A close up of a device

Description automatically generated

**A-OldBoard hard coded speed of 50 mL/min**

Screen at power up for older program SyringePump200mL.ino

A circuit board

Description automatically generated

First Time pressing Select/Menu button: This is the BolusStep Menu

A picture containing clock, meter

Description automatically generated

1. Left and right do nothing on this menu but UP or Down cycle through BolusStep options here did the down button once.

A circuit board

Description automatically generated

3.Second time push Select/Menu Button:

A circuit board

Description automatically generated

4. In above menu screen Left (Pull), Right (Push) from the above screen.

5.In above Menu you can change the total Bolus to sample by using up or down buttons on this screen

6. Note Used at the top of the screen will only update if used in push mode if you are pulling it remains 0.000

**Old Key Pad Board can select 10 mL/min, 50mL/min or 400mL/min speeds**

Open Screen Display:

1. **Syringe Pump V2.0** Rob’s original code with extraneous code, old board speed =50 mL/min
2. **SyringePumpV3 MR**: finalized 7/14/2020 at 10:11am Maritza Romero

Same execution as v2.0 with Hard coded speed currently at 50mL/min (old board)

Old Board removed all sections of code (like triggers and Serial) that did nothing and commented code. Program hard coded speed of syringe in line below.

#define SPEED\_MICROSECONDS\_DELAY 450 // (450 = 50mL/min for 300mL syringe)

If you want to slow down to 10mL/min change 450 to 2250 on the above line of code

1. **SyringePump** (old board with selectable syringe speed included extraneous code and errors)
2. **SyringePumpV4**  still using old board removed extraneous code and corrected errors allows selection of syring speed onscreen

Opening screen V 4 Syringe Pump:

A circuit board

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1. First time press menu key

A picture containing sitting, clock, table

Description automatically generated

1. Up or down to select speed you want to use

A picture containing indoor, table, sitting, wooden

Description automatically generated

1. Once speed selected press the Menu button again

A picture containing clock

Description automatically generated

1. Up and down to change the volume you want to push or sample

A person on the machine

Description automatically generated

1. From the above screen push left to pull sample or right to push a volume

New Board : <https://www.adafruit.com/product/772>