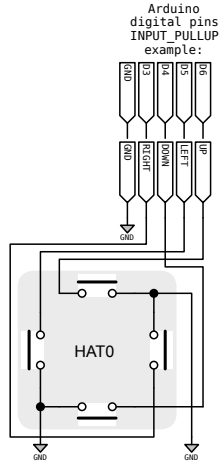# MegaJoystick Arduino library - Button and HAT swtich input configurations
(c) 2016-2017 Piotr Zapart www.hexeguitar.com

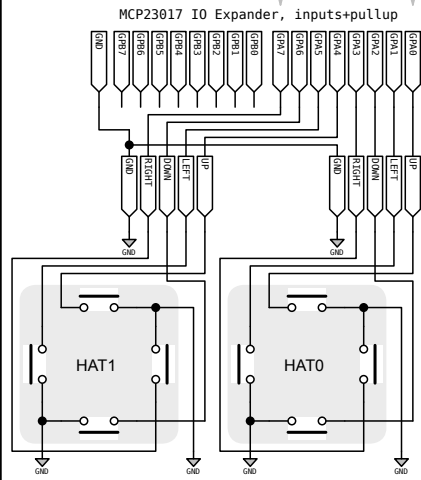## HAT Switches

Single HAT switch

Joystick.setHatSwitch(HATno,BtnUp,BtnL,BtnDwn,BtnR);

Joystick.setHatSwitch(0,6,5,4,3);

Arduino
digital pins
INPUT_PULLUP
example:

HAT0

Two HAT switches, read using an IO expander

Joystick.set2HatSwitch(HATno,uint8_t GPA);

Joystick.set2HatSwitch(0,readMCP23017(SlaveAddress));

MCP23017 IO Expander, inputs+pullup

HAT1   HAT0

Analog joystick used as HAT switch

Joystick.setHatSwitchAnalog(HATno,AnalogX,AnalogY,Thres);

Joystick.setHatSwitchAnalog(0,0,1,8);

Arduino
analog inputs
example:

Threshold

ON
OFF

10kLin

y

x

10kLin
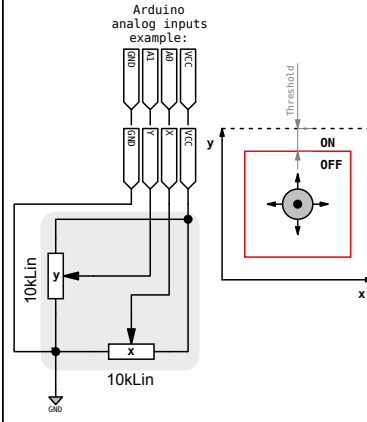
Four HAT switches, read using an IO expander

Joystick.set4HatSwitch(uint16_t GPAB);

Joystick.set4HatSwitch(readMCP23017(SlaveAddress));

MCP23017 IO Expander, inputs+pullup

HAT3   HAT2   HAT1   HAT0
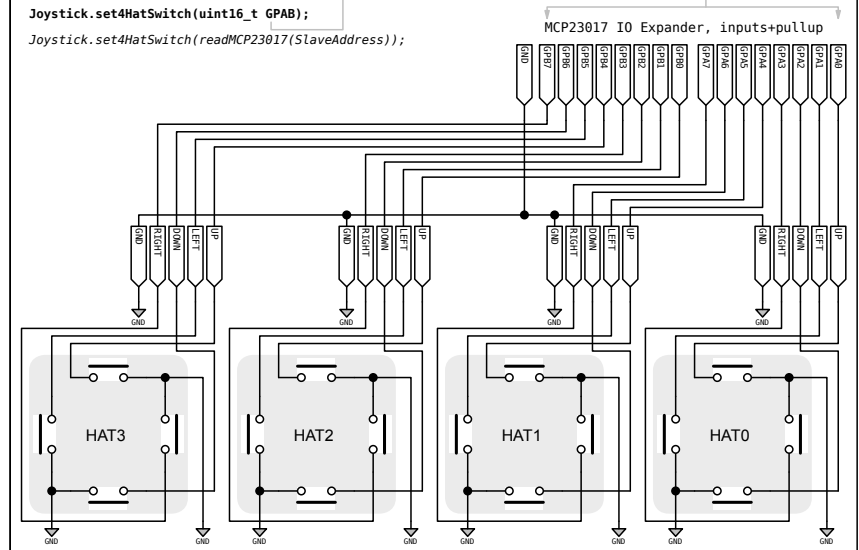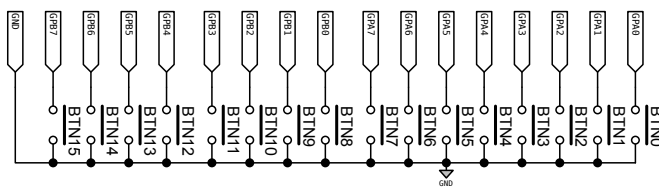
Buttons

Single button

Joystick.setButton(BtnNo,State);
Joystick.setButton(2,1); //press button 2
Joystick.setButton(2,0); //release button 2
Joystick.pressButton(BtnNo);
Joystick.pressButton(5); //press button 5
Joystick.releaseButton(BtnNo);
Joystick.setButton(5); //release button 2

Arduino
digital pins
INPUT_PULLUP
example:

BTN3   BTN2   BTN1   BTN0
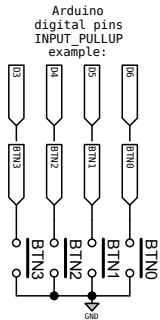
Bank of 16 buttons, 128 buttons divided into16 8bit banks

Joystick.setButtonBank16(BankNo,ButtonStates); //write two button banks at once
/ Read 16 input states from an MCP23017 and pass them*
to button banks 0 and 1 (buttons 0-15)
(requires MCP23017 library)/*

Joystick.setButtonBank16(0,readMCP23017(slaveAddress));

example: using 16bit MCP23017 IO Expander, ports set to inputs+pullup

BTN15 BTN14 BTN13 BTN12 BTN11 BTN10 BTN9 BTN8 BTN7 BTN6 BTN5 BTN4 BTN3 BTN2 BTN1 BTN0

Bank of 8 buttons, 128 buttons divided into16 8bit banks

Joystick.setButtonBank8(BankNo,ButtonStates); //write two button banks at once
/ Read 8 input states from a PCF8574 and pass them*
to button bank 0 (buttons 0-7)
(requires PCF8575 library)/*

Joystick.setButtonBank8(0,readPCF8574(slaveAddress));

example: using 8bit PCF8574 IO Expander, ports set to inputs+pullup

BTN7 BTN6 BTN5 BTN4 BTN3 BTN2 BTN1 BTN0