V 25.10.2.1

ARDF organizer FjwW

The program **FjwW** is used for the result evaluation of ***ARDF*** competitions with

SportIdent ® system from AES Arnstadt
www.sportident.com

This help in ***German***

Translation: Jens - DL8KAN, Karl-Heinz - DL7VDB and Google translator

Hints to improve this English text are welcome !

In an ***ARDF*** competition the competitor carries a special chip which is used to register the arrival times at the transmitters and the finish. The times are stored on the chip and in the timekeeping devices (stations). The program **FjwW** enables the user to read the registered times and make a lot of different analysis of the results for one or more competitions.

©Copyright FjwW is **not freeware** and requires on **each PC**, a licence key which is unique for a given PC or/and a specific SI chip. The licence key can be obtained from the ***author of the program***. Without a valid licence key the program runs in a demo version with restricted features.

Concerning *anomalies* of this FjwW-Unicode version comparatively to predecessor *see*.

Description of the installation ***see***.

Description of the licensing ***see***.

Informations concerning ARDF-FjwW, versions, current Name Lists, ...
can be find on ***www.dl7vdb.de*** or ***www.ARDF-FjwW.com***.

List of supported **SportIdent** devices and chip cards ***see***

To run FjwW for ARDF competitions you need at least the following files, when all variants of languages are installed:

FjwW.exe	Program itself
FjwE.cmd	Command file for start FjwW editor separately
FjwW.ini	INI file which contains the settings, since V9.12 as UTF16 format! however, old INI file in the ANSI format is further usable (when [RatingRUS] without meaning)
FjwWenu.dll	DLL for the English version of FjwW
FjwWfra.dll	DLL for the French version
FjwWnld.dll	DLL for the Dutch version
FjwWcsy.dll	DLL for the Czech version
FjwWrus.dll	DLL for the Russian version
FjwWplk.dll	DLL for the Polish version
FjwWara.dll	DLL for the German Orienteering version
FjwWcht.dll	DLL for the English Orienteering version
FjwWenu.chm	Help in English
FjwWdeu.chm	Help in German
~~**FjwWfra.chm**~~	~~Help in French (not completely translated)~~
FjwWdispl.exe	Windows program to display the results (remotely)
FjwMap.exe	Program to plan positions of transmitters on ARDF competitions and to get simple and quickly the coordinates of positions in FjwW display of GPX/TCX tracks
FjwLay.exe	Program to series printing of certificates
EDADcheck.exe	Program to check the EDAD files
FjwTconv.exe	Program for well-directed correction of time stamps in KOR/DAT files
DCFGPSvdb.exe	DCF/GPS synchronization program, to calibrate PC clock

ZyklCopy.exe	Program for cyclic backup of TLN/KOR files or independent using
psftp.exe	Program for secure, encrypted uploading of files to an SFTP server (similar to FTP) (c)tartarus.org
reduceGPX.cmd reduceGPX.txt, sed.exe	Tools to reduce the GPX file size of the coordinate/time/altitude data required for use in **FjwMap**
NameList?.txt	Two extensive list of ARDF competitors (German + international competitors)
Directory **Examples**	Examples of different TLN, KOR, RTF, XLS, BMP, GIF, JPG, LBL, CSV, HTM files
Directory **CSS**	Examples of different CSS layouts, optionally suppliable by the user in this files

Installation of FjwW

FjwW is delivered with a installable file called **Setup-FjwW-?.?.?.?.exe**. After starting the installation follow the instructions. In this process chosen language (English, German, French) is the preferred language to start FjwW. Not installed speech components may also be added subsequently. If a newer version is installed into the existing directory of a previous version of FjwW the files
NameList1.txt, **NameList2.txt** and **FjwW.ini** will be renamed to **NameList1.txt.???**, **NameList2.txt.???**, **FjwW.ini.???**
to prevent the loss of special settings made by the user. **???** is a number >= 001.

During the first start of FjwW user must enter a licence key; without a valid licence key the program only starts in a demo mode (restricted features).

Extras|Associates with FjwW see

Sets all links to the version of FjwW actually used (this is necessary

of you (re-)use an elder version or you reinstall another version of FjwW).

Should be used SI stations with USB interface, a special USB driver have to install! This driver can be download from ***Homepage of AES***
.

Licensing of FjwW

After the start of FjwW a **PCid** is displayed, which is a string unique to each PC. Please send this PCid to the ***author*** so you can get a valid licence key. Beside and in addition to the licensing to a special PC the licence can also be linked to a SI chip. If you want to use this possibility, you have to send the number of the concerned SI chip to the author as well.

When you receive the licence key, just enter it in the corresponding field and press ***Accept***, when the program is started again, the license key no longer needs to be entered.

On any other PC connect a running SportIdent reading station to a COM port of the PC (COM 1...50), activate ***SI chip licence*** and press ***Accept***. When the program request it, you've to insert the SI chip for which the licence key was created.

Without entered valid licence key the program only starts in a demo mode without some features.

Remark:
Using the SI chip licensing the SI chip has to be used for each start of the program. Using the licence key it must only be entered at the first start of the program. On any further starting of the program the field can stay empty.
When licensing with SI chip all available COM ports will be scanned for working SI read station. If problems occur, it's possible to start FjwW with parameter "/p?" (? = port number).
If the reading station is in **Autosend** mode ***see*** , you may have to

wait for about 20 seconds in error case, when the SI licensing chip must punching repeatedly.

Start the program

FjwW can be started as any other Windows program by a double click on the program icon or pressing **ENTER**. Additionally FjwW can be started by:

- Drag&Drop one or more icons of TLN / EDA file(s) on the FjwW icon or main window or competition data window of FjwW.
- Start FjwW via a command line or a batch file
  FjwW.exe [/i xyz.ini] 1.tln [2.tln] [3.eda] ....
  Even wildcards are supported (*, ?): **FjwW *.tln** (this does only make sense with TLN files!)
  FjwW.exe can be started from every path, because the Windows environment variable **PATH** is set to path of FjwW during the installation.
  After the TLN file the related KOR and DAT files can be declared. The files can be specified by their name relative to the path of FjwW.exe.
- Shortcut **`Ctrl+Alt+F`** start program simple and quickly;
  Shortcut **`Ctrl+R`** loads last TLN file immediately.
- The FjwW editor can be started alone (as often as you like) with the command line **FjwW /e [edit file]** or the key combination **`Ctrl+Alt+E`**

When using ***Extras|Associates with FjwW*** the following links to FjwW are created:

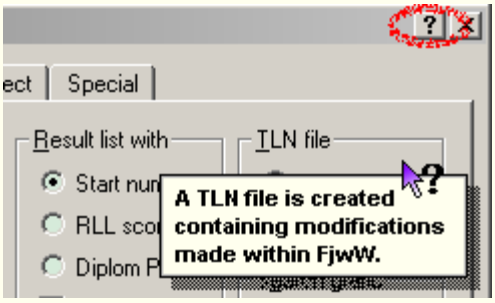
- A link to FjwW in the start menu
- A link to FjwW within the 'send to' part of the context menu (right click) for TLN / KOR / DAT and EDA files.

When using the ***Send to/ARDF-FjwW*** option in the context menu of a file the following actions are executed depending on the file extension:

- TLN/EDA file: If FjwW is not yet running it is started and the file is added as a competition.
- KOR/DAT file: Is added to the actual competition within FjwW.

FjwW is available in seven languages (German, English, French, Dutch, Czech, Russian and Polish). The language can be set via ***Extras|Language***. German is always available, the other only if the language support was selected when FjwW was installed.

The contex help



To display the help of **FjwW** the **`F1`** key can be pressed at any time. The help can also be reached via the **Help** menu in the main window. Furthermore the question mark ? can be used where it's available. The question mark offers context sensitive help for various elements of the application. A click on the questions mark in the menu bar and after this a click on the element of interest leads to the related help (see example on the left side). If the element to be explained already has the focus or the cursor is within the field to be explained, **`Shift+F1`** leads to the context sensitive help as well.

Special feature in the settings dialogs

When a dialog for setting features is opened in "**Fjw*.exe**" programs, the **last** settings confirmed in this dialog with "OK" are retrieved from the registry and displayed. The check, radio, selection, edit, ... boxes do not necessarily represent the current status, but is only a suggestion for a new setting !!! This should also be taken into account when working with multiple instances of FjwW.

Support for error corrections

If FjwW does not end properly (crashes) it creates two files in the subdirectory **LOG** which are called **~FjwWcrash.txt** and **~FjwWcrash.dmp**. Please send these files and the log file **~FjwW.log** to the ***author*** (for example via the menu ***Help|Bug Report***). It's also helpful if a description of the circumstances of the crash is described and the TLN-/KOR-/DAT-/LOG files are added (preferable in a ZIP archive). This will help to accelerate the correction of errors. After transfer the files they can be deleted.

Particularities of versions since 19.8

In order to better process the timestamps read by SI-Chip5, there is a change since version 19.8. In the KOR file, the timestamps read from the SIchip5 are stored unchanged, there are only timestamps from **0:00:00** to **11:59:59**. This Chip5 type can only store 12-hour timestamps due to the limited memory space (two bytes per timestamp). Only when re-reading a competition (first TLN then KOR file) are the timestamps according to the competition data (Begin-End Time) converted and evaluated. Thus, changes in competition data always result in a correct evaluation, so this option is preferable.

Since the time stamps from the KOR file as of V19.8 are processed differently, they must be identified in the associated TLN file with a new keyword line: **`@VERSION: 1908`**
For a new contest created in FjwW (menu ***File / New competition Ctrl+N***) this keyword will be automatically entered. If the contest is created by a self-created/copied/modified TLN file, it must be inserted. If SIchip5 data already exists in the KOR file, it must not be entered later. Then the advantages that result from the other storage in the KOR file can be used.

The SI-Chip5 can be used without any problem in the 12 hours after the start of the competition, even in midnight two-day competitions. If this is not the case, the timestamps read from the chip must be manually corrected (by 12/24/36 hours). If the time is on the following day, the time must be supplemented with a letter "a", e.g. **10:12:34a**).

Particularities of the unicode version

FjwW-Unicode is able to display all international (special) characters as Cyrillic, Arabian, Korean, Eastern- and Northern European countries. These option requieres that the needed fonts are installed

within Windows (specially for Korean/Japanese/Chinese...).
Internally FjwW uses UTF-16 codifications (two bytes per character). The files and lists created by FjwW are stored in UTF-8 format (one to four bytes per character). Because of this change in the file format the files can NOT be read by older versions of FjwW (V7.10 and below).
It is possible to convert the UTF-8 files to ANSI (character set 1252 = Windows ANSI) by using FjwW-Unicode (*) or other Windows programs (**).

If FjwW-Unicode is used to open TLN/KOR/DAT files in the ANSI format of older versions of FjwW the data of the competition or of the competitors can not be modified at all. You can only print (result) lists. If data has to be modified the ANSI files must to be converted into UTF-8 files prior to open them with FjwW-Unicode. The conversion can be done with FjwW Unicode (*) or other Windows programs (**).

(*) Converting the files from unicode to ANSI and vice versa is possible with the integrated editor of FjwW-Unicode. Use ***File|File display edit CTRL+E***. Using ***File|Save as*** the required file format can be chosen.
(**) Windows programs which can be used to display, edit and convert UTF-8 files are: **MS Editor (NOTEPAD.EXE), MS-Word** and others. Just check the file formats available when using ***File|Save as***.

The main window of application

Tool bar

- Select box to select the file name of the TLN-File to be displayed in the result list table of the actual competition. By pressing **`Ctrl+Cursor down`** or **`Ctrl+Cursor up`** the next or the previous competition can be selected as well.
- Icons to select the result list of the available categories. **`Ctrl+F1...Ctrl+F10`** can be used to change the categories. Using **`Ctrl+Cursor right`** and **`Ctrl+Cursor left`** moves through the categories.
- Icons to change the order of the categories. The order of the icons is also used for the display of the result lists and for the sending to the DisplayPCs which show the result lists. The icons are only visible if changes can be made to the order of categories.
- Icons to select the competitors not yet arrived **`Ctrl+A`** or already having finished **`Ctrl+Z`**.
- Icon **`Ctrl+Q`** to display the SI chip number with which no participant is registered in the competition. Occurs when reading the chip data during a competition or when registering

participants by reading the chip and not being accepted into the competition.

- Icon (**Ctrl+H**) displaying the Helper
- Icon (**Ctrl+C**) for display the no active participants/helpers stored in the deposit.
- Icon (**Ctrl+S**) to save the data to the TLN file
- Icon (**Ctrl+F**) for a quick search for name, call, club, searching order, start number, card number birth year

Header of the result list

The abbreviations have the following meaning:

- **Pl** = Place, Place number or abbreviations OVT, NOF, SPW, DSQ *see*
- **Fo** = Number of transmitters, asterisk ***** before mean, the value is set manually, the equals sign, highlighted in red **=** , if the number of foxes has been reduced due to non-compliance with a prescribed search sequence (e.g. SPRINT). **This should then be checked and, if necessary, the number of foxes should be corrected manually.**
- **Bonus** = Bonus (Credit) for Run time in minutes:seconds.
- **Chip No** = SI chip number. Cards marked as lend are marked with an asterisk *****.
- **Sequence** = Start-Transmitters-Finish are displayed separated by a hyphen. Other characters indicate, that the transmitter is not taken into account:
  ***** Transmitter was found but is not taken into account because it's not in the list of transmitters to be found by this category.
  # Transmitter was found/punched more than one with a time difference > 1 minute
  + The timestamp is out of the range of the start and finish time (must be checked)
  ? Timestamp is not valid (must be checked)
  ! If it comes after the fox number, it means 'Mandatory fox', during the SPRINT it shows the spectator fox

^ If it comes after the fox number, it means 'free fox', can be stamped at any time
When a finish beacon exist and the beacon was not registered direct before the finish or the order given by the 'mandatory fox' has not been adhered to, the sequence will be red in the background (e.g. **S-1-2-3-4-B-5-Z**).

- **Runtime** = behind a exclamation point (e.g. **65'59 !**) can be appear, possible only at the day of competition. This means that the placement of this competitor can not be changed.
  The background will be red (e.g. **-8'01**) in case of negative value, this means start and finish time are incorrect and have to check/make right.
  When the competitor not yet arrvived the finish and the run time is over the limit or the Finish-Limit-time is reached, the background of **StNo** and **Runtime** will be yellow (e.g. **99** . . . **133'44**).
  The run time will be blue in the background (e.g. **120'01**), when the competitor exceed the limit time and will be brown, when the competitor get a bonus to the run time (e.g. **60'01**).
- **Start** = start time, the start time can be specified in the TLN file, in the participant registration dialog or by balloting. Then they are automatically converted with an entered start delay. This does not happen with manually set start times (in the correction dialog), these start times are then marked **blue** as a hint.
- The **CAT**egory will be yellow in the background (e.g. **M50**), when the year of **Birth** is given and the competitor not started in the age-right category (concerning the IARU R1 ARDF rules). If other first letters are listed in **[FjwW]** in **MenCatFirstChar=** and **WomenCatFirstChar=** in the INI file, the age-matched IARU categories used for this rating.
- The **CAT**egory will be red in the background (e.g. **M21**), when the year of **Birth** is given and the competitor started in the age-higher category (concerning the IARU R1 ARDF rules).
- At **StNo** an appears if the participant does not appear in the result after filtering with the GRP name the GRP name shown.

The width of the columns can be changed by moving the upright

separator lines. The order of the columns can be changed by drag&drop. The optimal/necessary width of the columns can be set by menu ***Extras|Optimal column width***. The widths of the columns and their order can be saved by ***Extras|Save settings***. The settings are stored in the INI file and are restored when the program is started.
Clicking on the headline of a column sorts alphabetically or numerically in ascending order. The next click inverts the order to descending. The third click terminate the sorting; during sorting the complete column will be **blue** in the background. Refreshing the result list by pressing **F5**, **ESC** or via ***Extras|Refresh*** resets the sorting.

Result table

417	1.	Viktor Korshunov	UKR	UT4UXB	61'16	4	10:35	11:36:16	5	2004717	S-3-1-5-B-F	M60
416	2.	Oleg Fursa	UKR	UR4URL	66'22	4	11:30	12:36:22	5	2004716	S-3-1-5-B-F	M60
194	3.	Manfred Platzek	GER		67'05	4	10:25	11:32:05	5	2004494	S-3-1-5-B-F	M60

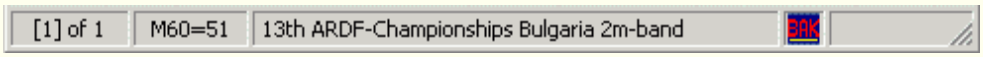
- Display of the results of a category or the finishers list (the latest finisher is on the top) or the list of competitors still running or not started (on the way). The starting groups are optically separated by a blank line. Five minutes before their starting time the competitors are marked with a hook.
- The icon at the left of the start number shows if the competitor will be taken into account in several list defined by ***Results|Options of Lists|Group/pFactor***. Changing the hook in the result list doesn't have any meaning.
- When the competition is ongoing those competitors are marked with an exclamation mark where the rank can not be changed by a competitor not yet finished.

A right click in the result list shows a context menu which is the same as the ***Edit|...*** menu. Pressing key **ESC** deselects the marked line of competitor.

At the day of competition there are a special function in table "competitors not yet finished" (key **Ctrl+A**). When no line is

marked, always the next starting competitors will be display visible in the window.
Similar in table "competitors finished" (key **Ctrl+Z**): when no line is marked, always the last arrived competitor will be display in the first, above line.

Status bar



- Number of the competition which is displayed and total number of opened competitions (ordered by the sequence in which the files were opened).
- Display of the descriptor of the category and the number of competitors in this category.
- Display of the short name of the competition.
- Indicator showing that changes have not been saved.
  TLN in rotation with (Modifications have to be saved to the TLN file, for example by **Ctrl+S**)
  Indicator of the existence of a ***TLN-BAK-File*** (including icon)
  BAK (Tool tip shows the filename)

The Competition data window

The competition data window shows the most important data of each competition which is loaded. It allows to change the entries (you must check the box ***Edit***).

The window can be hidden by pressing **`ESC`** and can be find in Systray (taskbar) after that. It can be (re)activated by pressing **`Ctrl+F3`**.

The select box on the right side allows to select the data of another competition which is loaded. After having changed the data the ***Save*** button must be pressed. If you uncheck ***Edit*** before saving all modifications are ignored.

For more help select the question mark at the top right corner of the window and click on the field you want to see the help for.

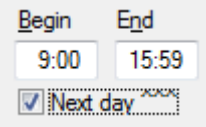
Details about the data fields:

- In the uppermost field you can enter up to eight lines to describe the competition. These lines are used as headlines for several lists.
- ***Date*** can only be changed as long as no data has been read from a KOR or DAT file and no SI chips have been read.
- The ***Beacon*** has to be found by every competitor. It will be counted as a found transmitter. The fox or beacon number must be lower than the ***Fin.No.***
- The ***Fox list*** contains the number of the transmitters the selected category has to register. Other transmitters are not taken into account for the result list (but they are displayed in some lists). If a competitor is added and his category does not yet exist all previously defined fox numbers are adopted. Fox numbers used for start/finish and the beacon number do not belong in the fox list. If necessary this list must be corrected.

If an exclamation mark '**!**' is added to the fox number, this fox becomes a 'mandatory fox': all foxes in front of it must be visited before the mandatory fox, and all foxes behind it must be visited after the mandatory fox. The order of the fox numbers listed before/after the mandatory fox or without a mandatory fox is arbitrary. If a sign '**^**' is added to the fox number, this fox becomes a 'free fox': it is always scored regardless of any order prescribed by the mandatory fox/foxes.
see Excamples of possiblities of 'Mandatory Fox'.
The starting alley can be placed in front of the fox list. They must be named "A: " through "Z: ".
Those categories without competitors are marked with an asterisk (*) within the select box. These categories can be delete via ***Delete***
After ***Edit*** and entered a non existent category into the select box it can be created via ***New*** .

Besides the categories abbreviations the following entries are selectable:
aK! not taken into account (out of competition)
kK! categories are not considered (no categories)
allFox complete list of transmitter numbers

- ***Begin*** and ***End*** of the competition have to be set correctly. All start, finish and transmitter times have to be in between these limits to be taken into account. Time stamps that are within these limits are taken as correct time stamps.

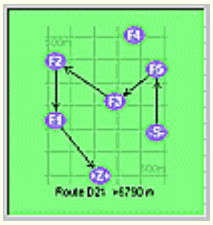


The end may also be the **Next day**, for that activate the checkbox below. Time data of the following day are displayed in different windows, dialogs and lists with an attached **a** (like **a**nother day). ***see***
Caution: The **SI-Card5** can be used in these competitions for two days only in the first 12 hours (stores only 12-hour time stamps, cannot automatic converted in Two-day time interval) !!!
Time stamps which are after the begin but before the start time or after the finish time but before the end time are not correct. They are not taken into account for the result but they are

displayed in some lists (these wrong stamps are marked). This method was choose because of the time coding within the SI chips. Using this methods tries to ignore timestamps coming from other competitions if the competitor forgot to erase his/her chip.

- If the ***Start dev.*** is changed the start times (balloted and start times from TLN file) are recalculated accordingly, but not the start times, which are set manually! The begin and end times might need to be changed as well (at least check for a valid end time).
- The origin of the start times for each competitor is displayed in ***Start time from*** and can be changed. The following options are available:
  TLN data The start times are read from a TLN or KOR file, originate by balloting or manual input.
  TLN + SI Start st. (..sec) The start times comes from TLN/KOR, overwrite by start times from SI chip/start station second accurate.
  SI Start station (..sec) The start times are read from a SI start station or the SI chip itself. The time remains second accurate. The start times within the TLN/KOR file are ignored.
  SI Start station (1 min) The start times are read from a SI start station or the SI chip itself. The time is rounded up to full minutes (0,1,2,..).
  SI Start station (2 min) The start times are read from a SI start station or the SI chip itself. The time is rounded up to two minutes (0,2,4,..).
  SI Start station (2,5 min) The start times are read from a SI start station or the SI chip itself. The time is rounded up to two 1/2 minutes (0,2:30,5,..).
  SI Start station (5 min) The start times are read from a SI start station or the SI chip itself. The time is rounded up to full five minutes (0,5,10,..).
  Fox xx The timestamp of the selected transmitter is taken as the start time. The timestamp can be provided by the SI chip or the SI station (only for special usage). The fox number may not be in the fox lists of all categories.

- The origin of the finish time for each competitor is displayed in ***Finish time from*** and can be changed. The following options are available:
  SI Finish station The finish times are read from a SI finish station or the SI-chip itself.
  Last Fox or SI finish The timestamp of the last found transmitter is taken as the finish time. The finish time is the time stamp from the SI fox station that the competitor last registered or the time from the finish station if no fox was stamped.
  Fox xx The timestamp of the selected transmitter is taken as the finish time. The timestamp can be provided by the SI chip or the SI station.
- If the ***Positions*** of the transmitters are indicated a picture with the scaled positions is displayed within a 500m grid. The



  positions and numbering of the transmitters can be checked. Missing positions are indicated by question marks in the X-Y-position fields. For each category the optimal sequence of transmitters and the shortest distance in a straight line is displayed. If any location information is missing, the input windows are highlighted in red.
- SI station number list ***SI-No***
  When using SI devices a translation table must be set up. This is necessary because the SI device numbers are greater/equal than 20 (FjwW use: **20...254**) and the transmitter numbers start with 1. No entries are allowed to be missing or exist double for different transmitter numbers. If an error exist, the data field background is **red** .
  In the second edit field it is possible to enter a second/reserve SI number. That brings the advantage when two SI stations used at the fox exactly distinguished will can, out of which station the data come. Or it brings the advantage that in problems with one SI station a reserve station can be used (with not number again of existing SI No).
  Exception in SPRINT: The spectator point can be in the same location as the beacon, then there is only the beacon transmitter and the SI beacon station. This is set in the competition data in

that also for the Spectator one/the same SI beacon station number is entered !>BR> If changes are made to this entries the corresponding TLN and KOR files are (re)read automatically.
- The button make it possible with running program **FjwMap**, to get rapidly the positions of transmitters and fox lists, which draws/recorded in FjwMap.

The button ***Optimum search orders*** shows the sequences for all categories in a new window (including an option for printing). The button ***Picture*** allows to save the image as a GIF file.

Display information about the organizer:

With the button at the right side of the head lines or with **ALT+<** the information of the organizer can be made visible. The following data can be entered:

- Name, call and club of the organizer
- Short title of the competition
- Type of competition (**OFF** – official competition of DARC, **INT** – international competition, **OV** – local competition of a DARC Ortsverband
- **Foxoring** - Foxoring, any changes for outputs in result lists, graphics with transmitter locations (GIF's) will be display enlarged.
- **Sprint** - Causes the correct counting of rated foxes in non-compliance with the correct search order at Sprint, changed some representations in results lists; must be enabled before reading data from the SI chip or from the KOR/DAT files !
- **Score** - Each fox found can be assigned a score(points) by **manual** score entry after the **@FOX_SCORE_LISTE** keyword in the TLN file ***see*** . The points of the found foxes are added and replace the fox number found in the placement of the participants.
- **Multi SI-Card** - Multiple use of SI cards in a competition ***see*** .
- Issue of CQ-DL when the competition was published (data fields: month, year, page).

If ***Edit*** is activated the data can be changed. With ***Save*** the data is validated and saved. If ***Edit*** is unhooked the changes are not applied.

The final saving of the competition data must be done via ***File|Contest File save*** or **`Ctrl+S`**.

The information at the bottom right are updated when competitors reach the finish (and their chip is read). The information give a quick overview of the status or the competition.

The SportIdent status dialog

The SportIdent status window is displayed if the serial interface to the SI station is activated. At the left some important status information about the connected SI station are displayed. At the right the data of the last SI chip is displayed.

The window can be hidden via the **ESC** key. It can be reactivated by clicking on its icon or via **Ctrl+F3**.

Left part
These data are gained by reading the SI station periodically. The data is updated after the cycle time after reading a SI chip.

- Station number, status of the last request
  Additional information: background
  green (Reading station, status ok),
  blue (Not a reading station, status ok),
  red (serial interface out of order, station switched off) or
  white when the SI card number is displayed and the card is cleared (absent data of foxes/start/finish).
- Function of the station, type of acoustical and optical signals when registering a SI chip
- Serial number and CPU number of the station
- Deviation between the clock of the SI station and the PC. If the date of station is different as the PC date, the text **? Date ?" and a red background will be displayed.**
- **Time of the station**
- **Number of used memory blocs / capacity of the station in memory blocs**

Middle part

- **Time of last backup of the data of the station**

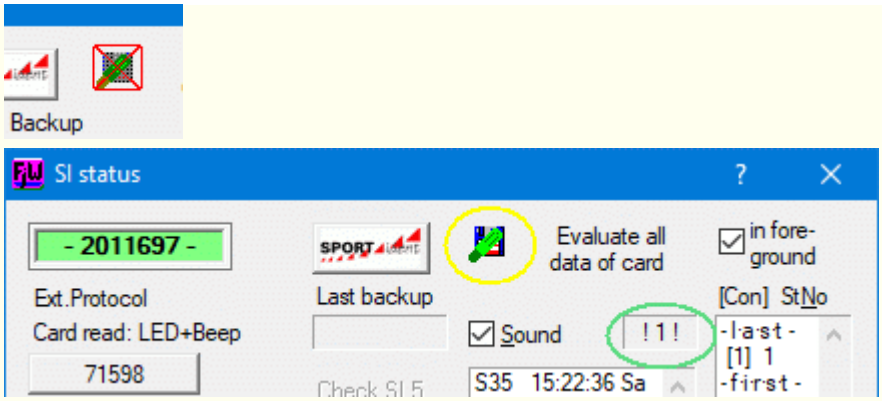
- **Data of last SI chip read (time of check, start time, finish time, SI chip ID, start number)**

Right part

- **In the left list box the time stamps of the SI chip are displayed (!never! converted to real times with the help of the begin time) and the station number of the transmitters**
- **In the right list box to each SI chip number the related competition number and the start number of the TLN file are displayed. The latest card read is at the top.**
- **Checkbox *Sound*: If activated each time a SI chip is inserted into the station or drawn out of the station a sound is played.**

Upper part
The following symbols and writings are not displayed in normal operation:

- **Blinking SI logo encourages to make a backup with *Erase station after backup* of the data of the SI station. When the capacity of memory is reached, all older data will not be available. This warning is displayed if the memory is filled up to 90%.**
- **As long as data is read from the SI station a small animation is running red border).**
- **If the SI chip read cannot be attributed to any competitor an acoustical signal is activated (4 times the Windows system sound "Question"). The background of the list box with the time stamps is cross-hatched in red and beside the green border the total number of not attributed cards is displayed.**
- **A small icon showing a diskette and chip is displayed if the time stamps are saved to the related KOR file (yellow border). If the stamps are not saved the icon is gray with red cross.**
- **If data is received from a SI card or on the serial interfaces B/C for which no competition is found where it can be assigned to a registered participant, this icon appears:**



Lower part

- **If on COM-B or COM-C the reception of transmitter data is activated those competitors, who logged in a start, finish or a transmitter station are displayed in the box. The following information is displayed: SI-station-number or "Start(3)"/"Finish(4), SI-card number, name of the competitor (if it is found using the SI-card-number) and the DOK. The box can be enlarged in order to see up to 200 time stamps.**

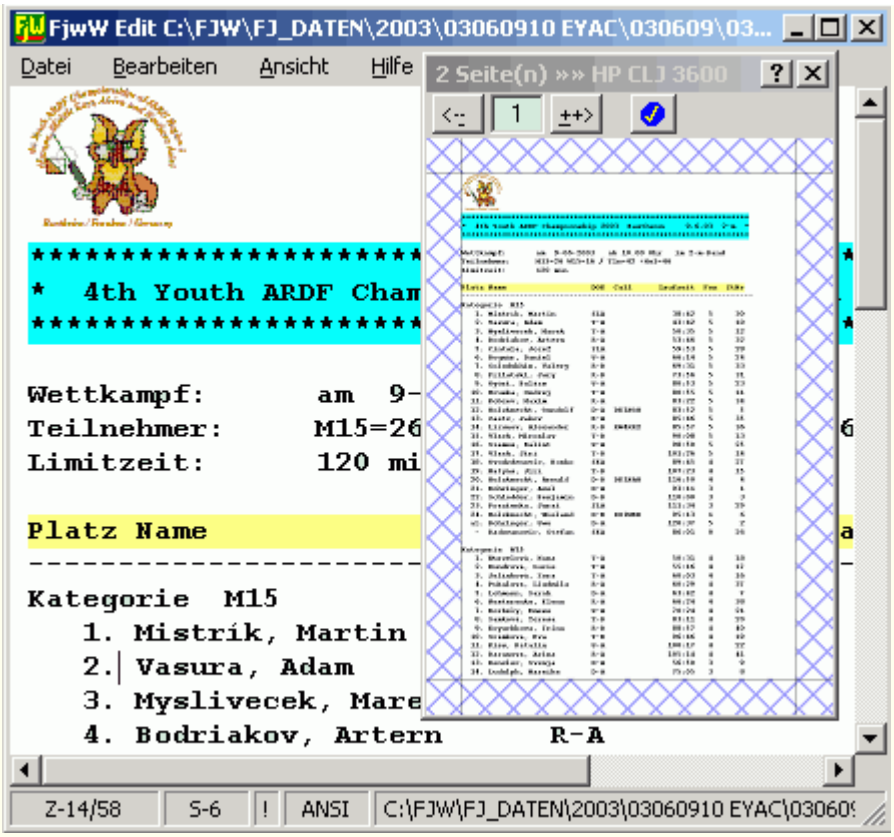
Remark: The sounds are only played if they are activated on the PC (Windows system sounds).

The Text/Edit window

This window represents a **full editor** with various functions:

- The editor is able to load RTF files with embedded pictures, is able to insert, remove,
  change (in size) pictures in TXT/RTF (then to save as *.RTF) and define the text background
- More possibilities to edit (compared to programs like Notepad/Wordpad)
- Support of shortcuts for quick editing
- Context menu when clicking with the right mouse button (equals the menu ***Edit|...***)
- Search and replace of portions of strings, go to a given line number
- Display of actual cursor position (line/number of lines – column)
- Extended undo and redo functions
- Opening and saving of text files in format (TXT) or Rich text format (RTF)
- All windows compliant formats for font and colors
- Drag&Drop of selected texts
- Print with background picture(s)
- Zoom within the editor window, correct print preview

Example for insert graphic, setting color of text background and print preview.



This editor is also used for displaying the lists (when this option is activated). By this the printouts can be reformatted before they finally are printed.

The editor window can be brought to the front by pressing **`Ctrl+F5`** if any other FjwW window has the focus.

Since V10.10: with the Shortcuts **`Ctrl+Alt+E`** or the command line "FjwW /E" the editor of FjwW can be start quickly, as often as you like and using for displaying and editing of arbitrary text files.

If the LOG file is displayed via ***Extras|LOG File*** or via **`Ctrl+G`** the background is light grey and the content can not be changed. The cursor automatically jumps to the last lines of the file.

The menu of the editor

File menu

- ***New*** *Shortcut Ctrl+N*
  Creates an empty file of the same type as the last file (ANSI / UTF8 / UTF16 / RTF).
- ***Open*** *Shortcut Ctrl+O*
  Opens a file to be displayed or edited. UTF8, UTF16 or RTF files are recognized automatically by its content of first characters in file. The background is changed to light blue for RTF files.
- ***Save*** *Shortcut Ctrl+S*
  Saves the file with the same name.
- ***Save as*** *Shortcut Ctrl+Shift+S*
  Allows to save the actual file with a new name. When file is a text file of ANSI, UTF8 or UTF16 format, the format of saved file can be changed.
- ***Save as RTF***
  A text file (ANSI / UTF-8) can be saved as a RTF file. This is needed if font formatting or picture insert was used on a text file. These formatting are lost when saved to a text file.
- ***Print*** *Shortcut Ctrl+P*
  Allows to print the whole document or single pages with the same formatting as displayed in the editor window.
- ***Print with Picture***
  The printed pages can be enriched with a watermark in several positions of the page (corner/center), independent of adjusted margins. The transparency and the largeness of the related picture (BMP-/GIF-/JPG format) can be set up as needed. An example is shown ***here***.
- ***Print Setup***
  The margins and paper format are respected when printing. If ***View|Row/Word Wrap*** is not activated the lines are cut after the maximum length of the line has been printed. The additional characters are not printed.
  If the margins are set to values below those which the printer supports these values are changed to the minimum which is supported by the printer.
  When the print option is first used the initial values are taken

from the ***INI file***.
[Edit]
; printing margins for top, bottom, left and right in mm
mTop=10
mBottom=10
mLeft=15
mRight=8

- ***Quit***

Edit menu

- ***Undo*** *Shortcut Ctrl+Z*
  The last change are revoked. Can be used multiple times.
- ***Redo*** *Shortcut Ctrl+Y*
  Reestablishes the previous status. Can be used multiple times.
- ***Select all*** *Shortcut Ctrl+A*
- ***Cut*** *Shortcut Ctrl+X, Shift+Entf*
- ***Copy*** *Shortcut Ctrl+C, Ctrl+Einf*
- ***Paste*** *Shortcut Ctrl+V, Shift+Einf*
- ***Find*** *Shortcut Ctrl+F*
- ***Replace*** *Shortcut Ctrl+R*
- ***Go to Line***
  After inputting a line number this line is selected.
- ***Font***
  The font for the selected text is changed. If no text is selected the font is used from the position of the cursor on.
- ***Last Font apply***
  The last used format is applied to the selected text.

View menu

- ***Row/Word Wrap***
  If ***to width of window***
  is selected the wrapping is done depending on the size of the editors window.
  if ***to width of printing page***

is selected the wrapping is done depending on the settings of the printer ***File|Print Setup***.

- ***Print Preview***
  The windows displays the page as it will be printed according to the settings made in ***File|Print Setup.***. Changing the settings updates the content of this window(-s). With this possibility it can be checked which settings are the best to make the text fit into a page.
  In the small window at the top the page can be keyed in immediately. With **`Alt+(+)`** or **`Alt+(-)`** the next or the previous page are selected. Unhooking this option disables the preview window.
- ***Normal 100% Zoom 80% Zoom 60%***
  The display of the file is set accordingly.
- ***Main Window*** *Shortcut Ctrl+F2*
  The main windows of FjwW is selected and activated.

The Correction dialog

The correction window is used to display the data of the selected user. It also allows the change of all data.

The content of the data fields of the displayed user can be corrected immediately. The changes can be ***Save***d into the ***KOR file*** *.KOR. If not, they have to be saved into the TLN file using the menu options ***File|Contest File save*** into the ***TLN file***. Using ***Cancel*** discards all changes.

In this window the Shortcut can be used for the quick entry or modification of data. For example to enter the starting time to 12:05 only the keys **`ALT+E, ALT+T, "12  5", ENTER`** have to be used.

FjwW remembers where the operator before the last Save command and sets the input cursor, repeat again in this field. For example, the change of starting times of several participants will be easier.

Upper left part

- The picture shows the distribution of the transmitters in true scale. The background shows a grid with 500m distance. The search order is marked with lines and arrows.

Upper right part

The input of the start and finish times is easy because numbers can be separated by spaces or any other special characters!

- ***Fox No***: (0...62) With 0 transmitters the competitor is not taken into account in the ranking.
  The background is **blue**, if the time was changed manually.
  The withdrawal of the manual change can by done by entering the percent symbol **%**.

- ***Start time***: The start time must be after the beginning of the competition and before the end of the competition minus the limit time. If 0 is entered the competitor is set as **not&compl;started**. Based on the start group the start time is calculated automatically. The interval between the start groups is assumed to be 5min. This value can be modified within the TLN file at the keyword **@START_BALLOT** or via the menu with ***File|Balloting Start Times***. The background is **blue**, if the time was changed manually. The withdrawal of the manual change can by done by entering the percent symbol **%**.
- ***Finish time***: The finish time must be after the beginning of the competition and before the end of the competition. If 0.00:00 (or simple 0) is entered the competitor is set to **not compl** (not completed). The competitor is not taken into account in the ranking.
  The background is **blue**, if the time was changed manually. The withdrawal of the manual change can by done by entering the percent symbol **%**.
- ***Transmitter time stamps***: To modify the transmitter number or time it must be selected. After selection the modification can be done in the upper right field. If 0 is entered the transmitter is not taken into account anymore. All changes are saved only after pressing the ***Save*** button.
  Manual corrections in the time field can be revoked by entering the percent symbol **%**.
  Modified transmitter times are marked with a **!** after fox time.
  Other mark:
  ***** Transmitter was found but is not taken into account because it's not in the list of transmitters to be found by this category.
  # Transmitter was found more than one with a time difference > 1 minute
  + The timestamp is out of the range of the start and finish time (must be checked)
  ? Timestamp is not valid (must be checked)
- ***For all time stamps***: In competitions over two days an **a** attached to the time indicates a time from the second competition day.

Center part

- ***Name, First name*** are rejected if another competitor with the same data already exists within the same competition. Name and first name are bind together as Name, first name und limited to 36 characters.
  To learn more about the structure of the name ***see***
- ***Club*** (also useful for country data) is an additional field for the competitor data. It is used to build the team or district result lists.
- The ***Group*** filed allows the result evaluation for a subset of competitors. As an example this field can be used to evaluate the results separated by domestic and foreign competitors of the competition.
- ***Chip No*** of the SportIdent card (4...7 digits). If this field is changed all the time fields are first deleted and then reread from any related KOR/DAT file. The card number can be marked as 'Rent chip'. Lend cards are marked with an asterisk in many lists and displays.
- ***Bonus*** Time bonus in minutes, negative values extend the time; in the results list, the change is indicated by a plus/minus sign (+/-) after the time.
- ***Status*** sign marks the competitor as being a 'Peilmeister'. This sign is used to calculate the German diploma points in the result list.
- ***Abandonment*** The competitor will be not placed and not display in the list of at finish expected competitors; when the competitor have a finish time, the 'Abandonment' is reset.
- ***Disqualification*** The competitor will be not placed and not display in the list of at finish expected competitors; disqualification will be declare by the organizer/jury.
- In the ***Category*** field any combination of up to three characters can be used. If no standard denominations are used a neutral icon is displayed in the toolbar of the main window of FjwW. Anyhow the text of the tool tip shows the written text.

Lower part

- To ***Selection*** any name or start number just key in the first (or all) characters of the name or start number. Pressing cursor down key or the button of the select box a sorted list of the competitors of the competition is displayed. The wanted entry can be selected and the data of this competitor are displayed.
- ***OK*** or ***Apply*** saves all changes to disk. After **OK** the window is closed, after **Apply** further changes can be made or another participant can be selected.
- The window can be left with ***Close*** or **ESC** if no unsaved changes exists. In any other case a confirmation is requested.

To open up right part

- After clicking the button **<<<<--->>>>** the right part of the dialog is expanded (or closed) to include a list box. FjwW searches the KOR/DAT file for the SI chip number of the participant shown in the dialog. In this way, all time data read from the SI chip is processed in an understandable manner.
- The line above the list box explains what is displayed in the columns:
  SFF: Start/Fox/Finish data are in the line
  SINo: SI station number from which the Fuchs timestamps originate
  Time: Time of the timestamp (hh.mm:ss)
  Date: Date of the timestamp (dd/mm/yy)
  Line: Line number of the KOR/DAT file where the timestamp can be found
- The data rows are highlighted in color.:
  yellow Comment line showing the time the timestamp was received/read.
  green Valid timestamps that will be used for the participant's scoring.
  <>- <>- <> This line indicates that there is a time jump backward between the previous and the next data line. Timestamps are stored sequentially in the SI chip, and are also read and written to the KOR file in this manner; therefore, valid timestamps for a competition must be sequential. This case

could, for example, indicate that the SI chip was not erased before the competition. **blue** Manual correction of a timestamp

The Registration dialog

In this dialog the following actions can be done:

1. Manual entry of the necessary data of a competitor and insertion to one or several loaded competitions.

2. Selection of a competitor from a previously loaded name data file. The selection can be done by entering the name+first name (or parts of it), card number, club or call. All entries can be modified.

3. Automatic selection of a competitor from a previously loaded name data file by reading the SI chip which corresponds to the competitor. The chip can be marked as "lend".

4. Quickly find a subscriber belonging to an unknown SI card number.

5. Update, addition, comparison of entries in the name data file including saving to a new file.

One or more Name list(s) can be load with drag&drop to the registration window. The name, in one process loaded name list(s), FjwW stored in the registry and loads the Name list(s) again when you open the dialog again.
At storing all contained entries, also inserted entries (button + ***New***), will be saved in a new file.

Details for 1.

Enter all data for the competitor in the upper select box. Indicate a ***Start No*** (or use the ***Vacant No*** button) and ***Insert*** this competitor into the actual selected competition. The competition is indicated in the windows title bar. Any errors are indicated. The SI chip can be marked as "lend". Lend chips are treated specially within the program.

Names should preferably be entered as '**Lastname, Firstname**' or '**Firstname Lastname**' *see*

If a competitor is inserted with a category that does not yet exist and there is already a fox list for the category " " or "kK!" (no class rating) was created, this fox list will be assigned to the participant.

After changing the actual competition the competitor can also be inserted into this one. Please keep an eye on the selected competition if more than one is loaded. You can avoid problems with this carefulness.

To select the wanted competition it can be choose by using the *Shortcut* **`Ctrl+Shift+1..9`** (for the first nine competitions) or by using **`Ctrl+Cursor down`** or **`Ctrl+Cursor up`**. By this way you can easily insert one competitor to several competitions you're preparing.

Details for 2:

The better possibility to insert competitors to a competition is to use a name data file or any TLN file or a CSV file (created with TLN key words). In this case a competitor can be selected from the already existing entries within this list. Several data files can be loaded if the ***Append*** is checked. All data from all loaded files are sorted alphabetically within the select boxes. Competitors can be easily found with the four select boxes. They can be modified and inserted to the actual competitions as described in 1.

The name of the last loaded files are saved on closing the dialogue in the registry. When reopening the dialog, also after re-start FjwW, they are loaded immediately.

To find a competitor using the name you can proceed as follows:

- Open the select box with the button or just press **`Cursor down`**. Key in the first character(-s) of the name. The

list is updated with every character keyed in. Mark the wanted entry by pressing **`Cursor down`** and **`ENTER`** or just click on it.
- Key in the first characters of the name and press **`Cursor down`**. The select list is opened and the available entries are displayed in alphabetical order. Mark the wanted competitor by pressing **`Cursor down`** and **`ENTER`** or just click on it.
- If a participant has been selected and has more than one card number (ie a **SI????/?????** in the comment field), only the card numbers used in the chip selection box will appear, from the one can be selected. With "Show all SI" in the first entry, the card numbers of all participants can be displayed again.

Details and examples for a loadable ***Name data file***.

Details for 3:

The registration of the competitors can be speed up by reading the SI chip and searching within a name data file. To do this the following preparations must be done:

- Connect a SI reading stations to the serial interface.
- Activate the interface in the menu ***Interface|SportIdent***.
- Open the windows ***Edit|FH/Hlp Registration*** and load a name data file with the button at the left (for example the supplied **NameList?.txt**).
- Check the checkbox ***Chip-Registration***. If the background is **green** everything is ok. If the background is **red** the SI station is not ready. If the background is **blue**, the SI station is not programmed as a read station.

