Windows XP Professional Configuration

for Agilent ChemStation Rev. B.01.03 or higher

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Introduction

Agilent delivered ChemStation PC Bundle systems have Windows XP Professional Service Pack 2 pre-installed and are configured for optimum ChemStation performance. Non-Agilent PC Bundle systems require some manual configuration changes to be performed in order to provide optimum performance.

This document identifies and describes all parameters necessary to configure a non-Agilent PC Bundle system as well as important settings like Internet Security. Please follow the steps outlined in the document.
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Install Windows XP

Keep your PC disconnected from the Internet until you have installed the appropriate security patches and hot fixes. It’s strongly recommended to install the latest security fixes as supported from Agilent and virus definitions prior to connecting to a network.

1. Install Windows XP from recovery CD or Windows XP Professional CD-ROM. During the setup of Windows XP provide the Computer Name, Administrator password and network settings. Select to either join an existing domain or set up the system in workgroup mode.

2. Check the Windows version by typing “winver” at the Start/Run command prompt: If necessary, install Service Pack 2 for XP. Ignore the option to archive current files and reboot the system.

3. To secure your system against viruses please install Symantec’s Norton AntiVirus.

Configure Windows XP Settings

Some changes within this document are mandatory for the ChemStation to work properly on a Windows XP system. Some changes will optimize application performance. Other changes will have a graphical or minor impact.

To indicate the relative importance of individual settings, each item is categorized as:

• MUST: These changes must be applied.

• PERFORMANCE: These changes will improve system performance.

• OPTIONAL: Most of these changes will affect the graphical display of the application.
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[OPTIONAL]  1  General Layout: (Start Menu, right-click/Properties)
  a  “Start Menu” Tab: Select “Classic Start Menu”
  b  Start Menu/”Customize” button: (See Figure 1)
     In “Advanced Start menu options”:
        Disable the following option:
        •  “Use Personalized Menus”

     Enable in the following options:
     •  “Display Administrative Tools”
     •  “Display Favorites”
     •  “Display Log Off” (for Workgroup Systems, this option is only available after configuration step 6)
     •  “Display Run”
     •  “Enable dragging and dropping”
     •  “Expand Control Panel”
     •  “Expand Network Connections”
     •  “Expand Printers”
     •  “Scroll Programs”
     •  “Show Small Icons in Start menu”
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[MUST] 2 Folder Options:

(right-click Start/Explore)

   a Set “View” to “Details”

   b Choose “Tools/Folder Options”

      - ‘General’ tab: for Tasks select “Use Windows classic folders”

      - ‘View’ tab:

        Disable the following options:
        - Use simple file sharing
        - Hide extensions for known file types

        Enable the following option:
        - Display the full path in the title bar

      Apply these settings to all folders by selecting the “Apply to All Folders” button

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[MUST] 3 Internet Explorer: (Start/Programs/Internet Explorer) (See Figure 2) “Tools”/“Windows Update”: Apply all critical security patches.

Figure 2  Defining Critical Security Updates
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[MUST] 4 Internet Security Settings: (Start/Settings/Control Panel/Security Center)
   a. Click “Manage security settings for Automatic Updates” (See Figure 3):
      - Enable “Turn off Automatic Updates”

Figure 3  ‘Automatic Updates’ Dialog
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b. From the list of Resources select “Change the way Security Center alerts me” (See Figure 4):
   - Disable “Automatic Updates”

![Alert Settings Dialog](image-url)
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c Click "Manage security settings for Windows Firewall"
   "General" tab: Enable “On (recommended)” and also enable “Don’t allow exceptions” (See Figure 5)

![Windows Firewall Dialog]

Figure 5  ‘Windows Firewall’ Dialog

NOTE

With Norton AntiVirus versions prior to Norton AntiVirus 2005, Windows Security Center will be aware that you have Norton AntiVirus installed, but it will not be able to determine its working status. Please either refer to Windows for help on how to disable the Security Alert for Virus Protection and monitor Norton AntiVirus yourself or refer to Symantec support to obtain an update which adds compatibility to Windows Security Center.
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MUST 5 Register Windows XP Professional with Microsoft.

MUST 6 Windows Logon Options: (For Workgroup Systems, only)
(Start/Settings/Control Panel/User Accounts)

Select “Change the way users log on or off”
  - Disable “Use the Welcome Screen”
  - Disable “Use Fast User Switching”

NOTE Be aware that with the option “Don’t allow exceptions” selected, you will not receive a notification when Windows Firewall blocks a program, even if you enabled this option on the “Exceptions” tab. Running ChemStation does not require any exceptions, but other programs that are needed for your work might require some. Please check with your IT department whether exceptions are needed and are appropriate within your IT department’s security strategy.

