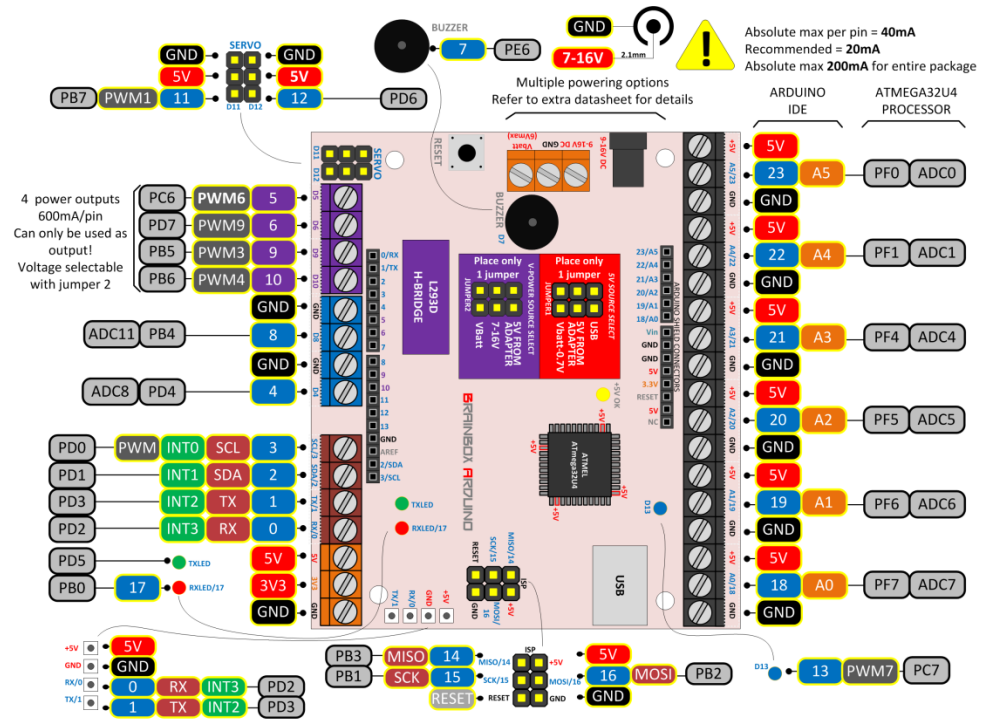
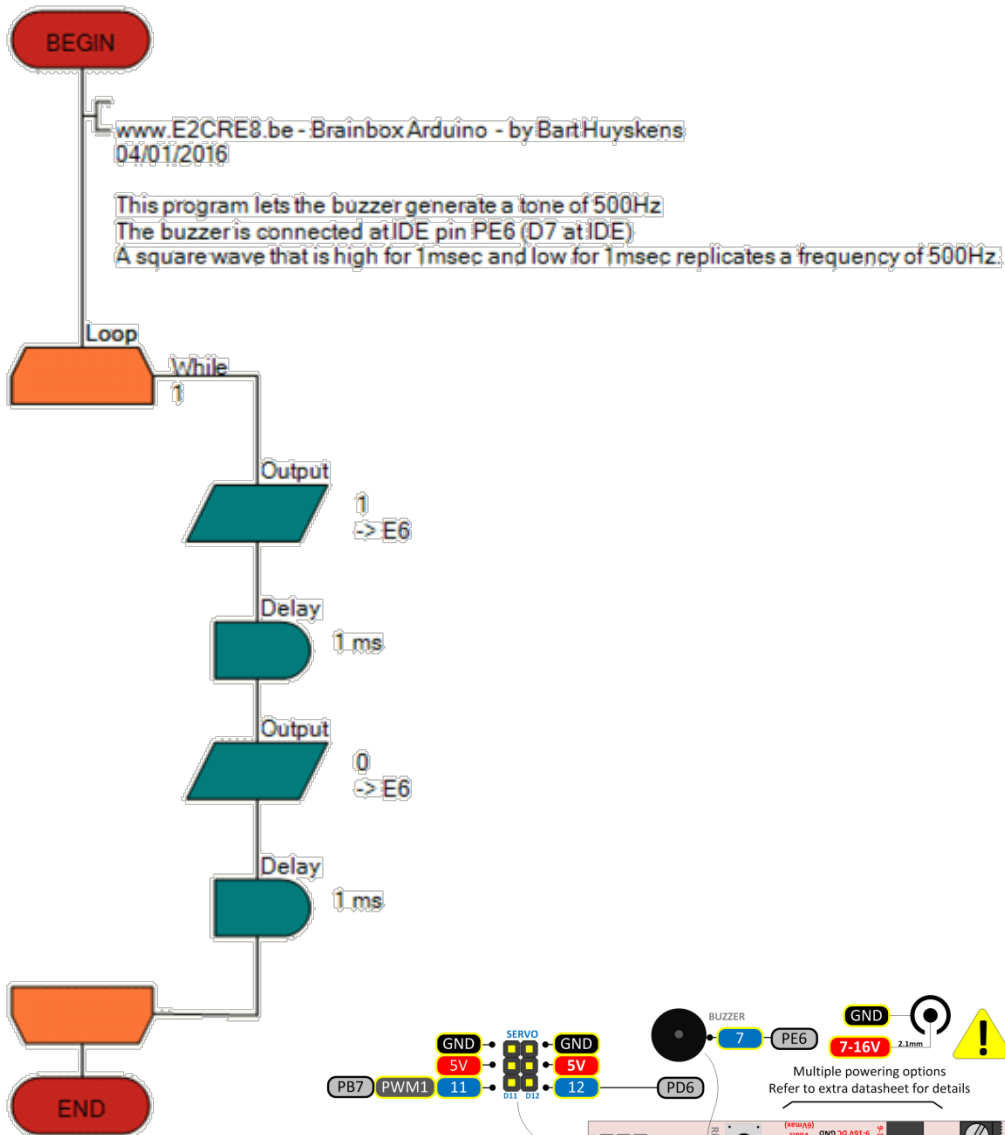


