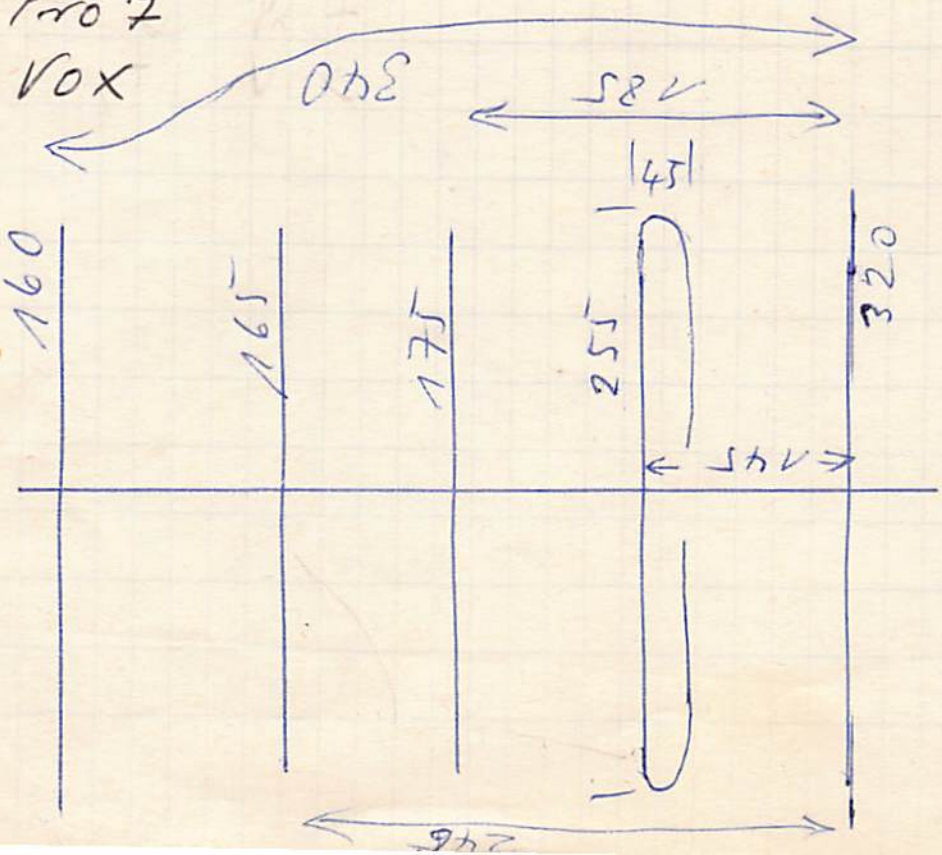
~~DVB~~ Kabel

1 ARD ✓
2 ZDF ✓
3 KiKa ✓
4 MDR 3 ✓
5 ORB 3 ✓
6 Sat 1 ✓
7 B 1 ✓
8 N 24 ✓
9 Kabel ✓
10 RTL ✓
11 3 sat ✓
12 Arte ✓
13 BR 3 ✓
14 N 3
15 SW 3 (→BW)
16 WDR 3
17 Pro 7
18 VOX
19 n-tv
20 Phoenix
21 S-RTL
22 RTL 2
23 MTV
24 ONYX
25 Viva
26 Viva 2
27 DSF
28 Eurosport
29 ~~DSF~~ 9Live (TM3)
30 ~~9Live (TM3)~~ Lück-tv
31 1 Muxx
32 1 Festival
33 QVC
34 HSEUR



TV 001 - 3 N24

005 - 6 ZDF

007 7/8/9 SFB

010 ZDFinfo

011 - 13 SuperRTL

014 - 17 RTL2

018 19 RTL

020 - 22 KiKA

023 → 26 Phoenix

004 VOX

027 Pro7 → 029 → 31

032 - 035 Kabel 1

~~036 RTL~~

037 - ORB → 39

040 - Sat 1 → 45

046 - 49 - ~~59~~ - 62 - (64) ZDF doku

065 - ARD - 69

070 ORB - 76

TV 01 RTL

02

03

04 01 20 +5

05

06

~~07~~ 07

08

↓

31

35

37

L — 734 (+100+734)!

R — 883

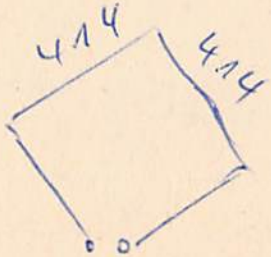
D_1 — 628

D_2 — 638

D_3 — 622

D_4 — 617

Quad



Kan 7

191 MHz

~~f = 300 000~~ / ~~63,4~~

$f = \frac{300\,000}{\lambda}$

~~$\lambda = \frac{300\,000}{f}$~~

$\lambda = \frac{300}{f}$

$\lambda = 1{,}57$

$\lambda/2 = 78{,}5$

0,94

K.F UHF

$\lambda \approx 1{,}57$

UHF

K25 — λ = 59 cm Ø 18,8 cm 78

K27 — = 57,5 cm 18,3

K33 — = 52,5 cm 16,7

K44 — 45,5 cm 14,48

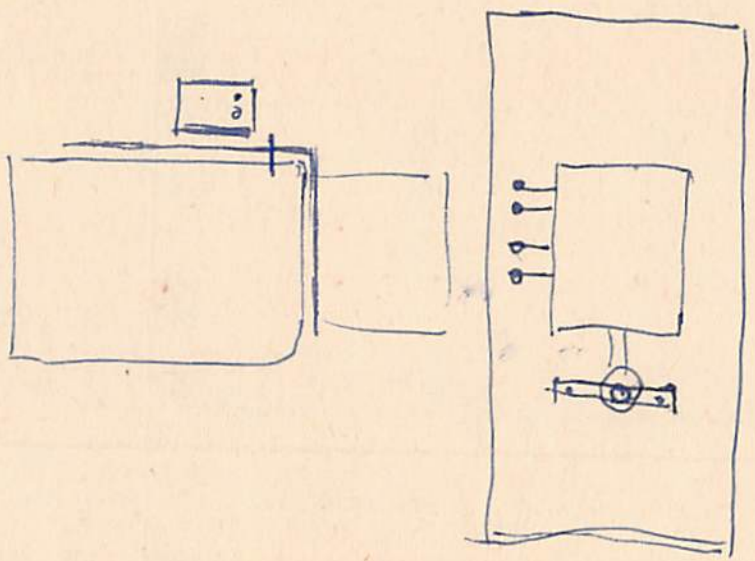
K59 — 38,5 cm 12,25

K51 — 42 cm Quad 13,4 cm (13,368)

K25 / K27 — λ - 58 cm Ø 18,46 $\lambda/2$ 29 cm

345 K33 / K44 — λ - 49 cm (Ø 15,597) $\lambda/2$ 25,5 cm

K30 λ 55 cm $\lambda/2$ - 27,5 cm Ø 17,5



174 - 240 | 87 - 108 Bandbreite

207 MHz mf | 97,5 mf (21 MHz)

(66 MHz) $\lambda = 3,077$

$\lambda = 1,449$ | $\frac{\lambda}{4} = 0,3623$ $\frac{\lambda}{4} = 76,9$

$\frac{\lambda}{4} \cdot 0,97 = 74,6$ cm

$\frac{\lambda}{4} \cdot 0,97 = 0,3514 19$

174 - 240

174 - 207 - 240

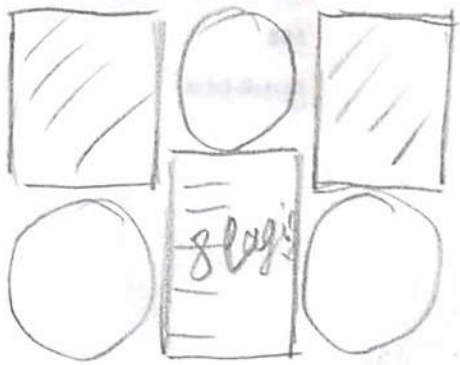
~~190,5~~ ~~223,5~~

190 223

$\frac{300}{190} = 1,58/4 = 0,395 \cdot 0,97 = 0,38$

$\frac{300}{223} = 1,34/4 = 0,336 \cdot 0,97 = 0,33$

Circular



196 MHz ≙ 1,56276 m

× 199,360 ≙ 1,53642 m ×

× 229,072 ≙ 1,33713 m ×

8C - 199,36

12D - 229,072 MHz

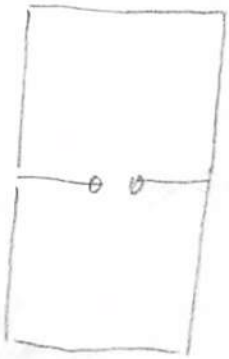
199,36 = λ 1,53642 m ⌀ 0,489056571 m

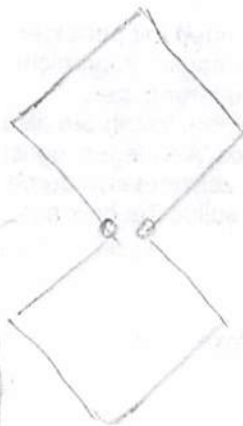
⌀ 489,06 mm ℓ = 384,10 mm

229,072 = λ 1,33713 ⌀ 0,425623027 m

⌀ 425,62 mm

ℓ = 334,3 mm





≃ 199,36 } 214,216

≃ 229,072 }

↷ λ = 1,42986 m

λ = 1429,7 mm

$\frac{\lambda}{4}$ = 0,357466 m

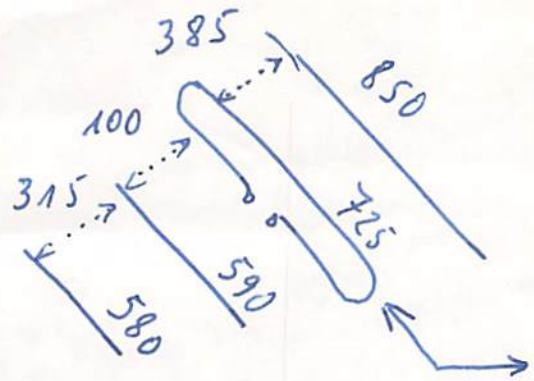
$\frac{\lambda}{4}$ = 357,5 mm

FM 97,85 MHz

$\frac{\lambda}{4}$ = 996,4 mm

λ = 3130,3 mm

$\frac{\lambda}{4}$ = 782,6 mm



$f = 230\ MHz$

6 dBd

$l_{ges} = 800\ mm$

Elemente $\varnothing \approx 8\ mm$ | 4-Element-Yagi

$$L/m = \frac{306,3}{f/MHz} \quad \rightarrow \quad L/m = \frac{306,3}{230\ MHz} \quad \rightarrow \quad L_{(Antennenlänge)} = 1,332\ mtr.$$

