

Diablo Tools Flash Guide User Guide v1.1

1 Declaration

It is declared that the original version of the robot's motor firmware is a development and testing version, and there will be problems during use. Therefore, when you modify the firmware of the motor by yourself, please pay attention to the following:

1. Please pay attention to safety when debugging the motor parameters;
2. It may cause damage to the robot;
3. It may not meet your development needs;
4. If the machine is damaged due to development, please refer to the second article of Warranty;
5. Making a change means that you agree and know the risk, and all losses caused by it have nothing to do with Direct Drive Technology Limited.

2 Data Preparation

Need Diablo Tools tool, firmware compression package (zip)

3 Robot Status


Before starting the firmware update, turn on the power of the robot, and use the remote control to disable the robot, as shown in the figure below. Be careful not to put your hands in the middle of the connecting rod to prevent pinching.

Make sure your Horizon/Raspberry Pi is connected to the 40pin interface of the main control board of the robot. DIABLO can only perform firmware update through UART4 in the 40pin interface.



4 Software Operation








1. Please copy the following tar archive to your Raspberry Pi through a USB flash drive or wireless transmission.

 Rasp_Diablo_Tools.tar	2023/5/10 13:54	TAR 文件	2,778 KB
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2. Use the following command to unzip your Raspberry Pi flashing kit.

```
tar -xvf Rasp_Diablo_Tools.tar
```

The extracted folder should look like this. Where .zip is the firmware compressed package. Please make sure that the connection between the Raspberry Pi and the main control board on the robot is stable.

 bin	2023/3/17 13:03	文件夹	
 logs	2023/3/17 13:03	文件夹	
 picture	2023/3/17 13:03	文件夹	
 2023_03_17.zip	2023/3/17 18:05	压缩(zipped)文件...	209 KB
 ReadMe.md	2023/3/17 13:03	MD 文件	2 KB
 ReadMe.pdf	2023/3/17 13:03	Microsoft Edge ...	190 KB
 Start_DiabloTools_CN.sh	2023/3/17 13:03	Shell Script	16 KB

3. Enter the Diablo Tools folder on the host computer Raspberry Pi ~~↗~~and enter the following command to grant executable permissions to the script.

```
chmod +x Start_DiabloTools_EN.sh
```

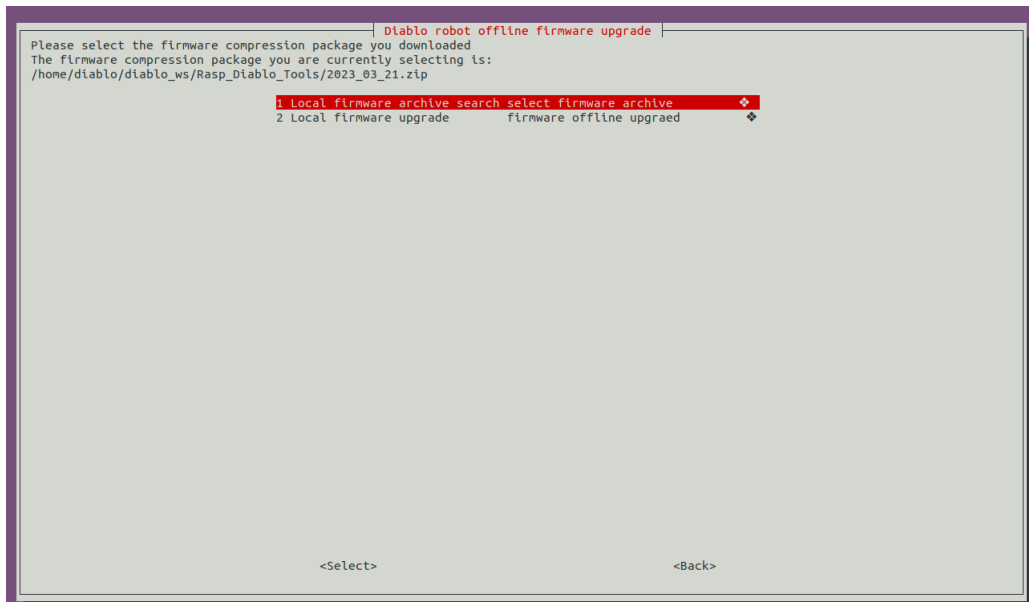
4. Then, make the command line window full screen, and enter the following command to execute:

```
./Start_DiabloTools_EN.sh
```

