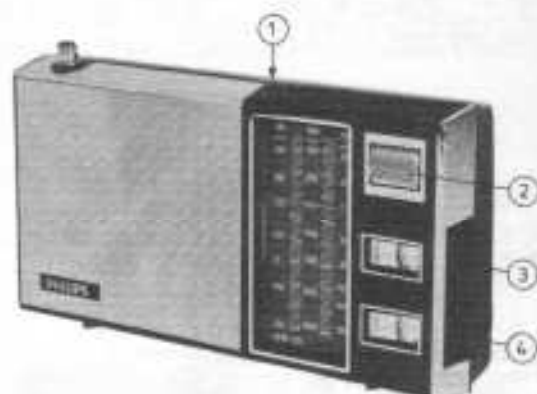


Service manual

RADIO 90RL290



311A

Dimensions 210 x 110 x 51 mm

PHILIPS



① Wave range switch
Golfbreteikschakelaar
Sélecteur de gammes d'ondes
Wellenbereichschalter
Commutador de márgenas de ondas
Commutatore di scala d'onde
Våglängdsskopplare
Båglængdeomskifter
Bølgevender
Aaltoluekytkin

SK-A

② Tuning
Afstemning
Syntonisation
Abstimmung
Sintonización
Sintonizzazione
Afstemning
Astemien voluta
Avstämning
Avstemning

VC1a/d

③ Tone control
Toonregeling
Contrôle de tonalité
Tonregler
Control de tono
Controllo del tuono
Tonkontroll
Tonekontroll
Tonekontroll
Skvynskiltö

R29

④ Volume control + On/off switch
Volume regelaar + Aan/uit schakelaar
Commande de volume + Commutateur marche/arrêt
Lautstärke regler + Ein/Aus-Schalter
Control de volumen + Interruptor
Controllo del volume + Interruttore
Volymkontroll + Till/från omkopplare
Volumenkontrol + Afbryder
Volumkontroll + På/Av vender
Volmakkuaasäldin + On/ei kytkin

H30
+
SK-B

Wave ranges - Golfgebieden - Gammes d'ondes - Wellenbereiche - Márgenas de ondas - Gamme d'onde - Våglängder -
Båglængdeområder - Bålgområder - Aaltolueet

LW - LG - GO - LW - GL - OL - LV-LB - LB - PA : 150 - 270 kHz (2000 - 1100 m)
MW - MG - PO - MW - OM - OM - MV - MB - MB - KA : 525 - 1605 kHz (571 - 187 m)
FM - FM - FM - UKW - FM - FM - FM - FM - FM - ULA : 86 - 104 MHz

Transistors

TS1 - ED1501A
TS2 - ED1501C
TS3 - LM9595T
TS4 - ED1501B
TS5 - ED1501C
TS6 - MP8969EF
TS7 - MP89680T
TS8 - ED1401B,C
TS9 - LM390HJ
TS10 - LM390HJ
TS11 - LM399HJ

