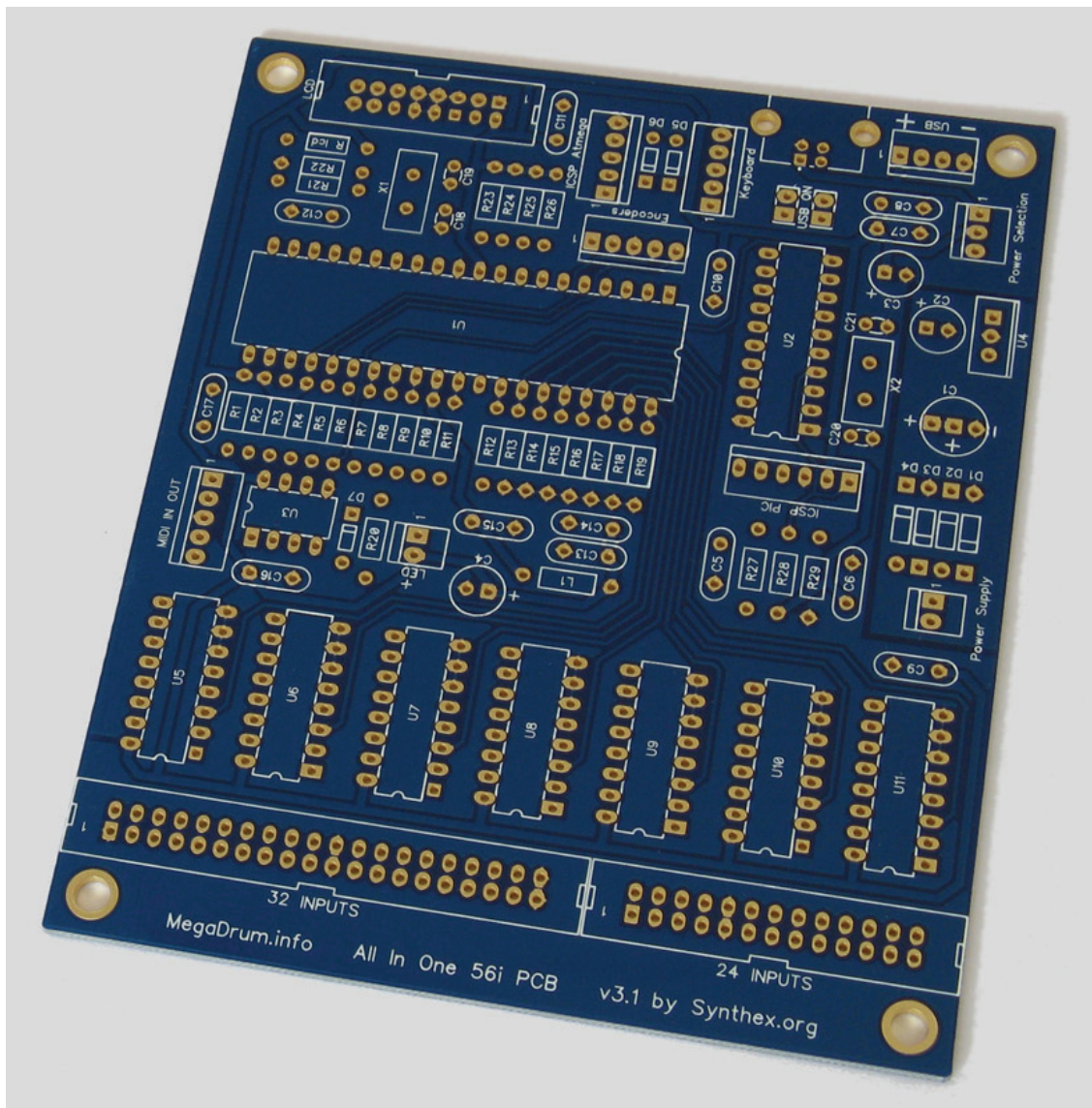


MegaDrum



All In One PCB 56i
v3.1 by Synthex.org



All In One 56i PCB v3.1 - Components

Resistors (1/4 watt metal) :

R1	100
R2	220
R3	220
R4	4k7
R5	220
R6	1k
R7	1k
R8	10k
R9	6k2
R10	4k7
R11	4k7
R12	100
R13	4k7
R14	4k7
R15	4k7
R16	4k7
R17	4k7
R18	4k7
R19	4k7
R20	220
R21	1k
R22	10k
R23	47k
R24	47k
R25	47k
R26	47k
R27	1k5
R28	4k7
R29	47k
R lcd	33 to 470

Capacitors :

