

October, 2010



# **iControl RC1<sub>e</sub><sup>TM</sup> 5.0 Installation Guide**

## **The Path to Safe and Efficient Processes**

**METTLER TOLEDO**

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## Contents

<b>1</b>	<b>System Requirements</b>	<b>5</b>
<b>2</b>	<b>Deployment Package</b>	<b>5</b>
2.1	Contents of the iControl RC1e™ 5.0 CD-ROM	5
2.2	Content of the iControl Mixing Guidelines CD-ROM	5
<b>3</b>	<b>Introduction</b>	<b>6</b>
<b>4</b>	<b>Installing iControl RC1e™ 5.0</b>	<b>7</b>
4.1	Necessary user rights	7
4.2	Installing iControl RC1e™ 5.0 without updating a previous installation	7
4.3	Updating iControl RC1e™ 4.0 with iControl RC1e™ 5.0	7
4.4	Updating WinRC with iControl RC1e™ 5.0	7
4.5	Starting the iControl RC1e™ 5.0 installation	8
4.5.1	Microsoft .NET Framework 3.5 SP1	8
4.5.2	Microsoft SQL Server Compact 3.5 SP1	9
4.5.3	iControl 5.0 ALR Components	10
4.6	iControl RC1e™ 5.0 Main application	11
4.6.1	Installed application shortcuts	13
4.7	Installing the iControl Mixing Guidelines	14
4.7.1	Installed application shortcuts	16
4.8	Starting the iControl Software	17
4.9	Configuring RC1e Instrument (New user)	17
4.10	Checking for Updates	17
<b>5</b>	<b>Tutorial Experiment</b>	<b>18</b>
<b>6</b>	<b>Importing existing Equipment Database</b>	<b>18</b>
<b>7</b>	<b>Converting Experiment Data from WinRC / iControl 3.3</b>	<b>18</b>
7.1	Installed Application Shortcuts	21
<b>8</b>	<b>UCB and RTCal-Box Firmware Update</b>	<b>22</b>
<b>9</b>	<b>Installation of the Multiport Adapter</b>	<b>23</b>
9.1	USB - RS422 Adapter VScorm USB-4COMi-SI	23
<b>10</b>	<b>iControl / iC Licensing</b>	<b>24</b>
10.1	Using the License Manager to Activate a Single-User License	24
10.2	Obtaining an Activation Code from the MT Web Site	26
10.3	Setting Up a New User Account	28

10.4	Activating an iCare Subscription	28
10.5	Installing a Site License	29
<b>11</b>	<b>Sharing Data between iC/iControl Applications</b>	<b>31</b>
11.1	Before You Begin	31
11.2	Connecting iC/iControl Applications	31
11.3	Getting PCs to Communicate (TCP/IP)	33
11.4	Troubleshooting the Connections	35
11.4.1	Diagnose Firewall Issues	35
11.4.2	Update the HOSTS File on the PC	36
11.4.3	Specify a Particular IP Address for the PC	37
<b>12</b>	<b>Supporting and Repairing the iControl RC1e™ Installation</b>	<b>39</b>
<b>13</b>	<b>Uninstalling iControl RC1e™</b>	<b>41</b>
13.1	Uninstalling the iControl RC1e™ 5.0 application	41
13.2	Uninstalling iControl Mixing Guidelines	41
13.3	Uninstalling previous iControl installations	41
13.4	Uninstalling Prerequisite Software	42
13.4.1	Uninstalling iControl ALR Components	42
13.4.2	Uninstalling Microsoft SQL Server Compact 3.5	42
13.4.3	Uninstalling Microsoft .NET Framework 3.5	42
<b>14</b>	<b>Installation / Operations Guidelines for IT Departments</b>	<b>43</b>
14.1	Installation privileges	43
14.2	Execution privileges	43
14.3	Folders access privileges	43
14.4	Registry access privileges	43
14.5	Network access privileges	43
14.5.1	UDP Ports	43
14.5.2	TCP Ports	44

# 1 System Requirements

Below are the minimum system requirements for the computer where you install iControl. To verify the operating system and hardware configuration, right-click My Computer, select Properties, and review the General tab.

	ONE iC/iControl Application (Minimum Requirements)	MULTIPLE iC/iControl Applications (Minimum Requirements)
CPU	Intel Core 2 Duo 2.2 GHz T7500 (Notebook) or Intel Core 2 Duo 2.4 GHz E4600 (Desktop)	Intel Core 2 Duo 2.5 GHz T9300 (Notebook) or Intel Core 2 Duo 2.8 GHz E8300 (Desktop)
Memory	2 GB	3 GB
Hard Drive	SATA 5400 rpm	SATA 7200 rpm
Graphics	SXGA 1280 x 1024 with 3D hardware acceleration, including Vertex Shader, Pixel Shader, Texture Support, and Lighting	SXGA 1280 x 1024 with 3D hardware acceleration, including Vertex Shader, Pixel Shader, Texture Support, and Lighting

Supported operating systems are:

Microsoft Windows 7 (64-bit with Office license only)  
Microsoft Windows Vista, SP1 (64-bit with Office license only)  
Microsoft Windows XP, SP3

Additional software requirements include Internet Explorer 7.0, Microsoft Office 2003 or 2007, and Adobe Reader 7 or higher (The latest version of Acrobat Reader is recommended).

## 2 Deployment Package

### 2.1 Contents of the iControl RC1e™ 5.0 CD-ROM

iControl RC1e™ 5.0 software (Autorun.exe)  
iControl Data Conversion Utility  
iControl RC1e™ 5.0 Release Notes in English  
iControl RC1e™ 5.0 Installation Guide in English (this file)  
Tutorial Experiment  
Firmware 3.4.2 for UCB and RTCal box including necessary tools and documentation

### 2.2 Content of the iControl Mixing Guidelines CD-ROM

iControl Mixing Guidelines (Setup.exe)  
iControl RC1e™ 5.0 Installation Guide in English  
iControl RC1e™ 5.0 Release notes in English

### 3 Introduction

iControl installation is wizard-driven. As soon as you start the process from the installation welcome page (Figure 1 on page 8), the wizard guides you through the steps to install the iControl software, starting with any prerequisite components.

**NOTE:** The wizards and dialog boxes shown in this guide are from a Windows XP installation. The corresponding wizards and dialog boxes displayed for Windows Vista and Windows 7 will differ slightly in appearance, but the functionality is the same for each operating system.

In addition to the installation process, this guide also includes information on administering the software, activating licenses, and sharing data among multiple iControl/iC applications.

## 4 Installing iControl RC1e™ 5.0

### 4.1 Necessary user rights

**NOTE:** You need **Administrator privileges** on the PC in order to successfully install the software.

To run iControl RC1e™, normal user privileges are sufficient.

### 4.2 Installing iControl RC1e™ 5.0 without updating a previous installation

When installing iControl RC1e™ 5.0 on a new system without any previously installed iControl or WinRC versions, there are no preparation tasks to do in order to perform the installation. Please proceed to chapter 4.5 to start the installation of iControl RC1e™ 5.0.

### 4.3 Updating iControl RC1e™ 4.0 with iControl RC1e™ 5.0

iControl RC1e™ 4.0 and iControl RC1e™ 5.0 can both be installed on the same PC, although it is not possible to run both applications at the same time.

When installing iControl RC1e™ 5.0, the following data is copied from the previous iControl RC1e™ 4.0 installation:

- Equipment database including all device settings such as device names and COM ports
- The last used lab equipment including defined reactor, stirrer, cover, inserts and safety limits
- Chemical Database
- Experiment Equipment Setup Templates
- Sensors (RTCal, UCB, RD10) including adjustment data
- Any defined links to other iC applications

After having iControl RC1e™ 5.0 installed, you are immediately ready to go with the same defined environment as you had in iControl RC1e™ 4.0. Experiments from version 4.0 can be opened without any data conversion.

**NOTE:** Before starting the iControl RC1e™ 5.0 installation, please Logout or Reboot in order to close all active iControl RC1e™ 4.0 processes. Then proceed to chapter 4.5 in order to start the installation of iControl RC1e™ 5.0.

Information about uninstalling iControl RC1e™ 5.0 can be found in chapter 13.

### 4.4 Updating WinRC with iControl RC1e™ 5.0

WinRC and iControl RC1e™ 5.0 can both be installed on the same PC, although it is not recommended to run both applications at the same time.

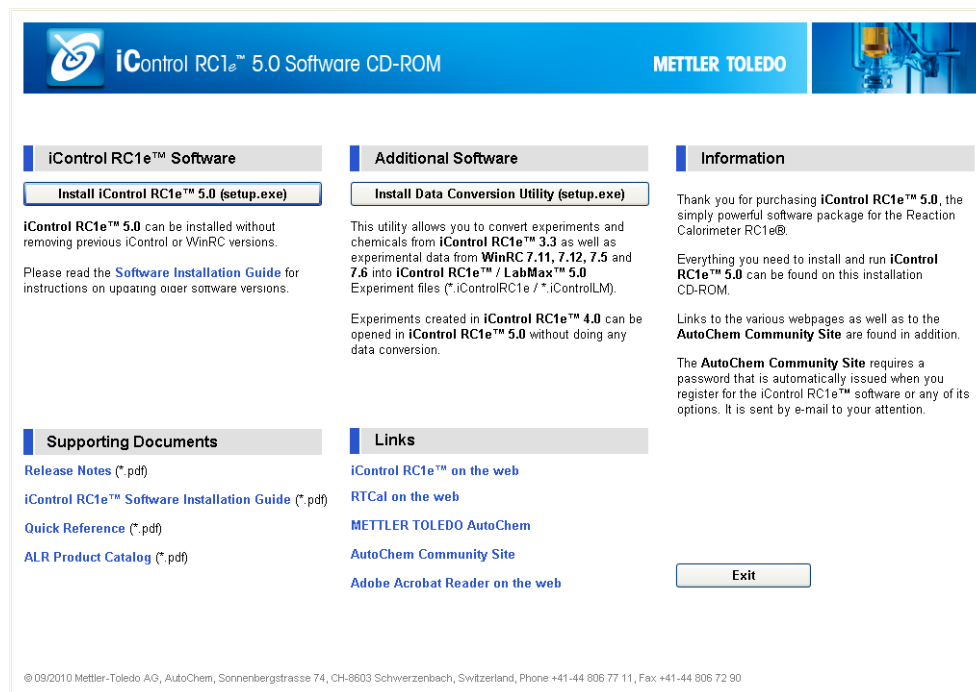
**NOTE:** Before starting the iControl RC1e™ 5.0 installation, please Logout or Reboot in order to close all active WinRC processes. Then proceed to chapter 4.5 in order to start the installation of iControl RC1e™ 5.0.

After having iControl RC1e™ 5.0 installed, please use the iControl Data Conversion Utility to convert WinRC experiment files (\*.mtd) into the iControl RC1e™ 5.0 data format. Go to chapter 7 for further details about the iControl Data Conversion Utility.

## 4.5 Starting the iControl RC1e™ 5.0 installation

**NOTE:** It is recommended that you close all open programs prior to starting the installation.

When you insert your iControl RC1e™ 5.0 CD-ROM into the PC's CD drive, the AutoPlay application should start. From this display, you can click on the 'Install iControl RC1e™ 5.0 (setup.exe)' button to start the installation.



