The NavLight System   REFERENCE MANUAL.

August 2017

WINDOWS 10 has caused the appearance of many of the pictures in this document to change. The colours of the title bars, and shapes of the windows, may be slightly different. This does not affect the information provided in this Manual.

Contents

INTRODUCTION.

This guide assumes that you are aware of the Navlight system components. For an event, you will need a number of Punches and Tags, a Reader for programming/reading them, and the RogaineSCORE software which this manual describes.

This manual is an up-dated but shortened version of the original Reference Manual, which remains a useful document.

1.1 The Basics

Each Punch and each Tag has a unique built-in Identity Code, represented as three or four alphabetical characters.

When a Punch is inserted into a Tag, both units record each other's Identity Code. A timestamp with 1-second resolution is also recorded. In the diagram below, one record in the tag would be <GNT 999764> (but stored in a binary format).

A data transfer will *always* occur regardless of any software settings.. The only things which will prevent data transfer are overloaded memories in Tag or Punch, or a flat battery in the Punch.
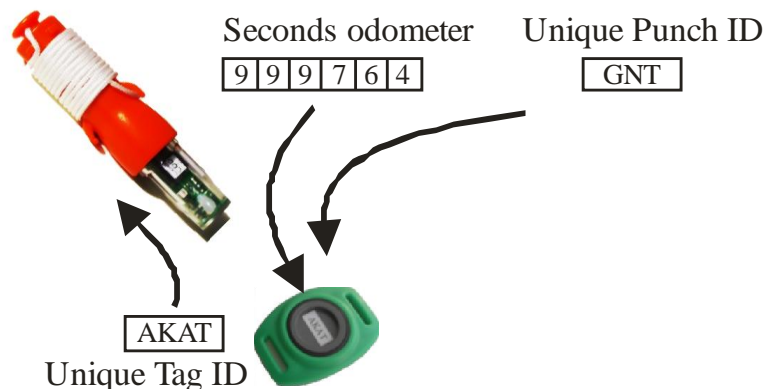
Data transfer between punch and tag.

When a Tag is read, the stored records of punch codes with timestamps are translated by the software into the scored results files and printouts.

1.2 Essential text files.

To connect punches to scores, and tags to people, source text files must be created. One file, **Punchnums.txt**, associates each punch code with a label and a points value. Some punches may also be assigned a "STATUS" for special functions such as Finish punches.

For example, a line from Punchnums.txt might look like   GNT   18   10
which gives punch GNT a label of 18 (the familiar punch number on your map), and a score value of 10 points. When the tag is read, the code GNT in the tag (and its timestamp) are translated into a scoring line   18   10   11/02/2017 1:07:38 PM   showing the punch number, score, and time.

Another file, **Tagnums.txt**, associates the Tag AKAT with a team number, a Category, a Course, and names. For example AKAT   102   XV   24hr   Jeremy Corbyn, Donald Trump

1.3 Event Clock and Time management

As part of your event setup, you must decide on a "REFERENCE TIME". This is usually about 2-3 hours before the start of your first course. It is stored in a text file on your computer (Punch_Options.txt) and is used to preset the odometer in the punches when you program them (which also clears their storage memory). The Reference Time is important for two reasons:

1. It allows accurate recording of the actual time that a punch is used.

2. It controls some aspects of the behaviour of the punch. It stops the light from its periodical flashing for a period of 36 hours, and it increases the frequency at which the punch searches for a connected tag. Before and after the event, the search is every 2-3 seconds, but this increases to four times per second during the event.

The punch "Seconds odometer" is a seconds counter, like a car odometer, which should be preset to roll over from 99999 to 00000 at the "Event reference time". Thus the tag would record negative seconds before the reference time, and positive seconds afterwards.

If the odometer has not been set, the system still works but with stupid times, which makes FINISH punches incorrect. It is essential that this Reference Time is not changed after the Punches have been programmed for a new event. The course start times can be changed at will, without altering the Reference Time.

Generally, timing is controlled by the clock in your computer. This should be reasonably accurate at all times, although it is not really critical except on Event day.

On the event day, the computer clock will be your master event clock. You should start at the listed start time, when your computer clock shows this time. It is therefore useful to all people if your computer time is as close as possible to actual time

Changes in time caused by Daylight Savings variations can be handled, as discussed in Section 4.1.

1.4 What you must decide for an event.

There are several things you must decide for your event. It is worth making these decisions before you start running the software.

You must choose:

A NAME and a DATE for your event.

How many Courses you will have, and for each Course, you need a name, a start and finish time, the penalty rate in points per minute, the late minutes to disqualification, and whether you will use the lowest or highest scoring Tag from each team.

What Age and Gender categories you will have.

1.5 Operating the system - an overview.

The PC software RogaineSCORE has six different Windows available, by clicking on the appropriate button. Some of these steps need to be done before the event while others can be done before, during, or even after the event. Obviously, scoring must be done at the event conclusion.

The basic steps are described here, with detailed instructions given in later sections. The settings entered are saved in text files and automatically re-loaded each time you start the RogaineSCORE software.

The startup window is shown above. The EVENT SETUP is used for the first four or five steps. In general, the sequence is EVENT SETUP, PROGRAM PUNCHES, ERASE TAGS, Tags to Teams (Preferably done entirely within the spreadsheet "EventEntries.xls"), and READ TAGS.

The system operation is governed by a number of text files. These are generated by the EVENT SETUP Window and the EventEntries.xls spreadsheet.

When the text files are made, the operation is simple – Program the Punches, Erase the Tags, then Read the tags (Score them) after the event has finished.

2   Using the HELP Menus.

Several screens have HELP Menus. These are:

- The MAIN window
- The EVENT SETUP window and some of its sub-windows
- The PROGRAM PUNCH window, under its various Menu items
- The ERASE TAGS window
- The READ TAGS window and many of its sub-windows

In addition, most buttons will display a hint or tip if you hold the mouse over it.

2.1 The MAIN window help.

This opens a re-sizable window with several "pages" of text in it.

It contains a summary of how you set up event folders, and the steps needed to create and run an event.

2.2 The EVENT SETUP help.

2.2.1   GENERAL HELP...

When this re-sizable window opens, you get a short introduction about how to set up an event. This window is interactive, and as you move the mouse over the five yellow buttons, the message displayed explains that button.
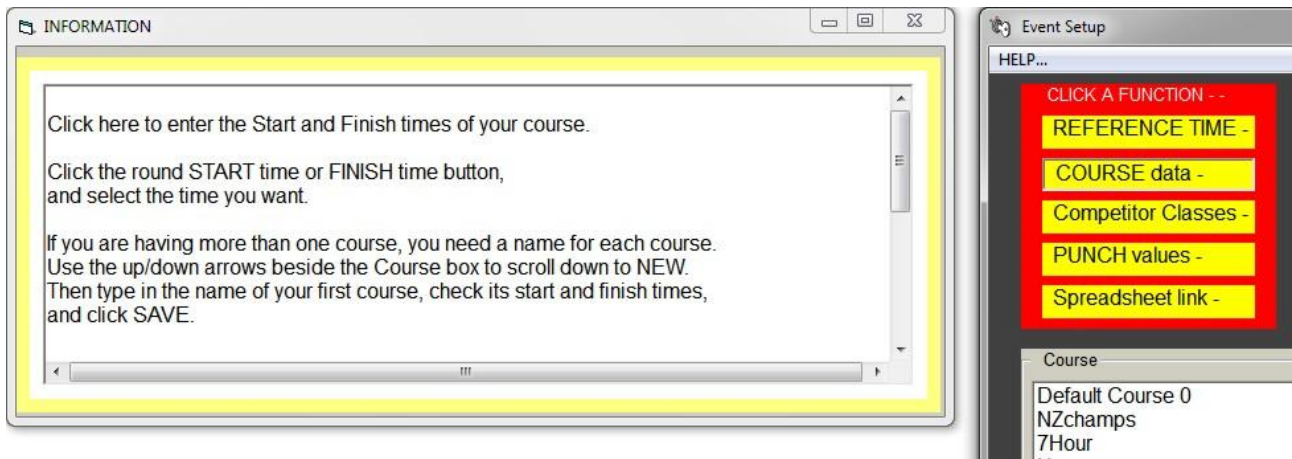
Mouse was last over the COURSE data- button.

2.2.2   SPECIFIC HELP...

This window allows you to get help on a particular subject, in the same way as the Read Tags HELP described below.

2.3 The READ TAGS help.

2.3.1   HELP... menu

This Menu item opens a small window from which you can choose a topic for more information.
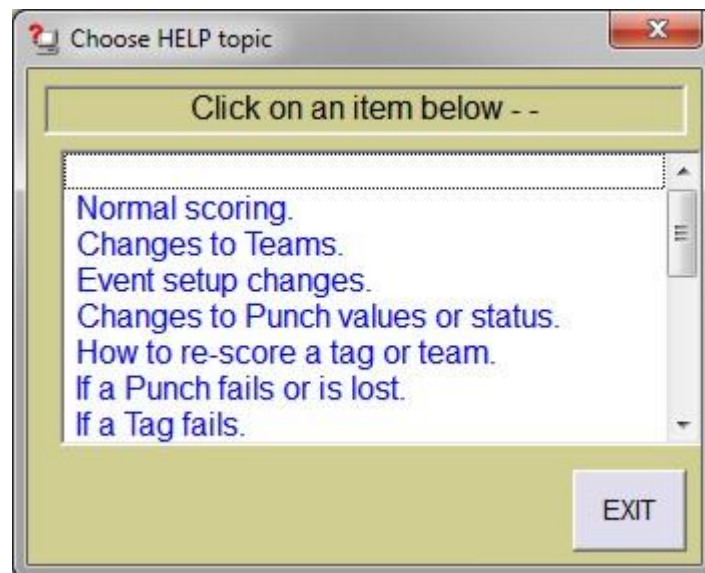
Scroll down to see the full list of items. Click on an item to see an expanded explanation.
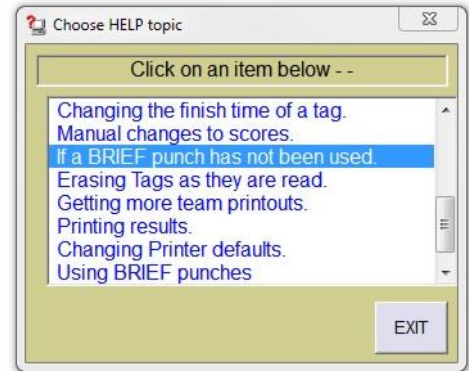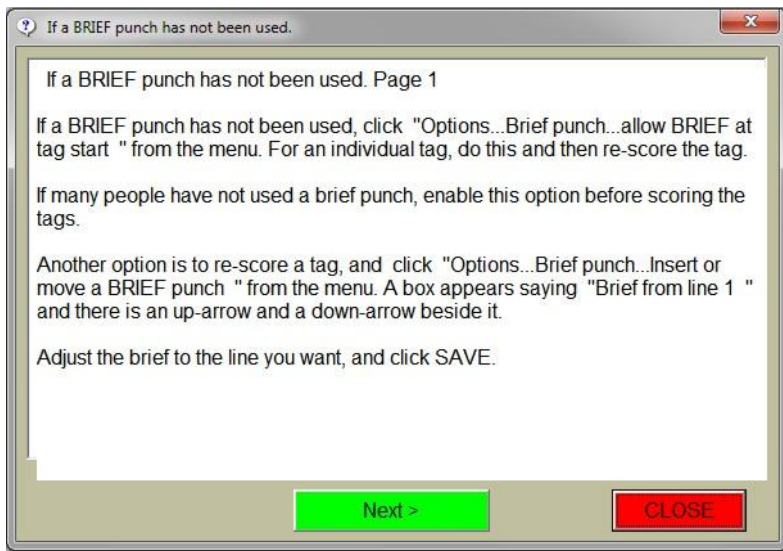
This shows the HELP window for the chosen topic. Note that there is more than one page on this topic, so use the Next > button to see more.

2.3.2   TOOLS... Delete Scored records... HELP...

This explains the circumstances under which you may have to re-score some or all tags. You need to do this if you have changed some of your event setup information after you have started scoring.

The different options are explained.

2.3.3   NETWORK...HELP...

Again, a re-sizable HELP window is opened, explaining how to operate a network of scoring computers.

2.3.4   TOOLS... Debug.....HELP...

This just opens a message box, which may provide help if you are having trouble reading tags.

It also explains how your printer output can be re-directed to a .txt file instead of a printer. This can be useful for inspection or de-bugging. Only the most recent printer output is kept.

3 PREPARING FOR AN EVENT – "EVENT SETUP" WINDOW

The first four or five steps are operated by clicking the "EVENT SETUP" window. This brings up the window below.
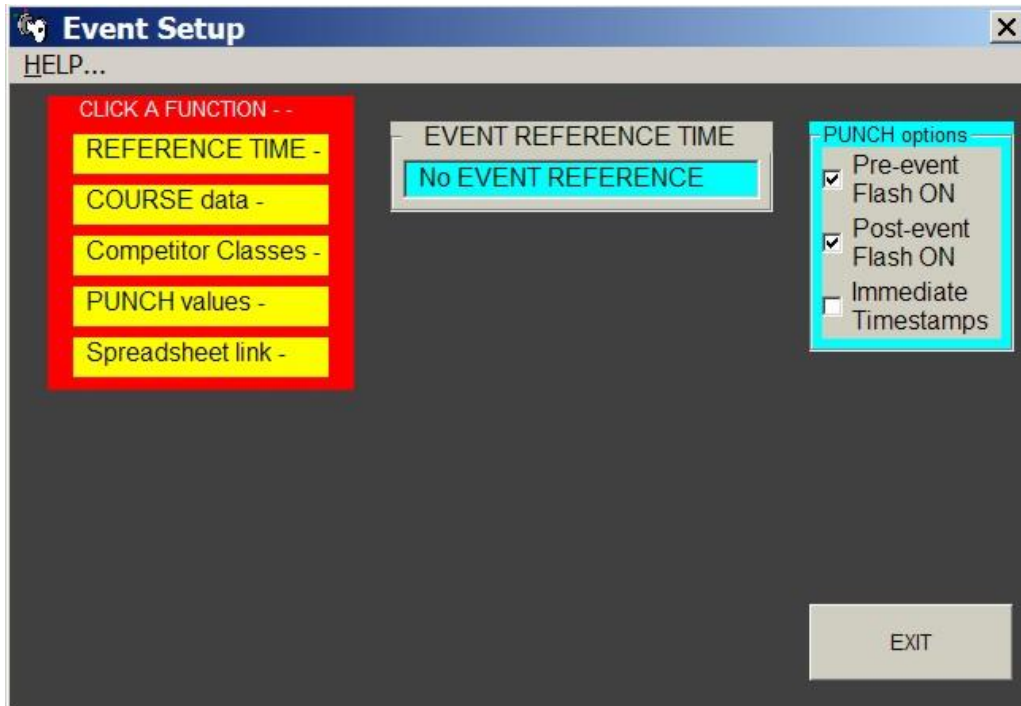
3.1 Setting the PUNCH REFERENCE time.

Time is stored in the Tags as seconds before or after a fixed point in time, known as the Event Reference Time. When the Tags are read, their 'Seconds' records are added to the Reference Time stored in Punch_Options.txt, and the exact time and date of each punch record is derived from there. The Punch clocks are set from this Reference Time when they are programmed, so once set, the Reference Time must not be altered..

