

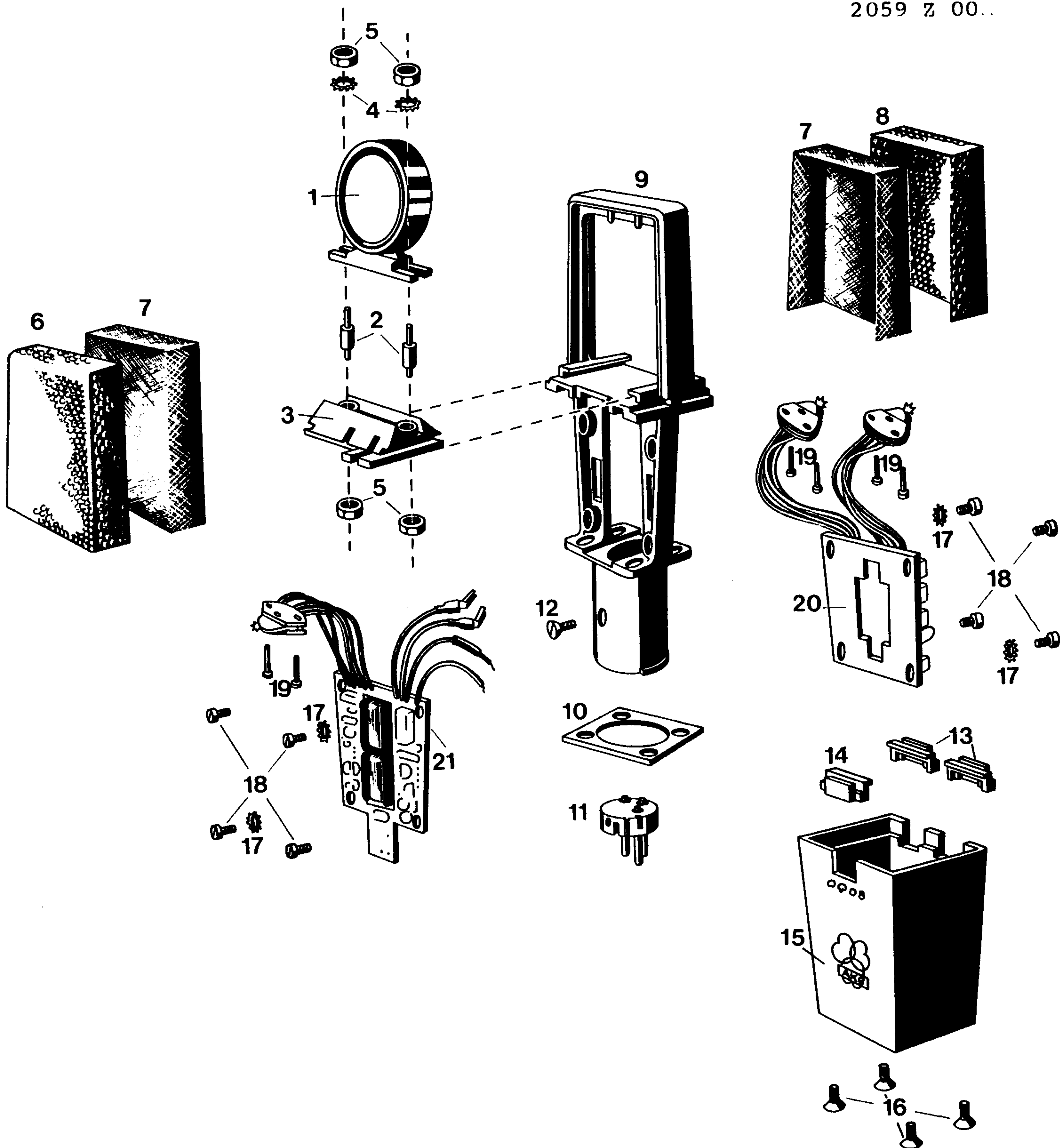
AKG

ACOUSTICS

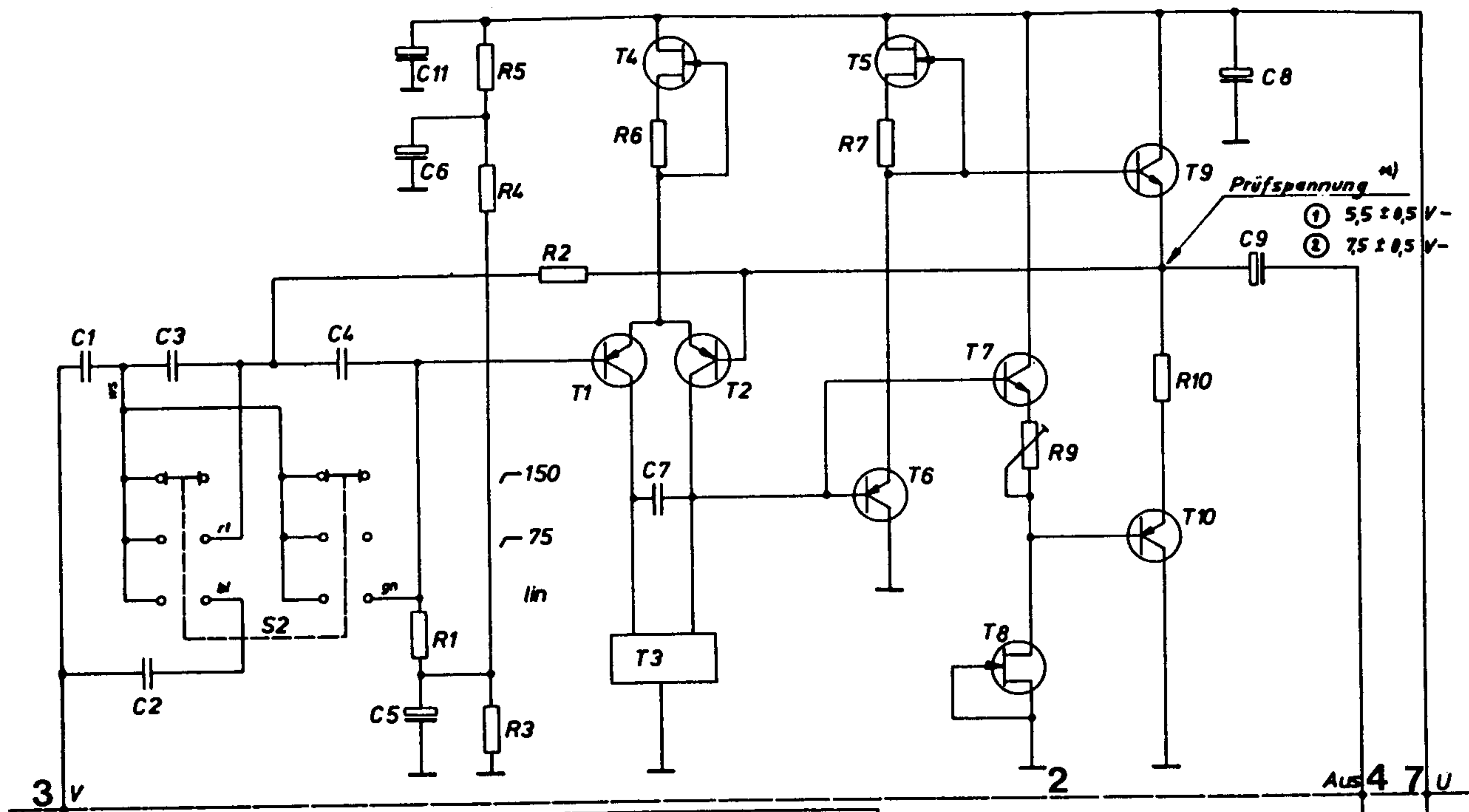
SERVICE

C 414 B - ULS
2059 Z 00..

C 414 B - TL
2059 Z 00..

