Inband Range Officer Manual

(1.1.2020)

1   Downloading and Installation of the InBand Range Officer software

This manual is compatible with following softwares

- InBand Range Officer v1.8

- InBand Scoring v4.3

Before using the InBand Range Officer software in training or in competition, it is recommended to download and install the latest version of above mentioned softwares.

The latest version of the InBand Range Officer is downloadable from:

> https://drive.google.com/open?id=12FdQEf0sIyjE921cfWPY2BOJwKCSkv5h

The latest version of the InBand Scoring is downloadable from:

> https://drive.google.com/open?id=0B3rKx5S-sD2TYUpDNTk2WW0ySkU

2   Implementation of the Range Officer

2.1   Connecting firing point computers

Connecting necessary firing point computers with the InBand Range Officer software will be done by following steps

1. All firing point computers and the competition management computer must be first in the same network. This can be done for example by WLAN Access point or by IP switch.

2. Execute the Inband Range Officer software

3. Execute Inband Scoring software in every firing lane

4. Check out the settings of firing point computers and connect them to the competition management computer (see paragraph 3.3)

2.2   Settings for the firing point computer (InBand Scoring)

After you have executed the InBand Range Officer software you can find the internet protocol (IP) address of the competition management computer in its main view (picture 1).
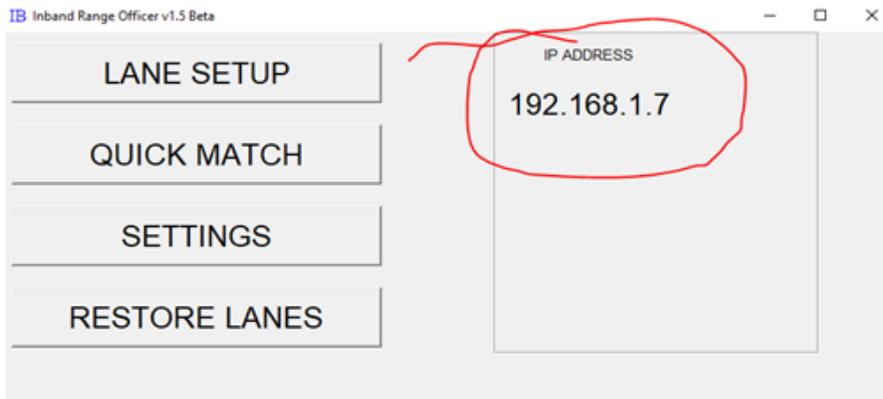
Picture 1: The main window of the Inband Range Officer. IP address must be set in the settings of all firing point computers.

Execute InBand Scoring programme in every firing point and go to the SETTINGS menu. Check that following data is correct (picture 2)

- The IP address of the competition management computer

- Number of the firing point

- Allow remote control square is ticked.
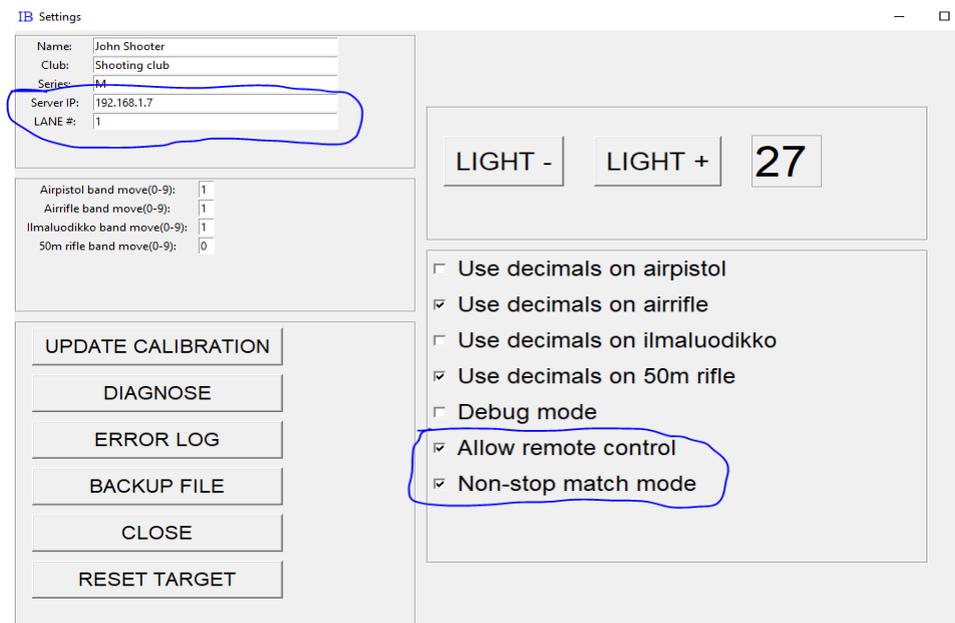
Picture 2. Settings in the InBand Scoring software

In the main menu of the firing point computer you can find a setting for Non-stop match mode. Ticking this function on (ᵛ) a shooter can bypass the competition management computer if an event is run by a non-stop schedule without any special relays. So, an individual lane can be started and stopped whenever needed. Non-stop mode is recommended also to be kept on also in normal competitions, if there should be some connection malfunctions (f.ex WLAN collapses) between the competition management computer and a firing point computer. If this kind of case a firing point computer can overtake the command and competition can be completed.

