

Speech Playback PICtail™ Plus Daughter Board

Overview

The Speech Playback PICtail™ Plus Daughter Board is a demonstration board for evaluating speech playback algorithms that operate on Microchip's PIC® microcontrollers or dsPIC® Digital Signal Controllers. It is an expansion board that is compatible with many of the PIC16 and PIC18 development boards employing a PICtail connector and with the Explorer 16 Development Board using the PICtail Plus connector.

Features

- 3V or 5V operation
- Potentiometer for volume control
- 4th order Low Pass Filter
- Mono output via on-board speaker or stereo output via headphone connector
- Shutdown control of power amplifier
- On-board 256 Kbit SPI Serial EEPROM for voice storage

Getting Started

To get started, an HPC Explorer Board with a PIC18F87J10 or PIC18F8722 microcontroller, or an Explorer 16 Development Board with a PIC24F microcontroller is needed. The headers on the Speech Playback PICtail Plus Daughter Board allow insertion in the development boards in only one orientation. Projects for both PIC18 and PIC24F devices can be downloaded from the Microchip web site (www.microchip.com).

The demonstration software implements a talking thermometer using the TC74 temperature sensor on the HPC Explorer Board or the TC1047A temperature sensor on the Explorer 16 Development Board.

See Figure 1 on the back of this page to view the Speech Playback PICtail Plus Daughter Board schematic.

Signals and Connections

The following signals are used to control the Speech Playback PICtail Plus Daughter Board. Pins are noted for both PIC18 and PIC24F devices.

| Function | I/O | PIC18 Pin | PIC24F Pin | Description |
|-----------|-----|-----------|------------|------------------------------|
| PWM | I | RC2/CCP1 | RD0/OC1 | PWM Voice Input |
| PA Enable | I | RA4 | RD8 | Power Amplifier Enable Input |
| CS | I | RE0 | RB2 | SPI Chip Select Input |
| SCK | I | RC3/SCK | RF6/SCK1 | SPI Clock Input |
| SO | O | RC4/SDI | RF7/SDI1 | SPI Data Out from EEPROM |
| SI | I | RC5/SDO | RF8/SDO1 | SPI Data In to EEPROM |

Americas

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Europe

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Italy - Milan - 39-0331-742611
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Spain - Madrid - 34-91-708-08-90
UK - Wokingham - 44-118-921-5869

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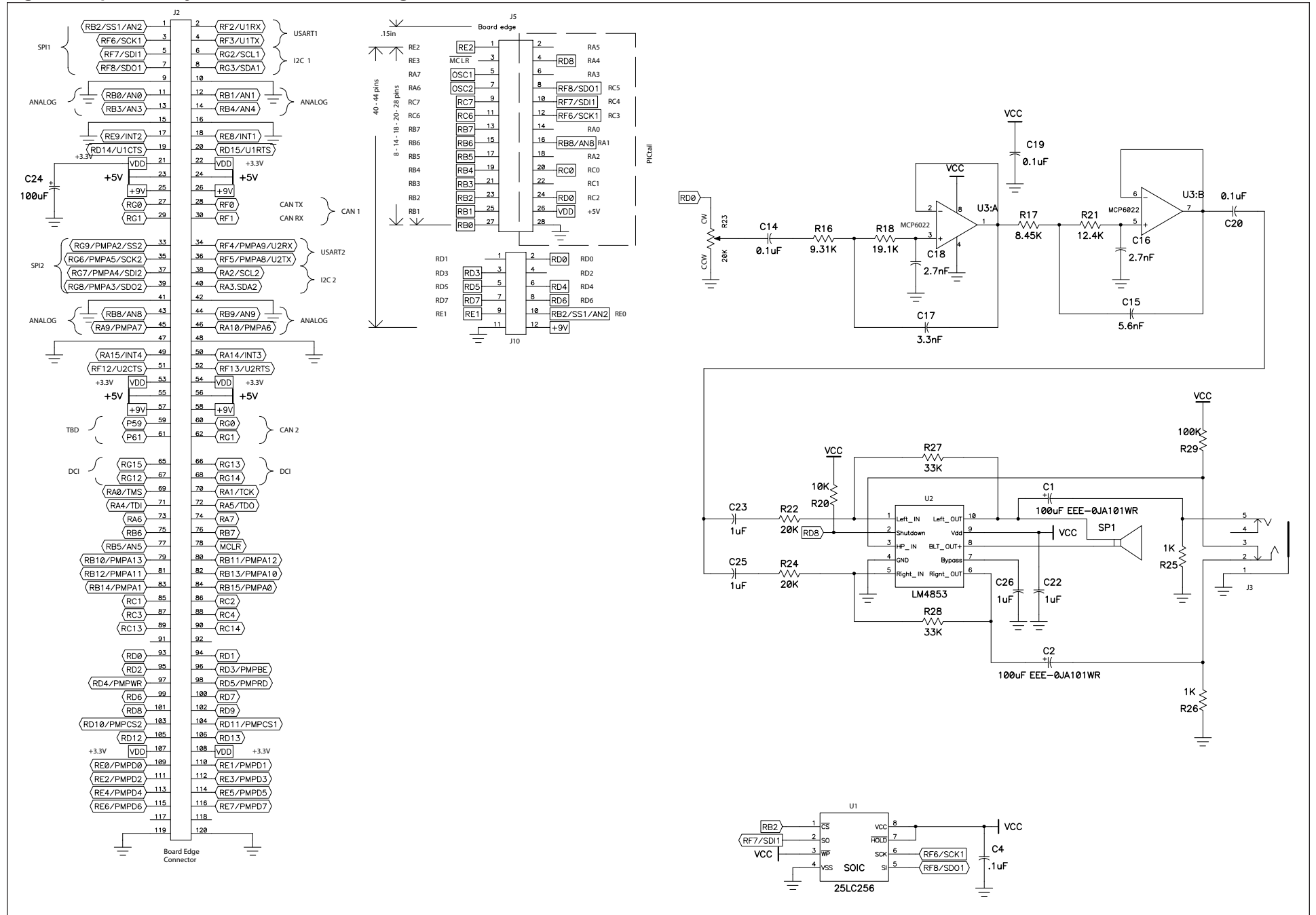


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Figure 1: Speech Playback PICtail™ Plus Daughter Board Schematic



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