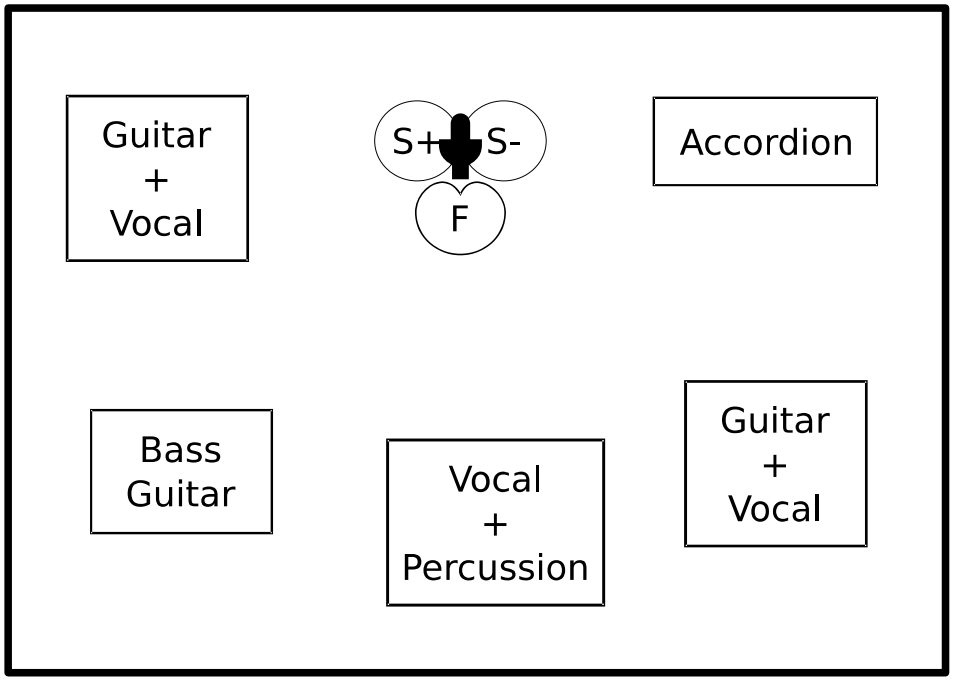
Work recordings of acoustic band

Work recordings of acoustic band

- 2 channel setup
- To give musicians a feedback of their performance
- To give musicians accompaniment for their home practice

Acoustic setup



- S: Bidirectional microphone (**8**)
- F: Unidirectional microphone (Cardioid)

Hardware setup

- Sound card
  - 2 inputs
  - 48 kHz / 24 bit
- Laptop
  - Dual core
  - 2.4 Ghz
  - 2 GB RAM
  - 7200 RPM HDD