Clicking the "REFERENCE TIME –" button opens the Date-Time Picker as shown below. This is a standard Microsoft Interface for selecting a date. The Hr and Min buttons can be used to adjust the time of day, as described in the next section.
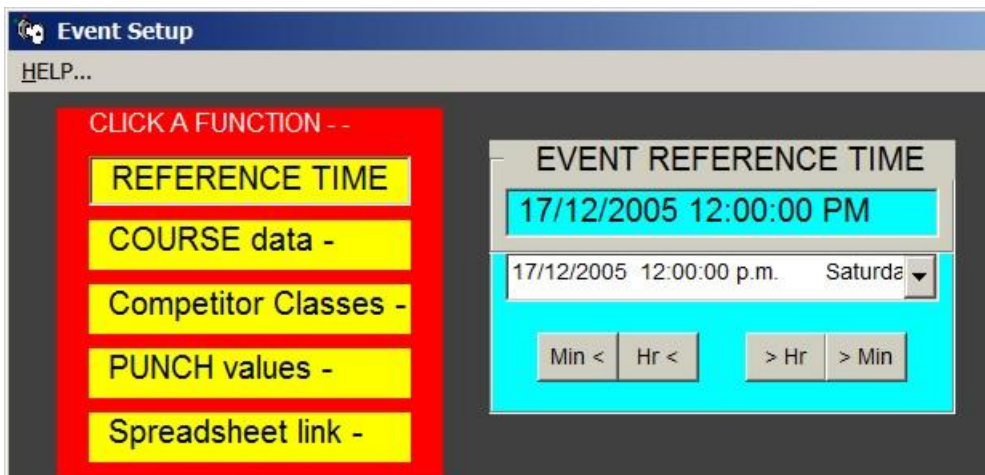
SETTING THE PUNCH REFERNCE TIME.

The Punch Reference Time is normally set to one or two hours before the earliest start time of the event, although it can be set to any time within six months of the event. The advantage of setting it close to the event start time is that the Punches "sniff" for Tags periodically, then go to sleep to conserve battery power. The "sniff" rate is much faster after the Reference Time is reached; about 3 per second. It stays faster for about 36 hours afterwards.

If the event is run some time away from the Reference Time, the system will still work, but the first Tag to visit a Punch may take up to 2 ½ seconds to register.

3.1.1   Using the "Date Time Picker".

Clicking the down arrow beside the Date opens a calendar as shown below. From this, a date can be clicked to select it. The Month can be changed by using the two horizontal arrows beside the Date.
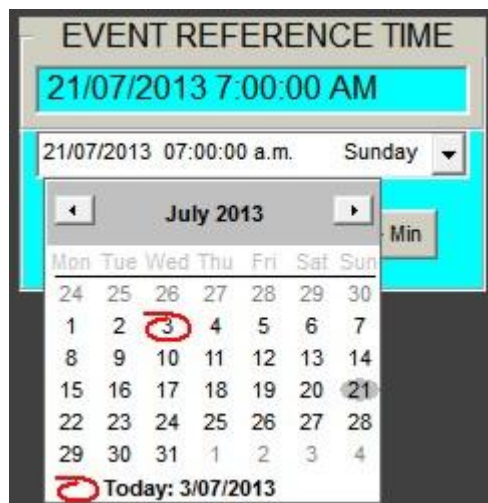
Once the Date is set, the time within the day is altered by using the <Min, <Hr, >Hr, and >Min buttons. When the desired Event Reference Time is set, click the "SAVE" button. The setting will be saved in a file called "Punch_options.txt", and will be re-loaded whenever you re-open this window. *Note*: You can also type the time directly into the date-time-day box.

3.2 Punch Options.

There are three Options which may be used to control the Punch behaviour. Two of these control the red light before and after the Reference Time. The settings are saved in Punch_Options.txt as 110 FLASH options. (Note: These must be set BEFORE you program the punches.)

3.2.1   Controlling the flashing light.

The **Pre-Event** and P**ost Event Flash** controls.

When a Punch is first erased and programmed with a Punch Reference Time, the red light flashes approximately every 16 seconds, with a gentle flash. This is to indicate that it is functioning normally. This flashing is called the "Pre-Event Flash".

When the Punch clock reaches the Reference Time, (normally an hour or so before the event start time,) the intermittent flashing is turned off to prevent a false indication to a user with a Tag. For the next 36 hours or so, the only flashing will be when a Tag has been successfully recorded. This Flash is much brighter than the Pre-Event Flash. A single flash, repeated about 3 times a second, confirms a successful Tag transfer. A Double flash at the same rate will occur if a user re-inserts their Tag after it has just recorded. This indicates that all is OK, but the second visit is not recorded as it is superfluous.

About 36 hours after the start, a gentle flash every 16 seconds approximately will commence. This is called the "Post Event Flash". While not as bright as a Tag flash, it is brighter than the Pre-Event Flash. The purpose is to aid recovering the Punch if it has been dropped into long grass, or otherwise misplaced.

Both the Pre-Event and Post Event flashes can be individually disabled by un-checking the boxes shown. This may be desirable if the Punches are in a public place and you do not wish to draw attention to them. Or, the Post Event flash may be disabled for a much longer course such as an adventure race.

These settings are saved with the "Save" button. Do this BEFORE you program the punches

3.2.2   Enabling exact Timestamps

When a Tag is presented to a Punch, the Tag's ID is stored within the Punch. This takes one "record" of memory. A "Time Stamp" uses 3 records and is inserted into the Punch memory at intervals of 8 minutes, if one or more Tags have been recorded in the previous 8 minute timeslot.

Because the "Time Stamp" uses three records of memory, it is not used with every Tag insertion. Using it intermittently allows many more Tags to be recorded over a 24-hour period, but the disadvantage is that the time of punching (as stored within the Punch) has only 8 minute accuracy. Note that the time recorded in the Tags is accurate, with a resolution of one second. It is only the Punch record which is approximate. Available storage is 2030 records.

For events with less than about 500 Tags, and where the time recorded in the Punch must be accurate (such as an aid station in a cross-country race), then the "**Immediate Timestamps**" box can be checked. If this setting is saved, a warning will be issued whenever the program is restarted.

3.2.3   The Text file "Punch_Options.txt"

This file holds the saved Punch Reference Time, the tolerance allowed on Clock error and battery voltage readings whenever a Punch is programmed, and lines reserved for Course restrictions (an advanced feature). These lines are not now used but must exist.

The first six lines look like this:

```
17/09/2005 12:00:00 PM
1 = Acceptable Clock tolerance in Seconds.
1.30    Volts  Lowest Battery Limit.
110    FLASH options
Course 0 =
Course 1 =
```

Only the Reference Time and the FLASH options are editable from the SETUP Window; the other lines are altered from the "PROGRAM PUNCHES" Window.

Newer punches, with re-chargeable batteries, may show a "fuel gauge" rather than a voltage.

3.3 Course Data.

It is possible to run several courses simultaneously, for example, a six-hour and a 24-hour, and an 8 -in-15 hour. Each course may have different finish times, and some courses, such as the 8-in-15 may have a time restriction on the total time on-course.

By clicking the COURSE data- button, the Window changes to this:
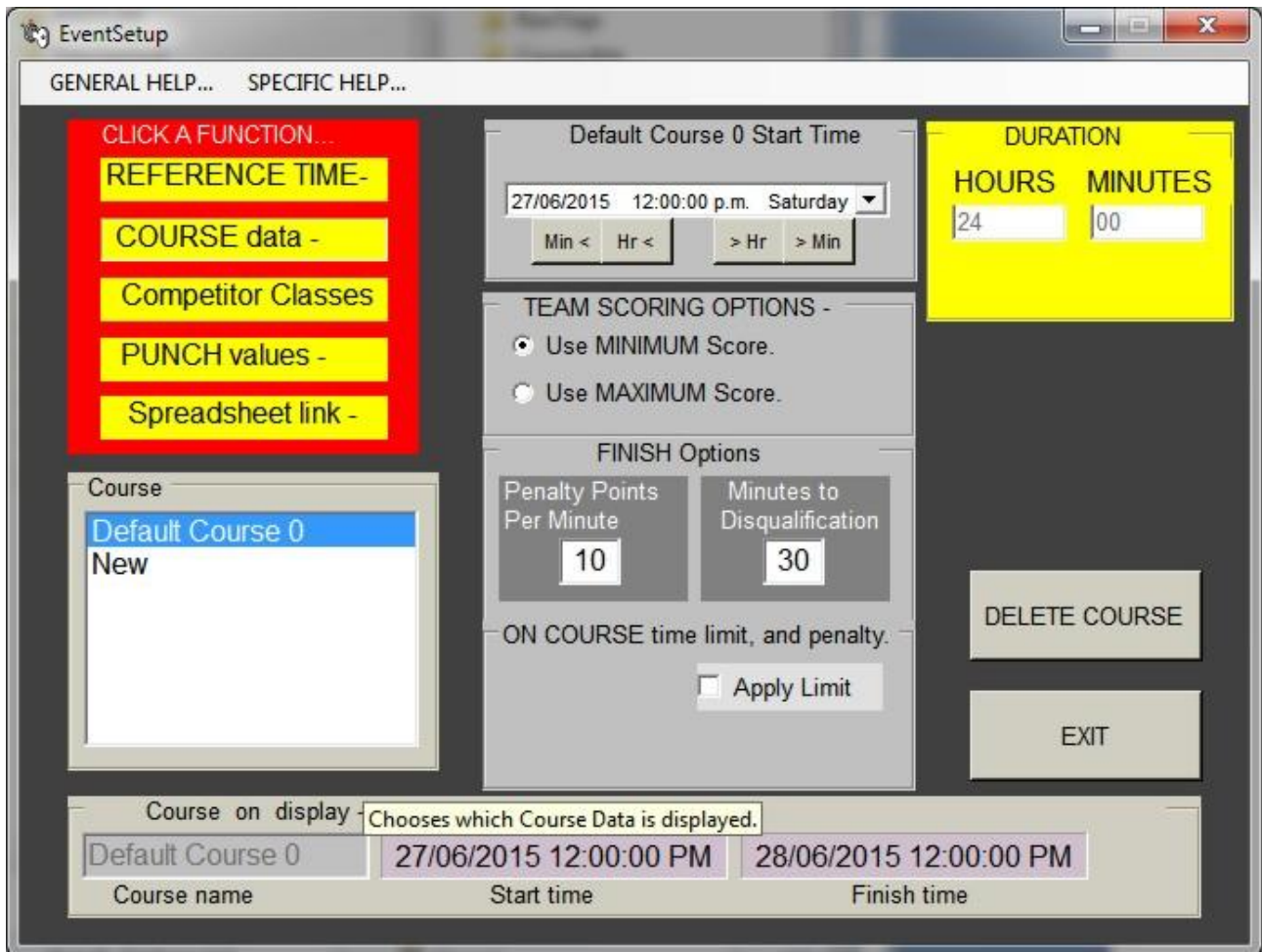
The course properties are displayed. Which course is displayed is chosen by clicking the desired course in the "Course" list.

3.3.1   Setting Course START and FINISH times.

The Course START and FINISH times are set by clicking the START Time or FINISH Time boxes (which turn blue), then using the Date-Time Picker (as described in Section 3.1.1 above) and the Hr and Min adjustment buttons to set these two times.
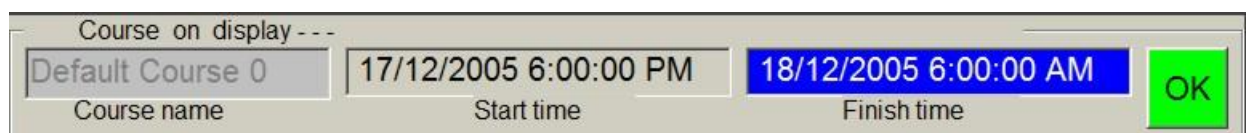
3.3.2   Time penalties and Disqualification.

The Penalty regime for late finishers is also set by typing into the two text boxes in the FINISH Options frame. The normal regime is 10 points per minute late (or part thereof) and 30 minutes to disqualification.

3.3.3   Duration-limited Courses (eg. 15Hr in 23Hr).

If a total-time-on-course limit is also required, for example 15 hours out of 23, clicking the "Apply Limit" checkbox will give the screen below. This will apply only to the course being edited.

Use the Min<, Hr<, Hr>, and Min> buttons to alter the COURSE TIME limit from the 24:00:00 shown to whatever the maximum time allowed on the Course is. For example, if the Course is restricted to 15 hours in 23, you would set 15:00:00 as the TIME limit, but have START and FINISH times which are 23 hours apart.
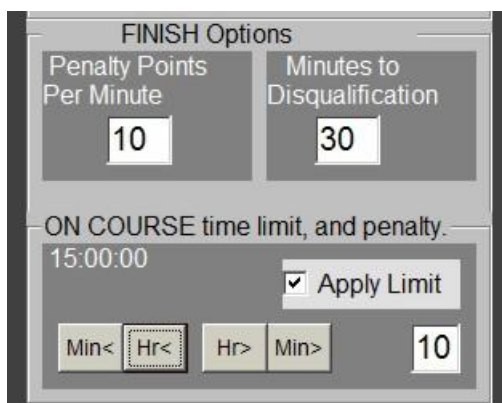
NOTE: Although all teams must still use a BRIEF punch, you *must* have a START Punch available for duration-limited Courses, in case some teams do not want to start at the Course Start Time. They must use the START Punch when they leave for the first time; it cancels previous Punches and records their start time. Teams who do not use a START punch will be deemed to have started at the course start time. (This is the usual procedure.)

3.3.4   "Setter" and other Special Courses.

Setter courses are described in section 16.1. Chain and Total Courses are described in detail in section 16.7. Setter courses allow checkpoint placers to verify Punch labelling and operation as they set up checkpoints in the field.

3.3.5 Selecting, Creating, or Deleting a Course.

To add a new Course to your event, or to view an existing Course, click the course in the "Course" list. For a new course, click "New". By default, all its settings will be copied from the previous course and you must then change them.
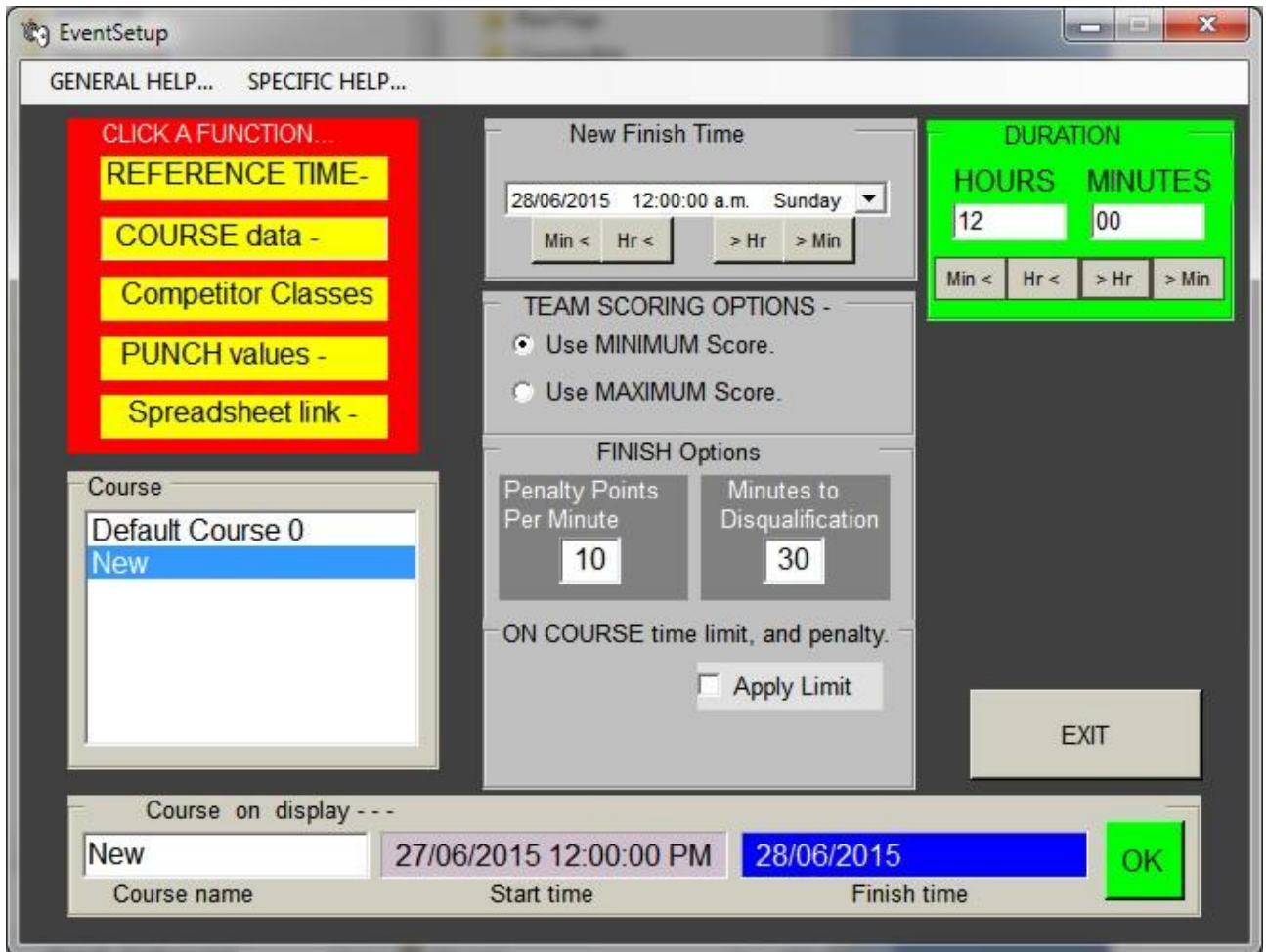
Type in a number or name for the Course you want to create in the "Course on display - - " box. Even if you have only one Course, such as a 12-hour one, you may want to name the course "12" or "12 Hour" rather than use the default course which will be called Course 0.

