
Science & Motion Sports

SAM BalanceLab 3 Pro Edition

New Features

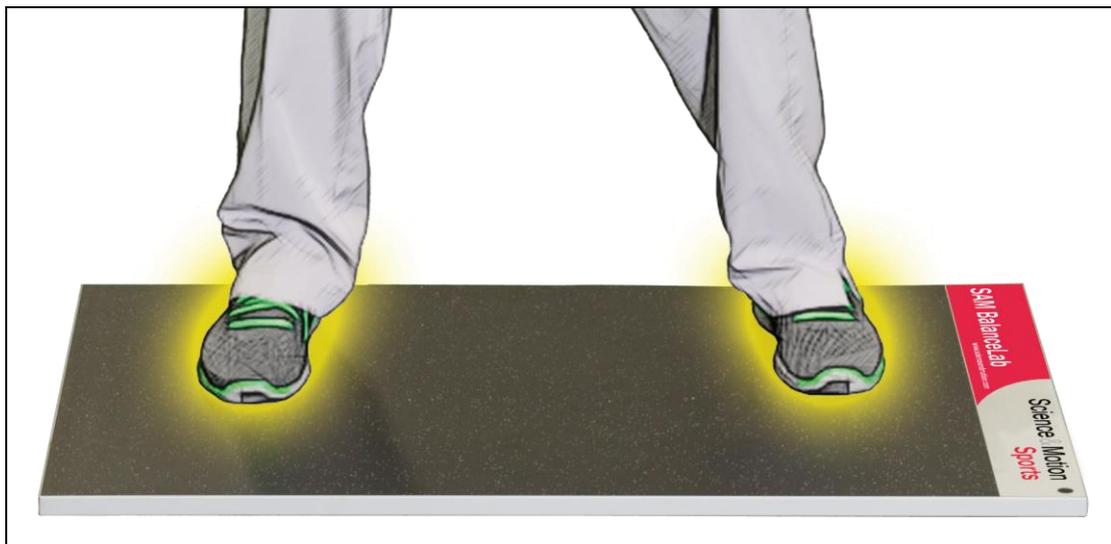


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New features of BalanceLab 3 – Pro Edition

BalanceLab version 3 includes a lot of new features. The main differences to the previous version BalanceLab 2 are listed in this chapter to give a quick overview.

All the new features are described in detail in this manual. Just follow the links in this overview to jump to the detailed descriptions.

1 System requirements – please read this before installing

BalanceLab 3 includes a high performance video recording engine to recording and realtime processing of video.

A highly important thing for balance data in combination with video is that both data streams are synchronized as good as technically possible. This will be achieved by frame by frame video recording. Each frame (video picture) will be synchronized with the balance data. This needs some serious CPU performance during recording.

Minimum system requirements:

- CPU: i5 or i7 DUAL core CPU
- Graphics: Dedicated graphics card recommended. Latest Intel onboard graphics may be ok too. DirectX 9 or better must be installed.
- Memory: 4 GB minimum
- Harddisk: Depending on usage a minimum of 50 GB free disk space is recommended on drive C.
- Operating System: Windows 7 / 8 / 8.1 / 10 (Windows XP is not supported)

Recommended system requirements:

- CPU: i5 or i7 QUAD core CPU
- Graphics: Dedicated graphics card recommended. Latest Intel onboard graphics may be ok too. DirectX 9 or better must be installed.
- Memory: 8 GB or better
- Harddisk: 100-200 GB free disk space on drive C.
- Operating System: Windows 7 / 8 / 8.1 / 10 (Windows XP is not supported)

If your system does not meet the requirements you can try to install the software and limit the camera performance. E.g. lower resolution like 640x480 pixels and lower frame rate <50 FPS.

If you search for an ideal system please look for i5 or i7 CPUs with the appendix HQ, MQ or QM.

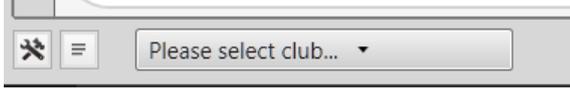
Example: i7-3740QM / i7-3820QM

2 Club selection – club type can be saved to any recording

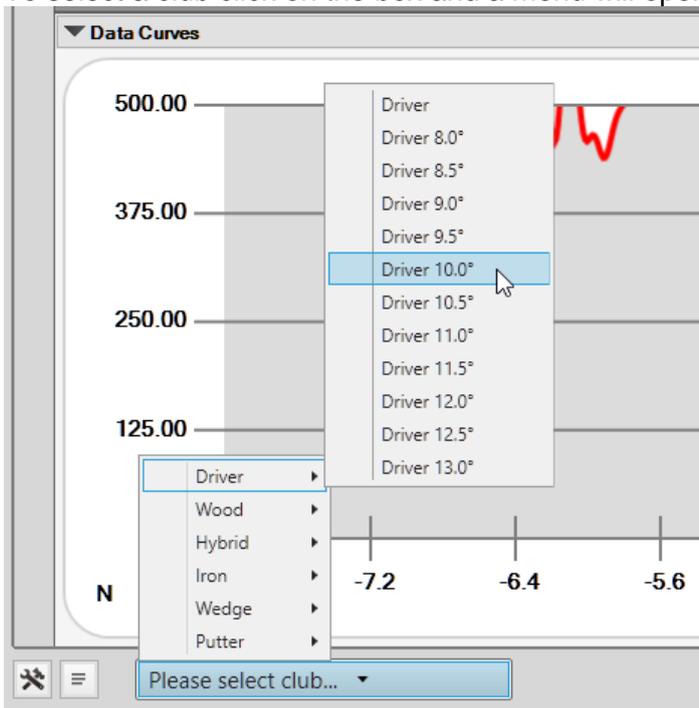
Version 3 introduces a club type selection for each recording. The club type will be saved to the database and will be visible when the swing is in replay mode.

This is important as the balance data might be different depending on the club that is used (e.g. iron or driver).

