

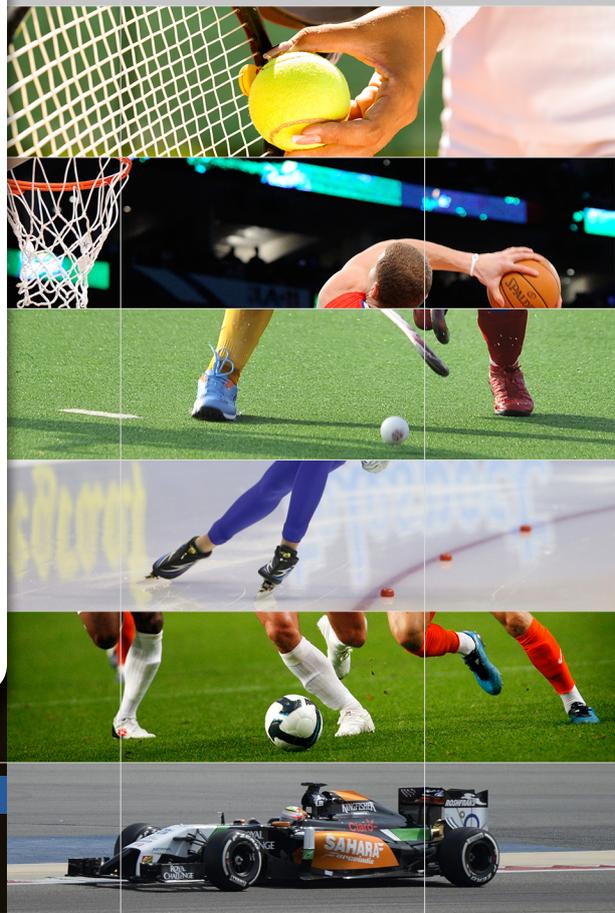


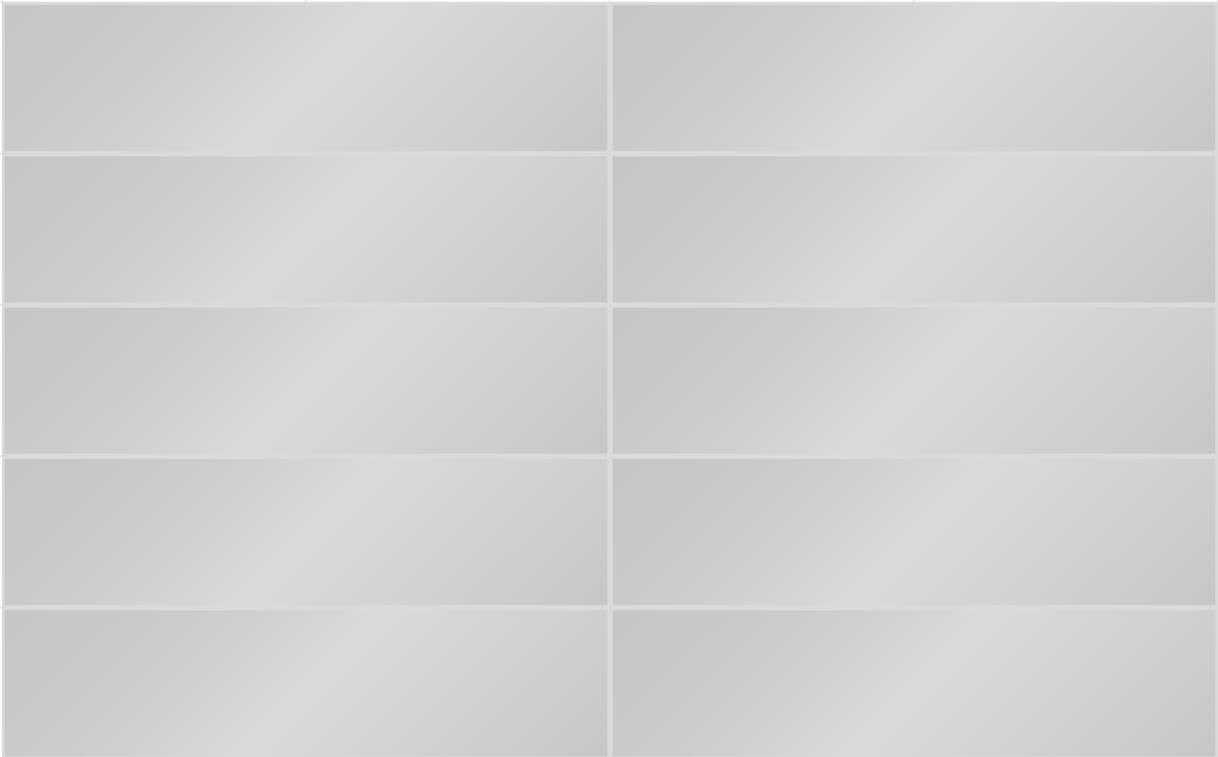
INMOTIO

System

version 3.4
English

draft-version-6
Manual





RICH-1502.D6

This manual is an interactive PDF. You can easily navigate through it, providing the answers you are looking for. There are several ways to utilize it:

Navigation/information bar

navigate to the page: Contact Imotio



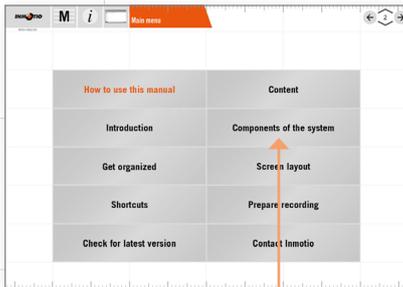
This bar is on every page helping you to find your way.

Main menu, Content and Screen Layout

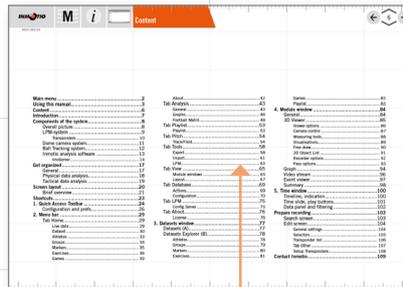
The Main menu offers you a choice between all subjects in this manual.

The Content shows a complete view of all items. You can click on the topic of your choice and you automatically navigate to that page.

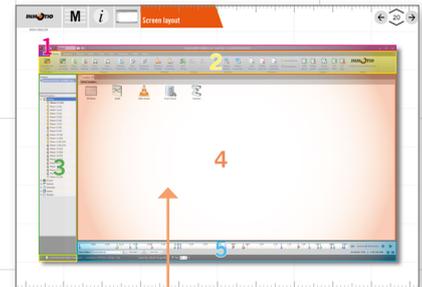
The Screen Layout offers you the fastest way to find your way into the screen, you can click on one of the five windows.



navigate to a subject



navigate to a topic



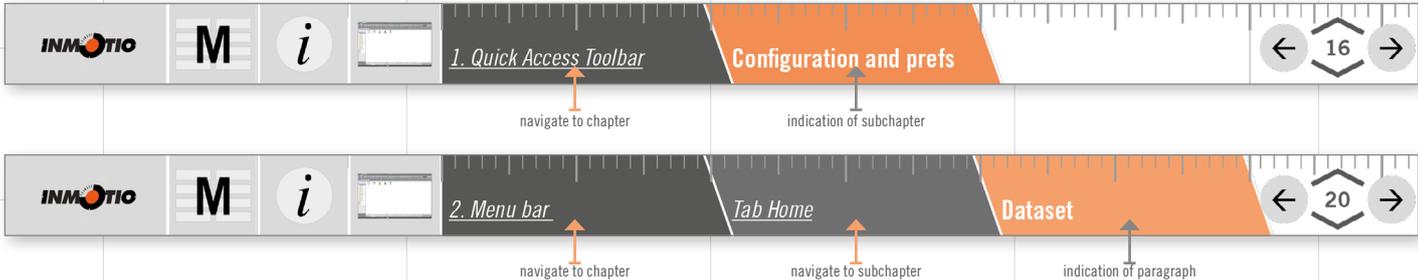
navigate to a window

If a topic continues on the following page, you will see this sign:



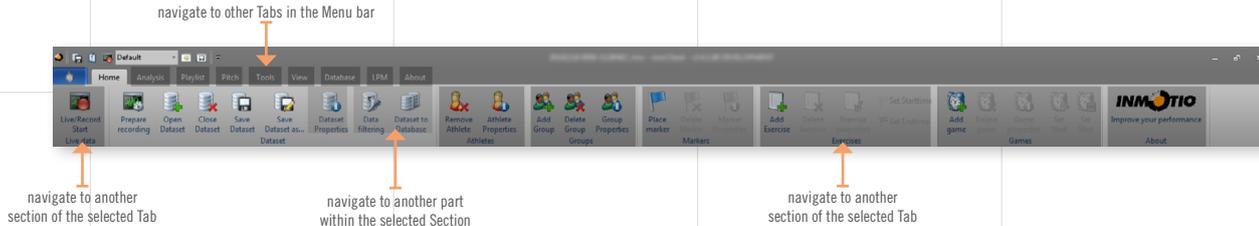
Chapters, subchapters and paragraphs

The beginning of a chapter and subchapter and paragraph is marked with a tab in orange (fading in colour). That indication turns into gray on the following pages and is then activated to switch to the beginning.



Navigation by windows

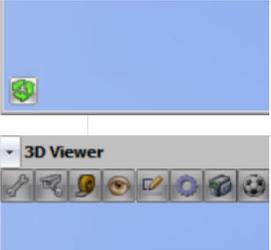
The five windows of the Screen Layout each have their own chapter in the manual. The screen shots of these windows are interactive. Here is an example of navigation using the Menu bar (window #2 in the Screen Layout):



Navigation in the text

When the explanation text is referring to another explanation, that part of the text is indicated by an orange rectangle. You can click on this text to navigate to this explanation.

Navigation with shortcuts



Rotating

Click on the button at the bottom left (c) of the screen, in order to rotate the field through 90 degrees. You can also change the position of the field in the window by clicking on the field and moving the mouse while holding the left mouse button pressed down. You can also zoom in and out using the scroll wheel on your mouse or the arrow keys on your keyboard.

If you select an athlete in "Datasets Explorer (B)", this player will be highlighted on the field with a yellow circle.

Display

You will see a number of icons at the top left of the module layout window (d). By clicking on an icon, a window containing options such as "Viewer options", "Camera control", "Measuring tools", "Visualisations" and "Recorder options", will appear (explained on the next pages).

navigate to the according
place in the manual



Go back on the path of visited pages (Windows). Equal to:



Go back on the path of visited pages (Mac). Equal to:



Go forward on the path of previously visited pages (Windows). Equal to:



Go forward on the path of previously visited pages (Mac). Equal to:

Main menu	2	Games	41	Games	89
Using this manual	3	About	44	Playlist	90
Content	6	Tab Analysis	45	4. Module window	91
Introduction	7	General	45	General	91
Components of the system	8	Graphs	48	3D Viewer	92
Overall picture	8	Football Match.....	50	Viewer options	93
LPM-system	9	Tab Playlist	61	Camera control	94
Transponders	10	Playlist.....	61	Measuring tools.....	95
Dome camera system.....	11	Tab Pitch	62	Visualisations.....	96
DomeControl Application	12	Track/Field.....	62	Free draw	97
Ball Tracking system.....	14	Tab Tools	66	3D Object List	98
Inmotio analysis software	15	Export.....	66	Recorder options.....	99
imoServer	16	Import.....	69	Pass options	100
Get organized	19	LPM.....	71	Graph	101
General	19	Tab View	72	Video stream	103
Physical data analysis.....	20	Module windows	72	Event viewer	104
Tactical data analysis	21	Layout.....	74	Summary	105
Screen layout	22	Tab Database	76	5. Time window	107
Brief overview	23	Actions.....	76	Timeline, indication.....	107
Shortcuts	25	Configuration	77	Time slide, play buttons.....	108
1. Quick Access Toolbar	26	Tab LPM	82	Data panel.....	109
Configuration and prefs.....	28	Config Server	82	Prepare recording	110
2. Menu bar	31	Tab About	83	Search screen.....	110
Tab Home.....	31	License.....	83	Edit screen	111
Live data	31	3. Datasets window	84	General settings.....	111
Dataset	32	Datasets (A).....	84	Selectors	112
Athletes	35	Datasets Explorer (B).....	85	Transponder list	113
Groups	36	Athletes	85	Tab Other	114
Markers	37	Groups	86	Setup Transponders.....	115
Exercises.....	38	Markers.....	87	Contact Inmotio	116
		Exercises.....	88		

RICH-1502.D6

Dear User,

The Inmotio System has been developed being an efficient and user-friendly athlete monitoring system. The system is based on the measurement of athletes position data, heart rate, video streams and optionally the ball.

It serves both physical and tactical analysis of individual athletes and teams. The system provides real time feedback during live training sessions and games. The Inmotio System helps you to better understand the physical performance of individual players and of the team, increases tactical insight, helps to prevent injuries and allows you to build up individual player profiles.

The Inmotio System includes player tracking (LPM), dome (PTZ) cameras, a ball tracking system and advanced analysis software. This manual describes the system in general but focuses on the use of the analysis software.

The application is flexible and therefore any suggestions for improvement or extension are welcome and will be seriously considered.

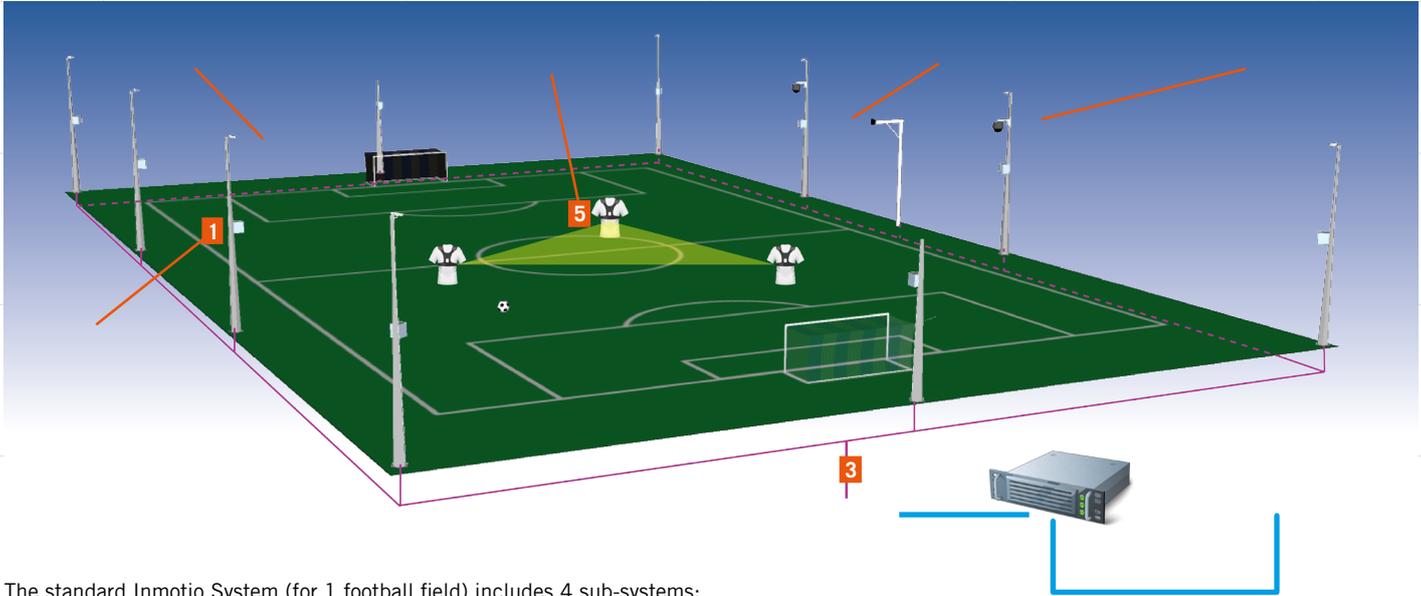
If you have any questions or suggestions, please contact us by phone: +31 20 3632693 or e-mail: support@inmotio.eu



INMOTIO OBJECT TRACKING BV
Founded by Abatec and TNO



RICH-1502.D6



The standard Inmotio System (for 1 football field) includes 4 sub-systems:

Local Position Measurement (LPM) System

capturing the position of the athletes
includes:

- 1** Base Station (10x)
- 2** Reference Transponder (1x)
- 3** Glass Fiber Hub (1x)
- 4** LPM-server
- 5** Athlete Transponder

Pan, Tilt, Zoom (PTZ or dome) Camera System

capturing of automated HD video
includes:

- 6** PTZ or Dome Camera (2x)
- 7** Dome Camera Application

Ball Tracking System

capturing the position of the ball
includes:

- 8** Camera (12x)
- 9** Ball Tracking Servers

Inmotio Analysis (coaching) Software

real time data analysis, database and reporting
includes:

- 10** imoServer *)
- 11** imoClient **)

*) software, can be installed on same PC as imoClient or separate (rack-)server.

***) software, can be installed on desktop, laptop, or tablet PC.

Capturing the position of the athletes

Local Position Measurement (LPM) System

The LPM system measures real time position of the athletes. The system includes base stations **1** that are mounted around the measurement area. The athletes wear a transponder **5** that communicates with these base stations.

A reference transponder **2** is positioned at an edge of the field for calibration purposes.

The base stations are connected through a fiber optic infrastructure to a fiber optic hub **3**. From here the base station data is transferred to the measurement PC (LPM Server) **4**.

The LPM Server calculates the position data of the athletes in real time.

A sensor is connected to the transponder's telemetry channel socket. This sensor picks up the heart rate signal that is produced by a H2 or H3 Polar heart rate belt.



1



2



3



4

RICH-1502.D6



Athlete equipment

The vest contains the Polar heart rate measurement belt and the transponder. Please make sure the antennas are positioned on the top of the shoulders. Adjust the vest if necessary.

Check the connection between the antennas on the shoulders and the transponder on the back of the player's vest.



Charging the transponders

After every measurement, the transponders must be charged in the charging station. When the transponder has been fully charged, a green light on the charging station will light up next to the transponder.

- Fully charged transponders will last for approximately 4.5 hours.
- Charging a transponder takes max. 1 hour (depending on the current power level of the transponder).



Activating the transponders

Adding transponders to the system and how to activate them, is explained in "Setup Transponders" in the chapter "Prepare recording".

RICH-1502.D6



Capturing of automated HD video

The dome camera system **6** records the training session or match by means of 1 or more HD quality PTZ cameras. The video streams are recorded in sync with the position data of the LPM-system. The cameras can be controlled automatically by following 1 or more athletes.

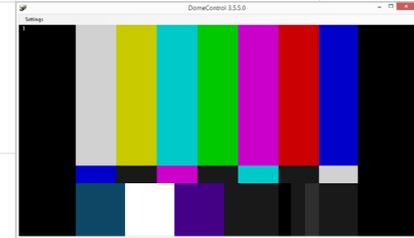
Dome Control Application

This application **7** takes care of the capturing of the video streams that are produced by the dome cameras (see “Dome-Control Application”). The application includes a live viewer.



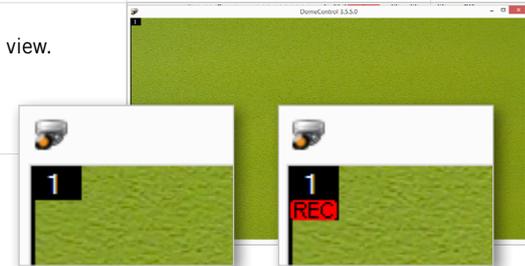
RICH-1502.D6

The DomeControl Application usually starts automatically when a measurement starts in the imoServer. If the application is started **without** the imoServer, than the screen (with 1 camera connected) looks like this test screen.



Connected with the imoServer

If the Measurement Selection is activated in the imoServer, the screen will show the camera's view. During recording, the sign 'REC' shows under the camera number.



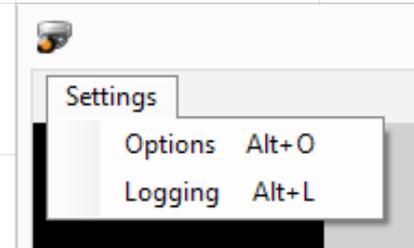
Menu



The **Alt** key makes the menu to appear.



Changes made by unauthorised persons can jeopardize the camera configuration and is therefore strongly discouraged.



Capturing the position of the ball

The ball tracking system includes 12 fixed CCD-cameras **8** that are positioned around the measurement area. The cameras capture the position of the ball, which is calculated in real time by the feature servers. Each feature server is connected to three cameras.

Fiber optic cables connect the cameras. The ball data is synchronized and merged with the position data and video.



Real time data analysis, database and reporting

Inmotio analysis software

The Inmotio analysis software or Inmotio Application (as shown in “Screen layout”) gathers the position data, ball data and video streams. The application can be used to record, store and analyze the data. A standard database can be connected to this application. Reports can be retrieved from this database by using standard report generating software.

Inmotio Server application

The Inmotio Server application or “imoServer” manages the communication between the LPM System, Ball Tracking system and the Inmotio Application. It is amongst others applied for activating and checking the status of the transponders in the system. It is used for controlling the dome cameras and enabling multiple Inmotio Applications (clients) to monitor a measurement simultaneously.

Dome Control Application

This application takes care of the capturing of the video streams that are produced by the dome cameras (see “Dome-Control Application”).
The application includes a live viewer.

The user interface of the imoServer includes of the following sections:



- “Section Transponders”
- “Section Measurement selection”
- “Section Video server”
- “Section LPM Statistics”
- “Section Control Camera”

and the following buttons (at the top):



Settings. Please note that unauthorised use of this feature may jeopardize the system and is therefore discouraged.



Exit. Shut down the imoServer.

The screenshot shows the imoServer v3.4.148 DEVELOPMENT interface. The main window displays a table of transponders with columns for Active, Vest, Name, Shortcut, Cam 1, Cam 2, Proc, Quality, Basestations, X, Y, Speed, and AntennaID 1. The table contains 13 rows of data, with some cells highlighted in red. Below the table, there are sections for LPM Statistics and a control panel for camera 1.

Active	Vest	Name	Shortcut	Cam 1	Cam 2	Proc	Quality	Basestations	X	Y	Speed	AntennaID 1
<input checked="" type="checkbox"/>	10	10		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1101
<input checked="" type="checkbox"/>	11	11		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1121
<input checked="" type="checkbox"/>	12	12		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1121
<input checked="" type="checkbox"/>	13	13		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1131
<input checked="" type="checkbox"/>	14	14		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1141
<input checked="" type="checkbox"/>	15	15		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1151
<input checked="" type="checkbox"/>	16	16		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1161
<input checked="" type="checkbox"/>	17	17		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1171
<input checked="" type="checkbox"/>	18	18		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1181
<input checked="" type="checkbox"/>	19	19		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1191
<input checked="" type="checkbox"/>	20	20		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1201
<input checked="" type="checkbox"/>	21	21		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1211
<input checked="" type="checkbox"/>	22	22		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1221
<input checked="" type="checkbox"/>	23	23		<input type="checkbox"/>	<input type="checkbox"/>	0	0,0%	0	0,0	0,0	0,0	1231

LPM Statistics

Control connection to LPM system:
Measurement selection not activated

Performance of LPM system in the last 60 seconds:

- Sample frequency: 1000
- Signal OK: 100,00 %
- No reference: 0,00 %
- No transponder: 0,00 %
- Not enough base stations: 0,00 %
- All zero: 0,00 %
- Too volatile: 0,00 %

Control camera 1 [Manual]

Man. zoom: [Slider]

Buttons: Select all, Select none, Store, Deselect off field

Section Transponders

Shows the overview of all transponders, selected for this measurement.

