This is the Revision A verion of the IRremote1 RoboBrick. The status of this project is work in progress.

IRRemote1 Robobrick (Revision A)

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This document is also available as a PDF document.

1. Introduction

The IRRemote1 RoboBrick is used to send and received IR signals. It currently takes signals from Sony IR remotes. The transmisssion facility is a little underdeveloped (i.e. non−existant) at the moment. The IR Receiver is the Sharp GP1U26X.

2. Programming

The basic operation is to send a query to the IRRemote1 RoboBrick to return the last two bytes of IR remote command.

The IRRemote1 RoboBrick supports RoboBrick Interrupt Protocol. The interrupt pending bit is set whenever a command has been received. Once the interrupt pending bit is set, it must be explicitly cleared by the user.

The IRRemote1 RoboBrick supports both the standard shared commands and the shared interrupt commands in addition to the following commands:

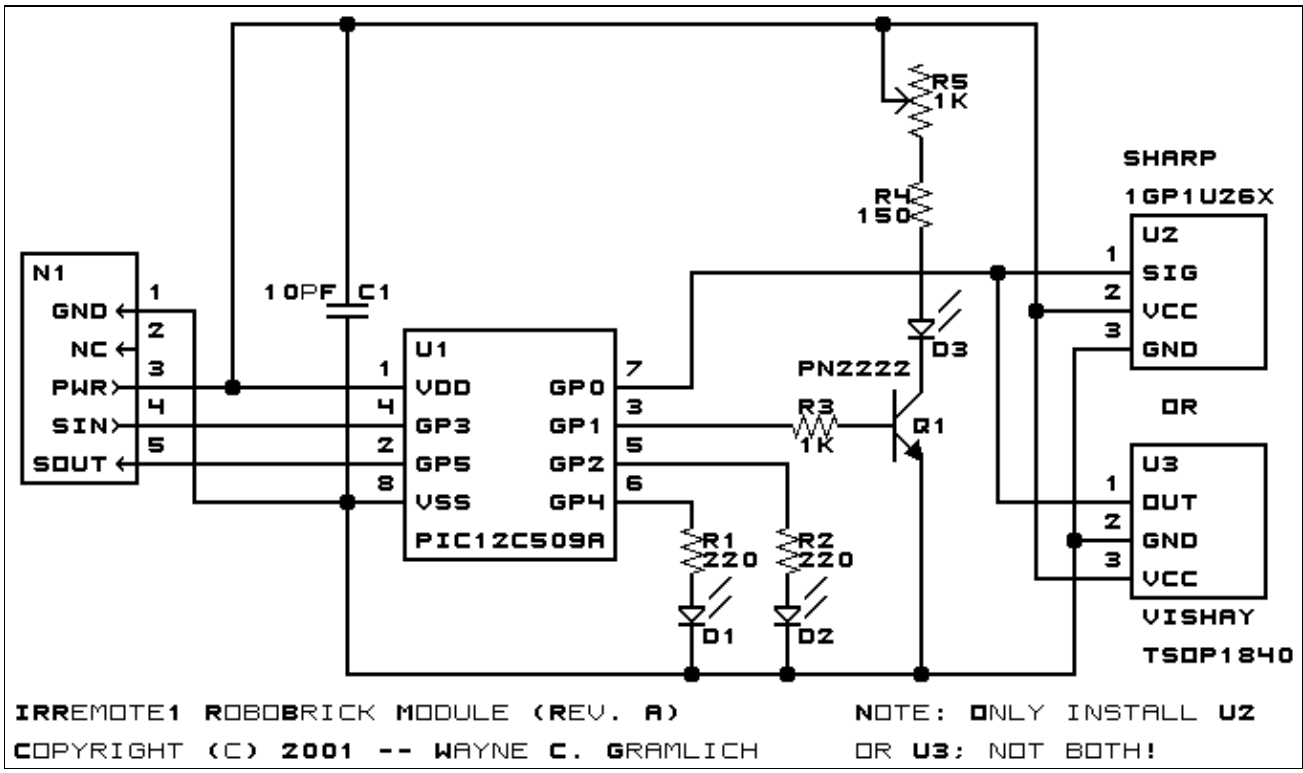
Command	Send/ Receive	Byte Value								Discussion
		7	**6**	**5**	**4**	**3**	**2**	**1**	**0**	
Read Inputs	Send	0	0	0	0	0	0	0	0	Return input values *abcdefghijk*
	Receive	0	0	0	0	*a*	*b*	*c*	*d*	
	Receive	*e*	*f*	*g*	*h*	*i*	*j*	*k*	*l*	
Read Interrupt Bits	Send	1	1	1	0	1	1	1	1	Return the interrupt pending bit *p* and the interrupt enable bit *e*.
	Receive	0	0	0	0	0	0	*e*	*p*	
Set Interrupt Bit Commands	Send	1	1	1	1	0	*c*	*c*	*c*	Execute shared set interrupt command *ccc*.
Shared Commands	Send	1	1	1	1	1	*c*	*c*	*c*	Execute shared command *ccc*.

3. Hardware

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

3.1 Circuit Schematic

The IRRemote1 RoboBrick schematic is shown below:



The parts list kept in a separate file −− irremote1.ptl.

3.2 Printed Circuit Board

The available printed circuit boards are listed below:

irremote1_back.png
: The solder side layer.

irremote1_front.png
: The component side layer.

irremote1_artwork.png
: The artwork layer.

irremote1.gbl
: The RS−274X "Gerber" back (solder side) layer.

irremote1.gtl
: The RS−274X "Gerber" top (component side) layer.

irremote1.gal
: The RS−274X "Gerber" artwork layer.

irremote1.drl

The "Excellon" NC drill file.

irremote1.tol

The "Excellon" NC drill rack file.

4. Software

The IRRemote1 code no longer compiles and will not be fixed.

5. Issues

Any fabrication issues are listed here.
