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# Audio Drop out



Cubase ASIO

, CPU , ASIO buffer Audio Drop out

.

Audio Drop out ,

VSTi

Audio Drop out , Audio Drop out [1]

, Audio Drop out /

. , F12 Audio Performance Audio

Drop out .

ASIO buffer Audio drop out

. Audio drop out .

.

# ASIO performance meter

: F12

Cubase 12 , ASIO .

# Realtime

( , **VSTi** ) .[2]

Peak , VSTi
Audio Drop out . Audio Drop out
, Audio Drop out
.[3]

Peak Audio Drop out
. .

, , ,
. .

# ASIO Guard

(**ASIO**-Guard) .

, MIDI VSTi
ASIO-Guard
. CPU . DAW
CPU ,
. , Realtime,
, CPU .

ASIO-Guard , (
, VSTi ) .

ASIO-Guard                                Audio Drop out                        Audio Drop out
.

ASIO-Guard                        Studio Setup        Audio System            ASIO-Guard
.

                                        VSTi                                ASIO-Guard
,                                . ASIO-Guard
.

                        MIDI        ASIO-Guard
.

# Peak

                                **Peak**                        .

                        ASIO-Guard                        Peak                                Peak
. Peak                Audio Drop                , Realtime, ASIO-Guard                Audio Drop out
.

        **Peak**                                                                        .

Peak                        ,                                        ,
.                                                                                ASIO
                Peak                        .        Peak
                                                        ASIO
. Peak                                , Realtime        ASIO-Guard
        .        DAW                                                .

                                                                ASIO
        Peak                                .

**ASIO**                                                                . **ASIO**
        **Peak**                                                ,
.

# Disk cache

                                                                .

                        Peak                ,                                                Audio Drop
out                .                                                                .
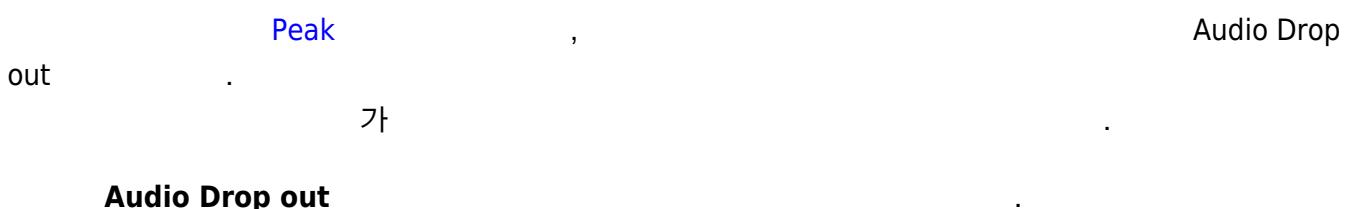
        **Audio Drop out**                                                .
        .

Audio Export        Audio Drop out                                    .[4]        CPU
                    Realtime Export        Export                                    .

# CPU                                    ?

                        CPU                                    .
        128 samples        CPU        30%        ,                256 samples            , CPU
    15%                    .

        Audio drop out                    . CPU                    .

                64 samples                                    , CPU        0%
                    .



                256 samples                                    , CPU
60-70%                                .[5]



            Realtime        Audio Drop out

| Audio Performance | | X |
| --- | --- | --- |
| Real Time | | |
| ASIO-Guard | | |
| Peak | | |
| Disk Cache | | |

(ASIO-Guard) Audio Drop out

100% CPU Audio drop out
[6]

ASIO Realtime( , VSTi
) Drop out
, CPU L1, L2, L3 /DMA[7] .

ASIO 256 samples
.( . .) CPU
Audio drop out .
, 256 samples ASIO buffer Audio drop out
.
, . 256 samples
[8] .

( 
DAW )
.