Diodes

D1
D2 - CDG00
D3 - 1N60
D4

Index: CS30399-CS30402

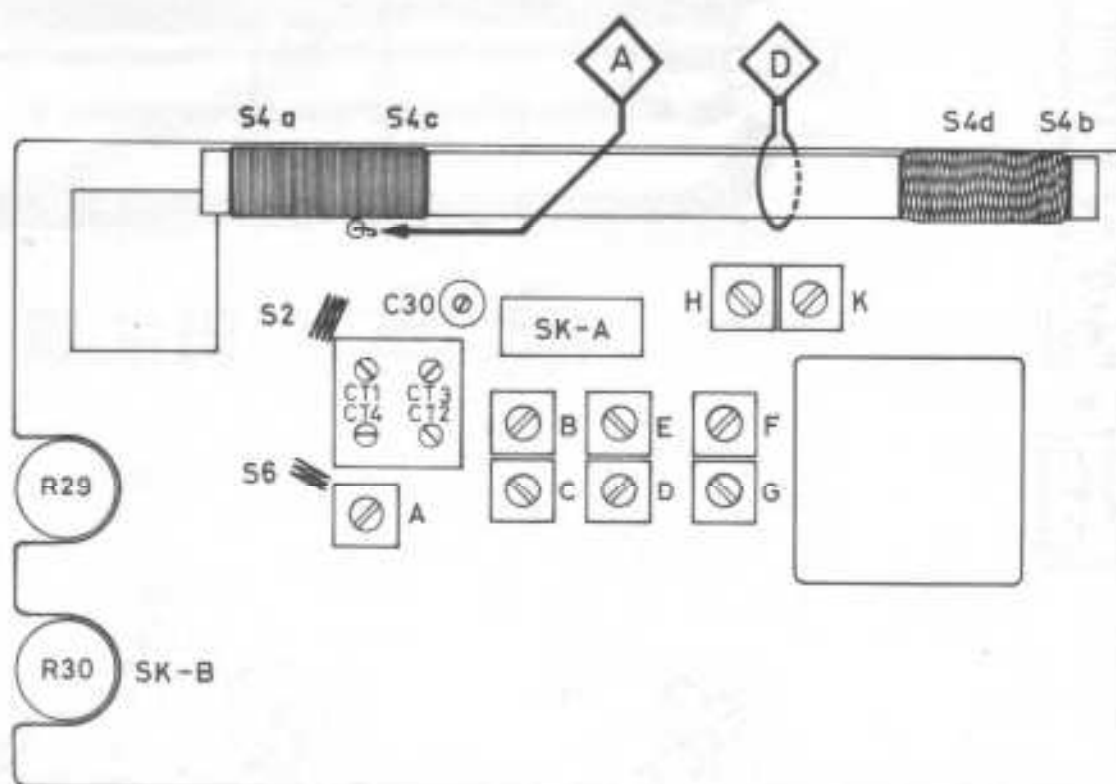


Subject to modification

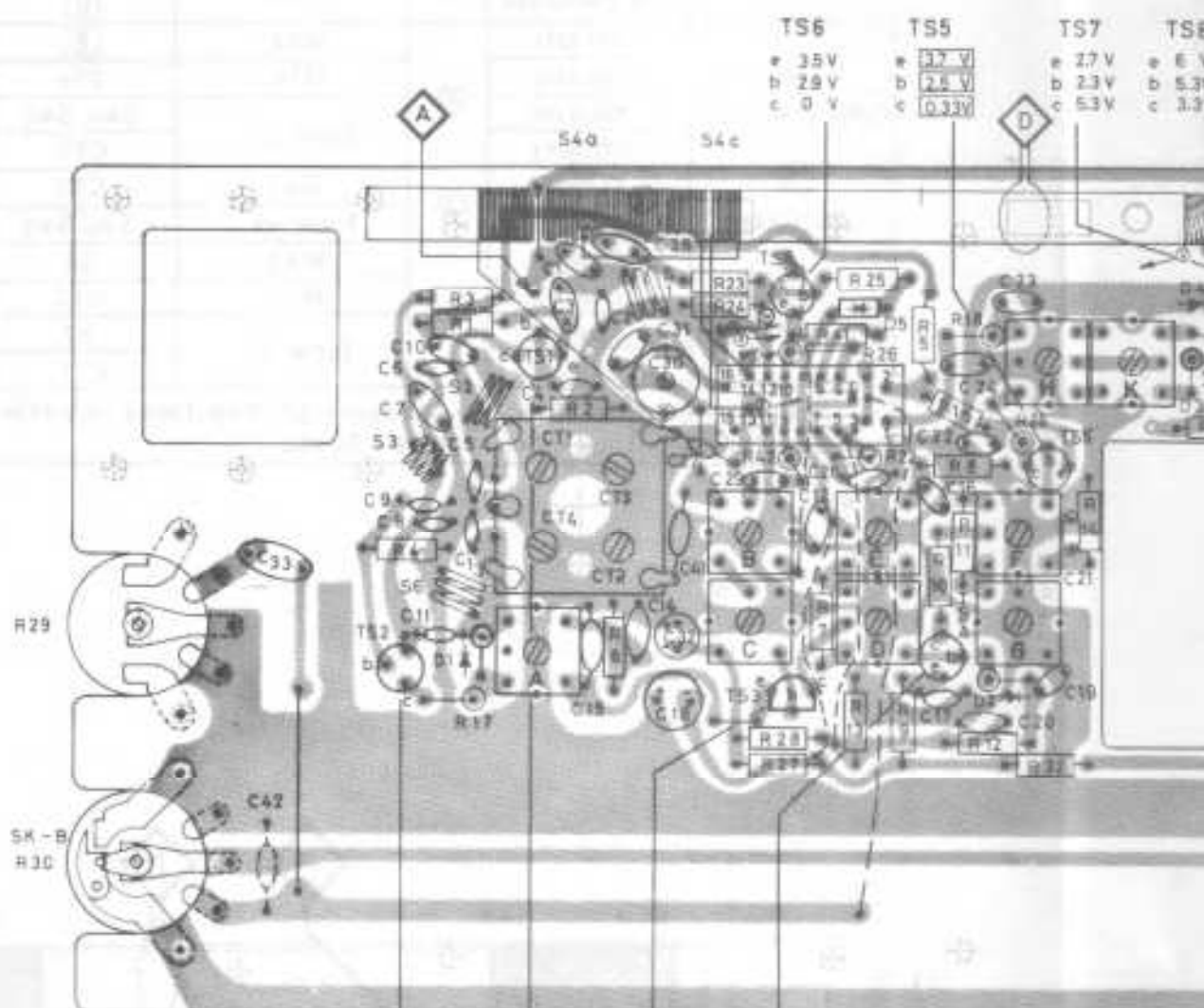
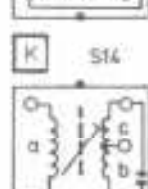
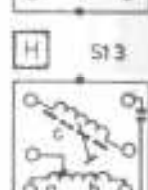
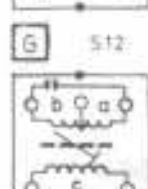
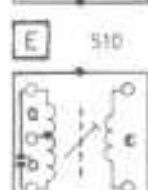
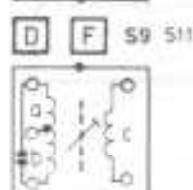
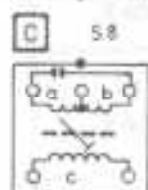
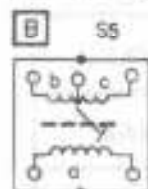
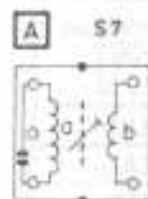
4822 725 10753

Printed in the Netherlands

Wave range SI	 Signal to 		 Var.cap	Adjust 	Indication 
MW(525-1605kHz)	470 kHz		MAX.		MAX.
FM	10.7 mHz FM		MAX.		↑ MAX.
	10.7 mHz AM				↓ MIN.
MW (525-1605 kHz)	517 kHz		MAX.		↑ MAX.
	1630 kHz		MIN.	CT4	↓
	600 kHz		Tune in	S4a S4c	↑ MAX.
	1500 kHz			CT3	↓
LW (150-263 kHz)	147 kHz		MAX.	C30	↑ MAX.
	200 kHz		Tune in	S4b S4d	↓
FM (87.5-104 mHz)	86.5 mHz		MAX.	S6	↑ MAX. ↓
	105 mHz		MIN.	CT2	
	89 mHz		Tune in	S2	
	103 mHz			CT1	
↑ ↓ Repeat - Herhalen - Répéter - Wiederholen - Repitanse - Ripetere - Repetera - Gentage - Gjentagelse - Toista.					



