

# Gamma 30

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## Camera and Software Manual

EAT GmbH

[Heimschiesskino.de](http://Heimschiesskino.de)

→ Schiesstraining → Ausbildung → Events

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Schießkino-Komplettsysteme  
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# 1 Introduction

This handbook describes the setup and installation of the Gamma 30 system. Should you require further assistance with the installation, please do not hesitate to contact us. You can do so using our contact form on our website <http://www.heimschiesskino.de>.



## 2 Kit contents

Please check that your package includes the following items before proceeding with the installation.

- ▷ Gamma 30 Camera
- ▷ Firewire cable
- ▷ Firewire card (PCI or CardBus)
- ▷ Softwaredongle
- ▷ Gamma 30 Driver-CD
- ▷ Gamma 30 Handbook

### 2.1 Copy Protection

The LASERCAM system is copy protected using a USB-Dongle. To use the software, you must attach the included dongle to a free USB port on your computer.

Please be advised, that the dongle may negatively affect the performance of other devices attached to the same bus.



Keep the dongle at a secure location at all times. Lost dongles will not be replaced!



## 3 Setup

To setup your Gamma 30 camera you need a computer with a free Firewire port (*IEEE1394a*) as well as a free USB port. If a Firewire port is missing on your computer you can use a Firewire card to retrofit one.

If you want to use a notebook computer, you will require a special Firewire card which can be provided by us.

Always take anti-static precautions when handling electronic equipment.

We do not take responsibility for any possible damage done to your computer or the card during installation.

Before we describe the software installation a quick description of the camera setup is provided.

### 3.1 Camera

#### 3.1.1 Mounting the Camera

Mount the camera on the projector or use a separate mount. It is crucial that the camera is placed on a steady surface.

#### 3.1.2 Positionierung

Position the camera and projector in such a way that the desired screen size is attained. This is usually 2 to 4 meters. A usual height would be 60cm from the ground. The projector should always be positioned squarely in front of the projection screen.

### 3.1.3 Connections

Please connect the following components

- ▷ video projector (Beamer) ↔ computer (VGA oder DVI)
- ▷ **Gamma 30** camera ↔ computer (*IEEE1394a*)
- ▷ keyboard and mouse ↔ computer (USB or PS/2)
- ▷ speakers ↔ computer
- ▷ monitor ↔ computer (VGA or DVI, optional)
- ▷ video projector (Beamer) ↔ power
- ▷ computer ↔ power
- ▷ camera ↔ power (optional)

Now turn on the projector and computer.

### 3.1.4 Bildeinstellungen

If you have a secondary screen attached to your computer, make sure that in the video settings for your graphics card you have enabled the clone mode. If unsure how to do this, consult the manual for your graphics card.

The projector needs to be set to a video resolution with an aspect ratio of 4 : 3. Usual choices include  $800 \times 600$ ,  $1024 \times 768$  or  $1280 \times 960$ .

Once the beamer is correctly setup and you can see the screen without distortion caused by incorrect resolution or aspect ratio settings you may proceed with the software installation.

## 3.2 Softwareinstallation

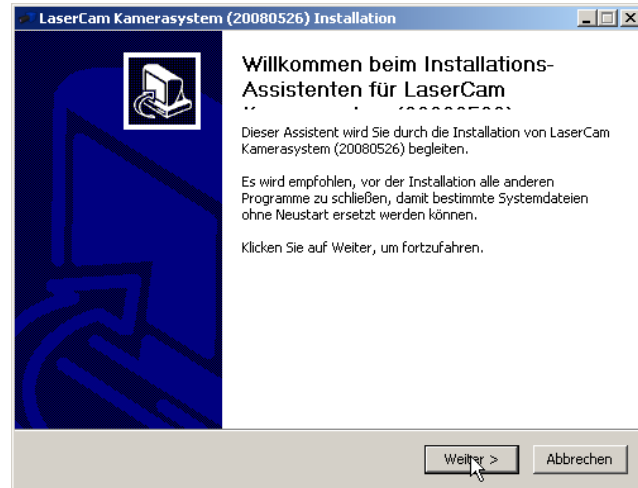
Make sure that your camera is connected to the computer and the light on the front is lit. If it is not, make sure that you are using a 6 (wide) pin Firewire cable or an additional power supply.

