

# User Manual

JPT GUI Control Software v2.0\_20161020

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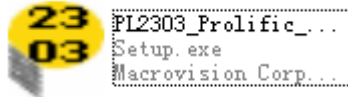
## 1. Software Installation&Introduction

### 1.1 Installation:

Unzip the installation package



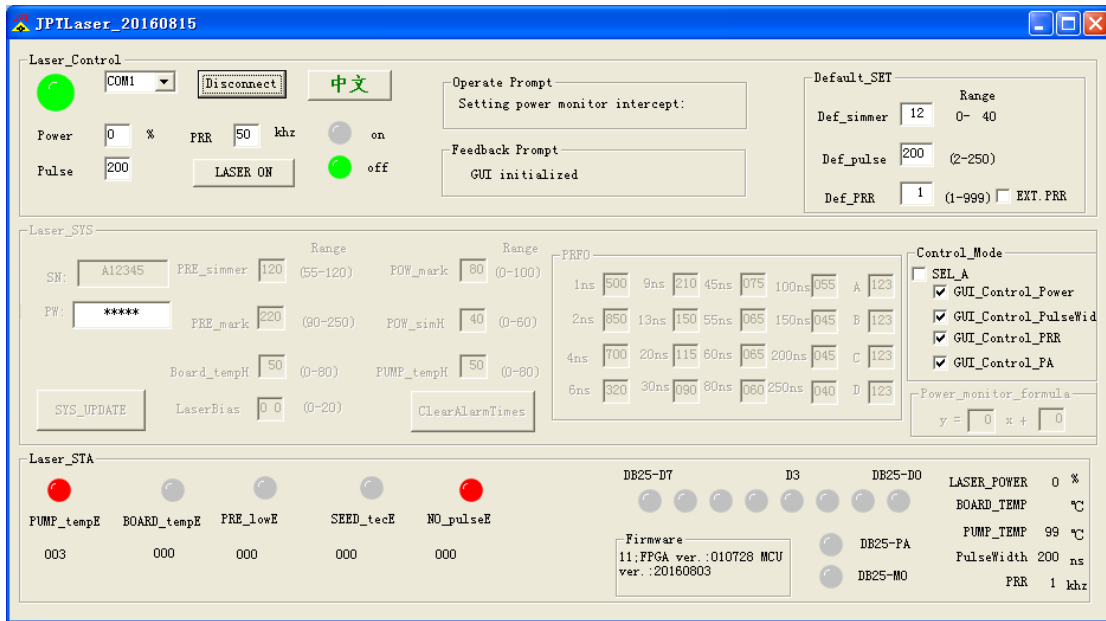
Install the Driver



Install vC2008-x86



Start Software



## 1.2.Introduction

1. JPTlaser GUI has below functions:Laser\_Control,Default\_SET,Operate Prompt,Feedback Prompt,Control\_Mode,Laser\_STA,DB25 Port Monitor,Laser SYS,etc.
2. All setting and change on GUI will work immediately,no need to restart,
3. The “Default\_SET” and “Control Mode” have power-off protection function for the parameter,
4. Only the Power can be adjusted in Laser\_Control panel when laser is emitting(Include DB25 Laser on & GUI Laser on).Otherwise laser will warning as below figure 1,

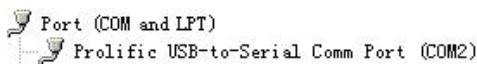


【Figure 1】

## 2.Functions

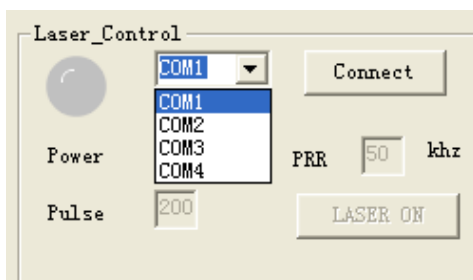
### 2.1 COM Port Connection

Check COM number after connecting the USB cable:  
Computer—>Properties—>Hardware—>Device Manager—>



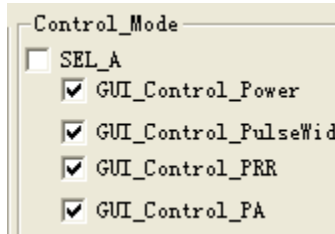
If the COM number is larger than 4, change it to an integer not exceeding 4.

Choose the COM port on GUI the same as set in the computer,then click “connect”.  
Please connect only after the laser get power  $\geq$  12s,

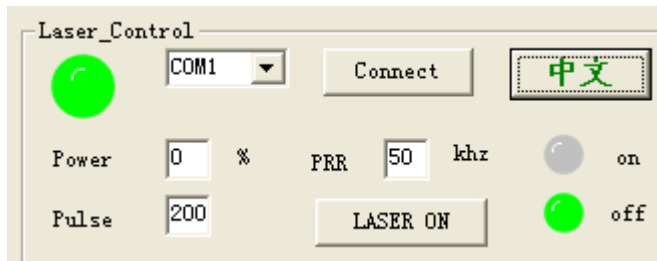


## 2.2 Use GUI to Control Laser

### 2.2.1 Control Mode Option



When we select all parameters controlled by GUI. The setting will be saved and has data power-off memory function. Therefore, we should cancel the GUI\_Control mode each time when we don't want to use GUI to control the laser.

