

Remote controlled Base station Simplex Manual 64

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Dwg. No.

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		Stykl. nr.:		
		AP-RADIOTELEFON	Tegn. nr.:	71099/4

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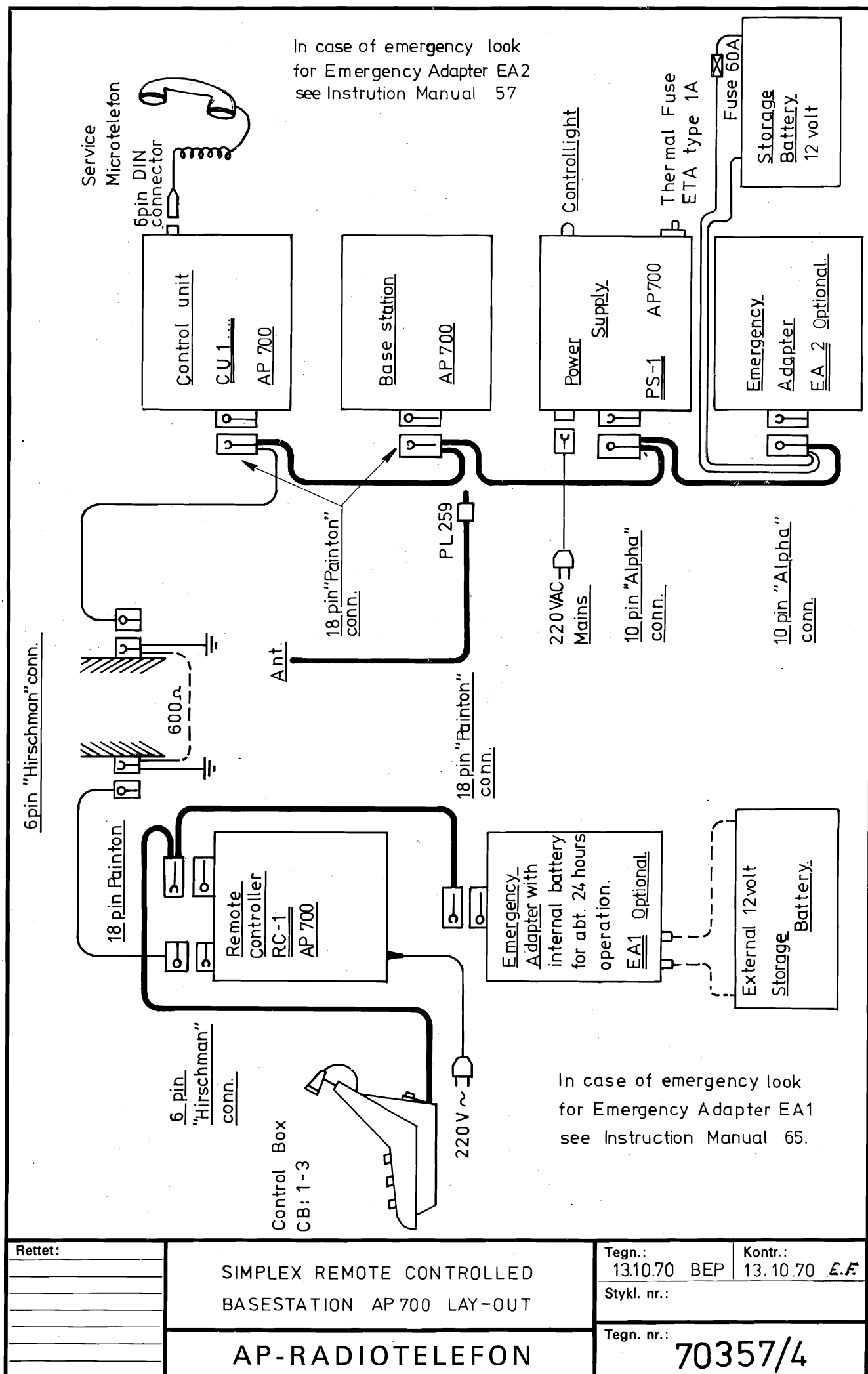
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Rettet: 15/3-71 E.F.	CONTENS II	Tegn.: 12.3.71 BEP	Kontr.: E.F. 15-3-71
		Stykl. nr.:	
		Tegn. nr.:	71100/4
	AP-RADIOTELEFON		



Rettet:

SIMPLEX REMOTE CONTROLLED
BASESTATION AP 700 LAY-OUT

AP-RADIOTELEFON

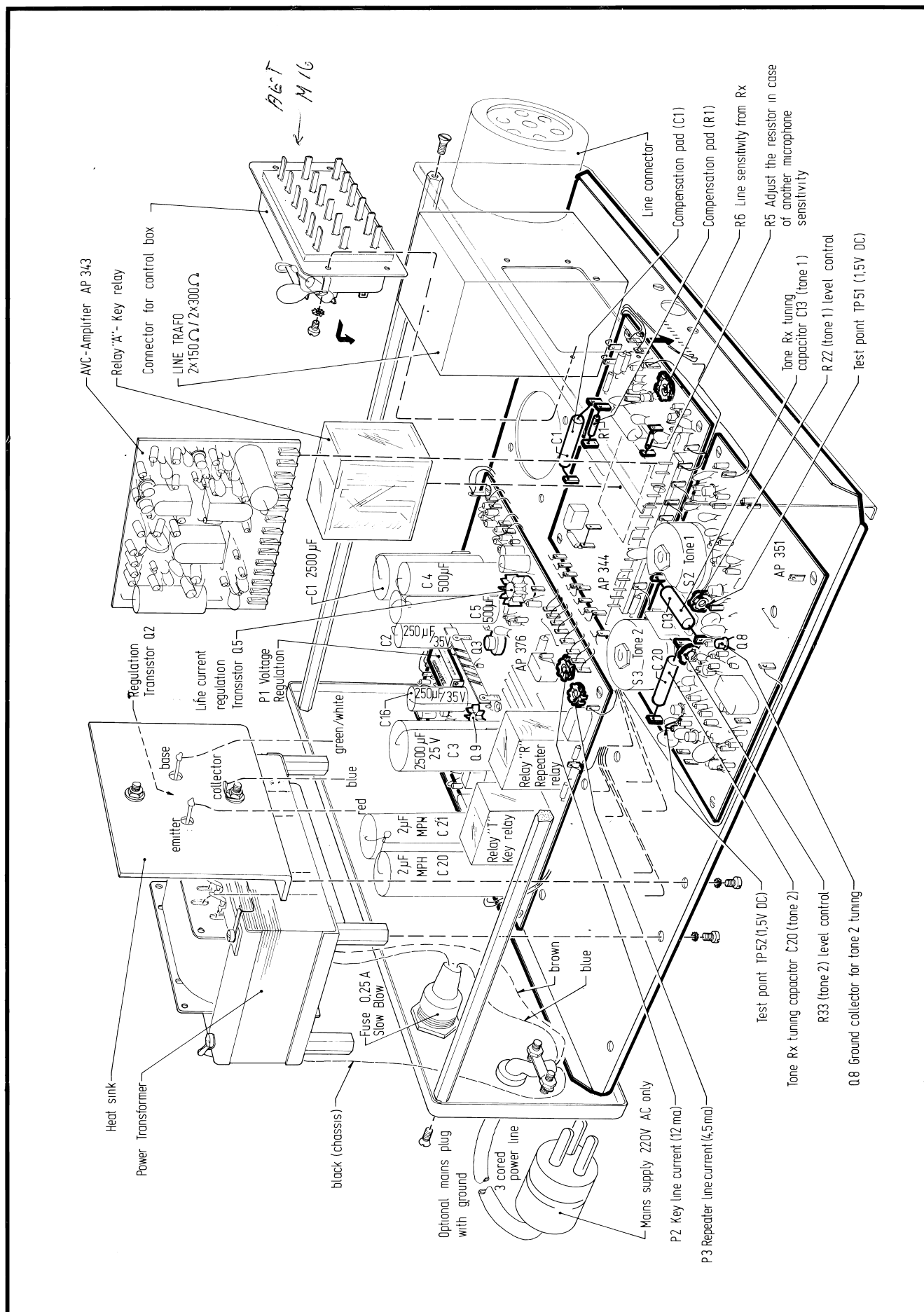
Tegn.:
13.10.70 BEP

Kontr.:
13.10.70 E.F.

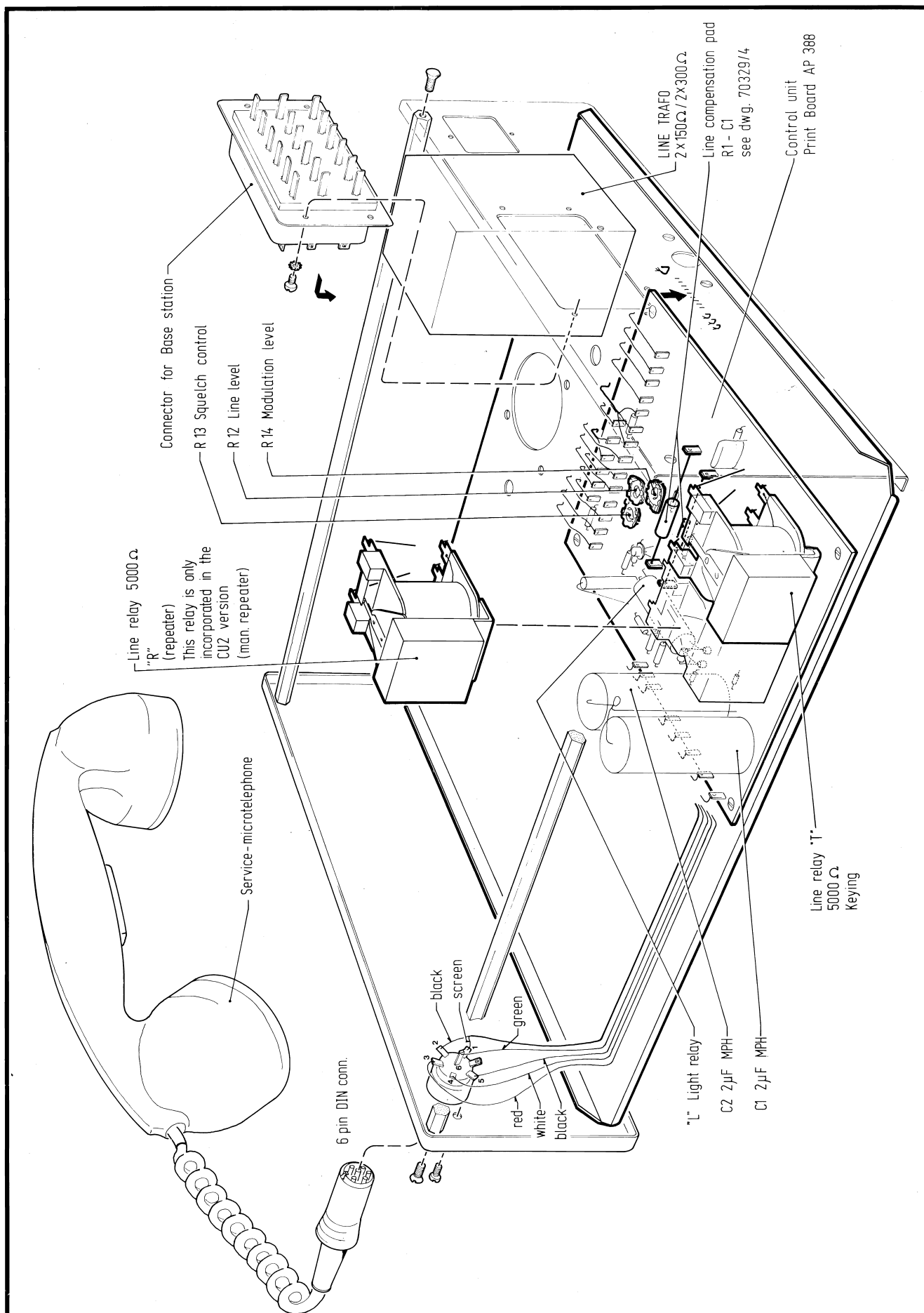
Stykl. nr.:

Tegn. nr.:

70357/4



Rettet: 	Remote Controller RC1 Simplex with repeater AP-RADIOTELEFON	Tegn.: H. Stykl. nr.: Tegn. nr.:	Kontr.: EF 15-2-71 71072/4
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Rettet:

