

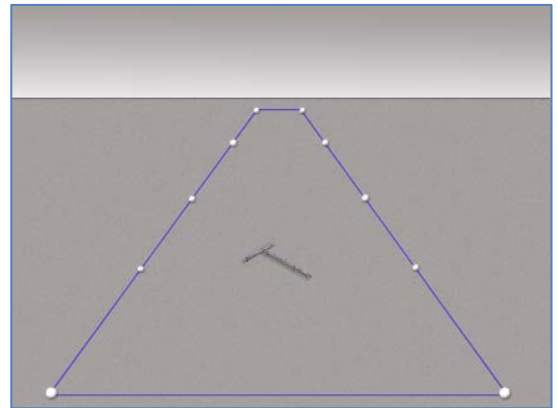
Vicon Bonita Quick Start Guide

Install Vicon software

- Before proceeding, install your Vicon software.

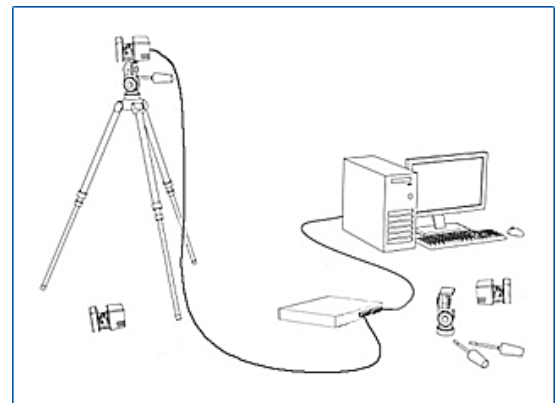
Define capture volume

- Lay out the intended capture volume by placing markers around the edges of the volume.
Tip: You can often place the markers on the floor, as shown. If the volume to be captured is higher up, place the markers accordingly. This makes it easier to visualize the capture space.



Install cameras

- Install each camera on a tripod, on the wall, or on a ceiling-mounted grid.
Note: Camera mounts are not provided, unless ordered separately.
- Insert the network cable into the camera and then connect the cable to the Power over Ethernet (PoE) or Giganet. It may take up to a minute for the camera to power up. If after a minute the camera has not powered up, see the Tracker online help.
- Turn on the PoE switch or Vicon Giganet.
Tip: If you plug in the cameras after turning on the PoE, you may not see all cameras. In this case, turn off the PoE, and then turn it on again.



Set up the PC connection to the devices

- Connect the PoE switch or Giganet to the PC.
- If you are using:
 - A single network interface card (NIC):** Enter the IP address 192.168.10.1 for the NIC to which the system is connected.
 - More than one NIC:** Enter the IP address 192.168.10.1 for the first NIC to which the system is connected, then see the [Link aggregation for multiple NICs](#) box (right).
- Enter the Subnet Mask 255.255.254.0.

Link aggregation for multiple NICs

To enable you to use more cameras or data, you can use additional NICs in your PC to split camera data. To do this:

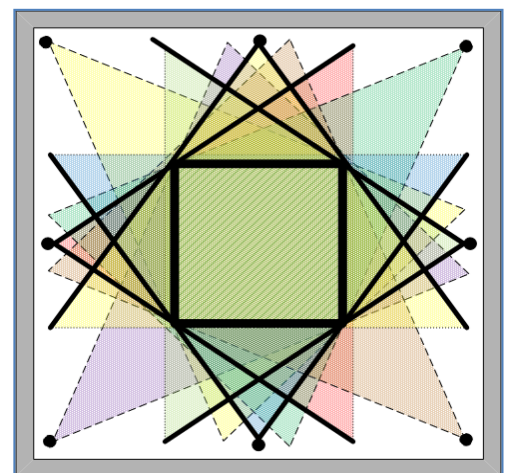
- Set the additional IP addresses of your NICs to different addresses in the available range 192.168.10.2–9.
- In the [Blade Attributes Editor](#) or Tracker/[Nexus Properties](#) pane for each camera, set the [Destination IP Address](#) to the IP address of the NIC to which to send data.

Start software

- On your Windows Desktop, double-click the Vicon software icon.
- In the [Resources System](#) pane, make sure all of the cameras are listed in the [Vicon Cameras](#) area. If they are not, see the tip under [Install cameras](#), above.