After reading the SI chip the checkbox ***Chip-Registration*** becomes unchecked and the data of the related entry of the name data file is displayed. If the data is not the data for the competitor it can be modified or another entry can be selected (see Details for 1). The SI chip number read can be taken over with the small button at

the right. If the SI chip has not been cleared, the number will be **red** or **white** (when cleared) in the background. When all data are complete ***Insert*** has to be clicked.

To register the next competitor the checkbox ***Chip-Registration*** has to be activated again.

If a chip has be read in the time the previous entry was treated, the card number is used immediately when the checkbox is activated. You can see that a chip was read in the ***SI status window***.

In the menu ***Interface|Display results*** in the area ***Display*** the entry ** ***Registration*** ** can be chosen. If this is done the data of a new competitor is sent to the DisplayPC immediately after he has inserted his stick into the SI registration device as long as his found in the NameList. If corrections of data have to be done in the correction window they are not automatically updated on the DisplayPC after pressing enter. By pressing the update on the DisplayPCs can be forced. After inserting the competitor the last five registered users are (re-)sent to the DisplayPCs.

For further details about the sending of data to the DisplayPCs ***see***

Details for 4:

If an unknown SI chip number is read at the finish the data is shown in front of a hatched background in the ***SI status window***). When activating the checkbox for ***Chip Registration***, the data of the related competitor is displayed if he's known in he file (of course a data name list has to be loaded).
To register a participant, the **Chip Registration** must be activated. After reading the SIchip, the corresponding participant will be searched for and displayed in the list(s) of names (if available) and can enter the current competition be inserted. If another SIchip is already read out with ***Insert*** before adding it to the competition, this

previous SIchip will be inserted into the window **'Unregistered SI chips, CTRL+Q'** inserted and can be edited later with a double-click.

Details for 5:

Append: load the name data file which should be updated; enlarge the window using the ***<Special>*** button; activate the checkbox ***Append***; load the TLN file of the competition which contains the competitors to be added; activate ***Merge*** and then ***Search*** for entries with inconsistent data to correct them. The number of entries is always displayed at the lower left corner.

The modified name data file can be saved after these corrections.

Update: Select the competitor to be updated or choose the first entry (**__neu_new__**) in the upper select boxes, the data are displayed in the fields in the middle part also. Checking ***Edit*** activates the fields. Using ✓*update* accepts the changes. With ✗*delete* the entry is completely deleted and with ✚*new* the entry is added to the already existing entries.

If the card number is following by a plus sign (+) it is marked as lend.

Using ***Merge*** several things can happen. If two entries are identical, one of them is deleted. If two entries have the same name and the same first name and the other data are not contradictory they are completed with each other. After this one of the entries is deleted.

Example: one single entry is created based on two incomplete entries.

```
Schade, Karl-Heinz   6613   D21   DL7VDB
Schade, Karl-Heinz                DL7VDB   1950   M60
-------------------------------------------------------
Schade, Karl-Heinz   6613   D21   DL7VDB   1950   M60
```

Using ***Search*** searches for entries with identical card numbers. Corresponding pairs are displayed in the upper select boxes and the

entry fields in the middle. Identical calls or card numbers are marked with **== == ==**.

Examples:

```
Stein, Jens          6310   B01   DL8KAN   1964   M40
                     == ==
Voit, Günter         6310   B11   DK1SC           M60
```

If two competitors have the same name and first name and differing other data they are marked with **<> <> <>** in addition.

Example:

```
Biehl, Dieter       411791   M25   DK8LU   1950   M60
 == == == ==       <> <> <>                <> <>
Biehl, Dieter       235677   M25   DK8LU   1951   M60
```

Afterwards the name data file can be saved again. The competitors are sorted alphabetically. Each data field is separated by a tabulator. Also the existing and new comments for each competitor are saved.

While reading the name data file the year of birth and the category are tested. When a regular IARU category is encountered the year of birth and the category must much (based on the actual year). If they don't match a question mark indicates the mismatch. Using ***Search*** these competitors are displayed and a manual correction can be done. Details about the IARU categories can be found here: ***category designations***.

More details can be found in the ***FAQ-9 section***.

The Ballot starting sequence dialog

Before raffling the start times the following information are required:

1) How to treat the start times already set (manual or automatic); only if not all start times have been set the raffling can be done

2) Distribution of the competitors of each category within the number of start groups set in **3c)**.

3a) Maximum number of competitors of one category who will start in one start group. The default value is 1.

3b) Maximum number of competitors who will start in one start group (regardless of the category!). The default value equals to "number of categories * number set in **3a)**".

3c) Total number of start groups. The number cannot be reduced below the necessary number of start groups.

4) Balloting the participant of all categories or of a chosen category.

5) If the participants should not be ballot with start times from the competition-beginning time, the first (earliest) start time can be changed within competition beginning till the competition end minus the limit time.

6) 'Pseudo-categories' can be made up of several categories whose participants are treated like those of a category when they are ballot. If **3a)** =1 is selected, more than one participant from these categories will never start in the same starting group.

The settings must be done in the given order because they influence each other. For the given settings the latest start group is displayed.

The interval between the start groups can be set individually. The default value is set to 300sec=5min or 120sec=2min.

The distribution of the competitors of each category can be choose as being followed ***in all*** or ***in first only*** start group after the ***First***

start time. Selecting ***Mass start*** sets the start time of all competitors of selected category(ies) to the 'First start time'.

Raffling can only be done if competitors without a start time exist. If necessary the already existing start times can be deleted by checking the ***Existing start times deleting*** checkbox. If this box is checked it can be decided if ***all*** start times should be deleted or only those which where previously ***balloted***. Only the times of competitors of selected category(ies) will be deleted.

If ***Existing start times deleting*** is not selected the existing start times are taken into account as long as they are within the first and the last time displayed in the upper right corner. Start times outside these boundaries do not influence the raffling. Start groups can also be set manually. In the case that the number of competitors per category is already reached or exceeded no more competitors of this category are added to the starting group.

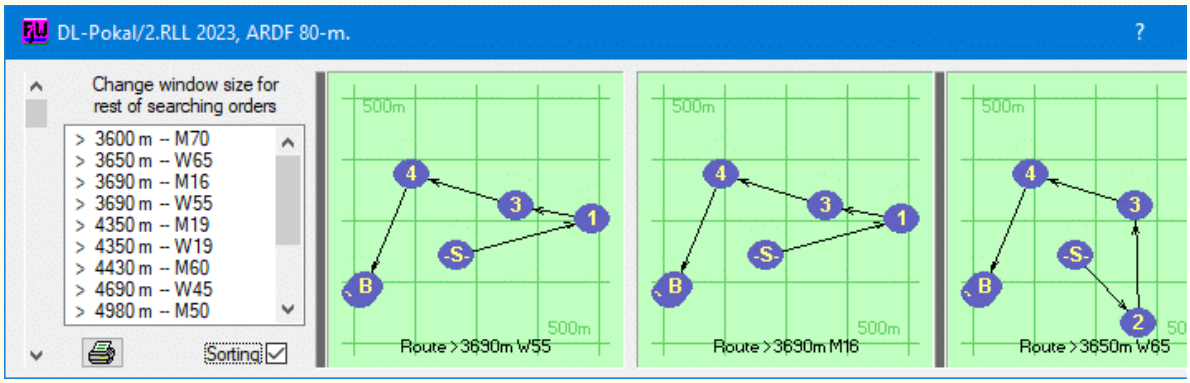
In the lower part a set of categories can be combined as "Pseudo categories". Competitors within these pseudo categories are treated as being within the same category. Competitors within the pseudo categories will not start in the same start group unless the maximum number of competitors of one category is larger than 1. The number of competitors within the pseudo category can have an influence on the ***total groups***.

The raffled start times are written to the KOR file immediately. The KOR file has the same name as the actual TLN file. If it already exists, the times are appended to it. If the KOR file does not exist it is created automatically.

Pressing the button ***Start order*** shows the start group distribution of the competitors in a table and give the possibility for simple change the starting order. Details can be found in ***FAQ-8***

The Search order window

In this window the optimal search orders for all categories are displayed. By scrolling or enlarging the window more than two categories can be displayed. In the upper left part of the window the minimal distances per category are displayed. The list is ordered by the length of the tracks.



All graphics can be printed on a chosen paper format.

For each category the shortest track in a straight line is displayed.
If **Sorting** is activated, the identical search sequences are displayed one after the other and delimited by black vertical stripes.

Because of an algorithm to investigate the optimal searching order of **Keld Helsgaun (keld@ruc.dk)**: An Effective Implementation of the Lin-Kernighan Traveling Salesman Heuristic
Department of Computer Science, Roskilde University, Roskilde/Denmark there is no longer this restriction.

If the location of the transmitters is changed within the competition window the optimal search orders are recalculated and refreshed immediately.

The Result display dialog

In this window several settings can be done concerning the sending of results, registration or finishing data to the display PCs. There is running program **FjwWdispl** ~~(or **FJWDISPL** on DOS-PCs)~~.

The data which should be displayed can be sent over three different serial interfaces and/or three different LAN ports. There is no interaction between the DisplayPCs and FjwW. FjwW is sending all data as a UDP broadcast.

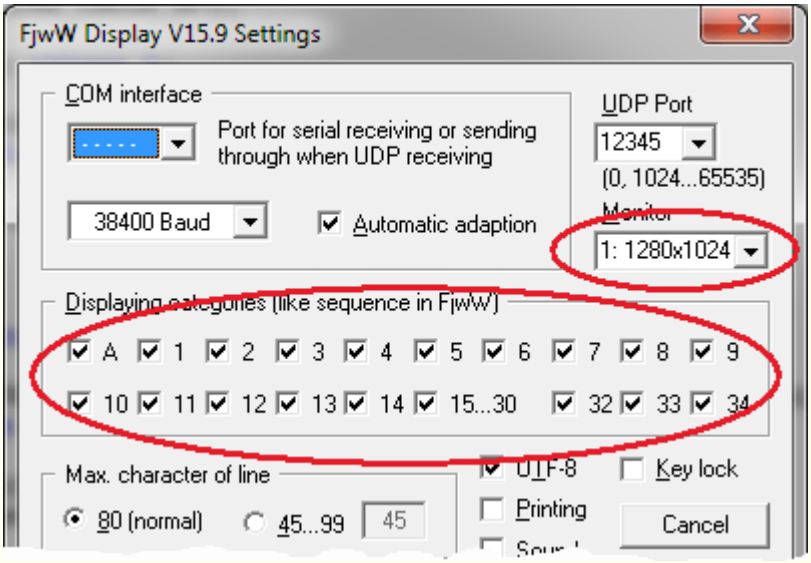
For each of the three port-groups one serial port can be selected and/or the fixed LAN port related to each entry can be activated as well as the type of data to be sent. The first LAN port is specified in the INI file via **UDPport=12345**. Beginning from this first port five ports will be used. If ports are already used in the network it can be changed in the INI file. FjwW must be restarted to take the changes into account. With using of WLAN for data transfer to DisplayPCs it can be sensible to increase the delay time while sending the data in the INI entry **UDPdelay=**.

The data is displayed on those display PCs connected to the related serial interface or which are "listening" on the defined LAN port. The LAN port must be choosed when executing FjwWdispl.

Since the FjwW version 9.11 a check sum is calculated for the displaying data of every category and is transferred with. If this data in FjwWdispl are received incorrect by test of the check sum, the category will not be shown (required also FjwWdispl since 9.11).

Each page sent by FjwW has an ID number. When starting ~~FJWDISPL and FjwWdispl~~ the pages to be displayed can be defined by these ID numbers.

In **FjwWdispl** this will be entered in first dialog, only 14 categories can be chosen individually, more can be choosen by 15...30 and



about the command line options (see below).

If there are several monitor outputs, the monitor can be choose in the combo box at right.

The combo boxes for the COM interface and the UDP port contain only the port numbers that are available. For the UDP port any port number >=1024 can be entered manually.

ID numbers of the pages with the **current result lists** (set display width to 80 characters per line or more when starting FjwWdispl). See ***example 1*** for a foxoring with a big amount of transmitters.

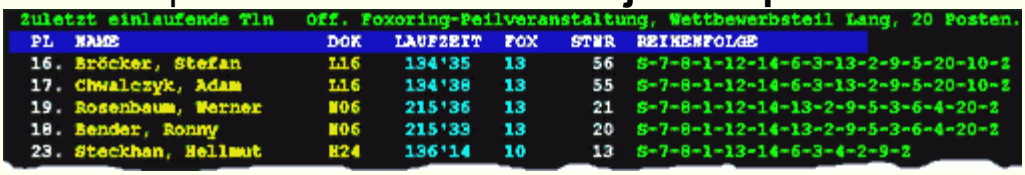
- 0 = arrival list of competitors (**A**)
- 1 = first category in FjwW (e.g. **W19**)
- 2 = second category in FjwW (e.g. **W21**)
- .....
- 11 = ninth category in FjwW (e.g. **M70**)
- .....
- 30 = last category supported by FjwW

ID numbers of the pages with registration or finishing data. (recomendation: set 45 characters per line when starting **FjwWdispl**)

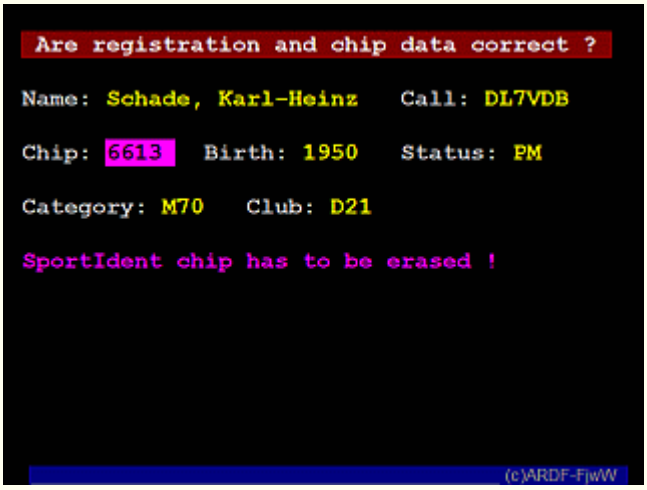
- 32 = data when registering via SI chip registration (see ***example 2***)
- 33 = data of the last five registered competitors (see ***example 3***)
- 34 = finishing data which was read out of the SI chip (see ***example 4***)

For more details concerning the display of data using display PCs *see*

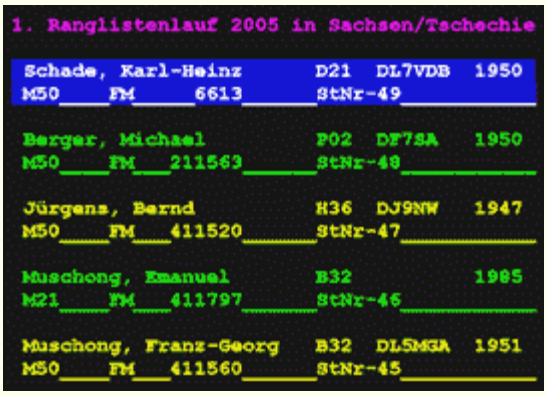
Characters per line was set to 99 in **FjwWdispl**



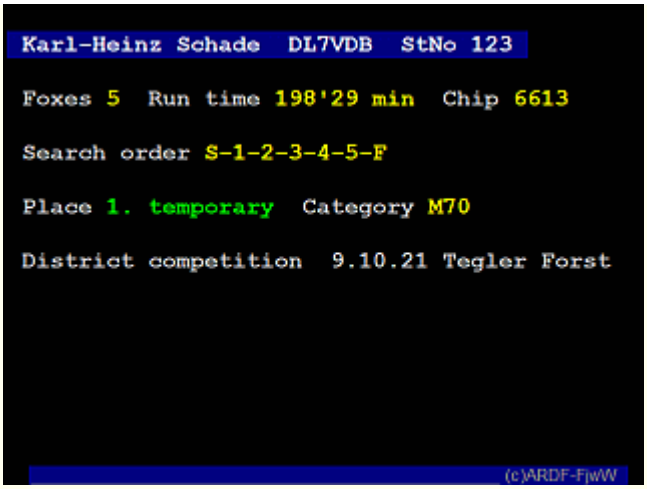
example 1



example 2, column width 45



example 3, column width 45



example 4, column width 45

The Finish timekeeping dialog

The time tacking window is always kept in the front. By pressing the **`space bar`** or by a mouse click the current time shown on the screen is stored. The stored time and entered number of transmitters is attributed to a competitor by entering his start number or by selecting him.
Before using this functionality the time of the PC should be checked. If it's not in line with the time taking stations it should be corrected.

The times, which are stored are kept on a stack. The latest time is on the top. The former times are below in the list. A maximum of 10 times can be stored in order to be attributed to the competitors. If more times are taken, the oldest ones are lost. The times can only be attributed to competitors of the selected competition. If more than one are loaded the right one has to be selected before attributing the times. If the current time is outside of begin and end of selected competition the background of label ***Start No Name*** becomes the color **red** .

The button on the top, which is displaying the actual time, is used for the manual time taking. The button is active if the characters are shown in big and upright characters (it has the focus). **Attention:** The time is taken when the space bar is released! Therefore press it only for a short time. Using the mouse, the button can be clicked for time taking at any time, even if the characters are shown in small, italic characters. **Attention:** The time is taken when the mouse key is released!

By taking the time it is stored on top of the time stack. Using the **`TAB`** key or by a mouse click the input field for the start number can be selected in order to attribute the time as finish time to a competitor. At the same time a drop down list is displayed beside the input box. This list shows all competitors not yet finished. Either the start

number of a competitor can be entered or he can be selected out of the list by clicking with the mouse or by typing the first letter of his name. The **cursor down** key can be used for selecting a competitor. By clicking on **OK** or by pressing the **ENTER** key the finish time and the entered number of transmitters is attributed to the selected competitor.

The structure of menus

The main window Additional help is available by clicking the elements of the window !

- ***File*** menu
  New competition; TLN competition file read;
  KOR correction file read; DAT data file read; Competitors from TLN import; Competitors from CSV; Competitors from CSV (INI keys); SI.ReaderUI CSV read; EDAD read; Balloting start times; IARU-R1-ARDF-WG Balloting; Save competition file; Save competition file as; EDAD save; Main window as file; Options; File display/edit; Last file display; Show in HTML window; Recent TLN/EDA files; Quit;
- ***Edit*** menu
  Correction FH/Hlp data; Search FH for unknown chip; Color signalize; Copy time stamps from; Set FH out of competition; FH/Hlp move to deposit; Line move to competition; Copy in an other deposit; Marked line delete in deposit; Complete deposit remove; FH/Hlp registration; Starting order;
  Quick searching; Competition remove; Category to the front; Category to the back;
- ***Results*** menu
  Options of lists; Not eval in categories; Single rating; Team rating; Run time list; Search graphics; Individual lists; Finish ticket; Start; Special; Certificate series print; Cup rating; Multi team rating; RLL rating (GER); Club rating (ROM); Special; Multi list, FTP
- ***Interface*** menu
  SportIdent interface; Backup/Display data; Station programming;

Result display; DisplayPC clear, send again; Transmit to ORGEO-Live; Transmit results as JSON; Start signal; Speech output; DCF/GPS synchronization; Automatic feature start; Manual finish timekeeping

- ***Extras*** menu
  LOG file; Show LO&G/TLN/HTTP/FTP path; Cyclic backup TLN/KOR; Opt. searching orders; Announce name & call; Several FjwW instances; Associations with FjwW; Save settings; Show/edit INI file; Own HTML display; Language program;
- ***View*** menu
  Comp. data Window; SI status Window; Registration Window; Text/Edit window; HTML Window; Refresh; Font in main window; Optimal column width; Runtime as hh:mm:ss; FH still on the way; FH finished; Not registered SI chip; Helpers; FH/Hlp deposit; Next category; Previous category; Next competition; Previous competition;
- **Help** menu
  Content; Search; Last info; About FjwW; Contact; Bug Report; Version check
- **?** menu
  Context sensitive help

The File menu

Read

New competition *Shortcut Ctrl+N*

There are three possibilities to create a new competition

- Competition creation with some default values
  Some data of the competition are set to default values. These values should be corrected immediately (for example the competition date) and the missing data should be added in the competition data window.
- Competition creation from content of clipboard
  The TLN file can be created with applications like **Word** or **Excel**. Before the data can be used in FjwW it has to be copied into the clipboard. If no errors are encountered a TLN filename is build based on the date of the competition and the band.

- Competiton creation from (default)TLN file
  It may be the TLN file of another competition or a prepared (default)TLN file to be used.
  An option also allows the import of the participants in this TLN file.

The TLN file name consists of the date of the competition and a serial number which starts with 1 for every new day. The proposed file name can be changed in the dialog.

Using ***Edit|FH/Hlp Registration*** the competitors can be added to the competition. The data must be saved with ***File|Save competition file*** or the keys **`Ctrl+S`**. The TLN file automatically receives a name (year-month-day-serial number) and is also emerging as the KOR-/BAK files in the log directory under FjwW or in the directory, which can be

File|Options|Path for new competition (the path must be writable!).

TLN competition file read *Shortcut Ctrl+O*

The TLN file (*.TLN) contains all relevant data about the competition and the data of the competitors. If an error is detected the reading of the file is stopped. A message box shows the type of the error. In the log file the line with the error is indicated. The log file can be displayed with **`Ctrl+G`**. If the option
Data to TLN automatic read is activated the related KOR- and DAT-files are loaded automatically (for example: After opening **020317.TLN** the related files **020317.KOR** and **020317.DAT** are loaded).

Up to 32 competitions can be can be loaded one after the other. All loaded files can be used for summary evaluations. The content of a TLN file is explained with the example of a ***TLN file***.

The character coding of file can be **UTF-8** or **UTF-16**.

KOR competition file read *Shortcut Ctrl+K*

If for the loaded TLN file corrections within a KOR file do exist, this file has to be read as well. The KOR file is always joined to the actual competition. The actual competition is displayed in the left part of the status bar or in the toolbar.

A KOR file with the same name as the TLN file but with the extension KOR is created when corrections are made to the competitors or if the start times are raffled. If the KOR file already exists the data is appended to this file. For FjwW only one KOR file exists in which the manually changes and readed SI chip data is written. After opening and reading a KOR file using this menu item all subsequent SI chip data is written to this file (attached).

Example of a ***KOR file***.

DAT data file read *Shortcut Ctrl+D*

The time data originated from a start/fox/finish station can be read from this data file. The result list is updated with these time data. The DAT file is always joined to the actual competition. The actual competition is displayed in the left part of the status bar or in the toolbar.

If an error is encountered the reading is stopped. At the end of the log file the line with the error is indicated.

Competitors from TLN import...

Competitors contained in a different TLN file than the current one can be included in the current competition as long as the competition does not contain any competitors.

Competitors read from CSV...

Additional participants can be added by importing a CSV file to the current competition. The file must contain the first line the default key words. ***see***
The character coding of file can be **ANSI**, **UTF-8** or **UTF-16**.

Competitors from CSV (INI keys)...

Participants can also be added to the current competition by reading a CSV file. The first line of the file must contain the accordingly keywords that are in the INI file under **ReadUserCSVger=** or **ReadUserCSVenu=**. The data in the CSV file can come from an online registration portal, for example.

SI.ReaderUI CSV read...

The software "SPORTident.ReaderUI" (see ***www.sportident.com***) is able to store readed SI chip data in a CSV file.
FjwW is able to read in this data. A short example here:

```
EventId;SI-Card;CN;Mode;Source;DayOfWeek;PunchDate;PunchTime;No;Cnt
1;1300076;;STA;RDO;2;2000-01-01;13:28:00;0;3;
1;1300076;31;CN;RDO;2;2000-01-01;13:56:44;1;3;
1;1300076;32;CN;RDO;2;2000-01-01;14:16:33;2;3;
```

the contained date **PunchDate** is without any meaning. A data line is only used if **DayOfWeek** corresponds to the weekday (Su...Sa=0...6) of the competition day. The day of the week is set to '7' on the SIcard5 and is replaced by the day of the week of the competition when it is imported. When the competition is reloaded, the CSV file must also be read in again.

EDAD read...

A file with the EDAD format is opened. The EDAD file contains all necessary data of a competition if it was created with FjwW. It contains all relevant data from the TLN, KOR and DAT file.

With the EDAD file the competition can only be used for **offline** analysis and result evaluations. No additional data can be read from SI stations. All results can be displayed or printed. Data of the competition or the competitors can not be modified.

With the program **EDADcheck** files not coming from FjwW can be tested.

Special

Balloting start times...

With this the start times of competitors can be raffled. The repartition into the start groups can be displayed immediately after raffling.
For details *see*

Team balloting (RUS)...

In Russia there is a special way of balloting the starting times. The participants of a team in each category should be started as far as possible. Obviously, it is intended to hinder or prevent possible cooperation between the team members. In each case a random

participant of the teams form a starting block, the next block is formed with another random participant from the teams ***see***.

IARU-R1-ARDF-WG Balloting...

With this the start times of competitors can be raffled concerning the rules of the IARU-R1-ARDF-Workinggroup. This will be used on World-/Region1-/EYAC-Competition.
For details ***see***

Save

Save competition file *Shortcut Ctrl+S*

The file containing the competitors data is saved with all its data as TLN file (always as UTF-8). The existing file is overwritten.

Saving is only possible if updates have been done. If an EDAD file was loaded it can not be saved as an TLN file.

Save competition file as *Shortcut Ctrl+Shift+S*

Using this option allows to save the TLN file to a new file. Depending on the ***Results|Options of Lists*** choice it is possible to:

- create another TLN file for the same competition
- create a TLN file for the next day (entries marked with ***#?*** must be changed usually).

The filename must be different compared to the actual competition.

Comments which did exist in the original file are not saved to the new one. The character set of the saved file always is UTF-8. The data columns are aligned with the related headline. To align the columns spaces are used (not tabs).

EDAD save

A file containing the results written to the disk. The format of the file is EDAD V2. This format is a human readable format which is secured by a checksum. It is used to exchange results with other persons.

Within the EDAD file all data about the competition is saved. The character set of the saved file always is UTF-8.

The saved file can be checked with the program **EDADcheck**. This program tests if all mandatory information are available in the EDAD file and it calculates a checksum (check of data integrity).

Main window as file...

The table shown in the main window (categories, 'On the way', 'Finish reached' will be stored in a HTML or CSV file.
For HTML: The order of the columns and a selected column sorting be issued. Very slim/invisible column does not appear in the output; a column that was clicked for sorting, but always appears.
For CSV: Well suited for further processing in EXCEL.

Options

Options

Data to TLN automatic read

After loading the TLN file the program searches for a KOR and DAT file in the same directory. If they are found, they are loaded in the given order.

Save competition BAK file

A BAK file is created for the loaded TLN file.
TLN BAK file: If activated a BAK file is created under the following circumstances:

- After one minute if changes have been done which can not be saved to a KOR file. Examples are: Adding a competitor,

changes to the list of transmitters, changes of the card number, ...
- When finishing FjwW without having saved the modified data before

The filename of the BAK file is deducted from the filename of the TLN file by adding the extension **~.bak**. Example: **050119b1.tln** becomes **050119b1.tln~.bak**.
This option is helpful if the user forgets to save the TLN file or the program crashes. In this case (almost) all data can be found in the BAK file. In this case the original TLN file must be deleted (or renamed) and the BAK file must get the name of the original TLN file. When path of stored BAK file is unknown, it is possible to search with name **.tln~.bak** to find the file.
The existence of an BAK file is indicated in the status bar of the actual competition. The status bar shows an icon and the tool tip of this icon reveals the filename.
If the TLN file is saved via ***File|Save competition file*** the BAK file is deleted and the icon disappears from the status bar.

Directory for LOG/TLN/(HTTP/FTP) files

Working with FjwW requires a directory in which temporary files can be written:

- for saving the LOG file
- for saving the TLN files of newly created competitions
- for storing the TXT/HTM/GIF/... files in directory **HTTP** provided by the HTTP server to the browser
- for storing the TXT/HTM/GIF/... files in directory **FTP** provided for the FTP client to upload

When FjwW is started for the first time, Windows provides a writable directory that is located in the user directories. It can be changed with no contests loaded. The directories HTTP and FTP will be created when they are required.
The keywords **HTTPpath=** and **FTPlocalPath=** in the INI file no longer have any meaning.

Display/Editor

File display/edit... `Ctrl+E`

A file can be choose within a file select box. The file is then displayed in the editor of FjwW. It can be modified, saved and printed. The editor can handle normal text files and simple RTF documents.
See also

Last file displaying `Ctrl+L`

The file which was create or loaded as the last one is displayed.

Recent TLN/EDA files *Shortcut Ctrl+R*

Up to the last TLN / EDA files loaded with FjwW are displayed. Selecting one of them allows the quick loading of this file. **`Ctrl+R`** loads the most recent file automatically.

Quit

Quits the program. If changes have not been saved or if the interface is still active a confirmation is requested.

The Edit menu

Correction FH/Hlp data `Ctrl+F7`

All important data about a competitor or helper is displayed. The dialog can be accessed by double clicking a line in the result list or if **`Enter`** is pressed while a line is selected.
For more details see ***Correction window***

Search FH for unknown chip

If a participant of the competition arrives at the finish with a chip number with which he is not registered in the competition, the chip number will appear in the "Unknown SI chips" window after reading. This menu item or a double-click on the unknown chip number opens a dialog for entering the start number, which the participant will 'hopefully' wear for quick identification. Then you can see if the unknown chip number can be assigned to this start number, name, etc.

Color signalize

A marked participant line is marked in color, e.g. to remind of an action.

==========

Copy time stamps from

When participants do not have SI chip number, possibly as the "follower" with another participant of the contest, a copying the time data (start/foxes/finish) is possible from that user. In the dialogue, the participant and the time data to be copied can be selected. All times are copied marked as 'set manually' and are saved in KOR file.

Set FH out of competition

The selected competitor can be set 'out of competition' (category set to **aK!**). All data of this competitor stay visible. Data read from files of SI stations is assigned to the competitor as usual. But the competitor is not printed in any result list anymore. However the competitor is displayed on the result list screen. All required data has to be set correctly for such a competitor (for example the list of transmitters is required). This status is supposed to be used for competitors which will be deleted later on.

FH/Hlp remove from competition `Ctrl+Del`

Participants and helpers will be removed from the current competition and moved to the depot. These participants/helpers in the depot will no longer appear in any lists., just in the deposit window **`Ctrl+C`**. However, they are always stored in the TLN file, these lines begin with the dollar sign "$" as the first character. They are thus still available beyond the competition (use, for example, in multi-day competitions in which the participants participate on different days).
The entries in the deposit are not checked for multiple identical entries, names, start numbers, ...

Line move to competition

An entry in the deposit can be pushed into the current competition at any time as a participant/helper. It is checked beforehand whether a participant with the same name, starting number and/or chip number already exists in the competition. In the window that opens, this is displayed and changes can be made.

Copy to an other deposit

An entry in the deposit can be copied to the deposit of another loaded competition. To do this, the competition must be selected first.

Marked line delete in deposit

Only a selected entry in the deposit can be completely removed from the competition.

Complete deposit remove

All deposit entries can be deleted at once.

==========

FH/Hlp registration `Ctrl+Ins`

In this dialog new competitors can be added to the actual competition. The upper data fields can be filled and the competitor is added by pressing ***Insert***. If some data is missing or inaccurate a warning is issued and the competitor is not added to the competition (examples: name already existing, no start number set, ...).

Adding competitors is easier if a name data list is used. The name data list can be the **NamesList.txt** file delivered with FjwW, any TLN file or any CSV file which was created with FjwW. The file has to be loaded before it can be used. When a name data file is loaded, the competitors can be added just by selecting them in the select box.

The fastest way of adding competitors to a competition is the using of the SI chip registration. After finding the competitor just one click is needed to add him to the competition.

For more details ***see***

Starting order

In this window the distribution of start times is displayed. The table contains the start group, the start time, the total of competitors starting in this group and the number of competitor per category. If a number in the right part of the table is clicked the competitors of this start group (line) and category (column) are displayed in the list field on the top of the window. Selecting one of the displayed lines

enables the ***New set*** of the start time or start group. The modification is marked by two **++** and **--**.

The start times can only be changed if no data from a KOR/DAT file has been read and as long as no data has been read from the SI devices (serial interface).

==========

Quick searching `Ctrl+F`

Used to search for data of a competitor when in the main window (result table). The given text is searched within the name, call, club, searching order, start number, SI card number, birth year fields. If a competitor is found he is highlighted and the line containing the search data is highlighted. ***Continue*** jumps to the next hit. If no more hits are found the search text is marked.
When choosing ***Chip-No in all loaded KOR files*** (available by entered chip number 1000...9999999) the time stamps of chip stored in KOR files of all loaded competitions will be displayed.

This option can be used to search for whole names or numbers. This can be helpful when searching for a certain SI chip number or the competitors of a certain DOK.

The search includes the activated category, the helpers of all loaded competitions.

Remove competition

In the right list field of this dialog the selected competition can delete ultimate. A competition can not be delete if modified data has not yet been saved to the TLN file or if the sending of results to a display PC is activated.

==========

Category to the front
Category to the back

The displayed category can be moved within the order of categories (front = move to the right, back = move to the left). The order of the categories is displayed in the top of the toolbar. The order of the categories is used when creating result lists or when sending data to DisplayPCs. This is specially interesting when displaying selective categories on the DisplayPC (***see*** **FjwWdispl** Option **/l**).

The Results menu

Single Rating	***Team Rating***	***Run Time List***
Search Graphics	***Individual Lists***	***Start List***
Start Information	***Start numbers***	***Finish Ticket***
Detail List	***All Fox stamps***	***Rent Chip List***
JSON File	***Certificate series printing***	
Cup Rating	***Multi Team Rating***	***RLL Rating (GER, CRO)***
Club Rating (ROU)	***Start Statistics***	***Diploma Points (DARC)***
Medal Statistics	***Participation Statistics***	***Multi list, FTP***

Options

Options of Lists

Format Setup of character sets (UTF-8, ANSI, ...) for Text, HTML and CSV lists, TLN file ...
The settings are valid for all loaded competitions.

Single Contest

Here settings can be carried out for the start/result/statistic lists of the different ratings of a single competition.
Settings for the team ranking. If defines how many competitors are part of a team and how many of them are taken into account for the ranking. The default values are **3 / 2**.

For Start-(**STL**)/Result-(**ERG**)/Team-(**MAN**)-Lists it's possible to create them by ***User defined columns***. Then the INI entries in

paragraphs **[UserListTXT]** and **[UserListHTML]** will be effective ***see INI file***. Details, example ***see***.

The settings are valid for all loaded competitions.

CSS Layout

A CSS layout file can be selected. This file is used to format HTML lists (for the moment only available for individual- and team-lists).

Using the entry **__Standard__** creates a fixed layout. The other entries in the CSS directory of FjwW are usable layout files. Additional layouts can be created in the CSS directory, ***see example***. A layout is inserted as a text within the list or copied into the directory where the result list is saved.

Group/pFactor

Group-Select: In this section you can decide which competitors or groups of competitors are displayed within the result lists. The characters "[*]" selects all competitors who do not belong to a named group. The group filter is only valid for the competition which is selected in the select list.

For more details ***see FAQ-3***.

Power factor: If ***apply*** or the menu option ***Results|Power Factor*** is activated, the running time will be altered using some factors which take into account the age and the sex of the competitor and recalculated (the time will be reduced depending on the age and the sex); this option can only be activated if the year of birth is entered for all competitors. The sex is deducted from the category. All categories starting with **'W'** are considered to be 'female'. For all other categories the competitors are considered to be male. The INI key word **WomenCatFirstChar=** change the first character of women's categories.

The list shows the factors in % based on age and sex of the competitors. The values are set in the INI-file. The application of the power factors does make sense only if ***Not eval in categories***

are used to calculate the results. Normally the ranges for the age are based on the standard categories.

The values must be set in the **INI-file**:
powerFactorName=
; Part of the running time on which the power factor will be applied
powerFactorRun=
; Male categories (age)
powerFactorMan=
; Female categories (age)
powerFactorWom=

The application of the power factors does make sense only if ***Not eval in categories*** are used to calculate the results. Normally the ranges for the age are based on the standard categories.
For all competitors the year of birth must be entered. The sex is deducted from the category. All categories starting with **'W'** are considered to be 'female'. For all other categories the competitors are considered to be male.

LA-ARDF Norway: ***www.ardf.no/regler-oslocup.htm***
ÖVSV Austria:
ardf.oevsv.at/Archiv/ARDF_Wertung_mittels_Leistungsfaktoren_nach_Cepelka__3a.pdf
Here a part of this paper ***see***

Contest select
In this section those competitions which should be taken into account for multi competition evaluations must be selected.

Multi Contest
This section is used for DARC ranking (Germany). It defines how many competitions are valid and how many of them are taken into account for the ranking. The default values are **4 / 3 / 3** which is the standard.

For the Cup ranking it defines which data (Fox number and Run time or special SRR points in Russia) determine the ranking.

If the options dialog is selected via ***Results|Options of lists*** all sections and settings can be modified. The buttons have only short texts. The context sensitive help can be used to learn more about each button. Just click on the question mark on the upper right corner and then click on the button you want to know more about.

The options dialog is displayed at each time a list will be created. But in this case only those options which are relevant for this list can be modified.

Not eval in Categories Shortcut **`Ctrl+G`**

If this option is activated all competitors are put into one category (regardless of there real category). This category does not have any description. The result is evaluated without taking into account the categories of the competitors. In the toolbar an icon with **kK!** appears. The icons of the other categories are inactivated. Almost all result evaluations are done without taking into account the categories (not true for DARC-RLL). The sending to the display PC omits the categories as well. This option can be activated and deactivated separately for each loaded competition.

Single competition evaluations

Single Rating

Text

A result list is created containing the rank, name, club, call, runtime, number of transmitters and start number/RLL-/ARDF points. The ranking is evaluated based on the transmitters found and the runtime. Competitors not having found any transmitters or having used more then the limit time are not given a rank. With

the option ***StT w. not fin.*** the start time of the competitor not yet finished is used for the list. This is meaningful to be used for provisional lists which are printed while the competition is still ongoing.
If the result list shall display the ARDF diploma points the FM attribute and the 'type of competition' must be set correctly (this is only interesting for German result lists).

HTML
Creates the result list using HTML tables and CSS layout, select by user.

RTF
The result list is created in a simple layout with only a few formatings. Only the widely spread fonts **Arial** and **Courier New** is used. The columns start with a tabulator. This allows easy reformatting. The different sections are format independently. In WORD (or similar programs) they can be reformatted with a few clicks. The sections are formatted using Title, Comment, Header, SubHeader, ResultRows.

CSV
A file is created containing all relevant data for competitors, helpers and results in **C**omma**S**eparated**V**alue file format. These files can be imported into programs like **FjwLay** or **Word / Excel / Access**.

The following data is contained in the file:

```
Category, name, first name, club, call, year of birth, frequency band, place
(digit only),
place1 (digit + extension as 1st/2nd/3rd/4th/5th...), runtime, number of
transmitters, start number,
SET out of the TLN file, start time, finish time, all times from the
transmitters.
or
for all helpers: name, first name, club, call
```

If the file is created using the options ***Data column hyphen -> TAB*** and ***CSV keyword row -> as TLN*** it can be used as a name data file within the ***FH/Hlp registration*** dialog.

Text Club/Country

When entering the Club/Country name, the first three places and the following are always given in each category if the participants belong to this country.

Team Rating

A number of competitors of one category having the identical club are taken to be a team. For the best ranks of a team the number of transmitters and runtimes are added (no competitor not having transmitters or out of the limit time is taken into account). The team ranking is based on these additions.

In the menu ***Results|Options of lists/Special*** the number of competitors per team can be defined (default=3). The second value defines how many competitors contribute to the ranking (default=2).

Competitors without club are not taken into account for the team ranking and they are not displayed in the team ranking lists.

Text

A file is created containing the following data of the team members: rank, name, club, call, runtime, number of transmitters, the total number of transmitters and the total of the run times.

HTML

Creates the team rating list using HTML tables and CSS layout, select by user.

CSV

A file is created containing all relevant data for the team members results in **C**omma**S**eparated**V**alue file format. These files can be imported into programs like **FjwLay** or **Word / Excel / Access**.

The following data of the team members is contained in the file:

```
Category, rank, team, total runtime, total number of transmitters,
name1, firstname1, call1, runtime1, number of transmitters1,
name2, firstname2, call2, runtime2, number of transmitters2,
.........
```

Text Club/Country

When entering the Club/Country name, the first three places and the following is always given in each category if the team belong to this country.

The relay race is a special type of result evaluation. The result is evaluated as follows:
All competitors with the same CLUB are members of a team. Their individual results are used to evaluate the relay race result. Each competitor performs a complete part of the competition with a start, finding transmitters and finish.

Relay race

Chinese rules

Any category

See detailed description

Run Time List

The list of runtimes shows several data and statistics of the individual competitors, of the competitors within the same category and of all competitors compared to each other. The list is divided into the following sections:

- Data concerning the competition itself (as in other lists as well)
- The shortest distances of all categories are calculated. If HTML format is used a graphic for the category with the longest distance is created as well.

- Data concerning each competitor (sorted by start time): Search order, start time, time at the transmitters, finish time
- Data concerning each competitor (sorted by category and rank): Search order, in minutes the times between the start and the transmitters and the finish line and cumulative times from the start to the transmitters in min:sec.
- For each category the statistics of the 'transmitter-to-transmitter' times in min:sec
- For all competitors the distribution of the arrival times at the transmitters within the 5-min-transmitting scheme (divided into sections of 30 sec)
- Distribution of the arrival times at the transmitters divided into sections of 10-min (including start and finish)
- List of competitors who might have collaborated within the competition. The collaboration is calculated based on their arrival times at the transmitters being almost the same (differences of 20, 30 or 40 sec). The competitors are listed one below each other.

Text
Creates the run time list in a simple text format.

HTML
Creates the run time list using HTML tables and CSS layout, select by user.

The start, transmitters and finish are listed in the order they were found. The time data is separated by a hyphen. If there are other or additional characters they have the following meaning:

***** Transmitter was found but is not taken into account because it's not in the list of transmitters to be found by this category.
# Transmitter was found more than one with a time difference > 1 minute
+ The timestamp is out of the range of the start and finish time (must be checked)
? Timestamp is not valid (must be checked)

Search Graphics

All competitors of each category who have choose the same search order are listed with their result. On the left side a graphic is displayed. The graphic shows the distance in a straight line using the given search order.

Text
Creates the search graphic in a simple text format. The graphic is displayed with special characters and pseudo graphics.

HTML
Creates the search graphic list using HTML tables and CSS layout, select by user. The associated graphics are stored in the same directory as the list itself.

Individual Lists

This list shows an extensive evaluation of the results of a competitor. The result of the competitor is compared with the other competitors of this category.

Marked FH
The individual ranking for the selected competitor is displayed.

Text
The individual ranking for the selected competitor is displayed in simple text format.

HTML
Creates the individual ranking in HTML format using tables. The associated graphic is stored in the same directory as the list itself.

All FH

Creates the individual ranking for every competitor. The format is using HTML tables. The associated graphics are stored in the same directory as the lists themselves. In addition to this a index page is created in two possibilities:

Result link list

The index page is a normal result list (ERG) with link on names of every competitor.

Simple link list

The index page is a simple list of names with link on names of every competitor.

Start List

Depending on the setting of the option dialog the start list is ordered by:

- Start times/start groups:used at the start
- Start numbers: used at the transmitters to log the competitors who found the transmitter
- Category and start time:used to check the raffle of the start times to avoid that the competitors of one start group are not ok to run together or if the competitors of the same categories are started with to short time intervals
- Club/Country and start time: helping clubs/coutries to see they start times
- The first start time is only given once at the top, the start times of the participants start with the zero time

There is no CSV formatted file available for the start list. If a start list in CSV format is needed the list for the individual rankings can be used. It contains the necessary information.

Start Information

It creates a list that shows the transmitter to search for the individual categories and the time limit and contains two lines for the manual entering of the transmitter frequencies. In the text editor can be easily formatted to the size of an A4 page and the printed page will be posted at the start line.

Start numbers

The dialog that opens shows the options that can be selected. It is important to select the CSS layout that is requested afterwards. An HTM file is created that can be displayed and printed out in the browser.
If a background image is integrated through the CSS layout, this image file must be copied to the HTM file.

Finish Ticket

The finish ticket all the data which is available at the competitors arrival. These are:

```
Name, club, call, category, start number, chip number, total running time,
search order of the transmitters, run times, minimal track length,
arrival time at the transmitters and the finish
```

As of V21.2, it now contains the competitor's place on the day of the competition with the time of the printout. See more details at the example of the ***Finish ticket***.

Marked FH
The finish ticket for the selected competitor is printed on the defined printer.

At finish arrival
Switch to set on or off the function of printing the finish ticket at the

registration of the competitor at the finish. The printer has to be selected when switching on this function.

Running route graphic

Within finish ticket the graphic of running route can be insert. The size can be change in INI file under [Ticket] with key word **tiZoomGraphic=** as zoom factor.

Portrait (def. Landscape)

The finish ticket can be printed in landscape or portrait page orientation. The portrait format is useful for printers with narrow endless paper.

