



NRD-515  
OPTION 1+2  
INSTRUCTION MANUAL

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## INSTALLATION AND ADJUSTMENT PROCEDURES

Note: Info  
on page 2

- 1) Remove the top cover of the NRD-515.
- 2) With the front panel facing you, drill two holes on the right side of the NRD-515 frame, as indicated on drawing **003-NRD-002-A-8409** (page 9 ).

Note: Info  
on Page 2

- 3) **Remove** the following components from the main circuit board: **TR22, C280, C281, C282, C283, C284, L123** by cutting the leads by means of a cutter.

**003-PCB-301-A-8409** (page 10).

- 4) Install option 1 (plug-in unit) as indicated on drawing **003-PCB-301-A-8409** (page 10).
- 5) Install option 2 as indicated on drawing **003-NRD-001-A-8409** (page 9).
- 6) By means of a lowpower soldering iron, solder the wires and coax cables from option 2 to the main print, the VFO and monitor switch, as indicated on drawing **003-PCB-301-A-8409** (page 10).
- 7) Mount the top cover of the NRD-515, without screws.
- 8) Remove the bottom cover of the NRD-515 and solder the coaxial cables E and F, as indicated on drawing **003-NRD-002-A-8409** (page 11).
- 9) This completes the installation of the 2 options.
- 10) Mount the bottom cover of the NRD-515.

### ADJUSTMENT PROCEDURE (option 2)

Note: Info  
on Page 2

- 1) Remove the top cover of the NRD-515 and switch the power on.

With the bandwidth switch on AUX; tune the receiver around 00.0 kHz, until you get the highest S-meter reading (between S9 + 40 dB to S9 + 60 dB).

- a) Adjust L3 on max S-meter reading.
- b) Adjust L9 on max S-meter reading.
- 2) This completes the adjustment of the 2 options.
- 3) Mount the top cover.

Info.  
adjustment

Instead of adjusting the receiver as explained in 1) you may choose a well known station with stable "S" readings and adjust for max S-meter reading.

Info.  
drilling

With each option No2 we supply the mounting hardware. The Option No2 may be installed using the screwholes on the main-board.(right side)

Info.  
removal

In case you want to save the components that have to be removed we advise you to unsolder them.

General comment:

The installation of the Option No2 requires no technical radio skills. However, we believe the installer should have some basic soldering skills.



## U S E R ' S M A N U A L

The option 1 + 2 from ESKA ELEKTRONIK A/S greatly improves the selectivity and signal-to-noise ratio of your NRD-515 - providing - at the same time - a superb PLL-ECSS reception.

### Selectivities

The combination of option 1 + 2 provides you with the following selectivities:

#### **Monitor switch on**

6/60 dB shape factor 1/1.7

#### **Bandwidth (kHz)**

Pos 1: 300 Hz  
Pos 2: 1.4 kHz  
Pos 3: 2.1 kHz  
Pos 4: 4.5 kHz

#### **Monitor switch off**

6/60 dB shape factor 1/2.5

#### **Bandwidth (kHz)**

Pos 1: 500 Hz  
Pos 2: 1.6 kHz  
Pos 3: 2.4 kHz  
Pos 4: 6 kHz

## The P L A M tuning procedure

P L A M means Phase-Locked AM.

The option 2 incorporates a PLAM detector to be used when the received broadcasting station suffers from selective fading.

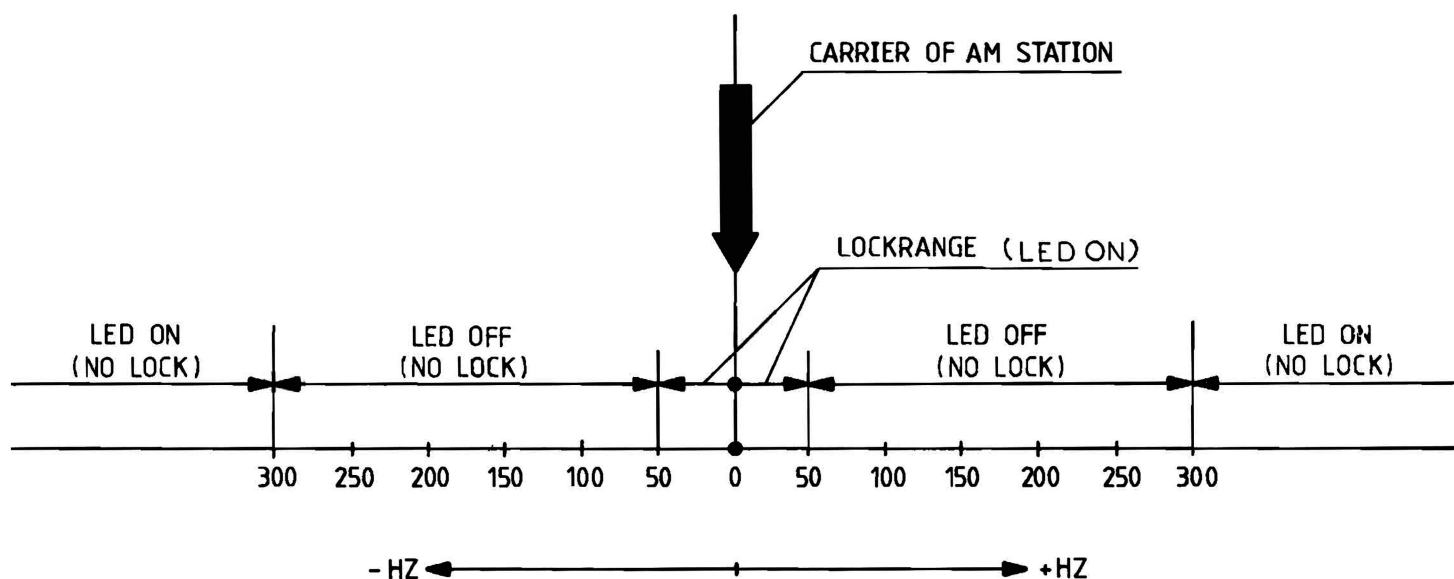
In order to tune in a station in the PLAM mode, proceed very carefully as follows:

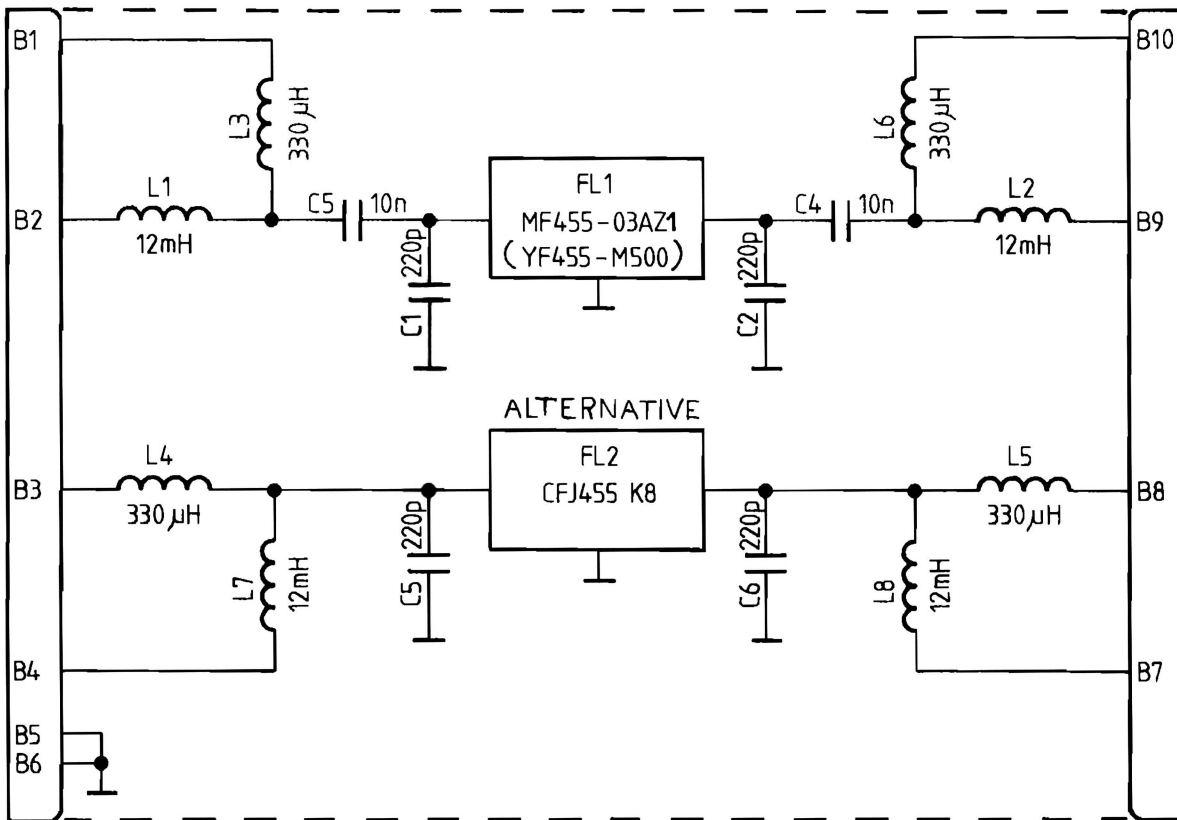
- a) Switch  $\Delta F$  in on position.
- b) Mode switch on LSB or USB depending on interference.
- c) Select 6 kHz, or 2.4 kHz bandwidth, depending on interference, the monitor switch can either be ON or OFF, also depending on the interference level.
- d) Tune in carefully the desired frequency and adjust very slowly the  $\Delta F$  control **until the PLAM LED (external VFO) lights up.**

Please note that the LED (external VFO) always will light up if the carrier is not present or if you are too far away from the center frequency.

