

测试 PCRProject 工厂版的程序

步骤 1: 像往常一样准备 Trim.dat 文件和 dataposition.ini 文件。

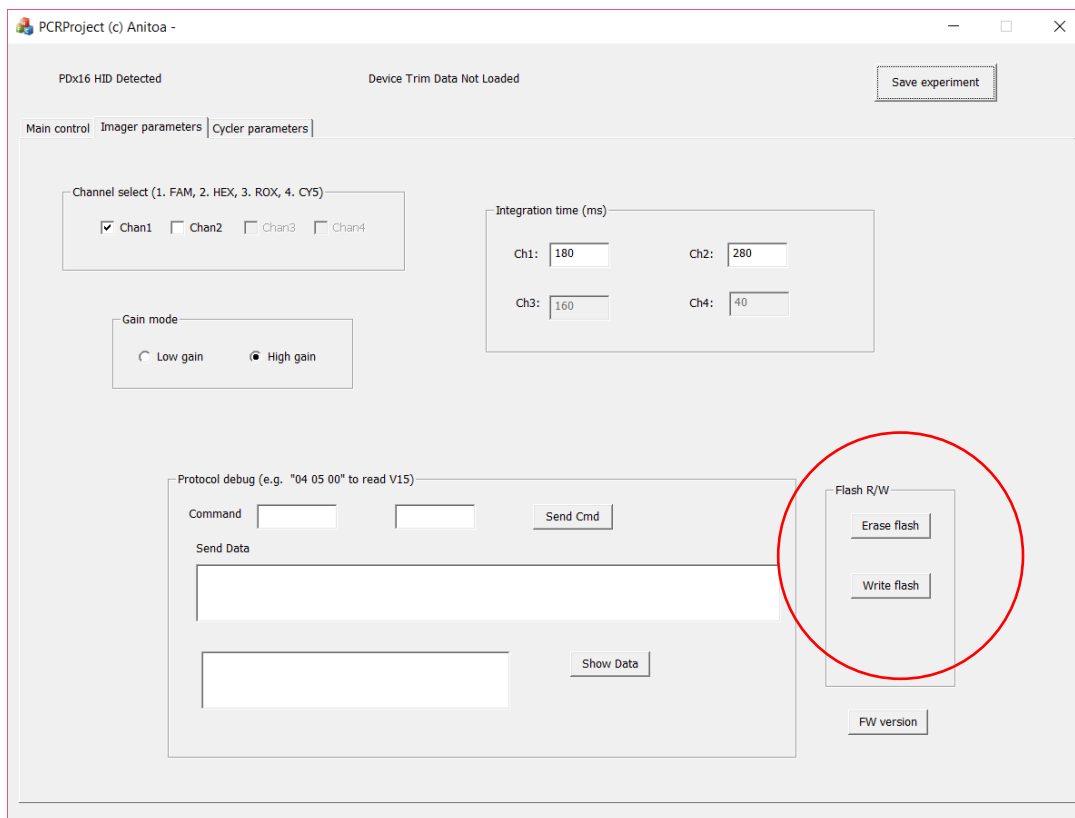
步骤 2: 在数据位置文件中, 添加通道数, 系统型号和序列号的规范:

```
[PLATE CONFIG]
NWELLS=4
NCHANNELS=2
[SYSTEM ID]
MODEL=T
SN1=10
SN2=20
```

在这个例子中, 通道数是 2. 型号字母是“T”, 序列号 1 和 2 是 10 和 20. 注意序列号只能是 1 到 255. 有 2 个序列号和一个型号字母给我们 52 * 255 * 255 组合。

步骤 3: 运行程序。通过运行一些图像捕获来检查 trim 设置是否正确, 并且检查数据位置是否正确。

步骤 4: 擦除闪存, 然后将 trim 数据和数据位置数据写入闪存。这是通过转到“Imager parameter”并首先单击“擦除闪存-Erase flash”按钮, 然后单击“写入闪存 – Write flash”按钮来完成的。等待成功弹出框。



步骤 5: 在一个空的文件夹再启动这个程序。如果程序找不到 trim 文件, 会自动读取闪存数据来找到 trim 数据。再次执行图像捕获以验证 trim 设置和数据位置设置是否仍然正确。

步骤 6: 测试热循环仪。确保温度设置如下所示。程序在加载 config.json 文件时, 将自动加载此设置。因此, 请确保不要更改或丢失此程序附带的 configure.json 文件。

The screenshot shows the PCRProject software interface with the following settings and components:

- Header:** PCRProject (c) Anitoo - PDx16 HID Detected, Device Trim Loaded: 18823016 18823017 18823020 18823022, Save experiment button.
- Navigation:** Main control | Imager parameters | **Cycler parameters**
- Cycler Parameter Setting:**

