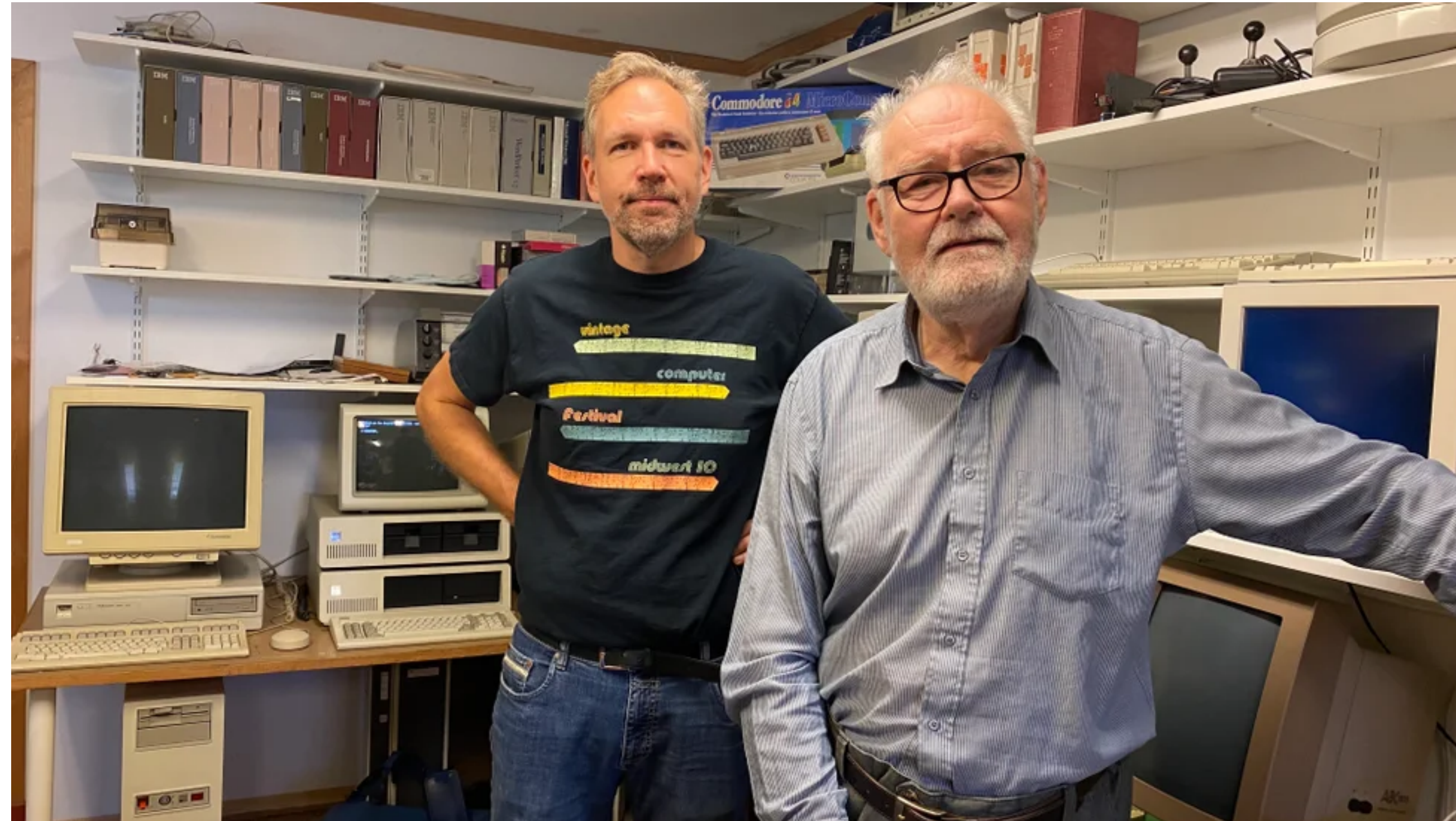
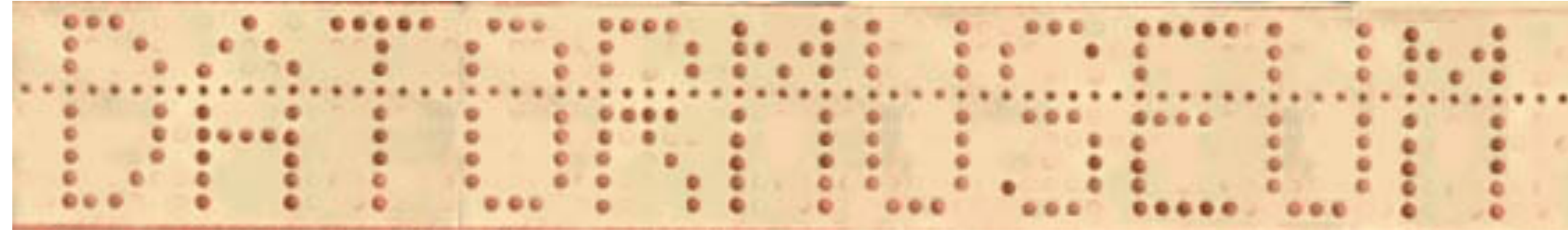


