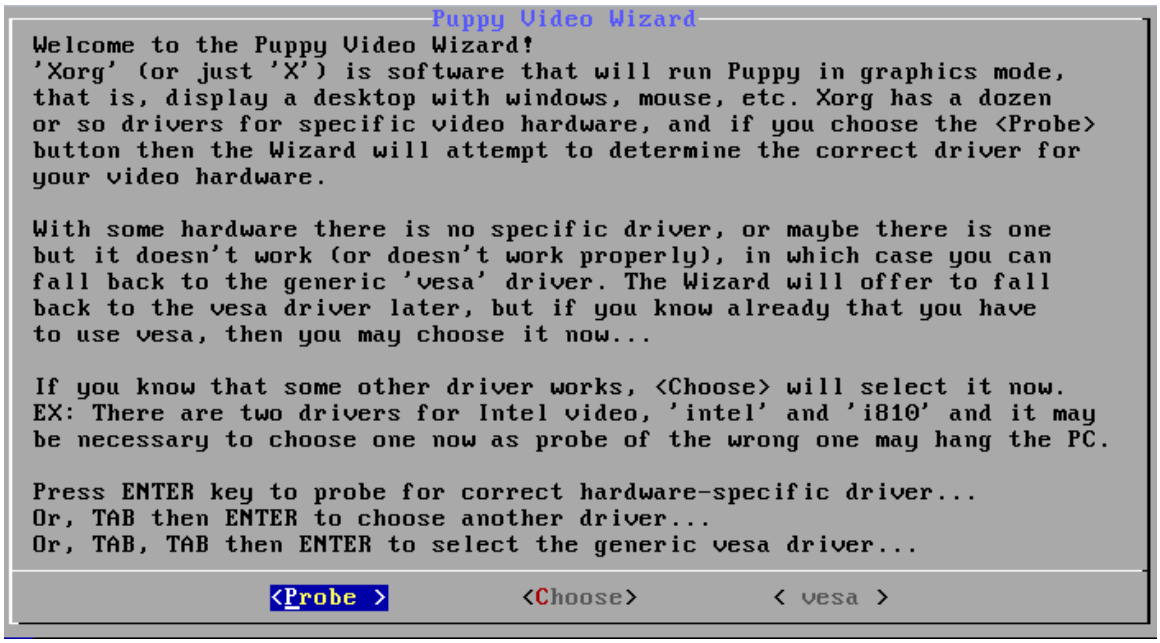
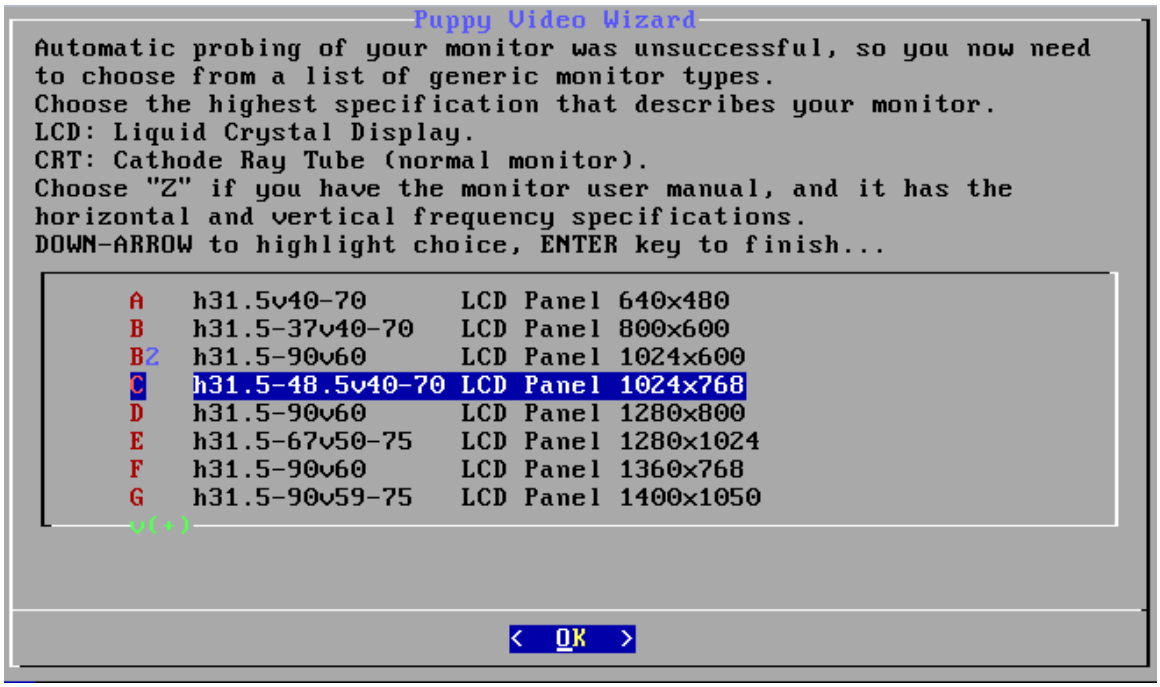
First Boot of jOrgan Pup 2011.6

Once you have booted the CD you will see the Puppy 5.2.5 boot screen, and then a whole bunch of text messages as Puppy informs you of what it is loading.

