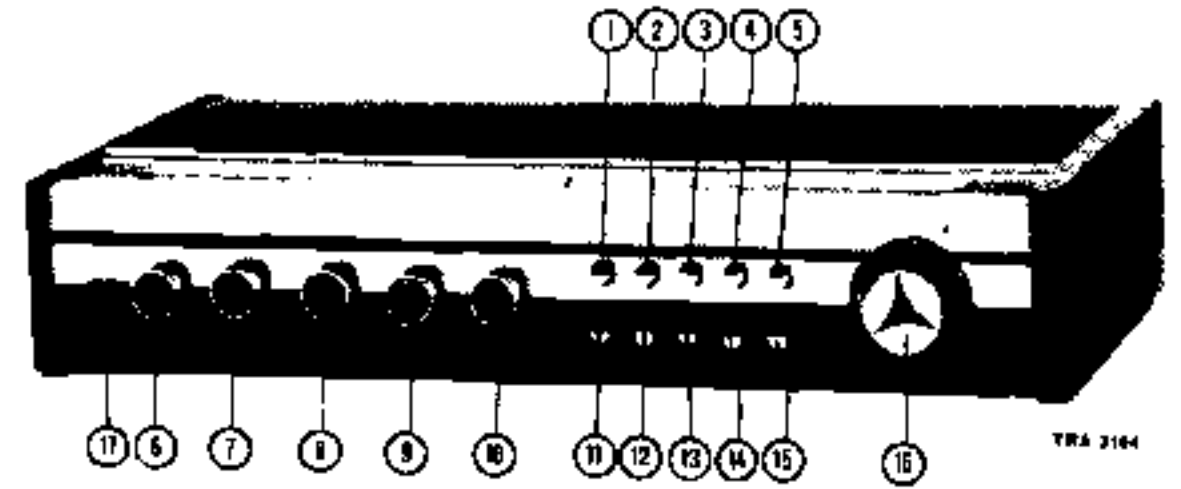
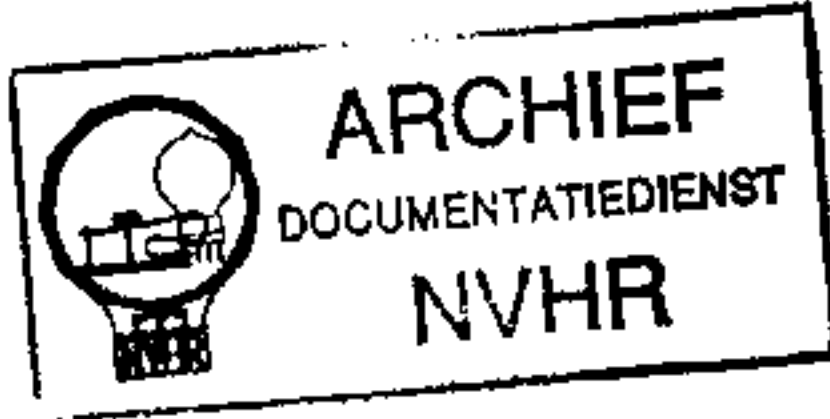


# SERVICE NOTES

## TUNER AMPLIFIER

5911/03/04 Ned. Ver. v. Historie v/d Radio

5912/03/04



① Mains switch Netschakelaar	SK-B	⑦ Balance control Balansregelaar	R68/116	⑫ MW switch MG-schak.	SK-M
② Aerial switch Antenne schak.	SK-A	⑧ Bass control Lagetonen-regelaar	R74/124	⑬ FM switch FM-schak.	SK-F
③ AFC switch AFC-schak.	SK-D	⑨ Treble control Hogetonen-regelaar	R77/127	⑭ Rec. -player switch PU-schakelaar	SK-G
④ Mono/stereo switch Mono/stereo-schak.	SK E	⑩ Tuning AM Afstemming AM	C11/12	⑮ Recorder switch Magn. -schak.	SK-T
⑤ Tone switch Toon-schak.	SK-H	⑪ LW switch LG-schakelaar	SK-L	⑯ Tuning FM Afstemming FM	S39-41
⑥ Volume control Volumeregelaar	R65/115			⑰ FM stereo-indicator FM stereo-indikator	LA 4

IF - AM  
IF - FM  
Mains voltages  
Consumption  
Output power  
Output impedance  
Loudspeaker box  
with loudspeaker (4 Ω)  
Dimensions 5911/03/04  
5912/03/04  
LW  
MW  
FM

452 kHz  
10.7 MHz  
110-127-220-240 V~  
54 mA - 8 W (220 V~)  
2x8 W (5 Ω)  
4 Ω - 8 Ω  
Lz4 = 4 Ω  
4822 240 20065 (0-4654Y)  
470x80x225 mm  
470x130x225 mm  
2000x1071 m (150-280 kHz)  
579.1-185.2 m (518-1620 kHz)  
87.5 - 100 MHz

MF - AM  
MF - FM  
Netspanningen  
Verbruik  
Uitgangsvermogen  
Uitgangsimpedantie  
Luidsprekerbox  
met luidspreker (4 Ω)  
Afmetingen 5911/03/04  
5912/03/04  
LG  
MG  
FM

### Transistors, diodes

T1 - BF195	T7, 14 - BC108	T401 - BC148	X1 - BA102	X408 - AA119
T2 - BF195	T8, 15 - BC109	T402 - BC148	X2 - AA119	X409 - AA119
T3 - BF195	T9, 16 - BC109	T403 - BC148	X3 - AA119	X410 - AA119
T4 - BF194	T10, 17 - AC126	T404 - BC148	X4, 5 - 2-AA119	X411 - AA119
T5 - BF194	T11, 18 - AD161	T405 - BC148	X6, 7, 8, 9 - B40C2200	X412 - AA119
T6 - BF194	T12, 19 - AD161/162	T406 - AC128	X407 - AA119	X413 - BA100
	T13, 20 - AD161/162			

Index: CS13320-CS13325

SERVICE INFORMATION									
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HFD/JD

