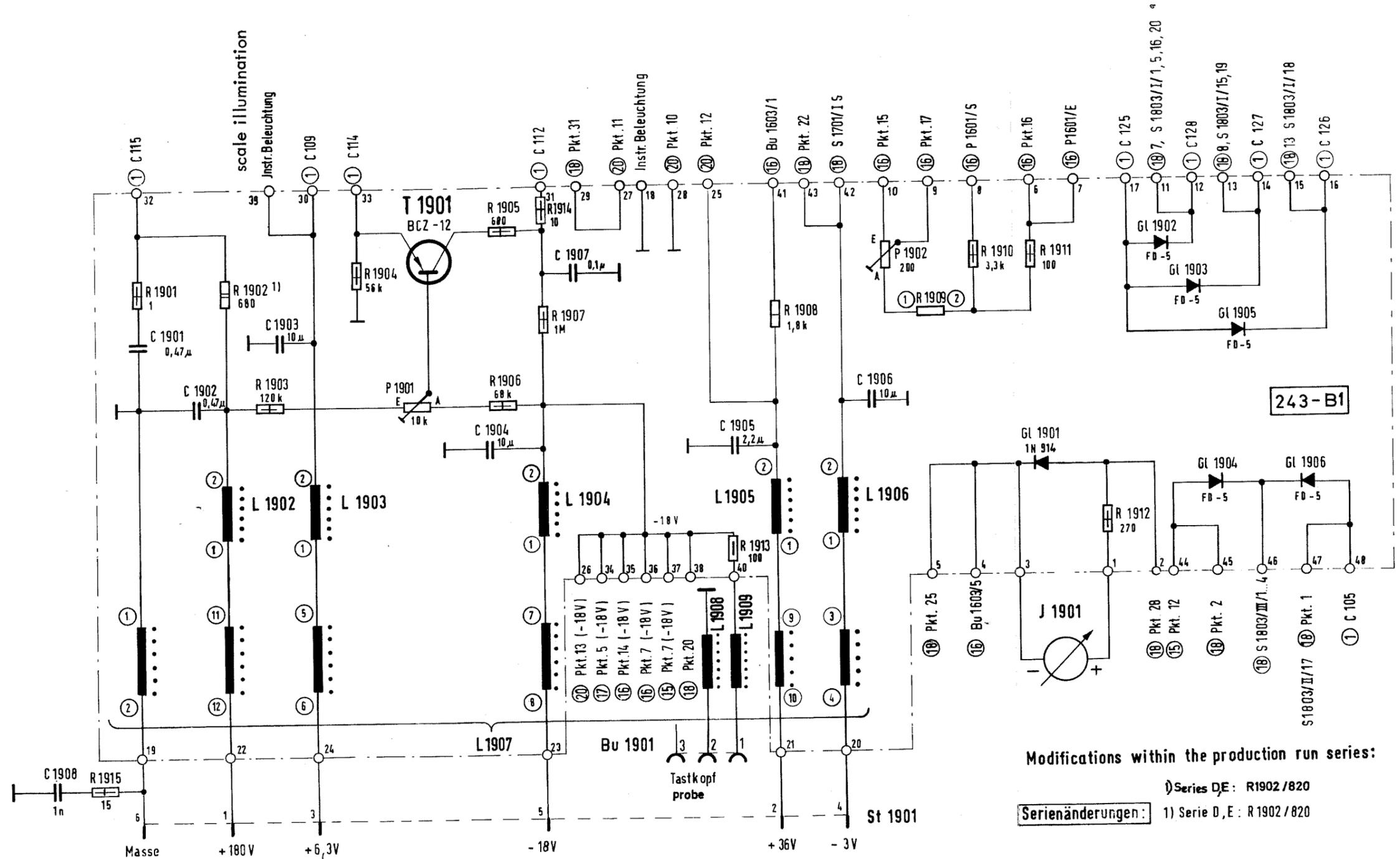
PM-5/BN 243

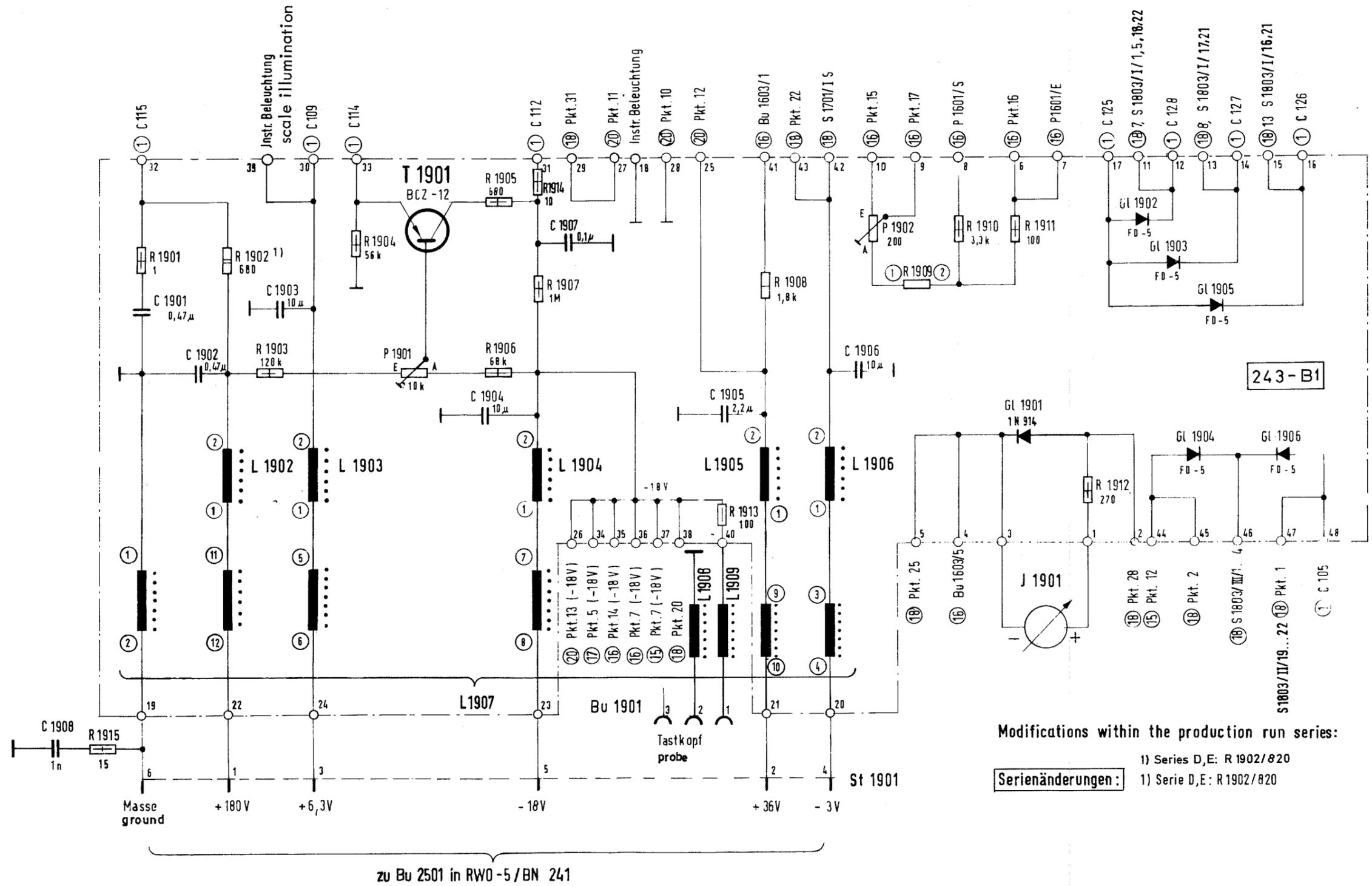
Tastensatz und Empfindlichkeitsschalter dB
(Push-Button Set and Level Switch)



