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
```