

LabX



Operating instructions



Balance Control Software
LabX balance Version 1.4

METTLER TOLEDO

Contents

1	License Agreement for METTLER TOLEDO LabX Software	9
2	Introduction	11
2.1	Brief presentation of LabX	11
2.2	What you need to know regarding the content of this instructions	12
2.3	User interface	14
3	Installing the software	15
3.1	LabX balance system requirements	15
3.2	Installation and License Administration	16
3.2.1	Installation (Standalone)	16
3.3	License Administration and Activation of LabX	20
3.3.1	Initial Startup of LabX	20
3.3.2	Activation and Reactivation of the System	21
3.3.3	Managing instrument licenses LabX pro only	22
3.3.4	Managing module licenses	22
4	Creating users and groups LabX pro only	23
4.1	Defining users and profiles	24
4.1.1	User properties	24
4.1.2	Deleting a user	26
4.1.3	Changing the password of a user	27
4.2	Defining group rights and group members	28
4.2.1	Group properties	28
4.2.2	Deleting groups	30
4.3	Starting LabX pro and selecting a profile	31
4.4	Changing your own password	31
4.5	Forced password change	32
5	General settings	33
5.1	Account Policies LabX pro only	33
5.2	General Policies LabX pro only	34
5.3	Electronic signature LabX pro only	35
5.4	Managing documents LabX pro only	36
5.4.1	Document settings	36
5.4.2	Displaying documents	36
5.5	Printing the security settings	36
5.6	General LabX settings (Menu>Tools>Options)	36
5.7	Setting up Instrument Management	37
5.8	Setting up Job Management	38
5.9	Setting up Report Management	39
5.10	User specific settings	40
5.10.1	Defining the folder for export of reports	40
5.10.2	Option Allow subdirectory for export of reports	40
5.11	Transfer Mode	41
5.11.1	Manual Transfer Mode configuration	41
6	Tree view Configuration	43
6.1	Tree view LabX pro LabX pro only	43
6.2	Tree view LabX light	44
6.3	Icons	45
7	Connecting peripheral devices	46
7.1	Settings of the e-Link network interfaces	46
7.2	Defining the computer connection in the balances	47
7.2.1	Defining the computer connection in the AX/MX/UMX balances	47

7.2.2	Defining the computer connection in the XS balances	47
7.2.3	Defining the computer connection in the XP balances	47
7.2.4	Defining the computer connection in the AT/MT/UMT balances	48
7.2.5	Defining the computer connection in the AG/PG balances	48
7.2.6	Defining the computer connection in the PG-S balances	48
7.2.7	Defining the computer connection in the PR/SR/SG balances	48
7.2.8	Defining the computer connection in the AB-L/AB-S/PB-L/PB-S balances	48
7.3	Defining balances in LabX	49
7.3.1	Define RS connection	49
7.3.2	Define Network connection	50
7.3.3	Show configured devices	51
7.4	Modifying Communication parameters	51
7.5	Managing and identifying balances	52
7.6	Creating maintenance intervals and MinWeigh Settings	53
7.6.1	MinWeigh functionality in LabX	54
7.7	Removing balances	55
8	Setting up Weights Management	56
8.1	Signing weights LabX pro only	57
8.2	Changing weights	57
8.3	Removing weights	58
9	Balance-specific settings	59
9.1	Defining FACT and proFACT settings	59
9.2	Scheduler for adjustment and tests	60
9.2.1	Scheduler for sensitivity adjustment with internal weight	60
9.2.2	Scheduler for sensitivity adjustment with external weight	61
9.2.3	Scheduler for sensitivity test with internal weight	63
9.2.4	Scheduler for sensitivity test with external weight	65
9.2.5	Scheduler for Repeatability test with external weight	67
9.3	Configuring the Release Control	70
10	Displaying histories	71
10.1	Histories of adjustment/test	71
10.2	Histories of repeatability	72
10.3	Histories of MinWeigh incidents	73
11	Tree view Weighing	74
11.1	Introduction	74
11.2	Overview	74
11.3	Icons	75
12	Job template definition	76
12.1	Chronological sequence of a running job	76
12.2	Flow chart of a Job template	77
12.3	Defining a new job template	78
12.4	Definition of job data	79
12.5	Definition of the Applications data	80
12.5.1	Simple Weighing	80
12.5.2	Totalization	80
12.5.3	Differential Weighing, weighing in several loops	81
12.5.4	Dynamic weighing	81
12.5.5	Interval weighing	82
12.5.6	General settings	82
12.6	Defining the balance and the minimum requirements for the balance	83
12.7	Definition of the Sample data	84
12.8	Defining calculations, statistics	85

12.8.1	Definitions and rules	85
12.8.2	Constants	86
12.8.3	Results	86
12.8.4	Statistics.....	87
12.8.5	SQC parameters.....	87
12.8.6	Post Job Results.....	88
12.9	Defining the data processing	89
12.9.1	Transfer Mode	89
12.9.2	Report data.....	91
12.10	Saving a job template	91
12.11	Duplicating job templates.....	92
12.12	Exporting a job template.....	92
12.13	Importing a job template	93
12.14	Organizing job templates.....	93
12.15	Signing job templates LabX pro only	94
12.16	Adding a job template to the queue	94
12.17	Running a job	95
12.18	Deleting job templates	95
12.19	Printing job templates	95
13	Balance queue and job types.....	96
13.1	Job types and status	96
13.1.1	Weighing jobs.....	96
13.1.2	Adjustment jobs	97
13.1.3	Test jobs	97
13.2	Reading FACT/proFACT records.....	98
14	Working with weighing jobs	99
14.1	Generating a weighing job	99
14.1.1	Using a job template	99
14.1.2	Creating a one-time job.....	100
14.1.3	Creating a job thanks to Rapid Access-Job Template	100
14.2	Generating adjustment and test jobs.....	100
14.2.1	Generating adjustment and test jobs with the scheduler	100
14.2.2	Generating adjustment and test jobs manually.....	101
14.3	Starting/continuing weighing and adjustment/test jobs	101
14.3.1	Jobs starting/continuing from LabX.....	101
14.3.2	Jobs starting from the balance with Rapid Access	101
14.4	Stopping a weighing job.....	102
14.4.1	Pausing a weighing job from LabX	102
14.4.2	Closing a weighing job from LabX.....	102
15	Balance monitor	103
15.1	Overview.....	103
16	Navigation on the balance.....	104
16.1	AX/MX/UMX balances with Remote software	104
16.1.1	Rapid Access	104
16.1.2	General operation	105
16.1.3	Starting a weighing job.....	105
16.1.3.1	Starting a weighing job from a queue	105
16.1.3.2	Starting a weighing job with a job template.....	106
16.1.4	Executing weighings	107
16.1.5	Deleting samples from a running job	108
16.1.6	Pausing/Terminating a weighing job.....	109
16.1.7	Disconnecting from LabX.....	109
16.1.8	Using peripheral devices	109

16.1.8.1	Barcode reader	109
16.1.8.2	Local printer.....	109
16.2	AX/MX/UMX balances with standard software.....	110
16.2.1	General operation	110
16.2.2	Starting a weighing job.....	110
16.2.3	Executing weighings	110
16.2.4	Deleting samples from a running job	111
16.2.5	Pausing/Terminating a weighing job.....	112
16.2.6	Using peripheral devices	112
16.2.6.1	Barcode reader	112
16.2.6.2	Local printer.....	112
16.3	XS balances.....	113
16.3.1	Rapid Access	113
16.3.2	General operation	113
16.3.3	Starting a weighing job	114
16.3.3.1	Starting a weighing job from a queue	114
16.3.3.2	Starting a weighing job with a job template	115
16.3.4	Executing weighings	116
16.3.5	Deleting samples from a running job	117
16.3.6	Pausing/Terminating a weighing job.....	118
16.3.7	Disconnecting from LabX.....	118
16.3.8	Using peripheral devices	118
16.3.8.1	Barcode reader	118
16.3.8.2	Local printer.....	118
16.4	XP balances.....	119
16.4.1	Rapid Access	119
16.4.2	General operation	119
16.4.3	Starting a weighing job	120
16.4.3.1	Starting a weighing job from a queue	120
16.4.3.2	Starting a weighing job with a job template	121
16.4.4	Executing weighings	122
16.4.5	Deleting samples from a running job	123
16.4.6	Pausing/Terminating a weighing job.....	124
16.4.7	Disconnecting from LabX.....	124
16.4.8	Using peripheral devices	124
16.4.8.1	Barcode reader	124
16.4.8.2	Local printer.....	124
16.5	AT/MT/UMT balances with standard software	125
16.5.1	Key assignments on AT/MT/UMT balances.....	125
16.5.2	Starting a weighing job.....	125
16.5.3	Executing weighings	125
16.5.4	Pausing/Terminating a weighing job.....	126
16.5.5	Using peripheral devices	126
16.6	AG, PG-S balances with standard software	127
16.6.1	Key assignments on AG, PG-S balances	127
16.6.2	Starting a weighing job.....	127
16.6.3	Executing weighings	127
16.6.4	Deleting samples from a running job	128
16.6.5	Pausing/Terminating a weighing job.....	128
16.6.6	Using peripheral devices	128
16.7	PG/SG balances with standard software	129
16.7.1	Key assignments on PG/SG balances	129
16.7.2	Starting a weighing job.....	129
16.7.3	Executing weighings	129
16.7.4	Deleting samples from a running job	130
16.7.5	Pausing/Terminating a weighing job.....	130

16.7.6	Using peripheral devices	130
16.8	PR/SR balances with standard software	131
16.8.1	Key assignments on PR/SR balances	131
16.8.2	Starting a weighing job.....	131
16.8.3	Executing weighings	131
16.8.4	Deleting samples from a running job	132
16.8.5	Pausing/Terminating a weighing job.....	132
16.8.6	Using peripheral devices	132
16.9	AB-L/AB-S/PB-L/PB-S balances with standard software	133
16.9.1	Key assignments on AB-L/AB-S/PB-L/PB-S balances	133
16.9.2	Starting a weighing job.....	133
16.9.3	Executing weighings	133
16.9.4	Deleting samples from a running job	134
16.9.5	Pausing/Terminating a weighing job.....	134
16.9.6	Using peripheral devices	134
17	Tree view Reports	135
17.1	Introduction	135
17.2	Overview.....	135
17.3	Icons	136
18	Working with reports.....	137
18.1	Report filter	137
18.2	Display reports	138
18.3	Structure of reports	139
18.3.1	Report start (job data)	139
18.3.2	Report body (measurement values per sample loop and sample)	139
18.3.3	Report end (results and statistics).....	140
18.4	Functions in the report view.....	141
18.5	Printing reports	141
18.6	Exporting reports.....	141
18.6.1	Manual export reports	141
18.6.2	Automatic export reports LabX pro only	142
18.6.3	Programmed export reports	142
18.7	Searching the document for text	142
18.8	Adding comments to the report.....	142
18.9	Signing reports LabX pro only	143
18.10	Deleting reports	143
19	Backup on the PC/Server.....	144
19.1	Database backup	144
19.2	Starting DB Maintenance	145
19.2.1	Data backup	145
19.2.2	Data restore	146
19.2.3	Data initialization/clear	146
19.3	Automated data backup	147
20	Audit Trail LabX pro only	148
21	What is 21 CFR Part 11?.....	150
21.1	Purpose of 21 CFR Part 11	150
21.2	Implementation within LabX LabX pro only	151
21.3	Specific implementation of user login within LabX pro balance LabX pro only	153
21.3.1	The impact of PC solution on the weighing process	153
21.3.2	A- and B- Choices: discussion about Part 11 compliance	154
22	Appendix LabX Functions	155

23	Network installations LabX pro only	156
23.1	Network examples	156
23.1.1	LabX light	156
23.1.2	LabX pro stand alone installation	156
23.1.3	LabX pro network installation	157
23.2	General notes on network installation	158
23.2.1	Optimizing the performance of the installation	159
23.2.2	Planning the installation	159
23.3	Installation (Distributed)	160
23.3.1	Installation (Server)	160
23.3.2	Installation (Client)	165
23.3.3	Installation (Broker)	169
23.3.4	Installation of independent systems	170
23.3.5	Troubleshooting	170
23.3.6	Installing Patches, Updates and Upgrades	172
24	Index	173

LabX is a trademark of Mettler-Toledo AG Switzerland. Current version 1.4.

Reference to third parties and products is only for information purposes. Mettler-Toledo AG accepts no liability for the selection, performance or use of these products. All agreements, contracts or guarantees apply directly between the manufacturer and the customer.

1 License Agreement for METTLER TOLEDO LabX Software

IMPORTANT-READ CAREFULLY: This License Agreement is a legal agreement between you ("Licensee") and Mettler-Toledo AG for the proprietary software product identified above, which includes computer software and may include associated media, printed materials, and "online" or electronic documentation ("SOFTWARE PRODUCT"). This SOFTWARE PRODUCT is made available to you only on the terms and conditions of this agreement. By installing, copying, or otherwise using the SOFTWARE PRODUCT (which ever occurs first), you agree to be bound by the terms of this agreement. If you do not agree with the terms of this agreement, you are not authorized to use the SOFTWARE PRODUCT. All rights not expressly granted to Licensee in this agreement are specifically reserved to Mettler-Toledo AG.

Software Product License

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. Grant of License

Installation and Use. This agreement grants to you the non-exclusive and non-transferable right to use the SOFTWARE PRODUCT for your own internal purposes only. For each network installation, a base license is required. In addition, each device which is controlled by the SOFTWARE PRODUCT requires a separate instrument license or as defined by separate agreement between the parties. You may only install the SOFTWARE in accordance with our installation manuals. The rights and limitation of this agreement also govern updates/upgrades of the SOFTWARE PRODUCT. You may make copies of the SOFTWARE PRODUCT solely for archival purposes in support of your use of the SOFTWARE PRODUCT. You may not reproduce or distribute the software in any other way, including rental or leasing.

2. Description of other Rights and Limitations

Limitations on Reverse Engineering, Decompilation, and Disassembly. You may not reverse engineer, decompile, or disassemble the SOFTWARE PRODUCT, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation.

Support Services and Registration of Licensee. Mettler-Toledo AG may provide you with support services related to the SOFTWARE PRODUCT ("Support Services"). Use of Support Services is governed by Mettler-Toledo AG's policies and programs described in the user manual, in "online" documentation, and/or in other Mettler-Toledo-provided materials. Any supplemental software code provided to you as part of the Support Services shall be considered part of the SOFTWARE PRODUCT and subject to the terms and conditions of this agreement. With respect to technical and other information you may provide to Mettler-Toledo AG, Mettler-Toledo AG may use such information for its business purposes, including for product registration, support and development. Mettler-Toledo AG will not divulge such information to third parties in a manner that allows personal identification

Transfer. You may not transfer any of your rights under this agreement. Licensee agrees to communicate the terms and restrictions contained in this agreement to all persons under his or her employment, direction, or control who have access to the SOFTWARE PRODUCT.

Taxes. Any withholding tax is to be paid by the party liable for payment. The parties to this Agreement bind themselves to obtain a refund of deductions if necessary. They will give one another mutual support in carrying out their procedural obligations.

Termination. Without prejudice to any other rights, Mettler-Toledo AG may terminate this agreement if you fail to comply with the terms and conditions of this agreement. In such event, you may not use the SOFTWARE PRODUCT any longer and you must destroy all copies of the SOFTWARE PRODUCT and all of its component parts

3. Copyright

All title and copyrights in and to the SOFTWARE PRODUCT (including but not limited to any images, photographs, animations, video, audio, music, text, and "applets" incorporated into the SOFTWARE PRODUCT), the accompanying printed materials, and any copies of the SOFTWARE PRODUCT are owned by Mettler-Toledo AG or its suppliers. The SOFTWARE PRODUCT is protected by copyright laws and international treaty provisions. Therefore, you must treat the SOFTWARE PRODUCT like any other copyright protected material.

4. Warranties

The SOFTWARE PRODUCT and any related documentation is provided to you "as is". Licensee is solely responsible for selection of the SOFTWARE PRODUCT and components to achieve Licensees intended results or for particular applications and systems.

Limited Warranty. If the SOFTWARE PRODUCT is or becomes defective or unusable due to incorrect manufacture within 90 days after you first accept this agreement, Mettler-Toledo AG undertakes at its sole discretion at your written request to provide you with a performing copy of the SOFTWARE PRODUCT or to refund you the purchase price and terminate this agreement. Mettler-Toledo AG specially does not warrant that the SOFTWARE PRODUCT will run uninterrupted or error-free.

No other warranties. Mettler-Toledo AG expressly disclaims any further warranty for the SOFTWARE PRODUCT including warranty of any kind, whether express or implied, including, without limitation, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. The entire risk arising out of use or performance of the SOFTWARE PRODUCT remains with you.

No liability for damages. In no event shall Mettler-Toledo AG or its suppliers be liable for any damages whatsoever including, without limitation, damages for loss of business profits, business interruption, loss of business information, or any other pecuniary loss arising out of the use of or inability to use this SOFTWARE PRODUCT, even if Mettler-Toledo AG has been advised of the possibility of such damages. Because, however, some jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damages by compulsory law, the above limitation may not apply to you.

5. Miscellaneous

This agreement is governed by the laws of Switzerland. Any dispute arising out of or in connection with this agreement shall be subject to the exclusive jurisdiction of the ordinary courts of the Canton of Zurich, Switzerland. The provisions of the United Nations convention on Contracts for the International Sale of Goods are expressly excluded. Notwithstanding the foregoing, Mettler-Toledo AG retains the right to bring legal action against you before any other competent court.

2 Introduction

In this chapter you will find a description of the fundamental aspects of LabX software. Please read carefully, even if you already have some experience with similar applications and laboratory software.

One important point before you begin. Before updating LabX software you should save your data (see chapter 19 "Backup on the PC/Server").

2.1 Brief presentation of LabX

Thank you for making the decision to purchase LabX from METTLER TOLEDO.

LabX is the software used by METTLER TOLEDO for controlling and handling data in conjunction with laboratory balances and titrators. LabX allows for central instrument management. Operations such as checking, adjusting or weighing application optimisation can be carried out on a PC workstation. With LabX, measurements with balances and titrators can be carried out from any PC included in your network. LabX contains all the necessary tools for handling and data storage according to the FDA requirements, (21 CFR part 11). The software is available in various levels (see function overview):

- **LabX light** contains all the standard applications.
- **LabX pro** contains all the functionality of **LabX light** and also additionally allows for networking capabilities, 21 CFR Part 11 support and possibilities to export data. Several instruments can also be supported.

The main features are:

- A Job template editor and management (for routine jobs)
- Report and statistics functions (with export possibility)
- Quality assurance functions (Scheduler and Release Control for every balance)
- User management and security functions (Electronic signature, Audit Trail) **LabX pro only**
- Complete network capability **LabX pro only**
- Control of multiple balances from one single PC **LabX pro only**
- Rapid Access from the balance to the LabX system. "Rapid Access" is only possible with balances which include a LabX Client. On the AX/MX/UMX balances, the "Remote" application must be installed.

You can define your job templates in advance. Just choose a weighing application and the number of samples, and then enter your job data. The application starts when you drag the symbol for the job template over the symbol of the desired balance. The job template can be reused an unlimited number of times for routine operations. With LabX it is easy to create and manage job templates for routine use. Job templates can be used to store test job data and to specify balance requirements. In each job template a weighing application can be selected. The job templates which have been created can be grouped at will to allow complete job libraries to be conveniently managed. Job templates can also be exported, so that they can easily be sent by e-mail, for example.

LabX offers the best overview of processes in the laboratory. When a weighing job is started, the online view appears on the screen. The weight values from the balance are displayed on the PC screen. If a LabX weighing job is also active on the selected balance, information about this is also displayed. In a window, the measurement values recorded in a weighing job are updated similar to the way they are printed on a balance printer. After a weighing job has been started, LabX guides the user on the balance. The user can terminate the process at any time while it is running, or interrupt it to restart it later. Individual measurements of a series can be repeated, provided that sample identifications are used.

In the "Report" area you can obtain a summary of your measurement results sorted by job template. All the measurements for one weighing job are displayed in one window and are comparable with the information normally printed on a balance printer. Weighing reports with tables of measurement values, statistical analyses, etc. can be displayed by double-clicking. The structure of the data allows rapid access to desired values. If desired, a powerful filter function also allows the data to be reduced to the essentials. Reports can be printed or exported in various standard formats.

2.2 What you need to know regarding the content of this instructions

The following conventions are relevant for this operating instructions.

Keyboard designations are enclosed in double pointed brackets (e.g. «**ESC**» or «**Return**»).



This symbol signifies safety and security references. Ignoring these may lead to malfunction of the software or the whole measurement system.

This operating instructions is still valid for both **LabX light** and **LabX pro**. The different versions are directly associated with various performance factors. Such cases will be highlighted in the text. **LabX pro only**

Whereas you should use this operating instructions for LabX and relevant adjustments of the connected METTLER TOLEDO balances, you should refer to the balance operating instructions for fundamental aspects of balance operation.

LabX pro offers all functions required for data management according to FDA guidelines (21 CFR Part 11). Every user has to log in to the system with a user name and password. The User Manager allows user rights to be defined for four different user groups. Critical manipulations have to be confirmed with the user name and password (Electronic signature). Every action is recorded in the **Audit Trail**.

LabX stores data in a SQL database. Data cannot be removed, moved, or deleted without being detected. All interventions in the database require valid access rights in the form of login and user name. If desired, the data can also be exported. This takes place either automatically – e.g. using one LIMS – or manually. In either case, only one copy of the original data is maintained.

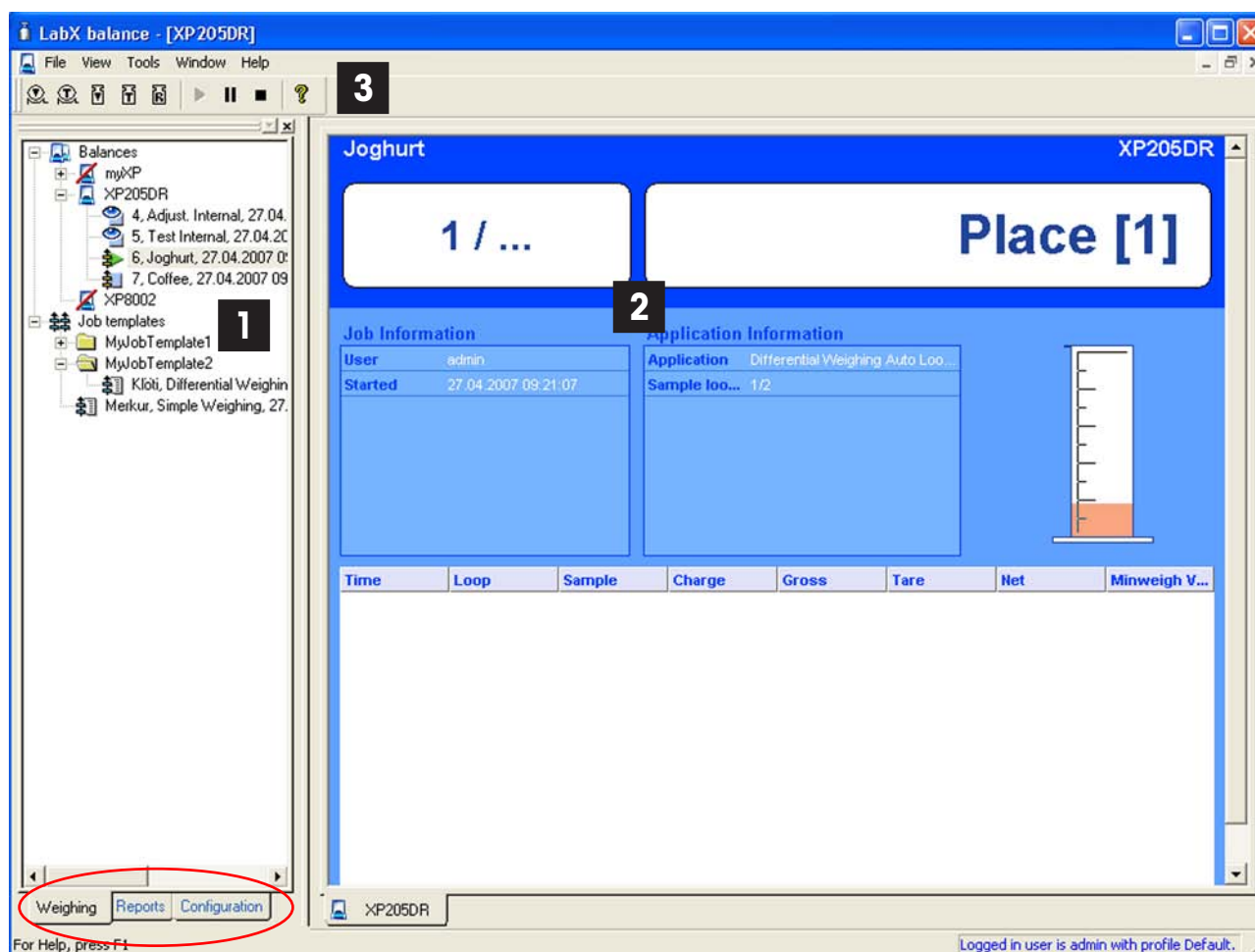
Overview of Features	LabX balance pro	LabX balance light
Control of METTLER TOLEDO AB-L, AB-S, PB-L, PB-S, AT, MT, UMT, AG, PG, PG-S, PR, SR, SG, AX, MX, UMX, XS and XP balances	•	•
Job management		
User guidance on the balance display	•	•
Rapid Access (only for AX, XP and XS balances) – start jobs from the balance	•	•
Online view	•	•
Job template editor	•	•
Simple weighing, Differential weighing, Interval weighing and Totalization	•	•
Job queue	•	•
Balance settings management	•	•
Instrument management		
Instrument release control	•	•
Sensitivity adjustments and performance tests scheduler and controller	•	•
Sensitivity adjustments and performance tests histories, incl. FACT and ProFACT	•	•
Tolerances management with built-in tolerance database	•	•
Weights library	•	•
MinWeigh incident history	•	•
Calibration certificate explorer	•	•
Data management		
Results stored in MS SQL database	•	•
Powerful database search/filter function	•	•
Flexible statistical evaluation	•	•
Report generator for automatic GLP-compliant reports	•	•
Manual export to Excel or LIMS	•	•
Automatic data export to Excel or LIMS	•	
Bidirectional, fully configurable and automated communication with LIMS available as an option (LabX connect)	•	
Database tool for manual/automated backup and maintenance	•	•
21 CFR Part 11 compliance		
User management with password management	•	
Electronic signature for modification	•	
Electronic signature for Review/Approve of all documents	•	
Audit Trail with filter and export functionality	•	
System		
Full network capability / instruments directly connectable via Ethernet	•	
Client/server architecture: All data can be put on a central database server	•	
Integrated help (PDF file)	•	•

2.3 User interface

The LabX window is divided into two panes, the tree view in the navigations window (1) for navigation and the working area (2) for entering data and report view.

The tree view **Weighing, Reports and Configuration** can be activated by clicking the corresponding tab directly below the navigations window (see marking). Many functions can be performed with drag-and-drop operations (e.g. moving a Job template) or via a context menu (right-click the icon).

- You can open or close a folder by clicking a \oplus or \ominus sign or by double-clicking the folder.
- If you right-click an icon in the tree view, a context menu appears with an overview of possible functions.
- Double-clicking an icon opens the corresponding working window in the working area. You can switch between working windows by clicking the tab directly below the working area.



The working area contains various views, such as the monitor view, job templates or reports. You can rearrange the working area using the **Window** menu command. You can switch between working windows by clicking the tab directly below the working area. To close working windows of the same type, use the **Window > Close All...** menu command.

The menu bar and toolbar (3) always have those commands available that are required for the active working window in the working area.

3 Installing the software

3.1 LabX balance system requirements

Supported operating systems / Databases

- Windows 2000 Professional / Server (SP4 or higher)
- Windows XP Professional (SP1 or higher)
- Windows Server 2003 (SP1 or higher)
- MS SQL Server 2000 (SP3 or higher)
- MS SQL Server 2000 Desktop Engine (SP3 or higher) maximum database size 2 GB
- MS SQL Server 2005 (SP2 or higher)
- MS SQL Server 2005 Express Edition (SP2 or higher) maximum database size 4 GB

Software

- Internet Explorer 6.01 (SP1 or higher)
- MDAC 2.8 (will be installed if not present)
- .NET 2.0 (will be installed if not present)

Client / LabX light

- Industry standard PC, 800 MHz (1.5 GHz recommended)
- 512 MB RAM (1024 MB RAM recommended)
- 5 GB free harddisk space (10 GB recommended)
- 1024x768 screen resolution (1280x1024 recommended)
- 100 Mbit Ethernet

Server / Standalone

- Industry standard PC, 1.5 GHz (2.4 GHz recommended)
- 1024 MB RAM (2048 MB RAM recommended)
- 10 GB free harddisk space (20 GB recommended)
- 1024x768 screen resolution (1280x1024 recommended)
- 100 Mbit Ethernet

Supported Balances

AB-L, AB-S, PB-L, PB-S, AT, MT, UMT, AG, PG, PG-S, PR, SR, SG, AX, MX, UMX, XS and XP

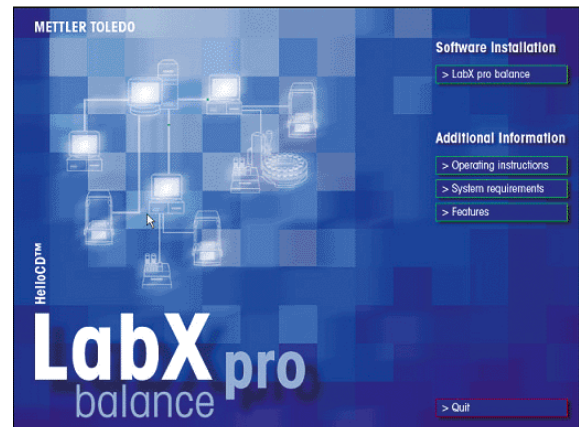
3.2 Installation and License Administration

3.2.1 Installation (Standalone)

For network installation please refer to “23. Network installations”. In order to be able to install the software, you must have administrator rights on the PC. It is mandatory, that the following services and Windows settings are installed and active:

- TCP/IP Protocol
- DCOM
- WMI
- File and Printer Sharing for Microsoft Network.
- “Use simple file sharing” must be deactivated.

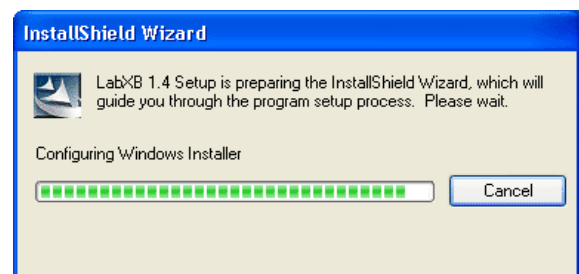
1. Insert the LabX CD in the CD-ROM drive. The HelloCD window appears automatically with a choice of different options. (If the HelloCD window does not appear, double-click start.exe on the CD in the Windows-Explorer to start the installation). Choose **Software Installation > LabX pro balance**.



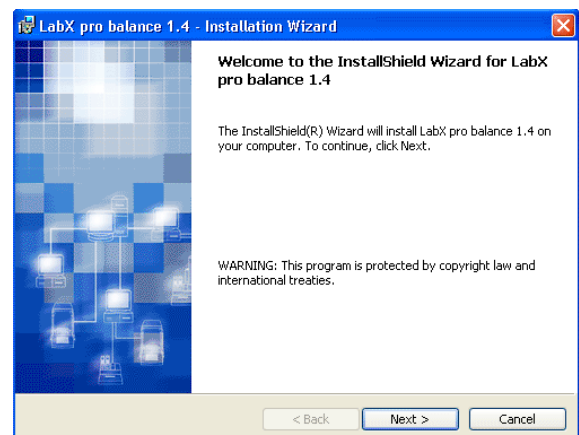
2. Choose the installation text language in which you wish LabX to be installed.



The installation program prepares the installation and examines the available software components.



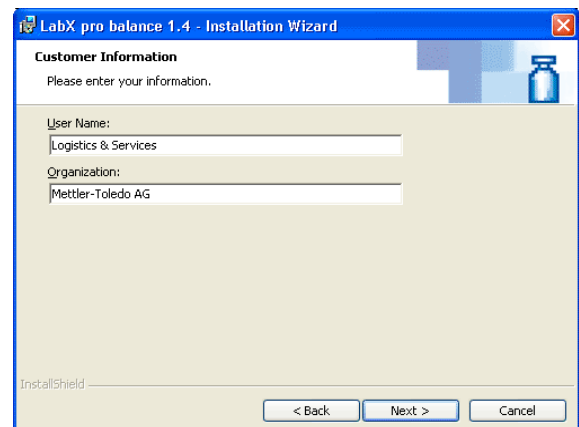
3. The welcome screen appears. Click **Next**.



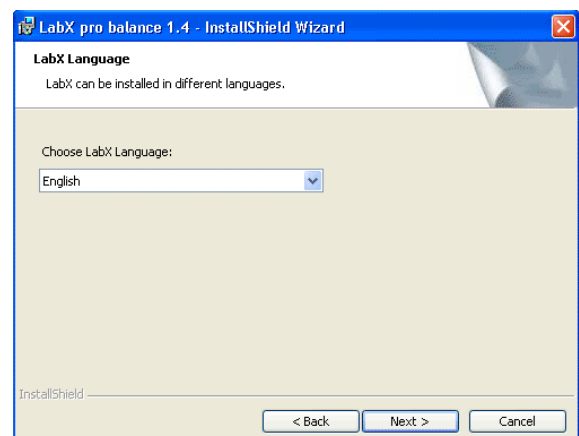
4. The license agreements are displayed. Mark the option that you accept these and click **Next**.



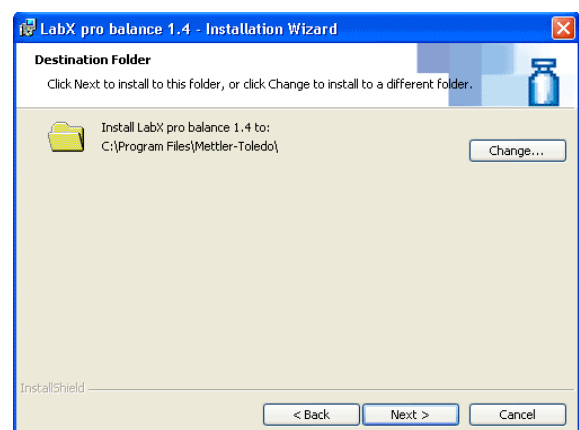
5. The user information and the use of LabX are displayed. Enter this and click **Next**.



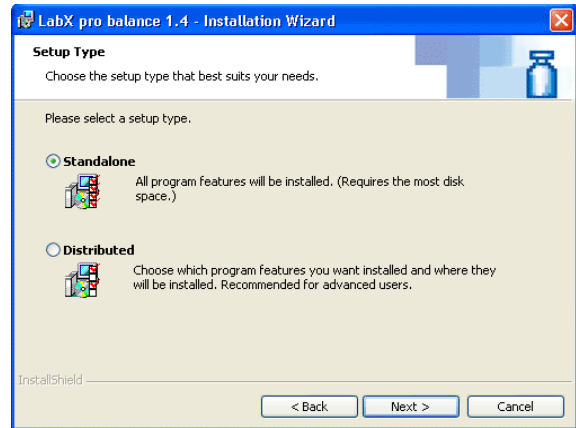
6. Select the language for the LabX Installation and click **Next**.
A subsequent change of the language is not possible.



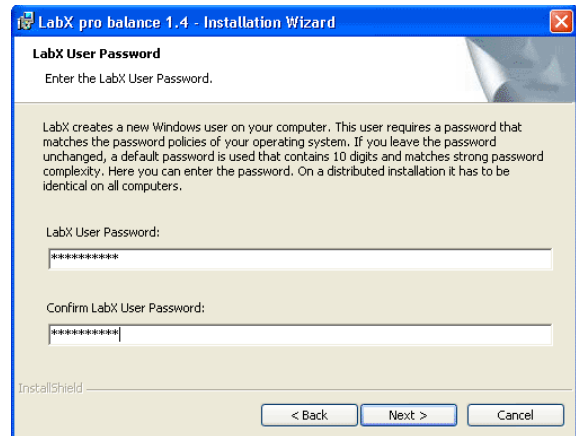
7. Select the target folder and click **Next**.



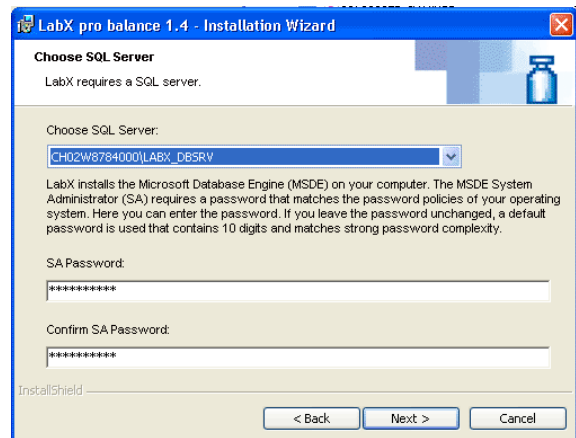
- When installing LabX, you can choose between a "Standalone" installation or a "Distributed" installation. Select "Standalone" and click **Next**.



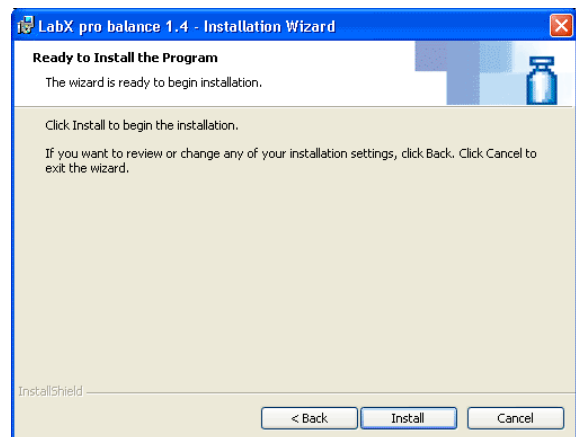
- Select a password for the user "LabX" and click **Next**.



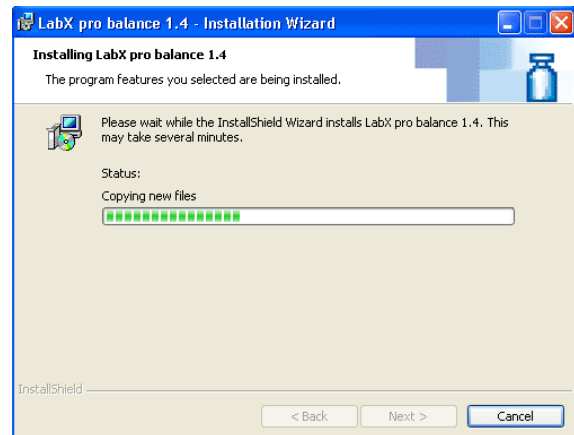
- Select the administrator password for the MSDE database and click **Next**.



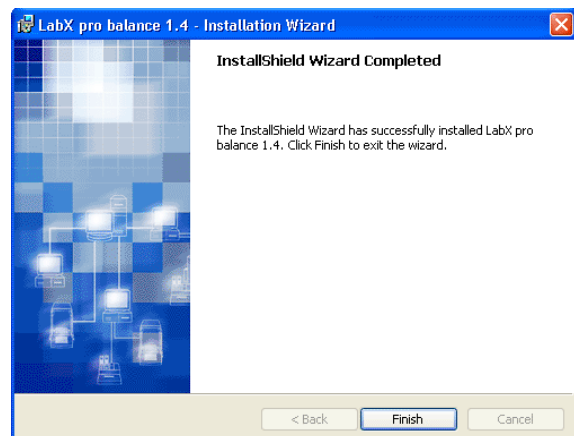
- Start installing the components by clicking **Install**.



12. The installation of various software components is executed and displayed.



13. On completion of installation, click **Finish** to complete the operation. We recommend that you should now reboot the system.



Notes

- In order to correctly display superscripted and subscripted numbers, e.g. in the job editor, the Option "Install files for East Asian languages" must be activated. It may be necessary to install additional operating system components.
- In the chapter 23.3.5 "Error messages" you will find a listing with possible errors and their correction.

3.3 License Administration and Activation of LabX

LabX pro balance

For each system you will need a LabX "Module License Key" and for each instrument an "Instrument License". Balances which are exclusively assigned to **LabX pro** titration do not require a license.

Both a module license key and an instrument license key are included in the scope of delivery of the LabX. If you wish to connect several instruments to **LabX pro**, you will require additional instrument licenses. You can purchase the instrument licenses from your local METTLER TOLEDO representative. Licenses are available in sets of 1, 3, 5 and 10.

LabX must be activated within 30 days of installation.

LabX light balance

LabX light balance comes with one "Module License" and one "Instrument License". The use of further instrument licenses is not supported. **LabX light** balance must be activated within 30 days of installation. **LabX light** does not contain any user administration.

3.3.1 Initial Startup of LabX

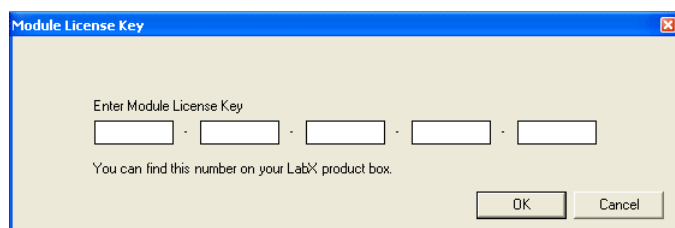
The first time you start up LabX, you must enter the "Module License Key". You will find this key on the LabX Box.

After installation of **LabX pro** only a single user is defined who has administrator rights. We recommend that after entry of the instrument licenses and activation you change the code or define a new administrator and delete the standard existing administrator.

1. Start LabX by double-clicking the LabX icon on the desktop.

or

Select **Start > Programs > LabX > LabX ...**. The **Module License Key** dialog box appears.



2. Enter the **Module License Key** and click **OK**. The **LabX License Manager** dialog box appears.
3. If you do not wish to install any additional instrument licenses, then proceed directly with the activation of the software. See chapter 3.3.2 "Activation and Reactivation of the System".

or

if you wish to install additional instrument licenses, then proceed with the entry of instrument licenses. See chapter 3.3.3 "Administering Instrument Licenses".

Notes

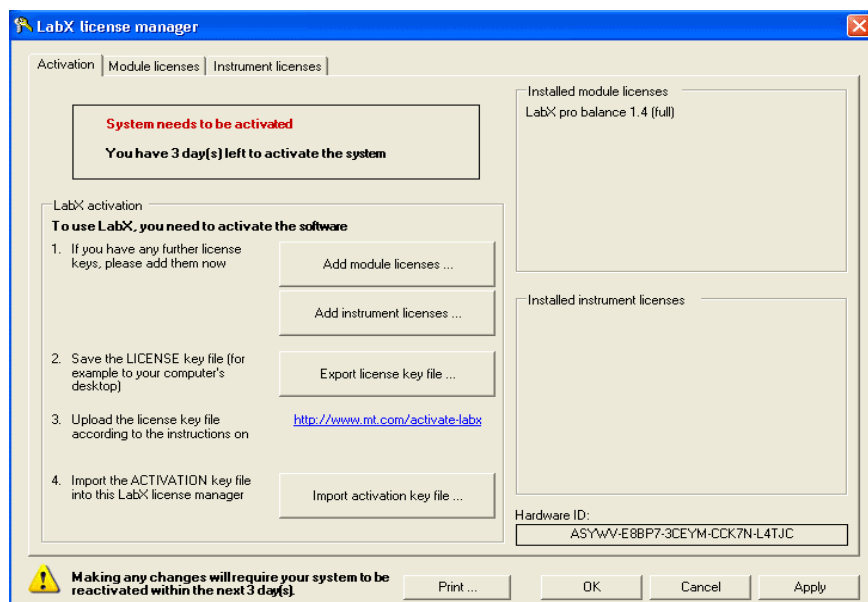
- LabX must be activated within 30 days of installation. See chapter 3.3.2 "Activation and Reactivation of the System".
- To set up the administrator under LabX, follow the instructions under chapter 4.1.1 "User Properties".

3.3.2 Activation and Reactivation of the System

A non-activated version of LabX only run for 30 days. 10 days before this period expires, you will be prompted to activate LabX every time you start it. If you wish to install additional instrument licenses, then enter the instrument license codes. See chapter 3.3.3 "Administering Instrument Licenses".

Reactivation is required if you add or remove module licenses or instrument licenses or if you replace hardware components or the entire server. The procedure for reactivation is similar to activation, but without the steps for creating a new user.

1. If the **LabX License Manager** is not already open, start LabX and select **Tools > License Manager**. The **LabX License Manager > Activation** dialog box appears.



2. If you have additional instrument licenses, please enter these first. To do this, click on **Add instrument licenses** and enter the relevant number in the **Instrument License Key** dialog box.
3. Click on **Export License Key File** and enter the path for export.
4. Click on the link www.mt.com/activate-labx. Follow the instructions on the screen.
 - Click on **New user** to create a new user. Enter a user name and a valid e-mail address. You will then receive your login information and a generated password via e-mail.
 - Click on the link in the e-mail and enter the generated password in the **Login** browser window that is displayed. Then complete your profile data.
 - Click on **Activation**, enter the path for the license key file and click on **Submit** to upload.
 - Complete the fields in the **instruments** tab and save the details. In the **system overview** tab, you can now download the activation key file.
 - Please enter all the details for your installed system under **My systems**. These will be relevant for software updates.
5. Click on **Import Activation Key File** and enter the import path for the downloaded activation key file.
6. Click on **OK** or **Apply** to adopt the entries.
LabX is activated.

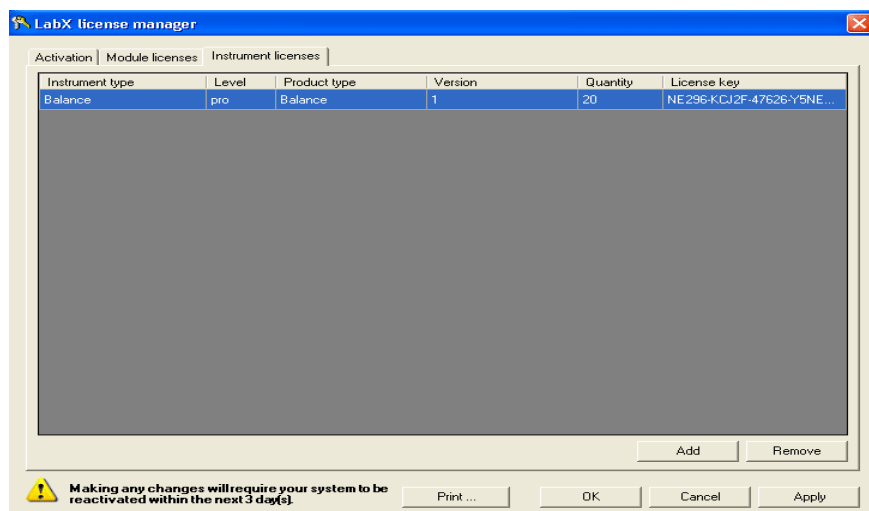
Note

If the PC is not enabled or authorized for access to the Internet, the license key files can be copied onto a storage medium (e.g. USB stick) on another PC with Internet access. You then continue the process as described above. Then copy the activation key file received from METTLER TOLEDO from any storage medium to the LabX PC and continue the procedure.

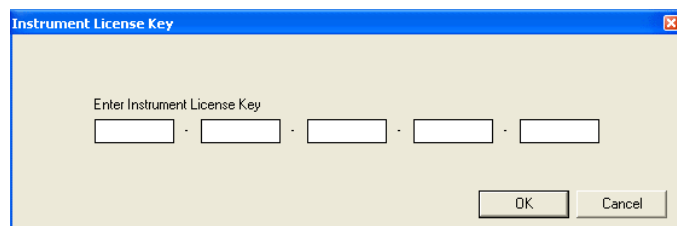
3.3.3 Managing instrument licenses **LabX pro only**

In order to operate more than one instrument on **LabX pro**, you must install one or more additional instrument licenses. A maximum of 31 instruments can be operated on **LabX pro**, balances used only by **LabX pro** titration do not require a license.

1. If the **LabX License Manager** is not already open, select **Tools > License Manager** in the menu. The **LabX License Manager > Activation** dialog box appears.
2. Click the **Instrument Licenses** tab. The **LabX License Manager > Instrument Licenses** dialog box appears.



2. To add instrument licenses, click the **Add** button.



3. Enter the instrument license number, which you will have received in an envelope, and confirm your entry by clicking the **OK** button.
4. Click **OK** or **Apply** to save the settings.

LabX pro must be immediately activated after any changes to the LabX License Manager. Proceed directly with the activation of the software. See chapter 3.3.2 "Activation and reactivation of the system".

Note

In order to be able to remove instrument licenses, you must beforehand remove the corresponding number of instruments from LabX, otherwise you will receive a corresponding reminder. Select the license from the list and confirm your selection by clicking the **Remove** button. A license once removed can be installed on another system, whereby in this case the system will also have to be reactivated.

3.3.4 Managing module licenses

Module licenses can be added or removed under certain conditions. If you have any questions about module licenses, please contact your local METTLER TOLEDO representative.

4 Creating users and groups **LabX pro only**

With a security system you can ensure that data is not deleted or changed by mistake.

This chapter explains how you can make LabX secure by defining access rights for user and groups, and how you can use profiles to define access to devices individually. In a network with more LabX modules, e.g. **LabX pro** titration, you can also administer these modules with the **LabX pro** balance **User and Group Manager**.

Users can be added, changed, deleted or temporarily disabled. Each user is assigned to at least one group. Each user can have several profiles. The profile defines which devices the user can use.

The administrator cannot be deprived of the rights "Modify policies", "Modify user manager settings" and "Add/remove instrument licenses". At least one administrator must be defined. If only one administrator is defined, it can neither be deleted nor be disabled.

In the groups you define the rights that are available to the assigned user. The default LabX setting is a division into 4 groups. However, groups can be edited, deleted or added as desired. The names of the groups can be changed.

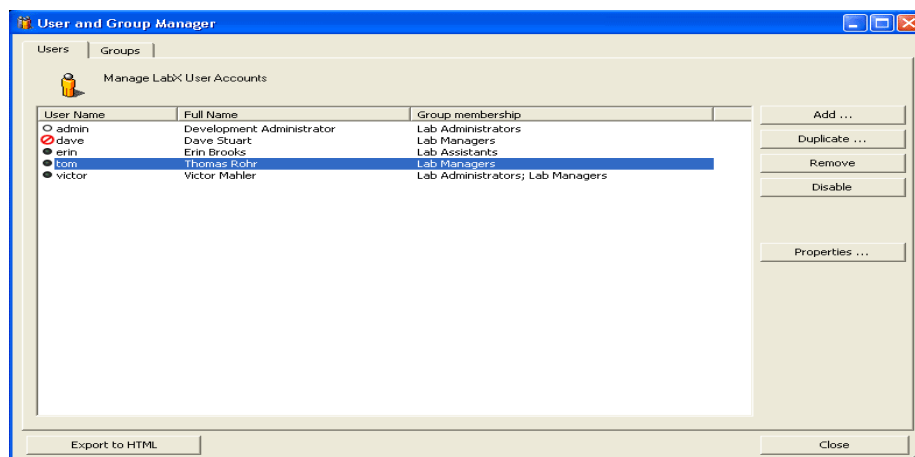
The settings for account guidelines are described under chapter 5.1 "Account Policies".