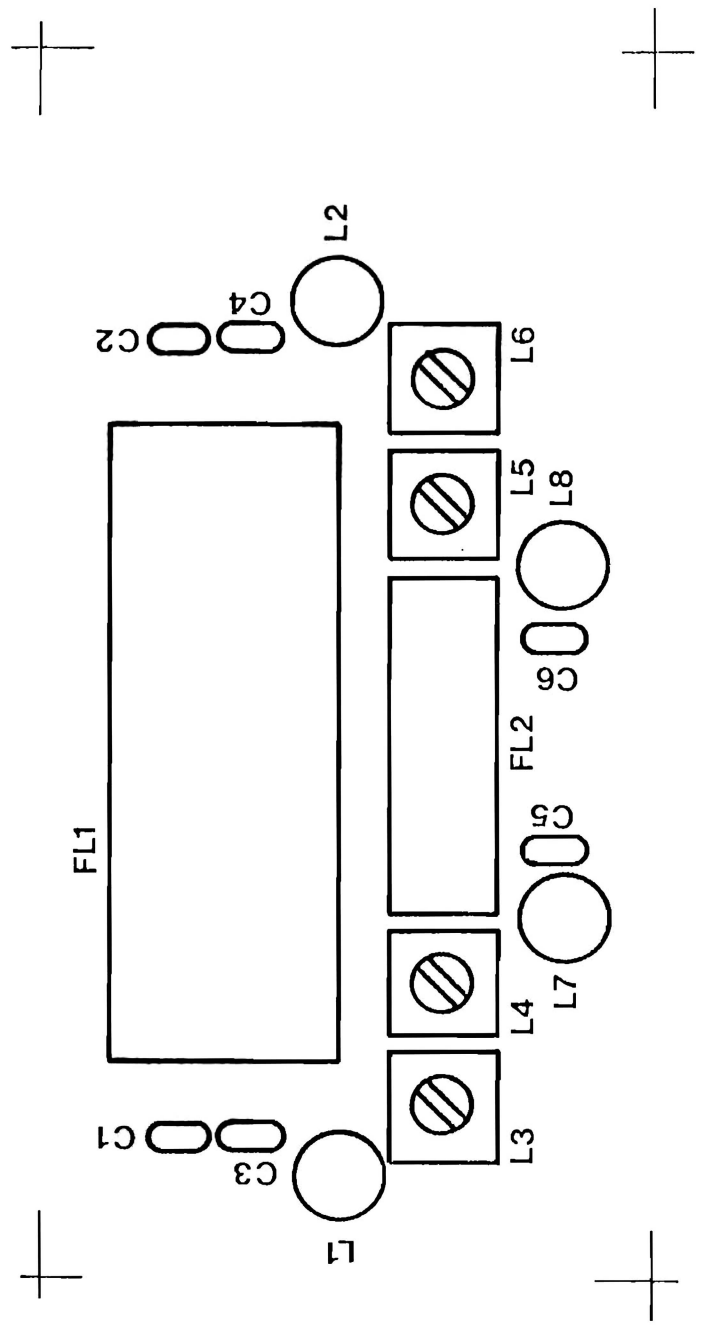
- e) Slowly turn the PBT control in order to obtain the best reception with the highest intelligibility.
- f) In case you reverse sideband, please repeat the procedure as indicated under step d and e.

Following fig. explains how the PLAM works.



