

METRAwin 90

Calibration Software

Version 2/05.13



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We make every effort to keep these instructions up-to-date in accordance with the latest software version. It is nevertheless possible that differences may exist between the software and the instructions. Further information and corrections may be provided in a "README.TXT" file included on the provided data storage medium or in the program directory after the software has been installed. Use the Windows Notepad to read this file.

Subject to change without notice.

Preface

Contents of these Operating Instructions

This document provides information regarding the specific functions and system requirements of METRAWin®90 calibration software when being used with the Process Calibrator **METRAHIT CAL** or Process Calibrator & Multimeter **METRACAL MC** (formerly **METRAHIT MULTICAL**).

Note: Detailed information regarding device-specific functions and their use is included in the operating instructions for the device.

Use of the general functions of this software is described in a separate document which can be accessed by clicking **Program Functions** in the **Help** menu.

Target Group

These instructions are intended for users of the software.

The software is designed for use with the Microsoft Windows® graphic user interface. Users must be familiar with basic Windows® functions.

Scope of Validity

These instructions are valid for METRAWin®90 as of version 4.00.

Note: The version number is specified on the program CDROM. It is also displayed when program installation is initialized or when the installed program is started and can be displayed via menu **Help : About** as well.

Support

If you have any questions regarding use of this software, please contact

- your GOSSEN METRAWATT sales representative,
- the address which can be accessed under menu **Help : About**:
GMC-I Messtechnik GmbH
Product Support Hotline
Phone: +49 911 8602-0
Fax: +49 911 8602-709
E-Mail: support@gossenmetrawatt.com

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1 Features

1.1 Scope of Functions

The Process Calibrator **METRAHIT CAL** and Process Calibrator & Multimeter **METRACAL MC** (formerly **METRAHIT MULTICAL**) are used primarily for testing and calibrating electrical measuring instruments and equipment in the field of process measuring and control technology like transmitters, temperature meters/recorders/regulators, signalling and metering devices etc.. They include the following functions: DC voltage source, DC current source and sink, pulse generator with adjustable frequency and magnitude, as well as simulation of resistors and temperature sensors (thermocouples and RTDs).

Combination of the **METRAHIT CAL** and a precision multimeter with IR interface METRAHIT X-TRA, EXTRA, ENERGY or ULTRA builds a calibration system for automated calibration of isolation amplifiers, temperature transmitters and the like.

With **METRACAL MC** this functionality is created by the multimeter functions existing in the device itself.

In conjunction with these calibrators METRAWin® 90 offers the following operating modes:

DIRECT	Convenient, interactive control of the calibrator from the PC.
TEST	Sequence-controlled setup of the calibrator from the PC and automatic PASS/FAIL analysis of measured values entered manually or read in from the multimeter via interface, as well as documentation and archiving of calibration results in a calibration report. Calibration procedures for each respective calibration object can simply be generated and tested with the program.

1.2 System Requirements

Refer to the description of the program functions in section 1.2 (**Program Functions** in the **Help** menu) for general requirements.

Special requirements for connecting the calibrator and multimeter(s):

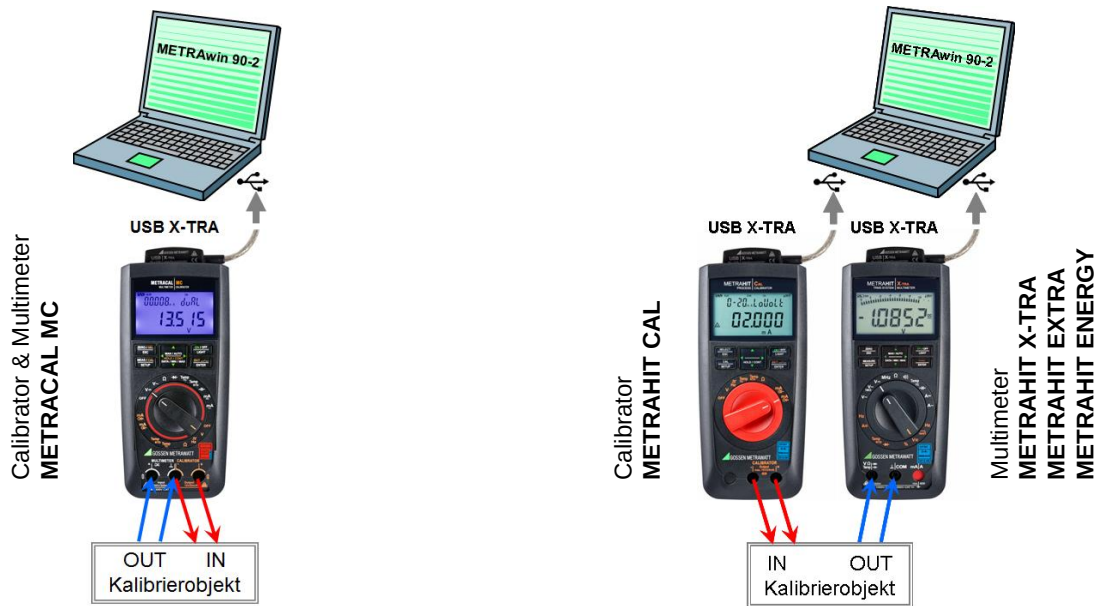
Hardware Requirements

Computer	1 or 2 free USB ports
Calibrator	METRAHIT CAL or METRACAL MC
Multimeter	1 or 2 METRAHIT X-TRA, EXTRA, ENERGY or ULTRA
Adapter	1 or 2 Interface Adapters USB-XTRA