If the finish ticket is printed in portrait mode it is limited to a width of 40 characters. If it is printed in landscape mode the width can be limited by an entry in the INI file **tiWidth=**. If there are big numbers of transmitters line breaks are used to format the printout properly.
The formatting (font, fontsize, fontstyle) and the positioning of the printout (margins, blank lines at the end of the ticket) can be set in the INI file. The keywords are: **tiFont=, tiTop=, tiLeft=, tiHead=, tiData=, tiTitl=, tiEndRow=**. With these parameters the tickets can be adapted to various paper formats and printers.
For more explanations and an example ***see***.

Since version 6.7 FjwW supports also the Label-Printer **QL-500/550** of **Brother**. Beginning from a label layout, which build with **p-touch-Editor** of Brother, finish tickets can be printed quickly. Also little graphics can be included. Further explanations ***see*** and ***QL-500***.

Check Com. per Cat & Club

In international competitions the number of **participants per category and country** is limited in **one** competition. According to the IARU-R1-WG rules, these are three competitors, on EYAC

(youth) five. This is checked here, the last error is output in the message box, all errors are listed in the LOG file.

Detailed List

All details available about the competition and the competitors are printed in a table format. The details are:

```
Rank, name, club, call, run time, number of transmitters,
start number, chip number, start time, finish time,
times at the transmitters, Error code, Correction code,
transmitters not taken into account (found but not counted) are listed after the
categories and rankings.
```

After the transmitter times the following indicators can be shown:

***** transmitter found but not taken into account because the transmitter is not in the list of transmitters (for this category)
# Transmitter was found more than one with a time difference > 1 minute
+ transmitter time is not within the start time and the finish time of the competitor but it is within the time of beginning and the time of end of the competition. This has to be checked. The transmitter is NOT taken into account.
? the registered transmitter time is not correct. This has to be checked. The transmitter is NOT taken into account.

The helpers and other information about the competition is shown in the list.

All Fox stamps

The timestamps from all Fox stations are sorted chronologically, along with the SI chip number. This can be used, among other things, to assess irregularities, such as the duration of a transmitter outage.

Rent Chip List

All chips that have been marked as borrowed are printed in this list. The list is sorted in ascending order. It makes it easier to collect the borrowed chips at the finish.
The chip of a competitor can be marked as borrowed while the competitor is registered or corrected. Within the TLN file the chip is marked as borrowed if it is preceded by an asterisk (“*”).

JSON file

For special Internet applications a file in JSON format can be created. The used ***Key words*** can be find here.

Certificate series printing

For the current competition a temporary CSV file with results for this moment is created. After selecting an existing layout file (*.lay) the program **FjwLay** is called. As parameters the two file names have to be used and added. Within FjwLay (independently from FjwW) you can print a single diploma or series of diplomas (see details within FjwLay and the related help (F1)).

Multi competition list of rankings

Multi competition assessments can be done with FjwW. For this purpose all required competitions must be loaded with their respective TLN/KOR/DAT or EDA files (up to 32). To select which of the loaded competitions will be taken into account must be

determined in the menu
Results|Options of lists/Contest select.

To calculate the results for a multi competition assessment the competitors are identified by name + first name. These have to be unique and identical in all competitions to evaluate the correct result.

To learn more about the details of the structure of the name ***see***

To be considered as one and the same competitor within different competitions the first six characters of the **Name** and the first six characters of the **Firstname** must be identical (regardless of capital or small characters).

To allow correct multi competition assessments the writing of the competitors name and first name have to be identical in all selected competitions.

Cup Rating

For the selected competitions (two or more) the results of the competitor are summarized (***see***). The total number of transmitters and the total of the run times are calculated. The ranking is done based on the total number of transmitters and the total run time. When as an option a small number of competitions will be given, the best results of this number of competitions will be produce the total result.

The cup ranking list shows the following information:

```
Rank, name, club, call, runtime and number of transmitters per competition
plus the total runtime and total number of transmitters.
```

Text

Creates the Cup Ranking in simple text format.

HTML
Creates the Cup Ranking list using HTML tables and CSS layout, select by user.

CSV
A file with **C**omma**S**eparated**V**alues is created. It contains all relevant data for result calculation. This format can be imported by programs like **FjwLay** or **Word / Excel / Access**.

The CSV file contains the following data for each competitor:

```
Category, rank, name, first name, club, call,
total runtime, total number of transmitters,
run time 1, number of transmitters 1,
run time 2, number of transmitters 2,
....,
run time (n), number of transmitters n(n)
```

Multi Team Rating

The MultiTeam ranking allows for team rankings across multiple competitions. All loaded and selected competitions are included in the results. Teams in the categories are formed by the same DOK/club designation.

Text
Creates the Multi Team Ranking in simple text format.

HTML
Creates the Multi Team Ranking list using HTML tables and CSS layout, select by user.

RLL Rating (GER, CRO)

A list is created following the ***Racing system of the DARC***. The parameters about the competitions to be taken into account are configured in the menu ***Results|Options of lists|Special***(top

left corner). In this window the maximum number of competitions (default=4) and the number of competitions for the result evaluation (default=3) can be defined. The difference between the maximum number and the number to calculate the result are ignored.

For the selected competitions (two or more) the results for each competitor are combined together (***see***).

If two competitors have the same amount of ranking points, their rank is evaluated by taking into account the ranks of the competitions taken into account (the ranks of the competitions are added as the times and number of transmitters). The competitor with the lower value is first.

Text
Creates the above described list in a simple text format.

HTML
Creates the run time list using HTML tables and CSS layout, select by user.

CSV
A file with **C**omma**S**eparated**V**alues is created. It contains all relevant data for result calculation. This format can be imported by programs like **FjwLay** or **Word / Excel / Access**.

The CSV file contains the following data for each competitor:

```
Category, name, first name, club, call,
total points, total points 144MHz, total points 3,5MHz,
points for 1st 144MHz competition, points for 2nd 144MHz competition,
points for 3rd 144MHz competition, points for 4th 144MHz competition,
points for 1st 3,5MHz competition, points for 2nd 3,5MHz competition,
points for 3rd 3,5MHz competition, points for 4th 3,5MHz competition
```

Club Rating (ROU)

This evaluation is applied in Romania. For every competition the participant receives up to 100 points. These points are added for all

participants of the same club and the clubs are sorted according to the score.

Start Statistics

With this option an evaluation about the repartition of start times within the opened competitions can be done. For each competitor the multiplicity with which he was positioned in which part of the starting list is calculated. The start period is divided into 10 sections (each representing 10% of the time period). The start time of the competitor is associated with one of the 10 sections.

One and the same competitor is defined as usual (***see***). The list is sorted by category and the RLL ranking within the category.

Diploma Points (DARC)

With this list the points for the DARC ARDF diploma can be calculated for the loaded competitions. The competitors and helpers are sorted by total points.

The points can only be calculated correctly if the following data of the competitions and of the competitors, helpers and organizers are set correctly:

Type of competition	**OFF, INT, OV**
Helper / organizer	**HLP, ORG**
Peilmeister	**FM**

The diploma points are calculated following the schema described ***here***.

Medal Statistics

For every Club/Country the number of medals (places 1./2./3.) will be add for Single or Team rating.

Participation Statistics

An HTML list is generated that shows the number of competitors in the categories of all participating DOK/clubs/countries of all invited/selected competitions.

Multi list, FTP `Ctrl+M`

To generate more/always the same current results lists/files, this function can be used. For this, a directory must be specified, in which all files are stored. This is done every time even after you click **OK**.

The specified files can be uploaded via FTP once/cyclically to a specified FTP server. Further details ***see***.

The Interface menu

SportIdent

SportIdent `Ctrl+I`

In this window the following settings for the SI stations have to be configured correctly:

- Combo boxes to choose the number of the **serial interfaces** (SI-A, SI-B, SI-C), to which SI stations are connected, the first 99 available COMs can be selected.
- Selection of the transfer rate of the serial interface. The SI stations with RS232 (V24) interface use 4800 or 38400(>=BSx7) bps. The SI stations with USB interface use 38400 bps. After 1-2 seconds the program tries the no selected transfer rate if the wrong transfer rate is selected.
- Cycle time in which the station is polled.
- Additional functions can be selected for the SI-B, which are described below.
- The SI-C can read data coming from start/fox/finish stations.
- ***Display cards only, not evaluate !*** has to be activated if the content of the cards should only be displayed and not taken into account for any competition and should not be stored in any KOR file; is already active, when using SI chip registration.
- The competition begin time is very important if data of SI-Chip5 will be read from a station. For "Two days competitions" here must be entered the date of first day !
  They are only not taken into account for the **Stations Service...**.
  In this case the date and time must be unequal to 0.
- With click on ***Refresh port list*** the available COM ports are scanned again, e.g. a serial-USB-adaptor, which connected during open dialog, will be visible then and can be selected.

The **SI-Chip5** can only hold time stamps with an 12 hours format. The timestamp can be one of two times of a day (6am vs. 6pm). Therefore the begin time of the competition is taken to evaluate which of the possible times is the right one. The date is just added to the time stamp read from the SI-Chip5. The first time is used to determine whether the timestamp in the afternoon or the morning. This does not matter for the newer chips.

If two competitions take place on the same day and both of them are loaded into FjwW the data read from the chip (or station) is taken into account for both competitions. The data is written to both KOR files. In the case the end time of the first competition and the beginning time of the second competition overlap, this can lead to problems!

Using the three interfaces SI-A, SI-B and SI-C different tasks can be achieved:

SI-A (SportIdent-Interface A):

- Reading the data of the SI cards for the competition
- Reading of the SI chip numbers for the registration
- Backup of data of the directly attached SI station (master)

SI-B (SportIdent-Interface B):

- Reading the data of the SI cards for the competition
- Reading of the SI chip numbers for the registration
- Backup of data of the directly attached SI station (master) and indirectly attached SI stations (slave)
- Service functions (programming of stations) of the directly attached station (master) or indirectly attached stations (slave). SI cards are not read or used for the competition result evaluation
- Reading of data sent by a start/fox or finish station when a SI card is inserted. The station must be in AUTOSEND mode for this option, the **Fox** stations have to have station **numbers 20...254**, the **Start** station the **number 3** and the **Finish** station the **number 4**.
  The data from a fox station will arrive via a radio transmission on

a real competition. The radio transmission itself must be transparent for the data. The transfer rate of SI-B can be set to 1200 bps for this purpose, other baud rates (e.g. 2400 bps) by set this value in INI file with **foxdataBaudrate=2400**.

SI-C (SportIdent-Interface C):

- !only! Reading of data sent by a start/fox or finish station when a SI card is inserted. The station must be in AUTOSEND mode for this option, the fox stations have to have station numbers 20...254, the start station the number 3 and the finish station the number 4.
  The data from a fox station will arrive via a radio transmission on a real competition. The radio transmission itself must be transparent for the data. The transfer rate of SI-B can be set to 1200 bps for this purpose, other baud rates (e.g. 2400 bps) by set this value in INI file with **foxdataBaudrate=2400**.

Backup/Display data `Ctrl+B`

The dialog enables the backup of the time stamp data stored in the SI stations. The data is written into a *.DAT file and are appended to an existing file. The name should not be changed in order to keep the relationship to the loaded TLN file.

The time stamps of the SI-Card5 are only unique within 12 hours, the competition date is always added, the time remains unchanged between 0.00:00 and 11.59:59. The conversion to the pre-/post-noon time is only carried out when the competition start time is read in.
The time stamps of the SI card 6...11 and SIAC are only unique for a period of four weeks. The competition date is added if the day of the week on the timestamp matches the day of the week on the competition date. Otherwise the abbreviations of the time stamp day of the week appear in the date and after a **#** at the beginning of the line, making this data line ineffective.
The data in an SI station should not be older than a week, otherwise the data may be ambiguous and must be edited manually afterwards. Examples of ***Backup-Data-Files***.

During the backup the SI station numbers are translated into transmitter numbers. For this translation the table located in the center of the dialog is used. The table can be the standard table which calculates Transmitter number=Station number–30 or a modified table which is used within a special competition. In the later case the competition has to be selected in the select box. ~~In the select box only competitions with the same date as indicated in **Interface/SportIdent** are displayed.~~ If the data read from the SI station contains unknown SI station numbers, they are written into the DAT file as Transmitter number=Station number+1000.

If the memory of the SI station should be cleared after the backup the checkbox ***Erase station after backup*** must be activated. After backup it is possible to switch off the SI station on SI-B only.

Total Backup causes the entire data memory to be read without taking the internal memory end pointer into account. Reading begins at the beginning of the memory until nonsensical data occurs. It is intended for use in the event of a battery failure (memory fill pointer lost) or accidental deletion of data in the BSF/M 7/8 stations. This long process can be aborted with ***Stop***.

While the backup is running a small animation is displayed together with a blinking indication telling:
It has to be assured that no SI chips are inserted into the SI station while the backup is running !!!
If this is not done the backup will be incomplete and might lead to a loss of data.

In the left part of the window the data read from the station can be displayed. After selecting a card number and a transmitter number/start or finish entry, the time stamp for this card number are displayed with the station number and the resulting transmitter number.

Station programming `Ctrl+P`

The most important setting for the SI stations can be done here, if the communication with the connected SI station is correctly setup and running. The following settings can be changed:

- Function of the SI station (Clear, Check, Start-, Finish-, Read station, Foxes; programmed with station numbers 1, 2, 3, 4, 5, >=20). Stations for transmitters have to programming with SI station number **20...254** (e.g. F1=31, F2=32, ... F5=35). The signalization is always set to LED flash and sound ON. The data within the station are **erased!** The station is switched off after it has been reprogrammed.
- Setup of the operation time and the Autosend mode for the so called **trainingsmode**. The station is switched off after it has been reprogrammed.
- Set the internal clock of the station based on the clock of the PC/notebook.
- Switch of the SI station

Together with the service dialog the status window of the SI station is displayed. In this window the settings can be controlled (eventually after switching on the station again)

More settings can be performed only with the **SI-Config Plus** (old SI-Config) provided by AES (Download: ***www.sportident.com***).

Display results

Result display

In this dialog the sending of results via the serial interface (COM) or the LAN (using TCP/IP) can be set up. The competition can be selected. For more details see ***Display of results***.

All available serial interfaces are listed in the combo box. The number of LAN port is define in the INI file. The list box show all URL's under which the FjwW HTTP server is reachable.

DisplayPC clear, send again `Ctrl+V`

Using this option all categories are sent to the DisplayPCs. This can be necessary if the software FjwWdispl was restarted, the network link was disturbed and old displays on the DisplayPC are to clear.

Signal+Speech

Start signal

For **all** loaded competitions where the date of competition is the system date some acoustic signals can be activated (similar to the time signal known from the radio/TV). The signals can be setup for the start of the competitors or independently from the start times in periodic intervals (every x minutes).

The seconds at which a sound should be played can be configured (e.g. 10, 5, 4, 3, 2, 1 second before the start; possible 60,45...1). At the start time a special sound is played. The way of creating the sound can be setup in the dialog itself or by some keywords in the ***INI file***.

For more details ***see*** .

Speech output

If a **T**ext**T**o**S**peech processor is installed on the PC (see details) it can be activated and used for some actions:

- announcement of the competitors starting next (the time before the start can be set up)
- announcement of the result of the competitor after his chip was read in the reading station
- announcement that the chip is a borrowed chip (this helps to collect them after the competition)

- announcement of the first name, name and call of the selected competitor in the result list with menu
  Extras|Announce name & call

Before each announcement a signal can be issued to attract attention to the announcement.

For more details ***see***

DCF/GPS synchronization

A correct time setting is necessary if FjwW creates the start signals or if the transmitter stations are setup for the competition. A DCF or GPS receiver can be connected to the COM or USB port of the PC to set the clock correctly. The DCF/GPS receiver allows the synchronization of the time and, if the GPS receiver is used, the display of GPS position of receiving. The **DCFGPSvdb** is a standalone application which must be run with the corresponding options. The software must be located in the FjwW program directory.

To learn how to use the program **DCFGPSvdb** and how to connect the DCF receiver to the COM port ***see***.

==========

Automatic feature start

In the five dialogues
SportIdent Interface - - Result display - - Start signal - - Speech output - - Finish ticket print
when the settings are confirmed with OK, they are always saved in the registry.

If one/more of these submenus are activated, the next time FjwW is started and a competition is loaded, the last settings from the registry are loaded into the corresponding dialogs and automatically confirmed immediately. This possibility is particularly valuable within

a competition with many participants if the program was terminated for any reason (including a program crash). Then the program with all its features can be put back into operation quickly. When working with 'Several instances with FjwW', these submenus are disabled because the 'Automatic Feature Start' no longer works correctly. After installing version 20.10: When one of the dialogs is opened for the first time, the values saved in the INI file are adopted in the dialog and, after confirmation with OK, are written to the registry and are also adopted from registry the next time the dialog is opened, the corresponding INI values are now irrelevant more.

==========

Finish timekeeping

Manual finish timekeeping... `Ctrl+T`

In the time taking window the actual time can be stored by pressing the space bar or by a mouse click. The times, which are stored are kept on a stack. The latest time is on the top. The former times are below in the list. A maximum of 10 times can be stored in order to be attributed to the competitors. If more times are taken, the oldest ones are lost. The times can only be attributed to competitors of the selected competition. If more than one are loaded the right one has to be selected before attributing the times. The selected competition has to have the actual date as the date of the competition. If this is not the case the label "***Start No Name***" the background color of the time taking window becomes **red** .

Further details see ***The Finish timekeeping window***

The Extras menu

LOG File

The display starts at the end of the LOG file. From here you can scroll up to the beginning of the file.

Certain activities and errors are appended to the log file. The current log file has the name **~FjwW.log** (it is located in the subdirectory, which can see or change after menu ***File|Options|Path for LOG file***). The size of the log file is automatically truncated to 200 kB. When the limit is reached the log file is renamed and a new log file is created. The renamed log files have increasing numbers. The files can be deleted if they are not required any longer.

Show LO&G/TLN/HTTP/FTP path

The directory was created automatically when FjwW was started for the first time. But it can be changed via menu ***File|Options|Directory for LOG/TLN/HTTP/FTP files***. The window that opens shows the LOG file (~FjwW.log), if applicable old LOG files (~FjwW???.log), data files (~FjwW_*.dat, time stamp of read SI chips), TLN files of newly created competitions and subdirectories HTTP and FTP.

==========

Cyclic backup TLN/KOR

For cyclic backup (prevention of data loss in a crash) changing TLN and KOR files during a competition, this feature may be used. In the dialog the drive/directory is specified, in which the copy number of the TLN/KOR files of the **current competition** will be stored. Repeating the backup is done with the input cycle time when at least

one of the files has changed. The files have a file extension **~00~** ascending to **~??~**. The question mark will be determined by the input copy number. When reached, the oldest copies (if the **~00~**) overwrite it. The backup runs as a separate process in a Command Prompt window, by closing the window the backup will be finish.

Opt. Searching Orders

The optimal search sequences for all categories are displayed in a window ***see also***

Announcement data

When the speech output is activated, the first name, name and call sign of marked competitors will be announced.

==========

Several FjwW instances

If this menu item is activated, each starting FjwW leads to another instance of the program. The then running FJwW programs are completely independent.
Normally, a new competition will be load in the 'File' menu, by double-clicking or drag&drop a TLN file in the one running FjwW. If on a competition day two temporally overlapping competitions (end time of the first is later than the beginning of the second competition) are to be evaluated, it may cause problems with the results. If the data of SI cards are read, FjwW writes the data to all KOR files of the loaded competitions. Further details ***see***.

To avoid the problems associated with time overlapping competitions, load the competitions in various instances of FjwW. This required to think about the used hardware resources (COM ports for SI-stations, LAN ports for network support, ...) of the computer, because they can't be shared between the FjwW instances.

Associates with FjwW

The following settings are done:

- In the start menu of Windows a icon to start FjwW is created below the **Program** group with name **ARDF-FjwW**. Quick start is possible by keys **`Ctrl+Alt+F`** .
- The file extensions **.TLN** and **.EDA** are linked to FjwW. Double clicking on files with these extension will automatically load into FjwW as a separated competition.
- The TLN and EDA files get a special icon.
- The path to access the **Help file** in the directory of FjwW is set.
- In the context menu ***Send to*** of the explorer a ***ARDF-FjwW*** is created. By using the right click a TLN/KOR/DAT/EDA can be easily sent to FjwW and loaded.

Save settings

The settings are always saved in the **FjwW.ini** file. This file is always located in the program directory of **FjwW**. If no INI file exists it is automatically created. The following settings are saved:

- Size of the main Window at program start
- Order and width of the columns of the result list in the main window
- Font, size and color in the main window
- Options for loading the TLN/KOR/DAT files (automatic loading of KOR/DAT)
- Option concerning the auto save of the TLN-BAK file
- 'Tool tip' and 'colored background' setting
- ~~Name of printer of finish ticket printing~~
- ~~Option for Portrait/Landscape of finish ticket printing~~
- Displaying style of Runtime

An example on an INI file can be seen ***here*** .

Show/Edit INI file

The INI file belonging to the running program is opened and can be viewed, changed and saved.

Own HTML display

If the option is activated, after creating(+ displaying) an HTML list a FjwW window will be opened and the HTML pages will be displayed, otherwise the selected default browser of the PC will be used for display. The HTML display of FjwW is not a complete replacement for an installed WEB browser!

Language program

All implemented languages are displayed. If the correct language-DLL is present in the program directory of FjwW the related language can be used. Changing the language requires a restart of FjwW to be taken into account!
If the language-DLL is no available, FjwW will start always with the German language.

Language lists

After selecting the **Language program** and restarting FjwW, the **Language lists** are set to the same language. After that, it can be changed to another language. This causes all output in result lists and displays(DisplayPC, Finish ticket, HTTP server) to be generated in that language.
The lists language can be changed without restarting FjwW.

The View menu

The Shortcuts
`Ctrl+F2, Ctrl+F3, Ctrl+F4, Ctrl+F5, Ctrl+F6`
are available as soon as a window of FjwW gets the focus.

Comp. data Window `Ctrl+F2`

Sets the focus to the window which contains the data for the competition and brings it to the top. After activation the window can be used to modify the data as requested ***see***.

SI status Window `Ctrl+F3`)

Sets the focus to the window which contains the status information of the SportIdent devices ***see***.

Registration Window `Strg+F4`

The dialog, in which participants are registered (inserted into the current competition), is brought to the foreground, ***see***.

Text/Edit Window `Ctrl+F5`

Sets the focus to the window for displaying and editing lists and brings it to the top ***see***.

HTML Window `Ctrl+F6`

==========

Refresh *Shortcut F5*

The table with the results in the main window is refreshed (normally this should not be necessary).

Font of Table...

Set the font, size and color... . for the results in the main window.

Optimal column width

All columns of the results in the main window becomes so wide to see unabbreviated text. When this option is activated the currently width of columns will not be saved in INI file (menu ***Extras|Save settings***).

In the result list the width of the columns can be changed by moving the separations lines between the headers of the columns. By this they can be reduced to a width of 0 (and they become invisible). The order of the columns can be changed by moving the headers of the columns to the desired place.

Runtime in h:mm:ss

Switch the display of Runtime in windows and result lists from mm'ss to h:mm:ss.

==========

Next category **`Ctrl+Cursor right`** (useable in all FjwW windows)
Previous category **`Ctrl+Cursor left`** (useable in all FjwW windows)

Can be used to select the next or previous category in the result list of the main window. The first nine categories can also be accessed using the *Shortcut* ***Ctrl+1...Ctrl+9***. The shortcuts are usable when any FjwW window is active.

FH finished **`Ctrl+Z`**

The arrival list displays the competitors already arrived at the finish. The competitor who arrived most recently is displayed on the top.

The card number of lend SI chips are marked with an asterisk. They can be easily identified at the finish. This enables the organizers to demand back the lent chips.

FH still on the way `Ctrl+A`

The list of running competitors displays those competitors not yet started or not yet arrived at the finish. The start groups are separated by a blank line. Five minutes before the start time of a start group is reached the competitors which will be starting are checked.

Not registered SI chips `Ctrl+Q`

The list shows the SI chip numbers with which no competitor is registered in the loaded competitions. The time when data was read from this chip number is entered in the **Diverse** column. When the competition is closed, existing chip numbers in the list are saved in the LOG file.

Helpers `Ctrl+H`

The list displays the registered helpers in alphabetical order.

FH/Hlp deposit `Ctrl+C`

The window show the no active participants/helper, which have no any meaning for the competition. They will store in the TLN file. The line begin with the "$" character always.

Next competition `Ctrl+Cursor down` (useable in all FjwW windows)
Previous competition `Ctrl+Cursor up` (useable in all FjwW windows)

If more than one competition is loaded they can be easily accessed with these keys. The first nine competitions can be accessed by

using the **`Ctrl+Shift+1...Ctrl+Shift+9`** as well. The shortcuts are usable when any FjwW window is active.

Preparation of the data for a competition

There are several possibilities to create a competition within FjwW:

- Menu ***File|New Contest***
  A competition with some default settings is created. The defaults include one competitor with the category “no category”. In the competition window these settings can completed and/or modified.
  Via ***Edit|FH/Hlp Registration*** the competitors can be added.
  Via ***Edit|FH/Hlp delete completely*** a competitor can be deleted from the competition.
  Via ***Edit|Correction FH/Hlp Data*** the data of the competitor can be modified.
  This functions are also available in the result menu doing a rightclickdisplay

- Copying and modifying the template **_beispiel.tln**. Copy and rename the template to something like **20060101.tln** (using the date as a filename is a very good idea) All data within the upper area of the file should be changed to the good values for the competition to be run. The keywords and key lines starting with **@** are not allowed to be changed.
  The lines used for the competitors can be replaced by empty lines or the correct data for the real competitors can be entered. The existing lines can be used as examples. They must be deleted before loading the file. The data has to fit within the columns given by the keywords. If this file is opened with FjwW and no error messages are displayed the application is ready to be used (two windows will be available).

- The same procedure as before can be applied with the files **_beispiel1.rtf** or **_beispiel2.xls**. In this case WORD or EXCEL can be used to modify the data. After all modifications are done just select all text or the whole table and copy it to the clipboard.

In FjwW the data is loaded using the option ***File|TLN Data from Clipboard***.

- Load the file **_default.tln**. The modification of an entry can be invoked by a double click or by **`Ctrl+F6`** or by the context menu. The necessary data can be modified. By using ***Edit|FH/Hlp Registration*** a dialog is opened which allows the selection of competitors based on a file called 'Namensliste.txt'. This file is delivered with FjwW. A lot of known ARDF competitors are included in this file. With a few clicks a new competitor is inserted into FjwW.

- For competitions which are similar at each time a TLN file can be prepared. If those competitors are included who “normally” attend the competition it’s very easy to go on. Competitors included in the initial file who do not come are simply deleted (if you want). As they are never shown in the result lists they can be deleted at a later time. In the prepared file you can set the category to **aK!**. The correct category is set when the competitor arrives. After the arrival of all competitors those remaining **aK!** Can be deleted easily.

After creating the competition and adding or modifying the competitors the file should be saved by ***File|Contest File save*** or **`Ctrl+S`**. If modifications have been done a KOR file is automatically created. The KOR file has the same name as the TLN file.

The starting times are set as follows:

- By manually writing them into the column **START** within the TLN file
- By manually setting the start group in the column **SET** within the TLN file
  Example: ***5** if the competitor should start in the 5th start group)
- By setting the start time in the related dialog (***Edit|Correction FH/Hlp Data*** or **`Ctrl+F6`**)

- ~~By using the desired values within the **@START_BALLOT** area of the TLN file (see the detailed description of the file _beispiel.tln).~~
  ~~If the first number is greater than 0 the start times are calculated at the next start of FjwW. The number is immediately reset to 0 after the times have been calculated in order to avoid a new calculation at the next start. The calculated start times are saved into (or appended to) a KOR file which has the same name than the TLN file.~~
- After loading a TLN file by using
  File|Balloting Start Times. The dialog allows the setting of some parameters for the automatic raffle of start times. The random calculation of start times can be influenced by using the SET entries in the TLN file. The calculated times are saved into (or appended to) a KOR file which has the same name than the TLN file.
- By taking into account a time stamp from a SI-Start-Device which can also be a normal device at a transmitter. To use this option the parameter **@STT_IN_DAT** must be set to 127 or 1...62 depending on what is used. Also the competition data window can be used to modify this entry. In the field
  Start times from the wanted choice can be done. If the TLN file already contained some start times, these will be deleted. Using this way of setting the start times does not enable FjwW to show the correct run times (**xxx:yy run**) as the start time is not known as long as the competitor has not finished his run.
- by connecting a AUTOSEND programmed start station to the COM-B interface and setting in menu
  Interface|SportIdent COM B Port / COM C Port activate and ***Start/Fox/Finish data reading*** . The starting times will be read in immediately after punching SI chip in the start station and will be rounded not or to full 1, 2, 2.5, 5 minutes.
- If the **@STZ_IN_DAT** parameter is set to 255, the arrival time at the first fox found will be taken as the start time and this arrival time will be increased by 1 second as the fox time. In the competition data window, select "First fox found" for
  Start times from.

The TLN file can be loaded and modified with the integrated editor of FjwW (***File|File Display/Editing***). The modifications can only be saved if the file is not used by FjwW. The file can be released by ***Edit|Remove Contest***. After saving the TLN file it has to be reloaded.

Attention: If the name of the TLN file is changed the related KOR file will not be loaded any longer unless it’s also renamed according to the TLN file.

Registration of competitor data with MS-EXCEL

For ARDF events with a high number of participants, such as the ARDF World and IARU Region1 Championships, there is a considerable amount of time required to register the participant data necessary for carrying out the competitions.

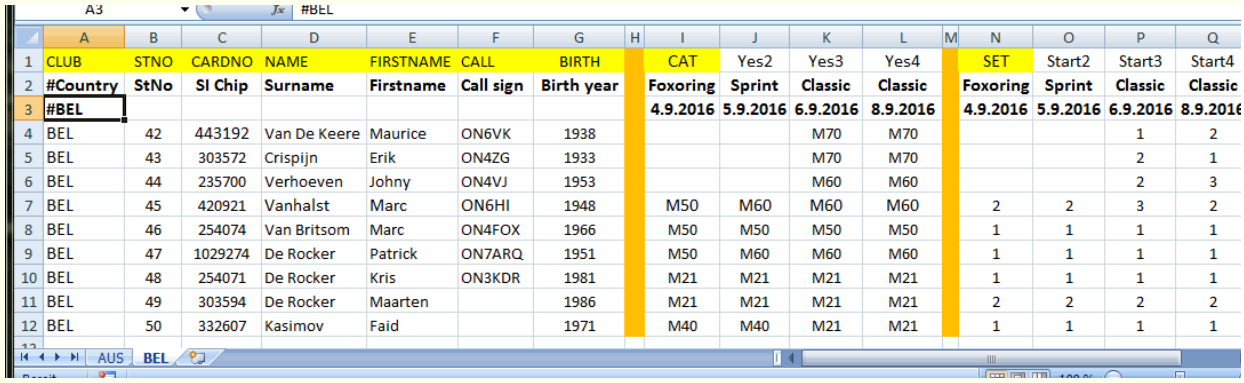
The following data must be provided by the competitors or participating countries:

- Surname and firstname
- Year of birth (control of the start authorization in the selected categories)
- Own SI chip number
- Amateur radio call sign
- Chosen category for each competition
- Chosen starting third for each competition (balloting start sequence for WC and IARU-R1)

The organizer shall provide the following data:

- Country name, preferably the abbreviations of the **IOC** with three characters ***see***
- Start numbers
- SI rent chip numbers for participants who do not bring their own

This data can best be captured, managed and modified with MS-EXCEL.
The EXCEL file could appear as shown in the file **_WC-Registry.xlsm** included in the directory **examples** and shown in the following image:



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	CLUB	STNO	CARDNO	NAME	FIRSTNAME	CALL	BIRTH		CAT	Yes2	Yes3	Yes4		SET	Start2	Start3	Start4
2	#Country	StNo	SI Chip	Surname	Firstname	Call sign	Birth year		Foxoring	Sprint	Classic	Classic		Foxoring	Sprint	Classic	Classic
3	#BEL								4.9.2016	5.9.2016	6.9.2016	8.9.2016		4.9.2016	5.9.2016	6.9.2016	8.9.2016
4	BEL	42	443192	Van De Keere	Maurice	ON6VK	1938				M70	M70				1	2
5	BEL	43	303572	Crispijn	Erik	ON4ZG	1933				M70	M70				2	1
6	BEL	44	235700	Verhoeven	Johny	ON4VJ	1953				M60	M60				2	3
7	BEL	45	420921	Vanhalst	Marc	ON6HI	1948		M50	M60	M60	M60		2	2	3	2
8	BEL	46	254074	Van Britsom	Marc	ON4FOX	1966		M50	M50	M50	M50		1	1	1	1
9	BEL	47	1029274	De Rocker	Patrick	ON7ARQ	1951		M50	M60	M60	M60		1	1	1	1
10	BEL	48	254071	De Rocker	Kris	ON3KDR	1981		M21	M21	M21	M21		1	1	1	1
11	BEL	49	303594	De Rocker	Maarten		1986		M21	M21	M21	M21		2	2	2	2
12	BEL	50	332607	Kasimov	Faid		1971		M40	M40	M21	M21		1	1	1	1

For each participating country such a worksheet should be created with the IOC name of the country (in the picture Australia & Belgium). The first line contains keywords (highlighted in yellow) that are required when importing the data into FjwW. Data columns, which are not yellow, have no meaning during the import. This is exploited by successively replacing the column names **Yes2/3/4** by **CAT** and **Start2/3/4** by **SET** before the export/import for the four competitions on 4./5./6./8.9.2016.
Lines 2 and 3 are comment lines (by '#' as the first character) to explain what is to be entered in the data columns. From line 4 the data sources of the participants are displayed.
The SI chip numbers can be marked with a leading asterics "*" as rent chips.
If you specify "$$$" in the Category column **CAT**, the participant is transferred to the deposit of FjwW and can be so easy before/during the competition and subsequently entered into the competition.
Before exporting to FjwW, export all worksheets as **"Unicode Text (*.txt)"**. VBA macros can be requested from the author, which enable a quick check for missing/multiple identical names, chip numbers, starting thirds, starting numbers.

Now you can import all CSV files (Multiple selection is possible) in FjwW under Menue ***File|Import competitors from CSV***. In the LOG file ***CTRL+G*** you will find error messages.

Rating on Sprint competitions

Extract from **ARDF RULES - Part B / 2015 - valid from January 1st, 2015**
Appendix 7: Rules for the ARDF Sprint Competition

```
S3   Race system
S3.1 The competition shall be run as two loops with a spectator run through the
finish area
  between them.
S3.2 Each competitor runs through the start corridor, which leads to the area with
transmitters
  No.1 to No.5 (slow keying). After finding all the required transmitters from this
loop, he/she
  runs to the spectator control and through the spectator corridor to the area with
transmitters
  No.1F to No.5F (fast keying). After finding all the required transmitters from
this loop, the
  competitor runs to the finish beacon and through the finishing corridor to the
finish line.
S3.3 The transmitters searched for on each of the loops are defined in advance but
may be visited
  in any order. All transmitters searched for on each loop shall be on the same
frequency.
S3.4 The finish beacon and the spectator control may be at the same place. In this
case, there
  is no spectator control transmitter.
```

The problem is to count the to rated transmitters, when the described order (above) of transmitters is not
respected. This will only be executed, when the checkbox "Sprint" in the Competition data dialog CTRL+F3
is activated! To the special settings in FjwW ***siehe FAQ17see*** and ***siehe FAQ18see***.

The above rules are not sufficient to meaningfully count the number of foxes found,
given the many conceivable possibilities. Further rules can be found below in FjwW,
as long as no further amendments are adopted in the IARU1 WG.
As soon as a participant's search order is displayed in red in the main window,
the organizer should be interested in controlling the count of the number of foxes found by FjwW
in accordance with their own wishes.

FjwW count the punched transmitter as following:

1. Because of failure in following the right order of searching already brings disadvantages,
   the competitor should get the highest fox number, when several variants 3) and 4) as described below exist.

2. The search of spectator is an important criterion in determining the variants of order.
   The spectator may once, several times, not be punched, or not be present in the competition.

3. Once/several times the spectator punched:
   - Only a spectator is respectively taken as punched and the counted fox number in the both
     loops(slow/fast) will be added.

     ```
     1  2  S  2F  3  4  S  1F  2F  3  S  3F  4F  B    punched transmitter
     ================================================
     1  2  S  2F  -  -  -  1F  -   -  -  3F  4F  B    =8 rated transmitter
     1  2  -  -   3  4  S  1F  2F  -  -  3F  4F  B    =10 rated transmitter
     1  2  -  -   3  4  -  -   -   -  S  3F  4F  B    =8 rated transmitter
     ```

   - If competitor start with a fox from loop(fast), only the foxes from this loop will be count
     or
     only the foxes from loop(slow) will be count; a punched spectator will not be count.

     ```
     1F  2F  S  3  4  5  B    punched transmitter
     ======================
     1F  2F  -  -  -  -  B    =3 rated transmitter
     -   -   -  3  4  5  B    =4 rated transmitter
     ```

4. No spectator punched:
   - Is the first punched fox from the loop(slow), the foxes will be count until a fox from loop(fast)
     will be punched their foxes will be count now.

     ```
     1  2  3  5F  5  3F  1F  B    punched transmitter
     ============================
     1  2  3  5F  -  3F  1F  B    =7 rated transmitter
     ```

- Is the first punched fox from loop(fast), which foxes are counted only.

```
3F  5F  2F  3  5  1  B    punched transmitter
=======================
3F  5F  2F  -  -  -  B    =4 rated transmitter
```

5. Each fox/spectator/beacon will be count only once. If only Spectator and/or Beacon (not hidden transmitters) are punched, the competitor is not placed.

```
S  B    punched transmitter
======
-  -    =0 rated transmitter
```

To characterize the Spectator as a special location in the fox lists of categories, the
exclamation mark "!" (obligation fox) will be used. ***see FAQ-17***.

Real examples, in which the result according to the above rules only a few rated transmitter are:

```
1  3  2  4  3F  4F  2F  5F  S  B    punched transmitter
---------------------------------
1  3  2  4  -   -   -   -   S  B    =6 rated transmitter

1  3F  4F  2F  5F  S  5  B    punched transmitter
---------------------------
1  -   -   -   -   S  -  B    =3 rated transmitter
```

With the "**Ranglistenlauf**" (RLL) system the best German ARDF competitors for each category.
The results of some special competitions are the basis for the selection of the German participants for international ARDF-competitions.

Therefore there is only the German version of the description ***see***

Calculation of the PM-Diplom- / Peilmeister points

(German ARDF diploma)

For the ARDF diploma of the DARC the competitors of each competition can collect the following points:
(criteria: Start time > 0)

- **OV** competitions at the level of the OV
  Each participant earns one point. The first not being Peilmeister (= **FM**) earns 3 points and the second non PM earns 2 points instead.
- **OFF** Official competition as the German champion ships and the Ranglistenläufe
  Each competitor earns the following points:
  (Number of competitors in the same category ***minus*** rank of the competitor)
  divided by (5 ***plus*** rank of the competitor)
  rounded down to an integer
  plus the ***Maximum*** of (6 ***minus*** rank of the competitor) or (2)
  This (complicated) calculation takes into account not only the rank of the competitor but also the varying number of competitors within the category. The minimum of points to be earned is 2.
- **INT** International competitions
  Two points regardless of the ranking.

Helpers and organizers earn the following points:

- **OV** competitions at the level of the OV
  Helper **HLP** earn 1 point. Organizers **ORG** earn 2 points.
- **OFF** Official competition as the German champion ships and the Ranglistenläufe
  Helper and organizers earn two points if they are not FM. If they are PM they get five points.
- **INT** International competitions
  Helper and organizers do not earn any points.

SORRY, in German only.

Mit dem **SRR Ranglistensystem** sollen die besten Amateurfunkpeiler Russlands/Ukraine (und angrenzender Länder) ermittelt werden.

Die vergebenen SRR-Punkte werden nach folgenden Regeln ermittelt:

- Punkte erhalten die Teilnehmer, die alle für ihre Kategorie festgelegten Sender gefunden haben
- Der Erstplatzierte erhält 25 Punkte (Basis-Punkte), kann in der INI-Datei unter ***[RatingRUS]*** **basePoints=** anders festgelegt werden.
- Für die Nächstplatzierten reduziert sich die Punktzahl für ihre zusätzliche Laufzeit (in Sekunden) dividiert durch 300 (entspricht minus ein Punkt pro fünf Minuten)
- Die Punktberechnung wird auf 1/100 Punkte genau durchgeführt
- Wenn die Kategorie eine kleine, in der INI-Datei unter ***[RatingRUS]*** **minComInCat=** definierte Anzahl von Teilnehmern hat, erhalten diese Teilnehmer keine Punkte, außer:
  es gibt Kategorien mit vergleichbaren Anforderungen (gleiche Anzahl zu suchender Sender), dort wird sein Ergebnis eingeordnet und dann seine Punktzahl berechnet. Die Möglichkeit der Einordnung in diese Kategorien wird in der INI-Datei festgelegt, z.B.: ein einzelner Teilnehmer der Kategorie M60 könnte in die Kategorien M50, M40 oder M21 eingordnet werden.

Bei Wettbewerben der "B"-Kategorie (Club level, City level, the traditional):

- Die Wettkämpfer werden bei entsprechender Leistung in der Vergangenheit einer der folgenden "Klassen" zugeordnet:
  ЭМС, МСМК, МС, КМС, I раэряд, II раэряд, III раэряд, Iю., IIю., IIIю., б.р.

Das sind Abkürzungen mit entsprechender Bedeutung wie "ЭМС = Verdienter Meister des Sports".

- Diese "Klassen" haben abhängig von der Kategorie unterschiedliche Gewichtungspunkte. Die Namen der "Klassen" und die zugehörigen Gewichtungspunkte werden mit mehreren Schlüsselworten in der INI-Datei unter ***[RatingRUS]*** **basePointsBcat= classW= classW1= classW2= classW3= classWeight_???= ...** eingetragen.
- Bei einem Wettbewerb der "B"-Kategorie wird die Basis-Punktzahl des Erstplatzierten aus den Gewichtungspunkten der ersten zehn Platzierten in jeder Kategorie nach einer Berechnungsformel ermittelt.
  Basis-Punktzahl = 12 + R5/100 + R5/200 + R10/400 (R5 = Summe der Gewichtungspunkte der ersten fünf Platzierten, R10 = Summe der Gewichtungspunkte der ersten zehn Platzierten). Das ergibt eine mögliche Basis-Punktzahl von 13...24 Punkten für den Erstplatzierten.
- Die erreichbare Punktzahl in jeder Kategorie hängt also von der "Klasse/Gewichtungspunkten" und der Platzierung der Teilnehmer ab. Nach dem Erstplatzierten reduziert sich die Punktzahl entsprechend der höheren Laufzeiten.

The **FRR ranking system** is intended to determine the best amateur radio direction finders in Romania.

The GC points awarded are determined according to the following rules:

- The point determination is carried out for selected (younger, high-performing) categories:
  e.g. in the two groups W19, W21, W35 and M19, M21, M40 (determined in INI file under **[RatingROM]**)
- Regardless of this, two or more categories with the same stations to be searched for can belong to a group. But each category can only appear once in all groups. The group of categories is listed after the keyword **catGroup?** ("?" is a number 1..9), separated by a comma.
- Within these two category groups, the participant is determined who has found all the transmitter to be searched for and has the shortest running time based on the number of these transmitters. This participant receives 100 points.
- Participants who have found all transmitters and have a longer running time per channel receive inversely proportional fewer points; for example, with three times the duration per transmitter, a participant receives a third of 100 points => 33.33 points.
- Participants who have found one less transmitter receive points according to the following procedure. The one with the shortest running time per channel among these participants receives 20 points less than the one with the worst running time per transmitter and all transmitters found. All other participants will receive proportionately fewer points (as above).
- Participants with two or more transmitters not found and participants in other categories than those listed in the INI file will not receive any points.

The FRR Romania club rankings are as follows:

- Participants' GC points from multiple competitions will be credited to the participant's club and added together.

- Participants in the W15 and M15 categories who have found all the transmitter they need to search for will receive 25 points (determined in the INI file under **[RatingROM]**) for their club.
- The clubs are sorted according to their total points achieved.

Evaluation of ARDF - Competitions with application of the power factor

This model will only be used, if an evaluation with categories (less than 5 competitors for a category) isn't possible or if competitions for higher-order ones (e.g.: OE championship) must be counted.

The international ARDF rules provides different competition conditions (categories, number of foxes to be looked for) to the consideration of sex and age. With this, among other things, a carrying out of competitions is reached under the same temporal framework.

At local competitions, sometimes there are not enough competitors for running in categories (at least 5 per category required!). So the evaluation is done only in a general category, which puts especially older participants and ladies in a strongly disadvantage.

