Rpw : Rowperfect for Windows

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The revision – see cover page – of this document voids any previous revisions.

About this manual

This is the manual for *Rowperfect for Windows* (or *Rpw* for short). *Rpw* is a MS Windows based successor of the original CARE/DOS Rowperfect software. It runs on all MS Windows versions currently available, including – but not limited to – Windows 98, XP and Vista. It is compatible with most USB Serial Adapters, allowing modern PCs without a Com port to be used with the Rowperfect rowing simulator.

This manual consists of the following sections:

A   Quick start guide
This section gives a user enough information to get *Rpw* up and running and to use the most common parts of the programme, following a step-by-step approach.

B   Reference manual
All aspects of the programme are covered in the Reference manual. It describes each menu option and screen in detail, and could be seen as a "dictionary". One chapter is dedicated to former users of the DOS software from Rowperfect (CARE.EXE).

C   Frequently Asked Questions
The Frequently Asked Questions list can be used as a shortcut to information available elsewhere in this manual.

D   Appendices
The appendices contain the table of contents and lists of figures and tables.

A.   Quick start guide

The most common tasks performed in *Rpw* are recording a training session, reviewing a training session as a whole, and reviewing a training session stroke-by-stroke. These tasks are described below, step-by-step.

For more details on the windows described in this Quick start guide, please consult the Reference manual (section B, page 8).

A.1.   Before we start : Installation

When *Rpw* will be used for recording data, the Rowperfect PC interface needs to be mounted on the Rowperfect rowing simulator (next paragraph), or the MkIV monitor needs to be set-up (paragraph A.1.1). When *Rpw* will be used for "off-line" analysis only, this is not necessary, and only the software set-up is needed. Software installation is explained in paragraph A.1.3.

A.1.1. Hardware – PC interface

The interface is a small black box (75x57x25 mm) with a small white cylinder protruding from it (the sensor). The sensor is sensitive towards magnetic fields. Its active spot is very small, and is situated in the centre of the extremity of the sensor. For proper functioning of the interface it is essential that the active spot of the sensor is positioned on exactly the same circle as the magnets in the flywheel that activate the sensor. The distance between sensor and flywheel should be between 1 and 2 mm.

The interface comes with two mounting brackets. To correctly place the sensor and interface into the right position proceed as follows (if you are aligning the sensor for the first time it may help to lay the rowing simulator very gently on its flywheel side, which makes it easier to see the magnets in the flywheel) :
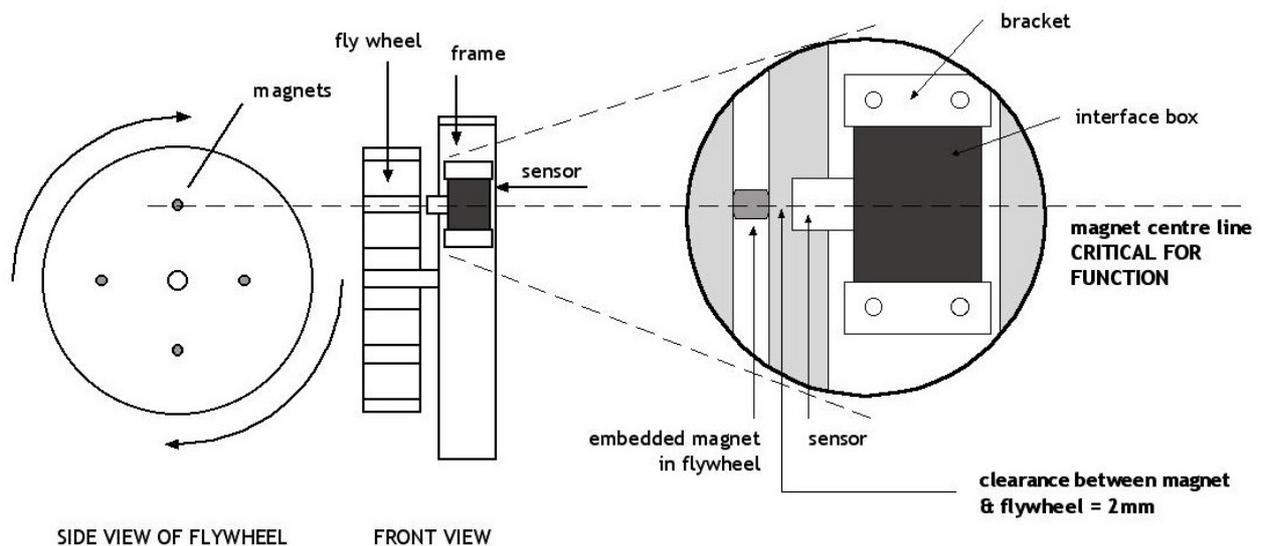

Figure 1 - Interface set-up

Unscrew the screws in both brackets until flush with the inside of the bracket. Hook the two brackets with their bent rims pointing towards each other, under the lower rims of the main frame. Take the interface, put it with the sensor side pointing towards the flywheel and to the main shaft, and insert the interface between the two brackets. Pushing both brackets firmly around the interface, slide the interface into position such that the magnets pass directly under

the centre of the sensor. Make sure the distance between the top of the sensor and the flywheel surface is between 1 and 2 mm, and the interface body is parallel to the flywheel. Then tighten gently the four screws to fix the brackets, and thus the interface, in the proper position. Put the rowing simulator upright again.

A.1.2. Hardware – MkIV monitor
For the MkIV monitor, the signal needed for *Rpw* is generated by the rotating magnet on the fly wheel; no alignment is necessary. Simply ensure the MkIV Monitor is mounted properly and connected to the sensor via the fan icon. (see Figure 4).

Note : The term "interface" will be used for the remainder of this manual. It corresponds to either a Rowperfect PC interface or MkIV monitor.

A.1.3. Software
To install *Rpw* for the first time on a PC, or to upgrade an existing installation of *Rpw*, take the following steps:
♦ Download the latest installer from our website *http://www.row-ware.com/rpw/* and save the file rpwNNNN.exe (where NNNN reflects the version number, e.g. "rpw1120.exe" contains "Rpw 1.1.2.0") on your desktop.
♦ Double-click rpwNNNN.exe
♦ You can change the default destination folder *Rpw* will be installed in. If needed, please do so here. After reading and agreeing with the "Read me / License" text, click Install.
♦ The files will be copied to the destination folder, and a shortcut in the Windows Start menu will be added. Also, *Rpw* compatible file types (*.STG, *.STR, *.MKS, *.MKR and *.MKI files) will automatically be associated with *Rpw*. To open such a file, just double-click it in the Windows Explorer.

They can be recognised by a *Rpw* icon (or).

A.1.4. Calibration
Because the flywheels of two Rowperfects are not identical, they are engraved with a calibration factor. The default calibration factor build into *Rpw* can be replaced by the number found on the flywheel. To do so, follow these steps:
♦ Locate the file *RPW.INI* in the folder *(My) Documents\Row-Ware\Rpw* .
♦ Double click the file to open it.
♦ Add a line "Inertia=XXXX" in the *RPW.INI* file in the [Row] section, where the X-es correspond to the 3rd through 6th digit behind the decimal point of the factor on the flywheel of the Rowperfect unit concerned. (E.g. for a factor on the flywheel of 0.108867, the line should read "Inertia=8867", but then without the quotes).
♦ Save the file and (re-)start *Rpw*.

A.1.5. Test interface
To ensure the sensor is positioned correctly and detected accordingly, take the following steps:
♦ Connect the DB-9 plug of the interface cable to a Com port (or USB Serial Adapter), and the RJ-45 plug to the bigger one of the two sockets on the PC interface or any one of the sockets labelled COM on the MkIV monitor
♦ (Install and) start *Rpw*
♦ Click [OK] in the "New row window" dialogue. The dialogue disappears.
♦ Press [Space] in the "Row" window.
♦ In the "Connect" dialogue, click on the [Search] button. The software will try to detect an

interface connected to the PC. If one is found, a message appears and the Source option will be set to the Com port number found. To check if all four magnets are detected, click the [Test] button, and give a gently swing to the flywheel. A regular beep will be heard every time a magnet passes the sensor.

