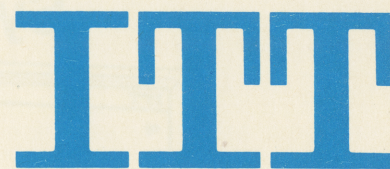


**TransITT 12  
Main Station  
VHF FM Radiotelephone**

**Instruction Manual**

2-4-5m (20-25-50 Kc/s)





# TransITT 12 VHF FM Radiotelephone Main Station

- FOR FIXED INSTALLATION
- 8 CRYSTAL-CONTROLLED CHANNELS
- COMPLETELY TRANSISTORIZED RECEIVER
- ONLY 3 TUBES IN TRANSMITTER
- SIMPLEX OR DUPLEX OPERATION
- 50/25 WATTS RF OUTPUT
- EXTREMELY LOW POWER CONSUMPTION
- FOR REMOTE CONTROL
- MODULAR CONSTRUCTION
- SEALED I.F. CRYSTAL FILTER
- SELECTIVE TONE CALL SYSTEM

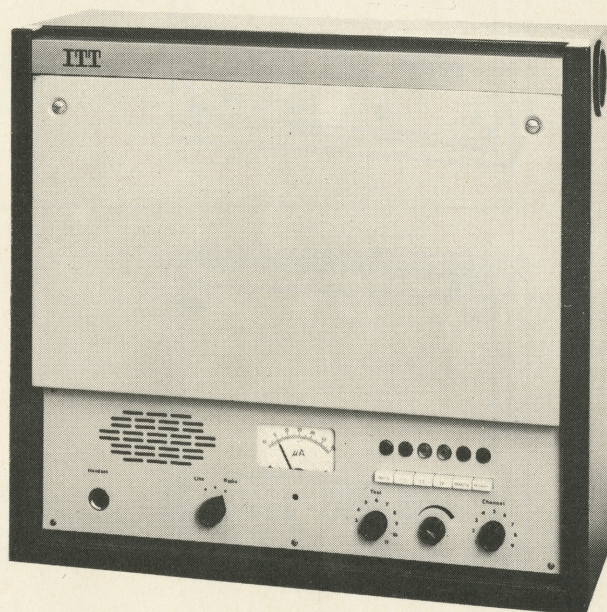
## APPLICATION

The TransITT 12 main station is a 50 Watt transistorized 8 channel VHF-FM radiotelephone for systems requiring remote control or higher power output.

The station provides excellent service as a base station for mobile and portable equipment and is available in simplex, semi-duplex, and duplex versions. TransITT 12 in the duplex version can be used as relay or repeater station when required utilizing a carrier operated relay in the receiver for keying the transmitter. By using the modular technique it has been possible to construct a main station with small dimensions which means that the station can be used as table model, if wanted.

## SPECIAL FEATURES

The TransITT 12 consists of a simplex base station with the possibility of extension to duplex service by adding a VHF hybrid or two antennas. The built-in VHF hybrid permits simultaneous transmitting and receiving on one antenna. This feature is of importance where it is difficult to find suitable installation positions for two antennas. The hybrid is extremely efficient, the loss from transmitter to antenna being only 0.7 dB. TransITT 12 can be operated directly through the control unit built into the cabinet or through a control unit attached to the station through a multi-core cable with a DC-loop resistance of up to 1500  $\Omega$ . Operation over public teleph-



online is possible through the built-in line termination unit in the cabinet, and the remote control can take place over a 600  $\Omega$  balanced line with up to 25 dB attenuation.

## DESIGN INFORMATION

All the units (transmitter, receiver, power supply, VHF hybrid, control panel, and line termination unit) are mounted on a swing frame in a standard cabinet, or on slides for 19" standard rack mounting.

Transmitter and receiver are transistorized except for the output stage. The operating voltage is 110 or 220 V AC. Ministac modules of the same type as those used for the portable and mobile units are employed. These modules give advantages such as: high reliability, high resistance against shock and vibration, and can easily be replaced, as they are provided with specially constructed gold-coated contacts which make service and repair very easy.

The TransITT 12 is provided with an 8 channel selector switch, a built-in testmeter, and squelch control. All crystals are oven mounted enabling a high frequency stability of  $\pm 0.0005\%$ .

For maintenance the front plates are easily removed, and the frame can be swung out, after which all parts of the equipment are accessible with the set still working.

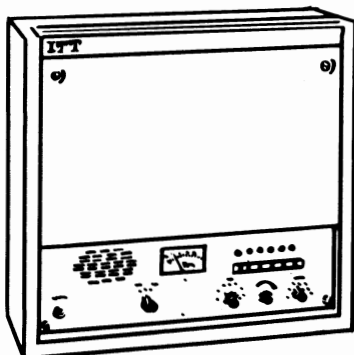
Order number for additional sheets

16-4- 30.003 -1E

Index tab Nos. Page No. Edition

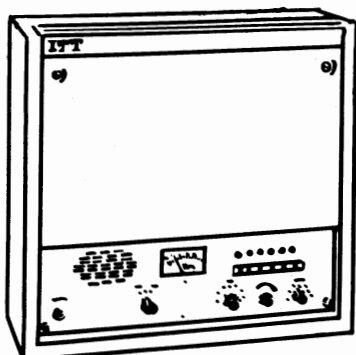


# System Description of TransITT 12



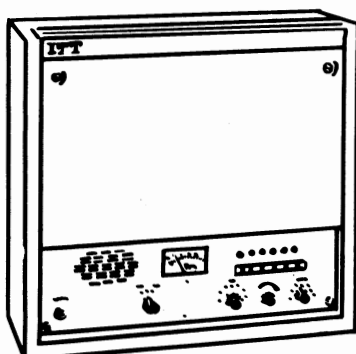
## Directly Controlled System

TransITT 12 can be used for various main station systems with remote control over multicore cable or over telephone-line. A small main station system is outlined here, and all necessary functions are served directly on the control panel. TransITT 12 is also available for installation in 19" standard rack. For the latter system the transceiver is placed behind the control panel.



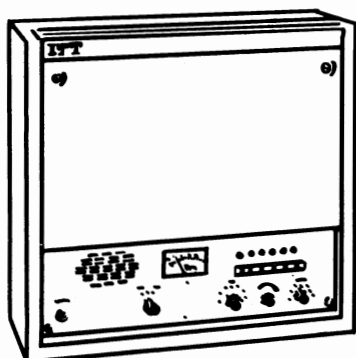
## Locally Controlled System

In the system shown a local control is connected to the TransITT 12. The remote control takes place through a multicore cable with a DC-loop resistance of up to 1500  $\Omega$ . The remote-controlled functions are: Main on/off, channel selection of up to 6 channels, squelch on/ off, loudspeaker on/off, volume control, repeater on/off, and keying of transmitter (PTT). Furthermore, there are built-in loudspeaker and microphone.



## Remote Control over Telephone-line

This system shows remote control over a 600  $\Omega$  balanced telephone-line with up to 25 dB attenuation. The remote-controlled functions are the same as mentioned under the locally controlled system, but increased by the change-over switch "Ext", "Int", which is used if a conversation from a telephone is to be connected to the main station. "Ext" is the normal position, in "Int" position the conversation is connected to the station, and the transmitter is keyed simultaneously.



## Remote Control over Telephone-line from 3 Control Units

This advanced system shows the remote control over telephone-line from 2 remote controls to which a local exchange is connected. As the line changes between the 2 remote controls, only one of these can serve the main station at a time. The local control shown is provided with the following functions: loudspeaker, microphone, volume control, and transmitter key (PTT).

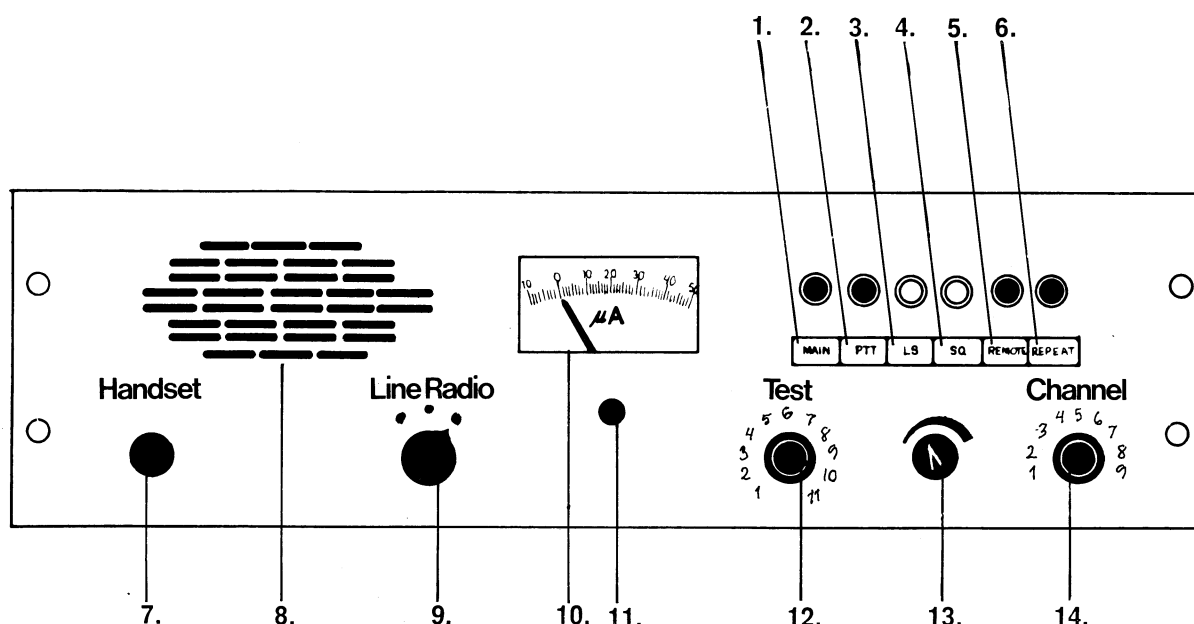
## Tone Call System

The remote control box can be provided with tone call 2 out of 10 tones = 45 combinations. Two rows of push-buttons are available for frequency selection, and each row are numbered 0-9. When pressing a button in the upper line, the first figure of the call number is chosen. When pressing a button in the lowest line, the

last figure of the call number is chosen, and at the same time the transmitter is keyed. The push-button named "Reset" is used when the TransITT 12 is provided with tone receiver. When receiving the tone combination, the tone receiver will then open the loudspeaker, which will remain open until the push button "Reset" is pressed.



# Functional Description of the Control Panel



## 1. MAIN SWITCH (MAIN)

When activating this switch the receiver is immediately in stand-by, and after 60 sec. the transmitter is in operating condition. The lamp is on, when the station is operating.

## 2. PRESS-TO-TALK SWITCH (PTT)

When the PTT switch is activated, the transmitter is operating until the switch is activated again. The lamp is on, when the station is transmitting.

## 3. LOUDSPEAKER SWITCH (LS)

By activating this switch the loudspeaker is connected or disconnected to the output stage. The lamp is on, when the loudspeaker is connected.

## 4 SQUELCH SWITCH (SQ)

At weak signals the switch is activated and the electronic squelch is disconnected. The lamp is on, when the squelch is disconnected.

## 5. REMOTE CONTROL SWITCH (REMOTE)

If TransITT 12 is connected to a remote control unit, all functions are coupled to this unit, when the switch is activated. The lamp is on in remote operation.

## 6. REPEATER SWITCH (REPEAT)

If TransITT 12 is a duplex version, it is possible to operate "car to car" when the repeat switch is activated. The transmitter is automatically keyed, when a signal is received. The lamp is on in repeat operation.

## 7. MICROPHONE SOCKET

Used with desk type microphone or microtelephone. At simplex operation the handset or microphone key serves as press-to-talk switch. At duplex operation the

handset or microphone key must be kept depressed, while the conversation is in progress.

## 8. LOUDSPEAKER

## 9. MICROPHONE FUNCTION SELECTOR

Pos. "Line": The microtelephone is connected through an amplifier to the remote-control unit for intercommunication between the remote-control, and the TransITT 12.  
Pos. "Radio": In this position the station is operated from the microtelephone or microphone.

## 10. TEST INSTRUMENT

## 11. ZERO ADJUSTMENT OF TEST INSTRUMENT

## 12. TEST SWITCH

Pos. 1. Monitors transmitter output  
Pos. 2-6. Monitors transmitter power supply  
Pos. 7-8. Monitors receiver power supply  
Pos. 9. Monitors relays and lamps power supply  
Pos. 10. Monitors receiver with diode probe  
Pos. 11. Monitors transmitter with diode probe

## 13. VOLUME CONTROL

The volume control regulates the signal level in the earphone and the loudspeaker.

## 14. CHANNEL SELECTOR

Selection between 8 crystal-controlled channels.



## TECHNICAL DATA

### General:

Frequency Range:	146–174 Mc/s (2m band) 68– 88 Mc/s (4m band)
Number of Channels:	1–8 locally controlled
Operation Mode:	Simplex or duplex
RF-Bandwidth:	2m band: 1Mc/s 4m band: 0.6Mc/s
Channel Separation:	20 kc/s, 25 kc/s or 50 kc/s
Modulation:	Phase modulation
Temperature:	From – 20° to + 50° C
Frequency Stability:	± 0.8 kc/s, + 1.5 kc/s
Crystals:	2 crystals for each channel - separate oscillators for transmitter and receiver
Power Supply (standard voltages):	110, 127 and 220 V AC
Power Supply Variation:	+ 10 % for all performance Specifications except for RF-power output, which meets EIA specifications. Extremes + 15 % and – 20 % according to EIA
Power Consumption:	110 W
Dimensions and Weight:	Height 477 – width 532 – depth 200 mm Weight: Approx. 50 kg

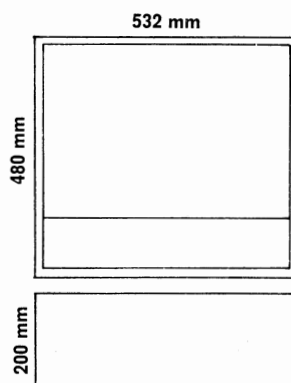
### Transmitter:

Power output at standard voltage and ambient temperature + 15° C – 30° C:	25 or 50 W
Maximum Deviation:	1) ± 15 kc/s for 50 kc/s channeling 2) ± 5 kc/s for 25 kc/s channeling 3) ± 4 kc/s for 20 kc/s channeling 4) Optional
Standard Deviation:	1) ± 10.5 kc/s for 50 kc/s channeling 2) ± 3.5 kc/s for 25 kc/s channeling 3) ± 2.8 kc/s for 20 kc/s channeling 4) Optional
Distortion at 1000 c/s:	Less than 7 % for standard deviation
Spurious Emissions:	Less than 0.2 µW
Harmonics:	Less than 0.2 µW
Adjacent Channel Radiated Power:	Less than 10 µW for micro- phone voltage 25 dB above voltage producing standard deviation
Noise Level:	More than 40 dB below standard deviation at ambient temperature (+ 15° C to + 30° C) At extreme temperatures, 6 dB degradation 2.5 to 15 mV/200 Ω (dynamic microphone)
AF Input Standard Level:	300–3000 c/s (optional 300–2600 c/s) ref. 1000 c/s + 1 to – 3 dB against a 6 dB preemphasis curve
Audio Pass Band:	Adjustable (inside the equipment)
Peak Limiter:	

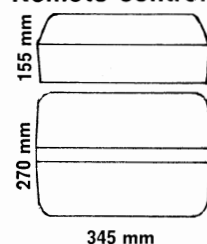
### Receiver:

Sensitivity:	0.3–0.5 µV (Voltage across input terminals) 20 dB signal/noise or $\frac{S+N+D}{N+D}$ (EIA)
Receiver Noise:	More than 46 dB below output at standard level and at 10 µV receiver input voltage Squelched: 50 dB
Selectivity:	80 dB (according to EIA two-signal method)
Image Rejection:	85 dB (EIA-method – 20 dB quieting)
Spurious Responses:	85 dB (20 dB quieting)
Interchannel Modulation:	64 dB
Blocking (GPO Requirement):	Reduction of AF output signal less than 3 dB, received signal 1 µV standard deviation, second signal 30 mV separated less than ± 150 kc/s (voltage measured across input terminals)
1st IF:	10.7 Mc/s
2nd IF:	470 kc/s
Receiver Radiation:	Less than 0.002 µV into 50 Ω, and 30 µV meter at 30 meters
Distortion at 1000 c/s:	Less than 7 % for standard deviation and 2.5 W AF power output
Output Power:	2.5 W in impedance 3.2 Ω
Output for Handset: (optional)	15 mW in impedance 200 Ω
Audio Pass Band	300–3000 c/s (optional 300–2600 c/s) + 1 to – 3 dB ref. 1000 c/s
Squelch:	Adjustable inside the equipment Operator on front panel

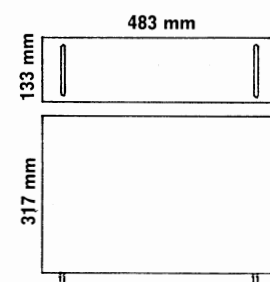
### Cabinet version



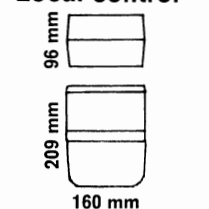
### Remote control



### 19" standard version



### Local control





## C O N T E N T S

### I GENERAL DESCRIPTION AND SPECIFICATIONS

### II THE FUNCTIONS OF THE OPERATING CONTROLS

### III MAJOR COMPONENT LAYOUTS

Front view control panel	RKS 456
Rear view control panel	RKS 458
Front view transceiver	RKS 457
Rear view transceiver	RKS 462
Power supply	RKS 461
Tx - PA	RKS 460

### IV DIAGRAMS AND LAYOUTS

RF-unit (unit 1)	0000-220-0001
-	0000-225-0001
-	0000-250-0001
-	0000-425-0001
-	0000-450-0001
-	0000-525-0001
-	0000-550-0001
1' & 2' Rx - Osc. (unit 2)	0000-200-0001
-	0000-400-0001
-	0000-500-0001
IF-unit (unit 3)	0000-020-0001
-	0000-025-0001
-	0000-050-0001
Limiter (unit 4)	0000-000-0001
Discr. & AF (unit 5)	0000-025-0003
-	0000-050-0003
Squelch (unit 6)	0000-000-0002
AF-driver (unit 7)	1200-000-0003
Rx - PA (unit 13)	1240-000-0001
Tx-osc. & mod. (unit 8)	3000-200-0002
-	3000-400-0002
1' multiplier (unit 9)	0000-200-0003
-	0000-400-0003
2' multiplier (unit 10)	0000-200-0005
-	0000-400-0005
-	0000-500-0005



## TransITT 12 - Main Station

- 8 channel VHF FM radiotelephone
- for fixed installation
- transistorized
- for simplex or duplex
- for remote control
- with selective tone call system
- modular construction

## Application

The TransITT 12 VHF FM radiotelephone provides excellent service as a base station for mobile and portable equipment. It has been designed to meet international specifications.

The TransITT 12 consists of a simplex base station with the possibility for extension to duplex service by adding a VHF hybrid or two antennas. It can be operated directly through the control unit built in the cabinet or through a service unit attached to the station through a multi-core cable with a DC-loop resistance of up to 1500 $\Omega$ .

Operation over public telephone-line is possible through the built-in line termination unit in the cabinet and control units for control of the normal functions and channel selection. The remote control can take place over a 600 $\Omega$  balanced line with up to 25 dB attenuation.

## Design Information

All the units (transmitter, receiver, power supply, VHF hybrid, control box, and line termination unit) are mounted on a swing frame in a standard cabinet.

Transmitter and receiver are transistorized, only the output stage is equipped with tubes. The operating voltage is for 110 or 220 V AC.

Ministac modules of the same type as those used for the portable and mobile units are employed. These modules can easily be replaced as they are provided with specially constructed gold-coated contacts which make service and repair very easy.

The set is provided with test instrument for the control of all voltages, output power, and test points in the transmitter.

The TransITT 12 is provided with channel selector for 8 channels and can be placed in a crystal oven so that high frequency stability of  $\pm 0.0005\%$  can be obtained. - The receiver is provided with electrical squelch.

For maintenance the front plates are easily removed, and the frame can be swung out, after which all parts of the equipment are accessible with the set still working.



## T E C H N I C A L   D A T A

### General

Frequency Range	: 146-174 Mc/s (2 m band) 68-88 Mc/s (4 m band)
Number of Channels	: 1-8 locally controlled
Operation Mode	: Simplex or duplex
RF-Bandwidth	: 2 m band: 1 Mc/s 4 m band: 0.6 Mc/s
Channel Separation	: 20 kc/s, 25 kc/s, or 50 kc/s
Modulation	: Phase modulation
Temperature	: From -20°C to +50°C
Frequency Stability	: 0.8 kc/s, 1.5 kc/s
Crystals	: 2 crystals for each channel - separate oscillators for transmitter and receiver
Power Supply (standard voltages)	: 110, 127, and 220 V AC
Power Supply Variation	: $\pm 10\%$ for all performance specifications except for RF-power output, which meets EIA specifications. Extremes $\pm 15\%$ and $-20\%$ according to EIA
Power Consumption	: 110 W
Dimensions and Weight	: Height x width x depth 477            532            200 mm Weight: Approx. 50 kilos



## Receiver

Sensitivity	: 0.3 - 0.5 $\mu$ V (voltage across input terminals) 20 dB signal/noise or 12 dB $\frac{S + N + D}{N + D}$ (EIA)
Receiver Noise	: More than 46 dB below output at standard level and at 10 $\mu$ V receiver input voltage Squelched: 50 dB
Selectivity	: 80 dB (according to EIA (two- signal method))
Image Rejection	: 85 dB (EIA-method - 20 dB quiet- ing)
Spurious Responses	: 85 dB (20 dB quieting)
Interchannel Modulation	: 64 dB
Blocking (GPO Requirement)	: Reduction of AF output signal less than 3 dB, received signal 1 $\mu$ V standard deviation, second signal 30 mV separated less than $\pm 150$ kc/s (voltage measured across input terminals)
1st IF	: 10.7 Mc/s
2nd IF	: 470 kc/s
Receiver Radiation	: Less than 0.002 $\mu$ W into 50 $\Omega$ and 30 $\mu$ V/meter at 30 meters
Distortion at 1000 c/s	: Less than 7% for standard devi- ation and 3 W AF power output
Output Power	: 2.5 W in impedance 32 $\Omega$
Output for Handset (optional)	: 15 mW in impedance 200 $\Omega$
Audio Pass Band	: 300-3000 c/s (optional 300-2600 c/s) +1 to -3 dB ref 1000 c/s
Squelch	: Adjustable inside the equipment. Operator on front panel



## Transmitter

Power output (at standard voltage and ambient temperature $+15^{\circ}\text{C}$ ... $+30^{\circ}\text{C}$ )	: 25 or 50 W
Maximum Deviation	: 1) $\pm 15$ kc/s for 50 kc/s channelling 2) $\pm 5$ kc/s for 25 kc/s channelling 3) $\pm 3.5$ kc/s for 20 kc/s channelling 4) Optional
Standard Deviation	: 1) $\pm 10.5$ kc/s for 50 kc/s channelling 2) $\pm 3.5$ kc/s for 25 kc/s channelling 3) $\pm 2.8$ kc/s for 20 kc/s channelling 4) Optional
Distortion at 1000 c/s	: Less than 7% for standard deviation
Spurious Emissions	: Less than $0.2 \mu\text{W}$
Harmonics	: Less than $0.2 \mu\text{W}$
Adjacent Channel Radiated Power	: Less than $10 \mu\text{W}$ for microphone voltage 25 dB above voltage producing standard deviation
Noise Level	: More than 40 dB below standard deviation at ambient temperature ( $+15^{\circ}\text{C}$ to $+30^{\circ}\text{C}$ ). - At extreme temperatures, 6 dB degradation
AF Input Standard Level	: 2.5 to 15 mV/200 $\Omega$ (dynamic microphone)
Audio Pass Band	: 300-3000 c/s (optional 300-2600 c/s) ref. 1000 c/s $+1$ to $-3$ dB against a 6 dB preemphasis curve
Peak Limiter	: Adjustable (inside the equipment)

## THE FUNCTIONS OF THE OPERATING CONTROLS

### **1** MAIN SWITCH (MAIN)

When activating the push-button the receiver is immediately in stand-by, and the lamp is on.

After 60 sec. the transmitter is in operating condition.

### **2** PRESS-TO-TALK SWITCH (PTT)

When the PTT push-button is activated, the transmitter is operating and the lamp above is on, until the push-button is activated again.

### **3** LOUDSPEAKER SWITCH (LS)

When the push-button is out, the handset is on.

By activating the push-button the loudspeaker and the lamp is on.

### **4** SQUELCH SWITCH (SQ)

At weak signals the electronic switch can be disconnected by activating the push-button. The lamp is on when the squelch is disconnected.

When the push-button is out, the lamp functions as carrier alarm, i.e. the lamp is on when a signal is received.

### **5** REMOTE CONTROL SWITCH (REMOTE)

If the TransITT 12 is connected to a remote control unit, and the push-button is activated, the whole push-button switch and the channel selector are coupled to this unit. The lamp is on, when the push-button is activated.

### **6** REPEATER SWITCH (REPEAT)

If the TransITT 12 is a duplex version, it is possible to operate "car to car" when the repeat push-button is activated.

The transmitter is automatically keyed when the push-button is activated.

### **7** HANDSET AND MICROPHONE SOCKET (HANDSET)

The socket can be used for handset or desk microphone.

At simplex operation the handset or microphone key serves as PTT switch.

At duplex operation the handset or microphone key must be kept depressed while the conversation is in progress.

### **8** LOUDSPEAKER



## **9** FUNCTION SWITCH FOR HANDSET

Pos.: Line	The handset is connected through an amplifier to the remote control unit for intercommunication.
Pos.: Radio	The TransITT 12 is operated from handset or a microphone with PTT switch.

## **10** TEST INSTRUMENT

## **11** ZERO ADJUSTMENT OF TEST INSTRUMENT

## **12** TEST SWITCH (TEST)

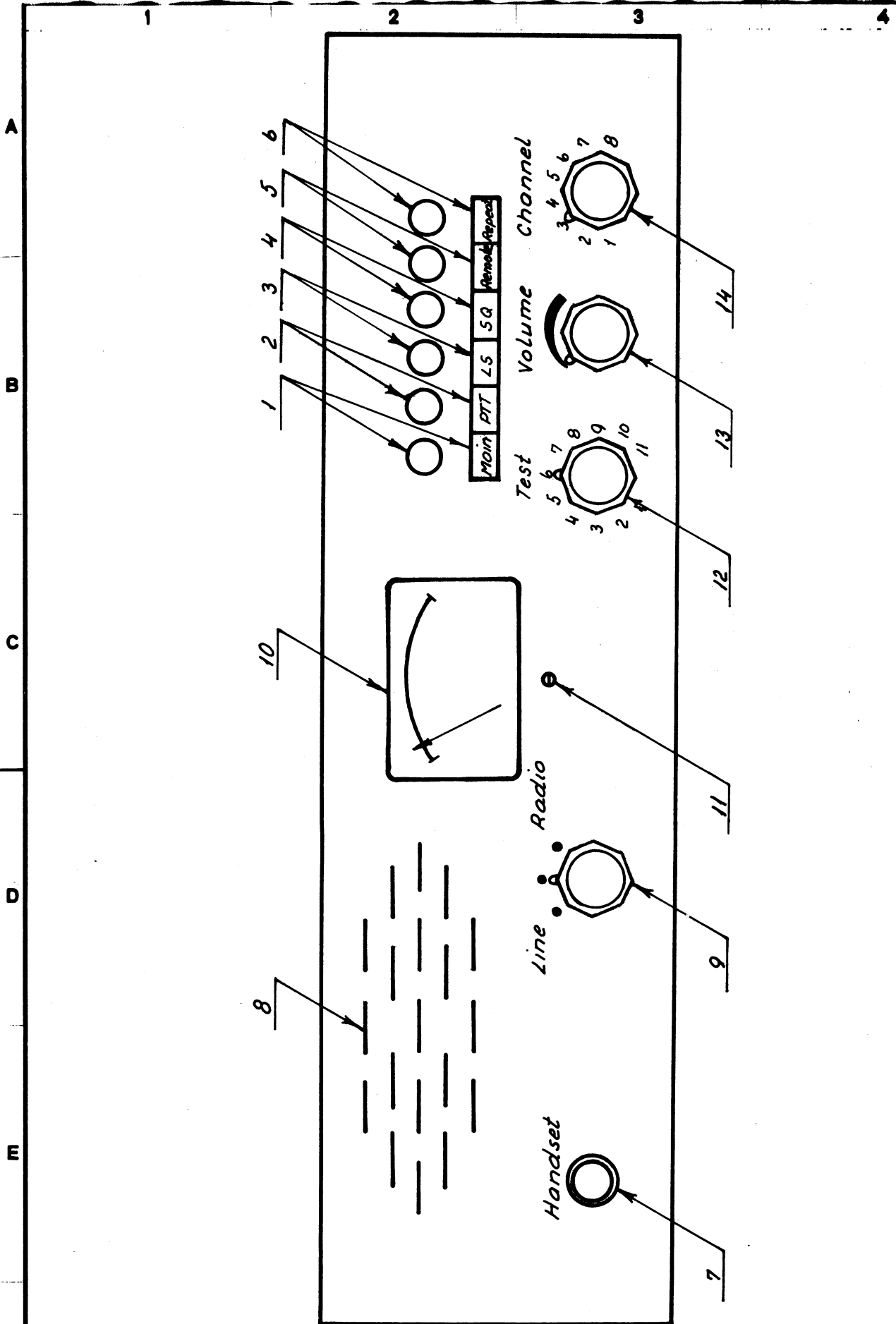
Pos.: (1) Tx-PA	Measures 50 W output at 40 $\mu$ A deflection.
Pos.: (2) Tx-PA	Measures 500 V at 40 $\mu$ A deflection.
Pos.: (3) Tx-PA	Measures 300 V at 40 $\mu$ A deflection.
Pos.: (4) Tx-PA	Measures -40 V at 40 $\mu$ A deflection.
Pos.: (5) Tx	Measures 12 V at 40 $\mu$ A deflection.
Pos.: (6) Tx	Measures 9 V at 40 $\mu$ A deflection.
Pos.: (7) Rx	Measures 12 V at 40 $\mu$ A deflection.
Pos.: (8) Rx	Measures 9 V at 40 $\mu$ A deflection.
Pos.: (9) Relays and lamps	Measures 12 V at 40 $\mu$ A deflection.
Pos.: (10) Diode probe	Measures testpoints in Rx.
Pos.: (11) Diode probe	Measures testpoints in Tx, except Tx-PA

## **13** VOLUME CONTROL (VOLUME)

The volume control regulates the signal level in the loudspeaker.

## **14** CHANNEL SELECTOR (CHANNEL)

The selector switches between 8 crystal-controlled channels.



(Fig 1/2 Size)

TransITT 12

UDG.	DATO	SIGN.	KONF.	MTP	STA
------	------	-------	-------	-----	-----

TITEL

Major Component Layout  
Front view control panel

**ITT**

STANDARD ELECTRIC A/s  
KØBENHAVN

ERSTATTER

TEGN. NR.

BL.