(1,331739 13)

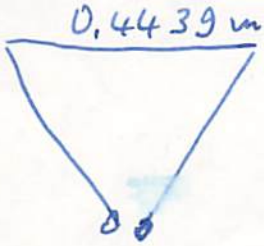
$\varnothing\ L = 0,424$ (0,423905738) → $l = 0,3329$ (0,332934792)

Gewinn 3,49 dBi || Gewinn 3,13 dBi

Rund $\varnothing$ 0,424 mm

Quadrat (eine Seitenlänge) $a = 0,333\ mm$

} bei 230 MHz

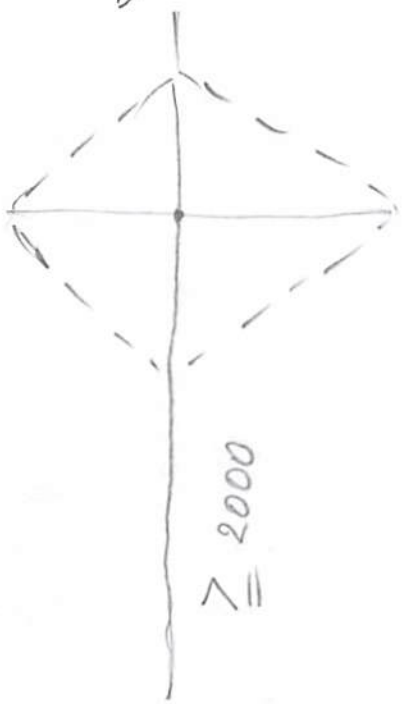


Delta
(corner fed)

Gewinn 2,7 dBi

Gewinn dBi bezogen auf Isotopen-Strahler

$$\lambda = \frac{306,3}{f}$$



$f_u = 87,5\ MHz$

$f_o = 108\ MHz$

$f_m = 97,75\ MHz$

$\frac{\lambda}{4} = 78\ 338$

$\lambda = 3,1335$

$e = 0,69335$

$e = a\sqrt{2}$

92,1 NDR2

95,5 HR2

98,2 NDR2

99,0 HR1

98,4 SAW

92,1

99,0

191,1

f_s 95,55

$\lambda_s = 3,206$

$\frac{\lambda}{4} = 0,8014$

$e_s = 0,7174$

$\lambda = \frac{309,7}{f}$ (2EL) $\left(\frac{\lambda}{8} = 392,5\right)$

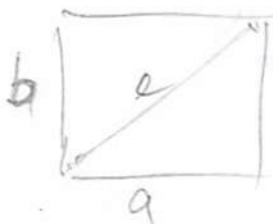
R $\frac{\lambda}{4} = 0810,309$

$e = 0729,42$ mm

Dip $\lambda = \frac{303,7}{f}$

$\frac{\lambda}{4} = 1,794610151$

$e = 0,708322706$ mm



$a^2 + b^2 = c^2$ √

110,787

112,2844667

174 - 240

207 MHz

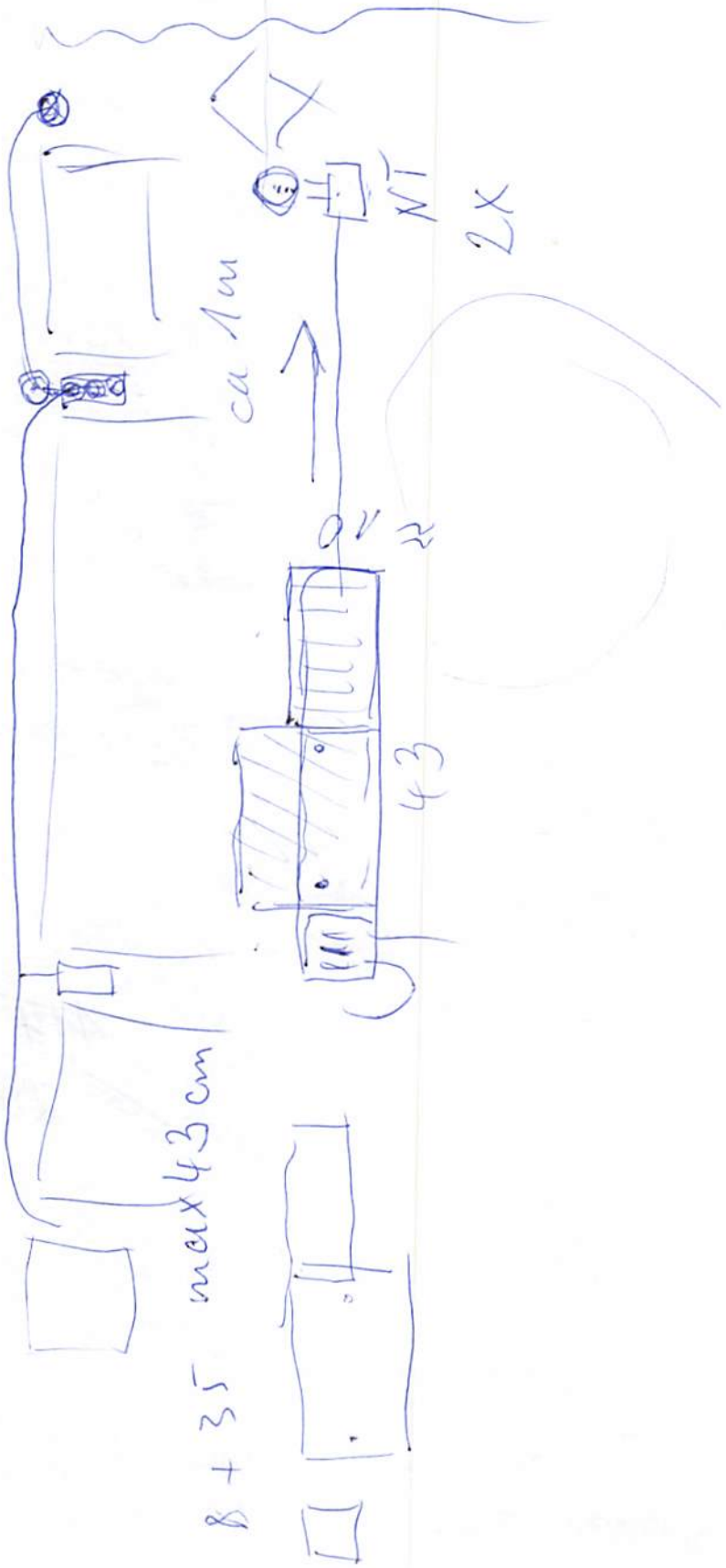
Skee to high
Kurt Nielsen

16.01.05

1. rot
2. gelb
3. rot
4. orange
5. gelb *

S-9 / 43 / 16

→ Eisschollenfeld geschafft!



