



Tennis Swing Analyser - how can it help me?

Tennis Swing Analyser can't magically turn you into a better tennis player. Sorry about that. However here are some ideas on how to use the app to give you pointers about your game that might be helpful.

1. Measure your service swing speed

This is something that you can do by yourself. You might want to work on your service action to get a first serve like the pros. Go onto the court with a basket of balls and start practising your serve. You probably want to improve your accuracy and speed. The app can't help you with accuracy, that's for you to observe. But to measure your service swing speed, set the watch to analyse mode by tapping the Analyse button. Now check the watch after each serve you hit to see the swing time and swing speed. You might want to set yourself a target to increase your average service swing speed by (say) 10% and use this app to monitor the results. *Note: The swing speed of your racket head is estimated from the movements of your wrist, so there will be some margin of error. Swing speed is different from, although highly correlated with, the ball speed as it leaves your racket. The ball speed depends on factors such as your racket characteristics, your string tension and the ball type. In general, ball speed will be somewhat higher than swing speed.*

2. Check individual swing times and swing speeds

Working with your practice partner or your coach, you can check the swing times and swing speeds as you hit each shot. Put the watch into analyse mode and hit each shot in turn. The results will be displayed on the watch and also sent in real-time to the phone app so that your partner/coach can see the details. Enable rotation and elevation data in Display options on the phone to see more information in analyse mode.

3. Compare your individual shot swing speeds to targets that you set

Start a practice session on your watch by tapping the Practice button and, when you are done, press the Finish button (short-tap then long-tap). This practice session can then be a baseline from which you can monitor your progress. In the phone app, go to the menu and select 'Set targets' and tap the Auto button. The app will auto-populate targets as the median swing speeds for each shot type. You can adjust the targets as

you see fit. Now for future practice sessions, you'll be able to see how many shots of each type were above or below the targets you specified.

4. Analyse your shot selections after your match or practice session

You might have an objective such as "I want to get my forehand into play more frequently" or "I want to hit more topspin backhands and fewer slice backhands". The app can help you by giving the total number of shots of each type that you played, along with many graphs to help you visualise the data.

5. Compare your shots between two sessions, or to those of your partner or coach

The Compare menu option allows you to compare shots between two different sessions. You might want to monitor changes in your shots over time, or compare your shots to those of another person, perhaps a partner or coach. The app allows up to five profiles to be set at any time, where each profile is typically for a different person. Each practice session is identified by the date, time, profile and practice type. You can compare average shot speeds, wrist rotation speed, arm rotation speed and wrist elevation speed between sessions.

6. Analyse wrist rotation speed, arm rotation speed and wrist elevation speed

The gyroscopes in your watch measure the speed of rotation in three dimensions: X, Y and Z. The X dimension approximates to wrist rotation speed, the Y dimension approximates to arm rotation speed and the Z dimension approximates to wrist elevation speed. The app will give you gyro readings for each shot type so that you can visualise your wrist orientation and movement as you strike the ball. For more information, see [here](#).

7. Use Analyse with video to view your strokes with swing analysis overlaid

Use the phone app's in-built video capture feature to start a recording and put your watch into analyse mode. When you play back the video, you'll see the swing analysis overlaid into the video as you play each stroke.

Malcolm Bryant

malcolm@freepoc.org

Last updated: 13 September 2022