4.1 Defining users and profiles

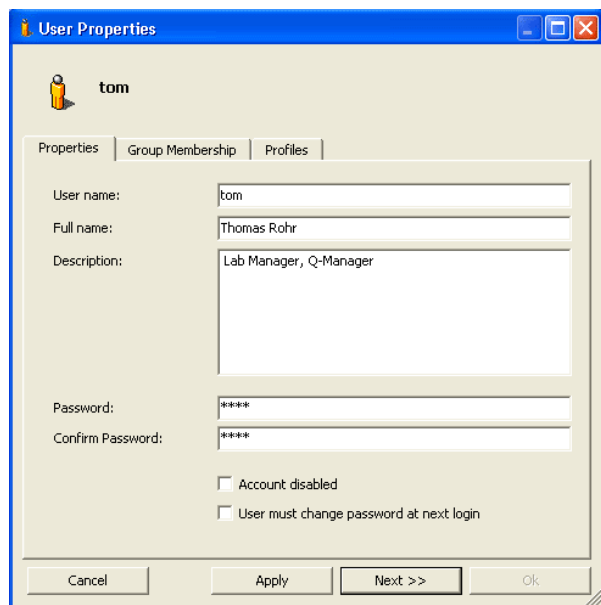
4.1.1 User properties

You must have the appropriate rights before you can create a new user or change a user's properties; make sure that you are logged on as a user with the necessary rights.

1. Select **Tools > User Manager** from the menu. The **User and Group Manager** dialog box appears.

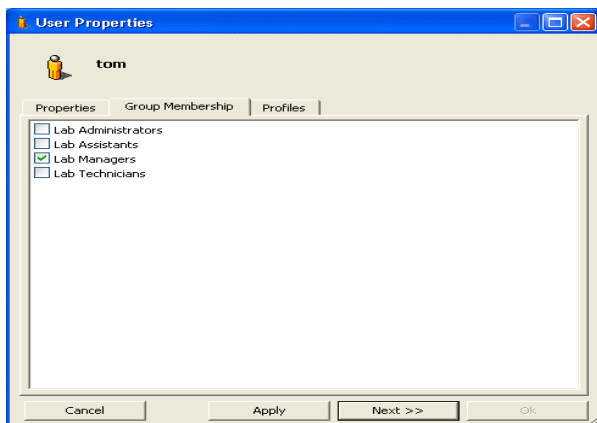


2. Click the button **Add ...** or **Duplicate ...** to add a new user or choose one or more (Shift key) existing users and click **Properties ...**. The **User Properties > Properties** dialog box appears.



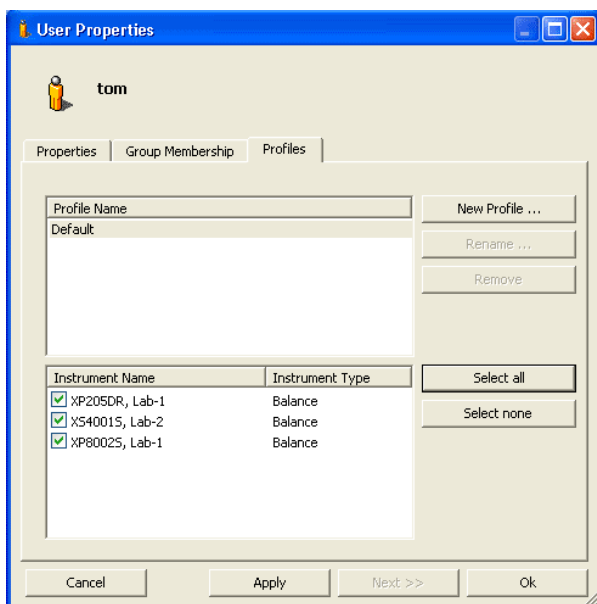
3. Now enter all the user data. When several groups are being edited simultaneously the deviating fields are highlighted in magenta.
 - The "User name" and "Full name" boxes must be completed. For more information on the password settings see chapter 5.1 "Account Policies".
 - If you select the "User must change password at next login" check box, the user must enter a new password the first time the user logs on.
 - If you have selected "Account disabled", then the user will be refused access.

4. If you click the **Group Membership** tab, the dialog box changes its display.



5. Select one or more groups to define the user's memberships.

6. If you click the **Profiles** tab, the dialog box changes to the **Profiles** display.



7. To create a new profile, click the **New Profile ...** button and enter a meaningful name in the dialog box. You can create several different profiles for a user, and assign them different devices.

8. Select the required instruments and then click **Apply** or **OK**.

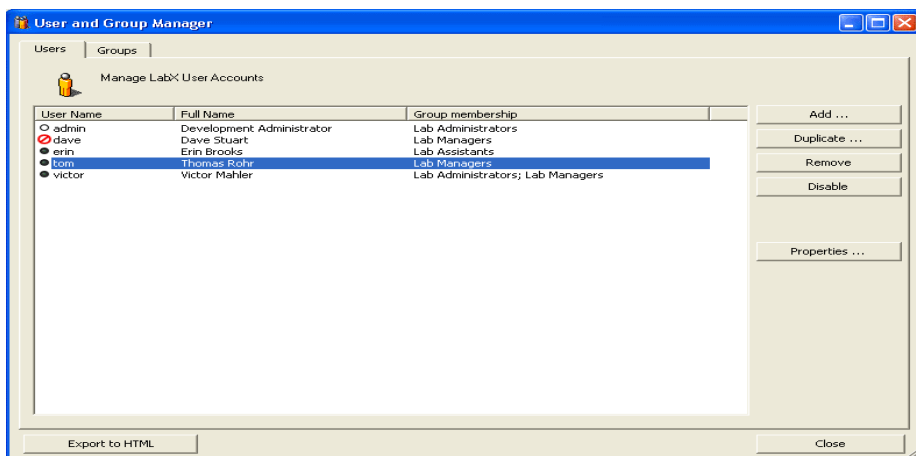
Notes

- The "Default" profile cannot be deleted or renamed.
- All the available devices are listed, even those that are switched off.
- Devices can be assigned to several different users.
- If any user account is disabled, a message is displayed to users with the right "Modify group manager settings".
- If your company has different laboratories, you can define one profile per laboratory. If a user with the profile for a laboratory logs on, the user concerned does not see the devices belonging to the other laboratory. This simplifies the overall view and prevents devices from being mixed up.

4.1.2 Deleting a user

In order to be able to change user settings, you must have the corresponding rights; make sure that you are logged on as a user with the necessary rights.

1. Select **Tools > User Manager** from the menu. The **User and Group Manager** dialog box appears.

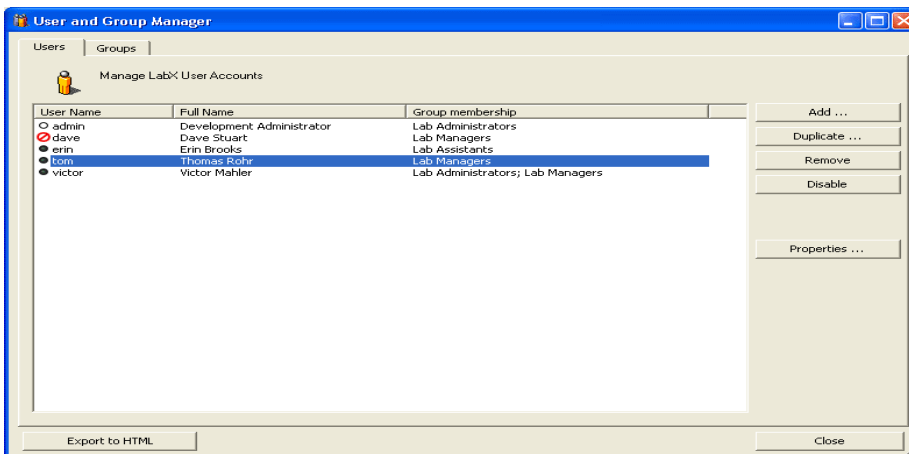


2. Select one or more (Shift key) existing users and click **Remove**.

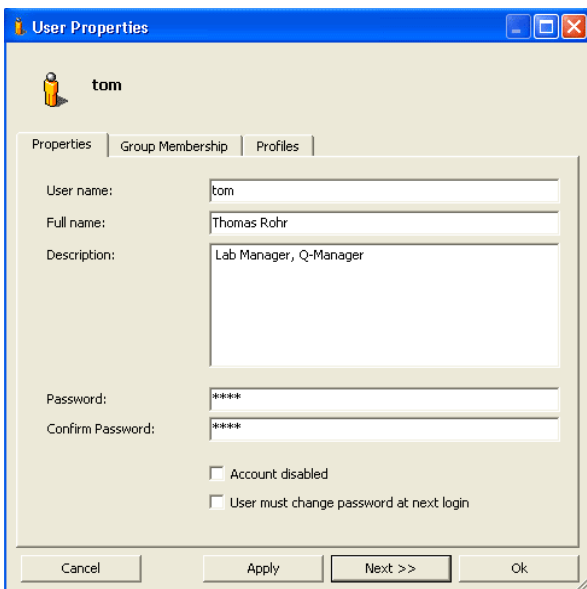
4.1.3 Changing the password of a user

In order to be able to change user settings, you must have the corresponding rights; make sure that you are logged on as a user with the necessary rights.

1. Select **Tools > User Manager** from the menu. The **User and Group Manager** dialog box appears.



2. Select a user and click **Properties**. The **User Properties > Properties** dialog box appears.



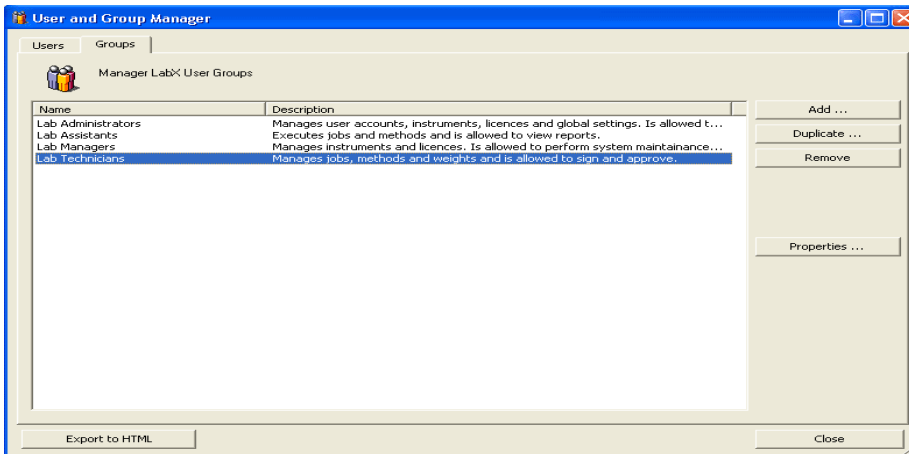
3. Enter the new password in the "Password" box and again in the "Confirm Password" box to confirm this.
For more information on the password settings see chapter 5.1 "Account Policies".
- If you have selected the "User must change password at next login" check box, the user must enter a new password the first time he logs on.
4. Click **Apply** or **OK** to save the settings.

4.2 Defining group rights and group members

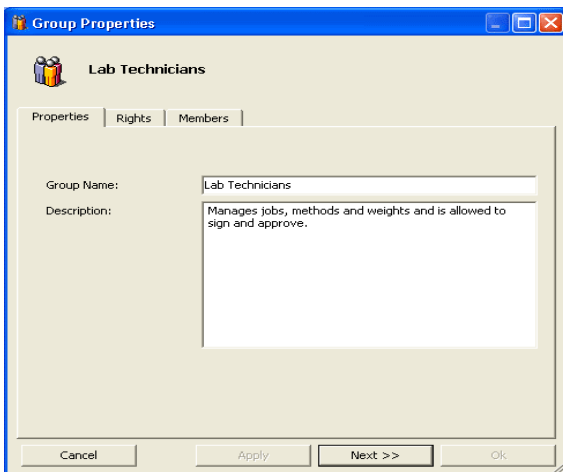
4.2.1 Group properties

In order to be able to change group settings, you must have the corresponding rights; make sure that you are logged on as a user with the necessary rights.

1. Select **Tools > User Manager** from the menu. The **User and Group Manager** dialog box appears.
2. If you click the **Groups** tab, the dialog box changes its display.

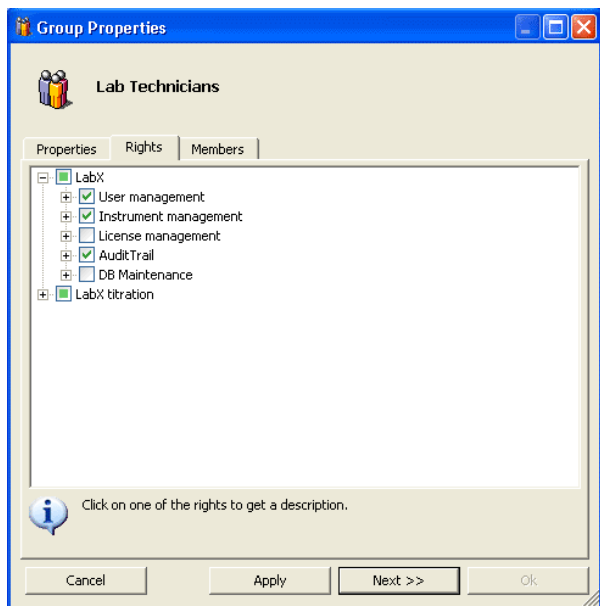


3. Click the button **Add** or **Duplicate** to add a new group or choose one or more (Shift key) existing groups and click **Properties**. The **Group Properties > Properties** dialog box appears.



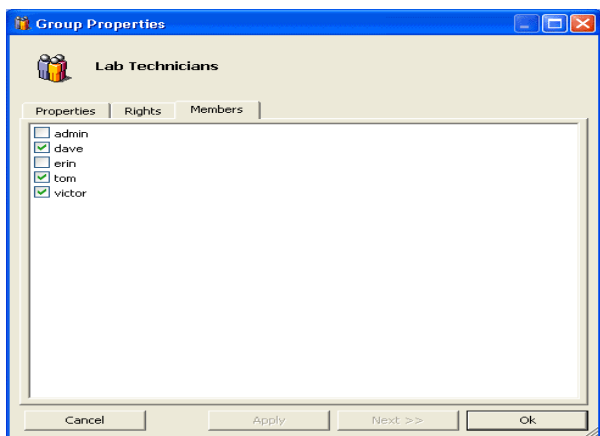
4. Enter the group name. When several groups are being edited simultaneously the deviating fields are highlighted in magenta. If you want to add a description, use the "Description" box.

5. If you click the **Rights** tab, the dialog box changes to the display in which you can grant rights.



The rights for the default groups are predefined, however these can be adapted to your requirements.

6. Mark the desired rights.
7. If you click the **Members** tab, the dialog box changes to the display in which you can define the assignments of the users to the groups.



8. Select the required user and then click **OK**. The dialog box is closed and the **User and Group Manager** dialog box reappears.

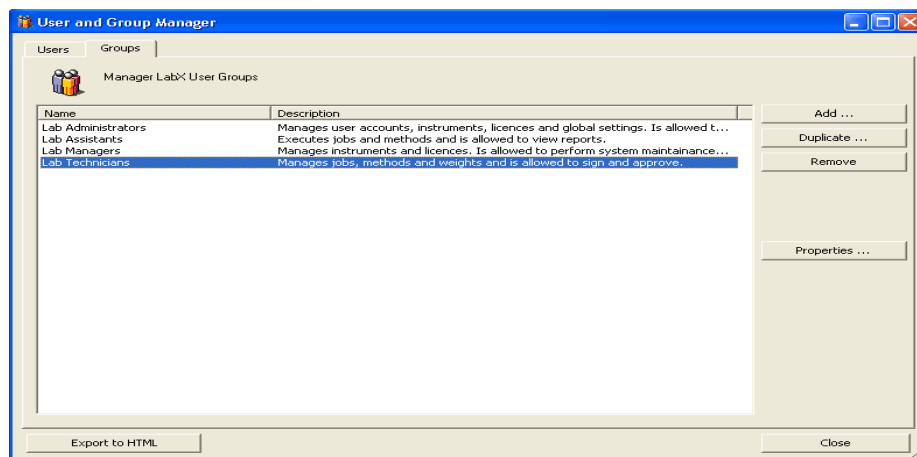
Note

A user can be a member of several different groups; the rights are cumulative.

4.2.2 Deleting groups

Before you can change group settings, you must have the corresponding rights; make sure that you are logged on as a user with the necessary rights.

1. Select **Tools > User Manager** from the menu. The **User and Group Manager** dialog box appears.
2. If you click the **Groups** tab, the dialog box changes its display.



2. Select one or more (Shift key) existing groups and click **Remove**.

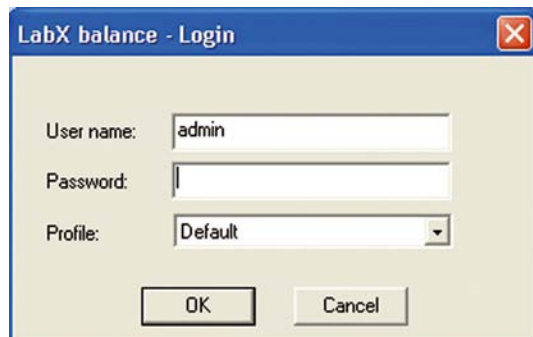
4.3 Starting LabX pro and selecting a profile

The normal startup procedure with the logging on of any user is as follows:

1. Start LabX by double-clicking the LabX icon on the desktop.

or

Choose **Start > Programs > LabX > LabX balance**. The **LabX - Login** dialog box appears.



2. Enter the user name and the password.
3. Select the desired profile from the "Profile" drop-down list.
4. Click the **OK** button to start LabX.

Notes

- If you are working with a network of several LabX computers, you can log on at any computer, select a profile and will then see the corresponding devices.
- You can log on at several PCs at the same time.
- The user can be disabled after a number of incorrect login attempts. See also chapter 5.1 "Account Policies".

4.4 Changing your own password

1. Select in the menu **File > Modify Password ...**. The **Modify Password** dialog box appears.



2. Enter your old password in the "Old password:" box.
3. Enter the new password in the "New password:" box and again to confirm in the "Confirm new password" box.
4. Click the **OK** button to confirm your entries.

Notes

- Depending on the settings in chapter 5.1 "Account Policies", a password cannot be used more than once.
- The settings in chapter 5.1 "Account Policies" define whether a password must contain letters, numbers or special characters. Moreover, if the password contains the user name it will not be accepted.

4.5 Forced password change

The password must be changed periodically, depending on the setting in the "Account Policies" dialog box. Users are will be prompted to change the password the next time that they log on after this time has lapsed. In this case, after logging on to LabX, the **Modify Password** dialog box appears.



1. Enter your old password in the "Old password:" box.
2. Enter the new password in the "New password:" box and again to confirm in the "Confirm new password" box.
3. Click **OK** to start LabX or click **Cancel**.

Notes

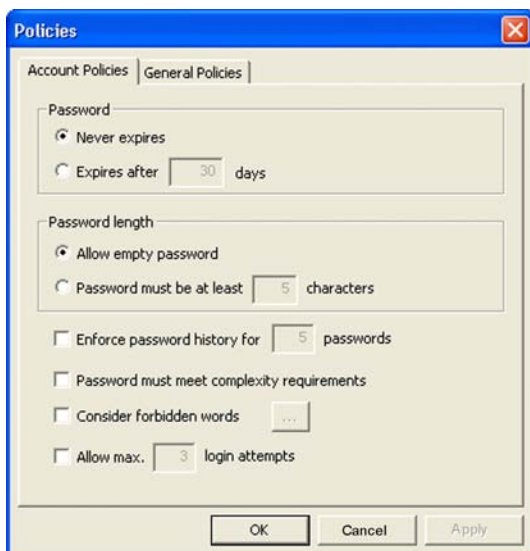
- Depending on the settings in chapter 5.1 "Account Policies", a password cannot be used more than once.
- The settings in chapter 5.1 "Account Policies" define whether a password must contain letters, numbers or special characters. Moreover, if the password contains the user name it will not be accepted.

5 General settings

5.1 Account Policies **LabX pro only**

In order to be able to change the password-specific settings applicable to all users, you must have the corresponding rights; make sure that you are logged on as a user with the necessary rights. In the **Account Policies** dialog box you can define the password-specific settings. These include the expiration date, and the length and complexity of the password.

1. Select **Tools > Policies...** from the menu. The **Policies > Account Policies** dialog box appears.
2. Select your desired settings (see below).
3. Click the **OK** or **Apply** button to confirm your entries.



Expiry date of the password

If you select the "Expires after" option and enter the number of days in the "days" box, the user will be requested to change the password after this number of days has elapsed. See also chapter 4.5 "Forced password change".

Password length

Selecting the "Allow empty password" option, allows you to log on without a password. Select the "Password must be at least ... characters" option and enter the minimum number of characters for the password.

Reusing the password

If you select the "Enforce password history for ..." check box and enter a number, you cannot use the same password after this many times.

Password complexity

If you select the "Password must meet complexity requirements" check box, the password must contain letters, numbers and special characters. Furthermore, the user name may not be included, otherwise the password will not be accepted.

Check forbidden strings

If you select **...** the **"Consider forbidden strings"** dialog box appears in which you can define strings that are not to be allowed.

Login attempts

If you select the "Allow max. ... login attempts" check box and enter a number, the user is disabled after the specified number of incorrect logins. See also chapter 4.1.2 "Deleting a user".

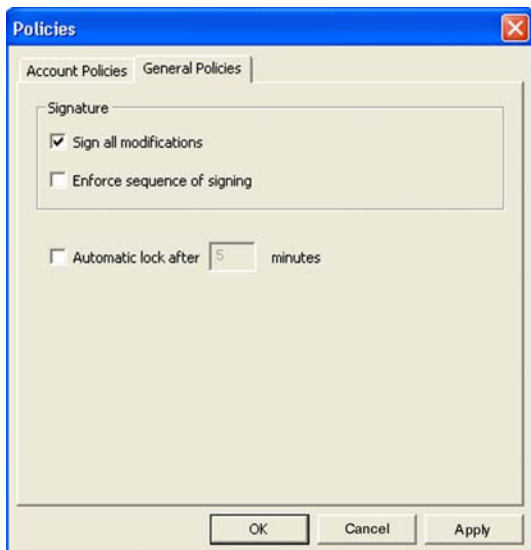
Notes

- The changes do not take effect until LabX has been restarted.
- If only one administrator is defined, this can neither be deleted nor be disabled.

5.2 General Policies **LabX pro only**

In order to be able to change the policies valid for all users, you must have the corresponding rights; make sure that you are logged on as a user with the necessary rights. In the "General Policies" dialog box you define general settings. This includes the 21 CFR Part 11 options and the automatic locking of LabX clients.

1. Select **Tools > Policies...** from the menu. The **Policies > Account Policies** dialog box appears. Click the **General Policies** tab and select the settings (see below).
2. Click the **OK** or **Apply** button to confirm your entries.



Sign all modifications (21 CFR Part 11)

If you select the "Sign all modifications" check box, all additions, changes and deletions require an electronic signature with reasons for the modification. These details are also recorded in the **Audit Trail**.

Enforce sequence of signing

If you select the "Enforce sequence of signing" check box, the order of signing of methods and results is set by LabX. The first signature is "Review" and the next one "Approved".

Automatic lock

The "Automatic lock after . . . minutes" check box enables LabX to lock out the user after a set time. The **Unlock LabX** dialog box appears that requests the user to enter the password. You can also quit LabX by clicking **Exit**. If the 21 CFR 11 functions are activated, you must enter a valid user name and password with explanations in the dialog box before you can exit LabX.

Note

The changes do not take effect until LabX has been restarted.

5.3 Electronic signature **LabX pro only**

When LabX is operating in "Secure Mode (21 CFR Part 11)" see chapter 5.2 "General Policies", changes must be confirmed by user Id and password in a dialog before the change is confirmed. If the signature is successful, an entry will be made in the **Audit Trail**.

The screenshot shows a 'Confirm Modification' dialog box with the following fields and content:

- Full name:** Development Administrator
- Date:** 9/6/2005 6:08:55 AM
- Description:** Action: Modify Simpleweigh1 Job management
- Reason:** Modify Job Template
- User name:** admin
- Password:** *****
- Buttons:** OK, Cancel

1. Under "Reason:", describe why the modification was made.
2. Under "User name:" enter the name that you used to log on.
3. Under "Password:" enter your password.
4. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

Note

In case of three incorrect password entries, the change is discarded. All attempts are recorded in the **Audit Trail**.

In "Secure Mode (21 CFR Part 11)" the user must input an electronic signature before the respective changes are accepted.

Area	Object	Subject	Action
License Management	Instrument License Key	License Manager	Add, Remove
Instrument Management	Balance	Properties * MinWeigh Settings Release Control Scheduler	Modify Modify Modify Remove
Job Management	Job template		Delete, Modify, Import
Report Management	Report	Comment	Delete Modify
Weights Management	Weights		Delete, Modify

* Only in areas of Identification and Maintenance

5.4 Managing documents **LabX pro only**

You can directly access documents such as operating instructions, certificates, calibration instructions and SOPs from LabX. The documents can be created with different programs such as Adobe Acrobat, Microsoft Word, Excel, or also HTML. The documents can be filed at different locations that can for example be accessed by means of an HTML page with corresponding links.

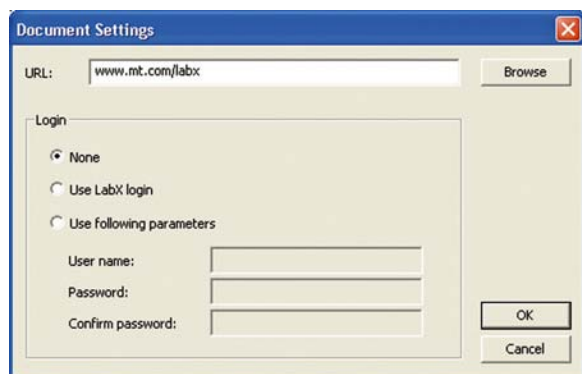
Note

To display the different documents, the corresponding program must be installed on the computer.

5.4.1 Document settings

To configure the home page for "Documents", proceed as follows:

1. Select **Tools > Document Settings** from the menu. The **Document Settings** dialog box appears.



2. Enter a URL for the home page or click "Browse" and specify the desired folder. Enter the login details for the identification in the **Login** pane.
3. Click the **OK** button to confirm your entries.

5.4.2 Displaying documents

To start the documents home page, proceed as follows:

1. Select **Tools > Documents** from the menu. The home page configured under chapter 5.4.1 "Document settings" appears.

5.5 Printing the security settings

The security settings, which include groups, users, account policies and general policies, can be exported as HTML files and printed out.

1. Select **Tools > User Manager...** from the menu. The **User and Group Manager** dialog box appears.
2. Click "Export to HTML". The **Export to HTML** dialog box appears.
3. Select the desired folder and save the settings by clicking the **Save** button.
4. Open the saved file which will be displayed in the Internet browser. You can now print out the settings.

5.6 General LabX settings (Menu>Tools>Options)

Under the menu point **Tools>Options** you can customize LabX by designating identifications and deciding other global settings. LabX offers the flexibility of a large number of identifications and freely-definable labels for identifying instruments, samples as well as company information. You can also configure extended balance functions that are used for process control purposes. Take a little time and consider all the data that you will have to manage. If you do this, you will have an optimized and reliable solution for your day-to-day work. Stored settings can be called up quickly and easily at any time.

Note

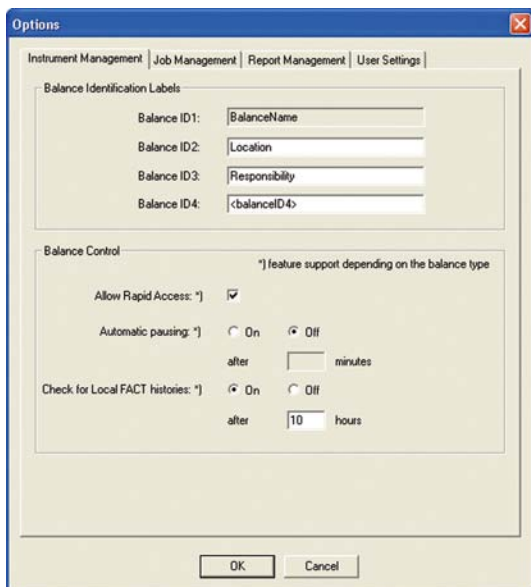
Typically, these settings are made by a LabX Administrator.

5.7 Setting up Instrument Management

If you work with several balances, it is a good idea to enter detailed information about the identifying features of each balance. This will give you a clear overview of which balance was used to do what, when and where.

You can use the following basic settings for instrument management and instrument control.

1. Select **Tools > Options** from the menu.
2. The **Instrument Management** dialog box appears. "Balance ID1" shows the designation currently used to identify the balance. This is permanently set to "BalanceName" and cannot be changed.



3. Under "Balance ID2", now enter "Location", for example, so that you can assign a location to every balance (see chapter 7.5 "Managing and identifying balances").
4. Under "Balance ID3", enter "Responsibility", for example, so that you can assign a reference person to every balance. This person will then be responsible for that balance (see chapter 7.5 "Managing and identifying balances").
5. If desired, you can enter another identifying feature under "Balance ID4".
6. Balance Control is used to make further global settings. Here you can decide whether LabX should allow Rapid Access to LabX or not.
7. "Automatic pausing" may be switched On or Off. If you select On, then you must define the period of inactivity after which the running job becomes paused.
8. Select On or Off under "Check for local FACT histories:". If you select On, enter a time interval after which the local FACT history is to be looked up.
9. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

Notes

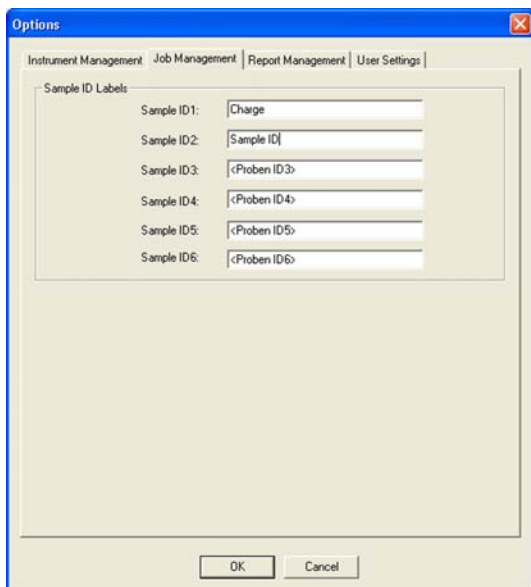
- "Rapid Access" is only possible with balances which include a LabX Client. On the AX/MX/UMX balances, the "Remote" application must be installed.
- With Rapid Access activated, the user must identify himself on the balance in order to start a weighing job from the balance.
- The query of local FACT history is made on FACT-supported balances.
- Changes affect all connected balances.

5.8 Setting up Job Management

For your day-to-day work, you should now select the Job Management tab in order to enter designations for the parameters to be used in the job templates for user guidance and in reports.

You can use the following basic settings for job management.

1. Select **Tools > Options** from the menu.
2. The **Instrument Management** dialog box appears. Click on the **Job Management** tab.



3. In the "Sample ID Labels" section, enter "Charge", for example, under "ID1" and "Sample ID" under "ID2". You may create more ID labels if you wish. In the Job Template, you can then select for which Sample ID you wish to scan a barcode identification. If you select Yes, the balance will prompt you to enter the relevant Sample ID(s).
4. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

Note

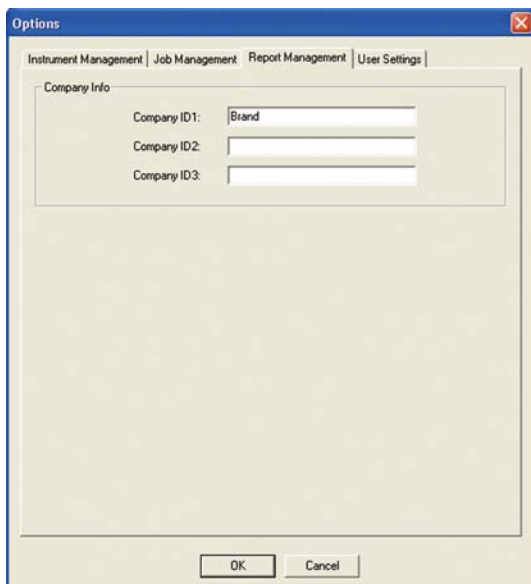
Changes do not affect existing job templates.

5.9 Setting up Report Management

You should now select the Report Management tab to define additional global information for your job reports.

You can use the following basic settings for report management.

1. Select **Tools > Options** from the menu.
2. The **Instrument Management** dialog box appears. Click on the **Report Management** tab.



3. In the "Company Info" section, enter under "Company ID1:" Brand, for example. You can then enter the company name. You can also enter further information about the company.
4. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

Note

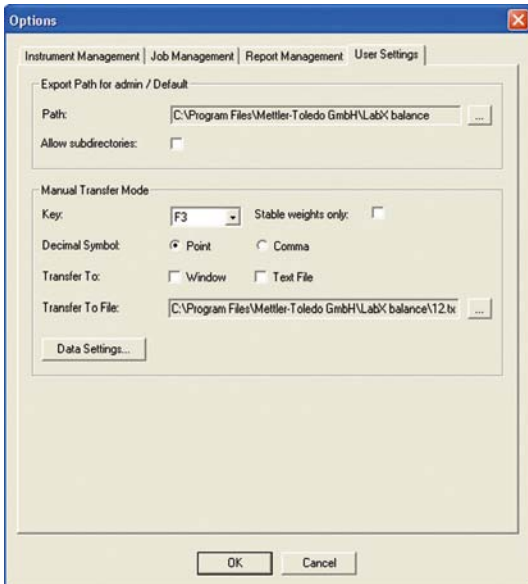
Changes made affect all existing reports.

5.10 User specific settings

5.10.1 Defining the folder for export of reports

Reports can be automatically exported to a predefined folder at any desired location in the PC file system or on an available server for which you have permissions.

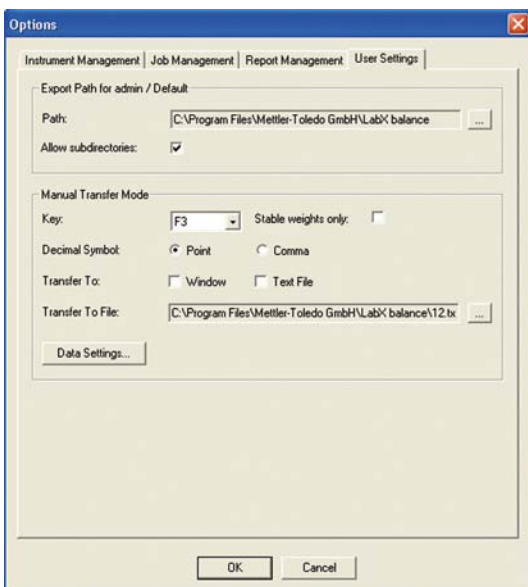
1. Select **Tools > Options** from the menu.
2. Click on the **User Settings** tab.



3. Use the Windows Explorer function to specify a directory to which the reports of weighing jobs can be automatically exported.
4. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

5.10.2 Option Allow subdirectory for export of reports

Activate this option to save exported reports automatically within the specified path according to the job template which was used, thereby giving greater clarity.



Note

Subdirectories are given the name of the "Job template".

5.11 Transfer Mode

Transfer Mode can be used to simply transfer weight data from the balance to an open external application window or directly to a text file.

Transfer mode works by configuring a definable function key, which when pressed will send a user-formatted weight value to an open Excel* worksheet. This sheet must be the top window (in focus) on the PC for a transfer to happen.



Transfer Mode can also be used to automatically send weight data to an open window or to a text file during a running job by configuring the feature in the Job Template (see chapter 12.5 "Defining the Application data").

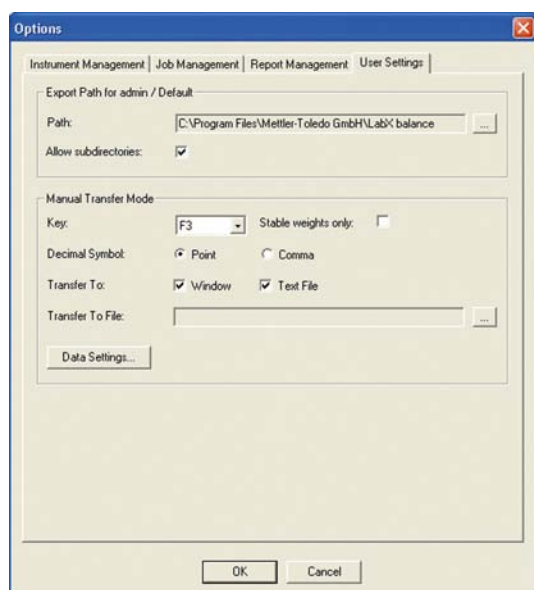
With the weight values, LabX allows you to add formatting as well to automatically fill in your own defined Excel templates. These formatting strings are customized for each user in the LabX system.

* or any other program where text is required as input

5.11.1 Manual Transfer Mode configuration

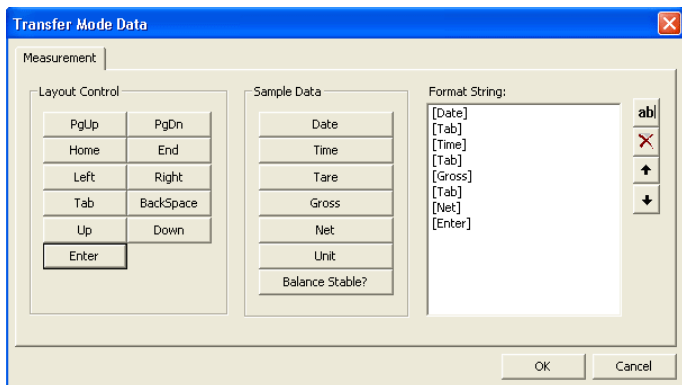
The Transfer Mode functions only with a single balance at a time on a single client PC.

1. In the tree view **Weighing**, right-click the mouse on the desired **Balance**  and select Transfer Mode. **Note:** Only one balance may be selected at a time. If another balance had been using Transfer Mode when selecting a new balance, the old balance will be deactivated for Transfer Mode.
2. After activating the **Manual Transfer Mode** , you can send the weight data by pressing the chosen function key (Tools... Options) at the PC or by pressing the Print key at the balance. You may also deactivate Transfer Mode at the balance by holding down the Home or Cancel key (for AT balances, touch the Print key twice). Transfer Mode also functions within a running job by sending the weight values exactly as recorded in the LabX database to an open window (e.g. Excel) or to an external text file
3. Select **Tools > Options** from the menu.
4. Click on the **User Settings** tab to see the Transfer Mode options

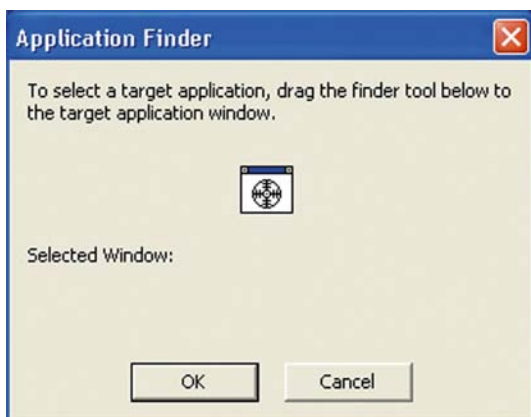


5. "Key:" This option allows you to define which function key on the keyboard you would like to use to trigger a data transfer to Excel.
6. "Stable Weights Only:" Check this option if you only want stable weights transferred. When checked, LabX will wait for a stable value from the balance before transferring to Excel. If unchecked, the next available weight value will be sent.
7. "Decimal Symbol:" Choose either period or comma to be used in the sent result.
8. "Transfer To:" By choosing the option Window, weight values are transferred to an open window. When File is chosen, data is transferred to a text file. Both options can be chosen and will work simultaneously.
9. "Transfer To File:" When transferring to a text file, you may specify an export directory and path. See chapter 5.10.1 "Defining the Folder for export of reports", for default folder location.
10. Click the "Data Settings..." button to format the string you wish to send to Excel.

11. The **Transfer Mode Data** dialog box appears.



12. Click on the format buttons to add to the window list on the right. After adding format values you can change the order using the up and down arrow buttons. In addition to the standard formatting buttons you can also add your own custom string by clicking the **abl** button next to the Format String list.
13. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.
14. After pressing the function key (or Print key at the balance) to transfer values, an **Application Finder** dialog box appears.





15. Open the desired target application (e.g. Excel, Word, etc) and drag the finder tool within the dialog to the open window and click **OK**. Now LabX knows the destination to send all Transfer Mode values.

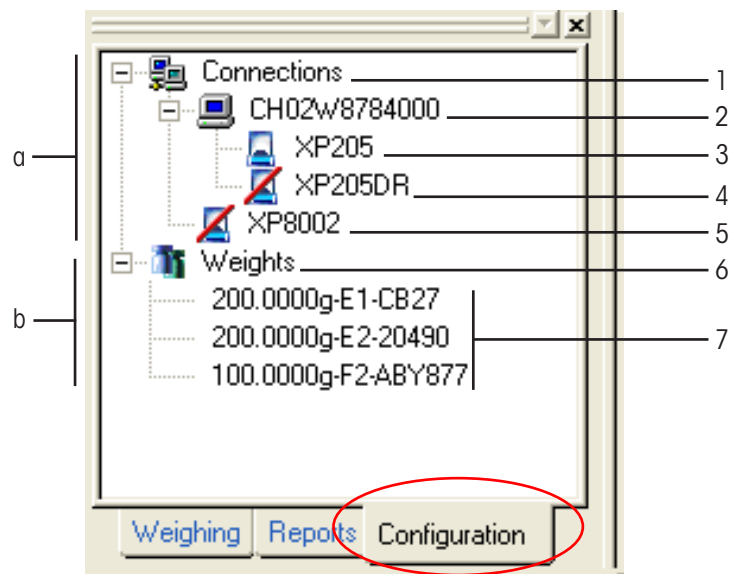
6 Tree view Configuration

6.1 Tree view LabX pro **LabX pro only**

The tree view **Configuration** contains all the functions you need for instrument and weight management. Here you can define connections to balances and other computers.

You can activate the tree view **Configuration** by clicking the **Configuration** tab directly below the navigations window.

- The tree has the following structure:
 - a **Connections**. Connection to PC's and instruments.
 - b **Weights**. Directory containing defined test weights.
- You can open or close a folder by clicking the  or  sign.
- If you right-click an icon, a context menu appears with an overview of possible functions.

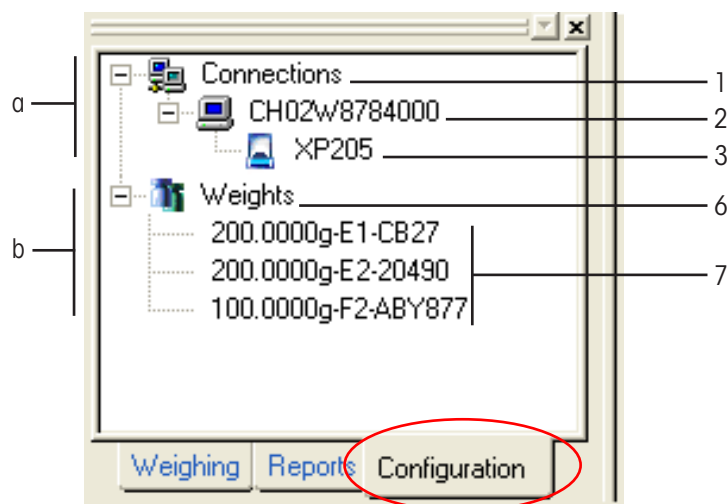


6.2 Tree view LabX light








The tree view **Configuration** contains all the functions you need for instrument management. Here you can define connection to balance.

You can activate the tree view **Configuration** by clicking the **Configuration** tab directly below the navigations window.

- The tree has the following structure:
 - a **Connections**. Connection to PC's and installed instrument.
 - b **Weights**. Directory containing defined test weights.
- You can open or close a folder by clicking the or sign.
- If you right-click an icon, a context menu appears with an overview of possible functions.



6.3 Icons

Icon	Number	Function/Contents
 Connections	1	Contains all connections to PC's and balances in the current user profile.
 PC	2	PC defined in network or locally.
 Balance Connection OK	3	Balance installed on a PC (2), connection OK.
 Balance No connection	4	Balance installed on a PC (2). No connection to the balance.
 Balance No connection	5	Balance installed on a network. No connection to the balance.
 Test weights	6	List of test weights.
 Test weight	7	Defined test weight.

7 Connecting peripheral devices

Peripheral devices such as titrators and balances are connected to computers via USB, RS232 or LocalCAN interfaces or by the network (TCP/IP). LabX computers have one or two USB, RS232 or LocalCAN interfaces or even none at all. Depending on the number of peripheral devices you want to connect, you must install one or more interface cards. To integrate titrators and balances without an Ethernet interface in a network, we recommend the use of METTLER TOLEDO e-Link network interfaces. For further information, contact the IT support group in your company, a computer specialist, or your local METTLER TOLEDO Service.

The order numbers for the corresponding connection cables can be found in the operating instructions of the peripheral devices concerned.

Before you can define titrators and balances in LabX, you must have the corresponding rights; make sure that you are logged on as a user with the necessary rights.

Notes

- If the LocalCAN interface is used, then an LC-RS cable will also be required.
- **LabX light** can only control one titrator and one balance.

7.1 Settings of the e-Link network interfaces

Make sure that the titrator or the balance is connected to the serial RS232 interface of the e-Link and that the instruments are switched on. For the e-Link to be able to communicate with the titrator or the balance, the settings must correspond to the e-Link settings. To find out how to change these settings on the e-Link, please consult the e-Link Pro EB01 & EB02 e-Link network interface operating instructions.

Determine an IP address for each e-Link and configure it accordingly (IP address, SubNet, DNS and default gateway). As port number select 8000; this is the default setting of the e-Link and on the LabX side.

Note

The following e-Link settings must be selected to guarantee problem-free operation:

Application Settings > RS232 Input to Network Output

Server enabled	yes
Server port	8000
Client enabled	yes
Host IP address	address/name of the Computer with the Broker
Host Port	8000
Host retry time	10s
Mode	string
EOL	CR
Timeout	0ms
Network queue size	10 messages
Prefix	empty
RS232 queue	10 messages

- Enter a DNS Server address entry in each e-Link, so that computer names can be resolved.
- A default gateway entry is also required if the network on which LabX is operated is divided into several subnets.
- Make sure with the e-Link configuration that the default gateway address is defined in the same subnet as the own IP address.

7.2 Defining the computer connection in the balances

LabX contains a default setting for communication with the balances. This may be adapted, if necessary. To allow LabX to communicate with the balance, the relevant balance settings must agree with the LabX settings. We recommend that you set the language on the balance to the same as is used on the computer (since LabX synchronizes the date and time with the server date and time before executing a job).

Notes

- In this chapter, a network interface (e.g. e-Link) may be regarded as a PC.
- Not all USB serial adapters correctly support handshaking.

7.2.1 Defining the computer connection in the AX/MX/UMX balances

1. Select the **Peripherals > Host > RS232 fixed** menu on the balance. You can only activate a single device. All other devices must be deactivated ("Off"). If you activate a new device, the previously selected device is automatically deactivated.
2. Select **Define**. Make sure that the following entries under **Define** have been defined:

Baud rate:	9600 Baud
Bit/Parity:	8-bit/none
Handshake:	XON/XOFF
End of line character:	<CR><LF>
Character set:	ANSI/WINDOWS
3. Click on **OK**.

Important: To ensure that special characters (e.g. "°C") are printed out correctly on METTLER TOLEDO printers, **Balance and printer** must be set to **8-bit**.

7.2.2 Defining the computer connection in the XS balances

1. Select the **Peripherals > Host > RS232 fixed** menu on the balance. You can only activate a single device. All other devices must be deactivated ("Off"). If you activate a new device, the previously-selected device is automatically deactivated.
2. Select **Define**. Make sure that the following entries under **Define** have been defined:

Baud rate:	9600 Baud
Bit/Parity:	8-bit/none
Handshake:	XON/XOFF
End of line character:	<CR><LF>
Character set:	ANSI/WINDOWS
3. Click on **OK**.

Important: To ensure that special characters (e.g. "°C") are printed out correctly on METTLER TOLEDO printers, **Balance and printer** must be set to **8-bit**.

7.2.3 Defining the computer connection in the XP balances

1. Select the **Peripherals > Host > RS232 fixed** menu on the balance. You can only activate a single device. All other devices must be deactivated ("Off"). If you activate a new device, the previously-selected device is automatically deactivated.
2. Select **Define**. Make sure that the following entries under **Define** have been defined:

Baud rate:	9600 Baud
Bit/Parity:	8-bit/none
Handshake:	XON/XOFF
End of line character:	<CR><LF>
Character set:	ANSI/WINDOWS
3. Click on **OK**.

Important: To ensure that special characters (e.g. "°C") are printed out correctly on METTLER TOLEDO printers, **Balance and printer** must be set to **8-bit**.

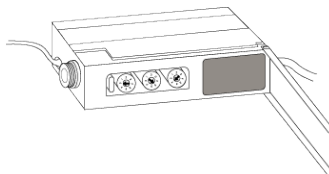
7.2.4 Defining the computer connection in the AT/MT/UMT balances

1. Select the **Configuration** menu by holding down the button on the balance.
 2. Press the button briefly to continue to **Interface**, then press Select button 1 to select **Int-FACE**.
 3. Press Select button 1 to continue to **Data transfer mode**, then press Select button 2 to activate **ALL**.
 4. Press Select button 1 to continue to **Data transfer speed**, then press Select button 2 to activate **9600 bd**.
 5. Press Select button 1 to continue to **Parity**, then press Select button 2 to activate **-E-**.
 6. Press Select button 1 to continue to **Transfer protocol**, then press Select button 2 to activate **HS none**.
 7. Press Select button 1 to continue to **End of line mode**, then press Select button 2 to activate **crLF**.
 8. Press the **Set** button to save your settings and return to weighing mode.
 9. Choose the **DoorAuto** to automatic (press then Menu key 4 times).
- In LabX, choose settings of 7 data bits and 1 stop bit. All other parameters must match the balance settings.

7.2.5 Defining the computer connection in the AG/PG balances

All settings must be configured on the LC-RS9 box using 3 switches.

1. Use the **left-hand** switch to change the position to **0**.
2. Use the **middle** switch to change the position to **5**.
3. Use the **right-hand** switch to change the position to **7**.



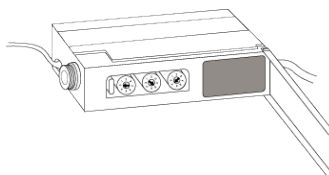
7.2.6 Defining the computer connection in the PG-S balances

1. Select the **Device > Host** menu on the balance.
2. Go to **Send commands > S.ALL**
3. Go to **Send format > S. SICS**
4. Continue to **Baud rate > bd 9600**
5. Now select **Parity/Bit > 8B/no**
6. Continue to **Handshake > HS Soft**
7. Hold down the **Menu** button until the balance returns to weighing mode. Your settings will now be saved.

7.2.7 Defining the computer connection in the PR/SR/SG balances

All settings must be configured on the LC-RS9 box using 3 switches.

1. Use the **left-hand** switch to change the position to **0**.
2. Use the **middle** switch to change the position to **5**.
3. Use the **right-hand** switch to change the position to **7**.