The SETTINGS menu can be closed after which you must push the PING SERVER button. If all settings are correct, a text SERVER CONNECTED should be visible (picture 3) to mark that this firing point computer is connected to the competition management computer.

Picture 3. Connecting the firing point computer (InBand Scoring) with a competition management computer (InBand Range Officer)

In the LANE SETUP menu of the InBand Range Officer can be monitored all the lanes which are connected to the competition management computer. In the picture 4 you can see that there are 22 connected firing points. In this menu you can easily test whether the targets also are connected properly. By pushing BLINK button of a firing point, the target of that lane blinks its led illumination system.

The software maintains all settings if the software is shut down, so they are always ready for the next competition.

IB Lane setup

1	192.168.1.10	BLINK
2	192.168.1.11	BLINK
3	192.168.1.12	BLINK
4	192.168.1.13	BLINK
5	192.168.1.14	BLINK
6	192.168.1.15	BLINK
7	192.168.1.16	BLINK
8	192.168.1.17	BLINK
9	192.168.1.18	BLINK
10	192.168.1.19	BLINK
11	192.168.1.20	BLINK
12	192.168.1.21	BLINK
13	192.168.1.22	BLINK
14	192.168.1.23	BLINK
15	192.168.1.24	BLINK
16	192.168.1.25	BLINK
17	192.168.1.26	BLINK
18	192.168.1.27	BLINK
19	192.168.1.28	BLINK
20	192.168.1.29	BLINK
21	192.168.1.30	BLINK
22	192.168.1.31	BLINK

Picture 4. Lane Setup view in competition management computer

2.3   Determination and modifying shooting defaults

The InBand Range Officer software uses a text file format for defining different amount of shots and specific classes (based on age or other skills). In the text file amount of shots and classes are on their own rows (starting with amount of shots) separated by commas.

60,M,MJ,M18,M20,W,WJ
40,N,N16,N18,N20,N45,N50,N55,N60,N65,N70,N75,N80,N85,M16,M45,M50,M55
30,14VT,14HT
20,8IT,10IT,12VT,12HT,11-14A

Above mentioned text file can be found in the same Google Drive address as this manual. In the InBand Range Officer software that setting is a default. These classes are used in the Finnish Shooting Sport Association.

A class definition list are imported in to the InBand Range Officer via SETTINGS menu. There you can find SERIES DEFINITIONS button. Press the button and import the file specifying number of shots and classes. The software saves all definitions which are automatically in use in a restart of the software.

3   Start list allocation

3.1   Start list allocation with Inband Range Officer software

A start list of the competition can be produced in the Inband Range Officer QUICK MATCH view (picture 5). This is especially recommended in a small Inband range and in a single relay competition. Quick Match view is normally used view during a competition.
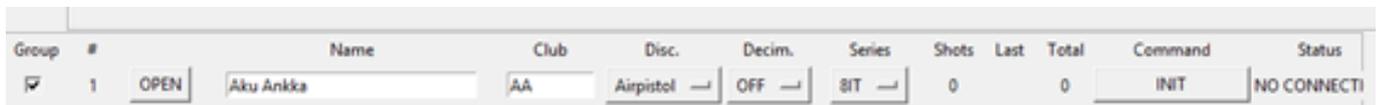
Group	#		Name	Club	Disc.	Decim.	Series	Shots	Last	Total	Command	Status
☑	1	OPEN	Aku Ankka	AA	Airpistol	OFF	8IT	0		0	INIT	NO CONNECTI

Kuva 5: Quick Match view

Write the name of a shooter in the Name box and his/her shooting club into a Club box. Next choose from fall down menus discipline (Disc.), determination of the score (Decim.) and shooting class (Series). Finally, connect the firing lane into a group with others by clicking the left most box Group in order to manage them simultaneously. The firing lane data options are explained more thoroughly in the chapter 5.1 Quick match.

In the Quick Match view you can follow how the competition develops. The number of shots can be seen in the paragraph Shots, values of the last shots in the paragraph Last and the total scores in the paragraph Total. This is explained more precisely in chapter 4.

3.2   Start list allocation with specific softwares

A start list allocation can also be done in advance before a competition day, which helps to conduct large and multirelay events.

Start lists can be produced with any text editors (like Windows memo). Start lists have to follow certain formalities that Inband Range Officer can utilize them (to read shooter, discipline, shooting class data). A start list file is in csv form (comma separated values) without spaces between data items as follows:

Relay,Firing point,Family name,First name,Shooting Club,Discipline,Class

1,1,Donald,Duck,Duckburg Shooting Club,Air rifle,M

1,2,Scrooge,McDuck,Duckburg Shooting Club,Air rifle,M

1,3,Huey,Duck,Duckburg Shooting Club,Air pistol,JM

1,4,Dewey,Duck,Duckburg Shooting Club,Air pistol,JM

1,5,Louie,Duck,Duckburg Shooting Club,Air pistol,JM

1,6,Daisy,Duck,Duckburg Shooting Club,Air pistol,W

1,7,May,Duck,Duckburg Shooting Club,Air pistol,JW

1,8,John,Rockerduck,Duckburg Shooting Club,Air pistol,M

1,9,Phantom,Blot,Hustle Stalkers,Air pistol,M

1,10,Flinthaert,Glomgold,Plute Shooters,Air pistol,M

Utilizing computer aided forms or registration systems start list allocation is even easier. However, in this manual we guide you use two useful way to make list allocation.

