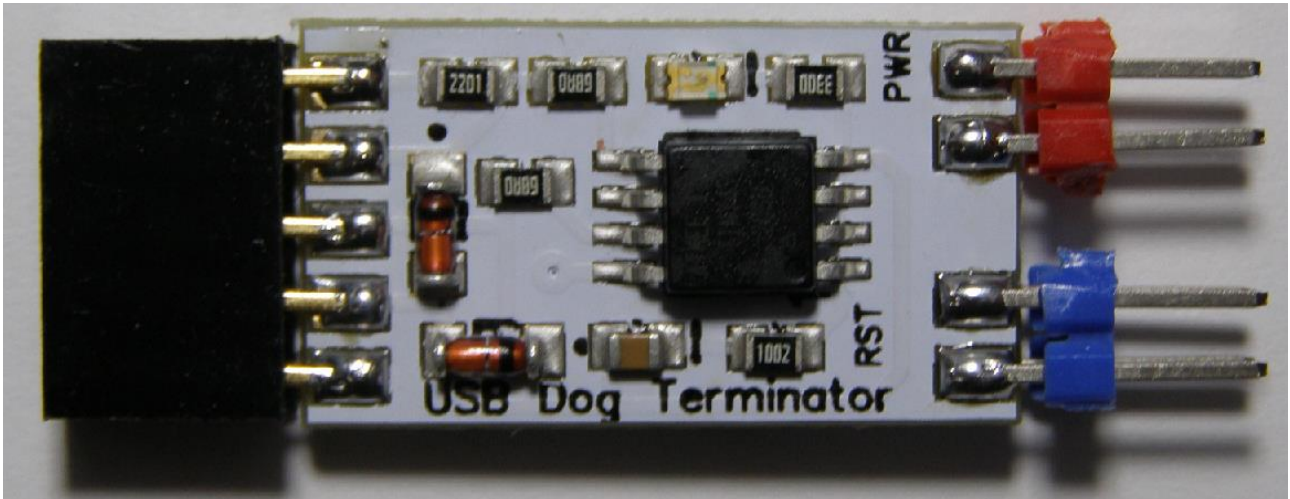# 2017

USB Dog Terminator

User's Manual

Short description

USB DOG Terminator was developed specifically for use in GPU farms and is designed to restart the computer, in the case of a freezing of the operating system (OS). If the computer does not reboot, with a hard OS hang, USB Dog Terminator will turn it off and then turn it on. And this will continue until the computer boots up the OS and the USB Dog Terminator service program starts up. The download timeout, hang time, and other values, if necessary, can be configured in the USB Dog Terminator service by the user. Due to the presence of LED indications, it is possible to visually observe various modes of operation, the description of which will be given below.