PM-5/BN 243/1

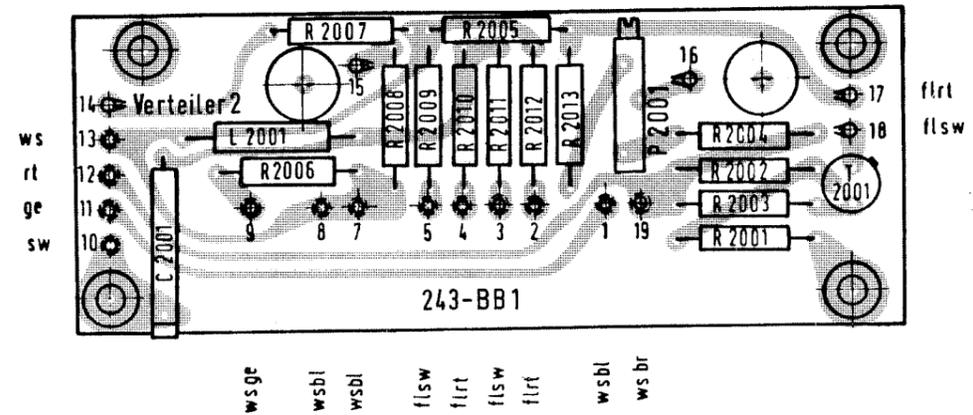
Tastensatz und Empfindlichkeitsschalter Np
(Push-Button Set and Level Switch)

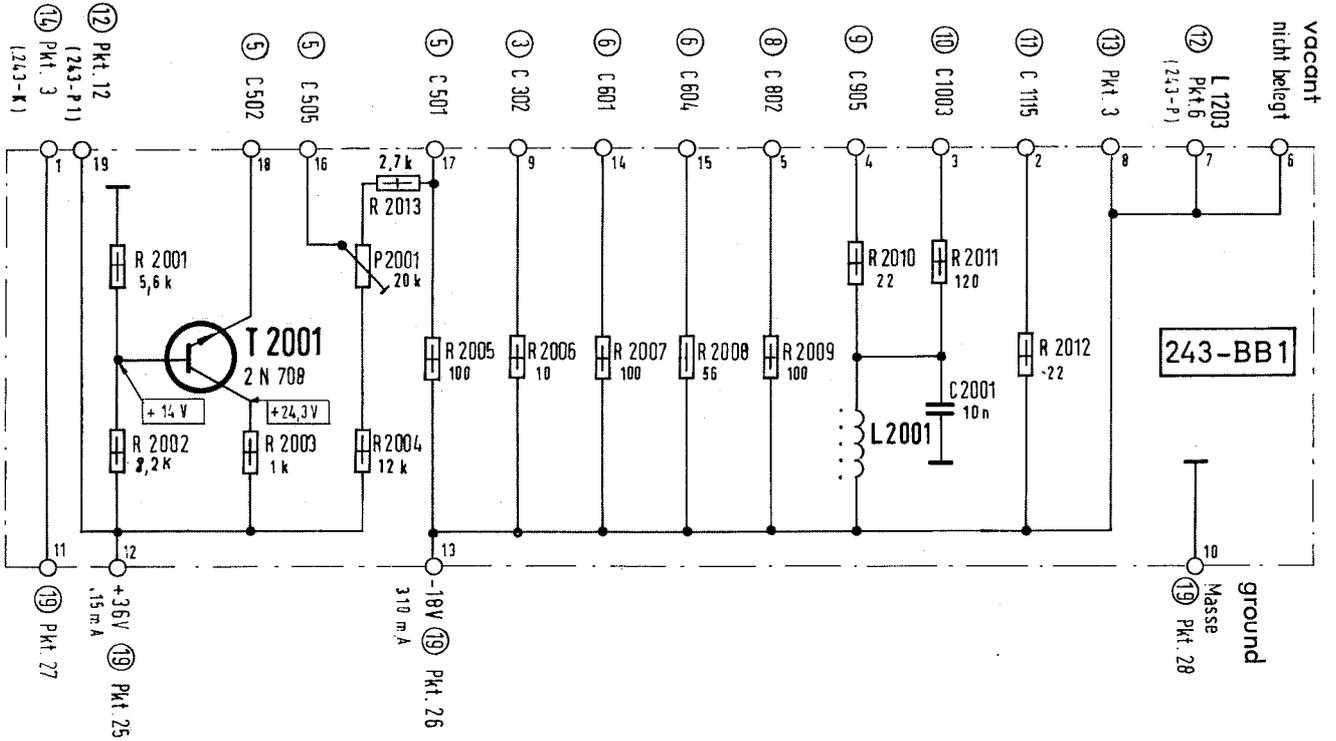




Modifications within the production run series:

