BioLogic DuoFlow Chromatography System

Version 4.0 Software New Features

For technical service
call your local Bio-Rad office or
in the U.S. call 1-800-4BIORAD
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On the Web at http://www.discover.bio-rad.com

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Version 4.0 software retains the familiar intuitive, accessibility of version 3.0. The ease of system Setup and method building are retained in the Browser, Setup, Protocol and Run screens. Manual accessibility to instruments is gained through the Manual screen providing individual control panels for each instrument and device attached to the system.

Programming has been added to incorporate new instruments and now integrates the Maximizer buffer blending system with all its peripherals, the BioFrac fraction collector, new pH Monitor and USB Bitbus Communicator.

USB Bitbus Communicator

Version 4.0 software requires the more robust Windows 2000 operating system and the new USB to Bitbus Communicator converter box. Any dedicated PC capable of running Windows 2000 and with a USB connection may be used to run version 4.0 DuoFlow software programs.

Maximizer Buffer Blending System

- Programming includes support for the Maximizer unit that enables adding automated buffer blending capabilities to a DuoFlow system. Buffer blending allows users to run multiple separations, each at a different buffer pH and salt concentration. Four stock solutions connected to the Maximizer are blended to the correct pH and salt concentration. Version 4.0 software calculates the acid/base ratio and compensates for changes in ionic strength and temperature during the run.

- Programming includes support for double the pump flow rate when a Maximizer is in use. Workstations with F10 pumpheads increase their flow rates to 20 ml/min, F40 pumphead Workstations double to 80 ml/min.

- Programming support incorporates additional valves enabled by adding a Maximizer to a DuoFlow system. This includes support for 3 additional low pressure solenoid valves (total of 6 valves), connecting to valve ports (3 on the Workstation and 3 on the Maximizer. The same is true for high pressure valves enabling a total of 6 high pressure valves, 3 connecting to the Workstation and 3 connection to the Maximizer. Additional Maximizer ports include a QuadTec port, a SIM port (Analog and pH), a conductivity port , and an auxiliary I/O port .

BioFrac Fraction Collector

Programming support has been added enabling users to incorporate functions of the new BioFrac Fraction Collector and supporting all 14 new rack and collection schemes of the BioFrac.

Manual Screen - Resize

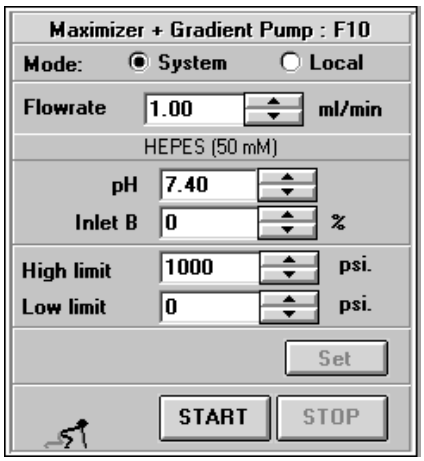
The Resize button enables users to double the size of the on screen chromatogram.

Manual Screen – Valve Display

The valve display panel has two viewing options: one, Workstation Valves, displays valves connected to the Workstation. The other, Maximizer Valves, displays valves connected to the Maximizer. Access to each display is via the down arrow box in the right upper corner of the valves display panel.

