Short Instruction Manual

argusX2® Software
incl. camera control

Version 2.1 07/2019

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List of contents

1. CONTACT DATA ................................................................................................................. 1
2. IMPORTANT NOTES .............................................................................................................. 2
   System-specific safety information ..................................................................................... 3
   Obligation of the operator ................................................................................................. 3
   Obligation of the personnel ............................................................................................... 3
   Licence agreement .............................................................................................................. 4
3. FURTHER NOTES ................................................................................................................ 4
   Warranty and liability ......................................................................................................... 4
   Decommissioning / disposal ............................................................................................. 5
4. SYSTEM DESCRIPTION ....................................................................................................... 5
5. SCOPE OF SUPPLY AND INSTALLATION ...................................................................... 6
   5.1 CANON EOS CAMERA ............................................................................................... 6
   5.2 INSTALLATION ............................................................................................................. 7
      Installation preparation ..................................................................................................... 7
      Installation ....................................................................................................................... 8
      Start of installation ......................................................................................................... 8
      Choose components ....................................................................................................... 9
      Choose additional tasks ............................................................................................... 9
      Installation process ....................................................................................................... 10
      Database connection ..................................................................................................... 10
      Camera Canon EOS – Default setting .......................................................................... 13
6. OPERATION .......................................................................................................................... 14
   6.1 USER ADMINISTRATION ......................................................................................... 14
      6.1.1. User login ........................................................................................................... 14
      6.1.2. User administration ......................................................................................... 16
      6.1.2.1. User groups ................................................................................................. 17
      6.1.2.2. User account ............................................................................................... 18
      6.1.2.3 User permissions ....................................................................................... 18
   6.2. IMAGE ACQUISITION ............................................................................................... 19
      6.2.1 Preview of several images .................................................................................. 21
      6.2.2 Capturing, naming and commenting an image .................................................. 22
      6.2.2.1 Direct capturing ......................................................................................... 22
      6.2.2.2 Image capture after multiple preview ............................................................. 22
   6.3 IMAGE OPTIMIZATION .............................................................................................. 23
      6.3.1 General issues and image optimization ............................................................... 23
      6.3.2. Insert comments on images ............................................................................. 24
   6.4. DATABASE .................................................................................................................. 25
7. MAINTENANCE AND REPAIR .......................................................................................... 26
   7.1 SERVICE ADDRESS ................................................................................................. 26
List of figures

Fig. 1: Licence agreement.................................................................................................................. 8
Fig. 2: Selection of installation path................................................................................................... 8
Fig. 3: Choose components and drivers............................................................................................ 9
Fig. 4: Create desktop symbols........................................................................................................ 9
Fig. 5: Active installation process..................................................................................................... 10
Fig. 6: Installation finished successfully............................................................................................ 10
Fig. 7: Selection of local and server database connection.................................................................. 10
Fig. 8: For server installation, please enter the missing information beside the database name and press „Connect“. If the login data are correct the database name will be displayed automatically. .......................................................... 11
Fig. 9: Press again “Connect“ to finish the installation. Now, argusX2® is operational............... 11
Fig. 10: Login .................................................................................................................................. 11
Fig. 11: Login .................................................................................................................................. 14
Fig. 12: Login window, if dongle was not found .............................................................................. 14
Fig. 13: Starting window .................................................................................................................... 15
Fig. 14: Right side bar: ....................................................................................................................... 15
Fig. 15: Customization with the button „User administration“.......................................................... 16
Fig. 16: User administration - Groups. ............................................................................................ 17
Fig. 17: User administration - Users. ................................................................................................ 18
Fig. 18: Permissions............................................................................................................................ 18
Fig. 19: Image acquisition tool ......................................................................................................... 20
Fig. 20: Example for display of a live image eines Livebildes.......................................................... 21
Fig. 21: Preview of several images..................................................................................................... 21
Fig. 22: Preview of images selected. .................................................................................................. 21
Fig. 23: Capture. ............................................................................................................................... 22
Fig. 24: General information. .......................................................................................................... 23
Fig. 25: Options for image optimization. .......................................................................................... 23
Fig. 26: Comments............................................................................................................................. 24
Fig. 27: Root folders and buttons....................................................................................................... 25
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2. Important Notes

Please read the safety information of this manual before putting the device into operation!
Basic requirement for a proper handling and an operation without problems is the knowledge of this manual.
Please keep it for future reference!

