

```
// radio1 rev.c5 Technotes  
// GoodPrototyping (goodprototyping.com)  
// (c) 2016 Jory Anick, jory@goodprototyping.com
```

RADIO1 PINS:

Analog:

A1 - VOLUME POTENTIOMETER
A2 - RTC POWER (HIGH=ON, LOW=OFF)
A3 - RADIO + AMPLIFIER POWER (HIGH=ON, LOW=OFF)
A7 - 5 BUTTON KEYPAD

Digital:

D2 - SLEEP BTN
D3 - CHARLIEPLEXED LEDS PIN 1
D4 - CHARLIEPLEXED LEDS PIN 2
D5 - CHARLIEPLEXED LEDS PIN 3
D8 - MAIN POWER LED
D10 - SPK+
D11 - COMPOSITE VIDEO INTERNAL PIN 1
D29 - COMPOSITE VIDEO INTERNAL PIN 2
D20/21 - I2C RTC
D30 - RESET
D42 - TFT DISPLAY POWER (HIGH=ON, LOW=OFF)
D44 - PWM (TIMER5) VOLUME OUT TO AMPLIFIERS
D45 - PWM (TIMER5) VOLUME OUT TO AMPLIFIERS

SPI Access via ICSP port

DETAILS:

A1 - VOLUME POTENTIOMETER

Function: Sets the volume level of the two audio amplifiers

A2 - RTC POWER (HIGH=ON, LOW=OFF)

Function: Turns the real-time clock on and off
when off, the clock uses the 3v battery

A3 - RADIO + AMPLIFIER POWER (HIGH=ON, LOW=OFF)

Function: Turns the FM radio and two amplifiers on and off

A7 - 5 BUTTON KEYPAD

Function: Input for the five buttons on the external controller

D2 - SLEEP BTN (HIGH=SLEEP)

Function: Connects to an external button paired to ground to toggle ultra-low-power "sleep" mode

D3/D4/D5 - CHARLIEPLEXED LEDS

Function: Connects to the 6 leds on the external controller
Each pin requires a 360 ohm resistor or higher, according to desired brightness

D8 - MAIN POWER LED

Function: Connects to the led on the external controller. requires a 360 ohm resistor or higher, according to desired brightness

D10 - SPK+

Function: Connects to the piezo buzzer on the external controller

D11/D29 - COMPOSITE VIDEO

Function: Internally forms the V+ and V- pins on the media expansion connector (top center)

D20/21 - I2C RTC

Function: Internally connects the real-time clock

D22/24/26/28 - KEYPAD

Function: Connects to external buttons paired to ground

D30 - RESET (HIGH=RESET)

Function: Internally connects to reset, forces a reboot

D42 - TFT DISPLAY POWER (HIGH=ON, LOW=OFF)

Function: Turns the 5V display connected to the media expansion connector (top center) on and off on pins M+ and M-

D44 - PWM (TIMER5) VOLUME OUT TO AMPLIFIERS

Function: Internally controls the audio amplifier volume

D45 - PWM (TIMER5) VOLUME OUT TO AMPLIFIERS

Function: Internally controls the audio amplifier volume