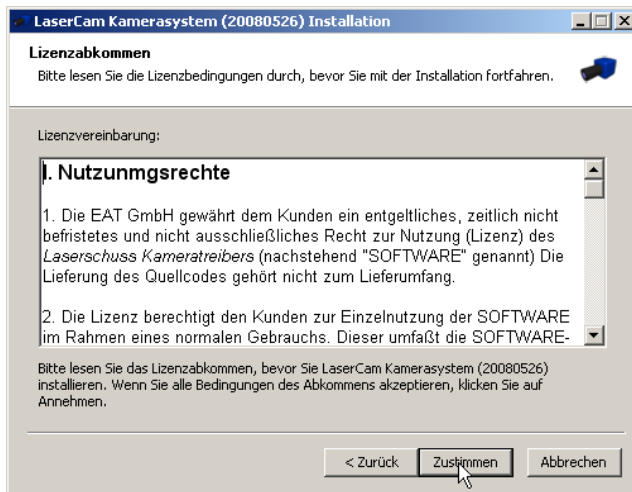
The installation will fail if your camera is not properly attached to the computer.

The copy protection dongle must be attached during the installation.

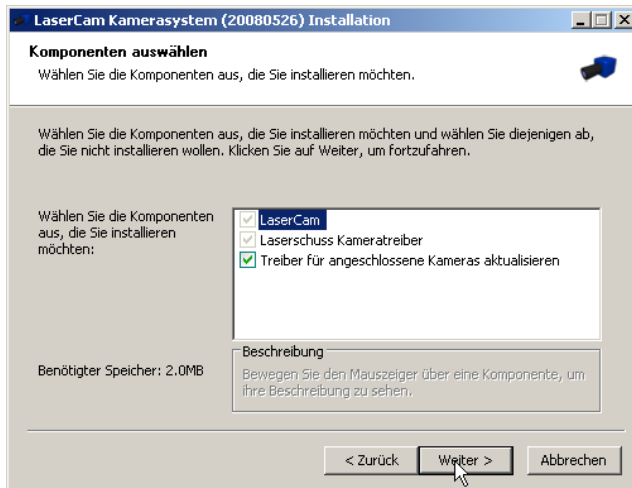
Insert the Gamma 30 driver CD into your CD-ROM drive. If auto start is enabled the installer will automatically start. Otherwise navigate to the cd drive using Explorer and manually start the `lasercam-setup.exe` by double clicking it.

You will be presented with a greeting screen. Click on **Weiter** to continue with the installation.





You must now accept the end user licence agreement by clicking on **Zustimmen**.

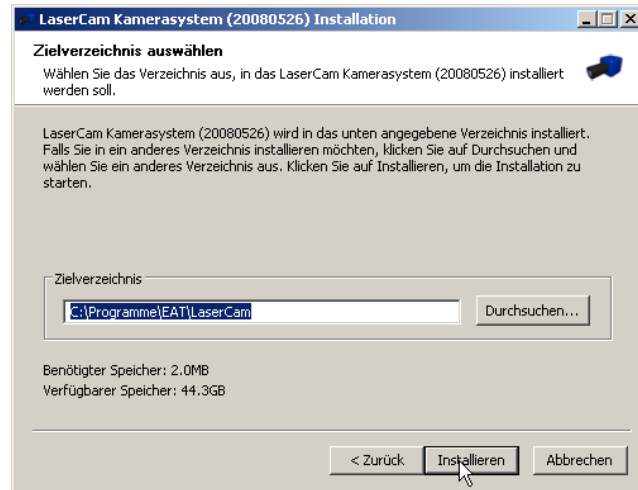


Next you may select the components to be installed. If this is your first installation simply install all components. If you have already installed the software on this computer you can leave out the driver installation step.

