



ALPINE OFFICIALS' MANUAL

CHAPTER XII

COMPUTERS AND SKI RACING

2018-2019

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OVERVIEW

Neither this Chapter, nor any of the others in the Alpine Officials' Manual, can possibly provide solutions for all the challenges that may occur at a ski race; it is only an attempt to make the same information available to all Alpine Officials. As you use the Manual, please send suggestions for improvement to the current Chairperson of the Alpine Officials' Education Working Group at aoewgchair@gmail.com.

COMPUTERS IN SKI RACING

This Chapter is organized in such a way that it should be easy to understand. Hopefully it will be as understandable for the novice computer users as well as for those with years of experience. It is important that this Chapter be used in conjunction with RACE ADMINISTRATION STUDY GUIDE Sections 1 and 2, and the documents listed in Chapter VI - Working Papers. Questions regarding standard/required documentation are answered in those presentations.

With almost total dependency on computers, there are some important items that must be given consideration. First and most important is the necessity for the Race Administrator to be fully knowledgeable in the preparation of race documents so that, if necessary, the documents can be prepared manually until they can be computer generated in the correct format(s) as prescribed by U.S. Ski & Snowboard and FIS; this affords the opportunity to continue and even complete a race. Second is the necessity to completely understand and accept the fact that all data that is keyed into a computer must be checked and rechecked for accuracy.

Computers can only do so much. One of the most common complaints is that the software has "frozen" and cannot complete a request. This problem is generally caused by a lack of available memory and may usually be solved by closing other software applications and/or windows that are open at the time the problem occurred.

At some upper-level races, professional race management teams perform all data processing functions, but it is a good idea not to take these individuals for granted as anyone can make mistakes. Even with a professional data management team in charge of data input, the Technical Delegate, the Race Administrator and the Chief of Timing and Calculations must verify all data prior to the duplication and distribution of any document because these officials are primarily responsible for the accuracy of the official documentation of an event.

RACE PROGRAM SOFTWARE SPECIFICATIONS

There are two issues that must be addressed well in advance of your first event:

1. Is your computer's operating system compatible with the scoring software either currently being used or being considered?
2. Is your computer's version of Windows supported by the scoring software either currently being used or being considered?

If the answer to either of these issues is negative, it is time for a change.

Basic computer skills are essential for a successful event. Being able to transfer files to and from your computer using external storage devices or email, understanding file-naming conventions, being able to determine what type of file you will use based on its extension (what comes after the dot (.)), are a basic requirement for creating a stress-free event.

Programs that have been tested to meet all current U.S. Ski & Snowboard and FIS result format requirements are currently available for download on the U.S. Ski & Snowboard website at usskiandsnowboard.org. When deciding on software, consider the following points:

1. Will you be using MAC or Windows?
2. Does the software produce the required matrix (XML) for electronic transmission to U.S. Ski & Snowboard and FIS? Does the software allow you to produce multiple formats (for example, U.S. Ski & Snowboard and FIS) from a single database? This is important as it saves data input time.
3. Does the software meet the requirements for all levels/types of events being staged by your club?
4. Does the software allow for easy access to both U.S. Ski & Snowboard National and FIS Points Lists to allow for accurate entry of competitor information?
5. Does the software allow the selection of the number of competitors needed for reversal on the Second Run Start List?
6. Does the software allow the selection of the number that will qualify for the Second Run?
7. Does the software allow competitors who are DNS, DNF or DSQ in the First Run to start in the Second Run?
8. Does the software deal correctly with ties for the last position of the reversed group? The last position of a qualifying group? In the rest of the field? In the Penalty?
9. Does the software allow you to edit Factors (F values)?
10. Does the software allow you to edit U.S. Ski & Snowboard/FIS maximum values?
11. Does the software allow you to edit race level Adders for FIS races?
12. Does the software allow for missing bibs?
13. Can you easily edit data for the header? For competitors? For competitor's points?
14. How easy is it to change from one function to another within the software?
15. Does the software allow manual input of the start order?
16. Will the software allow you to enter bib numbers that are different from the printed order of start for the First Run Start List (as in lower level races or when bibs are not re-issued for the second day of races)?
17. Does the software offer a variety of ways to sort and print competitors for different needs, e.g.: alphabetically, by points, by class, etc.?
18. Does the software allow easy insertion/deletion of competitors?

19. Does the software allow each run to be a separate race?
20. Does the software print alpha listing of competitors? By Team/Club/Nation list? By Points?
21. Can the software automatically create a random start order?
22. If required, can seed cards be printed from the software?
23. Will the software correctly calculate U.S. Ski & Snowboard National and FIS Penalties?
24. Does the software allow you to override a calculated race penalty?
25. Is Technical Support readily available? Is there a charge? Is there a toll-free number?