7.2.8 Defining the computer connection in the AB-L/AB-S/PB-L/PB-S balances

1. Press the **«Cal/Menu»** key until the display shows "Menu". Release the key and the first menu item will be displayed.
2. Use the **«E»** key until **Peripheral Devices** is shown and choose **HoSt** with the **«G»** key.
3. Using the **«E»** key go further to **Baudrate** and choose **bd 9600** with the **«G»** key.
4. Using the **«E»** key go to **Bits/Parität** and choose **8b-no** with the **«G»** key.
5. Using the **«E»** key go to **Handshake** and choose **HS Soft** with the **«G»** key.
6. Press **«Cal/Menu»** until "StorEd" shows in the display. Your settings are now saved.

7.3 Defining balances in LabX

7.3.1 Define RS connection

Make sure that the balance is connected either directly or via LC-RS9 to an RS232 serial interface on the PC, and that it is switched on. Alternatively, you can use a serial-to-USB adapter cable to connect a balance to a PC's USB port. You will need to also install the software driver that came with the adapter cable.


1. In the tree view **Configuration**, right-click the **Connections** icon and choose and select **Add Serial Balance...** from the context menu. The **Add serial balance** dialog appears.

2. Choose the COM-Port from the drop-down list. Be sure that the chosen COM-Port is not already being used for something else.
3. Click on **Auto-Detect Balance**. The connected balance will appear after a few seconds in the "Balance type" window. Enter a name of your choice into the window "BalanceName". You can then define the position and responsibilities in the relevant fields".
4. Click on **Save** in order to apply the information.
5. Should this not be the case then click on **More** in which case the balance communication parameters can be manually entered.
6. From the drop-down list in the "Model:" box, select the balance model and in the "BalanceName:" box, enter a name. The procedure is the same for the other balance models.
7. Now check that the communication parameters are set correctly, and change if necessary. Select a COM port which is not in use by another balance or device.
8. Click on **Save** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

The newly defined balances appear in the tree structure.



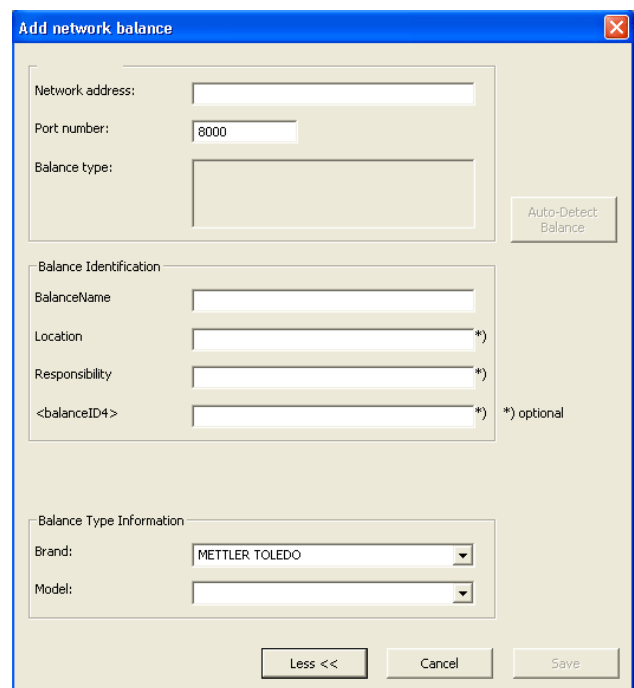
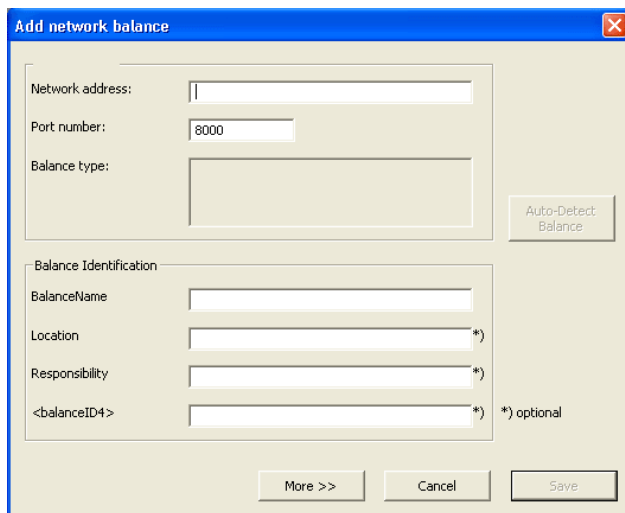
Notes

- If the balance is connected to another PC that has not yet been defined, right click on **Connections**  and first establish a connection to the PC.
- We recommend that you leave all the communication parameters set to their default values, apart from the COM port.
- Select a unique name for the balances so that they can be quickly identified if several balances are connected.
- Make sure that the communications settings are identical to those on the balances.

7.3.2 Define Network connection

Make sure that the balance is connected on the PC and is switched on.

1. In the tree view **Configuration**, right-click the **Connections**  icon and choose and select **Add Network Balance...** from the context menu. The **Add network balance** dialog appears.



2. Enter the required IP-address or host name of the network interface now. If you do not know the addresses, please contact IT Support in your organization and make sure that chapter 7.1 "Settings of the e-Link network interfaces" has been carried out.
3. Click on **"Auto-Detect Balance"**. The connected balance will appear after a few seconds in the "Balance type" window. Enter a name of your choice into the window "BalanceName". You can then define the position and responsibilities in the relevant fields".
4. Click on **Save** in order to apply the information.
5. Should this not be the case then click on **More** in which case the balance communication parameters can be manually entered.
6. Enter the required IP-address and from the drop-down list in the "Model:" box, select the balance model and in the "BalanceName:" box, enter a name. The procedure is the same for the other balance models.
7. Click on **Save** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

The newly defined balances appear in the tree structure.



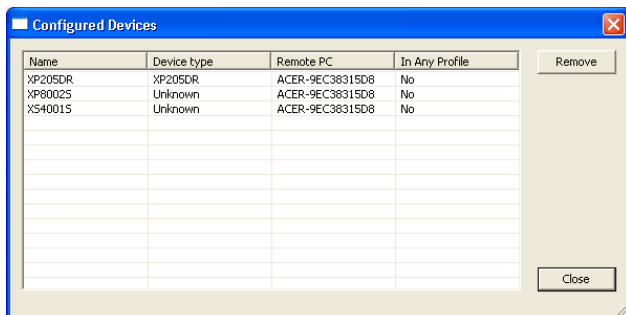
Notes

- Select a unique name for the balances so that they can be identified if several balances are connected.
- Each IP address should only be assigned once within the network. Make sure that the settings are identical to those for the network interfaces.

- The device serial numbers are used as their unique identification. The balance name is also unique - and selectable - and increases the readability within the LabX navigation and user interface.
- The port number for METTLER TOLEDO laboratory balances with an integrated network interface is 8001.

7.3.3 Show configured devices

1. In the tree view **Configuration**, right-click the **Connections**  icon and choose and select **Show Configured Devices** from the context menu. The **Configured Devices** dialog appears.



All configured devices are displayed. Devices which are not assigned to a profile will be marked with "No" in the "In Any Profile" column.

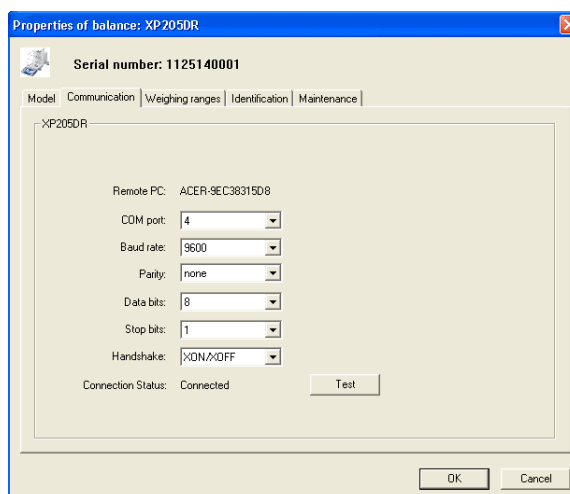
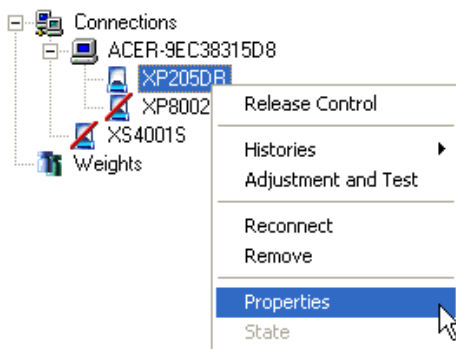
Note

If you select a device and then click **Remove**, the device is removed and the instrument license is again released.

7.4 Modifying Communication parameters

The communication parameters for each balance can be modified after the initial connection. If there is a problem getting a balance connected in LabX, perform the following steps to try and resolve the problem.


1. In the tree view **Configuration**, right-click on the desired **Balance**  and select **Properties**. The **Properties of balance...** dialog appears.
2. Select the **Communication** tab.

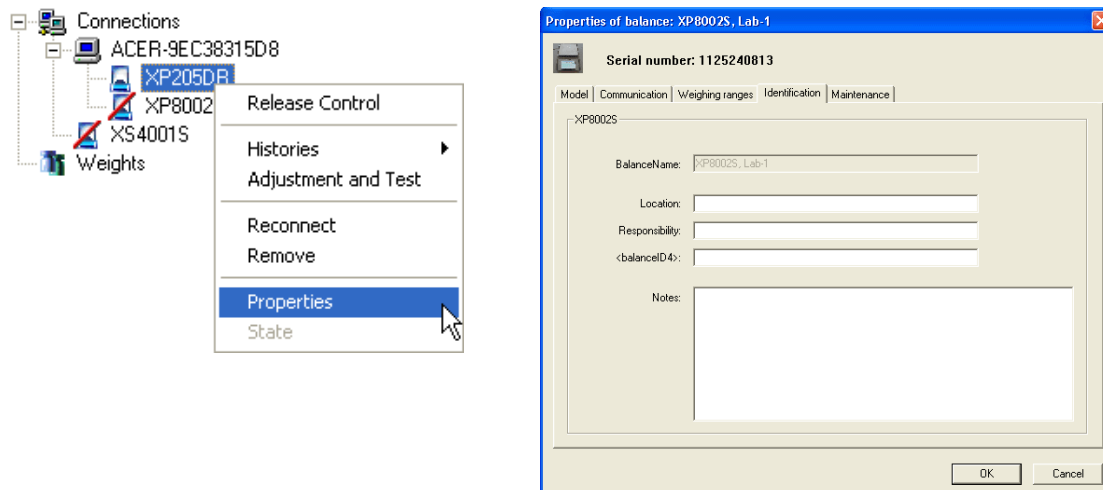


3. Make sure all parameters in this tab match the settings on the balance.
4. Click the Test button to check if the settings you have made enable a successful connection to the balance.
5. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

7.5 Managing and identifying balances

If you are working with several balances of the same model, it is a good idea to provide a more precise designation for each balance in order to avoid confusion. You can use the following basic settings.

1. From the tree view **Configuration**, right-click on the desired **Balance**  and select **Properties**. The **Properties of balance...** dialog appears.
2. Select the **Identification** tab.



3. Under "<Location>:" enter a designation of the balance's current location, e.g. Lab-1.
4. Under "<Responsibility>:" enter the name of the person with responsibility, e.g. John Miller.
5. If you have also defined something under "Balance ID4", enter the appropriate information.
6. Under "Notes:" you can enter further comments about the balance.
7. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

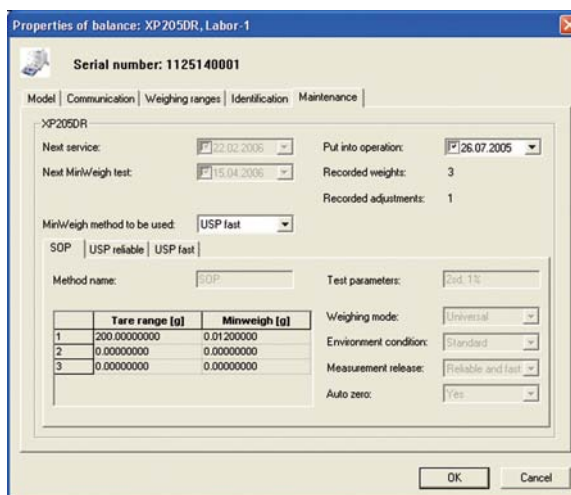
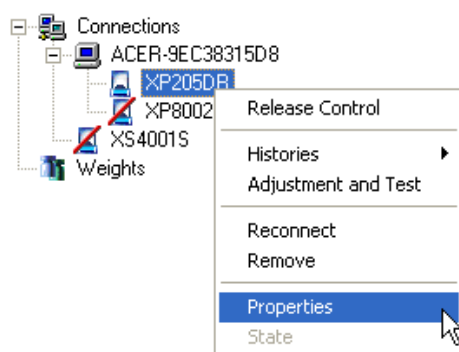
7.6 Creating maintenance intervals and MinWeigh Settings

If you want LabX to remind you when the next service or the next MinWeigh determination is due, enter the corresponding date here.

You can only configure the balance release control with respect to these criteria if you have entered the relevant date.

The procedure for checking this data or entering it manually is as follows:


































1. From the tree view **Configuration**, right-click on the desired **Balance** and select **Properties**. The **Properties of balance...** dialog appears.
2. Select the **Maintenance** tab.






Note

These dialog windows appear only for balances which support the matching features. LabX reads parameters directly from the balance in read-only form. All data input is handled only in LabX and is not send back to the balance. Only users with the correct permissions are allowed to enter these values.

3. Under "Next service:", enter the date on which the next service is due.
4. Under "Next MinWeigh test:" enter the date for the MinWeigh test.
5. Under "Method name:", you can enter the name of the regulations according to which the determination was carried out. This will appear on the "MinWeigh according to" report.
6. Under "Test Parameters:", specify the parameters used to determine MinWeigh.
7. Under "Tare range 1:" and "MinWeigh:", enter the data from the last MinWeigh determination. You can enter up to 3 tare values with the associated MinWeigh determinations.
8. Enter the MinWeigh determination to apply to weighing parameters.
9. Repeat Steps 5-8 for further MinWeigh methods.
10. Choose under "Applied MinWeigh Methods" a defined method. LabX supports working with **one** MinWeigh method per balance.
11. Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.

Function	AX/MX/MX Standard V3.22+ Remote V1.02	AX/MX/UMX	XS	XP	AT/MT/UMT AG/PG/SG/PG-S PR/SR AB-L/AB-S/ PB-L/PB-S
(1) Put into operation					
(2) Counter					
(3) Next Service date					
MinWeigh Data:					
(4) Next MinWeigh Date			–		–
(5) MinWeigh Method			–		–
(6) Method Name			–		–
(7) Test Parameters			–		–
(8) Weighing Parameters			–		–
(9) MinWeigh per Tare range			–		–

Legend

-  Write permissions for LabX user, the value is saved in LabX
-  Write-protected values are read from the balance
-  Write-protected values are read from the balance
- Functionality on the balance is not supported

Notes

- If you are operating your system in the “Secure Mode (21 CFR Part 11)”, when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 “Electronic signature”). If the signature is successful, an entry will be made in the **Audit Trail**.
- As soon as the MinWeigh parameter in the balance is received, all manual entries in LabX are overwritten. The value in the balance always has higher priority.
- All the values on this tab are stored in LabX, regardless of whether they were entered by the balance or had to be entered manually.

7.6.1 MinWeigh functionality in LabX

Requirements for using MinWeigh with LabX:

- The balance supports MinWeigh
- The MinWeigh determination is enforced
- The MinWeigh parameters in LabX are assigned. (automatically or manually depending on balance type)

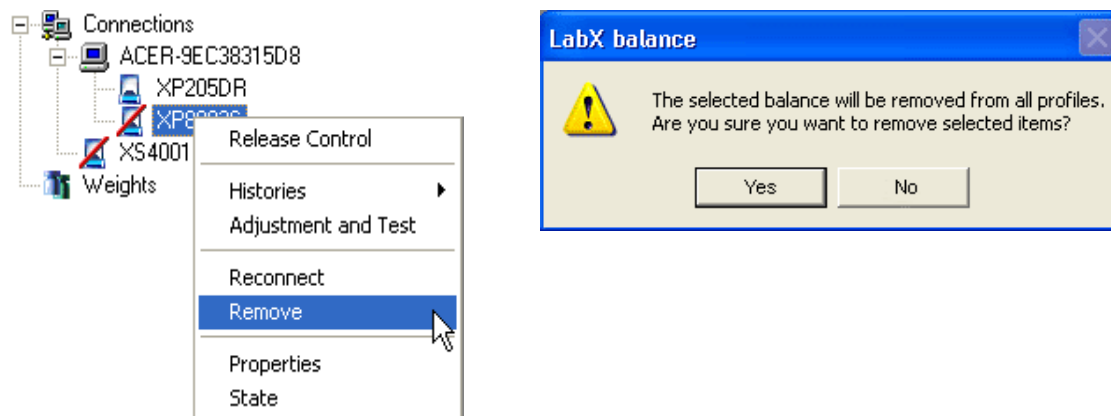
Functionality:

- Management of MinWeigh parameters
- Monitoring of upcoming MinWeigh determination
- Activation of MinWeigh control in job template
- Recording of MinWeigh violations during weighings
- Display of MinWeigh violations in weighing reports
- Overview display of all MinWeigh violations (MinWeigh Incident History)

7.7 Removing balances

You can remove any balances that are no longer needed or have been replaced. Make sure that you have the necessary access rights. Be aware that this operation removes the balance from all profiles. If you temporarily do not need the balance in the system, but want to add it again later, use the profile function Add/remove Balances (see chapter 4.1 "Defining users and profiles").

1. From the tree view **Configuration**, right-click on the desired **Balance** and select **Remove**. The **The selected balance will be removed from all profiles. Are you sure you want to remove selected items?** dialog appears.



2. Select **Yes**.

Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

Attention





- This operation gives you a unique opportunity to export the adjustment and test records of the balance, because after the balance has been removed from the system, no further access to this data is possible.
- Balances which have been removed cannot be reinstalled under the same name. This is the only way to rule out the possibility of data redundancy or wrong data in the **Audit Trail**.

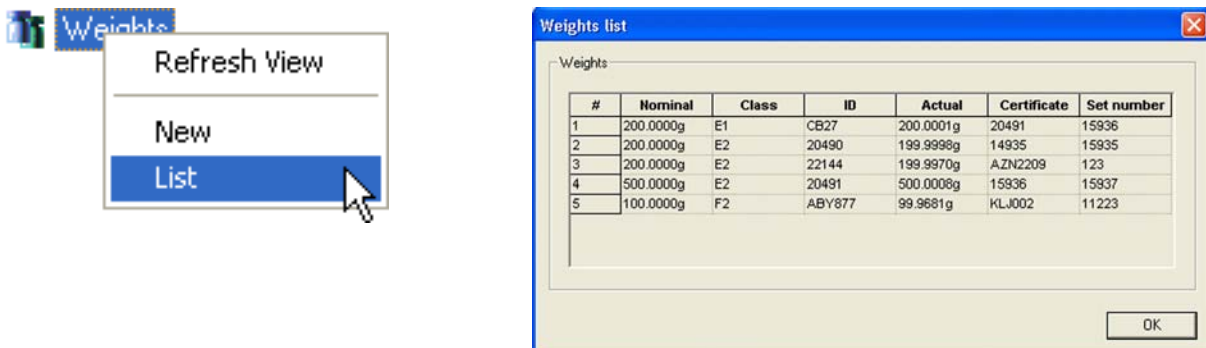
8 Setting up Weights Management

Here you can install and define your available weights that you will need for adjustments with external weights, tests with external weights and repeatability tests with external weights.

1. Select the tree view **Configuration**.
2. Right-click on the **Weights** icon  and select "New" from the context menu. The **Weight Data** form appears.



3. Complete the form with the weight specifications. The weight specifications are shown in the certificate that you received with the weight.
4. Click on the **Save** button  from the toolbar to save.
5. All the weights you have defined are displayed in a weights library. Right-click on the **Weights** icon  and select "List" from the context menu. An overview with the **Weights list** in LabX appears.




Notes

- We strongly recommend for clarity reasons that no local weights library is set up in the embedded balance software. This could lead to data redundancy and wrong data on the local print-out.
- The weight form can only be saved if all fields marked with an asterisk * are filled out.
- The identification of all weights must be clearly defined.

8.1 Signing weights **LabX pro only**

Weights can be signed with the **Reviewed** and/or **Approved** options. Weights are marked with **Reviewed** and/or **Approved** at the top of the window, at the end of the weight data form, and on the printout. If a signed weight is edited, the signature is automatically deleted.


To be able to sign, you must have the corresponding rights. Make sure that you are logged in as a user which has the corresponding rights.

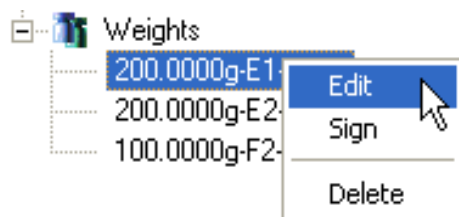
1. Click with the right mouse button on the **Weights** icon  in the tree view **Configuration**. In the context menu, select **Sign**.
2. The **Sign Weight:** dialog appears.



3. Enter the user name and password, and in the drop-down list of the "Meaning" field, select **Review** or **Approve**. See also chapter 5.2 "General Policies".
4. Click on **OK** to confirm the changed settings and close the dialog, or click on **Cancel** to reject all the changed settings and close the dialog.

8.2 Changing weights

Select an existing **Weight**  for editing by double-clicking on it, or use the right mouse button to select **Edit** in the context menu. The weight now appears as a form which you can change.



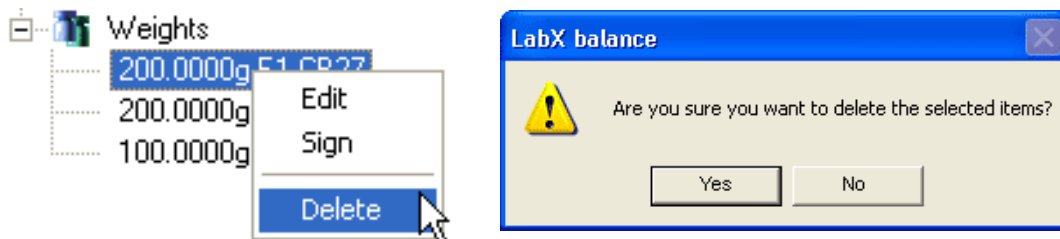
Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step, you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

8.3 Removing weights

If a weight is no longer required or has been replaced, you can remove it. Make sure that you have the corresponding rights to do this.

1. Select the tree view **Configuration**.
2. With the right mouse button, click on an existing **Weight** and in the context menu, select "**Delete**". The **Confirm Modification** dialog appears.



Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step, you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

Attention



The weight can only be removed when it is no longer defined for Adjustment or Test jobs (see chapters 9.2.2, 9.2.4, and 9.2.5).

9 Balance-specific settings

LabX allows you to check the **FACT/proFACT** settings on the balance and to modify them if necessary. Follow the instructions in your SOPs in order to make these settings, and enter these as a reference.


Weighing parameters such as autozero, vibration adapter and stability criterion are handled in LabX in relation to specific jobs, and can be determined in the job templates (see chapter 12.3 "Defining a new job template"). The environmental parameters, on the other hand, should be set individually and once only on each balance to suit the environmental conditions at the workplace.

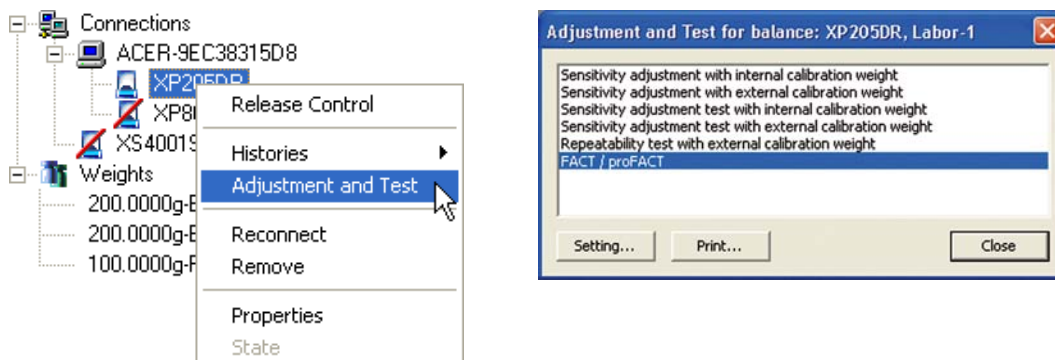
The **display area** can also be determined job-specifically in the working templates or a one-off job.

The **date and time** of the balance are synchronized with the LabX system time before each weighing or testing job.

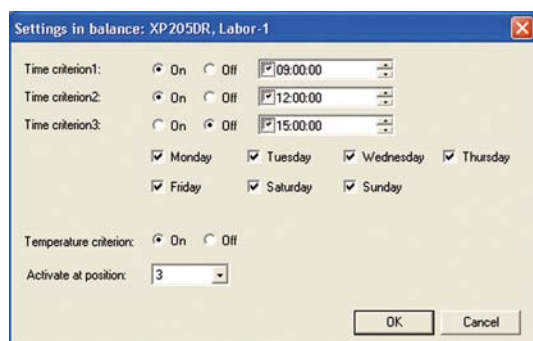
9.1 Defining FACT and proFACT settings

FACT or proFACT automatically adjusts and linearizes the balance to take account of changed environmental conditions. Define the time and/or temperature criteria at which a FACT or proFACT should be activated.

1. From the tree view **Configuration**, right-click on the desired **Balance**  and select from the context menu "**Adjustment and Test**".
2. The **Adjustment and Test for balance:** dialog appears.



3. Select "FACT/proFACT" by means of double-click for working or you click on **Setting...**



4. The **Settings in balance:** dialog appears. Under "Time criterion:" click on On.
5. Define the day of the weeks and time at which an automatic or manual adjustment is to be carried out.
6. Under "Temperature criterion:" click on On.
7. "Activate at position" refers to selecting one of the temperatures which are part of each individual balance. Select the position here which matches the desired temperature setting position on the balance.
8. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.

Notes

- The FACT settings are still managed by the balance. LabX can be used to configure them.
- The number of selectable parameters depends on the selected balance model.
- There are special rules for certified balances.

9.2 Scheduler for adjustment and tests

Schedules for adjustments and tests can be set up for every balance in LabX in accordance with table in chapter 22 "Appendix LabX Functions". This provides several options for planning adjustments and tests, in addition to the standard FACT/proFACT functions for balances.

The scheduler can be switched on and off individually. An active scheduler places an adjustment or test job in the balance's queue at the programmed times. LabX attempts to run test jobs automatically with an internal weight. Test jobs with external weights must be started and implemented by the user.

LabX allows management of weighing tolerances for certain checkpoints on all installed balances. Dependent on the balance model, recommended factory tolerance values T_0 are given. In case the value for T_0 remains blank or "0" after having selected a nominal weight value, the balance model does not support this function. The T_0 values correspond to the maximum deviation of a specific characteristic, e.g. the sensitivity offset of a certain type of balance in relation to the specified nominal weight value.


You can take T_0 as the basis and derive your own tolerances T_1 and T_2 from it. T_1 and T_2 tolerances must be greater than the T_0 value. They correspond to what you consider to be reasonable in your industry and application. As default, the T_1 and T_2 values are proposed according to the rule $T_1 = 3 * T_0$ and $T_2 = 10 * T_0$.

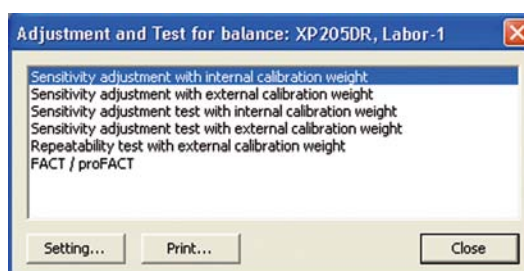
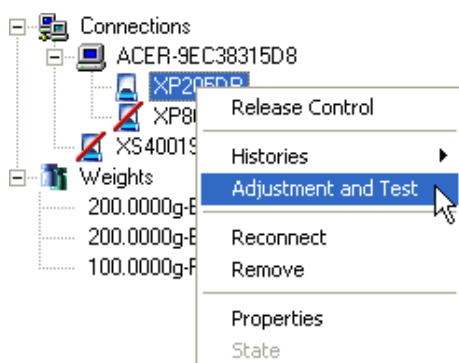
The Release Control that can be configured for every balance in LabX (see chapter 9.3 "Configuring the Release Control") is partly based on an assessment of reports from completed adjustment and test jobs.

For each adjustment and test setting, you may define up to 5 different test points. Each test point contains separate settings for weights used and tolerance values accepted. Any or all of the test points can be enabled at any given time. If the scheduler finds more than 1 test point enabled, a single job is created, all test points are carried out within that job and a single pass/fail status is generated.

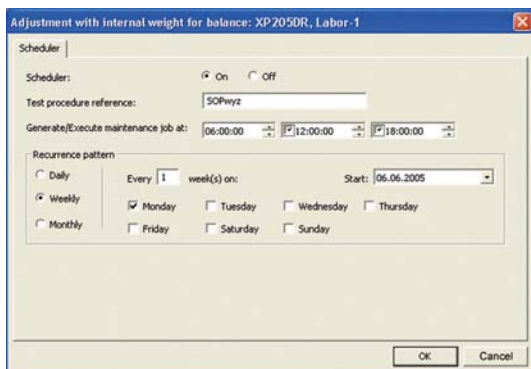
9.2.1 Scheduler for sensitivity adjustment with internal weight

This menu is used to define the schedule for running and recording an adjustment with internal weight. When it is due, an **adjustment job** is placed in the queue for the relevant balance in the tree view **Weighing**, and LabX attempts to run it at the same time.

1. From the tree view **Configuration**, right-click on the desired **Balance**  and select from context menu "**Adjustment and Test**".
2. The **Adjustment and Test for balance:** dialog appears.



3. Select "Sensitivity adjustment with internal calibration weight" by means of double-click for working or you click on **Setting....**



4. The **Scheduler for Adjustment with internal weight for balance:** dialog appears. Under "Scheduler" click on On.
5. You can enter a reference under the "Test procedure reference:" sequence.
6. Under "Generate/Execute maintenance job at:" select the time at which the adjustment is to be carried out.
7. Under "Recurrence pattern", define how often and from when the adjustment is to be carried out. You may define daily, weekly or monthly intervals.
8. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.

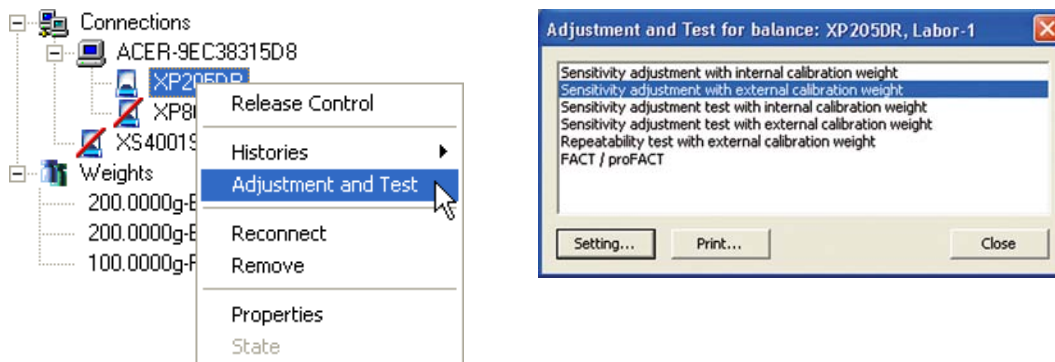
Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

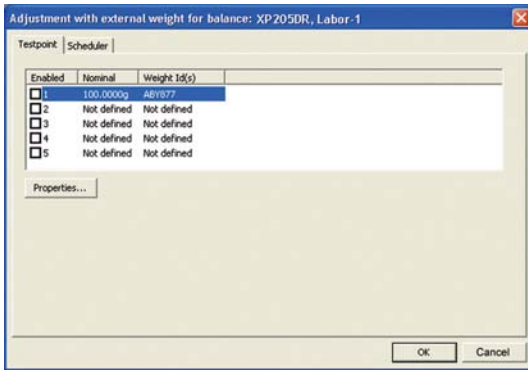
9.2.2 Scheduler for sensitivity adjustment with external weight

This menu is used to define the schedule for running and recording an adjustment with external weight. When it is due, an **adjustment job** is placed in the queue for the relevant balance in the tree view **Weighing**. As a user with the appropriate access right, you are then prompted to run this adjustment job as soon as possible.

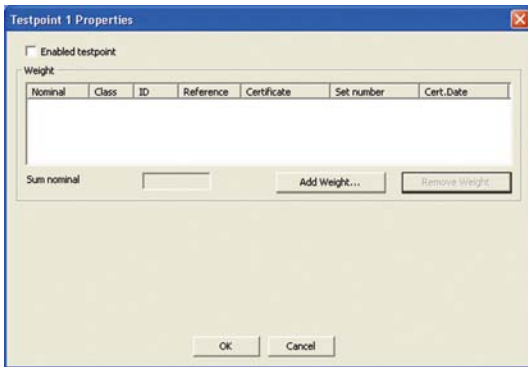
1. From the tree view **Configuration**, right-click on the desired **Balance** and select from the context menu "**Adjustment and Test**".
2. The **Adjustment and Test for balance:** dialog appears.



3. Select "Sensitivity adjustment with external calibration weight" by means of double-click for working or you click on **Setting....**
4. The **Scheduler for Adjustment with external weight for balance:** dialog appears.

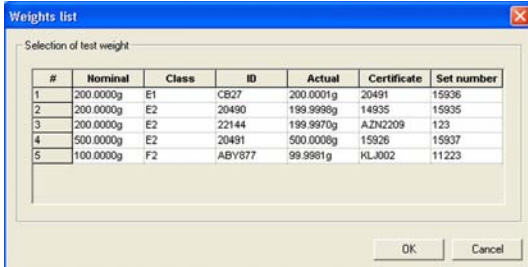


5. Select in tab **Testpoint** the test point 1 and click on **Properties...**

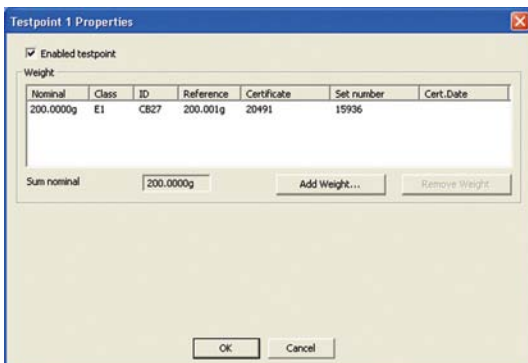


6. The **Testpoint 1 Properties** dialog appears.

7. Select the weights needed for this external adjustment by clicking on "Add Weight...". An overview with the **Weights list** in LabX appears.

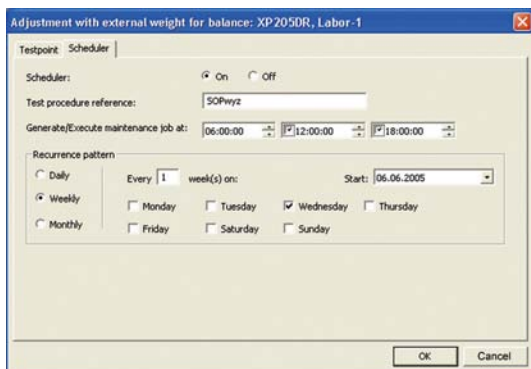


8. Select up to three adjustment weights in order to achieve the necessary nominal, and click on **OK** to accept the selection. The selected adjustment weight(s) now appear(s) in the **Testpoint 1 Properties** dialog box.



9. Activate the check box "Enabled testpoint" now and click the **OK** button to confirm the settings. Further test points can be defined in the same manner.

10. Select the tab **Scheduler**.



11. The **Scheduler for Adjustment with external weight for balance:** dialog appears. Under "Scheduler" click on On.
12. You can enter a reference under the "Test procedure reference:" sequence.
13. Under "Generate/Execute maintenance job at:" select the time at which the adjustment is to be carried out.
14. Under "Recurrence pattern", define how often and from when the adjustment is to be carried out. You may define daily, weekly or monthly intervals.
15. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.

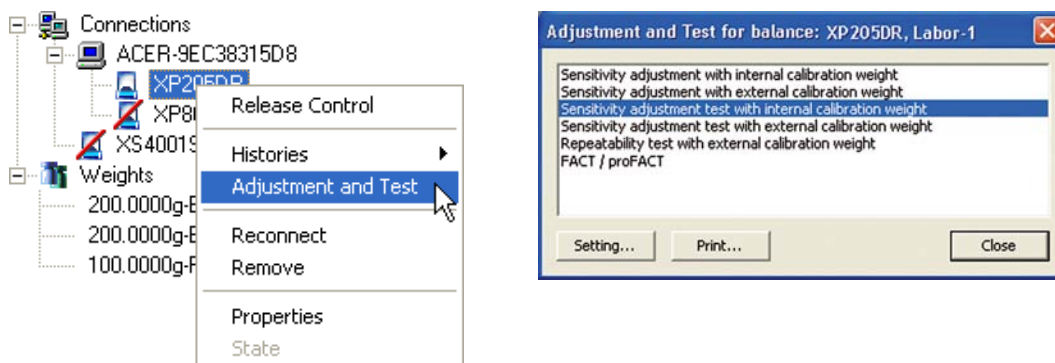
Notes

- For each adjustment and test setting, you may define up to 5 different test points. Each test point contains separate settings for weights used and tolerance values accepted. Any or all of the test points can be enabled at any given time. If the scheduler finds more than 1 test point enabled, a single job is created, all test points are carried out within that job and a single pass/fail status is generated.
- If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

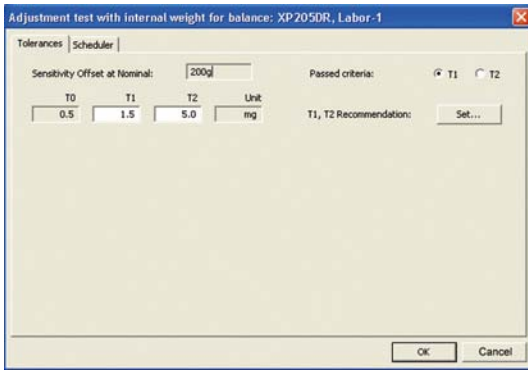
9.2.3 Scheduler for sensitivity test with internal weight

This menu is used to define the schedule for running and recording a sensitivity test with internal weight. When it is due, a **test job** is placed in the queue for the relevant balance in the tree view **Weighing**, and LabX attempts to run it at the same time.

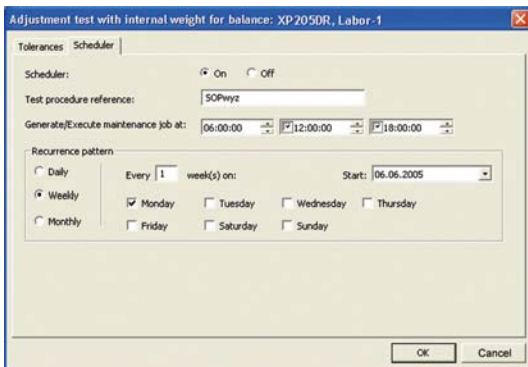
1. From the tree view **Configuration**, right-click on the desired **Balance** and select from the context menu "**Adjustment and Test**".
2. The **Adjustment and Test for balance:** dialog appears.



3. Select "Sensitivity adjustment test with internal calibration weight" by means of double-click for working or you click on **Setting...**



4. The **Scheduler for Adjustment test with internal weight for balance:** dialog appears. Select the tab **Tolerances**.
5. Check the specified nominal load to which the test is related, and adjust if necessary (e.g. to the typical operating range). Enter individual tolerance values in the form of a Control limit (T1) and a warning limit (T2) so that LabX can assess the effective deviation. Take account of the tolerance value T0 suggested by METTLER TOLEDO and the recommendation for T1 and T2 derived from it.
To ensure that the Release Control has a unique basis for determining whether a test was passed, please select "Passed criteria:" T1 or T2.
6. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.
7. Select the tab **Scheduler**.




8. The **Scheduler for Adjustment test with internal weight for balance:** dialog appears. Under "Scheduler" click on On.
9. You can enter a reference under the "Test procedure reference:" sequence.
10. Under "Generate/Execute maintenance job at:" select the time at which the adjustment is to be carried out.
11. Under "Recurrence pattern", define how often and from when the adjustment is to be carried out. You may define daily, weekly or monthly intervals.
12. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.

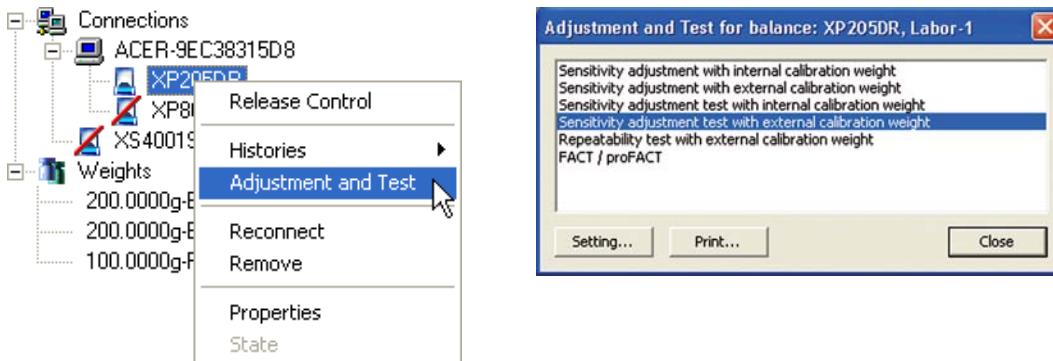
Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

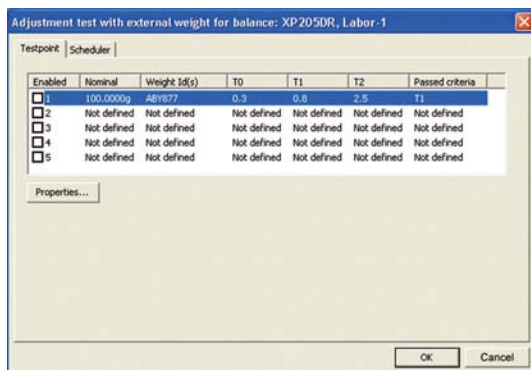
9.2.4 Scheduler for sensitivity test with external weight

This menu is used to define the schedule for carrying out and recording a sensitivity test with external weight. When it is due, a **test job** is placed in the queue for the relevant balance in the tree view **Weighing**. As a user with the appropriate access right, you are then prompted to carry out this test job as soon as possible.

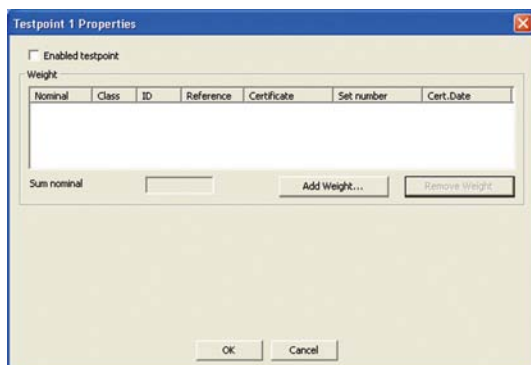
1. From the tree view **Configuration**, right-click on the desired **Balance**  and select from the context menu "**Adjustment and Test**".
2. The **Adjustment and Test for balance:** dialog appears.



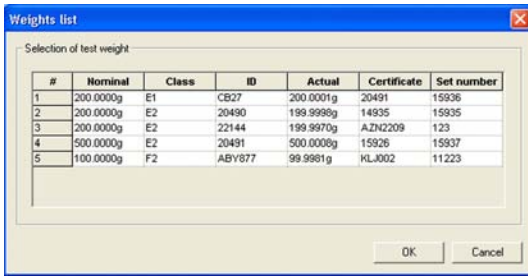
3. Select "Sensitivity adjustment test with external calibration weight" by means of double-click for working or you click on **Setting...**.
4. The **Scheduler for Adjustment test with external weight for balance:** dialog appears.



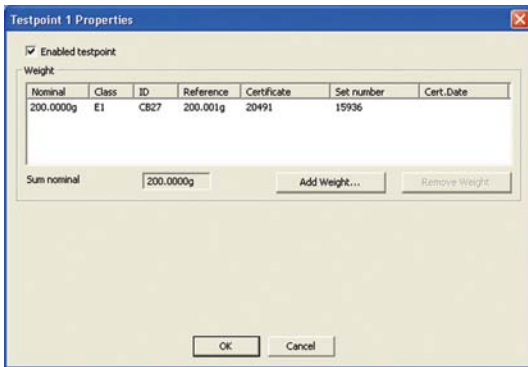
5. Select in tab **Testpoint** the test point 1 and click on **Properties...**.



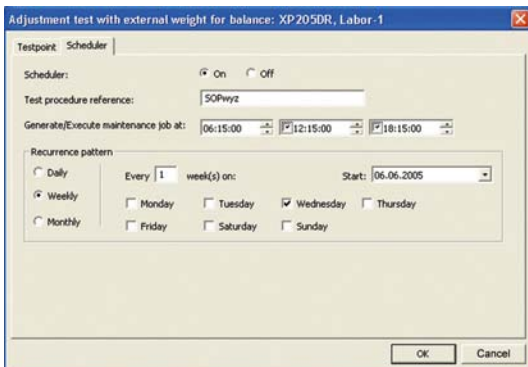
6. The **Testpoint 1 Properties** dialog appears.
7. Select the weights needed for this external adjustment by clicking on "**Add Weight...**". An overview with the **Weights list** in LabX appears.



8. Select up to three adjustment weights in order to achieve the necessary nominal, and click on **OK** to confirm your selection. The selected adjustment weight(s) now appear(s) in the **Testpoint 1 Properties** dialog box.
9. Check the specified nominal load to which the test is related, and adjust if necessary (e.g. to the typical operating range). Enter individual tolerance values in the form of an intervention- (T1) and a warning limit (T2) so that LabX can assess the effective deviation. Take account of the tolerance value T0 suggested by METTLER TOLEDO and the recommendation for T1 and T2 derived from it.
To ensure that the Release Control has a unique basis for assessing whether a test was passed, please select the "Passed criteria": T1 or T2.



10. Activate the check box "Enabled testpoint" now and click the **OK** button to confirm the settings. Further test points can be defined in the same manner.
11. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.
12. Select the tab **Scheduler**.



13. The **Scheduler for Adjustment test with external weight for balance:** dialog appears. Under "Scheduler" click on On.
14. You can enter a reference under the "Test procedure reference:" sequence.
15. Under "Generate/Execute maintenance job at:" select the time at which the adjustment is to be carried out.
16. Under "Recurrence pattern", define how often and from when the adjustment is to be carried out. You may define daily, weekly or monthly intervals.
17. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.

Notes

- For each adjustment and test setting, you may define up to 5 different test points. Each test point contains separate settings for weights used and tolerance values accepted. Any or all of the test points can be enabled at any given time. If the scheduler finds more than 1 test point enabled, a single job is created and all test points are carried out within that job and a single pass/fail status is generated.
- If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.
- The sensitivity test does not take account of the accuracy of the external weights. It is recommended to use a reference weight whose measurement uncertainty is not greater than one third of the value used for the tolerances T1 and T2.

Example


The maximum sensitivity offset of an AX204 is 2 ppm. At 200 g, this corresponds to 0.4 mg (T0). You decide to use a tolerance of 1 mg (T1) at 200 g.

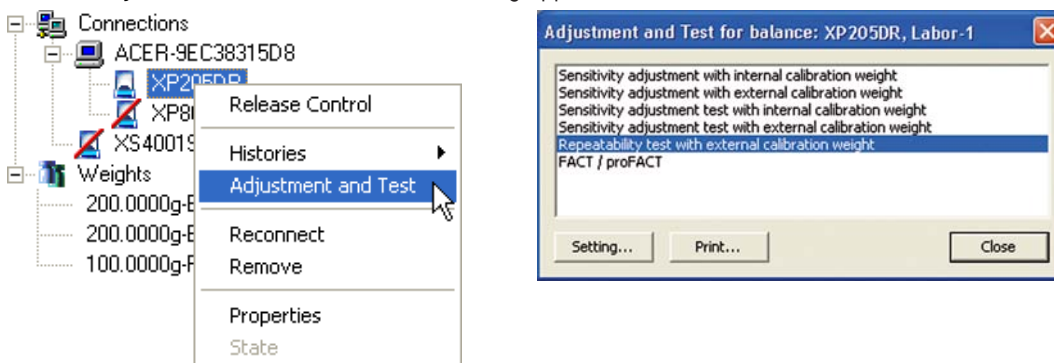
The maximum permissible error (mpe) of the selected reference weight should be less than 0.3 mg at 200 g (corresponds to 1.5 ppm). For practical reasons, a weight of class E2 should be used.

If you have a weight whose actual value is known, an OIML weight with a maximum permissible error (mpe) corresponding to the test limit, here 1 mg at 200 g, must be used. That in turn corresponds to 5 ppm, which means an F2 weight. (Reason: The uncertainty of an OIML weight must be not more than 1/3 of the maximum permissible error (mpe). Mpe of class F2: 5 ppm or 1 mg at 200 g; measurement uncertainty of this weight: $mpe/3 = 1/3$ mg, which corresponds to 1/3 of the desired tolerance).

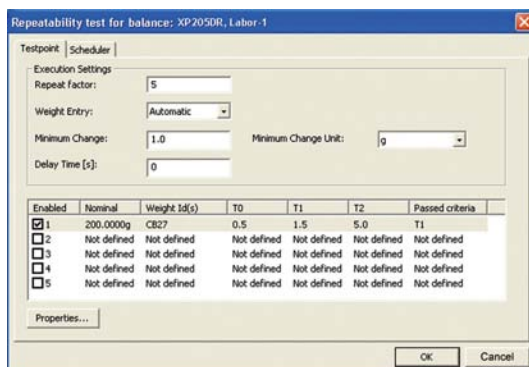
9.2.5 Scheduler for Repeatability test with external weight

This menu is used to define the schedule for running and recording a repeatability test with external weight. When it is due, a **test job** is placed in the queue for the relevant balance in the tree view **Weighing**. As a user with the appropriate access rights, you are then prompted to run this test job as soon as possible.

- From the tree view **Configuration**, right-click on the desired **Balance**  and select from the context menu "**Adjustment and Test**".
- The **Adjustment and Test for balance:** dialog appears.

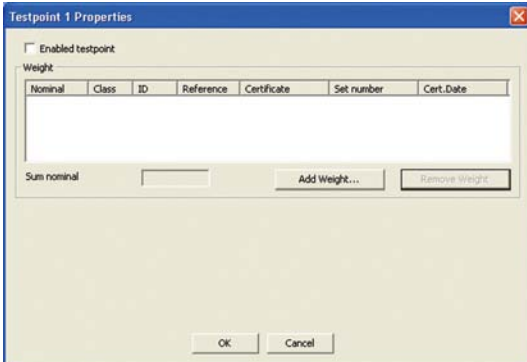


- Select "Repeatability test with external calibration weight" by means of double-click for working or you click on **Setting....**

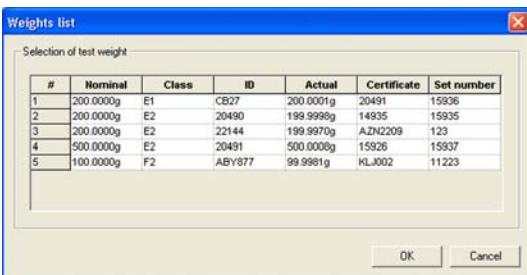


- The **Scheduler for Repeatability test for balance:** dialog appears.

