

Sampler

`class pyflp.channel.Sampler`

[\[source\]](#)

Bases: `_SamplerInstrument`

Represents the native Sampler, either as a clip or a channel.



arp

Miscellaneous functions -> Arpeggiator

au_sample_rate: `int` | `None`

AU-format sample specific.

content: `Content`

Sample settings ▸ Content

cut_group

Cut group in the form of (Cut self, cut by).

Miscellaneous functions ▸ Group

Hint

To cut itself when retriggered, set the same value for both.

delay

Miscellaneous functions -> Echo delay / fat mode

property **envelopes:** `dict`[`Literal`['Panning', 'Volume', 'Mod X', 'Mod Y', 'Pitch'],
`pyflp.channel.Envelope`] | `None`

An `Envelope` each for Volume, Panning, Mod X, Mod Y and Pitch.

Envelope / instrument settings

filter: `Filter`

fx: `FX`

Sample settings (page) › Precomputed effects

insert

The index of the `Insert` the channel is routed to according to FL.

“Current” insert = -1, Master = 0 and so on... till `Mixer.max_inserts`.

level_adjusts

Miscellaneous functions -> Level adjustments

property lfos: `dict[Literal['Panning', 'Volume', 'Mod X', 'Mod Y', 'Pitch'],
pyflp.channel.SamplerLFO] | None`

An `LFO` each for Volume, Panning, Mod X, Mod Y and Pitch.

Envelope / instrument settings (page)

property pitch_shift: `int | None`

-4800 to +4800 (cents).

RAISES:

PropertyCannotBeSet – When a `ChannelID.Levels` event is not found.

playback: `Playback`

Sample settings (page) › Playback

polyphony

Miscellaneous functions -> Polyphony

property sample_path: `Path | None`

Absolute path of a sample file on the disk.

Sample settings (page) › File

Contains the string `%FLStudioFactoryData%` for stock samples.

stretching: `TimeStretching`

Sample settings (page) › Time stretching

time

Miscellaneous functions -> Time

property tracking: `dict[str, pyflp.channel.Tracking] | None`

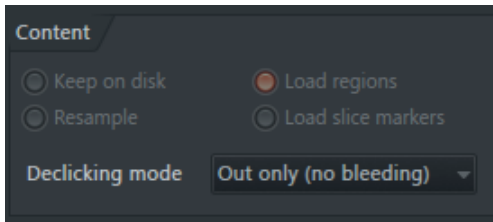
A [Tracking](#) each for Volume & Keyboard.

Miscellaneous functions -> Tracking

class `pyflp.channel.Content`

[\[source\]](#)

Used by [Sampler](#).



declick_mode: [DeclickMode](#) | [None](#)

FL STUDIO 9.0.0+

Defaults to `DeclickMode.OutOnly`.

keep_on_disk: [bool](#) | [None](#)

FL STUDIO 2.5.0+

Whether a sample is streamed from disk or kept in RAM, defaults to `False`.

load_regions: [bool](#) | [None](#)

Load regions found in the sample, if any, defaults to `True`.

load_slices: [bool](#) | [None](#)

Defaults to `False`.

resample: [bool](#) | [None](#)

FL STUDIO 2.5.0+

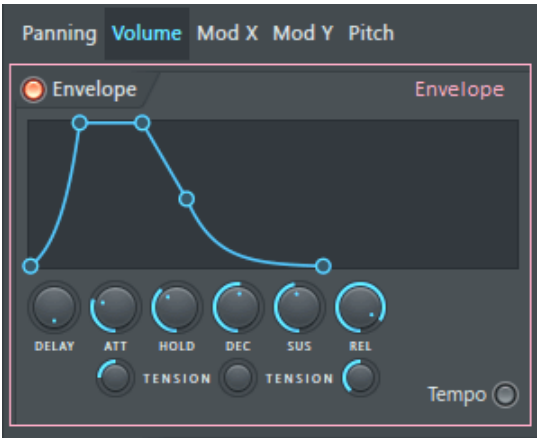
Defaults to `False`.

class `pyflp.channel.Envelope`

[\[source\]](#)

FL STUDIO 2.5.0+

A PAHDSR envelope for various [Sampler](#) paramters.



See also

[Sampler.envelopes](#)

amount: [int](#) | [None](#)

Linear. Bipolar.