**Figure 1: Installation welcome dialog box**

If the AutoPlay function does not start automatically, then you can also run the autorun.exe or Setup.exe directly from the iControl RC1e™ 5.0 CD-ROM root directory.

The following chapters describe the installation process in detail.

**Notice:**

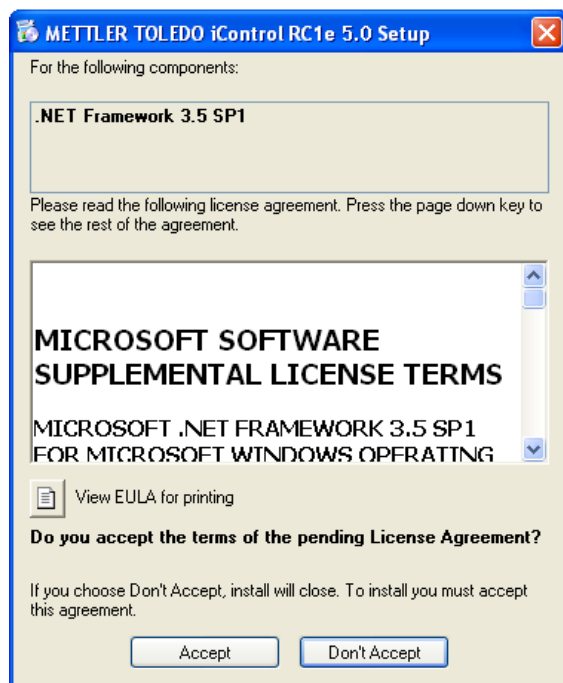
Dependent on what is already installed on your computer, some of the prerequisite installation steps below may be skipped.

Some of these prerequisite installations might ask you to reboot the computer. Please do as requested and reboot. After you have logged in again, you might need to restart the iControl RC1e™ 5.0 installer by double-clicking on Setup.exe on the iControl RC1e™ 5.0 CD-ROM root directory. The installer will then continue to install iControl RC1e™ 5.0.

### 4.5.1 Microsoft .NET Framework 3.5 SP1

**Note:** This step only applies if the .NET Framework 3.5 SP1 not already exists on the computer where you are installing iControl.

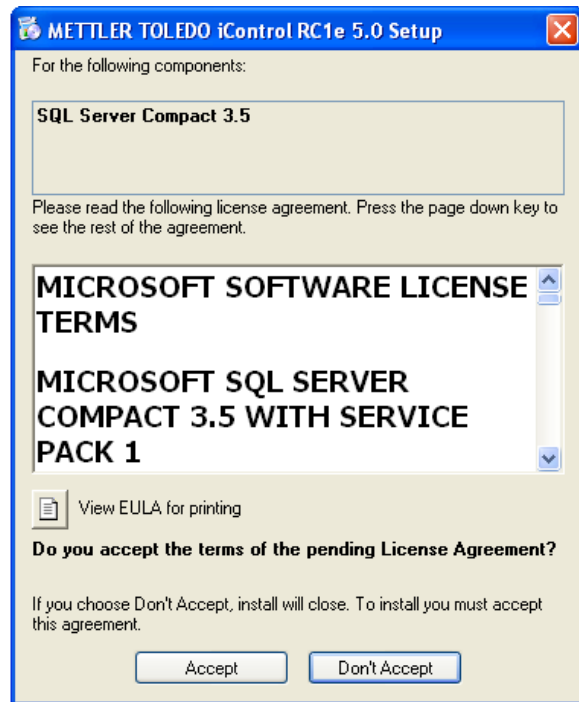




Read the "License Agreement" carefully and click 'Accept'.

#### 4.5.2 Microsoft SQL Server Compact 3.5 SP1

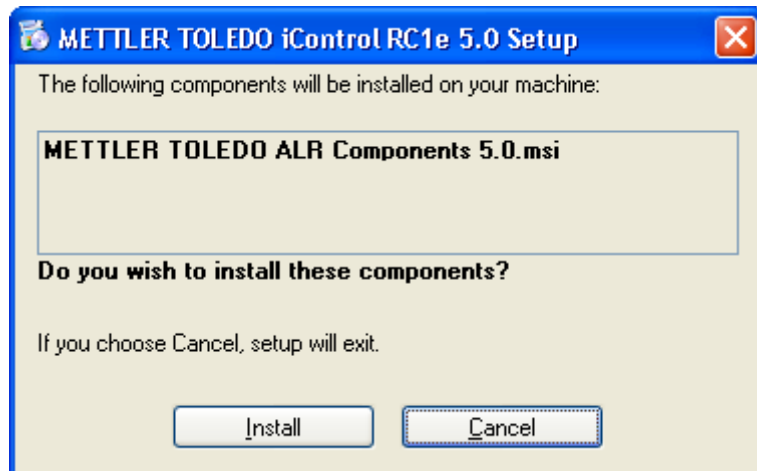
**Note:** This step only applies if the SQL Server Compact 3.5 SP1 not already exists on the computer where you are installing Icontrol.



Read the "License Agreement" carefully and click 'Accept'.

### 4.5.3 iControl 5.0 ALR Components

**Note:** In case the iControl 5.0 ALR Components are not already installed on your system, the iControl RC1e™ 5.0 installer will automatically ask you to accept the installation:



To start the installation process, click 'Install'. The installation of all prerequisites will then start.

## 4.6 iControl RC1e™ 5.0 Main application

After the successful installation of all of the prerequisite installers, the iControl RC1e™ 5.0 main application installer window will be displayed:



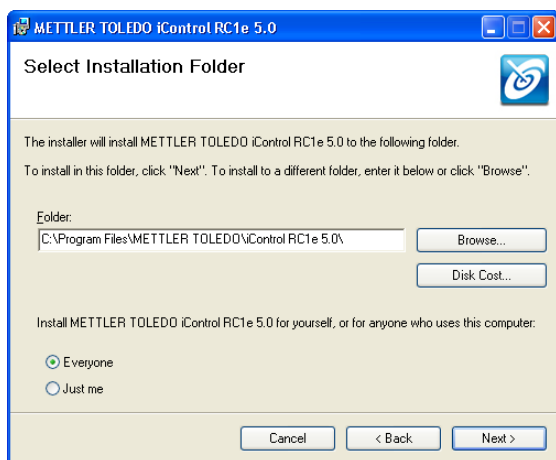
Click **Next**.



1. Review the license agreement and select **I Agree**.
2. Click **Next**.



3. Click **Next** to move through the installation wizard steps.

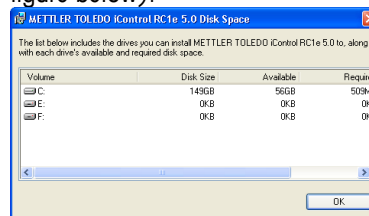


*Folder:*

4. Accept the default, if possible. If another location is required, click **Browse** -make sure the Mixing Guidelines installation folder is also changed accordingly!

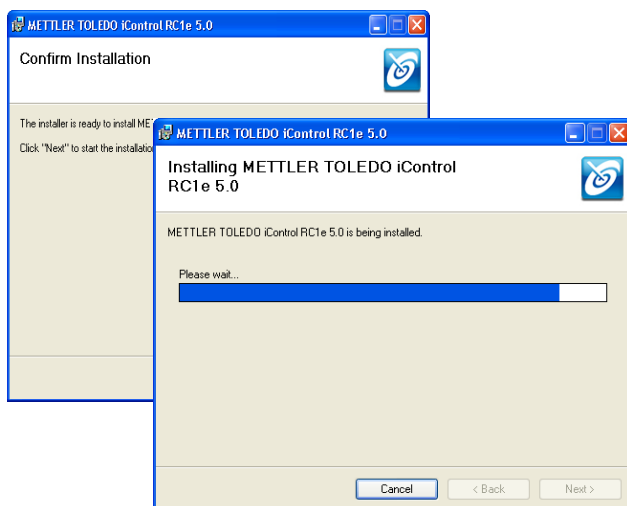
*Disk Cost:*

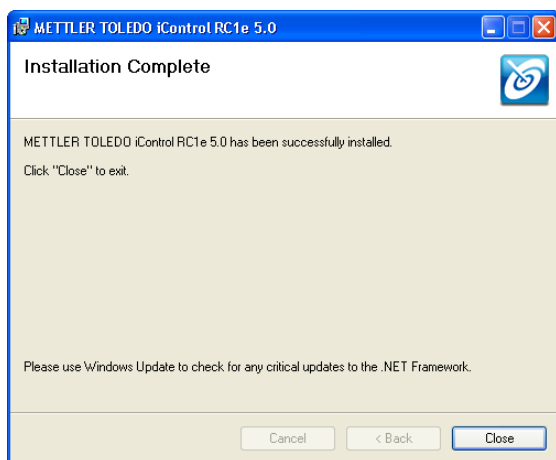
5. Click **Disk Cost** to review available disk space for the installation (see figure below).



*Install for yourself or for anyone...*

6. Accept the default (**Everyone**) to allow any valid login to use iControl on this computer. Otherwise, access to iControl will be limited to login ID used during installation (**Just me**).
7. Click **Next** through the confirmation and installation processing wizard dialog boxes.





8. Click **Close** after successful completion.
9. Proceed to 4.8 Starting the iControl Software page 17.

#### 4.6.1 Installed application shortcuts

The iControl RC1e™ 5.0 installer installed the following shortcuts under your Start menu

“Start->All Programs->METTLER TOLEDO->iControl RC1e™ 5.0”:

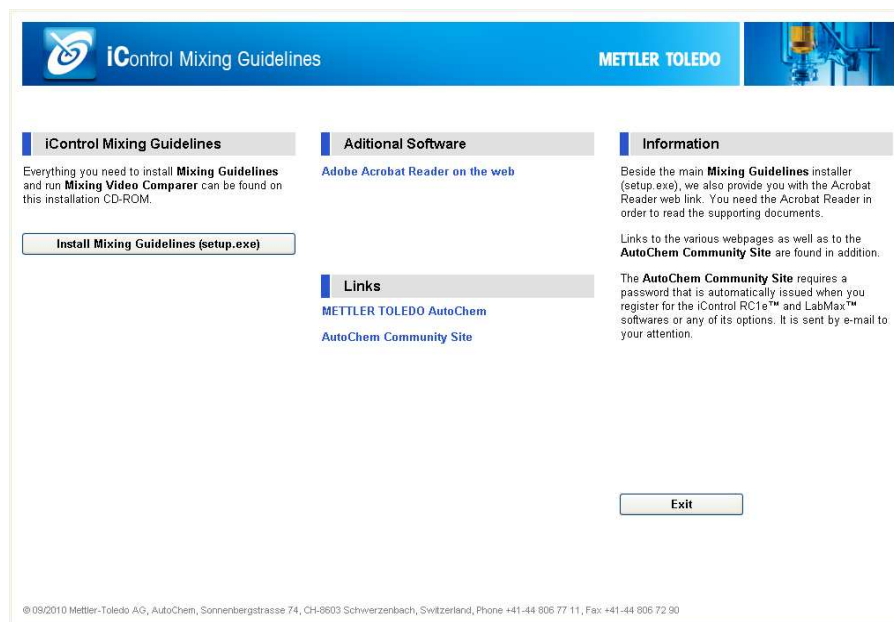
Shortcut	Description
Service Features	This folder contains tools for the METTLER TOLEDO field service engineer.
eLearning Tutorials iControl RC1e™	Web Link to online Training Videos on the AutoChem Community Webpage. Note: You can register on the Community Webpage for free to gain access to this and other interesting and important information around your application areas, AutoChem products and services.
iControl RC1e™ 5.0	Main Application. Click this shortcut to start iControl RC1e™ 5.0
Quick Reference	The 2 page quick reference which gives an excellent overview over the main functionality.
Release Notes	PDF document which describes the known issues with iControl RC1e™ 5.0. It is recommended to read this through to understand the currently known limitations.
Send iControl Logs To Customer Care	This is a utility which helps you to gather the necessary information to provide to METTLER TOLEDO Customer Care in case of a support issue.
Temperature Control PI Estimator Utility	For advanced users: This Excel spreadsheet is used to fine tune the PI control parameters for your thermostat. Details are described in the iControl RC1e™ 5.0 online help.

