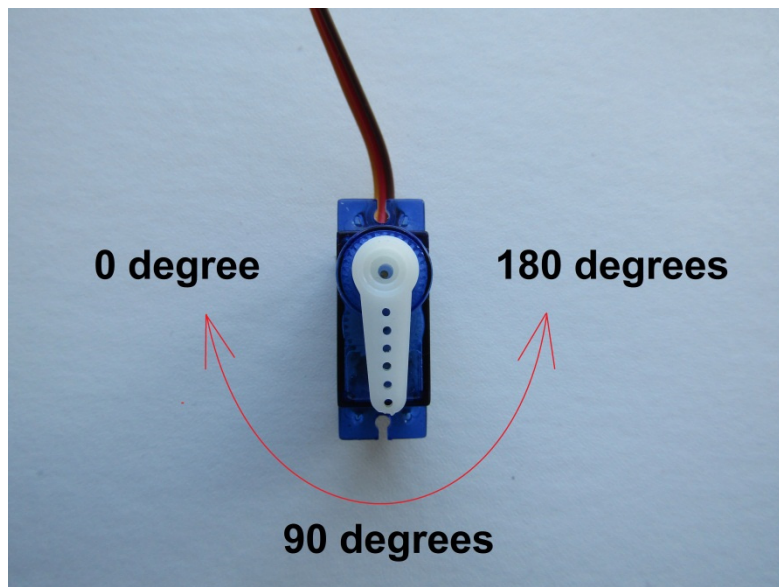


SERVO CONTROLLER - DIY

- servo controller with LED indication
- the module commands 4 servos with 4 pushbuttons between 0 - 180 degrees
- fixed starting position (0 degrees)
- adjustable maximum angle of a servo with four onboard potentiometer
- adjustable speed of servos (one potentiometer for all servos)
- store position of servos into the memory (remembers the last position after power switched off)
- output for 8x LEDs, or 4x Bipolar LEDs
- the LEDs show the position of the servo; you will always know in which position the servo arm is
- example: if the LED is green the servo controlled turnout is in the straight position, if the LED is red it is in the divergent position
- suitable for manual control of turnouts, semaphores, moving any kind of arms, doors, barriers
- push button to move servo into one direction (clockwise), push once again to move the servo to the opposite direction (counterclockwise)
- recommended power supply: 8-12V AC/10-16 DC

SETTING:

- connect LED diodes to left green terminal (picture 4, 5 and 6)
- the LED polarity is not important. Be careful that one of them must be contrary to the other one! If you would like to change the colors (red=straight, green=divergent), replace the +5V and 0V (ground) on LED's legs
- connect the servo to the first output (left pinhead). Be careful of the servo polarity orientation!
- move the servo to the start position (0 degree - clockwise - picture 1) with the first pushbutton
- move potentiometer with a small flat screwdriver
- press the first pushbutton to test the range of servo
- continue to set other outputs



Outputs

X1.1 - LED1
X1.2 - LED2
X1.3 - LED3
X1.4 - LED4
X1.5 - GND (output)
X1.6 - +5V (output)

