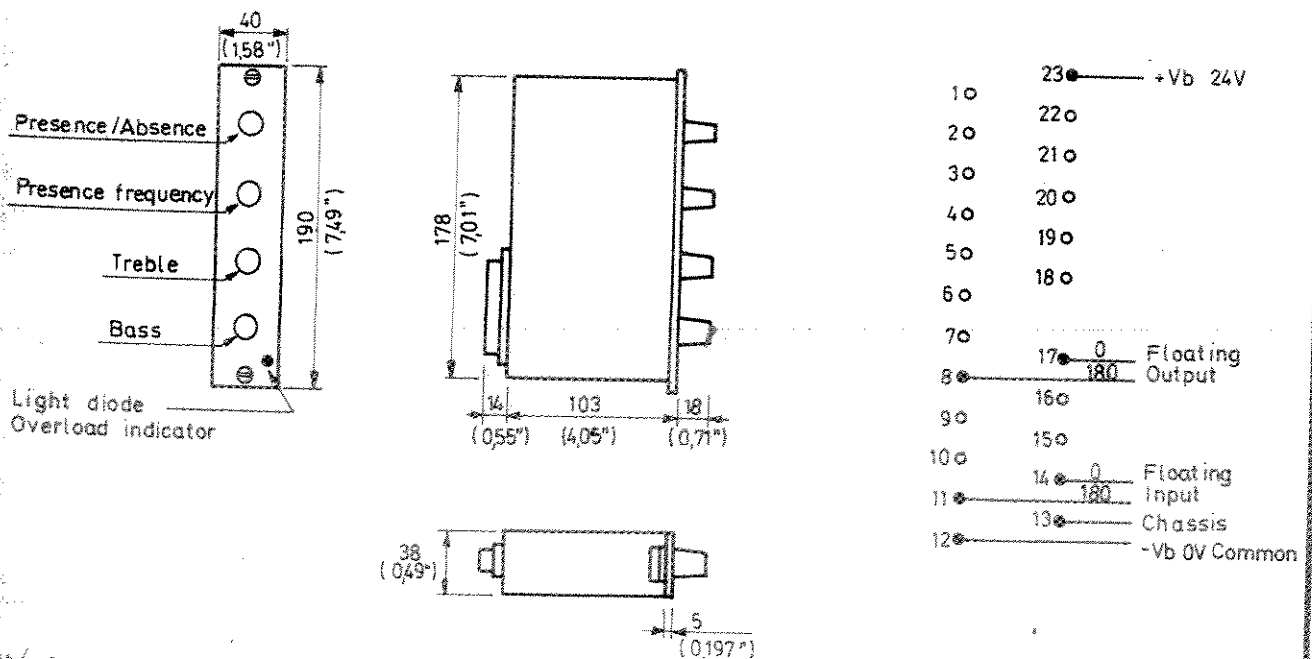


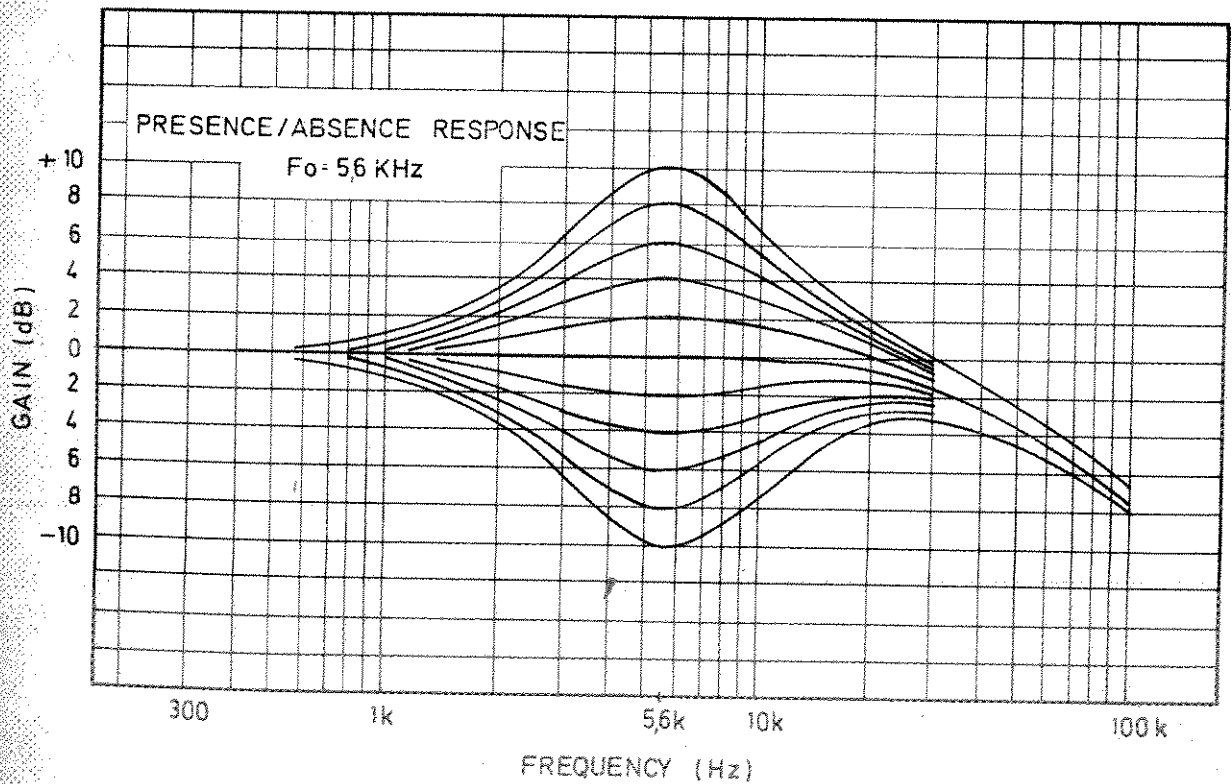
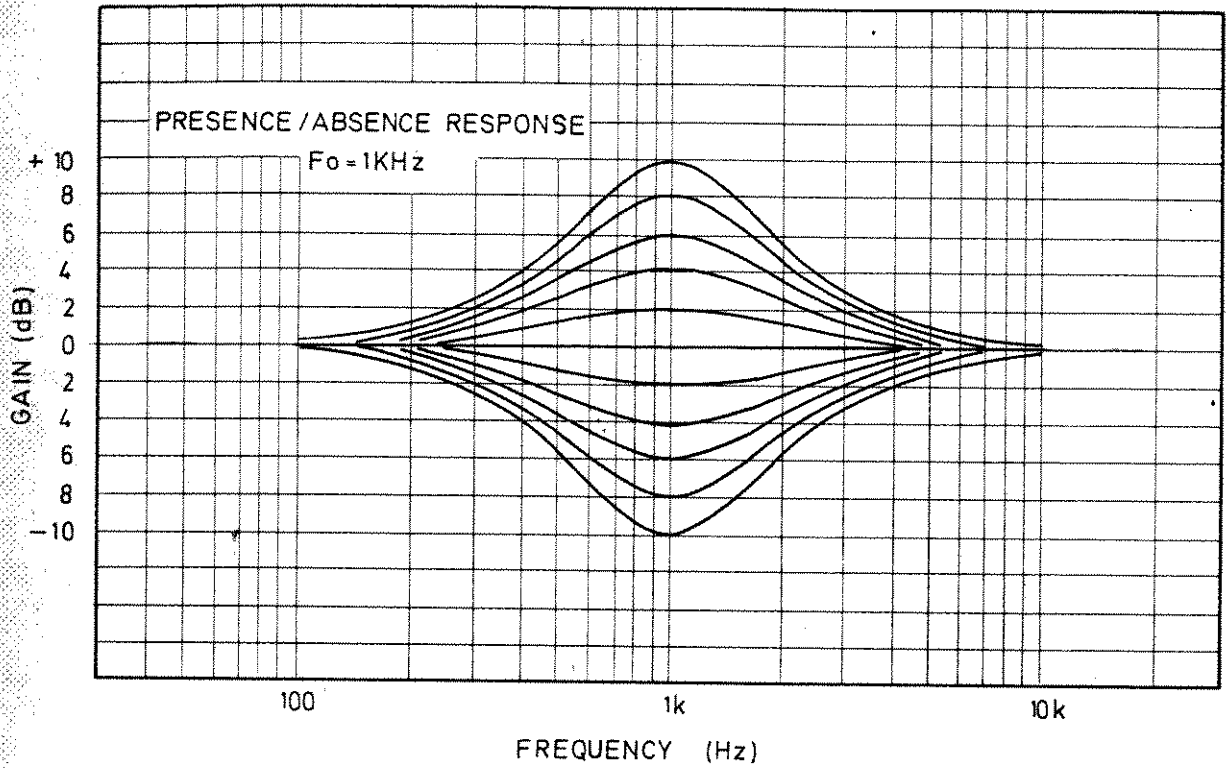
FILTER UNIT 182-100

