
DIGITAL BOXING TRAINERS ASSISTANT

USER MANUAL v1.0



PREFACE

Congratulations with the purchase of your own Digital Boxing Trainers Assistant “DBTA”. From today, you will be able to measure, analyze, print, store and recall all the information you ever wanted to know about your boxers. The DBTA software turns basic punch force and reaction time into an assistant for trainers, boxers or even doctors.

Although the DBTA provides users with all the interesting training information, our software developers have succeeded in keeping the actual user interface as simple as possible. This document is written so that users can maximize the information gathered by the DBTA and it provides a step by step guide, from hardware installation to the generation and analyses of advanced tests and results.

Ever since the first release of the DBTA, people have provided us with feedback on all possible subjects that are related to boxing training in combination with the DBTA. Because we are and want to remain the number one producer of high-tech boxing equipment, we welcome any kind feedback related to our products. Maybe you will even see your ideas implemented in the next release of the hard and software.

Good luck with the Digital Boxing Trainers Assistant!

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1. HARDWARE INSTALLATION

The Digital Boxing Trainers Assistant is delivered as a completely assembled device, with all required cables, electronics and other essentials. The only additional parts required for the installation are 4 strong vibration proof bolts. Be aware that the 4 bolts must be able to hold the entire 100kg/220lbs construction while being exposed to the extreme forces generated during a punch.

1.1 PLACING THE WALL RACK CONSTRUCTION

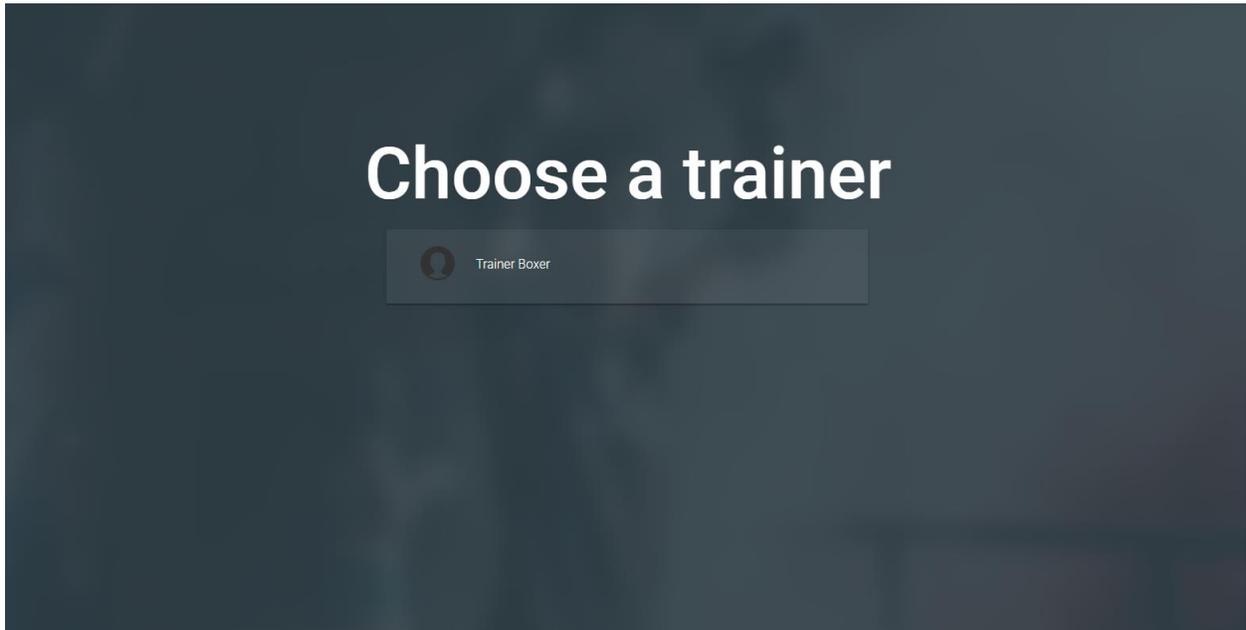
During a punch, the entire construction is exposed to huge forces in every direction. Even though the construction is designed to dampen the most severe vibrations before reaching the wall, the wall that holds the construction will also be exposed to the forces generated by a punch. Because of the high sensitivity of the used sensors, the strength of the wall can have a, usually negligible, effect on the test results. In general, a supporting wall provides more than enough stiffness.

The height adjustable construction can be adjusted for boxers of every length, but the construction itself can be mounted at any desirable height. This means that you are free to move the construction up or down so that it is most suitable for your application. Make sure that the used bolts are vibration proof in order to prevent the construction from coming lose during usage. After the installation of the construction, it is advised to check the bolts on a regular base.

After deciding the placement of the wall rack, the holes for the 4 bolts should be drilled. The final step is to lift the entire construction and place the 4 bolts, which can be achieved by lifting the entire construction with two people, while a third person places the bolts. Use caution during this phase, because of the construction weight (100kg/220lbs).

2. TRAINERS SCREEN

The first screen that is shown when starting the DBTA application is the so called “Trainers” screen. This screen provides a list with names of the all available trainers. To choose a trainer you have to click on one of the names. You must choose one trainer in order to continue.



Trainers screen

NOTE: The first time the system is run, a default trainer is created. This default trainer is named ‘Trainer Boxer’.

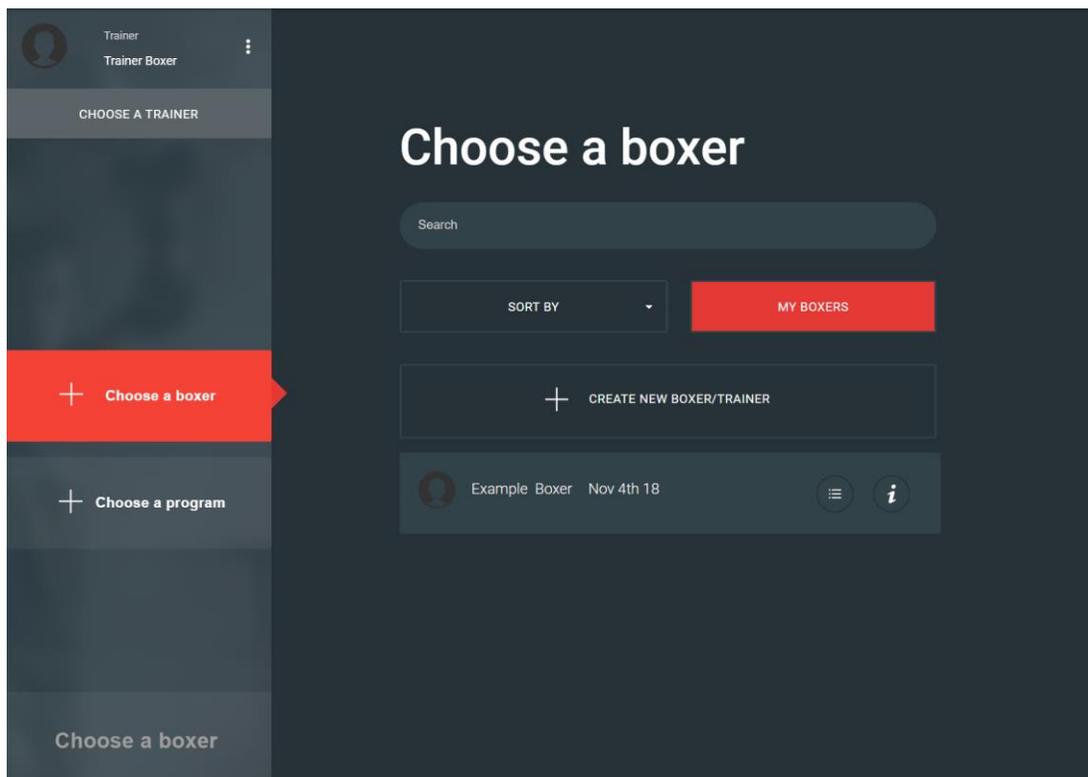
3. BOXERS AND TRAINERS ADMINISTRATION SCREEN

After you have chosen a trainer, the so called “Boxers and trainers administration screen” is shown. On that screen, boxers and trainers can be created and chosen. When a boxer is created in this screen, all related information for that boxer will be available until the boxer is deleted. The complete history of executed sessions and daily remarks about the boxer are also accessible via this screen.

NOTE: Every trainer can also be seen as a boxer, so the steps for creating, modifying, deleting or displaying details of a trainer are the same as those for a boxer.

3.1 CREATE BOXER / TRAINER

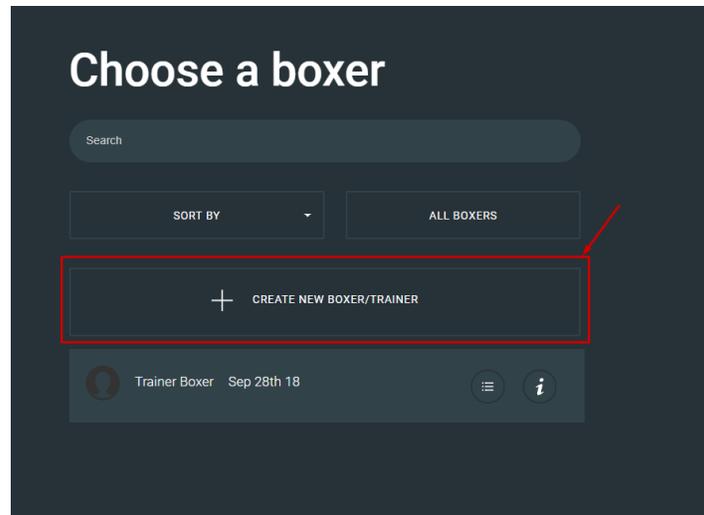
The following image shows the boxers and trainers administration screen immediately after starting the application for the first time:



Boxers and trainers administration screen

At this point, there are two options. Either create a new boxer/trainer or select an existing boxer. In order to create a new boxer/trainer, click the “Create a new boxer/trainer” item.

