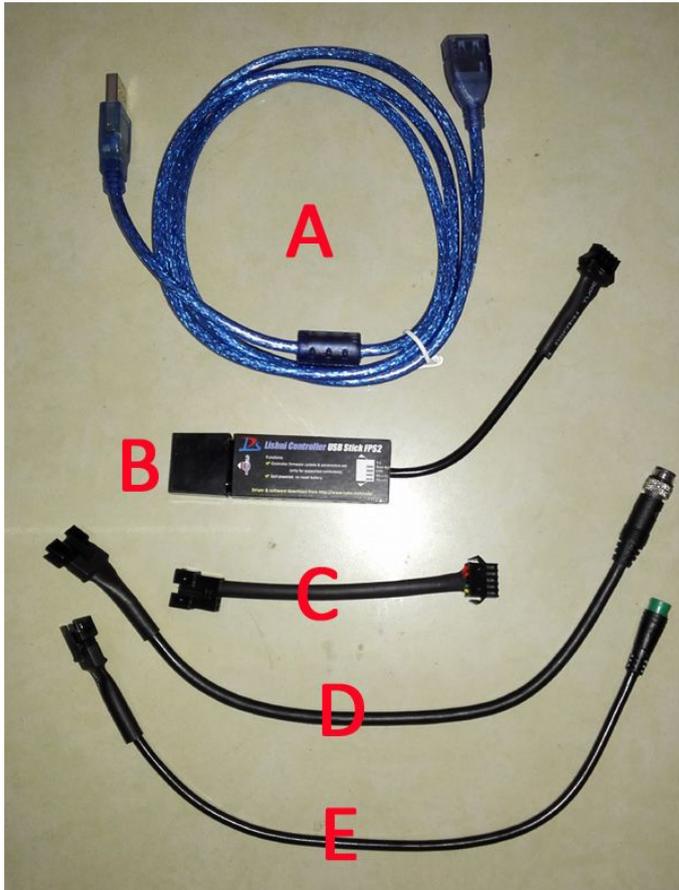


# Lishui Controller LSH Programmer User's Manual



## Hardware List

- A. USB extension cable
- B. USB stick FPS2
- C. Self-powered to out-powered cable
- D. KM 5-pin cable
- E. Julet 5-pin cable

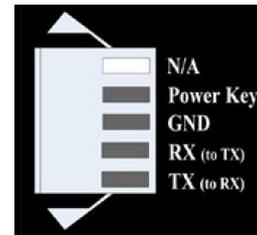
## Hardware Connection

Choose D or E according to the display connector type and connect it to USB stick B, then disconnect the controller from the display in the e-bike, and connect D or E to the controller's display connector. Use the USB extension cable between USB stick and computer if necessary.

Follow the instructions of

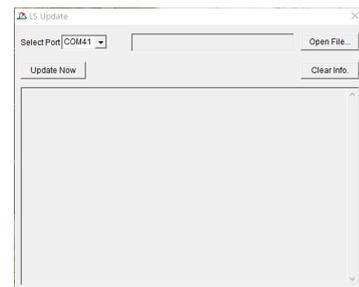
hardware driver installation in the next section of this document, and connect the USB stick or extension cable to the computer. Then it is ready for the programming software to be opened.

Note 1: If D and E cannot match your connector of controller's display cable, you can contact us to make a new type or you can make one by yourself with the right pin definition, RX connect to controller's TX and TX connect to controller's RX.



Note 2: Self-powered to out-powered cable C, can be used when the computer's USB port has no enough current supply. The e-bike battery is needed in this case. Insert C into BD or BE, then connect the battery to controller, when the programming software shows "Please turn on the power of controller now", turn on the battery power switch.

Note 3: Self-powered to out-powered cable C, can also be used for old version .LS file programming. Battery is also needed. Insert C into BD or BE, then connect the battery to controller, when the programming software shows "Turn on Power", turn on the battery power switch.