Vest

The ID of the vest (attached to the vest itself).

Name

The name of the player, wearing the vest.

Shortcut

A key that enables you to switch quickly between yes or not to follow with the dome camera.

Cam x

A transponder with this box checked is followed by the corresponding dome camera.

Freq.

The number of measurements per second for this transponder.

Quality

The quality of the signal in %.

Basestations

The number of base stations used for calculating the last position of this transponder. If smaller or equal to 6, the box turns red, or else it is green.

X, Y

Position on the field.

Speed

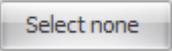
Instant speed of the player wearing the vest.

AntennaID1

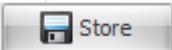
The ID of the first antenna in this transponder.



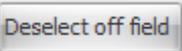
Select all of the shown transponders.



Deselect all of the shown transponders.



Save the present combination of selected transponders.



Deselect off field. Deselect all transponders that show less than 10% quality and are therefore considered to be off field. Please note that for using this option, first all transponders must be selected..

! The buttons above are nowadays barely used (only for testing purposes), since this option had been taken over by "Prepare recording".

Section Measurement selection

Select the **Pitch** you are intending to use and select the type of **Preparation** you want to use.



Refresh to apply the latest changes made in the coaching software.



Start a measurement with the **Activate** button.

! This is not the same as starting a recording.



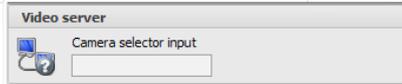
The dialog box titled "Measurement selection" contains two dropdown menus. The first is labeled "Pitch" and has "Field 1" selected. The second is labeled "Prepare" and has "Preparation" selected. There are two buttons: a refresh icon button next to the "Pitch" dropdown and an "Activate" button next to the "Prepare" dropdown.

Section Video server

The **icon** shows if there is a connection with the DomeControl application.

Camera selector input

Fill in this field by using the short cut character and the camera number (see "Section Transponders"). The checkbox of the camera is ticked in case the camera is on.



The dialog box titled "Video server" contains a checkbox with a camera icon next to it, which is checked. Below the checkbox is a text input field labeled "Camera selector input".

RICH-1502.D6

Section LPM Statistics

The first **icon** shows the status of the connection with the LPM server. The second line shows the previous status of the system.

The lower part shows the detailed status of the system in the last 60 seconds.

LPM Statistics

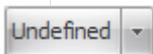
 Control connection to LPM system:
Measurement selection not activated

 Performance of LPM system in the last 60 seconds:

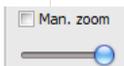
Sample frequency	1000
signal OK	100,00 %
No reference	0,00 %
No transponder	0,00 %
Not enough base stations	0,00 %
All zero	0,00 %
Too volatile	0,00 %

Section Control Camera

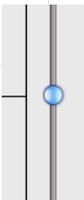
Select a camera to operate it manually. You can move the camera (pan and tilt) by moving the cross in the window.



You can store and name maximum 4 camera positions.



Zoom ruler for the camera that is focussed on a player (transponder).



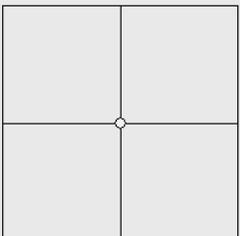
Zoom ruler for a camera with no particular focus.

Cam 1  Cam 2 

Control camera 1 [Manuel]

top 

Undefined 



Man. zoom



RICH-1502.D6



The Inmotio coaching software analyses data that has been stored. In this database generic information, like players, teams, pitches, etc is collected along with measurement data based on games and exercises (datasets).

Please note that training elements should be structured in order to be able to compare tests through time. By analysing the data we distinguish two kinds of analyses:

“Physical data analysis”

“Tactical data analysis”

Reports can be build by third party report building applications such as Visual Studio, MS Report Builder, Tableau and others or by using **.csv** files in combination with MS Excel.

General

First, we have to define general items like: **Players, Teams, Clubs, Training types, Dataset types, Exercise names, Agility Definitions** and **Exercise Analyze Options**.

This is done in the Section “Configuration” of the “Tab Database”. Please ask your Inmotio consultant for help.

Before a measurement can be started, a **Team** and a **Dataset type** must be selected in the “Dataset Properties”.

In case a training will be measured, one or more **Exercises** need to be defined first. In case of a match, a **Game** needs to be define first.

After the “General” settings being finalized, the physical definitions need to be filled in. When starting the application for the first time, all values are default.

The physical definitions can be entered in “Exertion Analyze Options” in the Section “Configuration” of the “Tab Database”. Please, ask your Inmotio consultant in case you need support.

Other parameters, like: **Speed**, **Heartbeat**, **Acceleration**, **Deceleration**, **Power**, **Sprint Category**, **Acceleration Category** and **Deceleration Category**, are defined in “Zones” in the “Configuration and prefs”-menu, also known as “Options” in the “1. Quick Access Toolbar”.

Analysing physical data

When the above mentioned definitions are made and a dataset has been recorded, the physical data is analyzed by using the “Exertion”-module in the Section “General” of the “Tab Analysis”.

Agility test

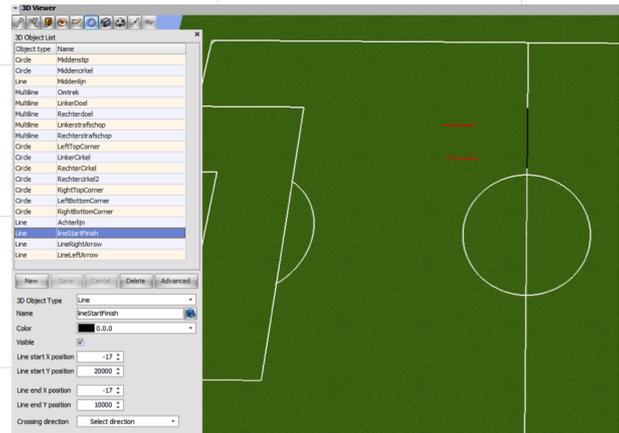
The **Agility Test** is applied to analyse a sprint or agility. For this test **lines** (start, finish, sector) must be defined first in the “3D Object List” of the “3D Viewer”.

Example

The black start and finish line (midfield line) and the two red lines (Line LeftArrow and LineRightArrow) are defined in the 3D Viewer.

Then, the sequence of crossing is defined in “Agility Definitions” in the Section “Configuration” of the “Tab Database”.

Now, it is possible to analyse the “Agility Test” in the Section “General” of the “Tab Analysis”.



The screenshot displays the INMOTION software interface. At the top, there is a menu bar with options: Home, Analysis, Playlist, Patch, Tools, View, Database, LPM, and About. Below the menu bar is a toolbar with numerous icons for file operations (Live/Record Start, Prepare recording, Open Dataset, Close Dataset, Save Dataset, Save Dataset as...) and analysis functions (Remove Athlete, Athlete Properties, Add Group, Delete Marker, Add Marker, Add Exercise, Delete Exercise, Exercise properties, Set Starttime, Set Endtime, Add game, Delete game, Game properties, Set Start, Set Stop). The INMOTION logo and the slogan "Improve your performance" are on the right side of the toolbar.

Below the toolbar is a "modules" section with a "Select module..." dropdown and five icons: 3D Viewer, Graph, Video stream, Event viewer, and Summary. A large orange number "2" is overlaid on the "Delete Marker" icon in this section.

On the left side, there is a "Dataset Explorer" panel. It shows a tree view with "Athletes" expanded, listing 22 individual players (e.g., Player 1 (11), Player 2 (12), ..., Player 22 (14)). A large green number "3" is overlaid on the "Athletes" folder icon.

The main workspace is currently empty. A large orange number "4" is overlaid in the center of the workspace.

At the bottom, there is a timeline with a scale from 0:05 to 1:35. It includes markers for "Set start" and "Set end", and playback controls (play, stop, back, forward). A large blue number "5" is overlaid on the timeline. The bottom right corner shows the current time "0:36:03.379" and system time "1:35:59.501".

At the very bottom, a footer reads: "(c) 2014 Inmotion Object Tracking B.V. License key: [unreadable]".

RICH-1502.D6

1. Quick Access Toolbar

the key, most frequently used features that the user can set up himself.

2. Menu bars**Tab Home**

Live data
Dataset
Athletes
Groups
Markers
Exercises
Games

contains tabs with the following menu bars:

contains the menu buttons, sub-divided into:
 starting or stopping a recording.

opening, closing or saving dataset files, editing the properties of the dataset and setting the dataset filter.

deleting athletes/transponders or editing athlete properties.

adding or deleting a group of athletes or editing the properties of the group.

placing, deleting or editing the properties of the marker.

placing, deleting or editing exercise properties.

adding, deleting or editing game properties.

Analysis

General
Graphs
Football Match

contains the menu buttons, sub-divided into:

contains data analysis options.

options for graphically displaying the analysis.

analysis of the field occupancy.

Playlist

Playlist

contains the menu buttons, sub-divided into:

making compilations of video's (under construction).

Pitch

Track/Field

contains the menu buttons, sub-divided into:

the opening, saving or editing the properties of the measuring area and the menu buttons for adding pylons and goal(s).

Tools

Export
Import
LMP

contains the menu buttons, sub-divided into:

for exporting data.

importing data from other programs.

loading lpm files.

View

Module windows
Layout

contains the menu buttons, sub-divided into:

options for displaying the modules in the module windows (tabs).

opening and closing (multiple) module layout windows (tabs), storing the active layout window and taking a snapshot of the active layout window.

Database

Actions
Configuration

contains the menu buttons, sub-divided into:

modifying analyzes and removing datasets

adding, deleting or editing players, teams, clubs and definition of agility tests and exercises.

LPM*Configuration server*

contains the menu buttons, sub-divided into:
configuration of transponders and defining pitches, settings of the imoServer(s).

About*License**About*

contains the menu buttons, sub-divided into:
to view the licence information and check for updates.
surf to the Inmotio website.

3. Datasets window

contains the following panes:

Datasets

the dataset of the live recording and any existing, open dataset files.

Dataset Explorer

the athletes, groups, markers, exercises, games and playlists from the selected dataset.

Camera selector input

select the (set of) camera('s) you want to enable or disable.

Detail window

the data from the selected transponder/group/marker/exercise/game.

4. Module window

contains the following modules:

3D Viewer

2D or 3D display of the field.

Graph

graphic display of data of the selected transponder/group.

Video stream

video image.

Event viewer

displays filtered details of events per athlete.

Summary

summary of the position, heart rate, speed and distance for each player.

5. Time panel

contains the following components:

Timeline

display of time of the recorded measurement.

Time indication

time of the current view and total duration of entire recording.

Time slide

to take small steps forward or backwards in the time of a recorded measurement, and to slow down or speed up the playback speed.

Play/Pause

to play/pause a dataset and the buttons below it, to go 30 seconds forwards or backwards in the time of a recorded measurement.

Data panel

settings for how the data are displayed in the window.

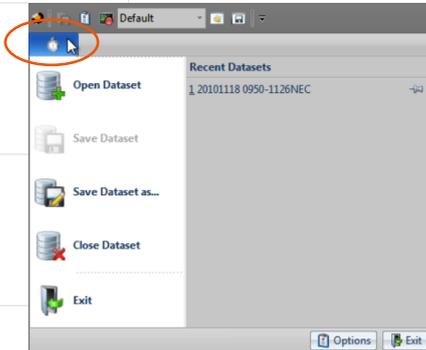
RICH-1502.D6

Working with the Inmotio IpmSystem, you may find the following shortcuts very handy:

	Save Dataset		1 Frame back
	Open Dataset		1 Frame forward
	Prepare recording		Replay faster
	Start Recording; Live/Record Start; Stop recording; Live/Record stop		Replay slower
	Start Live data; Stop Live data		
	Dataset to Database		
	Data filtering		
	Marker on play position		
	Live marker		
	Open Exertion module		
	Open Agility test module		
	Open Time On Ice module		
	Open Transition module		
	Close dataset		
	Close module/layout		
	Toggle play/pause dataset		
	Step forward		
	Step backwards		

1. Quick Access Toolbar

RICH-1502.D6



Open the window containing the main options of the application. It also allows you to quickly open previously saved datasets.



Save

Saves the selected dataset.



Options

Provides direct access to the "Configuration and prefs" window.



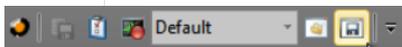
Live data

Logs you in to the "imoServer" to set the required credentials and start a direct dataset recording. Once running, the same button will stop a direct dataset recording.



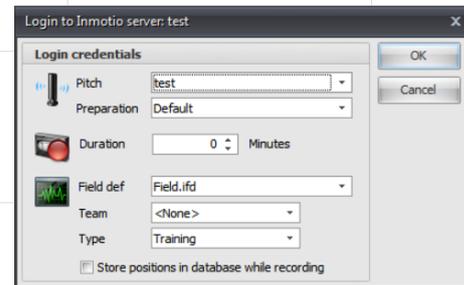
Load layout

Opens a selected, previously saved layout of your workspace (combination of open windows). Please also see: "Layout".

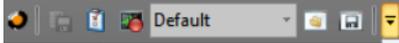


Save layout

Saves your present working space (combination of open windows). Please also see: "Layout".

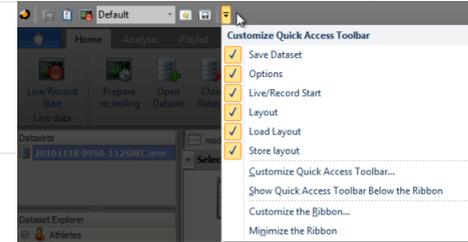


RICH-1502.D6

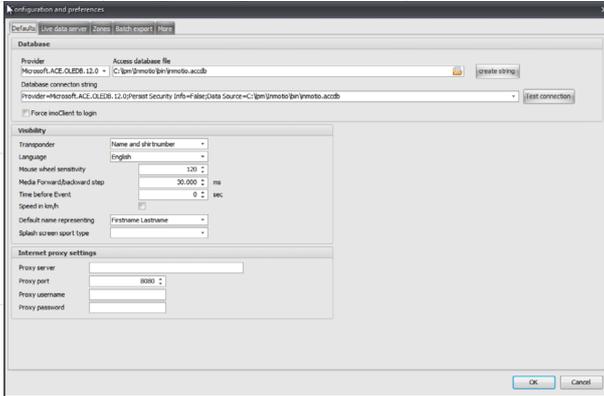


More buttons

A pull-down menu will appear, in which you can specify the desired options and can change the location of the Quick Access Toolbar and the menu bar on your screen.

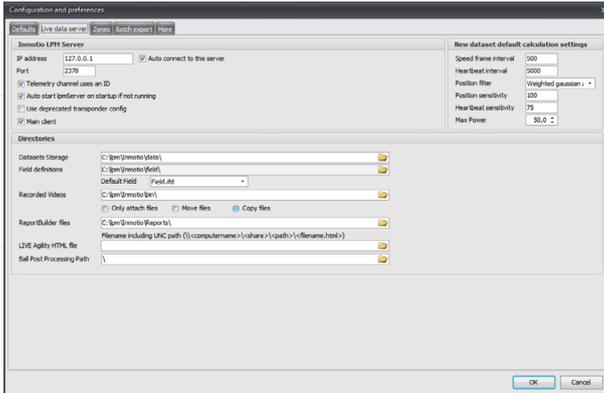


RICH-1502.D6



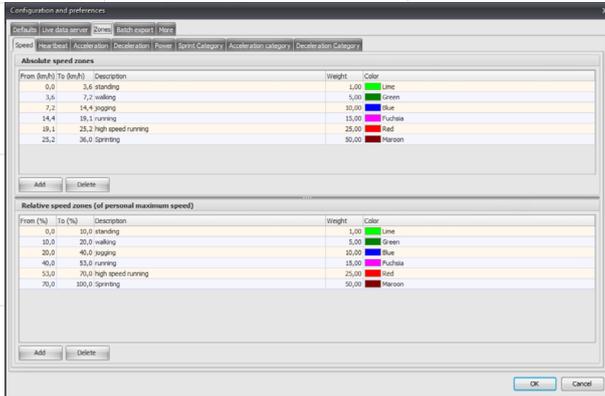
Defaults

The Defaults tab contains the connection with the “ImoServer” (Database), the user settings concerning **Visibility** and the **Internet proxy settings**.



Live data server

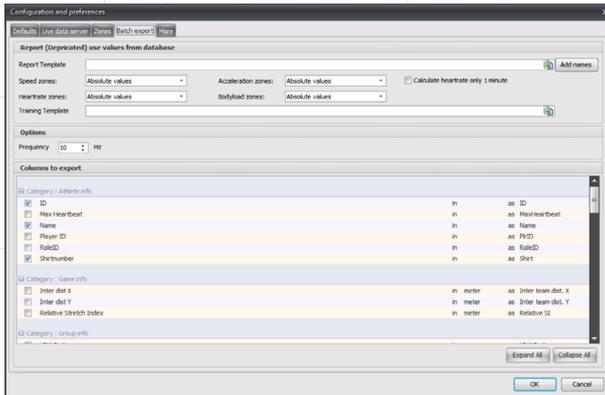
The Live DataServer tab contains the default settings of the “ImoServer” and its **Directories**.



Zones

The Zones tab contains the definitions of the absolute and relative zones for **Speed**, **Heartbeat**, **Acceleration**, **Deceleration**, **Power**, **Sprint Category**, **Acceleration Category** and **Deceleration Category**.

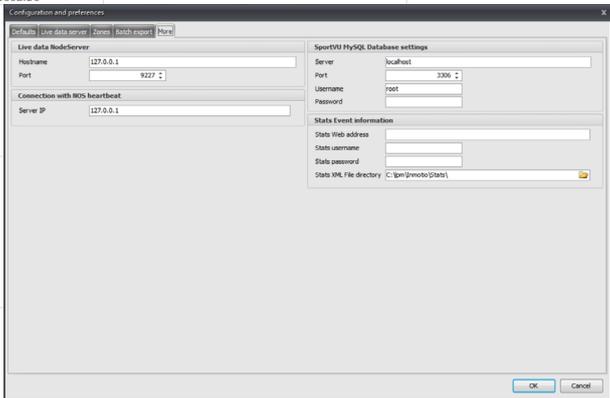
New zones can be added load by adding rows (**Add** button). It is necessary to adjust the zones, among other things for the movement statistics and exertion calculations.



Batch export

The Batch export tab contains the values for exporting data **Report template**, **Options** (frequency) and **Columns to export**. These settings are used in the “Batch conversion” menu button in the Tools tab menu.

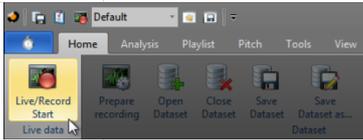
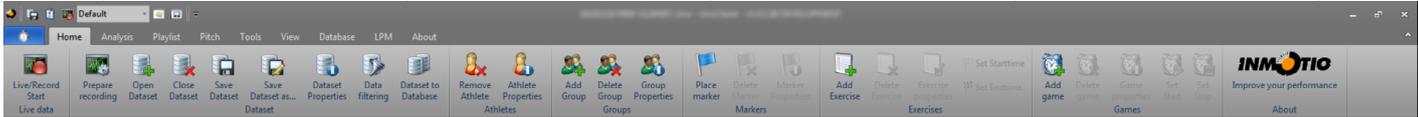
RICH-1502.D6



More

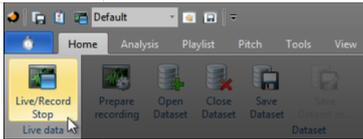
The tab “More” contains setting for **Live data NodeServer**, **Connection with NOS heartbeat**, **SportUV My SQL Database settings** and **Stats Event information**.

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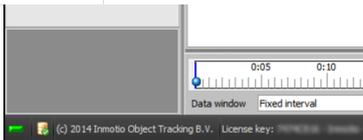
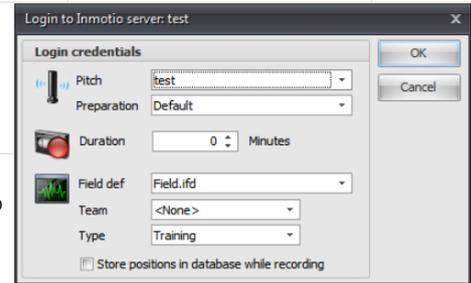
Live/Record Start

This button will log you in to the “imoServer” to set the required credentials and start a direct dataset recording.



Live/Record Stop

Once running, the same button (the red dot changed into a blue square) will stop a direct dataset recording.



Recorder indicator

The recording indicator is a small rectangle in the far left bottom of the screen. It can turn from grey into green or red.



Grey

the system is not ready to make a live data capture.



Green

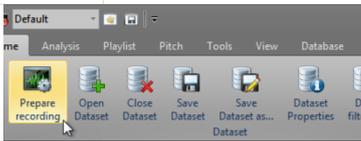
the system is ready to make a live data capture (Live Data enabled).



Red

during a recording (Live Data recording).

RICH-1502.D6



Prepare recording

The data of the current transponders/athletes on the field will be displayed. New players can be added here and linked to a transponder. A recording will start automatically. See “Prepare recording” for further instructions.



Open dataset

Open a saved .imo file.



Close dataset

Close the opened dataset.



Save dataset

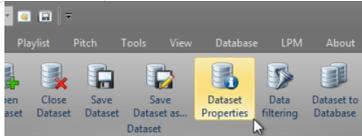
Save the recorded dataset. In case of a recording, the recording stops and you can save the dataset under a specific name in any folder. This button also saves the changes you have made in an open dataset.



Save dataset as...

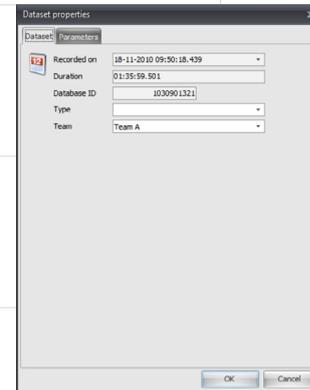
Save the recorded or opened dataset under a different name.

RICH-1502.D6



Dataset Properties

Open the dialog with the dataset properties containing the **Dataset** and **Parameters** tabs.



Dataset

Displays the date and duration of the recording.

Type

Select the kind of dataset (Match, Training, Test match, or Other, prepared in "Dataset types").

Team

Select the team (prepared in "Teams").

Parameters

Contains the following parameters:

Calculation parameters

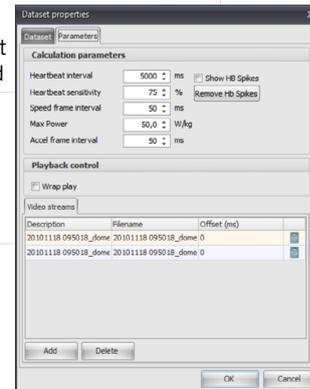
Set the heartbeat interval, heartbeat sensitivity, speed and acceleration frame interval and maximum power.

Playback control

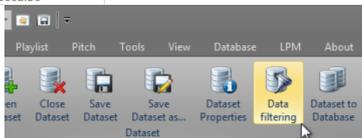
Wrap play: by ticking the box, the dataset that is currently being played is restarted each time it reaches the end of the dataset.

Video streams

Add video files to the dataset or deleting them from the same. Video streams can be imported via the **Add** button. The video can be synchronised with the data (see Modules – Video stream) via **Offset** (ms). If Inmotio has supplied a camera system, the video streams will be recorded via this system and are immediately synchronised with the data.

