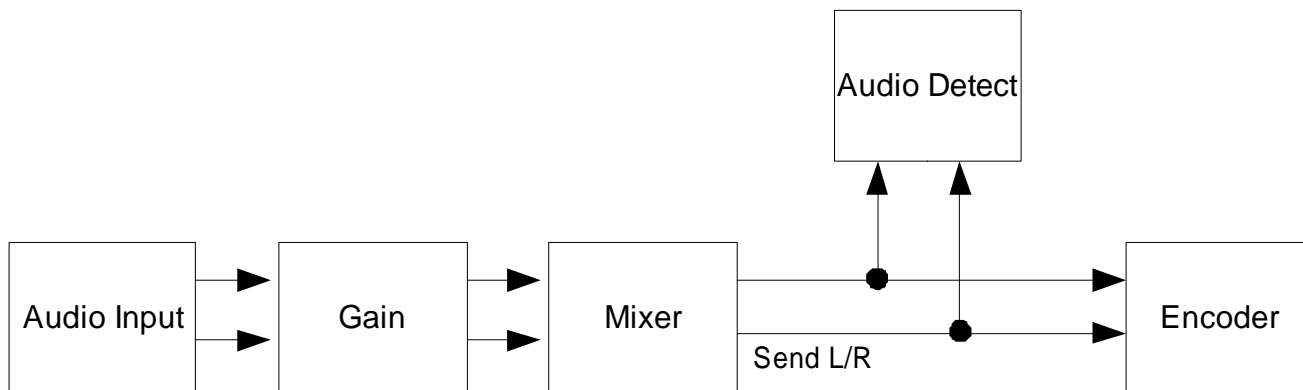


## MAYAH Application Note 29

# Audio Detection

### 1. Basic Configuration

MAYAH devices provide the possibility to detect the presence or absence of audio signals. In the audio signal chain this detection is always done right before the encoder.



**Figure 1: Typical Signal Flow (C11, Sporty, Flashman II)**

To prepare the device a number of configuration options need to be set. This can be done via SNMP or Telnet. This document will describe the Telnet commands necessary, if needed, the corresponding SNMP OIDs can be found in the Communication Reference Manual.

#### Step 1: Set Detection Parameters

The command `Audio_DetectLevel` is used to set the level in dB<sub>fs</sub> that has to be reached before the unit considers an audio signal to be present. Additionally the `Audio_DetectTime` must be used to enter a time period in milliseconds for which the signal needs to be above the 'Audio Detect Level'.

#### Step 2: Set Loss Parameters

The commands `Audio_LostLevel` and `Audio_LostTime` are used to enable a similar mechanism as described in Step 1 for sensing when an audio signal is not present any more. If the audio signal is under the 'Audio Lost Level' for a time longer than 'Audio Lost Time' the device will signal the absence of an audio signal.

Example:

```
Audio_DetectLevel -10
Audio_DetectTime 50
Audio_LostLevel -40
Audio_DetectTime 50
```

**Note: The parameters are highly dependent of the kind of audio signal used and the audio levels (see also Step 4). Therefore it is not possible to give universal recommendations.**

#### Step 3: Algorithm Configuration

Audio detection depends on the channel mode (mono, stereo) of the selected algorithm. That means that if a mono algorithm is selected, the audio detection mechanism only monitors the left channel.

#### Step 4: Mixer Configuration

With MAYAH devices which have an internal mixer (Flashman II, Sporty, C11, Merk II) the mixer setting is important for audio detection. The signal used to evaluate audio status is the signal entering the encoder.

Usually this means the 'send' signal in the mixer is used. This procedure ensures that all audio routing is done correctly (including mixer).

Figure 2 shows an example signal routing, which uses Input 1 and 2 as a stereo input. Note that in the default setting the audio detection will not operate on the input channels separately. By default a signal is assumed to be present as soon as *both* channels fulfill the 'Audio Detect' requirements and to be lost as soon as *one* channel fulfills the requirements for 'Audio Lost'.



Figure 2 Mixer Settings

### Step 5: Events

Whenever a change in audio signal is detected using the parameters set in steps 1-4 an event 'sig\_audio' is triggered containing the status information 'on'/'off'. Additionally the device can be configured to send out a SNMP trap (This needs the trap to be enabled by issuing `trap_audio on` and a SNMP Manager has to be set using `ip_snmpmanager [ip]`).

The Telnet commands

```
audio_valid ?      or
sig_audio ?
```

can be used to poll the current status.

## 2. Channel independent Detection

In addition to the mechanism described above the command

```
com_indaudio sig on
```

enables independent monitoring of the input signals.

As a result of this the command/message `sig_audio` is now followed by a number instead of a mere 'on' or 'off'. The Number indicates the channel status:

0: no audio present

1: Audio on Channel 1 only

2: Audio on Channel 2 only

3: Audio on Channels 1 and 2

This value is also present in the SNMP traps sent.

The command `audio_valid` still provides only the information 'on' or 'off'.