Serienänderungen: 1) Serie D,E: R 1902/820
1) Serie D,E: R 1902/820



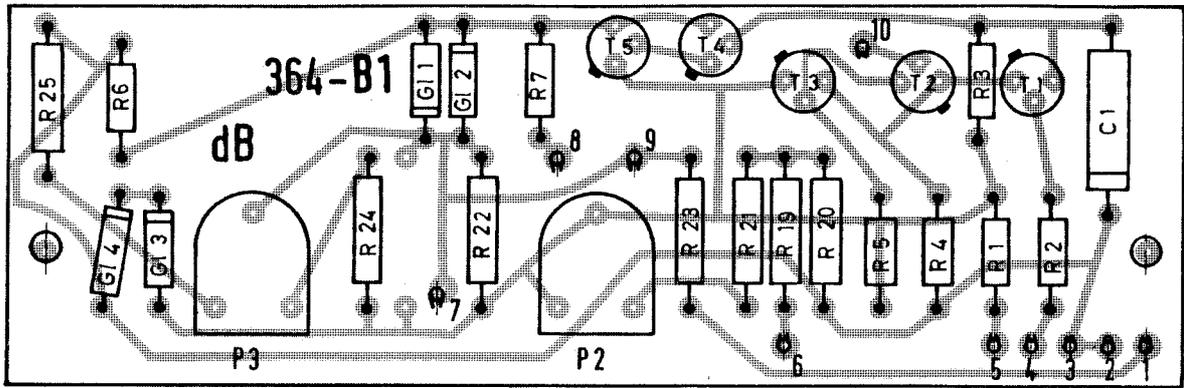


PM-5 / BN 243

Verteiler 2

20

(Distributor)