Figure 2 - DB-9 plug   *Figure 3 - PC interface*   *Figure 4 - MkIV*   *Figure 5 - Connect dialogue*

A.2. Record a training session : Row window

To record a training session, follow these steps. Make sure the PC interface or MkIV is properly set-up and connected to the PC.

♦ Start *Rpw*. A dialogue "New row window" appears, asking for information about the rower. Here either enter the data needed, or open a previously saved User File file.

♦ When finished, click [OK], and the Row window is displayed.

♦ This window contains two charts (left: Force curve of current stroke; right: Stroke history of all strokes) and 8 parameter cells at the bottom. All these items (charts and cells) can be adjusted by right-clicking on them.

♦ By default, a training session is set to 2km countdown. To modify this, click the Training button (🔵) on the toolbar (or press [F6], or select "Training" from the "View" menu). When the workout has been modified, click the Row button (🔵) on the toolbar (or select "Row" from the "View" menu, or press [Ctrl] + [R]) to switch back to the Row window.

♦ In the lower left-hand corner, click [Connect] (or press [Space]) to make a connection to the interface.

♦ A dialogue "Connect" appears, asking for details about the interface. Select the appropriate Com port or choose "Demo" and click [OK].

♦ Start rowing or watch the demo.

♦ To cancel or to interrupt a training session, click on the [Disconnect] button (or press [Space]).

♦ When you have completed your training session, switch to the training window by clicking on the Training button (🔵) on the toolbar (or press [F6], or select "Training" from the "View" menu).

♦ The training window appears, showing results and giving the opportunity to add some extra information to this training session on the General tab. When finished, click the Save button (💾) on the toolbar (or press [Ctrl] + [S], or select "Save" from the "File" menu), to save the training session to disk.

Note: Training sessions can be saved from within the Row window as well. It is not necessary to switch to the training window just for saving; it is, however, to add the extra training information.

A.3. Review a training session : Stroke data window

A training session can be reviewed by following these steps:

♦ Start *Rpw* and click [Cancel] in the "New row window" dialogue.
♦ Open a file by clicking the Open button (⌷) on the toolbar (or press [F9], or select "Open..." from the "File" menu).
♦ Click on the Stroke data button (⌷) on the toolbar, or select "Stroke data" from the "Analyse" menu, to open the Stroke data window.
♦ Set X (bottom), Y (left) and Z (right) axes as needed, by selecting the appropriate parameter on the right-hand side of the window.
♦ To compare this training session with another, just open another file.
♦ Zoom in on the chart, by selecting a rectangle. To do so, click on the chart with the left mouse button, drag the mouse to the bottom and right, and let go of the mouse button.
♦ Move the chart, by right-clicking it and moving the mouse. When finished, let go of the mouse button.
♦ Reset a chart by selecting a rectangle from bottom-right to top-left.

A.4. Review a training session stroke-by-stroke : Force curves window

To analyse force curves, take these steps:

♦ Start *Rpw* and click [Cancel] in the "New row window" dialogue.
♦ Open a file by clicking the Open button (⌷) on the toolbar (or press [F9], or select "Open..." from the "File" menu).
♦ Click on the Force curves button (⌷) on the toolbar, or select "Force curves" from the "Analyse" menu, to open the Force curves window.
♦ Click the training session in the list on the right, and use the "VCR" buttons (⌷⌷⌷⌷⌷) to view the next or previous stroke. The "Play" button shows the force curves as an animation. The data area at the bottom of the screen is updated for every stroke.
♦ To compare this training session with another, just open another file.
♦ Scale the force curves by force (vertical) or length (horizontal), for better comparison.

B.   Reference manual

This section presents a detailed description of all the aspects of *Rpw*. It starts with some common user interface features that apply to (almost) every window in the programme, and then addresses all windows, dialogues and menu-items one by one.

B.1.   Standard user interface features

To people used to working with MS Windows and MS Office, *Rpw* will have a familiar look and feel. The image below shows a number of standard window items:
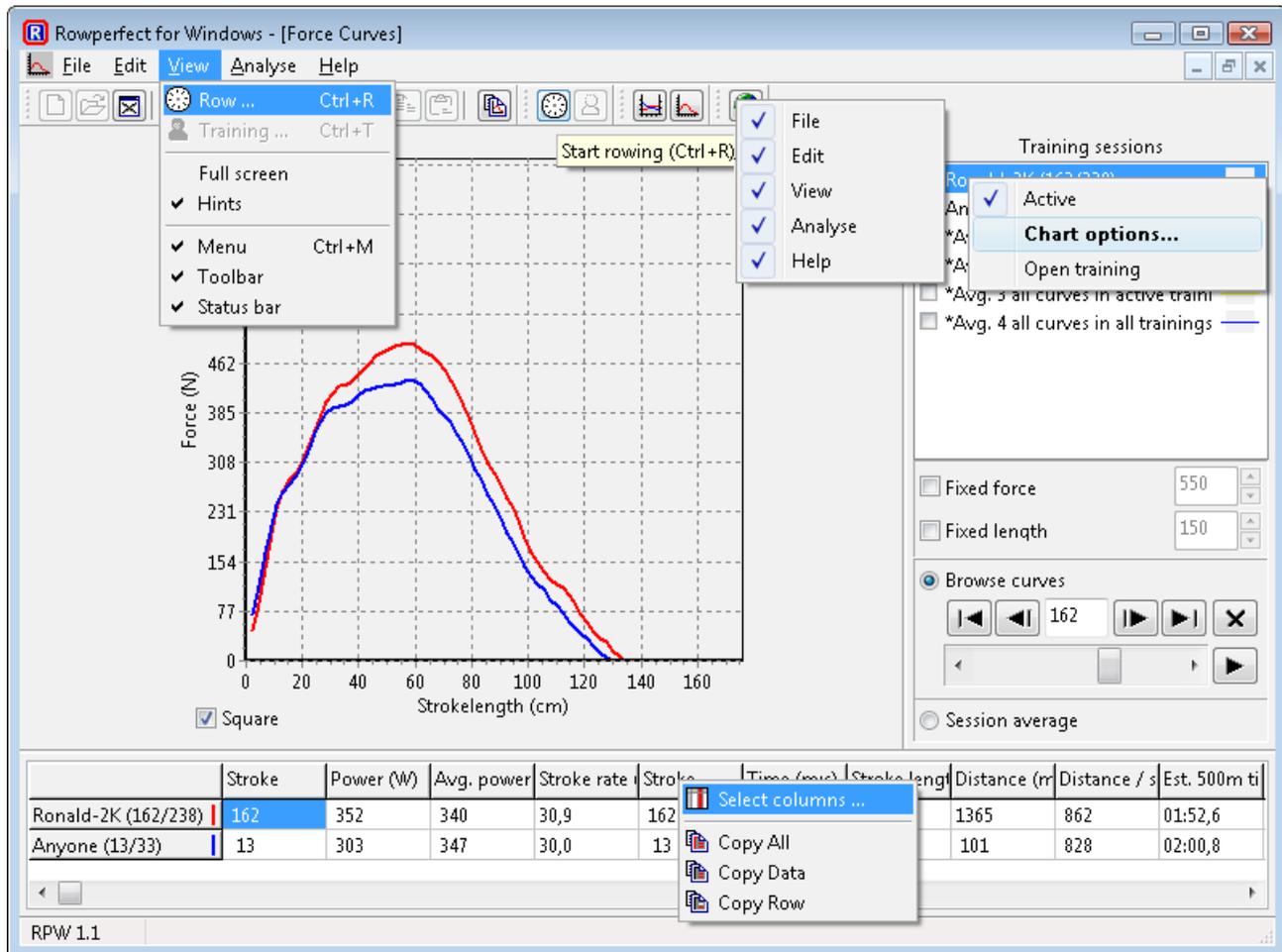

Figure 6 - Standard window items

- The blue bar on the top stating "Rpw : Rowperfect for Windows" is called the *(Main) Title bar*.
- The second "line" is the *Menu bar*, with common items like "File", "Edit" and "Help".
- Menu items can have *Shortcuts*, being key(-combinations) to activate the item by pressing the corresponding key(s) and without using the mouse. Shortcuts are shown next to a menu item, e.g. the "Row" window can be opened by pressing the "Ctrl" and "R" keys simultaneously.
- The images on the third line are called the toolbar. The buttons shown here are also visible in one of the menus. Items that can not be used at the time are greyed out (dimmed). Right-clicking the toolbar allows you to hide buttons associated with a specific menu.
- Hovering the mouse over an item on the screen and holding it still for a few seconds, will

show a *Hint* (or Tool tip*)* near the mouse pointer. Shortcuts are also shown in hints.
♦ The bottom is called the *Status bar*. It contains the programme version on the left, and – when available – extra information on the item the mouse points at.
♦ On several locations throughout the software, clicking with the right mouse button will show a *Pop-up menu,* from which specific actions can be selected.

