

This is the Revision A version of the [ProtoPIC RoboBrick](#). The status of this project is that it has been [replaced](#) by the [revision B](#) version.

# ProtoPIC Robobrick (Revision A)

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## 1. Introduction

The ProtoPIC RoboBrick is a RoboBrick with a socket for either an 8–pin PIC (e.g. PIC12C509, PIC12C672, etc) or a 14–pin PIC16C505. The rest of the board has plated through holes on a .1 inch grid for attaching other components.

For the 8–pin PIC's, a jumper selects whether the SIN pin (N1) is connected to GP3 or GP4. GP5 is connected to SOUT (N1).

## 2. Hardware

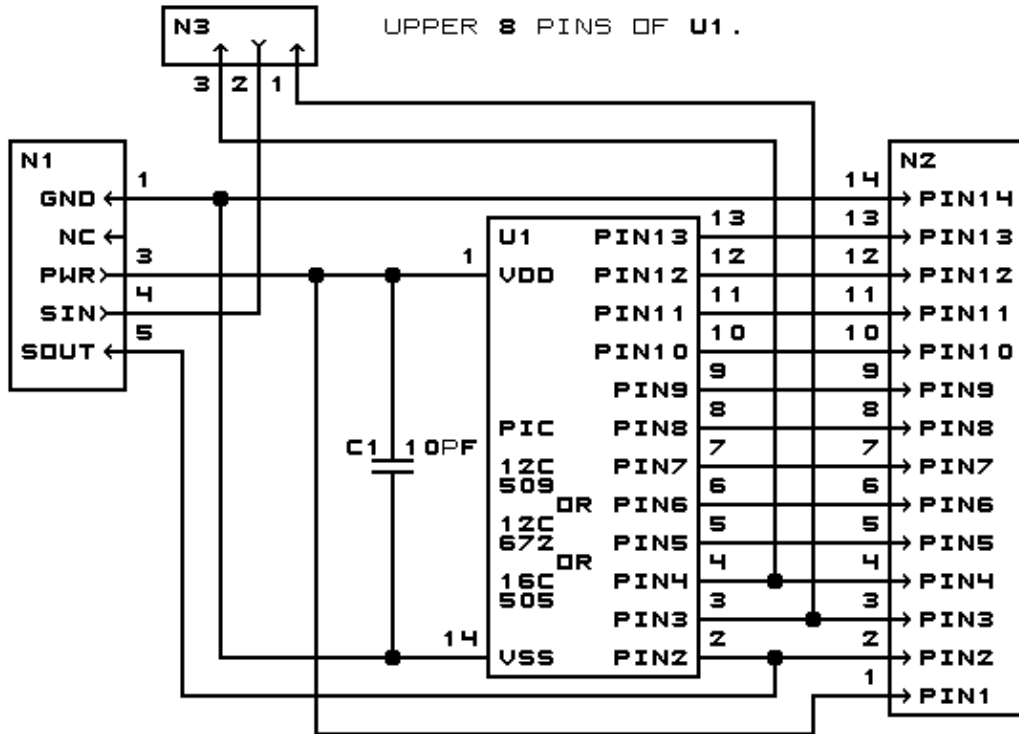
The hardware consists of a circuit schematic and a printed circuit board.

### 2.1 Circuit Schematic

The schematic for the Protopic RoboBrick is shown below:

## ProtoPIC RoboBrick (Revision A)

NOTE: THE 8-PIN PIC'S G0 IN THE UPPER 8 PINS OF U1.



PROTOPIC ROBOBRICK MODULE (REV. A)  
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The parts list kept in a separate file -- [protopic.ptl](#).

## 2.2 Printed Circuit Board

The printed circuit files are listed below:

[protopic\\_back.png](#)

The solder side layer.

[protopic\\_front.png](#)

The component side layer.

[protopic\\_artwork.png](#)

The artwork layer.

[protopic.gbl](#)

The RS-274X "Gerber" back (solder side) layer.

[protopic.gtl](#)

The RS-274X "Gerber" top (component side) layer.