O-Buzzer V1 met Delay



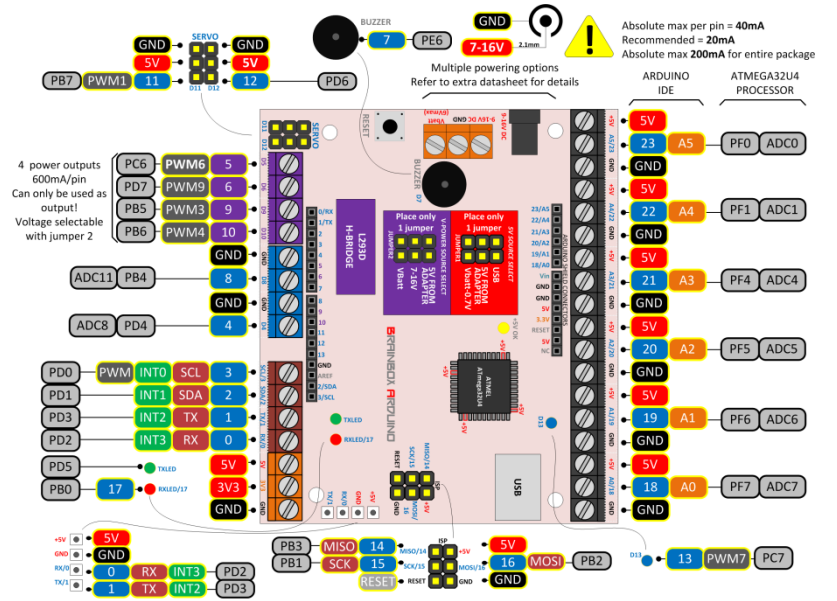
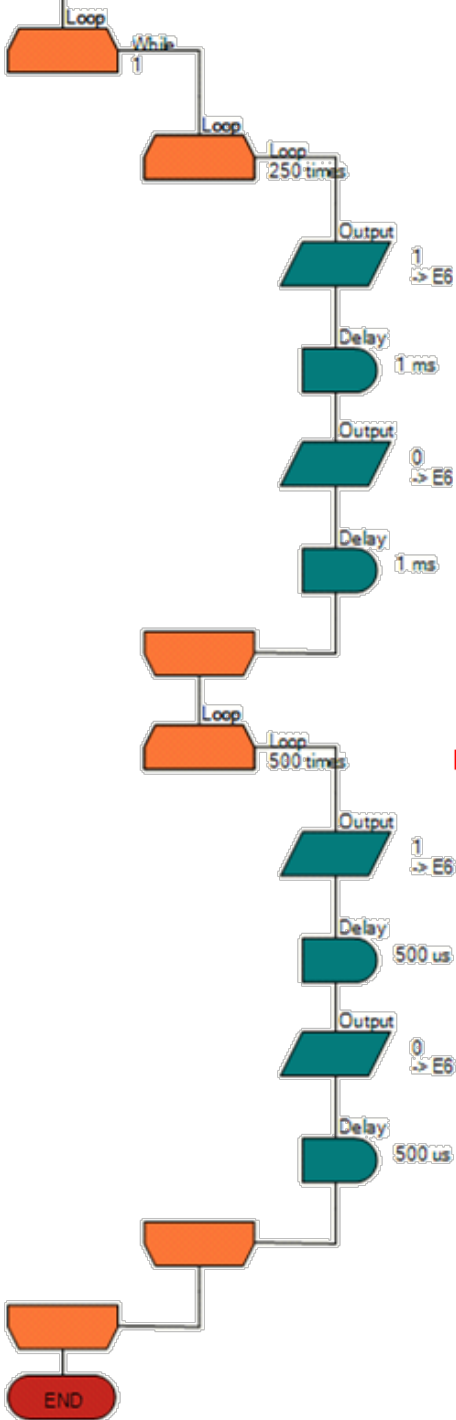
O-Buzzer Siren with delay

BEGN

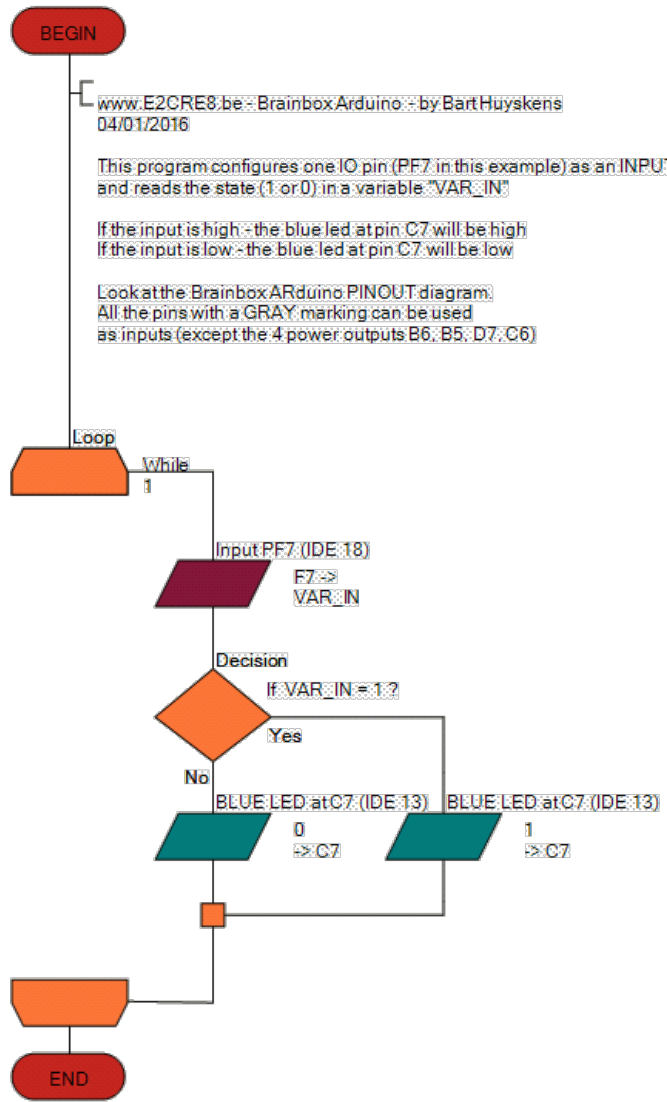
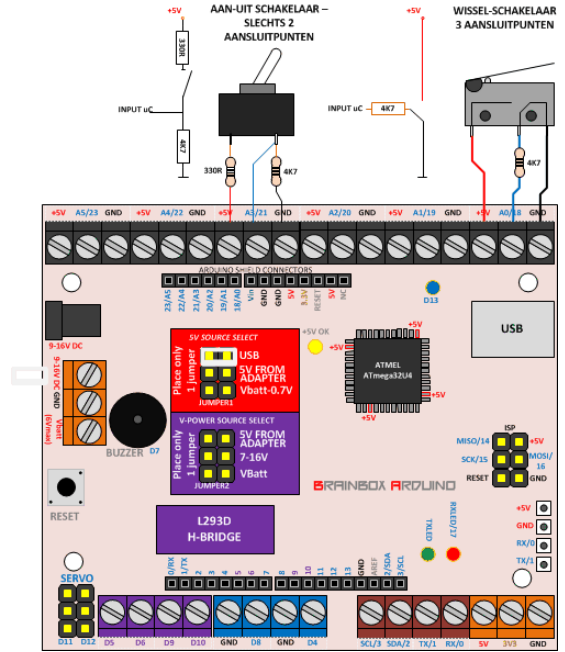
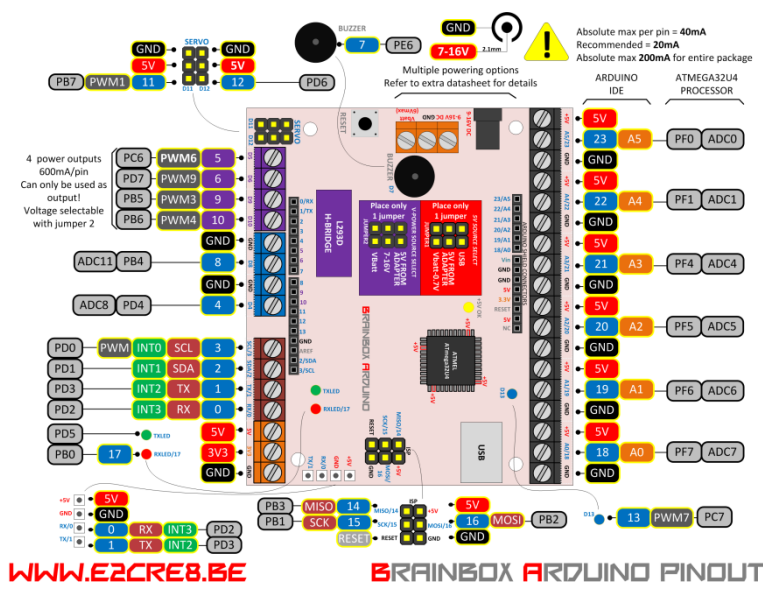
www.E2CRE8.be - Brainbox Arduino - by Bart Huydens
04/01/2016

