To get started with development, download and extract the Audio Development Board compressed archive file from www.microchip.com/adb. Connect a debugger or programmer such as the MPLAB® REAL ICE™ In-Circuit Emulator or ICD 3 to the RJ-45 (J3) connector. Open MPLAB and load the ADB Demo workspace. Compile, program and run the demo. For more information on the hardware, refer to the Audio Development Board User's Guide (DS70662).

Audio Development Board Information Sheet

Features

The Audio Development Board is a high quality audio development platform using a 16-bit or 32-bit microcontroller (MCU). The on-board high-performance MCU is ideal for complex audio algorithms, which are computation intensive.

Features of the Audio Development Board are:

• High-performance microcontroller
• Wolfson WM8960 audio codec with up to 48 kHz sampling rate and up to 24-bit resolution, headphone out and line-in jacks, and an on-board microphone
• TFT Color Display with 220x176 resolution
• USB and UART communication interfaces
• PICtail™ Plus expansion connector for Made for iPod®

Getting Started

The Audio Development Board is preprogrammed with an audio demonstration. Use the following procedure to run this demonstration:

1. Power the ADB by connecting the 9V power brick provided with the ADB in the power connector (J1).
2. Connect a pair of headphones or powered speakers into the jack labeled HP OUT (J6).
3. A line-in input to the Line IN (J5) jack can be connected or the on-board microphone (MIC) can be used for audio input. MIC is the default audio input, but it can be changed to Line-in in the settings.
4. A USB Flash drive must be plugged into the USB receptacle (J7) to use the record and playback features in the demonstration.
5. Press switch S3 to navigate between the individual applications. Navigation is indicated by the red bevel around the application icon. Descriptions of the applications are provided in Table 1.
6. Press switch S2 to select the application. The selection is confirmed by the red bevel turning green before the next application screen is presented.
7. While the application is running, switch S1 can be pressed to return to the main menu, which closes the application. Or alternatively, switch S4 can be used to perform a specific action depending on the application, as described in Table 1.

TABLE 1:

Action	Description	Switch S4	Switch S2, S3	Switch S1
Record	Audio from line-in or on-board microphone is recorded and stored on a USB Flash drive.	Stop or resume recording.	—	Back to main screen
Playback	Audio stored on a USB Flash drive is played back.	Pause or resume playback.	—	
Loopback	Audio from line-in or microphone is output to the headphones. Frequency spectrum of audio is displayed on screen.	Mute or un-mute playback.	—	
Settings	Change audio input, audio in and out volume, and sampling frequency.	Switch between settings options.	Change audio input between line-in and the on-board microphone. Increase or decrease audio in and out volume. Change audio sampling frequency.	