ws rt

ws ge

ws gn

ws bl

ws rt

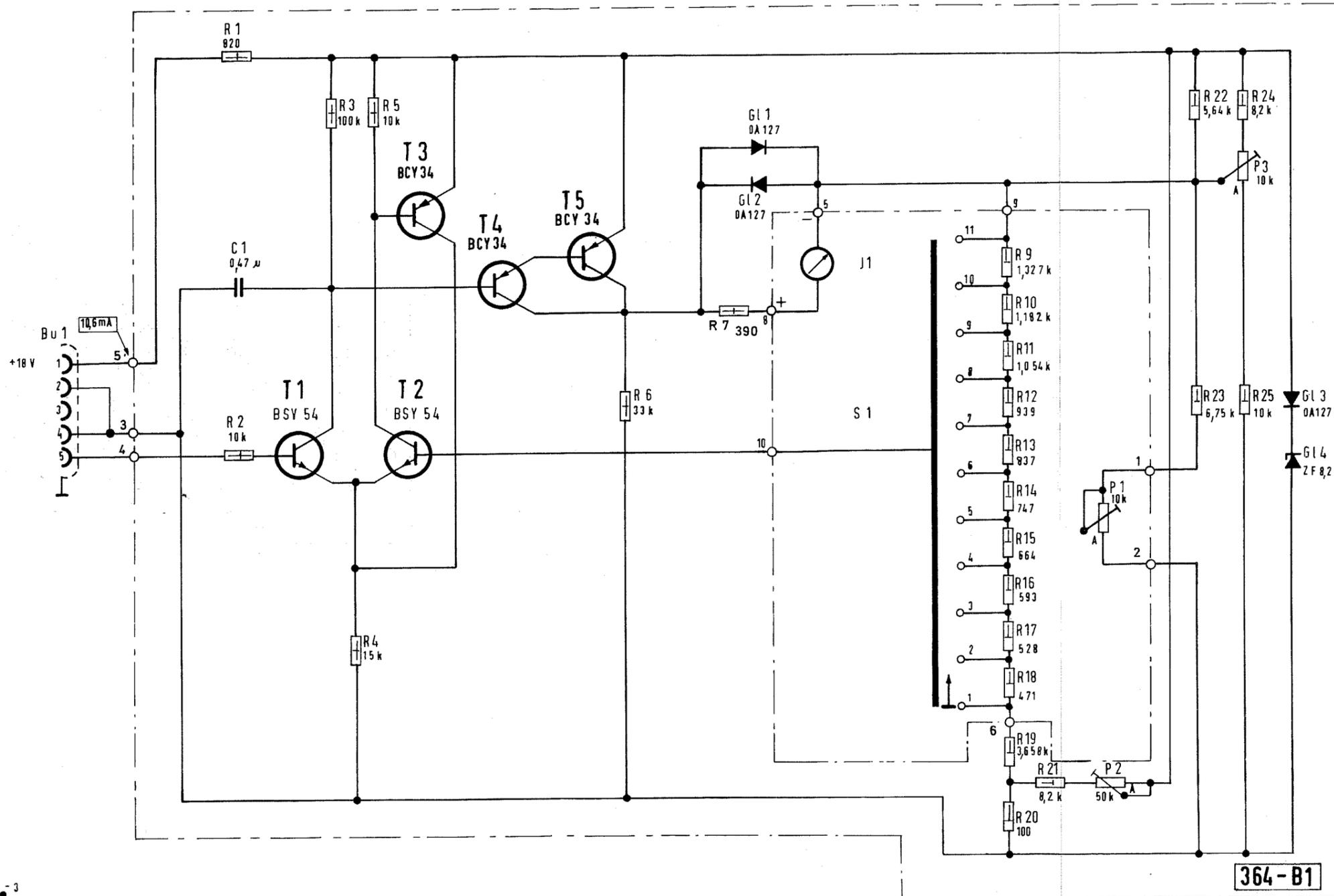
ws rt

ws gn

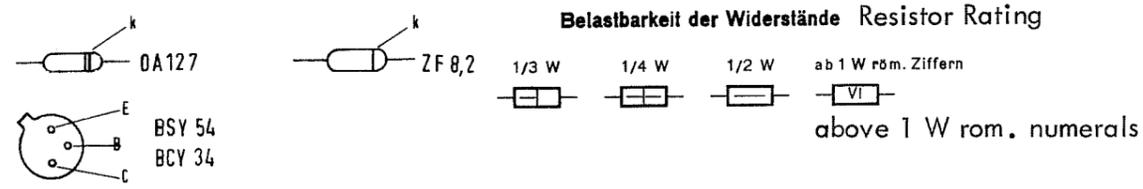
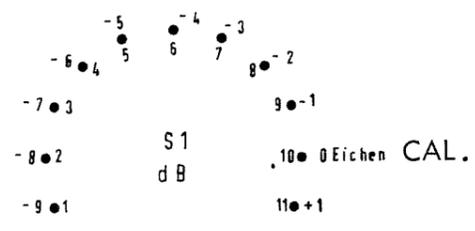
wssw

wssw

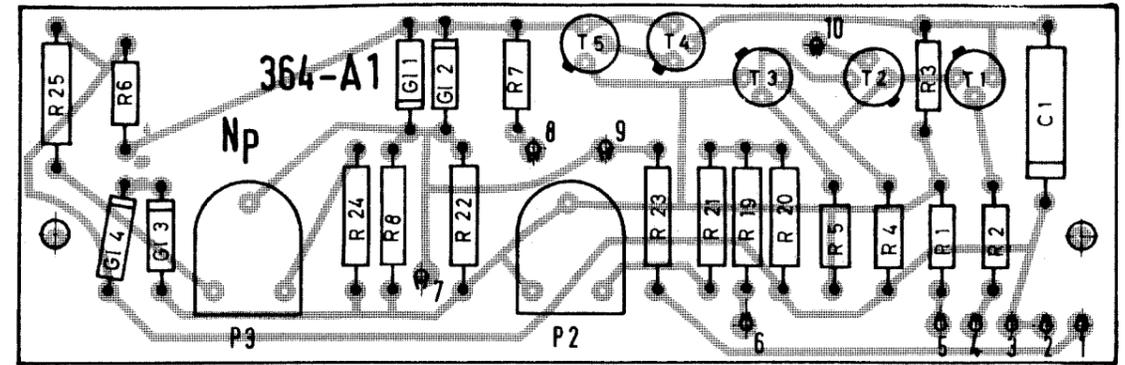
ws rt



364-B1



AZD-1/BN 364
Anzeigedehner dB
(Display Expander)



