

Installing the Planet CCRMA kernel:

The Planet CCRMA package consists of two things – a kernel and a collection of applications. Both of these are controlled using a package called apt.

The kernel includes an up-to-date, optimized linux kernel with various patches and fixes to make it run faster for audio applications. It also includes the **ALSA** sound drivers.

Installation is easy – more detailed information is available on the planet ccrma website –

<http://ccrma-www.stanford.edu/planetccrma/software/install.html>

******NOTE – THESE INSTALLATIONS SHOULD BE DONE AS SU (ROOT), AS SHOULD ANY OTHER INSTALLATION!******

Installing apt:

Download apt from the planet ccrma website – you will need the apt rpm AND the apt-devel rpm. If you are doing a cdrom install, they will be on the cd – look in **/mirror/redhat/linux/planetccrma/<dist>/en/os/i386/**

Install them using:

```
rpm -Uvh apt-0.5.5cnc6-1.i386.rpm
```

and

```
rpm -Uvh apt-devel-0.5.5cnc6-1.i386.rpm
```

Once this is done, we need to get a couple of configuration files for apt – **sources.list** and **apt.conf**. These tell apt where to get packages from. Download them from the website (or copy from the cd – in the **/apt/configuration** directory). Make sure you have the relevant file for your distribution. If you are doing a cdrom install you need to edit the **sources.list** file and comment out all the lines which start with '**rpm http**' by putting a # at the beginning.

Now do the following from the directory the new sources.list and apt.conf are in:

```
cp sources.list /etc/apt/sources.list
cp apt.conf /etc/apt/apt.conf
```

You are now ready to use apt. To prepare apt, type the following before you install anything.

```
apt-get update
```

This will download the latest list of available applications etc.

If you are doing a **cdrom install** you need to do this instead:
Unmount your Planet CCRMA cdrom (remember you had it in there to install apt!) and type

```
apt-cdrom add
```

Insert all your cdroms (doesn't matter which order) when prompted and hit enter. **apt** will scan them and then prompt for a name for that particular cd. Call it whatever you like, just remember what it was you decided on! From now on you will be asked for those cd's by the names you gave them any time apt needs to install a package. **Don't forget to add your apt-enabled red hat cdroms to this as well.**

Now we are ready for the **apt-get update** command we used above!

Installing the kernel:

We can begin to install the planet ccrma kernel. Type the following (all one command):

```
apt-get -o RPM::Install-Options::=--oldpackage  
install planetccrma-core
```

It will install the new kernel. When it is finished, we can now edit the **Grub** configuration file to select this kernel by default:

```
emacs /etc/grub.conf &
```

Change the line that says "**default=1**" to "**default=0**", save and exit (in emacs, the shortcut for save is **ctrl-x ctrl-s** and exit is **ctrl-x ctrl-c**).

Reboot your machine. When you boot into linux again, you should see the new kernel listed in grub and it will be selected by default.

Setting up ALSA:

To configure ALSA, there is a script which makes life much easier! Type:

```
/usr/sbin/alsaconf
```

and follow the instructions. The first time you do this you might get a failed message at the end when it tries to raise the volumes. Don't worry, this is because the old sound driver might still be loaded. If you reboot and do **/usr/sbin/alsaconf** again it will be successful and ALSA will be set up.

If the script doesn't work, you may need to set up ALSA manually. Check the ALSA website for more details, because they will have soundcard specific configuration details. The site is <http://www.alsa-project.org/>

Updating your distribution:

Now that the new kernel has been installed, we can get everything else up to date as well. Type the following:

```
apt-get update  
apt-get dist-upgrade
```

It will check your system, look for updated files, and then download and install them (or use the cdrom – whichever you have configured). It is advisable to do this every now and then to make sure you have the most up to date security patches and fixes etc.