

## **IEC Firmware Upgrade Instructions** Upgrade Kit P/N 25636



PO Box 16460, Portland, OR 97292-0460 • 503-254-6600 • Fax 503-255-2615

#### 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: <a href="http://www.aimco-global.com/">http://www.aimco-global.com/</a>

#### 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.

🖻 iFLASH Loader Ver 1.0	
• <b>IDC [RS232]</b> • IDC [CAN] • EV [RS232]	
E:\iEC_2_01.iDC	<u>S</u> elect File
Load External Flash	
C FLASH COMPLETE	
E REMOVE FLASH CABLE AND REBOOT CONTROLLER	
C T F	

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.

Find Netburners		X
Select an NNDK		-
Search Again		
	OK	

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:
  - o IP Address
  - FileName: CNC Firmware Image Location
  - Reboot when complete: Checked

🔛 AutoUp	date V2.	0						×
IP address:	10		10		30		150	Find
FileName:	C:\Docu	ments	s and	Sett	ings\jv	vang	g\Deskto	Browse
🔽 Rebo	ot when c	omple	ete			Up	date	Dismiss

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 Advanced Port Settings
  - Right Click Ports (Com & LPT) -> Serial On USB Port -> Properties
    Port Settings Tab -> Advanced

Advanced Settings for COM4	? 🛛
✓ Use FIFO buffers (requires 16550 compatible UART) Select lower settings to correct connection problems. Select higher settings for faster performance	OK Cancel
Beceive Buffer: Low (1)	<u>D</u> efaults
Iransmit Buffer: Low (1)	
COM <u>P</u> ort Number:	

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

Internet Protocol (TCP/IP) Prope	rties 🔹 🤉 🔁
General	
You can get IP settings assigned autom this capability. Otherwise, you need to a the appropriate IP settings.	natically if your network supports ask your network administrator for
Obtain an IP address automatically	/
• Use the following IP address:	
IP address:	10 . 10 . 30 . 255
Subnet mask:	255.255.0.0
Default gateway:	· · ·
Obtain DNS server address autom	atically
• Use the following DNS server add	resses:
Preferred DNS server:	
Alternate DNS server:	· · ·
	Advanced
	OK Cancel

Figure 7. Network Setup

- Setup a static IP Address that is in the same subnet, but with a different IP Address.
  - o Controller IP Address: 10.10.30.150
  - Laptop or PC IP Address: 10.10.30.255
  - o 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

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