ws bl

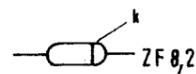
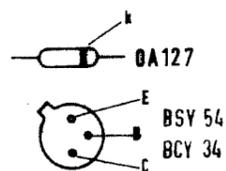
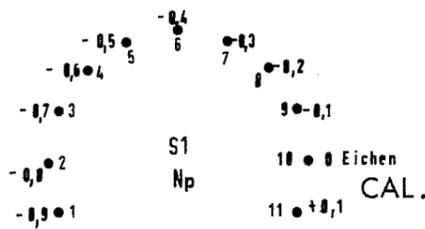
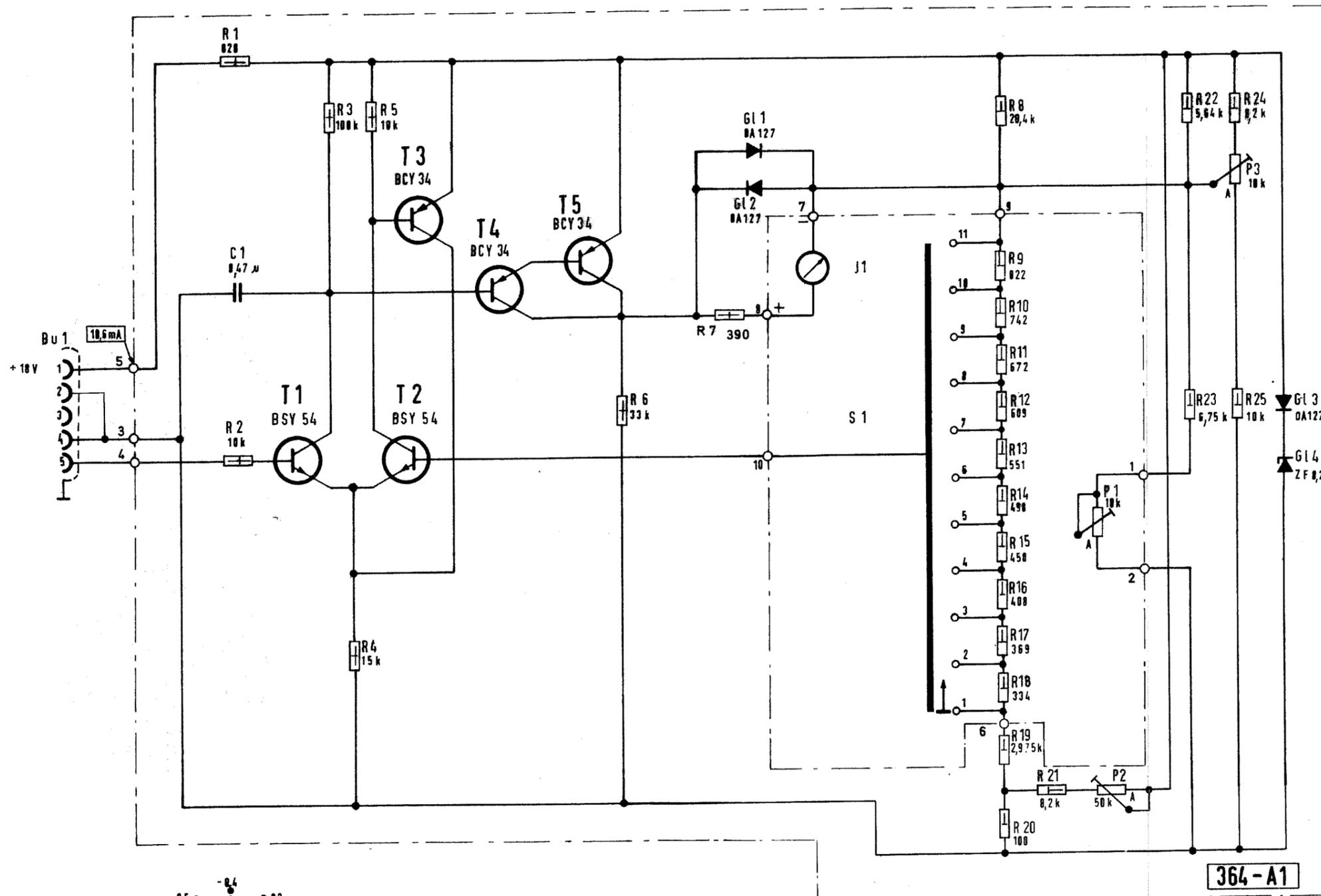
ws r1