Both analysis windows in *Rpw* have a common layout, and consist of three areas:
1. On the top-left, there's a *Chart*.
2. The *Training sessions list* can be found in the top-right. A training session can be temporarily switched on and off by (un-)checking the check-box in front of it. "Checked" training sessions are called "Active". To change the colour of a training session and corresponding graph in the chart, double click the name in the training sessions list. This will bring up the Chart options dialogue, as shown in Figure 7. Alternatively, right click for the pop-up menu.
3. The *Data area* is visible at the bottom. Columns can be re-sized by dragging (clicking
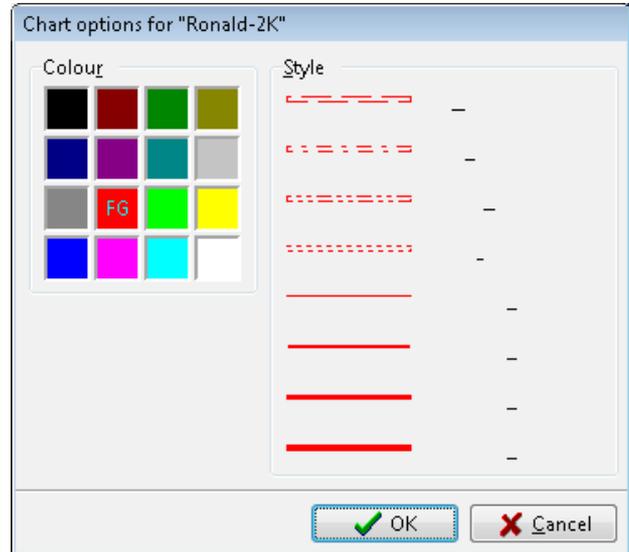
Figure 7 - Chart options

with the left mouse button and holding it down) the line between two columns. Right click for a pop-up menu that allows for hiding or showing columns and copy the data to the clipboard. From there, they can be pasted in – for example – your favourite word processor or spreadsheet application. An example of this is given in paragraph B.14.

The width of the list of training sessions and the height of the data area can be changed by dragging the *Splitter* (thick grey line) next / above the area.

All charts in *Rpw* have these common options:
♦ To zoom in on a part of a chart, "draw" a window from top-left to bottom-right by clicking with the left mouse button.
♦ To move a chart, right-click it and drag the chart.
♦ To reset a chart to it's original position / zoom, "draw" a window from bottom-right to top-left.

When *Rpw* is running, the Windows screen saver and energy saver are blocked, to prevent problems when recording a training session.

Most of the customizations made in *Rpw* (e.g. data area columns in the "Stroke data" window, parameter cells in the "Row" window) are automatically saved upon exiting the programme, to be re-used the next time the programme is started.

B.2. Training

All data associated with a training session are visible in a training window. A training window consists of two tab pages:

B.2.1. Training - General

This tab page contains information about the name of the athlete, date and time of recording and some extra information like type of training session. The lists of the Name, Description, Type and Event fields are stored for future reference, so it's not necessary to type common values here over and over again: just select them from the list. There's also a Note field to add text that can't be categorised, e.g. excuses ... .
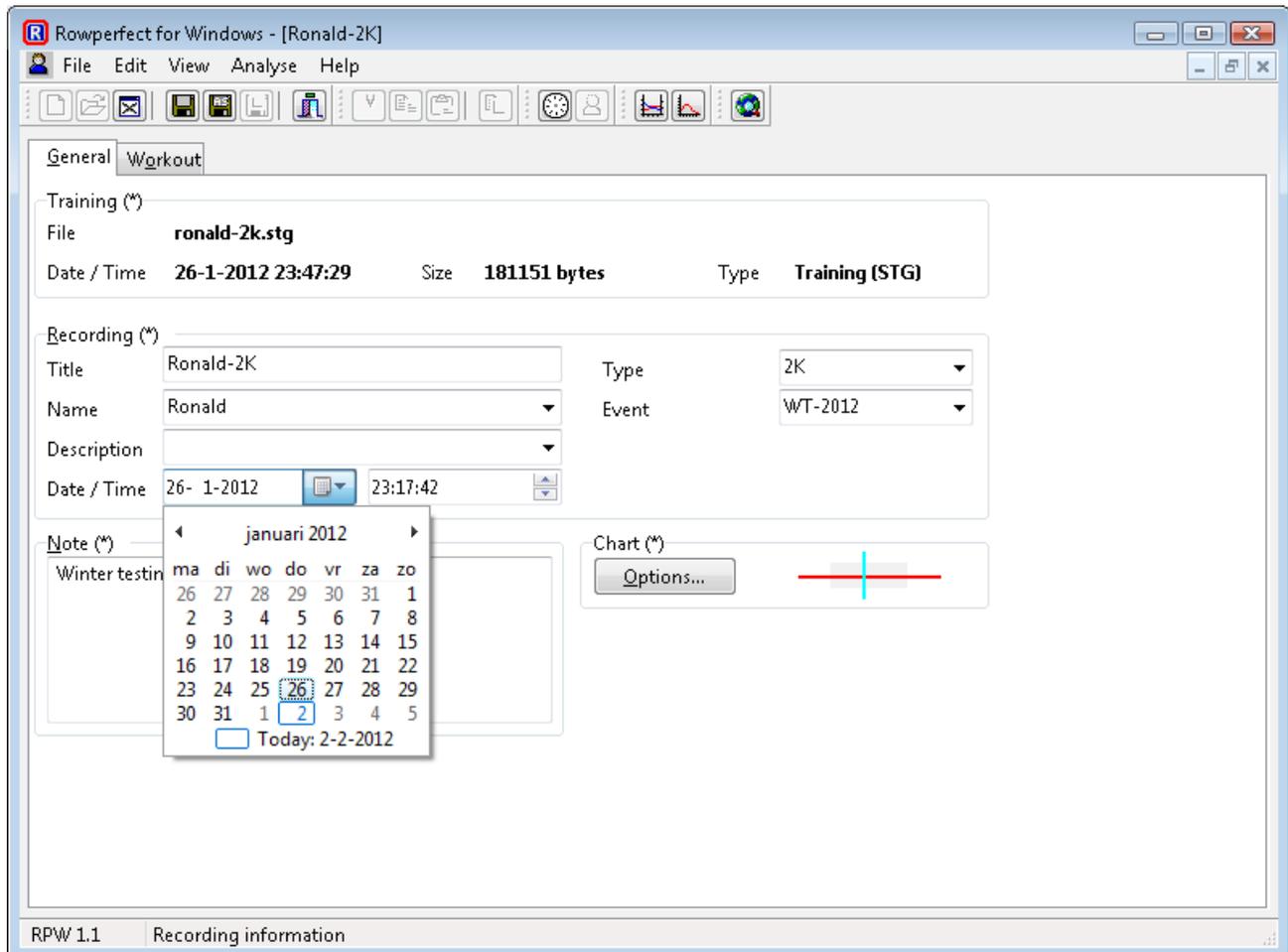
Figure 8 - Training general

The asterisks (*) next to the group-box captions ("Training", "Recording" and so on) indicate the training session data have been changed, and might need to be saved.
Every training session can have its own colour in the various charts available in *Rpw*. Set the colour and line type by clicking the [Options] button, or double-clicking a name in a training session list (see B.1).