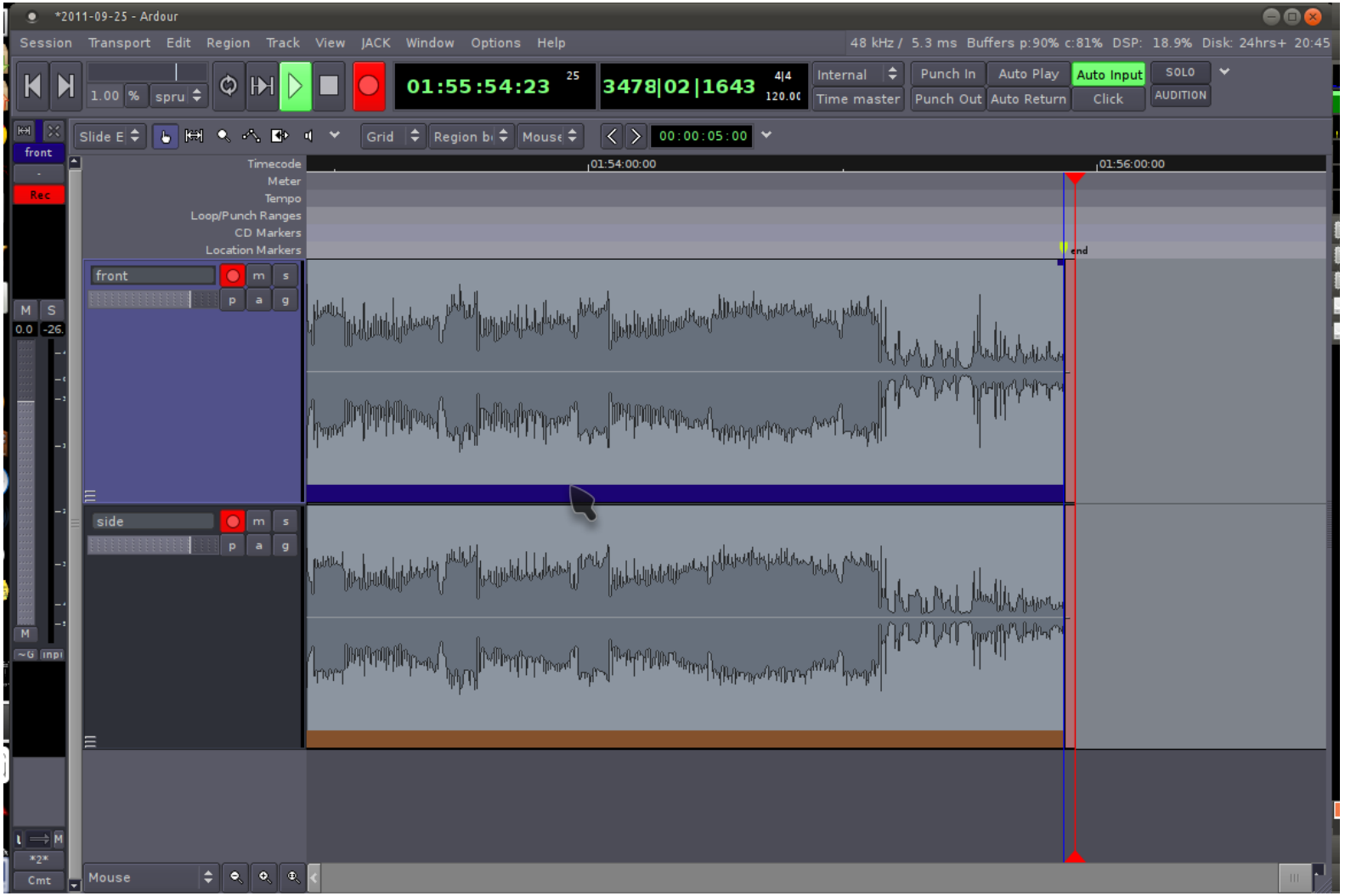
Software setup

- Ubuntu Studio 11.04
- Jack 1.9.7
- Ardour 2.8.11
- LADSPA plugins
  - Calf 0.0.18.6
  - SWH 0.4.15
  - TAP 0.7.1

Recording

- 2 channels
  - Front
  - Side
- Whole performance at once

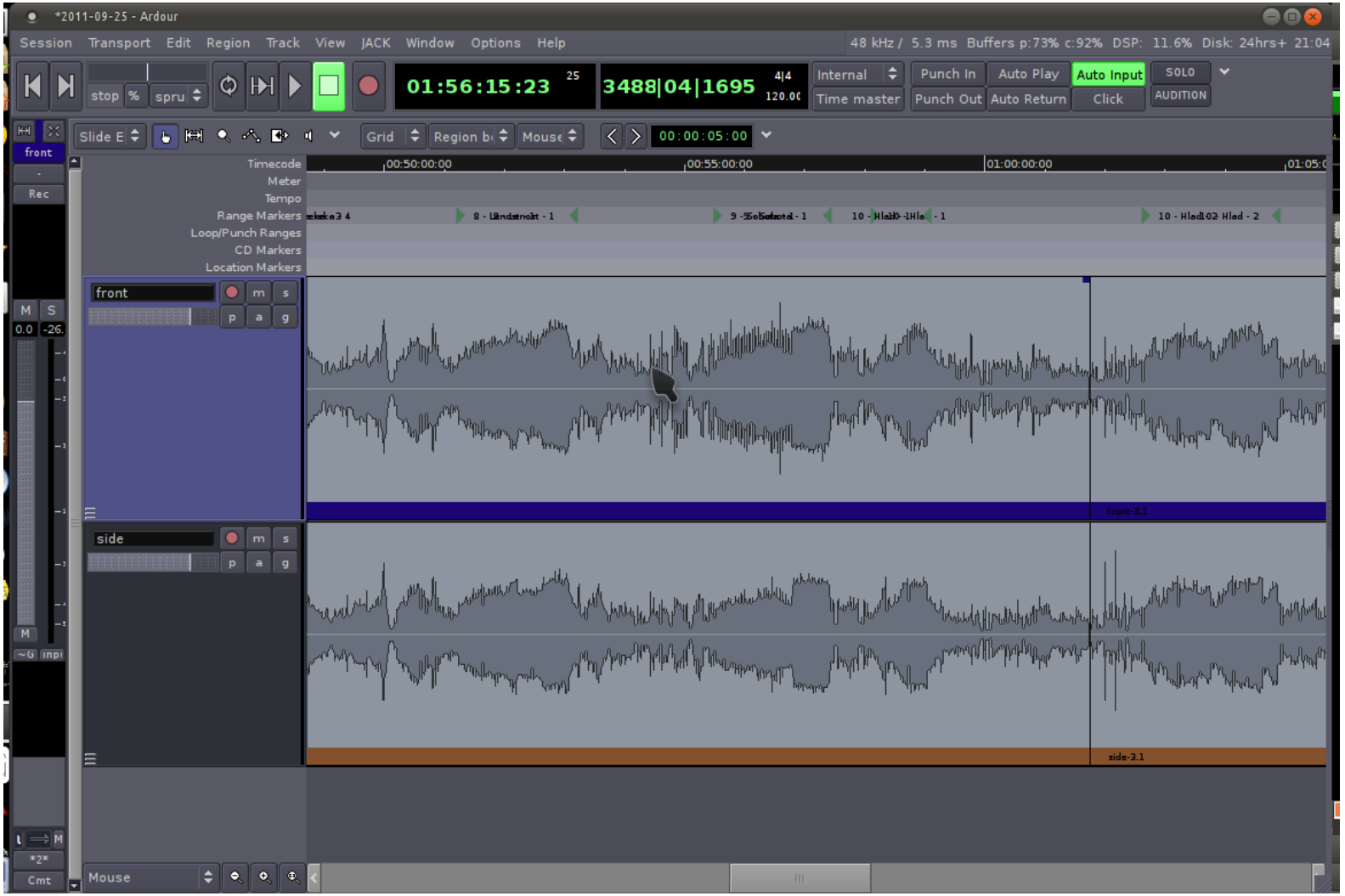
Recording


*2011-09-25 - Ardour
Session Transport Edit Region Track View JACK Window Options Help
48 kHz / 5.3 ms Buffers p:90% c:81% DSP: 18.9% Disk: 24hrs+ 20:45
01:55:54:23
3478|02|1643
Internal
Time master
Punch In
Punch Out
Auto Play
Auto Return
Auto Input
Click
SOLO
AUDITION
Grid
00:00:05:00
Timecode
Meter
Tempo
Loop/Punch Ranges
CD Markers
Location Markers
01:54:00:00
01:56:00:00
end
front
side
Mouse