ws r1
ws gn
wssw
wssw
ws r1

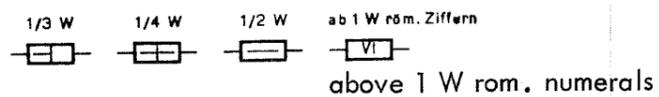
ws r1

ws ge

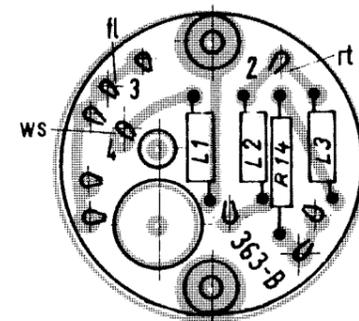
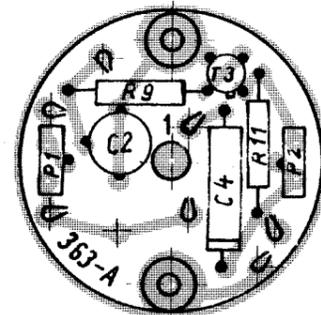
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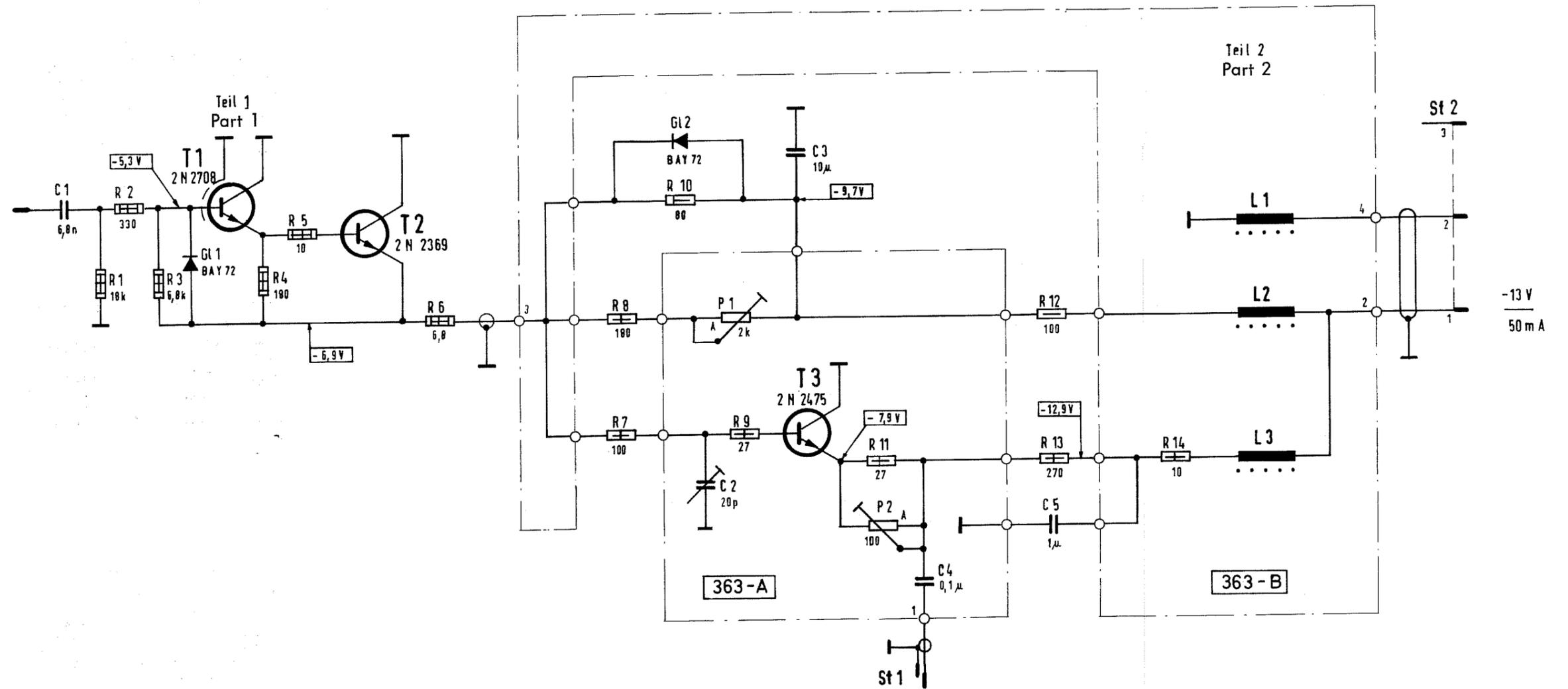


Belastbarkeit der Widerstände Resistor Rating

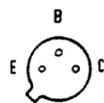


AZD-1/BN 364/1
Anzeigedehner Np
(Display Expander)

