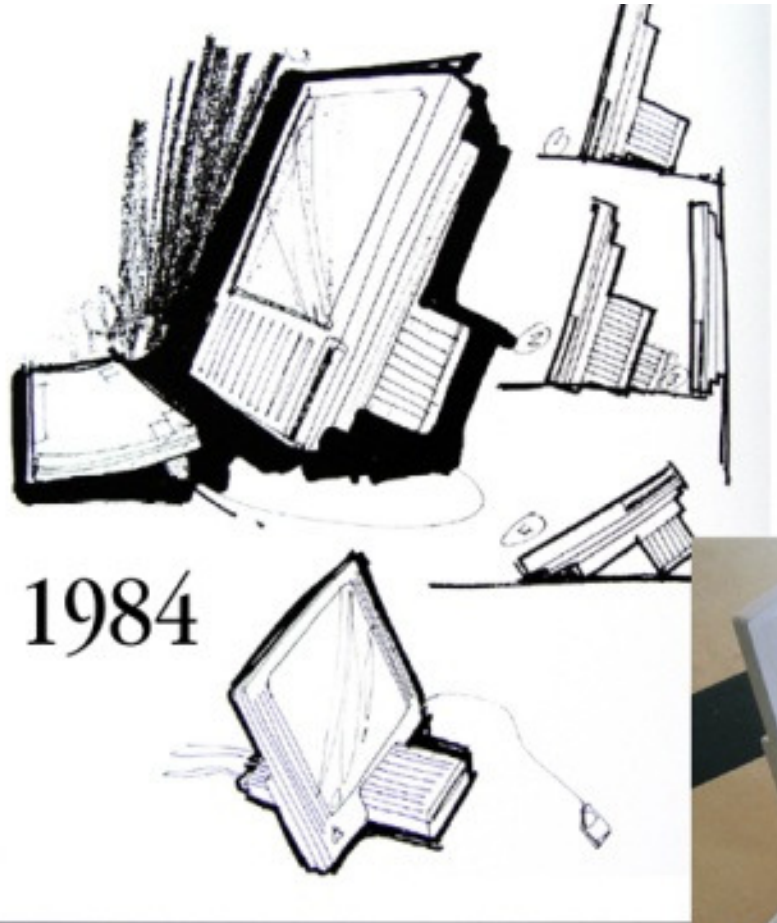
DDHF Småprojekter 2012

Æbler

Per Møller Olsen

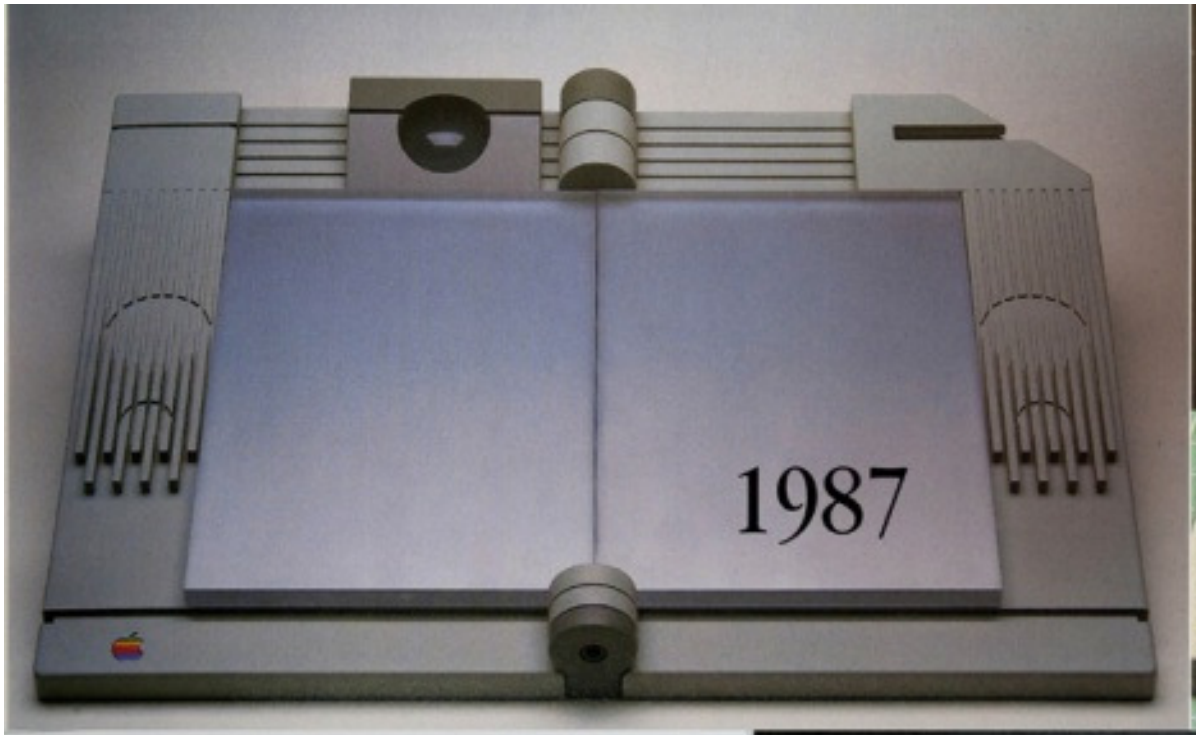

1984

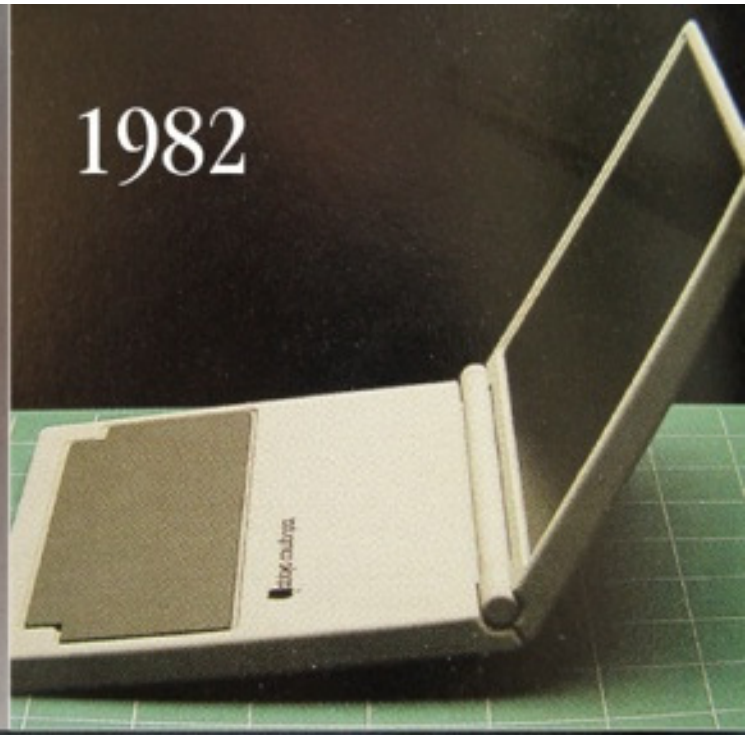

1989


1989


1993

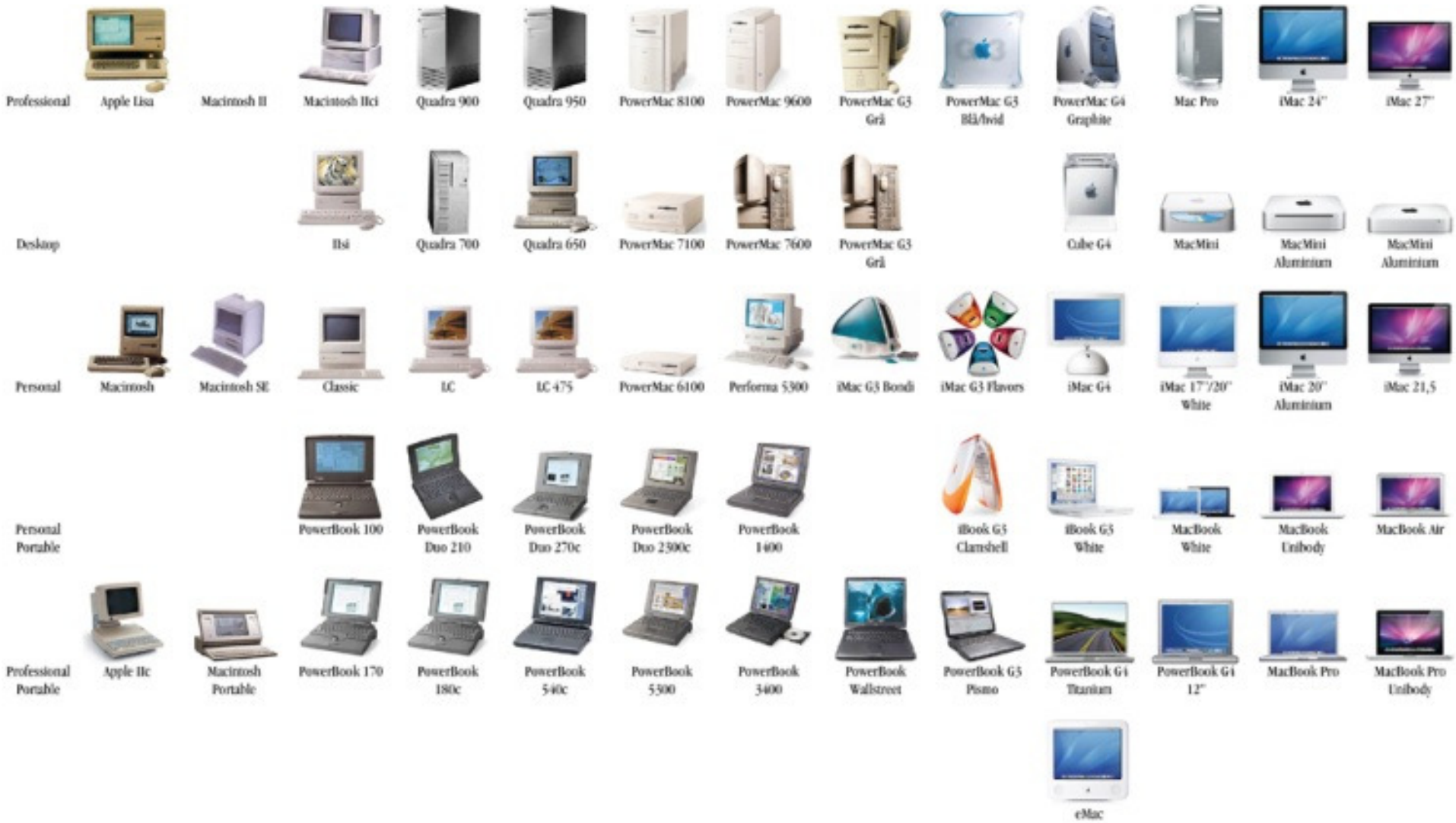

1986


1987


1982


1986


1986


Professional
Apple Lisa
Macintosh II
Macintosh IIci
Quadra 900
Quadra 950
PowerMac 8100
PowerMac 9600
PowerMac G3 Grå
PowerMac G3 Blå/hvid
PowerMac G4 Graphite
Mac Pro
iMac 24"
iMac 27"
Desktop
IIsi
Quadra 700
Quadra 650
PowerMac 7100
PowerMac 7600
PowerMac G3 Grå
Cube G4
MacMini
MacMini Aluminium
MacMini Aluminium
Personal
Macintosh
Macintosh SE
Classic
LC
LC 475
PowerMac 6100
Performa 5300
iMac G3 Bondi
iMac G3 Flavors
iMac G4
iMac 17"/20" White
iMac 20" Aluminium
iMac 21,5
Personal Portable
PowerBook 100
PowerBook Duo 210
PowerBook Duo 270c
PowerBook Duo 2300c
PowerBook 1400
iBook G3 Clamshell
iBook G3 White
MacBook White
MacBook Unibody
MacBook Air
Professional Portable
Apple IIc
Macintosh Portable
PowerBook 170
PowerBook 180c
PowerBook 540c
PowerBook 5300
PowerBook 3400
PowerBook Wallstreet
PowerBook G3 Pismo
PowerBook G4 Titanium
PowerBook G4 12"
MacBook Pro
MacBook Pro Unibody
eMac

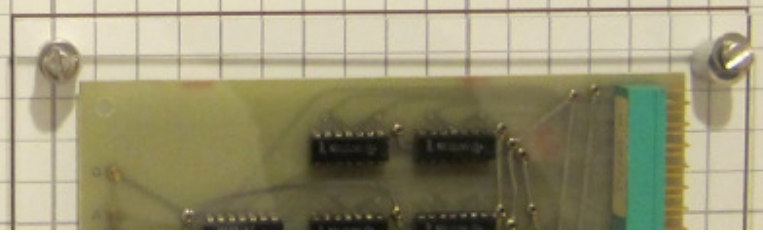
RC 4000

Claus Andersen

Pulawy, Polen

PROCESSTYRING 1968

Prototypen på RC4000 blev bygget til processtyring på en polsk gødningsfabrik. Den blev videreudviklet til en generel, multi-programmeret datamat, som både blev brugt i Regnecentralens servicebureauer og blev solgt til kunder. Programafviklingen skete under RC4000 Monitor, det internationalt berømmede sty-resystem udviklet af Per Brinch Hansen m.fl.



