User guide for the PBresults game equipment and the PBresults software
1. Introduction
This application guide is designed for the installation of the equipment and introduction to the functional properties of the PBresults software. All of the functions above refer to the basic software version 1.2.4.

1.1. About the software
PBresults represents easy and convenient software used for managing and organizing a paintball game. Software contains basic properties such as: summing up points, editing of results, time tracking, wherein there can be two or four teams on the field. The results of the game can be displayed separately for the viewers on a large TV monitor via PC. The software allows you to display all the necessary information for holding paintball games.

1.2. Terms used
In this particular application guide special terms are used

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve</td>
<td>In order to add points to a particular team, the points have to be confirmed by the judge</td>
</tr>
<tr>
<td>Auto, Reverse point</td>
<td>Adding point to another team</td>
</tr>
<tr>
<td>Base button</td>
<td>Base button</td>
</tr>
<tr>
<td>Break Time</td>
<td>A time break between rounds of the game. The time before the primary game time</td>
</tr>
<tr>
<td>Display</td>
<td>Monitor or TV, which displays the information screen about the game</td>
</tr>
<tr>
<td>Dual game</td>
<td>Dual game on the field. The game involves two teams alternately replacing each other on the field</td>
</tr>
<tr>
<td>Game time</td>
<td>Primary game time</td>
</tr>
<tr>
<td>No points</td>
<td>There are no points. The points are not added to the team</td>
</tr>
<tr>
<td>One for one 1-1</td>
<td>Minimal group removal (the offender and one more player of his team). Maximum possible group removal – three for one (the offender and three more players).</td>
</tr>
<tr>
<td>PC Receiver</td>
<td>PC receiver</td>
</tr>
<tr>
<td>Penalties</td>
<td>Removal. Penalties</td>
</tr>
<tr>
<td>Pit zone button</td>
<td>Pit zone button. Installed in the pit zones of the teams, where the teams are located during the game break time</td>
</tr>
<tr>
<td>Remote control</td>
<td>Remote control for control of the game which is designed for the head judge</td>
</tr>
<tr>
<td>Round</td>
<td>Round. After capture of the base, a new round of game begins</td>
</tr>
<tr>
<td>Settings</td>
<td>Settings</td>
</tr>
<tr>
<td>Single game</td>
<td>Single game. Two teams participate in the game</td>
</tr>
<tr>
<td>Switch sides</td>
<td>The teams change sides of the game field after a particular amount of rounds</td>
</tr>
<tr>
<td>Timeout</td>
<td>A timeout requested by a particular team</td>
</tr>
<tr>
<td>Towel Time</td>
<td>To surrender. The team admits its defeat and gives point to the opposing team</td>
</tr>
<tr>
<td>View</td>
<td>The view of the panel(window) in the software</td>
</tr>
<tr>
<td>Driver</td>
<td>A software that allows your computer to communicate with devices</td>
</tr>
<tr>
<td>Electronic key, chip</td>
<td>The electronic key should be pressed against the button of the pit zone in order to activate it</td>
</tr>
</tbody>
</table>

⚠️ Pay attention. Advice
2. Installation and verification of the software

Unpack the equipment for the PBresults game and get acquainted with the functions and management before use. In the scope of delivery (see Fig. 2.1) for the PBresults program the following devices are included:

- PC Receiver - 1 pcs.
- Pit zone button - 2 pcs.
- Electronic key/chip - 8 pcs.
- Remote control - 1 pcs.
- Base button - 2 pcs.

![Equipment set for the program PBresults](image)

Figure 2.1 – Equipment set for the program PBresults

2.1. PC Receiver

PC receiver working frequency is 868 MHz and is required to receive data from devices and transfer them to a computer program (see Fig. 2.2).
A cable is added to the receiver (see Fig. 2.3), which is necessary for connecting the receiver to the computer (USB2.0AM/mini-USB).

