

***KITRIS***

**KITRIS KIT**  
**USER MANUAL**  
**V4.0**



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## SAFETY REGULATIONS AND WARNINGS

Carefully read the following safety regulations, warnings, and the user manual before operating the KITRIS KIT to ensure safe and appropriate use.



Please observe the following safety information:

- If you have any problems using the KIT, please contact the KITRIS customer service. ([service@kitris.ch](mailto:service@kitris.ch))
- Do not open the housing of the KIT.
- Make sure the KIT is **NOT** exposed to water, or extremely high temperatures (inter alia fire).
- The KIT is equipped with a Li-Pol battery that can present a risk of fire or explosion if used incorrectly.
- Make sure the USB port does NOT get in touch with conductive material, such as metal or liquids.
- Only connect the USB port of the KIT to USB devices that are CE certified (including cables).

The symbol on the KIT indicates that the device and its electronic accessories, e.g. USB cables, must not be disposed of together with regular household waste.



## INTRODUCION

The KITRIS KIT has been developed as a tennis-specific data tracker. It enables you to collect important data on your performance behaviour when playing in competitions, training matches and training sessions. An analysis of the data enables both you and your coaches to train in a more effective and goal-oriented way.

As the recording of matches can be made either by the player himself by means of a Player KIT or by an external third party by means of a Coach KIT, we will distinguish between a Player KIT and a Coach KIT in the present user manual.

There are 3 different modes for recording match data:

1. **'Self-Scoring'** mode (only Player KIT): Comprehensive autonomous recording of all data by the player himself by means of the Player KIT.
2. **'Coach-Scoring'** mode (Player KIT and Coach KIT): Input of results performed by an external third party by means of the Coach KIT, strike data is gathered by the player himself by means of the Player KIT.
3. **'Match-Tracking'** mode (only Coach KIT): Both strike data and results are entered by an external third party by means of the Coach KIT.

While the system calculates comprehensive statistic values independently by using sensor data, mathematic algorithms and logics, evaluation of points won and points lost can only be made by the players themselves or by an external third party by passing information on to the KIT. As a result, correct point input in a match (according to official ITF tennis regulations) after completed rallies is an essential part of the KITRIS Tennis analysis and training system. The topic is therefore dealt with in appropriate depth in the present user manual.

After terminating a match or a training session, you can upload data from the KIT to the KITRIS Server for analysis and statistic evaluation. Via the KITRIS Webclient, you will gain access to all match and training sessions. This enables you to analyse and compare the sessions retrospectively.



Video Tutorials are provided on all important aspects of dealing with the KITRIS Tennis analysis and training system. You will find the Video Tutorials on [www.kitris-help.com](http://www.kitris-help.com).



The present user manual is related to the following KIT hardware and software versions:

Product number: KITBIA7303

Software version: OTP v8 / Firmware v25

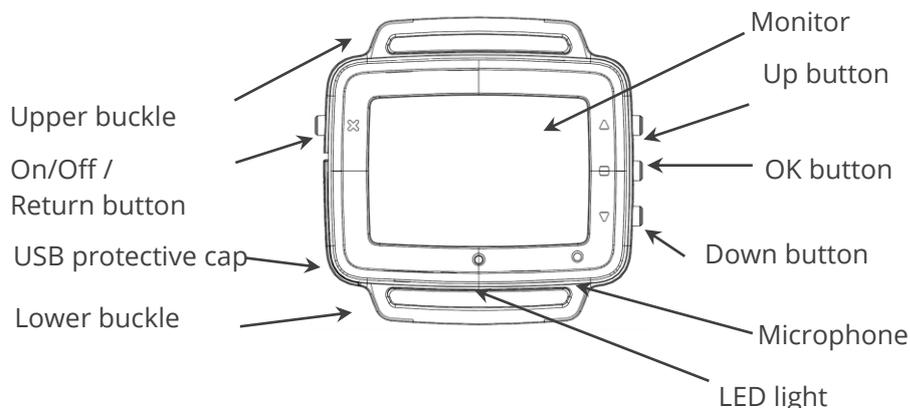
You will find the product number engraved on the back of the KIT.

You will find the firmware version in the 'Info' menu item on the KIT.

If you have any other hardware or firmware version, please contact the KITRIS customer service ([service@kitris.ch](mailto:service@kitris.ch)).



## PRODUCT OVERVIEW



## PRODUCT CARE

In the case of soiling or influence of moisture (e.g. sweat), clean the KIT with a clean and dry cloth.

If required, wash the KIT strap in the washing machine at 40°C using a mild detergent (no bleaching agent). Do not use a dryer or an iron.



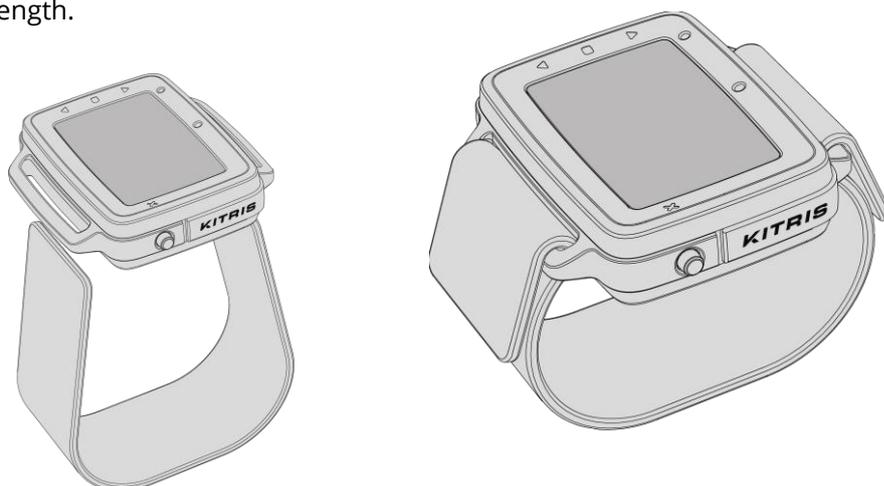
## OPERATING INSTRUCTIONS

### HOW TO FASTEN, UNDO AND ADJUST THE STRAP

To ensure good data quality, wear the Player KIT on your striking arm only.