Connects USB Dog Terminator to the USB port, which is located on the motherboard of the internal USB connector. The computer is controlled by additional, connectable jumpers that connect to the RESET and POWER buttons and to the USB Dog Terminator to store computer control.
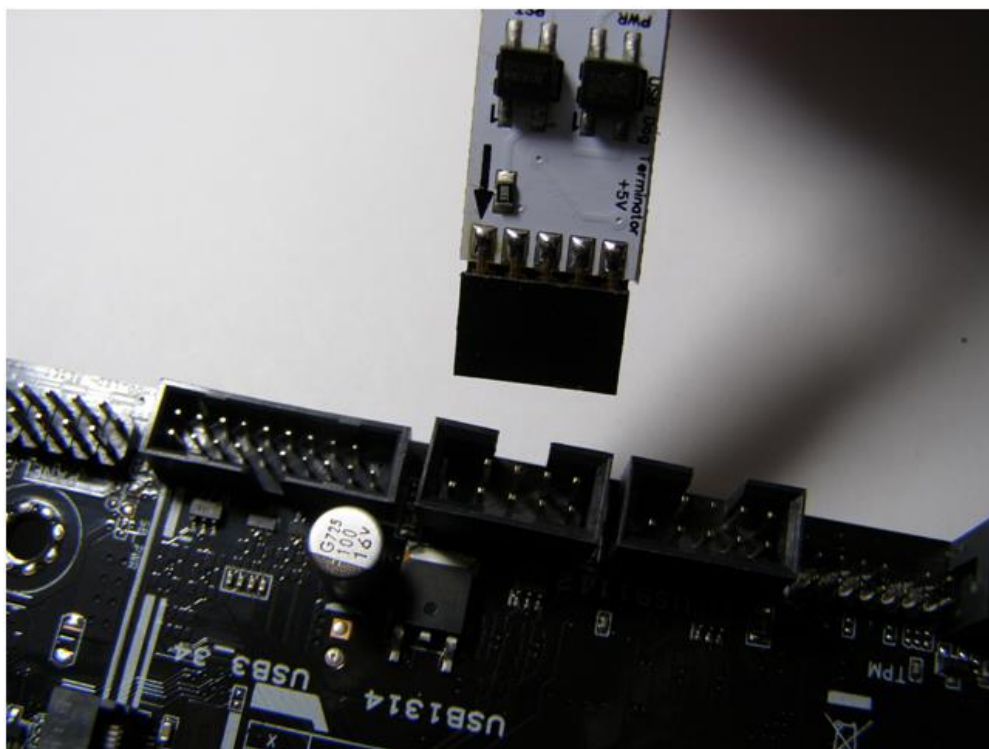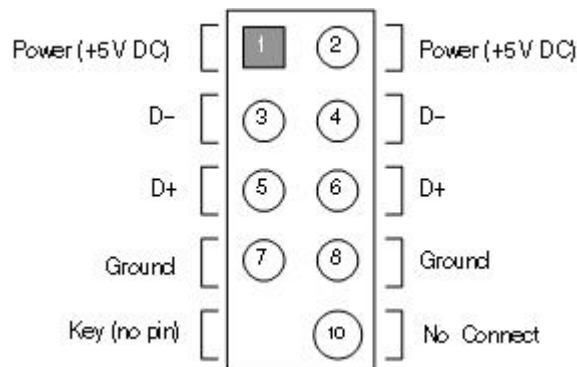
Device connection.
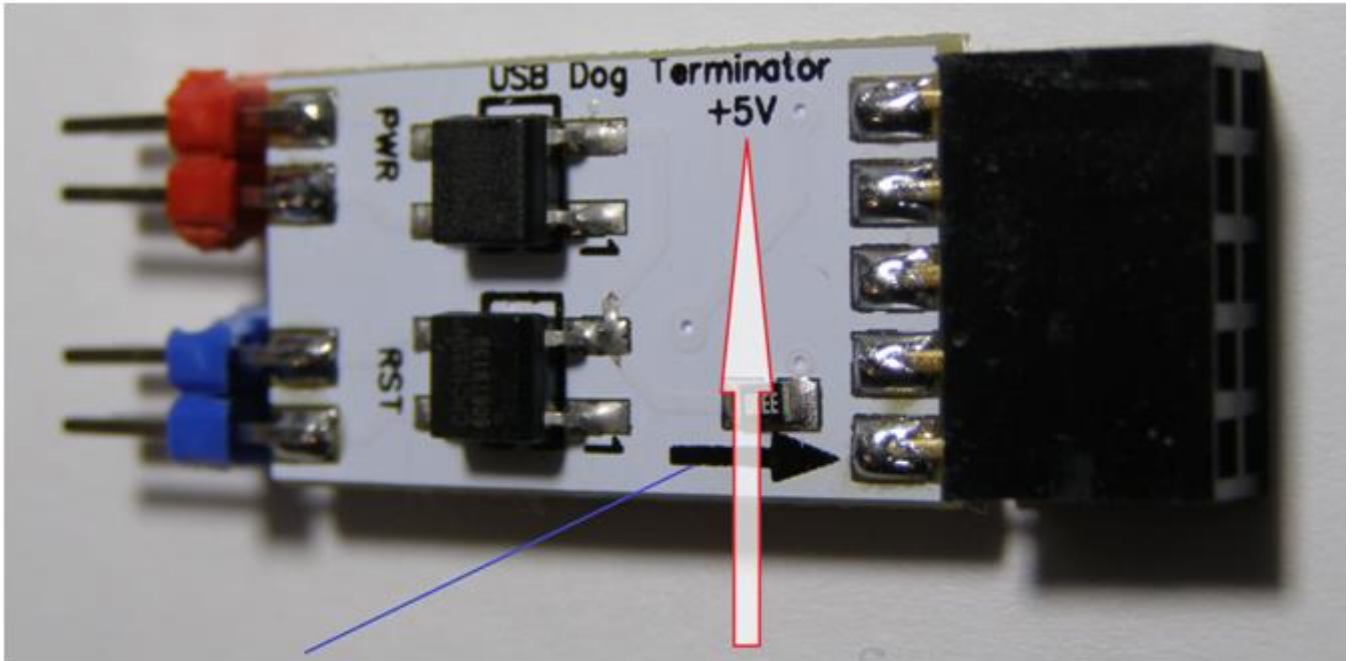

Label of an empty
USB connector

+5V USB
connector pin

See the documentation for your motherboard.

The USB Dog Terminator board contains labels for the correct installation of the device on the computer's motherboard. Before installation, it is necessary to study the manual of the motherboard, determine where the power supply is located, and where there is an empty pin of the USB connector.


Incorrect connection USB Dog Terminator will not disable the computer or the device itself, but the device will not work either!

The computer control buttons RESET and POWER are connected to the terminals of the USB Dog Terminator connectors, disconnecting them from the motherboard. And in their place connect wires-jumpers.
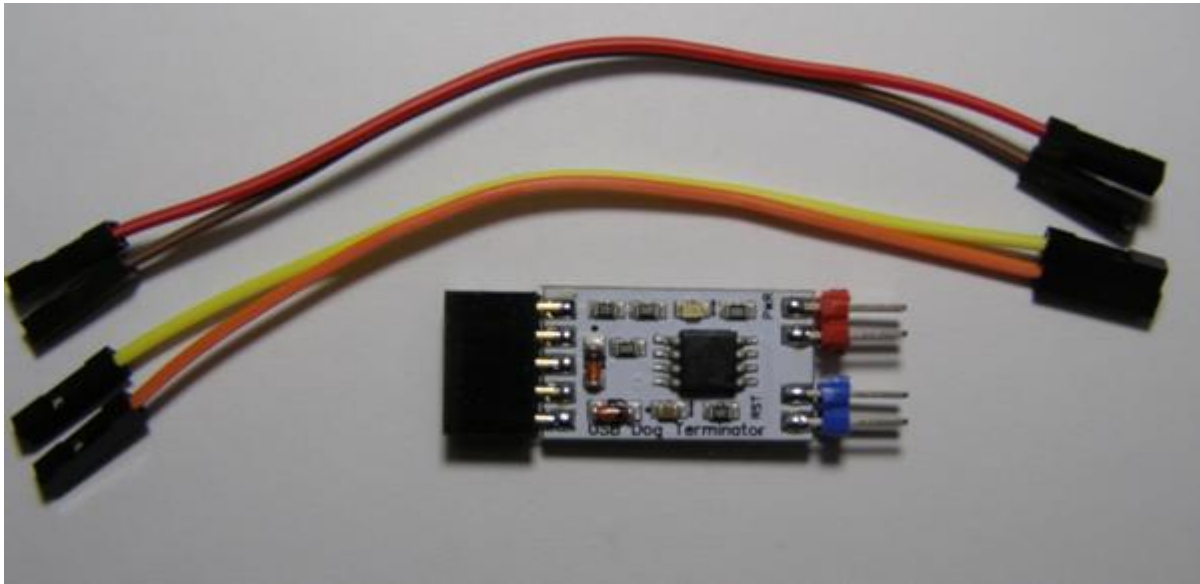

