

PWM

1. Config the /dtoverlay/config.txt by adb commands.

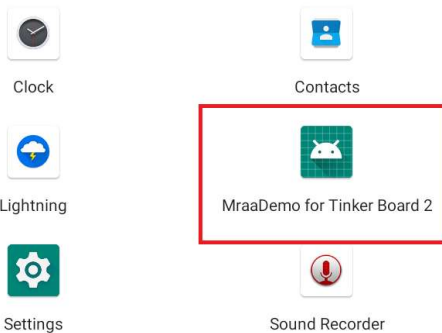
- a. Pull the config.txt file for edit
 - adb root
 - adb remount
 - adb pull /dtoverlay/config.txt
- b. Edit the config.txt on PC to the following status

```
intf:fiq_debugger=off
intf:uart0=on
intf:uart4=off
intf:i2c6=on
intf:i2c7=on
#intf:i2s0=on
#intf:spdif=on
intf:spil=on
intf:spi5=on
intf:pwm0=on
intf:pwm1=on
intf:pwm3a=on
#intr:test_cirkout2=on
```

- c. Push the file to device
 - adb push config.txt /dtoverlay/
- d. Reboot the system
 - adb reboot

2. Install the MraaDemo app by the following commands and then open it

- a. Install apk commands
 - adb install -r MraaDemo_TinkerBoard2.apk
- b. Open MraaDemo_TinkerBoard2 app
 - Select app icon



- PWM PINS

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MraaDemo for Tinker Board 2

	GPIO number	Function2	Function1	GPIO	Pin#	Pin#	GPIO	Function1	Function2	GPIO number
1	Io Map		VCC3.3V_IO		1	2		VCC5V_SYS		
2	Gpio		I2C6_SDA	GPIO2_B1	3	4		VCC5V_SYS		
3	I2c		I2C6_SCL	GPIO2_B2	5	6		GND		
4	Pwm		TEST_CLKOUT2	GPIO0_B0	7	8	GPIO2_C1	UART0_TXD		81
5	Spi		GND		9	10	GPIO2_C0	UART0_RXD		80
6	Uart		UART0_RTSN	GPIO2_C3	11	12	GPIO3_D0	I2S0_SCLK		120
			SPI5_TX	GPIO2_C5	13	14		GND		
			SPI5_RX	GPIO2_C4	15	16	GPIO2_C6	SPI5_CLK		86
			VCC3.3V_IO		17	18	GPIO2_C7	SPI5_CSN		87
		UART4_TXD	SPI1_TXD	GPIO1_B0	19	20		GND		
		UART4_RXD	SPI1_RXD	GPIO1_A7	21	22	GPIO3_D4	I2S0_SDO3		124
			SPI1_CLK	GPIO1_B1	23	24	GPIO1_B2	SPI1_CSN		42
			GND		25	26	GPIO0_A6	PWM3A_IR		6
			I2C7_SDA	GPIO2_A7	27	28	GPIO2_B0	I2C7_SCL		72
			I2S0_SDO1	GPIO3_D6	29	30		GND		
			I2S0_SDO2	GPIO3_D5	31	32	GPIO4_C2	PWM0		146
			PWM1	GPIO4_C6	33	34		GND		
			I2S0_FS	GPIO3_D1	35	36	GPIO2_C2	UART0_CTSN		82
			SPDIF_TX	GPIO4_C5	37	38	GPIO3_D3	I2S1_SDI0		123
			GND		39	40	GPIO3_D7	I2S1_SDO0		127

- PWM Test Screen

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MraaDemo for Tinker Board 2

Please select a PWM pin: PWM0

PWM0

Please input pulse period (unit: US):
eg: 1~2147483

Please drag the Seekbar to set the duty cycle of PWM:

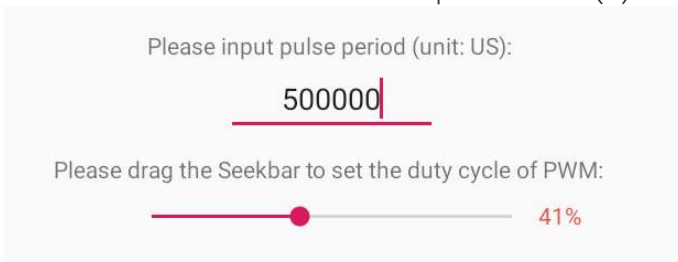
41%

3. Test the PWM0

a. Select the "PWM0"



b. Enter the value to text and then pull the bar(%)



c. Check the pwm value by adb commands

- Get the period value
- \$ adb shell "cat /sys/class/pwm/pwmchip0/pwm0/period"
- Return: value is changed --> Pass
- value is not changed --> Fail

- Get the duty_cycle value


```
$ adb shell "cat /sys/class/pwm/pwmchip0/pwm0/duty_cycle"
```

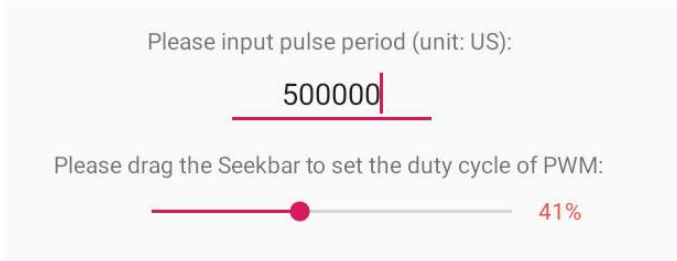
 Return: value is changed --> **Pass**
 value is not changed --> **Fail**

4. Test the PWM1

- a. Select the "PWM1"



- b. Enter the value to text and then pull the bar(%)



- c. Check the pwm value by adb commands
- Get the period value


```
$ adb shell "cat /sys/class/pwm/pwmchip1/pwm0/period"
```

 Return: value is changed --> **Pass**
 value is not changed --> **Fail**
 - Get the duty_cycle value


```
$ adb shell "cat /sys/class/pwm/pwmchip1/pwm0/duty_cycle"
```

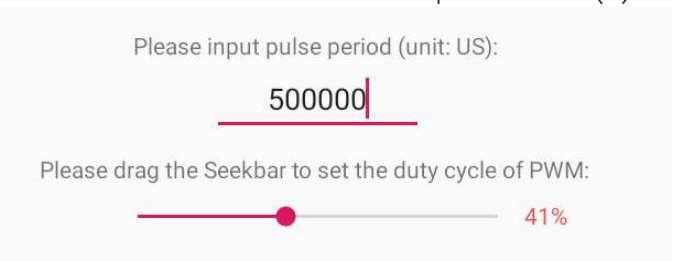
 Return: value is changed --> **Pass**
 value is not changed --> **Fail**

5. Test the PWM3A

- a. Select the "PWM3A"



- b. Enter the value to text and then pull the bar(%)



- c. Check the pwm value by adb commands
- Get the period value


```
$ adb shell "cat /sys/class/pwm/pwmchip3/pwm0/period"
```

 Return: value is changed --> **Pass**
 value is not changed --> **Fail**
 - Get the duty_cycle value


```
$ adb shell "cat /sys/class/pwm/pwmchip3/pwm0/duty_cycle"
```

 Return: value is changed --> **Pass**
 value is not changed --> **Fail**

6. The PWM verify completely!