Control Unit CU1 — CU2

Simplex with manual repeater

AP-RADIOTELEFON

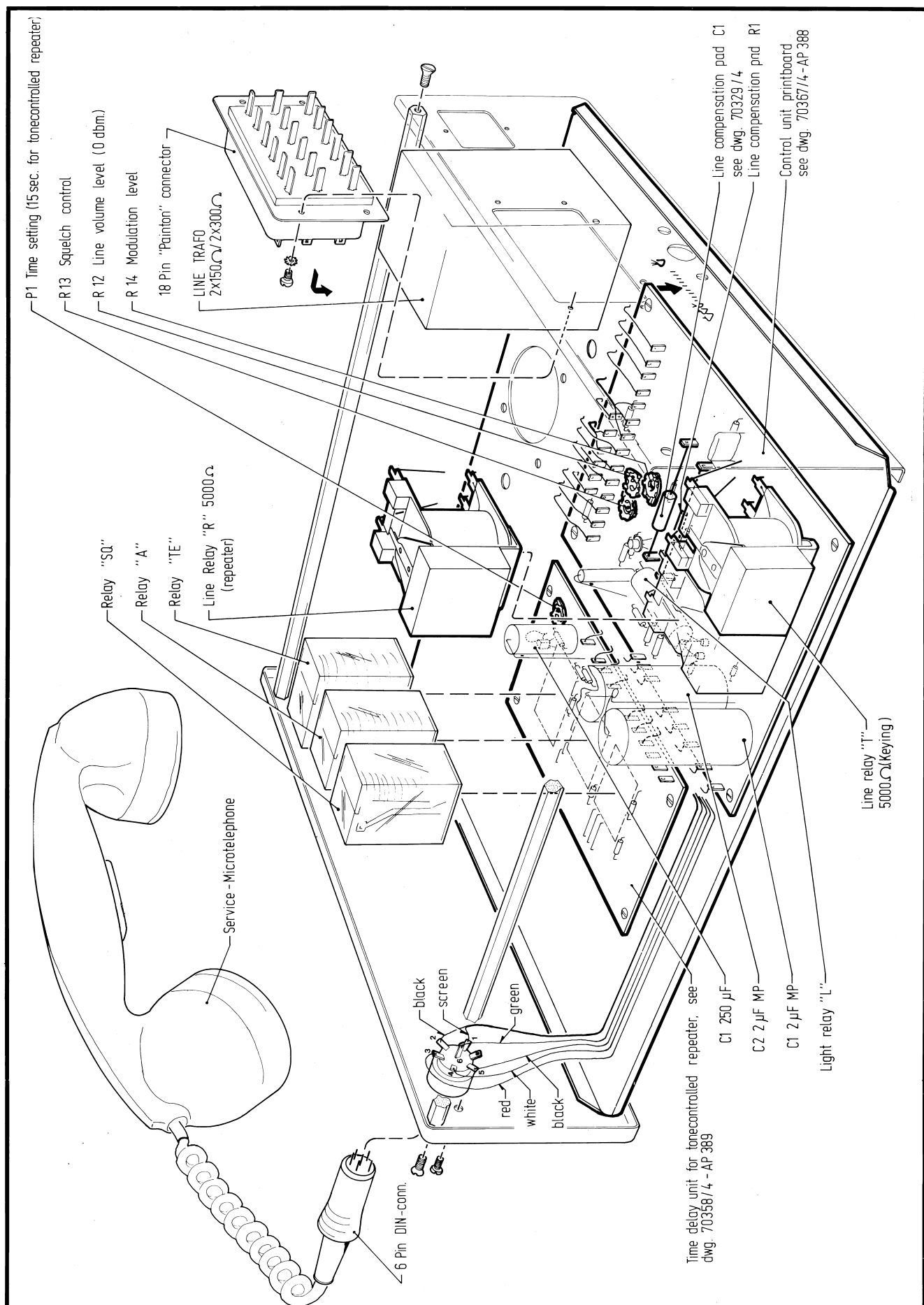
Tegn.: H.

Kontr.: EF
15-2-71

Stykl. nr.:

Tegn. nr.:

71071/4



Rettet:

Control Unit CU4

Simplex man./ tone-controlled repeater

AP-RADIOTELEFON

Tegn.: H.

Kontr.: E.F.
15-2-71

Stykl. nr.:

Tegn. nr.:

71091/4

Functional Description
of the Remote Control System for Simplex Base Station A.P. 700

The system consists of:

- | | |
|------------------------|---|
| Control Box CB 1-3: | CB-1: for simplex operation
see DWG no. 70421/4
CB-2: for simplex and selective call
see DWG no. 70422/4
CB-3: for simplex, selective call
and repeater function
see DWG no. 70419/4 |
| Remote Controller RC 1 | - for simplex operation
selective call and repeater
function
see DWG no. 70195/4 |
| Control Unit CU 1-2-4 | CU-1: for simplex operation
see DWG no. 70277/4
CU-2: for simplex and repeater
function
see DWG no. 70279/4
CU-4: for simplex, selective call
and manual/tonecontrolled
repeater function
see DWG no. 70323/4 |
- For a general view
 see DWG no. 70357/4

Rettet: <hr/> <hr/> <hr/> <hr/> <hr/>	Functional Description I Remote Controller RC1	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Tegn.: <i>GAV</i> 27-11-70</td> <td style="width: 50%;">Kontr.: <i>EF</i> 27-11-70</td> </tr> <tr> <td colspan="2">Stykl. nr.:</td> </tr> <tr> <td colspan="2">Tegn. nr.: 70448/4</td> </tr> </table>	Tegn.: <i>GAV</i> 27-11-70	Kontr.: <i>EF</i> 27-11-70	Stykl. nr.:		Tegn. nr.: 70448/4	
Tegn.: <i>GAV</i> 27-11-70	Kontr.: <i>EF</i> 27-11-70							
Stykl. nr.:								
Tegn. nr.: 70448/4								
AP-RADIOTELEFON								

The Remote Controller, RC-1, consists of 2 powersupplies. The one, 13,6 V, to supply the various circuits in the RC and the CB, also in case the system is supplied with an emergency adaptor EA-1, (see manual: 65), to keep the batteries in the EA-1 fully charged. The other supply, 60 V, (see function description EA-1) to supply a constant current generator, used to transfer the keying and squelch functions to the CU, via a telephone line.

The operation is as follows: see DWG 70195/4.

The squelch pot in the CB, is connected over pin 6 and pin 5 of the 18 pin painton connector on the RC, and regulates the current of the constant current generator, 2N 4314, so that the loop current, in the telephone-line, can be varied from 5 to 30 mA. Loop resistances, within 2000 Ω , do not influence this current.

The current is passed on to the telephone-line via the normally closed contacts of the "T"-relay.

If now the key-switch is depressed in the CB, 13,6 V, is placed on pin 14 of the painton connector on the RC-1, activating the "T" relay on PCB "A", shifting the base circuit of the 2N 4314, via "t" contact to a prefixed (trimpot P 2) current. The loop current is set to 6 mA x), by this trimpot, and is passed on to the telephone-line via the normally open contacts "t".

Now the current runs in the reversed direction in respect to the direction with stand-by and quelch.

The repeater function switch, if the CB is equipped with this, and when depressed places 13,6 Volt on pin 13 of the painton connector activating the "R"-relay, which in turn activates the "T"-relay via the "r"-contacts, the 2 N 4314 is set to another prefixed current and this current passed on via the normally open "t" contacts to the telephone-line, thus in same direction as with keying. x)(note: with repeater function installed, the loop current for keying is set to 12 mA, and for repeater function 4,5 mA by trimpot P3).

The RC-1 is also equipped with an AF power amplifier, see DWG no. 70283/4-70394/4, with two preamplifiers. The one preamp. is used in the stand-by position to amplify the AF signal from the telephone-line and via the normally closed contacts "a", the amplified signal is fed to the power amplifier. The volume control in the CB controls the AF outputlevel to the speaker.

With the key switch depressed in the CB, the "A" relay on PCB "B" is activated, via the normally closed "r" contact and a normally open "t" contact, shifting supply voltage from preamp I to preamp II, and shifting output from preamp I over to preamp II to the poweramplifier. Thus with the key switch depressed, the microphone signal is amplified by preamp II and passed to the power amplifier. With a contactset "a" the volume control is inactivated and via another contactset "a", the AF output of the power amplifier is passed on to the line transformer. A part of this output is fed via pin 12 to a voltage doubling rectifier circuit and used for the gain compression circuit of the AF power amp, thus holding the AF signal to the telephone-line at max 0 dBm.

The last circuit in the RC is the modulation indicator.

This circuit indicates by means of a light in the CB, if there is an AF signal on the telephone-line in either direction.

The delay-circuits on the "T"-and "A"-relays prevent keying clicks and pops reaching the loudspeaker.

Rettet: 	Functional Description II Remote Controller RC1	Tegn.: GAV 27-11-70. Stykl. nr.:	Kontr.: E.F. 27-11-70
AP-RADIOTELEFON		Tegn. nr.: 70449/4	

Note: When the repeater key is depressed on the CB, the "A" relay on PCB "B" is not activated, so that the CB can overhear the conversation.

The tone receiver in the RC-1 indicates via a light and optional bell that the station has been called, the light is reset by depressing the key switch.

On the opposite end of the telephone line the control unit, CU, is connected.

The CU is supplied from the base station's power supply, see DWG 70277/4.

With stand-by and squelch, the current of 5-30 mA is connected via the primary of the linetransformer and diode to the lamp of a "lamp-photocell module". The current value is inverted to a resistorvalue, which via the squelchcontrol transistor is connected to the squelch circuit of the base station.

In series with this circuit is placed a trimpot, adjusting the operation-mode of the squelch.

When the key switch on the CB is depressed the "T" relay, in the CU, is activated via another diode (the lamp of the "lamp-photocell module" is extinguished).

Contact "t" makes connection between pin 17 and 11 on the 18 pin painton connector, activating the transmitter of the base station. In case the system is equipped with a repeater-function see DWG 70279/4 for CU-2, and DWG 70323/4 for CU-4.

In the CU-2 resp. CU-4 the "R" relay is activated when the repeater-function switch is depressed and via the "r" contact pin 13 is connected to pin 14 on the painton connector, activating the base station as repeater station.

The Zenerdiode placed between relay "R" and "T" takes care, that the "R" relay only activates with 4,5 mA loopcurrent whilst with 12 mA both "R" and "T" activate for keying.

To compensate for length of the telephone line a line compensation pad is used in the RC and in the CU. For the correct values of the components of this pad, see tabel DWG no. 70329/4.

The trimpot in the modulation circuit is used to adjust the correct modulation level.

If the system is equipped with emergency power operation the base station power supply has to be supplied with an emergency adaptor EA-2 see description manual 57.

Rettet:	Functional Description III	Tegn.: G. A V	Kontr.: E F
	Remote Controller RC1	27-11-70	27-11-70
		Stykl. nr.:	
	AP-RADIOTELEFON	Tegn. nr.:	70450/4

Data

Remote controlled base-station power consumption from
emergency batteries. (Measured with fully charged
batteries)

1. Base station (25 W type)

Stand-by sq. locked.....200 mA
" sq. open.....385 mA
" in manual repeater mode.....240 mA
Transmitter keyed.....3,2 Amp.
Keyed in repeater.....3,3 Amp.

2. Remote controller

Stand-by sq. locked.....230 mA
" sq. open.....440 mA
" man. repeater mode.....500 mA
" with sel. call indicated.....500 mA
Transmitter keyed modulated.....500 mA
" " unmodulated.....420 mA
" " man. repeater mode.....500 mA
" " by tone keys.....510 mA

Rettet:	REMOTE CONTR. BASESTATION POWER CONSUMPTION FROM 12 VOLT BATTERY.	Tegn.: 14.10.70	Kontr.: 14.10.70
		BEP	EF
	AP-RADIOTELEFON	Stykl. nr.:	
		Tegn. nr.: 70360/4	

Data

Remote controlled base-station power consumption 220 VAC.

1. Base station (25 Watt type)

Mains power consumption (220 VAC) with emergency
adapter (EA 2) battery fully charged.

Stand-by sq. locked.....150 mA
" sq. open.....165 mA
" repeater mode.....155 mA
Transmitter keyed.....475 mA
Keyed in repeater.....485 mA

2. Remote controller RC1

Mains power consumption (220 VAC) with emergency
adapter (EA 1) battery fully charged.

Stand-by sq. locked..... 72 mA
" sq. open..... 87 mA
" repeater mode..... 98 mA
" sel. called with indication..... 96 mA
Keyed unmodulated - modulated.....88 mA-100 mA
" via manual repeater.....100 mA
" via tone " 72 mA
Tone keying.....103 mA

Rettet:	REMOTE CONTR. BASESTATION POWER CONSUMPTION FROM 220 VAC.	Tegn.: 14.10.70 BEP	Kontr.: 14.10.70 E.F.
		Stykl. nr.:	
	AP-RADIOTELEFON	Tegn. nr.: 70361/4	

Line Length	Loop resistance	Compensation values f. line C: values	Compensation values f. line R: values	Compensation values f. hybrid C: values Duplex remote control
0,0 km	0 Ω	0 pF	68 k Ω	880 nF
0,5 km	82 Ω	0 pF	56 k Ω	880 nF
1,5 km	246 Ω	0 pF	47 k Ω	540 nF
2,5 km	410 Ω	200 pF	47 k Ω	400 nF
3,5 km	574 Ω	800 pF	39 k Ω	300 nF
4,5 km	738 Ω	1300 pF	33 k Ω	240 nF
5,5 km	902 Ω	2000 pF	33 k Ω	220 nF
6,5 km	1066 Ω	3300 pF	27 k Ω	205 nF
7,5 km	1230 Ω	5000 pF	27 k Ω	200 nF
8,5 km	1394 Ω	6500 pF	27 k Ω	200 nF
9,5 km	1558 Ω	10000 pF	27 k Ω	200 nF

Values listed are for telephone cables (0,2^{mm}) of 36 nF and 164 Ω (loop resistance) pr. km

For coil loaded cables the response is more flat and values about zero km might be used.

Rettet:

Compensation list for
Remote control.

AP-RADIOTELEFON

Tegn.: U.K.