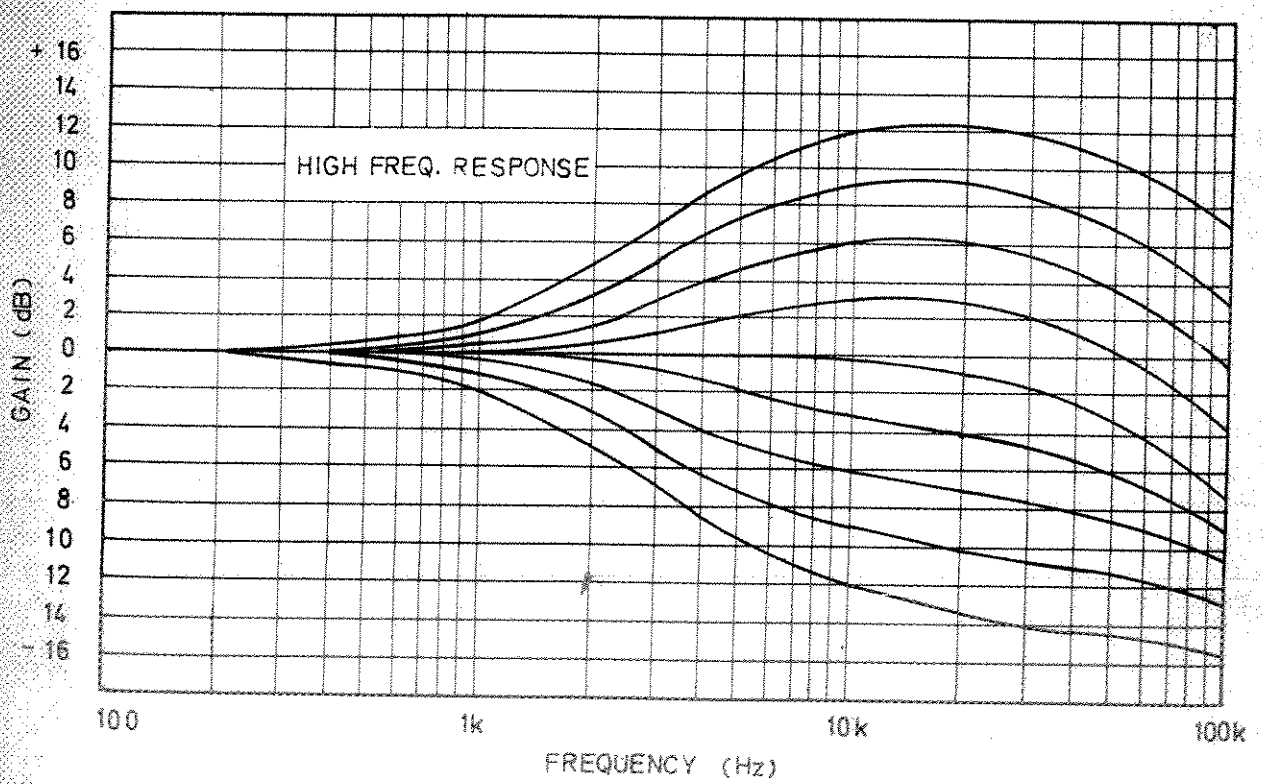
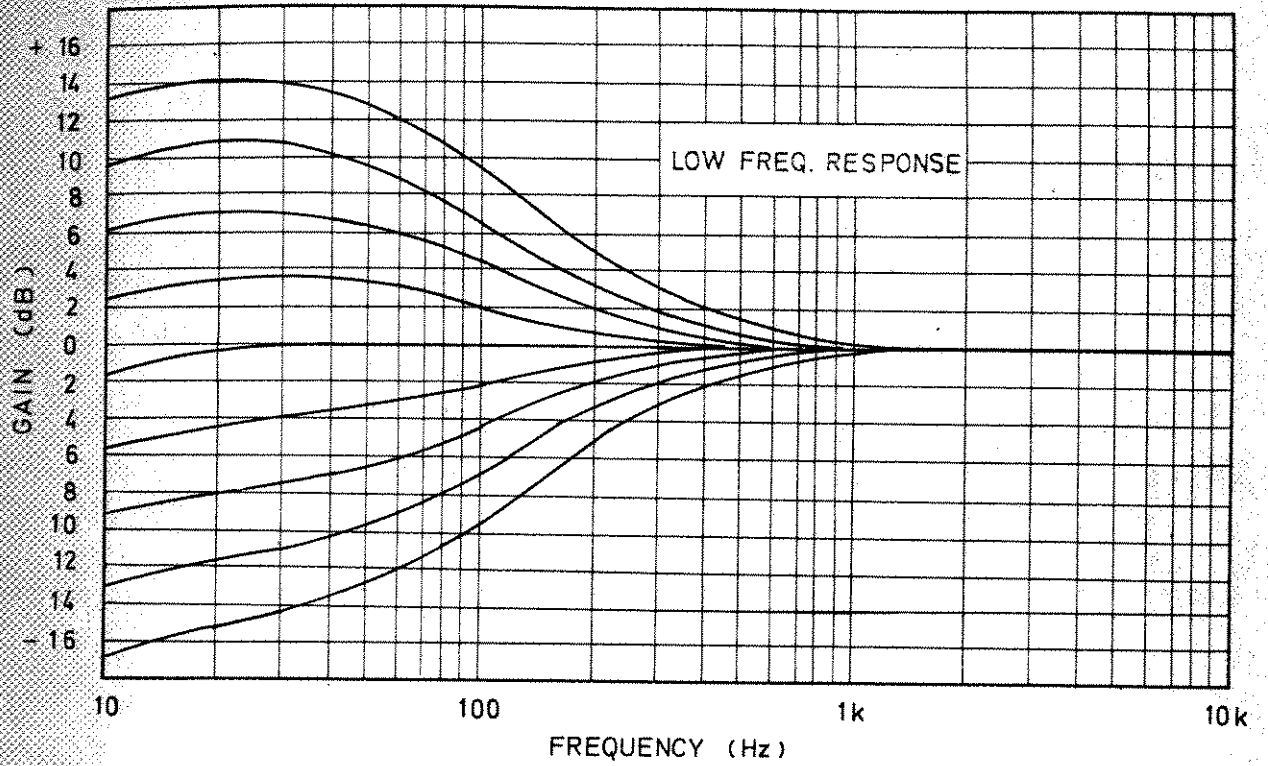
CONTENTS:	Draw. No.:
Technical Specifications	182-1011-A-4
Response Curves	182-1012-A-4
Terminals & Interconnections	182-1002-A-4
Diagram Amplifier	182-1030-A-3
Component Layout	182-1041-A-3
Electrical Partslist	182-1031-A-4
Diagram Switch Unit 182-A1	182-A130-A-4
Component Layout	182-A141-A-4
Partslist	182-A131-A-4
Diagram Switch Unit 182-A2	182-A230-A-4
Component Layout	182-A241-A-4
Partslist	182-A231-A-4
Diagram Switch Unit 182-A3	182-A330-A-4
Component Layout	182-A341-A-4
Partslist	182-A331-A-4
Diagram Switch Unit 182-A4	182-A430-A-4
Component Layout	182-A441-A-4
Partslist	182-A431-A-4