When connecting the RESET and POWER control signals from the computer to the USB Dog Terminator, using the jumper wires, it is necessary to observe the inscriptions of the connected functions RST-RESET, PWR-POWER.
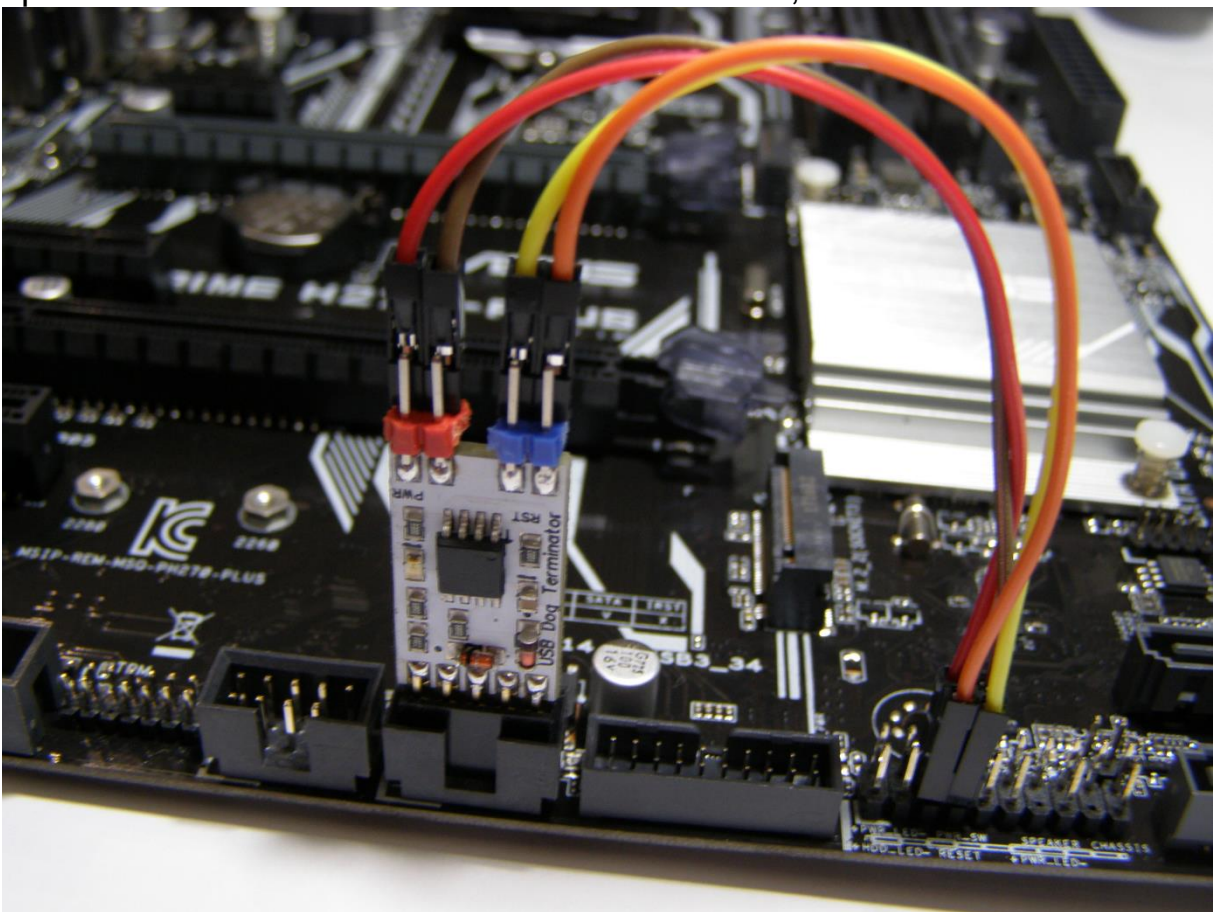
Connecting jumpers from the buttons to the free terminals of USB Dog Terminator. The color marking of the wires (polarity), whether on the buttons side

or on the contact side of the POWER and RESET control signals, is not necessary.


RESET   POWER
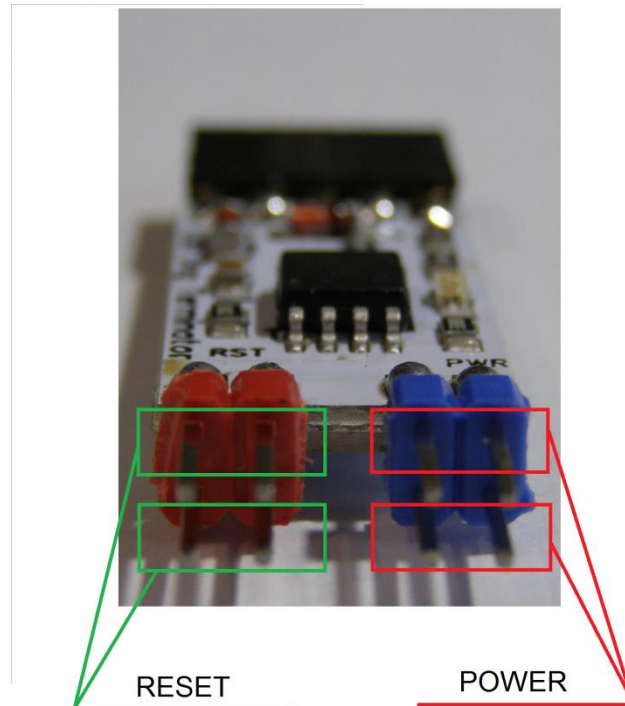
Note! The maximum load current of the outputs should not be more than 50mA !!! Therefore, it is not recommended to use USB Dog Terminator control outputs for other purposes without additional dedicated equipment!