NO DONT Disturb

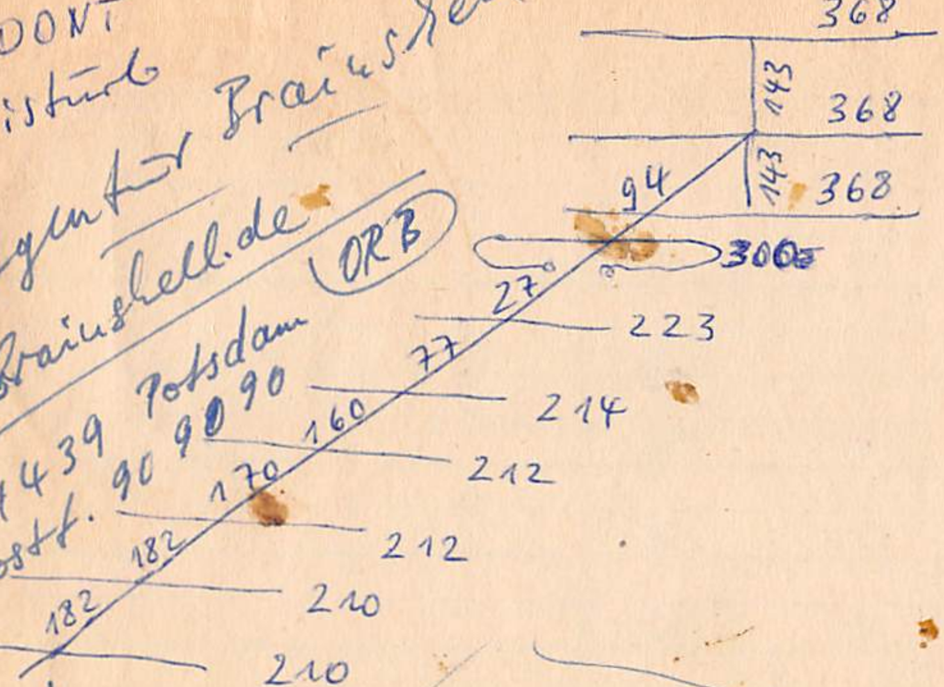
Agentur Brainshell

brainshell.de

ORB

14439 Potsdam

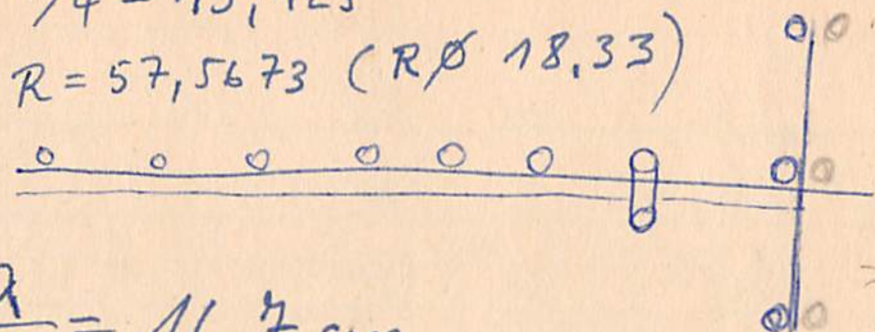
Postf. 90 90 90



λ 52,5 cm   L = 892

λ/4 = 13,125

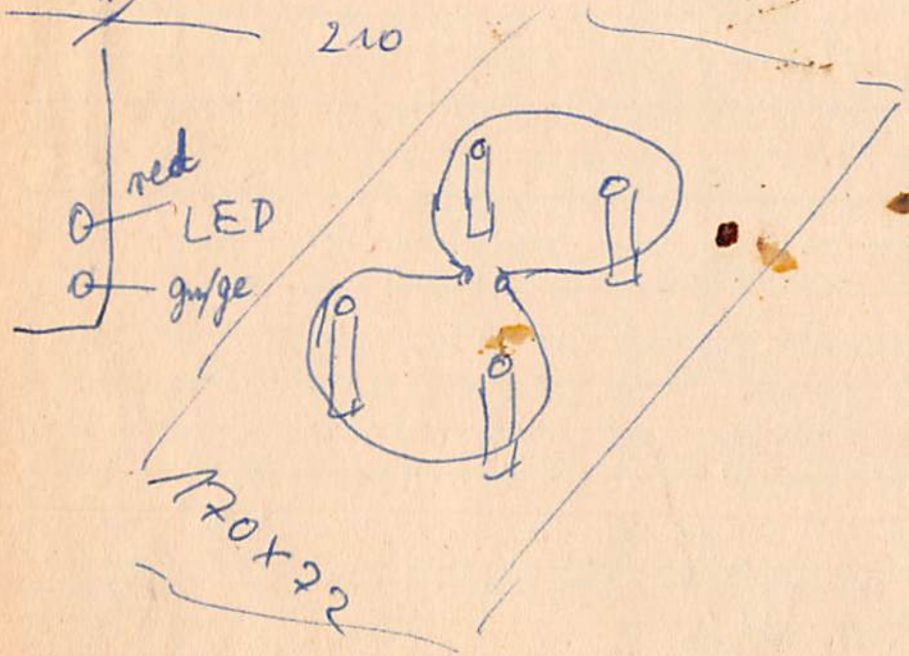
R = 57,5673 (RØ 18,33)



$\frac{\lambda}{\pi}$ = 16,7 cm

λ·0,08 = 4,2 cm   K33

λ·0,2 = 10,5 cm



K2 ≃ 50 MHz λ ≃ 6 m

L = 1523 ≙ 6092

R = 1670 ≙ 6680 (≃ 1,09652 %)

K12 ≃ 225 MHz λ ≃ 1,33 m

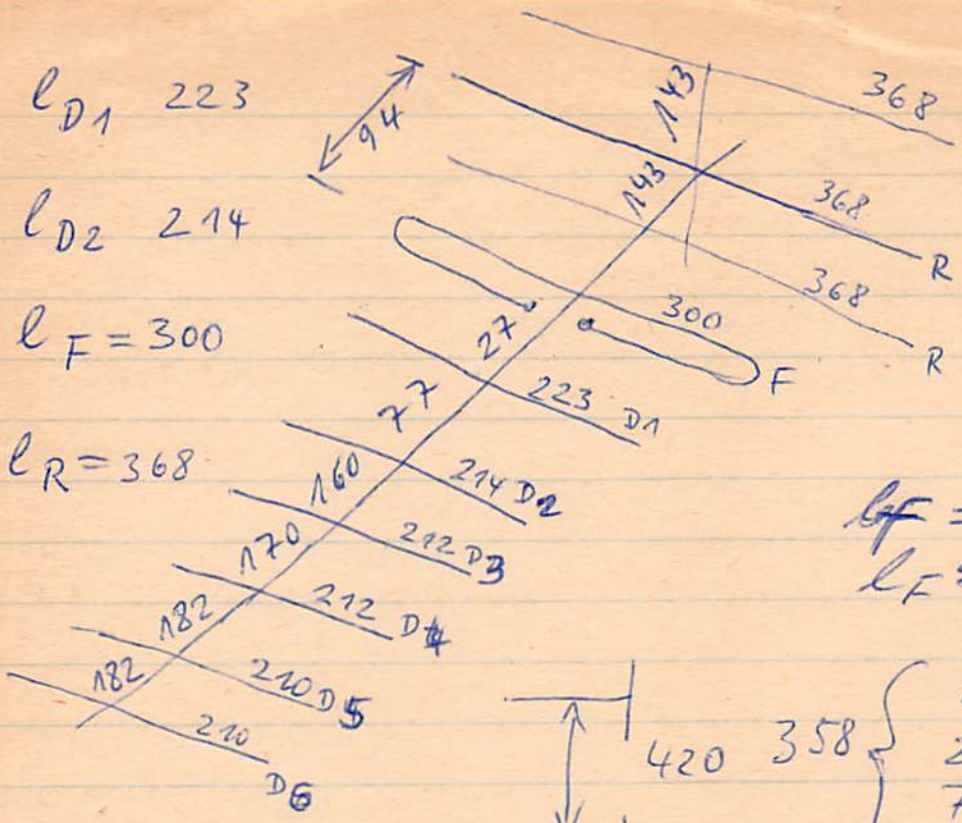
L = 337 ≙ 1348

R = 369 ≙ 1476 (≃ 1,0949554 %)

Partnerkarte
Twinkarte
1 Handy
2 Handys möglich
Rufnummer

199 Lichter

27 33 l=55cm
$\frac{l}{2}$ = 27,5cm



518
573

l_{D1} 223

l_{D2} 214

$l_F = 300$

$l_R = 368$

$L = 892$ mm

(50 × π)