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4822 720.1.0232

Printed in Holland

Cabinet 5911/03 teak	4822 425 50059	Kast 5911/03 teak
Cabinet 5911/04 palisander	4822 425 50063	Kast 5911/04 palisander
Cabinet 5912/03 teak	4822 425 50061	Kast 5912/03 teak
Cabinet 5912/04 palisander	4822 425 50062	Kast 5912/04 palisander
Foot black	4822 462 70505	Voet zwart
Foot brown	4822 462 70529	Voet bruin
Front panel without lens 5911/03/04	4822 454 10151	Frontplaat zonder lens 5911/03/04
Front panel without lens 5912/03/04	4822 454 10157	Frontplaat zonder lens 5912/03/04
Lens (green)	4822 381 10222	Lens (groen)
FM speed tuning unit	4822 691 10059	FM-afstemunit met voor-instelling
Fuse holder	4822 256 30097	Smeltveiligheidshouder
Knob tuning (FM)	4822 413 50638	Knop afstemming (FM)
Knob	4822 413 40367	Knop
Push-button	4822 410 10016	Druktoets
Push-button unit (wave range)	4822 276 50153	Druktoetseenheid (golfgebied)
Push-button unit + mains switch	4822 276 50154	Druktoetseenheid (netschakelaar)
Plug aerial FM	4822 264 30043	Steker antenne FM
Plug aerial AM	4822 264 30042	Steker antenne AM
Socket (5 pole)	4822 267 40039	Aansluiting (5 polig)
Plug (5 pole)	4822 264 40023	Steker (5 polig)
Socket (7 pole)	4822 267 50101	Aansluiting (7 polig)
Socket LS	4822 267 40073	Aansluiting LS
Plug LS	4822 264 30041	Steker LS
Drum on variable capacitor	4822 528 40147	Trommel op var. condensator
Pulley (small)	4822 528 80051	Snaarwiel (klein)
Pulley (large)	4822 528 40106	Snaarwiel (groot)
Pointer 5911/03/04	4822 450 80221	Wijzer 5911/03/04
Pointer 5912/03/04	4822 450 80224	Wijzer 5912/03/04
Drive cord	4822 321 30102	Aandrijfsnaar
Tuning spindle AM	4822 528 40146	Afstemas AM
Stop-pin of AM-spindle	4822 535 90523	Stop-pen op AM-afstemas
Core of coil S39, 40	4822 528 10076	Kern van spoel S39, 40
Core of coil S41	4822 526 10077	Kern van spoel S41
Detection unit	4822 210 20145	Detectie-unit
Stereo decoder	4822 210 30015	Stereodecoder
Scale 5911/03/04	4822 334 60014	Schaal 5911/03/04
Scale 5912/03/04	4822 334 60015	Schaal 5912/03/04
Fuse 1,25 A Z1,2	4822 253 20019	Zekering 1,25 A Z1,2
Fuse Z3	4822 252 20001	Zekering Z3
Dial lamp LA1, 2, 3	4822 134 40054	Schaallamp LA1, 2, 3
Indication lamp LA4	4822 134 40003	Indikatielamp LA4

Oscillator coil MW-LW	S1, 2, 3	4822 156 30264	Oscillatorspoel MG-LG
Ferroceptor MW-LW	S4 - 7	4822 158 60234	Ferroceptor MG-LG
Aerial coil MW	S8 - 10	4822 156 30178	Antennespoel MG
Aerial coil LW	S11 - 13	4822 156 10316	Antennespoel LG
IF coil AM+FM	S14 - 17, C20	4822 153 90022	MF-spoel AM+FM
IF coil FM	S18, 19, C25	4822 153 90023	MF-spoel FM
IF band pass filter AM	S20 - 22	4822 156 30185	MF-bandfilter AM
Mains transformer	S30-35, Z3	4822 146 40161	Nettransformator
Aerial coil FM	S36 - 38	4822 158 10017	Antennespoel FM
Absorption coil FM	S42	4822 158 10138	Zuigkringspoel FM
Rejection coil AM	S50	4822 156 20025	Sperkringspoel AM
IF band pass filter AM	S44 - 46, C66	4822 153 90009	MF-bandfilter FM

C2, 3, 5, 7	4822 125 50018	C29, 56, 90, 115	4822 121 50053	R10, 11	4822 116 20063
C4	4822 121 50048	C40	4822 124 20116	R68, 118	4822 102 30113
C8, 10	4822 125 50017	C47	4822 124 70012	R74, 77, 124, 127	4822 102 30086
C9	4822 121 50039	C54	4822 125 50026	R91, 141	4822 116 60002
C11, 12	4822 125 20089	C70	4822 121 50083	R92, 142	4822 116 30057
C14, 76, 101	4822 121 50094	C82, 107	4822 121 40096	R97, 98, 147, 148	4822 116 50182
C19	4822 121 50088	C91, 116	4822 125 20028	R65, 115	4822 102 30044 +
C24	4822 121 50188	C96, 121	4822 121 50067		4822 535 90226

#### Stereo decoder

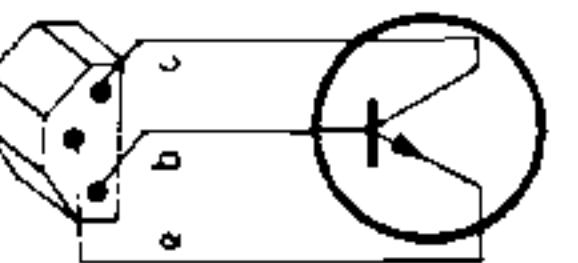
1 <sup>e</sup> 19 kHz coil	S414	4822 156 70031	1 <sup>e</sup> 19 kHz-spoel
2 <sup>e</sup> 19 kHz coil	S415	4822 156 50016	2 <sup>e</sup> 19 kHz-spoel
Detector coil	S416	4822 156 30275	Detectorspoel

C502, 503, 505, 506, 508, 511	4822 121 50089	R604	4822 100 10025
C504, 515, 516	4822 121 50072	R609	4822 100 10021
C509	4822 124 20018	R613	4822 100 10026
C517, 518, 520	4822 121 50082		

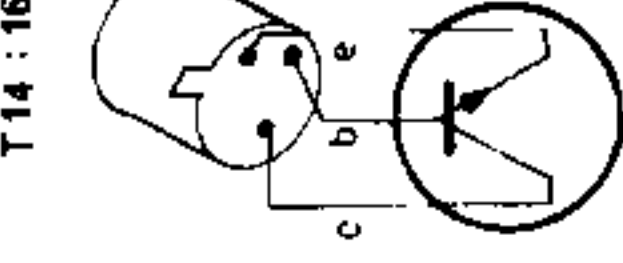


S	50.36.37.38.	41.	42.	44.45.46.4.5.	39.40.	20.21.22.6.7.18.19.	14.15.16.17.	1.2.3.23.24.25.27.28.29.8.9.10.11.12.13.	47.	94.99.	112.91.	86.	80.46.48.85.90.84.105.83.79.107.114.106.77.	78.	75.117.76.116.96.119.
C	50.51.49.	63.56.	60.55.54.58.57.68.	25.29.23.	44.45.71.63.28.22.1.	3.6.42.47.8.8.				79.87.	88.92.111.113.	110.95.106.93.122.108.82.104.	81.116.115.120.103.	100.101.74.121.99.102.	
C	53.55.52.125.61.	64.40.	62.	59.43.69.	36.24.18.14.70.27.17.19.21.	2.5.7.39.4.10.				83.90.78.77.	88.	130.96.84.126.97.74.	58.73.91.69.120.122.142.148.117.	136.104.138.135.60.102.154.63.	
R	36.44.38.	39.50.	56.27.61.10.11.45.7.	17.3.35.46.14.15.	1.34.29.20.					82.81.	128.77.131.85.	132.94.124.123.95.141.70.118.133.	140.71.67.121.147.134.61.146.152.64.113.153.		
R	37.51.	52.47.49.40.48.42.43.9.8.6.	54.55.26.13.30.21.28.2.	53.15.33.4.56.5.57.32.31.22.											