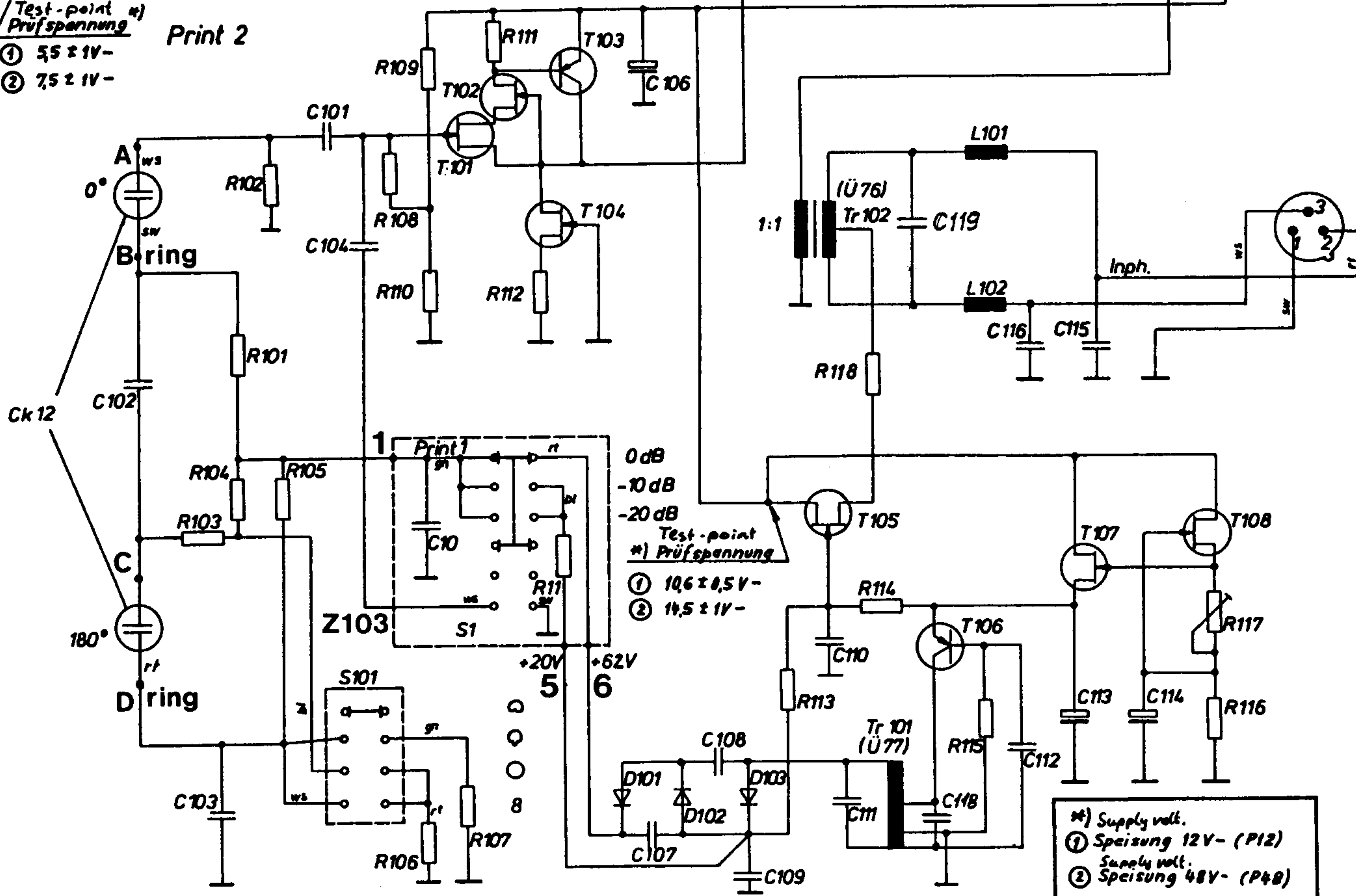


Print 1



Test-point *)
Prüfspannung
① 5,5 ± 0,5 V-
② 7,5 ± 1 V-

Print 2



Anschlußbelegungen der Transistoren
Pin occupancy of transistors

2SA 104B
2SC 245B



2Sk 118