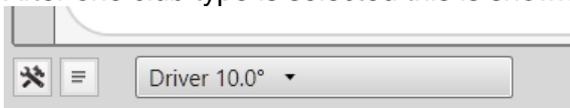
A box in the lower left corner of the Recording or Replay screen will show the actual club selection:



To select a club click on the box and a menu will open with all available options:



After one club type is selected this is shown in the box then:



In the Replay screen the club type is displayed at the bottom of the data selection bar on the left:



If the data selection bar is not visible you can open it by clicking on the small arrow button (see blue arrow).

By clicking on the club type selection box it is possible to change or select the club type also in the Replay. If changes are done you will be asked if you want to permanently save these changes when the Replay screen is closed.

3 Improved camera settings

BalanceLab 3 has a complete new camera interface and also improved settings for many cameras.

Basically the following cameras are supported:

a) all cameras that provide a Windows "Direct Show" driver.

All Webcams (Logitech/Phillips/Microsoft) belong to the group of supported cameras.

Many other more professional cameras also provide drivers for Windows.

Examples are: Basler, Allied Vision, Imaging Source and many more.

If you are unsure if your camera is supported please contact Science & Motion Sports or the camera manufacturer and ask for a Windows driver/interface.

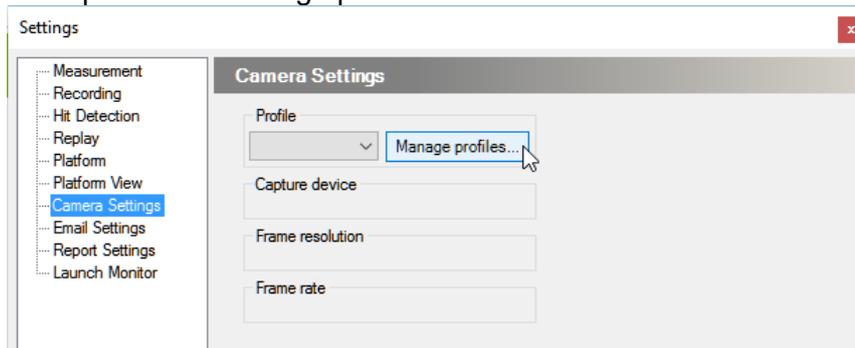
b) IDS uEye camera family (www.ids-imaging.com)

For these cameras the original interface is implemented. So many very specific parameters of the camera can be adjusted, mainly this is exposure time, speed, gain, picture size.

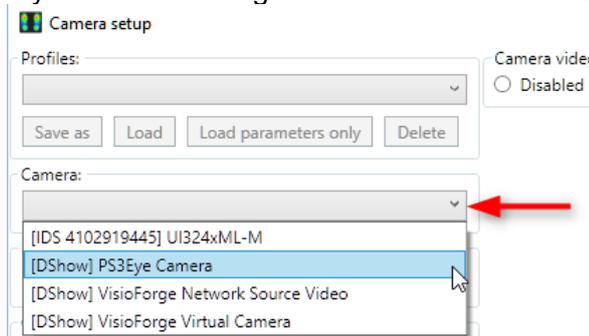
A new feature of BalanceLab 3 are camera profiles. A camera can be configured and settings can be stored inside a profile. This makes it possible to configure multiple or different cameras and then easily select one of them when a recording is done. A profile can even be loaded when the recording is started.

To configure a camera open the program settings and then select "Camera Settings".

Then press the "Manage profiles..." button.



If you want to configure a new camera then select the camera from the list:



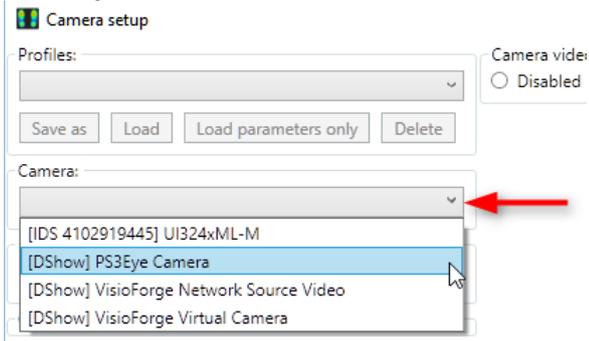
The list should show all cameras that are connected and have a valid Windows "Direct Show" driver. Additionally all IDS uEye cameras are listed.

If you already have created camera profiles you also can recall existing settings by selecting a profile:



3.1 How to configure a new camera

Select your camera from the Camera selection box:



The list should show all cameras that are connected and have a valid Windows "DirectShow" driver. Additionally all IDS uEye cameras are listed.

Depending on the type of the camera the configuration window may look different. Both configuration windows are described in the next sections.

3.1.1 Settings for a general USB camera (Webcam or DirectShow compatible camera)

As example we use a Microsoft Cinema Series Webcam.

The configuration windows will look like follows:

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The screenshot shows the 'Camera settings' panel in BalanceLab 3 Pro Edition. The settings are as follows:

- Pixel format:** YUY2
- Resolution:** 640 × 480
- Frame rate:**
 - Minimum: 15.000 fps
 - Maximum: 30.000 fps
 - Desired: 30.000 fps
 - Reported: 30.000 fps
- Exposure:** 1.95 ms
- Rotate & Flip:** 0° (selected), 90°, 180°, 270°, H, V
- Video quality:** 1% to 100% slider, 60.00
- Time offset to force plate data (ms):** 0
- Dropped frames:** 0 fps (compression)
- Actual frame rate achieved:** 30.057 frames per second

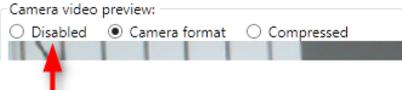
Callouts on the right side of the image explain the following parameters:

- Video size / resolution:** Points to the Resolution dropdown.
- Desired frame rate (FPS):** Points to the Desired frame rate input field.
- Exposure time (not available for all cameras):** Points to the Exposure dropdown.
- Additional settings (availability depending on camera type):** Points to the 'Show camera-dependent configuration dialog...' button.
- Picture orientation:** Points to the Rotate & Flip radio buttons.
- Video quality (compression factor, recommended: 60%):** Points to the Video quality slider and dropdown.
- Number of missed frames in the last second:** Points to the Dropped frames field.
- Real actual frame rate (if lower than desired a performance problem can be the reason):** Points to the Actual frame rate achieved field.

