ITrainerGolf Application

Mobile Swing Analyser for iTrainerPro and iTrainerMini
Version 0.4

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Change History

Version	Date	Who	Comments
0.1	20/09/2014	S.Sparrow	Initial draft
0.2	30/09/2014	S.Sparrow	Added Video Capture
0.3	01/10/2014	S.Sparrow	Added Video Replay, Troubleshooting and spell checked
0.4	06/10/2014	S.Sparrow	Grammar and spelling fixes. Updated Intro and moved Table of Figures to the end of the document.

1 Introduction

You have purchased the most accurate, affordable and advanced golf swing analysis system available anywhere, the **iTrainer**.

With a single iTrainer device and our sophisticated, yet user-friendly application, we put accurate and swing and putting data into the hands of every golfer, regardless of skill.

We are confident that by following the instructions contained within this manual, your swing mechanics will not only improve, but boost your confidence so that you play more golf and knock strokes off your handicap.

1.1 Important Information

The iTrainer was designed for precision, accuracy and reliability to ensure the information we report is, with a high degree of confidence, actionable.

We believe the iTrainer system is the most accurate on the planet when it comes to measuring club-head speed, 3D position and impact conditions of any competing product. This has been validated by universities and testing centres in the US and Europe.

Although iTrainer was not designed as a competitor to existing launch monitors, it does an admirable job of predicting the ball flight based from impact conditions.

We are confident that if the reported results do not match the observed ball fight, it is most likely a miss-hit or incorrect club settings. Refer to section 4 for details on achieving the best accuracy from the system.

1.2 Installing the App

If you have not already done so, you will need to install the application on your mobile device. Follow the steps below for your mobile platform.

1.2.1 Installation on Apple devices

On your Apple device, tap on the App Store icon and enter **iTrainerGolf** in the search box.

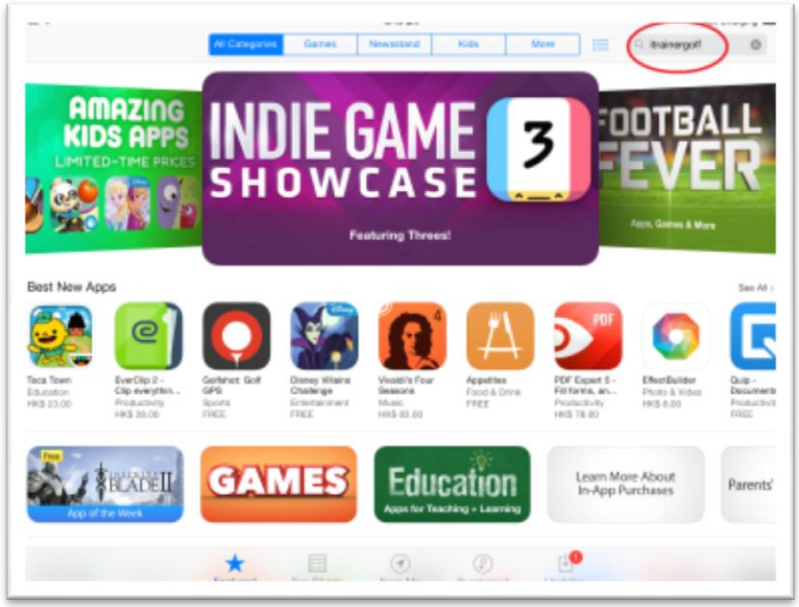

Figure 1 - App Store Main Screen

Once the app appears, Tap on the Download icon to install the application.

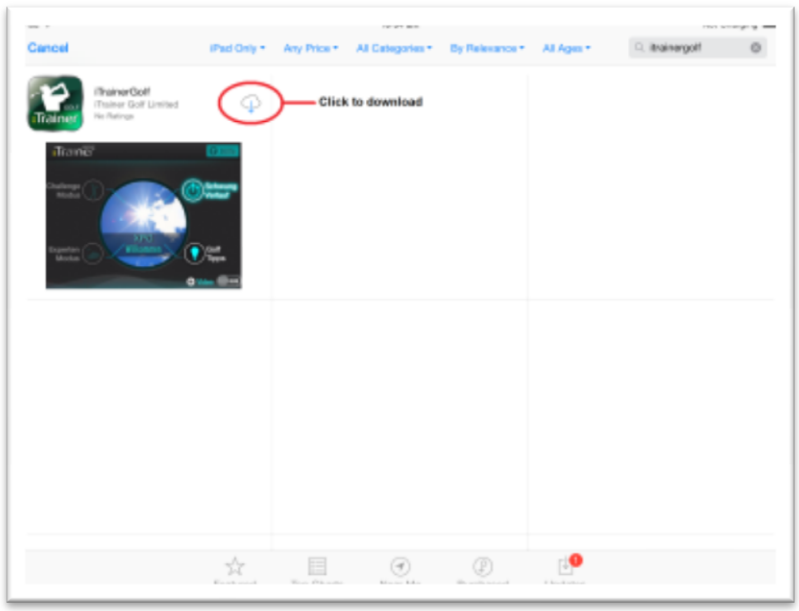

Figure 2 - Download the App

1.2.2 Installation on Android Devices

On your Android device, tap on the Google Play Store icon and enter **iTrainerGolf** in the search box.

Figure 3 - Google Play Store Main Screen

Once the app appears, tap on the image to continue.

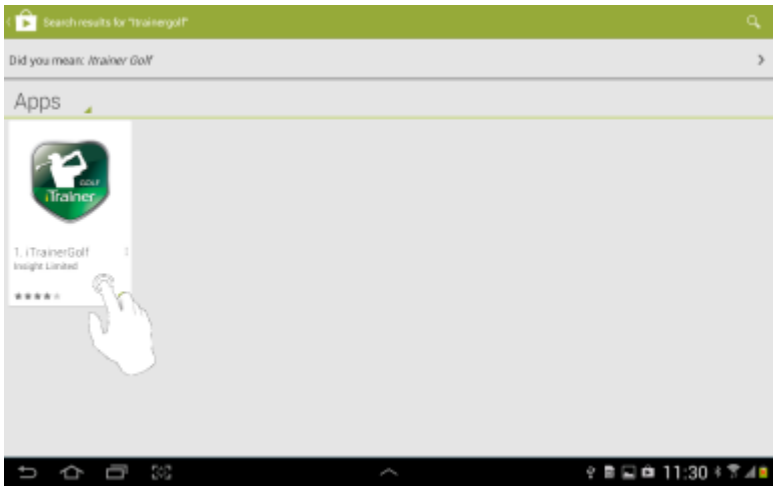

Figure 4 - Application in Google Play Store

You will now see an information page relating to the application. You can watch introduction videos, rear reviews etc.

Figure 5 - Application Information Screen

Now tap on the ‘INSTALL’ button to install the application and you will be prompted to allow the app to access various services.

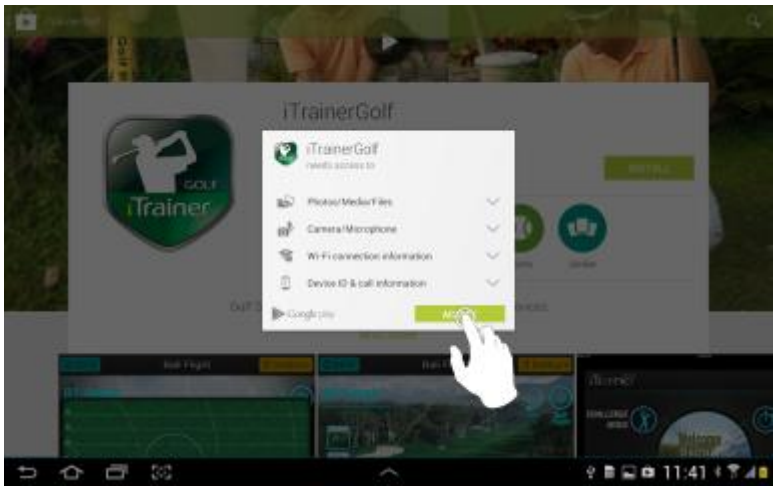

Figure 6 - Permissions Prompt

Tap on the ‘ACCEPT’ button to accept the permissions and install the app. During the installation, you will see a progress display something like the image below.

Figure 7 - Installation Progress

Once the installation completes, you will see a panel similar to that shown below. Tap on the 'OPEN' button to run the application.

Figure 8 - Installation Complete

That completes the installation procedure for Android devices.

1.3 Updating the iTrainerGolf App

Providing automatic updates are turned on for the iTrainerGolf application, you will receive a notification whenever an update is available.

1.3.1.1 Apple Devices

Turn on automatic updates on the “Settings->iTunes and App Store” page for the iTrainerGolf application.

Whenever an update is available for the iTrainerGolf application, the App Store icon will display a numeric indicator at the top left of the Icon showing how many apps updates are available.

When you enter the App Store, you will be able to update the iTrainerGolf application to the latest release.

1.3.1.2 Android Devices

Turn on automatic updates for Android using the following steps:

1. Open the Google Play Store app.
2. Touch the Play Store icon > **My Apps** to view your downloaded apps. Apps with available updates are labelled "Update."
3. Select the iTrainerGolf app.
4. Touch Menu > Check the box next to "Auto-update" (depending on your device, your Menu icon may look different).

When the **Auto-update** box is selected, the app will update automatically when updates are available.

1.4 Uninstalling the App on Apple

This section describes two methods for uninstalling the application on Apple iOS devices.

1.4.1 Method 1 – From Home Screen

Locate the app on your home screen. Don't open it; just find where it is located. Normally, to open an app, you have to tap the icon. Instead, press the icon and hold down for a few seconds.

Figure 9 - iTrainerGolf Launch Icon

You will notice that all the icons on the screen will start 'wiggling' and there will be a tiny 'X' mark at the top right hand corner of every icon. Press this 'X' mark.

Figure 10 - Delete App Mode

A pop-up window will appear asking if you want to delete the app. Tap the 'Delete' icon and the app will be removed from your device. Note that you won't see the 'X' mark for official iOS apps which are built into the system.

Figure 11 - Delete Confirmation

1.4.2 Method 2 – Through Settings

In this alternate method, you can delete apps directly from your iOS device's settings. The advantage here is that you can see how much space the app was taking up.

To delete the iTrainerGolf app, follow these steps:

1. Tap the 'Settings' icon on your home screen (it looks like a cogwheel). The settings panel should open automatically to the 'General' tab. Tap on the 'Usage' button.

Figure 12 - Delete App through iOS Settings

2. The Usage tab shows a list of all the apps installed on your device and how space each consumes. You can also see the amount of free space you currently have on your device and in your iCloud account. You may have to tap 'Show all Apps' to see the app you want to delete.

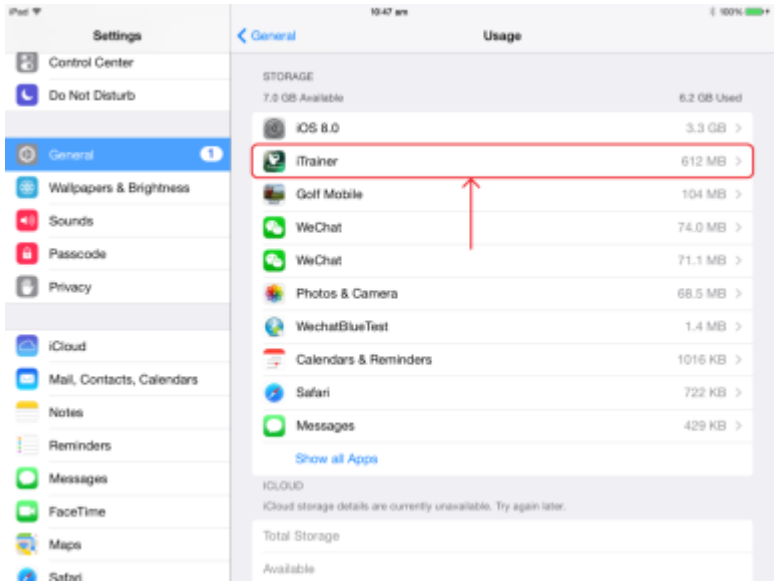

Figure 13 - iOS App Usage Panel

3. Tap on the app you want to delete. You should now see a screen showing the app's full name, version, and disk usage. You will also see a button to 'Delete App'. Tap this button.

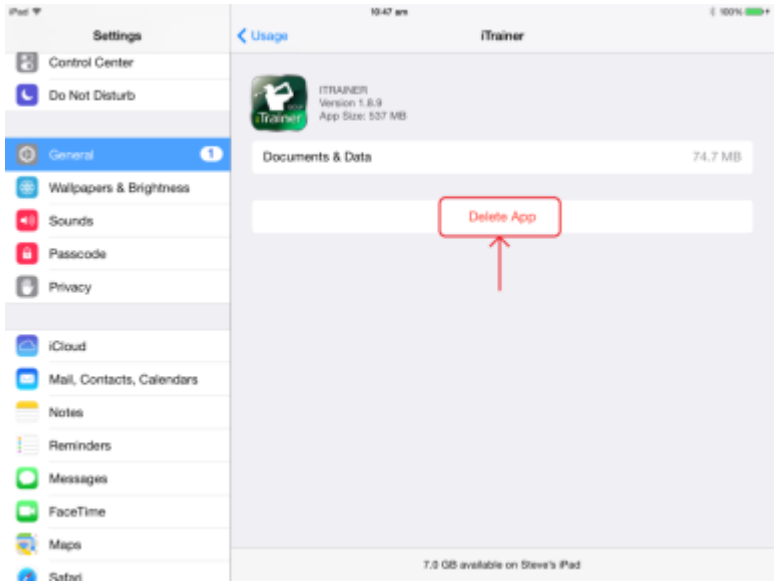

Figure 14 - iOS App Delete Panel

1.5 Uninstalling the App on Android

This section describes two methods for uninstalling the application under Android.

1.5.1 Method 1 - Device Settings

If you've installed an app on your phone or tablet using Google Play that you no longer want, you can uninstall it by following these steps:

1. Open the **Settings** menu > **Apps** or **Application manager** (this may differ depending on your device). Touch the app you'd like to uninstall.

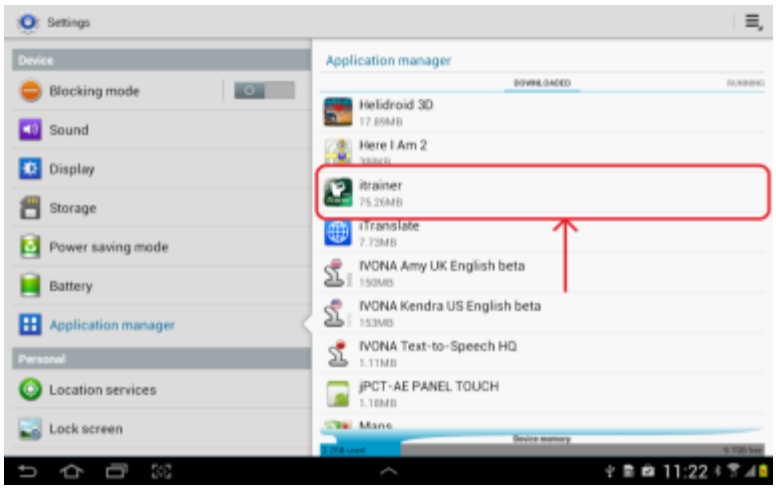

Figure 15 - App Uninstall on Android

2. Tap on Uninstall.

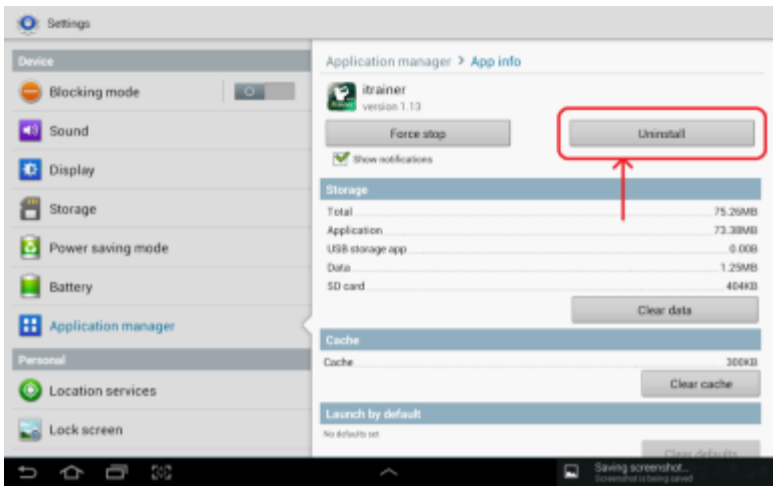

Figure 16 - Uninstall iTrainerGolf on Android

3. Tap **OK** to uninstall the app

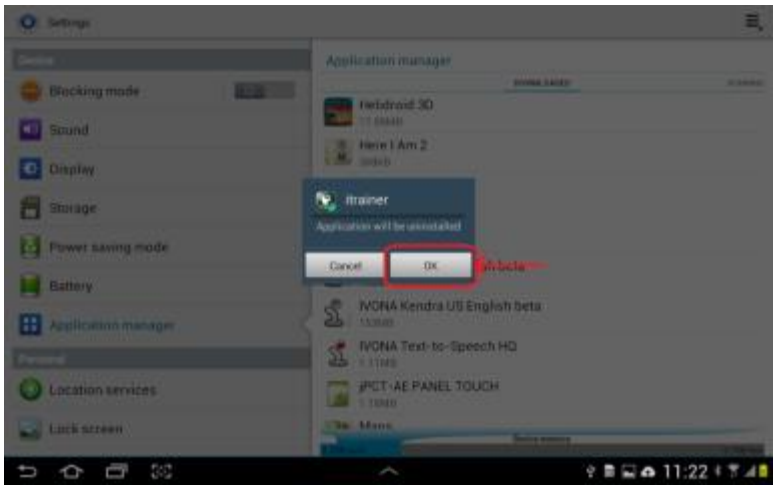

Figure 17 - Uninstall App Confirm on Android

1.5.2 Method 2 - Google Play Store

1. Open the Google Play Store app.
2. Touch the Play Store icon > **My Apps**.
3. Search for the **iTrainerGolf** App
4. Select **Uninstall** on the app's detail page.

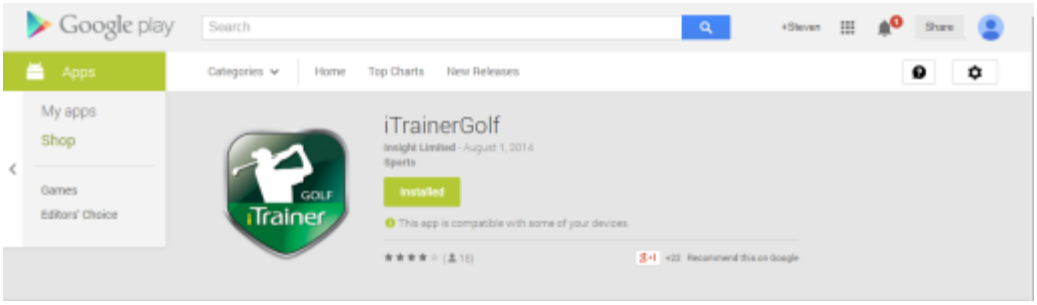

Figure 18 - Uninstall iTrainerGolf via Google Play

2 Quick Start Guide

This section gets you started capturing swings familiarising you with the interface and key features of the product.

2.1 Launching the iTrainerGolf App

When you launch the iTrainerGolf application for the first time, you are asked to register before proceeding; this is a simple step and does not require an Internet connection at this time.

1. Start the application on your Apple or Android device and then tap on the "Register" button at the top.

Figure 19 - iTrainerGolf Registration Panel

2. At the following screen, enter your email address and password, plus confirmation.

Figure 20 - iTrainerGolf Registration Details

3. Once done, tap the ‘Done! Go to User Settings’ button to continue. You will then be presented with the default user settings panel. Change your Name, Age, Height, Weight and Handicap if you wish and also set the Gender, Hand, Unit and Audio settings.

Figure 21 - iTrainerGolf User Settings

Once completed, tap on ‘Save’ to continue. To set your own portrait, ***refer to section 3.7 for details.***

Note: It’s ok to leave the default settings as they are and come back to them at a later stage.

2.2 Preparing your iTrainerMini

The iTrainerMini is a two-piece assembly comprising a sensor assembly and a removeable clamping mechanism. We ***recommend*** that you attach the clamp to the shaft first and then slide the iTrainerMini onto the clamp.

Figure 22 - iTrainerMini Clamp Attachment

The clamp is made from nylon and designed to snap onto the shaft right up near the grip. Make sure the clamp is oriented with the small lug facing the grip before clipping it onto the shaft.

Note Do not twist the clamp after it has been clipped onto the shaft or you will damage the grip material.

After attaching the clamp, fasten the strap for added safety and slide the Mini into the clamp as shown below.

Figure 23 - iTrainerMini Device Insertion

The iTrainerMini power button is located at the back of the device, below the USB connector. Press and hold the button, then release it when the indicator on the back of the iTrainerMini turns Green.

2.3 Bluetooth Pairing - iPad & iPhone

Your iPad or iPhone devices will need to register Bluetooth connection with the iTrainerMini before you can start capturing swings.

This is a quick and simple procedure is documented below:

2.3.1 Open the Settings Panel

Tap the ‘Settings’ icon on your home screen (it looks like a cogwheel). The settings panel should open automatically to the ‘General’ tab.