The iControl RC1e™ 5.0 installer also installs a shortcut on your desktop to start the iControl RC1e™ 5.0 application.

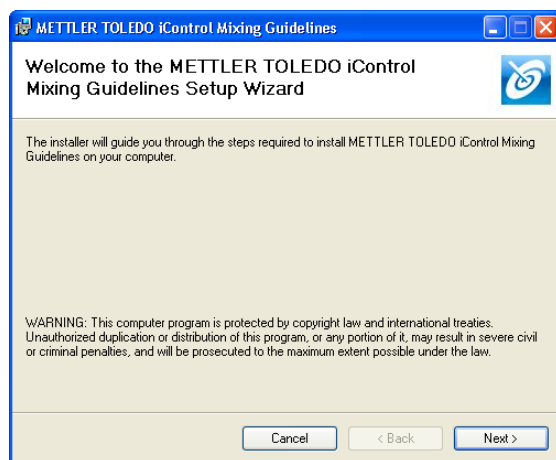
## 4.7 Installing the iControl Mixing Guidelines

As with the main application installation, it is recommended that you close all open programs prior to starting the installation.

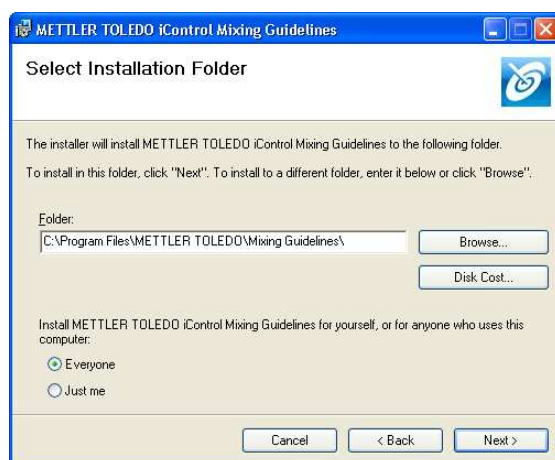
When you insert your iControl Mixing Guidelines CD-ROM into the PC's CD drive, the AutoPlay application should start. From this display, you can click on the 'Install Mixing Guidelines (setup.exe)' button to start the installation. Then follow the wizard steps of the installer.



If the AutoPlay function does not start automatically, then you can also run the autorun.exe or Setup.exe from the iControl Mixing Guidelines CD ROM root directory.



1. Click **Next** to move through the installation wizard steps.



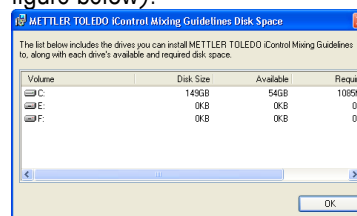
2. Review the license agreement and select **I Agree**.
3. Click **Next**.

#### Folder:

4. Accept the default, if possible. If another location is required, click **Browse**.

#### Disk Cost:

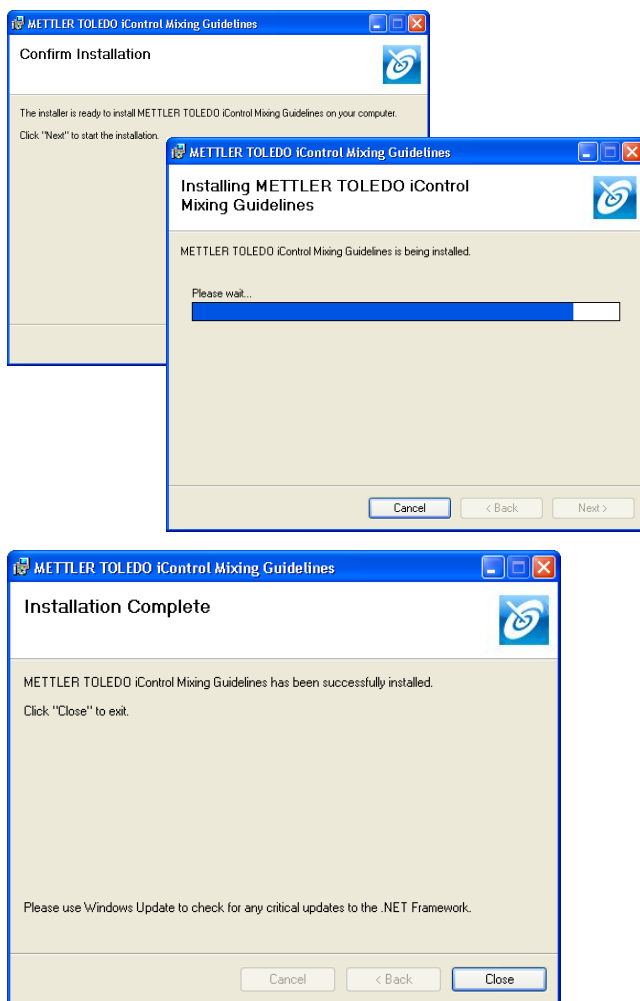
5. Click **Disk Cost** to review available disk space for the installation (see figure below).



**Note:** The 'Disk Cost' may not provide the correct information. The iControl Mixing Guidelines will need approximately **500 MB** of hard drive space.

#### Install for yourself or for anyone...

6. Accept the default (**Everyone**) to allow any valid login to use iControl Mixing Guidelines on this computer. Otherwise, access to the Mixing Guidelines will be limited to login ID used during installation (**Just me**).



7. Click **Next** through the confirmation and installation processing wizard dialog boxes.

8. Click **Close** after successful completion.

#### 4.7.1 Installed application shortcuts

The iControl Mixing Guidelines installer installed the following shortcuts under your Start menu

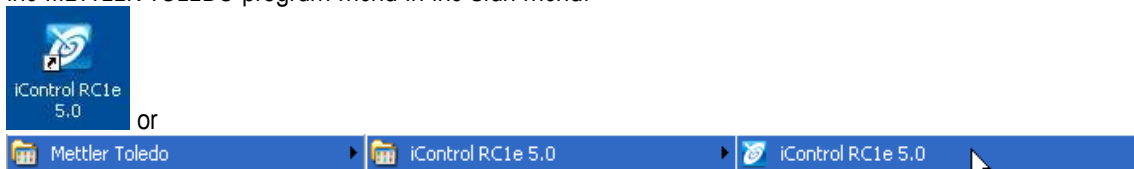
“Start->All Programs->METTLER TOLEDO”:

Shortcut	Description
Mixing Guidelines	Main Application. Click this shortcut to start the Mixing Guidelines main page.
Mixing Video Comparer	The Mixing Video Comparer application allows you to show and compare two different mixing scenarios. Note that this utility requires a valid iControl RC1e™ Instrument or Office License in order to work.

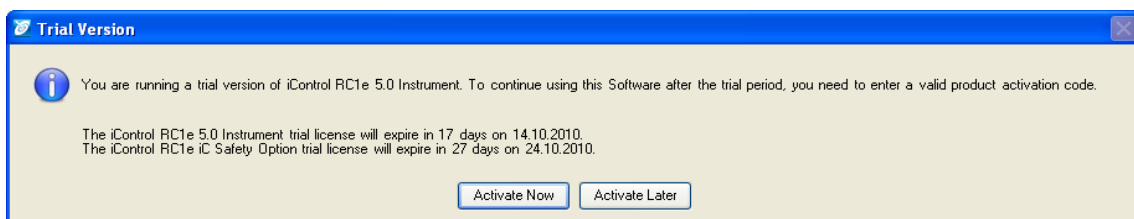


## 4.8 Starting the iControl Software

1. Start the iControl software application by clicking the desktop icon or selecting iControl RC1e™ 5.0 from the METTLER TOLEDO program menu in the Start menu.



2. The following message indicates the software is running on a trial license:



- o If you have a License Key, click **Activate Now** to proceed with the registration process. Instructions begin under 10 iControl / iC Licensing on page 24.
- o If you prefer to remain on the 30-day trial license, click **Activate Later**.

**Note:** The 30-day trial provides access to all iControl 5.0 features.

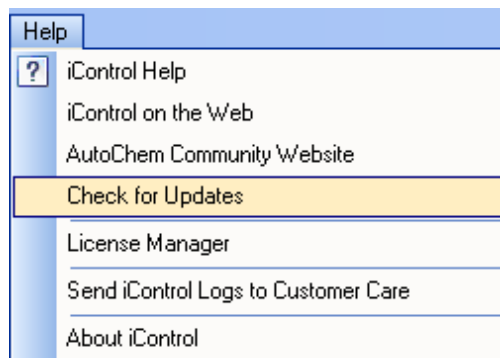
## 4.9 Configuring RC1e Instrument (New user)

**Note:** Users that updated iControl from version 4.0 to version 5.0 are immediately ready to go – there is no need for a reconfiguration of the instrument or equipment.

1. Log on to the iControl RC1e™ PC and open the iControl software application.
2. From the Start Page, click **Manage Equipment**, and use the Add Instrument button to configure your equipment. If needed, refer to the explanations in the online Help for additional details.

## 4.10 Checking for Updates

If you already have a release of iControl 5.0 installed and want to see if you have the latest version or release, select "Check for Updates" from Help menu.



## 5 Tutorial Experiment

On the CD-ROM you also find a Tutorial Experiment ("Tutorial Experiment.iControlRC1e") which shows an executed experiment with HeatFlow and RTCal calorimetry. The installer installs the Tutorial Experiment into your "My Documents\iControl RC1e Experiments" folder, and it is also available on the CD-ROM in the folder "Tutorial Experiment".

For more detailed information about this Tutorial Experiment please refer to the iControl Online help (search for "Tutorial Experiment").

