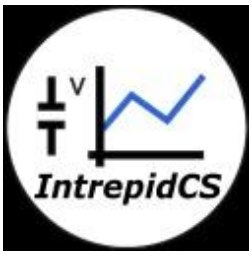


Intrepid Control Systems, Inc.

PWM Generator

Document Number: AN-ICSI-1007

Rev 2.0 08/2014

Contents

1. Introduction: 3
2. PWM Generator: 3
2.1 Example: 3
2.1.1 Hardware Requirement: 3
2.1.2 Cicuit diagram to remove the distorions. 3
2.1.3 Connection Diagram for Programming neo ECU10: 4
2.1.4 Steps to program neo ECU10: 4
2.1.5 Results: 5
3. Contact Us: 8

1. Introduction:

The neoECU 10 is low cost scriptable CAN node solution from Intrepid Control Systems. neoECU10 can be used in a applications to generate PWM Output .Downloading script with MISC I/O in neoECU 10 and by connecting additional PWM Generator design circuit ,we can generate PWM output Waveform.

2. PWM Generator:

2.1 Example:

To setup PWM one needs to download appropriate scripts with MISC I/O's setup. Please refer PWM Output Example vs3 file: NE10_PWM_Output.

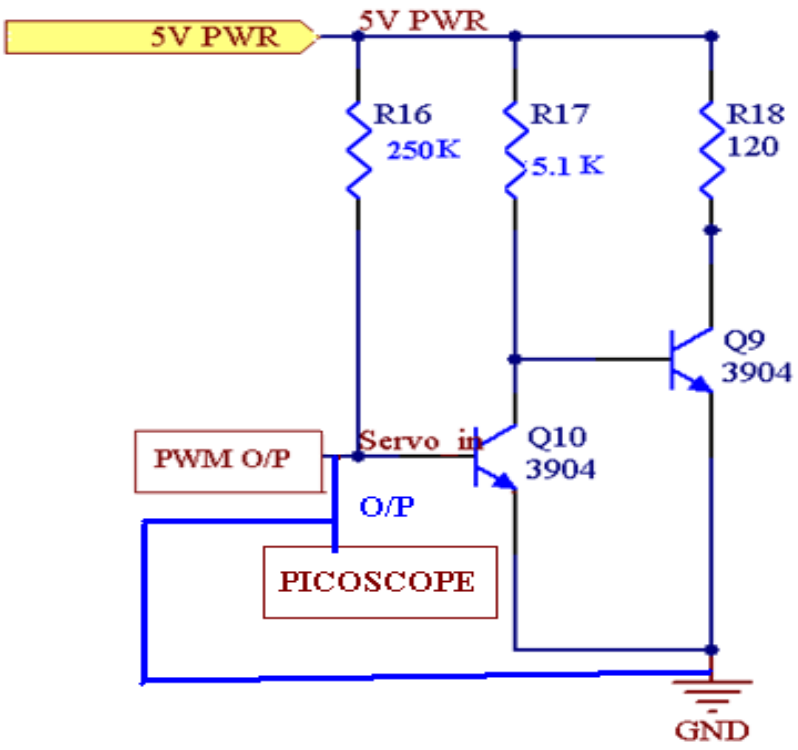
In these examples specific I/O is setup for PWM configuration.

2.1.1 Hardware Requirement:

Neo ECU10, ValueCAN3/ neoVI FIRE/ neoVI RED, Picoscope

2.1.2 Cicuit diagram to remove the distorions.

Design a circuit for pwm generator with the following specification**.** This circuit is implemented to remove the distortions



2.1.3 Connection Diagram for Programming neo ECU10:

neo ECU10 uses CAN to send the script to the device. For this type of device CAN network and a CAN tool (Value CAN 3/ RED/ FIRE) is needed to program them.

Figure: 1 shows an example how to connect NeoECU 10 to Value CAN 3 using CAN network.