B.2.2. Training - Workout

The Workout page contains the User settings (Weight and training definition) and training results. The data shown in User settings can only be modified in new training sessions (see B.3) and User Files. The values shown in "Totals", "Averages" and "Intervals" are calculated, and cannot be modified manually.

Figure 9 - Training workout

To change a value in the "User" group-box, simply click on it. This will result in either a pop-up menu from which you can choose a parameter (e.g. Session limit), or an edit-box to enter the required value (e.g. Weight). Press [Tab] to store a value.

The type of training session to be performed can be chosen by giving a certain amount of work to do or by indicating a certain intensity. The amount of work can be expressed in terms of strokes, energy, distance or time. The chosen parameter then is counted down from the limitation value down to zero. At the end of the session the results as shown in the "Totals" and "Averages" group-boxes are displayed (see Figure 13).

If the option intervals is chosen, the number of intervals, and the units in which the intervals are going to be counted down – with separate values for the work and rest period - can be selected.

Note: Always choose the number of intervals one higher than the number to be actually rowed.

Data shown in the Intervals area can be copied to the clipboard by clicking on it with the right

mouse button. To set which columns to display, right-click for a pop-up menu and select the appropriate option.

To re-set a previously recorded training session, which results in losing all recorded data but keeping all workout settings, can be done by clicking on the [Reset] button.

B.3.   File – New

To create a new, empty training session (to store as a User file, for example), click the New button (⬜) on the toolbar, select "New" from the "File" menu or press [Ctrl] + [N]. An empty training window appears, which can be filled in as needed. To change a user setting on the Workout tab, just click on it.

This "Empty" file already has some pre-defined settings. To set these "New training session defaults", store a User File with the name "rpw.stg" in the folder *(My) Documents\Row-Ware\Rpw* .

B.4.   File – Open

To open an existing *Rpw* compatible file, click the Open button (📂) on the toolbar, select "Open …" from the "File" menu or press [Ctrl]+[O]. A standard "Open file" dialogue appears. Here one or two files can be selected to open simultaneously.

Opening files can be done in a number of ways, besides using the toolbar or the "Open …" option from the "File" menu:

♦ By dragging one or more files from the Windows Explorer or Windows Desktop on a *Rpw* icon
♦ By dragging one or more files from the Windows Explorer or Windows Desktop on a running copy of *Rpw*
♦ By using the command line parameters (see B.20) specifying one or more files to open automatically at programme start-up. This is especially handy for opening User files to record a training session.

Names of files that have been opened, are added automatically to the bottom of the "File" menu, up to a maximum of 10, in a *recently used file list*. These files can now be easily re-opened by selecting them from this list, instead of going through the "Open file" dialogue.

Once files are opened, the analysis can begin.

B.5.   File – Close

The option "Close" in the "File" menu closes the active window, regardless of it's origin. For "Row" and "Training" windows, a confirmation dialogue will be presented asking if the modified data can be discarded. When this data needs to be saved, click [Cancel] and save the data by using either the "Save" or "Save as…" option from the "File" menu (see B.6 and B.7).

B.6.   File – Save

To save a new training session, or an existing training session under the same name as it has been opened, switch to the training window and click the Save button (💾) on the toolbar, choose "Save" from the "File" menu or press [Ctrl] + [S]. For a new training session, the Export training session dialogue will be shown (see B.7).

B.7.   File – Save As

To save a training session under a different name, or as a different type of file, use the Save As option. Click the Save As button on the toolbar or select "Save As …" from the "File" menu.

Alternatively, press [Ctrl]+[Alt]+[S]. This will bring up the Export training session dialogue.

Here a different path, name and / or file-type for the training session can be chosen.

Note: Only STG files can contain all data associated with a training session. The recording information from the Workout tab is NOT saved in User files (*.INI).

B.8. File – Save chart

When a chart is visible, the Save chart option can be used to save the current window to a BMP file. To do so, click the Save chart button (🖫) on the toolbar, or choose "Save chart…" from the "File" menu. The background will temporarily be set to white, so the screen might flicker for a moment. A dialogue titled "Save chart as file" will be shown to enable choosing the folder and name for the file.

B.9. File – Exit

To exit *Rpw*, choose "Exit" in the "File" menu, or click the Exit button (🏛) on the toolbar. The programme can also be closed by pressing [Alt] + [F4], or clicking on the cross button in the top-right corner of the window.

When closing *Rpw*, all custom made modifications (chart axes, column sizes, parameter cells etc.) are saved to be re-used when *Rpw* is run again.

B.10. Edit menu

Rpw comes with a standard Edit menu, with the usual options:
♦   Cut (✂). Cuts the selected text and places it on the clipboard. Shortcut [Ctrl] + [X]
♦   Copy (🖺). Copies the selected text and places it on the clipboard. Shortcut [Ctrl] + [C]
♦   Paste (🖺). Pastes the text on the clipboard at the current position, Shortcut [Ctrl] + [V]
♦   Find. Opens the Find dialogue to search for text within the current field. Shortcut [Ctrl] + [F]
Using the "Copy chart" option in the Edit menu, or clicking the Copy chart button (🖺) on the toolbar, will copy the current window contents to the clipboard as an image. From the clipboard, the chart can then easily be pasted in, for example, MS Wordpad as shown below:
•   Open an analysis window and select the "Copy chart" option from the "Edit" menu.
•   Open MS Wordpad, and place the cursor on the position the chart should be inserted.
•   choose "Paste" from the "Edit" menu in MS Wordpad (or press [Ctrl] + [V]) to paste the chart.
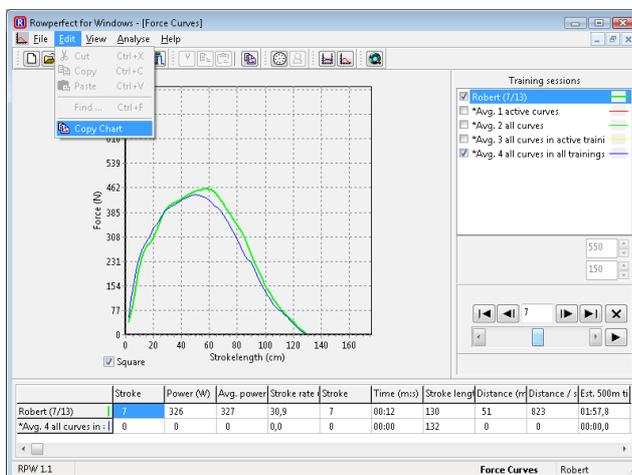

Figure 10 - Copy chart (Rpw)   *Figure 11 - Copy chart (MS Wordpad)*
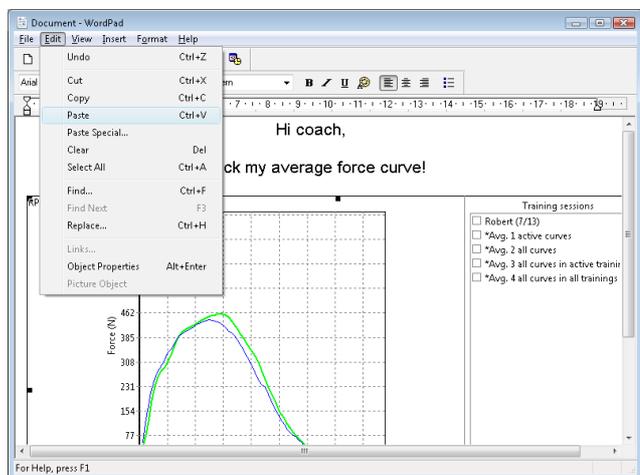
B.11. View – Row

To record a training session, click the Row button (⊙) on the toolbar (or select "Row" from the "View" menu, or press [Ctrl] + [R]). The "New Row Window" dialogue appears. Make the appropriate settings, or load a User file from disk, and click [OK]. Now an "empty" Row window opens. To connect to the interface, click the [Connect] button, or press [Space].

