

MS Software Installation Guide

Chromeleon 7.2 SR1 MUa

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1 About the Documentation

1.1 About this Document

This guide provides instructions for installing and upgrading MS instrument drivers and MS control software on stand-alone Chromeleon 7™ workstations and Client / Server installations. The following operations are covered:

- installing / updating Chromeleon 7
- installing / upgrading Thermo Scientific Mass Spectrometry drivers
- uninstalling Thermo Scientific MS software components

The following installation scenarios are covered in particular:

- Workstation installation on a PC that has no MS Software installed
- Workstation installations on a PC with Xcalibur / TraceFinder installed
- Client / Server installations

This guide also describes:

- Hardware and software requirements for installing Chromeleon 7

The intended audience includes both laboratory administrators and local IT professionals who have administrative privileges for the system.

Note: If you are installing multiple workstations that will be networked together, or adding a station to an existing networked installation, please contact the Thermo Fisher Scientific Service for Dionex Chromatography Software for support.

1.2 Document Conventions

The following formatting is used throughout the document to indicate text with special importance.

 **Caution:** Indicates text that must be followed carefully to avoid potential problems.

Note: Indicates information of special interest.

Tip: Indicates information that will help you to use the software more efficiently.

1.3 Other Documents

Other documents provided with Chromeleon will help you to learn more about the Chromeleon software. Their scope is described in the *Document Overview*, which is included with the Chromeleon installation media in printed form. The documents are also available in electronic form on the installation disk in the *Documents* folder.

Tip: The *Glossary* describes Chromeleon-specific terms and common abbreviations used throughout the documentation.

The *Instrument Configuration Manager Help* for Chromeleon 7 also provides information about installing and configuring Thermo Scientific Mass Spectrometry drivers.

The *Chromeleon 7 Installation Guide* provides further information about installing Chromeleon.

2 Supported Thermo Scientific MS Instruments

Chromeleon 7.2 SR1 MUa provides support for controlling the Thermo Scientific Mass Spectrometry systems listed in the table below.

To operate an instrument a corresponding instrument driver is required. Depending on the instrument driver used, installation of the driver either has to be performed using the Chromeleon setup program or manually. The table below provides information about the supported MS instruments and the applicable installation type for each driver.

MS Instrument	Installation via...
<ul style="list-style-type: none"> • ISQ Series (ISQ Classic, ISQ-QD and ISQ-LT) Single Quadrupole Mass Spectrometers 	Chromeleon setup program
<ul style="list-style-type: none"> • Exactive Series Benchtop Orbitrap Mass Spectrometers (Exactive Plus and Q Exactive) 	Chromeleon setup program
<ul style="list-style-type: none"> • TSQ 8000 	Chromeleon setup program
<ul style="list-style-type: none"> • TSQ Series 3.1 Triple Quadrupole Gas Chromatography Mass Spectrometers (TSQ Classic, TSQ 8000 Evo, TSQ Duo) 	manual installation
<ul style="list-style-type: none"> • TSQ Quantiva • TSQ Endura 	manual installation
<ul style="list-style-type: none"> • MSQ Plus 	manual installation

TSQ 8000 and TSQ Series 3.1 instrument drivers

Starting with Chromeleon 7.2 SR1 MUa, an updated instrument driver (**TSQ Series 3.1 driver**) for the TSQ Series is available, which replaces the previous TSQ 8000 driver that was distributed with Chromeleon version 7.2 SR1.

The new TSQ Series 3.1 driver provides support for an extended number of instruments – the TSQ Classic, TSQ 8000 Evo and TSQ Duo MS systems.

The TSQ Series 3.1 driver, however, has to be installed manually as described in → section **5.6 Installing a TSQ 8000 Classic, TSQ 8000 Evo or TSQ Duo**.

3 System Requirements / Compatibility

3.1 PC Hardware Requirements

Processor	With GC-MS:	2.4 GHz Dual Core Processor
	With LC-MS:	2.4 GHz Dual Core Processor
	Recommended:	3 GHz Intel Core i7* or better
RAM	Minimum:	4 GB*
	Recommended:	8 GB or more*
Hard Disk	With ISQ/TSQ	
	Series:	250 GB**
	With Exactive:	500 GB**
	With MSQ Plus:	150 GB
	With TSQ Quantiva /	
	Endura:	400 GB
Optical Drive	DVD	
Display	Minimum:	1024 x 768 resolution 32-bit color
	Recommended:	1280 x 1024 (MSQ Plus) or 1440 x 900 or higher resolution 32-bit color
USB Ports	For license device:	1 port
	MSQ Plus:	1 port
LAN Ports	ISQ/TSQ Series:	2 ports
	Exactive:	2 ports
	TSQ Quantiva /	
	Endura:	2 ports
	Includes 1 additional LAN port for the Chromeleon Client/Server PC.	