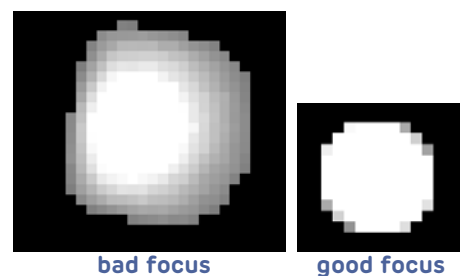
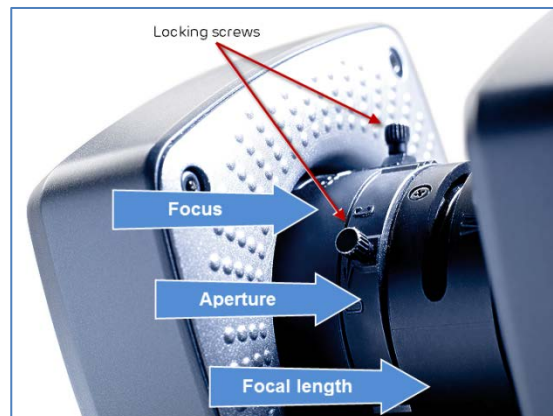
Aim cameras

- In the [Resources System](#) pane, select a camera.
- Change the View pane from [3D Perspective](#) to [Camera](#).
- Aim the camera so that it points where required, usually the center of the capture volume.



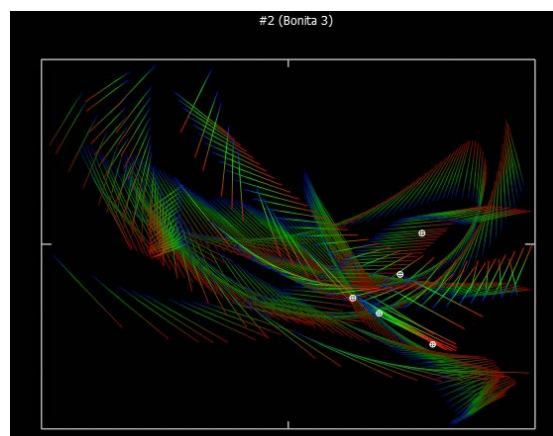
Adjust cameras

1. Adjust the **focal length adjustment ring** – this is the ring farthest from the strobe, see illustration (right).
Tip: Adjusting the focal length from W (wide angle) to T (telephoto) narrows the view to focus in on the area. Adjusting it from T to W widens the view.
2. When you have the focal length adjusted correctly, adjust the focus of the camera by turning the **focus adjustment ring** (this is the ring closest to the strobe, as shown in the illustration).
A small, well-defined blob denotes good focus.
Tip: You may find it easiest to adjust the focus if you change **Grayscale mode** to **ALL** in the camera's **Properties** pane.
3. Adjust the aperture as needed by turning the **aperture adjustment ring** (the ring that is between the focal length and focus rings, see illustration above right). The aperture ring allows you to adjust the amount of light that hits the image sensor.
O (open) enables more light to hit the sensor and C (closed) reduces the amount of light that hits the sensor. Try to get good, clear images of markers even when they are close together. The markers should not be too small, and the center should be just off-white (not fully saturated).
4. When you are happy with the focal length, focus, and aperture, to prevent the rings from moving if the camera is knocked, tighten the locking screws.
Caution: To avoid damaging the rings, *do not over-tighten the locking screws*.



Calibrate the cameras

1. Remove from the capture volume any unnecessary objects, such as calibration objects and markers.
2. Change the View pane to **Camera** and in the **Resources System** pane, select all cameras.
3. To remove any unwanted reflections, in the **Create Camera Masks** area click the **Start** button. Camera masks are automatically created. When all unwanted reflections have been masked out, click the **Stop** button. For more information, see the online help.
4. In the **Resources Calibrate** pane, go to the **Calibrate Cameras** area and click the **Start** button. Calibration should take no more than five seconds per camera.
 - a. Wave the calibration wand within the volume.
 - b. Make sure that the tracks are evenly distributed throughout the volume. You can view the distribution of the tracks in the **Camera** View pane.
 - c. When there are sufficient tracks within the volume (about 1000), if calibration doesn't stop automatically, in the **Calibrate Cameras** area click the **Stop** button.
The Vicon software automatically processes the calibration.



Set the volume origin

1. Place the wand where you want to establish the origin.
2. In the **Resources Calibrate** pane, go to the **Set Volume Origin** area and click the **Start** button.
3. Click the **Set Origin** button. The cameras will orient themselves properly.

Your system is now ready to stream data.

