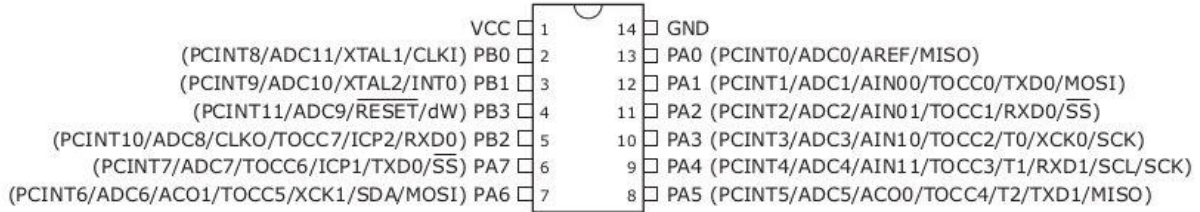


Attiny841

How to set PWM

PWM can allocate **only six** from TOCC0 to TOCC7.



Six parameter includes index of 0A, 0B, 1A, 1B, 2A, 2B.

This parameter can change TOCPMSA0 and TOCPMSA1 value.

11.9.1 TOCPMSA1 and TOCPMSA0 – Timer/Counter Output Compare Pin Mux Selection Registers

Bit	7	6	5	4	3	2	1	0	
(0x68)	TOCC7S1	TOCC7S0	TOCC6S1	TOCC6S0	TOCC5S1	TOCC5S0	TOCC4S1	TOCC4S0	TOCPMSA1
(0x67)	TOCC3S1	TOCC3S0	TOCC2S1	TOCC2S0	TOCC1S1	TOCC1S0	TOCC0S1	TOCC0S0	TOCPMSA0
Read/Write	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	
Initial Value	0	0	0	0	0	0	0	0	



table below. Note, that every second TOCCn pin can be routed to output compare channel A and every second TOCCn pin to output compare channel B.

Table 12-7. Selecting Timer/Counter Compare Output for TOCCn Pins

TOCCn Output	TOCCnS1:0		
	00	01	1X
TOCC0	OC0B	OC1B	OC2B
TOCC1	OC0A	OC1A	OC2A
TOCC2	OC0B	OC1B	OC2B
TOCC3	OC0A	OC1A	OC2A
TOCC4	OC0B	OC1B	OC2B
TOCC5	OC0A	OC1A	OC2A
TOCC6	OC0B	OC1B	OC2B
TOCC7	OC0A	OC1A	OC2A

12.12.5 TOCPMCOE – Timer/Counter Output Compare Pin Mux Channel Output Enable

Bit	7	6	5	4	3	2	1	0	
(0x66)	TOCC7OE	TOCC6OE	TOCC5OE	TOCC4OE	TOCC3OE	TOCC2OE	TOCC1OE	TOCC0OE	TOCPMCOE
Read/Write	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	
Initial Value	0	0	0	0	0	0	0	0	

- **Bits 7:0 – TOCCnOE: Timer/Counter Output Compare Channel Output Enable**

These bits enable the selected output compare channel on the corresponding TOCCn pin, regardless if the output compare mode is selected, or not.

You can change from

Arduino\hardware\arduino-tiny-841\avr\cores\tiny\core_pin.h from line 70 -> easy to use AnalogWrite

Arduino\hardware\arduino-tiny-841\avr\cores\tiny\wiring.c from line 371 -> setup PWM allocation

Next, change TOCPMCOE value. This value is enable PWM. For example(default),

```
TOCPMSA0 = 0b00010000; TOCPMSA1 = 10100100; TOCPMCOE = 0b11111100
```

```
TOCC7 = 2A
```

```
TOCC6 = 2B
```

```
TOCC5 = 1A
```

```
TOCC4 = 0B
```

```
TOCC3 = 0A
```

```
TOCC2 = 1B
```

```
TOCC1 = 0A duplex but not enable
```

```
TOCC0 = 0A duplex but not enable
```

Option

Q. Can we allocate I2C PIN PWM to TOCC0(PA1) and TOCC1(PA2)?

A. No, we can't.

Detail

SCL is TOCC3(PA4) and SDA is TOCC5(PA6). If this PWM pin release, we can get 0A and 1A.

We want to allocate TOCC1 and TOCC0. But TOCC0 can allocate only B class. So we can allocate TOCC1, but TOCC0 can't allocate rest A class.