Set the Course START and FINISH times, and penalties etc as described above. Click OK. A "SAVE" Button will appear, which you should click to save all the current settings.

Note that the finish time can also be altered from the "DURATION" box in the top corner.

To DELETE an existing Course, select it from the Course box and click it. Click the "DELETE COURSE" Button which will have appeared.

3.3.6 Saving Course Data.

The "OK" button stores the Course changes in memory but not on disk. Whenever a change has been made to Course Data, the "SAVE" button appears. Click this to save all the current Data in the "TagReader_Options.txt" file. This file also holds the default Printer Options and is used during the scoring process. . It may be viewed in Notepad but editing it that way is not recommended.

Event data and information files are kept in the Event folder being worked on.

3.3.7   Team Scoring Options.

You may issue one Tag to each team, or two Tags per team, or one Tag per person. Multiple tags have an advantage both in preventing cheating and in improving reliability. If you do have multiple tags, you must decide what to do if the Tags from a given team have different scores. The Rules from August 2007 allow event organisers to choose; to ensure that all team members visit all checkpoints you should use the smallest score. (The slowest Finish Time is used in all cases.)

```
┌─ TEAM SCORING OPTIONS - ─┐
│  ⊙ Use MINIMUM Score     │
│  ○ Use MAXIMUM Score.    │
└──────────────────────────┘
```
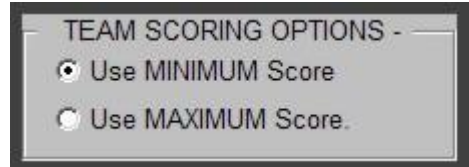
Click the Option which you choose. The default is MINIMUM.

3.4 Creating Age/Gender classes in an Event.

Competitors may compete within a restricted class, such as under 19, over 50, or Mixed teams. Each class is given a name, such as   M, W, V, XV etc. Competitors may be eligible for more than one class; for example, a Veteran may also be eligible for an Open class.

The Competitor Classes Window allows you to create the Major classifications, and then assign other classifications which also apply to people in each Major class. The classifications are saved in a text file called Categories.txt.

3.4.1   Major Categories in "Competitor Classes" Window.

Clicking the "Competitor Classes" button opens a new Window which looks like this.
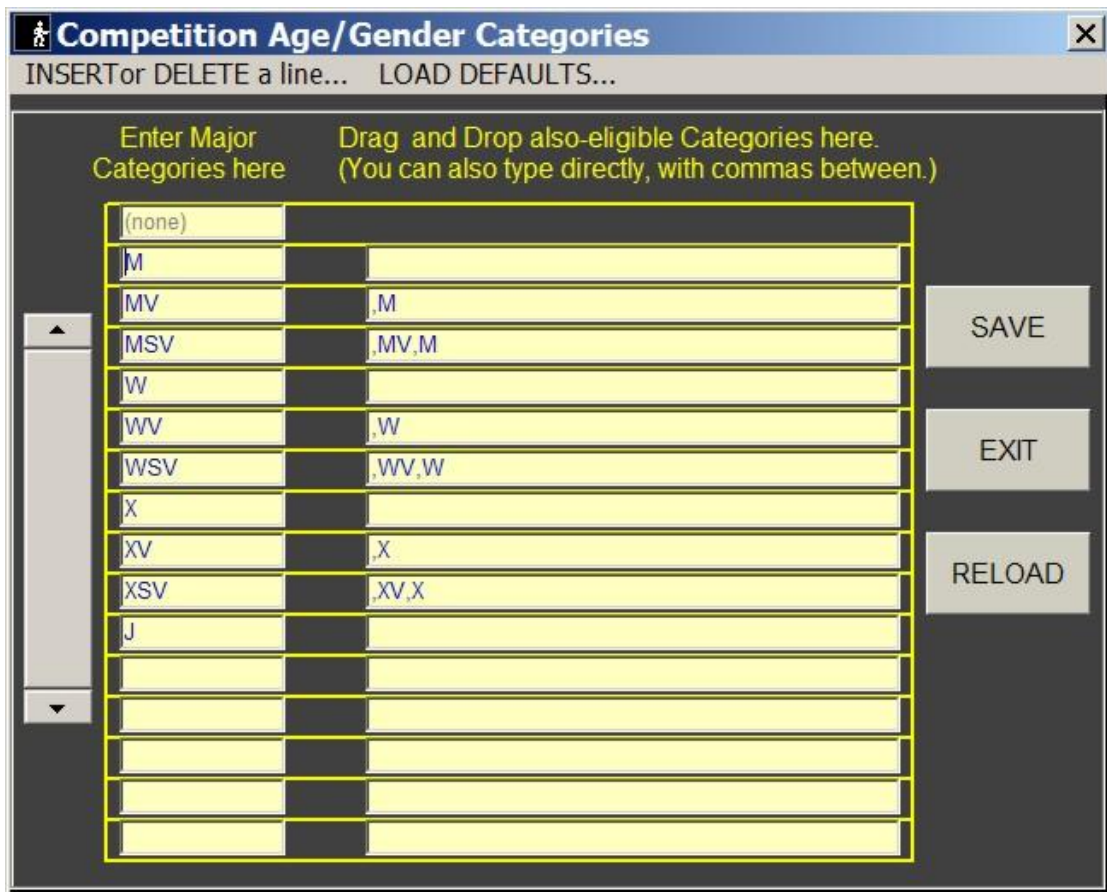
The Major categories show in the left column. The right column lists the other categories which people in a Major category are also eligible for. You may type directly in all columns, but it is best to type only in the Major column, and drag-and-drop from there into the right hand columns.

Lines may be inserted or deleted by clicking in a major category and using the INSERT or DELETE Menu.

If you don't need any categories for your event, don't worry – the default categories will still exist, but you choose the (none) category when giving team numbers to competitors. You may also use the LOAD DEFAULTS… Menu to REMOVE ALL CATEGORIES.

3.4.2   Inserting / Deleting Major Categories.

Lines may be inserted or deleted by clicking in a major category and using the INSERT or DELETE Menu. The example below shows the process of deleting the MV class.
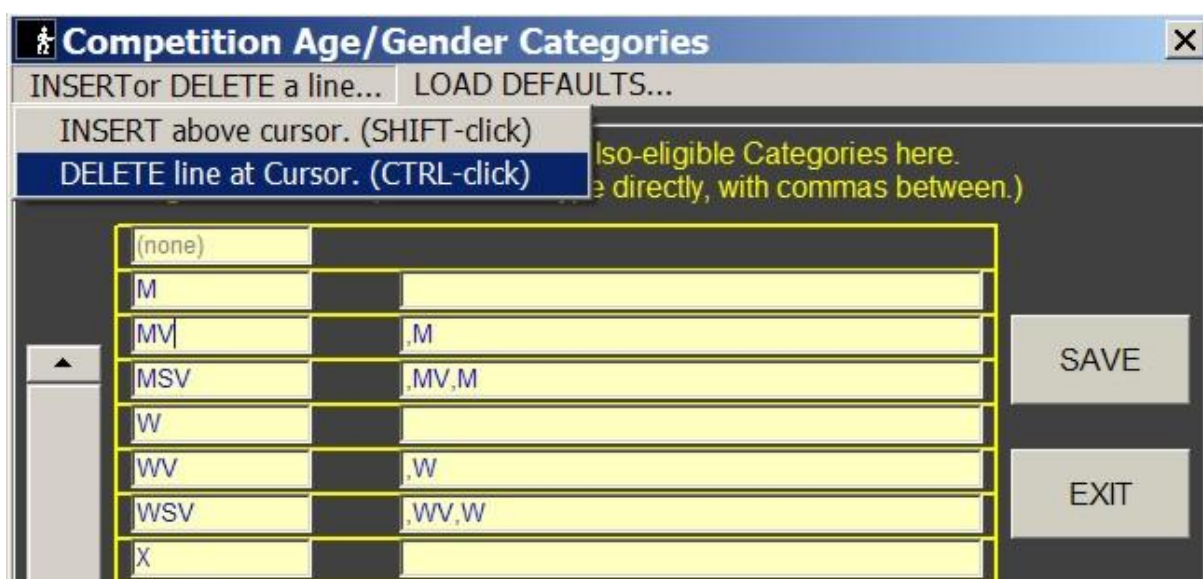
When the line is deleted, MV will also be removed from any also-eligible categories.

To replace a Category, click in the Category box in the left-hand column and enter the new Major Category name. The new name will replace the old name wherever it occurs in the right-hand column of also-eligible categories. If you do this in an empty box, you are adding a new Category.

For a completely new set of categories, you are best to use the LOAD DEFAULTS… REMOVE ALL CATEGORIES Menu to clear all the boxes, then start afresh. Enter the names of all your Major categories in the left-hand column. The order they are in down the page will be the order they are printed across the RESULTS Printout.

You can use the up-arrow and down-arrow keys to scroll through the major categories list.

NOTE: *Category names should be not more than 7 characters long, to retain formatting in the Results printout.*

3.4.3   Adding other also-eligible Categories .

The right-hand column is best populated by dragging and dropping the Major Categories into the also-eligible categories. It is possible to type directly into the right-hand boxes, but take care

that your formatting is correct. The boxes should start with a comma, and commas must separate each sub-category. Spaces are not permitted.

If your list is longer than 16 lines, the display will scroll down or up if you drag the mouse pointer below or above the column of textboxes.

3.4.4   The Text File "Categories.txt".

This file saves the category information you generate. If it does not exist, a default one will be created. Its structure is described in more detail in the "SOURCE and OUTPUT Text files" section 12. This file is not deleted when you create a new event, so the previous file will be the default for the new event.

3.4.5   Re-arranging the order of the categories.

You can drag any line of the categories list to a blank line position, by clicking in the appropriate Major Categories box and dragging up or down with the mouse. There will always be a blank line at the bottom of the list, or you can use the "INSERT" Menu to create a space. When you drag a line to a vacant place, the line vacated will be empty, allowing a different line to replace it.

It is therefore possible to re-arrange the lines into any order you wish. The order chosen determines the order in which results are printed across the "Results" printout.

Unused blank lines can be removed with the "DELETE" Menu, but they are also removed automatically when you save your changes.

3.4.6   Dragging and Dropping the Major Categories.

If the number of lines in your categories exceeds the displayed 16, the scroll bar on the left becomes active and you can use this to scroll the list. When dragging a major category with the mouse, you can also cause a scroll down or up by dragging below or above the 16 displayed lines.

Remember, you can re-arrange the sequence of the major categories by clicking one of them and dragging it to a vacant line. The also-eligible categories will move with it. As also mentioned, the also-eligible categories boxes are best populated by dragging the required Major categories into them.

3.4.7   Cross-Gender and Cross-Age Categories.

A Junior team can cross all genders, and may be eligible for Mixed, Womans, or Mens classes, but this can not be handled by the "Also-eligible" concept used above. The "J" category shown in Section 3.4.1 cannot be eligible for M, W, XV etc as this varies on a team-by-team basis.

Similarly, a Family team can be cross-gender and cross-age, and may be eligible for MV or W or J for example.

These additional per-team categories must be loaded from a spreadsheet file using automatic Tags to Teams generation (as described in Section 18.3) where a spreadsheet column contains each team's Major category.

Multiple Categories are entered in the spreadsheet by separating the classes with commas, so a Family Mixed team would be X,F (or F,X) while a Family Mens team would be M,F and a Junior mixed team would be J,X. The codes used (eg. X,F) *must* match the major categories loaded in the Event Setup Window above.

Note: The Category entry in the spreadsheet should normally list only the major class, such as WV or MSV rather than WV,W or MSV,M,MV. The sub-classes are automatically assigned.

3.5 Setting PUNCH Values and Function.

Each Punch has a unique, permanent, 3-letter internal ID code, which can be read through the transparent cover on the Punch. Each Punch also has a label on the outside which is the familiar "Punch Number", such as 23 or 76. There is also a score value for each Punch, which is normally (but doesn't have to be) the tens value of the Punch Number, so 23 and 76 would be worth 20 and 70 points respectively.

This PUNCH values Window allows you to assign numbers and values to Punches, and also allows Punches to be given a special function such as "FINISH" or "BRIEF" status. Note that these values and functions are not programmed into the Punches themselves; they are only interpreted from Punchnums.txt during the scoring process.

Clicking the "PUNCH values" button will open the Window below.
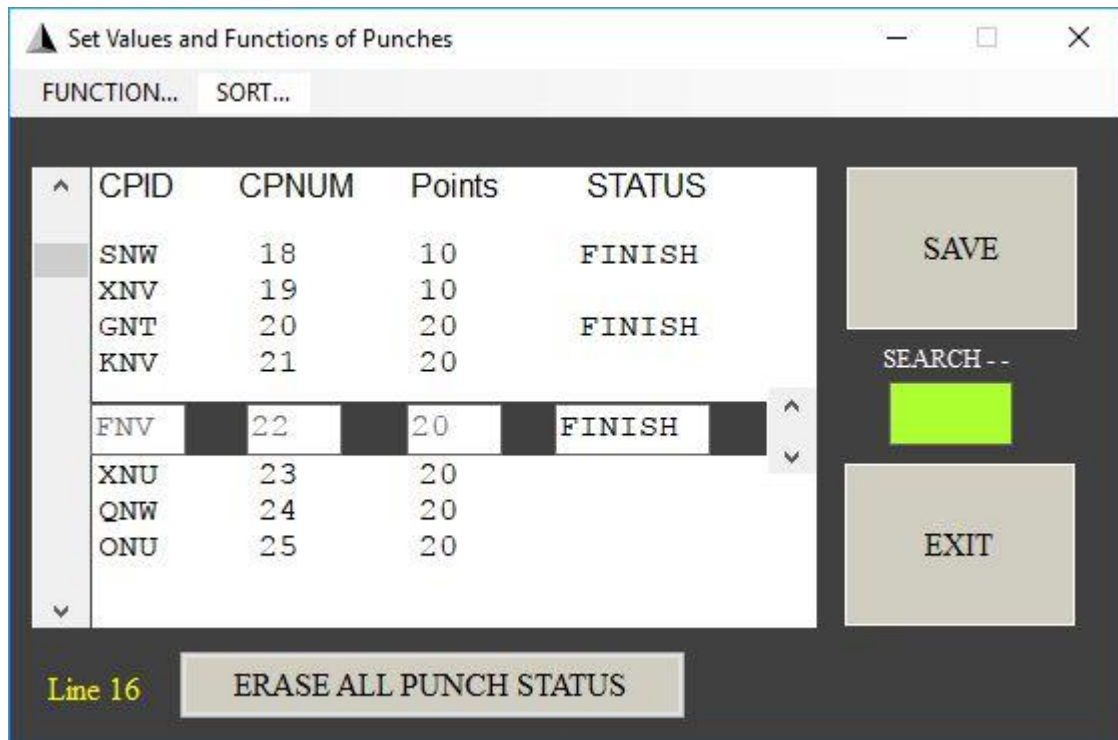
This Window shows the Punchnums.txt file, which should have come with your system. You will normally need only to remove previous STATUS and assign new STATUS to some Punches.