Producing results in XML format is a basic requirement for race result processing software for both U.S. Ski & Snowboard and FIS events. Results for scored events not submitted to FIS and U.S. Ski & Snowboard in this format will not be posted or scored until the format is correct.

Results for U.S. Ski & Snowboard non-scored events may also be posted on the U.S. Ski & Snowboard website. In order for this to happen, multi-category events sanctioned and administered as an event for each involved category, e.g. Ladies' and Men's U10, U12 and U14, must have separate results and U.S. Ski & Snowboard-assigned race codes for each gender and each category: Scored, Non-Scored and Masters. **Youth events that consist of two one-run races must have separate results and separate U.S. Ski & Snowboard-assigned race codes for each of the one-run races.**

U.S. Ski & Snowboard and FIS procedural advances require that officials have a basic degree of computer competency, but let's face it: some of us grew up with computers and some of us didn't! If you are a member of the latter group (and those numbers are rapidly decreasing), check with local computer companies or Community Colleges regarding the availability of introductory computer classes.

BEFORE THE RACE

Personal organizational skills and knowledge of the race result software being used, as well as the operation of the computer being used are very important to the success of the race. As in other areas of ski race organization, no amount of race day work can replace pre-race preparation. Prior to the race – not race day – is the time to sharpen organizational skills and review or learn how to use your race result software. It is beneficial to create a “test race” and evaluate your race result software by running through possible race situations. The “Race Administrator Study Guide – Section 1. Race Result Software” posted on the U.S. Ski & Snowboard website has documents that may, after loading applicable points lists and entering a field of competitors, be used to evaluate race result software.

A new season requires updated software, current Points Lists and clean directories. Saving previous season's software versions, Points Lists and race files is a good way to slow down an older computer and create problems. Uninstall previous season's software or overwrite with a current version, clear software dropdown caches delete old Points Lists and transfer previous seasons' race files to a storage unit where they may be accessed as needed, and you'll notice improved computer response.



COMPUTER INPUT INFORMATION

A Race Code: _____ FIS Codex: _____
 Race Name: _____ Race Site: _____
 Race Date: _____ Gender: M / F Event: DH/SL/GS/SG/AC/K/SQ/P
 Training Dates: #1 _____ #2 _____ #3 _____
 Training Times: #1 _____ #2 _____ #3 _____

RACE OFFICIALS	TECHNICAL DATA
TD: _____ USSA/FIS TD #: _____ Referee: _____ USSA #: _____ Asst. Referee: _____ USSA #: _____ Chief of Race: _____ USSA #: _____ Chief of Course: _____ USSA #: _____ Start Referee: _____ USSA #: _____ Finish Referee: _____ USSA #: _____	Name of Course: _____ Start: _____ m Finish: _____ m Vertical Drop: _____ m Measured Length of Course: (DH & SG Only) _____ m Homologation #: _____ _____
1 st Run	2 nd Run
Course Setter: _____ Forerunners: A: _____ B: _____ C: _____ D: _____ Number of Gates/Turns: _____ Start Time: _____ Weather: _____ Snow: _____ Temp Start: _____ Temp Finish: _____ Timing: _____	Course Setter: _____ Forerunners: A: _____ B: _____ C: _____ D: _____ Number of Gates/Turns: _____ Start Time: _____ Data Processing: _____

ENTERING HEADER DATA

The "header" is composed of information such as the names of Jury members, Course Setters, racecourse name, racecourse technical data, gate counts. The previous form is a suggested format to assist in gathering this information. *Current software(s) list Forerunners in a separate area above the "footer" on the last page of respective documents.*

Header information must be verified against the original source: Course name and homologation number against the original homologation file – not an old race result, start and finish elevations against the Technical Delegate's verification of information found in the homologation file - not an old race result; U.S. Ski & Snowboard Jury-member, Jury Advisor and Course Setter names against the current Alpine Officials' Roster; and race name, race location, U.S. Ski & Snowboard race code, race date and event type against the event information posted on the U.S. Ski & Snowboard website. *FIS race name, race location, FIS codex, race date and event type data must be verified on the FIS website.*

NOTE: Current Alpine Officials are included in a separate file (NLO) in the U.S. Ski & Snowboard National Points List download. When using software currently approved by U.S. Ski & Snowboard, data for these officials may be accessed by keying in the Official's last name. The Officials List only contains member names and membership numbers, and the software assigns "USA" as the default nation. Many foreign officials have obtained U.S. Ski & Snowboard "X" (foreign) memberships, and the "USA" default may have to be manually edited with a verified national affiliation for these officials. *This does not apply to coaches who are considered "U.S. Ski & Snowboard staff members".*

NOTE: Do not use an ampersand when keying in the race title; XML format does not recognize "&" as well as other keyboard characters. A title with "&" will have to be keyed as "and". *Our federation name: U.S. Ski & Snowboard does include an ampersand; however, since this portion of the file is not included in the XML transmission file it is allowed.*