The following model takes into account the performance differences proved scientifically (to Cepelka and Hanson) by multiplication of the actual running time by power factors simply to be used. The results of different sex and different age groups therefore get comparable. The suggestion orientates itself regarding to the age groups at the international ARDF rules.
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The model suggested by OE6TGD has 5 foxes to be found from all participants. The obtained running times will be multiplied by a power factor (Cepelka and Hanson) from the following table (responding to the age and sexuality of the competitor) to get the definite ranking:

In FjwW the women's categories are determined by the first letter 'W', the categories of men by all other first letters. With the key word **WomenCatFirstChar=** in INI file the first character of women's categories (z.B.: SLO -> **WomenCatFirstChar=Ž**, ROM -> **WomenCatFirstChar=F**) can be changed.

Age	Power factor Multiplier	
	M	**W**
to 19	0.91	0.83
19-40	1.00	0.91
40-50	0.91	0.83
50-60	0.86	0.78
60-65	0.80	0.73
65-70	0.75	0.69

The power factor of the ladies (W) is different to Cepelka by approx. 10% after Hanson by 8-10% of that one of Men (M).

In this preliminary draft 9% (mean average value) were taken into account for Ladies.

Upon the fact that the actually runtime is about 70% *) of the measured time, only this part has to be multiplied with the LF, the rest is added up without any alteration.

*) this value still has to be verified! OE6TGD/OE6GC, 13.11.2005

Precondition for using the power factor in FjwW are concerning entries in INI file under paragraph **[Rating]** with key words **powerFactorRun=**, **powerFactorMan=** and **powerFactorWom=**.
example:
powerFactorMan=0-19:66.66% / 20:99.5% / 21:100% /.../ 80-99:55.55%
that means: the age group until 19 years with 66.66%, competitors with age of 20 years with 99.5%, competitors with age of 21 years with 100%, ..., the age group of 80 until 99 years with 55.55% will be rated.
For every age of 0 until 99 years there must be exist a value of percentage !

Handling and behaviour of the SportIdent stations

The following description no longer deals with SI stations up to and including BSF/M 6. They can only deal with the older SI-Card 5/6, not with the newer SI-Card >=8. These stations should not be used anymore.

Typical station variants (Photos: ©SportIdent)

BSF7	BSF8	BSF9	BSM8-USB	BS11-BS AIR+
115*62*32 mm	101*51*19 mm	112*57*21 mm	101*51*19 mm	115*62*32 mm
137 g	62 g	85 g	62 g + Kabel	150 g
Start/Fox/ Beacon/Finish	Start/Fox/ Beacon/Finish	Start/Fox/ Beacon/Finish	Master: Read SI-Cards, Programming stations	Start/Fox/ Beacon/Finish AIR+

Quotes ©SportIdent:

- The BSF8 station is “always on” and works in a low power Stand-by Mode. There is no need to switch on the station or to make any special preparations before the unit can be used. Also in Stand-by Mode the station is fully qualified to proceed SPORTident-Cards. The maximal wake up time is 1 second but can be adjusted by the user. A faster wake up will increase station’s power consumption. The station is switched from Stand-by Mode to Active Mode when the first SPORTident-Card is inserted.
- Once the station is in Active Mode the reaction time to the insertion of subsequent SI-Cards is very quick. After an adjustable period without a SI-Card being inserted, the station drops back to Stand-by Mode.
- From Stand-by Mode the station can also be switched to Service Mode. This is done by switching on the station with the Service/OFF-Card. In Service Mode the station’s LCD display offers additional information like the serial number, battery consumption and firmware version, see below. Information about station’s battery is given both by measuring the battery voltage and by computing the station’s battery consumption in relation to the

battery performance. Service Mode is automatically terminated after 10 minutes or earlier if the Service/OFF-Card is used.
- SPORTident-Station BSF7/8/9 feature with an easy firmware upgrade mechanism. Station's firmware can be uploaded by the user via simple inductive coupling. This feature keeps the station up to date and enables the implementation of additional functionality. To upgrade the firmware a master station BSM7 must be used. Information about the firmware version and features are available at www.sportident.com.

The stations each fulfill a special function as Clear/Check/Start/Fox/Finish stations. For these functions, they must be programmed using a master station (BSF/M 7/8) ***see*** .

Apart from the station number and time, further station-specific data are shown on the display. Examples:

SERVMO	Service-Mode, once after switching on with the OFF card
CN 33	Station number
12:13:14	Time
OFF240	Operating time in minutes
SW 565	Version of firmware
BAT341	Battery voltage in volts (3,41V), measured when switching on the station
CAP011	Used battery capacity in percent
PC 35	Number of stored SI cards

Some selected data of SportIdent stations
(Binding information only at ***www.sportident.com***)

- Memory for: 21802/1022 (BSF8/BSM8) SI-Cards in Fox-/Read-Station

Feature/Handling of the SI cards

All SI-Card / Compass variants (Photos: ©SportIdent)

no longer deliverable SI-Card 5	no longer deliverable SI-Card 6	SI-Card 8	SI-Card 9	SI-Card 10	SI-Card 11	SIAC(AIR+)	ComCard Up
30	64	30	50	128	128	128	30
330 ms	130 ms	115 ms	115 ms	60 ms	60 ms	60 ms	115 ms
12-h-stamps					LED	LED+Beep	right-left hand
1.000-499.999	500.000-999.999	2.000.000-2.999.999	1.000.000-1.999.999	7.000.000-7.999.999	9.000.000-9.999.999	8.000.000-8.999.999	2.000.000-2.999.999

To register the SI chip it has to be inserted into the hole in the SI device. After less than one second a beep and a flash occurs (if activated) to confirm the registration. The timestamp is registered on the SI chip and in the SI device. The timestamp is added to the timestamps already available on the SI card (cumulative collection), for the number of storable timestamps, see the table above. In addition, there are fixed memory locations for the Clear(Check), Start and Finish time.

The oldest SI-Card5 stores only half-day timestamps (12 h), the chip variants from SI-Card6 store 4-week-unique timestamps, of which only the weekday information in FjwW is used.
For the SI-Card5, it is practically always necessary to clear the SI card before starting the competition in order to avoid problems in the subsequent evaluation. For the other SI cards, a non-deletion causes little problems if all the collected timestamps are on the SI card in the same week and exceeding the max. possible timestamp is not expected.

Since many SI-Card5 are still in use, the organizer must ensure that the SI card clearing is carried out correctly: Insert the SI card and leave it punched until the acoustic **and** visual signal is perceived. This is made very difficult if several clear and possibly check stations are close to each other and so heard the acknowledgment signals of neighboring stations or be seen.
Repeated insertion of a SI card in a fox or finish station after a successful registration within less than 20 seconds results in an immediate acknowledgment (Beep and LED flash), without any further storage in the SI card and the SI Station takes place.

Further information on ***www.sportident.com***

Preparation of SportIdent stations

For a normal ARDF competition the following SI stations are needed:

- **Clear** It's mandatory to erase all prior timestamps from the SI chip by using the clear station! This is essential when using the SI-Card5, which can store only 30 half-day timestamps. From SI-Card6 they store 4-week timestamp, but in FjwW only the weekday information is used, it could be deleted every week or if an overflow of the timestamps to be saved (different for the various SI cards) threatens.
- **Check** To check whether the erase process was successful, this job is also done by clear station.
- **Start** If the start time is not fixed but taken by a timestamp at the start station; If the data of the start station is to be evaluated immediately by FjwW via the interface, it must have the station number=3.
- **Foxes/Beacon** some stations at transmitters/beacon to take the time and do the timestamp. The station have to have numbers 20...254.
- **Finish** The finish timestamp is written to the chip and registered in the station. It's necessary to place enough finish stations at the finish line to avoid jams. If the data of the destination station is to be evaluated immediately by FjwW via the interface, it must have the station number=4.
- **Read** A master station in conjunction with a PC running the FjwW program is able to read the chips and the timestamps on it.

The stations for clear/check/finish can have station numbers within 1...19.

The SI stations have to be prepared before the competition starts. This can be done with the **SI-Config Plus** (obsoletely **SI-Config** and **SIMAN**) software provided as freeware by the producer of the SI stations AES ***www.sportident.com***. Some important settings can be

done with the FjwW software (see ***Interface|Stations Service***).

In this mode the station have a programmable operating time (for example 6 hours). After switching on the station it will stay on for the programmed time. If a SI chip is registered the time count restarts from zero and the full operating time available again. To check the proper operation of the SI station a SI card should be inserted (beep and flash must appear). This SI chip should not be used within the same competition because the related timestamp is not only stored on the chip but also in the SI station. The chip can be erased before being used but the station can not be erased when it's already brought to the transmitter! Once programmed the operating time is always the same until it's reprogrammed.

~~The operating time has to be big enough to cover the hiding of the transmitters and the time between the first start and the first found of the transmitter. If a station switches off because the operating time has passed it can not be switched on by the competitors if it's a station prior to BSF7 !~~ stations of type BSF7 and higher do not require a switch on. They are always in a sleeping mode and become active after a chip is inserted. No magnet is needed for these stations.

FjwW can also be used for this purpose. Use ***Interface|SportIdent***. Select the interface, set the first start time to a value equal or greater than the zero time and select ***Read stations via master***. After the communication with the master station is ok (perhaps help to switch it on with OFF chip) use the function "Interface/Station Service" for setting the relevant options for the stations used in the competition.

After being switched on the stations will be on for the operating time which has been set. Each time a SI chip is registered the operating time starts from zero. The stations can be switched off with the **OFF chip** or with SI-Config or FjwW.

The SI station stores the timestamp in its internal memory. The data is not erased when the station is switched of. The data can be read via a master station at any time. To avoid a memory overflow or mistakes created by elder timestamps still available in the stations memory it's recommended to clear the memory of the stations used in the competition. This can be done with **SI-Config** or FjwW (see ***Interface|Backup/Display Data***).

Mapping of SI station numbers to the ARDF transmitters

The stations should be programmed with the numbers **31...35...** for the transmitters **F1...F5...**. If more than one station is used at one transmitter the stations must have the same number!
But since the FjwW version 10.6 it's possible to assigned a second/backup station number to a fox. This is particularly in the case of failure (of the SI station at the fox) valuable. In the competition data window this number can be entered in addition, the number of the failed station must remain in FjwW get even, because participants may have already been registered at this tation.

Only in case of exceptions other rules can be applied:

- Exception: The stations are moved to another place where the transmitter number should be different but they can not be reprogrammed. In that case the sequence of station numbers must be changed. The first number is the one corresponding to the first transmitter.
- Exception: More than one competition are organized in parallel having a common finish station (for example if 80m and 2m is done in parallel). In this case the station numbers of one competition could be **31...35** and **36...40** for the second. The relation between station number and transmitter number is set up in the TLN file at the **@SI_NO_LIST** entry or in the dialog for the competition data within FjwW.

Mode of operation of the reading station:

There are two ways of using the reading stations:

- Interactive mode
  The SI reading station must be connected to the serial interface (or the USB port) of the computer running FjwW. The interface must be enabled within FjwW (see ***Interface|SportIdent***). As soon as a SI chip is inserted into the reading station a message is sent to FjwW. The program fetches the data of the SI chip and sends a confirmation to the reading station. This confirmation causes the reading station to store the data as well. In this operation mode the SI chips can only be read if the station is switched-on and connected to the PC and with FjwW running and an enabled interface.
- Autosend mode
  As soon as a chip is inserted into the reading station the data of the chip is stored in the memory of the station and sent out regardless of the status of the PC or notebook. The reading station can be used for automatic reading and storage of SI chips when the competitors arrive.
  If the SI reading station is connected to a serial or USB interface and the interface is activated by using ***Interface|SportIdent*** the behaviour is alike the interactive mode. If the reading station is not always connected to a running FjwW (so to say the number of read chips within the station is not the same as those received by FjwW), another way has to be choose to get the data for the result calculation. A backup of the data has to be done via ***Interface|Backup/Display Data***. The resulting DAT file has to be (re)read by FjwW via ***File|DAT Data File read***.
  Attention: If the memory limits are reached **all** eldest timestamps are lost !!!

Online result calculation, FAQs

Some points for the result calculation and presentation using **SportIdent**

- Preparation of TLN file is done, start lists are printed, PC with FjwW, printer and PC for displaying the results are at the finish area
- Load TLN-/KOR-files for all ongoing competitions
- Connect the SI reading device to the serial or the USB connector of the PC with FjwW
- Activate the interface and check the date and the starting time
- Put a SI chip to check the functioning of the reading device. The chip which was used to check the devices at the transmitters are a good example. The timestamps of the SI chip must be stored in the KOR file
- Connect the PC for displaying the results to the serial or the LAN interface ***see***
- Start FjwWdispl ~~/ FJWDISPL~~ on the DisplayPC's or start an Internet-Browser
- Release the COMy, LAN and HTTP results on the FjwW computer
- Prepare (network)printer and activate the printing of the finish ticket ***see***
- From time to time print a result list with the option 'unofficial' and make it public
- To calculate total results for more than one competition the related TLN-/EDA- files must be loaded. By this total results for the German RLL- or Cup-Rating can be done ***see***

FAQ: What has to be done if...?

1. A SI chip was read but the timestamps are marked with red lines in the background. At the upper right corner a bigger number is displayed with some exclamation marks and a sound is played (windows system sound for QUESTION): The chip or

start number of the chip was not found in any of the loaded competitions. The timestamps cannot be put into relation to any competitor. The timestamps are written into the KOR file(s) of the competition(s). If the error is corrected and the chip number is related to a competitor the KOR files can be reloaded and the timestamps are correctly put into relation with the competitor.

2. When moving the transmitters from one competition to another one the transmitter numbers change:
Within the **@SI_NO_LIST** in the TLN file the relation between transmitter number and device code can be freely chosen. The relation is e.g. **F1** -> 31 ... **F5** -> 35 but other relations are possible as well (example: the entry of 34 31 33 35 32 will be interpreted as F1->34, F2->31, F3->33, F4->35, F5->32. This relationship can also be changed in the window with the competition (head) data.
If the reading of the timestamps reveals an unknown number they are not mapped to a transmitter number. Instead of this the number is incremented by 1000 and written to the KOR file anyway.

3. At the German championships with participation of competitors from foreign countries only the German competitors should be taken into account to calculate special lists (for example the DARC ranking):
The groups used within FjwW can be used for this purpose. For this German competitors have a different indicator than the international guests. As an example the German competitors get no entry and the others get the entry **INT** (this can be achieved by writing it into the TLN file or by using ***Edit|Correction FH/Hlp Data***. When creating the result lists the
Edit|Options of Lists/Group select has to be modified. The characters "[*]" represents all users without a group. It has to be moved from the ***Existing groups*** with **<++** to the ***Rating groups*** field. As a result only German competitors will be displayed and used for calculation.

4. A SI master device is available to register only the finish time of the competitors:

The SI device has to be programmed as 'finish' and it has to be placed at the finish line. After the competitors have done their finish time stamp a backup of the data has to be done via ***Interface|Backup/Display Data***. The saved DAT file has to be loaded via ***File|DAT Data File read***. By this operation the finish time for the competitors is automatically updated. The real number of found transmitters has to be manually entered via ***Edit|Correction FH/Hlp Data***.

5. The start time of the competitors should be taken from a SI device:
In the TLN file the parameter **@STT_IN_DAT** has to be set to 127. Alternatively within the competition data window the parameter ***Start time from*** has to be set to ***SI Startstation***. The start times from the TLN and/or KOR file are automatically erased. When the competitor arrives at the finish and the chip is read the start time is set to the time of the timestamp of the SI device which was declared to be the start time. The same happens if the timestamps are read from the given SI device or a DAT file via
File|DAT Data File read

The stored start time after registration in the SI start station can be used not rounded or round up to **full 1, 2, 2.5 or 5 minutes (60, 120, 150 or 300 seconds)**. With rounding up, several participants get the opportunity to register one or two or five minutes before in a start-station and to start in the right second from the starting line. The result is a very simple launch process (e.g. FoxOring: the exact start time have no importance because all the transmitter are working permanently.)
If the start times of competitors read out from the start station as DAT file and read in again in FjwW until competitors arrive the finish, no constantly renewed display of current run times of competitors will be happens in the main window.
It is also possible to connect a with AUTOSEND programmed start station on the COM-B interface and to activate in menu ***Interface|SportIdent/COM B Port/COM C Port*** and

select ***Fox/Start data reading***. Then the starting time immediately read in with the punching of SI chip and are available for analysis.

6. The registered times from one of the SI devices at a transmitter should be taken as the start time:
For example a 80m and a 2m competition with 10 transmitters is done. The 80m part consists of the transmitters 1 to 5 and the 2m part of the transmitters 6 to 10. The two parts should be counted separately. The starting time should be taken from a transmitter 11 which is the finish of 80m and the start of 2m.

```
In the TLN file          or in the              #Window for the competition data
@STT_IN_DAT:  11                                #Start time from Fox 11 (SI-No 41)
@FT_IN_DAT:   0                                 #Finish time from Finish station
@FINISH_NO:   12                                #Fi.No
@FOX_LIST:    "M21"  6 7 8 9 10                 #Fox list
@SI_NO_LIST:  0 0 0 0 0 36 37 38 39 40 41       #SI-No
```

the above data has to be entered.

The finish number must always be the highest number. The number of the transmitter being the finish and the start between the competitions can be whatever number is chosen. But the chosen number is not taken as a found transmitter anymore (for example transmitter 5 of competition 80m).

7. A competition with 10 transmitters and a finish in the middle should be calculated as two separate competitions and as a single competition:
For the first part (for example 80m) the transmitters 1 to 5 are taken (SI devices with numbers 31 to 35). The finish in the middle is transmitter 6 (SI device number 36). For the second part (for example 2m) the transmitters 7 to 11 are taken (SI devices with numbers 37 to 47). Transmitter 6 should be taken as the start time and a normal finish as the finish time.

Single competition

```
In the TLN file          or in the              #Window for the competition data
@STT_IN_DAT:  0                                 #Start time from TLN file
@FT_IN_DAT:   0                                 #Finish time from Finish station
@FINISH_NO:   12                                #Fi.No
```

```
@FOX_LIST:    "M21"  1 2 3 4 5 . 7 8 9 10 11   #Fox list
@SI_NO_LIST:  31 32 33 34 35 36 37 38 39 40 41 #SI-No
```

80-m-part

```
In the TLN file          or in the              #Window for the competition data
@STT_IN_DAT:  0                                 #Start time from TLN file
@FT_IN_DAT:   6                                 #Finish time from Fox 6 (SI-No 36)
@FINISH_NO:   7                                 #Fi.No
@FOX_LIST:    "M21"  1 2 3 4 5                  #Fox list
@SI_NO_LIST:  31 32 33 34 35 36 37 38 39 40 41 #SI-No
```

2-m-part

```
In the TLN file         or in the               #Window for the competition data
@STT_IN_DAT:  6                                 #Start time from Fox 6 (SI-No 36)
@FT_IN_DAT:   0                                 #Finish time from Finish station
@FINISH_NO:   12                                #Fi.No
@FOX_LIST:    "M21"  7 8 9 10 11                #Fox list
@SI_NO_LIST:  31 32 33 34 35 36 37 38 39 40 41 #SI-No
```

8. The start times of some competitors should be set to a dedicated starting group or a dedicated starting time (this can be the case if some competitors want to start together)**, all others should be randomly distributed:**
a) In the TLN file for those competitors a start time can be written in the **START** column or the number of the starting group can be written in the **SET** column (preceded by an asterisk "*" or a minus sign "-"). The TLN file has to be reloaded after the modifications. The best is to unload the competition, modify the TLN file and reload it.
b) Using ***Edit|Correction FH/Hlp Data*** the start times of the competitors are set manually.
The raffle of start times must be initiated via ***File|Balloting Start Times***. To assure that only those competitors are given new start times the options ***Existing start times deleting*** and ***all*** must not be selected. If they are selected previously entered start times are erased and recalculated.

9. Competitors not existing in the file Namensliste.txt **were added to the competition. These names should be taken over into the Namenslist and updated data of other competitors should be saved as well**
After using ***Edit|FH/Hlp Registration*** the file **Nameslist.txt** is

loaded. With the option ***<Special>*** the dialog window is enlarged. By activating the option ***Append*** the actually loaded file of competitors is appended to the list and the number of entries is increased. Click ***Merge*** to delete identical entries and to merge additional information if it exists. The competitors who did not exist before in the file Namensliste.txt stay untouched. Using ***Search*** it has to be checked if there are no double entries or entries with conflicting data like same name but different club or unequal names but the same call sign. These entries can be edited, modified or deleted manually. After these operations the new set of data should be saved. If a new filename is used the old file remains as a backup.

10. After the year has ended a lot of categories in the file Nameslist.txt **will not be correct any longer. FjwW helps to identify these conflicts:**

After loading the file Namensliste.txt all the categories which are not correct compared to the age of the competitor are preceded by a question mark “?”. With ***Search*** they can be displayed one after the other. At every turn of the year there are many changes to the category (with currently >9000 entries in name lists 1&2). Modifications can be done.

How to proceed? Select the list of names and save it immediately. After opening the file with the FjwW editor (or any other editor which does NOT replace tabs with spaces) the wrong categories can be replaced by the correct ones. wrong categories are preceded by a question mark (**?**). With the search&replace option the replacing is very easy. Just replace as follows:

```
?W19 -> W21    ?W21 -> W35    ?W35 -> W50    ?W50 -> W60
?M19 -> M21    ?M21 -> M40    ?M40 -> M50    ?M50 -> M60    ?M60 -> M70
?JUN -> SEN    ?SEN -> OT     ?OT  -> VET
```

11. How can a preview of the printout of a result list be displayed within the editor?

As a preparation the margins have to be set correctly using ***File|Print Setup***. At the preview the option ***View|Print Preview*** has to be activated to see the pages, as

they will be printed. Every modification within the editor will be displayed after a short delay (for example the change of the font).

12. How can I find out which timestamps are correct if a competitor did not erase his SI chip before he started?

Not erasing timestamps of a prior competition can lead to the fact that more transmitters are counted for the competitor as he really found. This behavior is a result of the fact, that the SI chip timestamp is only unique within a 12 hours timeframe. If there are timestamps left which are within the start time and the end time of the competition they are counted as founds.

To correct this error the KOR file has to be loaded into the editor of FjwW. There a search is available ***Edit|Find***. For example the SI chip number can be searched (in the example number 5588) or the starting number (in the example number 43). The following lines will be found:

```
#StNo=43 - #at14.50:10 Chip=5588
  1 43 11.56:05'00 24-4-04 0; @id5588
  7 43 12.08:42'00 24-4-04 0; @id5588
  9 43 12.15:23'00 24-4-04 0; @id5588
  1 43 12.06:27'00 24-4-04 0; @id5588
  2 43 12.28:20'00 24-4-04 0; @id5588
  5 43 12.45:14'00 24-4-04 0; @id5588
  3 43 13.05:28'00 24-4-04 0; @id5588
  8 43 13.46:53'00 24-4-04 0; @id5588
  7 43 14.14:32'00 24-4-04 0; @id5588
  6 43 14.26:21'00 24-4-04 0; @id5588
128 43 14.38:49'00 24-4-04 0; @id5588
```

The rows represent the timestamps as they are stored on the SI chip. The order is the order within the chip. The leftmost column is the transmitter number. The finish has always number 128. In the same order the timestamps are read, when the competition data is loaded. If a number appears two times, the data is overwritten with the last timestamp read. In the above example number 1 and 7 are overwritten by the following number 1 and 7. But also the timestamp for transmitter 9 is stored in the competition because it is within the starting and the finish time. If number 9 is also a valid transmitter number for the category in which the competitor started this transmitter will be treated as a found transmitter. The competitor gets more transmitters than he has really found.

In the above example it can be clearly said that transmitter 9 was part of a prior competition which was not erased because **the timestamps within one competition are stored in ascending order**.
Via ***Edit|Correction FH/Hlp Data*** the time for transmitter 9 for the competitor with SI chip number 5588 is set to 0. By this the problem created by not erasing the SI chip is solved.

13. How can I easily load more than one competition to evaluate the actual RLL results (= German ranking) while a competition is ongoing?
The best way to do so is the usage of a command file or command line (prompt). The current competition has to be loaded first. The usage of wildcards like ? and * is allowed.
ATTENTION: If the file or directory names include spaces the name has to be enclosed by “...”.

Examples for a CMD or BAT file or command line:

We assume that the competition data is stored in the following three directories:
C:\Data\040814C:\Data\040815C:\Data\RLL 2004

Example 1:
FjwW.exe c:\Data\040815\040815.tln c:\Data\040814\040814.tln

Example 2:
C:
cd \Data
FjwW.exe 040815\040815.tln "RLL 2004\040814.eda"

Example 3:
C:
cd \Data\040815
FjwW.exe 040815.tln ..\040814\040814.tln "..\RLL 2004\04*.eda"

For example 4 there are many competition data in same path, only

data of 2005 should be load
C:\Data\RLL 03-05

Example 4:
FjwW.exe "C:\Data\RLL 03-05\05*.tln"

14. In a Swedish competition the last found fox determines the finish time.
For that choose in window 'Competition data' (Ctrl+F3) in combo box ***Finish time from*** the entry 'Last Fox' or set the key word ***@FT_IN_DAT:*** in the TLN file to "256".

15. During a competition a SI station falls in 'out of order'.
Since the FjwW version 10.6 it is no longer necessary for all (one or more) SI stations on transmitters must have the same station number. Now a second station may also be used at a transmitter, of course, one which is not used at other transmitters already.
For the unexpected accident a prepared SI station, e.g. programmed with a station number <=254 (from a reserve pool) can be brought immediately to the transmitter. The SI station number has to be entered in the 'Competition data' window.

16. In an ARDF World Championship, an 80m and 2m competition will be held for two groups of categories at the same time.
This allows a better separation of categories in the field can be achieved. So there is a start, twice 5 foxes, common finish beacon and finish. In FjwW, these two separate competitions can be combined in one TLN file. An example of this can be found in the "Examples" directory under the FjwW directory with the file name "**_WC2016m80+2.tln**".

17. In a SPRINT competition up to twice 5 stations are to be searched and in between a spectator point to found. How should this be set in FjwW?
For this purpose, a fox station is set up at the spectator point and in the Fox lists of the categories the station number with an exclamation mark '!' expanded. Example:

```
In the TLN file it looks like this:
@FOX_LIST:    "M19"  1 3 4 5 6! 11 13 14 15        #Foxlist M19
@FOX_LIST:    "M21"  1 2 3 4 5 6! 11 12 13 14 15   #Foxlist M21
```

That means for category M19: first of all the transmitters F1,3,4,5 in any order, then the spectator point F6 and then the transmitters F11,13,14,15 (any order) to visit. The transmitter F6, also called 'mandatory fox' in FjwW, is included correctly in the calculation of the optimal search sequences of the categories. If the participant does not observe the correct order, this will be indicated in the result table by a red background in column 'Order'.
A detailed example of a TLN file for a Sprint competition can be found in the "Examples" directory under the FjwW directory with the filename "**_bsp-sprint.tln**".

18. In a SPRINT competition, the spectator point and the finish beacon are in the same location, there is only one beacon transmitter and the SI beacon station (possible concerning IARU rules, point S3.4). Then the station number is also to be set for the spectator point. The locations of spectator point and finish beacon have to be the same. Example:

```
In the TLN file it looks like this:
@FIN_BEACON:  6
@FINISH_NO:   7
@SI_NO_LIST:  31 32 99 34 35 99
@FOX_LIST:    "M21"  1 2 3! 4 5
@OPTIONS:     SptO
@POSITIONS:   0:0/100:100/200:200/666:666/400:400/500:500/666:666/800:800
```

19. In an FoxO competition there should be no start and finish location. The participant begins by searching for any fox (results in the start time), the finish time results from the stamp time of the last fox visited. Example:

```
In the TLN file it looks like this:
@FINISH_NO:   11
@STT_IN_DAT:  255
@FT_IN_DAT:   256
@SI_NO_LIST:  31 32 33 34 35 36 37 38 39 40
@FOX_LIST:    "M21"  1 2 3 4 5 6 7 8 9 10
@OPTIONS:     FoxO
```

The stamp time of the first fox becomes the start time, the fox time itself is increased by one second. The stamp time of the last fox

found becomes the target time, the fox time itself is reduced by one second.

20. In an FoxO satellite competition, seven foxes must be found in a **predetermined order**. **Another three satellite foxes** can be found and stamped at **any time**.

```
In the TLN file it looks like this:
@FINISH_NO:    11
@SI_NO_LIST:   31 32 33 34 35 36 37 38 39 40
@FOX_LIST:     "M21"  2! 3! 1! 4! 7! 6! 5! 8^ 9^ 10^
@OPTIONS:      FoxO
```

The seven foxes are written in their specified order with a ! (mandatory fox), the three foxes to be searched for with a ° (free fox). If the correct order is not followed by the participant, the 'order' highlighted in red is displayed in the main program window.

Two or more competitions a day

If two or more competitions are to be held in one day, proceed carefully so that no problems arise. The examples describe it for two competitions, in several cases this applies analogously.

First of all, it is important to know how FjwW works: If multiple competitions are available by loading their TLN files with the date of the contest day, the SI chip data read from a SI read station is written into the KOR files of these competitions. This allows, among other things, later changes in the conditions of competition, without having to re-read the SI chips.

There are two cases where different procedures are required:

- There is no overlapping of the end time of the first and the start time of the second competition !

  Example: 1th competition 9:00 to 12:59 --- 2nd competition 13:00 to 17:00

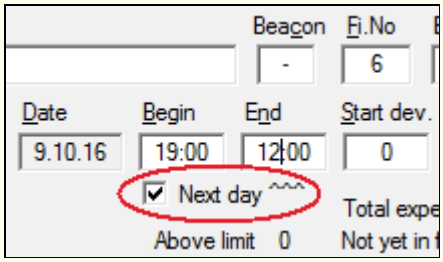
  Both competitions can be loaded in FjwW, because of the non-overlapping competition times, the read SI chip data can be clearly assigned to the right competition. It goes without saying that only one competition can be loaded alone at the right time and the evaluation can be made.
  However, may not be made the error here, to change the end time of the first competition to a later time (for example, because a competitor has reached the finish after the planned end time and still has to be evaluated). Then fox/finish times of the first competition can also be effective in the second competition or start/fox times of the second competition in the first competition, this change the result certainly.

- The end time of the first competition is after the start of the second competition /

  Example: 1th competition 9:00 to 13:30 --- 2nd competition 12:30 to 17:00

In order to prevent the above-mentioned problems, a different procedure must be followed.
First select the menu ***Extras|Several FjwW instances*** and after that load only the first competition in FjwW. Then the second competition is to be loaded by double-clicking the second TLN file or by starting FjwW itself and loading the second TLN file in this second instance of the FjwW program. Now both competitions are completely separated from each other in the two instances, the overlap problem is no longer present. However, two SI read stations must also be used, each instance requires its own reading station on another COM port. The HTTP server can only be activated in one instance (but this can also be bypassed with a second INI file of the second instance and another port of the HTTP server).

One competiton on two days (goes over midnight)



If the competition end time is to be on the following day, the checkbox ***Next day*** **^^^** must be activated in the competition data window (CTRL+F3), see picture on left.
~~Under ***Interface|SportIdent*** should be entered the date and begin time of competition in the field **Date !!! First time**.~~
All timestamps of the second day are marked in different windows and lists with an appended **a** (like **a**nother day).
Important:
The use of SI-Chip5 (Nr <500000) is possible if all timestamps on the chip are within 12 hours after the begin time of the competition. SportIdent chips of **Type 6 (also 8,9,10,11,SIAC)** can be used without restriction within the 48 hours of both competition days.

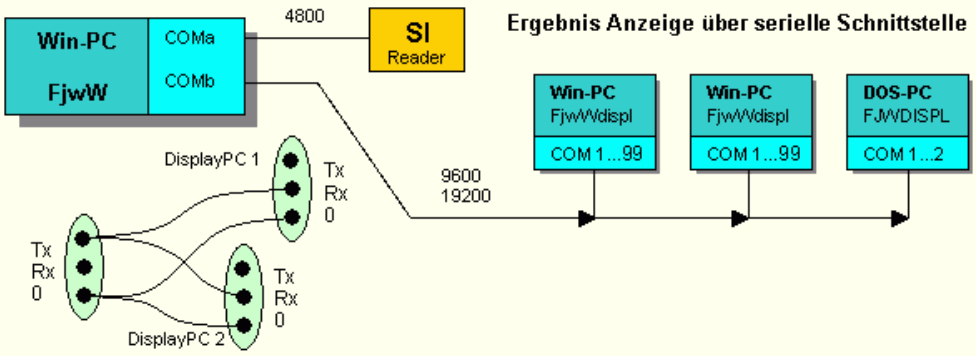
For experienced users: If the SI-Chip5 should/must be used, this is possible if a manual correction is made after reading the chip for all start/fox/finish times. All timestamps that are on the second day of the competition must be extended by the lowercase letter "a" (e.g. **10:12:34a**) and all timestamps must be checked in the morning/afternoon and thus the time may be increased by 12 hours !

Display of results

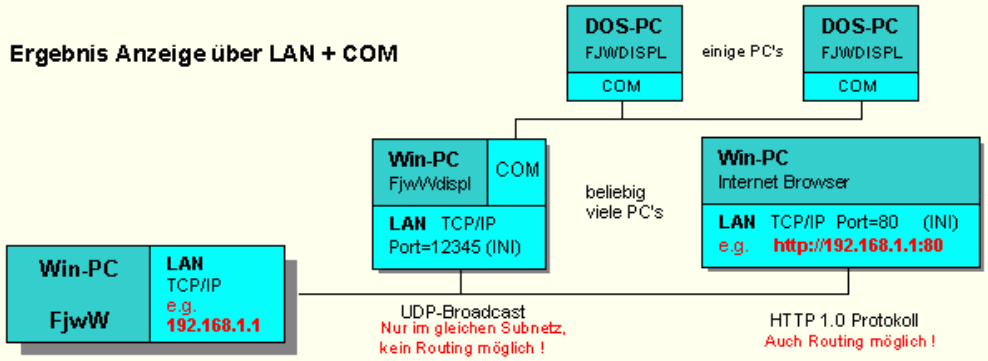
FjwW is able to display results in text form with 16 foreground and background colors on computers connected via a COM or LAN/WLAN interface and running the FjwWdispl program. When using the COM interface, the appropriate cables, as shown above, must be available. When using a LAN/WLAN network, any number of computers can be set up for viewing. A configuration of the IP addresses of these DisplayPCs is not necessary, the display data is sent as a UDP broadcast (radio) transmission, which only works in the immediate network, i.e. it ends with a router.

There are different ways to display the actual results:

- On PCs connected via the serial interface.
  Using Windows 2000 or newer the program **FjwWdispl** is used to display the results.
  ~~Using DOS 5.0 or newer the program **FJWDISPL** is used to display the results.~~



- On PCs connected via a LAN using the TCP/IP protocol (Windows 2000 or higher).
  The program **FjwWdispl** or an **Internet-Browser** is requested.



The programs **FjwWdispl** ~~and **FJWDISPL**~~ are delivered together with FjwW.

In the menu ***Interface|Result Display*** the available options to display the results on other PCs can be chosen. FjwW send with the set cycle time there (10...99 sec) the results of all categories. All contained category results in the list of items to display categories (option /l?) are stored and the DisplayPCs with the cycle time selected here (5...60sec) displayed successively. If several DisplayPCs installed, it can be achieved by different launch of FjwWdispl and litle different set cycle times that not all displays show the same category results.

To assure, that data can be transferred via a radio transmission the RTS line of the serial interface becomes high about **200 ms** before the first data is transmitted (**+ level**) and **10 ms** after the last byte was transferred (**- level**). With this signals the transmitter/modulator can be driven correctly, so it is ready when the first data arrives.

The program **FjwWdispl**

Starting the program without or with incomplete parameters shows a dialog window in which the setup can be defined easily.

If the program is started without options, a dialog appears first in which all settings can be made, they are saved in the registry. If started with some options on a command line the dialog does not pop up and the program starts to run (no storage of the options in the registry):

Start: **FjwWdispl.exe [/p?] [/s?] [/u?] [/c?] [/q?] [/l"?,?,.."] [/d".."] [/f".."] [/t".."] [/m?] [/k?] [/w?] [/z?] | [/?]**

```
/p - COM-Port (1..99), default=1
/s - Fixed transfer rate (1,2,4,8,16,32,48,96)*1200 Baud
     default=38400 + automatic adaptation of the baud-rate.
/u - UDP Port, default=12345
/c - Max. number of character per line (45...125), default=80
/q - Sound on receiving/key using (/q0, default), no (/q1)
/l - List of categories/lists to be displayed (0,1,..34)
     The number is derived from the sequence number in the TLN-file
     or from the order of the categories in the toolbar of FjwW
/d - Printout enabled (/d"Printer Name"), (/d"" no printer)
/f - Font, e.g. /f"Lucida Console"
/t - Text in foot line, e.g. /t"ARDF WC 2008 Korea"
     First four characters "0x??" control the text/background color, see below
/m - Display on monitor (1,2,..), default=1
/k - Key lock for choosing categories (F1,F2,..)
/w - Delay at launch, wait for network, default=0 sec
/z - Cycle time for displaying the results of categories (5..60 sec)
/? - This help text
```

A with "0x??" beginning text controls the text/background color of the title line. Both question marks can be the characters "0...9,A...F", the first for the background, the second for the text color. In this order it means the colors:
black, dark blue, dark green, dark cyan, dark red, dark magenta, dark brown, dark

white,
gray, cyan, green, blue, red, magenta, yellow, white

Only the first 22 categories sent to the DisplayPC can be chosen manually (keys **F1...F12,1...9,0**). If automatically displayed, all categories will be shown one after the other. If filtered by the **/l** option, only these categories are displayed. On each DisplayPC the categories to be displayed can differ.

If FjwWdispl has already been started, a further start on the same monitor (1 or 2) causes the screen to be split vertically for both of them. So that this happens in the desired order on the display when starting twice in a .CMD file or two links in the autostart, a longer delay with the "/w?" Option is required for the second instance, which should be visible in the lower part to specify. Special characters for the title line can only be transferred with a link (.lnk file).

Example:

```
In the competition the following categories exist in the given order:
   W19  W21  W35  W50  M19  M21  M40  M50  M60  W10  W16  M13  M16
-------------------------------------------------
If FjwWdispl is started with the following option:
   /L10,11,1,2,3,4
all the categories having a 'W' in its name are displayed and can be
selected by the function keys:
   F1   F2   F3   F4   F5   F6
   W10  W16  W19  W21  W35  W50
-------------------------------------------------
If FjwWdispl is started with the following option:
   /L5,6,7,8,9,0
all the categories having  >= 'M19' in its name and the arriving list
are displayed and can be selected by the function keys:
   ESC F1   F2   F3   F4   F5
   E   M19  M21  M40  M50  M60
```

This variant of the display is created by starting the following links or command lines at about the same time.

"FjwWdispl.exe" /c56 /w2 /u12345
"FjwWdispl.exe" /c65 /w5 /u12356 /t"_____ F i n i s h r e s u l t _____"

The number of columns after '/c' determines the font size (may vary), the start delay at '/w' determines the position (top/bottom) on the screen.

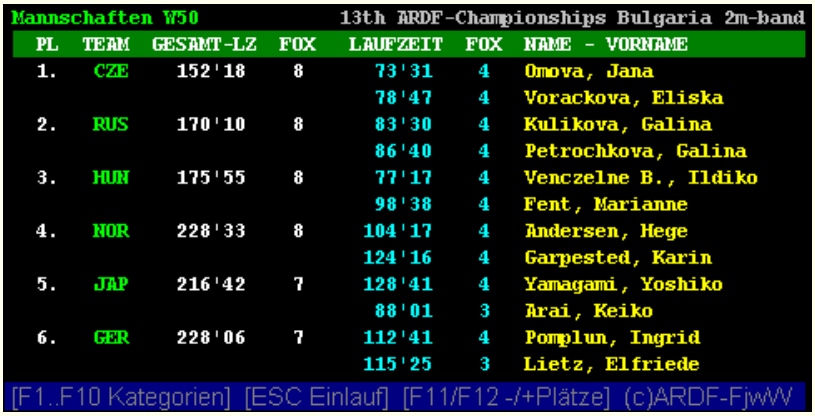
FjwWdispl does not access the hard disk after being started. New possibilities have been added because of the availability of the graphical interface. When starting the program an individual footer can replace the standard footer (add some spaces if needed).

Kategorie M21 — 15th IARU Region 1 Championchip

KAT	PL	NAME	DOK	LAUFZEIT	FOX	STNR	REIHENFOLGE
M21	1.	KAREL FUCÍK	CZE	58'35	6	601	S-5-1-2-4-3-6-Z
M21	2.	DMITRY SOMOV	RUS	58'48	6	611	S-5-1-2-4-3-6-Z
M21	3.	MARTIN BAIER	CZE	61'40	6	602	S-5-1-2-4-3-6-Z
M21	4.	EVGENY PANCHENKO	RUS	63'30	6	612	S-5-1-2-4-3-6-Z
M21	5.	SERGIY SHTANKO	UKR	71'59	6	628	S-1-2-3-4-5-6-Z
M21	6.	JAKUB OMA	CZE	73'13	6	603	S-5-1-2-4-3-6-Z
M21		JURAJ TURSKY		74'28	6	625	
M21	22.		SVK	96'00			S-5-1-2-4-3-6-Z
M21	23.	VIKTOR TZENKOV	BUL	98'54	6	621	S-5-1-2-4-3-6-Z
M21	24.	MITJA ŠTRMAN	SLO	100'29	6	617	S-5-1-2-4-3-6-Z
M21	25.	ROBERT OREHOCI	CRO	101'31	6	634	S-5-1-2-4-3-6-Z
M21	26.	ROBERT DECSEI	HUN	106'54	6	605	S-5-1-2-3-4-6-Z
M21	27.	DRAGAN LAZAREVSKI	MKD	109'10	6	631	S-5-1-2-4-3-6-Z
M21	28.	GUILLAUME VIDAL	FRA	109'19	6	624	S-5-1-2-4-3-6-Z

F1-F10 Kategorie **ESC Einlauf** **F11/F12 -/+Plätze** ©ARDF-FjwW

Example of individual results

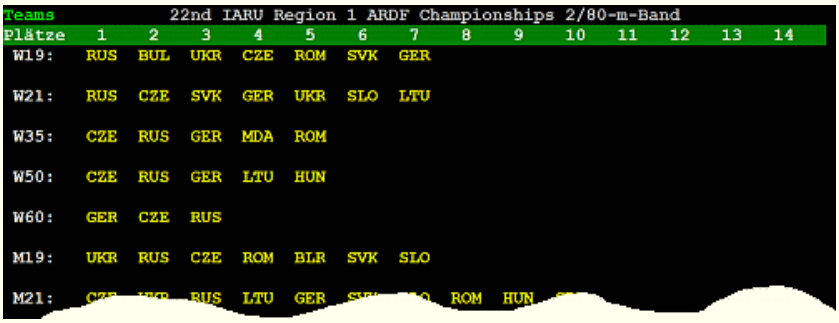


Mannschaften W50 — 13th ARDF-Championships Bulgaria 2m-band

PL	TEAM	GESAMT-LZ	FOX	LAUFZEIT	FOX	NAME - VORNAME
1.	CZE	152'18	8	73'31	4	Omova, Jana
				78'47	4	Vorackova, Eliska
2.	RUS	170'10	8	83'30	4	Kulikova, Galina
				86'40	4	Petrochkova, Galina
3.	HUN	175'55	8	77'17	4	Venczelne B., Ildiko
				98'38	4	Fent, Marianne
4.	NOR	228'33	8	104'17	4	Andersen, Hege
				124'16	4	Garpested, Karin
5.	JAP	216'42	7	128'41	4	Yamagami, Yoshiko
				88'01	3	Arai, Keiko
6.	GER	228'06	7	112'41	4	Pomplun, Ingrid
				115'25	3	Lietz, Elfriede

[F1..F10 Kategorien] [ESC Einlauf] [F11/F12 -/+Plätze] (c)ARDF-FjwW

Example of team results

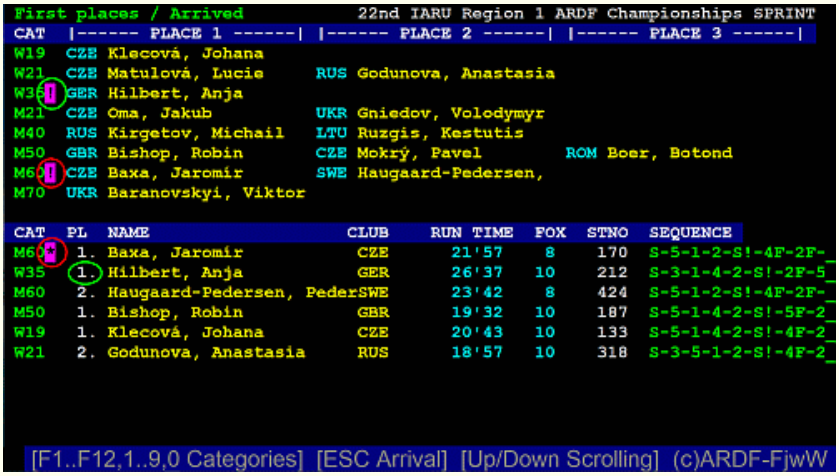


Teams — 22nd IARU Region 1 ARDF Championships 2/80-m-Band

Plätze	1	2	3	4	5	6	7	8	9	10	11	12	13	14
W19:	RUS	BUL	UKR	CZE	ROM	SVK	GER							
W21:	RUS	CZE	SVK	GER	UKR	SLO	LTU							
W35:	CZE	RUS	GER	MDA	ROM									
W50:	CZE	RUS	GER	LTU	HUN									
W60:	GER	CZE	RUS											
M19:	UKR	RUS	CZE	ROM	BLR	SVK	SLO							
M21:	CZE	UKR	RUS	LTU	GER	SVK	SLO	ROM	HUN					

Example of displaying the team results of the countries/clubs in all categories by keys **ESC, E** in FjwWdispl.

