

Driver Functions

DSP Functions

Start the DSP

kern_return_t **snddriver_dsp_boot**(port_t *commandPort*, int **bootImage*, int *imageSize*, int *priority*)

kern_return_t **snddriver_dsp_reset**(port_t *commandPort*, int *priority*)

Transfer data to and from the DSP via DMA

kern_return_t **snddriver_dsp_dma_write**(port_t *commandPort*, int *elementCount*, int *dataFormat*, pointer_t *data*)

kern_return_t **snddriver_dsp_dma_read**(port_t *commandPort*, int *elementCount*, int *dataFormat*, pointer_t *data*)

Enqueue a DSP command

kern_return_t **snddriver_dsp_host_cmd**(port_t *commandPort*, u_int *hostCommand*, u_int *priority*)

Set the sound driver's protocol vis-a-vis the DSP

kern_return_t s **nddriver_dsp_protocol**(port_t *devicePort*, port_t *ownerPort*, int *protocol*)

Set the DSP host flags

kern_return_t **snddriver_dsp_set_flags**(port_t *commandPort*, u_int *flagMask*, u_int *flagValue*, u_int *priority*)

Transfer data to and from the DSP

kern_return_t **snddriver_dsp_write**(port_t *commandPort*, void **buffer*, int *elementCount*, int *elementSize*, int *priority*)

kern_return_t **snddriver_dsp_read**(port_t *commandPort*, void **buffer*, int *elementCount*, int *elementSize*, int *priority*)

kern_return_t **snddriver_dsp_read_messages**(port_t *commandPort*, void **buffer*, int *elementCount*, int *elementSize*, int *priority*)

kern_return_t **snddriver_dsp_read_data**(port_t *commandPort*, void ***buffer*, int *elementCount*, int *elementSize*, int *priority*)

Request a DSP host interface register condition

kern_return_t **snddriver_dspcmd_req_condition**(port_t *commandPort*, u_int *registerMask*, u_int *conditionFlags*, int *priority*, port_t *replyPort*)

Request the contents of the DSP-reply buffers

kern_return_t	snddriver_dspcmd_req_msg (port_t <i>commandPort</i> , port_t <i>replyPort</i>)
kern_return_t	snddriver_dspcmd_req_err (port_t <i>commandPort</i> , port_t <i>replyPort</i>)

Get the DSP command port

kern_return_t	snddriver_get_dsp_cmd_port (port_t <i>devicePort</i> , port_t <i>ownerPort</i> , port_t <i>*commandPort</i>)
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Driver Setup and Access

Acquire ownership of sound resources

kern_return_t	snddriver_set_dsp_owner_port (port_t <i>devicePort</i> , port_t <i>ownerPort</i> , port_t <i>*negotiationPort</i>)
kern_return_t	snddriver_set_sndin_owner_port (port_t <i>devicePort</i> , port_t <i>ownerPort</i> , port_t <i>*negotiationPort</i>)
kern_return_t	snddriver_set_sndout_owner_port (port_t <i>devicePort</i> , port_t <i>ownerPort</i> , port_t <i>*negotiationPort</i>)

Reallocate the sound driver device port

kern_return_t	snddriver_new_device_port (port_t <i>devicePort</i> , port_t <i>superuserPort</i> , port_t <i>*newDevicePort</i>)
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Respond to asynchronous sound driver messages

kern_return_t	snddriver_reply_handler (msg_header_t <i>*reply</i> , snddriver_handlers_t <i>*handlers</i>)
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Set and get sound playback attributes

kern_return_t	snddriver_set_device_parms (port_t <i>devicePort</i> , boolean_t <i>speakerOn</i> , boolean_t <i>filterOn</i> , boolean_t <i>zerofill</i>)
kern_return_t	snddriver_get_device_parms (port_t <i>devicePort</i> , boolean_t <i>*speakerOn</i> , boolean_t <i>*filterOn</i> , boolean_t <i>*zerofill</i>)
kern_return_t	snddriver_set_volume (port_t <i>devicePort</i> , int <i>leftVolume</i> , int <i>rightVolume</i>)
kern_return_t	snddriver_get_volume (port_t <i>devicePort</i> , int <i>*leftVolume</i> , int <i>*rightVolume</i>)
kern_return_t	snddriver_set_ramp (port_t <i>devicePort</i> , int <i>rampOn</i>)

Stream Setup and Access

Configure stream transfer buffers

kern_return_t	snddriver_set_sndout_bufcount (port_t <i>devicePort</i> , port_t <i>sndoutPort</i> , int <i>count</i>)
kern_return_t	snddriver_set_sndout_bufsize (port_t <i>devicePort</i> , port_t <i>sndoutPort</i> , int <i>size</i>)
kern_return_t	snddriver_stream_ndma (port_t <i>streamPort</i> , int <i>regionTag</i> , int <i>count</i>)

Control and query a stream

kern_return_t	snddriver_stream_control (port_t <i>streamPort</i> , int <i>regionTag</i> , int <i>control</i>)
kern_return_t	snddriver_stream_nsamples (port_t <i>streamPort</i> , int <i>*byteCount</i>)

Configure a sound stream

kern_return_t

snddriver_stream_setup(port_t *devicePort*, port_t *ownerPort*, int *dataPath*, int *sampleCount*, int *sampleSize*, int *lowWater*, int *highWater*, int **protocol*, port_t **streamPort*)

Send data to and retrieve data fom a stream

kern_return_t

snddriver_stream_start_writing(port_t *streamPort*, void **data*, int *sampleCount*, int *regionTag*, boolean_t *preempt*, boolean_t *deallocateWhenDone*, boolean_t *msgStarted*, boolean_t *msgCompleted*, boolean_t *msgAborted*, boolean_t *msgPaused*, boolean_t *msgResumed*, boolean_t *msgUnderrun*, port_t *replyPort*)

kern_return_t

snddriver_stream_start_reading(port_t *streamPort*, char **filename*, int *sampleCount*, int *regionTag*, boolean_t *msgStarted*, boolean_t *msgCompleted*, boolean_t *msgAborted*, boolean_t *msgPaused*, boolean_t *msgResumed*, boolean_t *msgOverrun*, port_t *replyPort*)