

PERKINELMER

Release Notes for

TurboMatrix Remote Control Software

Version 2.5.0

Review this document before beginning the installation process.

This document provides the following information:

- Items Included
- New Features in TurboMatrix v2.5.0
- PC Configuration
- Interface Firmware Requirements
- About Installation
- Running the TurboMatrix HS with TotalChrom v6.3
- Limitations
- Known Bugs in v2.5.0
- Information on Previous Releases

ITEMS INCLUDED

The Software kit includes the TurboMatrix Software CD and Software Utilities CD. During installation, this document (TurboMatrix_Remote_Control_2_5_0.pdf) is copied into the directory where the software is installed. The default directory is C:\Program Files\PerkinElmer\TurboMatrix

The product also includes the following:

- TurboMatrix User's Manual
- Cable

Technical Assistance:

Phone: 800/ 762-4000, Selection #3, ask for GC Tech Support

NEW FEATURES IN TURBOMATRIX v2.5.0

Enhanced integration between TotalChrom with the TurboMatrix™ Headspace Sampler to simplify use and streamline operations, including faster setup times and reduced entry errors.

The key features of the software are:

- Simplified use of the TurboMatrix headspace sampler in conjunction with TotalChrom.
- A closer coupling between the TotalChrom and TurboMatrix methods
- Eliminates the current need for duplicate entry of vial sequence information in both TotalChrom and TurboMatrix Remote Control software.
- Reliable assignment of TurboMatrix vial numbers to TotalChrom data files.
- Better handling of error conditions in TurboMatrix/TotalChrom operation.
- Restores the ability for a user to edit methods when the TurboMatrix instrument is not connected or switched on. (This applies to the stand-alone Remote Control software as well as when used in conjunction with TotalChrom.)

PC CONFIGURATION

The TurboMatrix Control Software is tested using the following minimum PC system specifications. Before installing the software, verify that the PC meets the following minimum requirements:

- Intel Pentium® 733MHz or better based personal computer
- 128 megabytes (MB) of RAM
- 25 Megabytes of free hard disk space: 5 MB for the control software and 20 MB for logged data
- VGA color monitor and display adapter, 800x600 or better. The display adapter must be supported by Windows 2000

If TotalChrom is also installed on the same computer then the computer must meet the minimum requirements specified for the TotalChrom version.

Operating System: Microsoft Windows XP (Sp1); 2000 (Sp3) (US/UK - English versions).

INTERFACE FIRMWARE REQUIREMENTS

To use the Clarus 500 GC or AutoSystem XL GC instrument control features, verify that the installed firmware satisfies the following requirements:

Required Instrument Firmware Versions for LINK Control

| <u>Module</u> | <u>Minimum Required Firmware Version</u> |
|------------------|--|
| Clarus 500 GC | 1.01 |
| AutoSystem XL GC | 3.66 |

Required Interface Firmware Versions

| <u>Interface</u> | <u>Minimum Required Firmware Version</u> |
|------------------|--|
| LINK | 2.0 |

ABOUT INSTALLATION

Review all of the installation information at least once before beginning the installation process.

- To learn more about TurboMatrix Control Software, refer to the online Help files or the TurboMatrix User's Manual.
- For information about hardware installation, refer to the TurboMatrix User's Manual.

Pre-installation Notes

- Ensure the computer has Windows 2000 with Service Pack 2 or Service Pack 3 installed as the operating system. If not, contact your local service representative for details on upgrading.
- Before attempting to install new software, back up all important data files, either over a network, or use the CD-R drive in the TurboMass computer.
- Verify that there is at least 25 MB free space on the c: destination drive. If not, you must free some space by removing or copying files to a different location.

Close running applications

- Close all applications (MS Office, Toolbar, Word, Excel, Email, etc.) before proceeding.

Install TurboMatrix 2.5.0

The installation of TurboMatrix Remote Control Software is a simple procedure consisting of several steps. Before installing TurboMatrix, Login as an Administrator or at the Administrator Level. To get started, place the CD-ROM in the CD drive and follow the Setup instructions.

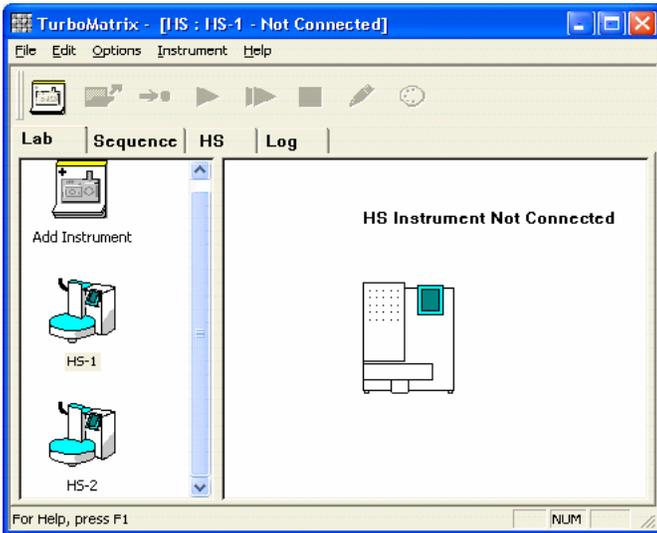
Running the TurboMatrix HS with TotalChrom v6.3

This is an overview describing how to set up the TurboMatrix HS running the Remote Control Software (RCS) with TotalChrom v6.3. This configuration enables the following:

- Generate TurboMatrix methods from within the TotalChrom Method Editor
- Automatic generation of TurboMatrix sequence
- Simultaneous setup and run of both TotalChrom and TurboMatrix sequences
- Automatic insertion of TurboMatrix Log File information into TotalChrom RAW and RST files
- Clear Setup stops both instruments and clears both sequences
- Real-time status of the TurboMatrix