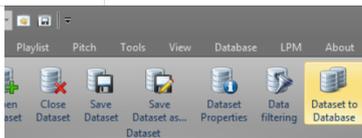
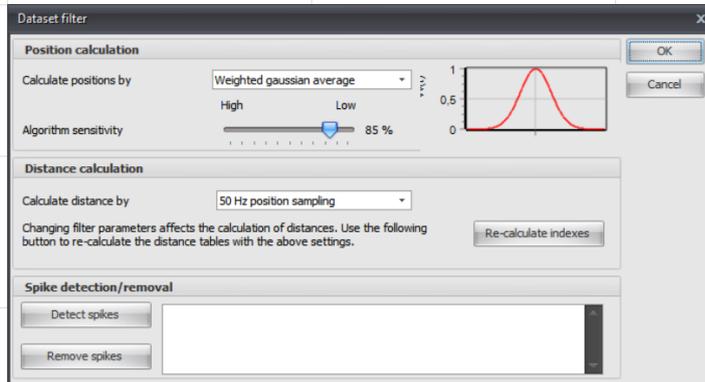


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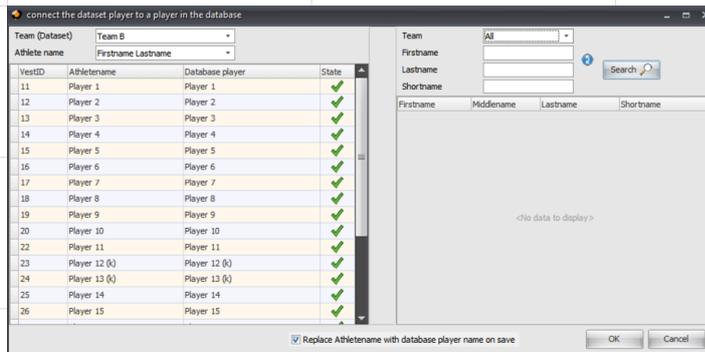
Data filtering

Opens a dialog box that contains the settings for the position and distance calculation. Inmotio sets the optimum values for your lpm system. If you want to change these settings, you are advised to do so after consulting Inmotio.

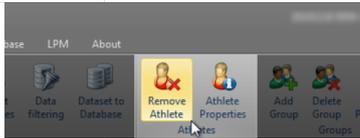


Dataset to Database

Allows you to link the current dataset to a database.



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Remove Athlete

Delete a selected player/transponder from the “Datasets Explorer (B)” from a live recording or from an open or previously recorded dataset. The deletion of an athlete is final and cannot be undone.



Athlete Properties

Open the athlete properties dialog:

Transponder

The definition of the **transponder role** (such as: athlete, ball, or referee) and the **Vest ID**.

Athlete

Define properties such as **Name**, **Shirt Number**, **Colour**, **Role** (function), **Category** and **Remarks** if any of the selected athlete/transponder.

Details

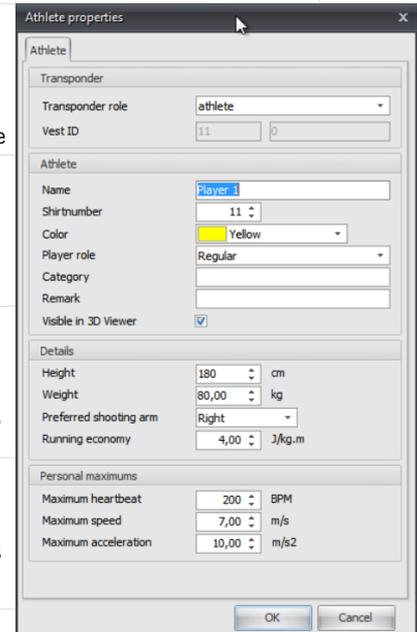
The **Height** and **Weight** of the selected player and other relevant remarks.

Personal Maximums

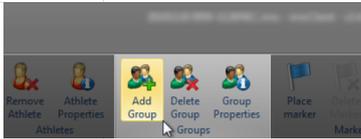
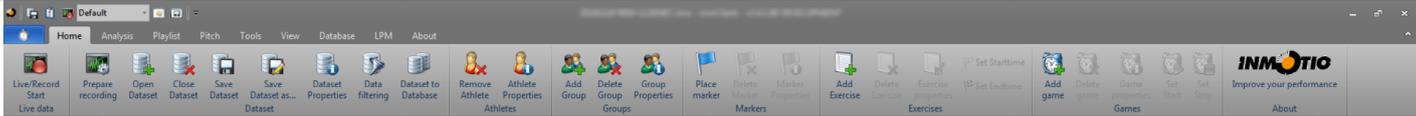
Define the **Maximum heartbeat**, **Maximum speed** and **Maximum acceleration** of the selected player/transponder.



During a live recording, a transponder is automatically added when data is received from a transponder. For this transponder, the data entered under “Configuration and prefs” are taken over.



RICH-1502.D6



Add Group

Open the group properties dialog box and add a group:

Properties

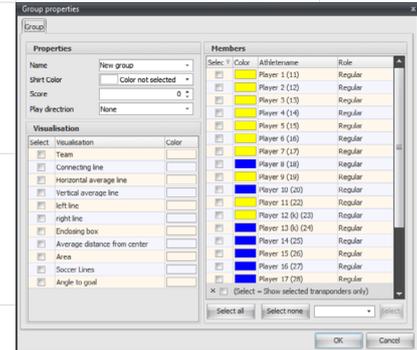
Define the properties such as **Name**, **Shirt Colour**, **Score** and **Play direction** for the group.

Members

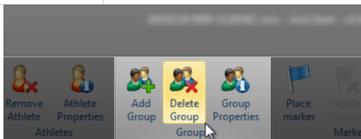
Define the composition of the group of players by checking or unchecking the box for the ID number and the name of the player.

Visualisation

Select how the group will be displayed in the “3D Viewer”.

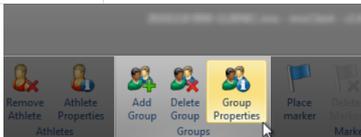


You will find a created group of athletes in the “Datasets Explorer (B)”.



Delete Group

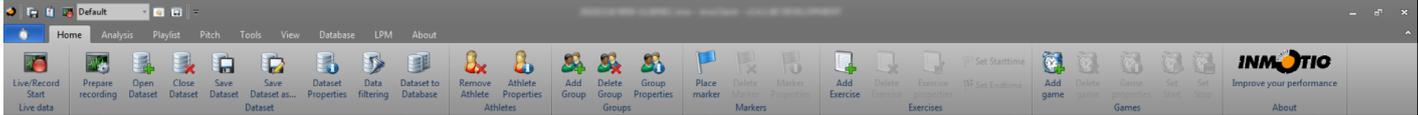
Delete the selected group.



Group Properties

Open the dialog with the properties of the selected group (see Add Group).

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Place marker

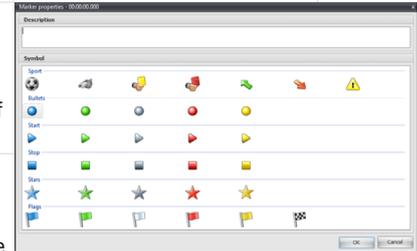
Open the dialog box for marker properties and place a marker:

Description

Here, you describe the situation/define the position of the marker.

Symbol

Assigning a symbol for the marker.

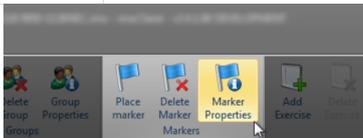


You will find a created marker and the defined properties in the "Datasets Explorer (B)".



Delete Marker

Delete the selected marker.



Marker Properties

Open the dialog for the properties of the selected marker (see "Place Marker").

RICH-1502.D6



Add Exercise

Open the dialog box for the exercise properties:

Game

Define the **Name**, **Remark**, **Begin time**, **End time** and **Traning Type** of the exercise.

Analyse ball possession

Based on the data, the system calculates the ball possession of a player and his passes. The results can be used for “Tactical data analysis” later on.

Tab Team

Properties

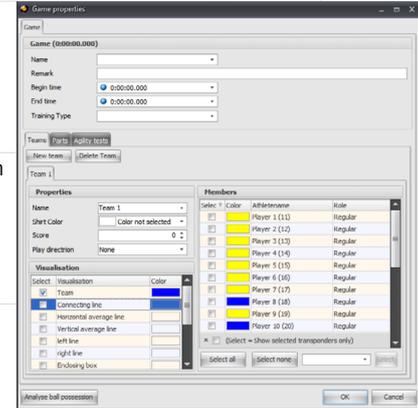
Define the properties such as the **Name**, **Shirt Colour**, **Score** and **Play direction** of the teams. You can add or delete a team using the New Team/Delete Team buttons (above the tabs for the teams).

Members

Define the composition of the team by checking or unchecking the box for the ID number and the name of the player.

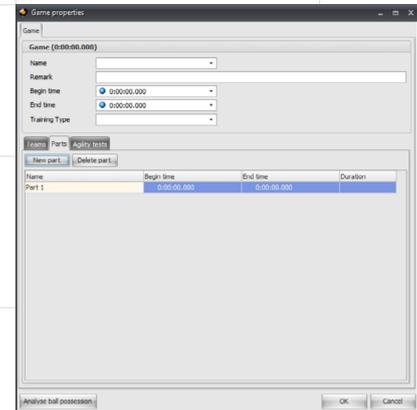
Visualisation

Choose how the team is displayed in the “3D Viewer”.



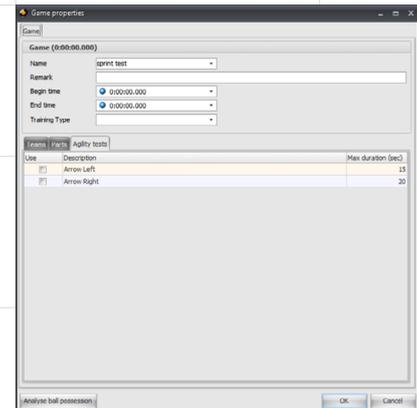
Tab Parts

Define parts of the exercise using the **New Part/Delete Part** buttons. You will find an exercise created under “Exercises” in the Dataset Explorer.



Tab Agility tests

Select which agility tests are executed in this exercise. These tests are earlier defined in “Agility Definitions”.



RICH-1502.D6



Delete Exercise

Delete the selected exercise.



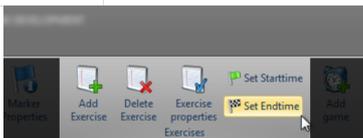
Exercise properties

Open the dialog box for the properties of the selected exercise (see "Add Exercise").



Set Starttime

Set the actual playing position as the starting time of the selected exercise.

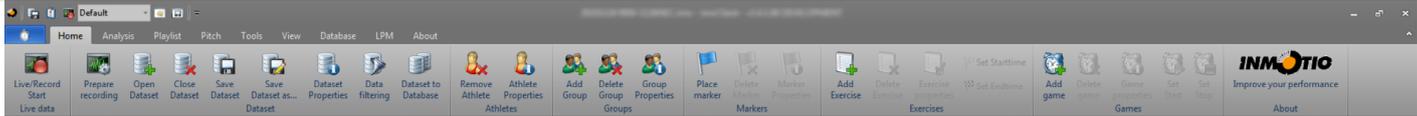


Set Endtime

Set the actual playing position as the ending time of the selected exercise.

! There is no difference between adding an exercise or a game, except that two teams are generally created in a game, while only one team is created in an exercise. Thus if there is a party form, one may best create a Game, and in other cases, it is sufficient to create an Exercise.

RICH-1502.D6



Add game

Open the dialog box for Game properties:

Game

Define the **Name**, **Remark**, **Begin time**, **End time** and **Traning Type** of the game.

Analyse ball possession

Based on the data, the system calculates the ball possession of a player and his passes. The results can be used for “Tactical data analysis” later on.

Tab Team

Properties

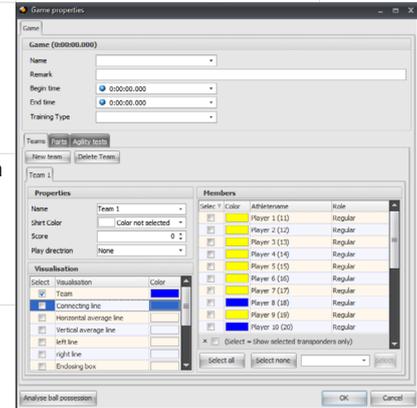
Define the properties such as the **Name**, **Shirt Colour**, **Score** and **Play direction** of the teams. You can add or delete a team using the New Team/Delete Team buttons (above the tabs for the teams).

Members

Defining the composition of the team by checking or unchecking the box for the ID number and the name of the player.

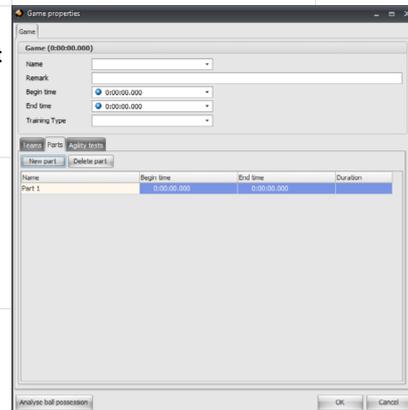
Visualisation

Choosing how the team is displayed in the “3D Viewer” module.



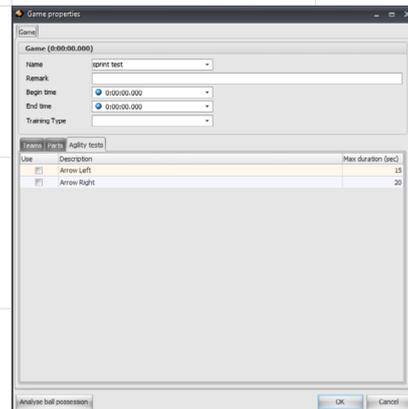
Tab Parts

You can define parts of the game using the **New Part/Delete Part** buttons. You will find an game created under “Games” in the Dataset Explorer.

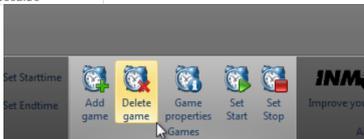


Tab Agility tests

Select which agility tests are executed in this exercise. These tests are earlier defined in “Agility Definitions”.

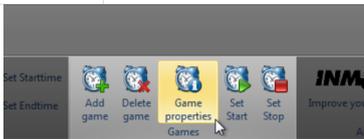


RICH-1502.D6



Delete Game

Delete the selected game.



Game properties

Open the dialog box for the properties of the selected game (see "Add game").



Set Start

Set the actual playing position as the starting time of the selected game.

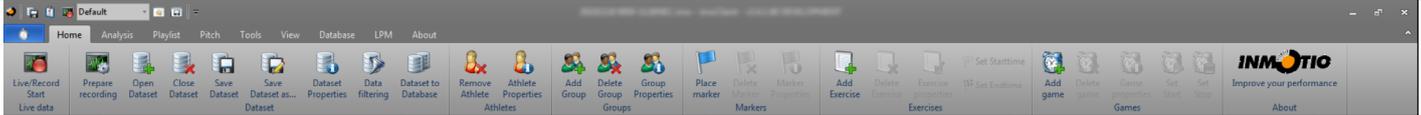


Set Stop

Set the actual playing position as the ending time of the selected game.

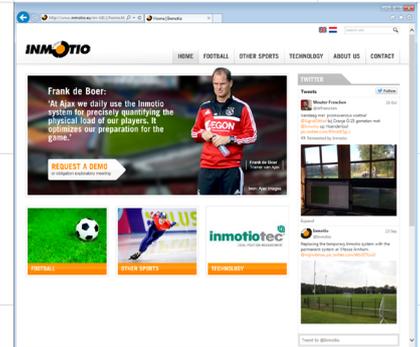
! There is no difference between adding an exercise or a game, except that two teams are generally created in a game, while only one team is created in an exercise. Thus if there is a party form, one may best create a Game, and in other cases, it is sufficient to create an Exercise.

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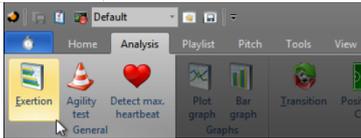
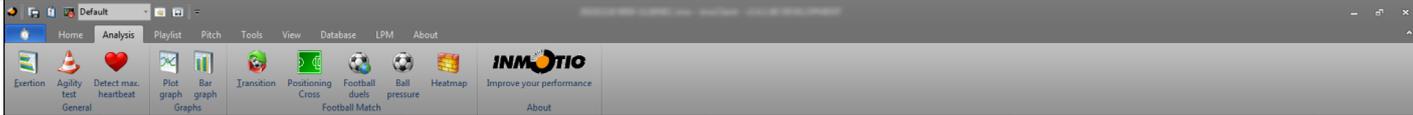


Inmotio

Surf to the Inmotio website.



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Exertion

Open the Exertion module in the module layout window (tab). All data come from the database. You can set the data for analysis in the right column of the screen. These data are displayed in the tabs **Summary, Details, Bins, Sprints, Distances, Accelerations, Decelerations** and **Heatmap** when you click on the **Analyse** button thereafter.

Timeframe

Define the time interval for the data to be analysed. Normally: keep default '**All games and exercises**' and press **Analyse**.

Defined options

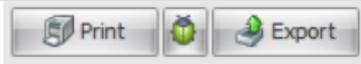
Check box **Custom Settings** and edit the settings like: **Calculation options, Zone parameters, Sprint options, Acceleration options** and **Heatmap options**.

! Calculations with Custom settings are not saved in the database.

Athletes

Check the athletes whose data are to be analysed.

Player name	Exercise name	Part name	Time on field	Total distance	High intensity distance (m)	Covered area	Scored Bins	Slip Index	# Sprints	Max speed (km/h)	Avg max speed (km/h)	Avg max accel (m/s ²)	Sum Sprint Index	Avg Sprint Index	Accel bins	Accides	# Accel	Max accel (m/s ²)	Avg max accel (m/s ²)	# Decel	Max decel (m/s ²)	Avg max decel (m/s ²)	Heartbeat Bins
Player 1 (11)	Whole dataset	Whole dataset	1:35:34	9,064.9	1,646.8	3,989		913.19	114	7.8	5.5	4.5	151.3	1.33		191.33	402	8.5	3.6	419	8.3	3.4	
Player 2 (12)	Whole dataset	Whole dataset	1:35:43	8,724.3	1,782.9	3,817		494.74	110	8.8	5.8	4.5	153.9	1.40		190.00	280	8.0	3.8	308	7.5	3.4	
Player 3 (13)	Whole dataset	Whole dataset	1:28:55	8,523.5	1,538.5	4,111		479.61	104	8.2	5.5	4.1	139.9	1.34		174.23	303	8.4	3.6	313	8.8	3.3	



Print

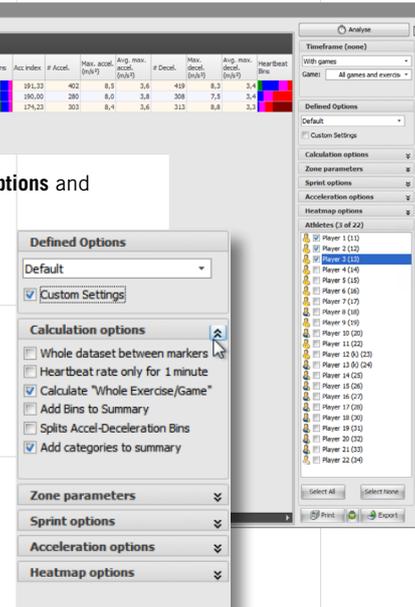
Allows you to print the analysis.

Single thread analysing

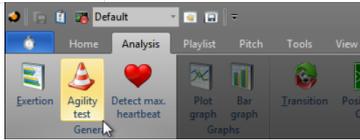
The calculations are executed on one core. This works slower, but enables you to send the exception log to Inmotio, in case something goes wrong.

Export

Allows you to export the analysis to a **.csv** file.



RICH-1502.D6



Timeframe

Define the time interval for the data to be analysed.
Normally: keep default **'All games and exercises'** and press **Analyse**. The exercise/game in the database is earlier defined in "Agility Definitions".

! Only when an earlier defined agility test is analysed, the results are saved in the database.

Output options

Check **Plot line in Graph** to see the data and the graph in the same window.

Agility test

Select a previously defined agility test.

Athletes

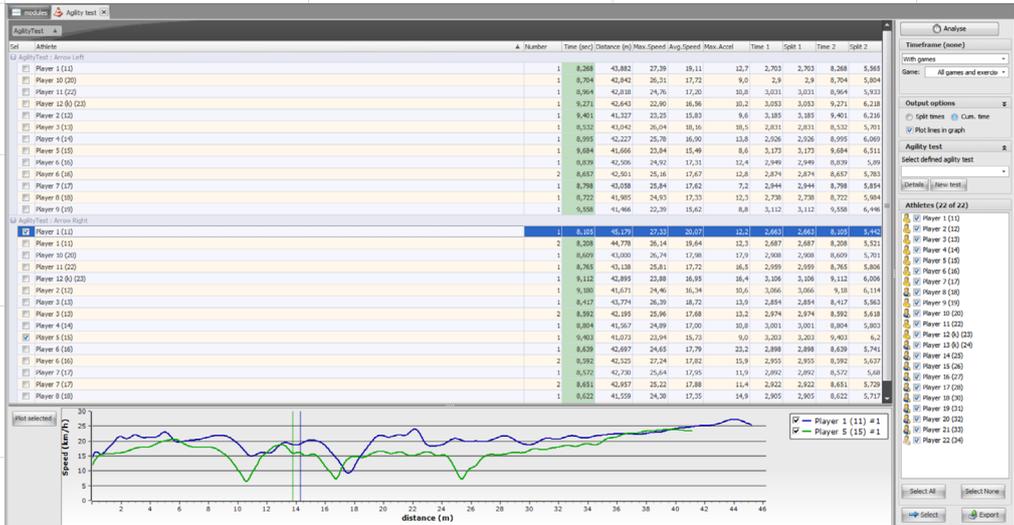
Check the athletes whose data are to be analysed.

Export

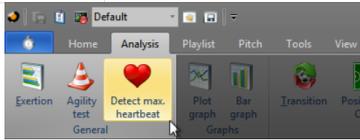
Allows you to export the analysis to a **.csv** file.

Agility Test

Open the Agility test module in the module layout window (tab). You can set the data for analysis in the right column of the screen. These data are displayed when you click on the **Analyse** button thereafter.



You can select this moment by selecting an athlete and then pressing the **Select** button. You can then review this moment in the "3D Viewer" and "Video stream" modules.



Detect max. heartbeat

Open the Detect Max. Heartbeat module in the module layout window (tab). This shows if an athlete has a higher maximum heart beat than he currently has (Athlete line turns red in case). You can set the data for analysis in the right column of the screen. These data are displayed when you click on the **Analyse** button thereafter.

Timeframe

Define the time interval for the data to be analysed. **Normally:** keep default **'All games and exercises'** and press **Analyse**.

Detection parameters

Set the min. time interval and max. peak difference.