2Sk 148



2Sk 30
2Sk 223



J 305



J 500

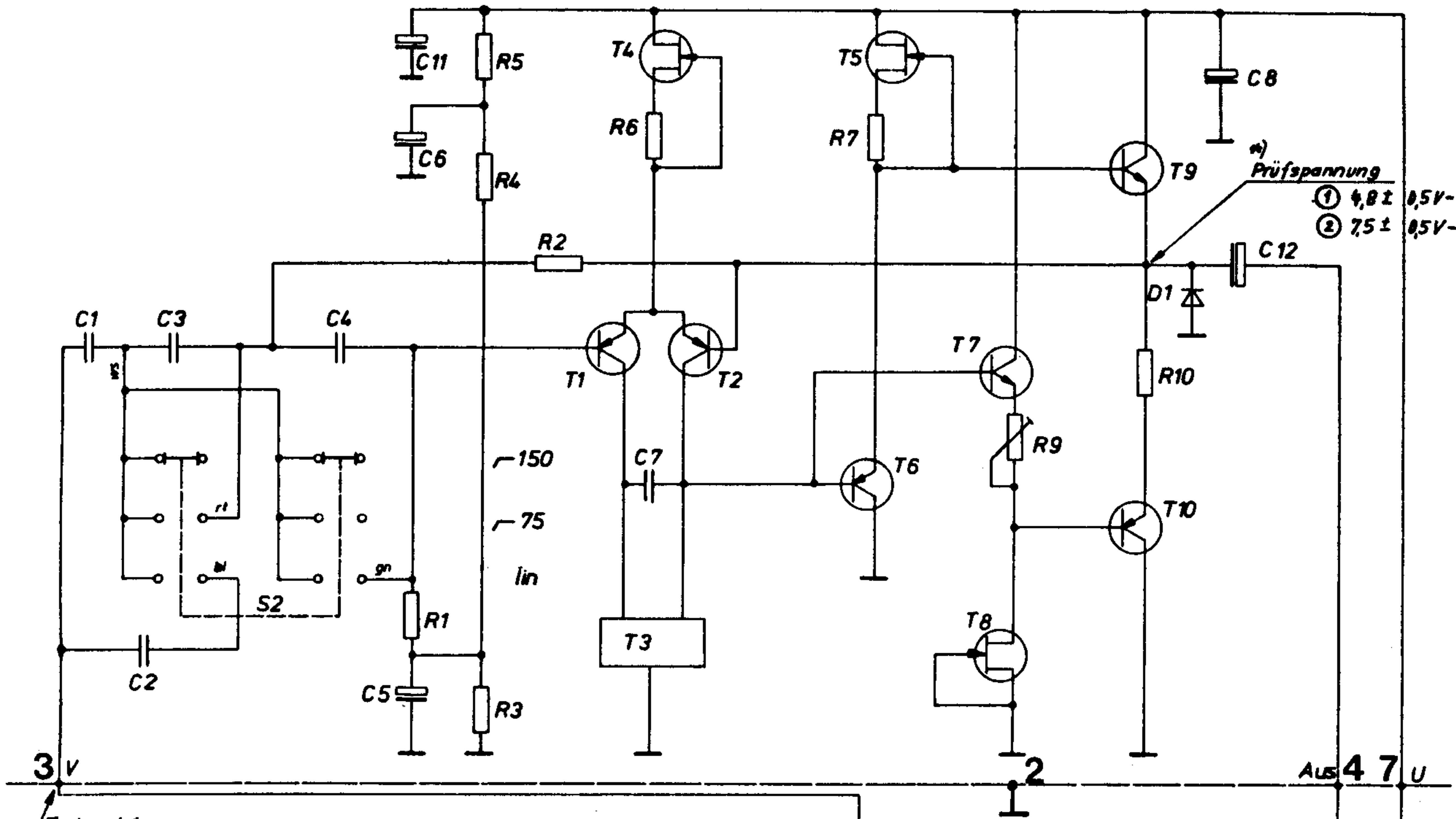


TL 011



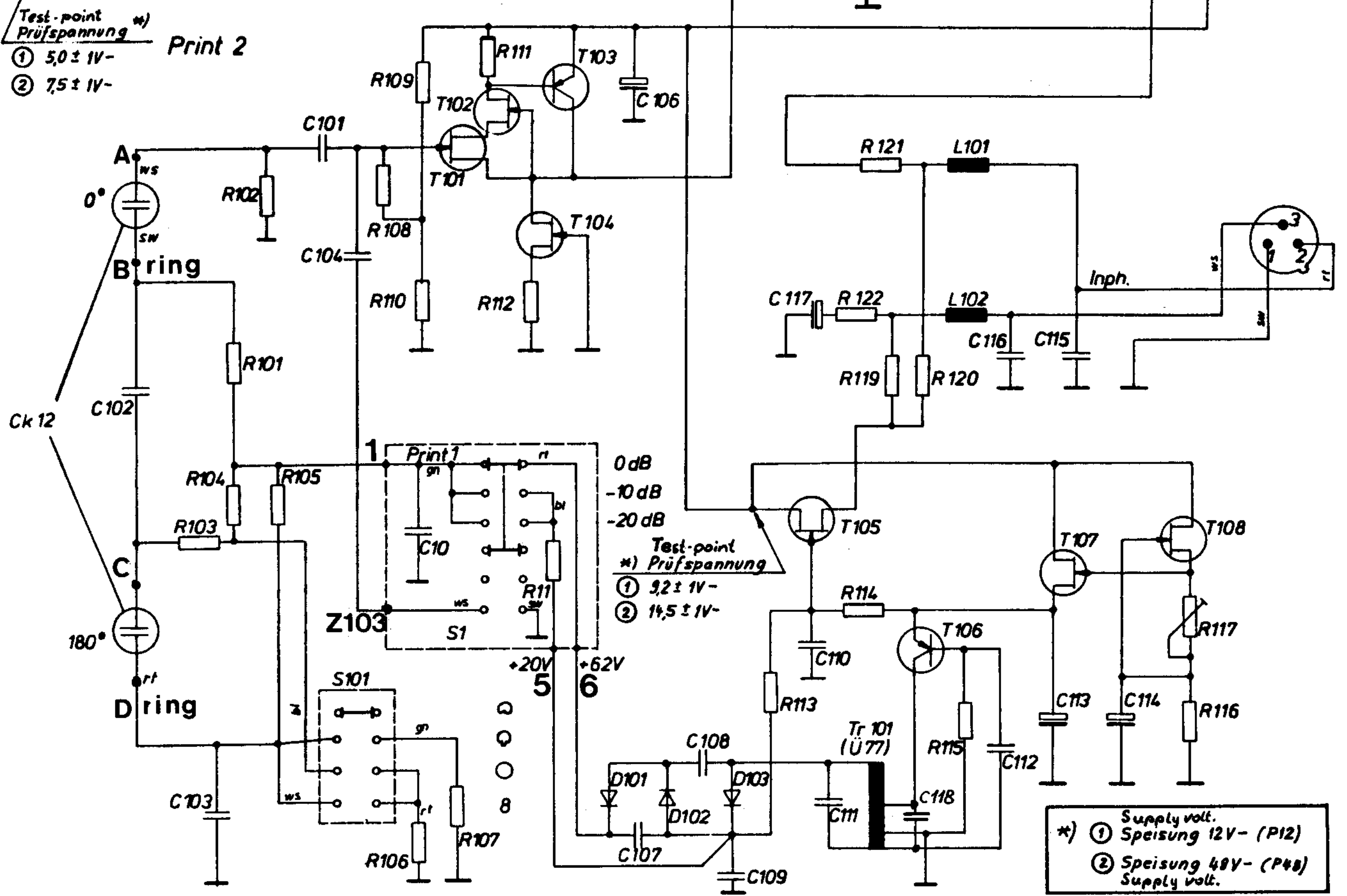
*) Supply volt.
① Speisung 12V- (P12)
Supply volt.
② Speisung 48V- (P48)

