1) SERVO A Y B (TIMER 1)

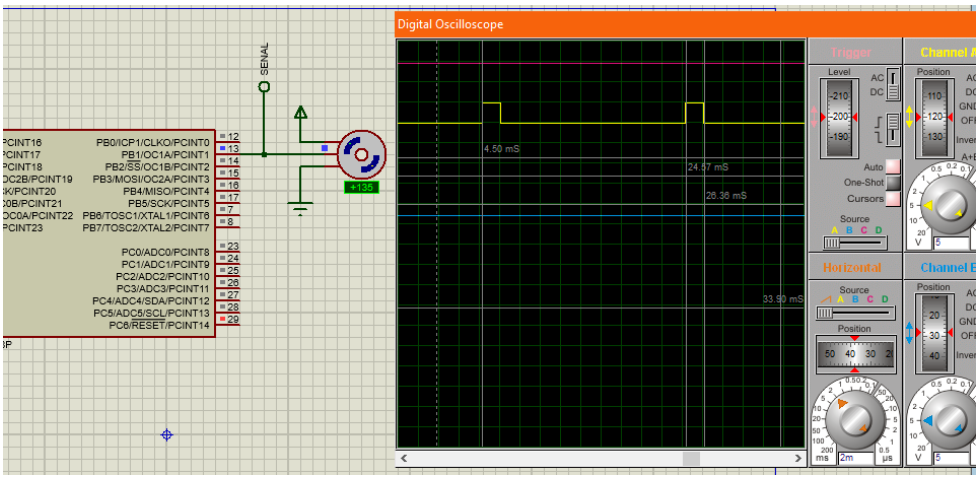
$$ICR1 = \frac{F_{CLK}}{2 * F_O * PRES} = \frac{16000000}{50 * 64} = 4999\ us \quad (T = 20\ ms)$$

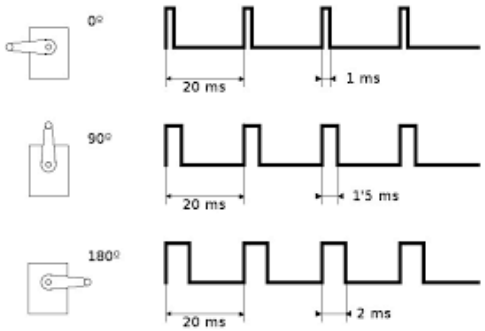
$100\% \rightarrow 20ms$ ***REGLA DE TRES DIRECTA***

$x \rightarrow 2ms, 1ms$

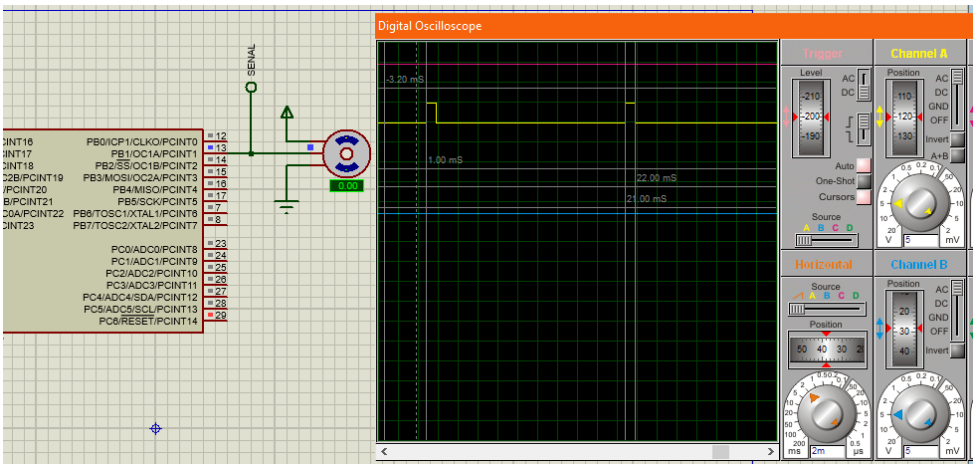
$(OCR1A = 1780 \rightarrow 135°, Max = 2000 \rightarrow 180°\ y\ Min = 1000 \rightarrow 0°)$ $1ms = 0°, 2ms = 180°$