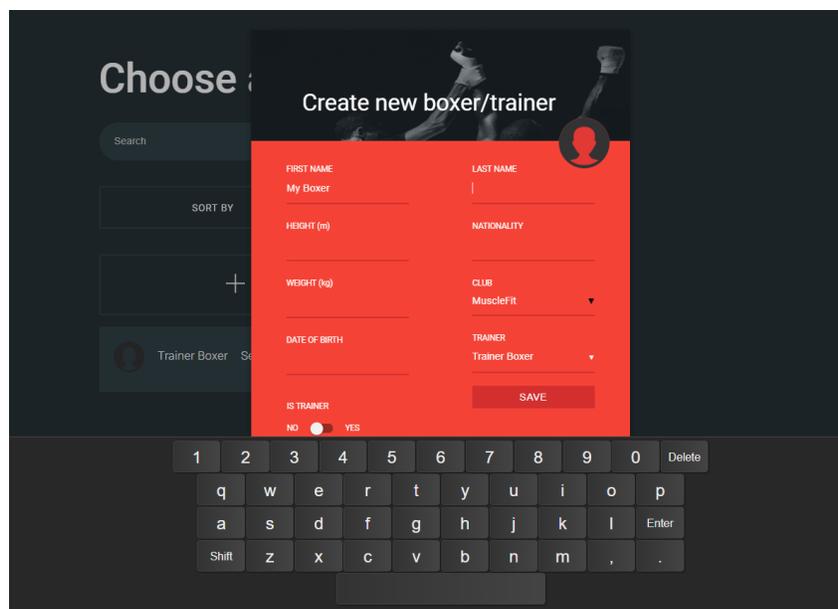
NOTE: If there are no existing boxers, only the first option is available.



Create new boxer/trainer option

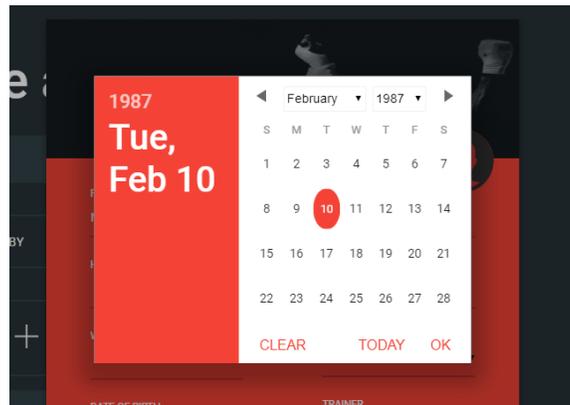
After clicking the “Create a new boxer/trainer” item, a pop-up with a form is shown. To fill the form, click on the input fields below each of the labels.

When clicking on the input fields for first name, last name, height, nationality and weight, a keyboard is shown on the bottom of the screen. Use this keyboard to fill in the information about the new boxer. Because of the worldwide distribution of the DBTA software, 2 different units of measurements can be used for the height and weight of boxers. A height specified in feet will automatically be converted to meters and length specified in meters will also be converted to feet when the settings for the height units of measurement are changed (*See “Units of measurement” in “Settings screen”*). The same applies for the weight of the boxer which could be measured in kilograms or pounds.



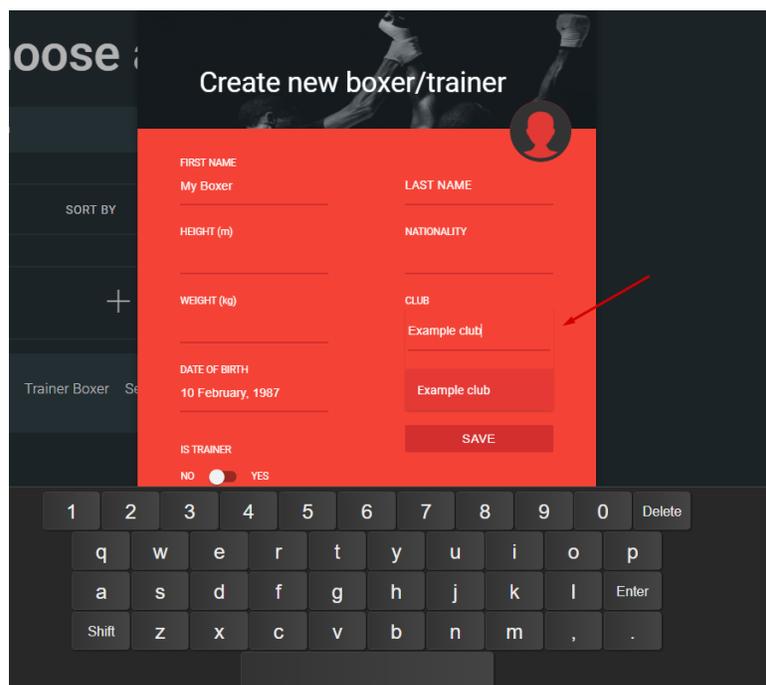
Creating boxers form

When clicking on the input field for date of birth, a calendar is shown and from there the date of birth can be selected.



The date selector

To make this boxer a trainer, click on the toggle below “Is trainer” label. To select a trainer and a club of this boxer click on the dropdowns below the labels “Trainer” and “Club”. If you want to assign a new club which is not shown in the dropdown, please enter the name of the club in the input field shown in the dropdown. **Important: After entering a new name make sure to click it in the dropdown first to select it!**



Creating a new club

To add a profile picture of the new boxer, first, insert a USB stick. Then, click on the icon with the person in the top right corner. Finally, find the location of the desired photo and click “Open”.

To save the new boxer, click on the “Save” button in the end of the form. After saving the boxer, the new boxer is added to the boxers list and it can be used throughout the entire program.

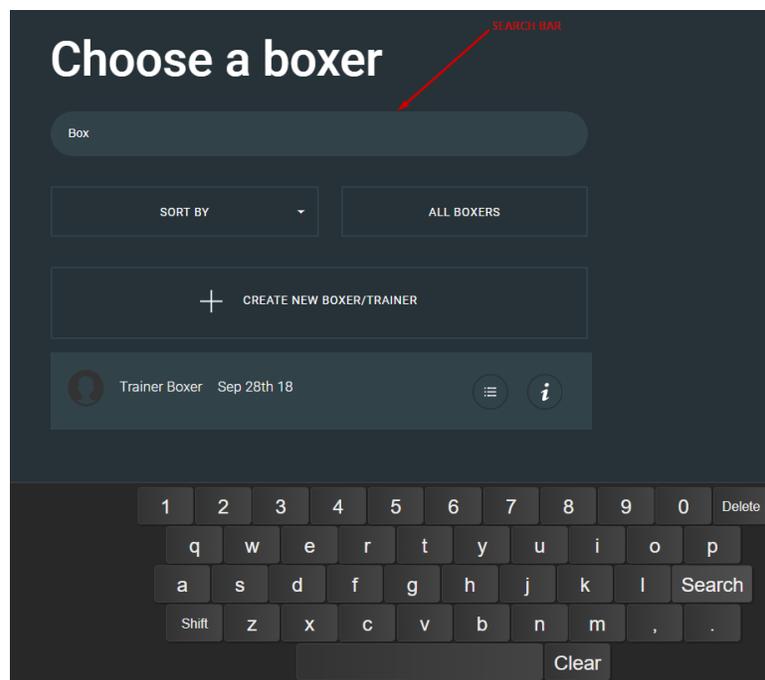
To discard the changes, click outside the pop-up.

NOTE: A new boxer cannot be created if not all the input fields are filled.

3.2 SEARCH / SORT / FILTER BOXERS

After a while the boxers list may contain many boxers, making it difficult to quickly find a boxer. Therefore, the list can be filtered and/or sorted.

To search for a specific boxer, click on the search box below the “Choose a boxer” heading. A keyboard is shown on the bottom of the screen. With the help of it, type the first name or the last name (or part of them). Clicking on the “Search” button on the keyboard will apply the search parameter and will show only the boxers which satisfy that parameter. To display again the whole boxer’s list, press “Clear” button on the keyboard.

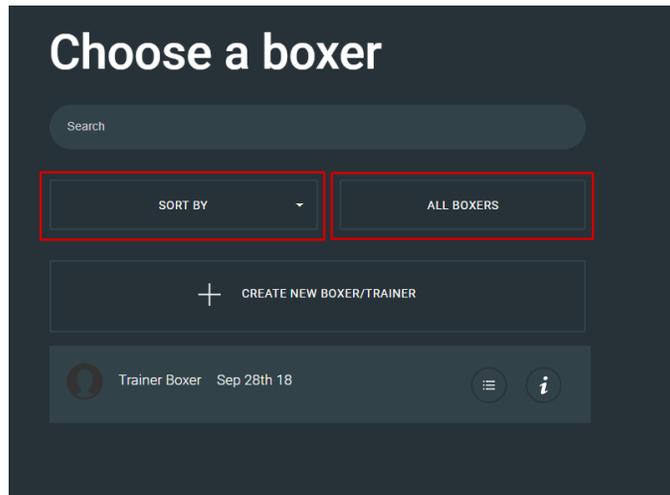


Searching boxer

To sort the boxers by first name, last name or date of birth, click on the “Sort By” button and choose the desired option.

To display only the boxers of the currently selected trainer, click on the “All boxers” button. To display the list with all boxers again, click on “My boxers” button.

NOTE: By default, only the boxers of the selected trainer are shown.



