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Introduction

DATA VOLLEY is scouting and statistical analysis tool of volleyball matches most used in the world. The software can be installed on any personal computer using Windows® 95/98/NT/2000 or subsequent versions. It is extremely versatile, is perfect for installation on portable computers, and allows the user to personalize a wide range of functions, from parameters of analysis to keyboard functions to meet the user’s specific needs. This adaptability facilitates data scouting and permits even beginners to scout data quickly and easily.

DATA VOLLEY is targeted toward anyone interested in volleyball, not just coaches or trainers, but even novice sport statisticians. The presence of sport scout-men many sports groups has greatly increased the importance of sports statistics and has created a new professional figure - the sports statistician. In recent years, the sports statistician has become a crucial asset to many volleyball teams at all levels.

This manual has been written for those using the software for the first time, but also provides in-depth explanations for those who wish detailed information on specific operations. For this reason all the menus, video displays, and sections of the program are widely documented.

The practice achieved by following the examples in the manual, will help the operator to speed up his/her data-collecting but, without a doubt, the use of the program is the best way to master the techniques. Upon using the DATA VOLLEY system for the first time, it may seem a bit difficult. This should not frighten the novice researcher, because the program is simple and intuitive in all its functions, allowing remarkable personalizations, but like all new things, a period of learning is required to gain familiarity with the coding system, the keyboard, and with the program itself.

Therefore, it is advisable to gradually start training on the coding system to be used. Keep this manual readily available and follow the given examples and the methodologies suggested for quick understanding.

The best way to start using DATA VOLLEY is by consulting this manual to the best of its possibilities. We suggest the following steps:

- after installing the program, read the paragraph "Architecture of the program", opening the menus and activating the program phases shown in the paragraph;
- insert in File/Teams, about your own team and the data regarding at least 3-4 players (all of them is even better);
- enter the scouting phase with New Match from the Scouting menu and read the introduction to the chapter "Scouting menu" including the commands, possibly verifying some examples;
- read the paragraph "Quickstart to scouting a match" and begin using the program;
- with the program running, read the rest of the manual, verifying the various phases based on the data collected for practice.

Do not expect to turn on the computer, run the program, and by some miracle immediately achieve everything you had hoped. Practice is required in order to make the best use of your skills as a data-collector/operator and all the features of the DATA VOLLEY system.

Rally point system, Points and side-outs

When the rally point system rule has been introduced, we have decided to improve DATA VOLLEY instead of adapt it to the new rule: in fact, with DATA VOLLEY it is possible to scout a volleyball match in both ways.

In the match reports printable by the users, this feature of volleyball is named Points to represent the points realized on reception and Break Point to indicate the points realized on serve. By the way, if you should find part of this manual in which are included a reference to Points and Side-outs, it has to be considered as Points on Serve and Points on Reception.

The program recognizes automatically if a point is realized on reception (the older side-out) or on serve (the former point): you may specify which type of rule to be adopted just selecting it in File/Options/General scouting or in Scouting, command NOTES.
Installation

Data Volley may be installed from CD-ROM or Internet.

From CD-ROM

Insert the CD-ROM in its drive, the program that manages the various program functions (demo, installation, manuals) should begin. If this does not occur, launch the Go.exe file from Windows File Manager.

You” get the page Data Volley CEV; click Program Installation:
- you may now proceed with the installation of DATA VOLLEY. You will be asked to confirm or change the directory into which the software will be installed C:\Data Project\Data Volley (we advise not to change it);

From Internet

You may download the full installation files of Data Volley from the Data Project web site at www.dataproject.com/CEV.

Once navigated thru the page dedicated to CEV, just follow the instructions displayed:
- Then download the files eDV_Setup_CEV.exe.
- Once finished the download, to carry the installation out, launch the files eDV_Setup_CEV.exe which will install real installation of DATA VOLLEY into the folder C:\Data Project\Data Volley CEV.

Clicking on mTeams.exe and/or wTeams.exe you can download the rosters of the Men’s and Women’s team participating to the current European CEV Champions League.

Upgrade Data Volley CEV via Internet

All Data Project customers are entitled, during the warranty period, to download the upgrades of the program from our website www.dataproject.com/CEV.

Once navigated thru the page dedicated to CEV, just download the file eDV_Upgrade_CEV.exe into a temporary folder (p.e. Windows\Temp).

Once finished the download, to carry the upgrade out you need to launch the file eDV_Upgrade_CEV.exe.

Before running an upgrade, it is a good principle to save all archives and keep the former version of the program: it will be enough to copy the file DvWin.exe or vary its name as well.
CEV SCOUTING REQUIREMENTS

The program you received is able to perform all the options and the analyses showed in the handbook present on the installation CD-Rom, but the CEV scouting requirements are limited to basic scouting.

The basic skills of a volleyball match are Serve, Reception, Attack and Block.

The CEV scouting doesn’t need any specification of the type of the skill and also doesn’t need the subdivision between the attack against a two men block from those against one man block. With these simple requirements, the scouting of a match using Data Volley becomes a quite easy job, also because the operator is helped by the compound codes which enable the scout-man to get together two related skills with one code and by the help of the default scouting code which enables the operator to choose a default skill code.

We suggest you to read the paragraph concerning Compound Codes (par. 2.4.2) and Default Scouting (1.4.2) before carrying out the scouting examples shown below.

Following, you will find the instructions to arrange a scouting-file and some examples are about scouting of basic data for both teams, according to CEV requirements.
Quickstart to scouting a match

In this paragraph you will find few simple example in order to ease the introduction to the scouting phase. The following examples are the minimum requests for a correct data-collection and allow you to keep confidence with the technical codes and with the keyboard.

Arranging a New match file

On the grounds of the pre-set tables of the program, the first operation to carry out is the insertion of two teams at least: select File / Teams and the program will display the empty teams window: click on [Add] and insert the team code (max. 3 characters), the description and the names of the coaches; then click on [Player list] to digit the names of the team’s players. Pay attention to the player’s code: it has to be composed of 6 characters (usually the first three characters for the player’s last name and the other for the player’s first name: thus the player Ryan Miller will be codified as MIL-RYA; you may find further information at paragraph 2.2.2). In the column Id it is possible to digit the letter C or L to identify the captain and the libero of the team.

At the end of this first part dedicated to the creation of the archives, let us enter into the real scouting phase. In the Scouting menu, select New Match: the program will display the Rotation, Scouting, Codes list Windows completely blank. Now you have to run some operations following the sequence indicated:

- The program will display the NOTES window automatically (it is also possible to open this window hitting the key [Esc] from the Scouting window and typing NOTES into the Command window). Insert the notes of the match into this window ... the codes of the two teams selecting them from the teams already stored into the teams database; when finished, hit [Enter] or click [Ok] to confirm and go to the next phase (further info at paragraph 2.2.1).

- After having confirmed the match notes, the software will automatically display the players list window of both teams: the first list to be shown is the one concerning the home team. In this phase you may modify the list or erase a player not included into the starting list (button [Not in summary]) or insert a player not included in the original database (button [Add]); execute the same operation for the Visiting Team. Once finished, the starting list of both teams will be displayed into the Rotation window.
• From the Scouting window, hit the key [Esc] and then type **LINE UP** into the Command window: insert the starting line-ups of both teams, following the volleyball order, and they respective setters (farther info at paragraph 2.2.3): the starting line-ups will be displayed into the Rotation window. The program will insert automatically in the Scouting window the codes concerning the setters and their respective starting zone (**P_asc; z_asc**). Further info at paragraph 2.1.11.

• In the Rotation window, a white ball indicates the team ready to serve: if necessary, press [Esc] and, in the Command window, type **aS** to assign the serve to the opposing team.

• If necessary, press [Esc] and digit **INV** in the Command window, to modify the position of the teams on the screen.

You are ready at this point to start the statistical scouting of a match.

In this paragraph we will insert some examples on the grounds of a simple code syntax: more info about the code syntax are available at paragraph 2.1.6.

Depending on the complexity of the data you want to scout, and naturally, on your ability and speed of typing, this phase may be more or less difficult even if every code uses acronyms borrowed from volleyball language in order to ease the work of the user.

To provide some sample schemes, the scouting phase may be subdivided into 4 levels. **IMPORTANT:** all the codes concerning skills have to be inserted in Capital letters; therefore be sure to lock the capital letters on your keyboard before the beginning of the scouting phase.

**Scouting example - first level**

This example is about the scouting of data of both teams using the help of the compound code, limiting the skills to the Serve, Reception, Attack, Block; the codes comprise only the player's number, the skill, the effect.

**Rally to scout**

Serve is by the home team. Home player No. 5 serves, the opponent no. 10 effects a bad pass, the opponent player no. 7 attacks but his hit is defended (not scouted) and then the home player no. 12 attacks successfully.

**How to digit into Scouting window**

5S.10 - a7A 14A# and then hit the key [Enter].

Now you have to hit the key which assigns the point to the proper team: in this case, you have to hit [End Rally Lft] because the team who won the rally is placed of the left of the screen; the key [End Rally Lft] is set by default on the key [<]: further info about its function refer to paragraph 2.1.8). The program now will insert automatically two codes **p01:00** which is the code of the current score and **5S** which is the code of the next player to serve (see par. 1.4.2 – Default Scouting).

At this point you only have to wait for the next serve and continue scouting. It is advisable to continue scouting, simulating other simple actions in order to keep confidence with the keyboard.

**Scouting example - second level**

Let's scout a longer rally, being also helped by the default scouting code.

**Rally to scout**

The home team is on the left of the screen.

Serve is by the home team. Home player No. 5 jump serves; the opponents receive easily with their player no. 15 and attack from backrow with their player no. 12 but the hit is dug by the home team who attacks with the player no. 8 but also this hit is defended by the opponents who attack succesfully with the player no. 9.

**How to digit into the Scouting window**

5S.15# a12 8 a9# and then hit the key [Enter].

So you only have to the key which assigns the point to the proper team: in this case, you have to hit [End Rally Rgt] because the team who won the rally is placed of the right of the screen; the key [End Rally Rgt] is set by default on the key [>] : further info about its function refer to paragraph 2.1.8).