Athletes

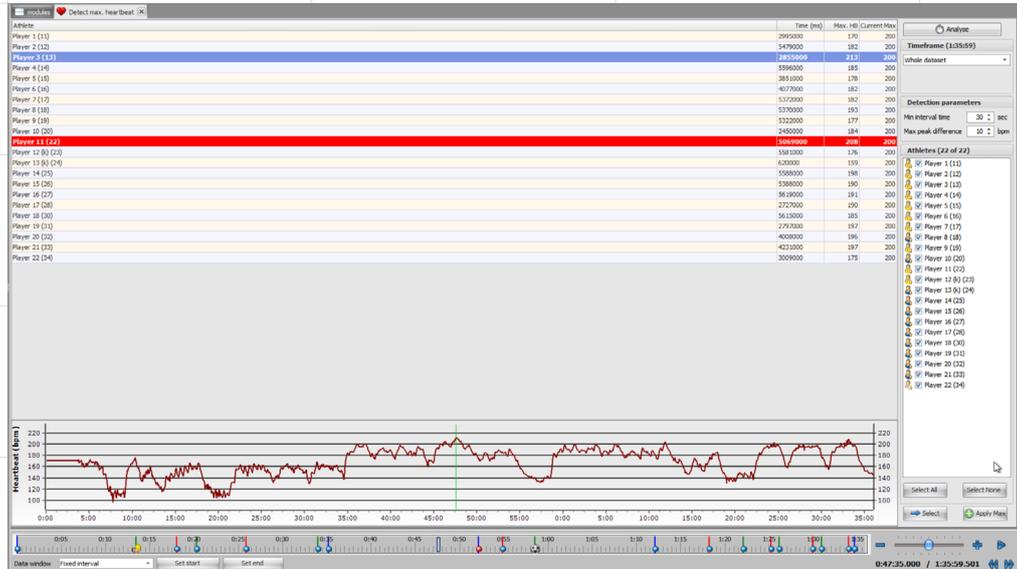
Check the athletes whose data are to be analysed.

Select

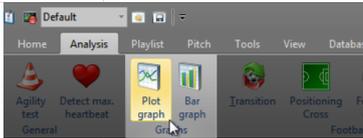
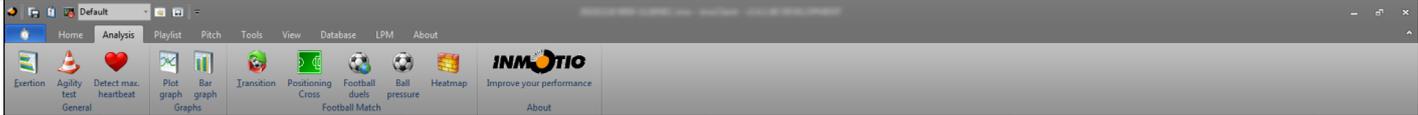
Go to the moment of the selected max. heart beat (red line turns into blue) in the Time Line (marked with a green vertical line) and check if this value should be considered as the new Max. Heartbeat for this athlete.

Apply Max

Apply the selected Max. Heartbeat in the Database as new value (see: above).

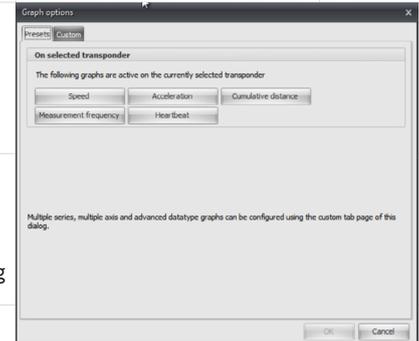


RICH-1502.D6



Plot graph

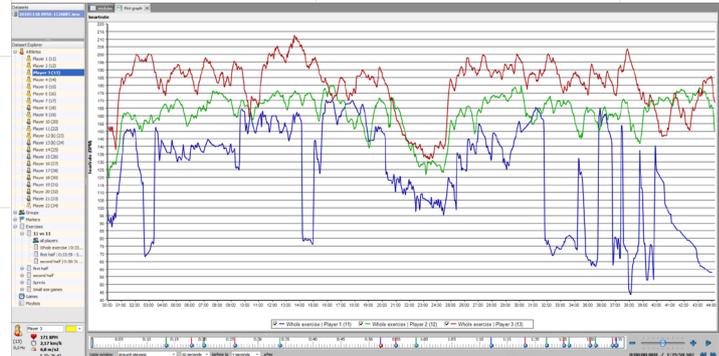
Open the dialog box for the Plot graph module in the module layout window (tab) with the **Presets** and **Custom** tabs.



Presets

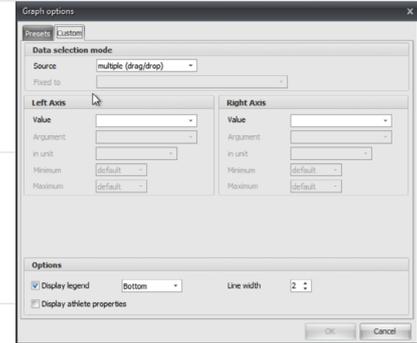
Make a selection in the type of graphic: **Speed, Acceleration, Cumulative distance, Measurement frequency or Heartbeat**. The graphic of your choice will then appear in the module layout window. In the Dataset Explorer window at the left, click on a part of an exercise in the "Datasets Explorer (B)" window on a Transponder/player and dragging it to the graphic. You can see the players for whom the data is displayed, in the legend below the graphic.

- ! You can zoom into the graphic by moving the cursor to a position in the graphic and pushing downwards while holding down the right mouse button. This enlarges the portion of the graphic that you have selected. To zoom out, move the mouse from bottom to top while holding down the right mouse button.



Custom

You can simultaneously display various parameters in the Custom tab. Here as well, the scale of the axis-value can be changed, from metres to kilometres, as well as a high number of other parameters in order to adjust your calculation.



Bar graph

Open the Bar graph module in the module layout window (tab). You can set the data for the analysis in the right column of the screen. These data are displayed in the **Data** and **Chart** tabs when you click on the **Analysis** button thereafter. If you have conducted an analysis and wish to create another bar graphic with new data, click on the **Clear** button.

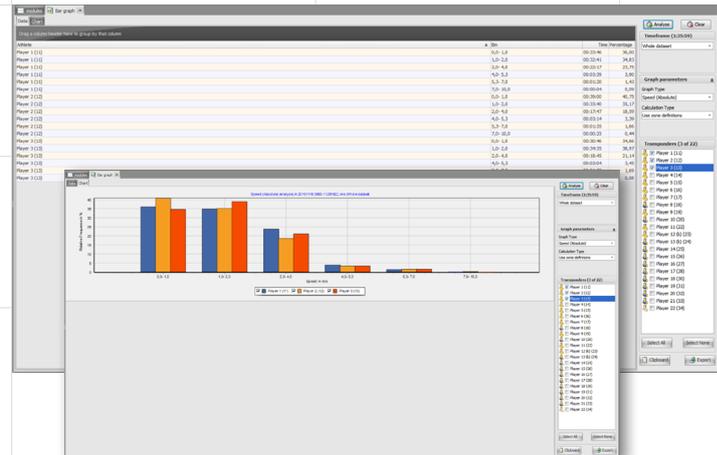
Timeframe Define the time interval for the data to be analysed.

Graph parameters Set the **Graph Type**, **Calculation Type**.

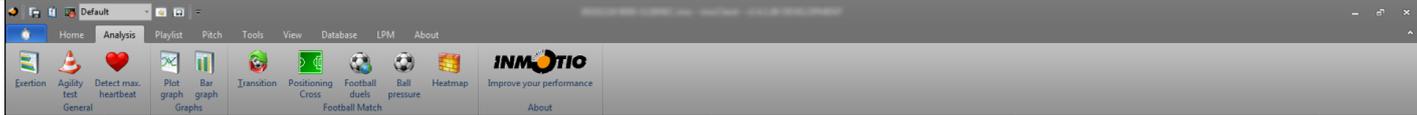
Transponders Check the transponders/athletes whose data is to be analysed.

Clipboard Enables one to copy the displayed graphic to the clipboard and to paste the same in another application if so desired.

Export Allows you to export the analysis to a **.csv** file.



RICH-1502.D6



Transition

Open the Transition module in the module layout window (tab). You can set the data for the analysis in the right column of the screen. These data are displayed in the “**Tab Possession**”, “**Tab Transitions**”, “**Tab All Passes**”, “**Tab Pass Summary**”, “**Tab Details**” and “**Tab Graphs**” when you click on the **Analysis** button thereafter.

Timeframe

Select the game/part for the data to be analysed.

Options

Define the degrees passed forward and back.

Export

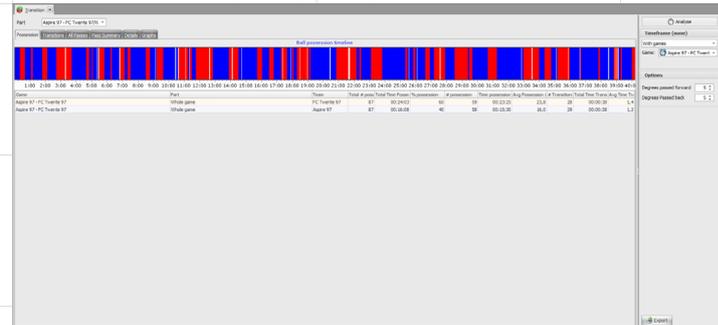
This allows you to export the analysis to a **.csv** file.

Tab Possession

Shows an overview of the ball possession. **Blue** is the first team, **red** the second. **Yellow** is the transaction time in between. These colours do not correspond with the team colours in the 3D Viewer.

The table shows the total figures:

- Total # poss** Number of times ball possession.
- Total Time Poss** Total time ball possession (and transactions) of that team.
- % possession** Percentage of ball possession.
- # possession** Number of times when the ball came in possession (by definition).
- Time possession** Total time ball possession without the transition time.
- Avg Possession** Average duration of ball possession.
- # Transitions** Number of times the ball was in the team, but lost it before it became in possession (by definition).
- Total Time Transition** Total time the ball was in transition.
- Avg Time Transition** Average duration of a transition time.



Tab Transitions

Shows an overview of all transitions.

BeginTime Begin time possession, counting from the start of the part.

EndTime End time of possession.

Short BP If checked, the possession was too short to be counted as ball possession, therefore counted as transition.

Duration (sec) The duration of the transition.

First Player The first player in possession.

Dir.before BP Direction of first player before team got ball possession.

#PassTrans Number of passes during transition time.

Pass Direction The direction of the first pass.

Pass length (m) Pass length in meters.

#Passes Pos Number of passes during possession.

Transition	All Passes	Pass Summary	Details	Graphs								
Drag a column header here to group by that column												
Name	Part	Team	Begin time	End time	Short BP	Duration (sec)	First Player	Dir. before BP	# Pass Trans	Pass Direction	Pass length	#Passes Pos
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:00:01	00:00:01	<input type="checkbox"/>	0.0	Delano Groothuis	2	0	Backwards	0.0	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:00:21	00:00:32	<input type="checkbox"/>	10.0	Bassam	Forward	1	Forwards	15.3	3
Auske 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:00:32	00:00:35	<input type="checkbox"/>	1.0	Odean Grootvuis	Backwards	1	Backwards	22.9	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:00:33	00:00:41	<input type="checkbox"/>	7.0	Hassan	Forward	1	Backwards	7.6	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:00:41	00:00:51	<input type="checkbox"/>	24.0	Roy de Graaff	Forward	2	Forwards	22.6	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:00:55	00:01:12	<input type="checkbox"/>	6.0	Moniez	Forward	0	Forwards	5.2	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:01:12	00:01:16	<input type="checkbox"/>	3.0	David El Hak	Forward	2	Backwards	2.0	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:01:45	00:01:46	<input type="checkbox"/>	0.0	Saeed	Forward	1	Forwards	8.8	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:01:46	00:01:49	<input type="checkbox"/>	3.0	Roy de Smit	Forward	1	Forwards	21.5	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:01:49	00:02:09	<input type="checkbox"/>	19.0	Adel	Width	0	Backwards	8.4	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:02:09	00:02:43	<input type="checkbox"/>	24.0	Margj Vilhjus	Forward	0	Forwards	8.6	8
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:02:43	00:03:18	<input type="checkbox"/>	24.0	Abdulahman (GK)	Forward	0	Forwards	16.8	7
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:03:18	00:03:39	<input type="checkbox"/>	1.0	Margj Vilhjus	Width	0	Backwards	4.4	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:03:44	00:03:55	<input type="checkbox"/>	1.0	Saeed	Forward	0	Width	17.0	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:03:55	00:03:55	<input type="checkbox"/>	0.0	Saeed	Forward	1	Backwards	10.6	4
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:03:55	00:03:55	<input type="checkbox"/>	0.0	Saeed	Forward	1	Forwards	9.6	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:04:51	00:05:01	<input type="checkbox"/>	10.0	Hidde ter Avest	Backwards	0	Short	0.0	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:00	00:05:29	<input type="checkbox"/>	0.0	Saeed	Forward	1	Forwards	1.1	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:29	00:04:40	<input type="checkbox"/>	40.0	Frans Van Oldeniel	Backwards	0	Forwards	38.8	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:04:40	00:04:51	<input type="checkbox"/>	10.0	Abdulahman (GK)	Forward	0	Forwards	26.5	2
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:04:51	00:05:01	<input type="checkbox"/>	10.0	Hidde ter Avest	Backwards	0	Backwards	14.5	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:01	00:05:04	<input type="checkbox"/>	3.0	Ghaesen	Backwards	0	Forwards	46.2	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:04	00:05:20	<input type="checkbox"/>	16.0	Frans Van Oldeniel	Backwards	0	Forwards	26.3	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:20	00:05:22	<input type="checkbox"/>	2.0	Bassam	Backwards	2	Forwards	8.7	2
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:22	00:05:25	<input type="checkbox"/>	3.0	David El Hak	Forward	2	Short	6.1	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:25	00:05:26	<input type="checkbox"/>	0.0	Saeed	Backwards	1	Short	6.1	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:26	00:05:29	<input type="checkbox"/>	0.0	Luuk Siegt	Backwards	1	Short	6.1	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:29	00:05:29	<input type="checkbox"/>	0.0	Abdulahman (GK)	Width	5	Short	0.1	5
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:29	00:05:29	<input type="checkbox"/>	0.0	David El Hak	Backwards	2	Short	2.8	1
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:29	00:05:49	<input type="checkbox"/>	20.0	Moh Atef	Forward	1	Forwards	7.9	3
Appie 97 - FC Twente 97	FC Twente 97	FC Twente 97	00:05:49	00:06:15	<input type="checkbox"/>	25.0	Margj Vilhjus	Forward	0	Backwards	14.8	6

Tab All Passes

Shows an overview of all passes.

Athlete name The player who has received the ball.

Received from The player who passed the ball.

Passed to Next player who passed Athlete to.

PassOptions Number of pass options when the ball was passed.

WasOption Checked if the 'next player' was among the options.

Distance (m) The distance of the pass in meters.

Ball Speed (km/h) Average speed of the ball during the pass.

Duration (sec) The duration of the pass in seconds.

Direction (deg) Direction of the passing (see inserted picture).

Time Time in the part of the game.

Transition 1 modules												
Part Appie 97 - FC Twente 97 (1)												
Passession	Transitions	All Passes	Pass Summary	Details	Graphs	Drag a column header here to group by that column						
Nr	Athlete name	Received from	Passed To	PassOptions	Was Option	Distance (m)	Ball Speed (km/h)	Duration (sec)	Dir.Direction	Time		
1	(23) Delano Groothuis	(16) Hidde ter Avest	7	<input type="checkbox"/>	<input type="checkbox"/>	15.6	42.4	1.6	47	00:00:11:467		
2	(16) Hidde ter Avest	(19) Delano Groothuis	(22) Roy de Smit	4	<input type="checkbox"/>	13.7	28.9	1.7	128	00:00:05:522		
3	(22) Roy de Smit	(16) Hidde ter Avest	(16) Hidde ter Avest	3	<input type="checkbox"/>	20.4	40.6	1.8	0	00:00:08:907		
4	(16) Hidde ter Avest	(24) Roy de Smit	(24) Roy de Graaff	2	<input type="checkbox"/>	12.1	11.1	4.0	-19	00:00:12:007		
5	(24) Roy de Graaff	(16) Hidde ter Avest	(22) Roy de Smit	3	<input type="checkbox"/>	26.3	41.2	2.6	178	00:00:16:997		
6	(22) Roy de Smit	(24) Roy de Graaff	(28) Bassam	3	<input type="checkbox"/>	35.5	53.3	2.1	96	00:00:21:827		
327	(28) Bassam	(22) Roy de Smit	(08) Adel	2	<input type="checkbox"/>	15.5	36.8	1.0	61	00:00:23:967		
328	(36) Adel	(38) Bassam		4	<input type="checkbox"/>	2.9	3.5	2.9	-95	00:00:27:147		
329	(38) Bassam	(19) Delano Groothuis		1	<input type="checkbox"/>	20.9	72.4	1.0	151	00:00:32:767		
7	(19) Delano Groothuis	(36) Hassan		2	<input type="checkbox"/>	22.5	43.7	1.9	-12	00:00:33:987		
8	(36) Hassan	(05) Abdulahman		2	<input type="checkbox"/>	7.6	26.7	1.0	-19	00:00:36:377		
9	(05) Abdulahman	(16) Hidde ter Avest		2	<input type="checkbox"/>	7.7	18.2	1.5	135	00:00:41:617		
10	(16) Hidde ter Avest	(14) Hidde ter Avest		2	<input type="checkbox"/>	15.6	36.9	1.5	-111	00:00:46:267		
11	(14) Hidde ter Avest	(12) Frans Van Oldeniel		5	<input type="checkbox"/>	27.7	39.0	2.6	-136	00:00:49:087		
12	(12) Frans Van Oldeniel	(22) Roy de Smit		3	<input type="checkbox"/>	14.0	35.0	1.4	142	00:00:51:827		
13	(22) Roy de Smit	(16) Hidde ter Avest		4	<input type="checkbox"/>	36.3	34.4	1.9	-17	00:00:55:467		
14	(16) Hidde ter Avest	(23) Roy de Smit		3	<input type="checkbox"/>	19.1	43.2	1.6	172	00:01:01:827		
15	(23) Roy de Smit	(16) Hidde ter Avest		3	<input type="checkbox"/>	14.6	32.6	1.6	143	00:01:05:967		
16	(16) Hidde ter Avest	(03) Roy de Smit		5	<input type="checkbox"/>	5.2	38.0	0.5	33	00:01:12:467		
17	(03) Roy de Smit	(23) Margj Vilhjus		1	<input type="checkbox"/>	2.9	6.2	1.7	-195	00:01:13:577		
18	(23) Margj Vilhjus			0	<input type="checkbox"/>	0.9	10.0	1.9	41	00:01:14:237		
19	(41) David El Hak	(22) Roy de Smit		2	<input type="checkbox"/>	15.8	31.5	1.8	-75	00:01:16:627		
20	(22) Roy de Smit	(16) Hidde ter Avest		4	<input type="checkbox"/>	23.8	39.8	2.2	-23	00:01:20:287		
21	(16) Hidde ter Avest	(23) Margj Vilhjus		2	<input type="checkbox"/>	27.2	43.7	2.2	84	00:01:27:147		
22	(23) Margj Vilhjus	(22) Roy de Smit		3	<input type="checkbox"/>	17.7	20.0	1.4	-57	00:01:29:777		
23	(22) Roy de Smit	(16) Hidde ter Avest		3	<input type="checkbox"/>	21.0	37.8	2.0	-27	00:01:32:417		
24	(16) Hidde ter Avest	(24) Roy de Graaff		2	<input type="checkbox"/>	8.2	24.6	1.2	-70	00:01:33:827		
25	(24) Roy de Graaff	(22) Roy de Smit		4	<input type="checkbox"/>	18.8	43.3	1.6	-163	00:01:42:857		
26	(22) Roy de Smit	(24) Saeed		3	<input type="checkbox"/>	4.4	49.4	0.3	65	00:01:45:587		
333	(24) Saeed	(22) Roy de Smit		2	<input type="checkbox"/>	8.8	15.8	2.0	-12	00:01:46:997		
24	(22) Roy de Smit	(32) Saeed	(17) Octavian Diaconu	2	<input type="checkbox"/>	13.5	70.0	0.7	99	00:01:46:137		



Tab Pass Summary

Shows an overview of the passes of each player.

Passes Number of passes by the player.

Reached Number of passes reached a team member.

Was Option Number of passes to a team member being a pass option.

Lost, W.O. Number of passes not reaching a team member in cases there were pass options.

Avg Options Average number of pass options at the moment a ball is passed.

Distance (m) Average pass length in meters.

Ball Speed (km/h) Average ball speed.

Duration (sec) Average duration of the passes.

Direction (deg) Average direction of the passes (see inserted picture).

Could receive How often this player was a pass option.

Did receive Number of times this player received a pass, being a pass option.

Zero Options Number of passes when there was no pass option.

Z.O.Reached Number of received passes by a team member in cases there was no pass option.

Tab Details

Shows the details per player per part of the game. The top grid section (a) is similar to the **Pass Summary**. In the second grid (b):

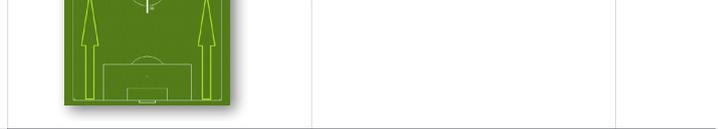
Passed to The selected player passed to this player.

Recvd from The selected player received from this player.

Options to Number of times this player had a pass option to a team member.

Options from Number of times this player was a pass option for a team member.

The third grid (c) shows all passes of the selected cell in grid (b). Double clicking on a pass, will show this pass on the field (d)




Tab Graphs

Shows a graphic visualisation of the passes of a team.

White circle Number of correct passes is in between 1 standard deviation of the team average.

Red circle Number of correct passes is less then 1 standard deviation of the team.

Green circle Number of correct passes is more then 1 standard deviation of the team.

Small circle Number of passes less then 1 standard deviation.

Middle circle Number of passes in between 1 standard deviation.

Large circle Number of passes larger then 1 standard deviation.

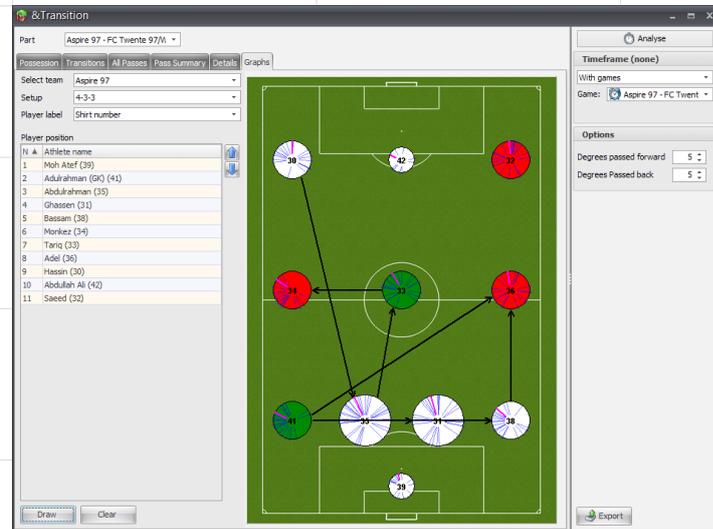
In (or between) the circles:

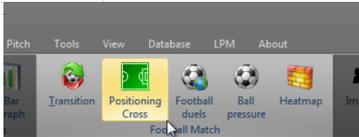
Number Shirtnumber.

Bleu lines Direction of all passes.

Pink line Average pass direction.

Arrows Dominant passes.





Positioning Cross

Open the Positioning Cross module in the module layout window (tab). You can set the data for the analysis in the right column of the screen. These data are displayed in the **"Tab All Crosses"** and **"Tab Visualisation"** when you click on the **Analysis** button, when the **[] Pass** event is checked.

Timeframe

Select the game/part for the data to be analysed.

