



# BX-5YJ USER MANUAL

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## 版本历史：

版本号	日期	作者	描述
1.0	2013-2-23	谢辉军	BX-5YJ 控制器用户手册
2.0	2013-5-30	谢辉军	修改屏幕参数为行宽度、行高度、行数量
3.0	2017-7-17	张继力	丰富功能描述、遥控器按键功能定义与使用步骤的内容

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## BX-5YJ USER MANUAL

### 1. 产品概述product instructions

本产品专用于油价屏显示由数字组成的油价、汇率等数据。本产品实现了从参数设置到数据输入全程遥控器控制，操作简单便捷。效果图如下：This controller is for Gas price screen, made by gas price, exchanges data, etc. This controller is with convenient operations which could be controller totally by remote controller, from set parameters to sending data. Picture showed below:





### 1.1 功能描述 *function instructions*

本产品完全由遥控器控制设置屏参和输入数据，设置屏参时有参数提示信息 and 光标位置提示，输入数据时有光标位置提示，可灵活移动光标的位置、参数设置或数据输入，完成后自动保存，并且支持亮度调节。From set parameters to input data, it's totally by a remote controller. When you set parameters, there's prompts for parameters informations and cursor station; When you input data, there's prompt for cursor station. You could move the cursor's station smartly, and it will be saved automatically after set parameters and input data, also it supports brightness adjustment.

技术参数如下 Technical parameters:

存储容量 storage	2MByte
适配范围 application	各种规格的单色/双基色 LED 显示屏 support all kinds of single/dual color screens
行宽度 line width	最大支持 120 字节（960 像素点）宽 maximum 120 bytes for width (960 pixels)
行高度 line height	最高支持 48 像素点高 48 pixels for maximum height
行数量 line quantity	最大支持 30 行 maximum to support 30 lines.
扫描方式 scan mode	P10 (default)、P12
支持字体 font size	8*16、16*32、32*48
通讯接口 communication	RS232 (used for firmware update online)、IrDA
串口波特率 baud rate	57600bit/s
显示接口 interface	2 组 T8、4 组 T12 接口；2 nos of T8, 4 nos of T12
亮度调节 brightness	16 级亮度 16 grades
远程开关 remote power on&off	支持遥控开关机 support remote power off&on
工作电压 working voltage	5V (3.5V-6V)
Maximum power	≤1W

BX5MKUM01

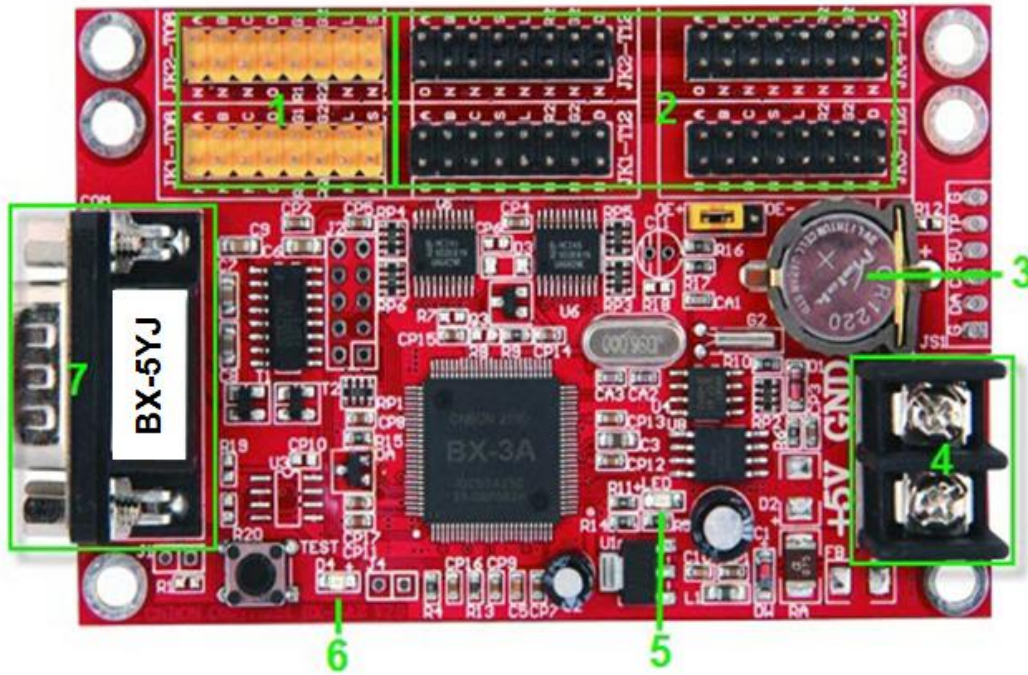
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Working temperature	-40°C~80°C
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1.2 屏幕规格 *Screen size*

