

Operating Manual

SpectroSwing qb



Operating manual edition E4



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Chapter 1: Introduction

May we congratulate you on your choice!

We from BARBIERI electronics are proud of presenting to you the spectrophotometer Spectro Swing qb. This instrument features most precise optics, state-of-the-art electronics and software. It is especially created for use in color management for the digital imaging market.

May we suggest you read the operating manual first for fully enjoying the capabilities of this instrument; thus you will be able to get familiar with its functions step by step. This operating manual covers the installation, basic operation and maintenance of the instrument .

As always, Barbieri supports you with a one year warranty through its service organisation. Please get in touch with us in case of need. May we also thank you for the confidence you have put in us by purchasing this instrument.

1.1 What you can do with this instrument

Most precise color measurement

Spectro Swing qb enables you to exactly determine the colors of both transmission and reflection copy. Thanks to a highly sophisticated diffraction grating and state-of-the-art electronics using best components this revolutionary spectrophotometer warrants utmost precision in determining color values, as required today for numerous applications.

Main features

- Easy to use thanks to its “no-button operation”
- Avoiding handling errors
- For transparent and reflective media
- Supported by most RIP-software
- Extremely high measuring precision and repeatability

Target markets

- Digital photo and inkjet printing
- Proofing
- Fine Art Printing

Application fields

- Creation of ICC profiles for digital output devices for different media (both reflective and transparent)
- For linearization of digital output devices
- Use as a densitometer to determine density values for films and papers

1.2 Unpacking the instrument

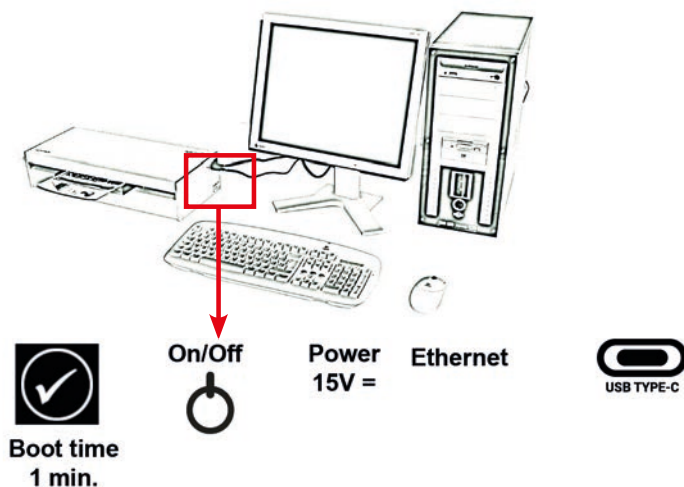
The Spectro Swing qb package includes the following components:

- Spectrophotometer Spectro Swing qb
- Media support to be fixed on the rear side of instrument
- C041H50 Transmission sample holder
- C041H51 White backing reflection sample holder
- USB connecting cable
- power supply adapter
- this operating manual
- package (keep it for possible shipments in future)

Please check that all these components are included.

1.3 Placing the instrument

It is recommended to locate the Spectro Swing qb on the left next to your computer. Check that there is enough free space both in front and behind the instrument allowing the target move freely during the measuring.



1.4 Optional components:

- C041H54 Black backing reflection sample holder

Chapter 2: Installation

2.1 Installing the USB driver software

If you use the USB connection, you need to install the USB driver on your computer before connecting the instrument to the computer.

2.1.1 Installing on a Mac computer under OS X

No specific USB driver is necessary. MacOS already includes the necessary driver (AppleFTDI).

Check if driver is correctly installed

- Switch on instrument
- Open "System Information" (About this Mac/ More info...)
- Show the "System Report" and check "Hardware/ USB". The instrument "Spectro Swing qb" must be listed

2.1.2 Installing on a PC with Microsoft Windows 10 or newer

There are two drivers to be installed for the connection between your computer and Spectro Swing qb:

- A. High speed USB to serial converter
- B. USB virtual serial port driver

The drivers are either already installed together with your application software or alternatively by installing Barbieri Gateway software.

