

This is the Revision A version of the ShaftSense2 RoboBrick. The status of this project is work in progress.

ShaftSense2 Robobrick (Revision A)

Table of Contents

This document is also available in PDF format.

- 1. Introduction
- 2. Programming
- 3. Hardware
 - ◆ 3.1 Circuit Schematic
 - ◆ 3.2 Printed Circuit Board
- 4. Software
- 5. Issues

1. Introduction

The ShaftSense2 board is designed to pick up a quadrature signal from a shaft using two Hamamatsu P5507 chips.

2. Programming

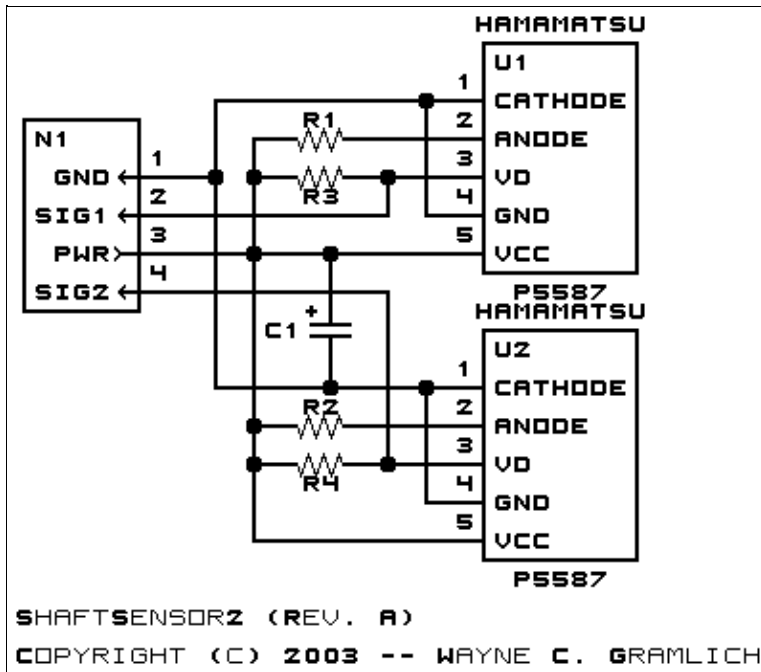
There is no programming specification yet.

3. Hardware

The hardware consists of a circuit schematic and a printed circuit board.

3.1 Circuit Schematic

The schematic for the ShaftSense2 RoboBrick is shown below:



The parts list kept in a separate file --- [shaftsense2.ptl](#).

3.2 Printed Circuit Board

The printed circuit board files are listed below:

[shaftsense2_back.png](#)

The solder side layer.

[shaftsense2_front.png](#)

The component side layer.

[shaftsense2_artwork.png](#)

The artwork layer.

[shaftsense2.gbl](#)

The RS-272X "Gerber" back (solder side) layer.

[shaftsense2.gtl](#)

The RS-272X "Gerber" top (component side) layer.

[shaftsense2.gal](#)

The RS-272X "Gerber" artwork layer.

[shaftsense2.drl](#)

The "Excellon" NC drill file.

[shaftsense2.tol](#)

The "Excellon" tool rack file.

4. Software

There is no software yet.

5. Issues

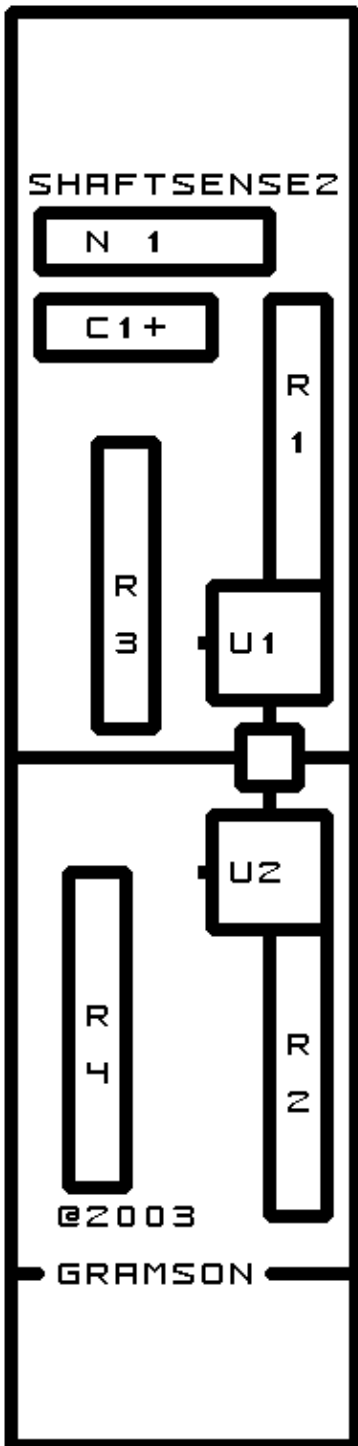
Any fabrication issues that come up are listed here.

Copyright (c) 2001–2002 by Wayne C. Gramlich. All rights reserved.

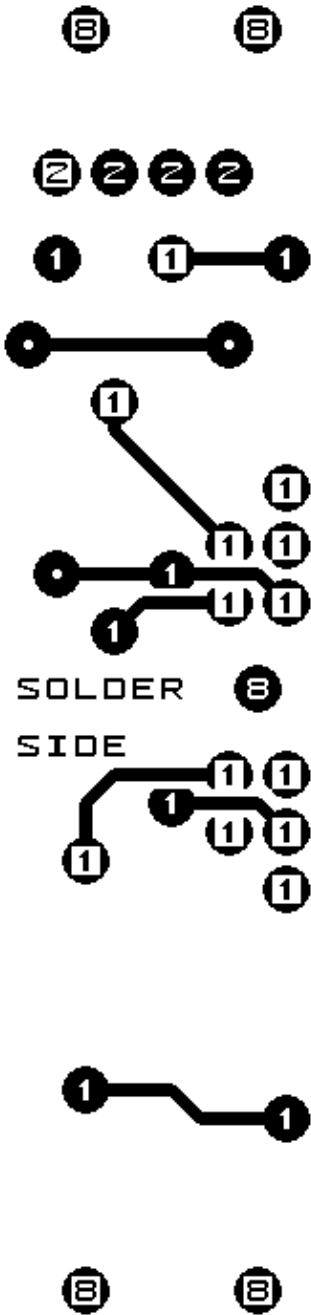
A. Appendix A: Parts List

```
# Parts list for ShaftSense2 (Rev. A)
#
C1: Capacitor100nF - .1 uF Capacitor [Jameco: 25524]
N1: Header1x4.ShaftSense2 [4/40 Jameco: 160881]
R1-2: Resistor10K - 10K KOhm 1/4 Watt Resistor [Jameco: 29911]
R3-4: Resistor470 - 470 Ohm 1/4 Watt Resistor [Jameco: 31165]
U1-2: P5587 - Hamamatsu Photoreflector [Acroname: R65-P5587]
```

B. Appendix B: Artwork Layer



C. Appendix C: Back (Solder Side) Layer



D. Appendix D: Front (Component Side) Layer

