



02.13.2008

Barnacle V1 Data Sheet

1 Overview

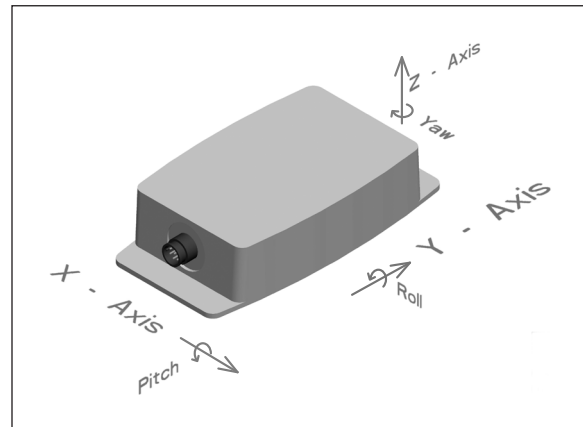
The Barnacle is an IMU designed to give highly sensitive low frequency readings in potentially noisy environments. It comes enclosed and shielded, and has a very wide input voltage range for maximum flexibility.

The Barnacle uses a Freescale MMA7260Q triple-axis accelerometer and three Analog Devices ADXRS401 75°/second gyros for measurements. Each channel is buffered and filtered with Sallen-Key second order low pass filters.

2 Electrical Specifications

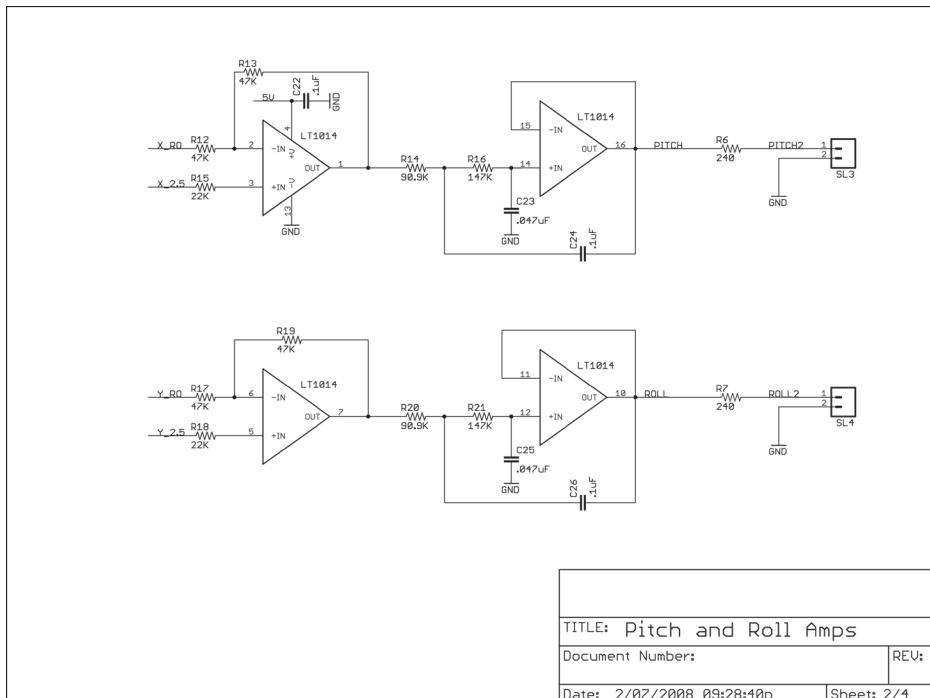
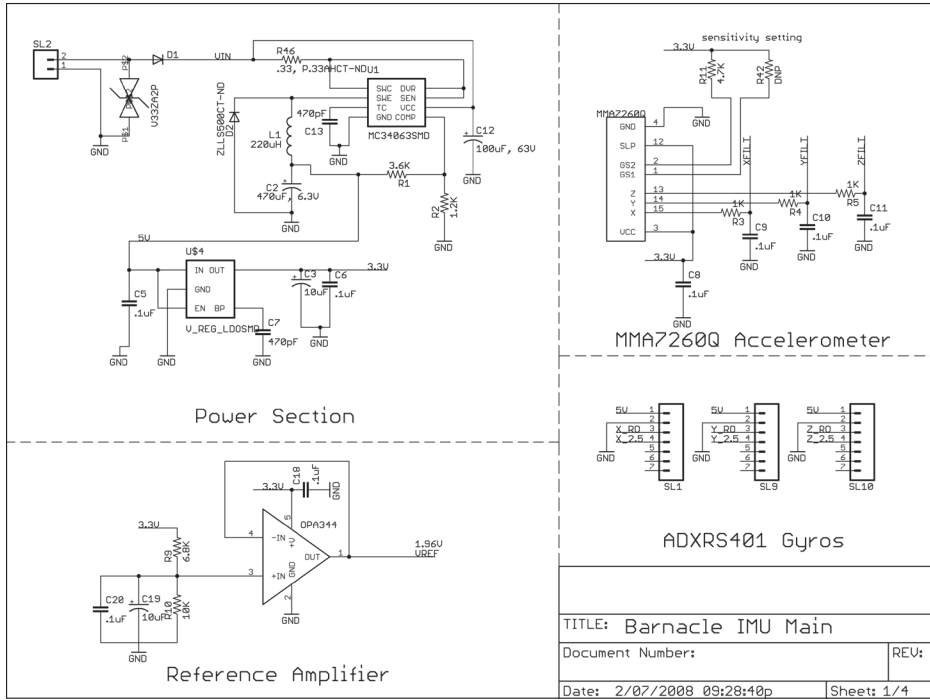
- Input Voltage: 7.5V to 32V DC
- Current Draw: 9mA@24V input, 15mA@12V input
- Acceleration Sensitivity: 586mV/g (min 542mV/g, max 630mV/g)
- Gyro Sensitivity: 15mV/°/second
- Zero-Rate Output: 2.5V nominal (0 and 5V rails)
- Frequency Response: 20Hz