1. Insert the jack plug on the end of the cable (USB mini) into the necessary jack on the receiver.
2. Connect the second jack plug on the end of the cable to an available USB - port on your computer.
3. After connecting the receiver to the computer, three red lights will light up on the receiver.
4. After that, the computer will detect the new device and will install all the necessary drivers automatically. When the process of connecting to a computer will be successfully completed, a red USB LINK light will ignite on the receiver.
5. When clicked on one of the devices (Pit zone button, Base button, Remote control) a status indicator RF ALARM will light up on the receiver (the devices should be programmed, see chapter 3.3.3.).
2.2. Pit zone button

The Pit zone button is working at frequency 868 MHz and is installed in the pit zones of the teams (see Fig. 2.4). The buttons are marked with a black and red circle.

![Image of Pit zone button]

**Figure 2.4 - Pit zone button**

For the pit zone that is marked with a black circle there are four electronic keys/chips with black ribbons (see Fig. 2.5). For the pit zone with the red circle - 4 chips with red ribbons.

![Image of Electronic key/chip]

**Figure 2.5 – Electronic key/chip**

Each team has one timeout per game, which can be requested during Breaktime and 10 seconds before game time.

The timeout can be used by attaching the chip with the matching color ribbon to the pit zone button, after that a green STATUS light will begin to blink and the time will be suspended (the devices should be programmed, see chapter 3.3.3.). The team can also use Towel Timeout, in order to do so, it is necessary to attach the chip to the pit zone button (see fig. 2.6), after the judge’s confirmation, the point will be added to the opposing team.
In case the STATUS button on the Pit zone is lighting up red, check whether the color of the ribbon matches the color of the button circle on the Pit zone. If it matches, but light indicator is not on, then check the batteries on the device. To do so, turn the Pit zone button around and remove 4 screws. Replace the old batteries with new ones and screw the lid back on.

2.2.1. How to add an electronic key to the Pit zone device

In case of adding additional electronic keys (no more than 10 units) to the Pit zone device, follow these instructions:

1. Purchase new electronic keys.
2. Turn the Pit zone device around and unscrew the 4 screws and take the lid off.
3. Push the Add key button (see Fig. 2.7). After that, the status indicators STATUS will start to blink alternately (green light) and «Lock» (red light).
4. While indicators are blinking attach the electronic key to the Pit zone device.
5. The green STATUS light will light up – a new electronic key is connected and programmed. If a red light ignites «Lock» - the electronic key is not connected, repeat point 3 and 4.
6. In order to add the following key repeat points 3 to 5.
2.2.2 How to delete electronic keys from the Pit zone device
In case of a loss of the electronic keys or the necessity to remove the electronic keys from the Pit zone device, follow the instructions below:

1. Turn the Pit zone device around and unscrew the 4 screws and take the lid off.
2. Push and hold the Add key button (see Fig. 2.7). During this time the ‘Lock’ status indicator will blink every two seconds.
3. After 20 seconds the ‘Lock’ status indicator will be lit, which means that all electronic keys have been deleted from the Pit zone device and that you can let go of the Add Key button.
4. In order to add new electronic keys to the device see chapter 2.2.1 from point 3 to 5.

2.3. Remote control
The remote control (see Fig. 2.8) is powered by two AA batteries and performs the same functions as the buttons in the software, description in chapter 4.1. When pressing any button on the remote control a green light ignites which is located above the Reverse Points button.
Figure 2.8 – Remote control

Start – start game
Stop – stop time
Base A – base A is captured, point to team B (if the teams have switched sides, then point goes to team A)
Base B – base B is captured, point to team A (if teams have switched sides, then point goes to team B)
Reverse point (Auto) – add points to opponent team of the team which pressed base button
Approve – approve point
No points – no points added
1 for 1, 2 for 1, 3 for 1 – one for one, two for one, three for one – team removal.

If the indicator does not light up, replace the batteries in the remote control and make sure that battery poles (+ / -) are aligned correctly.

2.4. Base button

The base button is installed in the bases of the teams (see Fig. 2.9). In order to capture the base, the player has to push and hold the button. You will hear a beep after which the judge will confirm or decline the point to the team.

Figure 2.9 - Base button
2.5. Connecting the external display

In order to connect the external display to the computer, it is necessary to use a video converter. If the video converter is from the Pbresults kit then follow the instructions listed below.