Any Punch can be found by using the scroll bar to the left, or by typing its Code or Number in the green SEARCH box, or by actually inserting the Punch into the Reader. The display can be sorted either by Punch ID code, or score, or status, or by its number, as shown above. Use the SORT… menu to do this.

3.5.1   Assigning STATUS to a Punch.

A Punch Record in a Tag can be interpreted during the Scoring process in several ways, depending on the STATUS assigned to that Punch. There are five STATUS conditions you may need. A Punch with no STATUS is a normal Punch, and its points value will be added to the Tag's score. With a STATUS assigned, the Punch value *WILL NOT COUNT* and must not be altered.

STATUS values are "TEST", "BRIEF", "START", "FINISH", "LAP", "GROUP-", and "DEPART".

The STATUS is assigned by using the scroll arrows to the right of the blank box on the "editable line". (The line with black bars between numbers.) or by typing in the first letter.

KMB	24	20	
AME	25	20	FINISH
HMB	26	20	
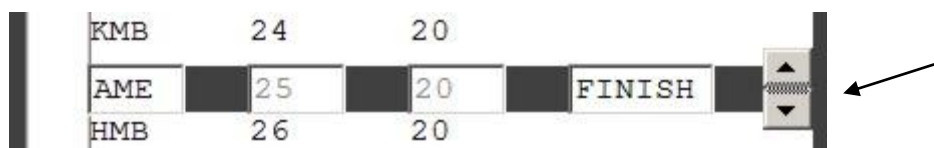
Use the Scroll Arrows to select the STATUS for that Punch, or type the first letter.
DO NOT alter the score value; it will be ignored.

A "TEST" Punch will have no effect on the Tag's score, although, like all Punch Records, it will show in the Tag printout. You may have a TEST Punch at the Registration area for people who are unfamiliar with the system to try their Tags on.

A "BRIEF" Punch must be used by all competitors before the event starts. Without it, some punches may return a zero score. With it, any Punch scores before the BRIEF Punch will have their scores cancelled, while subsequent Punches will score. The start time will be taken as the Course Start Time, so the actual time of using the BRIEF punch is not important. Several BRIEF Punches are usually made available to competitors as they enter the briefing area just before the event starts.

A "START" Punch may be used on Courses with a duration limit, such as a 15 – in – 23 course, when a competitor does not start at the scheduled Course Start Time. Its purpose is to allow time-on-course to be measured from the START Punch instead of the Course Start Time. You will not need this Punch except for duration-limited courses.

One or more "FINISH" Punches must be used to record the finish time of each competitor. When a person returns to the administration area, either during the event for a visit, or near the end of the event to finish, they should use a FINISH Punch. If they go back out on the course they should re-use a FINISH Punch on their subsequent return.

A "DEPART" Punch is used for people who have returned during an event and who wish to go out again. While not strictly necessary, it allows a measure of the time spent in the administration area. This is a *requirement* in Courses with a duration limit, such as a 15 – in – 23, as it allows accurate measurement of the time spent on-course. It is recommended that you use DEPART Punches for all courses, as it gets people used to using them and the Punches themselves can be analysed to see if a missing person has gone back onto the course.

A "GROUP-" Punch allows that punch to be grouped with another punch, so they both score the same value. This is useful where several punches may be desired at one place, such as close-in check-points, or for redundancy in major events. Thus a "97" punch can be grouped with a "23" punch, so either will score 20 points, but both will register as the same punch, preventing multiple scoring. It is not necessary to change the value of a GROUP punch. This is automatic.

See section 3.5.7 below for more details on using GROUP punches.

The LAP punch allows all punches already scored, to be re-used, adding to the total score. It is useful for events where a given route forms a Lap, such as a cycle course. The lap can be repeated a number of times, scoring extra points each time.
You would place a high-valued CP at mid-lap, and use a LAP punch when each lap is completed.

3.5.2   Editing Punch Values.

To alter the POINTS Value awarded by a Punch, use the Menu "FUNCTION… EDIT PUNCH VALUES". This will allow you to edit the Points Value box, which is normally disabled for safety.
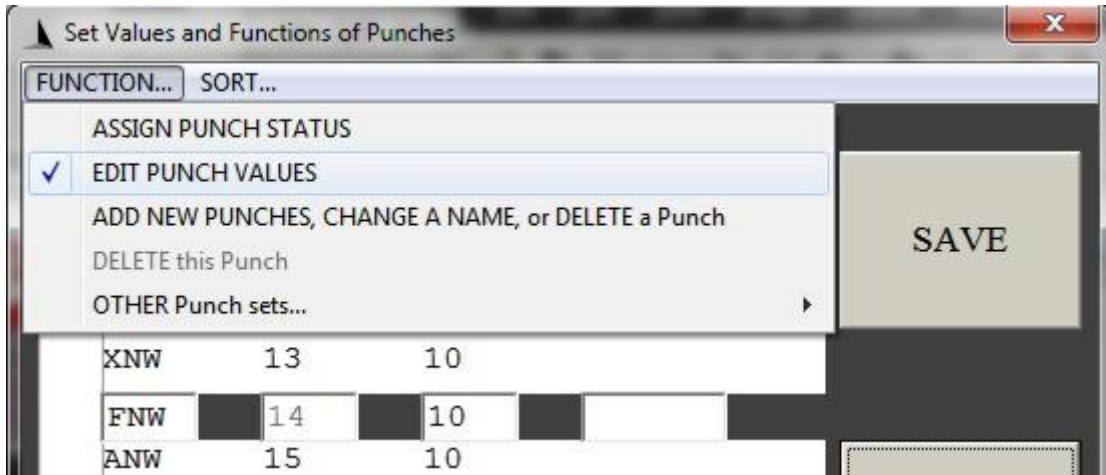
You can now type a new Value in the Points box. Don't forget to save !

If you need to change the Label on the outside of the Punch, (the Checkpoint Number,) you must do this from the "ADD NEW PUNCHES" menu item, described below.

Again, any Punch line can be found by using the scroll bar to the left, or by typing in the Punch ID Code in the box, or by actually inserting the Punch into the Reader.

3.5.3   Adding new Punches to your system.

Use the "FUNCTION… ADD NEW PUNCHES" Menu item to change the Window to this:
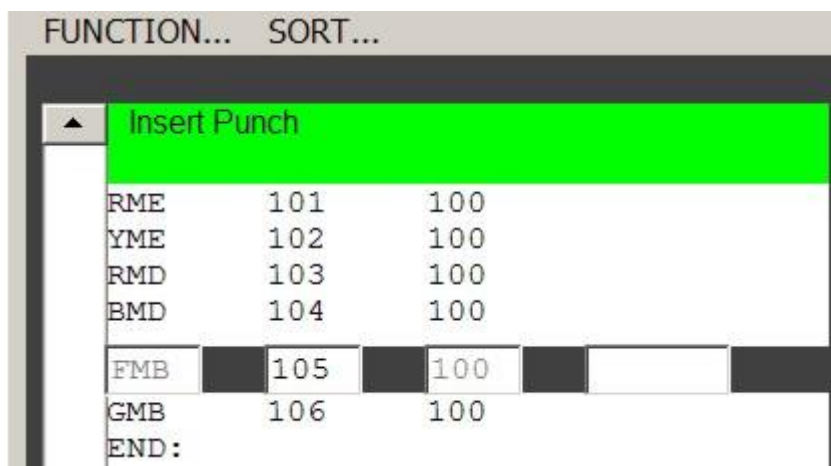
You may now edit the CPNUM value of the Punch. To add a new Punch to your system, insert it into the Reader. A new line will appear at the bottom of the display, showing the Internal Punch ID Code. You must enter the Checkpoint Number and the Score Value for that Punch.

Note: You nay remove the Punch before you enter its Data, to free your hands.

(*Hint*: If you enter only the Checkpoint Number, the Points value will be generated automatically when you scroll away from that Punch, either manually or by inserting another Punch.)

Again, any Punch line can be found by using the scroll bar to the left, or by typing in the Punch ID Code in the box, or by actually inserting the Punch into the Reader.

3.5.4   Combining Punches from other sets.

For significant events, it is desirable to have two or more punches at each checkpoint, for redundancy as well as speed. If you borrow a set of punches from other organisations, you must add these punches to your Punchnums.txt file.

This may be done individually, using the process described in section 3.5.3 above, or you can combine the two Punchnums.txt files directly, from the Punch values Window.
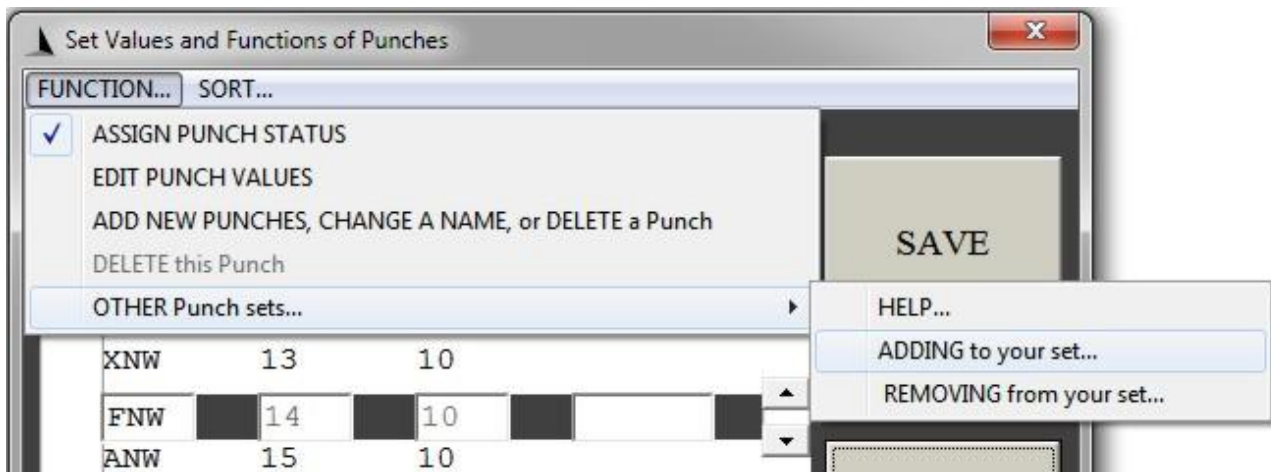
Use the HELP Menu for more information.

You must place the Punchnums.txt file you want to add, into another folder; perhaps the TeamData or Temp folders; it doesn't matter. A Windows Explorer box will open and you locate this file, and click "Open". The rest is automatic.

You will be offered the choice of saving the new Punchnums file immediately, or leaving it un-saved but in the Window, so you can sort or inspect before saving.

3.5.5   Deleting Punches from your system.

This will only be required if a Punch has been irrevocably lost. You must be in the "ADD NEW PUNCHES" menu in section 3.5.3 above. Scroll to the punch you want to delete, then type <delete> in the CPNUM box. (The box showing 105 in the previous section.)
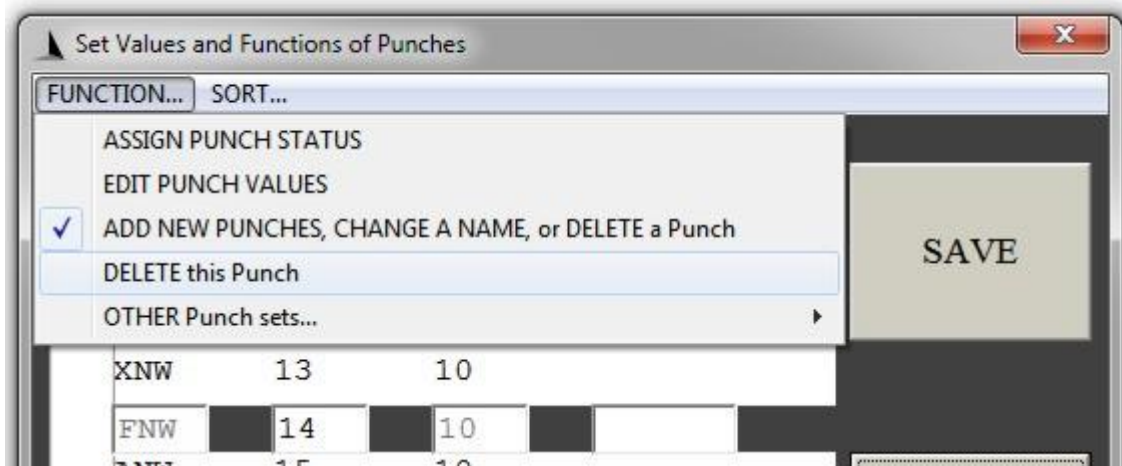
First, click the "ADD NEW PUNCHES, CHANGE A NAME, or DELETE item. This enables the DELETE function. Scroll to the punch you wish to delete, then click "DELETE this punch" from the menu. You will be queried.

3.5.6   Un-Combining Punches from other sets.

This follows the same procedure as Combining, in Section 3.5.4 above, except you click "REMOVING from your set..."

The punches from the other set will be removed from your own Punchnums.txt file. Again, you have the option of saving immediately, or inspecting before saving (or cancelling).

3.5.7   Grouping Punches at busy checkpoints.

Checkpoints close to the start of a course may have many visitors in a short time. To alleviate bottlenecks, you may have additional Punches at these checkpoints.

It is not sufficient just to have several Punches with the same point value, because someone could punch all of them to get extra points. Instead, each "group" of Punches need to be made equivalent to just one of the group.

For example, if checkpoint 21 had Punches 33, 78, and 80 also in the same place, then these extra three checkpoints 33, 78, and 80 must all have the same score value as 21, and all four Punches must be mutually exclusive.

To achieve this, the extra Punches can be "grouped" with a "GROUP" status, available from software version 45.1 onwards.

In the EVENT SETUP - PUNCH values window, select the first Punch 33, and scroll through the STATUS options until "GROUP-" appears.
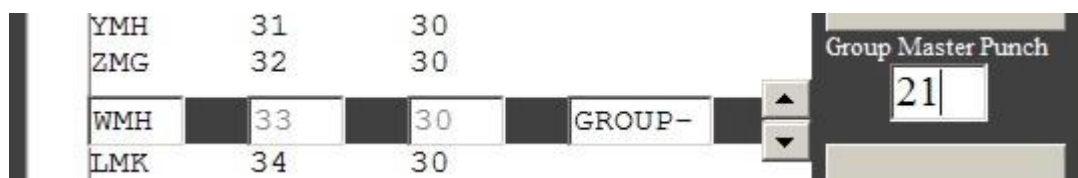
Note that a white box also appears with "Group Master Punch" written above it.

Type 21 (the number of the main Punch for this Group) into the box, as shown above. Then scroll up one line, and you will see the Group status is listed as G-21 for Punch 33.

Repeat this procedure for Punches 78 and 80.
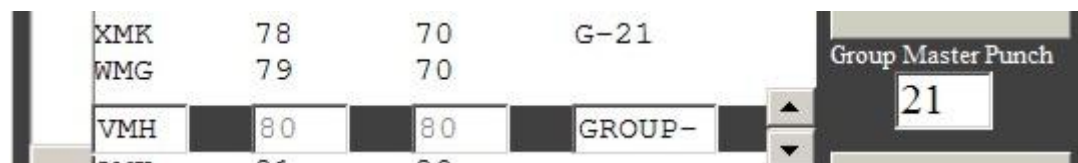
You may also make Punch 21 as a G-21 group member but this is not necessary.

Note that you should _NOT_ edit the Punch values or names! Do not group STATUS punches either, such as BRIEF or FINISH.

This spreadsheet contains Macros which will generate the tab-delimited text file needed for importation to RogaineSCORE. If properly positioned in your event folder tree, it will also save the text file directly into your event's "TeamData" folder.