1. Libre Office Calc software
2. Google Sheet.

3.3 Start list allocation with LibreOffice Calc software

LibreOffice is a commonly used free software packet. You can download it without expenses from:

https://www.libreoffice.org/

You can start making a start list allocation by using an example of a start list, which you can find here:

https://drive.google.com/open?id=1Of8kWN-_-r8fGKjrFdTR-_B-9MaQ3lSz

When you open a start list mentioned above in a LibreOffice software, it will open a window seen in the picture 6. It is important that you choose the right charactres (UTF-8). Also, you need to choose a comma as a separator (note: comma separated values).

LibreOffice software recalls these settings, so you do not have to re-set them every time you start making start lists.
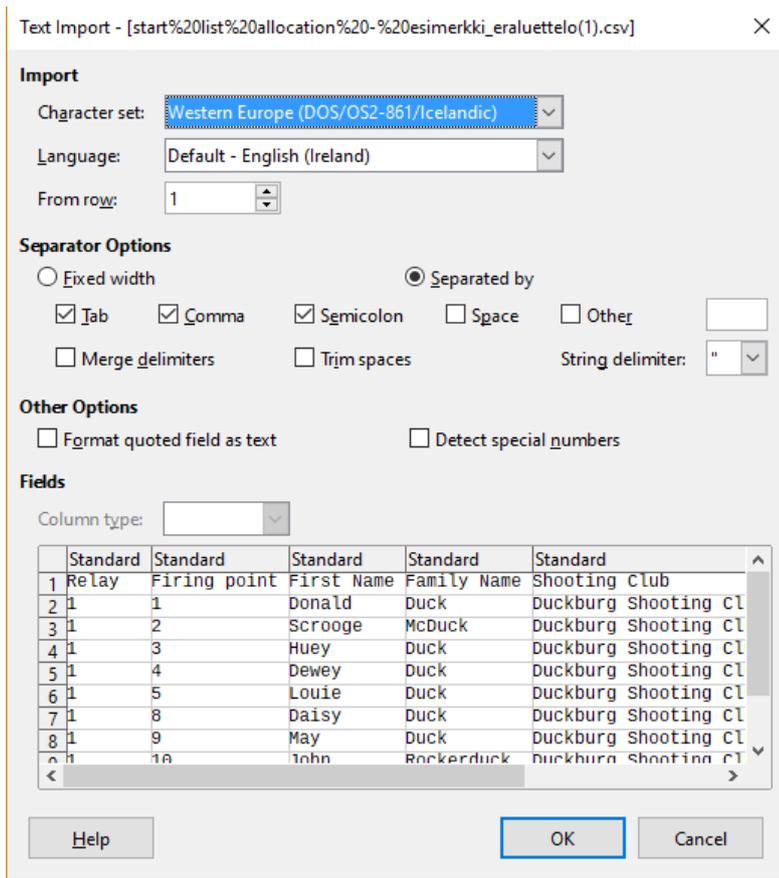
Picture 6. Start list allocation in LibreOffice Calc software

Modifying an old start list is very simple, but you have to notice following issues:

– Abbreviations for classes must follow official class names (note paragraph Determination and modification shooting defaults)

– There must not be empty rows in start list in LibreOffice Calc table. Empty firing points will be considered by numbering the firing points (second column)

– There must not be firing points which does not exists, otherwise the data transfer into the Range Officer does not succeed.

Picture 7. Start list modification in LibreOffice software

Start list will be saved in normal way. You can save it of course with a new name corresponding the competition, discipline and day-time-group. The software will ask you the file format in which the saving will be done – **use then a CSV format**!
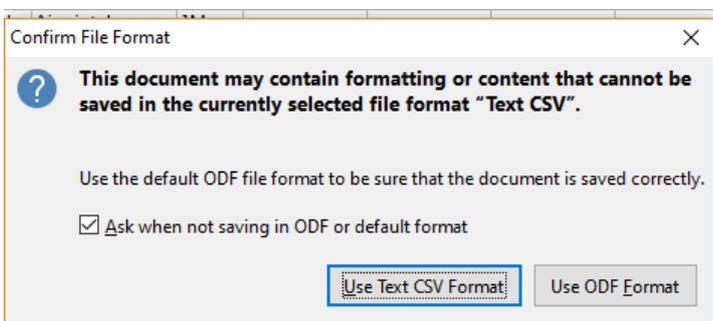
Picture 8. Saving a start list in the LibreOffice software

3.4 Start list allocation with Google Sheets

Another easy way to create a start list is to use Google Sheet software. It can be used by normal internet browser without any special softwares. The sheet can be edited simultaneously by many people if needed. To share Google Sheets forms, an internet connection is needed. An operator needs also a Google account. If a person has a gmail account, then he/she has also a Google account. A shared gmail account can be created also for a shooting club.