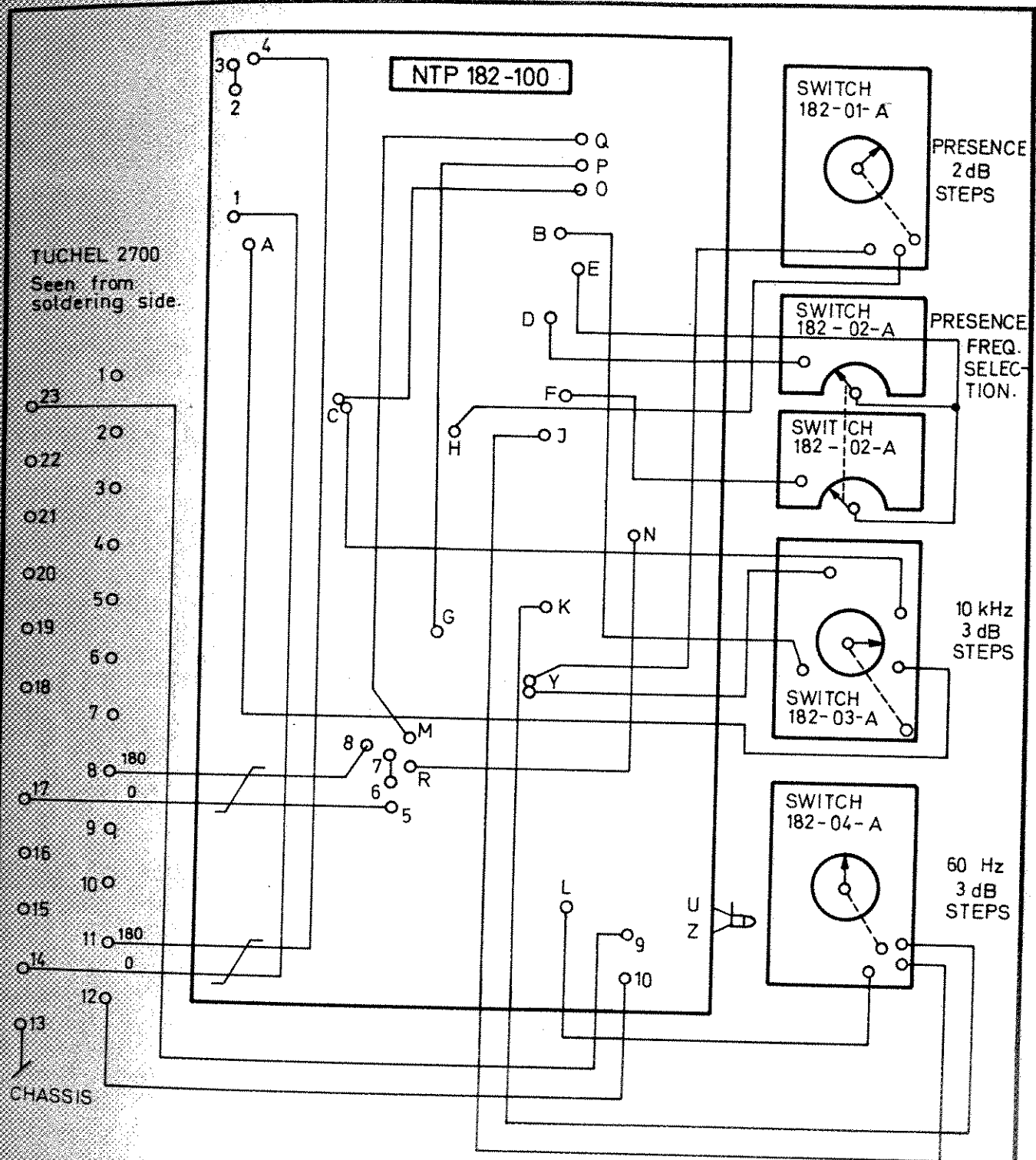
Supply Voltage	: 24 V dc \pm 10% - common
Maximum Ripple Voltage	: 0.1 V pp
Current Consumption (no signal)	: 55 mA
Current Consumption ($U_{out}=+21$ dBu)	: 145 mA
Temperature Range	: -20 to +60°C (-4 to +140°F)
Presence/Absence Frequencies	: 0, 7-1, 0-1, 4-2, 0-2, 8-4, 0-5, 6 kHz
Boost/Cut	: \pm 10 dB in 2 dB steps
High Frequency Filter	: \pm 12 dB in 3 dB steps at 10 kHz
Low Frequency Filter	: \pm 12 dB in 3 dB steps at 60 Hz
Input Overload Level	: +21 dBu (note 1)
Input Impedance (20 Hz - 20 kHz)	: 22 Kohms \pm 15% Balanced Floating
Output Overload Level	: +21 dBu ($R_L=600$ ohms)(note 1)
Output Impedance	: 40 ohms Balanced Floating
Minimum Load Impedance	: 200 ohms
Gain (flat response)	: 0 dB \pm 0.5 dB
Distortion 40 Hz to 200 Hz	: less than 0.5%
Distortion 200 Hz to 20 kHz	: less than 0.2%
Noise referred to input	: -102 dBu A-curve
Connector	: Tuchel T 2700
Standard Colour	: Dull Black
Mechanical Outline	: Front 40 x 190 mm Depth 103 mm (1.58x7.5") (4.05")

Note 1: The overload indicator is activated at input or output levels of approx. +20dBu. See below.



