



# **IEC Firmware Upgrade Instructions**

## **Upgrade Kit P/N 25636**



## **FIRMWARE UPGRADE KIT**

### **1.0 PURPOSE**

The purpose of this document is to provide step by step instructions for a iEC Controller to the latest revision.

### **2.0 WHAT YOU NEED**

- PC with Windows Operating System (XP, Vista, 7)
- USB to Serial RS232 Converter (If Laptop or PC does not have serial port)
- Ethernet Cable (AcraDyne pn: 20403)
- iFlash Cable (AcraDyne pn:25604)
- Auto Update Utility
- iFlash Loader Utility
- CNC Firmware Image (iEC\_X\_XX\_APP.s19)
- SCC Firmware Image (iEC\_X\_XX.IDC)
- iEC Controller

NOTE: Required software can be attained at weblink:  
<http://www.aimco-global.com/>

### 3.0 SCC FIRMWARE LOADING INSTRUCTIONS

- Download and Save the Parameter Sets, the Controller (DSP) Parameter settings and the I/O settings
- Install iFlash program into laptop or PC
- Connect iFlash cable (25604) to “System” port on iEC Controller (15 pin) and Laptop or PC serial port (9 pin end).

NOTE: If you are using USB-Serial (RS232) converter on Laptop or PC, the USB to Serial converter needs to be configured for COM 1. See instructions in **“CONFIGURE USB TO SERIAL CONVERTER FOR COM1”**

- Open iFlash Loader program
- Select “iDC [RS232]” option if not already selected by default
- Click “Select File” button and navigate to SCC iEC\_X\_XX.idc firmware image file (browse to find file either stored on hard drive, server, or removable media such as USB stick)
- Verify iEC Controller Power is OFF
- Click “Load External Flash” button, then turn iEC Controller power ON

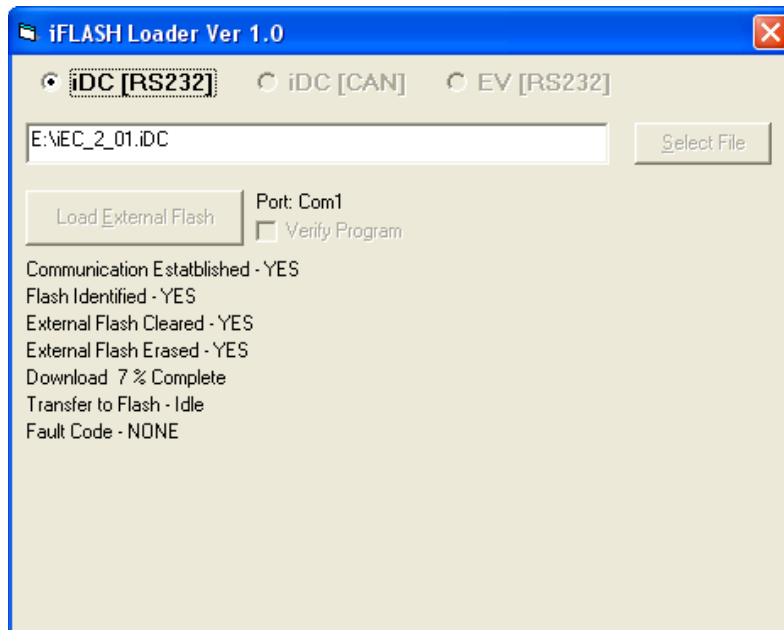
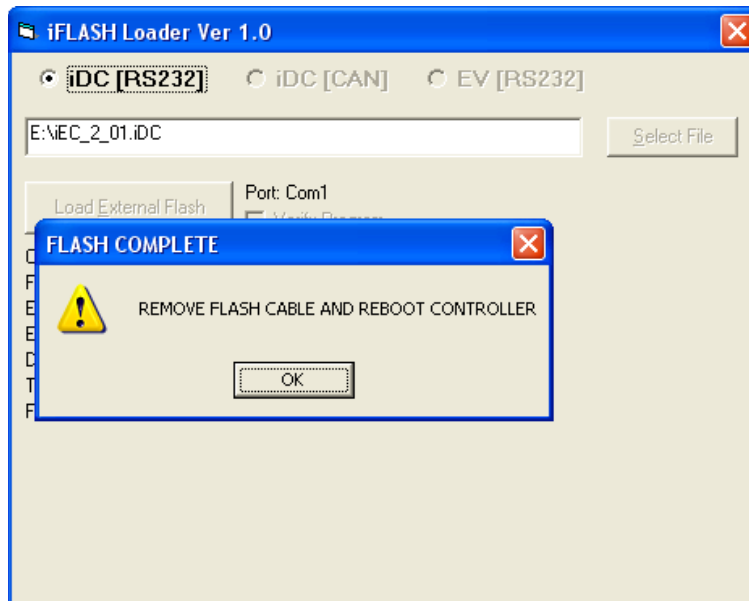


Figure 1. iFlash Loader Utility

- Monitor LED screen of iEC controller.