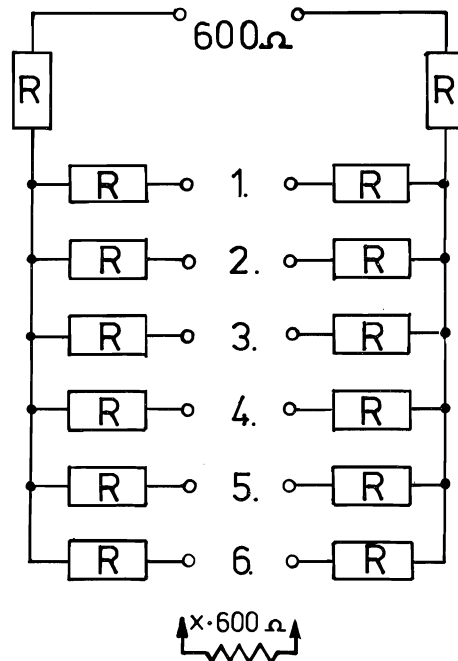
Kontr.: E.F.
25-9-70

Stykl. nr.:

Tegn. nr.:

70329/4

AP 700 Base Station

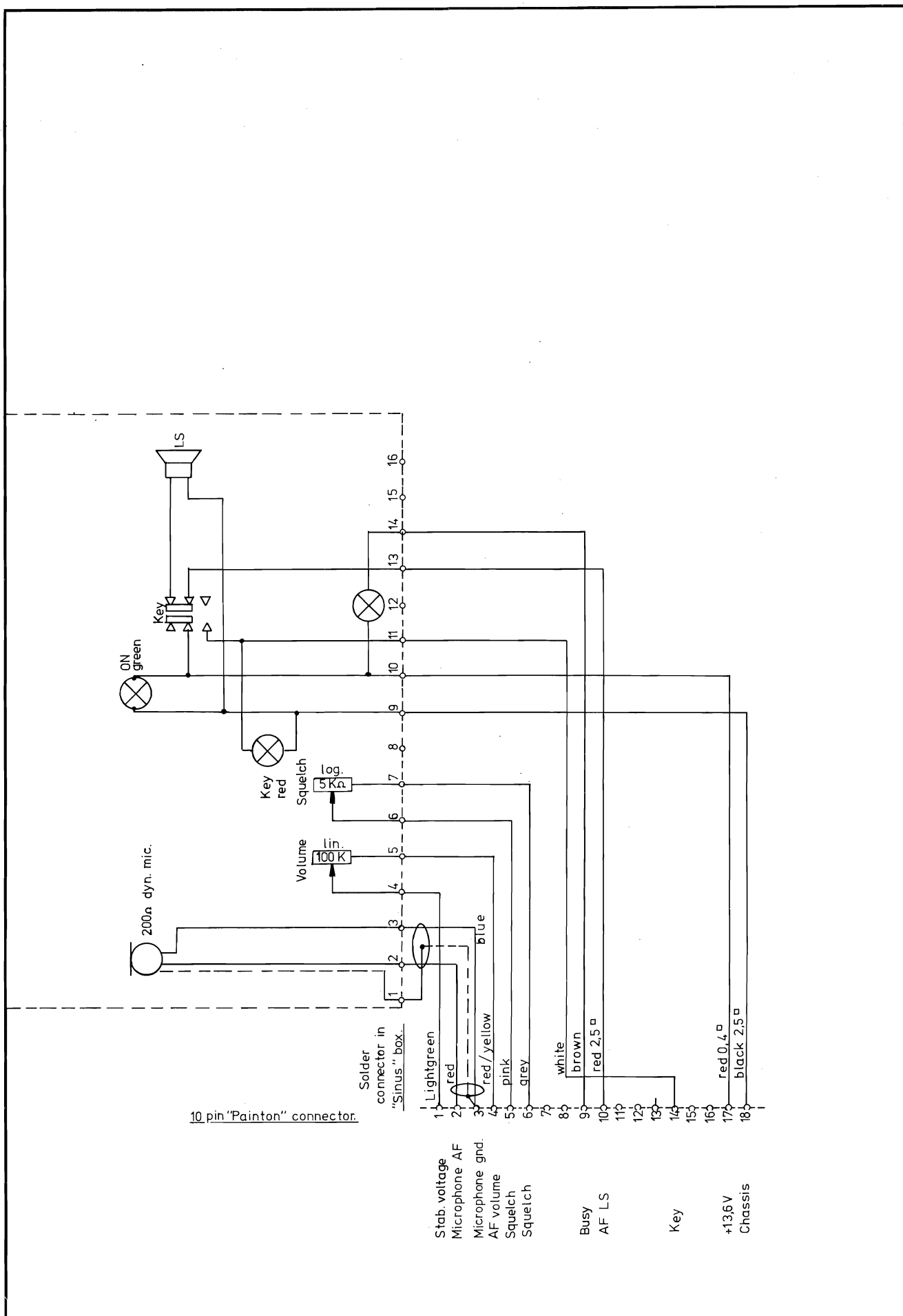


Remote Controllers

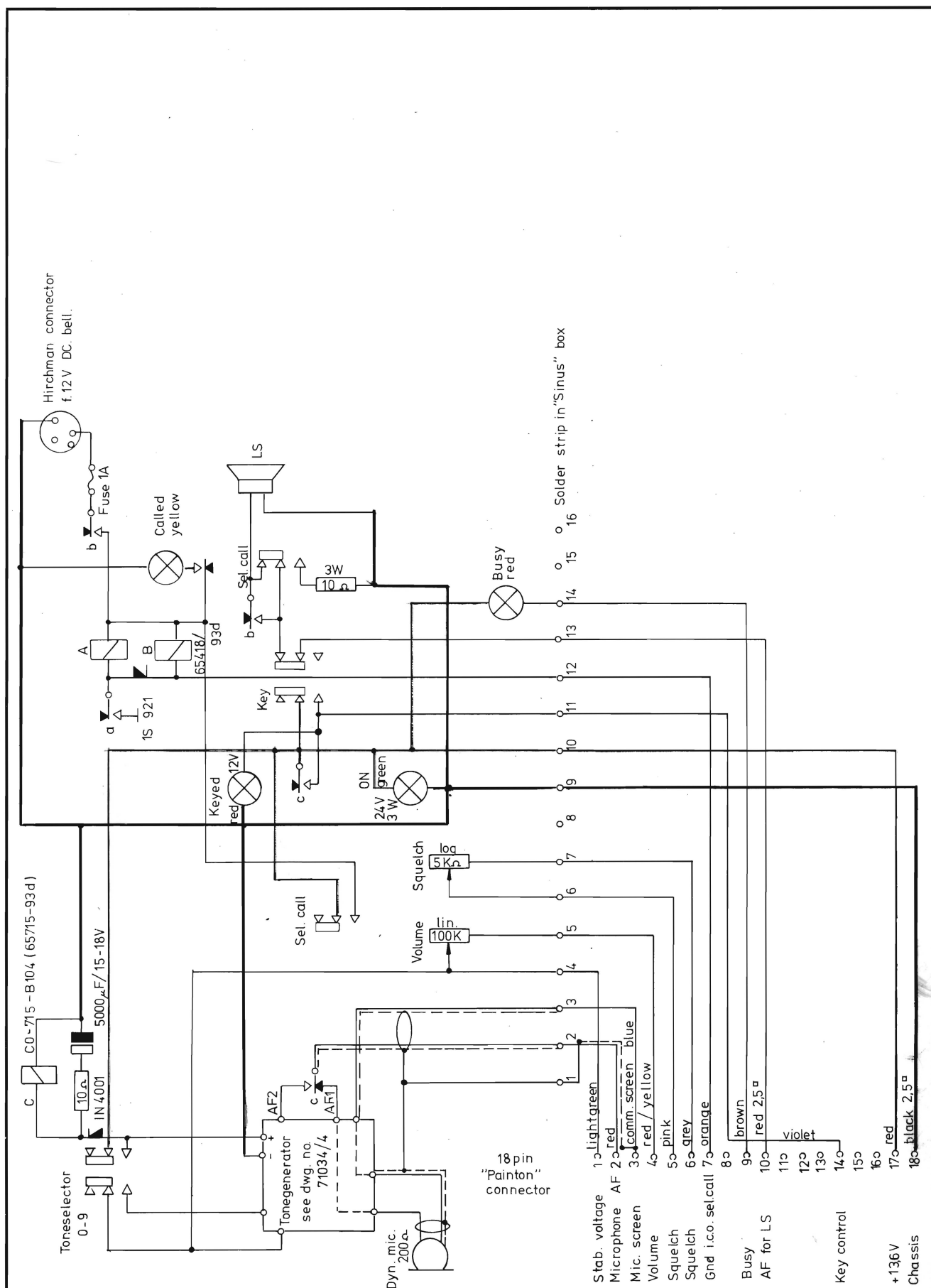
Numbers of RC'S	Values of $R = \Omega$	Attenuation dB	Max. line length (0,2mm ² 36nF per kilometer).
1	0	0	10 Km
2	100 Ω	6 dB	5 Km
3	150 Ω	10 dB	3 Km
4	180 Ω	12 dB	2,5 Km
5	200 Ω	14 dB	2 Km
6	215 Ω	15,6 dB	1,6 Km

Note: With several Remote Controllers in parallel the squelch function has to be annulled.

Rettet: 	SEVERAL REMOTE CONTROLLERS IN PARALLEL.	Tegn.: 12.10.70 BEP	Kontr.: 12.10.70 E.F.
		Stykl. nr.:	
	AP-RADIOTELEFON	Tegn. nr.: 70355/4	



Rettet:	"SINUS" CONTROL BOX FOR SIMPLEX REMOTE CONTROLLED AP700 CB1	Tegn.: 12.11.70 BEP	Kontr.: 12-11-70 E.F.
		Stykl. nr.:	
		Tegn. nr.:	
		70421/4	
		AP-RADIOTELEFON	



Rettet:

"SINUS" CONTROL BOX WITH SEL.CALL FOR SIMPLEX.

REMOTE CONTROLLED

AP 700

ART: CB2

AP-RADIOTELEFON

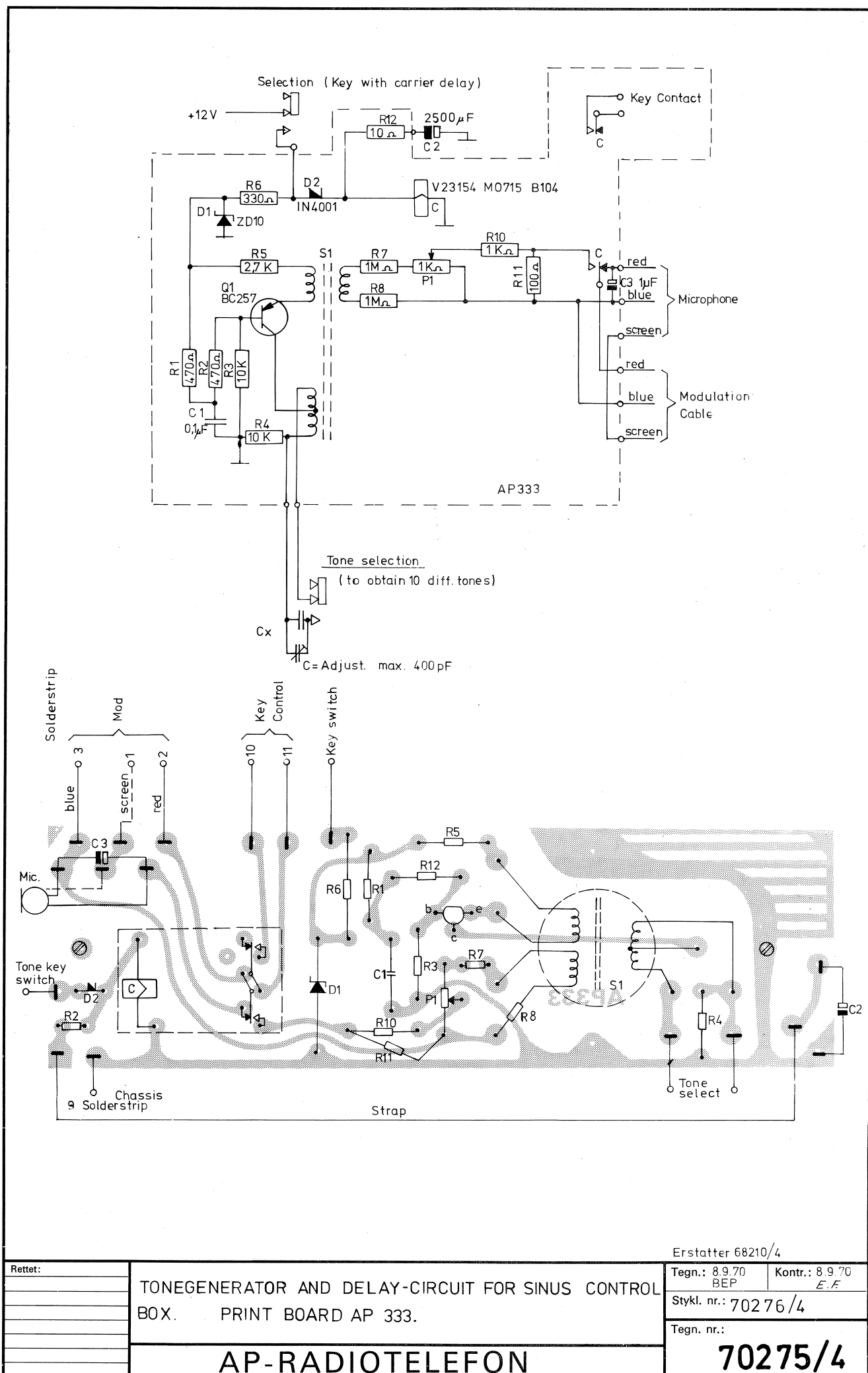
Tegn.: 13.11.70
BEP

Kontr.: 16/H-70
E.F.

Stykl. nr.:

Tegn. nr.:

70431/4



Erstatter 68210/4

Rettet:

TONEGENERATOR AND DELAY-CIRCUIT FOR SINUS CONTROL BOX. PRINT BOARD AP 333.