An example of a Google Sheets start list you can find here:

https://drive.google.com/drive/folders/1Of8kWN-_-r8fGKjrFdTR-_B-9MaQ3lSz

To edit a Google Sheets start list is done as with any spreadsheet. In this example the classes are set in to dropdown menu. When Google Sheets are used it will automatically save the changes: a user do not have to save it by himself/herself.

A start list can be saved and transferred to a user's computer easily in a right format like it stands in the picture 9. As a default, the file is saved in CSV (comma separated values) format into computers Downloaded files, from where you can import it to the InBand Range Officer.
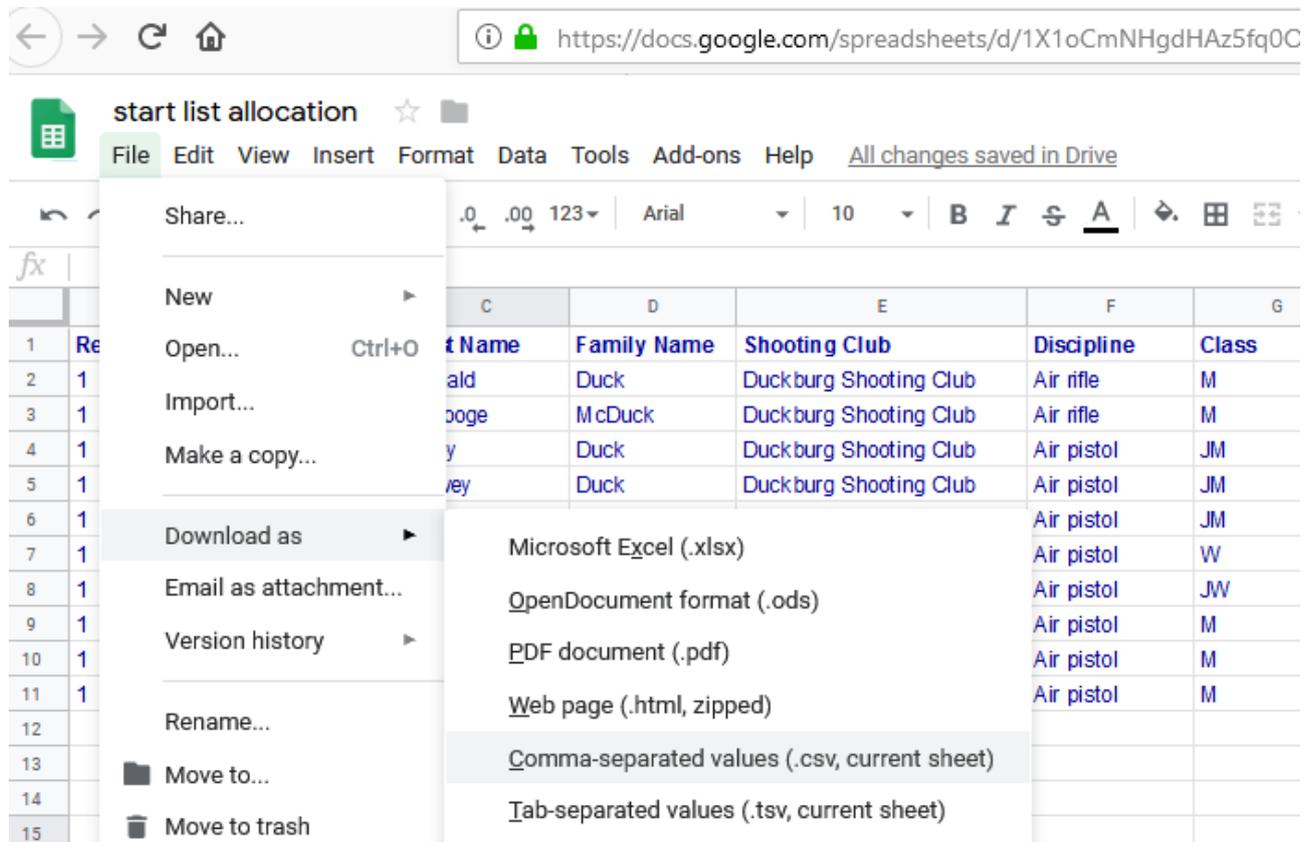
Picture 9. Saving a start list in Google Sheets software

4 Managing a competition

To organise a competition, push the QUICK MATCH button in the main menu of the InBand Range Officer. The software request a user to determine the file address where to save the competition data (results). The user can choose a file defined earlier or make a new file by pushing CREATE A NEW FILE button.