If you change values you will see the result in the live image window on the right.

The following table will give you detailed information on all parameters:

| Parameter | Description |
|--------------|--|
| Pixel format | The cameras deliver the pictures in different pixel formats. If you see a live picture without errors you don't need to change anything on the default setting. If the picture looks strange you can try other pixel formats if available. |
| Resolution | This is the picture size of the video. For BalanceLab a medium resolution is recommended, e.g. 640x480. The higher the resolution is the more CPU performance and also disk space is needed. So please be careful with high resolution settings here. |
| Frame rate | Most webcams only allow framerates of 30 FPS. Some more special cameras also allow higher framerates. You can enter a higher value here and the camera will be set to the maximum framerate. At the bottom of this window you can check if the desired framerate can be achieved, please see "Actual frame rate achieved". |
| Exposure | If this parameter is available (depends on the camera) you can adjust the exposure time. A smaller exposure time makes your video more crisp especially for the moving club. But the lower the framerate is the more light you will need. So this parameter is very much dependent on your environment conditions. |

| | |
|---|--|
| <p>Show camera dependent configuration</p> | <p>Some cameras offer additional settings like: Exposure time, gain, Color Balance, etc. The settings can only be done in a camera specific driver software, which will be opened by pressing this button. The BalanceLab software does not have direct control of these parameters, however, you can try to optimize settings here for specific cameras.</p> |
| <p>Rotate & Flip</p> | <p>Allows to rotate or flip the image. If the camera shows a wrong image orientation you can correct this here, e.g. switch to portrait mode from landscape.</p> |
| <p>Video quality</p> | <p>All pictures of the video will be compressed before saved to the disk. A higher quality setting will produce bigger files. The mechanism is identical to the JPG compression. A quality level of 60% is recommended to achieve a good compression level.</p> |
| <p>Time offset to force plate data (ms)</p> | <p>This value allows to perfectly synchronize the camera and force plate data streams. Depending on the used camera model there can be a small offset. Go to 2.1.4 to get a full description how to execute the synchronization.</p> |
| <p>Dropped frames</p> | <p>The number of dropped (missing) frames in the last second of recording. If this value is not zero frames are missed. This may show a problem with the camera or a problem with system or USB performance.</p> |
| <p>Actual frame rate achieved</p> | <p>This is the "real" framerate of the pictures coming in from the camera. If this value is differing from the "desired frame rate" setting by more than 2 frames permanently there is something wrong. Either frames are dropped (please check the display for the dropped frames) or there is a general performance problem. Try to lower the "desired frame rate" and check if the problem is still showing up for lower frame rates.</p> |
| <p>Processor load</p> | <p>Shows the current CPU usage. If this value is above 50% please switch off the preview live display:</p>  <p>Then check if the value is still higher than 50%. If so you may reduce frame rate or video resolution to save some CPU power.</p> |

If you press the "Close" button or leave the configuration window the actual configuration will be set.

It is recommended to create profiles for all configurations that you may want to use again in future. Go to [2.1.3](#) to learn how to do this.

3.1.2 Settings for IDS uEye cameras

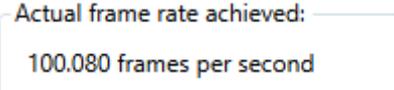
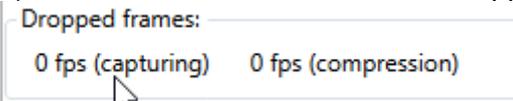
As example we use the USB 3.0 camera IDS UI-3240 LE.

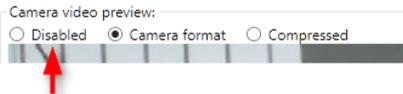
The configuration windows will look like follows:

The screenshot shows a configuration window for a camera with the following settings and callouts:

- Pixel format:** BGR8Packed (Callout: Image format delivered by camera)
- Binning:** 1 (Callout: Factor to skip lines in the video)
- Cropped width:** 800 (Callout: Width / height of the video in pixels)
- Cropped height:** 600
- Pixel clock:** 84.00 MHz (Callout: Transfer bandwidth, is limited by USB connection speed)
- Frame rate:**
 - Minimum: 0.953 fps
 - Maximum: 100.084 fps
 - Desired: 100.084 fps (Callout: Desired frame rate (fps))
 - Reported: 100.084 fps
- Exposure:** 0.04 ms (Callout: Exposure time in ms)
- Capture buffer:** 10 frames
- Gain:** 100% (Callout: Camera gain to increase brightness)
- Auto gain:** Enabled (Callout: Auto gain settings to auto-adjust brightness to environment)
- Analog gain boost:** Enabled
- Rotate & Flip:** 0° (Callout: Rotate / flip image for Portrait or landscape mode)
- Video quality:** 60.00 (Callout: Compression quality (JPEG factor))
- Time offset to force plate data (ms):** 0
- Dropped frames:** 0 fps (capturing) 0 fps (compression) (Callout: Number of lost frames in the last second)
- Actual frame rate achieved:** 100.084 frames per second (Callout: Real actual framerate – if lower than desired a performance problem can be the reason)
- Processor load:** 15% (Callout: Processor load)

| Parameter | Description |
|--------------|--|
| Pixel format | The cameras deliver the pictures in different pixel formats. If you see a live picture without errors you don't need to change anything on the default setting. For a grey camera you should select "Mono8". For color camera setting should be "BGR8Packed". |
| Binning | Binning factor removes rows and columns from the camera picture without changing the view. For a binning of 1 all lines of the camera will be used, for a binning of 2 every second line will be skipped. So the vertical and horizontal resolution will be half of what is defined under "Resolution". This makes sense if you have performance problems or want smaller video files. |