Event

Select the event of your choice.

Export

This allows you to export the analysis to a **.csv** file.

Tab All Crosses

Shows all passes done in a certain area of the field. (From half field part of the opponent (see inserted picture).

Was Cross

Checked if this pass was a cross.

Reached

Checked if the pass was reached by a member.

Distance

Passing distance.

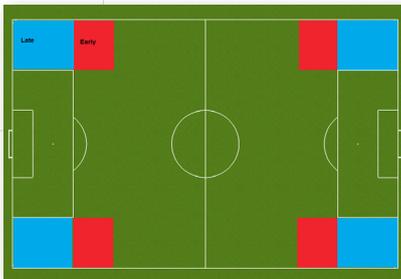
In 16

Number of players in 16m area.

Around 16

Number of players just outside the 16m area.

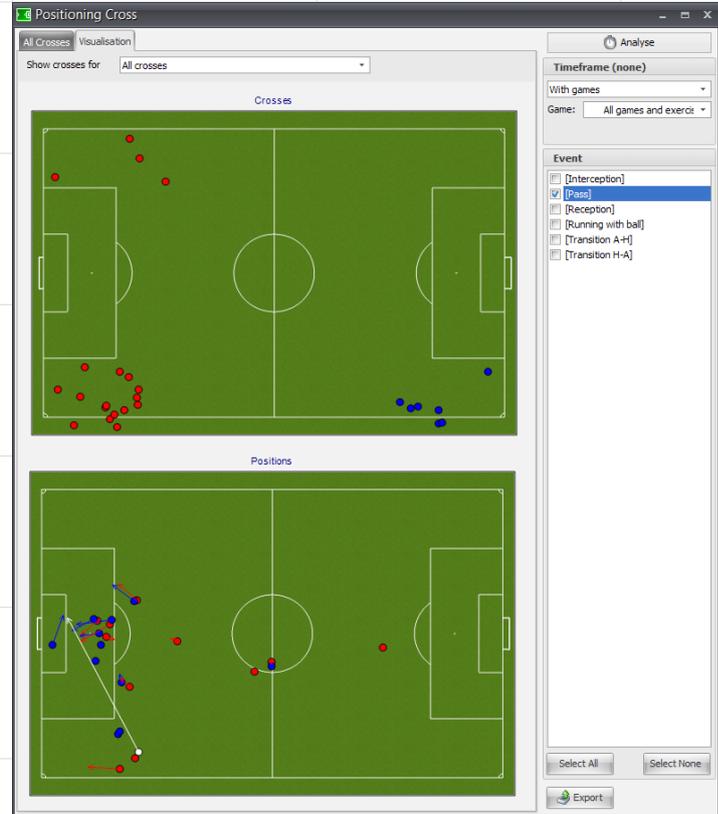
Nr	Team	Player name	Position	Was Cro	Reached	Distance (m)	# In 16m	# Around 16
1	FC Twente 97	(14) David El Haki	Late	<input type="checkbox"/>	<input type="checkbox"/>	6,0	0	1
3	FC Twente 97	(13) Said Moussilh	Early	<input type="checkbox"/>	<input type="checkbox"/>	1,1	0	1
5	FC Twente 97	(13) Said Moussilh	Early	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17,2	0	0
6	Aspire 97	(39) Moh Atef	Early	<input type="checkbox"/>	<input type="checkbox"/>	15,0	0	0
7	FC Twente 97	(19) Delano Groothuis	Late	<input type="checkbox"/>	<input type="checkbox"/>	52,3	1	0
8	FC Twente 97	(18) Ruben de Jager	Late	<input type="checkbox"/>	<input checked="" type="checkbox"/>	51,9	1	0
9	Aspire 97	(34) Monkeez	Late	<input type="checkbox"/>	<input type="checkbox"/>	0,4	0	0
12	FC Twente 97	(17) Octavian Deaconu	Late	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6,0	0	1
13	FC Twente 97	(14) David El Haki	Late	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14,4	2	1
14	FC Twente 97	(23) Marjin Wijkhuis	Early	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8,1	0	1
15	FC Twente 97	(17) Octavian Deaconu	Early	<input type="checkbox"/>	<input type="checkbox"/>	5,0	1	0
16	FC Twente 97	(23) Marjin Wijkhuis	Late	<input type="checkbox"/>	<input type="checkbox"/>	9,1	0	0
17	FC Twente 97	(18) Ruben de Jager	Early	<input type="checkbox"/>	<input type="checkbox"/>	2,4	0	1
19	Aspire 97	(34) Monkeez	Late	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,5	0	1
20	Aspire 97	(33) Tariq	Early	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9,2	1	1
22	Aspire 97	(33) Tariq	Late	<input type="checkbox"/>	<input type="checkbox"/>	29,4	3	1
25	FC Twente 97	(17) Octavian Deaconu	Early	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,3	1	0
2	FC Twente 97	(17) Octavian Deaconu	Late	<input checked="" type="checkbox"/>	<input type="checkbox"/>	16,5	2	0
4	FC Twente 97	(18) Ruben de Jager	Late	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10,5	0	0
10	Aspire 97	(36) Adel	Early	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10,7	0	0
11	FC Twente 97	(14) David El Haki	Late	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11,1	0	1
18	FC Twente 97	(20) Luuk Deigt	Early	<input checked="" type="checkbox"/>	<input type="checkbox"/>	37,3	3	0
21	Aspire 97	(24) Monkeez	Late	<input type="checkbox"/>	<input type="checkbox"/>	17,6	2	1
23	FC Twente 97	(24) Rody de Graaff	Early	<input type="checkbox"/>	<input type="checkbox"/>	22,2	0	0
24	FC Twente 97	(14) David El Haki	Late	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11,9	2	2
26	FC Twente 97	(14) David El Haki	Early	<input checked="" type="checkbox"/>	<input type="checkbox"/>	15,4	1	1



Tab Visualisation

The top field reflects where all passes were done. In the dropdown selection at the top you can select a player doing crosses.

When clicking on a dot in the top field, the situation at the beginning of that pass is reflected in the lower field.

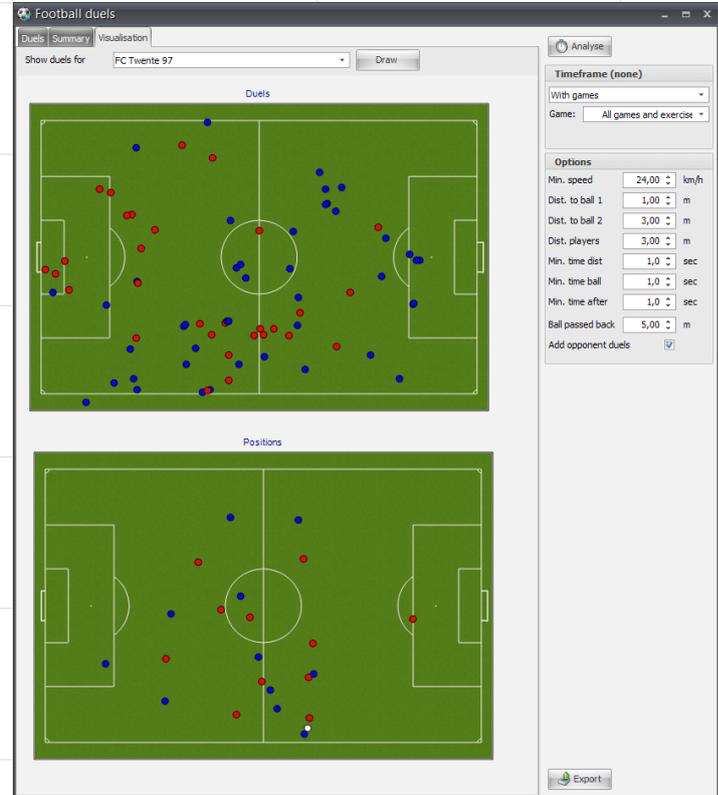


RICH-1502.D6

Tab Visualisation

The top field reflects all duels for a team. In the dropdown selection at the top you can select the team.

When clicking on a dot in the top field, the lower field shows the position of all players..



Tab Summary

Individual		Summary		Drag a column header here to group by that column											
Game	Part	Team	pressure	Pressure player	Close to BPP	Moved to BPP	Could Press	Did Press	Did press %	Did press Won	Did press won %				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(12)	Flora van Ockel	2	0	1	0	0	0	0	0			
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(13)	Sad Noussli	62	24	16	3	19	3	100				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(14)	David El Hoak	47	11	14	3	21	3	100				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(16)	Hilde ter Avest	22	8	8	3	38	3	100				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(17)	Octavian Deaconu	63	22	12	2	17	1	50				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(18)	Ruben de Jager	65	21	13	2	15	0	0				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(19)	Delano Groothuis	81	34	18	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(20)	Luuk Slaght	54	20	15	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(22)	Roy de Saik	14	3	4	1	28	0	0				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(23)	Harjo Wilhuijs	32	11	16	2	12	2	100				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(24)	Rody de Graaff	29	16	7	1	14	1	100				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(10)	Mark Spierdink	0	0	0	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	FC Twente 97	(15)	Hart Belhuis	0	0	0	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(30)	Hassin	76	19	16	1	6	1	100				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(31)	Ghassen	29	12	9	2	22	1	50				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(32)	Saeed	144	45	27	5	19	4	80				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(33)	Tang	79	31	19	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(34)	Monkeez	56	24	21	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(35)	Abdulahman	38	16	9	2	22	2	100				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(36)	Adel	101	40	28	1	4	1	100				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(38)	Sassam	33	13	14	2	14	2	100				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(39)	Moh Ataf	61	30	10	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(41)	Adulahman (GK)	5	1	3	0	0	0	0				
Aspre 97 - FC Twente 97	Whole game	Aspre 97	(42)	Abdullah Ali	144	59	18	2	11	0	0				

Analyze

Timeframe (none)

With games

Game: All games and exercise

Options

Min. pass time 100 sec

Min. speed to prob 7.0 km/h

Min. calculation speed 17.5 km/h

Zone high pressure 2.0 m

Zone medium pressure 4.0 m

Maximum pass forward 4.0 m

Min. possession time 1.0 sec

Filter results on direction Filter results on speed Filter results on could h.press

Export

RICH-1502.D6



Heat map

Open the Heat map module in the module layout window (tab). You can set the data for the analysis in the right column of the screen. These data are displayed when you click on the **Analysis** button thereafter.

Timeframe

Select the game/part for the data to be analysed.

Heat map parameters

Define the resolution of the heat map and check if you want to see how many seconds a player has been in a certain area.

Transponders

Select the athletes you want to analyse.

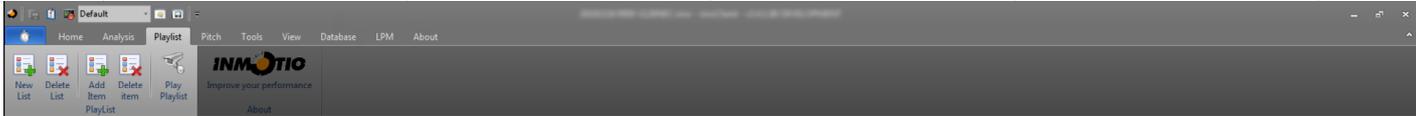
Export

This allows you to export the analysis to a **.csv** file.

Moet hier nog wat meer over verteld worden?

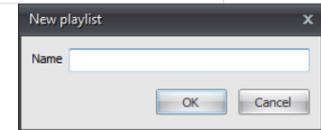


RICH-1502.D6



New list

Open the dialog box to create a new play list.



Delete list

Delete a play list.



Add item

Add an item in an existing play list.



Delete item

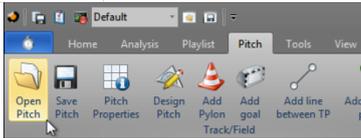
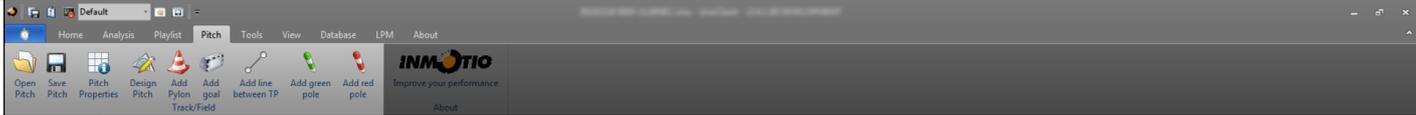
Delete an item in a play list.



Play Playlist

Replay the compiled video's.

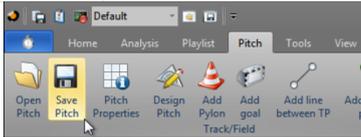
RICH-1502.D6



Open Pitch

Open an **.ifd** file with the related properties of the measuring area.

These are set by Inmotio and the regular user will not use this function.



Save Pitch

Save the current measuring area.

These are set by Inmotio and the regular user will not use this function.



Pitch Properties

Open the dialog box with the properties of the current measuring area.

These are set by Inmotio and the regular user will not use this function.

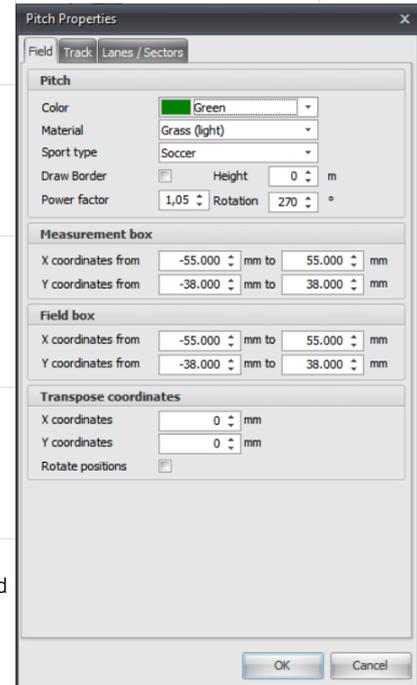
Tab Field

Pitch Define the **Colour**, **Material** and the **Sport type** of the measuring area.

Measurement box The X and Y coordinates of the area to be measured.

Field box The X and Y coordinates of the field to be measured.

Transpose coordinates The measuring area can thereby be shifted in X-and Y-direction.



Tab Track

Track Define the **Track orientation**, **Colour** and the dimensions of the measuring area.

Start/Finish line The X and Y coordinates of the start/finish line.

Track coordinates The length and radius of the track.

The screenshot shows the 'Pitch Properties' dialog box with the 'Lanes / Sectors' tab selected. The 'Lanes' section contains a table with columns 'Start radius', 'End radius', and 'Description'. Below the table are 'New' and 'Delete' buttons. The 'Sectors' section contains a table with columns 'Num', 'From', 'To', and 'Description'. Below the table are 'New' and 'Delete' buttons. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Tab Lanes/Sector

Lanes Define the **Lanes**.

Sectors Define the **Sectors**.

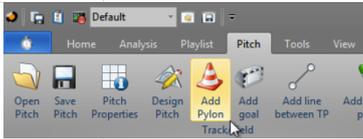
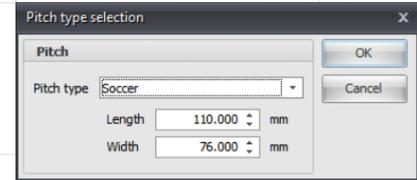
The screenshot shows the 'Pitch Properties' dialog box with the 'Track' tab selected. The 'Define track area' checkbox is checked. The 'Track' section includes: 'Track orientation' (horizontal), 'Material' (Solid color), 'Color' (Black), 'Corner 1' (X: 0 mm, Y: 0 mm), 'Corner 2' (X: 0 mm, Y: 0 mm), 'Radius' (from 0 mm to 0 mm), and 'Team pursuit' (unchecked). The 'Start / Finish line' section includes: 'Left' (X: 0 mm, Y: 0 mm) and 'Right' (X: 0 mm, Y: 0 mm). The 'Track coordinates' section includes: 'Track length' (0 mm) and 'Left/Right radius' (0 mm). At the bottom are 'OK' and 'Cancel' buttons.

RICH-1502.D6



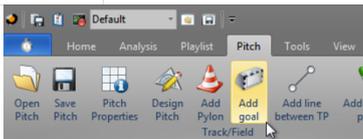
Design Pitch

Open the Pitch type selection to design a new pitch.



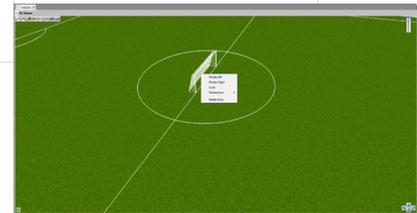
Add Pylon

Place a pylon in the field. After you have opened the 3D Viewer module and clicked on the **Add Pylon** button, a red Pylon will appear in the central circle of the field. You can place the pylon in the desired position in the field by dragging it with the left mouse button pressed down. You can delete the pylon by right-clicking on it. You can edit the properties of the pylon in the "3D Object List".



Add goal

You can place a goal thereby. After you have opened the 3D Viewer module and clicked on the **Add goal** button, a goal will appear in the central circle of the field. You can place the goal in the desired position in the field by dragging it with the left mouse button pressed down. You can delete or rotate the goal by right-clicking on the goal. You can edit the properties of the goal in the "3D Object List".



RICH-1502.D6



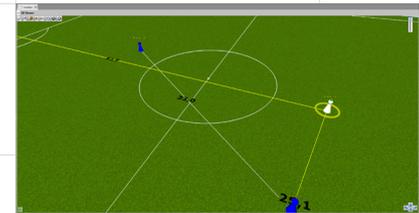
Add line between 2 transponders

Draw a line between two athletes. After you have opened the 3D Viewer module and clicked on the **Add line** button, a dialog box appears to let you choose from which athlete to which other athlete you want to draw a line. You can edit the properties of the line or delete it in the "3D Object List".



Add green pole

You can place a green pole. After you have opened the 3D Viewer module and selected an athlete, you click on the **Add green pole** button to place a green pole on the location of the selected athlete. You can delete or move the green pole by right-clicking on the pole. You can edit the properties of the green pole in the "3D Object List".

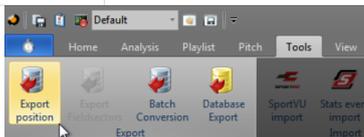


Add red pole

You can place a red pole. After you have opened the 3D Viewer module and selected an athlete, you click on the **Add red pole** button to place a red pole on the location of the selected athlete. You can delete or move the red pole by right-clicking on the pole. You can edit the properties of the red pole in the "3D Object List".



RICH-1502.D6



Export position

Open the dialog box with the options for exporting position data. The window contains the **Selection** and **“Result set”** tabs:

Tab Selection

Timeframe Define the time interval for the data to be exported.

Options

Frequency the export frequency in Hz.
Seperator separation of tab, comma or semicolon.

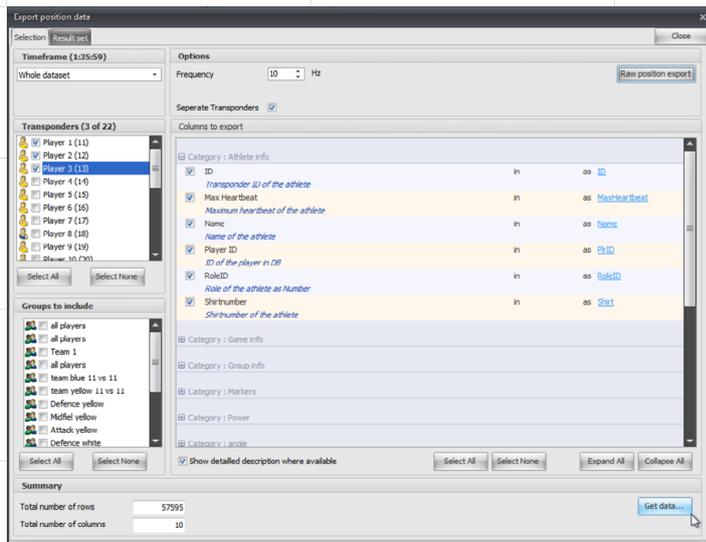
Transponders Checking the athletes whose data is to be exported.

Groups to include Checking the groups for which data must be exported.

Columns to export By clicking on the + button for the Category, the data columns that can be exported shall appear. Tick-mark the information that is to be exported. Defaults for checked boxes can be changed in the “Batch export” of the Configuration menu.

Summary The number of rows and columns with data selected for export.

On clicking the **Get data...** button, you will see the results of your selection in the **“Result set”** tab.



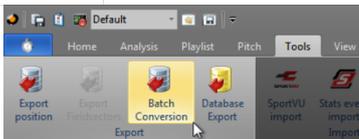
RICH-1502.D6

Result set

The result of the selected data that you have created in the “Tab Selection”. You can export the data to a **.csv** file (Export to text file...), an **.xls** file (Export to Excel), or save a copy to the clipboard (Copy to clipboard).

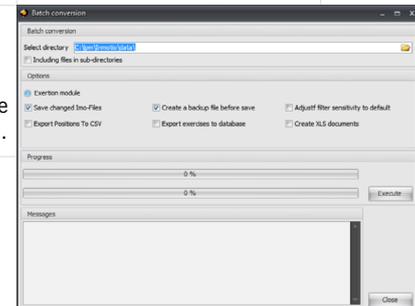
The screenshot shows a dialog box titled "Export position data" with a "Close" button in the top right. Below the title bar is a "Selection" tab and a "Result set" tab. The "Result set" tab is active, displaying a table with the following columns: Timestamp, X, Y, Speed, ID, Name, Start, RoleID, and Marksheet ID. The table contains 31 rows of data, all for "Player 1". At the bottom of the dialog, there are two buttons: "Export to text file..." and "Export to Excel...".

Timestamp	X	Y	Speed	ID	Name	Start	RoleID	Marksheet ID
0	-1,192	36,312	0,59	0	Player 1	11:0	200	1
100	-1,319	36,300	1,44	0	Player 1	11:0	200	1
200	-1,481	36,288	1,82	0	Player 1	11:0	200	1
300	-1,681	36,278	2,19	0	Player 1	11:0	200	1
400	-1,917	36,269	2,51	0	Player 1	11:0	200	1
500	-2,182	36,261	2,76	0	Player 1	11:0	200	1
600	-2,468	36,253	2,98	0	Player 1	11:0	200	1
700	-2,777	36,247	3,19	0	Player 1	11:0	200	1
800	-3,105	36,244	3,35	0	Player 1	11:0	200	1
900	-3,443	36,249	3,38	0	Player 1	11:0	200	1
1000	-3,777	36,259	3,26	0	Player 1	11:0	200	1
1100	-4,094	36,270	3,09	0	Player 1	11:0	200	1
1200	-4,396	36,277	2,97	0	Player 1	11:0	200	1
1300	-4,689	36,280	2,93	0	Player 1	11:0	200	1
1400	-4,982	36,279	2,94	0	Player 1	11:0	200	1
1500	-5,278	36,274	2,98	0	Player 1	11:0	200	1
1600	-5,577	36,266	3,00	0	Player 1	11:0	200	1
1700	-5,878	36,254	3,02	0	Player 1	11:0	200	1
1800	-6,180	36,243	3,02	0	Player 1	11:0	200	1
1900	-6,482	36,234	3,01	0	Player 1	11:0	200	1
2000	-6,782	36,224	2,99	0	Player 1	11:0	200	1
2100	-7,079	36,208	2,97	0	Player 1	11:0	200	1
2200	-7,374	36,184	2,95	0	Player 1	11:0	200	1
2300	-7,667	36,151	2,96	0	Player 1	11:0	200	1
2400	-7,962	36,118	2,97	0	Player 1	11:0	200	1
2500	-8,259	36,094	3,00	0	Player 1	11:0	200	1
2600	-8,561	36,087	3,04	0	Player 1	11:0	200	1
2700	-8,867	36,095	3,09	0	Player 1	11:0	200	1
2800	-9,179	36,114	3,18	0	Player 1	11:0	200	1
2900	-9,503	36,138	3,32	0	Player 1	11:0	200	1
3000	-9,841	36,160	3,44	0	Player 1	11:0	200	1
3100	-10,186	36,180	3,43	0	Player 1	11:0	200	1
3200	-10,533	36,199	3,36	0	Player 1	11:0	200	1

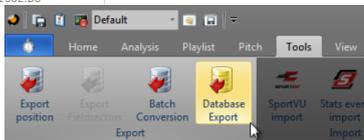


Batch conversion

Open the dialog box with batch conversion options. Here, you can specify the directory in which the batch conversion should be stored, which file, and which part is to be converted, and you can also see the progress of the conversion.