ENTERING COMPETITOR DATA

U.S. Ski & Snowboard has initiated an online race registration system. Some organizers are using independent online registration systems for their events. Online registration is an acceptable entry format; however, if online race registration is used for a FIS event, the "FIS Entry Form" must still be submitted. If the online race registration process produces an actual race file that may be downloaded directly into your race result software, the accuracy of the downloaded data must still be verified against the appropriate source: U.S. Ski & Snowboard for U.S. Ski & Snowboard National events and FIS for FIS events

Many Race Administrators prefer to receive a Team Entry Form; FIS competitors' entries require a FIS Entry Form. Both forms are available in the "Master Packet of Forms" (MPF) available on the U.S. Ski & Snowboard website.

U.S. Ski & Snowboard National Points Lists/Officials' Roster and FIS Points Lists that have been formatted for race result software may be downloaded from the U.S. Ski & Snowboard website either onto an external storage device, a designated location on your computer or directly into the race result software. *A compatible race program and a hard drive with sufficient storage is required in order to operate these features.*

NOTE: If a Points List needs to be reloaded, all previous versions may need to be deleted. Otherwise, the download process may simply verify that the list is already loaded on the computer and go no further. Software may also store copies of Points Lists in more than one

location and using the “search” function may be necessary in order to identify their location so that they may be deleted.

NOTE: *The FIS Points List available on the FIS websites is not formatted for downloading into race result software. Downloading this version into your software will result in loss of the link between a competitor’s U.S. Ski & Snowboard National data and their FIS data.*

The ability to download U.S. Ski & Snowboard National and FIS Points Lists directly into the Race Result Software has made accurate keying of competitors’ information - FIS/U.S. Ski & Snowboard code numbers and Points, competitor’s year of birth, class, etc. - a relatively easy operation. However, it is important that information for FIS events be carefully verified against the original data source - the current FIS Points Lists List posted on the FIS websites. *U.S. Ski & Snowboard race codes may be verified on the U.S. Ski & Snowboard website; FIS codex numbers must be verified on the FIS website.*

When retrieving data, programs will not "pull-up" needed information if the name entered has a different spelling from that on the points list, so it may be easier to "pull-up" the information by U.S. Ski & Snowboard or FIS code number. “Pulling-up” a competitor with U.S. Ski & Snowboard or FIS code number also helps ensure that the correct competitor is selected.

U.S. Ski & Snowboard database only capitalizes the first character of a competitor’s last name but FIS database capitalizes the entire last name. If your List of Competitors has different formats for competitors’ last names, it is usually caused by the software having to search the U.S. Ski & Snowboard List for a competitor’s name, etc. *This is usually only encountered for U.S. Ski & Snowboard members with new FIS inscriptions; please edit your race database as required by the type of race.*

NOTE: In some cases, athletes with “X” (foreign) memberships may either be listed with a “USA” national affiliation or the affiliation may remain blank. Verification and manual database correction should not only be done for accuracy, it should be done out of respect for an athlete’s nationality.

All of the event software programs approved by U.S. Ski & Snowboard enable the retrieval of all data for each competitor in one continuous operation. From the file you create, it should be easy to create additional race files for each day’s race(s) regardless of the event. When creating new files, enter and verify accuracy of required U.S. Ski & Snowboard race code information, e.g. event, date, U.S. Ski & Snowboard race code, FIS codex number, etc.

Information in the TEAM or NATION field, e.g. USA, CAN, AUT, etc., is intended to display an athlete’s national federation affiliation. The CLUB field is used to designate a competitor’s declared club membership. This CLUB field will need to be edited or - if your software allows it - a new field will have to be created, if information other than a member’s club is required; e.g. quota or college/university affiliation (required for FIS-U events).

CREATING A “COMPETITION DATABASE”

For a race series, e.g.: Regional Championships, where most of the competitors are entered in more than one event, the following procedure is recommended:

1. Create a “Competition Database”

2. Name it something that has meaning to you. Ex. "Snow Basin Spring Series" not F1234_Registration. If you have to find the file, you want to be able to find it quickly.
3. Enter ALL competitors and include quota designation, when applicable (When 2, or more competitors, have the same last name and first initial, search with a competitor's U.S. Ski & Snowboard/FIS code to eliminate the possibility of selecting the wrong competitor.)
4. Print List of Competitors with "Points in All Events"
5. Proofread all information and make necessary corrections
6. Create event, e.g.: Slalom, from this "Competition Database"
7. Delete competitors not competing in the Slalom
8. For each succeeding event, repeat steps 6 and 7. In the long run, this will save time and the "Competition Database" file may be transferred from one venue to another!
9. Update "Competition Database" as needed to include new competitors

NOTE: U.S. Ski & Snowboard allows exceptional athletes to ski up in class. If a ski up athlete is entered into your event, the athlete's class must be manually edited to agree with the class in which they are actually competing. *Some Divisions may allow an athlete to "ski down" in class; if allowed, the athlete's class must be manually edited to agree with the class in which they are actually competing.*

Once all competitor data has been input in the Competition Database, print an alphabetical list of competitors and use it to verify entered data against either online or downloaded copies of the applicable points list and/or membership roster. (If you have created a multiple-event database, printing a list with points in all events allows you to verify all competitor data in one operation.)