The program now will insert automatically three codes; **p01:01**, which is the code of the current score, **az1**, which is the code identifying the opponent setter position (see par. 2.1.11 – Automatic codes), and **a1S** which is the code of the next player to serve (see par. 1.4.2 – Default Scouting).
As you can see, we didn’t care about the type of the skill (jump serve and backrow attack) as well as the digs performed by both teams because these codes are not requested by CEV scouting.

**Scouting example - third level**

Here is a rally including some blocks: in this example we have used compound codes also, better explained at paragraph 2.4.2.

**Rally to scout**

The home team is on the left of the screen.

Serve is by the opponent team. The opponent player No. 1 serves on home player No. 10, who receives perfectly, then the attack of the home No. 7 is blocked partially by the opponent player no. 14, the home team defends and attacks again with its player no. 8 but he is blocked successfully by the opponent player no. 12.

**How to digit into the Scouting window**

```
a1S.10# 7 8.12#
```

and then hit the key [Enter].

So you only have to the key which assigns the point to the proper team: in this case, you have to hit [End Rally Rgt] because the team who won the rally is placed of the right of the screen;

The program now will insert automatically two codes; `ap01:02`, which is the code of the current score, and `a1S` which is the code of the next player to serve (see par. 1.4.2 – Default Scouting).

According to CEV scouting requirements, we did not mention about the middle block but we scouted only the winning block.

As you may also see, the attack code (A) is never typed because the Default Scouting will consider as an attack any number without a skill code.

**Scouting example - fourth level**

This last example will figure out a particular case of scouting: more info about evaluation of particular cases are available at page 12.

**Rally to scout**

The home team is on the left of the screen.

Serve is by the opponent team. Opponent No. 1 jump serves, home No. 10 receives perfectly and home No. 4 attacks from backrow against opponent single block by No. 15, the ball is dug by the opponent team but the player no. 15 touched the net during the block. In this case, the attack is not winning but the net interference made by the block led the opponent team lose the rally

**How to digit in the Scouting window**

```
a1S.10# 4 a15M=
```

and then hit the key [Enter].

Now you have to hit the key [End Rally Lft] because the team who won the rally is placed of the left of the screen.

The program now will insert automatically two codes; `*p02:02`, which is the code of the current score, and `8S` which is the code of the next player to serve (see par. 1.4.2 – Default Scouting).

We suggest you to continue the scouting of simple actions, serve and reception, attack and block: when you are on the set point, hitting the key [End Rally] the program will display a control window which will ask you to confirm the end of the set and another window which will ask you to insert the minutes of the set.

Similarly, at the end of the match the program will ask to confirm it: if you are sure that the scouting you have made is well-done, confirm the end of the set/match and to quit the scouting run the command END into the commands window (see paragraph 2.3.8): in this latter case the program will ask you to save the changes and will propose the file-name of the scouting which you may rename according to your needs.

This file will become the last file processed and its file-name and the final score will be highlighted in the lower right side of the screen.

In the next pages you will find more info about every feature of the program: from the detail of the scouting to all the analysis windows available.
Scouting evaluation criteria

In this paragraph we will enlist the evaluation criteria of some skills and some particular cases of scouting.

How to evaluate a Serve

Using the compound code, you will evaluate the efficacy of the serve giving the evaluation to its related reception/pass. In fact, according to CEV requirements, per each serve there must be a reception; if the serve is successful (ace) there must be a responsibility for the receiving players whether they touched the ball or they didn’t touch it.

You only have to evaluate the error in serve; so if a player misses the serve you have to type the player number, the serve code and the missing evaluation: 12S= if the serve is missed by the home player no. 12, a7S= if the serve is missed by the opponent player no. 7. Even if the serve is evaluated through the reception, this is the evaluation criterion for serve:

<table>
<thead>
<tr>
<th>SERVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
</tr>
<tr>
<td>/</td>
</tr>
<tr>
<td>-</td>
</tr>
<tr>
<td>+</td>
</tr>
<tr>
<td>#</td>
</tr>
</tbody>
</table>

How to evaluate a Reception/Pass

Using the compound code, you have to evaluate the reception on the grounds of the table shown below:

<table>
<thead>
<tr>
<th>Receiving Team</th>
<th>Serving Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>+</td>
<td>#</td>
</tr>
<tr>
<td>#</td>
<td>/ or -</td>
</tr>
<tr>
<td>/ or -</td>
<td>-</td>
</tr>
</tbody>
</table>

Perfect - CEV evaluates a perfect reception if the ball has an acceptable parabola and goes into the green area: the proper code is #: in fact, with this kind of pass, the setter is able to perform any kind of setting, even a combination.

Positive - if the ball, after a reception, lands into the yellow area you have to evaluate the pass as positive giving it the code +: in this case the setter may carry out any kind of setting but is not able to set a combination.

Negative - if the ball, after a reception, lands in the home field anywhere but the yellow and green areas or into the opponent field, you have to consider it as a negative pass assigning it the code -: in this case the setter or any other player may set only a high ball or cannot even perform any setting because the ball landed into the opponent field.

Mistake – a pass is considered a mistake in two cases:

1. if the ball isn't touched by any receiving player or it is touched by a receiving player and it goes out of the field or any other player is able to save it;
2. if the reception goes into the opponent field and it is killed directly and successfully by an opponent player (code /).

The proper code for the above cases is as follows:
1. in the first case the code is =: so if the serve is performed by the home player no. 10 and the ball hits the ground in the area pertaining to opponent player no. 7 (even if the player didn’t touch the serve) or he missed the pass, you have to codify 10S.7=
2. in the second case the right code is /: in fact if the pass, after the serve, goes into the opponent field and it is killed directly by the opponents. Example: if the home player no. 10 serves and the ball after the reception of the opponent player no. 7 goes into the home team field and it is killed directly by the home player no. 4, you have to codify 10S.7/ 4#

By the way, this is a summary table for the evaluation of reception/pass:

<table>
<thead>
<tr>
<th>RECEPTION – PASS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Error: the ball isn’t touched, a mistake or it is lost after a dig</td>
</tr>
<tr>
<td>/</td>
<td>Half error: the reception goes over the net and a player of opponent team kills or blocks</td>
</tr>
<tr>
<td>-</td>
<td>Negative: a reception which ends 3 or more meters from the net, the setter is not able to play a quick spike. Also the ball goes into opponent field but is not attacked directly and/or successfully</td>
</tr>
<tr>
<td>+</td>
<td>Positive: a reception which ends 1-2 meters from the net, the setter is not able to play a combination attack</td>
</tr>
<tr>
<td>#</td>
<td>Perfect: excellent position and parabola</td>
</tr>
</tbody>
</table>

How to evaluate an Attack

You have to evaluate the attack on the grounds of the difficulty created to the opponent team. According to the table shown below:

<table>
<thead>
<tr>
<th>ATTACK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Error: in the net, out, net interference.</td>
</tr>
<tr>
<td>/</td>
<td>Blocked: point or side-out lost</td>
</tr>
<tr>
<td>-</td>
<td>Negative: easily defended by opponent</td>
</tr>
<tr>
<td>+</td>
<td>Positive: defended with difficulty by opponent</td>
</tr>
<tr>
<td>#</td>
<td>Kill: point or side-out gained</td>
</tr>
</tbody>
</table>

How to evaluate a Block

You have to evaluate the block on the grounds of two features:

<table>
<thead>
<tr>
<th>BLOCK</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Error: net interference.</td>
</tr>
<tr>
<td>#</td>
<td>Kill: point or side-out gained</td>
</tr>
</tbody>
</table>

So, you have to scout a block only when it is a winning block or it in an error (net interference) because it ends the rally; in this case, it the attack is a kill and the referees notice also a net interference, you don’t have to consider the losing block but only the winning attack.

Evaluation of Particular Cases

Reception
In case the pass is effected badly but the fault is committed by a teammate who wasn’t able to pass the ball into the opponent side, the reception is considered negative. Example: the home player no. 7 serves and the opponent player no. 9 receives badly but his/her teammate no. 12, trying to pass the ball into the other side, throws the ball out of bounce; the proper code is 7S.12- and then hit the [End Rally Lft/Rgt].

Reception/Attack
In case of reception going into the opponent side, we have to distinguish the reception / (already explained) from the negative reception going into the opponent side: in fact if the home player no. 10 serves and the ball after the reception of the opponent player no. 7 goes into the home team field and it is attacked directly by the home player no. 4 without realizing a point, you have to codify 10S.7- 4; it is also considered a negative reception a ball that goes into the opponent side and the other team wins a point with a normal rally (dig/pass – set – attack)
**Attack/Block**

As explained before, an attack is not considered a kill if the ball is dug by the opponent team but the referees notice a net interference by the block; example: the home player no. 14 attacks and it is dug by the opponent team but the opponent player no. 15 commits a net fault, the proper code is **14 a15M=**

According to CEV requirements, a negative block has not to be considered; example: the home player no. 14 attacks and it goes out of bounce touched by the block of the opponent player no. 15, the proper code is **14#** (not 14.15=)

**Attack by the setter**

If the attack is performed by the setter, even without jumping, you have to consider it as an attack and not as a set. If, however, he/she commits a foul attempting to set the ball, it has to be consider as a set fault: so the code is **nE=** (being n the setter shirt number).
1 - File menu

Having opened the drop menu, different selection opportunities are presented, all of them identified by an underlined letter used to make a selection.

**Teams** – to open and manage the archive concerning teams and their own athletes.
**Tables** – this item allows to work with the tables which will help you customize parameters for the evaluation of each skill.
**Keyboard remapping** – to set-up the keyboard according to the user’s requirements.
**Options** – to set-up some operating phases of the program.
**Printer set-up** – enables you to indicate the predefined printer to the program.
**Exit** – this last item is used for exiting the program, returning to the Windows 95/98 desktop.

1.1 - Teams

Choosing the Teams option from the File menu, a table will open up where you will be able to insert, modify or remove all the teams and relative lists of players needed for subsequent scouting phase.

