Quintic Automatic

Equine Report

Tutorial

Introduction

The Quintic Automatic Equine Report is designed to work as an add on to our premier Quintic Biomechanics analysis software. Auto track equine gait using the provided digitisation templates, export the Excel data file, and load it through the Quintic Automatic Equine Report program. This will then produce a PDF report, containing variables such as:

- Linear Stride Kinematics
- Fore Leg Angular Kinematics
- Hind Leg Angular Kinematics

This tutorial will lead you through the simple process in order to create the reports.

To access tutorials on Quintic Biomechanics v26 that are referred to throughout this tutorial please download them from http://www.quintic.com/tutorials_v26.htm.

Installing the Quintic Automatic Equine Report

Please follow the below instructions carefully in order to successfully install the Quintic Automatic Equine Report.

1. Download the Quintic License Key Generator, and run the 'setup.exe' application (NOT 'QuinticKeyGeneratorSetup').
2. In this application window, press on the 'Get System Code' button.
3. Copy the System Code generated into an email, along with the following information
   a. Company Name
   b. Contact Name
   c. Contact Email Address
   d. Report Name (equine)
   e. Address
   f. Phone Number
   g. System Code (generated in the above step)
4. Please email to info@quintic.com.
5. After receipt of your email, Quintic will send you a unique Licence Key.

Next, download the Quintic Automatic Equine Report program and run the 'setup.exe' installer and complete the installation as prompted by the instructions.

You can now open the Quintic Automatic Equine Report program via the Desktop Icon and login in using your own User Name and Password.
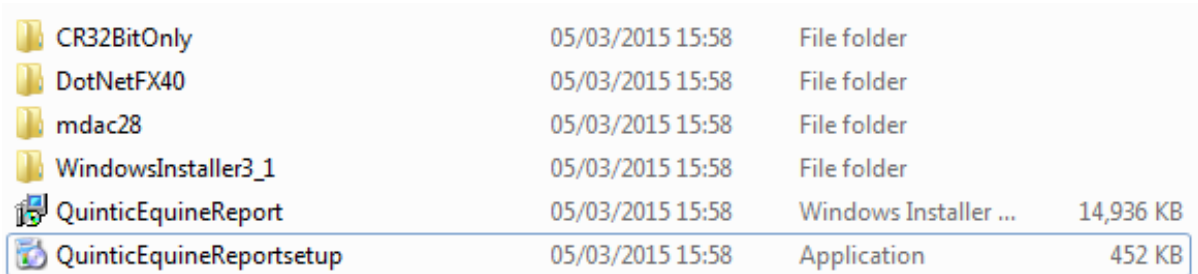
Follow the instructions, and when prompted, enter the Licence Key issued to you by Quintic.

WARNING: If re-installing the software onto a PC please make sure you create a copy of your report database BEFORE uninstalling the software from the PC. If you do not do this you will lose any existing equine details from the database!

Loading the Report Software

Download the Quintic Automatic Equine Report program and open the zip file.

Select 'Quintic-EquineReportSetup' as shown in the image below.

CR32BitOnly	05/03/2015 15:58	File folder	
DotNetFX40	05/03/2015 15:58	File folder	
mdac28	05/03/2015 15:58	File folder	
WindowsInstaller3_1	05/03/2015 15:58	File folder	
QuinticEquineReport	05/03/2015 15:58	Windows Installer ...	14,936 KB
QuinticEquineReportsetup	05/03/2015 15:58	Application	452 KB

Follow the instructions, and when prompted, enter the Licence Key issued to you by Quintic.
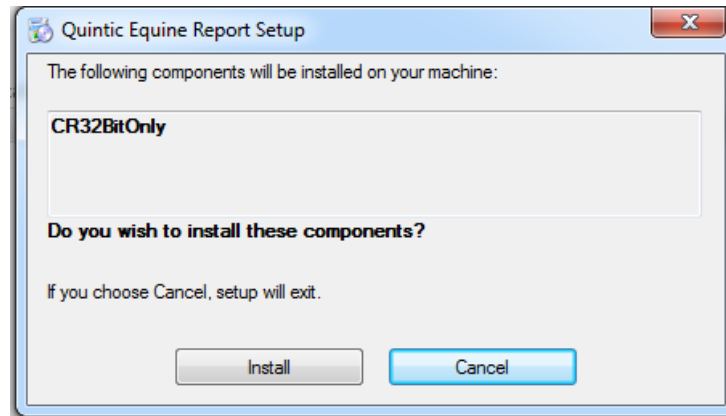
Step One