* For taking full advantage of this hardware, a 64-bit Windows version is required.

** These hard disk requirements are set to enable storage of a substantial amount of data. The software itself requires approximately 4 GB disk space on the C drive (twice as much during an update). In addition, a few GB disk space must always be available on the C drive for Sequences cached in the XVault.

3.2 Supported Operating Systems

Chromeleon MS instrument control is designed to work on the operating systems listed below:

- Microsoft Windows 7 (32 bit and 64 bit)

Note: The MSQ Plus supports Windows7 (32 bit) Operating Systems only.

For more details, refer to the Chromeleon 7 Installation Guide which is available in the **Documents** folder on the Chromeleon DVD.

4 Prerequisites

This chapter provides information about the software components that are required for controlling Thermo Scientific MS instruments using Chromeleon.

4.1 Chromeleon 7

Chromeleon version 7.2 or later is required for controlling Thermo Scientific MS instruments. For an overview of the MS instruments supported in Chromeleon, see → section **2 Supported Thermo Scientific MS Instruments**

4.2 Thermo Scientific MS Instrument Drivers

4.2.1 Thermo Scientific Exactive Series and ISQ Series

Chromeleon version 7.2 SR1 or later is required. The Chromeleon 7.2 SR1 setup program includes dedicated drivers for the following MS instruments:

- Exactive Series
- ISQ Series
- TSQ 8000

The drivers for these instruments can be installed at the user's option by running the Chromeleon setup program (*setup.exe*).

Tip: By default, the Chromeleon setup program installs MS editor components for the above listed systems which allow viewing and editing of instrument methods.

Note: For information about the updated TSQ Series 3.1 instrument driver distributed with Chromeleon 7.2 SR1 MUa see → section **2 Supported Thermo Scientific MS Instruments**.

4.2.2 Thermo Scientific MSQ Plus

Chromeleon version 7.2 SR1 or later is required. The instrument driver for the MSQ Plus is not part of the Chromeleon 7.2 SR1 setup package. Therefore, the driver has to be installed in a separate installation step. For details see → section **5.4 Installing an MSQ Plus Instrument Driver**.

4.2.3 Thermo Scientific TSQ Quantiva and TSQ Endura

Chromeleon version 7.2 SR1 MUa and instrument driver version 1.1 are required for controlling the Thermo Scientific TSQ Quantiva and TSQ Endura Quadrupole Mass Spectrometry systems.

The instrument driver for these instruments is not integrated into the Chromeleon setup package. Therefore, the driver has to be installed manually in a separate installation step. For details see → section **5.5 Installing a TSQ Quantiva or TSQ Endura Driver**.

Warning: TSQ Quantiva or Endura running driver version 1.0 may require hardware upgrades to be compatible with version 1.1. Please consult with your local MS field service engineer prior to attempting an upgrade!

4.2.4 Thermo Scientific TSQ 8000 Classic, TSQ 8000 Evo and TSQ Duo

Chromeleon version 7.2 SR1 MUa is required for controlling the Thermo Scientific TSQ 8000 Classic, TSQ 8000 Evo and TSQ Duo Quadrupole Mass Spectrometry systems.

The instrument driver for these instruments is not integrated into the Chromeleon setup package. Therefore, the driver has to be installed manually in a separate installation step. For details see → section **5.6 Installing a TSQ 8000 Classic, TSQ 8000 Evo or TSQ Duo.**

4.3 Thermo Foundation

Chromeleon 7 requires Thermo Foundation™ platform version 3.0 SP2. Foundation can be installed from the Chromeleon 7.2 SR1 Distribution DVD.

If a Foundation version prior to 3.0 SP2 is already present on the computer, you may upgrade it to version 3.0 SP2 by running the FoundationPlatform.exe application provided in the Packages\Thermo Foundation folder on the Chromeleon 7.2 SR1 distribution DVD.

Note: Foundation 3.0 SP2 supports Windows 7 operating systems only.

When installing an ISQ Series or Exactive Series instrument driver using the Chromeleon setup package, Foundation 3.0 SP2 will be installed automatically. Other instrument drivers, for example a Thermo Scientific TSQ Endura or TSQ Quantiva, however, may require manual installation of Thermo Foundation. Refer to the table below for details.

