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## ASUS WL500W

## Introduction

This How To is intended to walk someone through configuring a basic USB printer and a USB storage device on their ASUS WL-500W router. The majority of the information comes from the other ASUS WL500 series Wiki's as well as other websites. There are great USB how to articles on the DD-WRT wiki, so if what is listed in this how-to does not suit your needs, **search** the Wiki and the Forums! And remember Google is your freind!

## Firmware

**NOTE:** The 15315 build using the 2.6 kernel no longer supports devices with 4704 processors so do not use this or newer builds. This applies to the Asus WL-500W with a modified CFE as well.

### Use only V24 firmware on the WL-500W

A fresh firmware flash is **highly** recommended as well as a clearing of the NVRAM. Starting from a clean slate will provide the smallest chance of encountering a random problem as these units can be some-what temperamental. Flash your WL500W router with either the latest DD-WRT Mega firmware (v24 SP2 or later) or the [Eko DD-WRT NEWD/NEWD2 Big](#), or even a mini USB release that includes full USB support in a mini firmware package. Why bother with the reduced functionality of a mini build when this router has 8MB flash?

There are several advantages. The mini is a fraction of the size, yet provides the vast majority of the functionality of the larger builds. For this small sacrifice, you get a much more lean and efficient setup, including...

- A nearly 5.0MB JFFS2 partition
- Nearly 90% free system memory on a fully configured system
- Full USB support, easily enabled from the web GUI (just like Mega)
- Faster, leaner (Merely observational, but noteworthy)

## IMPORTANT

Consider the following or you run the risk of BRICKING your router:

Brainslayers mega flash size - 7.33MB

Eko's Big Flash size - 5.9MB

Now, the error only occurs when JFFS2 is enabled and the router reboots, so you are safe if you DONT enable JFFS2.

Total available JFFS2 size for BS's build is **640KB** which overwhelms the kernel and causes a panic. Even using a storage device with the command `mount -o bind /mnt/jffs /jffs` will still cause a kernel panic.

Eko's JFFS2 partition size is **1640KB+**, allowing much more room.

I tested this on BS's 12996,12874 and 12533 builds and partially bricked my router several times. (A simple power disconnect for 30 secs will allow it to recover)

Eko's build however works flawlessly AND provides the SAME features (except for connection warning) as BS's.

One thing I am still unsure of is why this particular model Asus router is subject to this bug, but in the mean time, I suggest using Eko's Big build until the dev's can work it out..

## Initial Prep

1. Complete your standard WAN, LAN, DHCP configuration so that your router has working Internet access

*Note: This guide will not explain these details, since they are very well documented elsewhere*

2. Under Services, enable:

**Secure Shell (SSHd)**

**Telnet** (optional, select this if you have no idea how to connect to an SSH server)

**USB modules which you need** (Core USB support, UHCI, OHCI, USB 2.0, USB Storage, ext2/ext3, FAT, USB Printing, Automatic drive mount)

For example, if you only want to install Optware packages on 2.0 device you can enable : Core USB support, USB 2.0, USB Storage, ext2/ext3 FS support

- Save & then Apply Settings
- Under Administration > Management:
- **Enable JFFS2 Support**
- **Clean JFFS2**
- Save & then Apply Settings
- Reboot Router

**NOTE** If attempting to use USB storage with multiple partitions for /opt , /jffs , /mnt, do NOT enable JFFS2. Once the USB storage is configured, JFFS will reside on the mounted drive partition.

## Using Telnet or SSH to install the printer driver

If you wish to keep it simple, you can use the command line in Windows to telnet to your router.

Steps:

1. Make sure Telnet is enabled under **Services** on your router.
2. In Windows XP, go to **Start->Run** and type **cmd**. A DOS window will pop up.
3. Type **telnet 192.168.1.1** into the prompt and let it connect.
4. Enter the user name (default is **root**) and press enter.
5. Enter the password. Be careful when typing, as the character will not display when you type them in.
6. You should now be connected to your router via Telnet with a DD-WRT Splash picture in the DOS prompt.

You must have JFFS2 enabled for the following to work, as well as an EKO Big build. Brainslayers Mega builds will not allow this to work! If you are not using a Big or Mega firmware, then no need to worry!

Steps:

1. Type `cd /jffs`
2. Type `mkdir -p /jffs/tmp/ipkg`
3. Type `ipkg update`
4. Type `ipkg install p910nd`
5. Let it install and download the packages.
6. Type `reboot` into the command line.

You're done!

## Configure the Printer from a Windows/Linux Client

If planning to use both a printer and take advantage of the USB storage support with the awesome advantages of Optware, go to [THIS](#) link. The below information is still useful though even after following the link!

- From Windows, go to Control Panel, Printers, Add Printer
- Choose Local, create new port Standard TCP/IP Port
- Set Device Type to TCP/IP
- For Hostname or IP field, set to router IP (default is 192.168.1.1)
- On Vista, do not query printer for driver
- On next screen, click custom
- Manually select the printer from list or select Have Disk to add a new printer driver
- Note: On Vista, many newer HP Deskjet printers can be set to HP Deskjet 990c since no Vista drivers are available from HP.

## Adding USB Storage

**ONLY USE HARD DISKS WITH THEIR OWN POWER SUPPLY'S!**

-USB Flash drives are ok to use.

USB storage is an ever growing popularity with modern routers. Asus' factory Web-interface is tacky and very buggy. DD-WRT provides a very stable platform for utilizing the twin USB ports on this model router. The section below is perhaps the greatest feature that DD-WRT has to offer as far as USB support is concerned.

If the below is not your cup of tea, the standard options in the DD-WRT Web-interface under Services -> USB will provide you with the basics.

## Installing Frater's Optware

This is the latest, greatest and easiest way to enable Optware on your Router, and add an enormous amount of flexibility to it. It is highly recommended.

Please see [Optware, the Right Way](#) for more detailed instruction

Potential services that you may want to incorporate through Optware:

- Bash instead of shell in busybox (LFS support)
- **Automounting and unmounting of storage device partitions**
- **Network printing**
- Watchprinter
- **Torrent transmission with watchdog**
- Hotmount
- **Pre-configured samba share**
- Reverse proxy featuring pound
- Service tool
- **Xinetd**
- Pound

- Asterisk
- Lighttpd
- Vlighttpd
- Countryblock
- AsiaBlock
- Services running as other users than root
- Vim with proper terminal support
- Twonky Media
- News Server
- Other various useful tools

## Reversion to Asus Firmware

You will need the [Restoration Utility](#) and the [Firmware](#).

- Reset the router to defaults by the 30/30/30 method but don't power cycle after the last 30 second hold. The router's Power LED should be blinking indicating it is in Restore mode.
- Set a static IP of 192.168.1.10 and 255.255.255.0 on your PC.
- Disable your Wireless devices and connect a cable to one of the LAN ports
- Start the Restoration utility and select the original Asus Firmware. Click Update.
- When it completes the install, wait 5 minutes, then power cycle the router.
- You should be able to access the unit at 192.168.1.1 with un/pw of admin/admin