All the competition data will be saved into this file.
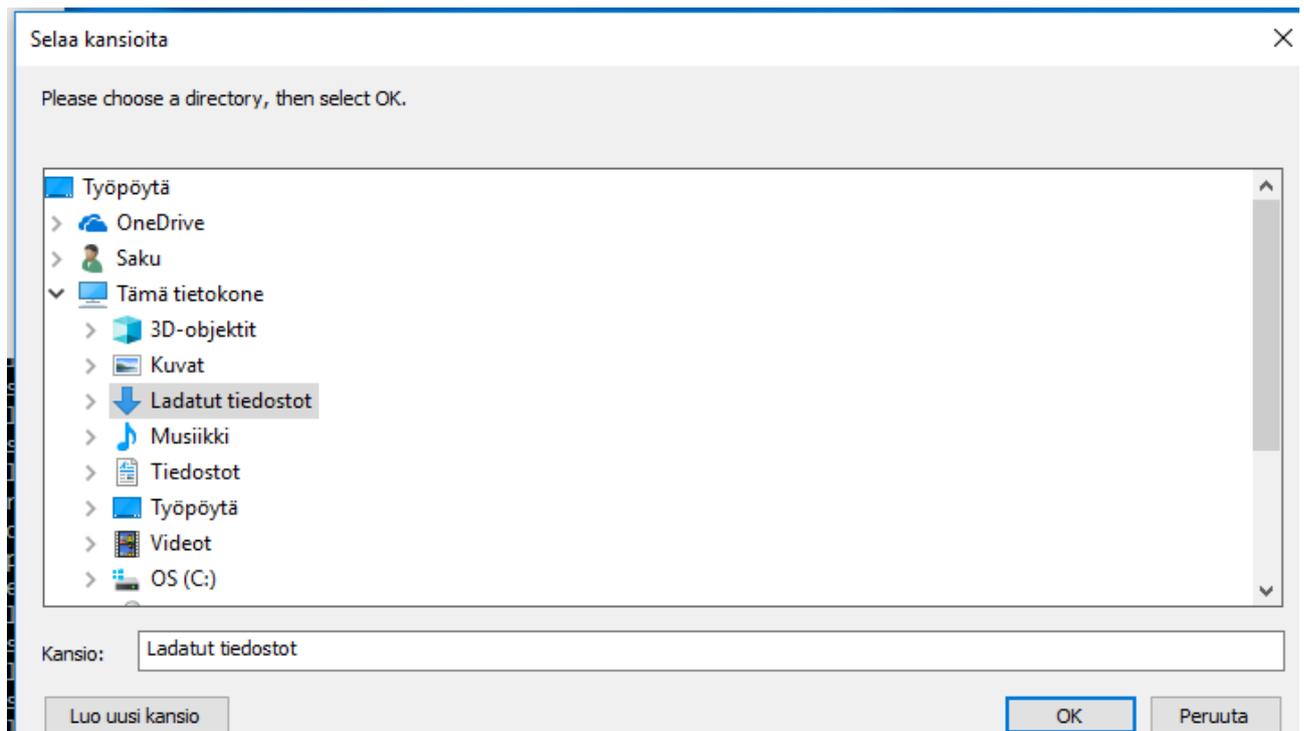
Picture 10. Determining the result directory in the begin of the competition

4.1   Quick match menu

During a competition a QUICK MATCH window (picture 11) is the main menu to manage firing point computers.

IB QUICK MATCH

| INIT | START | STOP | REFRESH GROUP | CHECK LANES | LOAD RELAY | RESET GROUP | DEFAULT | DEBUG |

Group	#		Name	Club	Disc.	Decim.	Series	Shots	Last	Total	Command	Status
☑	1	OPEN	Aku Ankka	AA	Airpistol	OFF	8IT	0		0	INIT	NO CONNECTI
☑	2	OPEN	Roope Ankka	AA	Airrifle	ON	N	0		0	INIT	NO CONNECTI
☑	3	OPEN	Tupu Ankka	AA	Airpistol	OFF	8IT	0		0	INIT	NO CONNECTI
☑	4	OPEN	Hupu Ankka	AA	Airpistol	OFF	10IT	0		0	INIT	NO CONNECTI
☑	5	OPEN	Lupu Ankka	AA	Airpistol	OFF	12VT	0		0	INIT	NO CONNECTI
☑	6	OPEN						0		0	INIT	NO CONNECTI
☑	7	OPEN						0		0	INIT	NO CONNECTI
☑	8	OPEN	lines Ankka	AA	Airpistol	OFF	14VT	0		0	INIT	NO CONNECTI
☑	9	OPEN	Liinu Ankka	AA	Airpistol	OFF	11-14A	0		0	INIT	NO CONNECTI
☑	10	OPEN	Kroisos Pennonen	AA	Airpistol	OFF	14HT	0		0	INIT	NO CONNECTI
☑	11	OPEN	Musta Kaapu	KelmienAS	Airpistol	OFF	M18	0		0	INIT	NO CONNECTI
☑	12	OPEN	Kulta-Into Pii	PohattaAs	Airpistol	OFF	M80	0		0	INIT	NO CONNECTI
☑	13	OPEN						0		0	INIT	NO CONNECTI
☑	14	OPEN						0		0	INIT	NO CONNECTI
☑	15	OPEN						0		0	INIT	NO CONNECTI
☑	16	OPEN						0		0	INIT	NO CONNECTI
☑	17	OPEN						0		0	INIT	NO CONNECTI
☑	18	OPEN						0		0	INIT	NO CONNECTI
☑	19	OPEN						0		0	INIT	NO CONNECTI
☑	20	OPEN						0		0	INIT	NO CONNECTI
☑	21	OPEN						0		0	INIT	NO CONNECTI
☑	22	OPEN						0		0	INIT	NO CONNECTI