NOTE: Screen will display “DNLD PROG” initially while SCC flashing is beginning. As the flash program progresses, the Parameter Set window will start at 9 and count down to 1. Controller display will change to “Done” when flash is completed.



**Figure 2. iFlash Loader Utility is Finished**

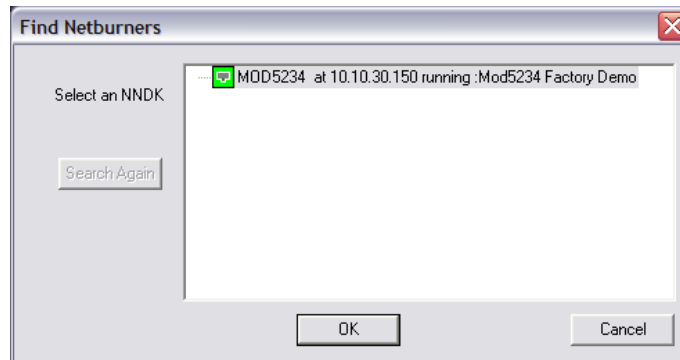
- Click “OK” on iFlash program screen
- Turn iEC Controller Power OFF and remove iFlash Cable
- Close iFlash Loader Utility
- Turn iEC Controller Power ON
- System will now be loaded and ready to function with new SCC Code that should have shown on screen during initialization of controller.

Note: The Parameter Sets and Controller (DSP) Parameter settings will revert to the factory default settings during the firmware load. The saved Controller Parameters will need to be reloaded and power will need to be cycled to restore these to the previous settings

#### 4.0 CNC FIRMWARE LOADING INSTRUCTIONS

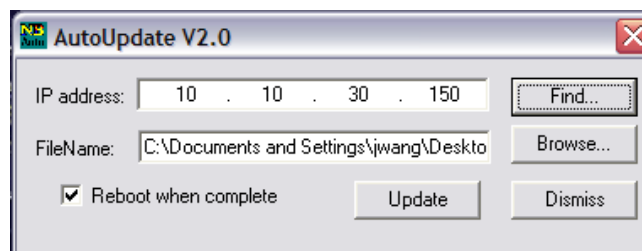
- See instructions in “**SETUP LOCAL NETWORK**”
- Connect Ethernet Cable from PC to CNC Board ASSY (23424) Ethernet Jack
- Turn IEC Controller Power ON
- Open Auto Update Utility
- Press the “Find...” Button
- Select the Target Device and press ‘OK’.

NOTE: The “Select an NNDK” display may require a refresh. Press the “Search Again” Button to refresh.



**Figure 3. Auto Update - Find NetBurners**

- Verify the IP Address
- Click “Browse..” button and Open CNC iEC\_X\_XX.idc firmware image file (browse to find file either stored on hard drive, server, or removable media such as USB stick)
- Verify Settings:
  - IP Address
  - FileName: CNC Firmware Image Location
  - Reboot when complete: Checked



**Figure 4. Auto Update Program**

- Click “Update” Button. Wait for program to acknowledge “Programming Complete without Error.”
- Open web browser (Internet Explorer)
- Enter URL “10.10.30.150”
- Verify Acradyne IEC Controller web interface appears
- Turn Programming Fixture (IEC Controller) OFF
- Programming CNC Board ASSY is complete

## 5.0 CONFIGURE USB TO SERIAL CONVERTER FOR COM1

- Navigate to Windows Device Manager
  - Right click “My Computer” -> Properties -> Hardware Tab -> Device Manager

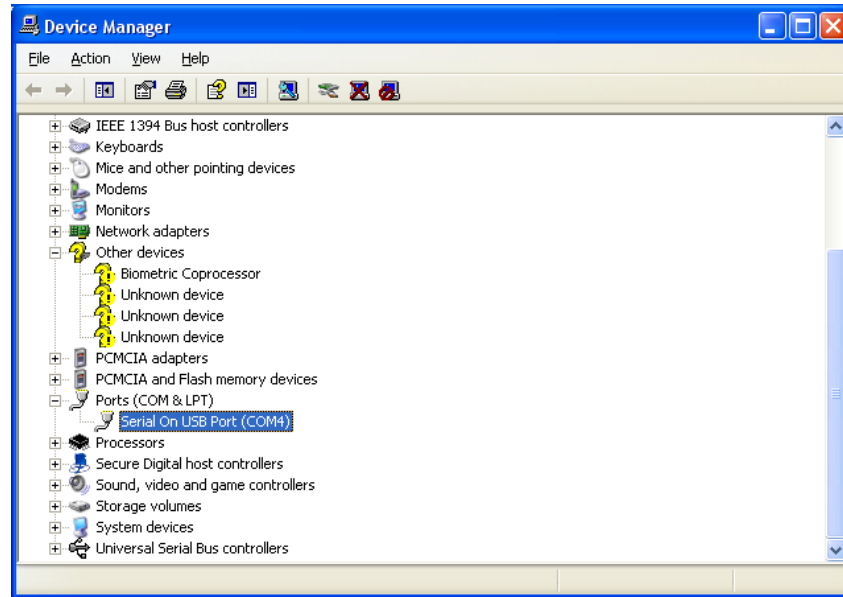


Figure 5. My Computer -> Properties -> Hardware -> Device Manager

- Go to “Serial On USB Port” Advanced Port Settings
  - Right Click Ports (Com & LPT) -> Serial On USB Port -> Properties – Port Settings Tab -> Advanced

