

inPhoto ID



**Canon camera control software
Automatic ID photography**

User Guide



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Akond company
197342, Russia, St.-Petersburg,
Serdobolskaya, 65A
Phone/fax: +7(812)600-6918
Cell: +7(921)757-8319
e-mail: info@akond.net
<http://www.akond.net>

inPhoto ID User Guide © 2008 A.V. Povarkova

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1. INTRODUCTION

Thank you for purchasing **inPhoto ID** software!

inPhoto ID is designed for full control of Canon cameras, automatic ID photography and image transfer to TWAIN compatible ID card management software and image databases.

inPhoto ID can work as TWAIN driver with TWAIN compatible ID card design and management software (e.g. Asure ID). Connect your Canon camera to computer, install inPhoto ID software, and enjoy working with your camera from within the card management application supporting image acquisition via TWAIN.

Basic features of inPhoto ID software:

- Ability to work as TWAIN driver
- Camera settings control from computer.
- Live image preview:
dynamic mode with 320x240 pixels resolution
- Face recognition on the live image in preview window
- Image rotation: automatic (depending on the camera orientation) and manual by 90 and 180 degrees
- Save and load user profiles.
- Automatic image capture
- Face crop on the captured image
- The cropped image enhancement
- Image export to the TWAIN compatible software (e.g. to ID card design and management software).

2. SOFTWARE PACKAGE AND PC REQUIREMENTS

Software package includes the following:

1. Setup file (inphotoid.exe),
2. User guide (inPhotoID_Userguide.pdf file),
3. USB dongle (if dongle protected version is supplied).

PC requirements:

- Windows 2000, Windows XP, Windows Vista
- Free 20MB on hard disk for inPhoto ID software files,
- One free USB 1.0 (or higher) port to connect Canon camera to PC. For some new cameras supporting USB 2.0 it is recommended to use USB 2.0 port. Otherwise the image transfer speed will be much lower than it is allowed by camera. If the software is supplied with the USB dongle your computer shall have the second free USB port.

Supported cameras:

inPhoto ID software supports the following Canon PowerShot cameras:

- Pro series - Pro90 IS, Pro1
- G-series - G1, G2, G3, G5, G6, G7, G9, G10
- S-series - S30, S40, S45, S50, S60, S70, S80, S1 IS, S2 IS, S3 IS, S5 IS, SX100 IS, SX110 IS
- A-series - A10, A20, A30, A40, A60, A70, A75, A80, A85, A95, A100, A200, A300, A310, A400, A510, A520, A620, A640
- Digital IXUS - SD100 (Digital IXUS II), SD110 (Digital IXUS IIs), S230 (Digital IXUS 330), S400 (Digital IXUS 400), S410 (Digital IXUS 430), S500 (Digital IXUS 500).

3. CAMERA AND SOFTWARE INSTALLATION

InPhoto ID software installation

If the software is supplied with the Serial number:

Run **inphotoid.exe** and install the software.

When **inPhoto** software is run for the first time the **Figure 1** window will be displayed.

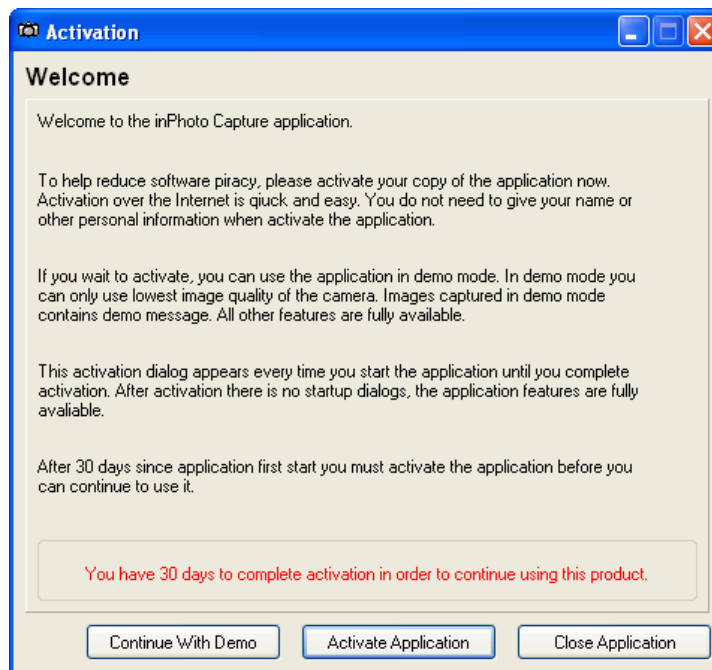


Figure 1.

Your have three options:

- Continue to use the software in the trial/demo mode
- Activate the software
- Close the software.