B.11.1. Row – Connect

In the "Connect" dialogue, specify which source to use. *Rpw* comes with demo data built-in, to test the software without an interface. To search all Com ports for presence of an interface, click the [Search] button.

To test whether the selected source is working properly, click the [Test] button. It will sound a beep every time a magnet in the flywheel moves past the sensor, or, when it's not turning approximately every second. When the [Test] button is clicked, four numbers appear at the bottom of the dialogue. These numbers indicate sensor detection accuracy. To verify sensor detection, the flywheel must be spinning. The numbers shown there are not (really) relevant, but they should be more or less stable. When they vary much, there is some problem detecting all magnets and/or reading the interface data at all.

When the "Connect" dialogue is closed by using the [OK] button, *Rpw* is ready for action and will begin recording when the flywheel of the rowing simulator starts spinning. In the lower right corner of the window, a little clock indicates the time since the connection with the interface has started.

B.11.2. Row – Interface protocol

Rpw will only accept data from a *Rpw* compatible PC interface or MkIV monitor. When connected to an old-style (CARE/DOS) PC interface, an error will be displayed.

Existing PC interfaces can be re-programmed to work with *Rpw* – please contact your Rowperfect agent for details.

B.11.3. Row – window

Figure 12 shows the "Row" window in *Rpw*:
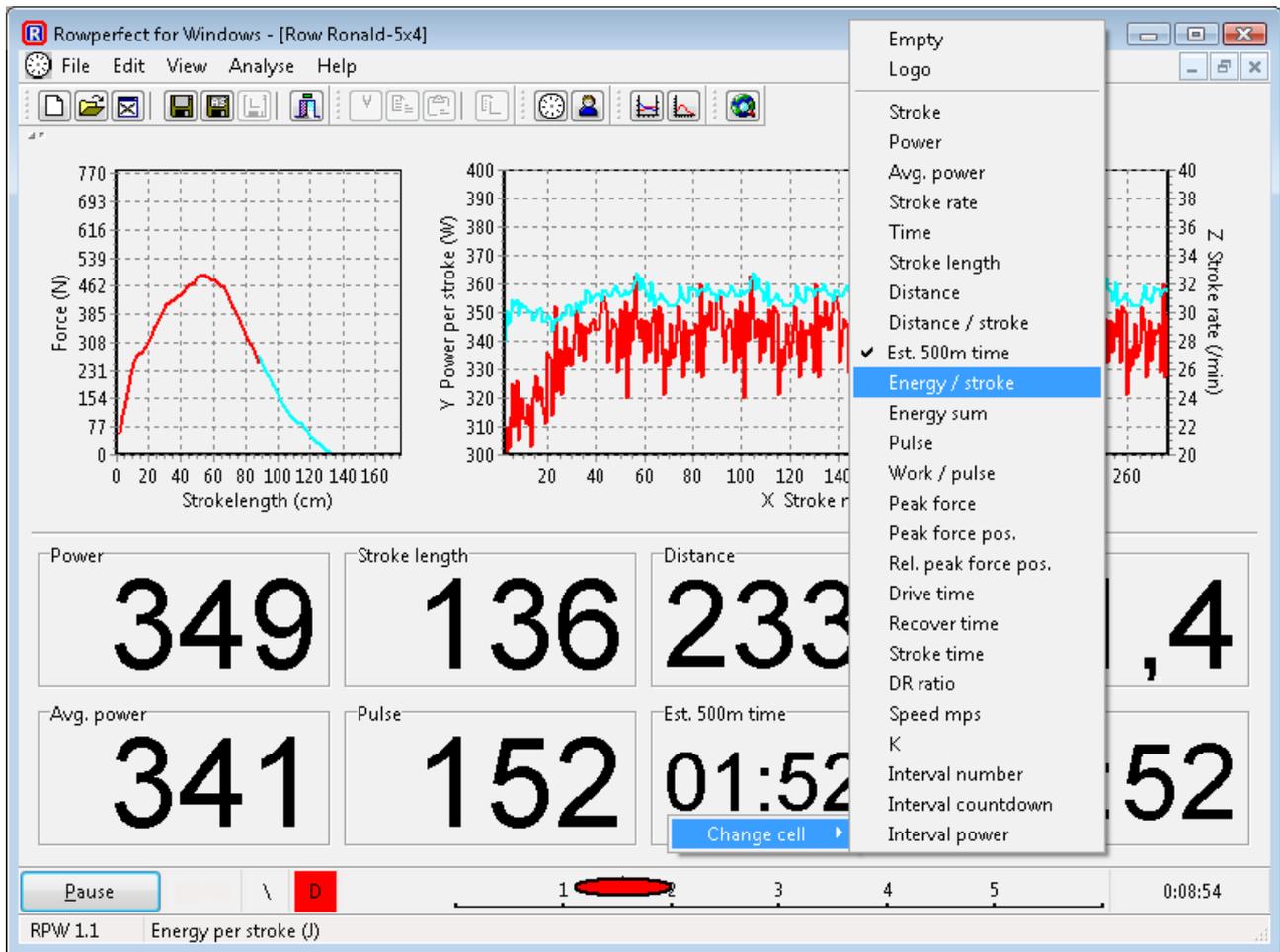
Figure 12 - Standard row window

The caption of the button in the lower left corner of the window changes, depending on the state the programme is in. When the interface is *not* detected – when Rpw has just been started, for example – the caption says "Connect". Click it to open the Connect dialogue as stated above. When connected, the training session will be re-set (previously recorded data will be lost) and the caption of the button will changed to "Pause", as in Figure 12. Clicking this will interrupt the training session and prompt for pausing.

To disconnect from the interface, choose [Yes]. The training session will be aborted, and the button caption set to "Connect" again. If [No] is clicked. The training session will be paused, and the caption changed to "Continue".

The row window consists of 3 areas:

1. Force curve chart on the top left.
   Right click on the chart to enable/disable the reference curve(s) – the curves currently visible in the Force curves window – or the previous stroke.
2. History / Stroke data chart on the top right.
   Right click on the chart to set the X, Y and/or Z axis.
3. Data area at the bottom.
   Right-click on a parameter cell to choose which data item to show here.

When a training session is finished, the Results dialogue is displayed, as shown in Figure 13.

Figure 13 – Results dialogue

B.11.4. Row – Performance issues

Running *Rpw* on older hardware, with limited processor and/or memory capacity (typically computers with Windows 98-Me), can result in badly updated charts in the "Row" window, especially with long sessions (20 minutes and more). To address this, users can switch off the data chart on the right by right-clicking it, and selecting "Empty". Alternatively, one can set-up the programme to just show the last x strokes, in stead of the whole training session. To do so, follow these steps:

♦ Locate the file *RPW.INI* in the folder *(My) Documents\Row-Ware\Rpw* .
♦ Double click the file to open it.
♦ Add a line "DataRange=X" in the *RPW.INI* file in the [Row] section, where the X denotes the number of strokes to plot. The minimum is 5, the maximum is 32000. (E.g. to limit the number of strokes in the chart to 10, the line should read "DataRange=10", but then without the quotes).
♦ Save the file and (re-)start *Rpw*.

B.12. View – Training

Click the Training button (🔲) on the toolbar (or select "Training" from the "View" menu, or press [Ctrl]+[T]), to switch to the training window belonging to the Row window. Therefore, this option is only available if a Row window is already present. The Training window is explained in detail in B.2.

To switch to another window, alternatively press [Ctrl] + [F6].

B.13. View – Other menu items

Rpw can be set to full screen (or reset to a normal window), by selecting the corresponding option from the "View" menu. A tick mark in front of the menu item indicates its current state. In full screen mode, the main title bar is no longer visible.

Note: Only switch from or to full screen mode when there are no windows open at the time.

Most of the buttons, lists etc. in *Rpw* will show a hint if the mouse pointer pauses while hovering over them. If required, this feature can be switched off by de-selecting the corresponding item from the "View" menu.