Tegn.: 8.9.70
BEP

Kontr.: 8.9.70
E.F

Stykl. nr.: 70276/4

Tegn. nr.:

AP-RADIOTELEFON

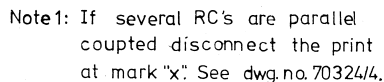
70275/4

AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		470 Ohm $\frac{1}{4}$ Watt			
R2		470 Ohm " "			
R3		10 Kohm " "			
R4		10 Kohm " "			
R5		2,7 Kohm "			
R6		330 Ohm $\frac{1}{2}$ Watt			
R7		1 Meg ohm $\frac{1}{4}$ Watt			
R8		1 Meg ohm " "			
R10		1 Kohm " "			
R11		100 Ohm " "			
R12		10 Ohm " "			
C1		0,1 uF Laco Poly.			
C2		2500 uF 15/18V Elett			
C3		1 uF 35V Tan.			
D1		Zenerdiode ZD 10			
D2		Motorola 1N 4001			
P1		Trim.pot. 1 Kohm Vitrohm.			
Re lay C		Siemens MO 715 B104			
Q1		Silicium pnp BC257			
S1		Pot.core 22/13 Philips ue 150 3B7 Siemens A315 N28			
Tonegenerator and Delay-circuit "sinus" control box Tilhører tegn. nr.: 70275/4			Rettet:		Tegn.: EF 1.11. Kontr.: Stykl. nr.: 70276/4

AP-RADIOTELEFON

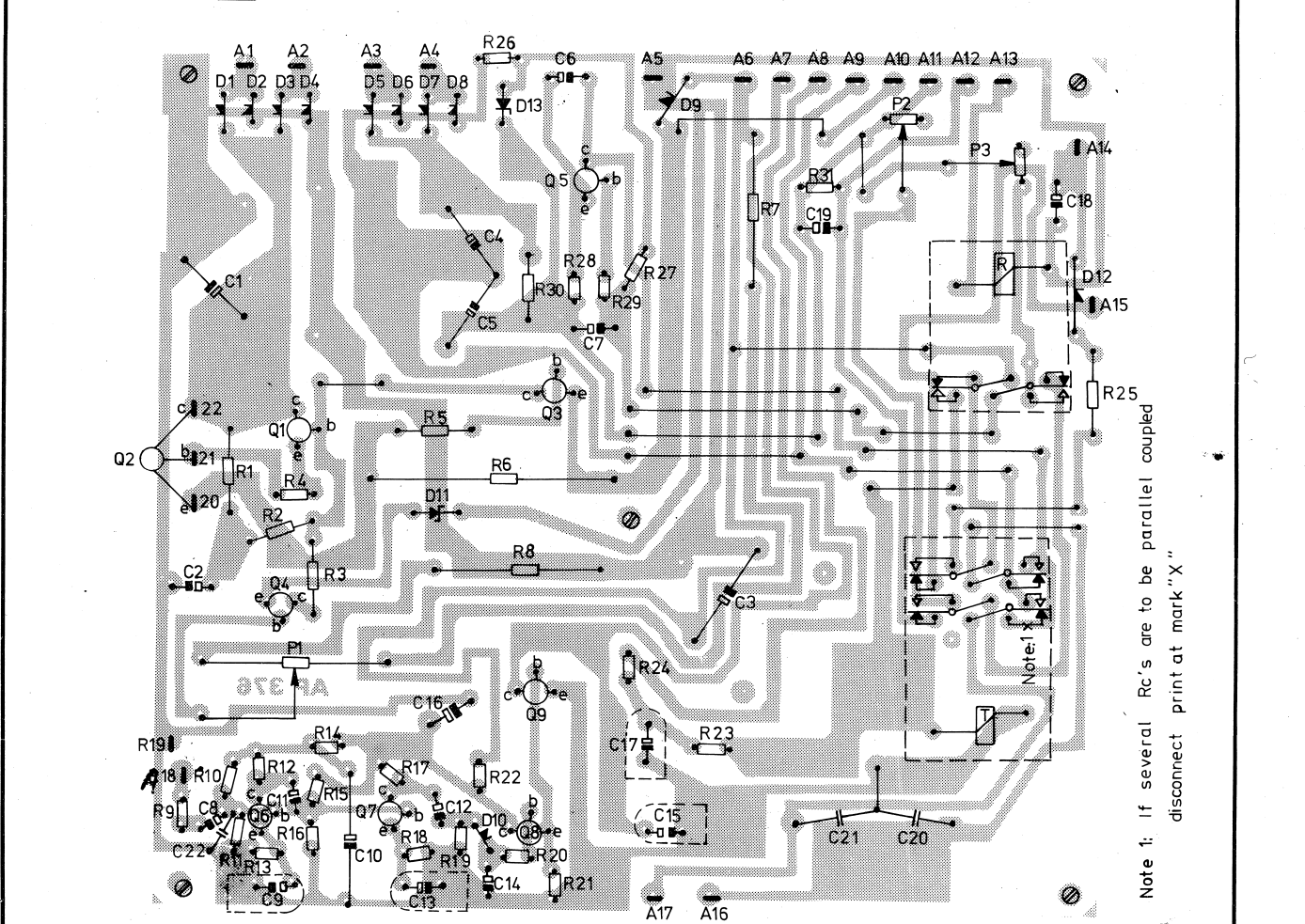
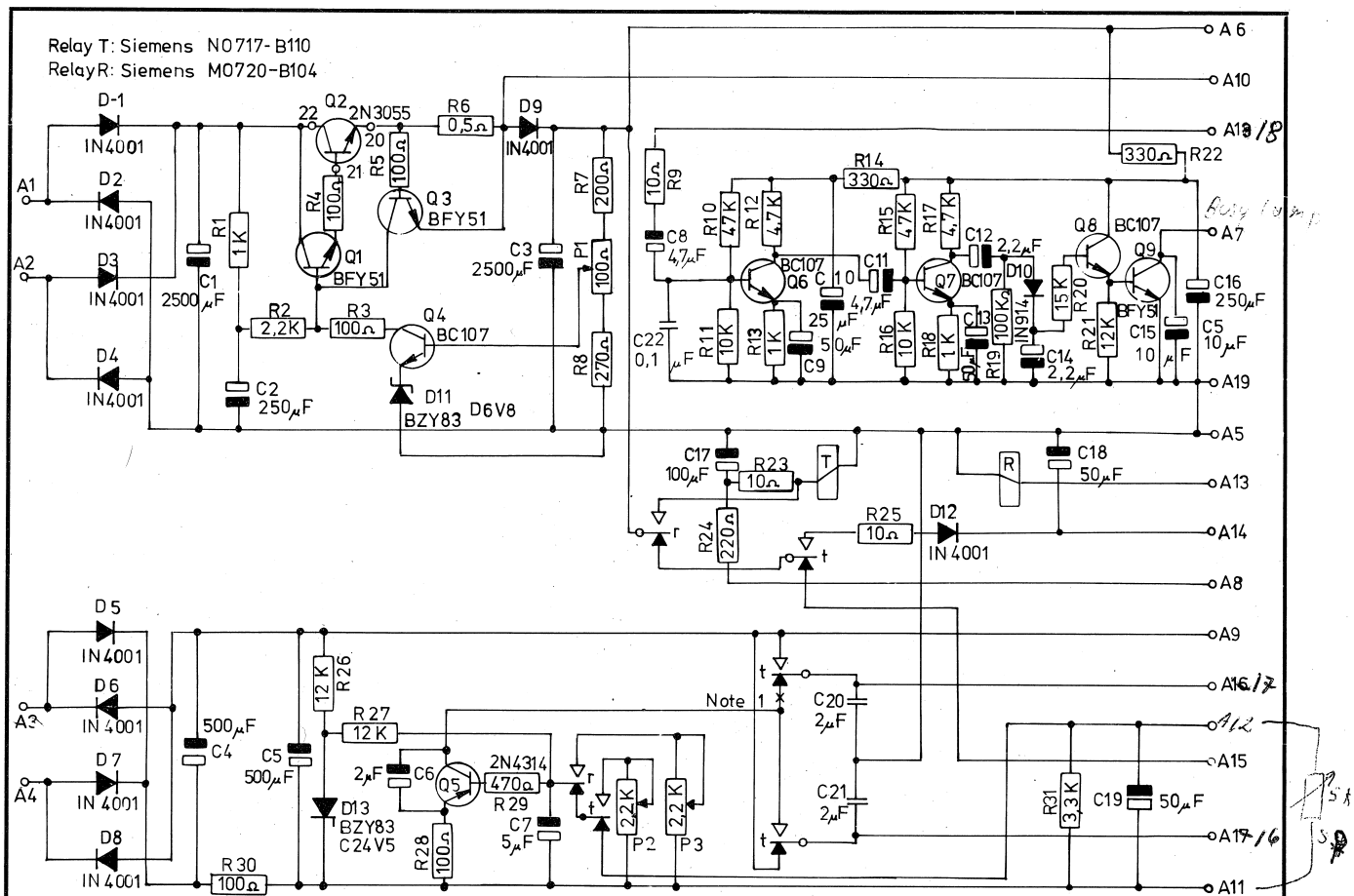
Nr.	Kode	Data	Nr.	Kode	Data
Q ₁		Transistor CB107B			
Q ₂		" "			
D ₁		Diode 1 N 4001			
D ₂		" 1 N 4001			
A		Relæ C 0720-B 104			
B		" " " "			
C		" " " "			
C ₁		Elektrolyt 1000MF 16/18 V			
C ₂		24 nF			
C ₃		2500 uF			
R ₁		Modstand 1 Kohm			
R ₂		" 1 "			
R ₃		150 Kohm			
R ₄		330 K			
R ₅		1 M			
R ₆		470 ohm			
R ₇		10 K			
R ₈		47 K			
R ₉		10 ohm			
R ₁₀		6,8 K			
R ₁₁		27 K			
R ₁₂		100 ohm			
Stykliste			Rettet:		Tegn.:
Tilhører tegn. nr.: 71034 - 4E					Kontr.:
					Stykl. nr.:
					71096/4



18 Pin "Painton" connector for Emergency Adapter EA1
see dwg. 70337/4

AP-RADIOTELEFON

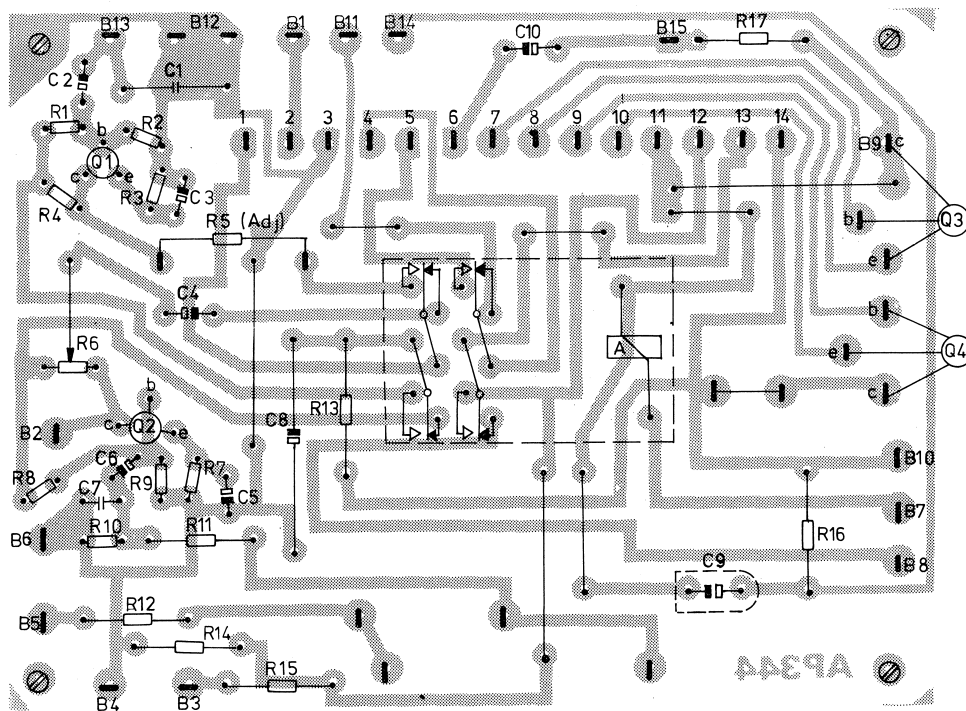
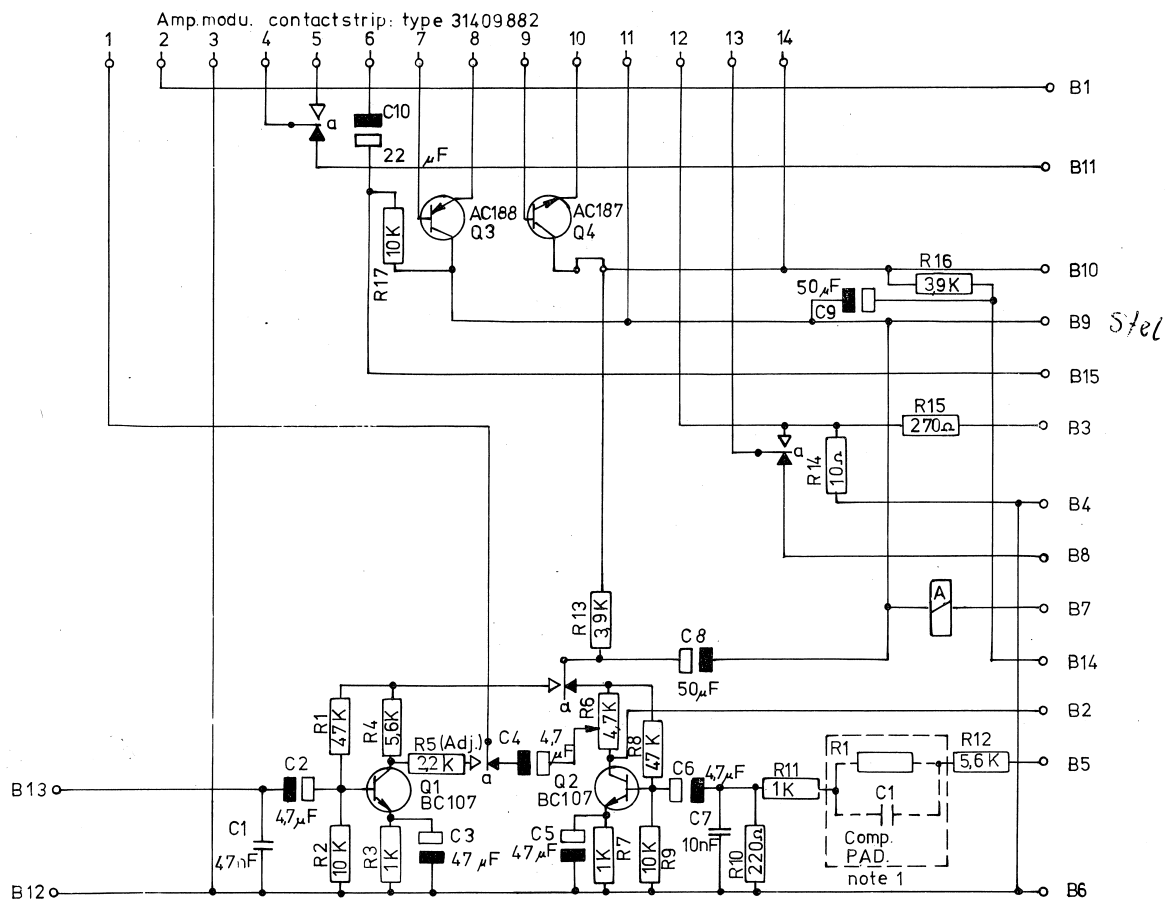
70195 /4