Use inPhoto software in trial/demo mode:

After the software is installed for the first time it can be used **free** for 30 days without activation. The trial period allows you to evaluate the software and make decision on purchasing it. The trial software has the following limitations: The captured images size is 640x480, "inPhoto Capture / ID Demo" is printed on the captured images.

After the software is paid and activated the **full resolution** images without demo print can be captured. You have an ability to activate the software either within 30 days of trial period or afterwards.

When your trial period is over the **Continue with Demo** button turns not active and in order to continue using **inPhoto** software you shall activate it. For this press **Activate Application** button (see Figure 1).

On-line activation

When you press **Activate Application** button the application will attempt to connect to server for on-line activation. If the attempt is successful the on-line activation window will be displayed (see Figure 2).

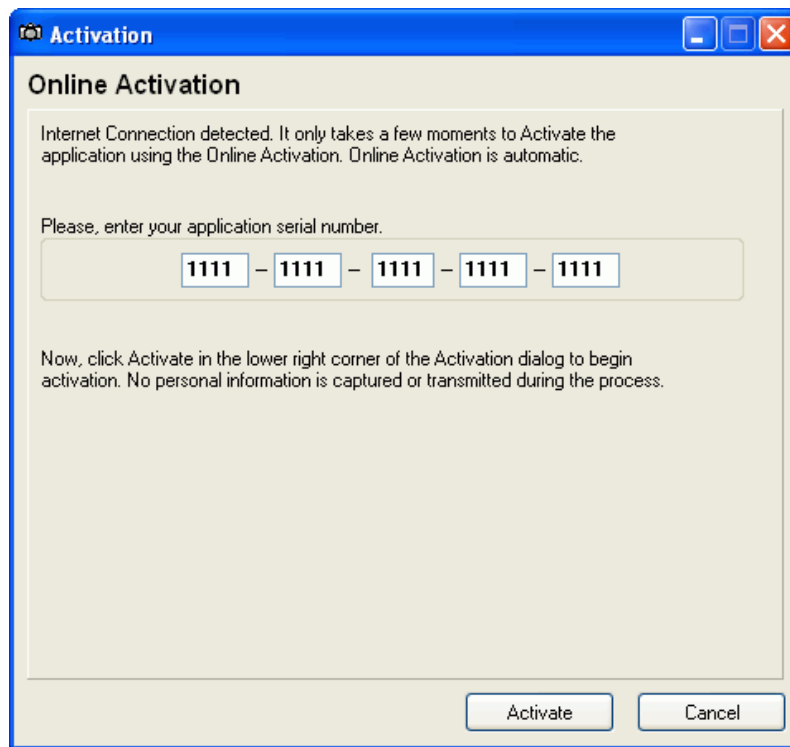


Figure 2.

You shall enter the serial number you received from your software supplier after payment and press Activate. The **inPhoto** software will be activated and you will get the corresponding message ("Thank you for taking time to activate your copy of application").

After the software is activated the serial number will be displayed in the **About** window.

If you make mistake while entering the serial number the error message will be displayed. Please check the serial number you entered, make necessary corrections, and press **Activate**. If you still get the error message contact your software supplier.

Off-line activation

If the application fails to connect to server for software activation (it happens if your computer does not have Internet connection), the off-line activation window will be displayed (see Figure 3).

Offline Activation

Application cannot establish connection with activation server. In that case we offer Offline Activation method. To perform activation follow steps:

1. Enter your application serial number
2. Press the button for generating your Activation code.
 Your activation code:
*Tip: you can select and copy your code to clipboard
3. From any computer with internet connection you can browse to activation page:

On activation page you must enter your Serial number and Activation code above. Activation server give you Authentication code. Write it, or save. This code needed to complete your offline activation.
4. Enter your Authentication code. Press Activate button.
 - - - - -

Figure 3.

Here you shall enter the software serial number you received from your software supplier after payment and press **Generate**. The activation code for your copy of the software will be generated. Write it down.

Then using a **different** PC connected to Internet go to

<http://www.marssystems.com/activation/>, enter the serial number and activation code and press **Activate** (see Figure4).

