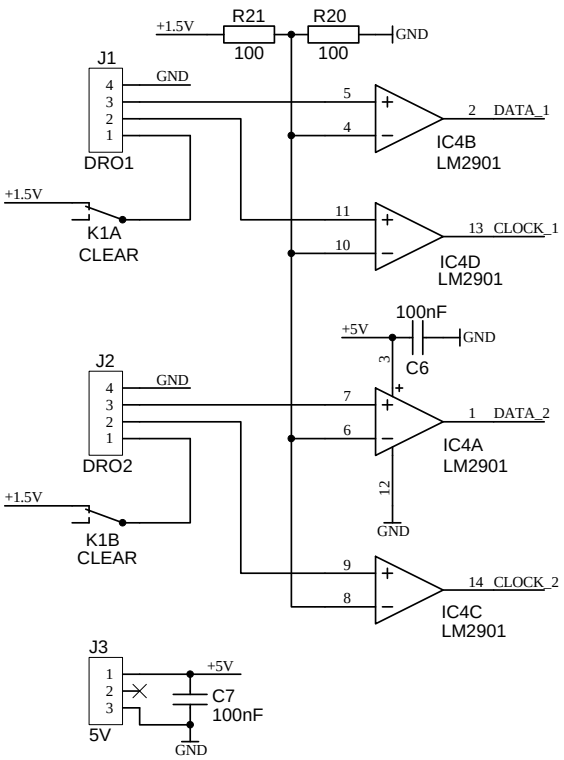
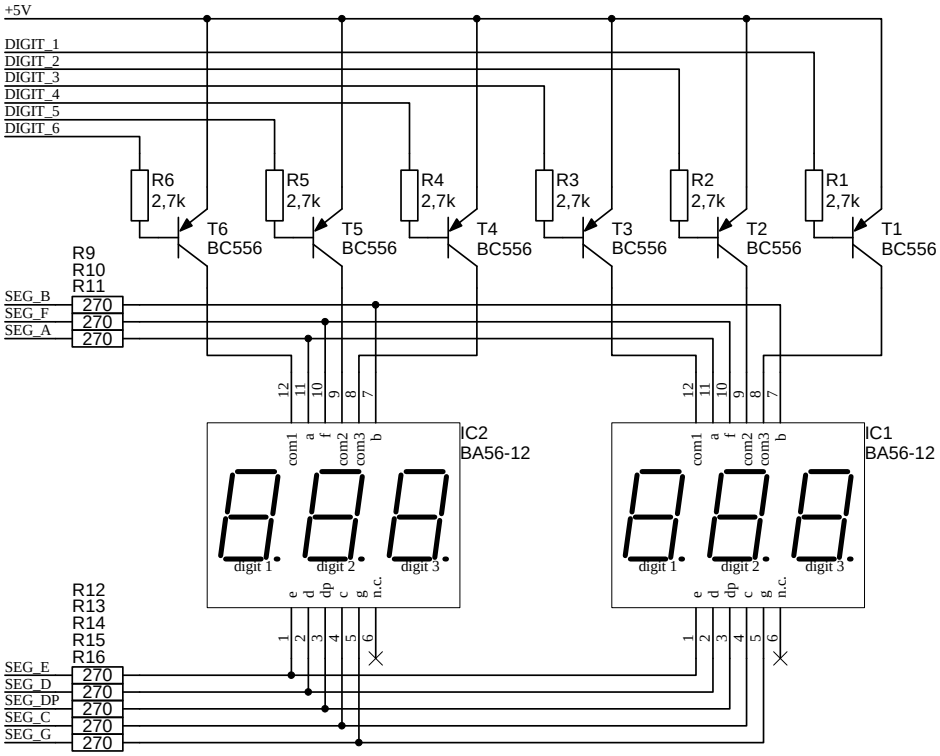
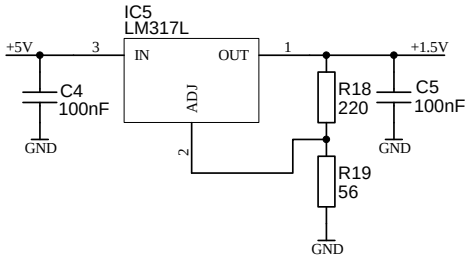