Switch off the Spectro Swing qb.

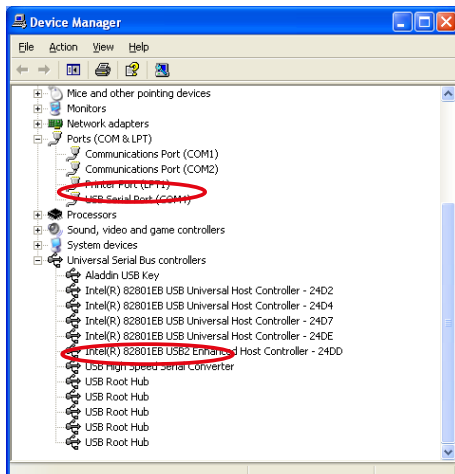
Download the Barbieri Gateway software from:

<https://www.barbierielectronics.com/barbieri-gateway-software/>

The installation procedures are guided automatically by an installation wizard.

Check if driver is correctly installed

- Switch on instrument
- Open "Control Panel", "System"
- Select "Hardware" and click "Device Manager".
- Look into "Ports" and "Universal Serial Bus controllers".



2.2 Installing the hardware

Installing the connecting cables:

- The power supply for the spectrophotometer is connected to the plug placed on the right side of the instrument near the On/Off switch
- Connecting the instrument to the computer with the supplied USB cable or alternatively to the Ethernet network port.

2.3 Product registration

It is recommended to register your instrument with Barbieri in order to get access to privileged information like access to download area, product information/ firmware updates etc.

Registration can be done through the Barbieri Gateway measuring software or manually by registering on the Barbieri web site:

<https://www.barbierielectronics.com/barbieri-gateway-software/>

Chapter 3: Putting into operation

The instrument is switched on in the following sequence:

- Switch on your computer
- Switch on Spectro Swing qb (The switch is situated on the right side of the instrument)

The power LED near the ON/OFF switch of Spectro Swing will light.

The instrument will need up to 1 minute for booting.

When completed booting, the instrument performs the following movements:

- the transport tray moves to the right and to the left

The display indicates the ready icon:



The instrument is now ready for operation and you can now start the measuring software on your computer.

3.1 Calibration

The instrument is self-calibrating, thus there is no need of calibration by the user.

3.2 Spectro Swing qb with Barbieri Gateway software

The function of this software is to allow you to drive a Barbieri measuring device if your particular software (RIP etc.) does not support the device directly. This software will measure any type of targets and save a measuring file in text format. The software runs under either Windows or Mac OSX and delivers measurement data either spectral, CIELab or density.

The software is available for download at the following web-site:

<https://www.barbierielectronics.com/barbieri-gateway-software/>

3.3 Spectro Swing qb with other color management software

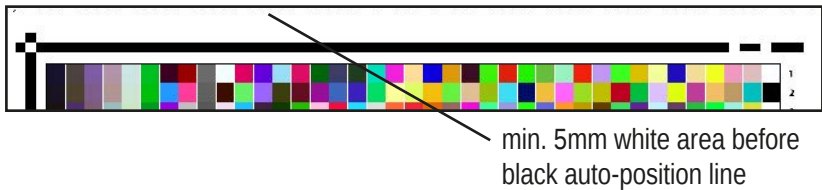
When using color management software from a different manufacturer than Barbieri, please see the operating manual of your software on how to use the Spectro Swing qb with your software or use the above applications with file import.

A list of software supporting Barbieri instruments can be found here:
<https://www.barbierielectronics.com/software-supporting-barbieri-spectrophotometers/>

3.4 The auto-position feature

The instrument is capable of automatically finding the position of the sample to be measured.