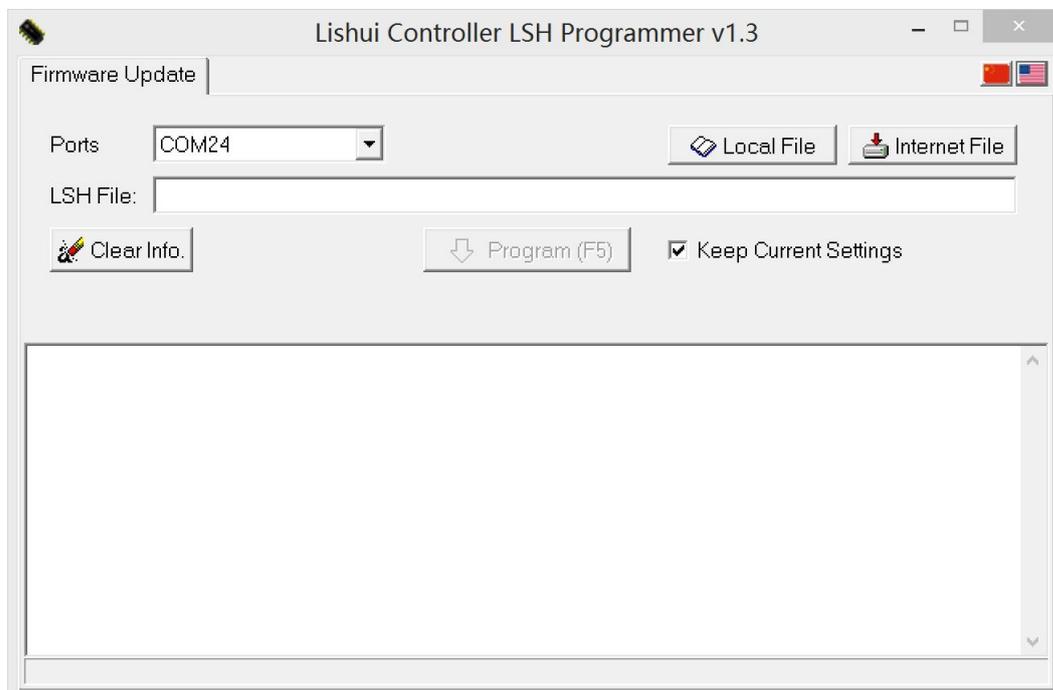


## Software Installation

Extract  Lishui\_Controller\_LSH\_File\_Update\_Tools.rar

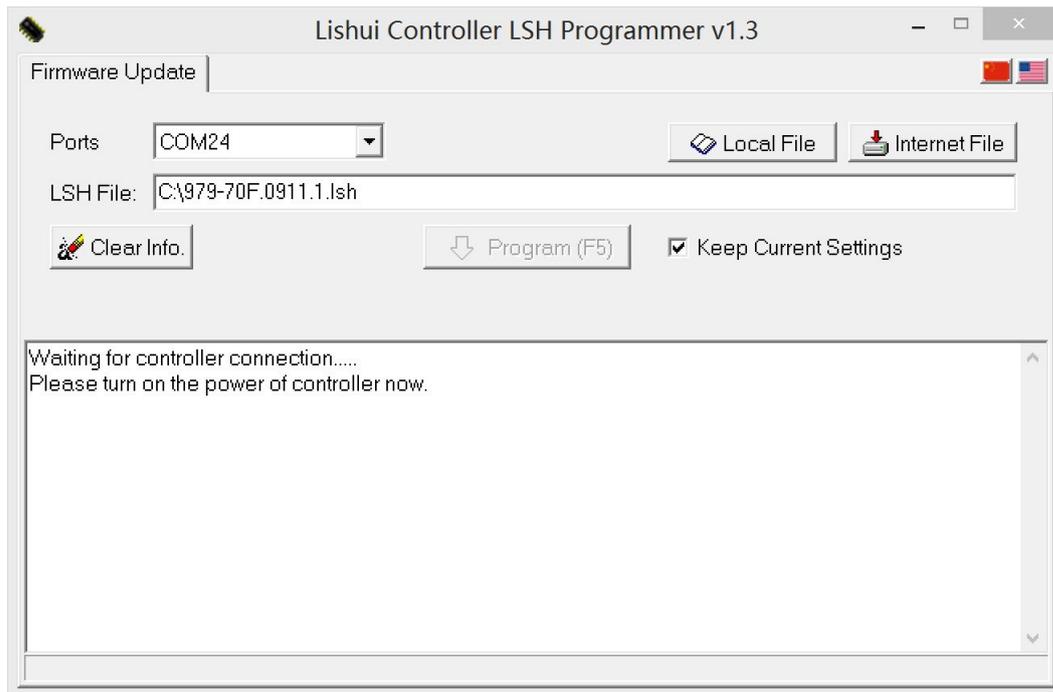
First, run  USB\_Driver\_Automatic\_Installation.exe to install the device driver, follow the instructions step by step. After finished, insert the USB program device or extension cable into your computer's USB port. Then

run  LSH\_Update.exe and get this interface.