Print 1



Test-point
Prüfspannung *)
① 5.0 ± 1V-
② 7.5 ± 1V-

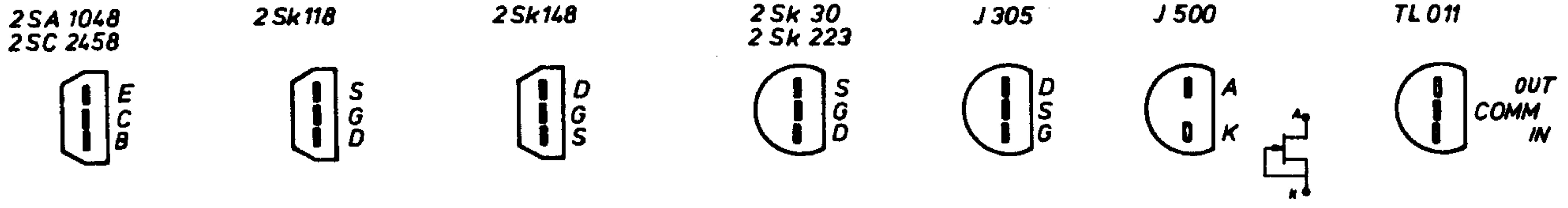
Print 2



*) Supply volt.
① Speisung 12V- (P12)
② Speisung 48V- (P48)
Supply volt.

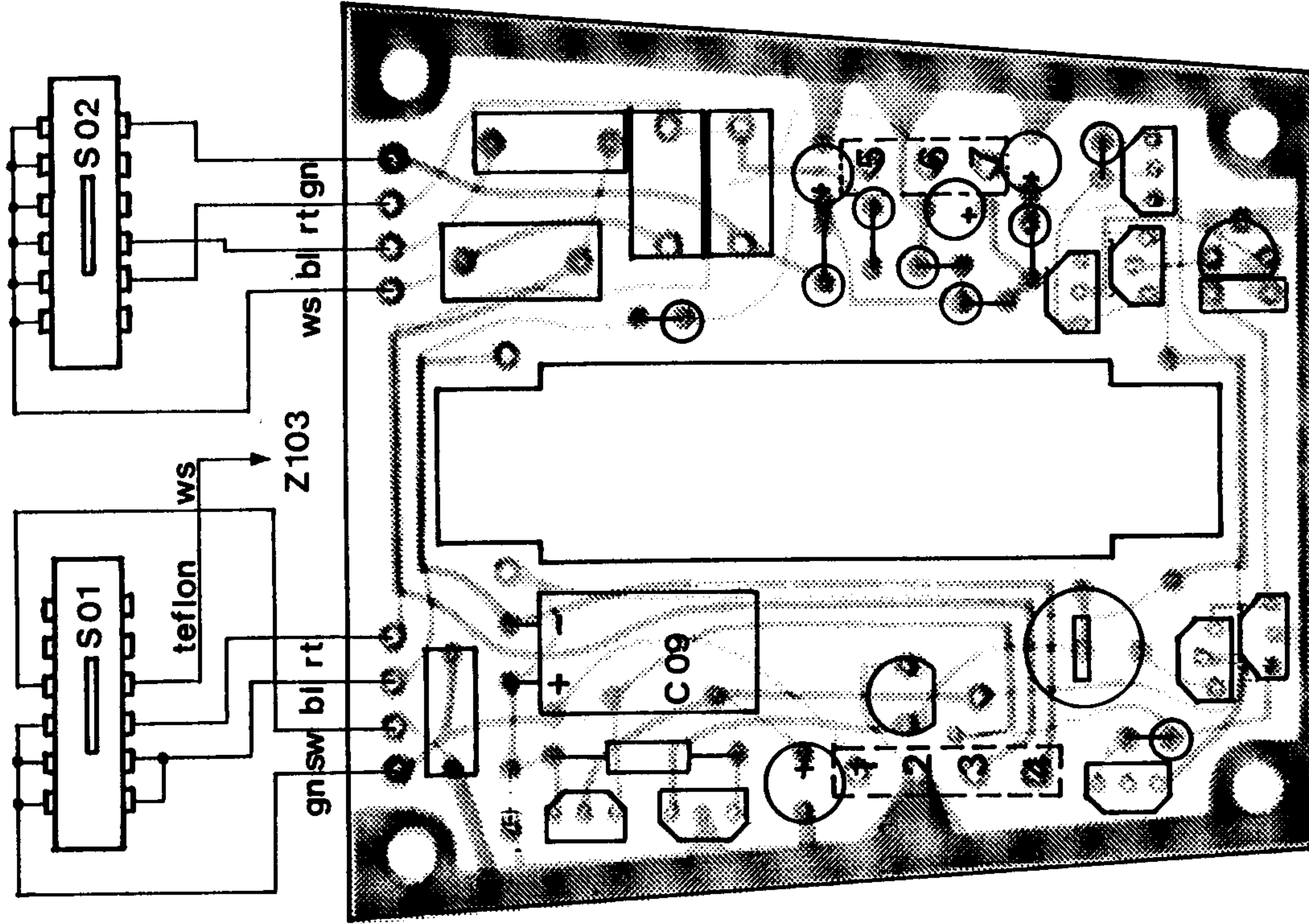
Anschlußbelegungen der Transistoren
Pin occupancy of Transistors

(Lötseite)
(bottom view)



