ACH1000

Firmware Upgrade Instructions

April 2008

TABLE OF CONTENTS

Important Information

Please refer to the installation guides for details regarding schematics and installation. Also, refer to the user guides for instructions on how to operate the equipment. This guide should only be used as a reference for the firmware upgrade process.

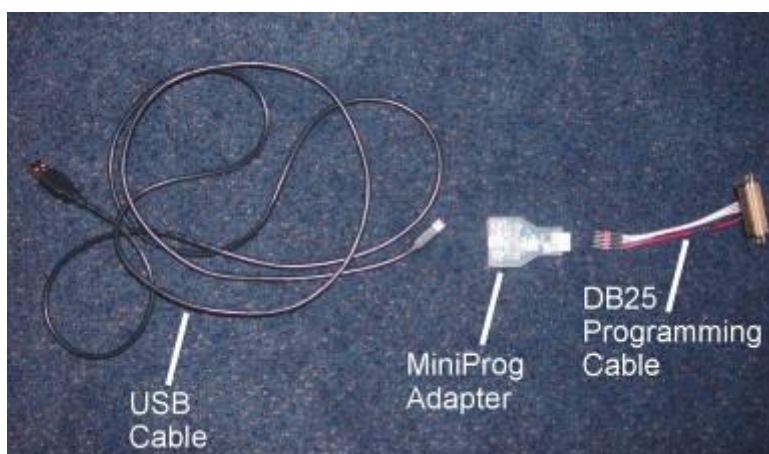The most recent support information is available at:
http://www.blueskynetwork.com/Support/Firmware.php

The most recent firmware is available at:
http://www.blueskynetwork.com/Support/Firmware.php
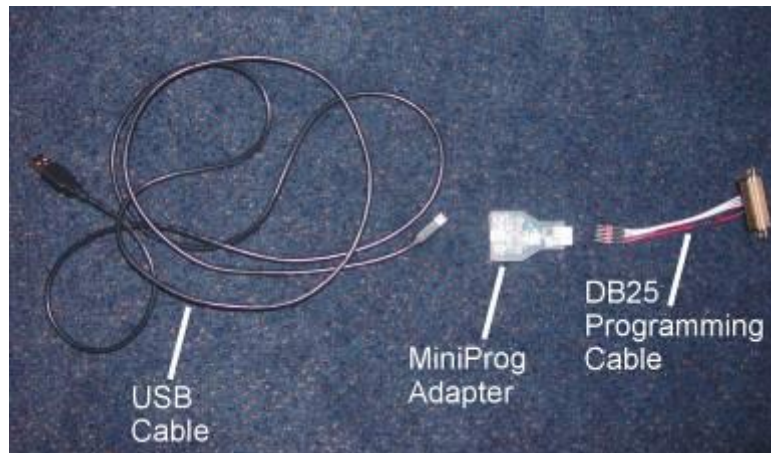
Before you Begin

Items Required

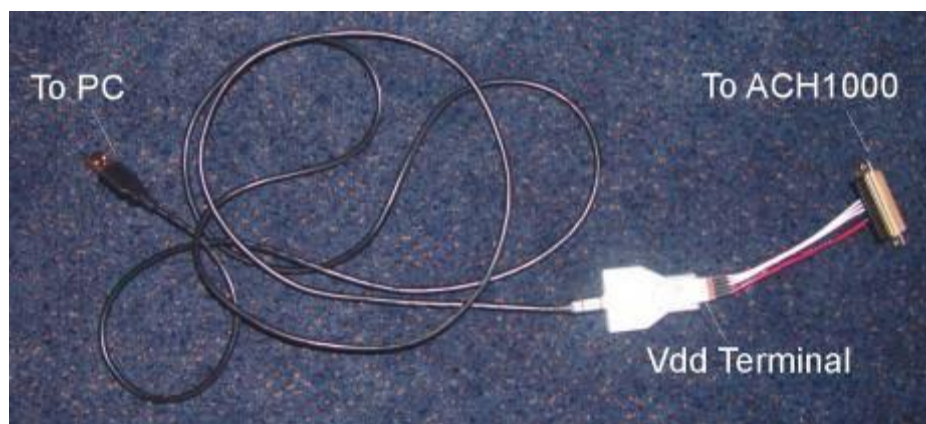You will need to acquire the following list of items before beginning the upgrade process:

1. Computer with a USB port using one of the following operating systems: Windows® 98, NT4.0 (SP6), 2000, Me, XP.

2. PSoC MiniProg Adapter and USB Cable (provided with adapter). DB25 (M)-MiniProg cable. Available from Blue Sky Network or you can build it yourself referencing appendix A of this document. (Upgrade kit part number: 100257)

3. The most recent version of the ACH1000 firmware upgrade software. The most recent software is available at http://www.blueskynetwork.com/Support/Firmware.php .

The ACH1000 firmware upgrade is done through its DB25 connector on the back of the unit (Data/Voice Interface). The ACH1000 control head should be removed from the cockpit panel in order to be upgraded. This is done easily by unscrewing the 4 DZUS fasteners and disconnecting the DB9 power and the DB25 data harnesses. The ACH1000 does not need to be powered when being upgraded. The only cables needed are the ones included in the programming set shown below (p/n: 100257). Please note that there is a special orientation for connecting the MiniProg adapter to the DB25 cable.

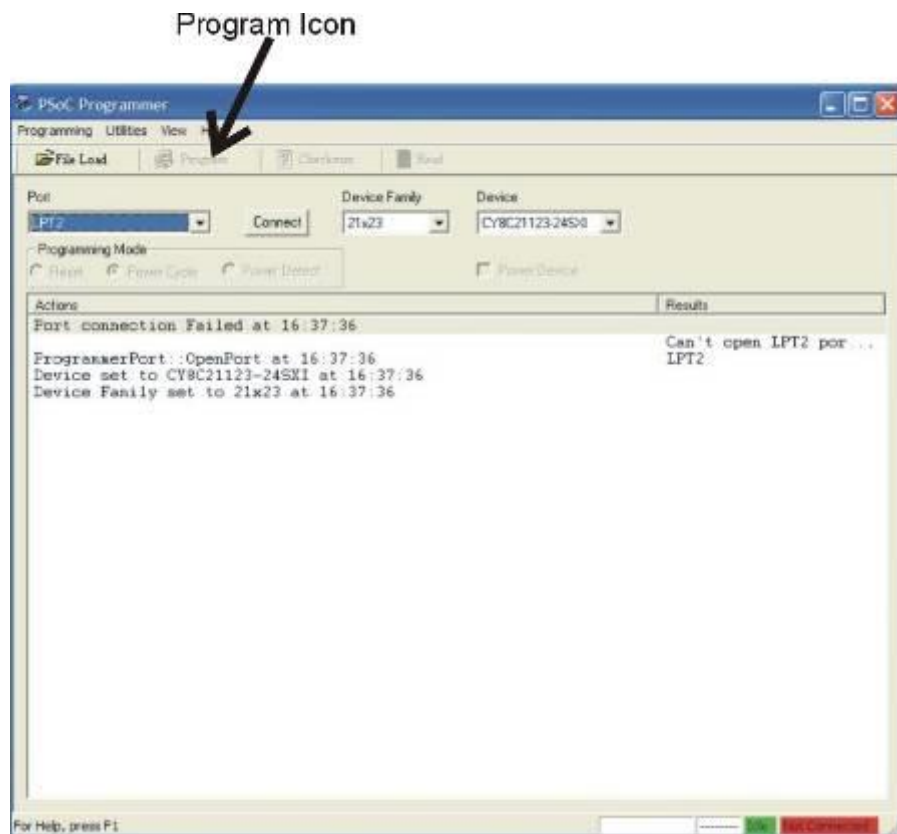**ACH1000 Programming Set: USB Cable, MiniProg Adapter and DB25 Cable**

Orientation: DB25 Cable's red wire should be connected to the MiniProg Vdd terminal (see wire diagram)

PSoC Programmer

Make sure the PSoC Programmer (the software application used to program the ACH1000) is downloaded and installed in your PC. It is located in the "ACH1000 Upgrade Tool\ACH1000 Upgrade Tool"-folder of the firmware download file.

