



# **NetBurner**

---

## **SB70 Parallax Configuration Guide**

Revision: 1.0  
October 25, 2005  
Status: Released

# Table of Contents

**NETWORK CONFIGURATION..... 3**

**OPERATIONAL CONFIGURATION..... 4**

**CONNECTOR DESCRIPTIONS ..... 4**

    RJ-45 ETHERNET CONNECTOR ..... 4

    POWER CONNECTOR, J8 ..... 4

    J5 - SERIAL TTL, DUAL ROW 10-PIN HEADER ..... 4

**SPECIFICATIONS ..... 5**

    INPUT POWER REQUIREMENTS ..... 5

    MECHANICAL ..... 5

**NETWORK IP ADDRESS CONFIGURATION..... 5**

**WEB BROWSERS AND PROXY SERVERS ..... 5**

**ADDITIONAL UTILITIES..... 5**

## Introduction

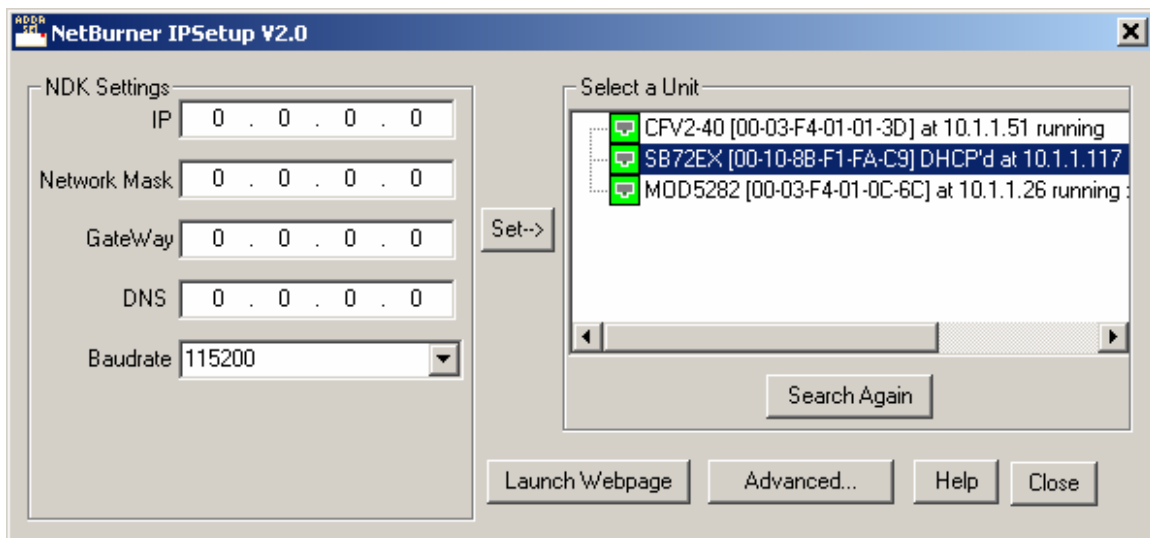
The NetBurner SB70 comes preprogrammed and ready to network-enable your Basic Stamp. All network devices require some basic configuration. The IPSetup program, located on the NetBurner Resource CD, is used to configure the SB70 with a network IP address, mask and gateway. Both static and dynamic (DHCP) configurations are supported.

This guide covers the network configuration. Once your SB70 is configured for the network, you can use the web page interface to manage your Basic Stamp network operation. Please see the Parallax documentation for the web page interface instructions.

## Network Configuration

A valid IP address must be configured before communications with a web browser can take place. The following steps illustrate how to use the IPSetup program to configure the SB70.

