

Quick Start Guide

HBM Software

MGCplus
SwiftCal 2.1

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Software Registration

Device:

- MGplus
- MGC
- Spider8
- PME
- Scout
- MVD
- DMP40
- AED
- K800
- UPM100/Centipede
- other _____

Interface:

- RS 232 C
- RS 485
- IEEE 488.2
- Ethernet
- USB
- CAN
- Profibus-DP
- other _____

Program: _____

License-No.: _____

Purchase date: _____

Address

Name: _____

First name: _____

Company: _____

Dept.: _____

Street address: _____

P/O Box: _____

Phone: _____

Fax: _____

City: _____

Postal code: _____

E-mail: _____

Our company agrees that HBM uses the company's name as a reference **without** details like company's address or type of application.

Date: _____

Signature: _____

1 General supply and license conditions for software

(Extract from standard terms and conditions of sale from HBM)

Special Rules concerning Software

1. If the Goods or any portion thereof includes software, which was developed by third parties, then the scope of the rights and entitlements granted to the customer will be determined in accordance with the third party's license terms, which we will include in the delivery and which we will send in advance upon demand. The aforementioned applies specifically to software such as operating systems and comparable components of the delivered system. We will provide suitable advance notice to the customer in the event that software from third parties will be included in the delivery (e.g., by naming the third party manufacturer in the bid documentation).
2. If the Goods we deliver include software developed by us (either as a component of the devices or as an independent product), then the following terms shall apply:
 - 2.1 Unless otherwise specifically agreed to in writing in the individual case, the transfer of software for purposes of use in return for a onetime payment constitutes a sale at law.
 - 2.2 We grant the customer a non-exclusive, transferable right to use the software developed by us on a single computer system for an indefinite period of time. In the absence of written approval, the software may be used for the customer's own purposes only. The software may not be leased, either expressly or implicitly, without our prior written consent.
 - 2.3 A transfer of the license to a third party requires that the software be completely deleted from the customer's system and that the media (including all documentation related thereto), which had been provided by us, be transferred to the purchaser of the software.
 - 2.4 Subject to any other written terms, the customer shall be responsible for installing the software.
 - 2.5 The customer is prohibited: a) from in any manner disclosing to third parties the software or any related material without our prior written consent (except for a complete transfer in accordance with section 2.3); b) from modifying the software without our prior written consent; c) from creating works derived from the software or copying the written materials; or d) from translating or modifying such software or preparing any derivative works based on the written materials. The foregoing provision shall not apply if the user is entitled, either by law or expressly by contract, to engage in any of the individual acts.

- 2.6 We reserve all rights to the software developed by us and any related material as well as to any modifications we performed. The software and related materials must be used and stored in such a manner that they are reasonably safe from any use, reproduction or disclosure in violation of the agreement.
- 2.7 One copy may be made for back-up purposes. A reference to our copy-rights must be made or applied to the back-up copy. If a copyright and/or registration number appears in the software, this information may not be removed.
- 2.8 The software is subject to a warranty inasmuch as the delivered software materially achieves the main functions, meets the recognized standard of technology and does not contain any errors, which will materially reduce or eliminate its value or its fitness for ordinary or contractually stipulated use.
- 2.9 Unless expressly agreed otherwise, the software supplied by us is not error tolerant and was not developed or produced for purposes of use in a dangerous environment, in which a failure-free operation is absolutely necessary, such as in nuclear installations, aircraft navigation or communication systems, in aviation safety, in life-support machines or in weapons systems in which the failure in technology would directly cause death, personal injury or severe damages to property or the environment.
- 2.10 Any errors or bugs in the software will be removed, to the extent such action would be fair to the customer, exclusively by providing the customer with new program versions as part of the continued product development and care. In enforcing the warranty, the customer is required to reasonably support us—in the event any program failures are identified—by sending us the error reports and any other requisite information at our request. A delivery of any new program version will not generally cause the warranty period to commence to run anew.
- 2.11 The buyer obligates himself towards us to use software that is suitable for calibrating technical equipment exclusively for technical equipment that is his/her property. The buyer will and must not use the software for calibrating third-party equipment—be it with or without payment. If the buyer violates this obligation, he/she has to pay a contract penalty of EUR 5,000 for each calibrated third-party device.
- 2.12 Otherwise, with respect to the software, the general provisions of the agreement and our Standard Terms of Sale (specifically those terms relating to warranty and our liability) govern.