Picture 11. The Quick Match menu

Buttons in the upper control bar of the Quick match menu

To manage firing points collectively with the InBand Range Officer software, click (ᵛ) the small square on the Group column on the left side of the QUICK MATCH window. After this all commands given with the buttons in the upper bar will affect to the all chosen firing point computers. The EST technical officer uses normally only these buttons during a competition.

INIT Initializes computers of firing points with the shooter information. The status of the firing point computer must be IDLE in order to make initialization. Before this initialization you must have created the start list with some text editor (look paragraph 2.1 or 2.2)

START Sends a START command to the firing points computers. Depending of the stage of the competition the preparation and sighting time or the competition time will start.

STOP Sends a STOP command to the all firing points computers. Depending of the stage of the competition the preparation and sighting time or the competition time will be stopped.

REFRESH GROUP

Collects the shooting data from all firing points. This operation is needed only if there has been a connection failure between the competition management computer and the firing point computers. Usually this function is not needed.

CHECK LANES By pushing CHECK LANES button, you can check that the main competition computer has a connection to all firing point computers. It also checks that the firing point computers are in the correct status. First, after pushing CHECK LANES button the firing point status of all firing point computers shows WAIT CONNECTION status and after a connection is checked it turns to the right status (CONNECTED). If some firing point status remains in WAIT CONNECTION status, it means that the competition management computer cannot create a connection to that lane.

LOAD RELAY To load a starting list.

RESET GROUP Resets all the firing point computers.

DEFAULT Returns all the firing point computers to default settings. Note: this does not affect to the illumination level of the targets.

DEBUG Lays all the firing point computers to a DEBUG mode. This is mainly used in testing and trouble shooting.

Buttons for the individual firing points

Group The group box ticked makes the upper bar buttons effective for this single firing point.

OPEN This button opens firing point menu for this single lane. So far, the single lane menu includes only the settings for the target illumination device.

Name Name of the shooter

Club Shooting club

Disc Discipline. The InBand Range Officer supports currently air pistol, air rifle and 50 metre rifle. The support will be extended to the other InBand Scoring disciplines to come.

Desim. Decimal scoring is on or off. Default settings are off for air pistol and on for rifles.

Series Shooting class of an athlete. In the drop down menu the earlier defined shooting classes are selectable (note paragraph for determination and modifying the shooting classes).

COMMAND With COMMAND button commands can be given to the single firing points computers. The exact command is depending of the status of the single lane (f ex, if the lane status is WAIT SIGHTERS, it stands START in the COMMAND button).

4.2   Managing a shooting relay

The procedure to manage a shooting relay is as follows (presumed that all needed firing points are luckily connected with the InBand Range Officer programme and QUICK MATCH menu is open and running):

1. Check that all lanes are really connected to the InBand range Officer programme by pushing CHECKS LANES button. The status of all lanes should become IDLE.

2. Import the beforehand prepared relay file in to Inband Range Officer programme by pushing LOAD RELAY button. You can also write the shooter name and shooting club details straight in the QUICK MATCH menu.

3. Compose a group by ticking the GROUP square of the firing points which have an athlete in the relay.

4. Press INIT button in the upper control bar. After this it will appear a target graphic to all firing point computers including details of a shooter and a red STOP text on the target figure.

5. After the chief range officer (CRO) has given a start command for the preparation and sighting time, press START button in the upper bar. The STOP text in the firing point computer will disappear and the count-down clock will start running (note that the sighters are not visible in the QUICK MATCH menu.

6. After the preparation and sighting time has ended, press STOP button in the upper control bar.

7. In the begin of the match time, press START button in the upper control bar. During a match time numbers of shots, the last shot value and a standing result will be indicated in the QUICK MATCH menu.

8. When the match is all over (match time is over or the CRO has commanded the ultimate STOP - UNLOAD!), press STOP button in the upper control bar. The technical officer should make a back-up copy of the result file (note paragraph 4.3 Result file).

9. After the results of the relay are definitely secured, a RESET GROUP button in the upper control bar can be pressed. This reset firing points to starting mode of a relay.

If there are multible relays in a competition and all results are desired to have in the same back-up copy, the next relay can be initialized (load relay, init etc) immediately without closing the QUICK MATCH menu. This adds the results of the following relays automatically into the same result file with the previous relays. You should keep in mind that always after every relay make a back-up copy.

If the back-up copy of the following relay is wanted to have separately (different file), the QUICK MATCH menu must be closed and re-opened.

4.3   Results file

InBand Range Officer software produces two result files during a competition: results.csv and backup.csv. In the results.csv file the results of every 10 shot series will be saved sorted by shooting classes and by superiority. The results.csv file can be run for real time scoring f.ex by CSVFileView software.