At the first start of the computer, the USB Dog Terminator is in the "stop" mode and the RESET and POWER buttons are not operated.

For the USB Dog Terminator to work properly on the computer's motherboard, it is necessary to install a jumper that is responsible for supplying power to the USB ports when the computer is off, if it is provided by the motherboard manufacturer. Or pay attention to the availability of the corresponding function in the BIOS settings in the USB configuration section.

Installation and configuration of software.

After connecting, the first time the computer is started, the device is identified as a HID-compliant device.
You can view it through the "Control Panel" -> "Device Manager" -> "Device - HID"
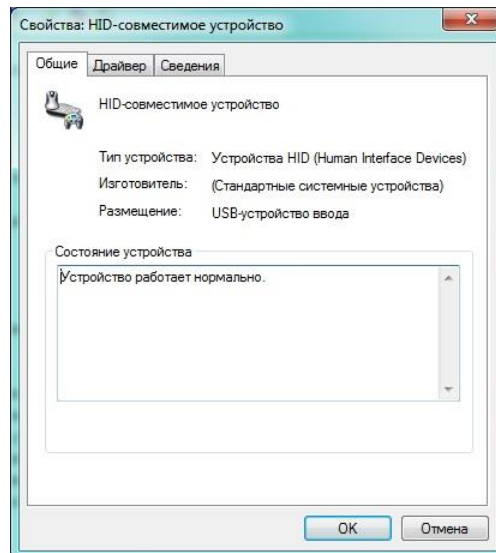

Make sure that it is the USB Dog Terminator that can be selected by selecting the "Details" tab, and selecting "Equipment ID" from the "Properties" drop-down list.
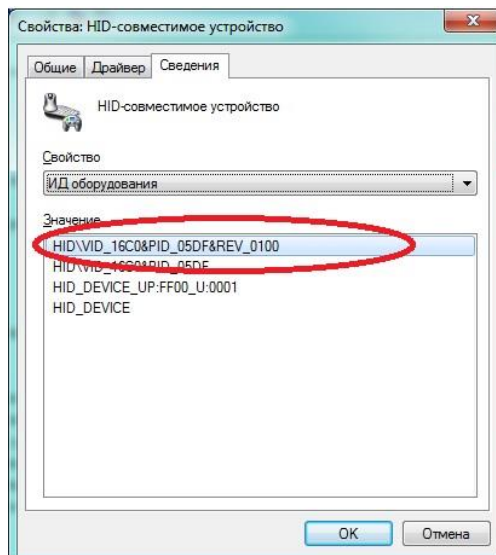

The value of this property must be VID 16C0 and PID 05DF or the full abbreviation HID \ VID_16C0 & PID_05DF & REV_0100. If there are several HID devices, you need to find with this VID and PID identifier.

Next, we install the driver management program and the driver itself. The driver contains versions for both x32bit OS and x64bit. Open the folder "WTD Dog Terminator \ Driver" and run the file libusb-win32-devel-filter-1.2.6.0.exe
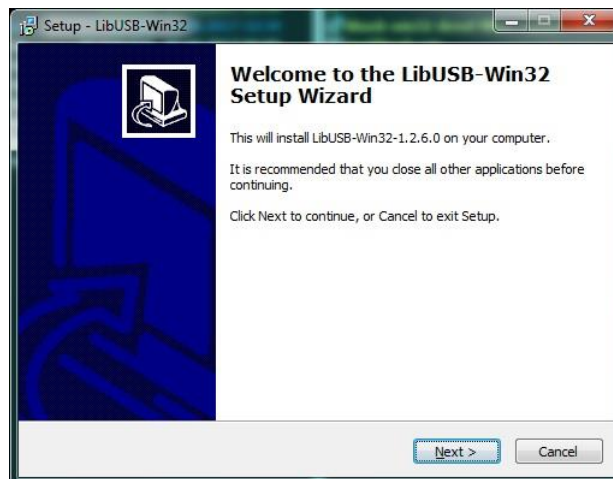
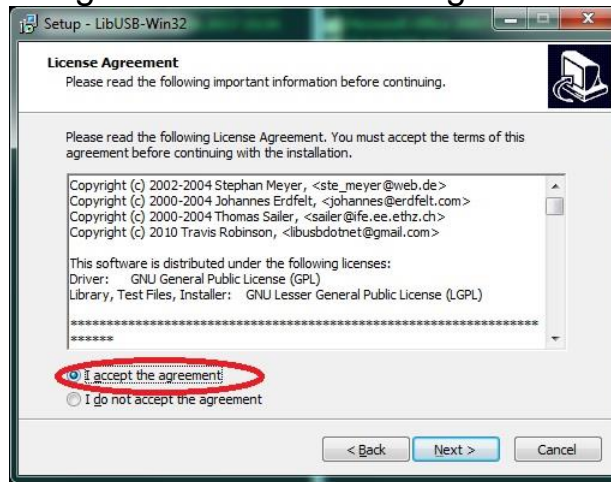The Security Warning window appears. We press start.
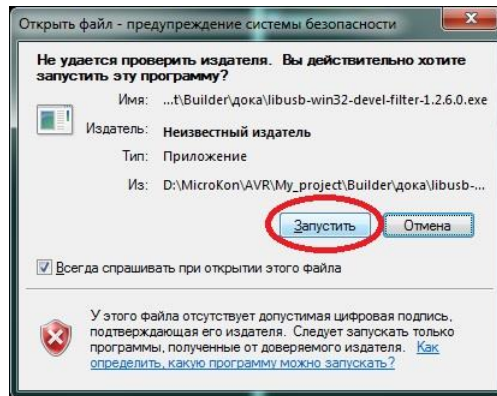
Then another dialog appears where you also need to agree to make changes to the computer. Click "OK"
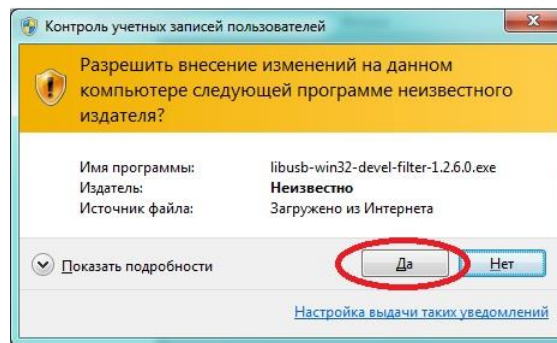
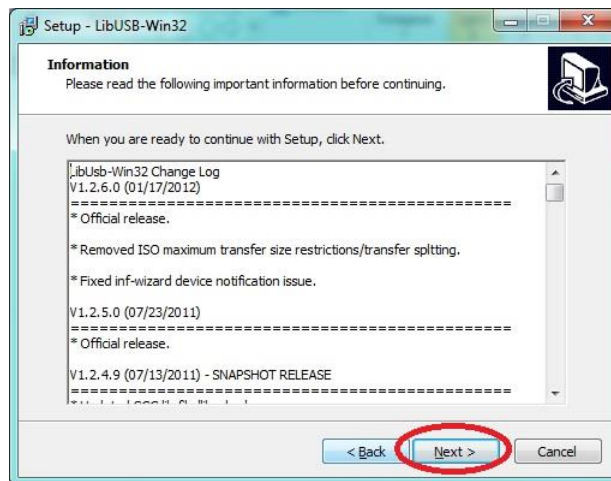After that, the driver installation welcome screen appears.