Cutting

- Create ranges for each individual songs / parts
  - To separate songs from each other
  - To leave out talk / beer pouring / insults
- No sound editing at the moment
  - Not even normalization

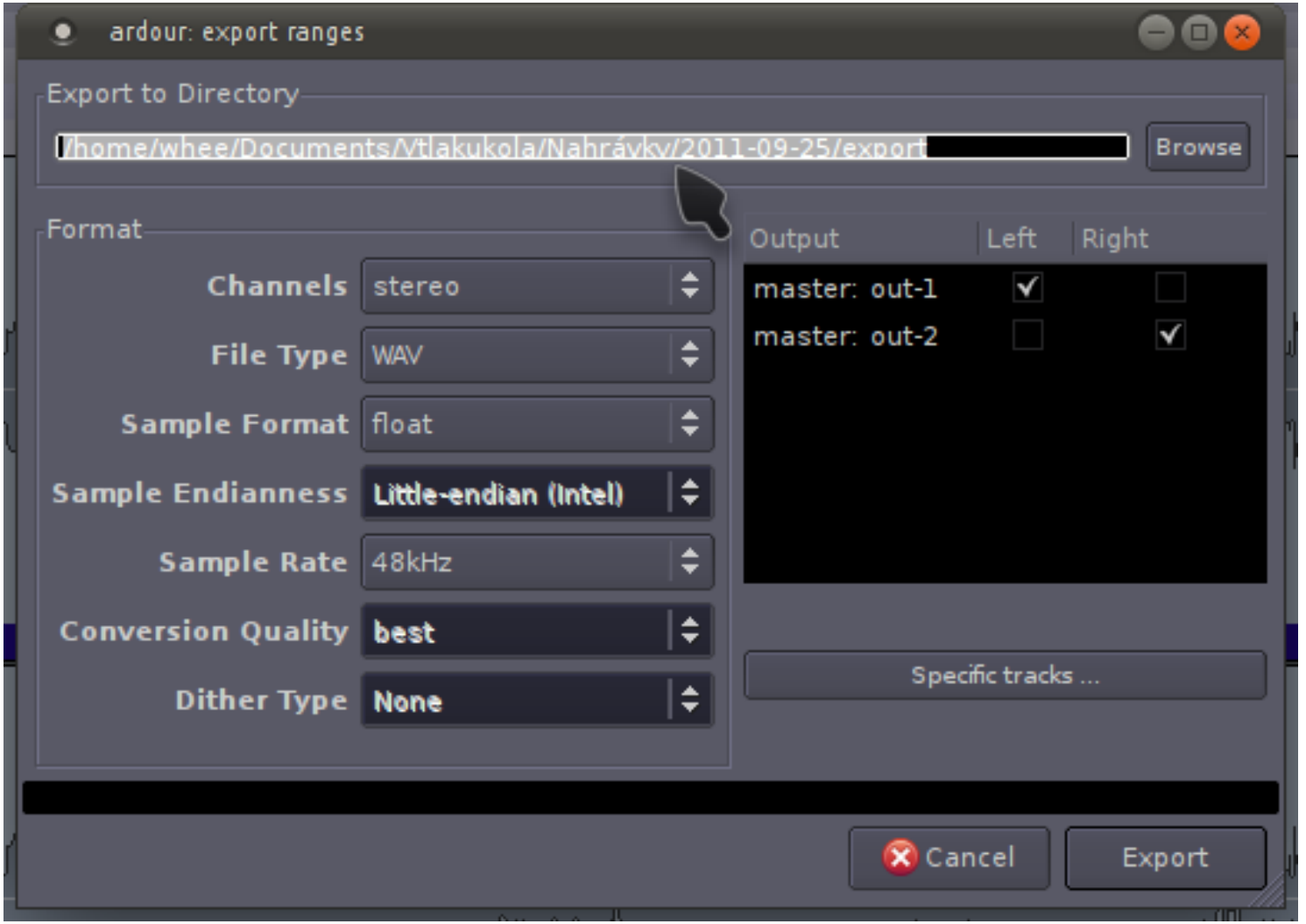
Cutting


*2011-09-25 - Ardour
Session Transport Edit Region Track View JACK Window Options Help
48 kHz / 5.3 ms Buffers p:73% c:92% DSP: 11.6% Disk: 24hrs+ 21:04
01:56:15:23
3488|04|1695
Internal
Time master
Punch In
Punch Out
Auto Play
Auto Return
Auto Input
Click
SOLO
AUDITION
Grid
00:00:05:00
Timecode
Meter
Tempo
Range Markers
Loop/Punch Ranges
CD Markers
Location Markers
00:50:00:00
00:55:00:00
01:00:00:00
front
side
front-3.1
side-3.1
Mouse

Export

- Export ranges as individual files
  - Stereo
    - Front channel as Left
    - Side channel as Right
  - Wav
    - floating point
    - 48 kHz