Copyright:
The copyright of this manual owns the company biostep GmbH. It is solely intended for the operating personnel and the buyer of the system. It must neither be duplicated nor distributed in part or in full without the written consent of biostep GmbH. Violations may have penal consequences.

argusX2® is a registered brand of the company biostep GmbH.

Technical changes reserved!

Burkhardtsdorf, 2019
Definition of symbols

This manual include the following symbols

The symbol informs about the appropriate handling of the unit as well as of general issues for a better understanding. A noncompliance of the information may cause an incorrect operation.

Other symbols stand for information on the following subjects: accident prevention rules, power supply, maintenance or disposal.

**System-specific safety information**

The device may only be used or be completed with the accessories described in this manual.

In addition, the knowledge of Windows® is required! More information also on other hardware components or programs can be found in the original manuals.

Please also read the manuals for the single modules of the system, especially the safety notes contained therein.

**ATTENTION:** Back up the device on a regular basis! biostep GmbH cannot be held liable for any data loss!

**Obligation of the operator**

The operator of the system commits himself to instruct only personnel having read and apprehended this manual. The personnel shall confirm with their signatures.

The work of the personnel has to be monitored on a regular base.

**Obligation of the personnel**

Personnel working the first time with the device does agree to:

- carefully read through this manual.
- observe the rules for accident prevention.
Licence agreement

By purchasing the Felix® system, the rights for using the software argusX2® were acquired to the following extent automatically:

The documentation software argusX2®, further data on the storage medium as well as other written accessories of the company biostep GmbH.

- If several people use the PC, the user right applies to all of these people.
- As licencee you have the right to transfer the program from one computer to another computer, provided that you or other persons also having user rights, will only work with one system at a time. Any further use is not permitted.
- It is expressly prohibited to copy the software as a whole or partly, or together with other software.
- Transfer of the software to third parties is only permitted with the written approval of biostep GmbH. Giving the software away as a present, renting or lending it out requires also written approval.
- These rights and obligations (licence) remain valid for an indefinite time.
- biostep GmbH reserve the right to update the software in its own discretion. By purchasing this licence you have the possibility to acquire an updated version against an updating fee.

3. Further notes

Warranty and liability

Basically, terms of payment and delivery of biostep GmbH apply. They are displayed on the website www.biostep.de.

Warranty and liability claims are excluded, if they can be ascribed to one or more of the following reasons:

- Inappropriate use of the device.
- Inappropriate installation, activation, operation and maintenance of the device.
- Noncompliance with the notes of this manual.
- Unauthorized changes to the system.
- Catastrophic events caused by foreign object damage and force majeure.
- Improper repair work.
Decommissioning / disposal

- The device must be professionally disposed off by an approved expert company or the local waste disposal company.
- Substances used or applied in connection with this device must be professionally disposed off.
- These operating instructions consist of the following materials: Binding comb and cover film are made of PVC, the rest is paper. This can be separated by pulling off the binding comb.

4. System description

A complete system for image display, digitalization, documentation storage and processing is available with the software argusX2®.

The documentation software argusX2® is the medium between the functions of the different imaging systems and the user. It displays the live image on the computer screen.

Commands for image acquisition are entered via the software. The image taken can be processed and archived with argusX2®.

The integrated data management allows the use of informative image names.

Saved images can be quickly found with the search function and the image preview.

Each image can be assigned a comment of any length. It is saved together with the image.

Password protection is available for each image as an option. Unauthorized personnel is not able to load the image. This also applies to the image comment and the preview function.
5. Scope of supply and installation

5.1 Canon EOS camera

**Scope of supply - hardware:**
1 x digital reflex camera  
1 x objective (fixed focal length objective or manual zoom objective)  
1 x short instruction manual

The image shows the model EOS 800 as an example. Other models are also available.