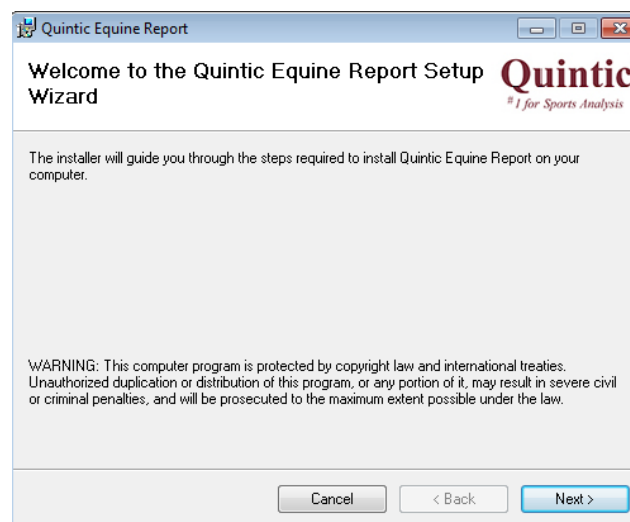Once you have selected 'Quintic-EquineReportSetup' the window shown in the image below will appear.
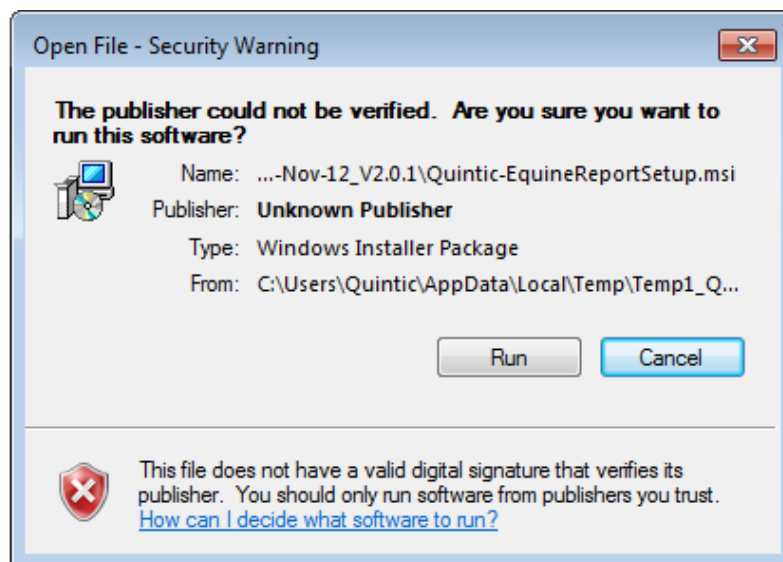
Step Two

Select 'install' and allow the computer to install the crystal report software.
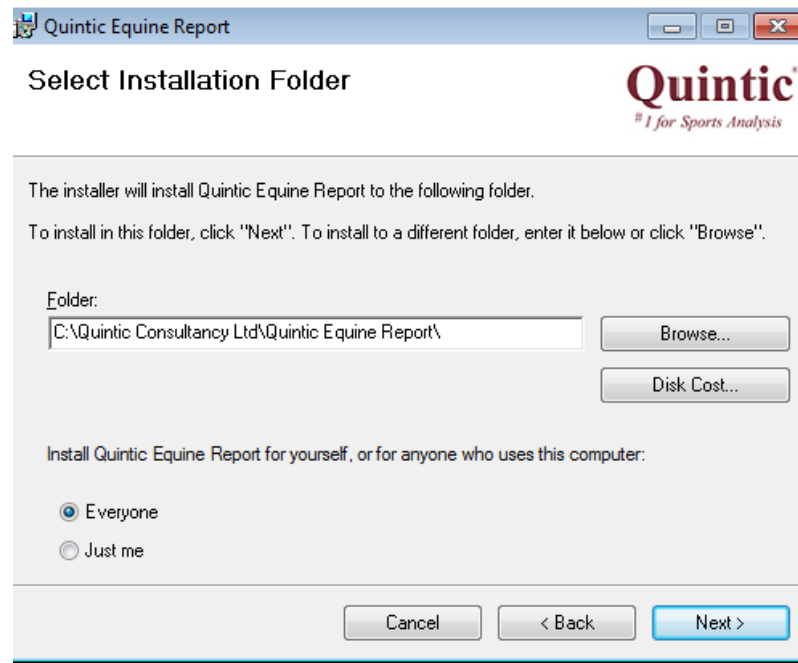