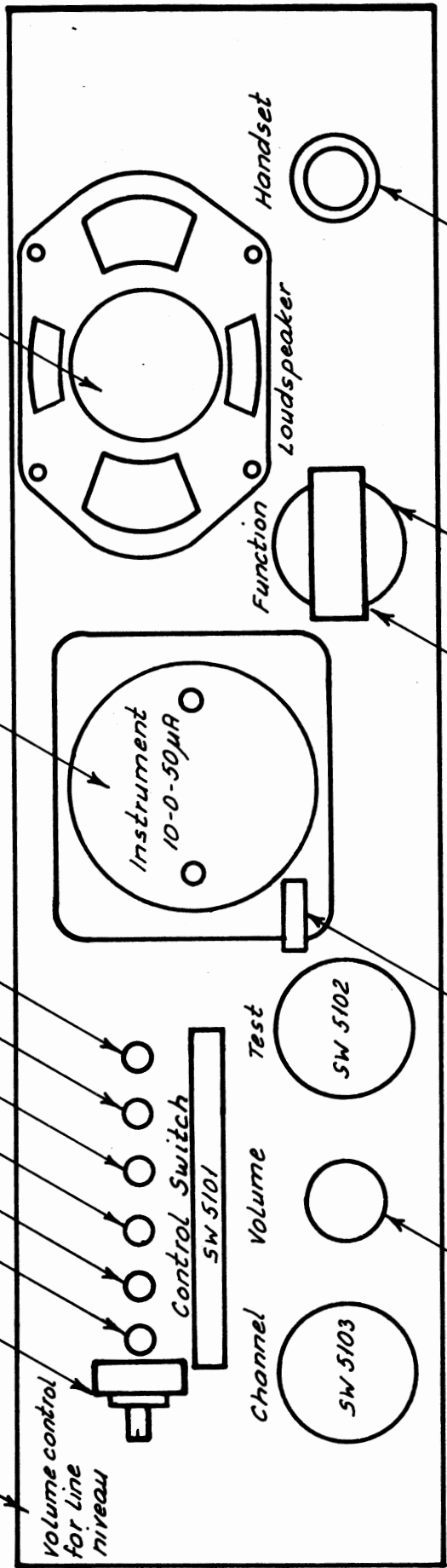
AF

**R-KS 456**

ERSTATTET  
AF



A  
B  
C  
D  
E  
F



(Fig 1/2 Size)

TransITT 12

TITEL

Major component layout  
Rear view control panel

ERSTATTER

TEGM. NR. BL. AF

R-KS 458

UDG. DATO SIGN. KONF. MTP STA

ITT

STANDARD ELECTRIC A/s  
KØBENHAVN

ERSTATTET  
AF

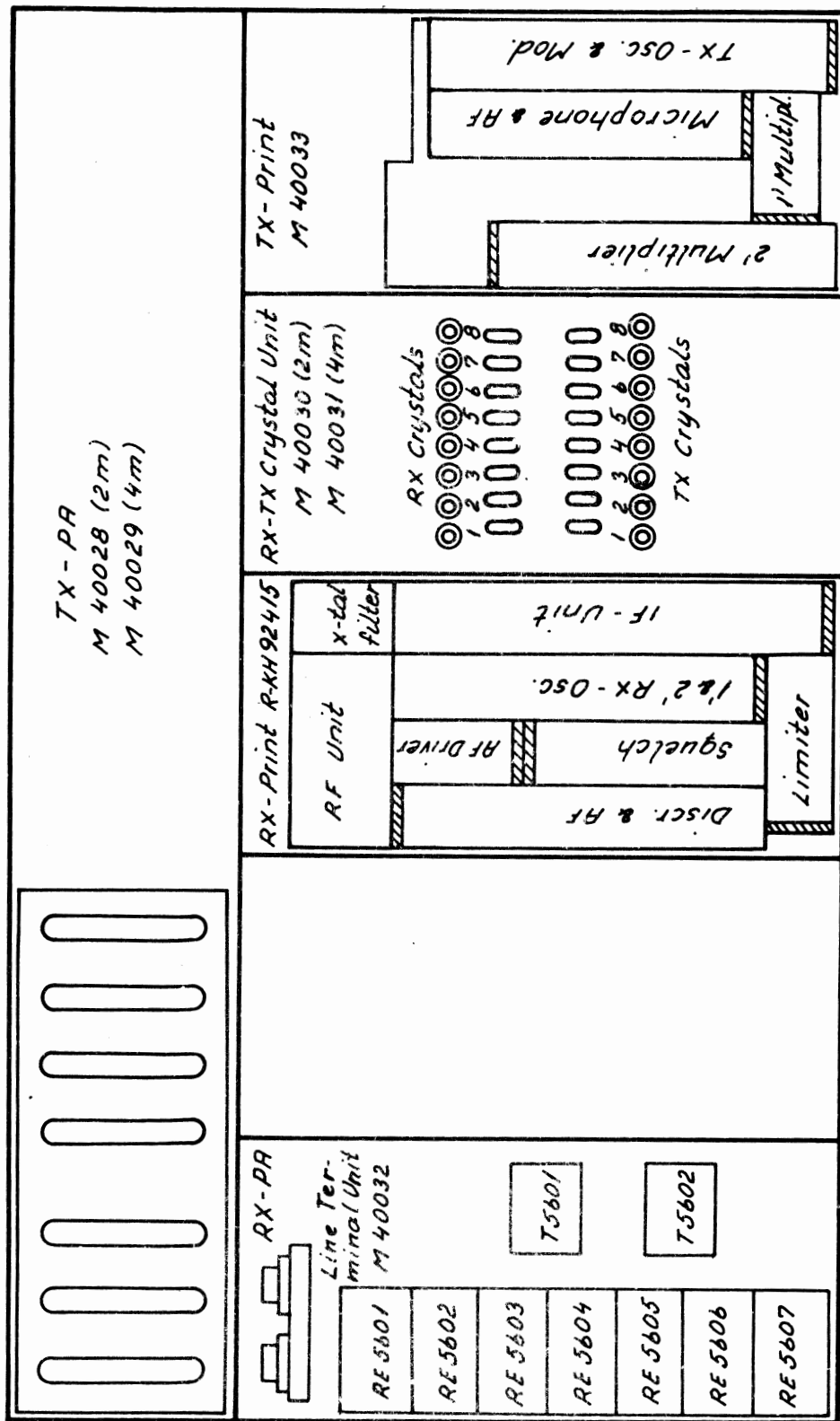
A  
B  
C  
D  
E  
F

1

2

3

4



(Fig 1/2 Size)

Trans/TT 12

TITLE

Major Component Layout  
Front view transceiver

ERSTATTER

TEGN. NR.

BL.

AF

R-KS 457

ERSTATTET

AF

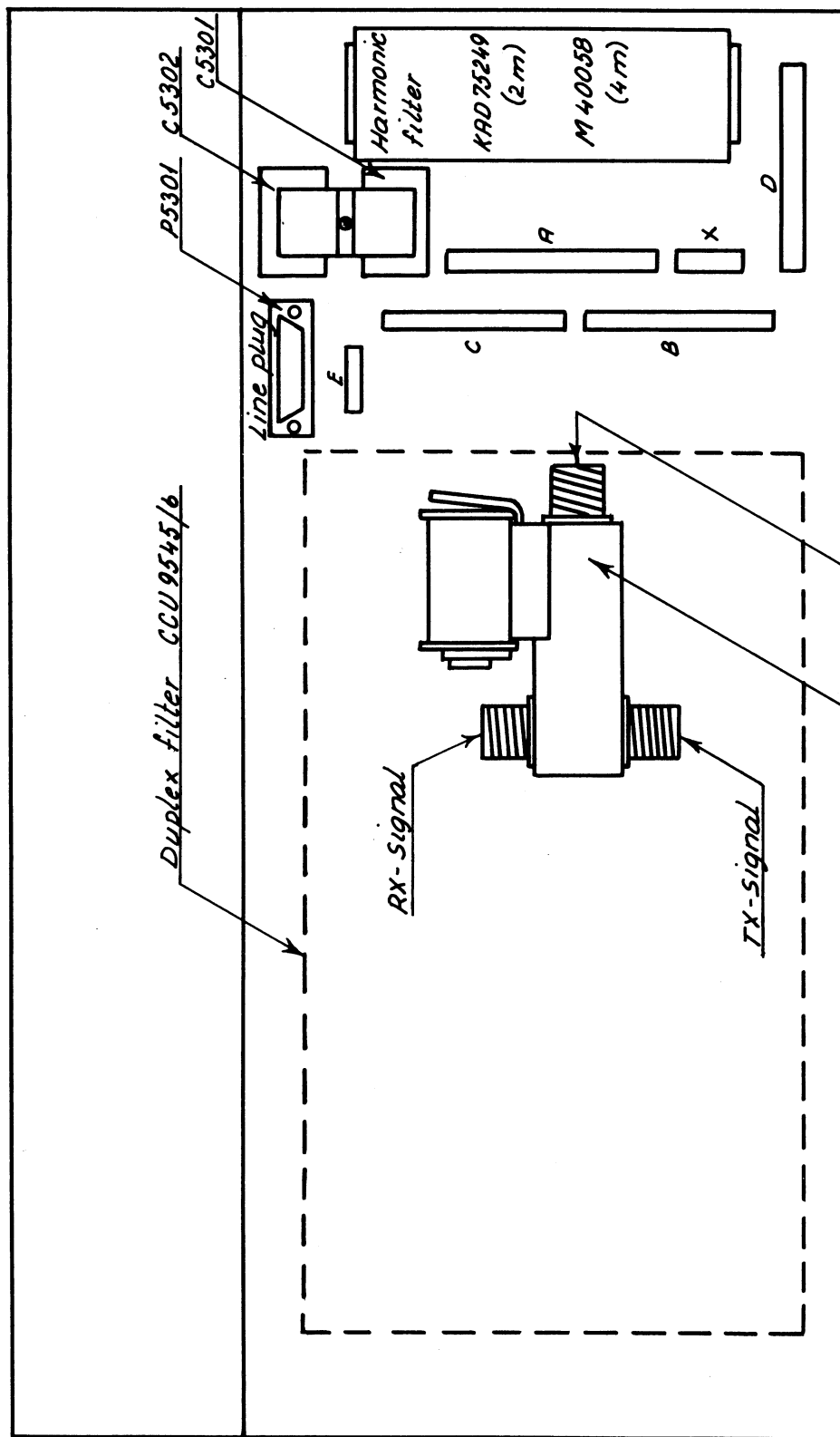
TTT

STANDARD ELECTRIC A/S  
KØBENHAVN



A  
B  
C  
D  
E  
F

1 2 3 4



Simplex and Duplex version (Fig. 1/2 size)

Trans/ITT 12

TITEL

Major component layout  
Rear view transceiver

ERSTATTER

TEGN. NR.

BL.

AF

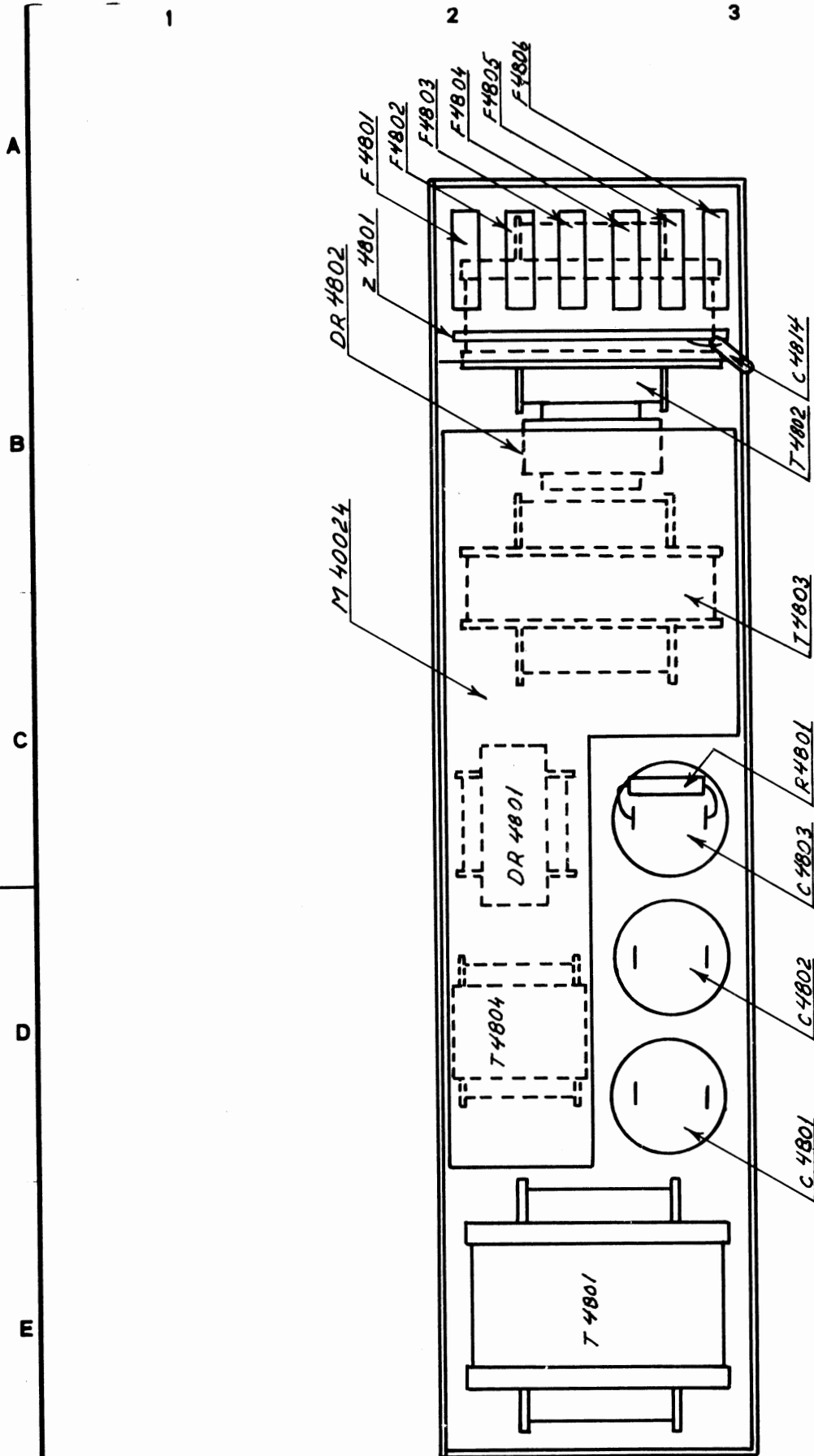
R-KS 462

ERSTATTET  
AF

UDG. DATO SIGN. KONF. MTP STA

ITT

STANDARD ELECTRIC A/S  
KØBENHAVN



Viewed from top (Fig. 1/2 size) (Unit 48)

TransITT 12

TITEL

Major component layout  
Power Supply M40026

ERSTATTER

TEGM. NR.

BL.

AF

R-KS 461

ERSTATTET  
AF

UDG. DATO SIGN. KONF. MTP STA

**ITT**

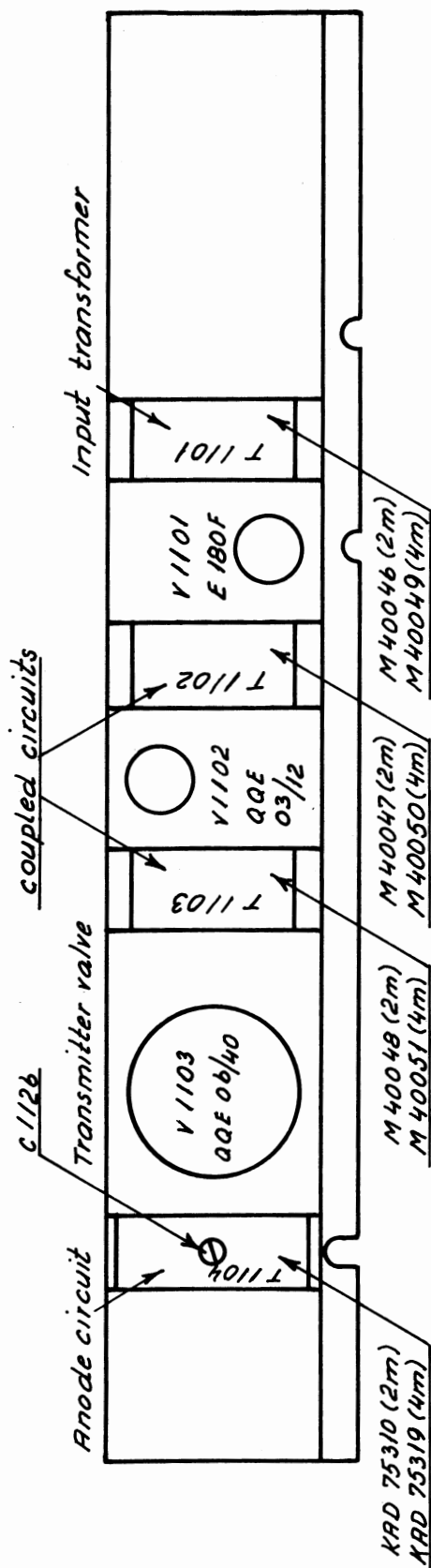
STANDARD ELECTRIC A/s  
KØBENHAVN



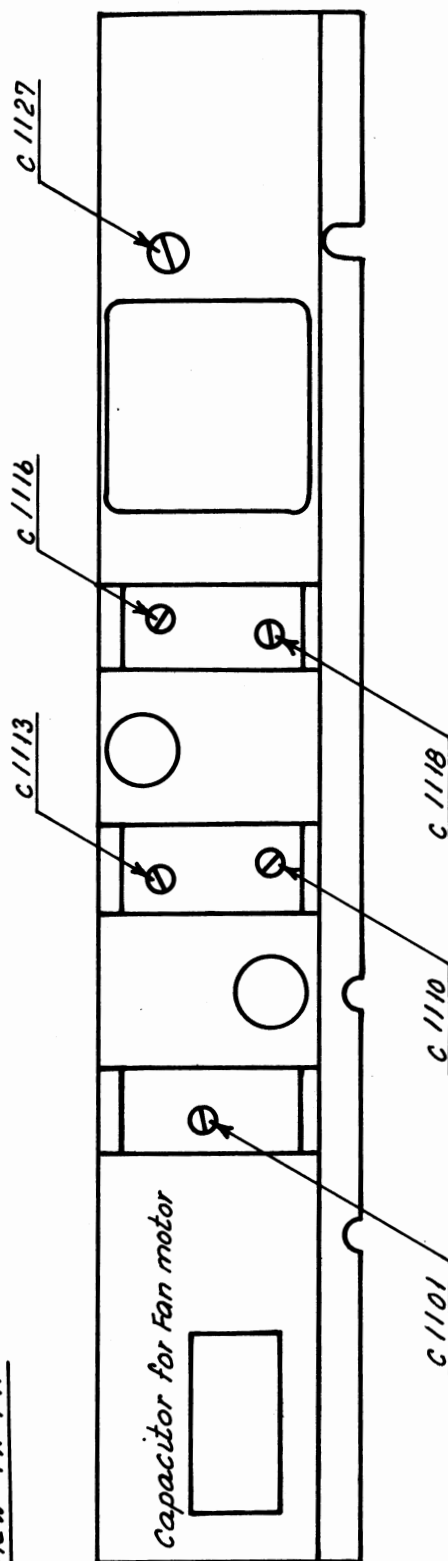
A  
B  
C  
D  
E  
F

1 2 3 4

Front view TX-PA



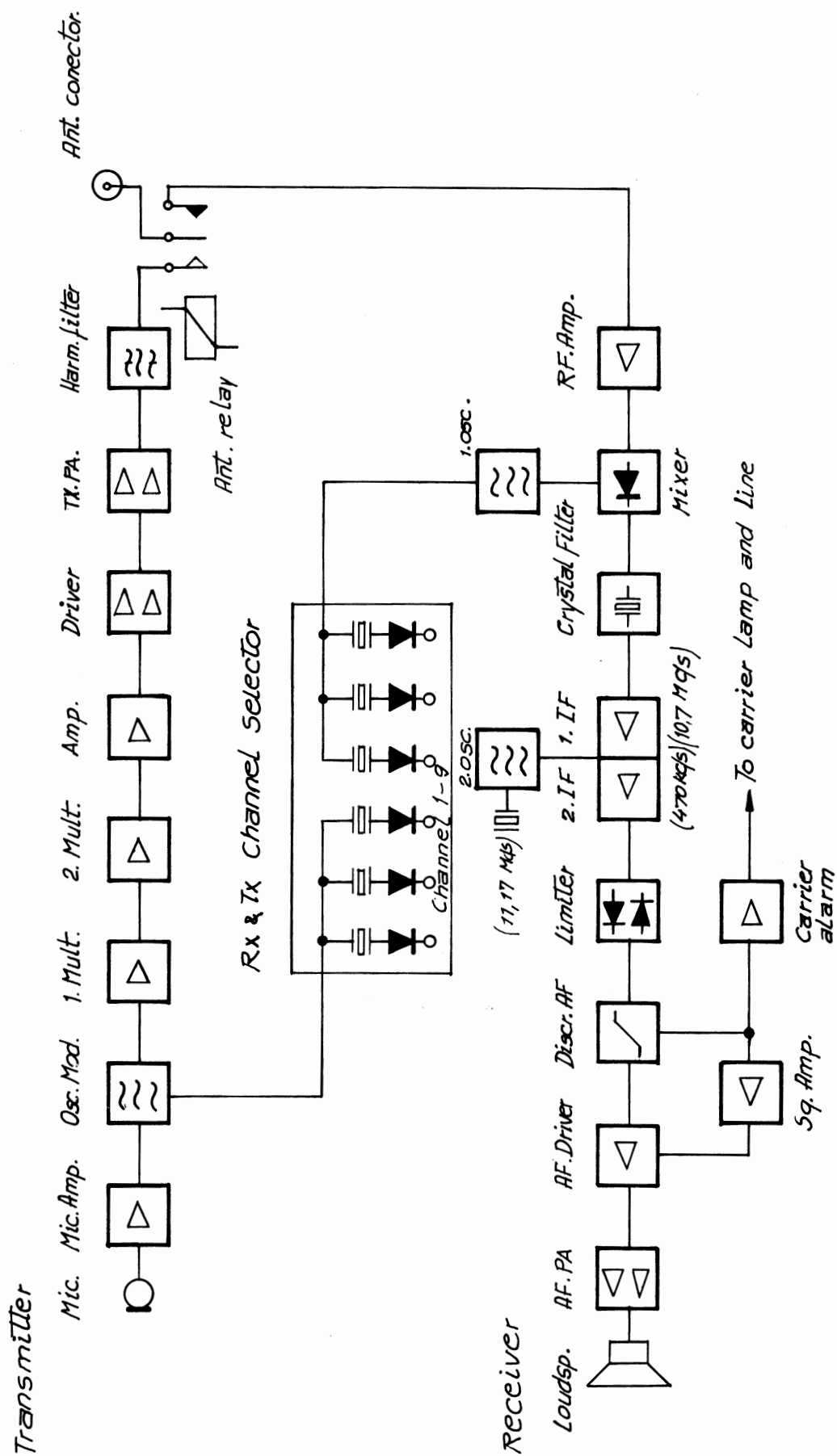
Rear view TX-PA



(Fig 1/2 Size)

Trans/TT 12

TITEL					ERSTATTER	
Major component layout Front and Rear view TX-PA					TEGN. NR. BL. AF	
ITT STANDARD ELECTRIC A/S KØBENHAVN					R-KS 460	
UDG.	DATO	SIGN.	KONF.	MTP	ERSTATTET AF	



*Block Diagram  
Trans ITT 12 (Simplex)*

TEGNET.  
23-8-67

KONTR.

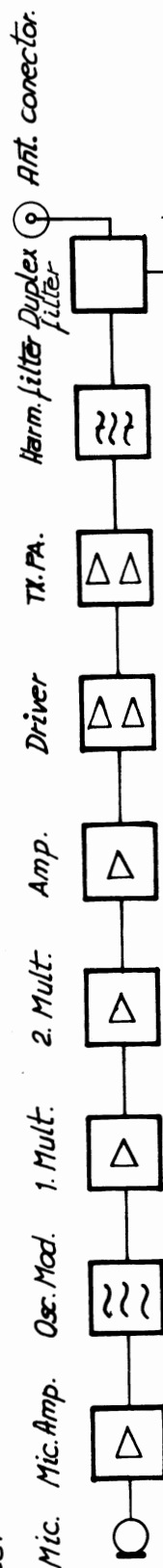
GODK.

**Standard Electric A/S**

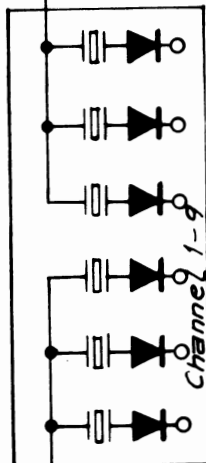
KØBENHAVN

BLADE  
BLAD R-KS 452

## Transmitter



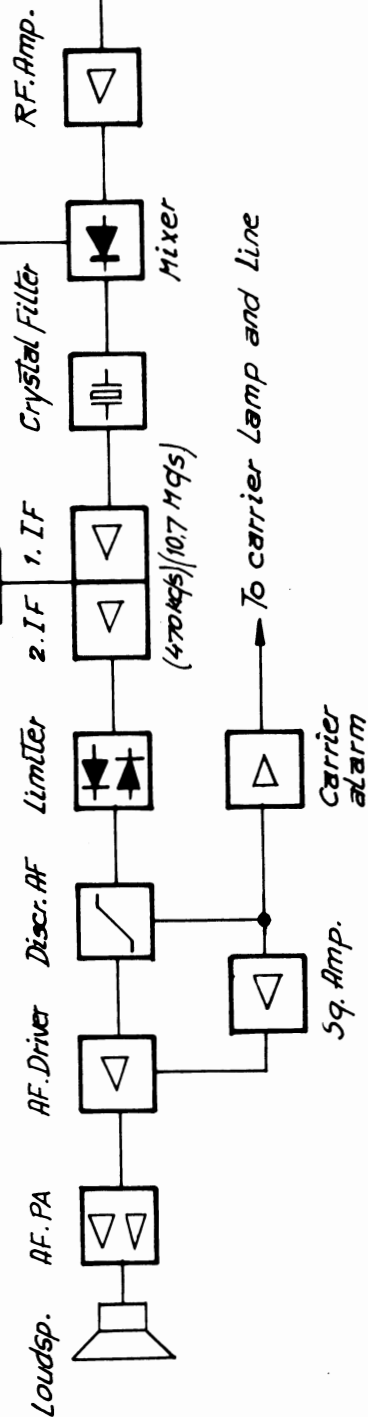
## Rx &amp; Tx Channel selector



2.0 SC.

1.0 SC.

## Receiver



Block Diagram  
Trans ITT 12 (Duplex)

TEGNET.

23-8-67

KONTR.

GODK.

Standard Electric A/S

KØBENHAVN

BLADE  
BLAD

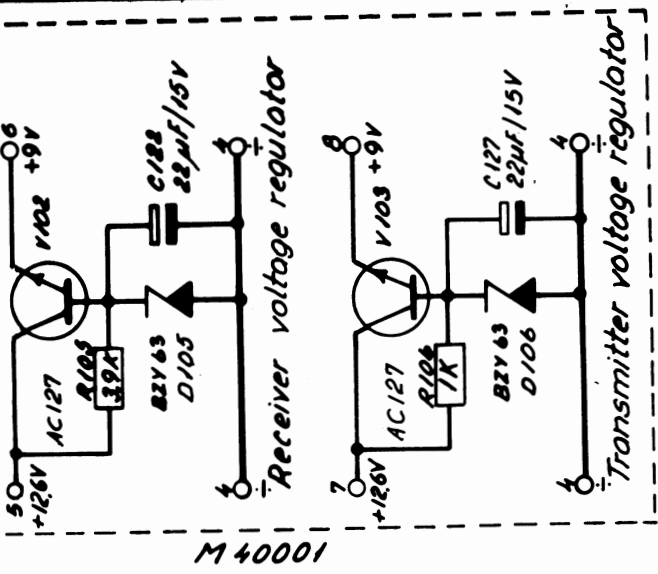
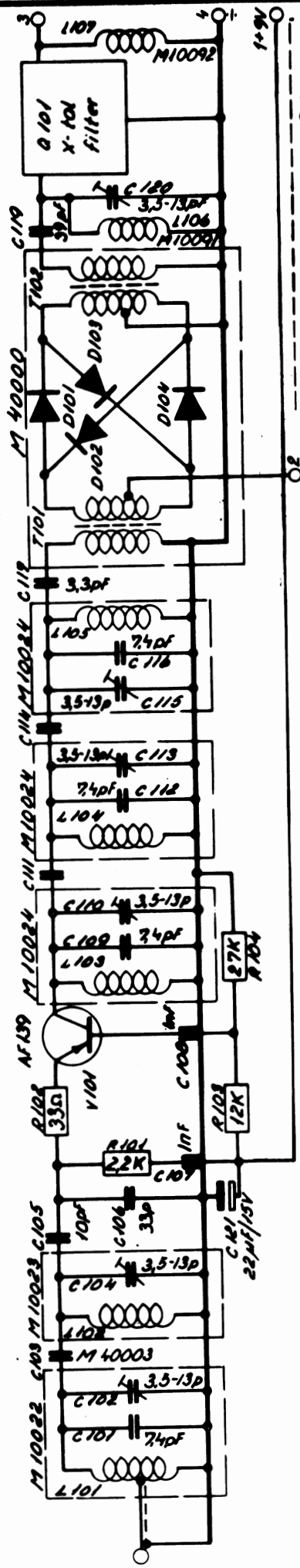
R-KS 453



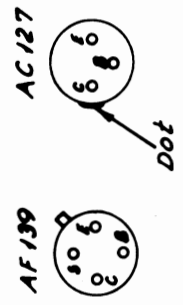
1.1  
27 tilf.  
2. Udg.  
12-65  
G.R.L.  
M405-D106  
2-9.1

3. Udg.  
2-65

TEGNET. G.R.L.  
2-11-65  
KONTR.  
D-11-65  
G.R.L.