DALBY





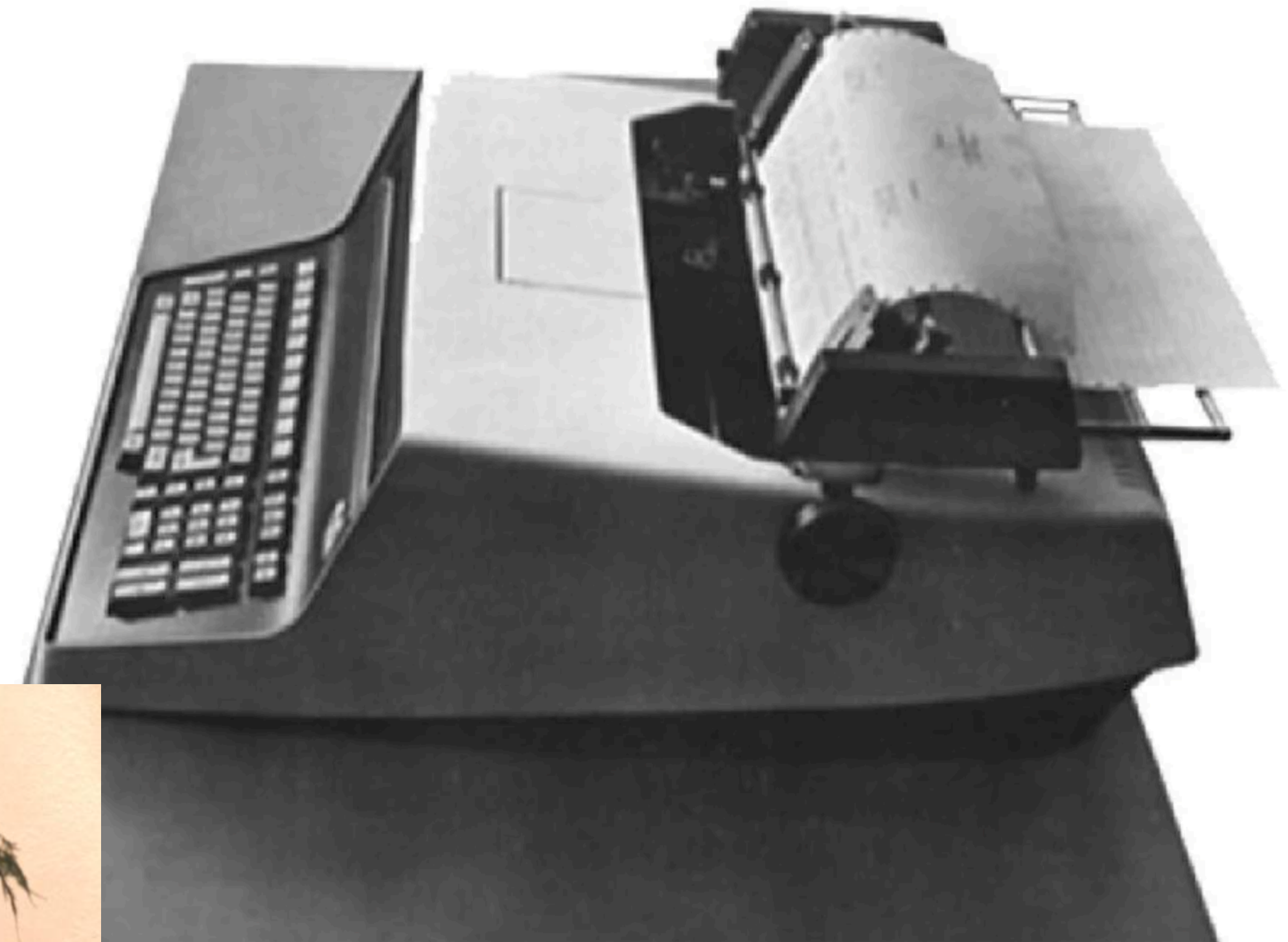
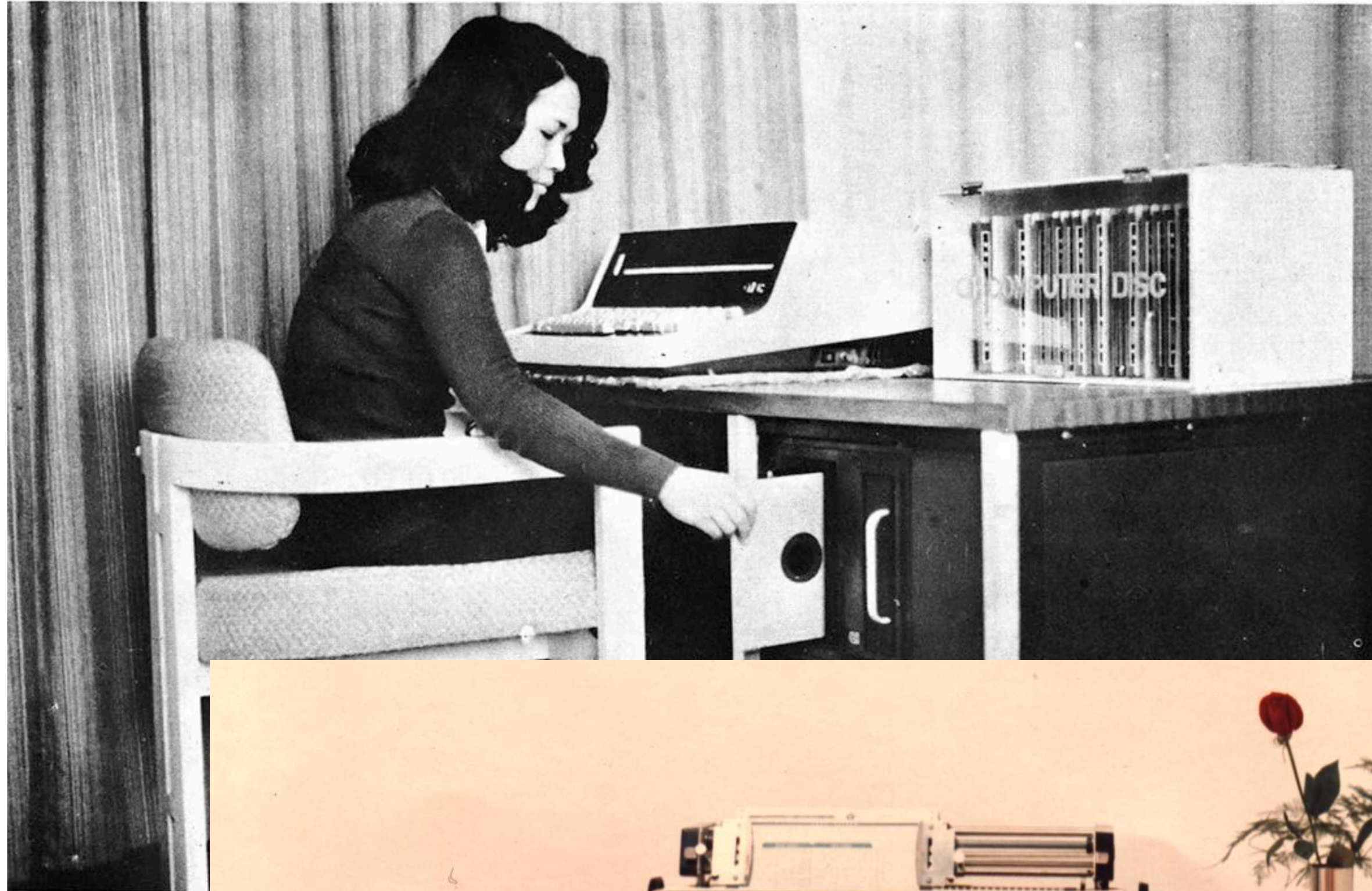
SVT Sörmland