T1:6

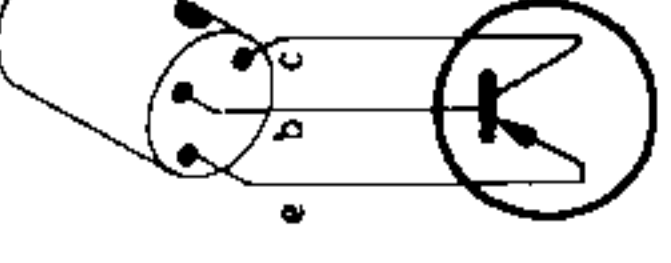


T7:9

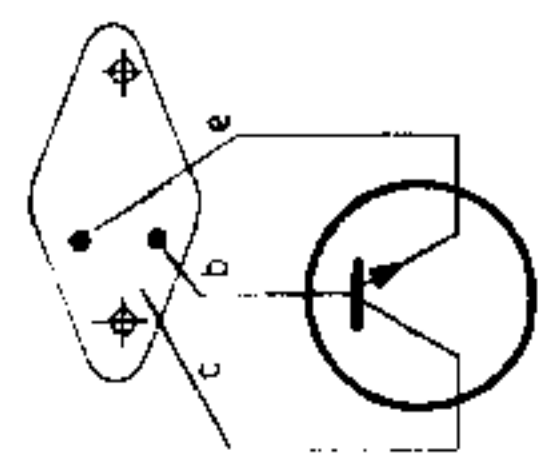


T14:16

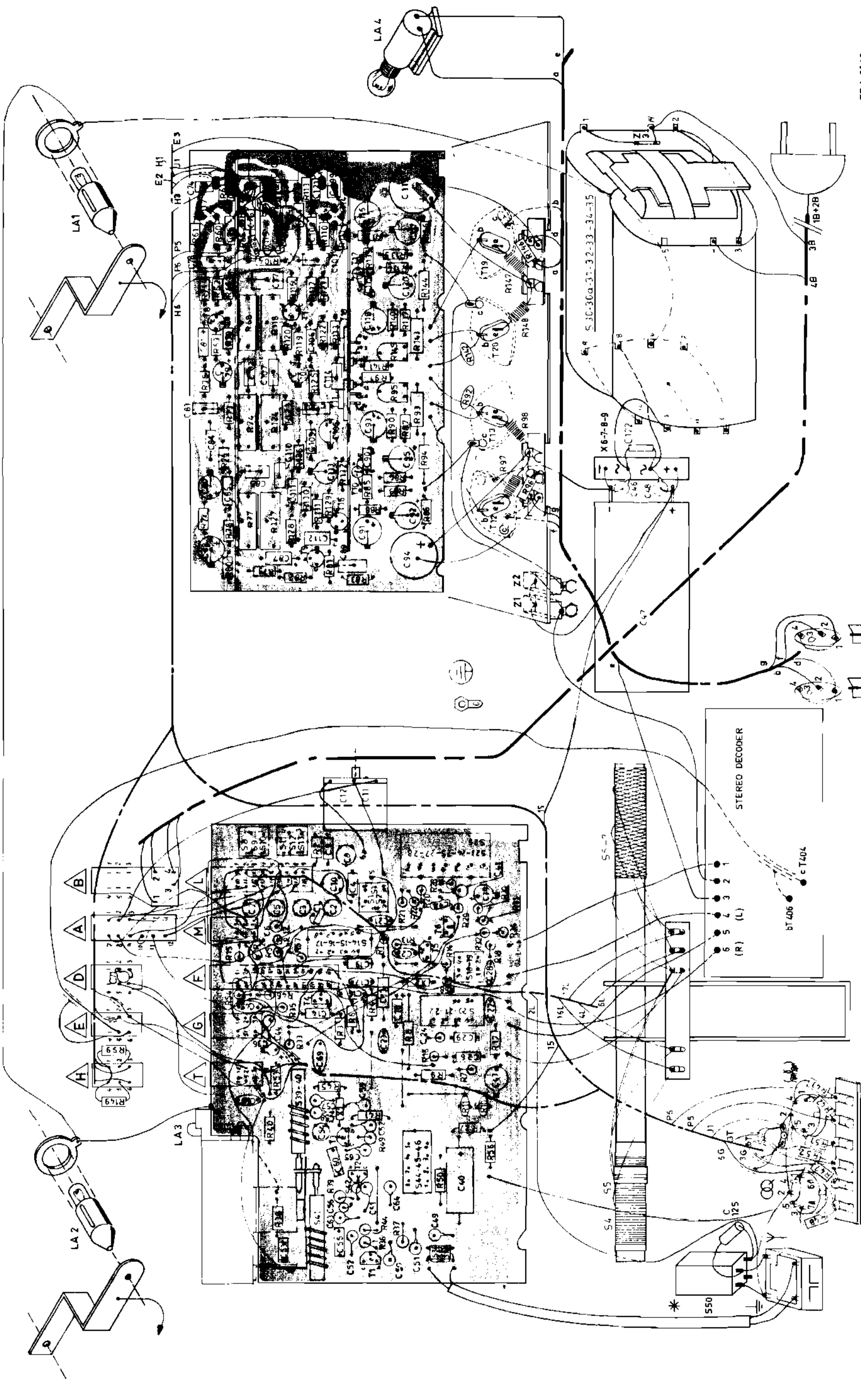
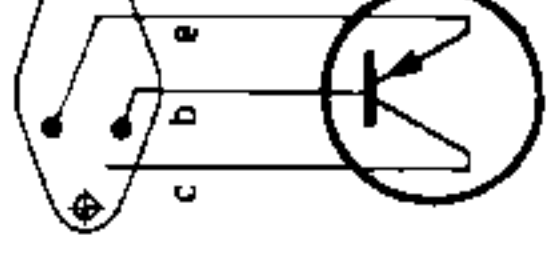
T10:17



