# ZEUS MONITOR Nov. 2021

### 8-BIT HOBBY COMPUTER BOOTSTRAP CODE

#### **Bootup**

At the bootup the Monitor copies memory block \$0000-\$3000 from bank F (EEPROM) to address \$8000 (highmem), than jumps to \$8000 and switch to bank E.

#### List of commands

>clr

Fills most of TFT screen with background color.

>dump

Dumps on TFT screen 0x70 bytes starting from specified memory address.

>send

Sends to UART specified amount of bytes starting from specified memory address.

>sysr

Sets system register value. Low nibble of sys reg is used by mem128 module for bank switching.

>load

Writes specified byte set starting from specified memory address.

>jump

Sets Program Counter register (jumps) to specified memory address.

>exec

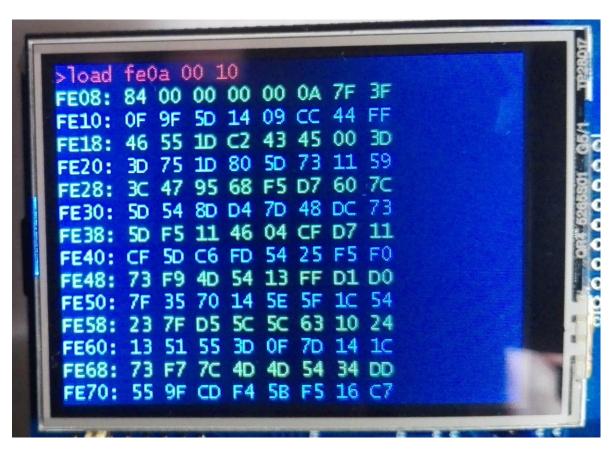
Executes specified byte set.

>crc7

Calculates crc7 sum augmented with bit0 = 1 (check SD phys layer specs).

#### Example 1

```
>dump fe08
FE08: 84 00 00 00 00 0A 7F
                               FF
              5D 14
                    09 CC
      15 9F
FE18: 46 55 1D C2
                    43
                        45
                            00
                                3D
       3D 75 1D 80 5D
                        73
                                59
                            11
FE20:
              95 68 F5 D7
                            60 7C
          47
FE28:
       30
              8D D4
                        48
          54
                     7D
                            DC
       SD.
FE30:
                    04
                        CF D7
                                11
          F5
              11
                 46
FE38:
       SD 
                               FÜ
                     54
              C6
       CF
          5D
                     13
                 54
                        FF D1
                               DÛ
FE48:
       73 F9
              4D
                 14
                     SE.
                         5F
          35
              70
FE50:
       7F
                        63
                            10 24
       23
          7F
              D<sub>5</sub>
                     5C
                 5C
       13
          51
              55
                 3D
                     0F
                                10
FE60:
                         7D
                            14
              7C 4D
FE68:
       73
          F7
                     4D
                         54
                            34
                               DD
FE70:
              CD F4
                     5B
                            16 C7
```





Example 2

```
7e00 30 31 32 33
              32
                 33 74
       30
7E00:
                                33
          04
              56
      F0
                                18
                     D5
          68
              4C CC
       45
                     13
          F3
                 67
                     D0
                 F6
                     D7
                                FF
          95
              4D
                             47
                         38
              1C 4E F5
          44
                 D9
                     10
          0D
                             51
              13
                 91
       D1
          6D
                     0C
                         14
       F5
           30
              74
                  29
                                加
                     D4
                                15
       3D
          7D
              3F
                  7D
                         70
                     03
                                DD
       4D
           36
              90
                  4F
                                45
       33
                         15
7E68:
       30
                             0C
          13
              44
                  D4
```

```
>send 7e00 0008
      30 31 32 33 74
7E00:
            56 51 C3
7E08:
      FO 04
                              18
            4C CC D5
      45 68
7E10:
                              D5
            30 12
                   13
                       57
      C5 F3
7E18:
7E20: D5 FA F5 67 D0
                       7C
                              F1
          95 4D F6 D7
                       5F
                           47
      71
7E28:
7E30: CD 44 1C 4E F5
                       38
                           10
                              F7
             7C D9 1D
       54
          0D
7E38:
          6D 13 91 0C
7E40: D1
                              F1
7E48: F5
         30 74
                29 D4
                       57
                           53
                              10
         7D
                    27
                       70
                              15
7E50:
      3D
             3F
                 7D
       4D
             90
         -36
                 4F
                    03
                              DD
7E58:
7E60: 33 93
             3D
                           SC
                              45
                76
                    79
                       FB
7E68:
       30 13
             44 D4
                       15
                              50
                    0F
```

```
>jump a000
      30 31 32
                33 74
7E00:
                51 €3
      FO 04
             56
7E08:
                              18
7E10: 45 68
             4C CC D5
                       FC
                    13
                              D5
             30 12
7F18: C5 F3
             F5 67 D0
                        7C
7E20: D5 FA
                               FF
             4D F6 D7
          95
                        5F
       71
7E28:
             1C 4E F5
                        38
                           10
7E30: CD 44
             7C D9 1D
                           55
                               57
       54
7E38:
          0D
             13 91 0C
                           51 F1
7E40: D1 6D
                        14
                               10
                           53
       F5
                 29
                    D4
          30
             74
7E48:
                    27
                        70
                               15
7E50: 3D
             3F
                 7D
          7D
                    03
              90
                               DD
          36
7E58:
       4D
                 4F
                               45
7E60:
          93
                 76
                     79
                        FB
       33
              3D
       30 13
                    OF
                        15
              44
                 D4
7E68:
```

## Example 3