Frequency Mc/s	C 111	C 114
146-160	M40003	M40003
160-174	M40004	M40004

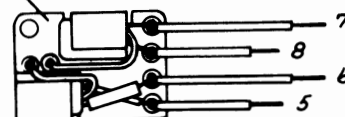
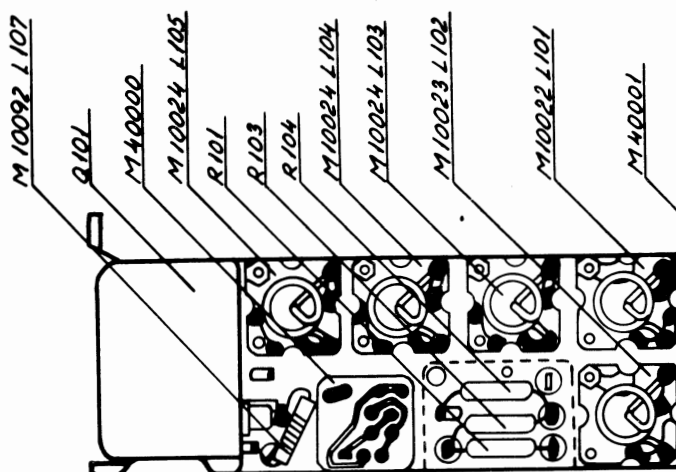
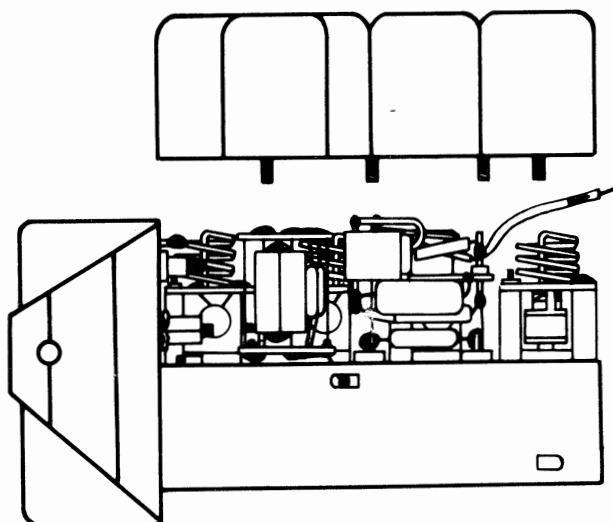
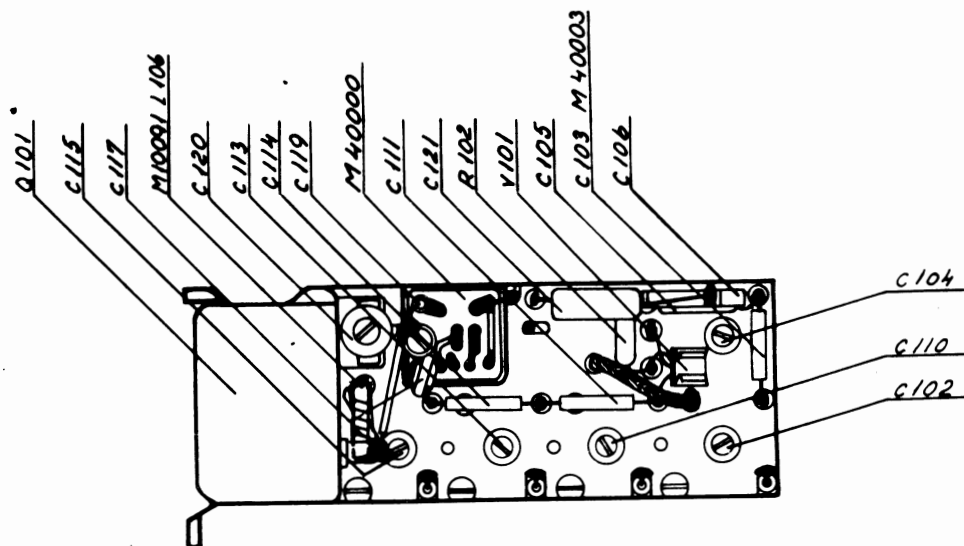


RF-Unit P6  
Unit 1

Standard Electric A/S

KØBENHAVN

5BLADE  
BLAD4 0000-220-0001



RF-Unit P6

Unit 1

TEGNET 622.

22/1-65

KONTR.

30-11-65

COOK.

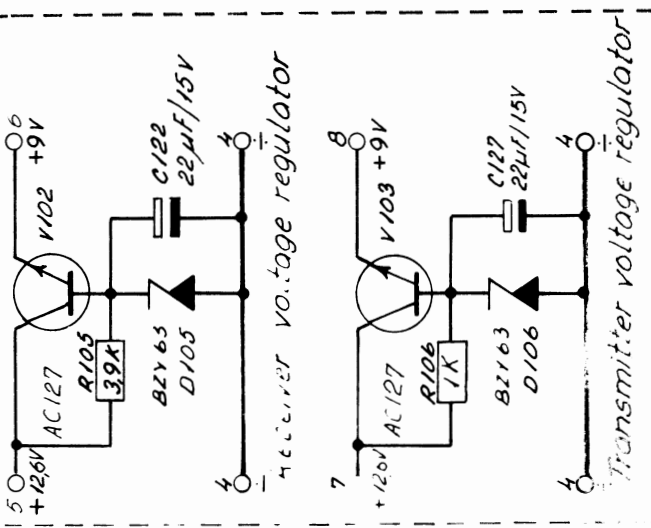
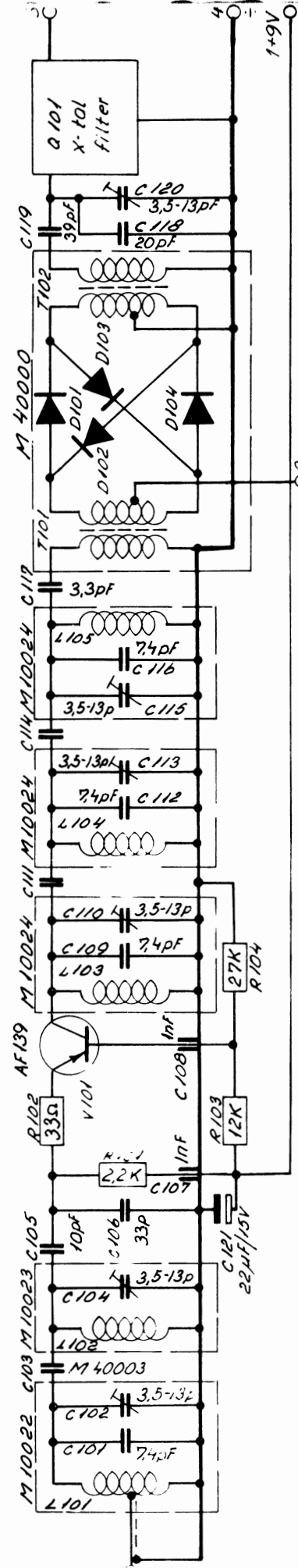
Standard Electric A/S

KØBENHAVN

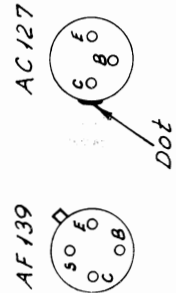
5 BLADE  
BLAD5

0000-220-0001

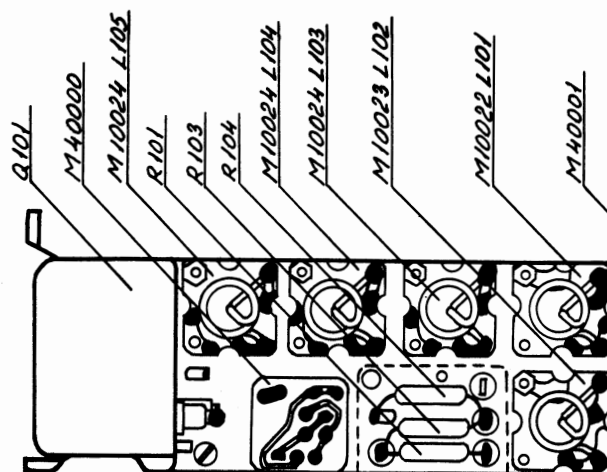
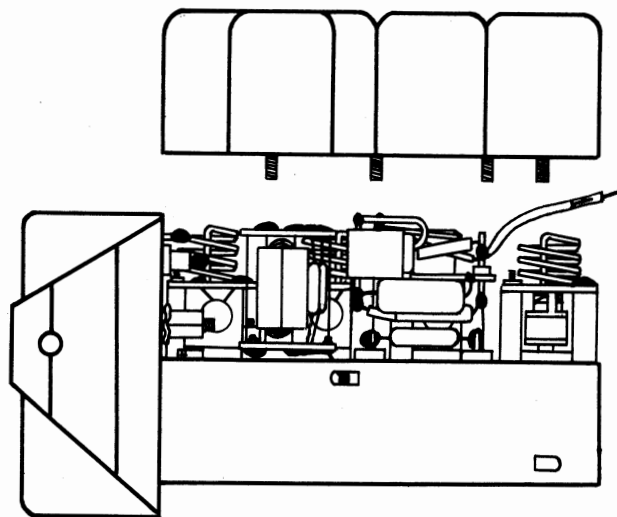
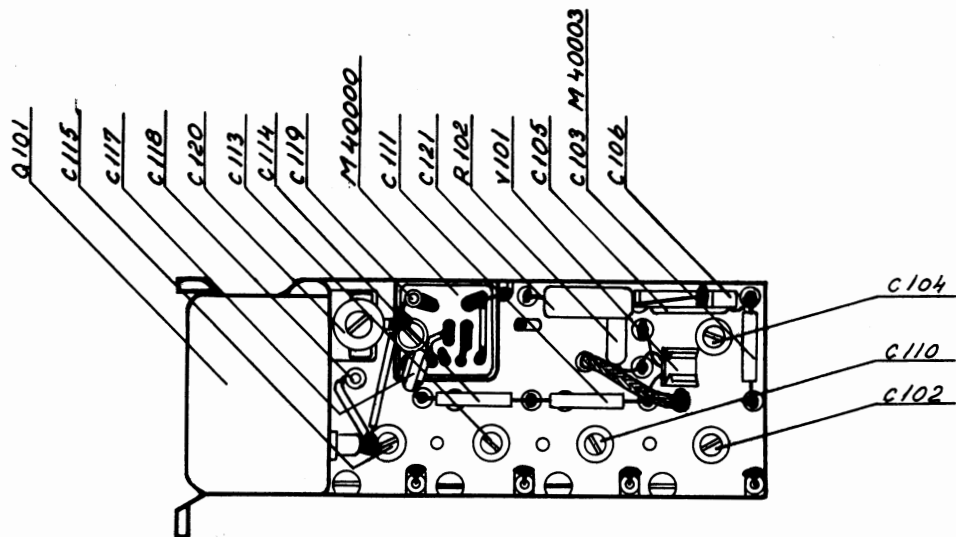
65 G.R.L.  
27 till  
2 Udg.  
18-12-85  
3 D105-  
106 V.K. 2 F9  
3 Udg.  
2-66



Frequency Mc/s	C 111	C 114
146 - 160	M40003	M40003
160 - 174	M40004	M40004



RF UNIT P6-P8  
Unit 1



RF-Unit P6-P8  
Unit 1

TEGNET. M.T.  
25-8-65

KONTR.  
30-11-65 R

GODK.  
B. B. B.

Standard Electric A/S

KØBENHAVN

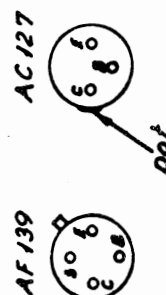
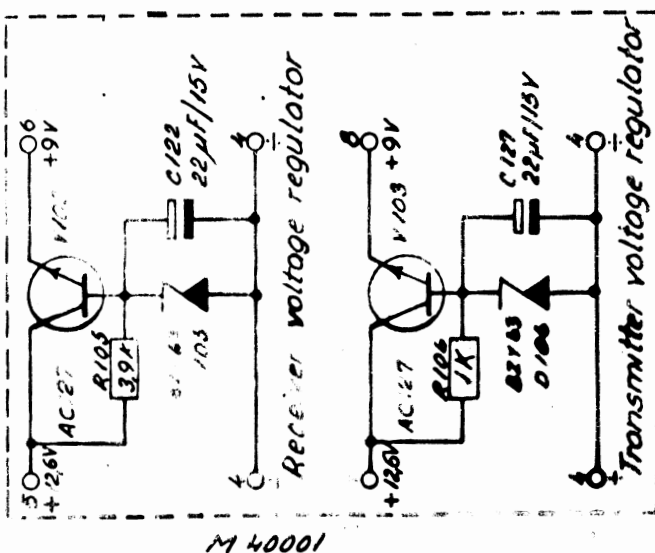
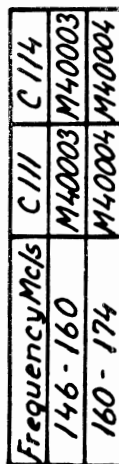
5BLADE  
BLAD 5 0000-225-0001



TEGNET. 6.91  
25-1-65

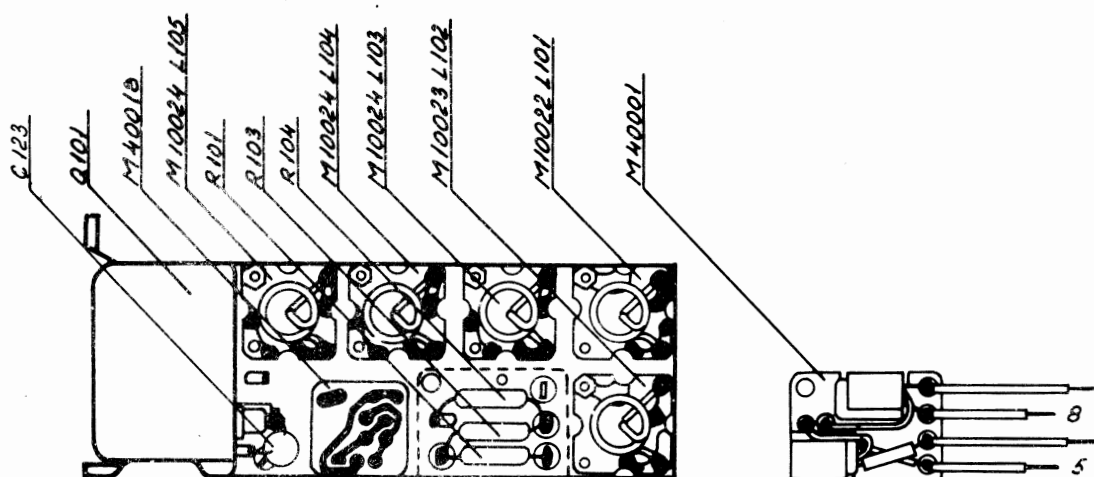
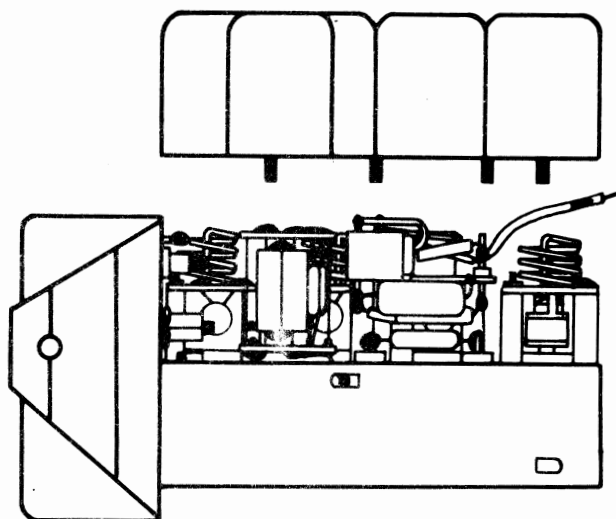
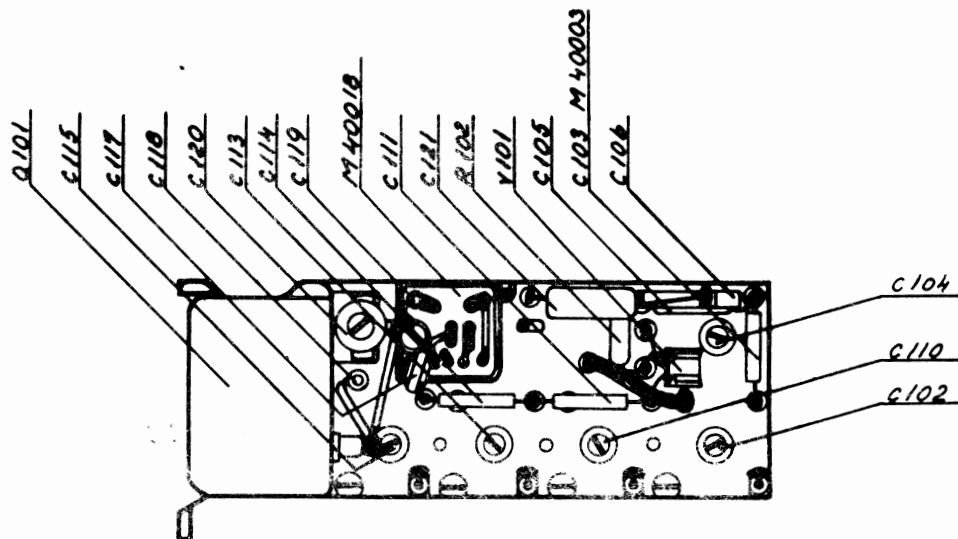
KONTR. R  
30-11-65

GODP. ~~25-1-65~~



RF - Unit 06  
Unit 1

100.1  
 123 210  
 21-10-65  
 GRL  
 M40000  
 1st. of M  
 10018  
 3409  
 21-9-67N



RF-Unit P6

Unit 1

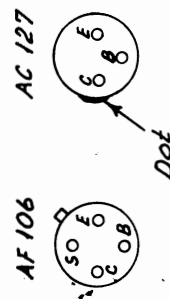
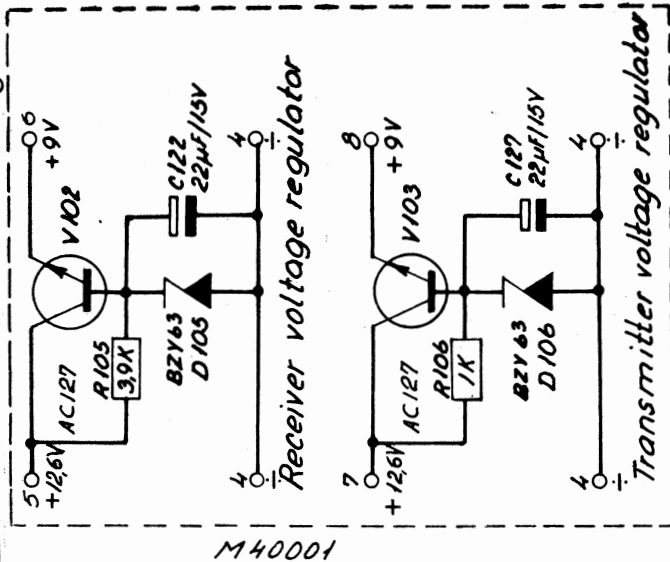
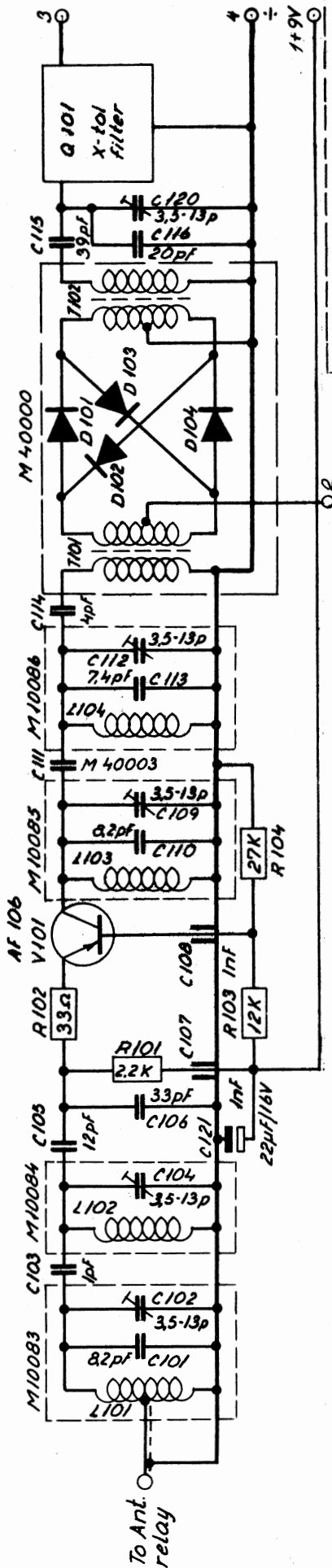
Standard Electric A/S

KØBENHAVN

4 BLADE

BLAD 4 0000-250-0001

UDG. 1  
 1-12-65 G.R.L.  
 C127 E11F  
 R.106  
 28-12-65 G.R.L.  
 D105-D106  
 K.K. ZF 9.1  
 31106  
 4-2-66



74-88 Mc/s

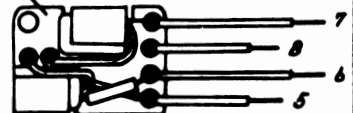
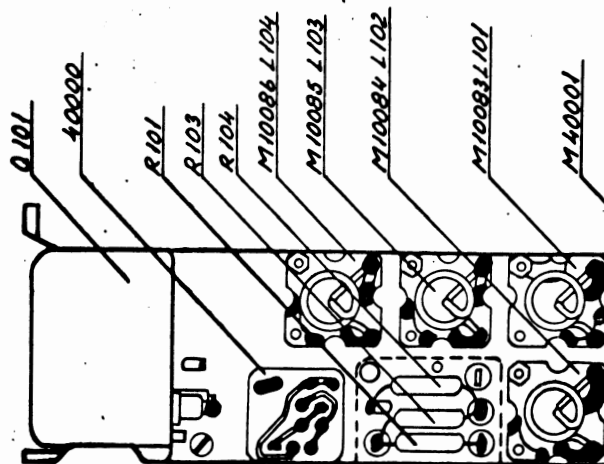
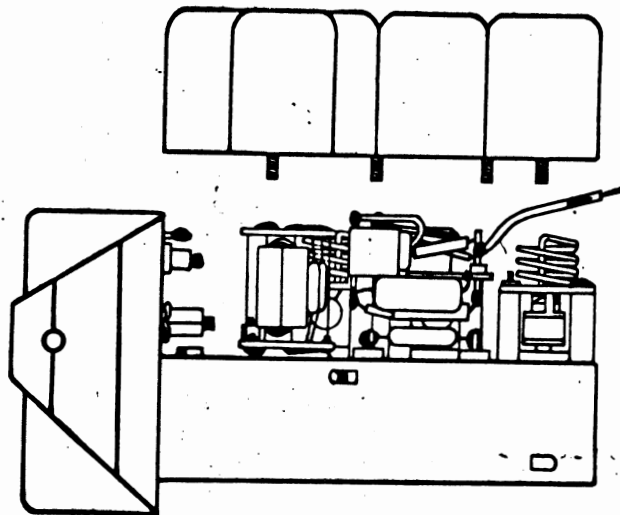
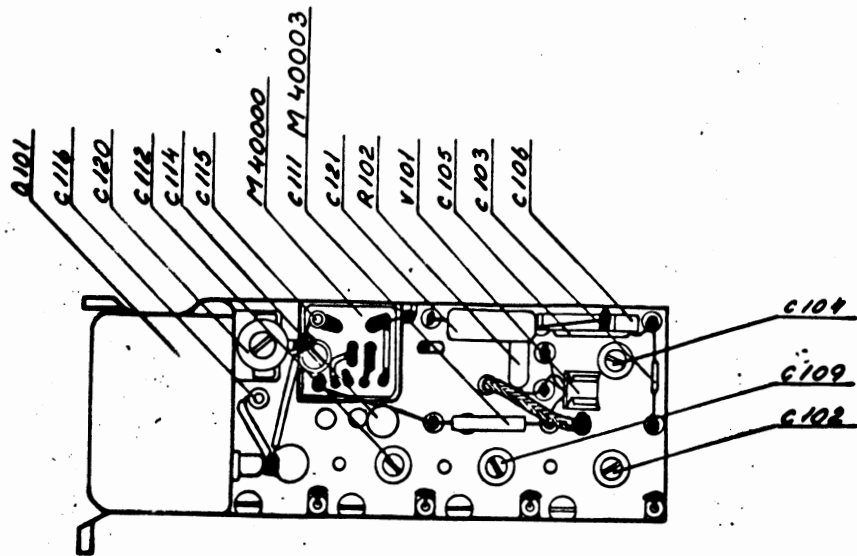
**RF-Unit P6**  
 Unit 1

TEGNET. G.R.L.  
 8-4-65  
 KONTR.  
 30-11-65 R  
 GODK.

**Standard Electric A/S**

KØBENHAVN

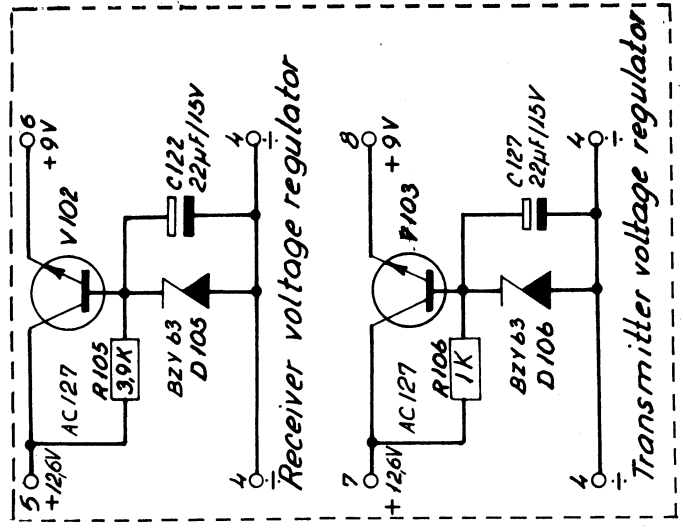
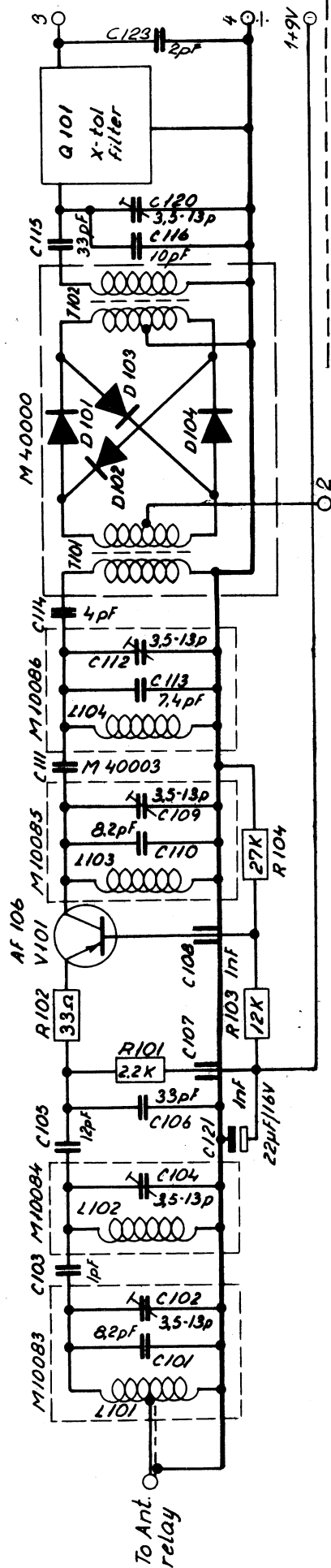
5 BLADE  
 BLAD 4 0000-425-0001



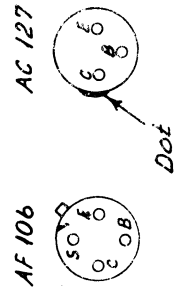
74-88 Mc/s  
RF-Unit P6  
Unit 1



UDG. 1  
C123 diff.  
2. Udg.  
21-10-65 G.R.L.  
R106 kv  
3,9K  
3. Udg.  
1-12-65 G.R.L.  
C127 diff.  
4. Udg.  
28-12-65  
G.R.L.  
D105-D106  
K.V. ZF 9.1  
5. Udg.  
4-2-68



M 40001



74-88 Mc/s

RF-Unit P6

Unit 1

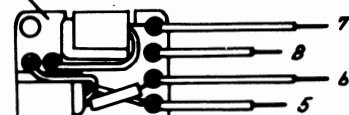
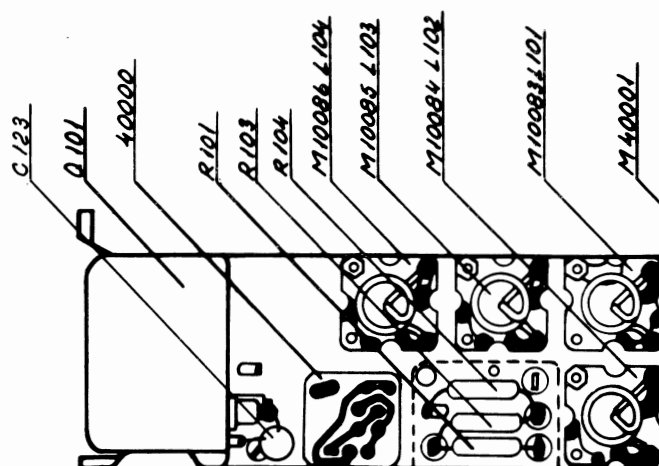
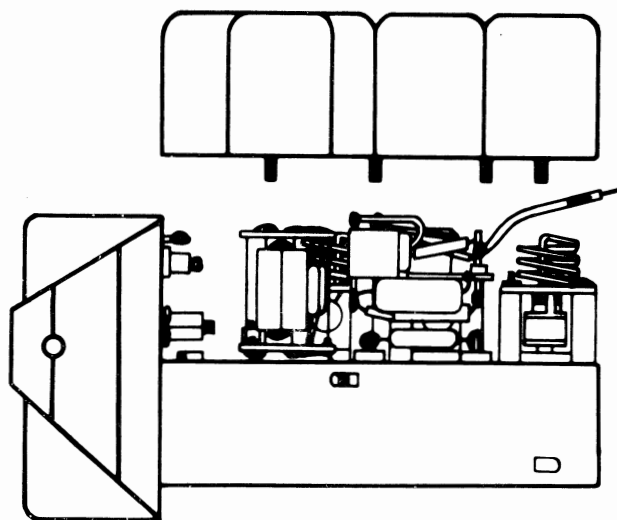
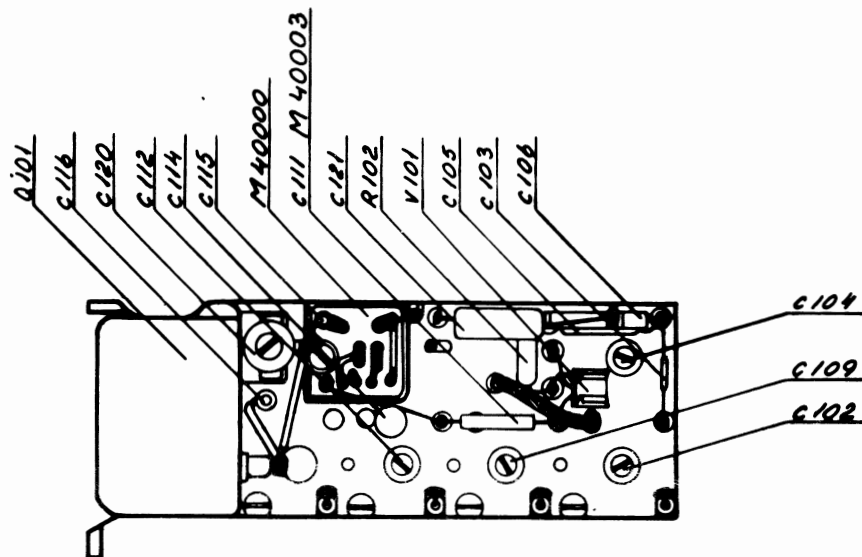
TEGNET: G.R.L.  
8-4-65  
KONT.  
30-11-65  
GODK.