~~l_F~~ $= 2 \times 300 + 157$

$l_F \approx 757{,}08$ plus Verschnitt

358 { 94, 27, 77 } 198

{ 160, 170 } 528

$l_{D3} = 212$

$l_{D4} = 212$

$l_{D5} = 210$

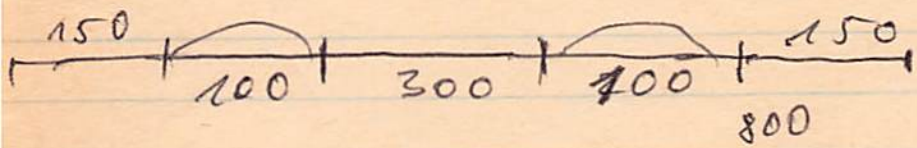
$l_{D6} = 210$

$368 + 368 = 736 + 223 = 959$
R_1 R_2 R_1+R_2 D_1

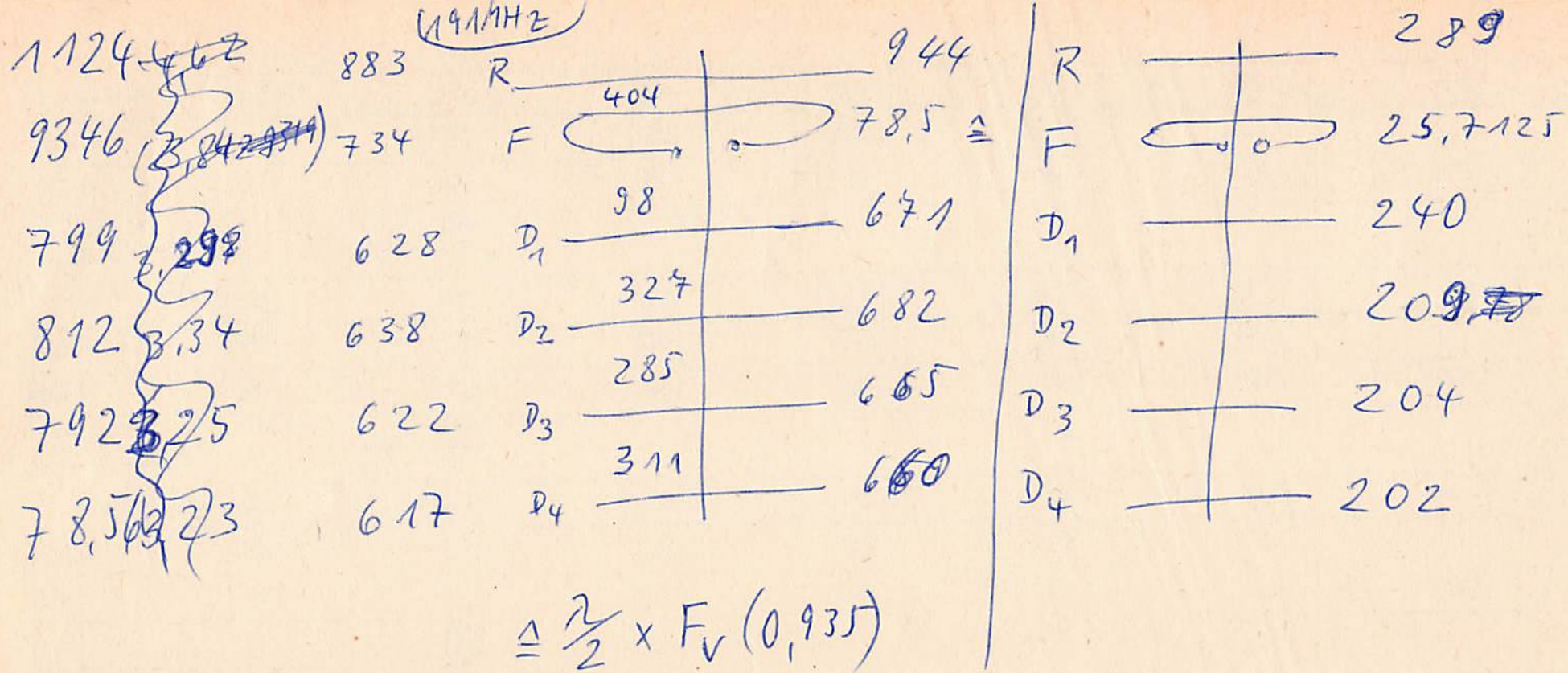
$\approx 765 + 214 = 979$
F D2

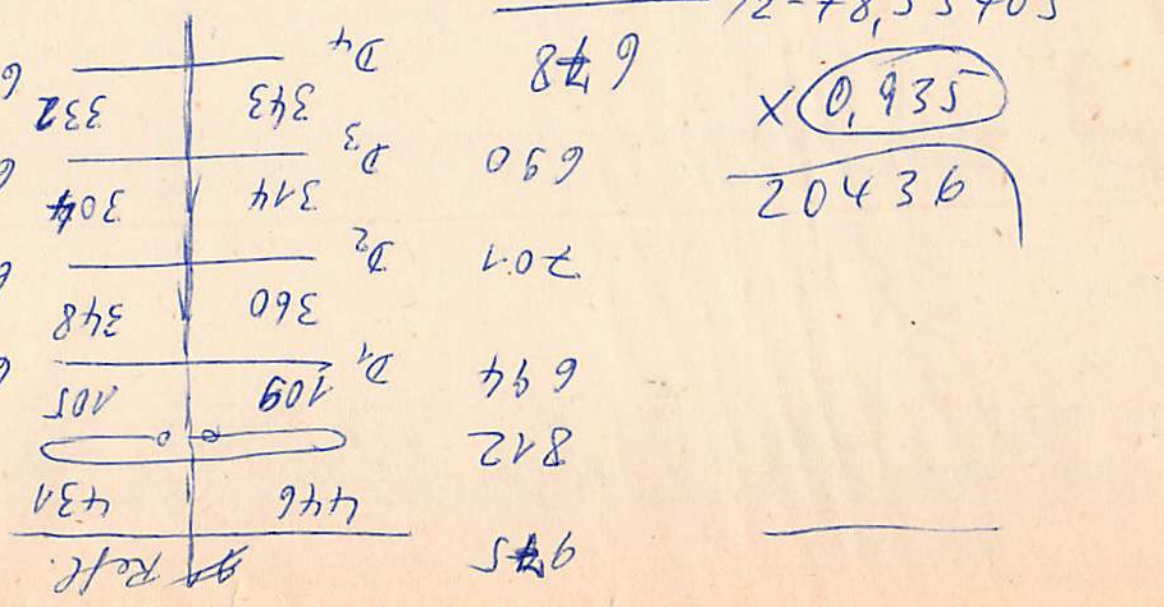
$212 + 212 + 210 + 210 + 368$

424 788



157


1124
9346
799
812
792
78,5
883
734
628
638
622
617
(191,1 MHz)
R
F
D1
D2
D3
D4
944
78,5 ≙
671
682
665
660
404
98
327
285
311
≙ λ/2 × Fv (0,935)
289
25,7125
240
204
202


1468
λ/2 = 78,53403
× 0,935
20436

30	35
395	368
321	300
239	223
230	214
~~228~~	212

32,5 (~~33~~)	33,75
381,5 (380)	374,75
310,5 (~~309~~)	305,25
231 (~~229~~)	227
222 (~~220,5~~)	218
220 (	216

21/37 470 – 606

38/60 606 – 862

25/33 502 – 574

K 21–37

RR 117

R 349 77

F 284 22

D_1 212 63

D_2 204

K (21) 31–35 → 44

RR 124

R 368	81	100	$A_{F/R}$
F 300	23	20	D_1
D_1 223	66	122	D_2
D_2 214			

El. Längen

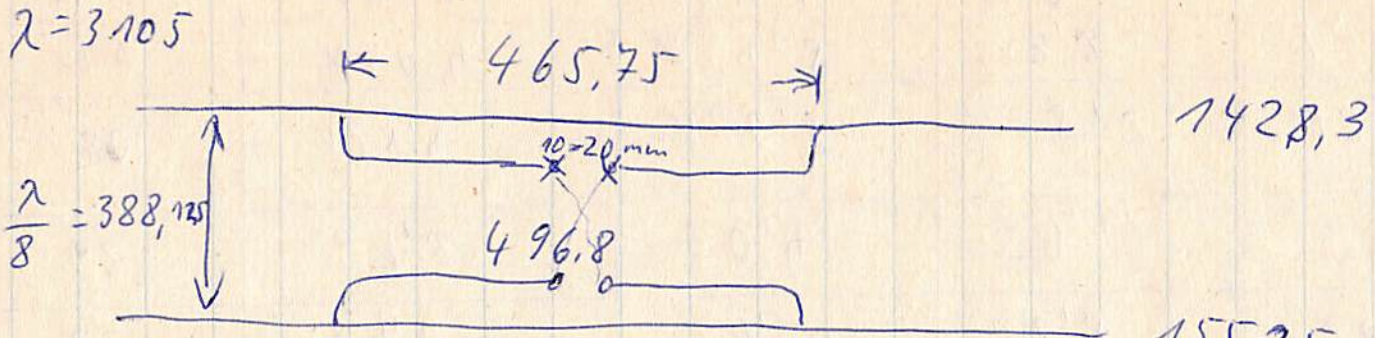
349 R

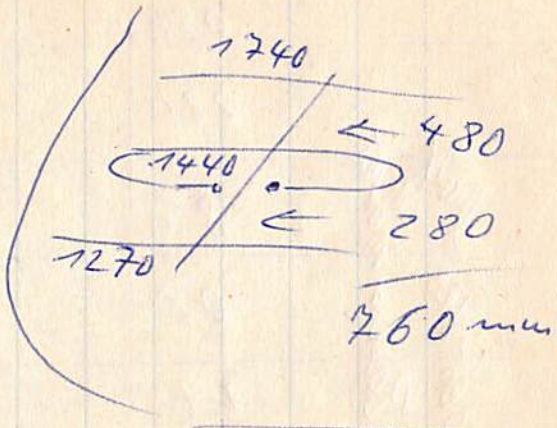
300 F

224 D_1

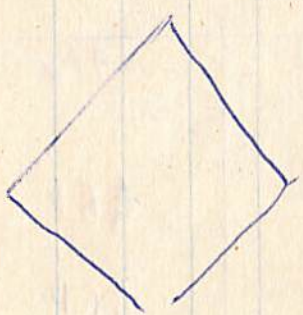
212 D_2

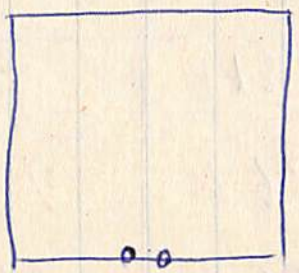
$\lambda = 3105$





$\lambda/4 = 776,25$ mm



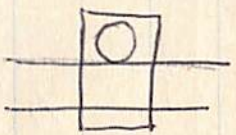


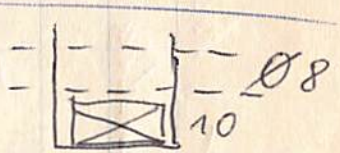
$A \geq 248,4 = 0,08\lambda$

$1310,5 = 0,1\lambda$

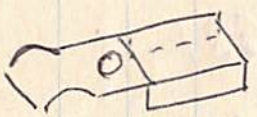
$465,75 = 0,15\lambda$

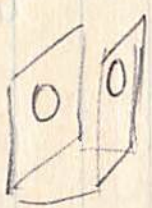
$621, = 0,2\lambda$

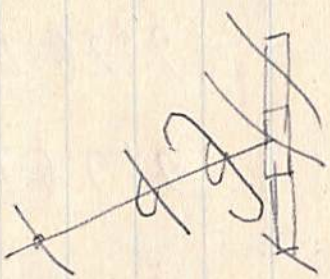


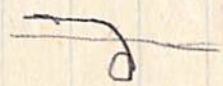


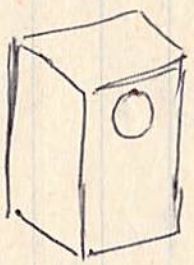
21
21
10
52

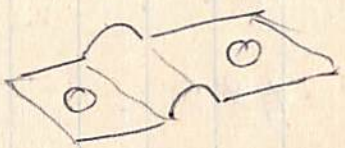


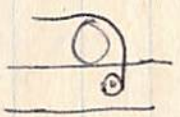












	C40	C41	C42	C43	C44 658	C45
R	345	340,8	336,6	332,4	328,2	324
F	280	276,8	273,6	270,4	267,2	264
D_1	209	206,4	203,8	201,2	198,6	196
(6) D_2	201	198,6	196,2	193,8	191,4	189
(7) D_3	199	196,6	194,2	191,8	189,4	187
(2) D_4	199	196,6	194,2	191,8	189,4	187
(5) D_5	197	194,6	192,2	189,8	187,4	185
(RC) D_6	197	194,6	192,2	189,8	187,4	185
A_{RR}	116	114,6	113,2	111,8	110,4	109
A_R	76	75	74	73	72	71
A_{D1}	22	21,6	21,2	20,8	20,4	20
A_{D2}	62	61,2	60,4	59,6	58,8	58
A_{D3}	130	128,4	126,8	125,2	123,6	122
A_{D4}	138	136,4	134,8	133,2	131,6	130
	148	146,2	144,4	142,6	140,8	139