Installation and Setup

1. First install and configure the TurboMatrix instrument(s) and the Remote Control Software (RCS).

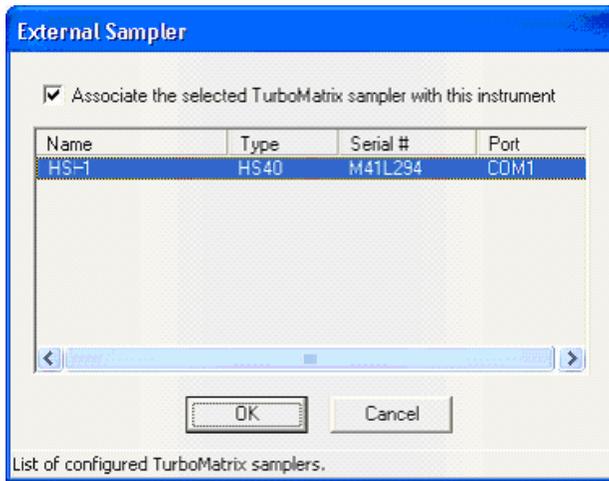


Note: Do not change the names of the TurboMatrix instruments. Changing their names will require reconfiguring TotalChrom.

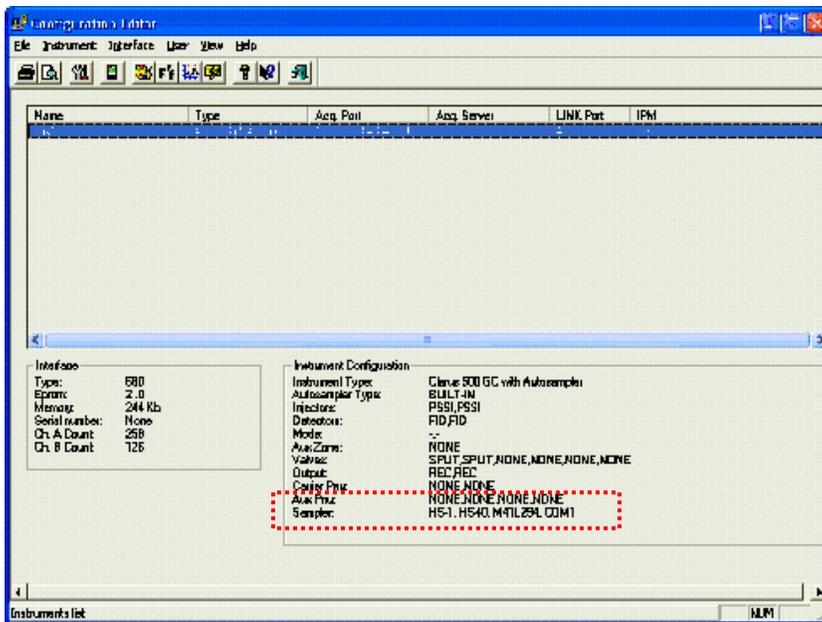
2. Start the RCS and Connect the instruments to be used.
3. Install and start TotalChrom.
4. Select Configuration from the Build menu.
5. After configuring the GC, select External Sampler from the Instrument menu.