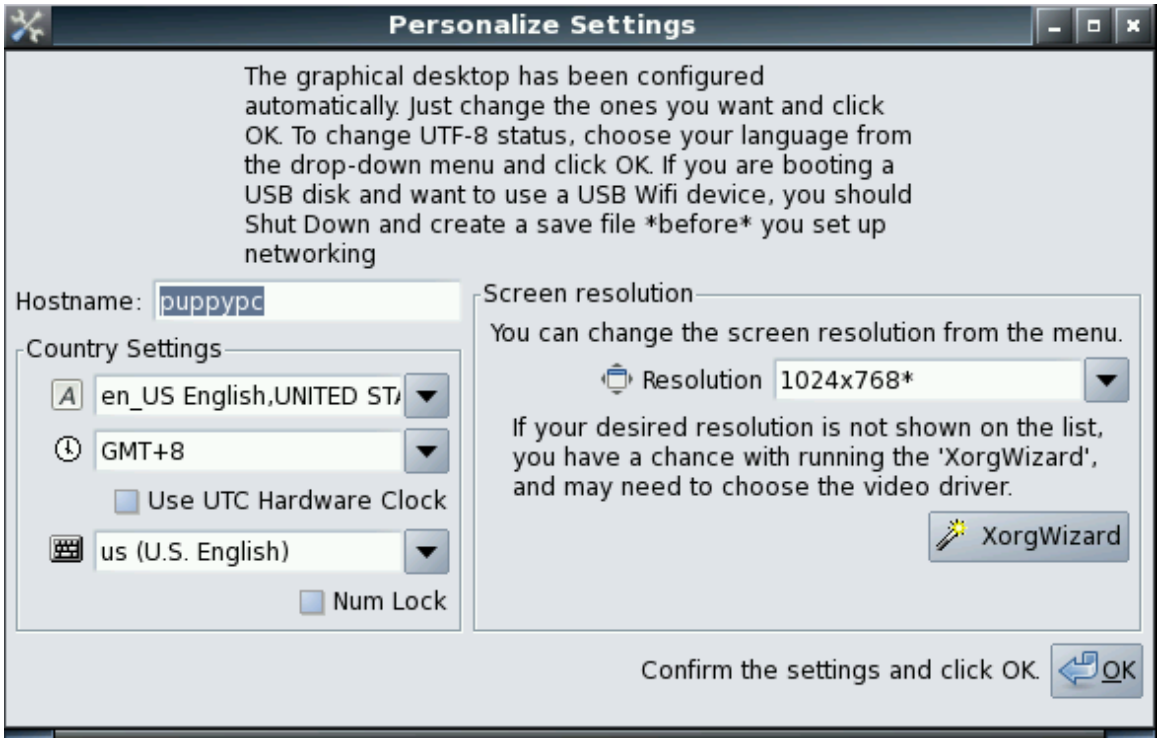
Eventually you will be presented with the Graphics/Screen configuration dialogue.



Select the 'Probe' option to automatically configure your graphics hardware and select the resolution to continue.



The jOrgan Pup 2011.6 desktop will then load, and the first boot options dialogue screen will show.



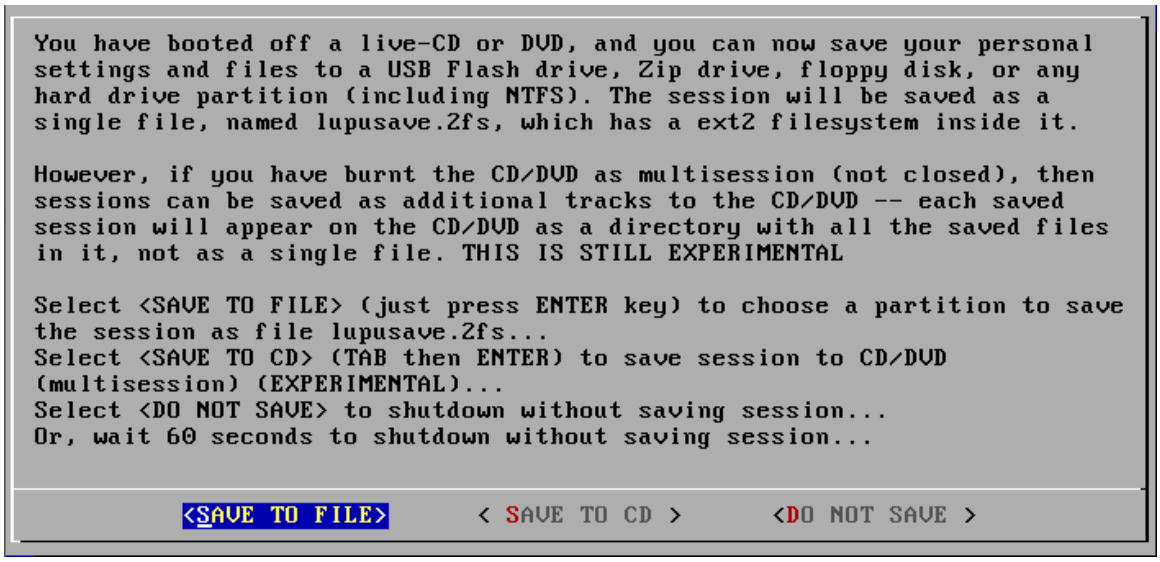
You can click on 'Ok' or configure Puppy to your personal requirements.

When the boot options dialogue screen has been closed, Jack Control will have loaded and you will be able to start with your audio testing configuration.