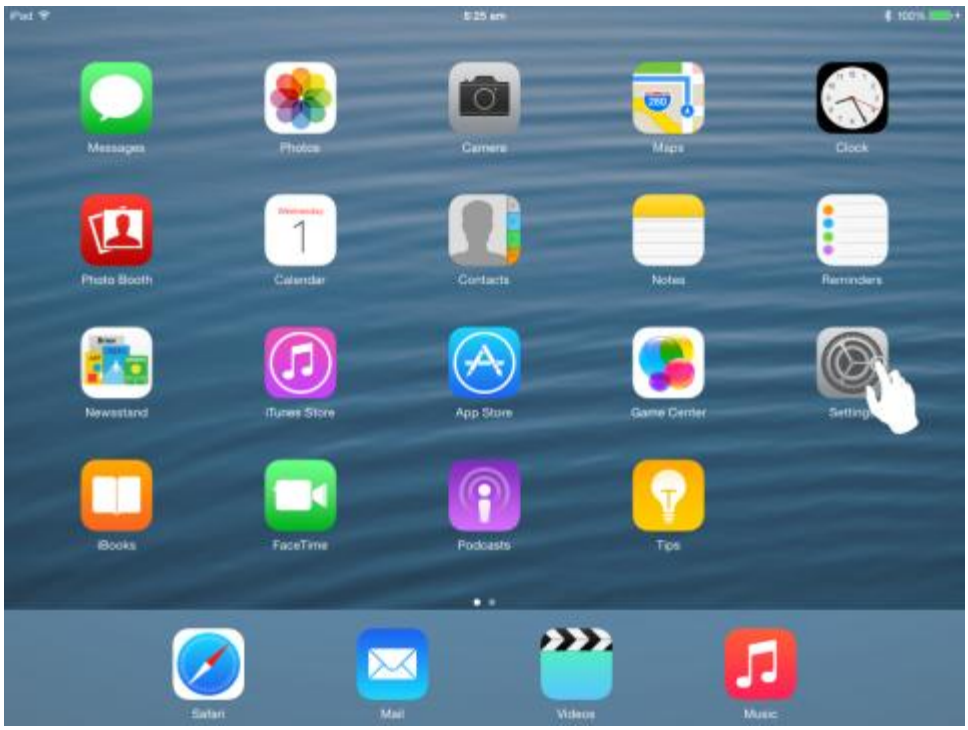

Figure 24 - Open Settings on iOS

If Bluetooth is not turned on, slide the switch to the ‘On’ position before proceeding.

Figure 25 - Enabling Bluetooth

When Bluetooth is enabled, you should see a list of nearby Bluetooth Devices.

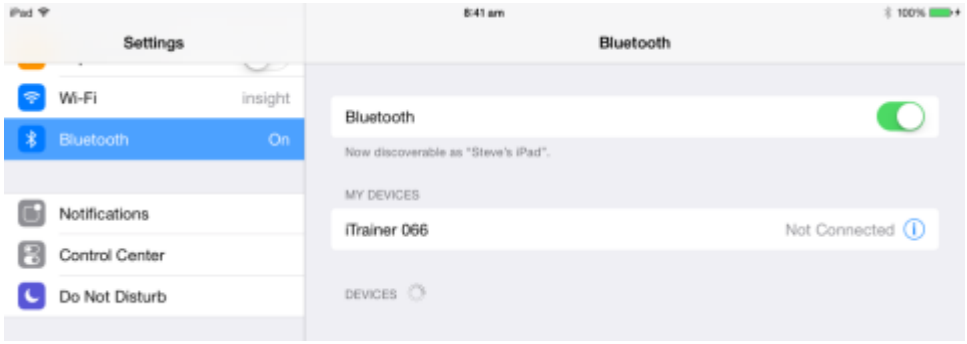

Figure 26 - Nearby Bluetooth Devices

Locate your iTrainer device in the list, using the last three digits of the serial number as a cue. Tap on your iTrainer device in the list to start the pairing process.

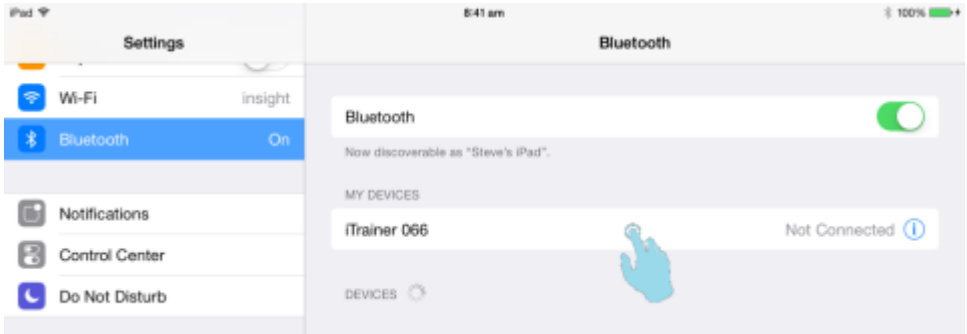

Figure 27 - Initiate Bluetooth Pairing

If pairing is successful, the device will display as “Connected”.

Figure 28 - iTrainerMini Pairing Successful

Within a few seconds, a prompt will appears asking you if you wish to launch the iTrainer Golf app.

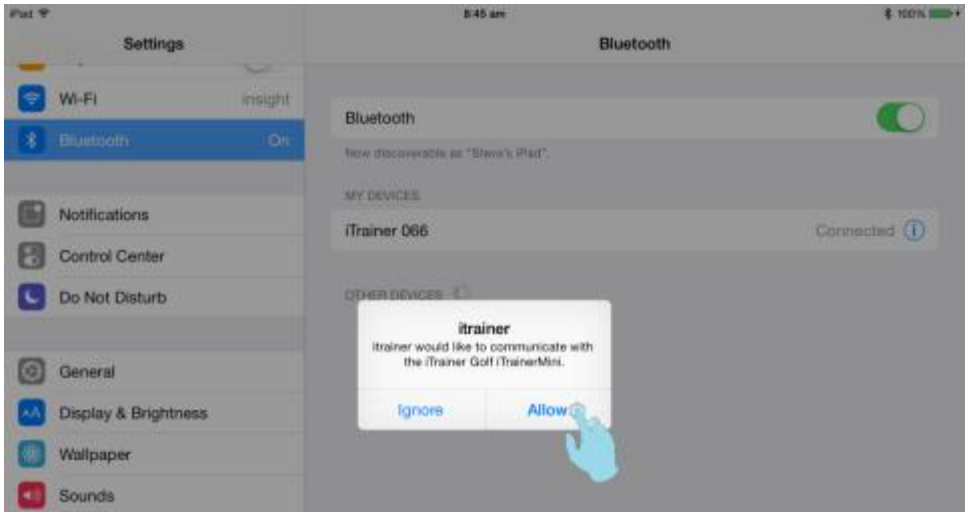

Figure 29 - Launch iTrainerGolf Prompt

This feature is intrinsic to Apple devices and simplifies the Bluetooth connectivity by launching apps whenever a previously paired Bluetooth device tries to re-connect.

2.3.2 Bluetooth Re-Connection

Once an iTrainerMini has been paired via Bluetooth with an Apple device, the next time the iTrainerMini is powered on it will try and reconnect with the iPad or iPhone.

If the connection is successful, the Apple device prompts you as to whether you wish to launch (or switch to) the iTrainerGolf application.

Note This feature is not available on Android devices.

2.4 Bluetooth Pairing - Android

The iTrainerGolf application on Android devices can perform Bluetooth operations within the application.

Launch the iTrainerGolf application on the Android device and tap on the 'Bluetooth Disconnected' message a shown below.

Figure 30 - Access Bluetooth Settings

If the Bluetooth Adapter is not turned on, you will see the following prompt and if so, tap 'Yes' to enable the Bluetooth adapter.

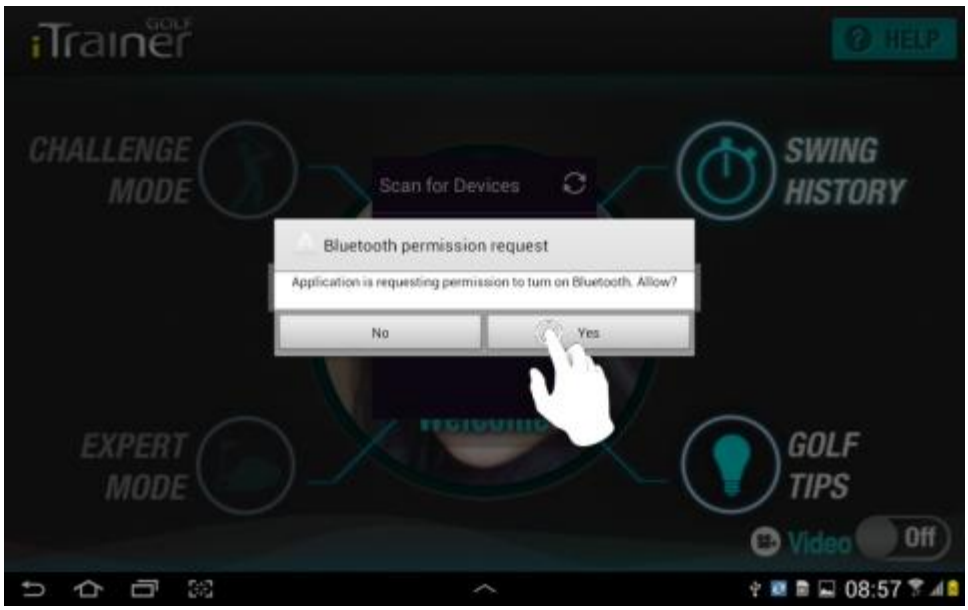

Figure 31 - Enabling the Bluetooth Adapter

The next screen displays a Bluetooth Scan panel. Tap on ‘Scan for Devices’ to start searching for your iTrainerMini.

Figure 32 - Scanning for Bluetooth Devices

After a few seconds, your device should appear in the list. Tap on your device in the list to bring up the prompt for pairing.

Figure 33 - Initiate Bluetooth Pairing

When the prompt appears, tap the “pair” button to continue.

Figure 34 - Bluetooth Pairing Prompt

You may receive a confirmation prompt to accept the passkey that is used to secure the Bluetooth connection. Tap ‘OK’ to continue.

Figure 35 - Accept Bluetooth Passkey

Once the device is successfully paired, the status changes to “Paired but not connected”. Tap on your device in the list now to establish a connection with the iTrainerMini.

Figure 36 - Open iTrainerMini Connection

Once connected, the “Bluetooth Disconnected” message will change to “Bluetooth Connected” as shown below.

Figure 37 - iTrainerMini Connected

2.4.1 Bluetooth Disconnection

Whenever your iTrainerMini is not in use, we recommend closing down the iTrainerGolf application, or turning off your Bluetooth adapter. This increases the battery life on the Android device and the iTrainerMini.

After the Bluetooth connection is closed, the iTrainerMini will power down after 5 minutes.

2.4.2 Reconnecting your iTrainerMini

You need to manually reconnect with your iTrainerMini device each time you start the iTrainerGolf application on Android. If your iTrainerMini has already been paired with your Android device, tap on the 'Bluetooth Disconnected' message to bring up a list of paired iTrainer devices.

Figure 38 - Open iTrainerMini Connection

2.5 Capturing your First Swing

You are probably eager to capture your first swing with the iTrainerMini, so we'll dispense with the topic of accuracy for now as this is covered later on.

There are two ways to capture a swing with the iTrainerGolf application:

- Challenge Mode — This mode overlays your swing with your favourite professionals (downloadable in the near future) or your best swings for comparison purposes. An analysis report lets you know how well you did.
- Expert Mode — This mode captures a swing and shows the results in a dashboard or 3D format. You view results in many ways.

2.5.1 Capture - Expert Mode

Let's get started, by capturing a swing in 'Expert Mode' as this is easiest. Start by tapping on the 'EXPERT MODE' icon as shown below.

Figure 39 - Launching Expert Capture Mode

You will now be taken to the club selection panel as shown below

To select a club:

- Swipe the centre image left or right to locate the club, or,
- Tap on the club names on the left or right of the screen to step through the clubs.

Once your desired club is displayed, tap on the club image to accept it.

Figure 40 - Club Selection

The next step is calibration, which allows the iTrainerMini determine its orientation with respect to the club-face and compensate for alignment errors when the clamp was fitted to the shaft.

Raise the club so the shaft is approximately horizontal and rotate the shaft until the grooves on the club face are “vertical”. The indicator lights on the front of the iTrainerMini will both be flashing Red during this time.

Figure 41 - Club Selection

Once your club face is aligned vertically, hold the club steady until the indicators stop flashing red and only a single indicator is blinking green. The displayed prompt will change from Calibrate to Address.

Figure 42 - Ball Address

At this point, you may perform your pre-swing procedure, like waggling the club, taking practice swings etc.

When you are ready to swing, place the club-head to the rear of ball and hold steady for 1 second. Both indicators turn green when the device is read and you will hear an audio beep on your mobile device with a “Swing Now” prompt.

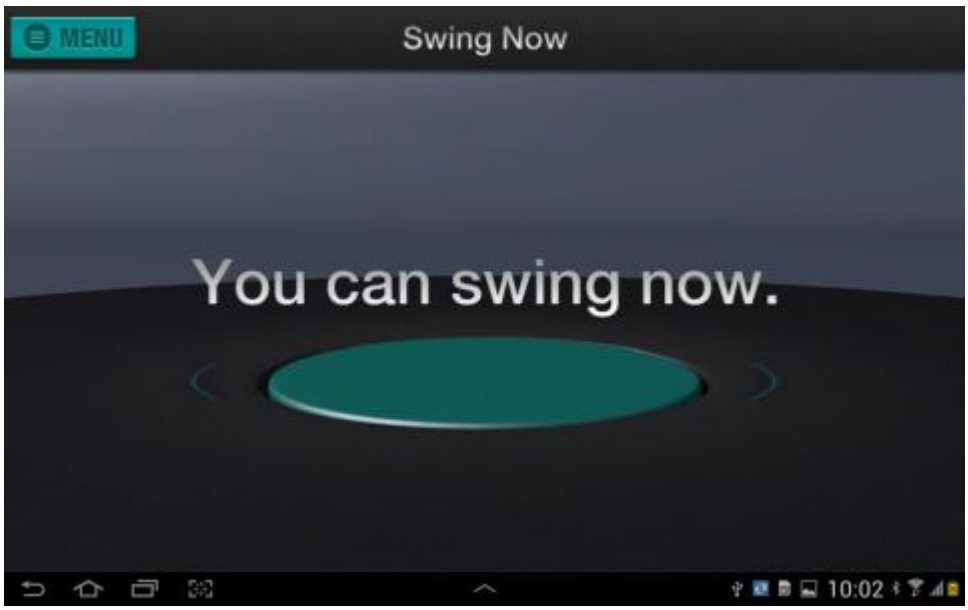

Figure 43 - Swing Now Prompt

Note If you swing before the indicators turn green, the swing will not be captured.

Once the iTrainerMini detects a valid swing (with or without impact) it uploads the data to the application over Bluetooth; this takes a few seconds.

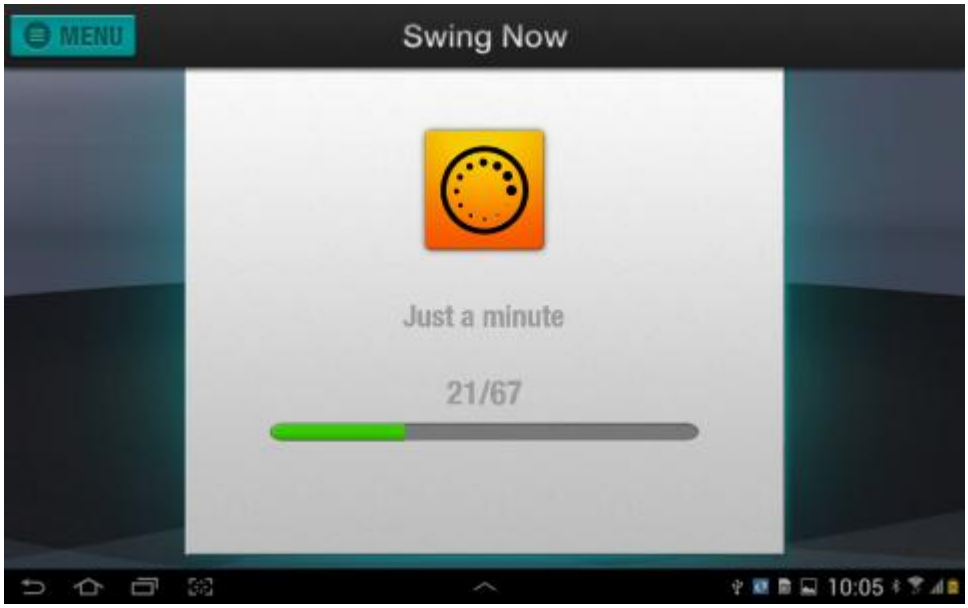

Figure 44 - Swing Upload

2.5.2 Swing Review

The application will now display a 3D replay of the swing (unless you switch the default mode to Dashboard). An example 7 Iron swing is shown below.

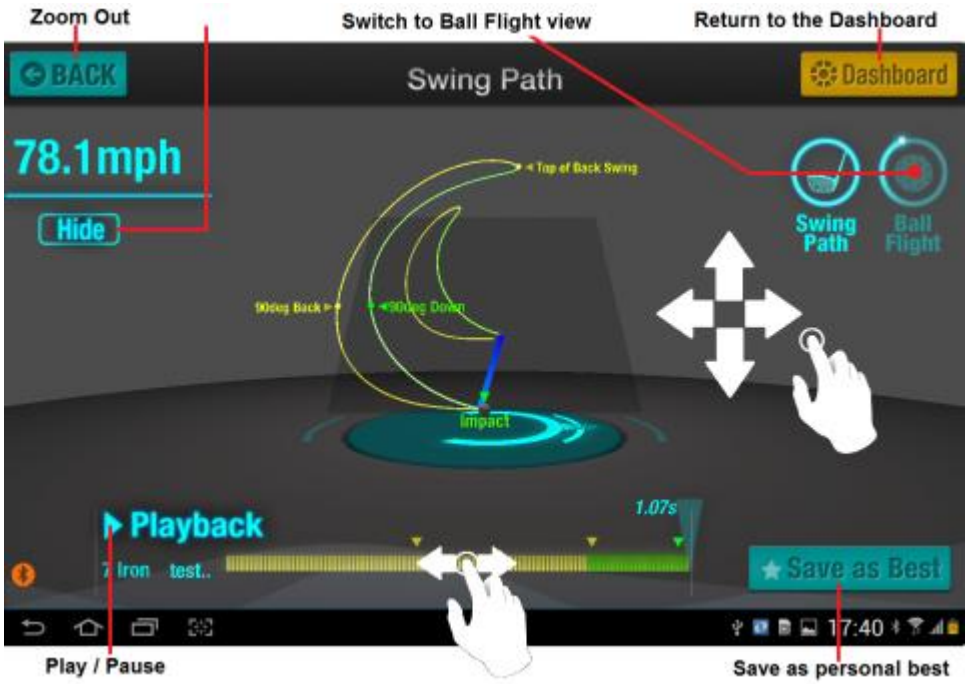

Figure 45 - 3D Club Path

The Yellow plot represents the rear-swing and the green plot, the target-swing. The smaller curve is the position of the sensor on the shaft, which represents the approximate hand location, while the larger plot represents the centre of the club face.

- Try moving around the screen with your finger to view the 3D plot from different angles.
- Tap on the Play button to replay the swing, you can tap the Pause button to pause the replay and drag the time slide left and right to see move through the swing.
- Tap on the 'Hide' button to remove the yellow and green text markers.

Tap on the Ball Flight icon to view the Ball Flight scene. This shows the estimated carry distance for the last shot. Tap on the icons on the left to change the view.

Figure 46 - Ball Flight

Note The third icon on the left is not available until at least 2 shots have been captured with the same club. This is an overhead view showing the shot spread.

Now tap on the ‘Dashboard’ button to view the swing metrics. Swipe left to view the second page of the dashboard and right to go back.

Figure 47 - Dashboard Panel 1

Clockwise around the panel we have:

- Club-head speed at impact
- Swing Timing (rear-swing and target-swing plus the ratio of the two
- 2D view of the swing path
- Face-to-Path and Path-to-Target angles

Swipe left to see the second dashboard panel.

Figure 48 - Dashboard Panel 2

Clockwise around the panel we have:

- Calculated carry distance and deviation from the target line
- Calculated Horizontal and Vertical Launch Angles
- Shaft Lean and Shaft Lie in the starting position and impact
- Calculated Backspin and Sidespin on the ball

Tap on any panel to zoom into a full screen view. The following example is for the club head speed dashboard panel.