6. Select the TurboMatrix you want to link to the instrument.

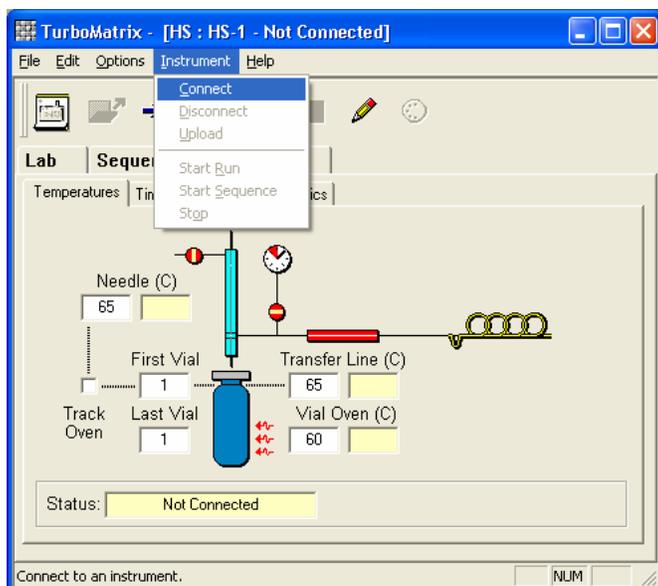


7. The Configuration Editor shows that your configuration now includes the TurboMatrix.



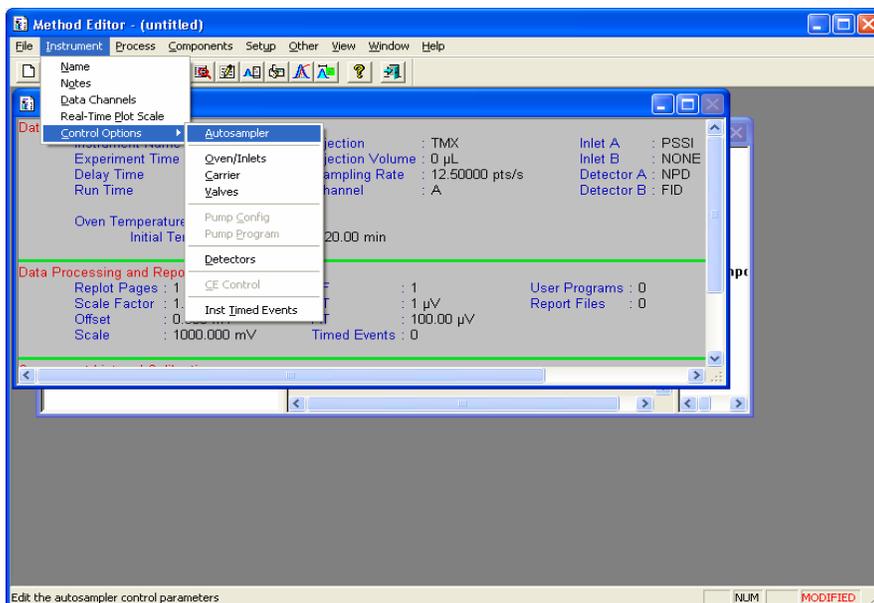
Generate a Method

1. To connect the TurboMatrix, start the RCS software, select Connect from the Instrument menu.



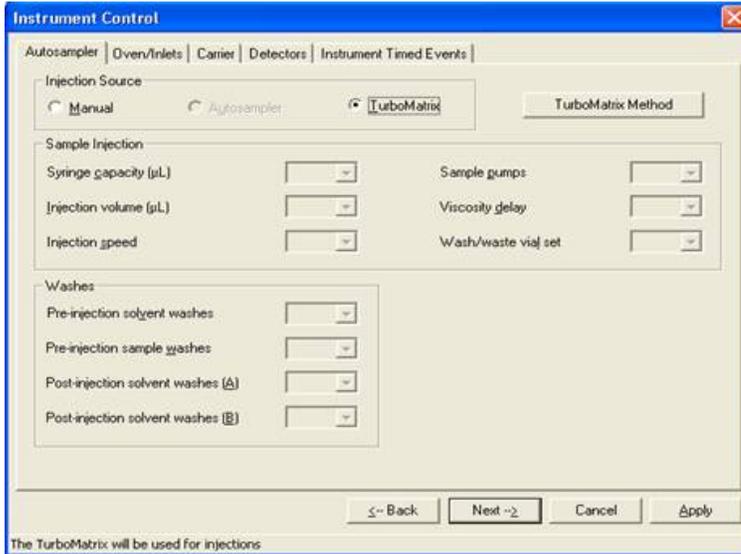
Once you connect the instrument, you can minimize the RCS software and continue to set up through TotalChrom.

2. From the TotalChrom Navigator, open Method Editor. If you are creating a new method, select the corresponding GC as shown in the Instrument Selection dialog. Then complete the Method Editor dialogs.
3. From the Instrument menu select Autosampler from Current Options.

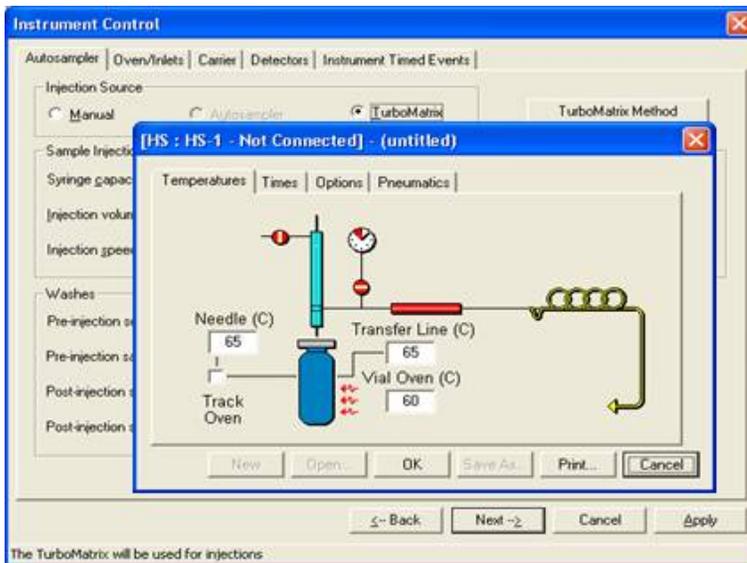


The Instrument Control dialog opens.

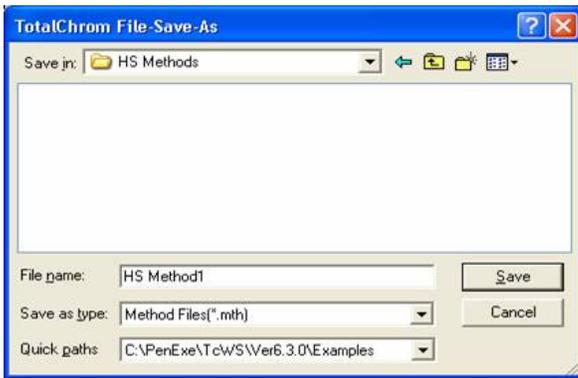
4. Select TurboMatrix as the Injection Source. Then click the TurboMatrix Method button.



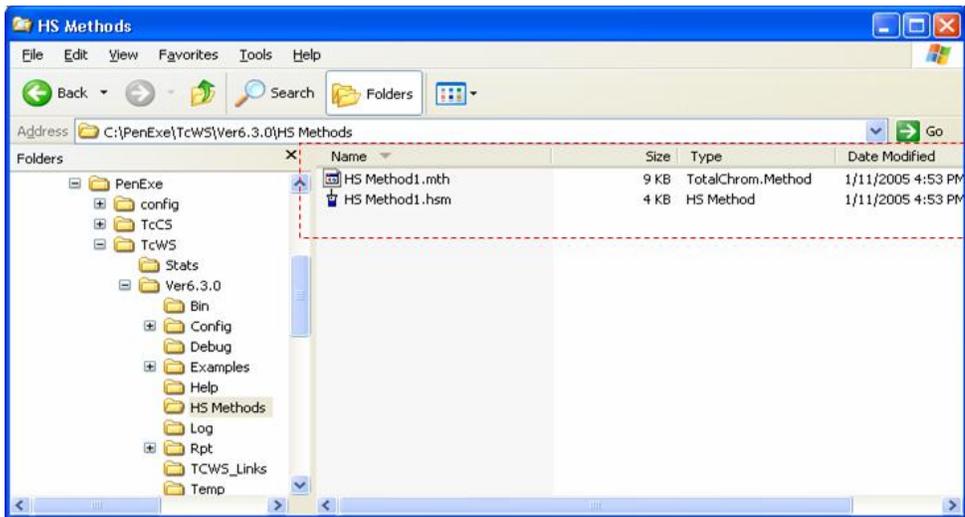
5. Generate or Edit a TurboMatrix Method. When done you can print the TurboMatrix method from this screen.