The KIT strap consists of an elastic textile material with a Velcro enabling you to easily fasten, undo and adjust the strap.

To fasten the strap to the KIT, lead the end of the strap through one of the buckles from below paying attention that the hooks of the Velcro are pointing away from the KIT. Next, fasten the hooks of Velcro on the inner side of the strap. Repeat this process by fastening the other end of the strap to the second buckle. As soon as the strap is correctly fastened to the KIT, you can adjust it in a simple way by removing the Velcro from the inner side of the strap and fastening it again after completing adjustment of the length.



## **GENERAL SETTINGS (PLAYER KIT/COACH KIT)**

### **SLEEP MODE**

If the KIT is not used for a certain length of time (10 seconds), the device turns to sleep mode and subsequently switches off the display to reduce battery consumption. If no further activities are recorded for some minutes, the KIT automatically switches off completely.

If the KIT is in its sleep mode or is switched off completely, you can reactivate it by pressing the On/Off button ('X'). The KIT then starts in its lock mode indicating the current time and date on the display.

### **LOCK MODE**

The lock symbol is located in the top right corner of the display beside the battery symbol. You can unlock the KIT by keeping the OK button pressed for at least 2 seconds. If you have reactivated the KIT but not unlocked it within 10 seconds, the KIT automatically turns back to sleep mode. If you have reactivated and unlocked the KIT, the previously selected mode is displayed on the monitor.

In the match mode, you can also reactivate the KIT from its sleep mode by a motion-controlled point input (only Player KIT) or by pressing any button.



## CLOCK MODE

If the KIT is in its standard mode, time and date are displayed on the monitor.



The battery symbol in the top right corner of the display indicates the current battery status in a graph. If you have locked your KIT, the relevant lock symbol is also displayed.

If you press the On/Off button ('X') in the clock mode, the KIT turns to sleep mode (the monitor switches off).

All settings for time and date can be made in the main menu under the '**Setup**' menu item (more precise information on '**Date and Time**' can be found in the relevant section of the present user manual).

**MENU AND NAVIGATION**

If the KIT is in its unlocked clock mode, you will get to the main menu by using the OK, Up or Down button.



The main menu consists of several menu items. These contain several menu sub-items.

The selected menu item is highlighted by an inverted display of text and background. You can navigate within the menu by using the Up/Down buttons. By pressing the OK button, you can select the relevant menu item. Pressing the On/Off button ('X') will always get you back to the previous menu item (The only exception being the clock mode. Here, the KIT turns to sleep mode or lock mode).

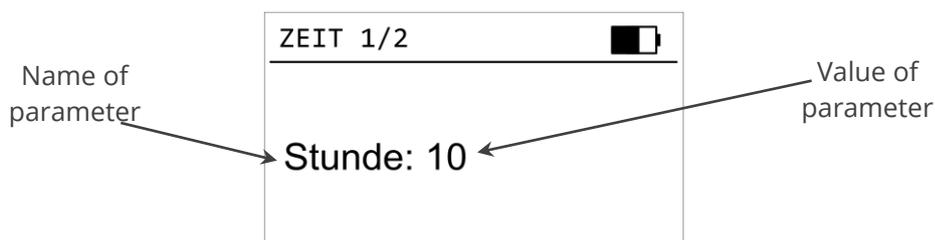
**RESETTING THE KIT**

If you keep the On/Off button ('X') pressed for at least 7 seconds, you can manually reset your KIT in any mode at any time. Bear in mind that running matches or training sessions will automatically be terminated, yet not deleted, during the resetting process.

## SETTINGS MAIN MENU (PLAYER KIT/COACH KIT)

You can adjust different parameters in the **'Setup'** menu item in the main menu of your KIT. This applies both for the Player KIT and for the Coach KIT.

If you want to adjust a numerical parameter (e.g. date, time, vibration intensity, screen contrast), the name and value of the parameter will always appear on the display.



You can adjust the value of the parameter by using the Up or Down button. Pressing the OK button will save the alteration. If you press the return button ('X') during parameter setting, the new values will not be saved and you will get back to settings.

## POINT INPUT

In the settings of the main menu under menu item '**Point Input**', you can select the type of point input following completed rallies in a match. In the Player KIT, you can select from the following 3 possibilities: point input by button pressing and motion control ('**Button + Motion**'), point input by button pressing only ('**Button**') and point input only by means of motion control ('**Motion**'). In the Coach KIT, point input can only be made by button pressing.

In addition, you can also activate a function for additional point information both in the Player KIT and in the Coach KIT. Entering additional point information serves the purpose of describing the outcome of a rally in more detail, thus resulting in improved data analysis and match statistics on the KITRIS Server (more precise information on '**Point input and additional point information**' can be found in the relevant section of the present user manual).

## CONTRAST

You can adjust the contrast intensity of the monitor in the settings of the main menu under the '**Contrast**' menu item. The contrast intensity ranges from value 1 (minimum contrast) and value 10 (maximum contrast).

If you adjust this value, the contrast adjusts itself to the actually selected value. Confirm the desired contrast intensity by pressing the OK button. If you leave the settings by pressing the return button ('X'), the previously stored contrast intensity will automatically be set.

Bear in mind that a higher contrast intensity results in increased battery consumption and thus in a reduced life time of your KIT.



## **VIBRATION**

Point input can be confirmed, inter alia, by a vibration feedback. You can set the intensity of the vibration feedback in the settings of the main menu under '**Vibration**'. The intensity scale ranks between value 0 (no vibration) and value 10 (maximum vibration). If you adjust this value, a short vibration of the selected value will follow thereafter. Confirm the desired intensity level by pressing the OK button. If you leave the settings by pressing the return button ('X'), the previously stored intensity value will automatically be set.