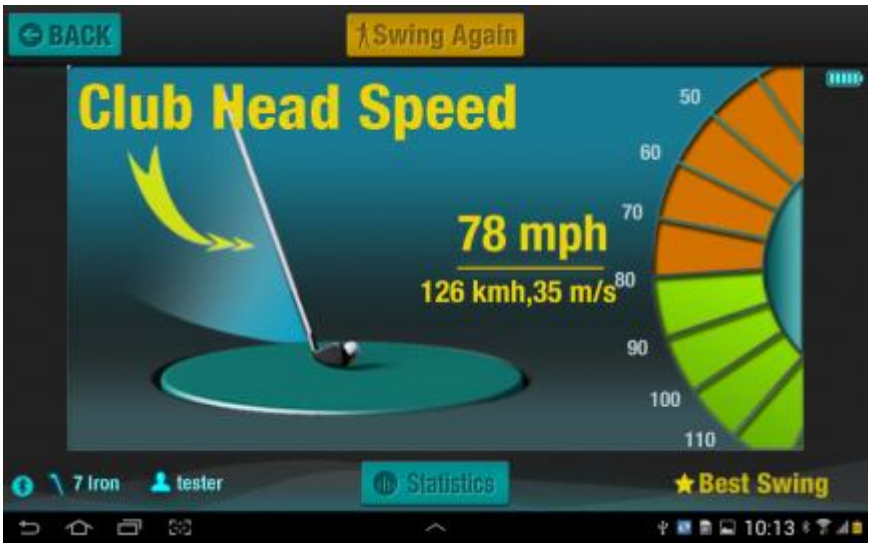

Figure 49 - Zoomed Club Head Speed

Tap on 'Statistics' to display the statistics for the swing. The statistics only cover the last 10 swings with the current club.

Figure 50 - Club Head Statistics Panel

For the club head speed statistics, you see the impact and maximum club head speed in different units as well as an efficiency indication. In this case, it refers to how close to impact the maximum club head speed was achieved.

The lower section shows the consistency with which the golfer achieved 100% efficiency.

Tap the 'BACK' button twice to return to initial Dashboard panel.

Note You can change the default view to the Dashboard, by tapping on the 'Menu' button and selecting the Default Screen setting to 'Dashboard'.

Now that you have captured and reviewed your first swing, try capturing a few more swings.

Tap on the 'Swing Again' button at the top of the screen and you will be taken back to the Address Panel (see figure Figure 42 - Ball Address). You will not need to re-calibrate unless you change clubs or return to the Home Screen.

Figure 51 - Capture another Swing

3 Detailed Guide

The following section provides a more detailed look at each application feature.

3.1 Home Screen

The home screen is the first panel the user sees when starting the application (after registration).

Figure 52 - Home Screen

The key points on this panel are as follows:

- Tapping ‘HELP’ displays a series of quick start help panels
- Tapping ‘CHALLENGE MODE’ allows you to challenge a Master golfer or a previously saved Best Swing
- Tapping ‘EXPERT MODE’ captures and analyses swings and putts.
- Tapping on ‘SWING HISTORY’ opens the swing history panel from where you can find and review past swings
- Tapping ‘GOLF TIPS’ brings up the Golf Tips and Drills
- Tapping the ‘Video’ slider to On, brings up the Video Setup panel
- Tapping the Portrait brings up the user Management panel.
- Tapping the ‘Bluetooth Connected’ message when it is showing ‘Disconnected” brings up the list of device you can connect with

3.2 Help Panel

The Help button takes you to some slides with basic setup information. The last page is of use when reporting problems.

3.2.1 Help - Page 1

The first page explains that the iTrainerMini must be paired with the Apple or Android device before proceeding. The image below is for Android devices.

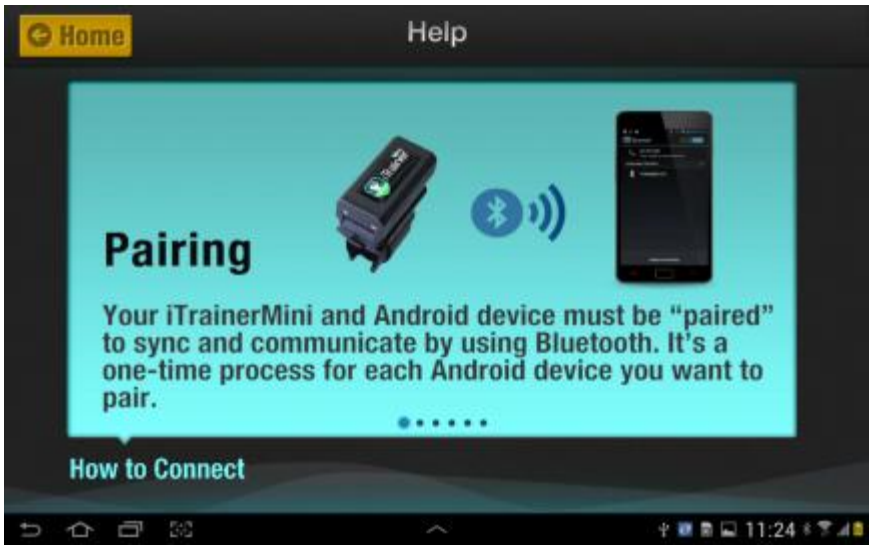

Figure 53 - Help Screen 1

3.2.2 Help - Page 2

The second page shows that Bluetooth must be enabled before proceeding.

Figure 54 - Help Screen 2

3.2.3 Help - Page 3

The third page shows how to turn the iTrainerMini on. You can turn the device off by pressing and holding the power button for 3 seconds.

Figure 55 - Help Screen 3

3.2.4 Help - Page 4

The fourth page shows how to pair the device with the application; in this case, Android.

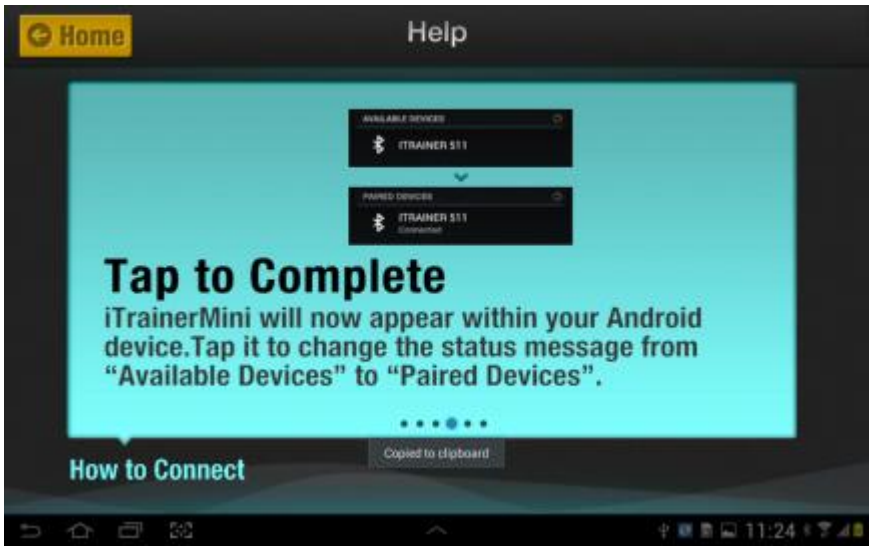

Figure 56 - Help Screen 4

3.2.5 Help - Page 5

The fifth page shows how to use the Mini again with Android.

Figure 57 - Help Screen 5

Note: This is incorrect. Please ***refer to section 2.4.2*** for details on reconnecting an iTrainerMini each time you restart the application or after the iTrainerMini has been powered off and then back on.

3.2.6 Help - Page 6

The sixth page shows how to use the some useful information and provides a link to the buy page for the iTrainerMini.

Figure 58 - Help Screen 6

The following information is displayed in the upper left region.

Version	Displays the current application version. This should be included in any emails to the iTrainer Support Team.
Battery	Displays the battery level as a percentage. If the iTrainerMini is on charge, this will always show 100%. Disconnect the charger to get an accurate level.
User	Displays the currently active user
Club Set	Not Used
Firmware	Displays the iTrainerMini firmware version. It is important to check the website for new updates from time to time.

Note The purchase link takes you to the www.insight-sports.com website; please go to www.itrainergolf.com if you wish to purchase an iTrainerMini device.

3.3 User Management

Tapping on the centre image of the Home Screen, takes you to the User Management panel. The areas of interest are highlighted below.

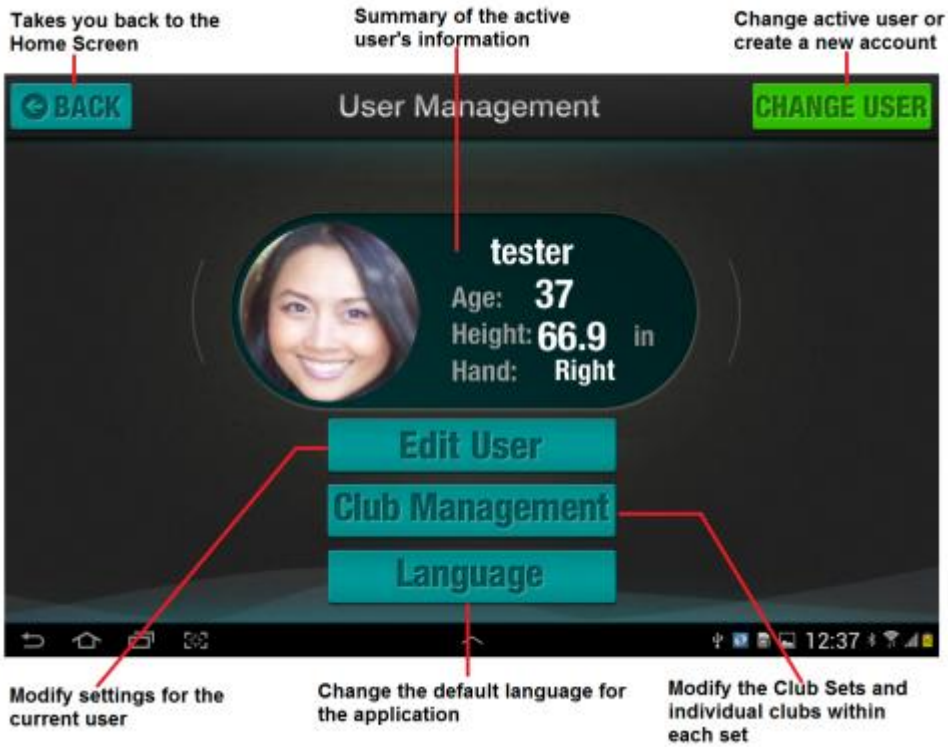

Figure 59 - User Management

3.3.1 User Settings

Tapping the Edit User button on the User Management screen brings up the User Settings panel. Here you can edit user information and set usage preferences.

Figure 60 - User Management Panel

The key buttons on this panel are as follows:

- Tapping the 'Portrait', launches the Set Portrait feature. ***Refer to section 3.7 for details***.
- Tapping the 'Delete User' button brings up a confirmation deletion prompt. ***Refer to section 3.3.4 for details.***
- Tapping 'SAVE', saves changes to the database.

A description of each field and preference follows:

Name	Modify this field to give the user a meaningful name. By default, it is the first part of the email address entered during registration
Age	Enter the golfer's age in years
Height	Enter the golfer's height in inches or metres, according to the current 'Unit' setting. The field provides a clue in the lower right and in the above example it is 'in' for inches.
Weight	Enter the golfer's weight in pounds or kilograms, according to the current 'Unit' setting. The field provides a clue in the lower right and in the above example it is 'lbs' for pounds.
HDCP	Enter the users handicap rating
Gender	Select Male or Female
Hand	Set the player's handedness. This is ignored when capturing swings as the iTrainerMini automatically detects this.
Unit	Set this to Metric in order to see distances in metres and centimetres and speed in kilometres. Set to Imperial to see distances in yards and inches and speed in miles per hour.

Audio Set ‘On’ to hear spoken audio, ‘Off’ to leave only the basic sounds.

3.3.2 Switch User

The switch user panel is very simple and only supports tapping, unlike the club select panel covered later on.

To switch to another user, tap on the ‘Next’ and ‘Previous’ buttons to select the desired user. If there is no ‘Next’ or ‘Previous’ text, you have reached the end.

Once you select the desired user, just tap on the portrait and the selected user will become active along with all associated settings.

Figure 61 - Change User Panel

The key interactions on this panel are as follows:

- Tapping the portrait changes the active user
- Tapping on ‘NEW USER’ takes you through the process of registering a new user. ***Refer to section 3.3.3 for details.***
- Tapping ‘Previous’, displays the previous user, if one exists.
- Tapping ‘Next’, displays the next user, if one exists.
- Tapping the ‘BACK’ button, returns you to the ‘User Management’ panel.

3.3.3 New User

Tapping on the 'NEW USER' button on the 'Change User' panel, brings up the Registration / Login panel as shown below.

Figure 62 - Register New User Panel

The key buttons on this panel are as follows:

- Tapping the 'Delete User' button brings up a confirmation deletion prompt. ***Refer to section 3.3.4 for details.***
- Tapping the 'Done! Go to User Settings' button results in data validation and if there are no errors, takes you to the User Settings page.
- Tapping the 'BACK' button cancels the registration process and returns you to the 'Change User' panel.

A description of each field and preference follows:

Email	Enter a valid email address in this field. The email address must contain a realistic email address, for example, jsmith@gmail.com
Password	Enter a 6 char alphanumeric password (e.g. abcdef3). At least one digit must be included in the password
Password Again	Enter the password again for confirmation.
Error Messages	If invalid data is entered into the fields, an error messages will be displayed in this region. Invalid Email address Password does not match Password must be at least 6 characters long Password must contain only numbers and letters

3.3.4 Delete User

Tapping the 'Delete User' button on the 'user Settings' panel, brings up a prompt, confirming the delete operation.

Figure 63 - Delete User Confirmation

The key buttons on this panel are as follows:

- Tapping 'CANCEL', cancels the delete operation
- Tapping 'YES', removes the user from the database

Note: You cannot remove a user if only one user is registered

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3.4 Club Set Management

You can define multiple sets of clubs in the iTrainerGolf application; this is useful when there are multiple users registered in the system and each has his own set of clubs.

Open the User Management panel (refer to section 3.3) and tap on the 'Club Management' button.

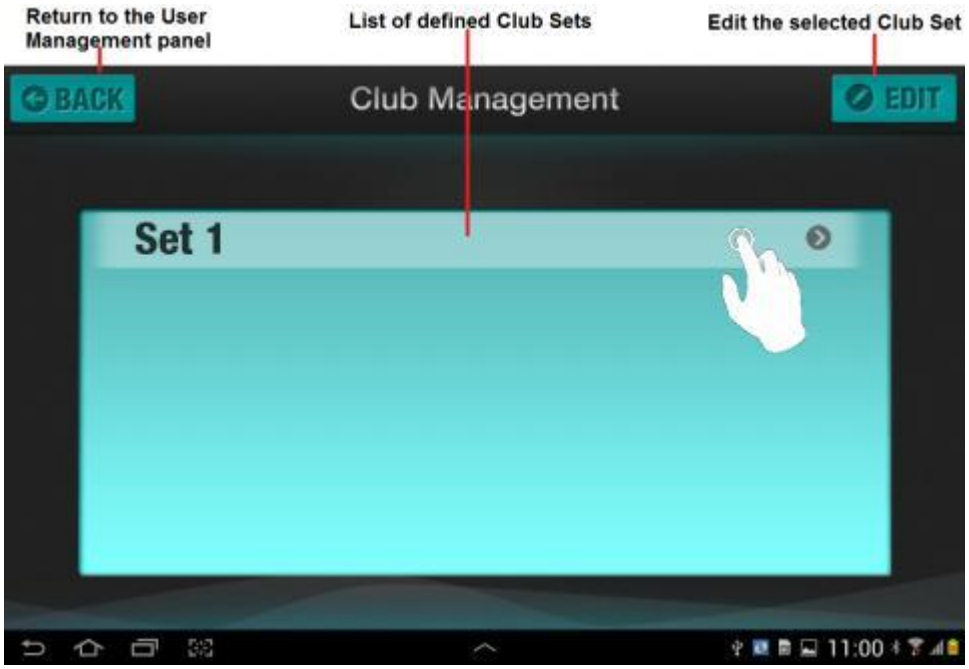

Figure 64 - Club Management Panel

The key buttons on this panel are as follows:

- Tapping 'BACK', takes you back to the User Management panel
- Tapping 'EDIT', brings up the Edit Set panel.
- Tapping on one of the sets in the list, brings up the Club Management panel for the selected Cub Set

3.4.1 Editing Set

Tapping on the EDIT button on the Club Management panel, opens the Edit Set panel. From this panel, you can Rename, Add and Remove club sets.

Tap and club set in the list to manage the clubs in that set.

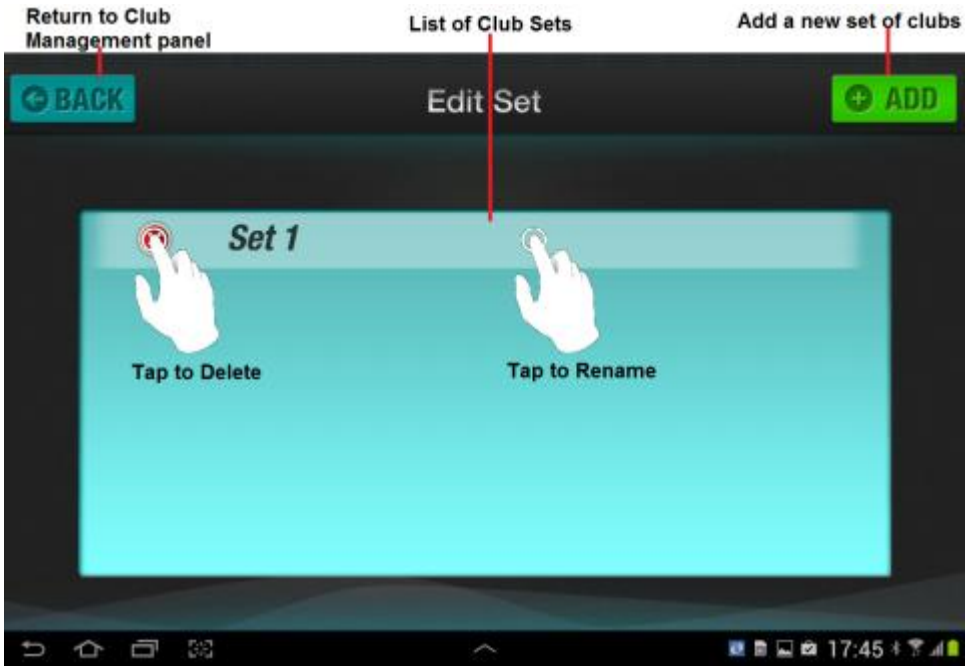

Figure 65 - Club Management Panel

The key buttons on this panel are as follows:

- Tapping ‘BACK’, takes you back to the Club Management panel
- Tapping ‘ADD’, brings up the Add Set panel
- Tapping on one a Set in the list, brings up the Change Set Name prompt. **Refer to section 3.4.4 for details.**

3.4.2 Adding a Set of Clubs

Tapping on the ADD button on the Edit Set panel, brings up the Add Set prompt as shown below. Enter a name for the new club set and tap 'YES' to save and continue.

Figure 66 - Add Set Panel

The key buttons on this panel are as follows:

- Enter a name for the club set in the Set Name field.
- Tap 'CANCEL' to cancel the add operation and return to the Edit Set screen.
- Tap 'YES' to complete the operation

Note: The club will be cloned from the first club set in the list. You will need to edit the set to modify the club settings to match your equipment

---

3.4.3 Removing a Set of Clubs

Tapping on the symbol on a set within the Edit Set panel, brings up the Delete prompt as shown below.

Tap on ‘OK’ to permanently remove the club set, else tap ‘CANCEL’ to abort the operation and return to the Edit Set panel.

Figure 67 - Delete Set Panel

Note If you try to remove the only set in the list, you will receive an error message indicating that you cannot delete the last club set.

3.4.4 Renaming a Set of Clubs

When you tap on an entry in list on the Edit Set panel, the change set name prompt appears as shown below.

To alter the name of a club set, enter the new name in the ‘Set Name’ field and then tap on ‘YES’ to save the change. Tapping on the ‘CANCEL’ button cancels the renaming operation and returns you to the Edit Set panel.

Figure 68 - Rename Set Panel

3.5 Club Management

Tapping on an entry in the list on the Club Set Management panel, launches the Club Management panel as shown below.

From this panel, you can Edit, Add and Remove clubs within a set.

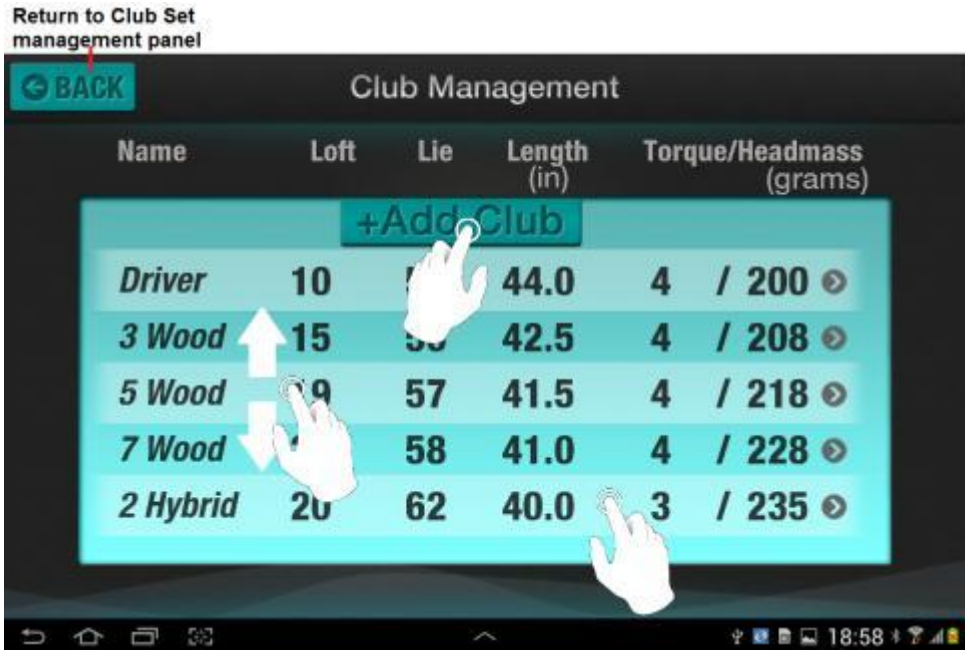

Figure 69 - Club Management Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ button to return to the Club Set Management panel
- Tap ‘Add Club’ to add a new club to the set. ***Refer to section 3.5.2 for details.***
- Tap on an entry in the list to view and edit the club specifications
- Swipe up and down to scroll through the list of clubs

3.5.1 Edit Club

The parameters that impact the speed, distance and face calculations are highlighted with a yellow box. The default settings are based on Callaway X10 Men's Steel clubs.

