

Prokyon3 Prelisten Howto

1 Preamble

1.2 About this Howto

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1.3 What we are talking about?

Since version 0.9.5 Prokyon3 supports the function „Prelisten Tracks“. The sense of this function is as follows: imagine the usage of Prokyon3 f.e. in a restaurant. Playlists have been generated and the desired musicprogramm is send to the player. So far everybody is happy and the guests hear the desired standard- programm . In the following I will use the term „audience-player“ for this scenery.

Now imagine that guests were asking or searching for a specific song, what can be easily done with Prokyon3. Now the question is, if song you found is the right one? It would be great to listen this song without disturbing the audience. And that's the prelisten-function for. In the following we'll gonna have a look howot realize all this.

2 Preparations

The following must be prepared and functional to use this howto :

- prokyon3 version 0.9.5. or higher
- 2 soundcards (one for audience, the other one for prelisten)
- an installed XMMS player
- an installed Amarok player
- xine-plugin

Both soundcards must be supported by alsa. The best is to check that on the Alsa- homepage <http://www.alsa-project.org/alsa-doc/> . Prokyon3 must be installed and functional.

Let me give you some advices concerning the players. In general you may use any player where you're able to select the output plugin and the hardware channel the player should use. The players I used were my choice. Feel free to adobt this howto for your players.

On the market you find highend soundcards supporting full multiplexing. Such cards were able to deliver several audio streams parallel to several output channels. You may use such cards too, but in practice most people will use two cheaper cards for our scenario.

3 Alsa- configuration

The configuration of the soundcards is not complicated. Have a look at the extensive alsa documentation. If you use yast to setup your soundcards, you have to know that the first card you configure will be called as snd-card-0 and the second as snd-card-1. You should use alsa version 1.0.9 or higher!

Important is that you can distinguish the cards by their names and you remember which card should do which job. For SuSE Linux the configuration file can be found under /etc/modprobe.d/sound. As an example here is the contents of my soundconfiguration:

```
options snd-ca0106 enable=1 index=0
options snd-cmipci enable=1 index=1
# lgGW.WCfr2+peI1A:SB Audigy LS
alias snd-card-0 snd-ca0106
# CvWd.fQ0hnWtjobB:CMI8738 6ch-MX
alias snd-card-1 snd-cmipci
```

I installed both cards using yast. You may also use alsacnf to do that job. Important for the next steps is, that both cards work fine and can be addressed with alsamixer. Here an additional hint: you must call alsamixer using the parameter -c to address a specific soundcard.

Snd-card-1 will be used later for the funktion prelisten. The first soundcard snd-card-0, a Soundblaster Audigy LS, will deliver the audience- program later. Which soundcard you use for what purpose is in general freely choosable, but it makes sense to use the card with the better sound- quality for the audience program as snd-card-0.

```
alsamixer -c 1
```

This call starts alsamixer for card 1 (snd-card-1). Take care that the channels you want to use are turned on in alsamixer and the the volume is not zero! After this basic configuration you should check if each cards works. This can be easily checked with ogg123. Here are the commands to play a soundfile on card 0 and card 1:

```
ogg123 -o dev:ca0106 someoggfile.ogg
ogg123 -o dev:cmipci someoggfile.ogg
```

If that worked, there's a last step to do for the alsa part of the configuration. We have to build an asound.conf - file in directory /etc/. This file can be stored locally for a user (filename is .asoundrc) in the users \$HOME, or systemwide (filename asound.conf) in directory /etc. I suggest the last type of configuration, cause then all users use the same sound configuration on the system.

The potentials of asound.conf are gigantic! You can define resampling rates, define symbolic names for specific channels and much much more. Please have a look at the complete alsa documentation. From my point of view you need asound.conf to be able to differ properly between the soundcards. Here's my asound.conf as an example.

```

pcm.ca0106 {
    type hw
    card 0
}
pcm.cmipci {
    type hw
    card 1
}
pcm.CMIPCI_1 {
    type plug
    slave {
        pcm "hw:0,0"
    }
}
pcm.CA0106_1 {
    type plug
    slave {
        pcm "hw:1,0"
    }
}
pcm.!default {
    type plug
    slave {
        pcm CMIPCI_1
    }
}
}

```

If everything up to here worked fine, we're able to configure the players now.

4 Amarok Player setup

Configuring the player is the most important work we've to do now. The reason for that is easy to understand: the player can be set up on which channel it should send the audiostream to. For our example we'll use the following assignment:

- snd-card-0 -> Audience channel
- snd-card-1 -> Prelisten channel

Like already mentioned: you may use your own assignement, if desired! Here a question from my side: in the moment I do not know howto assign a soundcard/outputchannel on the commandline when calling Amarok or XMMS. Therefor I had to use 2 different players to have different setups for audience an prelisten. If here's another possibility, or you know the commandline parameters, please send a note to the prokyon3 mailinglist. I'll check that and add that to this howto.