"Sort by" and "All boxers" options in the "Boxers and trainers administration" screen

3.3 SELECTING AN EXISTING BOXER AND DISPLAY INFORMATION

If the boxers list contains one or more boxers, the user can select a boxer from the list by clicking on the boxer. The selected boxer will be indicated in red.

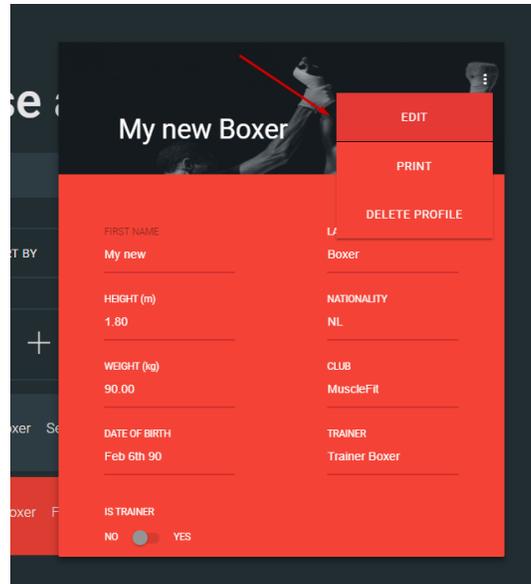
To display information about the selected boxer, click on the info icon  on the right side of the selected boxer. After that step, an information pop-up is shown containing all boxer's details.

3.4 EDIT / PRINT / DELETE BOXER

Before deleting a boxer, modifying his/her details or print those details, a boxer should be selected, and the information pop-up should be displayed (*See Selecting an existing boxer and display information*).

3.3.1 EDIT BOXER

In order to go to edit mode, click on the three dots on the top right corner of the information pop-up and choose "Edit" from the dropdown menu.



My new Boxer

EDIT

PRINT

DELETE PROFILE

FIRST NAME
My new

LAST NAME
Boxer

HEIGHT (m)
1.80

NATIONALITY
NL

WEIGHT (kg)
90.00

CLUB
MuscleFit

DATE OF BIRTH
Feb 6th 90

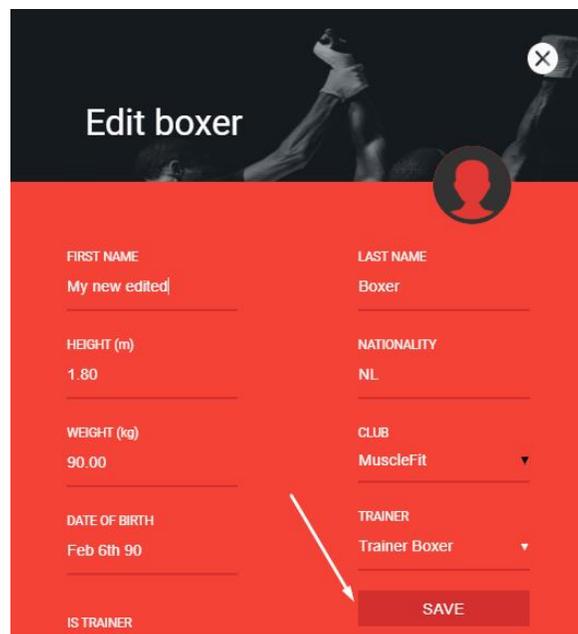
TRAINER
Trainer Boxer

IS TRAINER
NO YES

Boxer's information panel

After those steps, the information of the boxer could be modified by clicking on the desired fields and enter the new information.

To save the modified information, click on the "Save" button in the end of the form.



Edit boxer

FIRST NAME
My new edited

LAST NAME
Boxer

HEIGHT (m)
1.80

NATIONALITY
NL

WEIGHT (kg)
90.00

CLUB
MuscleFit

DATE OF BIRTH
Feb 6th 90

TRAINER
Trainer Boxer

IS TRAINER

SAVE

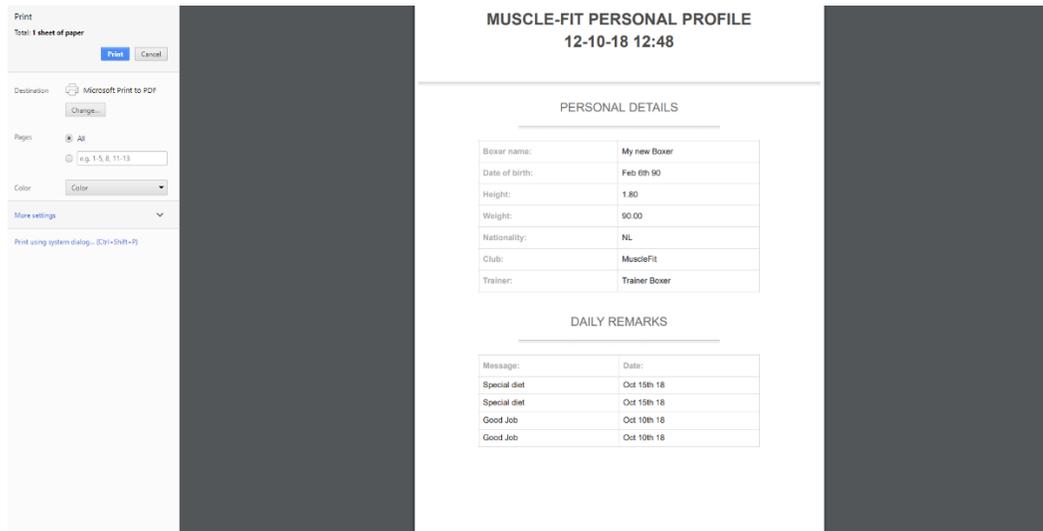
Boxers edit panel

To discard the changes, click on the cross icon on the top right corner or click outside the pop-up.

NOTE: All fields should be filled in order to save a boxer.

3.3.2 PRINT BOXER

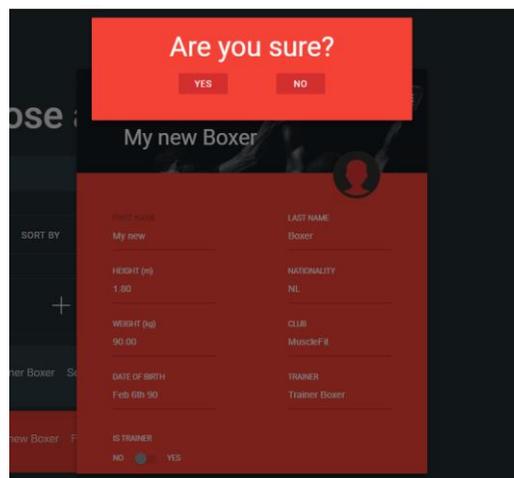
To print boxer's details, click on the three dots on the top right corner of the information pop-up and select "Print" option from the dropdown menu. A "Print preview" screen is shown, where the layout of a document with boxer's personal details and his/her daily remarks is displayed. From this screen, the shown document can be either printed by clicking "Print" or discarded by clicking "Cancel".



Print Preview of Boxer's details

3.3.3 DELETE BOXER

Although it usually is not necessary to delete boxers, it is possible to delete boxers including their entire session history and daily remark history. In order to delete a boxer, click on the three dots on the top right corner of the information pop-up and click "Delete" from the dropdown menu.



Delete boxer: Confirmation pop-up

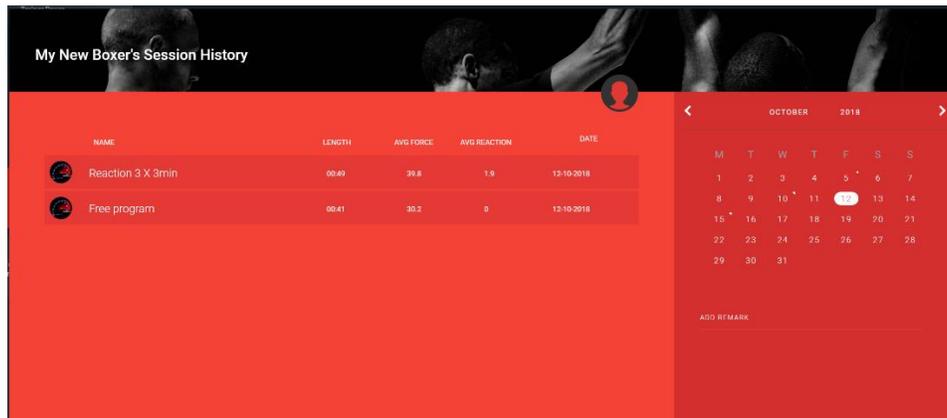
The application then asked the user's confirmation before permanently deleting the boxer.

NOTE: Be careful! All boxer details will be removed from the system and are not recoverable.

3.5 BOXER'S SESSIONS AND DAILY REMARKS

After selecting a boxer, it is possible to specify daily remarks for the boxer and see list of boxer's performed sessions. To display those details, click on the session history  icon which is on the left side of the info icon.

On the left side of the displayed pop-up, a list of all executed exercises is shown with the name of the training program, length of the exercise, average force and reaction, and date. To see more detailed information about the session, click on desired session and the session analysis screen will be displayed.



Session history panel

NOTE: If the selected boxer did not perform and/or save any exercises yet, the list with the sessions will be empty.

Daily remarks are independent from the “edit” mode, because this information is independent from the actual boxer details. Information that should be stored in daily remarks can vary from just the weight to rest heartbeat, diet, recent massages, etc. The only information that shouldn't be specified in the daily remarks are remarks about exercises on the DBTA, because there is a special remark field available for every executed exercise. To insert a daily remark, select a date from the calendar on the right side of the displayed pop-up and click on the “Add remark” field. After that, a keyboard is shown on the bottom of the screen with the help of which the remark could be entered. For saving the daily remark, click on the “Save” button on the keyboard. The remark can be always edited by selecting the day, modifying the remark with the keyboard and choosing “Save”.