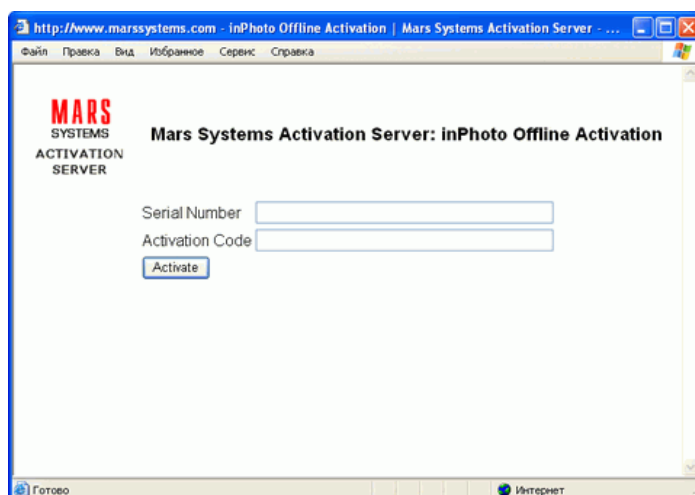


Figure 4.

Attention! Make sure to enter the serial number and activation code with the dashes!

The Authentication code for your copy of the software will be generated. Enter this code to the corresponding fields of the **Off-line activation** window (see Figure 3) and press **Activate**. The **inPhoto** software will be activated. The **Thank You!** window will be displayed.

After the software is activated the serial number will be displayed in the **About** window.

If you get the error message please check the serial number you entered, make necessary corrections, and press Activate. If you still get the error message contact your software supplier.

If the software is supplied with the USB dongle protection:

Run **inphotoid.exe** and follow the instructions you will get. If the installation went all right you will get the corresponding notification. After inPhoto ID is installed plug the USB dongle (USB Guadrant Stealth) nto

the USB port of your computer. The New Hardware Installation Wizard will start up. Select "Automatic installation" and press Next.

The Wizard will search for New Hardware installed (USB Guadrant Stealth dongle). The box notifying that the drivers are not signed by Microsoft will be invoked next. Select "Continue anyway" to continue the dongle driver installation, and the USD Guadrant Stealth driver will be installed.

Canon camera installation

- 1 Insert batteries to your Canon camera or connect it to power using standard power supply cable.
- 2 Install your camera on a tripod mount.
- 3 Remove a cap from the camera lense.
- 4 Connect your Canon camera to PC with the USB cable. Turn the camera on.

Camera preparation

CANON cameras

In order to be able to use inPhoto ID software to control your Canon camera from computer set your camera to **Play back** mode using the corresponding switch on your camera body. Connect your camera to PC using the USB cable. Switch on your camera. The new hardware (Canon camera) will be detected by your computer and installed.

If you miss to set your camera to **Play back** mode the message "Cannot connect to the camera" will be displayed when you run inPhoto ID software.

Attention!

If you work with Canon Poweshot S3 IS camera and OS on your PC is **not** Windows XP you must also install the Canon USB drivers from the CD that came with your camera in order to be able to connect to the camera. The latest Canon USB drivers can also be downloaded from <http://www.powershot.com>.

Final check

After you perform all above steps please check the following:

- 1 Your Canon camera is installed on the tripod stand.
- 2 The USB dongle is plugged into the USB port of your PC (if the software was supplied with the USB dongle).
- 3 inPhoto ID software is installed on PC.
- 4 Canon camera is turned on, connected with the USB cable to your PC, and set to Play back mode.

inPhoto ID start up

Now you can run inPhoto ID software as TWAIN source from all TWAIN compatible applications. Please refer to the corresponding documentation supplied with your TWAIN compatible software.

After inPhoto ID is started up you will get the live image in the image preview window.

Attention! The live image can be not sharp, dark, with not natural colors, etc. In order to get proper image in the preview window and start capturing photos please read the next Chapter.

4. INPHOTO ID OPERATION

inPhoto ID window

The **program window** view has two sections: the upper **Image Preview** area and the bottom **Control Panel** (see Figure 5).

The menu in the upper part of the software window provides access to **inPhoto ID** commands and settings.

