

# ZODIAC

---

## IF-7232

By means of the LRC-Combination L1, R1, C1, and C2 impedance matching between the crystal filter in the RF-unit and the first stage in the IF-unit is obtained.

The signal is amplified by transistor Q1, and goes via L2 to the mixer consisting of IC1, crystal-controlled.

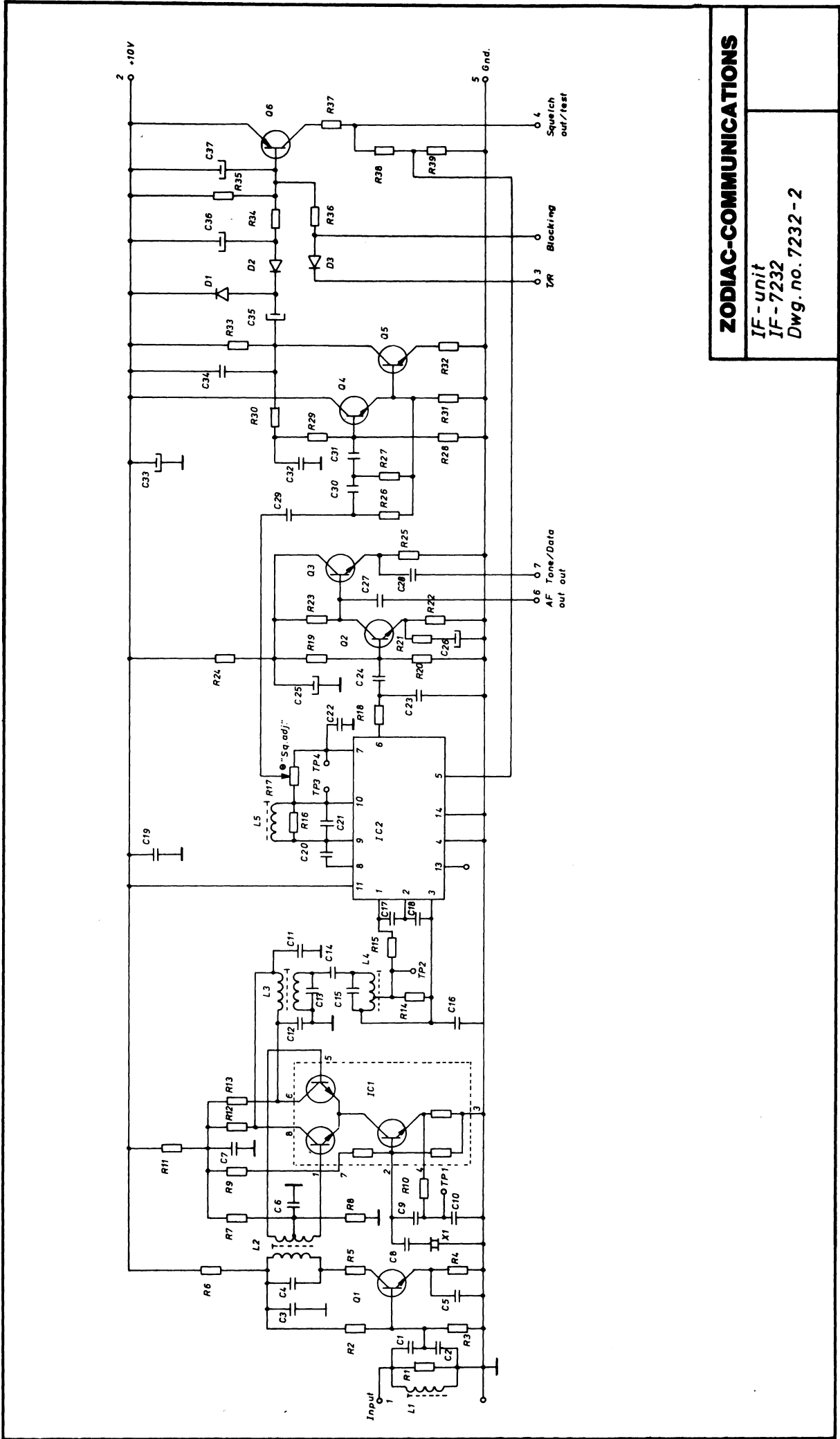
The intermediate frequency of 455 KHz is lead via L3 and L4 to the IF-Amplifier and Detector - unit IC2. The detected signal after deemphasis, is lead to the amplifier Q2 where it is amplified and passed to the AF-output amplifier. Simultaneously the AF-signal is lead to the tone/data out, through a buffer stage.