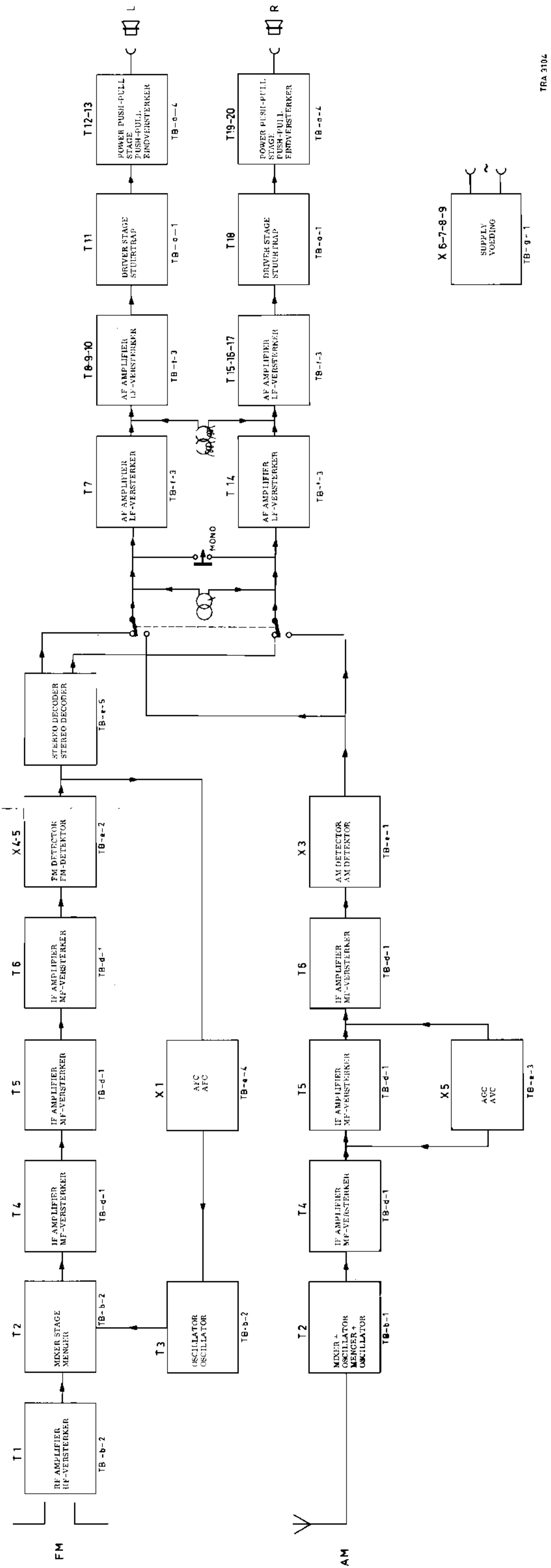
T11,13,18,20



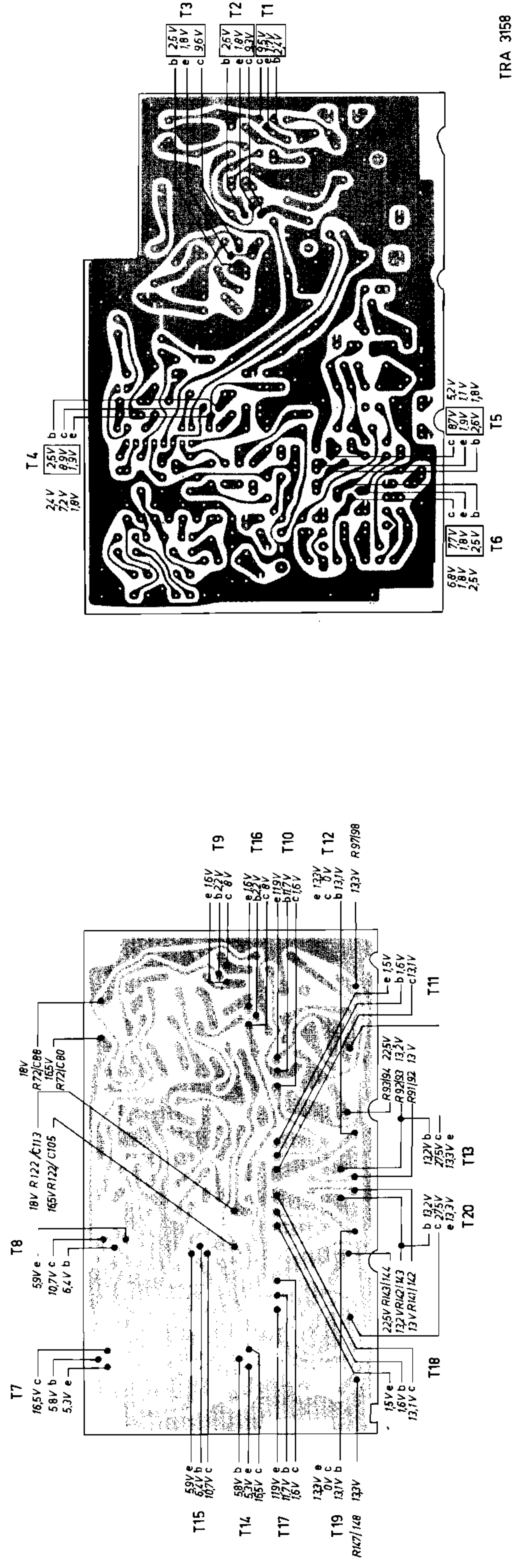
T12:19



\* This IF rejection circuit is included only in the 5911/03/04 and the 5912/03/04.  
 \* Deze MF-sperkring is alleen in de 5911/03/04 en de 5912/03/04 gemonteerd.



TRA 3104



TRA 3158

1. Detune S20 and S21, 22.
2. Apply a signal to the aerial input via a dummy aerial. Aerial switch in the position where the ferroceptor is switched off.
3. Apply the signal to the ferroceptor via a coupler winding. Aerial switch in the position where the ferroceptor is switched on.
4. AFC switched off.
5. Unsolder capacitor C39 and detune S24, 25-S18, 19-S14, 15 and S44, 45, 46. Connect an oscilloscope between junction R24-R30 and chassis. Signal: frequency-modulated. Adjust so that the height and the symmetry of the band-pass curve are maximum.
6. Re-connect capacitor C39. Signal: frequency-modulated. Connect oscilloscope between junction R32-R34 and chassis. Adjust so that the symmetry of the S-curve is maximum. Connect valve voltmeter between junction R32-R34 and chassis. Adjust to 0 V.
7. Signal: FM+AM. Adjust for maximum AM rejection (if necessary, by means of S24, 25).
8. In view of oscillations, keep the connection wires of the generator as short as possible.

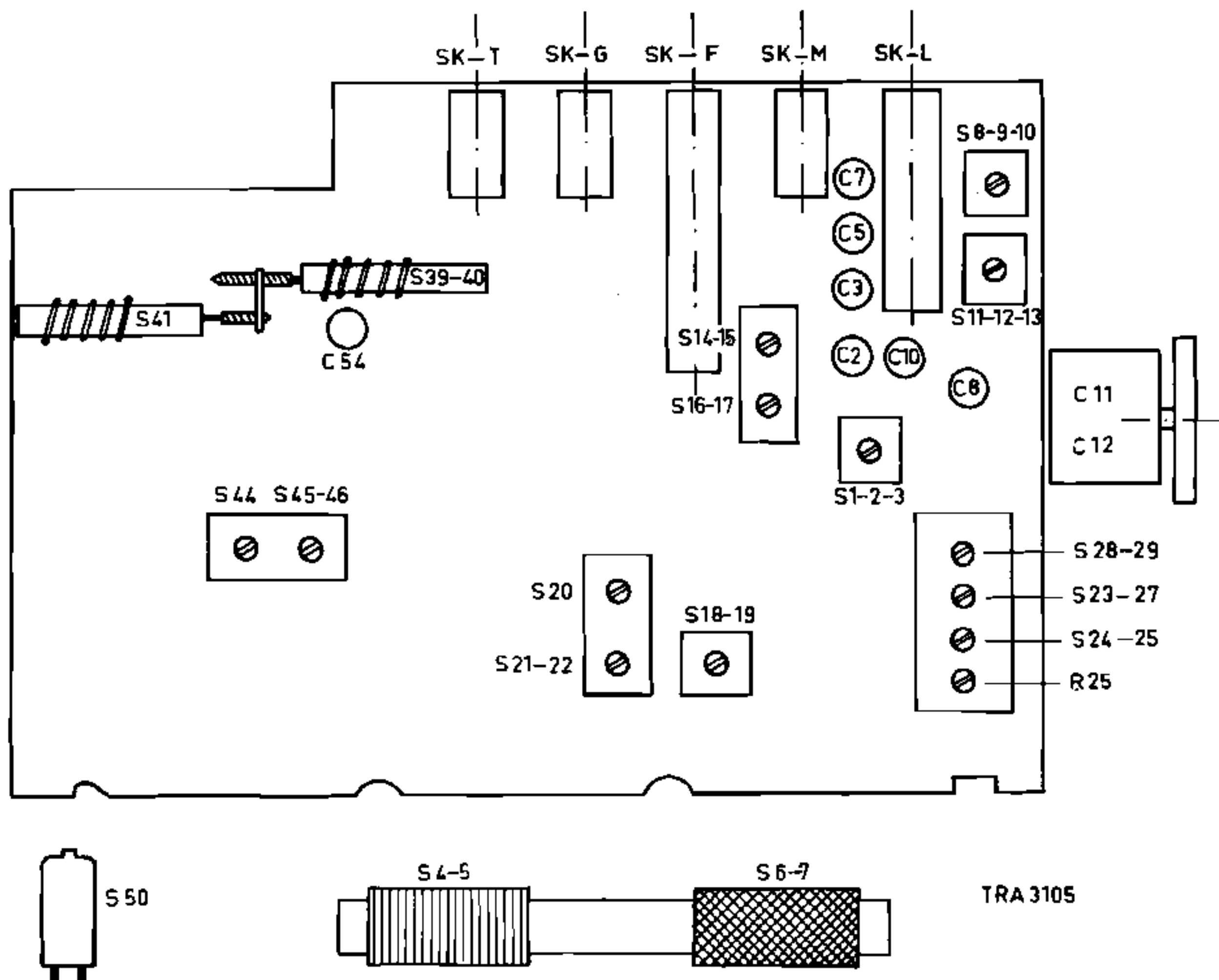
\* The IF is 452 kHz for the 5911/03/04 and the 5912/03/04.

