

# Audio Data Types

This section describes the structures, data types and defines used when talking to the audio device.

```
System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\drivers\staging\media\av7110\ (linux-master) (drivers) (staging) (media) (av7110) audio_data_types.rst, line 12)
```

Unknown directive type "c.type".

```
.. c:type:: audio_stream_source
```

The audio stream source is set through the AUDIO\_SELECT\_SOURCE call and can take the following values, depending on whether we are replaying from an internal (demux) or external (user write) source.

```
typedef enum {  
    AUDIO_SOURCE_DEMUX,  
    AUDIO_SOURCE_MEMORY  
} audio_stream_source_t;
```

AUDIO\_SOURCE\_DEMUX selects the demultiplexer (fed either by the frontend or the DVR device) as the source of the video stream. If AUDIO\_SOURCE\_MEMORY is selected the stream comes from the application through the `write()` system call.

```
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```

Unknown directive type "c.type".

```
.. c:type:: audio_play_state
```

The following values can be returned by the AUDIO\_GET\_STATUS call representing the state of audio playback.

```
typedef enum {  
    AUDIO_STOPPED,  
    AUDIO_PLAYING,  
    AUDIO_PAUSED  
} audio_play_state_t;
```

```
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```

Unknown directive type "c.type".

```
.. c:type:: audio_channel_select
```

The audio channel selected via AUDIO\_CHANNEL\_SELECT is determined by the following values.

```
typedef enum {  
    AUDIO_STEREO,  
    AUDIO_MONO_LEFT,  
    AUDIO_MONO_RIGHT,  
    AUDIO_MONO,  
    AUDIO_STEREO_SWAPPED  
} audio_channel_select_t;
```

```
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```

Unknown directive type "c.type".

```
.. c:type:: audio_status
```

The AUDIO\_GET\_STATUS call returns the following structure informing about various states of the playback operation.

```
typedef struct audio_status {
    boolean AV_sync_state;
    boolean mute_state;
    audio_play_state_t play_state;
    audio_stream_source_t stream_source;
    audio_channel_select_t channel_select;
    boolean bypass_mode;
    audio_mixer_t mixer_state;
} audio_status_t;
```

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Unknown directive type "c.type".

```
.. c:type:: audio_mixer
```

The following structure is used by the AUDIO\_SET\_MIXER call to set the audio volume.

```
typedef struct audio_mixer {
    unsigned int volume_left;
    unsigned int volume_right;
} audio_mixer_t;
```

## audio encodings

A call to AUDIO\_GET\_CAPABILITIES returns an unsigned integer with the following bits set according to the hardware capabilities.

```
#define AUDIO_CAP_DTS      1
#define AUDIO_CAP_LPCM     2
#define AUDIO_CAP_MP1      4
#define AUDIO_CAP_MP2      8
#define AUDIO_CAP_MP3     16
#define AUDIO_CAP_AAC     32
#define AUDIO_CAP_OGG     64
#define AUDIO_CAP_SDDS    128
#define AUDIO_CAP_AC3    256
```