	Temp(C)	Time (s)	Ramrate (C/s)	
Hot lid	105		<input checked="" type="checkbox"/> Max Ramp	
Initial denaturation	95	120		
Denaturing	95	10	5	Cycles 2
Annealing	60	15	3	
Annealing2	64	28	1.5	<input type="checkbox"/> Enable annealing2
Extension	72	25	1.5	<input type="checkbox"/> Enable extension
Hold on	50	60		
- PID Set:**

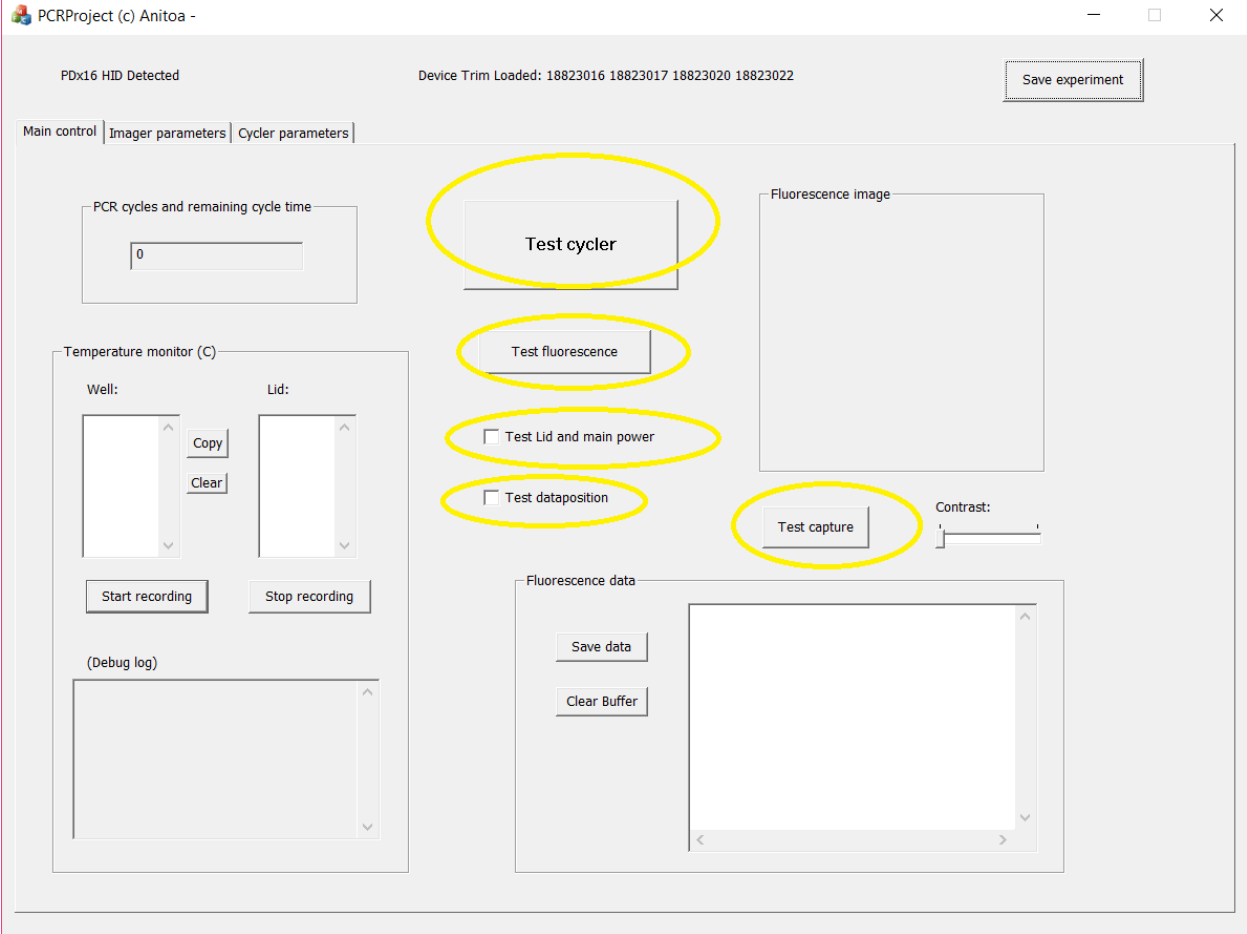
	0 Zone	1 Zone	
KP	100	300	KP Set
KI	0.01	0.575	KI Set
KD	0.5	1	KD Set
KL	0	0	KL Set