Creating a SAVE File

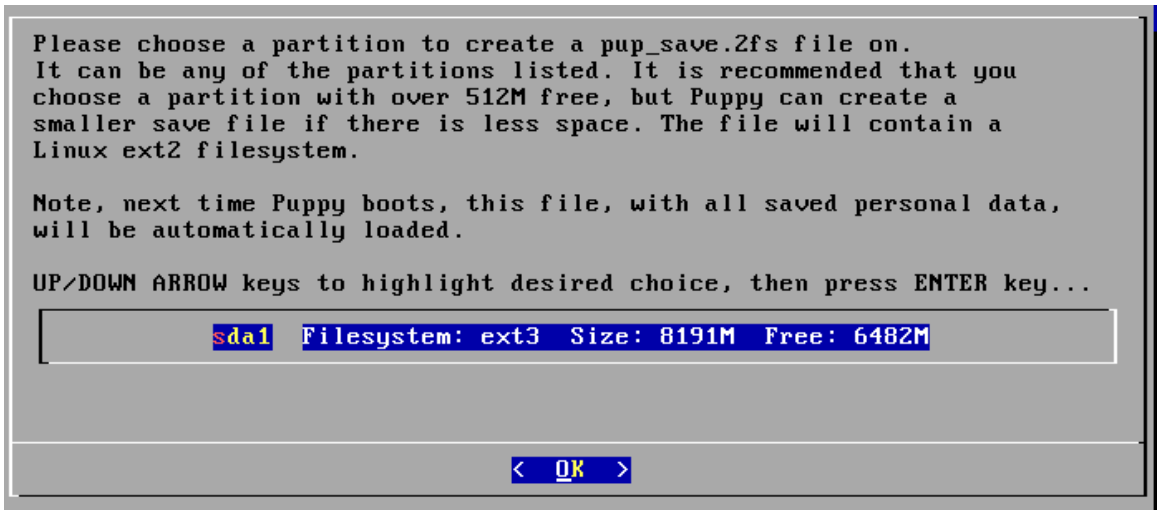
This option saves a file onto your harddrive or USB Memory stick that contains the working file system of Puppy Linux. When you boot into jOrgan Pup using the CD, the data contained in the save file is loaded using a layered file system, so that your changes load on top of the jOrgan Pup CD, allowing you to keep the modifications that you have made to configure jOrgan Pup to your system.

- Click on Menu - > Shutdown -> Reboot computer
- Within the shutdown sequence...Select Save to File

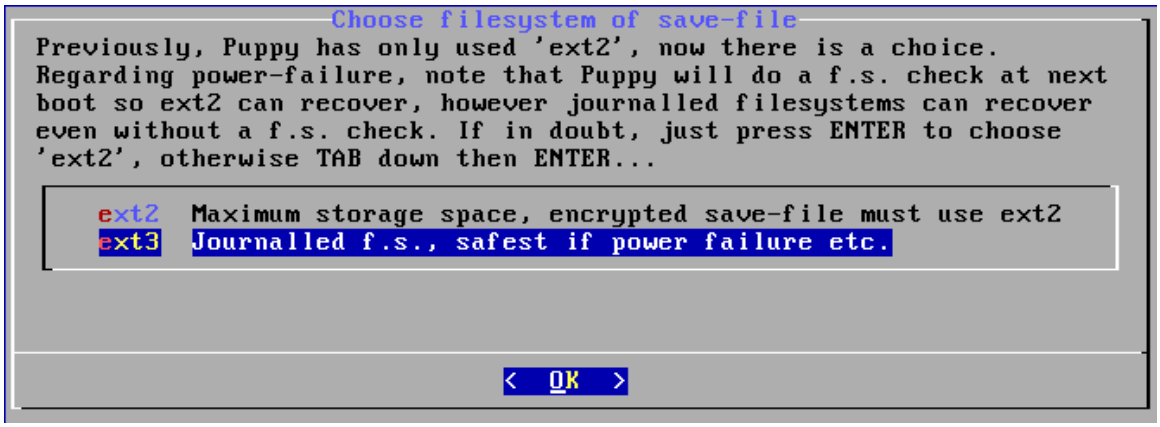


- Then select OK

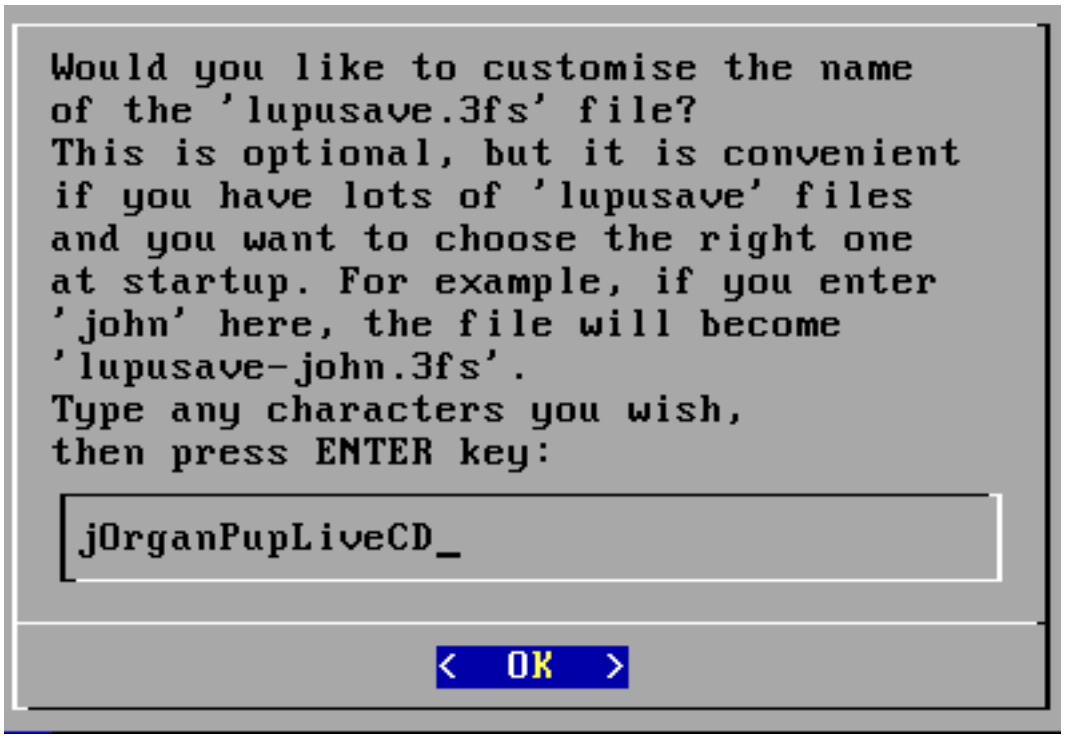
Now select where the saved file is to be located (if you are unsure what the numbers and letters mean here, just let me know and I'll help you with them)