Abstand „Rosettenkap" (Claudia Baumkötter)

C 44 / 658 MHz

3	R	328,2	−110,4
4	F	267,2	−72
5	D_1	198,6	−20,4
6	D_2	191,4	−58,8
7	D_3	189,4	−123,6
8	D_4	189,4	−131,6
9	D_5	187,4	−140,8
10	D_6	187,4	−140,8

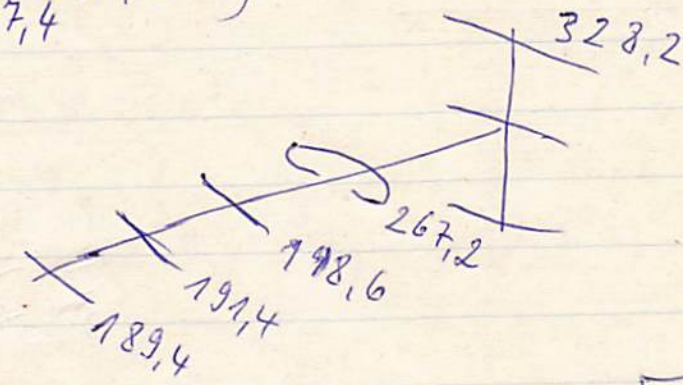
Bis D_6 10 → 688 (698)

Bis D_4 8 → 406 (416)

Bis D_2 6 → 151,2 (161,2)

7

Bis D_3 274,8 (284,8)

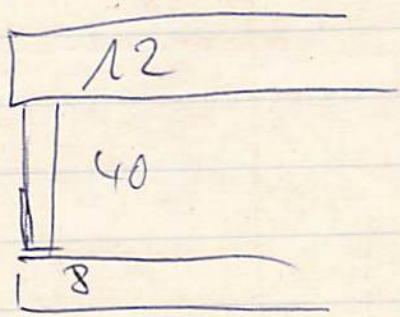


76

22

62

130



$3x = 51$

$3 \cdot x = 51$

$\frac{3x}{3} = 51:3$

$x = \frac{51}{3}\ 51:3$

$x = 17$

$x \cdot 45 = 46$

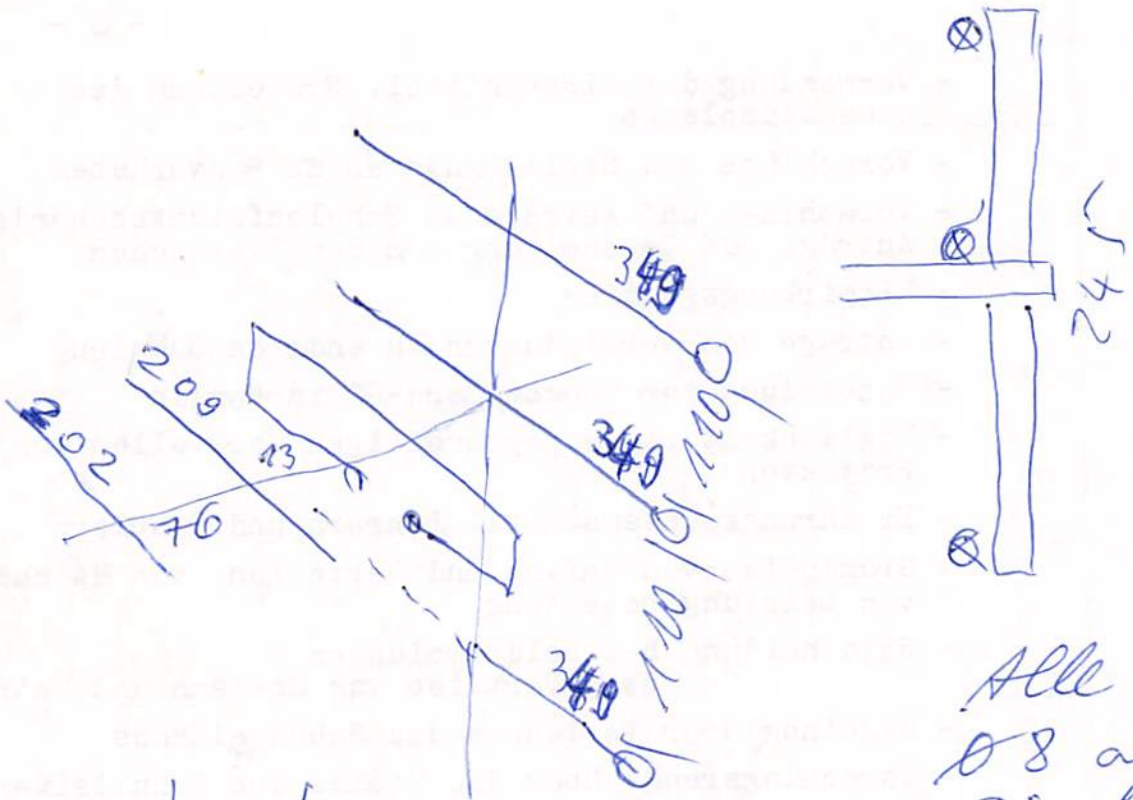
2t (2 · 1000kg)
(2 · 1t)

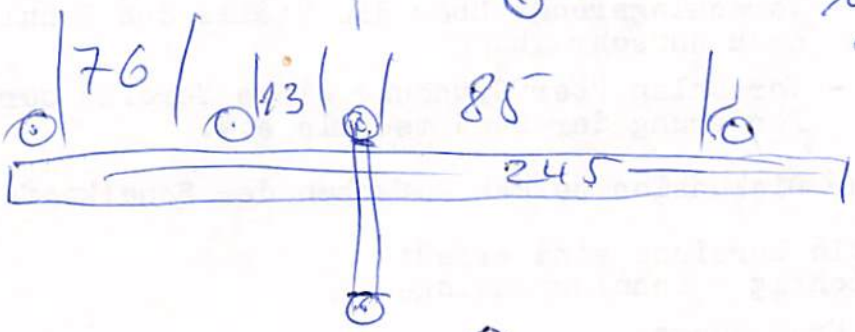
NR: 51:3 = 17
30
21

112,5

3 6 8
4 3 0 0 81
5 2 2 3 23
6 2 1 4 66
7 2 1 2

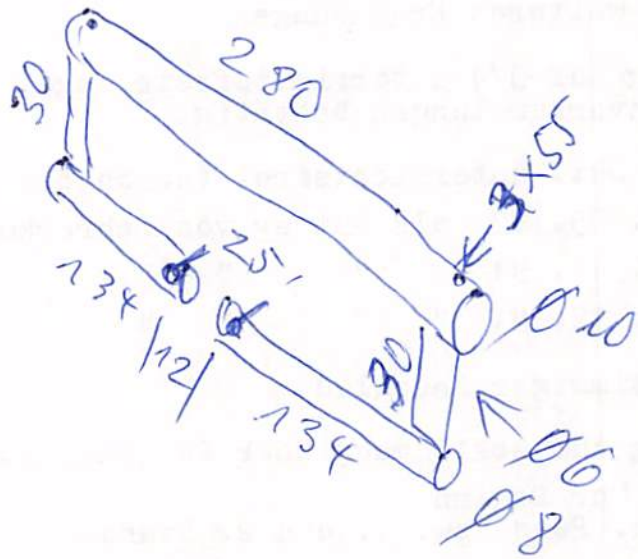
ARR 124
170 (180)

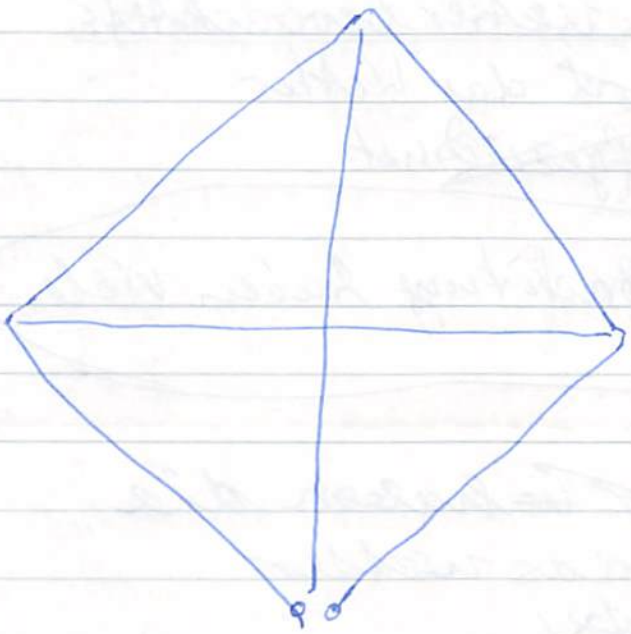




Alle Elemente Ø8 außer Dipol Ø10 + Ø8

(Ø6 Abstand)