Zone set: 70, Zone Set, PID Read
- Melt curve temp:** Start: 50, End: 80
- Overshoot:** Temp-heat: 2, Temp-cool: 1, Time-heat: 4, Time-cool: 3, Commit
- Temperature profile:** A graph showing Temperature (green line) and Set point (magenta line) over time. The set point starts at 70°C, ramps up to 95°C at 10s, holds until 20s, ramps down to 60°C at 25s, holds until 45s, ramps up to 95°C at 48s, and holds until 50s. The temperature follows this set point with some lag and overshoot.
- Buttons:** Show simulation, show history
- Est. cycle time (s):** 38

然后转到主控制窗口并为“Test cycler”按钮计时。该程序将运行循环仪并在完成后停止。将弹出一个对话框, 显示测试是否成功。

步骤 7: 测试光学系统。将试管放入仪器中, 确保试管中的混合物至少包含 FAM 信号。按“测试荧光”按钮。系统将运行测试以测试光学系统, 并生成指示测试是否成功的消息。

请参阅下面的测试按钮的位置。



Step 1: Prepare the trim.dat file and dataposition.ini file as we usually do.

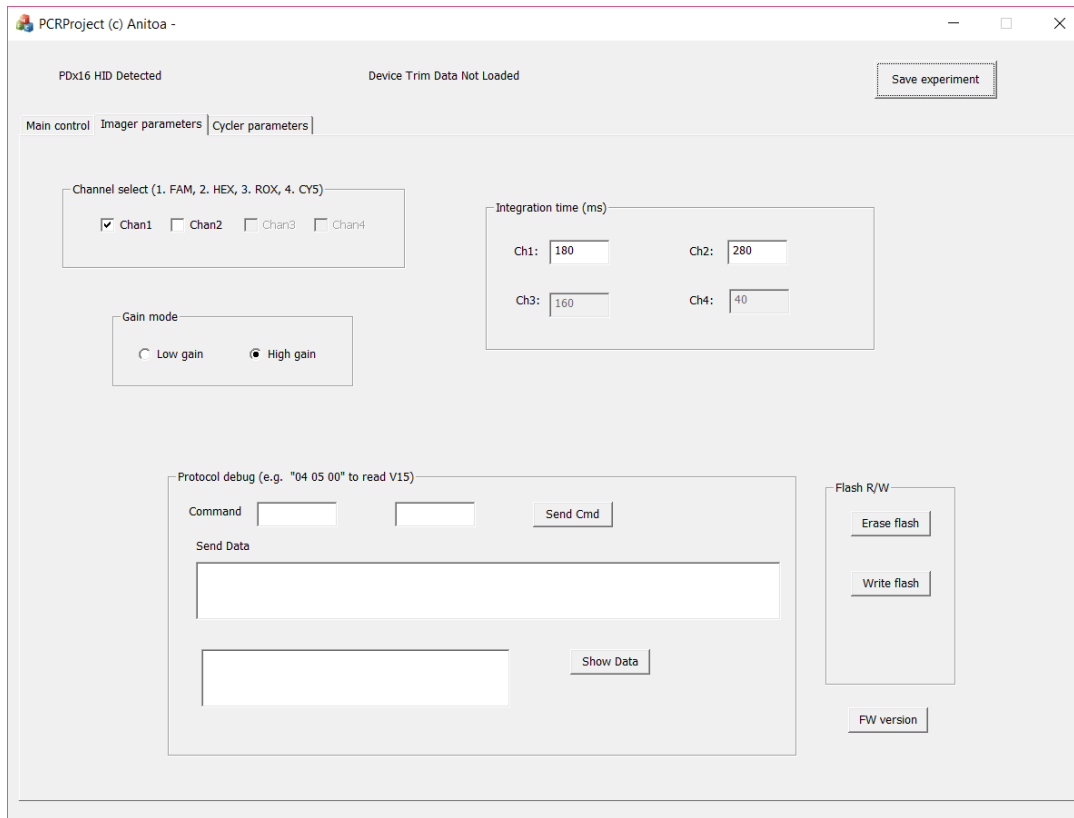
Step 2: In data position file, add specification for number of channels, system model letter and serial numbers:

```
[PLATE CONFIG]
NWELLS=4
NCHANNELS=2
[SYSTEM ID]
MODEL=T
SN1=10
SN2=20
```

In this example, the number of channels is 2. Model letter is "T" and serial numbers 1 and 2 is 10 and 20. Note serial numbers can be only 1 to 255. Having 2 serial numbers and a model letter gives us $52 * 255 * 255$ combinations.