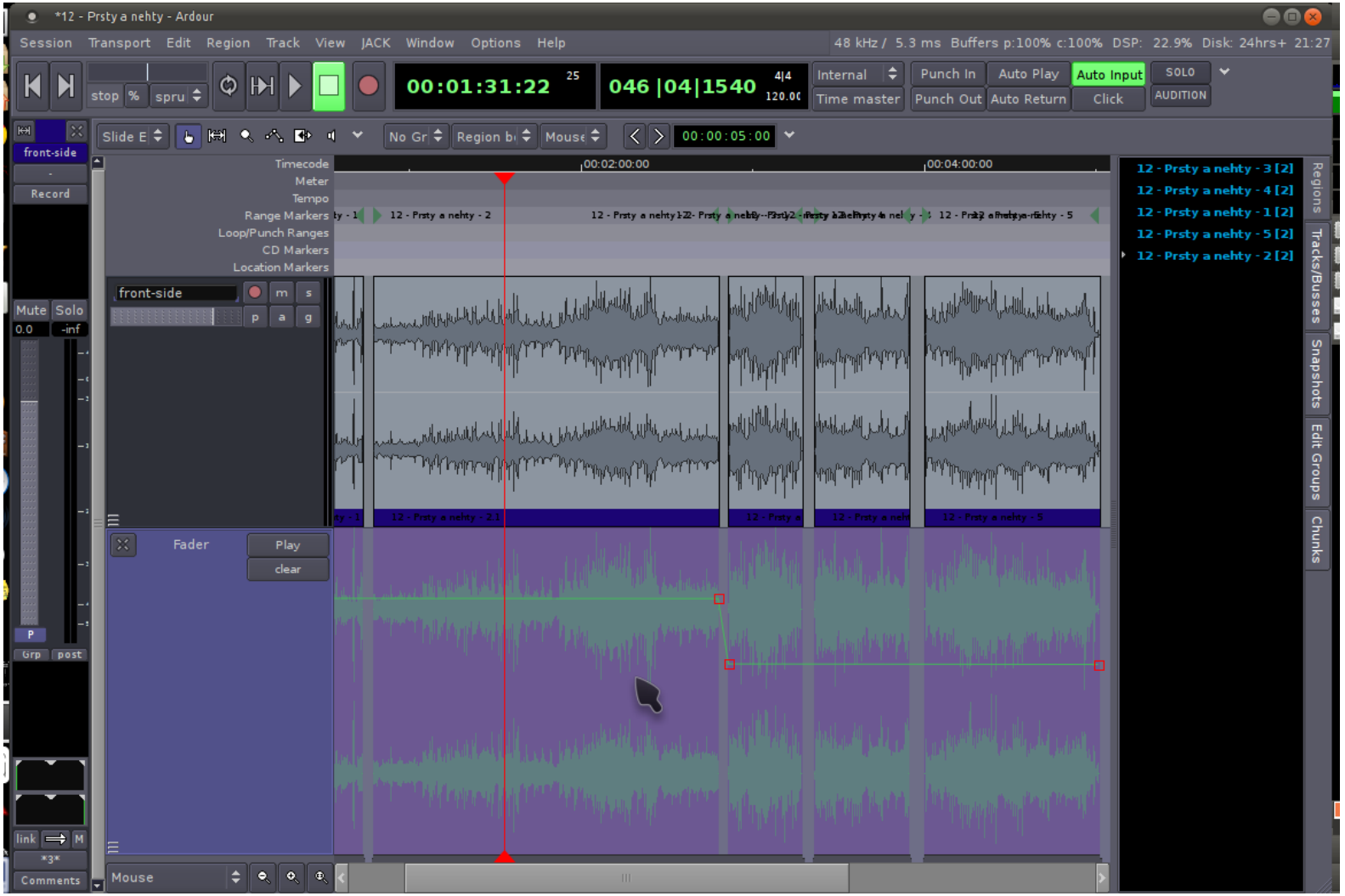
Export


ardour: export ranges
Export to Directory
/home/whee/Documents/Vtlakukola/Nahrávky/2011-09-25/export
Browse
Format
Channels
stereo
File Type
WAV
Sample Format
float
Sample Endianness
Little-endian (Intel)
Sample Rate
48kHz
Conversion Quality
best
Dither Type
None
Output
Left
Right
master: out-1
master: out-2
Specific tracks ...
Cancel
Export

Per-song session

- Create new Ardour session for a song
  - From prepared Per-song template
- Import all takes of the song as regions
- Place them into front-side track
- Normalize all regions
- Create track fader automation
  - So that the loudest parts of the takes have roughly the same level
  - Think RMS, not Peak