In order to display the results of the game on a separate display, connect the cables of the computer and the video converter as shown in figure 2.10.

![Connecting the video converter to the computer](image)

Figure 2.10 – Connecting the video converter to the computer

1. Next, right – click the mouse on the desktop and select the Screen Resolution option (see Fig. 2.11)
2. Click the Detect button in the opened window. (See Fig. 2.12).

3. After that, two monitors should appear (see Fig. 2.13).
Figure 2.2 – Two monitors

4. Choose the Generic Non-PnP Monitor option from the Display list (see Fig. 2.14)
5. For the Resolution option select the 1024 x 768 properties. For Orientation select Landscape. For Multi displays – Extend these displays (see Fig. 2.15). After that click the OK button and drag the scoreboard with the information beyond the monitor onto the other monitor (see chapter 5).

![Image](image.png)

**Figure 2.15 – setting the second monitor**

### 2.6. Additional equipment – scoreboard

Additionally to the entry equipment set up it is possible to purchase an electronic scoreboard by PBResults. The scoreboard dimensions are 100 cm x 110 cm x 8 cm and can be assembled with separate panels depending on type of scoreboard. Team names, score, and game time, and break time are displayed on the scoreboard.

The main advantage of the scoreboard is that it is wireless and works with a receiver in the entry equipment set. That means for tournament set up the only thing the user needs to do is connect the scoreboard to power outlet and with press of a button connect to the PBResults software. There are three scoreboard types: economic, tournament, and PRO.
“Economic” scoreboard is composed of one panel where placement of teams on scoreboard when teams switch fields (see fig. 2.16).

“Tournament” – scoreboard is composed of two panels, when teams switch fields, team names can be switched on scoreboard (see fig. 2.17.)
“PRO” scoreboard is composed of three panels and it is possible to change team names on the scoreboard. Central panel displays Game and Break time, panels on right and left name of teams and score (see fig. 2.18.).

3. Installation and launching of the software

Installation of the software onto the Windows operating system.

3.1. Installation

1. Download the PBresults software onto your computer
2. Run the file by double-clicking the main pbresults.exe file.
3. Follow the on the screen instructions and complete the installation.
4. PBresults Setup Wizard (see Fig. 3.1). In order to continue click "Next".

![PBresults Setup Wizard](image)

**Figure 3.1 – Step 1**

5. User terms (see Fig. 3.2). To continue select „I accept the agreement“ and click “Next”.

6. Tick the “Create a desktop icon” button and click “Next” (see Fig. 3.3).

7. This window displays the installation choices you have selected (see Fig. 3.4). In order to change any properties you can return by clicking the “Back” button. For continuing the installation click “Next”.
8. The files are being copied. Wait until the installation is completed (see Fig. 3.5).

9. After the installation of software is completed, click Finish (see Fig. 3.6).
3.2. Launching the program

Launch the program by clicking the desktop icon.

After opening the program a main window with three options will appear: Standalone Game, Game History, Settings (see Fig. 3.7).
3.3. **Settings – Settings of the program**

In order to change the settings of the program, choose the "Settings" option after launching the program or select “File” – “Settings” in the menu.

3.3.1. **Settings General – General settings**

To change general settings of the program, go to the first tab “General” (see fig. 3.8).

In order to change the main settings of the program use the first tab „General” (see Fig. 3.8). The „General” tab contains the following settings:

Break time (seconds) – the time in seconds before the start of the main game time.

Field Number – number of fields (depending on number of field, frequency of voice and sounds will change)*

*This field is not intended for the basic version of the program*

Sound Provider: Speaker , siren – sound signals during the game (for example, 10 second countdown before the end of the game)

Enable Voice Commands– activate for a female or male voice will sound the commands of the program (for example: Base, Approve, No points, 30 seconds, 10 seconds, Game on, Game finish).

Sound Provider: Female, Male – choice of voice of commands, female or male.

Browser start page – opens PBResults web-site in built-in browser of program.
Tournament Code – import of tournament code from website into program (see Ch 4.7.)

Tournament Field – filter of field names imported into program from website (see ch. 4.7.)