When you insert a target for measurement, the instrument needs to know where the patches are located. This is automatically determined by scanning some special border lines (auto-position lines):

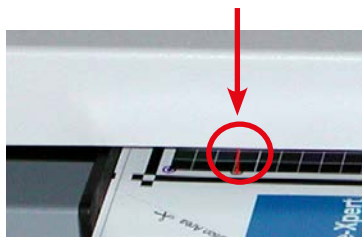


3.5 Manual positioning



Should it not be possible to take advantage of the auto-position feature, you can position your target for measuring manually with the aid of the red laser pointer. For this uncheck in your software the option „auto-position“

Laser pointer



Chapter 4: Maintenance

4.1 Opening the instrument

For replacing the measuring lamps or clearing a paper jam it is necessary to open the upper cover of the instrument. It is also recommended to open the cover for cleaning the optics every now and then. To open the instrument follow the instructions:

- | |
|--|
| 1. Switch off the instrument and disconnect the power supply from the instrument. |
| 2. To release the upper cover of the instrument unscrew the screws situated on the left and right side of the instrument and carefully remove the cover. |
| |

Specifications

Instrument	
Measurement conditions:	ISO 13655-2017 conditions M0, M1, M2 (UV cut)
Measuring apertures:	order code C041C50: reflection 2mm, transmission 2mm order code C041C60: reflection 6mm, transmission 6mm
Geometry:	reflection 45°:0° transmission d:0
Calibration:	automatic with internal white reference
Physical illumination:	Reflection: annular, with 3 LED-chips (D50, Type A - 2856 K, UV) Transmission: diffuse, 3 LED-chips (D50, Type A - 2856 K, UV)
Repeatability:	< 0.2 ΔE_{00} on white or ± 0.005 D (up to 1.000 D)
Inter-instrument agreement on 12 BCRA tiles:	average 0.5 ΔE_{00} max 1.0 ΔE_{00}
Measuring sensor:	diffraction grating with diode array
Spectral resolution:	2 nm (optical resolution 10 nm)
Spectral range:	380 ... 750 nm
Density measuring range:	0 ... 2.5 D
Target thickness	max 1.2 mm (0.05 in)
Maximum measuring area:	220 x 600 mm
Smallest measuring step:	0.2 mm
Interface:	USB-C and Ethernet
Dimensions:	510 x 240 x 130 mm (LxWxH) 20 x 9.5 x 5.1 inch
Weight:	5,50 kg net (12 lbs)

Order codes:	
C041C50	Spectro Swing qb 2mm aperture
C041C60	Spectro Swing qb 6mm aperture
CXRW08R2	Reference White Spectro Swing qb

System requirements

- Personal Computer running Microsoft Windows 10 or higher
- Apple Mac OS X version 10.12 or higher

Specifications are subject to change without notice

EG-Konformitätserklärung

Für das folgend bezeichnete Erzeugnis

Spectro Swing qb

wird hiermit bestätigt, daß es den wesentlichen Schutzanforderungen entspricht, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten über die elektromagnetische Verträglichkeit (89/336/EWG) festgelegt sind.

Diese Erklärung wird verantwortlich für den Hersteller:

BARBIERI electronics Srl/GmbH

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Italien

abgegeben durch den gesetzlichen Vertreter: Barbieri Markus.

Federal Communication Commission Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Operational hazard exists if AC adaptor other than original is used.

NOTE: Shielded interface cables must be used in order to maintain compliance with the desired FCC and European emission requirements.

For Italy:

INFORMAZIONE AGLI UTENTI

Ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n.151 "Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti".

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti.

La raccolta differenziata delle presente apparecchiatura giunta a fine vita e'organizzata e gestita dal produttore. L'utente che vorrà disfarsi della presente apparecchiatura dovrà quindi contattare il produttore e seguire il sistema che questo ha adottato per consentire la raccolta separate dell'apparecchiatura giunta a fine vita.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dimessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura. Lo smaltimento abusivo del prodotto da parte del detentore comporta l'applicazione delle sanzioni amministrative previste dalla normative vigente.



Operating Manual C041M50-3
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