

Manual 157  
Remote controlled  
Front sections  
for  
AP 2000

Remote controlled Front units

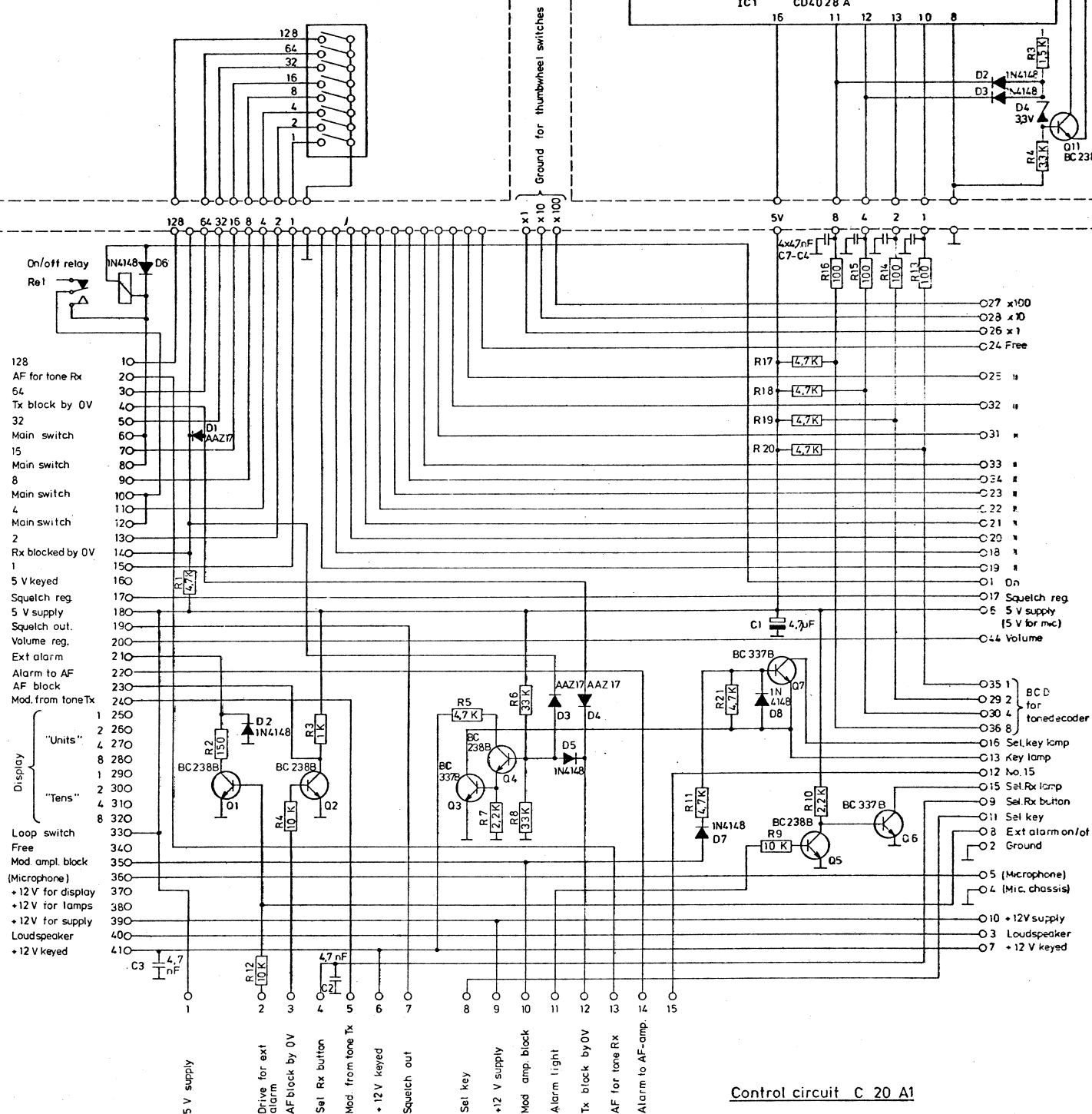
<u>Front units</u>	<u>Print</u>	<u>Kit no.</u>	<u>Diagrams</u>
206-001 F	C 20 A1+C 21 A1	209-015	79025-2E2+ 79066-2E2
206-002 F	C 20 A1+C 21 A1	209-015	79025-2E2+ 79066-2E2
206-003 F	C 20 A1+C 21 A1	209-015	79025-2E2+ 79066-2E2
206-004 F	C 20 A1+C 21 A1	209-015	79025-2E2+ 79066-2E2
206-005 F	C 20 A1+C 21 A1+C 23 A1	209-016	79025-2E2+ 79066-2E2
206-007 F	C 20 A1+C 22 A1+C 23 A1	209-017	79067-2E2+ 79065-2E2
206-008 F	C 20 A1+C 22 A1	209-018	79067-2E2+ 79065-2E2
206-009 F	C 20 A1+C 22 A1	209-018	79067-2E2+ 79065-2E2
206-010 F	C 20 A1+C 22 A1	209-018	79067-2E2+ 79065-2E2
206-011 F	C 20 A1+C 22 A1	209-018	79067-2E2+ 79065-2E2
206-015 F	C 38 A1	209-019	79084-2E2
206-016 F	C 20 A1+C 21 A1	209-015	79025-2E2+ 79066-2E2
206-017 F	C 20 A1+C 22 A1	209-018	79065-2E2+ 79067-2E2
206-018 F	C 37 A1	209-020	79038-2E2
206-019 F	C 38 A2	209-021	79084-2E2
206-020 F	C 20 A1+C 20 A1+C 23 A1	209-015	79025-2E2+ 79066-2E2
206-021 F	C 20 A1+C 22 A1	209-018	79065-2E2+ 79067-2E2
206-024 F	C 38 A3	209-022	79083-2E2
206-042 F	C 54 A1		79118-3E2

79235-4E2

# 1 channel switch, C 21 A1

## Tonedecoder, C 23 A1

Connected to tapped coil

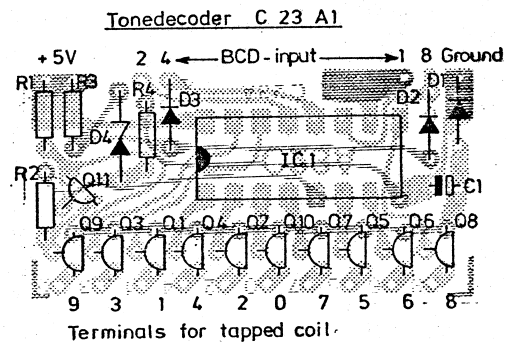
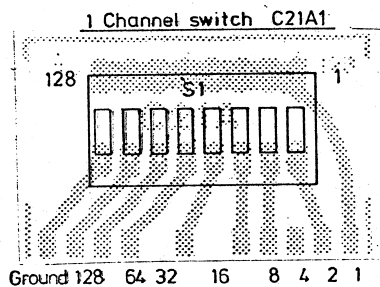
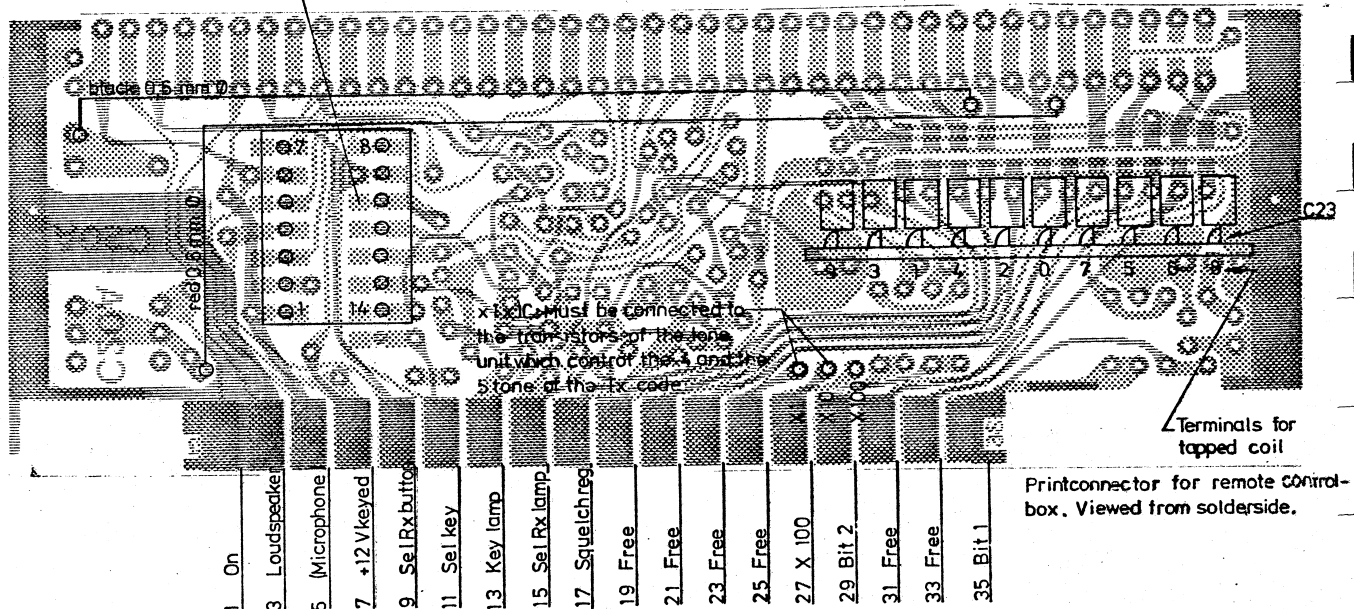