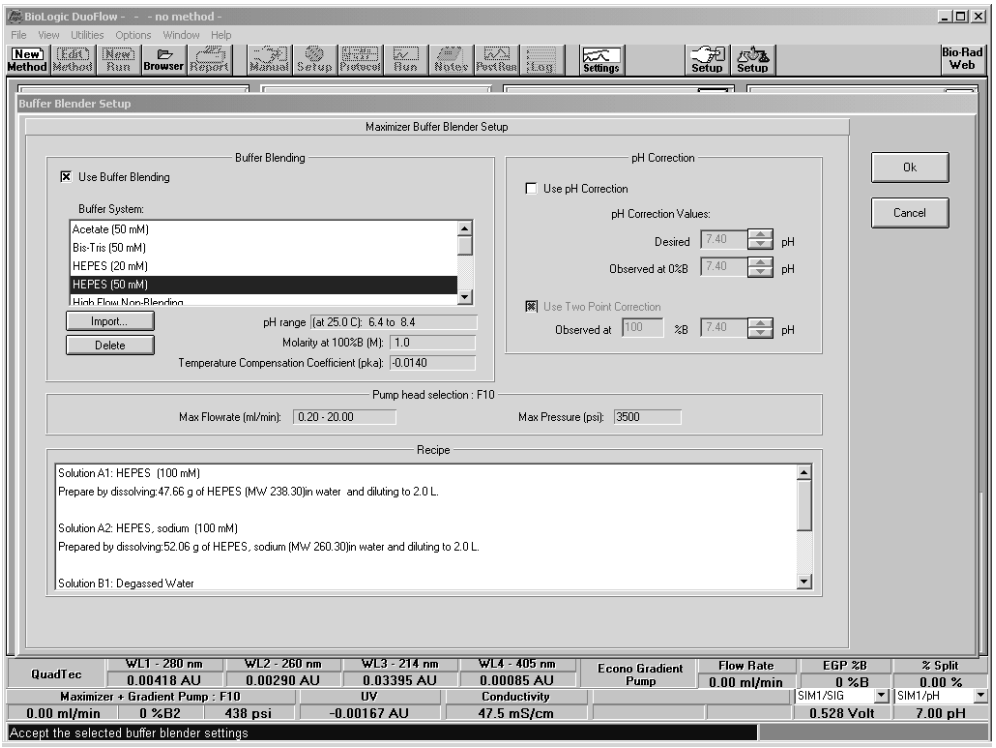
Manual Screen – Maximizer Control Panel

Manual pump control panel includes control of the Maximizer buffer blending mode.



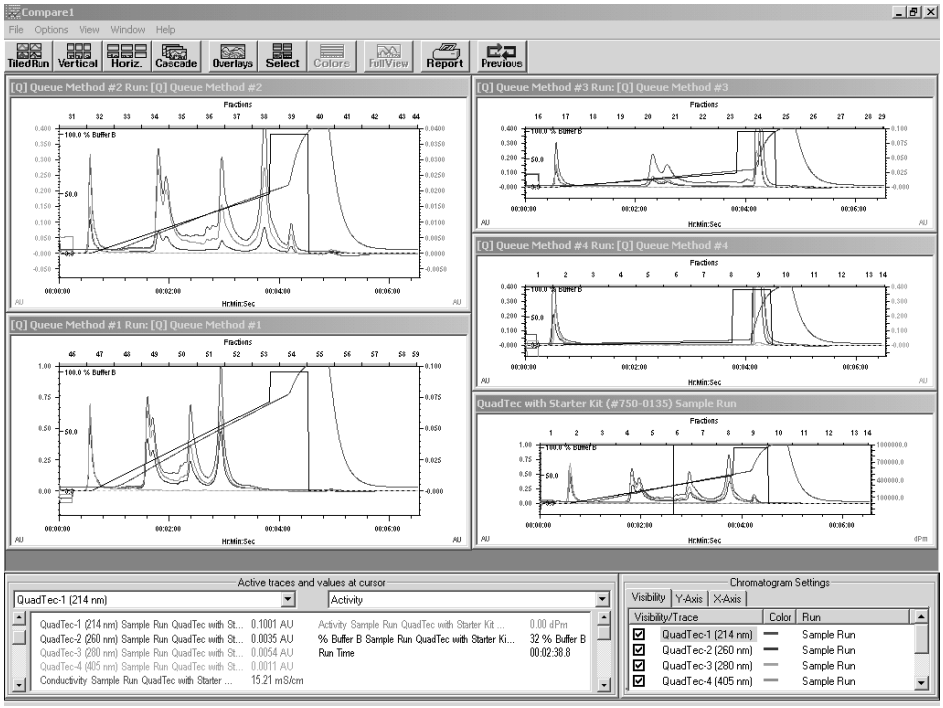
Manual Screen – Maximizer Buffer Blending Setup

Buffer blending icon in the toolbar provides access to new buffer blending screen for selection of buffers (including recipes) to be used in buffer blending mode.



