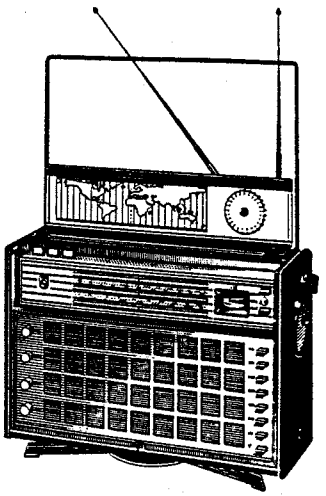
PHILIPS Service



RADIO

22RL798/15

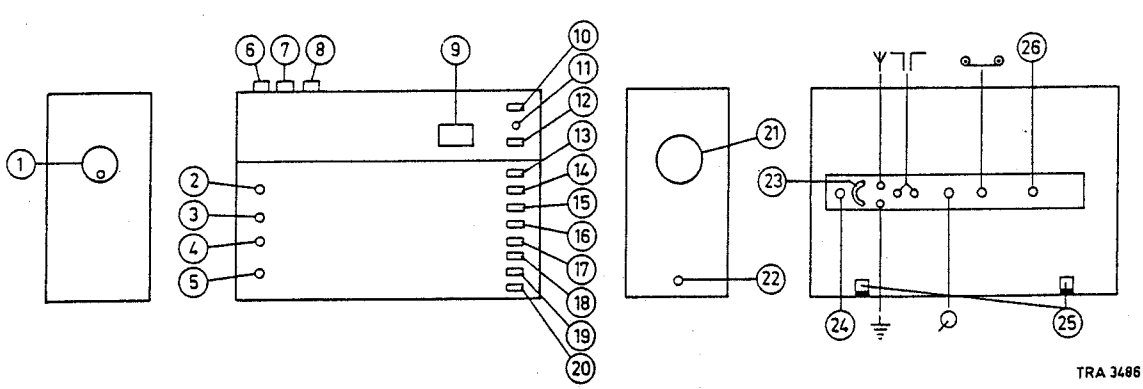
1	Tuning FM	S308/S311	10	PU switch	SK-K	18	MW switch	SK-E
2	Volume control	R415	11	On-off indication		19	LW switch	SK-F
3	High notes	R414	12	On-off switch	SK-P	20	Aerial switch	SK-G
4	Low notes	R416	13	FM switch	SK-H	21	Tuning AM	C410
5	Fine tuning	R413	14	SW1 switch	SK-A	22	Car aerial	
6	AFC	SK-L	15	SW2 switch	SK-B	23	Aerial selector switch	SK-R
7	Battery check	SK-M	16	SW3 switch	SK-C	24	External supply	
8	Scale illumination	SK-N	17	SW4 switch	SK-D	25	Lock of rear cover	
9	Tuning indicator	Ind.				26	Earphone connection	

SPECIFICATION

Loudspeaker	4 Ω
IF-AM	470 kHz
IF-FM	10,7 MHz
Battery voltage	9 V (6x1,5 V)
Consumption (without signal)	21 mA (AM)
	22 mA (FM)
Output	1 W
Dimensions	370x255x120 mm

WAVE RANGES

LW	: 150	- 415 kHz	(2000	- 725	m)
MW	: 517	- 1622 kHz	(580	- 185	m)
SW4	: 1,6	- 4,2 MHz	(187	- 71,4	m)
SW3	: 4,2	- 8 MHz	(71,4	- 37,5	m)
SW2	: 8	- 16 MHz	(37,5	- 18,75	m)
SW1	: 16	- 27 MHz	(18,75	- 11,1	m)
FM	: 87,5	- 108 MHz			



TRA 3486

COMBINED ELECTRONIC SERVICES LTD.

QUEENSWAY WADDON FACTORY ESTATE CROYDON CR9 4DR

TELEPHONES :

Spare part orders: 01-686 7311

General service enquiries : 01-688 7722

After business hours: Recorded messages on both lines

TELEX: 262308

Index: GS21889-CS21895

SERVICE INFORMATION										

4822 725.1.0367

The use of the aerials

Ferroceptor	: is used for the reception of LW and MW. It is also used for determining the direction of LW and MW (sounding). If the ferroceptor axis, which is also the longitudinal axis of the apparatus, points in the direction of the transmitter the reception is minimal.
Frame aerial	: is used for the reception of SW1-2-3-4. It is also used for determining the direction of SW1-2-3-4 (sounding). If the plane of the frame (the short axis of the apparatus) points in the direction of the transmitter the reception is minimal.
Outdoor aerial	: is used for the reception of weak stations on LW, MW and SW1-2-3-4. When the outdoor aerial is used the ferroceptor should be switched off.
Car aerial	: is used for the reception of FM, LW, MW and SW1-2-3-4. When it is used, SK-R, 2-3 should be interconnected for the reception of FM, whereas for the reception of LW and MW the ferroceptor should be switched off.
Dipole aerial	: is used for the reception of FM, and, because of its working as a normal aerial, it can also be used to receive LW, MW and SW1-2-3-4. For reception of LW, MW and SW1-2-3-4, SK-R. 2-3 should be interconnected and the ferroceptor should be switched off.
Rod aerials	: these are used to receive FM. If SK-R, 2-3 are interconnected they can also be used to receive SW1-2-3-4 and, if the ferroceptor is switched off, MW and LW can also be received.

REMOVEMENT OF THE CABINET

Removing the back of the receiver

Remove the ornamental screw between the two telescopic aerial rods. Next, remove the battery lid.
Unscrew the four screws A (see Fig. 1) Carefully lift the back in a slanting position.

Removing the battery holder

After having removed the back of the receiver, remove the six screws B, see Fig. 2.
Slightly lift the battery holder and then remove it from the cabinet by carefully tilting it.

Removing the front (this can only be removed if the back has been removed)

Remove the four metal knobs (vol, high, low, fine tuning) by pulling them forwards.
Loosen screw C and unscrew screws D, see Fig. 2.
Two clamping springs prevent screws C from falling down, Carefully hinge the front up.

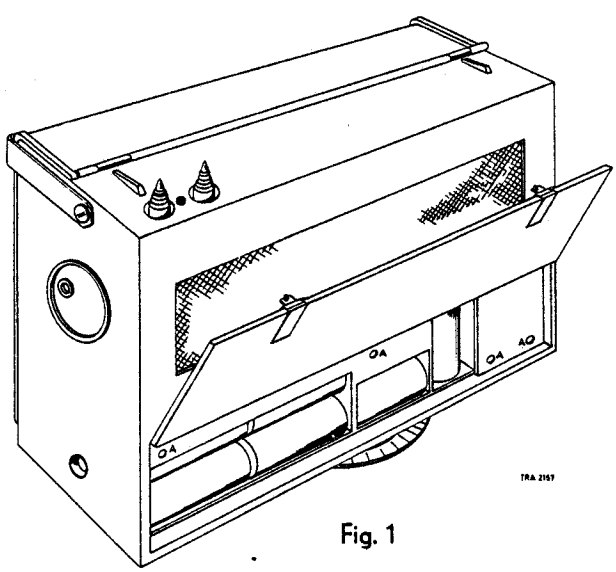


Fig. 1

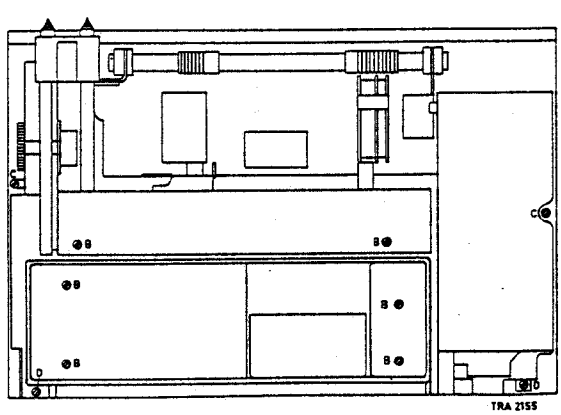
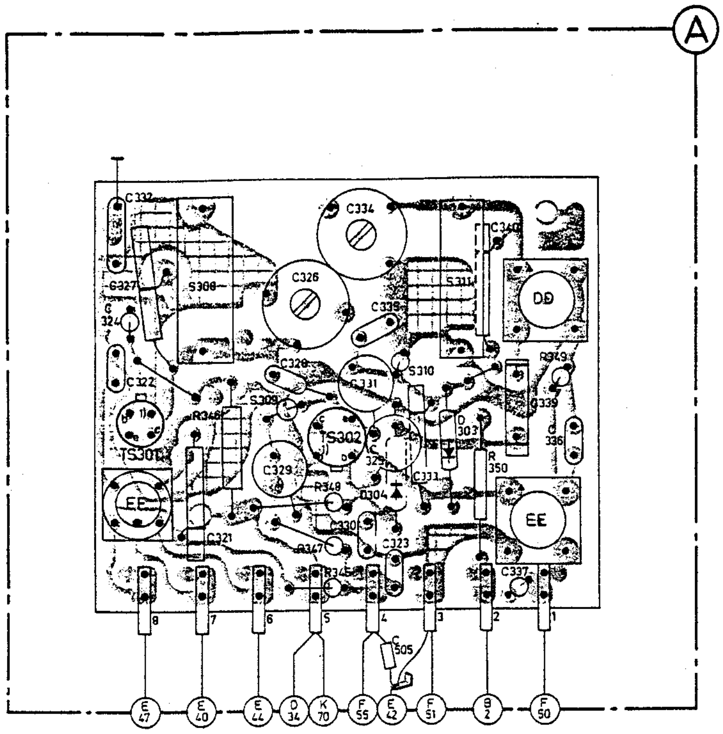
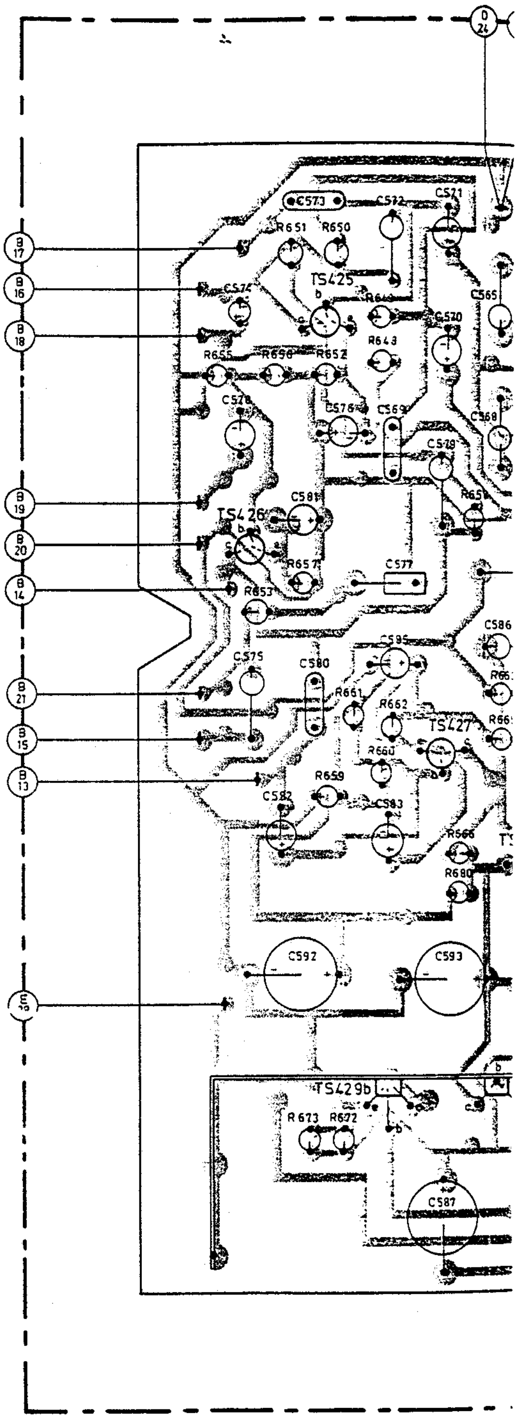
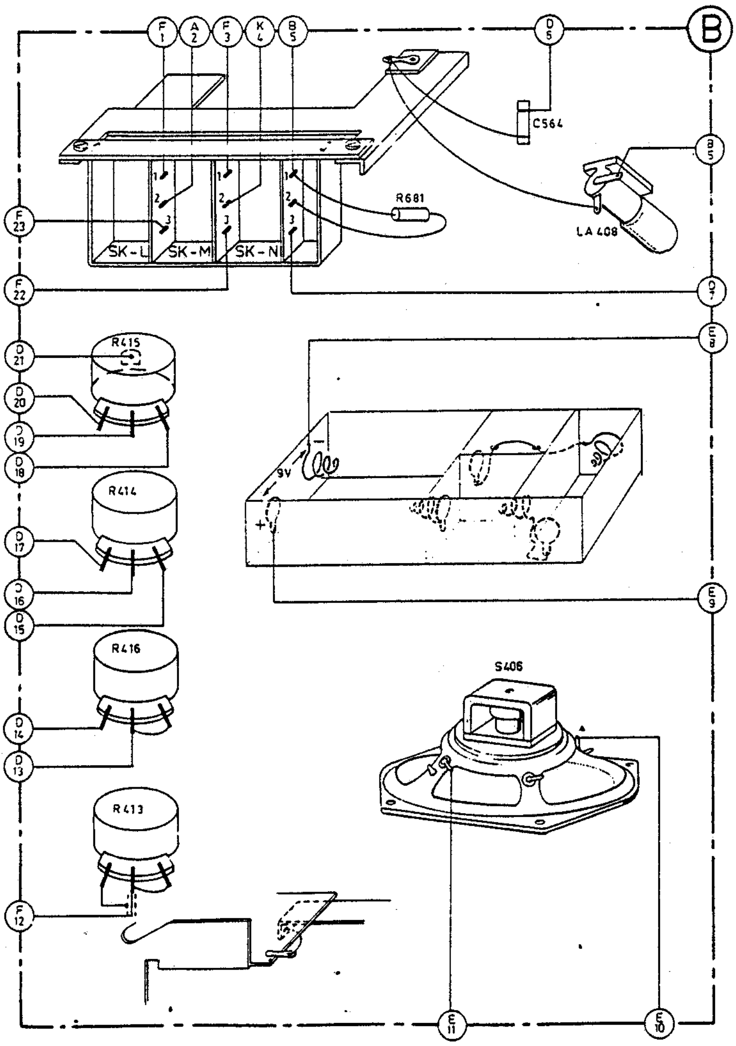