## 6 Importing existing Equipment Database

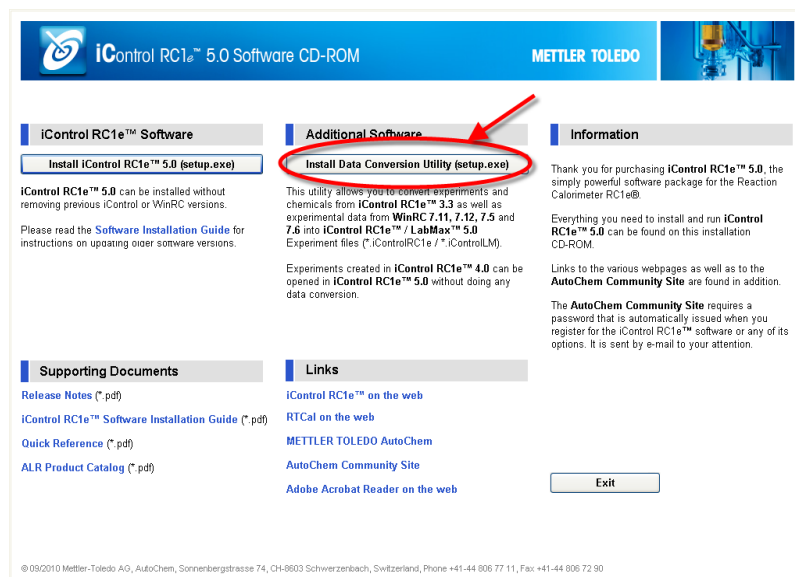
If you have used WinRC 7.5, 7.6, 7.11 or 7.12 or a previous version of iControl before, then you can import the existing equipment database (WinRC.mte file) into iControl RC1e™ 5.0.

For this, start iControl RC1e™ 5.0, press "Manage Equipment" on the Start Page, add or open the RC1e™ instrument and press "Import Equipment Database".

For more detailed information please refer to the iControl online help (search for "Import Equipment Database").

## 7 Converting Experiment Data from WinRC / iControl 3.3

If you want to convert existing WinRC 7.11, 7.12, 7.5, 7.6 or iControl RC1e™ 3.3 experiments or an existing iControl RC1e™ 3.3 Chemical Database to iControl RC1e™ 5.0, then you can use the iControl Data Conversion Utility which is available as a separate installer on the iControl RC1e™ 5.0 CD-ROM in the folder "Data Conversion Utility" or more conveniently from the AutoPlay application which should start when you insert the iControl RC1e™ 5.0 CD-ROM. From this display, you can click on the 'Install Data Conversion Utility (setup.exe)' button to start the installation.



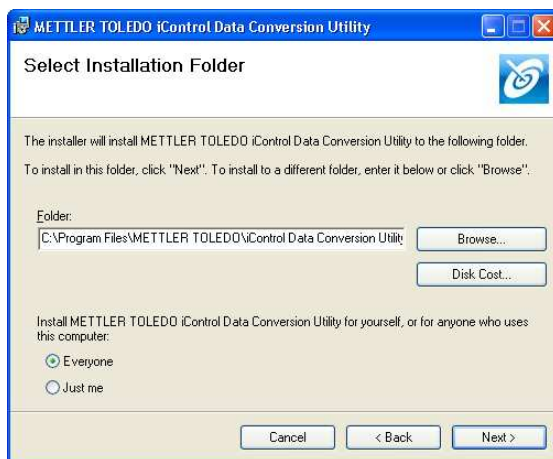
Alternatively you may also run the “setup.exe” in the “Data Conversion Utility” folder on the CD-ROM and follow the on-screen installation instructions. The installer will create a shortcut into the Windows Start menu:



1. Click **Next** to move through the installation wizard steps.



2. Review the license agreement and select **I Agree**.
3. Click **Next**.

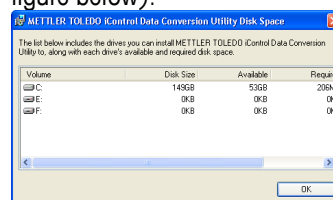


*Folder:*

4. Accept the default, if possible. If another location is required, click **Browse**.

*Disk Cost:*

5. Click **Disk Cost** to review available disk space for the installation (see figure below).

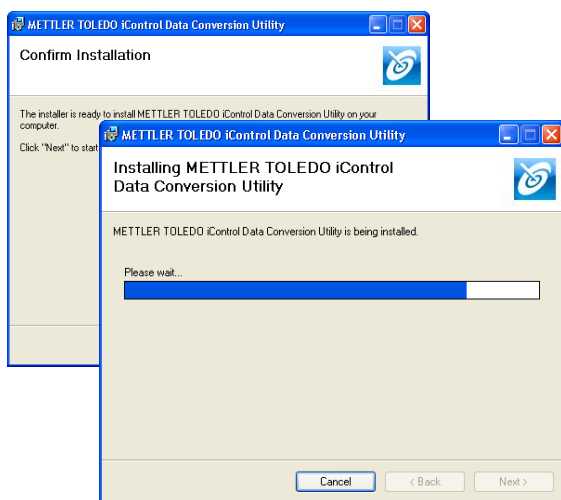


*Install for yourself or for anyone...*

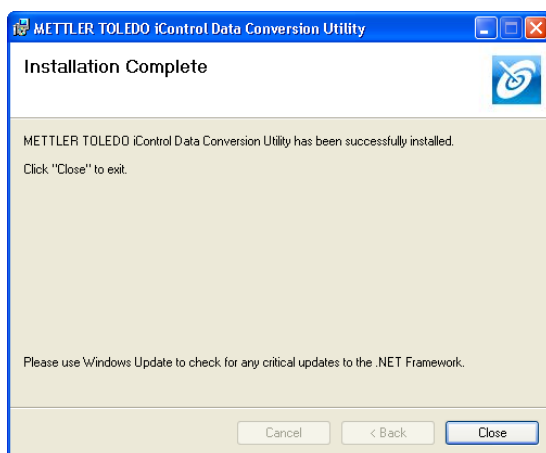
6. Accept the default (**Everyone**) to allow any valid login to use the Data Conversion Utility on this

computer. Otherwise, access to the Data Conversion Utility will be limited to login ID used during installation (**Just me**).

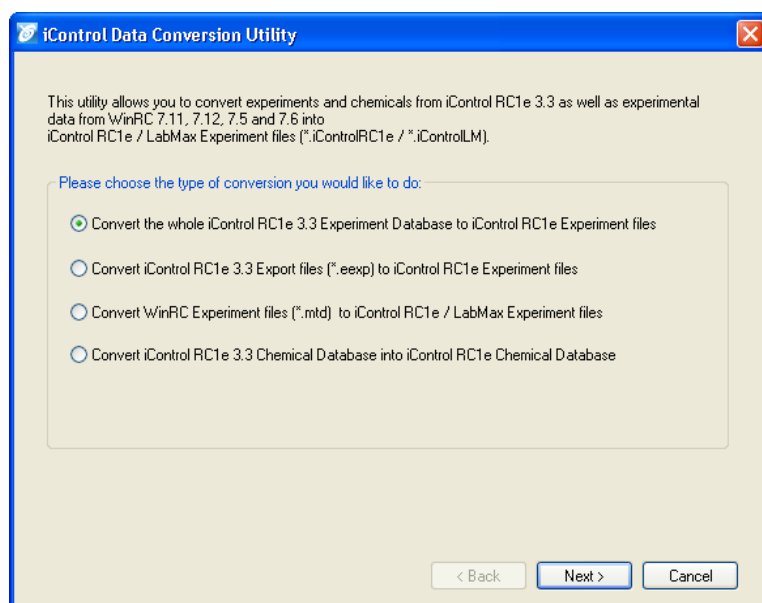
7. Click **Next** through the confirmation and installation processing wizard dialog boxes.



8. Click **Close** after successful completion.



When you run the utility, you have the option between 4 possible conversions:



**NOTE:** The original experiment and chemical data will not be altered during this conversion process.

**Important:** Although we have tested this conversion utility carefully for several months, there is a risk that some experiment files may not be completely converted by the utility. If this is the case, the utility will show an error report. Please contact iControl Support ([iControl@mt.com](mailto:iControl@mt.com)) for further assistance.

## 7.1 Installed Application Shortcuts

The iControl Data Conversion Utility installer installed the following shortcut under your Start menu

"Start->All Programs->METTLER TOLEDO":

Shortcut	Description
iControl Data Conversion Utility	Main Application. Click this shortcut to start the Data Conversion Utility.

## 8 UCB and RTCal-Box Firmware Update

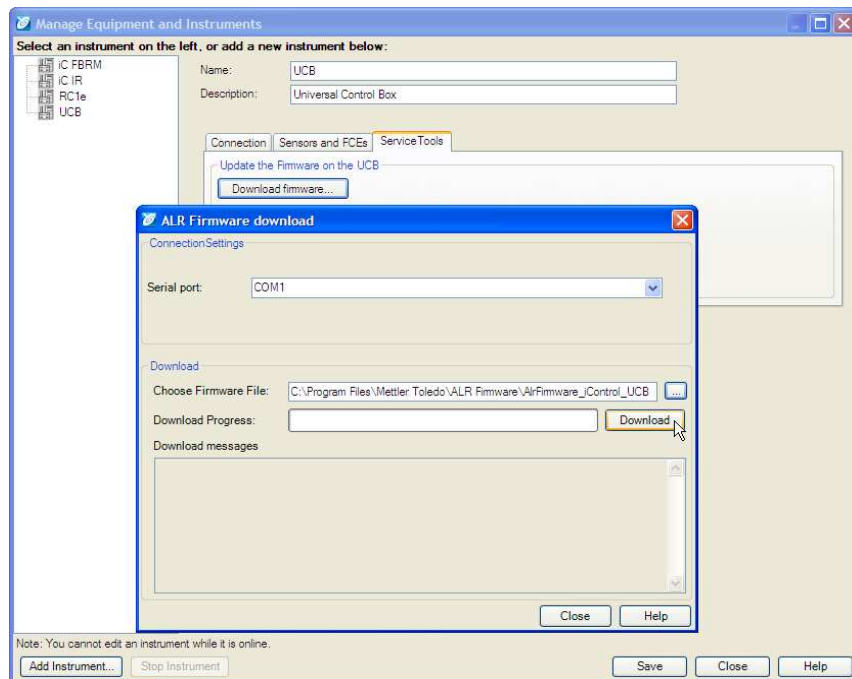
**NOTE:** In order to use an existing UCB (Universal Control Box) or RTCal-Box with iControl RC1e™ 5.0, you will need to update the firmware on those boxes.

On the iControl RC1e™ 5.0 CD-ROM in the folder “Firmware” you will find the following firmware files, corresponding to the type of the box:

Box-type	Version	Filename
UCB	3.4.2	AlrFirmware_iControl_UCB_x_x_x.alrfw
RTCal	3.4.2	AlrFirmware_iControl_RTCal_x_x_x.alrfw

These files can be used to update the UCB and RTCal-Box.

To update the UCB firmware, open “Manage Equipment” from your iControl RC1e™ 5.0 Start Page and select the UCB instrument. Select the 3<sup>rd</sup> tab called “Service Tools” and click on “Download Firmware”. You will need to select the appropriate serial port for the UCB and browse for the firmware file mentioned above. Click the ‘Download’ button to initiate the transfer.



To update the RTCal-Box firmware, open “Manage Equipment” from your iControl RC1e™ 5.0 Start Page and select the RC1e™ instrument. In the bottom part where the RTCal-box is shown, on the right you can click on “Download Firmware”. You will need to select the appropriate serial port for the RTCal-Box and browse for the firmware file mentioned above. Click the ‘Download’ button to initiate the transfer.

For more detailed information please refer to the iControl Online help (Search for “Download Firmware”).