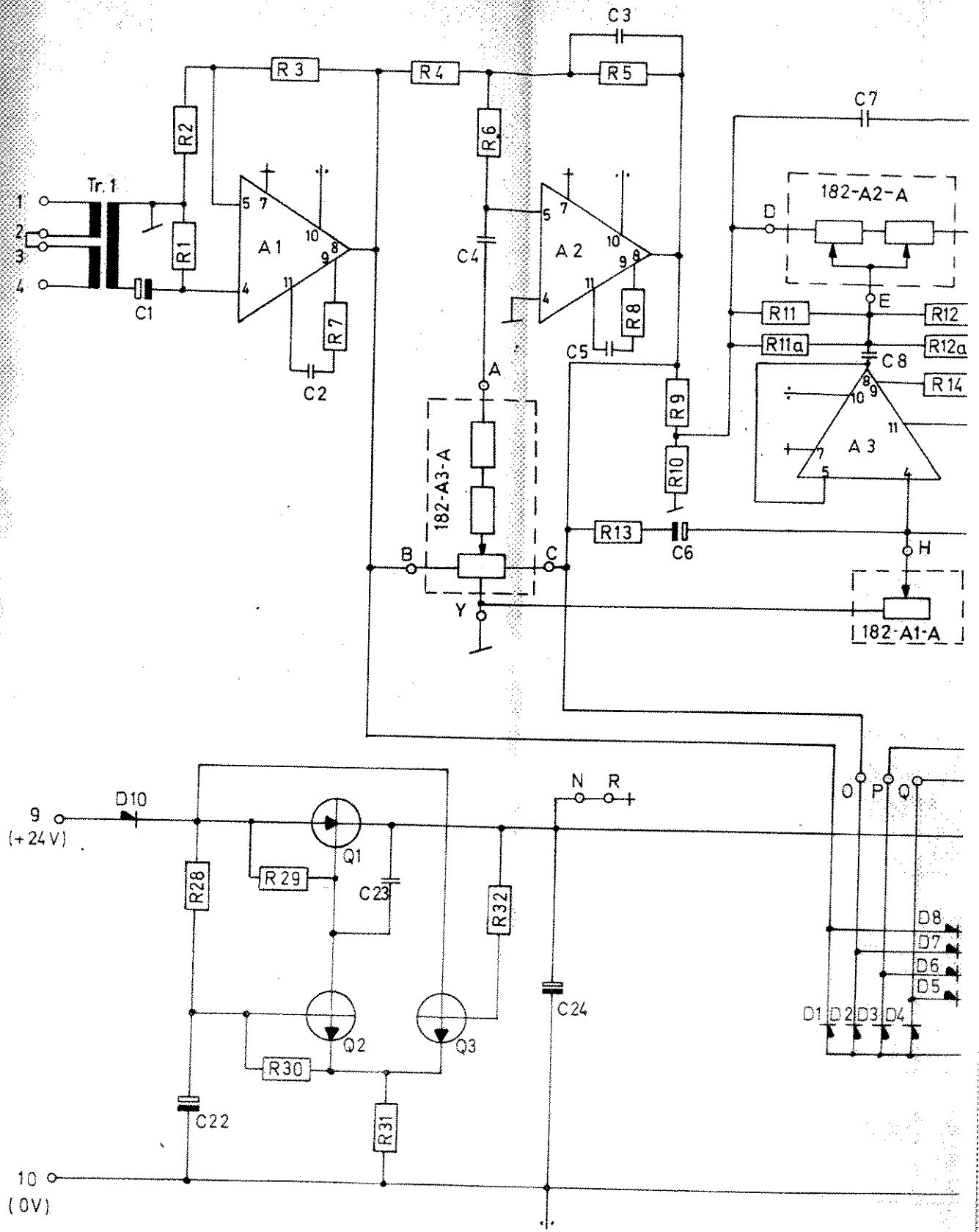


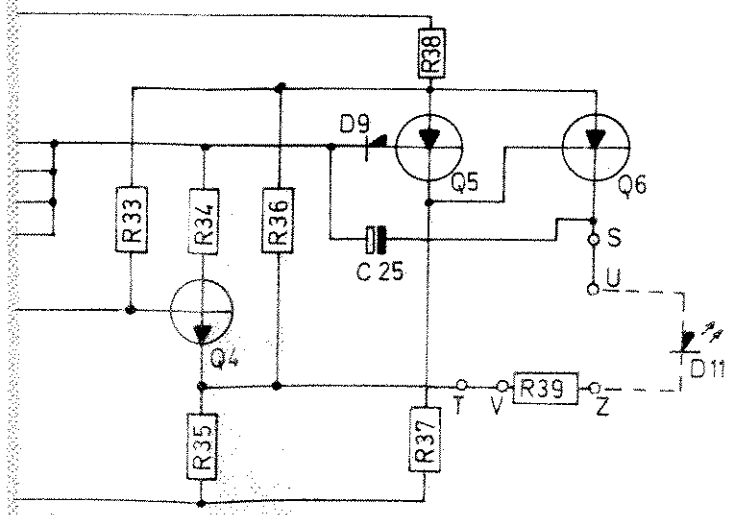
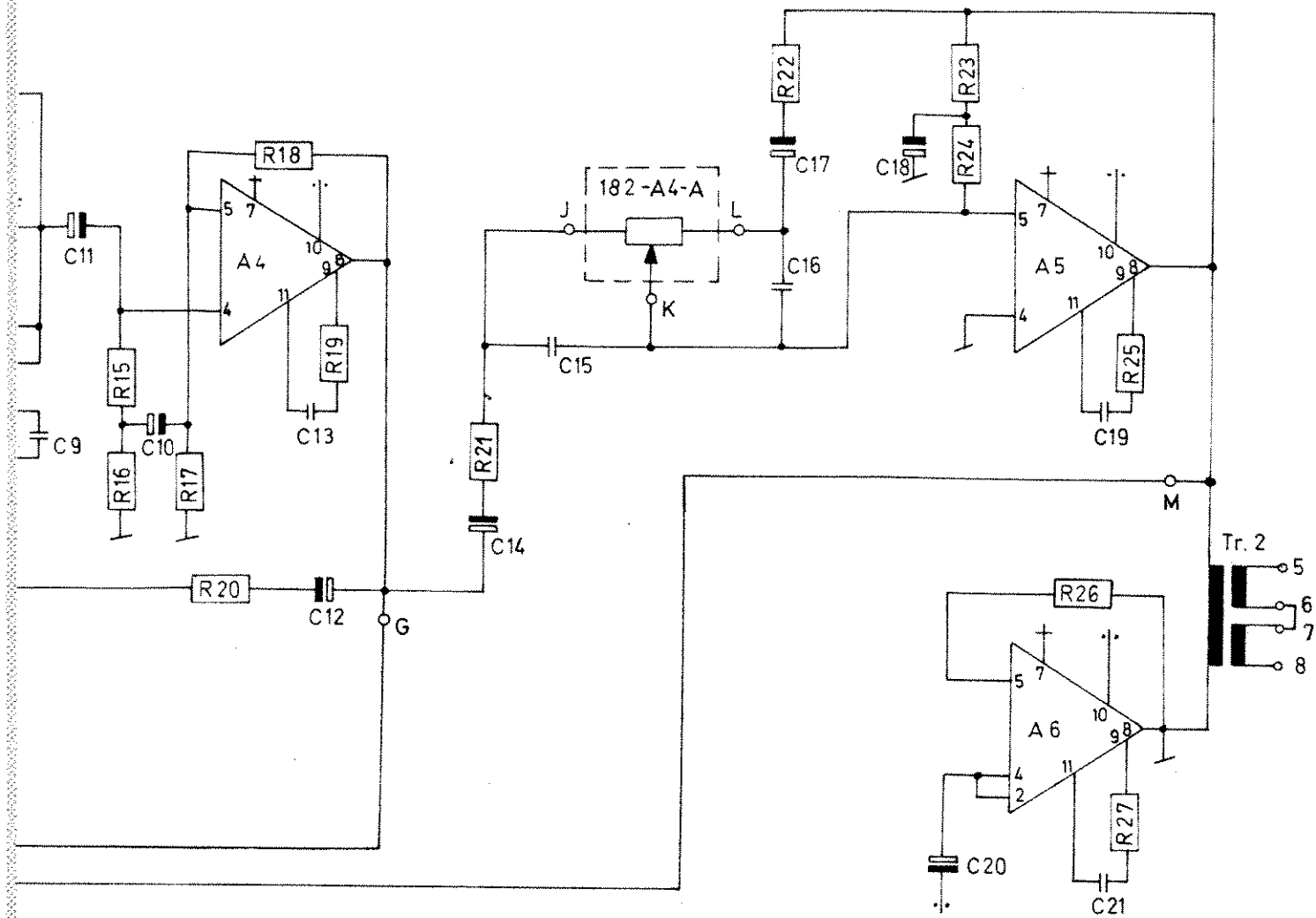