Step Three

Select 'Run' and the next screen will appear. Select 'Next' to move on in the installation process.
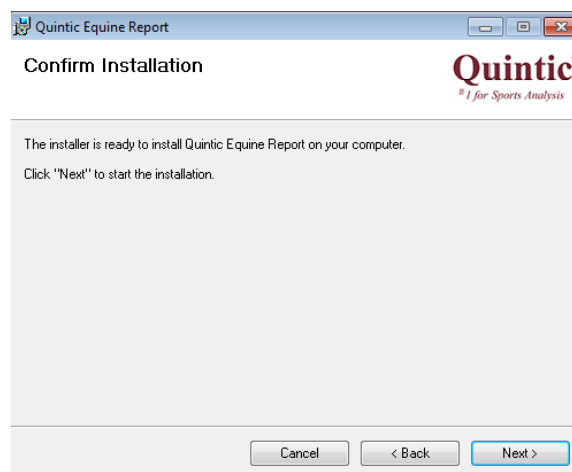
Step Four

Select 'Everyone' on the section asking who uses the computer, before you select 'Next' and move to the next installation window.
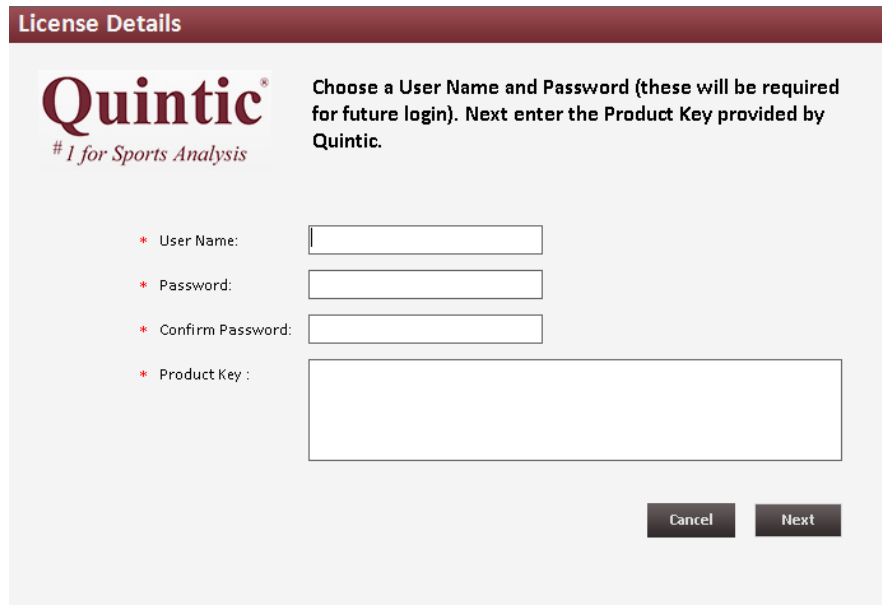

Step Five

The next window will ask you to confirm the installation which you will agree too by selecting 'Next'

<u>Step Six</u>

Once you have confirmed installation the programme will load automatically then the following screen will appear.

Once this screen has appeared you need to select your own username and password (select something you will remember easily). You must also enter your product key which was sent to you from 'info@quintic.com' after you sent the first code for the key generator.

Creating a Copy of the Report Database

1. First, go to the following folder location: C: Quintic Consultancy Ltd : Quintic Equine Report : DB.
2. Make a copy of the file named 'QuinticEquineSystem.mdb' and save it onto the desktop.
3. Uninstall the report software via the add/remove programs function found within the control panel.
4. Install the new version of the report software onto the PC and complete the licence registration process as above.
5. Now copy the file named 'QuinticEquineSystem.mdb' from the desktop to the following folder location: C: Quintic Consultancy Ltd : Quintic Equine Report : DB.