This program lets the buzzer generate a siren that alternates between a tone of 500Hz and a tone of 1KHz. Be aware that the 1KHz loop is looped 500 times and that the 500Hz loop is looped 250 times to generate 500msec of the high tone and 500msec for the low tone.

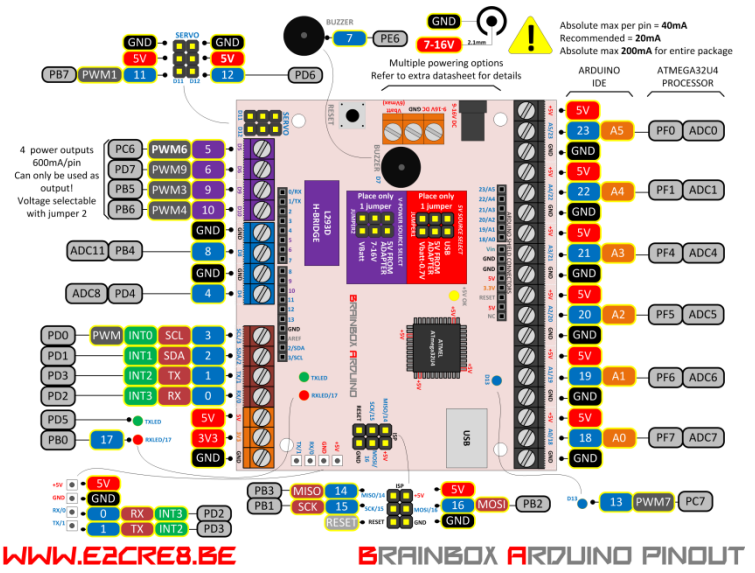
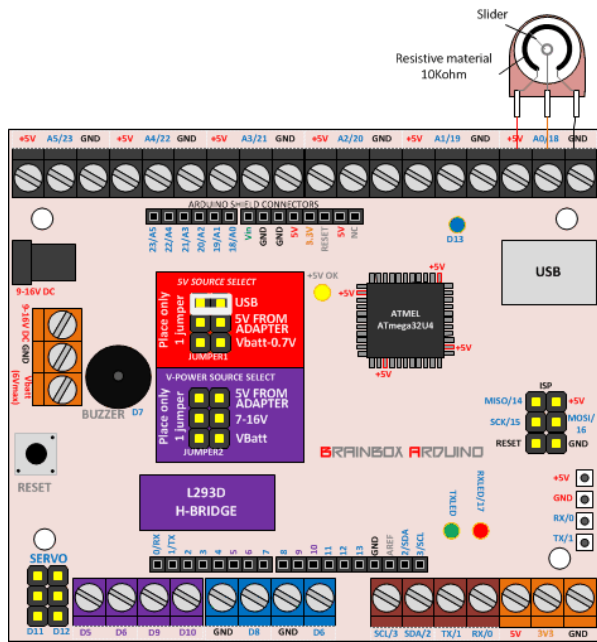
The buzzer is connected at IDE pin PE6 (D7 at IDE). A square wave that is high for 1msec and low for 1msec replicates a frequency of 500Hz.



I-DIG



I-AN



Properties

AN7_ANALOGIN

Component

Handle AN7_ANALOGIN

Type Potentiometer (Colour)

Simulation

- Start ... 225.000000
- Swee... 270.000000
- Cap C... 0000C0
- Point... FFFFFFFF
- Scope... No

Connections

- Channel An 7

Settings

- VRef ... 500
- VRef ... VDD
- Conve... Fosc / 8
- Aquis... 40
- Bit De... 10

Properties

PWM_BLUELED_C7

Component

Handle PWM_BLUELED_C7

Type PWM

Connections

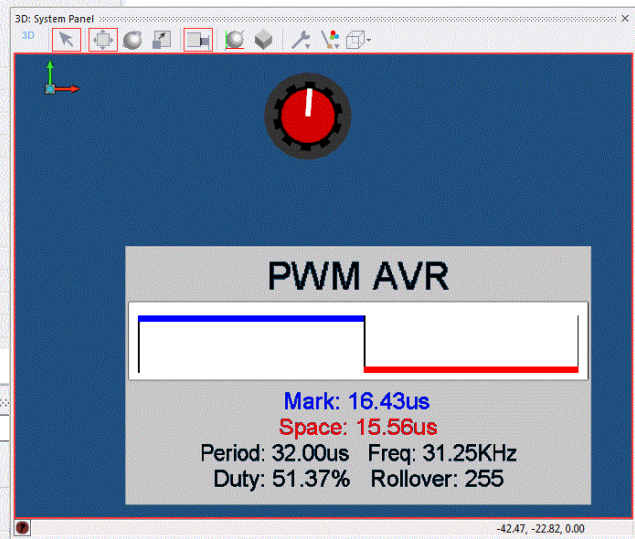
- Channel Channel 7
- Altern... No
- PWM ... \$PORTC.7