Inside DATA VOLLEY, the teams are identified by a code, made of three characters: for this reason, one should not insert teams with the same codes, nor modify the teams codes after the scouting has already been done (unless you return to those match files and modify the code in the NOTES command).

By positioning yourself on a team, you can make modifications regarding the description and the coaches; to move inside this table, the use of the directional arrows is advisable, while to modify any field it is sufficient to place the cursor on the section to be modified, press the key [Enter], carry out the modifications and press [Enter] again to confirm.

To open the window regarding the team’s players list, it will be sufficient to click the key [Players list]. The window displayed is subdivide into seven columns:

- **N.** – to insert the shirt number of the player;
- **Id** – to set-up the Captain of the team and the Libero;
- **Code** – to digit the player’s identification code: every player must be identified with a personal code; it has to be composed of 6 characters. It is advisable, but not obligatory, to set the first three characters for the player’s last name and the other characters to represent the player’s first name (see the picture below);
- **Name** – to write the player’s name;
- **Date of birth** – to insert the player’s date of birth;
- **Hgt** – to digit the height of the player;
- **Role** – to specify the role(s) of the players.

To insert a new player it is sufficient to click the key [Add] and the program will insert an empty line ready for a new athlete.

It is fundamental in this phase to insert the codes of the players in an exact and complete manner: the program will recognize the player on the grounds of his code; in case of several matches processing, the exact update depends upon the player’s code: during the year, a player could use different shirt numbers: this will not be a problem if he is always inserted in the list with the same code, that which you have allocated in this phase.

To remove a player from the list in a definitive manner, it is sufficient to select with the arrows the line to be removed, click on [Delete]: a message will appear confirming the deletion.
You may load even more than twelve players into this list (example: having a group of 16 players among who select the 12 starting list before every match) but you have to erase the exceeding players when running the command LIST/aLIST (par. 2.2.2).

To close this table and store the modifications carried out, it is sufficient to click the button [Close]; thus you will return to the list of teams to modify other lists of players if necessary. Clicking again the button [Close] you will close the list of teams and return to the main menu.

1.2 - Tables

1.2.1 - Weights for evaluation

This key allows you to give to every skill a weight for each effect (=, -, /, !, +, #). Such weight can acquire a value from -5 to 10.

We remind you that the meaning of the symbols are the following:

<table>
<thead>
<tr>
<th>SERVE</th>
<th>=</th>
<th>Error, in the net, out, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/</td>
<td>Half point: the opponent reception goes over the net and a player of our team kills or blocks.</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Negative: opponent receives perfectly</td>
</tr>
<tr>
<td></td>
<td>+</td>
<td>Positive: opponent reception ends 3 or more meters from the net, the setter is not able to play a quick spike; opponent reception ends 1-2 meters from the net, the team is not able to attack with a combination</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>Winning, Point: opponent doesn’t touch the ball or lose it after a dig</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RECEIPTION – PASS</th>
<th>=</th>
<th>Error: the ball isn’t touched, a mistake or it is lost after a dig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/</td>
<td>Half error: the reception goes over the net and a player of opponent team kills or blocks</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Negative: a reception which ends 3 or more meters from the net, the setter is not able to play a quick spike. Also the ball goes into opponent field but is not attacked directly and/or successfully</td>
</tr>
<tr>
<td></td>
<td>+</td>
<td>Positive: a reception which ends 1-2 meters from the net, the setter is not able to play a combination attack</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>Perfect: excellent position and parabola</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ATTACK</th>
<th>=</th>
<th>Error: in the net, out, net interference.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>/</td>
<td>Blocked: point or side-out lost</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>Negative: easily defended by opponent</td>
</tr>
<tr>
<td></td>
<td>+</td>
<td>Positive: defended with difficulty by opponent</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>Kill: point or side-out gained</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>=</th>
<th>Error: net interference only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>Kill: point or side-out gained</td>
</tr>
</tbody>
</table>

In the first of two columns of the section Parameters, you have to type the minimum percentage of shots performed individually in that specific skill, as regards the team’s shots performed, so that an evaluation can be assigned.

In the second column a multiplication factor has to be inserted (we suggest 1).

As a result of these weights, the program determines the “evaluation” that appears in the tables and in the statistical printouts, and it is variable skill by skill.

The evaluation is the result of the following "mean average":

\[
\]

A special feature of DATA VOLLEY consists in the ability to change the weight table at any moment: in this way you can adapt the weights so that the “evaluation” determined by the program coincides with the actual technical evaluation.
1.2.2 - Winning symbols

This table allows you to characterize effects (symbols), preceding the conquest or the loss of a point or a side-out even if we suggest to use the pre-set values. It is possible to distinguish, for example, hit-out attack (symbol =) from blocked attacks (symbol /), both presenting a loss of point or side-out, it is necessary to type these two symbols into attack row of the column losing symb.. As regards winning effects, in case you wish to identify winning hits with symbol #, it is necessary to insert # in column winning symb.: the skills that produce the conquest of a point or side-out are Serve, Attack and Block.

1.2.3 - Compound Codes

This command enables you to change the effects corresponding to each skill in the compound codes (for example: to a serve #, corresponds a reception =). As in the previous table, we suggest you to keep the predefined values, even if DATA VOLLEY is able to adapt the operation to the values set in this or other tables. For further info, refer to paragraph Compound code (par. 2.4.2).

1.2.4 - Scouting attack (Professional version only)

In this table, available only on DATA VOLLEY Professional version, you can insert the codes (2 letters) of various kinds of attack shots. When setting this table you have to consider some simple rules: The first letter of the combination code must not be one of those used by DATA VOLLEY for scouting stats (numbers, skills, types, etc.); the program automatically prevents this. For each combination it is possible to indicate the starting zone and, dividing each zone in three, also the side (Left\Center\Right): in phase of analysis you will have very exact attack directions graphics. Specifying correctly the shot type in the scouting phase, DATA VOLLEY will automatically take it from this table.
1.3 - Keyboard remapping

This option enables the user to adapt the keyboard to his various scouting needs. It is possible, in fact, to create a direct link between a selected key and a particular scouting code or command. There are some symbols and functions predefined in DATA VOLLEY, corresponding to the effects, to the End Rally and to the points and rotations variations as shown in the picture.

To re-map one of the links already present, it will be enough to highlight with the mouse pointer, or with the directional keys, the symbol you wish to set-up on the keyboard and then click the button [Modify]: in the subsequent window you have only to digit the key or the combination of keys you want to associate with the symbol or function.

Let's make an example: the function that gives one more point to the team displayed on the left of the screen is set on [F2] by default; if you would to associate this function with the combination of keys [Alt+F2] you only have to type those keys into the dialog box Hot Key and confirm by clicking [Ok].

The functions End Rally Lft/Rgt, Points +/- and Rotat +/-, may be associated with a combination of multiple keys, like Alt+key or Ctrl+key; the other functions may be associated with one key only.

Some useful suggestions: in the keyboard arrangement, you should keep in mind the following indications:

- the symbols ",, -, /, !, +, #" and the symbols "*" and "a" should be placed at the right of the keyboard, using those keys not needed for match scouting;
- do not use the same key for more than one function;
- it is best, if possible, not to modify the keys’ value; generally the keys correspond to the effects ",, +" which are placed at the right of the keyboard; in such a case, it is advisable to leave those keys as they are (leaving the respective section empty); the user will most likely find it useful to have the positive effects ",, +" adjacent to the negative effects ",, -". The two keys corresponding to the End Rally should be placed one at the right and the other at the left of the keyboard.
- To interactively modify the scoring and/or the rotations, you can use the function keys (for example, by adding the [F2] key in accordance with the "Point + Rgt" request; during the scouting, the hitting of the [F2] key will involve the increase of a point for the team appearing on the right side of the screen).

It is possible to use the combination of the [Ctrl] key and another key, likewise for the keys [Alt] and [Shift]. This phase may be studied furtherly, after having achieved a sufficient familiarity with the data-scouting process. You can, in fact, set the program so that:

- by pressing a single key, the program can link the two characters of the players with a shirt number above 9;
- the function keys correspond to determined combinations of attack (the most frequent ones);
- the [Ctrl] or [Alt] combination and a specific key enables you to show in the Scouting window a complete code (skill-number/etc.) frequently recurring during the scouting of data, especially for your own team.
1.4 - Options

In this phase it is possible to customize some peculiar functions of DATA VOLLEY, mostly linked to the scouting phase.

In the Options window the program will display six sub-windows: Match report, Default scouting, General scouting and Bench connection.

1.4.1 - Match report

Not to be modified for CEV scouting

In this table you can adapt the printing of the summarizing statistics table to your actual needs and typing skills.

If you are not sure that the initial line-ups have always been inserted correctly, it is advisable to exclude the printing of the "Points by rotation".

If you have not differentiating the attacks against one-man block ("U" code) from the attacks on two-men block ("S" code) when scouting, it is better to disable the printing of the "Attack against block".

Also, for CEV scouting requirements, you have to scout also non-winning attacks. Enabling this item you will display onto match report the percentage of the winning attacks compared to total attempts.

Depending on the space occupied by possible sponsor trademarks or your letterhead paper, you can increase or decrease the "Top margin" of the printout.

1.4.2 - Default scouting

Not to be modified for CEV scouting

In this table you will be able to modify the values that DATA VOLLEY assumes by default (automatic), both with respect to the most used skill (generally the attack), that in this way is possible to omit during the data-collection, and to the single skill (shot type and effect). By doing this, it is possible for DATA VOLLEY to optimize and automate the scouting phase according to the user’s needs.

For CEV scouting you must set A (attack) as default skill and H (high) as default type.

Example: if you only wish to record the setter’s moves to complete a tactical scout, indicate Set (E) as the default skill. In this way, when you insert the player’s number, for example 5, in the scouting phase the code 05EH+ will appear revealing the set and not the 05AH+ code of the spike which is set by default by DATA VOLLEY.

1.4.3 - General scouting

Not to be modified for CEV scouting

In this window it is possible to customize some features very useful during the real scouting phase.