Type	Value	Representation
Min	-128	-100%
Max	128	100%
Default	0	0%

attack: [int](#) | [None](#)

Linear.

Type	Value	Representation
Min	100	0%
Max	65536	100%
Default	20000	31%

attack_tension: [int](#) | [None](#)

FL STUDIO 3.5.4+

Linear. Bipolar.

Type	Value	Representation
Min	-128	-100%
Max	128	100%
Default	0	0%

decay: int | None

Linear.

Type	Value	Representation
Min	100	0%
Max	65536	100%
Default	30000	46%

decay_tension: int | None



Linear. Bipolar.

Type	Value	Mix (wet)
Min	-128	-100%
Max	128	100%
Default	0	0%

enabled: bool | None

Whether envelope section is enabled.

hold: int | None

Linear.

Type	Value	Representation
Min	100	0%
Max	65536	100%
Default	20000	31%

predelay: int | None

Linear. Defaults to minimum value.

Type	Value	Representation
Min	100	0%
Max	65536	100%

release: int | None

Linear.

Type	Value	Representation
Min	100	0%
Max	65536	100%
Default	20000	31%

release_tension: `int` | `None`



Linear. Bipolar.

Type	Value	Mix (wet)
Min	-128	-100%
Max	128	100%
Default	-101	-79%

sustain: `int` | `None`

Linear.

Type	Value	Representation
Min	0	0%
Max	128	100%
Default	50	39%

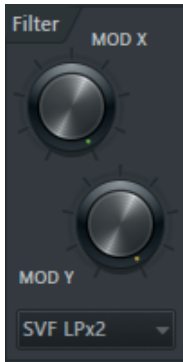
synced: `bool` | `None`

Whether envelope is synced to tempo or not.

`class pyflp.channel.Filter`

[\[source\]](#)

Used by `Sampler`.



mod_x: `int` | `None`

Filter cutoff. Min = 0. Max = 256. Defaults to maximum.

mod_y: `int` | `None`

Filter resonance. Min = 0. Max = 256. Defaults to minimum.

type: `FilterType` | `None`

Defaults to `FilterType.FastLP`.

class `pyflp.channel.FX`

[\[source\]](#)

Pre-computed effects used by `Sampler`.



See also

`Sampler.fx`, `Reverb`

boost: `int` | `None`

FL STUDIO 1.2.12+

Pre-amp gain. Defaults to minimum value.

Min	Max
0	256

clip: `bool` | `None`

Whether output is clipped at 0dB for `boost`.

crossfade: `int` | `None`

Linear. Defaults to minimum value

Type	Value	Representation
Min	0	0%
Max	256	100%

cutoff: `int` | `None`

Filter Mod X. Defaults to maximum value. Min = 16. Max = 1024.

fade_in: `int` | `None`

Quick fade-in. Defaults to minimum value. Min = 0. Max = 1024.

fade_out: `int` | `None`

FL STUDIO 1.7.6+

Quick fade-out. Defaults to minimum value. Min = 0. Max = 1024.

fade_stereo: `bool` | `None`

Properties derived from enum flags.

fix_trim: [bool](#) | [None](#)

Trim ▶ Fix legacy precomputed length.

Has no effect on the value of `trim`.

freq_tilt: [int](#) | [None](#)

Shifts the frequency balance. Bipolar.

Min	Max	Default
0	256	128

inverted: [bool](#) | [None](#)

Named `Reverse polarity` in FL's interface.

length: [float](#) | [None](#)

Min = 0.0, Max = 1.0. Defaults to minimum value.

Named `SMP START` in FL's interface.

normalize: [bool](#) | [None](#)

Maximizes volume without clipping by normalizing peaks to 0dB.

pogo: [int](#) | [None](#)

Pitch bend effect. Bipolar.

Min	Max	Default
0	512	256

remove_dc: [bool](#) | [None](#)



Whether DC offset (if present) is removed.

resonance: [int](#) | [None](#)

Filter Mod Y. Min = 0. Max = 640. Defaults to minimum value.

reverb: [Reverb](#)

reverse: [bool](#) | [None](#)

Whether sample is reversed or not.

ringmod: [Tuple\[int, int\]](#) | [None](#)

Ring modulation returned as a tuple of `(mix, frequency)`.

Limits for both:

Min	Max	Default
0	256	128

start: [float](#) | [None](#)

Min = 0.0, Max = 1.0. Defaults to minimum value.