X2ms= OCR1A*10%=2000 , X1ms= OCR1A*5%=1000





ServoMotor a 135° (Periodo= 20 ms) (26.35ms-24.57ms= 1.780 us)



ServoMotor a 0° (Periodo= 20 ms) (22.00ms-21.00ms= 1ms)

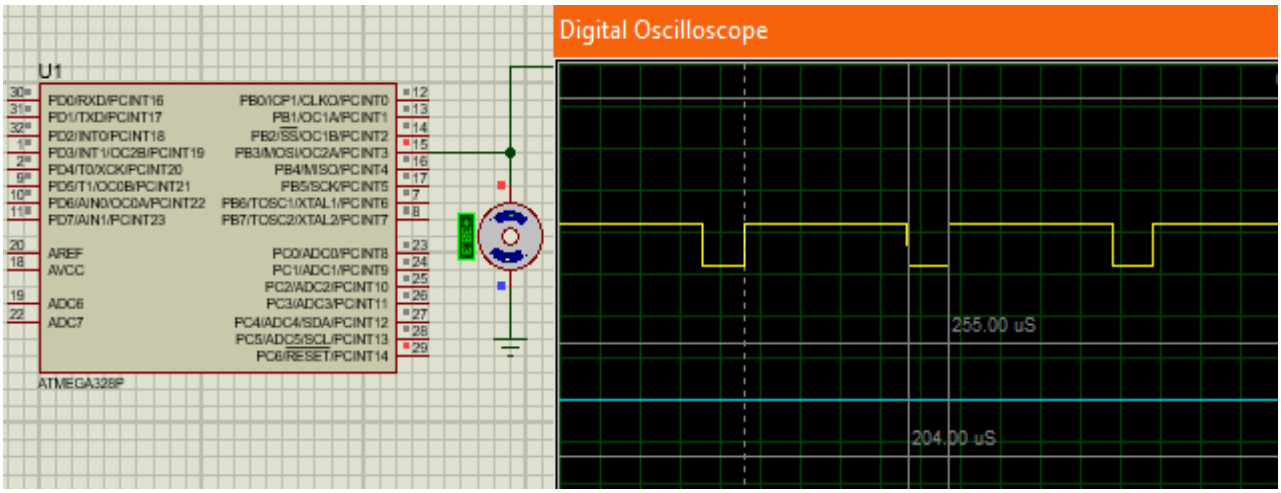
PWM				
Frec_out:	50			
F_CPU:	16		ICR1	5000
Preescaler:	64			
% PWM	0			
			OCRA	0

2) SERVO MOTOR GARRA (TIMER 2)

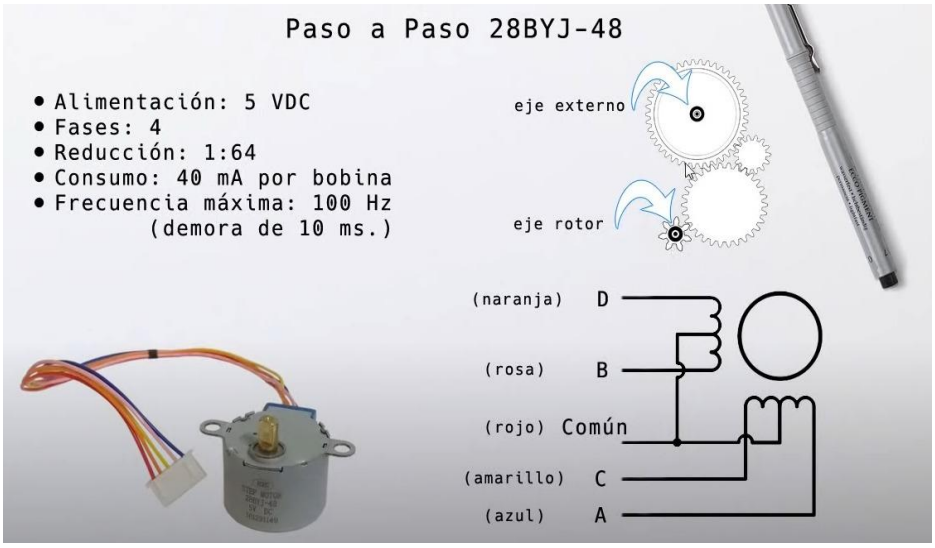
$$TCNT2 = 256 - \frac{F_{CLK} * T_{out}}{PRES} = 256 - \frac{16000000 * 0.0002}{64} = 206$$

$$OCR2A = \frac{F_{CLK}}{2 * F_O * PRES} - 1 = \frac{16000000}{2 * 488 * 64} - 1 = 255$$