MS Instrument	Foundation
<ul style="list-style-type: none"> • ISQ Series (ISQ Classic, ISQ-QD and ISQ-LT) Single Quadrupole Mass Spectrometers • Exactive Series Benchtop Quadrupole-Orbitrap Mass Spectrometers (applies only to Exactive Series instrument s version 2.3 or later) 	<p>Foundation version 3.0 SP2 is installed automatically when installing the instrument driver for one of the instruments listed on the left.</p> <p>Earlier Foundation versions present on the PC will be upgraded during installation or upgrade of Chromeleon.</p>
<ul style="list-style-type: none"> • MSQ Plus 	<p>Thermo Foundation is not installed automatically. Users who want to operate the MSQ Plus have to install Foundation manually. For details see → section 5.4 Installing an MSQ Plus Instrument Driver.</p>
<ul style="list-style-type: none"> • TSQ Quantiva / TSQ Endura 	<p>Thermo Foundation is not installed automatically. Users who want to operate the TSQ Quantiva or TSQ Endura have to install Foundation manually. For details see → section 5.5 Installing a TSQ Quantiva or TSQ Endura Driver.</p>

MS Instrument	Foundation
<ul style="list-style-type: none"> • TSQ Series 3.1 (TSQ 8000 Classic , TSQ 8000 Evo, TSQ Duo) 	<p>Thermo Foundation is not installed automatically. Users who want to operate an instrument of the TSQ Series 3.1 have to install Foundation manually. For details see → section 5.6 Installing a TSQ 8000 Classic, TSQ 8000 Evo or TSQ Duo.</p>

4.4 Chromeleon Instrument Licenses

For controlling MS instruments in Chromeleon 7, an

- **Instrument Class 1 license**

in combination with one of the following licenses is required:


- **SQ / QqQ GC-MS Data Acquisition** (ISQ Series, TSQ 8000 Classic, TSQ 8000 Evo, and TSQ Duo)
- **LC-MS Data Acquisition** (Exactive Series, TSQ Quantiva, TSQ Endura, and MSQ Plus)


5 Installing the MS Software Components


5.1 General Information

Starting with Chromeleon version 7.2, support for controlling Thermo Scientific MS instruments is provided. Depending on the MS instrument, the required MS software components have to be installed either manually or by using the Chromeleon setup package. The setup package allows installation of the components at the user's option. If you chose not to install them during setup, you can still install the components at a later time by re-running the Setup.

The step-by-step descriptions provided below are applicable to a PC with no version of DCMS^{Link}, Xcalibur, TraceFinder or any other Thermo Scientific MS software installed. For information about installing a specific instrument driver, refer to instructions.

 **Caution:** Make sure that the person performing the installation has local administrator privileges in Windows! Otherwise, the installation will fail.
If you are asked to do so, reboot the computer. After the reboot, the administrator who started the setup must log in again so that the installation process can be completed correctly.

 **Caution:** Make sure that third-party firewalls are turned OFF.

 **Caution:** Make sure that there is enough free drive space on your PC. Otherwise, the installation will fail (→ chapter **3.1 PC Hardware Requirements**).

Note: The (built-in) Windows Firewall **service** must be running. (Do not confuse with Windows Firewall.) If you need to turn off Windows Firewall for some reason, use the Windows Firewall **Control Panel program** (Control Panel\System and Security\Windows Firewall), but leave the Windows Firewall **service** running.

Note: Do not connect new instruments/modules via USB to your PC until the Chromeleon software installation is finished and the Chromeleon Installation Qualification (IQ) is completed and passed.

Note: Uninstalling previous versions of Chromeleon / PeakNet 6 is not required before installing Chromeleon 7.

Note: Setup time varies depending on the presence of third-party components. For example, installing .NET framework libraries may take considerable amount of time.

It is best to **close all applications** before starting the setup to ensure that it can update relevant system files.

Note that certain IT tools and anti-virus software may lock system files and therefore require rebooting after the setup. In addition, installing some of the third-party components (such as Windows Installer and

.NET Framework) usually require a reboot. If such a reboot is required, Chromeleon setup will automatically resume without the need for user interaction.

5.2 Installing an Exactive or ISQ Series Instrument Driver

This section describes how to install an MS instrument driver with Chromeleon 7.2 SR1 or later for controlling one of the following MS instruments:

- ISQ Series (Classic, QD, LT) Single Quadrupole Mass Spectrometer
- Exactive Series (Exactive Plus, Q Exactive) Benchtop Quadrupole-Orbitrap Mass Spectrometer

The instructions below apply to first-time installations of Chromeleon.

Tip: If Chromeleon 7.2 SR1 is already present on your computer but no MS instrument driver is currently installed, refer to → section **5.3 Modifying MS Options in Chromeleon** for instructions on how to modify an existing Chromeleon installation.