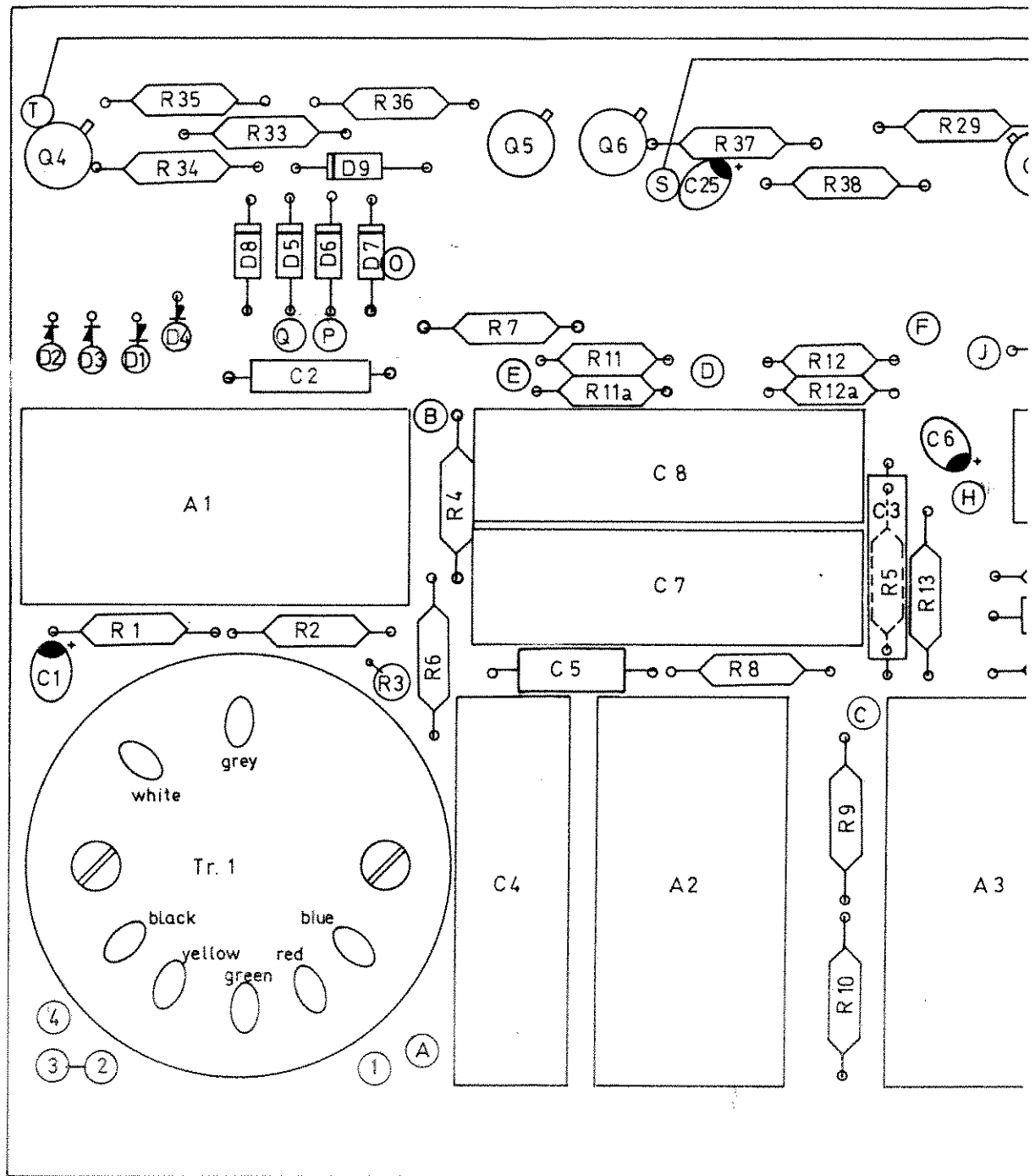
- Terminal 23 : $+V_b$ 24V
- " 11 & 14 : Floating Input
- " 8 & 17 : Floating Output
- " 12 : $-V_b$ 0V Common
- " 13 : Connected to chassis

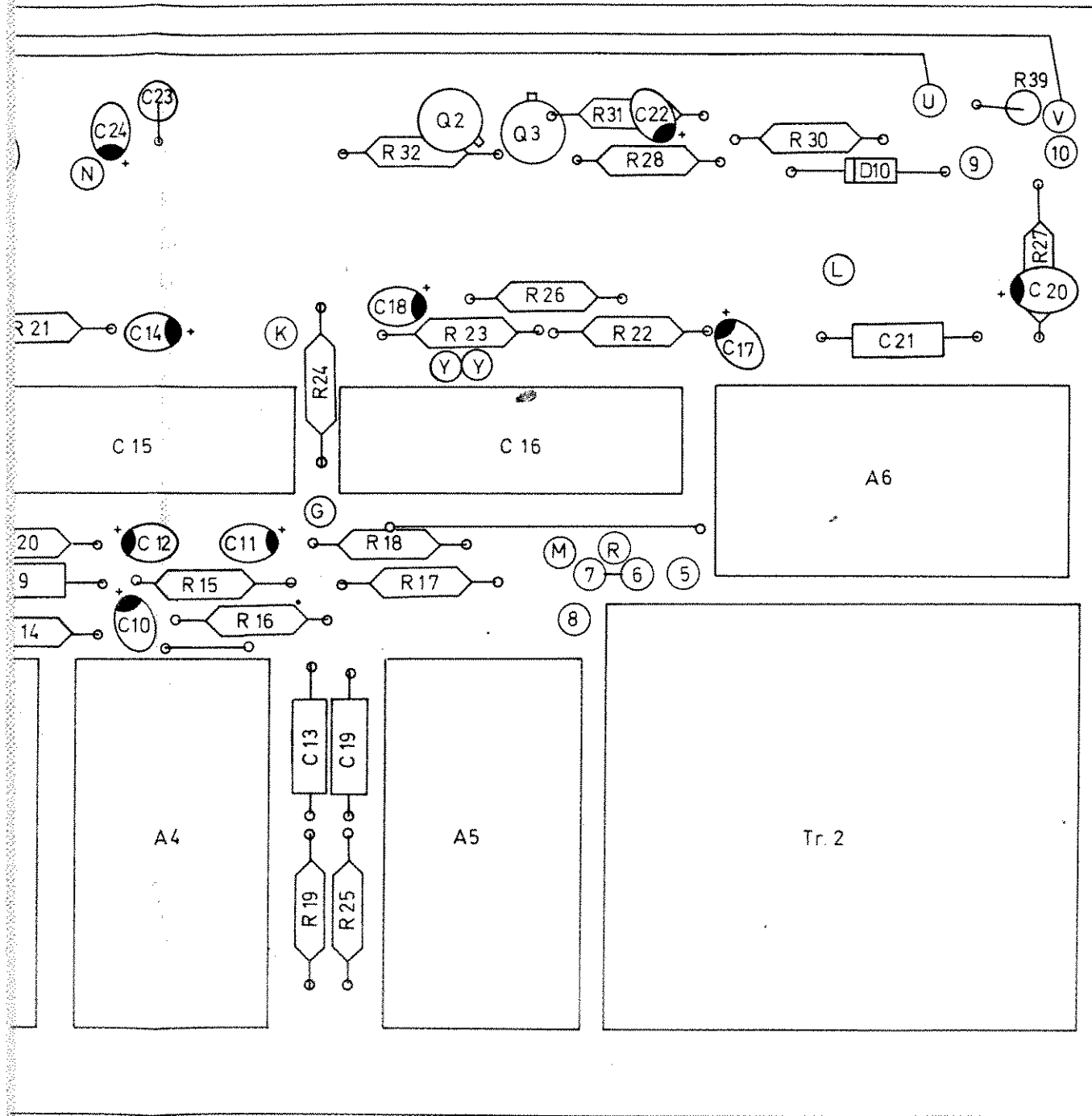
Målestok		INGENIØRFIRMA N. TØNNES PEDERSEN A/s	Tegn.	25-9-70 IW
Tolerance	+ mm ± 0	Filter Unit 182-100	Godk.	
Materiale			TEGNING NR.	
Behandl.		Terminals & Interconnections		
Det af				182-1002-A-4
Ansvar				





Målestok		INGENIØRFIRMA N. TØNNES PEDERSEN 1/6	Tegn. 30/6-70 G.J.
Tolerance	+ mm ± 0	FILTER UNIT 182-100	Godk.
Materiale		DIAGRAM	TEGNING NR.
Behandl.			182-1030-A-3
Del af			
Antal			





Målestok	2:1	INGENIØRFIRMA N. TØNNES PEDERSEN A/S	Tegn.	24-9-70. IW
Tolerance	+ mm +		Filter Unit 182-100	
Materiale			Godk.	
Behandl.			TEGNING NR.	
Del af		Component Layout	182-1041-A-3	
Antal				

POS.	TEGN. NR.	BETEGNELSE	MATERIALE	ANT.
R1		Resistor 10kΩ 5% 1/8W	Beyschlag	
R2		" 10kΩ " "	"	
R3		" 1kΩ " "	"	
R4		" 1.8kΩ " "	"	
R5		" 1.8kΩ " "	"	
R6		" 100 Ω " "	"	
R7		" 560 Ω " "	"	
R8		" 560 Ω " "	"	
R9		" 100 Ω " "	"	
R10		" 100 Ω " "	"	
R11		" 12kΩ 5% SK2	Resista	
R11a		" 82kΩ " "	"	
R12		" 12kΩ 5% SK2	"	
R12a		" 82kΩ " "	"	
R13		" 1kΩ 5% 1/8W	Beyschlag	
R14		" 560 Ω " "	"	
R15		" 22kΩ " "	"	
R16		" 22kΩ " "	"	
R17		" 220 Ω " "	"	
R18		" 220 Ω " "	"	
R19		" 560 Ω " "	"	
R20		" 1kΩ " "	"	
R21		" 180 Ω " "	"	
R22		" 180 Ω " "	"	
R23		" 4.7kΩ " "	"	
R24		" 4.7kΩ " "	"	
R25		" 220 Ω " "	"	
R26		" 1kΩ " "	"	
R27		" 100 Ω " "	"	
R28		" 22kΩ " "	"	
R29		" 10kΩ " "	"	
R30		" 18kΩ " "	"	
R31		" 6.8kΩ " "	"	
R32		" 1kΩ " "	"	
R33		" 10kΩ " "	"	
R34		" 10kΩ " "	"	
R35		" 560 Ω " "	"	
R36		" 5.6kΩ " "	"	
R37		" 10kΩ " "	"	
R38		" 470 Ω " "	"	
R39		" 1.5kΩ " "	"	
C1		Tantal cap. 3.3μF 16V ETP1	ERO	
C2		Styroflex cap. 33 pF B31310 5%	Siemens	
C3		" " 1500 pF	"	
C4		" " 47 nF PFE216	Rifa	
C5		" " 33 pF B31310 5%	Siemens	
C6		Tantal cap. 100μF 3V ETP3	ERO	