## Control circuit C 20 A1

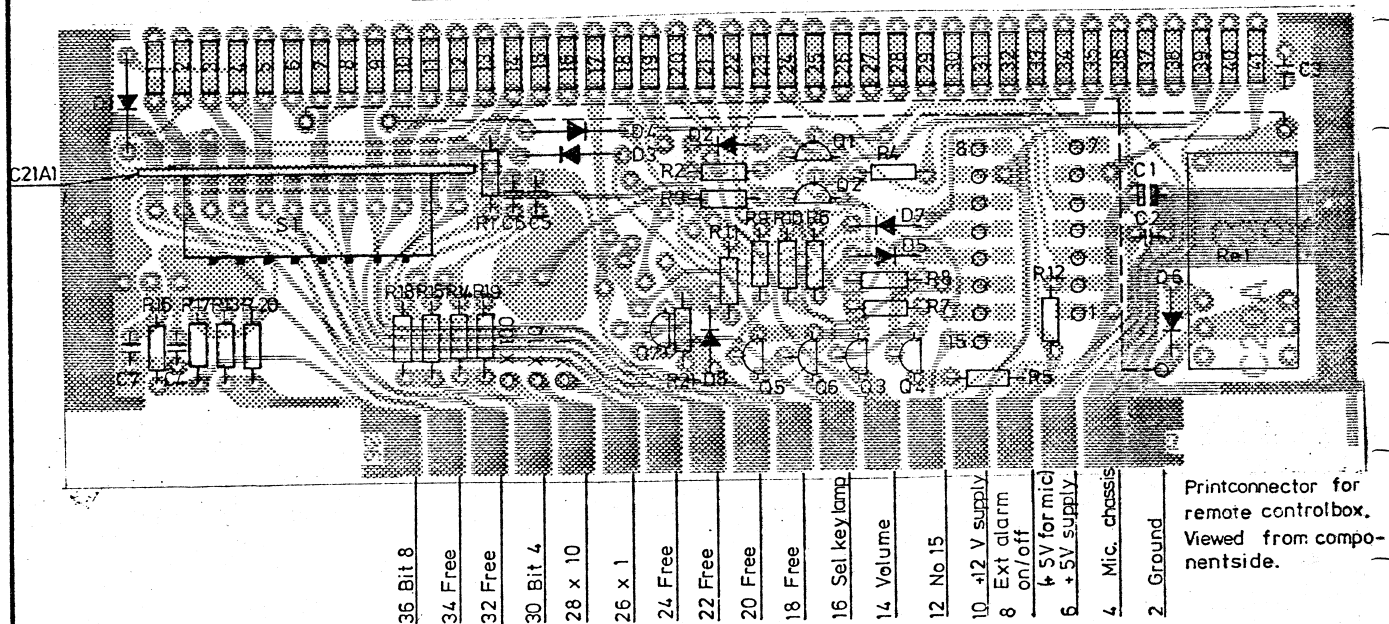
Frontsections	Print boards
01F	C20A1/C21A1
02F	C20A1/C21A1
03F	C20A1/C21A1
04F	C20A1/C21A1
05F	C20A1/C21A1/C23A1
15 F	C20A1/C21A1
20 F	C20A1/C21A1

Rettel:	Control circuit for 1 channel remote-controlbox. Print boards C 20 A1/ C 21 A1/ C 23 A1	Tegn.: 09-32-79 BC	Kont.: 15-2-79 LD
		Stryk nr.:	
	AP-RADIOTELEFON AS	Tegn. nr.:	79025-2E2

Plug from toneunit



Control circuit with indication for sel. key C 20 A 1



Rettet:

Control circuit for 1 channel remote controlbox.  
Print boards C 20A1/ C21A1/ C 23A1

Tegn.: 13-02-79 BC Kontr.: 15-2-79 LD

Stykl. nr.:

Tegn. nr.:

AP-RADIOTELEFON

79025-3E2

# AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1	13-291	4,7 K $\Omega$ 1/8 W CR16	D7	04-062	1N4148
R2	13-273	150 $\Omega$ " "	D8	04-062	1N4148
R3	13-283	1 K $\Omega$ " "			
R4	13-295	10 K $\Omega$ " "	Q1	19-093	BC238B
R5	13-291	4,7 K $\Omega$ " "	Q2	19-093	BC238B
R6	13-300	33 K $\Omega$ " "	Q3	19-096	BC337B
R7	13-287	2,2 K $\Omega$ " "	Q4	19-093	BC238B
R8	13-300	33 K $\Omega$ " "	Q5	19-093	BC238B
R9	13-295	10 K $\Omega$ " "	Q6	19-096	BC337B
R10	13-287	2,2 K $\Omega$ " "	Q7	19-096	BC337B
R11	13-291	4,7 K $\Omega$ " "			
R12	13-295	10 K $\Omega$ " "			
R13	13-271	100 $\Omega$ " "			
R14	13-271	100 $\Omega$ " "			
R15	13-271	100 $\Omega$ " "			
R16	13-271	100 $\Omega$ " "			
R17	13-291	4,7 K $\Omega$ " "			
R18	13-291	4,7 K $\Omega$ " "			
R19	13-291	4,7 K $\Omega$ " "			
R20	13-291	4,7 K $\Omega$ " "			
R21	13-291	4,7 K $\Omega$ " "			
C1	11-505	4,7 $\mu$ F/25 V Tant			
C2	11-416	4,7 nF Ker			
C3	11-416	4,7 nF "			
C4	11-416	4,7 nF "			
C5	11-416	4,7 nF "			
C6	11-416	4,7 nF "			
C7	11-416	4,7 nF "			
D1	04-002	AAZ17			
D2	04-062	1N4148			
D3	04-002	AAZ17			
D4	04-002	AAZ17			
D5	04-062	1N4148			
D6	04-062	1N4148			
Control circuit for 1 channel remotecontrolbox. Print C 20 A Tilhører tegn. nr.: 79025-2E2			Rettet:		<div>Tegn.: Stykl. nr.:</div> <div>Kontr.: 79025-4S2</div>