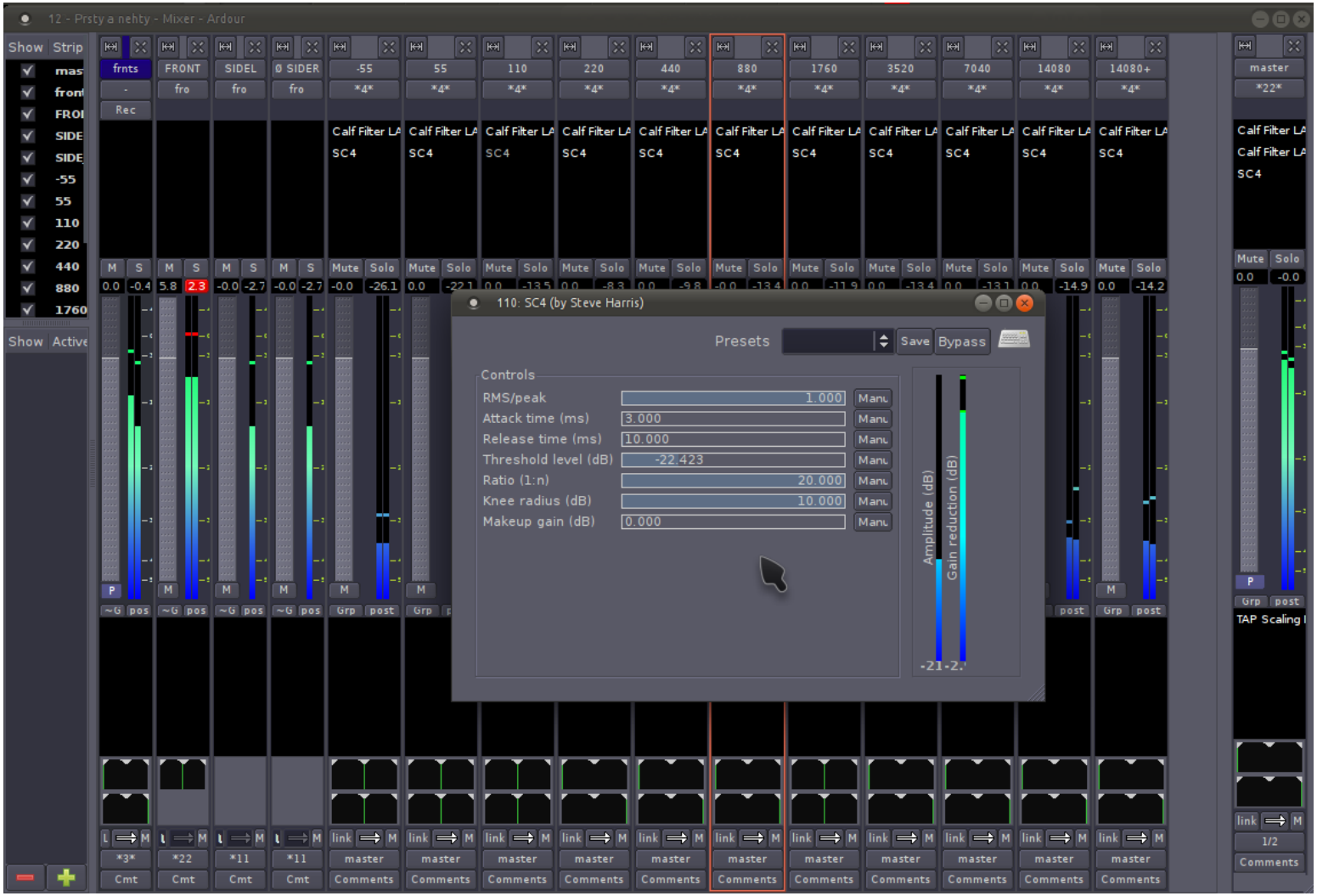
Per-song session



Multi-band compressor

- Octave bands
- Settings (each band)
  - Fast attack and release
  - Peak response
  - Ratio 1:20
  - The reduction along the song should vary between 0 and 10 dB