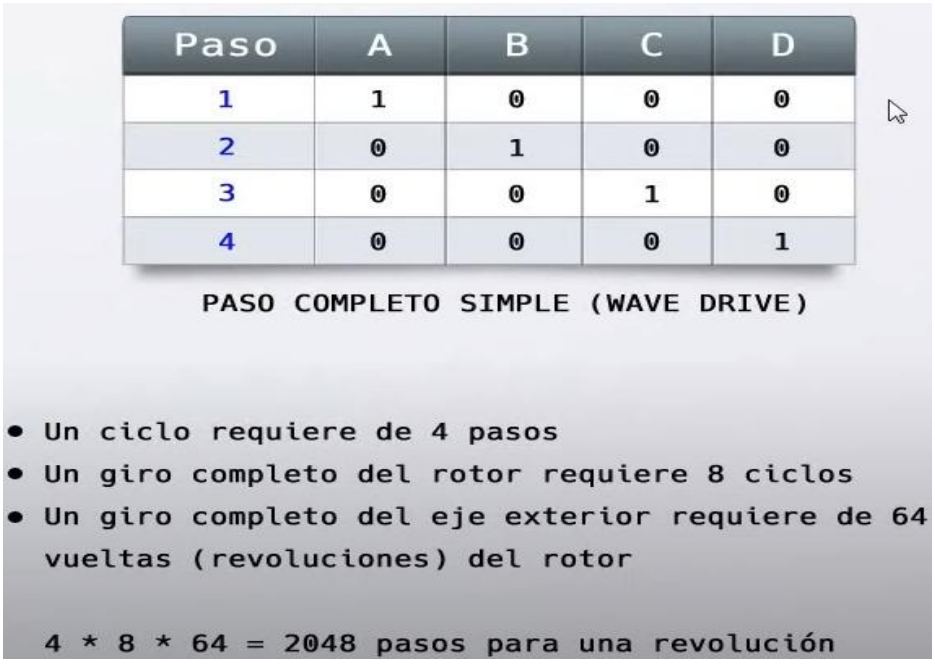
(Periodo= 255 us) $OCR2A = 50$ $(ABRIR)$ $OCR2A = 0$ $(CERRAR)$