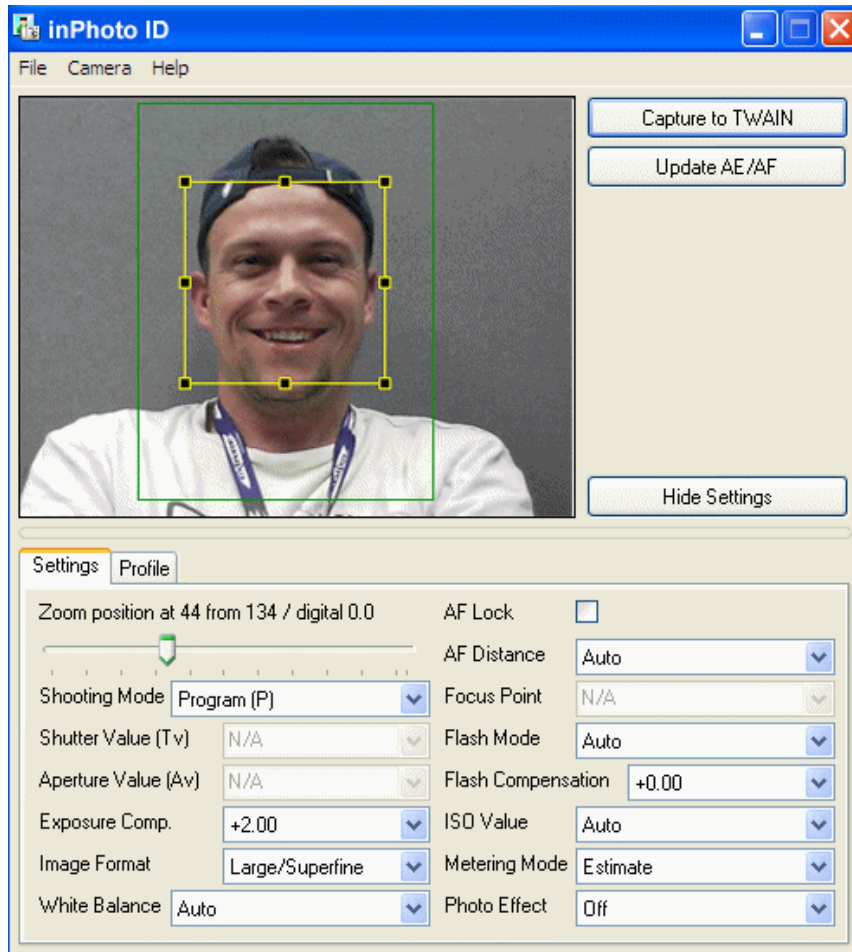


Figure 5. inPhoto ID window (in **Show Settings** mode)

In **Preview** area you can see the image to be captured. The preview image size is 320x240 pixels.

The **Control Panel** has two tabs: **Settings** and **Profile**. The Settings tab contains the drop-down lists used to control the Canon camera settings. The Profile tab contains the list of all User Profiles created.

When you select all camera settings you need for your application it is possible to minimize the **inPhoto ID** software window by pressing **Hide Settings** button. The **inPhoto ID** window will be minimized to Image Preview area.

To restore the **inPhoto ID** window press **Show Settings**.

Live image preview

Image preview (see Figure 6) is very important for image quality control and adjustment before capture.

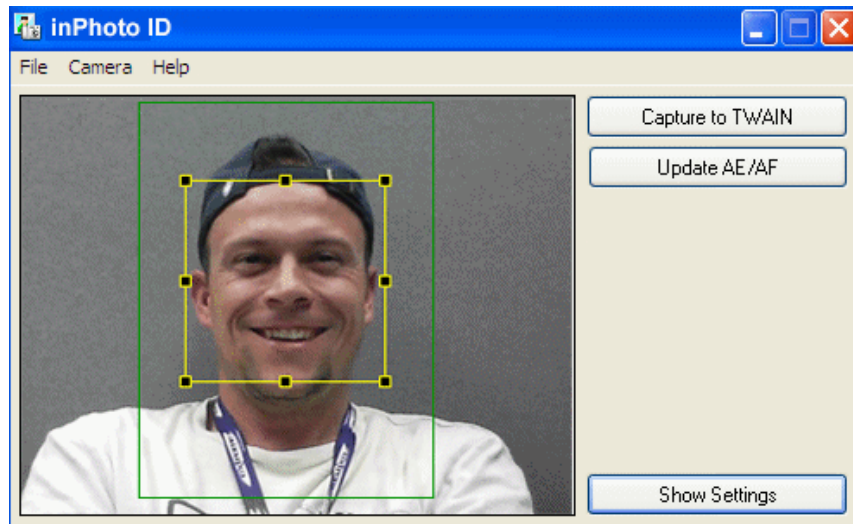


Figure 6. Live image preview.

inPhoto ID software provides the **dynamic image preview** with the preview window size of 320x240 pixels.

The dynamic preview mode provides an ability to control the image quality before capture. All changes made to the camera settings have effect on the previewed image immediately after they are performed.

The **Update AE/AF** button is used to update the automatic exposure and focus settings when the image scene is changing.

The **Show/Hide Settings** button is used to show or hide the Control Panel in the bottom part of the program window (hidden on this image).

The rotated image will be displayed in the preview window if the corresponding settings are made in **Menu Camera** (see **Image rotation**).

The automatic face detections will be performed in the preview window if the corresponding settings are made on the **Processing** tab of the Options dialogue box (see **Options**).