RICH-1502.D6



Database Export values

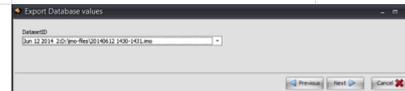
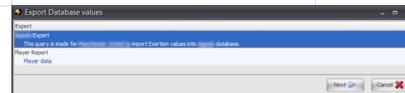
Open the dialog box with Export Database values. If you want to export data that matches a single imo-file then first open this imo-file.

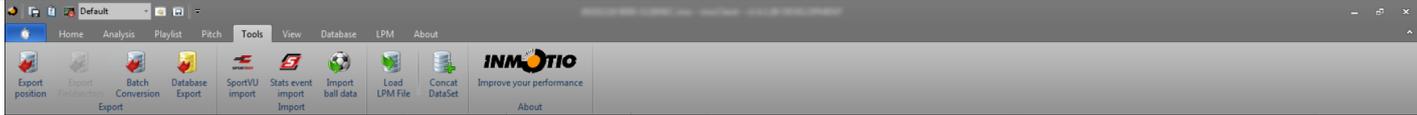
Select one of the Queries and press **Next**.

Fill in the required parameters.

If using the dataset with an opened imo-file, this dataset will be preselected. Press **Next**.

Press **Export** and the result dataset will be exported in the format given.

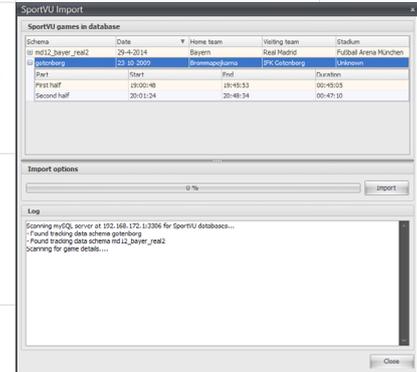




SportVU import

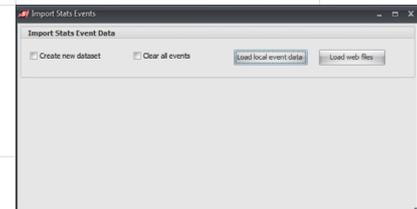
Open the dialog box with the options for importing SportVU data when you have a license from SportUV. A connection with the sportVU server is needed to import these data.

Select a game and press **import**. An imo-file is now created. Save it any time you are done.



Stats event import

Open the dialog box with the options for importing Stats Event data.



RICH-1502.D6



Import ball tracking data

Open the dialog box with the options for importing ball tracking data.

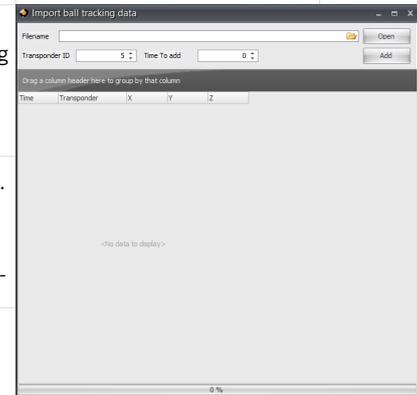
When a training is recorded with the Inmotio balltracking solution, the ball data can be enhanced afterwards.

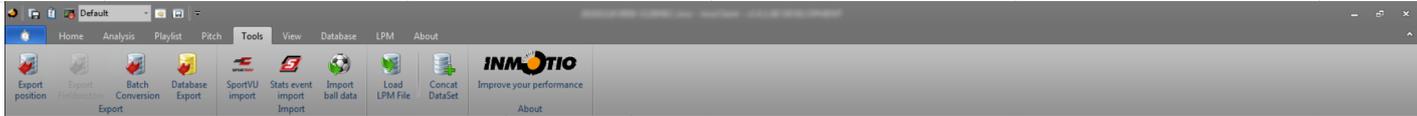
Filename First select the file by clicking the **Folder** button.

Open Open the file. The file is now loaded into the grid.

Transponder ID Select the transponder ID the ball gets when added to the dataset (see "Setup Transponders"). Then press the **Add** button.

Time to add Add some time to synchronise in case there is an offset in the ball data and the position data.

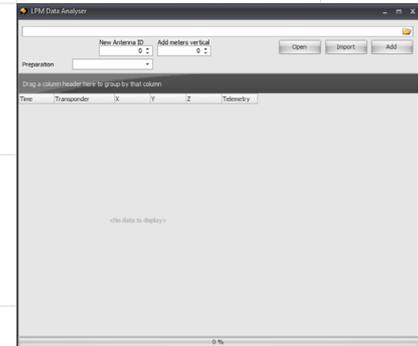




Load LPM File

It is possible to import a backup file - which is automatically created during a live recording - using the Inmotio system. This may be necessary if, by mistake, a dataset is not properly saved and the lpm file is still accessible.

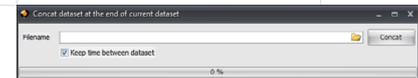
Select the **lpm** file and press **Open**. After the file is read, press **Import**. The entire recording will then be available and can be saved again.



Concat DataSet

Two datasets (.imo files) can be combined into one, if they are shortly created after each other (for instance, when the first was stopped by mistake).

If the time between the two files is too long, you will receive the message "**Keep time between dataset**".



RICH-1502.D6



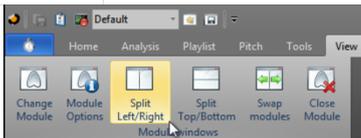
Change Module

The main modules screen appears, in which you can select a different module.



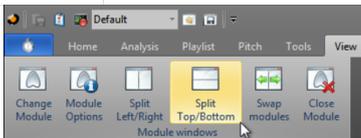
Module Options

Open the dialog box, if available, containing the options for the currently active module.



Split Left/Right

Split the module window into two parts (side by side) so that you can open another module in the right pane.



Split Top/Bottom

Split the module window into two parts (one above the other) so that you can open another module in the bottom pane.



Swap modules

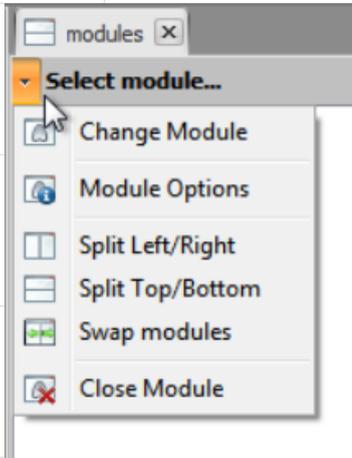
Change the modules in the split module window.

RICH-1502.D6



Close Module

Close the open module.



Dropdown Menu

These options may also be found in the “Drop-down menu” that appears when you click on the arrow next to the bar with the module name.

RICH-1502.D6



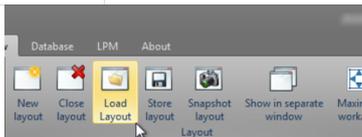
New layout

Open a layout window in a new tab where you can make a selection from the modules.



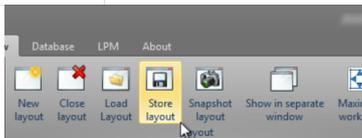
Close layout

Close the currently active layout window (tab).



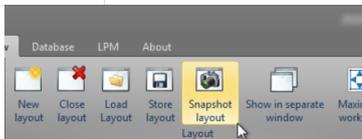
Load layout

Open a selected, previously saved layout of your workspace (combination of open windows).



Save layout

Save your present working space (combination of open windows).



Snapshot layout

Create a snapshot of the currently active layout window (tab). The dialog box shows a preview of the snapshot taken, that you can save if you so desire.



RICH-1502.D6



Show in separate window

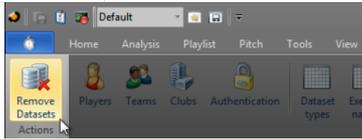
Open the module layout window in a separate window. You can also open a separate pane of the layout window module by right-clicking the mouse on the dark grey bar (next to Tab modules) and clicking on 'Show in separate window'.



Maximize workarea

Maximizes the "4. Module window" on your screen, leaving unshown most of the "2. Menu bar" and "3. Datasets window". This can be made undone by clicking the same button.

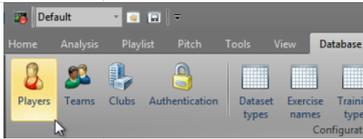
RICH-1502.D6



Remove Datasets

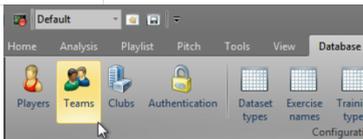
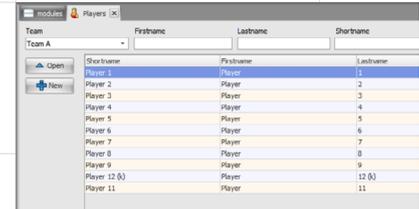
Get an overview of all datasets in the database. If a line turns red, it can not be found. One or more selected datasets can be removed from the database.

RICH-1502.D6



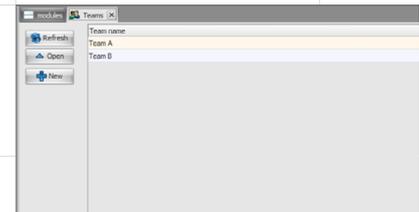
Players

Open the Players map in the module layout window (tab). You can find a player in your database or add a new one and configure the settings.



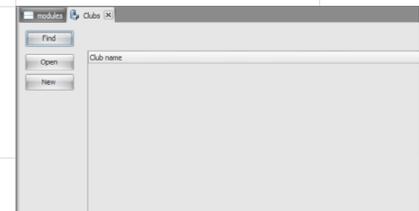
Teams

Open the Team map in the module layout window (tab). You can find a team in your database or add a new one and configure the settings.



Clubs

Open the Clubs map in the module layout window (tab). You can find a club in your database or add a new one and configure the settings.

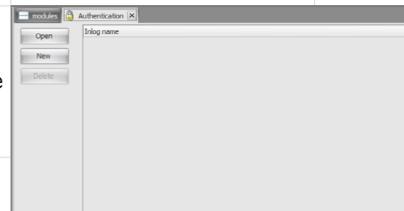


RICH-1502.D6



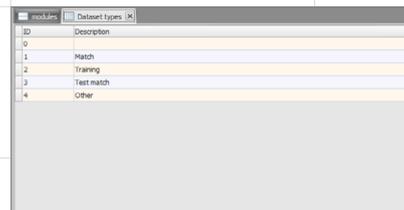
Authentication

Open the Authentication map in the module layout window (tab). Herewith you can authorize employers to make use of the Inmotio IpmSystem.



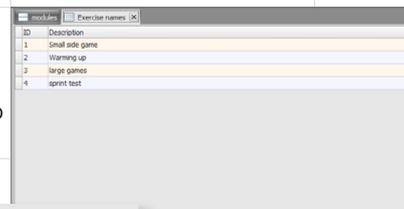
Dataset types

Open the Dataset types map in the module layout window (tab). Here you can define the kinds of datasets (training, match, ...) you want to use (and to compare with similar datasets).



Exercise names

Open the Exercise names map in the module layout window (tab). You can define new exercises, edit or delete existing ones with help of the buttons at the bottom. These buttons also help you to navigate in a (long) list of exercise names.

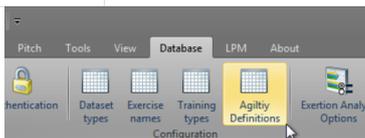
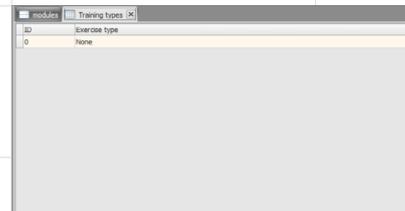


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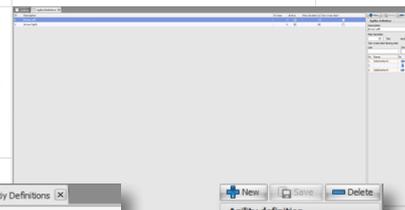
Training types

Open the Training types map in the module layout window (tab). Herewith you can define trainings within an exercise. E.g. a series of specified small games.



Agility Definitions

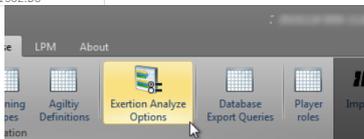
Open the Agility Definitions map in the module layout window (tab). (Example: sprint an arrow-shape left or right) The field(s) can be defined in the column at the right.



ID	Description
1	Arrow Left
2	Arrow Right

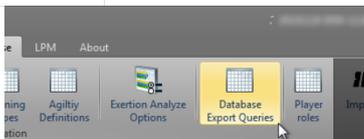
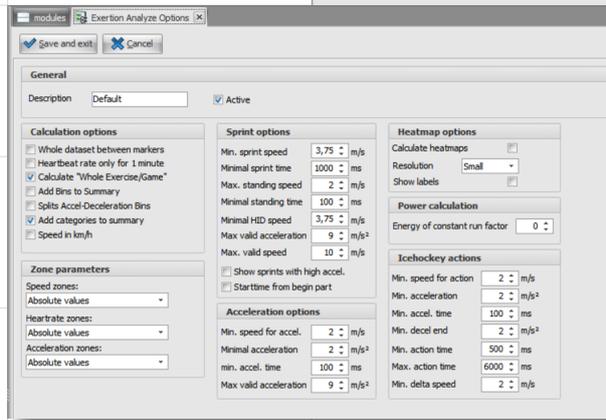
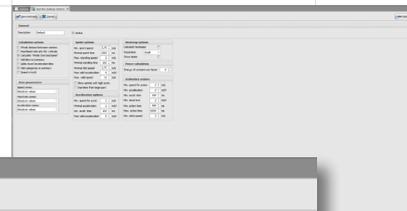
Nr.	Name	Dir
1	SidelineNorth	←
2	SidelineNorth	→
3	SidelineNorth	↔

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Exertion Analyze Options

Open the Exertion Analyze Options map in the module layout window (tab).
Here you can specify how you want to analyze an exertion.



Database Export Queries

Open the Database Export Queries map in the module layout window (tab) to make Export queries from the database so data from the database can easily be exported to a .csv file.



Create a new export query by clicking on **New** or to open an existing one on **Open**.

Description

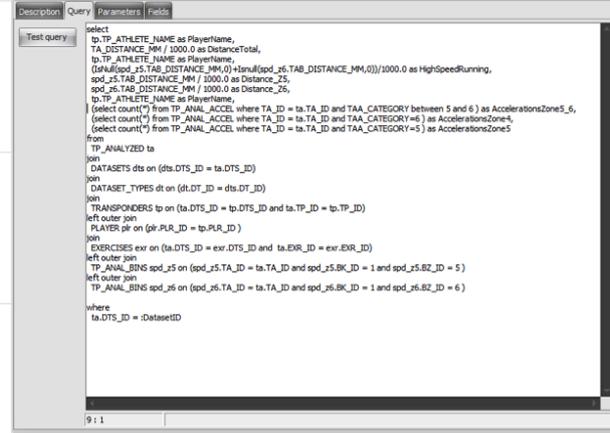
Complete the fields and press the tab **Query**.



Query

Complete the query and press **Test Query**. If everything is OK, the result dataset will be shown.

When testing for the first time, it is quite normal you encounter some errors. Often, this is because some parameters are left blank.



```

select
  tp.ATHLETE_NAME as PlayerName,
  ta.DISTANCE_MM / 1000.0 as DistanceTotal,
  tp.ATHLETE_NAME as PlayerName,
  ((sum(spds.TAB_DISTANCE_MM)/1000.0)+sum(spds2.TAB_DISTANCE_MM)/1000.0 as HighSpeedRunning,
  spds2.TAB_DISTANCE_MM / 1000.0 as Distance_25,
  spds.TAB_DISTANCE_MM / 1000.0 as Distance_25,
  tp.ATHLETE_NAME as PlayerName,
  (select count(*) from TP_ANAL_ACCEL where TA_ID = ta.TA_ID and TAA_CATEGORY between 5 and 6 ) as AccelerationsZone5_6,
  (select count(*) from TP_ANAL_ACCEL where TA_ID = ta.TA_ID and TAA_CATEGORY=3) as AccelerationsZone4,
  (select count(*) from TP_ANAL_ACCEL where TA_ID = ta.TA_ID and TAA_CATEGORY=5) as AccelerationsZone5
from
  TP_ANALYZED ta
join
  DATASETS dts on (dts.DTS_ID = ta.DTS_ID)
join
  DATASET_TYPES dt on (dt.DT_ID = dts.DT_ID)
join
  TRANSPONDERS tp on (ta.DTS_ID = tp.DTS_ID and ta.TP_ID = tp.TP_ID)
left outer join
  PLURER plr on (plr.PLR_ID = tp.PLR_ID)
join
  EXERCISES exr on (ta.DTS_ID = exr.DTS_ID and ta.EVR_ID = exr.EVR_ID)
left outer join
  TP_ANAL_BKNS spd_25 on (spd_25.TA_ID = ta.TA_ID and spd_25.BK_ID = 1 and spd_25.BZ_ID = 5)
left outer join
  TP_ANAL_BKNS spd_26 on (spd_26.TA_ID = ta.TA_ID and spd_26.BK_ID = 1 and spd_26.BZ_ID = 6)
where
  ta.DTS_ID = :DatasetID
  
```

Parameters

You can select a lookup type and default values.

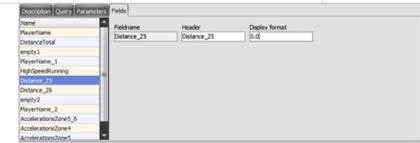
Two predefined **Default values** are:

- (DatasetID): The current open imo-file
- (Date): The current date

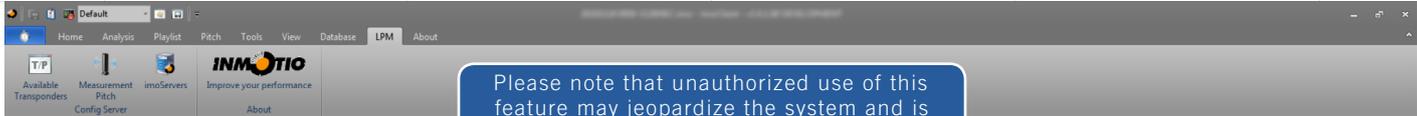


Fields

Here you can change the **name** of the field and the **display/export format** of the field.

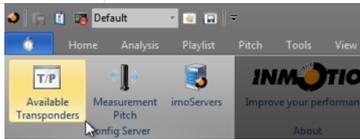
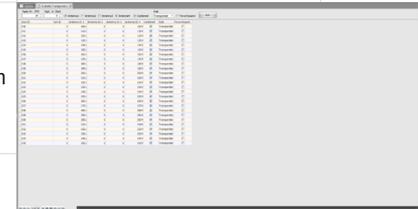


RICH-1502.D6



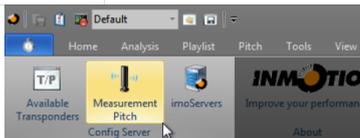
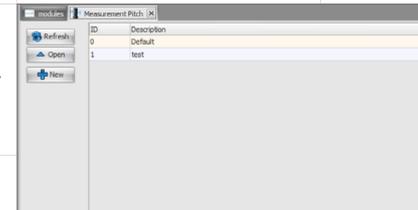
Available Transponders

Open the Available Transponders map in the module layout window (tab). You can manage the transponders in your system or add a new one and configure the settings. Also see “Setup Transponders” in “Prepare recording” for detailed instructions.



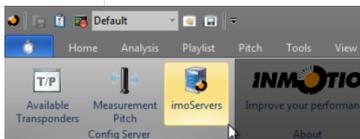
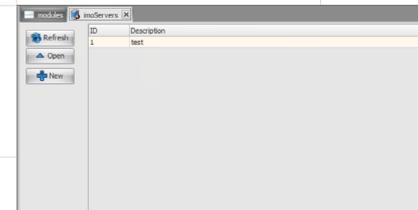
Measurement Pitch

Open the Measurement Pitch map in the module layout window (tab). You can (re-)define the pitch in your database or add a new one and configure the settings.

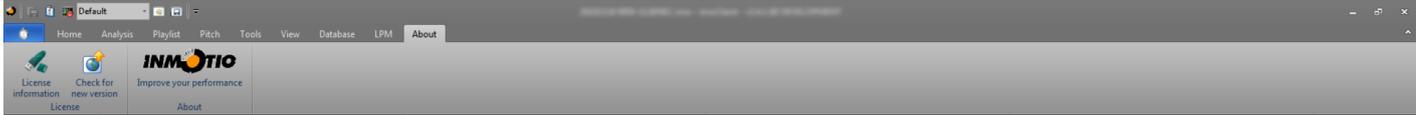


imoServers

Open the imoServers map in the module layout window (tab). You can find an imoServer in your database or add a new one. All imoServers must be registered here by name and IP-nbr.in order to make a connection with i.e. a tablet PC in the field. Also see “imoServer”.



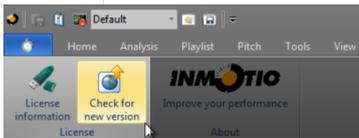
RICH-1502.D6



License information

Open the dialog box containing the license information. Press on the **arrow** next to the **Close** button and select “Update dongle with license information from file”.

- Write current license information to file. (So you can send it to Inmotio, when needed)
- Update dongle with license information from (updated) file.



Check for new version

Connect to the Inmotions' download site to obtain the latest version of your software: <http://latestversion.inmotio.eu>

Latest versions of the Inmotio software

Welcome to Inmotio Object Tracking S.V.

InoClient: 3.4.1.84
[Download current version](#)
 24-12-2014 | Version: 3.4.1.84
 - BUG fixed: When adding a new player in - 83 all information about team history was lost.
 - Added: Multiple Ability Tests can be assigned to a single revenue.
 - Added: 3D, DOTS, DOTS, 2D, DOTS, MAX in TEAM OBJECTS.
 - Added: Full Web Localization.
 - Important: Includes who uses the personal max documentation if analyzing assistances relative.
[Complete release notes](#)

InoServer: 3.4.1.45
[Download current version](#)
 10-12-2014 | Version: 3.4.1.45
 - Fixed a possible memory corruption during measurement.
 - Fixed some memory leaks.
[Complete release notes](#)

DomeControl: 3.3.6.1
[Download current version](#)

PTZ Controller: 1.2.6
[Download current version](#)

Firefox users
 If you are using Firefox please first install the following [Addon](#) then right click the download link above to open it with "Firefox".
[Find Firefox Plugin](#)

Upgrade warning
 If you are upgrading from version 2.x, please be aware there is now only one version for all sports.

