

# Huaqingjun PLC Programming Software

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## — Software Introduction

### 1.1 Introduction Information

《Huaqingjun PLC programming software》is a new programming software that matches our company's simple PLC all-in-one machine. The software has functions such as simple PLC all-in-one programming, program uploading and downloading between computer and PLC, saving and reading programming files, real-time monitoring of PLC working status, etc. It supports Chinese and English language switching. This system uses Qt for front-end UI design and C++ for logic processing, which not only brings high-quality user interface experience to users, but also has excellent performance. This software is an installation-free software, which can be run by opening the executable file. It adopts Qt programming and has strong platform portability.

### 1.2 System Features

The positioning of this software is PLC programming development software, which is specially customized software for the company's simple PLC all-in-one machine. There are two ways to communicate with the PLC, one is to use the RS485 to USB cable to connect with the computer, and the other is to use WIFI or 4G to connect with the computer. After the user has successfully connected with the PLC, the programmed program can be burned to the PLC by just clicking a button, which is simple and fast. The program written by the user can also be saved to a file for backup, so as to continue programming next time.

### 1.3 Operating Environment

Operating system: windows7 and above

CPU bits: 64-bit machines only

Memory: not less than 1GB

Display resolution: above 1024\*768

Keyboard and mouse: Microsoft's universal keyboard and mouse

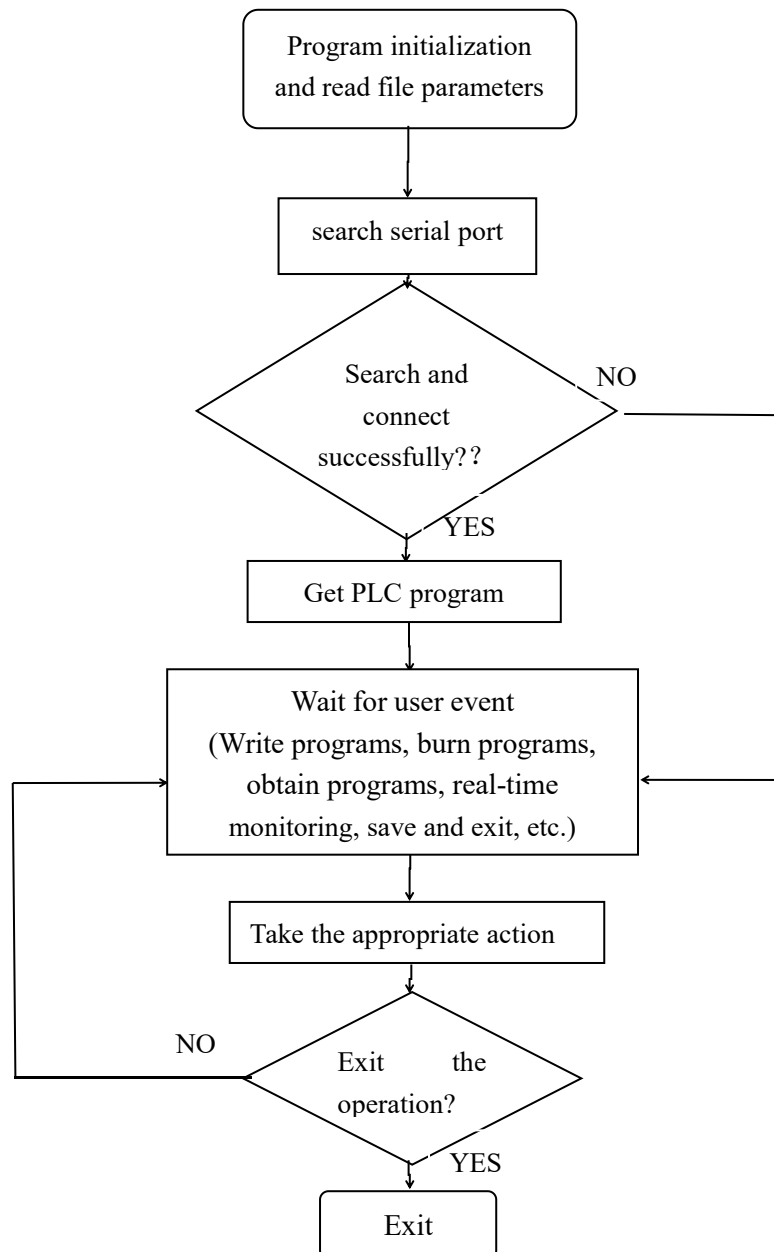
Sound card and stereo: No requirement.