**Scope of supply - software:**
1 x CD/DVD incl. program  
1 x USB licence dongle

Have you got questions on this or other biostep® products? Kindly contact us:

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Please check the carton and the system for damages. In case of damages caused during transport, kindly contact the forwarder immediately! The registration period of Dt. Bahn, Dt. Post, parcel services and forwarders) is only 24 hours in some circumstance. Inspect the scope of supply. Report flaws and damages to biostep GmbH immediately!
5.2 Installation

Installation preparation

Before installing argusX2® software, please check if your PC meets the minimum requirements:

**Processor:** Intel Core 2 Duo with 2.6 GHz minimum

**Random access memory:** 8 GB DDR2-SDRAM

**Operating system:**
- Windows 7
- Windows 10

**Connections:**
- 1 x USB 2.0 for operating the camera EOS
- 1 x USB 2.0 for operating the licence dongle

The installation explained in this chapter is for a Windows® operating system as a single user or server installation. Further, please note that you own administrator rights. Drivers are required for the corresponding operating system.

Please start Windows® for installation. Insert the data medium delivered into the PC drive. The installation program will start automatically.

Follow the instructions of the installation program for the next steps.
Installation

Local administrator rights are required for installing argusX2®. After installation, the software can also be used with restricted rights.

Start of installation

The installation of argusX2® is started by right clicking on the file „Setup.exe“ and choosing „Run as administrator“.

First, please accept the licence agreement.

Fig. 1: Licence agreement

Please select the installation path. It is recommended to use the following one C:\Program Files\biostep\argusX2. Press „Next“ to proceed.

Fig. 2: Selection of installation path
Choose components

Choose the complete installation with device drivers. Press “Next” to proceed.

![Choose components and drivers](image)

Fig. 3: Choose components and drivers

Choose additional tasks

![Create desktop symbols](image)

Fig. 4: Create desktop symbols

It is recommended to create desktop symbols. Press “Next” to proceed.
Installation process

Fig. 5: Active installation process.

Please wait until installation has finished. Press „Finish“ to proceed.

Fig. 6: Installation finished successfully.

Datenbase connection

After accomplished installation, a database connection has to be established.

Fig. 7: Selection of local and server database connection.
For server installation, choose „Server“. For local installation, choose „Local“ and enter the name of the database. Now, argusX2® is operational.

Fig. 8: For server installation, please enter the missing information beside the database name and press „Connect“. If the login data are correct the database name will be displayed automatically.

Double-click on the argusX2® icon on the desktop.

Fig. 9: Press again “Connect” to finish the installation. Now, argusX2® is operational.

Fig. 10: Login
Log into argusX2® software.

The initial user name is **biostep**.

The initial password is **biostep**.

After 24 hours, user name and password are reset automatically. Now, new data can be assigned. After login, an information of the new user name and assignment is displayed.
Camera Canon EOS – Default setting

Based on the default setting of the camera EOS800D, the following menu items or settings should be adapted:

1. Unpack the camera and the objective. Also follow the notes in the Canon® manual of EOS camera for installation.
2. Mount the objective on the camera. (See camera manual).
3. Turn the focus switch of the objective to <AF>(auto focus).
4. Unpack the power supply with adapter.
5. Install the adapter for the operating voltage supply in the battery case of the camera. Follow the notes in the Canon® manual.
6. Now, turn the power switch to <ON>.
7. Swing out the camera monitor.
8. The camera already comes with a factory setting. If you still have installation problems, please check if the settings described below are correctly applied:
9. Please note: Make sure that no USB connection between camera and PC has been established. Otherwise, the menu cannot be displayed on the camera monitor.
   o Turn the mode wheel to <M>(manual). Now, you are able to adjust aperture and exposure with the software.
   o If date and time are shown on the display at the first camera start, please update these with the <SET> function using the cursor keys and select your time zone.
   o Press the <MENU> key on the camera and select <function settings>. First, set your language in item 5. Then change the item <Auto Shutdown Off> to <Disable> by pressing <SET>.
   o Go back to <MENU> and select <shooting settings>. Check in item 2 if the function <Live View shooting> is activated.
10. Then, switch off the camera.
11. Now, mount the camera with the special knurled screw to the corresponding fixing bracket. Please remember to place the seal ring between CabUVIS and objective.
12. Connect the camera and the PC with the USB cable included in the scope of supply.
13. After activating the camera (<ON>), it logs into Windows®. The installation of a separate driver is only required if the camera is not correctly detected. Download the driver from the Canon®-CD „EOS Digital Solution Disk“ (languages: German, English, Italian).