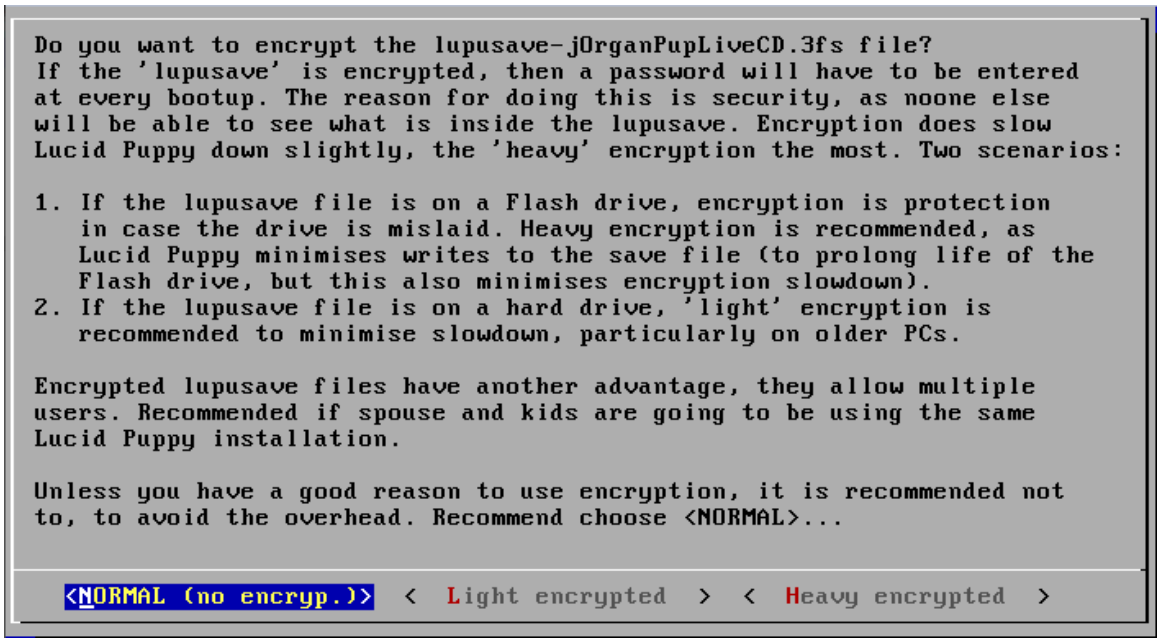
- Select OK
- Next, select the ext3 file system



- In the Name text box, type in something like jOrganPupLiveCD or something that makes sense to you.



- Then select OK
- Select Normal (no encryp.)



- Now select the size that suits your environment (I use option 8 - 1.25 GB)
- Then click on Yes, save

- Then wait for the save file to be generated... this may take quite a while
- Select Yes regarding the 'Copy lupu-525.sfs' question (this will speed up your boot sequence from the CD)
- Leave the jOrgan Pup CD in the drive
- The computer will now reboot back into jOrgan Pup 2011.6 (if you need to press F8 or some other boot option please do so), using the settings that you have now saved

You will still need to boot using the Puppy CD, but everything will be run using the save file space, so anything you save will be usable after a reboot.

Installing to a USB Flash Memory Drive

Easy Install

Puppy Linux has a Universal Installer that can be used to install jOrgan Pup to boot and run from a USB Flash memory stick. The following steps describe what to do.

- Plug the USB Flash drive into a USB port
- Run the Puppy Universal Installer (Menu -> Setup -> Puppy universal installer)
- Follow the onscreen instructions which will walk you through the Puppy USB installation process
- When finished with the Puppy USB install, reboot your PC and go into system BIOS to change your boot order to boot from the USB device
- Save your settings and reboot your PC to enjoy running jOrgan Pup from your USB Flash drive

Manual Install (for when things don't work as they should)

The USB Flash Memory drive installation will produce a 'frugal' installation of jOrgan Pup 2011.6. This means that the CD image will be copied across to your USB drive, and a Save File layer will be used to store your changes.

First you need a 2Gb or larger USB flash drive. This tutorial will use the whole drive, so if you do not have a dedicated USB drive please go and purchase one. Also, make sure that your computer is set up to boot from the USB device(this is set in the BIOS).

- Run the jOrgan Pup 2011.6 Live CD without a Save File (use the 'puppy pfix=ram' option at bootup)
- Plug the USB Flash drive in
- Use the System -> GParted partition manager to format the whole partition to the Linux ext3 disk format (this is a safer format than

FAT32 or NTFS)
- Once GParted is finished formating the drive partition, close GParted
- Now mount the USB drive by clicking on its icon (and take note of what it is called - something like sdb1)
- From the Live CD copy the lupu_525.sfs , vmlinuz and initrd.gz files to the USB drive
- Now run the System -> Grub4dos bootloader config from the system menu
- Select the USB drive from the dropdown
- Then select the "search only this drive or partition" option
- Now click on 'OK' to install the grub4dos boot system, allow it to write to the drive's MBR and make a new menu.lst
- You can now reboot and create a new Save File on the USB drive during the shutdown process
- Boot using the USB drive
- Once you have booted successfully from the USB drive you can configure the system to match your Audio and MIDI settings and customize the jOrgan dispositions
- Click on the 'Save' button when you have made significant changes (there is an autosave feature, but better safe than sorry)

If you are unsure about what to do at any stage in this installation please let me know so that I can improve the tutorial...