S		S3	S6	S2	A	S4c	S1	S4a	BC	ED	FG	H	K					
C	33	6.10	3.1	2.28	31.30	27	29			26	24.22	23	21					
C	42	7.9	8.11	5.13	4.15	14.18	32	41		12	16.17	20	19					
R 29		4	3		2			23	28	26	41	25	5	15	8	18	16	14
R 30		1	17		6			24	27	42	7	13	22	9	10	11	12	32



TS2
e 3.6 V
b 2.42 V
c 0.13 V

TS1
e 0.61 V
b 1.55 V
c 0 V

TS3
e 0.45 V
b 1.1 V
c 5.3 V

TS4
e 4.25 V
b 2.7 V
c 0.225 V

TS6
e 3.5 V
b 2.9 V
c 0 V

TS5
e 3.7 V
b 2.6 V
c 0.33 V

TS7
e 2.7 V
b 2.3 V
c 5.3 V

TS8
e 6.1 V
b 5.3 V
c 3.3 V

AM V
FM V

TS1
TS2
TS4
TS5
TS6
TS8

TS3
TS7
TS8
TS11
TS12



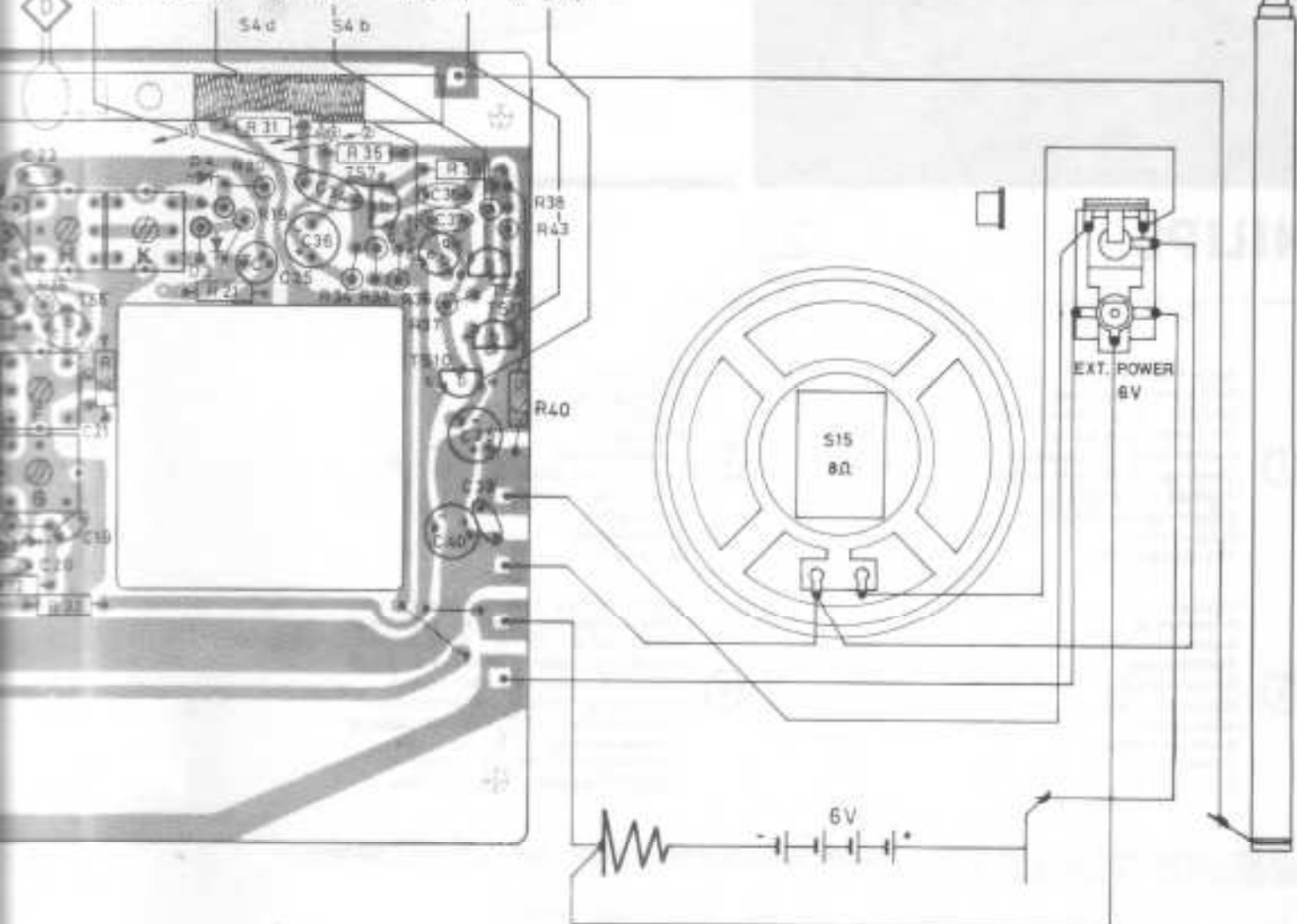
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Delivered