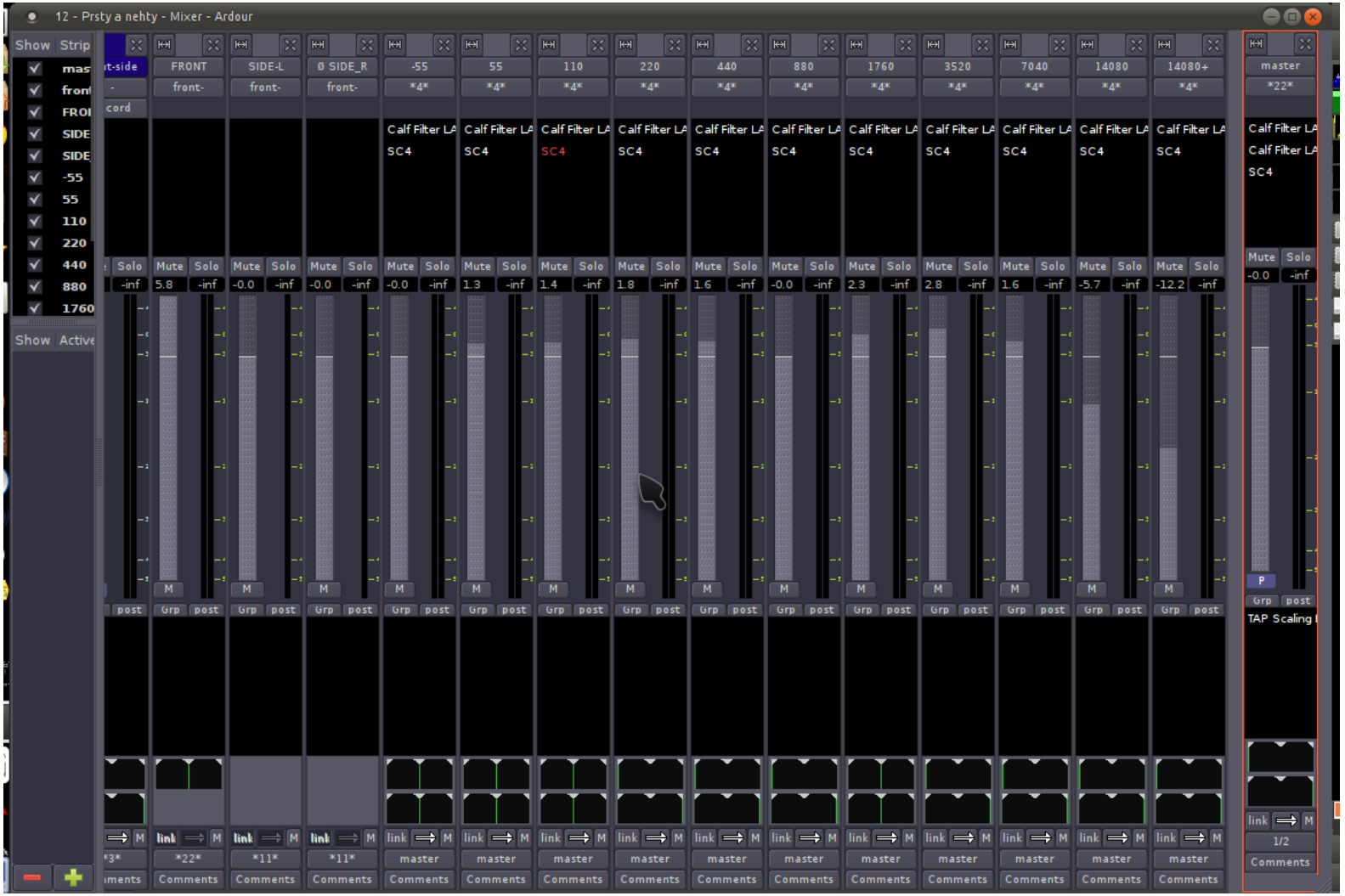
Multi-band compressor



Multi-band compressor

- Adjust band levels to suppress/emphasize instruments
  - -55, 55, 110 bands for Bass guitar
  - 220 band for guitar body
  - 440 band for voice body
  - 1760 band for voice melody
  - 3520 band for voice clarity / text understanding
  - 7040 band for voice breath / guitar brightness
  - Higher bands for maracas

Multi-band compressor



Master compressor

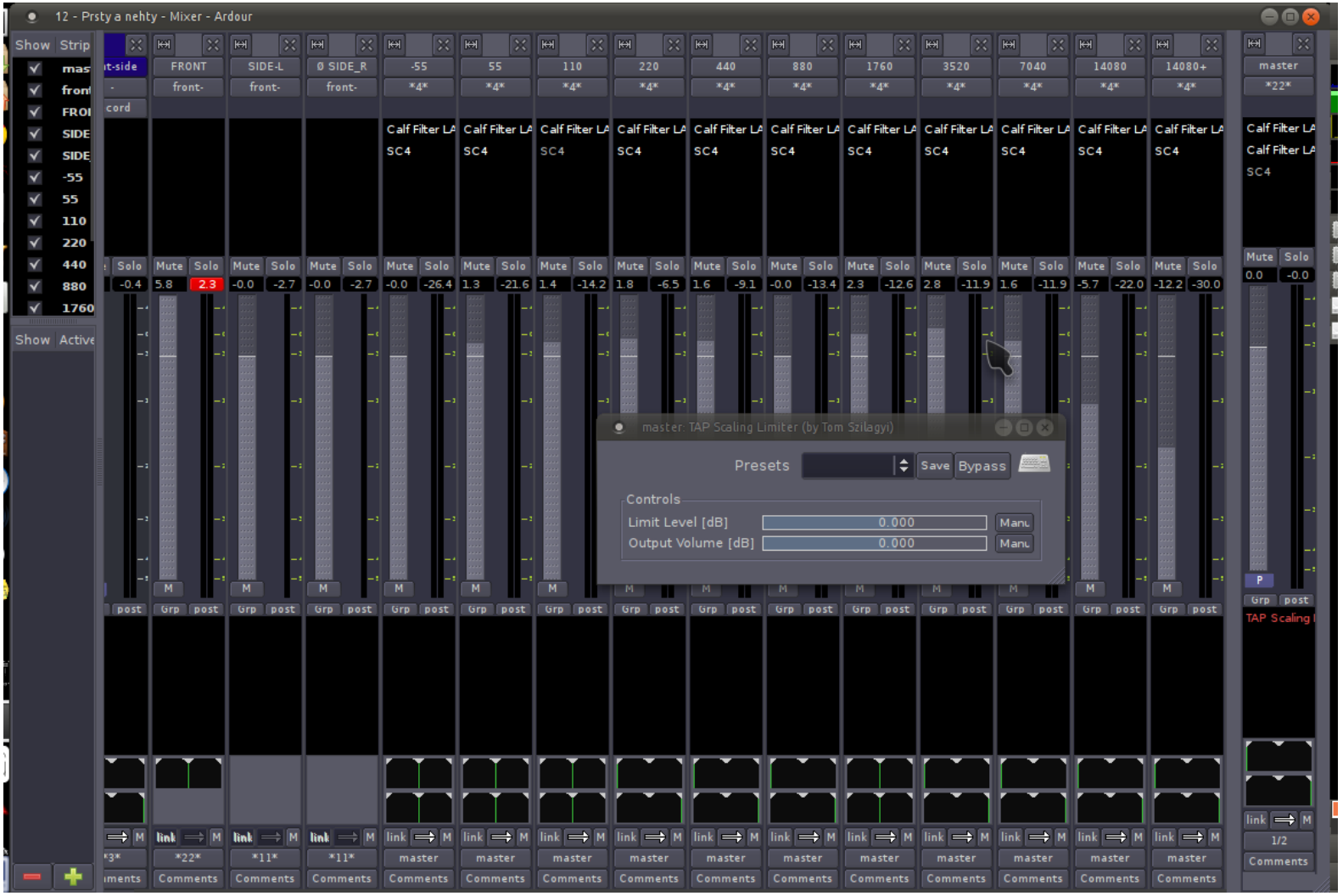
- Master channel
- Settings
  - Slow attack and release
  - RMS response
  - Ratio 1:20
  - The reduction along the song should vary between 10 and 20 dB
  - The makeup should compensate for reduction such that the peaks are around +1 dB

