Pentair Water
Pool and Spa®

IntelliChem™ Chemical Controller Firmware Upgrade Kit User's Guide

IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Kit contents

The following items are included in the Kit P/N 521498

- Programmer IntelliChem® - P/N 521469
- CD-ROM
- Installation Guide (this manual)

System requirements

- Windows® 7 and Windows Vista
- Windows® XP (with Service pack 3)

Technical Support

Sanford, North Carolina (8 AM to 5 PM)
Moorpark, California (8 AM to 5 PM)
Phone: (800) 831-7133
Fax: (800) 284-4151

Related manuals

IntelliChem Manual (P/N 521363) at:
http://www.pentairpool.com/pdfs/intellichemOM.pdf

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1620 Hawkins Ave., Sanford, NC 27330 • (919) 566-8000
10951 West Los Angeles Ave., Moorpark, CA 93021 • (800) 553-5000

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IntelliChem™ Firmware Update Instructions

The IntelliChem™ firmware updates are performed using the update programmer connected to a USB port on a computer running Microsoft® Windows.

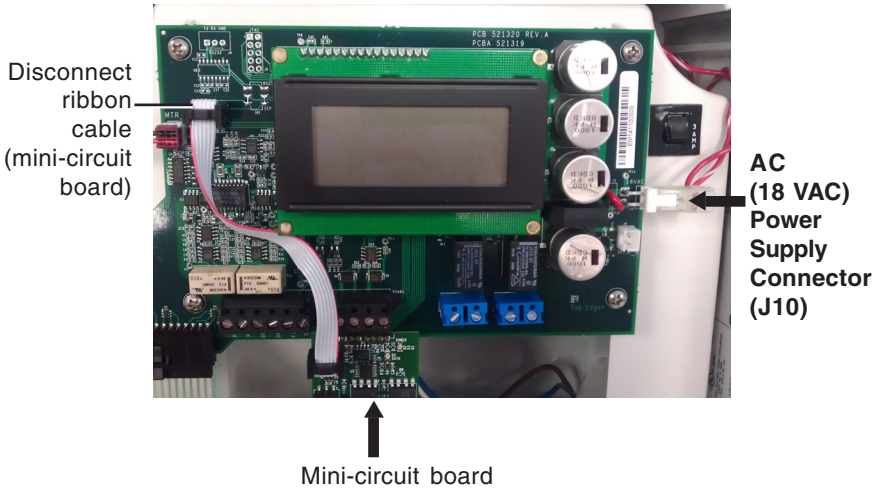
Connect the USB Cable to the Computer

- Before running the Setup Wizard, connect the programmer USB cable to a USB port on your computer.

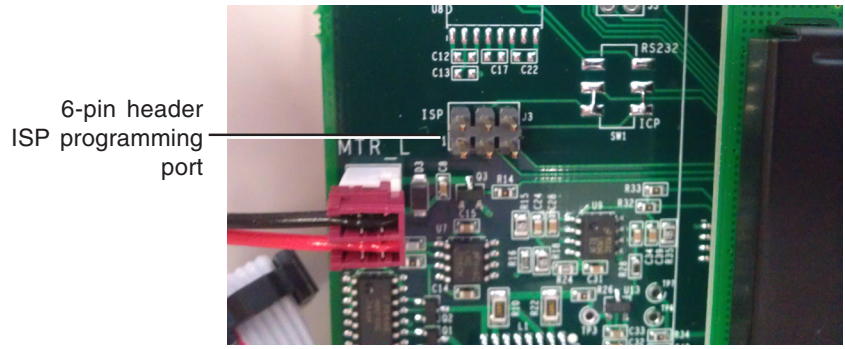
Connect the Programmer Cables

1. **Disconnect power to the IntelliChem**. To disconnect AC power to IntelliChem, open the front cover and disconnect the 18 VAC supply connector J10 on the right side of the IntelliChem circuit board.

2. ***Note: If there is a mini-circuit board connected to the IntelliChem circuit board, disconnect the ribbon cable from the IntelliChem circuit board.***



3. Locate the 6-pin header labeled ISP in the upper-left corner of the IntelliChem circuit board.



4. Connect the 6-pin ribbon cable connector to the ISP (In System Programming) port with the RED stripe toward the left-side as shown below.