SIG/DATO

16.9.70
BEJ/DG

INGENIØRFIRMA N. TØNNES PEDERSEN AS

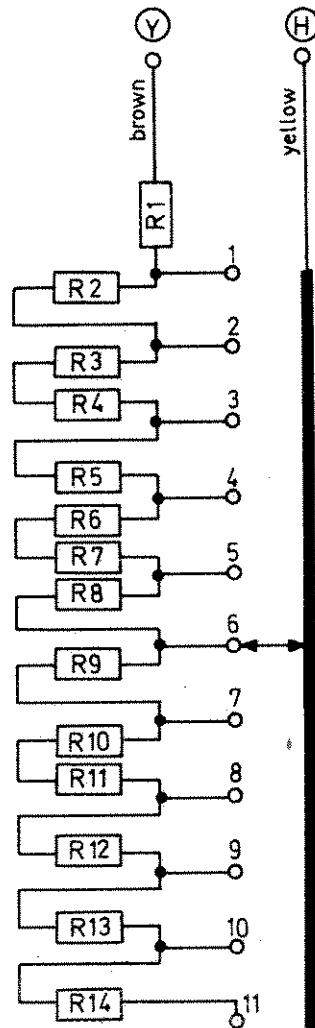
FILTER UNIT 182-100
Electrical Partslist

STYKLISTE

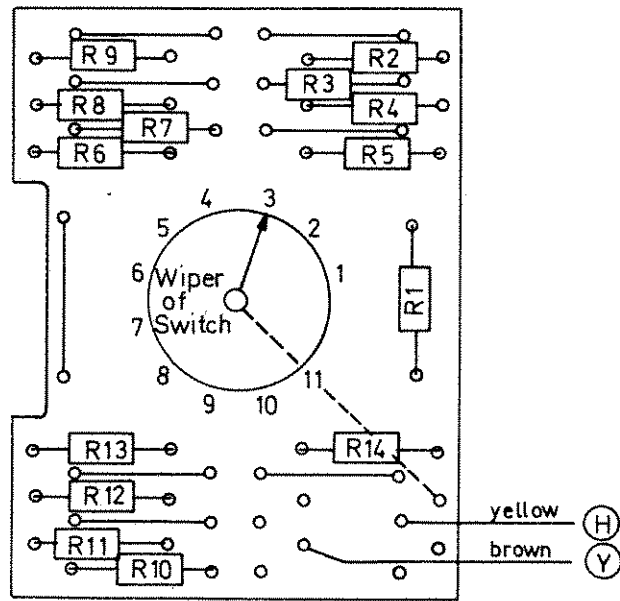
2 Blade - Blad 1

182-1031-A-4

POS.	TEGN. NR.	BETEGNELSE	MATERIALE	ANT.
C7		Styroflex cap. 10nF PFE216 2%	Rifa	
C8		" " " 47nF " "	"	
C9		" " " 33pF B31310 5%	Siemens	
C10		Tantal cap. 100µF 3V ETP3	ERO	
C11		" " " 10µF 16V ETP2	"	
C12		" " " 100µF 3V ETP3	"	
C13		Styroflex cap. 33pF B31310 5%	Siemens	
C14		Tantal cap. 100µF 3V ETP3	ERO	
C15		Styroflex cap. 100nF PFE216 2%	Rifa	
C16		" " " 100nF " "	"	
C17		Tantal cap. 100µF 3V ETP3	ERO	
C18		" " " 100µF " "	"	
C19		Styroflex cap. 47pF B31310 5%	Siemens	
C20		Tantal cap. 22µF 16V ETP3	ERO	
C21		Styroflex cap. 100pF B31310 5%	Siemens	
C22		Tantal cap. 10µF 35V ETP3	ERO	
C23		Styroflex cap. 100pF B31310 5%	Siemens	
C24		Tantal cap. 10µF 35V ETP3	ERO	
C25		" " 0.22µF 35V ETP1	"	
D1- D9		Si-diode 1 N 4148	Texas Instr.	9
D10		" " 10 D 1	J. R.	
Q1		Transistor BC 161-16	Siemens	
Q2		" BC 107 B	"	
Q3		" BC 107 B	"	
Q4		" BC 107 B	"	
Q5		" BC 177 B	"	
Q6		" BC 177 B	"	
A1- A6		Linear Amplifier M 100	NTP	6
Tr1 Tr2		Input transformer MSP no. 13592/2 Output transformer CAKP 13590/1	J. S.	
	182-1040	Printed circuit 182-100	NTP	
SIG./DATO		INGENIØRFIRMA N. TØNNES PEDERSEN A/S		STYKLISTE
15.9.70 HEJ/DG		FILTER UNIT 182-100 Electrical Partslist		2 Blade - Blad 2 182-1031-A-4



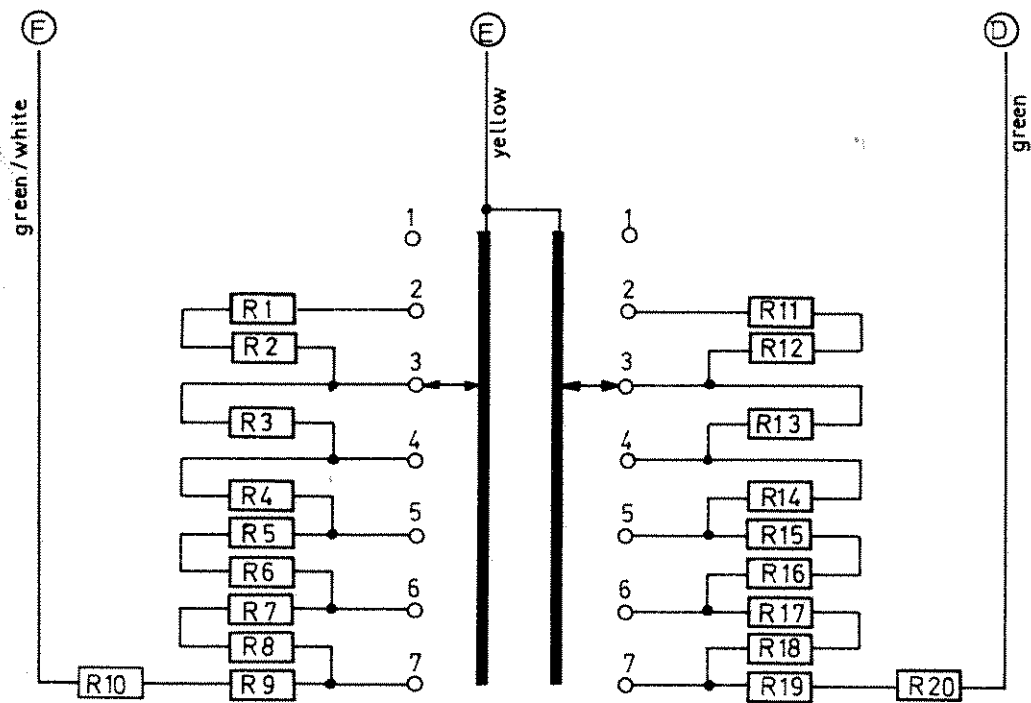
Målestok		INGENIØRFIRMA N. TØNNES PEDERSEN A/s	Tegn.	25-9-70. IW
Tolerance	+ mm + 0	Switch Unit 182 - A1 - A (Part of 182-100)	Godk.	
Materiale			TEGNING NR.	
Behandl.		Function: Presence, 2 dB Steps		
Del af		Diagram	182-A130-A-4	
Antal				