Once the USB cable is plugged to your PC and the DB25 Programming Cable is connected to the ACH1000 back connector, start the PSoC Programmer for configuration setup;
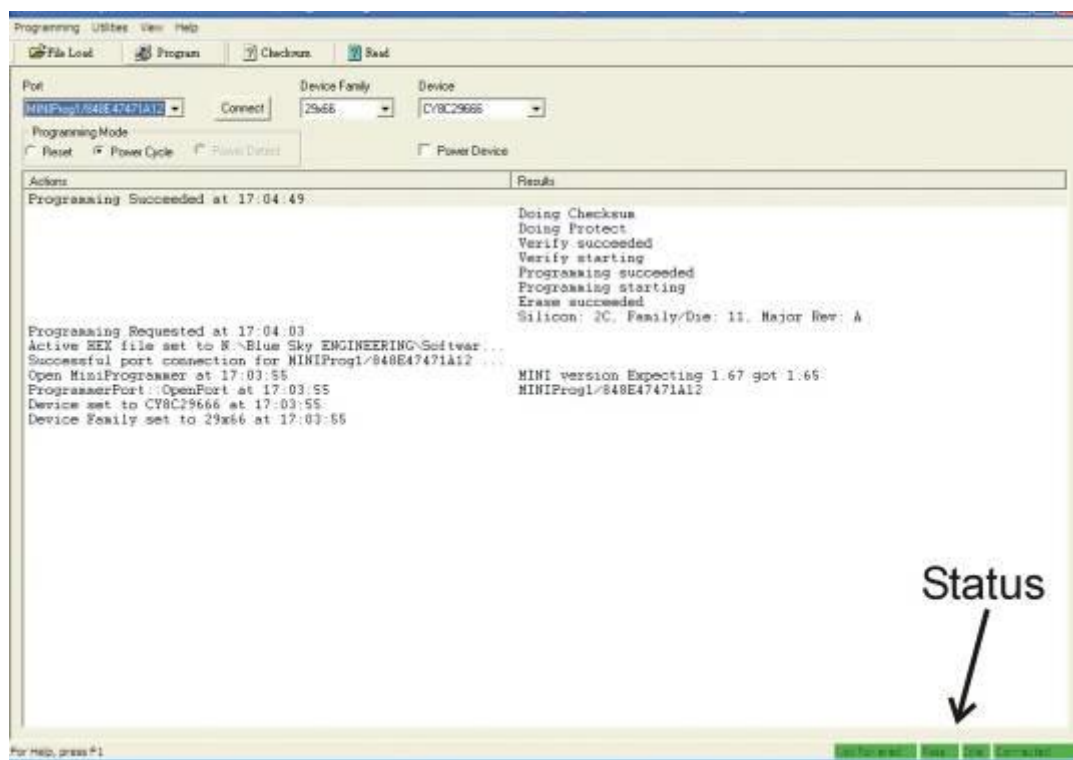
PSoC Programmer

Start Programming

The Programmer will automatically detect your ACH1000 and it should show "MiniProg/848 …" under PORT selection (if not successful, you should check your computer USB settings and then click on the "Connect" button of the application). Choose "29x666" under "Device Family" and "CY8C29666" under the "Device" box. Click on "File Load" to select the hex file to be programmed (ex: blue_sky_v110.hex) and then choose the "Program" icon, as shown above, to actually program the ACH1000.

The box will show the programming activity status on the bottom right hand corner. You will see a red icon showing BUSY while programming. After programmed, the icon will turn green and show PASS.

After the upgrade

Now disconnect all cables and re-install the ACH1000 back in the cockpit.

Appendix A– Programming Cables Schematics

Schematics for the D1000 Programming Cable (100174) and ACH1000 USB-DB25 Programming Cable (100257).

100174 – D1000 Programming Cable

100257 – ACH1000 DB25 Programming Cable (MiniProg to DB25)