Results.csv file details is in next format

NAME;SHOOTING CLASS;DISCIPLINE;CLASS;SHOTS;LAST;S1;S2;S3;S4;S5;S6;SCORE Inner tens

Mickey Mouse ;DSC;Airpistol;M;18;8;82;70;None;None;None;None;152 2-X

Scrooge McDuck ;DSC;Airpistol;M;16;7;89;53;None;None;None;None;142 3-X

Donald Duck ;DSC;Airpistol;M;14;9;84;35;None;None;None;None;119 1-X

Daisy Duck ;DSC;Airpistol;F;22;8;89;86;17;None;None;None;192 2-X

In the Backup.csv file the shot data is saved in the next format:

Donald Duck;DSC;Airpistol;M;9;8;9;9;7;8;7;X;9;8;8;9;9;9;

Scrooge McDuck;DSC;Airpistol;M;9;8;8;10;X;9;9;10;7;9;9;X;X;8;9;7;

Mickey Mouse;DSC;Airpistol;M;9;8;9;9;9;7;6;9;8;8;8;8;X;8;9;9;X;8;

Daisy Duck;DSC;Airpistol;F;X;8;9;10;8;9;8;10;8;9;9;8;9;8;7;8;9;9;9;X;9;8;

Backup.csv file can be utilized by the third part scoring softwares.

4.4   Result service by the CSVFileView programme

CSVFileView is a share-ware software, which is developed to monitor .csv files. It is easy to use, and you can use it for simple results, timing and scoring during the competition.

The CSVFileView is downloadable from:

> https://www.nirsoft.net/utils/csv_file_view.html

The download link is found in the bottom of the web page

Feedback

If you have any problem, suggestion, comment, or you found a bug in my utility, you can send a message to nirsofer@yahoo.com

Download CSVFileView (32-bit)

Download CSVFileView (64-bit)

Picture 12: Download CSVFileView

The results.csv file should be opened by the advance open function of the CSVFileView software. The defaults is shown in picture 13. The semi-comma must be used to separate the data fields as it is done also in the results.csv file.

The "Auto Refresh" must be chosen in the Option window that the results should be updated during a competition.
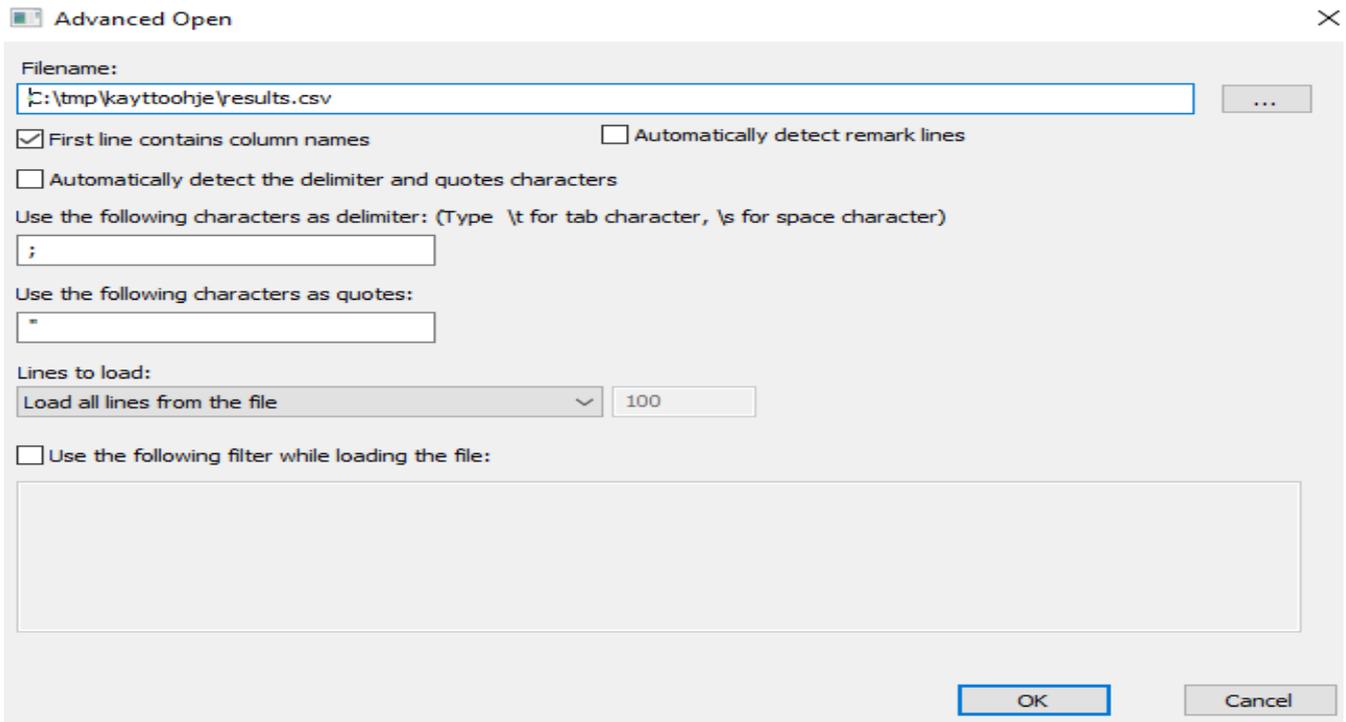
Picture 13. Opening of the results.csv with CSVFileView's advanced open function.