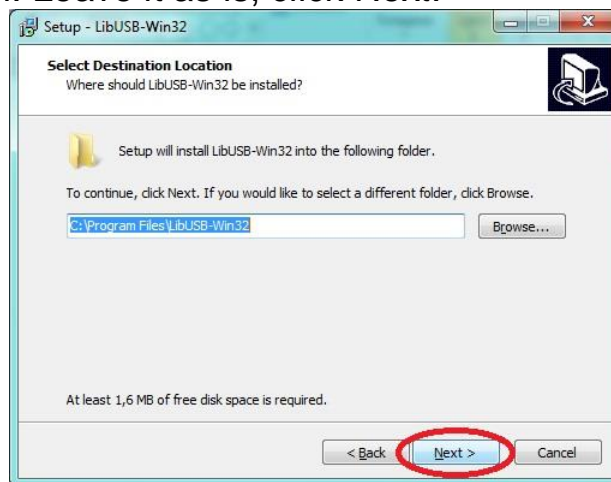The next step is to agree with the license agreement.

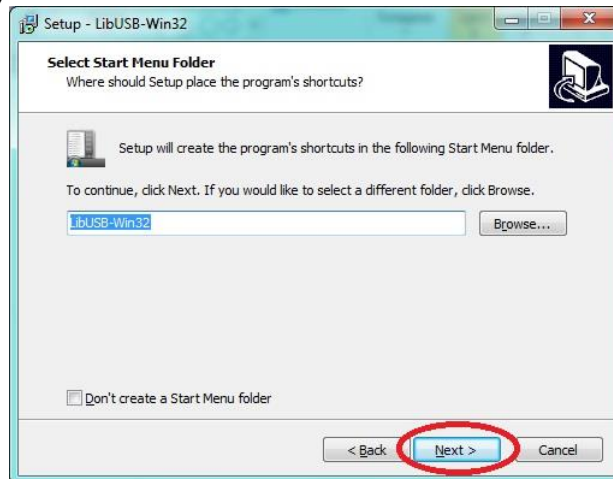Continue the installation, click Next.

Next, a window of technical information about the product version, etc. where also click Next.
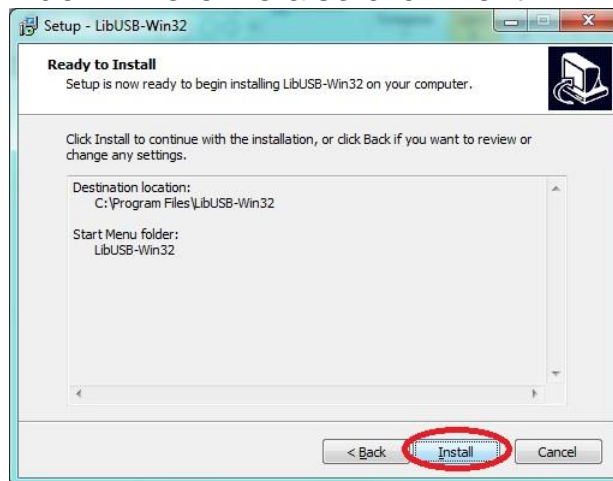