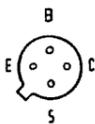




2 N 2475
2 N 2369



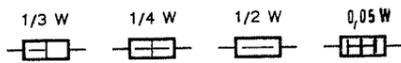
2 N 2708



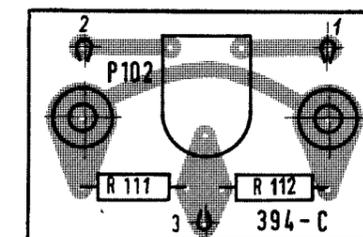
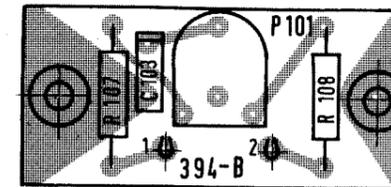
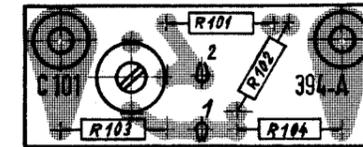
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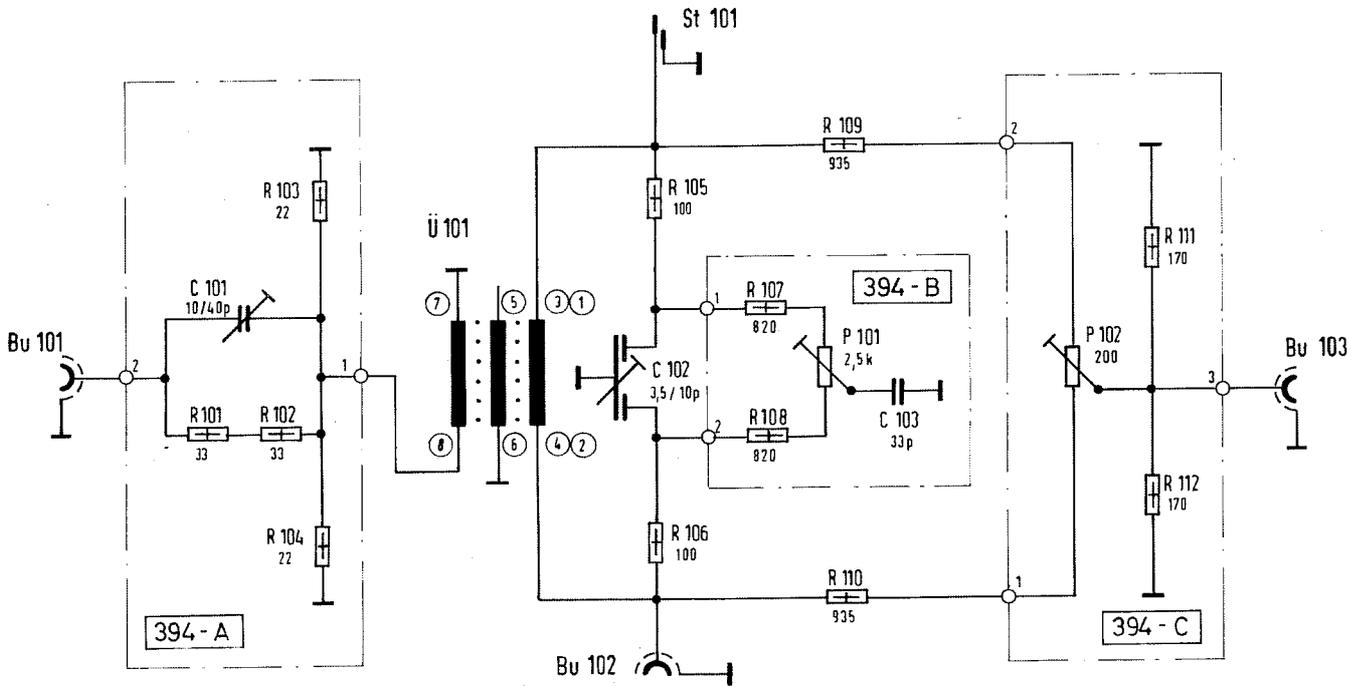


Belastbarkeit der Widerstände Resistor Rating



TK-8/BN 363
Tastkopf
(Probe)





RFZ-5/BN 394

Reflexionsmeßzusatz ①

(Reflection Coefficient Attachment)