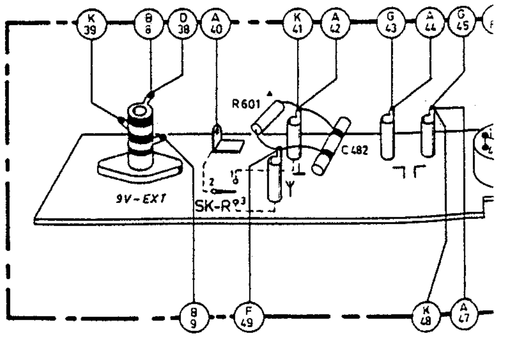
Fig. 2

S	FF. 308. 309. 310. 311. 406. EE.DD.	
C	332.322 324.327. 321 329.328.326. 330.334.331.335.325.323.333. 340. 339. 337. 336.	574 578.573. 576 569 572 570.571 579 565.5
C	505. 564.	575 592. 580÷583.482.585 577 593. 587 586.
R	346. 347. 348. 350. 349.	655 656.653.657.652.648÷650 658 6
R	413÷416 345 681.	651. 601.673.672.659÷662 666.680.663-









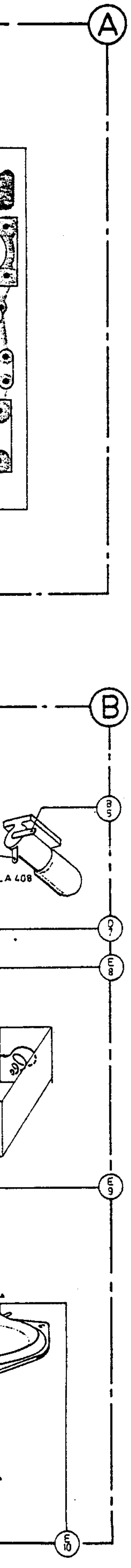
474. 473. T.V. X.Y.S.U. AA B

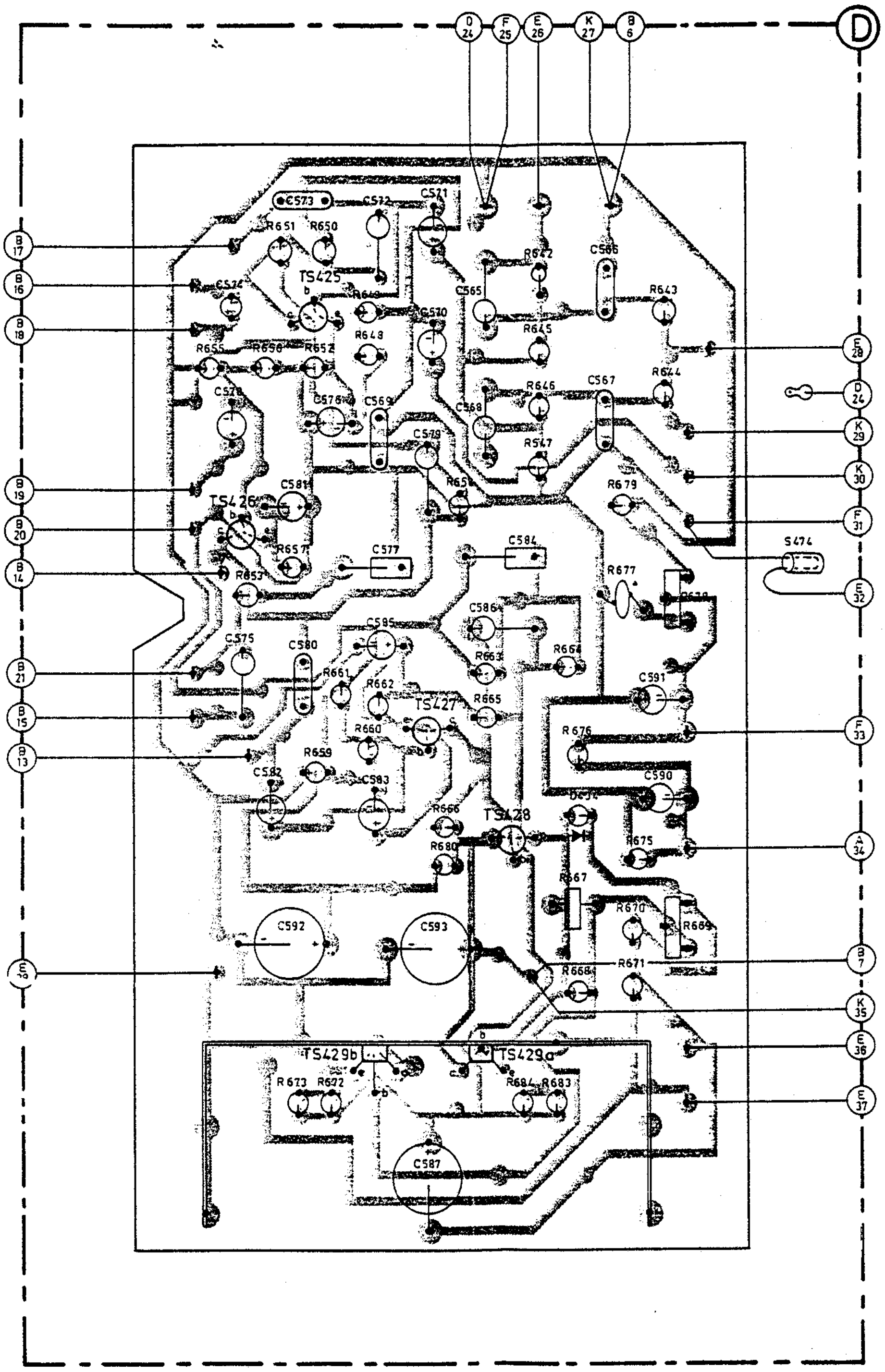
336. 574.578.573. 576 569 572 570 571 579 565.568. 566 567 538. 553

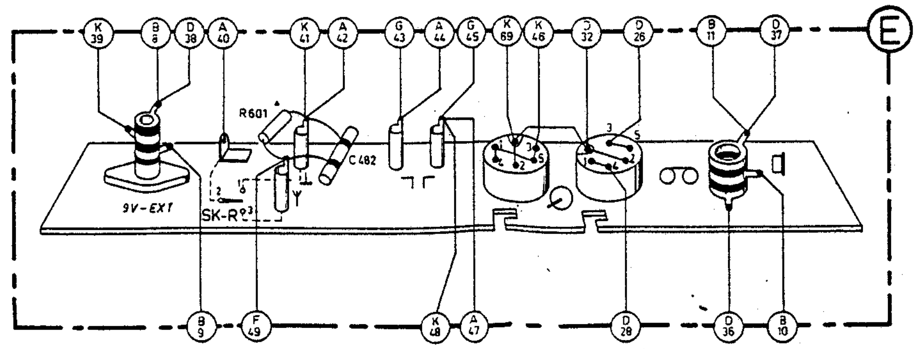
575 592.580÷583 482 585 577 593. 587 586. 584 590. 591 549. 560. 544÷547.

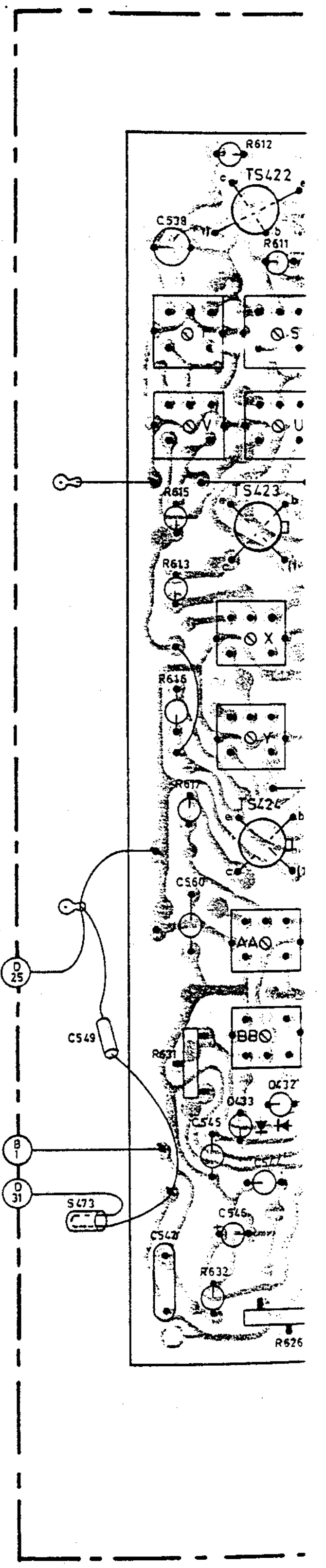
9. 655 656 653 657 652.648÷650 658. 645÷647 642.677 679.643.644 678 615. 616. 611÷613.

651. 601 673 672.659÷662 666 680.663÷665.684 683.676.667÷671.675. 617 631. 632. 626.