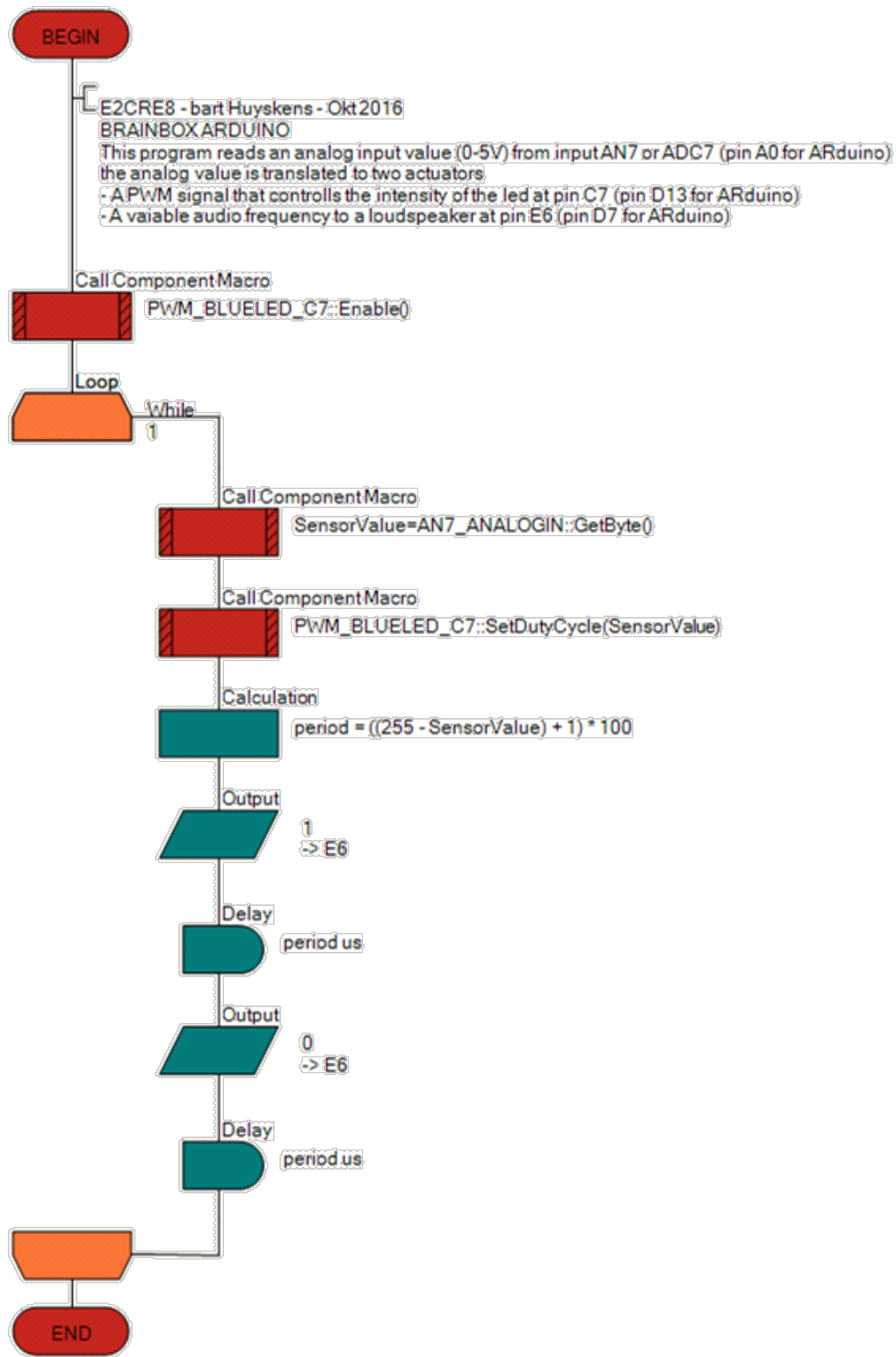
PWM Frequency

- PWM ... timer4
- Period... 255
- Presc... 1
- Period... 32.000000
- Frequ... 31.250000