Standard Electric A/S

KØBENHAVN

5 BLADE  
BLAD 4 0000-450-0001

Udg. 1  
C123 tilf.  
24.09.  
29-10-65  
S. GAL



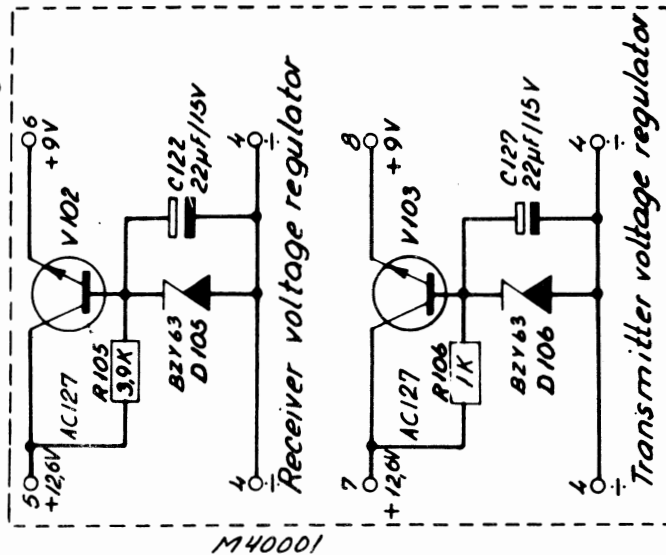
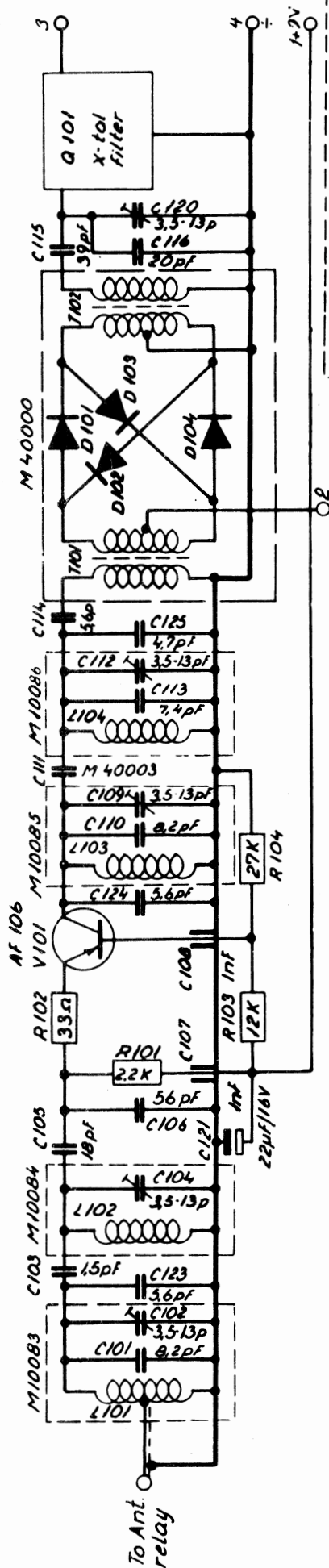
RF-Unit P6  
Unit 1

TEGNET. M. J.  
25-0-65  
KONTR  
30-11-65 R  
GODK.  
J. J. J.

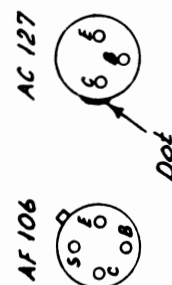
Standard Electric A/S

KØBENHAVN

5 BLADE  
BLAD 5 0000-450-0001



M40001

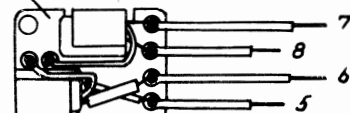
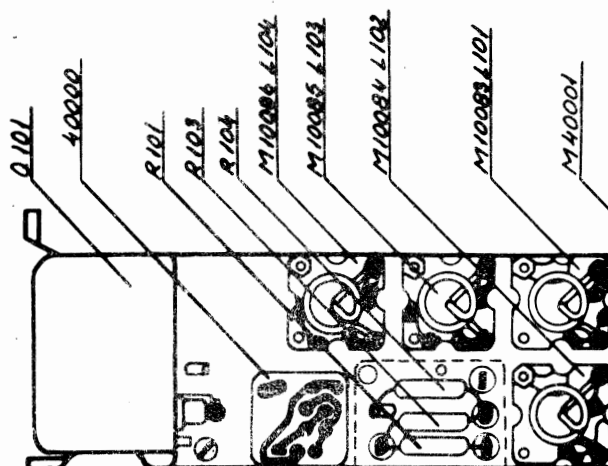
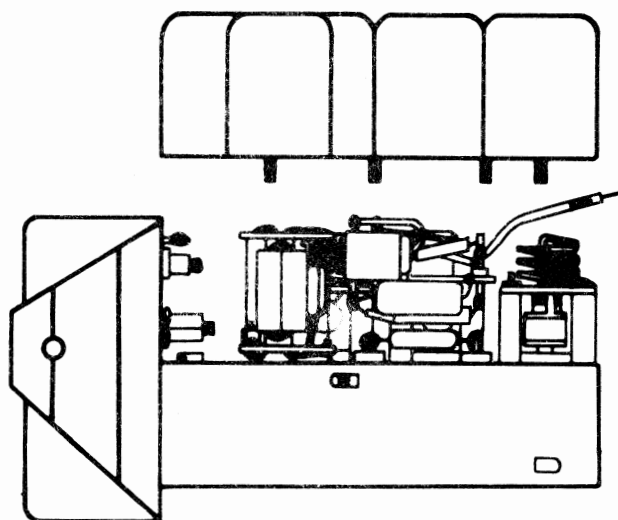
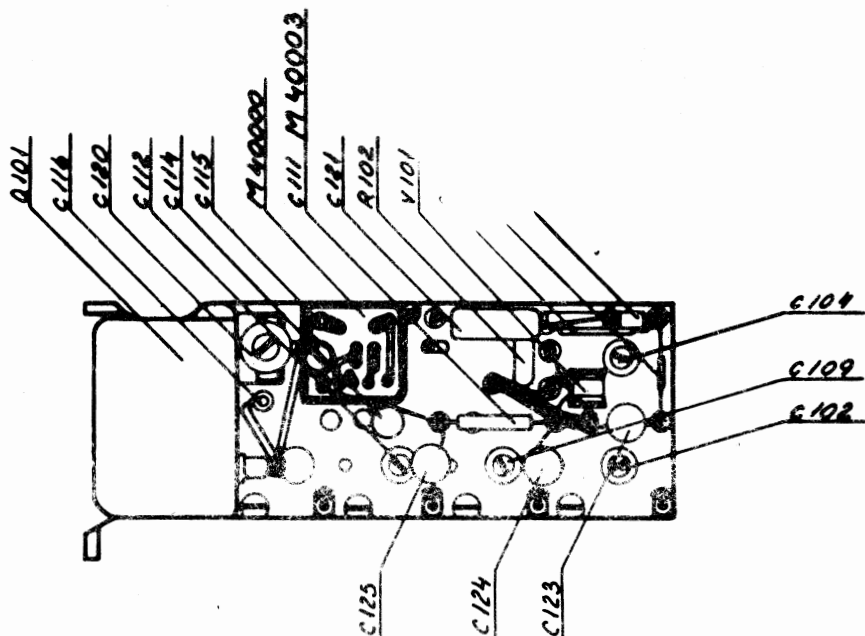


68-78 Mc/s

RF-Unit P6  
Unit 1

**Standard Electric A/S****KØBENHAVN**

5 BLADE  
BLAD 4 0000-525-0001



68-78 Mc/s

RF-Unit P6

Unit 1

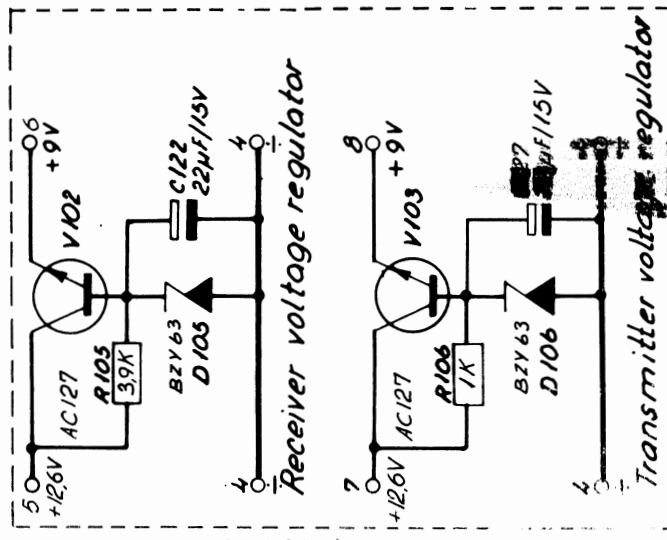
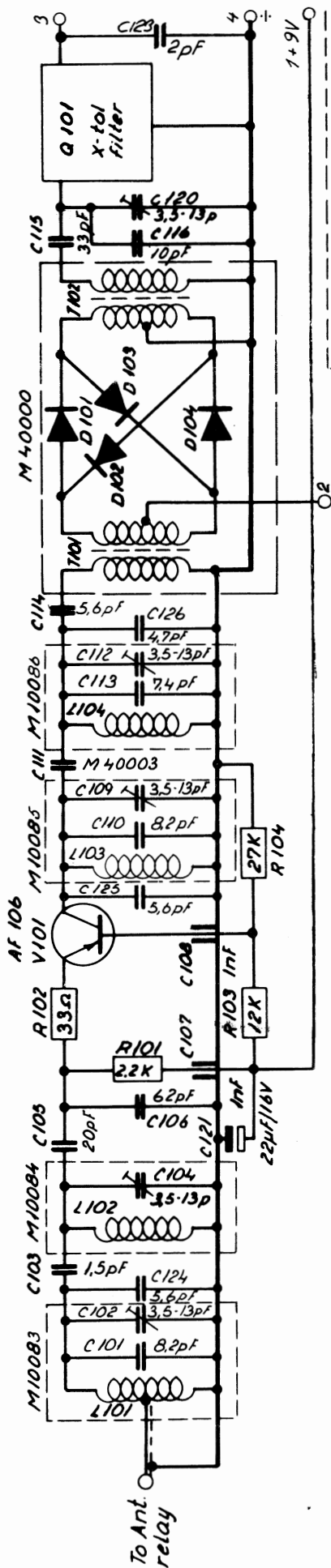
Standard Electric A/S

KØBENHAVN

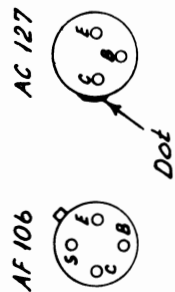
5 BLADE  
BLAD 5 0000-525-0001



DG. 1  
 12-65  
 GRL  
 127 Lili.  
 2. Udg.  
 28.12.65  
 GRL  
 D105  
 1106 V. KZF91  
 3. Udg.  
 4-2-66



M 40001



68-78 Mc/s

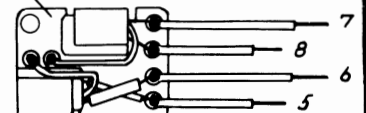
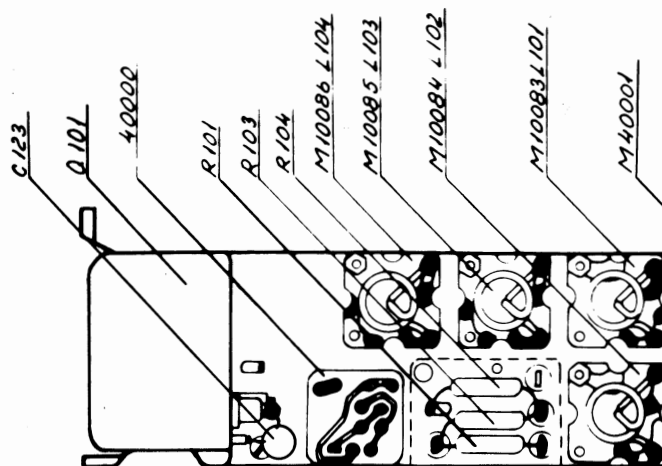
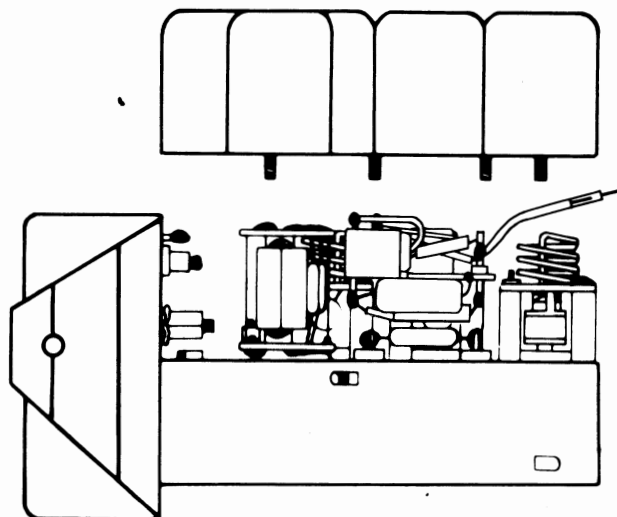
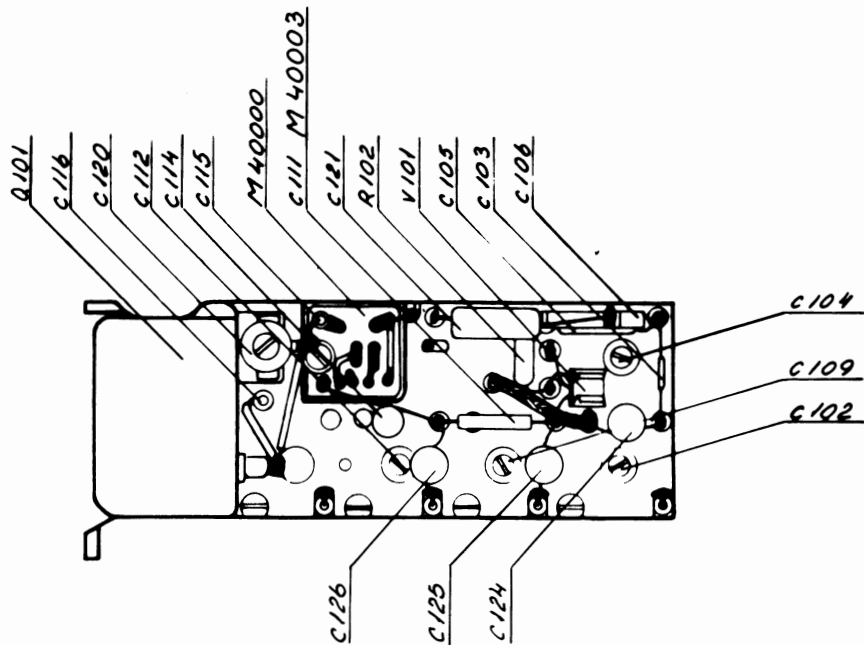
**RF-Unit P6**  
Unit 1

REGNET. GRL  
 4-65  
 ONTR.  
 0.11.65  
 00K.

**Standard Electric A/S**

KØBENHAVN

5 BLADE  
BLAD 4 0000-550-0001

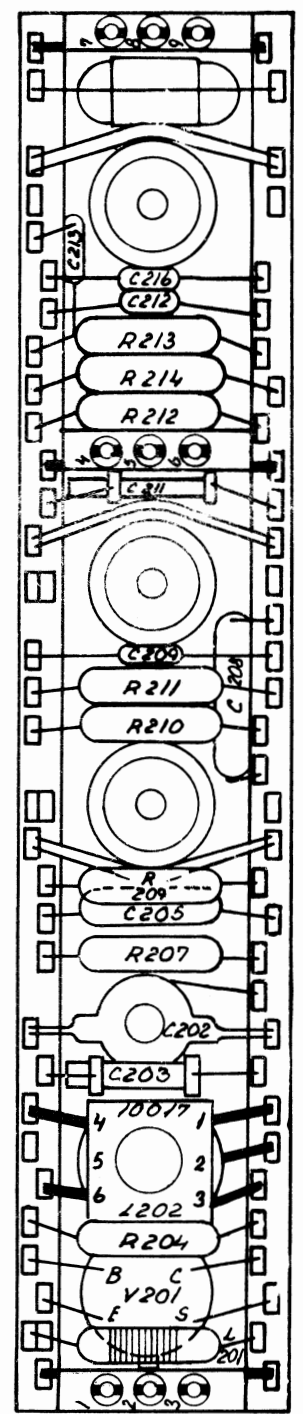
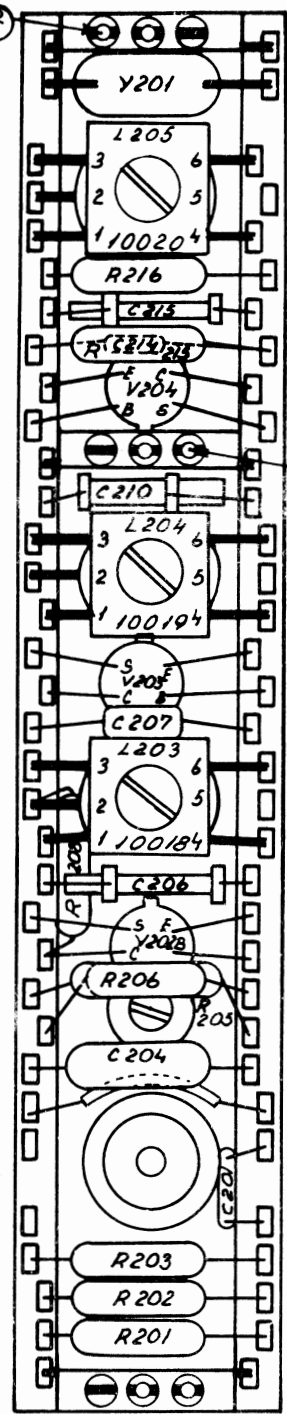
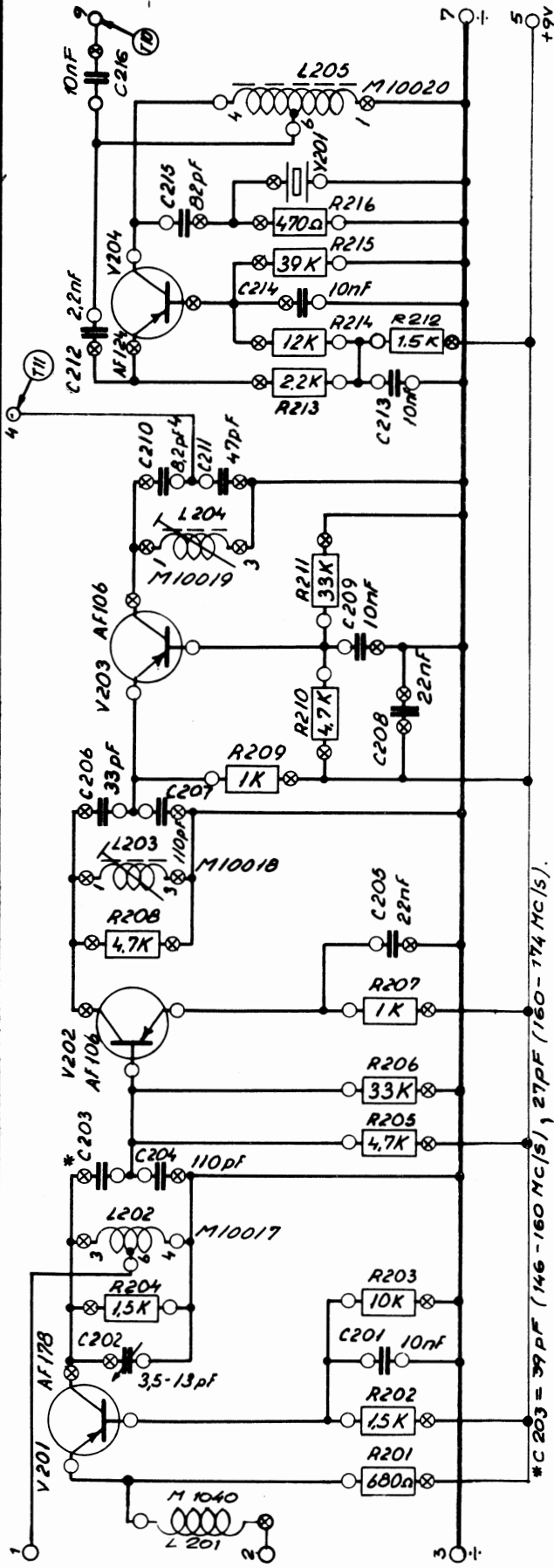


68-78 Mc/s

RF-Unit P6

Unit 1

1. 1  
 V-65A  
 23 (146-  
 7Mc/s) VV.  
 0F  
 2 Udg  
 2-65G R!  
 27kV / 1.  
 0pF  
 3 Udg  
 2-66  
 15pF  
 3.5-13pF  
 4 Udg GJ  
 6-66  
 slp. tilf.  
 5 Udg GJ  
 6-66 R  
 channel  
 slott.  
 1 Udg. UL  
 9-66  
 7 Udg.  
 06.27-  
 3pF  
 67 AL.



Seen from  
 the top

Seen from  
 the bottom

RX-OSC 182 2m

Unit 2

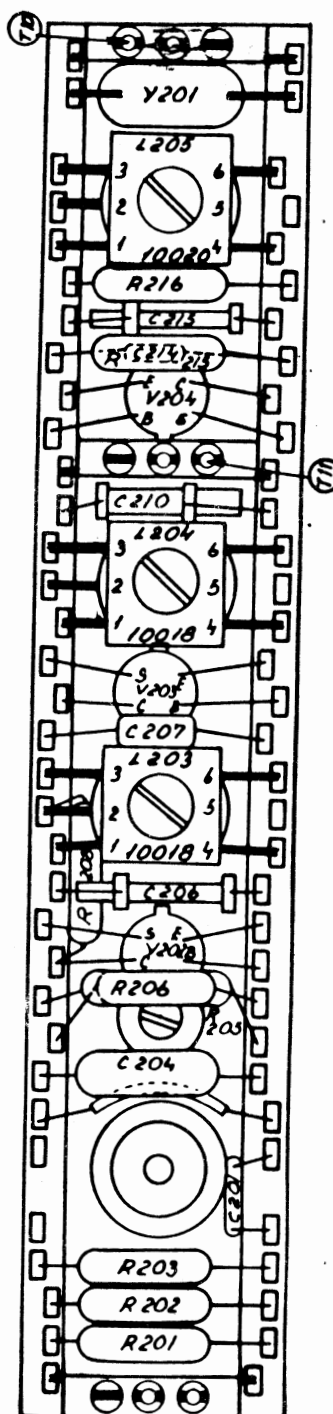
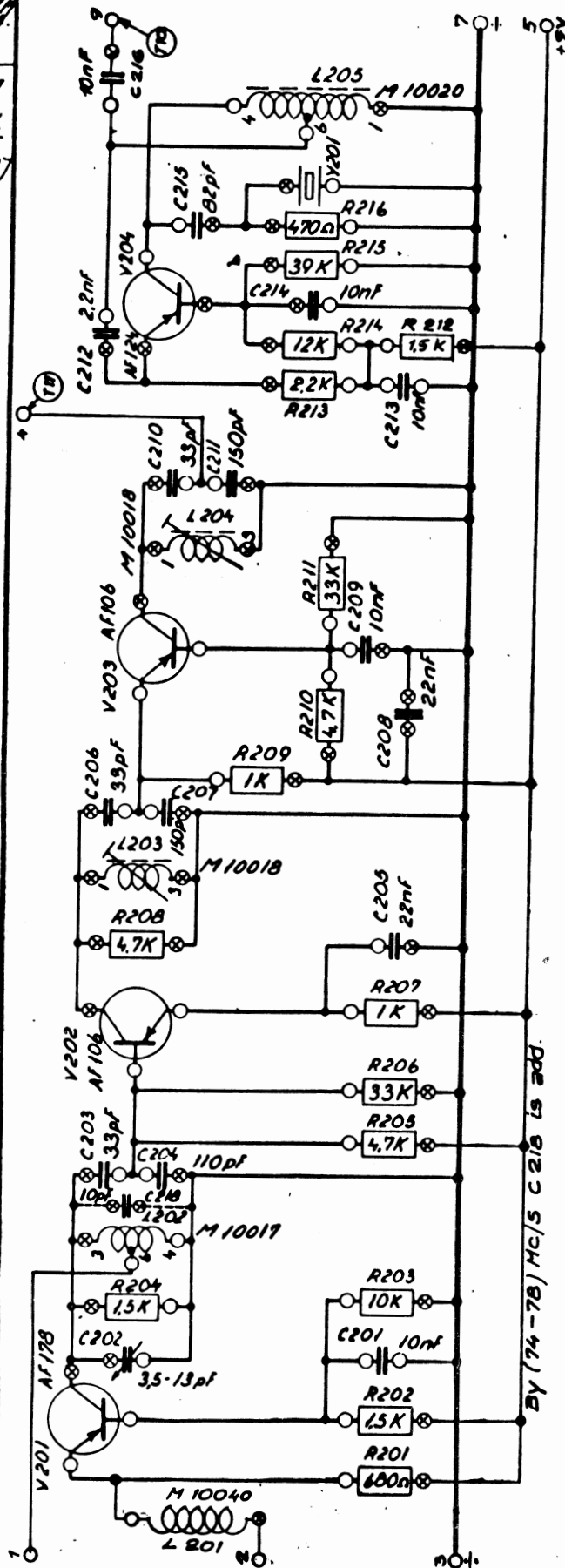
Standard Electric A/S

KØBENHAVN

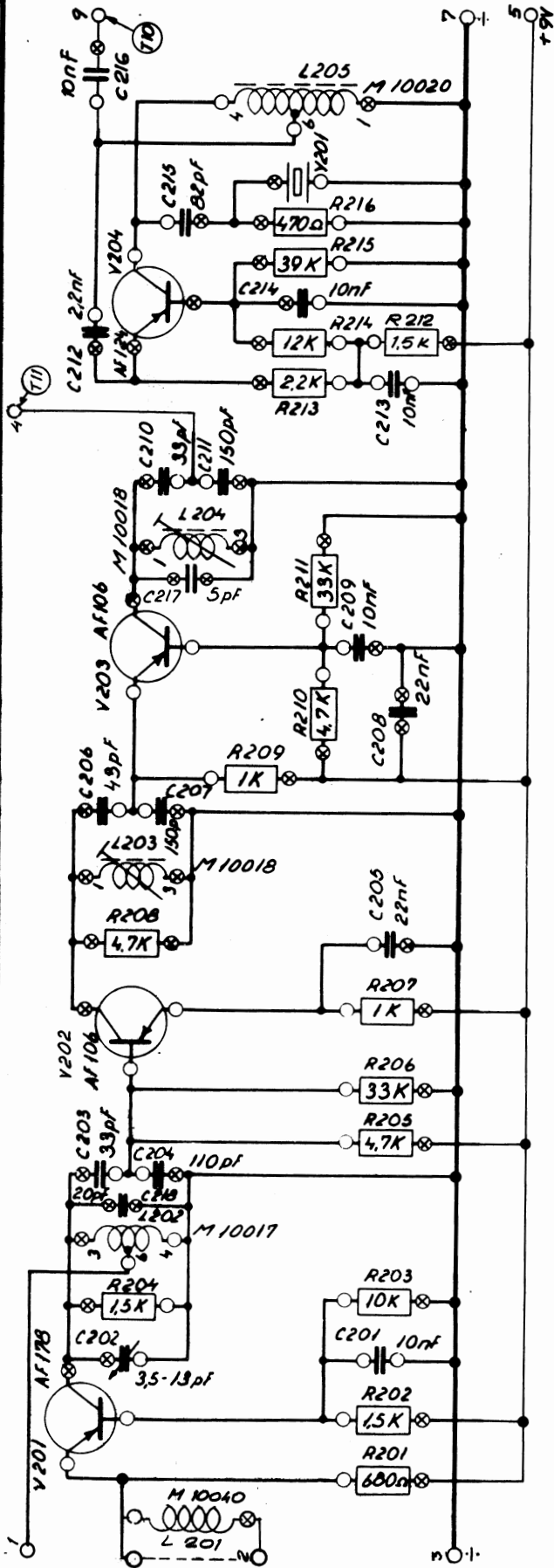
4 BLADE  
BLAD 3 0000-200-0001

GNET. GRL  
 1-65  
 ONTR.  
 1-65 S X2  
 ODK.  
 1-65

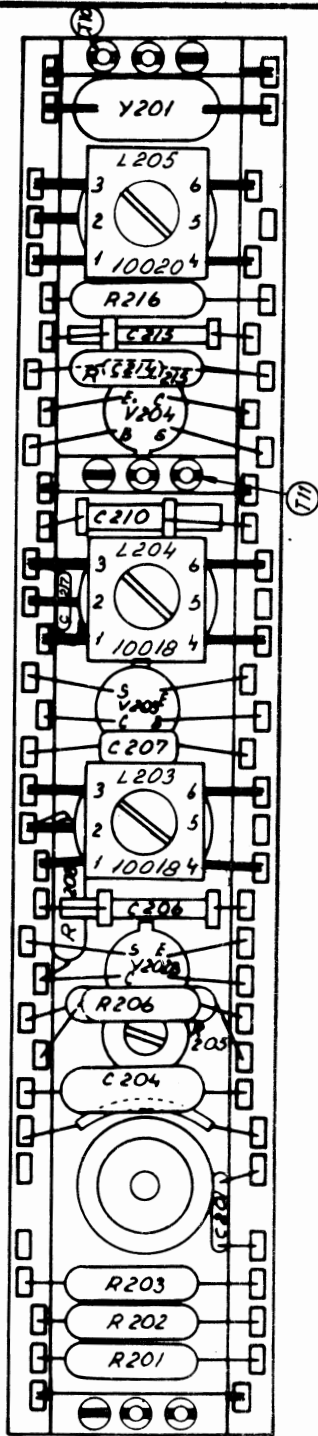
G.1  
11-65  
15pF  
3.5-13pF  
2.000 G7  
6-66  
hand s.s. 2  
3.00g  
1-9-66 G7



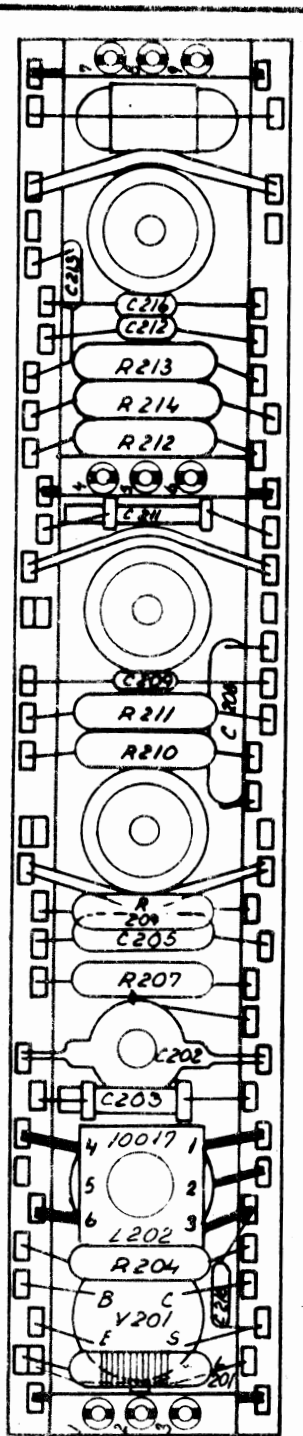
UDG. 1  
 8-11-65  
 3.5-15pf  
 vx 3.5-13pf  
 2. Udg. GJ  
 10-6-66 KJ  
 10 channel  
 slott.  
 3. Udg. UL  
 4-10-66  
 4 UDG.  
 8-11-67-4.



L 201 is to be shorted when a coil is placed on the channel selector (as in TransITT. 8.



Seen from the top



Seen from the bottom

68-74 Mc/s

RX-OSC 182 5m.