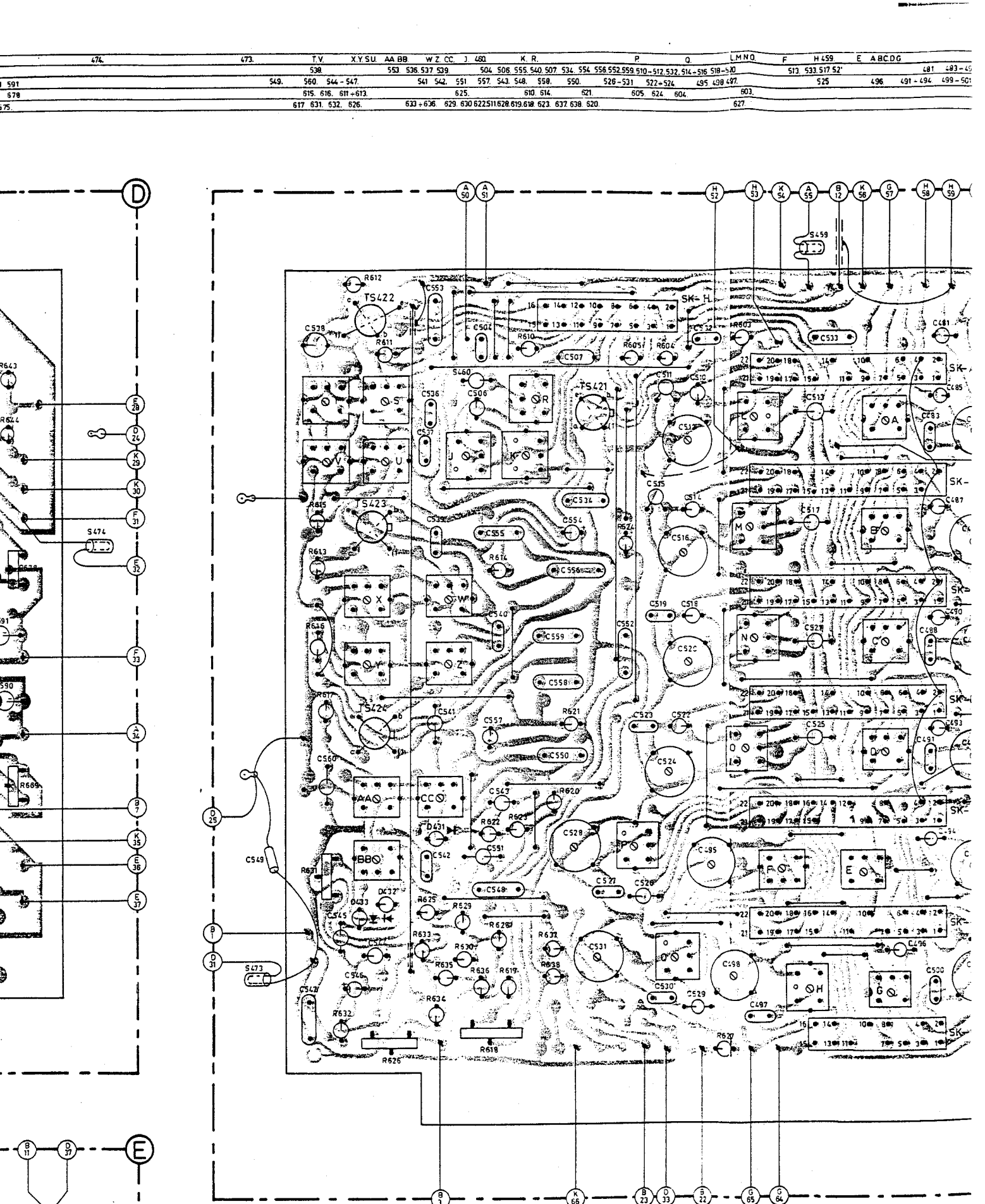
Wiring example

Voorbeeld bedrading

Exemple de câblage

Verdrahtungsbeispiel

Ejemplo de cableado



Wiring example : Wire (F1) (mentioned under unit B) leads to unit F, and is then mentioned (B1)

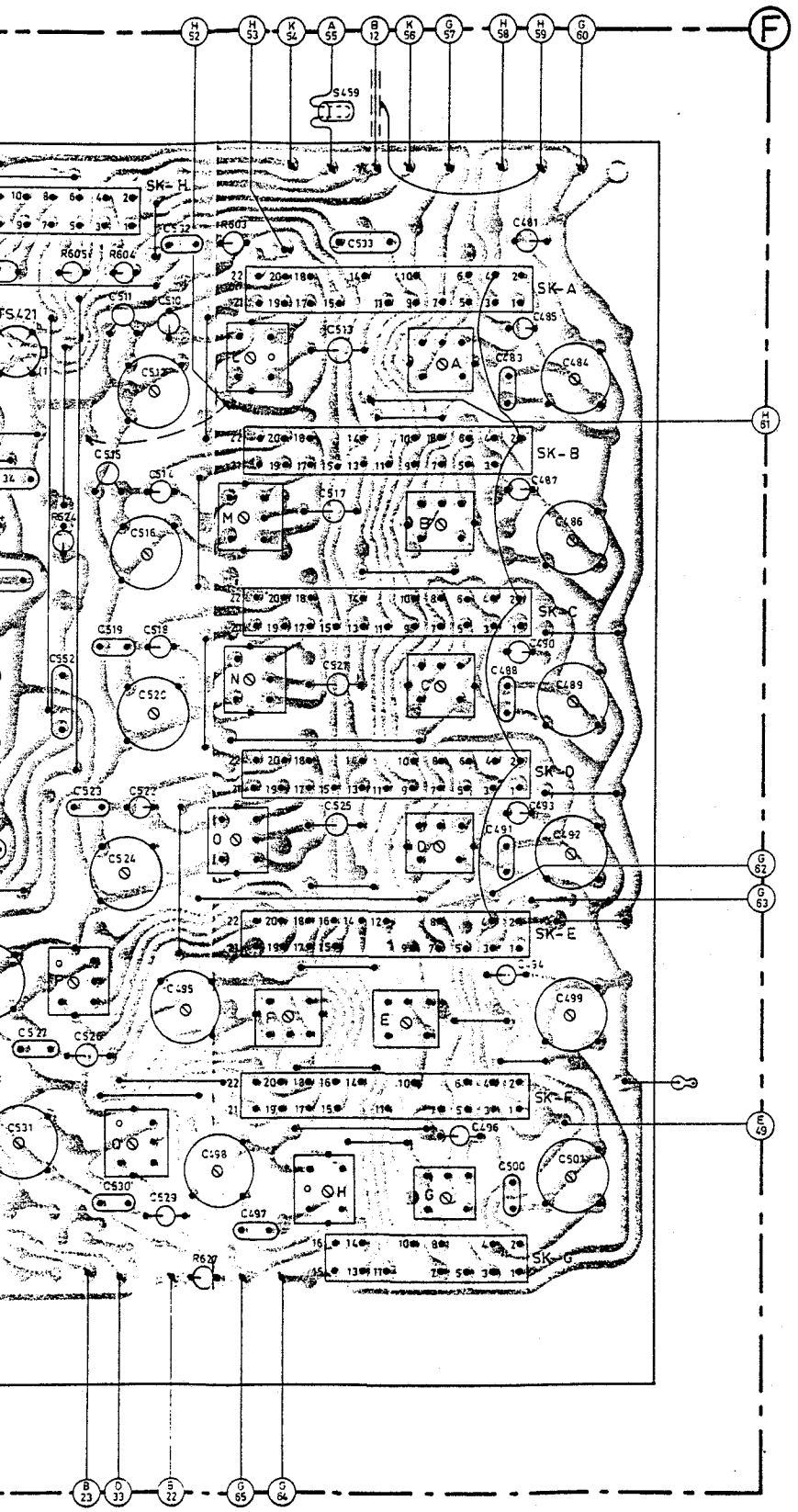
Voorbeeld bedrading : Draad (F1) (genoemd bij unit B) gaat naar unit F, en is daar (B1) genoemd

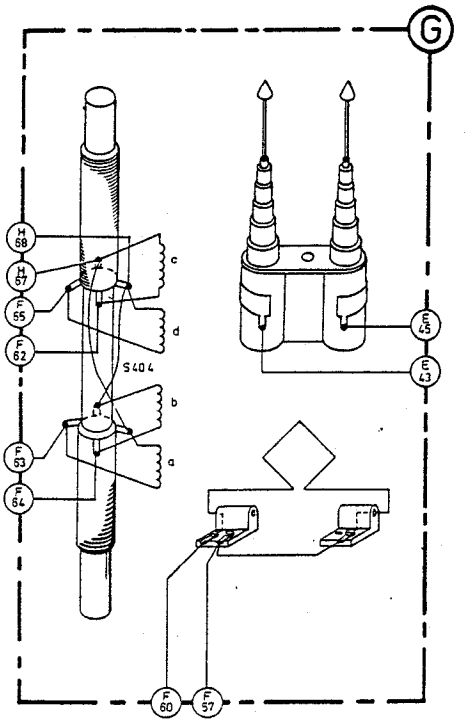
Exemple de câblage : Le fil (F1) (mentionné sous bloc B) va vers le bloc F, où il est indiqué sous (B1)

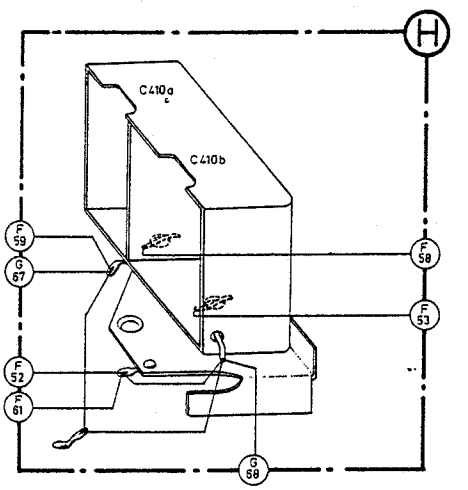
Verdrahtungsbeispiel : Draht (F1) (bei Einheit B genannt) führt nach Einheit F und wird dort als (B1) beze

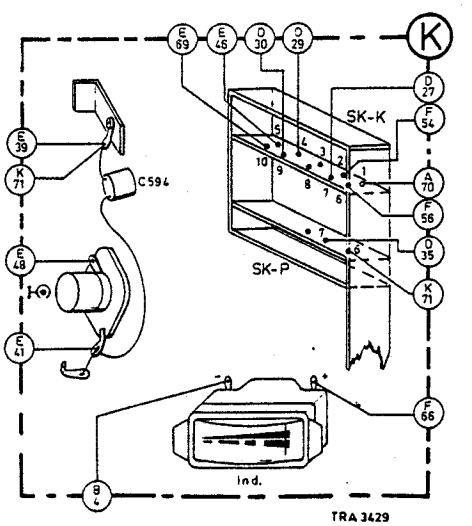
Ejemplo de cableado : El hilo (F1) (mencionado en la unidad B) va hacia la unidad F y allí está marcada con

P	Q	LMNO	F	H459	E	ABCDG			404	S
554. 556.552.559.510–512.532. 514–516 518–510			513. 533.517.52'				481.	483–490.	410.	C
526–531	522–524.	495. 498 497.	525		496.	491–494.	499–501.		594.	C
621.	605. 624. 604.	603.								R
620.		627.								R









ader unit B) leads to unit F, and is then mentioned (B1)

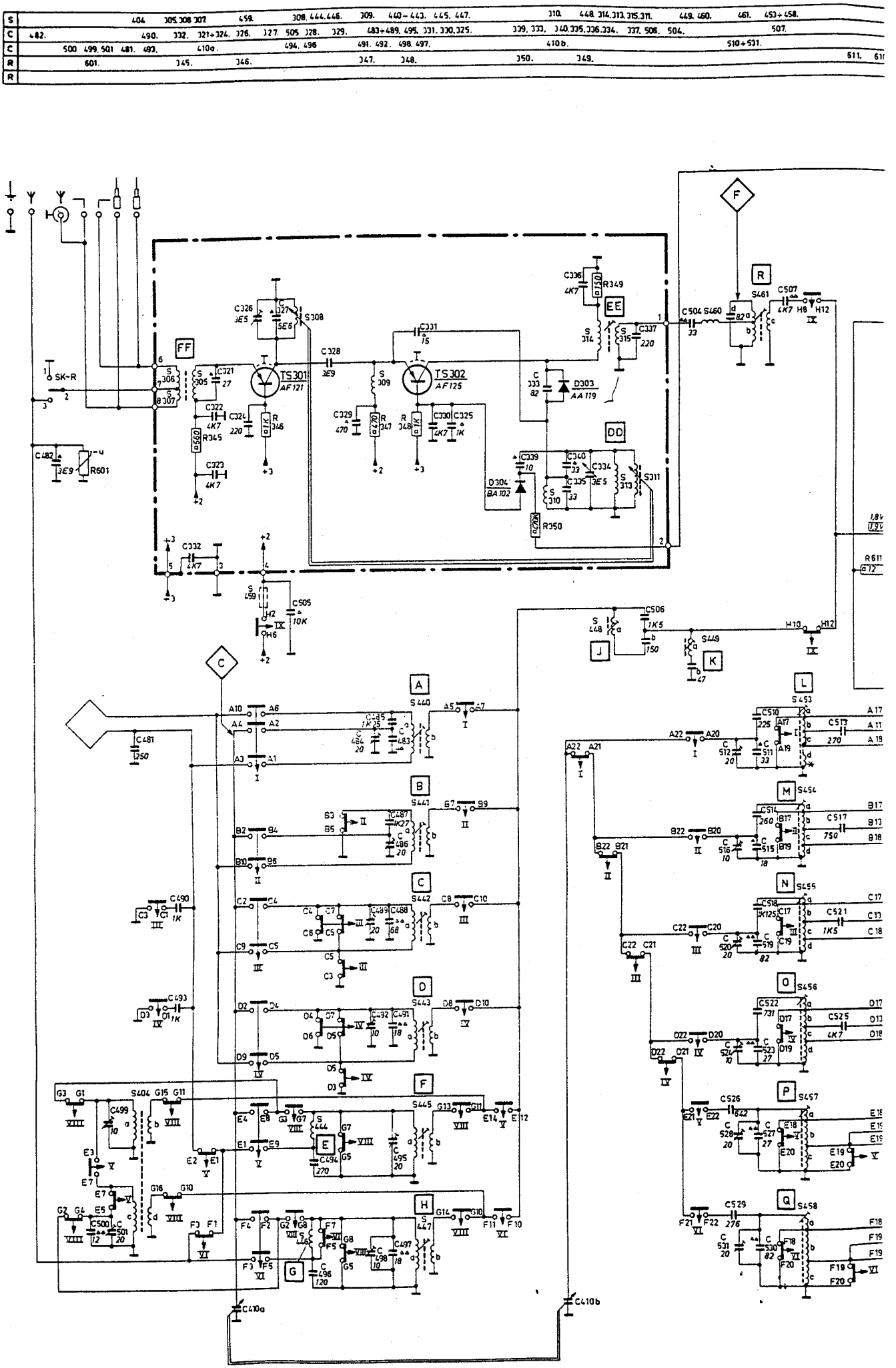
j unit B) gaat naar unit F, en is daar (B1) genoemd

