

AVR-lab01

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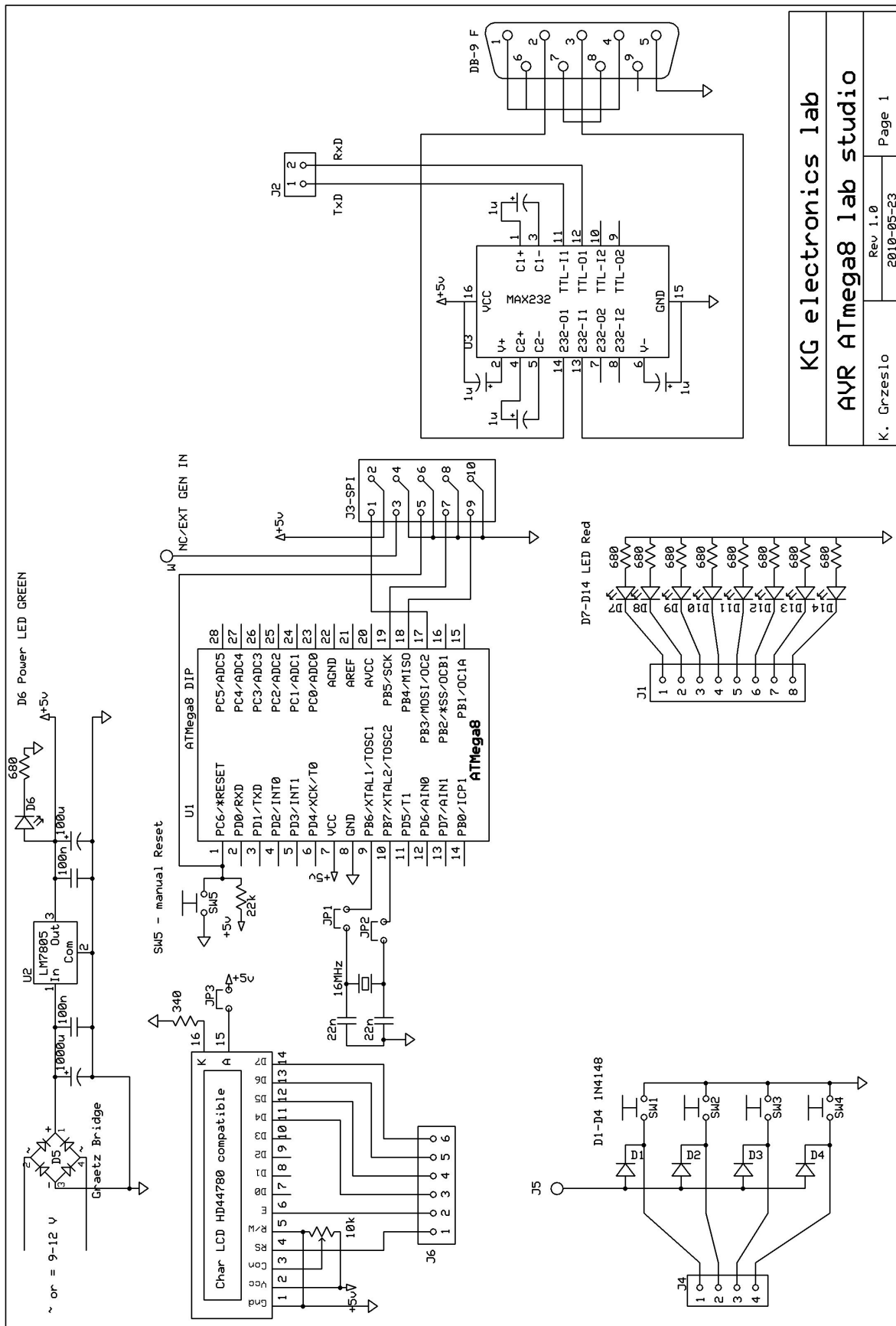
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1 Idea of the project

Here I would like to describe the idea of the project. See sample source code of the file test.asm as described in [1]

```
1  .include "m8def.inc"
2  .equ TABLE_BEGIN = 0x00
3  Initialization:
4      ; stack pointer initialization
5      ldi R17, high(RAMEND)
6      ldi R16, low(RAMEND)
7      out SPH, R17
8      out SPL, R16
9      ;set port A as output
10     ldi R16, 0xFF
11     out DDRA, R16
12     ldi R30, low(Table<<1) ;save LSB of the Table address
13     ldi R31, 8 ; offset set to 9th character (end of the table)
14     add R30, R31
15     ldi R31, high(Table<<1) ;save MSB of the Table address
16     mov R19, R30 ; save table offset
17     rjmp Loop
18
19 Back:
20     mov R30, R19 ; set the initial offset to the table
21 Loop:
22     lpm R18, Z ; load to program memory
23     tst R18 ; check if R18 does not have TABLE_BEGIN
24     breq Back ; if so return the initial table offset
25     out PORTA, R18 ; if not then display table content
26     dec R30 ; and decrement pointer in a table
27     rjmp Petla
28
29 Table: .DB TABLE_BEGIN, 0xFE, 0xFD, 0xFB, 0xF7, 0xEF, 0xDF, 0xBF, 0x7F
30     ; at the beginning of the table there is value 0x00 that would
31     ; point to the initial table offset
```

2 Schematics



References

- [1] J. Doe: *Title*, 1st Edition, ISBN XX-XXXXX-XX-X, JDoe Editions, Imagineland 2010.