TV

Ch
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skil

SM

Til
cen
und
som
• R
• R
• R
• R


CONTROL DATA
CONTROL DATA
CONTROL DATA
ADAM
A S
A S

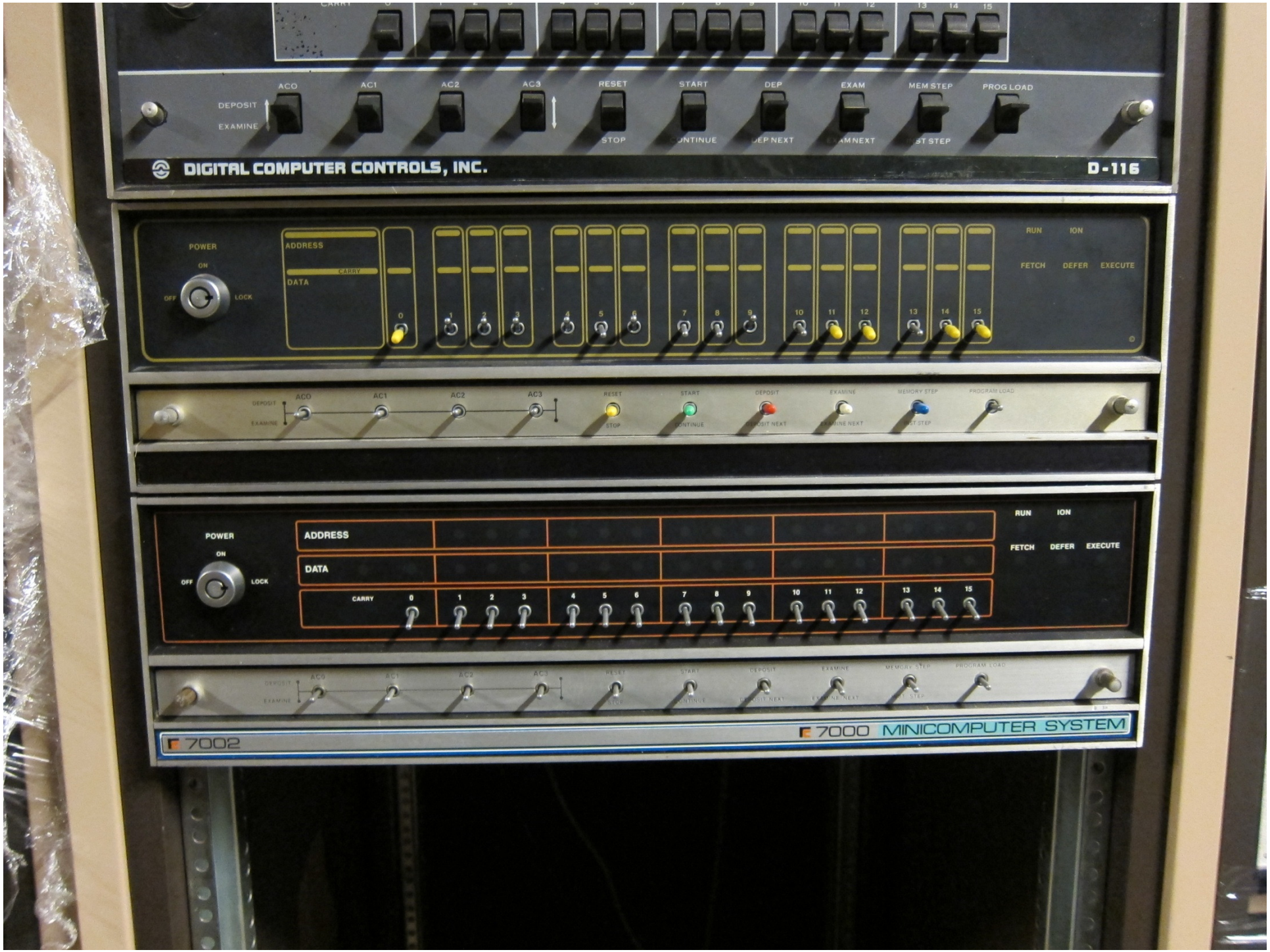
Prisudvikling

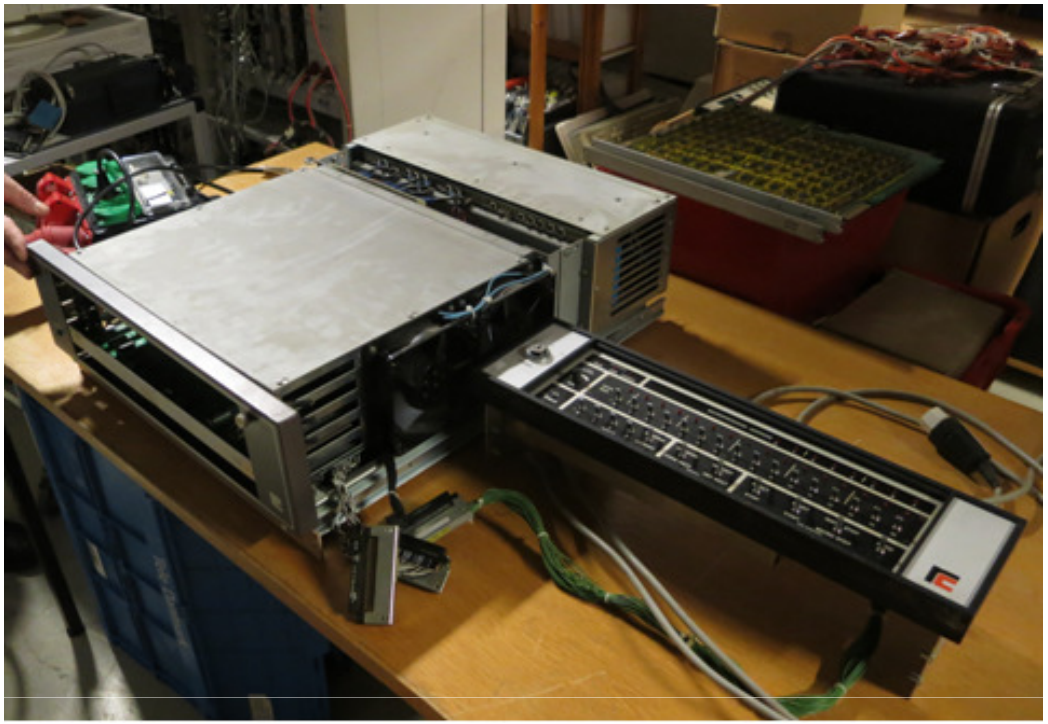
1973	2012
kr. 4.567.400,00	kr. 26.742.637,61

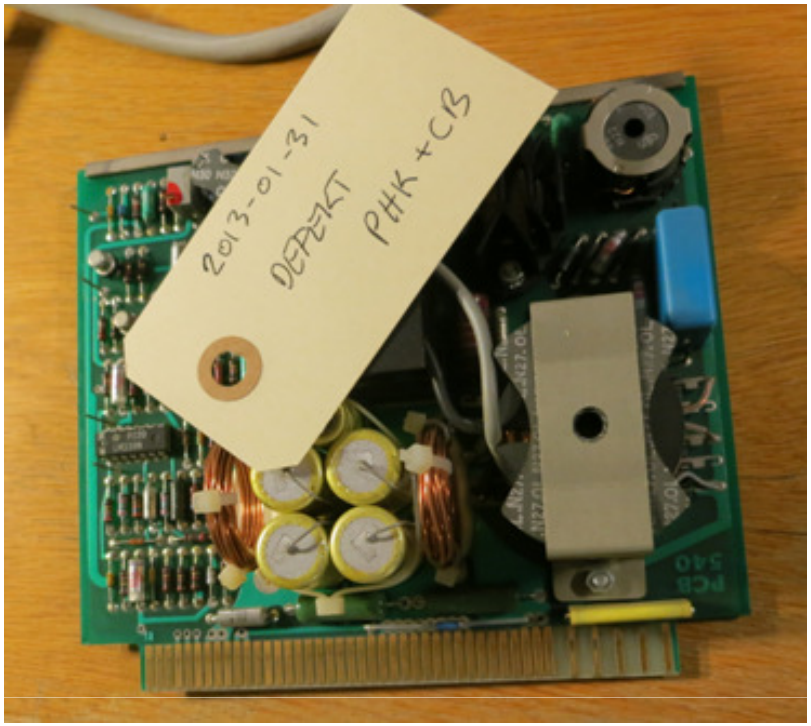

from s
mon840608
monitor release : 03.00
monitor version : 10.11.77 12.00.00
date of options : 22.02.80 23.20.00
initialize date using the date command
**date not initialized
831
PRINTER/KEYBOARD
LOCAL
DATA
TERM READY
INTRPT
ALARM

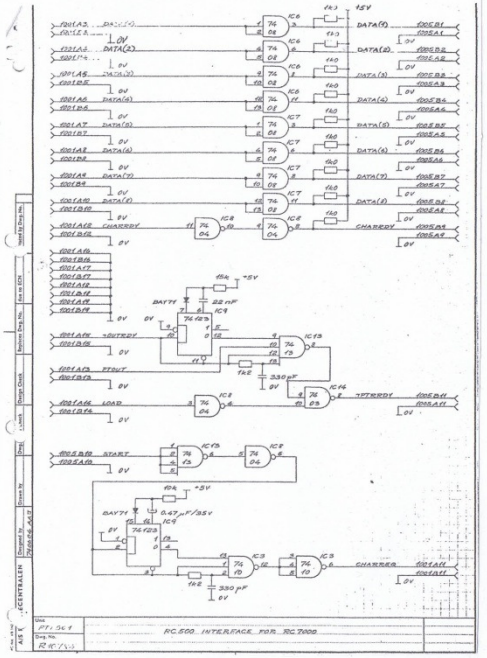
RC 7000

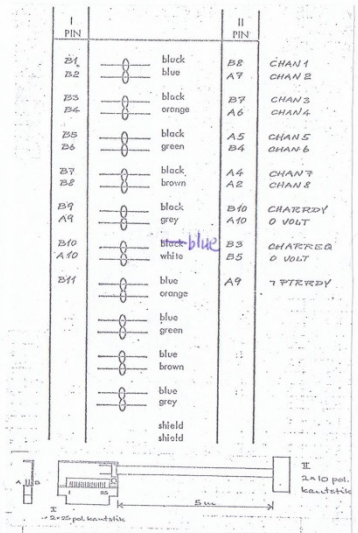
Claus Bruun


DEPOSIT
EXAMINE
AC0
AC1
AC2
AC3
RESET
START
DEP
EXAM
MEM STEP
PROG LOAD
DIGITAL COMPUTER CONTROLS, INC.
D-116
POWER
ON
OFF
LOCK
ADDRESS
DATA
CARRY
RUN
ION
FETCH
DEFER
EXECUTE
7002
7000 MINICOMPUTER SYSTEM