If most of the screen should be used for data, not for windows, borders or others, consider the last 3 options from the "View" menu. Compare the screens in Figure 14 and 15. Here the menu, toolbar and status bar are switched off. The Menu bar can always be restored by pressing [Ctrl] + [M].
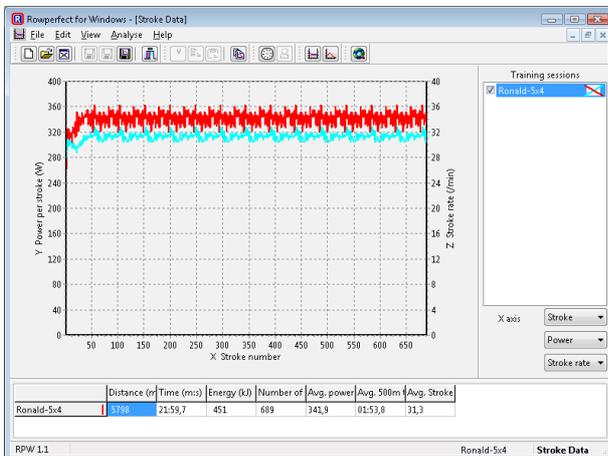

Figure 14 - Normal view
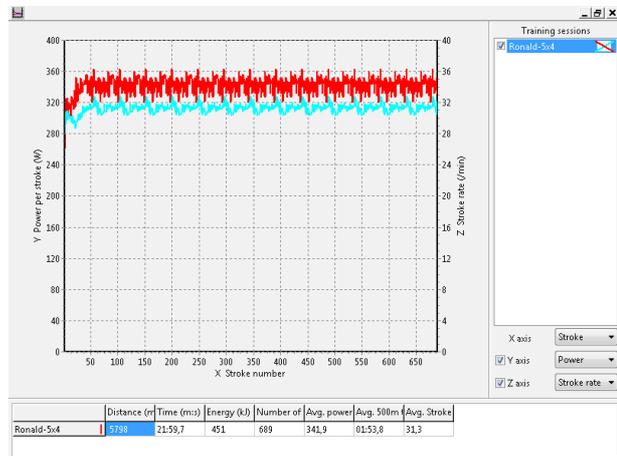
Figure 15 - "Enlarged" view

B.14. Analyse – Stroke data

To open the Stroke data window, click the Stroke data button (⊟) on the toolbar or select "Stroke data" from the "Analyse" menu. This enables in-depth analysis of training sessions by setting any of the 25 recorded parameters on any of the three axes.

Parameters that tend to accumulate during a session, like Time or Distance, result in LineCharts - as were all charts in previous versions. Parameters that do not accumulate, such as Stroke rate and Power, are plotted as PointCharts.
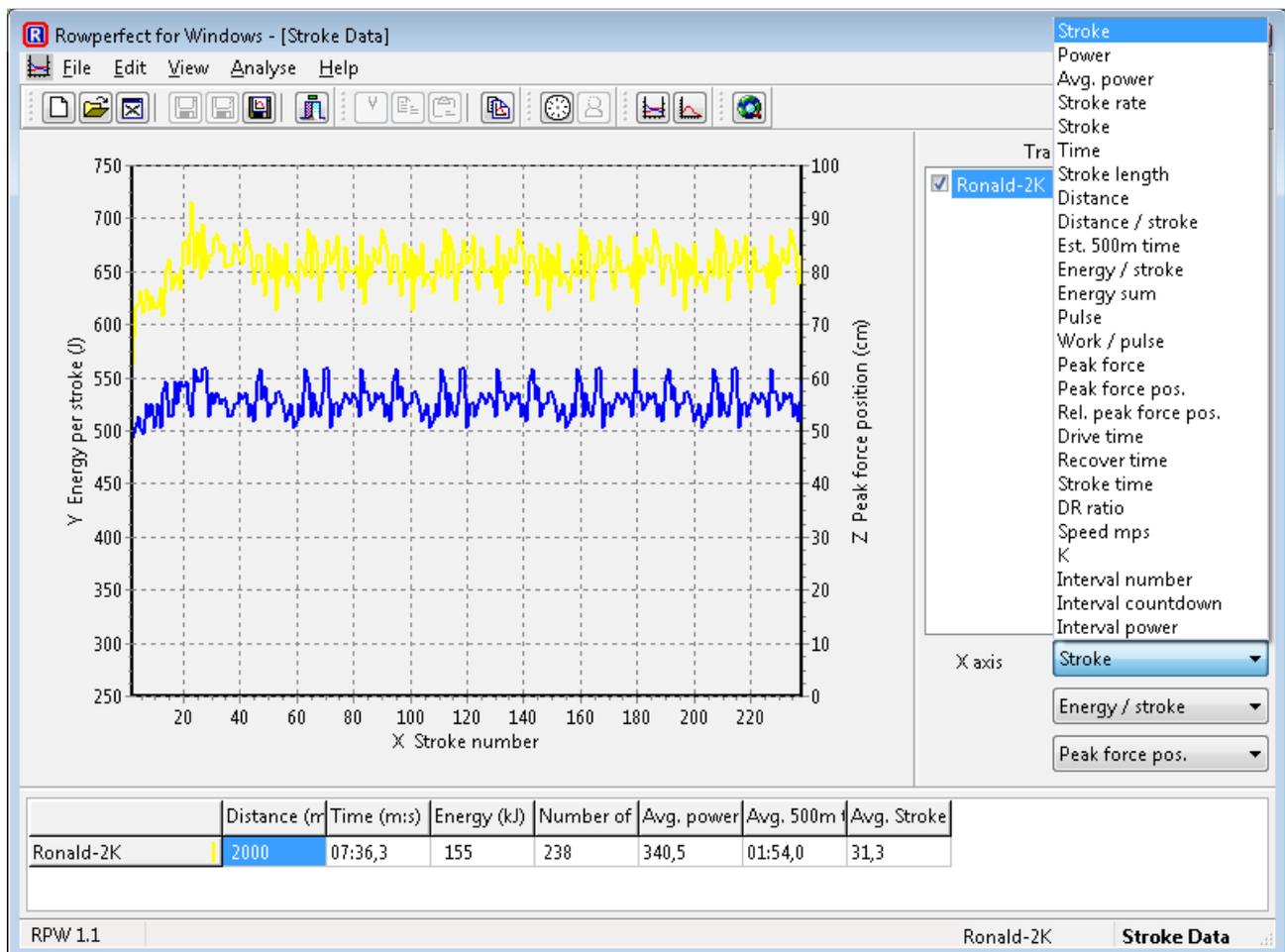

Figure 16 - Stroke data window

This chart can get cluttered easily if both Y and Z-axes are used, and a lot of files are loaded. To get a better overall view, temporarily hide a training session (de-activate it), by un-checking the check-boxes in the training sessions list. Also, selecting a part of the chart for zooming in can be very helpful. To do so, click on the chart with the left mouse button, and drag a window from top-left to bottom-right, and let go of the mouse button.

The data area at the bottom can be copied to the clipboard by right-clicking on it. From there, it can easily be pasted into a spreadsheet such as MS Excel.