1. Insert the installation disk into the PC. The AutoPlay window opens automatically and offers links for accessing the Chromeleon Setup window and exploring the installation disk:

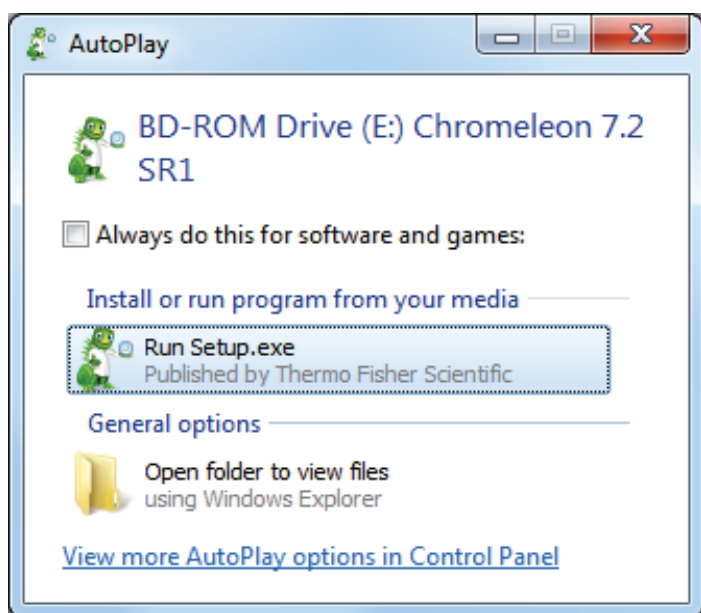


Figure 1: Chromeleon AutoPlay window

2. Click **Run Setup.exe**.

If you are upgrading from a previous Chromeleon version or installing the software for the first time, the first page of the setup displays the **Install** and **Advanced options** buttons (Figure 2).



Figure 2: Chromeleon Setup window

3. Click **Advanced options** (note that you must read and accept the license terms and conditions first).

This will display the list of optional components.

4. Under **Mass spectrometry drivers**, select the Exactive or ISQ instrument driver.

Important: Only one Mass Spectrometry driver can be installed per computer.

After an MS instrument driver has been installed in Chromeleon, it is not possible to later change the driver by re-running the Chromeleon setup. Refer to → section 8 **Uninstalling MS Software Components** for further details.

5. Change the installation path, if necessary. By default, Chromeleon is installed in the following location:

C:\Program Files\Thermo\Chromeleon (32-bit systems)

C:\Program Files (x86)\Thermo\Chromeleon (64-bit systems).

Note: The location of any other third-party software package, for example, Microsoft SQL Server, cannot be changed.

6. Click **Install**. This will launch the installation of the Chromeleon installation package and also install the specified MS instrument driver.

Along with the MS instrument driver, the Chromeleon setup also installs Thermo Foundation version 3.0 SP2, if not yet present.

If an earlier version of Foundation already exists on the computer, it will be upgraded by the Chromeleon setup.

If a version later than 3.0 SP2 is detected, the setup program will skip installation of Foundation.

7. If either the dongle or the License File is missing, or if the previous procedures failed (for example, due to a mismatch between the dongle and the file), click **Skip**.
You will have to provide a license after the setup has finished. Refer to the **Chromeleon 7 Installation Guide** for details about installing and activating your license.
8. As the final step, an **Installation Qualification Report** will be created. To open the report, click the Installation Qualification Report link provided on the setup window (Figure 4).



Figure 3: Chromeleon Installation complete

Tip: By default, the Chromeleon setup program installs MS editor components for the Exactive and ISQ systems which allow viewing and editing of instrument methods.

5.3 Modifying MS Options in Chromeleon (Exactive or ISQ Series)

5.3.1 Adding an MS instrument driver

Should your existing Chromeleon 7.2 SR1 installation not yet include an MS instrument driver, you can install the instrument driver any time later by re-running the Chromeleon Setup.exe application.

Note: You will need access to the Chromeleon installation media to modify an installation.

Note: Also make sure that the user who starts the setup has local administrator privileges.

1. Insert the Chromeleon 7.2 SR1 installation disk.
2. Click **Run Setup.exe**. The setup window opens in **Maintenance Mode** (Figure 5):