Controller model	Control size	Screen size	Instructions
BX-5YJ			

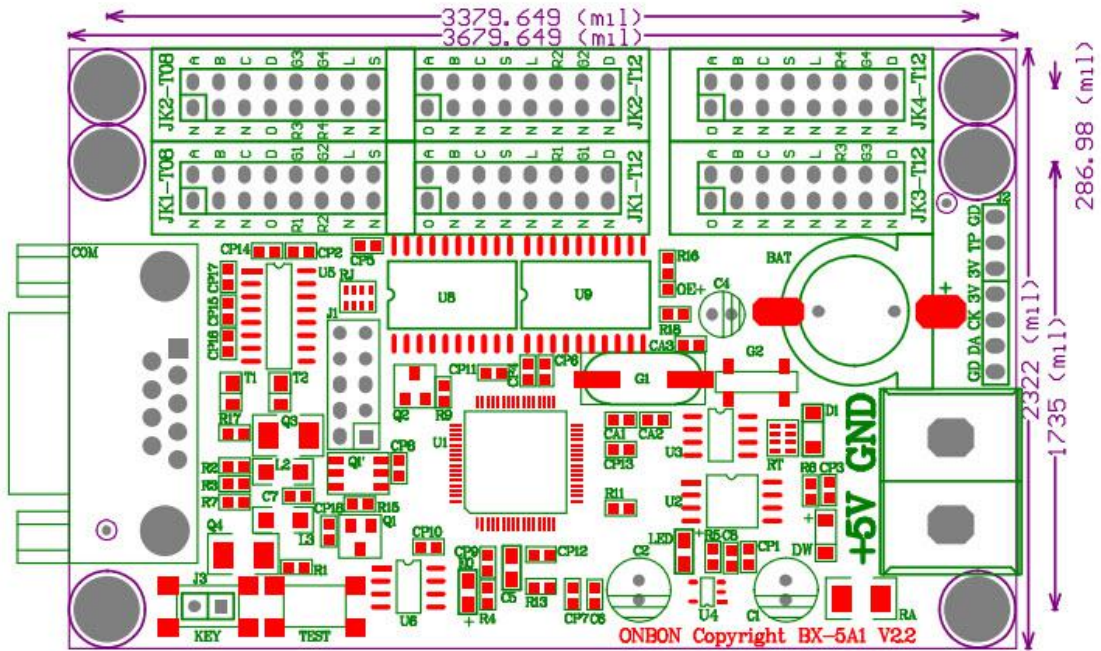
2. 接口定义 interface define



编号 item	接口名称 interface name	描述 Description
1	双基色屏接口 (T8) dual color (T8)	
2	单基色屏接口 (T12) Single color(T12)	
3	实时时钟纽扣电池 button cell	
4	5V 直流电源 5V DC power	
5	电源指示灯 power Indicator light	
6	控制器状态指示灯 Indicator light for controller status	Check 9.1
7	串口 Serial port	

控制器规格图 controller specification:





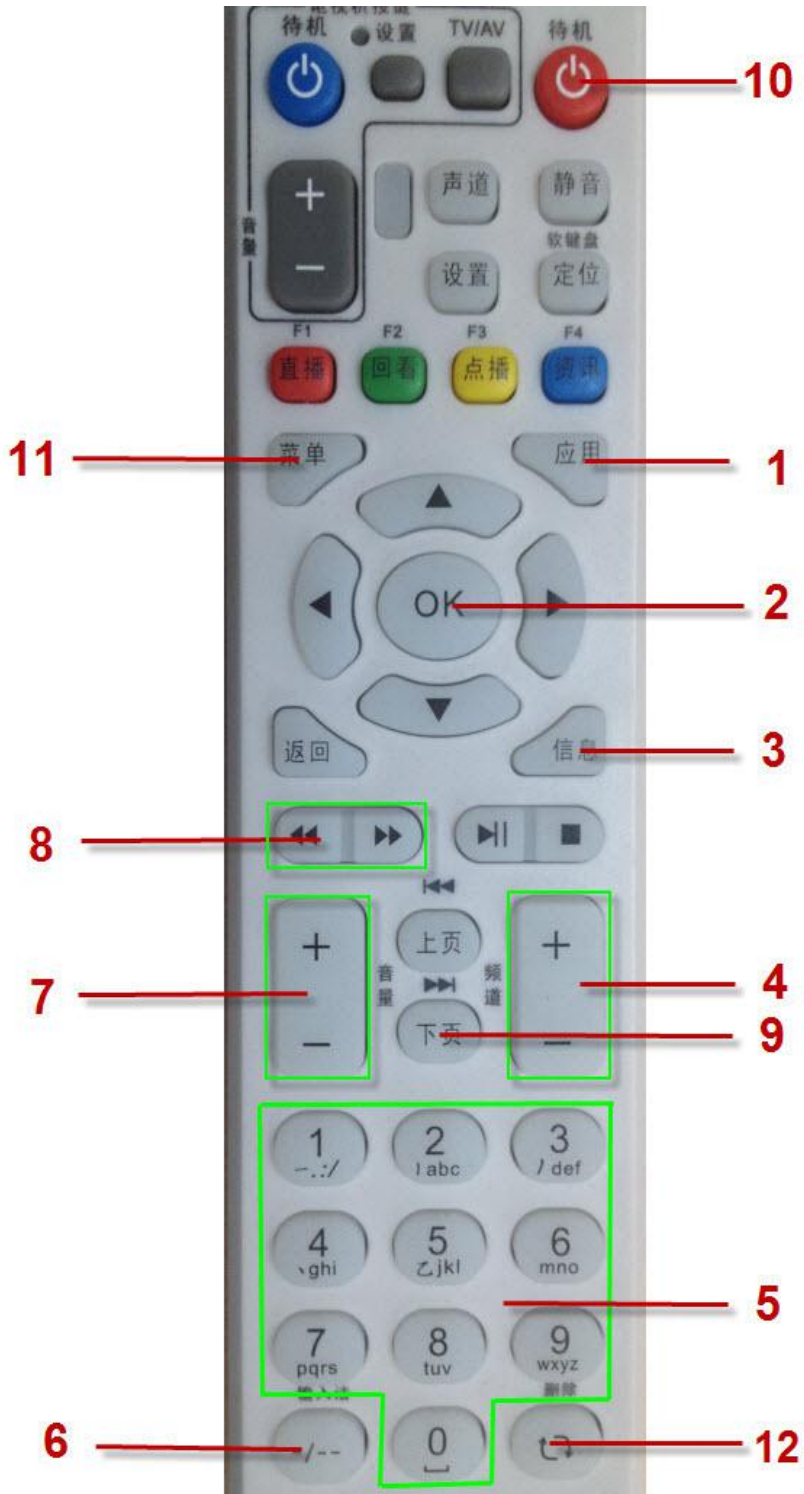
**直流特性**



输入电压 Input voltage: 4.5V~5.5V

工作电流 Working current flow :  $\leq$

功率 Power:  $\leq$ 1W

3. 遥控器按键功能定义button functions



items	Button function	Button value	instructions
1	扫描 (Scan)	application	切换扫描方式 switch the scan mode
2	确认 (OK)	OK	设置屏幕参数时使用 set the screen parameters
3	设置 (Set)	信息 information	设置屏幕参数 set screen parameters
4	亮度 (Brightness)	+ (右 right)	调节屏幕亮度 adjust the screen brightness
5	数字 (Number)	数字键 button 0~9	数字键 number button
6	小数点 (Dot)	-/-	小数点键 dot button
7	行内光标移动 (Move cursor in row)	+ (左)	在行内移动光标 move cursor in row
8	行间光标移动 (Move cursor between rows)		在行间移动光标 move the cruser between rows
9	编辑 (Edit)	下页 page down	编辑输入数据 edit and input data
10	开关机 (Power)	待机 waiting	开关机 power on&off
11	删除(Delete)	菜单 menu	删除旧数据和重置屏参 delete old data and reset the screen parameters