Microsoft Excel Drivers

A full version of Microsoft Excel is required for the Quintic Automatic Reports to read the required Excel Data Files. If any errors occur during the progress of uploading an Excel File, the following Excel driver may be required.

Please check if your PC is a 32bit or 64 bit version and download the appropriate driver from **http://www.quintic.com/downloads/QuinticEquineReport.htm**

If errors continue please contact info@quintic.com.

Camera Setup

In order to produce a complete report two Quintic high-speed cameras are required. These cameras should be set up in synch to record from the left lateral and right lateral views, positioned so that the equine is clearly within the centre of the field of view (N.B. Please refer to Quintic Tutorial 7c for instructions on setting up cameras).

In instances where two Quintic high-speed cameras are not available, it is also possible to film on a high-speed hard drive camera from one or more viewpoints. If hard drive cameras are used, it is recommended that you still make a video recording for both the right and left side of the equine, although it is possible to produce a partial report for the right or the left lateral view individually.

Template and Reflective Marker Setup

In order to generate a complete report, 13 reflective markers need to be positioned on the following anatomical landmarks:

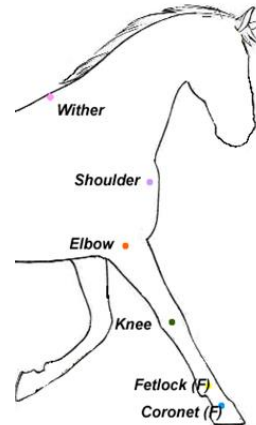Side View Fore Leg (Left/Right)

Wither

Shoulder

Elbow

Knee

Fetlock (Fore)

Coronet (Fore)
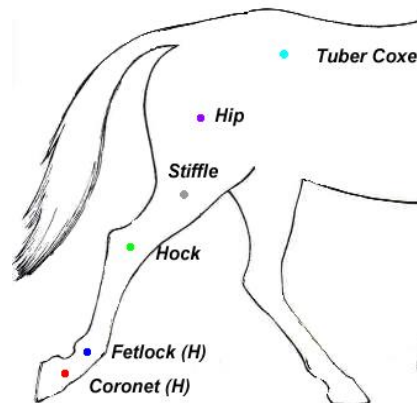

Side View Hind Leg (Left/Right)

Tuber Coxe

Hip

Stiffle

Hock

Fetlock (Hind)

Coronet (Hind)

Calibration

In order to facilitate the calibration process, we would advise that you create a calibration video file for each camera view before collecting any data. For this, you should record an object of known distance (e.g. a metre rule) within the field of view for a couple of seconds from each camera angle. From this, make a note of the height and width of the object you are using, as this will be used later on (NB: calibration is needed for both the vertical and the horizontal axis).

Data Collection

In order for the software to produce reliable data, it will allow you to analyse up to 5 steps per leg, per report. Hence, to produce a full report you should produce 5 video recordings of each leg for a complete step length (20 videos in total).

For each step it is important that you begin digitising exactly 10 frames before initial ground contact of the relevant hoof, and continue until exactly 10 frames after the next ground contact of the same hoof. When recording video trials it is important that a consistent walking velocity is maintained throughout.

Digitising the Video Files

Once you have collected data for up to 5 steps per leg (however each video will most likely only have the field of view for one full stride, so if 5 steps are desired then 5 videos will need to be recorded), your video files are now ready to be digitised. If reflective markers are used, the Automatic Digitisation feature of Quintic Biomechanics can be utilised (N.B. Please refer to Quintic Tutorials 8a/8b for information on how to digitise).

During this digitisation process, the calibration needed is that of both the **vertical and the horizontal axis.** This will need to be done independently for both camera views, such that a unique calibration file is saved for each. These files should be named appropriately so that it easy to distinguish which camera view they relate to when it comes to digitising. It is important to note that the accuracy of this calibration procedure will affect the results produced.