## **ROTATE SCREEN**

If you like, you can turn the screen by 180°, for example to be able to adjust button operation. To do so, select '**Rotate Screen**' in the settings of the main menu and rotate the display on the monitor by 180° (thus, the functionality of the Up/Down buttons is also interchanged).

**IMPORTANT NOTE:**      **If these parameters are set incorrectly, the collected sensor data cannot be analysed correctly.**

## **LED LIGHT**

Point inputs are confirmed, inter alia, by a two-coloured LED light below the monitor whereby the LED light flashes in green, if you have won a point and in red, if you have lost a point. You can switch the LED lights on and off in the settings of the main menu under '**Front LED**'. Confirm the relevant selection by pressing the OK button. If you leave the settings by pressing the return button ('X'), the previously selected option will automatically be set.



**DATE AND TIME**

To set the date and time, select '**Date and Time**' in the settings of the main menu. Confirm the adjustments made by pressing the OK button. If you leave the settings by pressing the return button ('X'), the previously stored contrast intensity will automatically be set.

**FORMATTING**

If you select '**Format**' in the in the settings of the main menu, the SD card is formatted by the KIT. Thereby, all data (inter alia matches, training sessions, player list) will be irrevocably deleted.

**IMPORTANT NOTE:      DELETED DATA CANNOT BE RESTORED AGAIN.**



## PLAYER KIT

The Player KIT has both a training mode and match mode.

### TRAINING MODE

#### START TRAINING SESSION

To start a training session, select the **Training** menu item in the main menu. Bear in mind that the battery state must be above 20% in order to start a training session.

After selecting a new training session you will get to the players list. Select the name you wish and press the OK button. If no players list has been issued so far, you can merely select a **Guest** from the list. The selected name will be displayed beside the time during the training session (You will find more precise information on **Player List** in the relevant section of the present user manual).

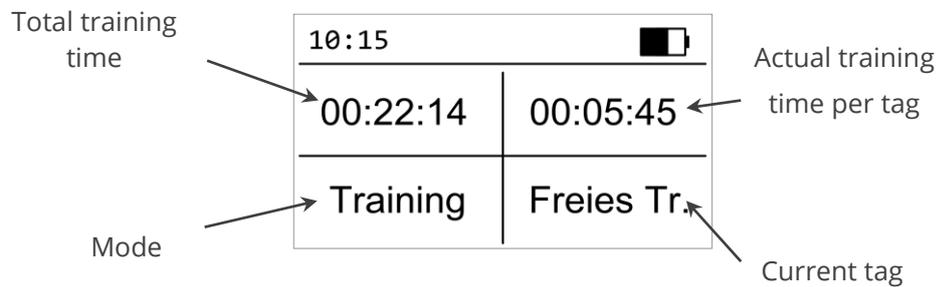
Then, you must determine on which arm (**Select Wearing Arm**) you want to wear the KIT during the training session (**Left** or **Right**). Bear in mind that the KIT must be worn on the striking arm to ensure high data quality.

After selecting the wearing arm, you can now select a more precise description of your training session from among the different tags. If you do not select a specific tag, the training will run in the **Free Training** mode (You will find more detailed information on **Select Tag** in the relevant section of the present user manual).

Thereafter, data recording on the KIT will start. The current training session is always displayed on the monitor.



## MONITOR TRAINING SESSION



The two areas on the left of the middle line contain information on the whole training session. The upper field indicates the whole training duration and the lower field informs you of the fact that the KIT is currently in training mode.

The two areas on the right of the middle line contain information on the actually selected tag, the upper field displaying the length of training performed in the current tag and the lower field informing you of the tag you have selected.

## ACCESS TO THE TRAINING MENU

If you press the Up button during a running training session, a **'Mark'** will be added (You will find more precise information on **'Add Mark'** in the relevant section of the present user manual).

If you press the Down button during a running training session, the KIT will turn to **'Pause Mode'**. If you press the Down button again, the pause mode will be terminated and the previously used tag is automatically selected.

If you press the OK button during a running training session, you will get straight to the training menu.

## SELECT TAG

In training mode, you can select different tags any time you like according to the actual training content (base line, serve, net, etc.).

If you select '**Select Tag**' in the menu of the training mode, a selection of the available tags will appear.

### Description of available tags:

- 'Free Training':** You have selected free training without allocating it to a specific tag.
- 'Half Court':** You are playing in the small field.
- 'Base Line':** You are playing from the base line.
- 'Net':** You are playing from the net and are training volley/smash.
- 'Serve':** You are practising your serve.
- 'Return':** You are practising returning the ball.
- 'Point Playing':** You are playing for points, yet without recording the points by means of a specific point input method. (You will find more precise information on '**Point input and additional point input**' in the relevant section of the present user manual).
- 'Fitness':** You are performing a fitness session (e.g. Warm-up).
- 'Pause':** You interrupt your training to have a drink, collect balls, etc. The pause tag can also be selected directly via the Down button.



## **VIDEO SYNCHRONISATION**

Select the **'Video Sync'** menu item if you want to film a training session or a sequence thereof, to later watch the KITRIS Video application. Start recording as soon as the countdown on the KIT reaches zero. This way, you ensure that data traces of both camera and KIT match each other precisely. Bear in mind that you can only use 1 synchronisation per training session. The final synchronisation will be considered here. As soon as the camera has been switched off, the synchronisation will also be terminated.

## **ADD MARKING**

The **'Mark'** menu item serves the purpose of marking specific incidents of a training session. When making a video analysis using the KITRIS Video application you can get straight to the marked incident.

## **START TRAINING MATCH**

By using the **'New Match'** menu item, you can start a training match directly out of training mode. As soon as you have confirmed your selection, the running training session will automatically be terminated. Follow the menu navigation up to the beginning of the match according to the instructions in the section **'Match Mode'**.

Bear in mind that the battery status must be above 20% to start a training match.



## TERMINATE TRAINING SESSION

You can manually terminate a running training session any time.

To terminate a training session, press the return button ('X') and select '**End Training**'. As soon as you have confirmed your selection, the KIT will turn to its clock mode.