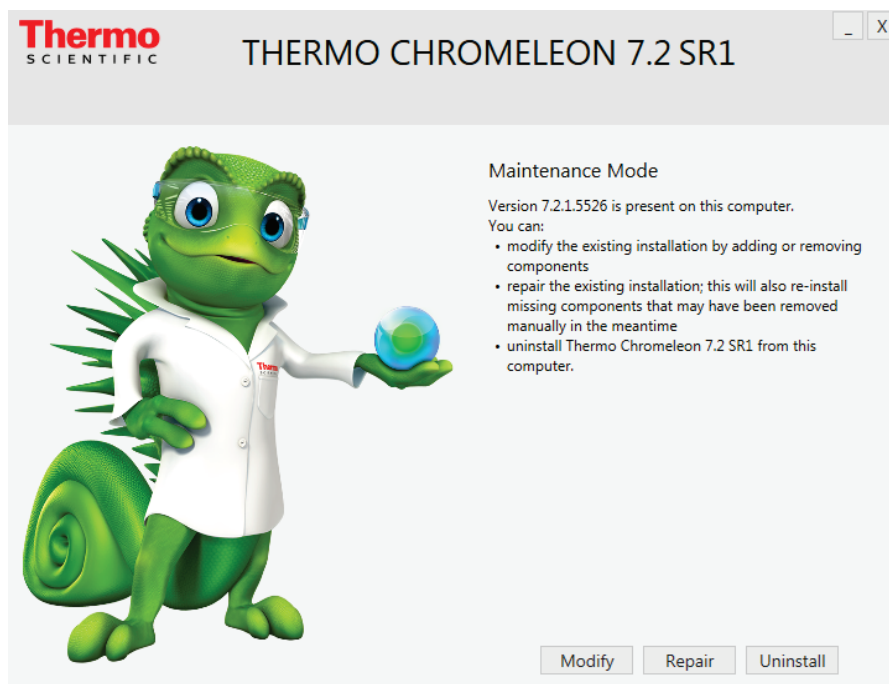


Figure 4: Chromeleon Setup window in Maintenance Mode

3. Click **Modify**.
4. Under **Mass spectrometry drivers**, select the required MS instrument driver.

Important: Only one Mass Spectrometry driver can be installed per computer.

5. Click **Install** to start installation of the selected MS driver.
6. Follow the on-screen instructions, and reboot if requested.
7. After the installation is completed, you can proceed to configure the instrument in the Chromeleon Instrument Configuration Manager program.

Note: If you want to change your MS instrument configuration later, the driver must be uninstalled manually.

5.3.2 Replacing an MS instrument driver

To replace an installed MS instrument driver by another driver, proceed as follows:

1. Manually uninstall the MS instrument driver (→ section 8 **Uninstalling MS Software Components**).
2. After you have removed the previous driver, add the new driver by following the steps described in section → **5.3.1 Adding an MS instrument driver**.

5.3.3 NIST Mass Spectral Search Program

A demo version of the NIST Mass Spectral Search program is installed automatically with Chromeleon 7.2 SR1. For manual installation, the demo program is provided on the Chromeleon installation disk in the Packages\NIST Mass Spectral Search Program folder.

5.4 Installing an MSQ Plus Instrument Driver

Chromeleon version 7.2 SR1 or later is required for operating an MSQ Plus Mass Spectrometer. The software components required for controlling the instrument are not part of the Chromeleon setup package; they have to be installed in a separate step.

In addition, the software components listed below are required to control the MS instrument. The components are provided on the Chromeleon 7.2 SR1 installation disk.

Driver / Software Package	Location on Chromeleon Installation Disk
Thermo Foundation™, version 3.0 SP2 or later	\Packages\Thermo Foundation\ThermoPlatform.exe
Thermo Scientific MSQ Plus instrument driver	\Drivers\Thermo MSQ Plus\Setup.exe

Note: You will need access to the Chromeleon installation media to add the instrument driver.

Note: Also make sure that the user who starts the setup has local administrator privileges.

To install the driver proceed as follows:

➤ Install Thermo Foundation

1. Insert the Chromeleon installation disk.
2. Navigate to the **\Packages\Thermo Foundation** folder and run **ThermoPlatform.exe**.
3. Follow the on-screen instructions, and reboot if requested.

➤ Install the MSQ Plus driver

1. Insert the Chromeleon installation disk.
2. Navigate to the **Drivers\Thermo MSQ Plus** folder.
3. Double-click the **Setup.exe** application to start installation of the MS driver.
4. Follow the on-screen instructions, and reboot if requested.

After you have installed the above MS components, you can proceed to the Chromeleon Instrument Configuration Manager where you can install the corresponding Chromeleon driver and configure the instrument. For details, see the Chromeleon Instrument Configuration Manager Help.

5.5 Installing a TSQ Quantiva or TSQ Endura Driver

Chromeleon version 7.2 SR1 MUa or later is required for operating a TSQ Quantiva and TSQ Endura Mass Spectrometer.

In addition, the software components listed below are required. The components are provided on the Chromeleon 7.2 SR1 and Chromeleon 7.2 SR1 MUa installation disk, respectively.

Driver / Software Package	Location on Chromeleon Installation Disk
Thermo Foundation™, version 3.0 SP2 or later	Chromeleon 7.2 SR1 installation disk: \Packages\Thermo Foundation\ThermoPlatform.exe
Thermo Scientific TSQ Endura/Quantiva instrument driver	Chromeleon 7.2 SR1 MUa installation disk: For full instrument control use the “Full” driver: \Drivers\Thermo TSQ Endura Quantiva\Full\TSQEnduraQuantiva.exe – Or – For viewing and editing methods only use the “Client” driver: \Drivers\Thermo TSQ Endura Quantiva\Client\MSCMClient-Release.exe
Microsoft SQL Server 2008 R2 SP2 Express with Advanced Services	Chromeleon 7.2 SR1 MUa installation disk: Drivers\Thermo TSQ Endura Quantiva\Microsoft SQL Server 2008 R2 SP2 Express\InstallSQLServerR2.bat

Note: You will need access to the Chromeleon installation media to add the instrument driver.