12	空格 (space)		空格键 space button

## 4. 使用步骤 steps

### 4.1 连接控制器 connect to the controller

将 LED 屏幕接在相应排座上并正确加电。 connect the LED screen with correct power supply .

### 4.2 屏参和扫描配置 screen parameters and scan mode

屏参和扫描配置现象分为三种（请根据实际选择）there is 3 mode options:

#### 步骤一 step one:

① 屏有数据 there is data on the screen:

② 屏无数据，但有光标闪动 there is no data on the screen,but only have the cursor flicker:

上述①②情况有 2 种按键选择 there is two button mode:

I. “删除”键：删除旧数据并且重置屏参，接着执行步骤二“delete” button:delete the old data and reset the screen parameters,then follow the step two;

II. “设置”键：会保留上次所设置的屏参，您可以根据提示逐步更改任某一参数，接着执行步骤二“set”button :this button will save the old screen parameters,u can change any of the parameters following the prompt,then follow the step two:

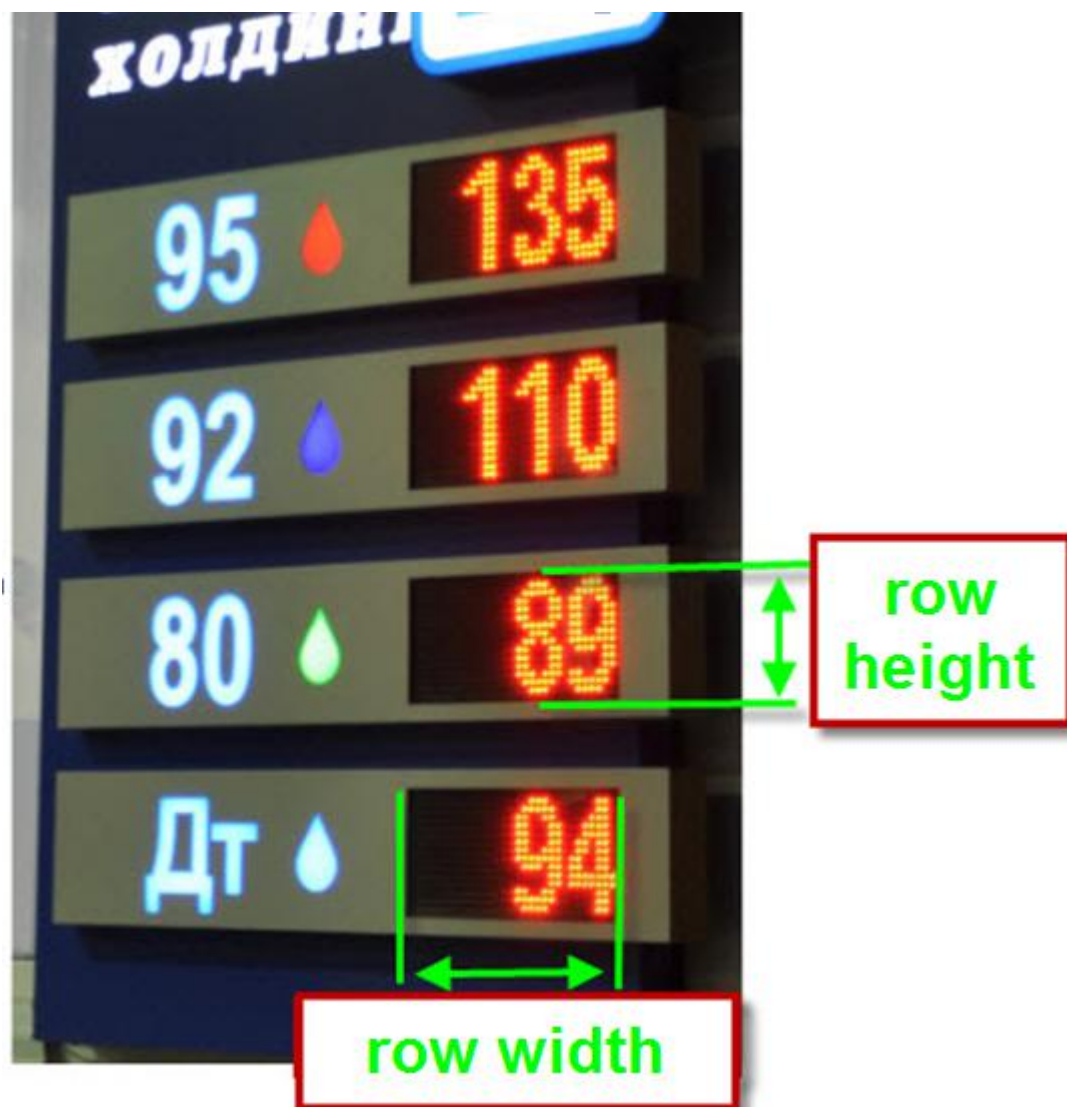
③ 屏无数据也无光标 there is no data and cursor flicker on the screen:

首先按下“设置”键：会保留上次所设置的屏参，接着执行步骤二；若没有正常执行，说明扫描方式与默认值不匹配，按“扫描”键，切换扫描方式后会出现光标，此时执行步骤二。 Firstly press the“set” button:will save the old parameters ,then follow the step two; if any problem ,that means the scan mode is not matching with the default value,press the“scan” button,switch the scan mode then will display the cursor flicker,then follow the step two as below.

#### 步骤二 Step two:

此时屏幕提示输入行宽度“W:”，此时输入行宽度（以字节为单位）并按“OK”键；随后屏幕提示输入行高度“H:”，（行高决定了您要显示的数字的高度）此时输入行高度（以像素点为单位）并按“OK”键；随后屏幕提示输入行数量“C:”，此时输入行数量并按“OK”键，随后屏幕提示输入 OE 极性“O:”，此时输入 OE 极性（0 为负极性 1 为正极性）并按“OK”键，最后屏幕会提示输入小数点显示模式“D:”，输入‘0’（小数点占半个字符宽度）或‘1’（小数点不占宽度）并按“OK”键来保存参数并退出设置模式。到此屏参设置完毕。按“扫描”键可切换屏幕扫描方式。 Set parameters: click " set " as to enter into the set mode --- prompt: input module width " W " --- input the width of module (unit: byte) --- click " OK " --- prompt: input module height " H " --- input the height of the module (unit: pixel) --- click " OK " --- prompt: input the line quantity of your module " C " --- input the line quantity and click " OK " --- prompt: input OE polarity " O " --- input the OE polarity (0 is the negative polarity and 1 is the positive polarity), then click " OK ",at last the screen will prompt to input the dot mode "D",input "0"(the dot will make up of the half of the character width)or input"1" (the dot will not make up the character width)then click "OK"as to save the parameters and exist. Click " scan ", could change scan mode.

行宽度和高度定义如下图：



#### 4.3 数据输入 *input data*

当需要更新数据时，按“编辑”按钮，此时光标会高亮停留在第一行的第一位位置，输入数据的第一位，光标会自动跳到第二位，接着输入数据第二位，以此类推，直到输入完此行数据，光标自动跳到下一行的第一位位置，……，如数据不慎输错，可按相应移动光标键在行内和行间移动光标位置来修改某一位数据。所有数据输入完毕后，按“编辑”按钮保存数据并退出编辑模式。  
Update data: click "edit" --- the cursor is on the first position of the first module --- input data --- get to the second position --- input data ....., if some times make wrong when input the data, you could use "move cursor button" to modify one of the data. After finished, click "edit" as to save the data and exist.