Bear in mind that a training session will automatically be terminated if the battery status drops below 10%.

## MATCH MODE

### START MATCH

To start a match, select the '**Match**' menu item in the main menu. Bear in mind that the battery status must be above 20% in order to start a match.

After selecting a new match, you will get to the players list. Select the name you wish and press the OK button. If you have not issued a player list so far, you can merely select '**Guest**' from the list.

During the match, the selected name will be displayed beside the time (You will find more precise information on '**Player List**' in the relevant section of the present user manual).

Now determine the arm ('**Select Wearing Arm**') on which you are wearing the KIT ('**Left**' or '**Right**'). Bear in mind that the KIT must be worn on the wearing arm to ensure high data quality.

After selecting the wearing arm, you can now determine the type of result input.

If you enter the results yourself during a match, select the '**Self-Scoring**' mode (you will find more detailed information on the '**Self-Scoring**' mode in the relevant section of the present user manual).

If result input will be performed by an external third party, select the '**Coach-Scoring**' mode (you will find more detailed information on the '**Coach-Scoring**' mode in the relevant section of the present user manual).



## SELF-SCORING MODE

If you have selected the **'Self-Scoring'** mode for result input, always enter the result immediately following a rally in a match (you will find more detailed information on **'Correct Point Input'** in the relevant section of the present user manual).

After selecting the **'Self-Scoring'** mode, define the match type (**'Training Match'** or **'Competition'**), and then the match mode. In a training match, you have the following three options: a match best of three, a match best of three with a match tiebreak on 10 points in the third set, single tiebreaks on 7 or 10 points. In a competition match, you have the choice between a match best of three and a match best of three with a match tiebreak on 10 points in the third set.

Then select who will start with the serve in the match.

Immediately following this selection, the KIT will start recording the sensor data and the actual score will be indicated on the display.

Bear in mind that a new match can only be started if no other match is running or has been interrupted.

If a match is running but has been interrupted because of a break, a relevant message (**'Match Paused'**) will appear on the display below the time.



## COACH-SCORING MODE

If you select the '**Coach-Scoring**' result input method, an external third party will have to enter the result in the Coach KIT following a rally (you will find more detailed information on '**Coach KIT**' in the relevant section of the present user manual).

## SYNCHRONISATION OF PLAYER KIT AND COACH KIT

To ensure that data traces of Player KIT and Coach KIT run synchronously, both KITs will have to be synchronised with each other before the beginning of a match. This step takes high relevance as it makes sure data of Player KIT and Coach KIT can later be correctly brought together.

Follow menu navigation both on the Player KIT and on the Coach KIT up to the step where you are asked to synchronise the two KITs.

First, press the OK button of the Player KIT. As soon as the countdown of the Player KIT reaches zero, press the OK button of the Coach KIT.

A message will appear on the Player KIT that the '**Coach-Scoring**' mode can be terminated by pressing the return button ('X'). After 1 minute, the display switches off to save battery consumption. Data recording, however, will continue unchanged. The display can be reactivated by pressing any button.



## COACH KIT

If you use the Coach KIT, you will have 2 possibilities for recording match data.

### COACH-SCORING MODE

In the **'Coach-Scoring'** mode, there is the possibility of entering results into the Coach KIT from outside; this will always have to be performed by an external third party immediately following a rally. The player himself only wears the KIT, which registers all strike data (such as serve, forehand, backhand).

Bear in mind that the battery status must be above 20% in order to start a match.

After selecting the **'Coach-Scoring'** menu item, you will get to the players list. Select the name you wish and press the OK button. If you have not issued a players list so far, you can merely select **'Guest'** from the list.

During the match, the selected name will be displayed beside the time (you will find more precise information on **'Player List'** in the relevant section of the present user manual).

After selecting a player from the players list define the match type (**'Training Match'** or **'Competition'**), and then the match mode. In a training match, you have the following three options: a match best of three, a match best of three with a match tiebreak on 10 points in the third set, single tiebreaks on 7 or 10 points. In a competition match, you have the choice between a match best of three and a match best of three with a match tiebreak on 10 points in the third set.

To retain match relevant information (e.g. name of opponent, playing ground, weather circumstances, etc.) you can record a voice message in the **'Record Audio Memo'** menu item.

Recording will begin as soon as you have confirmed your selection to record a speech memo. You can terminate the recording at any time by pressing the OK button or the return button ('X').



The time window for recording a voice message will automatically be terminated after 10 seconds and can be terminated at any time earlier by pressing the OK button or the return button ('X'). The voice messages can later be replayed on the KITRIS Tennis HUB.

### **SYNCHRONISATION OF COACH KIT AND PLAYER KIT**

Subsequently, you will be informed to press the OK button exactly when the countdown on the Player KIT reaches zero. This way, you ensure that data traces of both the Player KIT and the Coach KIT run synchronously. This step takes high relevance, as it makes sure that data of Player KIT and Coach KIT can later be correctly brought together.

In addition, you can also make a synchronisation with a video camera. Start recording exactly when the countdown on the Coach KIT reaches zero (you can find more detailed information on '[Video Synchronisation](#)' in the relevant section of the present user manual).

Next, you will be asked to briefly press the OK button twice immediately following each other in order to start the match.

After determining who of the two players will start with the serve in the match, the indication of the score will appear on the display.



## MATCH-TRACKING MODE

In the **'Match-Tracking'** mode you have the chance of entering both strike data (such as serve, forehand, backhand ) and results into the Coach KIT from an external place. In this mode, the player does not wear a KIT.

Bear in mind that the battery status must be above 20% in order to start a match.

After selecting the **'Match-Tracking'** menu item, you will get to the players list. Select the name you wish and press the OK button. If you have not issued a players list so far, you can merely select **'Guest'** from the list.

During the match, the selected name will be displayed beside the time (you will find more detailed information on **'Player List'** in the relevant section of the present user manual).

After selecting a player from the players list define the match type (**'Training Match'** or **'Competition'**), and then the match mode. In a training match, you have the following three options: a match best of three, a match best of three with a match tiebreak on 10 points in the third set, single tiebreaks on 7 or 10 points. In a competition match, you have the choice between a match best of three and a match best of three with a match tiebreak on 10 points in the third set.