Strängnäs Tidning



First generation - 8008 based

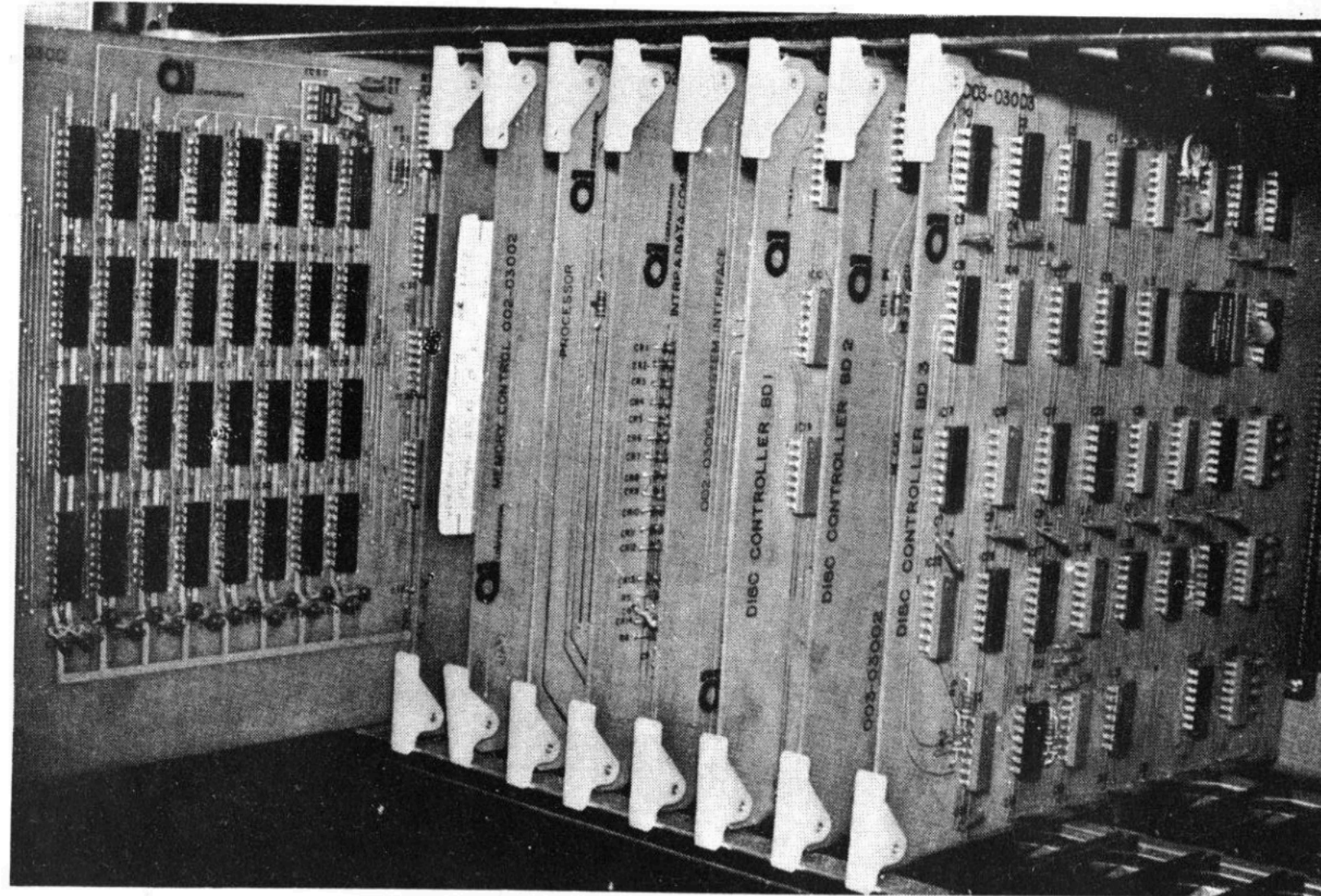


First generation - 8008 based

Printer: Diablo Hytype I

Display: Likely to be Burroughs Self-Scan

Floppy: Likely to be Memorex 651



THE QI DISK UNITS

Disks provide direct-access external storage, efficient scratchpad area, operation systems residence. The QI disks are removable. Unlike the larger, more expensive disk units, changing disks takes a few seconds only.

Disk specification :

1 disk : 64 tracks

1 track : 16 sectors

1 sector : 256 bytes

1 disk : 262,144 bytes

Disk operating specification :

rotational speed : 375 r.p.m.

track to track access time : 10ms .

setting time : 10ms.

environment-temperature : 40 F to 140 F

data transfer rate : 250 Kilo bits/sec.

relative humidity : 20% to 90%

heat generated (max) : 346 BTU/hr.

The disks is IBM compatible as used on IBM 3740.

Same spec as Memorex 651 except for it is 32 sectors. Hard sector disks. Were there 16 sector FD IV disks?



Second generation - 8080 based

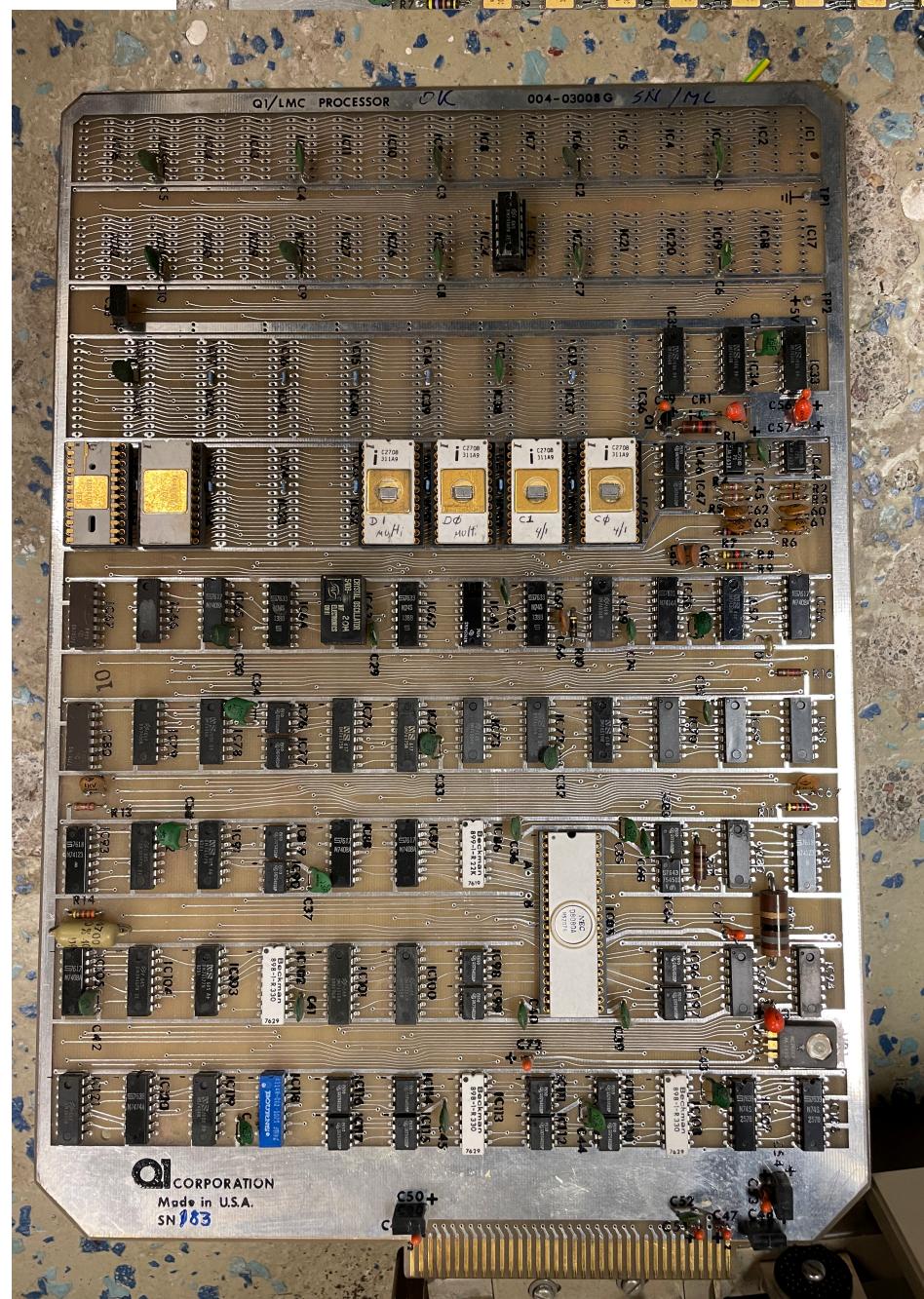
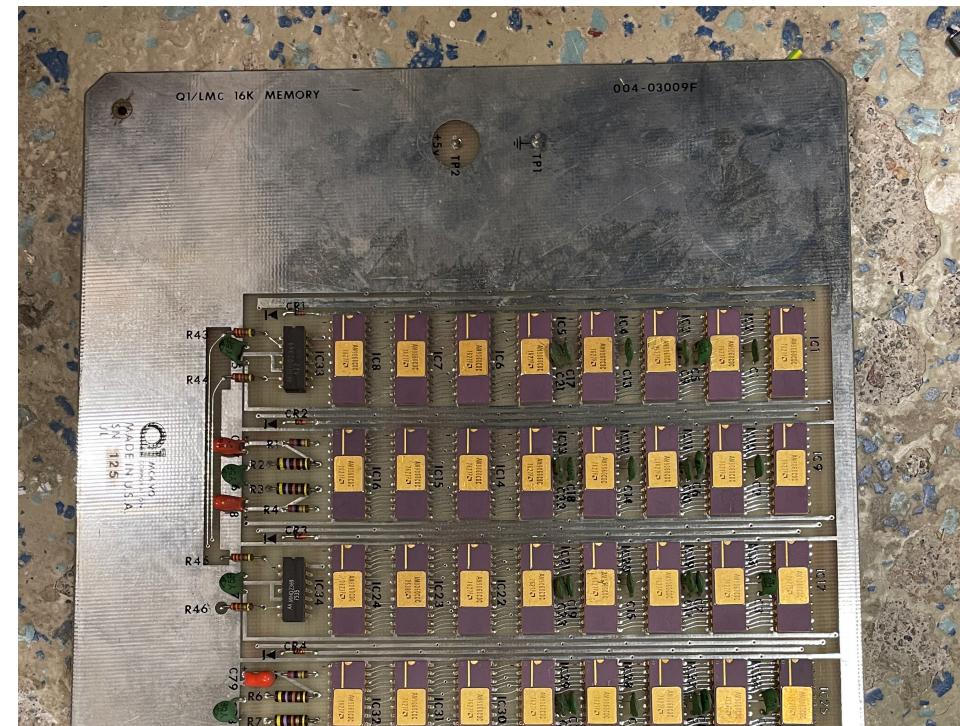


