

Installation and Maintenance Manual

Introduction

This manual provides installation and maintenance instructions for the USB Drop Attack Simulation Device using the Digispark ATTiny85. This educational tool is designed to safely simulate USB-based HID attacks in a controlled environment to raise cybersecurity awareness.

System Requirements

- Windows 7, 8, 10, or 11
- Arduino IDE (version 1.8 or later)
- Digispark ATTiny85 board
- USB Type-A port
- Digispark drivers

Installation Instructions

1. Download and install the Arduino IDE from <https://www.arduino.cc/en/software>.
2. Open the Arduino IDE. Go to File > Preferences and add the following URL in 'Additional Board Manager URLs':

`http://digistump.com/package_digistump_index.json`
3. Go to Tools > Board > Boards Manager, search for 'Digistump AVR Boards' and install it.
4. Select the board: Tools > Board > Digispark (Default - 16.5mhz).
5. Install the Digispark drivers from the Drivers/Windows_Drivers.zip folder (unzip and run the installer).
6. Open the provided digispark_payload.ino file from the Source folder.
7. Click 'Upload'. When prompted, plug in the Digispark device.
8. Wait for the code to upload successfully.
9. Remove the device and test it on a Windows machine.

Post-Installation Testing

To verify functionality:

- Plug the Digispark into a Windows machine.
- Notepad should open automatically.

Installation and Maintenance Manual

- A warning message will be typed.
- No additional software or driver prompts should appear after the first install.

Maintenance Instructions

This device does not require regular maintenance. However, you may:

- Re-flash the firmware using the Arduino IDE if needed
- Clean USB contacts occasionally
- Store the device in an anti-static bag or case
- Ensure you have updated drivers on test machines for compatibility

Troubleshooting

- If the device is not recognized:

Try a different USB port

Reinstall Digispark drivers

Check the USB connection and try uploading again

- If Notepad doesn't open:

Ensure payload is correctly uploaded

Test on a different machine to isolate the issue

Contact Information

For further questions or support, please refer to the User Manual or contact the project author through academic channels. This tool is for educational use only.