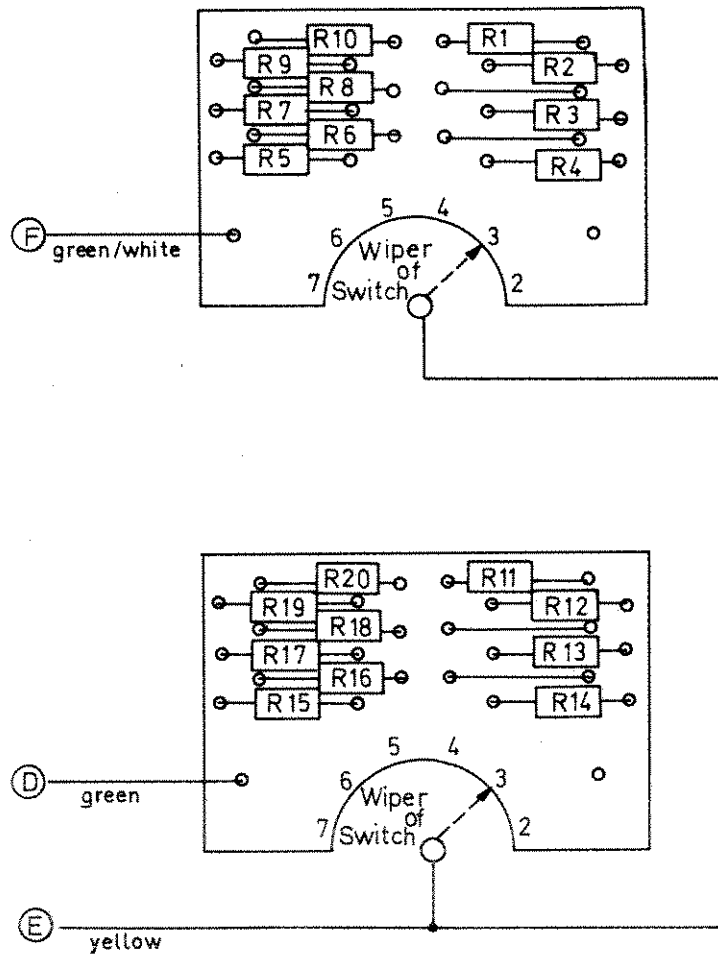
Målestok	2:1	INGENIØRFIRMA N. TØNNES PEDERSEN A/s		Tegn.	25-9-70.1W
Tolerance	+ mm ± 0	Switch Unit 182-A1-A (Part of 182-100)		Godk.	
Materiale		Function: Presence, 2 dB Steps		TEGNING NR.	
Behandl.		Component Layout		182-A141-A-4	
Del af					
Antal					

POS.	TEGN. NR.	BETEGNELSE	MATERIALE	ANT.
R1		Resistor 10 Ω 1/8W 5%	Resista SK2	
R2		" 47 Ω " "	"	
R3		" 27 Ω " "	"	
R4		" 33 Ω " "	"	
R5		" 82 Ω " "	"	
R6		" 100 Ω " "	"	
R7		" 15 Ω " "	"	
R8		" 180 Ω " "	"	
R9		" 270 Ω " "	"	
R10		" 100 Ω " "	"	
R11		" 330 Ω " "	"	
R12		" 820 Ω " "	"	
R13		" 2.2k Ω " "	"	
R14		" 15k Ω " "	"	
	182-9040	Printed circuit board 182-900 Switch: Mx 1/1 x 11 K T = 12	EBE	

SIG. DATO	INGENIØRFIRMA N. TØNNES PEDERSEN AS	STYKLISTE
28.9.70 BM/DG	SWITCH UNIT 182-A1 A Electrical Partlist	1 Blade - Blad 1 182-A131-A-4

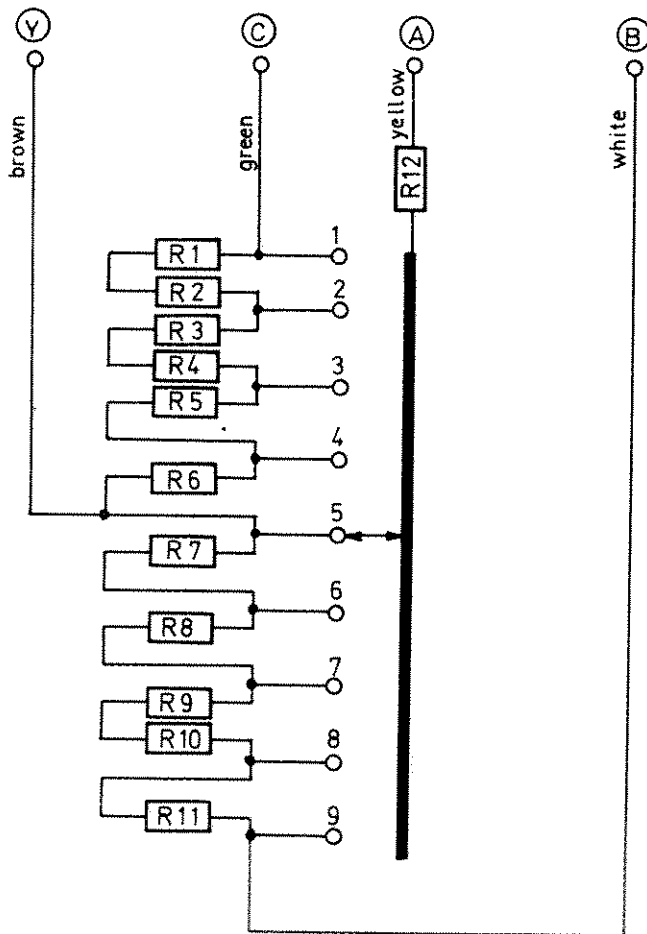


Målestok	INGENIØRFIRMA N. TØNNES PEDERSEN A/s		Tegn.	28-9-70. IW
Tolerance	± mm ± 0	Switch Unit 182-A2-A (Part of 182-100)	Godk.	
Materiale		Function: Presence, Frequency Selection Diagram	TEGNING NR.	
Behandl.			182-A230-A-4	
Del af				
Ansvar				

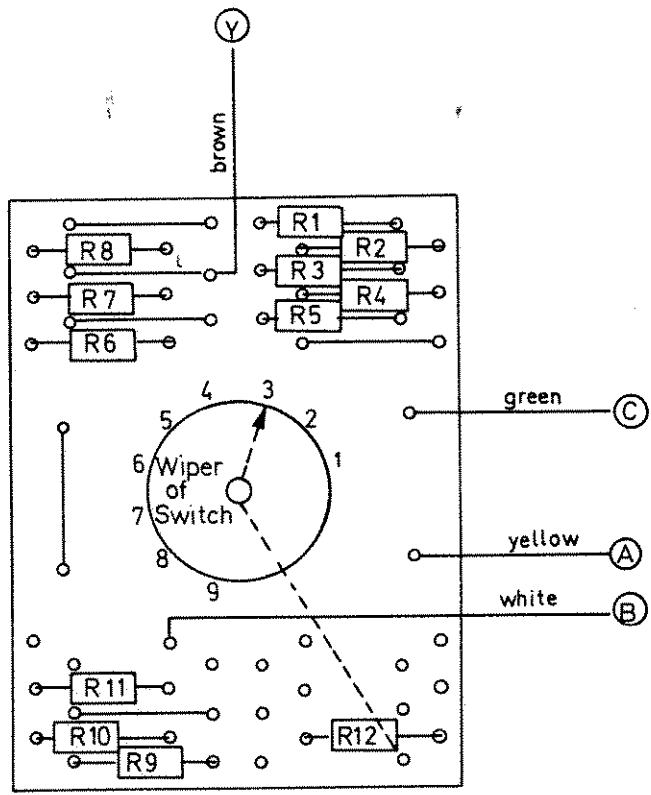


Målestok	2:1	INGENIØRFIRMA N. TØNNES PEDERSEN A/s	Tegn.	28-9-70 IW
Tolerance	± mm ± °	Switch Unit 182-A2-A (Part of 182-100)	Godk.	
Materiale			TEGNING NR.	
Behandl.		Function: Presence, Frequency Selection		
Del af		Component Layout	182-A241-A-4	
Antal				