Scoreboard Type – type of connected scoreboard. Wired – cable connected (see ch 2.5.). Wireless – wireless connection using specially designed scoreboard from PBResults (see ch. 2.6.)

Enable Overtime – switch On or Off for additional overtime after end of main game time.

3.3.2. Settings Devisions – Pre-set settings of the game
4. Under the second tab “Divisions” preset game settings can be found (game score and time). On startup there is preset game under name of D7 (see fig. 3.9.)
In order to add new pre–installed settings press the Add button. To change current settings, left–click on the table icon and enter the information with the help of your keyboard but saving the initial format of the time. When starting a new game you will be able to choose one of your pre–installed settings of the game (see chapter 4).

Name – the name of the pre–installed settings.
Game Time – the primary game time.
Timeout – timeout requested by the team.
Overtime – additional time if the game has ended in a draw.
To Win – the number of points necessary in order to win the game.
To Switch – the number of rounds after which the teams change sides of the field.
Max Difference – the maximum amount of points between team score to win the game.
Add – add new pre–installed settings of the game.
Delete – delete the selected pre–installed settings of the game.

3.3.3. Settings Hardware – Connecting the equipment to the program

Every piece of hardware has a unique serial code on it, the serial code must be available in the “Settings” of the program under third tab “Hardware” (see ch. 3.11.). Start with making sure that the receiver is working
and is connected to the computer (see ch. 2.1.). To connect the hardware to the program, press Pair button, then the button on the piece of equipment you intend to connect (see fig. 3.10.).

![Figure 3.10 – Connecting device to the program](image)

Base A – in the program press Pair button, then press one of the Base buttons. Hardware serial code in Base button must match the serial number in Base A.

Base B – press Pair button then press the Base button of the next hardware piece. The serial code of second button Base should be displayed in the Base B field.

Pit zone A – in the program press Pair button then touch the chip(tag) with corresponding ribbon to one of the Pit zone buttons (for example with red circle). Serial code of Pit zone button must match with the code in the field of Pit zone A.

Pit zone B – click the Pair button and then attach the chip with the matching ribbon to the second Pit zone button (for example, with the black circle).

Referee Control – click the Pair button in the program and then click on any button on the Remote control device.

Scoreboard – if a special scoreboard is used (see ch. 2.6.) make sure that scoreboard is connected to a power supply, then press Pair button in the program. Press a button on the scoreboard to connect scoreboard to the program. The button is located on the case of scoreboard on the side next to the power supply plug. After pressing the button Link OK will be displayed if connection was successful, or Link Error if there was an error during connection.
After turning on the scoreboard there will be displayed its serial number for 3 seconds, then nothing will be displayed until a new game is created.

Wired Scoreboard Serial Port – number of the port necessary for wired connection of external display to video converter (see ch. 2.5.).

Serial Port speed – speed of port transfer 2400, 4800, 9600, 19200.

Enable Serial Echo – turn on/off response (echo) of port.

After connecting all the devices to the program click the OK button. The “Hardware” settings will be saved when you restart the program.

![Image](image1.png)

**Figure 3.11 – The devices are connected to the program**

### 4. Standalone Game – Begin game

To start a new game, select the “Standalone Game” option after launching the program in the tab Welcome, or “Menu” button and select “File” – “New Game”.

![Image](image2.png)

**Figure 4.1 – Game properties for two teams, Single game**
After that a new window will open with the game’s properties labeled “Game Parameters” (see fig. 4.1). In this window you can select the Single or Dual game modes (see fig. 4.2), specify the team names and use one of the pre-set game settings (see chapter 3.3.2). Team names can contain no more than 8 characters. Once the data is entered, press the OK button.

![Game Parameters](image)

Figure 4.2 – Game properties for 4 teams, Dual game

4.3. **Single game**

When choosing the Single Game option in the game properties - „Game Parameters“ and clicking the OK button, a control panel will open for the game between two teams (see fig. 4.3). In order to start the game, press the Start button.

![Game Management](image)

Figure 4.3 – Management of the game between two teams

1. At the top (with orange numbers) the remaining time of the game is displayed, below it (with green numbers) the time until the beginning of the primary time and the timeout time between rounds is displayed (see fig. 4.3 number 1).