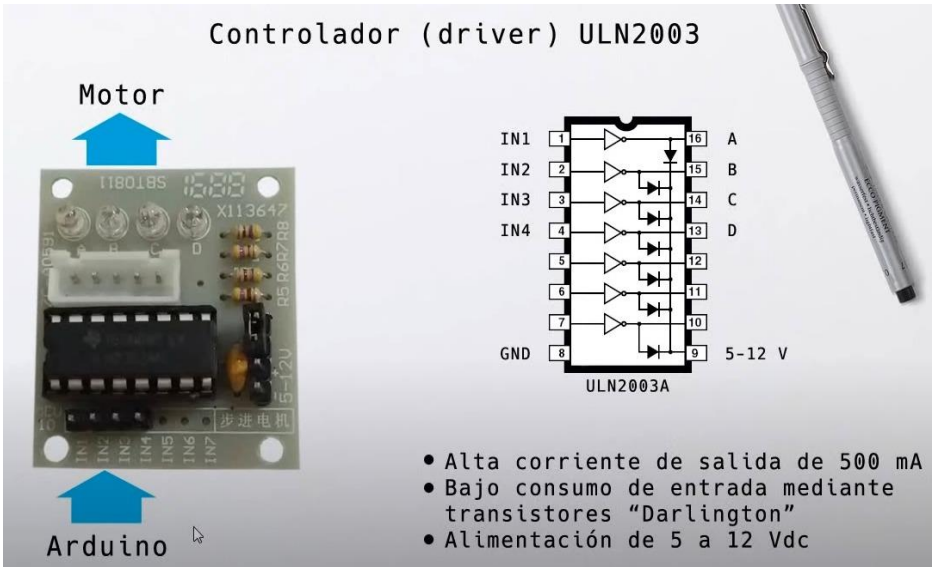
3) MOTOR PASO A PASO



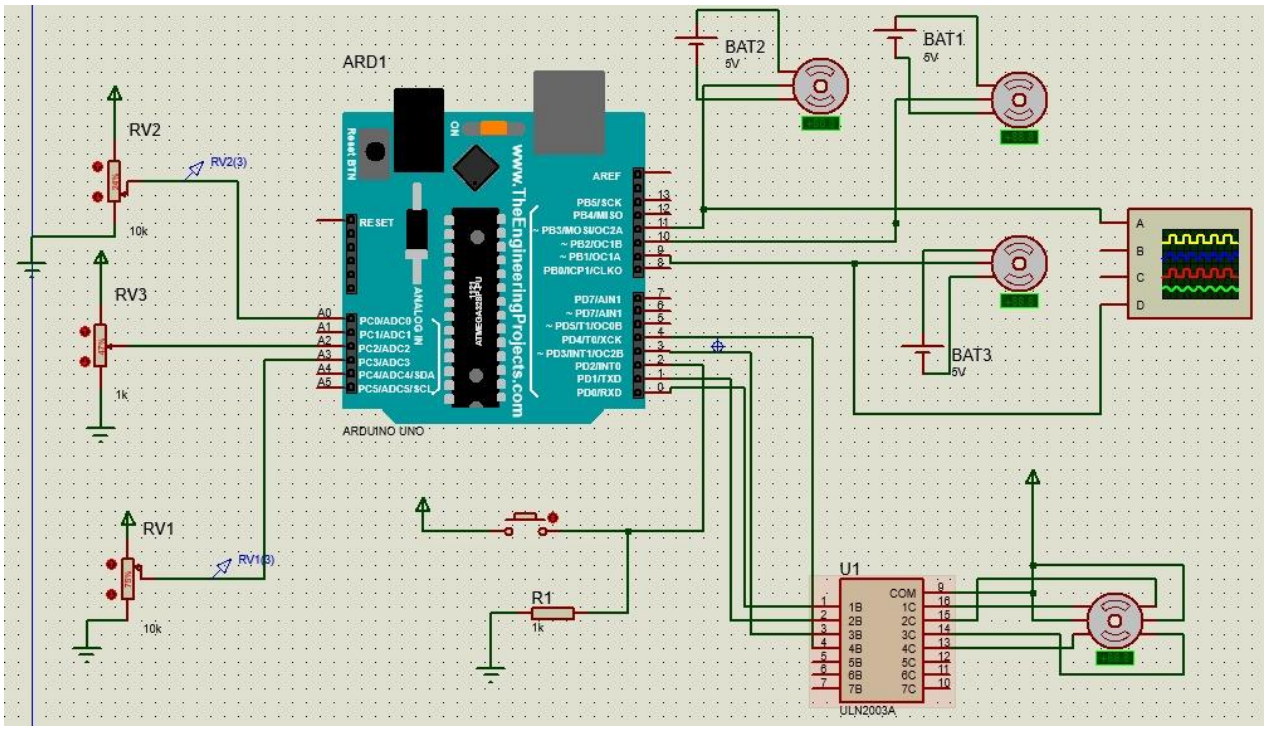
4*64=256 PASOS (1 BOBINA X VEZ)