Notice:

This software currently only supports Windows 7 and above Windows systems. WindowsXP and Linux are not currently supported.

This software is an installation-free version. After decompressing the software package, double-click "QingJunPLC.exe" to run.

## 1.4 Software Flow Chart



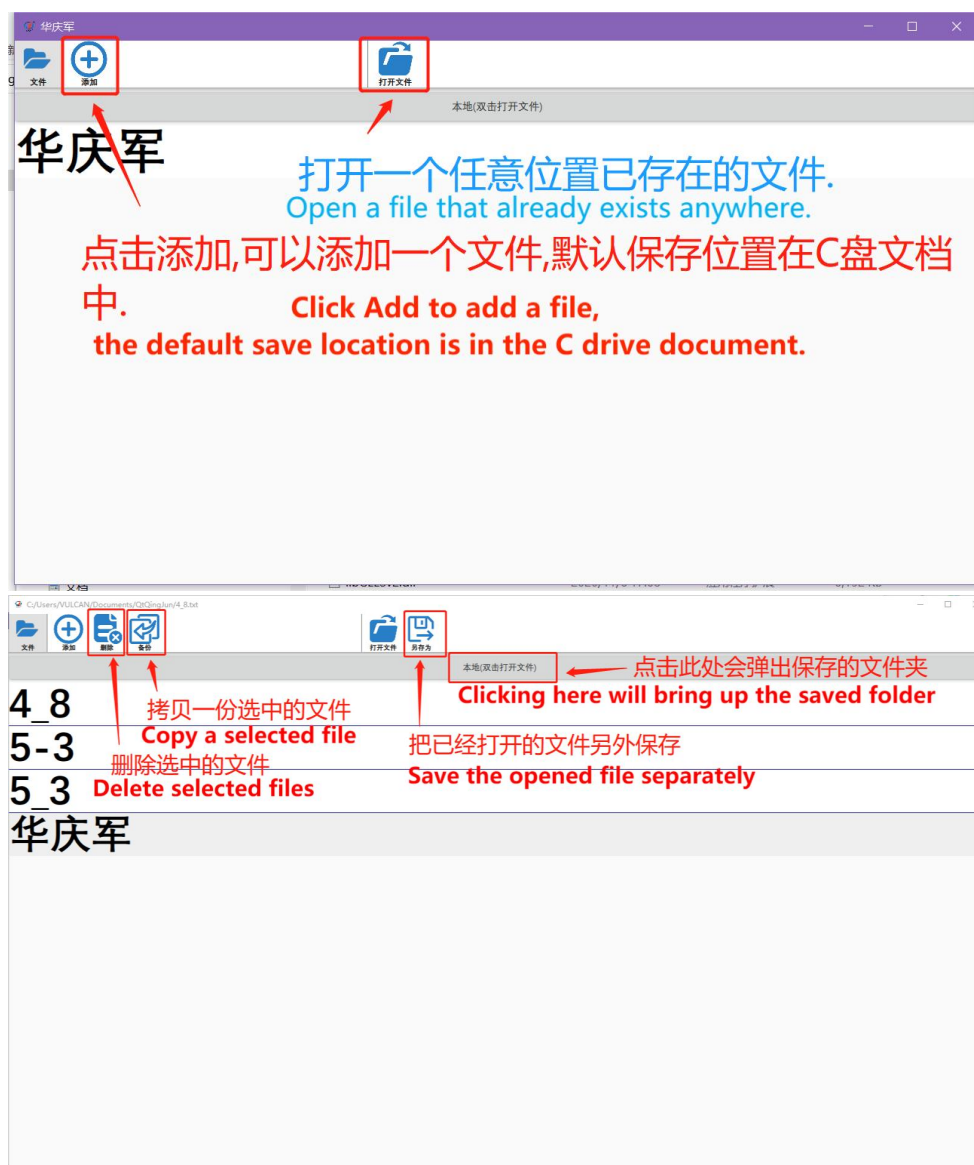
## 二 Software Function

### 2.3 PLC Programming

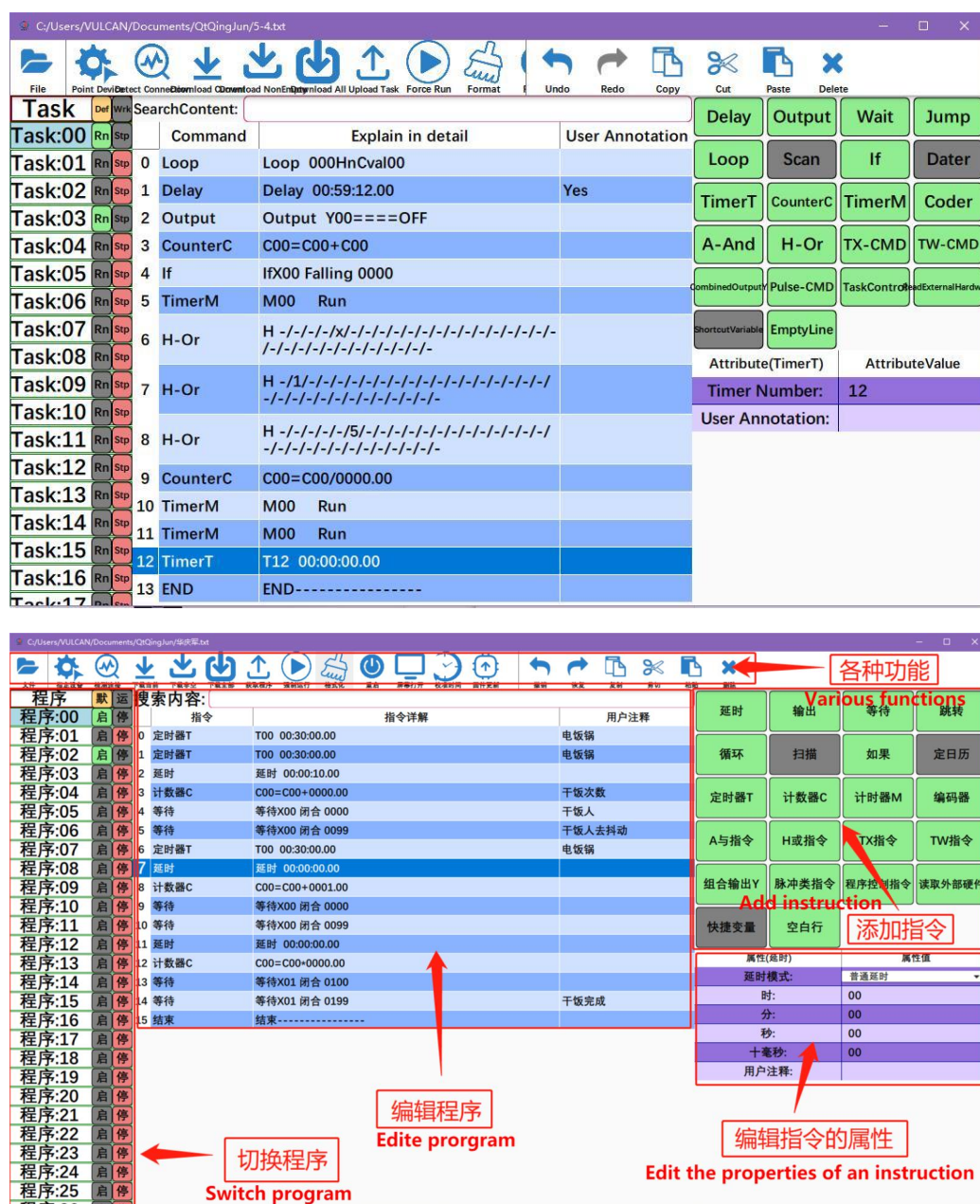
#### 2.3.0 Open A File

Note: 1. A file must be opened for editing

2. The file will be automatically saved 10s after editing or closing the software



### 2.3.1 Throughout Software



After entering the PLC operation interface, the user can use various operation functions of the software, such as writing programs, burning programs, obtaining programs, etc.




















On the left side of the software is an overview of all programs and general menus, you can click to switch programs, and click the general menu to set general menu parameters.

On the right side are various command buttons and the properties of the command. Click to add the command, and the properties window can modify the parameters of the command.

Above are various function buttons.

In the middle are instructions, which can be copied, pasted, and deleted.