2 Introduction

We are delighted that you have decided on MGCplus SwiftCal, the calibration software from HBM. We are sure you will enjoy problem-free working with MGCplus SwiftCal, having spent a short time getting used to it.

This short guide assumes that you:

- are familiar with your operating system
 - know how to find and open files
 - know how to use online Help files
- ☞ Information about Windows can always be accessed from the “Start” menu in Windows, just choose “Help”.

2.1 Typographical conventions

For the sake of clear, unambiguous labeling and better legibility, we use the following conventions in this manual:



We have flagged important paragraphs with this caution symbol.



☞ This symbol points to a significant detail or specific characteristic.



💡 This symbol marks a tip or an interesting feature.

We use *italics* to draw particular attention to a section of text or a word and for marking cross-links to other chapters.

“File → Open”: All menus and menu commands are shown in quotation marks (in this case “File” is a menu and “Open” is a sub-menu). The same applies to register tabs and frames in dialog boxes. A *context menu* is a menu that pops up when you place the mouse pointer over an object or specific part of a window, e.g. a table, and press the *right* mouse button.

Your “*input*”, all “*push buttons*”, “*control boxes*”, the names of “*input fields*” etc. are also shown in quotation marks, additionally *italics* are used.



❓ This symbol means more information is available in the online Help.

2.2 Using the manual

If you are not already familiar with MGCplus SwiftCal, you should read Section *What can you do with MGCplus SwiftCal?, page 15*, and Section *How do you work with MGCplus SwiftCal?, page 16*, after the Installation.

 If you need more detailed information, use the context-sensitive online Help.

If you still make no headway with your problem, Section 7, *Technical support, page 19*, shows you how to get help directly from HBM.

 Please also note the support offered by the HBM representatives in your country.

3 Operating requirements

-  The WIBU-BOX containing your license for the MGCplus SwiftCal software must be connected to your PC before the program is started. Connecting the WIBU-BOX to another PC in a network is not supported.
-  The software will start in Demo mode if no WIBU-BOX is connected. All features will be supported, but you cannot generate valid calibration certificates.

In order to operate MGCplus SwiftCal software, you need a PC with the following *minimum requirements*:

- Intel Pentium 600MHz or equivalent processor
- Windows® 2000 or Windows® XP
- 128megabytes main memory (RAM)
- Graphics card with a minimum resolution of 800 x 600 pixel
- 21megabytes free space on your hard disk
- Microsoft or 100% compatible mouse
- To be able to export data into Excel files, Microsoft Excel 2000 or higher is required
- For a CANHEAD calibration, the CANHEAD calibration module and the PEAK PCAN-USB adapter are required. Both devices are available from HBM.

The following fonts must be available on the PC:

Arial (TT), Courier, MS Sans Serif, Small Fonts, Times New Roman (TT), Tahoma, Verdana and Wingdings. These fonts are usually installed with the Windows operating system.

4 Installation

4.1 Installation from CD

! Please start the installation *before* connecting the WIBU-BOX to your PC. During the hardware installation, these devices will be connected and the necessary software installed.

- ☞ Administrator rights are required for installing the WIBU-KEY licensing system and the PEAK software installation. We recommend that you close all open programs before starting the installation.

Insert the CD into your CD-ROM drive. In standard configuration, Windows automatically opens the CD.

- ☞ You can cancel the installation at any point.