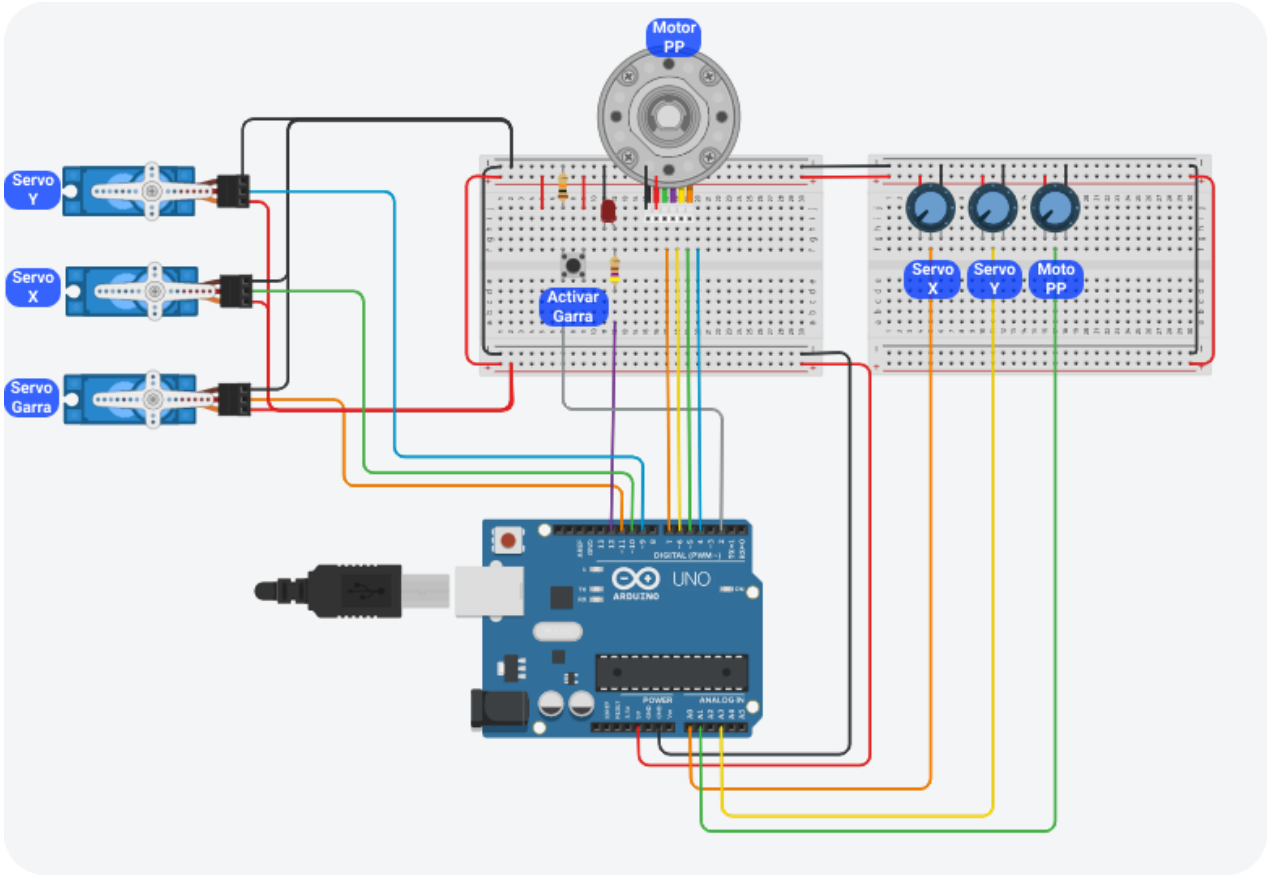


MODO: PASO COMPLETO



REVOLUCION= 1/8 DE VUELTA (FOR)


ARD1
RV2
RV2(3)
10k
RV3
1k
RV1
RV1(3)
10k
R1
1k
BAT2
6V
BAT1
6V
BAT3
6V
U1
ULN2003A
ARDUINO UNO
www.TheEngineeringProjects.com
RESET
Reset BTN
ON
AREF
PB5/SCK
PB4/MISO
PB3/MOSI/OC2A
~ PB2/OC1B
~ PB1/OC1A
PB0/ICP1/CLKO
PD7/AIN1
~ PD7/AIN1
~ PD5/T1/OC0B
PD4/T0/XCK
~ PD3/INT1/OC2B
PD2/INT0
PD1/TXD
PD0/RXD
A0
A1
A2
A3
A4
A5
PC0/ADC0
PC1/ADC1
PC2/ADC2
PC3/ADC3
PC4/ADC4/SDA
PC5/ADC5/SCL
ANALOG IN
ATMEGA328P
PIC16F887
A
B
C
D
COM
1B
2B
3B
4B
5B
6B
7B
1C
2C
3C
4C
5C
6C
7C


Motor PP
Servo Y
Servo X
Servo Garra
Activar Garra
Servo X
Servo Y
Moto PP
UNO
ARDUINO