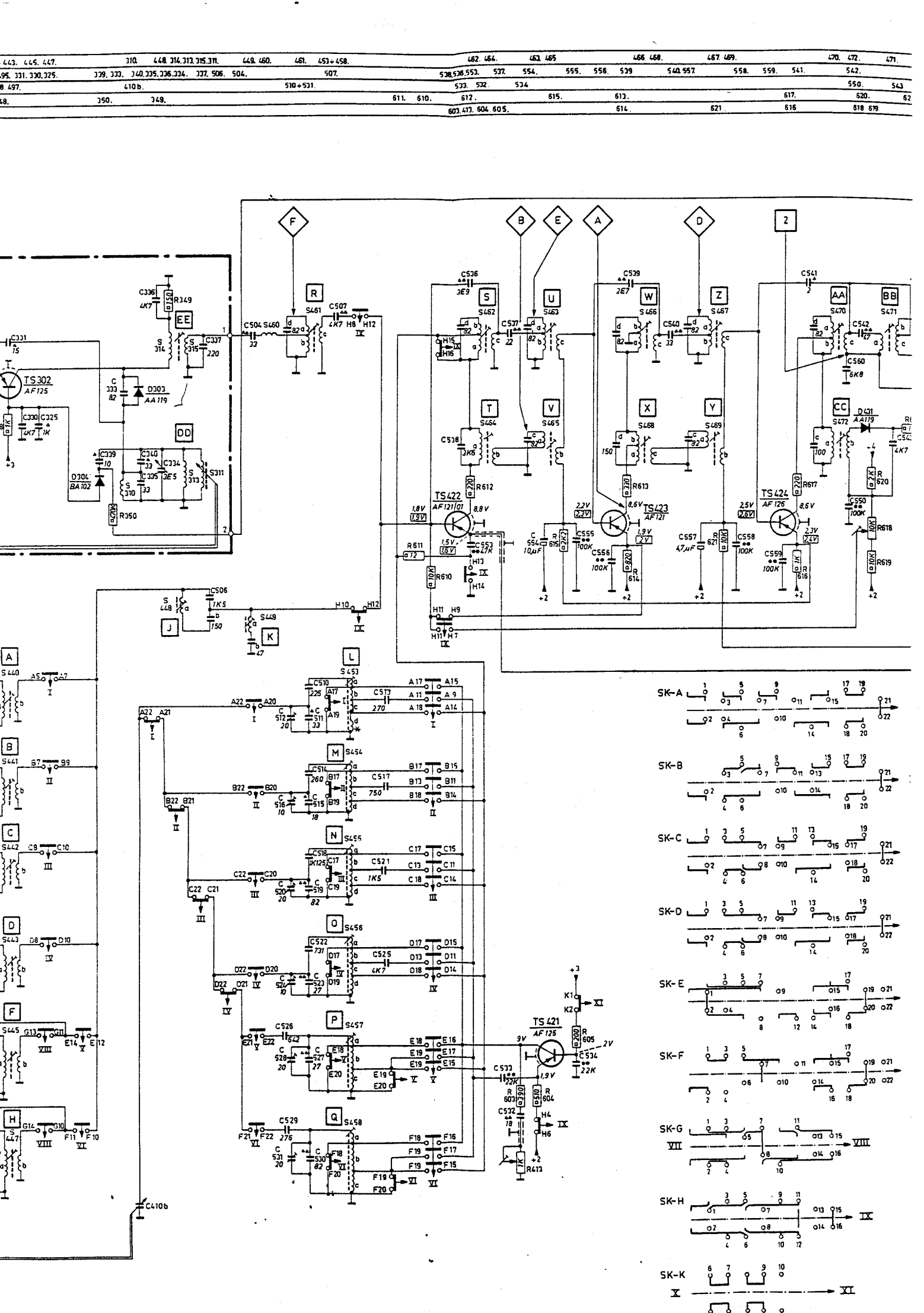
ous bloc B) va vers le bloc F, où il est indiqué sous (B1)

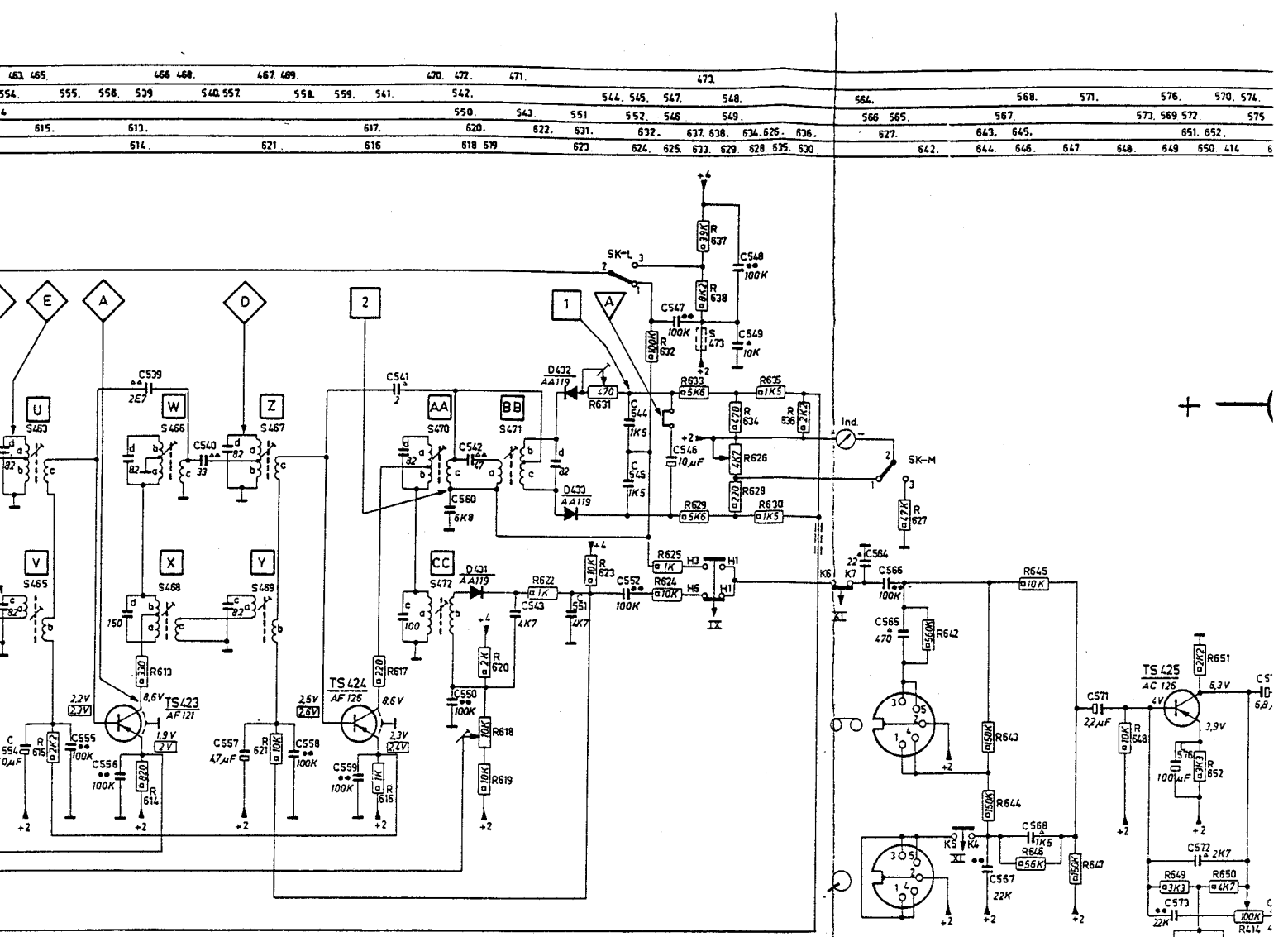
B genannt) führt nach Einheit F und wird dort als (B1) bezeichnet

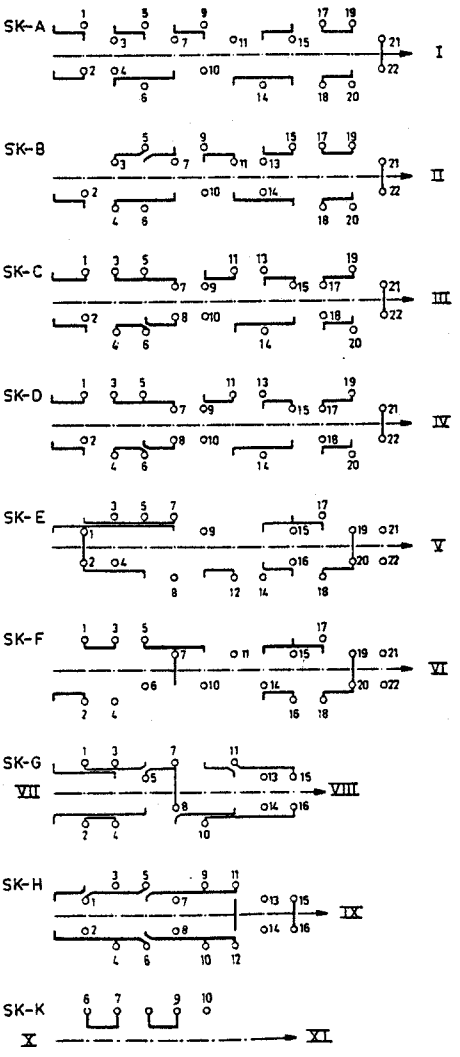
o en la unidad B) va hacia la unidad F y allí está marcada con (B1)

CS21890


TS301 AF121
TS302 AF125
D303 AA119
D304 BA102
SK-R
R601
S404
S440
S441
S442
S443
S444
S445
S447
S449
S453
S454
S455
S456
S457
S458
S459
S460
S461
A
B
C
D
E
F
G
H
J
K
L
M
N
O
P
Q
FF
EE
DD
C410a
C410b


TS302 AF125
D303 AA119
D304 BA102
TS422 AF121/01
TS423 AF121
TS424 AF126
TS421 AF125
D431 AA179
R350
R612
R613
R617
R620
R618
R619
R610
R611
R614
R616
R605
R604
R603
R413
C410b
SK-A
SK-B
SK-C
SK-D
SK-E
SK-F
SK-G
SK-H
SK-K