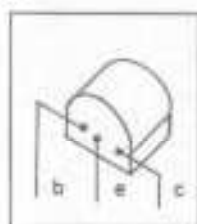
FG	H	K	S15	S4d	S4b	S
24	22	23	21	34	35	38
17	20	19	25	36	37	40
18	16	14	31	35	39	38
11	12	32	21	19	20	34
						33
						36
						37
						43
						40

TS7	TS8	TS9	TS11	TS10
a 2.7 V	a 6 V	a 3.3 V	a 2.7 V	a 2.7 V
b 2.3 V	b 5.3 V	b 2.7 V	b 2.2 V	b 3.3 V
c 5.3 V	c 3.3 V	c 2.2 V	c 0 V	c 6 V



3240

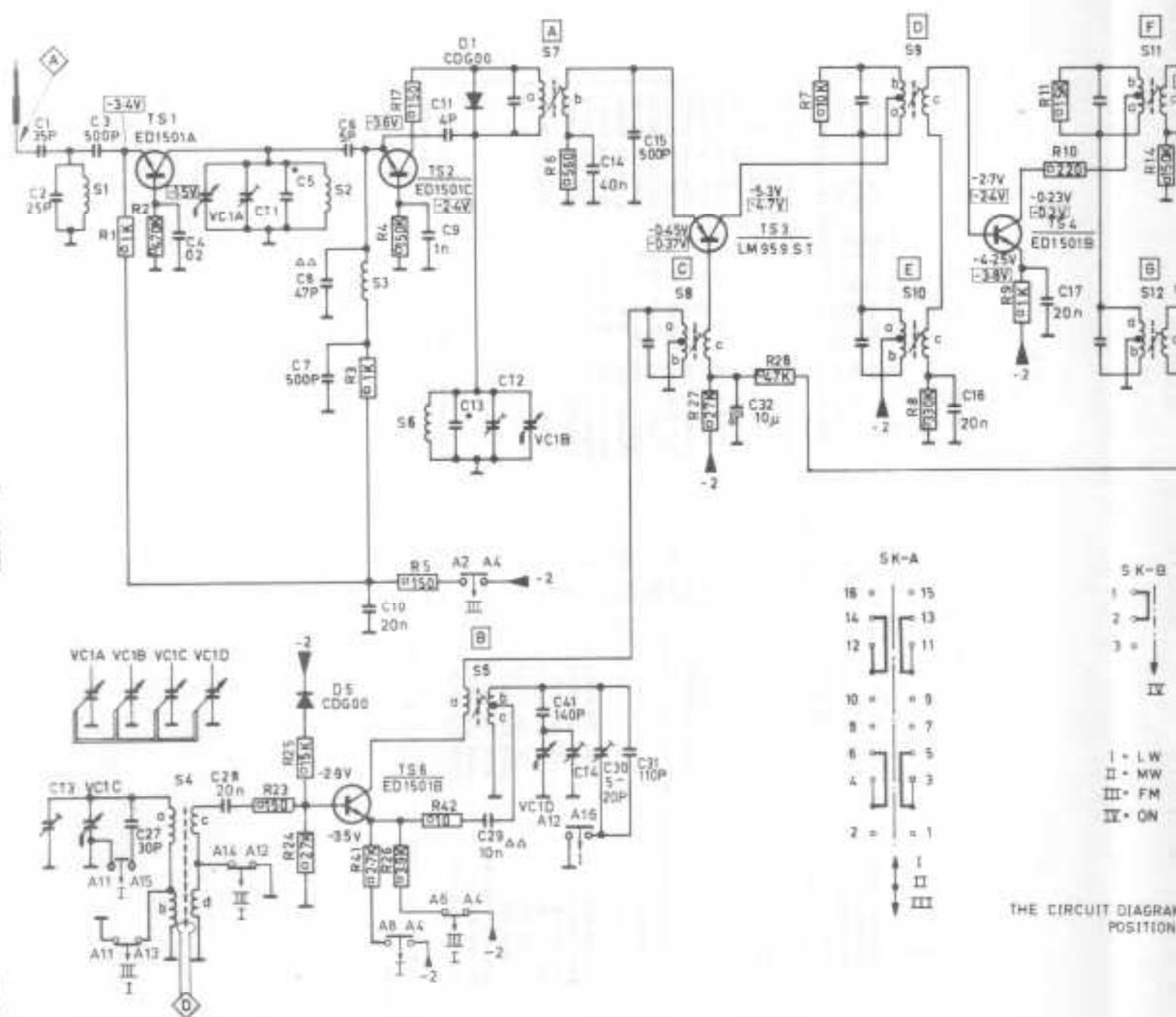
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TS1
TS2
TS4
TS5
TS6
TS8