[protopic.gal](#)

The RS-274X "Gerber" artwork layer.

[protopic.drl](#)

The "Excellon" NC drill file.

[protopic.tol](#)

The "Excellon" tool rack file.

### 3. Issues

The following fabrication issues came up:

- The holes on N1 are too large (size 3) and need to be made smaller (size 2).

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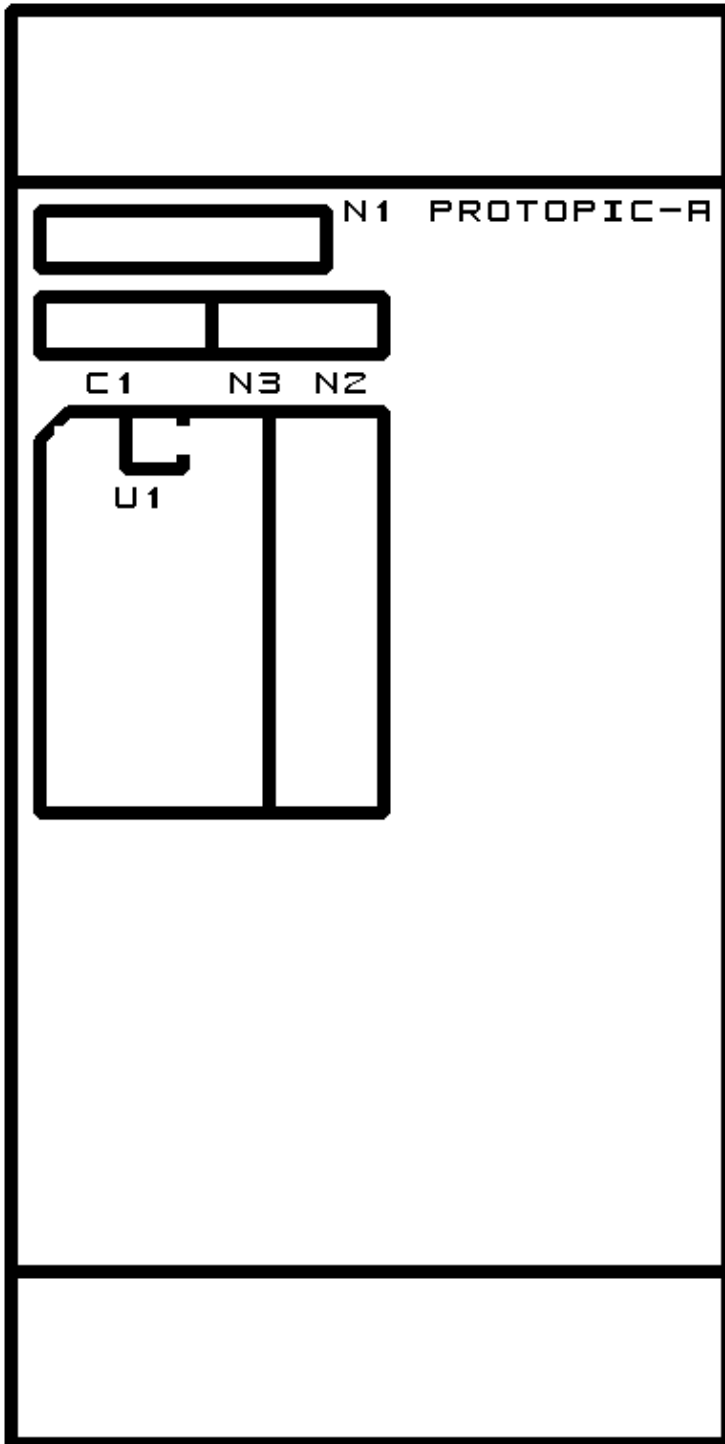
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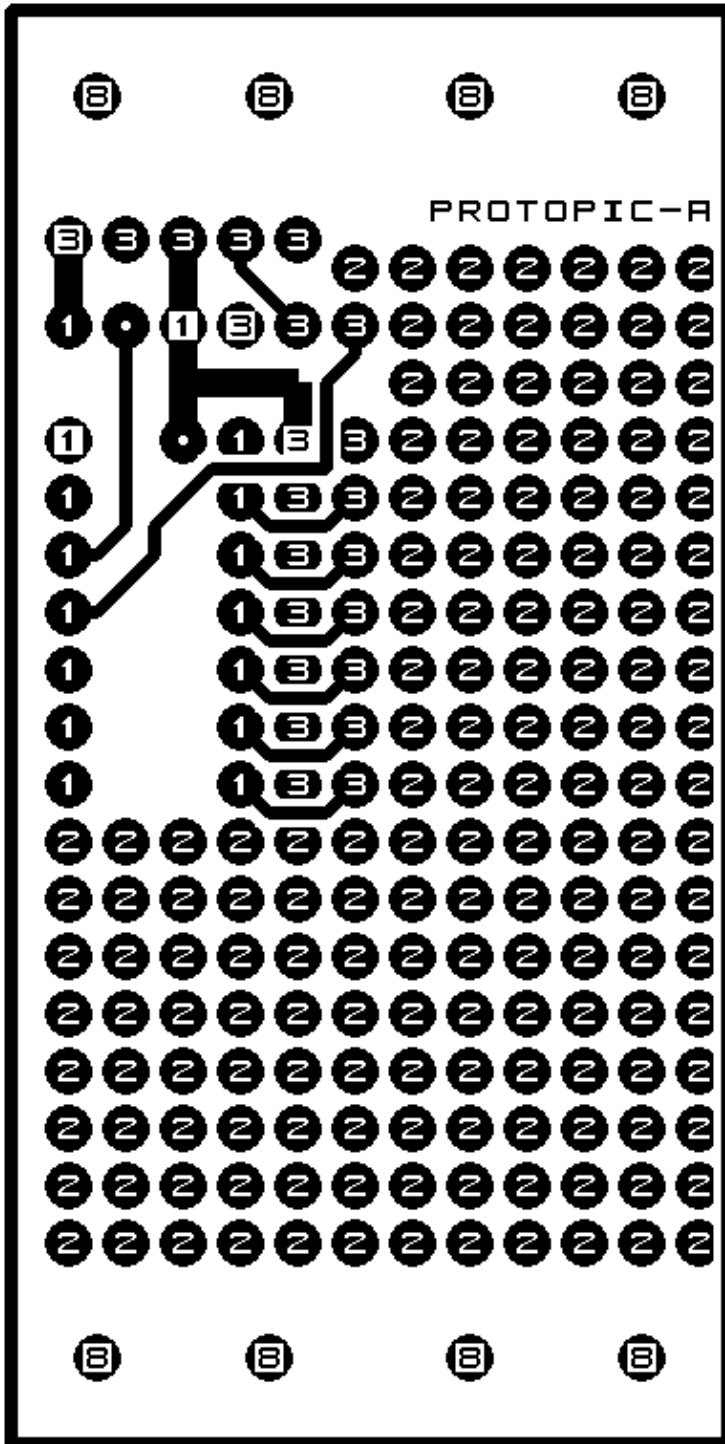
## A. Appendix A: Parts List

```
# Parts list for ProtoPIC RoboBrick (Rev. A)
#
C1: Capacitor10pF - 10 pF Ceramic Capacitor [Jameco: 15333]
N1: Header1x5.RBSlave - 1x5 Male Header [5/40 Jameco: 160881]
N2: Header2x7.ProtoPIC - 2x7 Male Header [14/80 Jameco: 117196]
N3: Header1x3.ProtoPIC - 1x3 Male Header [3/40 Jameco: 160881]
U1: PIC16C505.ProtoPIC - MicroChip PIC16C505 [Digikey: PIC16C505-04/P-ND]
```

## B. Appendix B: Artwork Layer



### C. Appendix C: Back (Solder Side) Layer



### D. Appendix D: Front (Component Side) Layer