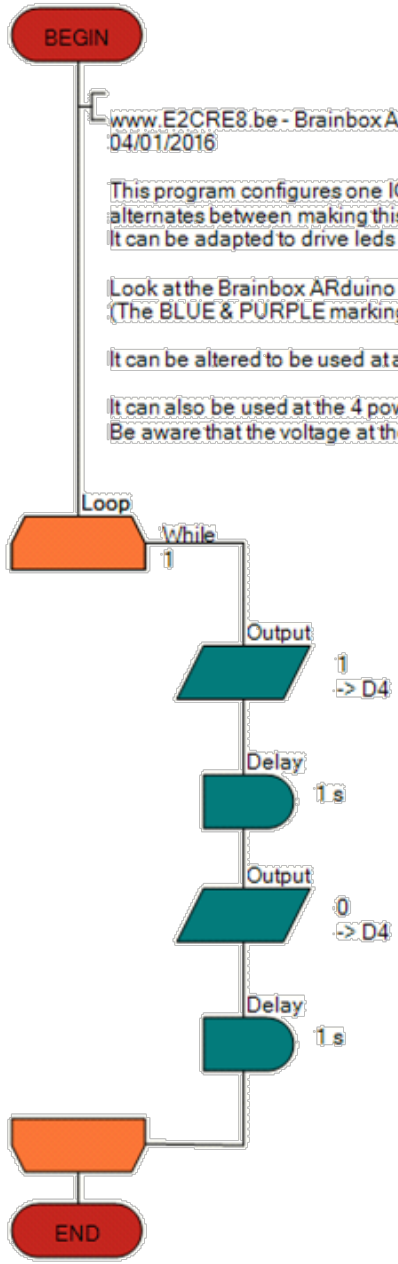
Simulation

- Repre... Digital





0-20 = 0-500 = 0-POWER



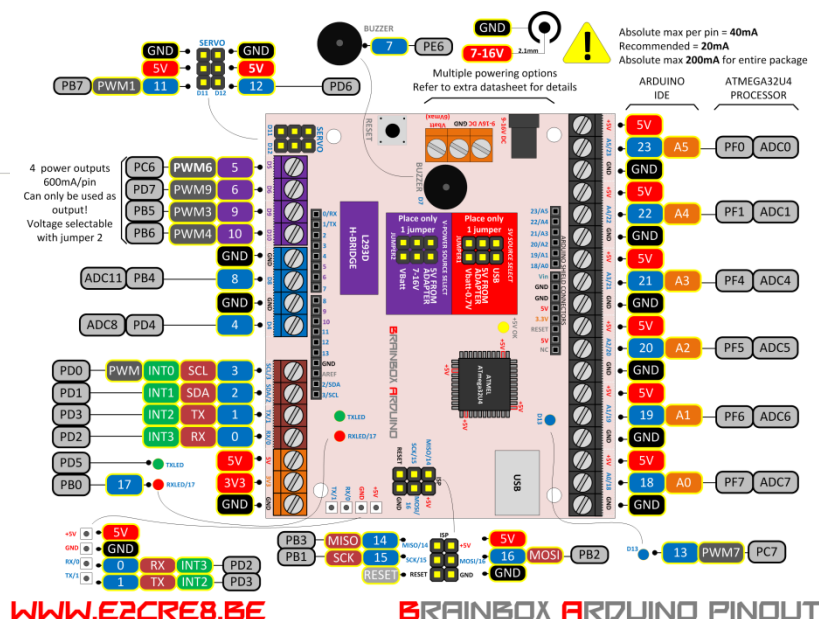
www.E2CRE8.be - Brainbox Arduino - by Bart Huyskens
04/01/2016

This program configures one IO pin (PD4 in this example) as an output pin and alternates between making this pin high or low with 1 sec delays
It can be adapted to drive leds - RGB leds or any device that does not draw current over 20mA

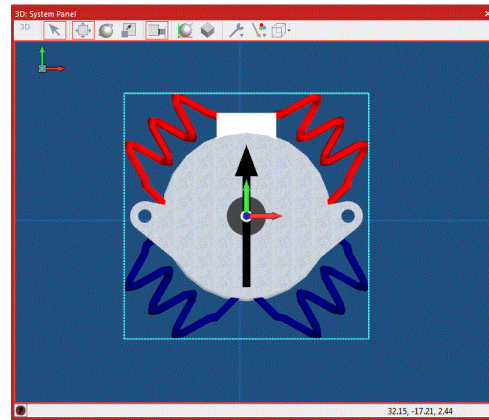
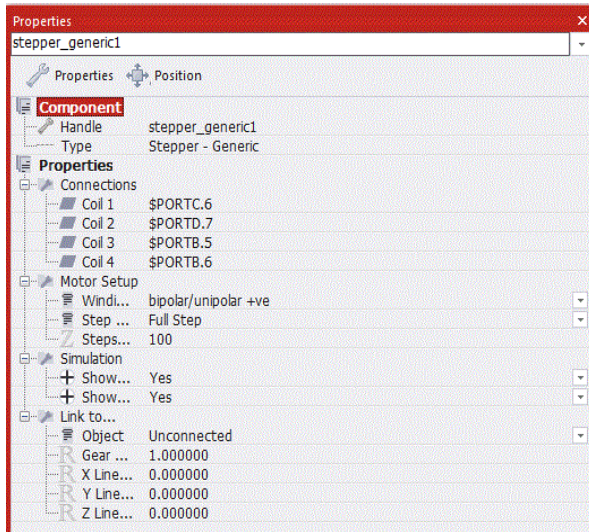
Look at the Brainbox ARduino PINOUT diagram. All the pins with a GRAY marking can be used!
(The BLUE & PURPLE markings are for the ARduino IDE)

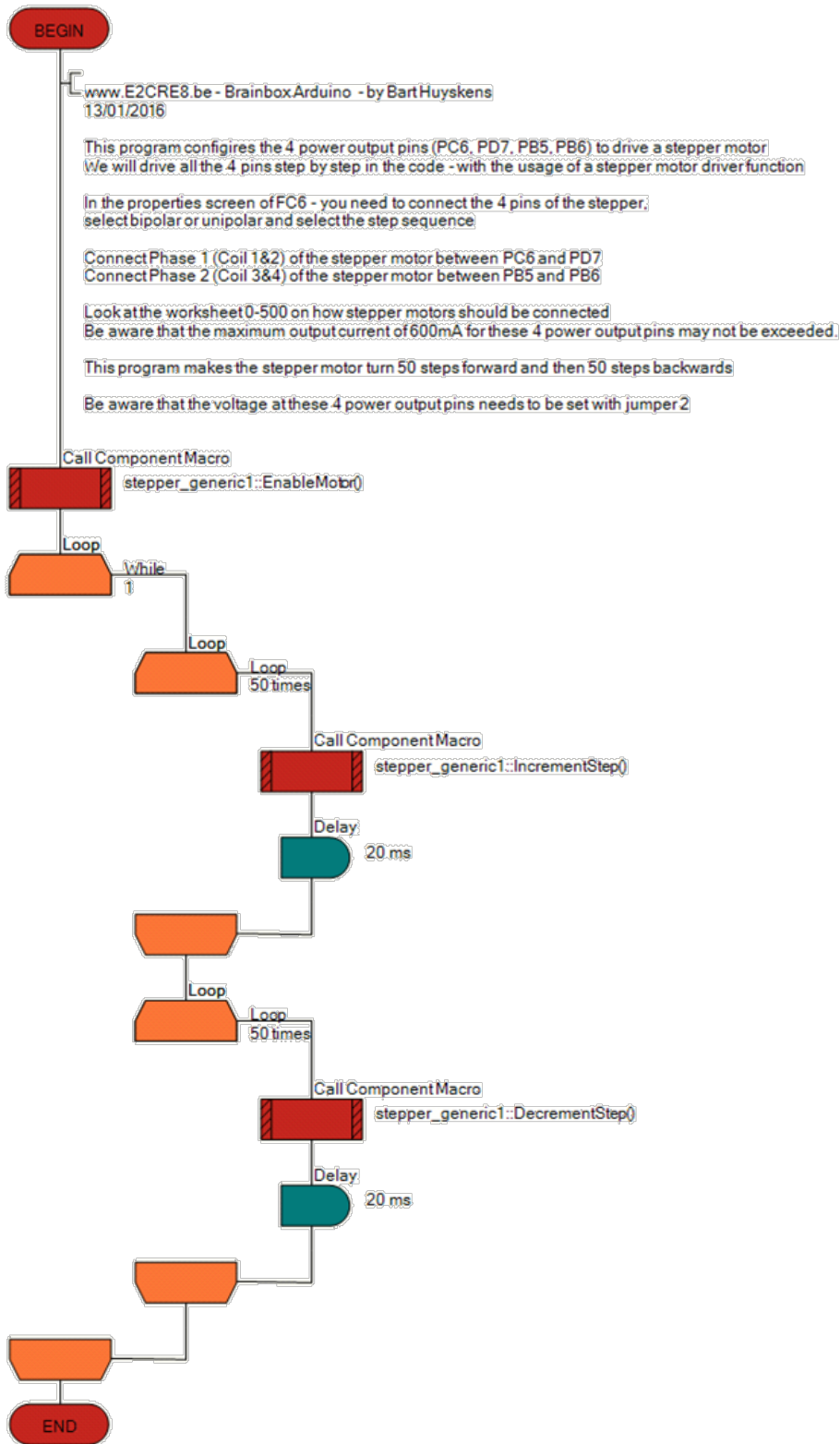
It can be altered to be used at any IO pin available at the Brainbox ARduino (max current 20mA)