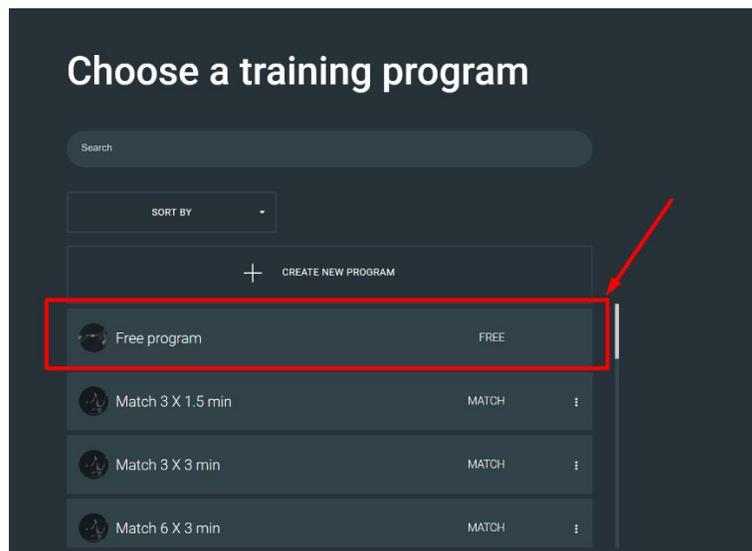
Calendar with daily remarks

4. TRAINING PROGRAMS SCREEN

Although the basic functionality of the DBTA is the measurement of punch force, the DBTA software expands this basic functionality to a complete analyses tool for punch force, frequency, reaction time and even more. In order to get the most out of the DBTA, the software provides the possibility to define all kind of training types for its boxers. These so-called training programs can be defined in the “Training programs” screen, which is discussed in the following paragraphs.

The DBTA system offers three main types of programs: Free, Match and Reaction.

The **free type** is the simplest training program available. The free program does not have any additional commands. During the execution of the free program the boxer is free to punch in any direction at any time for an unlimited amount of time. Because this type of training program will always be the same, the DBTA system always contains one Free training program. This training program cannot be deleted, and other free training programs cannot be created. It is named “Free program” and it can be found in the list of training programs.



Free program in the programs list

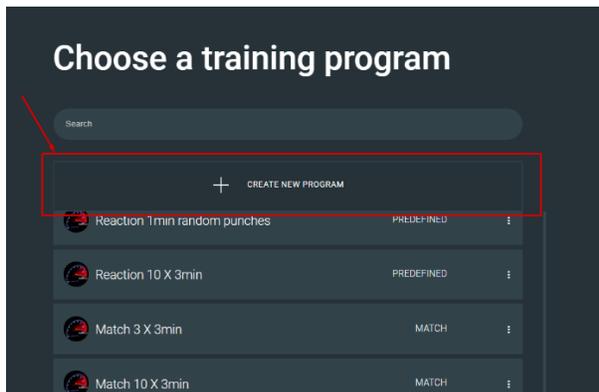
The **match type** is designed to simulate a real match. In this training program type it is possible to define rounds and the define breaks between the rounds. Each round has a defined amount of time and for that time the boxer is free to punch in any direction. The DBTA system provides several ready-to-use match type programs, but new ones can be always designed and created. All the details about creating a match type program are displayed in the “Create a ‘Match’ type program” section.

The **reaction type** enables the user to define a series of punches in advance to the actual training. In this case the punch direction and the delay between each punch can be specified. The reaction training programs can contain single punch blocks (single punches with predefined direction and delay), multiple punch blocks (set of multiple punches with random directions according to the settings), round breaks (break between rounds) and breaks (short break between the punch blocks). The DBTA system provides

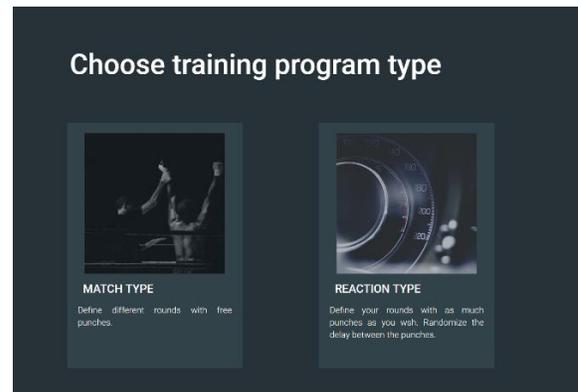
several ready-to-use reaction type programs, but new ones can be always designed and created. All the details about creating a match type program are displayed in the “Create a ‘Reaction’ type program” section.

4.1. CREATE A TRAINING PROGRAM

The creation of a training program could be achieved from the so called “Composer” screen. To open that screen, choose “Create new program”. After that, you can choose the type of the new program – match type or reaction type.



Create new program button



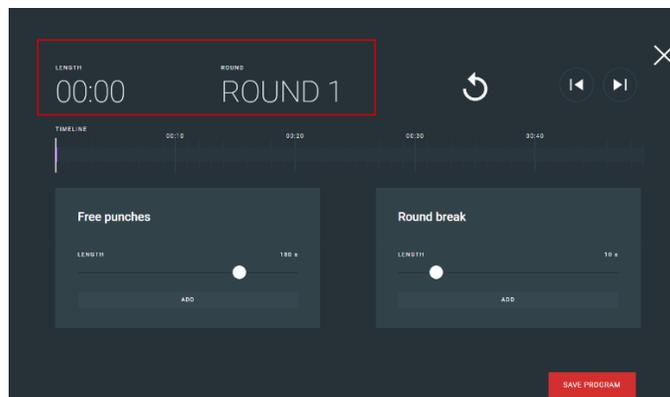
Choose training program type screen

Click on the desired type and continue to the “Composer” screen.

4.1.1 CREATE A “MATCH” TYPE PROGRAM

The “Composer” screen for the match training programs contains several elements.

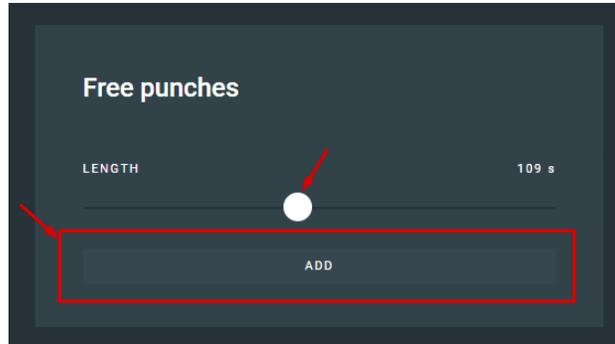
The labels on the top of the screen show the length of the whole training program and the number of rounds defined by now.



Information labels in Composer – match type screen

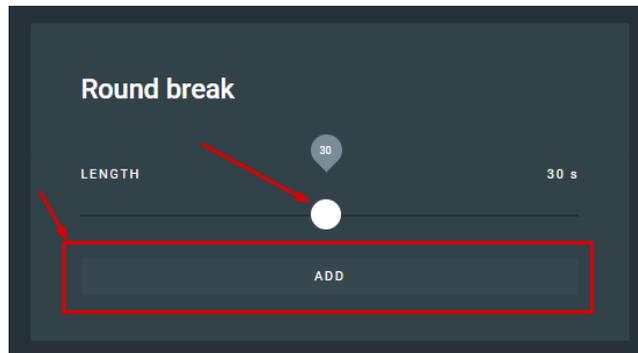
As mentioned above, the match type can contain Free punch blocks and Round breaks.

To include a Free punch block, select desired length with the help of a slider in the “Free punches” section and click “Add” button.



Slider for the length of Free punch block and Add button

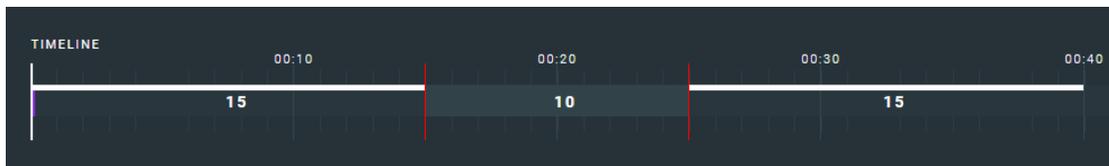
To include a Round break, select desired length with the help of a slider in the “Round break” section and click “Add” button. Keep in mind that every Round break defines a new round.



Slider for the length of Round break and Add button

To remove the last added item, click the “Undo” icon .

The timeline (at the top of the screen) provides visualization of the content of the training program. The Free punches blocks are colored in white and the round breaks are separated by two red lines at the beginning and at the end. The length of each round breaks is also displayed on the timeline.



Timeline in Composer – match type

To switch between the rounds on the timeline, click on the “forward” and “backward” icons



In order to save the training program, click on the “Save program” button on the bottom of the screen. Insert title and description and click “Save”.

Save program?

TITLE
My new training program

DESCRIPTION
2 Rounds for 30 sec

SAVE CANCEL

Save Program panel

The “Cancel” button will close the pop-up and the training program will not be saved.

To close the “Composer” page click on the “X” icon (above the “Program composer” on the left side of the screen or in the top right corner). A pop-up will be shown from which there are two options: “Save program and quit” or “Quit without saving”.

Are you sure you want to quit without saving?

