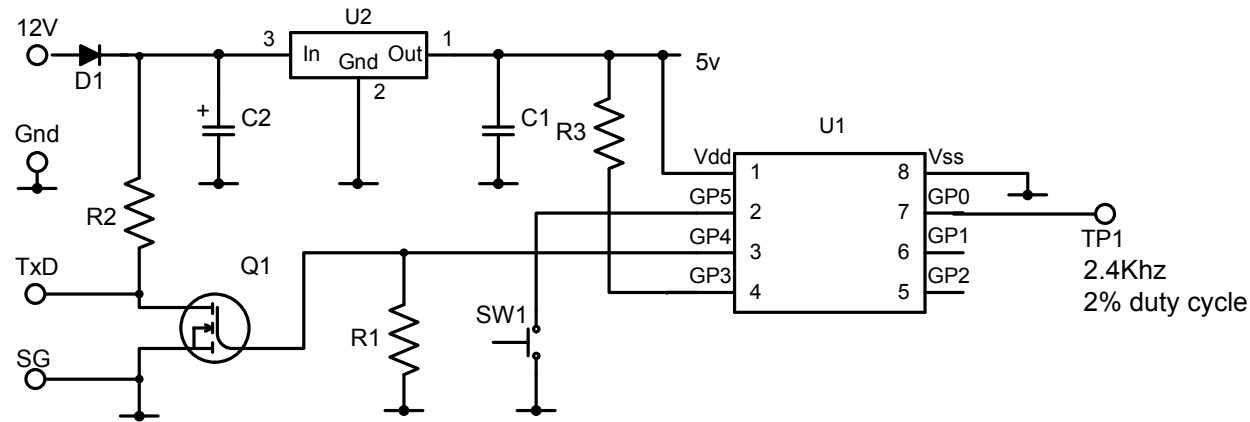


# Simple RGB LED Serial Controller

Note:  
12V supply must be regulated DC

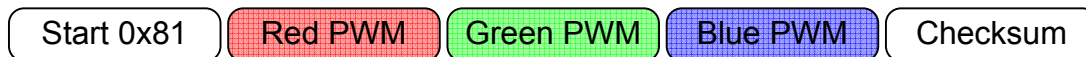


## TxD

Asynchronous serial frame  
1 Start, 8 Data, 1 stop  
2,400 bits per second



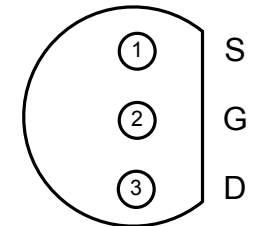
PWM data is sent in 5 frame packets



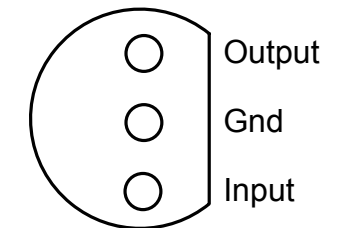
- Start frame always contains 0x81
- Checksum frame is the 2's complement sum of the data in the previous 4 frames
- Red, Green and Blue PWM values range from 0x00 to 0xFF

## Components

R1	100K	1/4w 5%
R2	1K	1/4w 5%
R3	1K	1/4w 5%
C1	100nF	ceramic
C2	22µF	16V tantalum
D1	1N4148	
Q1	2N7000	
U1	PIC12F627 / 675 / 683	(requires programming with firmware)
U2	78L05	
SW1	6mm x 6mm tactile pcb switch	e.g. Omron B3F series or similar



Bottom view  
2N7000



Bottom view  
78L05