\*\* Coil S50 (IF rejection coil) should be adjusted only in the 5911/03/04 and the 5912/03/04.

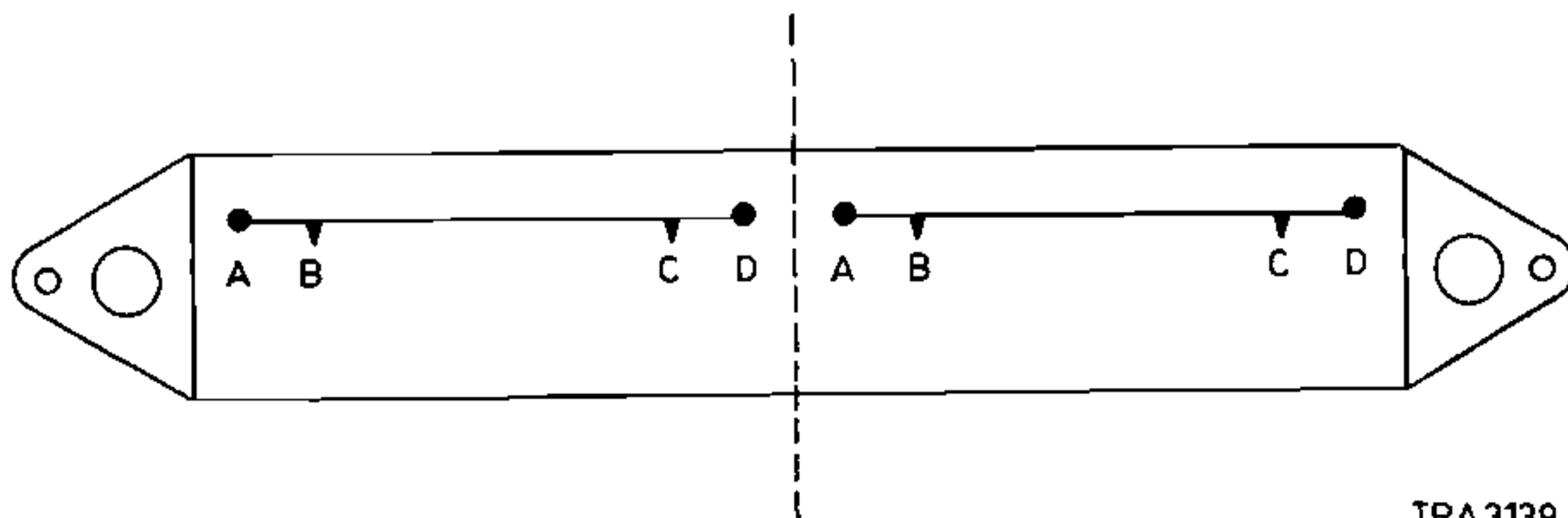
1. Ontregel S20 en S21, 22.
2. Signaal via kunstantenne aan de antenne-ingang toevoeren. Antenneschakelaar in stand "ferroceptor uitgeschakeld".
3. Signaal via koppelwinding aan de ferroceptor toevoeren. Antenne-schakelaar in stand "ferroceptor ingeschakeld".
4. AFC moet uitgeschakeld zijn.
5. Condensator C39 lossolderen en S24, 25-S18, 19-S14, 15 en S44, 45, 46 ontregelen. Oscillograaf aansluiten tussen knooppunt R24-R30 en chassis. Signaal FM-gemoduleerd. Afregelen op max. hoogte en symmetrie van de doorlaatkromme afregelen.
6. Condensator C39 vastmaken. Oscillator aansluiten tussen knooppunt R32-R34 en chassis en afregelen op symmetrie van de S-kromme. Buisvoltmeter aansluiten tussen knooppunt R32-R34 en chassis en afregelen op 0 V.
7. Signaal FM+AM gemoduleerd en afregelen op max. AM onderdrukking (eventueel met S24, 25).
8. Aansluitdraden van generator zo kort mogelijk houden, in verband met oscillatie.

\* Voor de 5911/03/04 en de 5912/03/04 is de MF 452 kHz.

\*\* Spoel S50 (MF-sperkringspoel) dient alléén in de 5911/03/04 en de 5912/03/04 afgeregeld te worden.