## 9 Installation of the Multiport Adapter

### 9.1 USB - RS422 Adapter VScom USB-4COMi-SI

The USB adapter USB-4COMi-SI will be working with Windows XP, Vista and Windows 7. The various drivers are found on the **VScom Product Drivers and Manuals CDROM**, which is shipped together with the multiport adapter or can be downloaded from <http://www.vscom.de>.

The following chapters are a brief overview on the installation of the multiport adapter:

1. Boot the system and log in with under an administrative user account.
2. Insert the VScom CDROM into your CD drive.
3. Check settings of the jumper on the USB multiport adapter (Jumper 1 and 2 "ON"; Jumper 3 and 4 "OFF" as defined on the USB adapter for use as RS422 adapter).
4. Plug the cable of the adapter into the USB port on the PC. Windows will start looking for device drivers since the adapter is Plug&Play. Go through the wizard and if necessary specify the appropriate path driver (located in the CD drive directory). The COM Port numbers are starting with the first available.
5. A reboot of the system is not necessary to complete the installation.

If you run into problems during the installation, please see the following problem descriptions:

	Problem	Solution
1	System doesn't recognize the new device	Go to the <Control Panel>, <System Properties>, <System>, <Device Manager> and open the <USBDevice> (or the USB component with the yellow mark) and re-install the respective driver. Then subsequently, reboot the PC.
2	System doesn't find the 4 COM ports	Reboot the PC
3	COM ports are not found any more after unplugging and re-plugging of USB adapter	Reboot the PC

If this does not help, please refer to your service engineer or to the iControl Hotline at [iControl@mt.com](mailto:iControl@mt.com)

## 10 iControl / iC Licensing

iControl applications use a licensing scheme to control distribution and use of the software. Below are the types of licenses.

**Instrument version**—Enables the application to connect to a live instrument and run experiments.

**Office version**—Enables the user to run the application without a connection to an instrument. With this version, experiment data obtained from a computer with an Instrument license can be viewed and analyzed.

**Trial version**—A trial version is equivalent to an Instrument license with a 30-day time limit.

**Module licenses**—Optional add-on modules, allow access to additional features that are purchased and licensed separately.

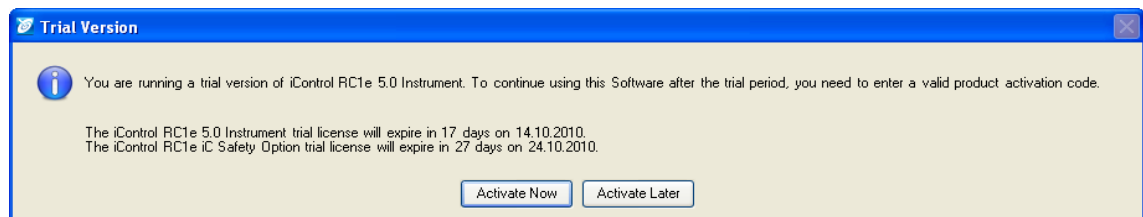
**iCare subscription**—A special annual subscription that entitles you to all major and minor upgrades and service packs for the Instrument or Office versions of your iC and iControl Software as well as priority telephone and email support. Please refer to 10.4 Activating an iCare Subscription on page 28.

**Site license**—Specific companies that have large software agreements with METTLER TOLEDO may also have a Site License for a particular product or products. Please refer to 10.5 Installing a Site License on page 29.

### 10.1 Using the License Manager to Activate a Single-User License

**Note:** Although you need to activate your software on a Web site, the PC where you are installing the iControl software does **not** require an internet connection. You can activate the software license using any internet-enabled PC.

The following information applies to users installing a single-user Instrument, Office, or Module license. The first time the iC application starts, the system displays the Trial License dialog.



1. Click **Activate Now** to open the License Manager. (This dialog box can also be opened from the main iControl Help menu.)



The License Manager contains an 8-digit Machine ID and an area to input a 25-digit Activation Code field in 5-digit segments.

- Register now.**

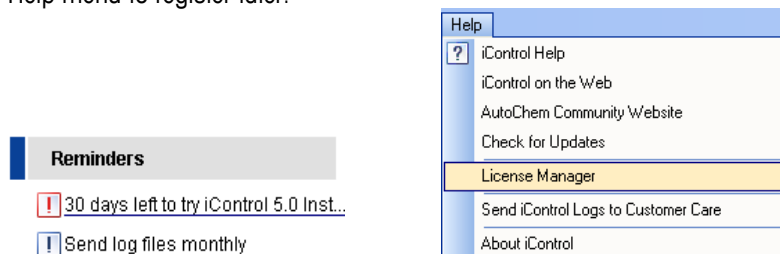
- Have your License Key sheet ready. (The sheet is usually a letter-size paper certificate delivered with the software.)
- Click **Copy** after step **1.Copy Machine ID**. (Refer to **Figure 1: License Manager**.)
- In the License Manager dialog box after step **2. Activate your license key at:**, click the link (<https://community.autochem.mt.com>).
- Obtain your Activation Code. Follow the instructions in the next section, "10.2 Obtaining an Activation Code from the MT Web Site." You will need to enter your Machine ID and License Key to generate an activation code (see page 27).

- e. Once you have copied the activation code from the AutoChem Community Web site, return to the License Manager (**Figure 1**).

- f. In the License Manager dialog box, click **Paste** after step **3. Enter Activation Code**.
- g. Click **Apply Activation Code** to complete the registration process.

**METTLER TOLEDO**

- Click **Close** without registering the software.
- Use the link under Reminders on the iControl Start Page or select License Manager from the Help menu to register later.



## 10.2 Obtaining an Activation Code from the MT Web Site

Your activation code is generated through the METTLER TOLEDO AutoChem Community Web site. To obtain the activation code, you must have the Machine ID from the License Manager dialog box in the iControl software and the License Key provided on a letter-size certificate with the software. (Refer to the previous section on 10.1 Using the License Manager to Activate a Single-User License.)

**Note:** Access the MT Web Site from any internet-enabled PC—This step does not necessarily need to be performed on the PC where the iControl software is installed.

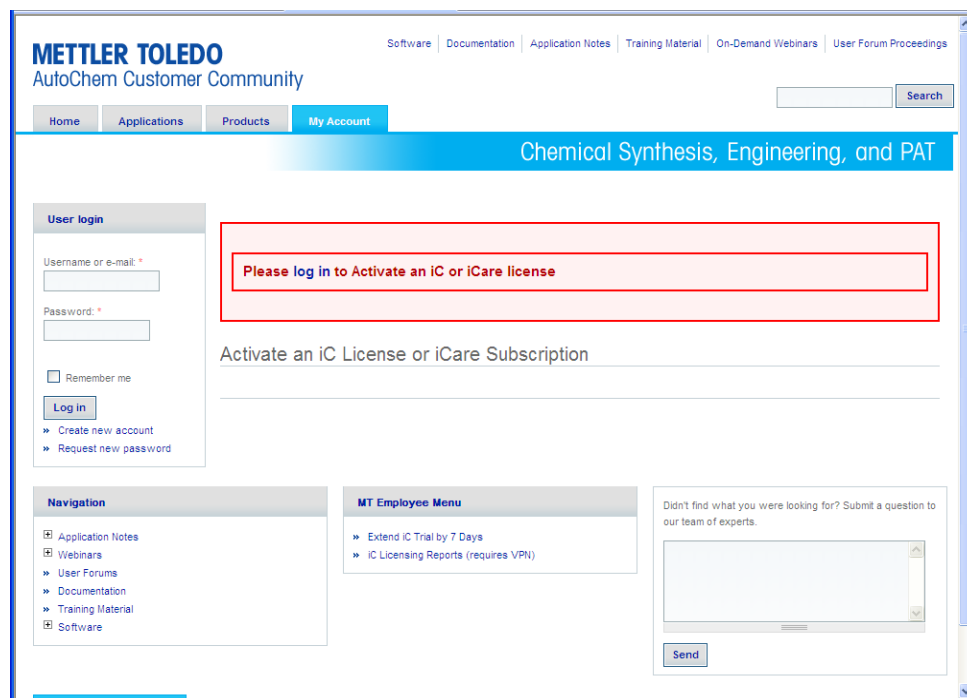


Figure 2 AutoChem Customer Community site

- Depending on whether or not you have an account, start with one of the following steps:

If you are a new user, begin by setting up a user account (see page 28).

If you already have an account, enter your username and password and click **Log in** under User login or click **log in** from the red prompt box.



2. Enter the required information and click **Log in**.

3. Click **Activate an iControl or iC License** from the My Account tab.

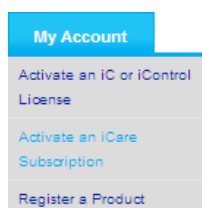
4. Enter the Machine ID and License Key or use the **Paste** buttons (highlighted below). The Machine ID can be copied from the License Manager window. The License Key is provided on a license certificate sheet delivered with your software.

Figure 3: Activate License dialog box

5. Click **Generate Activation Code** to produce the code in the text box. Then, click **Copy** to save the code to the clipboard.
6. Return to the License Manager in the iControl software (see 24), and click **Paste** or type in the activation code in step 3. **Enter Activation Code**.



1. Login to the METTLER TOLEDO AutoChem Community Web site.
2. Click **Activate an iCare Subscription** from the My Account tab.



An Activation iControl/iC License or iCare Subscription window appears with the iCare Subscription selected.

3. In the iCare activation window (Figure 4), enter the Machine ID as directed in the Note, or use the **Paste** button (highlighted below). The Machine ID can be copied from the License Manager dialog box.

**Figure 4: Activate an iCare Subscription window**

4. Enter or paste the Subscription Number, provided on a certificate sheet delivered with your software.
5. Click the **Activate Subscription** button. You should receive a confirmation email message in a few minutes that provides some additional information about the program.
6. The email will also include an iCare Subscription Activation Code that can be entered or pasted back into the License Manager dialog box of the iControl software.

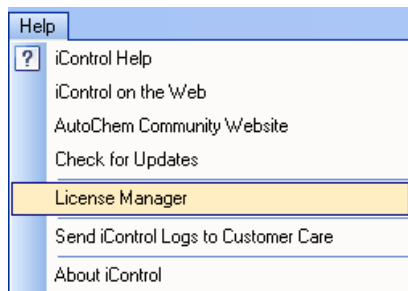
Activating the iCare subscription in the software itself is not required, but if you perform this step, then you will not need to update any licensing information if a new iControl version is released before the iCare subscription expires.

## 10.5 Installing a Site License

**NOTE:** Most companies do NOT have a site license, so only follow this procedure if specifically directed by your organization.

A Site License is supplied as a file and must be loaded into each copy of the iControl software in use.  
(Please refer to 10 iControl / iC Licensing on page 24 for an explanation of site licenses.)

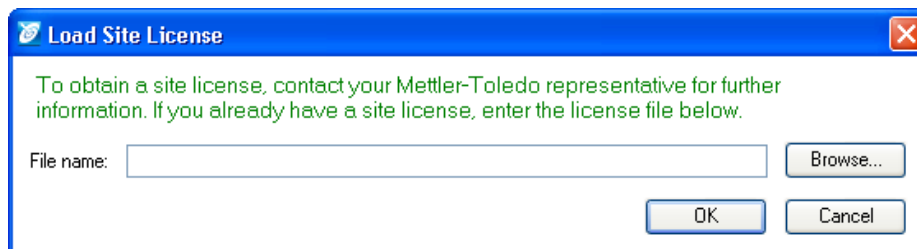
1. To install the Site License, open the License Manager by selecting it from the from the Help menu.