Second generation - 8080 based

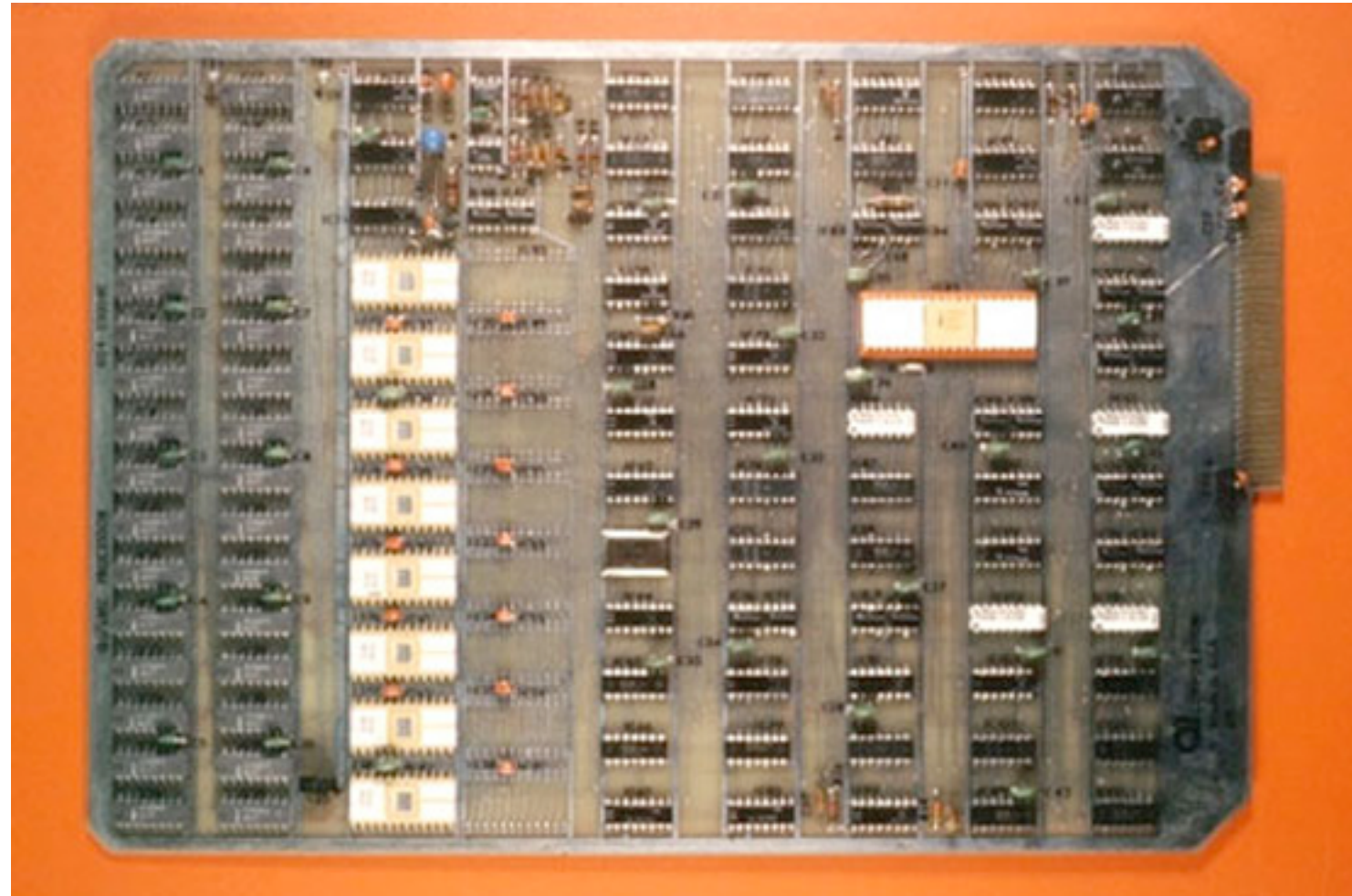
Printer: Diablo Hytype I

Display: Burroughs Self-Scan 8 lines 37 chars.