NOTE For PCs controlling LC/MSD and LC/MSD Trap systems less strict security settings are needed to ensure communication with the MSD part of the instrument. Also if you want to use the Agilent Bootp Service, less strict settings apply. These settings are described at the end of this document.
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[MUST] 7 Power Options: (Start/Settings/Control Panel/Power Options) (See Figure 6)

a Select the ‘Power Schemes’ tab
   - From “Power Schemes” drop down box select “Always On”
   - Set all available drop down boxes under “Settings for Always on Power scheme” to “Never”

b Select the ‘Hibernate’ tab: disable ’Enable hibernation’

Figure 6 ‘Power Options Properties’ Dialog
8 **Local Security Policy:** (Start, Programs, Administrative Tools, Local Security Policy)

In the Security Settings tree open Local Policies folder, then Security Options folder:

- Double-click the following policy listed in the right hand panel:
  “Network Access: Sharing and security model for local accounts”
- In the displayed dialog select the following item from the drop down list:
  “Classical - local users authenticate as themselves”
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[MUST] 9 Disable Automatic Startup of Windows Messenger:
(Start/Programs/Windows Messenger/Tools/Options): Select the ‘Preferences’ tab (See Figure 8)
In the ‘General’ section disable “Run Windows Messenger when Windows starts”.
Select ‘OK’ and reboot the system.

Figure 8  ‘Options’ Dialog, ‘Preferences’ Tab
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[MUST] 10 System Configuration: (Start/Settings/Control Panel/Regional and Language Options) (See Figure 9)
Regional options should be set to ‘English (United States)’ from the drop down list.

![Figure 9](image-url)  
‘Regional and Language Options’ Dialog

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If regional format other than ‘English (United States)’ is used, the following settings are mandatory. The settings can be defined by clicking the ‘Customize’ button (See Figure 10):

- Decimal symbol = . (point)
- Digit grouping symbol = , (comma)
- List separator = , (comma)

![Figure 10 ‘Customize Regional Options’ Dialog](image)
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[PERFORMANCE] 11 Hard disk Properties: (right-click Start/Explore, right-click on Local Disk (C:\)/Properties)
In the ‘General’ tab, disable “Allow Indexing Service to index this disk for fast file searching”.
Apply the changes by selecting ‘OK’. In the selection screen, enable the option “Apply changes to C:\, subfolders, and files”.
Disable this setting for all non-removable drives. (See Figure 11).

NOTE
Microsoft applies special sets of permissions to certain folders, such as the SNTUninstallKB... folders which relate to Windows HotFixes and Patches. These folder permissions result in error messages when applying new settings for the Indexing Service. Select ‘Ignore’, when these messages appear.

Figure 11: ‘Local Disk (C:) Properties’ Dialog
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**[PERFORMANCE]**

**12 Screen layout:** (right-click desktop/Properties):

Please change the following items in the ‘Display Properties’ dialog (See Figure 12):

a. ‘Themes tab’: Change “Windows XP” to “Windows Classic"

b. ‘Desktop’ tab/’Customize Desktop’ button:
   - ‘General tab’: Enable all 4 desktop icons (My Documents, My Computer, My Network Places, Internet Explorer)
   - ‘General’ tab: Disable “Run Desktop Cleanup Wizard every 60 days”

c. ‘Screen Saver’ tab: Change Screen Saver from “Windows XP” to “none”

d. ‘Appearance’ tab/’Effects’ button: disable all items, except for
   - Hide underlined letters for keyboard navigation.....

e. ‘Settings’ tab: 1024 by 768 resolution, 32 bit color, 75 Hertz refresh or higher. (Please note: some old monitors may only work with 60 Hz.)

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![Figure 12](Figure_12 Tabs for 'Display Properties' Dialog)
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[PERFORMANCE]  13 System Properties: (Start/Settings/Control Panel/System)
   a  ‘Advanced’ tab/Performance/’Settings’ button (See Figure 13):
      • ‘Advanced’ tab/Virtual Memory: For optimum performance use the ‘Change’ button to adjust the paging file size to a value of 2 to 3 times of the physical RAM on the PC.
      • ‘Data Execution Prevention’ tab: Enable “Turn on DEP for essential Windows programs and services only”.

![Figure 13 ‘Performance Options’ Dialog](image)
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b. ‘Advanced’ tab/Startup and Recovery/‘Settings’ button (See Figure 14):

- ‘System startup’ section: Change both “Time to display...” fields from '30' to '3' sec.
- ‘System failure’ section: Set “Write debugging information” to “none”
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- c. ‘Advanced’ tab/‘Error Reporting’ button: Select “Disable error reporting” and “But notify me when critical error occur”
- d. ‘Remote’ tab: Disable “Allow Remote Assistance invitations to be sent from this computer” and “Allow users to connect remotely to this computer”.
- e. ‘System Restore’ tab: Enable “Turn off System Restore on all drives”
  Reboot the system after enabling this setting.
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[OPTIONAL] 14 Recycle Bin Properties: (right-click on desktop icon Recycle Bin)
Enable the following options (See Figure 15):

a  “Use one setting for all drives”

b  “Do not move files to the Recycle Bin. Remove files immediately when deleted”

c  “Display delete confirmation dialog”

[OPTIONAL] 15 Screen layout: (right-click desktop/arrange icons by)
Disable “Align to grid”
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Security Settings for LC/MSD and CE/MSD Systems

The MSD part of LC/MSD and CE/MSD systems requires Security Settings differing from those outlined above in configuration step 4. Additionally, the communication with the MSD is sensitive to the order NICs in the ‘Adapters and Bindings’ dialog. These settings are described in the following passages.