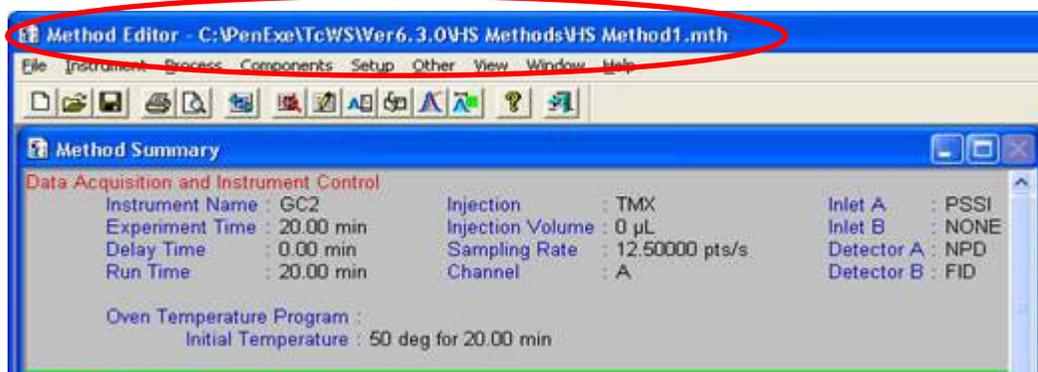
6. Click OK to close the TurboMatrix Method Editor and finish editing the TotalChrom Method for data processing and GC control. When done, Save the Method.



- When you save the method, note that the TotalChrom Method and TurboMatrix Method will be saved with same names as shown below.



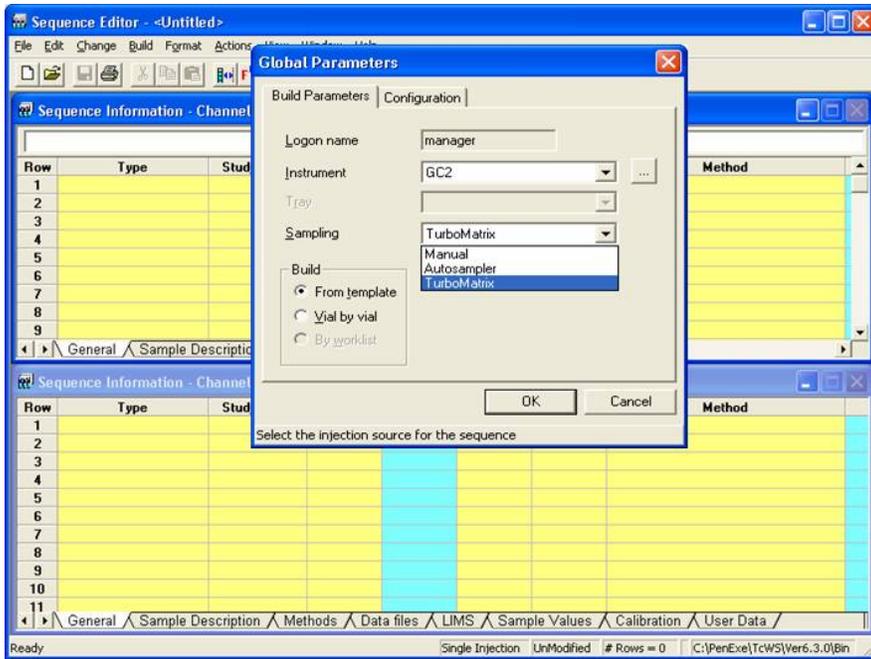
Also note that the new Method name now appears in the Method Editor Window title bar.



Generating a Sequence

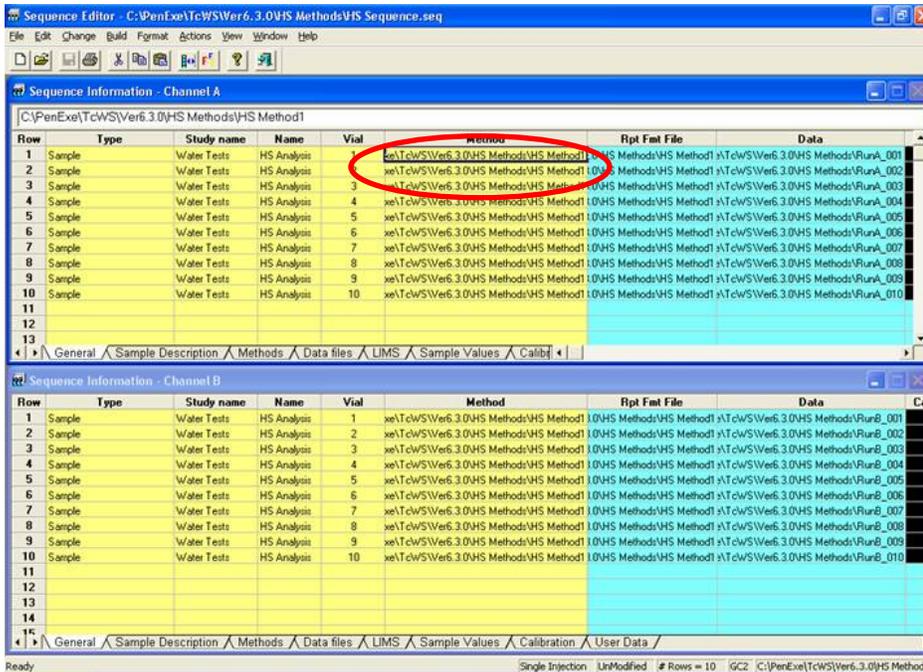
- Start the Sequence Editor.
- Load a Sequence or create a new Sequence.
- Select Global Parameters from the Change menu.