Additional information about set-up, calibration and object tracking can be found in the online help of your Vicon software. For more information, visit vicon.com or contact your local Vicon office.

COMMUNICATE
For further information on Bonita and other Vicon Products, contact your nearest office or email info@vicon.com.

vicon.com

facebook.com/vicon
twitter.com/vicon
youtube.com/vicon100
linkedin.com/company/vicon

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Bonita Regulatory Information

Federal Communications Commission



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.

Warning Changes or modifications to the supplied system not expressly approved by the party responsible for FCC compliance could void the user's authority to operate the equipment.

For customers within the European Union

Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment

-RoHS and Recast (RoHS 2)

Vicon Bonita hardware is fully RoHS (2002/95/EC provides that new electrical and electronic equipment put on the market for the first time from 1 July 2006) and RoHS 2- compliant. The European Union Directive [2011/65/EU](#) provides that new electrical and electronic equipment put on the market for the first time from 3rd January 2014 shall not contain more than permitted levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBB), or polybrominated diphenyl ethers (PBDE; PentaBDE, OctaBDE; DecaBDE), Mercury (Hg).

REACH Declaration of Conformity

Vicon Motion Systems Ltd is a manufacturer of electronic hardware. We are therefore considered a "downstream user" as far as the REACH document is concerned. Vicon Motion Systems Ltd is therefore not obligated to register with the European Agency for Chemicals 'ECHA'.

Products sold by Vicon Motion Systems Ltd are "articles" as defined in REACH (Article 3 Definitions). Moreover and under normal and reasonably foreseeable circumstances of application, the articles supplied shall not release any substance. For that, Vicon Motion Systems Ltd is neither obligatory for registration nor for the creation of material safety data sheets.

In order to assure our customers the continual supply reliable and safe products, we ensure that our suppliers fulfill all requirements regarding chemical substances and prepared materials.

Waste Electrical and Electronic Equipment (WEEE)



The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

For more detailed information about the recycling of this product, please contact Vicon Motion Systems Limited or your nearest agent.



Declaration of Conformity

Medical Devices Directive 93/42/EEC as amended by Directive 2007/47/EC

and

Electromagnetic Compatibility to EMC Directive 2004/108/EC.

We, Vicon Motion Systems Limited
Unit 6, Oxford Industrial Estate
Yarnton OX5 1QU
UNITED KINGDOM

declare that the VICON Bonita motion capture camera manufactured by VICON MOTION SYSTEMS LIMITED meets ANNEX V and VII Section 5 of the Medical Devices Directive 93/42/EEC as amended by Directive 2007/27/EC in that the Quality Management System has been approved by Lloyd's Register Quality Assurance, a notified body of the European Union (Reg No. 0088) for the manufacture and support of the aforementioned CLASS 1 Medical device. Product Configurations and Software Options overleaf details the product configurations and software options that conform to the metrological requirements of the Directive.

VICON MOTION SYSTEMS LIMITED has tested and demonstrated that all products of its own manufacture meet 2004/108/EC:

Electromagnetic Compatibility to:

EN60601-1-2:2007

General Requirements for Basic Safety and Essential Performance to:

EN60601-1:2006

A handwritten signature in black ink, appearing to read 'T.M.L. Shannon'.

T.M.L. Shannon TD PhD FIE (Aust) CPEng (Biomedical)

Director of Regulatory Compliance

22 February 2018

Not for use in an operating theatre anaesthetic gas or oxygen-rich environments. Not for use where there is a risk of compromising the essential performance of medical electrical equipment. Not suitable for use in high magnetic flux, ionizing radiation, sterile, or life- or safety-critical environments.

Product Configurations and Software Options

This page provides information relating to the CE Declaration of Conformity.

Conformity of the Metrological Performance of CLASS 1 Products Manufactured in Accordance with Annex VII, Section 5 of the Medical Devices Directive 93/42/EEC of the 14th June 1993 as amended by Directive 2007/47/EC

We, Vicon Motion Systems Limited
Unit 6, Oxford Industrial Estate
Yarnton OX5 1QU
UNITED KINGDOM

declare that the VICON Bonita motion capture camera manufactured by VICON MOTION SYSTEMS LIMITED has been tested prior to shipment and meets the following metrological performance:

Testing using the following Vicon application software: Tracker V1.0 or later, Nexus 1.5 or later, Blade 1.8 or later.