By right – clicking or double – clicking the left button on the mouse on the scoreboard, an additional window will open (see fig. 4.4). In this window, you can click “jump to” and change the time of the game.
2. The information about the teams is displayed on the left and right sides, team names, number of points (see fig. 4.3 number 2).

Rounds are displayed below the scores of the teams (Round) and the removal of players (Penalties) (see fig 4.5).

If the teams used a timeout, the heading Timeout available changes to Timeout taken (see fig. 4.6). After a specific number of rounds, the teams switch sides on the field and the heading - Sides Switched appear in the program (see fig. 4.6).

The Base buttons changes sides in the program and on the remote control device. For the first team the base corresponds to the Base B button, for the second team – Base A.

3. Below the information about the team (see fig. 4.3 number 3), the Base and Towel Timeout buttons are located for each team (see fig. 4.7). The teams may use those with the help of the Base button device or by attaching the chip with the matching ribbon to the Pit zone, as well as the person managing the program or the remote control device. After clicking on them, a window with the number of points will start blinking. Towel Timeout – to surrender, the team admits its defeat and gives the point to the opposing team. Base – the team has captures the base of the opposing team.
4. The buttons for adding the score are located below the dial (see fig. 4.3 number 4 and fig. 4.8). After clicking the Base button, the judge has to add the point (Approve), not to add points (No points) or add one point to the other team (Auto or Reverse Point on the judge’s remote control device). After clicking the Towel Timeout button, the judge has to add the point (Approve) or continue the game by pressing the Start button.

5. Buttons for player removal are located on the left and right sides of the buttons for adding the score: 1-1 One for one, 2-1 two for one, 3-1 three for one (see fig. 4.3 number 5). On the left side – for the team on the left side, on the right – for the team on the right side (see fig. 4.9). All removal of players will be recorded in the protocol of the game and displayed in the tables of each team in the Penalties column (see fig. 4.6).
6. You can stop the time at any moment of the game by clicking the Stop button and start the time again by pressing Start (see fig. 4.3 number 6 and fig. 4.10).

4.4. Dual Game

By choosing the Dual Game option in the properties of the „Game Parameters“ (see fig. 4.2) and clicking the OK button, a control panel opens for the four team game, two teams in one group (see fig. 4.11). In order to start the game, press Start.

The management of the game is the same as described in chapter 4.1. In addition, below the game’s control panel, the second group of teams is displayed with their game time. When the team from the first group presses the Base button, the Break time countdown starts for the second group, after which the second group of teams comes out on the field. The inactive group of teams is displayed in grey color (see fig. 4.12).
4.5. Switch Sides – Switch the sides of the teams

The program changes the sides of the teams automatically, according to the pre-set game settings, see chapter 3.3.2. In order to manually change the sides of the teams on the field during any moment of the game, choose point „Switch Sides“ in the „File“ menu (see fig. 4.13).

Keep in mind, that if Base A corresponds to team number 1, then after switching the sides of the team, the team will correspond with the Base B button.
4.6. **Edit game results**

In order to change the results of the game, click the menu and select „File“ and then „Edit active game results“ (see fig. 4.14). If there are four teams on the field in „Dual game“, in the menu click „File“ and then select „Edit inactive game results”, in order to edit results of the inactive game.

![Image 1](image1.png)

**Figure 4.14 – Editing game results**

In the opened window you can change the removal of players (Penalties) and points (Points). In the centre of the window the time of receiving the point and the number of the round are located. The results of the first team – on the left and the results of the second team – on the right (see fig. 4.15).

![Image 2](image2.png)

**Figure 4.15 – Window for editing results of the teams**

In order to delete a point click ![Delete Point](delete.png). In order to add a point click ![Add Point](add.png).

For changing the removal of players click ![Change Penalty](change.png), after which a new window will open „Edit Penalty List“ (see fig. 4.16).

In order to add a new removal (remove a player) press Add. From the menu, choose the type of removal - 1-1, 2-1, 3-1 (see fig. 4.17). You can add text next to the penalty type (for example, a surname).

To remove any kind of violation of the game press the big red cross on the right.

