

# 本 NanoNote Info Guide

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# **Contents**

## **1 - The Ben NanoNote**

*inside*

*left side*

*right side*

*back side*

*device specifications*

## **4 - How Tos**

*Ethernet over USB*

*Forward internet access over USB*

*USB Boot*

*Reflashing the Ben*

## **8 - Dos and Don'ts**

*Please do*

*Please don't*

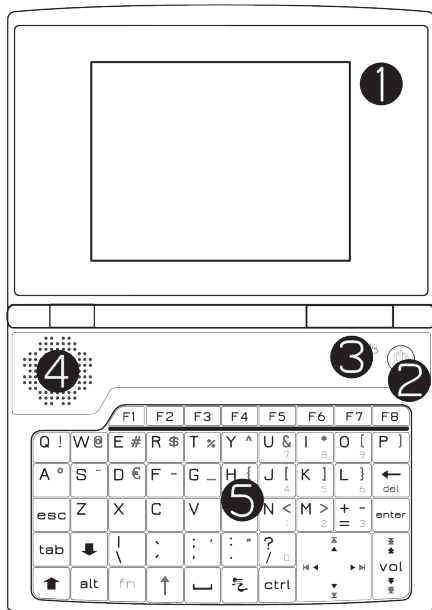
## **9 - Appendix**

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*GPL v3*

# The Ben NanoNote

*Inside*



1 - LCM

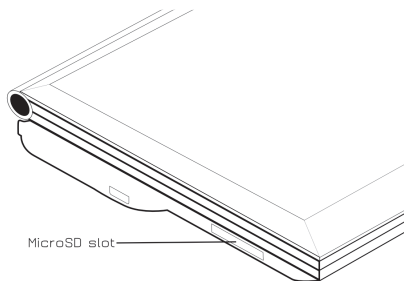
4 - Speaker

2 - Power Button

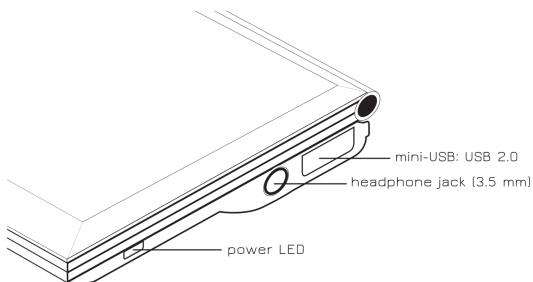
5 - Keyboard

3 - Microphone

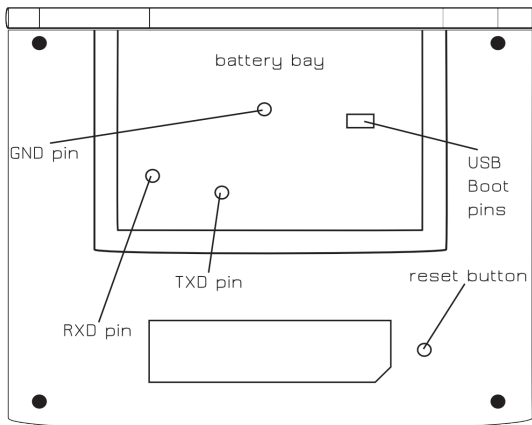
*left side*



*right side*



*back side*



*Device Specifications*

- \* 336 MHz XBurst Jz4720 MIPS-compatible CPU
- \* display: 3.0" color TFT
- \* resolution: 320 x 240, 16.7M color
- \* dimension (mm): 99 x 75 x 17.5 (lid closed)
- \* weight: 126 g (incl. battery)
- \* DRAM: 32MB Synchronous DRAM
- \* headphone jack (3.5 mm)
- \* SDHC microSD
- \* 850mAh Li-ion battery
- \* 2GB NAND flash memory
- \* mini-USB: USB 2.0 High-Speed Device
- \* speaker and microphone

# HowTos

## *Ethernet over USB*

What you need:

- a console on your Ben NanoNote
- a USB connection between your Ben and a PC/Laptop

**1)** On the NanoNote run (for example):

*\$ ifconfig usb0 192.168.3.2*

**2)** On your laptop/PC run:

*\$ ifconfig usb0 192.168.3.1*

**3)** Test if you can ping the NanoNote via (on your PC/Laptop):

*\$ ping 192.168.3.2*

For SSH:

**4)** Set the password of your Ben's root user. On your Ben type:

*\$ passwd*

You will be asked for the new password twice (the password can be empty as well).