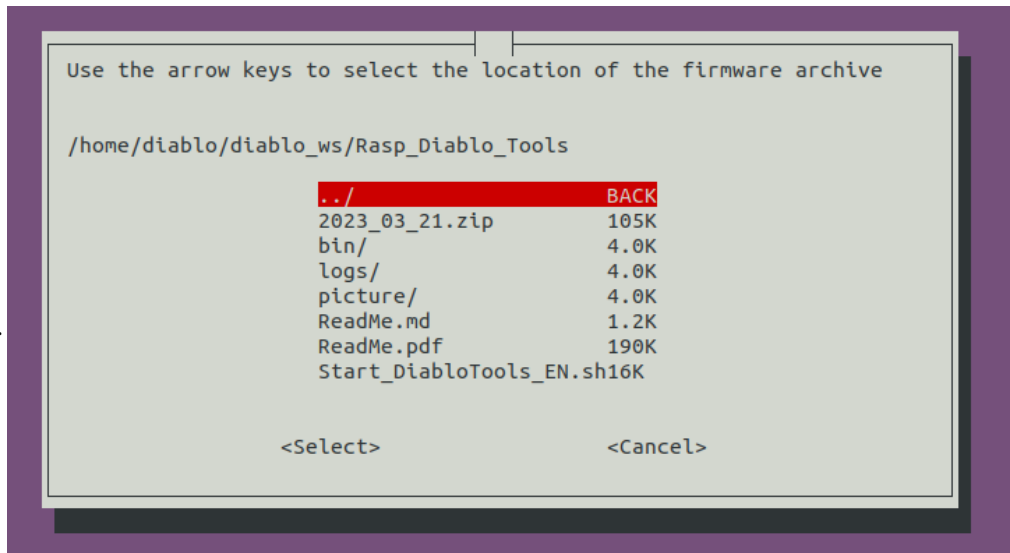
5. You will see the following interface. Select the first local firmware compressed package search.



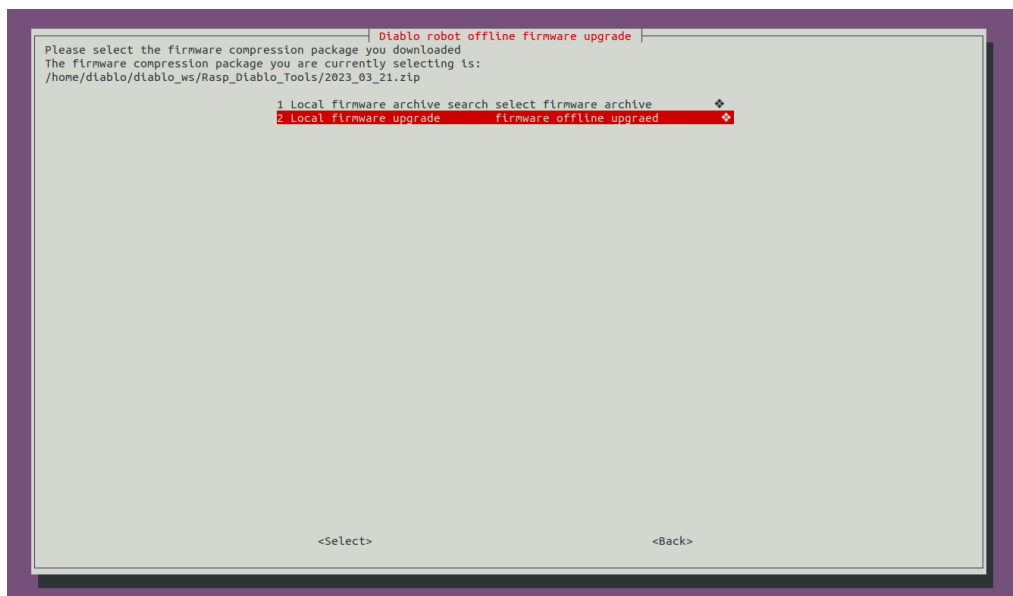
6. Then you will enter the following page. At this time, you need to select the location of the firmware compressed package, and select the local firmware compressed package to search.



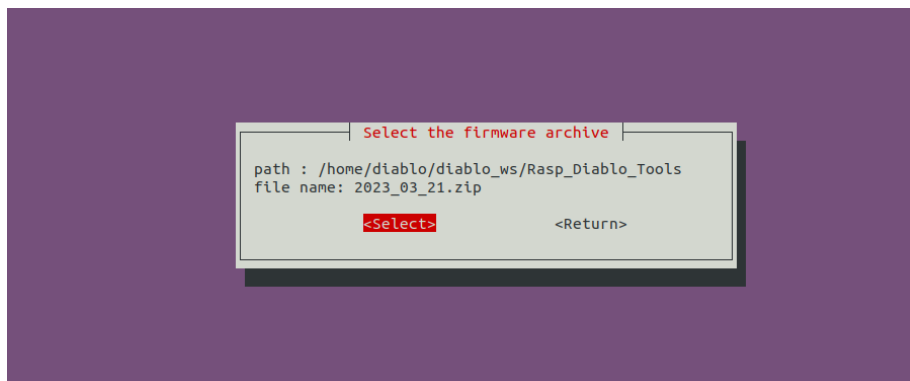
7. You will enter the following page. Select the firmware compressed package, the suffix is .zip, as shown in the figure below. After pressing the tab key, select <Select> to return to the upper-level page.



8. After that, the location of the firmware compression package should be displayed in the upper left corner of the page, as shown by the arrow in the figure below. Then select the local firmware upgrade.



9. You will enter the offline upgrade interface, where you will select the target firmware compression package and perform the upgrade. Before upgrading, please be sure to confirm whether the firmware compression package is selected correctly.



10. Afterwards, an upgrade progress bar will appear. When upgrading, the main control board of the robot will flash a red light. During the upgrade process, the robot legs may retract and reset automatically, as shown in the figure below. Please make sure that the progress bar reaches 100% and the page returns to the superior before powering off the robot.



If the upgrade fails, you can restart the robot and try to upgrade again or contact the staff.