Note: Also make sure that the user who starts the setup has local administrator privileges.

To install the components proceed as follows:

➤ **Install Thermo Foundation 3.0 SP2 or later**

1. Insert the Chromeleon 7.2 SR1 installation disk.
2. Navigate to the \Packages\Thermo Foundation folder and run **ThermoPlatform.exe**.
3. Follow the on-screen instructions, and reboot if requested.

➤ **Install Microsoft SQL Server 2008 R2 SP2 Express with Advanced Services**

1. Insert the Chromeleon 7.2 SR1 MUa Distribution DVD.
2. On the Startup screen, double-click **Open folder** to view files.
3. Navigate to the **Drivers\Thermo TSQ Endura Quantiva\Microsoft SQL Server 2008 R2 SP2 Express** folder and double-click **InstallSQLServerR2.bat**.

➤ **Install the MS instrument driver**

1. Insert the Chromeleon 7.2 SR1 MUa installation disk.
2. Install one of the following drivers:
 - If you want to install the driver with full instrument control, navigate to the **\Drivers\Thermo TSQ Endura Quantiva\Full** folder. Double-click the **TSQEnduraQuantiva.exe** application to start the installation of the driver.

–OR–

 - If you want a driver for viewing and editing methods only, navigate to the **\Drivers\Thermo TSQ Endura Quantiva\Client** folder. Double-click the **MSCMClient-Release.exe** application to start the installation.
3. Follow the on-screen instructions, and reboot if requested.

After you have installed the above MS components, you can proceed to the Chromeleon Instrument Configuration Manager where you can install the corresponding Chromeleon driver and configure the instrument. For details, see the Chromeleon Instrument Configuration Manager Help.

Note: Only one MS instrument driver per computer is allowed.

Existing TSQ Quantiva / Endura Instrument Driver Installations (Driver Version 1.0)

If an instrument driver version 1.0 is already installed on the computer, both the instrument driver for the TSQ Quantiva / Endura, any incompatible Foundation version, and Microsoft SQL Server have to be uninstalled before you can start installing the required software packages for the TSQ Quantiva / Endura.

Make sure to observe the correct order of steps when uninstalling the individual software components. For details, refer to the Foundation Installation Guide and the Installation Manual for the MS instrument.

Warning: TSQ Quantiva or Endura running driver version 1.0 may require hardware upgrades to be compatible with version 1.1. Please consult with your local MS field service engineer prior to attempting an upgrade!

Note: The below instruction apply only to the “Full” driver version of the TSQ Quantiva / Endura.

➤ **Uninstall TSQ Quantiva / Endura instrument driver version 1.0**

To uninstall the instrument driver proceed as follows:

1. Click **Start -> Control Panel -> Programs and Features**.
2. Select the instrument driver and then click **Uninstall**.
3. Follow the on-screen instructions, reboot if requested.

➤ **Uninstall existing Foundation version prior to Foundation 3.0 SP2**

1. Click **Start -> Control Panel -> Programs and Features**.
2. Select the Foundation application and then click **Uninstall**.
3. Follow the on-screen instructions, reboot if requested.

➤ Uninstall Microsoft SQL Server

For instructions about uninstalling an instance of Microsoft SQL Server, refer to the Microsoft support website at:

<http://support.microsoft.com/kb/955499/en-us>.

After the obsolete instrument driver, Foundation and Microsoft SQL Server versions have been removed, install the latest versions of the components by observing the following sequence of steps:

1. Install Chromeleon 7.2 SR1
2. Install Foundation 3.0 SP2
3. Install Chromeleon 7.2 SR1 MUa
4. Install SQL Server 2008 R2 SP2 Express with Advanced Services.
5. Install the TSQ Quantiva / Endura instrument driver

5.6 Installing a TSQ 8000 Classic, TSQ 8000 Evo or TSQ Duo

Chromeleon version 7.2 SR1 MUa or later is required for operating a TSQ 8000 Classic, TSQ 8000 Evo and TSQ Duo Mass Spectrometer.

In addition, the software components listed below are required to control the MS instrument. They are provided on the Chromeleon 7.2 SR1 and Chromeleon 7.2 SR1 MUa installation disk, respectively. The software components are not part of the Chromeleon setup package; they have to be installed in a separate step.