If you have deactivated this self-starting Windows function, look for the SETUP.HTML file in the main directory of the CD and double-click on its icon to get the opening screen.



Fig. 1: Opening screen after executing SETUP.HTML

The installation procedure depends on the program version and options you would like to install. The WIBU-KEY licensing system must *first* be installed if you wish to install a *full* MGCplus SwiftCal version. The installation is *not necessary* if you are installing a *Demo* version of MGCplus SwiftCal. Click on the picture under Hardware installation to open a Browser window with the hardware installation instructions.

| 1. WIBU-KEY driver installation (not Demo) | 2. WIBU-KEY Runtime Kit installation |
|--|--|
| How to install the WIBU-KEY licensing system: 1. Connect the supplied WIBU-KEY to a free USB port. 2. The Hardware Installation Assistant of Windows is started. Please follow the installation instructions. 3. Specify your CD drive as source to look for the WIBU-KEY driver. 4. Accept the driver found in the DATA\TOOLS\WIBU sub-directory. A warning may be issued that the driver concerned is not signed by Microsoft or a certified driver. Continue with the installation. The driver is tested by HBM and will not affect other system settings. 5. Wait for the installation to finish. 6. Click on the picture under <i>WIBU-KEY Runtime Kit installation</i> to start the WIBU-KEY software installation and follow the instructions. | Install the WIBU-KEY Runtime Kit (click Open/Run in the following dialog) |
| 3. PEAK driver installation (option) | 4. PEAK software installation |
| How to install the PEAK PCAN-USB adapter: 1. Connect the supplied PEAK PCAN-USB adapter to a free USB port. 2. The Hardware Installation Assistant of Windows is started. Please follow the installation instructions. 3. Specify the CD drive as source to look for the PEAK PCAN-USB adapter driver. 4. Accept the driver found in the DATA\DRIVER sub-directory. A warning may be issued that the driver concerned is not signed by Microsoft or a certified driver. Continue with the installation. The driver is tested by HBM and will not affect other system settings. 5. Wait for the installation to finish. 6. Click on the picture under <i>PEAK software installation</i> to start the PEAK software installation and follow the instructions. | Install the PEAK software for CANHEAD support (click Open/Run in the following dialog) |



HBM is a member of Spectris plc,
the specialist instrumentation and electronic controls group

spectris

Fig. 2: Hardware installation screen

- ☞ For installation of the WIBU-KEY licensing system see Section 4.2, page 12.

As next step you may install the PEAK hard- and software. This is only required if CANHEAD calibration shall be supported by MGCplus SwiftCal.

- ☞ For installation of PEAK hard- and software see Section 4.3, page 13.

Close the Browser window with the hardware installation if it is still open and click on the picture below Software installation (see Fig. 1 on page 10) to install MGCplus SwiftCal. Click on “Open” or “Run” in the next dialog to display the opening screen.

- ☞ You may also save the file to your hard disk and start the installation from there.

To install the software, click on “Next” and read through the license agreement. Continue the MGCplus SwiftCal installation and enter the directory in which you want to install the software: either confirm the suggested target folder or click on “Browse” and choose which one you want. If necessary, the Setup will create the directory you have specified and then copy all the files to it.

You must install all program parts (“*Full installation*”) if you are installing the software the first time or if you are upgrading from MC Calibrator 1.0. The installation options allow you to create an icon on your desktop and/or in the Windows task bar (Quick Launch).

Please follow the rest of the instructions in the Setup program.

After installing MGCplus SwiftCal, the MS Access Data Components are installed automatically.