Rettet:	REMOTE CONTROLLER. PRINT BOARD "A" AP 376.	Tegn.: 22.9.70 BEP	Kontr.: 22.9.70 E.F
		Stykl. nr.: 70325/4	
		Tegn. nr.: 70324/4	
	AP-RADIOTELEFON		

AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		1 Kohm $\frac{1}{4}$ W	D1		1N4001
R2		2,2 Kohm "	D2		1N4001
R3		100 ohm "	D3		1N4001
R4		100 ohm "	D4		1N4001
R5		100 ohm "	D5		1N4001
R6		0,5 ohm 5 W	D6		1N4001
R7		200 ohm 1 W	D7		1N4001
R8		270 ohm $\frac{1}{2}$ W	D8		1N4001
R9		10 ohm $\frac{1}{4}$ W	D9		1N4001
R10		47 Kohm "	D10		1N914
R11		10 Kohm "	D11		BZY 83 6,8v zen.
R12		4,7 Kohm "	D12		1N4001
R13		1 Kohm "	D13		BZY 83 24,5v zen.
R14		330 ohm "			
R15		47 Kohm "	Q1		BFY 51
R16		10 Kohm "	Q2		2N 3055
R17		4,7 Kohm "	Q3		BFY 51
R18		1 Kohm "	Q4		Bc 107 b
R19		100 Kohm "	Q5		2N 4314
R20		15 Kohm "	Q6		Bc 107 b
R21		12 Kohm "	Q7		Bc 107 b
R22		330 ohm "	Q8		Bc 107 b
R23		10 ohm "	Q9		BFY 51
R24		220 ohm "			
R25		10 ohm "	Rel		
R26		12 Kohm "	-R		MO 720 - B104
R27		12 Kohm "	Rel		
R28		100 ohm "	-T		NO 717 - B110
R29		470 ohm "			
R30		100 ohm "	P1		100 ohm pot
R31		3,3 Kohm "	P2		2,2 Kohm pot
			P3		2,2 Kohm pot
C1		2500 mF/25v lyt			
C2		250 mF/35v lyt			
C3		2500 mF/25v lyt			
C4		500 mF/70v lyt			
C5		500 mF/70v "			
C6		2 mF/100v lyt			
C7		4,7 mF/25v tant.			
C8		4,7 mF/25v "			
C9		50 mF/16v lyt			
C10		25 mF/25v "			
C11		4,7 mF/25v tant.			
C12		2,2 mF/25v "			
C13		50 mF/16v "			
C14		2,2 mF/25v "			
C15		10 mF/35v lyt			
C16		250 mF/35v "			
C17		100 mF/16v "			
C18		50 mF/16v "			
C19		50 mF/16v "			
C20		2 mF/250v MP			
C21		2 mF/250v MP			
C22		0,1 mF/12v ker.			
Remote Controller RC Print Board "A" AP 376 Tilhører tegn. nr.: 70324/4			Rettet:		<div>Tegn.: EB</div> <div>Kontr.:</div>
					Stykl. nr.: 70325/4



Rettet:

TERMINAL PRINT BOARD "B" AP 344. REMOTE
CONTROLLER RC1.

AP-RADIOTELEFON

Tegn.: 14.9.70
BEP

Kontr.: 14.9.70
EF

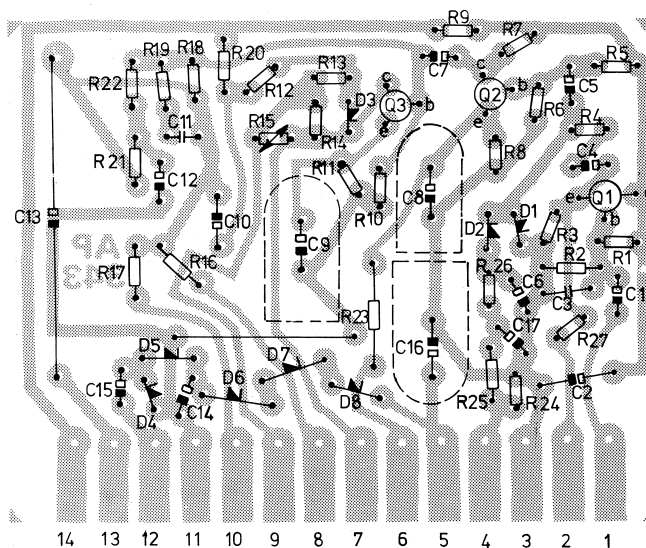
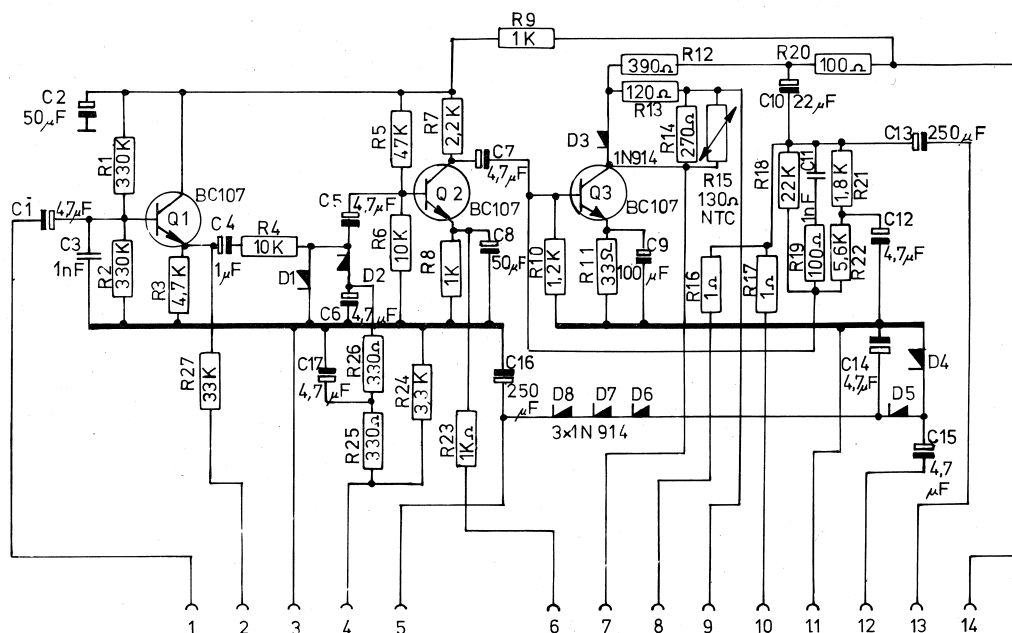
Stykl. nr.: 70295/4

Tegn. nr.:

70294/4

AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		47 Kohm $\frac{1}{4}W$			
R2		10 Kohm "			
R3		1 Kohm "			
R4		5,6 Kohm "			
R5		2,2 Kohm "			
R6		4,7 Kohm pot.			
R7		1 Kohm $\frac{1}{4}W$			
R8		47 Kohm "			
R9		10 Kohm "			
R10		220 ohm "			
R11		1 Kohm "			
R12		5,6 Kohm "			
R13		3,9 Kohm "			
R14		10 ohm $\frac{1}{2}W$			
R15		270 ohm $\frac{1}{4}W$			
R16		3,9 Kohm "			
R17		10 Kohm "			
C1		47 nF pol.			
C2		4,7 mF/25v tant.			
C3		47 mF/6,3v "			
C4		4,7 mF/25v "			
C5		47 mF/6,3v "			
C6		4,7 mF/25v "			
C7		10 nF ker.			
C8		50 mF/25v lyt			
C9		50 mF/16v "			
C10		22 mF/10v tant.			
Q1		Bc 107 b			
Q2		Bc 107 b			
Q3		Ac 188 k			
Q4		Ac 187 k			
Rel					
-A		NO 717 - B 110			
Terminal Print Board "B"			Rettet:		Tegn.: EB
f. Remote Controller RC 1.					Kontr.:
Tilhører tegn. nr.: 70294/4					Stykl. nr.: 70295/4



Rettet:

AUTOMATIC VOLUME CONTROLLED AMPLIFIER FOR
REMOTE CONTROLLER. PRINT BOARD AP 343.

AP-RADIOTELEFON

Tegn.: 10.9.70
BEP

Kontr.: 10.9.70
E.F.

Stykl. nr.: 70286/4

Tegn. nr.:

70283/4

AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		330 Kohm $\frac{1}{4}$ W			
R2		330 Kohm "			
R3		4,7 Kohm "			
R4		10 Kohm "			
R5		47 Kohm "			
R6		10 Kohm "			
R7		2,2 Kohm "			
R8		1 Kohm "			
R9		1 Kohm "			
R10		1,2 Kohm "			
R11		33 ohm "			
R12		390 ohm "			
R13		120 ohm "			
R14		270 ohm "			
R15		130 ohm NTC			
R16		1 ohm $\frac{1}{2}$ W			
R17		1 ohm "			
R18		22 Kohm $\frac{1}{4}$ W			
R19		100 ohm "			
R20		100 ohm "			
R21		1,8 Kohm "			
R22		5,6 Kohm "			
R23		1 Kohm "			
R24		3,3 Kohm "			
R25		330 ohm "			
R26		330 ohm "			
R27		33 Kohm "			
C1		4,7 mF/25v tant.			
C2		50 mF/35v lyt			
C3		1 nF ker.			
C4		1 mF/35v tant.			
C5		4,7 mF/25v "			
C6		4,7 mF/25v "			
C7		4,7 mF/25v "			
C8		50 mF/16v lyt			
C9		100 mF/16v "			
C10		22 mF/16v tant.			
C11		1 nF styr.			
C12		4,7 mF/25v tant.			
C13		250 mF/16v lyt			
C14		4,7 mF/25v tant.			
C15		4,7 mF/25v "			
C16		250 mF/3v lyt			
C17		4,7 mF/25v tant.			
Q1		Bc 107 b			
Q2		Bc 107 b			
Q3		Bc 107 b			
D1		1N914			
D2		1N914			
D3		1N914			
D4		1N914			
D5		1N914			
D6		1N914			
D7		1N914			
D8		1N914			
Automatic Volume Controlled Amplifier Print Board AP 343 Tilhører tegn. nr.: 70283/4			Rettet:		<div>Tegn.: EB</div> <div>Kontr.: 70286/4</div>

Alignment procedure for sequence tonereceiver AP 351.

The capacitors of the chosen code numbers in accordance to the scheme (see dwg.no.70180/4.) are to be installed, first code at C7, second at C13 and third at O20. Place the trim.pot. meters R11, R22 and R33 to center position.

An AF-generator tuned to the chosen frequency in connection with a signal generator is connected to the VHF-receiver. The deviation is adjusted in accordance to the scheme. A VTVM in range 3 Volt is connected to TP 50. The core of S1 is adjusted to max. deflection. By means of R11 the size of the deflection is adjusted to 1,5 Volt hereby another max. adjustment must be tried on the iron core of S1 and the deflection readjusted to 1,5 Volt. First tone should be adjusted and the same procedure is followed for tone two and three where R22, S2 and R33, S3 have to be used.

To obtain the tuning of tone two and three a separate power supply of each tone section has to be made, to obtain this, a connection between + 10V and the house of the respective transistor- Q7 and Q11 has to be made.

For tonereceivers, comprising only one or two tones, the procedure is the same as mentioned above.

E. Folling 31-7-70.

AP-RADIOTELEFON

		Values for "Siemens" pot. core 22/13 N28 A315	Values for "Philips" pot. core 22/13 - 3B7 AOA - μ e150	Values for "Siemens" pot. core 22/13 N28 A315	Values for "Philips" pot. core 22/13 AOA μ e150
Tone	Frequency in C/s	Tone-receiver C7 and C13 pF	Tone-receiver C7 and C13 pF	Tone-transmitter C1 and C2 pF	Frequency Deviation in K C/s
0	980	23500	16 900	21 000	1,2
1	1190	15500	11 400	13 800	1,4
2	1380	11 200	8 300	10 100	1,65
3	1600	8 300	6 200	7 300	1,9
4	1800	6 500	4 900	5 600	2,2
5	2010	5 200	3 900	4 400	2,5
6	2220	4 200	3 200	3 500	2,8
7	2410	3 600	2 700	2 900	3,1
8	2590	3 100	2 300	2 400	3,3
9	2820	2 600	2 000	1 900	3,5

Rettet:

C values for tone-receiver
AP 351, and tonetransmitter AP 369

Tegn.: A.B.P.
13/10-70

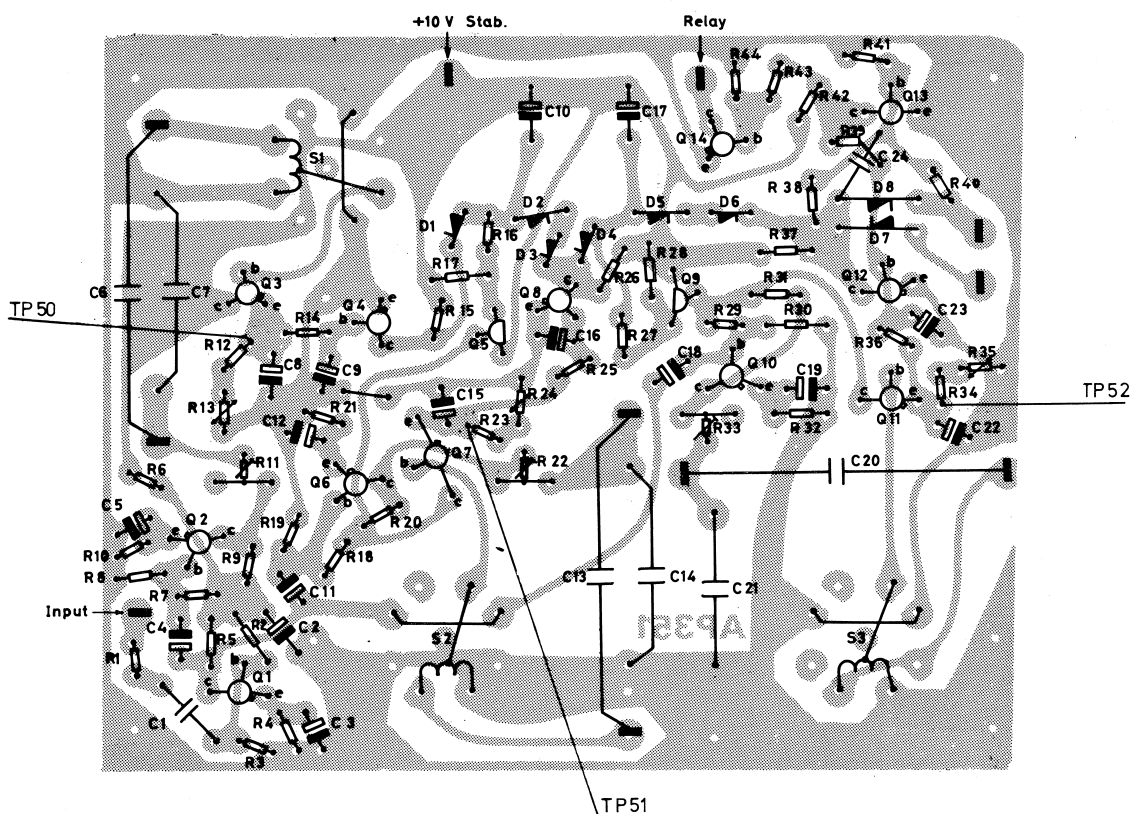
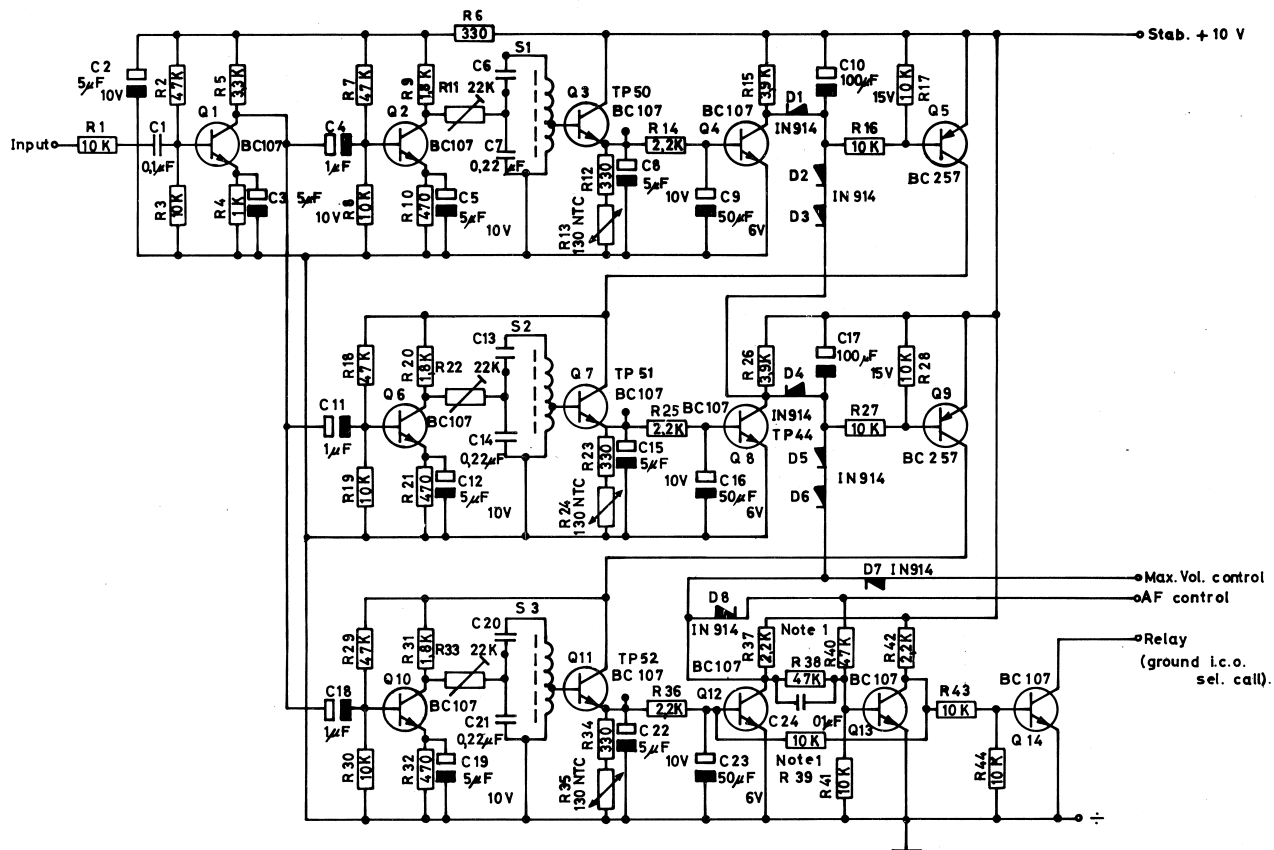
Kontr.: EF
13-10-70

Stykl. nr.:

Tegn. nr.:

AP-RADIOTELEFON

70180/4



Alignment procedure
look for description no. 70176/4
and C values no. 70180/4

Note 1: R 39 and R 40 are only incorporated
at squelch controlled sel. call.

Rettet:	Sequence tone receiver for 3 tones Printboard AP 351 AP 700 AP-RADIOTELEFON	Tegn.: 25.8.70 H. Kontr.: 25.8.70 E.F. Stykl. nr.: 70213 /4 Tegn. nr.:Erstatter 69041/3. 70212 /4
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AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		10 Kohm $\frac{1}{4}$ W	C13		matched f. code
R2		47 Kohm "	C14		0,22 mF MKH
R3		10 Kohm "	C15		5 mF/10v tant.
R4		1 Kohm "	C16		50 mF/6v tant.
R5		3,3 Kohm "	C17		100 mF/15v lyt.
R6		330 ohm "	C18		1 mF/35v tant.
R7		47 Kohm "	C19		5 mF/10v tant.
R8		10 Kohm "	C20		matched f. code
R9		1,8 Kohm "	C21		0,22 mF MKH
R10		470 ohm "	C22		5 mF/10v tant.
R11		22 Kohm pot.	C23		50 mF/6v tant.
R12		330 ohm $\frac{1}{4}$ W	C24		0,1 mF/12v ker.
R13		130 ohm NTC			
R14		2,2 Kohm $\frac{1}{4}$ W	S1		L181 Tg. 69148/4
R15		3,9 Kohm "	S2		L181 Tg. 69148/4
R16		10 Kohm "	S3		L181 Tg. 69148/4
R17		10 Kohm "			
R18		47 Kohm "	D1		1N914
R19		10 Kohm "	D2		1N914
R20		1,8 Kohm "	D3		1N914
R21		470 ohm "	D4		1N914
R22		22 Kohm pot.	D5		1N914
R23		330 ohm $\frac{1}{4}$ W	D6		1N914
R24		130 ohm NTC	D7		1N914
R25		2,2 Kohm $\frac{1}{4}$ W	D8		1N914
R26		3,9 Kohm "			
R27		10 Kohm "	Q1		Bc 107
R28		10 Kohm "	Q2		Bc 107
R29		47 Kohm "	Q3		Bc 107
R30		10 Kohm "	Q4		Bc 107
R31		1,8 Kohm "	Q5		Bc 257
R32		470 ohm "	Q6		Bc 107
R33		22 Kohm pot.	Q7		Bc 107
R34		330 ohm $\frac{1}{4}$ W	Q8		Bc 107
R35		130 ohm NTC	Q9		Bc 257
R36		2,2 Kohm $\frac{1}{4}$ W	Q10		Bc 107
R37		2,2 Kohm "	Q11		Bc 107
R38		47 Kohm "	Q12		Bc 107
R39		10 Kohm "	Q13		Bc 107
R40		47 Kohm "	Q14		Bc 107
R41		10 Kohm "			
R42		2,2 Kohm "			
R43		10 Kohm "			
R44		10 Kohm "			
C1		0,1 mF/12v ker.			
C2		5 mF/10v tant.			
C3		5 mF/10v tant.			
C4		1 mF/35v tant.			
C5		5 mF/10v tant.			
C6		matched f. code			
C7		0,22 mF MKH			
C8		5 mF/10v tant.			
C9		50 mF/6v tant.			
C10		100 mF/15v lyt.			
C11		1 mF/35v tant.			
C12		5 mF/10v tant.			

Sequence Tone Receiver for
3 Tones Print AP 351
Tilhører tegn. nr.: 70212/4 AP 700

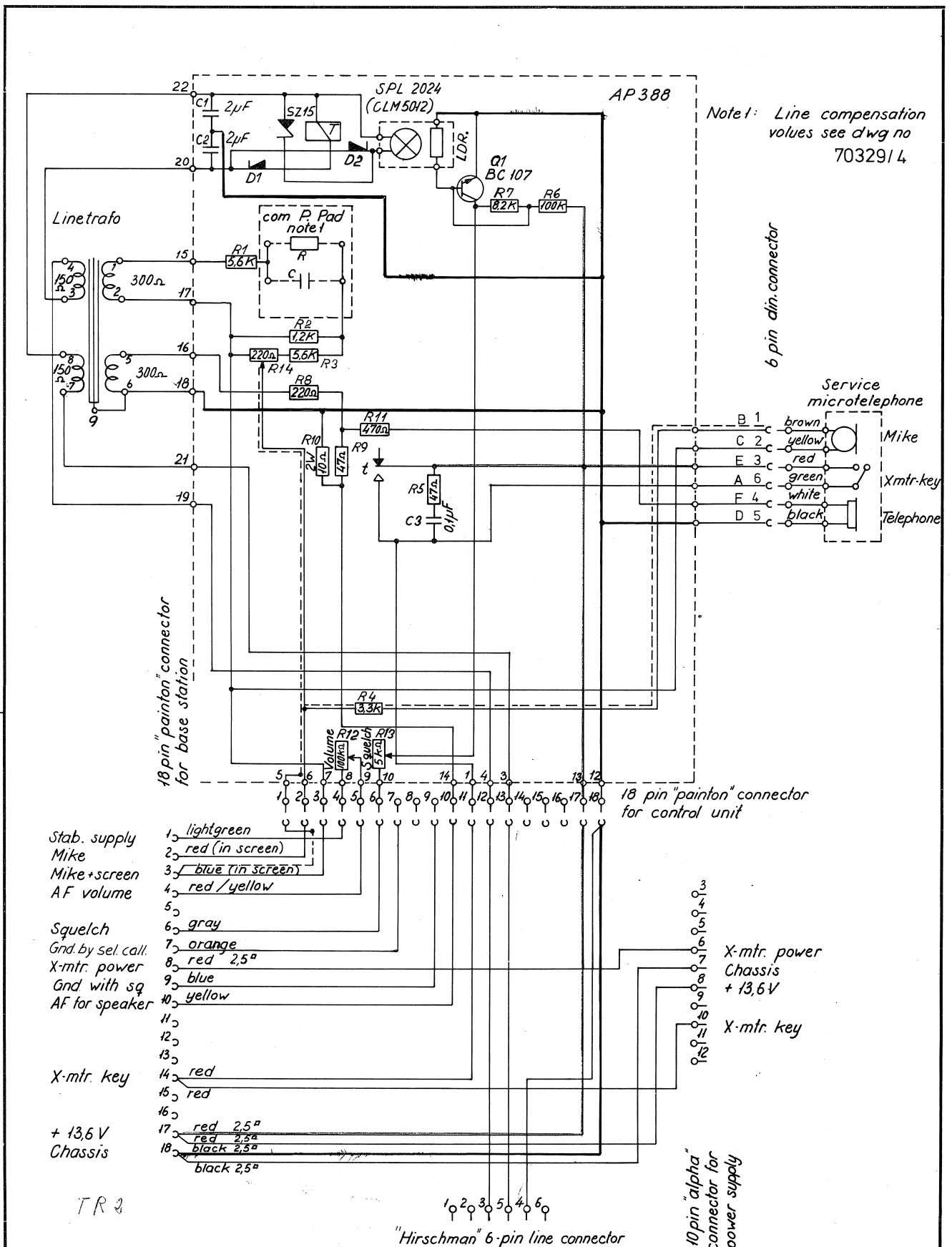
Rettet:

Tegn.:
EB

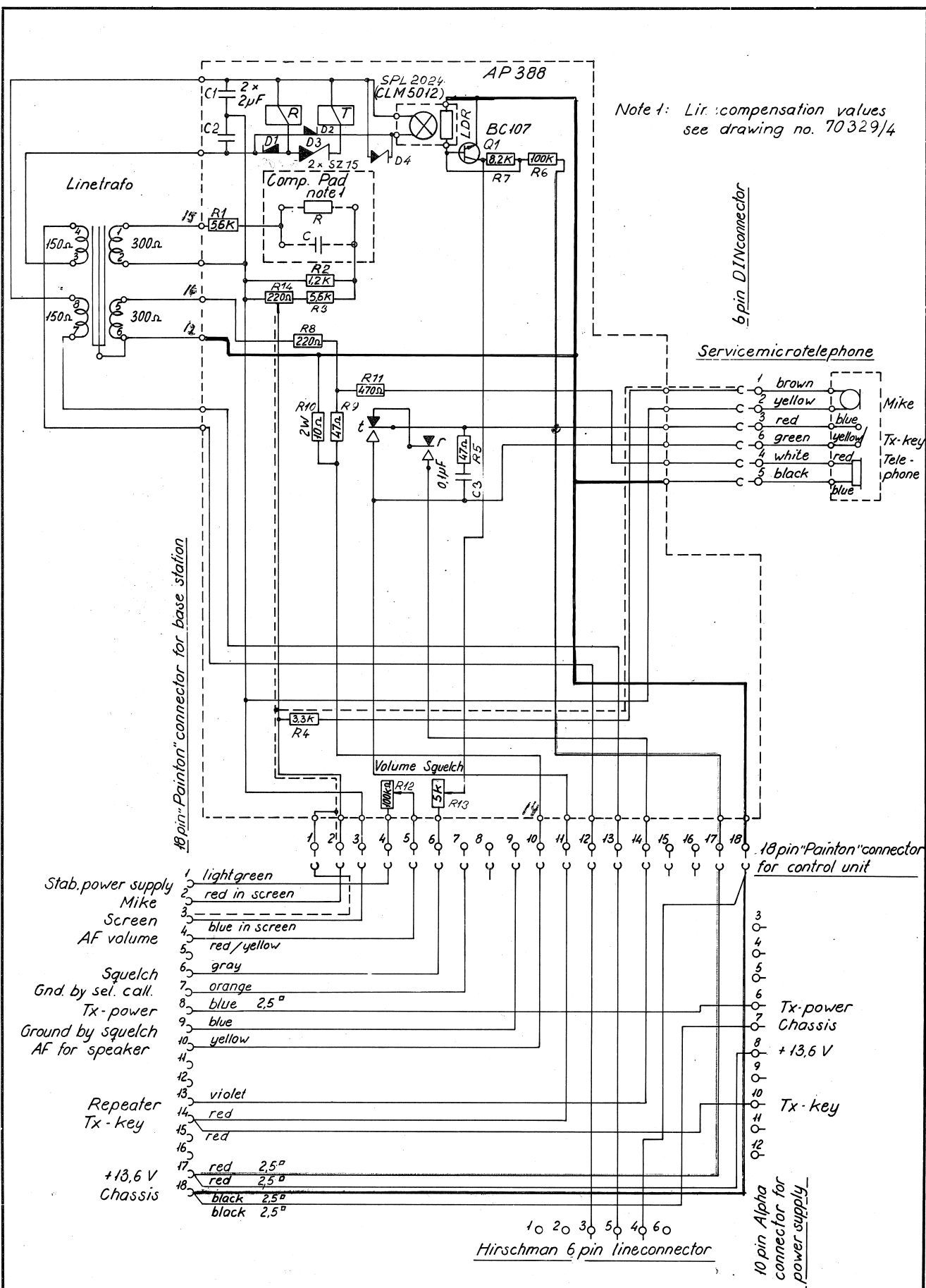
Kontr.:

Stykl. nr.:

70 213/4



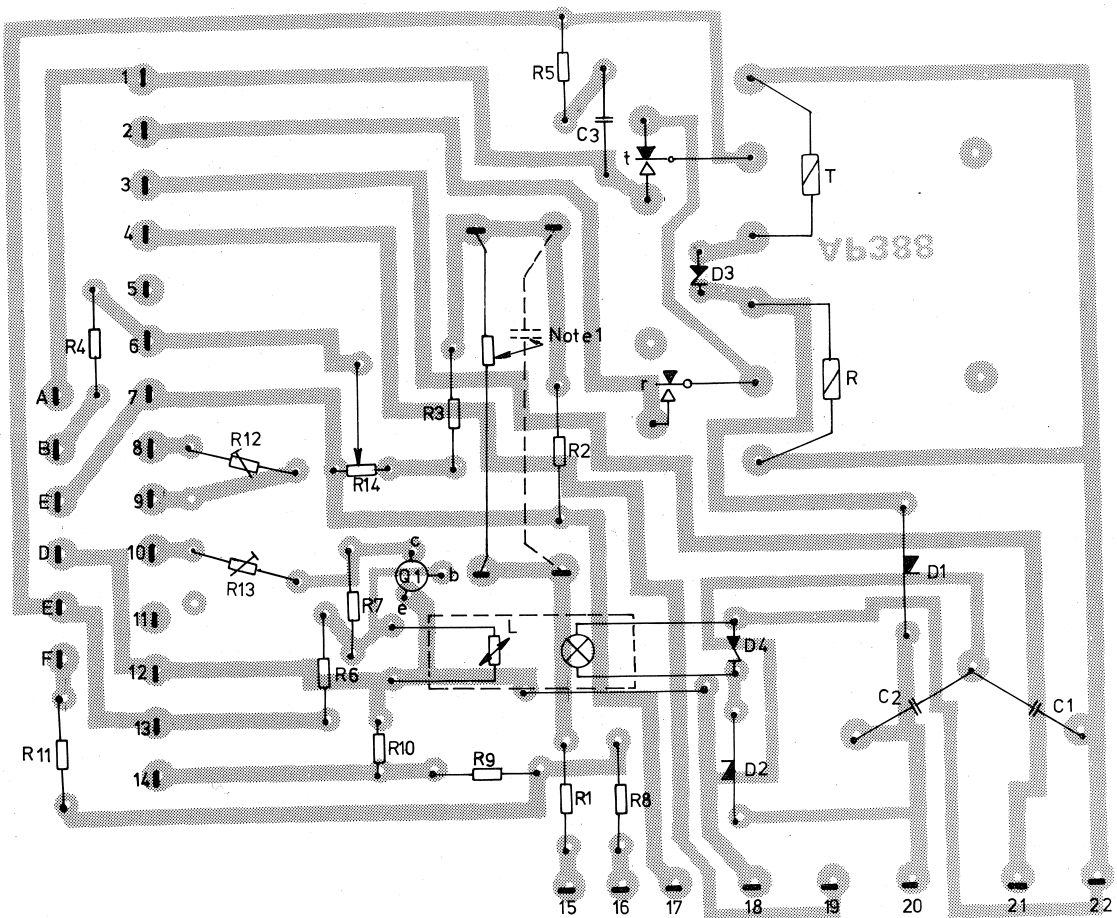
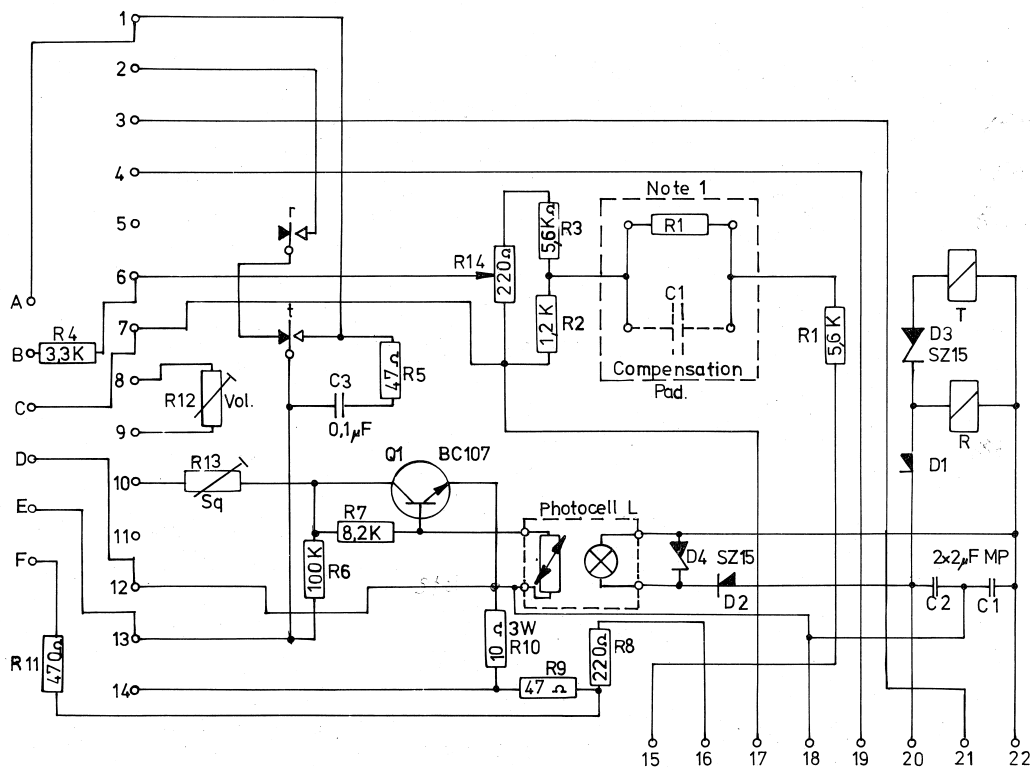
Rettet:	Art: CU1	Tegn.: U.K.	Kontr.: E.F. 11-10-70
	Control unit - for simplex	Stykl. nr.:	
	AP-RADIOTELEFON	Tegn. nr.:	70277/4



Rettet:	Control Unit for simplex Fixed station with repeater	Art: CU2	Tegn.: 16-9-70 U.H.	Kontr.: E.F. 20-9-70
			Stykl. nr.	
			Tegn. nr.:	
				70279/4

AP-RADIOTELEFON

Note 1: Line compensation values
see dwg. 70329/4



Rettet:

CONTROL UNIT PRINT BOARD AP 388.

AP388C er identisk diagrammening men
printet er udgivet under et andet navn.

AP-RADIOTELEFON

Tegn.: 23.10.70 Kontr.: 23.10.70
BEP EF

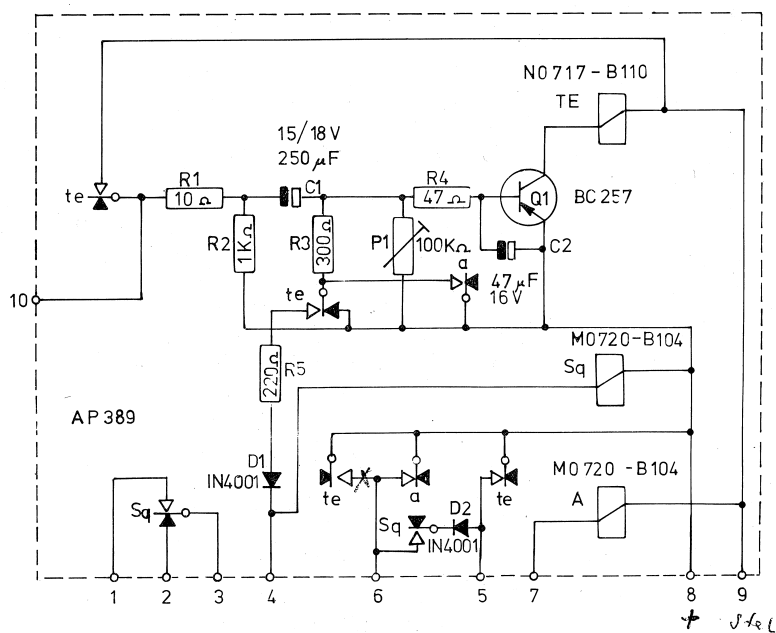
Stykl. nr.: 70368/4

Tegn. nr.:

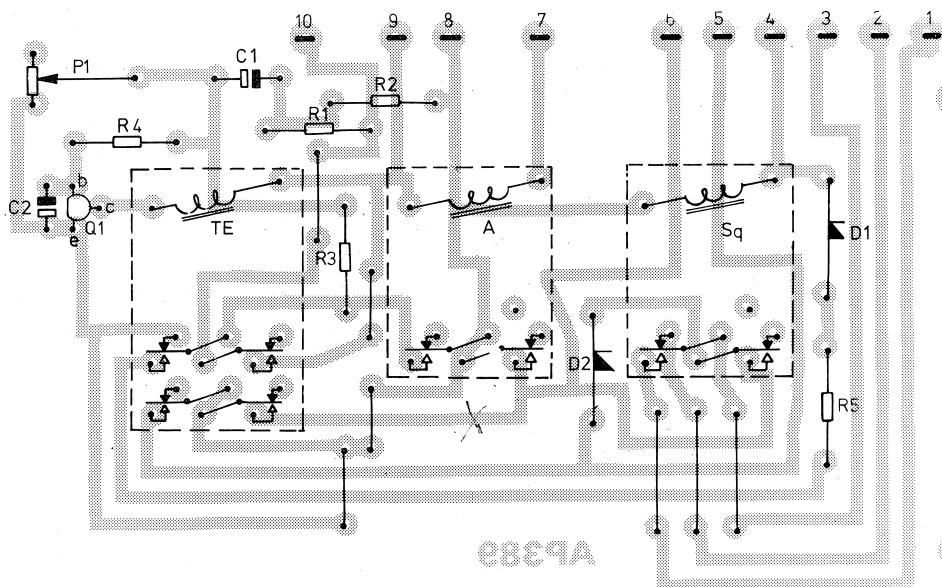
70367/4

AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		5,6 Kohm $\frac{1}{4}$ W			
R2		1,2 Kohm "			
R3		5,6 Kohm "			
R4		3,3 Kohm "			
R5		47 ohm "			
R6		100 Kohm "			
R7		8,2 Kohm "			
R8		220 ohm "			
R9		47 ohm "			
R10		10 ohm $\frac{3}{4}$ W			
R11		470 ohm $\frac{1}{4}$ W			
R12		100 Kohm pot			
R13		5 Kohm "			
R14		220 ohm "			
C1		2,2 mF/250v MP			
C2		2,2 mF/250v MP			
C3		0,1 mF pol.			
D1		1N914			
D2		1N914			
D3		SZ 15 zener			
D4		SZ 15 zener			
Q1		Bc 107 b			
Rel					
-R		Line relay 5 Kohm			
Rel					
-T		Line relay 5 Kohm			
Rel					
-L		Light relay			
Control Unit Print Board			Rettet:		Tegn.: EB
Tilhører tegn. nr.: 70367/4 AP 388					Kontr.: 70368/4



X Print for a¹ afbryde
bænkstregning, når der ikke
er afbrydningsignal



Rettet:

TIME DELAY UNIT FOR TONE CONTROLLED
REPEATER. PRINT BOARD AP 389.

