Chapter 14 - Reproduction Notes

Piotr and the Seven Segments | CASIO VX-4 / SB-5 / MD-120

Equipment

The tested environment used a Linux computer and a TAKK Engineering USB-to-2.5 mm serial cable to transfer programs to a CASIO FX-870P/VX-4 equipped with 64 KB RAM. The experiments used the VX-4 connected through an SB-5 interface to the CASIO MD-120 floppy drive.

Minicom transfer configuration

```
pu port             /dev/ttyUSB0
pu baudrate         4800
pu bits             8
pu parity           N
pu stopbits         1
pu rtscts           No
pu xonxoff          Yes
pu pprog9           /usr/bin/ascii-xfr -sv -l 500 -c 10
```

The transfer delay was increased after transmission errors during initial attempts. With the adjusted pacing, transfer and execution proceeded normally in the reported experiments.

Connections and execution

```
Linux PC -- TAKK Engineering USB-to-2.5 mm --> VX-4 (64 KB)
                                                 |
                                               SB-5
                                                 |
                                              MD-120
```

The reviewed VX-4 BASIC programs load the corresponding HD61700 machine-code bytes. BASIC RUN performs the load; native execution is initiated separately with MODE110(0). The programs use overlapping native RAM, so loading one replaces the prior native image at the same addresses.

The MD-120's separate 2.5 mm serial connector was not used. The peripheral experiments communicated through the SB-5 interface.

Observed demonstrations

P1: CASIO display sequence. **P2:** Seven-segment light show. **P3:** MD-120 buzzer. The release includes the BASIC loaders, assembler sources and listings, two display videos, and the buzzer audio recording.