Delivered bij Concern Service

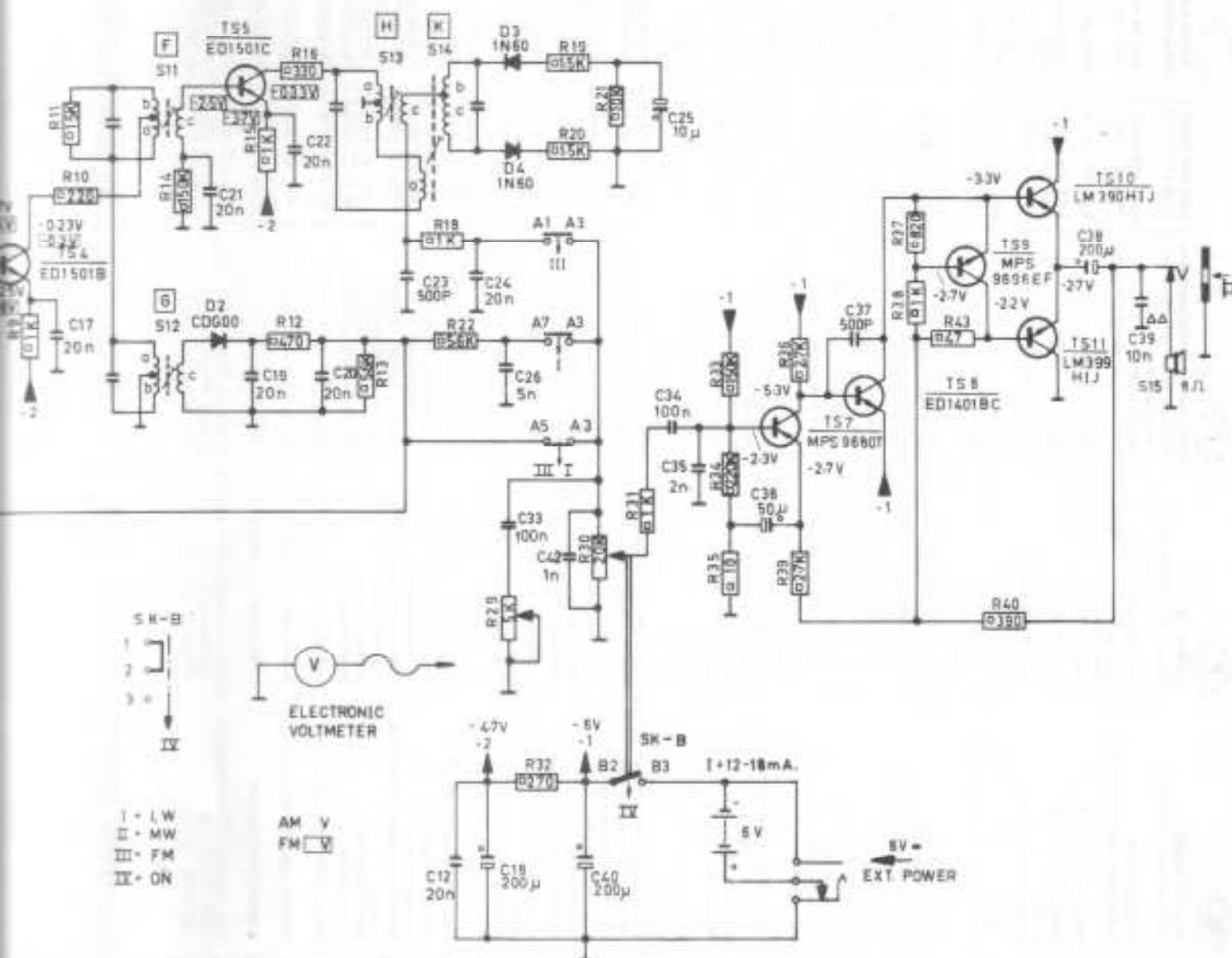
S	1		4		2		3		6		5		7		8		9		10		11			
C	1	2	3	27	4	28	5	7	8	6	10	9	11	13	20	41	14	30	31	35	32	1E	17	
R	1		2	23		24	25	41		26	35	42	43	6		27	28	7	8		9		10	11



