VKBSIM

T-Link

T-Rudder pedals
Control Panel

User guide

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Introduction

The T-Link software – T-Rudder pedals control panel – enables the interaction of VkB-Sim T-Rudder pedals working under BlackBox, TinyBox or ThrottleBox USB controllers with flight stick controllers developed by VKB-Sim. T-Link lets you perform the following actions:

▼ The main tools:

- ▼ Assign a joystick button to manage virtual axes for rudder pedals,
- ▼ Assign a joystick button to apply custom response curve to yaw axis,

▼ Extended settings:

- ▼ Calibrate yaw axis,
- ▼ Adjust axis dead zone,
- ▼ Adjust axis sensitivity,
- ▼ Save parameter settings to the controller,
- ▼ Test the operation of physical and virtual axes,
- ▼ Initiate a firmware upgrade.

Up-to-date version of T-Link executable *T-Link.exe*, firmware upgrade tool *Z-Bootloader.exe*, configuration tool VKB Device Configurator executable *VKBDevCfg.exe*, VKB device test program *VKBJoyTester.exe* and controller firmware files can be found at: http://ftp.vkb-sim.pro/Programms/ and http://ftp.vkb-sim.pro/Firmware/.

1. Using the T-Link Software

1.1.   Preparations for using T-link

To ensure that T-Link will work with your VKB-Sim devices, follow these steps:

▼ Connect your VKB-Sim flight stick and T-Rudders with respective USB controller to your computer,

▼ Flash the T-Rudders to firmware version 1.762 (or higher),

▼ Launch the T- Link software and VKB_JoyTester software.

1.2.   Starting the Program

After launching *T-Link.exe*, the program's window appears (Fig. 1.1).
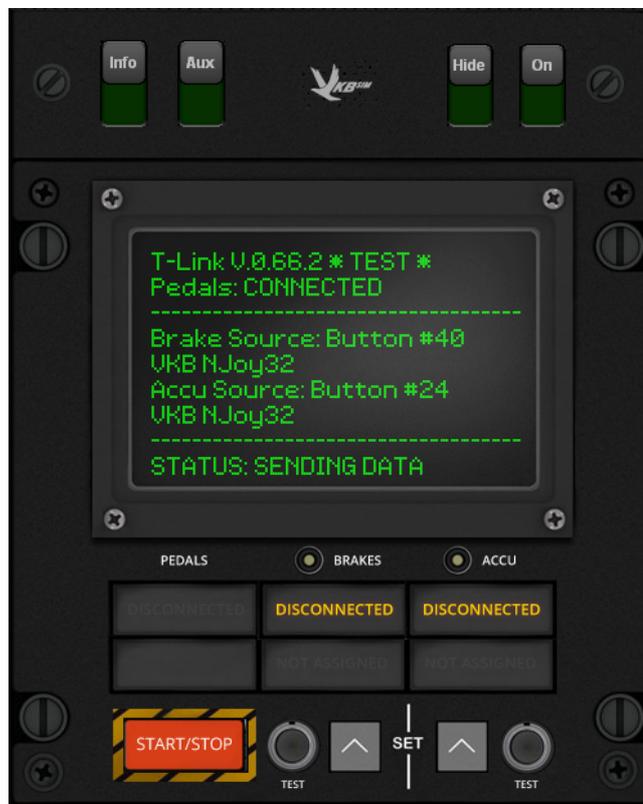
Fig. 1.1.

If the T-Rudders were not connected during T-Link start-up, the following message will appear: *Pedals: DISCONNECTED*. When connecting the T-Rudders, the status change is automatically detected and the message changes to *Pedals: CONNECTED*.

1.3.   Checking the T-Rudder Functionality

Launch the VKB_JoyTester program.

Click the **Start/Stop** button from within the T-Link window; the program's status changes from *Deactivated* to *Sending data*.

(Click the **Test** button in the **Brakes** section; the VKB_JoyTester window will display virtual axes 2 and 3 response (Fig. 1.2).
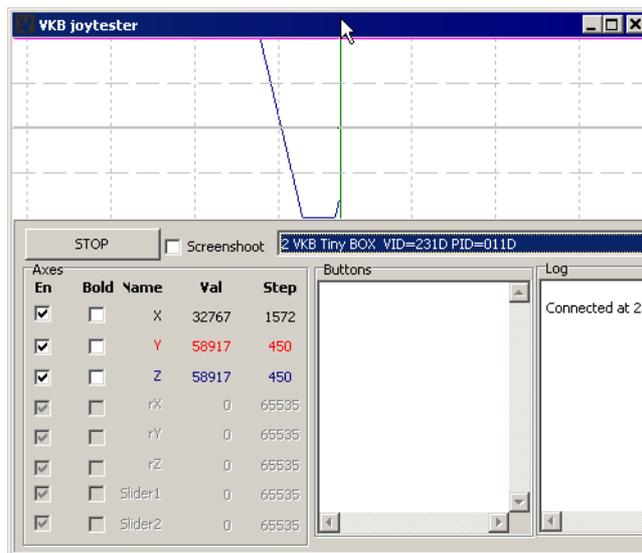
Fig. 1.2.

Click and hold the **Test** button within the **Accu** (Accuracy) section of the panel; when pressing a pedal axis, the VKB_JoyTester window will match the configuration axis response curve of the **Response Curves** shown within the VKB Device Config panel.