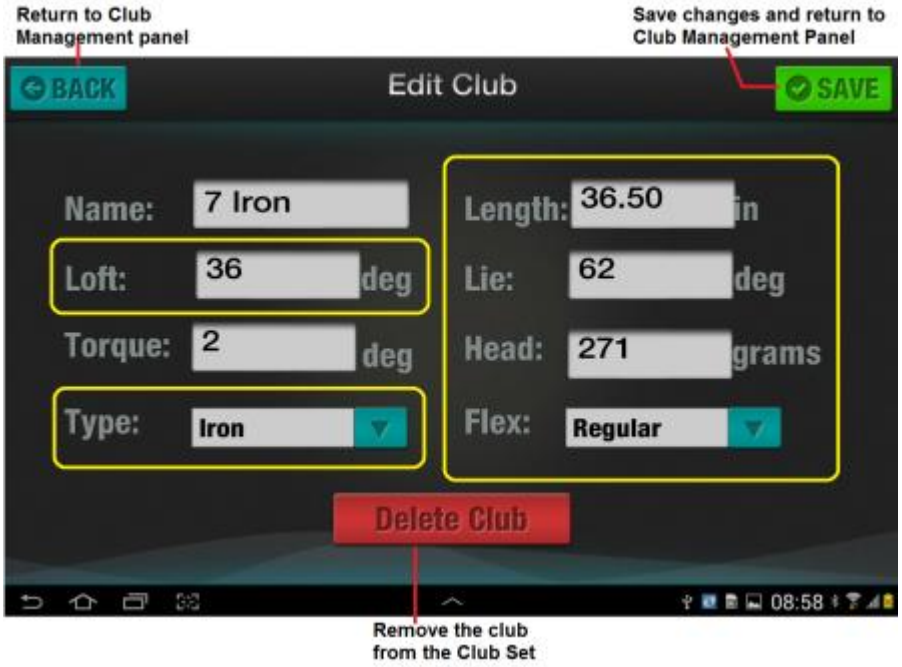

Figure 70 - Edit Club Panel

The key buttons on this panel are as follows:

- Tap 'BACK' button to return to the Club Management panel
- Tap 'SAVE to save the changes and exit to the Club Management Panel.
- Tap 'Delete Club' to remove the club from the bag. ***Refer to section 3.5.3 for details.***

The 'Type' and 'Flex' fields display a selection list when tapped. Make sure you set them correctly, especially Flex and if creating a putter, set the type to Putter.

Figure 71 - Club Type and Flex Setting

3.5.2 Add Club

Tapping ‘Add Club’ on the Club Management panel, brings up the ‘Add Club’ panel as shown below.

Figure 72 - Add Club Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ button to return to the Club Management panel
- Tap ‘SAVE to save the club and exit to the Club Management Panel.

Complete the following fields as accurately as possible.

Name	Enter a name for the club that has not already been used in the set
Loft	Enter the Loft angle for the club face in degrees. This value affects face at impact, launch angle and ball velocity
Torque	Enter the Torque (twist) value for the shaft in degrees if known.
Type	Select the type of club from the drop down list
Length	Enter the Shaft Length in the units indicated (in or cm). This is important for accurate club head speed calculations and is measure from the butt of the club to the centre of the club face.
Lie	Enter the Lie angle for the club in degrees. This is important for accurate face and path results.

Head	Enter the mass of the club head in grams. This is important for accurate ball speed and hence carry and deviation.
Flex	Select the appropriate shaft flex from the drop down. This is important for head droop and hence face at impact calculations.

Note You can only add a club to the bag, providing there are less than 20 clubs in the bag already. Delete an unused club first, or change the specifications for an existing club to your requirements

If you don't have the number for head mass, copy them from a similar type of club in the default set.

3.5.3 Remove Club

Tapping on the 'Delete Club' button on the Edit Club panel, brings up a confirmation dialog asking you if you really want to delete the club. Use this with caution as there is no undo operation.

Figure 73 - Delete Club Panel

The key buttons on this panel are as follows:

- Tap 'CANCEL button to cancel and remain on the Edit Club panel
- Tap 'OK' to delete the club and exit to the Club Management panel.

3.6 Setting the Language

Tapping on the 'Language' button on the User Management panel bring up the language selection page.

At present, there are three available languages, English, Japanese and German.

Figure 74 – Language Settings Panel

The key buttons on this panel are as follows:

- Tap 'BACK' to return to the User Management panel
- Tap 'OK' to accept the selection and return to the User Management panel. The language changes take effect immediately.

Note If you select **Deutsch**, a prompt will appear asking for an unlock key. Please contact your German distributor for details or email us at support@itrainergolf.com and we'll help you obtain the key.

3.7 Setting a Portrait

On the user settings screen, you can set (or change) the portrait using the built in camera or by selecting an existing image. The process is slightly different for Apple and Android devices, so read the section below that is appropriate to you.

Tap on the portrait in the panel shown below, to set your desired picture.

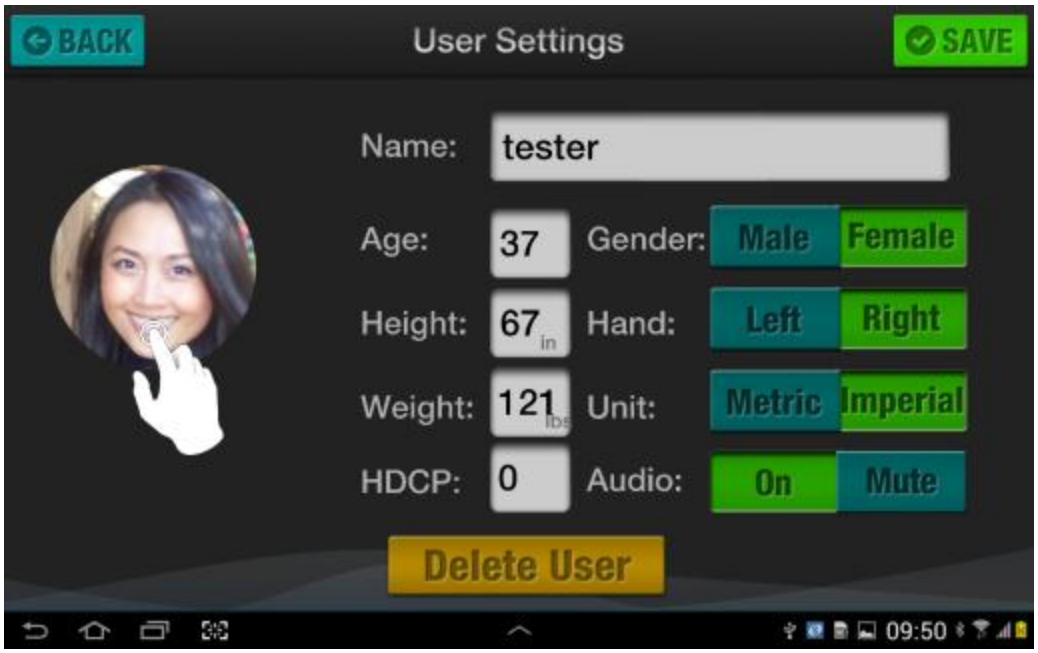

Figure 75 - User Settings Panel

3.7.1 On iPad or iPhone Devices

When you tap on the portrait shown on the user settings page, a dialog pops up asking you if you want to use an existing picture or take a picture using the camera.

When you tap on the displayed portrait, you are asked if you if you want to use an existing picture or take a picture using the camera. Select an existing image or take a photo using the built in camera on your device.

3.7.2 From the Camera

To use an existing image, tap on ‘From Camera’.

Figure 76 - Set Portrait Source Panel

The normal camera panel will open and allow you to take a photo. After taking the photo, the image detected face region will be used and automatically set as the portrait; you have not options to edit or re-size the image (unlike with Android).

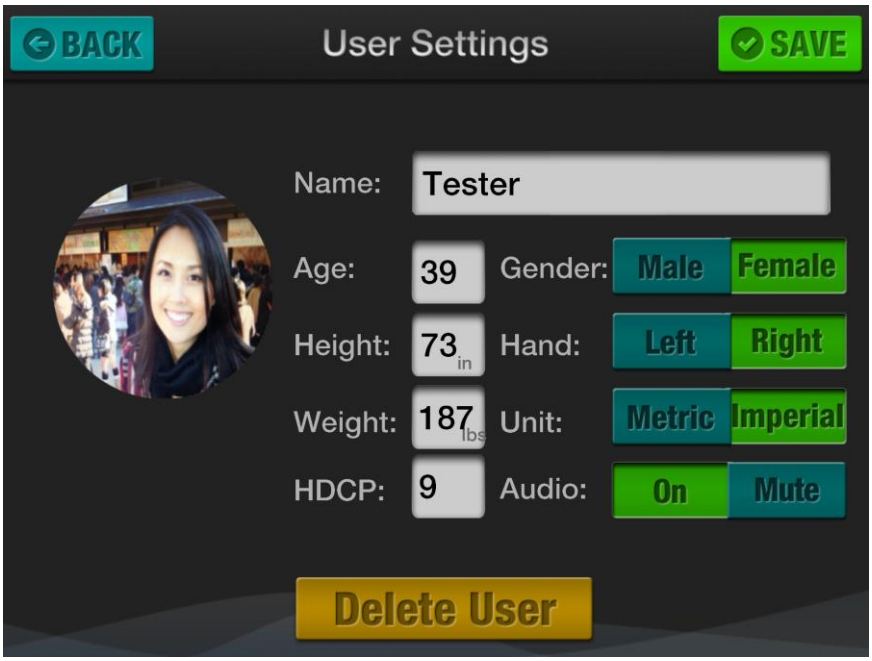

Figure 77 - Portrait Complete Panel

3.7.3 On Android Devices

When you tap on the portrait shown on the user settings page, you are asked if you if you want to use an existing picture or take a picture using the camera.

You can choose an existing photo or take a photo using the built in camera on your device.

3.7.4 From an existing file

To use an existing image, tap on the ‘From galley’ item.

Figure 78 - Set Portrait Source Panel

You will then be asked whether to complete the action using the Gallery or Photos feature on Android. Tap on the ‘Gallery’ icon, followed by the ‘Just Once” button.

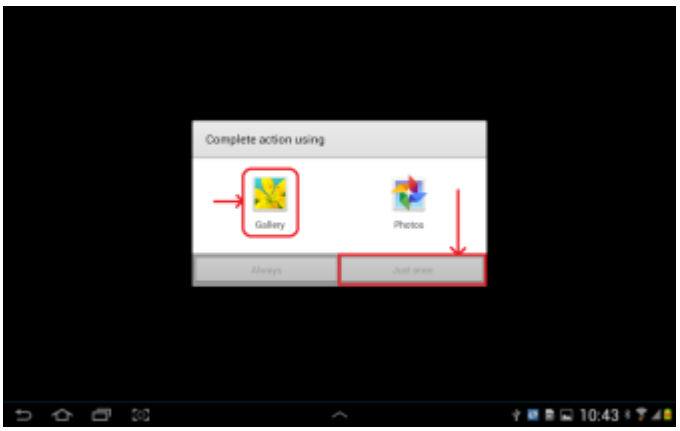

Figure 79 - Image Tool Panel

Now chose the category under which the image was saved. In this example, we are going to use an image from the Camera folder.

Figure 80 - Gallery Image Selection Panel

We tap on the Camera folder and we are presented with the images contained within that folder. Tap on the image you wish to use for your photo.

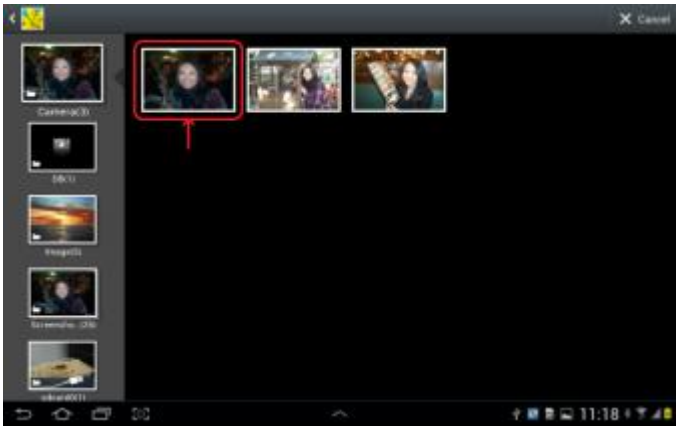

Figure 81 - Gallery Camera Folder Panel

Now select the area of the selected image you wish to use as your photo. The system will automatically highlight any faces it detects, so tap on the one you want to use. If there is only one face, you will not be presented with this option.

Figure 82 - Face Selection Panel

Now adjust the size of area you wish to include, by dragging the small solid blue boxes around the image.

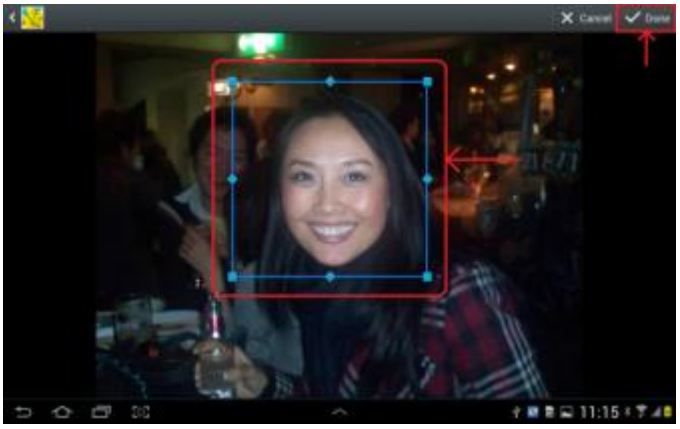

Figure 83 - Image Sizing Panel

When you are done, tap on the done button at the upper right and your photo will be updated.

Figure 84 - Portrait Complete Panel

3.7.5 Using the Camera

To set a camera image as your portrait, tap ‘From camera’.

Figure 85 - Image Source Selection Panel

The normal camera panel will open and allow you to take a photo. After taking the photo, you can Save or Discard the image.

Figure 86 - Image Save/Discard Panel

Tap ‘Save’ and then select the image area you wish to use.

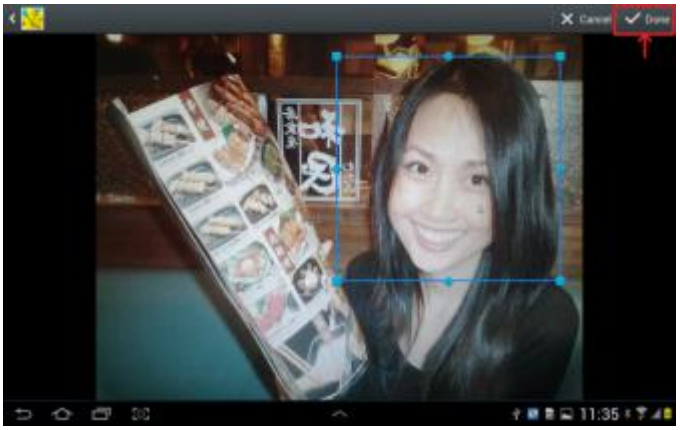

Figure 87 – Face Selection Panel

Adjust the selected area if needed and then tap ‘Done’ to complete the exercise.

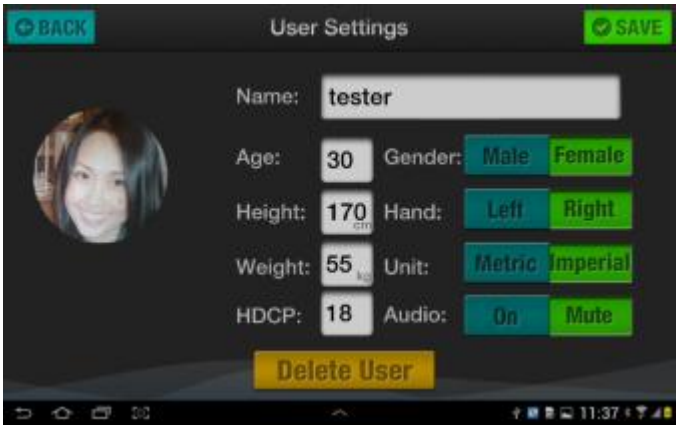

Figure 88 - Portrait Complete Panel

3.8 Swing Dashboard

The dashboard provides a quick way of reviewing swing results. There are two pages of 4 panels; each has a zoom feature and in some cases, statistics.

When capturing swings, the ‘BACK’ button is replaced with a ‘MENU’ button to allow configuration changes as well as to cancel the capture.

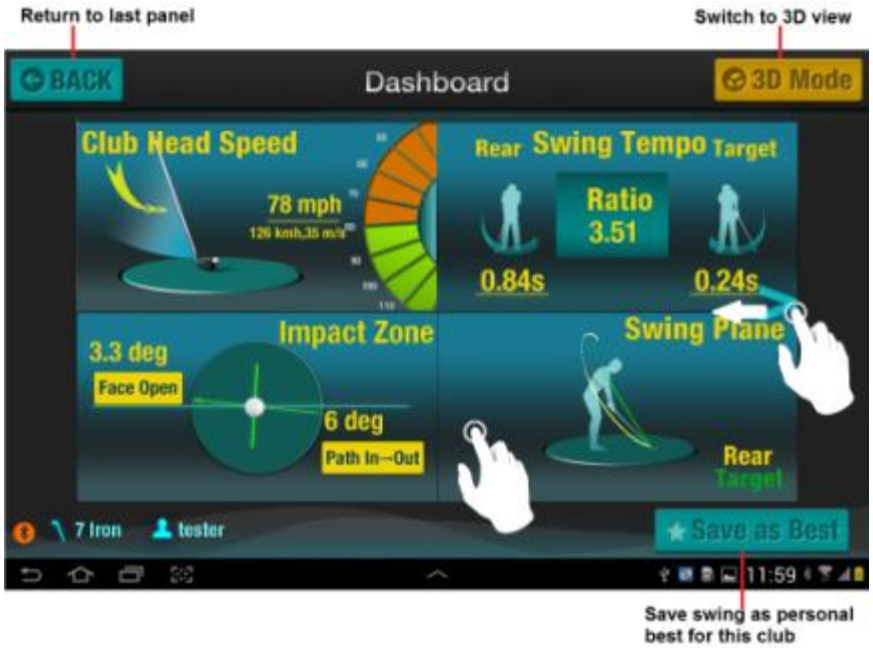

Figure 89 - Swing Dashboard Panel - Left

Figure 90 - Swing Dashboard Panel - Right

The key buttons on the Dashboard panel are as follows:

- Tap ‘BACK’ to return to the Swing History panel (replaced by ‘MENU’ button when in swing capture mode).
- Tap ‘3D Mode’ to witch to 3D. ***Refer to section 3.9 for details.***
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode
- Swipe the panel left to see the second Dashboard page
- Tap on any panel to zoom in and access statistics if available.

3.8.1 Club Head Speed

The Club Head speed sub-panel depicts the impact club-head speed in miles-per-hour as well as or kilometres-per-hour and metres-per-second. The dial on the right gives an analogue representation of the speed.

Figure 91 - Club Speed Sub-Panel

Tapping on this panel, zooms in to full screen with a Statistics button.

Figure 92 - Zoomed Club Speed Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a Personal Best
- Tap ‘Statistics’ to view the Club Head Speed statistics panel

3.8.1.1 Club Head Speed - Statistics

The Club Head Speed statistics panel displays various statistics relating to the impact and maximum club head speed.