Master compressor

Limiter

- Just before output engage a limiter
  - To prevent digital clipping
  - Use scaling limiter to reduce limiting artifacts

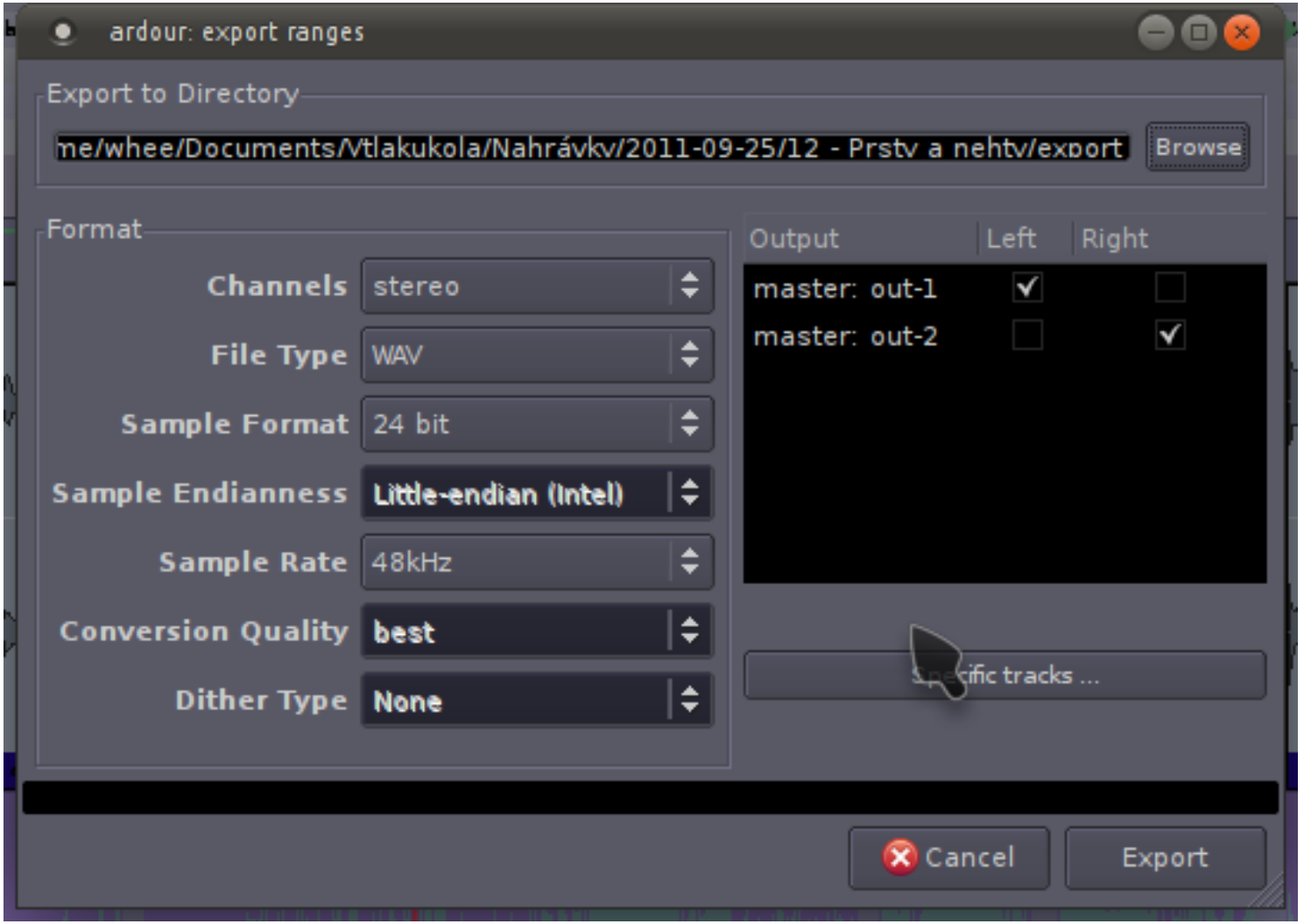
Limiter


12 - Prsty a nehty - Mixer - Ardour
master: TAP Scaling Limiter (by Tom Szilagyi)
Presets
Save
Bypass
Controls
Limit Level [dB]
0.000
Output Volume [dB]
0.000