#### 4.4 亮度调节 *Adjust the brightness*

当需要调节亮度时，按亮度加减键可以设置亮度，此时显示会变亮或变暗。When need to adjust the brightness ,use the brightness button to set is ok ,then the screen will be lighter or dark.

#### 4.5 注意Notes

设置模式和编辑模式互斥，即处在设置模式时不能进编辑模式，处在编辑模式时不能进设置模式。分别使用“设置”键和“编辑”键可以切回正常模式。Set mode and edit mode cannot be together: when it's on the set mode, you cannot enter into the edit mode; when it's on the edit mode, you cannot enter into the set mode.

#### 4.6 常见问题处理FAQ

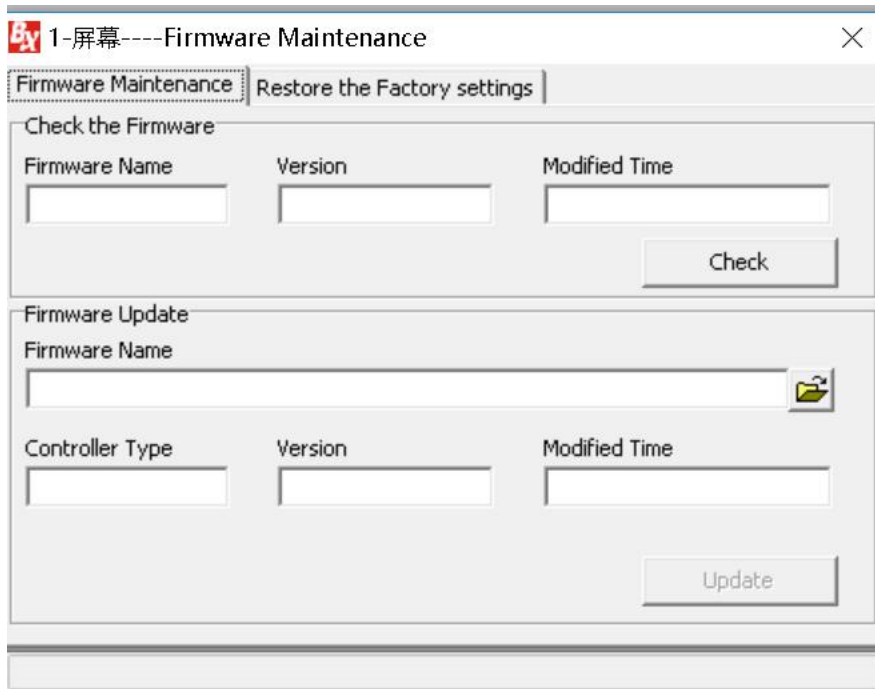
- 开机后屏幕黑屏，看不到数据或光标。Black screen when start it, cannot see the data or cursor.  
遇到此问题请先检查屏幕电源是否开启以及屏幕与控制卡之间的连接线是否插正确，若排除此可能，请先按遥控器的“删除”键，将以前的数据以及屏参擦除掉，若还是没有任何显示，请按“扫描”键切换扫描方式，再执行“删除”键，之后控制卡自动进入设置模式，可看到光标，即可设置屏参。Please check the power connection, and the connection between control card and screen. If all OK, please click " delete " button on the remote controller, as to delete the former data and screen parameters, then controller enters into set mode, you could see the cursor, then set screen parameters.