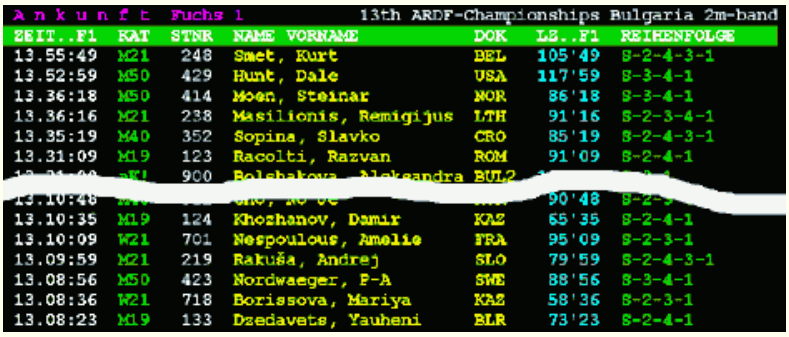
If a category is chosen via **F1...F12,1...9,0** or **ESC,E** is used to display the arrival list the screen does not change for about 20 seconds.



Example of display by keys **ESC, E**, display the first three ranked in each category and the last six participants who have reached the finish.

In this example the participant 'Baxa, Jaromir' has just read out his SIchip, marked in the lower part with *****. Therefore, its category M60 in the upper part with a **!** marked because it reached a place 1...3. Both markings have a **red** border. Before that, the participant 'Hilbert, Antje' achieved the same thing (**green** bordered).
After a while, ***** and **!** again, while an acoustic signal sounds.
For a speaker at the finish, only the option **E** for **Displayed categories** should be selected when starting FjwWdispl!

If it is possible on the PC to mechanically rotate the display and monitor into portrait format, the font size will be smaller, but this and the larger height of the display will show significantly more result lines. First rotate, then start FjwWdispl!



Example of displaying fox arriving

FjwWdispl as well as FjwW are using the **UTF-8** character set. Because of this all characters are displayed correctly (eastern European characters, cyrillic characters, Arabic characters, and so on). UTF-8 is supported by Windows NT and more recent versions of Windows.

The following keys can be used:

F1...F12, 1...9,0	Display a defined category manually 1...12, 13...22
NUM Bloc 0...9 / * .	Display a defined category manually 1...12 ~~!not in FJWDISPL!~~
Esc, E, e	Recently arrived competitor (entries)
Cursor/page up, NUM+	Display next competitors
Cursor/page down, NUM-	Display previous competitors
Home	Display starting with the first place
End	Display down to the last competitors
P, p, D, d	(P)rint/(D)ruck of the category actually on the screen
Q (Shift!)	(Q)uit Stop the program

The picture shows the keys used on an external numeric keyboard (USB connection)

HTTP-Display

Using the menu ***Interface|Result Display*** and selecting the option ***HTTP Display*** will start the integrated HTTP/Web server. This Web server will create a set of result lists to be displayed via LAN (TCP/IP port 80, default).

If the DisplayPC and the FjwW server is connected to the same LAN just enter the URL **http://w.x.y.z** in your preferred WEB browser (**w.x.y.z** is the IP address of the FjwW HTTP server). A homepage with some links is displayed. A click on the

required result list will show it. The list can be saved if needed.
Is running a HTTP server on PC already on default port 80, it's possible with INI entry e.g. **HTTPport=8888** to assign the Web server of FjwW this port 8888, so both server are able to work.

Starting with version 11.3 parallel to the web server also a simple DNS server (Domain Name System, port 53), which allows the resolution of a name into the IP address of the Web server. This name must be entered in the "Interface|Result display" dialog when starting the HTTP server. If this name is entered as a URL in the client's internet browser, it can be used to reach the web server. The name should be carefully chosen; it should not be resolvable on the internet and should be processed by various operating systems (Windows, Android, etc.) and browsers (Firefox, Edge, Chrome, etc.) in such a way that the DNS server in FjwW can also be reached. "**ardf.fjww**" is a working example, the "**http://**" in front of it does not need to be entered in the dialog.

For example to make sense in the finish area, use a WLAN router with activated DHCP server. The evaluation PC is assigned a fixed IP address and this address is set as a local DNS server in the router (not all routers allow this!). Then you can hang a notice in the finish area, as the picture shows. An easily recognizable name (SSID) of the WLAN router should also be selected.

The lists are representing the result at the moment the page was opened (no automatic update!). The page can be updated using the browser options (e.g. F5 updates the screen on an Internet Explorer).

When working at smaller competitions with common start and finish location, it is 'very bad', if there computer results, routes, maps, locations show that could see not yet started competitors. Therefore, there is the possibility to display these to suppress temporarily. For this purpose in menu ***Interface|Result display*** the checkbox ***Show not any result/files, but start list only*** is to activate. The map must have the file name **`~XXX-map.jpg`**, in which **`XXX`** is the file name of loaded TLN file (without extension). The presentation of the terrain map is then suppressed in the above described activation.
This also applies to other files/images in a self-created homepage (see next section) are integrated: a **tilde "~"** as the first character of the file name causes the suppression of the display when activated above described checkbox.

The user can create his own homepage and show it to the public. The HTML design of the homepage is free. The homepage has to be set in the INI file of the application (**firstHTTPpage=**). All necessary files for homepage have to exist in directory, which is defined in INI file under key word **HTTPpath=**.This directory must be writable! The LOG directory in the FjwW program directory is specified in the delivered INI file, which may have to be changed immediately.

Within the homepage certain keywords (see below) are replaced at runtime by the actual values. The list for multiple competitions can be addressed by this way as well as special lists (Rangliste, Pokalwertung, ...).

If the templates are installed the following homepages are provided with the software:

_http-layout-DM.htm

The create a link to a certain result list the following syntax has to be used:

Listname

red always **@**
blue Number of the competition to be displayed (**[1]...[32]** or **[]**)
green Fixed extension for the available result lists

Single competition, number 1...32 in **[]**

-erg.txt Result list (Text)
-erg.htm Result list (HTML)
-erg.rtf Result list (RTF)
-man.txt Team results (Text)
-man.htm Team results (HTML)
-lzl.txt List of runtimes (Text)
-lzl.htm List of runtimes (HTML)
-srg.txt Search graphics with text character (Text)
-srg.htm Search graphics with small pictures (HTML)
-stl.txt Start list (Text)
-stl.htm Start list (HTML)
-map.jpg Terrain map or any picture (JPG)

All loaded and selected competitions, no number in **[]**

-rll.txt Ranking list (DARC) (Text)
-rll.htm Ranking list (DARC) (HTML)
-pok.txt Cup result (Text)
-pok.htm Cup result (HTML)

To get the heading line of a competition onto the homepage a fixed text can be used or a keyword which will be replaced by the actual value when displayed in the browser:

@[1]CONTEST_TITL:

red always **@**
blue Number of the competition to be displayed (**[1]...[32]** or **[]**)
green Keywords which can be used (these are the same keywords as those used in the TLN file!)

CONTEST_TITL: Short description of the competition
CONTEST_TYP: Type of competition
PROMOTER: Organizer
CALL_PROMOTER: Call of the organizer
CLUB_PROMOTER: Club of the organizer
DATE: Date
BAND: Band (80m/2m)

LIMIT:	Time limit
START_DELAY:	Start deviation
FIRST_START:	First start, begin of competition

As a template the following files can be used:

_http-page-DM-tag1.htm	German Championships, first day
_http-page-DM-tag2.htm	German Championships, second day
_http-page-RLL.htm	Competition of a Rangliste

The files have to be stored in the temporary directory or in the directory specified in the **HTTPpath=** of the INI file.

Additional files can be saved in this directory. They can be displayed in the browser (e.g. The file **test.txt** by typing **http://w.x.y.z/test.txt**). The following file types are supported:

*.txt *.kor *.dat *.tln *.eda	**Text file**
*.htm *.html	**HTML file**
*.gif *.jpg	**Image file**
all others	**Text file**

Please note when a firewall is enabled, the above ports (12345...12372) can locked. If necessary, disable the firewall or allow the use of these ports.

Example for finish tickets on Brother Label Printer

With a Label printer **QL-500/550/560/570/700** of **Brother**

Name, Vorname DOK Call
Sisek, Daniel 827

Kat KartenNr StartNr Gesamt-Laufzeit
HG1 410483 2 63'31 min

Laufstrecke >6890 m (Optimum 6460 m)

Reihenfolge	Zeit	Diff	Kumulativ
Start	11:10:00		0'00
Fuchs 1	11:24:30	14'30	14'30
Fuchs 3	11:31:27	6'57	21'27
Fuchs 2	11:42:07	10'40	32'07
Fuchs 5	11:55:23	13'16	45'23
Fuchs 4	12:05:33	10'10	55'33
Fuchs 6	12:12:46	7'13	62'46
Ziel	12:13:31	0'45	63'31

Intern. Dt. ARDF-Meisterschaft 2006 2-z
www.ARDF-FjwW.com

may be printed good-looking finish ticket, which may contain graphic elements.

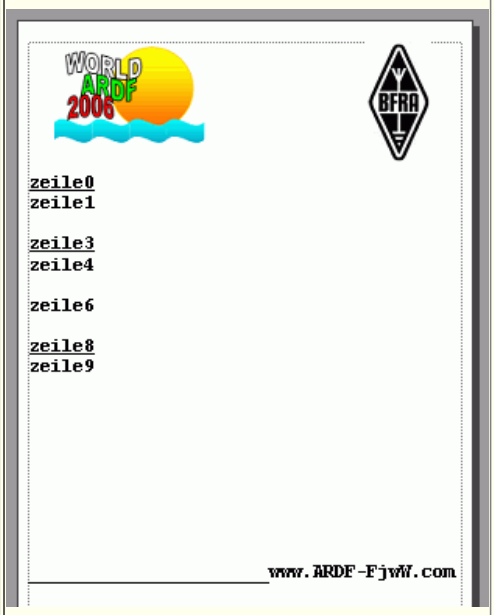
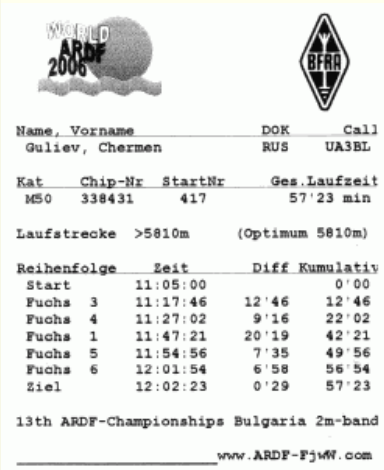
With the Currently 2019 available, small label printer from **SportIdent** (Li-battery, Bluetooth/USB, 58mm paper) simple finish tickets can be created

For that it is necessary to create label layout with the Brother-Label-Editor (see ***.lbl** in directory 'Examples' under FjwW-uni) and also to install a special FjwW-BrssCom-Interface. **FjwW-BrssCom** can be obtained from the ***Autor***.
It's better to download and install the newest driver from BROTHER internet ***Driver 'bcciw30016.msi'*** (end of 2012). This version will bring no problems with special character, e.g. 'S with Caron' .

The following entries in the **INI file** under the section **[Ticket]** have to made:

- Behind the key word **BrotherTicketPrinterName=**
  must be entered the name of label printer, exactly the same spelling as in "Windows Start/Settings/Printers and Faxes",
  Example: **`BrotherTicketPrinterName=Brother QL-560`**.
- Behind the key words **BrotherLabelFilePortrait=** and/or **BrotherLabelFileLandscape=**
  must be entered the Label file for Portrait- and/or Landscape format. The file name can be a relative pathname of directory FjwW-uni
  Example:
  `BrotherLabelFilePortrait=Examples\Ticket\_TicketLabelHochDM.lbl`
  or a absolute pathname
  Example:
  `BrotherLabelFilePortrait=c:\temp\_TicketLabelHochDM.lbl`.
- If two tickets are to be printed immediately at the finish, set **tiDouble=1**

From FjwW generated text	Label Layout (Display in 'P-touch Editor')	Printed ticket

Name, Vorname DOK Call Lehmann, Frank S27 DL1DUK Kat Chip-Nr StartNr Ges.Laufzeit M40 410483 21 60'18 min Laufstrecke >5640m (Optimum 5640m) Reihenfolge Zeit Diff Kumulativ Start 14:25:00 0'00 Fuchs 3 14:38:39 13'39 13'39 Fuchs 5 14:45:22 6'43 20'22 Fuchs 4 14:55:07 9'45 30'07 Fuchs 1 15:05:54 10'47 40'54 Fuchs 2 15:16:50 10'56 51'50 Ziel 15:25:18 8'28 60'18 1.Lauf zur Fränkischen Peilmeisterschaft		

Please note when you create the label layout with the P-touch Editor:

- Each line should end with line and finished in a font/size to be formatted, only the first character decides the layout of printed ticket. The font size must be such that can be printed for the portrait format 40 characters in one line. The font should have the same character width for all characters (for example, "Courier New ")
- The text lines are to be within a framework, the lines are numbered from top to bottom, zero(0) beginning. This has significance for the subsequent replacement of the text lines of the layout by FjwW before printing.
- Clipart files cannot be used for the target ticket printing.
- The information about the type of printer driver are stored with the template, therefore, the computer attempts to contact the printing of the template is always used when creating the template set driver.

Virtual Line numebering	From FjwW generated text	Label layout with Line Key Words (Display in 'P-touch Editor')	Printed ticket

@line00 @line01 @line02 @line03 @line04 @line05 @line06 @line07 @line08 @line09 @line10 @line11 @line12 @line13 @line14 @line15 @line16	Name, Vorname DOK Call Drews, Christian D04 DL7APD Kat Chip-Nr StartNr Ges.Laufzeit M21 4831 77 48'12 min Laufstrecke >4660m (Optimum 4660m) Reihenfolge Zeit Diff Kumulativ Start 10:20:00 0'00 Fuchs 2 10:26:57 6'57 6'57 Fuchs 4 10:39:06 12'09 19'06 Fuchs 3 10:44:11 5'05 24'11 Fuchs 5 10:52:20 8'09 32'20 Fuchs 1 11:00:50 8'30 40'50 Bake 11:07:58 7'08 47'58 Ziel 11:08:12 0'14 48'12	**Fränkische Peilmeisterschaft** @line00 @line01 @line03 @line04 *Glückwunsch!* @line08 @line09 @line10 @line11 @line12 @line13 @line14 @line15 @line16 @line06 **9.5.2004 Neuebersbach** www.dl7vdb.de	**Fränkische Peilmeisterschaft** Name, Vorname DOK Call Drews, Christian D04 DL7APD Kat Chip-Nr StartNr Ges.Laufzeit M21 4831 7 48'12 min *Glückwunsch!* Reihenfolge Zeit Diff Kumulativ Start 10:20:00 0'00 Fuchs 2 10:26:57 6'57 6'57 Fuchs 4 10:39:06 12'09 19'06 Fuchs 3 10:44:11 5'05 24'11 Fuchs 5 10:52:20 8'09 32'20 Fuchs 1 11:00:50 8'30 40'50 Ziel 11:08:12 7'22 48'12 Laufstrecke >4660m (Optimum 4660m) 9.5.2004 Neuebersbach www.dl7vdb.de

BrotherLabelKey=@line
??????????????????????

Registration of returning rent chips

FjwW supports the different response to participants with their own or borrowed SI chip. In competitions with many participants, it is quite a time problem to collect the rent chips again and register them in a simple way.

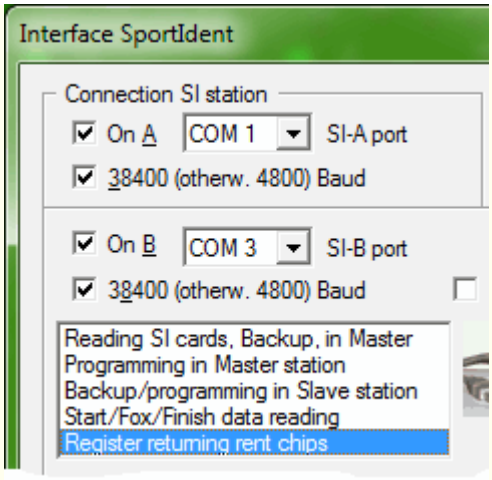
For this it is necessary to use an SI reading station that is **!not!** programmed in "Compatible protocol" mode or **!not!** in "Extended protocol" mode (different designations in the SportIdent **SI Config+** and SI-Config programs.

The SI reading station is connected to port SI-B and the setting ***Register returning rent chips*** is to select. The returned SI chip is inserted and all loaded competitions are searched for a participant with this chip number. After issuing the Rent chip list (sorted by chip numbers) you get an overview of the (not)returned rent chips, but also returned chips that are not marked as rent chips.

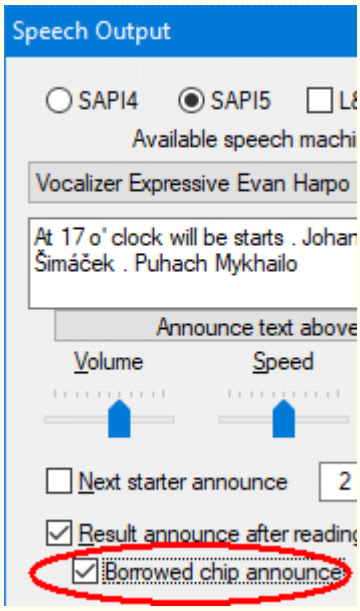
In the case of large events with several competitions for which rental chips are issued, the return of rental chips can be registered at the end of last competition. The 'normal' reading station is connected to the SI-A port, and the reading station for registering the rental chips is connected to the SI-B port, see below. If the Speech output is set so that an additional announcement is made when the borrowed SI chip is read at the first reading station, the rental chip can be punched immediately in the second reading station and the rental chip can be returned.

If the previous days competitions are also loaded, the return registration will be effective in all these competitions.

An example for settings under menu ***Interface|SportIdent***



Settings under menu ***Interface|Speech output***



DCF/GPS clock synchronization

With the program **DCFGPSvdb** and a receiver for the DCF signal the internal clock of the PC can be set automatically. The DCF receiver receives a high precision time signal from Frankfurt/Main. The precision of this time signal is better than 0,1 sec! The DCF receiver has to be connected to a (real) serial interface of the PC. A USB-serial-converter will ***not*** work! Also a GPS receiver can be used (e.g. so called 'GPS mouse'), mostly with USB interface. He receives the exactly time signal from satellites and has to deliver the data in protocol of NMEA-0183.

Start with GPS receiver: **DCFGPSvdb.exe port baud** ***Start for demonstration***

port	COM port (1...99)
baud	Baud rate (>=300, e.g. 4800,9600,115200)

Start with DCF receiver: **DCFGPSvdb.exe port [set [min]]** ***Start for demonstration***

port	COM-Port (1...99), deactivate a FIFO if it's activated!
set	Setting the PC clock after (1...9) correct receptions of the time code.
min	Set again after having waited for (1...) minutes

Examples:

- - D C F - - 77.5 kHz

DCFGPSvdb 1	COM port 1, display of the time, not setting the internal clock, endless
DCFGPSvdb 3,2	COM port 3, set clock after receiving the time signal two times correctly, end the program

DCFGPSvdb 1,3,10	COM port 1, set clock after receiving the time signal three times correctly, set again after ten minutes, endless
- - G P S - - NMEA-0183	
DCFGPSvdb 8 4800	COM port 8, 4800 baud

Headline:

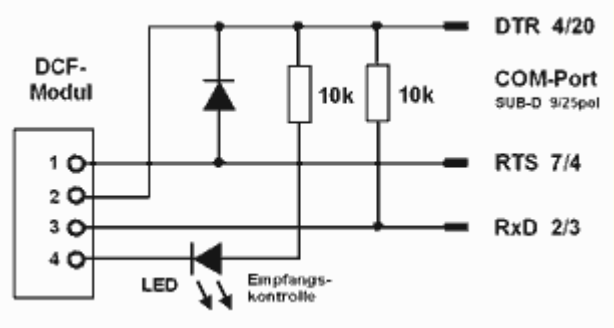
12.34:56 - 21/1/06 DCF	Correctly received DCF-time and date
12.34:56 - 21/1/06 GPS	Correctly received GPS-time and date
sec=?? >> DCF-Clock...	Start of a minute not yet detected
sec=56 << DCF-Clock...	Start of a minute detected, DCF-seconds are correct
?Receive? DCF/GPS-Clock...	None reception, is the receiver really connected?

In the window (DCF):

(0,1)	correct signs for seconds
(*)	start of minute detected
(#)	no reception
(?)	received wrong information
(?Parity?)	time/date not correct

Remark: Using WinNT/2000/XP the number of rows within the window can be changed even if DCFGPSvdb is running (menu on the upper left corner ***Properties|Layout/Rows***).

See the necessary connections between DCF receiver and a 9/25-SUB-D connector of the serial interface in the next picture.



The output T (=Tact) of the DCF receiver sends decoded 100-/200-ms-impulses which represent logical 0 and 1. These bits are displayed in the program window.

DCF-77-Codification:

```
Sec.   0 1...14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35
------+--------+-----------------+-----------+--------+--+-----------+-----+--
Bit   |x x....x| x  x  x  x  x  1| 1  2  4  8| 1  2  4| x| 1  2  4  8| 1  2| x
Usage |not used| R A1 Z1 Z2 A2  1|Ones       |Tens    |CS|Ones       |Tens.|CS
--------------|---special bits--|------minutes-------|  |-----hours-------|--
22:46 7.7.2003 | 0  0  1  0  0  1| 0  1  1  0| 0  0  1| 1| 0  1  0  0| 0  1| 0

Sec.   36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59
------+-----------+-----+--------+-----------+--+-----------+-----------+--+--
Bit   | 1  2  4  8| 1  2| 1  2  4| 1  2  4  8| 1| 1  2  4  8| 1  2  4  8| x|
Usage |Ones       |Tens.|Number  |Ones       |Z.|Tens       |Tens       |CS|
      |-day of the year-|--day---|----month-----|-------- year --------|  |
      | 1  1  1  0| 0  0| 1  0  1| 1  1  1  0| 0| 1  1  0  0| 0  0  0  0| 1|
```

Evaluated NMEA-0183 information: Example:

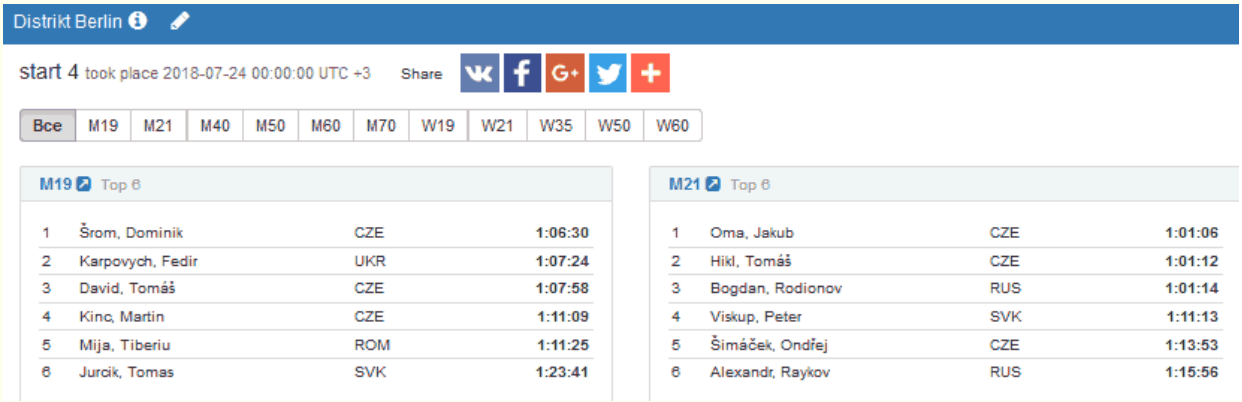
```
$GPRMC,191410,A,4735.5634,N,00739.3538,E,0.0,0.0,181102,0.4,E,A*19
       |      | |           |                   |              |
       |      | |           |                   |              Check sum
       |      | |           |                   Date: 18.11.02
       |      | |           007° 39.3538' East
       |      | 47° 35.5634' North
       |      Receiver warning, A = Data OK, V = Warning
       Clock: 19:14:10 UTC time
```

Results on ORGEO.RU

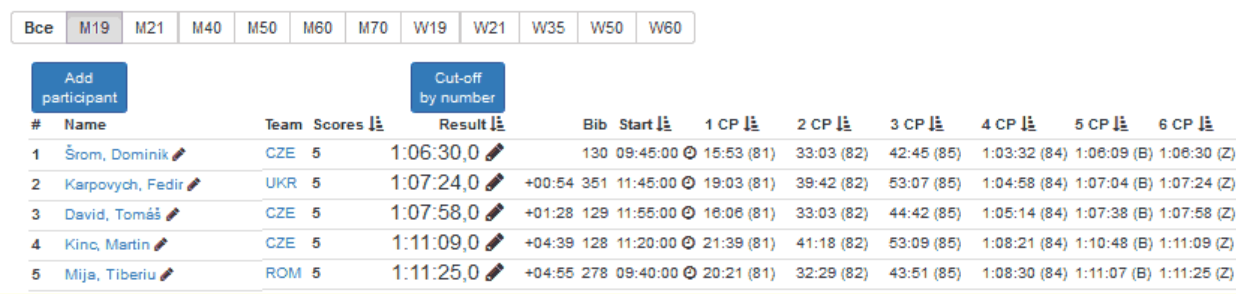
On the Russian server ORGEO.RU there is a web application, with which the results of ARDF and other competitions can be represented. To do this, data of the competition and the participants must be sent to a specific HTTP address in JSON format with keywords defined for this purpose. After activation in FjwW (menu ***Interface|Transmit to Orgeo-Live***) and changes in Competiton data window (Ctrl+F3) all available data of the competition and the participants are immediately sent to the server and displayed. With every read-out of SI chips, corrections of participant data, this also happens for the data of this participant only, the new results are practically visible at a distance of seconds and the ARDF world can watch.

This could be the example of a competition on the server:

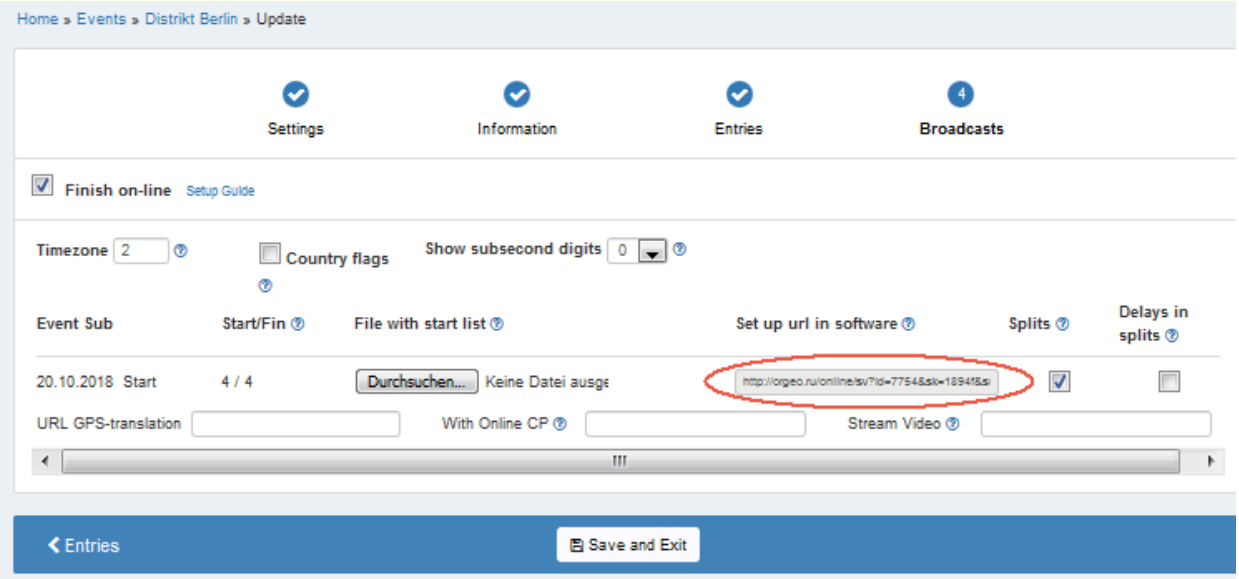
The overview shows all categories of the competition with the first six ranked.



After clicking on the category M19, all participants will be shown in placement order.



In order to access the ORGEO.RU server, a registration as a user with an e-mail address and password is first required on ***http://orgeo.ru/event/create*** Then it is possible to create the upload opportunity for a contest. At the end of the registration you will see the page below where you can see the red link address. This URL is to be used in FjwW, to this address the JSON data is sent.



In the dialog after menu ***Interface|Transmit to Orgeo-Live*** in FjwW this URL has to be inserted.
An **example** looks like this: http://orgeo.ru/online/sv?id=7754&sk=1894f&sub=1&

This also displays the clickable link address on which the results can be found. http://orgeo.ru/live/#/7754

Transmit results as JSON

The "Interface/Transmit results as JSON" menu can be used to start sending data/results in JSON format. Using the HTTP protocol and POST, the data is written to a specified URL on port 80 or to a directory released in the network.
When the function is started, all available data and results for all participants are sent immediately. The JSON data receive the value **ALL** for the keyword "SOURCE". During the course of the competition, an individual entrant's results will be sent immediately if:

- the chip of a participant is read in the reading station,
  only times of found foxes that are to be searched for are given,
  the keyword "SOURCE" is set to **READOUT**
- the chip of a participant is plugged into the beacon or target station
  and a serial radio or wire connection to the interface SI-B or SI-C from FjwW,
  the keyword "SOURCE" is set to **BEACON** or **FINISH**
- the data of a participant are changed, KOR dialog (Ctrl+F7)

The placement calculated in FjwW is not sent, it changes with each participant arriving at the Finish with "SOURCE": "READOUT". The calculation of the placement must be implemented in the 'receiving' software.

The data is displayed in the form "KEYWORD":"String", or in the case of pure numbers as "KEYWORD": 1234, .

The JSON data begin with the name *ARDF-FjwW*, followed by the keywords used:

```
ARDF-FjwW= {
"SOURCE":"ALL" or "READOUT" or "FINISH" or "BEACON" or "UPDATE"
"CONTEST":"...",
"DATE":"...",
"BEGIN":"...",
"BAND":"...",
"COMPETITORS": [
```

```
  {
  "FIRSTNAME":"...",
  "NAME":"...",
  "CLUB":"...",
  "CAT":"...",
  "CARDNO":...,
  "START":"...",
  "FOX1":"...",
  //...next foxes
  "FOX6":"...",
  "FOX":...,
  "FINISH":"...",
  "RUNTIME":"...",
  "PLACE:...,
  "STNO":...
  },
  {
  //...next competitors
  }
]
}
```

Start signal output

If the start signal is activated ***Interface|Start Signal*** a beep is issued for the starting of competitors or cyclically before the minute change.

Depending of input values in the dialog there can be signals at different points of time (60...1 sec), (45... sec) when 1-min-cycle,. A first signal is issued before the start time of competitor or minute change. A second one when the competitors start his competition or minute change. The start signal can be amplified and spread via loudspeaker.

The sounds are defined in the dialog after menu ***Interface|Start Signal***. The settings are saved to registry.

Default settings are possibly:
- Beep before start: 30, 10, 5, 4, 3, 2, 1 sec about 1500 Hertz, 60 milliseconds
- Beep at the start: about 1000 Hertz, 550 milliseconds

The pitch and the duration can be configured as needed (300..3000 Hz, 10..3000ms) (see below).

Additionally a start signal can be configured regardless of the starting signals of the competitors (every 1,2,2.5,5,10 min). This signal automatically starts, when the competition starts.

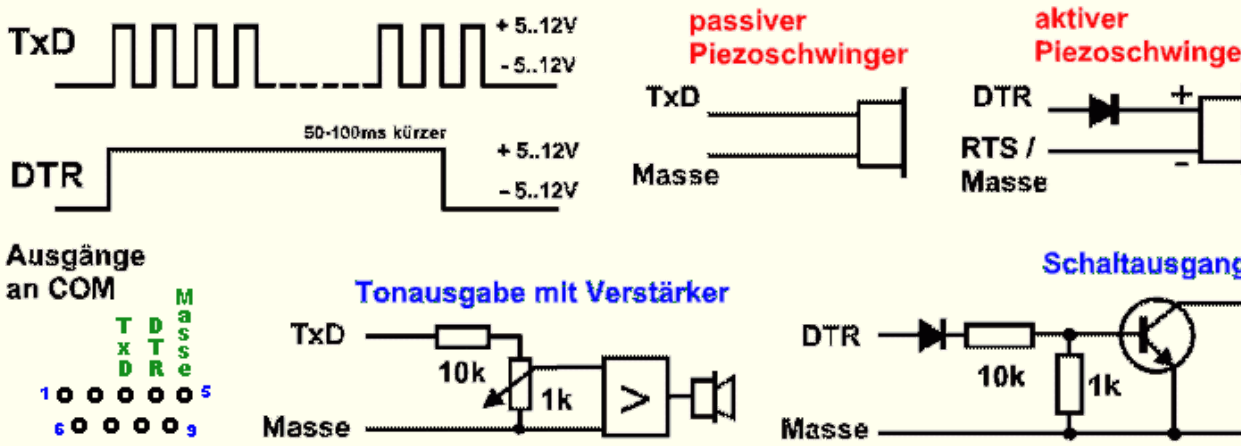
Start signals for competitors are only activated at the competition day. Changes only take effect for the start signal after the next minute change.

Entries not preceded by an asterisk * are treated as WAV files. If not drive and/or directory is indicated the files have to be located in the same directory as FjwW. The sound files are played instead of the beeps.

'COM port' creates a signal at the TxD output. As the interface delivers a voltages of -15..5V and +5..15V a passive piezo speaker can be connected directly to the outlet. Using an amplifier requires a limiting of the input voltages!

In parallel to the TxD signal the DTR output is activated and set to high (+5..15V). This voltage can be used to activate an “active piezo” provide it has an internal tone generator. The DTR signal is deactivated about 0,05 and 0,1 seconds than the TxD signal.

The following picture shows the output using the serial interface and the ways how to use the signals.



Speech output

With this version of FjwW the following speech output is implemented:

- announcement of the next competitors of all loaded competitions which have the same competition date than the actual date. The announcement can be configured as being done 1..9 minutes before the start of the competitors
- announcement of the results of the competitor after reading his SI chip. If the SI chip is not inserted for a sufficient long period this is also announced.
- announcement of the fact that a SI chip is a borrowed one in order to collect them easily.
- announcement of name, first name and call of the competitor marked in the result list.

The installation of the speech-output-software is required (**T**ext**T**o**S**peech). How the software has to be installed is described later. If the FjwW detects usable TTS they are displayed in the center of the window dialog and can be selected. Pressing ***Announce text above here*** the text written in the dialog box is read aloud. The volume, pitch and speed can be set with the controls.

To improve the pronunciation for special words an adaptation is required. For this purpose a special pronunciation dictionary can be used. The file indicated at the **TTSpronFile=** statement is used. A sample file called **FjwW_TTSdeu.txt** is shipped together with FjwW. This file can be used together with *TTS3000* from *Lernout&Hauspie*.

To gain attention a signal can be activated before each speech output (about 1500Hz, 60ms). A ongoing speech output is immediately interrupted if the next one arrives.

I n s t a l l a t i o n

Prerequisite for the installation of the speech output software is a soundcard and a PC with sufficient power.

Different Text-To-Speech machines (TTS) can be download free and without registration (2016) or by purchase on internet page:
Free Text to Speech Natural Voices - SAPI4 & SAPI5
Text-To-Speech Software Features

Depending on the operating system the installation can be complicated.

The lines in **bold** represent the minimum to be installed to use the speech output in German language. The files have to be downloaded and started. The installation runs automatically after the confirmation of the licence agreements has been done.

Component of speech software	**File**	**NT**	**2000**	**XP**	**WIN7 32bit**
Text-To-Speech engine TTS3000 (Lernout&Hauspie) American English, British English, German, Dutch, French, Italian, Japanese, Korean, Portuguese(Brazil), Russian, Spanish	**lhtts???.exe 1...3 MB**	**x**	**x**	**x**	**x**
Microsoft SAPI 4.0a runtime binaries Interface for TTS	**spchapi.exe 824 kB**	**x**	**ok**	**x**	
Speech control panel in the control panel	SpchCpl.exe 927 kB	(x)	(x)	(x)	

Legend:

x Installation is mandatory for FjwW is the function will be used!

(x) To be installed upon request and need.

ok Already installed

Having problems with the installation? Please contact
~~www.microsoft.com/msagent/support/user/tts3000deploy.aspx~~
see above!

for MS-Agent und TTS3000 : -> GERMAN page with more information: ***www.roeselhof.de/INFO/intro.htm***

Independent of language of TTS machine, the machine will be always receive texts in language, which is adjusted in FjwW (German, English, Dutch, Czech, ...). The speech output can be impossible to understand.

Result evaluation offline

The result evaluation and printing of lists can be done at any time after a competition has ended. The TLN/KOR/DAT files have to be loaded. Only the TLN file has to be indicated for the case the KOR/DAT files have the same name and are located in the same directory and the automatic load is activated by ***File|Options|Data to TLN read autom.***.

After loading the files all lists can be printed via the ***Results|...*** menu.

If more than one competition is loaded these can be used for multi competition results evaluation.

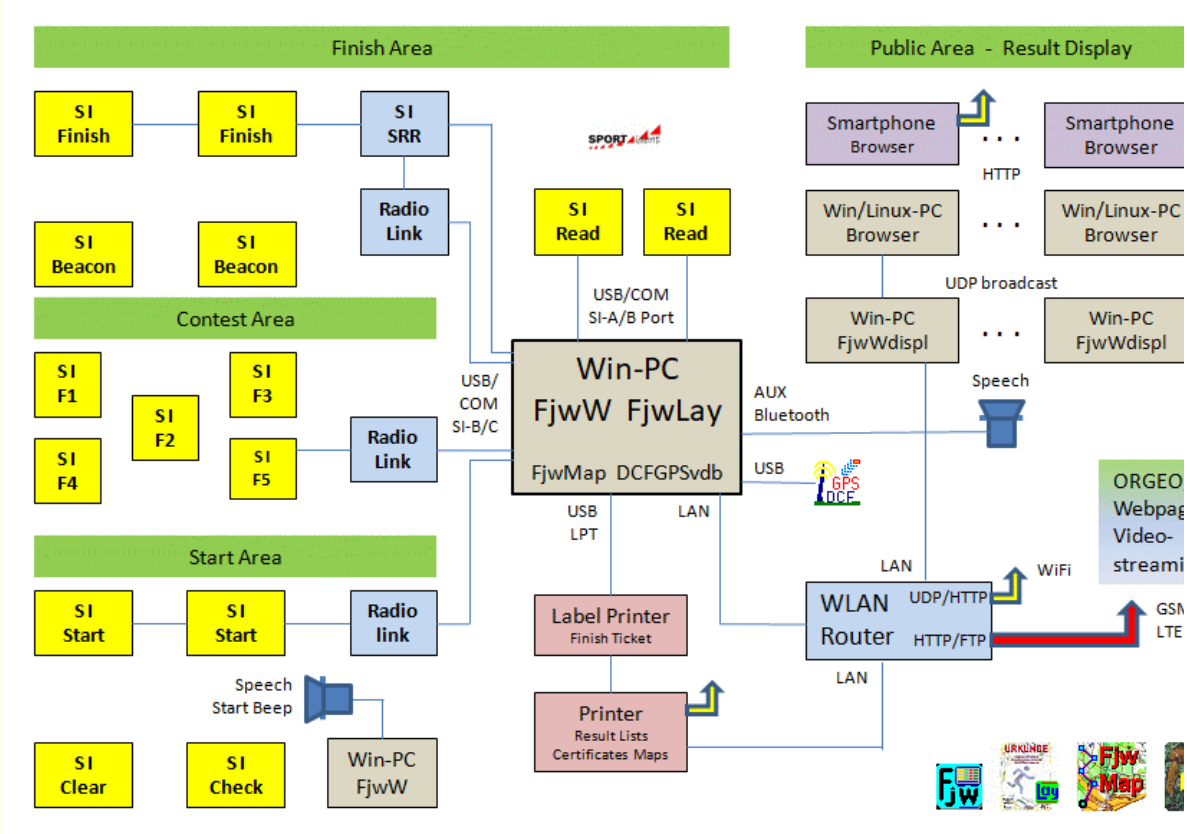
Supported SportIdent devices and chip cards

SI-Card 5	30 fox time stamps
SI-Card 6	64 fox time stamps
SI-Card 8/9/pCard	30 / 50 / 20 fox time stamps
tCard	25 time stamps (Read station have to be in mode 'Extended protocol') The circulating memory function is not supported, the card must be deleted before reaching 25 time stamps !
SI-Card 10/11/SIAC	64 fox time stamps, the possible 128 fox time stamps are not usable !
BSF/M 6	Control stations (**unsuitable** for SIcard 8/9/10/11/SIAC !!!)
BSM 7/8	Master station in modi: Normal / Extended protocol / Autosend Precondition: firmware **>= V5.80**
BSM 7/8 - USB	Master station in modi: Normal / Extended protocol / Autosend
BSF 7/8/9	Control stations in modi: Normal / Extended protocol / Autosend

The **SI-Card 5** returns only unique 12-hour time stamps. Therefore, the competition begin time will be used to recalculate.

The **SI-Cards >=6** provides unique 4-week time stamps. FjwW is used the 1-week(7-days)-time stamp thereof. Thus, the time stamp can be identified with these SI cards must be deleted no later than 7 days after the first time stamp on the card.

Hard- and software components



FjwW The FjwW program makes the entire evaluation of the competition, generates the various lists of results for printing, for the Internet and for display at the finish on PCs and smartphones.

FjwLay
The FjwLay program is used to print the certificates according to the competition results. In preparation, a layout is created for printing.
Finish tickets can also be printed using FjwLay with significantly expanded graphic options.

FjwMap
The FjwMap program is used to plan the locations of the transmitters in the area on a suitable (Orienteering) map. It then provides the locations for FjwW.

FjwWdispl
The program FjwWdispl is used to display the results, which are sent

cyclically by FjwW, on PCs.

DCFGPSvdb
Serves to receive the exact time from the DCF time signal transmitter (77.5 kHz) or the GPS satellites (approx. 1.1 - 1.5 GHz) for setting the time in the FjwW PC. The exact time is especially required when programming the SportIdent stations.

SI Clear, Check
When having a lot of competitors it might be necessary to use more than one station to CLEAR the SI chips. The erasing process takes some seconds. The CHECK station is not required when using SI stations BSF6 or newer with firmware V4.x or newer. In this case the CLEAR station also does the check.

SI Start, Finish
As the finish time is registered when the SI chip is inserted into the station there should be enough stations depending on the number of competitors to avoid jams and injustices at the finish line. This may also apply to the starting station(s). If there is a radio link connection, they are connected to the SI-B or SI-C COM ports.

SI Read
Read out the SI card, so that the evaluation takes place immediately. The reading stations are connected to the SI-A or SI-B COM ports.

Speech, Start beep
In large/important competitions, the start and finish are always spatially separated. A second PC can be set up there, where the same competition (TLN, KOR) is loaded in FjwW. With this, announcements can be made in the start area with appropriate loudspeakers/amplifiers about the next starting participants and/or start beeps can be given in the last minute before the start (seconds can be set in FjwW).

Radio Link
A radio link that is able to transparently transmit the serial data of the SI stations with baud rates of 38400/4800 in the direction of FjwW. They are connected to the SI-B or SI-C COM ports.

WLAN Router
To ensure that FTP uploads from FjwW to the Internet and HTTP access to

FjwW by guests in the public area are possible with functioning DNS name resolution:

- **FjwW-PC:** Set 'DNS Server' to the router's IP address; If necessary, enable port 80 (HTTP) and 53 (DNS) in the firewall
- **Router:** Set 'Local DNS Server' to the IP address of the FjwW PC (not all routers allow this)

The INI file

The INI file contains important settings for the program. The settings will be read out after launch of program or of any feature of FjwW. The menu entry ***Extras|Save settings*** updates the entries in the **[FjwW]** section. Clicking the INI icon in two dialogs will updates the values in sections [FjwW] or [Interface]. The settings of the other sections must be updated manually. The INI file is always located in the same directory as FjwW. A template of the INI file is always shipped with FjwW and writeable.

For many key words in the sections **[FjwW], [Interface], [Edit], [Ticket], [Speech]** there are default values, which are stored in FjwW.exe, when the key word don't exist in the INI file or is a comment line (beginning with semicolon.

The user can create and store several different INI files with any names, in any directories. When the FjwW program is started, the command line option ***/i*** can be used to load one of the INI file(s) for use during the entire runtime of the program (e.g. ***FjwW.exe /i c:\Test\FjwW1.ini xyz.tln***).