Upgrade instructions:

- Open an explorer
- Go to the "bin" directory (C:\Program Files\Inmotio)
- Find your installer (InnoSetup #20.0)
- Rename to inno2009.in
- Double click the new installer use in this directory.
- Follow the instructions in the .txt file.
- Update all your links to the new executable.

If you are using the PTZ system also update InnoServer

- Open an explorer
- Go to the "bin" directory (C:\Program Files\Inmotio)
- Find your .in file (Inno2009.in)
- Rename to inno2009.in
- Extract the new InnoServer.exe in this directory.

3. Datasets window

Datasets (A)

The datasets window consists of three distinct panels (four panels during a Live Data recording). These are, from top to bottom:

- A Datasets
- B Dataset Explorer
- C CameraZoom window
- D Detail window

Datasets (A)

Displays the names of the opened dataset files. The icon is red during a Live recording (a recording not saved under any name), and has the description 'Live Dataset'.

Dataset Explorer (B)

Shows the Athletes, Groups, Markers, Exercises, Games and Playlists.

Camera selector input (C)

Select the (set of) camera(s) you want to enable or disable with help of easy shortcut keys. More information about the shortcuts and the camera control you will find in "Section Video server" and "Section Control Camera" in the chapter "imoServer".

Detail windows (D)

The bottom panel (D) displays the details relating to the selection in the panel above.

RICH-1502.D6

The screenshot shows the 'Datasets' window interface. At the top, there is a 'Datasets' panel (A) with a red icon and the text 'Live Dataset'. Below it is the 'Dataset Explorer' panel (B) showing a tree view with 'Athletes' expanded, listing multiple 'Unknown ath...' entries, and other categories like 'Groups', 'Markers', 'Exercises', 'Games', and 'Playlists'. At the bottom is the 'Camera selector input' panel (C) showing a dropdown menu with 'Unknown athlete' selected and a red status indicator. Below the dropdown, there are three rows of data: a heart icon with '0 BPM', a speedometer icon with '0,00 km/h', and a speed icon with '0,0 m/s² out of range'. The text '(010)' and '0,0 Hz' are also visible on the left side of the bottom panel.

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The screenshot shows the software interface with the following components:

- Dataset Explorer:** Shows a 'Live Dataset' and a tree view with 'Athletes' expanded. A context menu is open over the 'Athletes' list, showing options: 'Athlete Properties', 'Athlete Details', 'Remove Athlete', 'Follow Athlete', and 'Follow Athlete'.
- Athletes List:** A list of 'Unknown athl...' items, each with a person icon.
- Camera selector input:** A panel at the bottom showing a dropdown menu with 'Unknown athlete' selected. Below it, there are four data points:
 - 0 BPPM (with a heart icon)
 - 0,00 km/h (with a speedometer icon)
 - 0,0 m/s² (with an acceleration icon)
 - out of range (with a red bar icon)

Under Athletes, you will find detailed information about the activated transponders located within the area to be measured. The ID numbers and names of the athletes are displayed by clicking on '+', left from 'Athletes'. When you select a transponder/athlete by clicking on the ID number, the details of the related athlete will appear in the Details pane (D) at the left bottom of the screen:

- transponder ID number
- frequency of measurement or sampling rate
- name of the athlete (edit if so desired)
- colour of the athlete as shown in the 3D Viewer (edit if so desired)
- current pulse
- current speed
- acceleration

By selecting a transponder/athlete and right-clicking the mouse button, you can open the dialog with the **Athlete Properties** (also see "Athletes"). This can also be done by double-clicking on a transponder/athlete.

RICH-1502.D6

A

Dataset Explorer

- Athletes
- Groups
 - team blue 11 vs 11
 - team yellow 11 vs 11
 - Defence yellow
 - Midfiel yellow
 - Attack yellow
 - Defence white
 - Midfiel white
 - Attack white
- Markers
- Exercises
- Games
- Playlists

Group Properties
Add Group
Delete Group
Follow Group

B

Camera selector input

team blue 11 vs 11

1,94 Km/h
4,32; 36,69

C
D

By clicking on '+', left from 'Groups', you will see the compiled group(s) of athletes. When you select a group by clicking on the name of the group, detailed information about this group will appear in the Details pane (D):

- group name (edit if so desired)
- group colour (edit if so desired)
- the selected visualisation(s)
- current speed
- current position of the centre of the group on the course, indicated by the X and Y coordinates

By selecting a group and right-clicking the mouse, you can open the **Group Properties** (also see "Groups") dialog or **Add Group**, or delete the group (**Delete Group**). The Group Properties window will also appear when you double-click on a group.

RICH-1502.D6

The screenshot shows a software interface with three main sections:

- Dataset Explorer (A):** A tree view on the left showing a dataset named '20101118 0950-1126NFC.imo'. Underneath, there are categories for Athletes, Groups, Markers, Exercises, Games, and Playlists. The Markers category is expanded, showing a list of time-based events.
- Marker List (B):** A list of markers with a context menu open over the selected marker '0:54:51.680 end 1st h...'. The menu options are: Marker Properties, Place marker, Delete Marker, and Goto Marker.
- Details Pane (C and D):** A pane at the bottom showing the details for the selected marker: '0:54:51.680 end 1st half'. It includes a 'Delete Marker' button.

If you click on '+', left from Markers, you will see information about the markers made during the measurement. When you select a marker by clicking on a time, the details of this marker will appear in the Details pane (D) on the left bottom of the screen:

- time at which the marker is placed
- button with arrow to place the play control at the time of placing the selected marker
- description of the marker (edit if so desired)
- button to delete the marker

By selecting a marker and right-clicking the mouse button, you can open the **Marker Properties** (also see "Markers") or **Place Marker** dialog box, delete a placed marker (**Delete Marker**), or go to the time point of the marker (**Goto Marker**).

RICH-1502.D6

A

Dataset Explorer

- Athletes
- Groups
- Markers
- Exercises
 - 11 vs 11
 - all players
 - Whole exercise | 0:33:...
 - first half | 0:33:59 - 0:...
 - second half | 0:58:31 ...
 - first half
 - second half
 - Sprints
 - Small size games
- Games
- Playlists

Context Menu:

- Exercise properties
- Add Exercise
- Delete Exercise
- Add Part

Camera selector input

second half

Start 0:58:31.262

End 1:18:13.927

Duration 0:19:42.665

Select Set start Set end

B

C

D

When you click on '+', left from 'Exercises', you will see information about the exercises that were created during the measurement. When you select an Exercise by clicking on an Exercise, the details of the related Exercise will appear in the Details pane (D) at the left bottom of the screen:

- name of the exercise
- start time of the exercise and button with arrow to move the play control to the start time
- end time of the exercise and button with arrow to move the play control to the end time



There are three buttons under the same:

Select

selects the exercise in the time bar

Set start

defines the (new) start time of the exercise

Set end

defines the (new) end time of the exercise

By selecting an exercise and right-clicking the mouse, you can open the **Exercise properties** (also see "Exercises") or **Add Exercise** dialog, delete the exercise (**Delete Exercise**) or add a part of an exercise (**Add Part**).

By selecting a part of the Exercise, detailed information concerning the part of the exercise will appear in the Details pane at the bottom left of the screen.

RICH-1502.D6

A

20101118 0950-1126NEC.rmo

Dataset Explorer

- Athletes
- Groups
- Markers
- Exercises
- Games
 - Test game
 - Team 1
 - Team 2
 - Whole game | 0:36
- Playlists

Context menu for 'Test game':

- Add game
- Game properties
- Delete game
- Add Part
- Analyse ball possession

Camera selector input

Test game

Start 0:36:03.379

End 0:58:31.262

Duration 0:22:27.883

Select Set start Set end

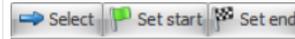
B

C

D

If you click on '+', left from 'Games', you will see information about the Games that were created during the measurement. If you select a Game by clicking on it, detailed information concerning the Game will appear in the Details pane at the bottom left of the screen:

- name of the Game
- start time of Game and the button with arrow to move the play control to the start time
- end time of the Game and the button with arrow to move the play control to the end time



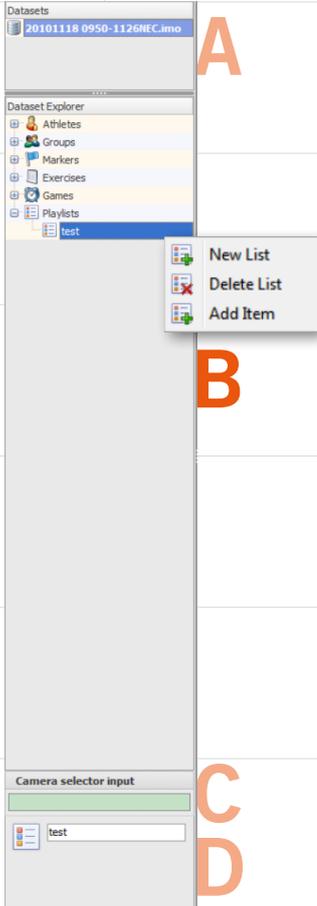
There are three buttons under the same:

- Select** selects the exercise in the time bar
- Set start** defines the (new) start time of the exercise
- Set end** defines the (new) end time of the exercise

By selecting a Game and right-clicking the mouse, you can open the **Game properties** (also see "Games") or **Add Game** dialog, delete the exercise (**Delete Game**) or add a part of a game (**Add Part**).

By selecting a part of the Game, detailed information concerning the part of the game will appear in the Details pane (D) at the bottom left of the screen.

RICH-1502.D6



If you click on '+', left from 'Playlists', you will see the Playlists you already made. If you select a Playlist by clicking on it, the name of the list will appear in the Details pane at the bottom left of the screen.

By selecting a Playlist and right-clicking the mouse, you make a **New List** (also see "Playlist"), delete the Playlist (**Delete List**) or add an item to the list (**Add Item**).

RICH-1502.D6



The available modules of your Ipm system will be found in the module layout window (tab). You can open a module by double-clicking on one of the icons.

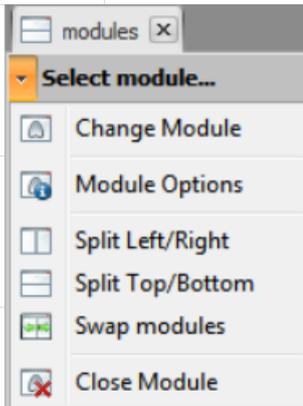
It is possible to simultaneously open several modules (Split Left/Right or Split Top/Bottom) or several module layout windows (tabs), side by side.

You can find these options in the Menu bar under the “Tab View”.

Drop-down menu

You will also find these Module windows options in the “Dropdown Menu” that appears when you click on the arrow next to the bar with the module name.

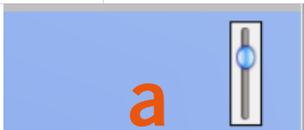
You can manually change the size of the window in which the modules are displayed, by holding the cursor at the edge of the window and moving the mouse while holding the left mouse button pressed down.



RICH-1502.D6



If you open the 3D Viewer module, the field with the athletes carrying the activated transponders will appear on the screen. You can change the field display using the interface buttons:



Zoom

Move the slide at the top right (a) of the screen up (to zoom in) or down (to zoom out).



Tilting

You can tilt the field using the arrows at the bottom right (b) in the screen. You can also tilt the field by clicking on the field and moving the mouse while keeping the right mouse button pressed down.



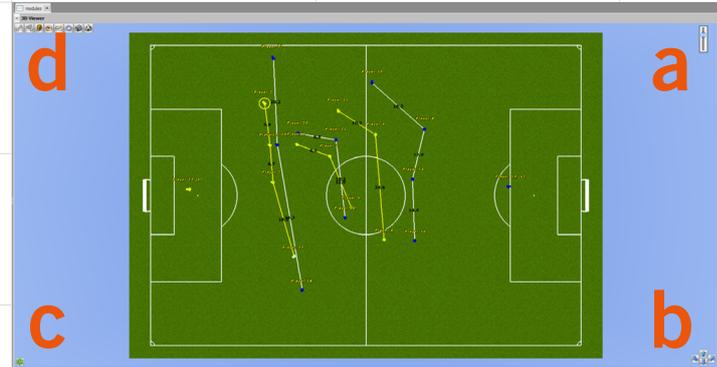
Rotating

Click on the button at the bottom left (c) of the screen, in order to rotate the field through 90 degrees. You can also change the position of the field in the window by clicking on the field and moving the mouse while holding the left mouse button pressed down. You can also zoom in and out using the scroll wheel on your mouse or the arrow keys on your keyboard. If you select an athlete in "Datasets Explorer (B)", this player will be highlighted on the field with a yellow circle.



Display

You will see a number of icons at the top left of the module layout window (d). By clicking on an icon, a window containing options such as "Viewer options", "Camera control", "Measuring tools", "Visualisations" and "Recorder options", will appear (explained on the next pages).



RICH-1502.D6



The display options include:

Antialias rendering

smooth display of the lines of the field.

Show interface buttons

tick-mark to display the interface buttons.

Show path of selected athlete

tick-mark to display the selected athlete's route.

Display an identifying label above each athlete

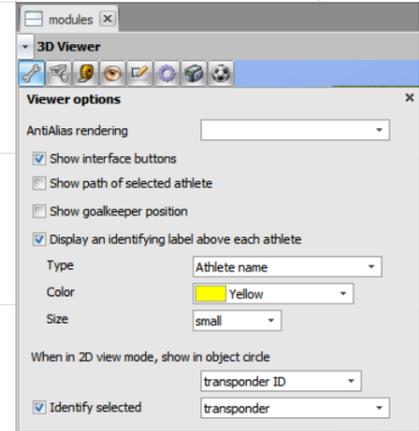
select the information (Type, Colour, Size) to be displayed.

When in 2D view mode, show in object circle

select the information (transponder ID/shirt number) that should appear in the object circle.

Identify selected

tick-mark and select the data to be displayed.



RICH-1502.D6



The options for the view of the field:

Enable first person view mode

tick-mark in order for the mode with a player's-eye-view display.

Tilt mode

select how the field should be tilted in the view.

Movement mode

select whether the view should display the motion in the field.

View direction

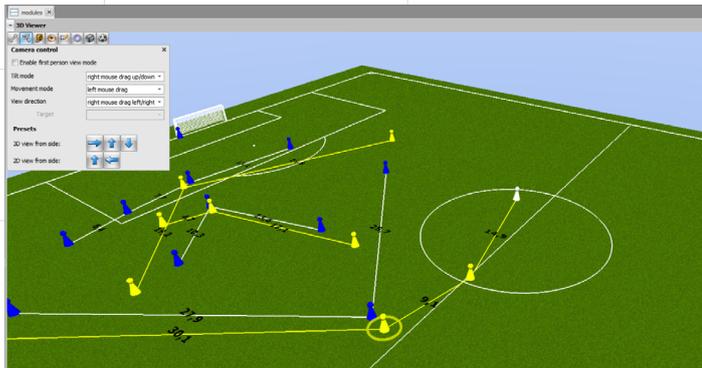
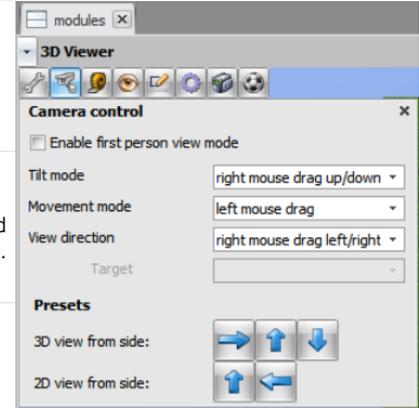
select the viewing direction of the display. If you select the option 'look at target', you select it under Target.

3D view from side

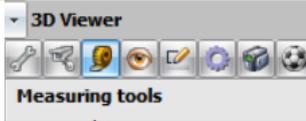
select the viewing direction of the 3D-display.

2D view from side

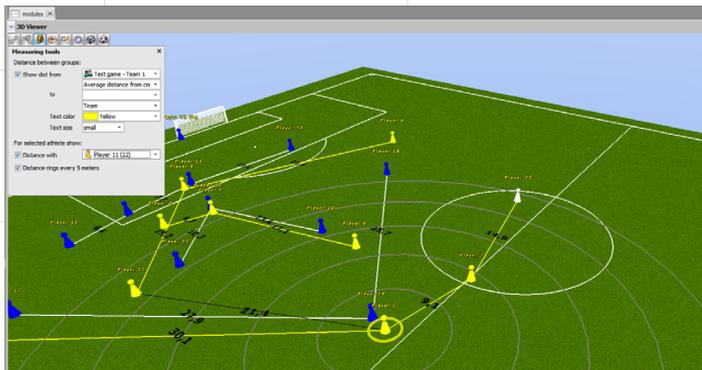
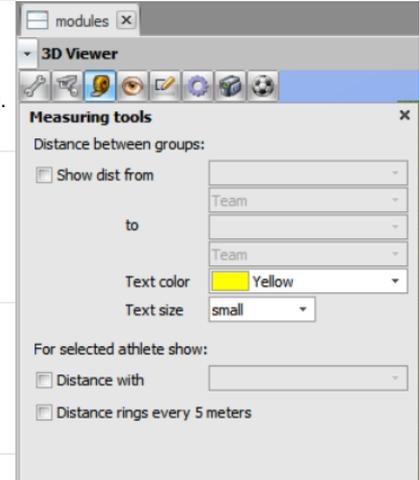
select the viewing direction of the 2D-display.



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The options for displaying the measuring instruments:
 Distance between groups tick-mark and selecting the groups between which the distances should be displayed.
 For selected athlete show tick-mark and selecting what information concerning the selected athlete should be displayed.



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The options for the display of the visualisations:

Show influence circles

tick-mark to display influence circles and defining the distance from the circles.

Show running Lines

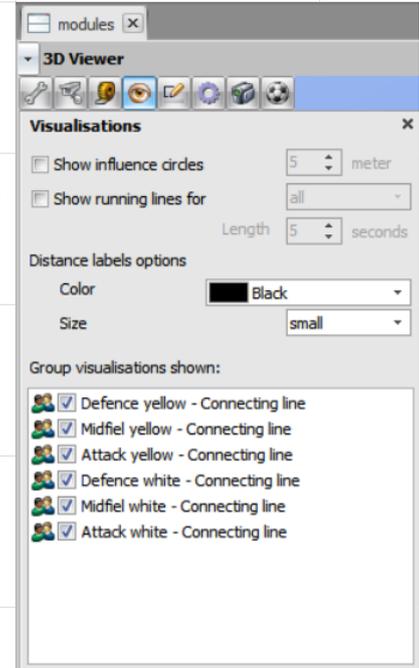
tick-mark to display motion lines and selecting for whom there should be a motion line, and how long it should be.

Distance labels options

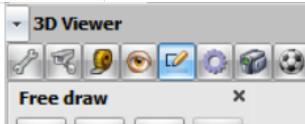
select color and size.

Group visualisations shown

select which visualisation should be displayed for the group.



RICH-1502.D6



This option enables you to:

Draw

Move

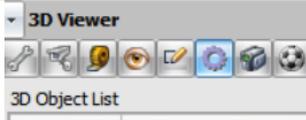
Add text

Remove

a line or rectangle yourself with its dimensions in the color of your choice; an athlete to another place; wherever you want; all the drawn items.



RICH-1502.D6



This option enables you to:

Change

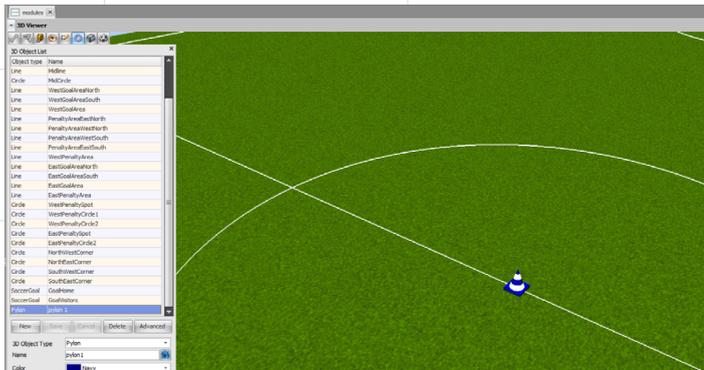
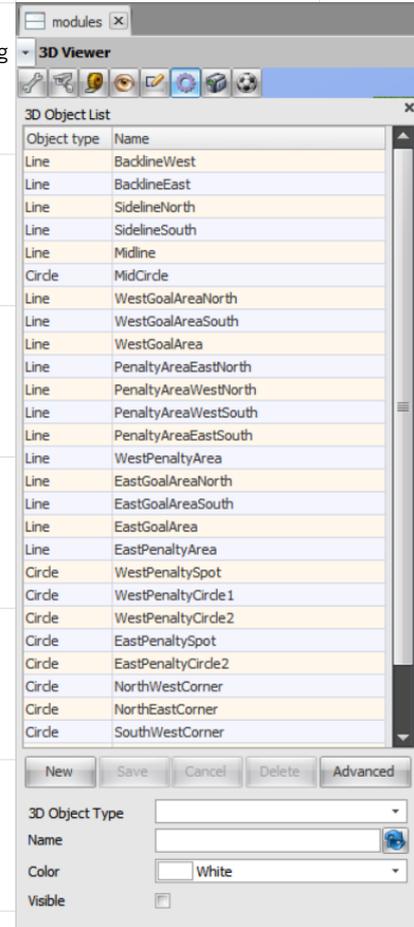
Add

Move

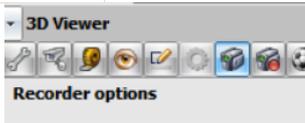
an existing line or circle, being a part of the field;

a new 3D object, like a pylon, goal, basket or net depending on your sport;

these objects by completing the X- and Y- positions.



RICH-1502.D6



The options for recording the data:

Begin recording at

specify the starting point of the recording.

End recording at

specify the end point of the recording.

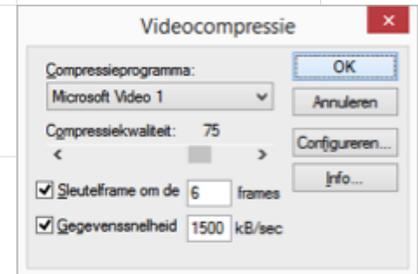
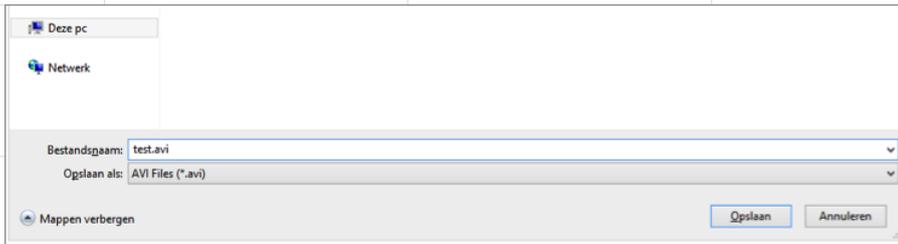
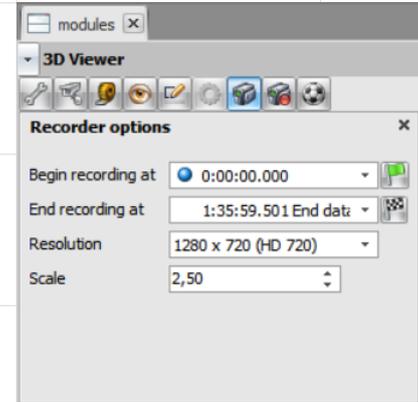
Resolution

select the resolution.

