Henar #3 MIDI Small Controller Rev 1 Diagram (H3_MIDISmallController_Rev_1)

H3_MIDISmall Controller_Rev_1

to MIDI exec
ARDUINO LEONARDO USB

to 12V
J_PW

J_SW[0:3] → **H3_Wire_SWPad** x4 → J_MAIN → **H3_SWPad_Small_Rev_3** x4

Note1: The H3_Wire_SWPad longitude depends on position.

J_PZ[0:7] → **H3_PZPad_Rev_1** x8

Note2: Sensor and Potentiometer may use a open variety of custon wires.

J_POT[0:3] → **Variety of Wires** x4 → J_MAIN → **H3_PotPad_Rev_1, Variety of Sensors** x4

Note3: *J_EXT_0* and *J_EXT_1* allow access to *Arduino Leonardo* free pins and power supply.

J_EXT0:1] → **Variety of Elements**

J_LED → **Neopixel WS2812B LED Stripe**

SWPad Connectors

47
R_LEDSTR   LED_STRIPE
J_SW_00-5
J_SW_00-4   5V
J_SW_00-3
J_SW_00-2   GND
J_SW_00-1   J_SW_00

J_SW_01-5
J_SW_01-4
J_SW_01-3
J_SW_01-2   GND
J_SW_01-1   J_SW_01

J_SW_02-5
J_SW_02-4   5V
J_SW_02-3
J_SW_02-2   GND
J_SW_02-1   J_SW_02

J_SW_03-5
J_SW_03-4   LED_OUT
J_SW_03-3
J_SW_03-2   GND
J_SW_03-1   J_SW_03

Note: When redesigning, check the Molex KK 254 orientation.

Pot/Sensor Connectors

J_POT_0-3   5V
J_POT_0-2   POT_0
J_POT_0-1
GND

J_POT_1-3   5V
J_POT_1-2   POT_1
J_POT_1-1
GND

J_POT_2-3   5V
J_POT_2-2   POT_2
J_POT_2-1
GND

J_POT_3-3   5V
J_POT_3-2   POT_3
J_POT_3-1
GND

PZPad Connectors

JPZ_0-2   PZ_0   R_PZ_0 1M   4n7   PZ_0   GND
JPZ_0-1
JPZ_1-2   PZ_1   R_PZ_1 1M   4n7   PZ_1   GND
JPZ_1-1
JPZ_2-2   PZ_2   R_PZ_2 1M   4n7   PZ_2   GND
JPZ_2-1
JPZ_3-2   PZ_3   R_PZ_3 1M   4n7   PZ_3   GND
JPZ_3-1

JPZ_4-2   PZ_4   R_PZ_4 4n7   PZ_4   GND
JPZ_4-1
JPZ_5-2   PZ_5   R_PZ_5 4n7   PZ_5   GND
JPZ_5-1
JPZ_6-2   PZ_6   R_PZ_6 4n7   PZ_6   GND
JPZ_6-1
JPZ_7-2   PZ_7   R_PZ_7 4n7   PZ_7   GND
JPZ_7-1

Note: When redesigning, check the Molex KK 254 orientation.

16to1 Multiplexer

C_MUX_0P   C_MUX_0 10uF
5V   VSS
GND   GND
U_MUX_0
INH
MUX_A   A
MUX_B   B
MUX_C   C
MUX_D   D

SW_03   X0
SW_02   X1   X   1 MUX_0
SW_01   X2
SW_00   X3
POT_3   X4
POT_2   X5
POT_1   X6
POT_0   X7
PZ_7   X8
PZ_6   X9
PZ_5   X10
PZ_4   X11
PZ_3   X12
PZ_2   X13
PZ_1   X14
PZ_0   X15
4067D

MIDI Jack Connector

Note: MIDI Jack Connector is just for experimental use.

R_MIDI_0
J_MIDI-4   220   TX
J_MIDI-3   R_MIDI_1   RX
J_MIDI-2   220   5V
J_MIDI-1   220   GND

EXT LED STRIPE Connector

J_LED-3   5V
J_LED-2   LED_OUT
J_LED-1   GND

RGB LED

LED_0
5V   VDD   DIN   LED
C_LED_0
LED_STRIPE DOUT VSS
10n
GND

Note: LED_0 is the first LED of the Neopixel LED STRIPE. It is powered always through 5V form Arduino.

Extension Connectors

J_EXT_0
D7   A1
D8   A2
D9   A3
5V   GND

J_EXT_1
5V   GND

Note: J_EXT_0 and J_EXT_1 are for extension use. Just access for free pins.

5V Power Selector

J_PWSEL-2   5V_PW
J_PWSEL-1   5V

Note: Use a Jumper to connect both 5V signals when not exterior power connected to J_PW.

Power Connector

VIN   PTCTHERMISTOR1206   VIN
J_PW   F_PW

Note: The Fuse Current must be determined once built

Power Input

U_VR_5V
7805T
VIN   VI   VO   5V_PW
C_VR_0   GND   C_VR_1
18127C103KAT2A   C18125BK2RACTU
LED_PW
GND

Arduino Leonardo

U_ARD
TX   TXO   RAW   5V_PW
RX   RXI   GND   GND
      RST   RST   5V
      GND   VCC
LED   2   A3
MUX_A   A2
MUX_B   A1
MUX_C   A0
MUX_D   MUX_0
D7
D8
D9
ARDUINO-MINI

Un Instrumento para Henar
MEDIALAB PRADO
AUTOFABRICANTES
HENAR#3

HENAR #3
AUTOFABRICANTES
UN INSTRUMENTO PARA HENAR
MEDIALAB-PRADO

PCB Name: H3_MIDISmallController_Rev_1

Designer: Pablo dMM (PablodMM.isp@gmail.com)   REV: 1

Date: 01/12/2017 11:42