JX-2SX Plus II
i-Stamp Project board
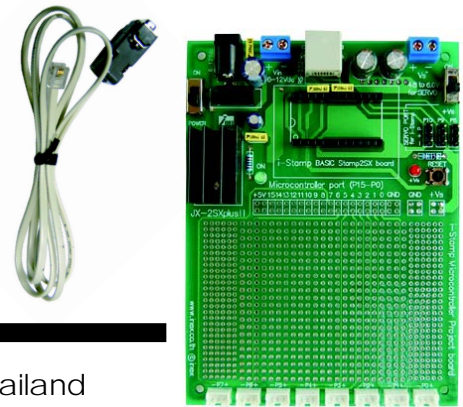
1. Specification

● Dual female socket 12 pin for support i-Stamp

● Prototype area 3.8" x 5" for making the circuit or small breadboard installation.

● 2 of power supply terminals

    - For i-Stamp and any interfacing circuit; use the external power suypply such as DC adpator or battery 6 to12V 500mA (not include), on-board polarity protection circuit. Include the power switch and LED indicator.

    - For the servo motor; support 4.8 to 6Vdc. Use 2-pin terminal block and have the power swith with LED indicator.

● On board +5Vdc regulator.

● Reset switch

● Provides in 3-pin JST connector for P0 to P7

● 3 of Servo motor connector. They are connected with P8, P9 and P10 pin of i-Stamp.

● Supplied with CX-4 cable for connecting PC's serial port

2. Circuit Description

The full circuit shows in Figure 1, on JX-2SXplus II board has a blank socket for supportting i-Stamp and prototype area sizes 3.8" x 5". You can apply DC voltage supply to the input DC jack or Terminal block. The supply voltage range is +7 to +16Vdc. On board provide +5V regulator circuit and reset switch.

The port of i-Stamp are provided 2 types. One is free-pads of P0 to P15 included +5V and GND pads. Another one is 3-pin JST connector for P0 to P7. You can use this port to connect with INEX sensor board and serial application board such as SLCD16x2, ZX-SERVO 16, ZX-19 Sound Smart board, ZX-17 the Serial Real-time clock board and etc.