The next window prompts you to select the path for installing the driver management program. Leave it as is, click Next.
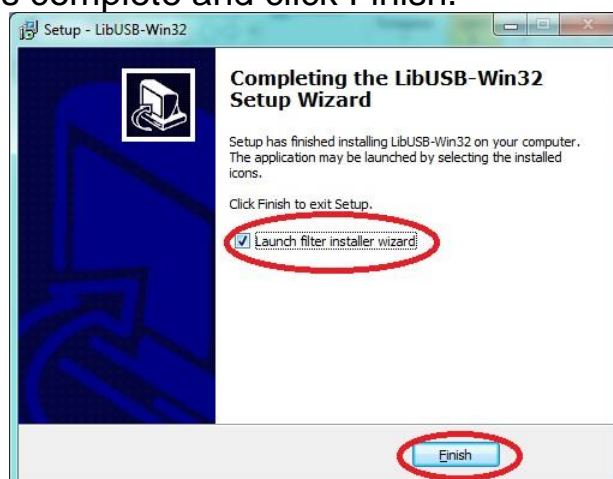
The following window prompts you to change the name of the program with which it will be displayed in the "Start" menu. Press Next.
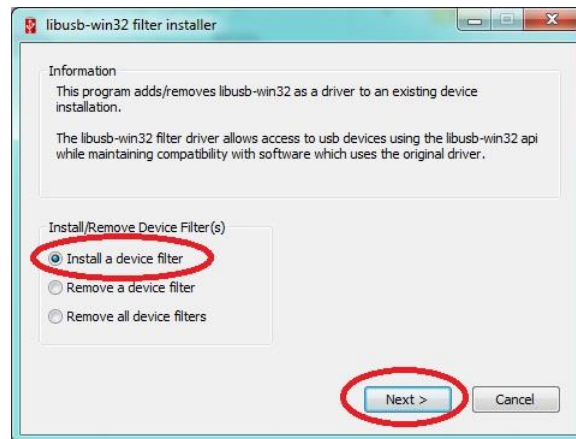

Another information window where we also click Next.

In the installation completion window, check the box to launch the application when the installation is complete and click Finish.

Now the installation window for the USB Device Terminator driver itself appears. We mark the point of installation of the device filter and continue the installation.

The following window will display the list of USB devices. In this list you need to find our device by the identifier, which we already considered early, it's VID 16C0 and PID 05DF (HID \ VID_16C0 & PID_05DF & REV_0100).
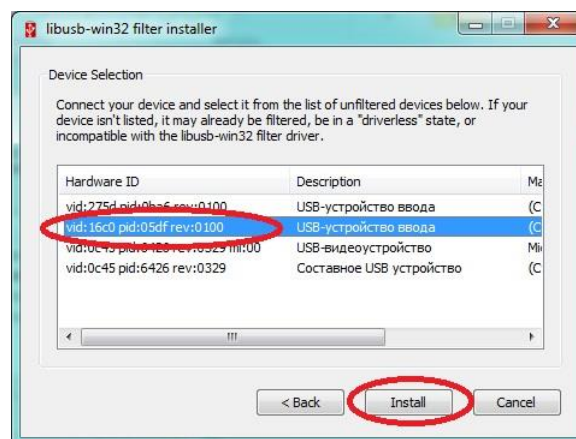
Click OK in the warning window for the successful installation of the driver.
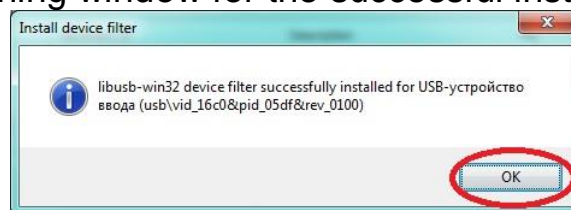
Close the window or click the Cancel button to complete the driver installation.

The driver installation is complete.

Installing, running the maintenance program and working algorithms USB Dog Terminator.

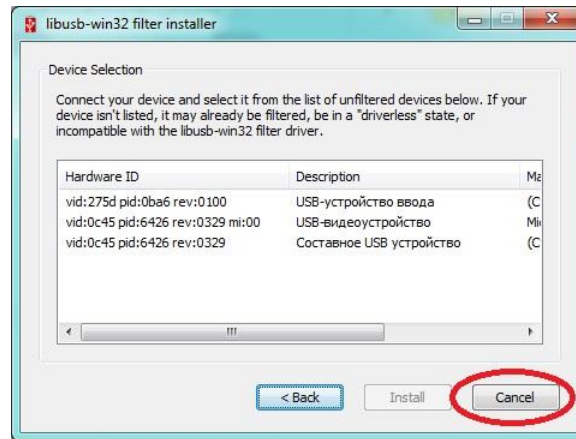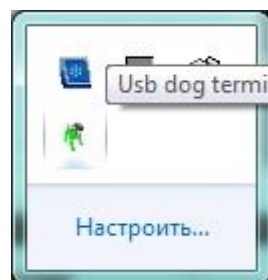To run the program from the WTD Dog Terminator folder, you need to copy the Dog Terminator folder to any location on the hard disk of your computer. For example, in the root of drive C. Run the application.

After launching the program should start and after a few seconds hide in the system tray (Special area located next to the clock on the taskbar).

Double-clicking the mouse on the icon, you can deploy the program.
The green label on the "Running" button indicates the status of the device. And the LED on the USB PC Terminator will flash a short flash approximately 1 time per second.

The following setting items are offered in the program window:
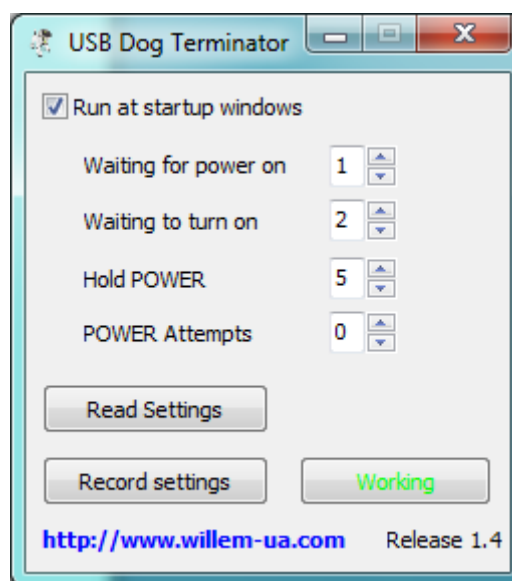
- Run when Windows starts - this item does not need comments.
- "Waiting to turn on" - The time to wait for the computer to start when it is turned on from 1 minute to 10 minutes. At the end of this time, the computer will be considered not running and an attempt will be made to enable it. In this case, the LED on the USB Dog Terminator board will be a long flashing (about half a second, half a second is off) to report that it does not receive a signal from the maintenance program and is waiting for its start. After the programmed time has elapsed, it will forcibly turn off (by long pressing the