NAME	SHOOTING CLUB	DISCIPLINE	CLASS	SHOTS	LAST	S1	S2	S3	S4	S5	S6	RESULT
Mickey Mouse	DSC	Airpistol	M	18	8	82	70	None	None	None	None	152 2-x
Scrooge McDuck	DSC	Airpistol	M	16	7	89	53	None	None	None	None	142 3-x
Donald Duck	DSC	Airpistol	M	14	9	84	35	None	None	None	None	119 1-x
Daisy Duck	DSC	Airpistol	W	22	8	89	86	17	None	None	None	192 2-x

Picture 14. Results.csv file via the CSVFileView programme
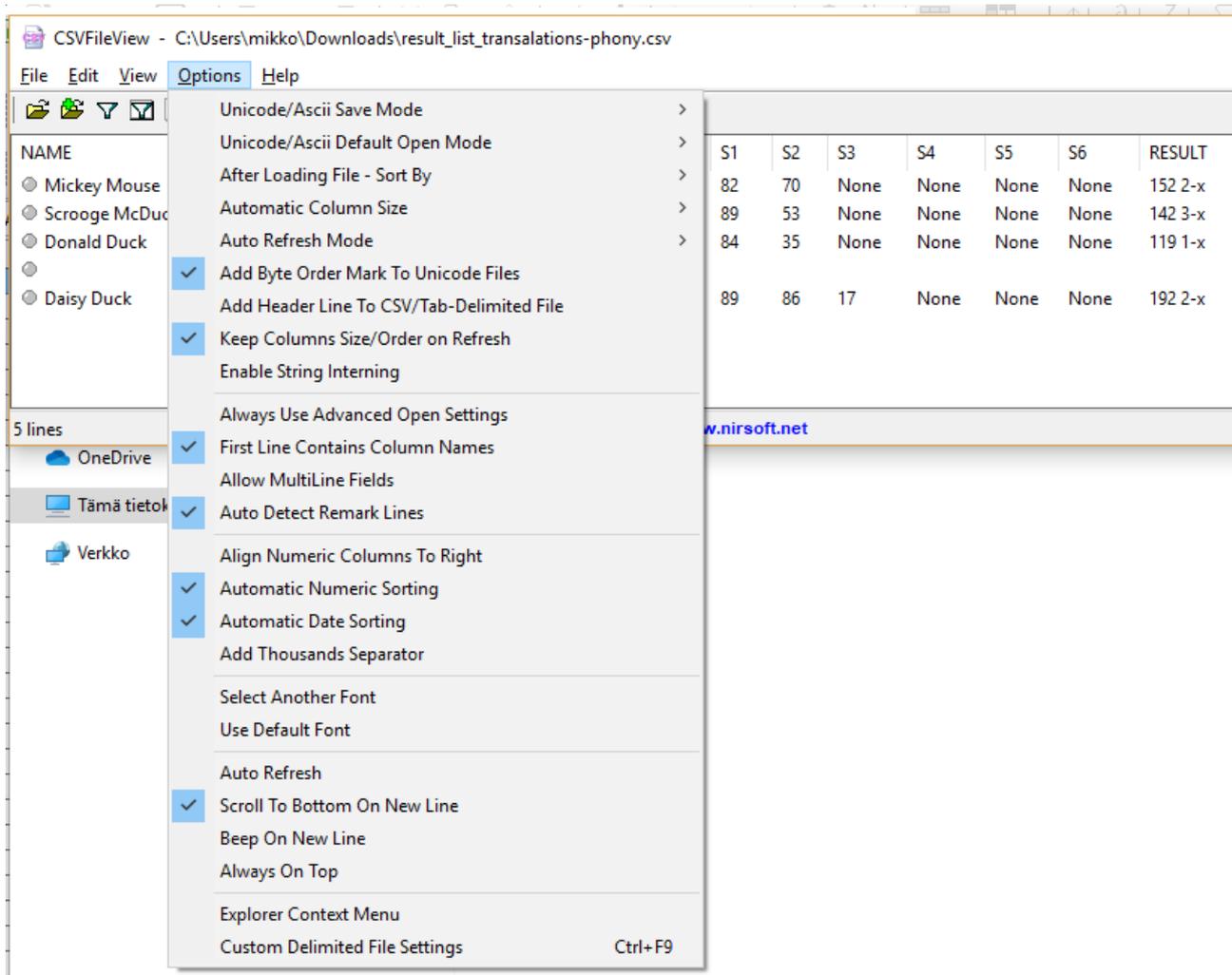
Picture 15. Option menu of the CSVFileView software. It is important to tick the AUTO FRESH point in order to update results.

Enjoy conducting shooting events!