Continue by clicking on **Weiter**.

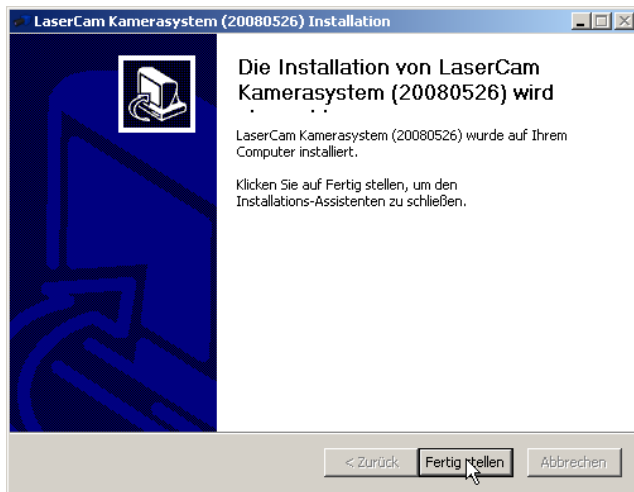
You may now change the installation directory for LASERCAM.

Once you click on **Weiter** the installation will proceed by copying the necessary files onto your computer and possibly registering the driver for the camera. Please make sure that the camera is correctly attached to your computer before you proceed.



During driver installation a dialog box may pop up asking you if you want to install an unsigned driver. Click the continue button in this case.





Once the installation as successfully complete the final screen is shown and you may quit the installer by clicking on **Fertigstellen**.

If you have problems with the installation please report them to us and include the following information:

- ▷ Version of the software (shown in the title bar of the installer)Titelleiste)
- ▷ Which step the error occurred in
- ▷ The exact text of the error message
- ▷ Any error number given

## 4 Using LaserCam

After successfully installing LASERCAM you can start the application by clicking on its icon in the start menu.



In the main window you see the current camera picture. This picture should be sharp. If it is not, focus the picture by turning the lens on the camera.

After focusing, you can position the camera in such a way, that the picture shows the whole screen. It is important that all four corners are visible.

Neon lights can negatively affect the performance of the camera.

### 4.1 Controlling Brightness

In the lower middle of the main window is a slider. This is used to control the image brightness. Adjust it so that the picture is a tad dark. It is not important if some details are hard to see in the picture.

## 4.2 Calibration

Make sure that the whole screen is visible in the camera picture. Also note the hints in [section 3.1](#).

During and after calibration neither the camera nor the projector may be moved.

### 4.2.1 Automatic Calibration

To start automatic calibration click on the button labeled **Auto Kalibration**. A dark screen with white dots will appear for a few seconds.

Afterwards the Autocalibration window appears. Here you can adjust the position of the calibration markers by dragging them. You can also add any missing markers around dots by clicking on them. Once satisfied accept the grid by clicking on **Übernehmen**.

You will now be shown the calculated calibration grid. If this is regular accept the grid by clicking **Ja**, else click **Nein** and reposition the camera and retry the calibration.

## 4.3 Shot detection

After the successful completion of the calibration, you can start the shot detection by clicking on the button **Schusserkennung**. The main window will minimize to the system tray and you can start using the laser gun.

If you want to deactivate the shot detection, click on the LASERCAM icon in the system tray and then on the button **Schusserkennung**.

You may also push the key combination Ctrl-Alt-F12 to toggle shot detection on or off.

## 4.4 Quitting the program

To quit LASERCAM, click on the blue camera icon in the system tray. The main window opens and you can close the application. You do not need to explicitly shut down LASERCAM before powering down your computer.

All calibration settings are saved and will be automatically loaded the next time you start LASERCAM. If you are not certain that the camera has not been moved we strongly advise thaz you recalibrate the camera on each program start.