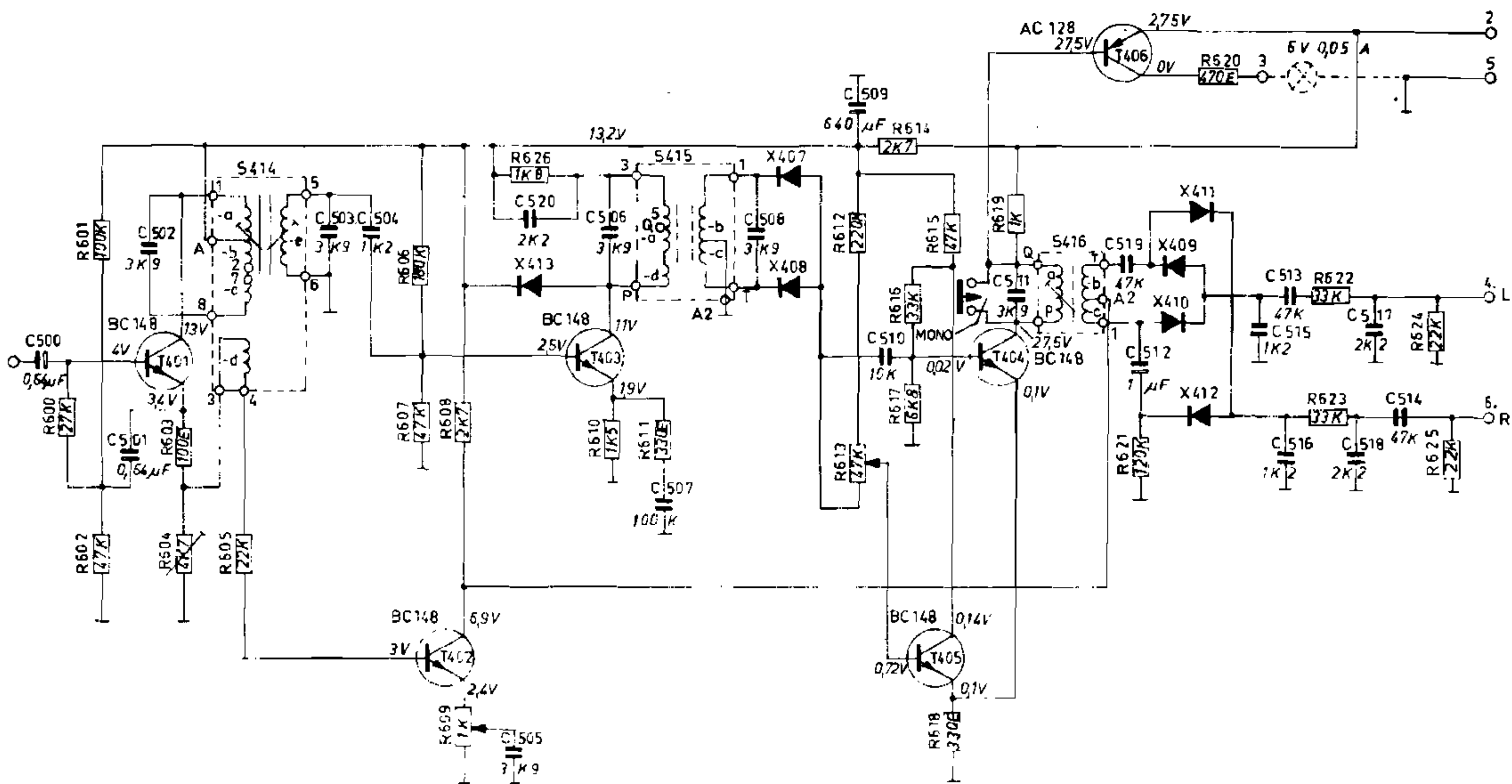


Serv-o-mecum TE-a-1 TE-a-2 TE-a-3	Wave range Golfsgebied	Trimming point Trimpunt	Signal Signaal	Adjust Afregele	Indication Aanwijzing			
IF - MF	MW - MG	B	* 470 kHz via 33 kpF 1)	b-T6	S28, 29	max.		
				R14-R58	S21, 22			
				R5-R57	S20			
				b-T4	S16, 17			
				Y 2)	S50 <sup>NR</sup>	min.		
Adjusting the pointer : stroke of the pointer = AD Instellen van de wijzer : slag van de wijzer = AD								
RF - HF	MW-MG	B	1500 kHz	3)	C8-C3	max.		
		C	560 kHz		S1, 2, 3-S4, 5			
		Repeat - Herhalen						
	LW-LG	C	160 kHz	3)	C10-S6, 7			
		B	268 kHz		C2			
		Repeat - Herhalen						
	LW-LG	B	268 kHz	Y 2)	C5			
		C	160 kHz		S11, 12, 13			
		Repeat - Herhalen						
	MW-MG	B	1500 kHz	Y 2)	C7			
		C	560 kHz		S8, 9, 10			
		Repeat - Herhalen						
	IF - MF	FM 4)	100 MHz	10, 7 MHz via 1500 pF	b-T6		S23, 27	5)
					b-T5		S18, 19	
					b-T4		S14, 15	
e-T2 8)					S44-S45, 46	6)		
					S24, 25			
R25	7)							
RF - HF	FM 4)	86, 5 MHz	86, 5 MHz	T	C54	max.		
		94 MHz	94 MHz		S39, 40-S41			
		Repeat - Herhalen						



# STEREO DECODER

S	414					415					416														
C	500.	501.	502.	503.	504.	505.	506.	507.	508.	509.	510.	511.	519.	512.	513.	514.	515.	516.	517.	518.					
R	600.	601.	602.	603.	604.	605.	606.	607.	608.	609.	610.	611.	612.	613.	614.	615.	617.	618.	619.	621.	620.	622.	623.	624.	625.

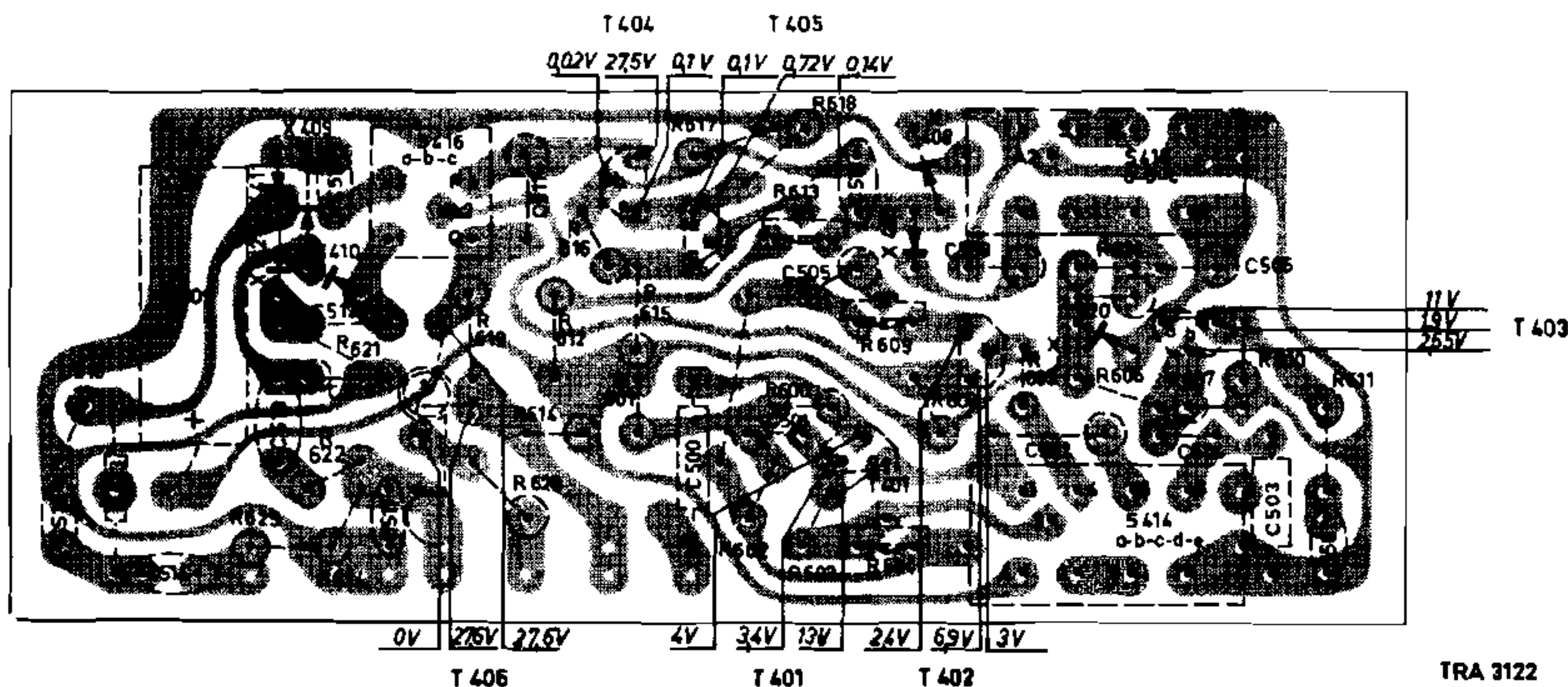


TRA 3133

- The voltages have been measured with respect to the "-" (chassis) with the aid of a valve voltmeter. The voltages in squares have been measured in position FM.