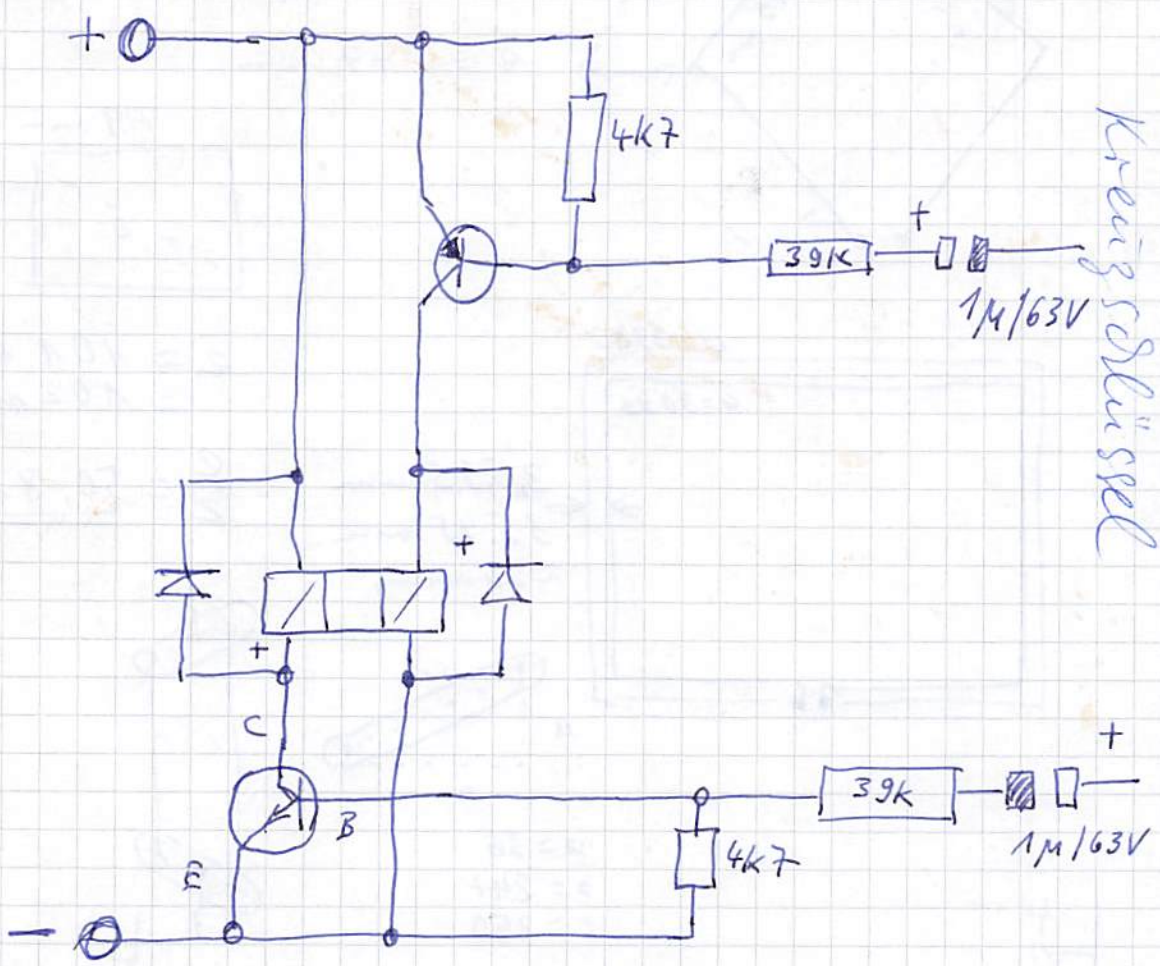
$e = 1,117\ m$

$$L_u = \frac{306,3}{f} \qquad L_4 = 3,16$$

$$L_{min} = 2,84 \quad (108\ MHz) \qquad L_{max} = 3,50 \quad (87,5\ MHz)$$

$$S = \frac{76,58}{f} \qquad S = 0,79$$

$$S_{min} = 0,709 \quad (108\ MHz) \qquad S_{max} = 0,875 \quad (87,5\ MHz)$$



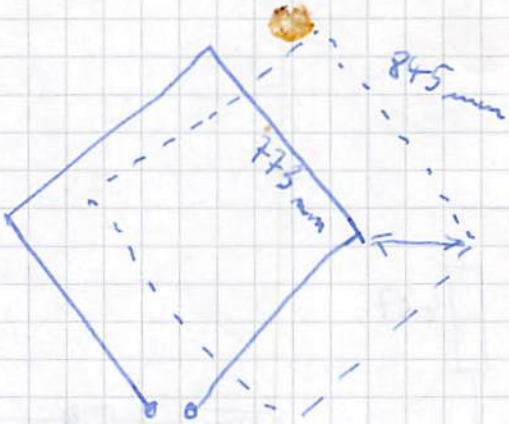
Kreuzschlüssel

Entwurf alt Ing Keller

HTML
XML

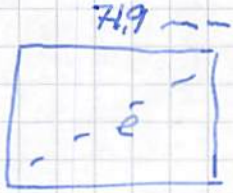
DTD

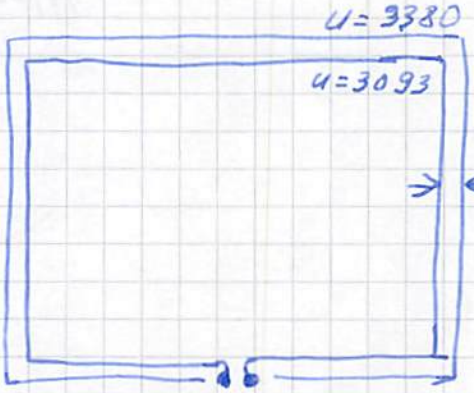
Mozilla
Netscape
Browser



$R_4 = U_L = 3093$ mm

$U_R = 3380$ mm



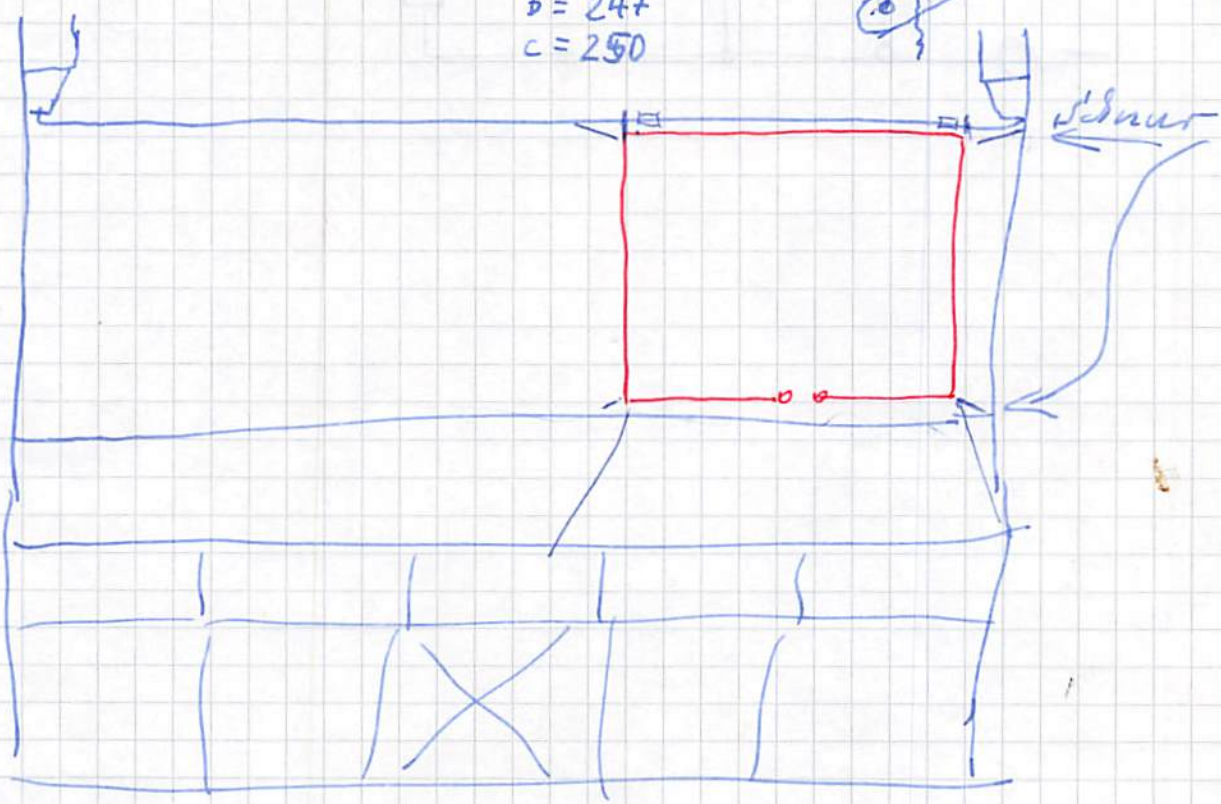


$e = 101.68$
≈ 102 mm

$\frac{e}{2} = 50,8$ mm

$3,5\,9.5$ mm
35.95 mm
≈ 36 mm

$a = 36$
$b = 247$
$c = 250$



 $\hat{=} 0,152\,\lambda^2$ (0,6)

 $\hat{=} 0,164\,\lambda^2$ (0,8)

 $\hat{=} 0,178\,\lambda^2$ (1,0)

Schleifenumfang ca $0,9\,\lambda$ bis $1,1\,\lambda$

$L/ft = \frac{1005}{f/MHz}$ oder $L/m = \frac{306,3}{f/MHz}$

Circular	3,44 – 3,28 g/dBi	R_s/Ω 135
Square	3,13 – 2,94 g/dBi	R_s/Ω 120
Rhombus	3,13 – 2,94 g/dBi	R_s/Ω 120
Delta	$\hat{=}$ 2,70 g/dBi	R_s/Ω 105