2013-01-31
DEFECT
PHK+CB



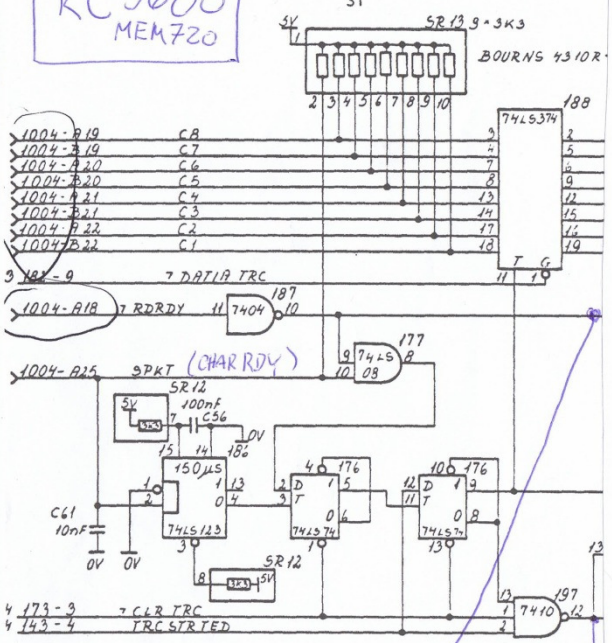


RC 500

DB25♀ DB25♂

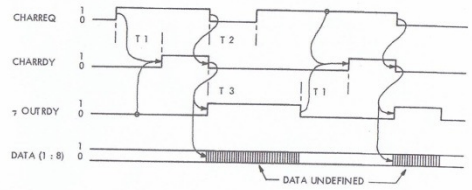
DOIG	KANT	COLOR	SIGNAL
13	17A		FWSTP
16	17B		5V
11	18A	(OR) BL	¬ READY
18	18B		0V
8	19A	BR	C8
7	19B	SO	C7
6	20A		C6
5	20B	SO GR	C5
4	21A		C4
3	21B	SO CR	C3
2	22A	BL	C2
1	22B	SO	C1
12	23A		STOP
14	23B	GRÅ (SO)	0V
10	24A	(HV) BL	GO
	24B		
17	25A	SO (GRÅ)	SPKT
	25B		5V

RC 3600
MEM720



PC Parallel Port

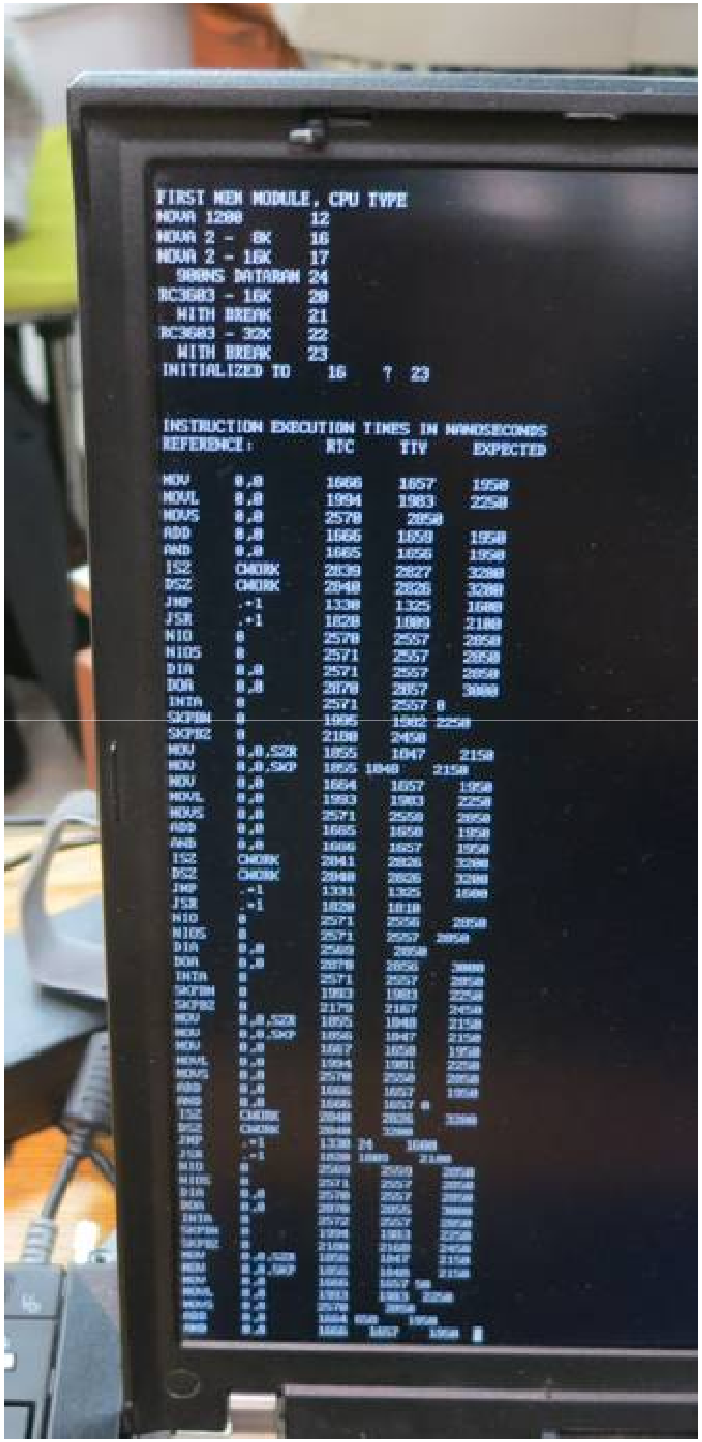
Pin No (D-Type 25)	Pin No (Centronics)	SPP Signal	Direction In/out	Register	Hardware Inverted	COLOR	SIGN
1	1	nStrobe	In/Out	Control	Yes	SO GRÅ	SPKT
2	2	Data 0	Out	Data		SO (BL)	C1
3	3	Data 1	Out	Data		BL (SO)	C2
4	4	Data 2	Out	Data		SO (OR)	C3
5	5	Data 3	Out	Data		OR (SO)	C4
6	6	Data 4	Out	Data		SO (GR)	C5
7	7	Data 5	Out	Data		GR (SO)	C6
8	8	Data 6	Out	Data		SO (BR)	C7
9	9	Data 7	Out	Data		BR (SO)	C8
10	10	nAck	In	Status		BL (HV)	GO
11	11	Busy	In	Status	Yes		
12	12	Paper-Out PaperEnd	In	Status			
13	13	Select	In	Status			
14	14	nAuto-Linefeed	In/Out	Control	Yes		
15	32	nError / nFault	In	Status			
16	31	nInitialize	In/Out	Control			
17	36	nSelect-Printer nSelect-In	In/Out	Control	Yes	BL (OR)	¬RDY
18 - 25	19-30	Ground	Gnd			HV (BL)	0V
						GRÅ (SO)	0V



T1 : min. 0.4 microsec
T2 : min. 0.8 microsec
T3 : min. 0.17 microsec, max. depends on reading speed.

Fig. 2.2. Output timing diagram

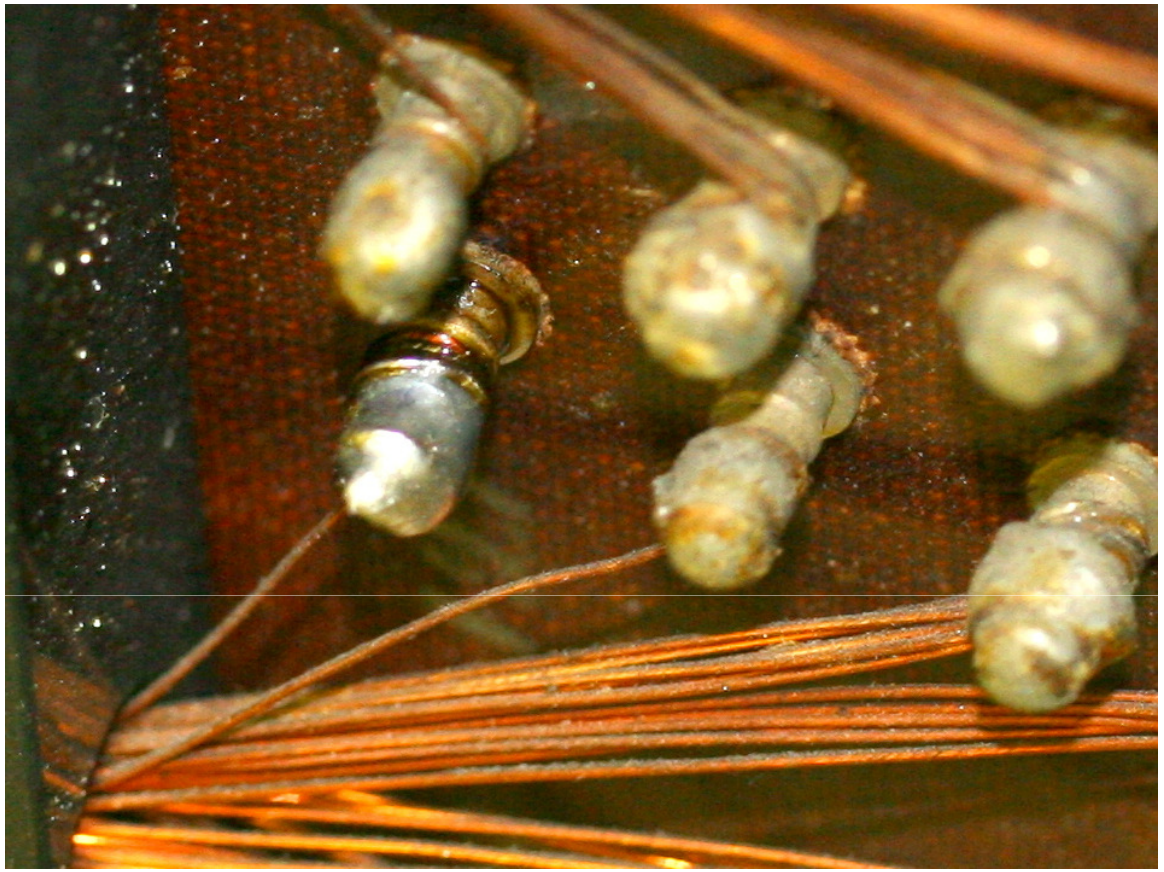
CB20130301.2521
Projekt „RC 7000 „PC Par" Boot