Measurement Criteria

- No fewer than four cameras fully viewing the static markers and rigid body objects.
- Measurement volume no less than 4 m x 4 m x 1.5 m.
- Independent of the lens fitted to each camera.
- Controlled lighting (no greater than 100 lux) and temperature (17-25° C)

Passive Marker Resolution

Resolution of the distance between the centres of two static 14 mm spherical markers to within 1 mm Mean; 1 mm Standard Deviation; sample size no less than 100.

Rigid Bodies

The mean and standard deviation derived from a sample size of no less than one 100 measurements of two static and defined, fixed rigid body object origins shall not exceed 1 mm within the volume in any axis.

Medical Device Adverse Event Reporting

Use the appropriate information and form to report any adverse events involving Vicon Bonita Cameras:

- [MHRA Adverse Incident Report Form \(EU\)](#)
- [FDA MedWatch Adverse Event Reporting Program \(US\)](#)

Should an adverse incident occur, the appropriate form is to be completed and forwarded within one working day to Vicon Motion Systems Limited through one of the following addresses:

Oxford

Vicon Motion Systems Limited
Unit 6, Oxford Industrial Estate
Yarnton OX5 1QU
UNITED KINGDOM
Tel: +44 (0)1865 261800

Los Angeles

Vicon Motion Systems Inc.
3750 S. Robertson Boulevard, Suite 100
Culver City, CA 90232, USA
T: +310.437.4499
F: +310.388.3200

Denver

Vicon Motion Systems Inc.
7388 S. Revere Parkway
Suite 901
Centennial, CO 80112 USA
Tel: +1 (303) 799 8686
Fax: +1 (303) 799 8690

MHRA Adverse Incident Report Form (EU)

The information in this section covers the reporting of incidents involving medical devices to the UK Medicines and Healthcare products Regulatory Agency (MHRA). The MHRA is a UK government agency and European Union Competent Authority which is responsible for ensuring that medicines and medical devices work, and are acceptably safe. Use the form specified in this chapter to report an adverse incident involving a medical device within the European Union.

Full information and guidance on reporting Adverse Incidents is published in MHRA Device Bulletin DB 2008(01) Reporting Adverse Incidents and Disseminating Medical Advice Alerts.

For details on reporting requirements, contact the MHRA:

Medicines and Healthcare products Regulatory Agency
Market Towers
1 Nine Elms Lane
London SW8 5NQ UK
Tel: +44 (0)20 7084 2000
Fax: +44 (0)20 7084 2353
Web: www.mhra.gov.uk

You can obtain the MHRA Adverse Incident Report Form from the MHRA Web site ([http://www.mhra.gov.uk/Safetyinformation/Reportingsafetyproblems/ Devices/index.htm](http://www.mhra.gov.uk/Safetyinformation/Reportingsafetyproblems/Devices/index.htm)).

Separate online and printed versions of the form are available on that Web site.

Notice to Agents For inclusion in all Vicor systems supplied from the United Kingdom for use within the European Union (for supply and use in the United States of America, see FDA MedWatch Adverse Event Reporting Program (US)). The master Medicines and Healthcare products Regulatory Agency (MHRA) file is located at Vicor Motion Systems Limited. Should an adverse incident occur, the appropriate form is to be completed and forwarded within one working day to Vicor Motion Systems Limited at one of the addresses listed.

FDA MedWatch Adverse Event Reporting Program (US)

FDA Adverse Event Report Form This section covers the reporting of incidents to the US Department of Health & Human Services.

Department of Health & Human Services, US Food and Drug Administration Medical Device Reporting System
—Reportable Events Code of Federal Regulations Title 21, Volume 8 Revised as of April 1, 2006 Cite:

21CFR803.32 Under 803.1(a) device user facilities and manufacturers must report deaths and serious injuries that a device has or may have caused or contributed to. Should such an event occur, please complete the form specified in this section and forward it in accordance with the applicable regulations and time limits to your nearest Vicor office.

You can obtain the FDA Adverse Event Report Form (MEDWATCH form FDA 3500A) from the FDA's MedWatch Adverse Event Reporting program on their Web site (http://www.fda.gov/medwatch/safety/FDA-3500A_fillable.pdf). This PDF form can be completed online or printed out.

Notice to Agents For inclusion in all Vicor systems supplied to the United States of America (for supply and use outside the US, see MHRA Adverse Incident Reporting (UK)). The master Medical Device Reporting (MDR) file is located at Vicor Motion Systems Limited. Should an adverse event occur, MEDWATCH Form FDA 3500A (10/05) is to be completed and forwarded within one working day to Vicor Motion Systems Limited (see [Medical Device Adverse Event Reporting](#)).