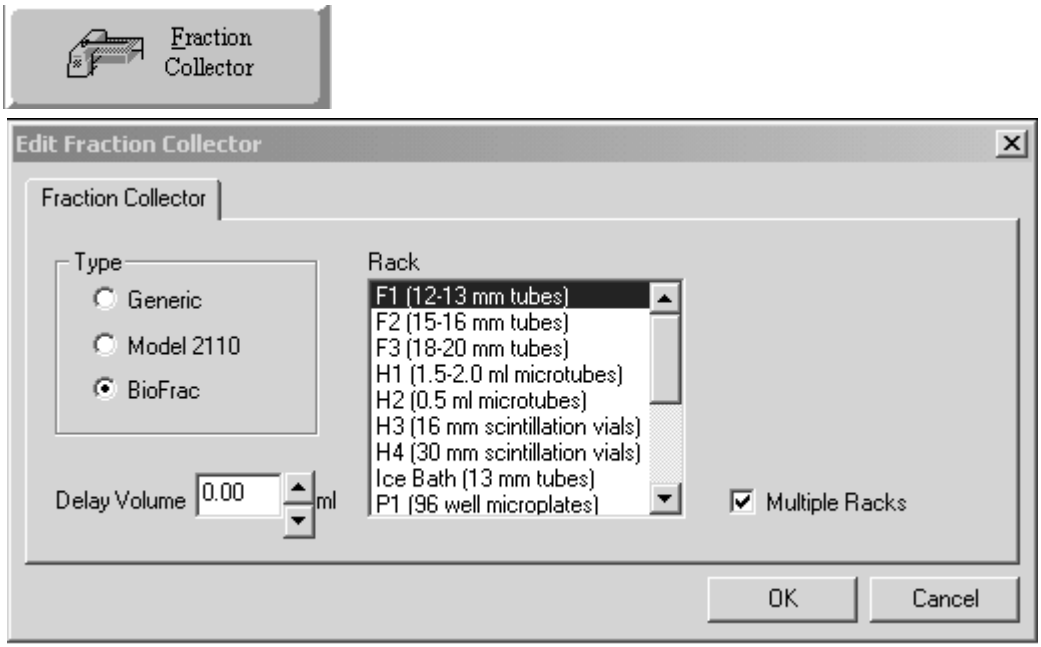
Browser - Trace Compare

Programming supports the ability to overlay multiple chromatograms either in tiled, cascade or overlay views.