## 5. 恢复出厂固件restore the firmware

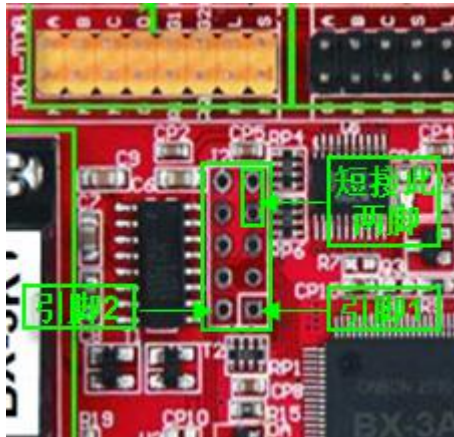
在升级固件后，若升级的固件出现意外不成功或不能适应当前环境，可以恢复出厂固件。具体步骤如下：点击菜单中“设置”按钮，选择“设置屏参”，输入密码“888”，然后设置好串口号：After upgrade the firmware, if the upgraded firmware shows not success, you could restore the firmware,click the “setup” --“set screen parameters”--input password “888”then set the serial port .

### Steps:

然后关闭此对话框，再次点击菜单中“设置”按钮，选择“控制器程序维护”，弹出对话框，选择“恢复出厂程序”页：close this page then click " set " --- select " firmware maintenance " -- select " restore the factory settings ":



若在升级固件后出现死机不能通信的情况下，请使用“硬恢复”，即短接控制卡上 JTAG 口的 7、9 两脚，如下图所示：If it cannot get communicate after upgraded the firmware, please forced to reset: connect 7 and 9 foot of JTAG port on the controller, picture showed below:

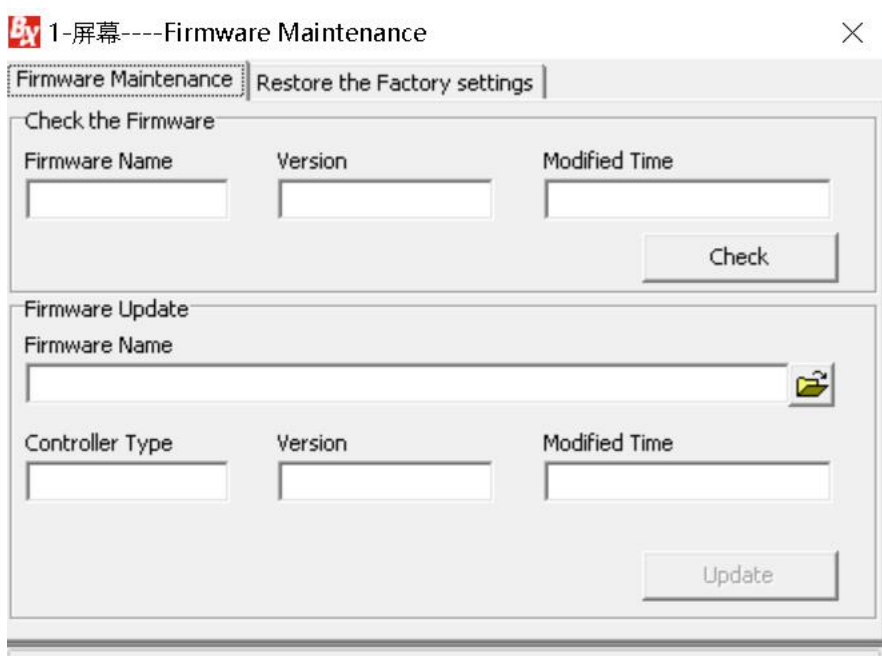


注意，短接前请先将控制器下电，短接后上电等待至少 10s 再放开。Note: Please do not get power when connect 7 and 9 foot, after get connection, get the power, at least 10s.