Once calibrated, you will need to digitise each video file using the corresponding digitisation template. Please note that if your video file contains a complete step length for both the fore and hind legs you will still be required to make a copy of the video file and digitise both legs independently using the relevant template. These digitisation templates can be downloaded from **http://www.quintic.com/downloads/QuinticEquineReport.html**

Creating the Excel Files

Once digitised, open the Linear Analysis Window (for help on this, please refer to the Quintic Tutorial 9).
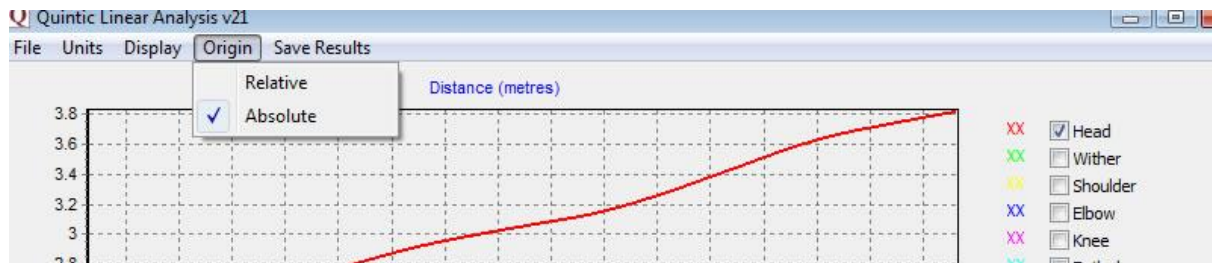
Click on 'Origin', and click on 'ABSOLUTE' (see above screenshot). This is very important in order to produce a correct report.

Next, in order to produce the Excel file, click on 'Save Results', 'Save results in an Excel file' (as shown below), making note of the folder location of this saved file.
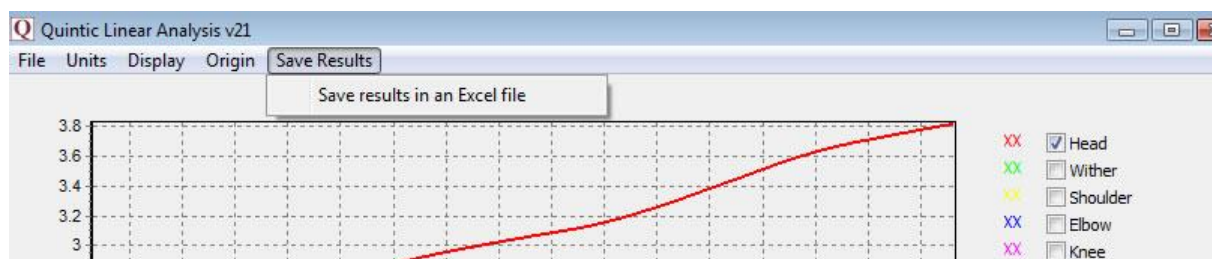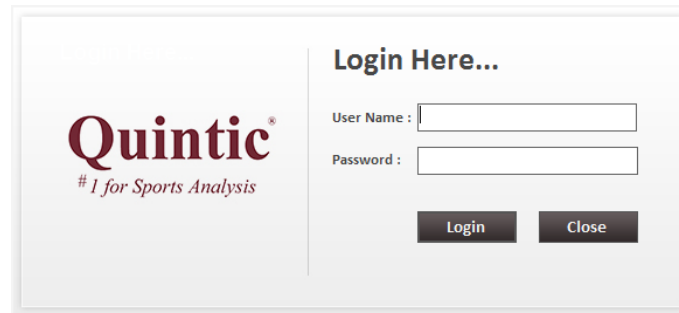

Repeat the steps above for each digitised video file.

Using the Quintic Automatic Equine Report

Adding Equines

Open the Quintic Automatic Equine Report program from the desktop icon created during the installation. Please ensure the licence code sent to you by Quintic has been installed correctly, and your login details are correct.