Abbildung 1: amarok audio setup

Now we'll setup Amarok for playing the audience- program: use the right mouse button and select „Configure Amarok“. Choose category „Engine“. First of all you have to select the output- plugin. We use „alsa“. As output-device we select „default“ for both mono and stereo. This instructs Amarok to use soundcard snd-card-0.

That's it! To be shure that everything's fine we use an audiofile to play and to control, if the soundoutput works!

5 XMMS as prelisten-player

Like already mentioned we gonna use XMMS for the prelisten- functionality. So we start XMMS and choose (right mouse-button) options->preferences dialog:

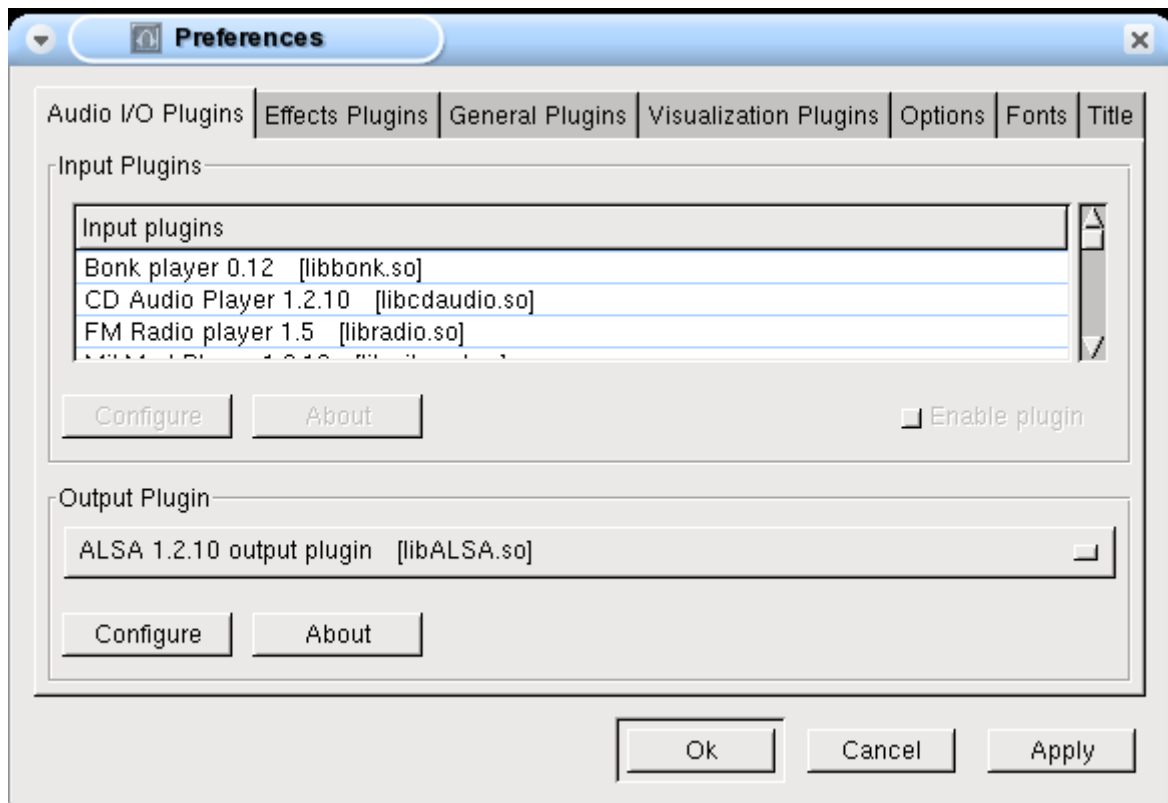


Abbildung 2: XMMS configuration dialog

Like for Amarok we choose also as output-plugin. Then with button „configure“ we change the hardware-settings:

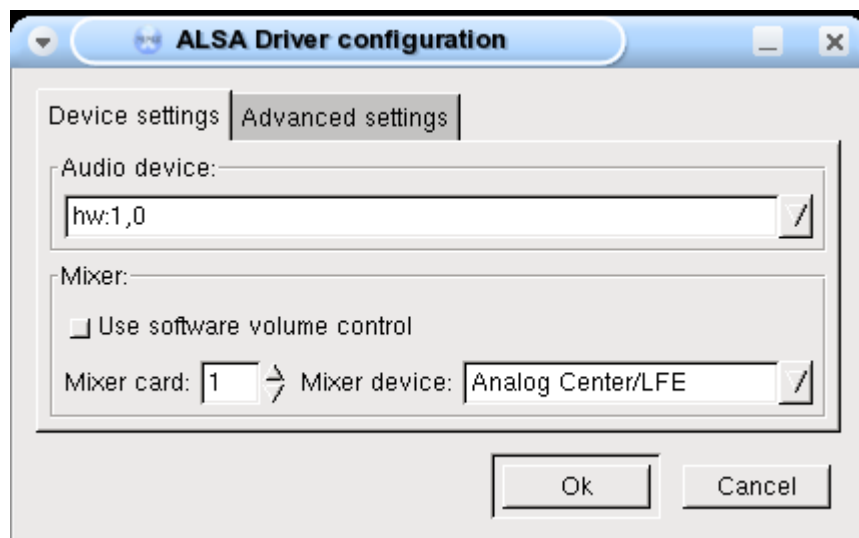


Abbildung 3: audio device configuration in XMMS

As audio-device we select „hw:1,0“. The mixer-card (responsible mixer) we choose „1“. With the mixer-device we may select now on which physical output the sound should be send to. „Analog Center/LFE“ is fine for us. Please notice, that the naming for the mixer- device depends on your soundcard, so it might be different on your system! Remember: in 90 % of all cases of sound problems the channel is muted or mixer volume is set to „0“.

That's it! To be sure that everything's fine we use an audiofile to play and to control, if the soundoutput works!

6 Prokyon3 configuration

Now we have to do the most complicated part of work: the configuration of Prokyon3! (;-)) We open the settings dialog and select card „player“.

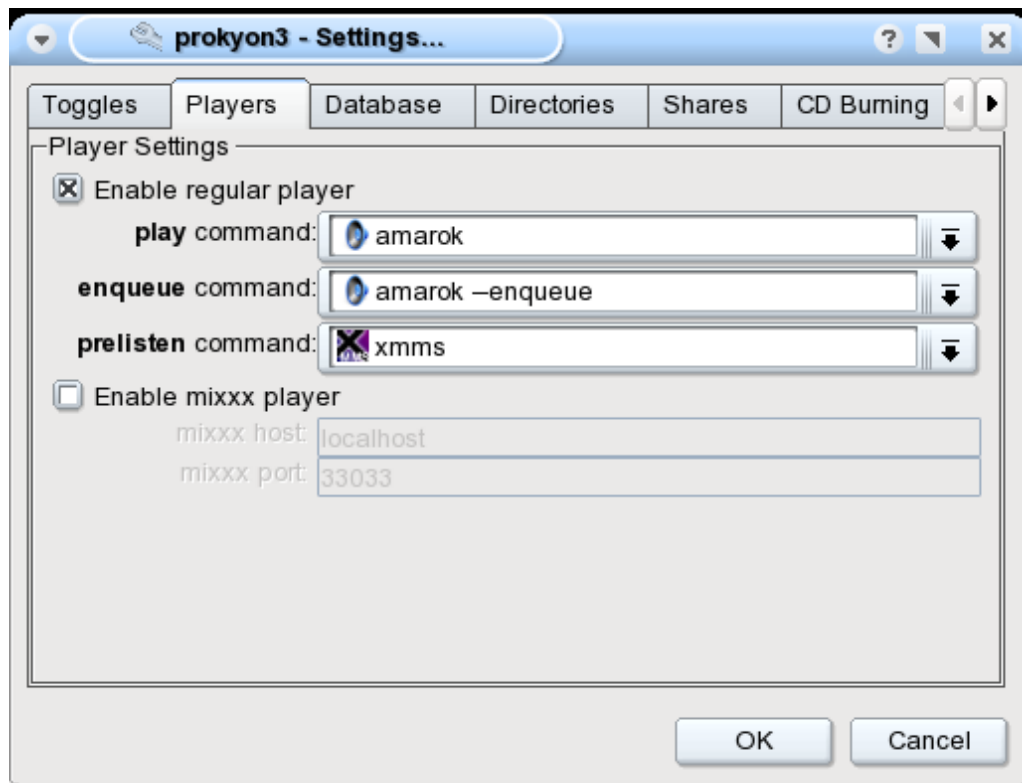


Abbildung 4: Prokyon3 player adjustments

The screenshot shows what we have to configure. Here we setup the functions play/enqueue for our audience-player Amarok. The function prelisten is assigned to xmms. All that we confirm with OK and we're able to check that now. The function prelisten may be used in prokyon3 via your right mouse key or the button in the menu. Have fun!

7 Appendix

I want to thank all the developers of Prokyon3 and my special thanks go to Markus Kalkbrenner. The prelisten function was a feature request of mine and has been enabled by the project in just some days! Again my thanks to the team! The readers I wish a lot of fun and success with Prokyon3's new prelisten function!

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