- Select TurboMatrix as the Sampling type.

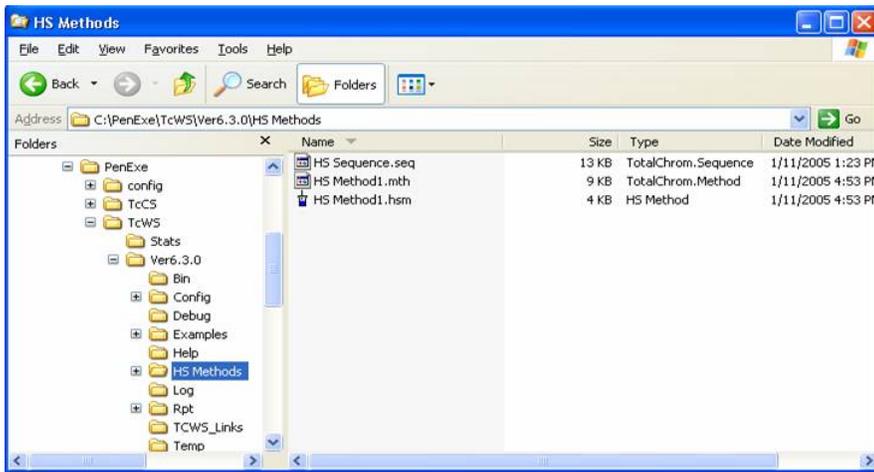


- Generate a Sequence in TotalChrom using the TurboMatrix method.

Note: When generating a sequence, the number of injections for the TurboMatrix method appears in red.



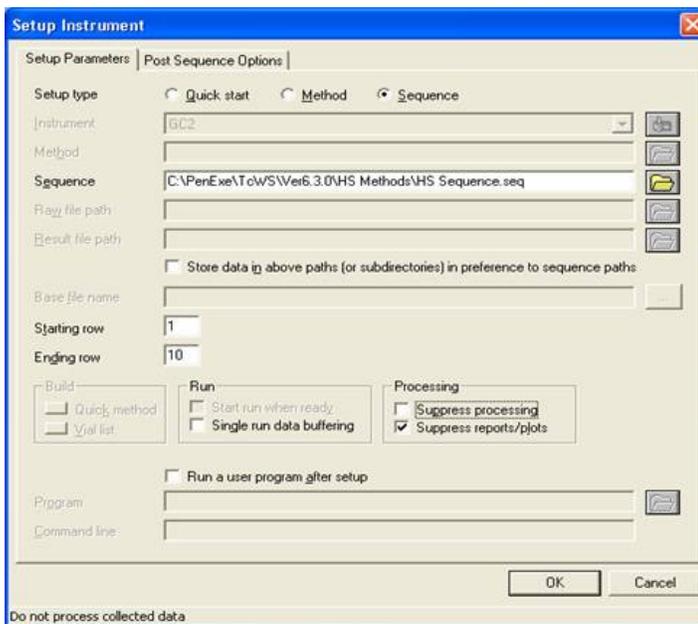
- Save the Sequence and note that only the TotalChrom Sequence is saved at this time.



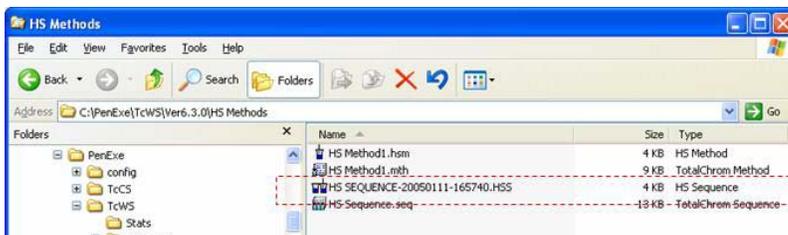
Set-up the Sequence

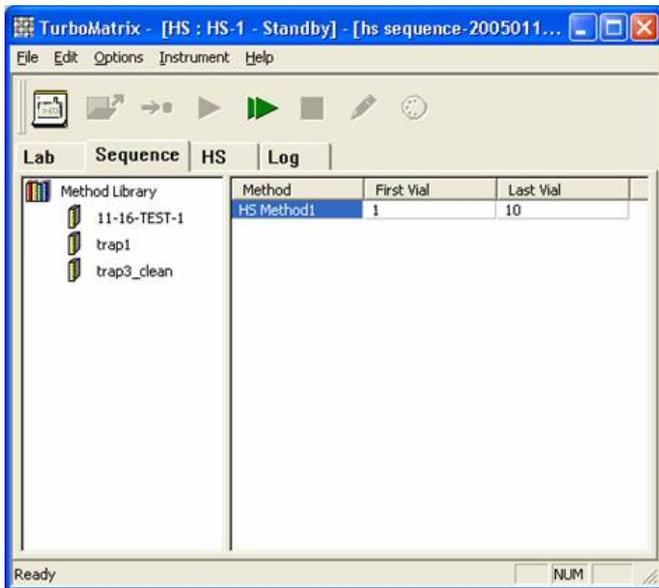
After generating a Sequence, your next step is to set up the HS sequence.