Driver / Software Package	Location on Chromeleon Installation Disk
Thermo Scientific TSQ 8000 Evo/Duo instrument driver	Chromeleon 7.2 SR1 MUa installation disk: \Drivers\Thermo TSQ Series 3.1\Full\setup.exe –Or– \Drivers\Thermo TSQ Series 3.1\Client\setup.exe

Note: You will need access to the Chromeleon installation media to add the instrument driver.

Note: Also make sure that the user who starts the setup has local administrator privileges.

To install the driver proceed as follows:

➤ Install Thermo Foundation

1. Insert the Chromeleon 7.2 SR1 installation disk.
2. Navigate to the **\Packages\Thermo Foundation** folder and run **ThermoPlatform.exe**.
3. Follow the on-screen instructions, and reboot if requested.

Note: Thermo Foundation is not required for the "Client" driver version.

➤ **Install the instrument driver**

1. Insert the Chromeleon 7.2 SR1 MUa installation disk.
2. Install one of the following drivers:
 - If you want to install the driver with full instrument control, navigate to the **Drivers\Thermo TSQ Series 3.1\Full** folder. Double-click the **setup.exe** application to start the installation of the driver.

–OR–

 - If you want a driver for viewing and editing methods only, navigate to the **\Drivers\Thermo TSQ Series 3.1\Client** folder. Double-click the **setup.exe** application to start the installation.
3. Follow the on-screen instructions, and reboot if requested.

After you have installed the above MS components, you can proceed to the Chromeleon Instrument Configuration Manager where you can install the corresponding Chromeleon driver and configure the instrument. For details, see the Chromeleon Instrument Configuration Manager Help.

Note: Only one MS instrument driver per computer is allowed.

Note: If an earlier version of the instrument driver is already installed, it must be removed before installing a more recent driver version.

5.7 Configuring an MS instrument in Chromeleon

After Chromeleon and the MS instrument driver have successfully been installed, the MS system has to be configured in the Chromeleon Instrument Configuration Manager.

The basic steps to configure an instrument in Chromeleon are described below.

Start the Chromeleon Instrument Controller service:

1. Right-click the Chromeleon tray icon in the notification area of the Windows task bar.
2. Click **Start Chromeleon Instrument Controller**.

Tip: If the Chromeleon tray icon is not visible on the task bar, click **Start**, point to **Programs** and **Chromeleon 7**, and then click **Services Manager**.

Start the Instrument Configuration Manager:

- In the Chromeleon Services Manager, click **Configure Instruments** (only available if Instrument Controller Service is running.)

–OR–

- Click **Start**, point to **Programs** -> **Thermo Chromeleon 7**, and then click **Instrument Configuration Manager**.

Configure the instrument:

To control the MS instrument with Chromeleon, the Chromeleon Mass Spectrometer driver must be added in the Instrument Configuration Manager. The table below shows the supported MS instruments and their corresponding Chromeleon drivers:

Chromeleon Driver Name	Controlled MS Instrument
Mass Spectrometer	<ul style="list-style-type: none">• ISQ Series (including ISQ Classic, ISQ-QD and ISQ-LT)• Exactive Series• TSQ Series 3.1 (TSQ 8000 Classic, TSQ 8000 Evo, TSQ Duo)• TSQ Quantiva• TSQ Endura
Legacy Mass Spectrometer	<ul style="list-style-type: none">• MSQ Plus

- Create an instrument and then add the **Mass Spectrometer** Driver to the instrument to configure an Exactive, ISQ or TSQ Series system. For information on how to create an instrument and add modules in Chromeleon, see → the Chromeleon Instrument Configuration Manager Help, chapter **Add, Configure, or Delete Instruments and Modules**.
- After you have added the driver, the Configuration dialog box for the Mass Spectrometer opens automatically where you can specify the settings for the MS system.

Important: Chromeleon cannot control the MS system, if it is configured under Foundation Instrument Configuration and Chromeleon at the same time. Make sure the instrument is configured only in one application.


For detailed information on installing and configuring the Mass Spectrometry and Legacy Mass Spectrometer drivers in Chromeleon refer to → the Chromeleon Instrument Configuration Manager Help.

6 Installation on a PC with Xcalibur / TraceFinder installed

Chromeleon 7.2 SR1 installs and runs Thermo Foundation 3.0 SP2. If your current Xcalibur or TraceFinder installation includes a different Foundation version than 3.0 SP2, this may result in operating errors in Xcalibur /TraceFinder and Chromeleon.


- If a Foundation version prior to 3.0 SP2 is present on your computer, Foundation will be updated by installing the Chromeleon MS software components (→ section 5 **Installing the MS Software Components**).
- If a Foundation version later than 3.0 SP2 is present on your computer, remove Foundation from your computer (→ section 8 **Uninstalling MS Software Components**).