5. Under "Repeat factor:", enter the number of repetitions.
6. Under "Weight Entry:" select Automatic or Manual to control the method of reading weights from the balance into LabX.
7. Under "Minimum Change:" and "Minimum Change Unit:" enter the desired criteria. After the minimum weight change is reached, the next stable weight is captured. Additionally, under "Delay Time [s]:" you can specify the delay time after which the weight should be captured.
8. Select in tab **Testpoint** the test point 1 and click on **Properties....**

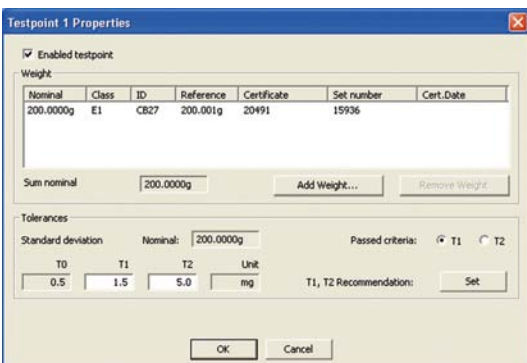


9. The **Testpoint 1 Properties** dialog appears.
10. Select the weights needed for this external adjustment by clicking on "**Add Weight...**". An overview with the **Weights list** in LabX appears.

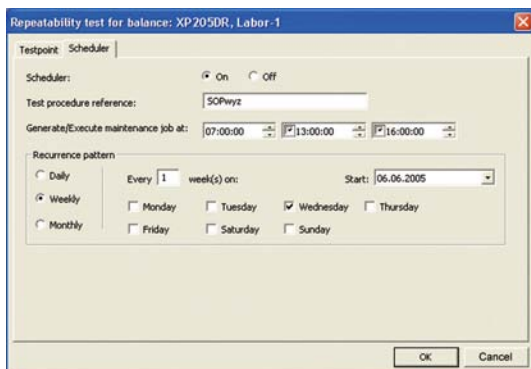


11. Select up to three adjustment weights in order to reach the necessary nominal, and click on **OK** to confirm your selection. The selected adjustment weight(s) now appear(s) in the dialog box.
12. Enter individual tolerance values in the form of a Control limit (T1) and a warning limit (T2) so that LabX can assess the effective deviation. Take account of the nominal load and associated tolerance value T0 specified by METTLER TOLEDO, and the recommended T1 and T2 derived from it.
To ensure that the Release Control has a unique basis for assessing whether a test was passed, please selected the "Passed criteria": T1 or T2.

Note: T0 always relates to a test with the specified nominal load. This cannot be changed for the repeatability test.



13. Activate the check box "Enabled testpoint" now and click the **OK** button to confirm the settings. Further test points can be defined in the same manner.
14. Select the tab **Scheduler**.



15. The **Scheduler for Repeatability test for balance:** dialog appears. Under “Scheduler” click on On.
16. You can enter a reference under the “Test procedure reference:” sequence.
17. Under “Generate/Execute maintenance job at:” select the time at which the adjustment is to be carried out.
18. Under “Recurrence pattern”, define how often and from when the adjustment is to be carried out. You may define daily, weekly or monthly intervals.
19. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject all your new settings and close the dialog.

Notes

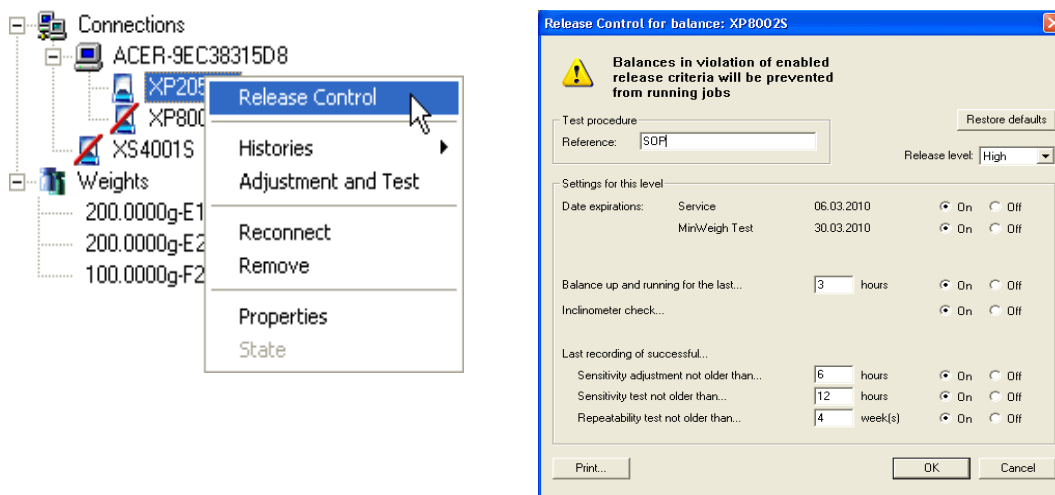
- For each adjustment and test setting, you may define up to 5 different test points. Each test point contains separate settings for weights used and tolerance values accepted. Any or all of the test points can be enabled at any given time. If the scheduler finds more than 1 test point enabled, a single job is created, all test points are carried out within that job and a single pass/fail status is generated.
- If you are operating your system in the “Secure Mode (21 CFR Part 11)”, when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 “Electronic signature”). If the signature is successful, an entry will be made in the **Audit Trail**.

9.3 Configuring the Release Control

The Release Control provides a general assessment of whether data may be recorded with a balance in LabX or not. The criteria to be fulfilled can be configured on three levels, Low, Medium, High. Thus an individual release level may be selected on every working template. This may be linked to the execution of a specific type of job.

Example: A weighing job based on a job template with Release level "High" can only be run if all the criteria stored for this level are fulfilled at the time of starting the job.

1. From the tree view **Configuration**, right-click on the desired **Balance**  and select **"Release Control"**. The **Release Control dialog for the selected balance** appears.



2. Select a release level. You have the choice of Low, Medium and High.
3. Now define the criteria that must be fulfilled for the selected release level.
4. Set the run date switches (Service, MinWeigh Test) to On for those run dates that you regard as the condition for fulfillment of this release level. Contact your LabX Administrator if one of more of these dates is not available.
5. Select a minimal required On time in hours, and set the On/Off switch to determine whether this criterion should apply to the balance.
6. The built-in level sensor on your balance continuously monitors the correct horizontal alignment of your balance. Setting the Level Sensor Check switch to "On" enables the inclinometer. If the level sensor detects that the balance is not level, a job error message is displayed and the job cannot continue until the balance has been re-levelled.
7. Select a maximum time it should take for a successful sensitivity adjustment to be recorded in LabX, then set the On/Off switch to determine whether this criterion should apply to the balance.
8. Select a maximum time it should take for a successful sensitivity adjustment test to be recorded in LabX, then set the On/Off switch to determine whether this criterion should apply to the balance.
9. Select a maximum time it should take for a successful repeatability test to be recorded in LabX, then set the On/Off switch to determine whether this criterion should apply to the balance.
10. Click on **OK** to confirm your new settings and close the dialog or click on **Cancel** to reject your new settings and close the dialog.


Notes

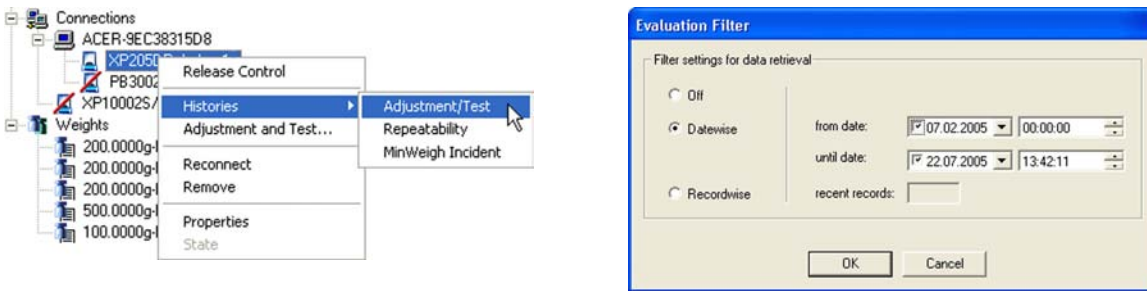
- If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.
- The supported functions are dependent on balance models. Additionally an expiry of the current minimum weight may require that MinWeigh may be updated. See table in chapter 22 "Appendix LabX Functions".

10 Displaying histories

10.1 Histories of adjustment/test

You can view and print the adjustment/test histories at any time. You can use the filter function to display only those data reports which are relevant for you.

1. Use the right mouse button to click on the desired **Balance**  in the tree view **Configuration**. In the context menu, select **Histories > Adjustment/Test**.
2. The working area displays an evaluation filter.



3. Enter the from/until dates of the period for which you wish to see the reports.
4. Click on **OK** to accept the changed inputs and close the dialog, or on **Cancel** to abort the operation and close the dialog.
5. The working area then displays the history of adjustment/test with all relevant data.

Brand

Adjustment and Test History

Balance

Type XP205DR
 Serial Number 1125140001
 Name XP205DR.Labor-1

Summary of Sensitivity Adjustments

Date and Time	User	Test Procedure Refer	Test ID	Testpoints	Type	Method	Result
26.07.2005 11:42:35	John Miller	SOPwyz	6	1	T	Internal	Passed
26.07.2005 11:35:19	John Miller	SOPwyz	5	0	A	Internal	Done
26.07.2005 11:05:42	Development Administrator	SOPwyz	4	1	A	External	Done
26.07.2005 10:28:54	Development Administrator	SOPwyz	3	1	A	External	Aborted
26.07.2005 10:23:36	Development Administrator	SOPwyz	2	1	T	Internal	Passed
26.07.2005 06:51:19	Development Administrator	SOPwyz	1	0	A	Internal	Done

Printed by: Development Administrator Page 1 / 2 LabX Version 1.2 26.07.2005 11:05:58

Brand

Adjustment and Test History

Testpoint Details

Test ID 4
 Testpoints 1
 Date and Time 26.07.2005 11:05:00

Testpoint Weights

Weight ID	Set Number	Nominal Mass	Actual Mass
CB27	15936	200.0000g	200.0001g
Total:		200.0000g	200.0001g

Testpoint Measurements

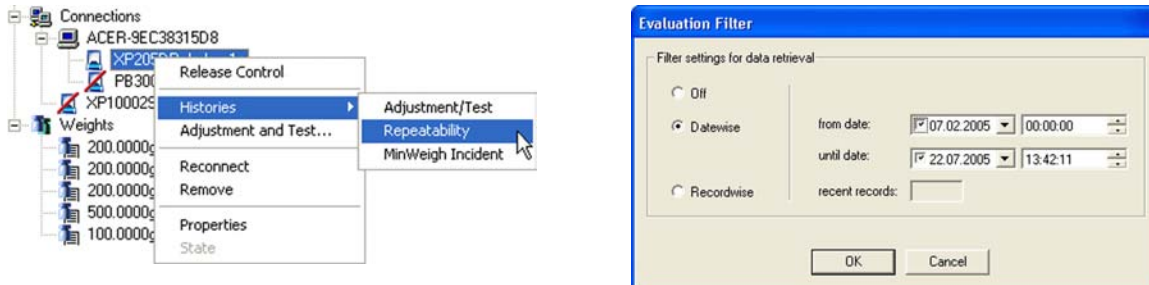
Balance Temperature	Net Reading	Accepted Tolerance	Result
26.2			Done

Printed by: Development Administrator Page 2 / 2 LabX Version 1.2 26.07.2005 11:05:58

10.2 Histories of repeatability

You can view and print the repeatability histories at any time. You can use the filter function to display only those data reports which are relevant for you.

1. Use the right mouse button to click on the desired **Balance** in the tree view **Configuration**. In the context menu, select **Histories > Repeatability**.
2. The working area displays an evaluation filter.



3. Enter the from/until dates of the period for which you wish to see the reports.
4. Click on **OK** to accept the changed inputs and close the dialog, or on **Cancel** to abort the operation and close the dialog.
5. The working area then displays the histories of repeatability with all relevant data.

Brand

Repeatability Test History

Balance

Type XP205DR
 Serial Number 1125140001
 Name XP205DR.Labor-1

Summary of Repeatability Tests

Date and Time	User	Test Procedure Reference	Test ID	Testpoints	Result
26.07.2005 12:30:46	John Miller	SOPwyz	8	2	Done
26.07.2005 11:47:18	John Miller	SOPwyz	7	2	Aborted
26.07.2005 11:25:50	Development Administrator	SOPwyz	6	1	Passed

Testpoint Details

Test ID 8
 Testpoint Number 2
 Number of Repeats 5
 Date and Time 26.07.2005 12:30:37

Testpoint Weights

Weight ID	Set Number	Nominal Mass	Actual Mass
ABY877	11223	100.0000g	99.9981g
Total:		100.0000g	99.9981g

Testpoint Measurements

Balance Temperature	Sample Count	Preload	Gross Reading	Net Reading	Weight Error	Corrected Net Reading
27.0	5	-0.00003g	100.0005g	100.0005g	-0.0019	100.0024
27.0	4	-0.00005g	100.0005g	100.0006g	-0.0019	100.0025
27.0	3	-0.00005g	100.0005g	100.0006g	-0.0019	100.0025
27.0	2	-0.00006g	100.0005g	100.0006g	-0.0019	100.0025
27.0	1	0.00000g	100.0004g	100.0004g	-0.0019	100.0023

Testpoint Statistics

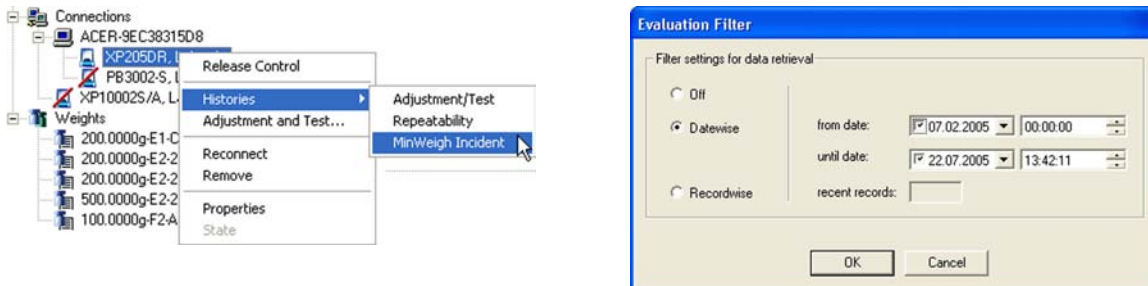
Mean	Min	Max	Standard Deviation	Accepted Tolerance	Testpoint Result
100.0024g	100.0023g	100.0025g	0.1mg	0.8mg	Done

Printed by: Development Administrator Page 1 / 1 LabX Version 1.2 26.07.2005 12:35:18

10.3 Histories of MinWeigh incidents

You can view and print the MinWeigh incident histories at any time. You can use the filter function to display only those reports which are relevant for you.

1. Use the right mouse button to click on the desired **Balance** in the tree view **Configuration**. In the context menu, select **Histories > MinWeigh Incident**.
2. The working area then displays an evaluation filter.



3. Enter the from/until dates of the period for which you wish to see the reports.
4. Click on **OK** to accept the changed inputs and close the dialog, or on **Cancel** to abort the operation and close the dialog.
5. The working area then displays the histories of MinWeigh incidents with all relevant data.

MinWeigh Incident History							
Balance							
Type	XP205DR						
Serial Number	1125140001						
Name	XP205DR, Labor-1						
MinWeigh Incidents							
Date and Time	Job ID	Sample Number	Tare Weight	Net Weight	MinWeigh Value	MinWeigh According To	
26.07.2005 11:39:58	33	3	0.00000g	0.00428g	0.0400000g	USP fast	
26.07.2005 11:39:30	33	2	0.00000g	0.00437g	0.0400000g	USP fast	
26.07.2005 11:38:57	33	1	0.00000g	0.00411g	0.0400000g	USP fast	
26.07.2005 11:32:26	30	2	0.00000g	0.00428g	0.0400000g	USP fast	
26.07.2005 11:31:53	30	1	0.00000g	0.00000g	0.0400000g	USP fast	
26.07.2005 11:30:25	29	1	0.00000g	0.00037g	0.0400000g	USP fast	
26.07.2005 11:04:14	27	3	0.00000g	0.00153g	0.0400000g	USP fast	
26.07.2005 11:03:40	27	2	0.00000g	0.00148g	0.0400000g	USP fast	
26.07.2005 11:02:58	27	1	0.00000g	0.00151g	0.0400000g	USP fast	
26.07.2005 10:59:33	26	3	0.00000g	0.00424g	0.0120000g	SOP	
26.07.2005 10:58:57	26	2	0.00000g	0.00418g	0.0120000g	SOP	
26.07.2005 10:58:12	26	1	0.00000g	0.00372g	0.0120000g	SOP	

Printed by: Development Administrator Page 1 / 1 LabX Version 1.2 26.07.2005 11:11:13

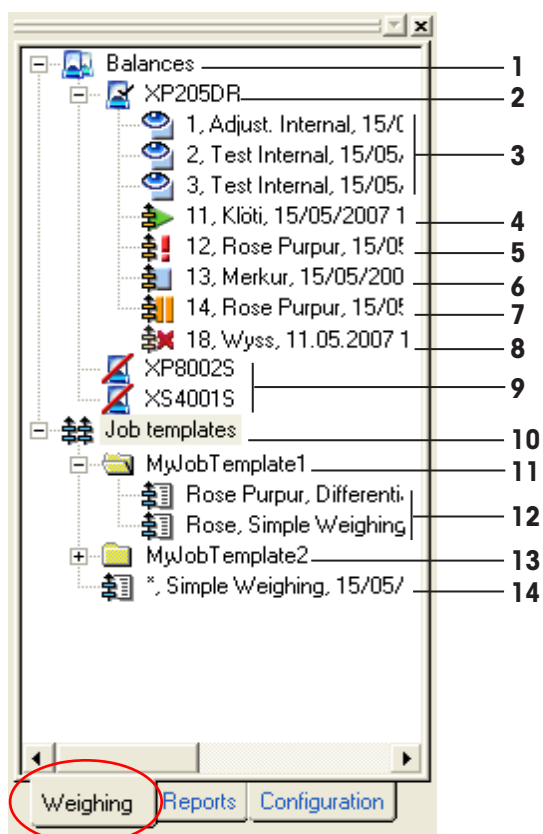
11 Tree view Weighing

11.1 Introduction

When performing your daily work with your balances, you are in the tree view **Weighing**. This is where you prepare and organize routine work, define once-only jobs, and control all types of jobs such as weighing, adjustment, and test jobs.





11.2 Overview

The tree view **Weighing** provides an overview of the balances available in the system, their connection status, and any queues of waiting jobs. It also provides an overview of stored job templates, from which you can easily generate weighing jobs.

















To activate the tree view **Weighing**, click on the **Weighing** tab in the bottom margin of the navigation window. If you have generated job templates, all defined jobs and maintenance jobs will be displayed, as in this example. How to generate and process job templates is described in the chapters which follow.

- The elements of the structure are as follows:
 1. The balance folder (1) with all the balances (2) installed locally or in the network. If these are not available, they are displayed crossed through.
 2. The job templates folder (10) can also contain sub-folders (11 and 13). Newly created job templates are saved directly in the job templates folder.
 3. Adjustments and tests (3) which you have specified in the scheduler, and which are now due, are shown here in the queue and must be executed.
 4. Job templates (6) in the queue.
- The folders in the top level of the hierarchy are permanently defined. For greater clarity, you can define sub-folders within the **Job templates** folder.
- Folders can be opened and closed by clicking on a \oplus or \ominus character, or by double-clicking.

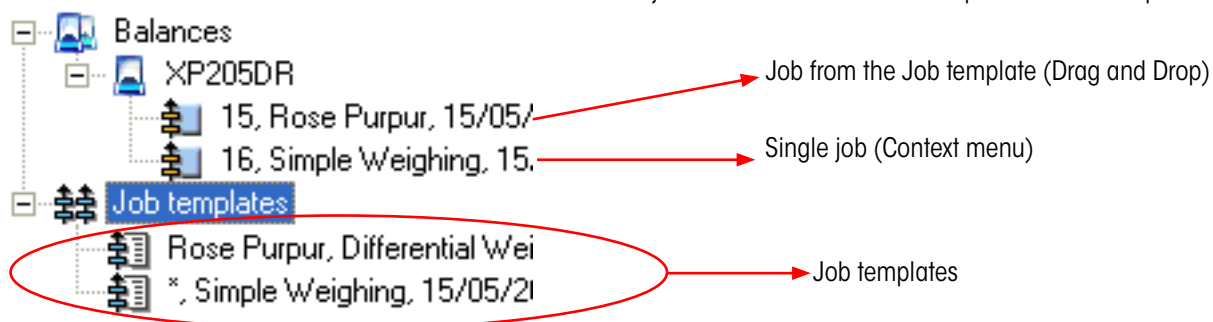
- A right mouse click on a symbol opens a context menu with a list of possible functions. For example, a right mouse click on the **Job templates**  (10) symbol opens a list with the options **New**, **Import**, or **New Folder...**
- Double-clicking on **Job templates**  or the **Balance**  symbol opens the respective dialog in the working area. You can switch backward and forward between the open working areas by clicking on the button at the bottom of the window.
- The menu- and toolbar always shows the functions which are available in a working area.
- You can close open working areas by clicking on the **Close**  button in the menu bar.

11.3 Icons

Icon	Number	Function/contents
 Balances folder	1	All balances in the current user's profile
 XP205DR	2	Switched-on and connected XP205DR balance with activated manual transfer mode
 Adjustments and tests	3	The adjustment and test date has expired; you must perform the adjustments and tests
 Job started	4	Job started in the queue
 Job aborted	5	Job aborted in the queue
 Job	6	Job in the queue
 Job paused	7	Job paused in the queue
 Job invalid	8	Job invalid in the queue
 XP8002S, XS4001S	9	Switched-off or disconnected balance
 Job templates folder	10	Job templates folder in the LabX database
 (Sub) job templates folder	11	Sub-folder in the job templates folder
 Predefined job templates	12	Predefined job templates in the sub-folder of the job templates folder
 (Sub) job templates folder	13	Sub-folder in the job templates folder
 Predefined job template	14	Predefined job template

12 Job template definition

The concept of LabX is based on a) system configuration and b) basic considerations based on requirements and defaults defined by a Q-System. In this environment a task is completed as order. Additionally a job template is defined which as single job which can be transferred into the balance folder or for routine jobs can be transferred as template into the template folder.

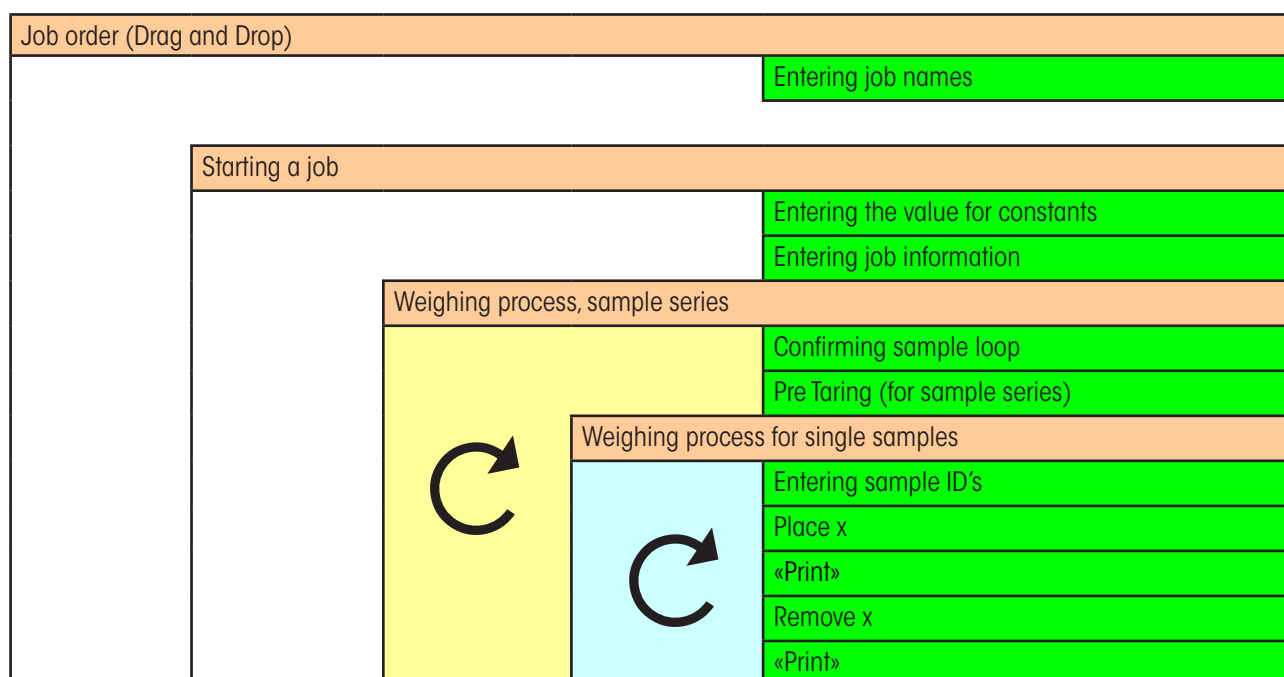


Whether you are defining a single job or a job for a pending routine job – the form is the same. In order to simply define a job template the following is recommended.

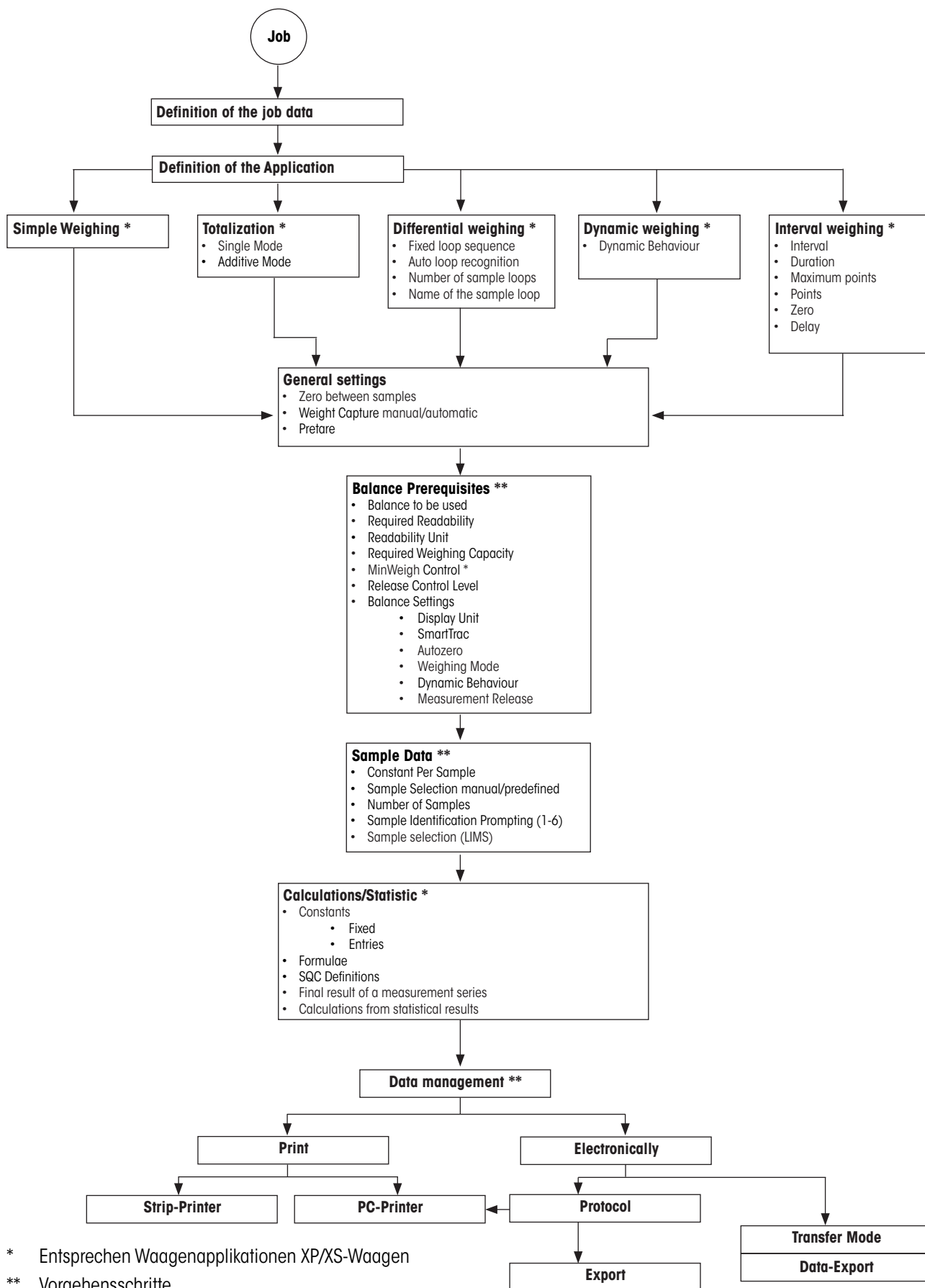
- Preparation of the necessary data (job data, application, job specifications, sample data, calculation steps: What should happen with data?).
- Consider how the user should be lead through the process.
- Definition of the corresponding names (job templates, job names, (name of the job information fields, name of the sample series fields, name of the sample identification fields).
- Consider changing the designations in Menu>Extras>Options, e.g sample ID1 (see chapter 5.8, "Setting up Job Management").
- Enter all the data in the job template form.
- Test run; check whether every runs as it should.
- Check the calculations.

12.1 Chronological sequence of a running job

In order to check that a job is running according to the definition in a template it is imperative to know, by key entry, when which entry will be requested and whether the process should follow step-by-step or continually.



12.2 Flow chart of a Job template




* Entsprechen Waagenapplikationen XP/XS-Waagen


** Vorgehensschritte

12.3 Defining a new job template

Job template creation

In the tree view **Weighing**, use the right mouse button to select in the context menu **Job templates**  "New", in order to create a job template. A form then appears which you can edit to create a new job template or a single job.

Job Data	
Date/Time created	25.09.2007 11:03:27
Date/Time last modified	25.09.2007 11:03:27
Job Template Name *	
Job Name	
<Job Info>	
Action	None
Application Data	
Application	Interval Weighing
Request Interval (hh:mm:ss) *	00:00:10
Duration (dd:hh:mm:ss) *	00:00:01:00
Maximum Number Of Points	30000
Zero Balance At Start/Resume	Yes
Begin Capture At Start/Resume	Immediately
Delay Time At Start/Resume (seconds)	0
Zero Between Samples	No
Weight Capture	Manual
Minimum Change	1.0
Minimum Change Unit	g
Delay Time [s]	0
Pretare	No
Number of Sample Loops	1
Sample Loop L1	
Name	
Transfer Mode	No
Decimal Symbol	Point
Transfer to	vWindow
Data Settings	
Sample Data	
Constant Per Sample	Off
Prompt	
Sample Selection	Manual
Number of Samples	
Sample Identification Prompting	
<Sample ID1>	No
<Sample ID2>	No
<Sample ID3>	No
<Sample ID4>	No
<Sample ID5>	No
<Sample ID6>	No
Balance Prerequisites	
Balance to be used	
Required Readability	
Readability Unit	g
Required Weighing Capacity	
Weighing range Unit	g
Minweigh Control	No
Release Control Level	
Balance Settings	
Display Unit	g
SmartTrac	Off
SmartTrac Nominal (Unit=Display Unit)	
SmartTrac +T (%)	10
SmartTrac -T (%)	10
Accept only weights within tolerance	Off
Autozero	Off
Weighing Mode (process adapter)	Universal
Dynamic Weighing Mode	Off
Dynamic Behaviour	Standard
Measurement Release (stability criterion)	Reliable and fast
Report Data	
Automatic Print	No
Automatic Export	No
Local Printout	No
Constants	
Number of constants	0
Sample Job Results	
Number of Results	0
Post Job Results	
Number of Results	0



General operation, see chapter 12.5.6

Data Processing, see chapter 12.9


Definition of the names, see chapter 12.7

Weighing application, dynamic weighing, see chapter 12.5.4

Data Processing, see chapter 12.9

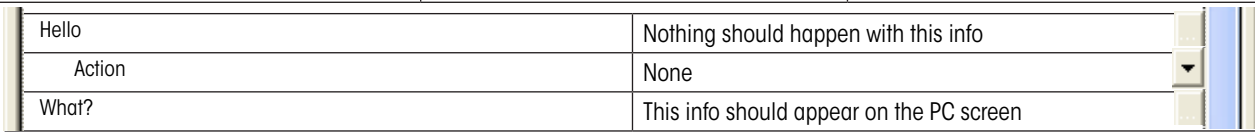
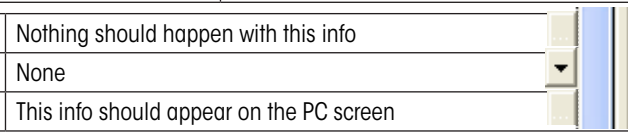
The individual settings in the job template are described in the chapters that now follow.

Single job definition

In the tree view **Weighing**, use the right mouse button to select in the context menu of the **Balance**  **"New Job"**, you can define a single job.

12.4 Definition of job data

Menu selection	Selection possibilities	Description
Date/Time created	23.08.2005 06:02:59	Defined by LabX
Date/Time last modified	23.08.2005 06:02:59	Defined by LabX
Job Template Name *		Here, a title is given for a job template. You can only save a job template when the fields are completed according to LabX syntax.
Job Name		<p>Here you can define a job name according to your wishes. By default LabX will take the job template name. LabX will always insert a relevant internal job number thus avoiding job description duplication.</p> <p>Entering an asterisk will allow you to enter a name during the job, e.g. the job number.</p> <p>A maximum of thirty characters can be entered.</p>
<Job Info>		<p>Here you have the possibility to adapt the description of the job info field.</p> <p>You can define as many job fields as you like. Click on the scroll down field on the right and choose "Request value when job starts". You now have a new job info field in which you can enter the corresponding information.</p>

Menu selection	Selection possibilities	Description
		Max 30 characters can be entered into a job info field and for the corresponding text a maximum of 256 characters can be defined.
		
Action	None	The information only appears on the job report..
	Show on online view only	The information will only be shown on the main field and in the info field of the balance terminal. Also it appears on the report.
	Request value when job starts	The information will be shown in a dialogue field and can be adapted on beginning a job. The adapted info appears on the job report.
	Show when job starts	The information will be shown on the screen as running text and as dialogue text on the terminal. You must confirm on the terminal with «OK» before you can proceed with the job. This information will appear on the job report.

12.5 Definition of the Applications data

Here you can choose the weighing process according to the type of weighing application and the number of samples taken. The type of application also defines the way in which the operator uses the balance. The content of the formula "Application data" is not linked to the chosen application and will therefore be described in the following sub-chapters of each application.

Information relating to the general settings is described in chapter 12.5.7, "General settings". Information regarding sample data is defined in chapter 12.7 "Definition of the Sample data" and the data processing is defined in chapter 12.9 "Definition of the data processing".

12.5.1 Simple Weighing

With this application weighing results are taken within a single run. The differentiation between Gross, net and tare follows according to the corresponding balance operation.

Various modes of calculation are of course already integrated into relevant fields of the job template.

12.5.2 Totalization

With this application, the individual weighing values are summed to a total. Job Execution and Job Reports for Totalization are almost identical to normal weighing jobs except that a summation of all net weights appears on a Totalization report.

Application Data	
Application	Totalization
Mode	Additive

You can choose between two placing methods: "Single" and "Additive". If single mode is chosen, then you will be prompted to remove the sample between weighings. If Additive mode is chosen, then you will not be prompted and each successive weighing is an accumulation of all past weighings.

In Single mode, the individual weights are recorded and then automatically set to zero. In combination with automatic weight recording, this option allows fast and completely automatic execution of a series weighing.

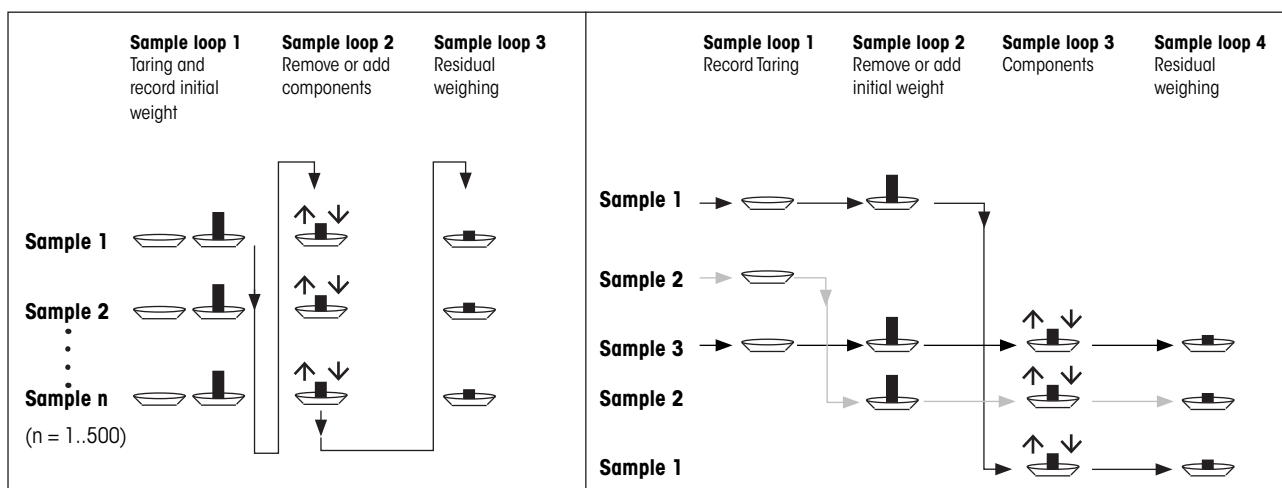
Note

In Additive mode, the balance is zeroed. In the special case of a certified balance, the balance is not zeroed but tared.

12.5.3 Differential Weighing, weighing in several loops

In conjunction with LabX, this application offers the most application possibilities. For example, different weighing results for a sample are recorded which can then be used together in the "Calculations" section to define custom formulas. You will find details of the "Calculations" section in chapter 12.8 "Defining calculations, statistics".

This application offers various procedures for weighing, allowing you to choose between a fixed and an automatic sample sequence.



Fixed sample loop

Automatic sample loop

Using fixed loop sequence, the user is prompted for all samples in each loop before proceeding with the next loop. With automatic loop detection, samples can be taken in any order and across any loop order. The limitation of automatic loop detection is that at least 1 sample ID must be defined for the job in order to track the weighings of each sample throughout the job.

Each sample loop which is defined can be given its own name. The maximum number of sample loops is 20.

12.5.4 Dynamic weighing

The "Dynamic Weighing" application allows efficient, convenient, and accurate weighing of unstable weighing objects (e.g. animals). To work with this application, the settings in chapter 12.6 "Defining the balance and the minimum requirements for the balance" must be made in the "Balance settings" section.

Dynamic Weighing Mode	Off
Dynamic Behaviour	Unstable

For dynamic behavior, you can choose between Stable, Standard, and Unstable. Adapt this parameter to the movement pattern of your weighing object.

12.5.5 Interval weighing

With this application, it is possible to perform long-term weighings and time-dependent weighings.

Application Data	
Application	Interval Weighing
Request Interval *	00:00:10
Duration (dd.hh.mm.ss) *	00:00:01:00
Maximum Number Of Points	30000
Zero Balance At Start/Resume	Yes
Begin Capture At Start/Resume	Immediately
Verzögerungszeit bei Start/Wiederaufnahme (Sekunden)	0

Choosing Interval Weighing enables several settings specific to this application: Interval, Duration, Maximum Number of Points, Zero at Start/Resume, Count from Start/Pause, and Delay time to Start/Pause.

If you placed the weighing object on the balance before the job was started, the function "Zero Balance At Start" does not apply in all cases.

If your balance has FACT, before you start such a job, make sure that FACT has been switched off.

12.5.6 General settings

Zeroizing between samples

For the Simple Weighing, Differential Weighing, and Totalization (Single Mode) applications, you can choose whether LabX should zero the balance between each sample or not. This option is not available for Totalization (Additive Mode) because it is already included.

Weight Capture

If Manual weight capture is chosen, you will be prompted to remove samples between weighings and you will be required to confirm with a keypress

Weight Capture	Manual
Minimum Change	1.0
Minimum Change Unit	g
Delay Time [s]	0

If Automatic weight capture is chosen, you will still be prompted between samples, but you will not have to confirm with a keypress.

Weight Capture	Automatic
Minimum Change	1.0
Minimum Change Unit	g
Delay Time [s]	0

For automatic weight capture, you define the change amount in the job form. While the job is being executed, if the balance overshoots this weight change, it automatically records the weighing value and continues with the next sample.

Manual tare

If the "Manual tare" function is activated, on balances with Rapid Access functionality a corresponding input possibility is offered at the start of a sample series.

12.6 Defining the balance and the minimum requirements for the balance

In principle, a job template can be used to generate a weighing job on any balance available in the system. However, for some weighing processes and regulations there are minimum prerequisites which the measuring instrument must fulfill.

In this section you can enter the prerequisites which the balance to be used must fulfill.

The following requirements may apply:

- A specific balance must be used.
- A certain readability and/or a certain minimum weighing range can be given.
- The control of MinWeigh feature can be activated.
- A certain Release Control level can be required (see chapter 9.3 "Configuring the Release Control").

Balance prerequisites	
Balance to be used	-
Required Readability	0.01 g
Readability Unit	mg
Required Weighing Capacity	100
Weight range Unit	g
Minweigh Control	Yes
Release Control Level	High

When saving a job template, or when generating a weighing job, the prescribed requirements and possibilities of the selected balance are verified and, if they are not as required, an error message is issued.

In addition to the balance and the general requirements, the weighing filters of the balances being used for the job can be set. They apply from the start of a weighing job that is based on this job template.

Balance Settings	
Display unit	g
SmartTrac	Off
SmartTrac Nominal (Unit=Display Unit)	50.00
SmartTrac +T (%)	10
SmartTrac -T (%)	10
Accept only weights within tolerance	No
Autozero	Off
Weighing mode (process adapter)	Universal
Dynamic Weighing Mode	On
Dynamic Behaviour	Standard
Measurement release (stability criterion)	Reliable and Fast

- The display unit specifies the unit to be used for working and reporting.
- SmartTrac is a graphic range indicator which can be used to display the used and available weighing range. The SmartTrac feature can be enabled for all applications. With an XP balance, values within the specified tolerances are displayed in green, outside the tolerances in red. When the field "Accept only weights within tolerance" is enabled the print button is disabled for values outside of specified tolerances. This feature cannot be enabled for interval weighing. SmartTrac is only available on AX/MX/UMX/XP balances. The graphic display and color of SmartTrac can be set at the balance.
- When minimum weight is activated, LabX can not modify predetermined weighing parameters.
- Dynamic mode can be selected to weigh moving objects. If this mode is selected, the balance that is used must contain the "Dynamic Weighing" application.
- The weighing parameters are recorded for each job that is performed and printed out on the report.

- The "Environment" weighing parameters (which are not shown here) cannot be changed with LabX, because their optimal settings depend on the location where the balance is installed and not on the type of weighing process. It is advisable to set these parameters once on the balance itself.
- When the end of the job is reached, the balance settings are reset to their original values.
- Weighing Mode and Measurement Release parameters match to settings in AX/MX/UMX/XP/XS balances.

Weighing mode	Weighing process adapter	Measurement release	Automatic stability detection (ASD)
AX/XP/XS	AT/MT	AX/XP/XS	AT/MT
Universal	Universal	Very Fast	1-2
Dosing	Weighing in	Fast	2-3
Sensor mode	Off	Reliable and Fast	4
Checkweighing	Absolute	Reliable	5-6
		Very Reliable	7

12.7 Definition of the Sample data

In this section you can enter the type of sample selection (manual or predefined) about the samples to be weighed, as well as their number if this is known. Predefined means that the sample list has already been created and the job execution follows this list.

Sample Data	
Constant Per Sample	Off
Prompt	Temperature
Sample Selection	Manual
Number of Samples	5
Sample Identification Prompting	
Sample designation	Yes
Charge	Yes
Number	Yes
<Sample ID4>	No
<Sample ID5>	No
<Sample ID6>	No

The "Constant Per Sample" section allows you to define the values for calculations. These can be either fixed values (= constants) such as π (pi), e (Euler's number), N_A (Avogadro's constant), g (gravitational constant), gravimetric factors, etc., or also variable values such as environmental parameters (temperature, pressure, humidity), volumes, molecular weights, etc., which you can enter for the specific job after the job has started.

When set to on, the field "Constant Per Sample" allows for a prompt to be entered. This prompt will appear at the first loop for each sample on both the balance and LabX. The entered sample constant can be used in sample results calculations. This constant per sample can be referred to in the formulas as "CS". If an overwrite or a deletion of the first loop's measurement is performed, the constant per sample will be re-requested. E.g. Constants per sample are useful if the purity varies per sample and needs to be taken into account in the results.

If you want to change the sample designations <Samples IDx> globally, you must make the changes under **Menu > Tools > Options**. However, you can also change the designations directly in the form - they then apply for the respective job.

If you want to arrange it so that within a job, several related weighing processes (number of sample series) follow immediately after each other, you can do so with **1** in "Number of samples".

Notes (LabX pro with LabX connect only):

If this option is chosen, a list currently in the LabX database may be selected from the list or an asterisk "*" may be used to indicate that the user will be prompted to select a list when the job begins. Sample data can be either prompted to be input during a running job or the list can be predefined by using LabX connect software.

12.8 Defining calculations, statistics

The option of further processing of weighing results opens many possibilities. For example, it is only possible for some jobs to be done if calculations are used. Examples of such jobs are:

- Determination of statistical values of measurement series
- Production of solutions: Simple production; USP <1251> with differential weighing
- Production of mixtures of substances (mole fraction)
- Density determination: solid, liquid with gamma sphere, liquid with pycnometer, powder in pycnometer
- Piece counting (in 2 steps)
 - 1. Step 1: Determination of the reference weight
 - Step 2: Entering the reference weight as constant
- Gravimetric analyses

12.8.1 Definitions and rules

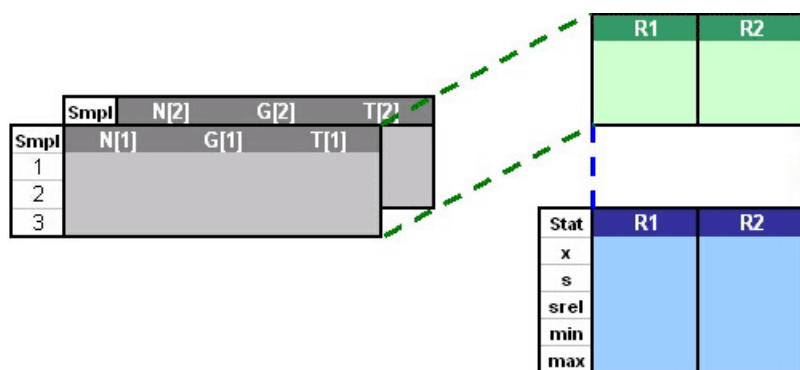
The "Constants", "Results", and "Job results" sections contain the following nomenclature:

Reserved terms	Meaning
N	Net weight
G	Gross weight
T	Tare weight
N[1], N[2]	Net weight in the first and second sample series
G[1], G[2]	Gross weight in the first and second sample series
T[1], G[2]	Tare weight in the first and second sample series
	(If no index is specified, the value 1 is assumed automatically, i.e. $N = N[1]$).
CS	Constant Per Sample
C1.....C10 (or user-definable name)	Defined constants
R1.....R20 (or user-definable name)	Defined results
PR1....PR20 (or user-definable name)	Defined job result
	(User-defined names in the formulas must be enclosed in braces { }).

The rules for the creation of calculations and formulas are:

- Sequential execution of the individual steps
- Constants must not depend on the weighing, and must be known before the first weighing
- No dependence on the calculation steps of partial weighing results
- No comparing of statistical values against values of the same series

Results: These are calculated from the individual weighing values of the various sample series. For the calculations, more or less complex mathematical functions can be used. From the results, LabX can carry out various statistical calculations.



Job results: This calculation step allows further processing of the statistical measures. For example, in this section, the summarized weighing values of a measurement series can be processed further. In addition, SQC-specific calculations can be performed.

12.8.2 Constants

The "Constants" section allows you to define the values for calculations. These can be either fixed values (= constants) such as π (pi), e (Euler's number), N_A (Avogadro's constant), g (gravitational constant), gravimetric factors, etc., or also variable values such as environmental parameters (temperature, pressure, humidity), volumes, molecular weights, etc., which you can enter for the specific job after the job has started.

Up to a maximum of 10 numerical values per job can be defined, which you can use in the calculations of the results in the formulas that must also be defined. For each constant definition, you are prompted to enter a valid name and the numerical value. Use of a unit is optional, and serves only to make interpretation of the constant by the job template more certain.

If only an asterisk * is entered in a value field in the job form, you then have the possibility of entering a value after this job starts and before weighing.

Constants	
Number of constants	2
Constant C1	
Name	Pi (Fixed value)
Value *	3.1415828
Unit	Yes
Constant C2	
Name	Room temperature (input)
Value *	*
Unit	*C

Notes

- The following names are reserved, and can not be used for naming constants: N, G, T, CS, C1...C10, R1...R20, PR1...PR20.
- Fractional values can only be entered as decimals.

12.8.3 Results

LabX allows you to save up to 20 individual calculations with sample data. For each result which is output, you determine a **name**, the associated **formula**, the **unit** as well as the number of **decimal places** in the result values.

Otherwise, the rules and definitions stated in chapter 12.8.1 "Definitions and rules" apply.

Sample Job Results	
Number of Results	1
Result R1	
Name	MyResult
Display result on balance	No
Formula *	10* {myConstant}*(N [2]-N [1])
Unit	g
Decimal places	5

Notes

- The result can be displayed in a window on the balance display.
- Rounding to the input number of decimal places is only applied to the presentation of the results. The number of decimal places must always be defined.
- The sample serial number behind the variables N, B, and T is given in square brackets.
- User-defined constant names in formulas must be enclosed in braces { }.
- In the "Formula" field, the formula that is necessary for the results definition can be saved.
 - Operators: +, -, /, *, ^
 - Functions:
 - abs(n) Absolute value of value n
 - rt((n,x) nth root of value n
 - sqrt(n) Square root of n
 - log(n) Logarithm of n
 - ln(n) Natural logarithm of n
 - round(n,x) Round n to x places
 - The number of levels of parentheses which is allowed is only limited by the maximum length of the formula. The maximum length of the formula is 50 characters.
- LabX checks the input formula for validity when the job template is saved.