Confirm the penalty information by clicking the OK button.
4.7. Game History

You can view the history of the game after running the program by clicking the ‘Game History’ option or selecting “Game History” tab.

In the opened window you can see the list of past games and the time when the games have ended. Also the names of the teams and the results of the games (see fig. 4.18).

You can change the results of the past games. In order to do that, click this icon next to the game. To see how to change the results of the game see chapter 4.4.

By clicking button next to game, printout with information on game in .pdf format can be viewed.

To delete all game history, chose menu, select “File” and then “Clear game history” (see fig. 4.19.)
After that, window of approval of deletion of game history will appear. Click “Yes” to approve deletion or “No” to dismiss action and keep game history (see fig. 4.20.).

4.8. Exit game
To exit the game click „Exit“ in the „File“ menu or click on the cross in the top right – hand corner of the window.

4.9. Synchronization of the tournament between the website and software

Cooperative use of web-site www.pbresultsonline.com and given program simplifies publication of results and organization of tournaments. Teams and tournament games previously created on the website can be imported into the program, and the results exported from program and imported on the website.

First you need to log in to the website and create a tournament, read the manual of website pbresultsonline.com on how to achieve that. The manual can be downloaded from our homepage under “Support”.
4.9.1. Import of tournament game from website to the program.

After creating the tournament go to page “My tournaments”. To do that press on Settings badge in the right upper corner of the site, then choose “Events organizing”. In the table under Code column next to the tournament the code of that tournament will be displayed (see ch. 4.21.). This code will be used for the tournament import in the program.

![Figure 4.211 – Page “My Tournaments” with tournament code](image)

Start the program then select “Standalone game” option after the Welcome tab or in the “File” menu selecting “New game”, new window with game parameter will open, select “Choose game” (see fig. 4.1.).

Next write in the tournament code in “Tournament code” field, then table will automatically fill in with tournament schedule. In the table following data are imported: date and time of the games, team names and field names where games take place (see fig. 4.22.).

![Figure 4.222 – Importing tournament from website to program](image)
To filter games on field names use “Filter by field” by writing in the same names as in web-site. The table will display only games that are happening on the selected game field (see ch. 4.23.).

![Figure 4.233. – filtering by game field name](image)

Press on the row and then press OK. A new window will open with game parameters, but team names will be entered in the game name fields that were previously selected (see fig. 4.24.). Press OK button to proceed to game control panel (see ch. 4.1.).

![Figure 4.244. – filtering by game field name](image)

Tournament code and field filter can be entered right away in the settings of the program (see ch. 3.3.1.). Then after pressing “Choose game” the popup table will have tournament code and field filled in.

After end of the game, again select new game and “Choose game”. Row with finished game will be grayed out. Select next game to proceed to the game control panel (see fig. 4.25.). Keep repeating same steps until all games are finished.
4.9.2. Import of tournament results from program to website

If tournament games were imported and used in program the results will automatically be sent to the website where results can be watched online in the tournament page.

The tournament will be available to all visitors on the homepage if in the tournament page option “Hide event from public” was not selected. To proceed to the online tournament watching, press on it with your mouse. In the tournament page under tab “Pitzone” live information on tournament will be displayed (see fig. 4.26.). All changes throughout the game (score, game time, break time) will automatically be updated.
Under tab “Schedule view” also display score of the game that is automatically imported from program. Author of the tournament can manually change score of every team.

![Figure 4.277. – Tournament schedule and score](image-url)

After end of the game it is mandatory to confirm game score. To confirm score tick the box in between both team scored points. After confirmation a text “Score approved” will appear in the upper right corner of the page and frame of the score field will turn green.

![Figure 4.288. – game score confirmation](image-url)
5. Display settings

There are two ways to display game board.

First method, connecting external display to computer through video converter. Make sure display is plugged in and computer is set to double display option (see ch. 2.5.). Then in the menu select “File”, “Show Pit Display”. By holding the window with left button of your mouse drag it to the right side and beyond the borders of your main display until it is seen in the secondary display.

Second method, using wireless connection and web browser through connection of all devices to common LAN network (see ch. 5.3.)