,
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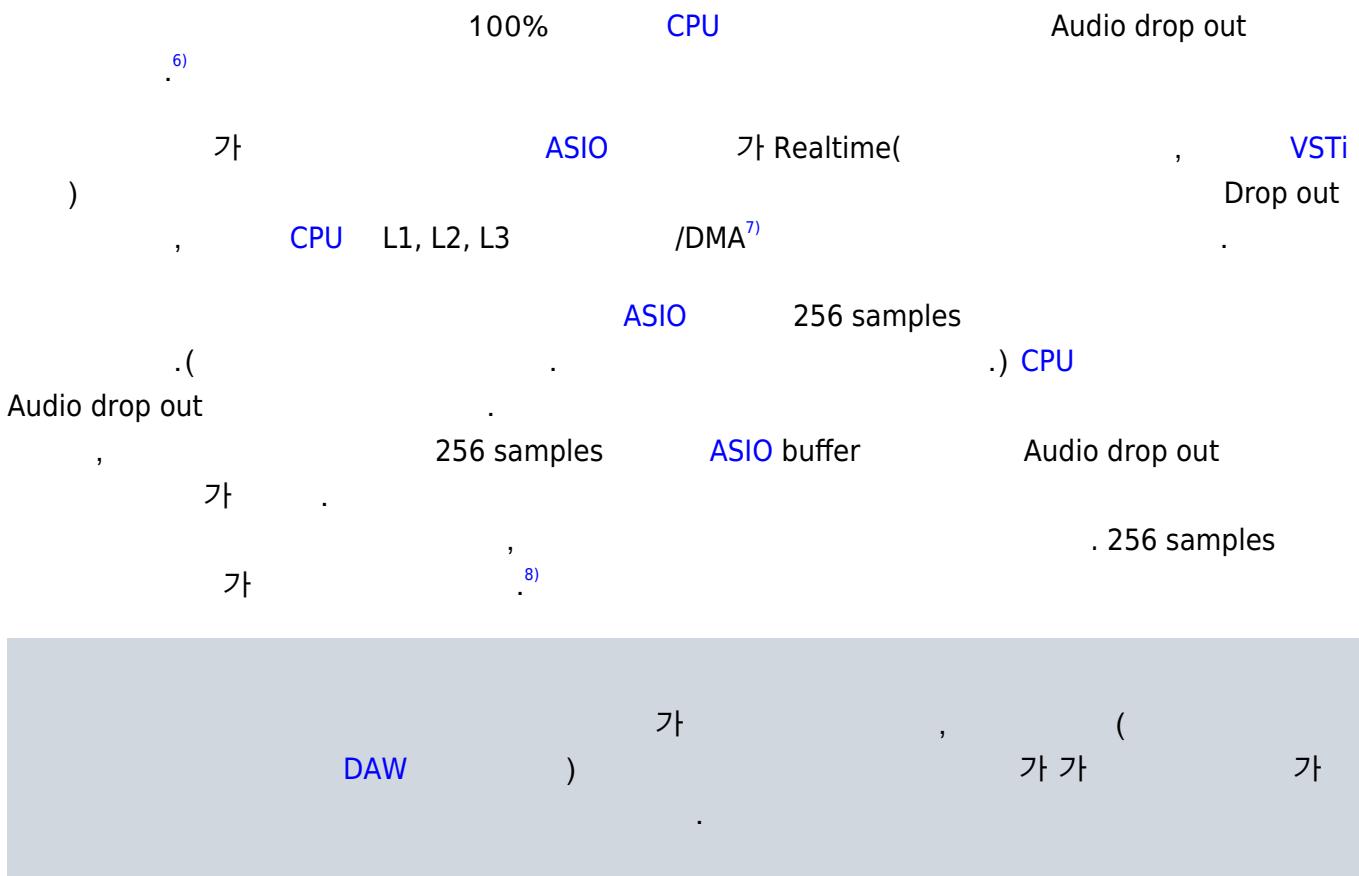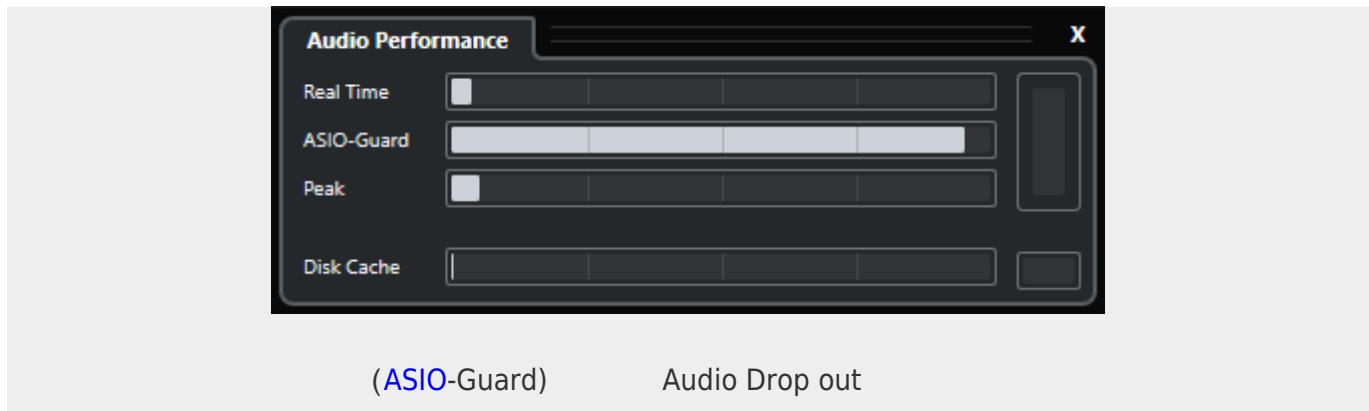
# Warn on processing overload

, Realtime( , VSTi )
Audio Drop out ,
. ,
Audio drop out . drop out
.