| | |
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| <p>Resolution</p> | <p>This is the picture size of the video. For BalanceLab a medium resolution is recommended, e.g. 640x480. The higher the resolution is the more CPU performance and also disk space is needed. So please be careful with high resolution settings here. A double resolution will increase storage size of the picture by 400%.</p> |
| <p>Frame rate</p> | <p>The maximum frame rate you can achieve with IDS cameras is dependent on the camera model and the USB connection speed. If you want to check out the maximum framerate you can achieve for a given resolution do the following:</p> <p>a) increase the Pixel Clock value to max. value</p> <p>b) you will then see a maximum framerate displayed in the "Frame rate" box. Set the value in the "Desired" field to this maximum value (or higher) and press "Apply"</p> <p>c) now check the value at the bottom of the window for "Actual frame rate achieved". This will show you the real frame rate in live mode:</p>  <p>d) if this value is ok also check for dropped frames:</p>  <p>This value should be 0 for both capturing and compression. If it is not 0 frames are lost due to performance problems. Please refer to the "Dropped Frames" section below in this table for possible solutions.</p> |
| <p>Exposure</p> | <p>This parameter allows to set the exposure time for the camera. A smaller exposure time makes your video more crisp especially for the moving club. The downside of a small exposure time is that you will need more light. So you need to play with the values for exposure time and camera gain (see below) to find a good setting for your environment. <u>Please note:</u> The Iris setting on the optics will also have a big influence on brightness and depth of field of the pictures.</p> |
| <p>Capture buffer</p> | <p>Number of frames buffered by the computer. If there is a performance problem (dropped frames) you can try to increase this value. Normally it should be left on the default value of 10.</p> |
| <p>Gain / Auto gain / gain boost</p> | <p>The camera gain will increase the brightness of the pictures. This can be helpful for low light conditions or if you want to achieve a low exposure time to get more crisp pictures for moving objects.</p> |

| | |
|--------------------------------------|---|
| | <p>Increased gain will lead to more pixel noise in the pictures, but this may be more acceptable than pictures that are too dark or blurry.</p> <p>Best way to find a good compromise between all settings is to play with the gain/auto gain/gain boost in combination with exposure settings until you get a satisfactory picture.</p> <p><u>Please note:</u> The Iris setting on the optics will also have a big influence on brightness and depth of field of the pictures.</p> |
| Rotate & Flip | <p>Allows to rotate or flip the image. If the camera shows a wrong image orientation you can correct this here, e.g. switch to portrait mode from landscape.</p> |
| Video quality | <p>All pictures of the video will be compressed before saved to the disk.</p> <p>A higher quality setting will produce bigger files. The mechanism is identical to the JPG compression. A quality level of 50-60% is recommended to achieve a good compression level.</p> |
| Time offset to force plate data (ms) | <p>This value allows to perfectly synchronize the camera and force plate data streams.</p> <p>Depending on the used camera model there can be a small offset.</p> <p>Go to 2.1.4 to get a full description how to execute the synchronization.</p> |
| Dropped frames | <p>The number of dropped (missing) frames in the last second of recording.</p> <p>If this value is not zero frames are missed.</p> <p>This may show a problem with the camera or a problem with system or USB performance.</p> |
| Actual frame rate achieved | <p>This is the "real" framerate of the pictures coming in from the camera. If this value is differing from the "desired frame rate" setting by more than 2 frames permanently there is something wrong.</p> <p>Either frames are dropped (please check the display for the dropped frames) or there is a general performance problem.</p> <p>Try to lower the "desired frame rate" and check if the problem is still showing up for lower frame rates.</p> |
| Processor load | <p>Shows the current CPU usage. If this value is above 50% please switch off the preview live display:</p>  <p>Then check if the value is still higher than 50%. If so you may reduce frame rate or video resolution to save some CPU power.</p> |

3.1.3 Saving camera settings to Profiles or exporting to files

There are two ways to save specific camera settings for later use.

a) Profiles

These are complete parameter sets for a specific camera. They can only be used for the unique camera that is connected during configuration.

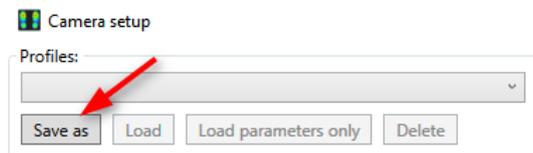
Basically this is the way to store configuration sets for a specific camera.

Multiple profiles allow to easily switch between different parameter sets, e.g. one for indoor use and one for outdoor.

Please note:

A profile will load the camera and also the settings.

To save the current configuration set into a profile press the "Save as" button in the "Profiles" section:



You will be asked for a name for the new profile, please choose a name that includes the camera model and a short description of the main properties.

E.g. "IDS-cam1-medium resolution-high gain" or "IDS-cam2-highres-outdoors".

To load a profile press the "Load" button and select the desired profile from the list.

Please note:

You can also load camera profiles when you are in the recording window.

You have the option to load all available profiles to quickly switch between different pre-configured cameras or settings.

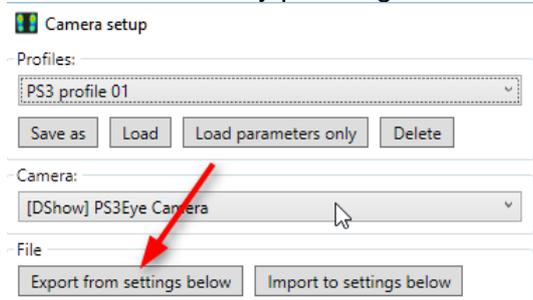
The camera that is linked to the profile must be connected, otherwise the profile cannot be loaded.

b) Export of parameters to file

These export files are not exclusive for a specific camera.

Example: You have multiple cameras of same type and want to transfer a configuration from one camera to another.

This can be done by pressing the button "Export from settings below":



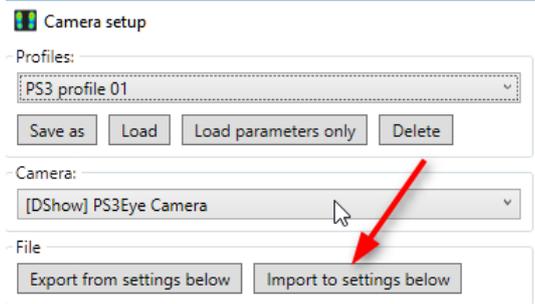
All current settings will be saved to a file. It is helpful to use a meaningful name.

