


HP G1701BA
Productivity
ChemStation
Software

Installation Manual

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Before You Begin

This manual provides instructions for installing and configuring the HP G1701BA Productivity ChemStation Software, revision B.00.00. Keep this manual to use if you ever need to reload the software.

This booklet assumes that your MSD or GCD hardware has been installed by your HP service representative.

Microsoft® Windows NT® 4.0 Notes

- Windows NT 4.0, with Service Pack 3 must be installed.
- If you are upgrading from an earlier revision, of ChemStation Software, you may have to change operating systems. See “Upgrading from G1701AA, Rev. A.03.xx” on page 10.

Web-based Product Update News

For the most current information on the HP ChemStation software, point your Web browser to HP web site at <http://www.hp.com/go/chem>. Look under **Service and Support** for **Software Status Bulletins and Patches**. You will need your product registration number to access the SSB site.

Minimum Hardware Requirements

All hardware and firmware must support Windows NT 4.0. The minimum requirements for operation of the ChemStation software are:

- Pentium PC (120 MHz or better) with BIOS that supports Windows NT 4.0.
- The power saver features of the PC must be disabled.
- SVGA color monitor
- 800x600, 256 colors video display resolution
- At least 48 Mbytes of RAM (additional RAM required for multiple instruments)
- At least 800 Mbytes of hard disk storage
The MSD ChemStation requires 115 Mbytes of disk space.
- CD-ROM drive
- Sound card and speakers or headphones
- Windows-supported mouse
- Data backup accessory is strongly recommended.
- Printer: HP LaserJet 4, 5, and 6p are supported, other LaserJet printers are supported only on “best-effort” basis.
- HP 82341C HP-IB card

Important Uninstall Notes

An uninstall utility exists that you can access from the Windows Control Panel Add/Remove Programs utility.

Required and Recommended Components

As you install the software, you are prompted to select which sets of files to install. You can keep clicking **Next** to accept the default, or you can use the following list to only install the files needed for the application mode you will be using.

Required and recommended components for quantitation modes

Components	Enhanced quantitation mode	MS Enviroquant (EPA) mode	Aromatics in gasoline mode	Drug analysis	GCD
Program files					
G1701BA MSD	Required	Required	Required	Required	Required
G1701BA Supplemental Files	Recommended	Recommended	Recommended	Recommended	Recommended
Custom Reports	Required	Required	Required	Required	Required
Environmental Forms (EPA only)		Required			
Supplementary files					
User Information ^a	Recommended	Recommended	Recommended	Recommended	Recommended
Utility Programs ^b	Recommended	Recommended	Recommended	Recommended	Recommended
Developer Information					
DrugAnalysis Supplementary Files ^c				Required	
Demo files^d					
MSD/GCD Demo Files	Recommended		Recommended	Recommended	Recommended
MS Environmental Demo Files		Required			
GC Environmental Data		Required			

- Includes software status bulletins, data analysis font customization readme, 6890 report sample, and ALS firmware upgrade.
- Includes Data file header browser utility, mass spectrum creation utility, isotope information utility, and chemical structures readme.
- Macros for customizing DrugAnalysis reports.
- The demo files are useful for learning how to use the ChemStation software. EnviroQuant tutorials require the Environmental demo files.

Installing the ChemStation Software

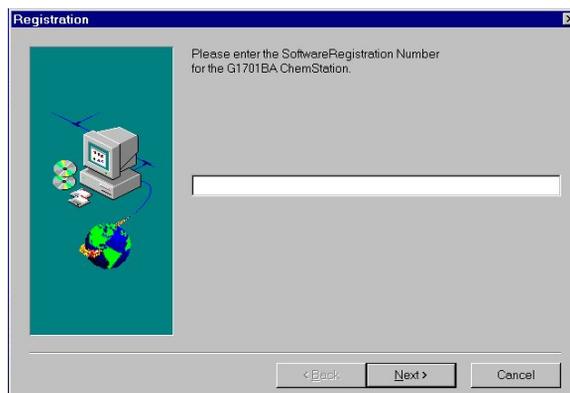
Windows NT 4.0 software configuration requirements

- NTFS disk partitions, but no compression for active data files
- Create a repair disk
- Default user accounts and passwords set up. See the CE CD_ROM for details.
- Minimal desktop configuration (wallpaper, desktop icons).
- Both NetBEUI and TCP/IP networking.
- Microsoft Internet Explorer for Internet access.
- Not all NT supported devices are supported for ChemStation products. Magneto-optical devices and CD-ROM writing units are not supported for data collection.
- Windows NT 4.0 system recovery disks created at completion of installation.