Bestückungsplan

Print 1
2059 M 0703 1

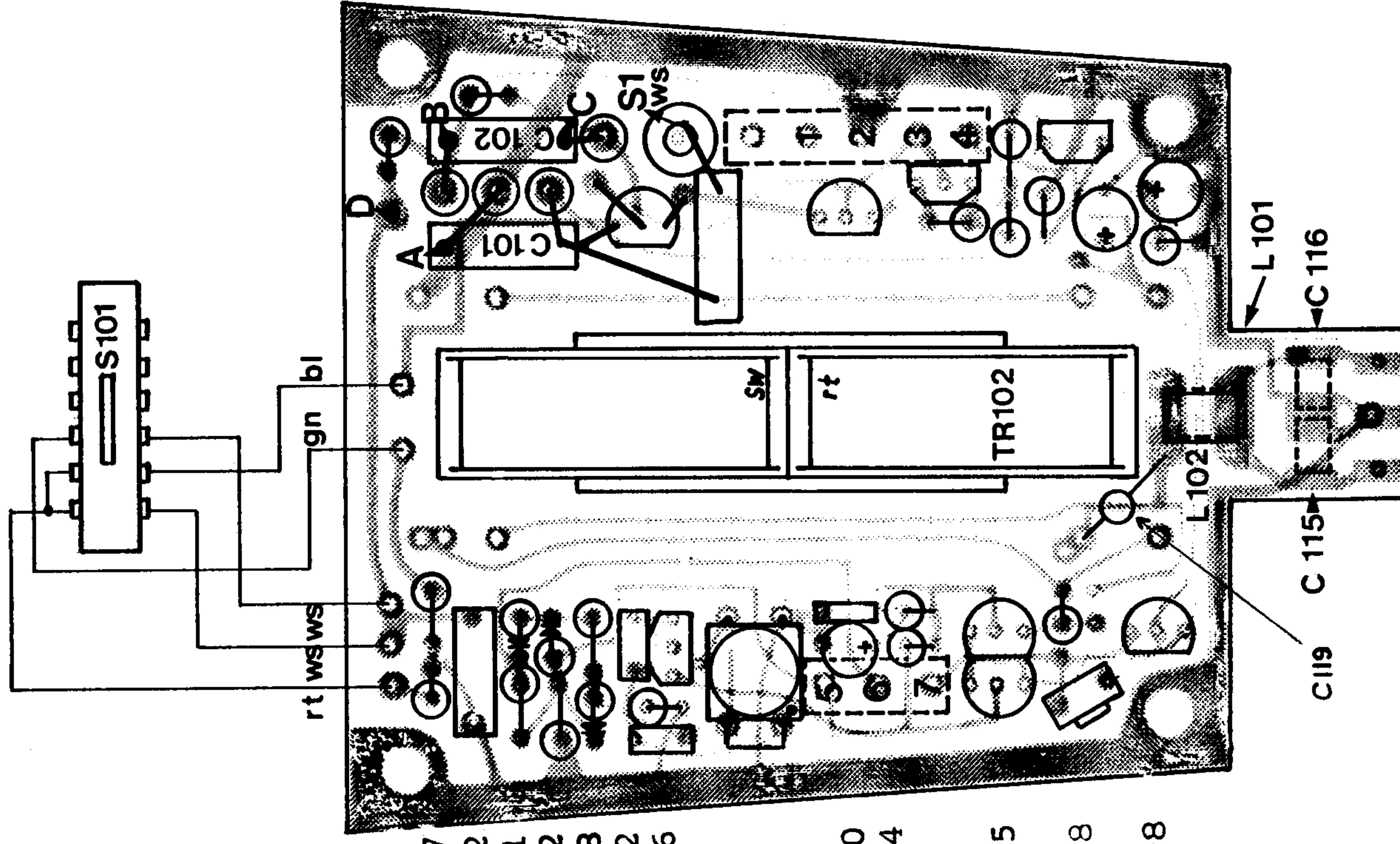


C 10
T 09
R 10
T 10
C 11
T 08
Z 02
R 09
T 05
R 07
T 07
T 06

C 414B-ULS

Component Locations

Print 2
2059 M 0803 1



C 01
C 02
R 11, C 03
C 04
R 01, C 05
R 02, Z 01
R 03, C 06
R 04, C 06
R 05, C 08
T 01
R 06, T 04
C 07, T 03
R 106, R 107
C 103, R 122
C 107, D 101
C 109, D 102
D 103, C 108
C 111, C 112
R 115, T 106
TR 101 C 118
Z 101
C 113, C 110
R 113, R 114
T 107, T 105
R 117, R 118
T 108

R 105
R 101
R 104
R 102
R 108
R 103
T 101
Z 103
C 104
Z 102
T 102
T 103
R 111
R 109,
R 110
R 112
T 104
C 106
R 116,
C 114