Addition, the JX-2SXPlus II board provids 3 of servo motor ports. They are connected to P8, P9 and P10. The servo motor supply must apply at the +Vs terminal. It is separated from the main supply terminal. The +Vs supply voltage range is +4.8 to +7.2V depend on your servo motor.
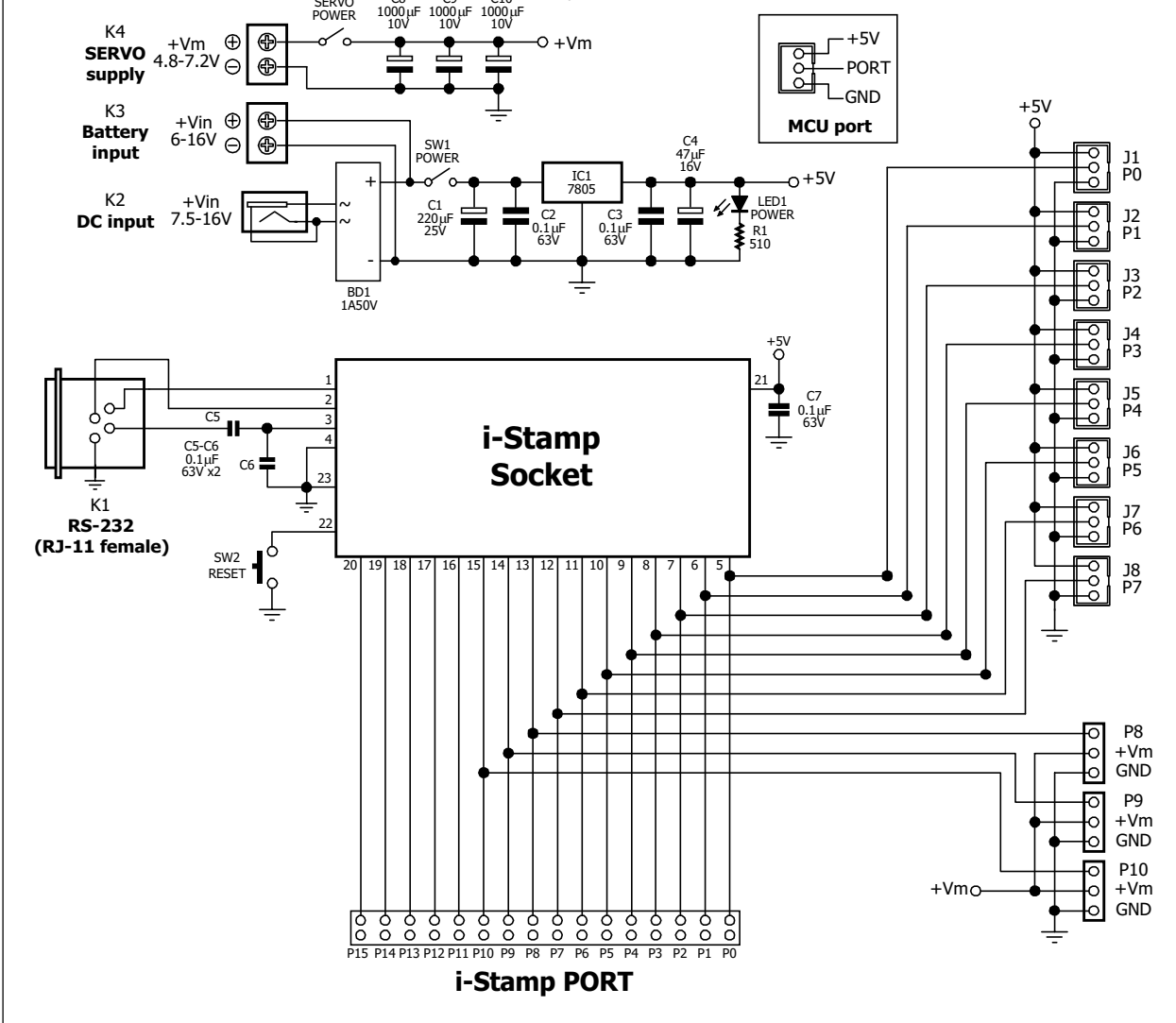
Figure 1 : Schematic of JX-2SX Plus II Project board for i-Stamp microcontroller

Install i-Stamp on socket at this side. The concave side is left-hand. User can read "PARALLAX" logo and LED "ON" is on right-top conner.

Must install the right direction.
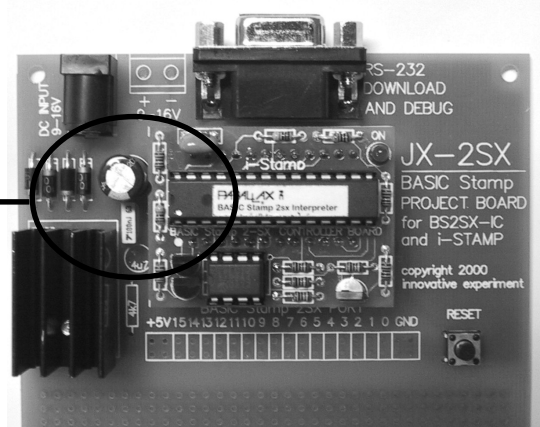**If not, i-Stamp may be damage !!!!!**

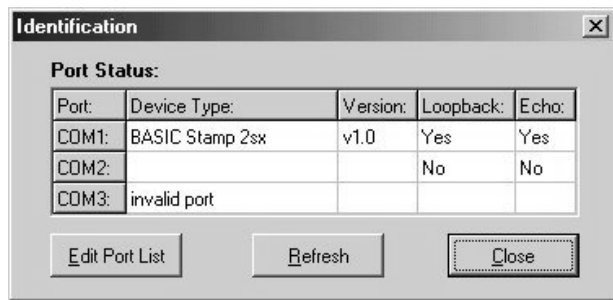Figure 2 : Show i-Stamp installation on JX-2SX Plus II board.