The window General scouting is subdivided into five sections aimed to the following purposes:

Check scout – DATA VOLLEY is enabled to verify the right sequence of the codes on the grounds of the opponents scouting also; if you want to verify your scouting on your team basis, unselect the box Opponent scouting.

Scouting skill (U) and (N) – according to CEV scouting requirements, this box has not to be tagged: in fact you don’t have to scout the match distinguishing the attacks against one-man block from the attacks against two-three-men block; this option, anyways, allows the program arrange the procession of data in order to develop analysis and
printouts sub-dividing the attacks into two categories. If you do not differentiate the attacks, it is better to disable this option to obtain more concise statistical summaries.

**Rotation update** - If you wish to analyze statistical data on various rotations according to the "real" position of both setters, on the basis of the position of the home team’s setter or the opponent team. This option (Home team rotation) is crucial to comparing statistics for a single rotation. Only in this way it will be possible to know, for example, how many points have been won on attack in a given rotation, compared to points won by the opposing team in the same rotation because Data Volley only considers the position of the home team’s setter when elaborating the data. The same situation, elaborated activating the "real" option reveals the data for the home team when its setter was, for example in zone 1, and the data for the opposing team when its setter was in zone 1.

**Automatic serve** – this function will help the scout-man during the scouting because, after having hit the [End Rally] key, DATA VOLLEY may enter automatically the number of the next player to serve into the Scouting window. In fact in this section it is possible to:

- NO – to disable this function;
- Player number + code – to insert automatically the code of next server (*suggested for CEV scouting*);
- Only player number – to insert automatically only the number of the next server. This latter choice is very useful for DATA VIDEO SYSTEM users; in fact program synchronizes the codes and images on the basis of time elapsed when the key corresponding to a skill was pushed: the Serve is therefore synchronized when the S key is hit, at the exact moment the player touches the ball. For this reason, it is helpful that Data Volley automatically inserts the player’s number but not the code, that has to be inserted by the scout-man in synchronization.

**Regulation** – in this section it is possible to select the type of regulation adopted in the match to be scouted: Side-out or Rally point system. This information, used as a standard for this phase (it does not apply to previously scouted matches) may be adapted to special needs in the scouting phase in the Notes. Each scout file, records the scoring system of the match in the Notes section. This information may then be used by the program to process the data.

**Points** – in this section it is possible to set up the maximum score needed to win a set; in fact there are some championships which adopt a different score cap (ex. NCAA): with this option you may set up the score cap for the first four set and for the final set. Obviously, per each set is valid the 2 points advantage rule.

### 1.4.4 - Bench connection

Data Volley allows you to connect a second computer "on line" on the bench to automatically manage the sending of scouted codes and the interactive updating of the analysis windows for the coach. The connection may be serial or network. You may physically connect the two computers via cable or radio.

This may be indicated in the window shown here so that DATA VOLLEY knows if and how to transmit data to the Visual Volley station on the bench.
2 - Scouting menu

Numerous choices are possible from this menu, but all will bring you to the central part of the program, that is, to the phase of the scouting of the match.

**Last Match** – to open the last match processed.
**New Match** - to arrange the scouting a new match.
**Old Match** – to open one of match-files stored on hard disk.
**File re-processing** - to elaborate again a file previously stored, making it "last match", without entering the scouting phase.

**Export scouting file** - this selection enables the transfer of the stats-file in a format compatible with the previous DOS version of the DATA VOLLEY program.

**Match report** - if after the match you wish to make additional printouts, this is the easiest and quickest way to produce them.

**Create report html** – to create a match report concerning the last match processed in html format for internet purposes.

2.1 - The scouting system

The scouting phase happens with the use of the following windows.

2.1.1 - Rotations window

This window, positioned at the center of the screen above the Scouting window, is not editable, but it is only the expression of some information inserted by appropriate commands. Nevertheless, the score counters and the formation rotations may be modified by using the pre-set function keys.

2.1.2 - Scouting window

Inside this window, placed horizontally at the bottom of the screen, the codes indicating the skills effected by the players and the team during the match are entered. This chart is a data input field formed by one line of noticeable size, actually visible for approx. ten/eleven codes. The storing of these data occurs every time you press the key [**Enter**].

During the scouting of a new match, which is an extremely delicate phase, DATA VOLLEY always stores a copy of the last data entered and confirmed: in case of computer failure, it tells you to restart from the last valid situation.

2.1.3 - Codes list window

In this Window, on the right of the screen, in a vertical position, are displayed those codes scouted in the Scouting window and confirmed with the [**Enter**] key. Passing onto this section, the codes are checked for the presence on court of the player to whom the shot has been attributed and the code sequence of End Rally, and the player carrying out the subsequent shot.

To access the Codes list window while scouting data, in order to bring about rapid modifications, it is sufficient to press the [**Pg Up**] key.

To move within this window, use the up and down arrows. To modify a code, use the [**Pg Up**] and [**Pg Down**] keys to position yourself on the code to be modified and press the key [**Enter**] to correct the mistake.

2.1.4 - Command window ([**Esc**] key)

The new DATA VOLLEY program, just like its previous versions, is controlled in the scouting phase by the commands inserted in this chart accessed at any time by pressing the command [**Esc**].

The description of these commands, given also in accordance with the logical sequence of usage, is shown in the following pages.
2.1.5 - Codes input

The codes should be separated by a space (excepted for compound codes: see par. 2.4.2) and, each time one of the two teams gains a point or a side-out, you should press the [End Rally] key corresponding to the team on the monitor. Example: in the picture of the paragraph Scouting window you may see that Italy is on the left of the window and USA is on the right; if Italy gains a point, press on [End Rally Lft], similarly if the point is gained by USA, press [End Rally Rgt].

It is better to press the [Enter] key before fulfilling the Scouting window so as to obtain a constant visual control of all codes typed.

As you begin scouting, the cursor is positioned on the left side of this window, same as when you press the [Enter] key to save what you have typed.

The following keys have a specific function in the Scouting window of DATA VOLLEY:

<table>
<thead>
<tr>
<th>Key</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Esc]</td>
<td>enables you to enter in the Command window; a subsequent pressing of the same key cancels the previous action to return to the Scouting window.</td>
</tr>
<tr>
<td>[Pg]</td>
<td>enables you to go to the Codes in order to rapidly back-scroll through the entire list of codes already scouted and processed.</td>
</tr>
<tr>
<td>[Ctrl + A]</td>
<td>pressing this combination of keys while gathering data, it is possible to cancel the storing of data confirmed with the last hitting of [End Rally], also restoring the rotation and scoring.</td>
</tr>
<tr>
<td>⇧ ⇧ or ⇧</td>
<td>Browsing inside the Scouting window is possible by means of the right and left arrows, or by the combinations of the keys allowed by the operating system.</td>
</tr>
<tr>
<td>[Ctrl ⇧]</td>
<td>To go at the beginning of the previous code</td>
</tr>
<tr>
<td>[Ctrl ⇧]</td>
<td>To go at the beginning of the subsequent code</td>
</tr>
<tr>
<td>[Home]</td>
<td>To go at the beginning of the Scouting window</td>
</tr>
<tr>
<td>[End]</td>
<td>To go at the end of the last code entered</td>
</tr>
</tbody>
</table>

The easy-to-use system will allow you in a short time to be able to follow the matches, even during the most exciting and frenzied action, without fear that the game speed might force you to neglect technical aspects in your data collection.

As regards the code management, it will become extremely simple for you since the symbols used comply with the current volleyball jargon: therefore your greater effort will be aimed at training with the keyboard.

Each skill of Volleyball has been codified and interpreted with a letter of the alphabet. All codes relating to the skills and the respective typology have to be inserted with capital letters. It is therefore advisable to always make sure that the caps-lock is on before starting any scouting.

2.1.6 - Code syntax

The composition of the code respects a precise syntax. The code may be composed of 9 characters max.; according to CEV requirements, the scouting code has to be composed of 5 characters which have to follow the program terminology. Therefore, a code may assume the following format:

\[ a/* NN S T E \]

- **Efficacy of the skill**
- **Type of the Skill**
- **Skill**
- **Number of the player**
- **Team identification code**

**Important**: to distinguish the hits performed by the opponent team, the relative code has to be preceded by the lower-case letter \( a \) (a for adversary).

**Shirt number of the player**

The player’s shirt number is always the first part of the code to be typed. When scouting the opponent team, the player’s shirt number have to be preceded by the lower-case letter \( a \).

Example: to codify a negative jump serve of the home player no. 5 you have to type \( 5SQ- \); if the same hit is performed by the opponent player no. 5, you have to type \( a5SQ- \).

For a player with shirt number below no. 10 it is not necessary to place the 0 before the number. For example, \( 5SQ- \) will be automatically recognized as \( 05SQ- \).

High is the default type of skill. It may be defined as High a float serve or a reception with an acceptable parabola or an attack performed after an high set or a block against an high attack. So, an attack performed by the player no. 5 and typed as \( 5A \) will be recognized as \( 05AH+ \).

The type of shot must always follow the skill in the sequence of code scouting, except when you don’t have an attack combination and DATA VOLLEY will automatically give the type of shot based on the combinations tables.
Skill

The second part of the code is reserved to the definition of the skill. As you may see, it has been used a volleyball jargon. Following are enlisted the volleyball skills allowed by Data Volley and their respective code:

<table>
<thead>
<tr>
<th>Skill</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve</td>
<td>S</td>
</tr>
<tr>
<td>Reception/Pass</td>
<td>R</td>
</tr>
<tr>
<td>Attack, generic or against two-man block</td>
<td>A</td>
</tr>
<tr>
<td>Attack against one-man block</td>
<td>U</td>
</tr>
<tr>
<td>Block, generic or two-men</td>
<td>B</td>
</tr>
<tr>
<td>Block one-man</td>
<td>N</td>
</tr>
<tr>
<td>Dig</td>
<td>D</td>
</tr>
<tr>
<td>Set</td>
<td>E</td>
</tr>
</tbody>
</table>

The skill must always follow the player number in the sequence of code scouted, with just these two exceptions:
when you scout an attack combination and DATA VOLLEY automatically gives to the skill the attack symbol; in the case of an attack against an individual block, or one-man block, it is possible to type the respective letter in any part of the code (generally at the end of the scouted code).
The most common skill in volleyball is definitely the attack; thus it has been inserted as a predefined value in File / Options / Default scouting window. For example, an attack by the home player no. 5 can be codified just typing 5 and it will automatically be recognized as 05AH+.