rt sw ws

XLR 2 1 3

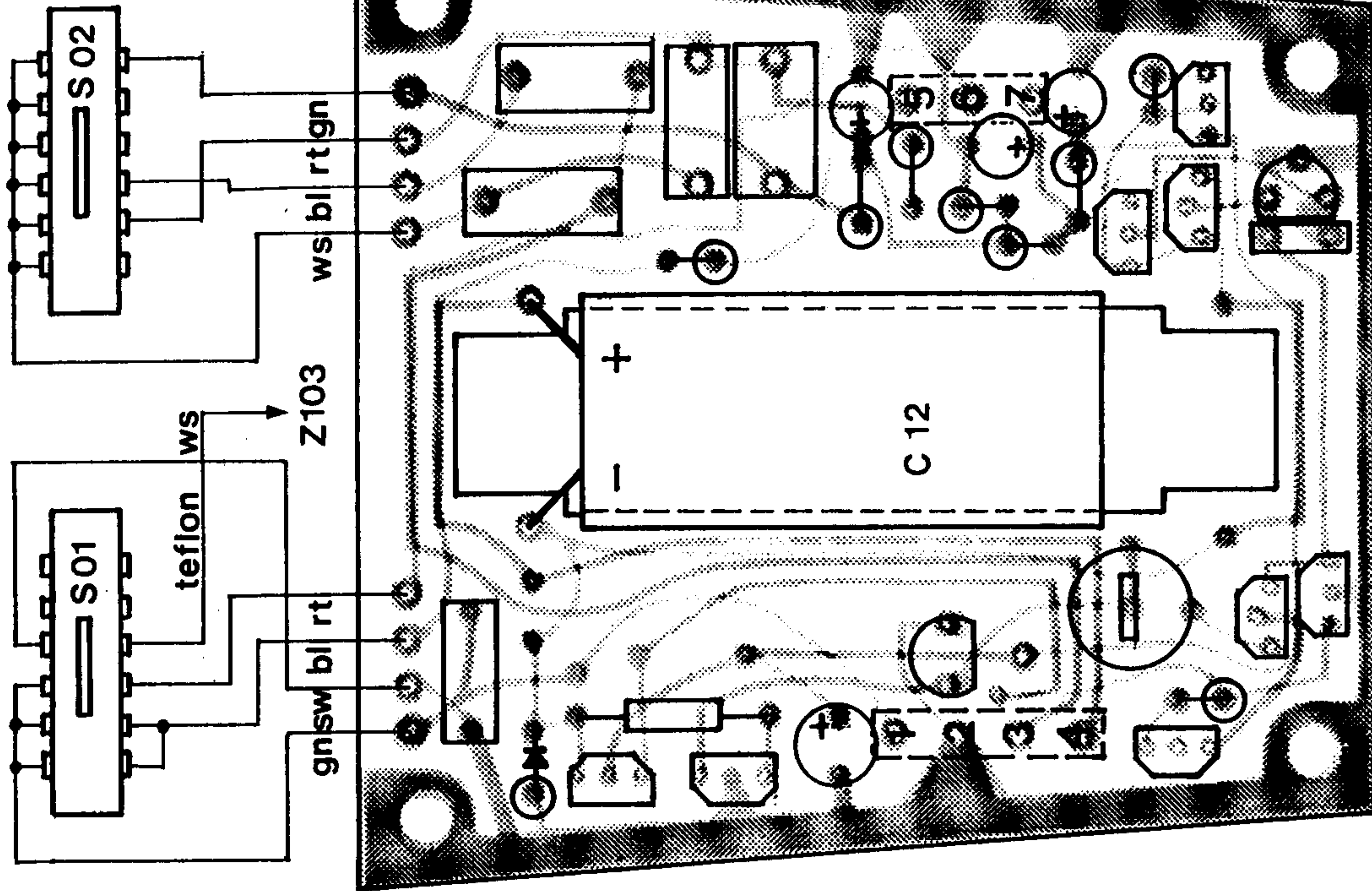
Bestückungsplan

C 414B-TL

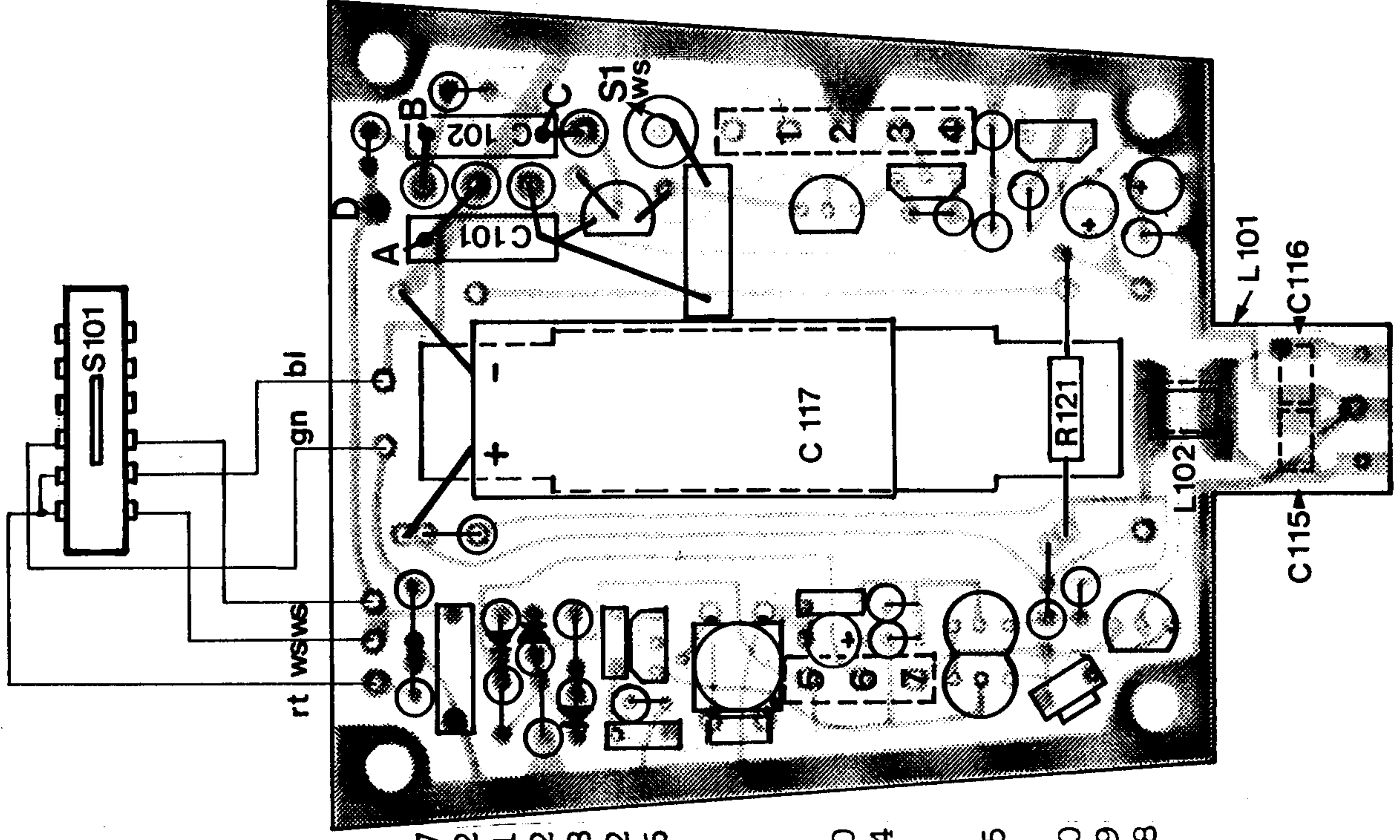
Component Locations

Print 1
2059 M 0704

Print 2
2059 M 0804/2



C 10
D 01
T 09
R 10
T 10
C 11
T 08
Z 02
R 09
T 05
R 07
T 07
T 06



R 105
R 101
R 104
R 102
R 108
R 103
T 101
Z 103
C 104
Z 102
T 102
T 103
R 111
R 109,
R 110
R 112
T 104
C 106
R 116,
C 114