When you create a new event from the Folder... Workspace menu, the EventEntries.xls file will be copied into your new folder but will be re-named to adopt the event name. For example, if you create an event (see Section 11.1.2) called "AusChamps", a folder of this name will be created and the EventEntries.xls file will be copied into it as "AusChamps.xls".

3.6 Creating a link to SPREADSHEET data.

This link is used to automate the creation of Tagnums.txt in the TAGS to TEAMS window, which is now largely obsolete. If you are using the spreadsheet EventEntries<date>.xls, or a file based on this, you will probably not need to establish this spreadsheet link, as the Excel file contains macros which will automatically generate **Tagnums.txt**.

However there are occasions when you might still wish to use the Tags to Teams window. One important use is if you are assigning tags randomly, at registration, by placing each tag in the

reader. This can be very useful if your tags have been randomly combined with extra tags from another set. See section 18.

Your spreadsheet will contain many columns, with Team numbers in one column, names of competitors in another (or several) columns, which Class each team has entered in another column, which Course in another, and more columns relating to payments, Tee shirt sizes, addresses, etc etc. The order of the columns across your spreadsheet doesn't matter, except that if people's names are in separate columns, these columns should be adjacent to each other. Examples of suitable files are given in Section 3.6.1

NOTE: The CLASS entry should show major ones only, eg. XSV and not X,XV,XSV.

TEAM NAMES and HANDICAPS are optional additional columns.

RECOMMENDED FORMAT: Use the same format as EventEntries<date>.xls.
- ColumnB   Team number
- ColumnC   Tag ID code or blank
- ColumnD   Category
- ColumnE   Name of ONE person
- ColumnF   Team name (if using.)
- ColumnG   Course
- ColumnH   Hamdicap (A pre-added score for this team; seldom used.)

A separate row is used for each person.

If the information in your spreadsheet is saved as a tab-delimited text file, you can import it directly into Navlight. An excel file called EventEntries<date>.xls is available which has a built-in Macro (Ctrl+Shift+T) to create the tab-delimited text file.

It is also very useful if each column has a "heading" such as Team number, names, categories, course, handicap, team names etc. While this is not essential, it simplifies the process of selecting which columns contain the needed data.

Click the "Spreadsheet link…" button from the EVENT SETUP window to show the "Choose Spreadsheet columns" window.
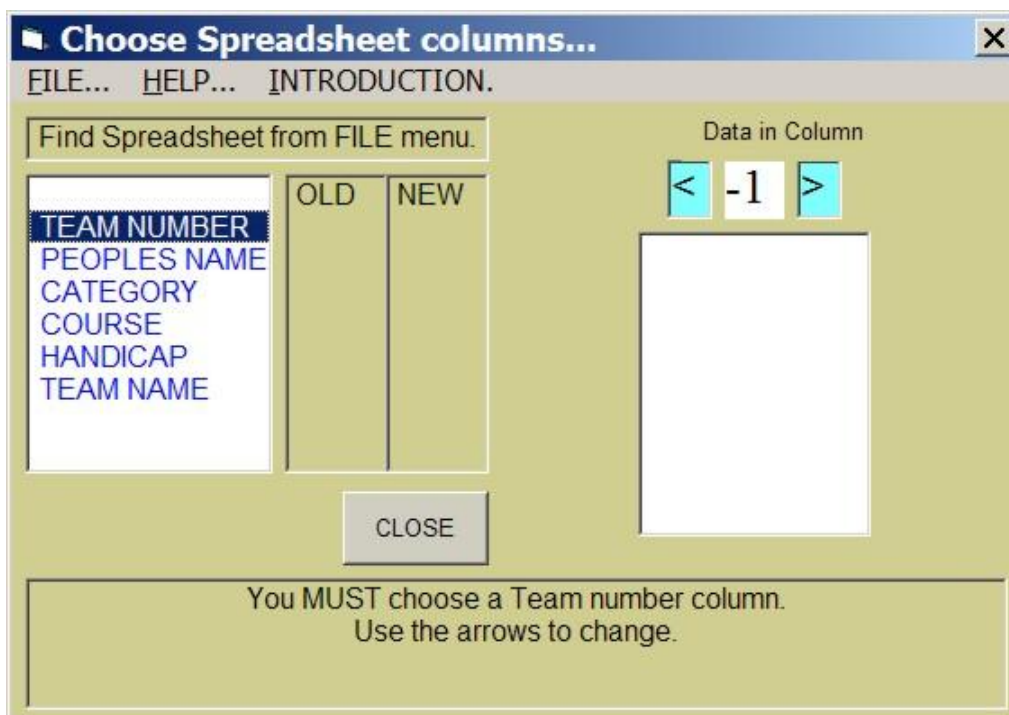
Hint - Use the HELP and INTRODUCTION menus to display the information written below.

First, you must find your spreadsheet file and copy it into the TeamData subdirectory, which was created automatically when you started the EVENT SETUP window. This copying will occur automatically when you use the FILE… Menu to Choose Spreadsheet text file.

When you click this, a standard Windows FILE dialog box opens. Use this to locate your spreadsheet file, and click Open.
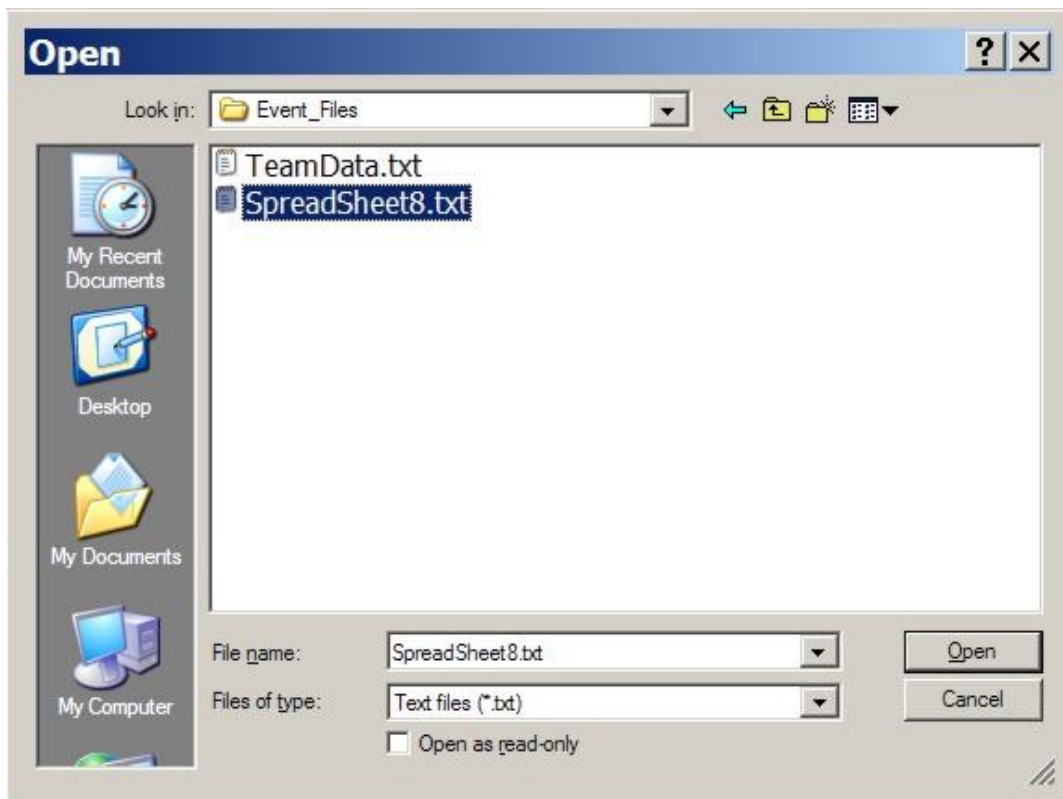
Clicking Open copies the file to the TeamData subdirectory automatically.

CAUTION: RogaineSCORE takes its data from the files in the TeamData subdirectory. Any changes to your spreadsheet file will not automatically copy back to here unless you either repeat the above step, or copy directly yourself.

After you click OPEN, the Spreadsheet window changes as the spreadsheet data is read -
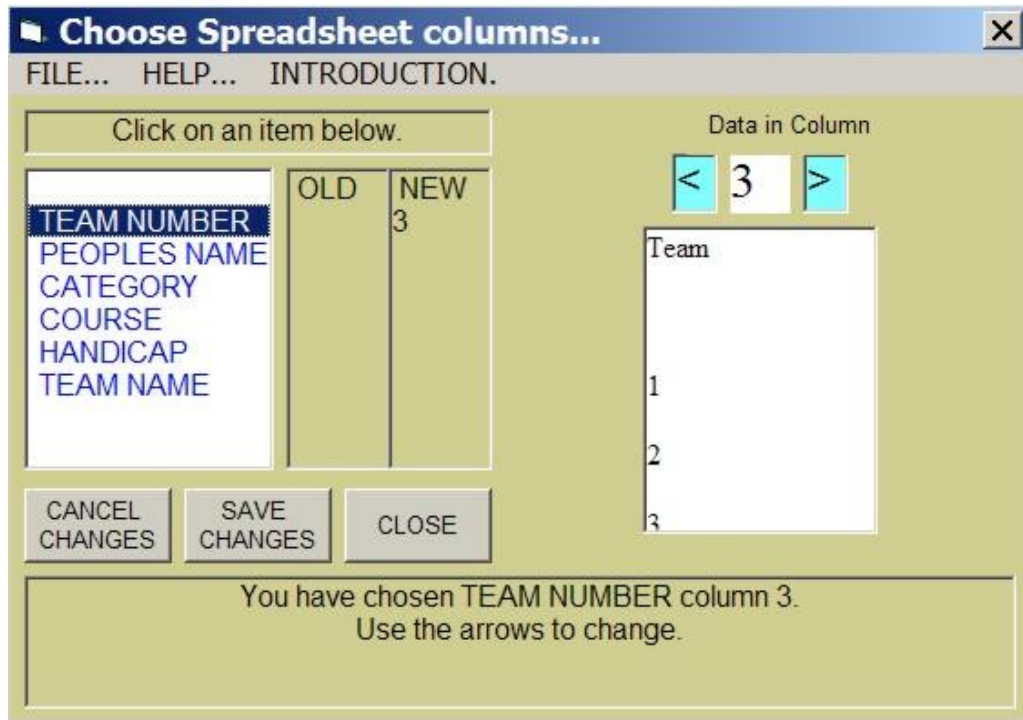
You choose one of the six items in the left list by clicking on it. Doing this chooses a default column (based on the column headings in your spreadsheet) and the contents of that column are displayed in the right list.

If the displayed column isn't correct, use the left and right arrows to alter it. You will see that your chosen column shows in the "NEW" label on the left.

The "OLD" label shows the saved choices. It is blank here because the selections have not yet been saved.

The PEOPLES NAME item causes two lists to show on the right - -
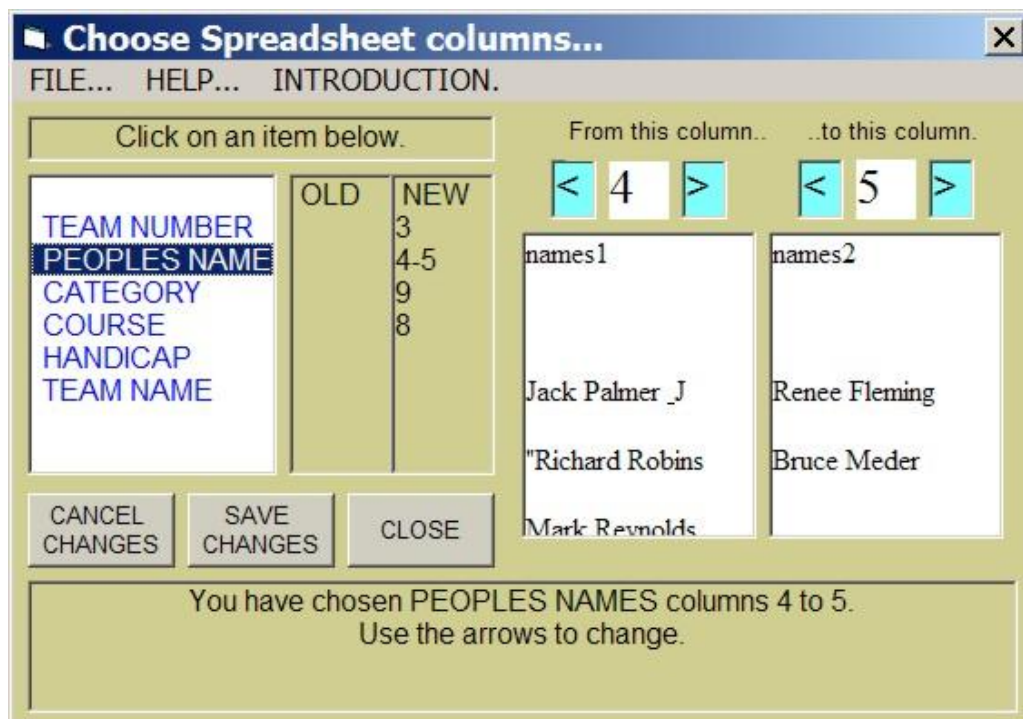
This allows you to have the names across several columns in the spreadsheet. If your names are all in one column, as is usual, then make the two columns the same.

Note that you can have team member's names below each other in the same column, as long as the team number hasn't changed.

IMPORTANT: Choose Column 0 for any item which you are not using, such as Handicap and Team Name.

Click SAVE CHANGES when your choices are finished. Notice that the NEW label is empty, and the OLD column shows the saved record. This is how it re-appears if you open this window at a later date.

3.6.1   Spreadsheet formats.

Team numbers, names, categories, and course information is best prepared in an EXCEL file, saved as tab-delimited text. These can be in any columns you choose because you have the option to select the columns you need, as described in Section **Error! Reference source not found.** above. You may have the names all in one cell, or across several cells, or on separate lines.

These are all suitable text file examples. In Example 4, multiple columns are required for the Names.

EXAMPLE 1 has all names in the same cell in column 3.

Team No.	Paid	Names
1		David Wall,Pete Douglas
2		Martin Leslie
3		Guy & Hilaa Mulligan
4		Michael Smithson
5	N	Bevan Pratt, Penelope Claridge, Shaun Barnes
6	N	Edward Evans, Abigail Arthurs

EXAMPLE 2 has the names in consecutive rows in column 4. Note the repeated team numbers in column 2. This is not necessary but is not a problem. Note also the column header words.

LINE	TEAM	NAMES
1	1	David Wall
2	1	Pete Douglas
3	2	Martin Leslie
4	3	Guy Mulligan
5	3	Hilaa Mulligan
6	4	Michael Smithson
7	5	Bevan Pratt
8	5	Penelope Claridge
9	5	Shaun Barnes
10	6	Edward Evans
11	6	Abigail Arthurs

EXAMPLE 3 has the same data but with the team number only on the first line of each team. Note also that the column headings are not used; this is of no consequence.

1	1	David Wall
2		Pete Douglas
3	2	Martin Leslie
4	3	Guy Mulligan
5		Hilaa Mulligan
6	4	Michael Smithson

7	5		Bevan Pratt	
8			Penelope Claridge	
9			Shaun Barnes	
10	6		Edward Evans	
11			Abigail Arthurs	

EXAMPLE 4 has the names are listed in different, but adjacent, cells on the same line.

Twilight	1	David Wall	Pete Douglas	
Twilight	2	Martin Leslie		
Twilight	3	Guy Mulligan	Hilaa Mulligan	
Twilight	4	Michael Smithson		
Twilight	5	Bevan Pratt	Penelope Claridge	Shaun Barnes
Twilight	6	Edward Evans	Abigail Arthurs	
Twilight	7	Richard Borrett	Matthew Tuite	Michael Pay
Twilight	8	Sarah and Lester Sinton		

All these tab-delimited text files were generated in an Excel spreadsheet, and saved as tab-delimited text. All are suitable.

Note that all the names, whether from different columns, different rows, or all in the same cell, are collated into the Tagnums.txt file when this is linked to the spreadsheet.