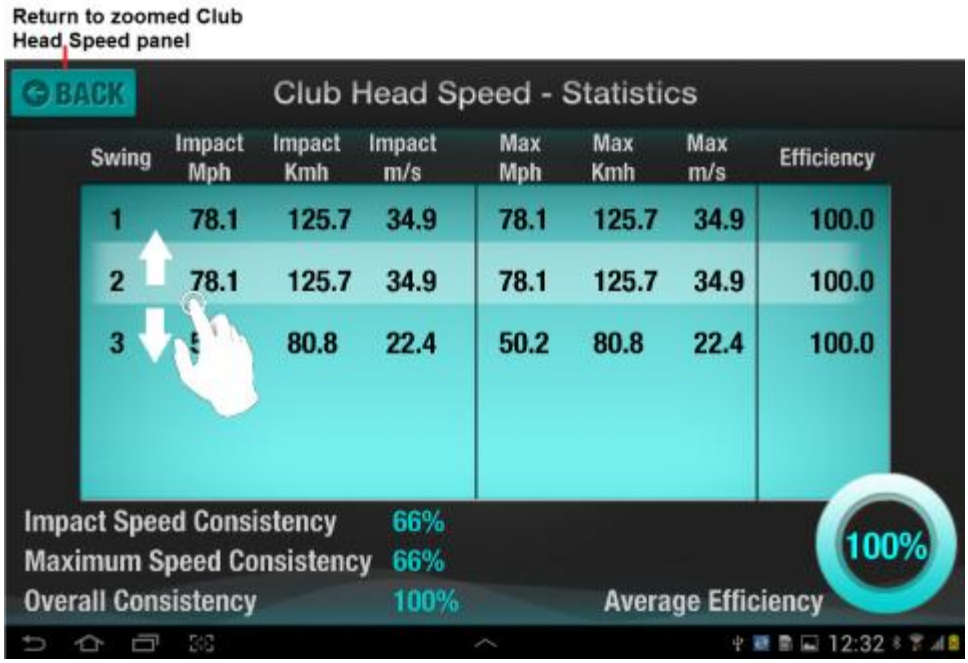

Figure 93 - Club Head Speed Statistics

The key buttons on this panel are as follows:

- Tap 'BACK' to zoom back out to the main dashboard
- Swipe up and down to view up to 10 swings with the same club

Efficiency	Reports how close the impact speed is to the maximum speed; if the same, then efficiency is 100% for each swing,
Impact Speed Consistency	Reports on the consistency of the impact club head speed across the last 10 swings.
Maximum Speed Consistency	Reports on the consistency of the impact club head speed across the last 10 swings.
Overall Consistency	Reports on the Efficiency Consistency across the last 10 swings
Average Efficiency	Reports the average efficiency across the last 10 swings.

3.8.2 Swing Tempo

The Swing Tempo sub-panel reports the timing of the rear-swing, target-swing and the ratio of the rear to target times. The ideal ratio is 3.1, based on the average tempo of the top 40 touring professionals.

Figure 94 - Swing Tempo Sub-Panel

Tapping on this panel, zooms in to full screen with a Statistics button.

Figure 95 - Zoomed Swing Tempo Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode
- Tap ‘Statistics’ to view the Swing Tempo statistics panel

3.8.2.1 Swing Timing - Statistics

The Swing Timing - Statistics panel displays various statistics relating to the Rear and Target timing and compares the tempo against the PGA tour average.

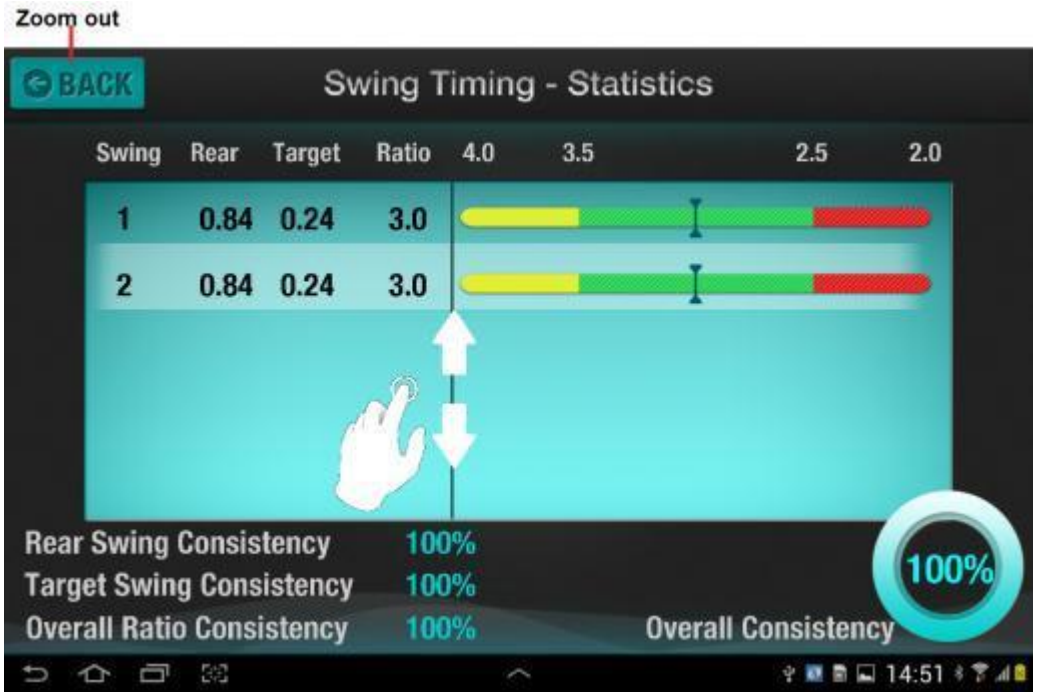

Figure 96 - Swing Timing Statistics

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Swipe up and down to view up to 10 swings with the same club

Rear	Reports the rear timing in seconds
Target	Reports the target timing in seconds.
Ratio	Reports the ratio of rear to target time
Rear Swing Consistency	Reports rear-swing timing consistency
Target Swing Consistency	Reports target-swing timing consistency
Overall Ratio Consistency	Reports timing ratio overall consistency
Overall Consistency	Reports the overall consistency of the rear, target and ratio consistency

3.8.3 Impact Zone

The Impact Zone sub-panel reports the face to path and path to target angles at the point of impact.

Figure 97 - Impact Zone Sub-Panel

Tap on the panel for a full screen view with access to Statistics.

Figure 98 - Zoomed Impact Zone Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode
- Tap ‘Statistics’ to view the Impact Zone statistics panel

3.8.3.1 Impact Zone - Statistics

The Impact Zone - Statistics panel displays Face and Path statistics at impact for the last 10 swings with the same club.

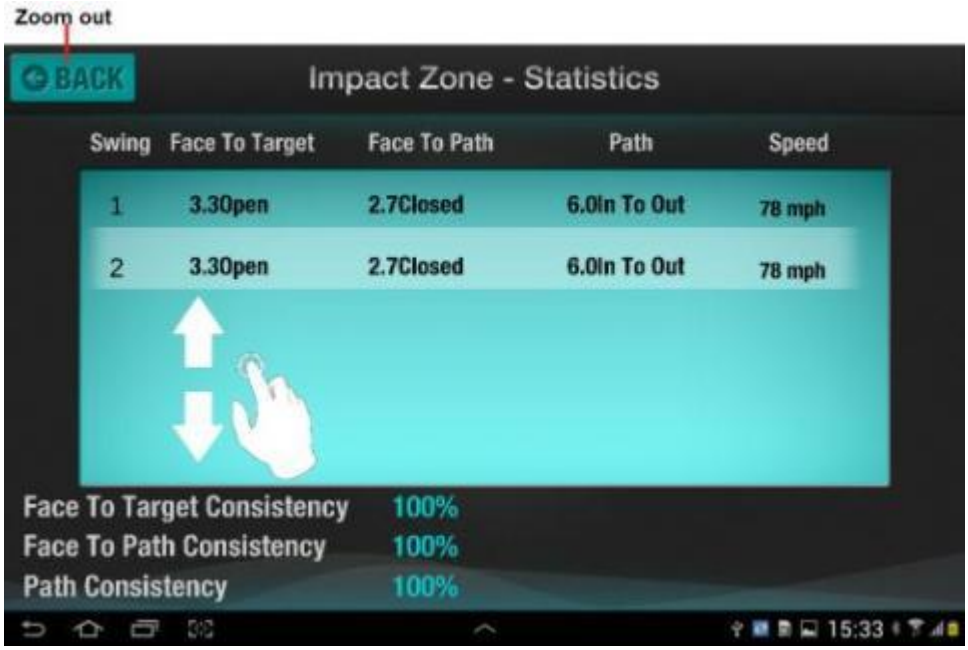

Figure 99 - Impact Zone Statistics

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Swipe up and down to view up to 10 swings with the same club

Face to Target	Reports the club-face to target line angle
Face to Path	Reports the club-face to club-path angle
Path	Reports the angle between the club-head path and the target line
Speed	Reports the impact club-head speed
Face to Target Consistency	Reports the face to target consistency
Face to Path Consistency	Reports the face-to-path consistency.
Path Consistency	Reports the path-to-target consistency

3.8.4 Swing Path

The Swing Path sub-panel displays a 2D representation of the club-head path viewed from different user-selected camera positions.

Figure 100 - Swing Path Sub-Panel

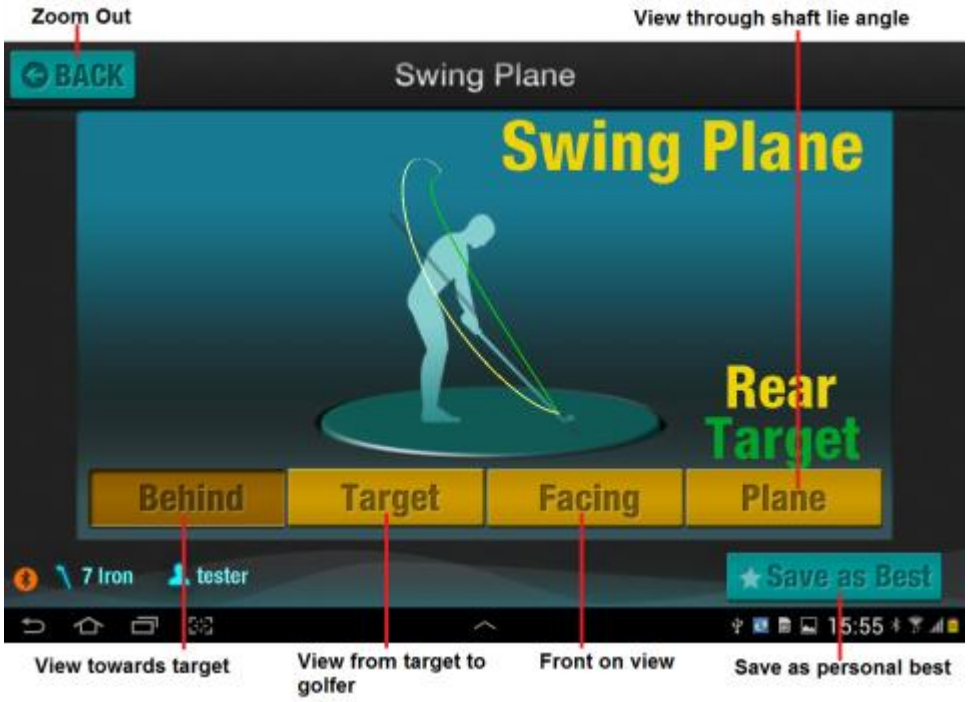

Figure 101 - Zoomed Swing Path Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard

- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode
- Tap ‘Behind’ to view the path looking towards the target
- Tap ‘Target’ to view from the target towards the golfer
- Tap ‘Facing’ to view the golfer face-on.
- Tap ‘Plane’ for an overhead view through the plane formed by the lie angle of the club at address and the target line.

3.8.5 Carry and Deviation

The Carry and Deviation sub-panel displays a 2D representation of the ball flight viewed from side on and above. To see a 3D view, refer to section 3.13.

Figure 102 - Carry and Deviation Sub-Panel

The following screen shot shows the zoomed Carry and Deviation panel.

Figure 103 - Zoomed Carry & Deviation Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode

Carry Distance is drawn as a yellow line against distance markers and depicts the trajectory of the ball “in the air”.

Deviation is drawn as a red line and depicts the trajectory of the ball viewed from above, along the target line.

3.8.6 Launch Angles

The Launch Angle sub-panel displays a 2D representation of the ball launch angles viewed from above and from the side.

Figure 104 - Launch Angles Sub-Panel

The following screen shot shows the zoomed Launch Angle panel.

Figure 105 - Zoomed Launch Angles Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode

The launch angle calculations are used as inputs to the ball flight calculations. They are based on factors such as the Dynamic Loft angle, Path, Club Speed to name a few.

The Horizontal Launch angle is the direction that the ball starts on after leaving the club face. It is influenced mainly by the face at impact and to a lesser degree, the club head path at impact. The angle is reported in degrees and includes a coloured letter indicating whether the ball started Left or Right of the blue reference line.

The Vertical Launch angle is the upward direction that the ball starts on after leaving the club face. It is influenced by dynamic loft and angle of attack. The angle is reported in degrees with respect to the blue reference line.

3.8.7 Spin Rates

The Spin Rate sub-panel displays the calculated spin on the ball, separated into a backspin and sidespin component.

Figure 106 - Spin Rates Sub-Panel

The following screen shot shows the zoomed Spin Rate Angle panel.

Figure 107 - Zoomed Spin Rates Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode

The spin rate calculations are used as inputs to the ball flight calculations. They are based on factors such as the Dynamic Loft angle, Path, Club Speed to name a few.

The backspin rate is the spin that is imparted to the ball from the sliding action of the ball up the club face as a result of friction. It is influenced mainly by the dynamic loft and angle of attack. The angle is reported in revolutions per minute and usually in the 2,000 – 3,000 rpm range for a driver and 9,000 to 10,000 deg for 9 irons and wedges.

The sidespin rate is the spin that is imparted to the ball from the sliding action of the ball across the club face as a result of friction. It is influenced mainly by the face to path angle at impact. The angle is reported in revolutions per minute and should be as close to zero as possible for straight shots, though a draw requires a spin rate under 1000 rpm

3.8.8 Shaft Angles

The Shaft Angles sub-panel displays the measured and calculated shaft-lean and shaft-lie angles at starting and impact positions.

Figure 108 – Shaft Angles Sub-Panel

The following screen shot shows the zoomed Shaft Angles panel.

Figure 109 - Zoomed Shaft Angles Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode

The Shaft Lean angles refer to the angle at which the shaft leans towards the target or rear at address and impact. The lean at the starting position is commonly referred to as Forward or Reverse Press. For drivers, it is usually slightly reversed and the head of the club is ahead of blue line, whereas for irons, it can vary from 0 to 10 or more degrees, to maintain a low vertical trajectory.

The shaft lean at impact is generally a positive value for irons and sometimes negative for drivers, due to ball placement and higher tee positions.

The Shaft Lie angle is the angle formed by the shaft, perpendicular to the target line. It is generally a number of degrees less than the manufacturers designed lie angle, in order to account for the centrifugal effect on the shaft causing the head to droop through impact.

The shaft lie and club loft angles at impact have a direct impact on the face angle at impact, which is why it is important to use fitted equipment to avoid compensating for a poor lie angle at impact.

3.9 Putter Dashboard

The putter dashboard provides a quick way of reviewing putt results. There 6 panels spread over 2 pages and each can be zoomed; some also have statistics.

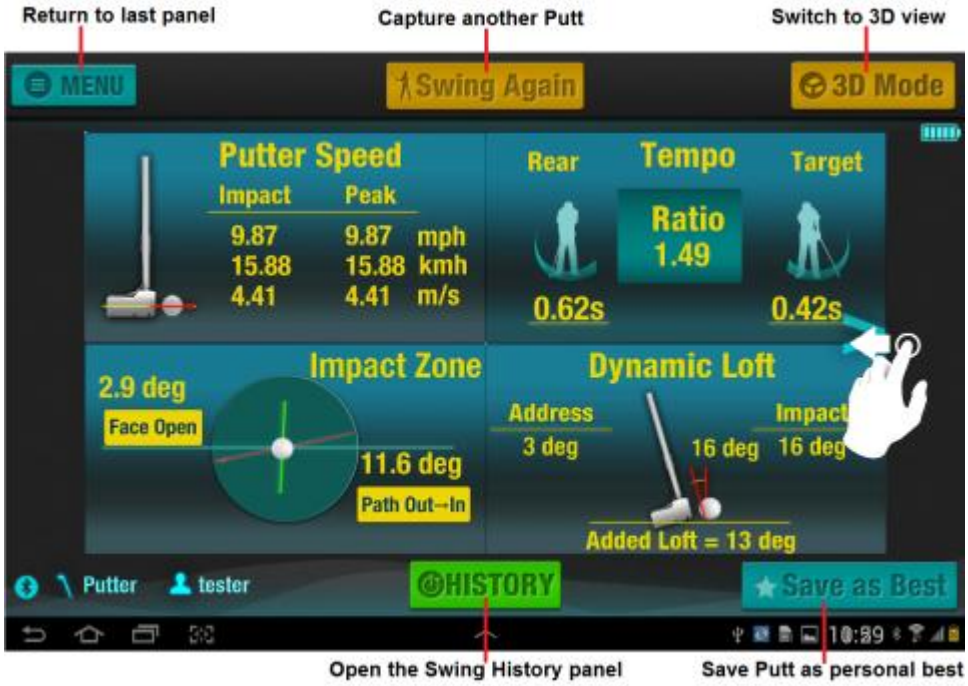

Figure 110 - LH Putting Dashboard Panel

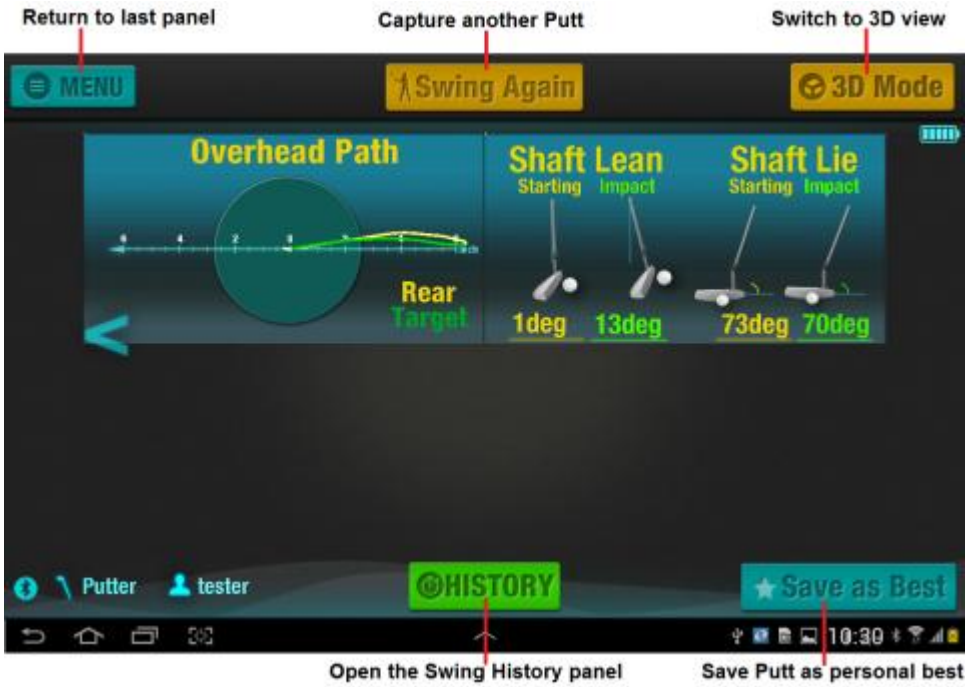

Figure 111 - RH Putting Dashboard Panel

The key buttons on the Putting Dashboard panels are as follows:

- Tap ‘BACK’ if displayed, to return to the Swing History panel
- Tap ‘MENU’ if displayed, to view capture options.
- Tap ‘3D Mode’ to switch to 3D. ***Refer to section 3.9 for details.***
- Tap ‘Save as Best’ to save this putt as a personal best for use in Challenge mode
- Tap ‘HISTORY’ if displayed, to open the Swing History panel
- Swipe the panel left to see the second Dashboard page
- Tap on any panel to zoom in and access statistics if available.

Note When the dashboard is opened from the Swing History pane, the ‘MENU’ button becomes a ‘BACK’ button and the ‘Swing Again’ button becomes Dashboard.

3.9.1 Putter Speed

The Putter Speed sub-panel displays the impact and maximum putter-head speed in miles-per-hour, kilometres-per-hour and metres-per-second.

Figure 112 - Putter Speed Sub-Panel

Tapping on this panel, zooms in to full screen with a Statistics button.

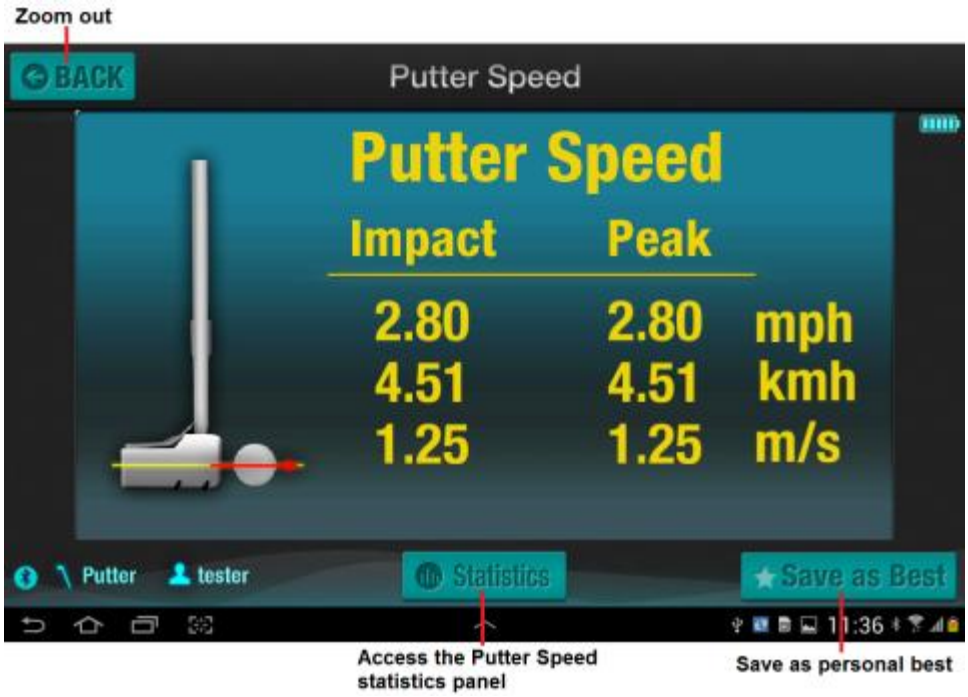

Figure 113 - Zoomed Putter Speed Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a Personal Best
- Tap ‘Statistics’ to view the Putter Speed Statistics panel

3.9.1.1 Putter Speed - Statistics

The Putter Speed statistics panel displays various statistics relating to the impact and maximum putter speed.