The first thing to do is to add an equine into the database. On the top toolbar, click on 'Setting' then 'Equines'.
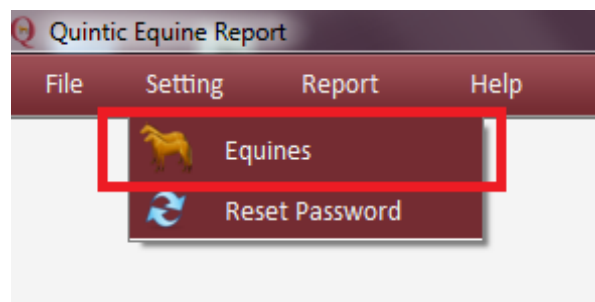
The following window will appear, listing any equines previously added into the database.
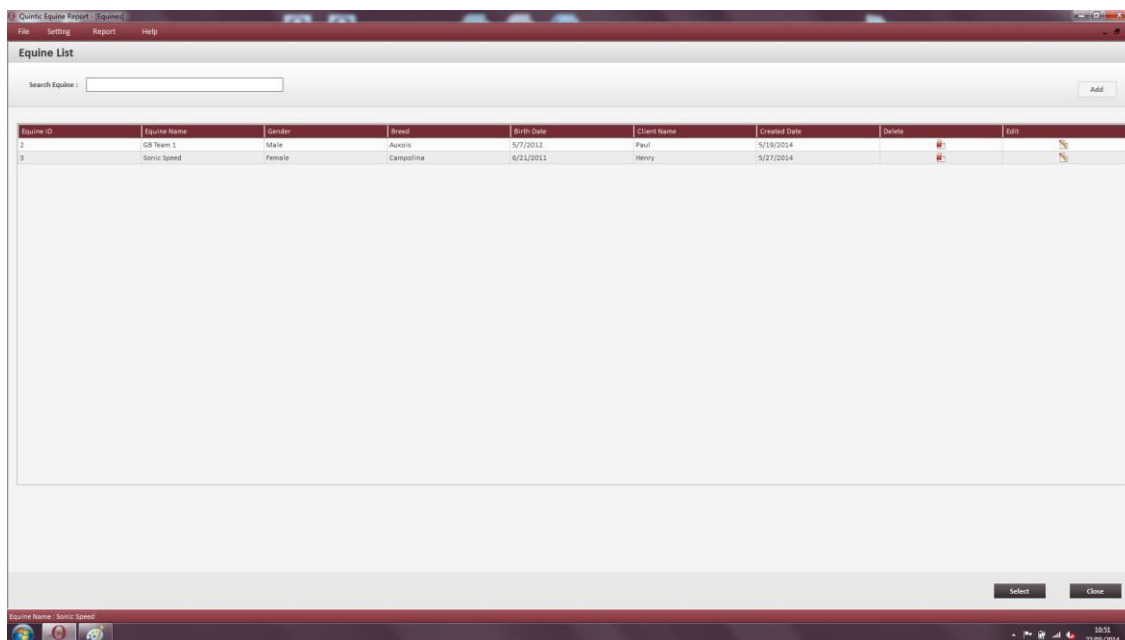
To add a new equine, click on the 'Add' button. This will bring up the following form where you can enter all the equine's details. The fields marked with * indicate a required field.


Once saved, the equine will be added to the equine list. From here they can be selected and a report can now be created for them.

Here you can also:

- Select a previously added equine by clicking on their row in the table, then on 'Select'.
- Search the equine list for a previous equine by typing in the top box.
- Order the equine list by any of the variables in the top red row.
- Edit / delete any current equine from the list.
- Add a new equine.