Software Requirements	Installed METRAWin 90 software (version 4.00 or higher) with device drivers for METRAHIT CAL and METRACAL MC (<i>KALIL_G.DLL</i>). Installed USB driver „GMC Driver Control“ for the Interface Adapter USB-XTRA.
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2 Calibration System Setup and Start-Up

The figures below show the possible structure variants of a calibration system using the Process Calibrator **METRAHIT CAL** or Process Calibrator & Multimeter **METRACAL MC** and the combined adapter and meter types.



- Each Calibrator and Multimeter is connected via adapter USB X-TRA with a USB port of the PC. Before you connect the adapter to the PC, the driver "GMC Driver Control" must be installed (available on CD or download from website <http://www.gossenmetrawatt.com/english/produkte/drivercontrol.htm>)



Note

Note that the driver installation may need administrator rights!

By driver installation an individual virtual COM port is assigned to each adapter. In the Device Manager of Windows, you can verify the success of the installation and identify the assigned COM port number:

Start : Settings : Control Panel: System : Hardware : Device Manager



Plugging the Adapter to Calibrator/Multimeter

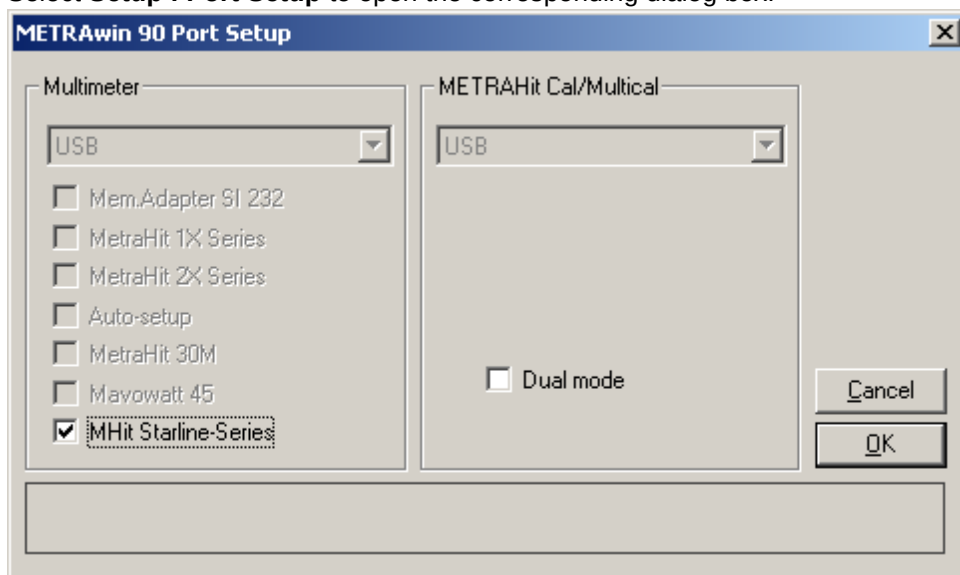
- Insert the studs on the adapter into the slots at the top of the calibrator/multimeter so that the cable points to the right as seen from the front of the device, and the socket for the power pack is not obstructed. Communication via the interface is only possible with the adapter in this position.

The adapter can also be connected when the multimeter is in its protective rubber cover.

Connecting the Adapter to the PC

- Insert the adapter's USB plug into a free USB port at the PC.
- ⇒ Since the device driver for the adapter has already been installed, this will be loaded by the Windows operating system and a virtual COM port is assigned to the adapter.

- ▶ Start the program METRAwin 90: **Start : Program Files : Gossen-Metrawatt : METRAwin 90 : Kalib** and in the menu **Setup : Device Type** select **METRAHit Cal/Multical**.
- ▶ Select **Setup : Port Setup** to open the corresponding dialog box:



- ▶ For the Calibrator (and the Multimeter if given) select the port(s) on which the system is connected to the PC.
- ▶ Specify the multimeter model and adapter being connected by checking the corresponding box(es).



Notes

When you place the mouse pointer on the check boxes, "tooltips" with detail information will be displayed.

After marking the check boxes, setting instructions for the corresponding device appear in the Info field of the dialog box.

- ▶ Confirm the selected settings with **[OK]**.
- ⇒ The program now checks the communication based on these settings. If this test failed, the dialog window opens again, so that you can verify the configuration and correct the settings. If the test is successful, then the calibration system is now ready for operation.