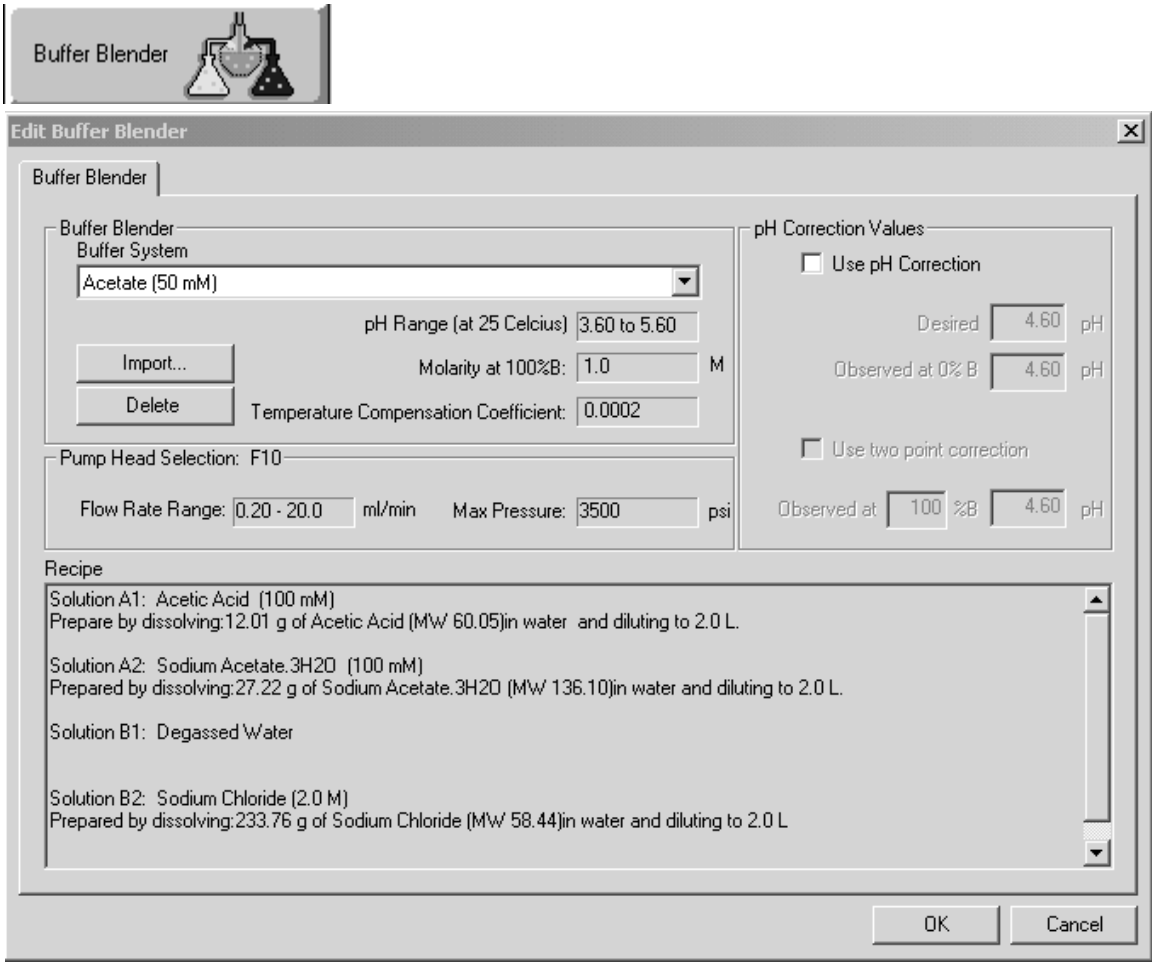
Setup – BioFrac Fraction Collector

Setup now incorporates the new BioFrac fraction collector.



Setup – Maximizer Buffer Blending

Setup includes the Maximizer and enables buffer blending setup.



Notes For Using Version 4.0 software

Running Non-Blending Method and Blending from the Manual Screen

Starting a non-blending method while running blending in Manual causes the Maximizer valves to malfunction. If you are running the Workstation pumps and Maximizer with a buffer blending scheme from the Manual screen and, simultaneous to this, a method that does not include buffer blending is opened in the Browser and a run started, the Maximizer valves will malfunction. To correct the problem abort the run and start and stop the pumps in the Manual screen. This will return the system to normal operation.

PAUSE Step as First Step in Method

Starting a method protocol with a PAUSE step as the first step does not work. The method will not start even if Time Out Reqd is placed on the PAUSE.

Using a V7-3 Manual Inject Valve

When a V7-3 manual inject valve is used with an auxiliary pump and Aux Pump Inlet Valve to load sample, the method does not hold to wait for you to switch the V7-3 valve. An AVR7-3 automated inject valve works correctly in this configuration.

Editing Fraction Collection Schemes During a Run with QuadTec Detector in Setup

When a QuadTec detector is in your Setup you will not be able to edit the collection scheme of your fraction collector, if you PAUSE a run in progress. The edit will be accepted by the software, but it will not be implemented by the fraction collector.

HOLD or PAUSE and the F2, Continue Key

If the F2(Continue) key is mistakenly pressed prior to a HOLD or PAUSE event in a method, the continue event remains in memory and immediately continues the run when the HOLD or PAUSE occurs.

Starting the System with no USB Bitbus Communicator Connected

DuoFlow version 4.0 software automatically runs in Emulation mode when a USB Bitbus Communicator is not connected to the system. Emulation mode is designed for demonstration of the software and, therefore, gives the appearance that the Workstation, valves, and all peripheral devices and instruments are connected and functioning normally. The system appears to be operating normally when it is not.

If you have additional questions, please call Bio-Rad Technical Support, Chromatography, at 1-800-4-BIORAD, 1-800-424-6723.

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