Unit 2

BLADE 0000-500-0001  
 BLAD 4

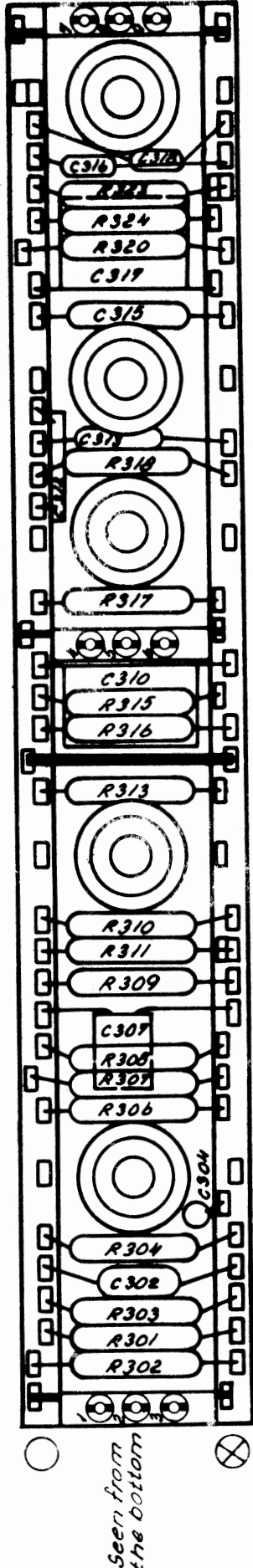
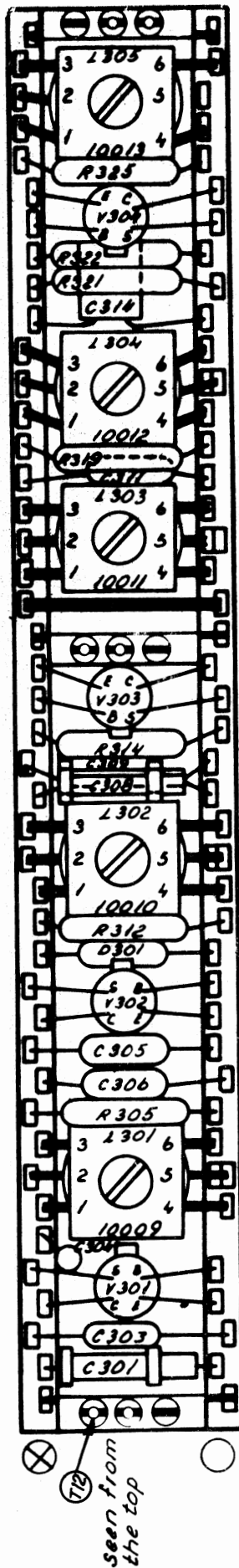
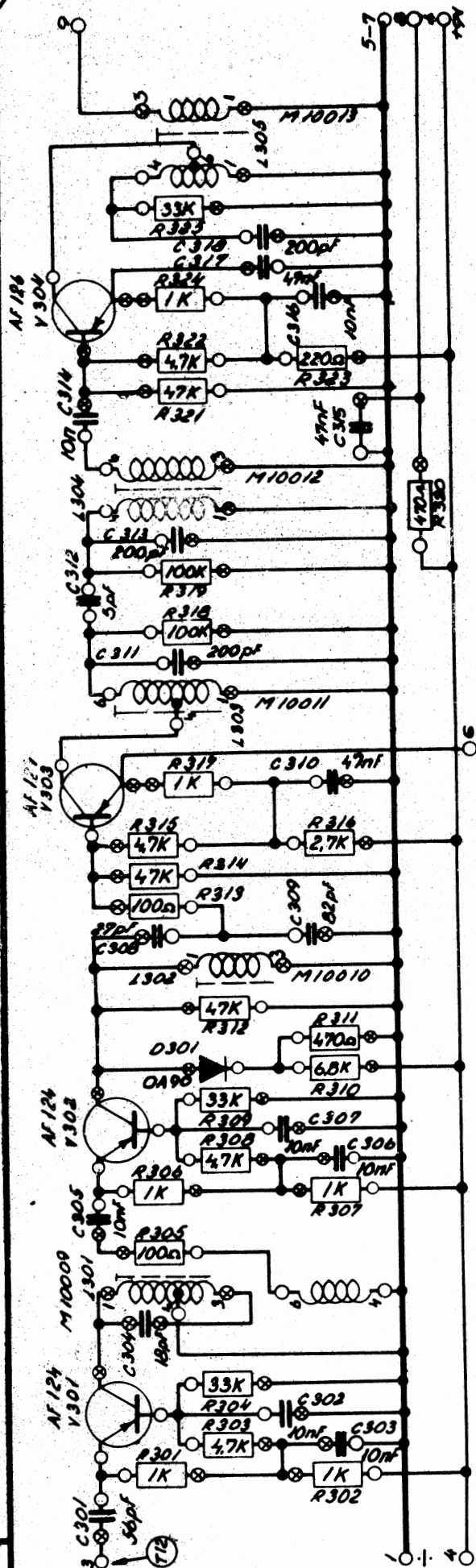
Standard Electric A/S

KØBENHAVN

TEGNET. GRL  
 15-1-65  
 KONTR.  
 8-1-65  
 GODK.



K6.1  
 9-11-65  
 316 CRL  
 1.47nF  
 2440  
 7-3-66  
 302 v.v.  
 303 v.v.  
 12 mont.  
 247n.  
 3449.4L  
 0-9-66.



I.F. UNIT

Unit 3

TEGNET  
 22-11-65  
 KONTR.  
 22-11-65  
 G.

Standard Electric A/S

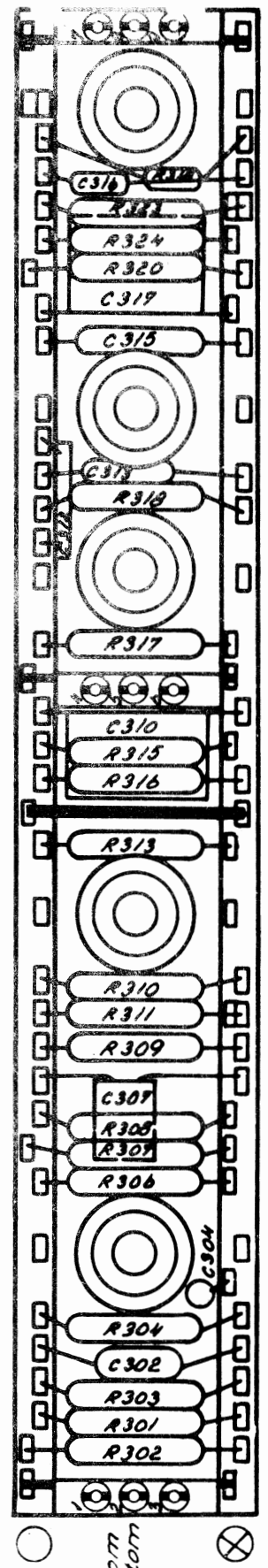
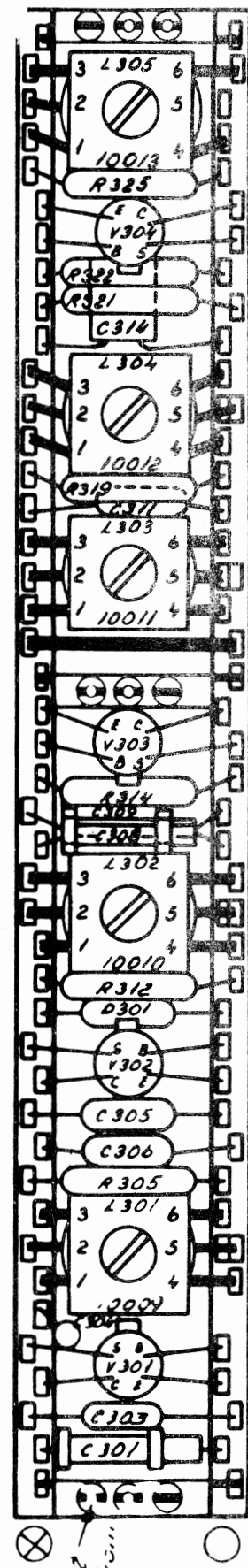
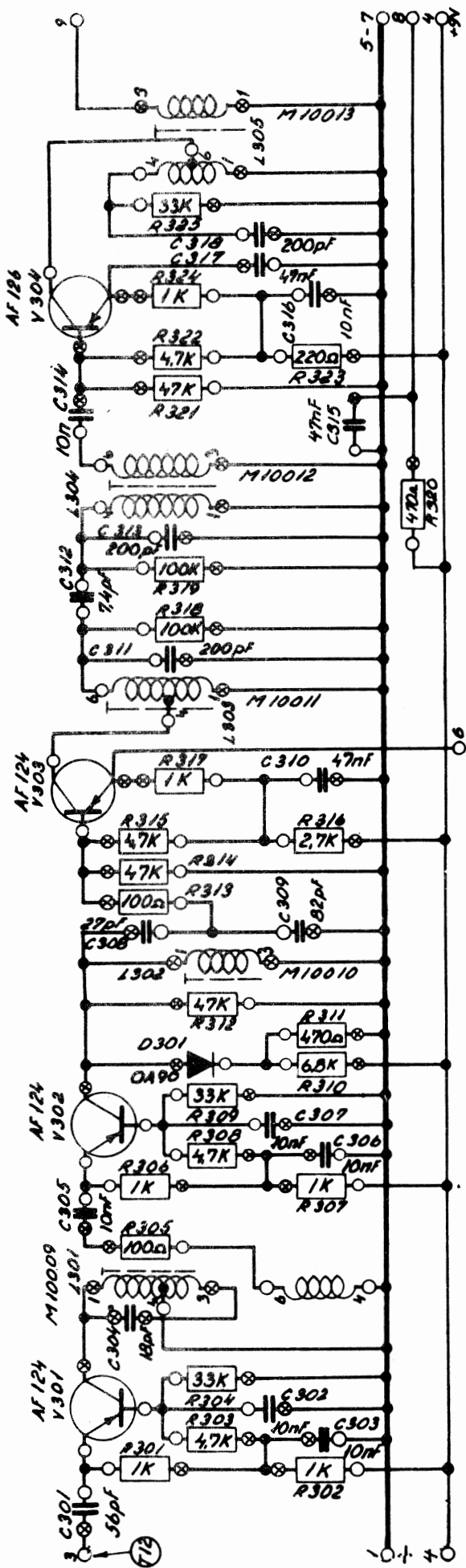
KØBENHAVN

5 BLADE

BLAD 4

0000-020-0001

-11-65  
 16 v.v.  
 2.46p  
 3-86  
 step till  
 5.40p  
 2-6-66  
 302 or  
 effect t/l  
 403 i  
 101tage  
 eqn.  
 11dy. 4L  
 1-9-66  
 503 v.v.  
 mont.  
 eqn.  
 5.40p 4L  
 0-9-66



I.F. UNIT

Unit 3

GNET 4-1  
 12-64

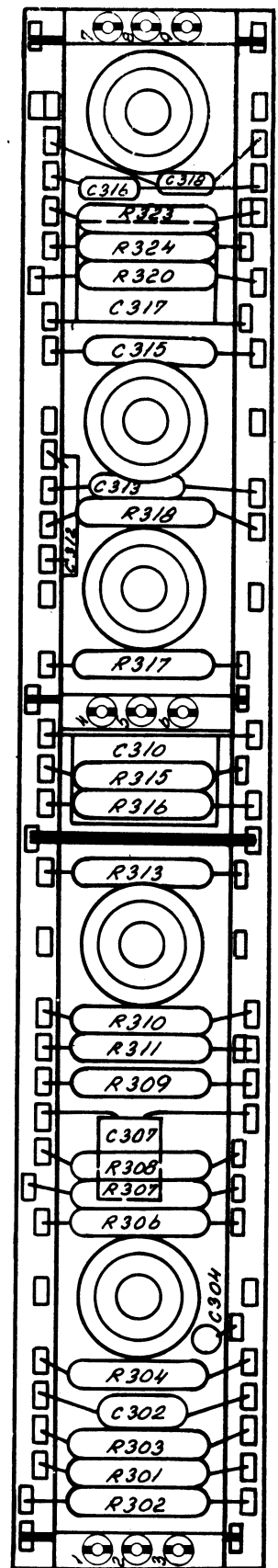
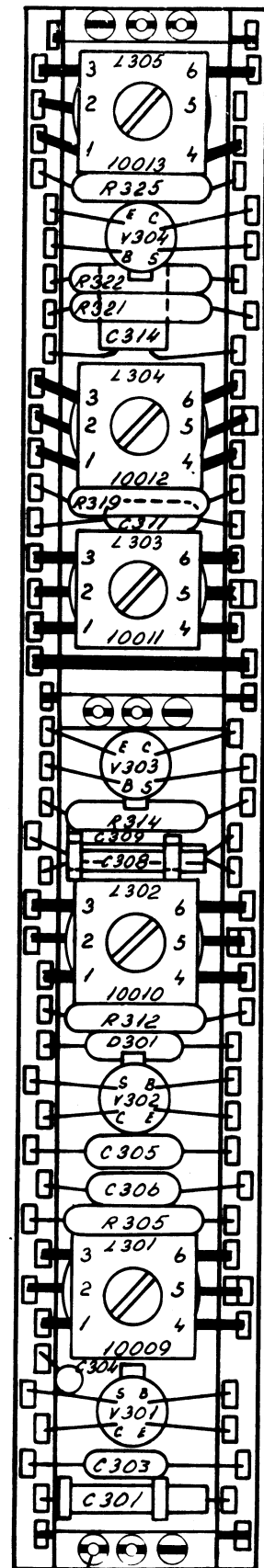
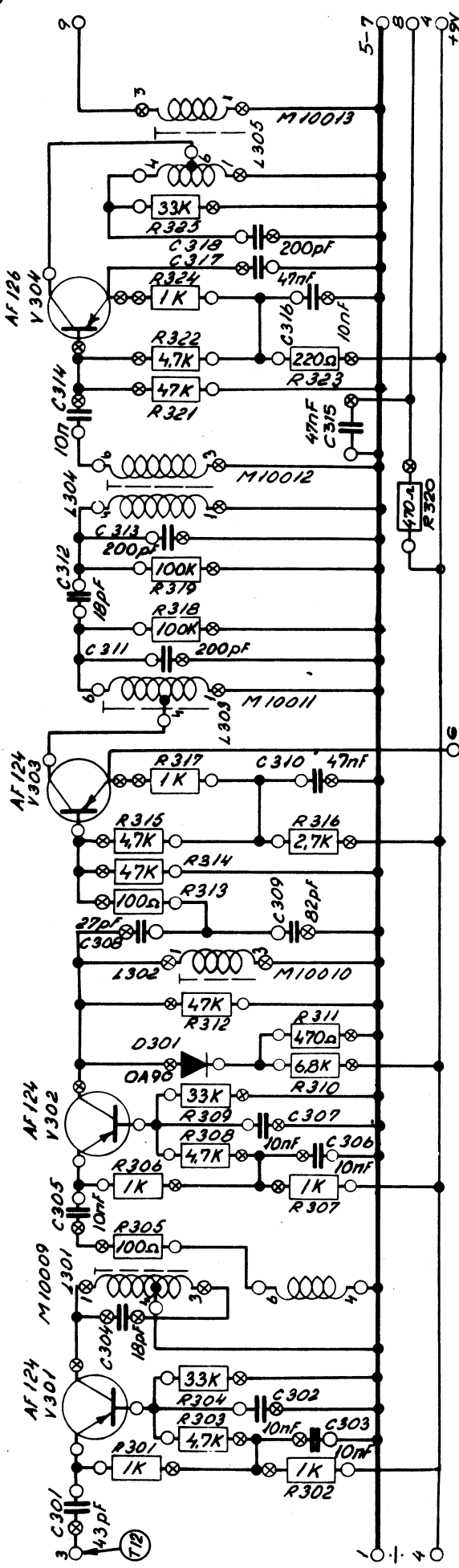
INTR.  
 1-14R  
 PK.

Standard Electric A/S

KØBENHAVN

4 BLADE  
 BLAD3 0000-025-0001

UDG. 1  
 17-11-65  
 C316 v.v.  
 47nF dff.  
 24d9.  
 17-3-66  
 R  
 C302 v.v.  
 C303 v.v. på  
 mont. tegn.  
 34d9.  
 20-9-66



I.F. UNIT

Unit 3

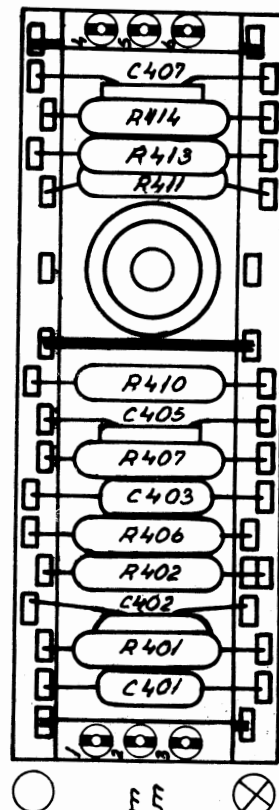
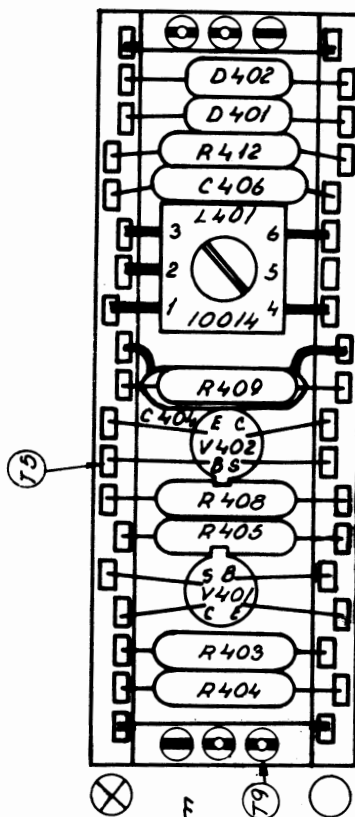
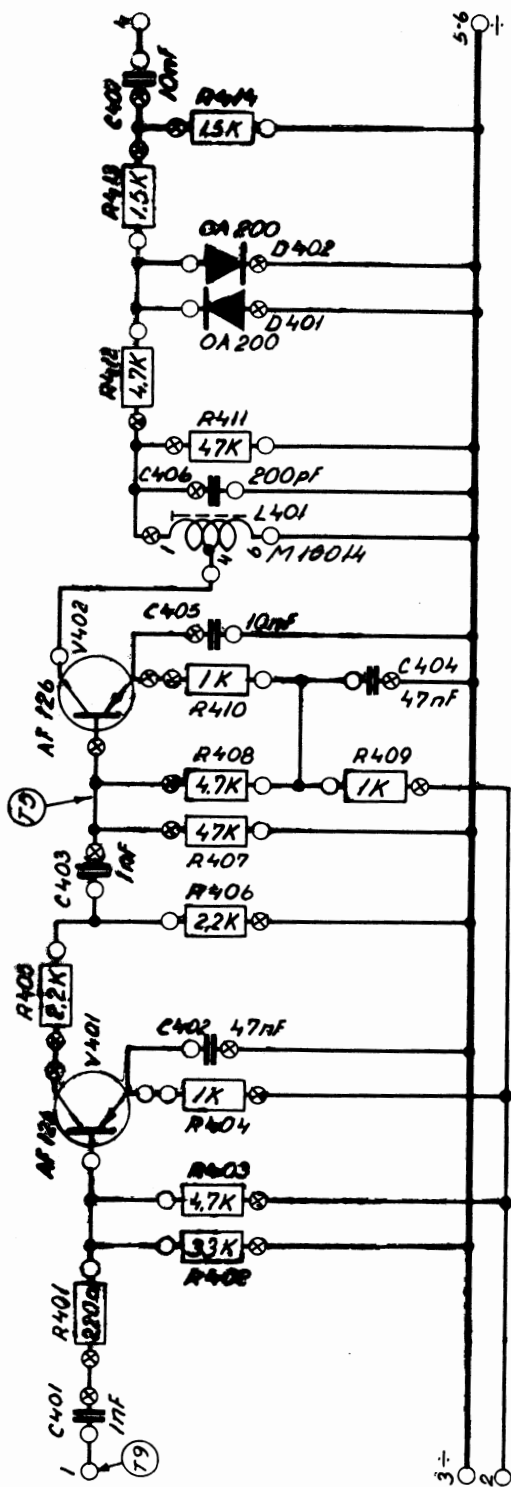
Standard Electric A/S

KØBENHAVN

4 BLADE  
 BLAD 5 0000-050-0001

TEGNET 23-12-64  
 KONTR.  
 15-11-65  
 GØDK.

11-65  
2.409  
7-6-66 GJ



Unit 4

Limiter

Standard Electric A/S

KØBENHAVN

3 BLADE  
BLAD

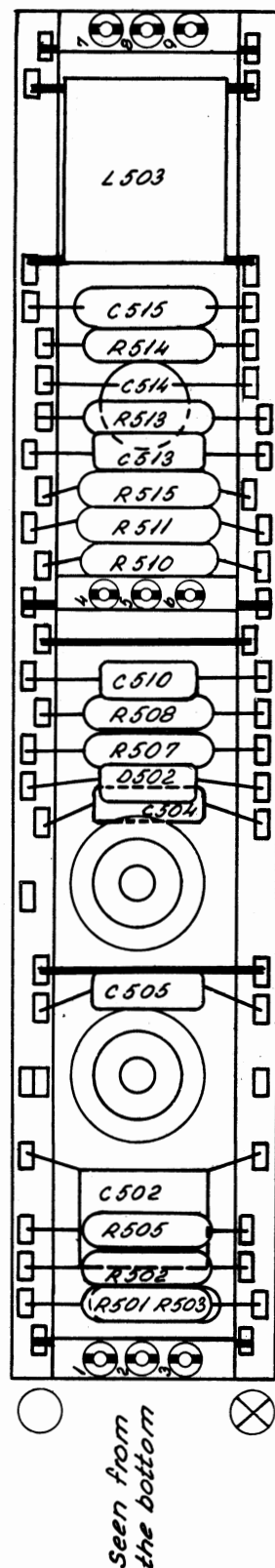
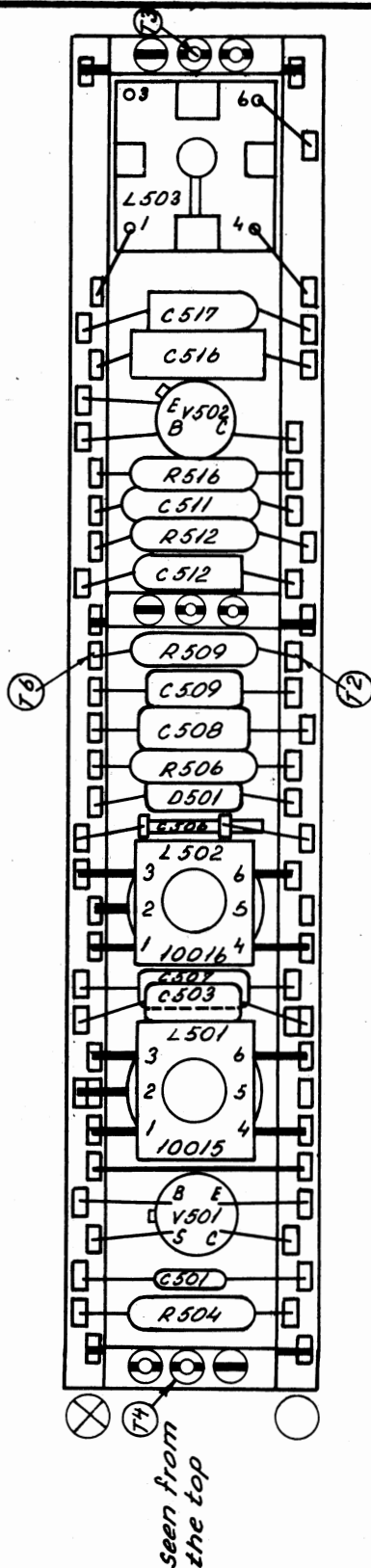
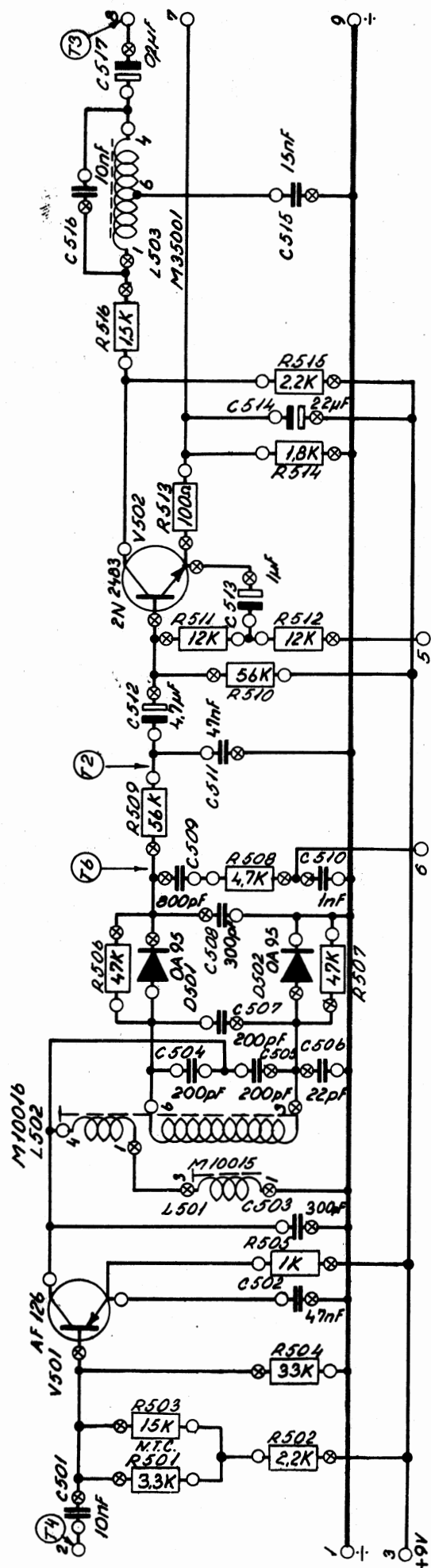
0000-000-0001

REGNET  
14-1-65 G.R.L.

KONTR. R.  
15-11-65

GODK.

UPG. 1  
21.9.66 GJ  
C517 v.v. 47pF  
2. Udg.  
3.10.66 GJ  
C517 v.v. 47pF  
3. Udg.  
21.10.66 GJ  
Tak nr. C514  
er flyttet  
4. Udg. 41.  
29-1-67



Discr.+AF

Unit 5

Standard Electric A/S

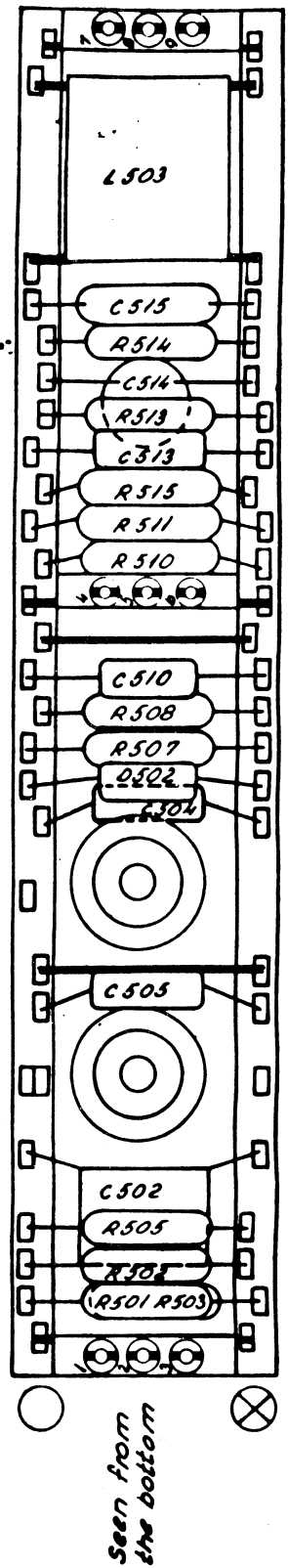
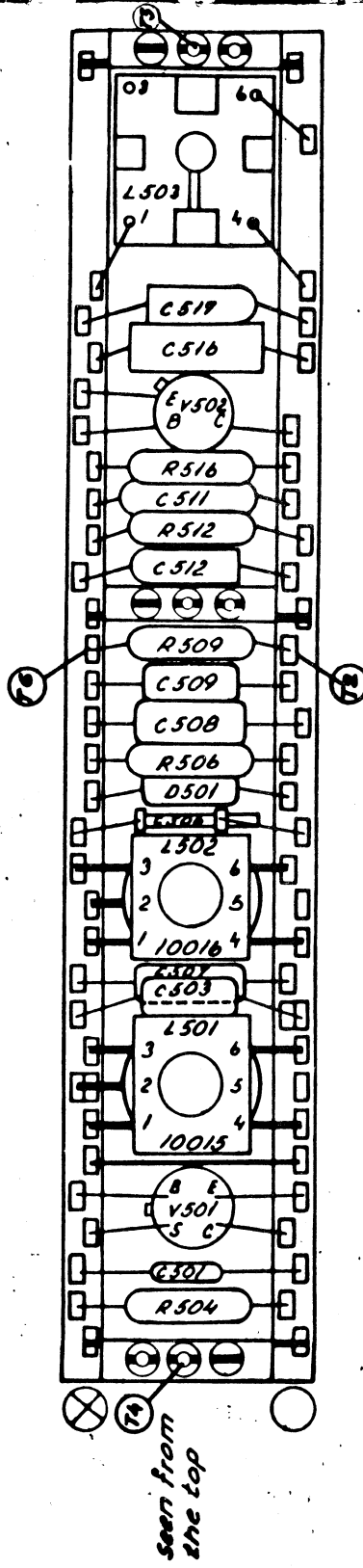
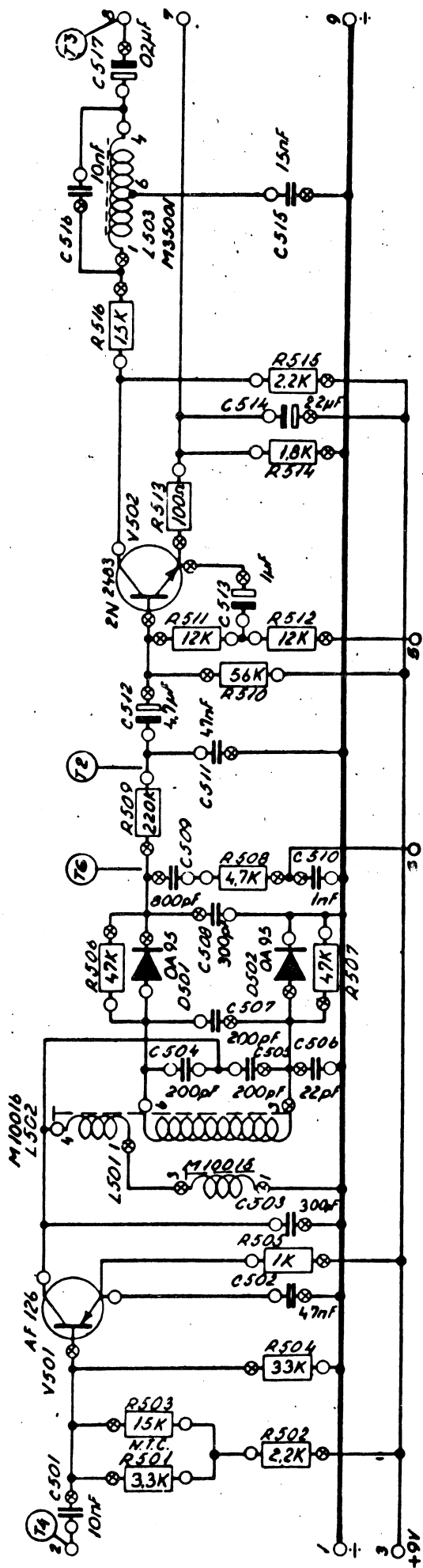
KØBENHAVN

5 BLADE  
BLAD 4 0000-025-0003

TEGNET. GJ  
21.9.66  
KONTR. A

GABK.

