

# Overview

The USB Audio Generator application is a simple demonstration program that uses the KSDK software. It is enumerated as a recording device and users can record the sound from this device via the "Sound Recorder" in the Windows Accessories.

## System Requirement

### Hardware requirements

- J-Link ARM
- P&E Micro Multi-link universal
- Mini/micro USB cable
- USB A to micro AB cable
- Hardware (tower/base board, ...) for specific device
- Personal Computer(PC)

### Software requirements

- The project files, for lite version example, the path is:  
<SDK\_Install>/boards/<board>/usb/usb\_device\_audio\_generator\_lite/<RTOS>/<toolchain>.  
For non-lite version example, the path is:  
<SDK\_Install>/boards/<board>/usb/usb\_device\_audio\_generator/<RTOS>/<toolchain>.

#### Note

The RTOS is BM ,FreeRTOS, uCOSII or uCOSIII.

## Getting Started

### Hardware Settings

- The Jumper settings:  
JP12 connected .

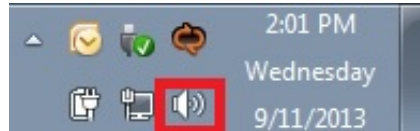
### Prepare the example

1. Download the program to the target board.
2. Either press the reset button on your board or launch the debugger in your IDE to begin running the demo.
3. Connect a USB cable between the PC host and the USB device port on the board.

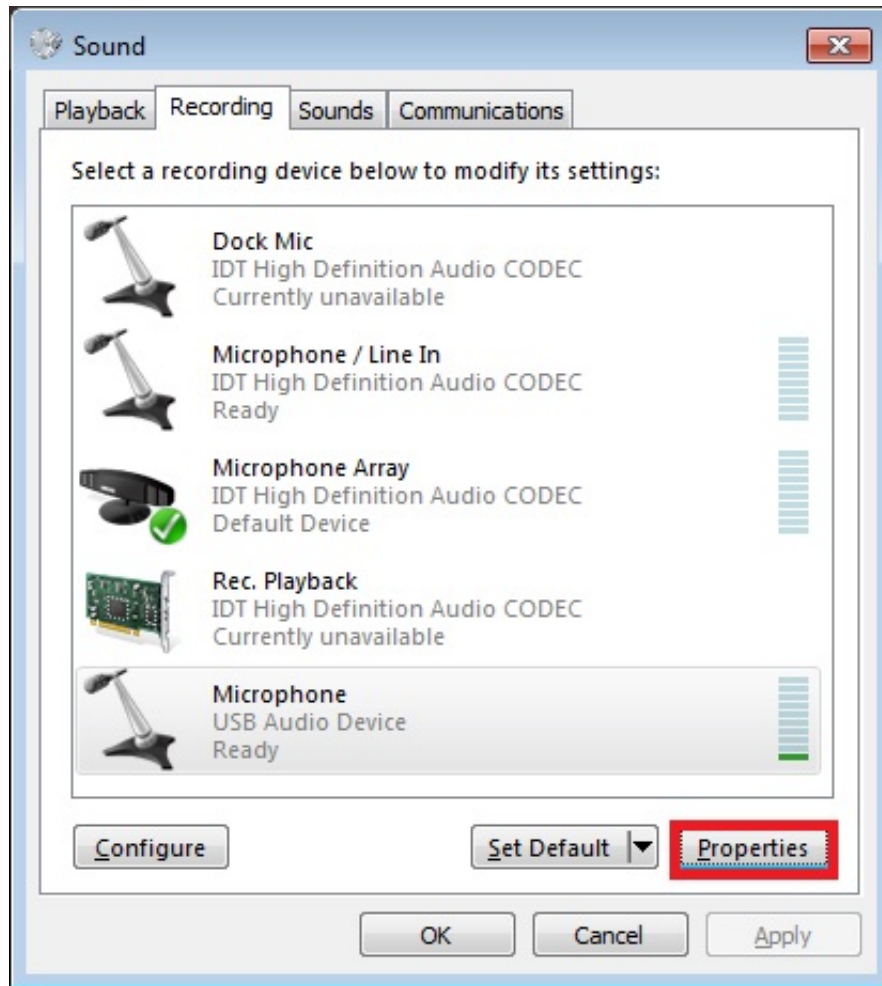
For detailed instructions, see the appropriate board User's Guide.