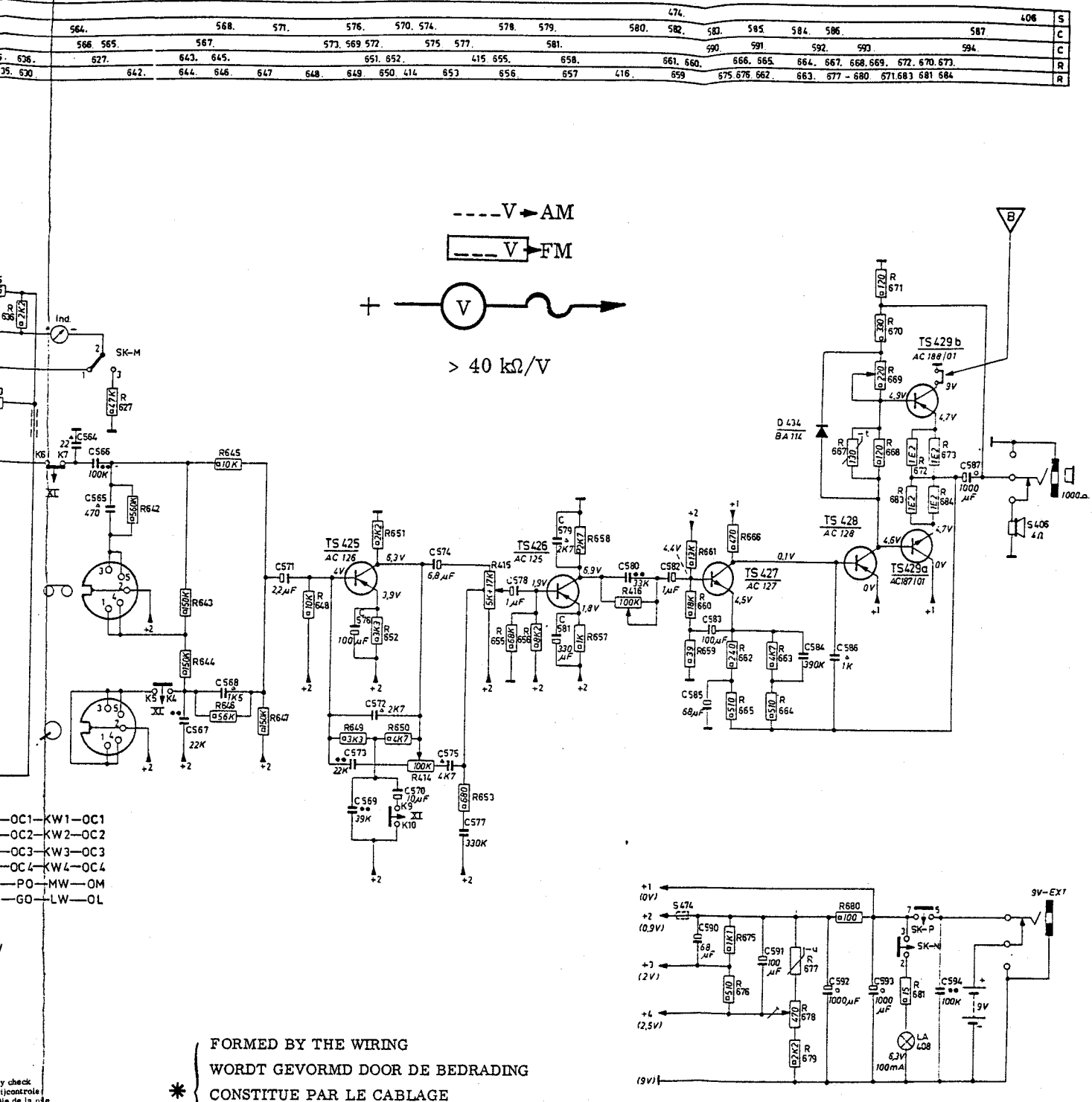
I : SW1—KG1—OC1—KW1—OC1
II : SW2—KG2—OC2—KW2—OC2
III : SW3—KG3—OC3—KW3—OC3
IV : SW4—KG4—OC4—KW4—OC4
V : MW—MG—PO—MW—OM
VI : LW—LG—GO—LW—OL
VII : FERROC.
VIII : Y
IX : FM—UKW
X : RADIO
XI : PU—TA

SK-L	AFC AFR CAF AFR CAF
SK-M	Battery check Batterijcontrole Contrôle de la pile Batteriekontrolle Comprobación de la pila
SK-N	Dial illumination Schaalverlichting Éclairage du cadran Skalenbeleuchtung Alumbrado del cuadrante
SK-P	Battery switch Batterijschakelaar Interrupteur de pile Batterieschalter Interruptor de pila
SK-R	Aerial switch Antenneschakelaar Commutateur d'antenne Antennenschalter Conmutador de antena

* FORMED BY THE WIRING
WORDT GEVORMD DOOR DE
CONSTITUE PAR LE CABLAG
WIRD DURCH DIE VERDRAHT
ES FORMADA POR EL CABLE

- Carbon resistor E24 series
- Tubular ceramic capacitor
- Ceramic capacitor "Pin-up"
- Plate ceramic capacitor
- Flat-foil polyester capacitor
- Miniature electrolytic capacitor

TRA 3438



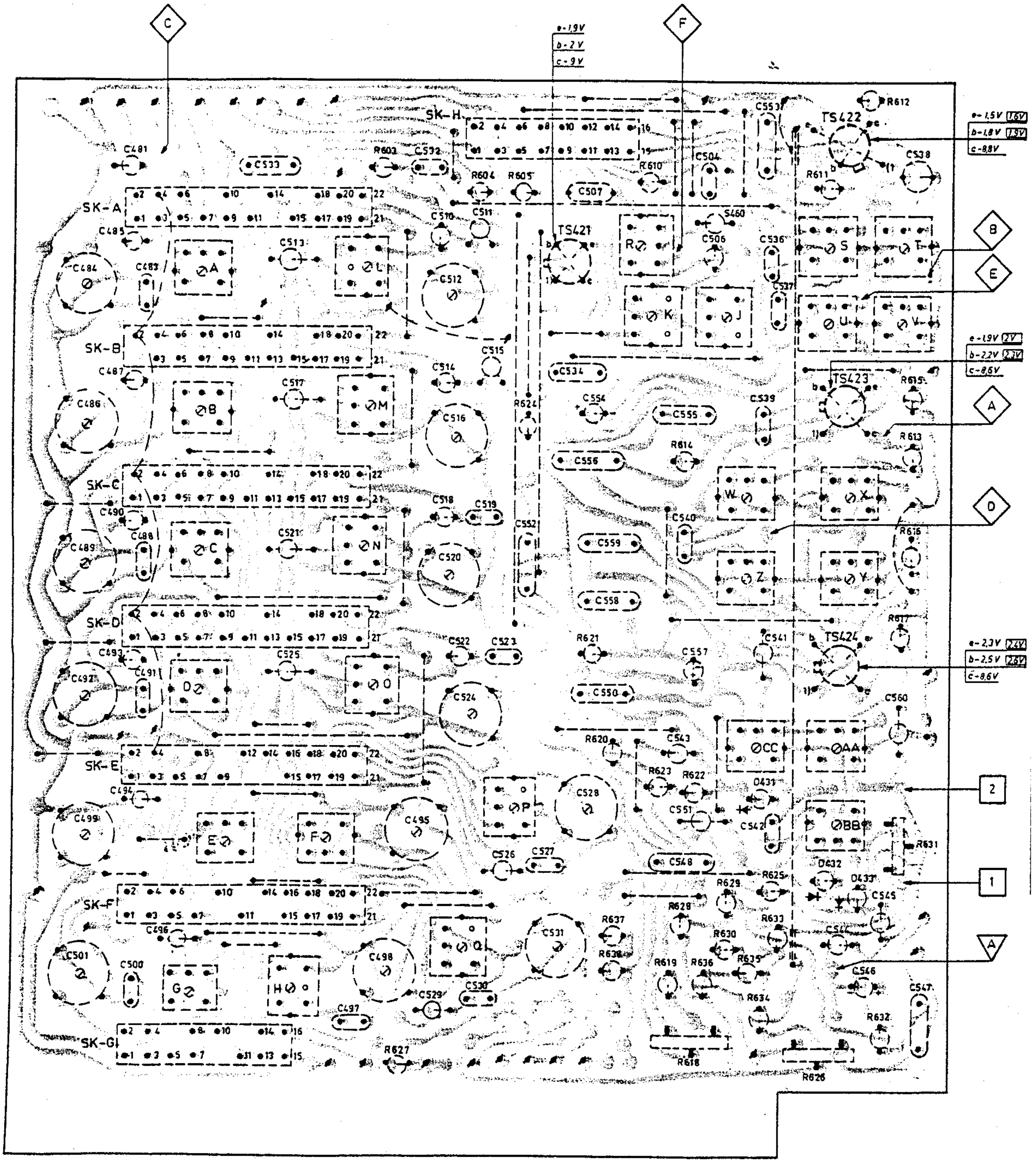
FORMED BY THE WIRING
WORDT GEVORMD DOOR DE BEDRADING
CONSTITUE PAR LE CABLAGE
WIRD DURCH DIE VERDRAHTUNG GEBILDET
ES FORMADA POR EL CABLEADO

TRA 3418

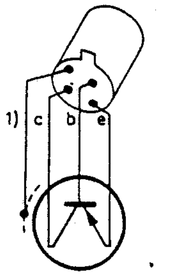
Carbon resistor E24 series	0.125 W	5%
Tubular ceramic capacitor	500 V	
Ceramic capacitor "Pin-up"	500 V	
Plate ceramic capacitor		
Flat-foil polyester capacitor		
Miniature electrolytic capacitor		

RA 3438

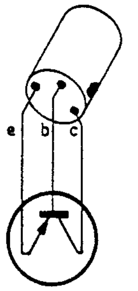
S	A B C.D.G E H F L.M.N O Q P R K 460 J W Z. CC S T U V X. Y AA BB.
C	484-490 481 483.494 533 513. 517 521 532 510-512.514-516.518÷520.552.534 556.507.554. 555.506 540 504 553 537 536 538.
C	492 499-501.493.491. 496 525 497 498 495. 529 522÷524 530 526 527 531 528.558.559.550 543 548 557 551 539. 541.542 544 546 545 560 547
R	603 604 605 620 610. 614 623 622 630.625.633-635 611 612 617 515 613.616
R	627 624 621 637 638.636.618.619. 628. 629. 626. 632.631.