Entries/comments crossed out below are no longer required and effective, the corresponding information is now stored in the registry under **HKCU\SOFTWARE\FjwW**.

In this section the entries of the INI file will be explained:

[FjwW]

; Width of the main window
Width=800
; Height of the main window
Height=360
; Font of result list table (displayed on the screen)
lvFont=-13,0,0,0,700,0,0,0,0,3,2,1,34,Arial
; Font color of result list table (displayed on the screen)

lvTxtColor=800000
; Order of the columns in the result list table (displayed on the screen)
lvOrder=0,1,2,3,4,5,6,7,8,9,10,11,12,13,14
; Width of the columns in the result list table (displayed on the screen)
lvWidth=50,35,140,45,70,78,30,50,70,4,25,25,40,93,40
~~; Display of Runtime in windows and result lists (0=mmm'ss, 1=h:mm:ss)~~
~~**styleRuntime=**0~~
; Load the related KOR and DAT files when loading the TLN file (1=automatic.)
AutoDATA=1
; Create a BAK-TLN file when saving (1=yes)
TLNbackup=1
; Don't show tool tips (1=no)
noTooltips=0
; For result list (*-erg.htm) if HTTP-Access and FTP-Upload, "" for __Standard__
HtmlCSSerg=
; For search graphic list (*-srg.htm) -"-
HtmlCSSsrg=
; For run route list (*-lzl.htm) -"-
HtmlCSSlzl=Layout-Lzl.css
; For start list (*-stl.htm) -"-
HtmlCSSstl=
; For team list (*-man.htm) -"-
HtmlCSSman=
; For pokal list (*-pok.htm) -"-
HtmlCSSpok=
; Replace the default key words for import competitors with CSV
; Order as in the comment line above
;;English:
STNO;CLUB;CAT;NAME;FIRSTNAME;CALL;BIRTH;CARDNO;SET;START;STAT;GRP
ReadUserCSVenu=;;;NAME;;;;CHIPNR;;Start;;
;;Deutsch:

STNR;DOK;KAT;NAME;VORNAME;CALL;GEBURT;KARTNR;SET;START;STAT;GRP
;**ReadUserCSVger=**;;;NACHNAME;VORNAME;;;CHIPNR;;Start;;
; Using 'User define column' (1=yes)
UserDefColumn=1

;;*** Last used CSS layout file
CSSlayout=
; CSS layout (1= in list insert as text, 0= as file attach)
CSSinclude=1

; Format Name-Firstname forming
; (0= "Name, Firstname") (1= "Firstname Name")
formatNameFname=0
; Conversion Name/Firstname in lower case, first character or character after "-" in upper case (=1)
; Conversion Firstname in lower case, first character in upper case; Surname in upper case complete (=2)
nameCapitalize=0
; First character for male categories (default =M)
MenCatFirstChar=M
; First character for female categories (default =W)
WomenCatFirstChar=W

; Start signal 60,10,5,4,3,2,1 sec before start
; default 10,5,4,3,2,1; possible 60,45...1
; CSS layout file
startBeepBefore=60,10,5,4,3,2,1
; Start signal before start
;startBeep1=*1666,77
;startBeep1=*1666,77,1
startBeep1=C:\WINNT\Media\Utopia Default.WAV
; Start signal at start
;startBeepL=*825,333
;startBeepL=*825,333,1
startBeepL=Utopia Asterisk.WAV
; Typ of start signal **startSignal=**0

~~; Interval of cyclic start signal (in min)~~
~~**timeSigCycle=**1~~
~~; Start signal cyclic output (1=yes)~~
~~**timeSignal=**0~~

; Name of the script which is included in the HTML resultlist (if a counter is used)
HTMLcounter=www.darc.de/cgi-bin/???
; Sound after punching SI-Card by registration
soundRegistration=
; Sound after read out an 'unknown SI card', absolute or relative path to FjwW.ini
soundUnknownChip=C:\WINDOWS\Media\ringin.wav
; Transmitter frequencies (in kHz) for the 'Start-Information'
freq80mFoxes_kHz=3520
freq80mSpectator_kHz=3540
freq80mFoxesFast_kHz=3560
freq80mBeacon_kHz=3580
freq2mFoxes_kHz=144500
freq2mBeacon_kHz=144900
; Helper at the end of result lists (0= three in one line) (1= one-line, all 20 characters of CLUB)
HelperInNL=0
; Added category names added in the Registration participants dialog
CategoryList=.7m;2m;80m;Short;Long;Youth;Adult
; Color markings in different data columns (1=yes)
lvTxtBackColor=1

[Interface]

~~; Predefined baudrate of COM ports to displayPCs~~
~~**baudRate=**38400~~
; Special-Baudrate on COM-B
foxdataBaudrate=1200
; Port number used when sending data to the displayPC via TCP/IP
UDPport=12345
; Delay (10...1000ms) for sending by LAN/WLAN to DisplayPC's
; Change effective after restart displaying

UDPdelay=100
; Port number of the HTTP servers
HTTPport=80
; Absolute or relative path to FjwW.ini for first HTML page of HTTP display
firstHTTPpage=Examples_http-page-DM-tag2.htm
~~; Full directory name for temporary or additional files generated by the~~
~~; HTTP server to be delivered by the server; must be writetable !~~
~~; Without entered path the user temp directory will specified (added \ARDF-FjwW\)~~
~~**HTTPpath=**C:\temp~~
; Name, which is resolved by DNS server. The FjwW Webserver is reachable by this name.
HTTPfjwwURL=www.ardf.aaa
; Cycle sending to DisplayPC's
displCycle=30
; Automatic correction of SI-timestamps (no additional description)
;**timeShiftSI??=**+100 add 100sec
;**timeShiftSI??=**-3333 sub 3333sec
;**timeShiftSI??=**14.15:16-10.11:12 ; FTP connection for upload of results
FTPserverName=ardf.???
; User
FTPuser=vvv
; Password, do not enter manually! Is stored encrypted.
FTPpassword=
; Path on server
FTPhostPath=www/xxx
~~; Full directory name for storing created files which should be upload to the FTP server.~~
~~; The directory should be located on a fast internal drive, it must be writable !~~
~~; Without entered path the user temp directory will specified (ended with ..\ARDF-FjwW\FTP)~~
~~**FTPlocalPath=**c:\yyy\zzz~~

[Edit]

; Print margins in mm
mTop=10
mBottom=10
mLeft=15
mRight=8

[Ticket]

~~; Printer of finish ticket (valid name for print on)~~
~~**Printer=**OKI OL-400~~
~~; (+1)Running route graphic, (+2)Portrait instead Landscape,~~
~~; (+4)Station No instead Fox No, (+8)no ticket when unknown SI chip~~
~~**tiOption=**3~~
~~; Size of Running route graphic~~
~~**tiZoomGraphic=**4~~
~~; Font of ticket printing (name, size)~~
~~**tiFont=**Courier New, 9~~
~~; margin above in mm~~
~~**tiTop=**22~~
~~; margin left in mm~~
~~**tiLeft=**10~~
~~; Format head line: (+1)bold, (+2)italic, (+4)underline~~
~~; add values for several options~~
~~**tiHead=**3~~
~~; Format data line: (+1)bold, (+2)italic, (+4)underline~~
~~**tiData=**0~~
~~; Format competition title below: (+1)bold, (+2)italic, (+4)underline~~
~~**tiTitl=**2~~
~~; Empty lines after ticket end (default=2)~~
~~**tiEndRow=**4~~
; Ticket print double, when arrive the finish: (0)no, (1)yes
tiDouble=0
; Name of label printer Brother QL-500 in Windows control panel
BrotherTicketPrinterName=Brother QL-500
; absolute or relative path to FjwW.ini for "Brother" label file
BrotherLabelFilePortrait=Examples\Ticket_TicketLabelHochDM.lbl

BrotherLabelFileLandscape=Examples\Ticket_TicketLabelQuerDM06.lbl
; Empty BrotherLabelKey for tickets as possible up to version 10.11
; With BrotherLabelKey there are extended possibilities for ticket layout **see**
BrotherLabelKey=@line

[Speech]

~~; TTS machine~~
~~**TTSmachine=**Anna == Adult Female #1 German (L&H)~~
~~; File of pronunciation dictionary~~
~~**TTSpronFile=**FjwW_TTSdeu.txt~~
~~; Use of pronunciation dictionary~~
~~**TTSpron=**0~~
~~; Time before start of announce next starters (in min)~~
~~**beforeStart=**5~~
~~; Announcement borrowed SI chips~~
~~**lendAnnounce=**0~~
~~; Attention signal before Announce (=1 internal beep, =2 external WAV file)~~
~~**Attention=**0~~
~~; External WAV file as attention signal~~
~~**AttFile=**~~
~~; Volume~~
~~**Volume=**65535~~
~~; Speed of speech output~~
~~**Speed=**130~~
~~; Pitch of speech output~~
~~**Pitch=**155~~
~~; !!! If the key word is > 0, each of the following keywords switches on the speech output after loading the 1st competition~~
~~; Announcement of next starting competitors~~
~~**startAnnounce=**0~~
~~; Announcement result when reading SI chip (1=yes, 3=short)~~
~~**resultAnnounce=**0~~
~~; Announcement of arrival at a transmitter (=1)yes, (=0)no~~
~~**speechFoxArrive=**0~~

; Speech output, when received data from fox station (1...62)
foxAudible=1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16

[UserListTXT]

; Result list, without 'Call' & long 'Club'
ERGcolTitle=Place//Name, Firstname/Club/Runtime/Fox/StNo
ERGcolData=PLACE/SPACES/FULLNAME/CLUB/RUNTIME/FOXNO/STNO
ERGcolWidth=5/2/25/20/8/5/6
ERGcolAlign=RIGHT/LEFT/LEFT/LEFT/RIGHT/RIGHT/RIGHT
; Start list
STLcolTitle=StNo/Name/Country/Birth/SIchip/Start time
STLcolData=STNO/FULLNAME/CLUB/BIRTH/CARDNO/START
STLcolWidth=5/25/6/6/8/10
STLcolAlign=LEFT/LEFT/LEFT/LEFT/RIGHT/RIGHT
; Team list
MANcolTitle=Pl//Name, Firstname/Team/Call/Runtime/Fox/Total/Foxes
MANcolData=PLACE/SPACES/FULLNAME/CLUB/CALL/RUNTIME/FOXNO/TOTRUNTIME/TOTFOXNO
MANcolWidth=5/2/25/6/8/10/4/10/5
MANcolAlign=RIGHT/////RIGHT/RIGHT/RIGHT/RIGHT

[UserListHTML]

; Result list
ERGcolTitle=Place/Name, Firstname/Club/Runtime/Fox/StNo
ERGcolData=PLACE/FULLNAME/CLUB/CALL/RUNTIME/FOXNO/STNO
; Start list
STLcolTitle=StartNo/Name/Country/Birth year/SIchip/Start
STLcolData=STNO/FULLNAME/CLUB/BIRTH/CARDNO/START
; Team list
MANcolTitle=Place/Name/Firstname/Team/Run time/Fox/Total/Foxes
MANcolData=PLACE/NAME/FIRSTNAME/CLUB/RUNTIME/FOXNO/TOTRUNTIME/TOTFOXNO

[Rating]
; Default number of foxes for "DARC-Ranglisten" rating
RLLdefaultFox=kK!=5,W19=5,W21=5,W35=5,W50=4,M19=5,M21=6,M40=5,M50=5,M60=4
; Rating as fox, when found only the beacon (1=yes)
oBeaconToRate=0

; Power factor, used by ÖVSV (Austria)
powerFactorName=ÖVSV like Cepelka
; Part of run time for applying the Power factor
powerFactorRun=70%
; Groups of men which age is **x** to **y** and have a Power factor of **z** (**x-y:z**)
powerFactorMan=0-19:91%/20-39:100%/40-49:91%/50-59:86%/60-64:80%/65-99:75%
; Groups of women which age is **x** to **y** and have a Power factor of **z** (**x-y:z**)
powerFactorWom=0-19:83%/20-39:91%/40-49:83%/50-59:78%/60-64:73%/65-99:69%

; Power factor used by LA-ARDF (Norway)
;powerFactorName=LA-ARDF
;powerFactorRun=100%
;powerFactorMan=0-15:90%/16-18:95%/19-44:100%/45-54:97%/55-59:94%/60-64:91%/65-69:88%/70-99:85%
;powerFactorWom=0-15:80%/16-18:85%/19-44:90%/45-54:85%/55-59:80%/60-64:75%/65-69:70%/70-99:65%

;*** Power factor ARDF-Team Netherland 2014
powerFactorName=NL-ARDF nieuw (50%)
powerFactorRun=50%
powerFactorMan=0-15:90%/16-18:95%/19-44:100%/45-54:87%/55-59:82%/60-64:79%/65-69:78%/70-99:74%
powerFactorWom=0-15:80%/16-18:85%/19-44:92%/45-54:80%/55-59:75%/60-64:72%/65-69:70%/70-99:67%

; Power factor ÖVSV by World Master Athletic (WMA)

;powerFactorName=ÖVSV by WMA
;powerFactorRun=70%
;powerFactorMan=0-5:65.26%/6:68.99%/7:72.5%/8:75.79%/9:78.86%/10:81.71%/11:84.34%/12:86.75%/13:88.94%/14:90.91%/15:92.66%/16:94.19%/17:95.5%/18:96.7%/19:97.9%/20:98.93%/21:99.61%/22:99.96%/23:100%/24:100%/25:100%/26:100%/27:100%/28:99.99%/29:99.91%/30:99.75%/31:99.52%/32:99.22%/33:98.85%/34:98.4%/35:97.88%/36:97.29%/37:96.62%/38:95.92%/39:95.21%/40:94.51%/41:93.8%/42:93.1%/43:92.4%/44:91.69%/45:90.99%/46:90.28%/47:89.58%/48:88.88%/49:88.17%/50:87.47%/51:86.76%/52:86.06%/53:85.36%/54:84.65%/55:83.95%/56:83.24%/57:82.54%/58:81.84%/59:81.13%/60:80.43%/61:79.72%/62:79.02%/63:78.32%/64:77.61%/65:76.91%/66:76.2%/67:75.5%/68:74.79%/69:74.02%/70:73.19%/71:72.3%/72:71.34%/73:70.31%/74:69.23%/75:68.08%/76:66.87%/77:65.59%/78:64.25%/79:62.85%/80:61.38%/81:59.85%/82:58.25%/83:56.6%/84:54.88%/85:53.09%/86:51.24%/87:49.33%/88:47.35%/89:45.31%/90:43.21%/91:41.04%/92:38.81%/93:36.52%/94:34.16%/95:31.74%/96:29.26%/97:26.71%/98:24.09%/99:21.42%
;powerFactorWom=0-5:66.07%/6:69.07%/7:71.87%/8:74.47%/9:76.87%/10:79.06%/11:81.06%/12:82.85%/13:84.45%/14:85.84%/15:87.04%/16:88.13%/17:89.22%/18:90.16%/19:90.78%/20:91.1%/21:91.14%/22:91.14%/23:91.14%/24:91.14%/25:91.14%/26:91.14%/27:91.14%/28:91.14%/29:91.14%/30:91.11%/31:91.04%/32:90.92%/33:90.75%/34:90.54%/35:90.26%/36:89.95%/37:89.59%/38:89.18%/39:88.71%/40:88.2%/41:87.65%/42:87.05%/43:86.39%/44:85.69%/45:84.93%/46:84.14%/47:83.29%/48:82.39%/49:81.45%/50:80.46%/51:79.46%/52:78.47%/53:77.48%/54:76.48%/55:75.49%/56:74.5%/57:73.5%/58:72.51%/59:71.52%/60:70.52%/61:69.53%/62:68.54%/63:67.54%/64:66.55%/65:65.56%/66:64.56%/67:63.57%/68:62.58%/69:61.58%/70:60.59%/71:59.59%/72:58.6%/73:57.61%/74:56.61%/75:55.62%/76:54.63%/77:53.63%/78:52.64%/79:51.65%/80:50.6%/81:49.44%/82:48.18%/83:46.8%/84:45.31%/85:43.72%/86:42.01%/87:40.2%/88:38.28%/89:36.25%/90:34.1%/91:31.85%/92:29.49%/93:27.02%/94:24.44%/95:21.75%/96:18.96%/97:16.05%/98:13.03%/99:09.91%

[RatingRUS]
;### Special Rating calculation in Russia(FRR) ###
;*** BasePoints SRR-Rating
basePoints=25
;*** minimum number of competitors in a category to calculate rating points
minComInCat=3
minComInCatEVSK=6
;*** Decimal digits for GAPpercent (0..2)
GAPpercentDigit=0
;*** Relapse to other categories for SRR-Rating
relapse_M70=M60,M50,M40,M21,M20
relapse_M70=M60,M50,M40,M21,M20
relapse_M60=M50,M40,M21,M20
relapse_M60=M50,M40,M21,M20
relapse_M50=M40,M21,M20
relapse_M50=M40,M21,M20
relapse_M40=M21,M20
relapse_M40=M21,M20
relapse_M19=M21,M20
relapse_M19=M21,M20
relapse_M16=M19,M20
relapse_M16=M19,M20
relapse_M14=M16,M19,M20,M21
relapse_M14=M16,M19,M20,M21
relapse_M12=M14,M16,M19,M20,M21
relapse_M12=M14,M16,M19,M20,M21
relapse_W60=W50,W35,W21,W20
relapse_D60=D50,D35,D21,D20
relapse_Ж60=Ж50,Ж35,Ж21,Ж20
relapse_Д60=Д50,Д35,Д21,Д20
relapse_W50=W35,W21,W20
relapse_D50=D35,D21,D20
relapse_Ж50=Ж35,Ж21,Ж20
relapse_Д50=Д35,Д21,Д20
relapse_W35=W21,W20
relapse_D35=D21,D20

relapse_Ж35=Ж21,Ж20
relapse_Д35=Д21,Д20
relapse_W19=W20,W21
relapse_D19=D20,D21
relapse_Ж19=Ж20,Ж21
relapse_Д19=Д20,Д21
relapse_W16=W19,W20,W21
relapse_D16=D19,D20,D21
relapse_Ж16=Ж19,Ж20,Ж21
relapse_Д16=Д19,Д20,Д21
relapse_W14=W16,W19,W20,W21
relapse_D14=D16,D19,D20,D21
relapse_Ж14=Ж16,Ж19,Ж20,Ж21
relapse_Д14=Д16,Д19,Д20,Д21
relapse_W12=W14,W16,W19,W20,W21
relapse_D12=D14,D16,D19,D20,D21
relapse_Ж12=Ж14,Ж16,Ж19,Ж20,Ж21
relapse_Д12=Д14,Д16,Д19,Д20,Д21
;;*** "B" category in Russia: club level, city level, the traditional
basePointsBcat=24;M70,M60,W60,D60,Ж60,Д60,W50,D50,Ж50,Д50
;;*** Таблица соответствия званий/разрядов с баллами по категориям
classW= ЗМС,МСМК, МС,КМС, I, II,III, Iю,IIю,IIIю,бр,1ю,2ю,3ю, *
classW0=150, 150,100, 50, 25, 12, 6, 3, 3, 3, 3, 3, 3, 3, 3
classW1=120, 120,100, 80, 60, 40, 20, 10, 10, 10,10,10,10,10,10
classW2= 0, 0,120,100, 80, 60, 40, 20, 10, 10,10,20,10,10,10
classW3= 0, 0, 0, 0,120,100, 80, 60, 40, 20,20,60,40,20,20
classW4= 0, 0, 0, 0, 0, 0,120,100, 80, 60,40,00,80,60,40
classWeight_M21=classW1
classWeight_M21=classW1
classWeight_W21=classW1
classWeight_D21=classW1
classWeight_Ж21=classW1
classWeight_Д21=classW1
classWeight_M20=classW1
classWeight_M20=classW1

classWeight_W20=classW1
classWeight_D20=classW1
classWeight_Ж20=classW1
classWeight_Д20=classW1
classWeight_M40=classW1
classWeight_M40=classW1
classWeight_W35=classW1
classWeight_D35=classW1
classWeight_Ж35=classW1
classWeight_Д35=classW1
classWeight_M19=classW2
classWeight_M19=classW2
classWeight_W19=classW2
classWeight_D19=classW2
classWeight_Ж19=classW2
classWeight_Д19=classW2
classWeight_M50=classW2
classWeight_M50=classW2
classWeight_M60=classW2
classWeight_M60=classW2
classWeight_M70=classW2
classWeight_M70=classW2
classWeight_M16=classW3
classWeight_M16=classW3
classWeight_W16=classW3
classWeight_D16=classW3
classWeight_Ж16=classW3
classWeight_Д16=classW3
classWeight_M14=classW3
classWeight_M14=classW3
classWeight_W14=classW3
classWeight_D14=classW3
classWeight_Ж14=classW3
classWeight_Д14=classW3
classWeight_M12=classW4
classWeight_M12=classW4
classWeight_W12=classW4

classWeight_D12=classW4
classWeight_Ж12=classW4
classWeight_Д12=classW4

[RatingROM]

;### Special Rating calculation for Romania (FRR, GC points) ###
;*** List of categories, in which best competitor determine the points
;*** Key words must have increased end number
catGroup1=M19,M21,M40
catGroup2=W19,W21,W35
catGroup3=F19,F21,F35
;*** Categories, which gets fixed rating points
catClubFix=25;W15,M15

Example of TLN file

The TLN file can be coded in following formats:

- ANSI (codepage 1252): using until version 7.10
  with restriction also since FjwW-Unicode version 8.3.
- UTF-8: required from FjwW-Unicode version 8.3.
- UTF-16: additional posible since FjwW-Unicode version 17.7.

```
*********************************************************
*  2th RLL Competition 2005   Niedersachsen  80-m-Band  *
*********************************************************

@BEGIN
@VERSION:         1908              # improved storing SIchip5 in KOR
@CONTEST_TITL:    2. RLL 2005 Niedersachsen 80m
@CONTEST_TYP:     OFF               # OV,OFFiziell,INTernational
@PUBLICATION:     6/2006 S.427      # Published in CQ/DL
@PROMOTER:        Hein, Günter      # Name organizer
@CALL_PROMOTER:   DJ6RU             # Call organizer
@CLUB_PROMOTER:   H33               # Club organizer
@BAND:            80                # Freq.-band (2,80,2+80,80+2,0.7)

@START_BALLOT:    0,0,300,0         # Raffle: max. comp. per start group,
                                    #   type of distribution, seconds per start group
                                    #   total count of start groups (Details see below)
@DATE:            19.6.2005         # Date (day month year)
@FIRST_START:     9:30              # First start time (hr min)
@LAST_FINISH:     14:59             # Finish closing time (hr min)
@LIMIT:           120               # Limit time < 500 min, 0 for no limit
@FIN_LIMIT_TIME:  0                 # Exceed with finish time, competitor will be set to 'aL',
                                    #   manual insert the value!!!
@START_DELAY:     0                 # Start deviation +/- min for all start times
                                    #   might require changing of @FIRST_START
                                    #   and @LAST_FINISH
@FIN_BEACON:      6                 # Number of finish beacon
@FINISH_NO:       7                 # Number of finish, @ZIEL_NR > max. transmitter number
@FINISH_LB:       0                 # Finish light barrier or evaluation/display of the time stamps
                                    #   received from the finish station (yes > 0)
@STT_IN_DAT:      0                 # 127 0   Start time from SI start station, remains second accurate
                                    # 1127    Start time from TLN/KOR, overwrite by SI chip/start station
                                    # 127 1   Start times are rounded up to full minutes
                                    # 127 2   Start times are rounded up to 2-minute-interval
                                    # 127 3   Start times are rounded up to 2.5-minute-interval
                                    # 127 5   Start times are rounded up to full five minutes
                                    # 1...62  Start time from fox station 1,2,..62
                                    # 255     Start time from first fox found
@FT_IN_DAT:       0                 # 0       finish time taken from SI chip/finish device
                                    # 1...62  finish time taken from fox station 1,2,..62
                                    # 256     finish time taken from last found transmitter
@BREAK_BONUS:     1 - 2             # Arrival time between specified foxes becomes bonus
@SI_NO_LIST:      31 32 33 34 35 36 # SI station numbers for T1...T5 & B; entries not used must be filled with 0
@SI-RES_NO_LIST:  0  0  0  0  0  99 # SI-No of second/reserve station on transmitters, here for beacon
@FOX_SCORE_LIST:  2 3 5 2 1         # For a Score rating manual to insert!!! Fox1=2Pts., Fox2=3Pts., ...
@FOX_LIST:        "W19" 1 . 3 4 5   # Valid transmitters for this category @FOX_LIST
@FOX_LIST:        "W21" 1 2 3! . 5  # A "!" behind the fox number means 'mandatory fox' as spectator on SPRINT
@FOX_LIST:        "W35" 1 2^ 3 . 5  # A "^" behind the fox number means 'free fox' -> can be stamped at any time
@FOX_LIST:        "W50" 1 2% 3 4 .  # A "%" behind the fox number means 'false fox' -> reduce the fox numbers by one
@FOX_LIST:        "M19" 1 2 . 4 5   # May not contain numbers from FIN_BEACON, @STT_IN_DAT and @FT_IN_DAT
@FOX_LIST:        "M21" A: 1 2 3 4 5 # Starting lane A
@FOX_LIST:        "M40" 1 2 3 4 .
@FOX_LIST:        "M50" 3: 1 2 3 4 5 # Max. 3 of the 5 foxes are to be found
@FOX_LIST:        "M60":"Men from 60 years" . 2 3 4 .  #with category alias name
@FOX_LIST:        aK!               # for competitors not starting in any category
@FOX_LIST:        ""                # for 'categories not used'/'no category'
@OPTIONS:         kK!,FOXO          # kK!: Categories not used for results, FOXO: Foxoring
@POSITIONS:       2363:0/1518:1328/1178:2676/913:551/2036:713/523:1735/2137:1394/2175:1401
                                    # relativ distances/places of the transmitters [in m]
                                    # Position  Start/F1/F2/F3/F4/F5/.../Finish
@LOC_NAMES:       /AA//bb/4F        # Fox1 will be label as "AA", Fox3 as "bb", Fox4 as "4F"
@USED_STNO:                         # last used StNo when insert new competitors

@GRP STNO  CARDNO   NAME, FIRSTNAME        CALL    BIRTH  STAT CAT  START  SET CLUB
#|---|-----|--------|--------------------|-------|------|----|----|------|---|----
 D   10    410484   Lehmann, Sarah                1988   FM   W19             S27
 D   19    410485   Berse, Kathrin                1987   FM   W19             N28
 D   13    236100   Denzler, Svenja               1989   FM   W19             P06
 D   3     411769   Hauser, Corina                1983   FM   W21             X41
 D   28    410475   Kaiser, Henrike               1972   FM   W21             B27
 D   21    4845     Hilbert, Anja          DG0YS  1973   FM   W21             S47
 D   22    246868   Lehmann, Ria           DG3VO  1966        W35         *6
 D   23    4841     Drews, Brigitte        DL7AFJ 1963   FM   W35         1   D06
 D   36    410486   Höfner, Sylke          DG4AAN 1969   FM   W35         2   H19
 D   46    410671   Krassowizkaja, Galina         1959        W35         3   N06
 D   8     4881     Gütt, Manuela                 1968   FM   W35             X09
```

```
 D   25    411506   Lietz, Elfriede                1941   FM   W50    9.30     G46
 D   14    6240     Stadler, Helga         DK7SC   1938   FM   W50    9.55     P18
 D   42    302973   Pomplun, Ingrid        DL4YCR  1955   FM   W50   10.15     N16

 M   48    238537   Schlodder, Benjamin    DO2BEN  1989   FM   M19             N28
 M   4     410489   Hauser, Matthias               1986   FM   M19             X41
 M   5     302995   Berse, Stefan          DO1FOX  1986   FM   M19             N28
 M   57    410424   Pelinski, Daniel       DE8FOX  1990        M19             R09
 M   6     232134   Pastor, Kai            DG0YT   1977   FM   M21             S47
 M   61    4893     Lindhorst, Sven                1969   FM   M21             V07
 M   11    4891     Boden, Michael         DL9GMB  1971   FM   M21             V07
 M   41    4894     Henke, Marco                   1972   FM   M21             V07
 M   29    236444   Kühlewein, Matthias    DL3SDO  1970   FM   M21             P12
 M   39    410487   Hergert, Alexander             1985   FM   M21             C18
 M   1     410483   Lehmann, Frank         DL1DUK  1959   FM   M40             S27
 M   2     4831     Drews, Christian       DL7APD  1965   FM   M40             D04
 M   12    4883     Denzler, Thomas        DL3SAK  1958   FM   M40             P06
 M   50    410471   Hauser, Hans-Jürgen    DH1HH   1958   FM   M40             X41
 M   60    1810     Souan, Rochus                  1956        M40
 M   45    411780   Flößer, Rainer         DL5NBZ  1957   FM   M40             B25
 M   9     4110     Gödtner, Ulrich        DL8YBR  1947   FM   M50             N06
 M   17    411520   Jürgens, Bernd         DJ9NW   1947   FM   M50             H36
 M   35    410477   Höfner, Bernd          DL1AQ   1954   FM   M50             H19
# M   49    235691   Gartner, Bernhard      DF7SF   1950   FM   M50              P11
 M   54    411560   Muschong, Franz-Georg  DL5MGA 1951   FM   M50             B32
 M   53    *411775  Frankfurter, Ralf      DG9ACT  1954        M50             H40
 M   30    411530   Platzek, Manfred               1947   FM   M50             X41
 M   31    410472   Hauser, Erich          DG0OC   1932   FM   M60             X41
 M   32    411550   Uebel, Dieter                  1940   FM   M60             X41
 M   44    410480   Kurz, Martin           DK9JP   1937   FM   M60             R10
 M   51    410221   Tuttmann, Josef        DL8YBL  1941   FM   M60             N42
     399   *111111  Mustermann, Hans       DL0XXX                 aK!         Z99

@GRP STNO  CARDNO   NAME, FIRSTNAME                    CALL    BIRTH  STAT CAT  START  SET CLUB
#|---|-----|--------|---------------------------------|-------|------|----|----|------|---|---
     400            SurName, FirstName MiddleName 36Ch

@GRP STNO  CARDNO   NAME           FIRSTNAME      CALL    BIRTH  STAT CAT  START  SET CLUB
#|---|-----|--------|--------------|--------------|-------|------|----|----|------|---|---
     399   *222222  Mustermann2    Hans2          DL7XXX                            Z98

@GRP STNR  KARTNR   NAME, VORNAME          CALL    GEBURT STAT KAT  START  SET DOK
#|---|-----|--------|----------------------|-------|------|----|----|------|---|---
$    398   9111112  Mustermann, Hans       DL0XXX              M60                #Depot

@NAME, FIRSTNAME        CLUB CALL    BIRTH  STAT CAT
#|----------------------|----|-------|------|----|---
 Hanzl, Peter           X09  DL1OHS  1955   FM   HLP
 Hein, Günter           H33  DJ6RU   1943   FM   ORG
 Schade, Karl-Heinz     D21  DL7VDB  1950   FM   HLP
 Zitzling, Anja                             HLP

@END    # needed if some text appears after this statement
Save: 11:08:32 19.6.05 LATITUDE/Charly
```

Explanations:

@BEGIN(+) and **@END**(+) are the start and the end of the data part of the file of competitors.

The first 8 lines BEFORE **@BEGIN** are used as headlines for the result lists.

The words beginning with **@** are keywords and cannot be changed. The order of the keywords between **@BEGIN** and **@END** should not changed.
If a '**a**' at the end of times in @LAST_FINISH and @FIN_LIMIT_TIME that means a time on the day after the date of the competition beginning in @DATE.

The line containing **@GRP...STNO...** defines the distances between the columns containing the date of the competitors. The position of the columns and the widths of the columns can be changed freely. The columns start with the beginning of the key word and they end before the start of the next keyword (=column). The order of the keywords can be changed freely (=columns). Keywords which are not needed can be omitted. Additional columns with keywords not used in the example, can be added. These columns are not used by FjwW.

The next line containing **@GRP...** changes the distances between the columns and their order if they are not the same as in the previous one.

The following line with the pseudo ruler **#---|---|...** is meant as a helpline to key in the competitors data. It can be omitted.

Between the columns spaces or tabs should be used as separators. The same separator has to be used in the line containing the keywords.

The keywords marked with **(+)** are a must within the competitors data line. Lines starting with 'REM' or '#' are ignored. They can be used for comments

Meaning of the keywords:

@GRP
STNO CARDNO NAME, FIRSTNAME CALL BIRTH STAT CAT START SET CLUB
@GRP STNO CARDNO FIRSTNAME NAME
CALL BIRTH STAT CAT START SET CLUB

GRP One to three characters can be used to define the group to which the competitor belongs. This is NOT the category of the competitor! Any combination of four characters and numbers can be used. The group entry is not case sensitive. In the example it's used to distinguish between **W** (women) and **M** (men). While creating the result lists this group indicator can be used for filtering. If there is no entry in the GRP column the competitor will be displayed when using "[*]" as a filter.

STNO (+) Start number of the competitor (1...99999).

This number should only be changed as long as no KOR file has been created. The link between all data sources is this **start number**. KOR files are created if data is modified manually or the raffle of start times is done.

CARDNO Chip number used by the competitor. If this number is preceded by an '*' or '-' the chip is marked as a "lent" one. In this case the chip number is handled different from regular chip numbers.

NAME, FIRSTNAME (+) Start with the surname followed the first name, delimited by a comma. Also possible: **FIRSTNAME** and **NAME** in two columns. The both entry is limited to a maximum of 24 characters.

CLUB Club or country abbreviation (max. 20 characters). For information see the list of ***country codes***.
If using team result(-lists) the field CLUB is the criteria to define a team.

CALL Call of the competitor (max. 7 characters).

BIRTH Year of birth of the competitor

STAT Indicator that a competitor is 'Fuchsmeister'. If he is, a **FM** should be used in this column. The entry is only relevant, as long as the result list should contain the FJ-Diplom-Punkte.

START Start time in the format hours:min. This time is always the original start time without taking into account the start deviation.
If the start time entry is present it overwrites the **SET** parameter and any raffling of start times. It has always the highest priority unless the **@STT_IN_DAT** is used (see below).
If a '**a**' at the end of times in @START that means a time on the day after the date of the competition beginning in @DATE.

CAT Category of the competitor (max. characters). The first character MUST be a character and not a number (see also **@FOX_LIST**). The category entry is not case sensitive. If no evaluation based on categories is done this column can remain empty.

SET Used to set the order while raffling the start sequence (see **START_BALLOT**). A competitor with a lower **SET** number will start before another competitor within the same category. Numbers preceded by an '*''of '-' the start group of the competitor:
Examples:
*1 (or -1) forces the competitor to start in the first starting group
* 9 (or -9) forces the competitor to start in the ninth starting group
Priorities and order when raffling the start groups:
1. Time indicated by the **START** entry
2. Start group defined by **SET** values with '*' or '-'.
3. Number of competitors per category and start group has been reached or is exceeded.
4. The competitor having a **SET**-value, which is the lowest within the remaining values.
5. A competitor without any **SET** value

REM Comment for this line

@BEGIN: (+) Text preceding this keyword is used as header lines in the results list (up to eight!).

@LIMIT: Maximum time for each competitor (must be below 500 minutes). If 0 is used no time limit does exist.

@FIN_LIMIT_TIME: When finish time of competitor exceed this time he/she will be set to 'above Limit'

@DATE: (+) Date of the competition. Format: dd.mm.yyyy (European format).

@FOX_LIST: List of transmitter numbers to be searched for by the given category.
If no result calculation based on categories is used (no class results) the category **""** has to be defined together with all transmitters to be found by everybody. If no transmitter numbers are entered automatically the transmitter numbers 1...Finish-1 are used.
If FOX_LISTE entries are missing the IARU categories and transmitter numbers are taken.
The order of the category entries is equal to the order used in several result lists.
For a good EDAD file the following categories should be used:

```
 - Competitor: WOM, JUN, SEN,  OT, VET,
               W14, W16, M14, M16,
               W19, W21, W35, W45, W55, W65,
               M19, M21, M40, M50, M60, M70,
               JUG, ERW,
               ""  (no categories)
 - Helper:     HLP, HEL
 - Organizer:  ORG
```

Helpers are only stored in the FjwW databases and not used. The helpers are only listed within the EDAD file, the result list and the detailed result list.

@OPTIONS: kK! If set the categories of the competitors are not taken into account. **FOXO** Foxoring competition

@START_DELAY: Start deviation (max. +/-500 min) of the whole competition. When reading the competitors list this time is added to the start time or added to the start time read from the KOR file.

@FIN_BEACON: Number of finish beacon. In different lists the beacon will be show in other way as the foxes.

@POSITIONS: Coordinates of the Start/Transmitters/Finish locations. The coordinates are measured in meters starting at a self defined point zero. The figures must be between -9999 and 9999 meters. Coordinates which are in the north or the east of the point zero are positive.
The order of the entries is the order of the transmitter numbers. Each entry consists of two figures, one for the east/west value and one for the north/south value. The values are separated by ':'. The entries (pairs) are separated by ';' or '/'. Example:

```
  startX:startY;fox1X:fox1Y;fox2X:fox2Y; ... foxnX:foxnY;zielX:zielY
```
The '/' delimits Start/Foxes/Finish. The ':' delimits the X- and Y-coordinates.
Transmitters not used in the **@FOX_LIST** are entered as '0:0/' or even easier as '/'.

@CONTEST_TYP: @CALL_PROMOTER: @PROMOTER:

@PUBLICATION: @CLUB_PROMOTER: @BAND:
Are necessary only to create the EDAD file.

@FINISH_NO: (+) The numbers in the **@FOX_LIST** must be less than this parameter.

@STT_IN_DAT: If this parameter is used by setting a device/fox number the start time of the competitor will not be the time indicated in the TLN file. It will be taken from the indicated SI station. Start times indicated in the TLN file are deleted.
=127 x Start times will be taken from a start station, rounded up, when x=(1,2,3,5), see above
=1...62 Start times will be taken from a fox station
If a start time was changed manually this start time is kept!
The number from which the start times are taken should not be the finish station or the number of a fox station.

@FT_IN_DAT: Defines the source of the finish times:
= 0 times from the SI finish station are used (default)
= 1...62 times from the indicated fox station are used

@SI_NO_LIST: (+) List of SI station numbers, which will be assign to number of foxes; list begin with SI-No for fox1, not existing foxes must filled with SI-No "0".
@SI-RES_NO_LIST: List of SI station numbers for a second/reserve station, which have not the same number as the first station.

@FINISH_LB: If a light barrier is used and the time recorded after passing the light barrier should be taken as finish time this entry has to be set to 1. Else it must be 0.

@FIRST_START: Time of the day when the first start is done (hh.mm:ss)

@LAST_FINISH: Last time which is accepted to be a valid finish time or time at the transmitter.

@LOC_NAMES: User-defined location names. Replaces the default names set in FjwW.

Example of CSV file for competitor supplement

The file must have a first line that contains some or all of following key words:

STNO;CLUB;CAT;NAME;FIRSTNAME;CALL;BIRTH;CARDNO;SET;START;FOX;FINISH;STAT;GRP
but at least
CLUB;CAT;NAME

Also the following German key words are possible
STNR;DOK;KAT;NAME;VORNAME;CALL;GEBURT;KARTNR;SET;START;FOX;ZIEL;STAT;GRP

(in any order, separated by a semicolon/tabulator). There may be other key words in the line, but the above key words have to appear in the first 20 key words from the beginning the line. The example shows the additional key words **SAVED** and **EMAIL**, they are ignored when reading the file. The competitor data must begin on the line immediately below the keyword line, and the data must be in the same order as the keywords. Both the keywords and data fields must be separated with semicolon/tabulator. Blank lines and comment lines (with '#' starting) are possible after the first line.

Competitors without a starting number will be assigned a number. Starting numbers will be assigned sequentially after the highest existing start number plus 1. The CSV file will be checked for duplicate start, chip numbers, and names. On error the reading will break and no new competitors will be added to the current competition.

If the read in of competitors is successful, the data belonging to competitors in the corresponding KOR file will be read in too.

```
STNO;CLUB;CAT;NAME;FIRSTNAME;CALL;BIRTH;CARDNO;SET;START;SAVED;EMAIL
1;GER;W21;Berse;Kathrin;;1987;410485;1;;10:52:30;dl7vdb@darc.de
2;GER;W21;Lehmann;Sarah;;1988;410484;2;13:15;;
3;GER;W21;Kaiser;Henrike;;1972;410475;3;13:20;;
```

```
11;GER;W35;Hilbert;Anja;DG0YS;1973;4845;2;;;
12;GER;W35;Gütt-Mühlberg;Manuela;;1968;4881;3;;;
13;GER;W35;Drews;Brigitte;DL7AFJ;1963;4841;1;;;
21;GER;W50;Krassowizkaja;Galina;;1959;440488;2;;;
22;GER;W50;Pomplun;Ingrid;DL4YCR;1955;302973;1;;;
;GER;M19;Stein;Nils;;1997;236356;1;;;
;GER;M19;Friedrich;Christian;;1997;412060;2;;;
;GER;M19;Liebsch;Jonas;;1997;361254;3;;;
;GER;M21;Köberle;Stephan;;1983;831106;3;;;
;GER;M21;Hergert;Alexander;DE1ADH;1985;800080;2;;;
;GER;M21;Böhringer;Axel;;1991;236459;1;;;
;GER;M40;Lindhorst;Sven;;1969;4893;1;;;
;GER;M40;Drews;Christian;DL7AFP;1965;4831;2;;;
;GER;M40;Henneberg;Jens;DL8UAN;1969;691123;3;;;
;GER;M50;Höfner;Bernd;DL1AQ;1954;888917;1;;;
;GER;M50;Böhringer;Wolfgang;DL9TE;1958;411501;3;;;
;GER;M50;Eipper;Ernst;DH1EE;1961;411522;2;;;
;GER;M60;Götte;Heinrich;;1952;6330;1;;;
;GER;M60;Pomplun;Siegfried;DL3BBX;1952;302972;2;;;
;GER;M60;Gartner;Bernhard;DF7SF;1950;235691;3;;;
;GER;M70;Barg;Dieter;DL9MFI;1942;7361;2;;;
;GER;M70;Schwider;Dieter;DF7XU;1942;247100;1;;;
;GER;M70;Lietz;Wilhelm;DL4KCU;1939;411556;3;;;
# Lines, beginning with '#', will be ignored



NAME    VORNAME CALL    DOK     STNR    KARTNR  KAT     GEBURT  START   SET
#-------------------------------------------------------------------------
Wind    Evert   PA3BNU          1       411535  M40     1957    09:15   1
Lehmann Frank   DL1DUK          2       410483  M40     1959    09:05   2
Gütt    Manuela         X09     4       4881    W21     1968    09:00   3
Ging    Jürgen  DG1GGI  A48     5       411551  M21     1964    10:05   2
```

The character coding of file can be **ANSI**, **UTF-8** or **UTF-16**.

Example of KOR file

The KOR file (corrections / modifications) is automatically created or data is appended to an existing KOR file on some events. This can be the raffling of the starting order, manual modifications of the data of a competitor or the reading of results from a SI chip in the case a SI reading device is sending them.

A bloc of data always starts with **@SAVE** and ends with **@END**. There can be more than one data block in a single KOR file.

The KOR file is parsed two times.

In the **first parse** the following data is taken into account:

Description	Code
Erase all time data for the given start number	**255**
Correction of number of transmitters found for a given start number (add info = number of fox, draw back: add info = 255 or 65535)	**254**
Correction of the start time for a given start number (draw back: add info = 255)	**253**
Correction of the finish time for a given start number (draw back: add info = 255)	**248**
Disqualification of a given start number (draw back: add info = 255)	**247**
Bonus/Credit of a given start number (penalty: add info = 1, draw back: add info = 255)	**241**
Correction of the transmitter time for a given start number (draw back: trx time = 0)	**65...126**

The data lines have the following format:

code startNo hrs:min:sec'ms day-month-year errorcode; [addinfo;] #comment

For possible ***errorcodes*** see the related chapter.

In the **second parse** the following data is taken into account:

Attention: The first parse has a higher priority than the second one. If data is found in both parses the one of the first parse will be kept and the data of the second parse is ignored.

Description	Code
Start time for a given start number (obtained by raffling)	**252**
Correction of the call for a given start number	**251**
Correction of the club for a given start number	**250**
Correction of the name for a given start number	**249**
Set out of competition	**246**
Erase all raffled start times (start number = 0)	**245**
Remark	**244**
Participant has given up 'SPW'	**242**
Participant has returned loan chip	**239**
Replacement start number	**238**

The data lines have the following format:

code startNo hrs:min:sec'ms day-month-year 0; *@Name/Call/Club/Category* #comment

The time hrs.min:sec'ms is calculated as the middle between the start of competition and end of competition time.