3.7 Error checking.

After Event Setup is completed, you can do some basic error-checking from the ERRORS... menu.
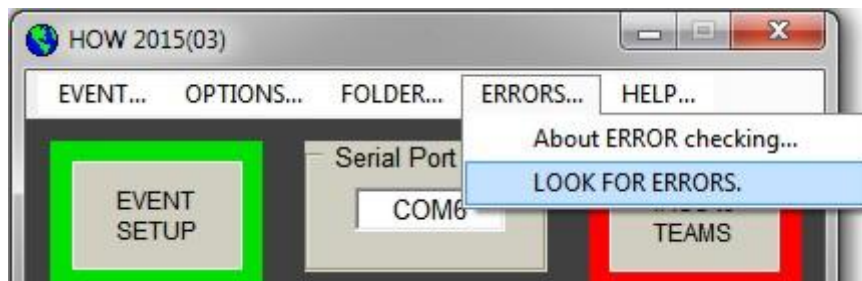
Checking for errors examines your event setup files and your Tagnums.txt file.

It looks for errors such as Course start times being later than Finish times etc, and the existence of Start and Finish punches.

It warns if the Tagnums.txt file contains courses or categories which do not match the course setups.

It does various other error checks also. Most of these errors happen because the Tagnums.txt file has been hand-edited. This should be avoided, because Tabs and Spaces can look the same but they aren't.

The results are displayed in a window (which will allow the results to be printed from the FILE... menu.)

```
ERRORS...                                              _ □ X

FILE...    ZOOM....
    Checking PUNCHNUMS.TXT
     Checking Punchnums.txt
    WARNING - You have no FINISH punches.

    Checking PUNCH_OPTIONS.TXT

    Checking CATEGORIES.TXT
    WARNING - Major Category XV is duplicated on lines 9 and 14

    Checking TAGREADER_OPTIONS.TXT for Course information.
    Warning - Course 6Hr Start time is after Finish time.

    Checking TAGNUMS.TXT
    WARNING: These teams do not have two tags -
    3,4
```

These checks do not provide any correction options. If you used the spreadsheet 'EventEntries.xls' or a re-named version, then you should use the error-checking routine provided in that. It is more powerful than this one.

4 PREPARING PUNCHES – THE "PROGRAM PUNCHES" WINDOW.

Before placing Punches in the field, they must be "programmed". This erases data from previous events, loads the Event Reference Time, and controls how the internal red light behaves before and after the event. These details should have already been set from the EVENT SETUP Window.

From the System Manager, click the "PROGRAM PUNCHES" button.
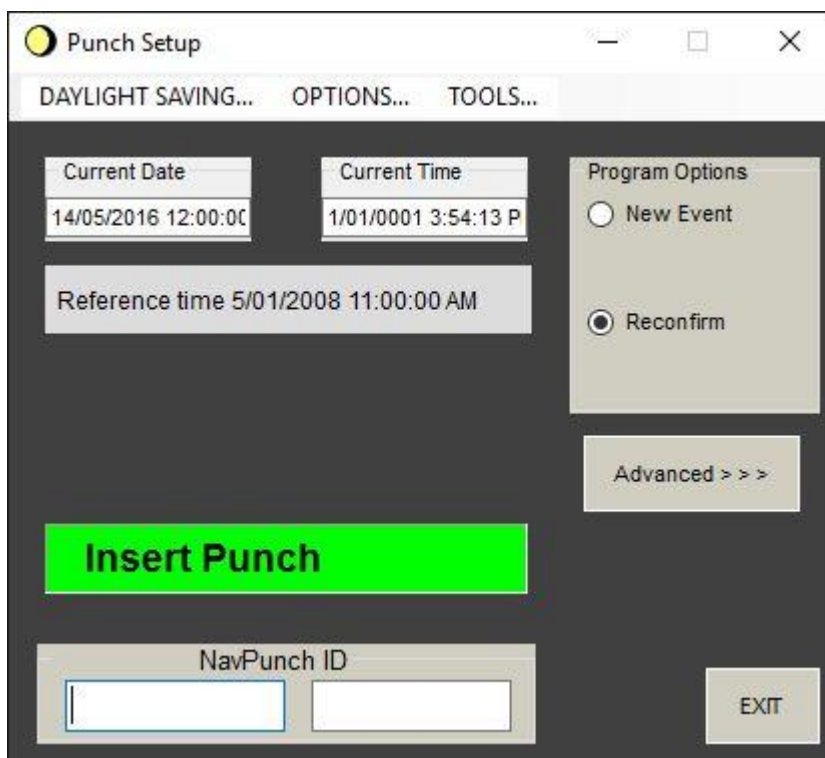
There are two main Options from this Window; New Event and Reconfirm (default).

To prepare Punches for field placement, **click the "New Event" Option**. You will get a warning message that this will erase all Punch Data. Confirm, then place all the Punches in the Reader, one at a time. You may have to wait up to five seconds for each Punch.

As each Punch is inserted, its clock is set, and its battery condition measured. If the battery voltage is below a thresh-hold, or the clock setting is not accurate, a flashing display will result. You can ignore the warning and live with the error, or reset the clock by clicking the "Correct the error" button.

The **Default Option** is "**Reconfirm**". This allows you to re-insert already-programmed Punches to observe their settings. No re-programming occurs, but the battery condition is shown and the time error displayed. The Punch Clock is read to an accuracy of 0.06 seconds. If the error compared with your computer clock is greater than the thresh-hold set in the "Advanced >>>" screen, the display will flash. You are given the option of correcting the Punch Clock.

This Clock-adjustment is very useful for synchronising all the "FINISH" Punches on the day of the event, to correct any clock drift since they were originally programmed.

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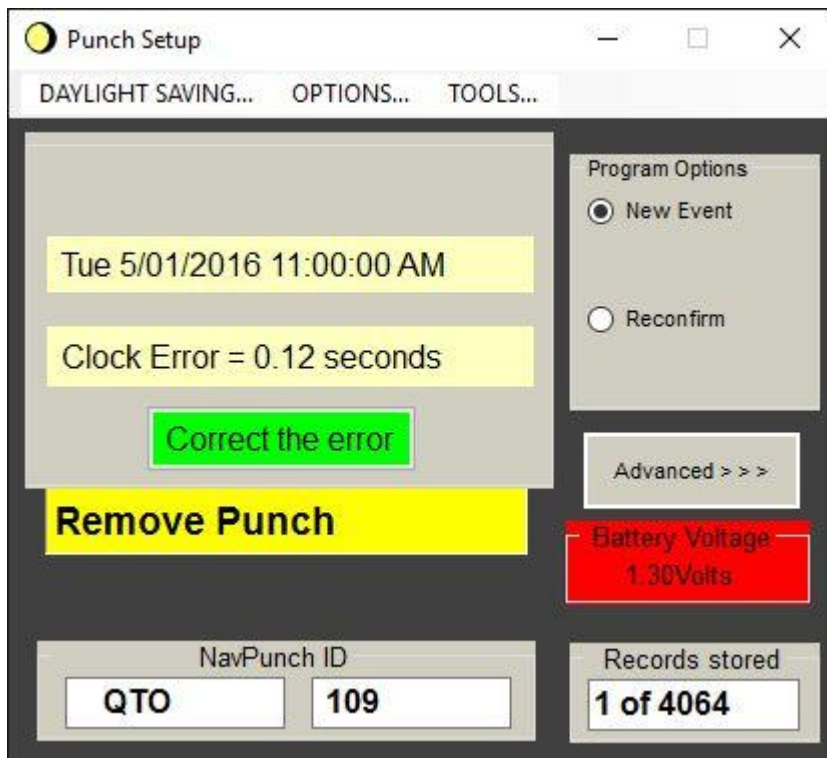
The "Reconfirm" display when a tolerance error is detected.

Clicking the "Advanced >>>" Button shows the tolerance levels before a warning is given. It also shows the Punch Options controlling the light.
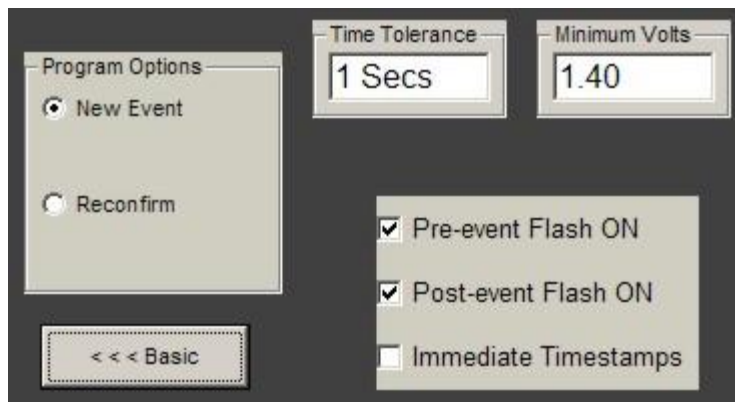
The Tolerance limits may be altered by entering new values in their display boxes. A minimum voltage of 1.2 volts or greater is recommended.

CAUTION: The three checkbox settings are applied to any Punch which is connected, regardless of whether you are erasing them or merely reconfirming them. You can thus change the settings without re-erasing and re-programming the Punches. This is useful, for example, if the Pre-event Flash must be OFF for some Punches, but ON for others.

Restrictions to courses is an advanced option, discussed later.

4.1 Handling DAYLIGHT SAVING time changes.

Punches have their internal clocks set to your computer clock when you program or confirm them. If your computer clock changes its internal time, for example it puts its clock forward an hour when Daylight Saving comes into force in spring, any Punches programmed before then will not have their clocks altered. There will be a 1 hour error between your Punches and your computer.

**NOTE**: Allowing for this is very simple. Click the DAYLIGHT SAVING... menu, open the Daylight Saving window, and click the green button. The rest is automatic.

The rest of this section describes how it works.

4.1.1   How Time is recorded.

The "Event Reference Time" which you set is the time from which all time measurements are made. It is stored as the first line in the Punch_Options.txt file

Punches have a "seconds" counter which is incremented each second, and only the counter contents are stored in each Tag when it is punched.

When you read a Tag, your computer calculates the time of each punching by reading the counter information and adding it to the Event Reference Time, which it extracts from the Punch_Options.txt file.

The only time your computer clock is used is when a Punch is programmed or confirmed from the "PROGRAM PUNCHES" Window. The value programmed into the punch counter is calculated from the time difference between the Event Reference Time and your computer time _at the instant of programming the punch_. Although the Event Reference Time is also stored in the Punch, this is only used to give a warning if it doesn't match the Event Reference Time stored in the Punch_Options.txt file.

If your computer clock has been altered by an hour since the Punches were programmed, it has no effect on the times recorded and printed from reading the Tags. Unfortunately, all the competitor's watches were probably changed at the same time as your computer, so they will be finishing an hour earlier (or later) than the time reported on the results. This can seriously affect the Late Penalties given, unless the FINISH punches have been re-synchronised on event day (as they always should be).

When you re-confirm the FINISH Punches after the time change they will report an error of 3600 seconds. Click the "Correct the error" button to re-synchronise them to your computer clock.

4.1.2   The Punch Log file.

In software versions from 2015 onwards, a log file is created and added to every time you program a punch, re-confirm one, or correct the time in one. The file is called Punch_log.txt and is primarily intended as a debug tool. It records the punch ID code and other information, including the date and time it was programmed.

Software version 2.1.0 onwards uses this log file whenever a Tag is scored. If you create a Daylight Saving change date and time from the new DAYLIGHT SAVING window, the actual time that the punch was programmed is compared to the Daylight Change date. If the time was before that date, a time-correction is added. If the time was after the change date, no correction is made.

The correction is set up from the DAYLIGHT SAVING window described next, and is saved as the last lines of the Punch-Options.txt file. Note that the Punch_log.txt file is included in any archive file when you SAVE an event.

4.1.3   The DAYLIGHT SAVING Window.

This is accessed from the DAYLIGT SAVING menu, available from the PROGRAM PUNCHES or READ TAGS windows.
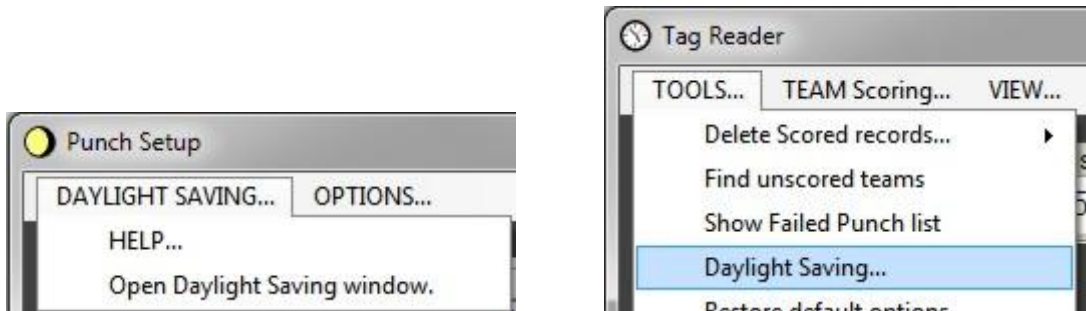
This window allows you to set the date and time of the Daylight Saving change, and how much the change is (usually +/- one hour.)
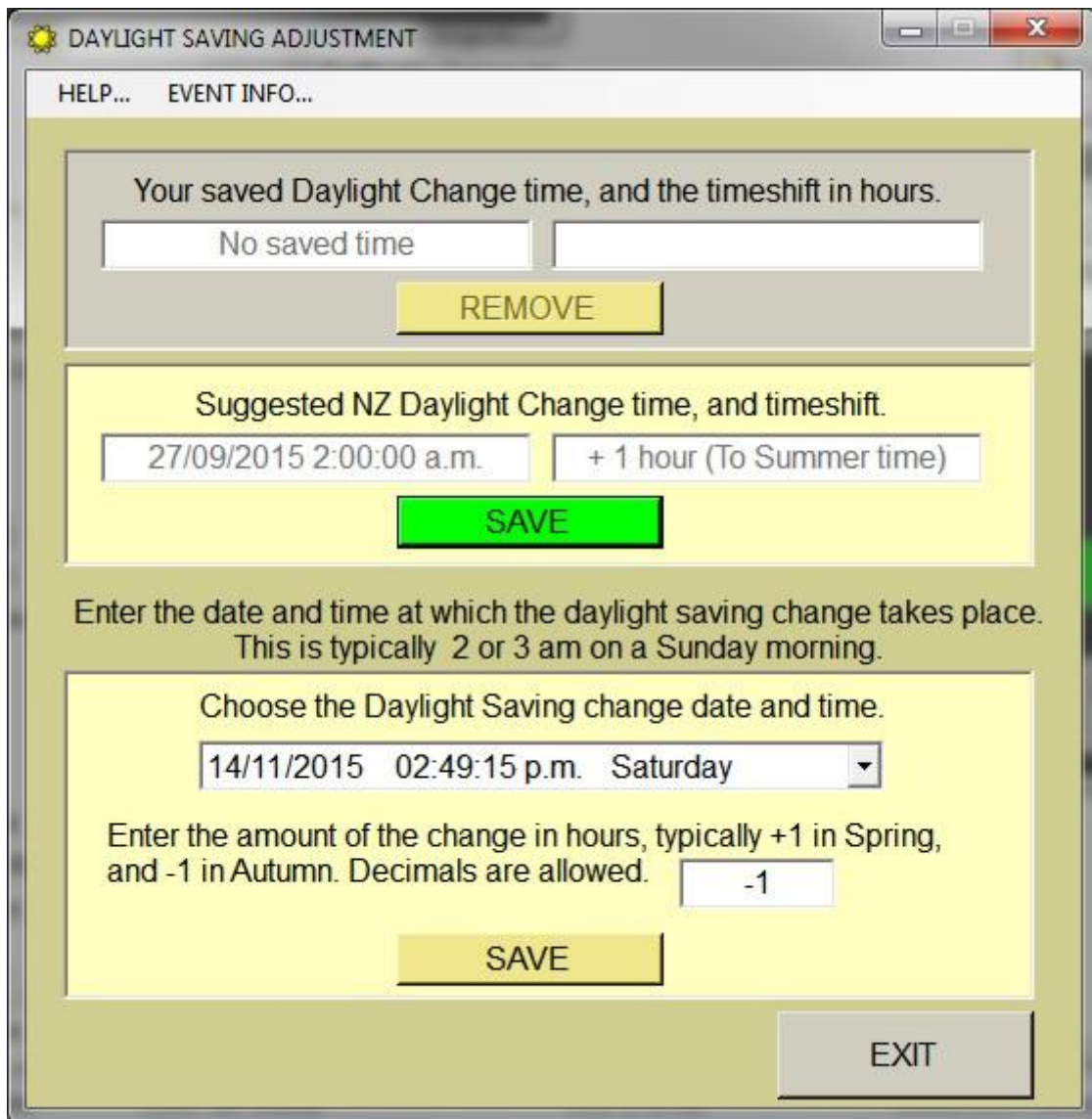
There are three "blocks" in this window.