FIS competitors' data may be verified against the FIS List posted on the FIS websites. If there is a difference in a competitor's name between FIS and U.S. Ski & Snowboard databases, use the name exactly as it appears on the appropriate list for your event - U.S. Ski & Snowboard or FIS. First, however, double-check the competitor's code number to make sure you have the correct competitor.

NOTE: It is extremely important that you "save" data often and backup race files to an external source after every major change, e.g. final editing of data, preparation of 1st Run Start List, entry of 1st Run times, etc. Creating systematic backups of your file may eliminate major issues in the event of a system crash with resultant data loss. Depending on your race result software's ability to create an automatic backup for you will work – but only if the computer is still functioning.

COMPETITOR LISTS

Once all competitor/header data has been keyed into the computer and verified against the original sources, it is useful to print the following competitor lists: List of Competitor by Seed Points which is used to check the Seed Board at the Team Captains' meeting; List of Competitors by Nation/Club, which may be used to help Team Captains' verify their entries; and a corrected copy of the alphabetical listing which may also be used to help verify competitors' entries.

START LISTS

The competitors' start order is determined and approved at the Team Captains' Meeting. [See Chapter V - The Secretariat, for an explanation of the Team Captains' Meeting and the Draw.] Also, additional header information - Forerunners, Course Setters and scheduled start times may be available at the Team Captains' Meeting for entry into the computer. This is also the time when any additions, deletions, or corrections to the competitors' database should be made. These changes and header data changes or additions should be completed prior to the assignment of start/bib numbers.

The Jury may allow a computer-generated draw for all U.S. Ski & Snowboard-scored and regional FIS events; a signed (submitted) entry form is considered acceptance of a computer-generated Draw at a FIS event. *(It is important to remember that computer-generated Draws are governed by a random identifier and unless this identifier is changed prior to each Draw, results of a Draw with the same competitors will only have minimal changes.)*

Some programs allow for a "random" sort function while others require that you do it manually. The Race Administrator must understand that any special instructions regarding the start order, such as for adaptive competitors ("Golden Rule" – U.S. Ski & Snowboard Alpine Competition Guide), collegiate competitions or Continental Cup (Nor-Am) seeding. If a separate individual is managing the event documents, the Race Administrator must verify these instructions have been communicated and that this person understands and abides by them.

ASSIGNING BIB NUMBERS

Because of incomplete sets of competitor bibs, it may be necessary to allow for missing bib numbers. After the Draw is completed and each competitor is in their proper start order, it is usually easy to assign bib numbers and allow for these gaps. However, the night of the Team Captains' Meeting is not the time to experiment with the procedure; this is something that should have been tested in advance. In the case of missing bib numbers, the First Run **BIB** number will not be the same as the First Run **Start** number (offset is created). This is the situation where the software **must** allow the printing of Official Results with "bib number" instead of "start number" so that there is agreement with Reports by the Referee, which list competitors' bib numbers.

If the Jury allows a competitor to be inserted in the field after the Start List has been prepared, assign an out-of-sequence bib number and the correct start number and then reassign start numbers for all subsequent competitors. As with the missing bib(s) situation, this will also create an offset from bib number to start number. Assigning a numeric plus an alpha character start number (e.g. 15A) for an insertion following the fifteenth racer may result in unexpected and possibly wrong outcomes. The start number is used for sorting and since an Alpha character is not a number, it will always be treated as a zero. (Geoff Elder, Split Second)

SNOW SEED

In Downhill, Super G and Giant Slalom, the Jury may require that a "Snow Seed" be drawn. If your chosen software cannot indicate which competitors have been drawn for the snow seed, it is easily accomplished by editing your Start List either in a print preview screen or by using a pen and marking an asterisk (*) before the designated competitors' names on the paper copy BEFORE duplicating your First Run Start List.

NOTE: If your software automatically assigns an asterisk (*) to those selected for the Snow Seed, it is strongly suggested that the asterisks be removed from the race file if the Jury decides

that the Snow Seed will not start. If the Snow Seed does start, and if time allows it, the asterisk may be removed immediately after they start.

Software may allow preparation of a “Condensed Start List” which eliminates the “Header”. A “Condensed Start List” is useful for individuals who only want to view the actual start order. It is not recommended for distribution to Team Captains and officials who need to be able to identify members of the Jury or who require knowledge of an event’s technical data. The layout of this type of Start List may also lead to confusion regarding bib number versus start number and Gate Judges must be educated accordingly. Limiting the amount of displayed data may help eliminate confusion, e.g. only display Start # / Bib # / Name.

