Shimadzu GC Control Software for EZChrom *Elite*™ CDS and Agilent OL Operating System for the Laboratory

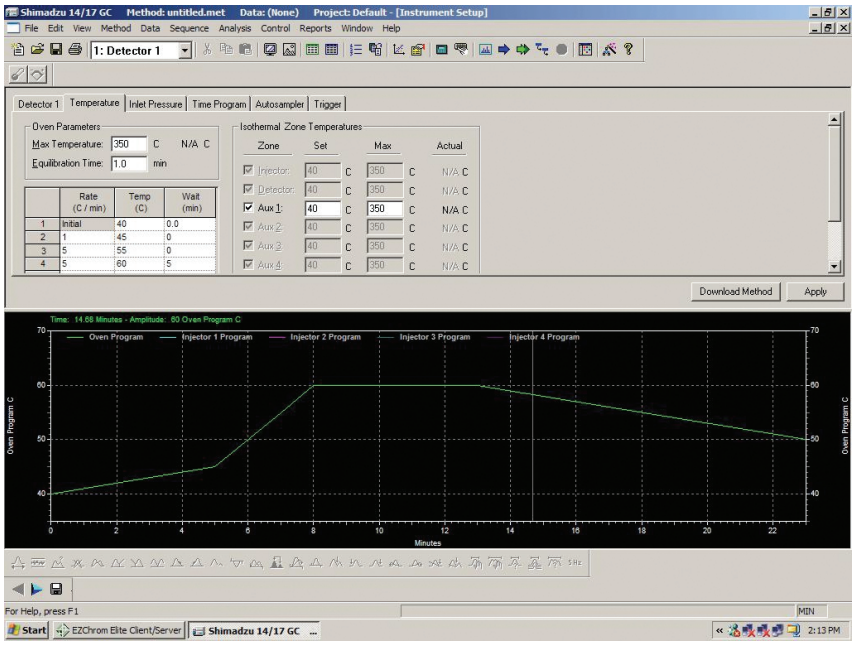

Figure 1. Shimadzu GC instrument control parameters are easy to set in the EZChrom Elite method program.

Control the Shimadzu GCs with EZChrom *Elite* and Agilent OL

Gas chromatographs from Shimadzu are in widespread use throughout the world. Comprehensive instrument control software to control the popular Shimadzu GC-14A, GC-15A, and GC-17A (versions 1, 2, 3, and GC-17AH) models as well as the new Shimadzu GC-2010 is available for the EZChrom *Elite* Chromatography Data System and Agilent OL Operating System for the Laboratory from Agilent Technologies. These Shimadzu control software options can be added to EZChrom *Elite* or Agilent OL to provide integrated instrument control of the particular GC along with a rich set of data handling and presentation capabilities.

In addition to full instrument control of Shimadzu GCs, EZChrom *Elite* and Agilent OL can control a wide variety of other GCs from leading instrument manufacturers. EZChrom and Agilent OL can also control GCs from Agilent, Thermo Electron, PerkinElmer, Varian, and others.

Specifications

Shimadzu GC control software for EZChrom *Elite* provides the following capabilities (subject to the capability in the hardware model):

- Perform data acquisition, processing, and reporting with a few mouse clicks using a simplified user interface.
- Complete control of thermal zones, including column oven, injector zone, detector zone, and auxilary-heated zone.
- Support is included for the split/splitless, purge/packed, and on column injectors.
- Complete control of all Shimadzu detectors and Autosamplers for the Shimadzu GCs.
- Controlled via RS-232 (GC14/17/2010) or TCP/IP (GC 2010).
- Shimadzu GC-14A, 15A and 17A detectors require SS420x. Shimadzu GC-2010 detectors can be connected and controlled by digital means directly.

Agilent Technologies

Control All GCs Through the Same Software Interface

In controlling the Shimadzu GCs, EZChrom *Elite* simplifies operation by providing the same software interface for all instruments. Users can create software methods for each kind of GC, using the same software displays and parameter entries to minimize learning time.

The software provides control for all injector types (Split/Splitless, widebore, packed and OCI), heat zones, pressure control and cooling. Control parameters for detectors, temperature control (oven, temperature programming and isothermal zone temperature), inlet pressure, time event programming, and external triggering are provided in easy to access software tab displays.

Powerful Graphic Displays

The graphic display not only plots the chromatogram, but can also overlay the temperature program and other parameters.