From the detector in IC2 a squelch-signal is sent, via an active highpass filter, to an amplifier stage Q5 to be amplified. When the squelch-signal has been detected, it is sent to the transistor Q6 which controls the squelch-switch in IC2.

When transmitting, the transistor Q6 is used to block the receiver.

This document must not be copied, reprinted or disclosed to any third party, either wholly or in part, without our consent. Any infringement will lead to legal proceedings.

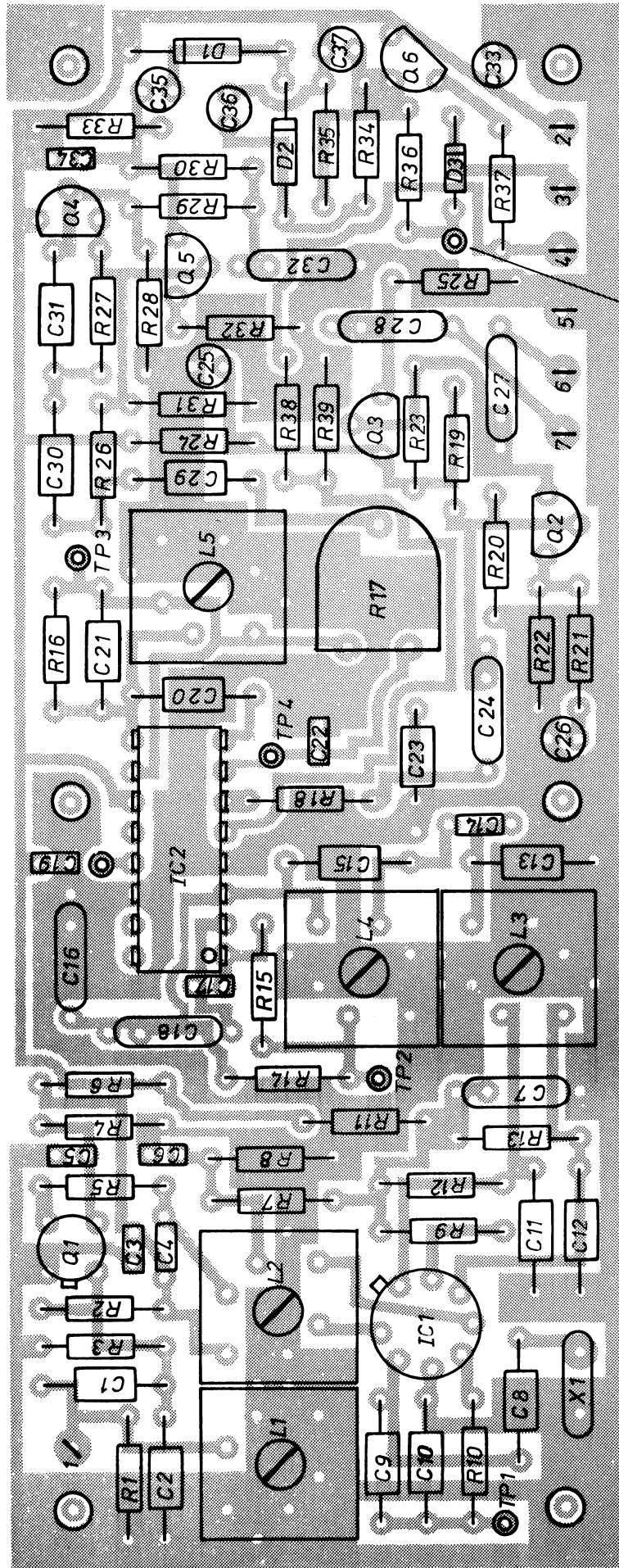
ZODIAC-COMMUNICATIONS APS, DENMARK



**ZODIAC-COMMUNICATIONS**  
 IF-unit  
 IF-7232  
 Dwg. no. 7232-2

This document must not be copied, reprinted or disclosed to any third party, either wholly or in part, without our consent. Any infringement will lead to legal proceedings.