COMPUTER LOCATION

It is important to give careful consideration ahead of time as to where the computer will be located on race day. Primary importance is a location where distraction either to computer operator and other officials is minimal. If need to relocate your computer (e.g. to and from the timing building), care must be used in its transport. Using a snowmobile may cause problems not only because of the rough ride and the cold temperatures, which may cause physical damage to hard drives, but also because of the magnetic field generated by the snowmobile's engine, which may and has been known to erase or scramble the data on the hard drive. Proximity to drills and radios carried by race personnel may also cause loss of data

Other questions that should be answered in advance of race day are the availability of power for the computer and also, whether or not there is a copy machine available. Electronic timing equipment may only be linked to the computer if it can be shown that the timing system will still function when disconnected from the computer. If the timing equipment is not linked to the computer, and the computer is not located in the timing building, arrangements will have to be made so that the competitors' times are made available for input. This may be accomplished by transferring either the “race file” or the “timing file” from the result computer to the timing system and then back to the result computer at the end of each run/event. When deciding on how to transfer a file, the following items should be considered:

1. Transferring the “race file” overrides the file on the computer to which it is being transferred and will overwrite any edits/corrections that have been made during the run/event.
2. Transferring the “timing file” involves transfer of only selected data: Name, Bib #, Club, etc. This eliminates overwriting of edits/corrections to the original race file (header, officials, etc.) that were made during the course of the day.

NOTE: Although current operating systems safeguard against the problem, it is a good idea to use the “safely remove” function if using a memory stick (thumb drive) to transfer race files. In some cases, failure to do so may result in the loss of data.

Regardless of the computer's location and the data input system used, competitors' times must be carefully checked for accuracy against the timing tapes from the homologated primary timer. When the official printing timer allows manual input or correction of a time, some type of indication – asterisk – concerning any effected change must be printed on the timing tapes. If the timing equipment does not record the information, it is suggested that the electronic clock operator mark the tape when a “DNF” or “DNS” is assigned. When a competitor’s primary electronic time is not valid or if both primary and secondary electronic timing systems fail and no electronic times are available for a competitor, a replacement time must be calculated, this falls under the category of correction of a time, and it must be so indicated.

DURING THE RACE

Since the decision as to the location of the computer was made ahead of time it will be possible to test its operation prior to the start of the race. This should be done well in advance of the race day and not the morning of the first day of competition. It is important to remember that the Race Administrator and the Chief of Timing and Calculations are responsible for the accuracy of official documents. Trust in each other's judgments/decisions and a cooperative manner on the part of all officials contributes to a more pleasant environment and fewer errors.

Certain information, e.g.: actual start time of the race; measured length of the racecourse (length measured from gate to gate along the racing line) for Downhill and Super G, as well as actual gate count for Downhill and actual gate count/number of direction changes for Super G, must be furnished to Race Administration as the race progresses and *it must be accurate*. This information is required for the Official Results.

The course length should be documented on the Start List if the measurement is taken prior to the Start List's preparation as it is required in order to calculate a competitor's speed on course. Super G, Giant Slalom and Slalom require documentation of actual gate count/number of direction changes on the Official Results.

The Race Administrator also needs: air temperature at the start and finish area at the beginning of the race; snow conditions; competitors' status: DNS, NPS, DNF and DSQ. Accuracy of this information must be verified by the Technical Delegate (TD) before any race-related documents are duplicated.

RECORDING COMPETITORS' FIRST RUN TIMES/STATUS

Whether the computer is linked up to the timing equipment or times are transferred by memory stick or email, competitor's times should be available as the race progresses. Times/standings may be announced, may be displayed on a remote screen or may be recorded on a paper/plastic scoreboard for public viewing. This option will obviously depend on the individual situation, available equipment and personnel. However, these times/standings, whether announced or displayed are unofficial.

Recording times is only part of the procedure required in order to produce official results. It must also be possible to enter DNS, NPS, DNF, and DSQ. When entering DSQ, the gate number where the DSQ occurred or the rule number for other infractions such as early/late start, equipment, etc. must be entered. Different programs have different procedures for this function; pre-race training allows familiarization with these functions.

After all competitors' first run times – or status – have been recorded and verified, a First Run Result may be printed. If the First Run Start List had 120 competitors, the First Run Result must also have 120 competitors; this allows verification that all competitors have been assigned either a time or a status (DNS, DNF, DSQ). Some programs will not allow you to print results until every competitor either has a time or a status designator and have a default factor, which will appear if nothing has been entered for a competitor; others, however, might simply list a competitor as a DNS if a time is not entered. Knowing your software's requirements is another good reason for pre-race training.