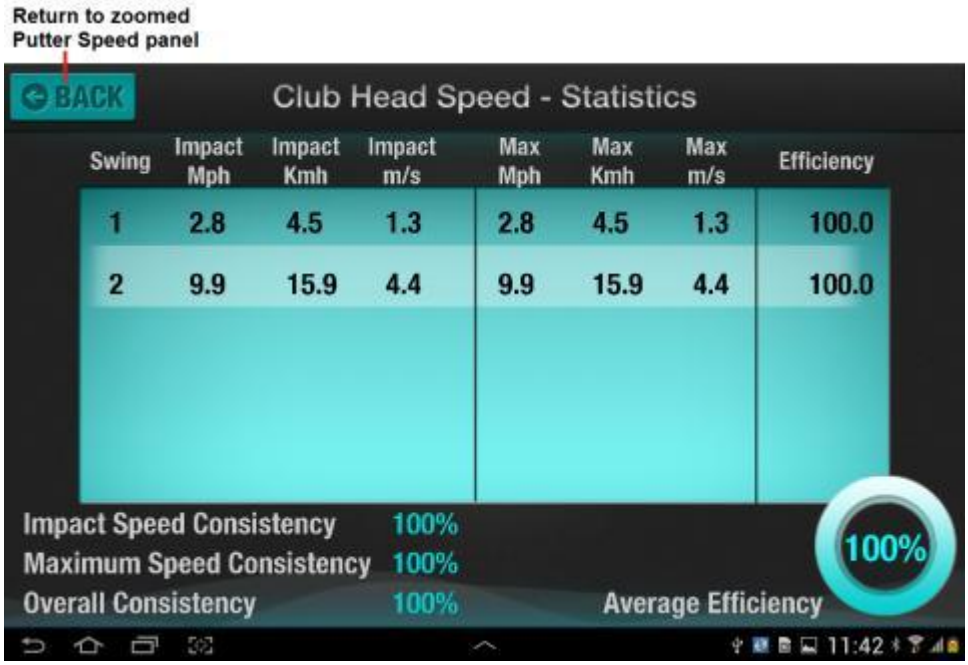

Figure 114 - Putter Speed Statistics

The key buttons on this panel are as follows:

- Tap 'BACK' to zoom back out to the main dashboard
- Swipe up and down to view up to 10 swings with the same putter

Efficiency	Reports how close the impact speed is to the maximum speed; if the same, then efficiency is 100% for each putt,
Impact Speed Consistency	Reports on the consistency of the impact club head speed across the last 10 putts.
Maximum Speed Consistency	Reports on the consistency of the impact club head speed across the last 10 putts.
Overall Consistency	Reports on the Efficiency Consistency across the last 10 putts
Average Efficiency	Reports the average efficiency across the last 10 putts.

3.9.2 Putter Tempo

The Putter Tempo sub-panel reports the timing of the rear-swing, target-swing and the ratio of the rear to target times. The ideal ratio is 2.0, based on the average tempo of the top 40 touring professionals.

Figure 115 - Putter Tempo Sub-Panel

Tapping on this panel, zooms in to full screen with a Statistics button.

Figure 116 - Zoomed Putter Tempo Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode
- Tap ‘Statistics’ to view the Putter Tempo statistics panel

3.9.2.1 Putter Timing - Statistics

The Putter Timing - Statistics panel displays various statistics relating to the Rear and Target timing and compares the tempo against the PGA tour average.

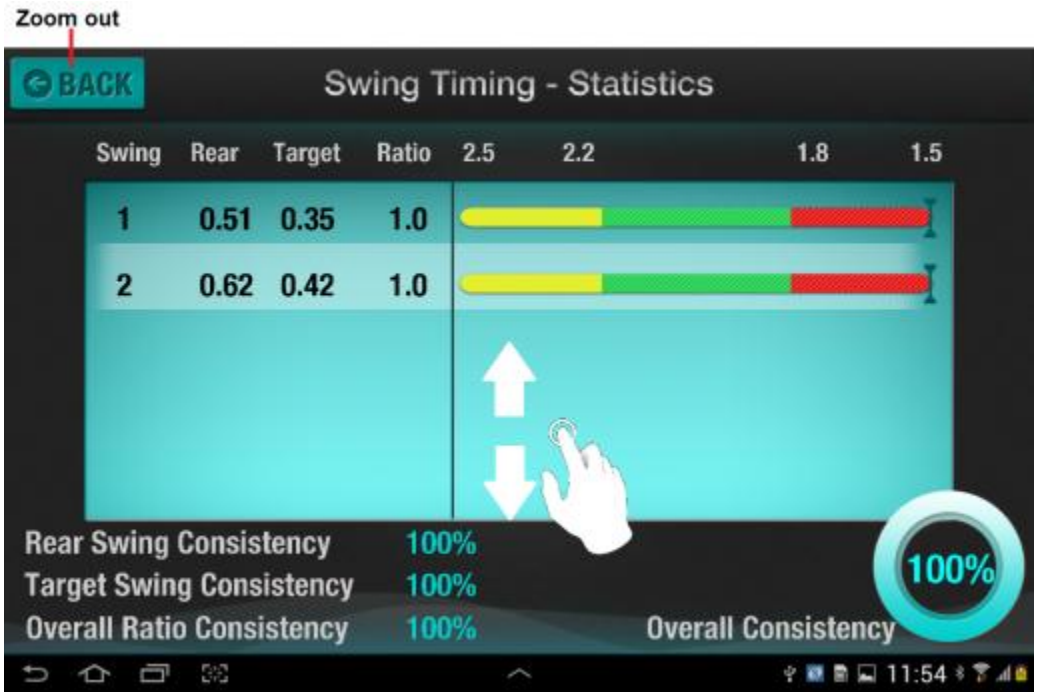

Figure 117 - Putter Timing Statistics Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Swipe up and down to view up to 10 putts with the same putter

Rear	Reports the rear timing in seconds
Target	Reports the target timing in seconds.
Ratio	Reports the ratio of rear to target time
Rear Swing Consistency	Reports rear-swing timing consistency
Target Swing Consistency	Reports target-swing timing consistency
Overall Ratio Consistency	Reports timing ratio overall consistency
Overall Consistency	Reports the overall consistency of the rear, target and ratio consistency

3.9.3 Putter Impact Zone

The Impact Zone sub-panel reports the face to path and path to target angles at the point of impact.

Figure 118 - Putter Impact Zone Sub-Panel

Tap on the panel for a full screen view with access to Statistics.

Figure 119 - Zoomed Putter Impact Zone Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode
- Tap ‘Statistics’ to view the Impact Zone statistics panel

3.9.3.1 Putter Impact Zone - Statistics

The Impact Zone - Statistics panel displays Face and Path statistics at impact for the last 10 putts with the same putter.

Figure 120 - Putter Impact Zone Statistics

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Swipe up and down to view up to 10 swings with the same club

Face to Target	Reports the face to target line angle
Face to Path	Reports the face to club-path angle
Path	Reports the angle between the putter-head path and the target line
Speed	Reports the impact putter speed
Face to Target Consistency	Reports the face to target consistency
Face to Path Consistency	Reports the face-to-path consistency.
Path Consistency	Reports the path-to-target consistency

3.9.4 Putter Dynamic Loft

The Dynamic Loft sub-panel displays a 2D representation of the putter loft at the point of impact.

Figure 121 - Dynamic Loft Sub-Panel

Tap on the panel for a full screen view.

Figure 122 - Zoomed Dynamic Loft Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode

3.9.5 Putter Overhead Path

The Overhead Path sub-panel displays a 2D representation of the putter head path viewed directly from above. The yellow plot is the rear-stroke and the green plot is the target-stroke.

Figure 123 - Overhead Path Sub-Panel

Tap on the panel for a full screen view.

Figure 124 - Zoomed Putter Path Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode

3.9.6 Putter Shaft Angles

The Putter Shaft Angles sub-panel displays the Lean and Lie angles of the Putter Shaft at address and impact.

Figure 125 - Shaft Angles Sub-Panel

Tap on the panel for a full screen view.

Figure 126 - Zoomed Shaft Angles Panel

The key buttons on this panel are as follows:

- Tap ‘BACK’ to zoom back out to the main dashboard
- Tap ‘Save as Best’ to save this swing as a personal best for use in Challenge mode

3.10 Challenge Mode Results

When Challenge Mode swings are captured or reviewed, the format in which the results are presented changes according to whether there is accompanying video for that swing.

The same display format is used when challenging a Master or Best swing. The key difference is that there are currently no videos for the Masters within the app, but if a swing is saved as a 'Best Swing' the video will accompany it.

3.10.1 Challenge Master – No Video

After capturing a swing in Challenge mode, the swing is overlaid on the reference swing as shown below.

This image is from a swing selected from Swing History; if the swing is captured in real-time, the BACK button is replaced by a MENU button and the Swing Path message is replaced by a 'Swing Again' button.

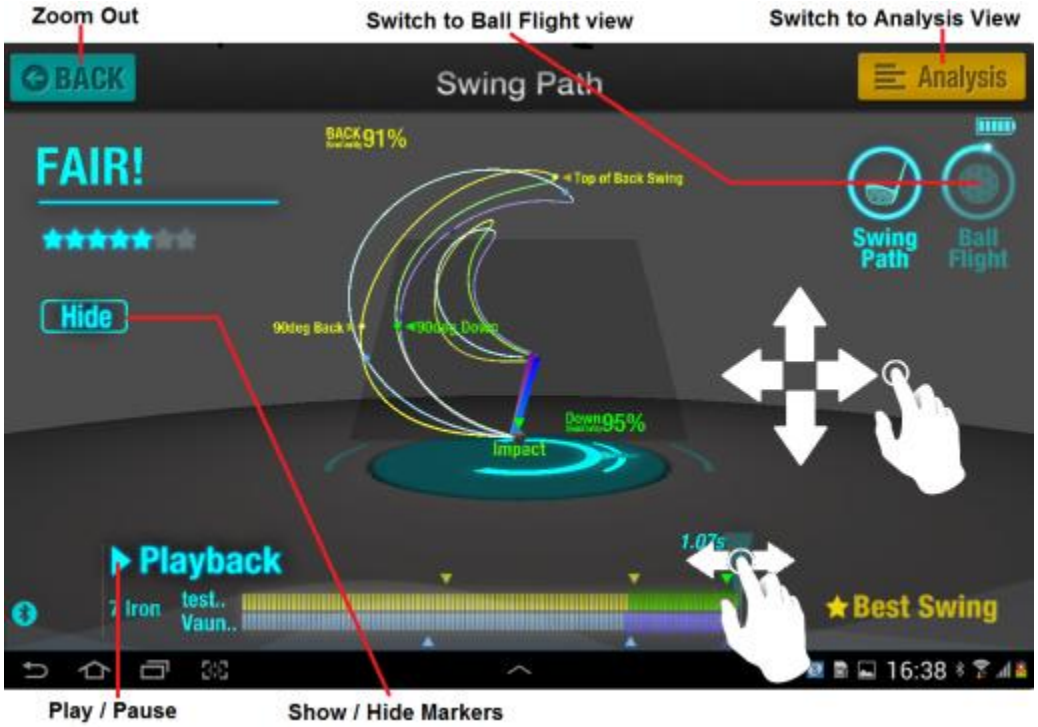

Figure 127 - 3D Replay Panel

The key buttons on this panel are as follows:

- Tap 'BACK' to return to the History panel
- Tap 'Analysis' to view the numerical results
- Tap 'Hide' to turn off the markers on the yellow and green plots
- Drag the screen around to change the view
- Tap the Play/Pause icon to pause / resume playback.
- Drag the time marker to control the replay position

3.10.2 Challenge Master - Analysis Panel

Tapping the Analysis button on the Challenge Mode 3D panel brings up the Analysis Panel as shown below.

Figure 128 - Challenge Mode Analysis Panel

The key buttons on this panel are as follows:

- Tap 'BACK' to return to the History panel
- Tap '3D Mode to switch to the 3D view
- Drag the page up and down to see all the results

The metrics on the analysis page are as follow:

BACK(s)	Rear-swing timing in seconds with a similarity percentage
DOWN(s)	Target- swing timing in seconds with a similarity percentage
FACE ANGLE	Face angle at impact with a similarity percentage
PATH ANGLE	Path angle at impact with a similarity percentage
CLUB SPEED	Club Head speed at impact with a similarity percentage
BALL SPEED	Ball Speed with a similarity percentage

3.10.3 Challenge Mode - With Video

After capturing a swing in Challenge Mode with Video enabled, you will see a 3D Swing Path display similar to that shown below.

Your video is displayed on the right and your swing is overlaid on the Master Swing on the left.

Figure 129 - Challenge Mode with Video

The key buttons on this panel are as follows:

- Tap ‘MENU’ to display the options menu
- Tap ‘Analysis’ to view the numerical results
- Tap ‘Hide Video’ to turn off the video and re-centre the image
- Tap the ‘Zoom’ icon to expand the video to full screen
- Tap the ‘Handle’ on the video image to select which video to view. If no challenge video is present, the tab is greyed out.
- Drag the screen around to change the view
- Tap the Play/Pause icon to pause / resume playback.
- Drag the time marker to control the replay position

Tap on the ‘’Full-Screen’ icon to zoom into the video and hide the 3D Club Path display

Figure 130 - Challenge Mode with Video Zoomed

The key buttons on this panel are as follows:

- Tap the ‘Pinch’ icon to go back to the previous screen
- Tap the Play/Pause icon to pause / resume playback.
- Drag the time marker to control the replay position

3.11 Expert Mode

When Expert Mode swings are captured or reviewed, the format in which the results are presented changes according to whether there is accompanying video for that swing.

The sections below explain the screens that are used in Expert Mode.

3.12 Expert Mode - No Video

The 3D replay panel renders a 3D view of the club head path and hand path for the swing. When this panel is viewed during Swing Capture, the 'BACK' button becomes a 'MENU' button.

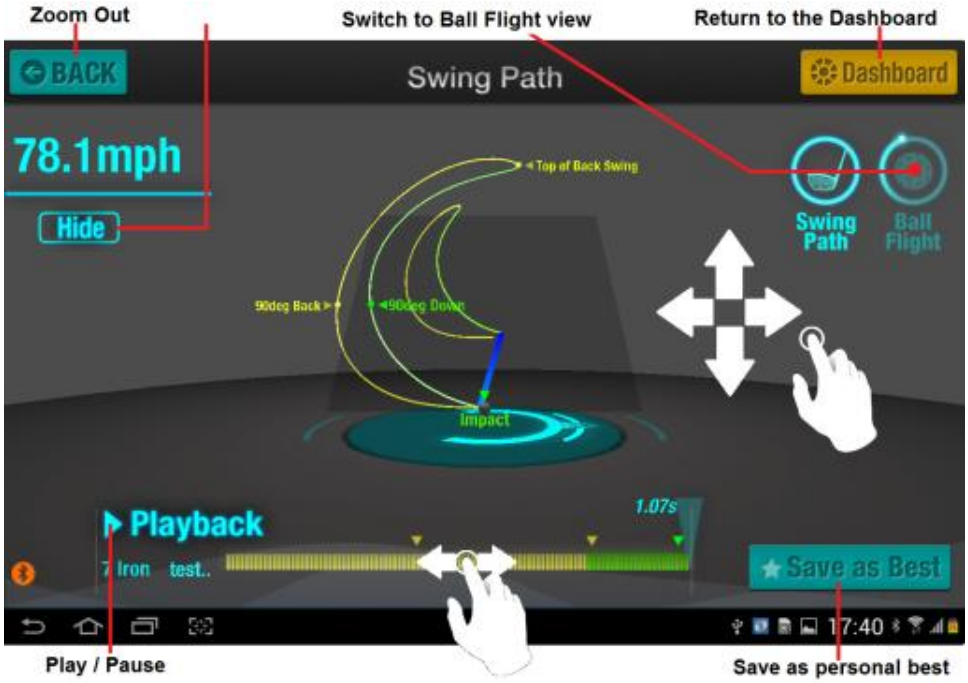

Figure 131 - 3D Replay Panel

The key buttons on this panel are as follows:

- Tap 'BACK' to return to the History page
- Tap 'Dashboard' to return to the Dashboard panel
- Tap 'Save as Best' to save this swing as a personal best
- Tap 'Hide' to remote the text markers on the yellow and green plots
- Tap & Hold then drag the screen around to change the view
- Tap the Play/Pause icon to pause / resume playback.
- Tap & Hold on the time marker to control the replay position

3.13 Expert Mode – With Video

After capturing a swing in Expert Mode with Video enabled, you will see a 3D Swing Path display similar to that shown below.

The video is displayed on the right and swing path is positioned on the left.

Figure 132 - Expert Mode with Video

The key buttons on this panel are as follows:

- Tap ‘MENU’ to display the options menu
- Tap ‘Swing Again’ to capture another swing
- Tap ‘Dashboard’ to view the 2D dashboard
- Tap ‘Hide Video’ to turn off the video and re-centre the image
- Tap the ‘Zoom’ icon on the video to expand it to full screen
- Tap the ‘Setup’ icon on the video to adjust the camera position
- Drag the screen around to change the view
- Tap the Play/Pause icon to pause / resume playback.
- Drag the time marker to control the replay position

Tap on the ‘’Full-Screen’ icon to zoom into the video and hide the 3D Club Path display

Figure 133 - Expert Replay with Video Zoomed

The key buttons on this panel are as follows:

- Tap the ‘Pinch’ icon to go back to the previous screen
- Tap the Play/Pause icon to pause / resume playback.
- Drag the time marker to control the replay position

3.14 Expert Mode Ball Flight Panel

The Ball Flight panel displays the predicted trajectory of the ball in a simulated course environment. When this panel is viewed during Swing Capture, the 'BACK' button becomes a 'MENU' button.

The screenshot below shows the default Ball Flight view.

Figure 134 - Ball Flight View - Diagonal

The key buttons on this panel are as follows:

- Tap 'BACK' to return to the History page
- Tap 'Dashboard' to return to the Dashboard panel
- Tap 'Save as Best' to save this swing as a personal best
- Tap one of the 'Change View' icons on the left to switch the view

The carry and deviation are reported at the bottom of the panel. For deviation, the letter L and R are At the bottom of the panel indicate which side of the target line the ball finished on.

In the above example, the carry distance (in the air) was 149.7 yards and the ball landed 3.7 yards to the right of the target line.

3.14.1 Ball Flight Rear View

Tapping the central Change View icon brings up a Rear view of the ball flight.

Figure 135 - Ball Flight View - Rear

The key buttons on this panel are as follows:

- Tap ‘BACK’ to return to the History page
- Tap ‘Dashboard’ to return to the Dashboard panel
- Tap ‘Save as Best’ to save this swing as a personal best
- Tap one of the ‘Change View’ icons on the left to switch the view

The carry and deviation are reported at the bottom of the panel. For deviation, the letter L and R are At the bottom of the panel indicate which side fo the target line the ball finished on.

In the above example, the carry distance (in the air) was 149.7 yards and the ball landed 3.7 yards to the right of the target line.

3.14.2 Ball Flight Top Down View

Tapping the bottom Change View icon brings up an overhead view of the impact points for the last 10 shots with the current club.

Figure 136 - Ball Flight View - Top Down

Each shot in the top-down view is colour coded, with the most recent shot being shot 1. A circle is drawn around all the shots to show the radius o shot spread.

The average carry distance and radius of a circle that encloses all the shots is reported at the bottom of the panel.

In the above example, the average carry distance (in the air) was 149.7 yards and the all shots landed within a circle of radius 9 yards.

3.15 Swing History Panel

The Swing History panel is accessible from the Home Screen; ***refer to section 3.1 for details***.