C1	100uF (1 or 2)
C2	47uF (1)
C3	47uF (1)
C4	47uF (1)
C5	470nF (2)
C6	100nF (2)
C7	100nF (2)
C8	1nF (2)
C9	100nF (2)
C10	100nF (2)
C11	100nF (2)
C12	100nF (2)
C13	100nF (2)
C14	1nF (2)
C15	100nF (2)
C16	100nF (2)
C17	100nF (2)

C18	22pF (1)
C19	22pF (1)
C20	15pF (1)
C21	15pF (1)

(1) : Lead space 2.54 mm

(2) : Lead space 5.08 mm

Inductors :

L1	10uH to 1mH
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Diodes :

D1	1N4004 to 1N4007
D2	1N4004 to 1N4007
D3	1N4004 to 1N4007
D4	1N4004 to 1N4007
D5	1N4148
D6	1N4148
D7	1N4148

Crystals :

X1	20MHz
X2	12MHz

ICs :

U1	Atmega644
U2	18F14K50
U3	6N138
U4	L7805
U5	74HC4851
U6	74HC4851
U7	74HC4851
U8	74HC4851
U9	74HC4851
U10	74HC4851
U11	74HC4851

Sockets and Connectors :

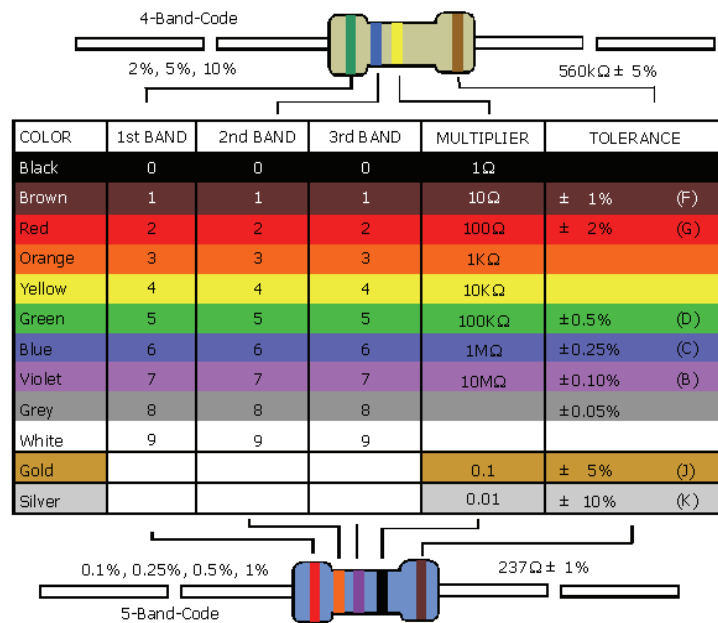
LCD	IDC-2X8M
24 INPUTS	IDC-2X13M
32 INPUTS	IDC-2X20M
Power Supply	HDR-KK-1X2
LED	HDR-KK-1X2
Power Selection	HDR-KK-1X3
USB	HDR-KK-1X4
Keyboard	HDR-KK-1X5
Encoders	HDR-KK-1X5
MIDI IN OUT	HDR-KK-1X5
ICSP Atmega	HDR-KK-1X5
ICSP PIC	HDR-KK-1X6

All In One 56i PCB v3.1 - Components

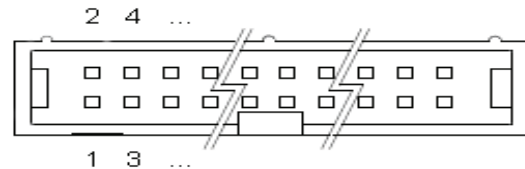
USB	USB Type B Socket
USB ON	HDR-1X2
USB ON	HDR-1X2
U3	DIL Socket-IC 8 pin
U5	DIL Socket-IC 16 pin
U6	DIL Socket-IC 16 pin
U7	DIL Socket-IC 16 pin
U8	DIL Socket-IC 16 pin
U9	DIL Socket-IC 16 pin
U10	DIL Socket-IC 16 pin
U11	DIL Socket-IC 16 pin
U2	DIL Socket-IC 28 pin (narrow)
U1	DIL Socket-IC 40 pin

Display and Keyboard :

LED	Blue LED
LCD Display	LCD 16x2 H44780 compatible
Up	D6 Switch Pushbutton
Down	D6 Switch Pushbutton
Left	D6 Switch Pushbutton
Right	D6 Switch Pushbutton