Type of skill Not to be used for CEV scouting

The third part of the code is referred to the skill type; in fact, every skill may be performed in different types and Data Volley allows the followings:

<table>
<thead>
<tr>
<th>Type</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>High ball</td>
<td>H</td>
</tr>
<tr>
<td>Quick attack, jump serve</td>
<td>Q</td>
</tr>
<tr>
<td>Tense</td>
<td>T</td>
</tr>
<tr>
<td>Medium</td>
<td>M</td>
</tr>
<tr>
<td>Backrow attack</td>
<td>L</td>
</tr>
</tbody>
</table>

If the skill is High, it is not essential to specify the type. For example, a high ball spiking will be scouted as 5A and will automatically be recognized as a 05AH+ high attack.
The type of shot must always follow the skill in the sequence of code scouting, unless you have an attack combination and DATA VOLLEY will automatically give the type of shot based on the combinations tables.

Skill efficacy

The fourth part of the code is reserved to the skill efficacy. With this symbol you may specify the result of the skill just performed. This is the meaning of the efficacy symbols, skill by skill:

**SERVE**

\[
\begin{align*}
\text{=} & \text{ Error, in the net, out, etc.} \\
/ & \text{ Half point: the opponent reception goes over the net and a player of our team kills or blocks.} \\
- & \text{ Negative: opponent receives perfectly} \\
! & \text{ Good: opponent reception ends 1-2 meters from the net, the team is not able to attack in combination} \\
+ & \text{ Positive: opponent reception ends 3 or more meters from the net, the setter is not able to play a quick spike} \\
# & \text{ Winning, Point: opponent doesn’t touch the ball or lose it after a dig} \\
\end{align*}
\]

**RECEPTION / PASS**

\[
\begin{align*}
\text{=} & \text{ Error: the ball isn’t touched, a mistake or it is lost after a dig} \\
/ & \text{ Half error: the reception goes over the net and a player of opponent team kills or blocks} \\
- & \text{ Negative: a reception which ends 3 or more meters from the net, the setter is not able to play a quick spike} \\
! & \text{ Not standard defined in reception: free meaning} \\
+ & \text{ Positive: a reception which ends 1-2 meters from the net, the setter is not able to play a combination attack} \\
# & \text{ Perfect: excellent position and parabola} \\
\end{align*}
\]

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The scouting of the skill efficacy can be inputted in any part of the code: DATA VOLLEY during the “normalization” will assign this symbol to the fifth position of the code. This automatism has been made because generally, while gathering data, it is when you finish typing the code that you can determine the respective effect.

By half-point reception we mean the ball passing over the net towards the opponent's court, followed by an opposing attack that immediately ends the action.

The default skill efficacy is +. In fact it surely is the most used symbol, representing a non-winning shot. In this case, for a non-winning spike or a good, but not perfect, reception, it will not be necessary to type the symbol + because the program will decide such evaluation automatically. Example: a non-winning attack performed by the home team player no. 5 you have to type only 5 and the program will automatically recognize it as 05SH+; in fact whether the skill or the efficacy are inserted by default.

2.1.7 - Normalizing the codes

Normalizing the codes is the procedure the software adopts in order to transform all codes into a standard format. It happens automatically when you confirm the codes by pressing [Enter]. This operation is necessary to recognize, control and possibly transfer in the following formula: **NNSTE**.

The meanings of the various fields are shown in the table below:

<table>
<thead>
<tr>
<th>Description</th>
<th>Codes allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NN</td>
<td>Shirt number</td>
</tr>
<tr>
<td>S</td>
<td>Skill</td>
</tr>
<tr>
<td>T</td>
<td>Type of skill</td>
</tr>
<tr>
<td>E</td>
<td>Efficacy of skill</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NN</th>
<th>Codes allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1..40</td>
<td>for the home team;</td>
</tr>
<tr>
<td>50..90</td>
<td>for the opponent team</td>
</tr>
<tr>
<td>S</td>
<td>R, A, B, E</td>
</tr>
<tr>
<td>T</td>
<td>H, Q, T, M, L</td>
</tr>
<tr>
<td>E</td>
<td>#, +, -, /, =</td>
</tr>
</tbody>
</table>

We wish to evidence that the shirt numbers of the opponent team players will be normalized with the same shirt number plus fifty (50), so as to distinguish them from the home players. For example:

<table>
<thead>
<tr>
<th>Rally</th>
<th>Code</th>
<th>Normalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error in float serve</td>
<td>a11S</td>
<td>61SH=</td>
</tr>
<tr>
<td>by the opponent player no. 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winning quick attack</td>
<td>a8Q#</td>
<td>58AQ#</td>
</tr>
<tr>
<td>by the opponent player no. 8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The first five characters are rigidly respected by the program in the normalization phase. From the sixth onwards, concerning the starting and receiving zones, the fields are shown as the operator has entered them, without any elaboration or transformation: therefore the correct codification of this feature depends upon the ability of the scout-man; in this way will you achieve valid and precise analyses, according to zones and trajectories.

As already seen in **Files / Options**, the normalization phase of DATA VOLLEY allows to personalize according to your own needs the default skill which will be automatically entered by the program as the 3rd character of the code, even when not specified by the operator: the default skill is generally the attack. The compound codes are always normalized as two single codes, with effects complementary to each other.

DATA VOLLEY automatically manages the codes, creating the attack-on-reception and attack-on-dig skills. These skills are generated thus:
• **attacks-on-reception**, both against individual blocks or two-men blocks, are those attacks which immediately follow a reception code;
• **attacks-on-dig** are all the other attacks: in other words, all those that are not preceded by a reception code. At the same time, these are sub-divided into attacks-on-dig Point and attacks-on-dig Side-out according to who effected the serve and/or the reception.

### 2.1.8 - Assigning the score

At the end of every rally you have to assign a point or a side-out to the team which has gained it. There are two keys available for this function, normally positioned on the sides of the space bar (also configurable through the Keyboard remapping function in the File menu), identified by the initials E.R. ([End Rally]).

The left key assigns a point (or side-out) to the team positioned on the left of the Rotation window, and similarly the right key assigns a point or (a side-out) to the team on the right.

After the introduction of the rally point system regulation, when you read point has to be considered as point-on-dig and when you read side-out you have to consider it as point-on-reception.

So, at the end of the rally, in case of a point-on-dig (former point) when you hit [End Rally]:
- the program will increase the point counter in the Rotation window automatically.
- If, at the end of the rally, you have to scout a point-on-reception (former side-out), when you hit [End Rally]:
  - the program will increase the point counter in the Rotation window automatically.
  - the serve will be assigned to the team that has won the previous rally;
  - the line-up will be increased of a rotation;
  - In the Scouting window, the program will automatically insert a code which is different depending upon if it is a point-on-reception or a point-on-dig; in case of a point-on-reception when hitting [End Rally] the program will insert the codes *z3* (or az3) which identifies that the home setter (or the opponent setter) will move into his zone 3; also the program will insert automatically the code *p01:00* (or ap00:01) which identifies that the score is currently 1 to 0 for the home team (or 1 to 0 for the opponent team).

If you have set Player Number + Serve Code in the Automatic serve (File / Options / General scouting), every since you hit [End Rally] the number of the player serving will be entered as well as the code S, as to facilitate the scouting of the next code.

Obviously, if a match is played using the side-out regulation, the program will work correctly: you have just to set the regulation before the scouting into the window File / Options / General scouting or during the scouting into the NOTES window.

Be sure to enter the codes typed in the Scouting window before pressing the key [End Rally]: after a quick visual check that the data entered in the Scouting window are correct, press the [Enter] key to save and normalize and then press the [End Rally] key. The data will be processed only when saved.

Remember that you can delete the [End Rally] entered just hitting the combination of keys Ctrl+A: however, you may do this only if other characters or codes have not been typed in the Scouting window.

In the course of scouting, it may happen that you need to effect some changes to the score or rotation of players in the Rotation window. Some function keys have been activated by default in order to quickly carry out these operations.

The predefined function keys and their effects are shown in the table below; such keys are always active and can also be used in the Scouting window.

<table>
<thead>
<tr>
<th>Definition</th>
<th>Effect</th>
<th>Function key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point Lft +</td>
<td>1 point more for the left team</td>
<td>F2</td>
</tr>
<tr>
<td>Point Lft -</td>
<td>1 point less for the left team</td>
<td>F3</td>
</tr>
<tr>
<td>Rotat Lft +</td>
<td>Forward rotation for the left team</td>
<td>F4</td>
</tr>
<tr>
<td>Rotat Lft -</td>
<td>Back rotation for the left team</td>
<td>F5</td>
</tr>
<tr>
<td>Point Rgt +</td>
<td>1 point more for the right team</td>
<td>F6</td>
</tr>
<tr>
<td>Point Rgt -</td>
<td>1 point less for the right team</td>
<td>F7</td>
</tr>
<tr>
<td>Rotat Rgt +</td>
<td>Forward rotation for the right team</td>
<td>F8</td>
</tr>
<tr>
<td>Rotat Rgt -</td>
<td>Back rotation for the right team</td>
<td>F9</td>
</tr>
</tbody>
</table>

Please note that these keys may be personalized from the File / Keyboard remapping menu. Always keeping the line-up and current score aligned means having greater scouting control of the End Rally codes for both teams and a correct update of the progressive score automatically entered by the program in the NOTES zone.