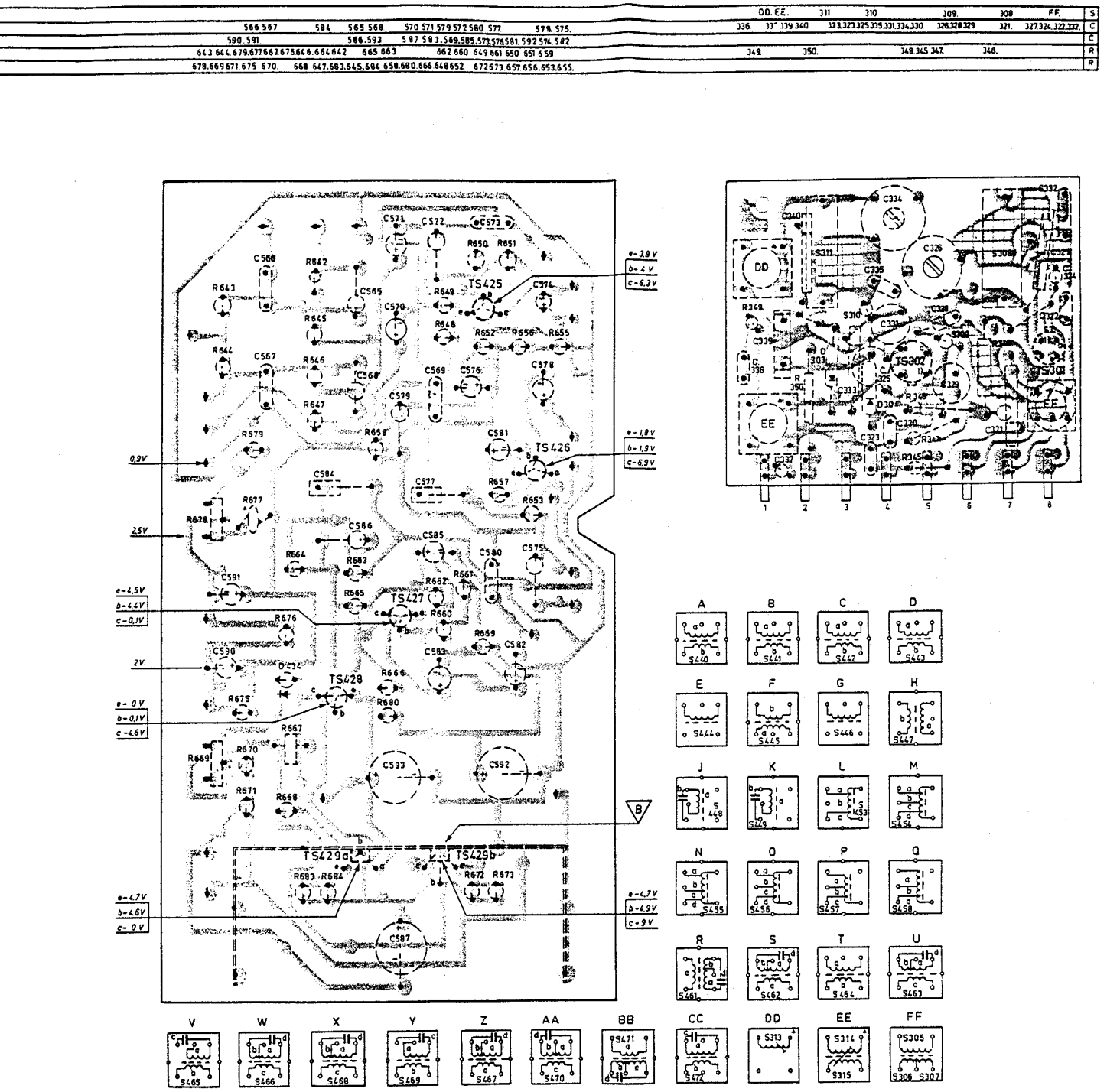


TS301 - 302 - 421
TS422 - 423 - 424

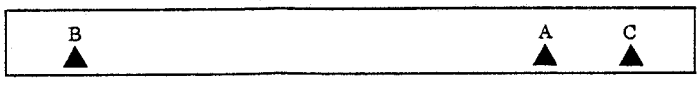


TS425 - 426 - 428




DD. EE. 311 310 309 308 FF S
336 337 339 340 333 323 325 335 331 334 330 326 328 329 321 327 324 322 332 C
566 567 584 565 568 570 571 579 572 580 577 578 575 C
590 591 586 593 587 583 569 585 573 576 581 592 574 582 C
643 644 679 677 662 678 646 664 642 665 667 662 660 649 661 650 651 659 A
348 350 348 345 347 346 A
678 669 671 675 670 668 647 683 645 684 658 680 666 648 652 672 673 657 656 653 655
TS425
TS426
TS427
TS428
TS429a
TS429b
TS307
e-3,9 V
b-4 V
c-6,3 V
e-1,8 V
b-1,9 V
c-6,9 V
0,9V
2,5V
e-4,5V
b-4,4V
c-0,1V
2V
e-0 V
b-0,1V
c-4,6V
e-4,7V
b-4,6V
c-0 V
e-4,7V
b-4,9V
c-9 V
B
A S440
B S441
C S442
D S443
E S444
F S445
G S446
H S447
J S448
K S449
L S453
M S454
N S455
O S456
P S457
Q S458
R S461
S S462
T S464
U S463
V S465
W S466
X S468
Y S469
Z S467
AA S470
BB S471
CC S472
DD S313
EE S314 S315
FF S305 S306 S307
1 2 3 4 5 6 7 8
TRA 3430
TS429a
TS429b
TS427
e b c
CS21892

	Push button	Signal	Apply to	Trimming point	Adjust	Indication
IF (AM)	MW + Y (SK-E+G)	① 470 kHz via 33 kpF	Ⓐ	Minimum cap.	CC	Max. output
			Ⓑ		Y , X	
			Ⓒ		V , T	
					K , J	Min. output
RF (AM)	LW (SK-F)	157 kHz	②	A	Q , S404c/d	Max. output
	MW (SK-E)	550 kHz		A	P , S404a/b	
	SW4 (SK-D)	1,66 MHz	③	A	O , D	
	SW3 (SK-C)	4,32 MHz		A	N , C	
	SW2 (SK-B)	8,06 MHz		A	M , B	
	SW1 + Y (SK-A+G)	16,1 MHz	④	A	L , A	
	SW1 + Y (SK-A+G)	26 MHz		B	C512, C484	
	SW2 (SK-B)	15 MHz	③	B	C516, C486	
	SW3 (SK-C)	7,83 MHz		B	C520, C489	
	SW4 (SK-D)	3,94 MHz		B	C524, C492	
	MW (SK-E)	1500 kHz	②	B	C528, C499	
	LW (SK-F)	393 kHz		B	C531, C501	
	LW + Y (SK-F+G)	157 kHz	④	Tune in	H	
	MW + Y (SK-E+G)	550 kHz			F	
	MW + Y (SK-E+G)	1500 kHz			C495	
	LW + Y (SK-F+G)	393 kHz			C498	
IF (FM)	FM+AFC(SK-H+L)	⑤ 10,7 MHz	Ⓓ	C	AA	⑥
			Ⓔ		W , Z	
			Ⓕ		S , U	
		10,7 MHz ⑤	⑦		EE , R	
		⑧			BB	⑨
RF (FM)	FM+AFC(SK-H+L)	88 MHz	⑦	Tune in	DD	Max. output
		108 MHz			C334	
		96 MHz			C326	



① Set the volume control to maximum. The signal applied should not be too strong in order to avoid overmodulation.

② Apply the signal via the coupling-coil of the ferroceptor.

③ Apply the signal via the coupling-coil of the frame aerial.

④ Apply the signal via the outside aerial

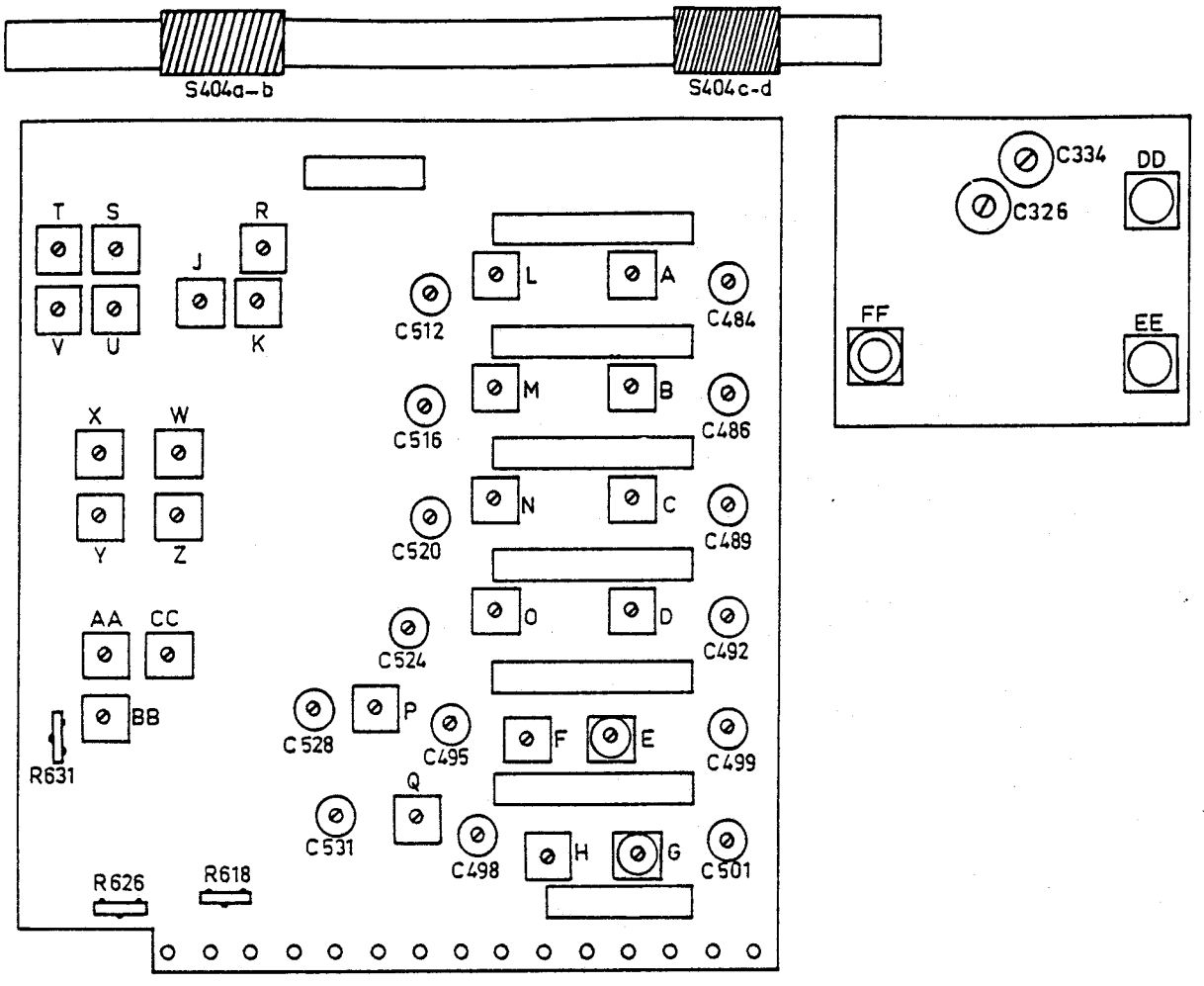
⑤ The signal applied is FM-modulated (50 Hz) with a sweep of 200 kHz. Open bridge Ⓐ. Connect an oscilloscope via 100 kΩ to 1. Damp S470c by means of a 1500 Ω resistor.

⑥ Adjust for maximum height and symmetry of the band-pass curve.

⑦ Apply the signal to the FM outside aerial

⑧ Apply the signal as under ⑤. Close bridge Ⓐ. Connect the oscilloscope via 100 kΩ to 2. Remove the damping resistor from S470c.

⑨ Adjust for maximum linearity and symmetry of the S-curve.



TRA 3434

Adjustment of the AM rejection

Apply a frequency modulated (50 Hz) signal of 10,7 MHz with a 200 kHz sweep to the FM outside aerial. This signal should also be AM modulated with 1 kHz.
Connect an oscilloscope to point [2] via 100 kΩ. Adjust for maximum AM rejection with R631, i.e. adjust the S-curve so that its linearity is maximum and passes through zero.

Adjustment of the quiescent current

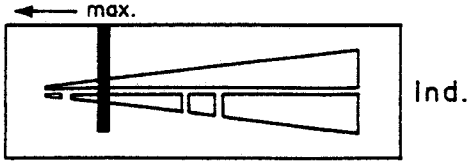
Turn volume control R415 fully anti-clockwise. Open bridge ▽B▽ and connect an mA-meter across this bridge.
Now close bridge ▽B▽.

Checking the battery-voltage indication

Connect the set to a 4.5 V supply voltage.
Depress SK-M. Then the pointer of the indicator (Ind.) should be at the transition of the grey and the black section.

Adjustment of the indicator.

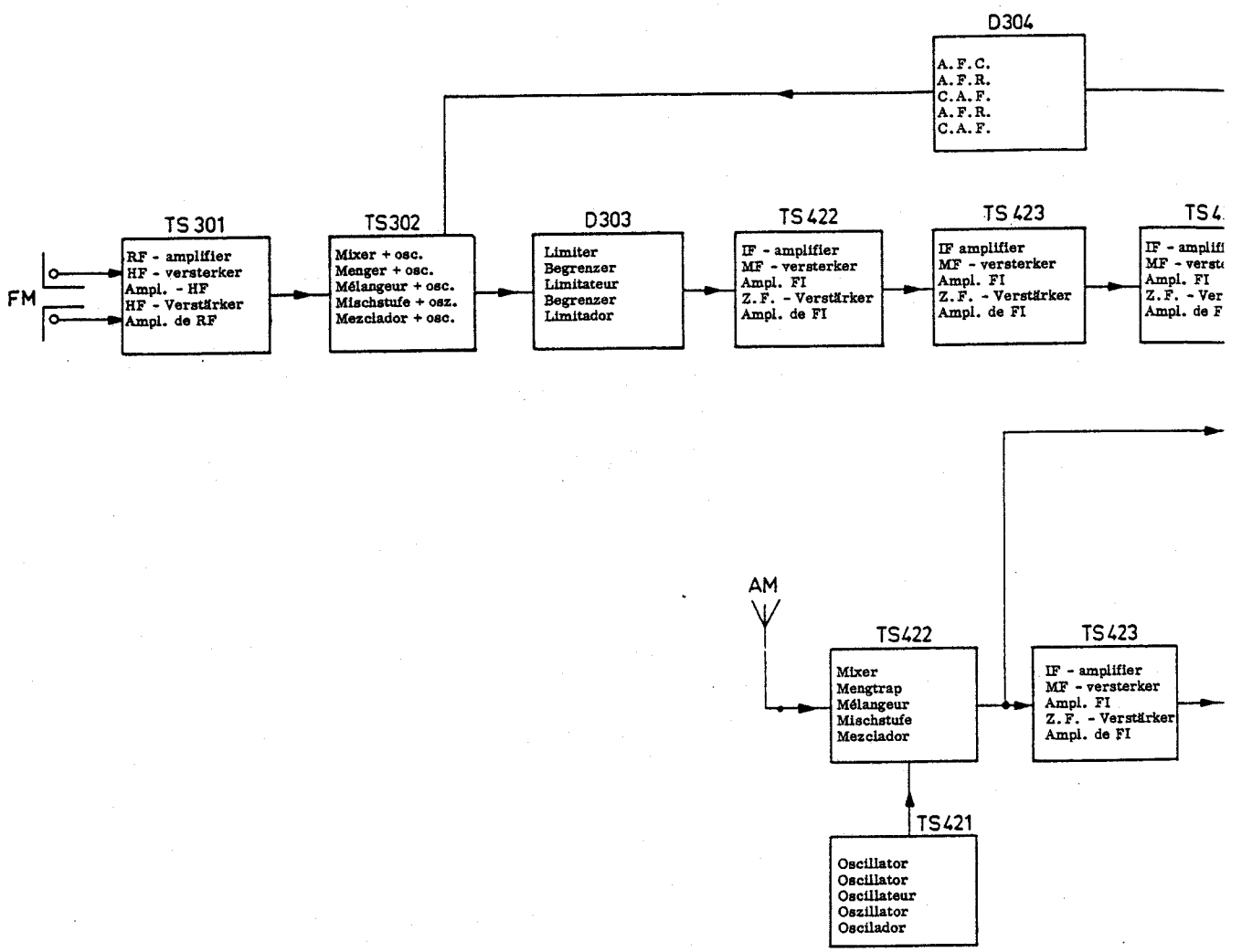
Set the receiver to position MW, outside aerial by depressing SK-E and SK-G. Adjust the indicator (Ind.) to maximum deflection of the pointer by means of R626, without applying a signal.
Set the receiver to position FM by depressing SK-H. (Consequently, SK-G is depressed also in this case).
Now the indicator (Ind.) is to be adjusted for maximum deflection of the pointer with R618, without applying a signal.