Figure 3 : Identification window shows correct connection about i-Stamp with software. User can work already now.
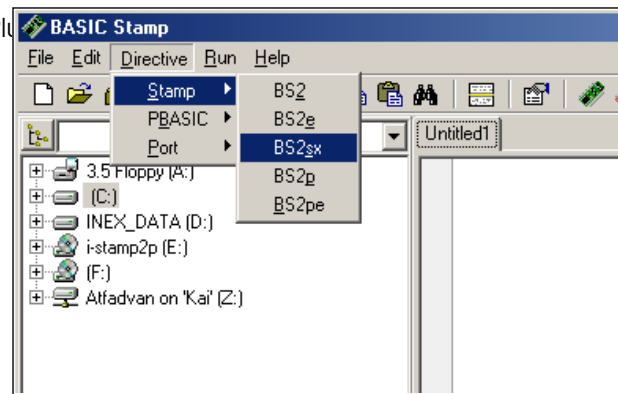

Figure 4 Show directive selection. In this figure select BS2SX directive

3. Using JX-2SX Plus II board with i-Stamp

3.1 Install i-Stamp on female socket follwing the Figure 2. Must installation right direction for protection i-Stamp damage.

3.2 Connect JX-2SX Plus II board to serial port with CX-4 cable. If your computer has not Serial port, you can use the USB to RS-232 Serial converter board (UCON-232S is recommended).

3.3 Supply voltage to JX-2SX Plus II board. See LED "ON" on i-Stamp turn-on.

3.4 Open BASIC Stamp editor program.

UPDATE ! Possible i-Stamp board use PBASIC2SX chip V1.2. If yes, need BASIC Stamp editor sofware V2.2.6 or higher. User can download at www.parallax.com.

3.5 Go to menu RUN and selected IDENTIFY

3.6 Appear "Identification" window to inform about BASIC Stamp and serial port status following the Figure 3. If i-Stamp work, it shows "BASIC Stamp2SX V1.X" (X is any number) message in Device Type box of Indetification window.

If Device Type box not shown "BASIC Stamp2SX V1.X" message but in Loopback and Echo box have "Yes" message, please check power supply.

If Device Type box not shown "BASIC Stamp2SX V1.X" message and in Loopback and Echo box have "No" message, please check cable.

3.7 If all correct, user can write very simple program for testing.

4. Testing

4.1 Still connect i-Stamp and JX-2SX Plus II board with the serial port and apply the supply voltage.

4.2 Open BASIC Stamp editor program. Go to **Directive** menu select **BS2SX**. User can see drirective message `'{$STAMP BS2sx}` on the top line. Please press Enter (Figure 4).

4.3 Go to **Directive** menu again. Define the serial port directive for select the serail port that connect with BASIC Stamp (Figure 5).
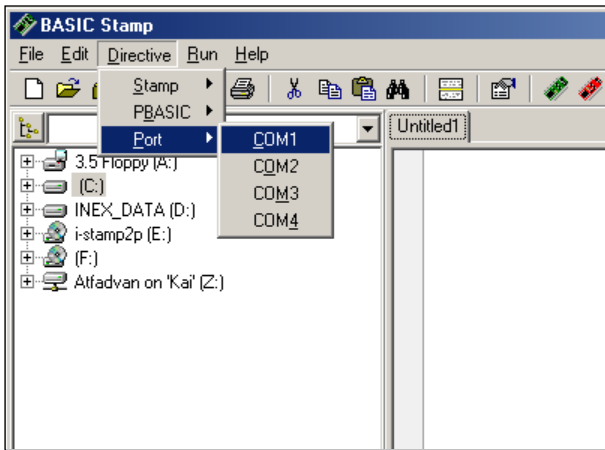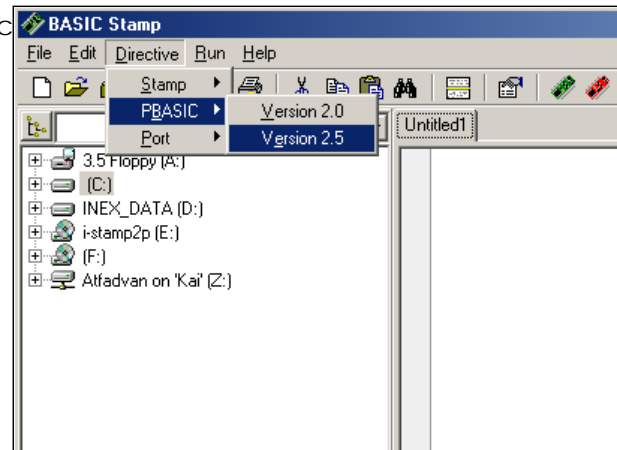
Figure 5 : Show serial port directive selection.