As already stated, the score is entered in this field on reaching the eight, sixteenth and the twenty-first point (fifth, tenth and twelfth point in case of side-out regulation), as well as at the end of a set. If you have a result that is not always aligned, you may make the mistake of entering incorrect data into the table. If at the end of set you notice a discrepancy between the official result and the one shown on screen in the Rotation...
window, it will be necessary to effect the due changes both to the score code in the Scouting window and in the Notes before producing any print-outs.

2.1.9 - End of the set

When assigning the last point to one of the two teams, you will be displayed the following message:

Press [Enter] if you actually want to confirm the end of set; otherwise click on [No] or press [Esc] if you have made a mistake in assigning the [End Rally]. In this latter case, the program will cancel the typing of the [End Rally] key.

Then the program will insert automatically into the Scouting window two codes: one concerning the score (*p25:22) and the other concerning the set yet concluded, having the following form **Nset, where N represents the number of the set.

Confirm with [Enter] in order to process the codes.

2.1.10 - Checking the scout

The Codes list window, which you access by pressing [PgUp] from the Scouting window, shows the saved and normalized codes as they are gradually confirmed.

For each code are shown the characters composing it as well as some other functional characteristics, and in particular in the column:

- `ps` - the letter "p" or "s" if that hit has generated a Point or a Side-out (point-on-dig or point-on-reception);
- `rd` - the letter "r" or "d" means that the hit corresponds to a reception-attack or to a dig-attack;
- `S` – the number is to evidence the set in which the code has been typed;
- `*z` – the number is to evidence the home setter position when the code has been typed;
- `az` - the number is to evidence the opponent setter position when the code has been typed. These data are useful especially within the program’s features, and they are available for any event or verification in this window, yet they are not changeable.

You may note that in the column "rd" there can be the letter p or s: it means that those particular hits were potential point or side-out.

The Codes list window is essential for the verification and variation of the data entered.

Using the options the Command menu offers, in this specific phase you can:

**Modify a code**

To modify a code already stored into the Codes list window, select it with the mouse or using the keyboard arrows and then press [Enter]: once the code has been changed, hit [Enter] or click on [Ok] to return to the Codes list window.

**Add a new code**

By positioning on the code before which you wish to input another one, and by pressing the [Ins] key: once you type the code, you return to the Codes list window with [Enter].

**Delete a code**

By positioning on the code concerned and pressing the [Del] key: at the request for confirmation, hit [Enter] and you will return to the Codes list window.

**Search for one or more codes**

Once in the Codes list window, pressing the combination of keys Ctrl+R you will be displayed a window through which you may filter the whole codes list: in the cells at the bottom of the Search window you may enter the key code(s) to be searched. Example: you want to highlight the codes concerning the serve errors of the home team player no. 11: you have to enter the code in the bottom cells as show in the window aside and then click on [Apply] or hit [Enter]; the program will display all the serve errors codes of the home player no. 11. Note that among the codes entered in the bottom cells we have left the 4th cell empty: in fact, you want to find every serve error code, independently of which kind it was.

The program will evidence, into the codes list window with the symbol `*`, the code highlighted into the Search code window helping you for a possible modification of the code(s) searched:

you may access the Codes list window just hitting the right arrow, modify, delete or insert the code, and return to the Search code window just pressing the left arrow key for a further search.
Verifying the syntax validity of the codes scouted

By pressing the Ctrl+V keys the program will check the whole code list out in order to gradually signal a possible scouting error in a code or in an erroneous logical sequence. The program will automatically pass on to the modification phase, showing the type of verified error in the window, and allowing the modification of the erroneous codes or of the erroneous codes sequence, their erasure or the input of new ones. Some possible mistakes might be: the discrepancy between the End Rally code/key and the subsequent serve, the discrepancy among teams in a structured code, and many others that DATA VOLLEY is capable of finding.

2.1.11 - Automatic codes

Some codes are entered by the program automatically and have quite a precise function. First of all we have to say that the codes showing as their first character the asterisk "*" regard the home team, the ones with the letter "a" regard the opposing team. The only exception to this rule is the end set code, identified by two asterisks.

The codes beginning with *

These codes are the ones concerning the setter new position, among the 6 possible zones of his court, after having gained a point or a side-out.

Thanks to these codes, the program recognizes the setter position in order to effect the statistical data update according to the setter rotation/zone: therefore a correct positioning of the players in the Rotation window will enable the program to generate and automatically input proper setter zone codes. Scouting a match, or part of it, with a screen line-up or an incorrect rotation, you will obtain the creation of invalid codes "*z" or "az" at every point or side-out: this fact will be highlighted in the phases of rotation analysis and of zone analysis.

You should always have a correct line-up and rotation in the Rotation window in order to obtain a correct scouting.

Therefore, it is advisable to launch the command LINE UP at the beginning of each set and/or change manually the wrong "*z" and "az" codes, when you have collected data using a non-updated rotations window.

A valid tool to put a match back in order, is the Rallies detail in the Match Analysis menu, which will be seen further on.

The codes beginning with "p" and "ap"

These codes show the current score after the gaining of a point for each team. The codes "p0N:00" or "ap00:0N" (being N the current score) are inserted automatically by DATA VOLLEY every since you hit [End Rally] when using the Rally Point System regulation, or every since a team gains a point when using the Side-out regulation.

The codes beginning with "c" and "ac"

These codes show the substitution of a player indicating always the number of the player exiting first, and then the number of the player entering the court.

The codes assigned to the team with skill 

These codes, inserted automatically by DATA VOLLEY directly into the Codes list window, show for or both teams the conquest or the loss of a point or a side-out in a non-defined way. They are easily found because they are colored green and you cannot modify them.

2.2 - Preliminary commands

The information inserted through these commands are necessary to prepare the match to be scouted, and they are is all correlated; it is therefore very important to follow the below sequence.

2.2.1 - NOTES – the match notes

This command allows you to record all the collateral information about the match. To enter this window hit [Esc] when you are in the Scouting window; in the Command window type NOTES and then hit [Enter] or click on [Ok]. You will be displayed a window with several empty dialog boxes: fill each dialog box with the relative information, selecting them from those available or entering new ones.
These initial dialog boxes are descriptive and, therefore, without special requirements, except for the date which has to be expressed in the Italian format dd/mm/yy (day, month, year).

**FOLLOWING A CORRECT CATALOGUING CRITERIA OF THE MATCHES MEANS, WHEN ANALYZING SEVERAL MATCHES, HAVING AN ORGANIZED AND EASY TO CONSULT FILE.**

Selecting the dialog box Home (Team) and clicking on its button you will be displayed the list of teams codes already stored and their relative description (see par. 1.1): such descriptions may also be changed and integrated if the official registered denominations or the sponsors are different from the ones registered in the teams list. Hit [Enter] or click on [Ok] to confirm the team selected. Carry out the same operation for the opponent team.

Finally, you should fill the remaining fields of the section Other.

Before scouting the match, the section Set Situation will be completely blank and will gradually fill up automatically as data are entered. The partial scores will be entered automatically by the program at the eight, sixteenth, and twenty-first point and at the end of the set the final result will be shown as definitive. The set length will be requested by the software at the end of each set, entered by the user, and automatically updated in the NOTES window.

**THE BOX BESIDE THE SET NUMBER IDENTIFIES WHETHER THAT SET WILL BE PLAYED WITH THE SIDE-OUT OR THE TIE-BREAK REGULATION.**

To save the information entered and return to the Scouting window, click on the button [Ok] or press the [Enter] key. The denominations of both teams will be displayed in the Rotation window, placing the home team to the left and the opponent team to the right.

### 2.2.2 - LIST/aLIST – the players list

Press [Esc] in order to activate the Command window, type the command LIST (or the command aLIST to display the players list of the opponent team) and then press [Enter].

The program will edit the players list of the home (opponent) team inserted into the NOTES page. If the team(s) has not been loaded into the Teams database, you will be displayed a blank list: in this case you have to load this page as shown in the paragraph 1.1.

Press the button [Load from file] in order to recall the original players list which has been already loaded in the Teams database. All the players entered into that database will be displayed and you will have to remove those who do not participate in the match and are not shown on the official report.

To insert a player not present in the original database, press the button [Add].

To erase a player not present in this match, select him and click on the button [Not in summary]: the player will be temporarily deleted from this list but his name will not be erased from his team original database.

**EACH PLAYER, IN ADDITION TO BEING IDENTIFIED BY THE SHIRT NUMBER, IN THIS SPECIFIC LIST IS UNIVOCALLY REPRESENTED BY A CODE FORMED BY THE FIRST THREE LETTERS OF THE SURNAME, A SEPARATING DASH AND THE THREE INITIAL LETTERS OF THE FIRST NAME. IT IS ESSENTIAL NOT TO CHANGE THE PLAYER’S CODE SO AS NOT TO LOSE THE AUTOMATIC CONNECTION WITH THE MATCHES FILE.**

In the zone next to the player’s name, five boxes are shown identifying the various sets. In the pre-competition phase, they are blank and will be filled in:
• with a number representing his position in the starting line-up;
• with an asterisk, if he is not among the starting six but he enters the court during that set.
To carry out the same operation for the opponent team, click on title Visiting team at the bottom of the window or launch the command aLIST from the Command window.
To exit the Players List it will be enough to click on [Ok] and you will return to the Scouting window the players lists of both teams will appear in the Rotations window.

2.2.3 - LINE UP — the starting line-up

With the LINE UP command you can set the players of the initial line-up for each set.
From the Scouting window, press [Esc] and then type the LINE UP in the Command window and then hit the [Enter] key.
A completely blank information table will be displayed.
On the upper line you should type the numbers of the home team players, in the order of the position 1 rotation (serve area) to position 6.
The last box highlighted, is reserved for the input of the setter number on court; the input of setters is necessary to the program in order to analyze and "scout" the performance of the team and players, according to the rotation/zone of the setter.
The same system should be used for the line-up of the opponent team.

