I've Got Peace Like an iRiver

TUX walks you through how to set up an iRiver device on your Linux system.

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iRiver is a portable media player. It isn't quite accurate to call it an MP3 player, because iRiver is one of the few so-called MP3 players that supports the OGG/Vorbis music format. When you add to that the awesome sound quality it produces (with the included Sennheisser headphones), it makes it a great choice for the Linux-using music lover.

The only problem with iRiver is that it doesn't work out of the box with Linux, which shouldn't be much of a surprise really, as Linux is infamous for poor driver support. Fortunately, the problem is easy to solve. And in this article, I show you how to solve it. So let's start cracking!

ONE WAY IN—TWO WAYS OUT

The first step is figuring out how you want your iRiver to behave. Don't know what I'm talking about, do you? Well, just follow my lead, it's not difficult at all. The firmware (software embedded in a hardware device) that came on your iRiver doesn't make it behave as a UMS (USB Mass Storage) device. If it did, you could use it as a normal USB disk. But don't despair! It is possible to turn it into a USB disk by upgrading the firmware.

It's up to you to decide whether you want to do this to your iRiver device. If you want to keep the firmware as it is, you'll have to connect your iRiver to your computer using special software. The up-side of this is that you won't have to

upgrade the firmware that lets you view the radio station presets and view the remaining battery power from the computer. The serious down-side is that you won't be able to use it as a UMS device and thus will need the special software installed on every computer you want to use with your iRiver. Finally, you can't copy your MP3s from your iRiver to the computer's hard drive because of the official firmware's built-in restrictions.

The alternative, again, is to change the (official) firmware to unofficial firmware. This changes your iRiver into a normal UMS device unhindered by copying restrictions, so you can carry around and use your iRiver with any computer that has a working USB port. The down-side is that you cannot use the custom iRiver software with your iRiver device anymore.

I chose to switch to the UMS firmware. It is more useful to be able to see the battery meter and radio station presets on the device itself than to view them on a computer. Plus, it is nice to be able to use such a device as a disk. It makes it easier to use as a music device and makes the iRiver an all-purpose portable disk drive.

If you decide to turn the iRiver into a UMS device, jump to the "Using UMS Firmware" section; otherwise, just continue reading.

LEAVING THE FIRMWARE AS IS

As mentioned, you can use your out-of-the-box

iRiver pretty much exactly like you would if you were using the official iRiver software.

What you need to connect iRiver to the computer is a working USB port and a package called libusb, or a package similarly named. Most distributions come with full USB support built-in nowadays, so you probably don't have to worry about installing this package.

GOING OLD-SCHOOL WITH IFP-LINE

ifp-line is a simple command-line application with which you can browse and manipulate files on your iRiver (upload, download and remove). It is capable of checking the battery, formatting and upgrading the firmware. But what's even better is that it can be used together with Midnight Commander to make the file manipulation a lot easier. And this is what we try to accomplish here. For those who desperately want to learn its command-line commands, the README is pretty straightforward.

Install ifp-line. It should be available for your distribution as a package. If not, have a techie friend compile it for you. If you know how to compile programs, uncompress the tarball, change to the ifp source directory and run:

```
# make; make install
```

If you want to use ifp-line as a non-root user,

you also should run the following command in the same directory:

```
# ./noroot.sh
```

Now, we're set. You can test whether it works by simply plugging the iRiver in to a USB port, turning it on and running these commands:

```
# ifp ls
# ifp df
```

The first command should show you which files and folders are on the root directory of your iRiver, and the second should tell you how much free space you still have on your iRiver (in bytes).

WORKS? GREAT! NOW, LET THE REAL FUN BEGIN!

There are some graphical applications available for iRiver. Since I'm a KDE user, I cover the installation and usage of the Qt-based ifpgui. GNOME users might be happy to hear there's also iFP-gnome (see Resources)—a GUI made for their favourite desktop.

You should be able to find a package of ifpgui for your distribution, but if not, it is even simpler to compile than ifp-line. Tell a techie friend to uncompress the source code tarball, change into the ifpgui directory and run the command:

```
$ ./build.sh
```

