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Wireless XBee Communication

Submitted by Andy Lindsay on Mon, 06/18/2012 - 16:40

XBee modules are versatile radios that work great for communication between microcontrollers, other microcontrollers, and the PC.

Getting Started with XBee RF Modules
Availabe as a PDF, printed book, or book and kit together, the "Getting Started with XBee RF Modules" tutorial by Martin Hebel includes both BASIC Stamp and Propeller example programs. Aside from being highly informative, the PDF textbook is a free download from www.parallax.com/go/xbee.
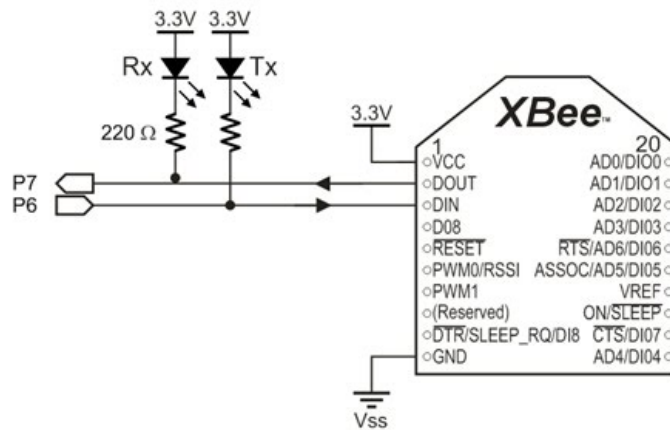
Circuit

All you have to do to prepare your Propeller BOE to communicate wirelessly with XBee radios is plug in the XBee module into its socket on the Propeller BOE, and connect a couple of jumper wires. One jumper should connect the XBee DO socket to a Propeller I/O pin, and the other should connect XBee DI to an I/O pin.

✓   Insert the XBee into its socket on the Propeller BOE as shown below.

✓   Connect P7 to XBee DO with a jumper wire.

✓   Connect P6 to XBee DI with another jumper wire.

Wiring
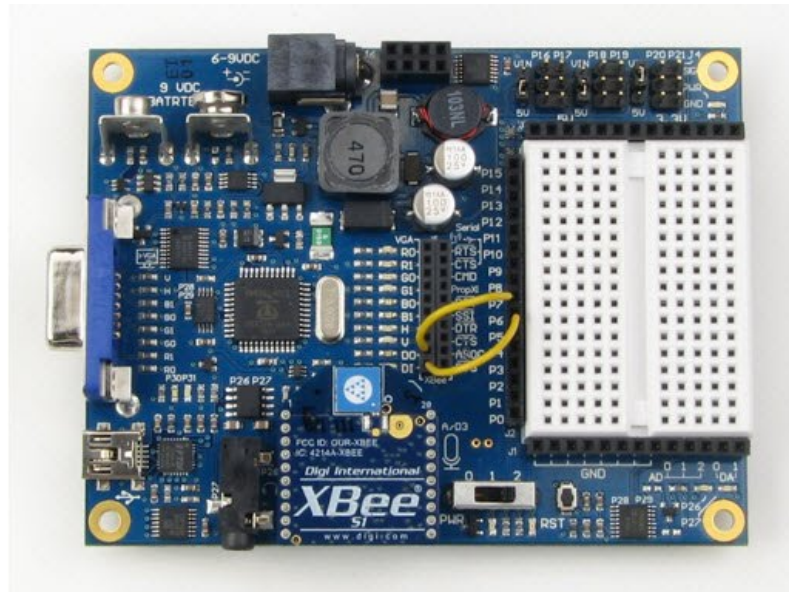
Schematic

The LEDs in this circuit are built into the PropBOE. All you have to do is connect each I/O pin to the correct XBee socket with a jumper wire.

Code Examples

There are two code examples to get you started with XBee modules. One sends messages, and the other receives them. You will need a pair of Propeller BOE boards and XBee modules to run this activity.