11-9-66 GJ  
 517 v.v. 4/4  
 2Udg  
 10-66 GJ  
 517 v.v. Qkd  
 3 Udg. 2.2  
 v. 11-66.  
 6A C514 or  
 lykket m. var  
 tre.  
 4 Udg. U.L.  
 14-1-67.



Discr. + AF

Unit 5

3NET. GJ  
 9-66  
 NTR  
 OK.

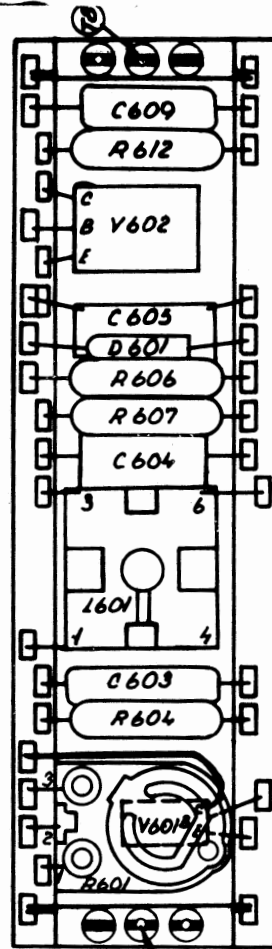
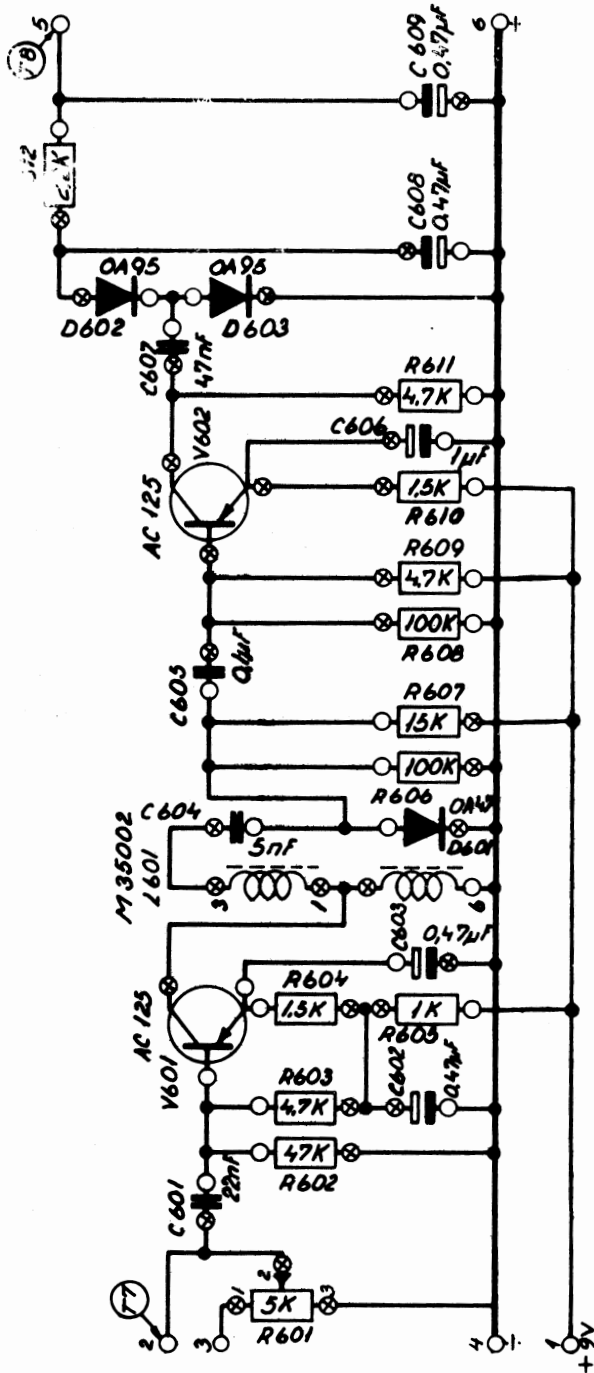
Standard Electric A/S

KØBENHAVN

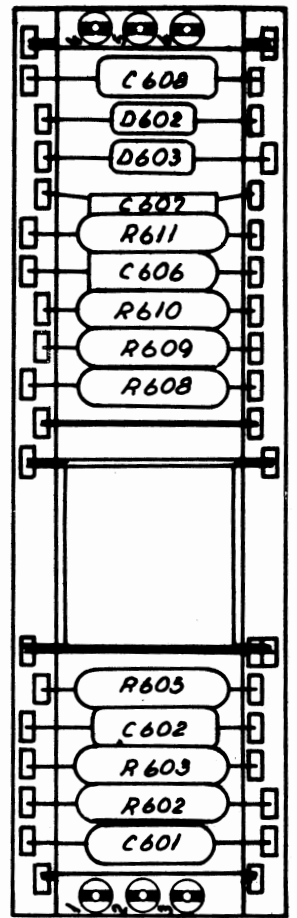
3 BLADE  
BLAD 0000-050-0003



109. 07  
23



Seen from the top



Seen from the bottom

Unit 6

Squelch

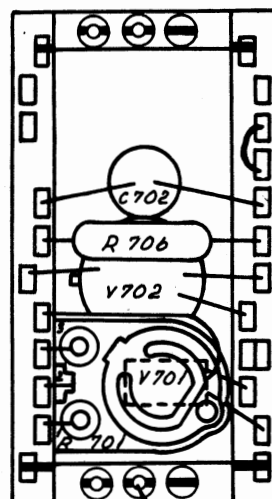
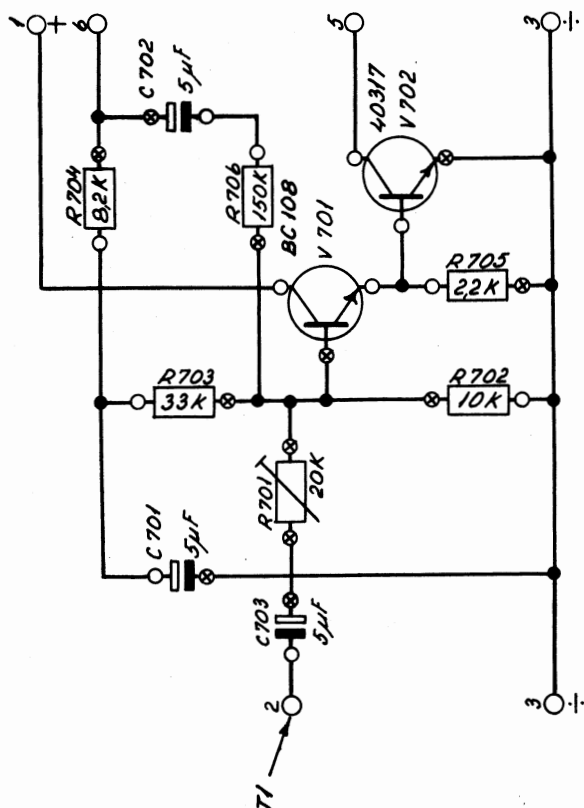
TEGNET. GR.  
18-1-65  
KONTR. N.  
42-1-66  
GOM

Standard Electric A/S

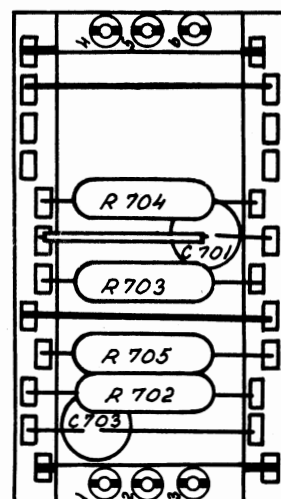
KØBENHAVN

4 BLADE  
BLAD3 0000-000-0002

UDG. 1  
27-1-66  
Test af  
Lil.  
2. Udg.  
20-6-66  
Stop tilf.  
3. Udg.  
12-10-66



seen from  
the top  
T1



seen from  
the bottom

AF-DRIVER

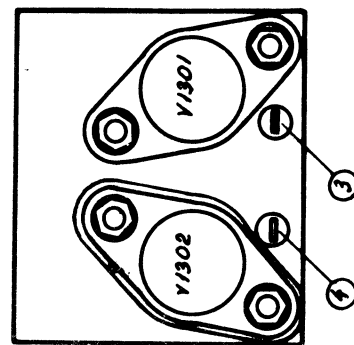
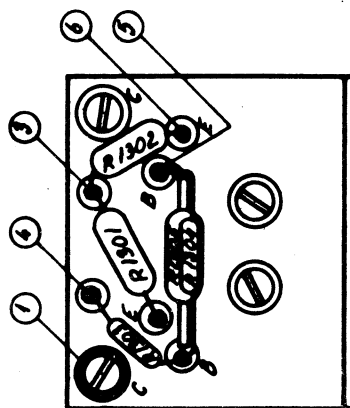
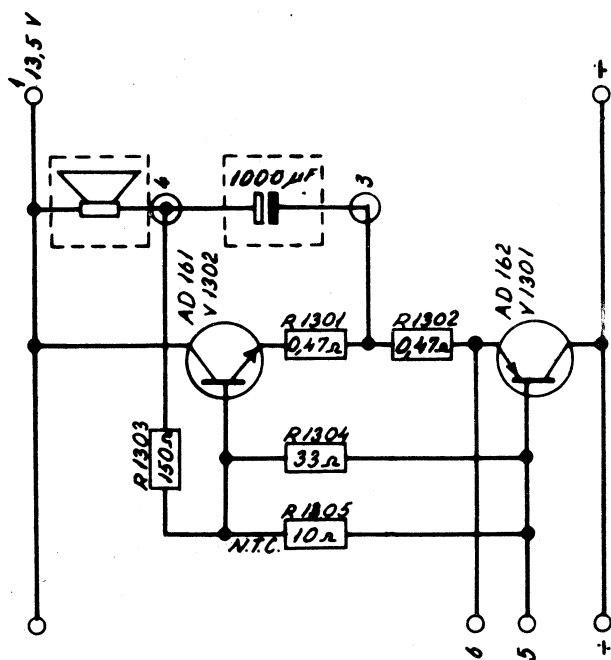
Unit 7

TEGNET. M.J.  
27-1-66  
KONTR.  
GODK.

Standard Electric A/S

KØBENHAVN

3 BLADE  
BLAD 2/200-000-0003



RX-PA

Unit 13

TEGNET. M.J.  
27-1-66

KONTR.

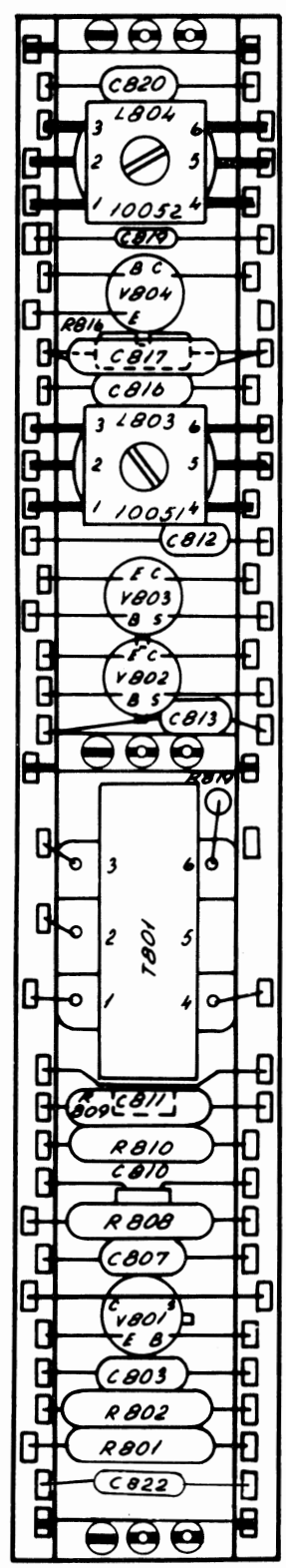
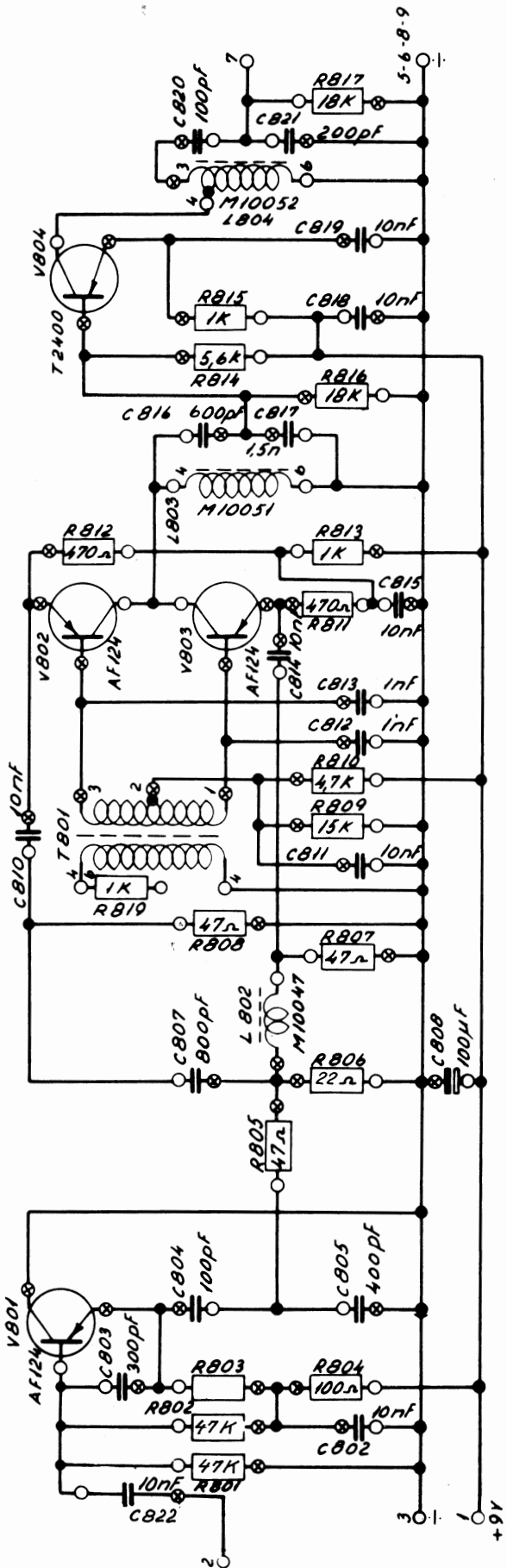
GODK.

Standard Electric A/S

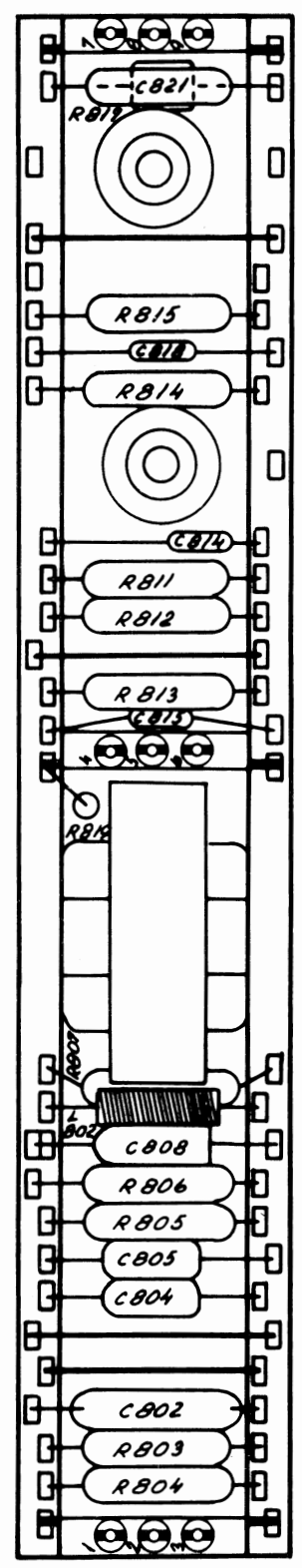
KØBENHAVN

BLADE  
BLAD 1240-000-0001

U.I.  
1-66  
22 V.V.  
20  
3449  
10-67



Seen from the top



Seen from the bottom

## 2m Tx-Osc. + Modulator

Unit 8

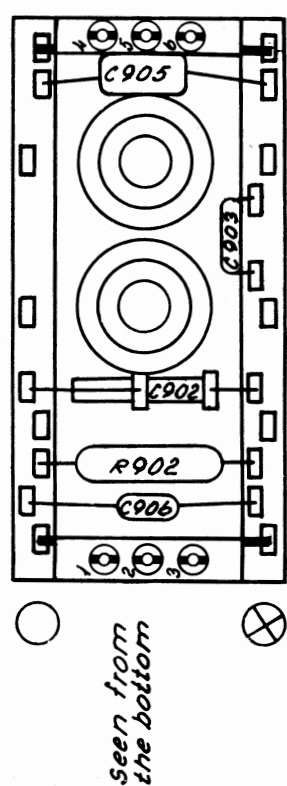
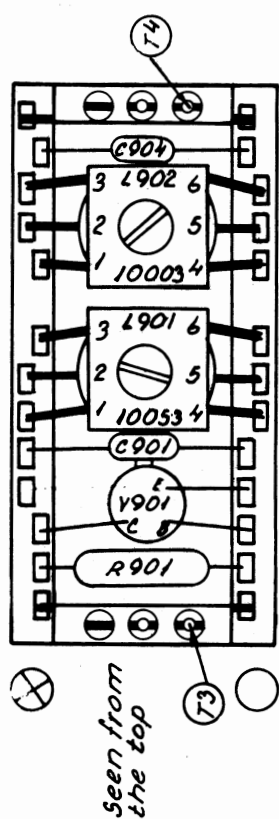
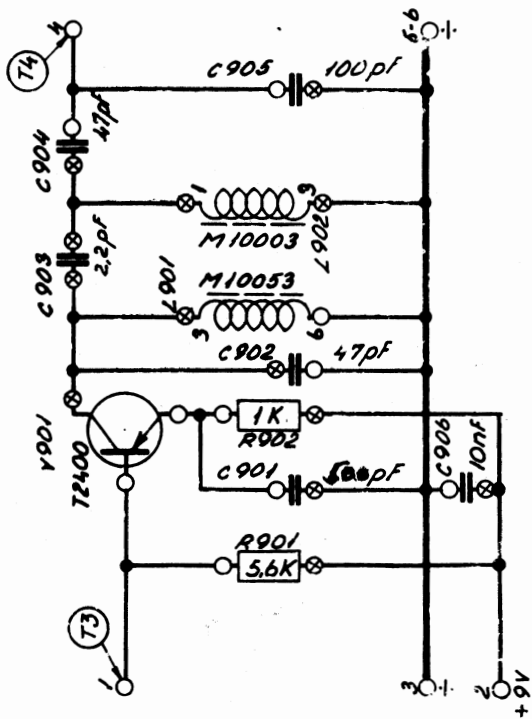
GNET. U.I.  
1-66  
DNTR:  
DOK.

Standard Electric A/S

KØBENHAVN

5BLADE  
BLADY 3000-200-0002

JDG.1  
 26-11-65  
 903 v.v.d.  
 15 pF  
 2 Udg.  
 25-2-66  
 Testp.  
 1/16  
 3. Udg.  
 20-8-66  
 ben på V901  
 fjernet.  
 4. Udg.  
 4-10-66. U.L.



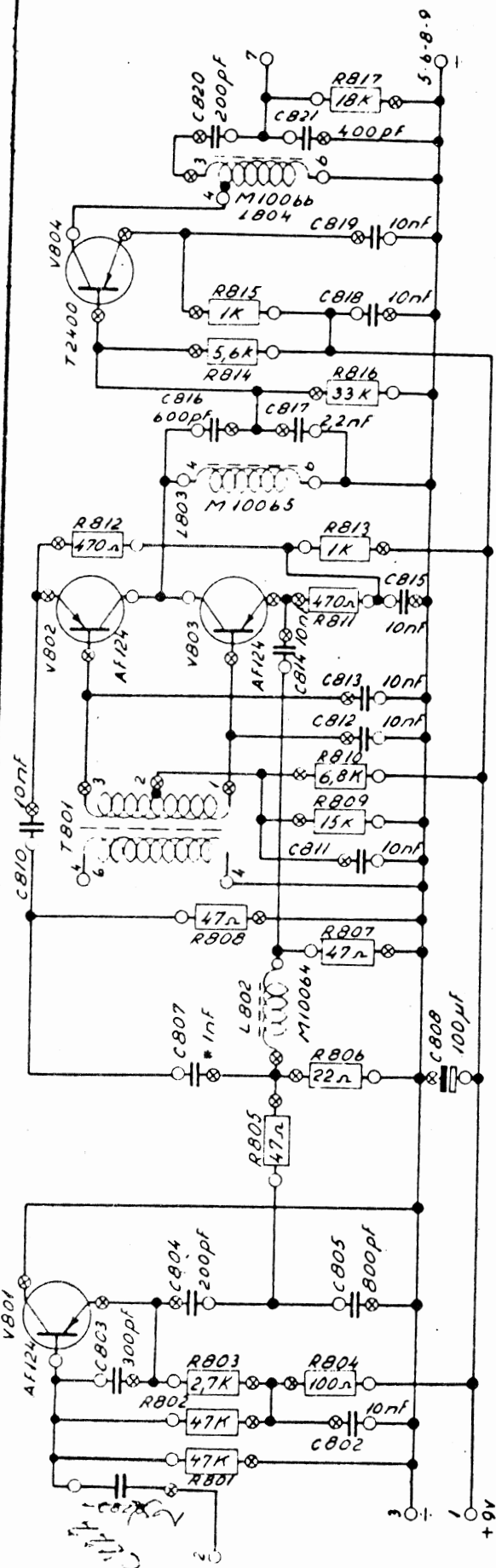
2m-1' Multiplier  
 Unit 9

Standard Electric A/S

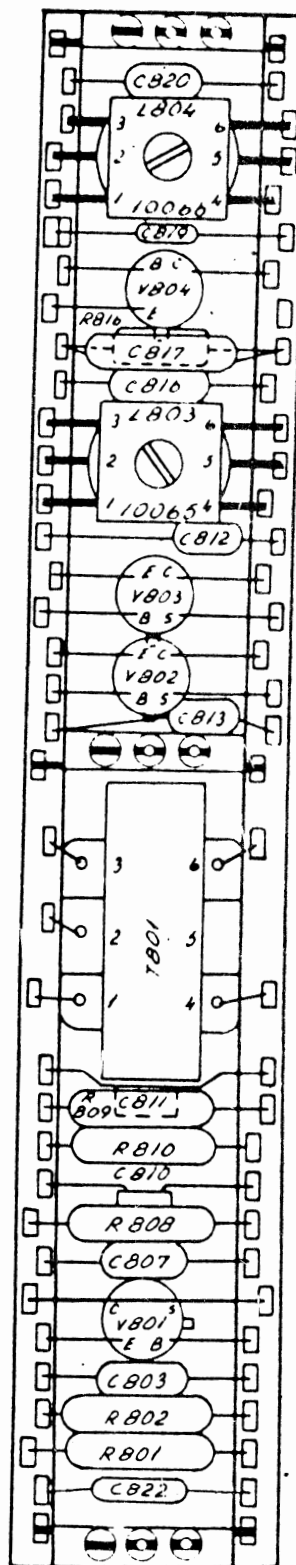
KØBENHAVN

2 BLADE  
 BLAD2 0000-200-0003

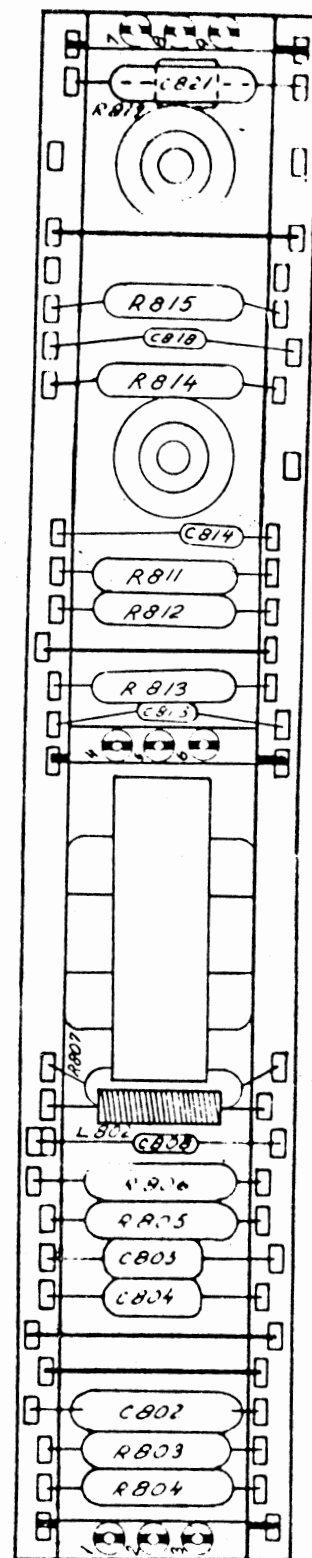
TEGNET. GRL.  
 21-1-65  
 KONTR. R.  
 24-11-65  
 GODT.  
 (Signature)



\*: as required Inf-16nf



Seen from the top



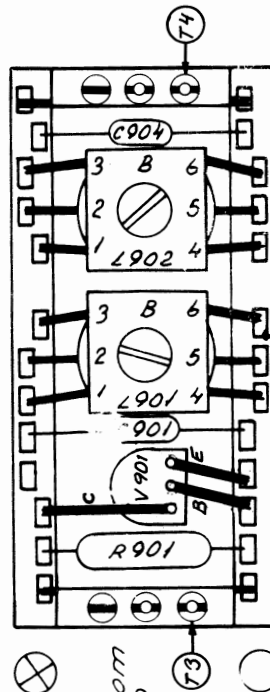
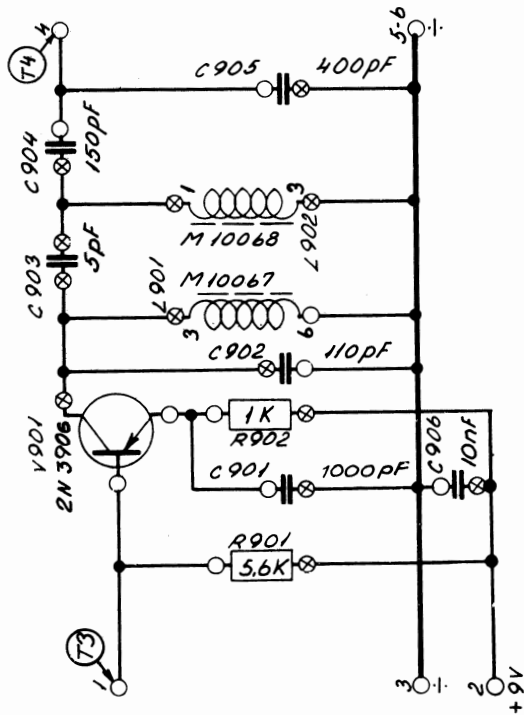
Seen from the bottom

4M Tx-Osc. + Modulator

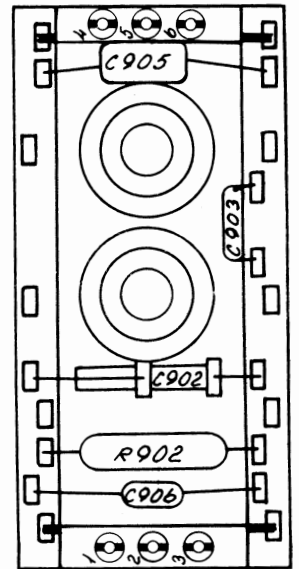
Unit 8



G 1  
 27-11-65  
 m på  
 701 fjernet  
 dg. 2. U.L.  
 -10-66



seen from  
the top



seen from  
the bottom

4M 1' Multiplier P6

Unit 9

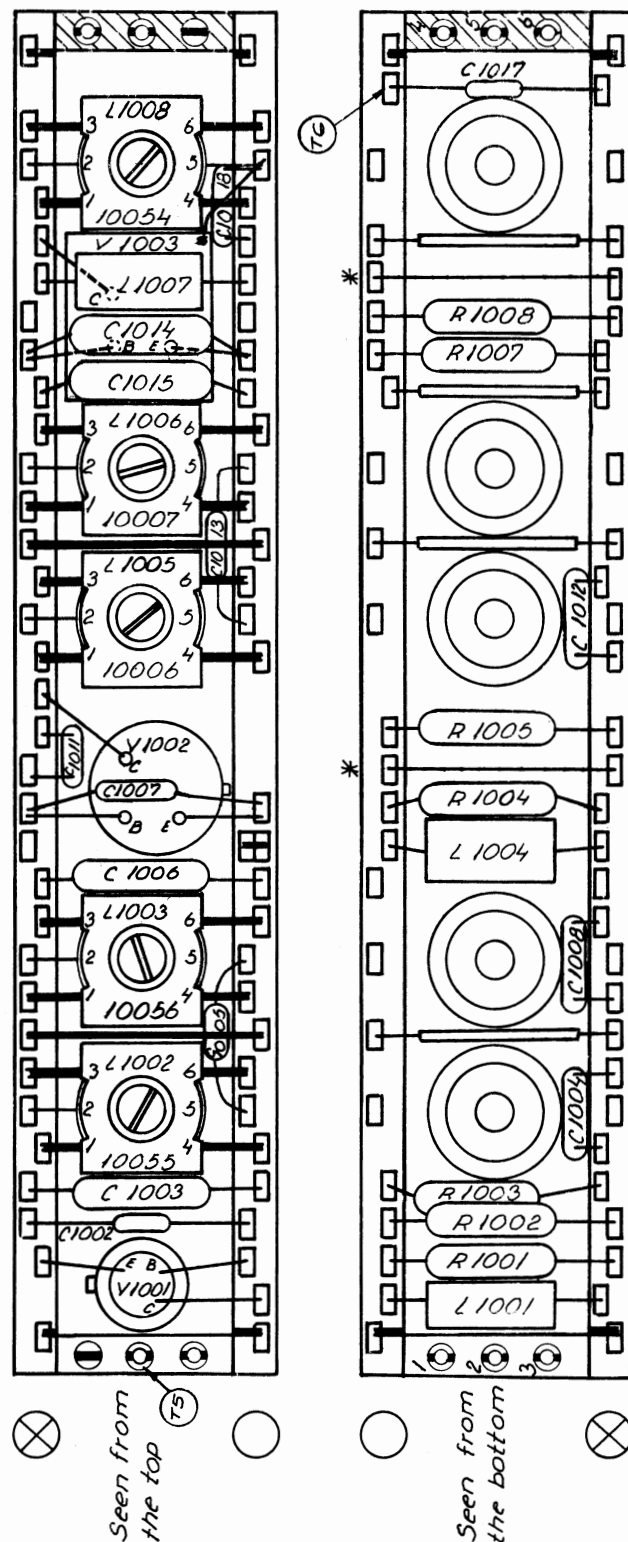
TEGNET. M.J.  
 27-9-65  
 KONTR  
 24-11-65  
 GØR