All other data lines have the following format:

code startNo hrs:min:sec'ms day-month-year errorcode; [@ts*+/-SHIFT*] @id*CHIP-NO* @si*STATION-NO #WeekDay*

Description	Code
Time stamp at the transmitters for a given start number	**1..62**
Finish time of a Lichtschranke for a given start number	**64**
Start time for a given start number	**127**
Finish time for a given start number	**128**
Time is relative to start time for a given start number	**243**
Code number of a fox SI station incremented by 1000 for those SI stations which could not be translated into a transmitter number	**1020..1254**
Code number of a fox SI station or start/finish function number incremented by 2000 The weekday of SI timestamp is not the weekday of competition	**2001...2062** **2127, 2128**
Code number of a fox SI station or start/finish function number incremented by 3000 The station is not suitable with this programming, the data line is commented out	**3001...3019** **3127, 3128**

Since version 19.8, SI-Chip5 (ChipNr < 500000) always has the 12h timestamp (00:00:00 to 11:59:59) in the KOR file unchanged saved! For the classification/placement it will be converted according to the competition begin time.

Example of a KOR file:

```
@SAVE: 14:08:24 11.7.09
TLN File: c:\09071112 RLL3\090711.tln
Computer: LATITUDE/Charly
@BEGIN-KOR
#StNo=53 - at 14:08:24 Chip=411512
   4 53 01:28:57'00 11.7.09 0; @ts-10 @id411512 @si34
   5 53 01:44:43'00 11.7.09 0; @id411512 @si35
   1 53 01:51:06'00 11.7.09 0; @id411512 @si31
```

```
   3 53 01:59:07'00 11.7.09 0; @id411512 @si33
   6 53 02:07:17'00 11.7.09 0; @id411512 @si36
 128 53 02:07:44'00 11.7.09 0; @id411512 @si4
#StNo=56 - at 14:09:22 Chip=4845
   4 56 01:30:30'00 11.7.09 0; @id4845 @si34
   5 56 01:44:40'00 11.7.09 0; @id4845 @si35
   1 56 01:51:25'00 11.7.09 0; @id4845 @si31
   3 56 01:58:49'00 11.7.09 0; @id4845 @si33
   6 56 02:08:09'00 11.7.09 0; @id4845 @si36
 128 56 02:08:46'00 11.7.09 0; @id4845 @si4
#StNo=16 - at 15:13:41 Chip=831106 - Stephan Koeberle  D SSV Planeta Redebeul
   4 16 14:29:10'00 11.7.09 0; @id831106 @si34 #Sa
   5 16 14:39:40'00 11.7.09 0; @id831106 @si35 #Sa
   1 16 14:45:07'00 11.7.09 0; @id831106 @si31 #Sa
   3 16 14:51:01'00 11.7.09 0; @id831106 @si33 #Sa
   2 16 15:07:00'00 11.7.09 0; @id831106 @si32 #Sa
   6 16 15:11:24'00 11.7.09 0; @id831106 @si36 #Sa
 128 16 15:11:46'00 11.7.09 0; @id831106 @si4 #Sa
@END

@SAVE: 16:08:33 11.7.09
TLN File: c:\09071112 RLL3\090711.tln
Computer: LATITUDE/Charly
@BEGIN-KOR
 251 17 14:00:00'00 11.7.09 0; @Stein, Jens #name
 251 14 14:00:00'00 11.7.09 0; @DL7AFJ #call
@END
```

Example of a Backup-Data-File (DAT)

A backup of an SI readout station was made here. The day of the competition was on Saturday, April 17th, 2021.
The first rows of data come from the Sunday, one of weekend before the day of the competition. They are not effective when reading into FjwW, they are commented out with '#So'.

```
#SI backup *17-4-21* ©FjwW V21.3 17:44:39 18.4.21
@SAVE: 17:44:40 18.4.21
 Station 5 = Chip lesen
 Board-CPU-No 134369
@BEGIN-A
#So   2 0 13:51:41'00 So.So.So 0; @id2133215 @si52 #at:So
#So   1 0 13:55:57'00 So.So.So 0; @id2133215 @si51 #at:So
#So   3 0 13:59:49'00 So.So.So 0; @id2133215 @si53 #at:So
#So   5 0 14:06:25'00 So.So.So 0; @id2133215 @si55 #at:So
#So   4 0 14:07:41'00 So.So.So 0; @id2133215 @si54 #at:So
#So 127 0 13:25:14'00 So.So.So 0; @id2133215 @si3 #at:So
#So 128 0 14:10:51'00 So.So.So 0; @id2133215 @si4 #at:So
#So   2 0 10:16:27'00 So.So.So 0; @id2107033 @si52 #at:So
#So   1 0 10:21:42'00 So.So.So 0; @id2107033 @si51 #at:So
#So   3 0 10:25:49'00 So.So.So 0; @id2107033 @si53 #at:So
#So   5 0 10:32:37'00 So.So.So 0; @id2107033 @si55 #at:So
#So   4 0 10:33:57'00 So.So.So 0; @id2107033 @si54 #at:So
#So 127 0 09:43:09'00 So.So.So 0; @id2107033 @si3 #at:So
#So 128 0 10:37:26'00 So.So.So 0; @id2107033 @si4 #at:So
   1 2 10:14:45'00 17.4.21 0; @id428091 @si51
   3 2 10:19:03'00 17.4.21 0; @id428091 @si53
   2 2 10:24:35'00 17.4.21 0; @id428091 @si52
   5 2 10:28:45'00 17.4.21 0; @id428091 @si55
   4 2 10:30:02'00 17.4.21 0; @id428091 @si54
 127 2 09:39:52'00 17.4.21 0; @id428091 @si3
 128 2 10:34:08'00 17.4.21 0; @id428091 @si4
   2 1 09:35:13'00 17.4.21 0; @id2068669 @si52 #at:Sa
   1 1 09:38:37'00 17.4.21 0; @id2068669 @si51 #at:Sa
   3 1 09:41:46'00 17.4.21 0; @id2068669 @si53 #at:Sa
   5 1 09:46:51'00 17.4.21 0; @id2068669 @si55 #at:Sa
   4 1 09:47:54'00 17.4.21 0; @id2068669 @si54 #at:Sa
 127 1 09:13:54'00 17.4.21 0; @id2068669 @si3 #at:Sa
 128 1 09:50:54'00 17.4.21 0; @id2068669 @si4 #at:Sa
   2 3 11:19:00'00 17.4.21 0; @id200468 @si52
   1 3 11:25:15'00 17.4.21 0; @id200468 @si51
   3 3 11:29:39'00 17.4.21 0; @id200468 @si53
   5 3 11:38:22'00 17.4.21 0; @id200468 @si55
   4 3 11:40:23'00 17.4.21 0; @id200468 @si54
 127 3 10:40:29'00 17.4.21 0; @id200468 @si3
 128 3 11:46:11'00 17.4.21 0; @id200468 @si4
   4 5 12:07:44'00 17.4.21 0; @id8625747 @si54 #at:Sa
   5 5 12:08:34'00 17.4.21 0; @id8625747 @si55 #at:Sa
   3 5 12:12:44'00 17.4.21 0; @id8625747 @si53 #at:Sa
   1 5 12:14:23'00 17.4.21 0; @id8625747 @si51 #at:Sa
   2 5 12:17:05'00 17.4.21 0; @id8625747 @si52 #at:Sa
 127 5 12:04:12'00 17.4.21 0; @id8625747 @si3 #at:Sa
```

```
 128 5 12:39:23'00 17.4.21 0; @id8625747 @si4 #at:Sa
   4 6 12:06:03'00 17.4.21 0; @id2068667 @si54 #at:Sa
   5 6 12:07:22'00 17.4.21 0; @id2068667 @si55 #at:Sa
   2 6 12:09:48'00 17.4.21 0; @id2068667 @si52 #at:Sa
   1 6 12:14:30'00 17.4.21 0; @id2068667 @si51 #at:Sa
 127 6 12:02:07'00 17.4.21 0; @id2068667 @si3 #at:Sa
 128 6 12:41:08'00 17.4.21 0; @id2068667 @si4 #at:Sa
   4 7 01:53:45'00 17.4.21 0; @id362809 @si54
   3 7 02:01:36'00 17.4.21 0; @id362809 @si53
   1 7 02:06:21'00 17.4.21 0; @id362809 @si51
   2 7 02:10:59'00 17.4.21 0; @id362809 @si52
 127 7 01:49:56'00 17.4.21 0; @id362809 @si3
 128 7 02:38:42'00 17.4.21 0; @id362809 @si4
@END_CRC_ok
```

Example of a Backup-Data-File (DAT)

In this example, the five SI Fox stations 31,32,33,34,35 were read out one after the other.

```
#SI backup *17-10-20* ©FjwW V20.8 11:02:19 18.10.20
@SAVE: 11:02:20 18.10.20
 Station 31 = Fuchs
 Board-CPU-No 84049
@BEGIN-A
 11 0 13:47:03'00 17.10.20 0; @id411769 @fsi31 #at:Sa
 11 0 13:47:42'00 17.10.20 0; @id1903179 @fsi31 #at:Sa
 11 0 13:51:00'00 17.10.20 0; @id2120137 @fsi31 #at:Sa
 11 0 14:01:42'00 17.10.20 0; @id7650506 @fsi31 #at:Sa
 11 0 14:02:40'00 17.10.20 0; @id445652 @fsi31 #at:Sa
 11 0 14:04:25'00 17.10.20 0; @id2118928 @fsi31 #at:Sa
 11 0 14:05:56'00 17.10.20 0; @id7801230 @fsi31 #at:Sa
 11 0 14:06:17'00 17.10.20 0; @id2118935 @fsi31 #at:Sa
 11 0 14:52:11'00 17.10.20 0; @id7631311 @fsi31 #at:Sa
 11 0 15:36:36'00 17.10.20 0; @id445659 @fsi31 #at:Sa
@END_CRC_ok

#SI backup *17-10-20* ©FjwW V20.8 11:02:59 18.10.20
@SAVE: 11:03:00 18.10.20
 Station 32 = Fuchs
 Board-CPU-No 84056
@BEGIN-A
 12 0 14:07:48'00 17.10.20 0; @id7631311 @fsi32 #at:Sa
 12 0 14:11:27'00 17.10.20 0; @id445659 @fsi32 #at:Sa
 12 0 14:33:21'00 17.10.20 0; @id411769 @fsi32 #at:Sa
 12 0 14:45:26'00 17.10.20 0; @id1903179 @fsi32 #at:Sa
 12 0 14:53:44'00 17.10.20 0; @id7650506 @fsi32 #at:Sa
 12 0 15:02:46'00 17.10.20 0; @id445652 @fsi32 #at:Sa
 12 0 15:03:12'00 17.10.20 0; @id2118928 @fsi32 #at:Sa
 12 0 15:14:18'00 17.10.20 0; @id2120137 @fsi32 #at:Sa
 12 0 15:17:42'00 17.10.20 0; @id7801230 @fsi32 #at:Sa
 12 0 15:18:14'00 17.10.20 0; @id2118935 @fsi32 #at:Sa
@END_CRC_ok

#SI backup *17-10-20* ©FjwW V20.8 11:03:19 18.10.20
@SAVE: 11:03:20 18.10.20
 Station 33 = Fuchs
```

```
 Board-CPU-No 84046
@BEGIN-A
 13 0 13:56:27'00 17.10.20 0; @id411769 @fsi33 #at:Sa
 13 0 14:03:28'00 17.10.20 0; @id1903179 @fsi33 #at:Sa
 13 0 14:08:06'00 17.10.20 0; @id7650506 @fsi33 #at:Sa
 13 0 14:09:51'00 17.10.20 0; @id445652 @fsi33 #at:Sa
 13 0 14:11:58'00 17.10.20 0; @id2118928 @fsi33 #at:Sa
 13 0 14:15:42'00 17.10.20 0; @id2118935 @fsi33 #at:Sa
 13 0 14:15:55'00 17.10.20 0; @id7801230 @fsi33 #at:Sa
 13 0 14:40:04'00 17.10.20 0; @id7631311 @fsi33 #at:Sa
 13 0 14:44:12'00 17.10.20 0; @id2120137 @fsi33 #at:Sa
 13 0 14:58:52'00 17.10.20 0; @id445659 @fsi33 #at:Sa
@END_CRC_ok

#SI backup *17-10-20* ©FjwW V20.8 11:03:42 18.10.20
@SAVE: 11:03:43 18.10.20
 Station 34 = Fuchs
 Board-CPU-No 86917
@BEGIN-A
 14 0 14:05:24'00 17.10.20 0; @id445658 @fsi34 #at:Sa
 14 0 14:11:25'00 17.10.20 0; @id2120137 @fsi34 #at:Sa
 14 0 14:20:21'00 17.10.20 0; @id411769 @fsi34 #at:Sa
 14 0 14:20:49'00 17.10.20 0; @id7631311 @fsi34 #at:Sa
 14 0 14:33:48'00 17.10.20 0; @id445659 @fsi34 #at:Sa
 14 0 14:34:04'00 17.10.20 0; @id1903179 @fsi34 #at:Sa
 14 0 14:37:34'00 17.10.20 0; @id7650506 @fsi34 #at:Sa
 14 0 14:51:35'00 17.10.20 0; @id2118928 @fsi34 #at:Sa
 14 0 14:51:55'00 17.10.20 0; @id445652 @fsi34 #at:Sa
 14 0 15:02:08'00 17.10.20 0; @id7801230 @fsi34 #at:Sa
 14 0 15:30:37'00 17.10.20 0; @id2118935 @fsi34 #at:Sa
@END_CRC_ok

#SI backup *17-10-20* ©FjwW V20.8 11:03:57 18.10.20
@SAVE: 11:03:57 18.10.20
 Station 35 = Fuchs
 Board-CPU-No 86890
@BEGIN-A
 15 0 14:07:05'00 17.10.20 0; @id411769 @fsi35 #at:Sa
 15 0 14:20:25'00 17.10.20 0; @id1903179 @fsi35 #at:Sa
 15 0 14:23:12'00 17.10.20 0; @id7650506 @fsi35 #at:Sa
 15 0 14:23:58'00 17.10.20 0; @id2118928 @fsi35 #at:Sa
 15 0 14:25:13'00 17.10.20 0; @id445652 @fsi35 #at:Sa
 15 0 14:30:08'00 17.10.20 0; @id7631311 @fsi35 #at:Sa
 15 0 14:35:43'00 17.10.20 0; @id2120137 @fsi35 #at:Sa
 15 0 14:41:57'00 17.10.20 0; @id2118935 @fsi35 #at:Sa
 15 0 14:47:45'00 17.10.20 0; @id7801230 @fsi35 #at:Sa
 15 0 15:07:48'00 17.10.20 0; @id445659 @fsi35 #at:Sa
@END_CRC_ok
```

Example of EDAD file (EDAD V2.1)

The data lines start with a ***Code***.

```
************************************************************
*  1. Ranglistenlauf 2002  Sachsen        26.5.2002  80-m-Band *
************************************************************

Competition:  at 26-05-2002   from 9.00 Uhr   in 80-m-Band
Competitor: D19=4 D21=6 D35=4 D50=3 M19=12 M21=13 M40=14
M50=10 M60=10 / Tln=76 +Hel=84
Limit:  120 min

000: OFF
001: 1. Ranglistenlauf 2002  Grillenburg 80m
002: 26.5.2002
003: 80
004: 5
005: 76
008: 9.00:00
009: 120
010: 13.01:00
020: 4/2002
021: 296
023: S27
031: Meißner
032: Stefan
033: DM2AML
034: S27
050: IARU2
051: D19,D21,D35,D50,M19,M21,M40,M50,M60
097: 1
098: 1
099: EDAD V2.1
233: 4
234: 6530
236: 6
237: 6790
239: 4
240: 7160
242: 3
243: 5320
245: 12
246: 6780
248: 13
249: 7680
251: 14
252: 7150
254: 10
255: 6530
257: 10
258: 7010
700: ************************************************************
701: *  1. Ranglistenlauf 2002  Sachsen        26.5.2002  80-m-Band *
702: ************************************************************
709: FjwW Version 4.5
710: 0:0/-2150:270/-2170:1530/-900:675/-480:2080/0:1350/-1210:-930
```

```
713: 6
719: 31 32 33 34 35
721: 1 . 3 4 5
722: 1 2 3 . 5
723: . 2 3 4 5
724: . . 3 4 5
725: 1 2 . 4 5
726: 1 2 3 4 5
727: 1 2 3 4 .
728: 1 . 3 4 5
729: . 2 3 4 .

101: Berse
102: Kathrin
103: N28
106: D19
109: 1987
120: 4
121: 95:47
150: PM
160: 410485
301: 11.30:47'00
302: 9.55:00
311: 11.18:28
313: 10.58:11
314: 10.34:32
315: 10.15:34
800: 59

101: Hauser
102: Corina
103: X41
106: D19
109: 1983
120: 2
121: 113:37
150: PM
160: 411523
301: 11.53:37'00
302: 10.00:00
313: 11.27:57
315: 10.45:07
800: 66

101: Lehmann
102: Sarah
106: D19
109: 1988
120: 4
121: 121:33
150: PM
160: 410484
301: 11.21:33'00
302: 9.20:00
311: 10.40:12
313: 11.06:43
314: 9.59:03
315: 9.36:50
800: 58

;---------------------- abbreviated ----------------------
```

```
101: Stadler
102: Ewald
103: P18
104: DJ2UE
106: M60
109: 1936
120: 3
121: 112:07
160: 6250
301: 10.57:07'00
302: 9.05:00
312: 10.29:12
313: 9.24:13
314: 9.53:14
800: 41

101: Hauser
102: Erich
103: X41
104: DG0OC
106: M60
109: 1932
150: PM
160: 410472
302: 9.40:00
800: 31

101: Eichhorn
102: Udo
103: S27
104: DL1DWR
107: HLP

101: Meißner
102: Stefan
103: S27
104: DM2AML
107: ORG

;---------------------- snip ----------------------

101: Oehme
102: Olaf
103: S47
104: DG0CH
107: HLP

101: Schade
102: Karl-Heinz
103: D21
104: DL7VDB
107: HLP

101: Zimmermann
102: Lutz
103: S27
104: DG4VX
107: HLP

999: 48239
```

Organiser: Meißner, Stefan DM2AML

EDAD files can be checked with the program **EDADcheck** which is shipped with FjwW.

Example of names list

Several thousand German/foreign participants are registered in the lists of names1/2, collected from hundreds of results from ARDF competitions. This makes it possible to quickly transfer your data to a new competition. The list of names3 contains international referees.

```
;SAVE: 16.3.08  12:13:14  ©FjwW  Version 8.3
@NAME       FIRSTNAME CALL    CLUB  CAT   CAT1  BIRTH  CARDNO  STAT REM
;---------- --------- ------- ----- ----- ----- ------ ------- ---- ---
_stolen     219317                                    219317+      purloined chip
Westfalen
_lost       235667                                    235667       belong Ludwig
Gruenberger
Abt         Wilhelm   DJ6OE   Z30   M60   VET   1925
Abts        Markus            G24                           FM
Abwandner   Dominik           M19   JUN   1986
Ackerly     Bryan     VK3YNG  AUS   M40   OT    1963
Ader        Frank     DH5FA   Z34   M50         1947                 before club R15
Adler       Andre             M21   SEN   1979
Adlerova    Martina   ASP8701 CZE   W19   WOM   1987   53779
...
Lend chip   200464                                    200464+      Charlys chip to
lend
...
Zyhaliuk    Stefan    OE2SZM  AUT
이광용            자문              HL1IE   KOR   M21   SEN                        Lee
Kwang-Yong in Hangul
```

For the headline with the keywords starting with **@** the same rules as for the ***TLN file***; apply. English and German ***keywords*** can be used.

Two different formats can be read by FjwW:

- The data as **FIRSTNAME** or **CALL** start at a fixed position and are filled with spaces until the next data column starts. The first name column starts at the position of the “**F**” in first name and end just before the “**C**” of the column for the calls.
- The data as **SURNAME** or **FIRSTNAME** are separated by tabs.

The **REM** is for free text. The whole line should not exceed 256 characters.

In the **window for competitor data** only the first 80 characters are displayed.

A normal TLN file or a CSV list of individual ratings generated in FjwW (with option: **CSV keyword row 'as TLN'**) can also be imported as a list of names. Several name lists can be loaded at once or added one after the other.

Examples:

- The usual TLN file
- A CSV list for individual ranking with following options: ***CSV keyword row 'as TLN'***

Example files

The following files can be found in the "Examples" subdirectory of FjwW_uni:

TLN files	
_default.tln	Simple TLN file with explanation of the key words, no participants
_WC2016m80+2.tln	World Championships 2016 Bulgaria, 80- and 2-m-band
_beispiel1.rtf	TLN file in RTF format, can be imported into FjwW via the clipboard
_beispiel2.xls	TLN file in XLS format, can be imported into FjwW via the clipboard
Competitions	
_beispiel.tln (*.kor)	German ranking run 2004, German keywords
_example.tln (*.kor)	German ranking run 2004, English keywords
_wc060916-80m.tln (*.kor)	World Championships 2006 Bulgaria
_beispiel-WC2010m80+2.tln (*.kor)	World Championships 2010 Croatia
_110908sprint.tln (*.kor)	IARU R1 Champioships 2011, Sprint competition
_demo.tln (*.kor)	Can be loaded in a non-licensed FjwW version, Comp. <=20, Cat <=2
_wc080904-2m.xls (*.kor)	World Championships 2008 Korea, TLN as EXCEL, import into FjwW via clipboard

FjwMap	
_ec070915-2m.map (_ec070915.jpg)	IARU R1 Championships Poland 2007
_wc080906-80m.map (*.jpg) _wc080906-80m-StNo185.gpx	World Championships Korea 2008, with running route
_FjwMap-Sprint-FoxList.txt	Fox lists for Sprint, importable in FjwMap
_FjwMap-Garmin-CSV.csv	Import of locations from a GARMIN CSV file
FjwLay	
_certificate-DM2007.lay (*.jpg) _beisp-urkunde.csv	Layout for certificate printing with FjwLay with data source
_beisp-urkunde.rtf (*.csv)	WORD document for series printing of certificates
Anmeldung mit EXCEL	
_IARU-WC-2022-SRB-Registry.xlsm	Proposal for World Championships 2022, improved VBS macros
_IARU-R1-2021-BUL-Registry.xlsm	Used at the IARU R1 Championships 2021 Bulgaria
_EuroCup-2021-BUL-Registry.xlsm	Used at EuroCup 2021 Bulgaria
Ergebnisse mit EXCEL	
_Ergebnisse-mit-EXCEL.xlsm	Evaluation of small competitions (GER: OV-Wettbewerbe), the generated CSV file can be imported into FjwW
Verschiedenes	
_ExcelAllSheetsOutAsCSV.vbs	VBS macro for EXCEL: output of all pages as CSV
_FjwWmassIDVprint.vbs	Mass printing of the IDV lists, note the comment in the script

_FjwWregKeyShow.vbs	Show of all existing registry entries for FjwW
_SIstationLabel12.lbl	Label file for 'Brother P-touch Editor' for printing SI station labels
_competitors_GER.csv	
_competitors_CZE.csv	
Bilder	
_ardfrll.jpg	Picture for background
_logo-EYAC.bmp	Results list printing with pictures

Examples of finish tickets

```
Name, First name         Club  Call    Cat   CardNo   StartNo
 Schmiedeberg, Nils       V24           M21   440244     51

Total runtime / Sequence / Runtimes / Minimal running route
 64:14 min / S-2-3-5-4-1-Z / 12+11+11+14+12+05 min / >8170 m

Start--Fox--Finish times
 13.25--13.36:36--13.47:11--13.58:22--14.12:28--14.24:15--14.29:14
_____________________________________________________________________
28-8-02   1. Ranglistenlauf 2002  Grillenburg 2m          (c)FjwW
```

If a SI chip is read and the SI number cannot be found in any competition which is loaded the finish ticket is printed in a different way. The differences are:

- No name, club, call, category und competition heading is printed (as they are not available :-)
- Instead of the start number of a competition the start number read from the SI chip is printed
- The start time is the start time read from the SI chip
- In the sequence area the codes of the SI devices is printed instead of the transmitter numbers. They are printed in the order in which they are stored on the SI chip.
- Start and finish time are always printed at the beginning and the end of the sequence list. Because of this negative run times can be calculated as a result.

```
Name, First name         Club  Call    Cat   CardNo   StartNo
 ??????????                                440244     40244

Total runtime / Sequence / Runtimes / Minimal running route
 64:14 min / S-32-33-35-34-31-Z / 12+11+11+14+12+5 min

Start--Fox--Finish times
 13.24:45--13.36:36--13.47:11--13.58:22--14.12:28--14.24:15--14.29:14
_____________________________________________________________________
28-8-02                                                   (c)FjwW
```

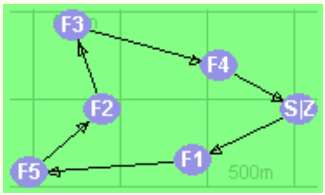
~~These INI file entries control the appearance of the ticket.~~
~~;;*** (+1)Running route graphic, (+2)Portrait instead Landscape,~~
~~;; (+4)Station No instead Fox No, (+8)no ticket when unknown SI chip~~
~~tiOption=3~~
~~;;*** Size of running route graphic~~
~~tiZoomGraphic=4~~
~~;;*** Font of ticket printing (name, size)~~
~~tiFont=~~~~Courier New, 9~~

~~;;*** margin above in mm~~
~~**tiTop=**22~~
~~;;*** margin left in mm~~
~~**tiLeft=**10~~
~~;;*** Format head line: (+1)bold, (+2)italic, (+4)underline~~
~~;; add values for several format option~~
~~**tiHead=**3~~
~~;;*** Format data line: (+1)bold, (+2)italic, (+4)underline~~
~~**tiData=**0~~
~~;;*** Format competition title below: (+1)bold, (+2)italic, (+4)underline~~
~~**tiTitl=**2~~
~~;;*** Empty lines after ticket end (default=2)~~
~~**tiEndRow=**4~~

The first time ticket printing is activated, a dialog opens in which all settings can be made better.
With this new feature, when the dialog is opened for the first time,
the corresponding settings are taken from the INI file and saved to the registry with OK,
then the INI file information no longer has any meaning.

With this INI file entry, the destination ticket can be printed twice
;;*** Ticket print double, when arrive the finish: (0)no, (1)yes
tiDouble=0

Example in portrait mode:
with **running route graphic**



Name, Fname		**StNo 19**		**Club**
Drews, Christian				D04

Category	**Call**	**ChipNo**	**Tot.runtime**
M21	DL7APD	4831	31'59 min

Route >1330 m

Sequence		**Time**	**Split**	**Cumulative**
Start		14:20:00		0'00
Fox 4		14:25:10	5'10	5'10
Fox 3		14:30:38	5'28	10'38
Fox 2	#	14:36:27	5'49	16'27
Fox 5		14:40:48	4'21	20'48
Fox 1		14:47:52	7'04	27'52

Example in portrait mode:
(40 characters per line)

Name, Fname	**StNo 19**	**Club**
Drews, Christian		D04

Category	**Call**	**ChipNo**	**Tot.runtime**
M21	DL7APD	4831	31'59 min

Route >1330 m

Sequence		**Time**	**Split**	**Cumulative**
Start		14:20:00		0'00
Fox 4		14:25:10	5'10	5'10
Fox 3		14:30:38	5'28	10'38
Fox 2	#	14:36:27	5'49	16'27
Fox 5		14:40:48	4'21	20'48
Fox 1		14:47:52	7'04	27'52
Finish		14:51:59	4'07	31'59

Foxes 5, Place 3 at 14:55 o'clock

2.Lauf zur Fränkischen Peilmeisterschaft

17.10.2004 **(c)FjwW**

```
 Finish      14:51:59    4'07     31'59
Foxes 5, Place 3 at 14:55 o'clock

2.Lauf zur Fränkischen Peilmeisterschaft
_____________________________________
17.10.2004                    (c)FjwW
```

In lines of fox times can be display following characters, they means:

- ***** Transmitter was found but is not taken into account because it's not in the list of transmitters to be found by this category
- **#** Transmitter was found/punched more than one with a time difference > 1 minute
- **+** The timestamp is out of the range of the start and finish time (must be checked)

It's possible to print tickets quickly with Label-Printer **QL-500 / 550 / 560** of **Brother**.

Name, Vorname DOK Call
Šiatek, Daniel 527

Kat KartenNr StartNr Gesamt-Laufzeit
M21 410483 2 63'31 min

Laufstrecke >6890 m (Optimum 6460 m)

Reihenfolge Zeit Diff Kumulativ
Start 11:10:00 0'00
Fuchs 1 11:24:30 14'30 14'30
Fuchs 3 11:31:27 6'57 21'27
Fuchs 2 11:42:07 10'40 32'07
Fuchs 5 11:55:23 13'16 45'23
Fuchs 4 12:05:33 10'10 55'33
Fuchs 6 12:12:46 7'13 62'46
Ziel 12:13:31 0'45 63'31

Intern. Dt. ARDF-Meisterschaft 2006 2-r
www.ARDF-FjwW.com

So good-looking finish tickets, also with graphical elements, are possible.

That required to use the Brother label editor to create a layout file (see ***.lbl** in path 'examples' under FjwW-uni) and to install a special FjwW-BrssCom interface. **FjwW-BrssCom** will be delivered by ***author***.

Furthermore the following entries have to write in the INI file under the paragraph **[Ticket]** :

- After the key word **BrotherTicketPrinterName=** the name of label printers have to entered, in the same spelling as find in "Windows Start/Setting/Printers",
  Example: **`BrotherTicketPrinterName=Brother QL-560`**.
- After the key words **BrotherLabelFilePortrait=** and/or **BrotherLabelFileLandscape=** the name of label file for ticket format Portrait/Landscape have to entered. The file name is relative to path of FjwW-uni

Example:
BrotherLabelFilePortrait=Examples_TicketLabelHochDM.lbl
or an absolute file name
Example:
BrotherLabelFilePortrait=C:\temp_TicketLabelHochDM.lbl.

Finish ticket with FjwLay

This new form of finish ticket printing offers many opportunities to design a ticket by the user. For this purpose, the program **FjwLay** is used, with which first a special, suitable layout must be created, before printing can be done. Examples are available in the example directory of FjwW.
The use of FjwLay provides for the graphic design:

- Selectable size of the ticket
- All fonts, sizes, properties, colors
- Set frames that can be filled with single-line formatted text and keywords
- Setting frames that can be filled with a graphic (JPG/GIF/BMP) preserves the transparent property of the GIF
- Text and graphics in the frame can be aligned, graphics differently adapted to the frame
- Background graphic (JPG/GIF/BMP) over parts or the whole ticket, all other elements printed above it

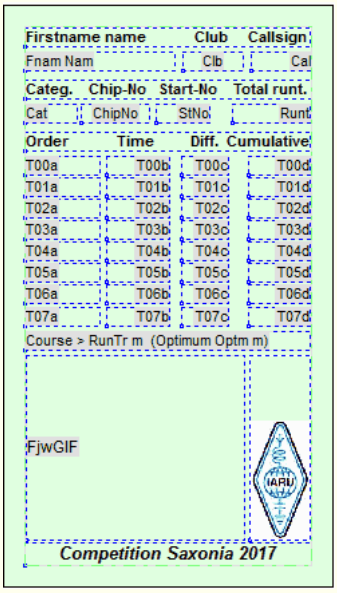
First of all, the layout is created as it is known from certificate printing. It also uses the familiar keywords in the resulting CSV stream from FjwW to FjwLay:
`Dat, Titl, Cat, Cat3, Nam, Fnam, Clb, Cal, Bnd, Runt, Fo, StNo, ChipN`
(English, also German available), see the picture below.
`RunTr, Optm` are new keywords for the minimum route of the participant and the optimal possible route of his category.

A special feature is the block with the keywords **`T??a, T??b, T??c, T??d`**. Here are the Fox arrival times, including start, finish, difference and cumulative times in search order of foxes listed.
The line with **`T00?`** always shows the start time, the following lines **`T01? ... Tnn?`** (nn = max. number of foxes/beacon in the competition) show the fox times. Subsequently, the finish data are given.
The lower picture illustrates this.

If the finish ticket is to display the (green) runway graphic in a set frame, the keyword **`FjwGIF`** must be set. The example below has been designed to be very similar to the well-known original FjwW printable finish ticket, showing the effects of the keywords. Please take a close look at this example, as file **_Ticket3-enu.lay** it is in the 'Example\Ticket' directory of FjwW.

Layout in FjwLay **Printou**

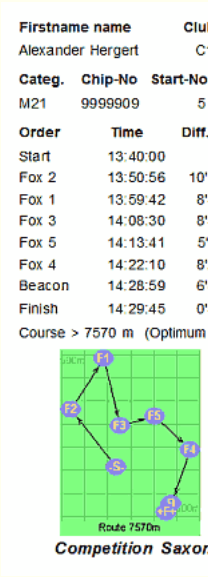
With this type of ticket printing both programs FjwW and FjwLay must be started and set correctly.



In **FjwLay** with ***Ticket print from FjwW on/off*** the printer to be used must be set and the ticket printing is so activated.

In **FjwW** ticket printing must be activated in menu ***Results|Finish ticket/Ticket with FjwLay***.

The data from FjwW are then transmitted to FjwLay via program communication, the keywords are replaced in the layout and printed on the selected printer in FjwLay, **see the right!**



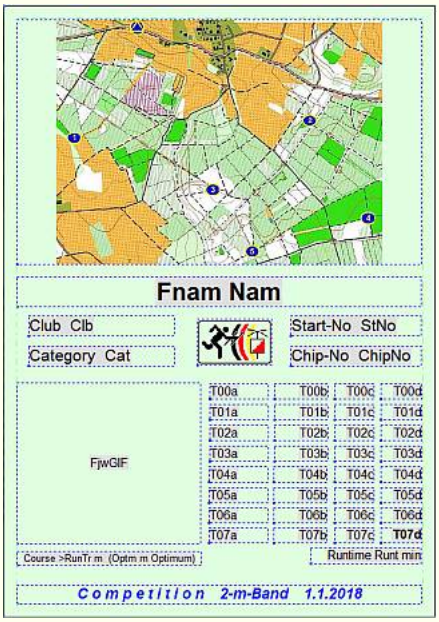
Whether the German or English keywords are sent by FjwW is set by
Results|Options of lists/Key words Language.

This example has a paper size of **`65 x 115 mm`**, suitable for label printers, e.g. of the Brother QL500...

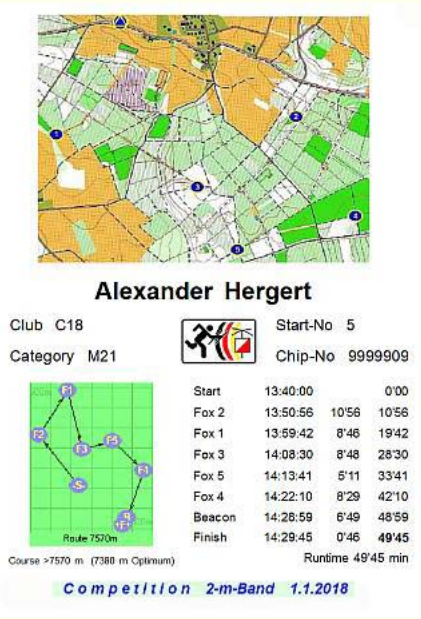
If two tickets are to be printed immediately at the finish, set .

Below is another example that shows the new possibilities.
Please take a close look at this example, as file **_Ticket5-enu.lay** it is in the 'Example\Ticket' directory of FjwW. This example has a paper size of A5 (**`148 x 219 mm`**).

Layout in FjwLay



Printout



Both examples above are suitable for a classical competition with 5 foxes and beacon.
The following number of **Tnn?** lines are required for the various ARDF competitions:

Classic	**T00? ... T07?**	Start, 5 Foxes, Beacon, Finish
Sprint	**T00? ... T13?**	Start, 5 Foxes, Spectator, 5 Foxes, Beacon, Finish
FoxOring	**T00? ... T12?**	Start, 10 Foxes, Beacon, Finish

Example for certificate series printing

- **FjwLay** can be used to create a layout for printing diplomas using the results of ARDF competitions. As FjwLay is a standalone application it can be used for many other purposes as well. Examples: Flyers, letters, posters, and so on ...
- The design of the layout is facilitated by using a background graphic (picture of certificate). The data for the printing process can be read from a CSV file (multiple formats are possible), the frame can be placed so exactly.
- One-line texts can be placed in the frames. Keywords are later replaced by data from the control file. Text parts that go beyond the frame do not appear and will not be printed.
- The frames can also take pictures, JPG/GIF/BMP formats are possible. The images are displayed/printed in original size or the size of the frame.
- The printing of diplomas can be initiated within FjwW. According to used option in FjwW it will be write German or English ***Key Words*** to CSV file. These Key Words have to use also in designed Layout.
- Printing of big amounts of diplomas, single diplomas or the reprint of a whole competition is supported (including printing of the background graphic).
- FjwLay allows the production of finished documents in HTML/CSS format or on server with FPDF created PDF format for publication on the Internet with a first link page to easily reach a single certificate of a particular participant.

FpsLayout urk-DM07-3.lay
Datei Bearbeiten Ansicht Hilfe
URKUNDE
Amateurfunk-Peilwettbewerb
Internationale Deutsche Meisterschaft
Distrikte Franken/ Bayern Ost
Vorn Name
Call
Kat
belegte den Pl. Platz
auf dem 2-m-Band
Stefan Schlippe DL7ATE
Peilreferat
Distrikt Bayern Ost
DARC
Wernberg
31./12. August 2007
Peilreferat
Distrikt Franken

FpsLayout urk-DM07-3.lay
Datei Bearbeiten Ansicht Hilfe
URKUNDE
Amateurfunk-Peilwettbewerb
Internationale Deutsche Meisterschaft
Distrikte Franken/ Bayern Ost
Stefan Berse
DO1FOX
M21
belegte den 14. Platz
DARC
31./12. August 2007

The picture at the left shows the final draft of the layout of the diploma. The results of the competition is contained in a CSV file. After loading the CSV file and activation of the preview function the keywords (greyed fields) are replaced by the values from the file. The same happens when printing the diplomas. The result is shown in the picture at the right.

Starting FjwLay with an example

Lists with 'User defined columns'

For Start- and Single/Team-Result-Lists (TXT and HTML format) the user is able to influence the look of lists.

Under menu ***Results|Options of lists/Single Contest*** there is a checkbox ***User defined column***.
If enabled, correct key word lines have to exist in the **INI file** under paragraphs **[UserListTXT]** (for TXT lists) and **[UserListHTML]** (for HTML lists).
The INI key words begin with:

ERG for Single result lists
STL for Start lists
MAN for Team result lists
following:

colTitle	for the title text of columns (TXT & HTML)
colData	Data key word (uppercase) for displaying value (TXT & HTML), see table below
colWidth	Width of column in characters, the text will be limit by width or filled with spaces (only TXT)
colAlign	Alignment key word (uppercase) left, center, right of text within the column (only TXT, in HTML the alignment happen by CSS)

For the six possible lists, there are examples that can modify the user ***see INI file***.

The entries behind the INI key words must be separated with a slash, the semicolon should nowhere be used.
The title text can also contain other special characters or numbers.

Data key word	Show	CSS class name	max. stringlength	Use in

NAME	Surname	name	36	STL ERG MAN
FIRSTNAME	Firstname	name	36	STL ERG MAN
FULLNAME	'Name, Firstname'	name	36	STL ERG MAN
FIRSTSURNAME	'Firstname Surname'	name	36	STL ERG MAN
SURFIRSTNAME	'Surname Firstname'	name	36	STL ERG MAN
CLUB	Club/Country	clb	20	STL ERG MAN
CALL	Callsign	call	7	STL ERG MAN
CAT	Category	cat	7	STL ERG MAN
STNO	Start No	stnr	4	STL ERG
BIRTH	Birth year	birth	10	STL
START	Start time	time	8	STL
STARTDATE	Date & Start time	time	14	STL
RUNINFO	Current/finally run time of competitor	runT	10	ERG

FINISH	Finish time	time	8	ERG MAN
CARDNO	SI Chip No	SIno	7	STL
STAT	Status	stat	4	ERG MAN
PLACE	Place	pl	3	ERG MAN
RUNTIME	Runtime	time		ERG MAN
GAPTIME	Runtime residue in min:sec	time		ERG
GAPPERCENT	Runtime residue in percent	pts		ERG
FOXNO	Fox number	fox	2	ERG MAN
BONUS	Time bonus	pts		ERG
ORDER	Foxes searching order	name		ERG
RUNTR	Minimal running track	pts	4	ERG
FOXLIST	Fox list with fox numbers	order		STL
FOXLISTUSER	Fox list with user fox terms	order		STL
RLLPTS	RLL points (DARC)	pts	4	ERG
DIPLPTS	Diplom points (DARC)	pts	4	ERG
SRRAPTS	SRR-A-points (RUS)	pts	4	ERG
SRRBPTS	SRR-B-points (RUS)	pts	4	ERG

SRREVSK	EVSK class (RUS)	pts	4	ERG
GCPTS	GC-points (ROM)	pts	4	ERG
TOTRUNTIME	Total runtime (Team-R.)	runT		MAN
TOTFOXNO	Total fox number (Team-R.)	fox		MAN
GRP	Group	grp		STL ERG
STGRP	Start group	pts		STL ERG
SET	SET value	pts		STL
ORDER	Searching order	order		ERG
RUNTR	Run track length	pts		ERG
SPACES	Spaces for column layout	name		STL ERG MAN
Align key words				
LEFT	CENTER		RIGHT	

STL - Start lists, ERG - Single rating lists, MAN - Team lists

Example of Single rating list:

```
Place Name                      Club     Call    Run time  Fox    RLL
-----------------------------------------------------------------------
Category   W21
   1. Pomplun, Ingrid           N16     DL4YCR      83'47   5     600
   2. Kahmann, Kerstin                  SWL         38'19   1     120
```

With this entries in the INI file under **[UserListTXT]**

ERGcolTitle=Place//Name,

Firstname/Callsign/Club/Runtime/Fox/RLLpts
ERGcolData=PLACE/SPACES/FULLNAME/CALL/CLUB/RUNTIME/FOXNO/RLLPTS
ERGcolWidth=5 / 2 / 25 / 6 / 9 / 8 / 4 / 7
ERGcolAlign=RIGHT/LEFT/LEFT/LEFT/LEFT/RIGHT/RIGHT/RIGHT

produced the following result list:

```
Place  Name, Firstname          Callsign Club   Runtime Fox RLLpts
-------------------------------------------------------------------
Category  W21
   1.  Pomplun, Ingrid          DL4YCR   N16      83'47   5    600
   2.  Kahmann, Kerstin         SWL               38'19   1    120
```

Terms of Categories

The official categories defined by the IARU should be used:
W19, W21, W35, W45, W55, W65 (female)
M19, M21, M40, M50, M60, M70 (male)
W14, W16, M14, M16 (youngsters)

The following category names are also predefined:
WOM, W50, W60, JUN, SEN, OT, VET (older IARU rule)
aK!, kK! or " " (out of competition, no category rating)

For these categories special grafical icons are displayed in the tool bar.
If others are used, an icons with the first three (of max. 8) characters of category are displayed in the tool bar.

Helpers and organizers must have the category names **HLP,** or **ORG**.
The categories **aK!** (not competitive), **kK!** (no evaluation in categories) and **$$$** (Read in deposite competitors) are reserved.

A **Category alias name** of up to 24 characters can also be specified for each category. This must be entered manually in the TLN file. This then appears instead of the short name in the result lists (TXT, HTML, CSV).
Examples:

```
@FOX_LIST: "M21" 1 2 3 4 5
@FOX_LIST: "M21-80m" 1 2 3 4 5
@FOX_LIST: "M21":"Men of any age" 1 2 3 4 5
```

Country codes

In the name list FjwW is using the codes defined by the International Olympic committee (**IOC**).