(Corner ~~feed~~ Side fed)

Diamond
(corner fed square) 2,94 g/dBi

Rechteck 2,43 g/dBi R_s/Ω 218

$f_m = 207\,MHz$ ca $0{,}36\ (\frac{\lambda}{4})$

$\curvearrowright e = 0{,}523$

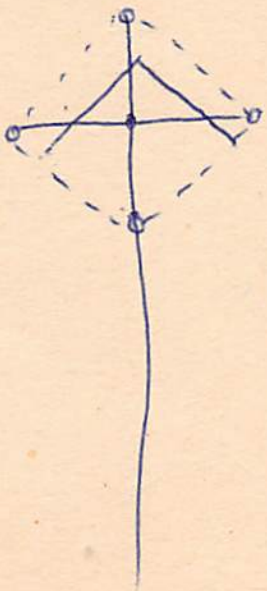
99,4

$f_m = 97\,MHz$ $\frac{\lambda}{4}$ 78,3

$\lambda = 3{,}158$ ca. $789\ (\frac{\lambda}{4})$

$\curvearrowright e = a\sqrt{2}$ $e \approx 1{,}11\,m$

54,5 | 195,5
109,0 | 97,75
3,1331

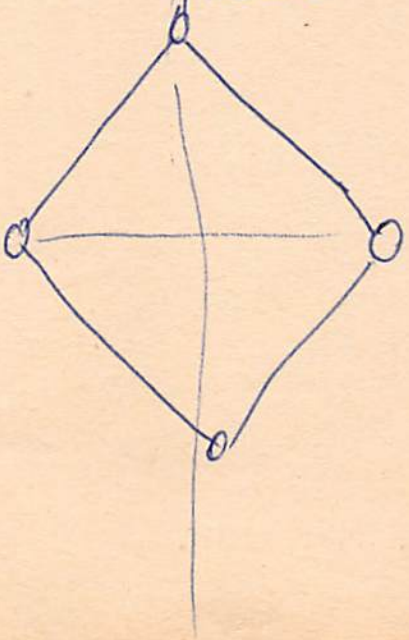


0,523 e_1

0,523 e_1

1,046

15 cm



2,99 dBi

August
Freitag

11

Vormerkungen

$\frac{\lambda}{m} = \frac{306,3}{f/MHz}$

Quadrat ≙ 12052

Kreis ≙ 13552

☎ 3,28 dBi

7.00
30
8.00
30
9.00

$f_m = 207\ MHz$

30
10.00

$\lambda = \frac{306,3}{f}$ $\quad \lambda = \frac{306,3}{207}$

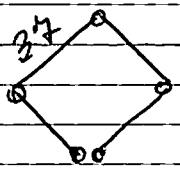
30
11.00

✉

30
12.00

$\lambda = 1,4797101$ $\quad \frac{\lambda}{4} = 0,3699 \ (\approx 0,37)$

30
13.00
30



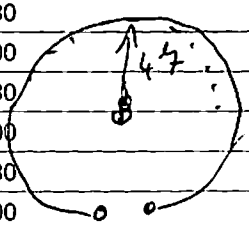
$\frac{\lambda}{2} = 0,7398 \ (\approx 0,74$

14.00
30
15.00

$e = a\sqrt{2}$

30
16.00
30

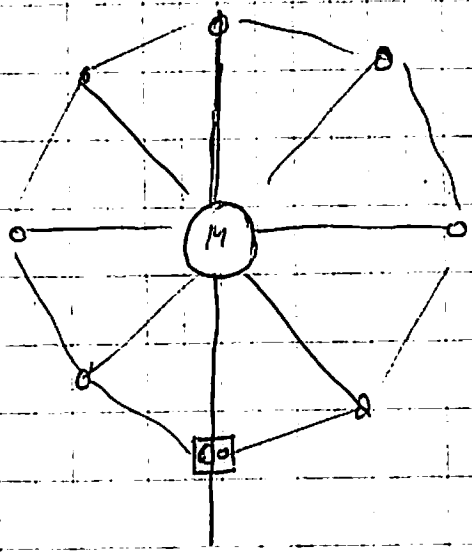
$e = 0,37 \cdot 1,41$



17.00
30

$e = 0,523$

18.00
30
19.00
30
20.00



3.1 m // 1.55 m $\frac{\lambda}{2}$

7 Stäbe à 1 Halbmeterstab

1 Platine für den Ant. Anschluß

Ø ca. 50 cm

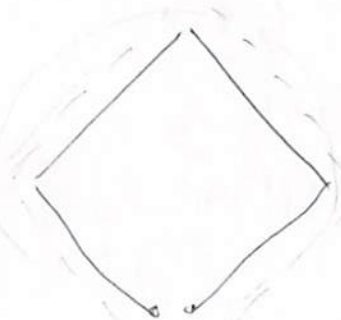
1) X
2) X
3) X
4) X
5) X
6) X
7) X
8) X

9) X
10) X
11) X
12) X
13) X

43 : 18

Stefanie Herbel

Lieber zum Verlieben



1 dB

0

$$\lambda = \frac{c}{f}$$

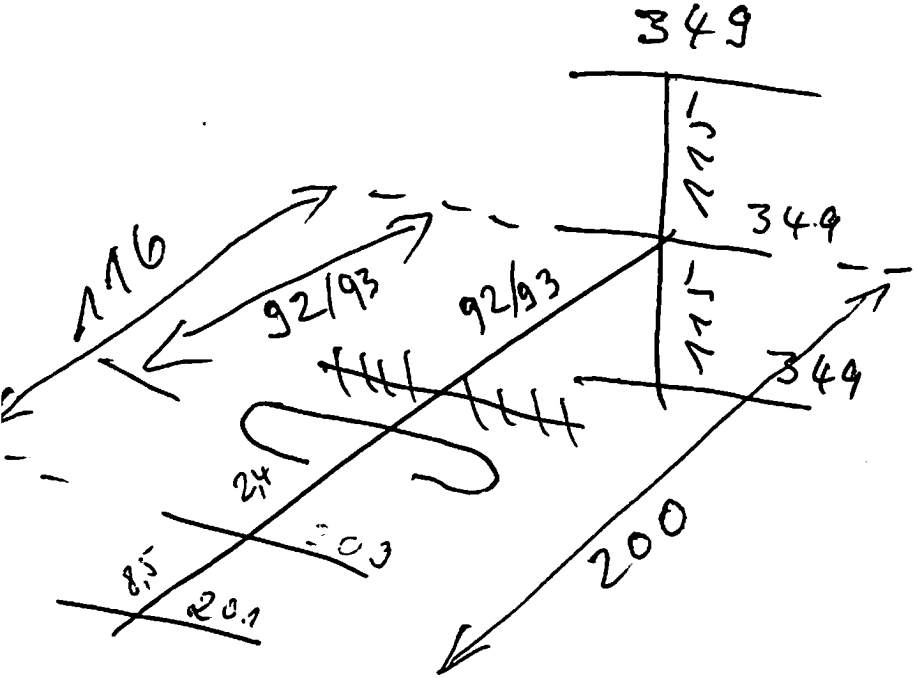
$\lambda = 3,1\ m\ (= \lambda)$

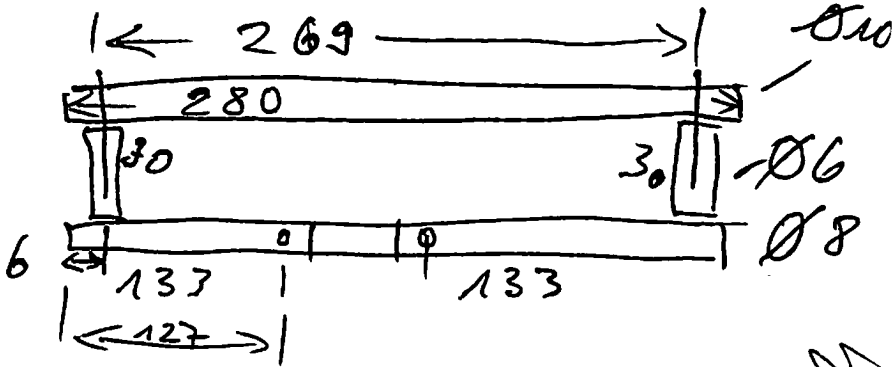
$f_m = 97,8\ MHz$

$87,5 \text{ —— } 108\ MHz$

011
110

001
110


349
115
115
349
349
116
92/93
92/93
24
200
8,5
20,1


269
Ø10
280
30
30
Ø6
Ø8
6
137
133
127

06058
07058
050003

90003
90589
100 u
120 u
140 u
150 u
↓
200589
0400003
2000003 ↓

k 1
↓
spears

(93,75)