✓   (Download Wireless_XBee_Communication.zip.)

✓   Unzip it to a folder.

✓   Remember that you have to open programs from within the folder, not within the zip.

✓   Open, read, and run "1 Test XBee Transmit.spin".
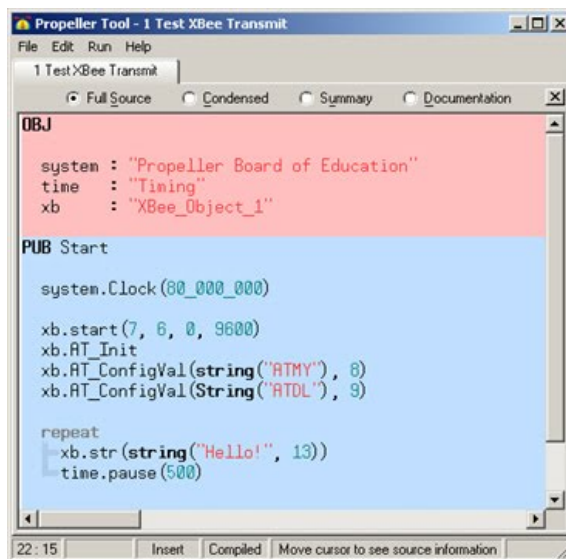
✓   Open "2 Test XBee Receive.spin" and use F11 to load it into the Propeller chip.

✓   While the program is loading, click the Parallax Serial Terminal's Enable button.

It should take five or so seconds for the XBees to sync up. Be patient, the hello messages should start up.
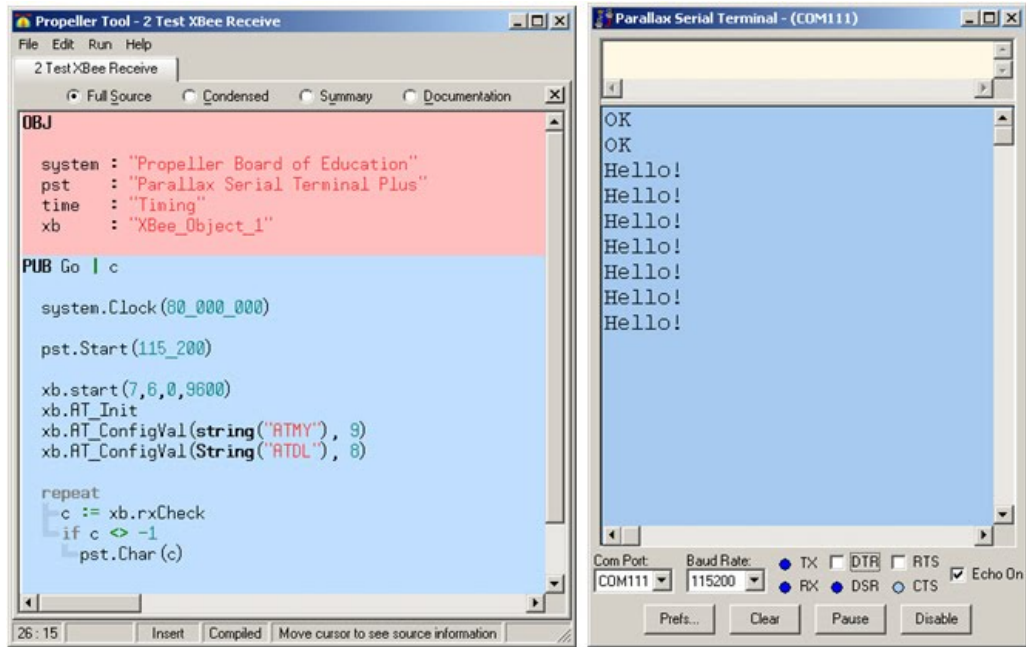
- Wireless Programming with XBee

‹ Set and Sequence Groups of Servos   up

Wireless Programming with XBee ›

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