### 2.3.2 Top Functions

 文件	Switch folder interface
 指定设备	4G and Wifi need to specify PLC to connect
 检测连接	If no 4G device is specified, the device will be searched through the machine's usb to 485
 下载当前	Download the currently selected program/general menu to the PLC individually
 下载非空	Download all programs to PLC, if the program is empty, skip this program
 下载全部	Download all programs to the PLC, if the program is empty, the program of the PLC will be cleared
 获取程序	Get all PLC programs, including the general menu
 强制运行	Force the PLC to run, only the program that is started by default will be started
 格式化	Clear all PLC programs
 重启	Restart the PLC
 屏幕打开	Put PLC into touch screen mode to improve performance
 校准时间	Calibrate the time of the PLC, the time is the current time of the computer
 固件更新	Update the version of the PLC, if the update fails, the PLC may become a brick
 撤销	Ctrl+Z Undo just edited
 恢复	Ctrl+Y, Ctrl+Shift+Z Redo just undone edits
 复制	Ctrl+C Copy selected statement
 剪切	Ctrl+X Cut the selected sentence
 粘贴	Ctrl+V Paste the copied statement
 删除	Delete delete selected statement

2.3.3 Switch Program on The Left

You can switch to the corresponding program by clicking the corresponding program with the mouse.

Program default start and stop and run start and stop :

程序	默	运
程序:00	启	停
程序:01	启	停
程序:02	启	停
程序:03	启	停
程序:04	启	停

Select this button to start and stop the program by default. When downloading the program, the program will be set to start or stop by default. The program initial startup state starts the program that is set to start by default.

When this button is selected as the program startup state, clicking the start and stop button below will start or stop the selected program.

2.3.4 Write A Program

Click the corresponding program on the left, and then click the command button on the right to add commands. It is quite simple. Then click the corresponding command in the middle, and the property window will automatically display the corresponding command properties.

Modifying the properties in it changes the properties of the clicked command of the command. As shown in Figure 2-3.



图 2-3

2.3.5 Download Program

After writing the program or opening a program file, click the "Download

All" button above to download the program. It is recommended that the PLC baud rate should not be too low, otherwise the download time will be longer.

4G and Wifi require designated equipment.

As shown in Figure 2-4.

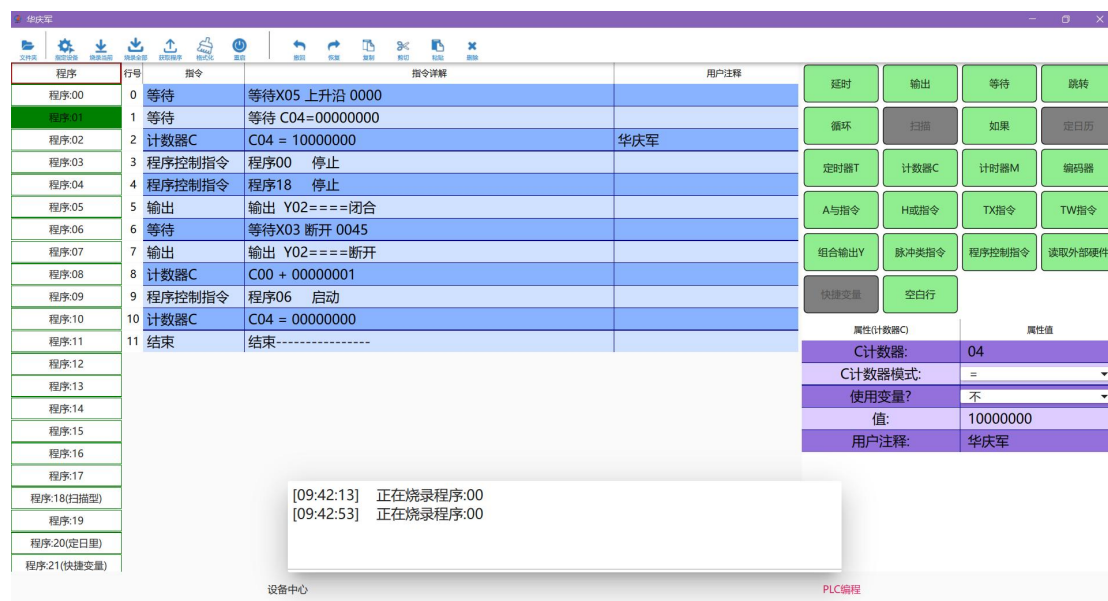
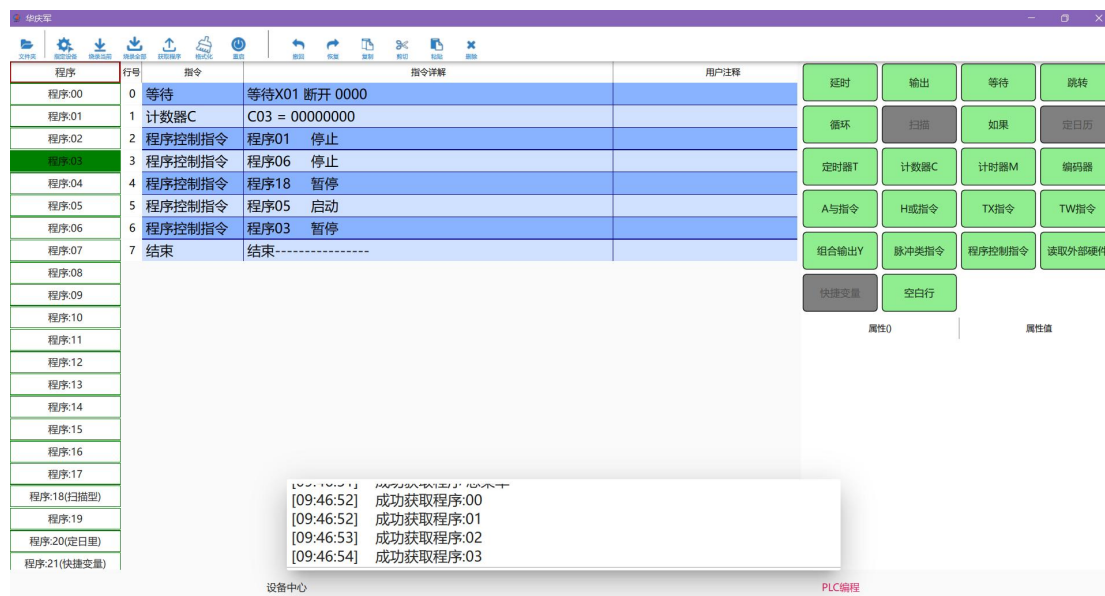