5.1. Show Pit Display

Select the file menu and click “Show Pit Display”, in the opened window you can see output information about the game (see fig. 5.1). At the top of the board there are the names of two active teams on the field (TEAM A, TEAM B) and game score (2:0). In the middle, the remaining time of the current group of teams is located (GAME TIME 07:48) and time of the timeout (BREAK TIME 01:14). Below the scoreboard, is the information about the inactive group of teams, if the mode „Dual game” had been selected: names of the teams (TEAM C, TEAM D), score (1:1), and also the remaining time of the game (7:36). When the group of teams switches on the field, then the information about the active group of teams changes its location on the scoreboard. The information about the active group of teams moves to the top of the board and the information about the inactive teams moves down.

![Figure 5.1 – Information board of the game results](image-url)
5.2. Full screen Pit Display
In order to output the scoreboard onto the full screen, click “File” point „Full screen Pit Display” (see fig. 5.2). To make the window smaller, click again „Full screen Pit Display”. To close the window fully, left- click of your mouse on any spot on the scoreboard, then hit the “Esc” button on the keyboard or use the cross in the top right hand side of the window.

![Full screen Pit Display](image)

Figure 5.2 - Full screen Pit Display

5.3. Refresh LED Display
In case the Display freezes or displays the wrong information, click the menu button and select “File” point “Refresh LED Display”. That will refresh the game’s window and resume the work.

5.4. Show Web Scoreboard
Any device that has a web browser (smart TV, tablet, mobile phone, and computer) and a local network connection can display the game board. Schematic display of wireless board display on devices can be seen in fig. 5.3.

1. Make sure all the devices are connected to the same network as the computer containing the software. For example, through the Wi-Fi router.
2. In the program menu select “File”, “Show Web Scoreboard”. In the web browser a new window will be opened containing game board. In the address bar of the web browser computer IP address (also the port) is displayed.
3. Copy that IP address (with the port) and paste it in the web browser of other devices.
4. The amount of wireless connected devices for display is not limited.
6. Tabs
Lower tab menu with tabs “Welcome”, “Game”, ”Game History” and “Browser” is meant for management and fast switching between main windows in program(see fig. 6.1.).

- **Welcome** – startup window with 3 options: Standalone Game, Game History, Settings (see fig. 3.7.).
- **Game** – tab with current game (see chapter 4.1. and 4.2.)
- **Game History** – history of the game (see chapter 4.5.)
- **Browser** – tab with built in browser application, for display of web-site PB results [http://paintballresults.com](http://paintballresults.com).
Built in web browser has buttons as:

- **Back** – return to previous page
- **Forward** – move forward to next page
- **Stop** – stop loading of current page
- **Refresh** – reload current page
- **Go** – go to page listed in the address bar.

### 6.1. Tab management

For tab management, right-click of the mouse on tab. In dropdown menu there will be “Customize”, “Save As”, “Reset”, “Close”, “Dock On” and Show Text” (see fig. 6.3.).

**Close tab.** To close current tab choose “Close” from the dropdown menu. Selected tab will disappear from menu, but it can be added again.

**Location of tabs.** To change location of tab menu choose “Dock On” from the dropdown menu and then choose one of the possibilities: “Top Right” to locate it in right hand top, “Top Left” to locate it in left hand top, “Left” to locate it on the left side see fig. 6.4.).
Show, do not show tab titles. To hide or show titles of tabs choose “Show Text” from the dropdown menu.

Add tab. To add a tab to lower navigation panel, click icon on the left side corner and then choose “Other...”. In opened window choose one of the tabs and hit “OK” (see fig. 6.5.). To dismiss action click “Cancel” or cross in right upper corner of window.

Save tab. To save current view of window into tab, choose “Save As” from dropdown menu. Then write in the name of the tab in “Name” area and hit ok.

Customize. To adjust the visibility of upper menu “File” and “Help” choose “Customize” from dropdown menu and go to “Menu Visibility” tab. There check in desired fields that will be shown in program. After that click “OK” to approve (see fig. 6.6.). Click “Cancel” or cross in the right upper corner of the window to dismiss action.
Figure 6.6 – Menu visibility options