Standard Electric A/S

KØBENHAVN

2 BLADF  
 BLAD 2 0000-400-0003

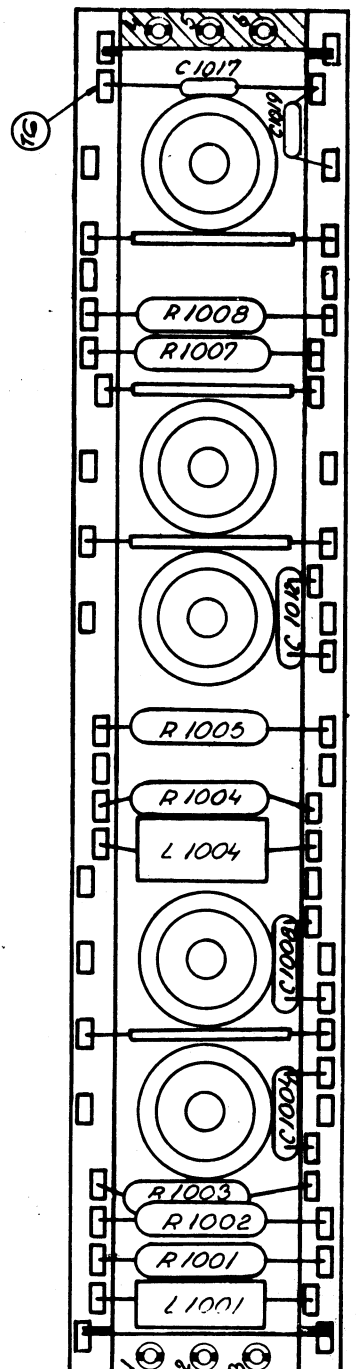
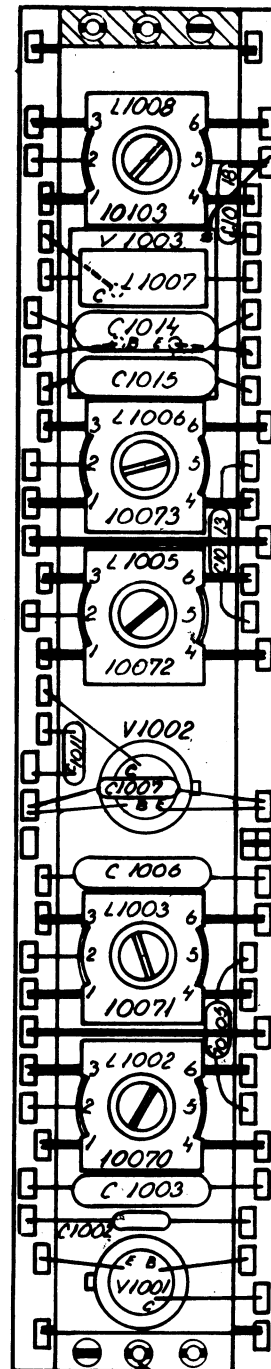
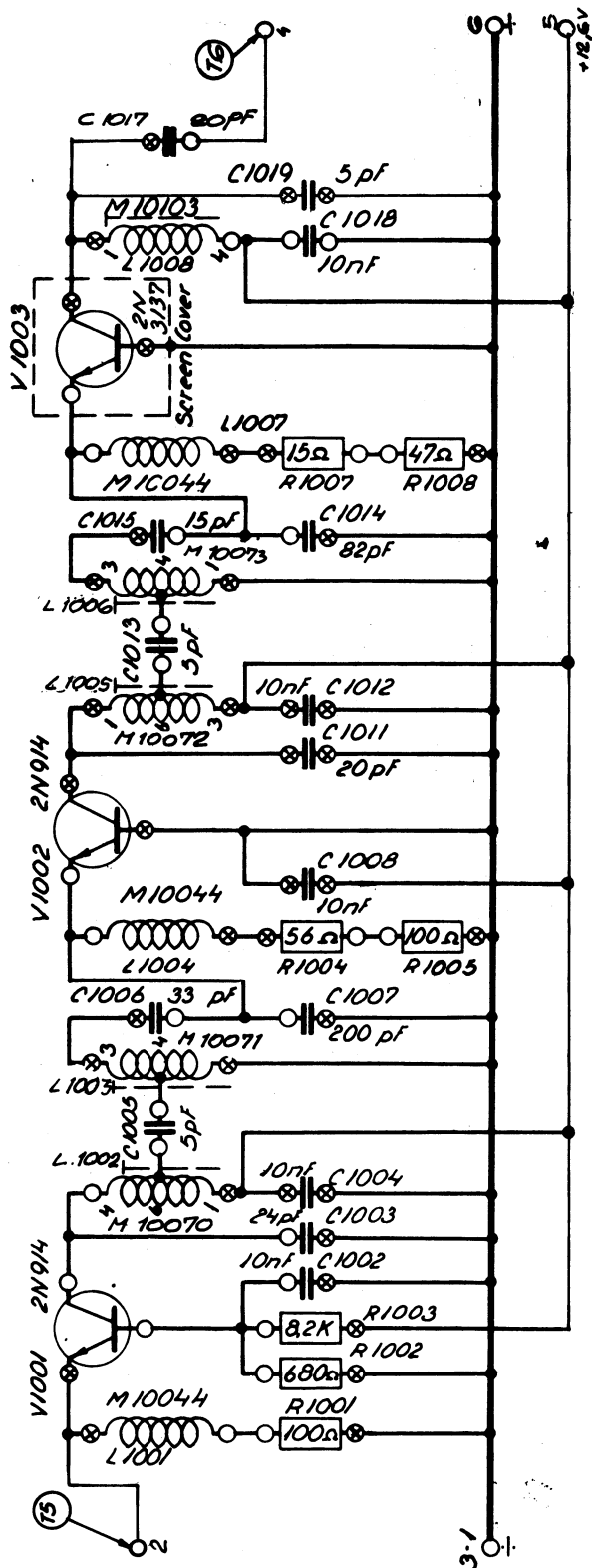
TEGNET. 67  
9-8-66  
KONTR. 12-8-66  
GODK. 12-8-66



## ***Standard Electric A/S***

4 BLADE  
BLAD 3 0000-200-0005

UDG. 1  
Ny ramme  
3. Udg.  
15-9-66 GJ  
1000-400-0005  
4. Udg.  
16-9-66 GJ



Seen from the top  
Seen from the bottom

Unit 10

4m 2. Multiplier (78-88Mc)

TEGNET. GJ.  
4-9-66  
CONTR VZJ

BOOK. 8

Standard Electric A/S

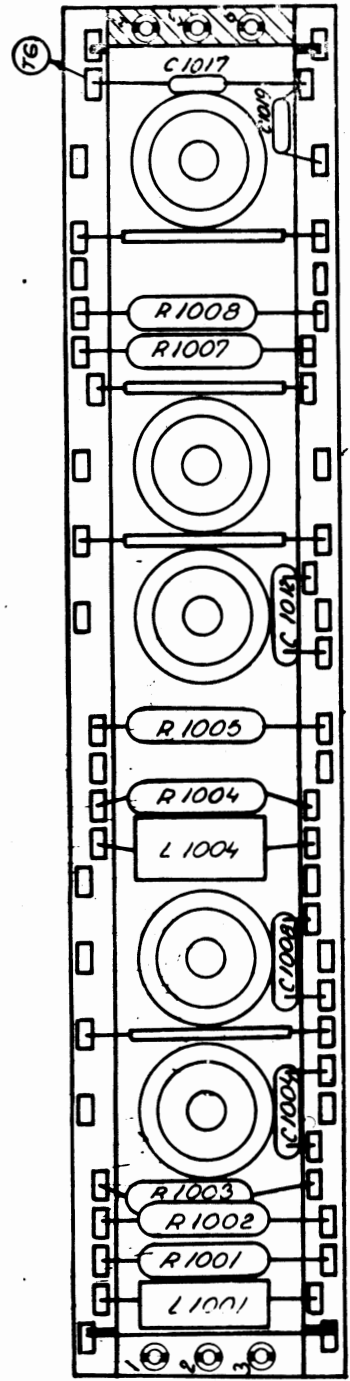
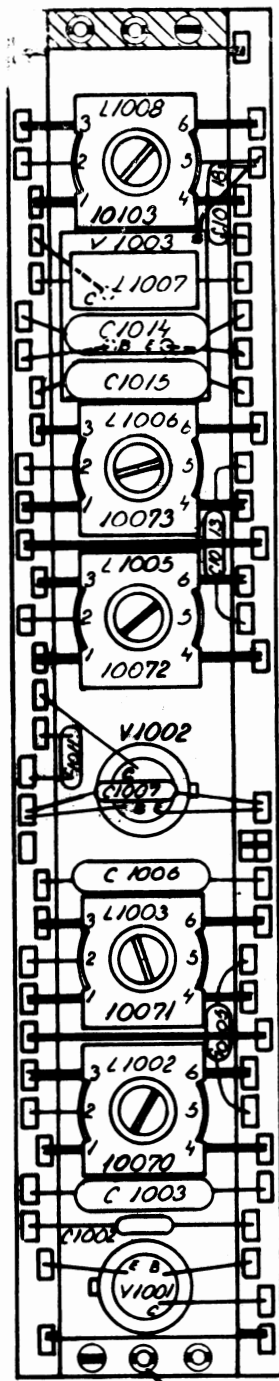
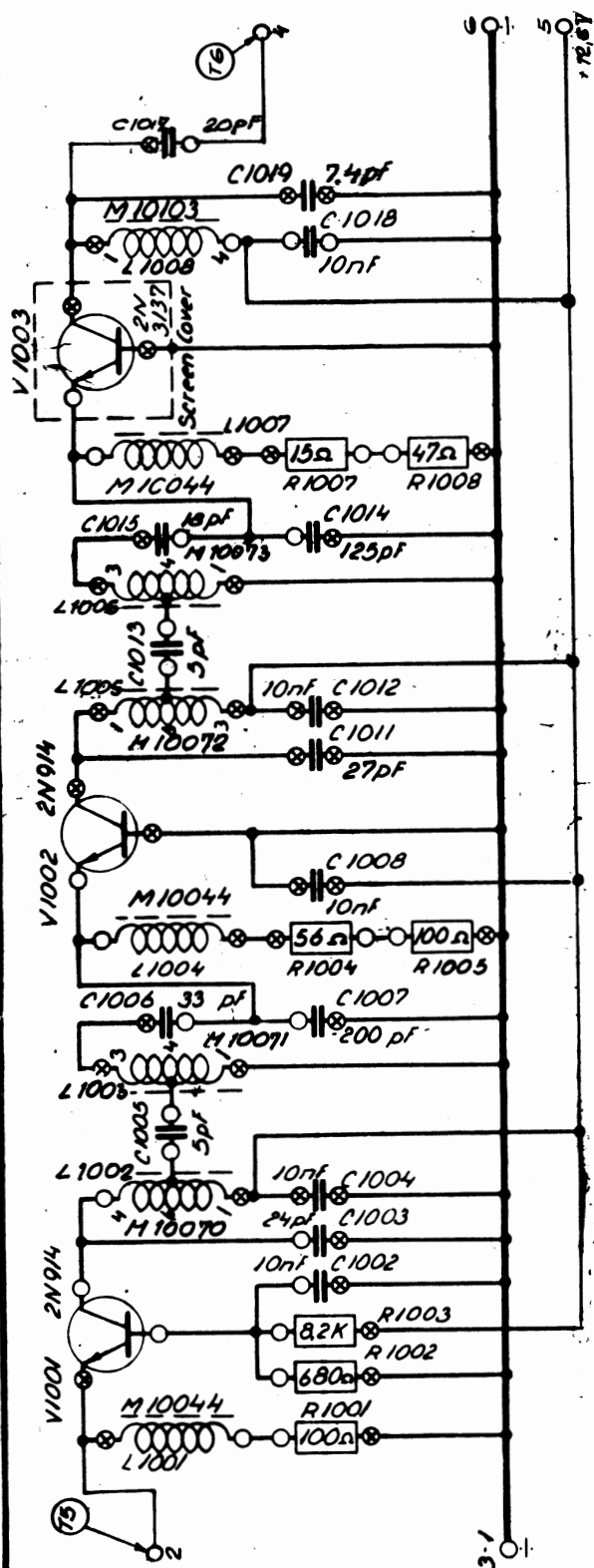
KØBENHAVN

BLADE

BLAD 3

0000-400-0005

9.6  
 20-60  
 25 V.V. 0.01  
 20004  
 3.166  
 10-666T  
 4 vdg.  
 9-76 →  
 9-78.  
 8-67



5m 2 Multiplier (68-78 Mc)

Unit 10

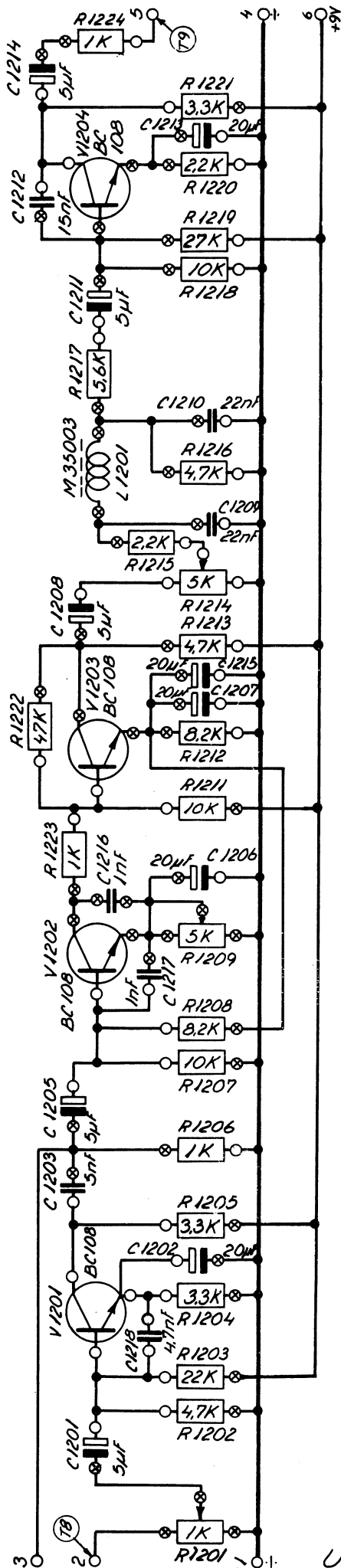
Standard Electric A/S

KØBENHAVN

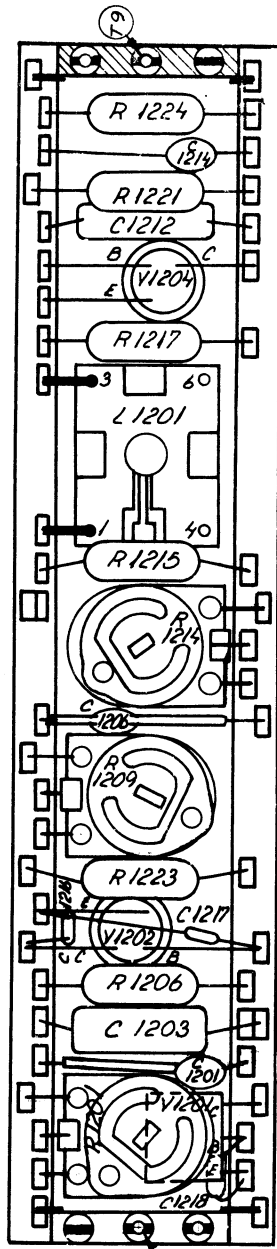
3 BLADE  
BLAD 3 0000-500-0005

REGNET 63  
 4-9-66  
 KONTR 473  
 50DK. 6

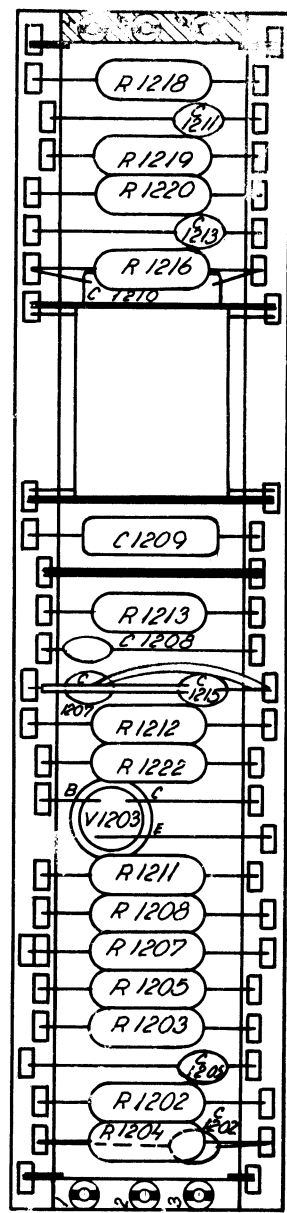
IG. 1  
1-8-66 GJ  
000-000  
005 v.v.  
000-000  
004.  
Udg. 4.1  
0-9-66  
1218 L.H.  
3. Udg. J  
3-66 GJ



Unit 12



Seen from the top



Seen from the bottom

Mic. + AF Unit

GNET. G.J.  
8-66  
ONTR. T.L.J.  
3-8-66  
ODK.  
8-66

Standard Electric A/S

KØBENHAVN

5 BLADE  
BLAD 4 0000-000-0005

1

2

3

4

A

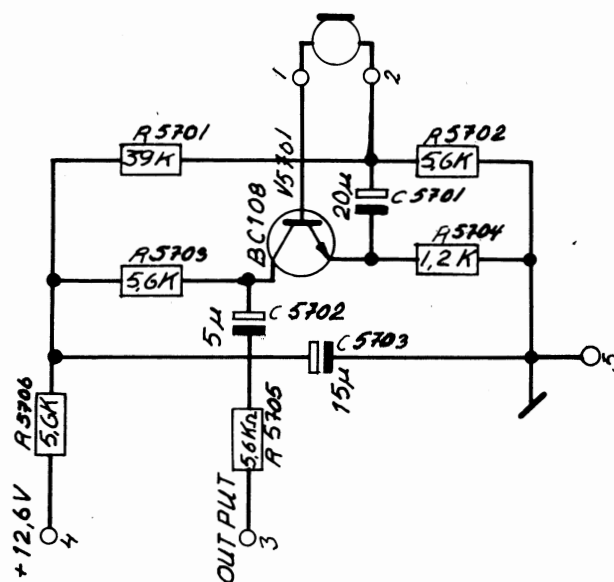
B

C

D

E

F



Unit 57

TITEL

Microphone Amplifier.

ERSTATTER

TEGN. NR.

BL.2

AF.2

M-40025

ERSTATTET

AF

1.

14-11-66

U.L.

E.H.

MTP

STA

UDG.

DATO

SIGN.

KONF.

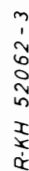
MTP

STA

ITT

STANDARD ELECTRIC A/S  
KØBENHAVN





TranslTT 12

**NOTE**

### COMPONENT LAYOUT RECTIFIER

ERSTATTER

TEGN NR

8L

AF

M 40024

23-11-67 M.J.

DATE SIGN CONF

MTP




**ITT**  
INTEGRATED TECHNOLOGIES

STANDARD ELECTRIC A/S

KOBENHAG.

ER 1



						TITEL	ERSTATTER	
3	20-4-67	md				Power supply TransITT 12	TEGN. NR. BL 3 AF 3	
2	22-3-67	6J				 <b>STANDARD ELECTRIC A/s</b> <b>KØBENHAVN</b>	<b>M-40026</b>	
1	30/9-68	UL	Ek					
UDG.	DARD	SIGN.	KONF.	MTP	STA		ERSTATTET AF	

July 2,  
59 amed  
Mogel  
C. E. H. H. H.  
1954-59

SW 5101

MAIN PTT LS SQ REMOTE REPEAT

SW 5101 in position LOCAL

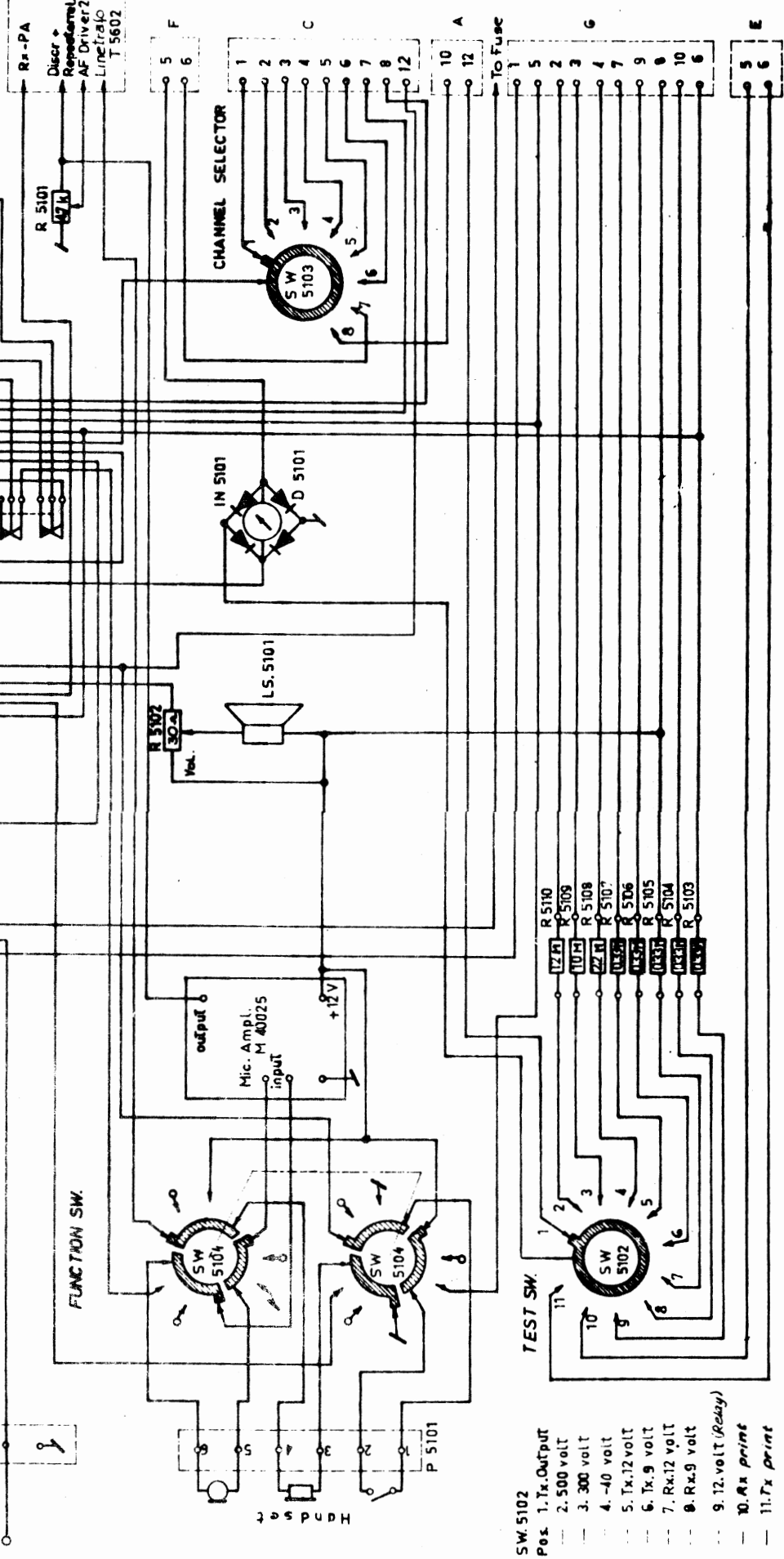
SW 5104 in position LINE

Point A-B-C-E-F is terminal-  
strips on the backside of  
Chassisbox

Point G is a terminalstrip on Power supply

CABELCONNECTOR  
in Cabinet

110/220 V ~



SW 5102

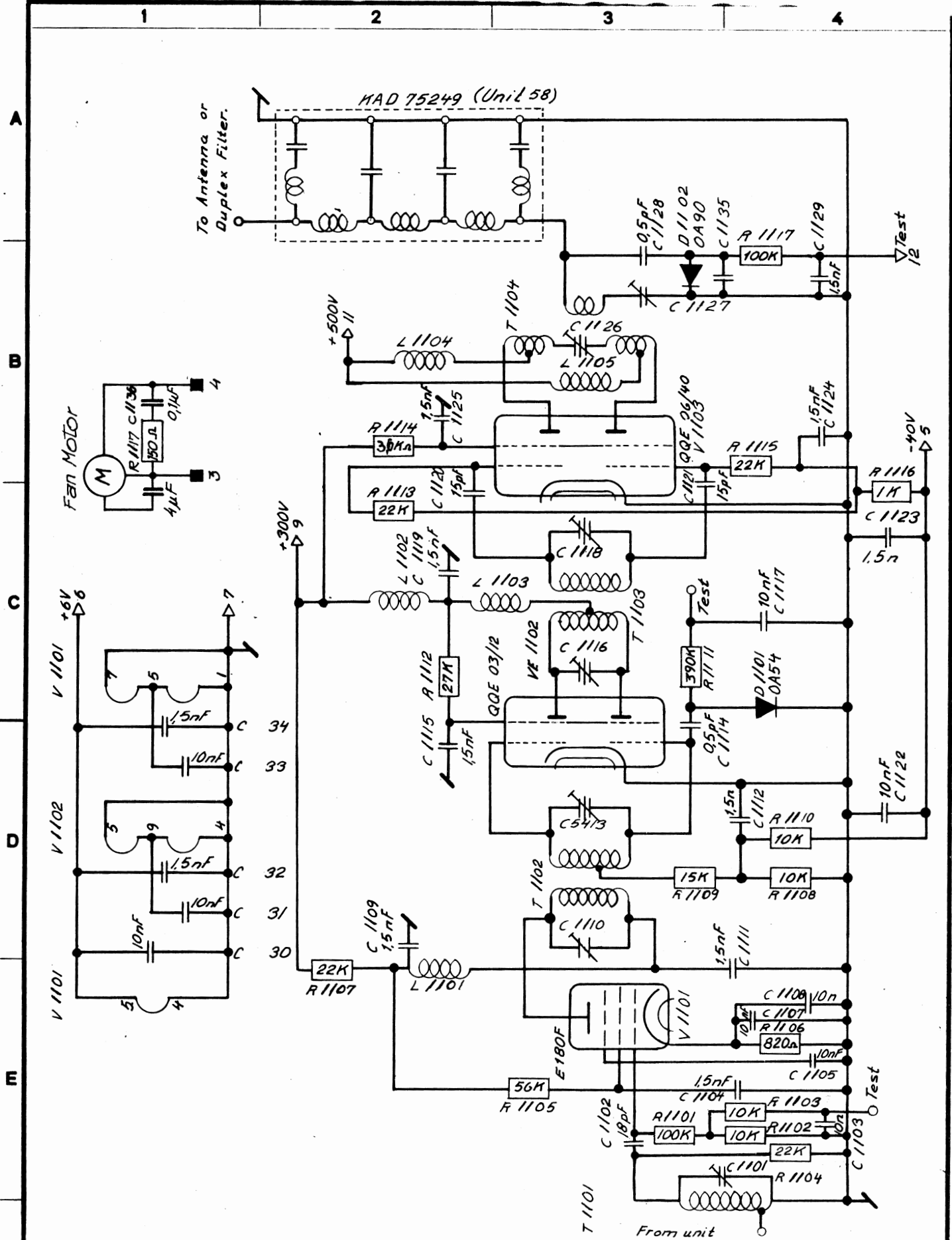
- Pos 1. Tx. Output
- 2. 500 volt
- 3. 300 volt
- 4. -40 volt
- 5. Tx. 12 volt
- 6. Tx. 9 volt
- 7. Rx. 12 volt
- 8. Rx. 9 volt
- 9. 12. volt (Relay)
- 10. Rx. print
- 11. Tx. print

TRANSITT 12

UNIT 3  
CONTROL PANEL

Standard Electric A/S KØBENHAVN

M-40027



Unit 11

Trans 1TT 12

UDG.	DATO	SIGN.	KONF.	MTP	STA
3	2/16-67	RH.			
2	20/4-67	Sh			
1	30/9-66	UL			

TITEL

TX-PA stage 2m

ITT

STANDARD ELECTRIC A/S  
KØBENHAVN

ERSTATTER

TEGN. NR. BL. 6 AF 6

M-40028

ERSTATTET  
AF

A

B

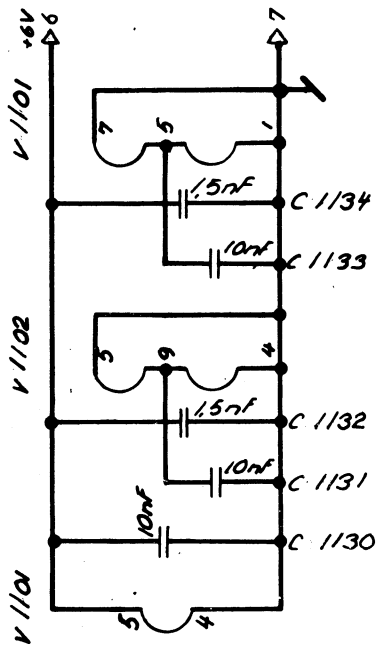
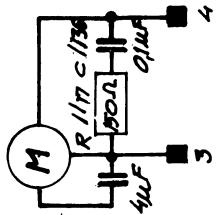
C

D

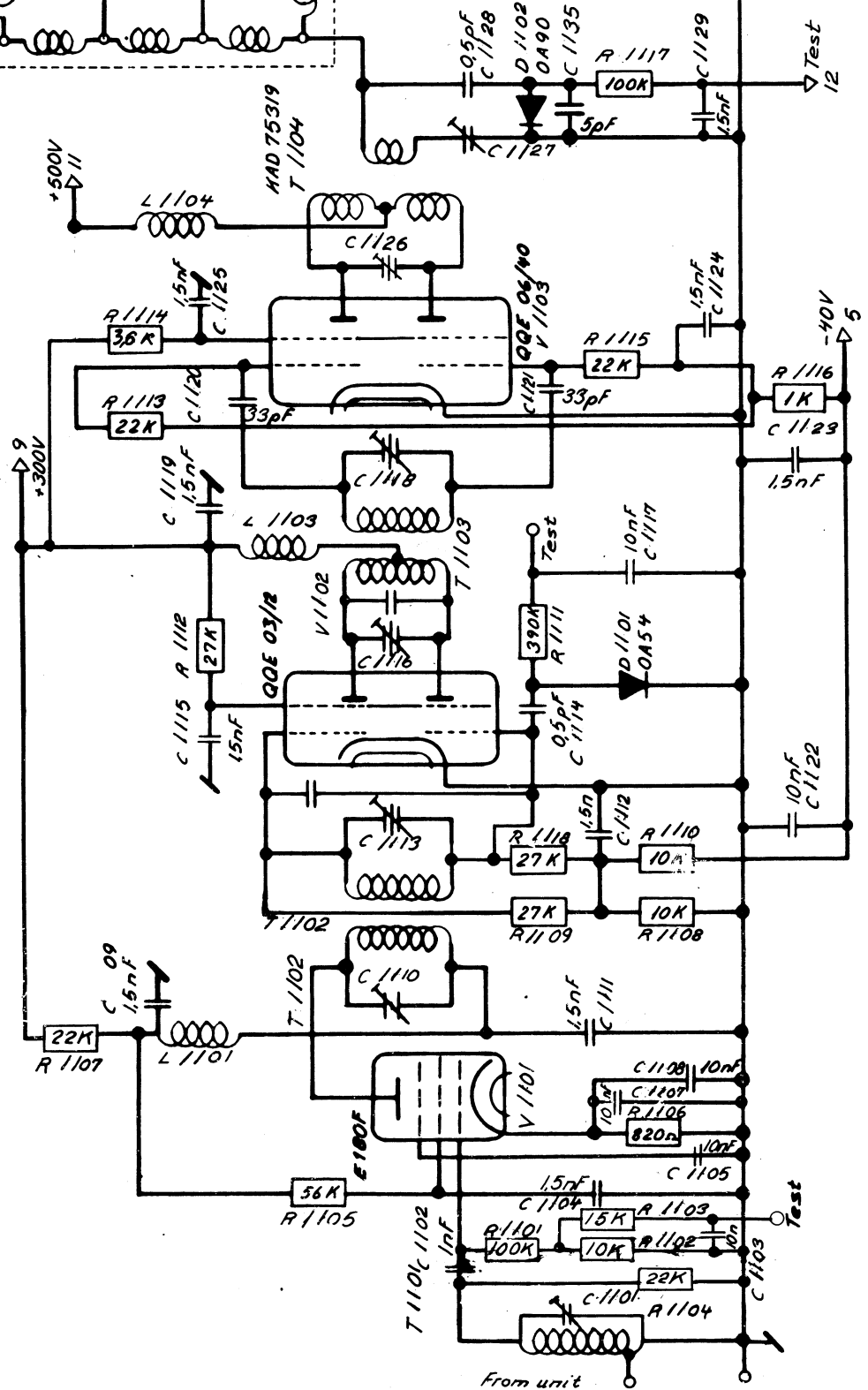
E

F

Fan Motor

To Antenna or  
Duplex Filter.