- 1 Turn on the computer. Windows NT is automatically started. If the computer is already on, make sure you close all programs. *Turn off any background applications, especially virus-protection or screen saver software.*
- 2 Log on as Administrator, or as a user with administrative permissions.
- 3 Place the HP G1701BA CD-ROM into the ChemStation CD-ROM drive.
- 4 Click the **Start** button and select **Run**.
- 5 When the Run box appears, type `<x>:\setup` where x is the CD-ROM drive.

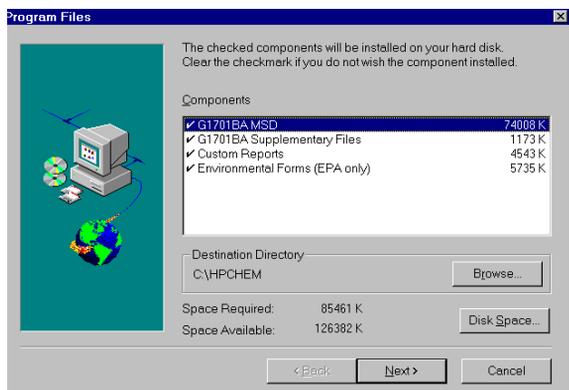
- 6 The first screen that appears is the Welcome screen. Select **Next** to continue.

Please review the system requirements screen and click **Yes**, if you meet all necessary NT system requirements or **No** to exit this installation program

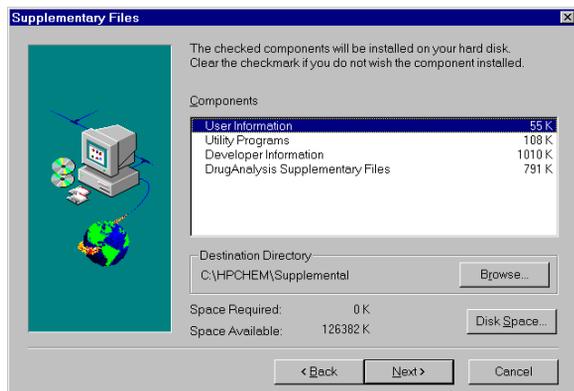


- 7 When prompted, enter the registration number provided on the software registration certificate and click **Next**.
- 8 The next **three** screens give you the opportunity to customize the installation.
 - See “Required and Recommended Components” on page 5 before you unselect any components.
 - You can use the **Browse** button to specify an alternative location to install the files.

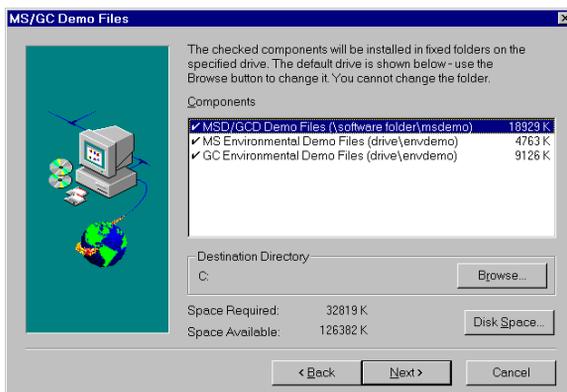
- 9 The Program Files screen is displayed. Click **Next** to accept the default components.



- 10 The Supplementary Files screen is displayed. Click **Next** to accept the default components.



- 11 The Demo Files screen is displayed. Click **Next** to accept the default components.



- 12 The files will be copied to your hard drive.

- 13 The following changes will be made to the PC configuration files:

- **autoexec.bat** — Sets the TEMP variable to a subdirectory temp of the directory the software will be installed in (for example, **c:\hpcchem\temp**).
- Inserts the ChemStation directory (for example, **c:\hpcchem, c:\hpcchem\sys**) into the PATH statement.
- **win.ini** — Inserts or modifies the PCS sections.

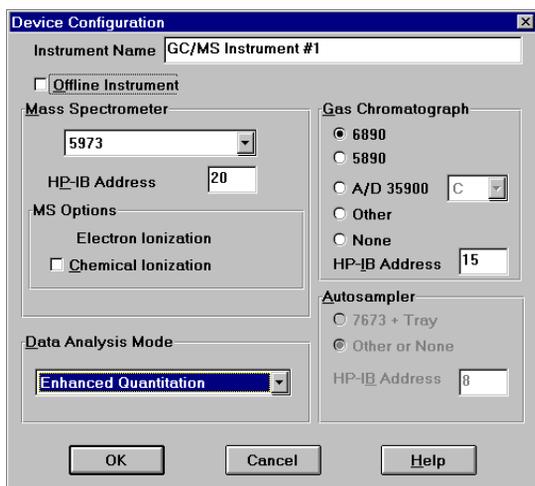
- 14 When installation is complete, you are prompted to reboot. After the system has rebooted, Windows NT 4.0 will restart. A configuration icon is created in the Productivity Tools group.