Installing to a Harddrive

Puppy Linux's Puppy Universal Installer will also intstall jOrgan Pup to an internal hard drive. The process will also depend on variables you will supply answers to: selecting default settings where applicable and/or recommended.

- Right click on your desktop, and under Setup, select Puppy Universal installer.
- From the available media options, select Internal (IDE or SATA) hard

drive.

- Choose the drive you wish to install it to, if more than one is displayed.
- Puppy Linux will display the specifications of the drive you are about to use.

NOTE: It is highly advisable to install on a hard drive that has been formated with either EXT2 or EXT3 file system. If your hard drive is not reflecting either of these file systems, you should run GParted application to correct this.

- When ready to install onto the hard drive, click the icon next to Install Puppy to... (Please note that the drive description could change from one system to another based on configuration. In the case of most older single IDE drive based computers, this will typically display as SDA1.)
- Acknowledge your selection to install jOrgan Pup to the hard drive by clicking on the OK button
- Select the CD option on the next window. This tells the wizard where the installation files can be found
- Make sure the CD is still in the drive and click OK to continue
- Select the FULL installation option to install Puppy Linux on the entire drive. (Although the Wizard recommends the Frugal option, it is best to dedicate the entire drive to Puppy Linux, since this is what we are actually aiming to do. If you prefer to run the Frugal option, you will need to choose partition sizes and other variables that may not be suitable for beginners. More experienced Linux users will typically choose the Frugal option.)
- Puppy Linux will begin its installation to the hard drive and prompt you when it is done
- For its booting option, select Install/Update GRUB
- Select Install to proceed; then choose OK at the next window to confirm
- For the GRUB Configuration, choose the default simple value and click on OK
- Choose the default standard resolution and click on OK
- For the GRUB partition, keep the default path and click OK

- For the GRUB destination, keep the default Root value and click OK
- When the installation is complete, you will see the GRUB INSTALL SUCCESS window. Click OK

You may be prompted to reinstall GRUB. If so, simply select No to exit.

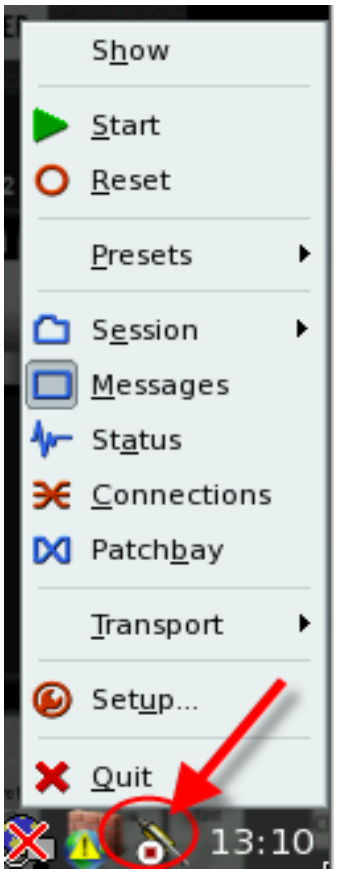
Configuring Your Audio and MIDI

Jack Connections

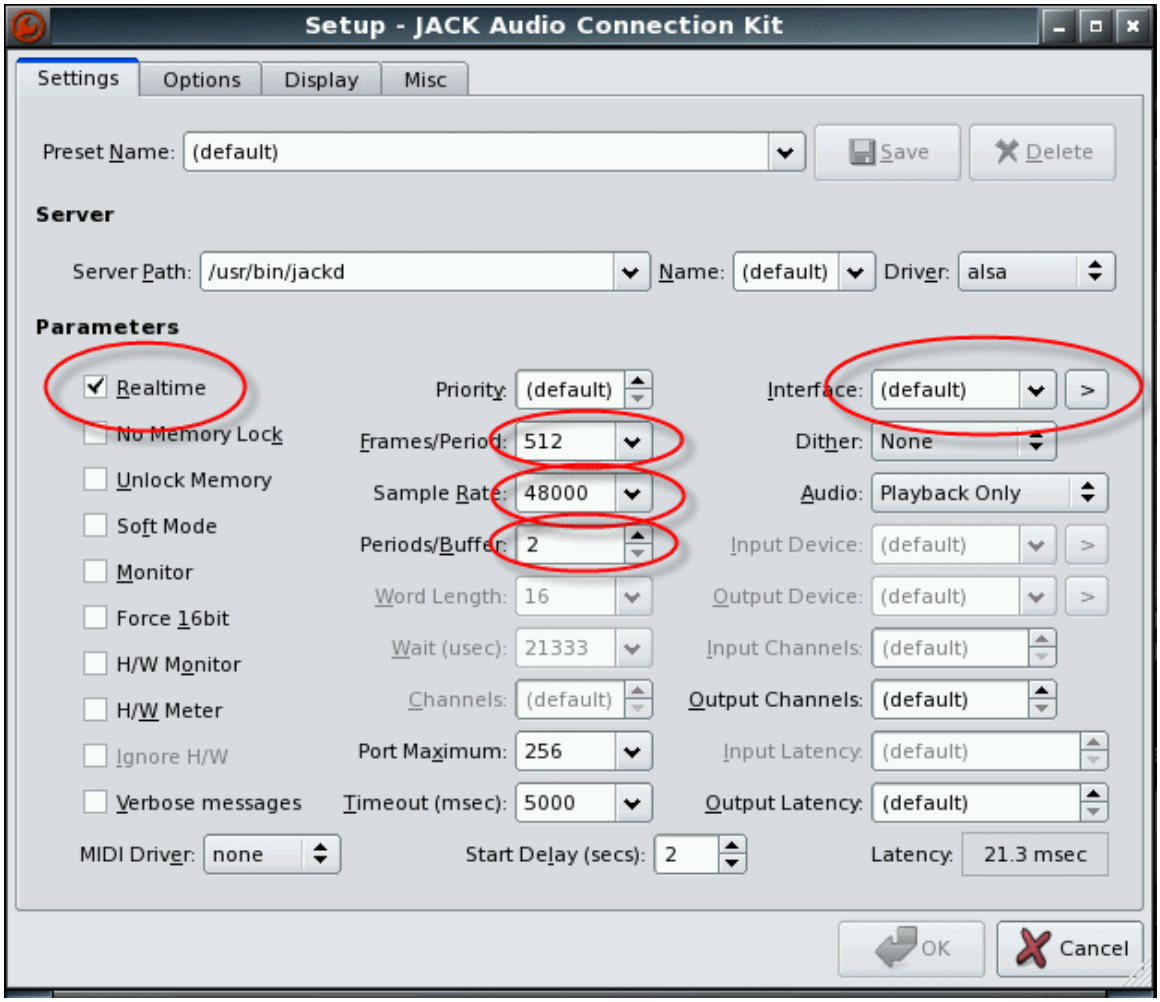
Jack is an audio and midi connections tool. We will be using it to create and test connections between MIDI hardware devices and Virtual MIDI devices, and between Audio Channels and Audio Effects.