, Realtime Performance

[9]), Audio Drop out

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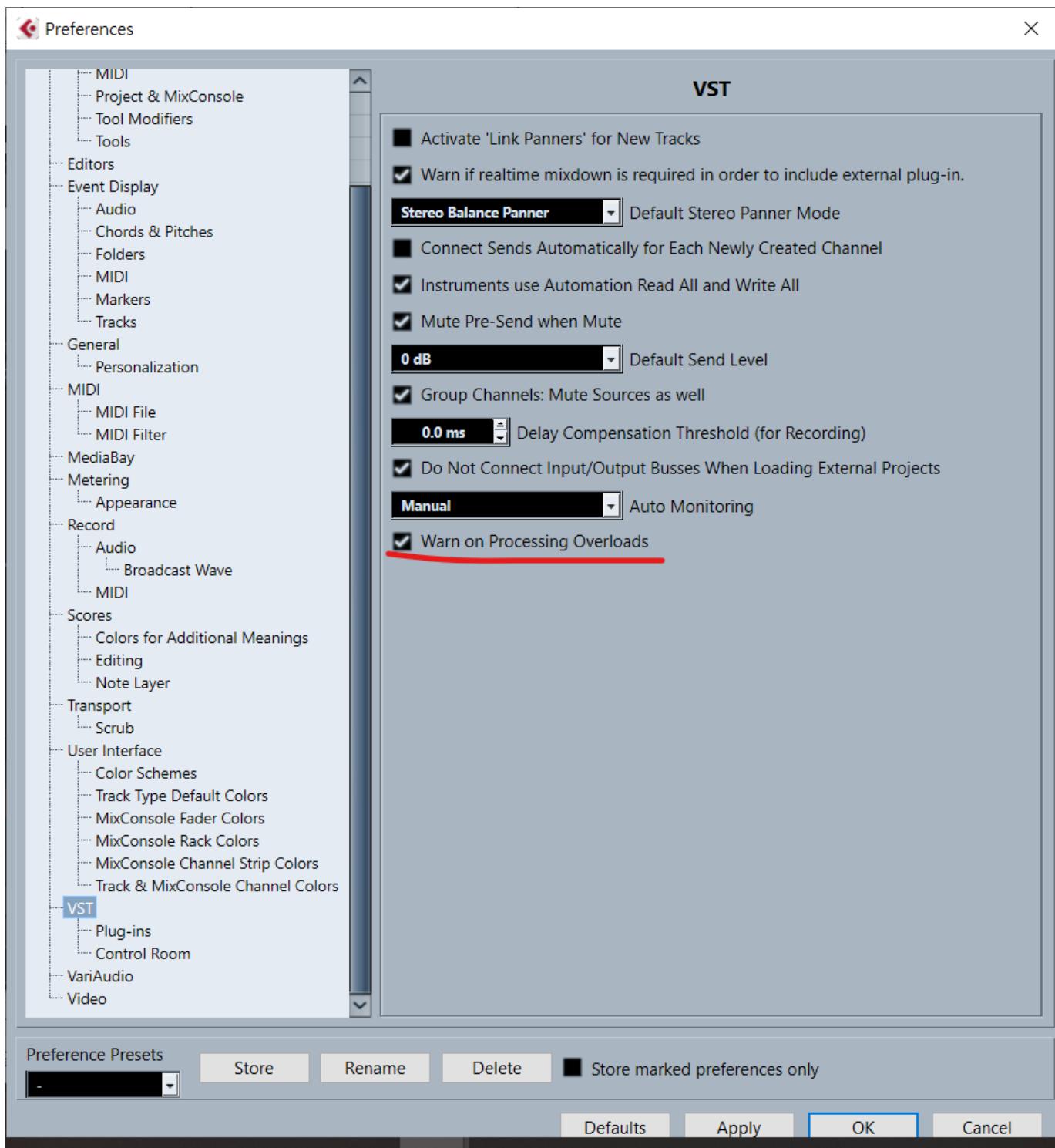