Floppy: Shugart SA900

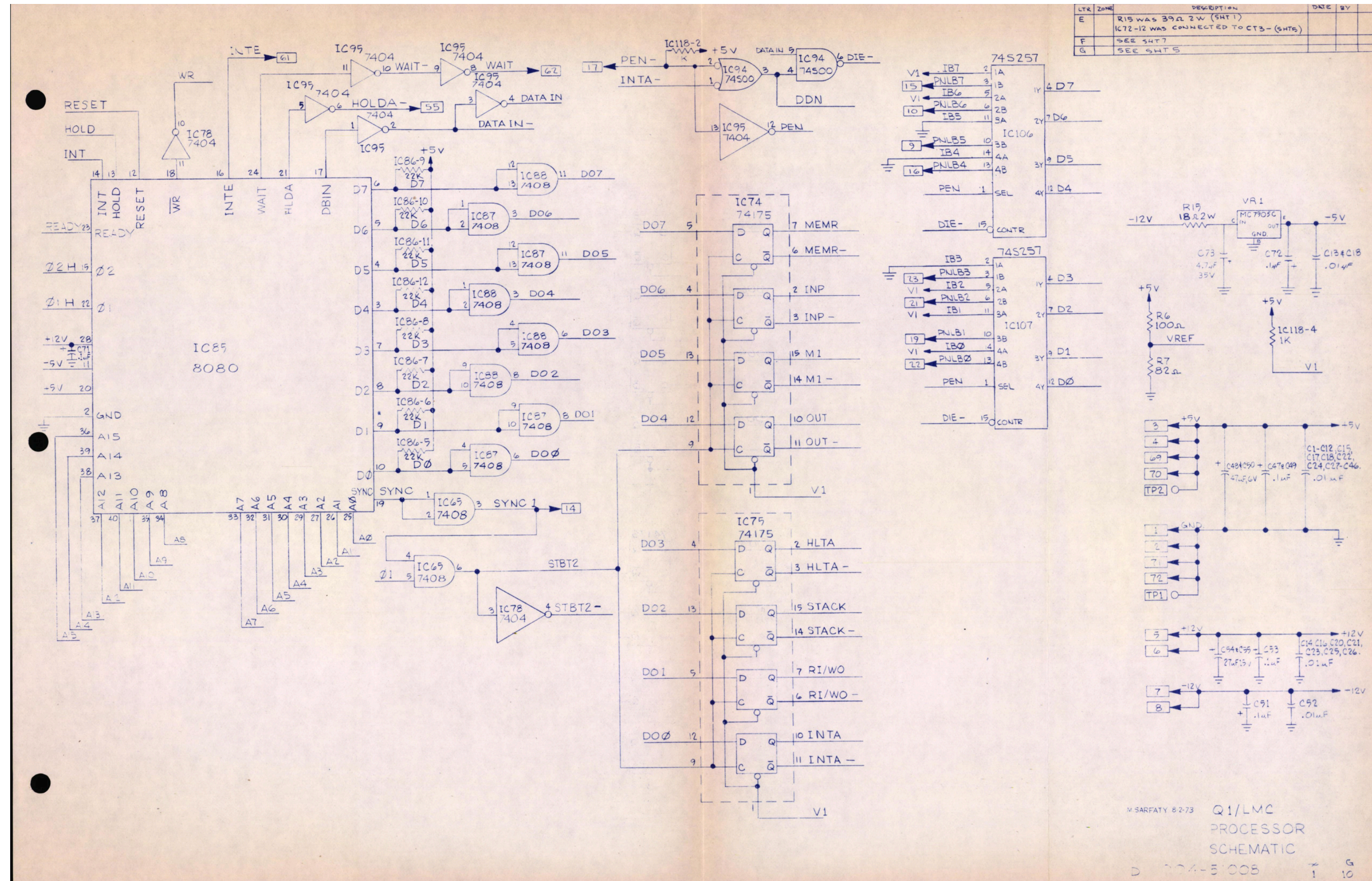


Second generation - 8080 based CPU revisions



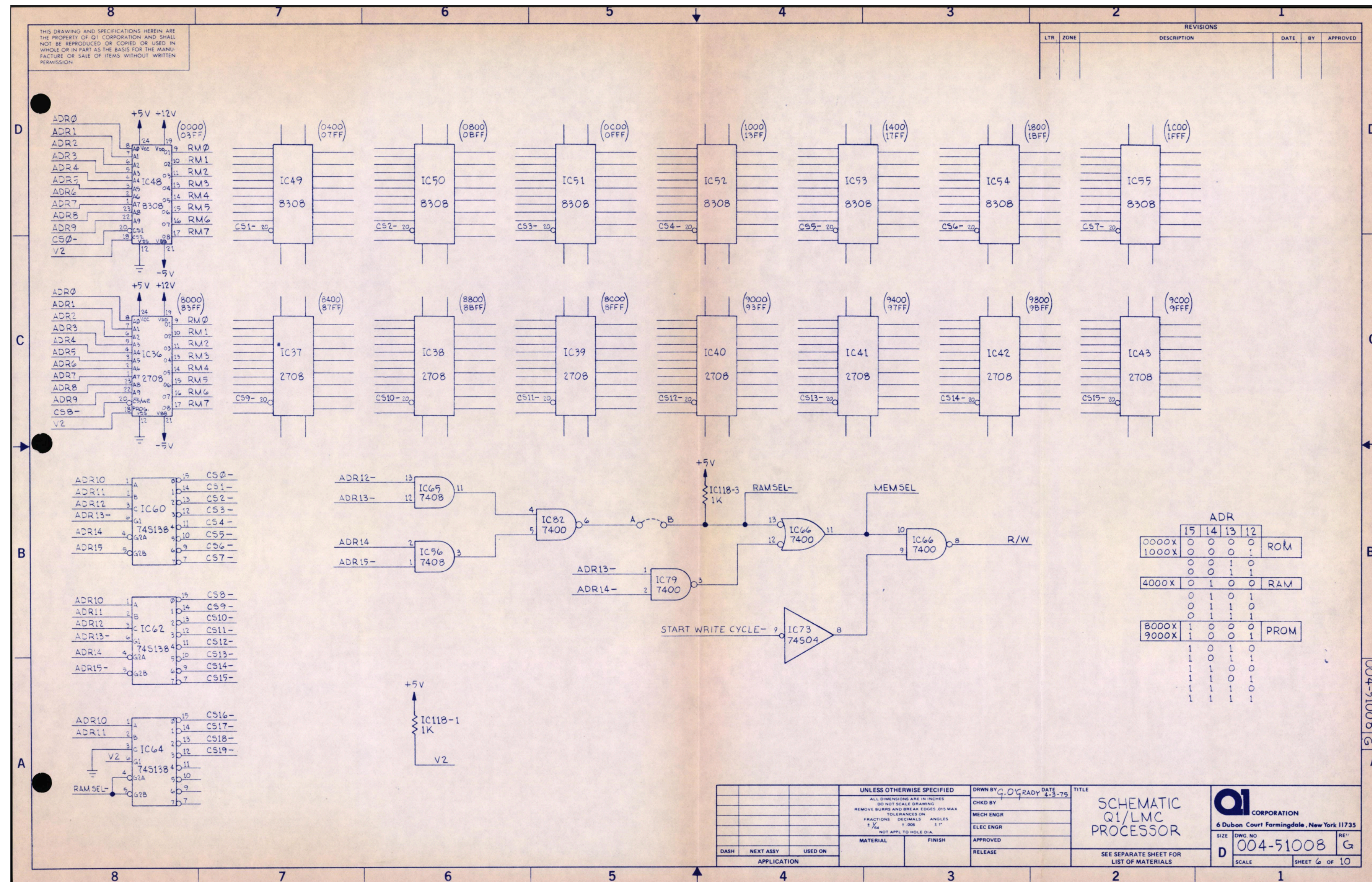
Early revisions: 2102 SRAM and 1702 EPROM
Later revisions: Separate RAM card and 2708 EPROM
- needed added 7905 regulator

Second generation - 8080 based



Work started already in August 1973 - long before the launch of the 8080


Second generation - 8080 based



2708 was added in 1975 - 2704 and 2708 launched in 1975

Second generation - 8080 based

BULLETIN NO. 1184September 1973



SELF-SCAN® PANEL DISPLAY

MODEL BDS40832-PD2

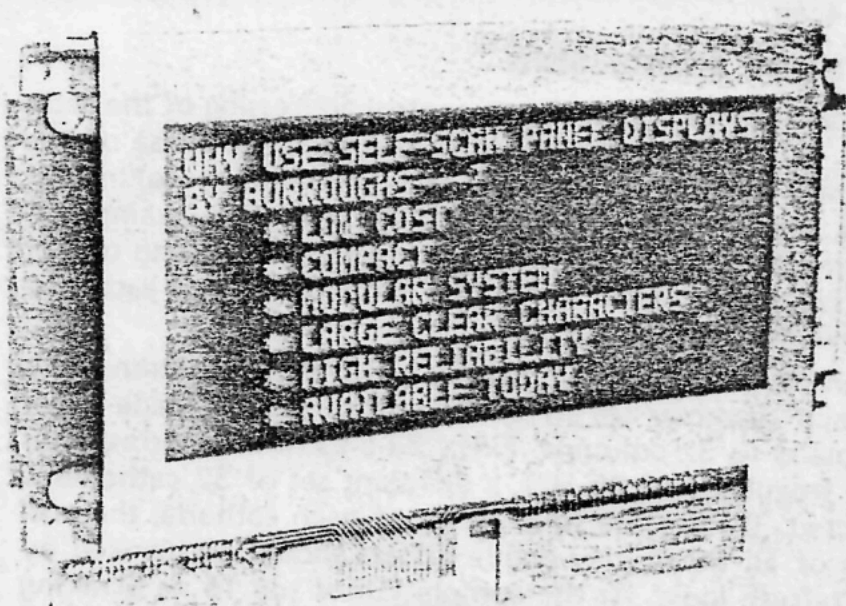
256-POSITION ALPHANUMERIC

The BDS40832-PD2 SELF-SCAN panel display is a flat panel display device capable of displaying eight rows of information. Each row is made up of a matrix of gas-filled display cells located on 0.040" centers. The matrix is seven cells high by 222 cells long. 0.136" of space (equal to three cells) separates each row. Figure 1 shows the message area of the panel.