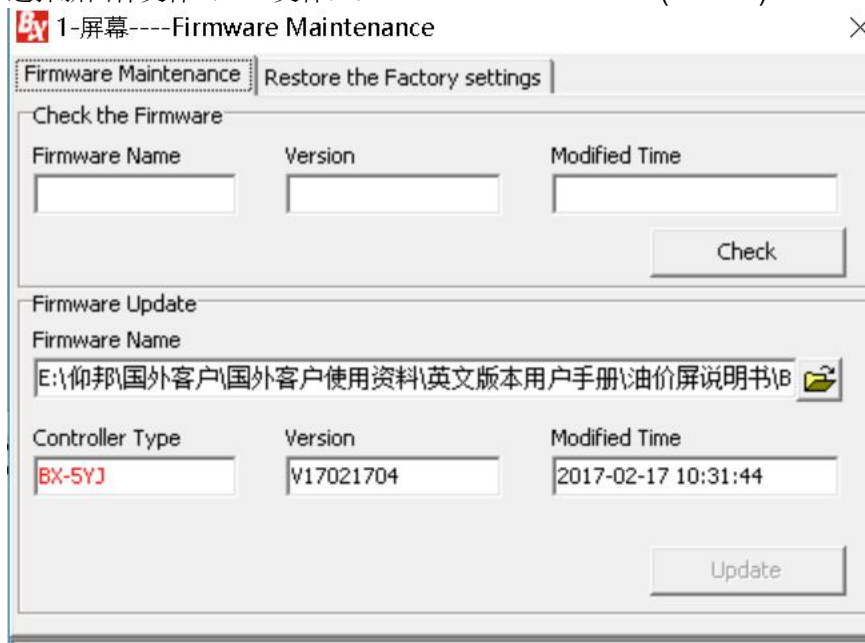


### 6. 升级固件firmware update

若出产固件发现一些 Bug，本公司会立即修复并发布新固件，客户可以选择升级新固件以解决此 Bug，升级新固件具体步骤如下：点击菜单中“设置”按钮，选择“控制器程序维护”（请确保串口号已设置正确，串口设置方法请看第五章“恢复出产固件”），此时弹出对话框，选择“字库卡程序维护”页：If the firmware with bug, we will fix it up immediately and release the new firmware. Steps: click " set " --- select " firmware maintenance "(pls make sure set the correct the serial port)then prompt the page as below:



选择新固件文件（\*.rel 文件）： select the new firmware(\*.rel file)



并点击“更新”按钮。Then click the update button.

## 7. 故障排查 Stoppage checking

### 7.1 状态指示灯 Status indicator light

状态编号 Numbers	状态指示灯动作 indicator light cation	说明 Description
1	3 秒钟闪烁一次 Blink in every 3 seconds	控制器工作正常，没有异常 All OK
2	0.1 秒钟闪烁一次 Blink in every 0.1 seconds	控制器出现时间错误、数据错误等异常 Time wrong, data wrong, etc.
3	1 秒钟闪烁一次 Blink in every 1 seconds	控制器固件丢失 Firmware missed

### 7.2 常见故障 FAQ

故障编号 Numbers	故障现象 Stoppage	解决方法 Solutions
1	电源指示灯不亮 Power indicator light does not work	检查电源接线，测量电源电压，确保电源接线正确，电压正常。 Check the power connection, power voltage, as to ensure all get ok.
2	状态指示灯不亮 Status indicator light does not work	检查电源供电是否正常，检查板子是否出现器件虚焊掉落。 Check the power supply, and the modules connection.
3	与软件通讯失败 Communicate failed with the software	检查串口通讯的 COM 口是否正确或网络通讯的 IP 设置是否正确，检查通讯接线是否正确，检查计算机通讯接口是否正常。 Check the COM port or the internet IP setting are correct; The communication connection is correct; Check PC communication port is OK.
4	控制器时间错误 Controller's time wrong	打开软件重新给控制器校时。 Open the software, correct the time.
5	校时后控制器时间不能保存 After correct the time, cannot save.	更换 RTC 钮扣电池。 Change RTC cell battery.
6	状态灯提示错误 LED 显示屏显示正常 Status indicator light prompts you wrong, but LED screen shows correct	检查控制器硬件有无虚焊，烧焦，更换损坏器件 Check the controller, with dry joint, burnt or not.

### 7.3 注意事项 Notes

- 1) 使用 5V 供电，电源注意不要反接。 Use 5V power supply, do not mixed the power.
- 2) 请不要带电插拔标准 16pin 接口。 When connect 16pin port, do not get power.
- 3) 控制器请放在干燥阴凉处储藏。 Keep the controller in a dry and colder place.

## 8. 联系我们CONTACT US

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