"POWER" button) and re-enable, the events of pressing the button will light the LED for the duration of these presses;

- "Hold POWER" is the time from 1 to 10 seconds, which will be fixed by pressing the "POWER" button to force the computer to turn off. The moments of pressing the button will light the LED for the duration of these presses;

- "POWER Attempts" is the number of times the computer turns off when the previous attempts did not start the OS and the USB Dog Terminator control program. The number of attempts from 0 is infinite and up to 10 times. After 10 unsuccessful attempts to turn on the computer, the USB Dog Terminator device will go into stop mode and the LED will light continuously without blinking;

- "Read Settings" button - reads the recorded settings of the control program from the internal USB memory of the Dog Terminator. This operation also occurs when the program is started.

- "Record Settings" button - after all the changes in the time intervals of the wait intervals or any changes in the control program for these changes to take effect, it is necessary to write these settings to the USB Dog Terminator, and so that they can be saved in the device's non-volatile memory.

The events of reading and writing the settings are accompanied by a double flashing of the LEDs.

- Button "Running" - means the current status of the USB Dog Terminator device, by pressing this button you can forcefully stop the USB Dog Terminator if necessary. For example, to configure a computer or other needs. The LED will stop blinking and light constantly. The program icon changes color to red. And the inscription of the button "Works" changes to "Stopped"
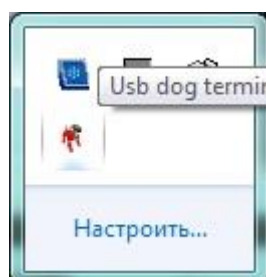
If you do not press this button again, to start the USB Dog Terminator and restart the computer, after the USB reboot, the Dog Terminator will go into normal operation. Because the auto start (if there is a tick in the corresponding item) will launch the program, which in turn will output the USB Dog Terminator from the "stopped" mode to the "work" mode.

When you click the close icon, the program is minimized to the system tray. If you need to close (unload from memory) the program, you need to right-click on the program icon in the tray, the context menu "exit" appears. Clicking on this item will close the program.
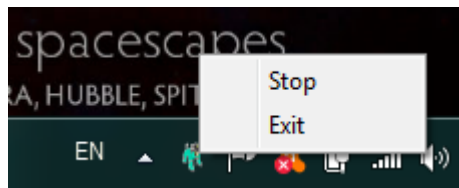
Possible errors and ways to eliminate them.

If the computer is constantly rebooted, the USB Dog Terminator is connected to the USB port and works fine, you need to disconnect the wires from the motherboard board to the connectors of the POWER and RESET buttons and connect the wires from the corresponding buttons to your place on the motherboard. Turn on the computer, wait for the OS to boot.

If after the start of the OS an error occurred:
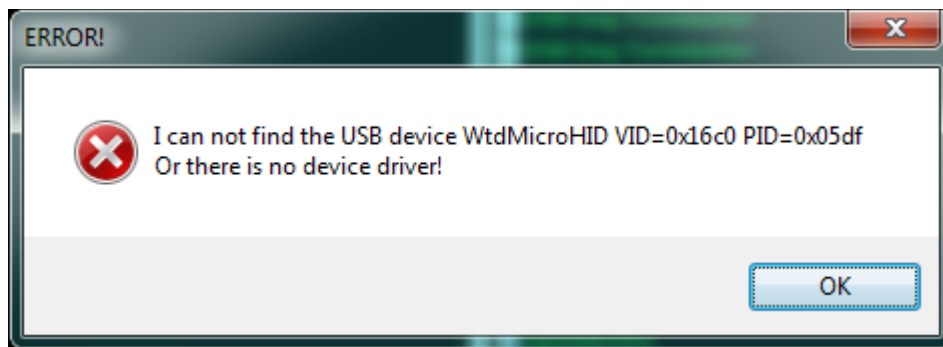
An error may occur when the USB Dog Terminator is not connected to the USB port, and attempting to start the program caused this error.

And the second reason is if the device driver was not installed or the device driver refused to work. In this case, the device driver needs to be tested or reinstalled.

To test or reinstall the USB Device Terminator driver, open the start menu and find the item with the LibUSB-Win32 program.
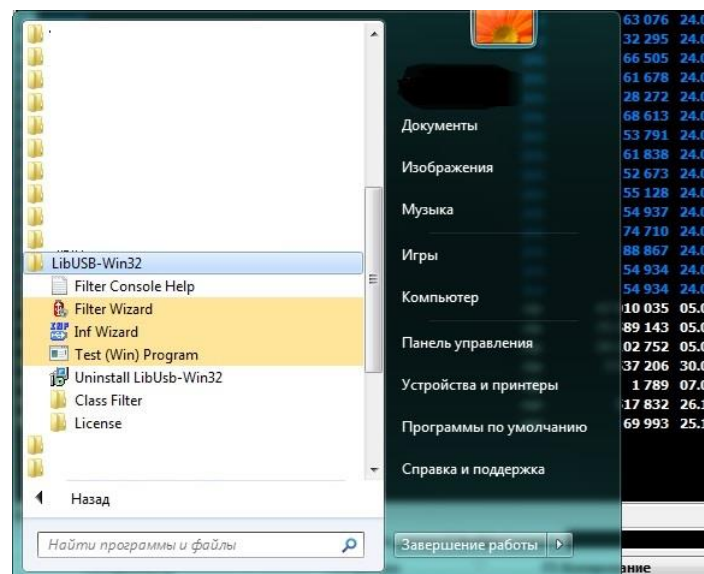

Select the test program for the Test (Win) Program driver, provided that the USB Dog Terminator is connected to the USB port and is operating normally.