1. The top block reports the date and time, and time correction, currently saved in Punch_Options.txt. It is for information only.

2. The middle block, with the green button, calculates the nearest Daylight Saving change time and amount of shift, based on the standard rules applied in New Zealand or Australia. If your computer region is set to NZ, it uses the NZ rules; if it is set to Australia, it uses the Australian rules. (NZ starts Summer time a week earlier than Australia, but both go back to Standard time on the same date). You can implement this change simply by clicking the green button – that's all you have to do. The rest is all automatic. There is no harm in clicking this button even if your event does not cross a change boundary between programming punches and the event day.

   Note: The Australian states of WA, NT, and QLD do not have daylight saving so don't click the green button; if you do, remove it by clicking the 'Remove" button in the top block.

3. The last block allows you to over-ride the recommended change date, by entering your own.

4.1.4   Changing Time after reading Tags.

If you have started, or finished, scoring an event, and realise that you have not allowed for a time-shift, you can do so retrospectively. Use the Daylight Saving window to set the date and time of change. Then you must re-score the tags using the Re-score >> extension, and re-scoring ALL tags.

4.2 Combining Punches from other sets.

For significant events, you will probably want to have two Punches at each CP to allow for failure, and intensive use. If you borrow a set from other organisations, you must add these Punches to your Punchnums.txt file. It is perfectly alright to have several Punches with the same Punch Number (eg.27) because each Punch has a unique ID code built into it.

You should place the Punchnums.txt file you want to add, into another folder. Create a new folder RogaineEvents\OtherSets or something similar. Create a sub-folder for each set, and name the sub-folder after the set, for example "VRA" or "ACT" or "QRA" etc. Then place the Punchnums file from each source into the appropriate folder. If you are using their Tags as well, place the Tagnums.txt files also.

The punches are added from the "EVENT SETUP ... PUNCH values – window.
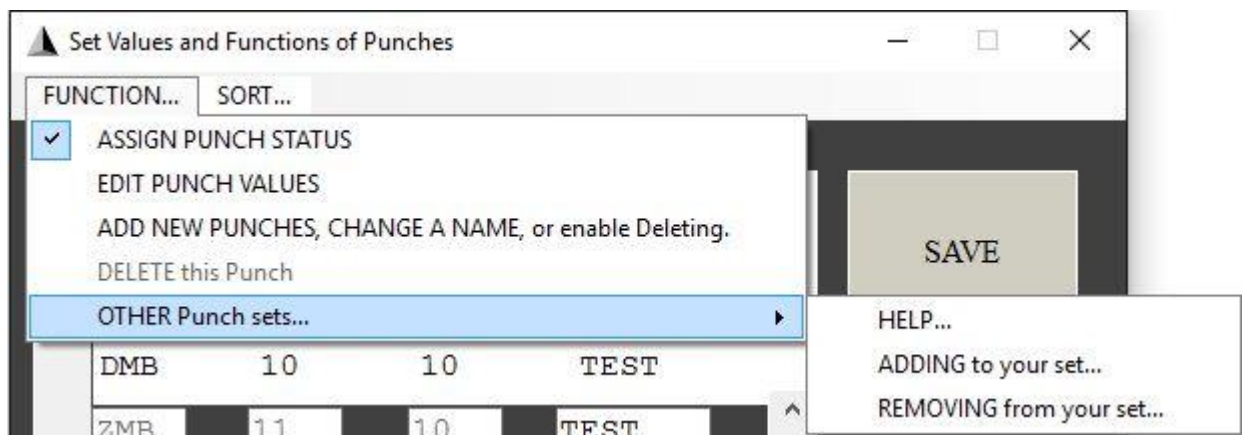
Click FUNCTION .. OTHER Punch sets .. and then choose HELP .., or ADDING to your set. To add, click ADDING to your set. A file explorer window will open and you select the Punchnums file you want to add. The punches are added at the end of your Punchnums file and you are asked if you want to SORT before you SAVE.

Repeat for any other punch sets you want to add. Where several punches have the same value, eg. 23, you can use some of them as STATUS punches and the others will still act as scoring punches.

4.2.1   Un-Combining Punches from other sets.

This follows the same procedure as Combining, in Section 5.1 above, except you click "REMOVING from your set..."

The Punches from the other set will be removed from your own Punchnums.txt file. Again, you have the option of saving or ignoring.

4.2.2   Physically sorting Punches back into other sets.

Open the PROGRAM PUNCHES window.
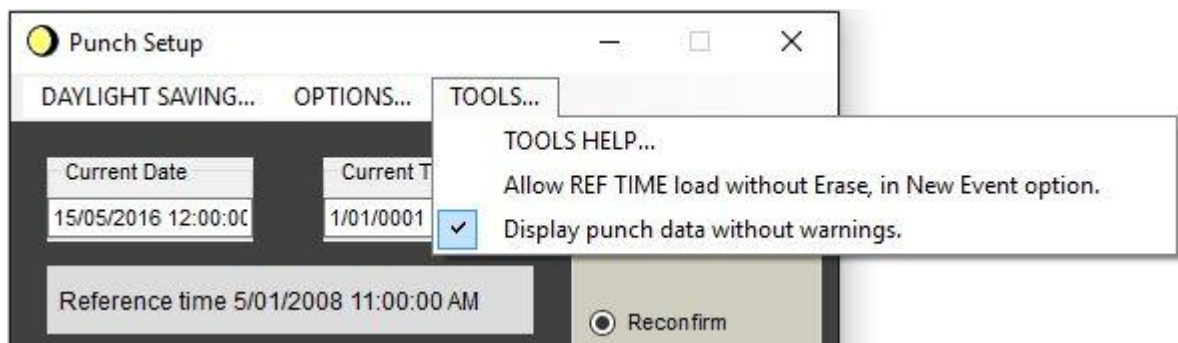
Use TOOLS.. TOOLS HELP… for more information. You must create a file called PunchRanges.txt in your event folder. Enter a line for each Punch file you wish to sort into. Each line must be the full path to each Punchnums.txt file, for example C:\Users\Public\Documents\RogaineEvents\Nevis2014\PunchNums.txt

As you place each Punch in the reader, the background colour of the Punch Number will change according to which of the Tagnums.txt file it belongs to. The colour sequence is White (for your set), Yellow, Lime, Blue, Magenta, Pink, Turquoise, and Orange. Light Gray is used for all remaining ranges. You can have up to seven paths to different Punchnums.txt files.

Punches from your set show white. If the punch is also in another PunchNums.txt file, the Range colour over-rides the white.
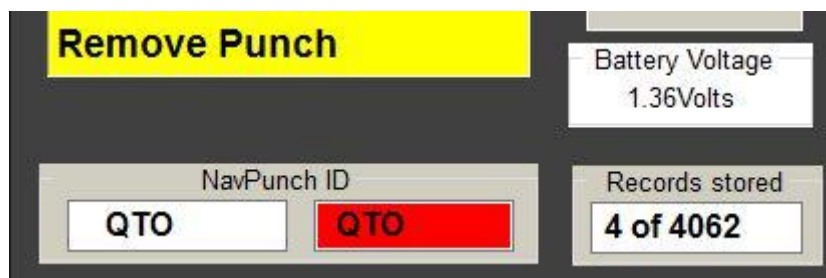
If a match can't be found, the colour is red.

5 PREPARING TAGS – THE "ERASE TAGS" WINDOW.

Again, self-explanatory options are available from this window. Once an option is chosen the Tags are placed into the Reader unit to operate the function automatically.
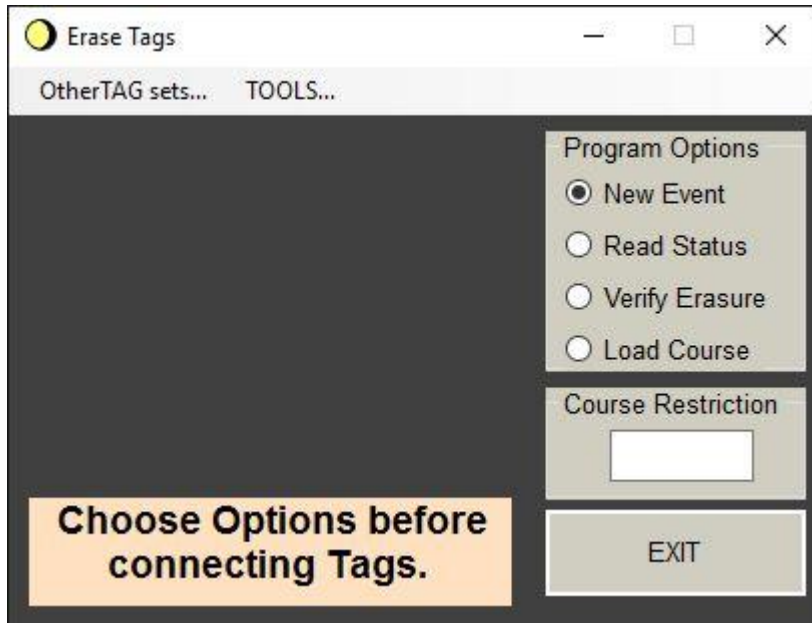
"**New Event**" will **Erase Tag Memory**. This is the most likely use of this Window. It is the default Option when the Window is opened.

"**Read Status**" does not alter the Tag in any way, but it displays the memory usage, the Tag ID code, and the Course Restriction in the Tag.

"**Verify Erasure**" checks that the Tag is erased, and programmed with any course Restriction which you have entered into the Course Restriction Box.

Course Restriction is an advanced feature and should be left blank. "Load Course" enters only the course Restriction into the Tag. See the "Advanced" section.

Inserting a Tag with "Read Status" gives the window below:

40
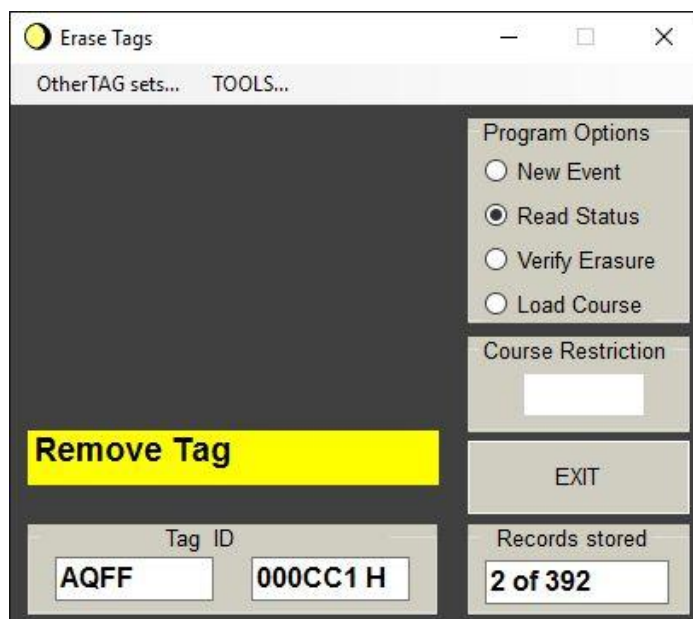
If the "Records stored" is less than say 100 of 393 it is OK to use it as is, provided a "BRIEF" punch is used before the start. However it will save time and paper when the Tag is scored if it is erased before each event. Use the "**New Event**" option for this, and insert all the tags you wish to use in turn. The operation is quite quick; about 1 second for each Tag.

If you think the Tag is already erased and you want to check it, use the "**Verify Erasure**" option. If not erased, a message will flash in the large vacant area of the window.

Note: The Course Restriction is an advanced feature and will not normally be required. You should leave it blank. It is discussed in more detail in the "Advanced" section.

5.1 Combining Tags from other sets.

For large events, you may have insufficient Tags. If you borrow a set from other organisations, you must add these Tags to your Tagnums.txt file.

It is dangerous to create a Tagnums.txt file which may list tags which you don't have. These could get assigned to people.

It is also risky to use un-erased Tags.

The SAFEST method of combining Tag sets is to delete your Tagnums.txt file, and creating a new one by erasing (=New Event) all of the tags you have for the event. Erasing will automatically add them to a new Tagnums.txt file.

However, if you are confident that the new Tags are erased, and that you have them all, you can combine the Tagnums.txt files with the procedure below.

You can combine the two Tagnums.txt files directly, from the ERASE TAGS Window.
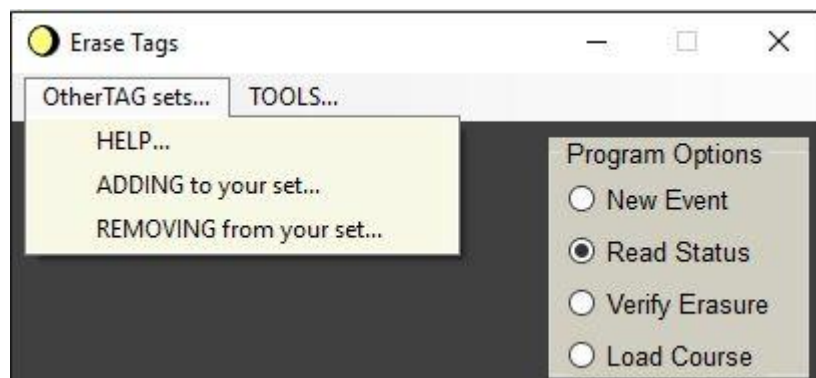
Use the HELP Menu for more information.

You must place the Tagnums.txt file you want to add, into another folder; perhaps the TeamData or Temp folders; it doesn't matter. If you are combining more than one new set, it may pay to create a new folder RogaineEvents\ OtherSets or something similar. Create a sub-folder for each set, and name the sub-folder after the set, for example "VRA" or "ACT" or "QRA" etc. Then place the Tagnums file from each source into the appropriate folder. If you are using their Punches as well, place the Punchnums.txt files also.

Click "ADDING to your set…" A Windows Explorer box will open and you locate each file, and click "Open". The rest is automatic.

You will be offered the chance to save or ignore the new Tagnums file.

If you have several other Tag sets, repeat this procedure for each set, but make sure that each one is in a different folder.

5.1.1   Un-Combining Tags from other sets.

This follows the same procedure as Combining, in Section 5.1 above, except you click "REMOVING from your set..."

The Tags from the other set will be removed from your own Tagnums.txt file. Again, you have the option of saving or ignoring.

5.1.2   Physically sorting Tags back into other sets.

Click the TOOLS.. Enable Tag Sort menu.
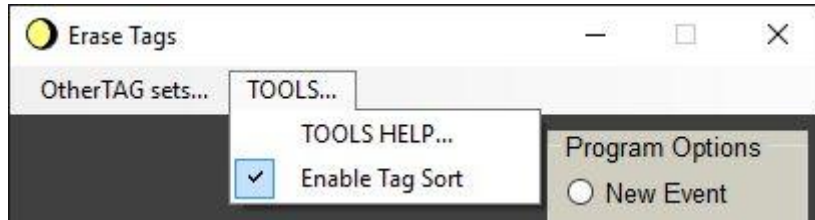
Use TOOLS.. TOOLS HELP… for more information. You must create a file called TagRanges.txt in your event folder. Enter a line for each Tag file you wish to sort into. Each line must be the full path to each Tagnums.txt file, for example C:\Users\Public\Documents\RogaineEvents\Nevis2014\TagNums.txt

As you place each Tag in the reader, the background colour of the Tag Number will change according to which of the Tagnums.txt file it belongs to. The colour sequence is White (for your set), Yellow, Lime, Blue, Magenta, Pink, Turquoise, and Orange. Light Gray is used for all remaining ranges. You can have up to seven paths to different Tagnums.txt files.