ZODIAC-COMMUNICATIONS APS, DENMARK



**ZODIAC-COMMUNICATIONS**

IF-unit  
 IF-7232  
 Dwg. no. 7232-2

Component List

IF-unit - IF-7232

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
IC1	IC	CA 3o53
IC2	IC	CA 3o89E
Q1	Transistor	BF 167
Q2	-	BC 183
Q3	-	BC 183
Q4	-	BC 183
Q5	-	BC 183
Q6	-	BC 213
D1	Diode	AA 143
D2	-	AA 143
D3	-	1N 4148
X1	Krystal HC 18/U	1o.245 or 11.155 Mhz
R1	Resistor	3,9K 1/8 W
R2	-	22K -
R3	-	4,7K -
R4	-	1K -
R5	-	1K -
R6	-	33o ohm
R7	-	1oK
R8	-	1oK
R9	-	4,7K
R1o	-	1o ohm
R11	-	1oo -
R12	-	1,5K
R13	-	1,5K
R14	-	33o ohm
R14	-	33o -
R16	-	3,9K
R17	Trimnepotm.	4,7K
R18	Resistor	2,7K
R19	-	1ooK
R2o	-	22K
R21	-	12o <del>1oo</del> ohm-selected value.
R22	-	1,2K
R23	-	4,7K
R24	-	22o ohm
R25	-	4,7K

## Component List

IF-unit - IF-7232

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
R26	Resistor	10K
R27	-	10K
R28	-	39K
R29	-	68K
R30	-	39K
R31	-	4,7K
R32	-	220 Ohm
R33	-	4,7 K
R34	-	12K
R35	-	12K
R36	-	47K
R37	-	4,7K
R38	-	22K
R39	-	22K
C1	Capacitor	680 pf
C2	-	680 pf
C3	-	4,7 nf-ceramic
C4	-	47 pf-ceramic
C5	-	4,7 nf-ceramic
C6	-	4,7 nf-ceramic
C7	-	100 nf-polyester
C8	-	47 pf-styroflex
C9	-	220 pf-styroflex
C10	-	120 pf-styroflex
C11	-	220 pf-styroflex
C12	-	220 pf-styroflex
C13	-	1,6 nf-styroflex
C14	-	<sup>56</sup> pf-ceramic
C15	-	1,6 nf-styroflex
C16	-	100 nf-polyester
C17	-	470 pf-ceramic
C18	-	100 nf-polyester
C19	-	2,2 nf-ceramic
C20	-	68 pf-styroflex
C21	-	1,6 nf-styroflex
C22	-	2,2 nf-ceramic
C23	-	330 nf-polyester