**5)** Log in to your NanoNote from your host via:

*\$ ssh root@[IP OF YOUR BEN]*

After entering your password you are logged in.

## *Forward internet access over USB*

What you need:

- a PC/Laptop with a GNU operating system connected to the internet
- a mini-USB to USB cable
- a Ben NanoNote with Networking set up as described unter "Networking with your Ben NanoNote"

**1)** Configure NAT (on your PC/Laptop as root):

```
$ modprobe iptable_nat  
$ echo "1" > /proc/sys/net/ipv4/ip_forward  
$ iptables -t nat -A POSTROUTING -o eth0 -j  
MASQUERADE
```

**2)** Add your PC/Laptop as the standard gateway on your Ben:

```
$ route add default gw 192.168.3.1  
$ echo "nameserver [DNS SERVER IP]" >>  
/etc/resolv.conf
```

## *USB Boot*

What you need:

- a usb to mini-USB cable
- something to shorten two pins (eg. a screw-driver)

**1)** Remove the battery

**2)** Connect NanoNote to your computer with a USB

cable (**NOTE:** sometimes the device will turn on by itself when connected to a power source via USB cable, if that happens just unplug and replug the USB cable until it remains off)

**3)** Turn the device around short the two pins in the battery bay marked with "USB Boot" (**NOTE:** best results have been achieved using a screw-driver)

**4)** now while holding the pins shortened press the power button for 2 seconds, the screen should remain black and the LED on the right side will flash a few times

**5)** if the device is in USB boot mode dmesg should show you a message like:

*Product: JZ4740 USB Boot Device*

### *Reflashing the Ben*

What you need:

- the image (kernel and rootfs) you want to flash (potentially also an uboot image)
- a PC/Laptop with usbboot installed

**1)** Put the ben into USB Boot mode (see above)

**2)** open a console and type (as root user):  
`$ usbboot -c "boot"`

**3) IF** you want to reflash uboot (**NOTE:** this should **not**



be necessary) type in the console (as root user):  
*\$ usbboot -c "nprog 0 [PATH TO BOATLOADER  
IMAGE] 0 0 -n"*

**4)** to flash the kernel image type in the console (as root user):

*\$ usbboot -c "nprog 1024 [PATH TO KERNEL IMAGE]  
0 0 -n"*

**5)** to flash the rootfs type in the console (as root user):

*\$ usbboot -c "nprog 2048 [PATH TO ROOTFS IMAGE]  
0 0 -n"*

If everything went ok, remove the cable from the NanoNote, put the battery back in and boot the device.

**NOTE:** Booting the device might take longer the first time after you reflashed

You can find further HowTos and tips in our wiki at:  
<http://wiki.qi-hardware.com>

## **Dos and Dont's**

(warranty and legal stuff)

Our software comes AS IS - WITHOUT ANY warranty!

### *Please do:*

- use this device for whatever purpose you want
- share your software with as many people as possible
- feel free to build upon this hardware design
- reflash the software as often as you want
- tell us about your experience and help us to improve it
- feel free to take the device apart, but only if you are qualified
- feel save that there is no spyware whatsoever on this device

### *Please don't:*

- throw the battery into open fire
- expose the battery to extreme temperatures
- take the battery apart
- use the device in the shower or while taking a bath
- use the device while driving
- leave small parts with unattended children
- expose the device to strong electro-magnetic fields
- expose the device to extreme temperatures
- use the device when handling explosives
- expect us to replace a device if you broke it
- use the device below 0°C and above 40°C
- store the device below -20°C and above 55°C

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