100 MHz $\lambda = 3{,}20\,m$ $\lambda/2 = 1{,}6\,m$

$\lambda/2 \cdot 0{,}92 = 1{,}47\,m$

$\lambda/2 \cdot 0{,}3 = 0{,}48\,m$ | $\lambda/2 \cdot 0{,}32 = 512\,mm$

$\lambda/8 = 0{,}4\,m$

104 (95,75) MHz $\lambda = 3{,}13\,m$ $\lambda/2 = 1{,}57\,m$

$\lambda/2 \cdot 0{,}92 = 1{,}44\,m$

$\lambda/2 \cdot 0{,}3 = 0{,}47\,m$ | $\lambda/2 \cdot 0{,}32 = 501\,mm$

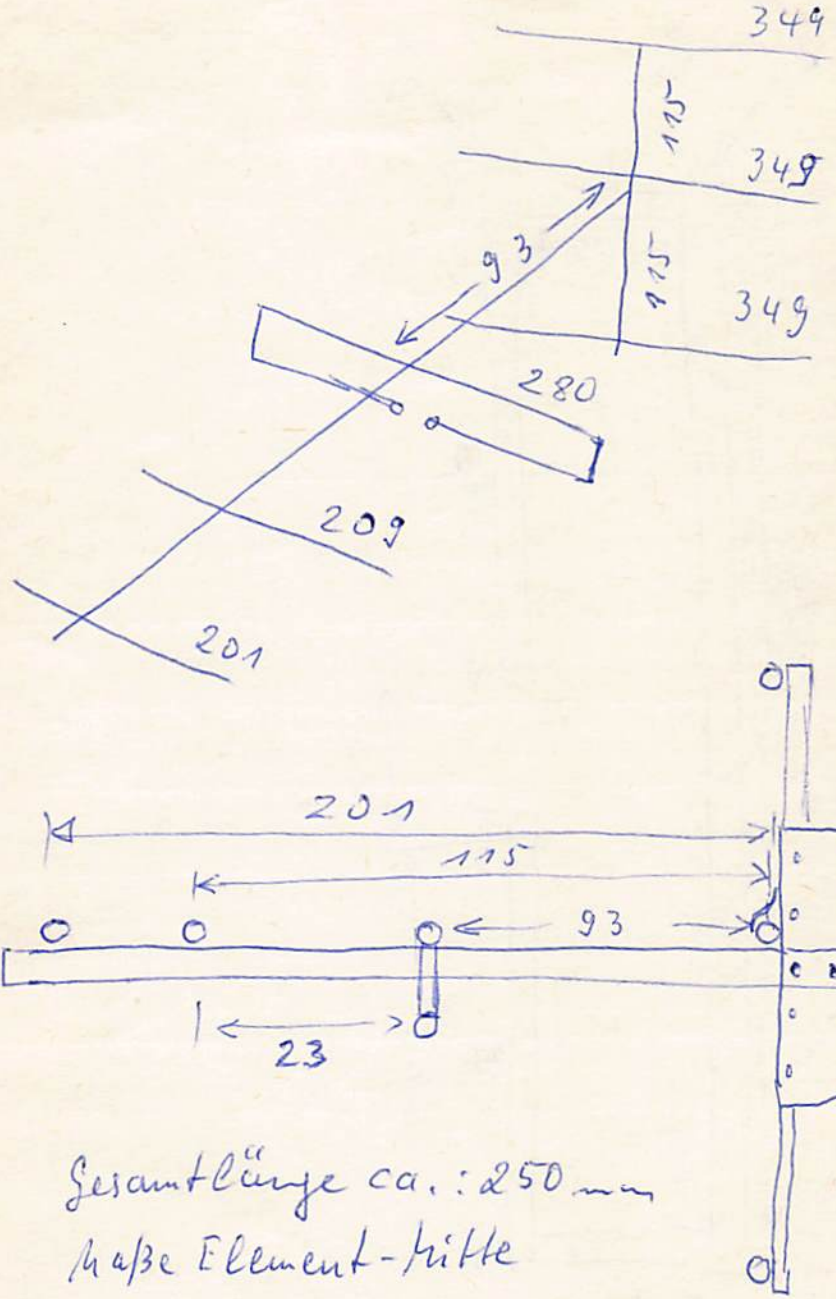
$\lambda/8 = 0{,}39\,m$

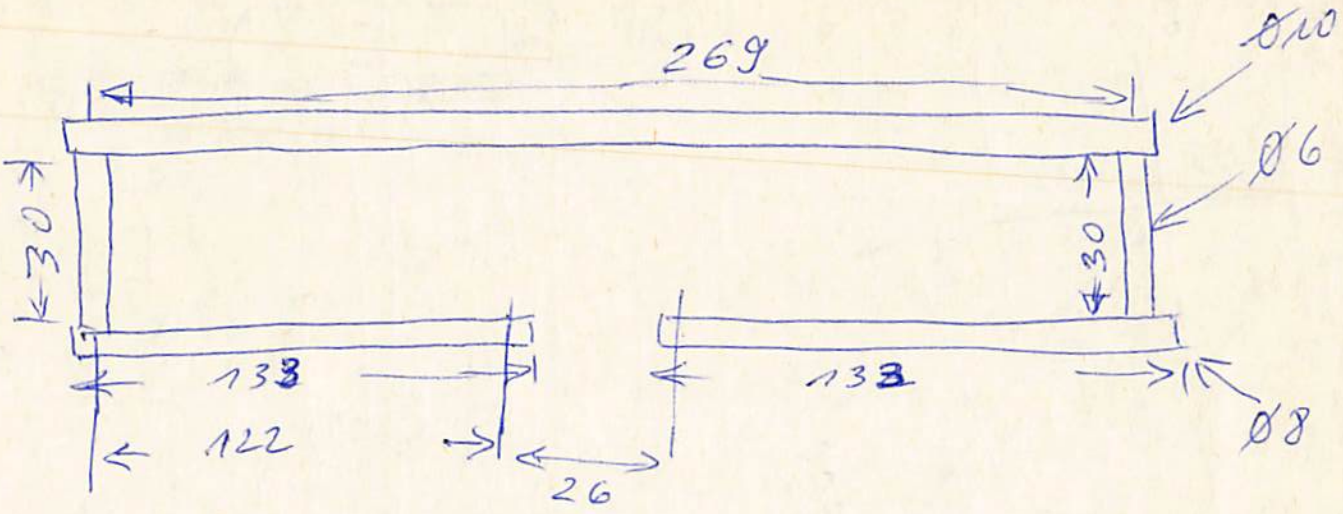
108 (97,75) MHz $\lambda = 3{,}07\,m$ $\lambda/2 = 1{,}53\,m$

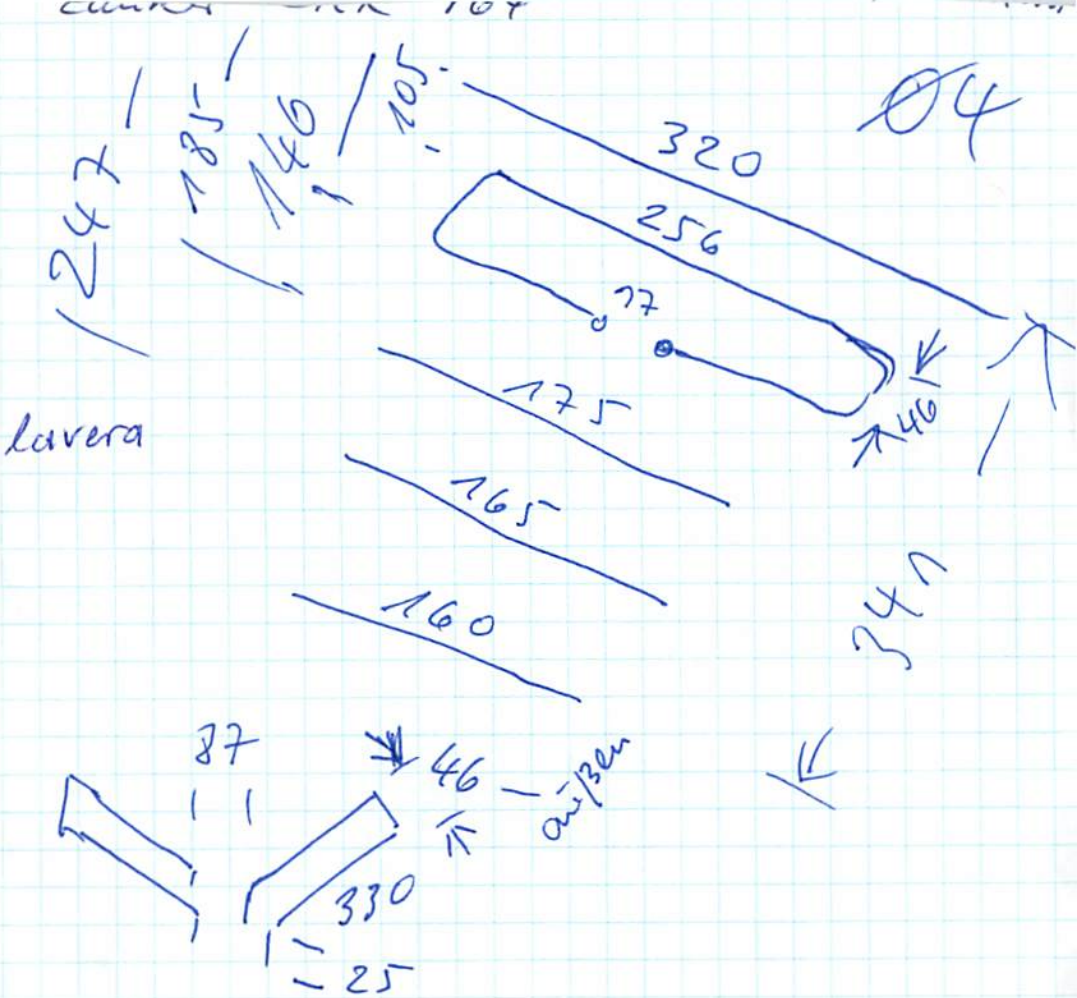
$\lambda/2 \cdot 0{,}92 = 1{,}41\,m$

$\lambda/2 \cdot 0{,}3 = 0{,}46\,m$ | $\lambda/2 \cdot 0{,}32 = 491\,mm$

$\lambda/8 = 0{,}38\,m$


349
115
349
93
115
349
280
209
201
201
115
93
23
115
115
Gesamtlänge ca.: 250 mm
Maße Element-Mitte


269
Ø10
Ø6
30
30
133
133
122
26
Ø8


247
185
146
105
320
256
77
175
165
160
46
341
lavera
87
46
330
25