Important: Make sure that the camera is connected and activated before starting the program.
6. Operation

6.1 User administration

6.1.1. User login

If the program is started for the first time, argusX2® is opened with the default username and password "biostep". After logging in, future users can be assigned individual user rights by the administrator. Each user can enter his own password. Afterwards, argusX2® is started with the following window:

![Login Window](image1)

Fig. 11: Login

Enter your username and password and confirm the entry with "Start". Now, argusX2® opens.

If the dongle is not found, the following error message will be displayed and the software is opened in demo mode. After having plugged in the dongle, argusX2® can be entered by clicking on the button „Retry“.

![Error Message](image2)

Fig. 12: Login window, if dongle was not found
After successful login, the program starts with the starting window:

![Starting window](image)

Fig. 13: Starting window.

The right sidebar is shown in detail in Fig. 14. The functions of the database menu bar (top left) are explained in detail in chapter 7.7 “The database”.

![Right side bar](image)

Fig. 14: Right side bar:
1 = User profile and settings
2 = Backup
3 = Camera control
4 = Scanner control (only visible for scanners installed)
5 = Dark hood control (only visible for dark hoods installed)
6 = Customization and user administration (only visible for authorized users)
7 = Information (About …)
6.1.2. User administration

Generally, user administration and settings are only available with administrator rights!

After having logged in as administrator, the „User administration“ can be opened.

For this, click on the icon and the button „User administration“ in the field „Administration“.

Fig. 15: Customization with the button „User administration“.
6.1.2.1. User groups

Fig. 16: User administration - Groups. Users are grouped. Administrators are able to create new groups and assign single users to.
6.1.2.2. User account

![User administration - Users]

Fig. 17: User administration - Users. Users are listed and the corresponding account is displayed with ID, name and creation date. It is possible to define a termination date and to block users. The blocked users are not able to log in any more.

6.1.2.3 User permissions

![User administration]

Fig. 18: Permissions. Different permissions can be assigned to each user.
Setting options in the user administration:

Login times of each user are displayed under User Administration.

Complex adjustments for passwords are possible under Password Settings.

Further customization settings:

The company logo can be loaded or changed with the button „Change“.

A print template for reports can be loaded with the button “Import”. Please choose *.bpt as template file.

The log-file for the current day is displayed by clicking on the button „Show log“.

This is an administrator tool reporting about events like camera connection or other issues. Errors are also displayed with the corresponding information.

The system audit trail is displayed with clicking on the word „History“ in the left blue bar.

User profile

By clicking on the symbol , the user profile is displayed with all data of the user logged in: login data, creation date, last login and language. The new language is activated by clicking on „Save“ and after having restarted argusX2®.

6.2. Image acquisition

By clicking on the symbol , the image acquisition window opens. Methods can be loaded in, saved and edited. A live preview is possible.
By clicking on the symbol 3 „Edit method“, a window opens where the method name can be changed and a comment be added. By clicking on “Apply”, changes are saved, by clicking on discard, changes are deleted.

Activating a live image is useful for putting the TLC-plate or the gel in the correct position. Clicking “Preview” takes an image and stores it in an image container. Many images can be taken one after another. The images can be seen in small preview images. Images can be selected and saved with name or comment (see chapter 7xxx). Clicking the button “Capture” directly takes one image and opens the menu to save it. Comments can be assigned. The following figure shows the display of a live image.
6.2.1 Preview of several images

In argusX2® several images can be exposed and displayed as preview image in the lower area of the main window. Additionally, up to four images can be upsized by ticking on the mark.