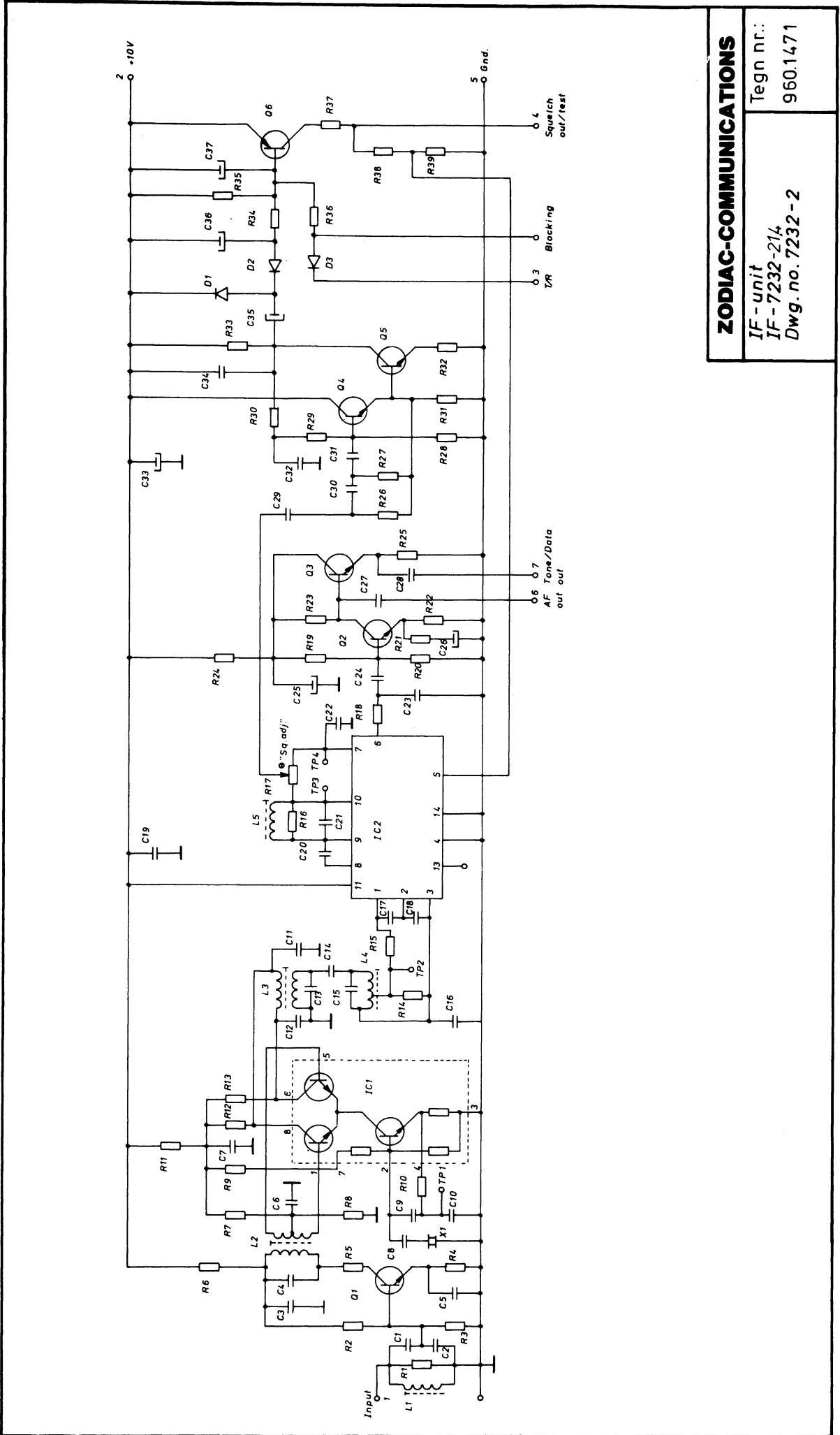
Component List

IF-unit - IF-7232

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
C24	Capacitor	220 nf-polyester
C25	-	22 uF/16V-tantal
C26	-	22 - - -
C27	-	100 nf-polyester
C28	-	100 nf-polyester
C29	-	1,6 nf-styroflex
C30	-	1,6 nf-styroflex
C31	-	1,6 nf-styroflex
C32	-	100 nf-polyester
C33	-	22 uF/16V-tantal
C 34	-	2,2 nf-ceramic
C35	-	1 uF/16V-tantal
C36	-	1 uF/16V-tantal
C37	-	1 uF/16V-tantal
L1	Coil	
L2	-	
L3	-	
L4	-	
L5	-	

This document must not be copied, reprinted or disclosed to any third party, either wholly or in part, without our consent. Any infringement will lead to legal proceedings.