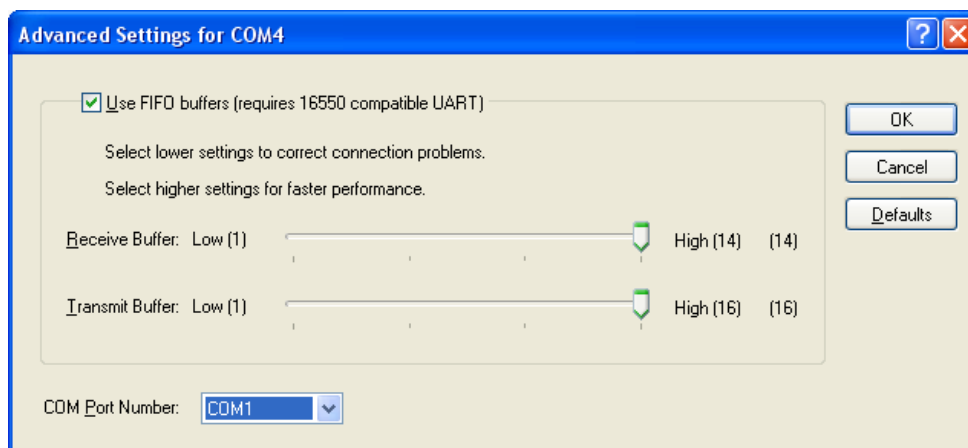


Figure 6. Serial Port on USB -> Properties-> Port Setting -> Advanced

- Set COM Port Number to COM1 in drop down menu in “Advanced Settings”
- Click OK to accept all changes

## 6.0 SETUP LOCAL NETWORK

- Remove any network connection to Computer
- Go to network settings. Start Menu -> Control Panel -> Network Connections -> Local Area Connection -> Properties
- Select Internet Protocol (TCP/IP). Go to Properties

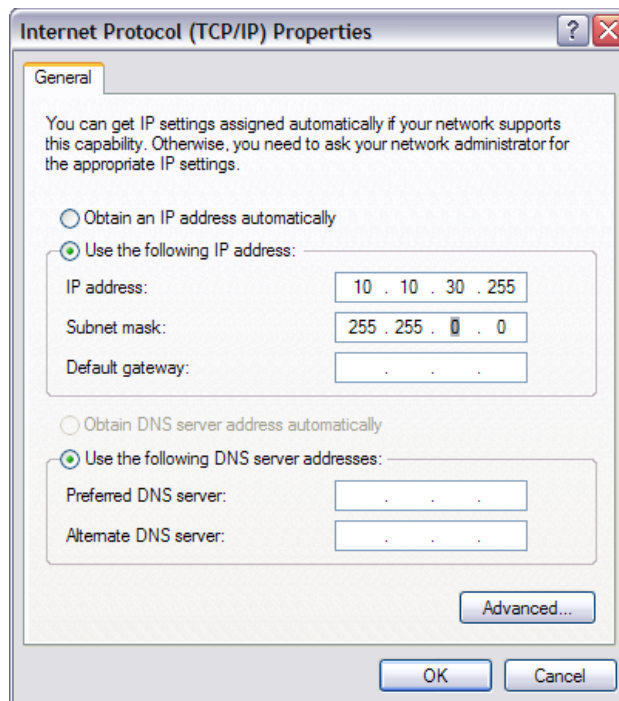


Figure 7. Network Setup

- Setup a static IP Address that is in the same subnet, but with a different IP Address.
  - Controller IP Address: 10.10.30.150
  - Laptop or PC IP Address: 10.10.30.255
  - Controller and Laptop Subnet Mask: 255.255.0.0
- Click OK to save settings
- Local Network Settings are setup

## 7.0 REVISION HISTORY

- **Revision Date: 04/22/2011**
- **Document Change Log**
  - Initial Release



**AIMCO CORPORATE HEADQUARTERS**

10000 SE Pine Street  
Portland, Oregon 97216  
Phone: (503) 254-6600  
Toll Free: 1-800-852-1368

**AIMCO CORPORATION DE MEXICO SA DE CV**

Ave. Cristobal Colon 14529  
Chihuahua, Chihuahua. 31125  
Mexico  
Phone: (01-614) 380-1010  
Fax: (01-614) 380-1019