FIRST MEM MODULE, CPU TYPE
NOVA 1200 12
NOVA 2 - 8K 16
NOVA 2 - 16K 17
SBANS DATARAM 24
RC3683 - 16K 20
WITH BREAK 21
RC3683 - 32K 22
WITH BREAK 23
INITIALIZED TO 16 ? 23
INSTRUCTION EXECUTION TIMES IN NANOSECONDS
REFERENCE: RTC TTY EXPECTED
MOV 0,0 1666 1657 1950
MOVL 0,0 1994 1983 2250
MOVS 0,0 2570 2850
ADD 0,0 1666 1650 1950
AND 0,0 1665 1656 1950
ISZ CWORK 2839 2827 3200
DSZ CWORK 2840 2826 3200
JMP .+1 1330 1325 1600
JSR .+1 1820 1809 2100
NIO 0 2570 2557 2850
NIOS 0 2571 2557 2850
DIA 0,0 2571 2557 2850
DOA 0,0 2570 2857 3000
INTA 0 2571 2557 0
SKPBN 0 1995 1982 2250
SKPBZ 0 2100 2450
MOV 0,0,SZR 1855 1847 2150
MOV 0,0,SKP 1855 1840 2150
MOV 0,0 1664 1657 1950
MOVL 0,0 1993 1983 2250
MOVS 0,0 2571 2550 2850
ADD 0,0 1665 1650 1950
AND 0,0 1666 1657 1950
ISZ CWORK 2841 2826 3200
DSZ CWORK 2840 2826 3200
JMP .+1 1331 1325 1600
JSR .+1 1820 1810
NIO 0 2571 2550 2850
NIOS 0 2571 2557 2850
DIA 0,0 2569 2850
DOA 0,0 2570 2856 3000
INTA 0 2571 2557 2850
SKPBN 0 1993 1983 2250
SKPBZ 0 2179 2167 2450
MOV 0,0,SZR 1855 1840 2150
MOV 0,0,SKP 1856 1847 2150
MOV 0,0 1667 1650 1950
MOVL 0,0 1994 1981 2250
MOVS 0,0 2570 2550 2850
ADD 0,0 1666 1657 1950
AND 0,0 1666 1657 0
ISZ CWORK 2840 2826 3200
DSZ CWORK 2840 3200
JMP .+1 1330 24 1600
JSR .+1 1820 1809 2100
NIO 0 2569 2550 2850
NIOS 0 2571 2557 2850
DIA 0,0 2570 2557 2850
DOA 0,0 2570 2856 3000
INTA 0 2572 2557 2850
SKPBN 0 1994 1983 2250
SKPBZ 0 2100 2160 2450
MOV 0,0,SZR 1856 1847 2150
MOV 0,0,SKP 1856 1840 2150
MOV 0,0 1666 1657 50
MOVL 0,0 1993 1983 2250
MOVS 0,0 2570 2850
ADD 0,0 1664 650 1950
AND 0,0 1666 1657 1950

```
                ; PFLOAD
                ; Loads an up to 32kword image in address 0-size
                ; We assume being loaded by the ROMloader into loc 100
                ; We relocate loadercode to 77700
                ; We read image from reader into low mem using same algorithm as the ROMloader

                .LOC 100        ; this is where the normal loader stores the code.
                ;DICB    0,1     ; 64kword mode
                JSR     RELO
                BEGIN           ; from
                77700          ; to
                END-BEGIN       ; len
                                ;
                JMP     $+1,1
                77700
                                ;


RELO:           ; subroutine
                LDA     0,$+0,3         ; length has to be > 0
                STA     0,$+1,3
                ISZ     $+0,3           ; assume addresses will never hit 0
                ISZ     $+1,3
                DSZ     $+2,3
                JMP     RELO
                JMP     +3,3            ; return, skipping parms

                .LOC 77700
                ; begin pfloader to be relocated into high mem
                                ; (modified romloader)
BEGIN:          READS   0
                MOVZR   0,1
                COMOR   1,1
OPLOOP:         ISZ     OP1
                ISZ     OP2
                ISZ     OP3
                ISZ     OP4
                INC     1,1,SZR
                JMP     OPLOOP

OP1:            060077          ; NIOS 0
                LDA     2,0     ; not needed - just to keep timing
                STA     2,0     ;
OP2:            063377          ; SKPBN 0
                JMP     OP1

ZBLOOP:         JSR     GETB
                MOV     0,0,SNR
                JMP     ZBLOOP

                JSR     GETW
                STA     0,CNT

MVLOOP:         JSR     GETW
                STA     0,@ADR
                ISZ     ADR
                ISZ     CNT
                JMP     MVLOOP

                JMP     0
CNT:                            0
ADR:                            0

                                ; subroutine
GETW:           SUBZ    1,1
GETB:
OP3:            063577           ; SKPDN 0
                JMP GETB
OP4:            060477           ; DIAS 0
                ADDCS   0,1,SNC
                JMP GETB
                MOVS    1,1

                                ; Now jump to 00000 where powerfail recovery will pick up.
                JMP     0,3
END:
```

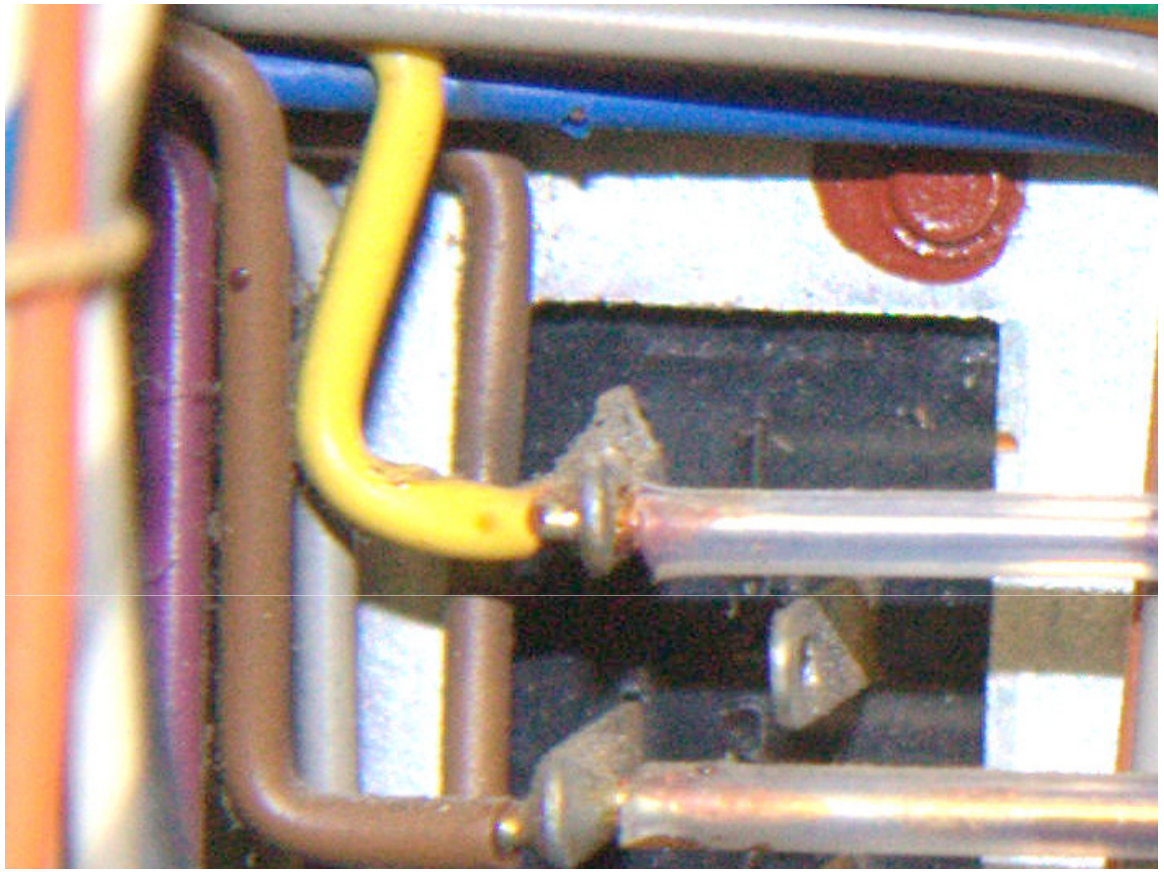
GIER Status

Henrik Jacobsen



1. Produktionsfejl på betingelsestårn #121

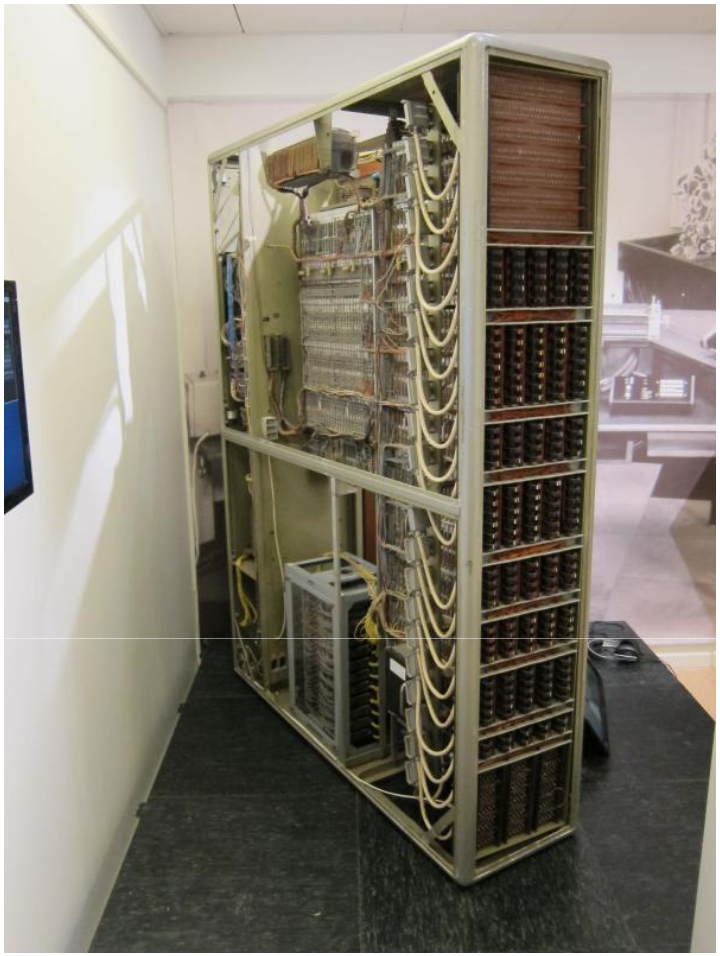
Periodisk fejl som har været der "altid": "PM" ordren udføres som "PM D". Fundet og rettet! Dårlig lodning af betingelsestårn #121



2. Produktionsfejl på 15,5V forsyningsbussen

RC2000 strimmellæseren driller: Læser dobbelttegn, paritetsfejl mv.
Under fejlsøgning fandt vi en dårlig lodning på 10.5V forsyningsbussen.

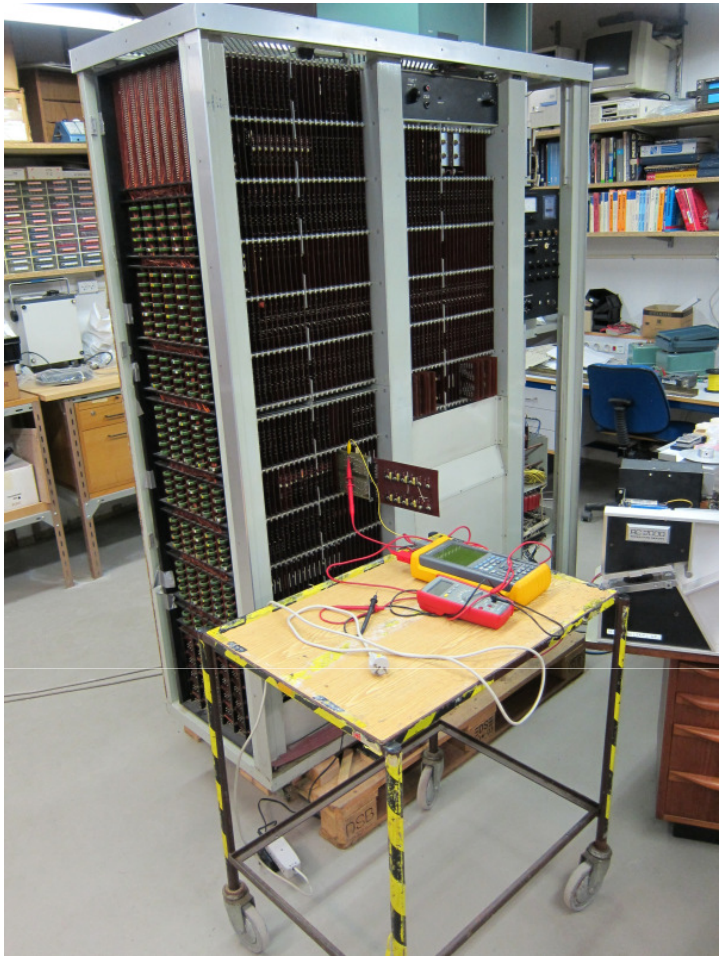
Løste desværre kun problemet med RC2000 midlertidigt.