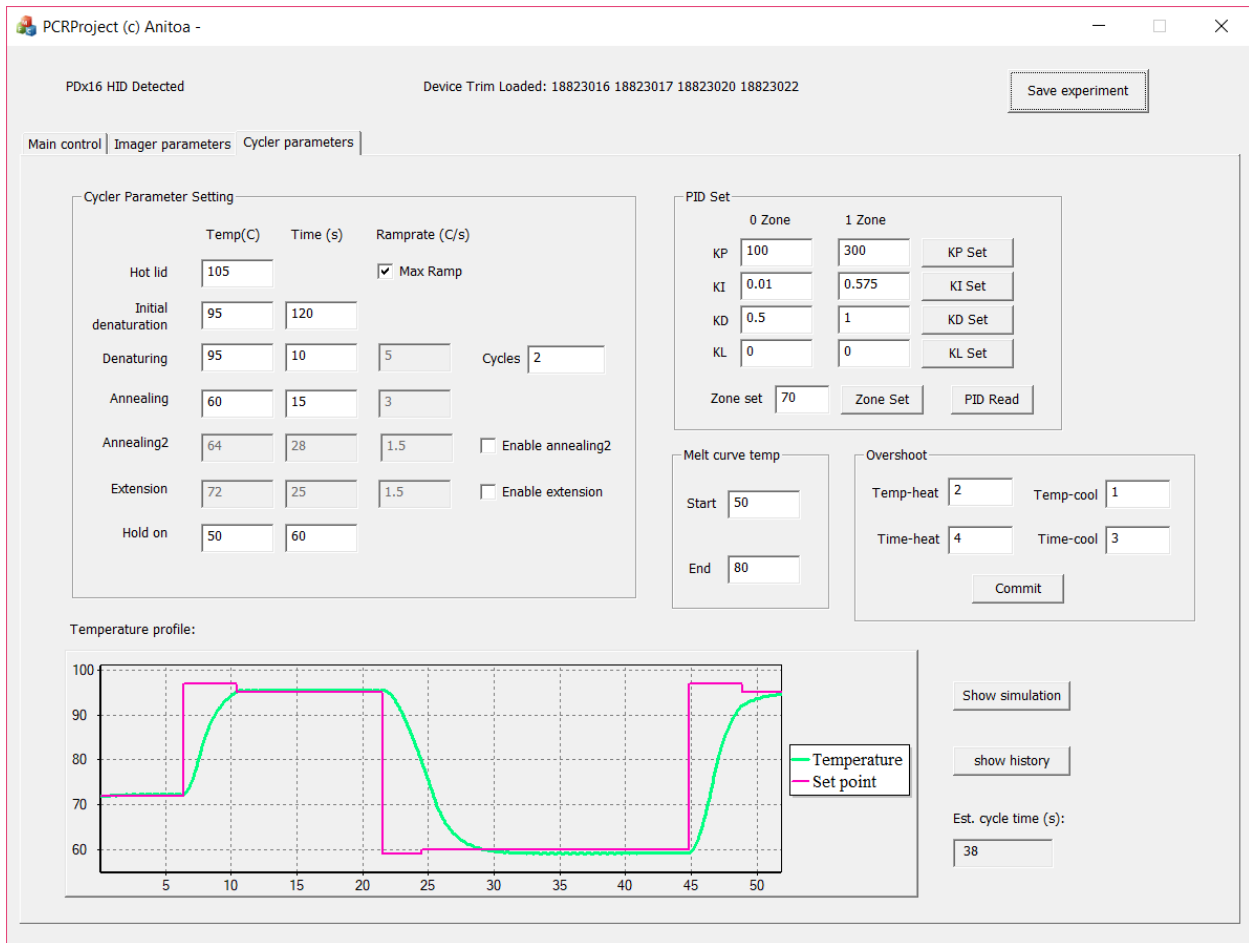
Step 3: Run the program. check if trim setting is correct and data position is correct by running some image captures.

Step 4: Erase flash and then write trim data and data position data to flash. This is done by going to "Imager parameter window" and click "Erase flash" button first, then "Write flash" button. Wait for success pop up box.



Step 5: Read from flash by pressing "Read flash" button. Perform image captures again to verify that trim setting and data position settings are still correct.

Step 6: Test Thermal cycler. Make sure the temperature settings are as shown below. This setting will be automatically loaded when the config.json file is loaded. So please make sure do not change or lose the config.json file that comes with this program.



Then go to the main control window and click the “Test cycler” button. The program will run the cycler and stop when finished. A dialog box will pop up showing whether the test is successful.

Step 7: Test the optical system. Place tubes into the instrument and make sure the mixture in the tubes contain at least FAM signal. Press the button “Test fluorescence”. The system will run a test to test the optical system, and generate a message indicating whether test is successful. See below for the location of the test buttons.