NOTE: For events that have field-size cutoffs for the second run, it is imperative to verify how your software addresses those competitors who did not qualify for the second run; designated as DNQ (did not qualify) or DNS (did not start) with an internal check that automatically assigns

DNQ on the printed results. If you do not test this function prior to race day, problems will not be evident until you attempt to print Official Results.

NOTE: If a DSQ is entered after a second run cutoff is established, you must verify that the correct number of athletes is on the Second Run Start List. If your software assigns “DNQ”, it will be necessary to change the status of the next ranked competitor from DNQ to DNS. *If you fail to address this issue, it will result in an incorrect number of starters for the second run; e.g. 59 instead of 60.*

It is also necessary to check for ties in time at the cutoff position. If a tie occurs at the cutoff position, it may be necessary to increase assigned cutoff number to include all tied competitors.

All times **MUST BE VERIFIED AGAINST THE TIMING TAPES FROM THE HOMOLOGATED PRIMARY TIMER** whether or not you choose the option of printing a First Run Result. DNS, NPS, DNF and DSQ competitor information must be verified against the Report by the Referee, and the data management person should never print a Second Run Start List before the end of the Protest period and before the competitors’ DSQ status has been verified and noted in the race file. Always account for all competitors by verifying that the number of competitors listed on the Second Run Start List is equal to the number on the First Run Start List minus all DNS’s, DNF’s, and DSQ’s that have not been protested.

- In U.S. Ski & Snowboard non-scored races first-run DNS, DNF and DSQ competitors usually start the second run at the end of class, gender or field.
- For U.S. Ski & Snowboard non-scored races where each run counts individually, first-run DNS, DNF and DSQ competitors remain in the field and start as scheduled.
- In U.S. Ski & Snowboard scored races, first-run DNF and DSQ competitors may start the second run at the end of the field with original bib number and in original start order.

SECOND RUN START LIST

Because of the varied second run allowances/requirement, Second Run Start Lists for all events must be carefully checked for accuracy. Please refer to current U.S. Ski & Snowboard Alpine Competition Guide for Age Class or other special seeding requirements.

If the level of event requires a second run “bibbo”, it is important that its requirements for preparation are understood. The standard number of competitors that are reversed for the second run start – the “bibbo” – is 30; 15 is the variation. Most programs allow the operator to select the exact number of competitors to reverse - “bibbo” - for the Second Run. If a Jury decides to allow a “bibbo” of 15, this announcement must be made one-hour prior to the start of the first run, but it is recommended that the size of the “bibbo” be confirmed prior to generation of the Second Run Start List.

Remember that in U.S. Ski & Snowboard-sanctioned events when the “Golden Rule” is used to seed adaptive competitors for the first run, the adaptive competitors are entitled to run immediately after the bibbo group in the second run if their first run results haven't earned them a better start position. (*Refer to “Golden Rule”, U.S. Ski & Snowboard Alpine Competition Guide; “Golden Rule” does not apply at FIS events.*)

When the race result computer is located in the timing/finish building and a copy machine is not readily available, it is important that the program feature a printing function for this document.

Always check for ties, especially at the last position of the reversed competitors, and verify that the race program has positioned the tied competitors according to current rules. Also, if there has been a change in the scheduled start time for the second run, verify that the change is indicated on the Second Run Start List.

If a computer failure should occur, you need to be familiar with rules, format and procedures so that a Second Run Start List may be generated manually.

NOTE: If your software allows manual assignment of start numbers, do not, under any circumstances, edit competitors first-run start numbers so that they correspond to the second-run start positions. The software's tie-breaking function may be controlled by the first-run start number.

RECORDING COMPETITORS' SECOND RUN TIMES/STATUS

Recording times for the second run is the same as recording times for the first run. If the software does not automatically bring up the next competitor on the Start List, the competitor's file is accessed by keying in the appropriate bib number. The correct Second Run time is entered and the race result software adds it to the First Run Time. The competitor is then moved to the proper finish order. Some programs will not let you put in a time if the competitor had a DNS, DSQ, DNF or DNQ in the first run; this is the type of issue that must be addressed prior to race day. Similar checks to detect competitors who have missing times are once again necessary and *all* input must be verified against the timing tapes from the homologated primary timer.

AFTER THE RACE

This is when all input is again double-checked. You may be asked to print Unofficial Results for a Jury Meeting. These are often printed before the DSQ'S are deleted from the field; verify that these Results are marked "UNOFFICIAL" and are not mixed up with official documents. You may also be asked to print a set of Results by Class for the Awards Chairman.