3. Periodisk fejl på -13,5V forsyningen

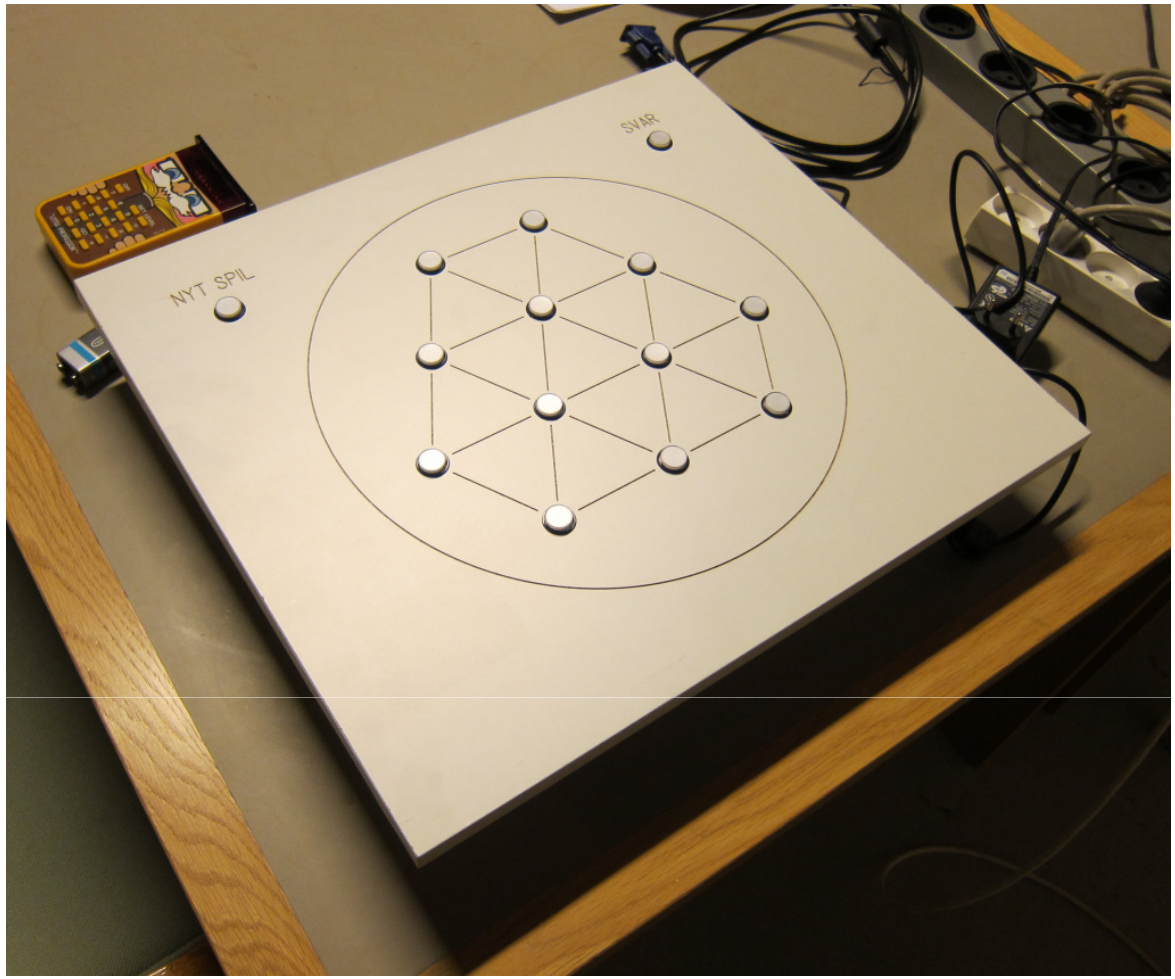
-13.5V strømforsyning slår af og til fra pgs. strømbegrænsning.

Periodiske fejl er træls!



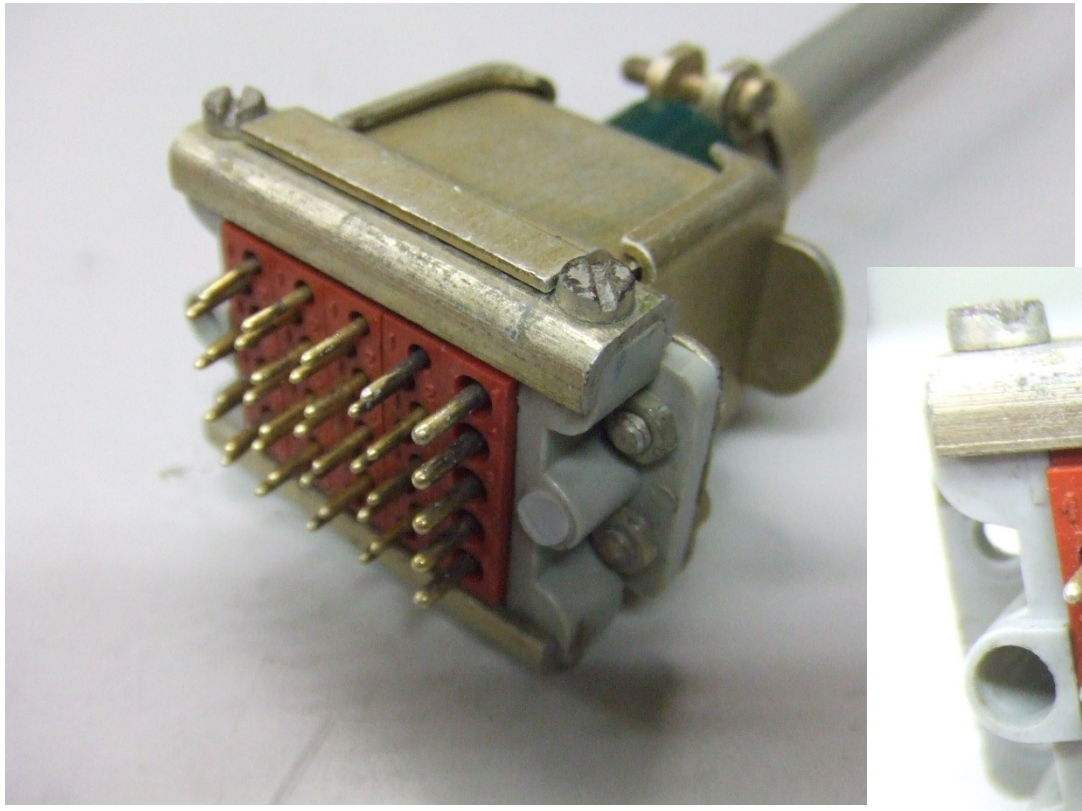
4. Løst plade lager

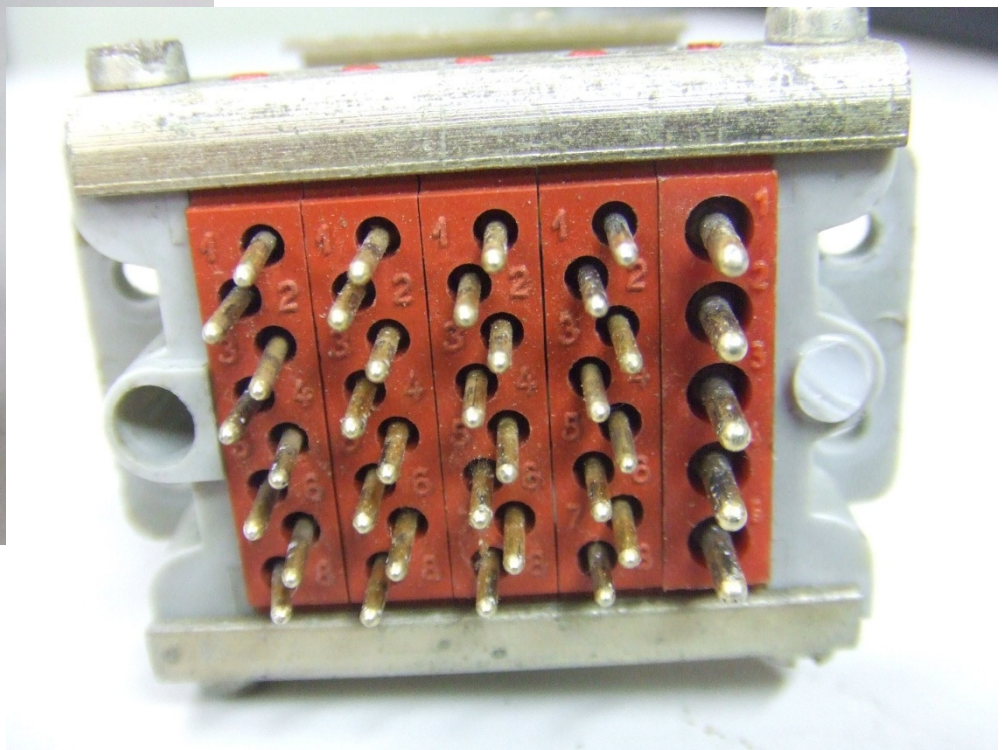
Drillenissen havde skubbet nogle plader ind, som skal være ude...



5. Nimbi tavle

Reverse engineering af Nimbi-tavle, og design af interface-kredsløb. Ikke bygget endnu...





6. Efterlysning

Er der noget som kender sådan et stik?

Olivetti Programma

Thorkil Naur


olivetti programma 101
V W Y Z

Gamma funktionen:

$$\Gamma(n) = \int_0^\infty e^{-x} x^{n-1} dx.$$

```
AV
/0
 S
B↑
a↑
c↓
C↑
A4
B↓
a↑
c↑
 -
/4
A‡
/1
C0
 V
a1
C↓
B‡
C‡
B↓
a↑
c↓
 +
D‡
 4
a4
a↑
c‡
 ↓
B-
/2
B↓
a↑
c↓
 -
B‡
C↓
BX
C‡
 4
a2
B↓
a↑
c↑
 -
B‡
c↓
```

```
a2
B↓
a↑
c↑
 -
B‡
c↓
BX
R-
 ↓
R-
D+
BX
R-
 ↓
R-
e+
BX
R-
 ↓
R-
E+
BX
R-
 ↓
R-
 S
```

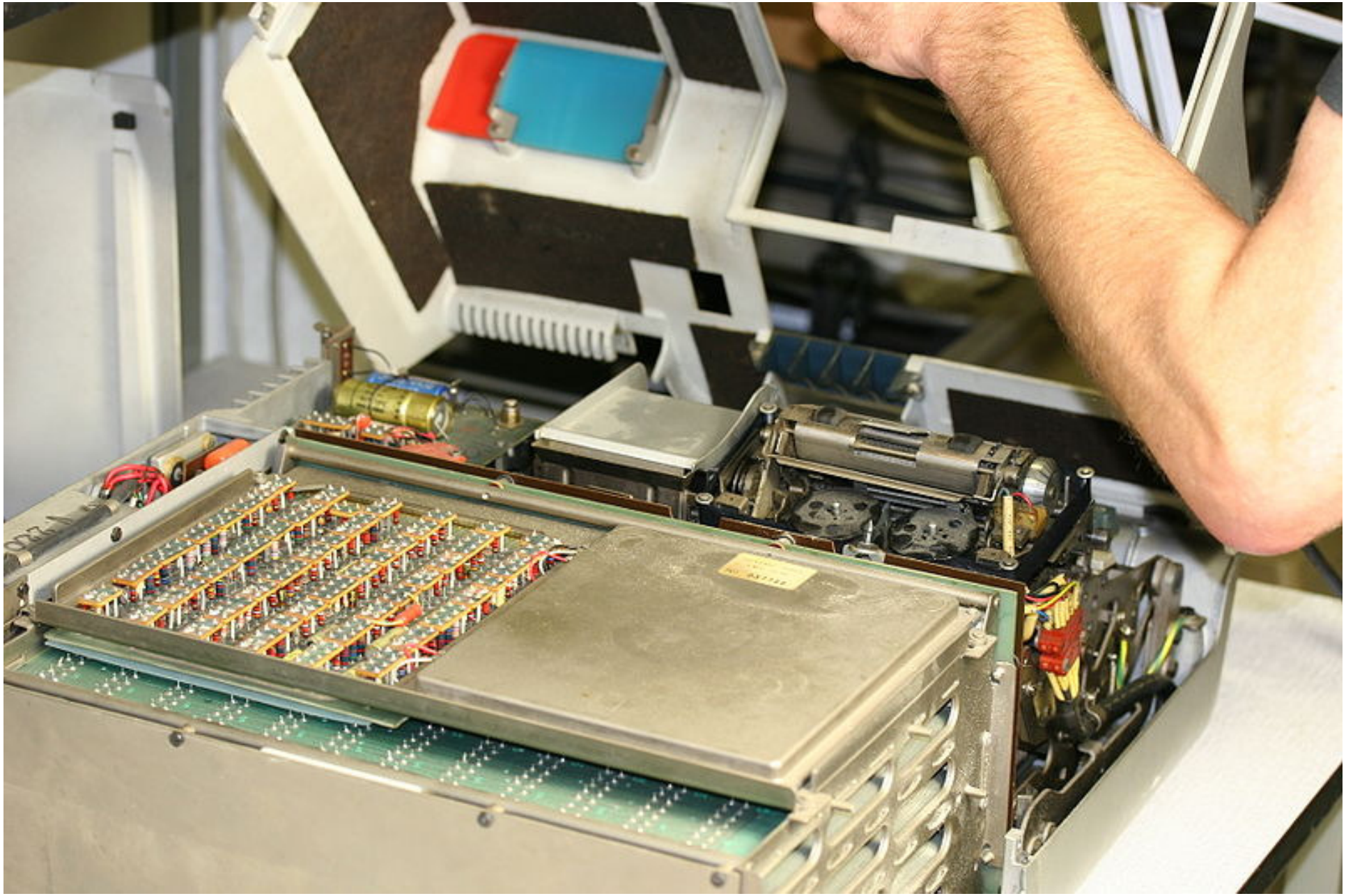
```
0.0000677106 c0
-0.0003442342 D0
0.0015397861 e0
-0.0024667460 E0
```