Jack Settings

Right click on the Jack Control icon on the bottom left side of the task bar



Select 'Setup' from the Jack Control menu that appears



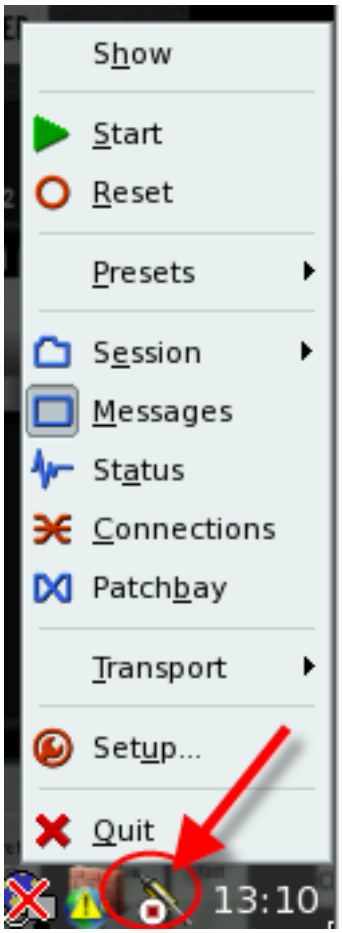
- The settings shown here are a good starting point for most computers/soundcards
- Click on the '>' button of the 'Interface' option to see the list of audio devices on your system
- If you have more than one soundcard, select the one that jOrgan will be using from this list
- If you are using an older computer or a slower CPU, deselect the 'realtime' option
- A lower Frames/Period will equal lower latency, so experiment with this value

- Higher Frames/Period and Periods/Buffer values increases latency but also increases stability of the audio stream. So if you experience crackles, pops, or other bang type noises experiment with higher values (distortion can also be caused by amplitude values being too high for your audio system, so if you are experiencing distortion also check the fludisynth gain values in the jOrgan Customize wizard of the disposition that you are playing)

Creating Connections from your Hardware MIDI device to a Virtual MIDI device

In my setup I configure all the jOrgan dispositions to use the first Virtual MIDI device for the keyboard elements, and then connect all three MIDI devices to that Virtual MIDI device in the ALSA tab of Jack Control. I have also created a patchbay setting that retains these connections each time I boot into jOrgan Pup (more on the patchbay later).

Right click on the Jack Control icon on the bottom left side of the task bar.



- Select 'Connections' from the Jack Control menu that appears
- The Connection screen will now show, and you will see three tabs indicating the three types of connections available - Audio, MIDI, and ALSA.
- Note: ALSA stands for Advanced Linux Sound Architecture and that tab

will contain all the installed hardware MIDI devices and the configured Virtual MIDI devices. The MIDI tab configures Jack MIDI ports which require specific software drivers with the application. Fluidsynth will be using ALSA MIDI ports by default and so these will only appear in the ALSA tab.

- Click on the ALSA tab. You will see all the MIDI Out devices (those that are sending MIDI data) on the left had side, and all the MIDI In devices (those that are receiving MIDI data) on the right.
- Click on the (+) node of one of the devices to expand the device node and show the available MIDI Ports
- To connect a hardware MIDI keyboard to a virtual MID device and Port, click on the name of the MIDI device in the left hand column, then click on the Virtual MIDI device in the right hand column, and then click on the 'Connect' button

Modifying Connections

You can disconnect Jack connections and make new connects that suit your particular hardware setup.