4.2 Installation of the WIBU-KEY licensing system

- ☞ You do not need to install the WIBU-KEY licensing system again if you are upgrading from a previous MGCplus SwiftCal version and the WIBU-KEY is already installed.
1. Connect the supplied WIBU-BOX to a free USB port.
 2. The Windows Hardware Installation Wizard starts. Please follow the installation instructions.
 3. Specify your CD drive as source to look for the WIBU-KEY drivers.
 4. Accept the driver found in the DATA\TOOLS\WIBU sub-directory. A warning may be issued that the driver concerned is not signed by Microsoft or a certified driver. Continue with the installation. The driver has been tested by HBM and will not affect other system settings.
 5. Wait for the installation to finish.
 6. Click on the picture under WIBU-KEY Runtime Kit installation to start the WIBU-KEY software installation. Click on “Open” or “Run” in the following dialog.

- ☞ You may also save the file to your hard disk and start the installation from there.
7. Please follow the installation instructions.

4.3 Installation of PEAK hard- and software

1. Connect the supplied PEAK PCAN-USB adapter to a free USB port.
2. The Windows Hardware Installation Wizard starts. Please follow the installation instructions.
3. Specify your CD drive as source to look for the PEAK PCAN-USB adapter driver.
4. Accept the driver found in the DATA\DRIVER sub-directory. A warning may be issued that the driver concerned is not signed by Microsoft or a certified driver. Continue with the installation. The driver has been tested by HBM and will not affect other system settings.
5. Wait for the installation to finish.
6. Click on the picture under PCAN drivers from PEAK to start the PEAK software installation. Click on “Open” or “Run” in the following dialog.
 - ☞ You may also save the file to your hard disk and start the installation from there.
7. Please follow the installation instructions.

4.4 WIBU-BOX settings

When the program starts, the license contained in the WIBU-BOX supplied with MGCplus SwiftCal is searched. However, with the query every port of the PC is searched for a WIBU-KEY system. Therefore you may restrict the search to the interface used.

Defining PC ports to be searched for

From the Windows “Start” menu, call up the “Settings → Control Panel”. Double-click “WIBU-KEY” and then click on the “Setup” tab.

In Fig. 3 on page 14 port LPT1 is enabled for the search (default). As MGCplus SwiftCal is supplied with a USB WIBU-BOX, only this interface must be enabled, all others may be disabled: remove the tick from box “*Enabled*” in frame “Port setting”.