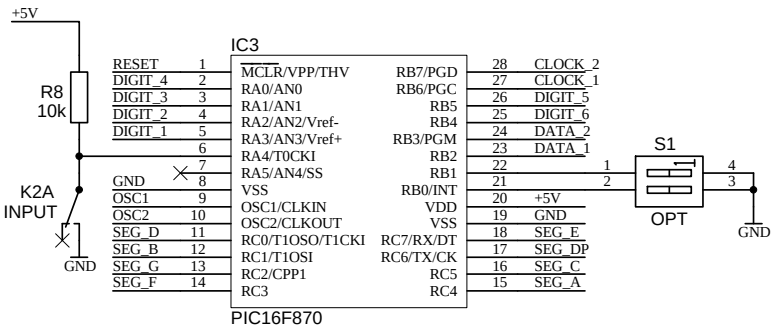
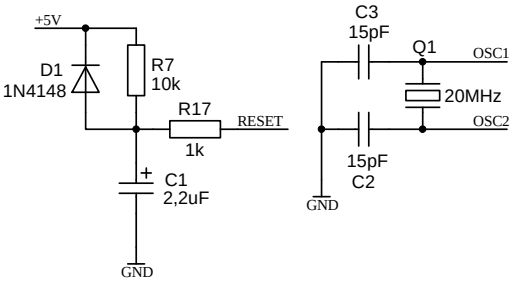
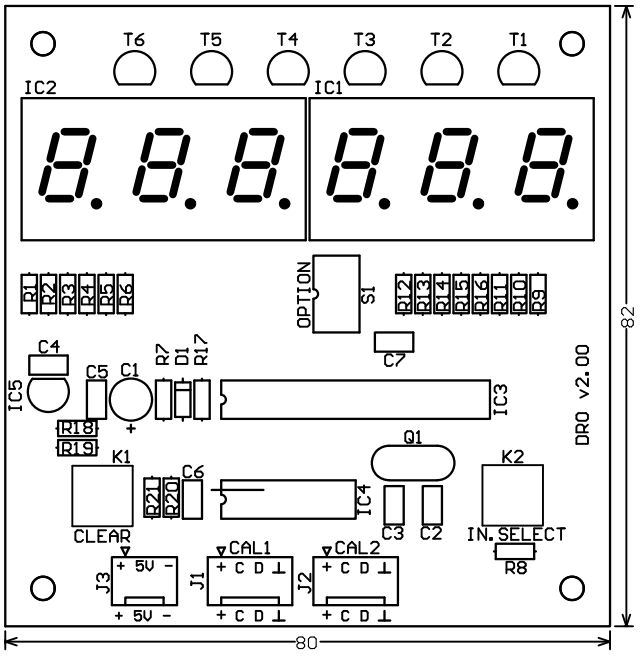