Loading Sessions

Data files can now be loaded for analysis. Click on 'File' then 'Upload Data Files'.
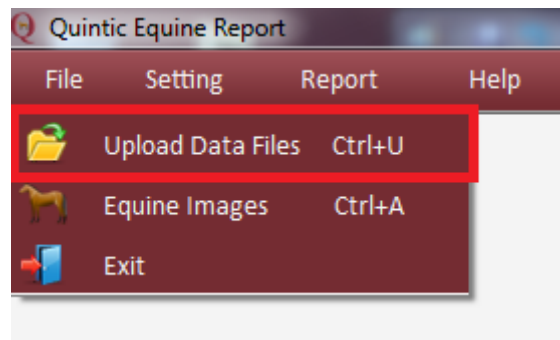
This will then open a window from which you can select the desired Excel files you wish to analyse.
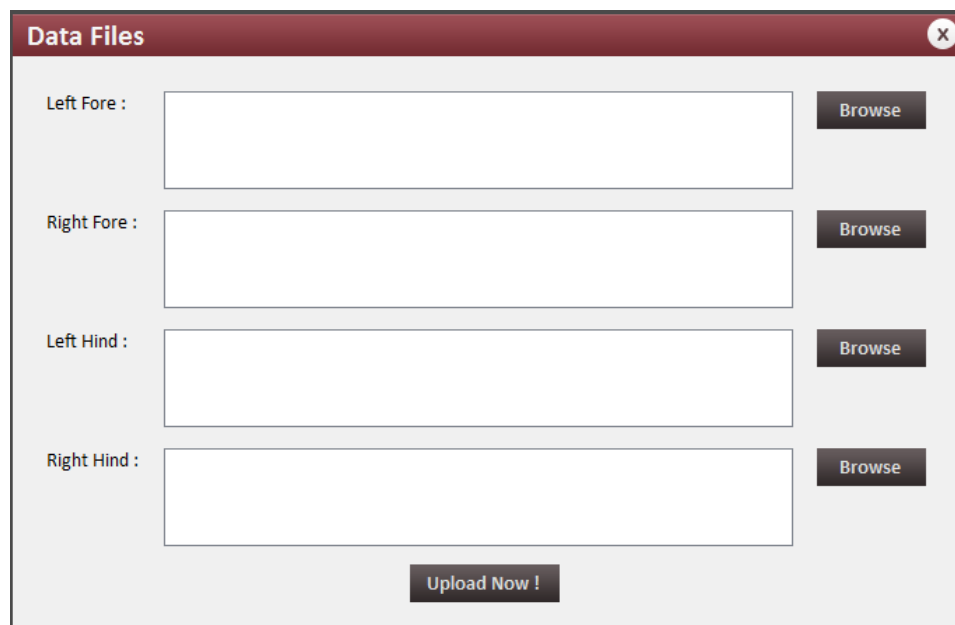

To upload an Excel file, click on 'browse' and then locate the required file and double click to select. The file will then be added to the data files ready to save once all files have been selected. If you select an incorrect file and wish to change this, simply right click on the file to delete and reselect the correct file.

NB: As mentioned previously, the program is able to produce a report for up to five steps for all four legs. A report can however be produced for less than five steps per leg and for only one, two or three legs.

Once you have selected all the required files, click 'Save'. An animation of an equine will appear, notifying you that the program is processing the Excel file(s). This may take a few minutes if data for all four legs is uploaded.

Once complete, the following information box will appear.
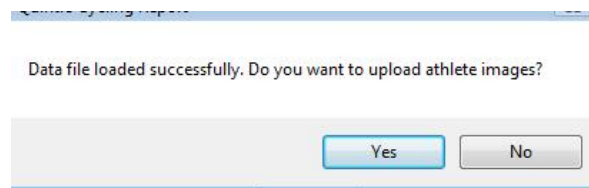
If you would like to upload equine images please select 'Yes', or alternatively select 'No'.

If you select 'Yes' you will be presented with the below screen from which you can select the desired images you wish to upload. Please note that images should be exported from 'Quintic Biomechanics' as individual images. These images will be resized automatically to fit into the report, so please do not edit these images prior to uploading them.
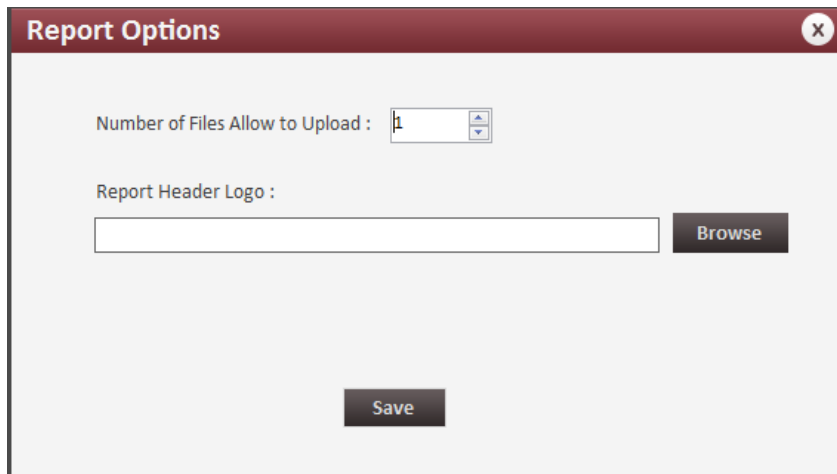
N.B. Please refer to Quintic Biomechanics v26 Tutorial 3 for information on how to export images.
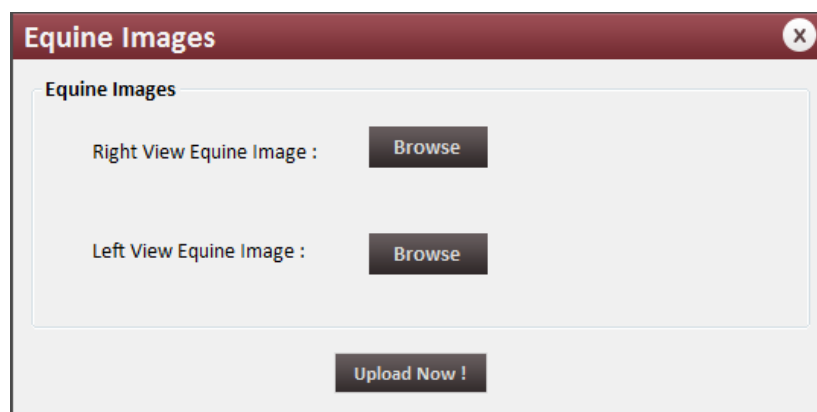
Add a Logo