If you want to transfer the settings to another camera then:

a) select the other camera

b) press the button "Import to settings below"

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Select the file you want to load.

c) Check the settings and if everything is OK then save the current configuration to a new profile for this camera.

The profile will then be available to use in the recording screen.

3.1.4 Synchronizing the camera with the pressure plate data

For each camera model it is necessary to synchronize the video to the recorded pressure data. A full golf swing is a very fast movement and it is very important to have synchronized data, otherwise you may see the moment of impact in the video, but the pressure data has an offset of some milliseconds and does not exactly belong to this time.

In worst case this could lead to wrong readings of data.

To synchronize video and pressure data you need to do a recording where an event is visible in both the video and the pressure data.

As an example this can be:

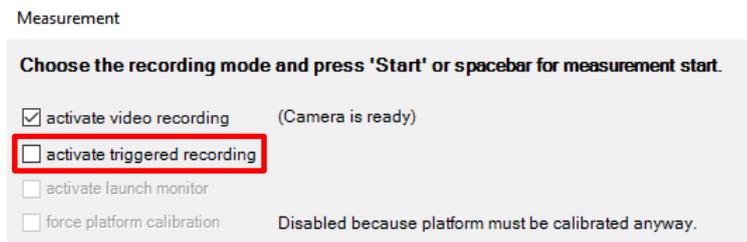
a) standing on the pressure plate with one foot only and then shortly push down the second foot.

b) take a golf club and hold it above the surface with the grip side down. While the recording is running, shortly push the club down and hit the surface of the plate with the grip end.

The video camera has to be placed in a way that you can exactly identify the moment when the objects (foot or club) hit the surface. This has to be clearly visible in the video.

Following is a step by step description of the complete synchronizing process.

1) Start a measurement in the BalanceLab software. Be sure to uncheck the "activate triggered recording" box in the startup window:

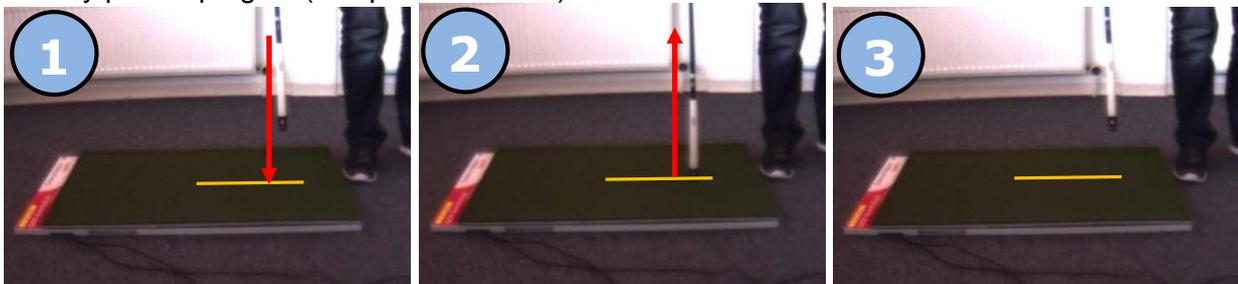


2) Adjust the camera so that the BalanceLab surface is visible in the view.

3) Take a golf club and hold it upside down with grip showing to the ground.

4) Start recording

5) During the recording is running push down the club shortly to the BalanceLab surface and directly pull it up again (see pictures below).

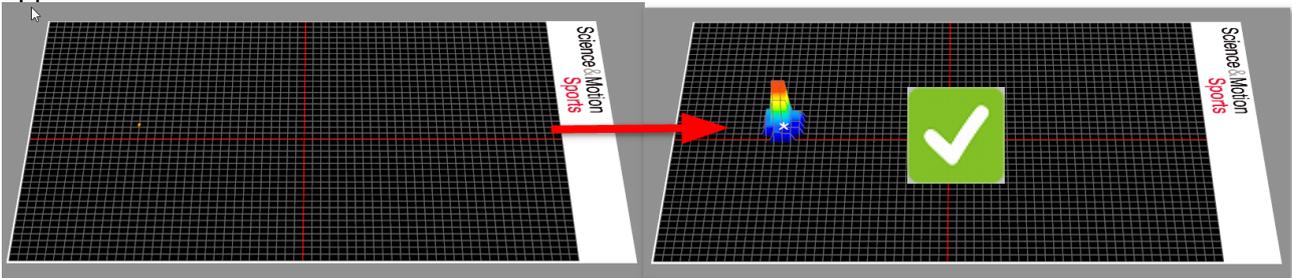


1: Push down the club to the BalanceLab surface 2 & 3: After contact directly move up the club again

6) Save the recording and close the measurement screen

7) Open the recording in the Replay

8) Navigate forward to the position where the contact is visible for the first time. Confirm this by going back and forth step by step and stay on the first position where the contact appears.

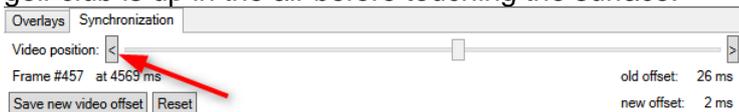


Stay on this position.

9) In the video window press on the button "Synchronization":



10) Use the arrow button left of the navigation slider to go back some frames in the video until the golf club is up in the air before touching the surface:

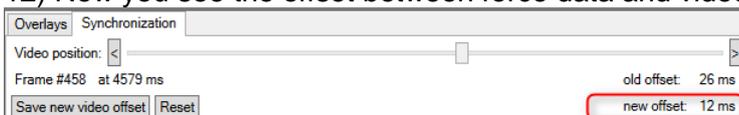


Please note: You need to use the mouse and click on the arrow buttons. Do not use the arrow keys of the keyboard!

This navigation only happens in the video, the position in the pressure display will not change.