The yellow frame on live image in the preview window automatically outlines the face area. The green frame outlines the image area which will be cropped. The green/yellow frame ratio is adjusted by the sliders in the **Image Processing** window (see Figure 8). If it is necessary to change the green/yellow frames position and aspect ratio, capture an image (the **Show Processing Window** option shall be selected on the **Processing** tab of the **Options** window) and make required adjustments in the **Image Processing** window. After that press **Back** button to return to the **Image Preview** window. If the face is located too close to the image frame and the area to be cropped is cut by the image border, the frame color will change from green to red.

The user can also enable the image preview on the camera LCD and camera video output in **Menu Camera**.

Press **Capture to TWAIN** button to capture the image and transfer it to the TWAIN compatible software.

Image rotation

Working with **inPhoto ID** software the user can rotate the image in the Preview window. The rotated image will be captured to the TWAIN compatible application. There two options of image rotation control:

- automatic, when the image in Preview window is rotated depending on the camera orientation,
- manual, by +90, -90 and 180 degrees.

The ability of automatic image rotation is very useful for ID photography

application. When the camera is rotated vertically, the previewed and captured image will have the portrait orientation as it is usually required for ID photo.

In order to rotate the image, check the appropriate option in **Menu Camera** (see Figure 7). To disable the image rotation, check **Rotation off**.

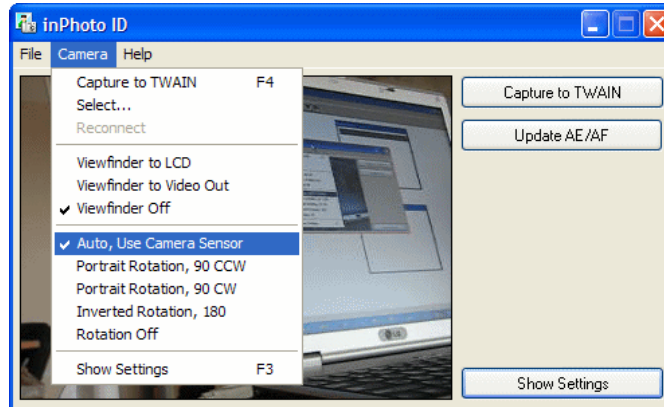


Figure 7. Image rotation options (Auto rotation is possible only if the Canon camera is used).

Camera settings control

The **full control** of your Canon camera settings is performed with the commands on the **Settings tab** of the Control Panel (see Figure 8).

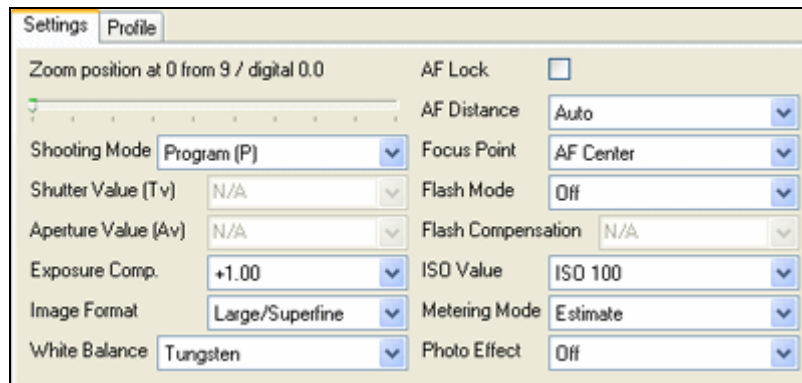


Figure 8. Settings Tab (Canon cameras).

To zoom the image in or out move the Zoom slider.

Check **AF Lock** box to lock the automatic focus. With the AF locked the camera focus will not change when you select the different scene to capture.

The **Settings tab** contains the following fields:

- **Shooting mode.** The shooting mode options are defined by the camera model. If you use the sophisticated camera you will be able to select between
 - Automatic (Program) when the shutter and aperture are set automatically by the camera,
 - Sutter priority when you have an ability to set the shutter speed manually, and the aperture value will be calculated automatically,
 - Aperture priority when you have an ability to set the aperture manually, and the shutter speed will be calculated automatically,
 - and Manual mode when you have an ability to set both shutter speed and aperture manually.
- **Shutter value.** In this field it is possible to set the shutter value if you work in Manual or Shutter priority shooting mode (not applicable for simple Canon cameras).
- **Aperture value.** In this field it is possible to set the aperture value if you work in Manual or Aperture priority shooting mode (not applicable for simple Canon cameras).
- **Exposure compensation.** Play with the exposure compensation values (varying from -2 to +2) when you capture the dark objects on the bright background to get the maximum image quality.

Recommendation: When you capture ID photos the automatic shooting mode can be used in most cases. It is also possible to use the Aperture priority mode (select the maximum aperture value to get shaper images).

- **Image format.** Select the image format and compression from the drop down list. The speed of image transfer to the TWAIN compatible software will depend on the selected image format and compression.