R 106,
C 103,
C 107,
C 109,
D 103,
C 111,
R 115,
TR 101
Z 101
C 113,
R 113,
T 107,
R 117,
R 120,
R 119,
T 108
C 01
C 02
R 11,
C 03
C 04
R 01,
R 02,
R 03,
R 04,
R 05,
T 01
R 06
T 02,
C 07,
C 08
T 04
T 03
R 107,
R 120,
R 119,
T 108
C 110
C 114
C 118
C 110
R 114
T 105
R 120
R 119
T 108

rt sw ws

XLR 2 1 3

C 414 Parts list

C 414 Stückliste

C 414 B-ULS ... A

C 414 B-TLII ... B

Description	Item Pos.	Part number Bestellnummer	Quantity Stück		Bezeichnung
			A	B	
Capsule CK12	1	2072Z0005	1	-	Kapsel CK12
		2072Z0009	-	1	
Shock mount	2	2074M0602	2	2	Schwingmetall
Elastic suspension	3	2059Z0703	1	1	Elastische Lagerung
Toothed washer A3,2	4	6797D3200	2	2	Zahnscheibe A3,2
Nut M3	5	0439D3000	4	4	Mutter M3
Front grill	6	2059M0303	1	-	Frontgitter
		2059M0304	-	1	
Inner grid	7	2059Z1201	2	2	Innengitter
Rear grill, black	8	2059M0302	1	1	Hinteres Gitter, schwarz
Frame	9	2059Z0306	1	1	Rahmen
Rubber plate	10	2059Z2801	1	1	Gummiplatte
Plug insert	11	1943M1204	1	1	Steckereinsatz
Screw B2,2x4,5	12	7971D2204	1	1	Schraube B2,2x4,5
Switch cover, neutral	13	2059Z0601	2	2	Füllstück, neutral
Switch cover 'TL'		2059Z0602	-	(1)	Füllstück 'TL'
Switch cover 'TL II'	14	2059Z0603	-	1	Füllstück 'TL II'
Switch cover 'ULS'	14	2059Z0604	1	-	Füllstück 'ULS'
Housing	15	2059Z0403	1	-	Gehäuse
		2059Z0404	-	1	
Screw	16	0071N2500	4	4	Schraube
Toothed washer A2,2	17	6797D2200	4	4	Zahnscheibe
Screw M2x4	18	0920D2004	8	8	Schraube M2x4
Screw M1,2x6	19	0084D1202	(6)	(6)	Schraube M1,2x6
Screw M1,4x6	19	0084D1407	6	6	Schraube M1,4x6
Printed circuit board, complete	20	2059M0701	1	-	Print, komplett
former version, compatible		2059M0703	(1)	-	frühere Version, kompatibel
		2059M0704	-	1	
former version, compatible		2059M0702	-	(1)	frühere Version, kompatibel
Printed circuit board, complete	21	2059M0801	1	-	Print, komplett
former version, compatible		2059M0803	(1)	-	frühere Version, kompatibel
		2059M0802	-	1	
former version, compatible		2059M0804	-	(1)	frühere Version, kompatibel
Dehumidifying sachet 5g	--	5407U0011	1	1	Trockenbeutel 5g

Accessories, depending on variation

Zubehör, variantenabhängig

Spider suspension	H100/2	2803Z0003	1	1	Spinnenaufhängung
Windscreen	W414	2214Z0001	1	1	Windschutz
Stand adapter (C 414 former versions)	SA18/3B	1818Z0059	(1)	(1)	Stativanschluss (C 414 frühere Versionen)

Colours / Farben

weiß	ws	white
schwarz	sw	black
grau	ga	grey
rot	rt	red
gelb	ge	yellow
grün	gn	green
blau	bl	blue
rosa	ra	pink
braun	bn	brown

Print

2059M0701 (former/früher: M0703), 2059M0704 (former/früher: M0702)

Tolerances are +/- Toleranzen sind +/-

Description	Value Wert	Item.Nbr. Pos. Nummer	Part Number Teilenummer	Bezeichnung
Resistor	14k3	R01	0005E1402	Widerstand
Resistor	6k65	R02	0004E6600	Widerstand
Resistor	390k	R03	0006E3901	Widerstand
Resistor	120k	R04	0006E1200	Widerstand
Resistor	270k	R05	0006E2704	Widerstand
Resistor	820	R06	0003E8205	Widerstand
Resistor	4k7	R07	0004E4709	Widerstand
Trimmer resistor	1k	R09	0021E0557	Einstellregler
Resistor	150	R10	0003E1512	Widerstand
Resistor	68k	R11	0005E6800	Widerstand
Capacitor	330nF/63V/10%	C01	0035E3303	Kondensator
Capacitor	220nF/63V/10%	C02	0035E2203	Kondensator
Capacitor	100nF/50V/10%	C03	0035E1015	Kondensator
Capacitor	150n/63V/10%	C04	0035E1504	Kondensator
Capacitor	10µF/25V	C05,06	0037E1006	Kondensator
alternatively	10µF/25V	C05,06	(0037E1024)	alternativ
Capacitor	33pF/63V/2%	C07	0031E3302	Kondensator
Capacitor	10µF/25V	C08,11	0037E1025	Kondensator
Capacitor	220µF/10V	C09 +)	0038E2212	Kondensator
Capacitor	22nF/100V/20%	C10	0034E2212	Kondensator
Capacitor	330µF/50V	C12 *)	0038E3300	Kondensator
Diode	1N4148	D01 *)	0014E0017	Diode
Transistor	2SA1048L-GR	T01,02,06,10	0010E0104	Transistor
Transistor	BCV61	T03	9010E0024	Transistor
Transistor	2SK118-O	T04	0010E0041	Transistor
Transistor	2SK184-4	T05	0010E0107	Transistor
Transistor	2SC2458-GR	T07,09	0010E0105	Transistor
Transistor	J500	T08	0010E0075	Transistor
Switch, 3 positions		S01, S02	2148Z0011	Schalter, 3 Positionen
Connector 3pole		Z01	0018E0342	Steckverbinder 3polig
Connector 3pole		Z01	(0018E0806 #)	Steckverbinder
Connector 4pole		Z02	0018E0426	Steckverbinder 4polig
Connector 4pole		Z02	(0018E0806 #)	Steckverbinder