1. The TurboMatrix Sequence is generated during setup.

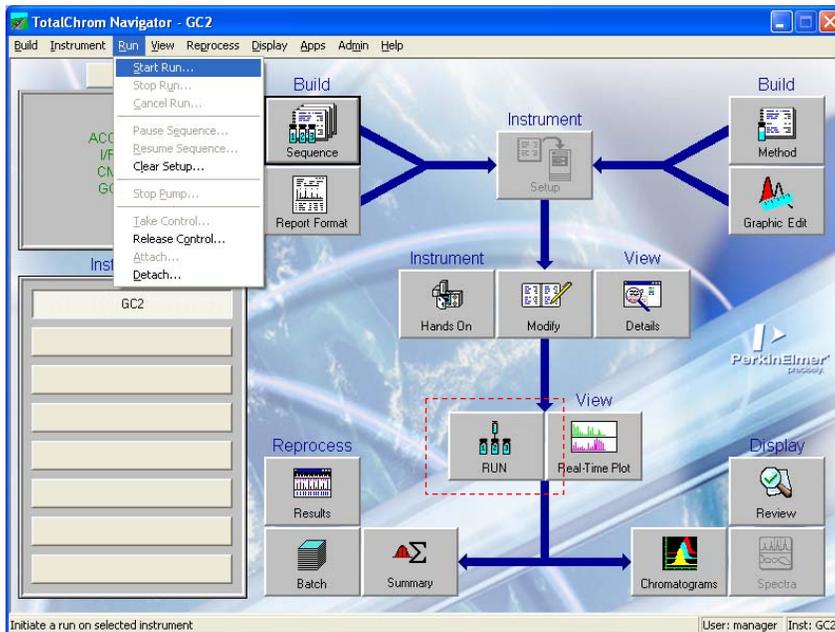


Check that the HS Sequence in TotalChrom (above) corresponds to the TurboMatrix sequence (below).



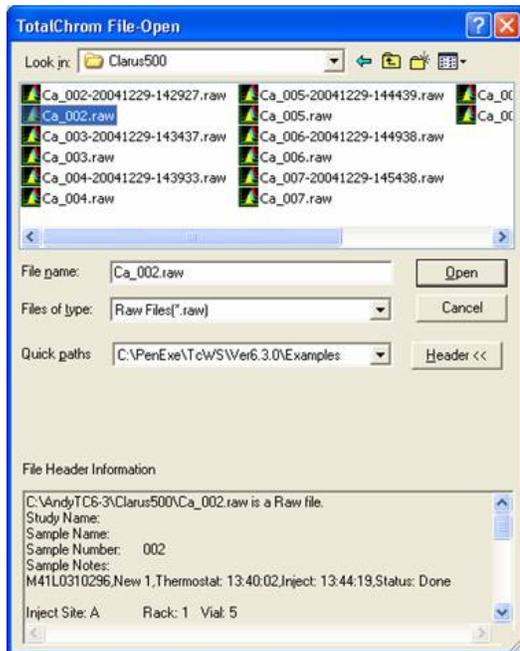


2. Start the TurboMatrix Run from TotalChrom by clicking the Run button.



Transfer of Sample Details for Reprocessing

The collected information goes into the .raw and .rst files for reprocessing.



Stopping a Run

- Click the Run button in the TotalChrom navigator and select Stop Run.

Note: For a coordinated shutdown, stop a run only from TotalChrom. Unexpected errors can occur if you stop a run from the TurboMatrix touch screen or from the Remote Control Software (RCS).

Limitations

- Do not cancel a run when using TurboMatrix sampling. Canceling a run clears the data but TotalChrom stays on the same line of the sequence waiting for the next injection. TurboMatrix advances to the next vial but the sequence does not advance and could become out of sync. (AWSN69DPWL)

Workaround: If you cancel a run and clear the setup (sequences) then there is no problem. If you don't clear the setup then the sequence will be misaligned with the TurboMatrix sequence and vial confusion will occur.

- When in the TurboMatrix MHE mode, using the vial by vial or any other way of generating a sequence (other than the sequence template) the resulting sequence will not be correct. TurboMatrix MHE Methods require more than one run for each vial. In such instances multiple lines should appear for each vial in the corresponding TotalChrom sequence. (DSCT68ZU8D)

Workaround: Use the sequence template when generating or modifying TotalChrom sequences to correctly build the appropriate sequence for MHE methods.

- If you have a failout caused by a missing vial when using the new TurboMatrix HS firmware with TotalChrom v6.3 and you have the failout cable connected between the TurboMatrix and the GC your sequence will advance two lines instead of one line. This happens because TotalChrom advances the sequence one line when the RCS reports the missing vial. Also, the firmware sends a failout signal through the cable to start the GC which now causes the sequence in TotalChrom to be misaligned. (AWSN69LMVH)

Workaround: When running the new TurboMatrix HS firmware with TotalChrom v6.3 do not connect the failout cable to the GC.

- The trap temperature set in the method can exceed the Maximum Trap Temperature set in the Preferences menu. (DSCT66KQXX)

Workaround: To prevent this, select the Trap Hi setpoint after making changes to the Set Trap Maximum Temperature.

- There is a problem with similar names in the firmware method editor and sequence editor. (DSCT65CPQZ)

Workaround: Use TotalChrom 6.3.

- Please do not use the TurboMatrix FailOut feature when running TotalChrom v6.3, with Remote Control Software v2.5, and TurboMatrix Headspace firmware v2.11. If you do not comply with this requirement, vial traceability will be compromised and the sequence will also be compromised. (NGRN5Z5JNY)
- Your system will become out of sync if your trap hold time is longer than your GC run time. (DSCT66CS68)

Workaround: Set your trap hold time shorter than your GC run time.