It can also be used at the 4 power output pins - (max current 600mA)
Be aware that the voltage at these 4 pins needs to be set by jumper 2



O-STEPPER with function





O-PWM

Properties
PWM1

Component
Handle: PWM1
Type: PWM

Properties
Connections
Channel: Channel 5
Altern...: Yes
PWM ...: \$PORTB.7

PWM Frequency
PWM ...: timer1
Period...: 255
Presc...: 1
Period...: 32.000000
Frequ...: 31.250000

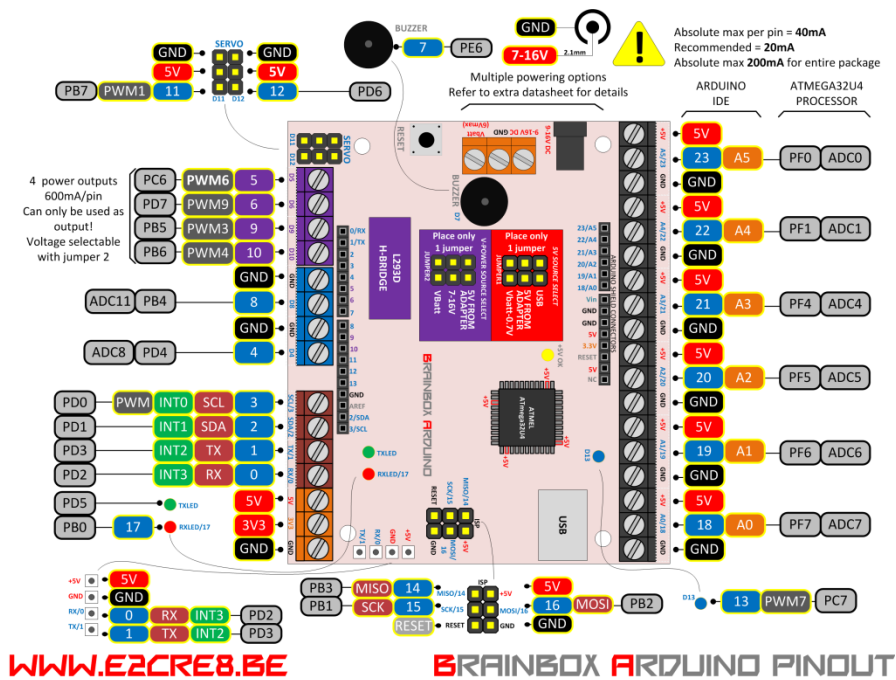
Simulation
Repre...: Digital

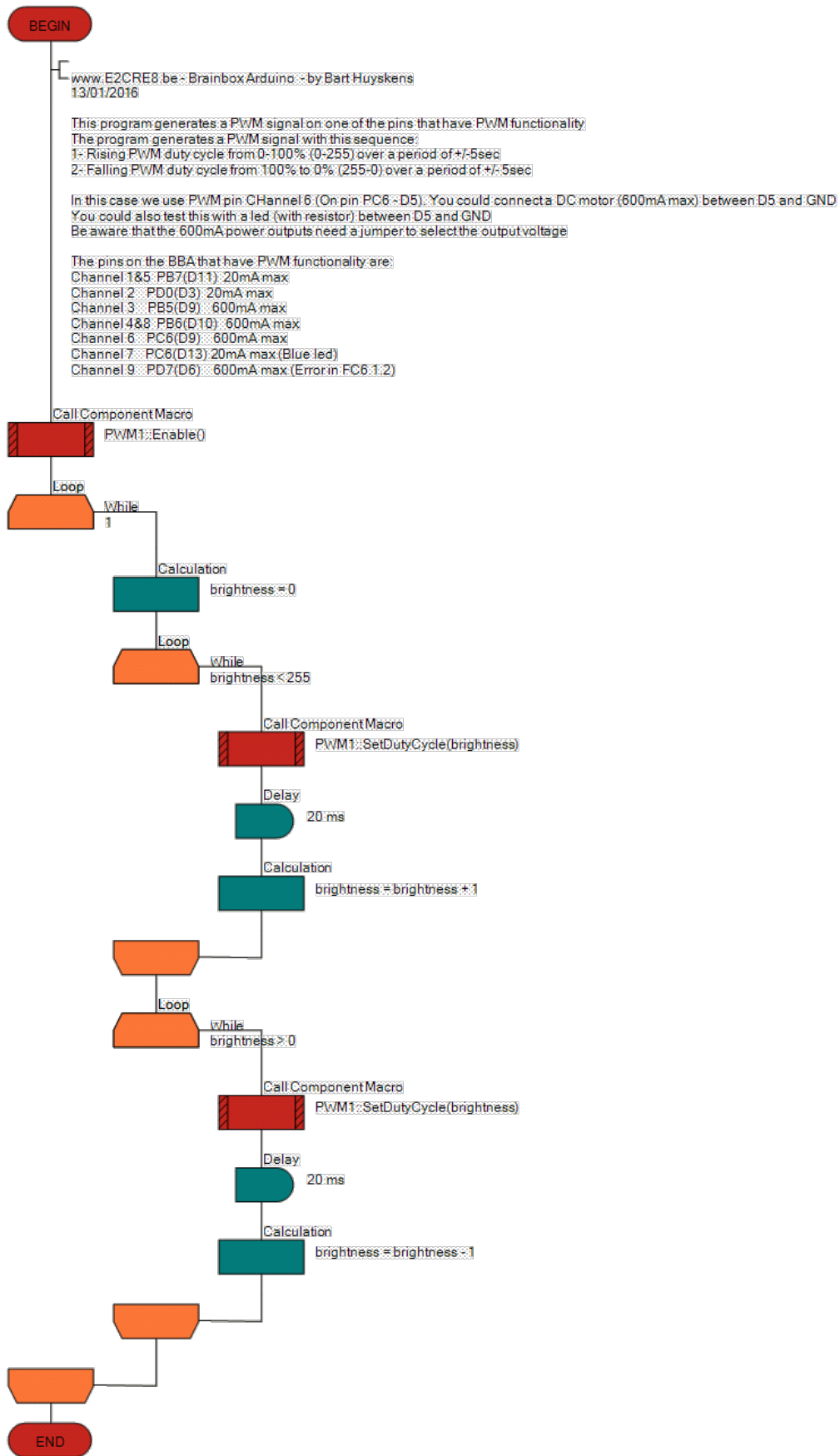
3D: System Panel

PWM AVR

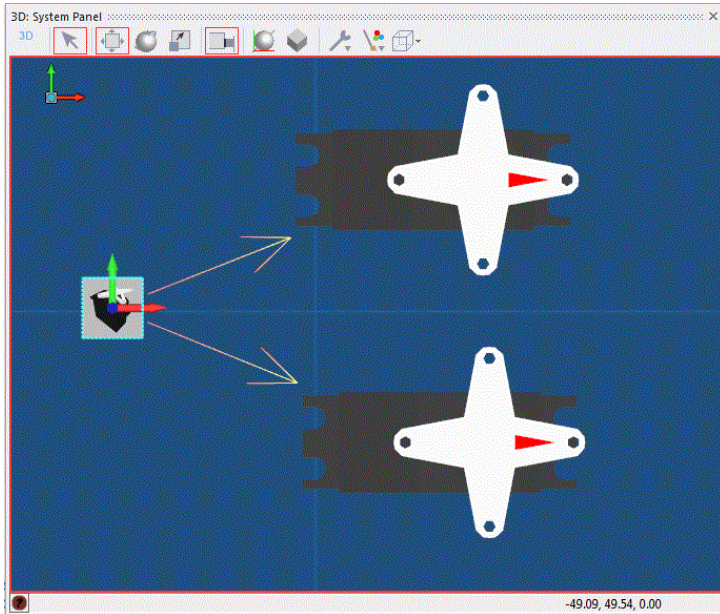
Mark: 22.21us
Space: 9.78us
Period: 32.00us Freq: 31.25KHz
Duty: 69.41% Rollover: 255