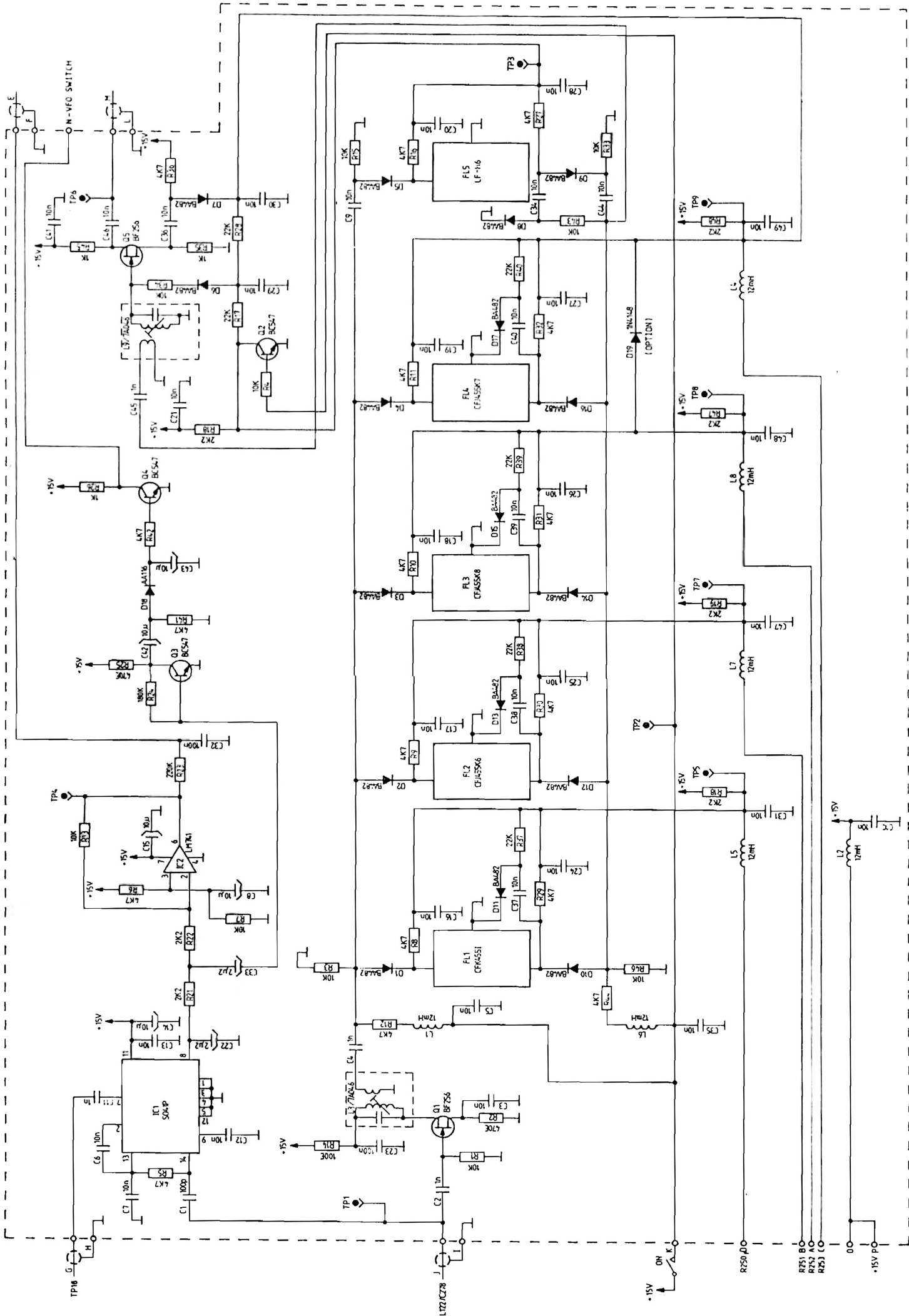


<p>A/S ESKA ELEKTRONIK NRD-515 OPTION 1</p>	<p>004-PCB-300-A-8409</p>
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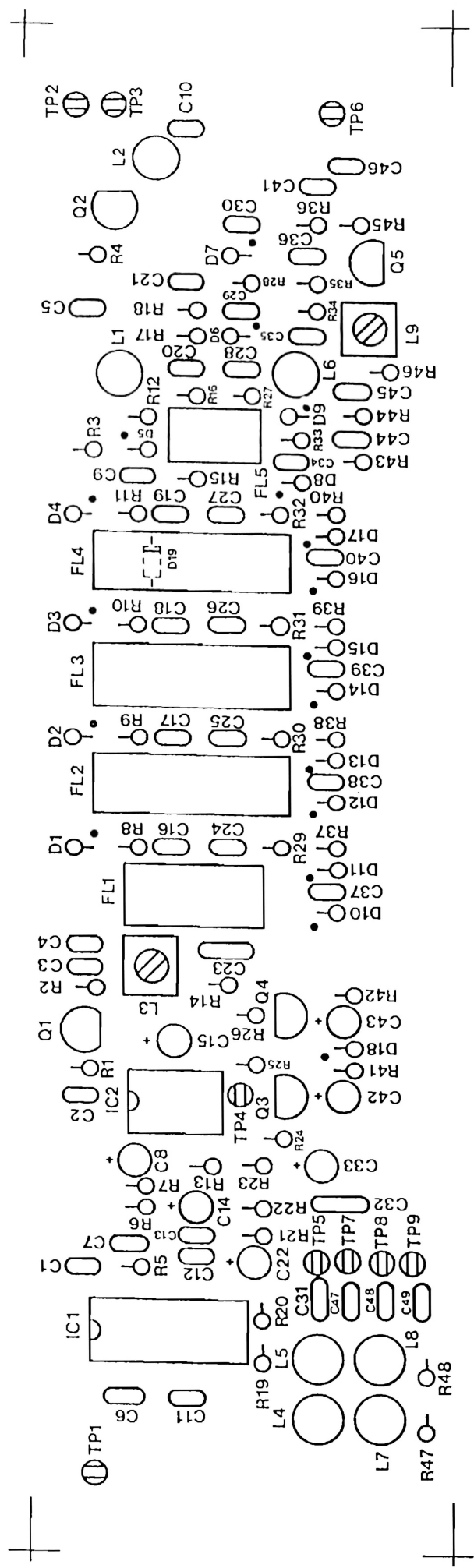
A/S ESKA ELEKTRONIK  
NRD - 515 OPTION 1