12.8.4 Statistics

LabX calculates the following statistical values for each defined result:

- Minimum value (min)
- Maximum value (max)
- Maximum difference (variance)
- Arithmetic mean (x)
- Absolute standard deviation (s)
- Relative standard deviation (srel)

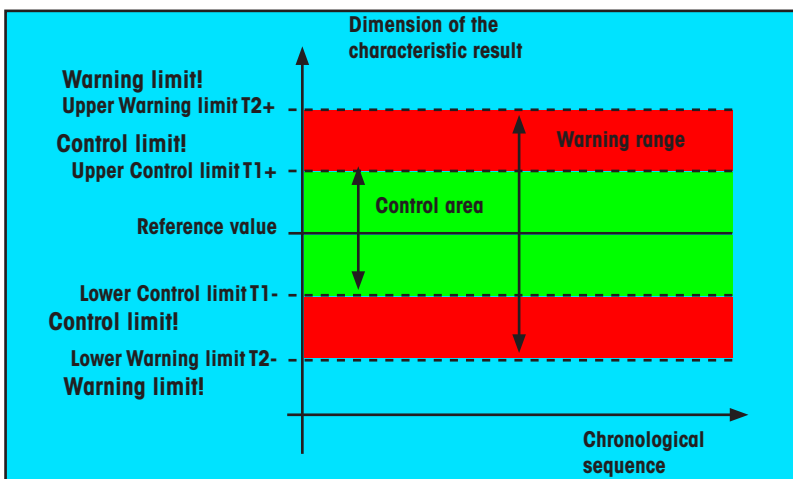
If you want to calculate statistical values from your weighing results, you must first define a result and formula. Define a formula in which the weighing values are accepted directly as the result, and define the number of decimal places. In the report, you then receive the statistical measures of the weighing values that were described above.

12.8.5 SQC parameters

In this section, you can compare your measurement results with prescribed values from your quality system. You thereby define a reference value, warning limits, and intervention limits. Review of your weighings within predefined limits is equivalent to review of quality control results in a rule card. Based on mathematical evaluations, you can make statements regarding tendencies, and intervene promptly in processes if necessary.

Target Value	0.8788
Limits	SQC Limits in %
Warning Limit High (T2+)	110
Control Limit High (T1+)	125
Control Limit Low (T1-)	75
Warning Limit Low (T2-)	90

For illustration, the comparison with a rule card:



The limit value can be defined as follows:

- As absolute values based on the target value
- As relative values based on the target value
- As calculated standard deviation factors

These can be used for the following statistical evaluations:

- Number of samples < warning limit low
- Number of samples between warning limit low and control limit low
- Number of samples between control limit low and target
- Number of samples between target and control limit high
- Number of samples between control limit high and warning limit high
- Number of samples > warning limit high

Note

If no target value is entered, LabX takes the mean of the measured samples as reference.

12.8.6 Post Job Results

For all defined job results, one value per job can be calculated. This value is recalculated each time a sample is taken, so that the report contains, for example, the mean value. Up to 20 individual job results can be defined.

Post Job Results	
Number of Results	1
Result PR1	
Name	MyResult
Display result on balance	No
Formula *	$\sqrt{\text{abs}(R1.\text{total})}$
Unit	g
Decimal Places	5

In addition to operators and functions, further reference values (variables) for the construction of formulas are available here:

- total Total
- count Sample Count (only valid samples are counted)
- mean Mean
- min Min value
- max Max value
- variance Max Difference
- stdev Standard Deviation
- relstdev Relative Standard Deviation
- target Target
- t1plus T1+ value
- t2plus T2+ value
- t1minus T1- value
- t2minus T2- value
- cntt2plus >T2+
- cntt1plus >T1+ and <=T2+
- cnttargetplus >target and <=T1+
- cnttargetminus >=T1- and <target
- cntt1minus >=T2- and <T1-
- cntt2minus <T2-


C1 or {name} Constant (by C or by user defined name)

R1 or {name} Results (by R or by user defined name)

PR1 or {name} Post Job Results (by PR or by user defined name)

Example: PR1 = sqrt (R1.total).


Notes

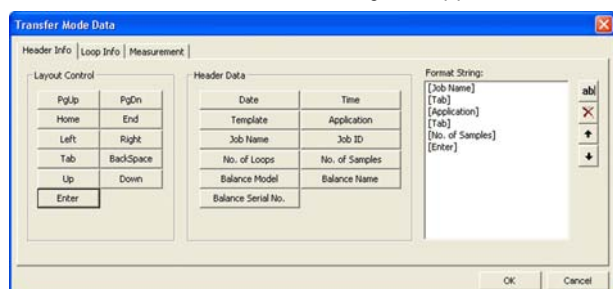
- If you end the job by pressing «» the result is displayed in a window on the balance display. This also occurs if the job ends when there are no more samples to be weighed.
- Formulas may be nested. Example: sqrt(abs(R1.total)).
- Variables are always used in connection with a result.
- Variables may only be used in result calculations.

12.9 Defining the data processing

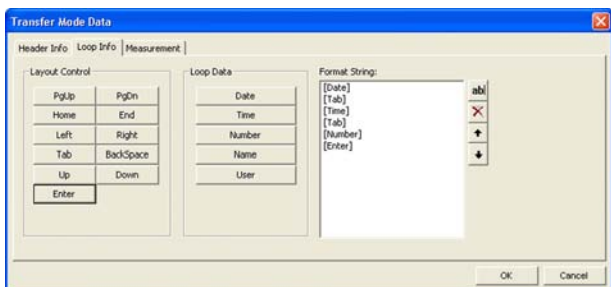
12.9.1 Transfer Mode

In the "Applications data" section there is a menu item **Transfer mode**. By means of the transfer mode, the weight values are automatically transmitted to an external application window and/or into a file. The transfer mode is activated as follows:

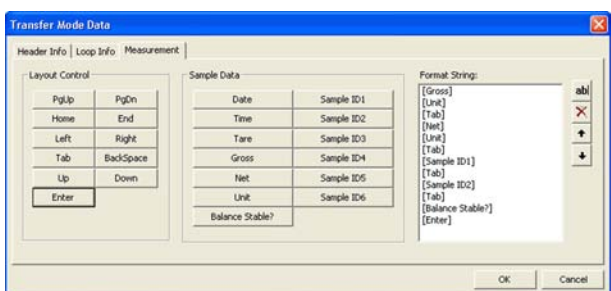
1. Choose "Yes" to enable Transfer Mode and select the format of the decimal symbol.
2. After starting a job, a dialog will appear with a target window selection tool. When text file is chosen, data is transferred to a text file. The file path is given by the settings in **Menu>Tools>Options**. The filename has the format of: TM_JobID_JobTemplateName_Date_Time.xls.
3. Under Data Settings specify the Measured value info you would like to transfer. Click on the  button at the right margin.
4. The **Transfer Mode Data** dialog box appears.



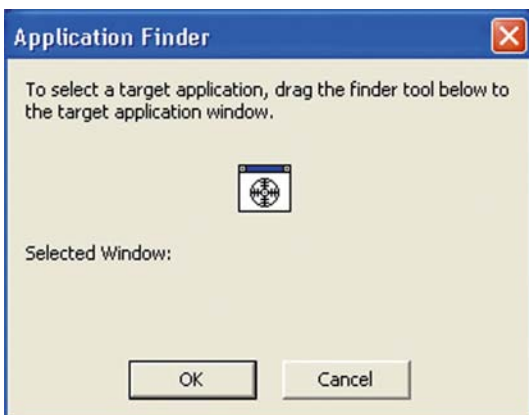
- In the **Header info** tab click on the format buttons to add to the window list on the right. After adding format values you can change the order using the up and down arrow buttons. In addition to the standard formatting buttons you can also add your own custom string by clicking the ab| button next to the Format String list.
- Click on the **Loop Info** tab and immediately go forward like in point 5.



- Then choose the **Measurement** tab and define the desired format buttons.



- Click on **OK** to confirm your new settings and close the dialog, or click on **Cancel** to reject the new settings and close the dialog.
- As soon as a job begins with job-based Transfer Mode enabled, an **Application Finder** dialog box appears.



- Open the desired target application (e.g. Excel, Word, etc) and drag the finder tool within the dialog to the open window and click **OK**. Now LabX knows the destination to send all Transfer Mode values.

Note

The job name is used as part of the final file name created, e.g.: TM_31_Diff_June212005_0920.txt.

You can also define the transfer mode in **Menu > Tools > Options**. To transmit the weight values, define a function key that you can use to start the operation. However, if you define the transfer mode in the job template, it will be started automatically with the job and data values transferred will match samples stored in the database.

12.9.2 Report data

Measurement values recorded in weighing jobs, and calculated results, can be printed on a report as soon as the first measurement values are available. To do this, however, the user must change to the tree view **Reports**. If your weighing process requires the report to be printed automatically, or the weighing data to be exported automatically, you can specify this here.

Report data	
Automatic Print	No
Automatic Export	No
Local Printout	Yes

Automatic Print **LabX pro only**

If you select this function, when a weighing job is finished the results are sent automatically as a print job to the printer which is defined as standard. The job must be started from the PC. Rapid Access does not support this functionality.

Automatic Export **LabX pro only**

If you select this function, when a weighing job is finished, its results are copied automatically into an Excel spreadsheet in the directory specified in the user settings.

Automatic export is supported via "Rapid Access". The print out takes place on the machine running the Broker process.

Local Printout

This function requires a strip printer which is connected to the balance and configured as a peripheral device. If this function is activated, LabX sends a report to the strip printer. Specific information can be found in the job report.

N = Net weight

T = Tare weight

PT = Pretare

D = Dynamic behavior - not stable


* = MinWeigh Violation

12.10 Saving a job template

When you attempt to save a job template, the contents of the fields are checked for validity. If necessary, you will be prompted to change invalid entries.




Toolbar with memory function

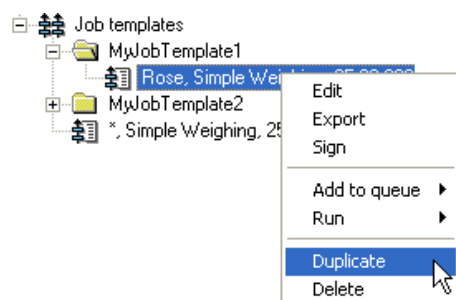
A saved job template appears in the tree view **Weighing** under the **Job templates**  node where you opened or created the job template.

Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)" and have modified an existing template, before you execute this operation you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry is made in the **Audit Trail**.

12.11 Duplicating job templates


You can duplicate a job template by using the right mouse button to select an existing **Job template**  in the tree view **Weighing** and then selecting “**Duplicate**” in the context menu. A copy of the selected job template is then saved in the tree structure.

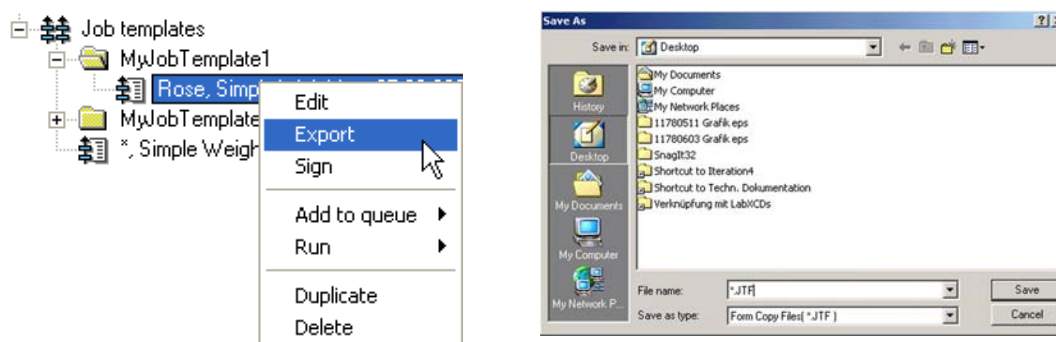


Note

On successful completion of this step, an entry is made in the **Audit Trail**.

12.12 Exporting a job template

The Export function can be used to make job templates available in other LabX balance systems. The data of the job template are saved in a specific LabX format with the file name extension *.JTF. To export a job template, use the right mouse button in the tree view **Weighing** to select an existing **Job template**  and then select “**Export**” in the context menu.

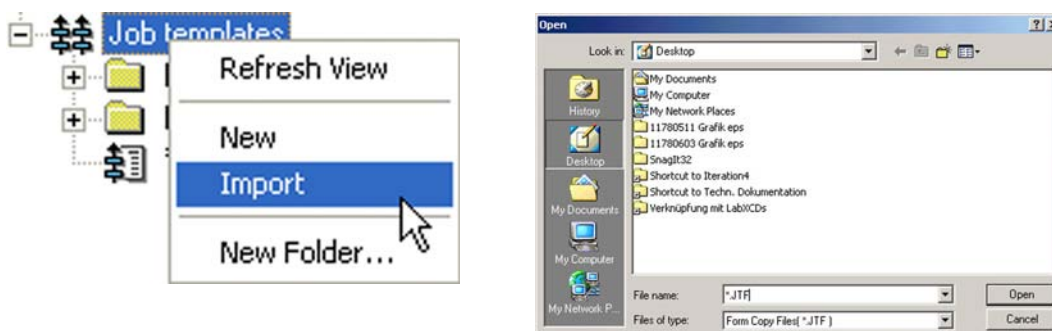


Notes

- Job templates are documents which are specific to LabX balance and can only be processed by a LabX balance system.
- If the export is successful, an entry is made in the **Audit Trail**.

12.13 Importing a job template

The Import function can be used to make use of job templates from other LabX balance systems. Job templates can only be imported from a system with the same or a lower software version. To import a job template, use the right mouse button in the tree view **Weighing** to select the **Job templates** folder and then select "Import" in the context menu.

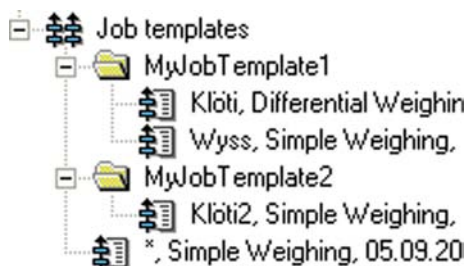


Notes

- Job Templates can be imported from the same version of LabX or an older version. If a job template was created in a newer version, you cannot import it into your current version.
- Job templates imported from an older version of LabX will most likely contain new fields in the template as well as the default values for these new fields. Please check the imported template with your old one to confirm any settings which are different.
- If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.
- Job templates are documents which are specific to LabX balance and can only be processed by a LabX balance system.
- If the import is successful, an entry is made in the **Audit Trail**.

12.14 Organizing job templates

Job templates can be managed in a freely definable directory structure. Folders can be created and managed at any level below the job template node.




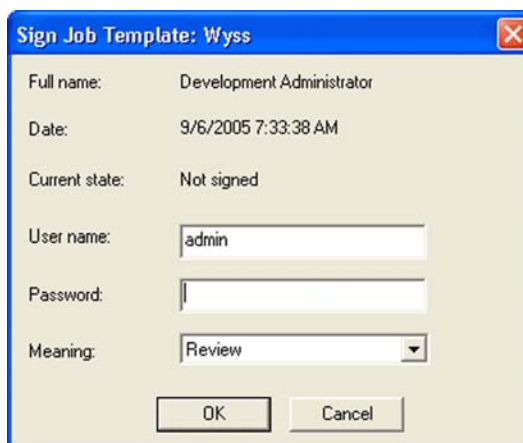
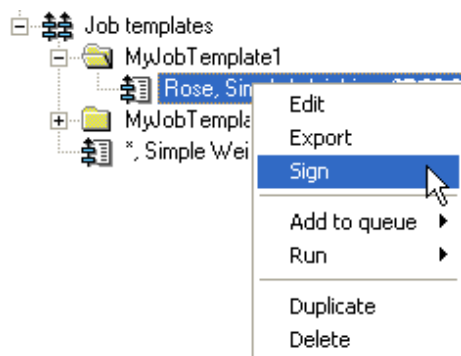
The folders can be given the names of, for example, users, job types, laboratories, or instruments, to make management of the job templates as easy as possible.

12.15 Signing job templates **LabX pro only**

Job templates can be signed with the options **Reviewed** and/or **Approved**. Job templates are marked at the top edge of the window, at the end of the job template, and on the printout with **Reviewed** and/or **Approved**. If a signed job template is edited, the signature is automatically deleted.


To be able to sign, you must possess the necessary authorizations. Make sure you are logged on with a user which has the necessary rights.

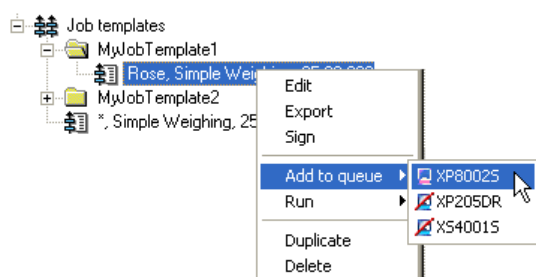
1. In the tree view **Weighing**, click with the right mouse button on the symbol of a **Job template** . In the context menu, select **Sign**.
2. The **Sign...** dialog appears.




3. Enter the **user name** and **password**, and in the drop-down list of the "Meaning" field select **Review** or **Approve**. See also chapter 5.2 "General Policies".
4. Click on **OK** to accept the inputs and close the dialog, or on **Cancel** to reject the inputs and close the dialog.

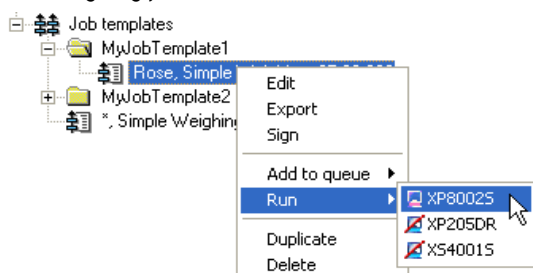
12.16 Adding a job template to the queue

If you are working with several balances, you can allocate a job template to a particular balance by right-clicking an existing **Job template**  in the tree view **Weighing** and selecting the appropriate balance in the "Add to queue" option in the context menu. This places a weighing job in the queue for the balance.




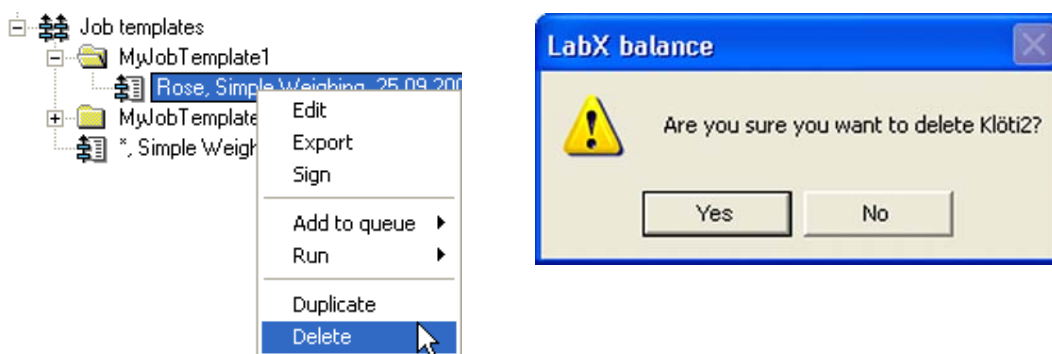
12.17 Running a job

If you are working with several balances, you can allocate a job template to a particular balance by right-clicking an existing **Job template**  in the tree view **Weighing** and selecting the appropriate balance in the "Run" option in the context menu. The weighing job is executed with the selected balance.



12.18 Deleting job templates

Provided you have the necessary user rights, you can delete job templates. Deleting a job template has no effect on weighing jobs which use the job template and have already been executed, or are currently being executed, or are in a queue for a balance; deletion also does not affect stored data for weighing jobs. To delete a job template, in the tree view **Weighing** click with the right mouse button on an existing **Job template**  and in the context menu select "Delete".



Once the delete command is confirmed, the job template is irretrievably deleted.

Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

12.19 Printing job templates

To print an open job template, click on the print function in the LabX toolbar.

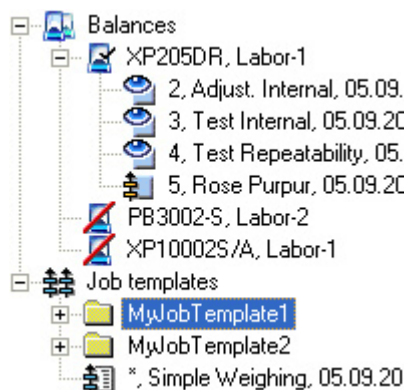


Define the view by pressing the Minimal/Maximal key.



13 Balance queue and job types

Each balance in LabX has its own queue. Weighing jobs, adjustment jobs, and test jobs can all be processed through this queue.



The sequence of processing the jobs in a queue can be freely determined by the user.

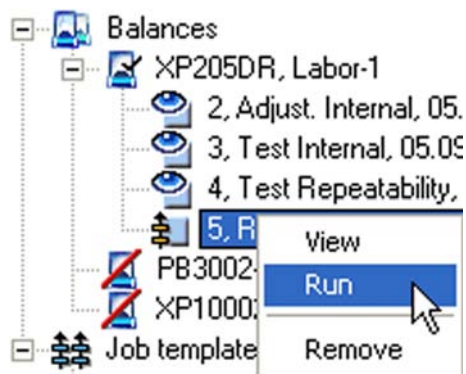
Note

As a matter of principle, the adjustment and test jobs should have a higher priority since these outcomes affect the balance's release control for weighing jobs.

13.1 Job types and status

13.1.1 Weighing jobs

Weighing jobs may originate either from a job template or from a one-time job. Jobs in the queue can be started, paused, completed, or aborted. This is done by using the context menu of a weighing job in the queue.



With a balance monitor window open, the same functions can be activated from the associated toolbar.



The icon of a weighing job indicates its current status:

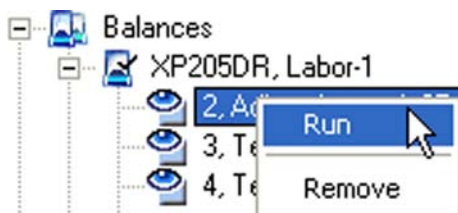
- Weighing job ready for execution
- Weighing job executing
- Weighing jobs paused by the user, ready to resume
- Weighing jobs aborted due to error, ready to resume
- Weighing job is invalid due to a change in the balance service settings

Note

The context menu contains further information about the job status.

13.1.2 Adjustment jobs



Adjustment jobs are initiated according to plan by the scheduler, or unplanned by selecting a corresponding function in the toolbar. Adjustment jobs can only be started or aborted from LabX. This is done by using the context menu of a weighing job in the job queue. Adjustment jobs which have been started can also be aborted from the balance.



With a balance monitor window open, the same functions can also be activated from the associated toolbar.



The icon of an adjustment job indicates its current status:

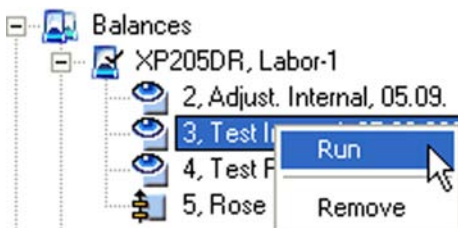
-  Adjustment job ready for execution
-  Adjustment job executing

Notes

- If an adjustment job with an external weight is started manually from the toolbar, the weight currently saved in the scheduler is used for execution. The weight must be defined in advance.
- For records to be made in the LabX database, adjustment jobs must be started from one of the LabX functions (scheduler, manual start, or start of an adjustment job via Rapid Access). Exception: Balances with FACT or proFACT and built-in adjustment history.
- "Rapid Access" is only possible with balances which include a LabX Client. On the AX/MX/UMX balances, the "Remote" application must be installed.

13.1.3 Test jobs



Test jobs are initiated according to plan by the scheduler, or unplanned by selecting a corresponding function in the toolbar. Test jobs can only be started or aborted from LabX. This is done by using the context menu of a weighing job in the job queue. Test jobs which have been started can also be aborted from the balance.



With a balance monitor window open, the same functions can also be activated from the associated toolbar.



The icon of an adjustment job indicates its current status:

-  Test job ready for execution
-  Test job executing

Notes

- If a test job is started manually from the toolbar, the weights and tolerances currently saved in the scheduler are used for execution and evaluation. The weights must be defined in advance.
- For records to be made in the LabX database, test jobs must be started from one of the LabX functions through the (scheduler, manual start). Local tests are not recorded in the LabX database.

13.2 Reading FACT/proFACT records

LabX can be configured in the global settings (see chapter 9.1 “Defining FACT and proFACT settings”) so that it periodically attempts to read the adjustment records in balances memories. This event is placed in the job queue of the appropriate balance at the time of execution. This is only valid for balances equipped with FACT/proFACT and has some restrictions, see Section 22 “Appendix LabX Functions”.



FACT history is currently read

14 Working with weighing jobs

As soon as you add a job template to the queue of the balance (drag & drop), a weighing job is generated from the template. Weighing jobs in the queue can be started either from LabX or from a balance which supports Rapid Access. While a LabX weighing job is executing, you will be guided on the balance according to the instructions contained in the job template.

The individual steps of a weighing job can be observed in the online view.

Note

"Rapid Access" is only possible with balances which include a LabX Client. On the AX/MX/UMX balances, the "Remote" application must be installed.

14.1 Generating a weighing job

14.1.1 Using a job template

You must first either create a new job template as described in chapter 12.3 "Defining a new job template", or else use a template which already exists and drag it to the balance you wish to use.

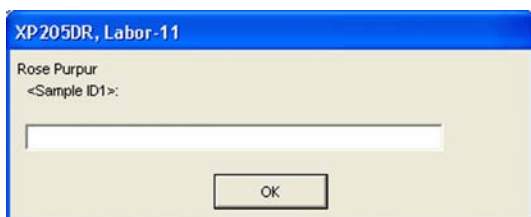
Attention



Checking the balance model

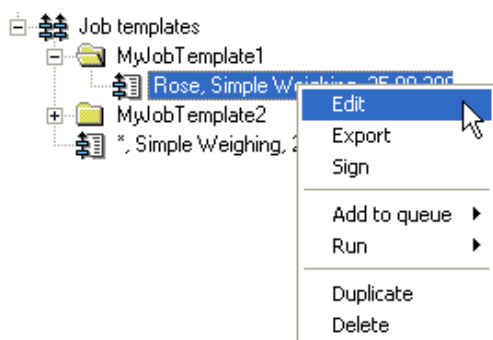
LabX checks whether the selected balance meets the requirements specified in the weighing job template. If it does not, a corresponding message is displayed and no weighing job is placed in the queue of the balance.

The default job name is the name of the job template. Mark the field "Job Name" with an asterisk * if the user should be prompted to change the job name when placing a job in the queue. The **Modify Job Name** dialog box appears.

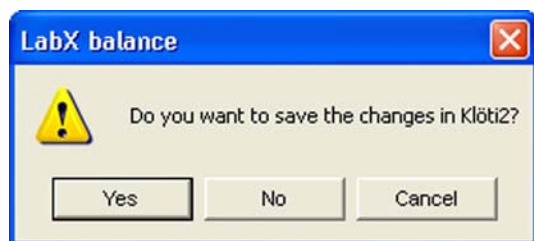


Enter a new name and click on the **OK** button to confirm your settings and close the dialog. When **Cancel** is pressed, the job is not put into the queue.

To change the name of a Job in the Job templates folder, right click on the **Job Template**  in the tree view **Weighing**. In the context menu select **Edit**.



Job Templates now appear in a form for editing. You will find specifications for processing the job template in chapter 12.4 "Definition of job data" as well as following below. Click on **Save**  to confirm your new settings and close the dialog or click on **Cancel**  to reject all your new settings and close the dialog.

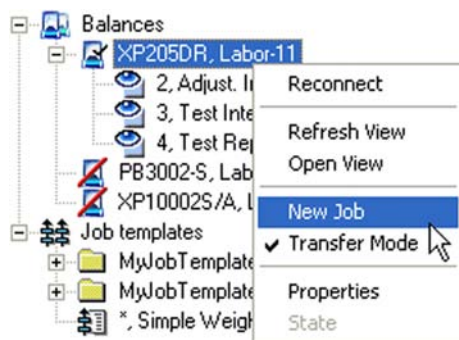


Notes

- If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.
- You can also use an existing job template with Rapid Access.
- The job template you use remains in the directory of job templates.

14.1.2 Creating a one-time job

Using the right mouse button, click on the **Balance symbol**  and in the context menu select "**New Job**" for a new weighing job. A form appears in which you can specify the new job.



Notes

- After the data in the form have been validated, and provided the balance meets the requirements, the weighing job is placed in the queue of the balance.
- This one-time job is only visualized in the weighing tree until it has finished executing.

14.1.3 Creating a job thanks to Rapid Access-Job Template



You can create a job based on a job template directly from the balance. Please read chapter 16 "Navigation on the balance".

Note

"Rapid Access" is only possible with balances which include a LabX Client. On the AX/MX/UMX balances, the "Remote" application must be installed.

14.2 Generating adjustment and test jobs

14.2.1 Generating adjustment and test jobs with the scheduler

The scheduler automatically places adjustment and test jobs with **external weight** in the queue. Adjustment and test jobs with **internal weight** are started by LabX directly, provided no job is currently executing.

Note

LabX attempts to start an adjustment and test job for a maximum of 1 hour. After that, the job remains in the queue.

14.2.2 Generating adjustment and test jobs manually

After the necessary settings for weights and tolerances have been made in the scheduler, adjustment and test jobs with **internal or external weights** can also be generated manually direct from the LabX toolbar. Such jobs can then be started in the job queue.

Note

The values for external weights and tolerances which are saved in the scheduler are used.

14.3 Starting/continuing weighing and adjustment/test jobs

Jobs can be started either from LabX or with Rapid Access from the balance.

Attention



Checking balance release

Each time a **weighing job** is started, and if a specific release level (Low, Medium, High) is required to execute the job, LabX checks the **release status** of the balance.

Depending on the model of balance, the following conditions can be checked: Expiry of maintenance intervals, elapsed switch-on time, date/time of the last successful adjustments and tests (see chapter 9.3, "Configuring the Release Control").

Notes

- Before an initial adjustment/test job with external weight can be carried out on a balance, an external weight needs to be specified in the appropriate scheduler section of the balance.
- If execution of an announced adjustment or test job is refused by the balance, the job is not repeated automatically.

14.3.1 Jobs starting/continuing from LabX

Select a job in the queue of the balance and start it from the context menu with **"Run"**, or from the toolbar. If the job has been paused, start again from the context menu with **"Resume"**.



14.3.2 Jobs starting from the balance with Rapid Access

Select a job from those shown for the balance, and confirm the job start with the related details.

After the job starts, you are guided on the balance (see chapter 16, "Navigation on the balance").

Note

"Rapid Access" is only possible with balances which include a LabX Client. On the AX/MX/UMX balances, the "Remote" application must be installed.

14.4 Stopping a weighing job

Jobs can be stopped either from LabX or from the balance. A weighing job which has been started can be stopped in two different ways. Stopping on the balance is described in chapter 16 "Navigation on the balance".

14.4.1 Pausing a weighing job from LabX

A weighing job which has been paused remains in the queue of the balance and can be continued at a later time/date. The measurement values which have been collected before interruption, and the calculated results, can already be called up in the tree view **Reports**.



Notes

- Adjustment and test jobs cannot be paused.
- If the global option "Automatic pausing" (see chapter 5.7 "Setting up Instrument Management") is selected then LabX can automatically pause a weighing job.
- In the case of an error condition, LabX will pause the job and update the job icon.

14.4.2 Closing a weighing job from LabX

A job which has been closed is permanently removed from the queue.



Note

If adjustment and test jobs are closed prematurely, they abort. Data collected by adjustment and test jobs before they are aborted is not written into the database.

15 Balance monitor

In the tree view **Weighing**, a monitor window can be opened for every balance. In the balance monitor window, jobs which are executing on the balance can be observed.

Attention



It is not permitted to use the weight display in the balance monitor window as the main display in a commercial application.

15.1 Overview

Shown below is the monitor view of an executing weighing job.

Time	Loop	Sample	Charge	Gross	Tare	Net	Minweigh Violation
10:50:06	1	2	WYSS 2	40.0003 g	0.0000 g	40.0003 g	-
10:49:32	1	1	WYSS 1	40.0001 g	0.0000 g	40.0001 g	-

- 1 Name of the job or the job template
- 2 Unique name of the balance
- 3 Number of samples measured / total number of samples (if the number was specified)
- 4 User guidance (next step for execution)
- 5 Full name of the user who started the job, starting time, job information
- 6 Application information and sample loop display
- 7 Recorded measurement values with sample identifications
- 8 Residual range display

Notes

- The designations of the sample identifications for the job are defined in the global settings (see chapter 5.8 "Setting up Job Management") and may be changed for each job template.
- Date and time stamps for all recorded measurement values are added to the database.
- The widths of the columns in the monitor window can be set individually.

16 Navigation on the balance

Particular LabX features may require certain balance models and/or versions of balance software. Please check with the corresponding table in the chapter 22 "Appendix LabX Functions".

The navigation possibilities, and the resulting levels of convenience, depend not only on the balance but also on the software used on the balance. LabX seeks to utilize the available possibilities as optimally as possible while maintaining minimum standards.

While a LabX weighing job is executing, please follow the instructions on the display. Windows may appear which request inputs from you, or a text on the weight line may prompt you to execute the next process step.

When a weighing job is started, the balance keys are given specific functions. A confirmation key and an abort key are available for general use.

Pressing the Confirmation key may be avoided by choosing the automatic weight entry in the job template.

If the global option "Automatic pausing" (see chapter 5.7 "Setting up Instrument Management") is selected then LabX can automatically pause a weighing job. If a job is paused, a corresponding login at the balance is presented when you want to resume the job.

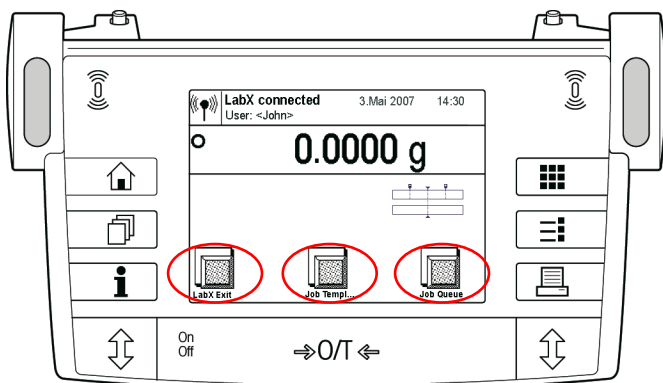
16.1 AX/MX/UMX balances with Remote software

Use of Remote software in your balance allows you to work more directly with LabX from the balance with Rapid Access.




16.1.1 Rapid Access

When you switch the balance on, or select Application "Remote", the balance attempts to establish a connection to LabX to obtain a LabX navigation window.

As soon as the balance is connected to LabX, the top navigation level appears in the balance display. You can now call up balances, queues, and job templates directly from the balance.



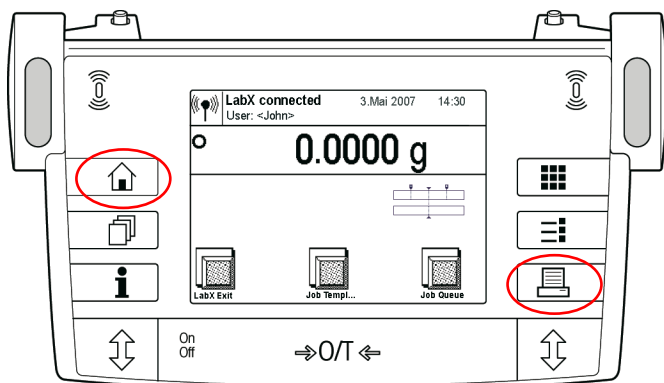
In the top navigation level, the keys in the display have the following meanings:

	LabX Exit:	Terminate connection with LabX
	Job Templ...:	Call up the job templates for this balance
	Job Queue:	Call up the queue of this balance



Note

No user login is required to operate the top navigation level on the balance.



16.1.2 General operation



While a LabX weighing job is executing, the keys of the operating terminal on the balance have the following meanings:

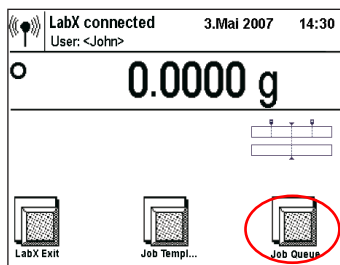
- | | | |
|---|------------|--|
|  | Home key: | Paused job (unprompted) or answer "No" (to a question in the display) |
|  | Print key: | Confirm job step (unprompted) or answer "Yes" (to a question in the display) |

Notes

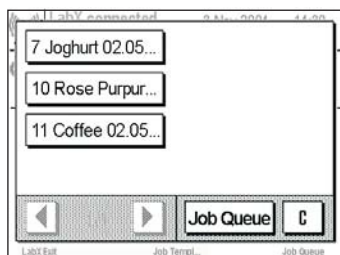
- The function of the «» key is similar to the **Escape** key, and the function of the «» key is similar to the **Enter** key on a PC keyboard.
- While a prompt for input is displayed, the «**C**» key and the «**OK**» key is the navigation key.

16.1.3 Starting a weighing job

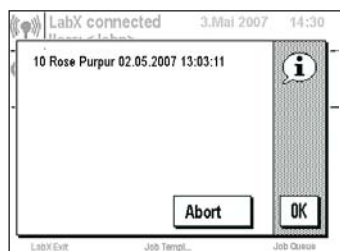
16.1.3.1 Starting a weighing job from a queue



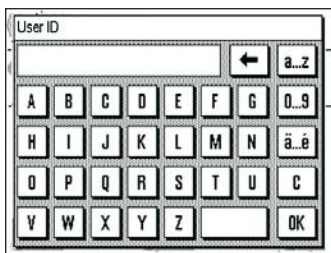
In the selection window, click on the "Job Queue" symbol.



All jobs in the queue are displayed. Click on a job you now want to execute.

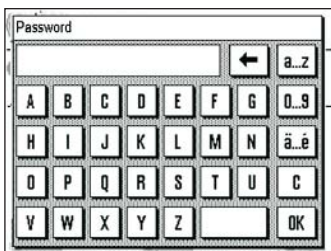


When you have selected the job, the display shown at the left appears. Click on «**OK**» to start the job, or on «**Abort**» to quit the job.



When you have confirmed the selected job, you will be prompted for your user identification.

Enter your user name and press «OK» to start the job, or «C» key to quit the job.

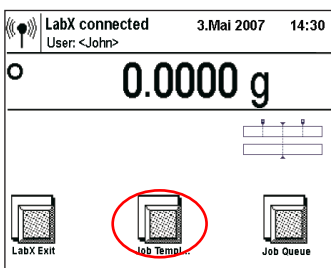


Enter your password and press «OK» to start the job, or «C» key to quit the job. After you have pressed «OK», the display briefly shows “* Job started”.

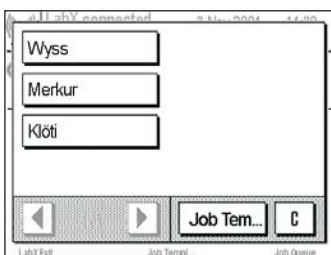
Notes

- The password is case sensitive.
- The user ID is not case sensitive.

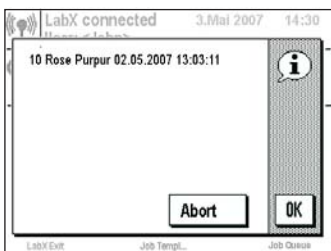
16.1.3.2 Starting a weighing job with a job template



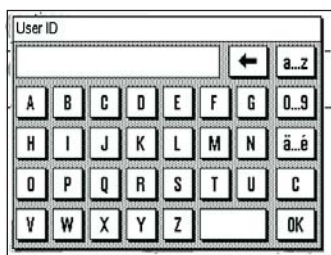
In the selection window, touch the “Job Templ...” symbol.



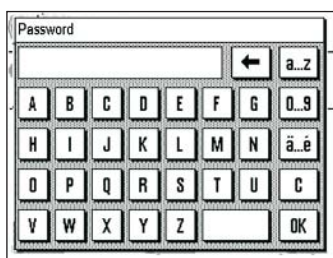
The display shows all the job templates which are suitable for this balance. Touch a job template you want to use to execute a weighing job.



After you have selected the job template, the detailed information is displayed. Click on «OK» to start a weighing job, or press «Abort» to return.



After you have confirmed the selected job, you are prompted for your user identification. Enter your user name and press «OK» to start the job, or «C» key to quit the job.



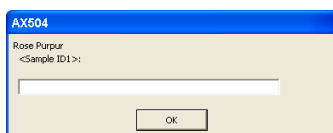
Enter your password and press **«OK»** to start the job, or **«C»** key to quit the job. After you have pressed **«OK»**, the message **“* Job started”** the display briefly shows.

Note

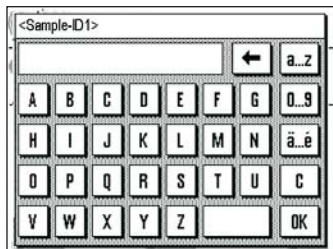
Only those job templates are displayed on the balance which can actually be executed with this balance according to the criteria in the templates, see chapter 12.6 “Defining the balance and the minimum requirements for the balance” of the job template.

16.1.4 Executing weighings

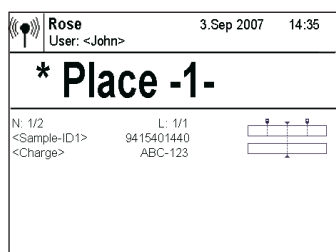
Depending on the specification for the defined weighing job, before each weighing you will be prompted to enter sample identifications (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance. When **«OK»** is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.



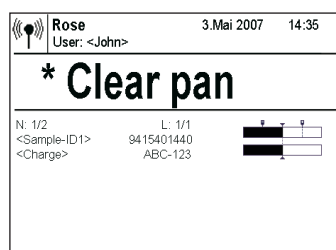
Now follow the instructions on the display:



When the message **“* Place -1-”** appears, place the sample on the weighing pan and confirm the weighing with the **«E»** key. The weighing is then saved in the database.

If the application “Differential Weighing, automatic loop detection” is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).

“SmartTrac” is a graphical weighing aid which simplifies weighing aimed at a specific nominal value. The “SmartTrac” appears below the weighing result on the right-hand side of the display. To use the “SmartTrac” feature the nominal value, upper and lower tolerance values must be supplied in the job template. The lower bar indicates the coarse range for fast weighing in. The upper bar represents the +/- tolerances. Additionally if the “Accept only weights within tolerance” field is set to yes, the print button will be disabled for values outside of the specified tolerance and values can not be sent to LabX.



When the message **“* Clear pan”** appears, remove the sample from the weighing pan and press the **«E»** key to confirm. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

At the end, the message **“* Job done”** appears. However, you can terminate at any time with the **«C»** key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.1.3.

You can now print and/or export the report which is created (see chapters 18.5 “Printing reports” and 18.6 “Exporting reports”).

Repeating a sample

To repeat a sample within a current weighing job, read in the corresponding sample identification again and confirm overwriting the previous weighing before you can repeat the weighing.

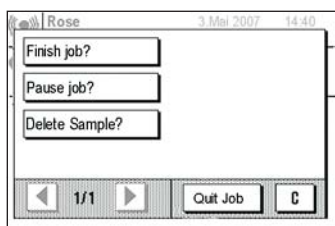
If the application "Differential Weighing, automatic loop detection" is being used, thus functions repeat to a measurement only on balances with Remote Software. When overwriting a sample, all samples taken are shown so that one can be chosen from any loop to overwrite.

Note

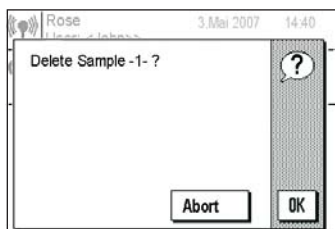
An entry will be made in the **Audit Trail** showing the older and the newer weight.

16.1.5 Deleting samples from a running job

Samples can also be deleted during a job. During a running job, press « \leftarrow » key, and you will be prompted to confirm the deletion of the last sample. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.



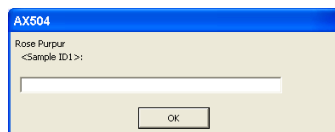
Select in the display "Delete Sample?".



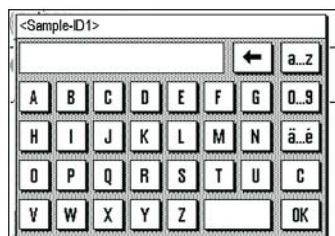
Press «**OK**» to delete the "Sample -1-" or «**Abort**» to return to the job without deleting.



In the display you will receive a confirmation "Sample -1- deleted". Press «**OK**» to continue.



Enter a new Sample ID 1 at the balance or computer and confirm with the **Enter** key or click «**OK**».



Note

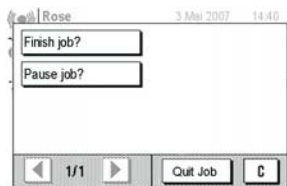
An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

16.1.6 Pausing/Terminating a weighing job

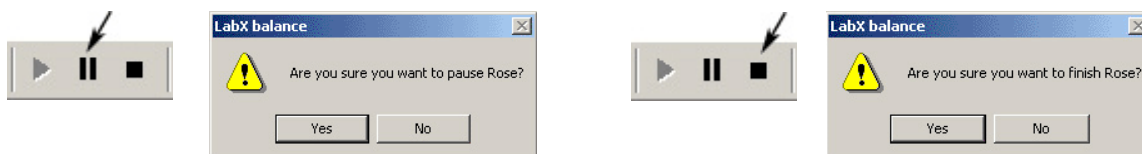
If you want to pause or terminate a weighing job, select the «⏏» key and follow the instructions to complete the desired termination.

Do you want to pause or finish the job?



Choose in the display "Finish job?" or "Pause job?".

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on "Yes" to pause/finish the job or on "No" to continue the current job.

After a weighing job has been stopped, the LabX navigation window opens again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

16.1.7 Disconnecting from LabX

To disconnect from LabX, select "LabX Exit" in the display. The balance then disconnects from the Application "Remote" and is available again for local use.

16.1.8 Using peripheral devices

16.1.8.1 Barcode reader

Configure the barcode reader for the optional interface on the balance, and in the system configuration of the balance select "Host" for the barcode receiver. This allows barcodes to be read in and recognized by LabX while the job is executing. Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.1.8.2 Local printer

Configure the local printer (strip printer) for the optional interface on the balance. This allows a report to be printed on the local printer while a job is executing.

Note

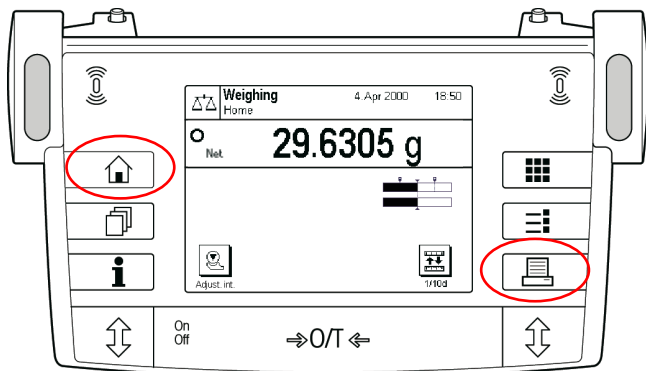
If you want to use the barcode reader and local printer, use a LocalCAN network with corresponding option on the balance.

16.2 AX/MX/UMX balances with standard software



Weighing jobs and job templates on AX/MX/UMX balances with standard software must always be selected and started from LabX.

16.2.1 General operation



When executing a LabX weighing job, please follow the instructions in the display. A text in the weight line may prompt you to perform the next process step.



While a LabX weighing job is executing, the keys of the operating terminal on the balance have the following meanings:

- | | | |
|---|------------|--|
|  | Home key: | Paused job (unprompted) or answer "No" (to a question in the display) |
|  | Print key: | Confirm job step (unprompted) or answer "Yes" (to a question in the display) |

Notes

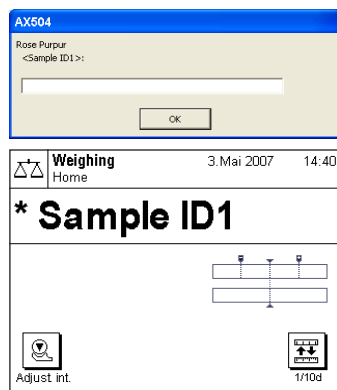
The function of the «» key is similar to the **Escape** key, and the function of the «» key similar to the **Enter** key on a PC keyboard.


16.2.2 Starting a weighing job

Weighing jobs and job templates must always be selected and started from LabX. Select a job in the queue of the balance and start the job with "Run" in the context menu or from the toolbar.

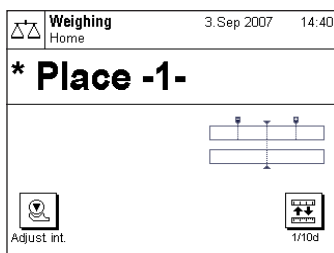
16.2.3 Executing weighings


Depending on the specification of the defined weighing job, before each weighing you will be prompted to enter sample identifications (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance with Barcode reader. When «» key is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.

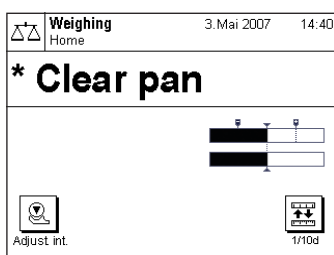
Now follow the instructions on the display.





When the message “* Place -1-” appears, place the sample on the weighing pan and confirm the weighing with the «» key.

If the application “Differential Weighing, automatic loop detection” is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).

“SmartTrac” is a graphical weighing aid which simplifies weighing aimed at a specific nominal value. The “SmartTrac” appears below the weighing result on the right-hand side of the display. To use the “SmartTrac” feature the nominal value, upper and lower tolerance values must be supplied in the job template. The lower bar indicates the coarse range for fast weighing in. The upper bar represents the +/- tolerances. Additionally if the “Accept only weights within tolerance” field is set to yes, the print button will be disabled for values outside of the specified tolerance and values can not be sent to LabX.



When the message “*Clear pan” appears, remove the sample from the weighing pan and confirm the weighing with the «» key. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

At the end, the message “* Job done” appears. However, you can terminate at any time with the «» key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.2.2.

You can now print and/or export the report which is created (see chapters 18.5 “Printing reports” and 18.6 “Exporting reports”).

Repeating a sample



To repeat a sample within a current weighing job, read in the corresponding sample identification again and confirm overwriting the previous weighing before you can repeat the weighing.

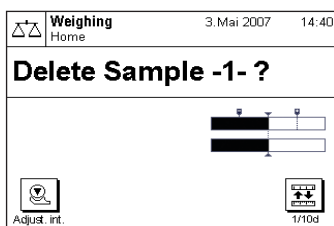
If the application “Differential Weighing, automatic loop detection” is being used, thus functions repeat to a measurement only on balances with Remote Software. When overwriting a sample, all samples taken are shown so that one can be chosen from any loop to overwrite.

Note

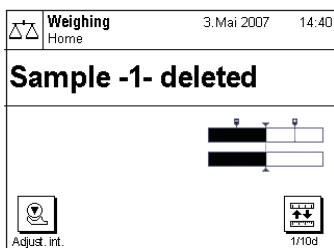
An entry will be made in the **Audit Trail** showing the older and the newer weight.

16.2.4 Deleting samples from a running job

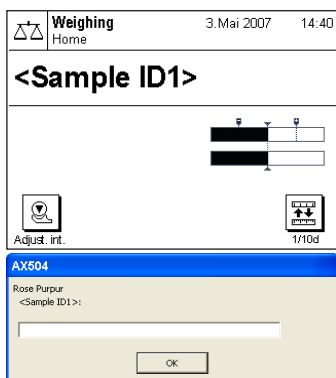
Samples can also be deleted during a job. During a running job, press «» key, and you will be prompted to confirm the deletion of the last sample via the «» key. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.




Press the «» key. In the display, the message “Delete Sample -1- ?” appears. To confirm, press the «» key.



After pressing the «» key, the message “Sample -1- deleted” appears. Press the «» key again to confirm.



