Advantech AE Technical Sharing Documentation

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Category	■FAQ □ SOP	Related OS	Ubuntu RISC
Abstract	How to test the PCM-27J3AU function under Ubuntu.		
Keyword	WISE-710, Ubuntu (0305)		
Related Product	WISE-710		

■ **Problem Description:**

In the no GUI environment, how to use the Command to play music and record sound.

User: advantech

Password: 123

User: root

Password: 123456

■ **Brief Solution - Step by Step:**

1.) WISE-710 belongs to the RISC platform, so the operating system is a customized operating system, and the Ubuntu is also a customized version. Please make sure the Ubuntu version is above 0305. Check the version by below command:

cat /etc/version

2.) How to check audio/recordable devices (make sure you are the root):

aplay –l   (Line-out)

You may see as following information, in this case, card is 1, device is 1

  **** List of PLAYBACK Hardware Devices ****

  card 1: Audio [USB Audio], device 1: USB Audio [USB Audio #1]

    Subdevices: 1/1

      Subdevice #0: subdevice #0

arecord –l   (Line-in/Mic)

You may see as following information, in this case, you have two recordable device which is card 1, device 0 and card 1, device 0.

  **** List of CAPTURE Hardware Devices ****

  card 1: Audio [USB Audio], device 0: USB Audio [USB Audio]

    Subdevices: 1/1

    Subdevice #0: subdevice #0

  card 1: Audio [USB Audio], device 1: USB Audio [USB Audio #1]

    Subdevices: 1/1

Subdevice #0: subdevice #0

3.) Check the currently supported control options; you can get the numid which can help you to check the devices details.

amixer -c 0 controls

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root@localhost:~# amixer -c 0 controls
numid=11,iface=MIXER,name='PCM Playback Switch'
numid=12,iface=MIXER,name='PCM Playback Volume'
numid=8,iface=MIXER,name='Line Capture Switch'
numid=9,iface=MIXER,name='Line Capture Volume'
numid=4,iface=MIXER,name='Mic Capture Switch'
numid=5,iface=MIXER,name='Mic Capture Volume'
numid=7,iface=MIXER,name='Extension Unit Switch'
numid=6,iface=MIXER,name='Loudness'
numid=10,iface=MIXER,name='Loudness',index=1
numid=1,iface=PCM,name='Capture Channel Map'
numid=2,iface=PCM,name='Capture Channel Map',device=1
numid=3,iface=PCM,name='Playback Channel Map',device=1
```

4.) Check current output volume (use numid=12 and you can get volume. The 127 is the max values you can get.)

amixer -c 1 cget numid=12

5.) Set output volume (use numid=12, set volume=60)

amixer -c 1 cset numid=12 60

6.) Play audio (aplay + path/name.wav)

aplay /usr/Advantech/Audio_test/sound.wav

7.) Mic-in record

arecord -D plughw:1,0 -d 8 -f cd -t wav record.wav

Recording WAVE ' record.wav' : Signed 16 bit

Little Endian, Rate 44100 Hz, Stereo

8.) Line-In record

arecord -D plughw:1,1 -d 8 -f cd -t wav Line-in.wav

Recording WAVE ' Line-in.wav' : Signed 16 bit

Little Endian, Rate 44100 Hz, Stereo