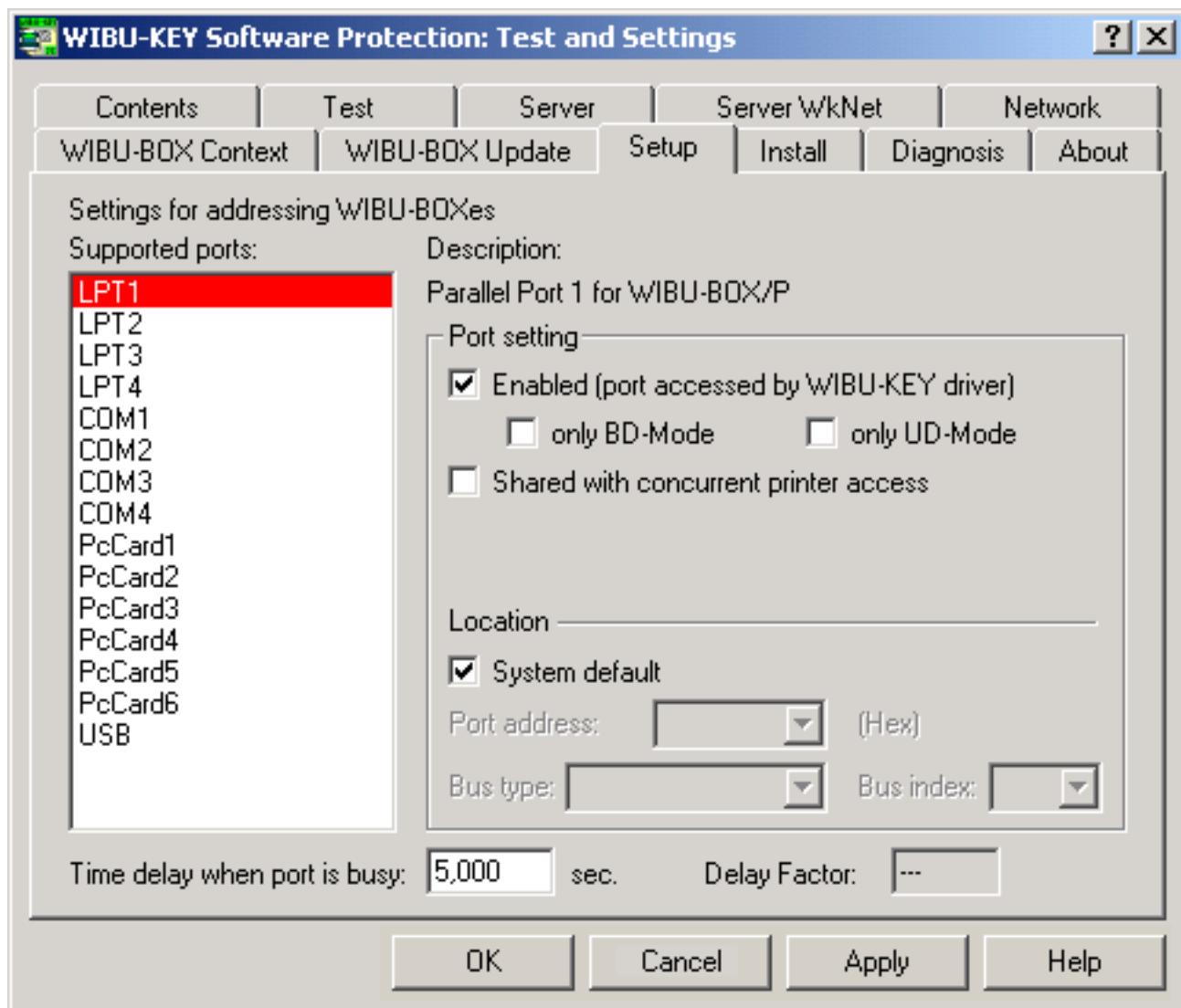


Fig. 3: Disable unnecessary ports

5 What can you do with MGCplus SwiftCal?

The MGCplus SwiftCal program supports you when calibrating MGCplus signal conditioning devices or CANHEAD amplifier modules. In addition, the calibration units may be controlled from the PC. However, you may also use manually operated calibration units.

- ☞ The program requires the WIBU-BOX connected to your PC for operation.

Use in accordance with the regulations

The MGCplus SwiftCal software is to be used exclusively for calibrating the standard amplifier plug-in modules of the MGCplus and for calibrating the CANHEAD amplifier modules with a CANHEAD calibration module. Use for any purpose other than the above shall be deemed to be not in accordance with the regulations.

Please also note the environmental and operating conditions and the legal and safety requirements given in the Operating Manuals of MGCplus, the CANHEAD calibration module and the calibration units, voltage calibration sources and multimeters used.

- ☞ The automatic detection of serial numbers and measuring ranges as well as the assignment of the correct settings through MGCplus SwiftCal is not possible in all cases, in particular with special versions of the MGCplus plug-in modules and connector plates.

Program features

Simply start the program, define some initial settings and start the process. When using non-HBM calibration units, a setup has to be made specifying which commands should be sent in order to perform a calibration. The program checks which amplifier module the calibration unit is connected to and performs the calibration. An audio notification may be issued after each successful step. There is no need to do anything on the PC once an MGCplus plug-in module has been calibrated: just connect the unit to another amplifier module of this type, the program searches automatically for this amplifier and continues with the calibration process. With CANHEAD, exchange the amplifier module, re-scan the CAN bus and perform the next calibration.

Having calibrated an amplifier module, calibration certificate data is automatically saved to a database. You may create and print out the certificates immediately or at a later point in time. Apart from your address, you may also include a company logo in the Calibration certificates.