图 2-4

### 2.3.6 Get The Program

Obtaining the program is relatively simple. After the connection is successful, you can automatically obtain the program by clicking the "Get Program" button.



## 2.4 General Menu Settings

Note: To download the general menu, you need to select the general menu, and then click Download Current.

The general menu refers to setting the contents of the PLC general menu. The general menu includes program default start and stop, system settings, 485 communication settings, analog quantity & temperature settings, and pulse output settings.

1. The default start and stop of the program can be set to start or stop the program. Changed when writing the program.

2. System settings can set the language and screen backlight time of the PLC.

3. 485 communication settings can change the baud rate, data format, device address, whether to open the touch screen, communication interval, etc.

4. Analog & temperature settings can set input and output channels, filter levels, and temperature display input sources.

5. Pulse output setting can set X, Y axis pulse.

As shown below.

程序默认启停

程序:00	停止
程序:01	启动
程序:02	启动
程序:03	启动
程序:04	停止
程序:05	停止
程序:06	停止
程序:07	启动
程序:08	启动
程序:09	停止
程序:10	停止
程序:11	停止
程序:12	停止
程序:13	停止
程序:14	停止
程序:15	停止
程序:16	停止
程序:17	停止
程序:18	启动
程序:19	停止
程序:20	停止

系统设置

显示语言:	中文
背光时间 分钟:	00

通信设置

----485-A1-----	
写操作码:	16码
波特率:	115200
数据格式:	8N1
设备地址:	01
触摸屏模式:	关闭
主动间隔ms:	0500
远程链接:	关闭
----485-A2下载-----	
写操作码:	06码
波特率:	1200
数据格式:	8N1
设备地址:	99
主动间隔ms:	6000

模拟量&温度设置

输入滤波:	3级
温度显示1:	关闭
温度显示2:	关闭
模拟量转换CH0:	00-00/0000-0000
模拟量转换CH1:	00-00/0000-0000

脉冲输出设置

---X轴脉冲---	
单位:	圈
细分系数:	03200
每圈距离mm:	010.00
加速时间ms:	1000
开机回零:	关闭
探头接口:	X00
回零速度Hz:	3000
---Y轴脉冲---	
单位:	圈
细分系数:	03200
每圈距离mm:	010.00
加速时间ms:	1000
开机回零:	关闭
---Z轴脉冲---	
单位:	圈
细分系数:	03200
每圈距离mm:	010.00
加速时间ms:	1000
开机回零:	关闭
探头接口:	X02
回零速度Hz:	3000
---W轴脉冲---	
单位:	圈
细分系数:	03200
每圈距离mm:	010.00
加速时间ms:	1000
开机回零:	关闭
探头接口:	X03
回零速度Hz:	3000
---编码器1---	
规格 线:	0400
每圈长度mm:	0100.00
---编码器2---	
规格 线:	0400
每圈长度mm:	0100.00