2. In the License Manager, click **Enable**.



3. Click **Browse** to navigate to the Site License file location. Then, click **OK**.



The license loads and the software is ready to use.

4. Repeat on the other computers with iControl installed.

## 11 Sharing Data between iC/iControl Applications

Data can be shared between iControl and iC applications that are running on a network. To connect two PCs that run iControl or iC products, you must have an Ethernet connection between them. The two common situations are:

**Both PCs are on the same network**—either the main company network or a lab network.

**Each PC is standalone with an Ethernet cross-over cable that connects them.** (Cross-over cables are available at almost any computer supply store.)

### 11.1 Before You Begin

1. Ensure that the iControl and iC applications are installed and operating properly on each PC, meaning a user can successfully execute an experiment with a ReactIR instrument.
2. Verify that the major versions of the products are release 4.0 or higher to ensure compatibility.
3. Ensure that the two PCs are connected by one of the methods described at the beginning of this section.

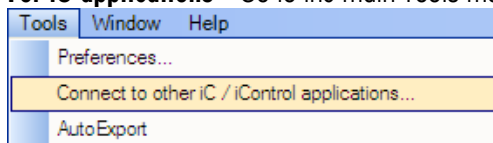
**NOTE:** Any PCs that will be coordinating live experiments should have the same regional settings and be in the same time zone.

### 11.2 Connecting iC/iControl Applications

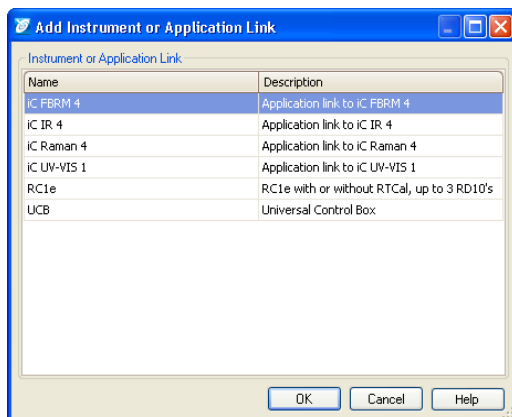
For iControl/iC applications running on different PCs on the same network, the applications must first connect to each other. Below are the steps to get the iControl/iC applications on the separate PCs to connect.

1. Start the iControl or iC application on each PC.
2. On one PC, connect to the iControl or iC software that is running on the other PC.

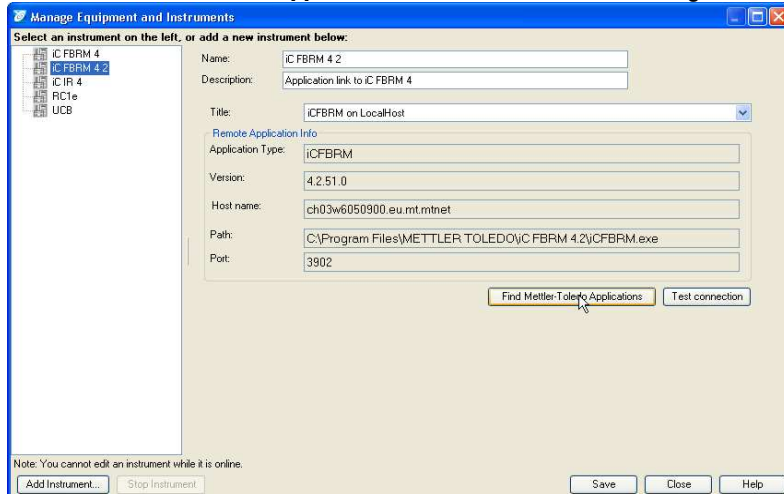
**For iC applications**—Go to the main Tools menu and select “Connect to other iC/iControl applications...”



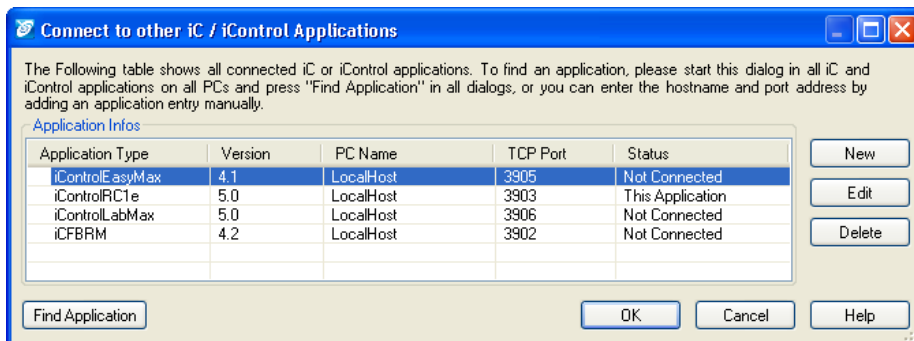
**For iControl**—Go to Manage Equipment and add a new device of the appropriate type. For example, iC FBRM 4:



Click the **Find Mettler-Toledo applications** button on the device configuration screen:

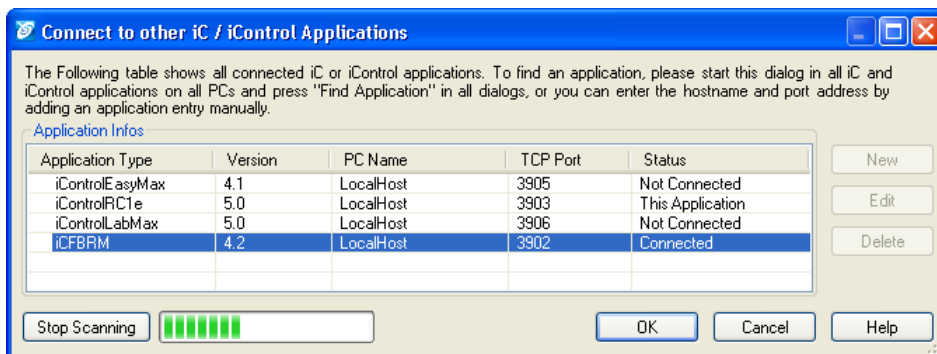


3. Find applications using the "Connect to other iC/iControl applications" dialog box.



- a. On each PC, click the **Find Application** button to begin a network scan for the other applications.

Once this initial scan is performed, the Application Type list displays all iC/iControl applications currently running the Find Application process on the network. On each PC, the corresponding applications should appear on the list and the Status column should show **Connected** (as shown for iCFBRM in the sample below).



**NOTE:** If an application connection cannot be made, the Application Type column entry is "Unknown." Please refer to Getting PCs to Communicate (TCP/IP) on page 33.

There is no need to rescan the network PCs in the future unless a new iC/iControl application or PC running an application is added to the network. In this case, a scan must be run on all PCs to update the Application Type list.



Once communications between the iC/iControl applications has been established, trend data for the applications display in the Result List Add Trends list.

- b. Close the connection list dialog box and test the connections.

In iControl, click the **Test Connection** button on the iC device configuration dialog box.

**NOTE:** There is no corresponding test in iC—Use the checks below for testing.

4. To verify that the connection is working for all aspects of the software application, perform the following checks:

#### **iControl-to-iC connection**

- a. In iControl, start a new experiment and include the iC device in the equipment setup.
- b. Execute the run and verify that you can start a new iC experiment from the iControl wizard.
- c. Verify that the iC experiment starts when the iControl experiment starts.
- d. Check that the iC operations can be used in the iControl procedure (for example, Change Sample Interval, Pause, etc.).
- e. Add iC trends to the iControl Trend Viewer.
- f. Try another iControl experiment that specifies a template file for the iC IR experiment that iControl will start. When starting an iC experiment from the iControl experiment Start wizard, the template should be automatically selected for the iC experiment.

**NOTE:** The path for the template file should be from the iC application point of view.

#### **iC-to-iControl connection**

- a. Add iControl trends to the iC Trend Viewer.
- b. Verify that live trends from iControl are correctly updated in a live iC experiment.

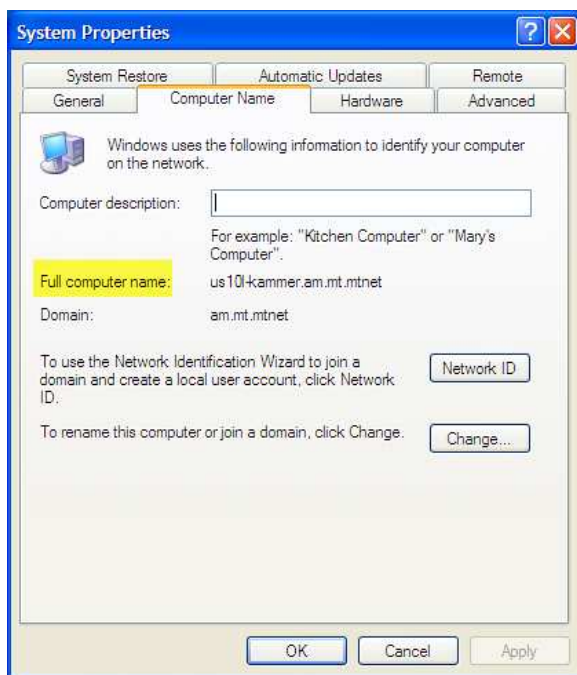
If you have trouble getting the applications to talk, then you can execute the procedure described next under Getting PCs to Communicate (TCP/IP).

## **11.3 Getting PCs to Communicate (TCP/IP)**

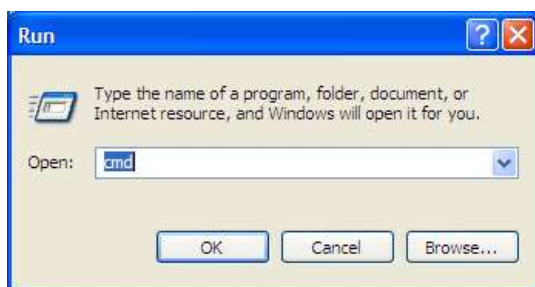
Follow the steps below to establish communications between the two PCs:

1. Find out each PC's name.
  - a. Right-click on the **My Computer** icon (on the Desktop) or from the Start menu, and select **Properties**.
  - b. Select the **Computer Name** tab in the System Properties dialog box and note the "Full computer name."

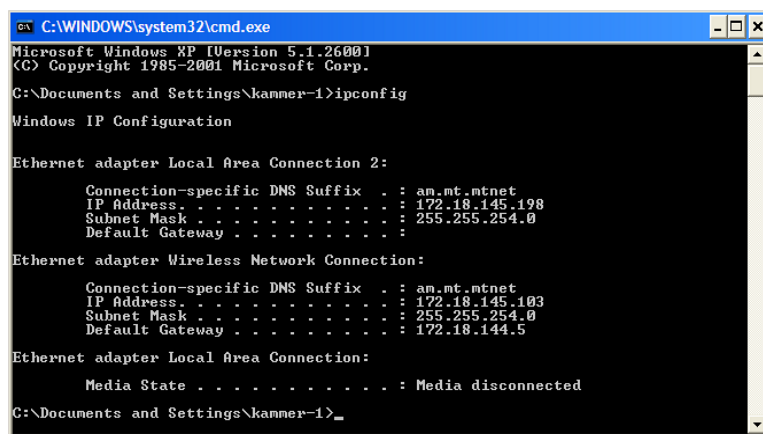
**NOTE:** Make sure each PC has a unique name or they will not be able to communicate.