Working with Convolution Reverb

Jc Gui

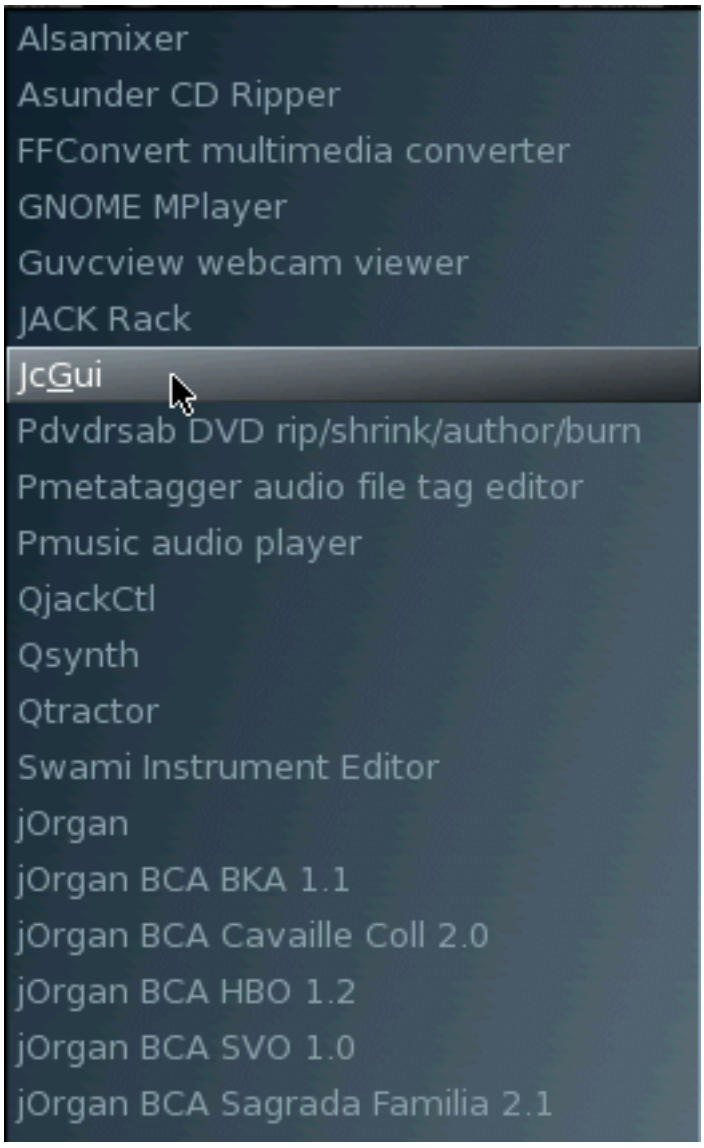
I have pre-configured Jc Gui with the BCA EMU Casper Cathedral 00 reverb. Use the method described in the section below if you want to change the impulse response.

All of the BCA argonon dispositions require added reverb. So we will use the Jc Gui reverb. Therefore, before you load a BCA argonon, start Jc Gui first (and make sure the 'run jconvolver' button is showing in green). Once Jc Gui is load, and the BCA argonon is loaded, look for the '**Jack Reverb'** button on the BCA console. Click on the button to activate the Jack Connections script that I have written to disconnect the fluidsynth outputs from the system speakers and connect them to the Jc Gui Reverb. Wait a few seconds for the new connections to be activated.

Now play the organ, and use the sliders and knobs in Jc Gui to get the right amount of reverb for your environment.