- Synchronized sequencing between TotalChrom and the TurboMatrix will only occur when running sample vials. For this reason, do not include Trap Clean methods in such sequences. (DSCT65CMV8)
- In a TotalChrom sequence, the .mth extension is added to the method file when the sequence is setup from the method editor. This in turn leads to separate lines of the TurboMatrix sequence and decreases the sample throughput. (DSCT68BP4Z)

Workaround: Go into the TotalChrom sequence and delete the .mth extension.

KNOWN BUGS IN v2.5.0

Instrument method parameters in the sequence template are taken from the Channel A method. (AWSN69QSGU)

If you try to run MHE on one channel and another method on the second channel with the same GC conditions (i.e., manual or autosampler) unexpected errors can occur if you build from the template and have MHE methods.

**If the TotalChrom sequence is aborted, the TurboMatrix sequence is not cleared.
(AWSN69QSMJ)**

If communication (or other type) errors occur within the LINK box and cause TotalChrom to abort a sequence in progress, this information is not communicated to the TurboMatrix software and can produce extended thermostat times.

RCS software does not get the missing vial message for the last vial if the previous vial was also missing. (DSCT698N6A)

When there are two empty vials at the end of a sequence then the log is missing that entry for the last missing vial. This only occurs on the last vial position of a sequence.

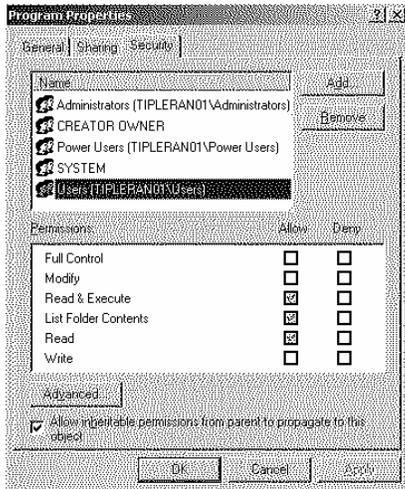
Under Windows XP and 2000 operation, Methods and Sequences could not be saved while logged on as a Limited account user. (ALCE5Y7JZS)

Some directories are 'locked' when logged on as an administrator. The TurboMatrix RCS default directory (..\TurboMatrix\Program\) is one of these.

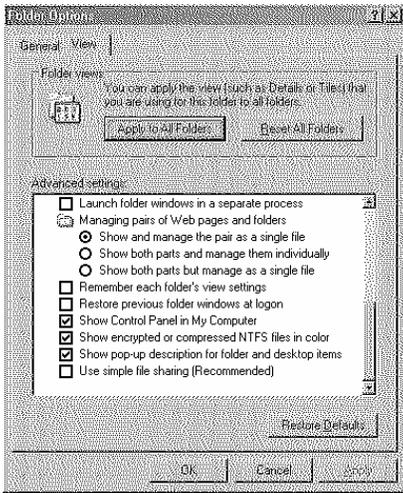
Workaround: To correct this we recommend the following:

- Disable the Administrator from locking the default directory or to select another directory in which to store Methods etc.
- Advise the user to disable Standby mode on the PC.

An Administrator can unlock that particular directory (by allowing 'Full Control', 'Modify' and 'Write') for Limited or Restricted Users in the Folder Properties Screen as follows:



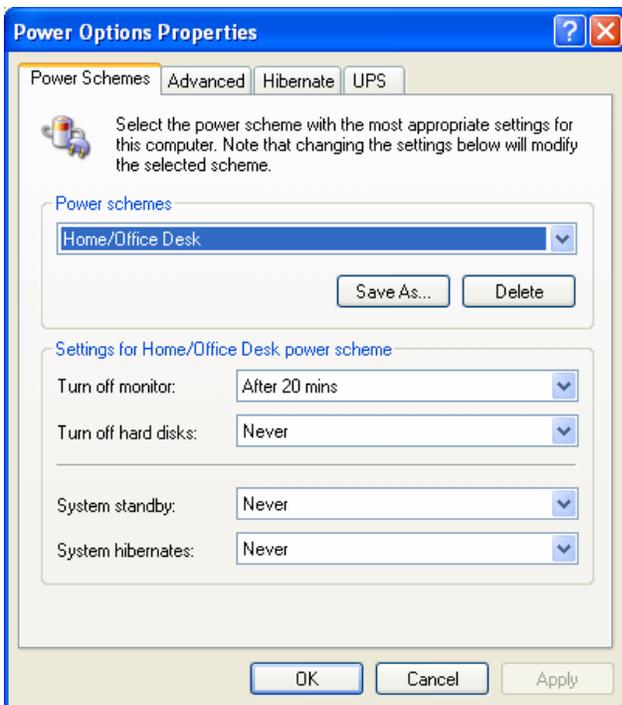
This works for both Windows XP and Windows 2000. In some Windows 2000 installations, it may be necessary to enable the "Use simple file sharing" option as follows (last entry):



Under WinXP and (Windows 2000), RCS stops unexpectedly while connected to an instrument once the System standby power management option goes into effect. (ALCE5Y7K3J)

It appears that the RCS stops unexpectedly when the System Standby within Power Options properties is set to something other than Never. System standby should be set to Never, but you can set the monitor to power off with no effect on the RCS. It was discovered that the System Standby setting of the Power Options Properties is the cause of the crash.