POS.	TEGN. NR.	BETEGNELSE	MATERIALE	ANT.
R1/ R11		Resistor 3.9kΩ 1/8W 5%	Resista SK2	2
R2/ R12		" 1.0kΩ " "	"	2
R3/ R13		" 4.7kΩ " "	"	2
R4/ R14		" 2.2kΩ " "	"	2
R5/ R15		" 1.2kΩ " "	"	2
R6/ R16		" 68 Ω " "	"	2
R7/ R17		" 680 Ω " "	"	2
R8/ R18		" 39 Ω " "	"	2
R9/ R19		" 1.5kΩ " "	"	2
R10/ R20	182-9040	Printed circuit board 182-900 (divided into halves) Switch: Mx 2/2 x 7 K T = 12	NTP EBE	2
SIG./DATO		INGENIØRFIRMA N. TØNNES PEDERSEN A/S		STYKLISTE
30.9.70 BM/DG		SWITCH UNIT 182-A2-A Electrical Partslist		1. Blade - Blad 1 182-A231-A-4

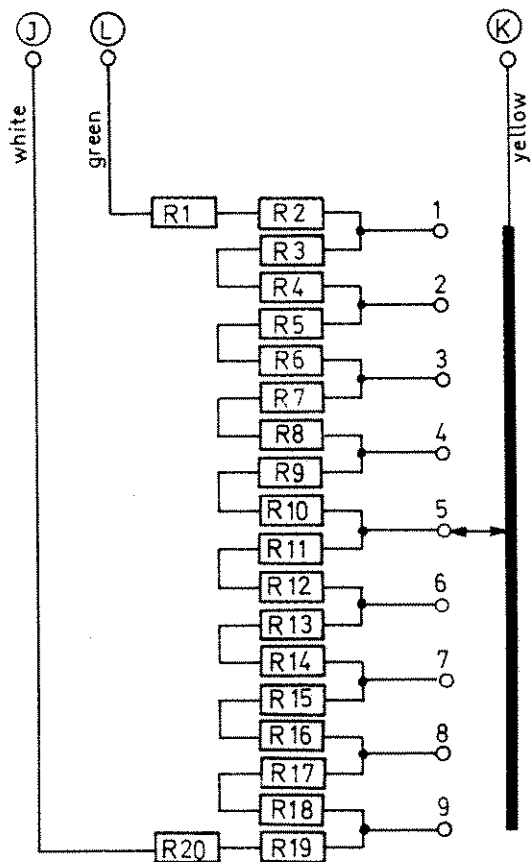


Målestok		INGENIØRFIRMA N. TØNNES PEDERSEN A/s		Tegn.	28-9-70. IW
Tolerance	± mm + 0	Switch Unit 182-A3-A (Part of 182-100)		Godk.	
Materiale		Function: 10 kHz - 3 dB Steps Diagram.		TEGNING NR.	
Behandl.				182-A330-A-4	
Del af					
Antal					

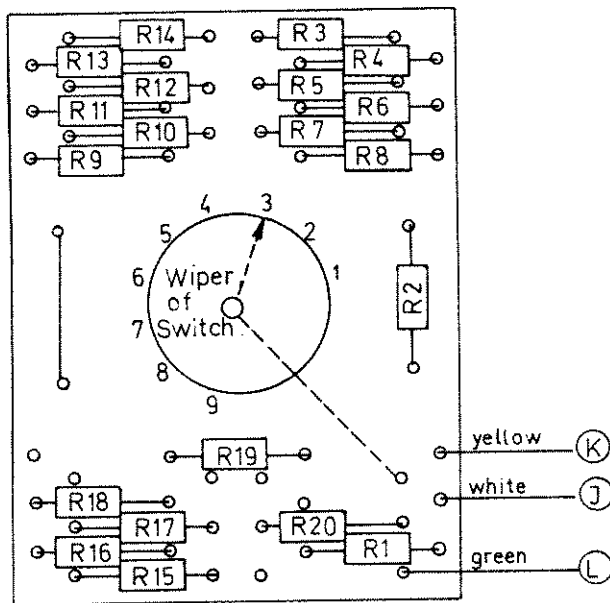


Målestok	2:1	INGENIØRFIRMA N. TØNNES PEDERSEN A/s		Tegn.	28-9-70. IW
Tolerance	+ mm + 0	Switch Unit 182-A3-A (Part of 182-100)		Godk.	
Materiale		Function: 10 kHz - 3 dB Steps Component Lay out		TEGNING NR.	
Behandl.				182 -A341-A-4	
Del af					
Antal					

POS.	TEGN. NR.	BETEGNELSE	MATERIALE	ANT.
R1		Resistor 68 Ω 1/8W 5%	Resista SK2	
R2		" 22 Ω " "	" "	
R3		" 68 Ω " "	" "	
R4		" 10 Ω " "	" "	
R5		" 56 Ω " "	" "	
R6		" 39 Ω " "	" "	
R7		" 39 Ω " "	" "	
R8		" 56 Ω " "	" "	
R9		" 18 Ω " "	" "	
R10		" 56 Ω " "	" "	
R11		" 82 Ω " "	" "	
R12		" 560 Ω " "	" "	
	182-9040	Printed circuit board 182-900	NTP	
		Switch type Mx 1/1 x 9 K T = 12	EBE	
SIG./DATO		INGENIØRFIRMA N. TØNNES PEDERSEN A/S	STYKLISTE	
30.9.70 BM/DG		SWITCH UNIT 182-A3-A Electrical Partslist	1 Blade - Blad 1	
			182-A331-A-4	



Målestok	INGENIØRFIRMA N. TØNNES PEDERSEN A/s	Tegn.	28-9-70. IW
Tolerance	mm ± 0	Godk.	
Materiale	Switch Unit 182-A4-A (Part of 182-100)	TEGNING NR.	
Behandl.	Function: 60Hz - 3 dB Steps		
Del af	Diagram		182-A430-A-4
Antal			



Målestok	2:1	INGENIØRFIRMA N. TØNNES PEDERSEN A/S	Tegn. 25-9-70. IW
Tolerance	mm	Switch Unit 182-A4-A (Part of 182-100)	Gouk.
Materiale		Funktion: 60 Hz - 3dB Steps	TEGNING NR.
Behandl.		Component Layout	182-A441-A4
Dato			
Ans.			

POS.	TEGN. NR.	BETEGNELSE	MATERIALE	ANT.
R1		Resistor 680 Ω 1/8 W 5%	Resista SK2	
R2		" 3.9kΩ "	"	
R3		" 1.8kΩ "	"	
R4		" 56 Ω "	"	
R5		" 2.2kΩ "	"	
R6		" 220 Ω "	"	
R7		" 2.7kΩ "	"	
R8		" 390 Ω "	"	
R9		" 3.3kΩ "	"	
R10		" 220 Ω "	"	
R11		" 3.3kΩ "	"	
R12		" 220 Ω "	"	
R13		" 2.7kΩ "	"	
R14		" 270 Ω "	"	
R15		" 220 Ω "	"	
R16		" 2.2kΩ "	"	
R17		" 56 Ω "	"	
R18		" 1.8kΩ "	"	
R19		" 3.9kΩ "	"	
R20		" 680 Ω "	"	
	182-9040	Printed circuit board 182-900	NTP	
		Switch: Mx 1/1 x 9 K T = 12	EBE	
SIG./DATO		INGENIØRFIRMA N. TØNNES PEDERSEN 4%	STYKLISTE	
30.9.70 BM/DG		SWITCH UNIT 182-A4 Electrical Partslist	1. Blade - Blad 1 182-A431-A-4	