Before creating the report, there is a customization option to add your own logo onto the front page. This option is only available before you create the report. If left blank/not changed, there will be no logo at the top left hand corner of the front page. However, if you wish to add a logo, click 'Report', 'Report Option'.
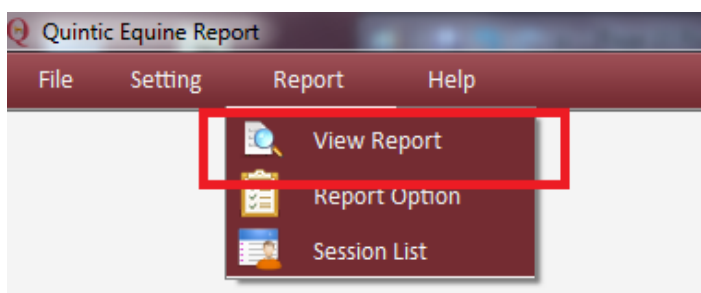
This will open the following window, where you can browse for the desired image and then 'Save' the changes. Please also ensure that the 'Number of Files Allow to Upload' is '1'.

N.B. This Logo will remain on all future reports unless you change or remove it.

Create the Report

The next step is to create a report. Click on 'Report', 'View Report' (as displayed below).

An animation of an equine will open and the software will then proceed to produce your report, which may take a few minutes. Once complete your report will open automatically.

The toolbar below appears above the report, and has the following functions:

1. **Export Report** – Allows you to export the report as a PDF, Excel or Word Document.
2. **Print Report** – Prints the report straight from the program.
3. **Page Control** – These buttons allow you to navigate through the pages of the report.
4. **Find Text** – Allows you to search the document for a specific piece of text.
5. **Zoom Function** – Change the zoom of the report within the window.
6. **Add Report Summary** – Enables you to add comments / text into the 'Summary' box on the front page of the report.
7. **Save Session** – This allows you to save the created PDF into the program memory to load again at a later date.

Additional Program Features:

Session List

To view the Session List, click 'Report', 'Session List'
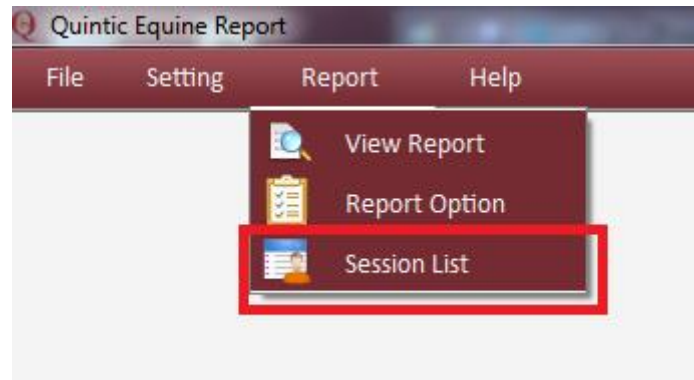
Here, by clicking on the blue File Name, you can load previously created reports into the program.

Change Login Details

Click 'Setting', 'Reset Password'. Here this will allow you to change your login details (Username and Password).