Recommendation: When you capture ID photos the low image resolution of 640x480 can be used in most cases.

- **White balance.** Ability to select the best white balance setting from a list of available options (depending on the Canon camera used). The image colors will be reproduced better if the white balance is selected in accordance with the lighting conditions.
- **AF distance.** Select the automatic focusing distance corresponding to the scene you photograph (remote or close up objects) or use the Auto option.
- **Focus point.** Depending on the option selected the Canon camera will be focusing automatically on the whole image or on its central part.
- **Flash mode.** Select the flash setting required. The camera flash can be always on or off, or can be activated automatically if the light is too low. The red eye reduction mode is also available. The flash mode settings are defined by the Canon camera model.

Recommendation: When you capture ID photos the flash shall be used in most cases. Select Red Eye correction mode. The White balance mode shall correspond to the lighting conditions you have.

- **Flash compensation.**
- **ISO value.** It is recommended to increase the ISO value if you capture with the high shutter speed or if you want to minimize the risk of image blurring when the camera is shaken.

Recommendation: Select minimum ISO value (typically ISO 100).

- **Metering mode.** This is the exposition metering mode. The values in the list depend on the camera model.
- **Photo effect.** You can capture images using various photo effects which will influence on color saturation and contrast. The list values depend on the camera model

Work with User Profiles

The **Profile** tab (see Figure 9) contains a list of all User Profiles created. Once you select the best camera settings for your specific applications you can **save these settings to profiles** and use them easily later on without spending time on camera settings adjustment.

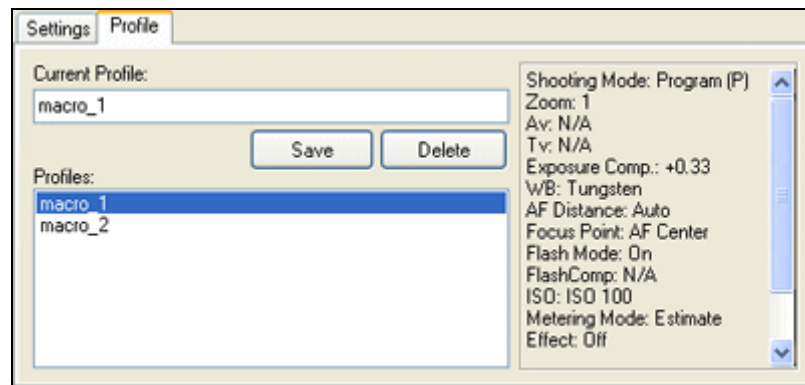


Figure 9. **Profile** Tab.

Save your camera settings to profile and you will not need to strain yourself by moving sliders and switching the checkboxes on and off again and again. Just select the necessary profile and enjoy the best image quality without any troubles.

To save the current camera settings to profile, enter name of profile to Current Profile field and press Save button. To select the saved profile, double click its name in Profiles area and the InPhoto ID software will adjust camera settings to the values stored in the profile. To delete profile, highlight its name in Profiles area and click Delete button.

Recommendation: Adjust all camera settings to capture images of high quality and save them to a User profile. Afterwards just select this profile from the list of profiles and the camera will be set up automatically.

All changes made to the camera settings on the **Settings** tab will have effect on the live image displayed in the image preview window.

Face crop and image enhancement

After the image is captured the **face area can be cropped**.

Upon pressing the **Capture to TWAIN** button in the image preview window the Image Processing window will be invoked (see Figure 10). This window can be skipped off if the corresponding settings are made in the inPhoto ID options.

This window provides an ability to crop the face area (automatically or manually), and enhance the resulting image if necessary.