B.15. Analyse – Force curves

Analysing stroke profiles is done in the Force curves window. To open it, click the Force curves button ( ) on the toolbar, or select "Force curves" from the "Analyse" menu.
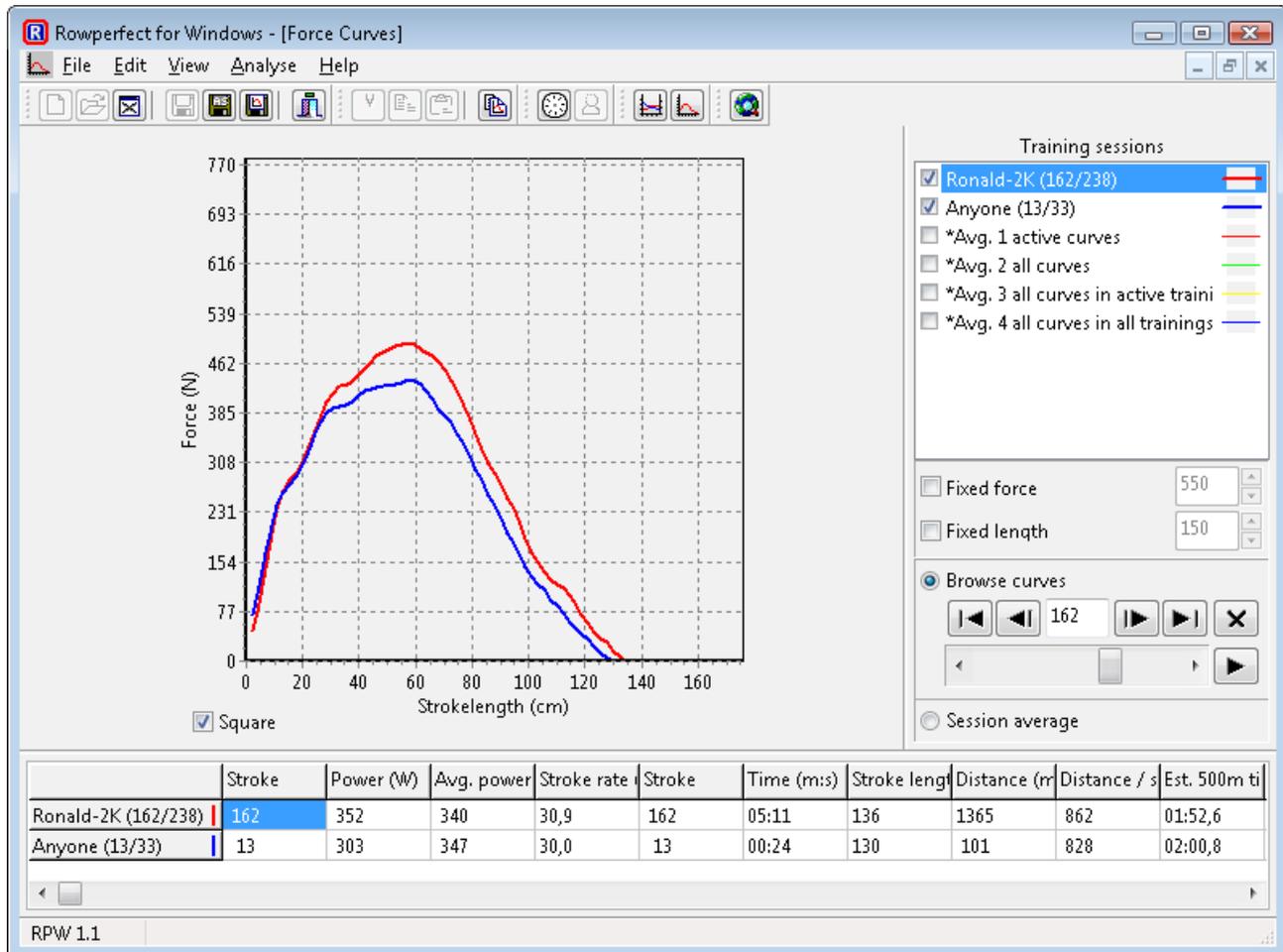

Figure 17 - Force curves window

This window allows one to browse through all force curves in one or more training sessions, compare them, play one training session as an animation or resize them to ones specific needs or reference.

At the bottom, the data area is filled with all the parameters calculated for each stroke. This area is updated automatically when training sessions are (de-)activated and when other force curves are selected.

A training session is called "Active" when it is checked in the list on the right. A force curve is called "Active" when it is currently shown in the chart. Therefore, for every training session, only one can be active.

For a training session, you can either browse through strokes or display the "Session average".

With the "Square" check-box, the force curve chart is fixed to a square aspect ratio. To have the chart fill up the entire chart area, un-tick this check-box.

B.15.1. Force curves – Averages

Besides the "usual" items shown in the training sessions list, there are also four "*Avg." lines:

1. Active curves. This shows an average force curve based on the current curves visible for the active training sessions (the ones preceded with a "ticked" check-box).
2. All curves. This shows an average force curve based on all current curves of all training sessions, regardless of their Active state.
3. All curves in active trainings. An average force curve calculated from all curves in the active training sessions will be shown if "Avg. 3" is checked.
4. All curves in all trainings. This will result in an average curve calculated from all curves in all opened training sessions.

Note: For Average force curves, only a limited set of parameters is calculated.

B.15.2. Force curves – Navigate

To navigate through the force curves of a training session, please use the scrollbar or the VCR-like buttons on the right:

♦ ◄◄ First
♦ ◄ Previous
♦ 8 Force curve number
♦ ► Next
♦ ►► Last
♦ × Delete force curve
♦ ► Play, starts animation
♦ ■ Stop, pauses animation

The Play button changes into the Stop button when showing an animation, and changes back to the Play button when stopped.

Selecting the "Session average" option below the "Browse curves" controls, will show the average force curve for the selected training session, instead of the current one. As long as the average is selected, browsing through the force curves for that training session is not possible.

The captions next to the names in the training session list indicate the stroke / force curve currently shown, for example:

♦ "Name (213/452)" means the force curve for stroke 213 of a total of 452 is shown.
♦ "Name [A] (941)" means the average of the force curves for all 941 strokes is shown.
♦ "Name", without extras, means there's no or just one curve in the corresponding training session, for example in a Stroke file.

B.15.3. Force curves – Scale

To compare force curves of athletes of different strength or height, all shown force curves can be scaled in height (force) or width (stroke length). To do so, select the "Fixed force" or "Fixed length" check-boxes. Examples are shown in the following figures:
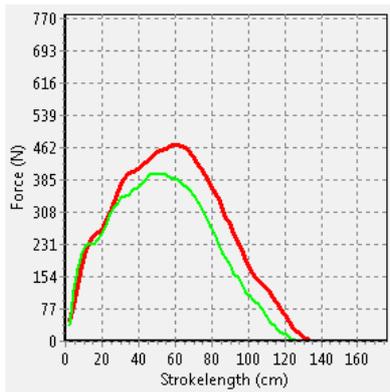
Figure 18 - Forces curve, normal
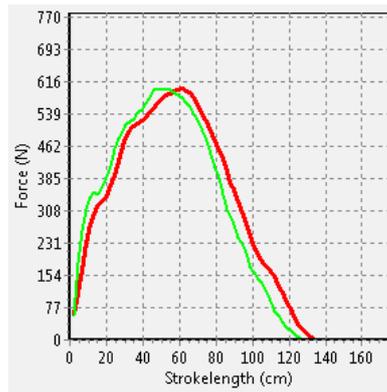
Figure 19 - Force curves, fixed force 600N
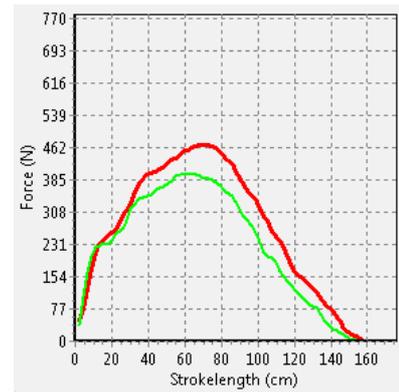
Figure 20 - Force curves, fixed length 160cm

To save a force curve to a STR file, select the training session in the list and click the Save as… button ( ) on the toolbar, or choosing "Save as…" from the "File" menu. This STR file can later be used to serve as a template- or reference-curve for a rowing session.

B.15.4. Force curves – Save
To save a specific force curve, either a "normal" one or an average curve, to disk, click the corresponding training session in the list. Then, choose "Save as ..." from the "File" menu, or click the "Save as ..." button ( ) on the toolbar. This will present the "Export stroke file" dialogue, where an appropriate location and file name can be entered.

B.16. Help - Manual
Selecting this option will launch this manual in a separate window.