IF BY ERROR A MISTaken LINE-UP IS ENTERED AND DURING THE SET YOU FInd OUT THAT A PLAYER ON COURT IS NOT DISPLAYED INTO THE RoTATION WINDOW, AS SOON AS POSSIBLE ENTER THE PLAYER NOT SHOWN ON SCREEN WITH THE PLAYER COMMAND (PAR. 2.3.6).
FOR CORRECT SCOUTING, YOU SHOULD THEN GO TO THE PLAYER LIST TO INPUT FOR THE PLAYER NOT INSERTED IN THE STARTING LINE-UP THE RESPECTIVE INITIAL STARTING ZONE.

From the second set onwards, using the LINE UP command, the initial functions will be displayed for the previous set, which may be directly confirmed, modified or simply rotated by one backward or forward turn using the pre-set keys (Rotat+-).
To close the Line-up window click on the button [Ok]; you will be asked if you wish to enter this line-up as that set initial rotation: click on [Yes] or press the [Enter] key.
The starting line-ups will be displayed into the Rotation window and the number of setters will be highlighted with a different color, while in the Scouting window the codes of the two setters *PN and aPN (where N is the setter number) and the codes of their respective starting zones (*zn, azn) will be automatically inserted.

2.3 - Occasional commands

There are some commands which provide for several information that have to be inserted before or during the scouting of each set of the match; that is why they are they are called occasional commands.

2.3.1 - S/aS - assigning the serve

Several minutes before the beginning of the match the scout-man should know which team is going to serve. The program will assign the serve to the home team automatically: if is this the team to serve first, then you don’t have to change anything; if the first serving team is the opponent, then you have to press on [Esc] and type the command as into the Command window. After having hit [Enter] or clicked on [Ok], you will note that the white ball will be set into the opponent half-court.
By correctly entering the serve turn at the beginning of the match, the program will automatically invert the assigning of the serve at the end of each set.
If during the scouting you have hit a mistaken [End Rally] key, to assign the serve to the home team is necessary to launch the command S or, otherwise, aS to the opponent team.
Before the possible fifth set, it will be necessary to re-assign the serve, after the new draw made by the captains.

2.3.2 - P/aP - identifying the setter

The identification of the main setter is one of the most important operation to carry out before and/or during the course of the match. In fact, the program will evaluate the setter performance on the grounds of his identification.
Usually the first identification of the setter happens together with the typing of the starting line-up: the program will recognize the setter number and his position on the grounds of the command LINE UP.
If, during the competition, the setter will be replaced, it will be necessary to specify the new setter number with this command: hit [Esc] and once in the Command window, type Pnn (or aPnn if is the opponent setter to be replaced) where nn is the new setter shirt number.
This command will change, besides the setter shirt number, his position also allowing you to have correct rotation analyses.
It may happen that the actual setter will be replaced temporarily, for a rally only; in this case it will be not necessary to launch the command P/aP. Similarly, if the starting setter is substituted by the second setter, it is un-necessary to launch this command because the substitution has already been noted with command C/aC and because he occupies the same court position of the staring setter.

2.3.3 - C/aC - players substitution

This command allows you to report the substitution between two players. When it happens, press [Esc] to open the Command window, enter the letter C (or aC if the substitution occurs among the opponents) followed by the number of the exiting player, a dot (.) and the entering player number. By pressing [Enter] the court line-up will be automatically updated in the Rotation window, the counter of substitutions increased by one, and the player who has entered the court will be signed with an asterisk.

Example: you have to report the substitution between the home players no. 8 (exiting) and no. 6 (entering). Hit the [Esc] key and then digit C8.6; confirm pressing the [Enter] key or clicking on [Ok] and you will see in the Rotation window the number 6 instead of the no. 8 and the code *c08:06 in the Scouting window which is the normalized code of the substitution.

To carry out a double substitution, relative to the same team, it is enough to separate the two codes with the space bar.

Example: to report the substitution between the opponent players no. 13 (exiting) and no. 1 (entering) and between the opponent players no. 15 (exiting) and no. 7 (entering) hit the [Esc] key and digit aC13.1 15.7; confirm pressing the [Enter] key or clicking on [Ok] and you will see in the Rotation window the number 1 instead of the no. 13 and the number 7 instead of the number 15; finally, in the Scouting window the program will insert the codes ac13:01 and ac15:07 which are the normalized codes for that substitutions.

2.3.4 - T/aT - time-out

The time-out is a break upon request of the trainer: this pause have to be reported with a procedure similar to the one followed for the substitutions. Press the [Esc] and then, into the Command window, type T if the time-out has been requested by the home team, or aT if requested by the opponent team; finally, press [Enter]. The code will be normalized automatically into the Scouting window with *T or aT. The T counter into the Rotation window will also be incremented.

2.3.5 - INV - court inversion

In most cases, the scouting is carried out from the a lateral zone of the court, in order to have a team on the right and the other one on the left of the net. Likewise, on the computer screen you will have the same team arrangement.

If after the input of the Notes and the respective draw for the first serve turn, you notice that the teams are arranged in the opposite way from what is shown in the Rotation window, it will be enough to type the code INV into the Command window.

The teams will result as inverted and you will be able to proceed an easier scouting.

On a possible fifth set, carry out the same operation if the team on the court are inverted compared to your monitor: you have to launch the INV command anyway at the eighth point gained by one of the two teams, when the referee will make a court inversion.

2.3.6 - PLAYER - re-inserting the line-up

This is a true modification of the starting line-up rather than a reinsertion. Such a command is very useful, for example, when you note that starting line-up on the court is different from the one inserted with the command LINE UP or there is a player substitution and you notice that the player to be replaced is not on court in the Rotation window and the program does not allow you to regularly effect the replacement.

It will be enough to press [Esc] to go to the Command window and type PLAYER. The two rotations will be displayed with the court rotations at that moment; it will be possible to move with the arrows on the number of the player to be replaced and enter the correct one. Once the modification has been effected, it will be possible to effect the substitution and thus fix the correct court formation.

For correct scouting, you have to return to the players list to remove the respective initial starting zone for the player erroneously inserted into the starting formation, and assign it to the player that has started the set. To exit this window just press [Enter] or click on [Ok].

Example: in the starting line-up you have typed by mistake the number 13 instead of the number 12 and you will note this mistake during the
scouting (because his code is highlighted red into the Codes list window): during the first pause of the match carry out the above said operation and digit the number 12 in the place of the no. 13 and then confirm with [Enter]. Then you have to launch the command LIST (or aLIST) and correct the starting position of the player no. 12 for that set and delete the starting position of the player no. 13.

2.3.7 - UPDATE – statistics refresh

The UPDATE command enables the updating of statistics, and it is advisable to use it in case the codes of skills (in the Codes list window during scouting) have been changed frequently.

2.3.8 - VER – data check

Through this command it is possible to access the Codes list window and verify the sequence of codes inserted. Further information are available at par. 2.1.10.

2.3.9 - REPORT – print a match report

This command will allow you to print a match report in a summary format. It is possible to launch this command every since during the course of the match or at the end of each set or at the end of the match. It is also possible to print this report concerning one set only: you have to type the number of the set you wish to print after the command REPORT; so, to print the summary report for the second set, hit [Esc], then type REPORT2 and finally press [Enter] or click on [Ok].

2.3.10 - PLAY – print a report play by play

Not to be used for CEV scouting

This command will allow you to print a match report which will show the exact sequence of the match, play by play. To launch this command every since during the course of the match or at the end of each set or at the end of the match, you have to type PLAY into the Command window. It is also possible to print this report concerning one set only: you have to type the number of the set you wish to print after the command PLAY; so, to print the play by play report for the second set, hit [Esc], then type PLAY2 and finally press [Enter] or click on [Ok].

2.3.11 - END - closing the scouting phase

After having scouted the match, after the formal data check and after the printing of the final report, in order to save the data it is necessary to exit correctly from the program. From the Scouting window, go to the Command window by pressing [Esc] and type the END command; confirm with [Enter]. A request message will appear to save the changes effected; confirm with [Enter]. The program will suggest a name for the file, created automatically analyzing the data entered in NOTES: you may confirm it or save it with another name unless you leave the symbol & as its first character. We have used a file name format of comprised of 8 characters, plus the 3 extension characters, so that DATA VOLLEY may maintain a complete compatibility with the DOS version: of course, you are not prevented from using longer names if you are not interested in this DOS aspect.

2.4 - Codifying skills - deepening

The ease of the DATA VOLLEY system will enable you to follow the performance of the matches in a short time, even during the most heated and exciting rally, fearless that the game velocity might force you to neglect technical aspects of scouting. The code management will result extremely simple since the symbols used are those found in current volleyball jargon, so that the greater effort will be aimed at practicing on the keyboard. Each skill of Volleyball is codified and interpreted by a letter of the alphabet. All the codes relating to the skills and the respective typology should be inserted with a capital letter; it is therefore advisable to always make sure to block the caps-lock key before any scouting. Each code should represent an intervention on the ball by a home or opponent team player, and in its standard form comprises 5 elements.
2.4.1 - Single code

The single code generally identifies a skill only and its related efficacy: for example, a wrong serve landed into the net (05SH=), a perfect reception on a jump serve (14RQ#), a winning backrow attack (12AL#), etc.

The single code is usually adopted when scouting one team only without codifying the opponent skills.

When scouting both teams it advisable to use compound codes in order to ease the typing of complementary rallies.

2.4.2 - Compound codes

Through the compound code it is possible to scout statistics of both teams simply typing one of the skills typically connected with each other.

This kind of code is very useful for speeding up the scouting, since in the complementary skills (for example, Serve-Reception, Attack-Block), it is enough to assign the efficacy of the second skill, and automatically an efficacy opposite to the first skill will be assigned.

In the scouting of compound codes, it is easier to specify the efficacy of the second skill, because when you enter the first part of the code, it is not yet possible to evaluate its final effect. Example for serve and reception: while you can enter the number of the player who carries out the serve, you will identify the one who will receive and evaluate the effect of the serve only after having seen the result of the reception.

Therefore, just typing the code of the first skill and the efficacy of the correlate skill, the program will recognize and normalize the proper skill, type and efficacy to both players who have performed them.

The syntax of the compound code is very simple; there is one bond only the two codes have to be tied with a dot (.)

The possible codes relationships are: Serve/reception and attack/block.