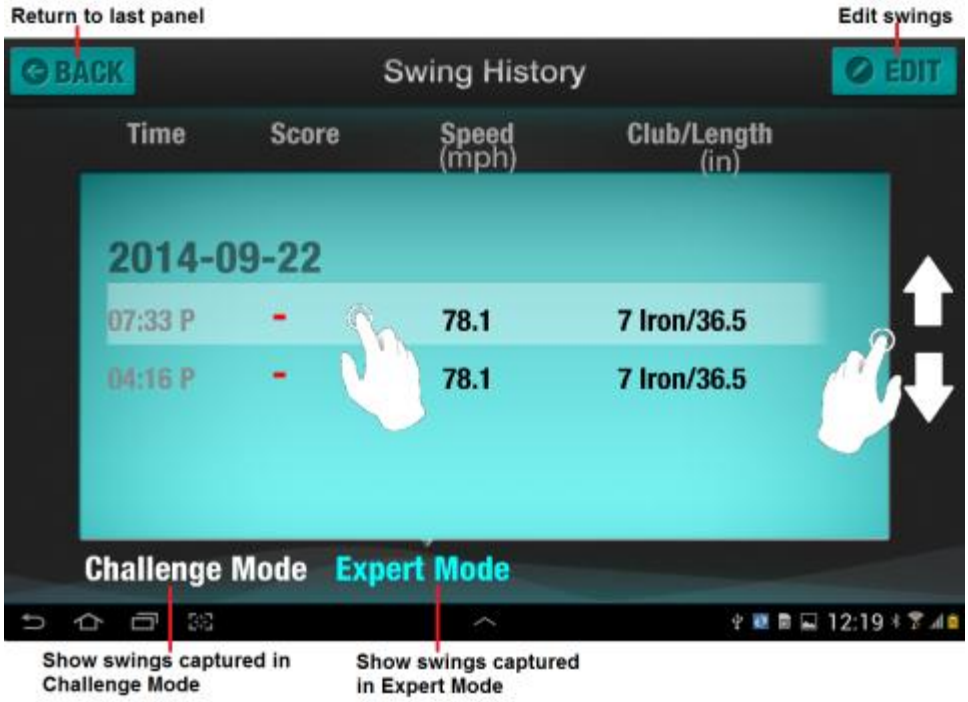

Figure 137 - Swing History Panel

The key buttons on this panel are as follows:

- Tap 'BACK' to return to the last panel
- Tap 'EDIT' to edit the swing history and enable swing deletion
- Tap 'Challenge Mode' to display swings captured in Challenge Mode
- Tap 'Expert Mode' to display swings captured in Expert Mode
- Tap a swing in the list to open a Dashboard or 3D view for that swing
- Tap & Hold then swipe up and down to view more swings.
- Tap on the date to expand or collapse the swings on that day

3.15.1 Deleting Swings

Tapping the 'EDIT' button on the Swing History, puts the panel into edit mode. In this mode, you cannot view swings; you may only tap on the 'Delete' icons to remove the swing. When done, tap the 'DONE' to exit edit mode.

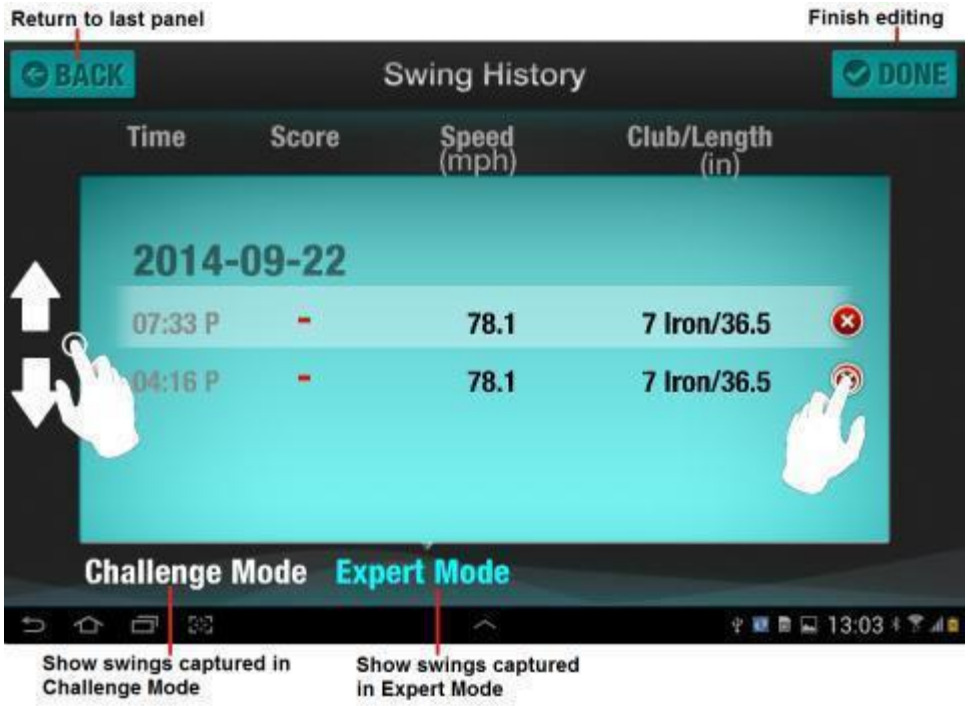

Figure 138 - Swing History - Edit Panel

The key buttons on this panel are as follows:

- Tap 'BACK' to return to the last panel
- Tap 'DONE to finish editing
- Tap 'Challenge Mode' to display swings captured in Challenge Mode
- Tap 'Expert Mode' to display swings captured in Expert Mode
- Tap & Hold then swipe up and down to view more swings.
- Tap on the date to expand or collapse the swings on that day

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Note Once a swing is deleted, it cannot be recovered, so use this feature with caution.

3.16 Golf Tips Panel

The Golf Tips panel is accessible from the Home Screen. ***See section 3.1***.

Figure 139 - Golf Tips Panel

The key buttons on this panel are as follows:

- Tap ‘Home’ button to return to the Home Screen
- Tap an entry in the list on the left to view that tip / drill. An example is shown below in Hold Drill section
- Tap & Hold then swipe up and down to view more tips & drills.

3.16.1 Hold Drill

Tapping on the Hold Drill from the Golf Tips panel, opens a panel describing the drill and with one or more images on the right showing the required steps for the drill.

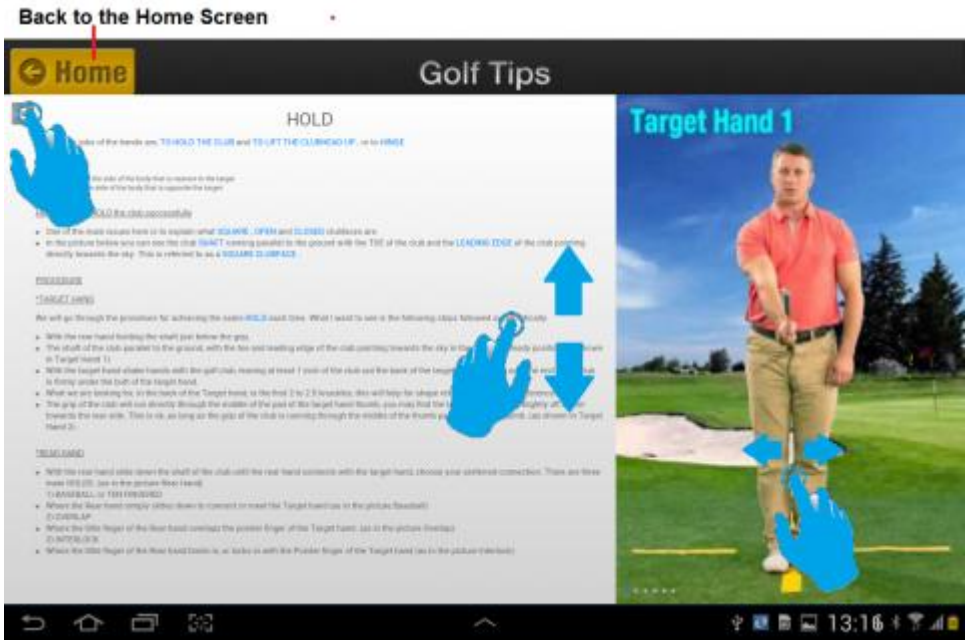

Figure 140 - Hold Drill Panel

The key buttons on this panel are as follows:

- Tap ‘Home’ button to return to the Home Screen
- Tap the icon on the upper left corner of the panel to return to the Golf Tips menu
- Tap & Hold and Swipe up and down in the text area to view more text
- Tap & Hold and Swipe left and right in the image area to view more images

When you swiped through the images, the text moves move to the section appropriate for the selected image.

Likewise, as you scroll through the text, the images on the right change to reflect the area of the drill you are viewing

3.17 Club Selection Panel

The club selection panel is displayed when capturing swings in either Challenge Mode or Expert mode (refer to section 3.20.1 and 3.20.4 for details).

Locating a club is possible through several means:

- Swiping your finger left or right on the centre image
- Tapping on the club names on the left and right side of the panel

Once the desired club is shown in the centre image, tap the image to select it and continue.

Figure 141 - Club Selection Panel

The key buttons on this panel are as follows:

- Tap ‘MENU’ to open the options menu, from where you can switch Club Sets or exit the capture process.
- Tap the club’s image to select it and continue

3.17.1 Changing Club Sets

When choosing a club, you can switch to a different set by tapping on the MENU button of the Choose Club panel to open the options menu. If another set is available, you can tap in it to populate the club selection panel with clubs from the other set.

Figure 142 - Choose Club - Options Menu

The key buttons on this panel are as follows:

- Tap ‘MENU’ to close the options menu
- Tap on a Club Set name to select that set
- Tap ‘Home’ to exit to the Home Screen

3.18 Calibration Panel

The first time you capture a swing, select a new club or manually invoke re-calibration, you will be asked to calibrate the iTrainerMini to the club face.

This process is design to help the iTrainerMini determine to what degree it is rotated on the shaft with respect to the club-face. The iTrainerMini can be attached on the top of the shaft, or either side. The tolerance is +/- 10 degrees from either of these positions.

Two things occur during calibration:

- iTrainerMini flashes the indicators red, until calibration is complete
- The application displays the screen below

The procedure is automatic, just raise the club to a horizontal position and align the grooves on the clubface so they are dead vertical and then hold steady for 1 second. ***Use a pole or other vertical reference where possible.***

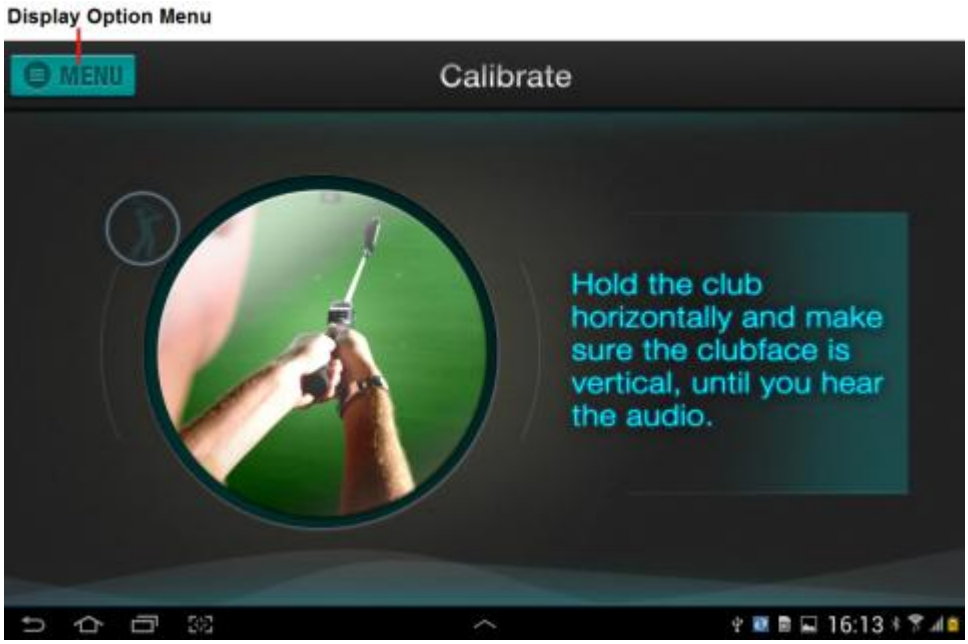

Figure 143 - Calibrate Club

The key buttons on this panel are as follows:

- Tap the ‘MENU’ button to open the options menu (described below).

3.18.1 Calibrate Panel - Challenge Mode Menu

Tapping on the 'MENU' button while in Challenge mode, brings up the option menu on the left of the panel as shown below.

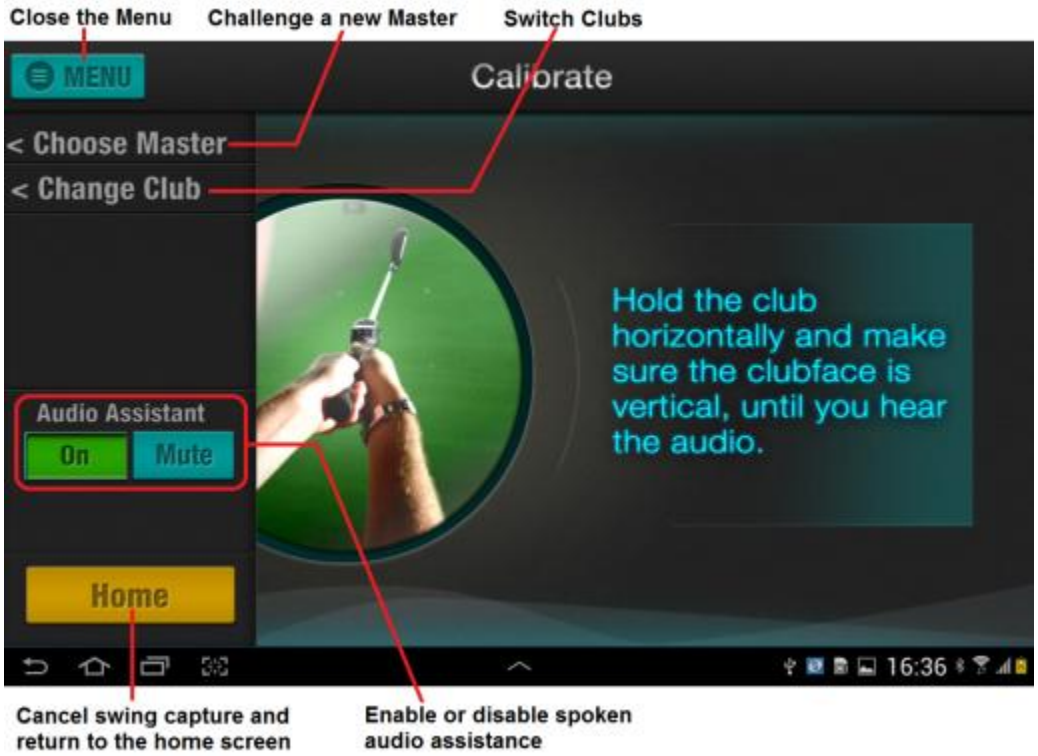

Figure 144 - Calibrate Menu - Challenge Mode

The key buttons on this panel are as follows:

- Tap the 'MENU' button to close the menu and continue
- Tap the 'Home' button to cancel the calibration procedure and return to the Home Screen.
- Tap on 'Choose Master' to cancel the calibration procedure and open the 'Choose Master' panel.
- Tap on 'Change Club' to cancel the calibration procedure and open the 'Choose Club' panel
- Tap the 'On' or 'Mute' buttons to turn spoken audio assistance on or off.

3.18.2 Calibrate Panel - Expert Mode Menu

Tapping on the 'MENU' button while in Expert mode, brings up the option menu shown below.

Figure 145 - Calibrate Menu - Expert Mode

The key buttons on this panel are as follows:

- Tap the 'MENU' button to close the menu and continue
- Tap the 'Home' button to cancel the calibration procedure and return to the Home Screen.
- Tap on 'Change Club' to cancel the calibration procedure and open the 'Choose Club' panel
- Tap the 'On' or 'Mute' buttons to turn spoken audio assistance on or off.

3.19 Address Panel

After the calibration step, you are asked to get into the address position. This process provides the iTrainerMini with a target line reference based on the direction in which the club face is aiming.

The following events occur during address:

- iTrainerMini flashes one indicator green, until it detects address
- The screenshot below is displayed by the application
- When address is detected, the lights turn solid green and an audible beep is played by the application.

The procedure is automatic, just set the club-head to the rear of the ball, with the face of the club aiming along the target line and hold steady for 2 second. ***For greater accuracy, place masking tape or a chalk line on the ground for alignment.***

Notes:

1) While one indicator is blinking green, you can waggle the club as much as you want, even take practice swings.
2) Before you start your real swing, set the club head behind the ball, making sure the face is square to the target line. Hold steady until you see two solid green lights on the iTrainerMini (or hear the audio beep). Now take a swing.

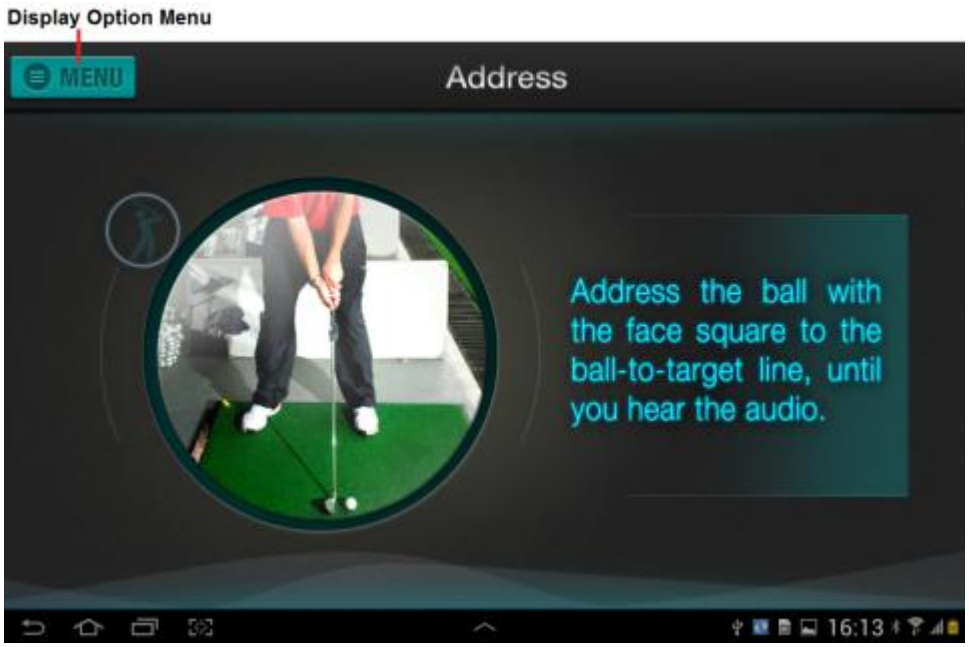

Figure 146 - Address Panel

The key buttons on this panel are as follows:

- Tap the ‘MENU’ button to close the menu and continue

3.19.1 Address Panel Menu - Challenge Mode

Tapping the 'MENU' button on the Address screen when in Challenge mode, displays the option menu shown below.

Figure 147 - Address Panel Menu - Challenge Mode

The key buttons on this panel are as follows:

- Tap the 'MENU' button to close the menu and continue
- Tap the 'Home' button to cancel the address procedure and return to the Home Screen.
- Tap on 'Choose Master' to cancel the address procedure and open the 'Choose Master' panel.
- Tap on 'Change Club' to cancel the address procedure and open the 'Choose Club' panel
- Tap on 'Calibrate' to cancel the address procedure and open the 'Calibrate Club' panel.
- Tap the 'On' or 'Mute' buttons to turn spoken audio assistance on or off.

3.19.2 Address Panel Menu - Expert Mode

Tapping on the 'MENU' button while in Expert Capture mode, brings up the option menu on the left of the panel as shown below.

Figure 148 - Address Panel Menu – Expert Mode

The key buttons on this panel are as follows:

- Tap the 'MENU' button to close the menu and continue
- Tap the 'Home' button to cancel the address procedure and return to the Home Screen.
- Tap on 'Change Club' to cancel the address procedure and open the 'Choose Club' panel
- Tap the 'On' or 'Mute' buttons to turn spoken audio assistance on or off.

3.20 Swing Capture

The iTrainerGolf application has two swing capture modes, Challenge and Expert. These can be accessed from the Home Screen as shown below.

Challenge Mode	Golfer selects a golf professional they wish to compare themselves with, or a swing that was saved as their personal best.
Expert Mode	The golfer captures swings and can view the results in dashboard or 3D formats.

Figure 149 - Accessing Swing Capture

The key buttons on this panel are as follows:

- Tap ‘CHALLENGE MODE’ to capture swings in Challenge Mode
- Tap ‘EXPERT MODE’ to capture swings in Expert Mode

Note The ‘CHALLENGE MODE’ and ‘EXPERT MODE’ icons are only active if the ‘Bluetooth Connected’ is displayed in the lower left corner of the screen.

3.20.1 Challenge Mode

Tapping on ‘CHALLENGE MODE’ on the Home Screen, brings up the selection panel for Masters and Best swings.

Figure 150 - Challenge Mode Panel

The key buttons on this panel are as follows:

- Tap the ‘MENU’ button to open the side menu and gain access to the Home button.
- Tap on ‘MASTERS’ to display a choice of Masters
- Tap on ‘BEST SWINGS’ to display a choice of Best Swings
- Tap on the image to select you’re the Master or Best Swing
- Tap, hold and swipe the image left and right to select from multiple masters or best swings (where available)

3.20.2 Challenge a Master

Tapping on the centre image when 'MASTERS' is selected, selects that master for you to challenge.

After you tap on the image of the Master you wish to challenge, you are taken through the Swing Capture process. This involves selecting a club and then capturing a swing. This process is the same for Expert Mode and covered in ***section 2.5 - Capturing your First Swing***.