The driver board contains all necessary drive electronics, including eight scan drivers which control the panel reset and cathode busses, 56 bits of dot pattern storage and the associated anode drivers which control the display anodes on the front of the panel, and a blanking circuit which controls the current drive of the display anode drivers. An option has also been provided to allow for external dimming control of the panel. Interconnection to the driver board is through a 36-pin connector. The panel driver can be remoted from its drive electronics by seven feet.

Depending on the character generator used, a variety of 5 x 7 dot matrix formats can be implemented. The panel has the capacity for 32 characters per row with two spaces between characters.

The specifications in this data sheet apply primarily when the assembly is used as part of the BDS40832-201 SELF-SCAN panel display subsystem. When part of the



BDS40832-PD2

subsystem, the panel is capable of displaying up to 256 characters of information (eight rows of 32 characters).

For additional information, write to Burroughs Corporation, Electronic Components Division, P. O. Box 1226, Plainfield, New Jersey 07061; or call our special sales/ applications number, (201) 757-3400.

- * One upper case and one lower case ROM
- * ROM contains column counter!

2240 BIT

MOS Read-Only Memory

Character Generators

MK 2300 P

SERIES

MK 2302 P



- FEATURES
- ☐ Ion-implantation processing for full TTL/DTL compatibility
 - ☐ 2240 bits of storage organized as 64 5x7 dot matrix characters with column-by-column output
 - ☐ MK 2302 P is pre-programmed with ASCII encoding
 - ☐ Internal counter provides clocked column selection
 - ☐ Counter output for updating external character address registers
 - ☐ Internal provision for one- or two-column intercharacter spacing
 - ☐ Output enable and blanking capability
 - ☐ Operates from +5V and -12V supplies
- APPLICATIONS
- ☐ CRT alphanumeric displays
 - ☐ Light-Emitting Diode (LED) array driver
 - ☐ Billboard and stock market displays

DESCRIPTION

The MK 2300 P Series MOS, TTL / DTL-compatible read-only memories (ROMs) are designed specifically for dot-matrix character generation. Each ROM provides 2240 bits of program-able storage, organized as 64 characters each having 5 columns of 7 bits. A row output capability for 64 7x10 characters is possible, as illustrated on the back page.

Low threshold-voltage processing, utilizing ion-implantation, is used with P-channel, enhancement-mode MOS technology to provide direct input/output interface with TTL and DTL logic families. All inputs are protected to prevent damage from static charge accumulation.

The MK 2302 P is preprogrammed with ASCII-encoded characters (font shown on back page). Other ROMs in the series are programmed during manufacture to customer specifications by modification of a single mask.

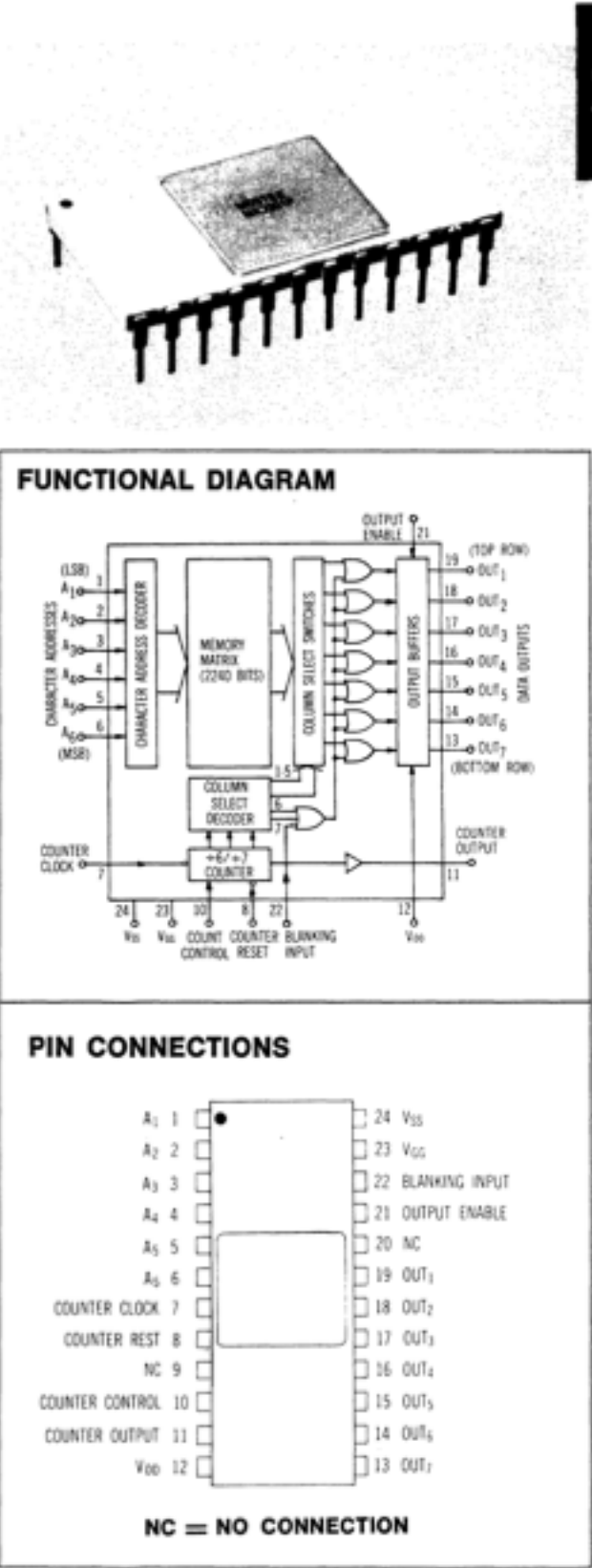
Characters are selected by a six-bit binary word at the Character Address inputs. Each character consists of five columns, the columns selected by an internal counter which is

clocked by the Counter Clock input. Column information appears sequentially beginning with the left-most column. Two additional intercharacter spacing columns are available, selectable for one or two spaces by the Count Control Input. During spacing, the Data Outputs are high (+5V), or the "dot-off" condition. After the last space, the modulo counter automatically increments to the leftmost column.

Synchronizing other system components with the ROM is possible using the Counter Reset Input to reset the counter to the last intercharacter spacing column, or using the Counter Output which occurs only on the last spacing column.