B.17. Help - Website
Selecting this option, or clicking the Website button ( ) on the toolbar, launches the default web-browser on your PC opening the website http://www.rowperfect.com/

B.18. Help – About
Selecting "About" from the "Help" menu, will bring up the About dialogue with the current version number and a list of people and companies who contributed one way or the other in the development of *Rpw*. Clicking on the link to the website will open the default web-browser with the site provided.

The last page on the Help dialogue contains some statistics on programme use.

B.19. CARE.EXE Reference
At first sight, *Rpw* may look very different from the DOS based Rowperfect software, CARE.EXE. There are however, also a series of similarities. The following table lists the features of CARE.EXE available in *Rpw*, and where to find them in this manual for more details:

CARE.EXE	Rpw	Where to find
User screen	Training window, tab "General" (for the name) and tab "Workout" for the training session definition.	See B.2.1 and B.2.2
♦ Save (F8)	Use the Save button ( ) or choose "Save" in the "File" menu to save the current training session	See B.6 and B.7

CARE.EXE	Rpw	Where to find
	using the same file name. Use the Save as button (📷) or choose "Save as …" from the "File" menu to use a different name.	
♦ Load (F9)	Use the Open button (📂) or choose "Open" from the "File" menu.	See B.4
♦ Restore (F10)	Not available.	
♦ Password (F5)	Not available.	
♦ Color (F6)	Double click the name in a training sessions list or click [Options] in the training window, tab "General".	See B.1 and B.2.1
Work screen	Row window	See B.11
♦ Quit (Esc)	Click the Exit button (📷) or choose "Exit" from the "File" menu.	See B.9
♦ Evaluate (F1)	Stroke data window.	See B.14
♦ Displays (F2)	Right click the parameter cells in the bottom and/or right side of the Row window.	See B.11
♦ Strokes (F3)	Force curves window.	See B.15
♦ Reset (F4)	Click [Disconnect] in the lower left corner of the Row window.	See B.11
♦ DOS (F5)	Not available.	
♦ User settings (F6)	Training window, tab "General" (for the name) and tab "Workout" for the training session definition.	See B.2.1 and B.2.2
Evaluation screen	Stroke data window.	See B.14
♦ Set X (F1)	Set the X-axis.	See B.14
♦ Set Y (F2)	Set the Y-axis.	See B.14
♦ Set Z (F3)	Set the Z-axis.	See B.14
♦ Save (F8)	Use the Save button (📷) or choose "Save" in the "File" menu to save the current training session using the same file name. Use the Save as button (📷) or choose "Save as …" from the "File" menu to use a different name.	See B.6 and B.7
♦ Load (F9)	Use the Open button (📂) or choose "Open" from the "File" menu.	See B.4
♦ Text (F4)	Not available.	
Strokes screen	Force curves window.	See B.15
♦ Previous (←)	Click the Previous button (◀).	See B.15
♦ Next (→)	Click the Next button (▶).	See B.15
♦ Set (Space)	Not available. Force curves remain on screen when navigation is completed.	
♦ Save (F8)	Use the Save as button (📷) or choose "Save as …" from the "File" menu to save the current force curve as a STR file.	See B.7
♦ Load (F9)	Use the Open button (📂) or choose "Open" from the "File" menu.	See B.4

B.20. Command Line Parameters

Starting *Rpw* with Command Line Parameters facilitates selection of the same user file again and again, alternatively opening the Browse window in the same folder as usual.

Note: Command Line Parameters are optional.

To use Command Line Parameters, make a shortcut to Rpw.EXE, for example on your desktop, and open its properties page (right click the shortcut and choose "Properties"). Command Line Parameters are entered in the "Target" box.

Below is a list of all available options:

/?, /H	Show this list
/N	Create a new training session
/D	Open stroke data window
/F	Open force curves window
/R[:UserFile]	Open row window (with UserFile)
/R:?	Open row window with "Open user file" dialogue
/X	Register current *Rpw* file types
/X+	Register all *Rpw* file types
/X-	Un-register all *Rpw* file types

If no parameter is given, *Rpw* starts with a new Row window by default (parameter " /R").

General remarks on parameters:
♦ Multiple parameters and files are allowed.
♦ The "/" can be replaced by a "-".
♦ Parameters are not case-sensitive.
♦ Enclose Path and UserFile with quotation marks, especially when they contain spaces.

Example:
♦ To let *Rpw* start with a predetermined User file, type the following in the "Target" box:
  "C:\Program Files\Rowperfect for Windows\Rpw.exe" /R:"C:\RPData\John-1K.ini"
  This example assumes the User file you'd like to be opened automatically is
  "C:\RPData\John-1K.ini".

With the "Run" option in the Properties dialogue, the initial screen size can be set, e.g. select "Maximised" to let *Rpw* start in a maximised window.

Note: There's no limit to the number of shortcuts that can be made to *Rpw*.

C.   Frequently Asked Questions

C.1. Connection problems

Q. When connecting to the interface, by closing the "Connect" window, I get an error stating "Comport : no data". I'm confident the interface is hooked up properly. What's going wrong?

A. *Rpw* sometimes has some trouble in detecting whether the interface is sending data. To prevent this, give the flywheel a gentle swing when closing the "Connect" dialogue.

C.2. Feature requests

Q. Is there a way to analyse Interval data with *Rpw*, or compare more than just two training sessions?

A. Yes and No. These features are not available in *Rpw*, but they are in another MS Windows programme for the Rowperfect, called *SEAN : Session Analysis*. For more information on *SEAN*, please contact Row-Ware (website *http://www.row-ware.com/sean/* or e-mail info@row-ware.com) .

C.3. Save chart colours

Q. Every time I open a new "Row" window, I need to set the chart colour and line type manually. Can this be saved somehow?

A. When the workout has been set up (name, type, distance / duration etc. are entered), change to the first tab of the "Training" window, and set the chart options. Then, choose "Save as" from the "File" menu, and save the user data as an STG file. The next time you open a new "Row" window, open this file with the [Open] button in the "New row window" dialogue and save the results under a different file name.

C.4. Use reference curve

Q. How do I set *Rpw* to use a reference curve in the "Row" window?

A. By default, all curves visible in the "Force curves" window, are used as a reference curve in the "Row" window. Thus, to use a reference stroke, just open a STR or STG file and - in case of the STG file – select the appropriate curve to be used as a reference. Then, switch to the "Row" window (or start a new one) and start rowing.
Right-clicking on the Force curve chart in the "Row" window will show pop-up menu where this behaviour can be switched off.

C.5. Save a reference curve

Q. How do I scale a previously recorded force curve and save it as a reference for future use?

A. In *Rpw*, open a stroke profile (STR) file or Training file (STG) and open the "Force curves" window. Click on the name of the session in the Training sessions list on the right, and browse to the force curve that you would like to serve as a template for future workouts, by using the VCR like buttons. Optionally, use the check-boxes Fixed force and/or Fixed length to scale the curve vertically and/or horizontally. When finished, click the "Save As ..." button on the toolbar (🖼) or select "Save As …" from the "File" menu, and save the STR file (see also B.15.4).

C.6.   Old computer hangs during long sessions
Q. My old laptop seems to hang when doing long sessions with *Rpw*. Can anything be done about it?

A. Long sessions means accumulating lots of data. As *Rpw* stores all parameters of all strokes in a session, after 20 minutes (or even less, depending on computer hardware) the PC can run out of memory and processor power. There are 2 ways to prevent this to happen, aside from the obvious "don't do long sessions" :-)
1. Switch of the Stroke data chart in the Row window, by right-clicking it.
2. Add a line to the RPW.INI file limiting the number of strokes visible in this chart (see also "Performance issues" in B.11). All data will still be stored, but only the last x strokes will be visible during the session.

C.7.   Using *Rpw* without a serial port
Q. Can I use *Rpw* on a PC without a serial port?

A. In general, *Rpw* can connect to the Rowperfect PC Interface through a so called USB serial adapter. However, **not all** cables tested have proven to work properly, depending on brand, MS Windows version and computer hardware. Contact us for more details.

D.   Appendices

D.1.   Table of contents

D.2.   List of figures