3.20.3 Challenge Best Swing

Tapping on the centre image when 'BEST SWINGS' is selected, selects that person's best swings for you to challenge. The swing you challenge will be based on your choice of club; if there is no best swing for that club, it will not appear in the club selection screen.

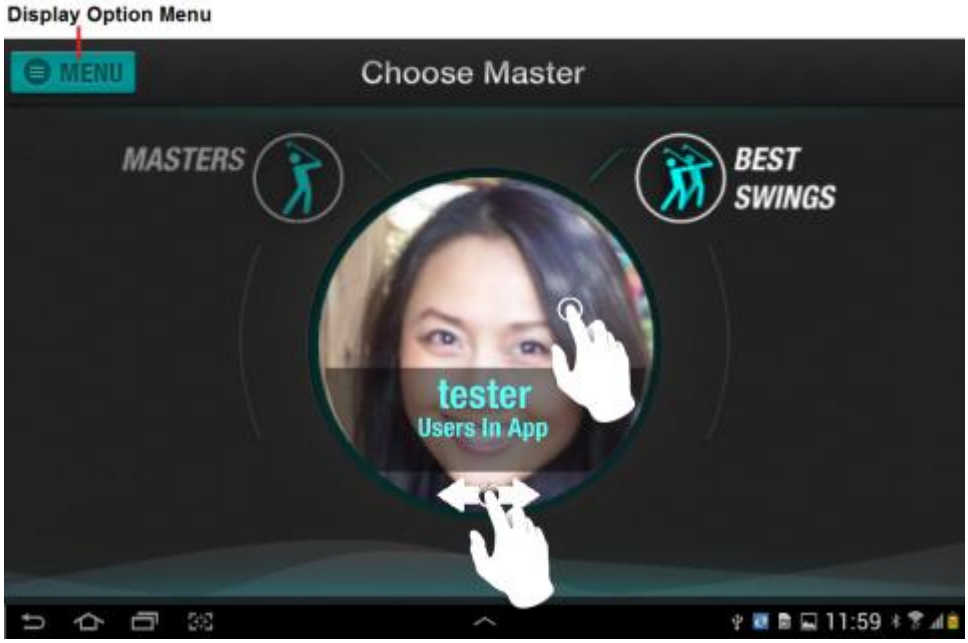

Figure 151 - Challenge Mode - Best Swing Panel

The key buttons on this panel are as follows:

- Tap the 'MENU' button to open the side menu and gain access to the Home button. Tap again to close the menu.
- Tap on 'MASTERS' to switch to Master swings
- Tap on the image to select the user's swings you wish to challenge
- Tap, hold and swipe the image left and right to select from multiple best swings (where available)

After you tap on the image of the golfer's with the best swing you wish to challenge, you are taken through the Swing Capture process, which involves selecting a club and then capturing a swing. This process is the same for Challenge Mode and Expert Mode and covered in section 2.5

3.20.4 Expert Mode

Tapping on 'EXPERT MODE' on the Home Screen, takes you through the Swing Capture process. This involves selecting a club and then capturing a swing. The swing capture process is the same for Challenge Mode and Expert Mode from club selection onwards. ***Refer to section 2.5 for more details.***

3.21 Capture Another Swing

After capturing a swing, review the results on the dashboard or 3D replay panels and then tap the Swing Again to capture another swing. This can be distracting if your phone or tablet is not within reach, so the application has an automatic mode that you can turn on to enable continuous swing capture.

3.21.1 Manual Mode

In manual mode, the 'Swing Again' button is displayed at the top of the 3D and Dashboard panels when capturing swings. Tap this button to start another swing capture using the same club.

Figure 152 - Manual Mode - Dashboard Panel

The key buttons on this panel are as follows:

- Tap the 'MENU' button to open the options menu.
- Tap on 'Swing Again' to start another swing capture
- Tap on '3D Mode' to change to the Swing Path view
- Tap on 'HISTORY' to open the Swing History panel

Figure 153 - Manual Mode - 3D Replay Panel

The key buttons on this panel are as follows:

- Tap the ‘MENU’ button to open the options menu.
- Tap on ‘Swing Again’ to start another swing capture
- Tap on ‘Dashboard to change to the Dashboard view
- Other buttons and features are described in section 3.9

3.21.2 Continuous Mode

To switch to continuous capture mode, capture a swing and when the Dashboard or 3D replay panel are displayed, tap on the 'MENU' button to bring up a list of options as shown below.

Figure 154 - Change Capture Mode

The key buttons on this panel are as follows:

- Tap the 'MENU' button to close the options menu.
- Tap on 'Swing Again' to start another swing capture
- Tap on '3D Mode' to change to the Swing Path view
- Tap on 'HISTORY' to open the Swing History panel
- Tap 'Change Club' to switch clubs and start another swing capture
- Tap 'Calibration' to recalibrate the sensor
- Tap '3D Mode' or 'Dashboard' button to switch the default view when capturing swings or accessing swing history.
- Tap the 'On' or 'Mute' button to control the spoken audio dialog.
- Tap the 'Home' button to return to the Home Screen.

3.22 Swing Capture - With Video

The application includes a video capture feature that works in both Challenge and Expert mode. To start using the Video Capture feature, slide the Video switch on the Home Screen to the 'On' position as shown below

Figure 155 - Enabling Video Capture

When the switch is moved to the 'On' position, a setup panel is displayed as shown below.

Figure 156 - Video Setup Panel

The key buttons on this panel are as follows:

- Tap the Camera icon to switch to the front camera and vice-versa.
- Tap the OK icon to accept the settings and return to the Home Screen

Align the camera so that the golfer's head is within the upper circle and the ball within the lower circle. This ensures that most of the golf swing is visible in the camera frame.

Note If you change the camera orientation, go back and repeat the camera setup from the Home Screen.

Refer to sections 2.5 for a quick guide to swing capture, or section 3.20 for a more detailed guide on capturing swings in Expert Mode or Challenge Mode.

4 Accuracy

The iTrainerMini in combination with the iTrainerGolf application provide the most accurate on-shaft golf swing analysis solution available in the market today.

The iTrainerMini is highly accurate when correctly setup and in combination with the software that was developed with the help of the University of Michigan, we are able to achieve extremely good results.

In order to get the most out of the iTrainerGolf system, you must setup and calibrate your equipment correctly. Every aspect of the club and sensor mounting comes into play when determining the launch conditions at the club face.

4.1 Sensor Mounting

The iTrainerMini must be mounted just below the grip on the golf club. Ideally, the arms of the clamp should be touching the grip as shown here.

Figure 157 - Sensor Mounting

If the sensor is not mounted near the grip, the calculations relating to the sensor location with respect to the club face will be wrong, resulting in incorrect club head speeds being reported.

If you mount the sensor either side of the shaft, instead of on top; that is ok, but the club head speed will be slightly off.

4.2 Club Specifications

The iTrainerGolf app relies on the club specifications combined with data received from the iTrainerMini sensor to reconstruct the position of the club face throughout the swing.

The default specifications are set for Callaway X10 Men's steel shafts. Other manufacturers clubs will differ markedly, so check carefully.

We advise all iTrainerMini customers to have their equipment properly fitted. If not, the golfer may be correcting for poorly fitted equipment. The iTrainerMini will therefore base all calculations from incorrect start data and the results will be skewed.

The key parameters and their effect on the results are as follows:

Shaft Length	Impacts the club-head speed and therefore ball speed. If incorrect, Carry Distance and Deviation are affected and to a lesser degree, face angles and path.
Loft Angle	Impacts the vertical launch angle, spin rates, ball speed, and face to path. If incorrect, Carry Distance and Deviation are affected
Shaft Flex	Impacts the club face compensation at impact as a result of head droop. If this is too low, the club face at impact will be more closed and vice versa. Fitted equipment is designed to sole the club head at the point of impact.
Head Mass	Impacts the ball speed calculation, but not by a large amount. 10 grams either way will not make a noticeable difference to the results.
Shaft Lie	Impacts the initial target line calculation as well as the face angle at impact. At address, the combination of lie angle and loft affects where the face is aiming. If the lie is not correctly specified, the face angle will be incorrectly compensated at address, thereby impacting the target line and at impact affecting the face to target angle.

4.3 Calibration

The calibration process is used by the iTrainerMini to determine the degree to which it is misaligned on the shaft with respect to the club face.

When you snap the clamp onto the shaft, the grip material prevents it from twisting, so it is important to align the clamp as near as possible to ideal before pushing firmly into place.

If the clamp is twisted left or right by 15 degrees or less, the system can compensate for this, providing you line the club face to a vertical target during calibration.

During calibration, you are asked to raise the club to a horizontal position, set the club face vertical and hold steady. The grooves on the club face are a good vertical marker; use them to line up with a vertical reference nearby.

For example, the image below shows how to line up against a pole at a nearby driving range.

Figure 158 - Club Face Vertical Alignment

The more accurately this procedure is carried out, the more accurate the Path to Impact results will be.

4.4 Setup Position

Setup position is an important aspect of the golf swing. This tells the iTrainerMini where you are aiming and the iTrainerMini will use this as the inferred target line.

Make sure you setup with the club face square to the intended target line, before you adjust your lie angles to account for anticipated head droop.

If you setup with a closed or open club face, the system will use an incorrect target line reference and your path results will be incorrectly reported. Some golfers may correct for a swing flaw by setting up with an open or closed clubface; this distorts the results.

You can waggle, take practice swings as much as you want while one green indicator is flashing on the front of the iTrainerMini. When you are ready to start your swing or putting stroke, hold the club steady to the rear of the ball and wait for both indicators to turn green. You can also wait for an audio beep from the application.

Once the signal to swing is given, do not waggle or make adjustments; just swing.

Figure 159 - Address Position

4.5 How Accurate is the iTrainerMini

One of the most common questions relates to the accuracy of the system. This is a tough question to answer, because there is no definitive standard to gauge our system against.

Trackman is the de facto standard at present and so our testing was carried out under controlled conditions using a Japanese Robot and the Trackman radar. New Pro V1 balls were used during testing.

Averaging the results across Irons and Drivers, we found the following:

- Club head speed values are within +/- 2mph of Trackman.
- Launch Angles are within+/- 2deg of Trackman.
- Carry Distance is within +/- 5 yards for all clubs except Drivers, which vary between +/- 8 yards
- Face at Impact is within +/- 1 deg in most cases
- Path at Impact is within +/- 1 deg in most cases, but occasionally, Trackman reports results that don't match the ball flight.
- Trackman reports Swing Direction and Club Path; we do not report swing direction, but it is noticeable from the 3D Swing Path screen.

The iTrainerMini cannot detect the quality of the strike and assumes centre face contact. If the shot is thinned, shanked, or the ground is struck before the ball, the results will not be accurate.

5 Troubleshooting

This section provides answers to common questions raised by customers over the years. Hopefully, you won't need to refer to this section, but if you do, please read it carefully before picking up the phone or emailing us with a problem; we've pretty much seen them all.

5.1 iTrainerMini

This section addresses common questions relating to the iTrainerMini device

5.1.1 Device won't switch on

If the device won't switch on when you press the power switch for ½ second, check the following:

- Locate the supplied USB cable and connect to a USB charger.
- If the battery is flat, the status indicator at the back will start blinking a yellowish colour; press and hold the power button while connected to the USB charger to turn the unit off.
- If the status indicator is glowing red; leave the unit to charge for around 30 minutes and check that the charge indicator turns off.
- Disconnect the USB charge cable and trying turning the device on.
- If it still fails to turn on, contact support@itrainergolf.com

5.1.2 Device not charging

If you tried to charge the device, but the status indicator at the rear does not glow red, or only turns on briefly, check the following:

- Locate the supplied USB cable and connect to a USB charger.
- If the battery is flat, the status indicator at the back will start blinking a yellowish colour; press and hold the power button while connected to the USB charger to turn it off.
- If the status indicator is not glowing red, you have a faulty battery; contact support@itrainergolf.com

5.1.3 Status light flashing green

When you turn the device on, the status indicator at the rear is flashing green, indicating that the device has entered Boot-Loader mode. Check the following:

- Check that the iTrainerMini is not plugged into a USB power source when you switch it on. If not plugged into a USB source, your device has lost its firmware and you need to reload it. Follow the steps in the iTrainerMini update guide located under the Updates->iTrainerMini section of our website www.insight-sports.com

5.1.4 Status light cycling through colours

When you turn the device on, the status indicator at the rear appears to be cycling through a range of colours. This indicates there is a hardware problem with the Memory Card. Check the following:

- Power off the iTrainerMini
- Carefully remove the MicroSD card from the front of the device. Be careful how you grip it as it chips easily
- Clean the gold contacts on the MicroSD card with mild soapy water and then dry thoroughly
- Insert the MicroSD card back in the iTrainerMini with the gold contacts facing down
- Switch on the iTrainerMini and check if the status light has stopped cycling. If not, contact support@itrainergolf.com

5.1.5 Windows is Requesting a Device Driver

When you turn the iTrainerMini on and connect it to a PC for the first time, Windows will try to install device drivers for the iTrainerMini and will fail to locate the COM port driver. To resolve this, do the following:

- Ignore the first Windows request to locate the COM port drivers and let Windows finish installing the Mass Storage driver.
- Once the mass storage driver is installed, another disk drive should appear on your PC called ITRAINER.
- Unplug the iTrainerMini from the PC and wait a few seconds, then plug it back in.
- When Windows asks for the COM port device driver, perform a manual installation and instruct Windows to search the SETUP folder on the newly created ITRAINER drive
- If the driver fails to install, contact support@itrainergolf.com

5.1.6 Firmware Update Fails

If while performing a firmware update on the iTrainerMini, the update fails or locks up, your device may have an old boot-loader that is incompatible with the USB port on he PC you are connected to.

- You need to reboot the PC as the USB port will have locked up
- Try using a different PC or laptop for the iTrainerMini firmware update.
- If you are still unable to update the firmware, contact support@itrainergolf.com

5.2 Bluetooth Issues

This section covers common Bluetooth related problems.

5.2.1 Unable to find my iTrainerMini - Android

You scan for your iTrainerMini from the iTrainerGolf application and it does not show up in the list, check the following:

- The iTrainerMini is switched on and the indicator at the back is blinking slowly green or white. If not, switch the iTrainerMini on and try again.
- If you are still unable to find the iTrainerMini from within the iTrainerGolf application, open the settings panel on the Android device and check that Bluetooth is enabled. Now tap the Scan button to see if your device shows up in the list.
- If you are still unable to locate your device, it most likely has a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com

5.2.2 Unable to find my iTrainerMini - Apple

You open the Bluetooth settings panel on your iPhone or iPad and the iTrainerMini does not show up in the list, check the following:

- The iTrainerMini is switched on and the indicator at the back is blinking slowly green or white. If not, switch the iTrainerMini on and try again.
- Check that the Bluetooth switch is in the ON position; if so, try rebooting your iPhone or iPad as we have seen Bluetooth lockup problems in the past.
- If you are still unable to locate your device, it most likely has a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com

5.2.3 Bluetooth Pairing Fails - Apple

You try to pair your iTrainerMini with an iPhone or iPad and the device does not show ‘Connected’, check the following:

- If the device shows as ‘Not Connected’, try tapping on the iTrainerMini name entry in the Bluetooth panel and see if it changes to Connected and then quickly goes back to ‘Not Connected’. If so, there is a problem with the MFI hardware and you need to contact support@itrainergolf.com to arrange for a replacement.

5.2.4 Bluetooth Pairing Fails - Android

You try to pair your iTrainerMini with an Android device and it fails, check the following:

- Open the settings panel on the Android device and check that Bluetooth is enabled. If your device does not appear in the list, tap the Scan button and after a few seconds check again
- If your iTrainerMini is in the list, tap on it to try pairing again. If this fails, your device most likely has a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com

- If pairing is successful, go back to the iTrainerGolf application and try opening a Bluetooth connection with the iTrainerMini.
- If you are unable to connect, your device most likely has a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com

5.2.5 Bluetooth Disconnects

The application loses the Bluetooth connection and displays a 'Bluetooth Disconnected' message at the bottom of the Home Screen. This could be power or hardware related, check the following:

- Check that your iTrainerMini device is still switched on
- Check that your iTrainerMini is not more than 10 metres away from the Android or Apple device you are communicating with.
- Check whether the status indicator light on the iTrainerMini is flashing Blue or White. If it is Blue, then the Bluetooth connection is open, but the iTrainerMini is not communicating with the application. Try switching the iTrainerMini off and back, then reconnecting. If the Bluetooth connection drops out again, your iTrainerMini most likely has a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com
- If the indicator is flashing White, it could be that the battery level is too low to support the Bluetooth connection and it was closed by the iTrainerMini. Check the battery level displayed on the Home Screen in the upper right corner. If it is showing one or less red bars, try recharging the iTrainerMini.
- If after fully charging the iTrainerMini, your are still losing the Bluetooth connection, your iTrainerMini most likely has a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com
- If Bluetooth disconnects after a swing, your device most likely has a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com

5.3 Timeout Errors

If you are receiving Timeout Errors, whether capturing a swing, or just preparing to capture a swing, check the following:

- If you receive a "Timeout Error" or the application hangs at the "Swing Now" screen, it is likely that iTrainerMini was busy and failed to respond to the application in time. We are aware of a problem with the very first swing customers make when they receive their device, but after that, things are normal. Just tap the Menu->Home and capture a swing again; this time it should be ok.
- If you receive a "Timeout Error" when selecting a club, it could be that the messages have become out of synch. Try restarting your Apple or Android device as well as the iTrainerMini. If the problem persists, it most likely a Bluetooth hardware fault and the iTrainerMini needs replacing; contact support@itrainergolf.com

- If you receive a “Timeout Error” when the swing is uploading; wait one minute to see the upload completes. If so, there is nothing to worry about; minor Bluetooth communications hiccups occur; however, if the problem persists, your iTrainerMini may have developed a Bluetooth hardware fault and needs replacing; contact support@itrainergolf.com

5.4 Partial Swing Upload

During the swing upload, if the counter and progress bar stop moving, don’t worry, just wait (~60 seconds) and the upload should resume.

This is a known problem with iPad Air devices and appears to be related to the Bluetooth communications. We have not experienced this issue on other iPad or iPhone devices, but if you do, please email us at support@itrainergolf.com and let us know.

5.5 Error Message Audio

If you are making a swing and hear an “Error” message from the application which in most cases is nothing to worry about and you can continue to swing again. If the problem persists, check the following:

- If you waggle the club after being given the OK to swing, the iTrainerMini may detect an invalid swing and notify the application which plays the error message and returns to waiting for a valid swing. Make sure you don’t waggle the club after getting the OK to swing cues.
- If your rear-swing or target-swing is too long, 2 seconds & 1 second respectively, the iTrainerMini will report a swing error. Make sure you are making normal swings and not deliberately stopping during your rear-swing.
- If you are sure you are swinging the club properly, then perhaps it is something else relating to your swing mechanics that is confusing the iTrainerMini. In this case, we ask that you send us a few of your swings to analyse (***refer to section 5.8.2 for details***)

5.6 Weird Results

If you are seeing odd results on the Dashboard panel, it is most likely due to your swing action, but there are occasions where a hardware failure is to blame. To find out the cause, check the following:

- Try capturing a short, straight Putt and check whether the Face and Path results are sensible. The path should be within +/- 5 degrees and the face should be within +/- 2 degrees.
- If the putting results are way off, then your device is either incorrectly calibrated or there is a hardware fault. Check that your followed the calibration procedure correctly (***refer to section 4.3 for help***).
- If the calibration procedure was ok, then your device most likely has a sensor problem and needs replacing; contact support@itrainergolf.com
- If the results from the putt were ok, check that your pre-swing routine is not the cause of the problem (***refer to section 4.4 for help***).

5.7 Video Capture

There are three known problems with the Video Capture function:

- Sometimes turning Video On does not bring up the Setup panel. This is a known problem and easily resolved by turning the video off and back on again.
- If you zoom into full screen when viewing a swing with video attached, the display will continue to show the zoomed in video and you cannot get out. You need to stop and restart the application to solve this issue.
- If you capture a swing with video and during replay, notice that the video does not seem to move, or is out of synch, this is a known problem. If you deliberate too long before taking your rear-swing, you are more likely to experience this problem; try to swing within 1 second of seeing the two green indicators and hearing the audio beep to swing.

5.8 Contacting Support

For any issues relating to the iTrainer or the software modules, please send an email to support@itrainergolf.com. We guarantee a response within 24 hours.

5.8.1 Reporting Mechanical Problems

For mechanical problems, please try to ***include a photo*** of the problem along with a description of the events leading up to the problem. Ideally, a screen-gab of from the Android device would be best.

5.8.2 Reporting Swing Problems

For operational problems, please attach ***captured swing files*** along with a description of the problem.

To email us your swing files, follow these steps:

- Turn the iTrainerPro on and then plug into a PC.
- Ignore any messages about installing a serial driver (press the Escape key). If this is the first time, windows will install a Mass Storage driver and once completed, the iTrainerMini will appear as a new “disk drive” on the PC called **iTrainer**.
- Open Windows Explorer ad navigate to the CAPTURE\USER_A folder on the **iTrainer** drive
- Locate the folder with the date stamp that matches when the swings were captured; for example, CAPTURE\USER_A\ 20140427 would represent the 27th April 2014.
- All swing files are time stamped in accordance with the time on the iTrainerGolf application. The naming convention is HHMMSS.CAP
- Now email the individual files for a given date, or zip them all into a single file and email that to us.

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