3 Orientation Axes



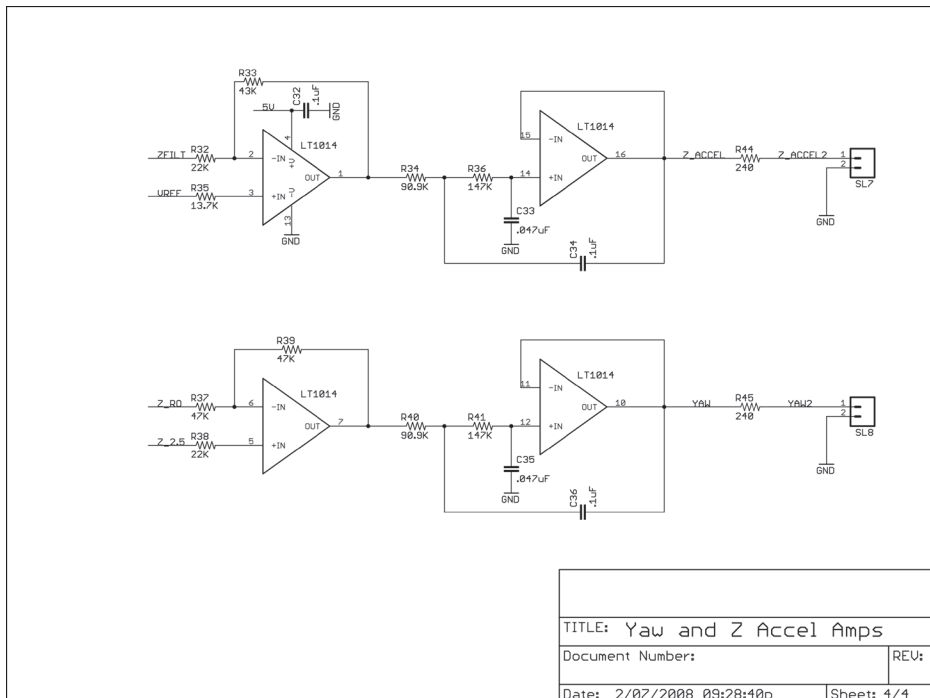
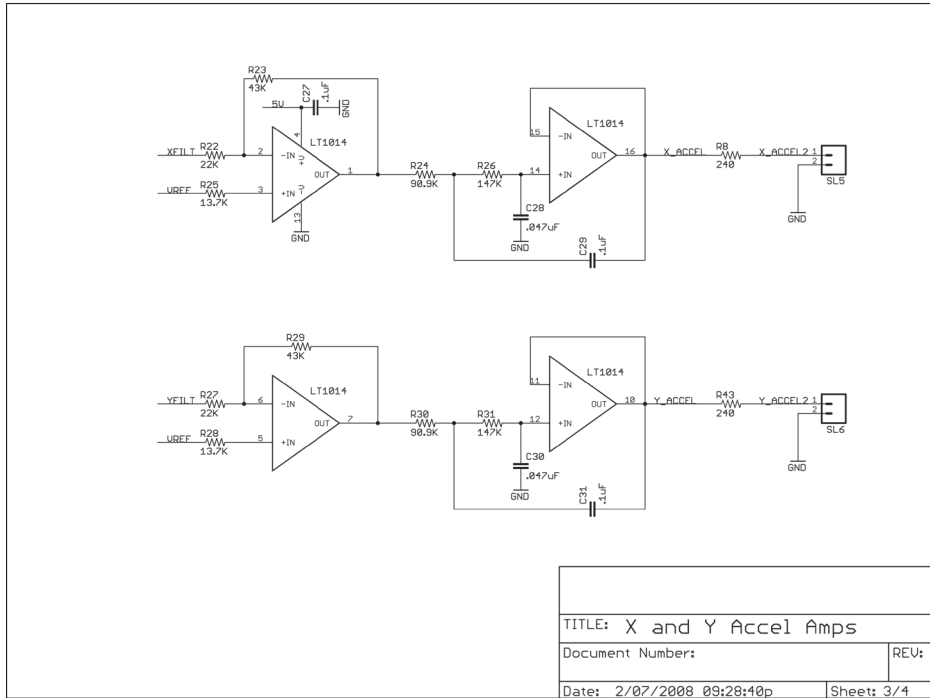


4 Schematics





4 Schematics *continued*



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