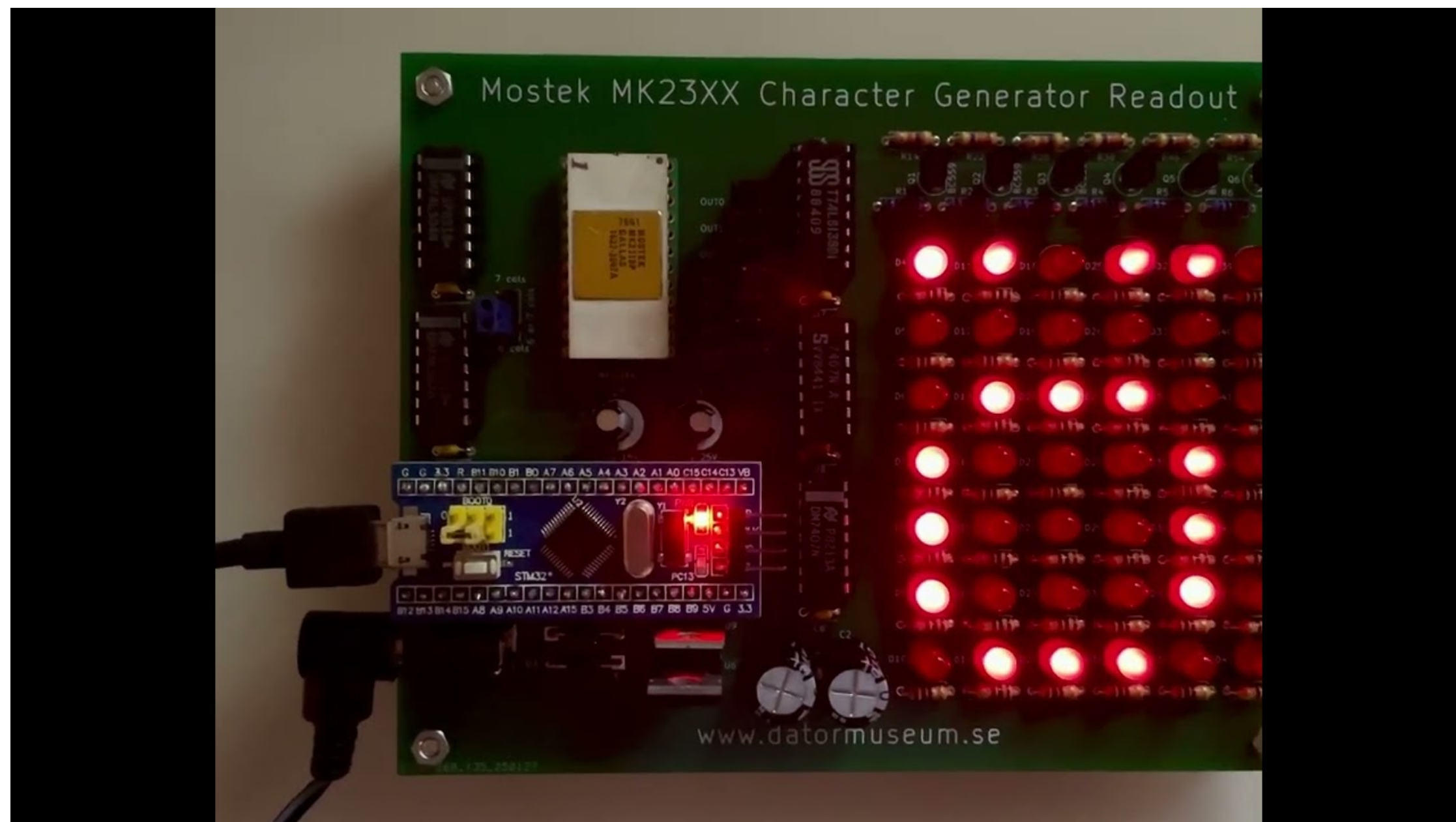
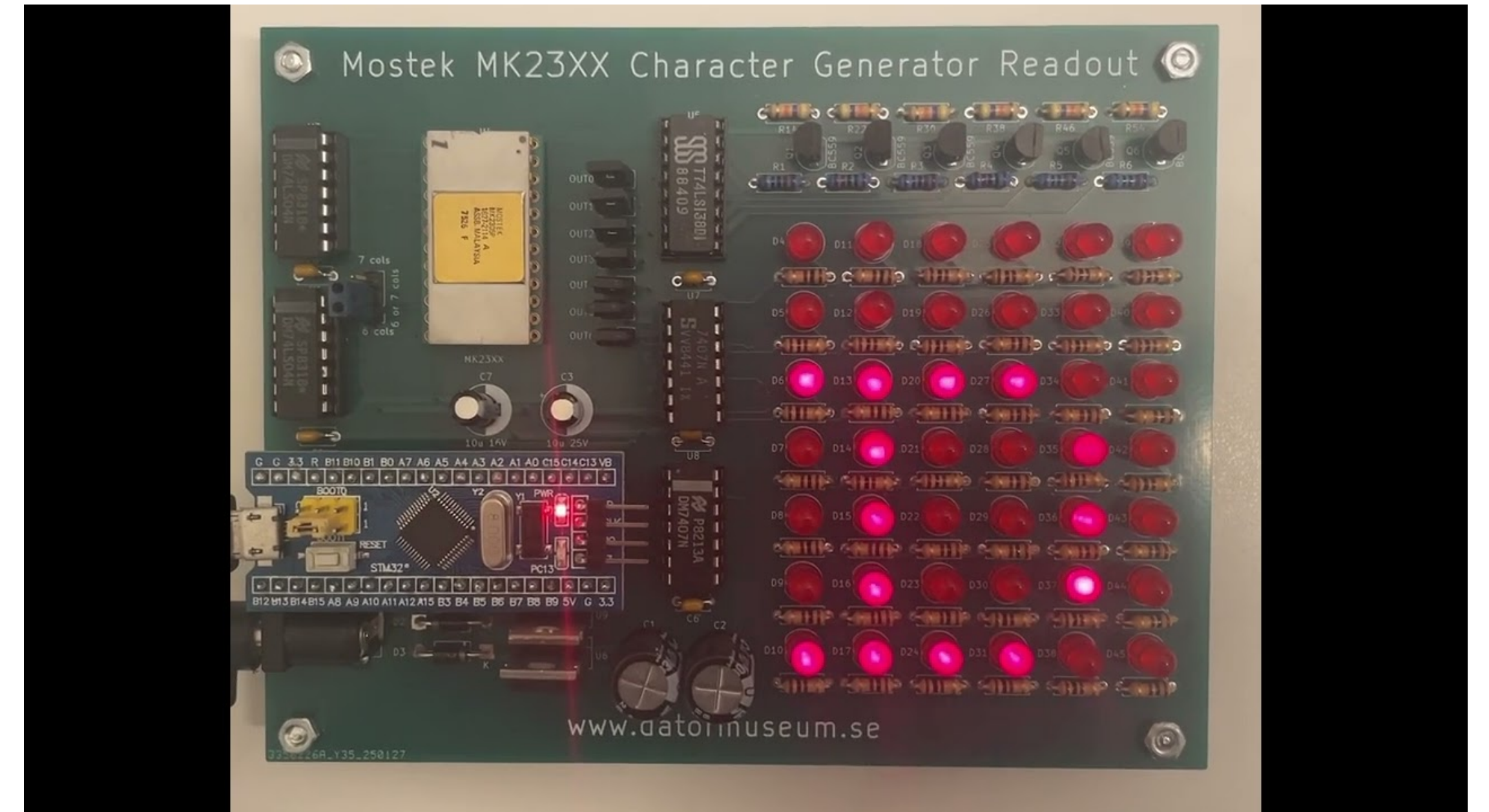
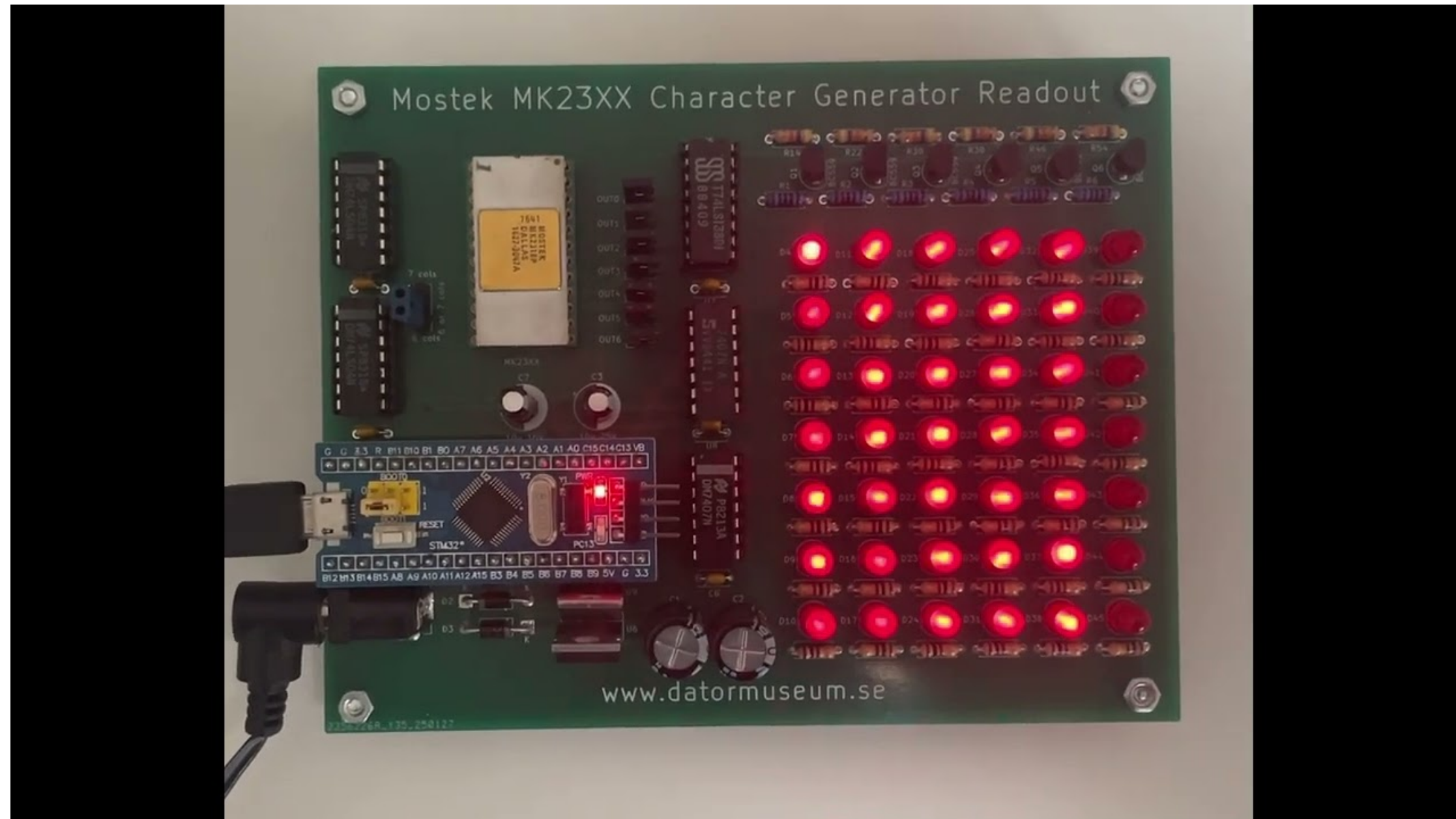
The Blanking Input allows all Data Outputs to be driven high (+5V) without affecting any other ROM functions. The Output Enable input allows the outputs to be open-circuited for wire-ORing.