Always set to 0.0 irrespective of the knob position unless a sample is loaded.

stereo_delay: [int](#) | [None](#)



Linear. Bipolar.

Min	Max	Default
0	4096	2048

swap_stereo: [bool](#) | [None](#)

Whether left and right channels are swapped or not.

trim: [int](#) | [None](#)

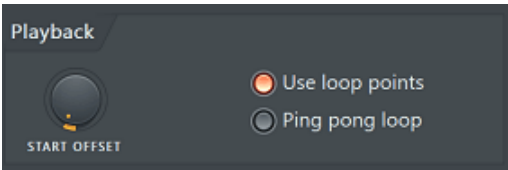
Silence trimming threshold. Defaults to minimum. Linear.

Type	Value	Representation
Min	0	0%
Max	256	100%

class `pyflp.channel.Playback`

[\[source\]](#)

Used by `Sampler`.



`ping_pong_loop`: `bool` | `None`

Properties bound directly to one of fixed size or string events.

`start_offset`: `int` | `None`

Linear. Defaults to minimum value.

Type	Value	Representation
Min	0	0%
Max	1072693248	100%

`use_loop_points`: `bool` | `None`

Properties derived from enum flags.

class `pyflp.channel.Reverb`

[\[source\]](#)



Precalculated reverb used by `Sampler`.

property `mix`: `int` | `None`

Mix % (wet). Defaults to minimum value.

Min	Max
0	256

property `type`: `ReverbType` | `None`

class `pyflp.channel.SamplerLFO`

[\[source\]](#)



A basic LFO for certain `Sampler` parameters.



See also

[Sampler.lfos](#)

amount: [int](#) | [None](#)

Linear. Bipolar.

Type	Value	Representation
Min	-128	-100%
Max	128	100%
Default	0	0%

attack: [int](#) | [None](#)

Linear.

Type	Value	Representation
Min	100	0%
Max	65536	100%
Default	20000	31%

predelay: [int](#) | [None](#)

Linear. Defaults to minimum value.

Type	Value	Representation
Min	100	0%
Max	65536	100%

retrig: [bool](#) | [None](#)

Whether LFO phase is in global / retriggered mode.

shape: [LFOShape](#) | [None](#)

Sine.

TYPE:

Sine, triangle or pulse. Default

speed: [int](#) | [None](#)

Logarithmic. Provides tempo synced options.

Type	Value	Representation
Min	200	0%
Max	65536	100%
Default	32950	50% (16 steps)

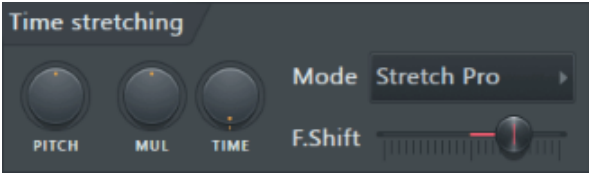
synced: [bool](#) | [None](#)

Whether LFO is synced with tempo.

class `pyflp.channel.TimeStretching`

[\[source\]](#)

Used by `Sampler`.



mode: `StretchMode` | `None`

Properties obtained from a `construct.Struct`.

multiplier: `float` | `None`

Logarithmic. Bipolar.

Type	Value	Representation
Min	0.25	25%
Max	4.0	400%
Default	0	100%

pitch: `int` | `None`

Pitch shift (in cents). Min = -1200. Max = 1200. Defaults to 0.

time: `MusicalTime` | `None`

Returns a tuple of `(bars, beats, ticks)`.

Enums

class `pyflp.channel.DeclickMode`

[\[source\]](#)

Crossfade = 5

Generic = 3

OutOnly = 0

Smooth = 4

Transient = 2

TransientNoBleeding = 1

class `pyflp.channel.LFOShape`

[\[source\]](#)

Used by `LFO.shape`.

Pulse = 2

Sine = 0

Triangle = 1

class `pyflp.channel.ReverbType`

[\[source\]](#)

Used by `Reverb.type`.

A = 0

B = 65536

class `pyflp.channel.StretchMode`

[\[source\]](#)

Auto = 5

E2Generic = 6

E2Mono = 8

E2Speech = 9

E2Transient = 7

E3Generic = 1

E3Mono = 2

Resample = 0

SliceMap = 4

SliceStretch = 3

Stretch = -1