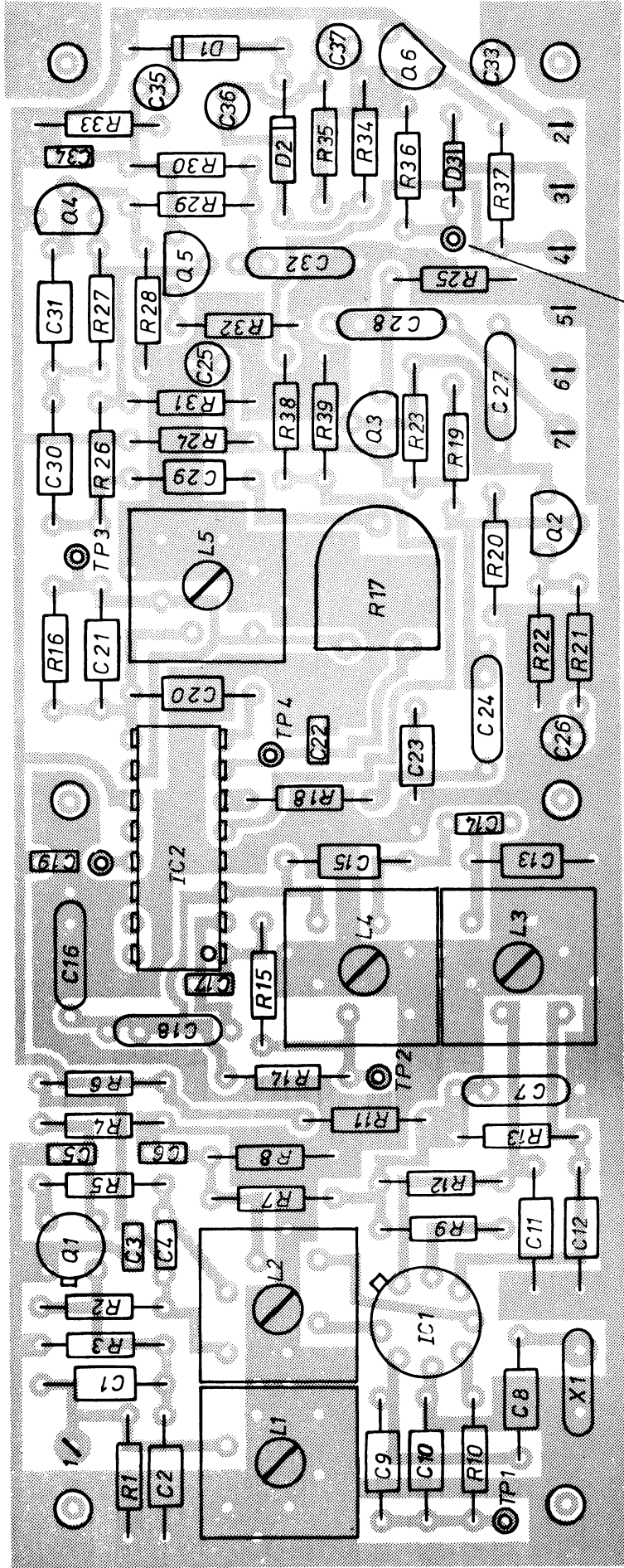
ZODIAC-COMMUNICATIONS DENMARK



<b>ZODIAC-COMMUNICATIONS</b>	
IF-unit IF-7232-214 Dwg. no. 7232-2	Tegn nr.: 960.1471

This document must not be copied, reprinted or disclosed to any third party, either wholly or in part, without our consent. Any infringement will lead to legal proceedings.

ZODIAC-COMMUNICATIONS DENMARK



**ZODIAC-COMMUNICATIONS**

IF-unit  
 Tegn nr.: 9601472  
 IF-7232-214  
 Dwg. no. 7232-2



Component List

IF-unit - IF-7232 -21,4

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
IC1	IC	CA 3o53
IC2	IC	CA 3o89E
Q1	Transistor	BF 167
Q2	-	BC 183
Q3	-	BC 183
Q4	-	BC 183
Q5	-	BC 183
Q6	-	BC 213
D1	Diode	AA 143
D2	-	AA 143
D3	-	1N 4148
X1	Krystal HC 18/U	20,945 or 21,855 Mhz
R1	Resistor	5,6K
R2	-	22K -
R3	-	4,7K -
R4	-	1K -
R5	-	1K -
R6	-	33o ohm
R7	-	1oK
R8	-	1oK
R9	-	4,7K
R1o	-	1o ohm
R11	-	1oo -
R12	-	1,5K
R13	-	1,5K
R14	-	33o ohm
R14	-	33o -
R16	-	3,9K
R17	Trimmpotm.	4,7K
R18	Resistor	2,7K
R19	-	1ooK
R2o	-	22K
R21	-	12o <del>1oo</del> ohm-selected value.
R22	-	1,2K
R23	-	4,7K
R24	-	22o ohm
R25	-	4,7K

Component List

IF-unit - IF-7232 - 21,4

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
R26	Resistor	10K
R27	-	10K
R28	-	39K
R29	-	68K
R30	-	39K
R31	-	4,7K
R32	-	220 Ohm
R33	-	4,7 K
R34	-	12K
R35	-	12K
R36	-	47K
R37	-	4,7K
R38	-	22K
R39	-	22K
C1	Capacitor	150 pf
C2	-	330 pf
C3	-	4,7 nf-ceramic
C4	-	47 pf-ceramic
C5	-	4,7 nf-ceramic
C6	-	4,7 nf-ceramic
C7	-	100 nf-polyester
C8	-	47 pf-styroflex
C9	-	120 pf-styroflex
C10	-	120 pf-styroflex
C11	-	220 pf-styroflex
C12	-	220 pf-styroflex
C13	-	1,6 nf-styroflex
C14	-	56 pf-ceramic
C15	-	1,6 nf-styroflex
C16	-	100 nf-polyester
C17	-	470 pf-ceramic
C18	-	100 nf-polyester
C19	-	2,2 nf-ceramic
C20	-	68 pf-styroflex
C21	-	1,6 nf-styroflex
C22	-	2,2 nf-ceramic
C23	-	330 nf-polyester

Component List

IF-unit - IF-7232 - 21,4

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
C24	Capacitor	220 nf-polyester
C25	-	22 uF/16V-tantal
C26	-	22 - - -
C27	-	100 nf-polyester
C28	-	100 nf-polyester
C29	-	1,6 nf-styroflex
C30	-	1,6 nf-styroflex
C31	-	1,6 nf-styroflex
C32	-	100 nf-polyester
C33	-	22 uF/16V-tantal
C 34	-	2,2 nf-ceramic
C35	-	1 uF/16V-tantal
C36	-	1 uF/16V-tantal
C37	-	1 uF/16V-tantal
L1	Coil	
L2	-	
L3	-	
L4	-	
L5	-	