-33.57, 24.58, 0.00





O-SERVO



Properties

Servo_Controller1

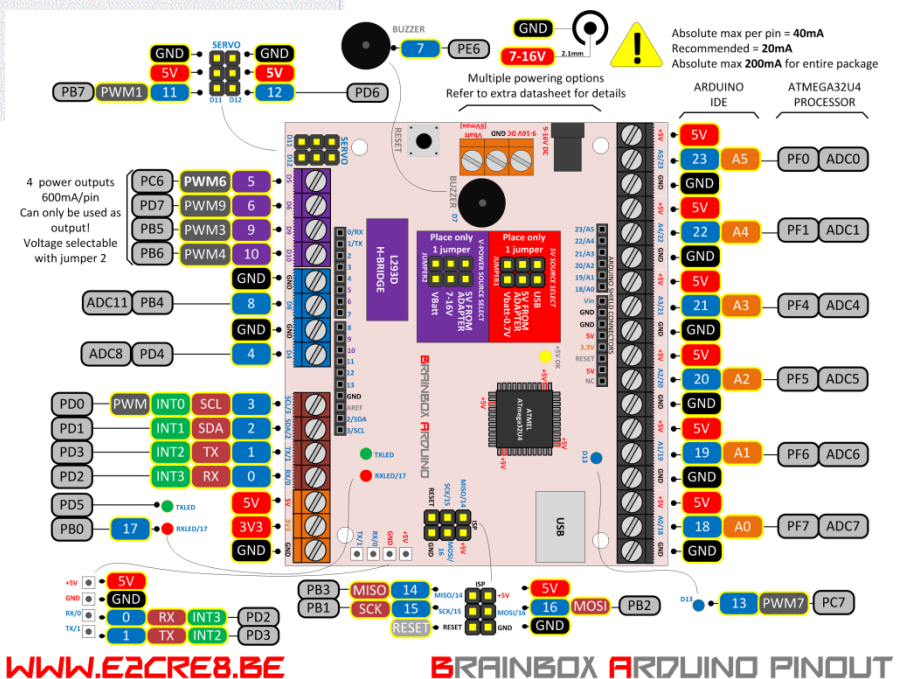
Properties Position

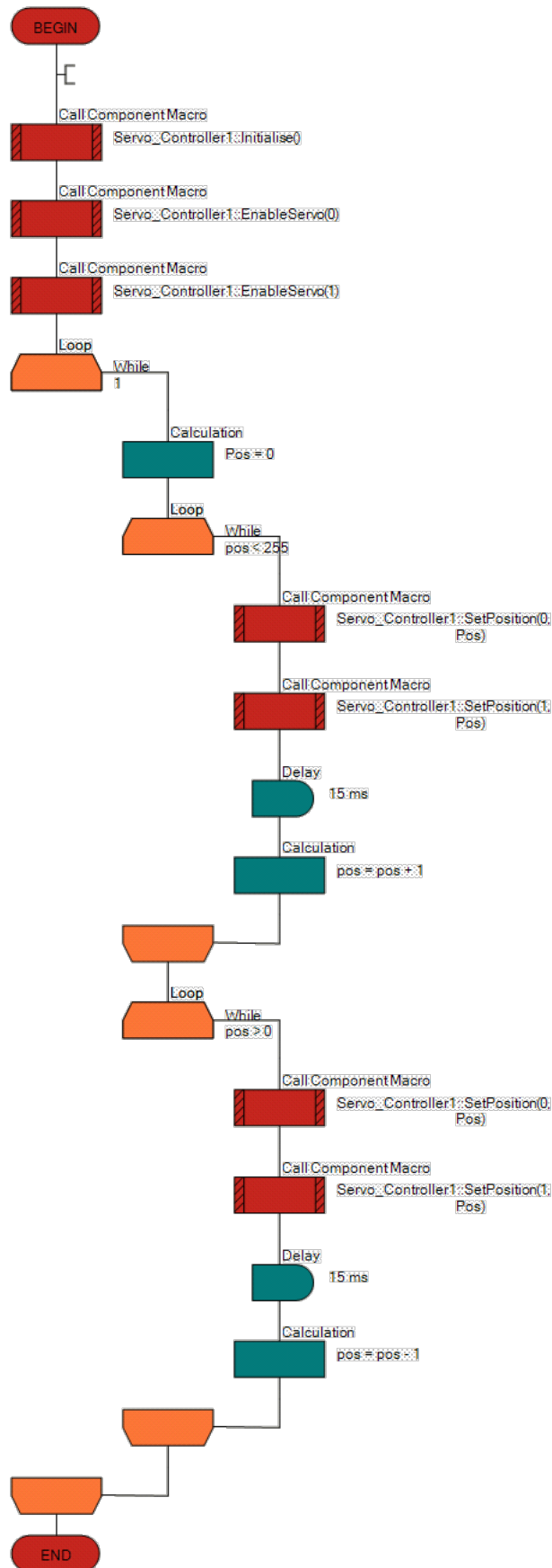
Component

- Handle: Servo_Controller1
- Type: Servo Controller

Properties

- Channels (1 - 8): 2
- Connections
 - Channel 0: \$PORTB.7
 - Channel 1: \$PORTD.6
- Trim
 - Trim 0: 0
 - Trim 1: 0
- Pulse Width
 - Minimum (us): 1000
 - Maximum (us): 2000
- Simulation
 - Servo Object 0: standard_servo1
 - Servo Object 1: standard_servo2





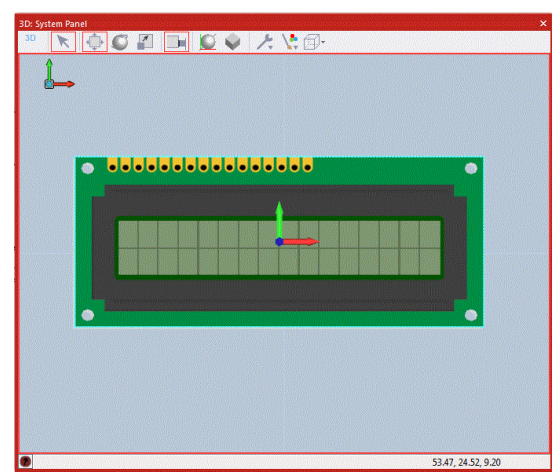
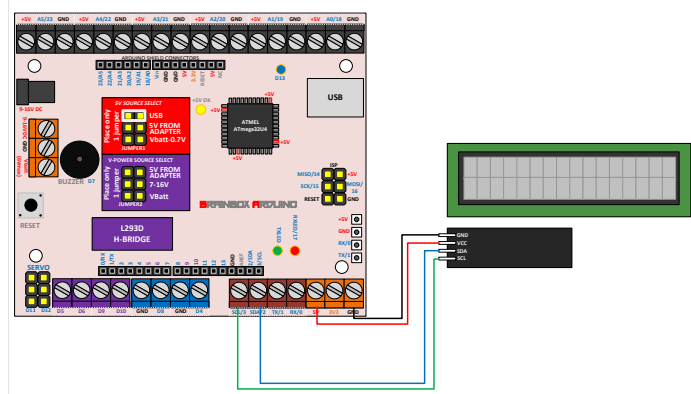
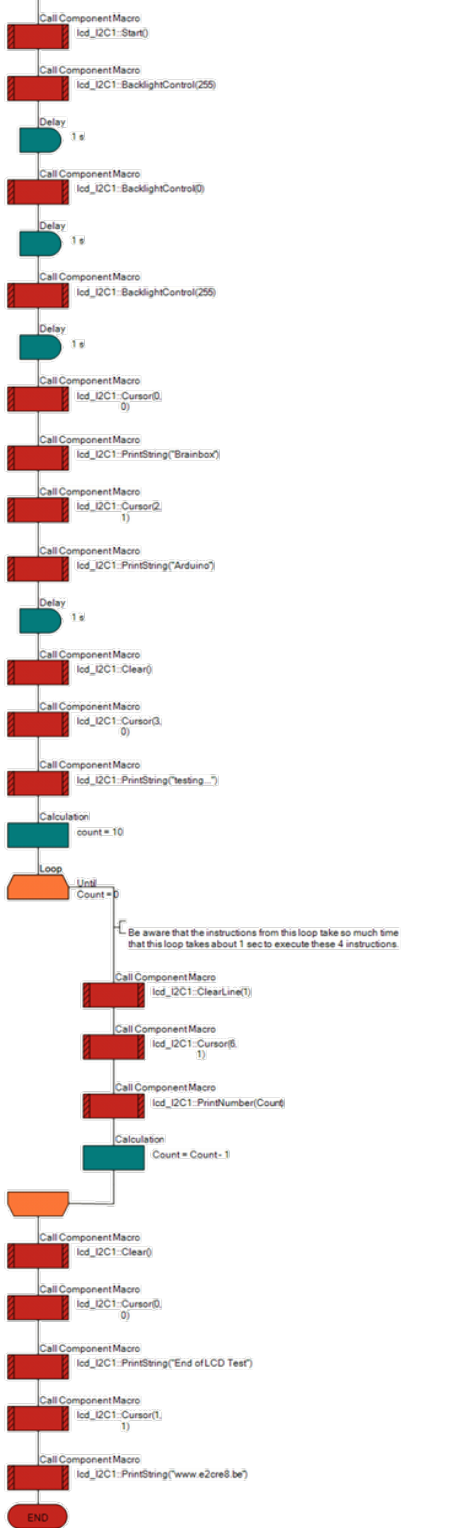
I2C LCD

www.E2CRE8.be - Brainbox Arduino - by BartHuyskens
13/01/2016

This program drives an I2C LCD of the type:
16 character 2 line I2C Display
Backpack Interface labelled "YwRobotArduino LCM1602 IIC V1" (26 @ aliexpress)

Connect this LCD as follows:
LCD Brainbox Arduino
GND GND
VCC +5V
SDA SDA/2
SCL SCL/3
!! Pull up resistors are required - place 4K7 between SDA and 5V and 4K7 between SCL and 5V

To communicate correctly with this I2C LCD Flowcode has this LCD(I2C) component
You can find this component with the search function in FC6
Properties for this I2C LCD:
- Channel 1
- LCD Address: 39
- Rows: 2
- Columns: 16



Properties

lcd_I2C1

Properties Position

Component

Handle lcd_I2C1
Type LCD (I2C)

Properties

Connections

- Channel Channel 1
- I2C Data (SDA) \$PORTD.1
- I2C Clock (SCL) \$PORTD.0
- Stop Delay Yes

I2C Config

- LCD Address 39

LCD Configuration

- Rows 2
- Columns 16