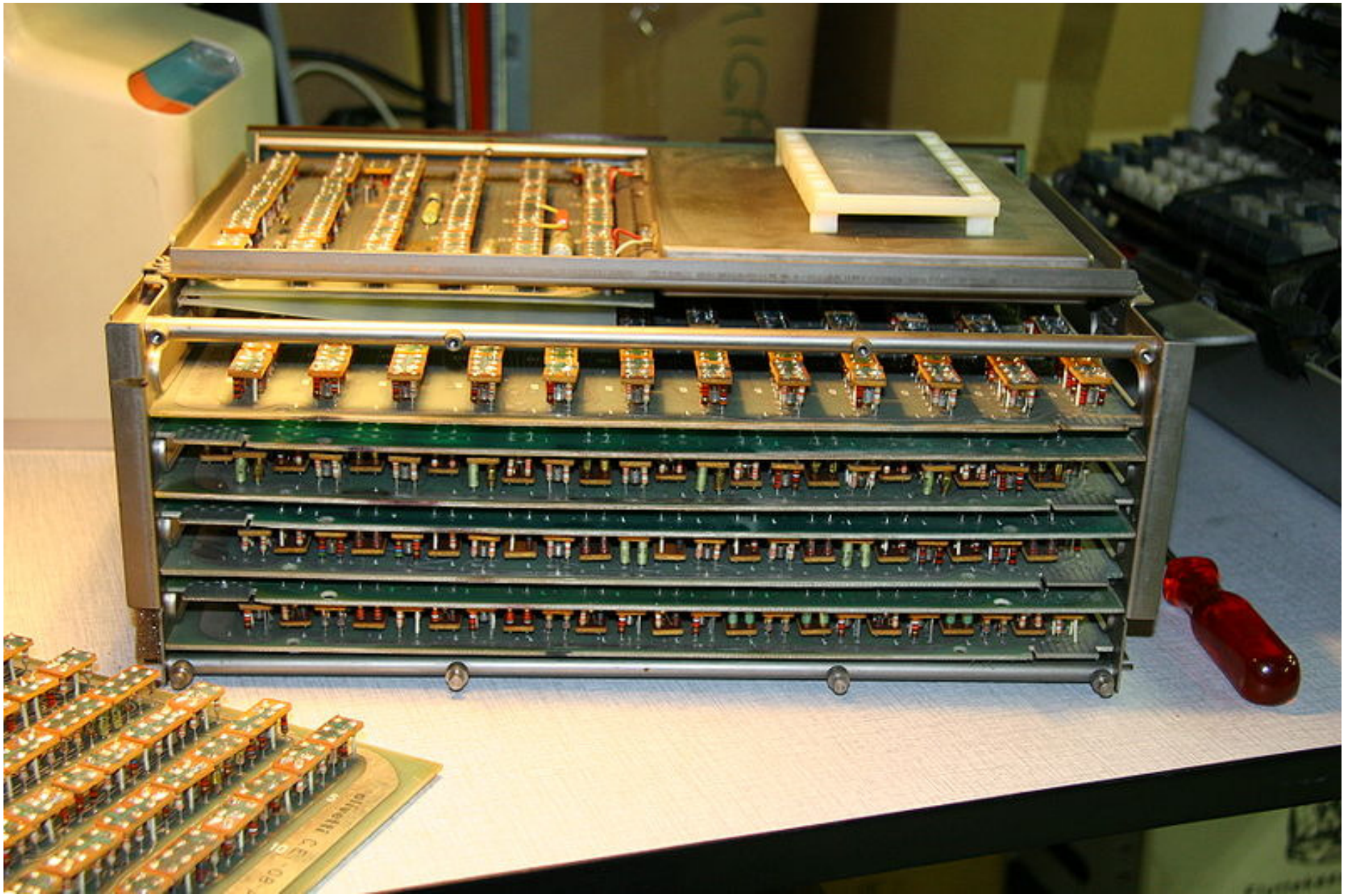
```
A4
c+
BX
R-
 ↓
R-
D+
BX
R-
 ↓
R-
e+
BX
R-
 ↓
R-
E+
BX
R-
 ↓
R-
f+
BX
R-
 ↓
```

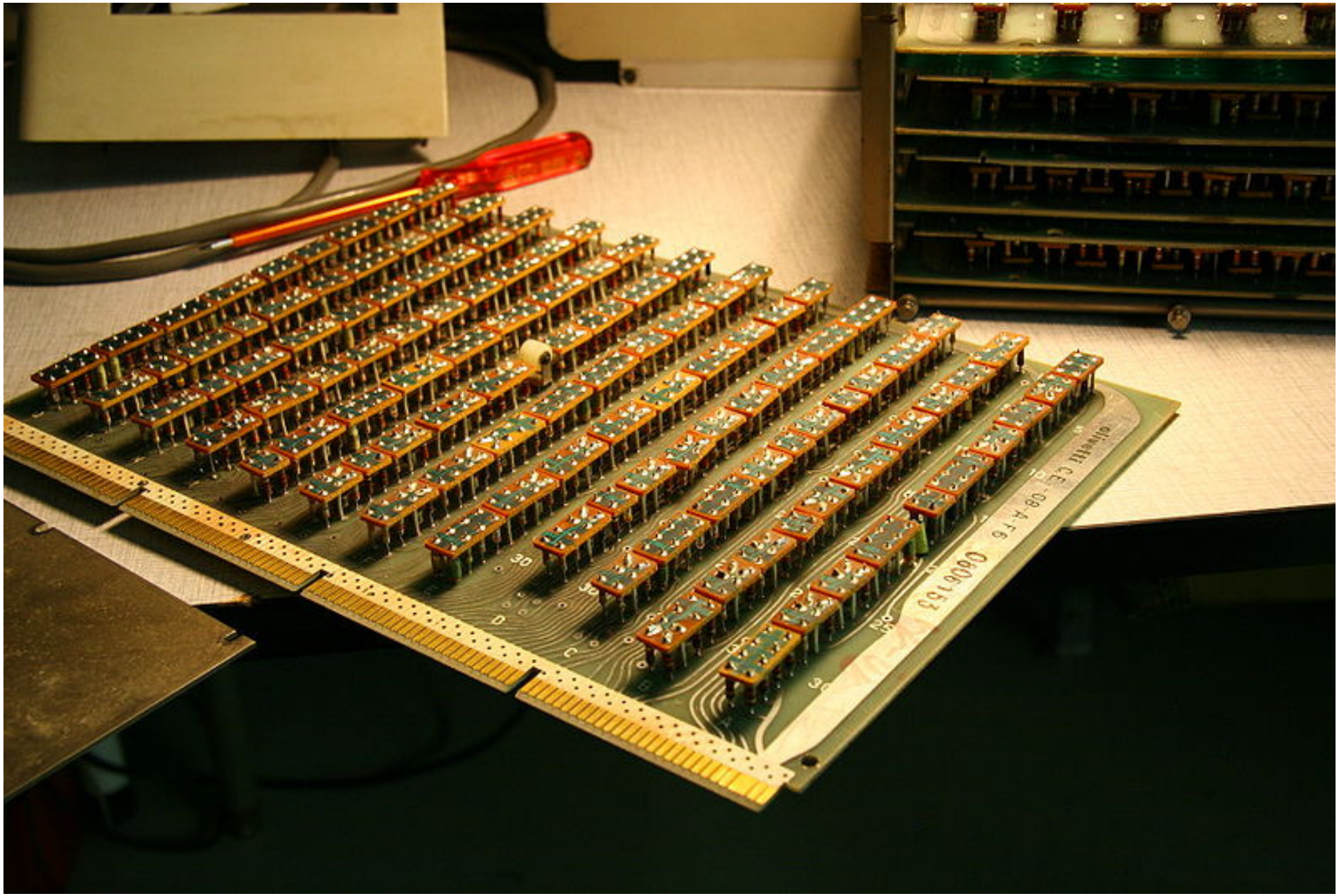
```
e+
BX
R-
 ↓
R-
E+
BX
R-
 ↓
R-
f+
BX
R-
 ↓
R-
F+
BX
R-
 ↓
R-
a↑
c↓
 +
CX
A0
 S
```

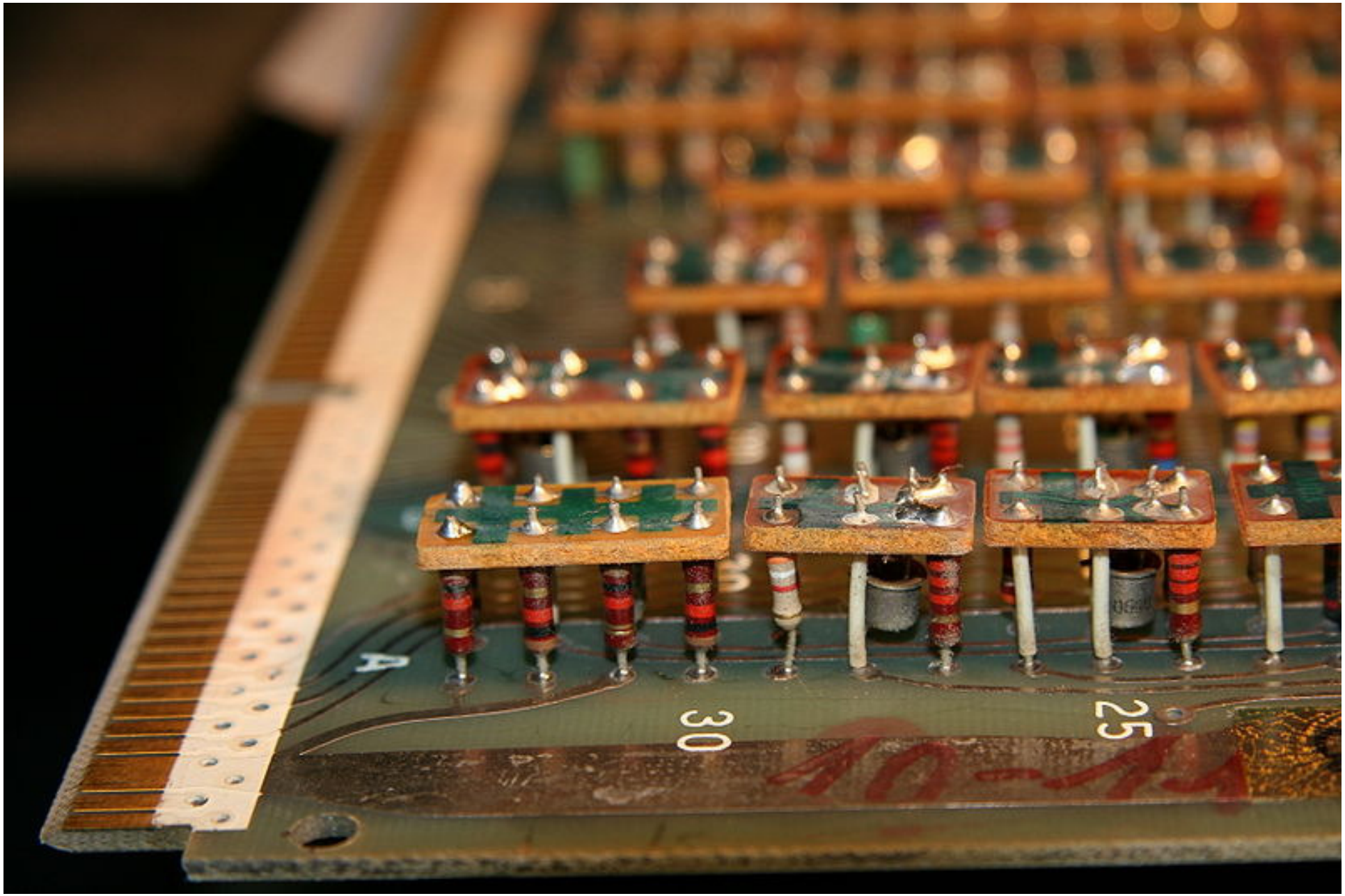
```
0.0107738558 d0
-0.0002105075 D0
0.0742375076 e0
0.0815782188 E0
0.4115402518 f0
0.4227843370 F0
```

```
 V
1.4616321450  S
 V
0.4855603143 A0
 V
3  S
2.0000000000 C0
4  S
6.0000000000 C0
-0.2361  S
 V
-5.1137374454 A0
```