OFFICIAL RESULTS

Official Results, (which include race points for scored events), are printed after all header data has been verified, competitors' times have verified against the timing tapes from the homologated timer, Protest period has expired and all DSQ'S have been entered per Jury instructions. The Chief of Timing & Calculations must be available in case a competitor's time is questioned and also to assist in the review of the Timing & Data Technical Report form and oversee its submittal as required by the level of race. (A TDTR is required for FIS events and also for all U.S. Ski & Snowboard events – both scored and non-scored. *Preparation/submittal of a TDTR is not required for speed event training runs.*)

Clean and neat original documents (masters) of all required race documents as listed in Chapter V - The Secretariat, must be available to either answer necessary questions or correct and reprint necessary documents. Official Results are not "Official" until they have been verified and signed by the Technical Delegate.

OFFICIAL PENALTY

For scored events, race result software programs calculate and print Race Points and Penalty. The Penalty is calculated and printed either as part of the "Result" function or as a separate function based on the Results. The Technical Delegate is responsible for verifying accuracy of Race Points, Seed Points and factors (event factors for U.S. Ski & Snowboard and event factors

and race level adders for FIS), used in the calculation of the Penalty as well as verifying the accuracy of the actual calculation.

A Penalty for U.S. Ski & Snowboard or FIS scored events is not "Official" until signed by the Technical Delegate. If computer is unable to perform calculation, e.g. insufficient number of finishers, a hand-calculated Penalty must be generated and submitted.

U.S. SKI & SNOWBOARD RESULTS: DATA TRANSMISSION

U.S. Ski & Snowboard requires that race results/penalties for scored events be transmitted electronically in XML format to alpineresults@usskiandsnowboard.org. U.S. Ski & Snowboard assigns an alpha character followed by a 4-digit number – a race code – that is used to identify U.S. Ski & Snowboard events. The subject line of the email must be the U.S. Ski & Snowboard-assigned race code for the race being submitted. This enables the U.S. Ski & Snowboard autoscore system to quickly verify accuracy of the data and post the results on the U.S. Ski & Snowboard website. *(Refer to transmission information referring to non-scored events on page 4 of this Chapter.)*

U.S. Ski & Snowboard-approved software packages automatically generate the required XML file. The XML file should be available for review, and it is strongly suggested that the basic race information it contains, e.g. race codes, race date, penalty, etc., be verified prior to transmission. XML race result files must be transmitted individually.

FIS RESULTS: DATA TRANSMISSION

Data transmission of results to the FIS also requires electronic transmittal in XML format. The FIS Office will not manually enter race results into their database and races with issues are the responsibility of U.S. Ski & Snowboard. FIS assigns a 4-digit number - a codex number - that is to be used to identify FIS events. The subject line must be the FIS-assigned codex number for the race being submitted. (Refer to “Rules of the FIS Points” for current FIS transmission address.)

In order for data transmission to be successful, an organizer will need to supply Internet connection capability – network or wireless.

NOTE: Electronic transmission of the U.S. Ski & Snowboard and/or FIS Results and Penalty in XML format does not replace the requirement for submittal of official event document packets. Refer to Race Administration Study Guides or documents posted in the MPF on the U.S. Ski & Snowboard website for U.S. Ski & Snowboard and FIS event document packet requirements and transmission procedures.

If the results are received in the proper format, you will receive an emailed confirmation of submission. If there is a problem with the results, you will receive an emailed status report. Following are possible replies you may receive following result submittal:

- File conforms; results usable and being loaded.
- File conforms but with some errors listed that are being corrected automatically. Following errors are corrected but need to be verified on paper copy and in Report by the Technical Delegate. Errors that need to be checked, corrected and reported are:
 - ❑ Category not same as in FIS Calendar (WC, COC, FIS, etc.)
 - ❑ Event not same as in FIS Calendar
 - ❑ Ranking of ties incorrect

- File cannot be loaded, as information is incomplete. File must be corrected and resubmitted.
 - ❑ Wrong codex
 - ❑ FIS inscriptions do not match (athlete FIS code numbers)
 - ❑ Unknown competitors
- File received but can't be identified; return to sender
- File not attached

Occasionally, the FIS parser will go down - usually over the weekend. If you do not receive a confirmation email within approximately 15 minutes following this procedure:

- Confirm that you are connected to the Internet.
- Have someone send an email to the email account that you are sending results from to confirm that you are receiving emails. (Setting up a secondary Yahoo! or Google type account is helpful for testing yourself without relying on an outside person.)
- If you can send and receive emails to/from another account, the FIS parser is down. DO NOT PANIC and resubmit your race result XML file numerous times. If it is over the weekend, you may need to wait until Monday to resubmit.
- FIS' receipt and acceptance of the race result XML file and the Timing & Data Technical Report XML file is required in order for a FIS Technical Delegate to verify the TDTR data and file an online FIS Technical Delegate Report. If the FIS parser is down, the Technical Delegate will need to delay online verification and filing of his/her reports until XML transmission is successful. FIS events will not be valid for points until all reporting requirements have been completed.
- After logging into his FIS member account, the Technical Delegate can track/verify receipt of required files.