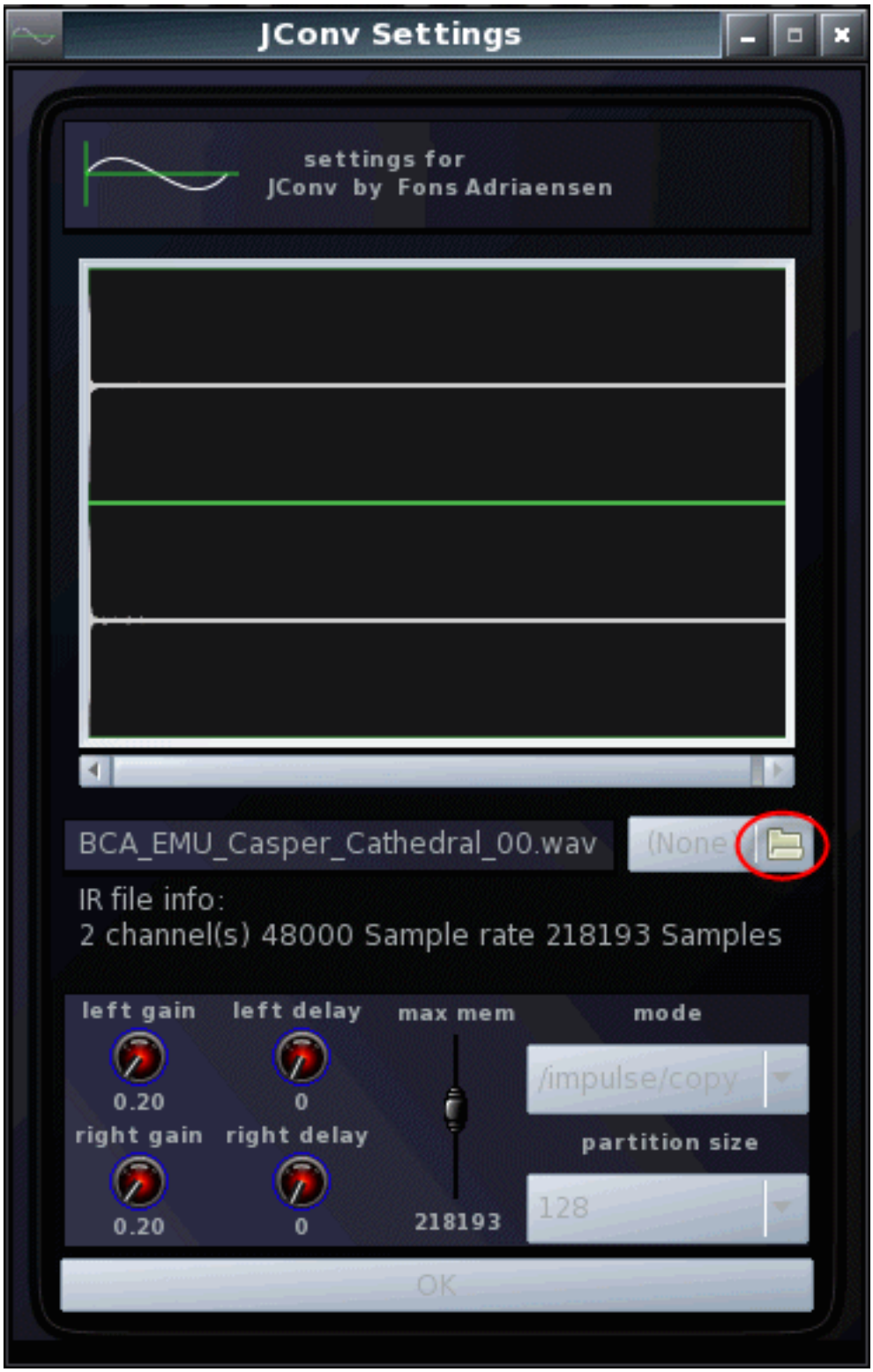
Adjusting the Jc Gui Settings

With the Jack audio server running, start Jc-Gui (Multimedia -> Media Tools -> JcGui)

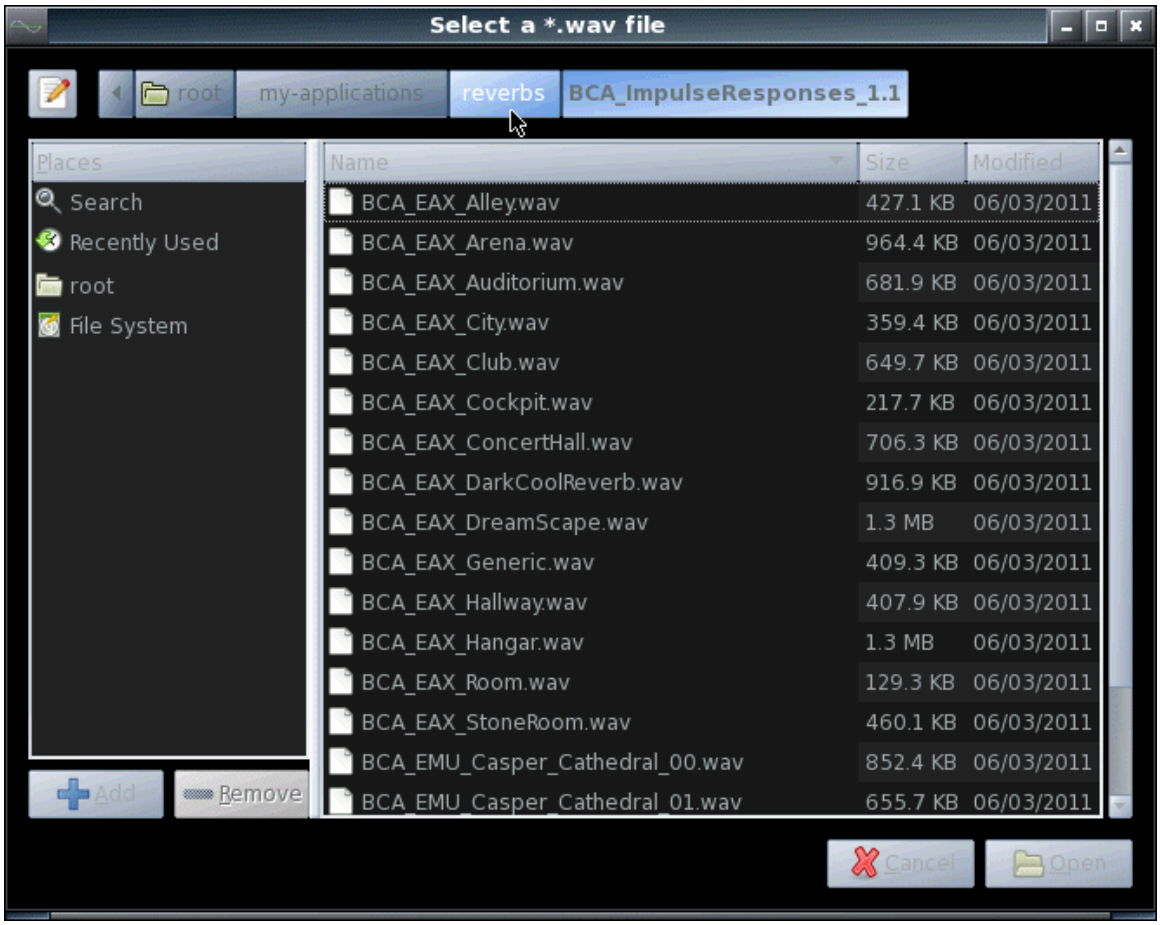


Click on 'jconvolver settings' (this will open the jConv Settings window, you may need to drag the window to the center of your screen)

Click on the 'Open file' icon (the folder image)



Navigate to the impulse response reverb wav files and select one by clicking on it (the path to the included impulse response reverbs is /root/my-applications/reverbs)



- Then click on Open (the folder icon) [if your text is white on the light blue background, just look closely at the screen to see the text]
- Wait for the wav file to be loaded. You should now see it in the preview window.
- Don't worry about the other buttons and dials, those are for tweaking the reverb
- Click on Ok to close the Jconv Settings window
- Now click on the 'run jconvolver' button
- After a few seconds (or a little longer with the older computers) the 'run jconvolver' button should turn bright green, indicating that jconvolver is loaded and running
- Take note of the wet/dry slider above the four dials above the buttons that we have used

Now we need to re-connect the output of the fluidsynth soundfonts to the reverb, and connect the reverb to the jack system (speaker) outputs. Find the 'Jack Reverb' button on the BCA console and click on it to activate the script that will reset the connections.