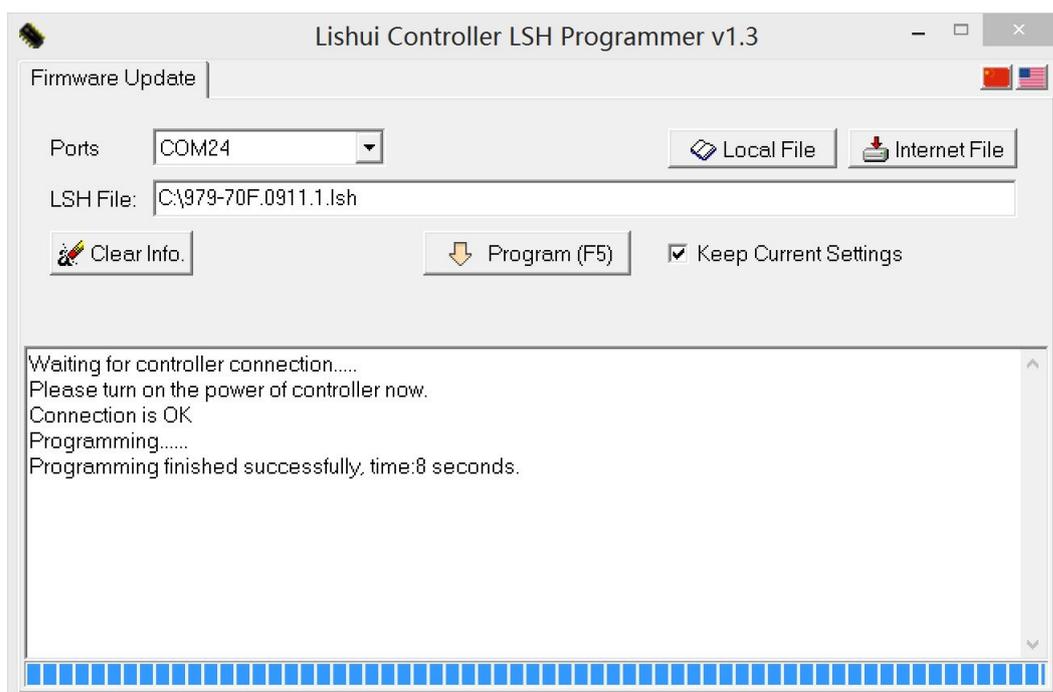
If the right area of Ports shows COM+number, it means the USB driver has been installed successfully and the device is found to proceed next step. Otherwise, if the Ports is empty, it means the driver is not installed rightly. You can try to install the driver manually. The driver file is under the folder USB\_Driver\_Manual\_Installation.

If you have received a LSH file, just click “Local File” button and open the LSH file. Make the controller and programmer well connected, and do not connect the controller with battery. Click “Program (F5)” button, you will see the below interface.

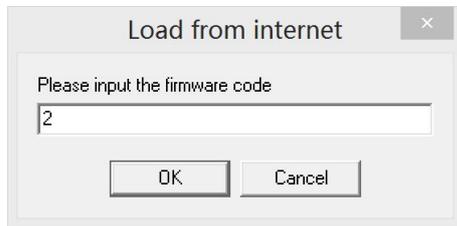


If the software stops here, now you need to connect the controller with the battery and switch on the battery's power to start programming.