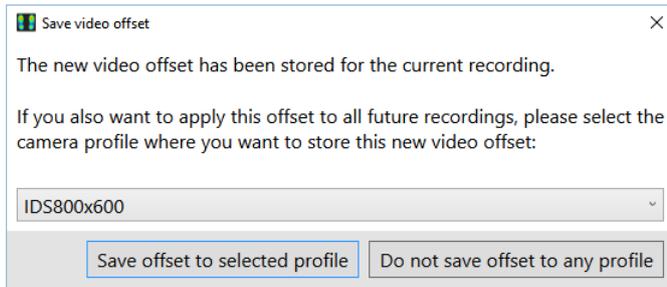
11) Now click on the arrow button right of the navigation bar to move forward step by step in the video. Do this until you see the first frame where the club touches the surface. Stay on this frame.

12) Now you see the offset between force data and video data in milliseconds:



13) If everything looks fine save this offset setting by clicking the "Save new offset" button.

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Now the video offset is set for the current record. If you also want to use this offset for all future recordings with the same camera profile then press the "Save offset to selected profile".

If you only want to set the offset for the actual record then press "Do not save offset to any profile".

4 Automatic hit detection by audio trigger (microphone) or by connection with launch monitor

The BalanceLab 3 software now supports automatic hit detection to control recordings. There are two options to achieve hit detection:

a) by audio trigger of impact (sound when ball is hit by the club will be detected by a microphone)

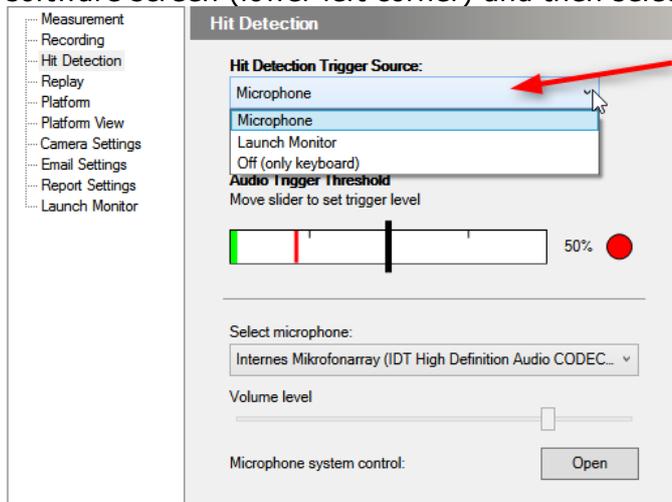
b) if a launch monitor is connected to the BalanceLab software, the launch monitor will send the trigger for a detected swing

*Launch Monitor plugin is needed to use this functionality. The plugin is part of the "Ultimate" edition of BalanceLab 3. For BalanceLab 3 Pro edition the plugin needs to be purchased as an upgrade.

There are some great advantages for swings recorded with automatic hit detection:

- No need to operate keyboard or mouse for recording start/stop
- Impact marker will be automatically be set (no need to do this manually)
- Recordings will be automatic cropped to a defined length before and after impact (can be defined in settings)

To configure your system for automatic hit detection click on the settings button in the main software screen (lower left corner) and then select **Hit Detection**.



First thing here is to select the Trigger source for the hit detection. Besides using a **Microphone** there are the options **Launch Monitor** and **Off**.

Launch Monitor will only be available when the launch monitor plugin is available (depending on software edition).

If set to **Launch Monitor** the BalanceLab software will just receive the swing detection from the connected launch monitor. This will work for Flightscope and Trackman. For Foresight only if the "Foresight API" version of the connection is used.

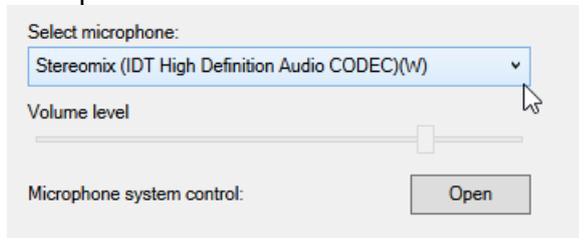
No further settings need here for this option.

The setting **Off** will emulate the hit detection by a press on the spacebar (keyboard). So you set the moment of impact manually by hitting the spacebar. This allows to use the hit detection mode also without additional hardware.

The most common option if you don't have a launch monitor connected or if you want to achieve best accuracy of impact detection is to use a **Microphone** to detect the impact sound.

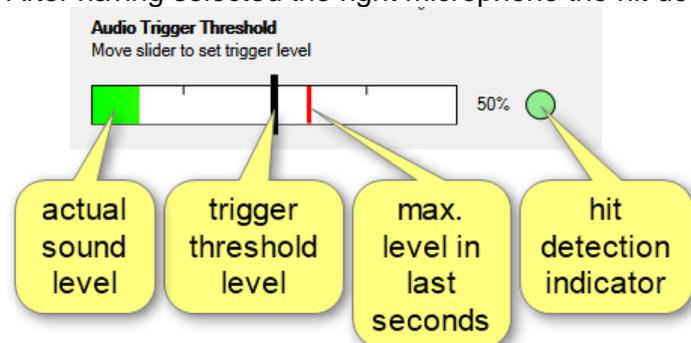
For using a **Microphone** as impact trigger source some additional settings are needed:

First step is to select the desired microphone input channel. Internal or external microphones can be used. Click on the selection box and select the microphone:



Some microphones allow direct volume settings (Volume level slider). There is also the option to open the Windows audio input control settings, for most cases this is not needed.

After having selected the right microphone the hit detection level has to be set.



To do this clap your hands and watch the audio level for the selected microphone. When clapping it should move into the right section of the bar (>75%).

The maximum level for the last seconds is always displayed by the red max level bar.

Try to set the black threshold level bar (click and hold with mouse) to a position where the clapping is noticed as trigger and the background sounds are ignored.

For a sound that triggers the impact you will see the **hit detection indicator** turn to green. If no trigger is detected it will stay red.

The indicator should only turn to green for each clap, not for any other sound that is recorded.

If the microphone is either too sensitive or too low you can try to use the volume level slider below the microphone selection box. This control will not be available for all microphones, but when available you may use it to pre-adjust the volume level for this microphone and then do the other settings.