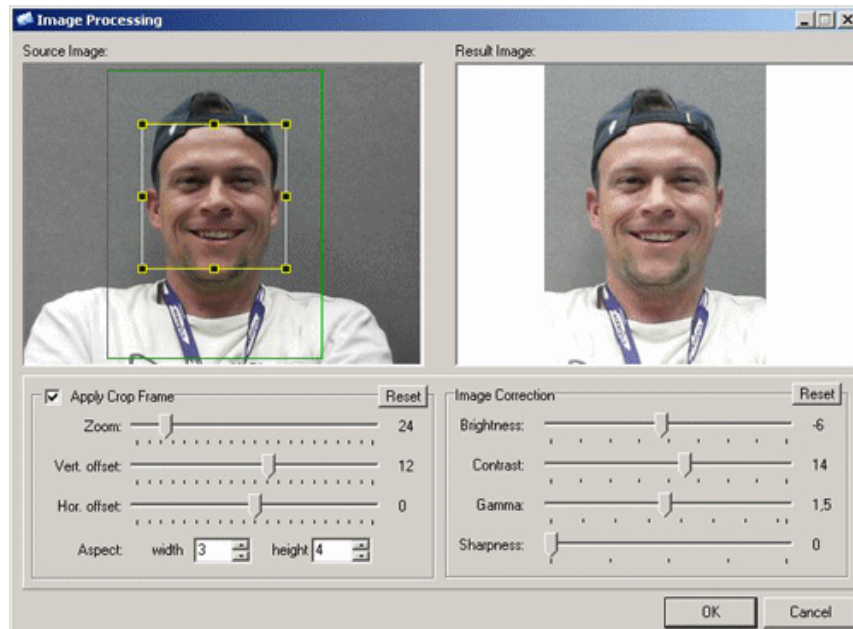


Figure 10. **Image Processing** window.

The face area is automatically outlined by the yellow frame. The user can change the frame size and position if necessary. If the face on the image is not recognized automatically the user has an option to outline the face area manually.

The green frame outlines the image area to be cropped. The yellow frame / green frame ratio and position are adjusted by Zoom, Vertical offset, and Horizontal offset controls. The aspect ratio control is used to set the resulting image ratio.

If the face is located too close to the image frame and the area to be cropped is cut by the image border, the frame color will change from green to red. In this case the user has three options: ignore, modify the image frame, or press Back button and return back to the image preview window.

The cropped image will be displayed in the right part of the Image Processing window.

The cropped image **can be enhanced** if you are not quite satisfied with the resulting image quality.

It is possible to adjust image brightness, contrast, gamma, and sharpness using the corresponding controls in the right part of the Image Processing window.

Press OK in order to transfer the cropped and enhanced photo to the TWAIN compatible application from which **inPhoto ID software** has been started up.

Image transfer

inPhoto ID software provides an ability to transfer the captured images to TWAIN compatible applications for further processing.

Press **Capture to TWAIN** button in the upper right corner of inPhoto ID window, and the previewed image will be captured and transferred to the TWAIN compatible software for further processing and saving.

With **Always** check box checked on the Processing Tab of the Options dialogue box the captured image will be transferred to the Image Processing window. With **Never** check box checked on the Processing Tab of the Options dialogue box the captured image will be transferred directly to TWAIN application. With **Show if necessary** box checked on the Processing Tab of the Options dialogue box the captured image will be transferred to the Image Processing window only if the face was not detected on live image in the Preview window. For more details see **Options**.

The progress bar showing image transfer progress will be displayed.

The transfer time depends on the selected image resolution and compression.



Figure 11. Image transferred to Asure ID card management software.

When the image is captured and transferred the inPhoto ID window will either stay open or get closed (if the **Close on capture** option is selected on the General tab of the Options dialogue box).

The captured image will be displayed in the TWAIN compatible software (e.g. Asure ID, see Figure 11).

Options

The **Options** dialogue box (File menu) is used to set the options of inPhoto ID operation.

The **Options** dialogue box contains 2 tabs. On the **General** tab it is possible to select the options of inPhoto ID start up and close process (see Figure 12).

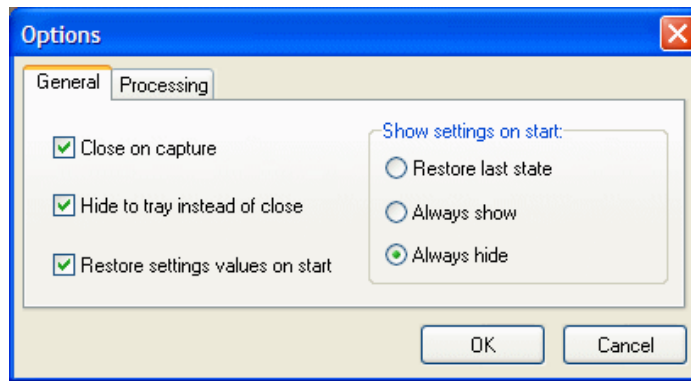


Figure 12. **Options** dialogue box, **General** tab.

If **Close on capture** is checked the inPhoto ID will be closed after the image is captured and transferred to the TWAIN compatible software (or saved to file).

Check **Hide to tray instead of close** to hide inPhoto ID to tray when it is closed. It reduces tremendously the software activation time for the next image capture.

If **Restore settings value on start** box is checked the Canon camera settings will be restored to the last state used when the software was closed.

On the right part of **General** tab it is possible to set the inPhoto ID window view on start. If **Restore last state** box is checked the inPhoto ID window on start will correspond to the last state before close.

If **Always show** box is checked the Control panel (bottom part of the software window) will be always displayed.

If **Always hide** box is checked the Control panel (bottom part of the software window) will be always hidden.

The **Processing** tab (see Figure 13) contains controls to set up face detection and image processing options.