To retain match relevant information (e.g. name of opponent, playing ground, weather circumstances, etc.) you can record a voice message in the **'Record Audio Memo'** menu item.

Recording will begin as soon as you have confirmed your selection to record a speech memo. You can terminate the recording at any time by pressing the OK button or the return button ('X').

The time window for recording a voice message will automatically be terminated after 10 seconds and can be terminated at any time earlier by pressing the OK button or the return button ('X'). The voice messages can later be replayed on the KITRIS Tennis HUB.

Following this, you can also make a synchronisation with a video camera. Start recording exactly when the countdown on the Coach KIT reaches zero



(you can find more detailed information on **'Video Synchronisation'** in the relevant section of the present user manual).

Next, you will be asked to briefly press the OK button twice immediately following each other in order to start the match.

After determining who of the two players will start with the serve in the match, the indication of the score will appear on the display. After 2 seconds the display changes to the strike input mode.

### **NAVIGATION IN THE 'MATCH-TRACKING' MODE**

In the **'Match-Tracking'** mode, you have the possibility of entering both strike data for your player and results from an external place. To do so, you can choose from the following 2 modes. Using the return button ('X'), you can manually switch between the two modes. If you have entered a point in the result input mode, the Coach KIT automatically switches to the strike input mode soon after.

### **'STRIKE INPUT' MODE**

To enter the different strikes for your own player, the OK, Up and Down buttons are at your disposal. Immediately following strike input a relevant message will appear on the display.

Bear in mind that the OK button has a different function depending on whether it is a game in which your player is serving or one in which he is returning.

In a game in which your player is serving, the OK button serves the purpose of registering both the 1<sup>st</sup> and 2<sup>nd</sup> serve of your player.

In a game in which your player is returning, the OK button gets you straight to the match menu (you will find more detailed information on **'Match Menu'** in the relevant section of the present user manual).



**CORRECT INPUT OF STRIKES:**

**Serve:** To enter a serve of your player, press the OK button 1x.

**Forehand:** To enter a forehand of your player, press the Up button 1x.

**Backhand:** To enter a backhand of your player, press the Down button 1x.

**Forehand Volley:** To enter a forehand volley of your player, press the Up button 2x immediately following each other.

**Backhand Volley:** To enter a backhand volley of your player, press the Down button 2x immediately following each other.

As soon as the rally has been finished, turn to the result input mode.

**'RESULT INPUT' MODE**

Point input is performed by means of the Up or Down button. As soon as you have pressed the relevant button, point input is briefly confirmed by a thumb symbol on the display. In addition, various types of vibration and LED feedback are given depending on the type of point input and provided they have been activated (you will find more detailed information on **'Correct Point Input'** in the relevant section of the present user manual).

If you press the OK button in the result input mode, you will get straight to the match menu (you will find more detailed information on **'Match Menu'** in the relevant section of the present user manual).

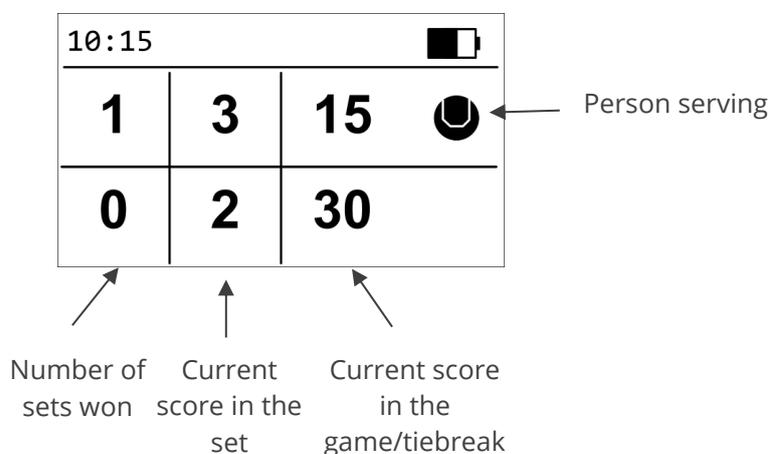


## INDICATION OF THE SCORE

The current score will be indicated as follows:

Your score will be indicated in the top line and your opponent's score in the bottom line. The tennis ball (🎾) beside the score indicates which player is serving.

The column on the left shows the sets that have been played, the one in the middle shows the games that have been played in the current set, and the section on the right indicates the score in the current game.



To save battery consumption the monitor automatically switches off after 5 minutes in a match if no manipulation has been made.

You can reactivate the monitor by pressing any button or by performing an activation movement (Player KIT). If there has been a period of inactivity for more than 10 minutes, the match will automatically be interrupted and the KIT turns to sleep mode.

Check the battery status of your KIT before the beginning of a match. A match may not be fully recorded, if the battery status is too low.

## ACCESS TO THE MATCH MENU

If you press the OK button during a running match, you will get straight to the match menu. Depending on the result input mode (**'Self-Scoring'**, **'Coach-Scoring'**, **'Match-Tracking'**) and the KIT(s) involved (Player KIT, Coach KIT) the match menu contains different menu items.

### INFORMATION ON THE SECOND SERVE (COACH KIT)

The following information applies to the opponent's serve. Press the OK button and select **'Second Serve'** always following a faulty first serve and prior to an upcoming second serve of your opponent.

If your own player has to perform a second serve, you do not have to explicitly point out it is a second serve.

### INFORMATION ON DOUBLE FAULT (COACH KIT)

The following information applies to both a serve of your own player and the opponent's serve. Press the OK button and select **'Double Fault'** whenever your own player or the opponent has made a double fault.

### REPETITION OF SERVE (COACH KIT)

If the serve has to be repeated because the ball has touched the net, press the OK button and select **'Let'**. This applies to both your player and the opponent.