AP-RADIOTELEFON

Tegn.: 14.10.70
BEP

Kontr.: 14.10.70
EF

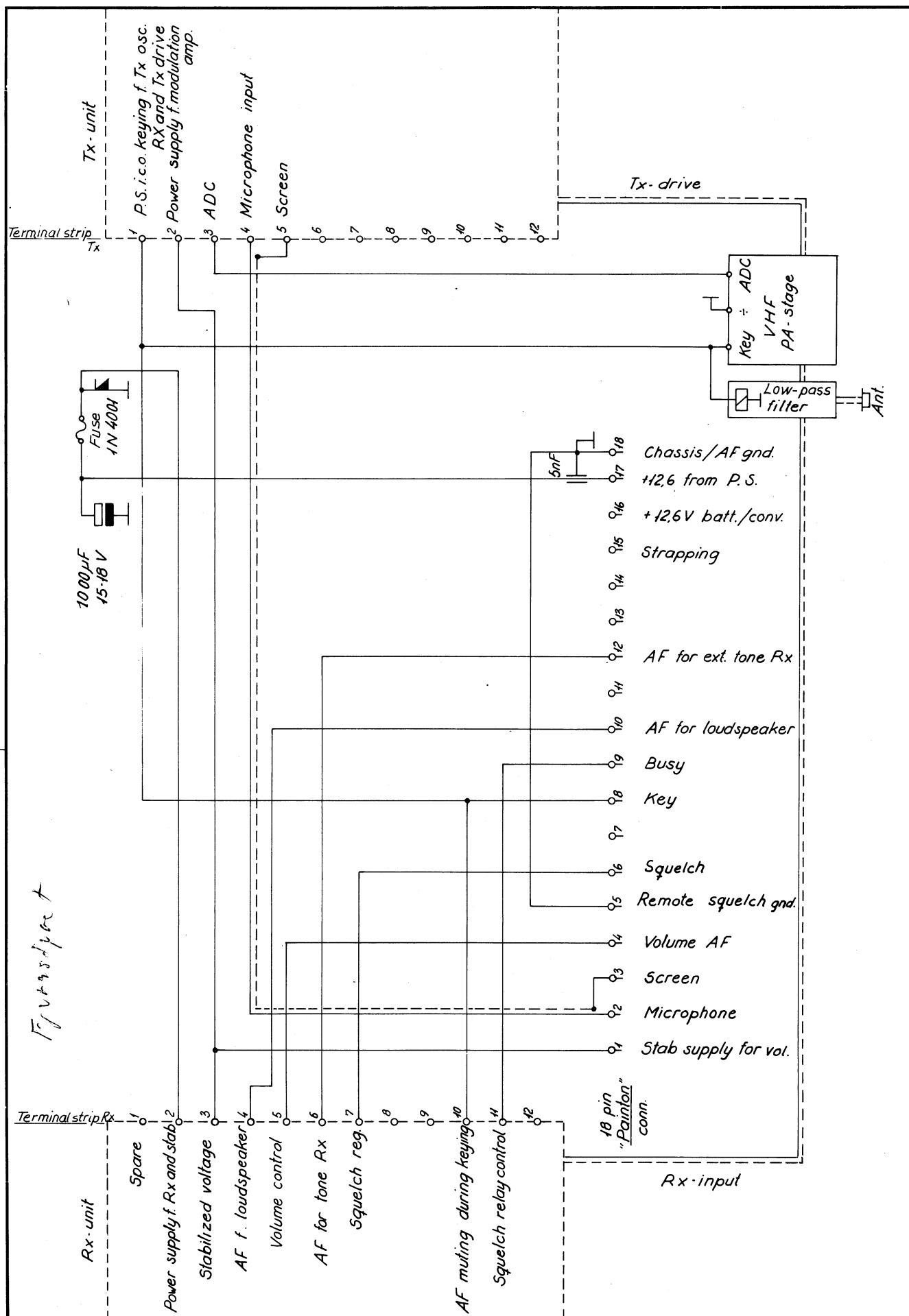
Stykl. nr.: 70359/4

Tegn. nr.:

70358/4

AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		10 Ohm $\frac{1}{4}$ Watt			
R2		1 Kohm " "			
R3		300 Ohm " "			
R4		47 Ohm " "			
R5		220 Ohm " "			
C1		250 uF 15/18V ell.			
C2		47 uF 16V Tantal			
P1		100 Kohm trim.pot.			
D1		Motorola 1N 4001			
Re lay					
TE		Siemens N0717-B110			
Sq		Siemens M0720-B104			
A		Siemens M0720-B104			
Time delay unit for tone contr. repeater Print Board AP389 Tilhører tegn. nr.: 70358/4			Rettet:		<div>Tegn.: EF</div> <div>Kontr.: Stykl. nr.: 70359/4</div>



Rettet:

AP 700
Basestation, simplex

AP-RADIOTELEFON

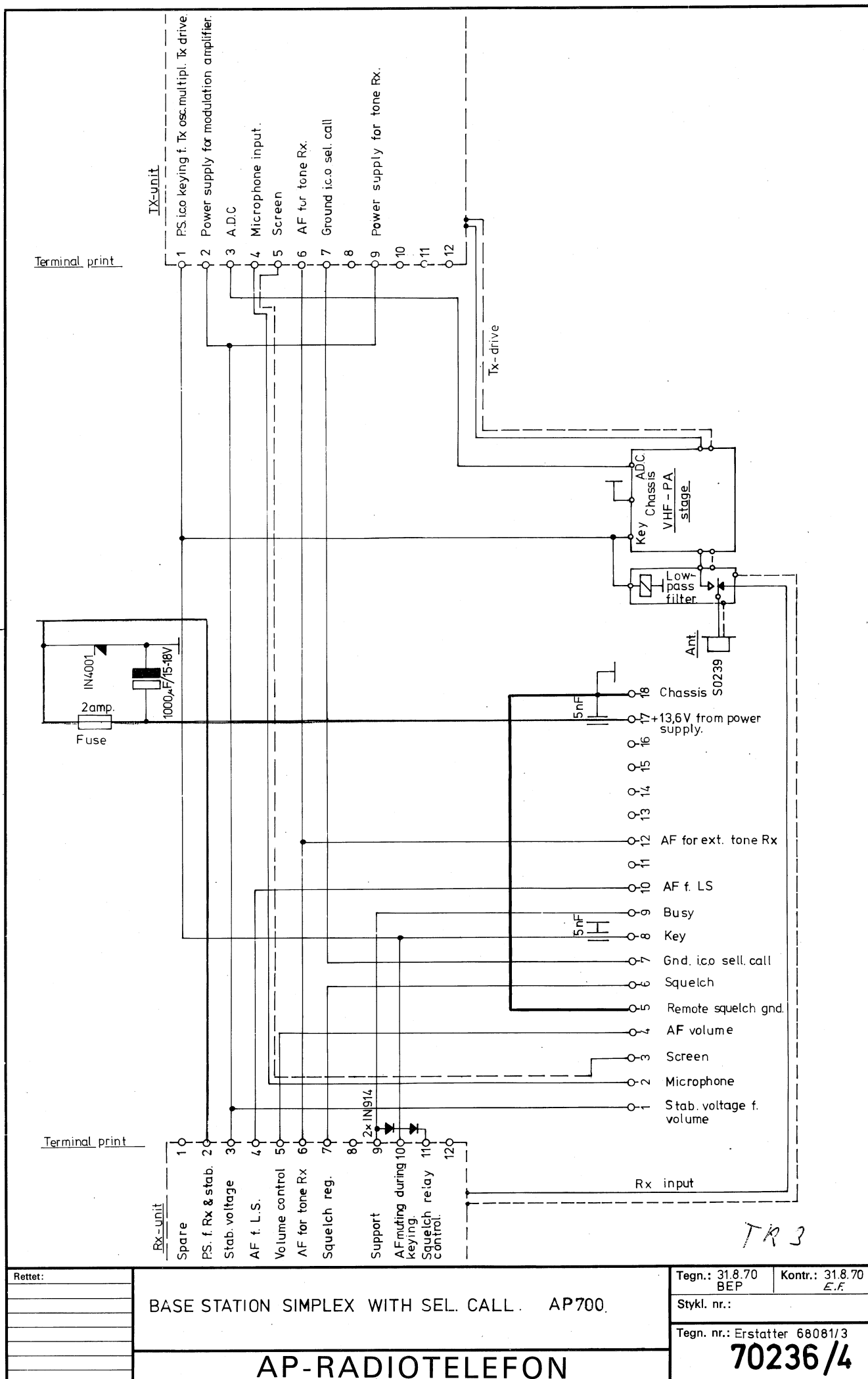
Tegn.: U.K.

Kontr.: E.F.
2-9-70

Stykl. nr.:

Tegn. nr.: Erstatte 68071/3

70244/4



Rettet:

BASE STATION SIMPLEX WITH SEL. CALL. AP700.

AP-RADIOTELEFON

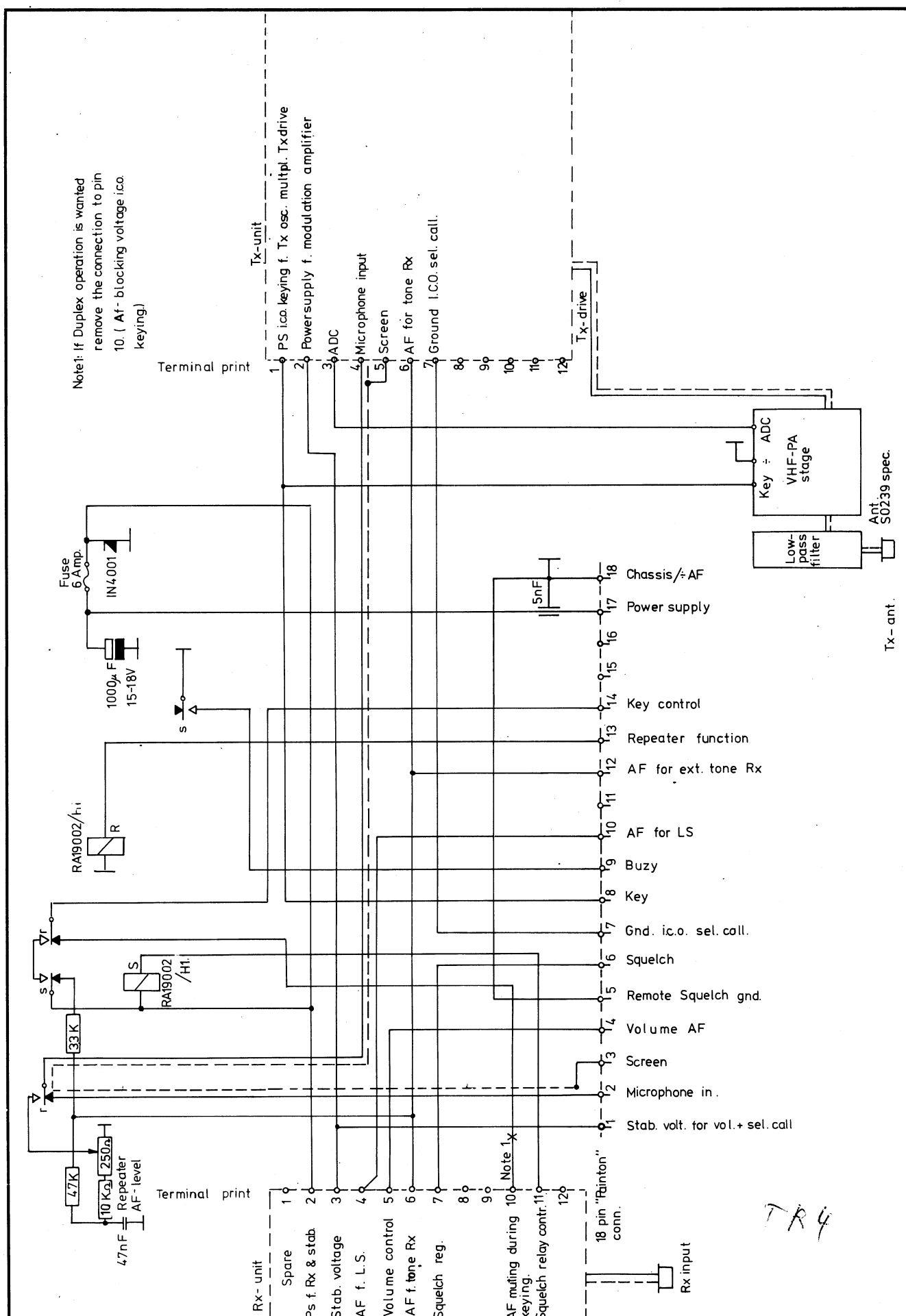
Tegn.: 31.8.70
BEP

Kontr.: 31.8.70
E.F.

Stykl. nr.:

Tegn. nr.: Erstatte 68081/3

70236/4



Rettet:

BASESTATION WITH REPEATER, SEL. CALL AND DUPLEX
OPERATION. AP700.

AP-RADIOTELEFON

Tegn.: 10.11.70
BEP

Kontr.: 10.11.70
EF

Stykl. nr.:

Tegn. nr.:

70415/4

AP-RADIOTELEFON

Nr.	Kode	Data	Nr.	Kode	Data
R1		1 ohm 3 W			
R2		20 ohm "			
R3		15 ohm 15 W			
C1		5000 mF/15-18v			
C2		5000 mF/15-18v			
C3		5000 mF/15-18v			
C4		5000 mF/15-18v			
S1		0,4 ohm choke			
D1		BY 21/100 R			
D2		BY 21/100 R			
D3		BY 21/100 N			
D4		BY 21/100 N			
F1		Aut. Fuse ETA			
Rel					
-T		V23006-A0008-A192			
L1		24v/3W lamp			
T1		EI 120/20			
		1172 trafo			
Power Supply for Base Station			Rettet:		Tegn.: EB
PS1 AP 700					Kontr.:
Tilhører tegn. nr.: 70240/4					Stykl. nr.: 70245/4