It asks you for the root password once during the install to make the application usable by non-root users.
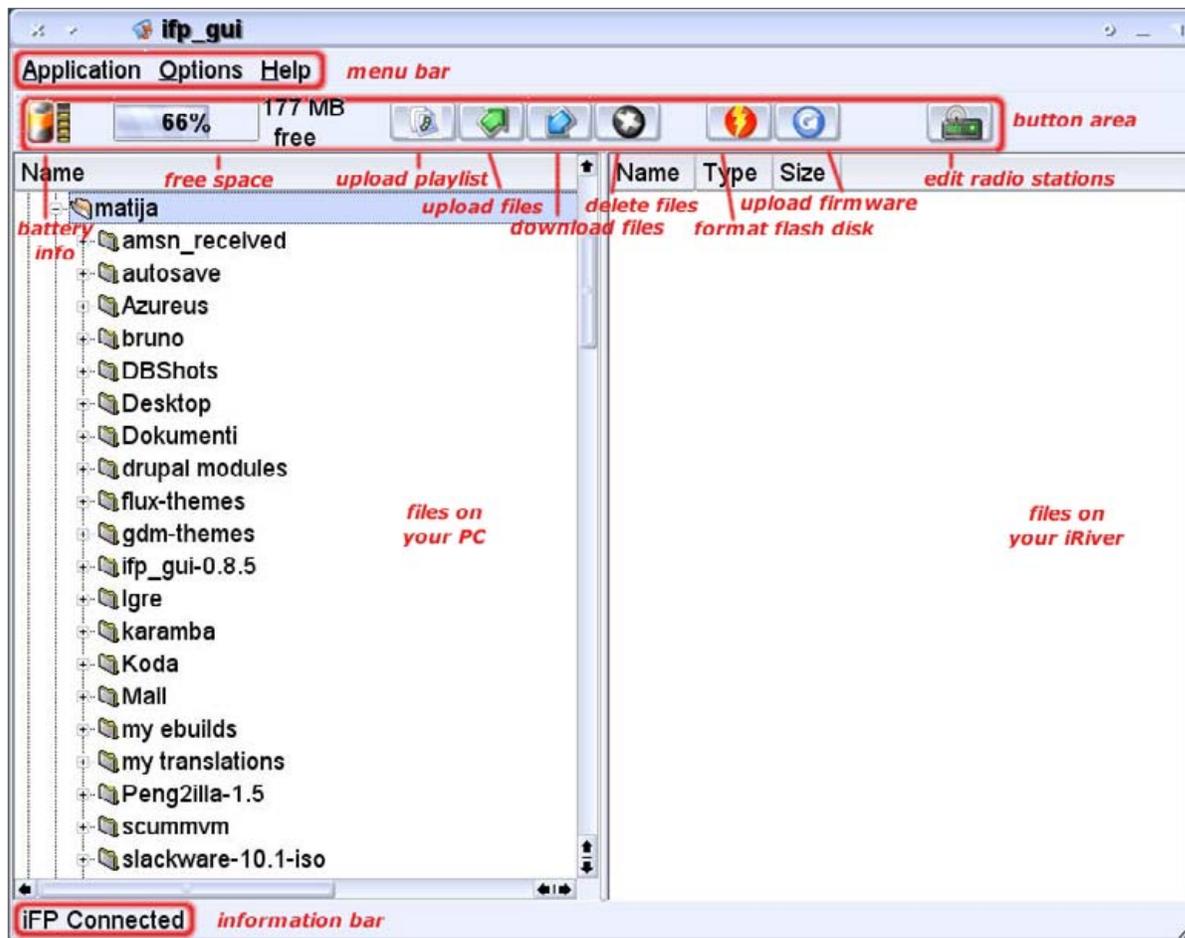

Figure 1. The ifpgui Main Window

As you can see in Figure 1, the interface is divided into four sections: the menu bar, the info bar, the button area and the main area. The main area is also divided into two parts. The left part shows the files on your computer, and the right part shows files on the iRiver. The buttons are self-explanatory.
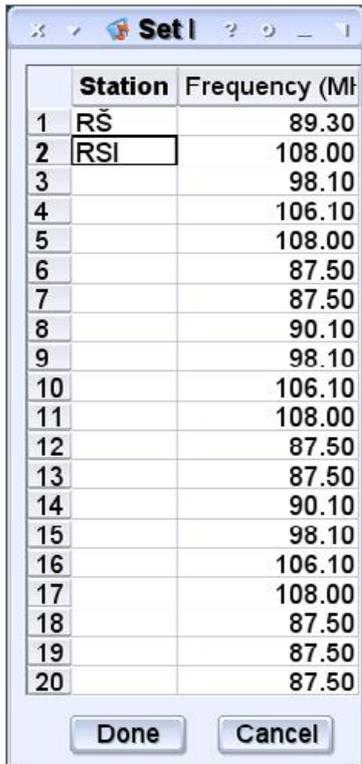
The first thing you might want to do is dive

Figure 2. Edit Radio Frequency Presets

directly into copying music to your iRiver. The interface is simple to understand, but if you would like to hear how to do it, here's how. Let's say you want to upload some rock albums and keep them separated from the rest. So, create a new directory using the right-click menu on the right (that is, iRiver) part of the main area, create a new folder and name it Rock. Enter that new folder you just created. Now, navigate to your favourite rock songs on your computer (left part of the main area), select them and press the Upload button. You also can upload the files simply by dragging and dropping them from the left area to the right—whatever suits you best. You can select multiple files if you hold down the Ctrl key while clicking on them.