### UNDOING A POINT (PLAYER KIT/COACH KIT)

If you have entered a point by mistake or incorrectly during a match or if you have noticed that the score is not correct, you can easily undo this point, i.e. correct the score point by point. To do so, select **'Undo'**.

If you would like to undo further points, repeat this process. Bear in mind that points that had been recorded before a match was interrupted cannot be undone. Moreover, undoing points requires no confirmation. That is why points that have been undone are not saved and must therefore be re-entered.



**REPLAY POINT (PLAYER KIT/COACH KIT)**

Press the OK button and select **'Replay Point'**, if a rally has to be repeated. Although this function has no direct influence on the current score, it is important for you to use this function in a relevant case to enable correct data evaluation.

**VIDEO SYNCHRONISATION (PLAYER KIT/COACH KIT)**

Select the **'Video Sync'** menu item before the start of a match, if you want to film a match to later watch it with the KITRIS Video application. Start recording as soon as the countdown on the KIT reaches zero. This way, you ensure that data traces of both camera and KIT match each other precisely. Bear in mind that you can only use 1 synchronisation per match. The final synchronisation you on the KIT will be considered. As soon as the camera has been switched off, the synchronisation will also be terminated.

**RECORDING A VOICE MESSAGE (PLAYER KIT/COACH KIT)**

To retain match relevant information (e.g. name of opponent, playing ground, weather circumstances, etc.) you can record a voice message in the **'Record Memo'** menu item.

Recording will begin as soon as you have confirmed your selection to record a speech memo. You can terminate the recording at any time by pressing the OK button or the return button ('X').

The time window for recording a voice message will automatically be terminated after 10 seconds and can be terminated at any time earlier by pressing the OK button or the return button ('X'). The voice messages can later be replayed on the KITRIS Tennis HUB.



### **ADD MARK (PLAYER KIT/COACH KIT)**

The **'Mark'** menu item serves the purpose of marking specific incidents of a match. When using the video analysis of the KITRIS Video application you can get straight to the marked incident.

### **SET FIRST SERVER**

If you have entered the incorrect person as the first server by mistake, you can correct the false input by going to the 'Select server' menu item. This will only be possible, however, if no point has been entered so far.

### **TERMINATE A MATCH (PLAYER KIT/COACH KIT)**

The KIT automatically recognises the end of a match as soon as you have entered the last point. At that stage, you can still undo or replay points. To definitely terminate a match, you will be asked to press the return button ('X') and to confirm the match end. In the **'Coach-Scoring'** mode, you always have to terminate the recording of strikes manually on the Player KIT. To do so, press the X button, and terminate the match. Subsequently, match data is saved and the KIT turns to its clock mode.

You can manually terminate a match at any time by pressing the return button ('X') and by selecting **'End Match'**. In this case, you need to inform the KIT of the reason for terminating the match ahead of time.

In the **'Match-Tracking'** mode, you will find the menu item for terminating a match ahead of time in the match menu itself. If you are in the **'Result Input'** mode, press the OK button and afterwards navigate to the **'End Match'** menu item.

Bear in mind that a match is automatically terminated as soon as the battery status drops below 10%.

### **PAUSE A MATCH**

If a match has to be interrupted (e.g. due to rain), you can also interrupt the current recording of the match. However, this is only possible in the **'Self-Scoring'** mode. In this case, press the return button and select **'Pause Match'**. After completing your selection, the KIT automatically turns to clock mode and relevant message (**'Match Paused'**) will appear below the time.



To resume a match, select '**Resume Match**' in the main menu and confirm your selection. Bear in mind that a match can only be resumed if the battery status is above 20%.

Bear in mind that a new match can only be started if no other match has been interrupted.



## PLAYER LIST

After selecting '**Training**' or '**Match**' in the main menu, you will get straight to the players list that you have saved on your KIT. If no players list has been issued so far, you can merely select a '**Guest**' from the list.

A players list containing different players is particularly helpful if different players are using the KIT, as then a training session or a match can be allocated to the relevant player.

If you are the only one using your KIT, this function serves the purpose of personalisation on the one hand, as the selected name will briefly be displayed when you unlock your KIT. On the other hand, uploading sessions onto the KITRIS Server via KITRIS Tennis HUB will be facilitated, as the sessions are always allocated to the relevant person and email address and password will be remembered.

The players list can only be issued and edited via the KITRIS Tennis HUB. You will find more information on this topic in the user manual of the KITRIS Tennis HUB.

## POINT INPUT AND ADDITIONAL POINT INFORMATION

Enter point information immediately following the end of a rally so that, inter alia, the score can be updated. You can enter the points into the KIT either by button pressing or by means of a specific movement. However, point input by means of motion is only possible in the '**Self-Scoring**' mode. Always evaluate the outcome of a rally from your perspective i.e. from your player's perspective (You will find more precise information on '**Correct Point Input**' in the relevant section of the present user manual).



### **POINT INPUT BY MEANS OF BUTTON PRESSING**

Point input by means of button pressing is performed via the Up/Down buttons. As soon as you have pressed the relevant button, point input is briefly confirmed by a thumb symbol on the display. In addition, various types of vibration and LED feedback are given depending on the type of point input and provided they have been activated. (You will find more precise information on 'Correct Point Input' in the relevant section of the present user manual).

### **POINT INPUT BY MEANS OF MOTION**

Point input by means of a motion is performed with two specific movements. However, this is only possible in the 'Self-Scoring' mode. Following correct performance of the movements for point input, the relevant point input is briefly confirmed by a thumb symbol on the display. In addition, various types of vibration and LED feedback will additionally be given depending on the type of point input and provided they have been activated. (You will find more precise information on 'Correct Point Input' in the relevant section of the present user manual).