2. Find out the IP address for each PC.
  - a. Open a Command prompt (Start > Run > Type **cmd** in the Run dialog box > Click OK).



- b. Type **ipconfig** and press Enter.



3. If there is no IP address specified (or the address is 0.0.0.0), specify one using the instructions in the 11.4 Troubleshooting the Connections section on page 35 before continuing to the next step.
4. Ping the other PC.
  - a. Open the Command prompt window again.

- b. Type **ping** followed by a space and the name of the other PC.
- c. You should get a series of replies from the other PC—If you see 'Request timed out,' the other PC cannot be reached via TCP/IP.

```

C:\WINDOWS\system32\cmd.exe

Connection-specific DNS Suffix  . : am.nt.mtnet
IP Address. . . . . : 172.18.145.103
Subnet Mask . . . . . : 255.255.254.0
Default Gateway . . . . . : 172.18.144.5

Ethernet adapter Local Area Connection:

    Media State . . . . . : Media disconnected

C:\Documents and Settings\kanner-1>ping us101-vanorder.am.nt.mtnet
Pinging us101-vanorder.am.nt.mtnet [172.18.145.171] with 32 bytes of data:
Reply from 172.18.145.17: bytes=32 time<1ms TTL=128
Reply from 172.18.145.17: bytes=32 time<1ms TTL=128
Reply from 172.18.145.17: bytes=32 time<1ms TTL=128
Reply from 172.18.145.17: bytes=32 time<1ms TTL=128

Ping statistics for 172.18.145.17:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\kanner-1>

```

5. If the PCs can ping each other by name, go to 11.2

Connecting iC/iControl Applications on page 31.

If the PCs cannot ping, follow the steps in the 11.4

Troubleshooting the Connections section.

## 11.4 Troubleshooting the Connections

If you are still having trouble getting the PCs to communicate or getting the iC/iControl applications to successfully communicate, try one of the following suggestions:

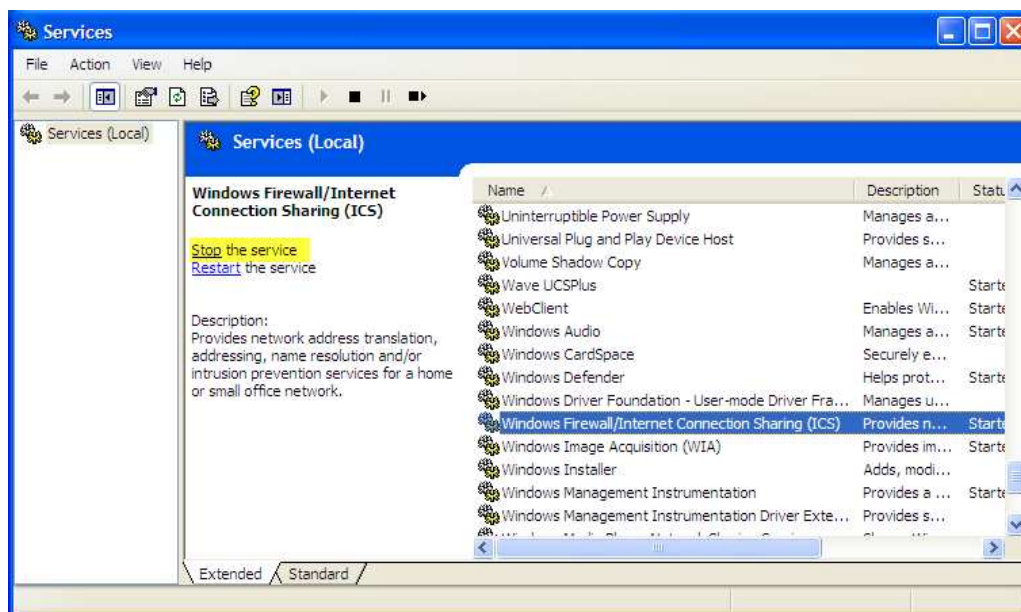
- 11.4.1 Diagnose Firewall Issues (procedures begin below)
- 11.4.2 Update the HOSTS File on the PC (procedures begin on page 36)
- 11.4.3 Specify a Particular IP Address for the PC (procedures begin on page 37)

**NOTE:** You should always stop and restart the iC or iControl applications (including their services) after changing any of the networking information described below. Rebooting the PC is the easiest way to do this.

### 11.4.1 Diagnose Firewall Issues

If permitted, the best way to check whether firewall issues are causing communication issues is to disable the service.

1. Open the Services view (Control Panel > Administrative Tools > Services).
2. Double-click on the **Windows Firewall** service to display the properties.



3. Click **Stop** the service. Then, select **Disabled** from the **Startup type** drop-down list.
4. Click **OK** to save changes.

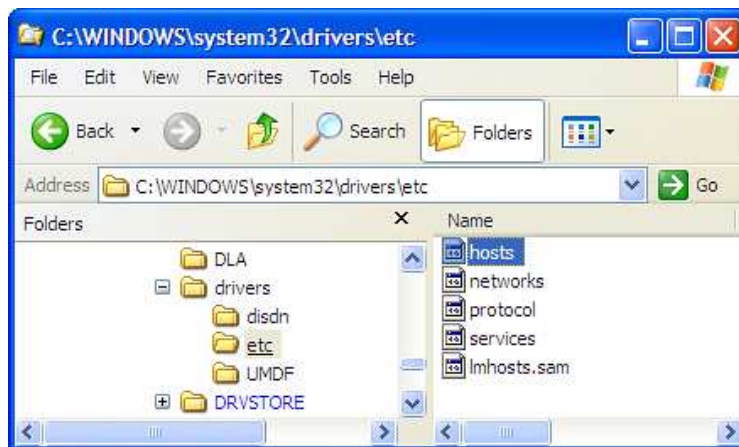
If disabling the firewall solves the communication issues, investigate setting up exceptions within your firewall to enable iC/iControl communications along with firewall protection.

### 11.4.2 Update the HOSTS File on the PC

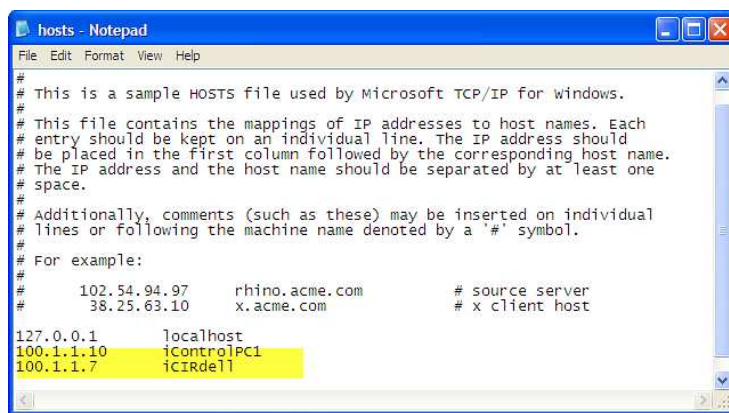
This method “hard codes” the IP address in the HOSTS file on the PC.

1. Open Windows Explorer and drill down to the C:\Windows\System32\Drivers\etc folder.

**NOTE:** The directory may be C:\WIN\System32, or some other name like ‘windows.’ If the directory has a **System32** subdirectory, then you are in the right place.



2. Locate the **HOSTS** file and open it with **Notepad**.
3. Add two new entries—one for the other PC and one for this PC—with the appropriate IP addresses.



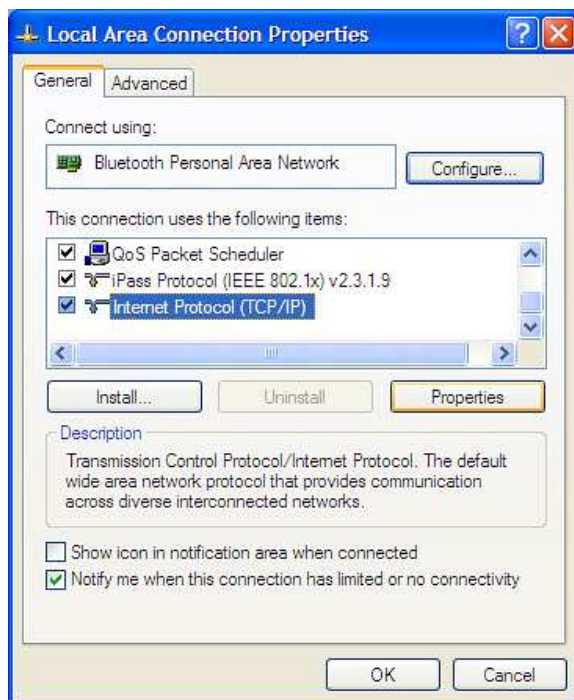
4. Save the file.

**NOTE:** Make sure you do not inadvertently add a .txt file extension—This HOSTS file should have NO extension.

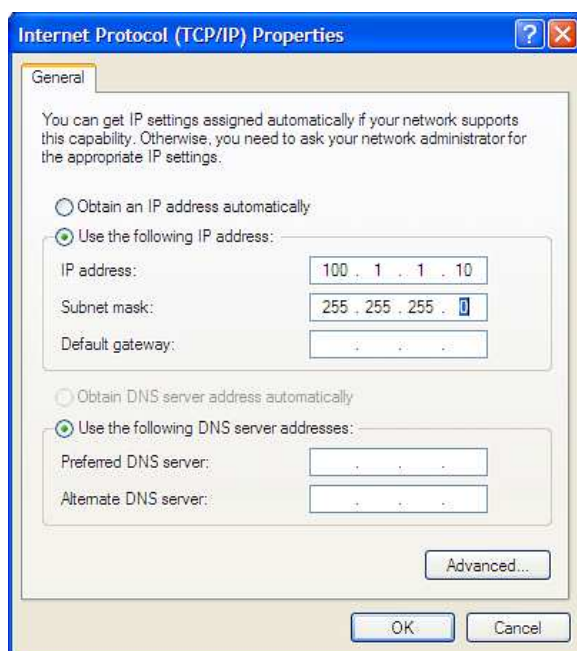
5. Repeat this procedure on the other PC.

### 11.4.3 Specify a Particular IP Address for the PC

1. Under the Control Panel, find and open the **Network Connections** dialog box.
2. Right-click on the appropriate connection (usually 'Local Area Connection') and select **Properties**.
3. Scroll through the list box until you find Internet Protocol (TCP/IP), select it, and click the **Properties** button.



4. Select the **Use the following IP address** radio button.



5. Enter an **IP address** (ideally, the addresses for the two PCs should differ only by the 4<sup>TH</sup> number).
6. Enter a **Subnet mask** of 255.255.255.0 and click **OK**.

If you continue to have issues connecting to other iC/iControl applications, send an email to [iControl@mt.com](mailto:iControl@mt.com) for assistance.