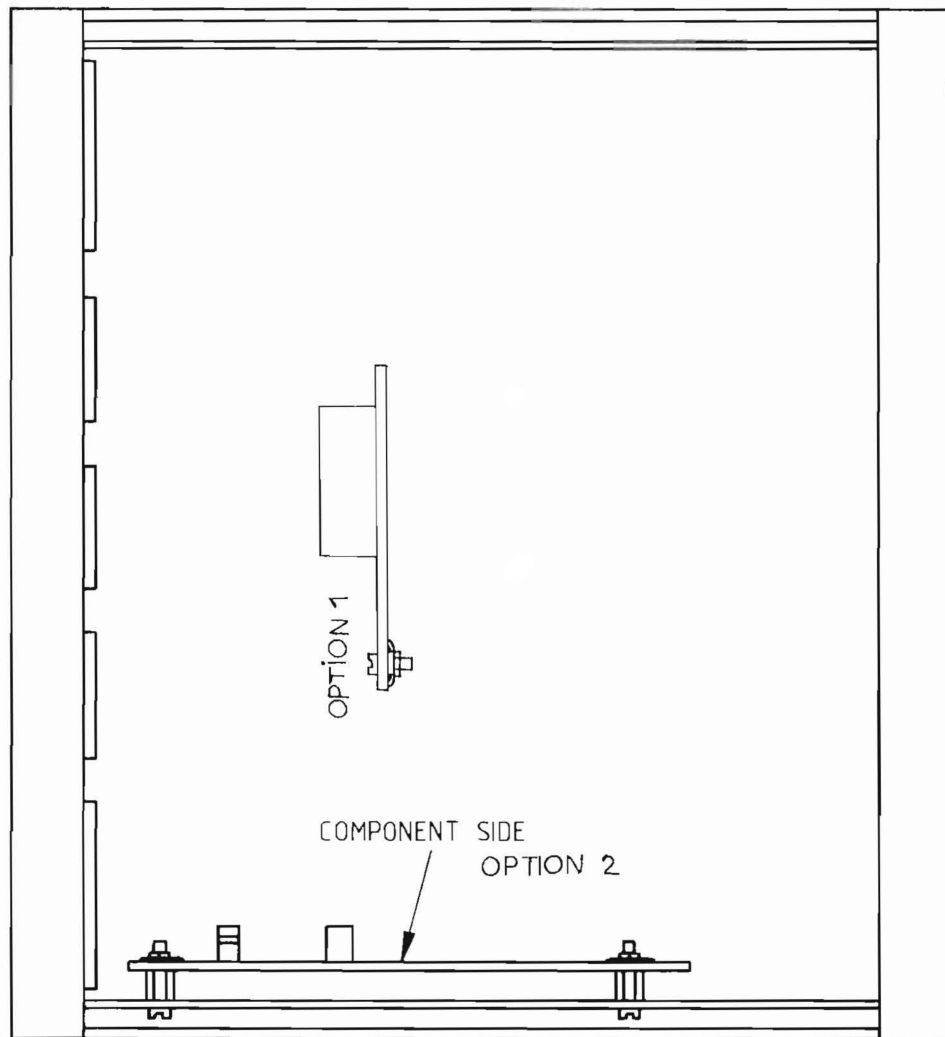
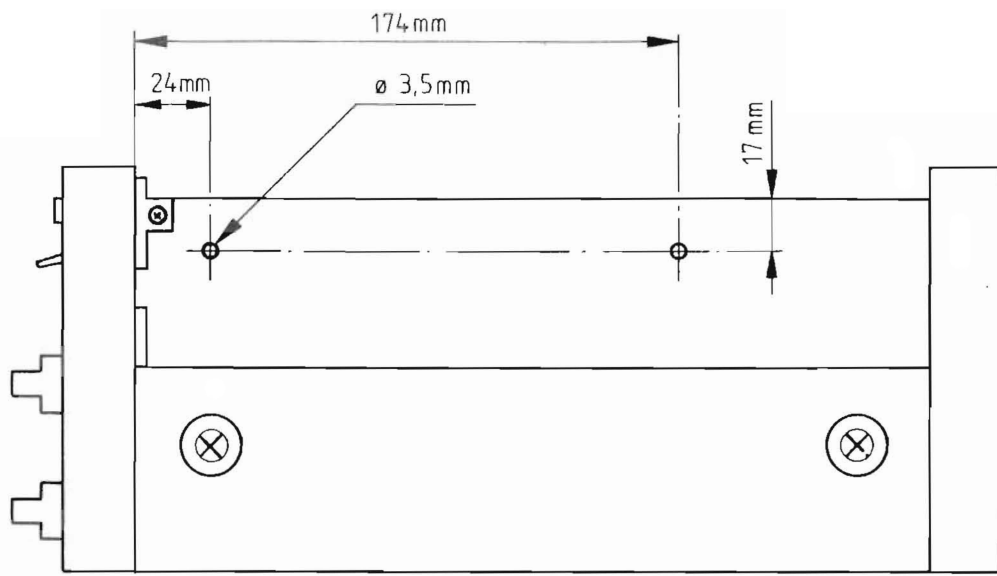
002 - PCB - 300 - A - 8409