Fig. 20: Example for display of a live image

Fig. 21: Preview of several images
The images selected are numbered and displayed for comparison.
6.2.2 Capturing, naming and commenting an image

An image can directly be captured by pressing the button „Capture“ or „Accept“ the image requested in preview mode. Several images can be processed consecutively.

6.2.2.1 Direct capturing

After activation of the live image, the button „Capture“ can be pressed. Now, the image is displayed in the middle window. On the right-hand side, the fields for “Image Name” and “Comment” are shown. Any name can be assigned. By clicking on the comment field, a window for entering and processing a comment is displayed.

![Image of capturing](image)

Fig. 23: Capture. After image capture, a name (1) and a comment (2) can be given. Save this by the “Save” button (3).

To save this image, select a subfolder of “Root” or “Root” itself and click the button “Save”. Image folders being not correctly placed can be cut out and pasted in the correct folder or subfolder.

6.2.2.2 Image capture after multiple preview

If two or more images are shown as previews, select one by the checkbox and click “Accept”. Now, this image is displayed in the middle window and names and comments can be entered as described in 7.4.3.1. For seeing the residual preview images, click on the camera symbol in the right blue bar and on the button “Live Capture”. Then, in the upper left corner of the middle window, you have the choice between “Live Capture” and “Recordings”. Select “Recordings” to see the other previews. Now proceed as described before.
6.3 Image optimization

6.3.1 General issues and image optimization

After opening the image, general information are displayed in the right part of the image.

Fig. 24: General information. By clicking „Image optimization“ the following menu opens.

Fig. 25: Options for image optimization. Clicking on the sun symbol opens the setting boxes for brightness, contrast, saturation and color angle. Values can be changed by entering a new value or by a slider being opened by double click. The color channels Red, Green and Blue may also be adjusted by sliders or by values. With the exposure control, under- or overexposed areas can be detected in the borders you define by the sliders (arrows). Over- or underexposed areas are calculated according to the greyscale image generated from the colored image. The histogram is scaled in %-values. The display of under- or overexposed areas is independent of the color channel but only dependent of the brightness value. By default, underexposed areas are shown in red and overexposed areas in green, but colors can be changed by clicking on the color buttons.
6.3.2. Insert comments on images

Fig. 26: Comments.
Display of comments and Rf scale can be set in the General Settings (1). Type of comments can be selected in the field „New comment” (2). A list of comments can be seen in „Comments” (3). A comment will be opened by clicking on it. The image can be saved and printed out (4, 5).
6.4. Database

During installation, a default database folder “Root” is created. After activation of the “Root” folder, the buttons for “Add”, “Edit”, “Search” and “Filter” become active.

1 2 3 4 5 6 7 8 9 10

Fig. 27: Root folders and buttons.

Buttons:
1 = Multiple selection (After clicking on Number 1 button checkboxes are displayed in front of each entry to select multiple images as well as to preview them.)
2 = Open/Preview (Open the image selected or display multiple images selected in the preview container.)
3 = Cut out (Folders and subfolders can be cut out to paste them at another position.)
4 = Pasting of cut out folders and subfolders
5 = Addition of a folder or subfolder
6 = Editing (Change of name.)
7 = Deletion (Deletion of folders and subfolders from directories, objects are still available in the database but not visible.)
8 = Search (Search for different criteria.)
9 = Filter (Search for several criteria in combination possible.)
10 = Export (Export images as graphic file.)

By double-clicking on „Root“, the menu structure is displayed. A single click on the desired subfolder shows a preview of the original image in the lower left-hand corner. Clicking on “Open” shows the image in the central view. Any derivative of the original image (e.g. with annotations) is located in the respective subfolder and can be opened by double-click or single click and “Open”.

V 2.1 07/2019 Seite 25
7. Maintenance and Repair

7.1 Service address

If you have any questions or problems with the system, please consult the service department of biostep GmbH or your local dealer.

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Important: In most case we require the licence number and the software version of your system. You find these data in the pull-down menu "Help" / "Info about" of argusX2®. E-mail us and describe your problems and provide us with as many information as possible to enable a quick problem solution.