Enter a new Sample ID 1 at the balance with the barcode reader and confirm with the «» key, or enter from the computer and confirm with the **Enter** key or click «**OK**».

Note





An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application “Differential Weighing, automatic loop detection” is chosen, samples can be taken across sample loops.

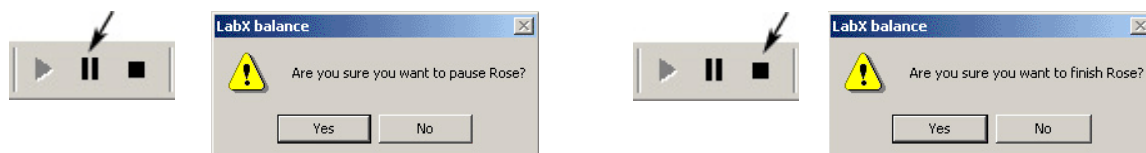
16.2.5 Pausing/Terminating a weighing job

If you want to pause or terminate a weighing job, select the «» key and follow the instructions to complete the desired termination.

To stop a weighing job, you are guided by the following two-step procedure:

	No	Yes	Result
1. Do you want to pause the job?			No: You can continue to work Yes: → Question 2
2. Do you want to close the job?			No: The job is paused Yes: Job closed

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on “**Yes**” to pause/finish the job or on “**No**” to continue the current job.

After a LabX weighing job has been stopped, the balance is released for local use again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

16.2.6 Using peripheral devices

16.2.6.1 Barcode reader

Configure the barcode reader for the optional interface on the balance, and select “Host” for the barcode receiver in the system configuration of the balance. This allows barcodes to be read in and recognized by LabX while the job is executing. Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.2.6.2 Local printer

Configure the local printer (strip printer) for the optional interface on the balance. This allows a report to be printed on the local printer while a job is executing.

Note

If you want to use the barcode reader and local printer, use a LocalCAN network with corresponding option on the balance.

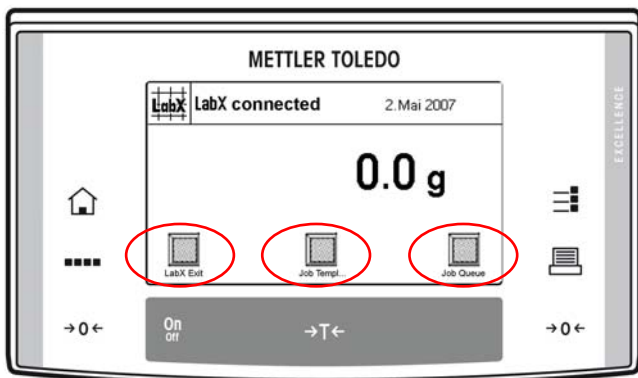
16.3 XS balances

Use of Application "LabX Client" in your balance allows you to work more directly with LabX from the balance with Rapid Access.




16.3.1 Rapid Access

When you switch the balance on, or select Application "LabX Client", the balance attempts to establish a connection to LabX to obtain a LabX navigation window.

As soon as the balance is connected to LabX, the top navigation level appears in the balance display. You can now call up balance queues and job templates directly from the balance.



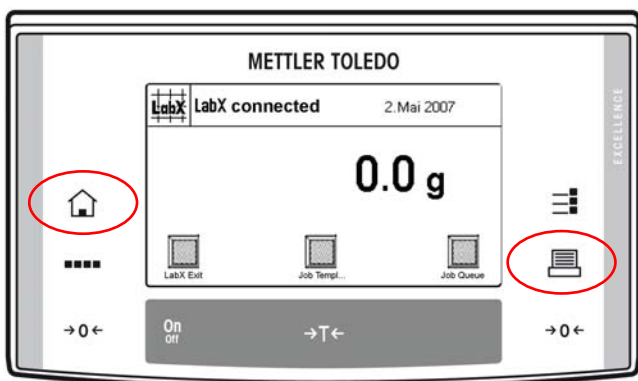
In the top navigation level, the keys in the display have the following meanings:

	LabX Exit:	Terminate connection with LabX
	Job Templ...:	Call up the templates for this balance
	Job Queue:	Call up the queue of this balance


Note


No user login is required to operate the top navigation level on the balance.

16.3.2 General operation





While a LabX weighing job is executing, the keys of the operating terminal on the balance have the following meanings:

 Home key: Paused job (unprompted) or answer "No" (to a question in the display)

 Print key: Confirm job step (unprompted) or answer "Yes" (to a question in the display)

Notes

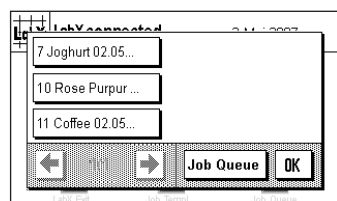
- The function of the «» key is similar to the **Escape** key, and the function of the «» key is similar to the **Enter** key on a PC keyboard.
- While a prompt for input is displayed, the «**C**» key and the «**OK**» key is the navigation key.

16.3.3 Starting a weighing job

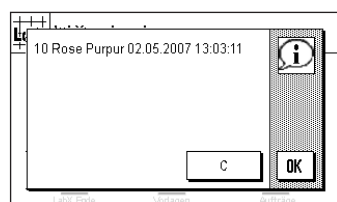
16.3.3.1 Starting a weighing job from a queue



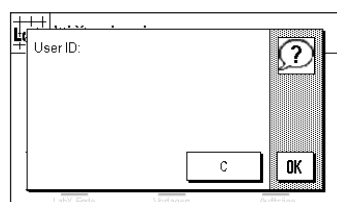
In the selection window, click on the "Job Queue" symbol.



All jobs in the queue are displayed. Click on a job you now want to execute.

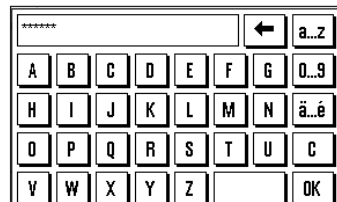


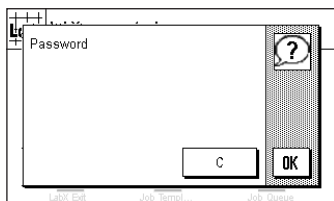
When you have selected the job, the display shown at the left appears. Click on «**OK**» to start the job, or on «**C**» key to quit the job.



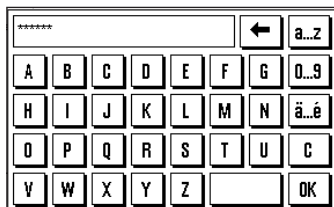
When you have confirmed the selected job, you will be prompted for your user identification.

Enter your user name and press «**OK**» to start the job, or «**C**» key to quit the job.





Enter your password and press «**OK**» to start the job, or press «**C**» key to quit the job. After you have pressed «**OK**», the display briefly shows “* Job started”.



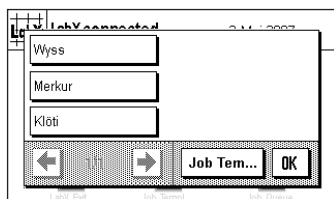
Notes

- The password is case sensitive.
- The user ID is not case sensitive.

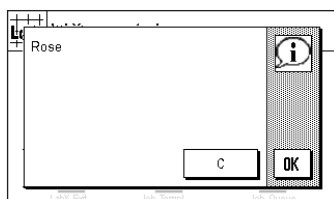
16.3.3.2 Starting a weighing job with a job template



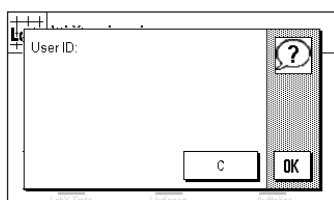
In the selection window, touch the “Job Templ...” symbol.



The display shows all the job templates which are suitable for this balance. Touch a job template you want to use to execute a weighing job.

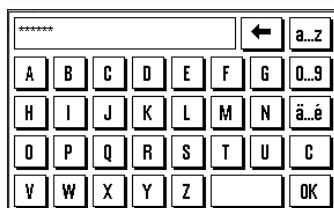


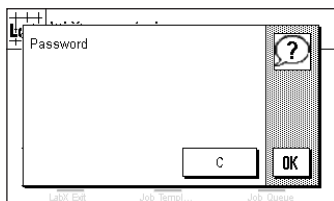
After you have selected the job template, the detailed information is displayed. Click on «**OK**» to start a weighing job or press «**C**» key to return.



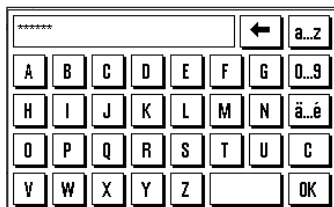
After you have confirmed the selected job, you are prompted for your user identification.

Enter with your user name and press «**OK**» to start the job, or «**C**» key to quit the job.





Enter your password and press «OK» to start the job, or “C” key to quit the job. After you have pressed «OK», the message “* Job started” appears briefly in the display.

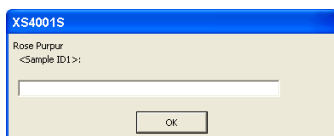


Note

Only those job templates are displayed on the balance which can actually be executed with this balance according to the criteria in the templates, see chapter 12.6 “Defining the balance and the minimum requirements for the balance” of the job template.

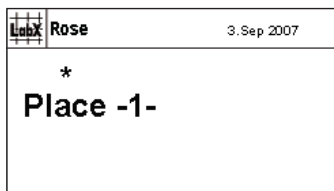
16.3.4 Executing weighings


Depending on the specification for the defined weighing job, before each weighing you will be prompted to enter sample identifications (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance. When «OK» is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.


Now follow the instructions on the display:




When the message “* Place -1-” appears, place the sample on the weighing pan and confirm the weighing with the «» key. The weighing is then saved in the database.

If the application “Differential Weighing, automatic loop detection” is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).



When the message “* Clear pan” appears, remove the sample from the weighing pan and press the «» key to confirm. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

At the end, the message “* Job done” appears. However, you can terminate at any time with the «» key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.3.3.

You can now print and/or export the report which is created (see chapters 18.5 “Printing reports” and 18.6 “Exporting reports”).

Repeating a sample

To repeat a sample within a current weighing job, read in the corresponding sample identification again and confirm overwriting the previous weighing before you can repeat the weighing.

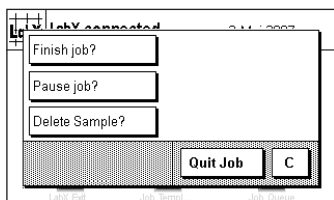
If the application “Differential Weighing, automatic loop detection” is being used, thus functions repeat to a measurement only on balances with Application “LabX Client”. When overwriting a sample, all samples taken are shown so that one can be chosen from any loop to overwrite.

Note

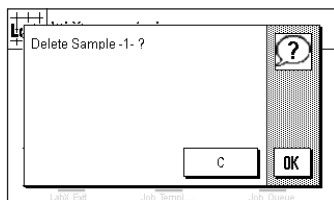
An entry will be made in the **Audit Trail** showing the older and the newer weight.

16.3.5 Deleting samples from a running job

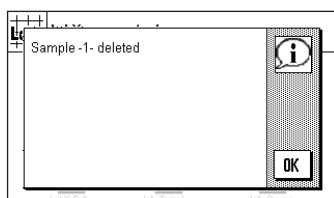
Samples can also be deleted during a job. During a running job, press «**⏏**» key, and you will be prompted to confirm the deletion of the last sample. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.



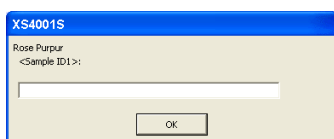
Select in the display "Delete Sample?".



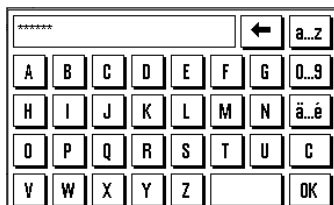
Press «**OK**» to delete the "Sample -1-" or «**C**» to return to the job without deleting.



In the display you will receive a confirmation "Sample -1- deleted". Press «**OK**» to continue.



Enter a new Sample ID 1 at the balance or computer and confirm with the **Enter** key or click «**OK**».



Note

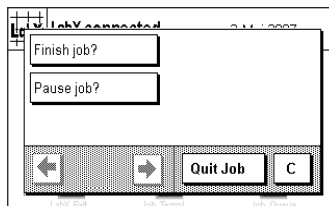
An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

16.3.6 Pausing/Terminating a weighing job

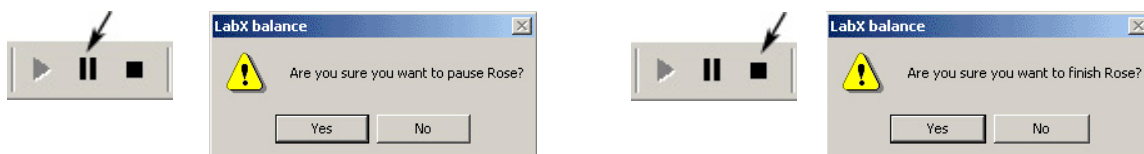
If you want to pause or terminate a weighing job, select the «⏏» key and follow the instructions to complete the desired termination.

Do you want to pause or terminate the job?



Choose in the display "Finish job?" or "Pause job?".

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on "Yes" to pause/finish the job or on "No" to continue the current job.

After a weighing job has been stopped, the LabX navigation window opens again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

16.3.7 Disconnecting from LabX

To disconnect from LabX, select "LabX Exit" in the display. The balance then disconnects from the Application "LabX Client" and is available again for local use.

16.3.8 Using peripheral devices

16.3.8.1 Barcode reader

Configure the barcode reader for the optional interface on the balance, and in the system configuration of the balance select "Host" for the barcode receiver. This allows barcodes to be read in and recognized by LabX while the job is executing. Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.3.8.2 Local printer

Configure the local printer (strip printer) for the optional interface on the balance. This allows a report to be printed on the local printer while a job is executing.

Note

If you want to use the barcode reader and local printer, use a LocalCAN network with corresponding option on the balance.

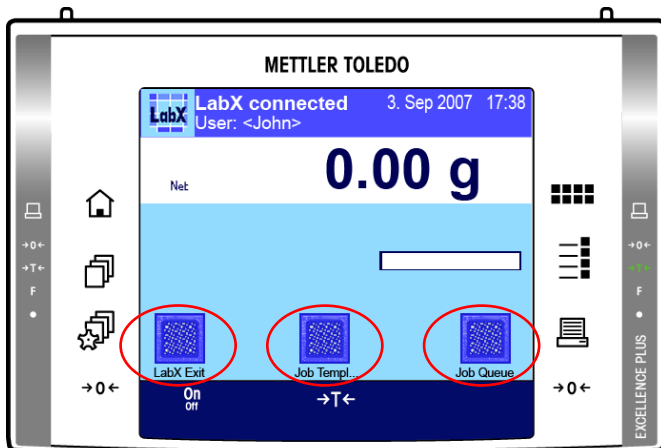
16.4 XP balances

Use of Application "LabX Client" in your balance allows you to work more directly with LabX from the balance with Rapid Access.




16.4.1 Rapid Access

When you switch the balance on, or select Application "LabX Client", the balance attempts to establish a connection to LabX to obtain a LabX navigation window.

As soon as the balance is connected to LabX, the top navigation level appears in the balance display. You can now call up balance queues and job templates directly from the balance.



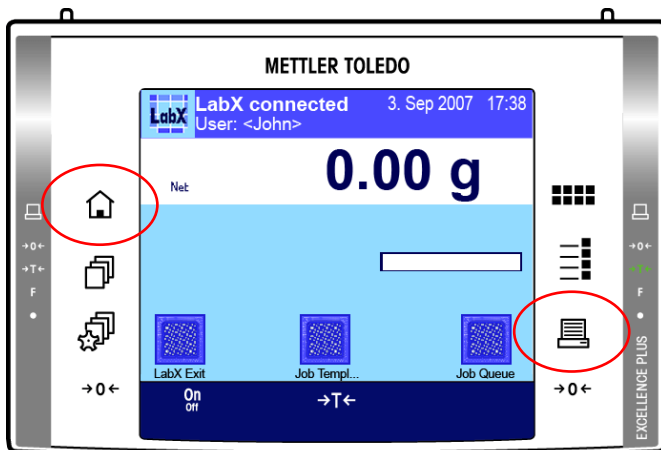
In the top navigation level, the keys in the display have the following meanings:

	LabX Exit:	Terminate connection with LabX
	Job Templ...:	Call up the templates for this balance
	Job Queue:	Call up the queue of this balance


Note


No user login is required to operate the top navigation level on the balance.

16.4.2 General operation





While a LabX weighing job is executing, the keys of the operating terminal on the balance have the following meanings:

 Home key: Paused job (unprompted) or answer "No" (to a question in the display)

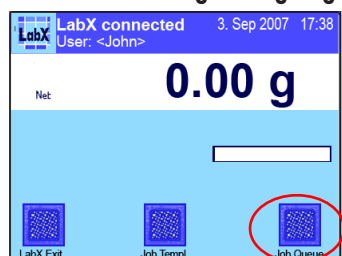
 Print key: Confirm job step (unprompted) or answer "Yes" (to a question in the display)

Notes

- The function of the «» key is similar to the **Escape** key, and the function of the «» key is similar to the **Enter** key on a PC keyboard.
- While a prompt for input is displayed, the «**C**» key and the «**OK**» key is the navigation key..

16.4.3 Starting a weighing job

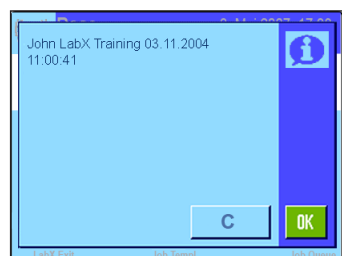
16.4.3.1 Starting a weighing job from a queue



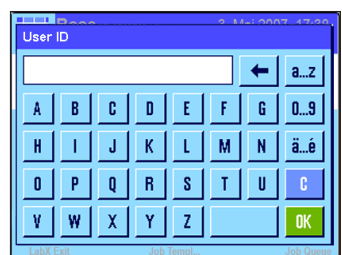
In the selection window, click on the "Job Queue" symbol.



All jobs in the queue are displayed. Click on a job you now want to execute.



When you have selected the job, the display shown at the left appears. Click on «**OK**» to start the job, or on «**C**» key to quit the job.



When you have confirmed the selected job, you will be prompted for your user identification.

Enter your user name and press «**OK**» to start the job, or «**C**» key to quit the job.

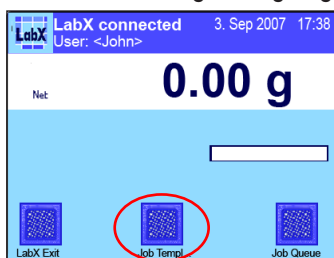


Enter your password and press «**OK**» to start the job, or press «**C**» key to quit the job. After you have pressed «**OK**», the display briefly shows "* Job started".

Notes

- The password is case sensitive.
- The user ID is not case sensitive.

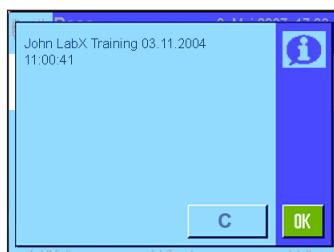
16.4.3.2 Starting a weighing job with a job template



In the selection window, touch the "Job Templ..." symbol.



The display shows all the job templates which are suitable for this balance. Touch a job template you want to use to execute a weighing job.

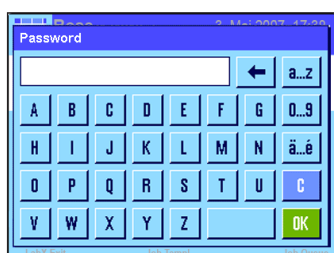


After you have selected the job template, the detailed information is displayed. Click on «OK» to start a weighing job or press «C» key to return.



After you have confirmed the selected job, you are prompted for your user identification.

Enter with your user name and press «OK» to start the job, or «C» key to quit the job.



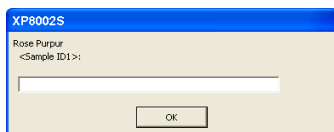
Enter your password and press «OK» to start the job, or «C» key to quit the job. After you have pressed «OK», the message "* Job started" appears briefly in the display.

Note

Only those job templates are displayed on the balance which can actually be executed with this balance according to the criteria in the templates, see chapter 12.6 "Defining the balance and the minimum requirements for the balance" of the job template.

16.4.4 Executing weighings

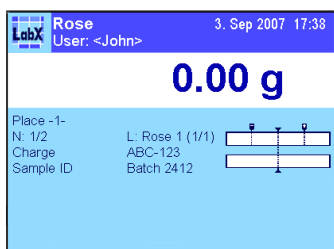
Depending on the specification for the defined weighing job, before each weighing you will be prompted to enter sample identifications (**for example: Simple weighing**). Up to 6 sample identifications can be used.




When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance. When «OK» is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.



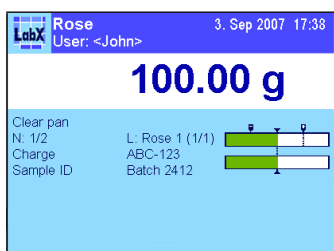
Now follow the instructions on the display:





When the message "* Place -1-" appears, place the sample on the weighing pan and confirm the weighing with the «» key. The weighing is then saved in the database.

If the application "Differential Weighing, automatic loop detection" is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).

"SmartTrac" is a graphical weighing aid which simplifies weighing aimed at a specific nominal value. The "SmartTrac" appears below the weighing result on the right-hand side of the display. To use the "SmartTrac" feature the nominal value, upper and lower tolerance values must be supplied in the job template. The lower bar indicates the coarse range for fast weighing in. The upper bar represents the +/- tolerances. Additionally if the "Accept only weights within tolerance" field is set to yes, the print button will be disabled for values outside of the specified tolerance and values can not be sent to LabX.



When the message "* Clear pan" appears, remove the sample from the weighing pan and press the «» key to confirm. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

At the end, the message "* Job done" appears. However, you can terminate at any time with the «» key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.4.3.

You can now print and/or export the report which is created (see chapters 18.5 "Printing reports" and 18.6 "Exporting reports").

Repeating a sample

To repeat a sample within a current weighing job, read in the corresponding sample identification again and confirm overwriting the previous weighing before you can repeat the weighing.

If the application "Differential Weighing, automatic loop detection" is being used, thus functions repeat to a measurement only on balances with Application "LabX Client". When overwriting a sample, all samples taken are shown so that one can be chosen from any loop to overwrite.

Note

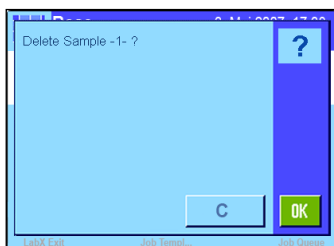
An entry will be made in the **Audit Trail** showing the older and the newer weight.

16.4.5 Deleting samples from a running job

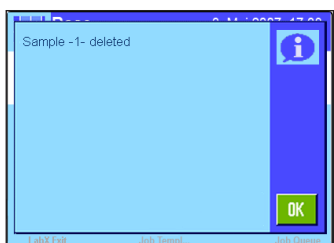
Samples can also be deleted during a job. During a running job, press «**⏏**» key, and you will be prompted to confirm the deletion of the last sample. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.



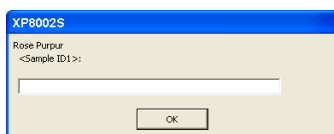
Select in the display "Delete Sample?".



Press «**OK**» to delete the "Sample -1-" or «**C**» to return to the job without deleting.



In the display you will receive a confirmation "Sample -1- deleted". Press «**OK**» to continue.



Enter a new Sample ID 1 at the balance or computer and confirm with the **Enter** key or click «**OK**».



Note

An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

16.4.6 Pausing/Terminating a weighing job

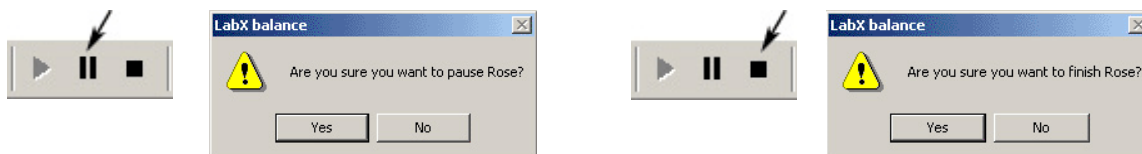
If you want to pause or terminate a weighing job, select the «⏏» key and follow the instructions to complete the desired termination.

Do you want to pause or terminate the job?



Choose in the display "Finish job?" or "Pause job?".

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on "Yes" to pause/finish the job or on "No" to continue the current job.

After a weighing job has been stopped, the LabX navigation window opens again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

16.4.7 Disconnecting from LabX

To disconnect from LabX, select "LabX Exit" in the display. The balance then disconnects from the Application "LabX Client" and is available again for local use.

16.4.8 Using peripheral devices

16.4.8.1 Barcode reader

Configure the barcode reader for the optional interface on the balance, and in the system configuration of the balance select "Host" for the barcode receiver. This allows barcodes to be read in and recognized by LabX while the job is executing. Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.4.8.2 Local printer

Configure the local printer (strip printer) for the optional interface on the balance. This allows a report to be printed on the local printer while a job is executing.

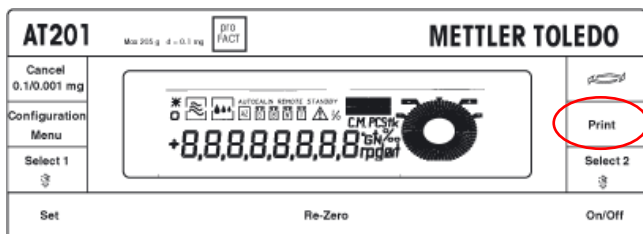
Note

If you want to use the barcode reader and local printer, use a LocalCAN network with corresponding option on the balance.



16.5 AT/MT/UMT balances with standard software

When using LabX with the AT/MT/UMT balances, the standard door functionality must be selected and not the automatic door.

16.5.1 Key assignments on AT/MT/UMT balances



While a LabX weighing job is executing, the keys of the operating terminal on the balance have the following meanings:

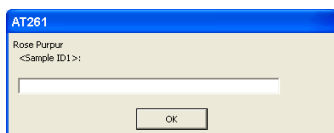
	Print key (double-click):	Abort job, turn off Manual Transfer Mode or answer "No" to a question
	Print key:	Confirm job step or answer "Yes" to a question in the display

16.5.2 Starting a weighing job

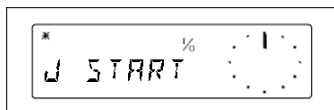
Weighing jobs and job templates must always be selected and started from LabX. Select a job in the queue of the balance, and start the job with "Run" in the context menu or from the toolbar.

16.5.3 Executing weighings

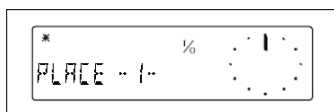
Depending on the specification for the defined weighing job, before each weighing you will be prompted to enter sample identifications (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance with Barcode reader. When «Print» key is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.

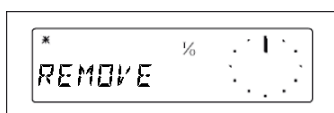


Now follow the instructions on the display.



When the message "PLACE -1-" appears, place the sample on the weighing pan and confirm the weighing with the «Print» key.

If the application "Differential Weighing, automatic loop detection" is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).



When the message "REMOVE" appears, remove the sample from the weighing pan and confirm the weighing with the «Print» key. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

You can terminate at any time with the «Print» key (double-click). The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.5.2.

You can now print and/or export the report which is created (see chapters 18.5 "Printing reports" and 18.6 "Exporting reports").

Note

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

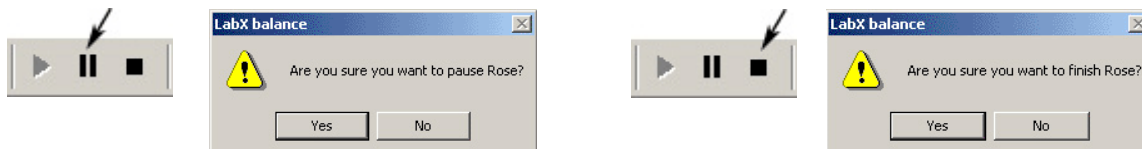
16.5.4 Pausing/Terminating a weighing job

If you want to pause or terminate a weighing job, select the «**Print**» key and follow the instructions to complete the desired termination.

To stop a weighing job, you are guided by the following single-step procedure:

	No	Yes	Result
1. Do you want to terminate the job?	<input type="button" value="Print"/>	<input type="button" value="Print"/>	No: The job is paused
	(double-click)		Yes: Job closed

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on “**Yes**” to pause/finish the job or on “**No**” to continue the current job.

After a LabX weighing job has been stopped, the balance is released for local use again.

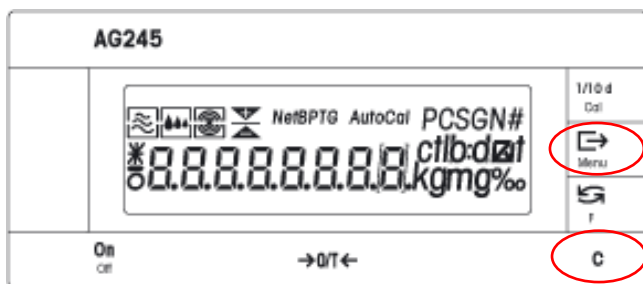
16.5.5 Using peripheral devices

The peripheral devices on the AT balance are not supported by LabX. If you use a barcode reader on the AT balance, it is preferable to connect it to an e-Link EBO2 device which allows it to be operated on the network along with the AT balance. For further information, please contact METTLER TOLEDO.

Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.6 AG, PG-S balances with standard software

16.6.1 Key assignments on AG, PG-S balances



While a LabX weighing job is executing, the keys of the operating terminal on the balance have the following meanings:

C	Cancel key:	Short press = Zero Long press = Abort job, turn off Manual Transfer Mode or answer "No" to a question
↵	Print key:	Confirm job step or answer "Yes" to a question

Note

The function of the **«C»** key is similar to the **Escape** key, and the function of the **«↵»** key similar to the **Enter** key on a PC keyboard.

16.6.2 Starting a weighing job

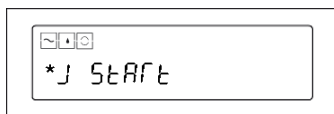
Weighing jobs and job templates must always be selected and started from LabX. Select a job in the queue of the balance and start the job with **"Run"** in the context menu or from the toolbar.

16.6.3 Executing weighings

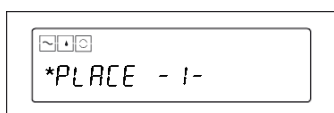
Depending on the specification of the defined weighing job, before each weighing you will be prompted to enter sample identifications (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance with Barcode reader. When **«↵»** key is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.



Now follow the instructions on the display.



When the message **"* PLACE -1-"** appears, place the sample on the weighing pan and confirm the weighing with the **«↵»** key.

If the application "Differential Weighing, automatic loop detection" is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).



When the message **"REMOVE"** appears, remove the sample from the weighing pan and confirm the weighing with the **«↵»** key. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

You can terminate at any time with the **«C»** key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.6.2.

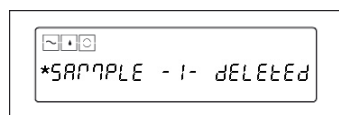
You can now print and/or export the report which is created (see chapters 18.5 "Printing reports" and 18.6 "Exporting reports").

16.6.4 Deleting samples from a running job

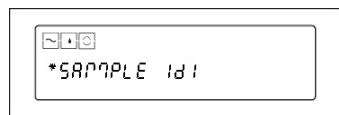
Samples can also be deleted during a job. During a running job, press the **«F»** key, and you will be prompted to confirm the deletion of the last sample via the **«↵»** key. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.



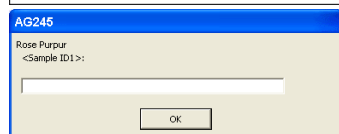
Press the **«F»** key. In the display, the message "Delete Sample -1- ?" appears. To confirm, press the **«↵»** key.



After pressing the **«↵»** key, the message "Sample -1- deleted" appears. Press the **«↵»** key again to confirm.



Enter a new Sample ID 1 at the balance with the barcode reader and confirm with the **«↵»** key, or enter from the computer and confirm with the **Enter** key or click **«OK»**.



Note

An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

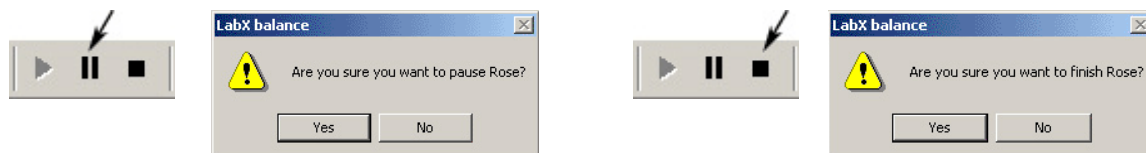
16.6.5 Pausing/Terminating a weighing job

If you want to pause or terminate a weighing job, hold the **«C»** key (Long press) and follow the instructions to complete the desired termination.

To stop a weighing job, you are guided by the following two-step procedure:

	No	Yes	Result
1. Do you want to pause the job?	<input type="button" value="C"/>	<input type="button" value="↵"/>	No: You can continue to work Yes: → Question 2
2. Do you want to close the job?	<input type="button" value="C"/>	<input type="button" value="↵"/>	No: The job is paused Yes: Job closed

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on **«Yes»** to pause/finish the job or on **«No»** to continue the current job.

After a LabX weighing job has been stopped, the balance is released for local use again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

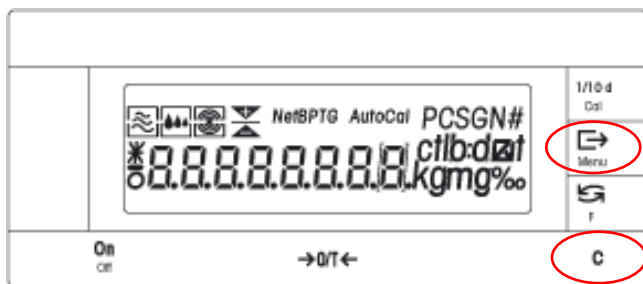
16.6.6 Using peripheral devices

A LocalCAN network can be used to connect peripheral devices directly to the balance. Printers and barcode readers are generally supported. For further information, please contact METTLER TOLEDO.

Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.7 PG/SG balances with standard software

16.7.1 Key assignments on PG/SG balances



While a LabX weighing job is being executed, the keys on the operating terminal on the balance have the following meanings:

C	Cancel key:	Short press = Zero Long press = Abort job, turn off Manual Transfer Mode or answer "No" to a question
	Print key:	Confirm a job step or answer "Yes" to a question

Note

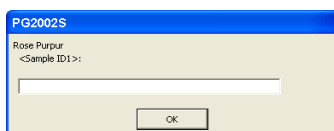
The function of the «**C**» key is similar to the **Escape** key, and the function of the «» key similar to the **Enter** key on a PC keyboard.

16.7.2 Starting a weighing job

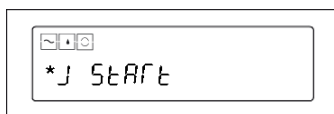
Weighing jobs and job templates must always be selected and started from LabX. Select a job in the queue of the balance and start the job with "Run" in the context menu or from the toolbar.

16.7.3 Executing weighings

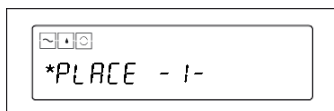
Depending on the specification of the defined weighing job, before each weighing you will be prompted to enter sample information (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance with Barcode reader. When «» key is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.



Now follow the instructions on the display.



When the message "* PLACE -1-" appears, place the sample on the weighing pan and confirm the weighing with the «» key.

If the application "Differential Weighing, automatic loop detection" is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).



When the message "REMOVE" appears, remove the sample from the weighing pan and confirm the weighing with the «» key. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

You can terminate at any time with the «**C**» key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.7.2.

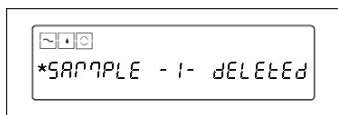
You can now print and/or export the report which is created (see chapters 18.5 "Printing reports" and 18.6 "Exporting reports").

16.7.4 Deleting samples from a running job

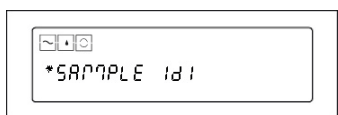
Samples can also be deleted during a job. During a running job, press «F» key, and you will be prompted to confirm the deletion of the last sample via the «↵» key. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.



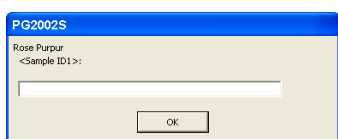
Press the «F» key. In the display, the message "Delete Sample -1- ?" appears. To confirm, press the «↵» key



After pressing the «↵» key, the message "Sample -1- deleted" appears. Press the «↵» key again to confirm.



Enter a new Sample ID 1 at the balance with the barcode reader and confirm with the «↵» key, or enter from the computer and confirm with the **Enter** key or click "OK".



Note

An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

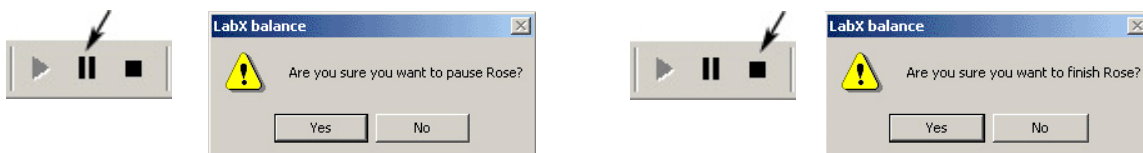
16.7.5 Pausing/Terminating a weighing job

If you want to pause or terminate a weighing job, hold the «C» key (Long press) and follow the instructions to complete the desired termination.

To stop weighing jobs you are guided by the following two-step procedure:

	No	Yes	Result
1. Do you want to pause the job?	<input type="button" value="C"/>	<input type="button" value="↵"/>	No: You can continue to work Yes: → Question 2
2. Do you want to close the job?	<input type="button" value="C"/>	<input type="button" value="↵"/>	No: The job is paused Yes: Job closed

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on "Yes" to pause/finish the job or on "No" to continue the current job.

After a LabX weighing job has been stopped, the balance is released for local use again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

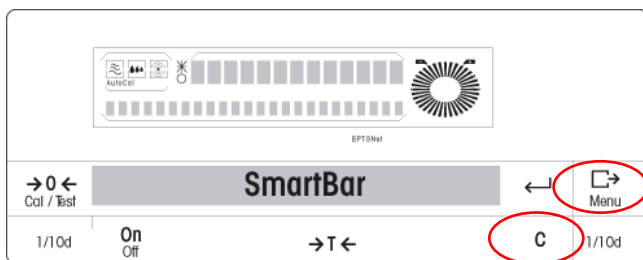
16.7.6 Using peripheral devices

A LocalCAN network can be used to connect peripheral devices directly to the balance. Printers and barcode readers are generally supported. For further information, please contact METTLER TOLEDO.

Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.8 PR/SR balances with standard software

16.8.1 Key assignments on PR/SR balances



While a LabX weighing job is executing, the keys of the operating terminal on the balance have the following meanings:

C	Cancel key:	Short press = Tare Long press = Abort job, turn off Manual Transfer Mode or answer "No" to a question
⇒	Print key:	Confirm job step or answer "Yes" to a question

Note

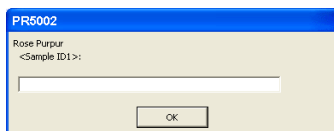
The function of the «**C**» key is similar to the **Escape** key, and the function of the «**⇒**» key similar to the **Enter** key on a PC keyboard.

16.8.2 Starting a weighing job

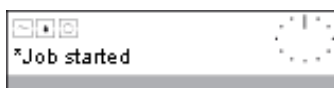
Weighing jobs and job templates must be selected and started from LabX. Select a job in the queue of the balance and start the job with "Run" in the context menu or from the toolbar.

16.8.3 Executing weighings

Depending on the specification of the defined weighing job, before each weighing you will be prompted to enter sample information (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer or on the balance with Barcode reader. When «**⇒**» key is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.



Now follow the instructions on the display.



When the message "* Place -1-" appears, place the sample on the weighing pan and confirm the weighing with the «**⇒**» key.

If the application "Differential Weighing, automatic loop detection" is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).



When the message "Remove" appears, remove the sample from the weighing pan and confirm the weighing with the «**⇒**» key. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

You can terminate at any time with the «**C**» key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.8.2.

You can now print and/or export the report which is created (see chapters 18.5 "Printing reports" and 18.6 "Exporting reports").

16.8.4 Deleting samples from a running job

Samples can also be deleted during a job. During a running job, press «←» key, and you will be prompted to confirm the deletion of the last sample via the «→» key. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.



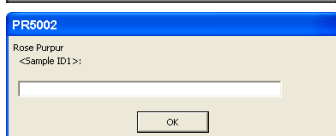
Press the «←» key. In the display, the message "Delete Sample -1- ?" appears. To confirm, press the «→» key.



After pressing the «→» key, the message "Sample -1- deleted" appears. Press the «→» key again to confirm.



Enter a new Sample ID 1 at the balance with the barcode reader and confirm with the «→» key, or enter from the computer and confirm with the «←» key or click «OK».



Note

An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

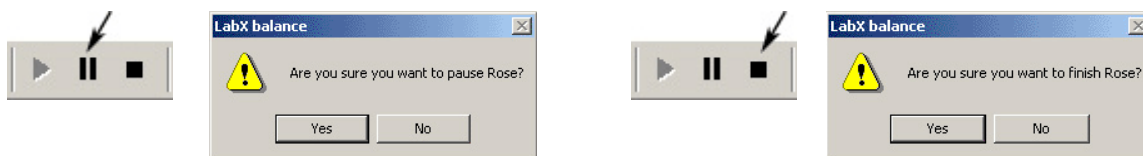
16.8.5 Pausing/Terminating a weighing job

If you want to pause or terminate a weighing job, hold the «C» key (Long press) and follow the instructions to complete the desired termination.

To stop a weighing job, you are guided by the following two-step procedure.

	No	Yes	Result
1. Do you want to pause the job?	<input type="button" value="C"/>	<input type="button" value="→"/>	No: You can continue to work Yes: → Question 2
2. Do you want to close the job?	<input type="button" value="C"/>	<input type="button" value="→"/>	No: The job is paused Yes: Job closed

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on "Yes" to pause/finish the job or on "No" to continue the current job.

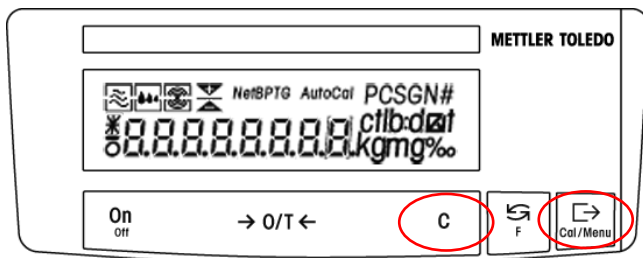
After a LabX weighing job has been stopped, the balance is released for local use again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

16.8.6 Using peripheral devices

A LocalCAN network can be used to connect peripheral devices directly to the local balance. As standard, LabX supports printers and barcode readers which can be configured on the balance. For further information, please contact METTLER TOLEDO. Alternatively, a barcode reader can be used by connecting to the PC keyboard.

16.9 AB-L/AB-S/PB-L/PB-S balances with standard software

16.9.1 Key assignments on AB-L/AB-S/PB-L/PB-S balances



While a LabX weighing job is being executed, the keys on the operating terminal on the balance have the following meanings:

C	Cancel key:	Short press = Zero Long press = Abort job, turn off Manual Transfer Mode or answer "No" to a question
↵	Print key:	Confirm a job step or answer "Yes" to a question

Note

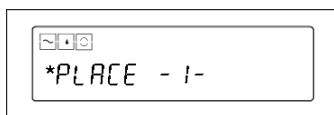
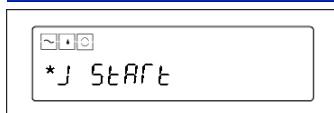
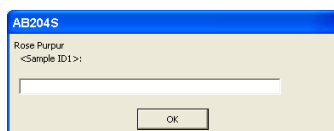
The function of the «**C**» key is similar to the **Escape** key, and the function of the «**↵**» key similar to the **Enter** key on a PC keyboard.

16.9.2 Starting a weighing job

Weighing jobs and job templates must always be selected and started from LabX. Select a job in the queue of the balance and start the job with "Run" in the context menu or from the toolbar.

16.9.3 Executing weighings

Depending on the specification of the defined weighing job, before each weighing you will be prompted to enter sample information (**for example: Simple weighing**). Up to 6 sample identifications can be used.



When a weighing job is started from LabX and Sample ID's are used, you will be prompted to enter the Sample ID's from both the balance and the computer where you started the job. You may enter the ID from computer with Barcode reader. When «**↵**» key is pressed on the balance resp. the **Enter** key at the computer, the Sample ID will be accepted and the dialogs on both LabX and the balance will close.

Now follow the instructions on the display.

When the message "* PLACE -1-" appears, place the sample on the weighing pan and confirm the weighing with the «**↵**» key.

If the application "Differential Weighing, automatic loop detection" is being used, the next sample in the order is shown in the LabX display (e.g. Put 1/2).

When the message "REMOVE" appears, remove the sample from the weighing pan and confirm the weighing with the «**↵**» key. You will be repeatedly prompted to enter sample identifications and make weighings until the specified number of samples is reached or you terminate.

You can terminate at any time with the «**C**» key. The balance again displays the top navigation level of LabX.

To start a new job, proceed according to chapter 16.9.2.

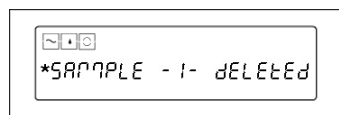
You can now print and/or export the report which is created (see chapters 18.5 "Printing reports" and 18.6 "Exporting reports").

16.9.4 Deleting samples from a running job

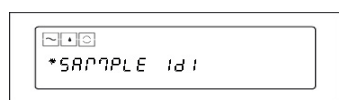
Samples can also be deleted during a job. During a running job, press «F» key, and you will be prompted to confirm the deletion of the last sample via the «↵» key. This operation can be continued back to the first sample of the loop. You can only delete samples within the current loop. After a job is finished, samples can no longer be deleted.



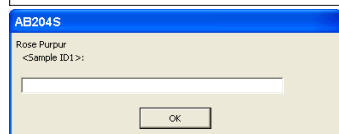
Press the «F» key. In the display, the message "Delete Sample -1- ?" appears. To confirm, press the «↵» key.



After pressing the «↵» key, the message "Sample -1- deleted" appears. Press the «↵» key again to confirm.



Enter a new Sample ID 1 at the balance with the barcode reader and confirm with the «↵» key, or enter from the computer and confirm with the **Enter** key or click «OK».



Note

An entry will be made in the **Audit Trail** showing the older and the newer weight. The deleted sample is also shown in the report.

If the application "Differential Weighing, automatic loop detection" is chosen, samples can be taken across sample loops.

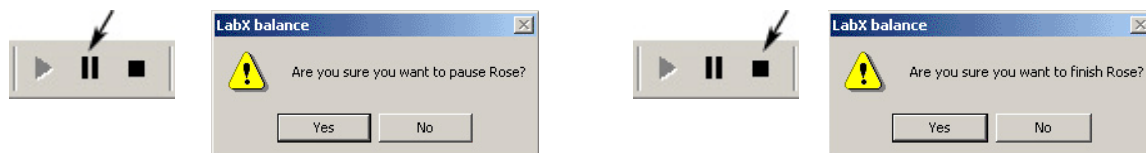
16.9.5 Pausing/Terminating a weighing job

If you want to pause or terminate a weighing job, hold the «C» key (Long press) and follow the instructions to complete the desired termination.

To stop weighing jobs you are guided by the following two-step procedure:

	No	Yes	Result
1. Do you want to pause the job?	<input type="button" value="C"/>	<input type="button" value="↵"/>	No: You can continue to work Yes: → Question 2
2. Do you want to close the job?	<input type="button" value="C"/>	<input type="button" value="↵"/>	No: The job is paused Yes: Job closed

You can pause and finish a job directly at the computer. With an open balance monitor window, you can also operate the same functions via the toolbar.



Click on "Yes" to pause/finish the job or on "No" to continue the current job.

After a LabX weighing job has been stopped, the balance is released for local use again. Any paused weighing job remains in the balance job queue. It can be resumed any time later.

16.9.6 Using peripheral devices

A LocalCAN network can be used to connect peripheral devices directly to the balance. Printers and barcode readers are generally supported. For further information, please contact METTLER TOLEDO.

Alternatively, a barcode reader can be used by connecting to the PC keyboard.

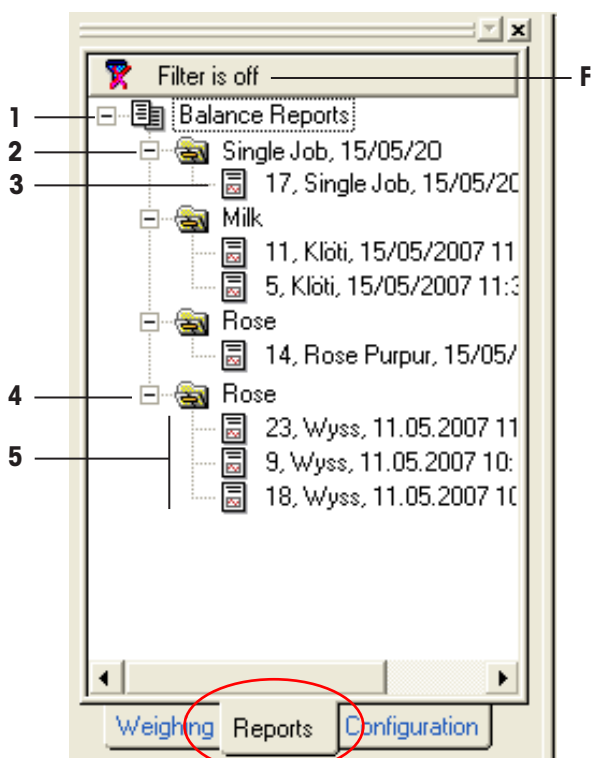
17 Tree view Reports







17.1 Introduction

In the tree view **Reports**, you see the reports which have been saved for weighing jobs. You can filter the displayed list of reports, and select a report to be exported or printed.








17.2 Overview

The tree view **Reports** is activated by clicking the **Reports** tab directly below the navigation window.



- The folders in the tree view are automatically created the first time a report is transferred from the balance.
- The name of the folder corresponds to the title of the job template.
- The individual reports are saved by LabX in the respective **Report folders** .
- Clicking a  or  sign allows you to open or close folders.
- If you right-click an **Report symbol** , a context menu appears with an overview of possible functions (except with folder icons).
- Double-clicking on a **Report symbol**  opens the working area and displays the selected report along with the toolbar of available functions.
- You can close working windows by clicking the **Close**  button in the menu bar.
- You can use the filter function to limit the displayed data records to only those reports which are relevant for you.

17.3 Icons

Icon		Number	Function/content
	Report folder	1	Contains all reports of weighing jobs.
	Report folder of a on-time weighing jobs	2	Contains the reports of weighing jobs.
	Report	3	Report of a on-time weighing jobs which were created with the same job template.
	Report folder of a job template	4	Contains the reports of weighing jobs which were created with the same job template.
	Report	5	Report of a weighing job with measurement values and calculations.
	Filter activated	F	The list currently displays only those reports which match the specified filter criteria.
	Filter deactivated	F	The list displays all reports which are saved.