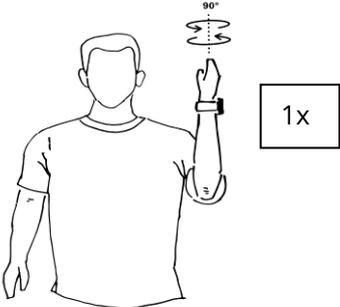
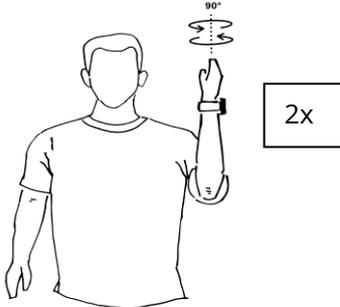
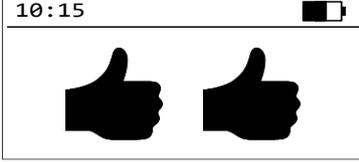
### **ADDITIONAL POINT INFORMATION**

You can also activate a function for additional point information on your KIT (You will find more precise information on 'Point Input' in the relevant section of the present user manual). Entering additional point information serves the purpose of describing the outcome of a rally more precisely, thus resulting in improved data analysis and match statistics on the KITRIS server.

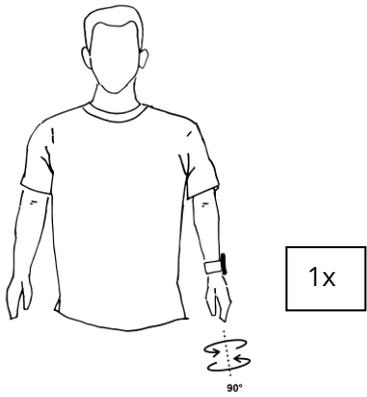
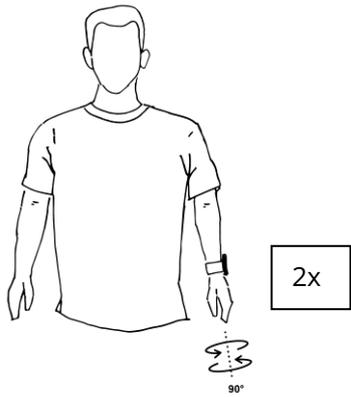
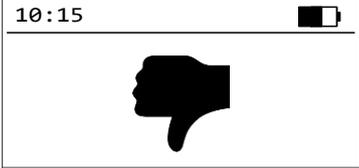
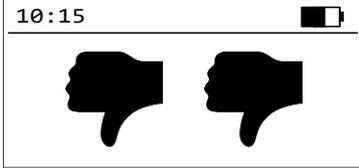


## CORRECT POINT INPUT

### AFTER POINT WON

<b>Game situation:</b>	You win / your player wins a point as a result of an 'unforced error' made by your opponent.	You win / your player wins a point as a result of a winner or you forced your opponent to make a mistake.
<b>Instructions for point input by means of button pressing:</b>	Briefly press the Up button 1x.	Briefly press the Up button 2x in quick succession.
<b>Instructions for point input by means of motion:</b>	Hold the lower arm wearing the KIT up, and then perform a rotating movement. Quickly turn your hand away from your body (thumb away from your body), then back to its original position (within 1 second).	Hold the lower arm wearing the KIT up, and then perform two rotating movements immediately following each other (without any interruption in between) quickly turning your hand away from your body (thumb away from your body), and straight back to its original position (within 1 second).
<b>Instructions for point input by means of motion:</b>		
<b>Feedback from KIT:</b>		

**AFTER POINT LOST**

<p><b>Game situation:</b></p>	<p>You lose / your player loses a point as a result of your opponent's direct winner or because your opponent forced you to make an error.</p>	<p>You lose / your player loses a point as a result of your own unforced error.</p>
<p><b>Instructions for point input by means of button pressing:</b></p>	<p>Briefly press the Down button 1x.</p>	<p>Briefly press the Down button 2x in quick succession.</p>
<p><b>Instructions for point input by means of motion:</b></p>	<p>Hold the lower arm wearing the KIT down, and then perform a rotating movement. Quickly turn your hand away from your body (thumb away from your body), then back to its original position (within 1 second).</p>	<p>Hold the lower arm wearing the KIT down, and then perform two rotating movements immediately following each other (without any interruption in between) quickly turning your hand away from your body (thumb away from your body) and straight back to its original position (within 1 second).</p>
<p><b>Instructions for point input by means of motion:</b></p>		
<p><b>Feedback from KIT:</b></p>		



## INFORMATION ON THE SERVE (SELF-SCORING)

Certain circumstances can lead to serve situations that cannot be correctly interpreted.

To enable the KITRIS Server to later provide you with more precise values, you can inform your KIT in the '**Self-Scoring**' mode of specific serve information by performing the subsequently described movements.

<b>Game situation:</b>	<b>Explanation:</b>	<b>What to do when you are serving:</b>	<b>What to do when opponent is serving:</b>
<b>1<sup>st</sup> serve:</b>	There is a 1 <sup>st</sup> serve.	No additional information required.	No additional information required.
<b>2<sup>nd</sup> serve:</b>	There is a 2 <sup>nd</sup> serve.	No additional information required.	Tap your thigh 2x (without any interruption in between) with your flat hand wearing the KIT within 1 second before your opponent's 2 <sup>nd</sup> serve.
<b>Repetition of 1<sup>st</sup> serve:</b>	The 1 <sup>st</sup> serve is repeated because the ball has touched the net.	Tap your thigh 1x with your flat hand wearing the KIT before repeating the 1 <sup>st</sup> serve.	No additional information required.
<b>Repetition of 2<sup>nd</sup> serve:</b>	The 1 <sup>st</sup> serve is repeated because the ball has touched the net.	No additional information required.	No additional information required.
<b>Ace:</b>	There is an ace with the 1 <sup>st</sup> or 2 <sup>nd</sup> serve.	Enter the relevant point information into your KIT (point input as a winner) immediately following the ace.	Enter the relevant point information into your KIT (point input as a winner) immediately following the ace.



<b>Serve winner:</b>	There is a serve winner with the 1 <sup>st</sup> or 2 <sup>nd</sup> serve.	Enter the relevant point information into your KIT (point input as a winner) immediately following the serve winner.	Tap your thigh 2x (without any interruption in between) with your flat hand wearing the KIT within 1 second immediately prior to point input.
<b>Double fault:</b>	There is double fault.	Enter the relevant point information into your KIT (point input as an unforced error) immediately following the double fault.	Tap your thigh 2x (without any interruption in between) with your flat hand wearing the KIT within 1 second immediately prior to point input.