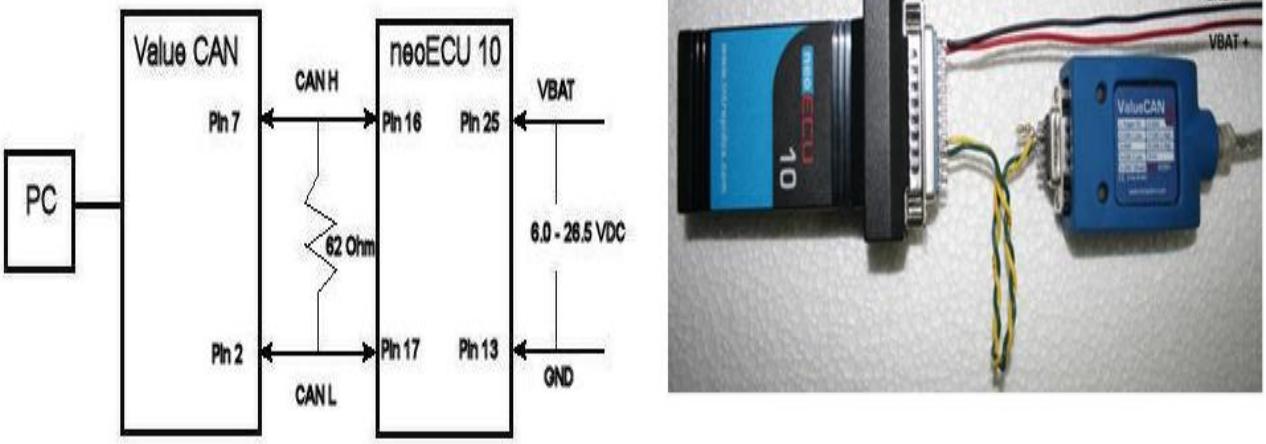


Figure 1: Connection Diagram for Programming neo ECU10

2.1.4 Steps to program neo ECU10:

1. Launch Vspy and Set up a Platform for HS CAN.
2. Download the coremini to NeoECU 10.
3. Connect the designed PWM Generator circuit to neoECU 10 as per configuration.
4. Check the PWM o/p at neoECU 10 by connecting picoscope at following pins of the DB 25 connector:
   - Pin Number.5
   - Pin Number.6
   - Pin Number.19
   - Pin Number.20
   - Pin Number.21.

2.1.5 Results:

1. PWM output waveform at Pin number 5 of neoECU10 is shown in (Figure 2)

   Measurements:

   Duty Cycle = 48.50%

   Frequency = 1K

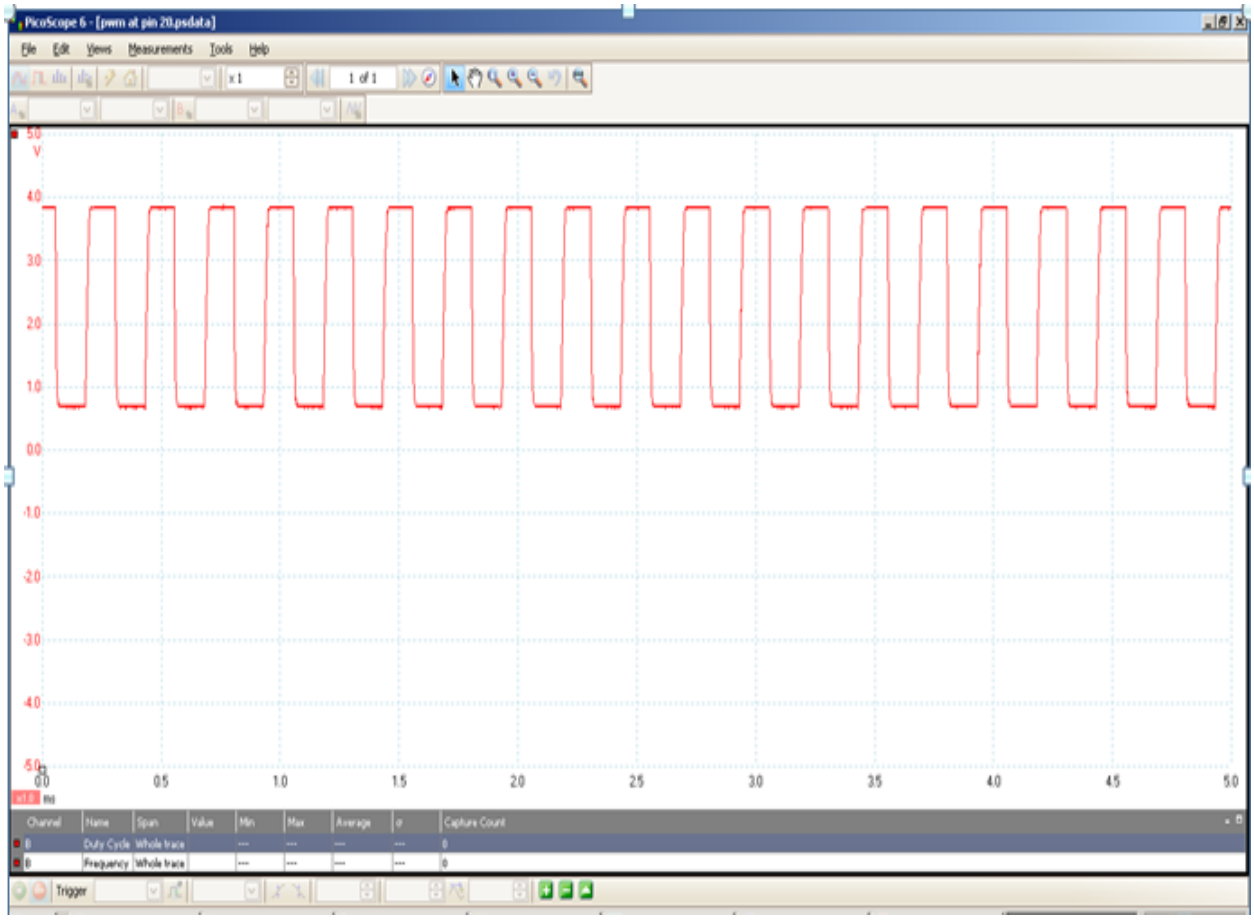


Figure 2: PWM output waveform at Pin number 5 of neoECU10

2. PWM output waveform at Pin number 20 of neoECU10 is shown in (Figure 3).

   Measurements:

   Duty Cycle = 49.1%

   Frequency = 3K

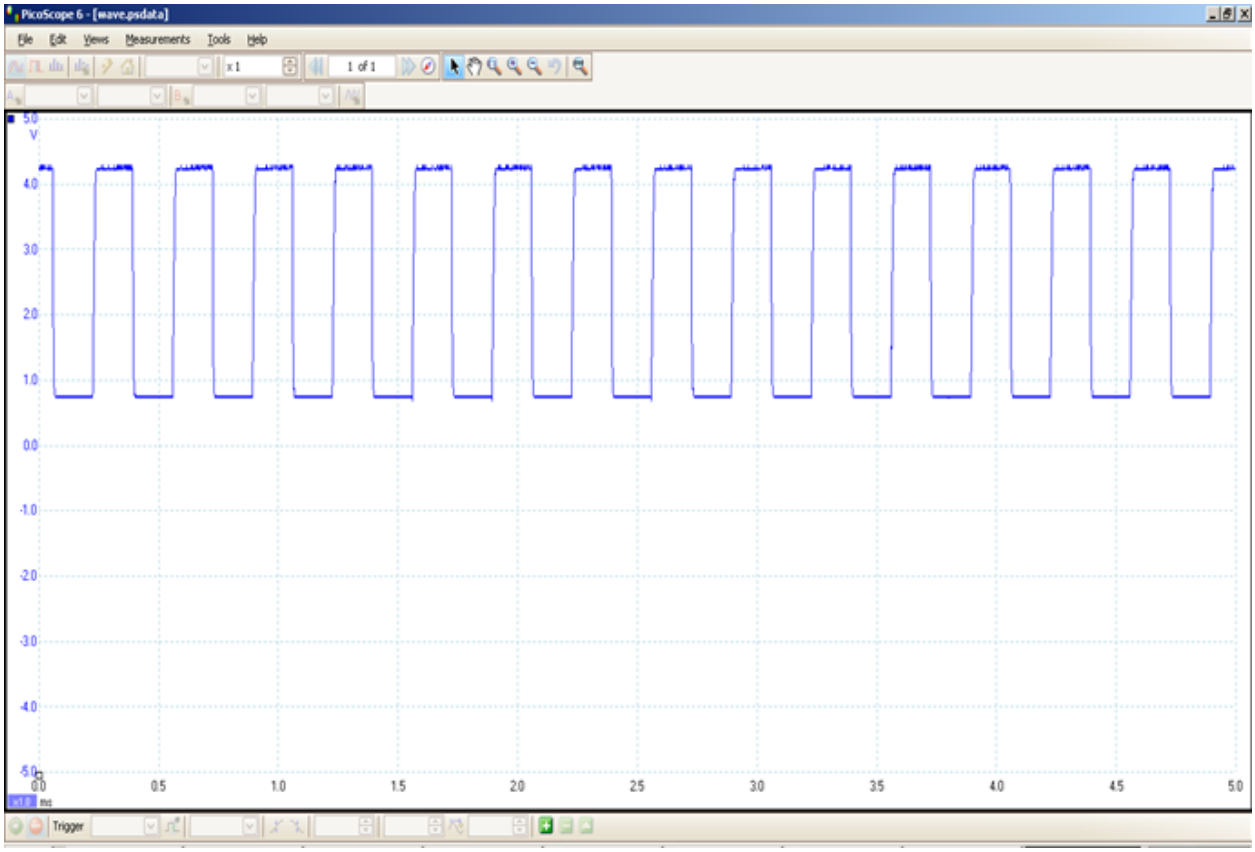


Figure 3: PWM output waveform at Pin number 20 of neoECU10

3. PWM output waveform at Pin number 21 of neoECU10 is shown in (Fig.4).

   Measurements:

   Duty Cycle = 47.13%

   Frequency = 6K

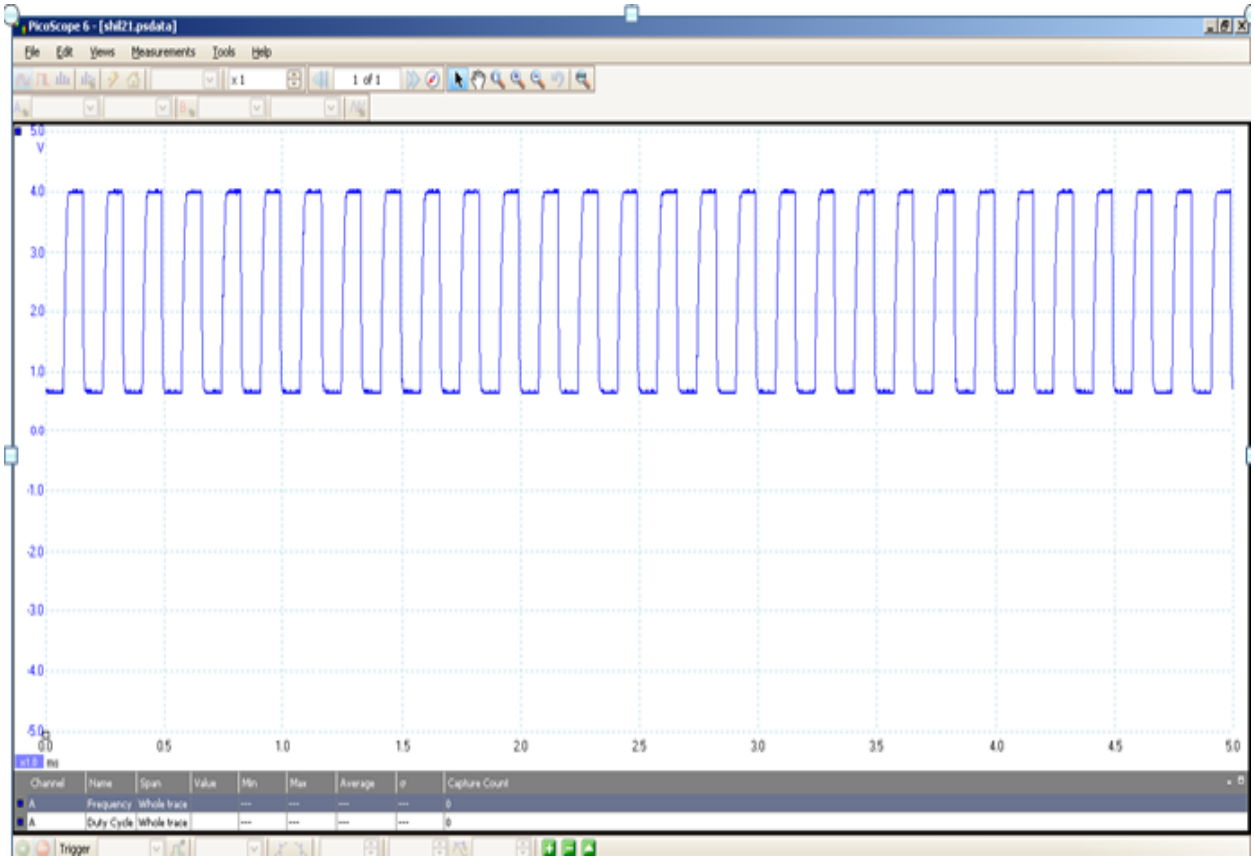


Figure 4: PWM output waveform at Pin number 21 of neoECU10

3. Contact Us:

Intrepid Control Systems, Inc.
Email: icsindia@intrepidcs.com
Website: www.intrepidcs.com