A record of your installation is stored in the ChemStation msexec directory (for example, **c:\hpcchem\msexec\install.d.txt**)

Configuring the ChemStation Software

- 1 Double-click the **Config** icon in the Productivity Tools group.

The Device Configuration dialog box allows you to specify your system's configuration.



- 2 Type in a name for the instrument.
- 3 **Deselect Offline Instrument.**
- 4 Select the type of MSD, and enter the correct HP-IB address for the MSD (usually **20** for an MSD and **21** for a GCD). Select the **CI** option, if this option is installed on your MSD.
- 5 Select the GC, and enter the correct HP-IB address for the GC (usually **15**).
 - The HP 5972 MSD and GCD can *only* be used with the HP 5890 GC.
 - The HP 5973 and the HP 6890 MSD can *only* be used with the HP 6890 GC.
 - HP 35900 A/Ds (C and E) are functional as standalone instruments. Their signals

cannot be combined with an MSD.

- 6 If you configure a 5890 GC, you will need to select the type of ALS and enter the HP-IB address for the controller. The default HP-IB address is **8** for the 5890 ALS and **9** for the GCD ALS.
- 7 Select the analysis mode you want to use. These choices are **not** available for GCD.

Enhanced Quantitation is the preferred and default mode of operation. It combines ease of use with powerful processing tools to increase productivity. This is the only mode that supports mixed mode quantitation (MS detector and GC detector).

EnviroQuant (EPA) is specifically designed for labs performing analyses compliant with US EPA methodology.

Aromatics in Gasoline is similar to Enhanced except that it adds features that make it compliant with ASTM-D5769-95.

Standard is the same as the Data Analysis program found on old revisions of the MSD ChemStation (G1034C Rev. C.03.00 and G1701AA Rev. A.02.00).

DrugAnalysis is designed for labs performing drug analysis.

- 8 Click **OK** when you have specified all parameters.

-
- 9 When prompted, enter the correct dc polarity (if this window does not appear, you have selected **Offline Instrument**). Use the setting in the test data supplied with your instrument.
- 10 When **Instrument configuration saved** appears on the message line, select **File / Exit** to close the window.

The MS Config program adds a group to the Windows NT Start Menu Programs list with the instrument name. The MS Top and MS Data Analysis icons are in this group.

NOTE The instrument program group window may not display both icons. If so, you can select the window and click Refresh under the View menu.

The program also sets up a directory structure under the MSD ChemStation directory labeled with the number of the instrument. For example, **c:\hpchem\1\data**, **c:\hpchem\1\methods**, **c:\hpchem\1\sequence**, and **c:\hpchem\1\5973**.

- 11 If you want shortcut icons on the desktop, **copy** the icons from the program group. Shortcuts created in the **c:\hpchem\msexe** directory will **not** function correctly.

Important *Uninstall* notes

You can Uninstall the ChemStation software using the **Add/Remove Programs** icon in the Windows NT 4.0 control panel.

Note that the Uninstall utility cannot remove any elements added after ChemStation installation; for example, any thing added by the MS Config program. Before running the Uninstall, use the MS Config utility to **Delete All Instruments**.

Some ChemStation elements cannot be removed by Uninstall. Autoexec.bat is left with the temp path statement and the path to HPCHEM and HPCHEM\SYS are in the path statement. You need to specify another TEMP directory before you run Uninstall.

Win.ini still contains the PCS section.

HPCHEM and its subdirectories are still on the hard drive. HPCHEM has no files in it while 1,2,3, and 4 have methods and data files intact. MSEXE contains **instcfg.txt** and **install.d.txt**. Start / Programs still contains the MSTop and DataAnalysis icons for each instrument configured, but productivity MSD has been cleared.

If you have moved icons to the desktop, they will still be there even though the underlying programs have been deleted.

Upgrading from G1701AA, Rev. A.03.xx

This upgrade requires changing the operating system from Windows 95 to Windows NT 4.0, with Service Pack 3. HP does not support dual-boot operating systems.