**NOTE**

These settings should only be applied on PCs controlling LC/MSD or CE/MSD systems.
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**Internet Security Settings:** (Start/Settings/Control Panel/Security Center)

- Click “Manage security settings for Windows Firewall”
  - ‘General’ tab (See Figure 16):
    - Select option “On (recommended)”
    - Disable option “Don’t allow exceptions”

![Figure 16] ‘Windows Firewall’ Dialog, ‘General’ Tab
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- ‘Exceptions’ tab (See Figure 17):
  Select option “Display a notification when Windows Firewall blocks a program”
  Add ‘hpcore.exe’ to the list of ‘Programs and Services’ and enable an exception for this program.
  Disable exceptions for all other programs listed by default.

Figure 17  ‘Windows Firewall’ Dialog, ‘Exceptions’ Tab
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**Advanced Network Settings:** (Start/Settings/Control Panel/Network Connections)
Select menu “Advanced”/“Advanced Settings”.

- ‘Adapters and Bindings’ tab (see Figure 18):
  Make sure that the Local Area Connection pertaining to the “LC/MS” or “CE/MS” NIC is the first item in the list of connections. The names of your LAN cards may differ from those shown in the example. You can tell which LAN card is the Instrument LAN by comparing the IP addresses assigned to the LAN cards. The LAN pertaining to the company intranet/internet will typically have an IP address assigned by organization’s Static IP policy or by a DHCP server. Check with your network administrator.

![Figure 18](image-url)  
‘Advanced Settings’ Dialog, ‘Adapters and Bindings’ Tab
Security Settings for LC/MSD Trap Systems

The MSD part of LC/MSD Trap systems requires Security Settings differing from those outlined above in configuration step 4. These settings are described in the following passages.

NOTE

These settings should only be applied on PCs controlling LC/MSD Trap systems.
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**Internet Security Settings:** (Start/Settings/Control Panel/Security Center)

a. Click “Manage security settings for Windows Firewall”
   - ‘General’ tab (See Figure 19):
     Select option “On (recommended)”
     Disable option “Don’t allow exceptions”

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**Figure 19**  ‘Windows Firewall’ Dialog, ‘General’ Tab
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• ‘Exceptions’ tab (See Figure 20):
  Select option “Display a notification when Windows Firewall blocks a program”

Figure 20  ‘Windows Firewall’ Dialog, ‘Exceptions’ Tab
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- ‘Advanced’ tab (See Figure 21):
  In the ‘Network Connection Settings’ section, de-select the Local Area Connection pertaining to the “LC/MS” NIC. Typically, this is “Local Area Connection 2”.

![Figure 21](image-url)  ‘Windows Firewall’ Dialog, ‘Advanced’ Tab
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- From the list of Resources select “Change the way Security Center alerts me” (See Figure 22)
  - Disable “Automatic Updates”
  - Disable “Firewall”
  - Enable “Virus Protection”

![Alert Settings Dialog](image)

**Figure 22**  ‘Alert Settings’ Dialog

**NOTE**  With these settings, you will not receive any alerts regarding the state of Windows Firewall. Be sure that you monitor the state of Windows Firewall yourself
Security Settings for Systems using Agilent Bootp Service

If you use Agilent Bootp Service for administration of IP addresses for Agilent instruments on a LAN, your system requires Security Settings differing from those outlined above in configuration step 4. These settings are described in the following passages.

NOTE

These settings should only be applied on PCs using Agilent Bootp Service.
Internet Security Settings: (Start/Settings/Control Panel/Security Center)

a. Click “Manage security settings for Windows Firewall”
   - ‘General’ tab (See Figure 23):
     Select option “On (recommended)”
     Disable option “Don’t allow exceptions”

![Figure 23](image-url)  'Windows Firewall' Dialog, 'General' Tab
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- ‘Exceptions’ tab (See Figure 24):
  Select option “Display a notification when Windows Firewall blocks a program”
  Add ‘bootpwin.exe’ to the list of ‘Programs and Services’ and enable an exception for this program. The ‘bootpwin.exe’ can be found in the folder c:\Program Files\Common Files\Agilent Shared\BootP\bin. Disable exceptions for all other programs listed by default.

Figure 24  ‘Windows Firewall’ Dialog, ‘Exceptions’ Tab
Additional Modifications (To be performed using an Administrator user account)

Install ChemStation (to be installed using an Administrator user account)

Install the ChemStation Software to C:\Chem32 (logged on with “Administrator” user account). Reboot the system.

Profiles and Group Policies to run ChemStation as PowerUser / User (to be set using an Administrator user account)

The ChemStation system needs to be installed using an operating system Administrator user account. To run the system with the configured options outlined in this document, all Users and PowerUsers should use the same settings.

Some of the outlined settings can be simplified by using the Windows Group Policy or by copying user profiles in order to simplify the User/PowerUser set up. But some changes (e.g. performance settings) can only be set manually using the Administrator account.