Connect the programmer ribbon cable with RED STRIPE on LEFT SIDE

5. Reconnect the power connector (J10) to the IntelliChem circuit board (see page 1).
6. Connect the USB cable to the computer.

Continue with "Installing IntelliChem Firmware Upgrade Setup Wizard".

Installing IntelliChem Firmware Upgrade Setup Wizard

1. Insert the Installation CD into your CD-ROM. If needed, navigate to ***[C:]*** *where C: is your drive letter* ***\Pentair\IntelliChem\IntelliChem Programmer v1.xxx.exe***
   and click on the exe file to start the Setup Wizard and follow the on-screen Setup Wizard instructions.
2. Click next on each of the three WHCL screens.

3. *To continue with the installation, press any key on your keyboard.*

Load the Firmware to IntelliChem

1. When the programming is finished, the IntelliChem will restart and display the version number on the boot-up splash screen. The version is also available in the menu **Configuration\Diagnostics\Software Rev.**
2. **After the upgrade firmware installation process has been completed: Disconnect power to the IntelliChem**. Open the front cover and disconnect the 18 VAC supply connector J10 on the right side of the IntelliChem circuit board.
   Remove programming ribbon cable and reconnect the mini-circuit card ribbon cable onto the IntelliChem circuit board (see page 1).
3. **Reconnect the power connector** (J10) to the IntelliChem circuit board (see page 1). Secure the front cover of the IntelliChem enclosure.

Desktop Icon

The firmware update icon is displayed on your desktop or you can access the batch file from the START > PROGRAM menu.

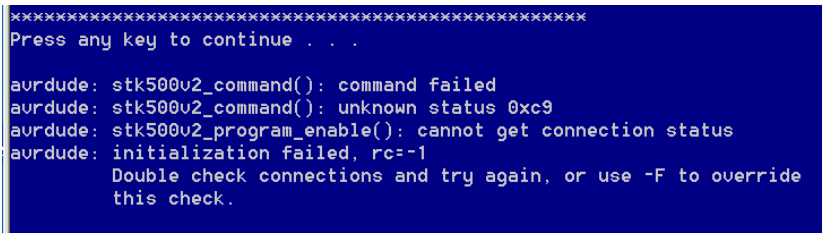
The batch file is located in C:\Pentair\IntelliChem\IntelliChem Programmer v1.xxx.bat

Troubleshooting

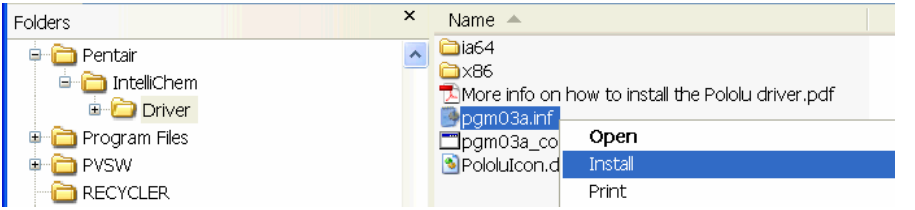
If the programmer exits without showing a progress bar, there was an error in the setup or installation. Check the following:

a) The programmer is installed correctly
b) IntelliChem unit is powered on
c) Driver is properly installed
d) Refer to the detailed instructions in the file pololu_usb_avr_programmer.pdf

No communication with Pololu Programmer, check USB connection.



No communication with IntelliChem, check connection to ISP.



The C:\Pentair\IntelliChem\ folder will contain files similar to these that you will need:

Driver\pgm03a.inf	(driver installation file)
IntelliChem Programmer v1.xxx.bat	(loads firmware to IntelliChem)
ICHEM_v1.xxx.a90	(firmware file)

Manually install the Driver

The first time using this programmer, right-click on the C:\Pentair\IntelliChem\Driver\pgm03a.inf file and select Install.

Note:Windows XP users must have installed SP3 for this to work correctly.

Next, when you connect the programmer, your computer should recognize the device. For additional information, refer to the file *Driver\More info on how to install the Pololu driver.pdf*

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