Export

- Export ranges as individual files
  - Stereo
  - Wav
    - 24 bit
    - 48 kHz

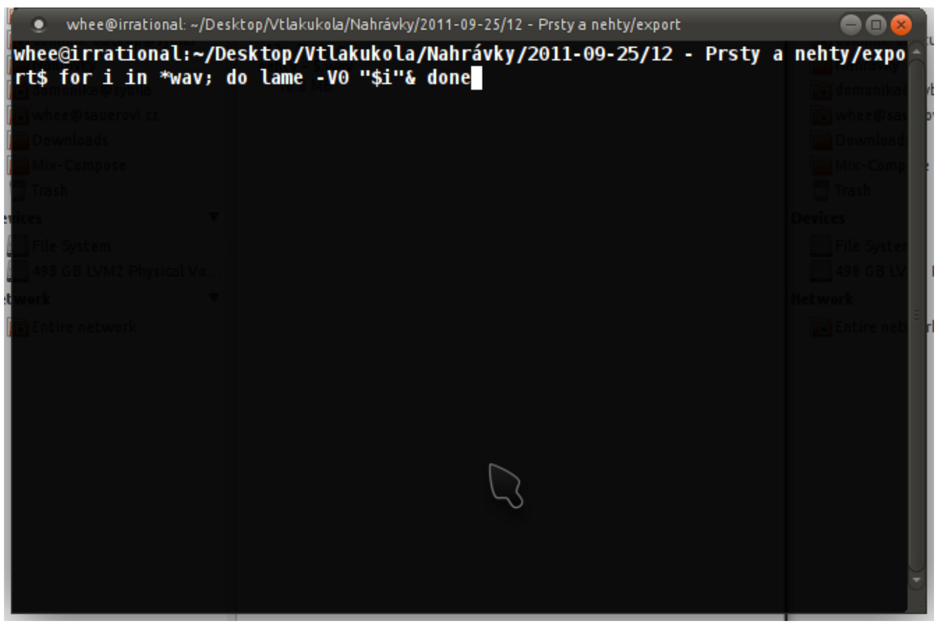
Export

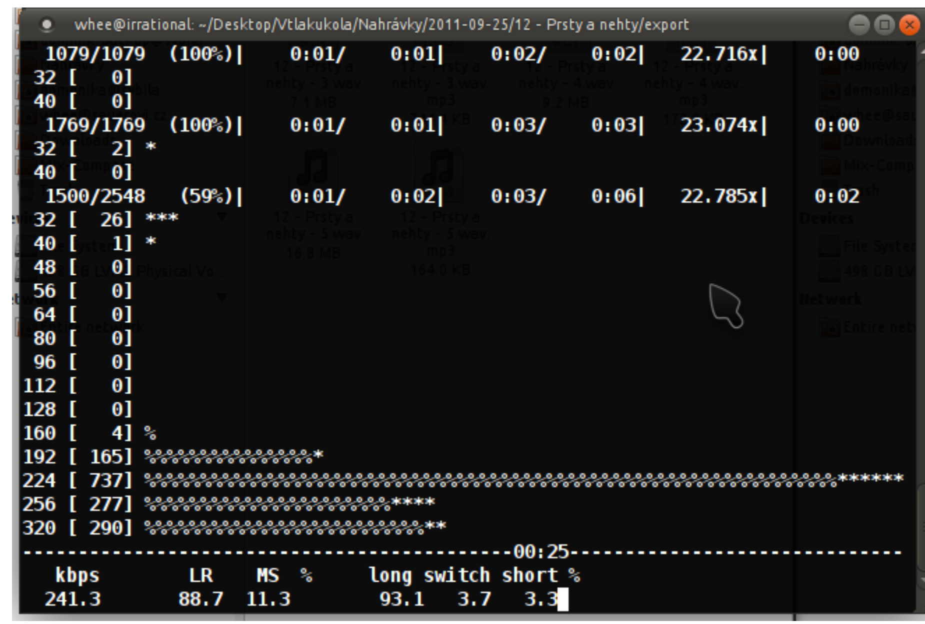

ardour: export ranges
Export to Directory
ne/whee/Documents/Vtlakukola/Nahrávky/2011-09-25/12 - Prsty a nehty/export
Browse
Format
Channels
stereo
File Type
WAV
Sample Format
24 bit
Sample Endianness
Little-endian (Intel)
Sample Rate
48kHz
Conversion Quality
best
Dither Type
None
Output
Left
Right
master: out-1
master: out-2
Specific tracks ...
Cancel
Export

Encode

- Convert the exported wavs to MP3

Encode


whee@irrational: ~/Desktop/Vtlakukola/Nahrávky/2011-09-25/12 - Prsty a nehty/export
whee@irrational:~/Desktop/Vtlakukola/Nahrávky/2011-09-25/12 - Prsty a nehty/expo
rt$ for i in *wav; do lame -V0 "$i"& done


whee@irrational: ~/Desktop/Vtlakukola/Nahrávky/2011-09-25/12 - Prsty a nehty/export
1079/1079 (100%)| 0:01/ 0:01| 0:02/ 0:02| 22.716x| 0:00
32 [0]
40 [0]
1769/1769 (100%)| 0:01/ 0:01| 0:03/ 0:03| 23.074x| 0:00
32 [2] *
40 [0]
1500/2548 (59%)| 0:01/ 0:02| 0:03/ 0:06| 22.785x| 0:02
32 [26] ***
40 [1] *
48 [0]
56 [0]
64 [0]
80 [0]
96 [0]
112 [0]
128 [0]
160 [4] %
192 [165]
224 [737]
256 [277]
320 [290]
00:25
kbps LR MS % long switch short %
241.3 88.7 11.3 93.1 3.7 3.3

Thank you!

Contact

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