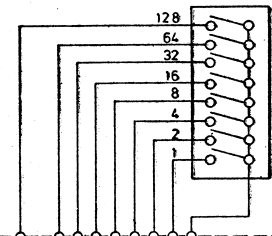
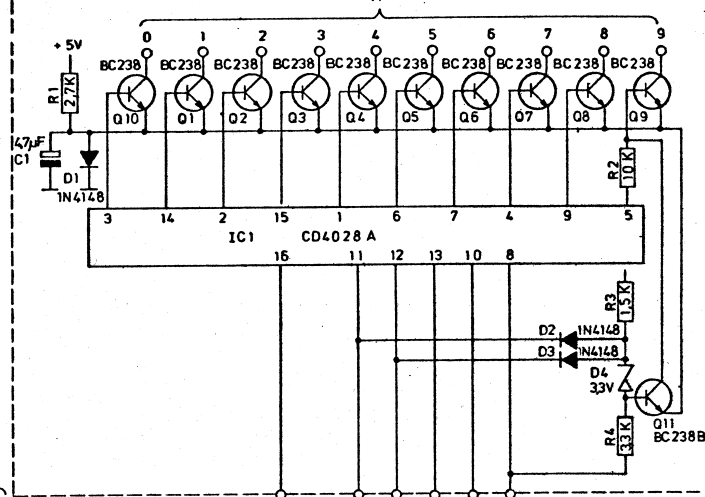
# AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1	13-288	2,7 K $\Omega$ 1/8W CR16			
R2	13-295	10 K $\Omega$ " "			
R3	13-285	1,5 K $\Omega$ " "			
R4	13-289	3,3 K $\Omega$			
C1	11-504	4,7 $\mu$ F " "			
D1	04-062	1N4148			
D2	04-062	1N4148			
D3	04-062	1N4148			
D4	04-068	BZY88-C3V3			
Q1	19-117	BC238BP			
Q2	19-117	BC238BP			
Q3	19-117	BC238BP			
Q4	19-117	BC238BP			
Q5	19-117	BC238BP			
Q6	19-117	BC238BP			
Q7	19-117	BC238BP			
Q8	19-117	BC238BP			
Q9	19-117	BC238BP			
Q10	19-117	BC238BP			
Q11	19-117	BC238BP			
IC1	09-070	CD4028A			
Control circuit for 1 channel remotecontrolbox Print C23A Tilhører tegn. nr.: 79025-2E2			Rettet:		<div>Tegn.:</div> <div>Kontr.:</div>
					Stykl. nr.: 79025-4S2