Autosampler Control is Simple and Sophisticated

For simple operation, just load the autosampler and start. All autosamplers and vial configurations for the Shimadzu GCs are supported. For the GC-2010, autosamplers equipped with the barcode readers can feed sample identification through the convenient barcode option.

Shimadzu GC-2010 GCs equipped with dual analytical line configurations are also controlled by the software.

Use Powerful EZChrom Features for Data Analysis

EZChrom *Elite*'s powerful graphical routines make it easy to view all results. Compare and overlay multiple runs for quick review of data. Re-analyze an injection using different reporting and data processing conditions. Subject multiple runs to a variety of different reporting options. Interface EZChrom results with other software applications for extended calculations for BTU analysis, simulated distillation, and more.

Take advantage of EZChrom *Elite*'s unprecedented multi-vendor instrument control and have it control over 300 different instrument modules from over 25 different GC and LC manufacturers. Instrumentation from different vendors such as Agilent, Waters, Thermo Electron, Varian, PerkinElmer, and Waters are available.

Use the GC Setup Assistance for the GC-2010

The unique *GC Setup Assistant* for the GC-2010 makes it fast and easy to setup the instrument and monitor the instrument. The graphical screen displays all pertinent status information on one, easy to read display. Accessing a module to set or change parameters is a simple mouse click away. Quickly viewing the current settings on the GC is simple and clear.

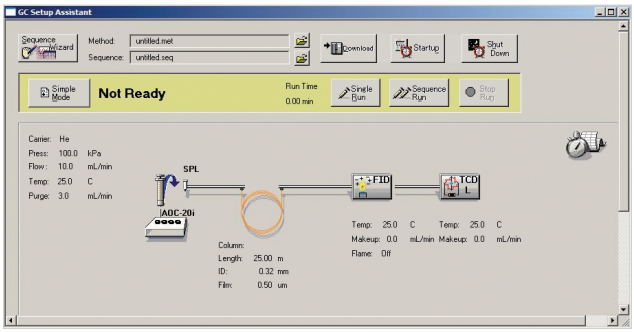

Figure 2. The GC Setup Assistant for the GC-2010 provides users with an extremely easy way to graphically access instrument parameters and view status of all components.

Fully Protected Data Acquisition and Control

The unique data acquisition and instrument control architecture in EZChrom and Agilent OL make it possible to perform data collection even in the event the host computer network is down. The special Agilent Instrument Controller acts as a network appliance and can take control of each Shimadzu GC. The Agilent Instrument Controller™ can run injections, collect and protect the data completely. If the network is down, these injections will be securely stored in special flash RAM in each Agilent Instrument Controller.

The data storage in each Agilent Instrument Controller allows multiple injections from entire sequences (including injections based on different methods) to be safely stored and protected so your instrument runs can continue under such serious network problems.

Up to four (4) Shimadzu GC 14/15/17s can be connected to a single Agilent Instrument Controller (RS232 version). Up to four (4) Shimadzu GC2010s can be connected to a single Agilent Instrument Controller (LAN version). Connections are through standard RS232 cabling for the GC 14/15/17 or LAN for the GC 2010.

Manage All Instrument Data with Agilent OL

The unique Agilent OL Operating System for the Laboratory provides powerful content management of all raw data and results from the Shimadzu GC systems. "Smart" electronic filters specific for the Shimadzu GC results are used to extract key metadata from each GC run and store that information in a database. All results are automatically deposited in a safe, secure repository and made fully searchable.

Users can readily find their data based on queries that not only specify criteria such as instrument, username and Sample ID, but even extend to detailed results such as component names and concentration ranges.

Agilent OL manages all the electronic information in the laboratory. In addition to all Shimadzu GC raw data and results, Agilent OL can manage Microsoft Office files, e-mails, Adobe pdf files, chromatography data from EZChrom *Elite* and other CDS packages, mass spectrometry files, and much more. No other package offers this powerful capability to handle all electronic information and documents generated in the laboratory. Conduct quick, focused searches across all your data to find hits from various Shimadzu GC results, as well as Excel spreadsheets, Word documents, pdf reports, and more.

Furthermore, Agilent OL's management of the information makes it easier and safer to collaborate and share results with others with its powerful "check-in/check out" capabilities and Electronic signoff capabilities.

Minimum Firmware Requirements

Model	Version
GC-14A	2.11
GC-14B	3.10
GC-15A	2.11
GC-17	3.15
GC-2010	1.1

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