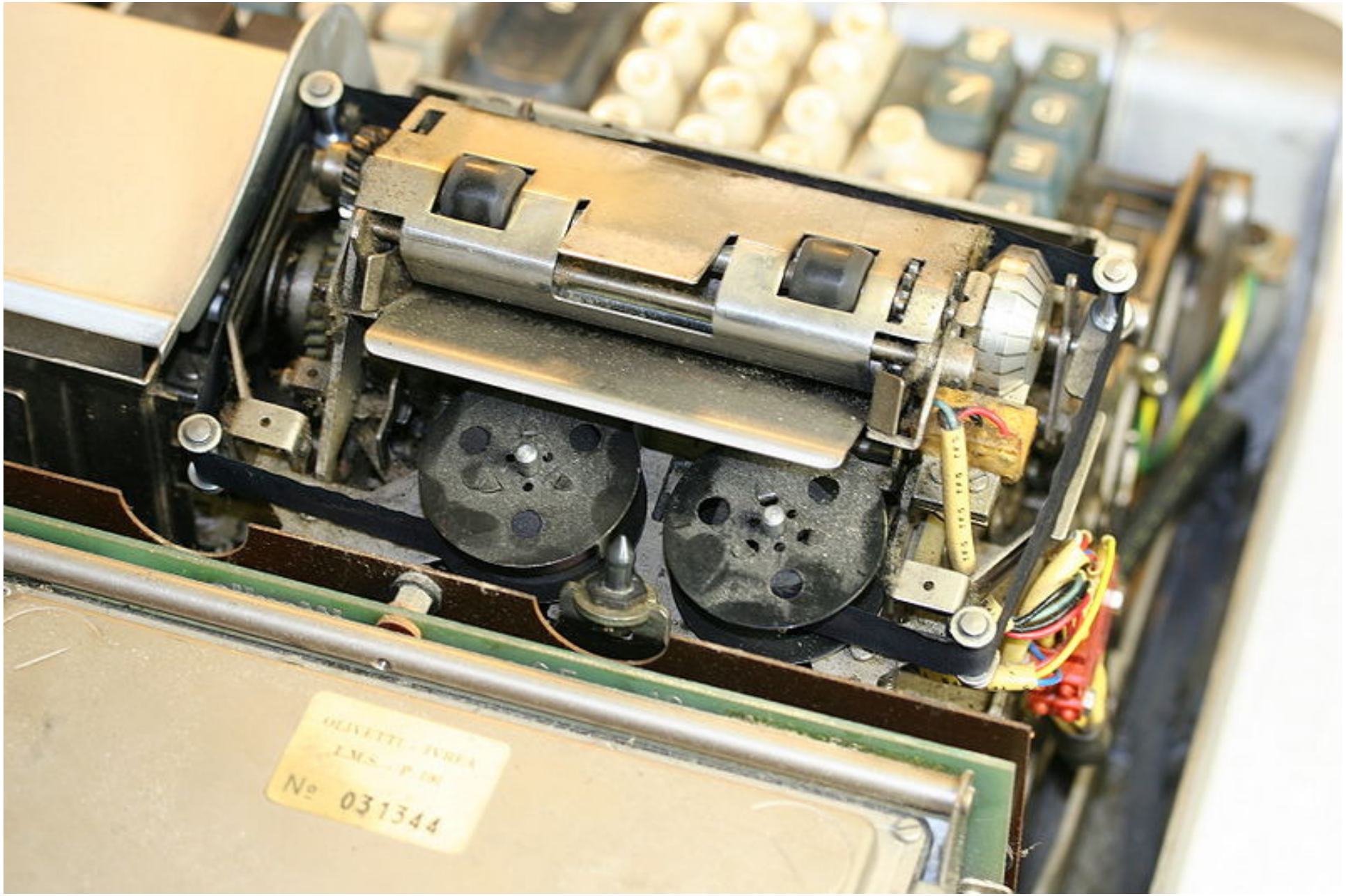







A
30
25


19.12.64 -
Ac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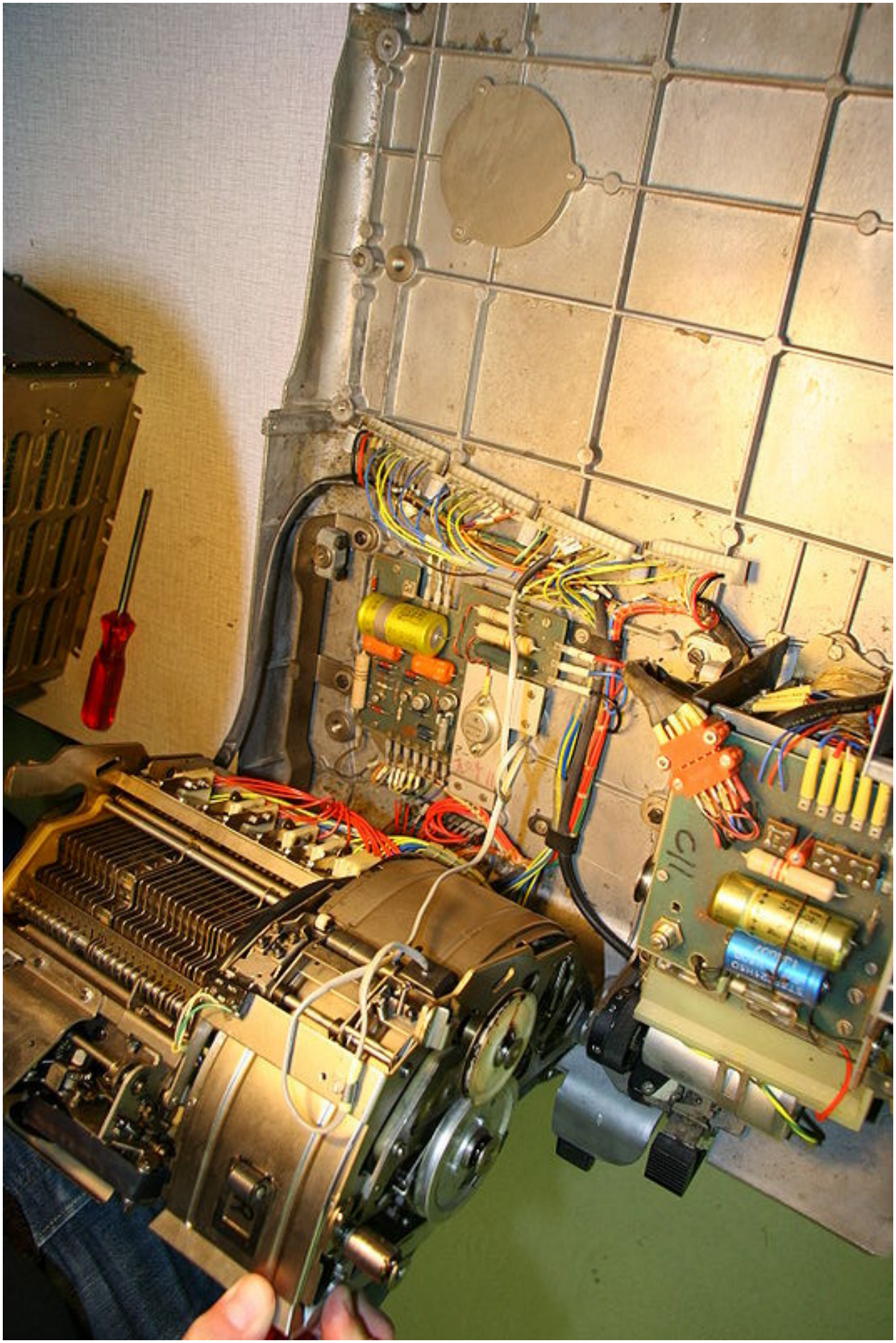
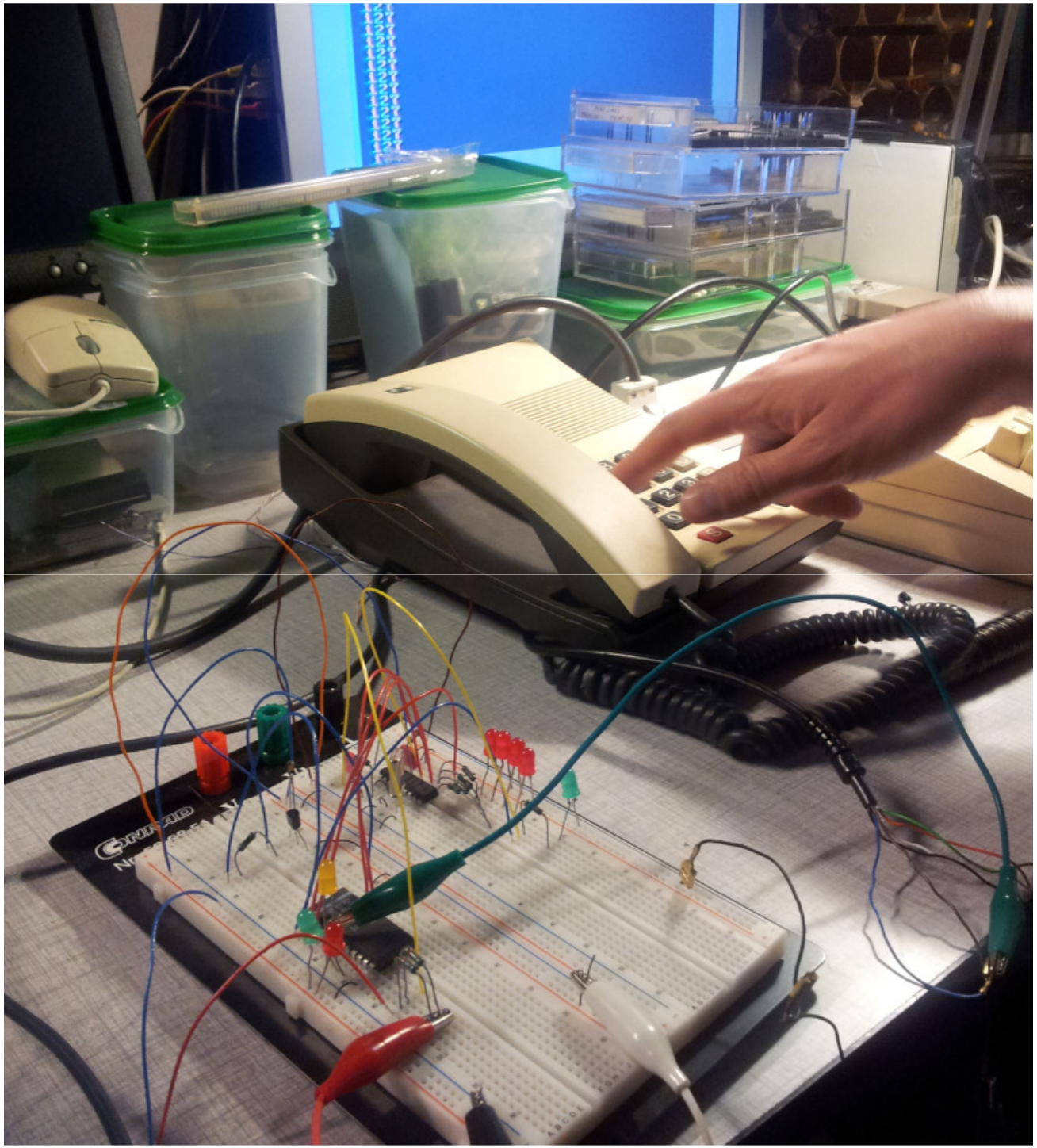
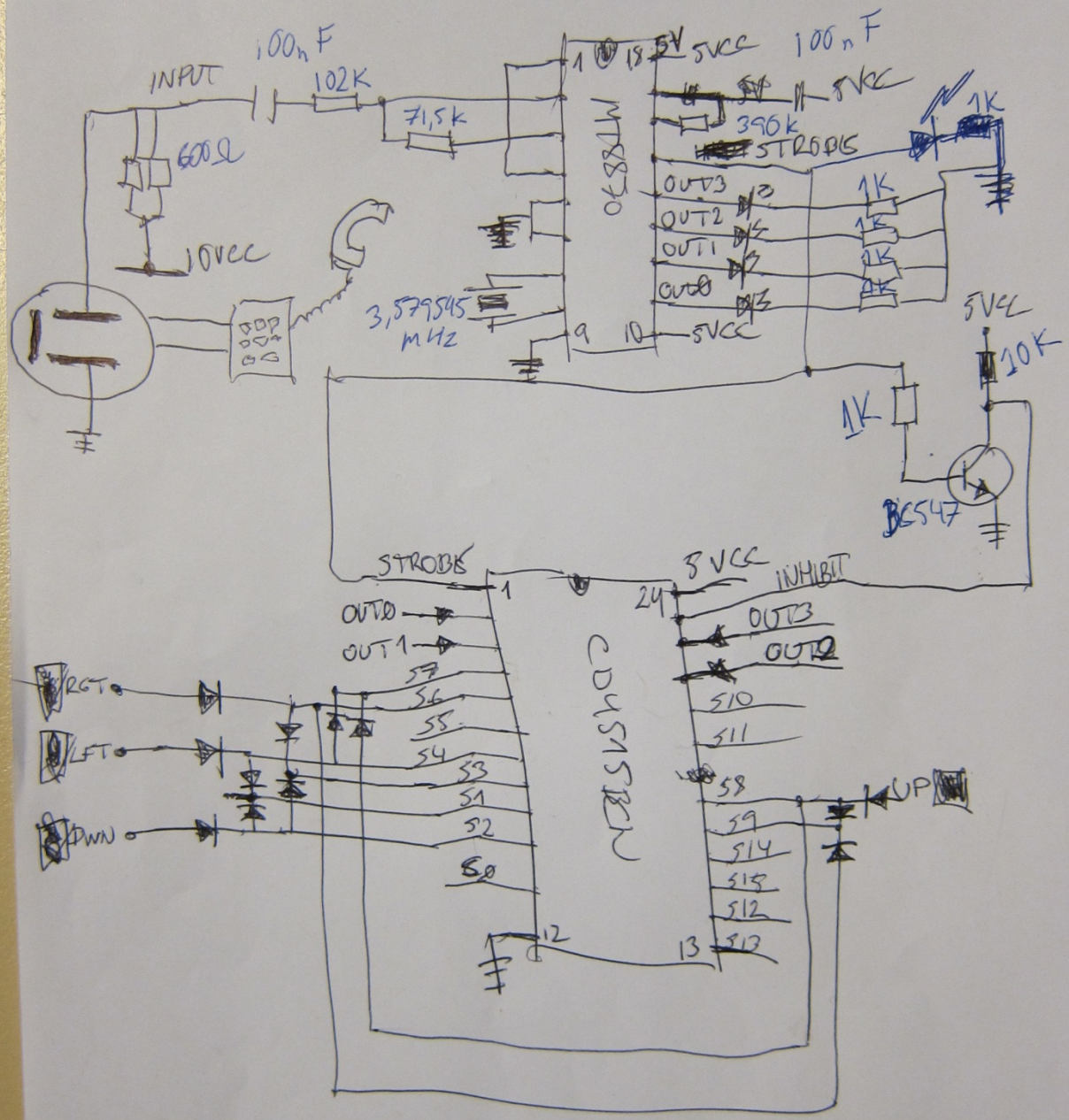
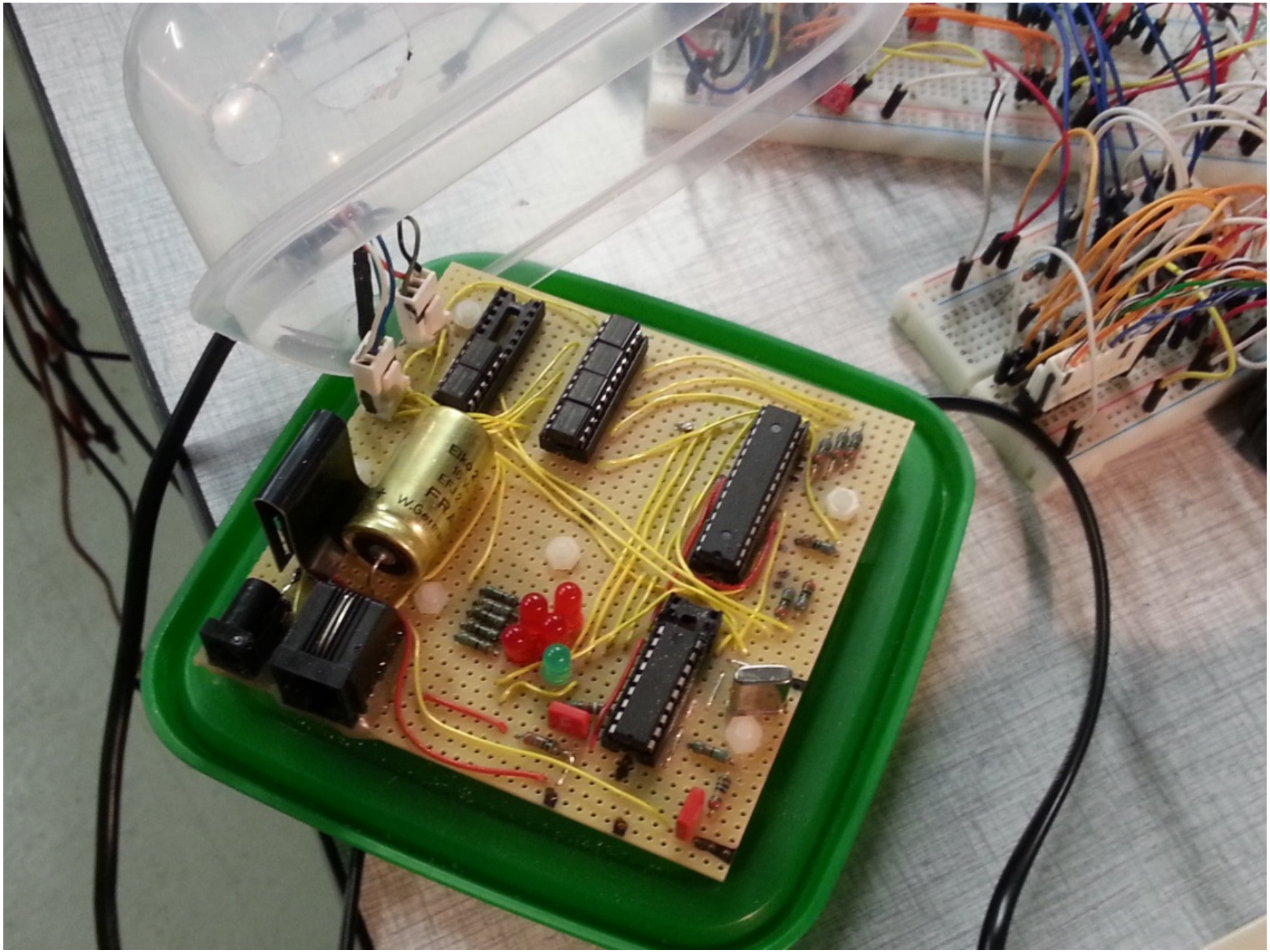


Hugo / DTMF

Uffe Jakobsen




INPUT
100nF
102K
71,5k
600Ω
10VCC
3,579545 mHz
MT8841
5VCC
100nF
390k
STROBE
OUT3
OUT2
OUT1
OUT0
1K
5VCC
10K
BC547
STROBE
INHIBIT
CD4515BCN
RGT
LFT
DWN
UP




Commodore
A600
AMIGA
POWER
FLOPPY
DISK

Tidslinie

Christian Gram


REGNECENTRALEN
DATA IND & UD
HULKORT
HULSTRIMMEL
SKRIVEMASKINE
DATALAGER
TEKNOLOGI
IT I HVERDAGEN
CHR. ROVSING A/S
SPROG
1960


2000
2001
2002
2003
2004
2005
2006
2007
2008
FUJITSU
CSC
Google
skype
eBoks.dk
Microsoft