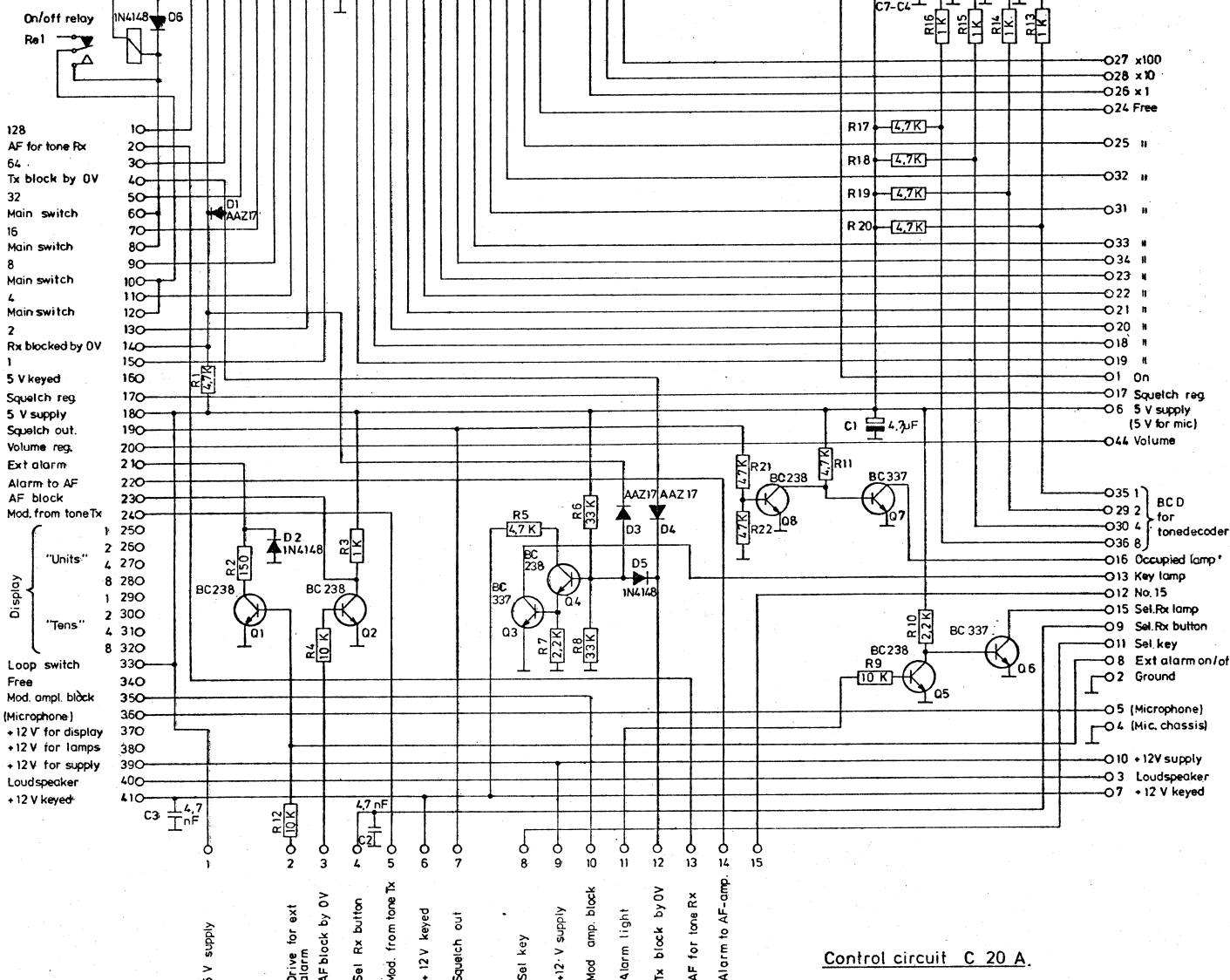
# 1 channel switch, C 21 A1

## Tonedecoder, C 23 A1

Connected to tapped coil

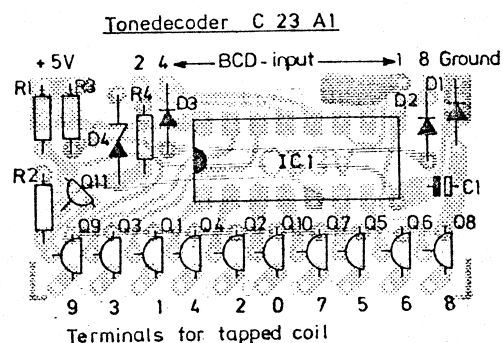
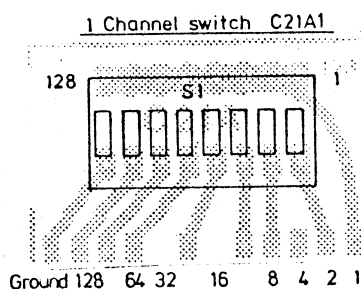
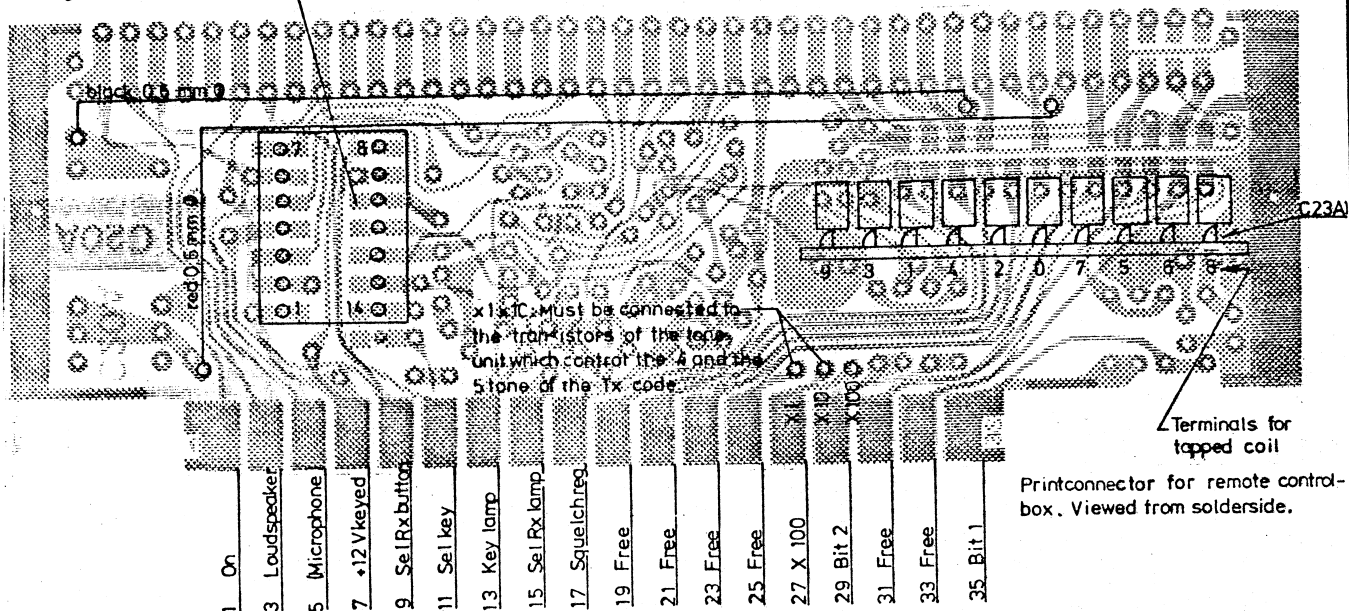


Ground for thumbwheel switches

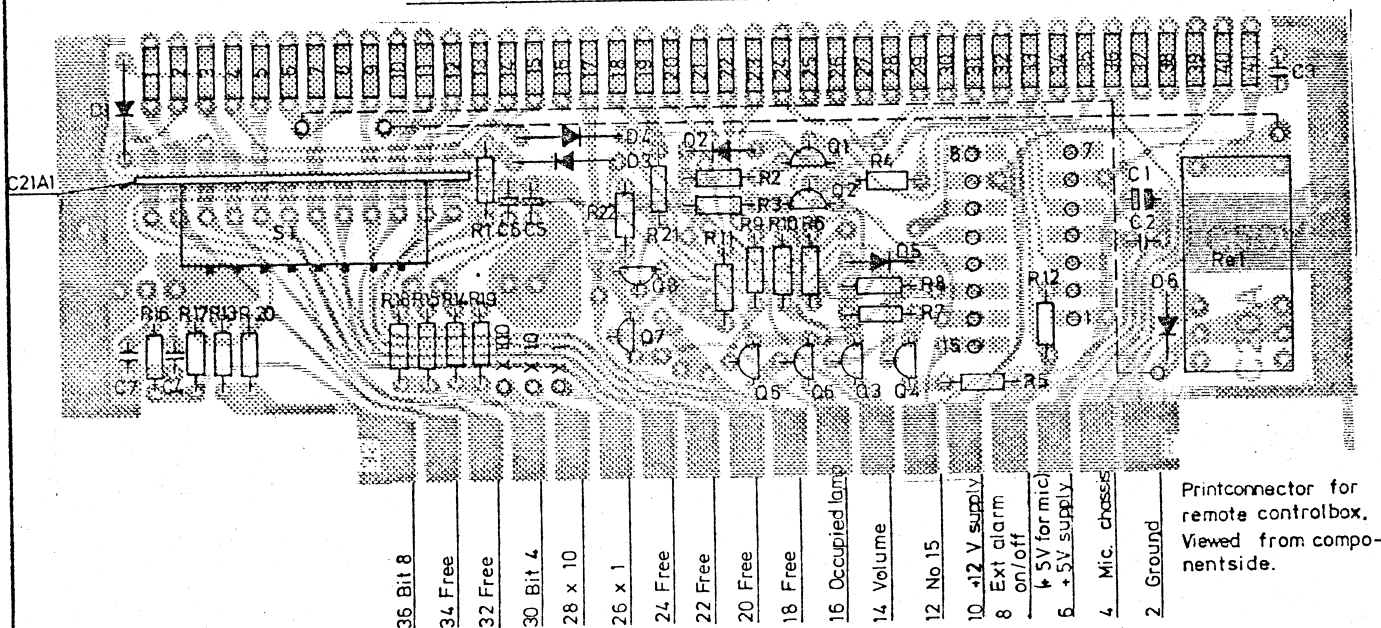


Front sections	Print boards
01 F	C 20A1/C21A1
02 F	C 20A1/C21A1
03 F	C 20A1/C21A1
04 F	C 20A1/C21A1
05 F	C 20A1/C21A1/C23A1
16 F	C 20A1/C 21A1
20 F	C 20A1/C 21A1

Plug from tone unit



Control circuit with indication for occupied C 20A



Rettet:

Control circuit with occupied indication for  
1 channel remote control box  
Print boards C 20A/ C 21A1/ C 23A1

AP-RADIOTELEFON

Tegn.: 13-02-79 BC Kontr.: 15-2-79 LD

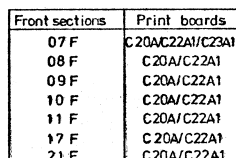
Stykl. nr.:

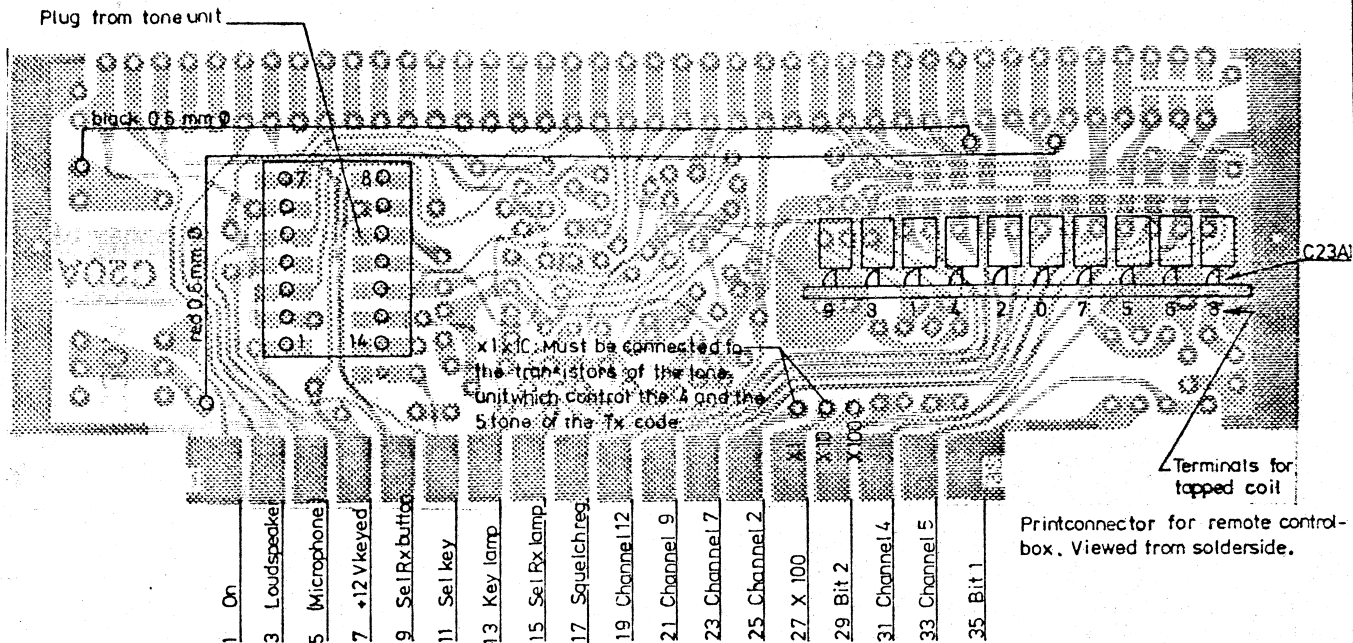
Tegn. nr.:

79066 -3E2

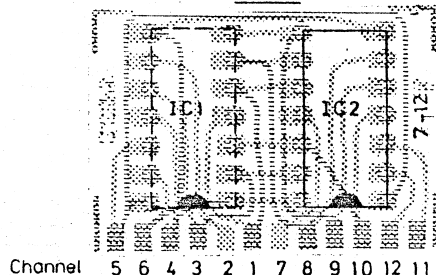


Tonedecoder, C 23 A1

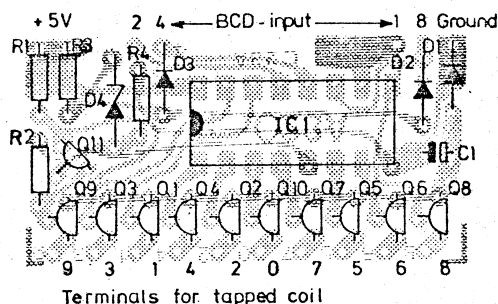




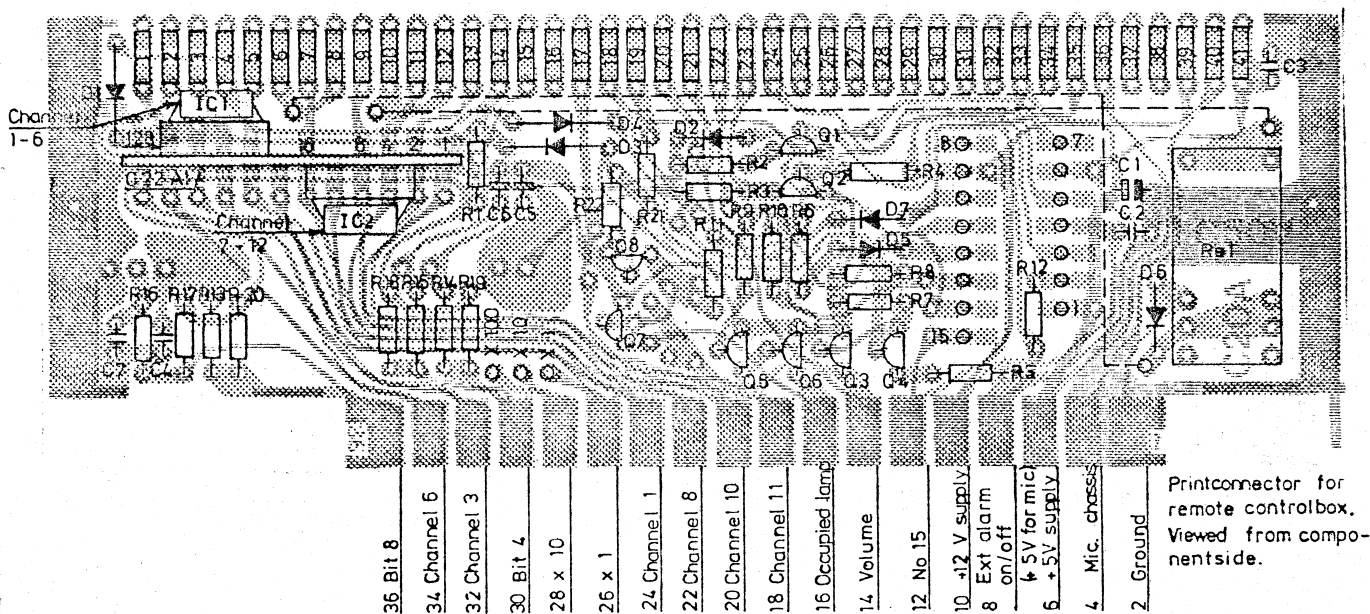
Printboard for diode matrices  
C 22 A1



Tonedecoder C 23 A1



Control circuit with indication for sel. key C 20 A



Rettet:

Control circuit with occupied indication for 12 channel remote controlbox.  
Print boards C 20 A/C 22 A1/ C 23 A1

AP-RADIOTELEFON

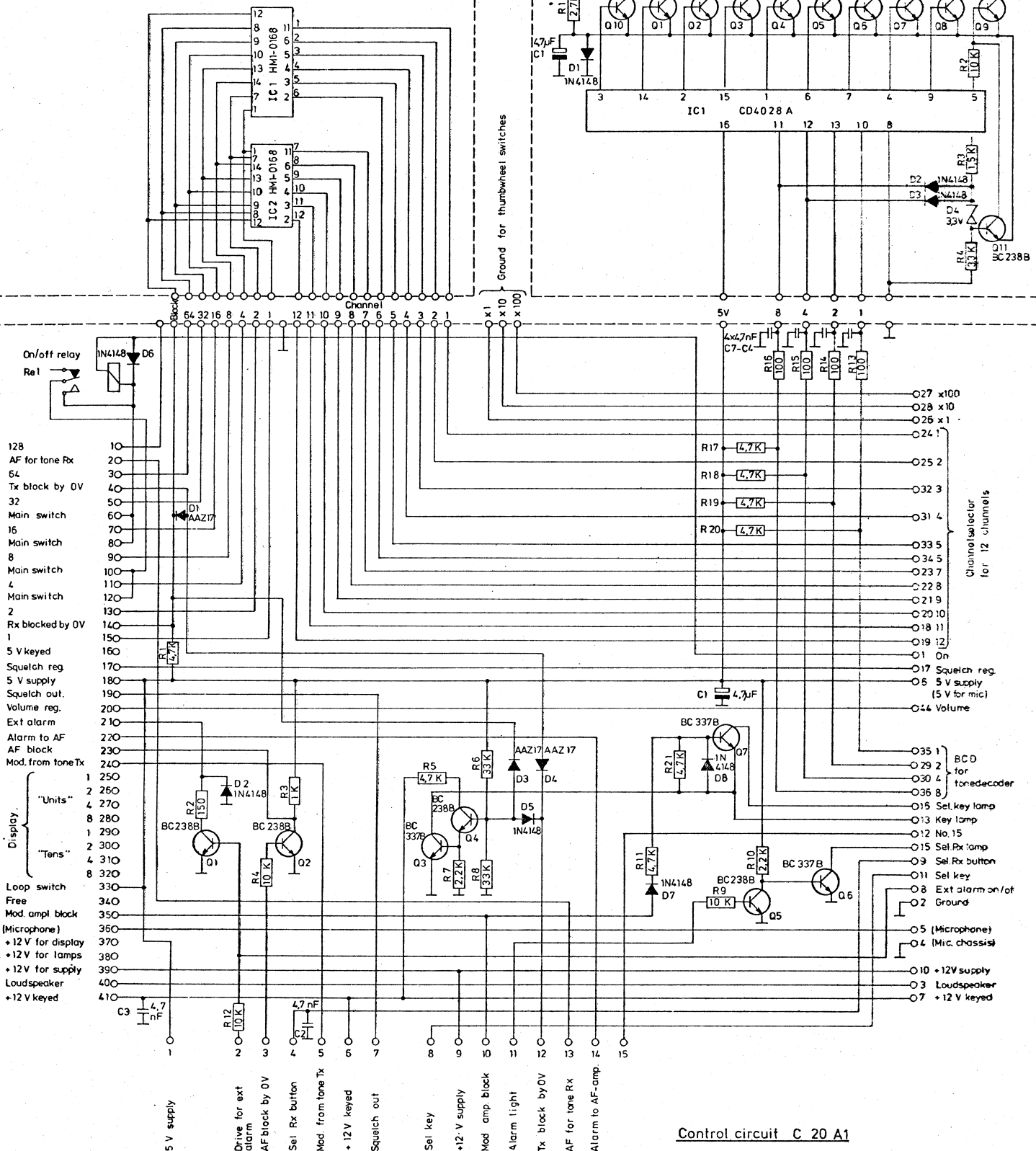
Tegn.: 13-02-79 BC  
Kontr.: 15-2-79 LD  
Stykl. nr.:

Tegn. nr.:

79065-3E2

Tonedecoder, C 23 A1

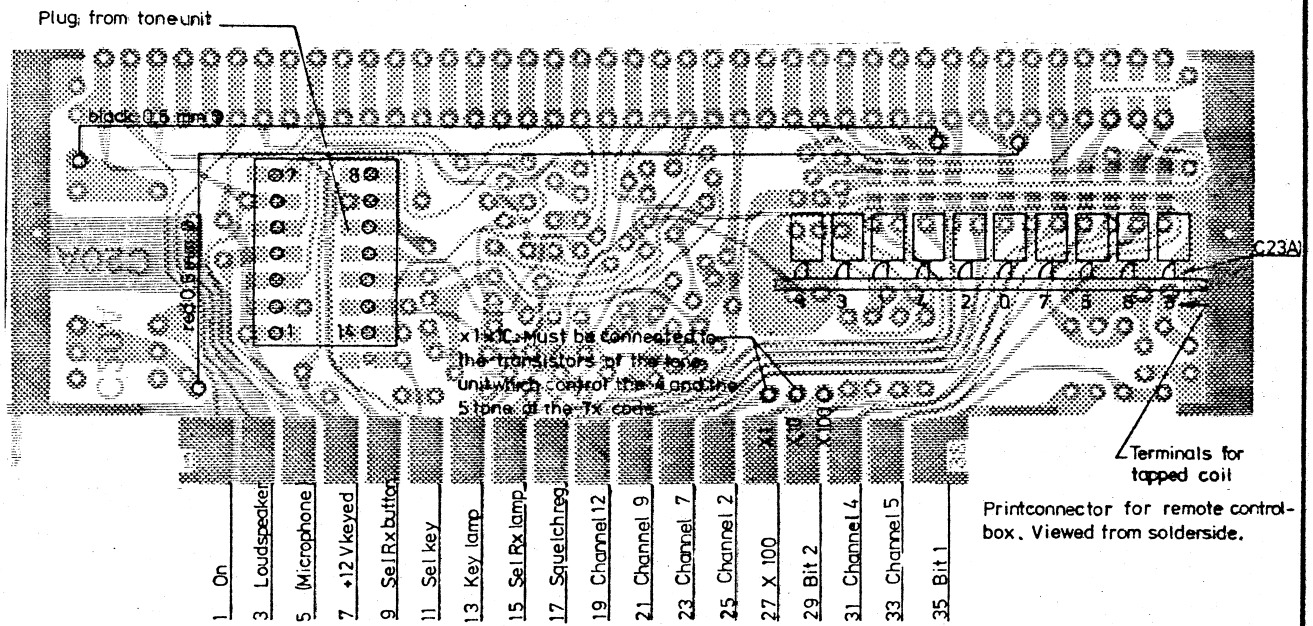
Connected to tapped coil



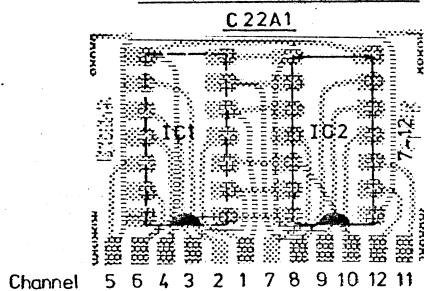
Control circuit C 20 A1

Front section	Print boards
07F	C20A1/C22A1
08F	C20A1/C22A1
09F	C20A1/C22A1
10F	C20A1/C22A1
11F	C20A1/C22A1
17F	C20A1/C22A1
21F	C20A1/C22A1

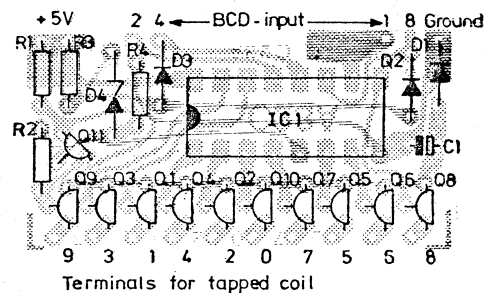
Rettet:	Control circuit for 12 channel remote control box, Print boards C 20A1/C 22 A1/ C 23 A1	Tegn.: 09-02-79 BC	Komm.: 15-2 -79 LD
		Syftl. nr.:	
	AP-RADIOTELEFON 46	Tegn. nr.:	79067 - 2E2



Printboard for diode matrices



Tonedecoder C 23 A1



# AP-RADIOTELEFON

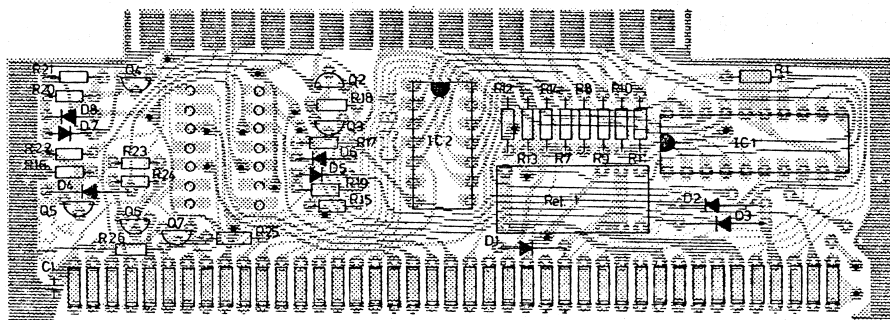
Nr.	Kode	Data	Nr.	Kode	Data
R1	13-291	4,7 K $\Omega$ 1/8 W CR16D7		04-062	1N4148
R2	13-273	150 $\Omega$ " "		04-062	1N4148
R3	13-283	1 K $\Omega$ " "			
R4	13-295	10 K $\Omega$ " "	Q1	19-093	BC238B
R5	13-291	4,7 K $\Omega$ " "	Q2	19-093	BC238B
R6	13-300	33 K $\Omega$ " "	Q3	19-096	BC337B
R7	13-287	2,2 K $\Omega$ " "	Q4	19-093	BC238B
R8	13-300	33 K $\Omega$ " "	Q5	19-093	BC238B
R9	13-295	10 K $\Omega$ " "	Q6	19-096	BC337B
R10	13-287	2,2 K $\Omega$ " "	Q7	19-096	BC337B
R11	13-291	4,7 K $\Omega$ " "			
R12	13-295	10 K $\Omega$ " "			
R13	13-271	100 $\Omega$ " "			
R14	13-271	100 $\Omega$ " "			
R15	13-271	100 $\Omega$ " "			
R16	13-271	100 $\Omega$ " "			
R17	13-291	4,7 K $\Omega$ " "			
R18	13-291	4,7 K $\Omega$ " "			
R19	13-291	4,7 K $\Omega$ " "			
R20	13-291	4,7 K $\Omega$ " "			
R21	13-291	4,7 K $\Omega$ " "			
C1	11-505	4,7 $\mu$ F/25 V Tant			
C2	11-416	4,7 nF Ker			
C3	11-416	4,7 nF "			
C4	11-416	4,7 nF "			
C5	11-416	4,7 nF "			
C6	11-416	4,7 nF "			
C7	11-416	4,7 nF "			
D1	04-002	AAZ17			
D2	04-062	1N4148			
D3	04-002	AAZ17			
D4	04-002	AAZ17			
D5	04-062	1N4148			
D6	04-062	1N4148			
Control circuit for 12 channel remotecontrolbox. Print C 20A Tilhører tegn. nr.: 79067-2E2			Rettet:		<div>Tegn.:</div> <div>Kontr.:</div>
					Stykl. nr.: 79067-4S2

# AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
IC1	09-067	HM1-0168			
IC2	09-067	HM1-0168			
Control circuit for 12 channel remote controlbox Print C 22A Tilhører tegn. nr.: 79067-2E2			Rettet:		<div>Tegn.:</div> <div>Kontr.:</div>
					Stykl. nr.: 79067-4S2

# AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1	13-288	2,7 K $\Omega$ 1/8W CR16			
R2	13-295	10 K $\Omega$ " "			
R3	13-285	1,5 K $\Omega$ " "			
R4	13-289	3,3 K $\Omega$			
C1	11-504	4,7 $\mu$ F " "			
D1	04-062	1N4148			
D2	04-062	1N4148			
D3	04-062	1N4148			
D4	04-068	BZY88-C3V3			
Q1	19-117	BC238BP			
Q2	19-117	BC238BP			
Q3	19-117	BC238BP			
Q4	19-117	BC238BP			
Q5	19-117	BC238BP			
Q6	19-117	BC238BP			
Q7	19-117	BC238BP			
Q8	19-117	BC238BP			
Q9	19-117	BC238BP			
Q10	19-117	BC238BP			
Q11	19-117	BC238BP			
IC1	09-070	CD4028A			
Control circuit for 12 channel remote controlbox. Print C23A Tilhører tegn. nr.: 79067-2E2			Rettet:		<div>Tegn.:</div> <div>Kontr.:</div>
					Stykl. nr.: 79067-4S2

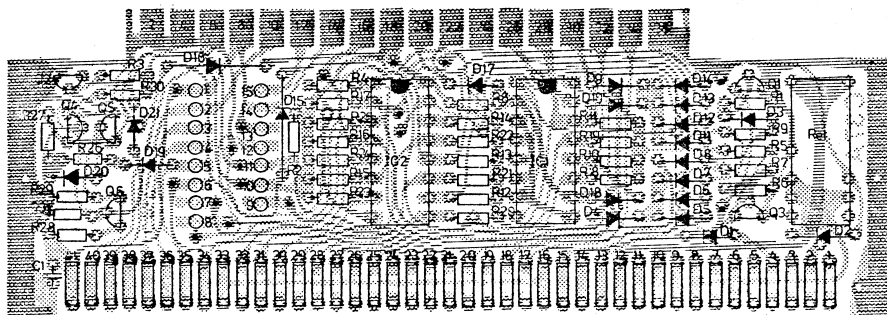
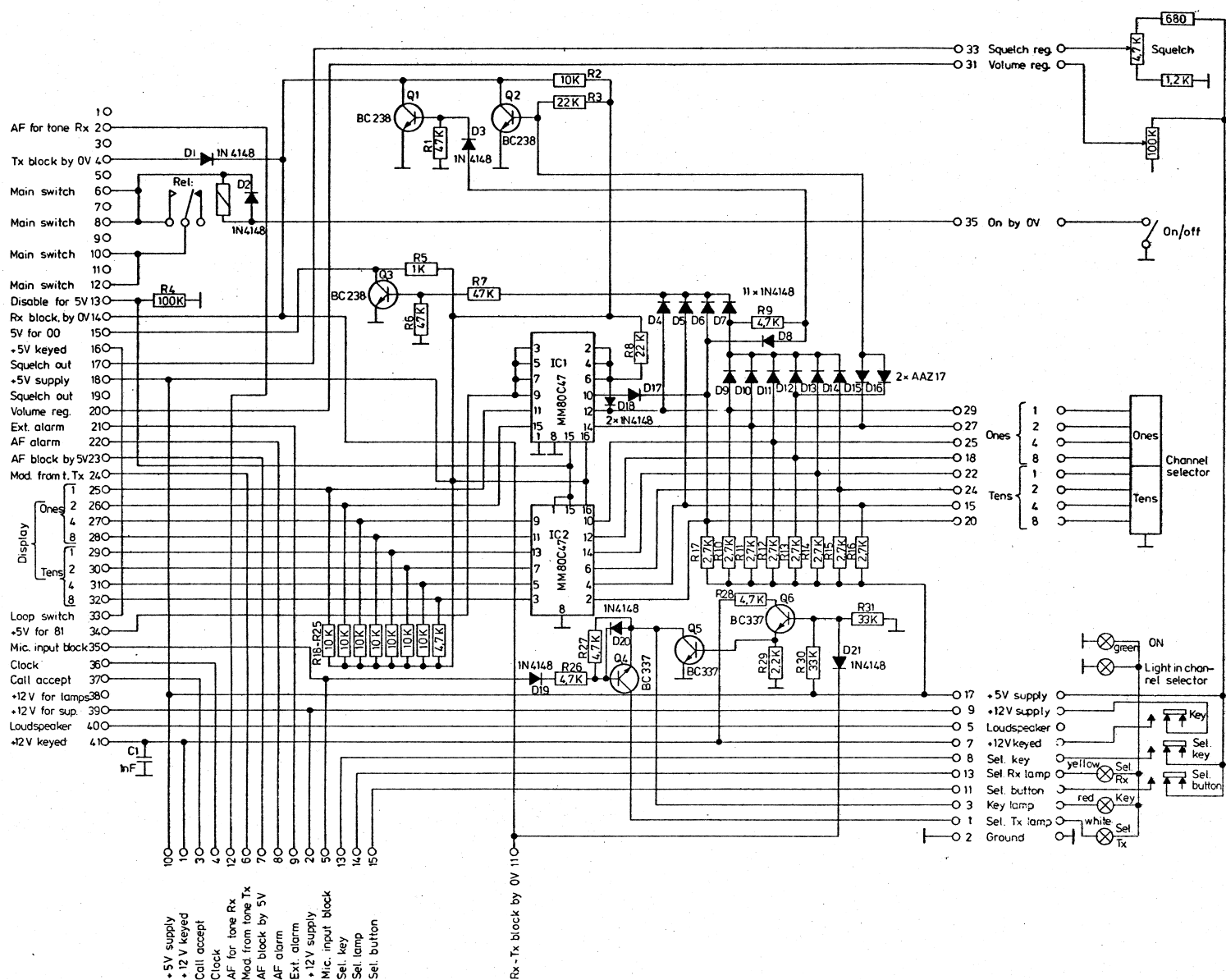


Rattat:	Control circuit for frontsection no.15F and 19F	Tegn.: 24- 4- 79	Kontr.:
		AMC	
		Stykt. nr.:	
	AP-RADIOTELEFON ½	Tegn. nr.:	79084-2E2