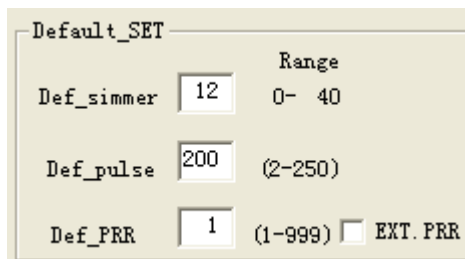


Laser is able to work at the parameter set by GUI like power, frequency and pulse width.

**Laser On:** set the parameters you want and click "laser on",the "on" light become green means laser start. "off" light become green means laser off.

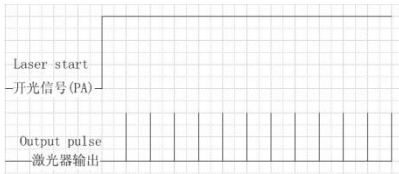
**Language:** In the English interface, click "中文" will switch to English, in the Chinese interface, click "English" will switch to English.

### 2.2.2 Default Set of Laser

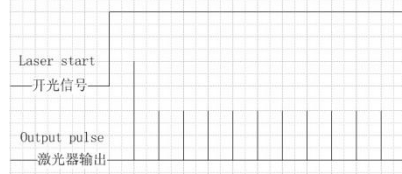


Laser can set the default parameters through this Default\_SET,like SIMMER,Pulse Width,Repetition Rate and others,any change will work immediately and it support data Power-Off memory function.

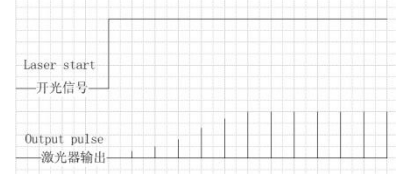
**Def\_SIMMER:** To control the amplitude of the first pulse. The larger the value is, the higher the first pulse will be.



[Suitable SIMMER]



[Too High SIMMER]



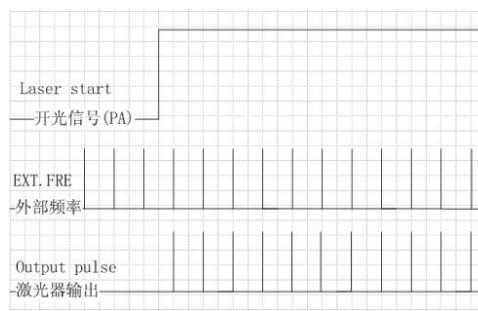
[Too Low SIMMER]

**Def\_PRR:** Under internal PRR mode, the system will output based on the default PRR if no external frequency signal is detected.

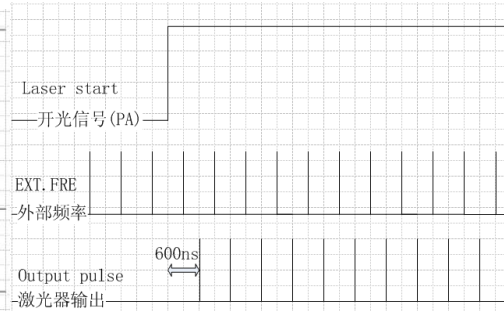
**Def\_pulse:** The system will output laser pulses with default pulse-width if it cannot be controlled externally.

**EXT.PRR:** Tick this choice to use the external frequency mode (The final output laser pulses will be synchronized with external frequency signal. This mode can be used when the control card has optimized the external signal). If un-ticked, internal frequency mode will be selected (System will firstly calculate the external frequency signal and then generate the pulse signal internally. This mode can be used to define the default PRR of the laser when there is no external frequency signal detected by the control card.

**The default mode is external frequency mode.**



[External PRR]



[Internal PRR]

## 2.3 Laser System Setting

Laser\_SYS

SN: A12345	PRE_simmer: 120 (55-120)	POW_mark: 80 (0-100)	PRFO
PW: *****	PRE_mark: 220 (90-250)	POW_simH: 40 (0-60)	1ns: 500 9ns: 210 45ns: 075 100ns: 055 A: 123
Board_tempH: 50 (0-80)	PUMP_tempH: 50 (0-80)		2ns: 850 13ns: 150 55ns: 065 150ns: 045 B: 123
LaserBias: 00 (0-20)			4ns: 700 20ns: 115 60ns: 065 200ns: 045 C: 123
			6ns: 320 30ns: 090 80ns: 060 250ns: 040 D: 123

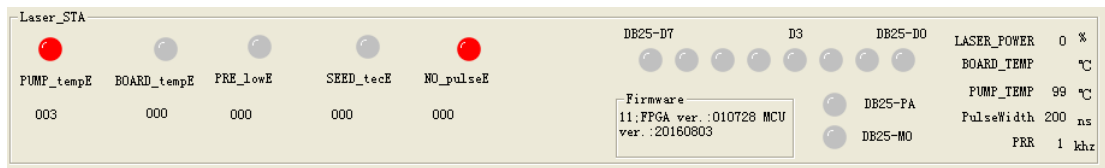
SYS\_UPDATE      ClearAlarmTimes

Power\_monitor\_formula

y = 0 x + 0

Laser-SYS for JPT engineer to set laser system parameters, it need right password to input any parameter change. Not open to customers in current version.

## 2.4 Laser Working Status Monitoring



From **Laser\_STA**, parameters and alarms can be monitored. Every time when laser is switched on, the times of alarms saved in the system will be sent to GUI automatically.

The DB25-D0,D3,DB25-D7,DB25-PA,DB25-MO to display the DB25 power received from laser,The status of port PA,MO,light on when high level,light off when low level,

**PulseWidth,PRR** to display the laser working pulse width and frequency,

**LASER\_POWER** to display the value of the pump current/energy in percentage

# Thanks!

Contact JPT Technical Support Dept. if any questions