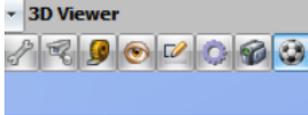
Scale

select the scale.

By clicking on the camera icon next to it, you can specify where the image file (.avi) should be stored.



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In cases ball data is available, the pass options for a player can be shown in the 3D Viewer.

The player in the yellow circle has ball possession (player nbr. 28 in the figure). His options to pass the ball to a team member are shown in a green circle (here player nbr. 23).



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Double clicking on the Graphic module icon will open the Plot Graph in the module layout window (tab) and the dialog box containing the graphics options with the **Presets** and **Custom** tabs.

Presets

Make a selection from the possible graphics for the **selected transponder** or for the **selected group**. The graphic of your choice will then appear in the module layout window. Double clicking on the graphic will again open the dialog with the options for the graphics.

Custom

Data selection mode

select the **Source** of the graphic.

Left/Right Axis

set the values for the vertical axes of the graphic (**Value, in unit, Minimum, Maximum**).

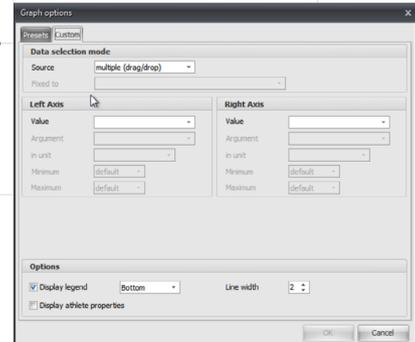
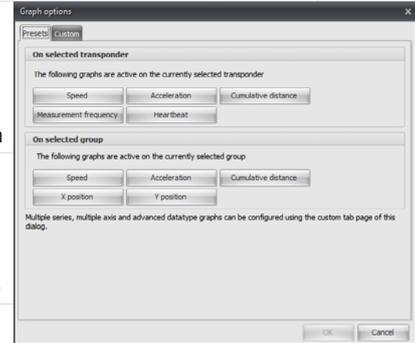
Horizontal Axis

set the values for the horizontal axis of the graphic (**From, To, Axis unit**).

Options

If the box for the **Display legend** is checked, the legend shall be displayed at a location of your choice. If **Display athlete properties** is tick-marked, the Details pane containing the details of the selected athlete will be displayed in the module layout window. You can also define the thickness of the line.

Double click on a displayed graphic to change its options. The dialog box will reappear.



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To zoom in on the graphic, move the cursor to a position within the graphic and select the portion of the graphic to be enlarged by moving the mouse from top to bottom with the right mouse button held down. To zoom out, move the mouse from bottom to top while holding down the right mouse button.

If in the **Data selection mode**, you select the Source 'multiple (drag/drop)' in the **Custom** tab, you can drag several transponders from the "**Athletes**" in the **Dataset Explorer** to the graphic, after which the graphics of the selected transponders will be simultaneously displayed in the graphics layout window. By tick-marking the box next to the **Display legend**, you will immediately see in the layout window which line belongs to which transponder.

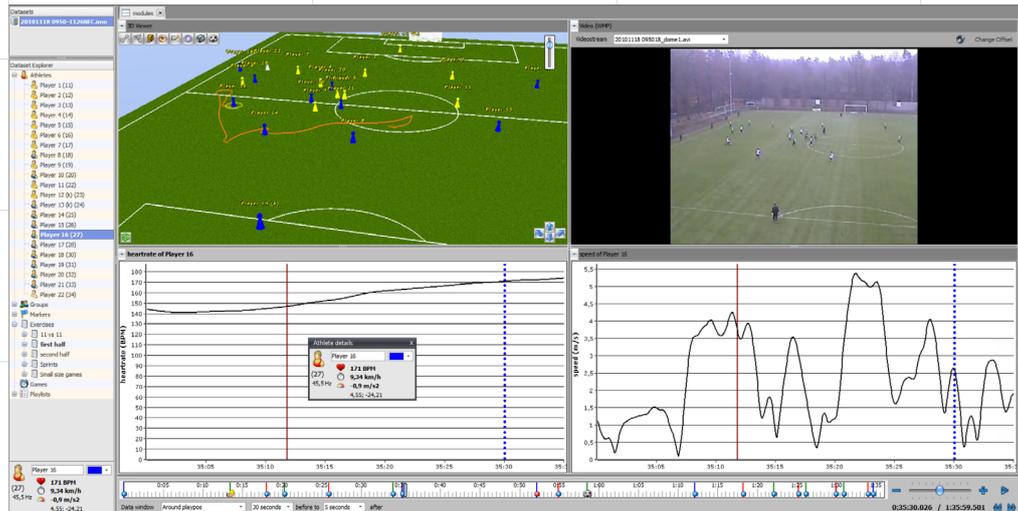


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If you select the Video stream module, select a video recording linked to the measurement by clicking on the arrow next to video stream. If no recordings are available, please first add one or more video streams in the “Dataset Properties”, tab **Parameters**. You can synchronise the video image with the data via the Change offset button.

With help of the “Drop-down menu”, you can show several windows at the same time. For instance, you can watch the 3D View, real videorecording, the heart beat and the speed of the player of your choice all at once. The graph windows automatically show the details of the player at stake, but this is similar to the the Dataset detail window.



RICH-1502.D6



Double clicking on the Event Viewer module icon, a two-part screen will appear in the module layout window. The top part contains a table of events with the number per person.

The bottom part contains the selected events.

Next You can use this to navigate to the next record.

Prev You can navigate to a previous record (this only works well if the dataset is in 'pause').

Delete This allows you to delete an event. This can no longer be undone after the dataset is saved.

Export This allows you to export the selected events to a .csv file.

If 1 or more boxes are selected in the topmost screen segment, all the associated events will be visible in the bottom part.

One can jump to the 'Start' time in the time bar by double-clicking on an event. As a result, the 3D viewer/Graphics and Video also jump to that time.

Ik krijg hier nu heel weinig data van in mijn scherm dus dit is overgenomen van de vorige versie.

 A screenshot of the software interface showing the 'Event viewer' module. The top part is a table with columns: 'Category', 'Start', 'End', 'X', 'Y', 'Affiliate', 'Target', and 'Labels'. The bottom part is a time bar with a play button and a 'Data window' dropdown. The interface also shows a 'modules' window on the left with a tree view of the dataset.

Category	Start	End	X	Y	Affiliate	Target	Labels
All	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(1) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(11) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(14) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(15) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(16) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(17) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(18) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(19) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(20) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(21) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(22) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(23) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(24) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(25) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(26) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(27) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(28) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(29) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(30) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross
(31) Unknown Affiliate	0:20:18.000	0:20:18.000	0,0	0,0	(2) Unknown Affiliate		Cross

Agility tests

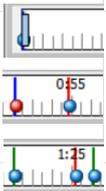
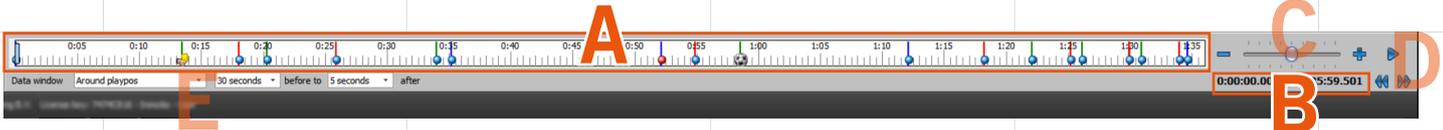
Shows a table with the results of your summary: the **Time (sec)**, **Distance (m)**, **Max. Speed**, **Average Speed**, **Max. Acceleration**, **Split 1**, **Time 1**, **Split 2**, **Time 2**.

Name	Split	Time	Distance	Max Speed	Average Speed	Max Acceleration	Split 1	Time 1	Split 2	Time 2	
Profound - Access LRF	Phase 1 (10)	1	6.512	420.213	21.75	128.84	128.4	18.76	18.88	5.94	5.912
Profound - Access LRF	Phase 1 (10)	2	6.442	421.21	22.22	128.38	6.5	1.28	1.28	6.24	6.24
Profound - Access LRF	Phase 1 (10)	1	6.388	421.13	22.15	127.17	6.4	2.877	2.877	5.761	5.761
Profound - Access LRF	Phase 1 (10)	2	6.402	420.83	22.22	127.37	6.5	2.971	2.971	6.269	6.269
Profound - Access LRF	Phase 1 (10)	1	6.729	38.847	23.11	24.76	6.5	3.218	3.218	6.511	6.511
Profound - Access LRF	Phase 1 (10)	2	6.674	41.242	23.11	24.77	7.2	2.852	2.852	5.974	5.974
Profound - Access LRF	Phase 1 (10)	2	6.730	41.276	24.45	17.68	6.5	2.832	2.832	5.96	5.96
Profound - Access LRF	Phase 1 (10)	1	6.638	41.653	23.67	17.67	6.5	2.829	2.829	6.079	6.079
Profound - Access LRF	Phase 1 (10)	1	6.796	40.746	24.97	16.77	6.4	2.767	2.767	5.979	5.979
Profound - Access LRF	Phase 1 (10)	1	6.586	28.363	24.41	16.77	6.1	3.146	3.146	6.482	6.482
Profound - Access LRF	Phase 10 (2)	1	6.752	41.862	24.52	17.12	7.1	2.832	2.832	5.892	5.752
Profound - Access LRF	Phase 10 (2)	1	6.552	41.766	24.64	16.12	6.1	2.864	2.864	5.896	5.852
Profound - Access LRF	Phase 10 (2)	1	6.557	41.844	24.64	16.12	6.5	3.001	3.001	6.214	6.157
Profound - Access RFT	Phase 1 (10)	1	6.146	42.831	22.37	13.5	3.891	3.891	5.749	5.749	5.146
Profound - Access RFT	Phase 1 (10)	1	6.46	42.58	22.38	16.14	6.5	2.711	2.711	5.214	5.214
Profound - Access RFT	Phase 1 (10)	1	6.227	42.366	22.39	15.14	6.5	3.139	3.139	6.114	6.227
Profound - Access RFT	Phase 1 (10)	1	6.401	42.388	22.41	15.11	7.0	3.025	3.025	5.818	6.401
Profound - Access RFT	Phase 1 (10)	2	6.638	42.686	23.47	15.11	7.0	3.025	3.025	5.818	6.638
Profound - Access RFT	Phase 1 (10)	1	6.452	42.388	23.47	15.11	7.0	3.025	3.025	5.818	6.452
Profound - Access RFT	Phase 1 (10)	1	6.462	42.412	24.45	16.47	6.5	3.042	3.042	5.842	6.462
Profound - Access RFT	Phase 1 (10)	1	6.462	42.412	24.45	16.47	6.5	3.042	3.042	5.842	6.462
Profound - Access RFT	Phase 1 (10)	2	6.622	41.151	24.39	15.17	6.2	2.874	2.874	6.046	6.622
Profound - Access RFT	Phase 1 (10)	1	6.632	41.174	24.42	15.15	6.2	2.832	2.832	5.746	6.632
Profound - Access RFT	Phase 1 (10)	1	6.632	41.174	24.42	15.15	6.2	2.832	2.832	5.746	6.632
Profound - Access RFT	Phase 10 (2)	1	6.642	40.841	24.61	15.28	7.7	2.946	2.946	5.794	6.642
Profound - Access RFT	Phase 10 (2)	1	6.516	40.742	23.61	15.14	7.0	2.842	2.842	5.746	6.516
Profound - Access RFT	Phase 1 (10)	1	6.207	40.881	22.61	15.14	6.5	3.171	3.171	6.124	6.207
Profound - Access RFT	Phase 10 (2)	1	6.622	41.753	24.22	15.45	11.0	3.071	3.071	6.024	6.622
Profound - Access RFT	Phase 10 (2)	1	6.622	41.753	24.22	15.45	11.0	3.071	3.071	6.024	6.622
Profound - Access RFT	Phase 10 (2)	1	6.622	41.753	24.22	15.45	11.0	3.071	3.071	6.024	6.622
Profound - Access RFT	Phase 10 (2)	1	6.622	41.753	24.22	15.45	11.0	3.071	3.071	6.024	6.622
Profound - Access RFT	Phase 10 (2)	1	6.122	41.752	23.14	16.44	6.5	3.129	3.129	6.022	6.122



The Time window contains the following parts:

- Timeline (A)** display of time of the recorded measurement.
- Time indication (B)** shows the duration (right) of the entire recording and the time of the current view (left).
- Time slide (C)** to take small steps forward or backwards in the time of a recorded measurement, and to slow down or speed up the playback speed.
- Play/Pause (D)** to play/pause a dataset.
- Data panel (E)** settings for how the data are displayed in the window.



0:00:00.000 / 1:35:59.501

Timeline (A)

By clicking on a specific time in the Timeline, you can review a specific point of time in the record file.

Indicator

The current time is indicated with a thick, light blue vertical line.

Markers

The placed markers (see "Markers" in the Menu bar or "Markers" in the Dataset window) are shown as a small blue vertical line with a dot or the symbol you have chosen.

Exercises/Game

The beginning of an Exercise/Game is marked with a green vertical line and the end with a red one.

Time indication (B)

duration entire recording
time of the current view

shown at the right.
shown at the left.

**Time slide (C)**

If you click and move the big blue dot with the left mouse button pressed down during a replay, you can go forwards or backwards in time.
If you move the time slider with the **CTRL** key pressed down, the playback speed will be maintained after release.

Plus-button

Clicking on the plus button speeds up the playback speed of the dataset.



Minus-button

Clicking on the minus button slows down the playback speed of the dataset.

**Play/Pause button (D)**

With the play button (C) you can play back a previously recorded measurement (dataset). While replaying a dataset, you can freeze it with the pause button.



Backward-button

Move 30 seconds backward in time in a recorded measurement.

Forward-button

Move 30 seconds forward in time in a recorded measurement.

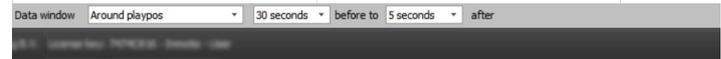


Data panel (E)

In the data panel, you can define the interval with which the dataset will be played; around the playing position or at a fixed interval.

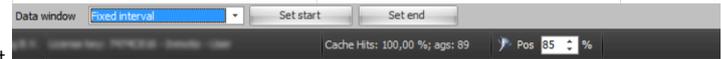
Around playpos

If you choose to play around the play position, you can set the time for until after the playback position.



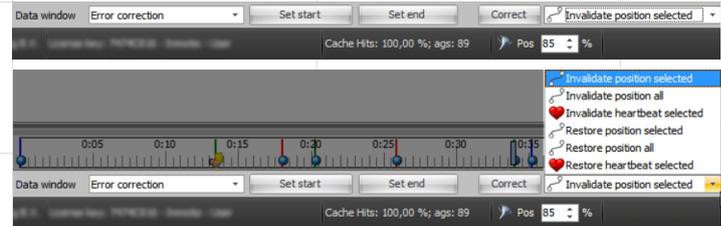
Fixed interval

Using the **Set start/Set end** buttons, you can define the start and end time of a fixed interval. This selection is greyed out in the timeline.



Error correction

Using the **Set start/Set end** buttons, you can correct an invalid position or heartbeat. You can select one or choose for all.



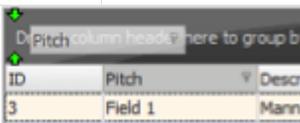
RICH-1502.D6

Introduction

It is advisable to link athletes already to their transponder before any measurement will take place. This avoids the action to link an athlete to a transponder during a measurement. Also when you start the imoClient-software on any other device (laptop/tablet), the names of the athletes and the connection to their transponder are already in the database and ready to use.

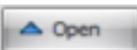
This is done at the button **Prepare Recording** in the section “Dataset” of the Menu Bar, Tab Home.

Visible is the grid with all the preparations.



Grouping and filtering pitches

By dragging the column header to the top, the grid can be grouped by the pitches.



Open the selected preparation. Or double click on the selected row. This will bring you to the “Edit screen”.



It is also possible to filter the grid. Point your cursor to the column header en press the marked button.



Create a new preparation.



Refresh the grid.



Delete 1 or more selected preparation.

RICH-1502.D6

On the edit screen you can set up the preparation of the measurement.



Saves the changes and shows the search screen.



Close the edit screen without saving changes.

Description

A useful name for the preparation to make it easy to identify in the imoServer.

Pitch

On which pitch is the measurement taking place.

Expect Date

On what date is the measurement going to happen. In the imoServer all preparations without a date are visible and those with a date are only visible on that particular date.

Dataset type

Required for reports when different type of recordings are done with LPM.

Inmotio field definition

The ifd-file that has to be loaded by the 'imoClient' when the recording is started.

Store Live Pos in DB

Save the Gaussian filtered data in the database for transponders that are connected to players. This is only useful when the WebClient is running. Positions are removed from the database a day after recording in order to keep the size of the database low so the Express version of MS SQL Server can be used.

Active

This preparation can be selected if checked.

Tab Transponders

Set

Selection box of the set of transponders, configured in "Setup Transponders".



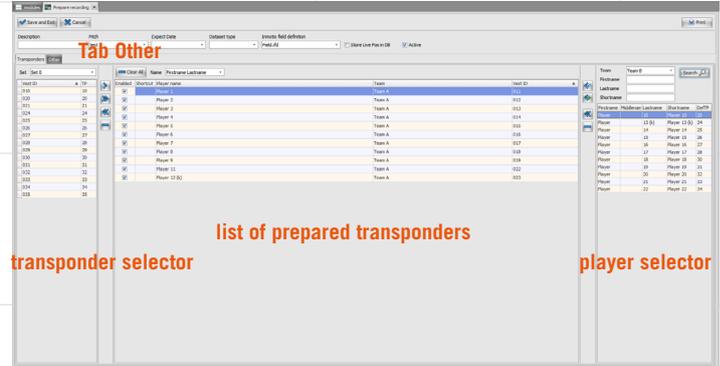
Removes all Transponders from the list.

Name

Choose how the name of the player is visible in the system.



Search for a player or players in a team.



RICH-1502.D6

Transponder selector

Select transponders for a preparation. Select the set you want to use.

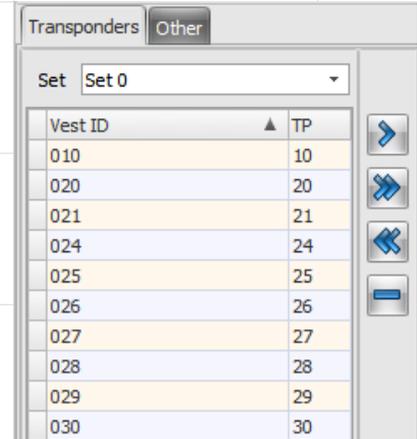


Add selected transponder to the list.

Add all transponders to the list.

Remove all unassigned transponders from the list.

Remove selected transponder from the list, even if there is a player connected.

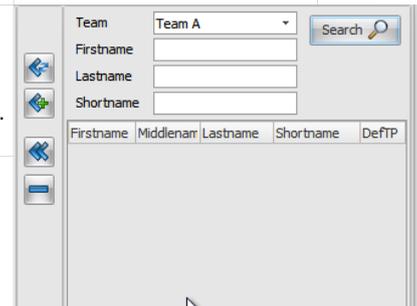


Player selector

Select players for the measurement.



Select a team and press search so all members of that team will be listed. You can also search for "first name", "last name" or "short name". You don't need to type the whole name, just a part of it will be enough to find the right person.



Replaces the player of the selected transponder with the selected player in the search grid.

Add the player in the search grid to the transponder list. Player is not automatically connected to a transponder.

Add the whole search grid to the transponder list. If the "DefFTP" is available in the "Transponder List" or in the "Set", the player is automatically connected to this transponder.

Disconnect the player from the selected transponder.

RICH-1502.D6

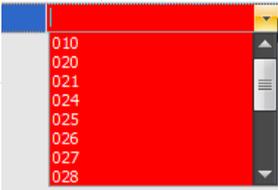
The list of prepared transponders



Player name



Vest ID



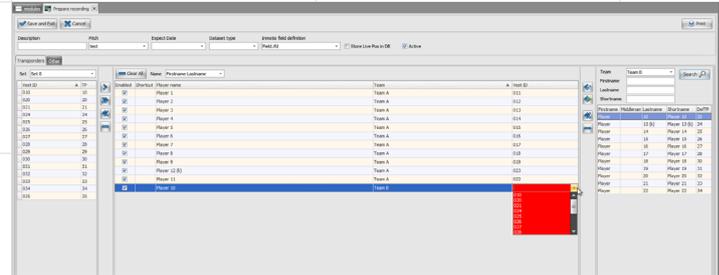
Removes all the transponders from the list

When adding players to the transponder list this is how the Player's name is created.

When the player is not in the DB you can add him by clicking this button.

Because a transponder is no longer unique on the first 2 digits, It is now called 'Vest ID' so also the 'Set ID' is a member of this value.

Cell 'Vest ID' is mandatory, when it is not filled it is marked red.
Select a 'Vest ID' from the dropdown list.

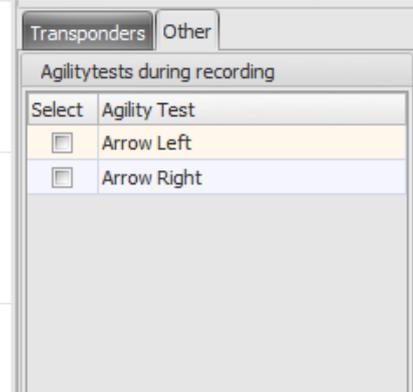


RICH-1502.D6

Tab Other

You can select all the agility tests that are going to be played in the training. When doing this, the lines should be defined in the corresponding Inmotio Field definition (see "Track/Field").

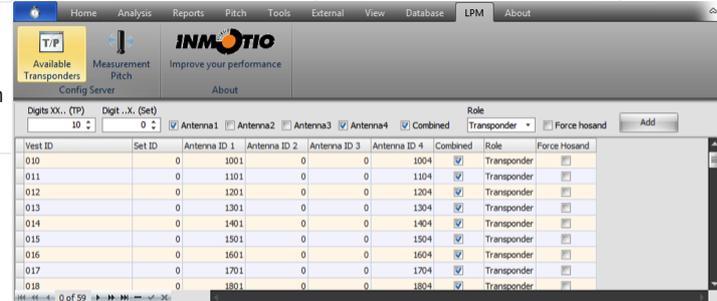
When the agility tests are selected in the preparation, you can see live results during the measurement.



RICH-1502.D6

Adding transponders to the system should be done by adding them to the database.

This is done in 'imoClient' at the button **Available Recording** in the section "Config Server" of the Menu Bar, Tab LPM.



Adding transponders to the system

Digits XX.. (TP)

This is the 'old' transponder ID.

Digit .X. (Set)

In some applications this field is called **Field ID**, here it is called **Set ID** because it is not limited to a field.

Antenna checkboxes

If a Transponder has more than 1 antenna, please check all the antenna's that are in use. We assume a transponder uses the same antenna ID except for the last digit. If in some cases the ID of the antenna differs, you can change it manually in the table.

Checkbox 'combined'

Meaning the Abatec LPM server combines the AntennaID's to only Antenna ID 1.

Role

Can be **Transponder** or **Ball**.

If 'Transponder' it can be added to the Abatec Transponder.ini

If 'Ball' it will not be added to the Abatec Transponder.ini

Add

The transponder is added and the **Digits XX..** is increased automatically so adding transponders is as easy as pressing the **Add** button until all the available transponders are inserted.



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