ESKA  
NR10-515, OPTION 2

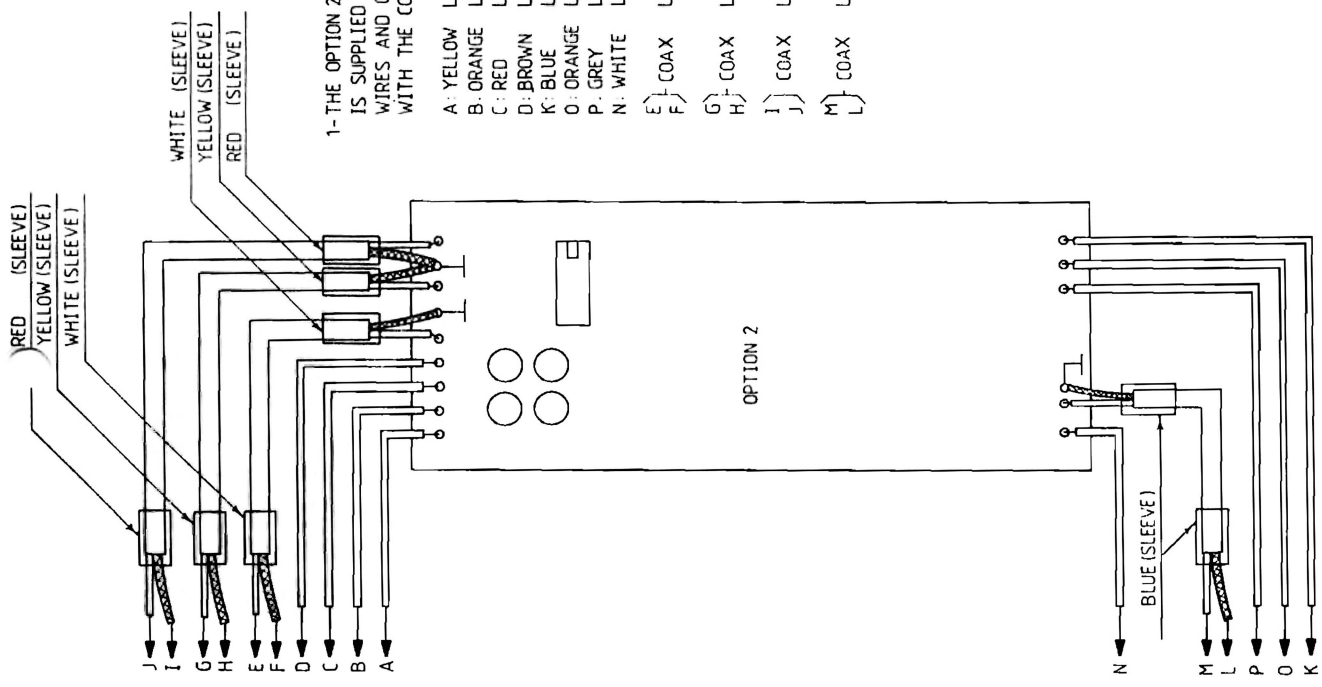
004-PCB-301-A-04-09





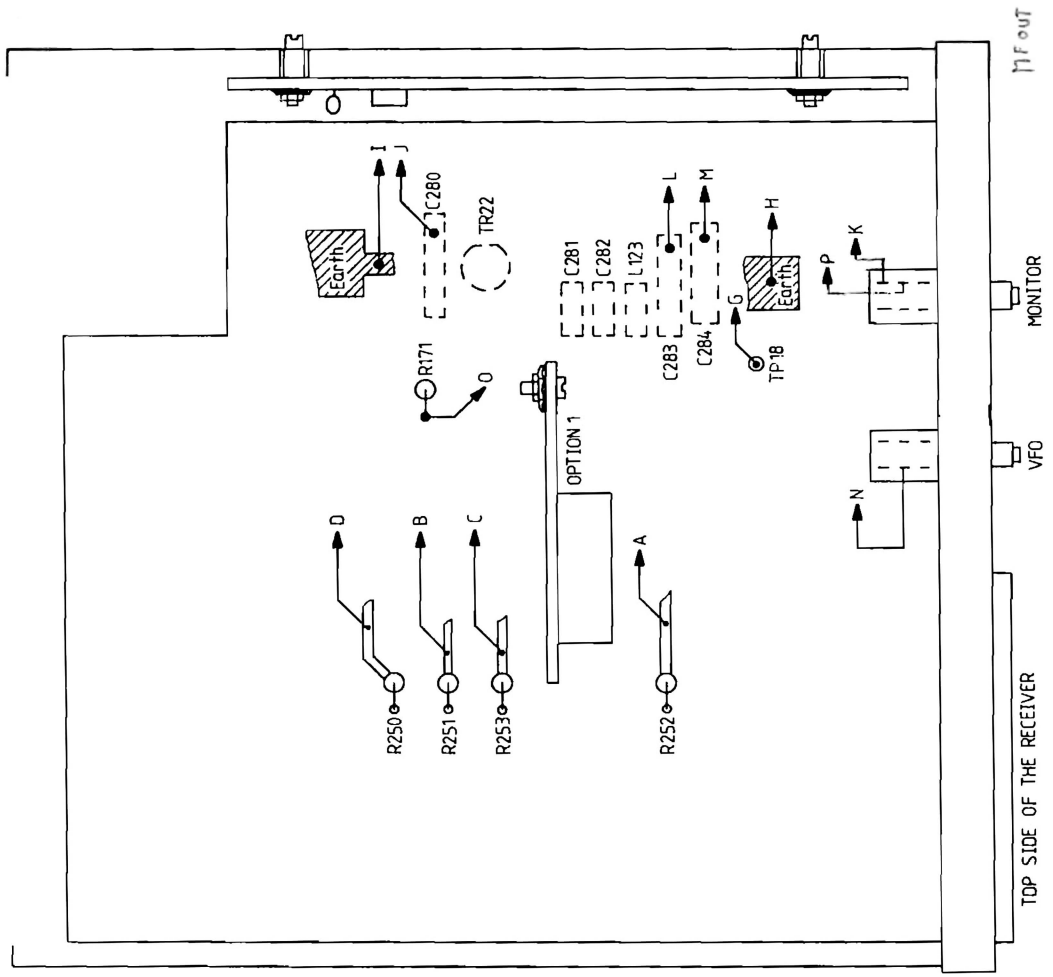
RIGHT SIDE OF THE RECEIVER  
WITH THE FRONT PANEL FACING YOU

A/S ESKA ELEKTRONIK NRD - 515	003-NRD-001-A-8409
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1- THE OPTION 2 PRINTED CIRCUIT BOARD IS SUPPLIED WITH ALL THE NECESSARY WIRES AND CABLES READY FOR SOLDERING WITH THE CORRECT LENGTHS

- A: YELLOW L = 250
- B: ORANGE L = 250
- C: RED L = 250
- D: BROWN L = 250
- K: BLUE L = 80
- O: ORANGE L = 180
- P: GREY L = 100
- N: WHITE L = 180
- E: COAX L = 700
- F: COAX L = 250
- G: COAX L = 250
- H: COAX L = 170
- M: COAX L = 200