## TIMER

You can select a timer function via the **'Timer'** menu item in the main menu. This function primarily provides coaches with time orientation during exercises. After selecting the timer function, you can set the number of minutes by using the Up/Down buttons. If you use the OK button, the timer turns to the level of seconds, and you can proceed in steps of 15 seconds by using the Up/Down buttons. As soon as the time you like is set, the timer can be started or paused by pressing the OK button. You can terminate the timer by pressing the On/Off button ('X').

## INFO

Selecting the **'Info'** menu item in the main menu will provide you with some information on the KIT. On the one hand, you can have a look which firmware version is currently installed on the KIT. On the other hand, you will find a relative battery display as well the number of sessions stored on the KIT. Bear in mind that a maximum of 14 sessions can be stored.



## CONNECTING KIT WITH COMPUTER

First, connect your KIT to a computer to be able to retrieve the stored data on match and training sessions by means of the relevant local software KITRIS Tennis HUB.

There is a Micro-USB connection under the USB protective cap located on the left of your KIT. To gain access to the connection, hold the protective cap in the middle of the KIT and carefully pull it upward.

The KIT must be switched on to be connected with a computer. If the KIT is in its sleep mode or switched off, you must first reactivate it by pressing the On/Off button ('X').

As soon as the KIT has detected a connection to a computer, the battery status and a message on the connection ('Connected') will appear on the monitor. As the KIT has a USB HID protocol, no specific drivers are necessary for connection with the computer.

As soon as the USB connection is disconnected, the KIT turns to its previously active mode.

**IMPORTANT NOTE:**      **THE KIT CANNOT BE CONNECTED WITH A COMPUTER IF A MATCH OR A TRAINING SESSION IS RUNNING OR HAS BEEN INTERRUPTED.**



## BATTERY STATUS

In the KIT, there is a Li-Polymer battery. In the top right corner of the monitor, a graphic display of the battery status is indicated.

In addition, you will find a further display of the current battery status in 'Info' of the main menu.

### CHARGE BATTERY

The KIT contains all necessary internal circuits to correctly charge and maintain the Li-Polymer battery.

**IMPORTANT NOTE: ONLY CHARGE THE BATTERY WITH A SUITABLE AND CE CERTIFIED BATTERY CHARGER! YOU WILL FIND DETAILED INFORMATION ON THIS IN THE SAFETY REGULATIONS AND WARNINGS AND IN TECHNICAL INFORMATION OF THE PRESENT USER MANUAL.**

To charge the battery, connect the KIT with a USB charger or a USB host (e.g. computer). The current battery status together with information on the charging process ('**Charging**') will appear on the display of your KIT.

If the KIT recognises a connection to a USB host, information on the connection ('**Connected**') will also be displayed on the monitor.

Bear in mind that the monitor is automatically switched off after a certain length of inactive time to optimise the battery charging process (if no USB connection has been recognised). You can reactivate the screen display at any time by pressing any key.



## PROBLEM SOLVING

### THE KIT DOES NOT REACT...

**Symptom:** The display is activated but does not react to input.

**Possible cause:** The KIT has been caught up.

**Possible solution:** The KIT must be reset. To do so, keep the return button ('X') pressed for at least 7 seconds until the screen switches off. Let go of the button and subsequently press it briefly to restart the KIT. During the resetting process, all collected data remain unchanged.

### THE KIT DOES NOT START...

**Symptom:** The screen remains switched off although you have pressed the On/Off button ('X') (or any other button in match or training mode).

**Possible cause:** The battery of the KITRIS KIT is empty.

**Possible solution:** Follow the instructions in the section '[Charge Battery](#)' and connect the KIT with a USB power source. Subsequently, press the On/Off button ('X') to activate the screen and to control the battery status.

### POINT INPUT FOR INCORRECT PLAYER...

**Symptom:** The KIT registers point input by means of motion for the incorrect player (e.g. you enter a point for yourself, but the KIT registers it as a point for your opponent).

**Possible cause:** Incorrect information given on the striking arm.

**Possible solution:** Start a new match making sure you have selected the correct information for the striking arm.



### **NO CONNECTION BETWEEN KIT AND COMPUTER...**

**Symptom:** The KIT cannot be connected with the computer.

**Possible cause:** You are not using the original Micro-USB cable.

**Possible solution:** Use the original cable or try using a different Micro-USB cable.

### **BATTERY EMPTY DESPITE OF CHARGING PROCESS...**

**Symptom:** The battery is empty although the KIT has been connected with the computer for some time and has been charged sufficiently.

**Possible cause:** The computer in its 'sleep mode' does not supply sufficient current. As a result, the KIT has been used as a current source.

**Possible solution 1:** Only connect the KIT with the computer for as long as the computer is in its active state.

**Possible solution 2:** Connect the KIT to a socket and charge it from there.

### **FURTHER THINGS...**

If the problem-solving approaches mentioned do not work or if a subject has not been mentioned, please contact KITRIS customer service ([service@kitris.ch](mailto:service@kitris.ch)).



**TECHNICAL INFORMATION**

Dimensions	54 x 42 x 15mm
Weight	40g
Connections	USB1.1 (HID protocol) / USB-Micro-B-plug Only connect to CE certified devices
Battery	Li-Pol 3.7V / 330mAh / PCM protected
Battery charger	USB2.0 standard compliant charger USB-Micro-B connection 5V±5%/ min. 350mA 3000V insulation of primary and secondary winding according to IEC/EN 60950-1 Only use CE certified chargers
Operating conditions	-20 to 60°C 0 to 75% RH
Storing conditions	Temporarily: -10 to 40°C 0 to 75% RH More than 3 months (recommended): 0 to 25°C 0 to 75% RH
Standards	CE marking IP54 RoHS guidelines