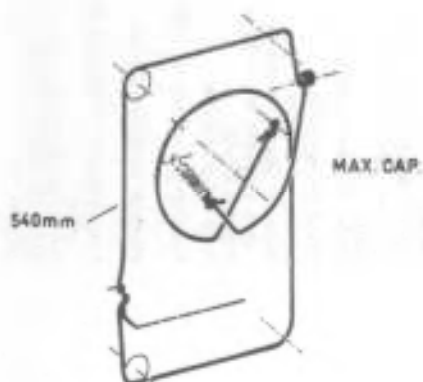
	104 to Hc	108 to Hc	104 to Lo
*C	290	01	03
5	23P	15P	23P
13	25P	15P	15P

- Carbon resistor E12 series
0.25 W < 1MΩ 5%
- Plate ceramic capacitor
- Miniature electrolytic capacitor

17	11 12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
----	-------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----



THE CIRCUIT DIAGRAM HAS BEEN DRAWN IN POSITION MW



GB

Drum on variable equalizer
Spring fixing drive cord

Tuning unit
Scale back plate (plastic)

Nylon pulley 9 mm Ø

Nylon pulley 10 mm Ø

Scale

Drive cord (0.5 mm Ø)

Pointer

Knob, volume, tone control

Front part of cabinet

Telescopie aerial

Harpoons and external

power socket

Rear side of cabinet

Battery lid

Battery spring ^{10, 11}

Battery contact plate ^{10, 11}

Wave range switch

Knob for wave range switch

Indication plate

Loudspeaker 5 Ω

E

Tuner codes, variable

Resorte de tambor codifica

unidad de sintonía

Placa detrás escala

Polea (9 mm Ø)

Polea (10 mm Ø)

Escala

Cuerda de arrastre de aguja

0.5 mm Ø

Aguja

Botón (volumen, tono)

Minid frontal de caja

Antena telescopica

Conexión para auricular 3

para alimentación externa

NL

Varië-tronmel
Voor in varië-tronmel

Afzeteneenheid
Achterwand schaal (plastic)

Saarswiel 9 mm Ø

Saarswiel 10 mm Ø

Schaal

Aandrijfsanaar (0.5 mm Ø)

Wijzer

Volumé en toonregelingsschep

Voorzijde kast

Teleskoopantenne

Corroeftelefoon - ext., voeding

aanleiding

Achterzijde kast

Batterijdeksel

Batterij-kontaktvoer ^{10, 11}

Batterij-kontaktplaat ^{10, 11}

Golfbereikschakelaar

Knop golfbereikschakelaar

Indicatieplaat

Luidspreker 5 Ω

S

Drivetrunkon för avstämningsskond.Tronle för drejelskond.
Fjäder i drivtrunkon för
avstämningsskond

Avstämningsskond

Skaibakgrund

Tränsa (9 mm Ø)

Tränsa (10 mm Ø)

Skaib

Skaibansö (0.5 mm Ø)

Visare

Platt, volym + tonkontroll

Främre ljudbalk

Teleskop antenn

Batteriförbindare - bordsladd-

uttag

Bakre ljudbalk

Batterilucka

F

Tambour de C.V.
Bessort de tambour du C.V.