Click on the program Test (Win) Program.
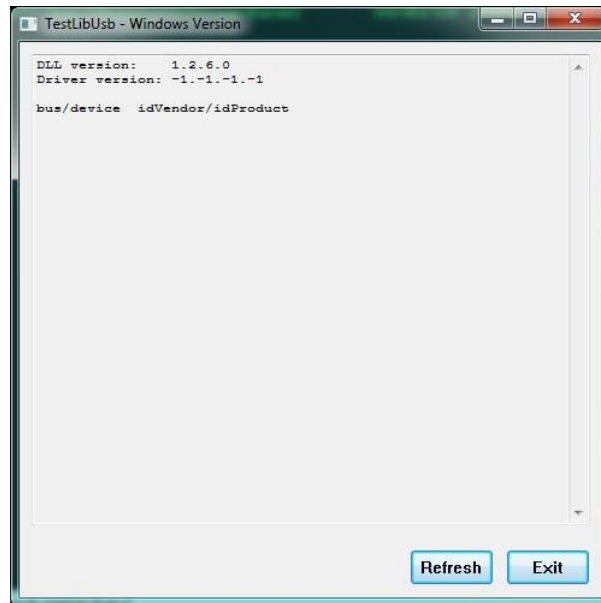
If the test program displays as shown in the picture, it means that the device driver is not found, and it needs to be reinstalled.
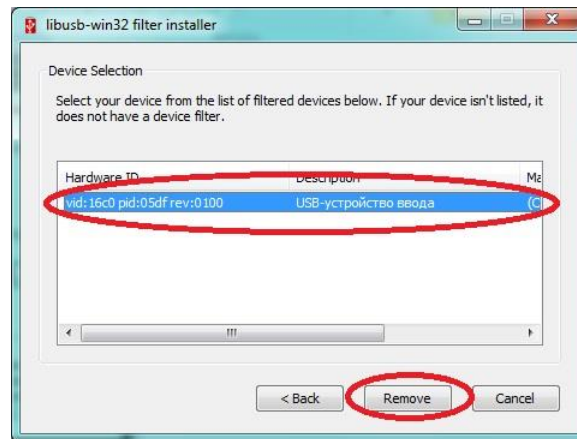
To do this, perform the following steps. Again, open the Start menu and run the Filter Wizard.
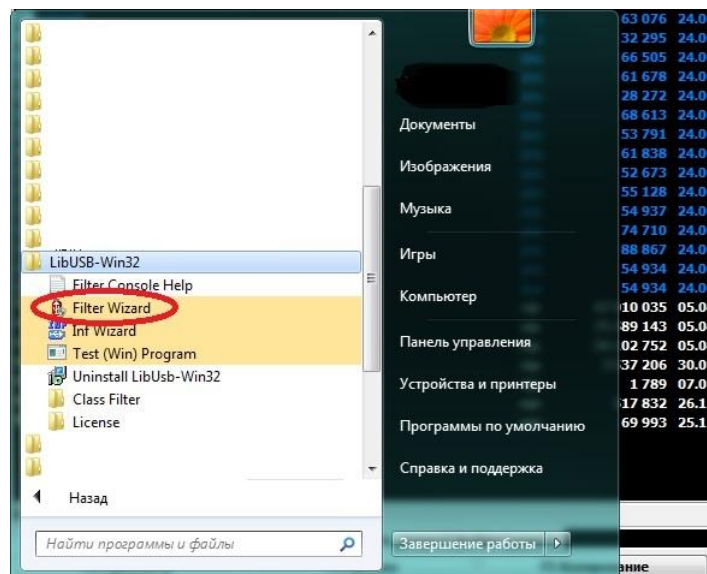
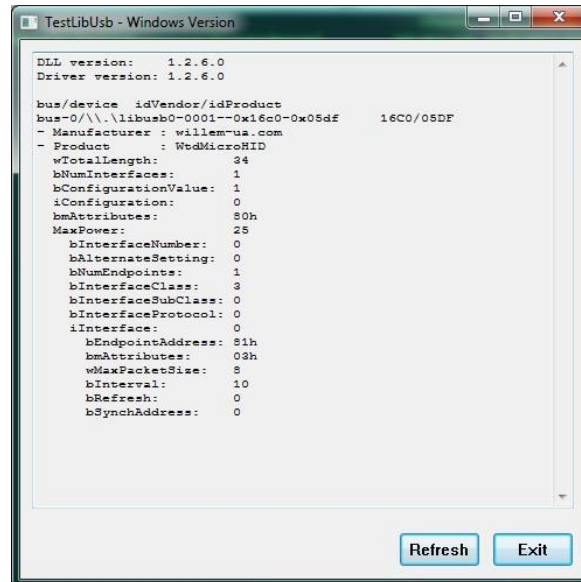Select the item "remove filter device." Click Next.

Next in the list choose our device, checking its VID 16C0 and PID 05DF. Click "Remove".

Close the window.

To install, restart the Filter Wizard and repeat the driver installation, as described above.

After installing the driver, if you start the program Test (Win) Program, it should turn out, as shown in the figure below.

Test (Win) Program reports that the driver has been successfully installed. It is necessary to turn off the computer to return the wires from the buttons and to the motherboard in accordance with the instruction and turn on the computer.