Workaround: It is recommended that this option be set to **Never**. Below is a screen capture of the Power Options Properties and what the recommended settings should be.



| Description | Workaround |
|-------------|------------|
|-------------|------------|

| | |
|--|--|
| The Track Oven option does not clear when subsequent methods are downloaded. (DSCT693LX3) | |
| There is an overlapping GUI (or a GUI refresh issue) in RCS when running two instruments connected with a USB. If you tab between the instruments the displayed pages do not refresh. (AWSN697M3M) | Use a dual COM port system instead of USB. |
| It is possible to select the Configuration tab of a connected instrument and change the sampler type (i.e., from a 40 to a 110). (DSCT692KQR) | Never select the Configuration tab of a connected instrument. |
| After installing the software, it is necessary to reboot the PC in order for the software to function. The reboot prompt is hidden in back of other windows at the end of installation and will be missed by the user. The software then appears to be faulty. | After installing the software, ensure that the system is rebooted prior to use. |
| Discrepancy between firmware and Remote Control Software (RCS) on Event Time. Keypad allows 999.99 min whereas 999.9 min is maximum in RCS. (TNGG5T2RFK) | Do not exceed 999.9 minutes. |
| Firmware overwrites RCS software for Priority Vials setting while firmware is under control of the software. (ALCE5RGK8C) | Do not leave HS on Setup page when connecting the RCS. |
| GC Cycle, Pre and Post Cryo-Focus maximum values are different in RCS (3276.7) from the HS keypad (999.9). (TNGG5T8LN2) | Do not exceed 999.9. |
| Incorrect access to vials 39 and 40 on HS110 in HS40 emulation mode. (AKCO5NMQZC) | Vials 39 and 40 are not available in this mode. |
| Internal standard setting is accessible in Constant mode. (DSCT5R2NFK) | This combination is not supported. |
| Log within firmware and Log within remote control software do not display the same information. In some instances the log on the firmware reported a message that said "Run Stopped!". However the log in the RCS did not display this message of "Run Stopped!". (ALCE5NTQQK) | User should check the keypad log page. |
| On Option tab, check box reads "Hi Psi Inject". (WQII5T6QKP) | Will not be applicable if user uses the kPa unit. |
| Method names do not support use of decimal points. (DSCT5SXJUA) | Do not use decimal points in method names. |
| Scroll bar and arrows on Log tab are not initially visible. (AKCO5PCLED) | Functionality re-appears during access. |
| Two methods with similar names may be entered into the firmware yet the firmware cannot differentiate between them. (DSCT5UAP6H) | Avoid the use of similar names for methods. |
| Unclean Uninstall of PerkinElmer folder from the Programs directory. AKCO5PCLCD) | Some files are left behind. These can be deleted if needed |
| Values on Trap Timing screen do not take effect immediately. (CMAA5U2P9M) | After changing any of the values in the Trap timing screen, hit OK to exit the dialog/save the values to the active method, BEFORE attempting to perform a decay time calibration. |
| A full run log is not handled properly. If the run log is filled up (either by running many sequences or encountering many errors), the firmware will stop functioning properly. It may lockup or get stuck in a particular analysis state. Note: the max size of the run log is 32k. (CMAA5N7PPN) | This situation will only occur after about 600 consecutive runs. |

| | |
|---|--|
| Date format in footer of printed HS Method Report does not match date format of "Created" & "Modified" fields within report. (ALCE5RHNE2) | No workaround |
| The application locks up when more than 249 characters is used to define the Instrument Name. (ALCE5R7HRK) | Avoid the use of more than 249 characters in instrument name. |
| Touch screen display dimming within Economy Mode does not work properly. (ALCE5NVNF2) | No workaround |
| Lost communication between PC and HS unit. | This has been reported by a few users in high throughput applications where significant post-run processing takes place on the PC. |

INFORMATION ON PREVIOUS RELEASES

Version 2.0

This is a functional revision of the software to support the TurboMatrix Headspace Trap product. This HS system provides a means of improving analytical detection limits by collecting most or all of the headspace vapor in an adsorbent trap prior to thermal desorption and gas chromatography.

Important: After opening and saving an old method in TurboMatrix v2.0 it can no longer be used in software and firmware versions less than 2.0.

Old files, or sequences with old files can be uploaded to HeadSpace and run correctly, but the old format remains, unless you open and save the methods to convert the methods and recreate the sequences with converted methods. When saving old files into the new format, they will no longer be able to run with an older instrument.

Version 1.2

Instrument settings now stored in a configuration file rather than in Windows Registry to enable operation under Microsoft Windows 2000, Service Pack 2.

Version 1.1 will continue to ship for users using Windows NT4 SP6a.

Version 1.1

Operation supported under Microsoft Windows NT 4.0, Service Pack 6a.

In this version the following issues have been resolved and features have been enhanced:

- Dr. Watson crash when adding a new method to a currently running sequence.
- TurboMatrix title in application bar is formatted incorrectly.
- TurboMatrix title in the About Box is formatted incorrectly.
- All cryofocus related objects within the HS "status" tabs are not available when connected to an instrument with cryofocussing configured.
- Shaker option on Status/Options tab not available when connected to an instrument with shaker installed.

- Shaker option on Status/Options tab is available when MHE mode is selected.
- In Method Editor, pre-cryo field has incorrect range.
- In Method editor, post-cryo field has incorrect range.
- Column Pressure (carrier) has incorrect range on Status/Pneumatics tab and in Method editor.
- Remove incorrect "Time remaining" item.
- Headspace software doesn't know state "Cryo Not Ready".
- Wrong vials are sometimes analyzed.
- Problems with multi-user permissions losing instrument configurations, NT4.

Software Issues in Previous Releases:

The following discrepancies are noted here for your information and are planned to be addressed in future software releases.

- Printing the Headspace Control Software Sequence information during a run generates a Dr. Watson error.
- The Headspace Control Software will upload instrument methods different from the current configuration.
- Headspace Control software locks up when opening TotalChrom Sequence Editor.
- Can delete a method from the method library while on the Sequence tab.