Figure 6 : Show PBASIC2.5 directive selection.

4.4 Select suitable PBASIC version by enter Directive menu and select PBASIC2.5 directive (Figure 6).

4.5 Type program DEBUG "Welcome".Then press RUN bottom or Ctrl+R. Debug Terminal window appear that message. Prss RESET switch, the program will show this message again because pressing RESET buttom is re-start microcontroller opeartion.

4.6 Writed program already and always save in .BSX file because BASIC Stamp 2SX interpreter can operate only .BSX file.
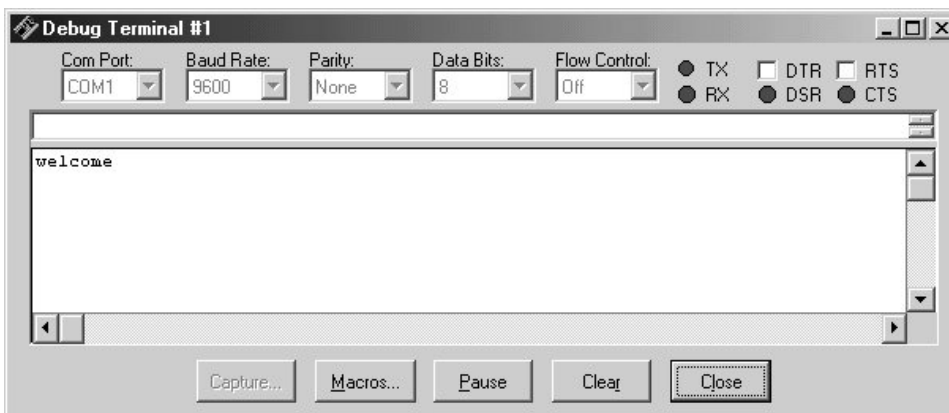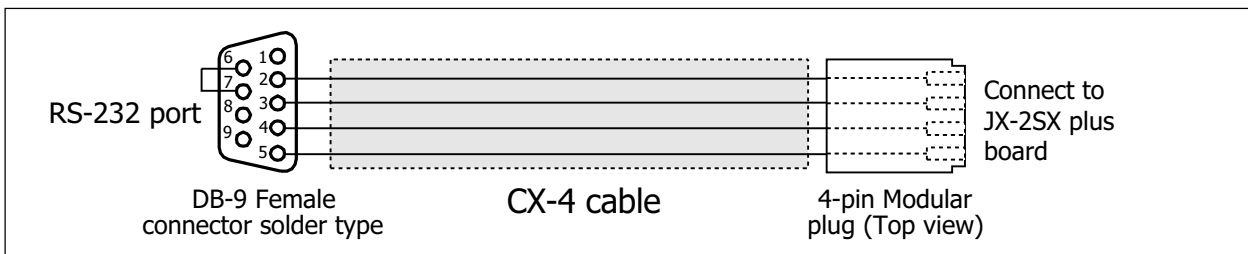

Figure 7 : Debug terminal window show DEBUG command operation.

Figure 8 : CX-4 cable connection diagram