TITLE
Example program

DESCRIPTION
This program is really hard

QUIT WITHOUT SAVING SAVE PROGRAM AND QUIT

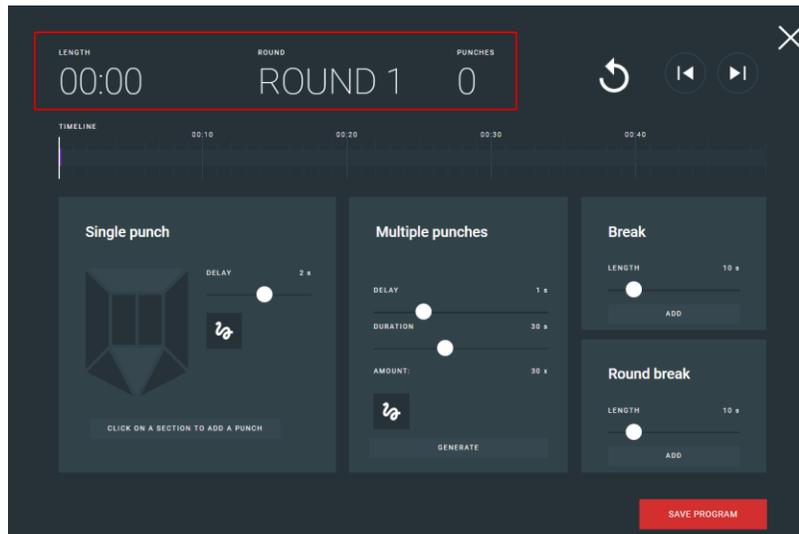
Exit from the Composer panel

NOTE: If you try to go to another page before the training program is saved, pop-up with the options to “Save program and quit” or “Quit without saving” will be shown.

4.1.2 CREATE A “REACTION” TYPE PROGRAM

The “Composer” screen for the reaction training programs contains the below explained elements.

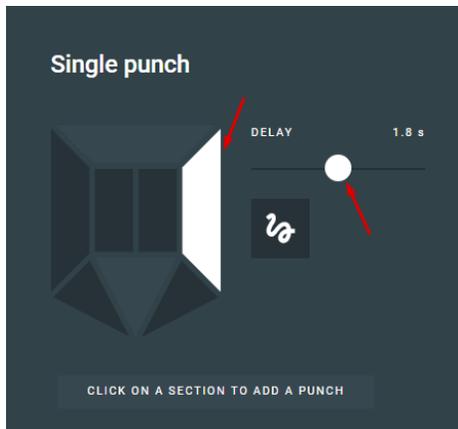
The labels on the top of the screen shows the length of the whole training program, the number of rounds defined by now and the number of the punches.



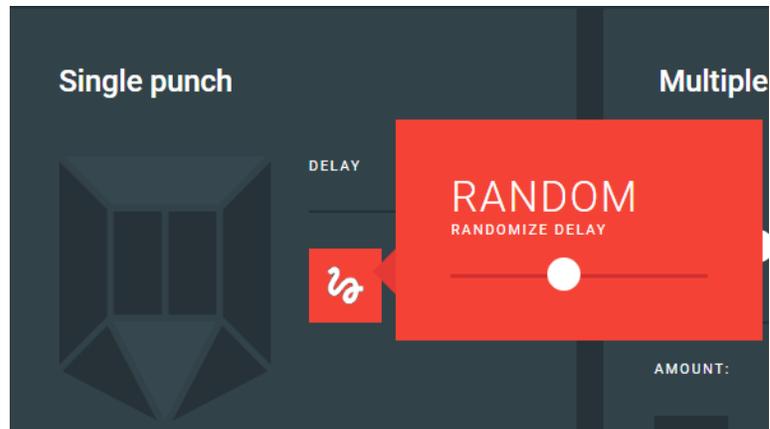
Information labels in Composer – reaction type screen

The match type can contain Single punches, Multiple punch blocks, Round breaks and Breaks.

To include a Single punch, select a delay before the punch with the help of a slider in the “Single punch” section. The delay can be randomized by clicking on the “randomize” icon. By clicking it, a section with a slider is shown from where the percentage of randomization can be selected. That means, if the percentage is set to 20%, there will be 20% chance for different length of the delay. By default, this percentage is set to 0. To finish the process of including a Single punch, click on a section on the displayed cushion. Each of the section represents the different direction of the cushion. The selected section will blink in white and the Single punch will be added to the training program.

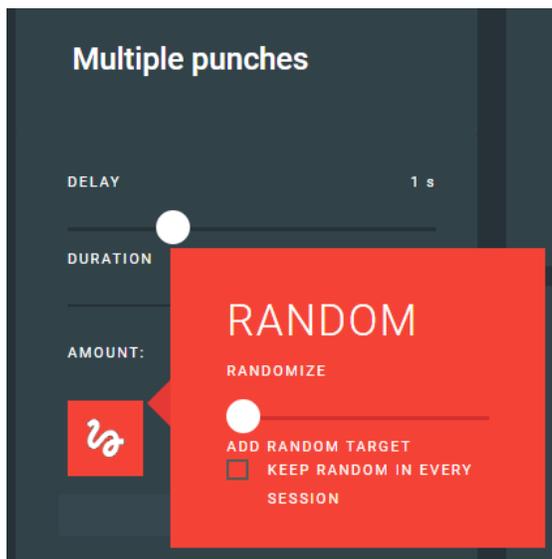


Adding a Single Punch

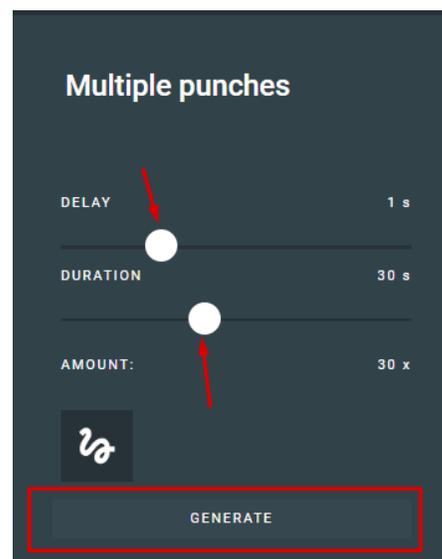


Randomize panel for Single Punch block

To include a Multiple punches block, select a delay before the punches and duration with the help of a sliders in the “Multiple punches” section. The delay can be again randomized by clicking on the “randomize” icon. By clicking it, a section with a slider is shown from where the percentage of randomization can be selected. By default, this percentage is set to 0. In the randomize section there is also a checkbox “Keep random in every session”. If the checkbox is ticked, the direction of the punches will be different in every session according to the settings (see “Random punch settings” in “Settings page”). If that checkbox is not ticked, directions will be generated immediately after the program is saved and they will be the same in every session in which this training program is executed. Finally, click on the “Generate” button add the Multiple punches block to the training program.



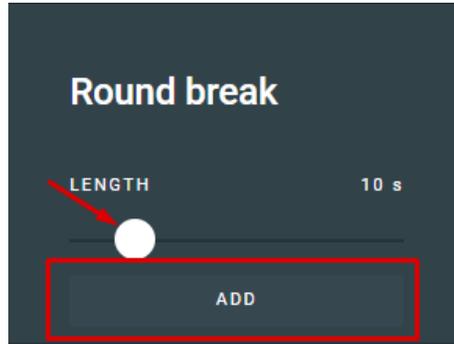
Randomize panel for Multiple punch blocks



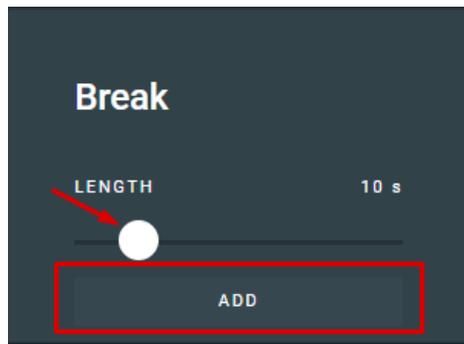
Adding Multiple punch block

To include a Round break, select desired length with the help of a slider in the “Round break” section and click “Add” button. Keep in mind that every Round break defines a new round.

To include a Break, select desired length with the help of a slider in the “Break” section and click “Add” button.



Adding Round break



Adding Break

To remove the last added item, click the “Undo” icon .

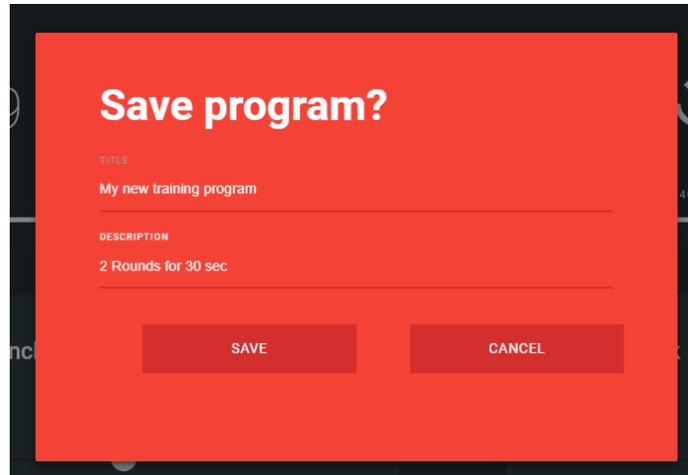
The timeline (at the top of the screen) provides visualization of the content of the training program. The Single punch blocks are separated with line in the end (the color of the line vary according to the direction of the punch). The Multiple punch blocks are displayed with multiple-color line. The round breaks are separated by two red lines at the beginning and at the end. The Breaks are displayed with a grey block.



Timeline in the Composer – reaction type screen

To switch between the rounds on the timeline, click on the “forward” and “backward” icons .