## 12 Supporting and Repairing the iControl RC1e™ Installation

To access support information and to repair your installation, click on 'Control Panel' in your start menu on your computer:



This will open your control panel:

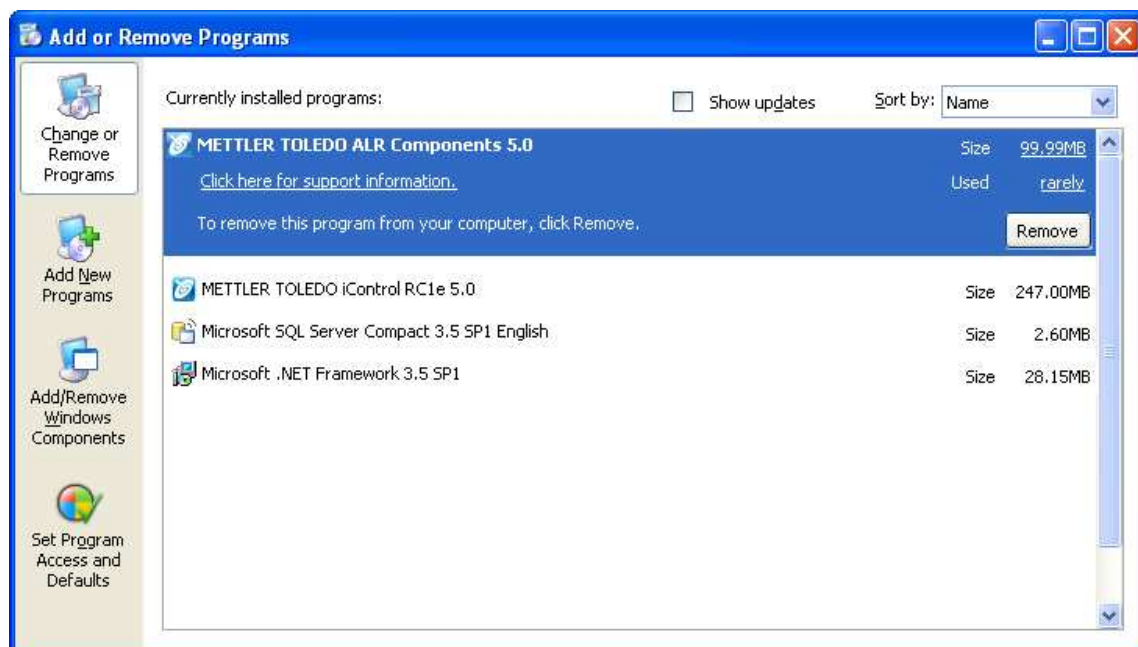


Double-click 'Add or Remove Programs'.

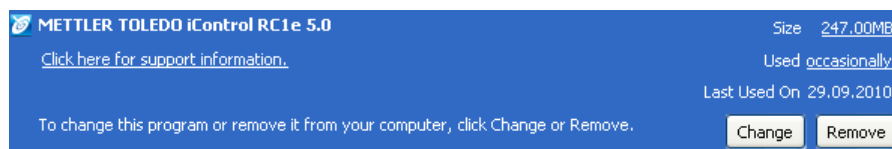
Note: On *German* versions of Windows, this item is called 'Software'

Depending on your installation, you may see the following entries:





If you select an item in the list, such as 'METTLER TOLEDO iControl RC1e™ 5.0', the view of this item will expand to show more information.



From here, you can access the support email and webpage information.

You have the option to repair your iControl RC1e™ 5.0 installation by clicking on the 'Change' button.

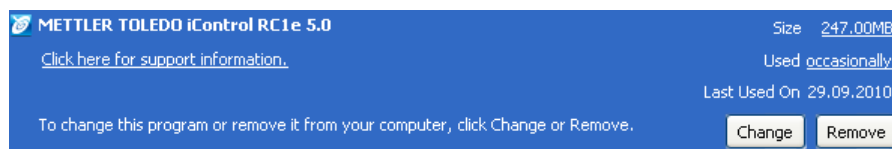


## 13 Uninstalling iControl RC1e™

### 13.1 Uninstalling the iControl RC1e™ 5.0 application

Note: Uninstalling iControl RC1e™ 5.0 will not uninstall or delete any experiments, equipment database, license activation or user settings – all data is retained. So after you reinstall iControl RC1e™ 5.0 (or install a future version of iControl RC1e™), all of your data will be accessible again.

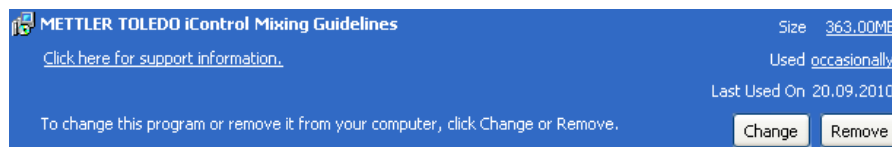
To uninstall the iControl RC1e™ 5.0 application, open 'Add or Remove Programs' from the 'Control Panel' (see the previous chapter for details) and select the 'iControl RC1e™ 5.0' entry:



Click on the 'Remove' button. This will start the removal process. Follow the instructions in the uninstall wizard.

### 13.2 Uninstalling iControl Mixing Guidelines

To uninstall the iControl Mixing Guidelines, open 'Add or Remove Programs' from the 'Control Panel' (see the previous chapter for details) and select the 'iControl Mixing Guidelines' entry:



Click on the 'Remove' button. This will start the removal process. Follow the instructions in the uninstall wizard.

### 13.3 Uninstalling previous iControl installations

When uninstalling a previous iControl installation such as iControl 3.3 or 4.0, assure that you only remove the iControl installation and the ALR Service Tools 4.0 if installed. Do not remove any METTLER TOLEDO ALR Components installations.

METTLER TOLEDO ALR Components 5.0		Size 140.00MB
METTLER TOLEDO ALR Service Tools 4.0	✗	Size 225.00MB
METTLER TOLEDO iControl RC1e 4.0	✗	Size 114.00MB
METTLER TOLEDO iControl RC1e 5.0		Size 220.00MB

Remove entries marked with a ✗ in order to uninstall a previous iControl installation.

## 13.4 Uninstalling Prerequisite Software

Please note that iControl RC1e™ 5.0 and the iControl Mixing Guidelines require several prerequisite applications to run. Uninstalling any of the prerequisite applications may lead to unexpected behavior of the iControl RC1e™ software. The following table shows the required prerequisites per product:

	Mettler Toledo ALR Components 5.0	Mettler Toledo Service Tools 5.0	Microsoft .NET Framework 3.5 SP1	Microsoft SQL Server Compact 3.5
iControl RC1e™ 5.0	x	x	x	x
iControl Mixing Guidelines			x	

### 13.4.1 Uninstalling iControl ALR Components

Note: iControl requires the 'iControl ALR Components' to run. Do not uninstall the 'iControl ALR Component' as long as you need the 'iControl RC1e™ 5.0' application

To uninstall the iControl ALR components, open 'Add or Remove Programs' from the 'Control Panel' (see the previous chapter for details) and select the 'iControl ALR components' entry. Then click the 'Remove' button. This will start the removal process. Follow the uninstall wizard instructions.

### 13.4.2 Uninstalling Microsoft SQL Server Compact 3.5

To uninstall Microsoft SQL Server Compact 3.5, open 'Add or Remove Programs' from the 'Control Panel' (see the previous chapter for details) and select the 'Microsoft SQL Server Compact 3.5' entry. Then press 'remove'. This will start the removal process. Follow the uninstall wizard.

### 13.4.3 Uninstalling Microsoft .NET Framework 3.5

Note: Microsoft .NET Framework 3.5 is a basic infrastructure component of your Windows operating system and therefore uninstalling it is not recommended.

To uninstall the Microsoft .NET Framework 3.5, open 'Add or Remove Programs' from the 'Control Panel' (see the previous chapter for details) and select the 'Microsoft .NET Framework 3.5' entry. Click on the 'Change/Remove' button. This will start the removal process. Follow the uninstall wizard instructions.

## 14 Installation / Operations Guidelines for IT Departments

This section is intended for IT departments to help them understand the minimal user privileges needed to install and run iControl RC1e™ 5.0.

**NOTE:** The below mentioned paths are only applicable to Windows XP. Paths on Windows Vista and Windows 7 may be slightly different.

### 14.1 Installation privileges

The installation of iControl RC1e™ 5.0 and the iControl Mixing Guidelines requires **administrative privileges**.

### 14.2 Execution privileges

To operate iControl RC1e™ 5.0 and the iControl Mixing Guidelines **normal user privileges** are sufficient.

### 14.3 Folders access privileges

To operate iControl RC1e™ 5.0 and the iControl Mixing Guideline, the logged in user needs **read access** to the following folders including all subfolders:

*<Drive>:\Program Files\METTLER TOLEDO*

To operate iControl RC1e™ 5.0 and iControl Mixing Guideline, the logged in user needs **read/write access** to the following folders including all subfolders:

*<Drive>:\Documents and Settings\All Users\Application Data\METTLER TOLEDO*

*<Drive>:\Documents and Settings\<UserName>\Application Data\METTLER TOLEDO*

*<Drive>:\Documents and Settings\<UserName>\Local Settings\Temp*

### 14.4 Registry access privileges

To operate iControl RC1e™ 5.0 and iControl Mixing Guideline, the logged in user needs **read/write access** to the following keys including all subkeys:

HKEY\_LOCAL\_MACHINE\SOFTWARE\Mettler Toledo

### 14.5 Network access privileges

In general iControl RC1e™ 5.0 does not require any network access privileges, but if iControl RC1e™ 5.0 is needed to communicate to an iC 5.0 (or newer) application which resides on the network, then the UDP and TCP ports described below need to be open:

#### 14.5.1 UDP Ports

All iControl 4.0 (and newer) and iC 4.0 (and newer) application use UDP broadcasts on the UDP port 1001 (default) to find each other. This happens only if the user presses "Find METTLER TOLEDO Applications" on each of those iControl and iC applications (in iControl RC1e™, this button can be found on the configuration display for the iC instrument on the 'Manage Equipment' dialog).

Note that it is not required to have this port open, the UDB broadcast is only used to find and exchange the Hostname and TCP port settings to connect the iControl or iC applications. All the actual communications are then done on a TCP link.

This default UDP port can be changed in the following XML file by setting a different Broadcast Port:

*C:\Documents and Settings\All Users\Application Data\METTLER TOLEDO\ApplicationInfo.config.xml*

```
<?xml version="1.0" standalone="yes"?>
<AppInfos>
  <AppInfo>
    <Title>iControl</Title>
    <AppType>iControlRC1e™</AppType>
    <Version>5.0.20.0</Version>
    <Host>ch03w0713.eu.mt.mtnet</Host>
    <Path>C:\Program Files\METTLER TOLEDO\iControl RC1e 5.0\iControlRC1e.exe </Path>
    <Port>3903</Port>
    <Index>0</Index>
  </AppInfo>
  <OtherDefaults>
    <BroadcastPort>1001</BroadcastPort>
  </OtherDefaults>
</AppInfos>
```

**NOTE:** This file is created when iControl starts up the first time.

### 14.5.2 TCP Ports

By default, iControl RC1e™ communicates with other iControl or iC applications on the network over TCP port 3903. This default port can also be changed in the XML file using the Tag <Port> (sample XML file see previous chapter).

#### **Mettler-Toledo AG, AutoChem**

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