6 How do you work with MGCplus SwiftCal?

 Please make sure the WIBU-BOX is connected to your PC *before* starting the program, otherwise the Demo version will start.

If you are starting the program for the first time, you must enter the company information, which will be printed later on the Calibration certificates.

- ☞ Before starting a calibration the first time, you must define which calibration units you have and—for non-HBM devices—you must specify, which commands they need to perform the required calibration steps.

The following summarizes the steps necessary for a standard calibration process:

MGCplus

1. Connect the MGCplus signal conditioning device(s) to the PC using either Ethernet, USB or a serial port.
2. Connect the calibration unit to one of the MGCplus plug-in amplifiers.
3. If supported, also connect the calibration unit to the PC via the interface specified for that unit.
4. If not already running, start the MGCplus SwiftCal program and create a new project (or open an existing one).
5. Click on the Devices entry (left-hand side) and scan for the MGCplus signal conditioning devices connected (“Scan” menu or ,  or ).
6. Click on  to the left of a device to see the existing ML/AP combinations (amplifier module and connection plate combination).
7. Mark the ML/AP combination you wish to calibrate.
8. Please continue with Section *Both devices*.

CANHEAD

1. Connect the CANHEAD calibration module to the PEAK USB interface.
2. Connect the calibration unit to the CANHEAD calibration module.
3. If supported, also connect the calibration unit to the PC via the interface specified for that unit.
4. If not already running, start the MGCplus SwiftCal program and create a new project (or open an existing one).

- ☞ Please note when inserting/exchanging CANHEAD amplifier modules while the power supply is *on*: the modules have to be inserted into the calibration module in such a way that the left-hand side (see Fig. 4) connects to the socket before the right-hand side.
5. Insert the CANHEAD amplifier module to be calibrated into the CANHEAD calibration module.
 6. Click on the Devices entry (left-hand side) and scan for the CANHEAD calibration modules connected (“Scan → CANHEAD” or ).
 7. Click on  to the left of a CANHEAD calibration module to see the inserted amplifier module.
 8. Mark the CANHEAD amplifier module you wish to calibrate.
 9. Please continue with Section *Both devices*.



Fig. 4: How to insert a CANHEAD amplifier module

Both devices

1. Specify the general calibration settings, e.g. which calibration unit to use.
2. Start the calibration with  and enter calibration certificate number and name of the tester.
3. Check the results.
4. You may go back to step 7 (MGCplus) and select another ML/AP combination to calibrate or proceed to the next step. Go back to step 5 (CANHEAD) if you wish to calibrate another CANHEAD amplifier module.
5. Create the certificate(s) with .

6. After having created a certificate as PDF file you will be asked whether you want to open it with Adobe Acrobat Reader. Print out the documents from this program.

- ☞ You may define audio alerts which inform you about the calibration process in the Preferences dialog.
- 💡 Assign test-equipment numbers (or strings) with  if you want to use an additional numbering system, e.g. inventory numbers. These numbers may also be used for search queries.

7 Technical support

Should your installation not run perfectly or if you have a problem with MGCplus SwiftCal, you can use the following services:

E-mail support

support@hbm.com

Telephone support

The telephone support is available on workdays from 9:00 to 12:00 and 13:00 to 16:00 hours Central European Time.

+49 6151 803-0 (International)

06151 803-0 (from within Germany)

Fax support

+49 6151 803-288 (International)

06151 803-288 (from within Germany)

HBM in the Internet

<http://www.hbm.com>

Please do us a favor:

If you come across an error in MGCplus SwiftCal, please let us know. We would appreciate if you fill out the questionnaire in the Internet on the HBM website. Thus you will support our efforts toward the continuous development and enhancement of MGCplus SwiftCal.

Modifications reserved. All details describe our products in general form only. They are not to be understood as express warranty and do not constitute any liability whatsoever.

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