Rectangular pad is always pin 1



32 INPUTS Connector :

- 1 - GND
- 2 - HiHat controller High impedance input
- 3 - HiHat controller Power source
- 4 - HiHat controller Low impedance input
- 5 - Kick
- 6 - NC
- 7 - HiHat Bow
- 8 - HiHat Edge
- 9 - Snare Head
- 10 - Snare Rim
- 11 - Ride Bow
- 12 - Ride Edge
- 13 - Crash Bow
- 14 - Crash Edge
- 15 - Tom1 Head
- 16 - Tom1 Rim
- 17 - Tom2 Head
- 18 - Tom2 Rim
- 19 - Tom3 Head
- 20 - Tom3 Rim
- 21 - GND
- 22 - GND
- 23 - Tom4 Head
- 24 - Tom4 Rim
- 25 - Aux1 Head/Bow
- 26 - Aux1 Rim/Edge
- 27 - Aux2 Head/Bow
- 28 - Aux2 Rim/Edge
- 29 - Aux3 Head/Bow
- 30 - Aux3 Rim/Edge
- 31 - Aux4 Head/Bow
- 32 - Aux4 Rim/Edge
- 33 - Aux5 Head/Bow
- 34 - Aux5 Rim/Edge
- 35 - Aux6 Head/Bow
- 36 - Aux6 Rim/Edge
- 37 - Aux7 Head/Bow
- 38 - Aux7 Rim/Edge
- 39 - GND
- 40 - GND

24 INPUTS Connector :

- 1 - Aux8 Head/Bow
- 2 - Aux8 Rim/Edge
- 3 - Aux9 Head/Bow
- 4 - Aux9 Rim/Edge
- 5 - Aux10 Head/Bow
- 6 - Aux10 Rim/Edge
- 7 - Aux11 Head/Bow
- 8 - Aux11 Rim/Edge
- 9 - GND
- 10 - GND
- 11 - Aux12 Head/Bow
- 12 - Aux12 Rim/Edge
- 13 - Aux13 Head/Bow
- 14 - Aux13 Rim/Edge
- 15 - Aux14 Head/Bow
- 16 - Aux14 Rim/Edge
- 17 - Aux15 Head/Bow
- 18 - Aux15 Rim/Edge
- 19 - Aux16 Head/Bow
- 20 - Aux16 Rim/Edge
- 21 - Aux17 Head/Bow
- 22 - Aux17 Rim/Edge
- 23 - Aux18 Head/Bow
- 24 - Aux18 Rim/Edge
- 25 - Aux19 Head/Bow
- 26 - Aux19 Rim/Edge

USB Connector :

- 1 - VCC 5V (pin 1)
- 2 - D- (pin 2)
- 3 - D+ (pin 3)
- 4 - GND (pin 4)

Power Selection Connector :

- 1 - Switch ON (Power USB)
- 2 - Switch Common (Power IN)
- 3 - Switch ON (Power Supply)

Power Supply Connector :

- 1 - 7V to 12V (AC or DC)
- 2 - 7V to 12V (AC or DC)

All In One 56i PCB v3.1 - Connectors

MIDI IN OUT Connector :

- 1 - MIDI OUT + (DIN pin 4)
- 2 - MIDI OUT - (DIN pin 5)
- 3 - MIDI OUT GND (DIN pin 2)
- 4 - MIDI IN + (DIN pin 4)
- 5 - MIDI IN - (DIN pin 5)

- 4 - RS (pin 4)
- 5 - RW (pin 5)
- 6 - E (pin 6)
- 7 - D0 (pin 7)
- 8 - D1 (pin 8)
- 9 - D2 (pin 9)
- 10 - D3 (pin 10)
- 11 - D4 (pin 11)
- 12 - D5 (pin 12)
- 13 - D6 (pin 13)
- 14 - D7 (pin 14)
- 15 - Led + (backlight)
- 16 - Led - (backlight)

Keyboard Connector :

- 1 - Right
- 2 - Up
- 3 - Down
- 4 - Left
- 5 - GND

Encoders Connector :

- 1 - Encoder Left / Right (pin 4)
- 2 - Encoder Left / Right (pin 2)
- 3 - GND (pin 1, 3)
- 4 - Encoder Up / Down (pin 2)
- 5 - Encoder Up / Down (pin 4)

ICSP PIC Connector :

- 1 - MCLR Vpp
- 2 - VCC 5V
- 3 - GND
- 4 - PGD (Data)
- 5 - PGC (Clock)
- 6 - PGM (LVP)

LED Connector :

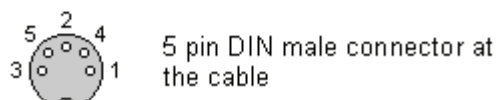
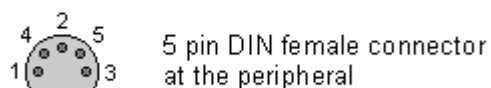
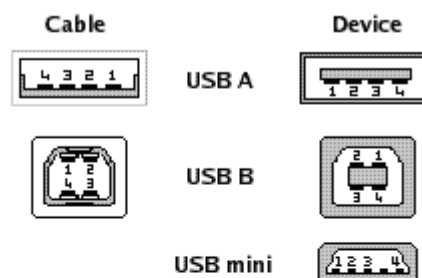
- 1 - LED -
- 2 - LED +