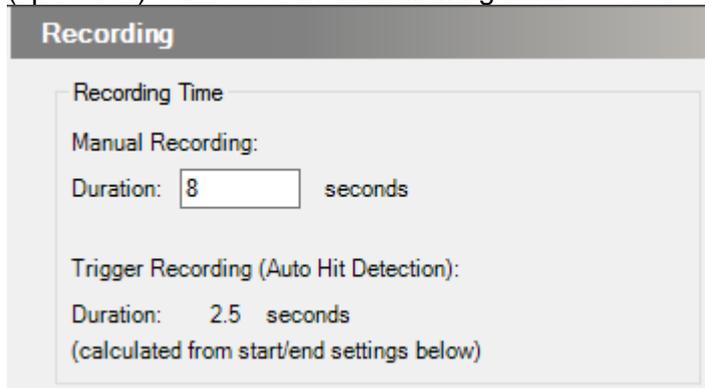
Please note: The threshold level can also be changed later while you are in the recording screen. If the settings need to be adjusted this can be done from there also without having to go to the settings window all the time.

Further configurations for Auto Hit Detection

In the **Recording** page of the program settings further options for automatic hit detection can be configured.

This are mainly the swing key position markers (Events) and the recording duration.

The recording duration for manual recordings controlled by Start/Stop commands via keyboard (spacebar) can be set in the following field:

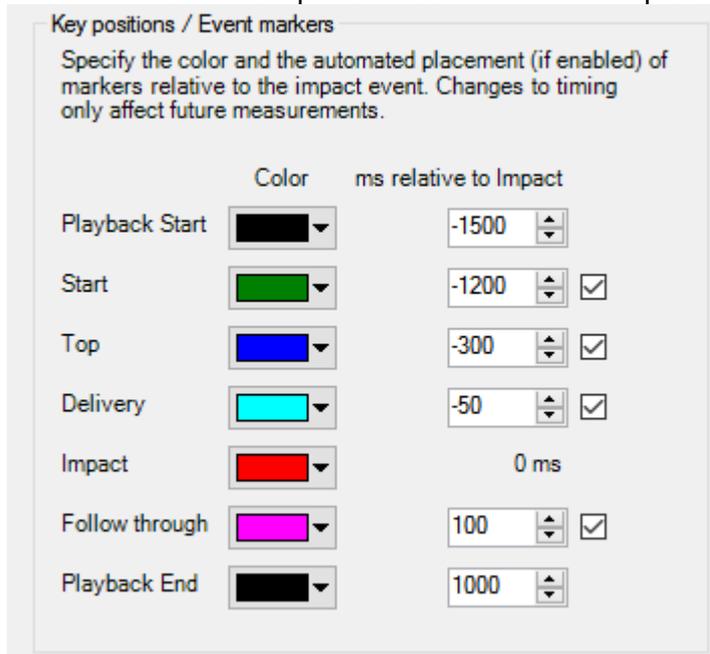


The screenshot shows a dialog box titled "Recording". It contains two sections: "Manual Recording:" and "Trigger Recording (Auto Hit Detection):".

Manual Recording:
Duration: seconds

Trigger Recording (Auto Hit Detection):
Duration: seconds
(calculated from start/end settings below)

The recording time for recordings done with **Auto Hit Detection** is defined automatically by the timing of the event markers **Playback Start** and **Playback End**. Both values are relative to the impact and define the length of the recorded data. In this case the length will be 2.5 seconds. 1.5 seconds before impact and 1 second after impact (see below).



The screenshot shows a dialog box titled "Key positions / Event markers". It contains a table of settings for various event markers.

Specify the color and the automated placement (if enabled) of markers relative to the impact event. Changes to timing only affect future measurements.

| | Color | ms relative to Impact | |
|----------------|---------------------------------------|------------------------------------|-------------------------------------|
| Playback Start | <input type="color" value="black"/> | <input type="text" value="-1500"/> | |
| Start | <input type="color" value="green"/> | <input type="text" value="-1200"/> | <input checked="" type="checkbox"/> |
| Top | <input type="color" value="blue"/> | <input type="text" value="-300"/> | <input checked="" type="checkbox"/> |
| Delivery | <input type="color" value="cyan"/> | <input type="text" value="-50"/> | <input checked="" type="checkbox"/> |
| Impact | <input type="color" value="red"/> | 0 ms | |
| Follow through | <input type="color" value="magenta"/> | <input type="text" value="100"/> | <input checked="" type="checkbox"/> |
| Playback End | <input type="color" value="black"/> | <input type="text" value="1000"/> | |

For all key positions a timing relative to Impact can be defined. All key position markers with a checked box will be set automatically when:

- Auto Hit Detection mode is active
- Impact Marker is set in Replay and the key "M" is pressed. This will set all other markers relative to impact with the given timings. If you move the Impact marker you can always correct all other markers by pressing the "M" key.

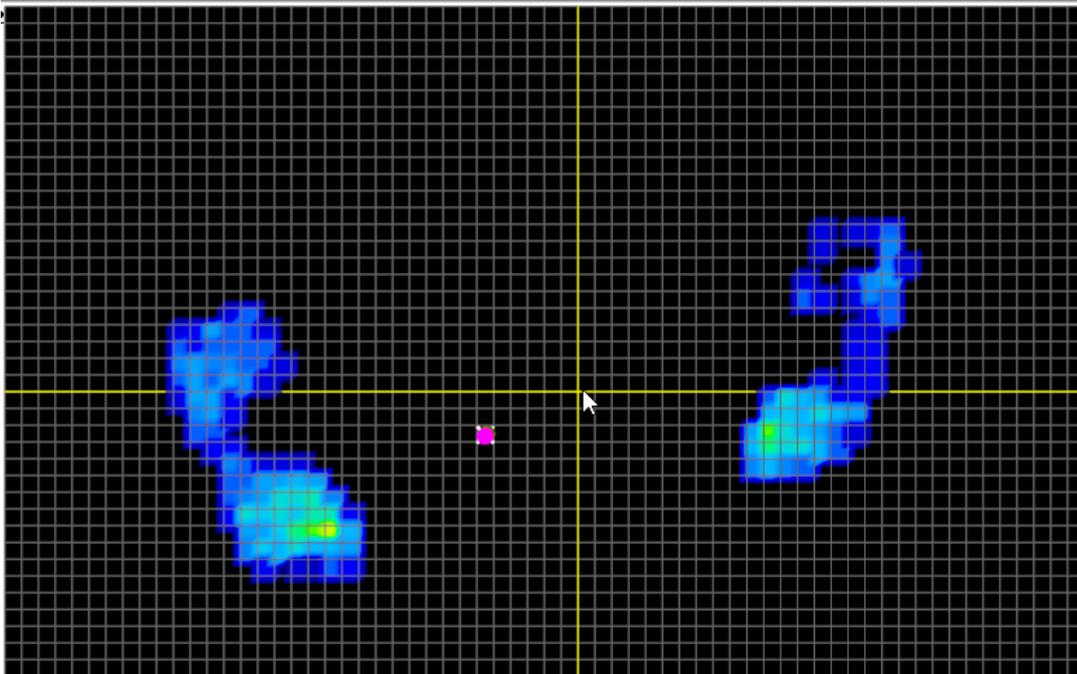
List of Key Position and Event markers:

| Key position / Event | Description |
|-----------------------------|---|
| Playback Start | Start time of recording relative to Impact. By changing this you can extend/shrink the recording time to the beginning. |
| Start | Moment when the player starts to move the club for the backswing. |
| Top | Top of backswing, the moment before the clubhead is starting the downswing movement. |
| Delivery | Moment where the shaft is horizontal to the ground in the downswing. |
| Impact | Moment where the ball is hit - will be set automatically in the moment the trigger signal is received. |
| Follow through | Moment where the right arm of the player is horizontal to the ground after impact. |
| Playback End | End time of recording relative to Impact. By changing this you can extend/shrink the recording time to the end. |

5 Improved setting of "Split Position" for feet separation

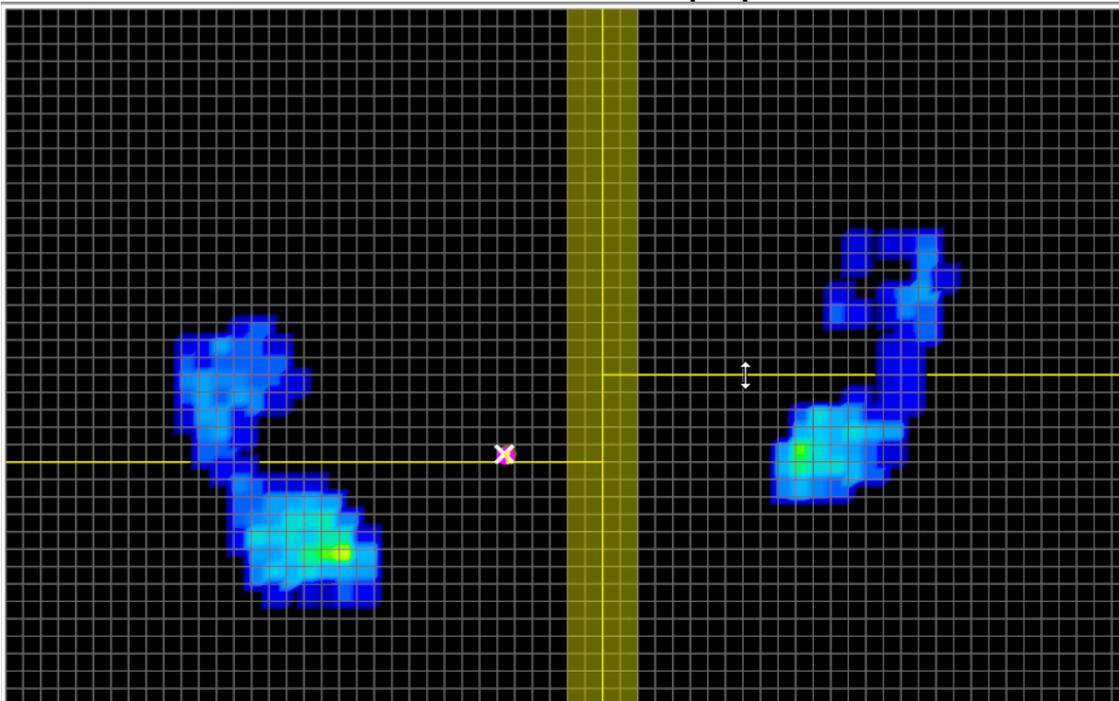
In BalanceLab 3 the vertical split line to separate front and back for each foot can be set to different positions for each of the feet.

Example for BalanceLab 2:



If the player stands on the platform with feet not in line it is impossible to set the separation line to a position where both feet are properly separated in front/back direction. Balance results will not show the exact right numbers in this case.

New feature for BalanceLab 3: Different vertical split position for each foot



By pressing the mouse button while over the left or right side of the platform you can set a vertical split position for each of the feet. So all results generated from front/back balance of the feet will be correct.

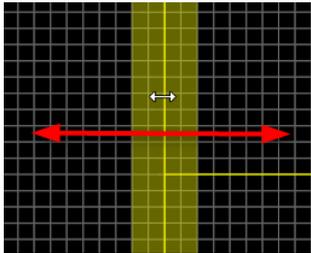
How to set the feet separation split positions in BalanceLab 3:

To activate the split position screen click on the "SP" button in the platform view menu:



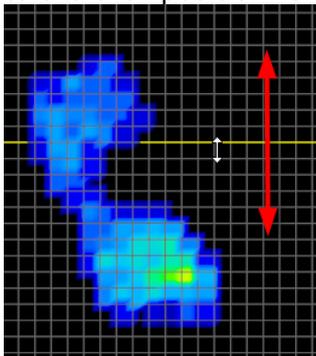
Left/right separation:

Click on the vertical separation area marked in yellow background and then hold the mouse and move to left and right to shift the split position.



Front/back separation for each of the feet:

Click on any position in the left or right field and the separation line will be positioned exactly to the click position. Or hold the mouse button down and move up or down to move the line.



Do this for both feet and when finished click again on "SP" button in the platform view menu.



The split positions are now defined for this dataset.

Please note:

Split position can be set in Recording or Replay screen.

If set in Recording the position will automatically be saved when saving the record.