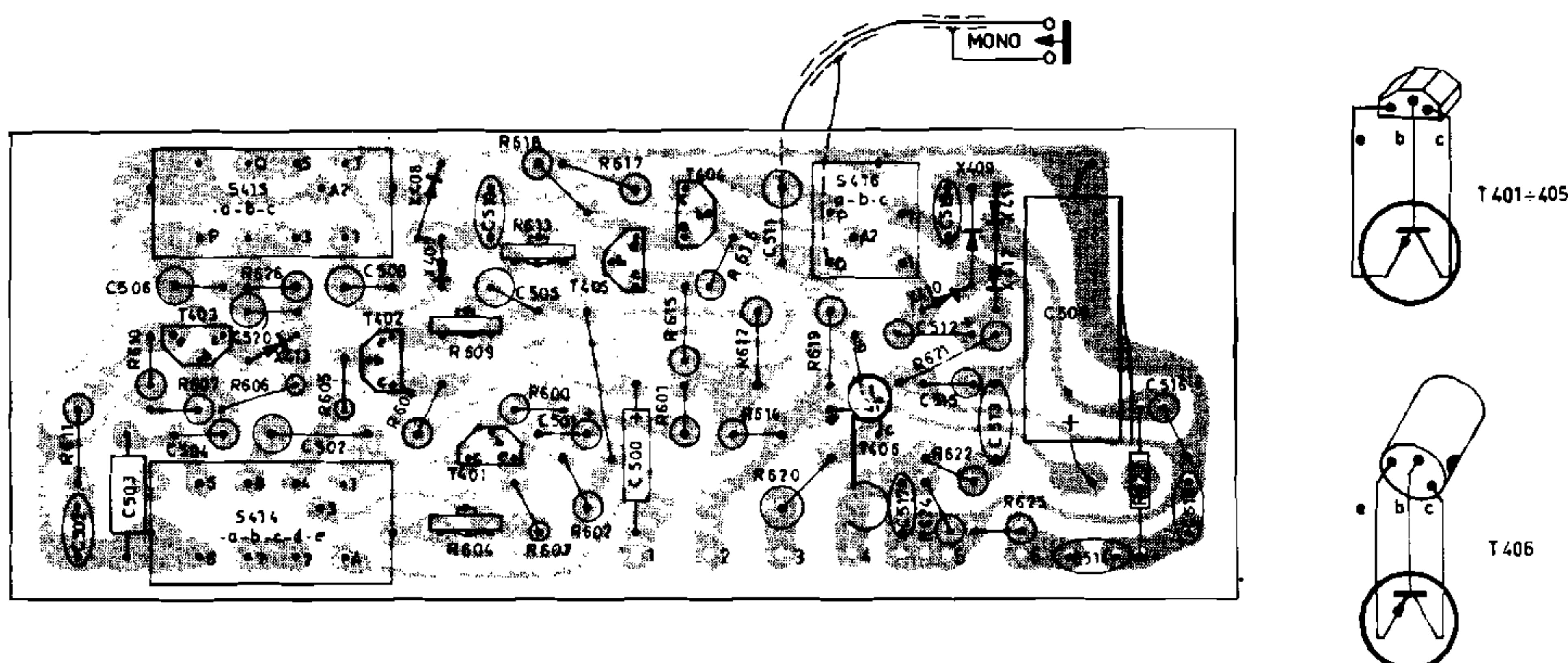
- De spanningen zijn m.b.v. een buisvoltmeter t.o.v. "-" (chassis) gemeten. De omlijnde spanningen zijn gemeten in stand FM.

S	416										415										414									
C	518.	516	514.	509.	513.	519.	515	512.	517.	511	500.	501.	505.	510.	508.	502.	520.	504.	506.	503.	507.									
R	623.	621.	624.	619.	612.	616	615.	617.	613.	618.	609.	604.	608.	605.	606	626.	607.	610.	611.	625.	622.									
R	625. 622.										620. 614. 601.										602. 603. 600.									



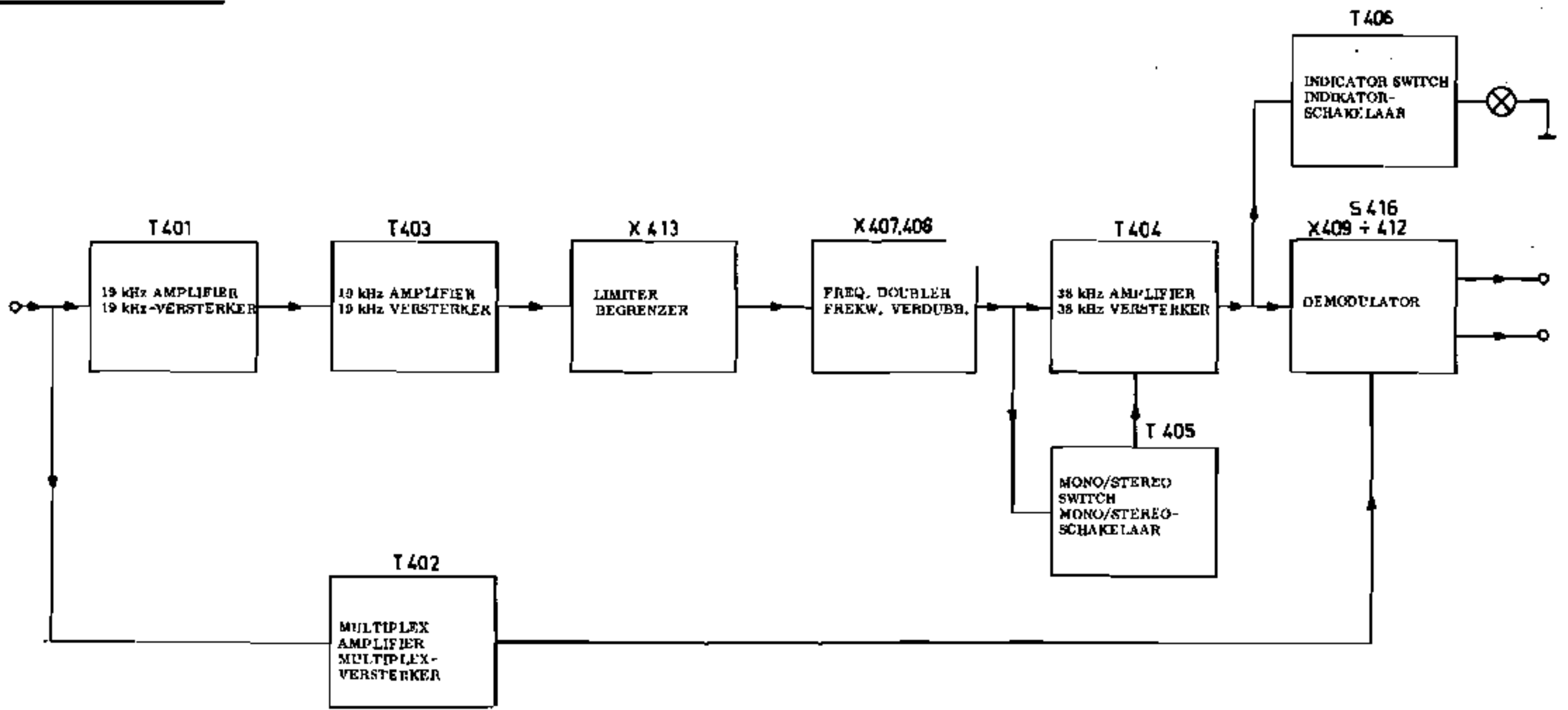
TRA 3122

S	414.					415.					416																			
C	501.	503.	506.	504.	520.	502.	508.	510.	505.	501.	500.	511.	517.	512.	515.	519.	513.	509.	514.	516.	518.									
R	611.	610.	607.	626.	606.	605.	608.	604.	609.	618.	613.	612.	615.	616.	612.	619.	624.	621.	623.	625.	622.									
R	600. 603. 607.										601. 614. 620.										622. 625.									