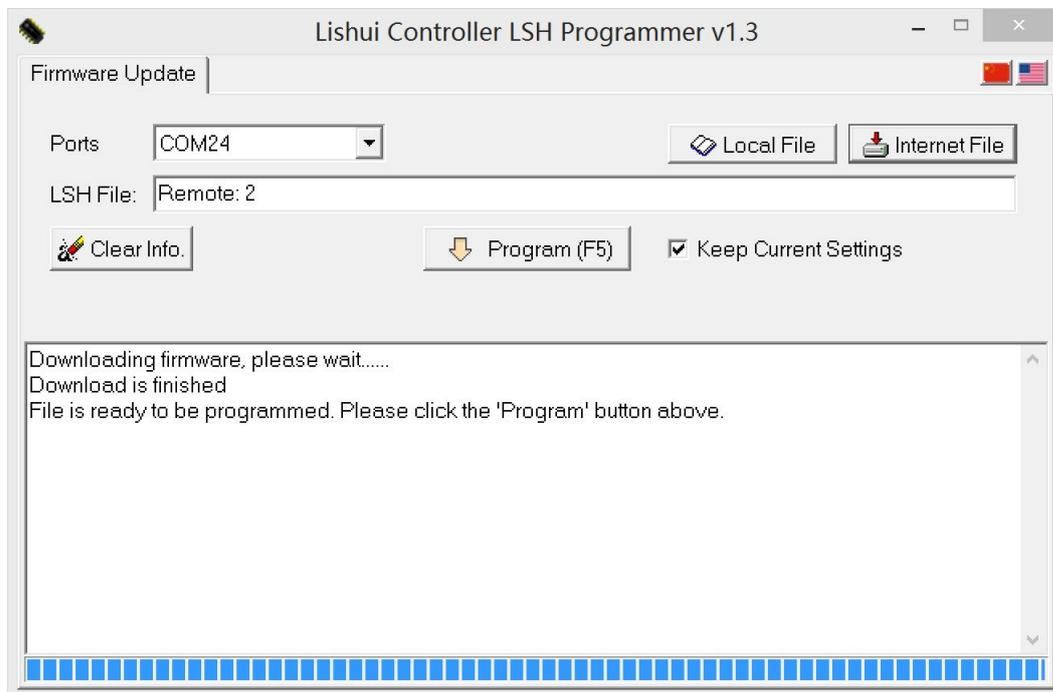
If you get the programmer device after Sept. 2015, it is new version with USB boost power. It does not need a battery during programming. Click "Program (F5)", only if the programmer and controller is connected well, the programming will go on automatically like below.



If you get a remote file code instead the LSH file, just click “Internet File” button and input the firmware code

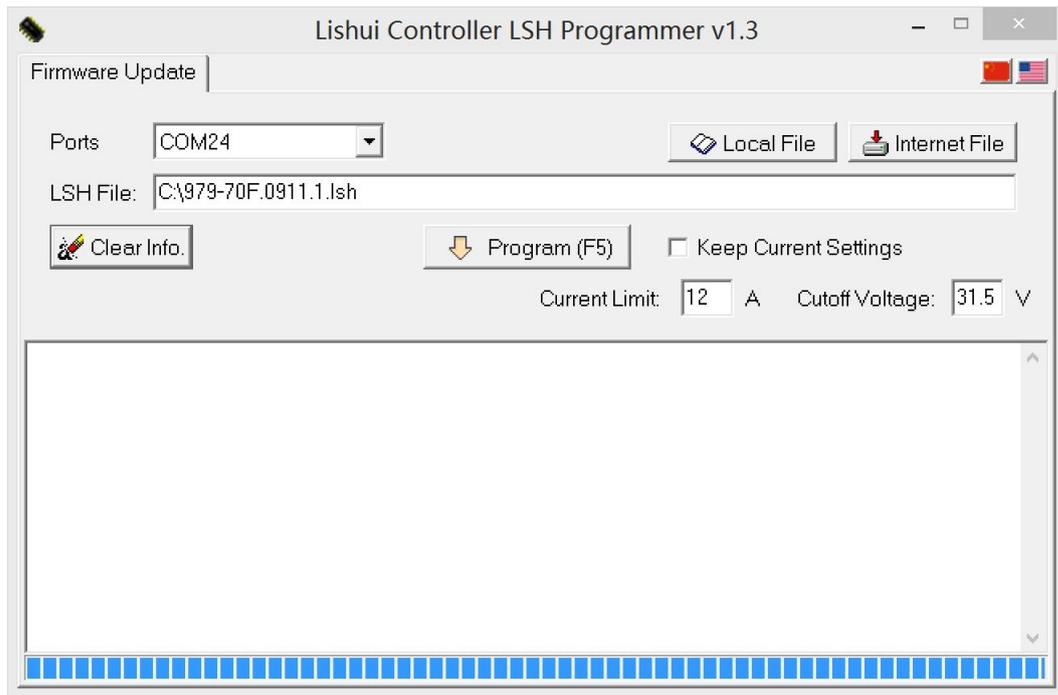


If the firmware code is valid and your internet connection is well, you will see this interface.



Now you can click the “Program (F5)” button to start programming, the procedure is the same as what’s doing with local file.

If you want to set the controller’s maximum current and cutoff voltage, you can uncheck the “Keep Current Settings” and you see below



You can set the new current limit and cutoff voltage here and the following steps are the same.