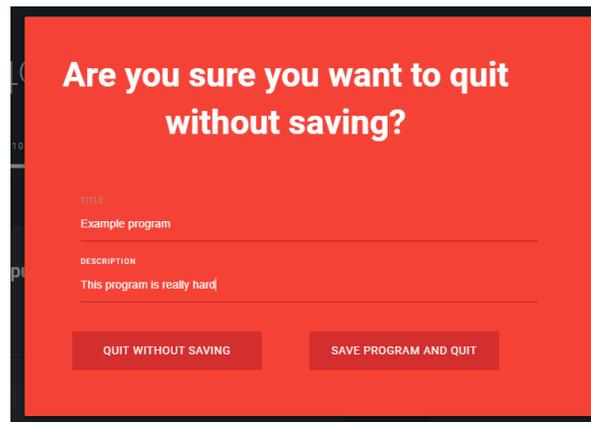
In order to save the training program, click on the “Save program” button on the bottom of the screen. Insert title and description and click “Save”.



Save program panel

The “Cancel” button will close the pop-up and the training program will not be saved.

To close the “Composer” page click on the “X” icon (above the “Program composer” on the left side of the screen or in the top right corner). A pop-up will be shown from which there are two options: “Save program and quit” or “Quit without saving”.



Exit from the Composer panel

NOTE: *If you try to go to another page before the training program is saved, pop-up with the options to “Save program and quit” or “Quit without saving” will be shown.*

4.2 DELETE A TRAINING PROGRAM

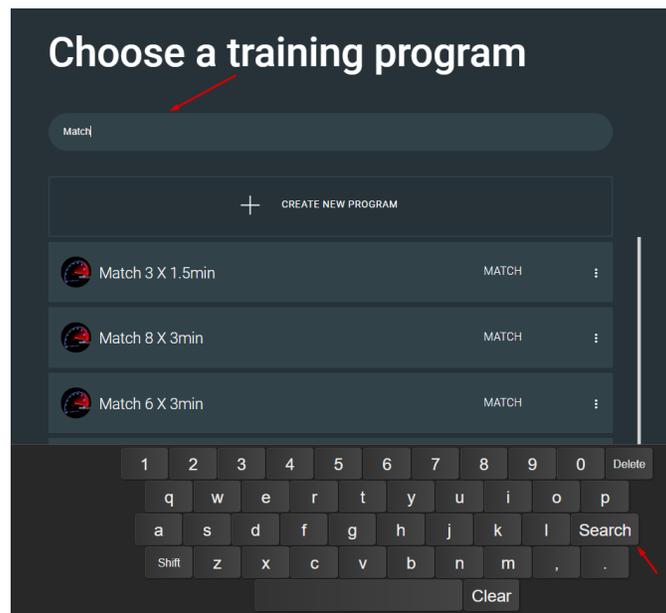
To delete a training program, select a program and click on the icon with the three dots  in the right side of the selected program. After that, click on the “Delete” button which is shown next to the icon.

NOTE: *Keep in mind that if a training program is deleted, it cannot be restored!*

NOTE: *All sessions performed with that training program will NOT be deleted!*

4.3 CHOOSE A PROGRAM

If the training programs list contains one or more programs, the user can select a training program from the list by clicking on it. The selected program is marked in red. After a while the training programs list may contain many programs, making it difficult to quickly find a program. Therefore, the user can use the “Search” bar on the top of the screen to filter the list. To search for a specific program, click on the search box below the “Choose a training program” heading. A keyboard is shown on the bottom of the screen. With the help of it, type the program’s name (or part of it). Clicking on the “Search” button on the keyboard will apply the search parameter and will show only the programs which satisfy that parameter. To display again the whole training programs list, press “Clear” button on the keyboard.



Search bar and search button in the Training programs screen

When the user selects a program by clicking on the training program in the list, a button “Start training” on the right side of the screen appears. From there the user can go to the “Session execution” screen and perform an exercise with the selected training program. The user could also use the “Start training” button in the bottom left corner of the screen.

NOTE: Going to the “Session execution” screen will be disabled, if either a boxer or a training program is not selected.

5. SESSION EXECUTION SCREEN

When the boxer and the training program are selected, the session execution screen is enabled. This screen enables the user to execute the selected training program. Numerous screen elements are added to this screen, which provide the trainer and boxer with useful information during exercise execution. Because the different training program types generate session specific data, the layout of this screen depends on the selected program type.

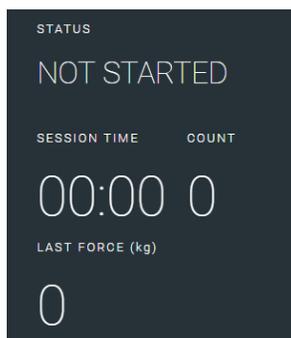
5.1 EXERCISE INFORMATION

During the execution of a session, several screen elements keep the boxer and trainer informed on important exercise data. What information is displayed depends slightly on the selected session.

5.1.1 EXERCISE GENERAL INFORMATION

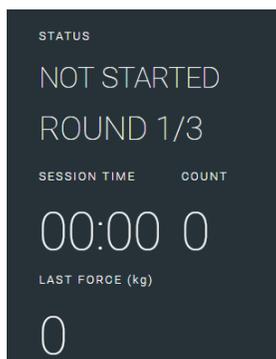
On the right part of the screen is displayed general information about the current session.

For the free program type, that section contains the status of the session which could be “Not started”, “Started”, “Paused” or “Stopped”. This section also contains the time for which the session is running, the number of the performed punches and the force of the last punch.



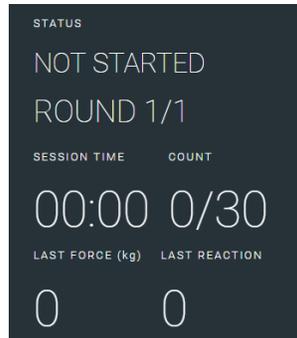
General information – free type

For the match program type, that section contains the status of the session which could be “Not started”, “Started”, “Break”, “Paused” or “Stopped”. This section also contains the time for which the session is running, the number of the performed punches, the force of the last punch and the number of rounds.



General information – match type

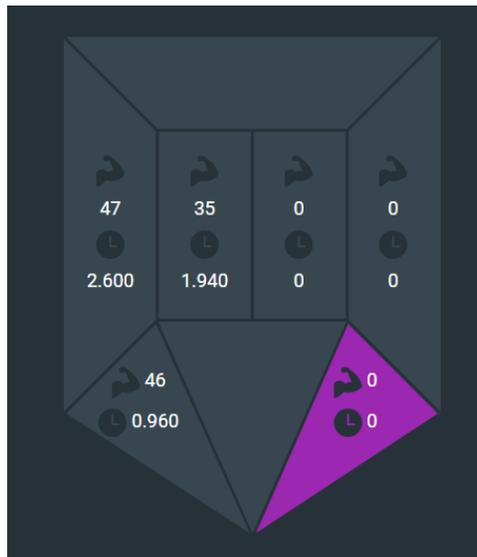
For the reaction program type, that section contains the status of the session which could be “Not started”, “Started”, “Normal”, “Round break”, “Break”, “Paused” or “Stopped”. This section also contains the time for which the session is running, the number of the performed punches, the force and the reaction time of the last punch.



General information – reaction type

5.1.2 VIRTUAL PUNCH CUSHION

During execution of reaction type program, the virtual punch cushion contains numeric punch information. For all reaction programs the virtual punch cushion contains the last force and reaction time for all six punch types.



Virtual punch cushion

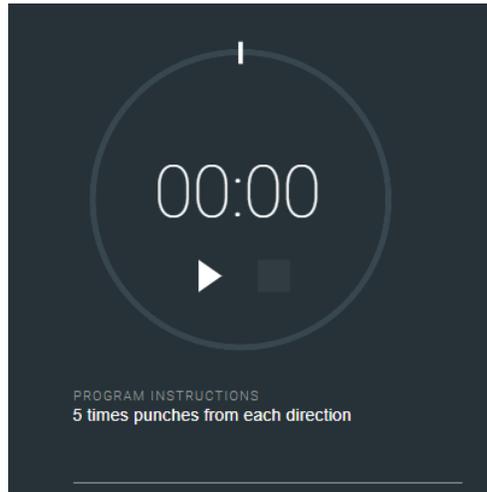
Reaction sessions measure the reaction time for specific punch types in seconds. Additionally, this cushion visualizes all planes on the actual punch cushion. These planes lid up in different color according to the predefined or random punches in the training program.

During execution of free or match session, the virtual punch cushion blinks in white when a punch is detected.

5.1.3 TIMER PANEL AND PROGRAM DESCRIPTION

In the left side of the screen there is a timer which indicates for how long the session is executed. Its serves also for starting, pausing, resuming and stopping the session (see Start, pause, resume and stop session).

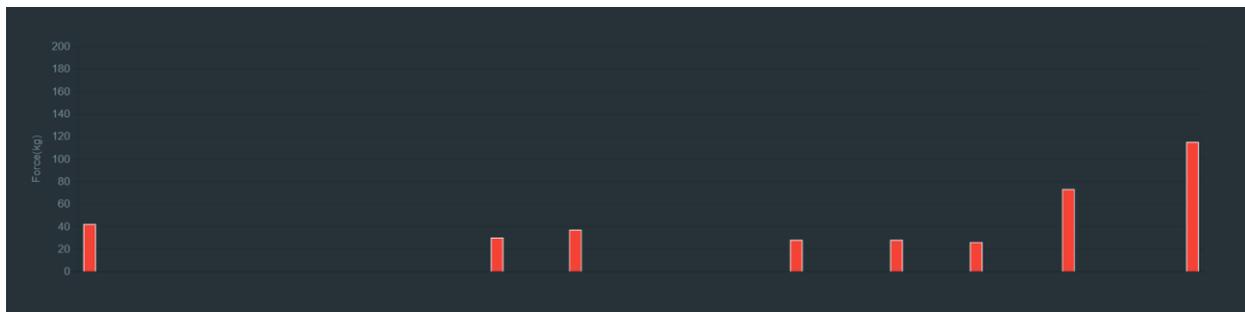
The program description, which can contain short overview or instructions, is placed below the timer panel.