1. Run IPSetup.exe, which is located on the CD-ROM that came with your SB70. You will see a dialog box similar the one below:



2. Locate your SB70 in the "Select a Unit" pane by matching its MAC address. If your SB70 does not appear in the list box, verify the power and link LEDs are illuminated, and click the Search Again button. If you are still unable to see your SB70, correct any cabling errors, and click the Search Again button. Note: IPSetup uses a UDP broadcast protocol similar to BOOTP and will not operate through a router.
3. If your network supports DHCP: The assigned IP address will appear in the "Select a Unit" pane. Write down this address. If your network does not support DHCP, or you prefer a static IP address, configure the IP Address, Mask and Gateway fields. If you need help selecting values, see the "Selecting an IP Address" section of this guide. After you have entered all of the values, click the Set button in the center to configure your SB70 with its new parameters.

## Operational Configuration

Once the network parameters have been configured, you can use the web server interface to modify the settings of your SB70. To access the web page on the SB70, click on the Launch Webpage button in IP Setup or you can open your web browser and enter the numeric IP Address in the address field (e.g. <http://10.1.1.117>).

## Connector Descriptions

### ***RJ-45 Ethernet Connector***

| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1   | TX+    | 5   | -      |
| 2   | TX-    | 6   | -      |
| 3   | -      | 7   | RX+    |
| 4   | -      | 8   | RX-    |

### ***Power Connector, J8***

The power input is a 3 pin header

| Pin | Signal |
|-----|--------|
| 1   | VCC    |
| 2   | GND    |
| 3   | Vcc    |

### ***J5 - Serial TTL, Dual Row 10-Pin Header***

This connector allows access to TTL level serial ports 0 and 1 on the SB70. Pin 9 is a VCC 5V input, which provides power to the SB70.

| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1   | GND    | 2   | CTS1   |
| 3   | TX1    | 4   | RX1    |
| 5   | RTS1   | 6   | RTS0   |
| 7   | CTS0   | 8   | TX0    |
| 9   | VCC 5V | 10  | RX0    |

## LEDs

- Large right angle power LED, illuminated while power is applied.
- LED1 on RJ-45: Ethernet speed - 10 or 100
- LED2 on RJ-45: Link Light and data activity

## Specifications

### ***Input Power Requirements***

Input Voltage: 5 VDC +/- 5%

Suggested power source: 5VDC @ 350mA

Operating Range: Commercial 0 – 70C

### ***Mechanical***

4.1" x 3.125" x 1"

## Network IP Address Configuration

If you are part of an existing network and are **not** using DHCP, stop reading now and go get an IP address and network mask from your network administrator. If you follow the advice in this paragraph on an existing network without an assigned IP address, your Network Administrator will hunt you down.....

IP addresses are used to route packets from place to place on an intranet/Internet. If you are **not** part of an established network, and your Ethernet segment is isolated, you can choose just about any IP address you desire. The "powers that be" have actually set aside some addresses for isolated networks. They are documented in RFC1918. The reserved ranges are:

Class A: 10.0.0.0 to 10.255.255.255

Class B: 172.16.0.0 to 172.31.255.255

Class C: 192.168.0.0 to 192.168.255.255

If you are doing development on an isolated network, you can use the following addresses:

- Set your host computer's Network Adapter Card IP address to 10.1.1.10 (Note: Only change the Network Adapter Card, do not change your Dial-Up Adapter settings.)
- Set the IP address of your SB70 to 10.1.1.11
- Set the network mask for both your host computer network adapter and your SB70 to 255.255.255.0

## Web Browsers and Proxy Servers

If you are working on a corporate LAN that uses a proxy server for Internet web browsing, you will need to exclude the IP address of your SB70 in your web browser's proxy server settings/preferences.

Otherwise, an attempt to connect to a web page on the LAN will fail because the proxy server will attempt to route the request outside the LAN. For most web browsers, this can be accomplished in the advanced settings for the proxy server configuration. Set the network mask for both your host computer network adapter and your SB70 to 255.255.255.0

## Additional Utilities

The resource CD also contains the following programs:

Autoupdate.exe – used to update the firmware on the SB70. This should only be used in combination with instructions from Parallax support.

MTTTY.exe – a serial dumb terminal.