They always consist of a three characters value (***Name list***):

ALB Albania	**AUS** Australia	**AUT** Austria
BLR Belarus	**BEL** Belgium	**BIH** Bosnia/Herzeg.
BUL Bulgaria	**CAN** Canada	**CGO** Congo
CHN China	**CRO** Croatia	**CZE** Czech Republic
DEN Denmark	**EST** Estonia	**FIN** Finnland
FRA France	**GBR** Great Britain	**GER** Germany
GRE Greece	**HUN** Hungary	**ISR** Israel
ITA Italy	**JPN** Japan	**KAZ** Kazakhstan
LAT Latvia	**LTU** Lithuania	**LUX** Luxembourg
MKD Macedonia	**MDA** Moldova	**MGL** Mongolia
MNE Montenegro	**NED** Netherlands	**NGR** Nigeria
PRK North Korea	**NOR** Norway	**OMA** Oman
POL Poland	**POR** Portugal	**ROU** Romania
RUS Russia	**SRB** Serbia	**SLO** Slovenia
SVK Slowakia	**ESP** Spain	**KOR** South Korea
SWE Sweden	**SUI** Switzerland	**THA** Thailand
TPE Chinese Taipei	**UKR** Ukraine	**UZB** Uzbekistan
USA United States of America		

Amateur radio associations operating in the countries ARDF-Sport:

AARA	Albania Albanian Amateur Radio Association	**ARABH**	Bosnia/Herzeg. Asocijacija Radioamatera Bosne i Hercegovine	**ARI**	Italy Associazione Radioamatori Italiani
ARRL	United States of America American Radio Relay League	**BFRA**	Bulgaria Bulgarian Federation of Radioamateurs	**BFRR**	Belarus Belarus Federation of Radioamateurs

					and Radiosportsmen
CTARL	Chinese Taipei	**CRC**	Czech Republic Czech Radio Club	**CRSA**	China Chinese Radio Sports Association
DARC	Germany Deutscher Amateur Radio Club	**EDR**	Denmark Experimenterende Danske Radioamatoerer	**ERAU**	Estonia Estonian Radio Amateurs Union
FRR	Romania Federația Română de Radioamatorism	**FRRM/ARM**	Moldova Asociata Radioamatorilor in Republica Moldova	**HRS**	Croatia Hrvatski Radioamaterski Savez
IARC	Israel Israel Amateur Radio Club	**JARL**	Japan Japanese Amateur Radio League	**KARL**	South Korea Korean Amateur Radio League
KFRR	Kazakhstan Kazakhstan Federation of Radiosports and Radioamateur	**LRAL**	Latvia Latvijas Radioamatieru Liga	**LRMD**	Lithuania Lietuvos Radijo Megeju Draugija
MARP	Montenegro Montenegrin Amateur Radio Pool	**MRASZ**	Hungary Hungarian Radio Amateur Society	**MRSF**	Mongolia Mongolian Radio Sport Federation
NGR	Nigeria Nigeria Amateur Radio Society	**NRRL**	Norway Norsk Radio Relæ Liga	**OEVSV**	Austria Österreichischer Versuchsender Verband
PZK	Poland Polski Związek Krótkofalowców	**RAAG**	Greece Radio Amateur Association Of Greece	**RAC**	Canada Radio Amateurs of Canada
RAST	Thailand Radio Amateur Society of Thailand	**REF**	France Réseau des Emetteurs Français	**REP**	Portugal Rede dos Emissores Portugueses
RL	Luxembourg Radioamateurs du Luxembourg	**ROARS**	Oman	**RSGB**	Great Britain Radio Society of Great Britain

RSM	Macedonia Радио Слободна Македонија	**SARA**	Slowakia Slovak Amateur Radio Association	**SRAL**	Finland Suomen Radioamatooriliitto Ry
SRR	Russia Союз радиолюбителей России	**SRS**	Serbia Savez Radio-Amatera Srbije	**SSA**	Sweden Foreningen Sveriges Sandareamatorer
TARL	Uzbekistan	**UARL**	Ukraine Ukrainian Amateur Radio League	**UBA**	Belgium Koninklijke Unie van de Belgische Zendamateurs
ARAC	Dem. Rep. Kongo	**URE**	Spain Union de Radioaficionados Espanoles	**USKA**	Switzerland Union Schweizerischer Kurzwellen-Amateure
VERON	Netherlands Vereniging voor Experimenteel Radio Onderzoek in Nederland	**WIA**	Australia Wireless Institute of Australia	**ZRS**	Slovenia Zveza Radioamaterjev Slovenije

File names and file extensions

When creating result lists FjwW makes a proposal for the names. They are build with the following rules:

- The name starts with the name of the TLN file **220415m2** (Example containing a date and the band of the competition):
- An appendix is added to the name depending on the type of result list created (***-erg, *-erg1, *-stl, *-lzl, *-srg, *-man, *-kpl, *-rll, *-pok, *-linki, *-???i**)
- The file extension is appended depending on the file type (***.tln, *.kor, *.dat, *.txt, *.htm, *.rtf, *.eda, *.csv, *.gif**)

File names with e.g. German vowel mutations and other special characters should be avoided.

Fixed names (hard coded):

FjwWdeu.chm **FjwWenu.chm** **~~FjwWfra.chm~~**	Help files
FjwW.ini	to be located in the same directory as FjwW
TLNfile~.bak	TLNfile = Name of the TLN file
~FjwW.log	or others like **~FjwW001.log**, **~FjwW002.log**, ... located in the directory, delivered by Windows or choosed by the user

Files created by the HTTP server within the directory (delivered by INI keyword **HTTPpath=** or choosed by th user)
~FjwW.tmp §FjwWhttp §FjwW*.gif

If FjwW crashes the related error logs are created within the irectory, delivered by Windows or choosed by the user
~FjwWcrash.txt ~FjwWcrash.dmp

Keywords in EDAD files

In the table below you will find a short description of the keywords used in EDAD files (V2.4).

The full list of all keywords can be found at the following link (in German):
www.dl7vdb.de/download/EDADv2.4.pdf

Using **EDADcheck** the descriptions can be displayed by using the following syntax:

EDADCHECK.exe /keyword.

00x-02x	General information	**3xx**	Additional time information
000	Type of competition	**301**	Finish time
001	Heading of competition	**302**	Start time
002	Date of competition	**311**	Timestamp at transmitter 1 (MOE)
003	Frequency	**312**	Timestamp at transmitter 2 (MOI)
004	Total count of transmitters (w/o finish)	**313**	Timestamp at transmitter 3 (MOS)
005	Total number of competitors	**314**	Timestamp at transmitter 4 (MOH)
008	First start time	**315**	Timestamp at transmitter 5 (MO5)
009	Max. runtime in minutes	**316**	Timestamp at transmitter 6
010	Finish closing time	**.....**	.....

012	First found fox results start time	**372**	Timestamp at transmitter 62
013	Last found fox results finish time		
020	Published in CQ/DL		
021	Published on page of CQ/DL		
023	Organizing club	**7xx**	FjwW data about competition
		700-707	Text about competition
		709	Version of FjwW
03x	Information about the organizer	**710**	(Start/Transmitters/Finish, x:y)
031	Name of the organizer	**711**	Indicator for light barrier usage
032	First name of the organizer	**712**	Start deviation
033	Call of the organizer	**713**	ID for finish
034	Club of the organizer	**714**	ID for finish beacon
		715	Finish limit time
05x	Information for the categories	**716**	FjwW options
050	To be set if categories are used	**717**	Fox Score list
	in this competition	**718**	List of SI reserve numbers
051	List of the categories	**719**	List of SI device numbers
052	List number of comp. in cat.	**720**	List of transmitters no KLW
053	List of min. running route in cat.	**721**	List of transmitters per category (Oder as in 051)
		.....	.....

10x-16x	Data of each competitor	**750**	List of transmitters per category
101	Name of competitor	**751**	Location names
102	First name	**761**	Alias name per category (Oder as in 051)
103	Club	**.....**	.....
104	Call sign	**790**	Alias name per category
106	Category		
107	Indicator for helpers and organizers	**8xx**	FjwW data for competitors
109	Year of birth	**800**	Start number
120	Number of found transmitters	**801**	Group
121	Runtime	**802**	SET
150	Status info	**803**	Status
160	SI chip number	**804**	Special
		805	Bonus(Credit)
09x	Special	**811**	Timestamp at transmitter 1 (not to search)
097	Validation for private data 7xx	**812**	Timestamp at transmitter 2 (not to search)
098	Validation for private data 8xx	**.....**	.....
099	EDAD version	**872**	Timestamp at transmitter 62 (not to search)
9xx	Administrative information		
999	CRC checksum		

Limitations for the program

For the total number of loaded competitions

Competitions loaded into memory	max. 32
Number of categories	max. 64 (including 30 ***predefined***)

For each competition

Number of competitors	max. 32767
Number of transmitters (incl. beacon)	max. 61
Number of categories	max. 32
Length of surname, firstname middlename	max. 36 characters (sum)
Length of birth string	max. 10 characters
Length of Call sign	max. 8 characters
Length of Category	max. 8 characters
Length of Category-Alias-Name	max. 24 characters
Length of Club	max. 20 characters
Length of Group	max. 4 characters
Length of Status	max. 4 characters
Range of starting numbers	1...99999

Demo-Version (without Lizenz Key)

Number of competitors	max. 20
Number of categories	max. 2
Many files are shown but not saved	

Abbreviations used in this help file and within the program FjwW

ANSI	**A**merican **N**ational **S**tandards **I**nstitute ... (ISO-8859)
aK!	Out of competition
ARDF	**A**mateur **R**adio **D**irection **F**inding
CAT	**CAT**egory
COM	Serial **COM**munication port
CSS	**C**ascading **S**tyle **S**heets (Format of HTML elements)
CSV	**C**omma**S**eparated**V**alue file format (data column within a CSV file are separated by a semicolon/tabulator)
DARC	**D**eutscher **A**mateur **R**adio **C**lub (German writing :-()
DAT	**DAT** file (used to store the backup data read from SI stations)
DNS	**D**id **N**ot **S**tart
DNF	**D**id **N**ot **F**inish
DSQ	**DSQ**ualified
EDAD	**E**lektronische **D**aten **A**ustausch **D**atei (Electronic data exchange file)
FCCD	**F**ox **C**lock **C**ontrol **D**evice (timekeeping devices of the DARC-Distrikt Berlin)
IARU-R1	**I**nternational **A**mateur **R**adio **U**nion **R**egion 1 (Europe&Africa)
INI	**INI** File to store settings
kK!	Category name for 'No evaluation in categories'
KOR	**KOR**rection file (German writing :-() contains the manually corrected data, raffled start times, downloaded timestamps and so on
LAN	**L**ocal **A**rea **N**etwork
LOG	**LOG**ging file (used to log activities and errors)
NOF	**No F**oxes (no founding foxes)
OVT	**OV**er**T**ime, limit time exceeded
PM	**P**eil**M**aster (of DARC)

SI	Company **S**port**I**dent, AES Arnstadt
SI-Config	**SI**-**Config**uration program (Download: www.sportident.com)
SPW	**SP**orting **W**ithdrawal
TIn	Competitor of a competition (German writing :-()
TLN	TLN File to store the data of the competition and competitors)
TTS	**T**ext **T**o **S**peech (Speech output)
UTF-8(16)	**U**nicode **T**ransformation **F**ormat (Coding every text character in 1-4 Byte)

Keywords

If FjwW working in the German language version, the German key words will be write to the files (TLN, CSV files, lists of names), in any language other as German the English key words will be used.
Regardless of language, the TLN files and Nameslists with German or English key words will be correctly read in. If these files are handled manually, German and English key words must not mixed.

TLN file (German keywords) ***look here***

@BEGIN	@WETTB_TITL	@BAND	@VERANSTALTER
@CALL_VERANST	@DOK_VERANST	@WETTB_TYP	@CQ_DL
@START_LOSEN	@DATUM	@ERSTER_START	@LETZTE_ZIELZEIT
@LIMITZEIT	@START_VERZ	@ZIEL_NR	@ZIEL_LS
@STZ_IN_DAT	@ZZ_IN_DAT	@SI_NR_LISTE	@SI-RES_NR_LISTE
@FOX_LISTE	@ZIELBAKE	@STANDORTE	@ZIEL_LIMITZEIT
@FOX_SCORE_LISTE	@PAUSE_BONUS	@ENDE	

GRP STNR KARTNR 'NAME, VORNAME' NAME VORNAME DOK CALL GEBURT STAT KAT START SET BEM

TLN file (English keywords)

@BEGIN	@CONTEST_TITL	@BAND	@PROMOTER
@CALL_PROMOTER	@CLUB_PROMOTER	@CONTEST_TYP	@PUBLICATION
@START_BALLOT	@DATE	@FIRST_START	@LAST_FINISH
@LIMIT	@START_DELAY	@FINISH_NO	@FINISH_LB
@STT_IN_DAT	@FT_IN_DAT	@SI_NO_LIST	@SI-RES_NO_LIST
@FOX_LIST	@FIN_BEACON	@POSITIONS	@FIN_LIMIT_TIME
@FOX_SCORE_LIST	@BREAK_BONUS	@END	

GRP STNO CARDNO 'NAME, FIRSTNAME' NAME FIRSTNAME CLUB CALL BIRTH STAT CAT START SET REM

The detailed description of keywords can be found ***here***.

CSV file for competitor supplement (German keywords)
STNR KAT NAME VORNAME CALL DOK GEBURT KARTNR SET START STAT GRP

CSV file for competitor supplement (English keywords)
STNO CAT NAME FIRSTNAME CALL CLUB BIRTH CARDNO SET

START STAT GRP

Namelist (German keywords) ***look here***
NAME VORNAME CALL DOK KAT KAT1 GEBURT STAT KARTNR BEM

Namelist (English keywords)
NAME FIRSTNAME CALL CLUB CAT CAT1 BIRTH STAT CARDNO REM

Key words for User-definied-result-lists look here
NAME FIRSTNAME FULLNAME FIRSTSURNAME SURFIRSTNAME CLUB CALL STAT CAT CAT3 GRP BIRTH STNO CARDNO SET PLACE RUNTIME GAPTIME GAPPERCENT START STARTDATE RUNINFO FINISH FOXNO FOXLIST FOXLISTUSER RLLPTS SRRAPTS SRRBPTS SRREVSK BONUS DIPLPTS GCPTS TOTRUNTIME TOTFOXNO ORDER RUNTR STGRP SPACES
for text alignment within column
LEFT CENTER RIGHT

CSV file individual ranking (German)
Dat;Kat;Kat3;KatAlias;Nam;Vorn;Clb;Cal;Geb;Bnd;Pl;Pl1;Laufz;Fz;StNr;Set;Start;Ziel;Bnd1;F1;F2:F3;F4;F5;...;Ba

CSV file individual ranking (English)
Dat;Cat;Cat3;CatAlias;Nam;Fnam;Clb;Cal;Birth;Grp;Bnd;Pl;Pl1;Runt;Fn;StNo;ChipNo;Set;Status;Start;Finish;Bnd1;Bonus;RLLpts;DiplPts;AptsSRR;BptsSRR;EVSK;GCpts;F1;F2:F3;F4;F5;...;B

CSV file individual ranking, long keys (German)
KAT;KAT3;NAME;VORNAME;DOK;CALL;GEBURT;BAND;PLATZ;PLATZ1;LAUFZEIT;FOX;STNR;SET;START;ZIEL;BND1;F1;F2;F3;F4;F5;...

CSV file individual ranking, long keys (English)
DATE;CAT;CAT3;NAME;FIRSTNAME;CLUB;CALL;BIRTH;GRP;BAND;PLACE;PLACE1;RUNTIME;FOX;STNO;CARDNO;SET;START;FINISH;BAND1;BONUS;RLLPTS;DIPLPTS;SRRAPTS;SRRBPTS;SRREVSK;GCPTS;F1;F2;F3;F4;F5;...;B

CSV file team ranking (German)
Kat;Pl;Pl1;Clb;GesLz;GesFz;Bnd1;Nam1;Vorn1;Cal1;Laufz1;Fz1;Nam2;Vorn2;Cal2;Laufz2;Fz2;...

CSV file team ranking (English)
Cat;Pl;Pl1;Clb;TotRun;TotFn;Bnd1;Nam1;Fnam1;Cal1;Runt1;Fn1;Nam2;Fnam2;Cal2;Runt2;Fn2;...

CSV file for cup ranking (German)
Kat;Kat3;Pl;Pl1;Nam;Vorn;Clb;Cal;Ges;GesFz;Laufz1;Fz1;SRRpkt1;Laufz2;Fz2;SRRpkt2;Laufz3;...

CSV file for cup ranking (English)
Cat;Cat3;Pl;Pl1;Nam;Fnam;Clb;Cal;TotRun;TotFn;Runt1;Fn1;SRRpts1;Runt2;Fn2;SRRpts2;Runt3;...

CSV file German RLL ranking (German)
Kat;Nam;Vorn;Clb;Cal;GesPkt;Pkt1;Pkt2;...

JSON file (English)
Competition data: CONTEST_TITLE SOURCE DATE FIRST_START BAND LIMIT COMPETITORS
For every competitor: STNO NAME CAT START FINISH FOX RUNTIME CARDNO

Key words for finish tickets with FjwLay (English/German) ***look here***
Dat;Cat;Nam;Fnam;Clb;Cal;Bnd;Runt;Fz;StNo;ChipNo;RunTr;Optm;FjwGIF
Dat;Kat;Nam;Vorn;Clb;Cal;Bnd;Laufz;Fn;StNr;KartNr;Lfstr;Optm;FjwGIF

Short cuts

Shortcuts are available in the dialogs and windows. By pressing **ALT+underlined character** the options or fields are directly accessible. Since Windows 2000 by default the underlined characters become visible after pressing the **ALT key**. This can be changed in the control panel settings.

After installation FjwW can be started easy by pressing **Ctrl+Alt+F**. Also the environment variable "PATH" will be extended by directory of installed FjwW, so FjwW can be started on command line easy with "FjwW.exe ..." (without leading path).

Other Shortcuts are available!

Usable within the activated windows of FjwW

F1	Help for FjwW or the present dialog
Shift+F1	Contextual help about the data field which has the focus
F5	Refresh the result list in the main window
Ctrl+F2	Competition data window to the top
Ctrl+F3	SI status window to the top
Ctrl+F4	Registration window to the top
Ctrl+F5	Edit window to the top
Ctrl+F6	HTML window to the top
Ctrl+F7	Modify the data of the marked competitor
Ctrl+T	Open finish timekeeping window for the activated competition
Ctrl+M	Open multi result list creation
Ctrl+Shift+1...9	Jump to competition 1...9 (if more than one is loaded!)

Ctrl+Cursor up	Jump to the next competition
Ctrl+Cursor down	Jump to the previous competition
Ctrl+1...9	Jump to category 1...9
Ctrl+Cursor right	Jump to the next category
Ctrl+Cursor left	Jump to the previous category

Usable within the main window

Ctrl+A	Display competitors not yet finished
Ctrl+B	Data backup of SI devices
Ctrl+C	Competitors which are in deposit
Ctrl+D	Read DAT file
Ctrl+E	Edit/Display file
Ctrl+F	Quick search for name, call, club, searching order, start number, chip number, birth year
Ctrl+G	Not eval in categories
Ctrl+H	Display helpers
Ctrl+I	SportIdent interface settings
Ctrl+K	Read KOR file
Ctrl+L	Display latest file (again)
Ctrl+N	Create a new competition
Ctrl+O	Read TLN file
Ctrl+P	Stations programming
Ctrl+R	Load latest TLN/EDA file as competition
Ctrl+S	Save TLN file
Ctrl+Shift+S	Save TLN file as
Ctrl+U	Result Display
Ctrl+V	DisplayPC clear, send again
Ctrl+W	Start signal

Ctrl+X	Speech output
Ctrl+Y	DCF/GPS Synchronization
Ctrl+Z	Display arrival list (those who have read out the SI chip)
Ctrl+Ins	Add competitor/helper
Ctrl+Del	Foxhunter/Helper move to deposit

Usable within the editor

Ctrl+A	Select All
Ctrl+C, Ctrl+Ins	Copy
Ctrl+F	Find
Ctrl+N	New file
Ctrl+O	Open file
Ctrl+P	Print
Ctrl+R	Replace
Ctrl+S	Save
Ctrl+Shift+S	Save as
Ctrl+V, Shift+Ins	Paste
Ctrl+X, Shift+Del	Cut
Ctrl+Z	Undo last action

F o x l i s t s

For each category a Fox list has to be created.
The foxes to be sought and evaluated by the participants of this category are to be listed in any order as numbers 1...62. At the same time this means that these foxes can be searched and registered in any order by the competitors.
A **Start alley** designation may precede the fox list. The designations A: to Z: are possible. Fox lists could look like this:

```
A: 1 2 3 4 5
B: 1 2   4 5
```

Or: A maximum **Scored fox count** can be prefixed to the fox list. Values â€‹â€‹from 1...255 can be used. This can be used when any fox can be searched for and stamped from a large number of foxes. However, only the number specified at the front will be counted.

```
6: 1 2 3 4 5 6 7 8 9 10
4: 1 3 5 7 9
```

By using the exclamation mark ! according to the fox numbers (so-called **'duty fox'**), an order of searching can be prescribed. But then the order of the listed fox numbers plays an essential role. If this order is not followed by the competitor, a red background marker appears in the main window in the column 'Sequence'. However, no automatic evaluation of a wrong order is made.

Start	Finish	Chip No	Sequence	Cat
10:16	10:40:31	7210455	S-2-1-3-5-1F-5F-3F-4F-B-F	M40
9:58	10:27:44	7621109	S-2-3-5-S!-1F-3F-5F-4F-B-F	M40

There is no rule for it. The operator can but by manual correction of the number of fox found the rating and make the resulting placement.

The following examples give an overview of the possibilities:

```
1   2   3   4   5  - any search order of all; default for ARDF
1   2   3!  4   5  - first F1,F2 in any search order; then F3; then F4,F5 in any
```

```
search order; default for SPRINT
1!  2   3   4   5  - first F1; then F2,F3,F4,F5 in any search order
1!  2   3   4   5! - first F1; then F2,F3,F4 in any search order; last F5
1!  2!  3!  4!  5! - only in search order F1,F2,F3,F4,F5
1!  2   3!  4   5! - only in search order F1,F2,F3,F4,F5
```

In China there is a special rating, if a **'false fox'** (set up but not switched on) that is not to be searched for is stamped anyway, then the number of foxes found is **reduced by one**. This fox is not part of the calculated optimal search order.
In the fox list this is indicated by a % after the fox number. Example:

```
1  2  3   4%  5  - Stamping Fuchs 4 leads to reduction
1  2  3!  5   4% - does not change the above order
```

Another symbol ^ means that this **'free fox'** marked in this way is not subject to any rule in a prescribed search order. These can also then simply be placed at the end of the fox list.

```
1  2^ 3   4! 5  6  7 - first F1; then F3; then F4; F5,F6,F7 in any order; F2 between
any foxes
1  2  3!  4  5  6^  7^ - first F1,F2; then F3; then F4,F5; F6,F7 between any foxes
```

End-user licence agreement

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The author is not responsible for harms of using the software. Using of the programs is on own risk. At this license agreement can only German law be used.

Handling of the license:
After the start of the program you can see at the field 'PCid' a unique sign sequence. Please send this PCid and for the licensing with SportIdent® chip the chip number to the author. Write the received licence-key into the edit field under this and click ***Accept***.

Activate extra at another PC 'SI-Chip Licence' and switch on the activated SportIdent® reading station at serial interface and follow hints at the text you can see.
Without entered valid licence-key the program starts only in a demo version in restricted functions.

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This program used an algorithm to investigate the optimal searching order of
Keld Helsgaun (keld@ruc.dk): An Effective Implementation of the Lin-Kernighan Traveling Salesman Heuristic
Department of Computer Science, Roskilde University, Roskilde/Denmark

The program 'psftp.exe' from (c)tartarus.org is used to send files securely and encrypted to an SFTP server.

® **SportIdent** is a registered product sign of the Angewandte Elektroniksysteme GmbH Arnstadt.
Windows, Word, Excel, Access, Wordpad is a registered product and company sign of the Microsoft Corporation.

Multiple use of SI chips in a competition

By activating the checkbox ***Multi SI-Card*** in the 'Competition data Windows' (Ctrl+F3) several competitors can be included in the competition, which use the same chip number, before or during the competition. In the case of a chip shortage, several competitors can successively complete the competition with a identical chip.

The following details must be observed when this function is activated:

1. Participants who want/should start with the same chip number can already be present or added to the competition at any time. Initially, these must not have any start times or chip numbers.
2. The start time is assigned **manually** to the first(next) starting competitor. The competitor begins the competition with the chip which is erased.
3. At the finish line, the **finish station must be punched**! The chip is then read out normally, only the competitor with the set start time and not yet available finish time is assigned the read data, if the time of transmitters and finish is after this start time. If the finish station has not been stamped, the finish time of the competitor must be entered manually.
4. If no start time and chip number has been set for this competitor during read-out of the chip, this must be done immediately thereafter, the data of the read chip are automatically fetched from the KOR file. The existing start and finish times are, so to speak, the completion of the use of the chip by this competitor.
5. A repeated readout of the chip shows it as an unknown chip in the SI status window (red oblique stripes).
6. The chip is to **erased** and can be used by the next competitor.
7. Go to item 2.

A chip can only be used successively by several competitors, that is, The start time of a next starting competitor must be later than the target time of a previous competitor. If, inadvertently, an early start

time is manually assigned to the next starting point, time data is already taken from the KOR file of the previous participant to the participant. This mistake can be corrected by **re-entering the correct later start time and deleting the fox/finish times** by activating the checkbox "(Start)/Fox/Finish time delete".

An on-chip start time is not read in any case, thus it is not possible for the competitors with the identical chip number to start with 'stamping the start station'. Possibly at point 4, the start time, which is then visible in the SI status or correction dialog, could be transmitted manually for the competitor.

Printing with background picture

****
* 14th ARDF-World-Championship Korea 6.9.08 80-m-Band *
****

Wettkampf: 6.09.2008 ab 9.00 Uhr
Band/Limit: 80-m-Band / 140 min
Teilnehmer: W19=31 W21=38 W35=20 W50=22 M19=38 M21=47 M40=46 M50=38 M60=38 AK-6 / =320 +Hal=323

Platz	Name	DOK	Call	Laufzeit	Fox	StNr
Kategorie W19						
1.	Oleksandra Parkhomenko	UKR	UT4UXD	73'32	5	419
2.	Zuzana Myslivečková	CZE		79'54	5	157
3.	Lydmila Pukalova	RUS		85'35	5	353
4.	Hana Wurzelová	CZE		87'31	5	158
5.	Olena Pitirimova	UKR	UT4UXH	87'46	5	420
6.	Šárka Jelinková	CZE		91'59	5	159
7.	Ekaterina Filippova	RUS		92'51	5	354
8.	Lucia Brezmanová	SVK		108'58	5	392
9.	Tijana Živko	CRO	9A1ACD	110'23	5	145
10.	Petra Levičar	SLO	S58APL	110'24	5	334
11.	Nina Radi	SLO	S57ORR	119'15	5	336
12.	Oxana Maximova	RUS		123'47	5	352
13.	Anita Žerjav	CRO		132'37	5	146
14.	Adrijana Moškon	SLO	S57ORA	133'04	5	335
15.	Malgorzata Stankiewicz	POL		134'25	5	331
16.	Sofya Urvantseva	KAZ		93'56	4	252
17.	Urszula Byrdy	POL		97'38	4	330
18.	Maamuu Enkhzaya	MGL		99'36	4	294
19.	Ria Stančíková	SVK		108'48	4	391
20.	Raissa Popova	KAZ		117'23	4	251
21.	Laura Dittrich	GER		124'46	4	197
22.	Akemi Kikuichi	JAP	JO1MMV	95'54	3	232
23.	Arisa Sato	JAP		118'48	3	234
24.	Kirara Fujita	JAP	JQ2MOB	119'23	3	233
25.	Vivian Fuhl	GER	DE2VVF	118'20	2	198
al.	Xu Jiayang	CHN		144'08	5	130
al.	Anna Pilarczyk	POL		149'56	4	329
al.	Alexandra Veroshko	KAZ		152'03	5	250
al.	Norday Santaga	MGL		193'07	3	295
al.	Lustar Bolortsetseg	MGL		211'31	3	293
-	Lin Xueyuan	CHN		not compl	0	129
Kategorie W21						
1.	Michaela Omová	CZE		70'21	5	161
2.	Veronika Králová	CZE		72'39	5	160
3.	Svetlana Godunova	RUS		76'13	5	357
4.	Olena Parsa	UKR	UT4UXH	76'38	5	421
5.	Svetlana Pukalova	RUS		78'50	5	356
6.	Tatiana Melnikova	RUS		85'42	5	355
7.	Yuliya Borovitina	KAZ		86'20	5	253
8.	Iuliia Petrenko	UKR	UT5UZQ	87'19	5	422
9.	Magdalena Dura	POL		88'06	5	333
10.	Ildikó Bihari	HUN		92'08	5	212
11.	Dóra László	HUN		92'43	5	213
12.	Lenka Novotná	CZE		93'29	5	162
13.	Feng Miaomiao	CHN		94'28	5	131
14.	Alžběta Šimečková	SVK		95'39	5	393
15.	Erika Hlaváčiková	SVK		97'18	5	385
16.	Maja Marušič	SLO	S58MJA	98'17	5	337

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* 14th ARDF-World-Championship Korea 6.9.08 80-m-Band *
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In the four corners or in the center of the page a graphic can be printed as a background. The size of the graphic can be set in five steps. The value of the transparency can be set continuously. Two examples demonstrate how the graphic is printed in the upper and lower right corners or centered on the page.

Structure of the name (-field)

In the TLN file and within FjwW the name(-s) of a competitor are always stored as '**Name, Firstname**' or as '**Firstname Name**', the number of the character of names including the separators is limited to 36 characters. In the lists, where the whole name is printed, the same representation is used.

If the name and the first name are needed separately the following rules are applied in order to 'separate" the name from the first name.

- If a comma exists the **Name** ends before the comma. The program assumes that the structure '**Name, Firstname**' was used. The name might include spaces, hyphen and underscore.
- If no comma is found the last part of the string represents the name. The program assumes that the structure '**Fistname Name**' was used. The name might contain hyphens and underscores BUT no space.
- Separators are the space and **;:*#§$%&=/|~"**. When reading the TLN file and after entering data in the KOR window the separators are automatically removed from the input string.
- Semicolon (**;**) and number sign (**#**) will be replace always by underscore (**_**).

Example:

Completely Name	**Name**	**First name**
Schade, Karl-Heinz	Schade	Karl-Heinz
Smith, Charles+Marie	Smith	Charles+Marie
Jens Stein	Stein	Jens
Maier Schulze, Bert	Maier Schulze	Bert
Gertrud Maria Poppel	Poppel	Gertrud Maria
Fritz Schulze-Boysen	Schulze-Boysen	Fritz
Sperling, K. Christian	Sperling	K. Christian

Saleh Al_Sulaimi	Al_Sulaimi	Saleh
Charly %W#ieand	W_ieand	Charly

Team balloting (RUS)

In Russia (SRR, Союз Радиолюбителей России) there is a special way of balloting the starting times. The participants of a team in each category should be started as far as possible. Obviously, it is intended to hinder or prevent possible cooperation between the team members. In each case a random participant of the teams form a starting block, the next block is formed with another random participant from the teams ***see***.
A team includes the participants who have the same name in the parameter club.

One after the other is done for each category:

- The order of the teams will ballote.
- From each team in the above order one participant is selected randomly, they form the first starting block.
- This is repeated for the next start blocks until all participants in the category are set one after the other.
  If the team does not have another participant not yet selected, the next team will be transferred.
- Participants will be assigned a start time with the first start time and interval selected in the dialog.

More details ***see***

The Ballot starting order concerning IARU-R1

The following excerpts from the current rules of the IARU-R1-ARDF-Working Group show conditions of balloting the starting order at World-/Region1-/EYAC competitions. They are implemented in FjwW.

ARDF RULES — Part B / 2015 — valid from January 1st, 2015
Pg4 17. Starting order
17.5 The starting order shall be drawn at random. The draw shall be made in three starting groups (early, middle, late).
17.6 Competitors from the same society and category may not start at the same time or consecutively. If they are drawn to start consecutively, the next competitor shall be inserted between them.
17.7 The competitors within one category start at equal start intervals. The normal start interval is 5 minutes.

MINUTES 37th Plenary Meeting of the IARU Region 1 ARDF Working Group held at the IARU Region 1 ARDF Championship, Mariánské Lázne, Czech Republic, August 18-21, 2015
9. ARDF Rules The chairman of the Sub-Group Rules presented a number of changes to the rules:
1. To delete Appendix 5 (start list preparation), including minor resulting changes to 17.3, S2, F17: This change drops the parallel start system, and it allows every competitor to be assigned to the desired starting group.

It is a prerequisite for balloting the starting order that every competitor in the parameter **SET** the number of start-third (1...3) or the start-fifth (1...5, EYAC) is assigned. Do not use the same numbers within the team of a category and country. A team includes max. 3 or 5 (EYAC) competitors.

Following settings have to made before the balloting:

- Max. Number of participants in each team (of a country and category), which are 3 in the World-/Region1- and 5 in EYAC-Competitions.
- With the two radio button on top, the distribution of the participants should be selected for each category. 'In the first start groups of only' is common, but does not meet the rule 17.7 !
- If the number of participants is in a category of the half of the largest category, the starting interval for this category can be doubled. Thus a more uniform distribution, in the case 'In the first start groups of only' reach through all groups and usually 17.7 justice.

Example of CSS-Layout file

The CSS-Layout is written between the lines **@BEGIN** and **@END**, this part will be inserted in head of HTML result file or stored as separate layout file (adjustable by ***Results|Options of Lists/CSS Layout***)

The text before **@BEGIN** is comment and will be displaying in dialog window, the text after **@END** remains unnoticed.

This is the CSS Layout **__STANDARD__**

```
Comment possible
@BEGIN
 body,.Trenn,.TrennL {background-color:#ffffe0; text-align:center;}
 table {border-collapse:collapse; border:outset 1px; margin-left:auto; margin-
right:auto;}
 td,th {padding:0 2pt 0 4pt; border:inset 1px;}
 pre   {text-align:left;}
 .TableH {border:outset 3px; background-color:#EAEAEA; font-size:90%;}
 .TableC {background-color:#EAF6EF; text-align:center;}
 .Head1  {font-weight:bold; color:white; background-color:#0000a0;}
 .Head3  {font-weight:bold; background-color:#c0c0c0;}
 .Title1 {font-family:monospace; text-align:center;}
 .Title2 {font-style:italic;}
 .Title3 {font-weight:bold; font-size:180%;}
 .Title4 {font-weight:bold; font-size:120%; color:blue;}
 .Foot   {text-decoration:underline;}
 .ResLine {font-weight:bold; color:#000040;}
 .GifBack {background-color:#80ff80;}
 .Link1,.Link2,.Head2 {font-size:75%;}
 .Mark1,b {color:blue; text-decoration:underline;}
 .Mark2  {background-color:#c0ffc0;}
 .Mark3  {background-color:#ffc0c0;}
 .TrennL {padding:5pt 0 5pt 0;}
 .Cy {background-color:#e0e0e0;}
 .name,.call,.tList {text-align:left;}
 .club,.fox,.birth,.cat {text-align:center;}
 .pl,.runT,.stno,.SIno,.time,.pts {text-align:right;}
@END
Comment possible
```

The Relay race

Der Staffellauf ist eine spezielle Form der Team-Wertung. Die Wertung erfolgt folgendermaßen:

Relay race

- All foxes found by the participants of a team (to be searched for according to the category fox list) are added together, but each fox only counts once, even if it was found by several participants. Each participant can search for one or more foxes, this is not controlled by FjwW (determined by the team participants themselves or the organizer).
- The running times (from start to finish) of all participants are added together.
- Within the category, the relay teams are placed based on the total number of foxes and running time achieved.
- If menu ***Results\|Team Rating\|Any Category*** is activated, the category of participants is no longer taken into account, only the same club name forms a relay team and the channels to be searched for are all in the fox list **kK!** for 'Not eval in categories'.

Any category

- The team participants can belong to any category.
- The participants have to search for the foxes according to their category fox list.
- As with the team ranking, the placement is based on the sum of the foxes found and the running time of the best participants (can be set in the menu ***Results\|Options of lists\|Single Contest\|Team rating-No of competitors***).

Relay race according to Chinese rules

Chinese Rules

- The three participants with the same Club name and Category form a relay team and their results are used for the team ranking
- If the teams have to look for a total of six foxes according to their category, each team participant will look for a maximum of two foxes; If there are nine in total, everyone is looking for a maximum of three foxes
- All participants stay at one starting point, separated into three team groups
- The participants in a team start one after the other in a self-determined order
- All team participants who start first start at the same time (mass start) and do **not punch !** the start station
- After a participant returns to the starting point, he stamps the finish station and informs the next starting team participant about the foxes he has found
- The next participant stamps a starting station and begins his fox search
- . . .
- The participants of third teams run to the finish after their fox search and punch the finish station

At the starting point there are one or more start and destination station(s), at the destination there is only one or more destination station(s).

How is it scored:

1. The Chinese rules also recognize 'false foxes' (normally structured transmitter locations, the transmitter is not switched on; marked with '%' in the FjwW fox list); If these are stamped, the number of foxes found is reduced by one
2. Only the first two or three stamped foxes (according to the category) are counted; if there are foxes that are not to be searched for, they are not counted
3. The team's number of foxes is calculated by adding the number of foxes of the participants, but reducing it by the number of foxes the team found multiple times
4. The placement of the teams in the categories is based on the total number of foxes ranked and the total running time of the team members

Which settings need to be made in FjwW:

- Menu ***Results*|*Team rating*|*Relay race*** activate
- Menu ***Results*|*Team rating*|*Without equal foxes*** activate (Realization of point 3. above)
- Menu ***Results*|*Options of lists*|*Single contest*|*Competitors per team*** Set =3 (default =3)
- Menu ***Results*|*Options of lists*|*Single contest*|*Rated best competitors*** Set =3 (default =2)
- Menu "File|Balloting start times" with 'Mass start' set the start time of the first teams for all participantsBR> The start times of the second and third teams will later be overwritten by the times from the start station

Codes

KORRcodes, which indicate which data of the competitor was manually modified:

b	starting time was balloted
s	starting time was manually modified
z	finish time was manually modified
f	number of transmitters (foxes) was manually modified
t	timestamp of a transmitter was manually modified
d	competitor was disqualified

Working with multiple result lists, [S]FTP upload

This function can be used after ***Results|Multi lists, [S]FTP*** to generate several/always the same current result lists/files. The directory used for this is shown in the dialog below, in which all files are saved. This is done once every time after clicking ***Start***.

The specified files can also be uploaded once/cyclically to an FTP or SFTP server via [S]FTP. To do this, the following four details must be entered: **Server Name**, **User**, **Remote directory**, **Password**. The four fields are defined by the INI keywords **`FTPserverName=`**, **`FTPuser=`**, **`FTPpassword=`**, **`FTPhostPath=`** and can be changed. The time for the cyclic upload can be set. With button ***Save INI*** changed entries are saved in the INI file. The password will be encrypted, only this cannot be written manually into the INI.

When uploading using the SFTP protocol, the files are transferred securely and encrypted to the SFTP server by calling **psftp32.exe** (program in the ARDF-FjwW directory). Before a first upload from FjwW, a connection to the SFTP server must be established with the psftp32 program so that the received **Fingerprint** or **Public key** of the server is accepted and stored on the local computer.

```
sftp32.exe servername -l user -pw password
```

Fingerprint confirm with y !

This is a prerequisite for a repeated upload to the SFTP server with FjwW. As long as the upload is working, the running program **psftp32.exe** is shown in the taskbar.

The two FTP upload options mean:

- With ***Auto-Refresh in HTML***, a ' tag' is inserted into the HTML files, which results in an automatic refresh of this page in the clients (Internet browsers) after the specified time
- With ***Auto-Scroll in HTML*** causes slow scrolling of the page in the clients (Internet browsers)

If an error occurs during the FTP upload, an FTP error is displayed in the status bar on the right in the main window. The dialog can be opened again for further information.

Please note ! After the files have been created in the specified directory, **all** files in this directory (including other types of files existing there) will be uploaded to the [S]FTP server and, once a file has been successfully uploaded, this file will be deleted immediately !!!. This can also be understood as error-free uploading.

Working with multiple instances of FjwW

Up to 32 competitions can be loaded in FjwW, e.g. to generate a cup rating from several competitions.

For example, two or more competitions can be loaded that will take place one after the other, overlapping or in parallel. It is the principle in FjwW that when reading out the participants' chips, the read time stamps are written in **all** KOR files of the loaded competitions **with the current date**. If the competitions are separated by the set competition start and end times, the scoring of the competitions hardly causes any problems.

If the competitions run more or less simultaneously, the read time stamps can also have an impact on another loaded competition, which the operator often does not notice very quickly. Here is the help from working with multiple instances (running FjwW programs). To do this, after starting FjwW for the first time (1st instance), the ***Extras|Several FjwW instances*** menu is called up. Each restart of FjwW or e.g. loading a competition by double-clicking on a TLN file creates another instance (running FjwW program). The started instances are completely separated from each other in Windows, the problem described can no longer occur.

It should be noted, however, that resources in the instance can no longer be shared:

- Each instance must have its own SI reading station if the chips of participants in a running competition are to be read
- Each instance needs its own temporary directory that can hold the various LOG/TLN/FTP/HTTP files that don't interfere with other instances
- Each instance needs its own port address for the HTTP server. This can be set in the INI file with the keyword **HTTPport=** (e.g. 8080, standard 80). Each instance requires its own port addresses for UDP sending to the DisplayPCs. This can be set

in the INI file with the keyword **UDPport=** (e.g. 23456, standard 12345).
For the settings to take effect, a separate INI file must be created when starting the FjwW instance with the command line option **/i** (e.g. "FjwW.exe /i c:\temp\ini2.txt ") be handed over.

Mit dem **Ranglistensystem** sollen die besten deutschen Amateurfunkpeiler in jeder Kategorie ermittelt werden. Die Ergebnisse bilden die Grundlage bei der Auswahl von Teilnehmern aus Deutschland für internationale ARDF-Wettbewerbe.

Dazu werden die Deutsche ARDF-Meisterschaft und weitere ausgewählte Wettbewerbe herangezogen, die nach IARU-/DARC-Regeln ausgerichtet werden müssen.

- Der beste Läufer mit den meisten Sendern und der kürzesten Laufzeit erhält 100 Punkte pro gefundenem Sender. Jeder danach platzierte Läufer mit gleicher Senderzahl erhält 100 Punkte, abzüglich der prozentual mehr gebrauchten Laufzeit.
- Der erste Läufer mit einem Sendern weniger erhält die Punktzahl des vor ihm Platzierten, abzüglich der ggf. mehr gebrauchten Laufzeit. Bei den weiteren Läufern wird wie oben verfahren.
- Die Gesamtpunktzahl des Läufers ergibt sich aus den oben ermittelten Punkten, multipliziert mit der Zahl der vom Läufer gefundenen Sender.
- Läufer, die die Limitzeit überschreiten oder keinen Sender (ausschließlich Zielbake) gefunden haben, bekommen keine Punkte. Läufer mit mehr als der doppelten Laufzeit des Siegers erhalten keine Punkte.
- Es wird jede Kategorie getrennt gewertet.
- **Seit 2010:** Unabhängig der zu suchenden Senderzahl bei den verschiedenen Wettkämpfen (z.B. Foxoring mit deutlich höherer Senderzahl) wird in allen Kategorien die Punktzahl des Erstplatzierten auf 600 Punkte und der folgenden Platzierten entsprechend in jedem Wettkampf hoch- oder herunter-gerechnet.
- **Nicht mehr seit 2013:** ~~In jedem Frequenzband muss mehr als ein Wettkampf absolviert werden, damit die erreichten Punkte zur Gesamtpunktzahl addiert werden~~
- **Seit 2013:** Teilnehmer, die als Ausrichter eines RLL-Wettbewerbs tätig sind, können Ausrichterpunkte als Ausgleich für die entgangenen Teilnehmerpunkte erhalten, siehe weiter unten (***).
- **Seit 2018:** Es wird nicht mehr zwischen dem 80- und 2-m-Band unterschieden. Wenn alle Wettbewerbe absolviert sind, werden drei Wettbewerbe mit den kleinsten Punktzahlen gestrichen, also nicht zur Gesamtpunktzahl addiert.

Beispiel: RLL-Punkte in einem Wettbewerb

Platz	Teilnehmer	Laufzeit /min	Punkte	Sender	Gesamt
1.	Runner1	60:00	100	5	500
2.	Runner2	75:00	75	5	375

3.	Runner3	90:00	50	5	250
4.	Runner4	80:00	50	4	200
5.	Runner5	120:00	0	4	0

Beispiel: RLL-Punkte über 2*4 gewerteten Wettbewerbe

Platz	Teilnehmer	2-m-Band					80-m-Band					Gesamt
		#1	#2	#3	#4	Punkte	#1	#2	#3	#4	Punkte	
1.	Runner1	500	400	500	200*	1400	500	300	100*	500	1300	2700
2.	Runner2	-	500	300	400	1200	400	400	300	200*	1100	2300
.??.	Runner3	0	-	200	-	200	-	-	200*	-	0	200

(-) nicht teilgenommen, (*) Streichergebniss, (") Punkte nur aus einem Wettbewerb

(***) Wenn Teilnehmer **Ausrichterpunkte** für ihrer Tätigkeit für den entsprechenden Wettbewerb erhalten sollen, ist folgendermaßen vorzugehen:

- Der Teilnehmer ist 'außer Konkurenz' zu setzen, ihm also die Kategorie **aK!** zu geben
- Der Teilnehmer ist im Statusfeld auf **AP** zu setzen

Zur Berechnung der Ausrichterpunkte werden die zwei besten Punktzahlen von aktiver Teilnahme bei Ranglisten-Wettbewerben addiert und halbiert den Wettbewerben mit Helfer Funktion zugeordnet.

Hinweis: Da die Teilnehmer, die Ausrichterpunkte erhalten sollen, auch als Helfer erfasst werden (für Erhalt von Fj-Diplompunkten) müssen sie hier mit leicht verändertem Namen erfasst werden (gleiche Namen für Teilnehmer und Helfer sind nicht möglich). Ein Vorschlag wäre aus 'Name, Vorname' z.B: 'Name_, Vorname' zu machen.

Wenn das Ergebnis einzelner Teilnehmer oder ganzer Kategorien eines Wettbewerbs gestrichen werden sollen, also keine RLL-Punkte bekommen und auch nicht als Streichergebnisse zählen sollen, ist das Statusfeld jedes dieser Teilnehmer mit einem Prozentzeichen **%** zu ergänzen.