Blac d'accord
Panneau arrière du cadran

Poulie 9 mm Ø

Poulie 10 mm Ø

Cadran

Corde d'entraînement

0.5 mm Ø

Aguille

bouton de volume et réglage

tambour

Partie avant du coffret

Antenne télescopique

Prise écouteur et connexion

d'alimentation

Partie arrière du coffret

Couvercle de la boîte à piles

Revenir de contact de pile ^{10, 11}

Plaque de contact de pile ^{10, 11}

Commutateur de gamme

d'ondes

bouton du commutateur de

gamme d'ondes

plaque-parleur 5 Ω

haut-parleur 5 Ω

DK

Drivetrunkon för avstämningsskond.Tronle för drejelskond.
Fjäder i drivtrunkon på
drejelskond

Avstämningsskond

Skaibakgrund

Tränsa (9 mm Ø)

Tränsa (10 mm Ø)

Skaib

Skaibansö (0.5 mm Ø)

Skalaviser

Knapp, styrke + tonekontrol

Frontdel af kabinet

Teleskopantenne

Forbindelse til strømforstyr +

tonekontrol

Kabinet bagside

Batterilucka

D

Trommel auf Dreieckskondensator
Feder in Trommel auf Dreieckskondensator

Abstimmeelchheit
Rückwand der Skala (plastik)

Seilrad 9 mm Ø

Seilrad 10 mm Ø

Skala

Antriebsseil (0.5 mm Ø)

Zeiger

Knopf Lautstärke- und

Tonregler

Frontantenne

Telekommunikation

Kopfhörer + Anschlusseinheit

Elchheit

Deckel Batteriesicherung

Batterie-kontaktfeder ^{10, 11}

Batterie-kontaktplatte ^{10, 11}

Wellenbereichschalter

Knopf des Wellenbereich-

schalters

Schritplatte

Lautsprecher 5 Ω

N

Trommel på varico
Fjær i trommel på varico

Avstemningselchheit

Skalabakgrunn

Trånsa (9 mm Ø)

Trånsa (10 mm Ø)

Skala

Skalaviser (0.5 mm Ø)

Skalaviser

Knapp, volum + tone kontrol

Frontdel av kabinet

Teleskopantenne

Kontakt for utv. ström-

forstyring + tonekontrol

Bakre del av kabinet

Deksel for batteribholder

I

Tambour del condensatore variabile
Molla del tambour del C.V.

Unità di sintonia

Fondo per scala (plastic)

Puleggia 9 mm Ø

Puleggia 10 mm Ø

Scala

Cordina di trasmissione

0.5 mm Ø

Indice

Massiglia (volumen, località)

Parte anteriore del mobile

Antenna telescopica

Preselezione alimentazione

esterno

Parte posteriore del mobile

Copertura batterie

Molla di contatto della tastiera ^{10, 11}

Placina di contatto batteria ^{10, 11}

Commutatore di scala d'onda

Manopola scala d'onda

Placina con tipo

Altoparlante 5 Ω

SF

Stålklonda, rumpa
Rummen Jous

Virityksikkö

Asterikon lauta

Urapysä (9 mm Ø)

Urapysä (10 mm Ø)

Asterikko

Asterikonaru (0.5 mm Ø)

Quotit

Naappi, voimakkuus + sävlykytkin

Laatikon etupuuksia

Teleskoopilaitteet

Koudeaplettukka + erill.

virtalähde

Laatikon takapuuksia

Paristokotelon kansi

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para alimentación externa