Customer Responsibilities

- This upgrade requires **formatting** the PC hard disk. This procedure will result in **loss of all data** on the hard disk. Be sure to back up all the following.
 - Methods and Data
 - Sequences
 - Tune Files (*.U) and the “comma-separated variables” (*.CSV) files associated with the Tune Files
 - User-created libraries
 - Any other files that **may ever** be wanted
- The BIOS of the PC may need to be updated for Windows NT. Verify the BIOS setup on any **non-Vectra** PC, and check with the manufacturer for the correct version of BIOS for Windows NT 4.0.
- Other software applications on the PC may not work with Windows NT 4.0. Check with the manufacturer.
- PC Hardware accessories may not work with Windows NT 4.0. Check the hardware compatibility list.

Prepare the PC for upgrade

- 1** Verify that the Customer Responsibilities listed above have been performed:
 - Make sure that the customer has backed up all desired data files.
 - Verify that the BIOS on the PC is correct for Windows NT 4.0.
- 2** Verify that the PC meets the minimum hardware requirements for this upgrade. See “Before You Begin” on page 4.
- 3** Verify that the correct HP-IB card is installed.
 - Turn off your computer, and remove the cover.
 - Verify the HP-IB card part number. If it is (82335-xxxxx), install an HP 82341 card. Follow the instructions with the card.
 - Replace the cover and turn on the computer.
- 4** Install the drivers for the HP-IB card. See “Installing the HP 82341C HP-IB drivers” on page 12.

Upgrade the PC Operating System

CAUTION This procedure will destroy all data on the computer. All critical files *must* be backed up.

- 1 Format the hard drive. See the specific documentation for the PC if you wish to change the size of existing partitions.
- 2 Install Windows NT 4.0.

Use either the HP ChemStation System Emergency Boot Diskette and Recovery CD-ROM or a Windows NT 4.0 CD-ROM. Refer to the manual or readme file.

Be sure to specify NTFS for the system file format.

Select **Install the most common components**.

The power saver features of the PC must be disabled.
- 3 Select the proper time zone and time.
- 4 Set up your display for 256 colors.
- 5 Install Microsoft Service Pack 3 for Windows NT 4.0.
- 6 Reboot.

Software configuration requirements

- NTFS disk partitions, but no compression for active data files
- Create a repair disk
- Default user accounts and passwords set up. See the CE CD_ROM for details.
- Minimal desktop configuration (wallpaper, desktop icons).
- Both NetBEUI and TCP/IP networking.
- Microsoft Internet Explorer for Internet access.
- Not all NT supported devices are supported for ChemStation products. Magneto-optical devices and CD-ROM writing units are not supported for data collection.
- Windows NT 4.0 system recovery disks created at completion of installation.

Network Notes

If the PC will be running on TCP/IP network, the system registry should be modified to prevent network session time-out, and subsequent loss of network connections:

- 1 Run `Windows\system32\regedit32.exe`.
- 2 Navigate through the menus following this path:
- 3 `HKEY_LOCAL_MACHINE` on **Local Machine** | **System** | **CurrentControlSet** | **Services** | **NetBT** | **Parameters** | **SessionKeepAlive**.
- 4 With Radix set to Hex, set **Data** to `fffffff` (eight "F"s).
- 5 Click **OK**.

Installing the HP 82341C HP-IB drivers

The HP G1701BA Productivity ChemStation supports *only* the HP 82341C HP-IB card. If this is a bundled system the card and drivers will be installed at the factory.

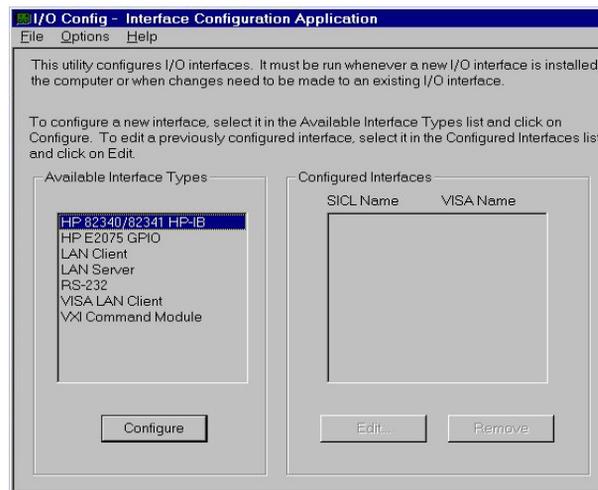
Install the SICL drivers

The HP 82341C HP-IB card drivers (SICL drivers) are supplied on a separate HP Analytical CD-ROM.