18 Working with reports

Each time a weighing job is started, a report is generated automatically. The report is visualized in the tree view **Reports** and can be opened even before the weighing job has finished executing. The data contained in the report is updated each time the report is opened. The format of the report is a simple standard format based on the information in the job template (e.g. selected application, sample loops, results definitions).

18.1 Report filter

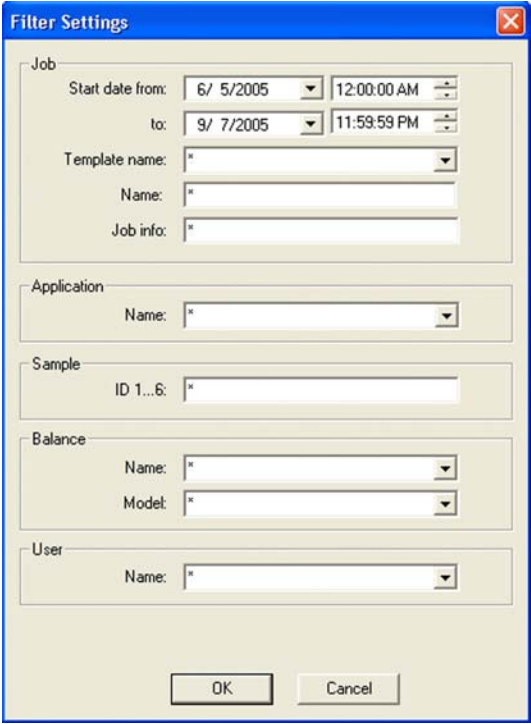
You can use the filter function to limit the data sets in the tree view **Reports** so that only the data sets of interest are visible. Different combinations of filter criteria are available.

Switch filter on/off

You can switch the filter on or off by clicking the **Filter** button  at the top of the tree view **Reports**.

Filter settings

1. If you right-click the **Filter** button , the **Filter Settings** dialog box appears.
2. You can now enter the filter criteria. For example, enter a "Job name" and a "Start date from... to" and confirm the entries by clicking the "**OK**" button.



The **Filter Settings** dialog box is shown with the following fields:

- Job**
 - Start date from: 6/ 5/2005 12:00:00 AM
 - to: 9/ 7/2005 11:59:59 PM
 - Template name: *
 - Name: *
 - Job info: *
- Application**
 - Name: *
- Sample**
 - ID 1...6: *
- Balance**
 - Name: *
 - Model: *
- User**
 - Name: *

Buttons: **OK** and **Cancel**

The following filter settings are available:

Weighing job

Start date from:	Weighing job started between ...
To:	and ...
Template name:	Name of the job template
Name:	Name of the job
Job Info	Job information

Application

Name:	Name of the application (e.g. Simple Weighing)
-------	--

Sample identification(s)

ID1...6:	Sample identifications (Sample ID1...Sample ID6)
----------	--

Balance

Name:	Name of balance used
Model:	Balance model, e.g. AX204


User

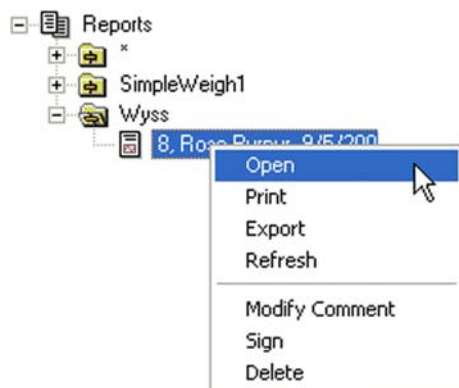
Name:	Name of the user
-------	------------------

Notes

- If an * is used in a box, all values are allowed.
- You can fill out several boxes at the same time, which causes job templates to be searched and displayed which match all the criteria.

18.2 Display reports

In the tree view **Reports**, click with the right mouse button on a desired **Report of a weighing job** : and select "Open". The **Report of the weighing job** appears in the working space.



18.3 Structure of reports

The reports of weighing jobs all have a standard structure.

18.3.1 Report start (job data)

Job Report		1
Tulpe Yellow		
Job Data		
Job ID	3	2
Start Time	25.09.2007 11:32:09	Template Name
Application	Simple Weighing	Template Last Saved
Pre-defined Loops	1	Auto Export
Pre-defined Samples	2	SmartTrac Nominal Value
Started by	Development Administrator	SmartTrac + Tolerance (%)
<Job Info>	Gardencenter	SmartTrac -Tolerance (%)
		10
		10
Balance Data		
Model	XP 8002S	3
Serial Number	1125240813	
BalanceName	XP 8002S	

- 1 Company information (according to settings, see chapter 5.9 "Setting up Report Management") and title of the job template used, under which the report was displayed or printed
- 2 Job information, details of the user, sample informations and nominal value
- 3 Information about the balance used

Notes

- Company identifications and user data in the title line and footer do not belong to the report data.
- When the report is displayed, company identifications are included according to the current global settings.
- The user information in the title and footer indicates the currently logged-in user who opens the report.

18.3.2 Report body (measurement values per sample loop and sample)

Results							4
No.	Result Name	Charge	Result Value	SQC Violation			
1	R1	2	39.23g	+T2			
2	R1	3	39.24g	+T2			
Sample Loop: L1							5
Last Adjustment Recorded	23.09.2007 11:32:21	6	Legend:	<i>MinWeigh Violation</i>			
Start Time	25.09.2007 11:32:21			Deleted Sample			
				Not Level/ Unstable Sample			
Date and Time	No.	Charge	Constant	Tare Weight	Gross Weight	Net Weight	
25.09.2007 11:32:38	1	2	0.99	0.00g	39.63g	39.63g	
25.09.2007 11:33:00	2	3	0.99	0.00g	39.64g	39.64g	

- 4 Calculated results according to the formulas entered and sample ID
- 5 Sample loop information
- 6 Data of the last sensitivity adjustment record saved in LabX and start date of the sample loop with date/time
- 7 Samples with IDs, sample constants and measurement values. With activated MinWeigh function information regarding MinWeigh violations

18.3.3 Report end (results and statistics)

Statistics and SQC: R1		SQC		SQC Target Settings	
Sample Count	2	>T2+	2	T2+	45%
Mean	39.24g	<= T2+ and > T1+	0	T1+	43%
Min	39.23g	<= T1+ and >= Target	0	Target	40g
Max	39.24g	< Target and >= T1-	0	T1-	38%
Max Difference	0.01g	< T1- and >= T2-	0	T2-	35%
Standard Deviation	0.007g	< T2-	0		
Rel. Standard Deviation	0.000				

Result Name	Formula
R1 R1	N[1]*cs

Constant Name	Constant Value
C1 C1	38g

Result Name	Formula	Result Value
PR1	R1.total	78.48g

Balance Settings		Balance Prerequisites	
Autozero	Off	Readability	0.01 g
Weighing Mode	Universal	Maximum Capacity	200 g
Measurement Release	Reliable	MinWeigh Activated	Yes
Pretare Used	No	Release Control Level	Low
MinWeigh Value	0.03		
MinWeigh Tare Limit	5.00		
MinWeigh Value	0.00		
MinWeigh Tare Limit	0.00		
MinWeigh Value	0.00		
MinWeigh Tare Limit	0.00		

Comment
This report is for a test

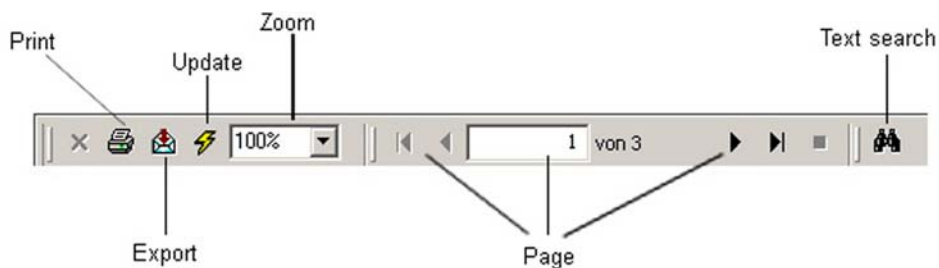
Job Approval	
Created:	Development Administrator (admin), 25.09.2007 11:32:09
Modified:	Development Administrator (admin), 25.09.2007 11:34:30
Reviewed:	Development Administrator (admin), 25.09.2007 11:34:43

Printed by: Development Administrator Page 2 / 2 LabX Version 1.4 25.09.2007 11:34:44


- 8 Statistics and SQC of the results (if limit values were specified in the job template)
- 9 Used Formulas
- 10 Used Constants
- 11 Post Job Results, showing the used formulas and variables
- 12 Balance settings for this job
- 13 Balance prerequisites for this job
- 14 Comments
- 15 Signed elements of the document (Electronic signature) with date/time
- 16 Footer with information about the user and report page number

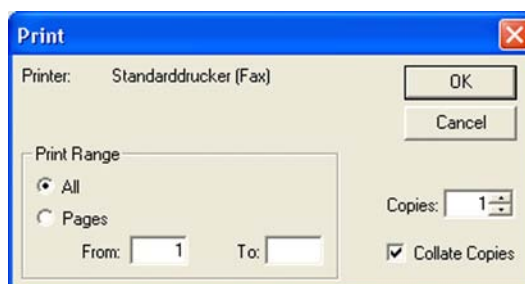
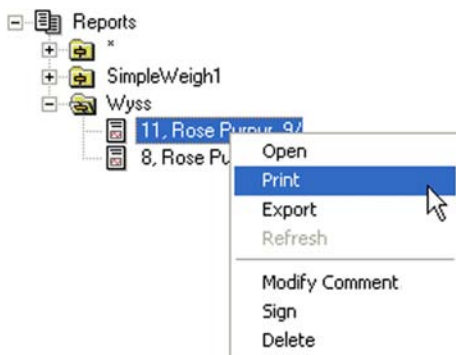
18.4 Functions in the report view

After you have opened a report, you can choose between the following functions:




18.5 Printing reports

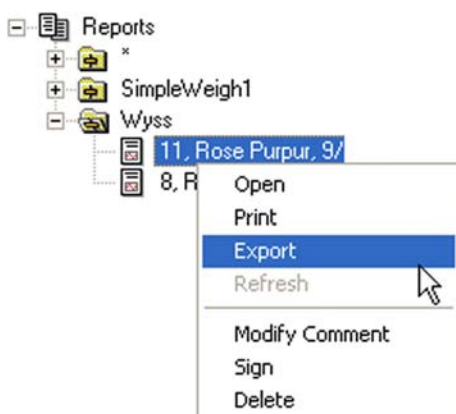
Reports can be printed by selecting the **Print** function in the context menu of a report, or with a report open by using the **Print** function  in the **toolbar**:



18.6 Exporting reports

18.6.1 Manual export reports

After you have opened a report, its data can be exported in a selectable file format. To do this, use either the **Export function**  in the **toolbar** or the respective function in the context menu of a report.



As standard, LabX chooses a name composed of

job ID, job title, date, time

and the export format .pdf. There is a choice of export formats. The following file formats are supported: pdf, rpt, doc, xls, txt, rtf, and xml.

18.6.2 Automatic export reports **LabX pro only**

After a weighing job has been completed, reports can be exported automatically into an Excel table (*.xls), provided that this option was selected in the job template which was used (see chapter 12.9.2 "Report data").

You can define a user-specific location for this exported data to be saved (see chapter 5.10.1 "Defining the folder for export of reports").

18.6.3 Programmed export reports

Programmed access from your system (e.g. LIMS, ERP) to the LabX report data is possible with the LabX connect Software which is available as an option.


18.7 Searching the document for text

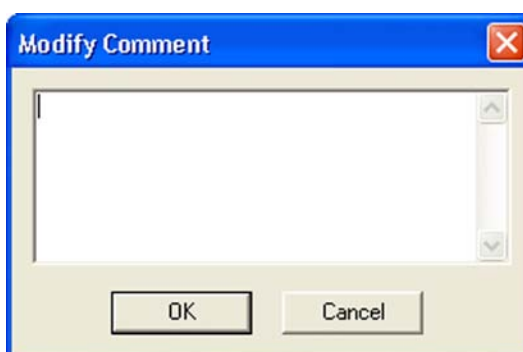
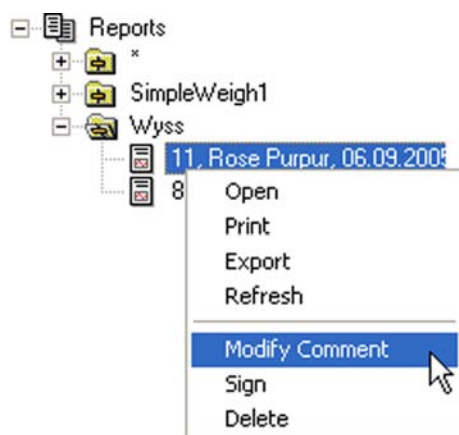
Using the integrated **Search function**  in the report **toolbar**, you can search for any text in the document.



18.8 Adding comments to the report

A short comments text can be added to every weighing report. The comments are logically part of the weighing report and are handled correspondingly when modifications are made.

1. In the tree view **Reports**, click with the right mouse button on the symbol of a **Report** . In the context menu, select **Modify Comment...**
2. The dialog **Modify Comment...** appears.



3. Enter a free text.
4. Click on **OK** to confirm the inputs and close the dialog, or on **Cancel** to reject the inputs and close the dialog.


Note

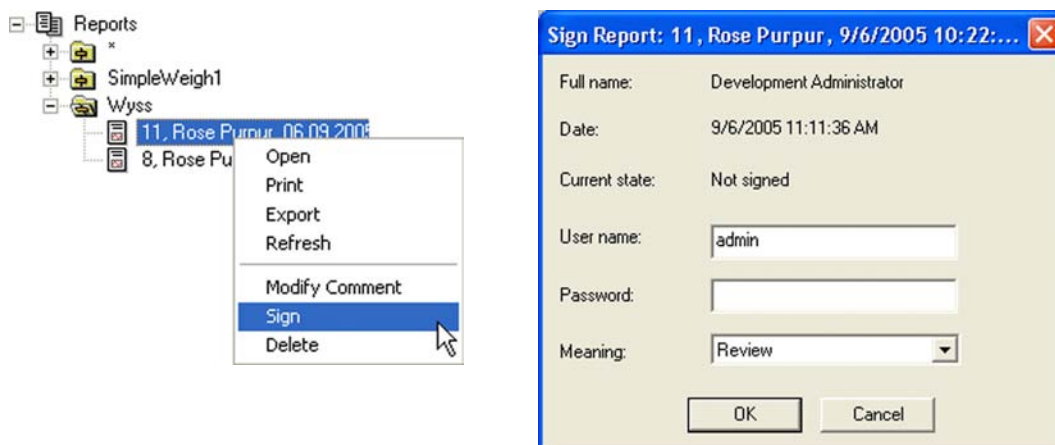
If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

18.9 Signing reports **LabX pro only**

Reports can be signed with the options **Reviewed** and/or **Approved**. Reports are marked with **Reviewed** and/or **Approved** at the top margin of the window, at the end of the report form, and on the printout. If a signed report is edited, the signature is automatically deleted.

To be able to sign, you must possess the corresponding rights; make sure you are logged in with a user that possesses the corresponding rights.

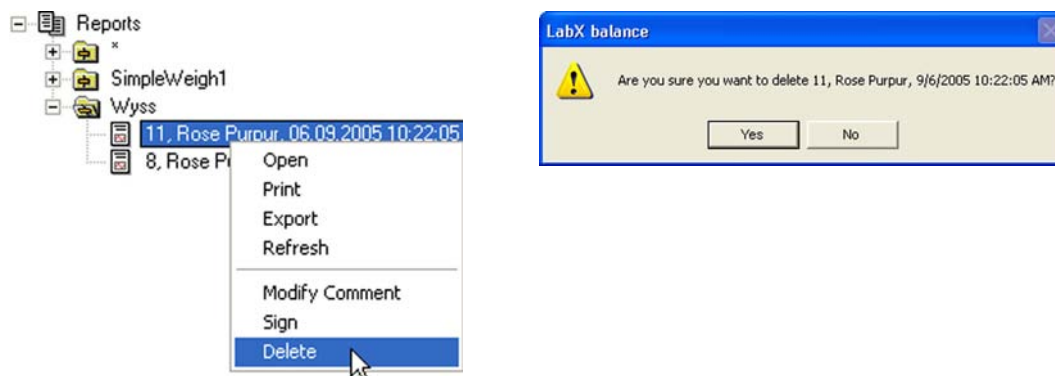
1. In the tree view **Reports**, click with the right mouse button on the symbol of a **Report** . In the context menu, select **Sign....**
2. The dialog **Sign...** appears.



3. Enter the **User name** and **Password**, and in the pop-up list of the "Meaning" field, select **Review** or **Approve**.
4. Click on **OK** to confirm the inputs and close the dialog, or on **Cancel** to reject the inputs and close the dialog.

18.10 Deleting reports

Provided you have the necessary user rights, you can delete a report. To delete a report, in the tree view **Reports** click with the right mouse button on an existing **Report**  and in the context menu select "**Delete**".



Once the delete command is confirmed, the report is irretrievably deleted.

Note

If you are operating your system in the "Secure Mode (21 CFR Part 11)", when you execute this step you will be prompted to enter your electronic signature (see chapter 5.3 "Electronic signature"). If the signature is successful, an entry will be made in the **Audit Trail**.

19 Backup on the PC/Server

Every document that is saved on a computer should be backed up regularly. Backup means that files and programs are copied to another storage medium. A full backup will require the use of third-party software.

Data backup can be done in a number of different ways using different storage media. You can, for example, store copies of important files on another part of the file system (on a different partition or hard disk).

Centralized data backup is particularly important on a network. It is essential that one person is designated as being responsible for the routine backup of data.

Note that modern backup tools must be used to correctly backup "MSDE" databases (SQL). Basic tools may not be able to backup and restore such databases.

Using the windows function "Scheduled Tasks" and the program "LabX Database Maintenance" the database backup can be automated. See chapter "19.3 Automated Data Backup".

19.1 Database backup

LabX is based on the Microsoft Data Engine "MSDE" database (SQL); all the data used by LabX is therefore organized in a database.

The "LabX Database Maintenance" program allows you to backup and restore databases and to change to new or other existing databases. Another possibility is to reset existing databases so that all the jobs and installation data are retained (only the results are deleted), or that all reports are retained while jobs and configuration data is deleted.

Notes

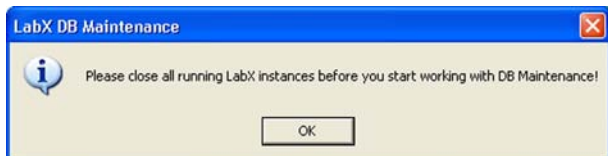
- The "LabX DB Maintenance" program must be installed separately on the PC where the database is resident. See chapter 23.2.2 "Installation Planning".
- If the data base server (MSDE) was installed on the operating systems 2000 or XP without SQL server authentication (only with Windows authentication), the "DB Maintenance" actions under the registers **Restore** and **Database** can be performed only by a member of the administrators group.
- A backup or restore with "DB Maintenance" is only possible with a local administrator on the database server.
- Changes should only be performed by a specialist in order to prevent the possibility of data being lost.
- When working with "DB Maintenance", any attempt to access to databases must be prevented. Make sure that all LabX Clients are closed.
- Logging on is always done under an administrator account.
- Backup is only possible on the PC, where the active database is resident.
- The process can take several minutes.
- The name of the database cannot be changed.

19.2 Starting DB Maintenance

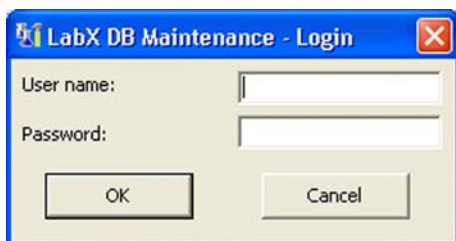
1. Start "DB Maintenance" by double clicking the "LabX DB Maintenance" program icon on the desktop.
- or

Choose **Start > Programs > LabX > LabX DB Maintenance**.

2. Make sure that no LabX client is active in your network, and then confirm the message.



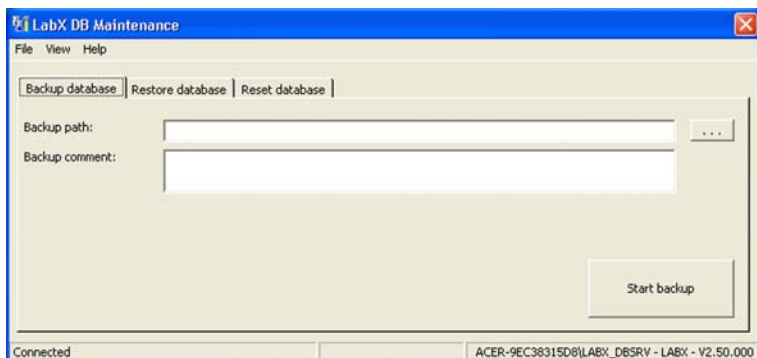
The dialog **LabX DB Maintenance - Login** appears. (**LabX pro** only).



3. Enter a user name and a LabX administrator password in the dialog and click **OK**.

19.2.1 Data backup

1. Start "DB Maintenance".
2. Click the **Backup database** tab.



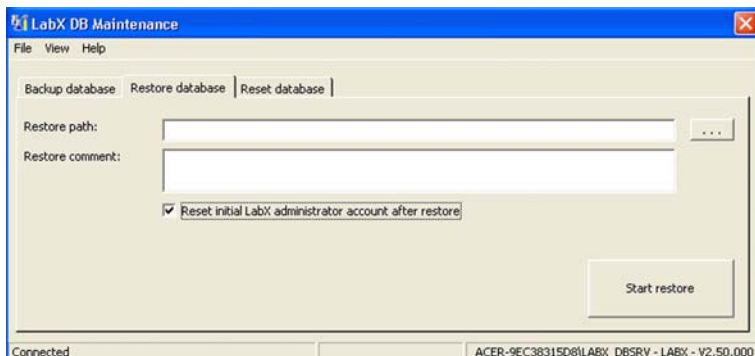
3. Click the **...** button to the right of the "Backup path:" box and the dialog box to save files appears. LabX provides a name for the file; you can change this as required.
4. Choose the destination folder and click **Save**.
5. Click the **Start backup** button to perform the data backup.

Note

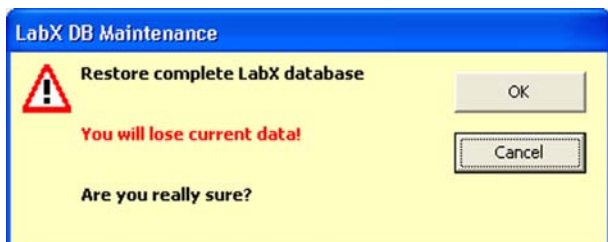
- The secured file has the extension .BAK.

19.2.2 Data restore

1. Start DB Maintenance.
2. Click the **Restore database** tab.



3. If you mark the check box "Reset initial LabX administrator account after restore", an administrator with the user name "admin" and password "admin" will be created.
Click the [...] button to the right of the "Restore path:" box and the dialog box to open files appears. Select a backup copy and click **Open**.
4. If you click **Start restore**, a dialog box appears.



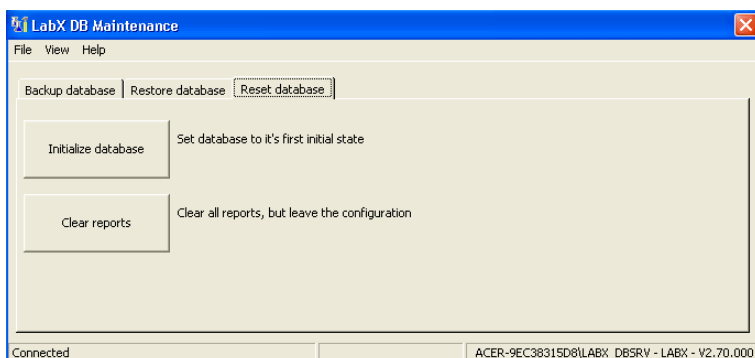
5. The database will be restored once you click the **OK** button.

Notes

- **The currently active database will be overwritten without any further warning once you click the OK button in the Dialog.**
- It is possible that an administrator does not know the password for a database being restored. If you mark the check box "Reset initial LabX administrator account after restore", an administrator with the user name "admin" and password "admin" will be created.
- It may not be possible to perform a restore operation when the Scheduler component is in use (since it uses the database). In this case, wait until the Scheduler is not active to perform the restore operation.

19.2.3 Data initialization/clear

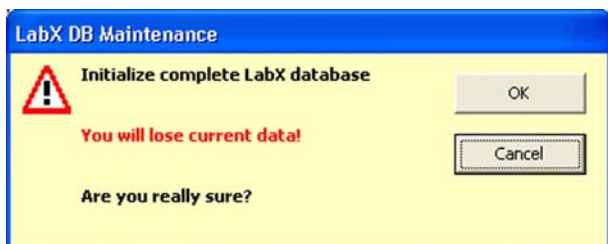
1. Start DB Maintenance.
2. Click on the **Reset database** tab.



- If you click **Initialize database** a dialog box appears.
The database is initialized once you click the **OK** button.

or

If you click **Clear reports** a dialog box appears.
All the applications and installation data are retained (only the reports are deleted) once you click the **OK** button.



19.3 Automated data backup

Using the windows function "Scheduled Tasks" and the LabX component "LabX Database Maintenance" the database backup can be automated. The backup can be executed at regular intervals, for example every evening at 7 pm.

- Open the "Control Panel" in Windows and double-click on "Scheduled Tasks".
- Double-click on "Add Scheduled Task". The "Scheduled Task Assistant" will appear.
- You must indicate the path to the program component "LabX Database Maintenance" of LabX. You can find this program component under: Programs\Mettler-Toledo\LabX\DBServices\DBTools.
- If you create this task you will be prompted to enter the user name. This is the user under whom DBMaintenance runs.
- The command line to be executed is for example:

```
"C:\Programs\Mettler-Toledo\LabX\DBServices\DBTools\DBMaintenance.exe" /b c:\mybackup
```

/b is the parameter for backup.
c:\mybackup is the target directory for the backup. The target directory must exist, the user under whose name the task is running must possess write entitlements.

Note

For data backups we recommend the use of a network which is saved in regular intervals.

20 Audit Trail **LabX pro only**

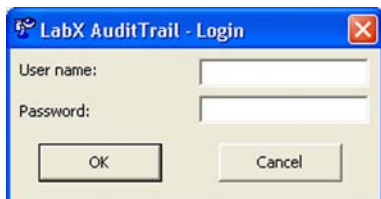
The **Audit Trail** records all the important activities such as: Logging on, starting the application, creating application, changing application. The **Audit Trail** is only a viewer and is an independent program that is started separately from LabX. With the filter function, you can limit the data records so that only those data records that are of interest to you are visible. To be able to access **Audit Trail**, you must have LabX administrator rights; make sure that you log in on as a user with the necessary rights.

1. Start "**Audit Trail**" by double-clicking the "Audit Trail" program icon on the desktop.

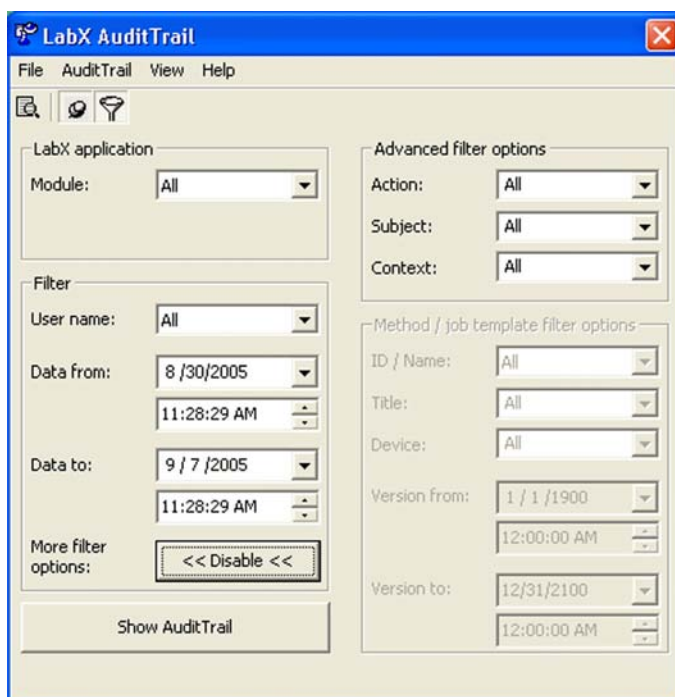
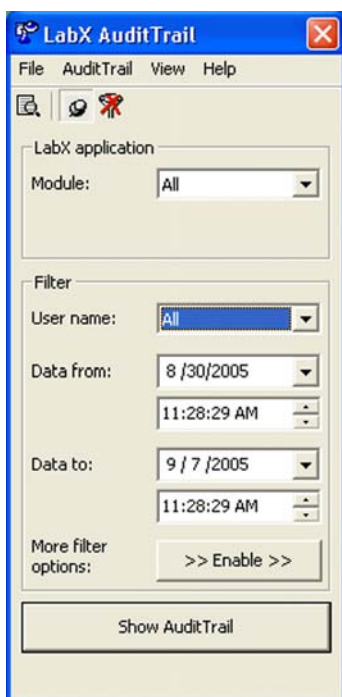
or

Choose **Start > Programs > LabX > LabX Audit Trail**.

The dialog **LabX Audit Trail** appears



2. Enter your user name and password in the "**LabX Audit Trail - Login**".






3. You can now enter the filter criteria. Select either a user, or all users in the drop-down list in the "User name:" box. Enter values for the "Data from" and "Data to" date range and confirm the entries by clicking the **Show Audit Trail** button or . You may activate additional filter criteria by clicking the "More filter options:" **Enable** button or . Enter filter criteria and confirm the entries by clicking the **Show Audit Trail** button or . The **LabX Audit Trail** window appears with a table of all activities.



Available options

LabX AuditTrail

Date	Action Subject	User Name	Full Name
9/6/2005 11:25:36 AM	DBMaintenance: login successful LABX ----- C: Installation/Upgrade/Maintenance R: Automatic entry O: N:	admin	Development Administrator
9/6/2005 11:24:33 AM LabX balance	Exit LabX balance ----- C: User R: Automatic entry O: N:	admin	Development Administrator
9/6/2005 11:05:19 AM LabX balance	Login successful LabX balance ----- C: User R: Automatic entry O: N:	admin	Development Administrator
9/6/2005 10:21:53 AM LabX balance	Modify Result R1 Control Limit Low (T1-) (Created) ----- C: Job template Wyss R: Automatic entry O: N: 199.9997	admin	Development Administrator
9/6/2005 10:21:53 AM LabX balance	Modify Result R1 Control Limit High (T1+) (Created) ----- C: Job template Wyss R: Automatic entry O: N: 200.0020	admin	Development Administrator
LabX AuditTrail 3 / 28 9/6/2005 11:31:19 AM			

- **Zoom** drop-down list on the toolbar for expanding and scaling the display.
- The **Print**  icon on the toolbar for printing.
- With the **Navigation arrows**  you can backward and forward or jump to the end or beginning. You can also enter the desired page number in the box and press the Enter key on the PC keyboard.
- The **Export**  icon on the toolbar is for exporting files in HTML or text format to any folder. The exported files can be opened with a Web browser or text editor and displayed.

Notes

- The **LabX Audit Trail** dialog box is always in the foreground. To disable this property click on .
- You can quit **LabX Audit Trail** by clicking the **Close**  button on the title bar of the dialog box.
- The "**Audit Trail**" program can be installed separately on any LabX PC. See chapter 23.2.2 "Installation planning".

21 What is 21 CFR Part 11?

21CFR Part 11 is a regulation issued in 1997 by the American **F**ood and **D**rug **A**dministration (**FDA**) to define the requirements for submitting documentation in electronic form and the criteria for the use of legally binding electronic signatures.

Section **21** covers all regulations pertaining to **GCP** (**G**ood **C**linical **P**ractice), **GLP** (**G**ood **L**aboratory **P**ractice) and **GMP** (**G**ood **M**anufacturing **P**ractice), collectively designated GxP, relating to the pharmaceutical and health care industries.

CFR relates to the “**C**ode of **F**ederal **R**egulations”.

Part **11** covers all FDA regulated issues pertaining to electronic records and electronic signatures.

This regulation is of importance to all U.S. pharmaceutical and health care companies together with all international pharmaceutical or health care companies wishing to or currently exporting to the USA. In addition to the above, many countries or companies are using this regulation as a guideline for developing their own guidelines or regulations.

21.1 Purpose of 21 CFR Part 11

The main purposes of 21 CFR Part 11 are:

- To allow the use and submission of electronic data instead of having to store and submit a mass of paper documentation.
- To prevent, or at least reduce the risk of, records being deliberately manipulated to falsify results.
- To prevent unauthorized access to data.
- To ensure traceability of data to their originator or owner.

21 CFR Part 11 compliance cannot be provided by an instrument or analytical system alone. To fully comply with the rule, it is important for an organization that uses electronic data and electronic signatures to have Standard Operating Procedures (SOPs) that support and complement the functionality within the analytical system being used. In addition to the above, it is also the responsibility of the organization to ensure that all personnel involved have an adequate level of education, are aware of, and are trained on 21 CFR Part 11 related issues.

Companies that need to comply with this regulation must define their own realistic requirements. Compliance is not the responsibility of the equipment or system supplier. All the supplier can do is to provide systems that support compliance thus making it easier for the organization to become or remain compliant.

The final Electronic Records and Electronic Signature Rule may be accessed at http://www.fda.gov/ora/compliance_ref/part11

21.2 Implementation within LabX **LabX pro only**

LabX pro functions are designed for FDA 21 CFR Part 11 compliant workflow/data processing. As defined by 21 CFR Part 11, LabX balance software together with connected balances comprises a closed system. Section 11.3 defines a Closed system as "an environment in which the system access is controlled by persons who are responsible for the content of electronic records that are on the system".

Section 11.10 addresses controls for closed systems and the security of closed systems:

"Persons who use closed systems to create, modify, maintain, or transmit electronic records shall employ procedures and controls designed to ensure authenticity, integrity, and when appropriate, the confidentiality of electronic records, and to ensure that the signer cannot readily repudiate the signed record as genuine."

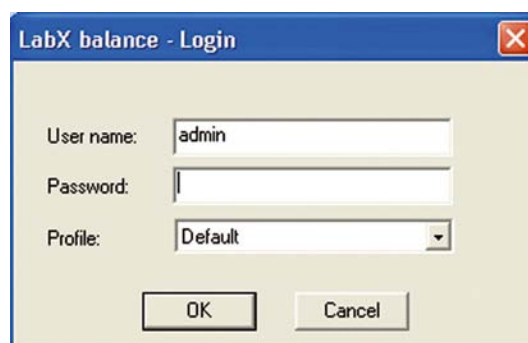
Such procedures and controls should include:

"Limiting system access to authorized individuals."

Login

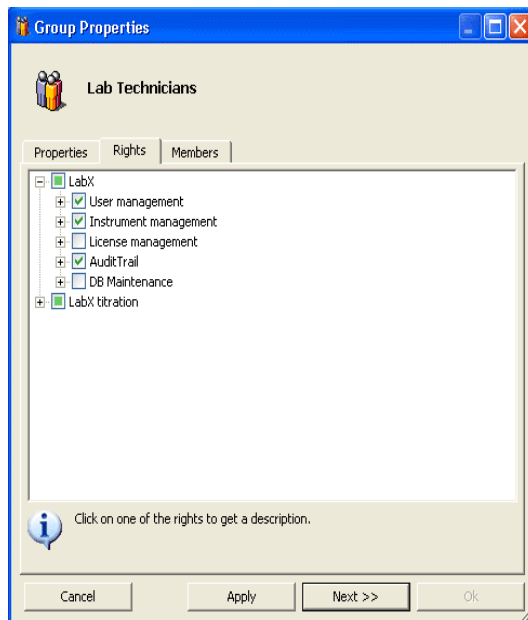
Login to the system is only possible by entering a matching and valid user name and password. Signatures must employ at least 2 distinct components such as ID code and password. After logging in, the name of the current user is displayed on the screen. LabX can be locked automatically after a specified time to prevent unauthorized access while the instrument is unattended.

"Use of authority checks to ensure that only authorized individuals can use the system, electronically sign a record, access the operation or computer system input or output device, alter a record, or perform the operation at hand."



Group Manager

User Account defined by unique user name and password. User Profile defined in 4 groups. Comprehensive definition of individual access privileges.



Electronic signature

With the option "Sign all modifications" in the "General policies" activated, all additions, modifications or deletions require an electronic signature together with the reason for the change. These details are then automatically entered in the **Audit Trail**.

Section 11.200 states that:

"Electronic signatures that are not based upon biometrics shall: (1) Employ at least two distinct components such as an identification code and a password."

LabX requires that each person trying to access the system has to enter a unique user name and password (see Login).

Sector 11.300 states that:

"Persons who use electronic signatures based upon the use of ID codes in combination with passwords shall employ controls to ensure their security and integrity. Such controls shall include:

- Uniqueness of each User ID/password combination;
- Ensuring that identification code and passwords are periodically checked, recalled or revised (e.g. to cover such events as password aging);
- Following loss management procedures to electronically deauthorize lost, stolen, or otherwise potentially compromised devices that bear the identification code and password;
- Use of transaction safeguards to prevent unauthorized use of passwords and/or identification codes, and to detect and report any attempts at their unauthorized use."

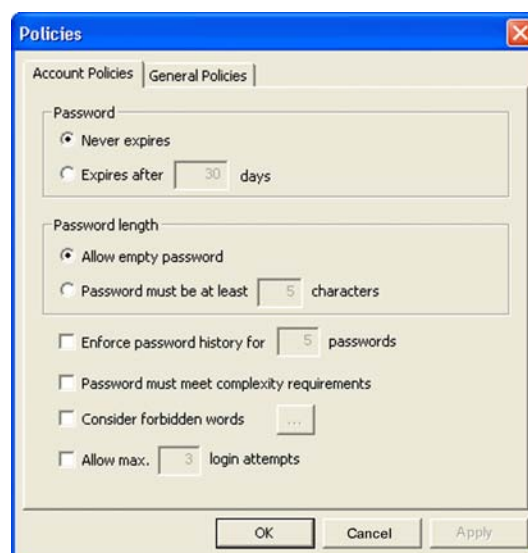
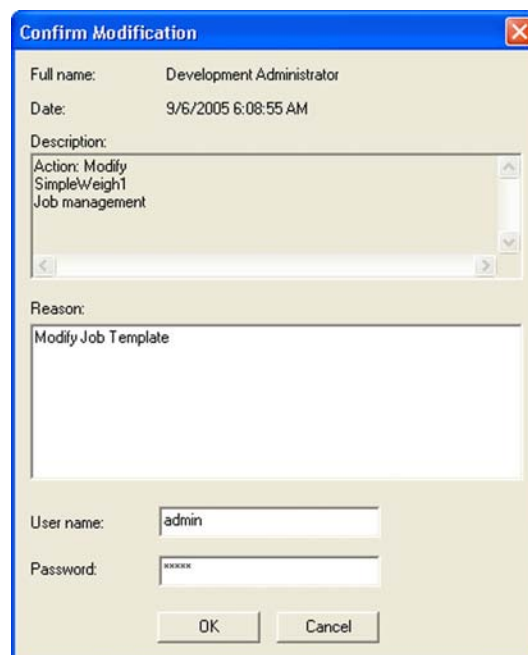
Passwords

It is possible for the Administrator to set up password controls such as:

- Passwords have a minimum length.
- Passwords must contain a mixture of letters, numbers and special characters.
- Passwords expire after specified intervals and must be redefined.
- A defined history of passwords cannot be reused.
- Passwords do not include forbidden strings.

A user account is automatically deactivated after x consecutive unsuccessful login attempts and can only be reactivated by an Administrator. In addition it is possible for the Administrator to manually deactivate or activate an user account and force the user to enter a new password (see Group Manager).

Any successful or unsuccessful login attempt is automatically entered in the **Audit Trail** log.



Audit Trail

Use of secure, computer-generated, time-stamped **Audit Trail** to independently record the date and time of operator changes. Record changes shall not obscure previously recorded information. The log file can be viewed, printed and backed up.

Section 11.50 states that:

"Signed electronic records shall contain information associated with the signing that clearly indicates all of the following: (1) The printed name of the signer; (2) The date and time when the signature was executed; and (3) The meaning associated with the signature."

LabX AuditTrail			
Date	Action Subject C: Context R: Reason O: Old Value N: New Value	User Name	Full Name
9/6/2005 11:25:36 AM	DBMaintenance: login successful LABX C: Installation/Upgrade/Maintenance R: Automatic entry O: N:	admin	Development Administrator
9/6/2005 11:24:33 AM	Edit LabX balance C: User R: Automatic entry O: N:	admin	Development Administrator
9/6/2005 11:05:19 AM	Login successful LabX balance C: User R: Automatic entry O: N:	admin	Development Administrator
9/6/2005 10:21:53 AM	Modify Result R1 Control Limit Low (T1-) (Created) C: Job template Wtms R: Automatic entry O: N: 199.9997	admin	Development Administrator
9/6/2005 10:21:53 AM	Modify Result R1 Control Limit High (T1+) (Created) C: Job template Wtms R: Automatic entry O: N: 200.0020	admin	Development Administrator

Data security

All data is stored in a database that cannot be directly accessed by a user. It is impossible to remove or alter data in an uncontrolled manner.

21.3 Specific implementation of user login within LabX pro balance **LabX pro only**

21.3.1 The impact of PC solution on the weighing process

Connecting lab instruments to the network thanks to networkable PC-solutions is a big trend in the pharmaceutical and chemical industries. Let us compare the weighing process and the titration process (titration is taken as an example), both with PC solutions and highlight the main differences.

Imagine an analyst wanting to execute a titration task. Following steps have to be executed:

- Step 1: The analyst sets up the titrator and prepares the required material.
- Step 2: The analyst starts the titration task from the PC.
- **Step 3: The titrator executes the method.**
- Step 4: The analyst evaluates data on the PC, edits a report.

Now, imagine the analyst wanting to weigh a sample on a computerized balance.

- Step 1: The analyst sets up the balance.
- Step 2: The analyst starts the weighing job from the PC.
- **Step 3: The analyst executes the weighing job on the balance.**
- Step 4: The analyst evaluates data on the PC, edits a report.

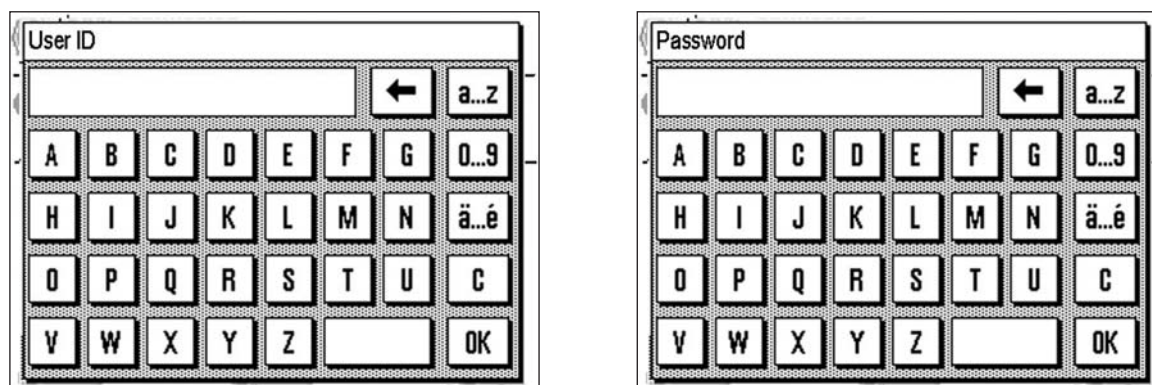
Contrary to the titration activities, the analyst is still needed in front of the instrument during weighing data acquisition (step 3). This cannot be changed without balance automation! Two main choices are offered to preserve the analyst's efficiency:

- Choice A- The analyst can start the weighing job from the balance.
- Choice B- Reduce distance between PC and balance.

21.3.2 A- and B- Choices: discussion about Part 11 compliance

A-Choice

The A-choice is possible for **LabX pro** in use with the AX, MX, UMX and XP balances thanks to their comfortable Touch Screens. This special feature, called "Rapid Access", allows the user to start any routine weighing task directly from the balance display at any time and execute it without touching the PC. These balances must be equipped with the Application "Remote" or LabX Client. In a multi-user and multi-instrument environment (e.g. 3 users, 5 balances), in order to trace which user has executed which weighing job, a login mechanism is necessary on the balance. The current implementation within the **LabX pro** balance Software allows the user to log into LabX from the balance display. This login strictly follows the settings within LabX user manager.



B-Choice

The B-choice is valid for all other balances supported by LabX balance. The weighing job is started at the PC by the analyst (login described in Section 21.3) and must be executed immediately on the balance by this analyst. The customer is responsible to decide which practical set-up best fits his interpretation of 21 CFR Part 11:

- 1 PC next to each balance. Although LabX balance does not need a PC next to each balance, this solution clearly underlines that the lab assistant who starts the weighing job also executes it immediately on the balance next to it.
- 1 PC near to a group of balances. LabX balance can support multiple balances, serially connected or connected to the network. In that case, we recommend that weighing jobs started from that PC only concern the group of balances nearby. The "Profile" feature of LabX is appropriate to ensure that the analyst starting the weighing job is also the person who executes it.

22 Appendix LabX Functions

Balance Model required SW-Version	AX/IMX/UMX Remote-SW >= V 1.11	AX/IMX/UMX V >= 3.22	XS	XS Application LabX Client >= V 4.00	XP Remote-SW >= V1.10 or Application LabX Client >= V 4.00	XP	AT/MT/UMT	AG/PG-S V >= 1.20	AG/PG/SG/PG-S V < 1.20	PR/SR V >= 1.65	AB-S/PB-S	AB-L/PB-L
LabX Function												
Rapid Access	✓	-	-	✓	✓	-	-	-	-	-	-	-
Allows Alphanumeric Password	✓	-	-	✓	✓	-	-	-	-	-	-	-
Job Execution	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Date/Time Synchronizing	✓	✓	✓	✓	✓	✓	-	-	-	✓	-	-
MinWeigh Support	✓	✓	-	-	✓	✓	-	-	-	-	-	-
SmartTrac Support	✓	✓	-	-	✓	✓	✓**	-	-	✓**	-	-
Info Field Control	✓	✓	-	✓	✓	-	-	-	-	-	-	-
LabX Controlled Local Printout	✓	-	✓	✓	✓	✓	-	✓	✓	✓	-	-
FACT/proFACT Settings	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
FACT/proFACT Hoover	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
Maintenance Job Execution	✓	✓	✓	✓	✓	✓	✓*	✓	✓*	✓	✓	✓*
Adjustment/Test Scheduler	✓	✓	✓	✓	✓	✓	✓*	✓	✓*	✓	✓	✓*
Adjustment/Test Histories	✓	✓	✓	✓	✓	✓	✓*	✓	✓*	✓	✓	✓*
Balance Release Control	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Service Date	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MinWeigh Date	✓	✓	-	-	✓	✓	-	-	-	-	-	-
Power Up Time	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
Level Sensor Check	-	-	-	-	✓	✓	-	-	-	-	-	-
Adjustment Event Check	✓	✓	✓	✓	✓	✓	-	✓	-	✓	✓	-
Test Result Check	✓	✓	✓	✓	✓	✓	-	✓	-	✓	✓	-
Repeatability Test Result Check	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓* Only Repeatability

✓** "Accept only weights within tolerance" feature is not supported

Note

It is recommended to upgrade all balance software versions when installing/upgrading LabX software.

23 Network installations **LabX pro only**

LabX is available in two versions:

- **LabX light** includes all the standard application functions.
- **LabX pro** offers all the functions of **LabX light**, but also includes additional functions such as network capability, quality management, security and automatic export features.

The advantage of a network installation is that all data is stored centrally on the server. This thereby eliminates data redundancy and minimizes the problem of data security.

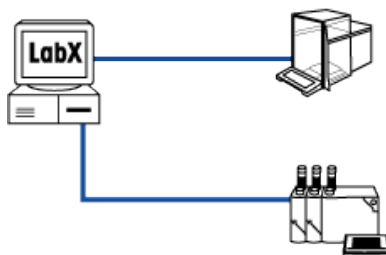
You can log on at any LabX Client on your network and follow applications in another laboratory, or view the results of applications that you performed beforehand in the laboratory. A job template is only present once on the server and can be used on several titrators.

The server should be installed by trained specialists. Our own specialists will be pleased to help you with the installation. Please contact your METTLER TOLEDO representative.

23.1 Network examples

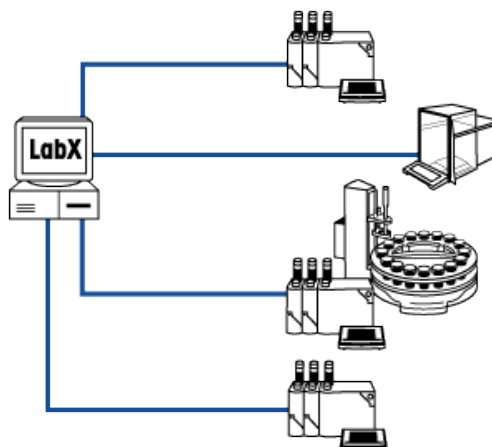
23.1.1 LabX light

You can connect a titrator and a balance. You can connect the devices either via USB, RS232 or Ethernet.



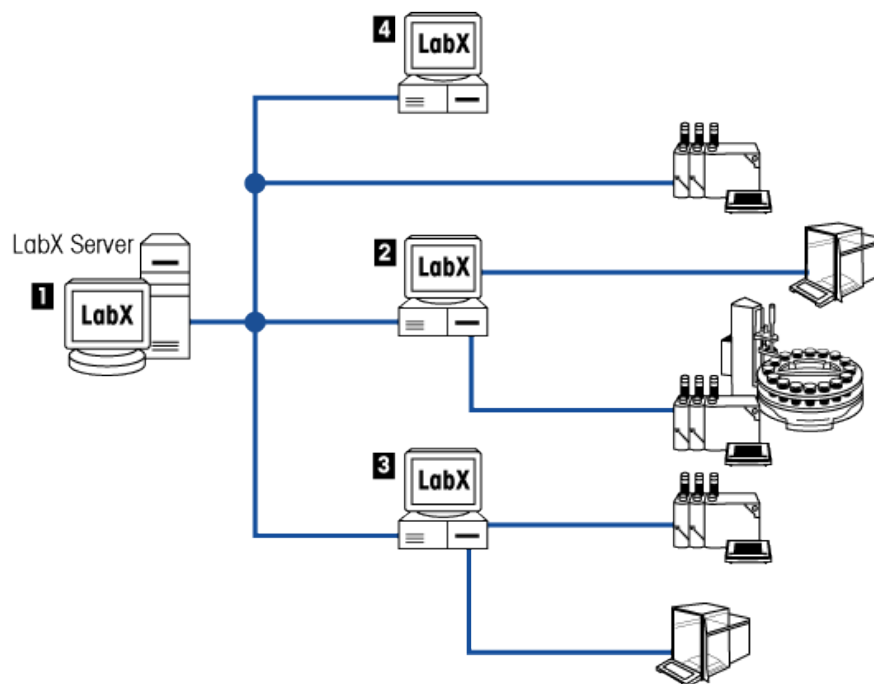
23.1.2 LabX pro stand alone installation

With a standalone solution you can use several titrators and a balance. In addition, **LabX pro** fulfills quality management requirements. You can connect the devices either via USB, RS232 or Ethernet.