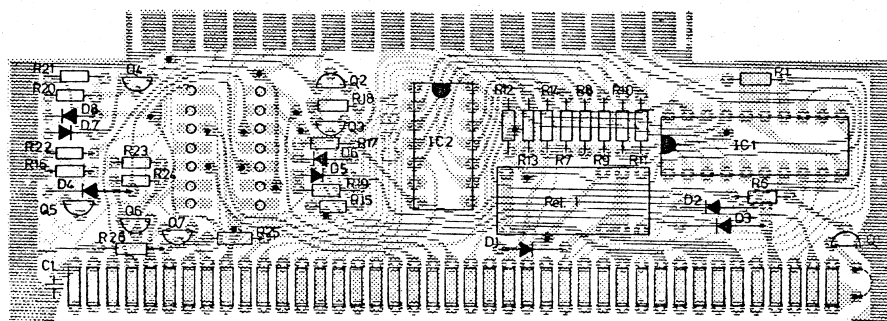
# AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1	13-289	2,2 K $\Omega$ 1/8W CR 16	Q1	19-093	BC 238
R6	13-299	22 K $\Omega$ " "	Q2	19-096	BC 337
R7	13-295	10 K $\Omega$ " "	Q3	19-093	BC 238
R8	13-295	10 K $\Omega$ " "	Q4	19-096	BC 337
R9	13-295	10 K $\Omega$ " "	Q5	19-093	BC 238
R10	13-295	10 K $\Omega$ " "	Q6	19-095	BC 327
R11	13-295	10 K $\Omega$ " "	Q7	19-093	BC 238
R12	13-295	10 K $\Omega$ " "			
R13	13-295	10 K $\Omega$ " "	IC1	09-073	74S470
R14	13-295	10 K $\Omega$ " "	IC2	09-083	CD4078
R15	13-291	4,7 K $\Omega$ " "			
R16	13-302	47 K $\Omega$ " "			
R17	13-300	33 K $\Omega$ " "			
R18	13-287	2,2 K $\Omega$ " "			
R19	13-300	33 K $\Omega$ " "			
R20	13-291	4,7 K $\Omega$ " "			
R21	13-291	4,7 K $\Omega$ " "			
R22	13-302	47 K $\Omega$ " "			
R23	13-283	1 K $\Omega$ " "			
R24	13-291	4,7 K $\Omega$ " "			
R25	13-306	100 K $\Omega$ " "			
R26	13-306	100 K $\Omega$ " "			
C1	11-416	4,7 nF Ker.			
D1	04-062	1N4148			
D2	04-002	AAZ17			
D3	04-002	AAZ17			
D4	04-002	AAZ17			
D5	04-062	1N4148			
D6	04-062	1N4148			
D7	04-062	1N4148			
D8	04-062	1N4148			
Control circuit for frontsec- tion no. 15F, 19F. Print B 38 A Tilhører tegn. nr.: 79084-2E2 1,2			Rettet:		<div>Tegn.:</div> <div>Kontr.:</div>
					Stykl. nr.: 79084-4S2



# AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1	13-302	47 K $\Omega$ 1/8W CR 16	D1	04-062	1N4148
R2	13-295	10 K $\Omega$ " "	D2	04-062	1N4148
R3	13-299	22 K $\Omega$ " "	D3	04-062	1N4148
R4	13-306	100 K $\Omega$ " "	D4	04-062	1N4148
R5	13-283	1 K $\Omega$ " "	D5	04-062	1N4148
R6	13-302	47 K $\Omega$ " "	D6	04-062	1N4148
R7	13-302	47 K $\Omega$ " "	D7	04-062	1N4148
R8	13-299	22 K $\Omega$ " "	D8	04-062	1N4148
R9	13-291	4,7 K $\Omega$ " "	D9	04-062	1N4148
R10	13-288	2,7 K $\Omega$ " "	D10	04-062	1N4148
R11	13-288	2,7 K $\Omega$ " "	D11	04-062	1N4148
R12	13-288	2,7 K $\Omega$ " "	D12	04-062	1N4148
R13	13-288	2,7 K $\Omega$ " "	D13	04-062	1N4148
R14	13-288	2,7 K $\Omega$ " "	D14	04-062	1N4148
R15	13-288	2,7 K $\Omega$ " "	D15	04-002	AAZ17
R16	13-288	2,7 K $\Omega$ " "	D16	04-002	AAZ17
R17	13-288	2,7 K $\Omega$ " "	D17	04-062	1N4148
R18	13-295	10 K $\Omega$ " "	D18	04-062	1N4148
R19	13-295	10 K $\Omega$ " "	D19	04-062	1N4148
R20	13-295	10 K $\Omega$ " "	D20	04-062	1N4148
R21	13-295	10 K $\Omega$ " "	D21	04-062	1N4148
R22	13-295	10 K $\Omega$ " "			
R23	13-295	10 K $\Omega$ " "	Q1	19-093	BC 238
R24	13-295	10 K $\Omega$ " "	Q2	19-093	BC 238
R25	13-291	4,7 K $\Omega$ " "	Q3	19-093	BC 238
R26	13-291	4,7 K $\Omega$ " "	Q4	19-096	BC 337
R27	13-291	4,7 K $\Omega$ " "	Q5	19-096	BC 337
R28	13-291	4,7 K $\Omega$ " "	Q6	19-096	BC 337
R29	13-287	2,2 K $\Omega$ " "			
R30	13-300	33 K $\Omega$ " "	IC1	09-082	MM80C97N
R31	13-300	33 K $\Omega$ " "	IC2	09-082	MM80C97N
C1	11-409	1 nF Ker.	Rel. -1	17-061	HB2-DC12V
Control circuit for front-section no. 18F. Print B 37A1 Tilhører tegn. nr.: 79038-2E2			Rettet:		<div>Tegn.:</div> <div>Kontr.:</div>
					Stykl. nr.: 79038-4S2



Rettet:     	Control circuit for frontsection no. 24 F	Tegnr.: 24-4-79 AMC	Kontnr.:
		Stykkl. nr.:	
	AP-RADIOTELEFON 4/s	Tegnr.:	79083-2E2

# AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1	13-289	2,2 K $\Omega$ 1/8W CR 16	Q1	19-093	BC 238
R6	13-299	22 K $\Omega$ " "	Q2	19-096	BC 337
R7	13-295	10 K $\Omega$ " "	Q3	19-093	BC 238
R8	13-295	10 K $\Omega$ " "	Q4	19-096	BC 337
R9	13-295	10 K $\Omega$ " "	Q5	19-093	BC 238
R10	13-295	10 K $\Omega$ " "	Q6	19-095	BC 327
R11	13-295	10 K $\Omega$ " "	Q7	19-093	BC 238
R12	13-295	10 K $\Omega$ " "			
R13	13-295	10 K $\Omega$ " "	IC1	09-073	74S470
R14	13-295	10 K $\Omega$ " "	IC2	09-083	CD4078
R15	13-291	4,7 K $\Omega$ " "			
R16	13-302	47 K $\Omega$ " "			
R17	13-300	33 K $\Omega$ " "			
R18	13-287	2,2 K $\Omega$ " "			
R19	13-300	33 K $\Omega$ " "			
R20	13-291	4,7 K $\Omega$ " "			
R21	13-291	4,7 K $\Omega$ " "			
R22	13-302	47 K $\Omega$ " "			
R23	13-283	1 K $\Omega$ " "			
R24	13-291	4,7 K $\Omega$ " "			
R25	13-306	100 K $\Omega$ " "			
R26	13-306	100 K $\Omega$ " "			
C1	11-416	4,7 nF Ker.			
D1	04-062	1N4148			
D2	04-002	AAZ17			
D3	04-002	AAZ17			
D4	04-002	AAZ17			
D5	04-062	1N4148			
D6	04-062	1N4148			
D7	04-062	1N4148			
D8	04-062	1N4148			
Control circuit for front-section no. 24F. Print B 38A3 Tilhører tegn. nr.: 79083-2E2			Rettet:		<div>Tegn.:</div> <div>Kontr.:</div>
					Stykl. nr.: 79083-4S2

Rettet:

Control unit and Cablewiring for English Mobile Telephone Control circuit

AP-RADIOTELEFON

Tegn.: 214-75 410	Kontr.:
Stykl. nr.:	
Tegn. nr.:	
79118 -3E2	

PRINTCONNECTORPLUG FOR MOTHERBOARD C53A

FUNCTION	COLOUR	NO	NO	COLOUR	FUNCTION
GROUND	WHITE BLUE	A	1		
ON/OFF	GREY	B	2		
AREA CODE U-X	RED/WHITE	C	3		
AREA CODE O	RED/GREEN	D	4		
AREA CODE I	RED/BLACK	E	5		
AREA CODE EX	BLUE/WHITE	F	6		
AREA CODE A-O-U	BLUE/GREEN	H	7		
AREA CODE A-E-I	BLUE/BLACK	J	8		
+5V SUPPLY	VIOLET	K	9		
VOLUME	BROWN	L	10		
+12V FOR LAMPS	LIGHT GREEN DARK GREEN	N	12		
KEY LAMP	PINK	R	14		
SEARCH LAMP	RED	T	16		
CALLED LAMP	YELLOW	U	17		
GROUND	BLACK	V	18		

NOT USED

FACE UPWARDS

FACE DOWNWARDS

FRONTSECTION NR 206-0V2F