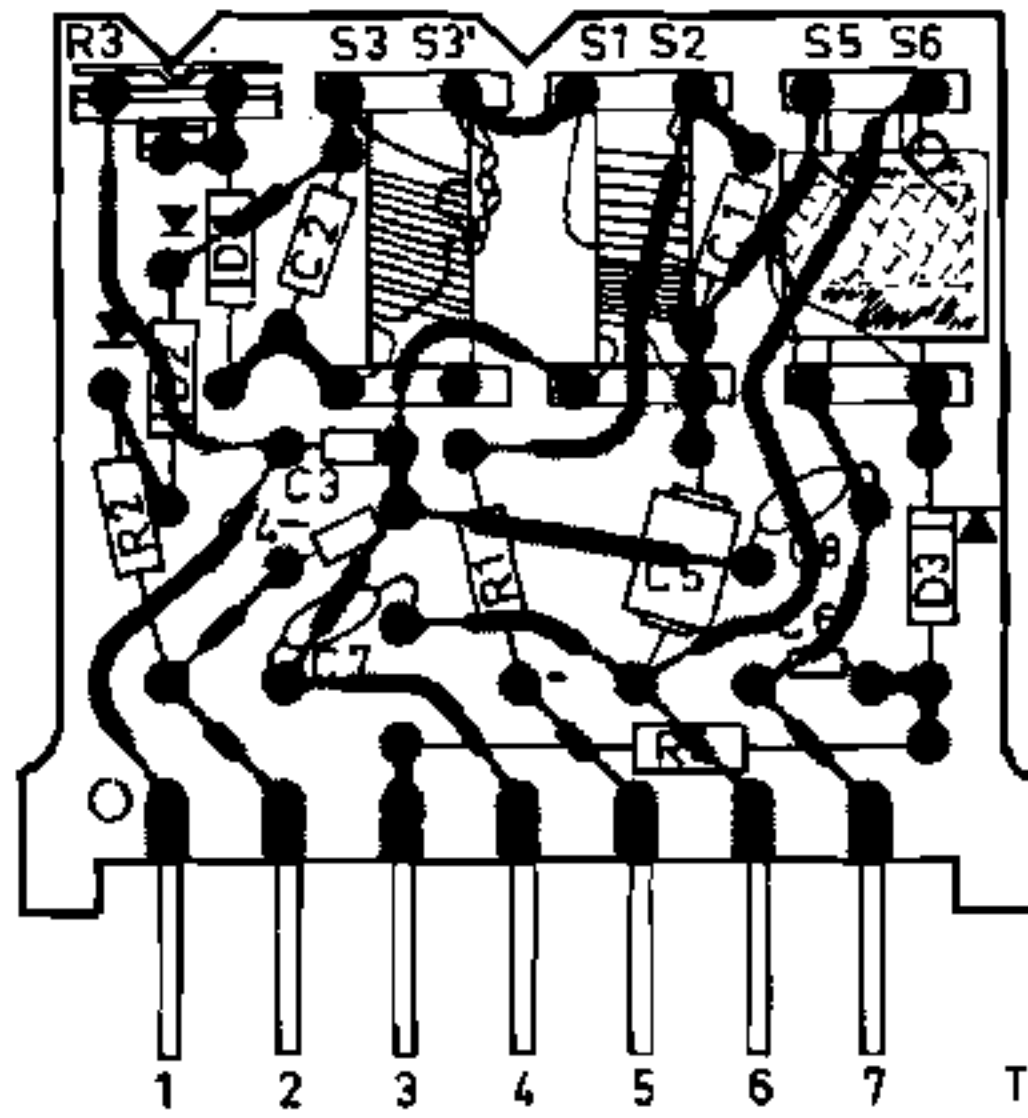


# STEREO DECODER

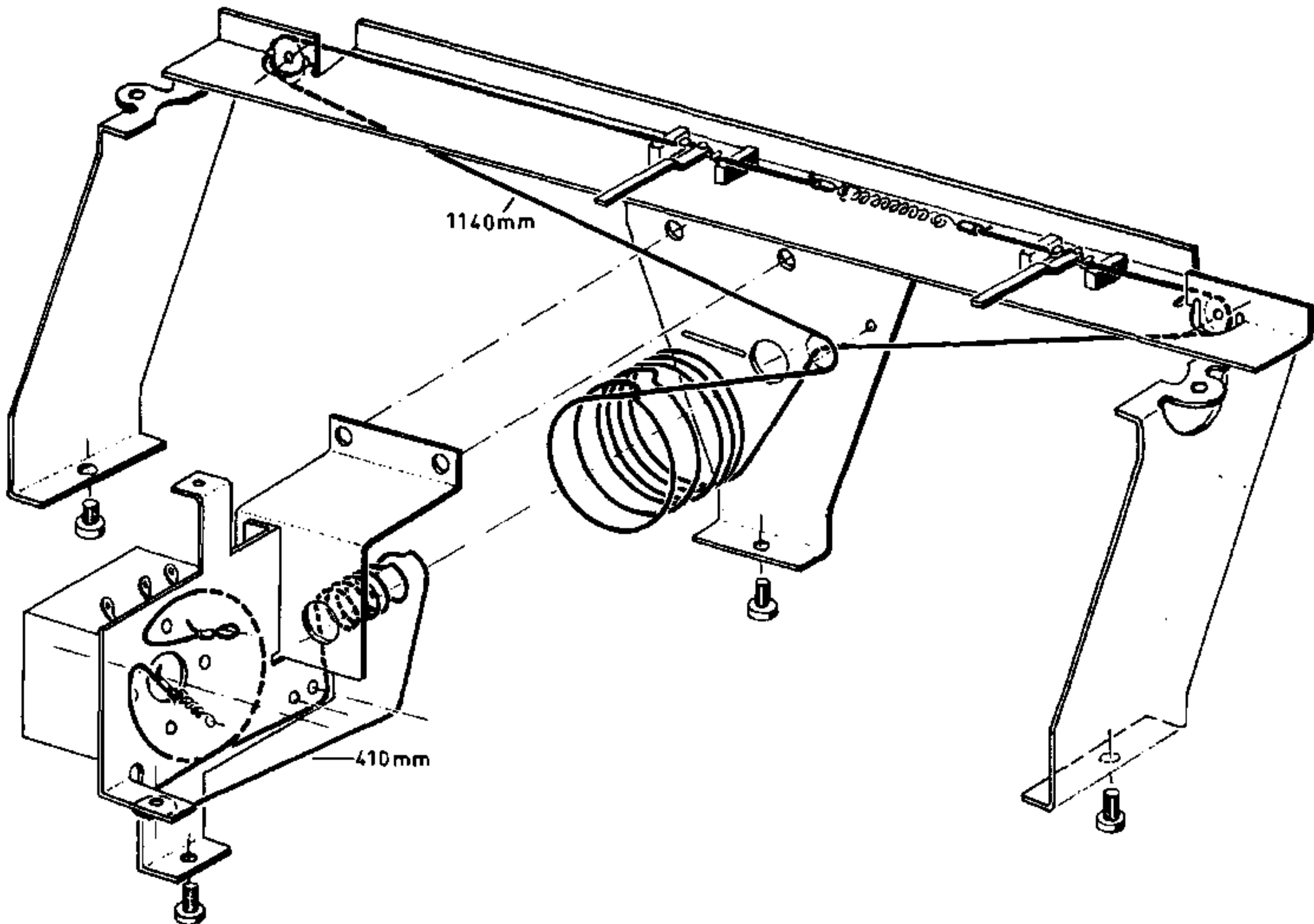


TRA 3118.

# DETECTION-UNIT



TRA 3143



TRA 3159