+1.5V
R21
100
R20
100
GND
J1
DRO1
K1A
CLEAR
IC4B
LM2901
IC4D
LM2901
100nF
C6
J2
DRO2
K1B
CLEAR
IC4A
LM2901
IC4C
LM2901
J3
5V
C7
100nF
DATA_1
CLOCK_1
DATA_2
CLOCK_2

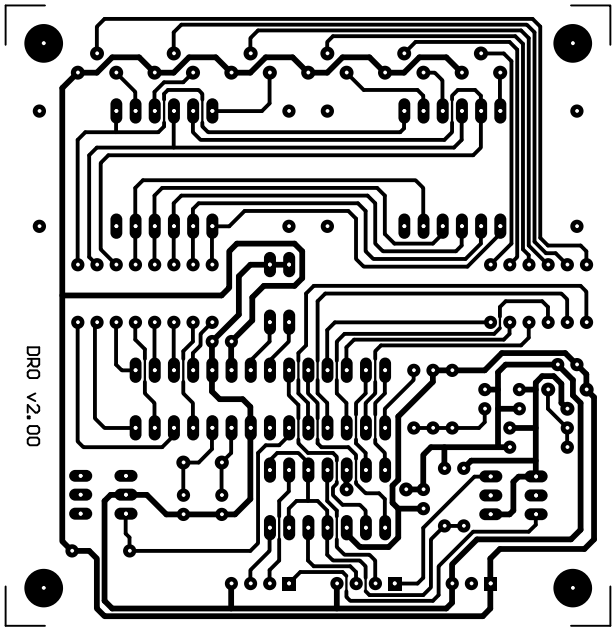

+5V
DIGIT_1
DIGIT_2
DIGIT_3
DIGIT_4
DIGIT_5
DIGIT_6
R6 2,7k
R5 2,7k
R4 2,7k
R3 2,7k
R2 2,7k
R1 2,7k
T6 BC556
T5 BC556
T4 BC556
T3 BC556
T2 BC556
T1 BC556
R9
R10
R11
SEG_B
SEG_F
SEG_A
270
IC2
BA56-12
IC1
BA56-12
com1
com2
com3
digit 1
digit 2
digit 3
R12
R13
R14
R15
R16
SEG_E
SEG_D
SEG_DP
SEG_C
SEG_G
n.c.


IC5
LM317L
IN
OUT
ADJ
+5V
+1.5V
C4
100nF
R18
220
C5
100nF
R19
56
GND


+5V
IC3
PIC16F870
MCLR/VPP/THV
RA0/AN0
RA1/AN1
RA2/AN2/Vref-
RA3/AN3/Vref+
RA4/T0CKI
RA5/AN4/SS
VSS
OSC1/CLKIN
OSC2/CLKOUT
RC0/T1OSO/T1CKI
RC1/T1OSI
RC2/CPP1
RC3
RB7/PGD
RB6/PGC
RB5
RB4
RB3/PGM
RB2
RB1
RB0/INT
VDD
VSS
RC7/RX/DT
RC6/TX/CK
RC5
RC4
RESET
DIGIT_4
DIGIT_3
DIGIT_2
DIGIT_1
OSC1
OSC2
SEG_D
SEG_B
SEG_G
SEG_F
SEG_E
SEG_C
SEG_A
CLOCK_2
CLOCK_1
DATA_2
DATA_1
R8
10k
K2A
INPUT
S1
OPT
GND


+5V
D1
1N4148
R7
10k
R17
1k
RESET
C1
2,2uF
C3
15pF
Q1
20MHz
C2
15pF
OSC1
OSC2
GND





Bill of Material for DRO_v200.Sch

Used	Part Type	Designator	Description
1	56	R19	Ellenalas 0,6W
2	100	R20 R21	Ellenalas 0,6W
1	220	R18	Ellenalas 0,6W
8	270	R9 R10 R11 R12 R13 R14 R15 R16	Ellenalas 0,6W
1	1k	R17	Ellenalas 0,6W
6	2,7k	R1 R2 R3 R4 R5 R6	Ellenalas 0,6W
2	10k	R7 R8	Ellenalas 0,6W
2	15pF	C2 C3	Kondenzator
4	100nF	C4 C5 C6 C7	Kondenzator
1	2,2uF	C1	Elektrolit kondenzator
1	1N4148	D1	Dioda
6	BC556	T1 T2 T3 T4 T5 T6	Tranzisztor
2	BA56-12	IC1 IC2	3 digites kozos anodos hetszegmens kijelzo
1	PIC16F870	IC3	8 bit MCU
1	LM2901	IC4	Quad comparator
1	LM317	IC5	Stabilizator IC
1	20MHz	Q1	Quartz
1	-	K1 K2	Kapcsolo 2 valto (LOMEX: 342-es)
2	-	J1 J2	Tapcsatlakozo 4-es
1	-	J3	Sorkapocs 2x2#
1	-	S1	2-es DIP-SW