While you're at it, you might as well add your favourite radio station. Simply click on the radio button (it's the right-most button) and change the presets. Let's say you want to add a radio station called foo at the frequency 89.45MHz on the first preset. Double-click the Frequency field in the first row, and enter 89.45. You can even name it (it doesn't show on the iRiver though) by double-clicking the Station field and typing in foo.

But, as already mentioned, this application isn't difficult to use at all, just play with it a bit and you'll understand it perfectly. Unfortunately, ifpgui is, at the time of this writing, still in the beta phase and gave me problems detecting the connection to the iRiver. It may work for you immediately by the time you read this.

USING NEW UMS FIRMWARE

In my experience, iRiver becomes a lot easier to use when you transform it into a UMS device; it behaves just like a normal USB disk.

It is fairly painless to update the firmware to the UMS version. Download the latest UMS firmware from the official iRiver home page, and unzip the file with the command:

```
$ unzip <firmware filename, such as IFP-800T.HEX>
```

If you prefer to use your KDE desktop, simply open the zip file by clicking on it. KDE opens the file as if it were another folder. Now drag the file to a convenient location, like the desktop, to unzip the file.

If you're a command-line friendly person, run the following command to update the firmware:

```
$ ifp firmupdate <firmware filename, such as IFP-800T.HEX>
```

It's even easier if you use ifpgui. Click the upgrade firmware button, and select the .hex file you downloaded and unzipped to the desktop.

After the upgrade has finished, simply turn your iRiver on again, and you can start using it after it is done reformatting itself. Some distributions will detect the device automatically when you plug it in and turn it on. KDE will place an icon on the desktop for you. If your distribution doesn't work that way, put a link to it on your desktop yourself. Right-click on the desktop (while it's plugged in and turned on) and select Create New→Link to Device→Hard Disc Device. Be sure to point the device to the right device (usually /dev/sda) and change the icon and the name to what you like best.

Now that you can access your iRiver from your desktop, you don't have to mount it manually every time—just plug the iRiver in, turn it on and click its icon. Now you can open another Konqueror, point it to your music collection and drag and drop your music files from there to your iRiver. But, don't forget to unmount before you unplug it! Because you have a device link on your desktop, that's as easy as right-clicking the icon and selecting Unmount.

Figure 3. The amaroK Script Manager

SOME EXTRA GEMS

If you are using KDE 3.4, you can run Konqueror and enter `media:/` in the location field. Here's an even easier method: press Alt-F2. A dialog box appears. Type `media:/` in the edit field, and click the Run button.

amaroK is a popular music player for KDE. amaroK users might like to upload their music directly from amaroK to their iRiver. Select Tools→Script Manager from the main menu, after which a dialog box should appear. Click on the Get More Scripts button. A new window should appear with a list of available scripts. Select the one called Transfer To Media Device and click on the Install button. Then click Close to close the script installation window.

Now you need to configure this script. Select Tools→Script Manager from the main menu if you closed the Script Manager window. Select

RESOURCES

iRiver Official Home Page: http://www.iriver.com

ifp-line (Command-Line Application): http://ifp-driver.sourceforge.net/ifp-line

ifpgui (Qt/KDE GUI): http://ifpgui.sourceforge.net

iFP-gnome (GTK/GNOME GUI): http://ifp-gnome.sourceforge.net

transfer_to_media_device amaroK Plugin: http://www.kde-apps.org/content/show.php?content=26850

Rockbox (Alternative/Unofficial Firmware): http://www.rockbox.org

transfer_to_media_device.sh from the Scripts list, and start the script by pressing the Start button. (Depending on the size of the scripts window, you may see only a portion of the name transfer_to_media_device.sh.) Click the Run button. Then, click the Configure button. Click on the Storage Media option on the left and select the iRiver device. If you have an older version of KDE, you can navigate to the mount point, usually /media/usbdisk.

Now you can upload tracks directly by right-clicking the selected tracks and selecting Transfer to→USB device. If you would like to have this amaroK script load itself every time you (re)start amaroK, tick the Start scripts on application startup box.∎

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