



Linux Ubuntu 26.04 Manual Pages on command 'pw-cat.1'

\$ man pw-cat.1

pw-cat(1) General Commands Manual pw-cat(1)

NAME

pw-cat - Play and record media with PipeWire

SYNOPSIS

pw-cat [options] [FILE | -]

pw-play [options] [FILE | -]

pw-record [options] [FILE | -]

pw-midiplay [options] [FILE | -]

pw-midirecord [options] [FILE | -]

pw-midi2play [options] [FILE | -]

pw-midi2record [options] [FILE | -]

pw-dsdplay [options] [FILE | -]

DESCRIPTION

pw-cat is a simple tool for playing back or capturing raw or encoded media files on a PipeWire server. It understands all audio file formats supported by libsndfile for PCM capture and playback. When no container is specified for capturing PCM, the filename extension is used to guess the file format with the WAV file format as the default.

It understands standard MIDI files and MIDI 2.0 clip files for playback and recording. This tool will not render MIDI files, it will simply make the MIDI events available to the graph.

You need a MIDI renderer such as qsynth, timidity or a hardware MIDI renderer to hear the MIDI.

DSD playback is supported with the DSF file format. This tool will only work with native DSD capable hardware and will produce an error when no such hardware was found.

When the FILE is - input will be from STDIN. If no format is specified, libsndfile will attempt to parse and stream the format from STDIN. For some formats, this is not possible and libsndfile will give an error. Raw, MIDI and DSD formats are all streamable from STDIN.

When the FILE is - output will be to STDOUT. If no format is specified, libsndfile is instructed to output the .au format, which is streamable and preserves the format, rate and channels. Raw and DSD formats are all streamable to STDOUT.

OPTIONS

-h | --help

Show help.

--version

Show version information.

-v | --verbose

Verbose operation.

-R | --remote=NAME

The name the remote instance to connect to. If left unspecified, a connection is made to the default PipeWire instance.

-p | --playback

Playback mode. Read data from the specified file, and play it back. If the tool is called under the name pw-play, pw-midiplay or pw-midi2play this is the default.

-r | --record

Recording mode. Capture data and write it to the specified file. If the tool is called under the name pw-record, pw-midirecord or pw-midi2record this is the default.

-m | --midi

MIDI mode. FILE is a MIDI file. If the tool is called under the name pw-midiplay or pw-midirecord this is the default. Note that this program will not render the MIDI events into audible samples, it will simply provide the MIDI events in the graph. You need a separate MIDI renderer such as qsynth, timidity or a hardware renderer to hear the MIDI.

-c | --midi-clip

MIDI 2.0 clip mode. FILE is a MIDI 2.0 clip file. If the tool is called under the name pw-midi2play or pw-midi2record this is the default. Note that this program will not render the MIDI events into audible samples, it will simply provide the MIDI events in the graph. You need a separate MIDI renderer such as qsynth, timidity or a hardware renderer to hear the MIDI.

-d | --dsd

DSD mode. FILE is a DSF file. If the tool is called under the name pw-dsdplay this is the default. Note that this program will not render the DSD audio. You need a DSD capable device to play DSD content or this program will exit with an error.

-s | --sysex

SysEx mode. FILE is a File that contains a raw SysEx MIDI message. If the tool is called under the name pw-sysex this is the default. The File is read and sent as a MIDI control message into the graph.

--media-type=VALUE

Set the media type property (default Audio/Midi depending on mode). The media type is used by the session manager to select a suitable target to link to.

--media-category=VALUE

Set the media category property (default Playback/Capture depending on mode). The media type is used by the session manager to select a suitable target to link to.

--media-role=VALUE

Set the media role property (default Music). The media type is used by the session manager to select a suitable target to link to.

--target=VALUE

Set a node target (default auto). The value can be:

? auto: Automatically select (Default)

? 0: Don't try to link this node

? <id>: The object.serial or the node.name of a target node

--latency=VALUE[units]

Set the node latency (default 100ms)

The latency determines the minimum amount of time it takes for a sample to travel from application to device (playback) and from device to application (capture).

The latency determines the size of the buffers that the application will be able to fill. Lower latency means smaller buffers but higher overhead. Higher latency means larger buffers and lower overhead.

Units can be s for seconds, ms for milliseconds, us for microseconds, ns for nanoseconds. If no units are given, the latency value is samples with the samplerate of the file.

-P | --properties=VALUE

Set extra stream properties as a JSON object.

`-q | --quality=VALUE`

Resampler quality. When the samplerate of the source or destination file does not match the samplerate of the server, the data will be resampled. Higher quality uses more CPU.

Values between 0 and 15 are allowed, the default quality is 4.

`-a | --raw`

Raw samples will be read or written. The `--rate`, `--format`, `--channels` and `--channelmap` can be used to specify the raw format.

`-M | --force-midi`

Force midi format, one of "midi" or "ump", (default ump). When reading or writing midi, for one of midi or UMP.

`-n | --sample-count=COUNT`

Stop after COUNT samples.

`--rate=VALUE`

The sample rate, default 48000.

`--channels=VALUE`

The number of channels, default 2.

`--channel-map=VALUE`

The channelmap. Possible values include are either a channel layout such as mono, stereo, surround-21, quad, surround-22, surround-40, or comma separated array of channel names such as FL,FR. See `--list-layouts` and `--list-channel-names` to get a complete list of possible values.

`--list-layouts`

List all known channel layouts. One of these can be used as the `--channel-map` value.

`--list-channel-names`

List all known channel names. An array of these can be used as the `--channel-map` value.

`--format=VALUE`

The sample format to use. Some possible values include: u8, s8, s16 (default), s24, s32, f32, f64. See `--list-formats` to get a complete list of values.

`--list-formats`

List all known format values.

`--container=VALUE`

Specify the container to use when saving. This is usually guessed from the filename

extension but can be specified explicitly. When using STDOUT and no container is specified, the AU container will be used. Then using a filename and the container was not specified and it could not be derived from the filename, the WAV container is used.

--list-containers

List all known container values.

--volume=VALUE

The stream volume, default 1.000. Depending on the locale you have configured, "," or "." may be used as a decimal separator. Check with locale command.

AUTHORS

The PipeWire Developers <<https://gitlab.freedesktop.org/pipewire/pipewire/issues>>; PipeWire is available from <<https://pipewire.org>>

SEE ALSO

pipewire(1), pw-mon(1),

PipeWire

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