ICSP Atmega Connector :

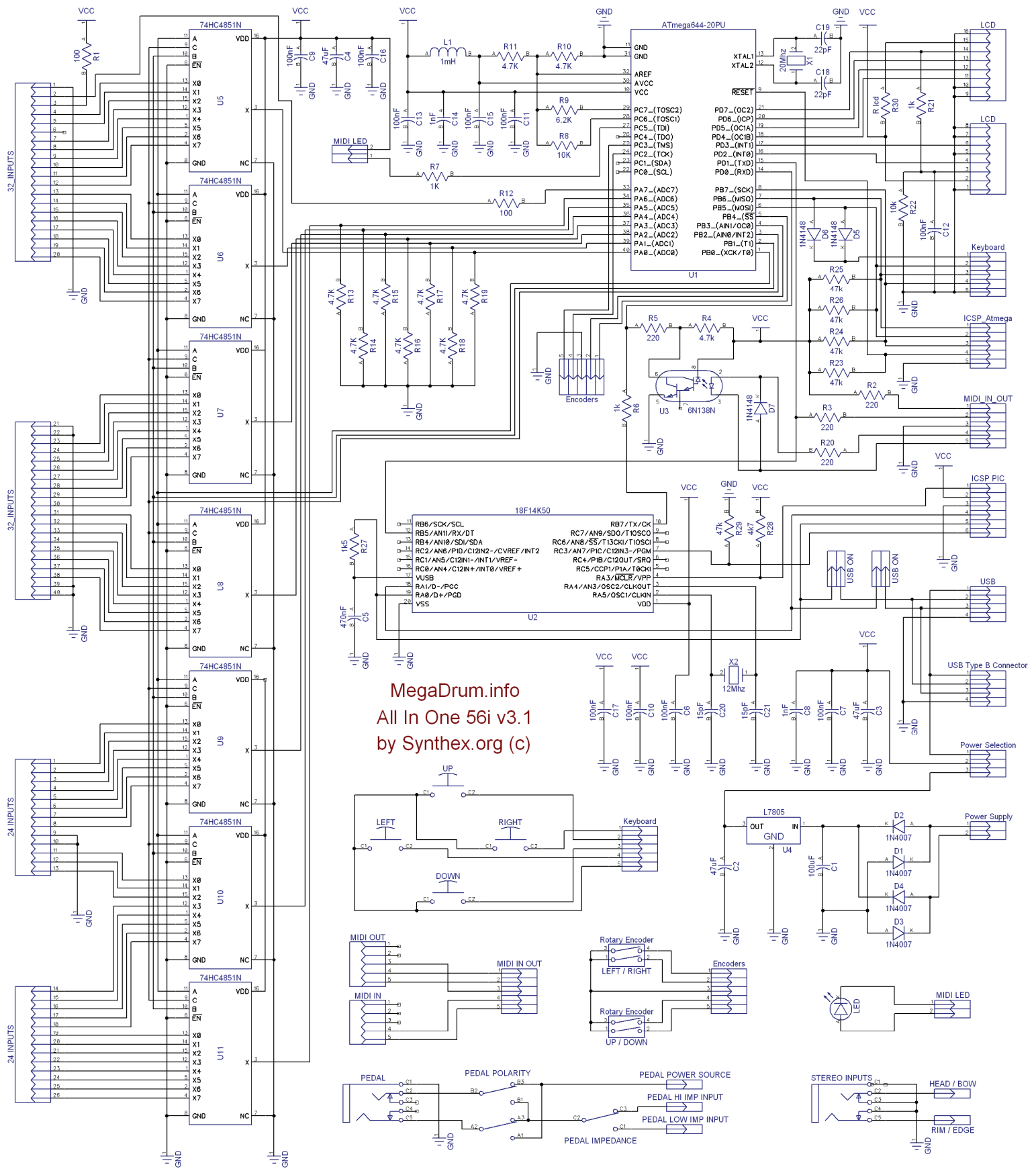
- 1 - MISO (PB6)
- 2 - MOSI (PB5)
- 3 - SCK (PB7)
- 4 - RESET
- 5 - GND

LCD Connector :

- 1 - GND (pin 1)
- 2 - VDD (pin 2)
- 3 - VEE (pin 3)



All In One 56i PCB v3.1 - Schematics



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