

## Introduction

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This document describes the necessary steps to setup a 'USB over Ethernet' connection - DO.Net - for remote control of an ANDIAMO device.

## Requirements

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- Raspberry Pi with ethernet port
- SD card with at least 2GB capacity
- ANDIAMO Remote Software version 1.8 or higher

available from <http://www.directout.eu/en/support/downloads>

*NOTE: DO.Net is provided 'as is' without warranty of any kind. The author can not be held liable for any damages, failures or other liabilities arising from the use of this software.*

## 1. Install Linux on the Raspberry Pi

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We recommend Raspbian.

- Download the image from [http://downloads.raspberrypi.org/raspbian\\_latest](http://downloads.raspberrypi.org/raspbian_latest) and install it onto the SD card according to the installation manual on <http://www.raspbian.org/>.
- Connect a monitor and keyboard and power it up. The setup wizard will start after a few seconds. It's default settings are ok for our purposes - a headless system, DHCP and the user 'pi' with password 'raspberrypi'.
- Finish the setup wizard and reboot.

*Some useful links are listed on page 2.*

## 2. Installing the DO.Net daemon

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- Log in into your rPi and download the latest version of the DO.Net client:

```
wget http://www.directout.eu/upload/software/donetd_rpi_latest
```

- Now we have to install the daemon. We need to be root to write to the system:

```
sudo tar -C / -pvxf donetd_rpi_latest
```

- One last step is necessary to make sure the daemon is run upon startup: We need to run a script once the network is configured. To do so, we open the network configuration in a text editor, e.g.:

```
sudo nano /etc/network/interfaces
```

- where we will see the section for 'eth0':

```
"iface eth0 inet dhcp"
```

- We add a line after this line:

```
iface eth0 inet dhcp
    post-up /etc/network/if-up.d/udev_trigger.sh
```

- And save with Ctrl-O and exit with Ctrl-X.

That's it. If you plug in a DirectOut device into one of the rPi's USB ports, it will show up in the remote software.

## Links

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[http://elinux.org/RPi\\_Easy\\_SD\\_Card\\_Setup](http://elinux.org/RPi_Easy_SD_Card_Setup)

<http://n00blab.com/how-to-set-up-raspberry-pi-without-monitor/>

## Large Network Environments

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For proper transport of the control data via network check to enable UDP Multicast Routing in the entire network for 224.7.7.7 Ports 7777 to 8555. IGMP v3 is used.

*If you experience trouble connecting the device with the remote, you may start with a point-to-point setup first.*