1.4.   Assigning a Joystick Button

To assign a physical joystick button, which allows you to toggle the virtual brakes, click the **Set** button in the **Brakes** section of the panel. In this «set» mode, T-Link is waiting for you to assign a joystick button. Press the desired button, and the T-Link application will respond with the controller assigned button number (Fig. 1.3).
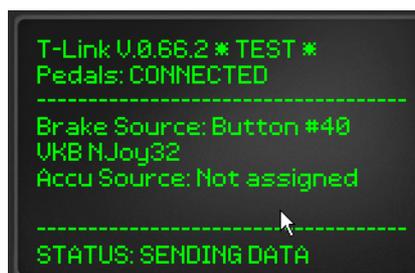
Fig. 1.3.

The selected button should not have any additional modes assigned to it, for example Shift, Keyboard etc.

In the example above (Fig. 1.3), the virtual brake is controlled by joystick button #40 (*Brake Source: Button # 40*). To test the assigned button, press it; the response of virtual axes should correspond to that shown in Fig. 1.2.

Similar to assigning a joystick button for the virtual brakes, you can assign a button to apply the control of the shape of the response curve (*Accu Source*). Click the **Set** button in the **Accu** section of the window and press a joystick button to assign it to the Accu function.

1.5.   Additional Settings

In order to use T-Link functionality (the virtual brakes within any simulation and response curve control), T-Link needs to be running in the background. The **Hide** button allows you to minimize the T-Link window, while still remaining active. The shortcut menu allows you to restore the T-Link window, toggle the state of the T-Link program, or exit T-Link (Fig. 1.4).

Fig. 1.4.

2. Service Functions

In order to open the Advanced Settings panel, click the **Aux** button. Here you can access additional controls (Fig. 2.1).

Fig. 2.1.

2.1.   Axis Calibration

To calibrate, proceed as follows:

1. Click the **Start** button within the **Calibration** section of the window.

   CALIBRATING message appears.

2. Depress the T-Rudder pedals to their extreme positions. The **Left** and **Right** indicators show the current position of the axis respectively to the central one. Digital indicator shows response value. The **Center** indicator corresponds to pedals central position.

3. To finish the calibration process, click the **Stop** button; if you want to cancel the calibration without saving, press **Cancel** instead.

2.2.   Axis Configuration

2.2.1. Setting the Dead Zone

The arrow buttons in the **DEAD ZONE** section of the window allow you to adjust the size of the dead zone; the dead zone value is displayed in the same section via digital readout.

2.2.2. Adjusting Sensitivity

The **RESOLUTION** switch allows you to set the multiplier value that determines axis sensitivity; for VKB controllers with MaRS sensors, this value should set to be in the range of 9 - 11.

2.2.3. Writing Parameters to the USB Controller

The **SET** button allows you to save the axes settings in the USB controller's memory.

Don't forget to press this button each time you change the settings!

2.3.   Firmware upgrade

To update the controller's firmware, do the following:

1. Download the firmware upgrade tool file called *ZBootloader-C.zip* from http://ftp.vkb-sim.pro/Programms.

2. Download the desired firmware version for your T-Rudders from http://ftp.vkb-sim.pro/Firmware (look for either TinyBox, ThrottleBox or BlackBox, depending on your T-Rudder variant).

3. Extract both files from their respective ZIP file, into the same folder from where you are running your *T-Link.exe*.

4. Click the **Bootloader** button (Fig. 2.2).

Fig. 2.2.

Controller will be turned to firmware upgrade mode and T-Link window will close.

5. Launch *ZBootloader-C.exe* file.

Z-Bootloader window will appear on the screen (Fig. 2.3).
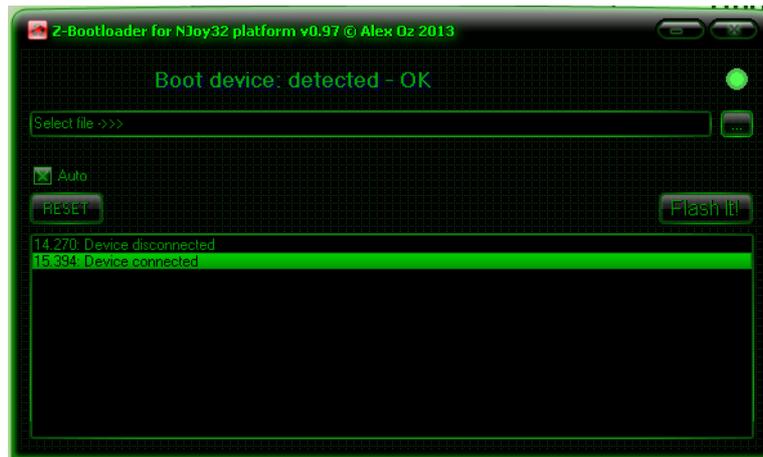
Fig. 2.3.

6. Click the **Browse** button and select the firmware file from within the standard dialog that opens; the file name will appear in the program window.

7. Click the **Flash It!** button.

   The **Z-Bootloader** window will display informational messages during the flashing process; after the firmware update is complete, the window will close automat- ical-ly.

2.4.   Shutting Down T-Link

To close the T-Link application, click the **On** button.