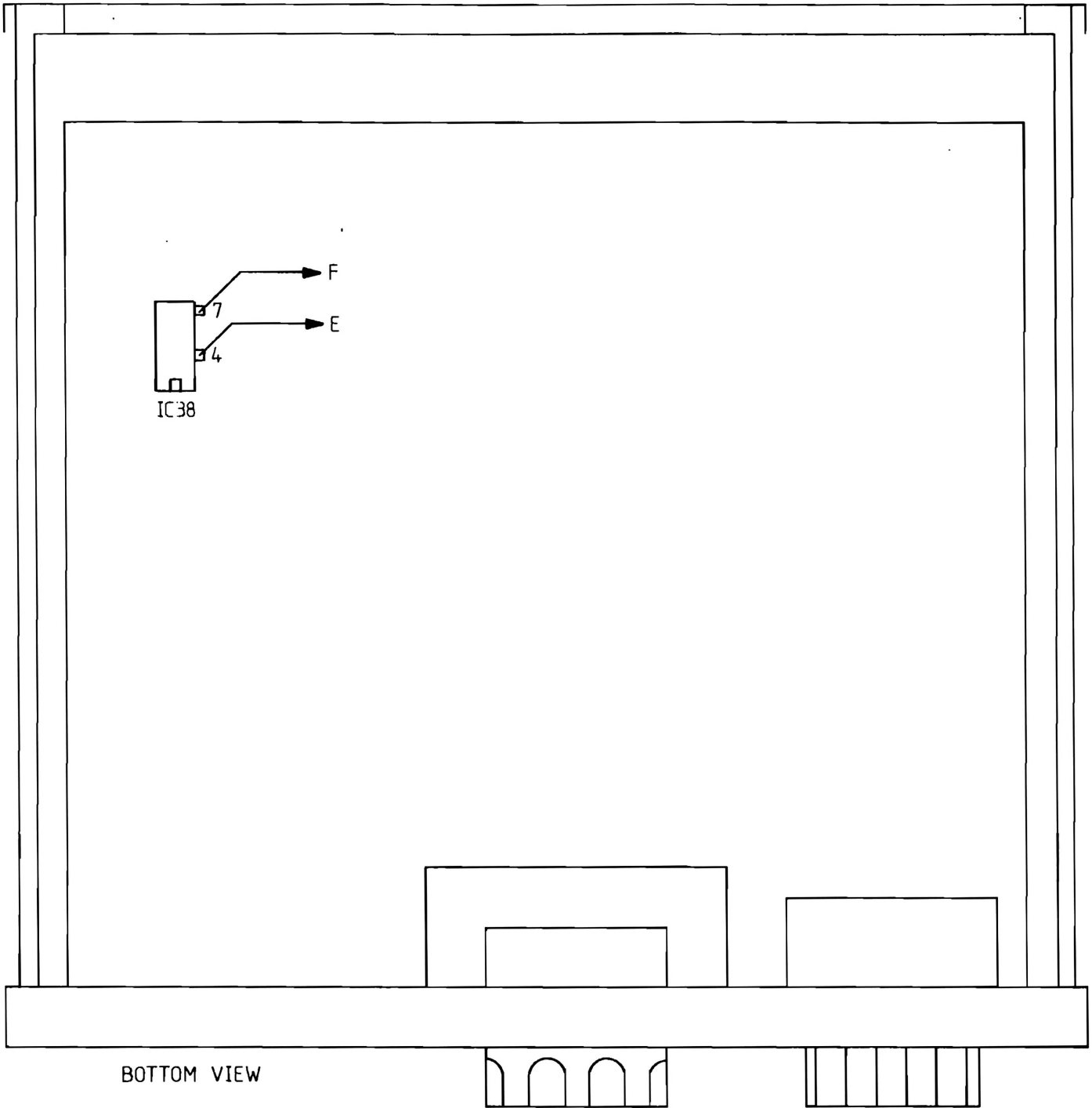


REMOVE : C280, C281, C282, C283, C284, L123, TR22

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NRD-515

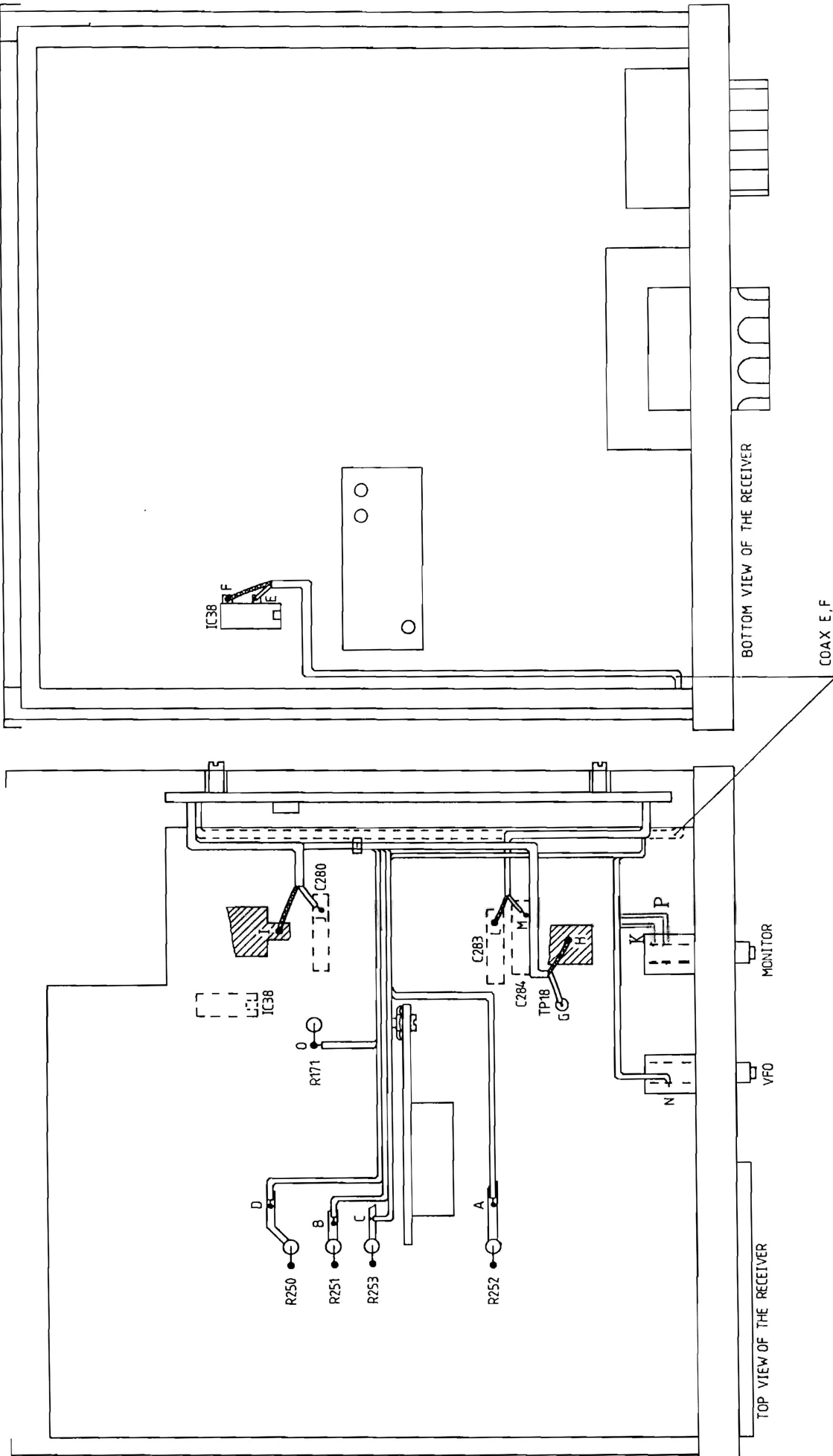
003-PCB-301-A-8409





BOTTOM VIEW

ESKA ELEKTRONIK NRD-515	003-NRD-002-A-8409
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003-NRD-003-A-8409
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NRD-515