Memory operation is static; refresh clocks are not required to maintain output information. The Counter Clock input is used only to select columns and need not be pulsed continuously.



Display

Second generation - 8080 based



<https://github.com/MattisLind/MK23xxCharGenReadout>

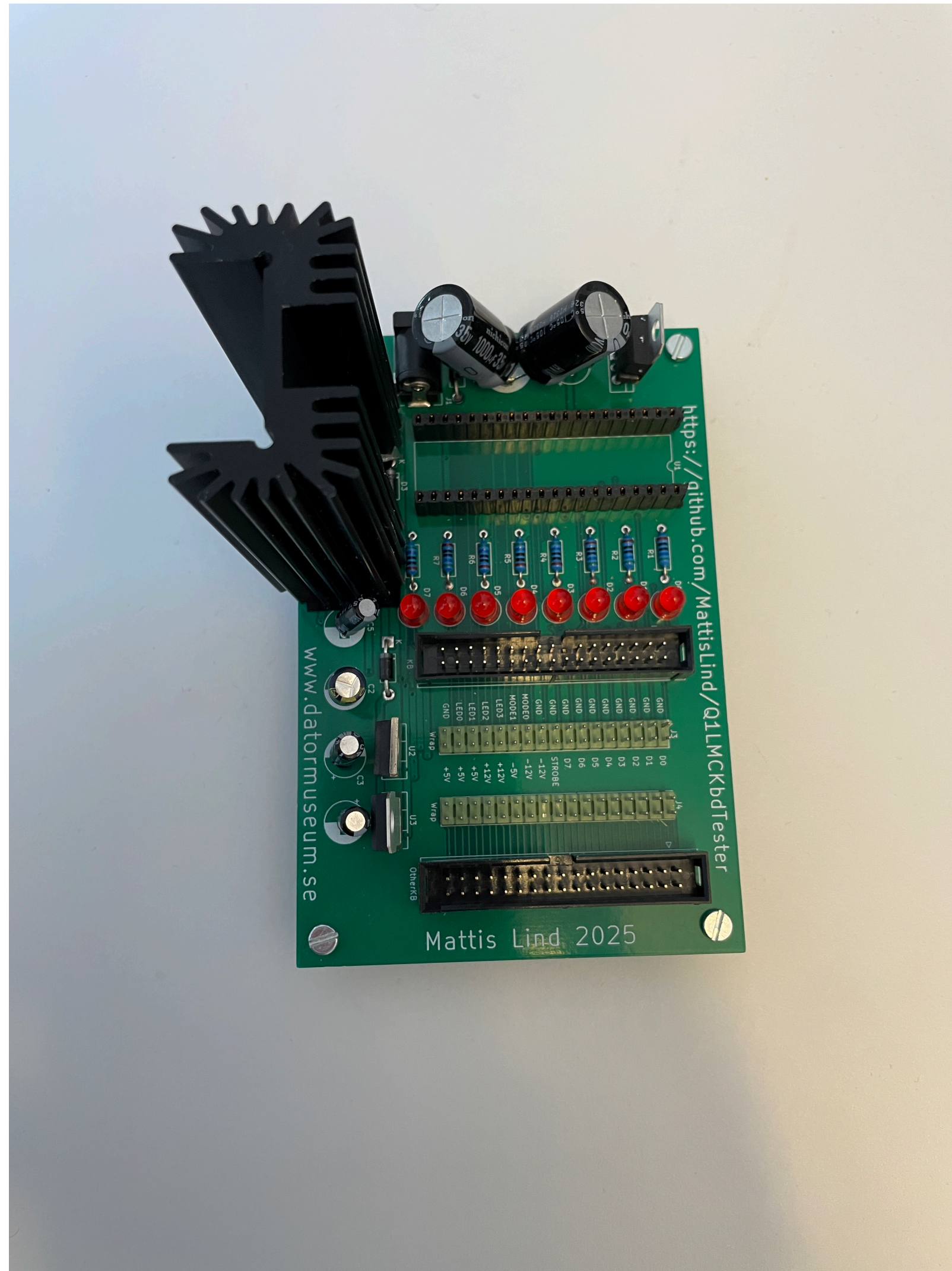
Second generation - 8080 based

Dumping keyboard.

Four shift keys!

The computer can set a shift mode
But the keyboard can override it.

Pressing Alpha Shift overrides back to
normal.



Mårten Stenhardt AB

The reseller in Sweden

Company started as early as in the 1940ies.
Imported electronics of various sorts.

Was a reseller of WANG in Sweden - Then WANG decided that a reseller must focus on WANG only.

Became reseller of Q1 in Sweden.

Also developed software. It seems like there were MSAB employed programmers.

Funny anecdote: Håkan Stenhardt (son of Mårten) met Daniel Alroy in New York. He was driving them in his car and was apparently a lousy driver!

Håkan Stenhardt

Håkan is the donator of the Q1.

He wrote his thesis on this machine.

He want it to go to good hands.

Picked up a lot of floppy disks that has been dumped.

Got binders of some documentation.

There might be one more Q1/LMC!