6.1 Client / Server Installations

 **Caution:** Client / Server installations should only be performed by Chromeleon specialist. Also refer to the Chromeleon Enterprise Installation Guide.

Installation of Chromeleon **7.2 SR1** in a Client/Server environment basically follows the same steps as for installations on stand-alone workstations. Follow the steps as described in → section 5 **Installing the MS Software Components**.

6.2 Other Installation Considerations

 **Caution:** Xcalibur includes services that are incompatible with Windows Terminal Server or Citrix environments. Do not install Xcalibur on any PC used as a Windows Terminal Server or Citrix Server.

 **Caution:** Do *not* use Windows Server based PCs as IPCs. The Foundation components have not been validated on Windows Server Operating Systems.

7 Using Xcalibur/TraceFinder and Chromeleon on the same PC

If you are using Xcalibur/TraceFinder and Chromeleon on the same PC, only *one* software package can be connected to the hardware at any given time.

To use Chromeleon to control your LCMS or GCMS:

1. Remove the LC, GC and MS hardware drivers from the Foundation Instrument Configuration.
2. After doing so, start the Chromeleon Instrument Controller. (Right-click the Chromeleon tray icon in the notification area of the Windows task bar and then click **Start Chromeleon Instrument Controller**.)

To use Xcalibur/TraceFinder to control your LCMS or GCMS:

1. First stop the Chromeleon Instrument Controller. (Right-click the Chromeleon tray icon in the notification area of the Windows task bar and then click **Stop Chromeleon Instrument Controller**.)
–OR–
Enable the **Temporarily used in other application** option on the General page in the Chromeleon Instrument Configuration Manager.
2. Then add the LC, GC and MS hardware drivers to the Foundation Instrument Configuration.

8 Uninstalling MS Software Components

If MS software components are no longer useful to you, you have to remove them manually from the computer.

Also observe that MS software components cannot be removed by uninstalling Chromeleon. This applies specifically to these software components:

- Thermo Foundation
- Thermo Mass Spectrometry drivers:
 - ISQ Series,
 - Exactive Series,
 - TSQ Series,
- MSQ Plus Mass Spectrometer.

Note: By default, the Chromeleon setup program installs MS editor components for the Exactive, ISQ and TSQ Series systems which allow viewing and editing of instrument methods.

To remove the software components from the computer proceed as follows:

1. Click the **Start** button.
2. In the Windows Control Panel, click **Programs and Features**.
3. Find the program you want to uninstall, then right-click and select **Uninstall/Change**.
4. Follow the on-screen instructions to remove the program.
5. If the wizard asks so, reboot your computer.

Tip: When uninstalling other Thermo Scientific software packages, for example, Xcalibur or TraceFinder, make sure to uninstall components in the correct order (see → section **9.2 Uninstalling Xcalibur / TraceFinder** for details).

9 APPENDIX

The procedures described in this appendix should be considered advanced topics. They assume knowledge beyond what is explicitly described in this appendix and should only be performed by qualified individuals.

9.1 Performance Improvements on PC with Xcalibur / TraceFinder

Chromeleon 7.2 SR1 is supported on PCs that also have Xcalibur and TraceFinder installed. However, Xcalibur includes a number of services that automatically load and run on PC startup. These services, which are not needed by Chromeleon, consume memory and may degrade system performance.

If Chromeleon will be used exclusively on the PC, it may be desirable to disable the Xcalibur related services. The following Xcalibur services are not used by Chromeleon and may be disabled using the Services.msc applet:

- ThermoFisher.Foundation.AcquisitionService
- Thermo.Foundation.Acquisition.Service.Monitor
- FinniganDatabaseService
- Finnigan Security Server
- FinniganSecurityService
- Finnigan Auto Log Off

Tip: Remember that these services must be re-enabled in order to run Xcalibur.

9.2 Uninstalling Xcalibur / TraceFinder

If your current Xcalibur or TraceFinder installation includes a Thermo Foundation version other than 3.0 SP2, you may use the procedure below to remove Xcalibur and TraceFinder from your PC (also see → section 8 **Uninstalling MS Software Components**).

Step 1: Remove all components from the Xcalibur instrument configuration

1. Launch the Xcalibur Instrument Configuration utility.
2. Remove the MS instrument component from the Xcalibur instrument configuration.
3. Save and exit.

Step 2: Uninstall the following components in order, rebooting as prompted

1. Uninstall the Xcalibur MS drivers.
2. Uninstall the Xcalibur GC Devices.
3. Uninstall Thermo Foundation (only needed if installed version is not 3.0 SP2).
4. Uninstall TraceFinder.
5. Uninstall Xcalibur.
6. Now follow the steps described in → section 5 **Installing the MS Software Components** to install the MS software control components.

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