- 1 Insert the **HP-IB drivers for 82341C** CD-ROM into the CD-ROM drive. The volume name is Sicl.
- 2 Click **Start / Run**, and **Browse** to find **X:\F0102\hpiolib.exe**. F.01.02 is the revision of drivers to install.
- 3 The program will display a welcome message. Click **Next** to continue.
- 4 Next choose the directories for the HP-IB drivers. Use same drive where the ChemStation software is (or will be) installed, usually **C:**. Use the default directory names, **\SICLNT** and **\VXIPNP**.
- 5 A panel is displayed for you to review your choices. Click **Next** to accept your choices; if you need to change you choices, click **Back**.
- 6 After the files are copied to the hard drive, reboot the PC.

Configure the HP 82341 HP-IB Card

- 1 After the PC has rebooted, click **Start** and click the **HP I_O Config** icon in the HPI_O Libraries group.
- 2 When prompted, select the **HP 82340/82341 HP-IB**. Click **Configure**.

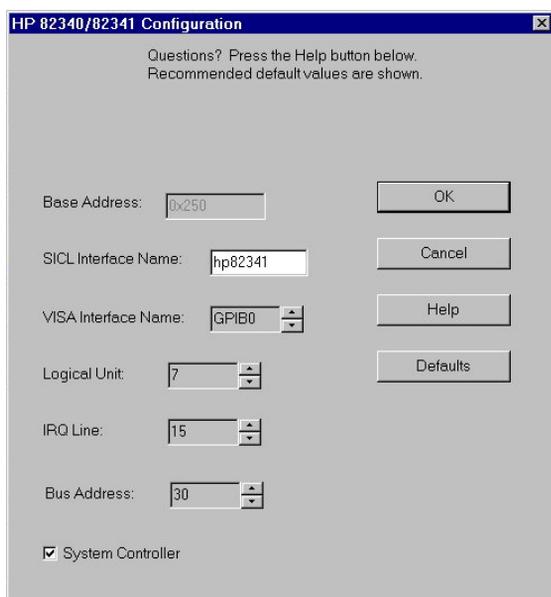


3 Make the following changes:

- SICL Interface Name: **hp82341**: hp82341 (**Must** be lower case)
- Bus Address: **30** (You **must** use the scroll bar to set this value.)

If these fields are incorrect, the MSD ChemStation software **will not work**.

4 Click **OK** to save the configuration.



5 Reboot the PC, and power-cycle all instruments connected to the HP-IB.

CAUTION Always allow the diffusion pump of the MSD or GCD to cool before turning off the power to prevent backstreaming.

Troubleshooting the 82341C HP-IB Card

If your HP 82341C HP-IB card is not communicating, complete the following troubleshooting steps before replacing the card.

- 1 Confirm that the HP-IB settings in “HP L_O Config” have the SICL interface set to **hp82341** and the bus address set to **30**.

This is the **most** frequent cause of 82341C cards failing to communicate. The default settings of the 82341C card **will not** communicate with the ChemStation.

- 2 If the L_O Config settings are correct and you still cannot communicate, try turning off each device on the bus and reseating the cables. Power-up the devices in this order:

- GC
- ALS
- MSD
- Printer
- PC

Failure to power cycle any of these HP-IB devices can “lock up” the HP-IB bus.

CAUTION Always allow the diffusion pump of the MSD or GCD to cool before turning off the power to prevent backstreaming.

WARNING If you are using hydrogen as a carrier gas, do not start carrier gas flow until the MSD has pumped down. Read the *Hydrogen Carrier Gas Safety Guide* (5955-5398).

- 3 Check the HP-IB address switch settings of all the devices on the HP-IB bus. If an address HP-IB DIP switch was not completely set to the ON position. This will cause the MSD/HP-IB interface card to “lock up” the HP-IB and prevent any of the devices from communicating with the 82341C card.
- 4 If the HP 82341C card is still not communicating use the “Edit VISA Config” panel to aid your troubleshooting. This button is located in the 82340/82341 Edit Configuration panel. Do **not** change any settings; or you will have to de-install and reinstall the HP-IB drivers.

Once in VISA configuration, press the “Auto Add Devices” button. An additional panel lists the devices on the HP-IB bus. If none appear, but the card shows in the Device Manager, the problem is the cabling of the HP-IB devices, probably at the PC.

If devices appear, but not all of them, then power cycle the “missing” devices. Wait long enough for their capacitors to bleed down before you power the instrument on again.



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