pactl Sound server control

START HERE

pactl info
Server and default devices

pactl list short sinks
Output devices

pactl list short sources
Inputs and monitors

pactl set-default-sink *<sink>*
Pick the output

pactl set-sink-volume @DEFAULT_SINK@ 50%
Set volume

pactl set-sink-mute @DEFAULT_SINK@ toggle
Mute / unmute

pactl list short sink-inputs
Playing streams

pactl move-sink-input *<id> <sink>*
Move stream to a device

Card hardware, profile → **has** → **Sink** output, port → **fed by** → **Sink input** app playback stream → **monitor** → **Source** input or sink monitor

CONCEPTS

pactl talks to a PulseAudio server. On PipeWire the pipewire-pulse service answers the same protocol, so these commands work unchanged.

Names or numeric indexes both work for devices; indexes change after restarts, names do not. @DEFAULT_SINK@ and @DEFAULT_SOURCE@ avoid looking names up.

Add -f json (or --format=json) for machine-readable output, or use list short for tab-separated columns.

INSPECT

pactl info
Server, version, default sink/source

pactl list short sinks
Output devices, one per line

pactl list short sources
Input devices and monitors

pactl list short cards
Sound cards

pactl list short sink-inputs
Playback streams

pactl list short source-outputs
Recording streams

pactl list sinks
Full detail: ports, volume, state

pactl list short modules
Loaded modules

pactl list short clients
Connected clients

pactl -f json list sinks
Machine-readable output

pactl list short samples
Cached samples

pactl stat
Daemon memory statistics

DEFAULT DEVICE

pactl get-default-sink
Print default output

pactl set-default-sink *<sink>*
Change default output

pactl get-default-source
Print default input

DEFAULT DEVICE (cont.)

pactl set-default-source *<source>*
Change default input

pactl set-default-sink @NONE@
Back to priority-based choice

pactl set-sink-port *<sink> <port>*
Switch speakers / headphones

pactl set-source-port *<source> <port>*
Switch mic port

VOLUME AND MUTE

pactl get-sink-volume *<sink>*
Show volume

pactl set-sink-volume *<sink>* **50%**
Absolute volume

pactl set-sink-volume @DEFAULT_SINK@ +5%
Raise by 5 points

pactl set-sink-volume @DEFAULT_SINK@ -5%
Lower by 5 points

pactl set-sink-volume *<sink>* **0dB**
Volume in decibels

pactl set-sink-mute *<sink>* **toggle**
Toggle mute

pactl set-sink-mute *<sink>* **1**
Mute (0 = unmute)

pactl get-sink-mute *<sink>*
Show mute state

pactl set-source-volume *<source>* **80%**
Mic level

pactl set-source-mute *<source>* **toggle**
Mute the mic

pactl get-source-volume *<source>*
Show mic level

pactl set-sink-volume *<sink>* **40% 60%**
Per channel (left, right)
Give as many values as the sink has channels.

Values above 100% amplify and may distort; relative +/- steps apply to the current volume.

STREAMS

pactl move-sink-input *<id> <sink>*
Send a stream to another output

pactl set-sink-input-volume *<id>* **30%**
Per-app volume

pactl set-sink-input-mute *<id>* **toggle**
Mute one app

pactl move-source-output *<id> <source>*
Record from another input

pactl set-source-output-volume *<id>* **50%**
Per-recording volume

pactl set-source-output-mute *<id>* **toggle**
Mute one recording

CARDS AND DEVICES

pactl set-card-profile *<card> <profile>*
Change profile (e.g. HDMI, A2DP)

pactl suspend-sink *<sink>* **true**
Suspend output (false resumes)

pactl suspend-source *<source>* **true**
Suspend input (false resumes)

pactl set-port-latency-offset *<card> <port> <usec>*
Compensate port latency

pactl set-sink-formats *<sink> <formats>*
Passthrough formats (;-separated)

MODULES

pactl load-module *<name>* **[args]**
Load; prints module index

pactl unload-module *<id or name>*
Unload by index or name

pactl load-module module-null-sink sink_name=*<name>*
Virtual output

pactl load-module module-loopback source=*<src>* **sink=***<sink>*
Route input to output

pactl list short modules | grep *<name>*
Find a module's index

EVENTS AND SAMPLES

pactl subscribe
Stream server events, runs until stopped

pactl upload-sample *<file>* **[name]**
Cache a sound file

pactl play-sample *<name>* **[sink]**
Play cached sample

pactl remove-sample *<name>*
Drop cached sample

pactl send-message *<recipient> <message>*
Message a module

pactl exit
Ask the server to quit

OPTIONS

pactl -s *<server> <command>*
Use another server

pactl -f json *<command>*
JSON output (text is default)

pactl -n *<name> <command>*
Client name shown on the server

pactl --version
Print client version

RECIPES

Volume keys script

```
pactl set-sink-volume
@DEFAULT_SINK@ +5%
pactl set-sink-mute
@DEFAULT_SINK@ toggle
pactl get-sink-volume
@DEFAULT_SINK@
```

Move every stream to one sink

```
for i in $(pactl list short
sink-inputs | cut -f1); do
  pactl move-sink-input "$i"
<sink>
done
```

Loopback, then remove it

```
id=$(pactl load-module module-
loopback latency_msec=50)
# listen to the mic through the
speakers
pactl unload-module "$id"
```

Virtual sink for capturing audio

```
pactl load-module module-null-
sink sink_name=capture
# play to "capture", record
from capture.monitor
pactl list short sources | grep
capture
```