+) for C 414 B-ULS only / nur für C 414 B-ULS

*) for C 414 B-TLII only / nur für C 414 B-TLII

#) Former version, not compatible / frühere Version, nicht kompatibel

Print 2059M0801 (former/früher: M0803), 2059M0802 (former/früher: M0804)

Tolerances are +/- Toleranzen sind +/-

Resistor	3G	R101-103,108	0009E0004	Widerstand
Resistor	10M	R104,105	0008E1003	Widerstand
Resistor	330	R106	0003E3300	Widerstand
Resistor	22M	R107	0008E2202	Widerstand
Resistor	1M	R109	0007E1011	Widerstand
Resistor	681k	R110	0006E6804	Widerstand
Resistor	2k7	R111	0004E2711	Widerstand
Resistor	220	R112	0003E2202	Widerstand
Resistor	4M7	R113	0007E4704	Widerstand
Resistor	3M3	R114	0007E3301	Widerstand
Resistor	560k	R115,116	0006E5600	Widerstand
Trimmer resistor	500k	R117	0021E0558	Einstellregler
Resistor	47	R118	0002E4707	Widerstand
Resistor	1K	R119,120 *)	0004E1013	Widerstand
Resistor	47	R121,122 *)	0002E4707	Widerstand
Capacitor	470pF/100V/20%	C101,102	0032E4710	Kondensator
Capacitor	22nF/100V/20%	C103	0034E2212	Kondensator
Capacitor	100pF/100V/20%	C104	0032E1010	Kondensator
Capacitor	10µF/25V	C106	0037E1025	Kondensator
Capacitor	6n8/100V/20%	C107-109	0033E6802	Kondensator
Capacitor	6n8/100V/20%	C119 +)	0033E6802	Kondensator
Capacitor	4n7/63V/10%	C110	0033E4712	Kondensator
Capacitor	15pF/100V/5%	C111	0031E1505	Kondensator
Capacitor	22n/63V/5%	C112	0033E2206	Kondensator
Capacitor	3µ3/50V	C113	0036E3321	Kondensator
Capacitor	1µF/35V	C114	0036E1008	Kondensator
Capacitor	10nF/100V/20%	C115,116	9034E1019	Kondensator
alternatively	10nF/50V/10%		(9034E1023)	alternativ
Capacitor	330µF/50V	C117 *)	0038E3300	Kondensator
Capacitor	150pF/63V/5%	C118	9032E1500	Kondensator
alternatively	330pF/50V/1%	C118	(9032E3301)	alternativ
Diode	1N4148	D101-103 *)	0014E0017	Diode
Transistor, selected	J305	T101	2180Z0301	Transistor, ausgemessen
Transistor	2SK772-E	T102	0010E0108	Transistor
Transistor	2SA1048L-GR	T103,106	0010E0104	Transistor
Transistor	2SK118-O	T104	0010E0041	Transistor
Transistor	2SK30ATM-GR	T105,108	0010E0031	Transistor
Transistor, selected	J305	T107	2180Z0302	Transistor, ausgemessen
Coil	220µH	L101,102	9023E0043	Induktivität
Transformer U77		TR101	1650Z0194	Übertrager Ü77
Transformer U76		TR102 +)	1650Z0193	Übertrager Ü76
Switch, 4 positions		S101	2148Z0018	Schalter, 4 Positionen
Connector, 3pole		Z101	(0018E0327 #)	Steckverbinder, 3polig
Connector, 3pole		Z101	0018E0343	Steckverbinder, 3polig
Connector, 5pole		Z102	(0018E0510 #)	Steckverbinder, 5polig
Connector, 4pole		Z102	0018E0427	Steckverbinder, 4polig
Solder terminal		Z103	0013E0106	Lötstützpunkt
Pin bushing		Z104	(0013E0091)	Steckerhülse
Solder tag			4149N6059	Lötfahne
Teflon wire, white			1800Z9102	Teflondraht, weiß
Teflon wire, red			1800Z9103	Teflondraht, rot
Teflon wire, black			1800Z9105	Teflondraht, schwarz

*) for 2059M08.. (C 414 B-TLII) only / nur für 2059M08.. (C 414 B-TLII)

#) Former version, not compatible / frühere Version, nicht kompatibel

Kurzdaten:

	C 414 B-ULS	C 414 B-TL
Empfindlichkeit	12,5 mV/Pa	12 mV/Pa
typ. Schalldruck für $k \approx 0.1\%$		
kein Abschwächer eingeschaltet	141 dB SPL	142 dB SPL
dtto, 500 Ohm Last	137 dB SPL	140 dB SPL
typ. Fremdspannung	2,5 μ Veff	
Phantomspannung	9 - 52 V	
Strombedarf	≈ 2 mA	

Short specs:

	C 414 B-ULS	C 414 B-TL
Sensitivity	12.5 mV/Pa	12 mV/Pa
typical SPL for harmonic distortion		
$d \approx 0.1\%$, without attenuator	141 dB SPL	142 dB SPL
with 500 ohms load impedance	137 dB SPL	140 dB SPL
residual noise, C-weighted	2.5 μ Veff	
Phantom powering voltage range	9 to 52 V	
Current consumption	≈ 2 mA	

Abgleich:

- R 09 : Stromaufnahme ≈ 2 mA
 R 117 : Polarisationsspannung 62 +/- 0,5V, gemessen an Punkt "6" gegen Masse (Punkt "2"). Impedanz des Messgerätes ≈ 10 MOhm!

Adjustments:

- R 09 : current consumption ≈ 2 mA
 R 117 : polarization voltage 62 +/- 0.5 volts, measured from point "6" against ground (point "2"). Impedance of the voltmeter must be greater than 10 Mohms!

Achtung: Nach erfolgter Reparatur müssen die Printplatten völlig von Lötrückständen und Flussmittelresten gesäubert werden, eine ev. schadhafte Isolierung der Vorstufe (ablackierter Bereich) darf nur mit dem Originallack (Pos. 22) ausgebessert werden. Nichtbeachten dieser Punkte kann zu erhöhtem Grundrauschen, Feuchtigkeitsempfindlichkeit und u.U. zum Totalausfall des Mikrofon führen.

Attention: After repair please clean the p.c.b.s carefully from residual flux and dirt. If the coat of laquer of the front end stage is damaged, restore it with the original laquer only (item 22). Please take special care of these points, otherwise the microphone may become noisy, sensitive to moisture, or could break down completely under certain circumstances.