Timer panel and program description

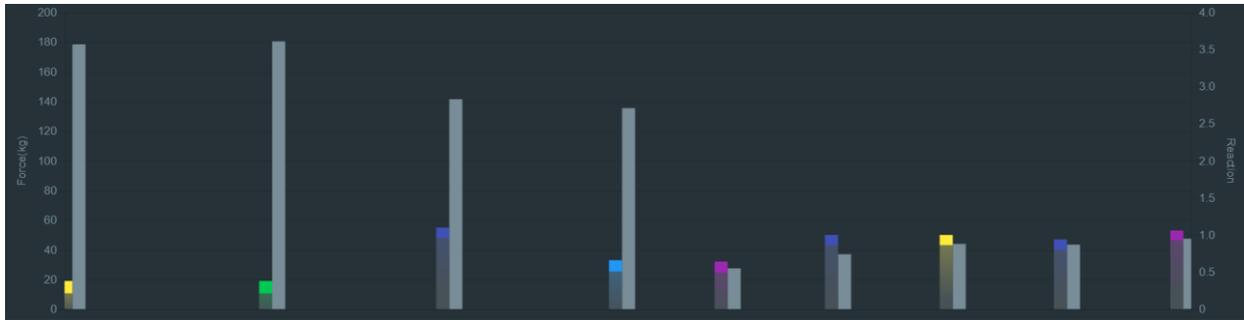
5.1.4 PUNCH DATA CHART

The last screen element in the session execution screen is the punch data chart. For free and match programs the punches are added in red. In case of a match session, the graph data is reset on every new round.



Punch data graph for free / match sessions

For all reaction programs, the punches are added in gray with different punch color (according to the direction of the punch) on top of each bar.



Punch data graph for reaction sessions

Additionally, each punch also has a white bar attached to it, indicating the reaction time of the punch. The reaction time is indicated in seconds.

The punch power depends on the units of measurements that are used. The weight could be measured in kilograms or pounds and that is defined in Settings screen (see Settings screen).

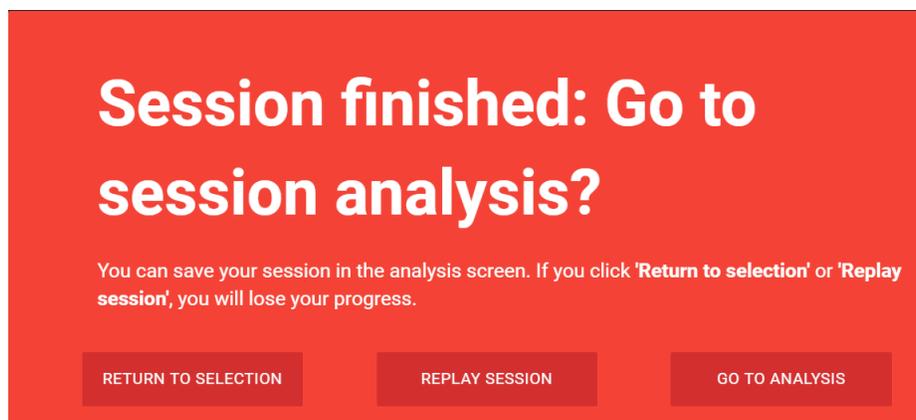
5.2 START, PAUSE, RESUME AND STOP SESSIONS

In order to be able to control the sessions, two buttons were added to start, pause, resume and stop the session. It is possible to pause the session during any training program type. The buttons are placed in the “Timer panel” and they are represented by a “play” /pause ” icon and a “stop” icon .

To start or resume the session, use the “play” icon. When the session is started, the “play” icon is hidden and the “pause” icon is shown.

The session can be stopped with the help of “stop” icon. After that step, a pop-up with three options is shown:

- “Return to selection” – discard the session and return the user to the “Boxers and trainers administration screen”
- “Replay session” – discard the session and start a new session with the same chosen boxer and training program
- “Go to analysis” – open “Session analysis” screen which contains more details of the session



Pop-up after stopping the session execution

NOTE: Be careful, because once the session is stopped, it cannot be resumed.

NOTE: The "stop" icon will be disabled as long as the session is not started once.

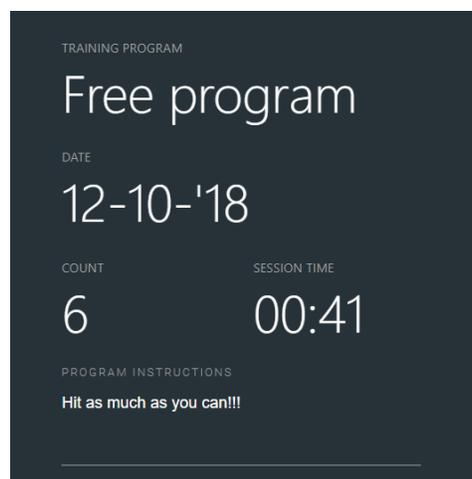
NOTE: The session could be saved only in "Session analysis" screen, otherwise it the results will be discarded.

6. SESSION ANALYSIS SCREEN

After completing an exercise, the exercise data can be analyzed and stored. If an exercise is saved, it can be reopened and analyzed days, weeks or even years later (from the “Boxers and trainers administration screen”). The analyzer screen provides the user with a relatively easy user interface to look at the exercise results in more detail. This chapter explains all components and functionalities provided in the “Session analysis” screen.

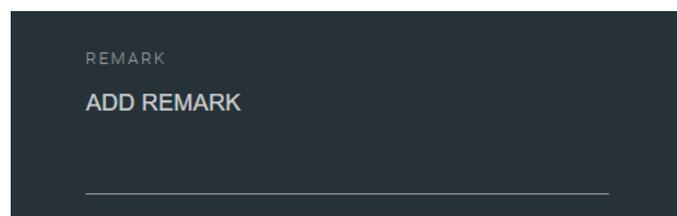
6.1 GENERAL EXERCISE INFORMATION

Every session has several basic fields that are shown in the exercise analyzer screen. The data field indicate when the exercise was executed, and the name field displays the name of the performed exercise. The count field indicates how many punches were performed and the session time – the length of the exercise. The program instructions present the description of the training program.



General exercise information

The exercise remark is intended for training specific information. Especially when trainers, boxer or other users have the desire to analyze the exercise at later point, it is very important to write down key comments about the exercise.



Exercise remark field

6.2 PUNCH STATISTICS

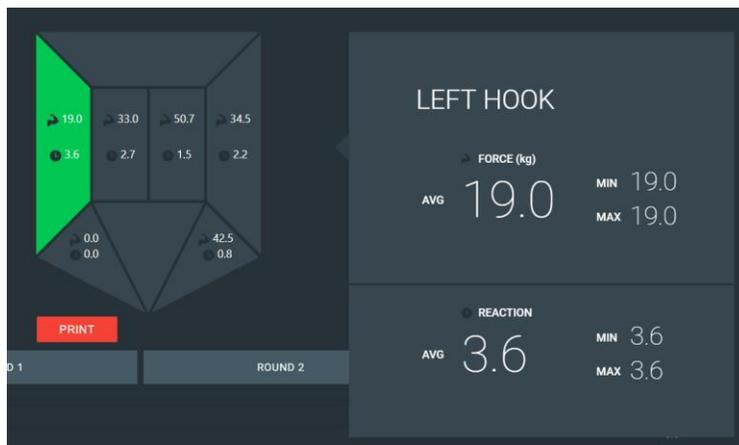
In order to provide a quick overview of the boxer’s performance during an exercise, a special section is added to the exercise analyzer screen. For the free and the match type, this section contains the maximum

and average punch force. For the reaction type, this section contains the maximum and the average punch force and the minimum and average reaction time.



Average and maximum force for the session

In case of a reaction session, on each of the cushion sections are displayed the average force and the average reaction time of the performed punches of that type. Additionally, the different sections of the cushions can be clicked in order to see the statistics only for the selected direction.



Additional statistics for the reaction type exercises

6.3 PUNCH DATA CHART AND TABLE

On the bottom of the screen is placed the punch data chart which is different for all three types of training programs.

For the free type, the chart represents with red bars the force of all the punches performed during the session.



Chart – free type

The match session punches are also added in red. In case of a match session, the graph data is available for the full session and for each round separately. The rounds can be switched by the tabs on top of the chart.



Chart – match type

The graph for the reaction type contains indicates the force of the punches with gray bars with different colors of the top (according to the direction of the punch). The reaction time is presented with white bars right next to the force bars. In case of a reaction session, the graph data is available for the full session and for each round separately. The rounds can be switched by the tabs on top of the chart.



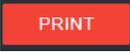
Chart – reaction type

For the reaction type is available also a table with addition information about the punches categorized by their direction. To see the table, click on the “eye” icon  which is in the right side of the tabs. The round tabs also affect the table, so by changing them, the information in the table is switched.

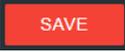
| | | L DIR | R DIR | L HOOK | R HOOK | L UPPER | R UPPER |
|---|-----|-------|-------|--------|--------|---------|---------|
|  | MAX | 33.0 | 55.0 | 19.0 | 50.0 | 0.0 | 53.0 |
| | AVG | 33.0 | 50.7 | 19.0 | 34.5 | 0.0 | 42.5 |
| | MIN | 33.0 | 47.0 | 19.0 | 19.0 | 0.0 | 32.0 |
|  | MAX | 2.7 | 2.8 | 3.6 | 3.6 | 0.0 | 0.9 |
| | AVG | 2.7 | 1.5 | 3.6 | 2.2 | 0.0 | 0.8 |
| | MIN | 2.7 | 0.7 | 3.6 | 0.9 | 0.0 | 0.6 |

Table with statistics – reaction type

6.4 PRINT THE SESSION DETAILS

To print all details shown on the “Session analysis” screen, press the “Print” button  which is placed below the cushion. A “Print preview” screen is shown, where is displayed the layout of a document with boxer’s personal details and the exercise statistics. From this screen, the shown document can be either printed by clicking “Print” or discarded by clicking “Cancel”.