PROGRAMMING CHANGE REQUEST

During the course of an event, you may encounter problems with the software you are using. If the problems are related to U.S. Ski & Snowboard-approved software and require a programming change, debug or enhancement, the Programming Change Request form available in the Master Packet of Forms should be completed and emailed to compservices@usskiandsnowboard.org. U.S. Ski & Snowboard staff will address these situations with the appropriate software vendor. Changes, debug or enhancement of other software applications will have to be addressed by the user with the applicable vendor.

USE OF THE U.S. SKI & SNOWBOARD AND FIS WEBSITES

U.S. Ski & Snowboard website (usskiandsnowboard.org) is utilized as a major communication tool. Available services are U.S. Ski Team news, current rules and regulations, race results, U.S. Ski & Snowboard National/FIS Points Lists, competitor and official membership data, officials' resources, FIS website link, etc. The goal of U.S. Ski & Snowboard is to utilize available technology and resources through the use of computerized processing, electronic transmission and storage of information. This will allow for further development of an efficient communication system.

Take some time and browse the items available on the U.S. Ski & Snowboard website. U.S. Ski & Snowboard staff's creation and maintenance of this website is an outstanding contribution to all members of the organization as well as other interested parties. *The U.S. Ski & Snowboard National Points List is only available at this site.*

The general information FIS website may be accessed at fis-ski.com or through a link on the U.S. Ski & Snowboard website. FIS Points Lists and FIS Calendar are only available electronically.

RACE RESULT SOFTWARE SOLUTIONS

1. Verify that you are using an up-to-date version of the software.
2. Delete previous seasons' Points Lists.
3. If possible, delete dropdown caches
4. Store previous seasons' races on external storage.
5. If software freezes, verify that you do not have an excessive number of programs running in the background. If you do have additional programs open, start shutting them down until your software starts responding again.

Key CTRL+ALT+DEL and a TASK MANAGER window will appear. Click the "Applications" tab for a list of running programs; select individual open programs and select "End Task". A new box will appear that lists the program as not responding and allows you the option to shut it down. After shutting down other programs, if the race result software is still not responding, use the same procedure and shut it down. You should then be able to successfully reopen the software.

If the software is still not responsive, shut it down and, using either CTRL+ALT+DEL again or the RESTART function, reboot the computer. The rebooting function should solve remaining issues. If RESTART or CTRL+ALT+DEL are not allowing you to reboot the computer, your next option is to power off and restart the computer. A "hard" powering off, however, —pressing the power button until the computer shuts down—should be used only as a last resort. A "hard" powering off is the equivalent of dropping a phonograph needle directly onto a phonograph record. (If you don't know what a phonograph is, Google it!)

If you are using the Live-timing feature of the software and have intermittent or no internet connection, this may cause the software to appear frozen. DO NOT PANIC and start 'mashing the buttons' (hitting keys over and over). Step back and let software cycle through. This may appear to take several minutes (it's actually about 30 seconds). If you are connected wirelessly or by wire, disable your internet connection to see if this helps the 'freeze'.

6. If it is necessary to load a corrected Points List, accessing U.S. Ski & Snowboard's ftp points list site and reloading the lists may not be adequate. When you request a download, the ftp site checks the hard drive on your computer, if it recognizes that the list is already loaded it may not overwrite the previous points list file; you must delete the original version.
7. When deleting list, it is important to remember lists may be stored in more than one area.
 - a. If not sure of actual storage location, use search function, identify actual storage locations and delete them.
 - b. After reloading required lists, refresh competitors' points and verify them against the appropriate source.
 - c. If you are having problems retrieving both U.S. Ski & Snowboard and FIS data for the same competitor, rekey the competitor's last name.

8. If your event has a second-run cutoff and the required number of competitors are not present on the Second Run Start List (e.g.: cutoff of 60/only 59 showing), verify your software has not recorded a first-run designation for the missing competitor as “DNQ”. *This problem generally occurs when a first-run disqualification is entered after the initial preparation of a second-run sort.*
9. If outside help is required, attach and email the actual race file to an experienced Race Administrator; this enables hands-on *trouble* shooting.

COMPUTERS AND “THE CLOUD”

The desire for more portable computers led to the development of “Cloud Computing”. When using a cloud, data is stored on remote servers rather than being stored on a local server or a personal computer. The benefits of cloud computing are a user being able to synchronize their physical hard drive to a virtual one and allowing the user to share data with other users as long as they all have Internet connectivity and shared access. Cloud computing also allows access to files from anywhere and from any computer. Commonly used cloud systems are Google Drive and Dropbox.

Sending or receiving a file via email is a common use of cloud computing. The original file is saved in the sent box of the sender and also in the inbox of the receiver. Regardless of which cloud system is used, Google Drive/Dropbox, etc., or email, physical backup using a flash drive is strongly suggested. Physical backup is critical when an Internet connection is not available!