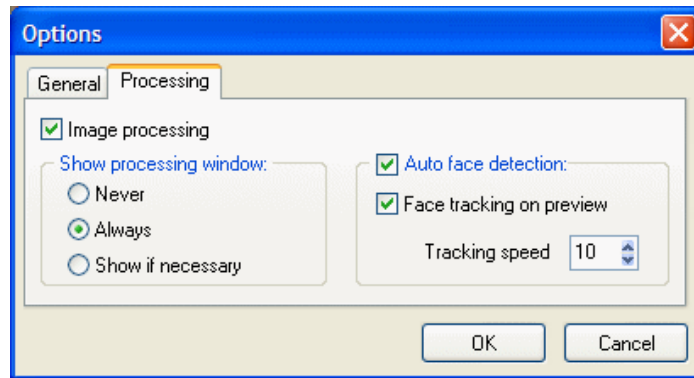


Figure 13. **Options** dialogue box, **Processing** tab.

Check **Image Processing** to enable image processing after capture.

The **Show Processing Window** group includes the following options:

- **Never**: the Image Processing window will not be displayed (will be skipped off), and the image will be processed according to the last settings made. If the face has not been found automatically the full image will be captured,
- **Always**: the Image Processing window is always invoked,
- **Show if necessary**: the Image Processing window is displayed when necessary, e.g. when the face is not recognized on the image, when the face is too close to the image frame, etc.

Check **Auto Face Detection** to activate the automatic face recognition and detection.

Check **Face Tracking on Preview** to enable dynamic face detection in the preview window.

The **Select camera** dialogue box (see Figure 14) called up from the Camera menu is used to select the Canon camera to be controlled from the inPhoto ID software.

The inPhoto ID software provides an ability to control several cameras connected to the computer. Select camera in the drop down list and control all settings of the selected camera model from your computer.

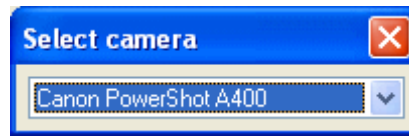


Figure 14. Select camera box.

5. MOST COMMON DIFFICULTIES

Canon cameras

Problem № 1.

inPhoto ID is installed and the Canon camera from the supported cameras list (see Chapter 2) is connected to your computer and turned on. When you try to run inPhoto ID you get the following message: "Cannot connect to the camera."

Reason № 1.

Your camera is not set to Play back mode.

Solution.

Set your Canon camera to Play back mode. Read Chapter 3, **Camera preparation**.

6. ABOUT COMPANY

We hope that you install **inPhoto ID** software and learn how to use it with no problems, and that your work will be more effective and comfortable than before.

Other software products offered by our company:

- inPhoto Capture
- inCard

inPhoto Capture software is designed for full control driver control of Canon cameras, automatic image capture, save or transfer to TWAIN compatible applications for further processing.

inPhoto Capture camera control driver can work both as the stand alone application and as TWAIN driver with any program supporting TWAIN

protocol (e.g. Photoshop, Paint Shop Pro, Imaging, ACDSee, etc.). Connect your Canon camera to computer, install inPhoto Capture software, and enjoy working with your camera from within any graphic application supporting image acquisition via TWAIN.

Basic features of inPhoto Capture camera control software:

- Ability to work as **TWAIN driver**
- Ability to work as **stand alone** application
- **Camera settings control** from computer.
- **Image preview** with 320x240 resolution
- **Image rotation:** automatic (depending on the camera orientation) and manual by 90 and 180 degrees
- **Image capture**
- **Time lapse image capture**
- **Image save** in the specified folder on disk
- **Save and load user profiles**
- **Export images** to the applications supporting TWAIN protocol.

inCard is designed for design, management and printing ID cards and badges.

Basic features of inCard software:

- Create ID card templates of the standards and user defined size. The following elements can be used in the ID card design: line, rectangle, image, bar-code, text.
- Create and manage the database of ID holders.
- Connect to the external database.
- Capture images to the database with the Canon camera controlled with **inPhoto Capture** software or with the web camera. Load image to the database from the file.
- Print ready ID cards.
- Two modes are supported: **Designer** (ID card design, database management) and **Producer** (data entry and ID card printing).

Please feel free to contact us

- If you have any problems or questions concerning inPhoto ID operation,
- If you have any suggestions or comments on inPhoto ID operation,

- If you need any help on selection of software and hardware for your application.

We will be happy to help you!

Contact details:

Akond company

197342, Russia, St.-Petersburg

Serdobolskaya, 65A

Phone/fax: +7(812)600-6918

Cell: +7(921)757-8319

e-mail: info@akond.net

<http://www.akond.net>