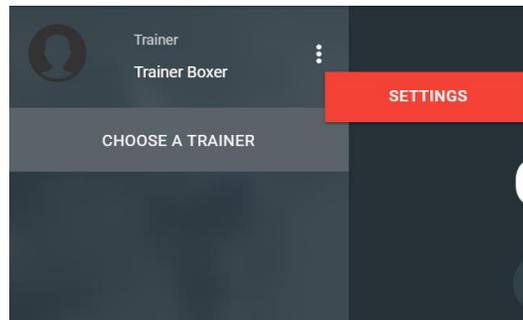
6.5 SAVE THE SESSION

To add the session to the boxer’s exercise history, click on the save button  below the cushion. A pop-up for confirmation is shown.

NOTE: The “Save” button is available only if the session analysis was opened right after the training execution. If the “Session analysis” screen was opened from the boxer’s session history, the session was already saved and therefore the option for saving is not available.

7. SETTINGS SCREEN

The “Settings” screen can be reached by clicking the “three dots” icon, placed in the right side of the trainers name, and selecting “Settings” from the dropdown menu.



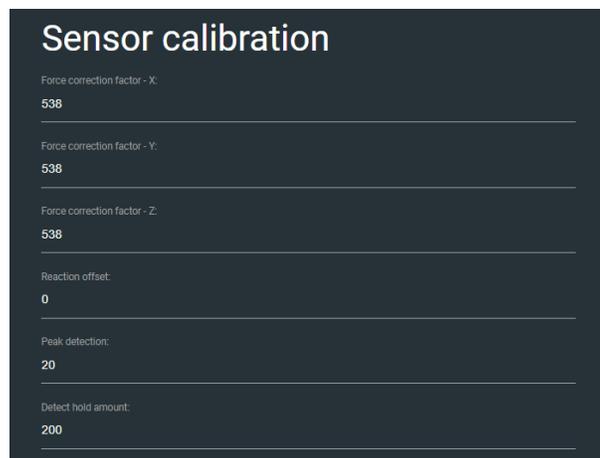
Going to the settings page

7.1 SETTINGS TYPES

The “Settings” screen contains three different sections: “Sensor calibration”, “Units of measurement” and “Random punch settings”.

7.1.1 SENSOR CALIBRATION

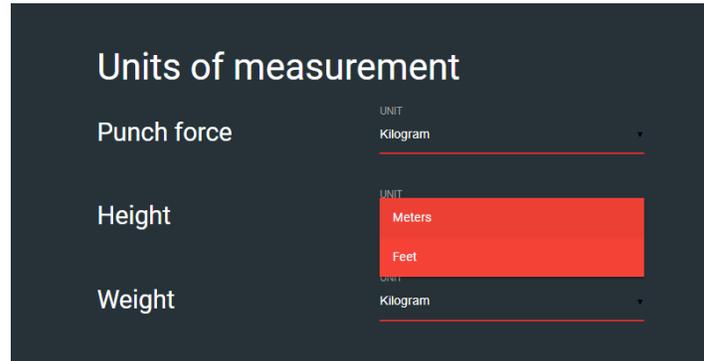
As the name suggests, these settings are for the calibration of the sensors and by default they are set to pre-calculated values. We recommend not changing them, because this can influence the accuracy of the calculations of punch force.



Sensor calibration settings

7.1.2 UNITS OF MEASUREMENT

The “Units of measurement” section contains the different units available for Punch force, Height and Weight. Different units can be selected from the three dropdowns.



Units of measurement settings

NOTE: Changing those settings will influence on the displaying of the Punch force, Height and/or Weight values.

7.1.3 RANDOM PUNCH SETTINGS

The “Random punch settings” section represents the chance of each direction to be set during calculating the random direction of multiple punch blocks. That means, the bigger number is set to a direction, the bigger chance for applying this direction for a punch. To change the settings, use the input fields right next to each direction.

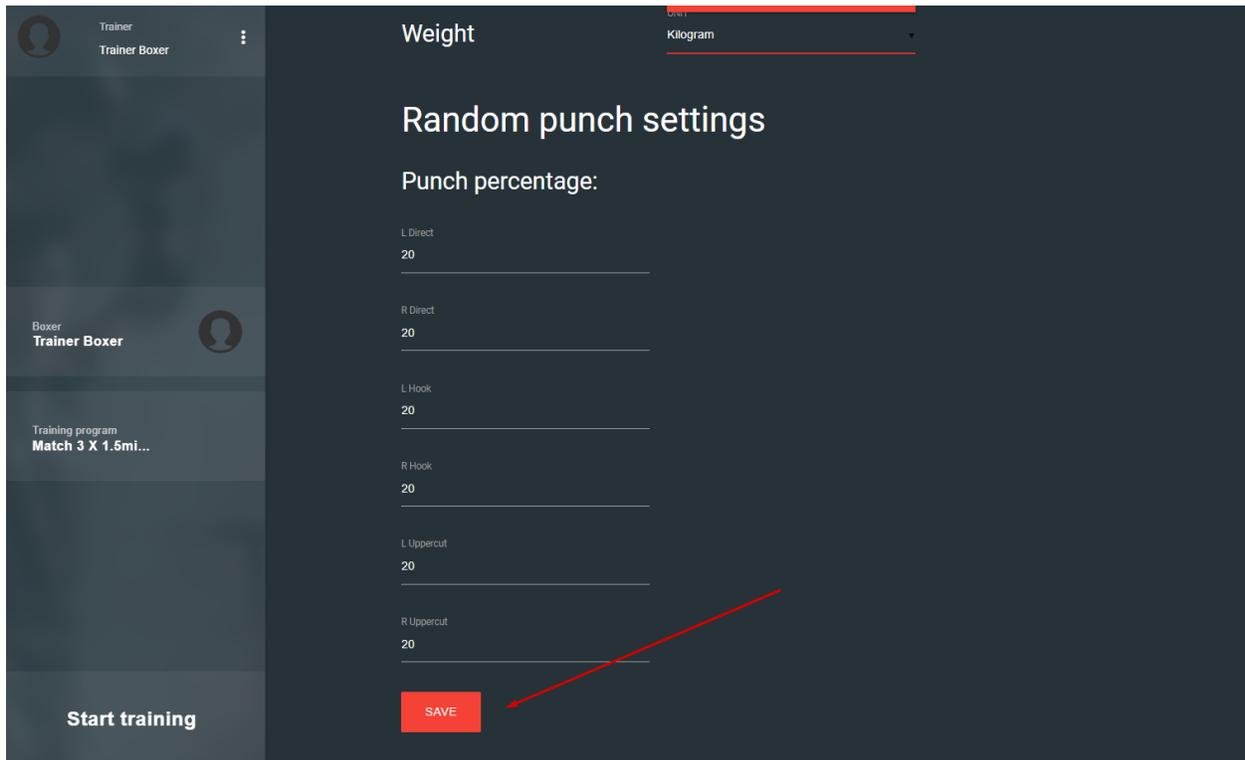


Random punch settings

NOTE: “L” and “R” symbols stands for “left” and “right”.

7.2 SAVING THE SETTINGS

To save the changes in the settings, use the “Save” button on the bottom of the page.



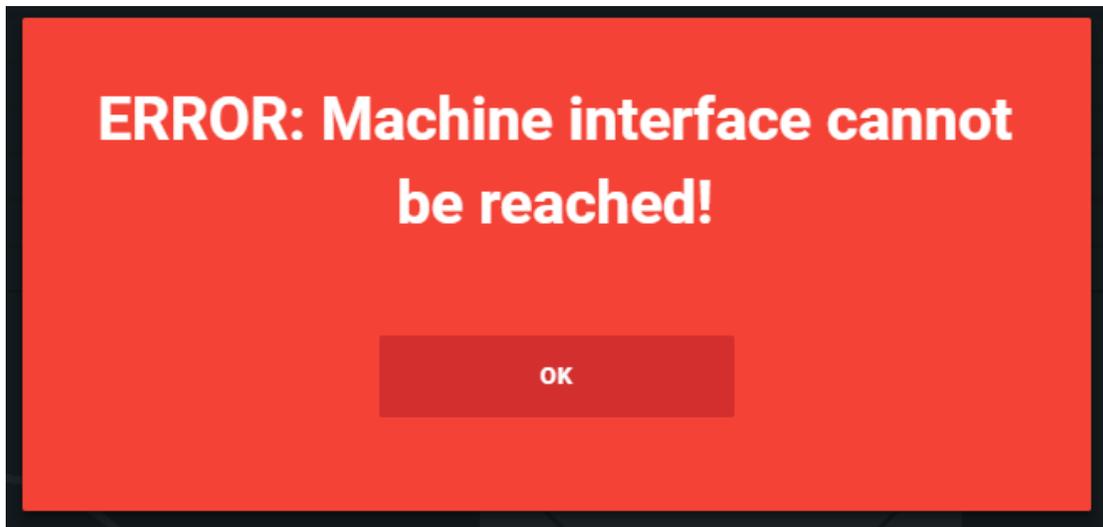
Save settings button

NOTE: *If you do not press the “Save” button, all the changes will be discarded.*

8. TROUBLESHOOTING (USER TIPS / WARNINGS)

If problems with the system occur, please restart the system by plugging out, wait for a few seconds and plug in the power adapter.

In the execution screen, an error pop-up can be shown. That means there is a problem with the connection. To fix that, try to restart the system as mentioned above.



Error pop-up in case of problem with connection