

# Prizmatix

## Pulser - USB Pulse Train Generator

Ver. 04

### Introduction

The Pulser - USB pulse train generator with user friendly software is an easy way to generate trains of pulses for Optogenetics activation directly from your computer. The Pulser TTL-Out output can work smoothly to trigger Prizmatix LED light sources to produce light pulses for such application as opsin activation. The Trigger-In input enables synchronization of Optogenetics activation with various experimental events

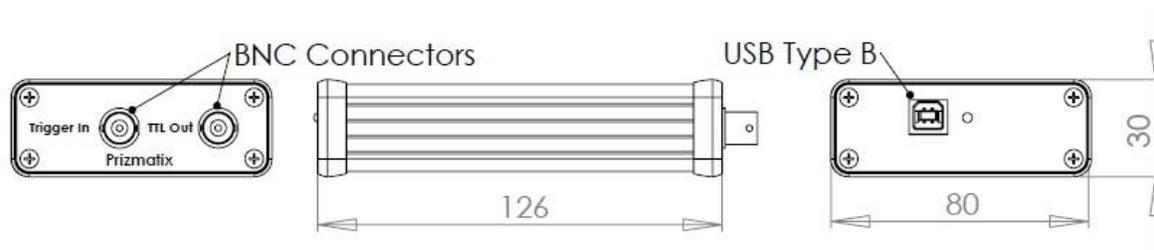


### Key Features

- Single or Bi-phasic pulse Trains
- Trigger-In input enables synchronization with various experimental events.
- Operation modes:
  - Don't use trigger input
  - Use trigger for single sequence
  - Use trigger, perform sequence and wait for next trigger
  - Use trigger, perform sequence during trigger high
- No external power supply required (uses USB power for operation)
- Independent time base by internal microcontroller
- LabView or Matlab control interface can be provided upon request

### Specifications

Input connector		USB Type B
Output connector		BNC
Output voltage level		TTL
Minimum pulse width	msec	1



Dimensions in mm

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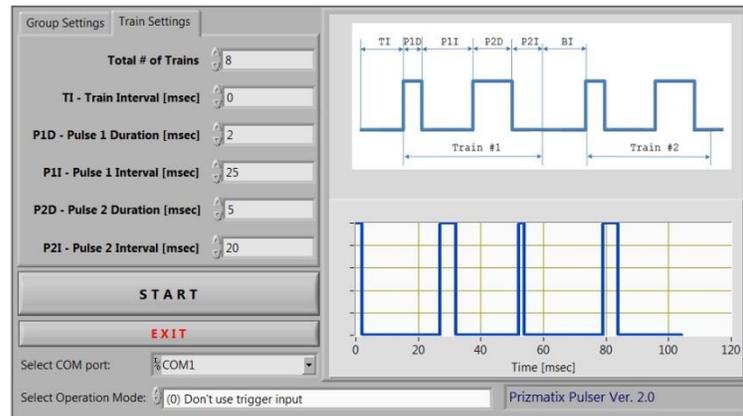
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## Software

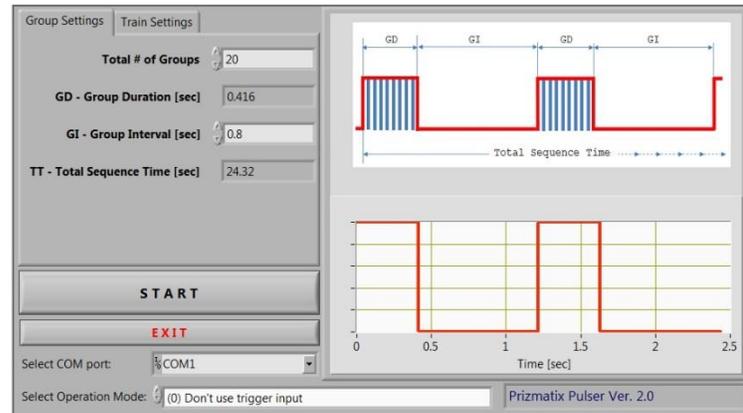
The software enables easy visual design of the various pulse conditions.

The pictures show software Graphical User Interface (GUI). In each tab the upper pane shows example waveform with user definable parameters. The bottom pane shows the actual TTL waveform build according the user settings at left controls.

The Train tab allows setting of single or bi-phasic pulse timing and define pulse repetition creating multiple pulse Trains. The Group tab allows creating of multiple Groups of Trains.



Train Settings Tab



Group Setting Tab

The Operation mode selector provides four operation modes (see key features above).

After completion of the pulse / train / group design step the user can immediately start pulse generation by clicking Start button.

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