We are ready to show some examples in order to better explain what above mentioned not before remembering that you have set A (Attack vs 2 men block) as default skill and every default skill type and efficacy have been set as H (high) and + (positive) into the window Default scouting of the File / Options menu (see par. 1.4.2).

<table>
<thead>
<tr>
<th>Single code</th>
<th>Compound code</th>
<th>Normalized code</th>
</tr>
</thead>
<tbody>
<tr>
<td>10SH- a12RH#</td>
<td>10S.12#</td>
<td>10SH-62RH#</td>
</tr>
</tbody>
</table>

In this case the compound code will be 10S.12#: in fact it is possible not to insert the serve type because has been set High by default; you can omit to digit the code and the type of the reception because the program will automatically recognize that after the serve code and a dot (.) there can only be a reception; if the Serve is High, the Reception will be High; if the Serve is Quick (SQ), the Reception will be codified as RQ (reception on a quick serve). Obviously assigning the efficacy to one of the two skills the program will automatically assign the complementary efficacy to the other skill on the grounds of the settings made into Tables / Compound codes.

<table>
<thead>
<tr>
<th>Single code</th>
<th>Compound code</th>
<th>Normalized code</th>
</tr>
</thead>
<tbody>
<tr>
<td>a6SQ+ 11RQ-</td>
<td>a6SQ.11-</td>
<td>56SQ+11RQ-</td>
</tr>
</tbody>
</table>

In this second case the relative code will be: a6SQ.11-: in fact you have to specify the serve type (Q - quick/jump) because the default serve type is High; you can omit to digit the reception code and the relative type because the program will automatically recognize that after the serve code and a dot (.) there can only be a reception; if the serve has been codified as quick (SQ) the reception will be codified as RQ (reception on a quick serve). Obviously assigning the efficacy – (negative) to the reception the program will automatically assign its complementary efficacy (+ - good) to the serve on the grounds of the settings made into Tables / Compound codes.

<table>
<thead>
<tr>
<th>Single code</th>
<th>Compound code</th>
<th>Normalized code</th>
</tr>
</thead>
<tbody>
<tr>
<td>15AH/ a8BH#</td>
<td>15.8#</td>
<td>15AH/ 58BH#</td>
</tr>
</tbody>
</table>

Example: float serve by the home player no. 10 and perfect reception by the opponent player no. 12:

Example: quick serve by the opponent player no. 6 and a negative reception by the home player no. 11:

Example: losing high attack against by the home player no. 15 a two men block by the opponent player no. 8 who touches the ball:
In this third case the relative code will be 15.8#: in fact it is not necessary to specify neither the skill not the type because the default skill is the attack against a 2 men block and its default type is High; it is possible to omit also the block code and the type because the programs recognizes that after an attack code (in this case omitted) and a dot (.) there can only be a block code; if the attack is high (AH) the block will be codified as High (BH). Obviously assigning the efficacy # (winning) to the block the program will automatically assign its complementary efficacy (/ - losing) to the attack on the grounds of the settings made into Tables / Compound codes.

In a compound code, it is not necessary to enter the (a) symbol before the opponent player's number if this is second in the code. For example, in the code 5S.1R# the reception by the opposing player no. 1 will automatically be recognized.

Similarly, it is also unnecessary to specify the second skill, as it is complementary to the first one. In fact the code 5SSH.1# will be normalized as a negative serve by the home player no. 5 and a perfect reception performed by the opponent player no. 1.

The compound codes will be stored as two single codes; the effect relating to the first part of the compound code is complementary to the effect relating to the second part of the code.

The default relationship are shown in this picture which is available into Tables / Compound codes: it is naturally possible to modify these relationships according to your own needs.

Serve-Reception

In case of the compound code relating to Serve-Reception it has been followed this principle: in the table below are shown the meanings corresponding to compound codes, using as a reference the efficacy of the second skill:

<table>
<thead>
<tr>
<th>SERVE</th>
<th>RECEPTION / PASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Wrong – error</td>
</tr>
<tr>
<td>/</td>
<td>Half point because the opponent reception goes over the net and a home player kills or blocks.</td>
</tr>
<tr>
<td>-</td>
<td>Negative because the opponents receive perfectly</td>
</tr>
<tr>
<td>+</td>
<td>Good because the opponents cannot attack with a combination</td>
</tr>
<tr>
<td>#</td>
<td>Positive because the opponents can only perform a high attack</td>
</tr>
<tr>
<td>#</td>
<td>Point: an ace or a reception error</td>
</tr>
<tr>
<td>/</td>
<td>There is not a reception</td>
</tr>
<tr>
<td>#</td>
<td>Perfect pass</td>
</tr>
<tr>
<td>+</td>
<td>Good but not perfect (1 or 2 meters from the net)</td>
</tr>
<tr>
<td>-</td>
<td>Negative pass: setter is not able to play quick attack</td>
</tr>
<tr>
<td>=</td>
<td>Error: no one touches the ball or it is lost after a dig</td>
</tr>
</tbody>
</table>

Example:

A negative float serve by the home player no. 8 and a good reception by the opponent player no. 11

<table>
<thead>
<tr>
<th>Code</th>
<th>Normalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>8S.11</td>
<td>08SH+ 61RH+</td>
</tr>
</tbody>
</table>

A quick serve by the opponent player no. 4 and the relative reception by the home player no. 4 whose hit goes over the net and an opponent player kills or blocks.

<table>
<thead>
<tr>
<th>Code</th>
<th>Normalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>a4S.6/</td>
<td>54SH/ 06RH/</td>
</tr>
</tbody>
</table>

To gain familiarity with these automatisms, the best thing to do is to verify them: enter in Match Scouting / New Match, insert some compound codes in the Scouting window and check how DATA VOLLEY has entered and normalized them in the Codes list window.
**Attack-Block**

In the case of the Attack-Block, the principle followed is:

<table>
<thead>
<tr>
<th>ATTACK</th>
<th>BLOCK</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Error: outside, into the net</td>
</tr>
<tr>
<td>/</td>
<td>Blocked attack</td>
</tr>
<tr>
<td>#</td>
<td>Winning because the attack is just blocked outside</td>
</tr>
</tbody>
</table>

**Example:**

An attack by the opponent player no. 7 against a winning block performed by the home player no. 10.

<table>
<thead>
<tr>
<th>Code</th>
<th>Normalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>a7.10#</td>
<td>57AH/10BH#</td>
</tr>
</tbody>
</table>

A winning attack by the home player no. 8 whose spike has been only touched by the block of the opponent player no. 15.

<table>
<thead>
<tr>
<th>Code</th>
<th>Normalized</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.15=</td>
<td>08AH#65BH=</td>
</tr>
</tbody>
</table>

To gain familiarity with these automatisms, the best thing to do is to verify them: enter the phase of Match Scouting / New Match, insert some compound codes in the Scouting window and check how DATA VOLLEY has normalized and entered them in Codes list window.
3 - Match analysis menu

This menu enables you to create, process and print quickly many statistical charts of the last match processed. The CEV scouting requirements don't foresee any match analysis but if you'd like to deepen this feature, please, refer to the handbook present on the installation CD-Rom. Anyways, the wide range of options available gives you an idea about the analysis possibilities of DATA VOLLEY.
4 - Total menu

This section of the program DATA VOLLEY allows you to create, display and print “a overall statistic” of a team on the grounds of more scouting files.

4.1 - Matches database

Selecting the only item of this section, Match database, you will be displayed the list and the most important data of all the matches stored into the folder C:\Data Project\Data Volley\Scout: the program automatically verifies the presence of all match-files and will update the list proposed on screen.

The list of the match-files on screen may be ordered according to the choices available in the proper dialog box: the default order is based on the home team.

Once highlighted the match to analyze, click on [Select] and the program will ask which team has to be considered as home or opponent team. After the team has been indicated, it will be possible to select only the matches presenting the team selected only whether home or opponent team.

Important: the basic principle followed by DATA VOLLEY when working on the Matches database is that once a team has been selected as the analysis object it is possible to process data concerning that team only until you click on [Empty database].

The menu, until now called Match Analysis menu, will become Total Analysis.

At this point, you may use all the options offered by the program and by the personalization the user has made to analyze the statistical data of the selected matches either in recapitulating form or in detailed form, with both the match and annual averages.
5 - View menu

This last item has been inserted to have the largest possible space on screen during scouting by taking away the two bars of buttons and status.

5.1 - Toolbar

The toolbar is placed just under the menu bar and allows you to select rapidly several program features just clicking on its relative icon:

- to manage the Teams database and the respective lists of players;
- to modify the Tables concerning Weights for evaluation and Winning symbols;
- to open the table about the Keyboard Remapping;
- to activate the Options windows;
- to print the total match report;
- to open the last match processed and re-load it in memory;
- to arrange the scouting of a new match clearing the totals and the notes in memory;
- to reprocess an old match (previously scouted), to be selected from the files database.

5.2 - Help bar

This bar displays additional information or help messages concerning the work in course on the lower section of the screen.
In fact, these commands allow the user to launch some command frequently employed without using the mouse: their function has been already explained into paragraph 3.1.1 – Shortcut keys.
Other Data Project’s systems are:

**Data Video System**
The most widely used multimedia system to select, analyze and create match videos quickly and easily: everything you track with stats, you get on video.

**Scout Basket**
The software for a professional scouting of basketball games. It is the tool which uses simple scouting system to store all information of the game of both teams. Available in the version Professional, allows to develop an infinite number of team and players’ analyses.

**Data Scout**
Engineered in support of Data Video System, Data Scout is the software that allows data scouting of any sport. A simple scouting system, easy to learn and aimed to simplify the work of the operators enables to gather all statistics of the match for one team or even both teams. Thanks to its features, it takes few seconds to integrate the data scouted with Data Scout and the images captured with Data Video System.

**Data Training**
The complete management tool for the modern training. Create and manage a data bank of your exercises, methodologies, tests and training sessions to store, analyze and compare athletes’ performance.

Visit us on the internet site at: [www.dataproject.com](http://www.dataproject.com)