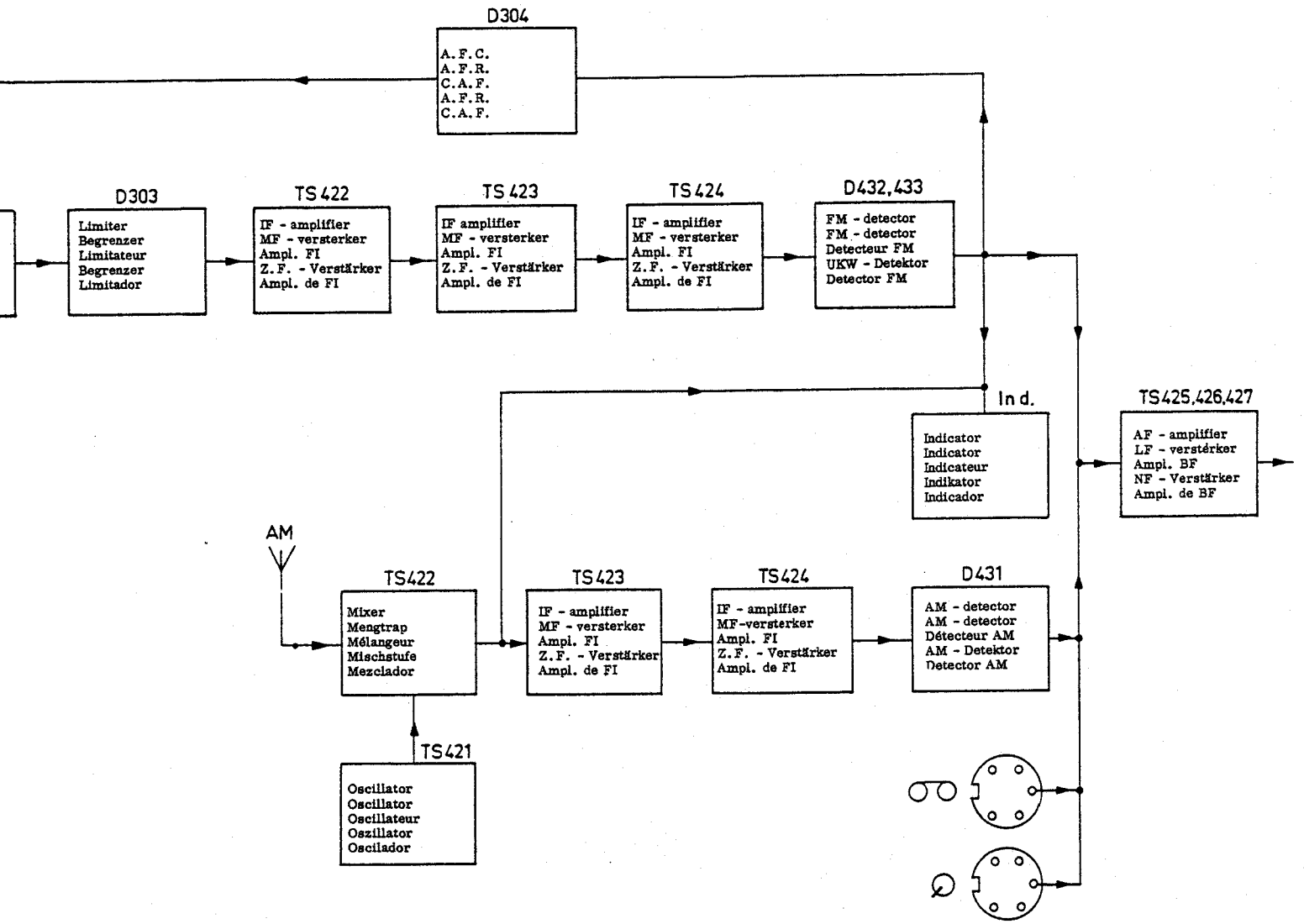


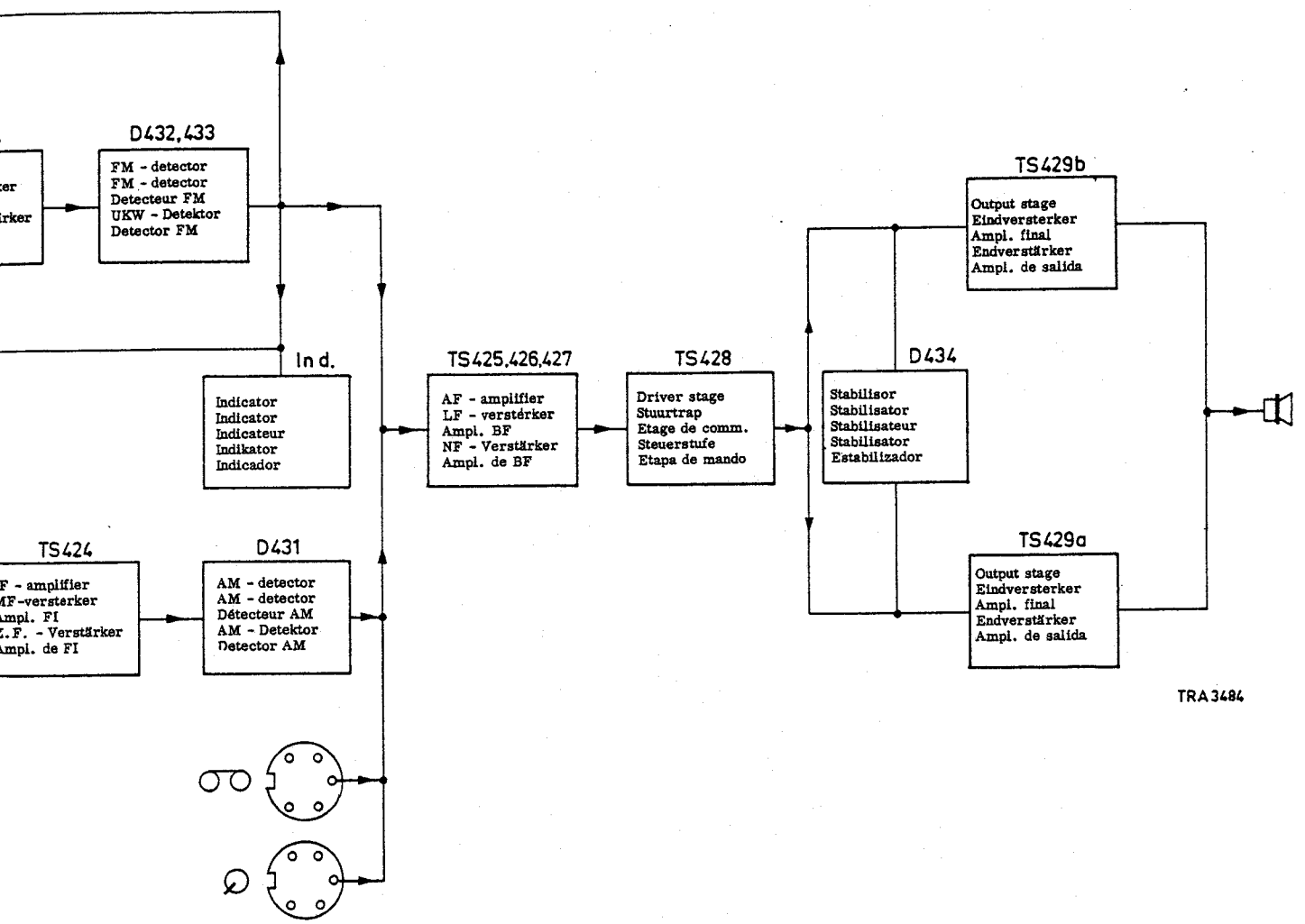
TRA 3485

Voltage adjustment C591, C590

Connect a voltmeter across C591.
Adjust for a 1,6 V voltage across C591 with R678.
The voltage across C590 should now be about 1.1 V.


D304
A.F.C.
A.F.R.
C.A.F.
A.F.R.
C.A.F.
TS 301
RF - amplifier
HF - versterker
Ampl. - HF
HF - Verstärker
Ampl. de RF
FM
TS302
Mixer + osc.
Menger + osc.
Mélangeur + osc.
Mischstufe + osz.
Mezclador + osc.
D303
Limiter
Begrenzer
Limitateur
Begrenzer
Limitador
TS 422
IF - amplifier
MF - versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
TS 423
IF amplifier
MF - versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
AM
TS422
Mixer
Mengtrap
Mélangeur
Mischstufe
Mezclador
TS423
IF - amplifier
MF - versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
TS421
Oscillator
Oscillator
Oscillateur
Oszillator
Oscilador


D304
A.F.C.
A.F.R.
C.A.F.
A.F.R.
C.A.F.
D303
Limiter
Begrenzer
Limitateur
Begrenzer
Limitador
TS 422
IF - amplifier
MF - versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
TS 423
IF amplifier
MF - versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
TS 424
IF - amplifier
MF - versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
D432,433
FM - detector
FM - detector
Detecteur FM
UKW - Detektor
Detector FM
In d.
Indicator
Indicator
Indicateur
Indikator
Indicador
TS425,426,427
AF - amplifier
LF - verstérker
Ampl. BF
NF - Verstärker
Ampl. de BF
AM
TS422
Mixer
Mengtrap
Mélangeur
Mischstufe
Mezclador
TS423
IF - amplifier
MF - versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
TS424
IF - amplifier
MF-versterker
Ampl. FI
Z.F. - Verstärker
Ampl. de FI
D431
AM - detector
AM - detector
Détecteur AM
AM - Detektor
Detector AM
TS421
Oscillator
Oscillator
Oscillateur
Oszillator
Oscilador


D432,433
FM - detector
FM - detector
Detecteur FM
UKW - Detektor
Detector FM
In d.
Indicator
Indicator
Indicateur
Indikator
Indicador
TS425,426,427
AF - amplifier
LF - verstärker
Ampl. BF
NF - Verstärker
Ampl. de BF
TS428
Driver stage
Stuurtrap
Etage de comm.
Steuerstufe
Etapa de mando
D434
Stabilisor
Stabilisator
Stabilisateur
Stabilisator
Estabilizador
TS429b
Output stage
Eindversterker
Ampl. final
Endverstärker
Ampl. de salida
TS429a
Output stage
Eindversterker
Ampl. final
Endverstärker
Ampl. de salida
TS424
D431
AM - detector
AM - detector
Détecteur AM
AM - Detektor
Detector AM
TRA3484

