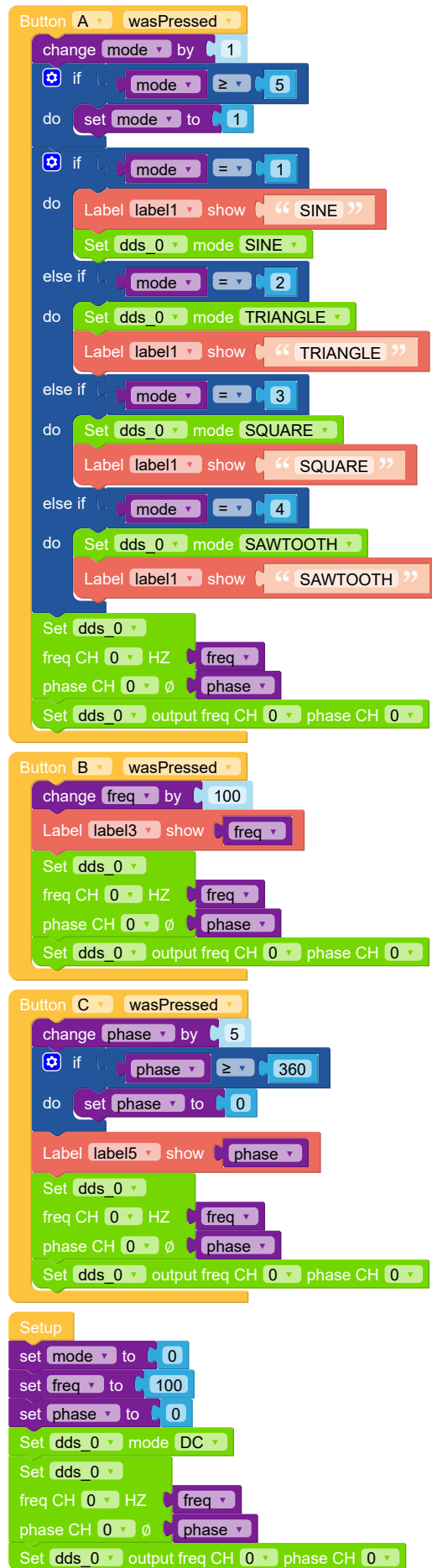


Unit DDS

| Example

DDS functional test



```

from m5stack import *
from m5ui import *
from uiflow import *
import unit
  
```

```

setScreenColor(0x222222)
dds_0 = unit.get(unit.DDS, unit.PORTA)

mode = None
freq = None
phase = None

label0 = M5TextBox(39, 41, "MODE:", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
label1 = M5TextBox(97, 41, "Text", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
title0 = M5Title(title="UNIT DDS", x=120, fgcolor=0xFFFFFF, bgcolor=0x830269)
label2 = M5TextBox(39, 93, "FREQ:", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
label3 = M5TextBox(97, 93, "Text", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
label4 = M5TextBox(39, 142, "PHASE:", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
label5 = M5TextBox(104, 142, "Text", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
label6 = M5TextBox(44, 219, "MODE", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
label7 = M5TextBox(139, 219, "FREQ", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)
label8 = M5TextBox(224, 219, "PHASE", lcd.FONT_Ubuntu, 0xFFFFFF, rotate=0)

from numbers import Number

def buttonA_wasPressed():
    global mode, freq, phase
    mode = (mode if isinstance(mode, Number) else 0) + 1
    if mode >= 5:
        mode = 1
    if mode == 1:
        label1.setText('SINE')
        dds_0.set_mode(dds_0.SINE)
    elif mode == 2:
        dds_0.set_mode(dds_0.TRIANGLE)
        label1.setText('TRIANGLE')
    elif mode == 3:
        dds_0.set_mode(dds_0.SQUARE)
        label1.setText('SQUARE')
    elif mode == 4:
        dds_0.set_mode(dds_0.SAWTOOTH)
        label1.setText('SAWTOOTH')
    dds_0.set_freq_phase(0, freq, 0, phase)
    dds_0.output(0, 0)
    pass
btnA.wasPressed(buttonA_wasPressed)

def buttonB_wasPressed():
    global mode, freq, phase
    freq = (freq if isinstance(freq, Number) else 0) + 100
    label3.setText(str(freq))
    dds_0.set_freq_phase(0, freq, 0, phase)
    dds_0.output(0, 0)
    pass
btnB.wasPressed(buttonB_wasPressed)

def buttonC_wasPressed():
    global mode, freq, phase
    phase = (phase if isinstance(phase, Number) else 0) + 5

```

```

if phase >= 360:
    phase = 0
label5.setText(str(phase))
dds_0.set_freq_phase(0, freq, 0, phase)
dds_0.output(0, 0)
pass
btnC.wasPressed(buttonC_wasPressed)

mode = 0
freq = 100
phase = 0
dds_0.set_mode(dds_0.DC)
dds_0.set_freq_phase(0, freq, 0, phase)
dds_0.output(0, 0)

```

API

dds_0 quick output mode SINE freq 0 phase 0

```
dds_0.quick_output(dds_0.SINE, 0, 0)
```

- Device Fast Output Mode
 - SINE
 - sine
 - freq
 - phase
 - TRIANGLE
 - SQUARE
 - SAWTOOTH
 - DC

dds_0 reset

```
dds_0.reset()
```

- Reset

Set dds_0 control Disable MCLK

```
dds_0.set_sleep(1)
```

- Sleep Mode Configuration
 - Disable MCLK
 - Disable DAC
 - Enable ALL

Set **dds_0** 
freq CH **0**  HZ  **0**
phase CH **0**   **0**

```
dds_0.set_freq_phase(0, 0, 0, 0)
```

- Frequency/Phase Programming

Set **dds_0**  mode **SINE** 

```
dds_0.set_mode(dds_0.SINE)
```

- Operation Mode Selection
 - SINE
 - TRIANGLE
 - SQUARE
 - SAWTOOTH
 - DC

Set **dds_0**  output freq CH **0**  phase CH **0** 

```
dds_0.output(0, 0)
```

- Output Frequency/Phase Adjustment