Audio Drop out , ASIO buffer Buffer
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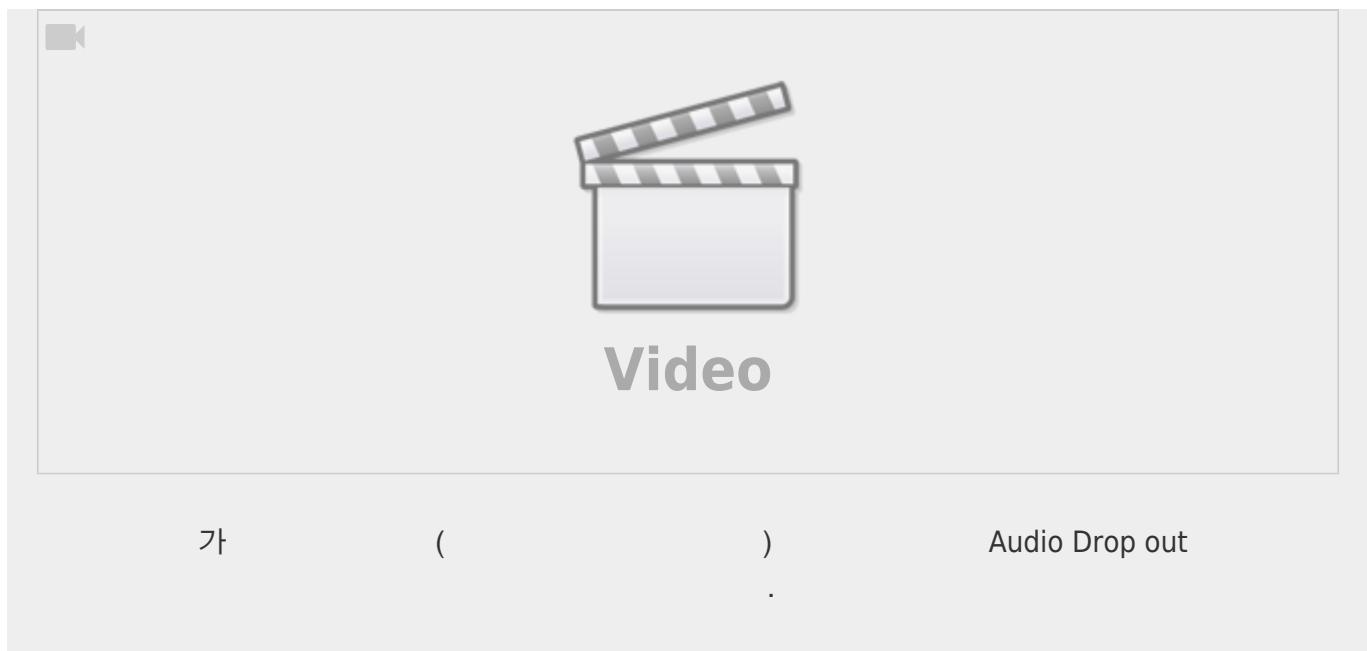
(                              )                              Audio Drop out
.

[ASIO](#)
[1)](#)
Audio Drop out                              ,                                            .
.
[2)](#)

[3)](#)

.
[4)](#)
Realtime export                              Audio drop out                                            .
[5)](#)
[CPU](#)                              100%                                            …
[6)](#)
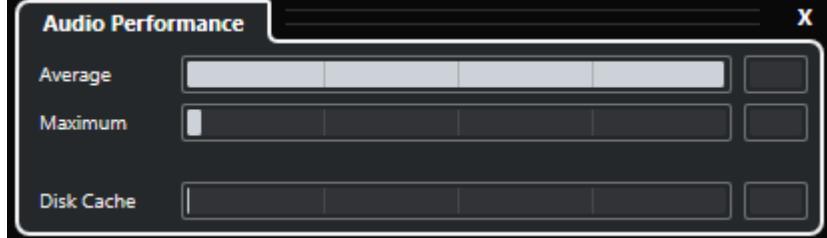


[7)](#)
Direct memory access, Cache [latency](#)

|  | L2 Setup | L2 Latency |
|---|---|---|
| Skylake (Client) | 256 KB 4-Way | 12 cycles |
| Skylake (Server) | 1024 KB 16-Way | 13 cycles |
| Sunny Cove (Client) | 512 KB 8-Way | 13 cycles |
| Willow Cove (Client) | 1280 KB 20-Way | 14 cycles |
| Golden Cove (Client) | 1280 KB 10-Way | 15 cycles |
| Raptor Lake P-Core (Client) | 2048 KB 16-Way | 16 cycles |

Intel's L2 designs trend towards increased capacity, with slightly higher latency

[8]

64 samples        Audio drop out
.

[9]

,                                                .

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