## Run the example in Windows

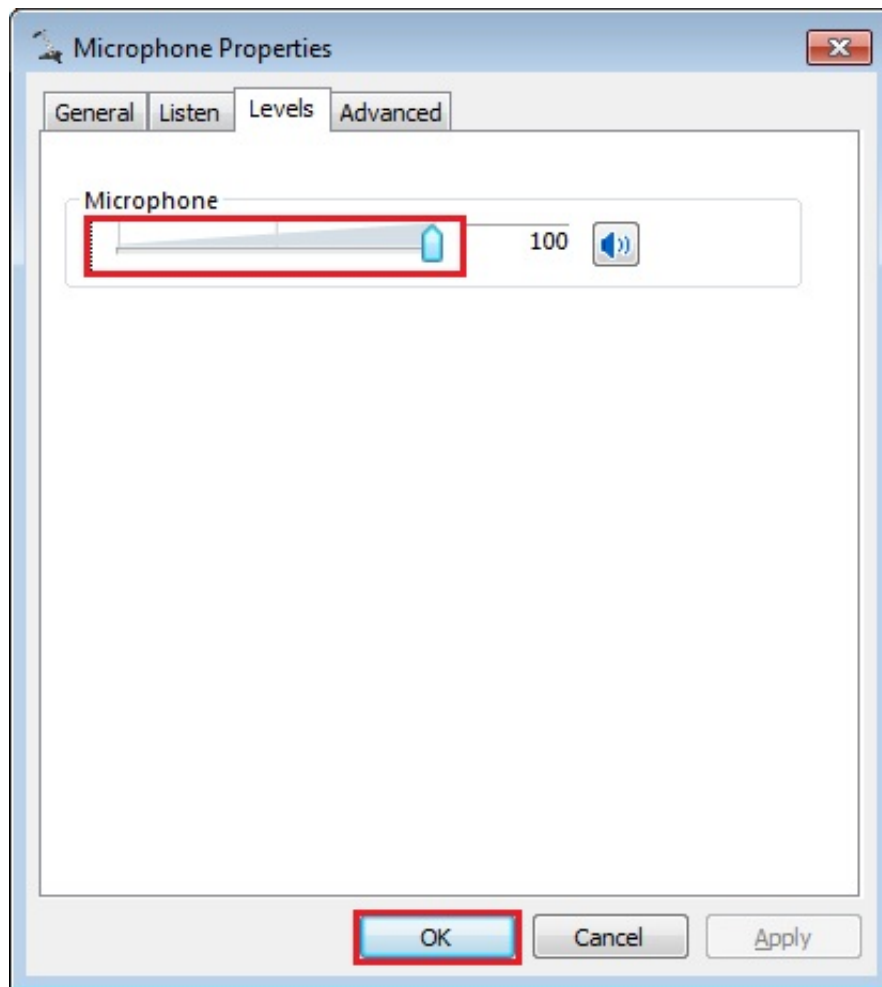
1. Plug-in the device which is running Audio Generator example into PC.
2. You will see a USB AUDIO DEMO device enumerated in Device Manager.
3. Right click on the Sound control icon of the Start bar (near to clock) and select "Recording devices".



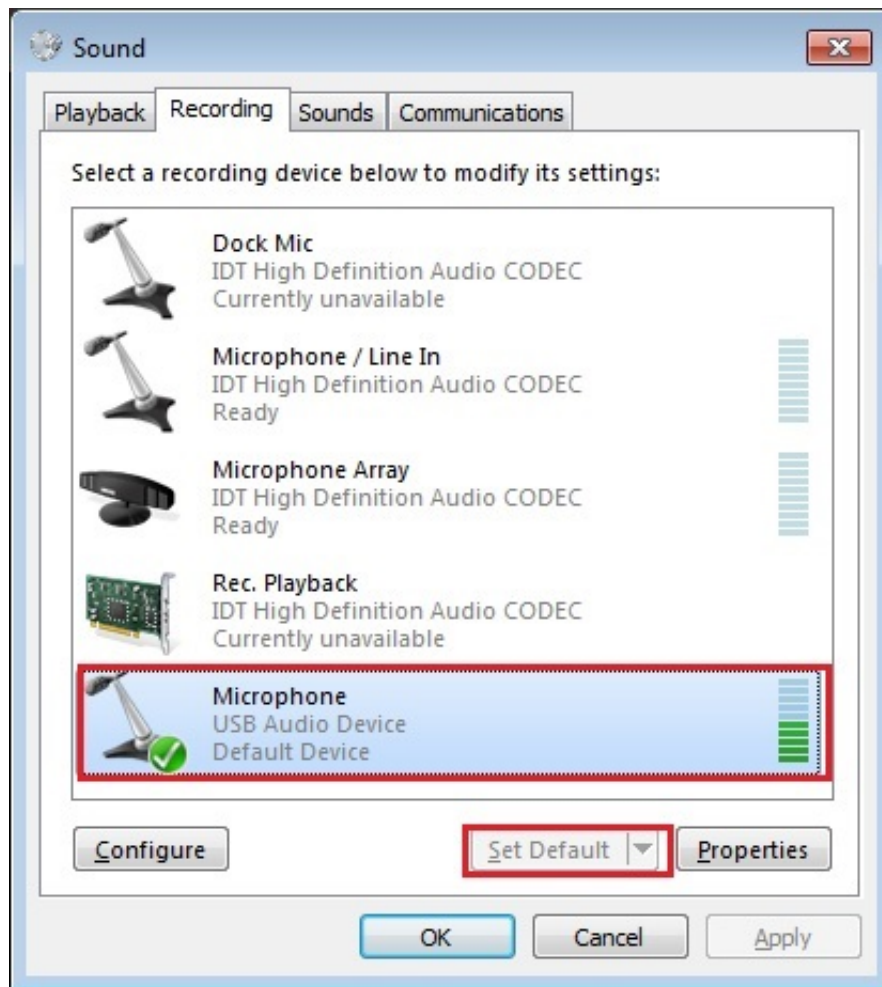
4. On the opened window, select the "Microphone" device with the description "USB Audio Device" and click on the "Properties" button.



5. On the new window, go to "Levels" tab, and move the slide until 100%, then, click on "OK".



6. Back on the previous window be sure that "USB Audio Device" is still selected, then click on the "Set Default" button and finally, click on "OK" button.



7. Open the "Sound Recorder" application and record audio for about 5-10 seconds.
8. After recording, Open the recorder file with any media player. The sound that you can listen now is identical to the instance sound located in the memory.

Note: When connected to Macbook should change the PCM format from (0x02,0x00,) to (0x01,0x00, ) in `g_config_descriptor[CONFIG_DESC_SIZE]` in the `usb_descriptor.c`, otherwise it can not be enumerated. And it will have noise when recording with the quicktime player since the sampling frequency and bit resolution are not matched.