CS21894

- S -

		abcd	
S404	4822 158 60075		Ferroceptor, MW/LW
S406	4822 240 20039		Loudspeaker
S440	4822 156 40092	39--	Aerial coil, SW1
S441	4822 156 40093	29--	Aerial coil, SW2
S442	4822 156 40094	40--	Aerial coil, SW3
S443	4822 156 40095	19--	Aerial coil, SW4
S444	4822 156 20197	89--	Aerial series coil, MW
S445	4822 156 40096	09--	Aerial coil, MW
S446	4822 156 20198	99--	Aerial series coil, LW
S447	4822 156 40097	98--	Aerial coil, LW
S448	4822 153 10102	001-	Rejection filter, AM
S449	4822 153 10081	24--	Absorption filter, AM
S453	4822 156 10146	69--	Oscillator coil, SW1
S454	4822 156 10147	59--	Oscillator coil, SW2
S455	4822 156 10148	101-	Oscillator coil, SW3
S456	4822 156 10149	201-	Oscillator coil, SW4
S457	4822 156 10151	301-	Oscillator coil, MW
S458	4822 156 10152	49--	Oscillator coil, LW
S459	4822 526 10024		Ferroxcube bead
S460	4822 157 50045		coil
S461	4822 153 50029	16--	IF coil, FM
S462	4822 153 50029	16--	IF coil, FM
S463	4822 153 50029	16--	IF coil, FM
S464	4822 156 40103	13--	IF coil, AM
S465	4822 153 10082	23--	IF coil, AM
S466	4822 153 50029	16--	IF coil, FM
S467	4822 153 50029	16--	IF coil, FM
S468	4822 153 10083	33--	IF coil, AM
S469	4822 153 10082	23--	IF coil, AM
S470	4822 153 50031	95--	Prim. detection coil, FM
S471	4822 153 50032	06--	Sec. detection coil, FM
S472	4822 153 10084	43--	Detection coil, AM
S473	4822 526 10024		Ferroxcube bead
S474	4822 526 10024		Ferroxcube bead

- C -

C410	4822 125 20021		Variable capacitor
C481	4822 121 50036	250 pF	1 %
C484	4822 125 50029	20 pF	trimmer
C485	4822 121 50072	1250 pF	
C486	4822 125 50029	20 pF	trimmer
C487	4822 121 50423	1270 pF	1 %
C489	4822 125 50029	20 pF	
C490	4822 121 50424	1000 pF	1 %
C492	4822 125 50026	10 pF	trimmer
C493	4822 121 50424	1000 pF	1 %
C494	4822 121 50039	270 pF	5 %
C495	4822 125 50029	20 pF	trimmer
C496	4822 121 50381	120 pF	5 %
C498	4822 125 50026	10 pF	trimmer
C499	4822 125 50026	10 pF	trimmer
C501	4822 125 50029	20 pF	trimmer
C506	4822 121 50432	1500 pF	2,5 %
C510	4822 121 50426	225 pF	1 %
C512	4822 125 50029	20 pF	trimmer
C513	4822 121 50039	270 pF	5 %
C514	4822 121 50037	260 pF	1 %
C516	4822 125 50026	10 pF	trimmer
C517	4822 121 50427	750 pF	5 %
C518	4822 121 50071	1125 pF	1 %
C520	4822 125 50029	20 pF	trimmer
C521	4822 121 50432	1500 pF	10 %

- C -

C522	4822 121 50111	731 pF	1 %
C524	4822 125 50026	10 pF	trimmer
C525	4822 121 50094	4700 pF	5 %
C526	4822 121 50429	642 pF	1 %
C528	4822 125 50029	20 pF	trimmer
C529	4822 121 50431	276 pF	1 %
C531	4822 125 50029	20 pF	trimmer
C538	4822 121 50088	3600 pF	2,5 %
C543	4822 121 50094	4700 pF	5 %
C544	4822 121 50432	1500 pF	10 %
C545	4822 121 50432	1500 pF	10 %
C546	4822 124 20355	10 µF	25 V
C551	4822 121 50094	4700 pF	5 %
C554	4822 124 20355	10 µF	25 V
C557	4822 124 20346	4,7 µF	63 V
C560	4822 121 50096	6800 pF	5 %
C566	4822 124 20341	1 µF	63 V
C570	4822 124 20353	10 µF	63 V
C571	4822 124 20343	2,2 µF	63 V
C574	4822 124 20351	6,8 µF	40 V
C576	4822 124 20383	1000 µF	10 V
C577	4822 121 40092	0,33 µF	
C578	4822 124 20341	1 µF	63 V
C581	4822 124 20401	330 µF	4 V
C582	4822 124 20341	1 µF	63 V
C583	4822 124 20383	100 µF	10 V
C584	4822 121 40098	0,39 µF	
C585	4822 124 20377	68 µF	16 V
C590	4822 124 20377	68 µF	16 V
C591	4822 124 20383	100 µF	10 V

- R -

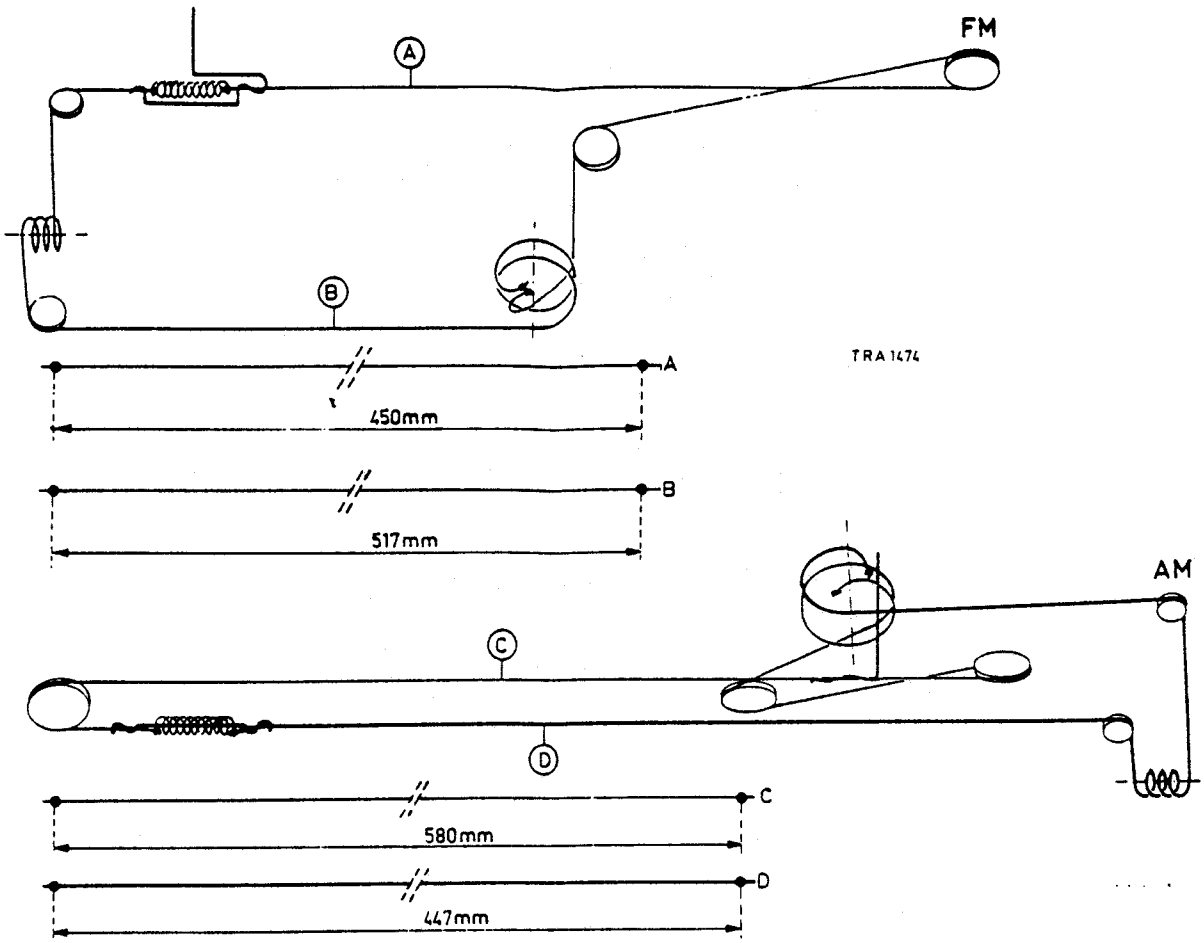
R413	4822 101 30053	1 kΩ	Potentiometer
R414 / R416	4822 101 30039	100 kΩ	Potentiometer
R415	4822 101 30074	5 kΩ+17 kΩ	Potentiometer
R601	4822 116 20003		VDR
R618	4822 100 10024	10 kΩ	Adj. potentiometer
R626	4822 100 10025	4700 Ω	Adj. potentiometer
R631	4822 100 10023	470 Ω	Adj. potentiometer
R667	4822 116 30016	130 Ω	NTC
R669	4822 100 10026	220 Ω	Adj. potentiometer
R672	4822 116 60004	1,2 Ω	0,125 W
R673	4822 116 60004	1,2 Ω	0,125 W
R677	4822 116 20094		VDR
R678	4822 100 10023	470 Ω	Adj. potentiometer
R683	4822 116 60004	1,2 Ω	0,125 W
R684	4822 116 60004	1,2 Ω	0,125 W

-TS -

TS301	4822 130 40385
TS302	4822 130 40254
TS421	4822 130 40254
TS422	4822 130 40384
TS423	4822 130 40385
TS424	4822 130 40252
TS425	4822 130 40236
TS426	4822 130 40235
TS427	4822 130 40096
TS428	4822 130 40095
TS429a / TS429b	4822 130 40319

- D -

D303	4822 130 40229
D304	4822 130 30272
D431	4822 130 40229
D432 / D433	4822 130 30312
D434	4822 130 30189



Cabinet

Ornamental front	4822 423 50075
Cover for scale	4822 423 50158
Side panel (right)	4822 423 20037
Side panel (left)	4822 423 20038
Bottom	4822 423 20036
Rear cover	4822 422 50016
Slide in rear cover for locking	4822 411 60053
Handle	4822 498 40267
Screw fixing handle	4822 502 10411
Philite disc fixing foot	4822 532 60033
Leg (metal)	4822 462 10023
Buffer for leg	4822 462 40062
Frame aerial	4822 303 40031
Hinge for cover and frame-aerial	4822 417 10041
Plate fixing hinge	4822 691 10027
Telescopic aerial	4822 303 30021
Screw fixing aerial	4822 502 10412
Scale assembly	4822 334 50071
Bracket fix. frame aerial	4822 404 10038

Chassis

Pulley (9,5 mm)	4822 528 80087
Pulley (17,5 mm)	4822 528 80086
Drum in driving	4822 528 40052
On-off indicator	4822 404 10029
Connection bracket for slide of SK-H	4822 404 10021
Connection bracket for slide of SK-G	4822 404 20024
Connection bracket for slide of SK-A ÷F	4822 404 10025
Speed fix on slide of SK-A ÷ H	4822 492 60264
Drive cord	4822 321 30101
Connection strip with sockets	4822 267 20109
Scale-lamp holder	4822 255 10007

Battery holder

Assembly complete	4822 256 60022
Spiral spring-large	4822 492 50322
Spiral spring-small	4822 492 50375

Sockets

Aerial	4822 268 20002
PU + Recorder	4822 267 40039
Earphone	4822 420 40041
Nut fix. socket earphone	4822 505 10043
Car aerial	4822 267 30086
Ext. supply	4822 265 20051

Switch assemblies

Push button unit (SK-L, M, N)		4822 276 30062
Push button unit, wave ranges		4822 276 80014
SK-A	(SW1)	4822 277 30099
SK-B	(SW2)	4822 277 30101
SK-C-D	(SW3-SW4)	4822 277 30102
SK-E	(MW)	4822 277 30103
SK-F	(LW)	4822 277 30104
SK-G	(aerial)	4822 277 30105
SK-H	(FM)	4822 277 30098
Slide of SK-A		4822 278 20107
Slide of SK-B		4822 278 20108
Slide of SK-C-D		4822 278 20109
Slide of SK-E		4822 278 20111
Slide of SK-F		4822 278 20112
Slide of SK-G		4822 278 20113
Slide of SK-H		4822 278 20071
Contact strip (SK-L, M, N)		4822 278 80069
Contact slide (SK-L)		4822 278 30029
Contact slide (SK-M, N)		4822 278 30006
Contact strip (SK-K, P)		4822 278 50029
Contact slide (SK-K, P)		4822 278 30018

Push-buttons

AFC-battery check - scale light	4822 410 20136
PU-off-wave ranges	4822 410 20297

Knobs

Tuning FM, AM	4822 413 50679
Volume-high-low-fine tuning	4822 413 30384
FM tuner	4822 210 30003
Tuning indicator	4822 347 10004
Lamp (LA-408)	4822 134 40005