1950
1960
1970
1971
1972
1973
CHR. ROVSING A/S
REGNECENTRALEN
DATA IND & UD
DATALAGER
TEKNOLOGI
IT I HVERDAGEN
SPROG
DANSK DATA E
dde


disk cassette


PKB 901

Diverse

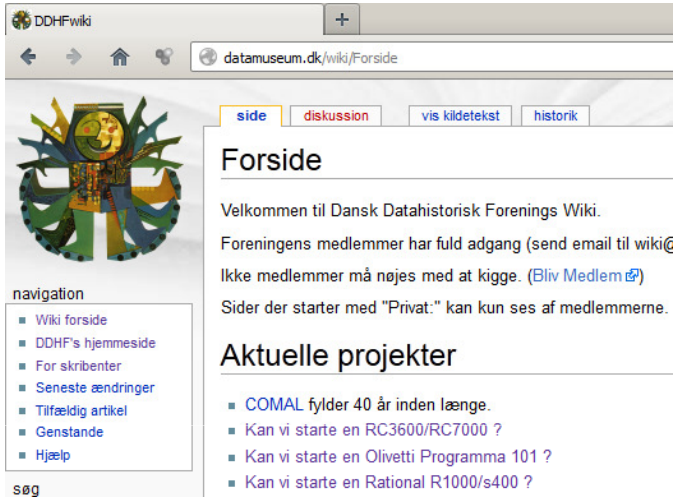
Poul-Henning Kamp

Data-arkælogi

- COMAL-projektet
  - Kick-off møde
- Rational R1000/s400 maskine
  - Scanning af manualer
- Ingeniøren Papirarkiv (deres & vores)
  - Fra 1800-hvidkål ... nutiden
- Nimbi-spil mk. II
  - ARM processor

Foreningen

- Wiki-renovering
  - Samlingens ansigt udadtil



- Publicity
  - Via mine blogs

Bitarkiv

- Software & Dokument arkivering
  - Mest planlægning/research
- Ny brugt dokument-scanner
  - 5 ringbind i timen ?

Karaktér og værksted

Ole Nørgaard Nielsen


Flytte og opbevarings-
kasse
Made in Germany