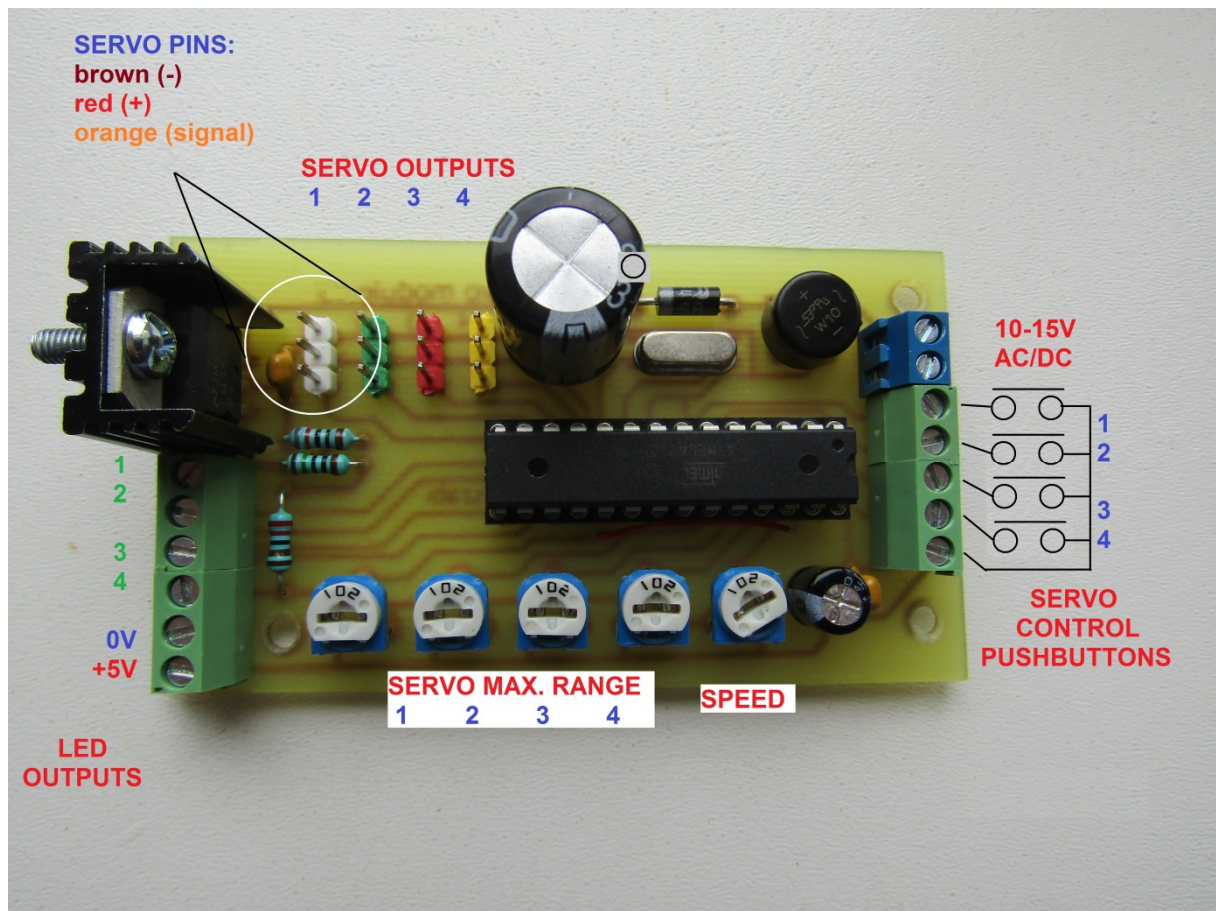
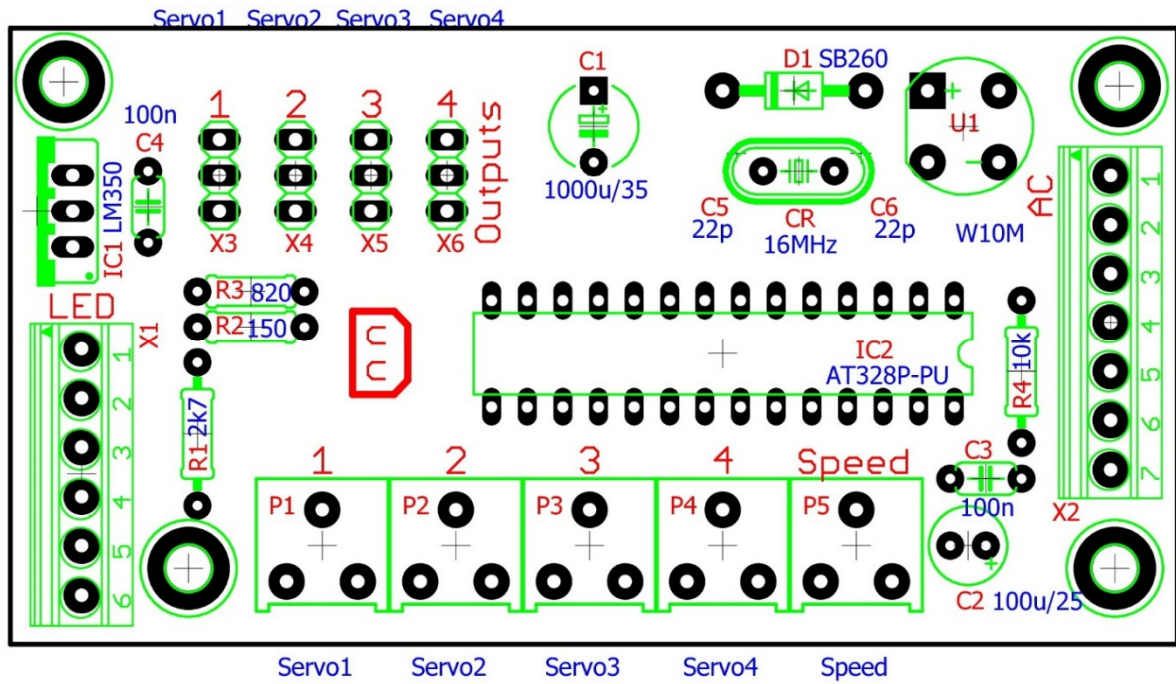
X2.1 - 10-12V AC/DC (input)
X2.2 - 10-12V AC/DC (input)
X2.3 - Button 1
X2.4 - Button 2
X2.5 - Button 3
X2.6 - Button 4
X2.7 - Common GND (all buttons)

Components

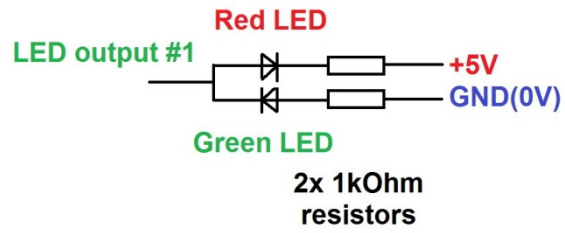
R1	2k7
R2	150R
R3	820R
R4	10k / 0,66W
IC1	LM350
IC2	Atmega328P-PU with program
IC1 socket	28 pins, narrow
U1	W10M
CR1	16 MHz crystal
D1	SB260
C1	1000uF/35V
C2	100uF/25V
C3, C4	100nF
C5, C6	22pF / SMD1206
P1 - P4	RM065 - 10k
X1	3.5 mm terminal block, 6 pins
X2	3.5 mm terminal block, 7 pins
X3 - X6	pinhead, male, 3 pins, RM 2,54 mm
heatsink radiator	TO220 (IC1)

IMPORTANT:

Always switch off the power supply before connect or disconnect servo or push button!



2x LED version



Bipolar LED version