M 4005B (Unit 5B)



Unit 11

Trans/TT 12

3	2-10-67	PH
2	20-4-67	MS
1	8-11-66	LL
DATE	DATE	DATE

NTL

TX-PA STAGE 4 m

ITT

STANDARD ELECTRIC A/S  
KØBENHAVN

ERSTATTER

TECH. NR.

BL

AF

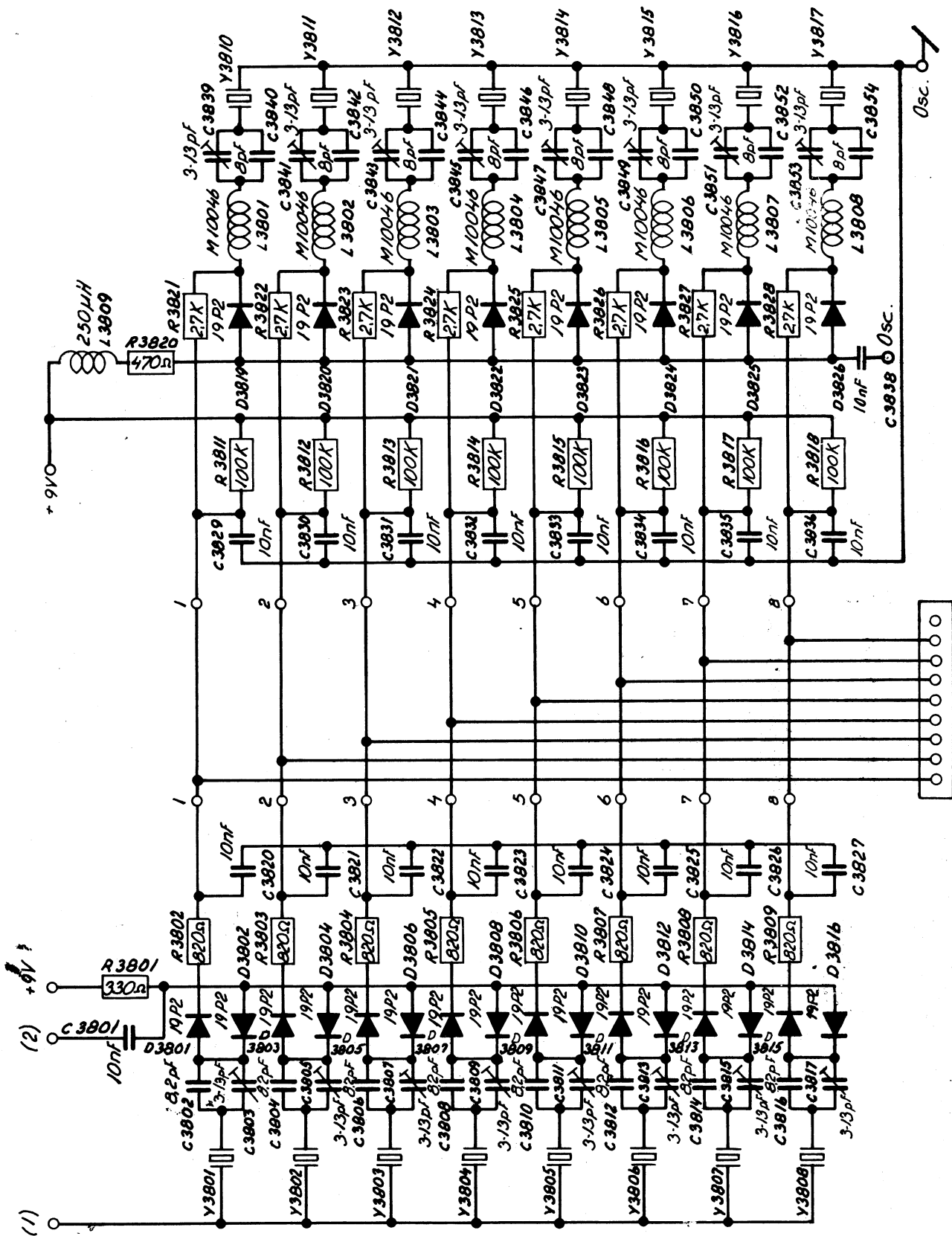
M 40029

ERSTATTET

AF

# Transmitter

# Receiver



Unit 38

TransITT 12

UDG.	DATO	SIGN.	KONF.	MTP	STA
3	3-10-67	M.J.			
2	24-8-67	R.			
1	29-9-66	G.J.			

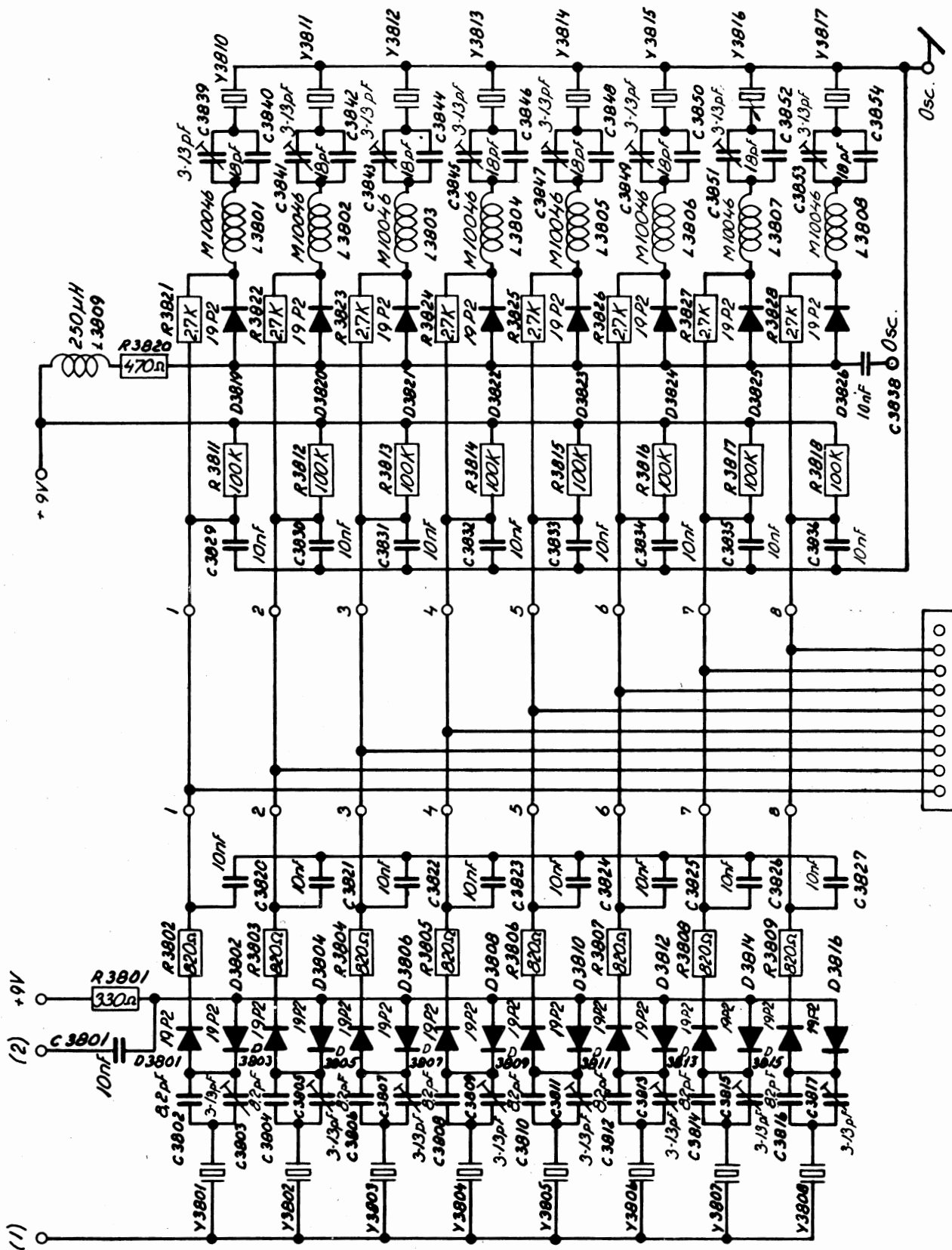
TITEL	
RX-TX X-TAL UNIT 2 m	
<b>ITT</b> STANDARD ELECTRIC A/s	KØBENHAVN

ERSTATTET	
TEGM. NR.	BLB AF B
M 40030	
ERSTATTET	AF



# Transmitter

# Receiver



Unit 38

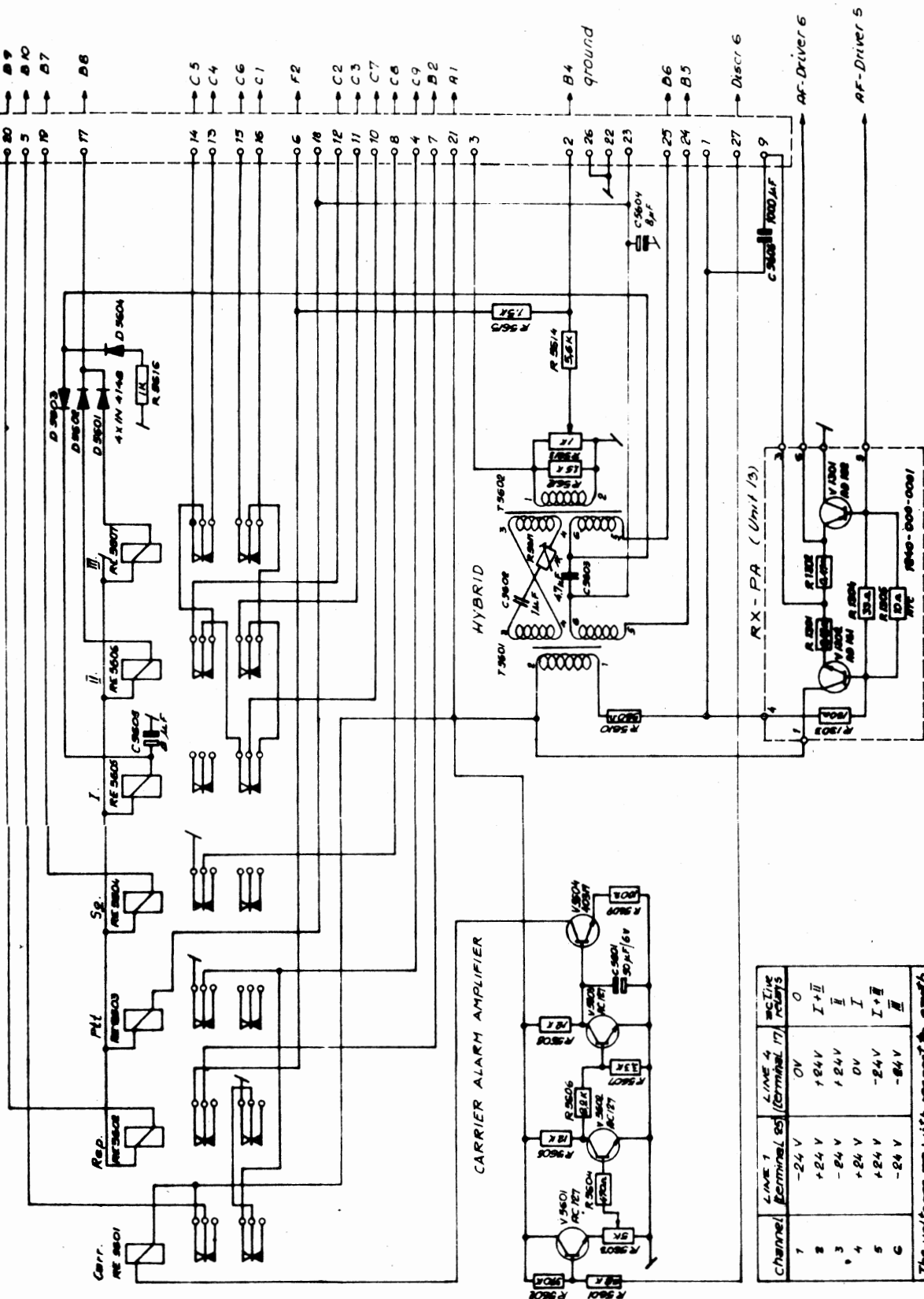
TransITT 12

3	3-10-61 M.J.				
2	24-8-61 R.				
1	29-9-66 G.J.				
UDG.	DATO	SGN.	KONF.	WTP	STA

TITEL	RX-TX X-TAL UNIT 4 m
STANDARD ELECTRIC A/S	KØBENHAVN

ERSTATTER	TEGM. NR.	M.B.	A.F.
	M 40031		
ERSTATTET AF			

TERMINALS ON DRAWING STRIPS



Channel	LINE 1 Terminal 65	LINE 4 Terminal 17	LINE 5 Terminal 17
1	-24 V	OV	OV
2	+24 V	+24 V	I+II
3	-24 V	+24 V	I
4	+24 V	OV	I
5	+24 V	-24 V	I+II
6	-24 V	-24 V	II

The voltages are with respect to earth

Trans ITT 12

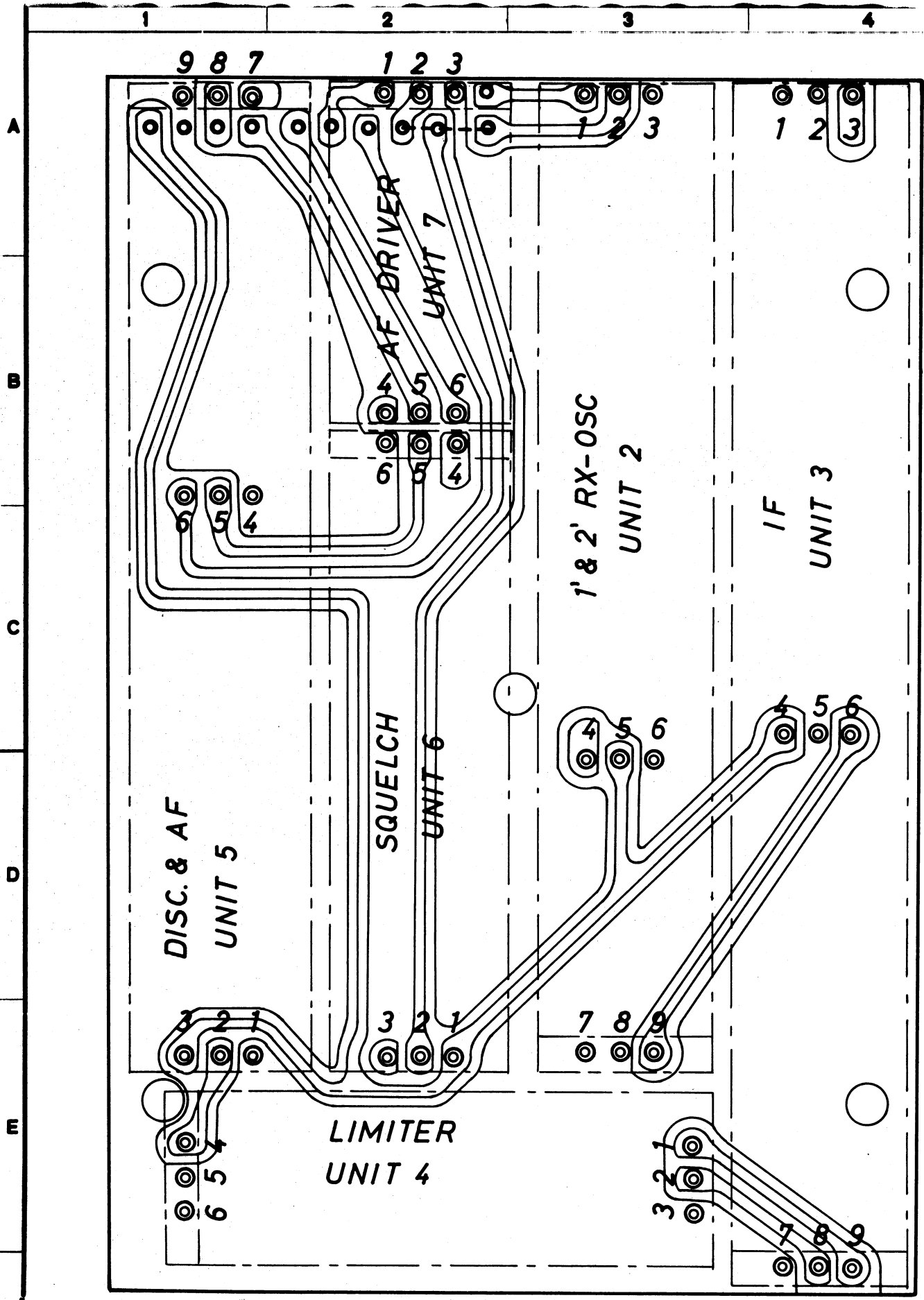
M-40032

UNIT 56

LINE TERMINAL UNIT

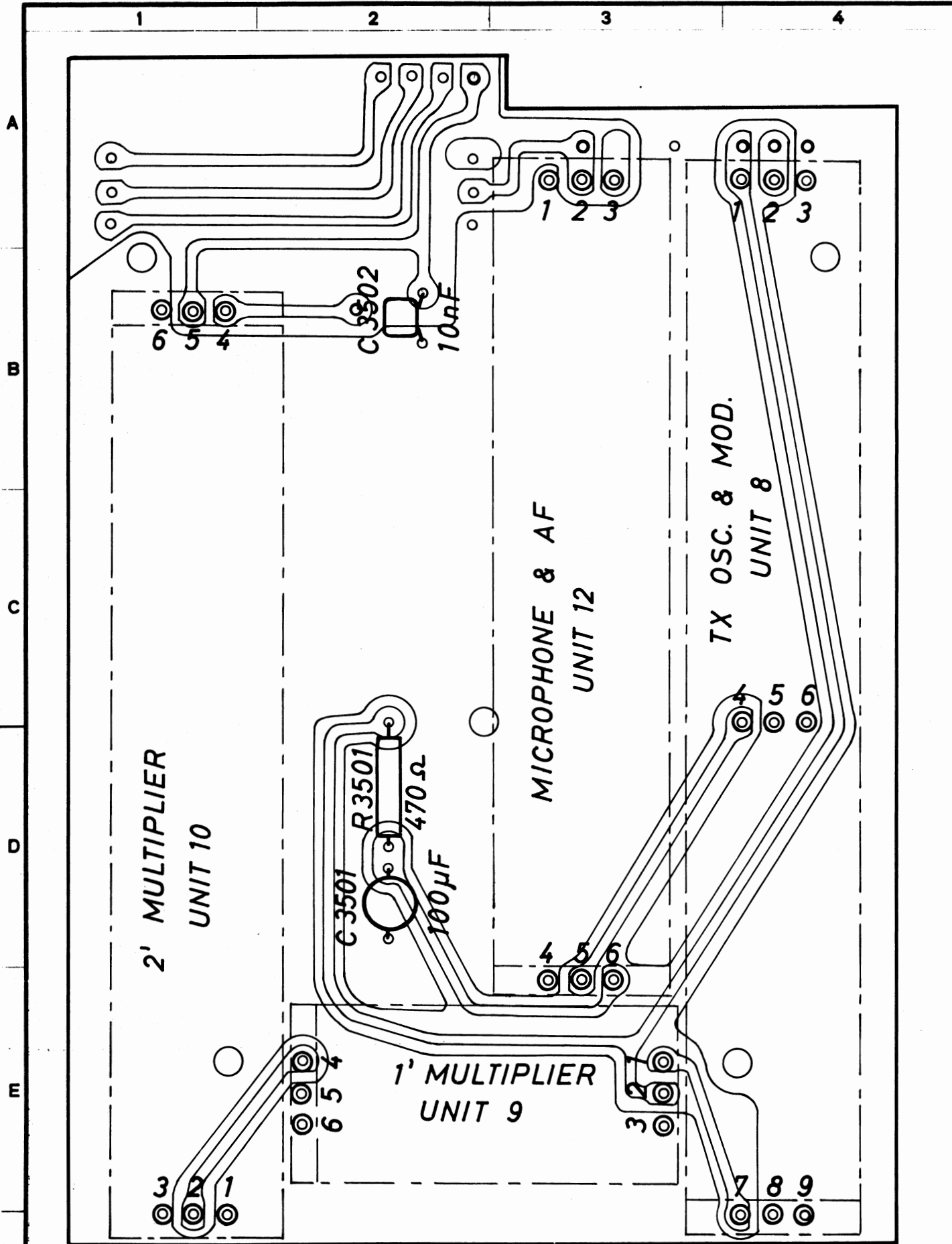
Standard Electric Alg KERNHANN





(Viewed from componentside)    Size 2 1/2    Unit 34    TransITT 12

<div style="display: flex; align-items: center;"> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; margin-right: 5px;"></div> </div>					TITEL		ERSTATTER			
					<b>COMPONENT LAYOUT</b> <b>RX-PRINT COMPLETE</b>				TEGN. NR.    BL.    AF <b>R-KH 92415</b>	
					<b>ITT</b> STANDARD ELECTRIC A/S KØBENHAVN				ERSTATTET AF	
					UDG.	DATO	SIGN.	KONF.	MTP STA	



(Viewed from componentside) Size  $\frac{2}{1}$  Unit 35 TransITT 12

UDG.	DATO	SIGN.	KONF.	MTP	STA

TITEL	COMPONENT LAYOUT TX-DRIVER PRINT COMPLETE
ITT	STANDARD ELECTRIC A/s KØBENHAVN

ERSTATTER	TEGN. NR.	BL.	AF
	M 40033		
ERSTATTET AF			

UDG. 1

25-2-63

bl. 2 ændr.

2. Udg.

29-10-63

GRL

Nr. 1-2-3-4-5

11/15

3. Udg.

25-11-64 GRL

Dato: 22-1-1963

Ingeniør: T.K.

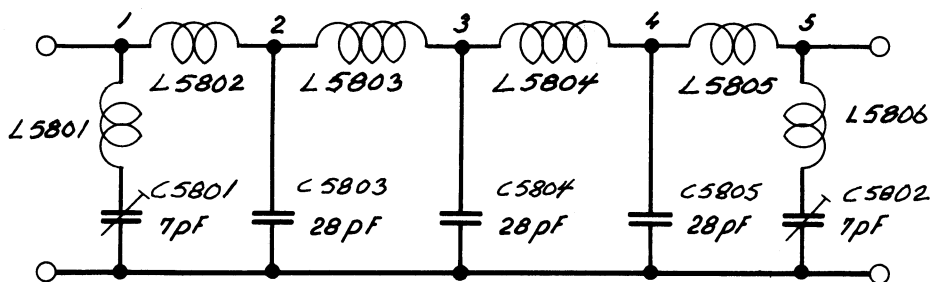
Stenogr.: M.T.

Specifikation KAD-75249

Standard Electric A/s

Lyngby

## HARMONIC FILTER



Spole Nr.	Kapacitet pF	Resonansf. Mc/s	Selvindukt μH
L1 - L6	7	220	0,075
L2 - L5	28	110	0,075
L3 - L4	28	95	0,100

Anvendelse: CCU8080 gr.5 - 8091-8094

Grænsefrekvens:  $F_c = 190 \text{ mc}$ Uendelighedsfrekvens:  $F_{\infty} = 220 \text{ Hz}$ Beregningsdata:  $m = 0,5$   $K = 60 \Omega$ 

Fabrikat: Standard Electric A/s

Alm. beskrivelse: Denne specifikation omfatter 6 spoler monteret i 4 kamre, forbundet indbyrdes med gennemføringskondensatorer. Filteret er et lavpasfilter.

Fremstillingsvejledningen skal følges nøje.

Stykliste: Se blad 2.

Fremstilling: Se blad 3-4-5-6-7

TEGNET. M.T.  
4-2-63KONTR. T.K.  
25-2-63GODK.  
Borup

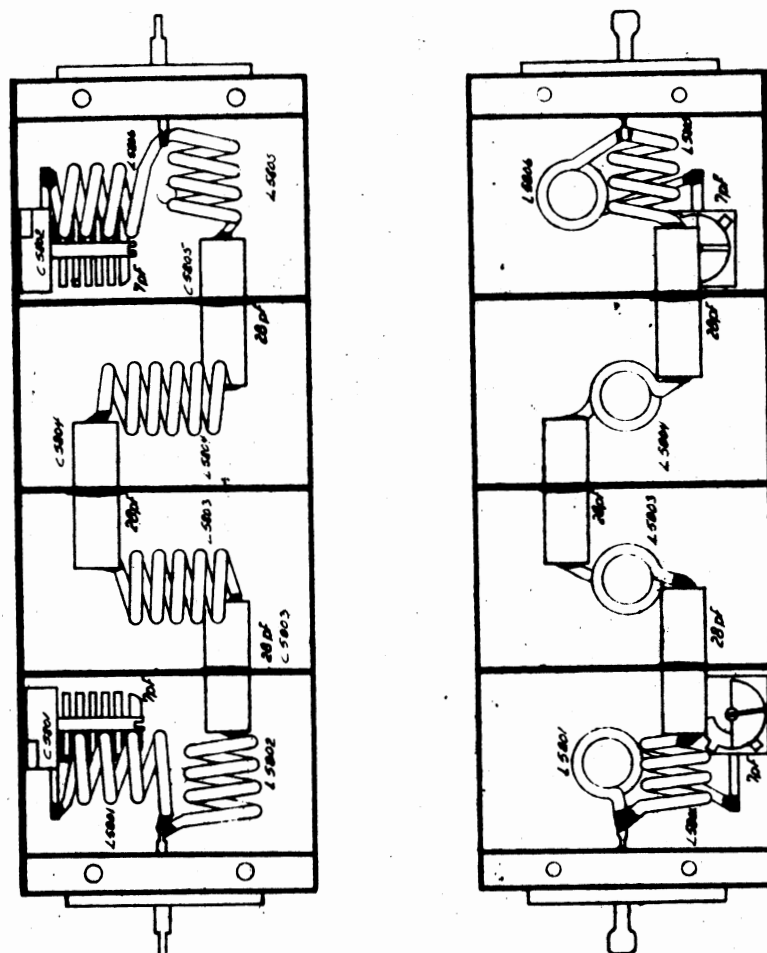
Unil 58

Trans ITT 12

Standard Electric A/s

KØBENHAVN

8 BLADE  
BLAD 1 KAD 75249

**E**

**STANDARD ELECTRIC A/S**  
**KØBENHAVN**



## A



**C**

D

**E****F****TITEL**

ERSTATTER

**ERSTATTET  
AF**

1	7-11-66	U.L.		
UDG.	DATO	SIGN.	KONF.	MTP STA

### III

1

2

3

4

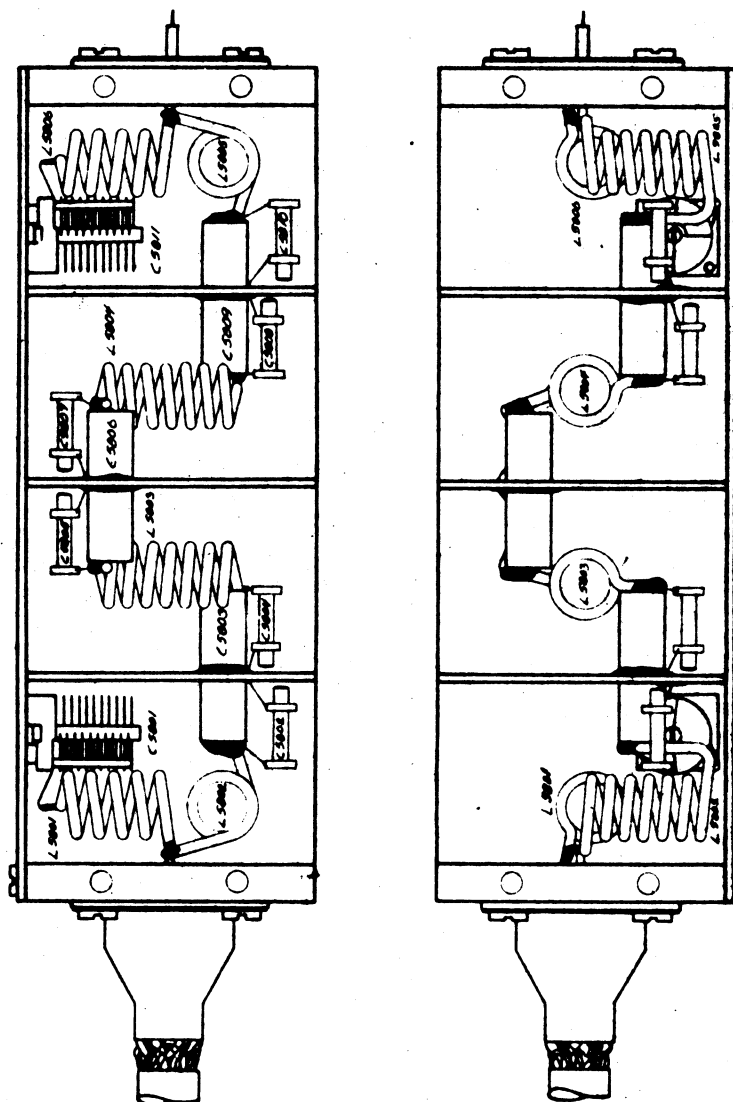
A

B

C

D

E



Size 7

Unit 58

TransITT 12

WIR

COMPONENT LAYOUT

HARMONIC FILTER 4 m.

ERSTATTET

TOSCH. NR.

NR.

AS

M 40058

ERSTATTET

AP.

UDG. DATO SIGN. KONF. HTP STA

STANDARD ELECTRIC A/S  
KØBENHAVN

SEK 501 A

