Audio Input Function Reference

PlayStation®Vita Programmer Tool Runtime Library Release 3.50

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Audio Driver (Input) Functions

sceAudioInOpenPort

Open audio input port

Definition

```
#include <audioin.h>
int sceAudioInOpenPort(
        int portType,
        int len,
        int freq,
        int param
)
```

Calling Conditions

Multithread safe.

Arguments

portType	Port type. Specify the basic functions
len	Input sample granularity
freq	Sampling frequency for captured data
param	Channel count and other settings

Specify the following macro for *param*.

Macro	Value	Description
SCE_AUDIO_IN_PARAM_FORMAT_S16_MONO	0	16 bit 1 ch

Return Values

Returns a positive value as a *port* value when successful. This *port* value is used by the input functions.

Returns a negative value for errors. (Refer to Error Codes for details.)

Description

This function acquires the audio input port. At present, only one audio input port can be acquired. This specifies the basic functions according to the port type. The parameters that can be set depend on the port type.

Port Type	Sampling Frequency	Input Sample Granularity	Description
SCE_AUDIO_IN_PORT_TYPE_VOICE	16000	256, 512	Used for chat and other audio applications. Functions as an echo canceller and ALC on the system.
SCE_AUDIO_IN_PORT_TYPE_RAW	48000	768	Provides a signal without performing signal processing.
	16000	256	

The internal microphone and headset microphone have a gain setting that prevents distortion even during close talking. When the port type is VOICE, ALC provides the appropriate signal level, but when the port type is RAW, the signal level is substantially low. The level often must be adjusted after signal acquisition.

Examples

Refer to the example of `sceAudioInInput()`.

See Also

`sceAudioInReleasePort()`

sceAudioInInput

Audio input

Definition

```
#include <audioin.h>
int sceAudioInInput(
        int port,
        void *ptr
)
```

Calling Conditions

Multithread safe.

Arguments

port Set the port value acquired with `sceAudioInOpenPort()`.
ptr Pointer to store captured data

Return Values

Returns a negative value for errors. (Refer to Error Codes for details.)

Description

This is a blocking read function that captures audio data.

It stores the audio input signal to the buffer specified with *ptr*.

It functions regardless of whether the actual microphone device is enabled or disabled.

When the audio input signal is captured, the read timing jitter does exist and must be taken into account.

Regarding jitter, refer to the "Audio Input Function Overview" document.

Examples

```
Int portID;

/* Acquire port */
portID = sceAudioInOpenPort(
        SCE_AUDIO_IN_PORT_TYPE_VOICE , 512, 16000,
SCE_AUDIO_IN_PARAM_FORMAT_S16_MONO);

While( /* Sound input condition */) {
        /* Sound input */
        Res = sceAudioInInput( portID, buffer);

        /* Process input sound  */
}

/* Release input port */
sceAudioInReleasePort(portID);
```

See Also

`sceAudioInOpenPort(),sceAudioInReleasePort()`

sceAudioInReleasePort

Release audio input port

Definition

```
#include <audioin.h>
int sceAudioInReleasePort(
        int port
);
```

Calling Conditions

Multithread safe.

Arguments

port Set the port value acquired with `sceAudioInOpenPort()`.

Return Values

Returns `SCE_OK` when successful, and a negative value for errors.

Description

This function releases the audio input port.

Examples

Refer to the example of `sceAudioInInput()`.

See Also

`sceAudioInOpenPort()`

sceAudioInGetAdopt

Retrieve audio input port usage right status

Definition

```
#include <audioin.h>
int sceAudioInGetAdopt(
        int portType
);
```

Calling Conditions

Multithread safe.

Arguments

portType Specify the port type of the audio input port to be retrieved.
For the port type that can be specified, see `sceAudioInOpenPort()`.

This function retrieves the information by specifying the port type of audio input port.

Return Values

If the application has the usage right of the audio input signal, this function will return 1; if not, it will return 0. Returns a negative value for errors.

Description

Retrieves the caller's audio input port usage right status.

If there are multiple applications, the system will give the usage right of audio input to only one of them. The function for signal retrieval remains active in the ports of applications without the usage right, but the signal will be silent.

Furthermore, since the function for signal retrieval stays active even without the usage right of audio input signal, the application does not necessarily need to respond in accordance with its usage right status.

Since, in case this information is used, the usage right will be updated asynchronously, it should be retrieved regularly instead of only "once when the application is started up." Overly frequent retrieval, however, is not necessary, as the usage right does not change very often.

See Also

`sceAudioInGetStatus()`

sceAudioInGetStatus

Obtain audio input port status

Definition

```
#include <audioin.h>
int sceAudioInGetStatus(
        int command
);
```

Calling Conditions

Multithread safe.

Arguments

command Specification of information to be obtained

Return Values

Returns a negative value for errors.

Description

Audio input port usage right status can be retrieved with `sceAudioInGetAdopt()`. This function retrieves other statuses. Choose the information to be retrieved with the argument

Argument	Description	Return value
SCE_AUDIO_IN_GETSTATUS_MUTE	Retrieve audio input mute status in the system due to user operation	1: Muted 0: Unmuted

See Also

`sceAudioInGetAdopt()`

Constants

Error Codes

Error codes returned by audio input functions

Definition

Macro	Value	Description
SCE_AUDIO_IN_ERROR_INVALID_SIZE	0x80260102	The sample value is invalid.
SCE_AUDIO_IN_ERROR_INVALID_SAMPLE_FREQ	0x80260103	The sampling frequency is invalid.
SCE_AUDIO_IN_ERROR_INVALID_PORT_TYPE	0x80260104	The port type is invalid.
SCE_AUDIO_IN_ERROR_INVALID_POINTER	0x80260105	The pointer is invalid.
SCE_AUDIO_IN_ERROR_INVALID_PORT_PARAMETER	0x80260106	The port parameter is invalid.
SCE_AUDIO_IN_ERROR_PORT_FULL	0x80260107	The port is already open.
SCE_AUDIO_IN_ERROR_OUT_OF_MEMORY	0x80260108	The system resources are insufficient.
SCE_AUDIO_IN_ERROR_NOT_OPENED	0x80260109	The specified port is not opened.
SCE_AUDIO_IN_ERROR_BUSY	0x8026010A	Tried to input during audio input
SCE_AUDIO_IN_ERROR_INVALID_PARAMETER	0x8026010B	The parameter is invalid
SCE_KERNEL_ERROR_INVALID_MEMORY_ACCESS	0x80022005	Memory access error