23.1.3 LabX pro network installation

A network installation allows you to use LabX and several titrators and/or balances over the network. The data is stored on the server. You can work at any computer, and perform weighing jobs.



	PC 1	PC 2	PC 3	PC 4
Client Component	•	•	•	•
Device server	•	•	•	
Database	•			
Broker	•			
DB Maintenance	•			
Audit Trail				•

23.2 General notes on network installation

LabX consists of 6 software components that partly dependent on each other and can be installed on different computers. The components are the:

- Device Server Component
- Broker Component
- Client Component
- Database
- DB Maintenance
- Audit Trail

Device Server Component

This component is responsible for communication between the instruments and the Broker. You can connect the devices either via USB, RS232 or Ethernet. The Device Server Component can be installed more than once on a system.

Broker

This component coordinates all the activities that take place between the different components. The Broker Component may only be installed once on a system.

Client Component

This component (GUI) enables LabX to be operated by the graphical user interface and can be used to control devices. The Client Component can be installed more than once on a system.

Database

The Database enables data generated by LabX to be stored in a structured way. The Database may only be installed once on a system.

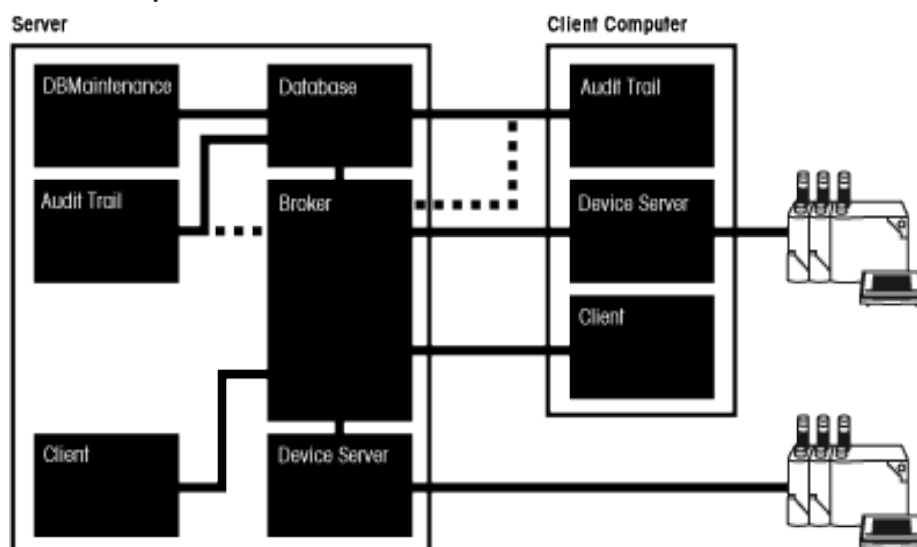
DB Maintenance

The DB Maintenance Program (only in English) allows you to backup and restore databases. DB Maintenance can only be installed on the database server.

Audit Trail

The "Audit Trail" program displays and prints all the important activities such as logging on, starting job templates, creating job templates, changing job templates. The Audit Trail can be installed more than once on a system.

Schematic representation



23.2.1 Optimizing the performance of the installation

We recommend that the Broker Component and the Database be installed on the same computer. This reduces network traffic significantly compared with when the components are installed separately.

We strongly recommend the use of a powerful computer for the server installation.

23.2.2 Planning the installation

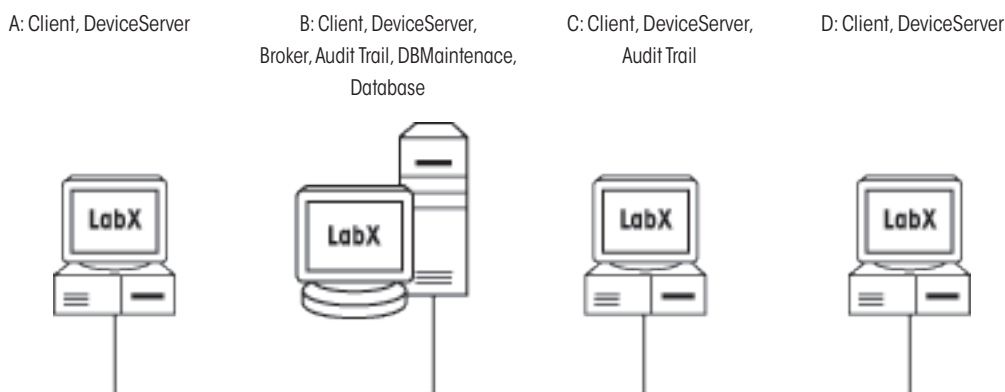
When you install **LabX pro**, you can choose either a "Standalone Installation" or a "Distributed Installation". The "Standalone Installation" option installs all the components on one computer, while the "Distributed Installation" leaves it to you to decide which to install where.

1. Identify the computers you want to use with LabX.
2. Identify the computer on which you want to install the Database Component and note its name.
3. Identify the computer on which you want to install the Broker Component and note its name (the computer with the Database server is recommended).
4. Identify the computers to which you want to connect the instruments. The device server component must be installed on these computers.
5. Identify the computers on which you want to install the Client Component.

With a "Distributed Installation", the following information is needed:

- When a Client Component is installed: the name of the broker computer.
- When the Broker Component is installed: the name of the database computer.

Example



In this example, the system comprises 4 computers.

All the components are installed on computer B. This means that LabX can be installed with the "Standalone Installation" option.

The "Distributed Installation" of the Client components requires the name of the computer on which the Broker Component was installed (computer B).

23.3 Installation (Distributed)

In order to be able to install the software, you must have administrator rights on the PC. It is mandatory, that the following services and Windows settings are installed and active:

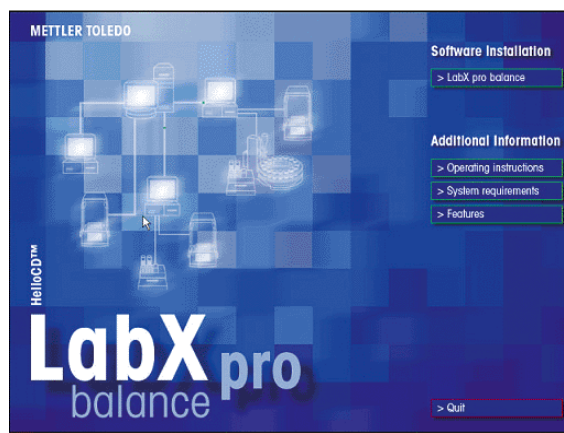
- TCP/IP Protocol
- DCOM
- WMI
- File and Printer Sharing for Microsoft Network.
- "Use simple file sharing" must be deactivated.

23.3.1 Installation (Server)

If you want to use a SQL server make sure, that a SQL server in a named or unnamed instance is available.

This is how you install LabX:

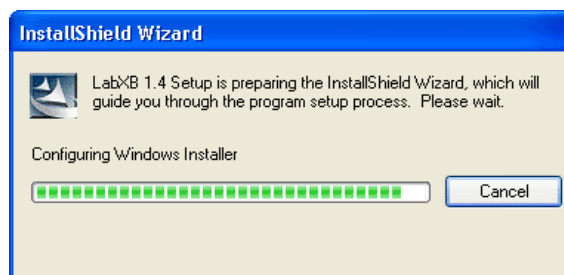
1. Insert the LabX CD in the CD-ROM drive. The HelloCD window appears automatically with a choice of different options. (If the HelloCD window does not appear, double-click start.exe on the CD in the Windows-Explorer to start the installation). Choose **Software Installation > LabX pro balance**.



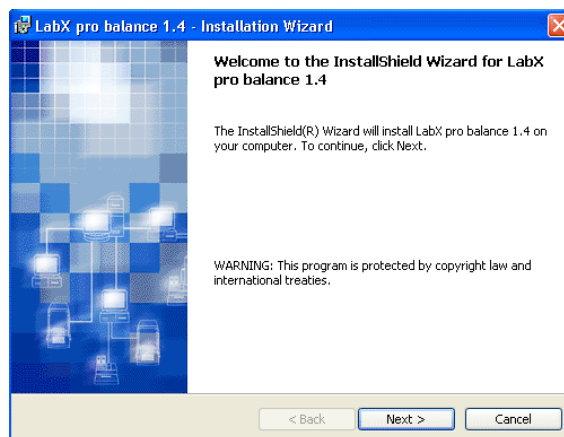
2. Choose the language for the installation routine.



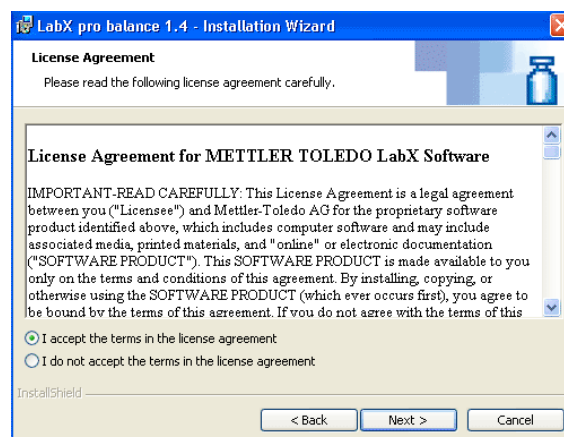
The installation program prepares the installation and examines the available software components.



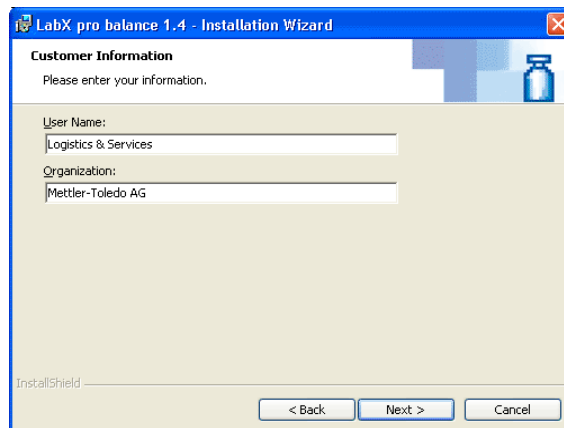
3. The welcome screen appears. Click **Next**.



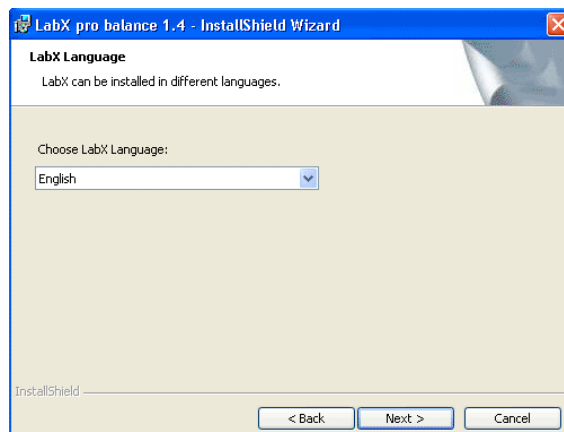
4. The license agreements are displayed. Mark the option that you accept these and click **Next**.



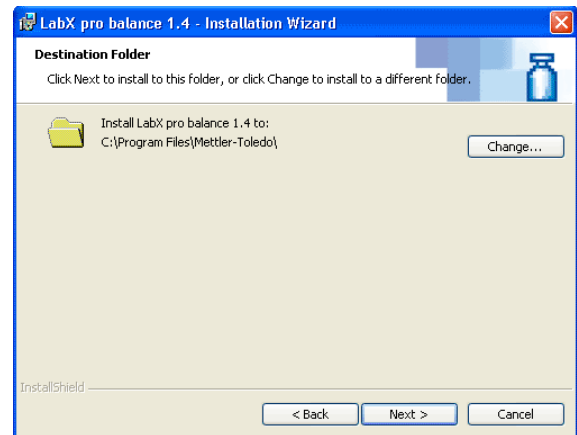
5. The user information and the use of LabX are displayed. Enter this and click **Next**.



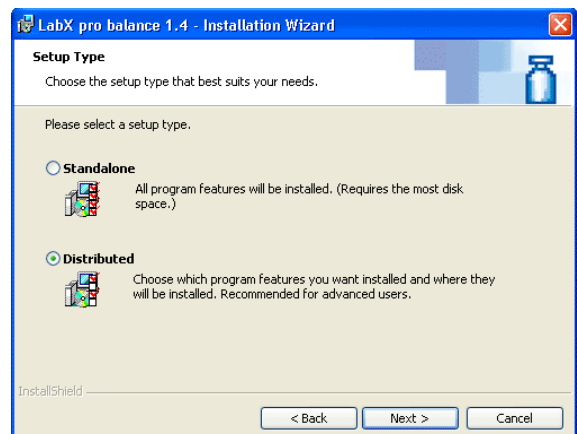
6. Select the language for the LabX Installation and click **Next**. A subsequent change of the language is not possible.



7. Select the target folder and click **Next**.

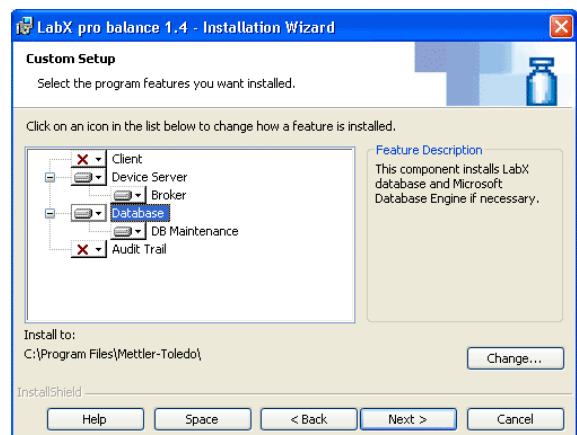


8. When installing **LabX pro**, you can choose between a “Stand-alone” installation or a “Distributed” installation. Select “Distributed” and click **Next**.



9. Select the components “Database” and “DB Maintenance” that you want to install on this PC and click **Next**.

- If no “Broker” is installed, you will be prompted to enter the name of the PC where the corresponding broker is installed.
- In order to connect devices via Ethernet, a “Device Server” has to be installed on the same PC as the “Broker” component is installed.



10. Select a password for the user “LabX” and click **Next**.

- The password must be identical on all PCs.
- A new local Windows user (VUSR_LabX) is created.



11. Select the administrator password for the MSDE (Database Engine) and click **Next** if you want to install a MSDE on the local PC.

or

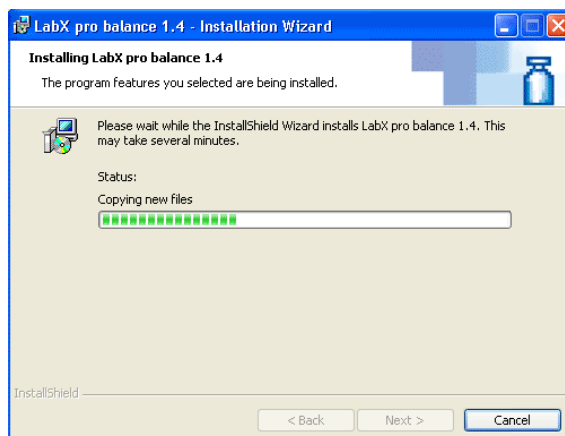
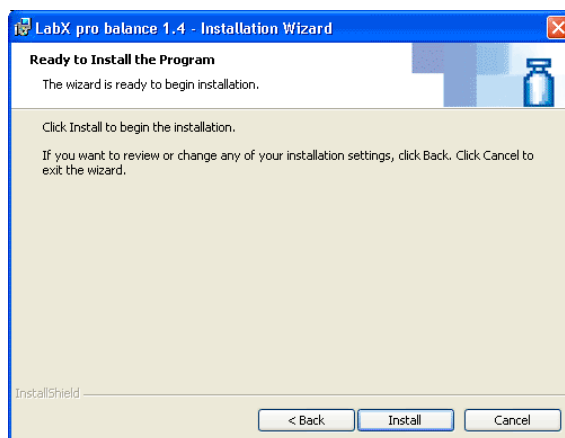
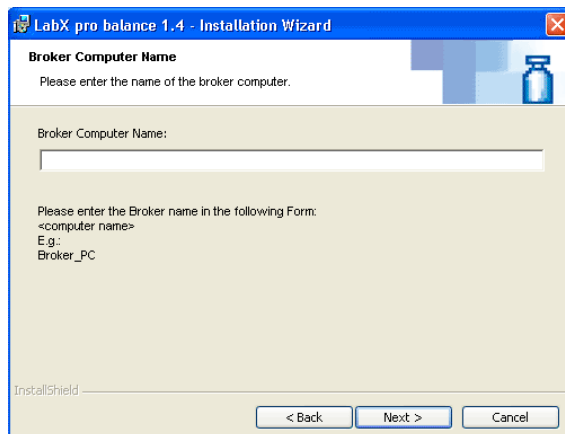
select from the drop-down list an existing SQL server, installed on the local PC.

The LabX database will be installed on the SQL server you selected.

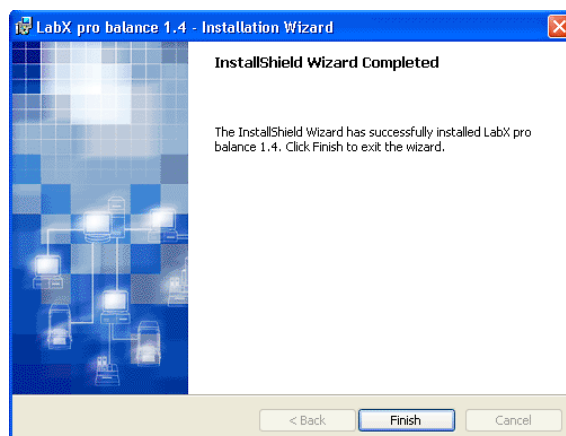
12. If no "Broker" is installed, enter the name of the PC where the corresponding "Broker" is installed.

13. Start the installation of the components by clicking **Install**.

14. The installation of various software components is executed and displayed.



15. On completion of installation, click **Finish** to complete the operation. We recommend that you should now reboot the system.



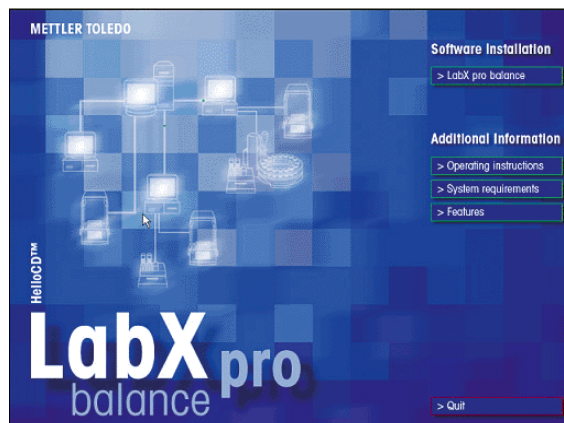
Notes

- In order to correctly display superscripted and subscripted numbers, e.g. in the job editor, the Option "Install files for Asian languages" must be activated. It may be necessary to install additional operating system components.
- In the chapter 23.3.5 "Error messages" you will find a listing with possible errors and their correction.

23.3.2 Installation (Client)

This is how you install LabX:

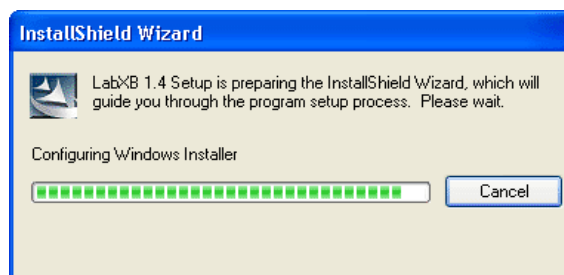
1. Insert the LabX CD in the CD-ROM drive. The HelloCD window appears automatically with a choice of different options. (If the HelloCD window does not appear, double-click start.exe on the CD in the Windows-Explorer to start the installation). Choose **Software Installation > LabX pro balance**.



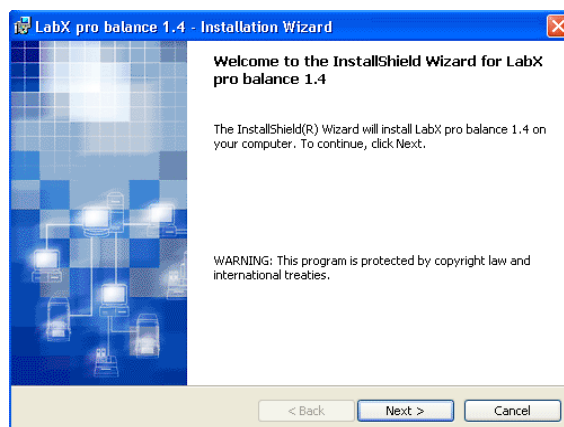
2. Choose the language for the installation routine.



The installation program prepares the installation and examines the available software components.



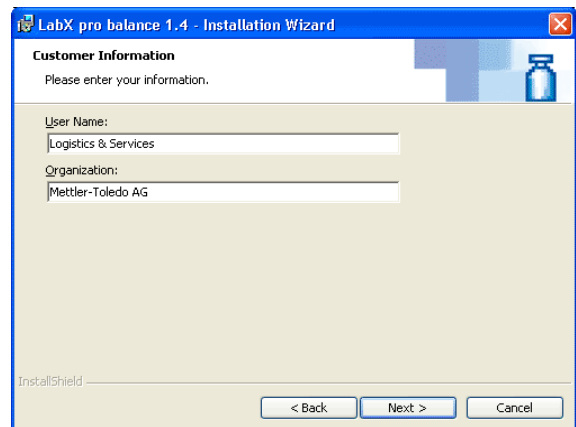
3. The welcome screen appears. Click **Next**.



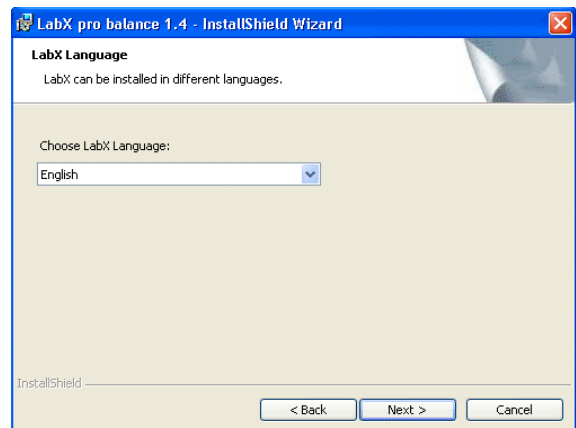
- The license agreements are displayed. Mark the option that you accept these and click **Next**.



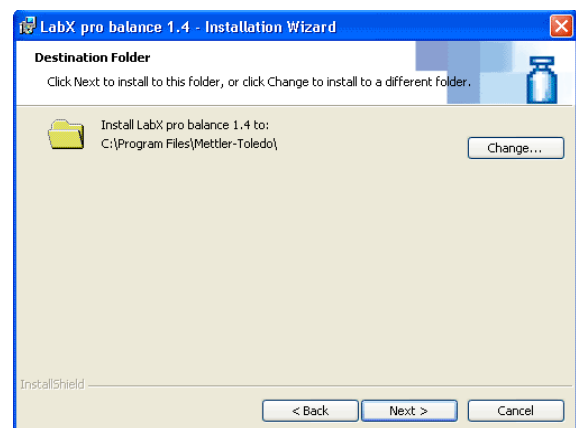
- The user information and the use of LabX are displayed. Enter this and click **Next**.



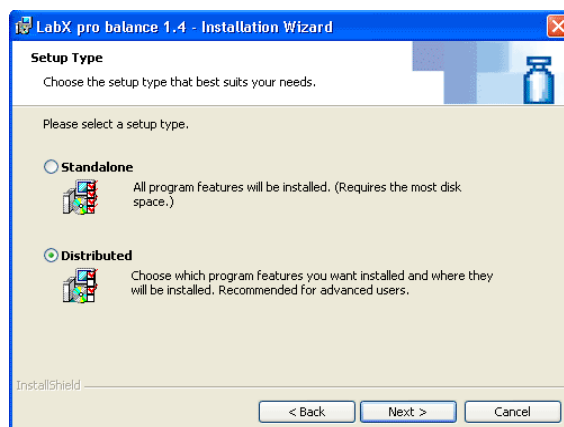
- Select the language for the LabX Installation and click **Next**. A subsequent change of the language is not possible.



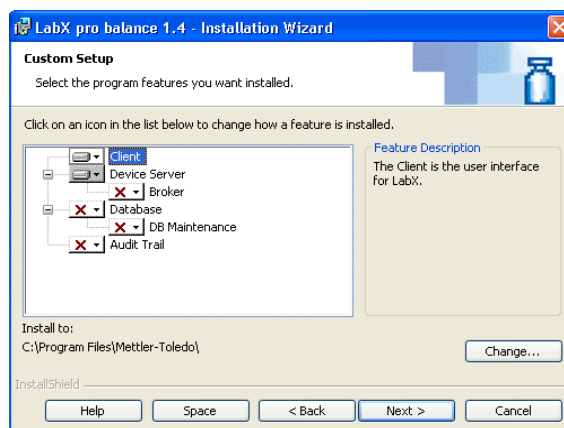
- Select the target folder and click **Next**.



8. When installing **LabX pro**, you can choose between a “Standalone” installation or a “Distributed” installation. Select “Distributed” and click **Next**.



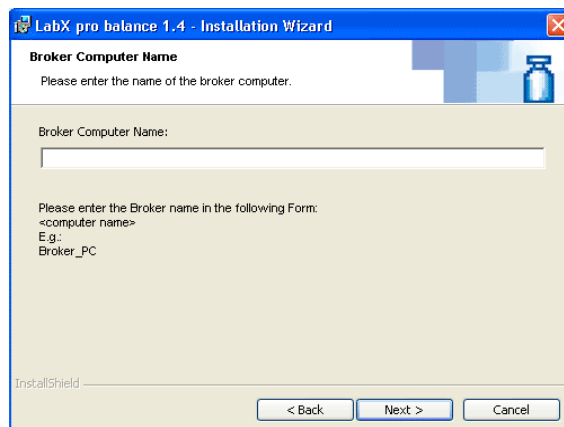
9. Select the components “Client” and “Device Server” that you want to install on this PC and click **Next**.



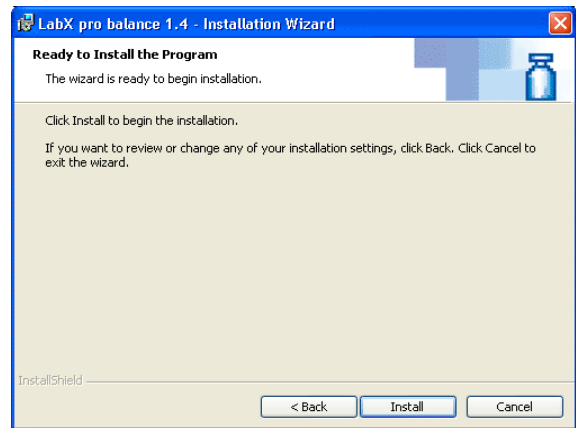
10. Select a password for the user “LabX” and click **Next**.
- The password must be identical on all PCs.
 - A new local Windows user (VUSR_LabX) is created.



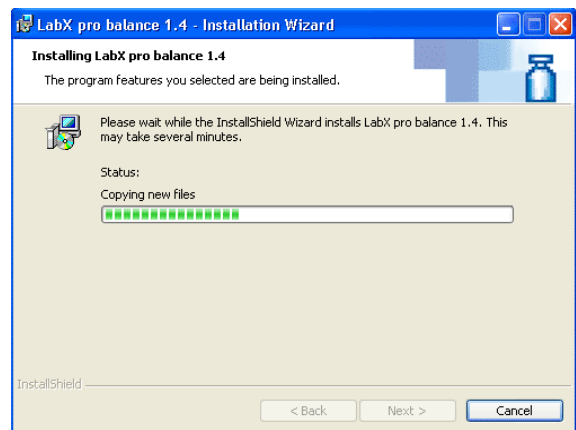
11. Enter the name of the PC where the corresponding “Broker” is installed.



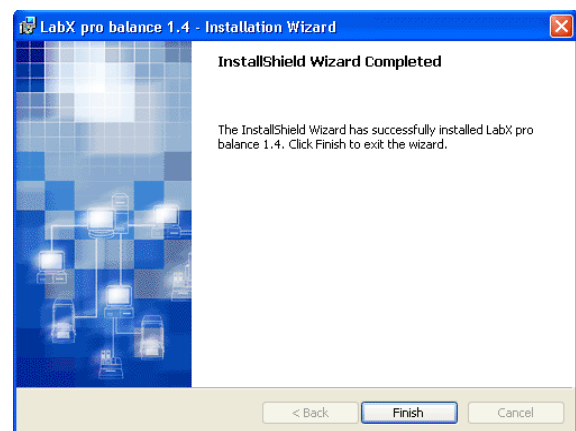
12. Start the installation of the components by clicking **Install**.



13. The installation of various software components is executed and displayed.



14. On completion of installation, click **Finish** to complete the operation. We recommend that you should now reboot the system.



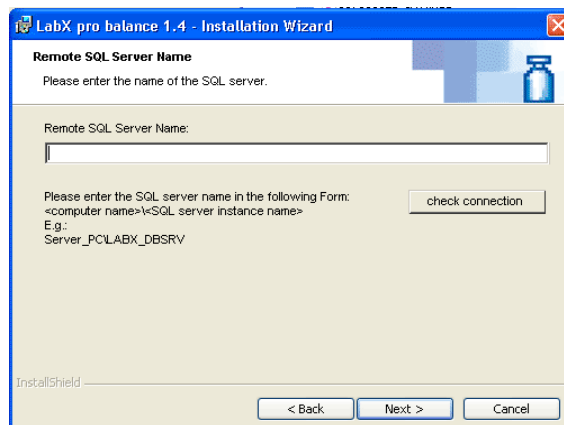
Notes

- In order to correctly display superscripted and subscripted numbers, e.g. in the job editor, the Option “Install files for Asian languages” must be activated. It may be necessary to install additional operating system components.
- In the chapter 23.3.5 “Error messages” you will find a listing with possible errors and their correction.

23.3.3 Installation (Broker)

In order to connect devices via Ethernet, a "Device Server" has to be installed on the same PC as the "Broker" component is installed.

1. Start the LabX installer. Follow the instructions on the screen.
2. Select the "Broker" and "Device Server" components to be installed on the local PC. Follow the instructions on the screen.
3. Enter the name of the PC where the corresponding MSDE or SQL service is installed and the database name "Computer-name\Instancename".



4. Continue with the installation.

Note

In the chapter 23.3.5 "Error messages" you will find a listing with possible errors and their correction.

23.3.4 Installation of independent systems

If you want to install more than one system, you must make sure that the systems are completely independent of each other. This means that each combination of Broker and Database components must be unique and that no instruments / devices / titrators used in these combinations are common, otherwise serious problems can arise.

23.3.5 Troubleshooting

Error 1603

If "Error 1603" is displayed during the installations, the installation was aborted.

Please follow the steps below to eliminate possible errors.

Causes	Procedures
Check if an old MSDE is installed.	<ol style="list-style-type: none"> 1. Check whether an old SQL service is executed (to be identified by the SQL icon in the task bar). 2. If applicable end the service (Right click the SQL icon and choose MS-SQLServer-Stop). 3. Check whether the following entries are available under Control Panel > Add or Remove Programs. <ul style="list-style-type: none"> - MSDE - Microsoft SQL Server Desktop Engine 4. If one of the listed MSDE is installed, make sure that no other application is using it, before you deinstall it. 5. Remove the MSDE (Control Panel > Add or Remove Programs) 6. Check whether the following folders are available: <ul style="list-style-type: none"> - C:\MSSQL - C:\MSSQL7 - C:\Program Files\Microsoft SQL Server 7. If one of the listed folder is available, rename it.
Check whether "Use simple file sharing" is deactivated.	<ol style="list-style-type: none"> 1. Check whether "Use simple file sharing" is deactivated and if applicable, deactivate it. With Windows XP you find the setting under: Explorer > Tools > Folder Options. In the tab View, deactivate "Use simple file sharing".
Check whether "File and Printer Sharing for Microsoft Network" is available and activated.	<ol style="list-style-type: none"> 1. Open Control Panel > Network Connections. 2. Right click Local Area Connection and choose Properties. 3. Check whether "File and Printer Sharing for Microsoft Network" is available and activated. 4. If not available, install the service. Click Install > Service.
Check whether "File and Printer Sharing for Microsoft Network" is running.	<ol style="list-style-type: none"> 1. Click Start > Run and enter "services.msc". Click OK. 2. Check whether in the window Services the server status is "Started". 3. If the service is not started, right click Server and choose Start.

After all this points were checked, the installation can be again executed.

Error during the launch of LabX

When launching LabX, the defined server units are started. Server units are the broker components, which starts every time, the DeviceServer component is started on every PC, for which a Titrator or a balance is assigned in LabX.

If one of the components cannot be started, an error message appears.

Causes	Procedures
Error during the launch of LabX.	<ol style="list-style-type: none"><li data-bbox="654 394 805 421">1. Quit LabX.<li data-bbox="654 427 1353 454">2. Choose Control Panel > Add or Remove Programs > LabXxx.<li data-bbox="654 461 1040 488">3. Click Modify and choose Repair. Follow the instructions on the screen.

Notes

- A faulty installation of the broker component can also cause an error message of the DeviceServer component.
- Visit our "Knowledge Base" under www.mtlabxinfo.com or contact our local METTLER TOLEDO representative.

23.3.6 Installing Patches, Updates and Upgrades

Patches, Updates and Upgrades must be installed on all PC on which LabX components are available. Please follow the instructions given below. Make sure, that you have administrator rights. Please be aware, that it concerns an intervention into the LabX system and that the procedure needs to be planned carefully. Furthermore, make sure that during the process LabX is not launched on any other PC. LA stands for "local administrator".

Procedure

1. Shut down all the PCs on which components of LabX are installed, with the exception of the server.
2. Print a randomly chosen report and a job or method template.
3. Perform a manual back up, using "DBMaintenance" and copy the backup to a save location (Network drive, USB stick etc.).
4. Restart the server, and do not launch LabX.
5. (LA) Install the patch on the server and follow the instruction of the installer carefully.
6. (LA) Restart the server. Login using the very same user as before the restart and do not launch LabX.
7. (LA) Execute the "Installation Checker" and check that none of the symbols are canceled.
8. Launch LabX and print the same reports, the same job or method template as before and check them for compliance.
9. (LA) Quit LabX on the server and check if all relevant processes are stopped after a short time (approx 15 seconds).

LabX balance	LabX titration
BalBroker.exe	DLBroker.exe
LXDeviceServer.exe	LXDeviceServer.exe
LabXbal.exe	LabX.exe

To check this use the task manager using the keys CTRL-SHIFT-ESC. If the above mentioned tasks are not stopped, restart the server.

10. (LA) Start a client PC and do not launch LabX.
11. (LA) Install the patch on the client and follow the instruction of the LabX installer carefully.
12. (LA) Restart the client. Login using the very same user as before the restart and do not launch LabX.
13. (LA) Execute the "Installation Checker" and check whether non of the symbols are canceled.
14. Launch LabX on a client and check some basic functions of LabX.
15. Repeat the steps 10-14 for all remaining LabX clients including all dedicated Device servers.

Notes

- If there are any inconsistencies between the printouts (see step 8), restore the database using "DBMaintenance".
- For a standalone installation, follow the steps 1-8 only.
- If there are any canceled symbols after executing steps 7 and 13, please use the repair function. Select **Control Panel > Add or Remove Programs > LabXxx**. Click **Modify** and select **Repair**.

24 Index

Symbole

21 CFR Part 11 12, 34, 150, 151, 154

A

AB-L/AB-S/PB-L/PB-S balances 48
 AB-L/AB-S/PB-L/PB-S balances with standard software 133
 Access rights 12, 23
 Account Policies 24, 31, 33
 Activation of the system 21
 Adding comments to the report 142
 Add Serial Balance 49
 Adjustment 59, 60, 61, 62, 63, 65, 67
 Adjustment history 97
 Adjustment job 60, 61
 Adjustment jobs 96, 97, 102
 Adjustments 74, 101
 Adjustments with external weights 56
 Adjustment weights 66, 68
 Administrator 33, 145, 146, 148
 AG, PG-S balances with standard software 127
 AG/PG balances 48
 Appendix LabX Functions 155
 Application 137, 138
 Application "LabX Client" 119
 Application "Remote" 154
 Applications 147, 156
 AT/MT/UMT balances 48
 AT/MT/UMT balances with standard software 125
 Audit Trail 12, 34, 35, 52, 54, 55, 57, 58, 61, 63, 64, 67, 69, 70, 91, 93, 95, 100, 108, 111, 112, 116, 117, 122, 123, 128, 130, 132, 134, 142, 143, 148, 152, 153, 158
 Automated data backup 147
 Automatic export reports 142
 Automatic lock 34
 Autozero 59
 AX/MX/UMX balances 47
 AX/MX/UMX balances with Remote software 104
 AX/MX/UMX balances with standard software 110

B

Backup 13
 Backup of data 144
 Backup on the PC/Server 144
 Balance-specific settings 59
 Balance display 104
 Balance monitor 103
 Balance monitor window 103
 Balance queue 96
 Balance release control 53
 Balance settings 13, 47
 Barcode identification 38
 Barcode reader 109, 112, 118, 124, 128, 130, 132, 134

Basic settings 52
 Baud rate 47
 Bit/Parity 47
 Broker 169
 Broker Component 158

C

«C» key 105, 106, 114, 115, 120, 127, 129, 131, 133
 Calculations 85
 Calibration certificate explorer 13
 Calibration instructions 36
 Certificates 36
 Changing the password of a user 27
 Changing weights 57
 Changing your own password 31
 Character set 47
 Check forbidden strings 33
 Checking balance release 101
 Checking the balance model 99
 Client Component 158
 Closing a weighing job from LabX 102
 COM-Port 49
 Comment 142
 Comments 52
 Communication parameters 49
 Company identification 39
 Company information 39, 139
 COM port 50
 Configuration 48
 Configuring the Release Control 70
 Connecting peripheral devices 46
 Connections 43, 44, 45
 Connection status 74
 Constant Per Sample 84
 Constants 85
 Context menu 14, 56, 57, 75, 92, 93, 94, 96, 97, 99, 100, 101, 125, 127, 129, 131, 133, 141, 143
 Creating a job thanks to Rapid Access-Job Template 100
 Creating a one-time job 100
 Creating maintenance intervals 53
 Creating users and groups 23

D

Data backup 145
 Database 97, 98, 102, 116, 122, 144, 146, 158
 Database backup 144, 147
 Database search/filter function 13
 Data export 13
 Data initialization/clear 146
 Data management 13
 Data restore 146
 Data transfer mode 48
 Data transfer speed 48
 Date 47, 59, 71, 72, 73, 141

DB Maintenance 145, 146, 158
Defining balances in LabX 49
Defining FACT and proFACT settings 59
Defining group rights and group members 28
Defining the balance 83
Defining the computer connection in the balances 47
Defining the data processing 89
Defining the folder for export of reports 40
Defining users and profiles 24
Definition of the Applications data 80
Deleting a user 26
Deleting groups 30
Deleting job templates 95
Deleting reports 143
Deleting samples from a running job 108, 111, 117,
123, 128, 130, 132, 134
Device Server 162, 169
Device Server Component 158
Differential Weighing 81, 82
Directory structure 93
Disconnecting from LabX 109, 118, 124
Display area 59
Displaying documents 36
Displaying histories 71
Display reports 138
Document settings 36
Duplicating job templates 92
Dynamic weighing 81

E

e-Link 46, 47
e-Link EB02 126
Electronic data 150
Electronic signature 12, 34, 35, 52, 54, 55, 57, 58,
61, 63, 64, 67, 69, 70, 91, 93, 95, 100, 140,
142, 143, 150, 152
End of line character 47
End of line mode 48
Enforce sequence of signing 34
Environmental conditions 59
Error 1603 170
Ethernet 13
Evaluation filter 71, 72, 73
Excel 13
Excel table 142
Executing weighings 107, 110, 116, 122, 125, 127,
129, 131, 133
Expiry date of the password 33
Export 107, 111, 116, 122, 125, 127, 129, 131,
133, 149
Exported 135
Exported automatically 91
Export format 141
Export function 141
Exporting a job template 92
Exporting reports 141
Export License Key File 21

F

«F» key 128, 130, 134
FACT 59, 97, 98
FACT histories 37
File format 141
Filter 136, 137
Filter button 137
Filter criteria 136, 137
Filter function 135
Filter settings 138
Forced password change 32
Formula 89
Functions 89
Functions in the report view 141

G

General Policies 34
General Policies tab 34
General settings 33, 82
Generating adjustment and test jobs 100
Generating a weighing job 99
GLP-compliant reports 13
Group Manager 151, 152
Group Membership tab 25
Group properties 28
Groups 23, 29

H

Handshake 47
Help system 13
Histories of adjustment/test 71
Histories of MinWeigh incidents 73
Histories of repeatability 72
Home key 105, 110, 114, 120

I

Icons 45, 75, 136
Identification tab 52
Identifying balances 52
Identifying feature 37
Import Activation Key File 21
Importing a job template 93
Initial Startup of LabX 20
Installation 16
Installation (Broker) 169
Installation (Distributed) 160
Installation (Server) 160
Instrument License 20, 22, 51
Instrument License Key 35
Instrument licenses 21
Instrument Management 13, 35, 37, 38, 39, 44
Interface 48, 109, 112, 118, 124
Interval weighing 82
IT Support 50

J

Job 76, 88, 103, 105, 114, 115, 116, 120, 121, 127, 129, 131, 133
 Job data 139
 Job Execution 80
 Job form 76, 82
 Job ID 141
 Job Management 13, 35, 38
 Job Name 99
 Job queue 13
 Job results 85, 86
 Jobs starting/continuing from LabX 101
 Jobs starting from the balance with Rapid Access 101
 Job template 13, 35, 40, 70, 76, 86, 87, 94, 95, 96, 99, 103, 106, 135, 137, 139, 142
 Job template creation 78
 Job templates 11, 14, 38, 59, 74, 75, 78, 91, 93, 104, 107, 110, 113, 115, 119, 121
 Job title 137, 141
 Job types 93

K

Key assignments on AB-L/AB-S/PB-L/PB-S balances 133
 Key assignments on AG, PG-S balances 127
 Key assignments on AT/MT/UMT balances 125
 Key assignments on PG/SG balances 129
 Key assignments on PR/SR balances 131

L

LabX connect 85
 LabX DB Maintenance 144
 LabX light 11, 13, 20, 44
 LabX pro 11, 12, 43, 85, 154, 156
 Language 47
 LC-RS9 49
 LC-RS cable 46
 LC interface 46
 License administration 16, 20
 License key 20
 License Management 35
 License Manager 35
 Limit values 140
 LIMS 12, 142
 LocalCAN 109, 112, 118, 124, 128, 130, 132, 134
 Local printer 109, 112, 118, 124
 Local Printout 91
 Login 31, 151
 Login attempts 33

M

Maintenance intervals 101
 Maintenance job 61, 63, 64, 66, 69
 Maintenance jobs 74
 Maintenance tab 53
 Managing balances 52
 Managing documents 36
 Managing instrument licenses 22

Manual export reports 141
 Manual Transfer Mode configuration 41
 Mean 89
 Measurement uncertainty 67
 Measurement values 91
 Measurement values per sample loop and sample 139
 Members tab 29
 Menu bar 14, 75, 135
 Minimum requirements for the balance 83
 Minimum weighing range 83
 MinWeigh 53, 83
 MinWeigh control 54
 MinWeigh determination 53, 54
 MinWeigh functionality in LabX 54
 MinWeigh incident 13
 MinWeigh methods 53
 MinWeigh parameters 54
 MinWeigh Settings 35, 53
 MinWeigh Test 70
 Modifying Communication parameters 51
 Module License Key 20
 MSDE 170

N

Navigation level 104
 Navigation on the balance 104
 Navigations window 14, 43, 44
 Net weights 80
 Network 126, 128, 130, 132, 134, 144, 145, 153, 154
 Network examples 156
 Network installations 156
 Nominal 62, 66
 Nominal load 66, 68

O

«OK» key 105, 114, 120
 Operators 89
 Optimizing the performance of the installation 159
 Option Allow subdirectory for export of reports 40
 Organizing job templates 93
 Overview of Features 13

P

Parity/Bit 48
 Password 12, 24, 31, 32, 34, 35, 57, 94, 106, 107, 115, 116, 120, 121, 143, 146, 151, 152
 Password complexity 33
 Password length 33
 Password management 13
 Pause a weighing job 109, 112, 118, 124, 126, 128, 130, 132, 134
 Pausing/Terminating a weighing job 109, 112, 118, 124, 126, 128, 130, 132, 134
 Pausing a weighing job from LabX 102
 Peripheral device 91
 Peripheral devices 109, 112, 118, 124, 126, 128, 130, 132, 134

PG-S balances 48
PG/SG balances with standard software 129
Policies > Account Policies 33, 34
Post Job Results 88
PR/SR/SG balances 48
PR/SR balances with standard software 131
Print 111, 116, 122, 127, 129, 131, 133, 141
Printer 128, 130, 132, 134
Printing job templates 95
Printing reports 141
Printing the security settings 36
Print job 91
Print key 105, 110, 114, 120, 125, 127, 129, 131, 133
proFACT 59, 97, 98
Profile 154
Profiles 25, 55
Profiles tab 25
Programmed export reports 142
Properties of balance 52, 53

Q

Queue 60, 61, 63, 65, 67, 94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 105, 113, 114, 119, 120, 125, 127

R

Rapid Access 37, 97, 99, 101, 104, 113, 119, 154
Reactivation of the system 21
Readability 83
Reference values 89
Reference weight 67, 85
Release Control 13, 35, 60, 66, 68, 83, 101
Release Control level 83
Release level 70
Release status 101
Remote software 104
Removing balances 55
Removing weights 58
Repeatability test 70
Repeat factor 68
Repeating a sample 108, 111, 116, 122
Report 11, 35, 53, 88, 107, 111, 116, 122, 125, 127, 129, 131, 133, 136, 137, 139, 141, 142, 143, 153
Report data 91, 142
Report filter 137
Report generator 13
Report Management 35, 39
Report of a weighing job 138
Reports 14, 38, 40, 135, 147
Reset database 146
Restore database 146
Results 85, 86, 139
Results and statistics 140
Results definitions 137
Reusing the password 33
Rights tab 29

RS232 interface 49

S

Sample 82, 84, 107, 108, 110, 111, 116, 122, 125, 129, 133
Sample data 76
Sample ID 38
Sample identification 138
Sample identifications 11, 103, 107, 110, 116, 122, 125, 127, 129, 131, 133
Sample loops 137
Samples 103, 139
Save 56
Saving a job template 91
Scheduled Tasks 147
Scheduler 35, 60, 61, 62, 64, 66, 69, 74, 97, 98, 100, 101
Scheduler for adjustment and tests 60
Scheduler for Repeatability test with external weight 67
Scheduler for sensitivity adjustment with external weight 61
Scheduler for sensitivity adjustment with internal weight 60
Scheduler for sensitivity test with external weight 65
Scheduler for sensitivity test with internal weight 63
Search function 142
Searching the document for text 142
Secure Mode 35, 52, 54, 55, 57, 58, 61, 63, 64, 67, 69, 70, 91, 93, 95, 100, 142, 143
Security 151
Security settings 36
Security system 23
Selecting a profile 31
Selection window 105, 106, 114, 115, 120, 121
Send commands 48
Send format 48
Sensitivity adjustment 70
Sensitivity adjustments and performance tests scheduler 13
Sensitivity offset 60, 67
Sensitivity test 67
Serial numbers 51
Server 13, 160
Service 53, 70
Settings of the e-Link network interfaces 46
Setting up Instrument Management 37
Setting up Job Management 38
Setting up Report Management 39
Setting up Weights Management 56
Show configured devices 51
Sign 57, 94, 143
Sign all modifications 34
Signatures 150
Signing job templates 94
Signing reports 143
Signing weights 57
Simple Weighing 80, 82
SmartTrac 83

SOP 36, 59
 Special characters 33, 47
 Specific implementation of user login within LabX pro balance 153
 SQC parameters 87
 SQL database 13, 160
 Stability criterion 59
 Standard Deviation 89
 Start backup 145
 Starting adjustment jobs 101
 Starting a weighing job 105, 110, 114, 120, 125, 127, 129, 131, 133
 Starting a weighing job from a queue 105, 114, 120
 Starting a weighing job with a job template 106, 115, 121
 Starting DB Maintenance 145
 Starting LabX pro 31
 Starting test jobs 101
 Statistics 85, 87, 140
 Stopping a weighing job 102
 Strip printer 91, 109, 112, 118, 124
 Structure of reports 139

T

Tab Scheduler 64, 66, 68
 Tab Testpoint 62, 65, 68
 Tab Tolerances 64
 Tare values 53
 Temperature criteria 59
 Terminate a weighing job 134
 Testing job 59
 Test job 63, 65, 67, 98
 Test jobs 96, 97, 102
 Test Parameters 53
 Testpoint 62, 65, 68
 Test procedure reference 61, 63, 64, 66, 69
 Tests 60, 74, 101
 Tests with external weights 56
 Test weights 43, 44, 45
 Time 47, 59, 141
 Time criterion 59
 Tolerance 60
 Tolerance database 13
 Tolerances management 13
 Tolerance values 66, 68
 Toolbar 14, 75, 91, 95, 96, 97, 101, 110, 125, 127, 129, 131, 133, 135, 141, 142, 149
 Totalization 80, 82
 Traceability 150
 Transfer Mode 41, 89
 Transfer protocol 48
 Tree view Configuration 43, 44, 52, 53, 55, 56, 57, 58, 59, 60, 61, 63, 65, 67, 70, 71, 72, 73
 Tree view Reports 91, 102, 135, 137, 138, 142, 143
 Tree view Weighing 14, 60, 61, 63, 65, 67, 74, 78, 79, 91, 93, 94, 99, 103
 Troubleshooting 170

U

Unlock LabX 34
 User 12, 23, 24, 29, 32, 33, 37, 55, 93, 103
 User account 152
 User data 24
 User guidance 38
 User identification 106, 114, 115, 120, 121
 User interface 14
 User login 104
 User Manager 12
 User name 12, 24, 31, 34, 35, 57, 94, 106, 114, 115, 120, 121, 143, 145, 146, 151
 User properties 24
 User Settings tab 40, 41
 User specific settings 40

V

Vibration adapter 59

W

Weighing application 11, 80
 Weighing data 91
 Weighing job 37, 59, 91, 99, 100, 102, 103, 104, 106, 107, 109, 112, 113, 115, 116, 118, 119, 121, 122, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 137, 138, 142, 153, 154
 Weighing jobs 40, 74, 80, 96, 110, 136
 Weighing job template 99
 Weighing pan 111, 116, 122, 125, 129, 133
 Weighing parameters 53, 59
 Weighing process 80, 83, 84, 91, 153
 Weighing report 142
 Weighing reports 11, 54
 Weight 62, 65, 68
 Weight capture 82
 Weight Entry 68
 Weights 35, 43, 44, 56
 Weights library 13, 56
 Weights list 56, 62, 65, 68
 Weights Management 35
 Weight specifications 56
 Working with reports 137
 Working with weighing jobs 99

X

XP balances 47, 113, 119
 XS balances 47

Z

Zeroizing between samples 82

**To protect your METTLER TOLEDO product's future :
METTLER TOLEDO Service assures the quality, measuring accuracy
and preservation of value of all METTLER TOLEDO products for years
to come.**

**Please send for full details about our attractive terms of service.
Thank you.**



Subject to technical changes.