Tags from your set show white. If the Tag is also in another TagNums.txt file, the Range colour over-rides the white.

If a match can't be found, the colour is red.

6 ASSIGNING A TAG CODE TO A PERSON.

– USING THE EVENTENTRIES.XLS SPREADSHEET.

This spreadsheet contains programs (called Macros) which will assign Tags to people or teams, check many of the other files which contain course information and categories, and create Tagnums.txt.

The spreadsheet MUST be in the event folder for each event, along with Tagnums.txt.

If you created a workspace using RogaineSCORE from C:\Program files\Navlight Rogaine Scoring, then the spreadsheet should exist in your event folder, probably re-named to the name of the event folder.

Open it, and it should look like this.
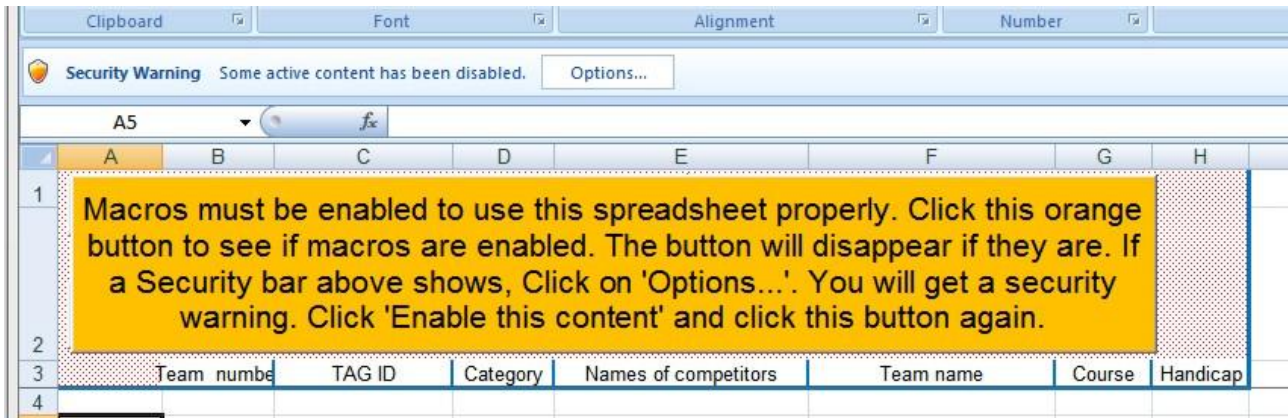
Note the Security warning. This is Windows 7. Other versions of Windows may give a different warning about Macros, and you must Accept them.

Click on the "Options..." button next to the Security warning. You get this ---.
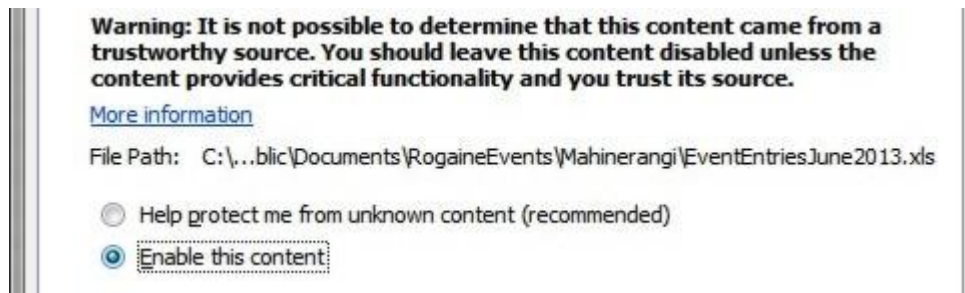
Click on "Enable" and click OK at the bottom of the window.

The "Security Warning" should disappear, leaving the big orange button. Click on the orange button. It should change momentarily to a yellow button.
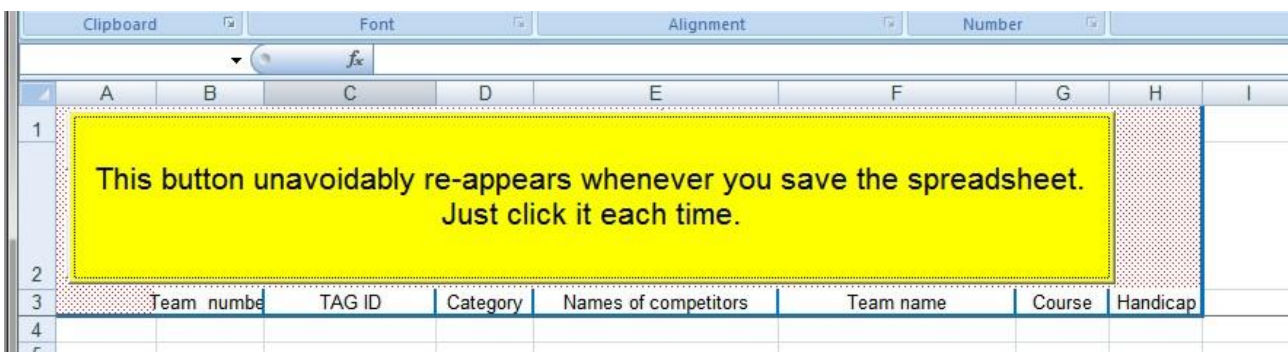
This button lasts about a second, and then disappears to show the Macro control buttons.

The yellow button appears momentarily every time you SAVE the spreadsheet. This is unavoidable. Blame Microsoft.

These are the Macro control buttons.
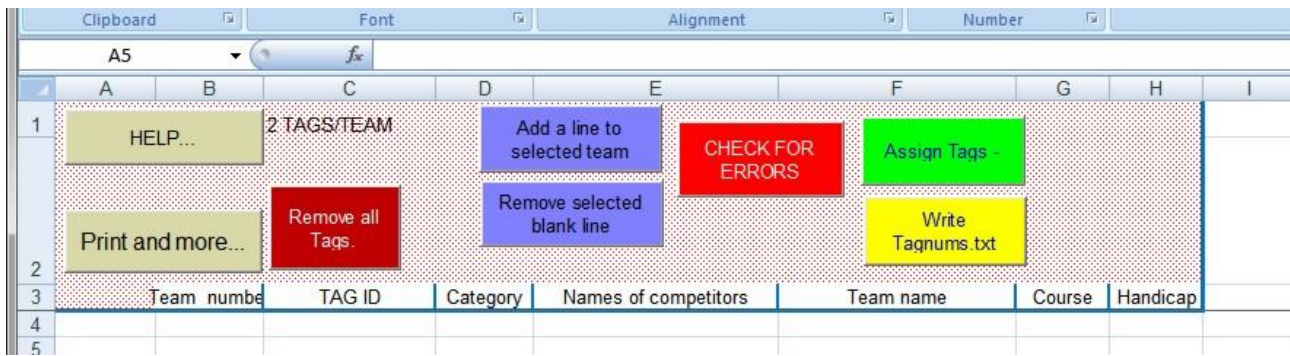
The HELP button gives extensive information about using the spreadsheet. The fundamentals are:

- Each team must have a numerical team number entered in Column "B". Only the first line of each team needs the number, but it can go on every line.

- Each team should have a Category, which matches the categories in your Event Setup. Multiple categories are allowed, such as J,M or J,W or F,X. Standard categories such as MSV do not need the sub-categories MV and M; this should be handled in your Event Setup – Categories.

- The name of each PERSON in the team MUST be listed on a separate line. Commas are not allowed! A three-person team will need three lines. A team name is optional, and is entered on the first line only.

- The Course for each team must match the course names you created in your Event Setup. These may be typically 24 Hr, 12 Hr, 6 Hr, but can be anything as long as they match your Event setup EXACTLY, including spaces.

- A handicap is an optional point value which will be added to the team's final score. Negative values are allowed.

This is an example of how entries should look.

When you have most, or all, of the people entered, you can click on "Assign Tags –". At this stage, you will be asked how many tags per team you want, and the words in cell C1 above will change to reflect your choice. Once made, it cannot be changed unless you "remove all Tags".

An error check is performed, so you will get a message screen also:

Team 1 inconsistencies in Not enough Tags,
Team 3 inconsistencies in Not enough Tags,
Team 4 inconsistencies in Not enough Tags,
Team 5 inconsistencies in Not enough Tags,
Team 6 inconsistencies in Not enough Tags,
Team 7 inconsistencies in Not enough Tags,
Team 8 inconsistencies in Not enough Tags,
Team 9 inconsistencies in Not enough Tags,
Team 10 inconsistencies in Not enough Tags,
Team 11 inconsistencies in Not enough Tags,
Team 12 inconsistencies in Not enough Tags,
Team 13 inconsistencies in Not enough Tags,
Team 14 inconsistencies in Not enough Tags,
Team 15 inconsistencies in Not enough Tags,

Click OK, and Tags will be assigned.

	Team number	TAG ID	Category	Names of competitors	Team name	Course
4	1	ANAQ 1A	XV	Richard Robinson		NZchamps
5		AOAQ 1B		Tamsin Barnes		
6				Vivienne Prince		
7	3	ARAQ 3A	XSV	annie sanderson		NZchamps
8		ASAQ 3B		max Kerrison		
9	4	ATAQ 4A	XSV	Emma de Lacey		NZchamps
10		AUAQ 4B		Guy de Lacey		
11	5	AVAQ 5A	MSV	Richard English		NZchamps

Like any spreadsheet, you can move people around, add more to a team (by adding a line to the team where the active cell is), change courses and categories, and move Tag ID codes to different people or teams.

Whenever you click "Assign Tags", only those people or teams who need more tags will be assigned.

 NO ALREADY-ASSIGNED TAGS WILL BE ALTERED.

Finally, you must click "Write Tagnums.txt" and save your spreadsheet. You can repeat this as often as you need, to handle late entries, withdrawals etc.

6.1 Changing the number of tags per team.

When the spreadsheet first opens, the cell C1 may say "2 TAGS/TEAM". This is the default option, but for championship events you will need 1 Tag per person, and for very large events you may have only 1 Tag per team.

As long as NO tags have been assigned, you will be given the choice when you click "Assign Tags-". Once any Tags have been assigned, the choice is fixed and cannot be changed unless you click "Remove all Tags". Then you can re-assign, and the options will be offered again.

6.2 Printing Tag lists.

Click the "Print and more..." button.
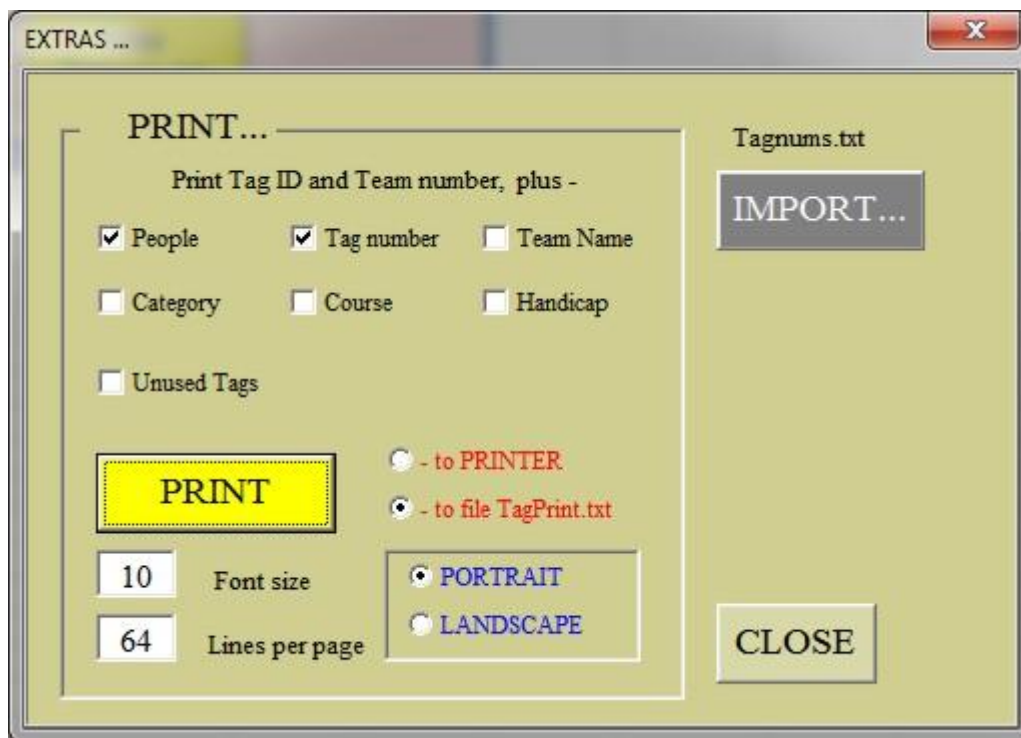
The choices are self-explanatory. Click your choices, and then click PRINT.

6.3 Importing an existing Tagnums.txt.

You can import an existing Tagnums.txt file into your spreadsheet, complete with Tag ID codes, people's names etc.

CAUTION - - Make sure that the file you import has the **SAME TAG CODES** as the tags you are using. Otherwise, you will erase your own Tagnums.txt and you will not have the tags that you assign.

You must delete any entries from row 4 downwards that may already exist. Then, click the "IMPORT..." button from the "Print and more..." window.

A Windows Explorer window will open. Find the Tagnums.txt you want to import and click "Open".

6.4 Loading and Saving Tagnums.txt.

Whenever you open the spreadsheet, your existing Tagnums.txt is loaded automatically, but ONLY THE TAG ID CODES ARE USED. Other information is ignored, since the spreadsheet is the master holder of all the other information.

You re-create Tagnums.txt by clicking the yellow "Write Tagnums.txt" button. This writes Tagnums.txt with all the information from your spreadsheet. All un-used tag ID codes are also saved, so your Tagnums.txt file still holds all your tags.

MAKE SURE YOU WRITE TAGNUMS.TXT before closing, if you wish to update the original.

6.5 Saving your spreadsheet.

When you SAVE or CLOSE the spreadsheet, the big orange button re-appears –
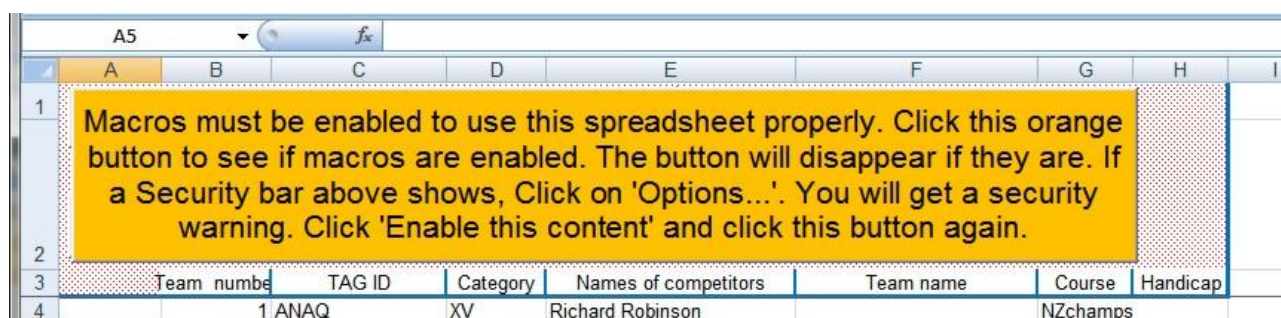
This is unavoidable, because the saved file must show this button on re-opening. Just click the orange button. It changes to yellow for a second then disappears.

7 ADVANCED SCORING – THE "READ TAGS" WINDOW.

When the READ TAGS button is clicked the window below opens. (Note: A simpler scoring window is available. See Chapter 8 below.)
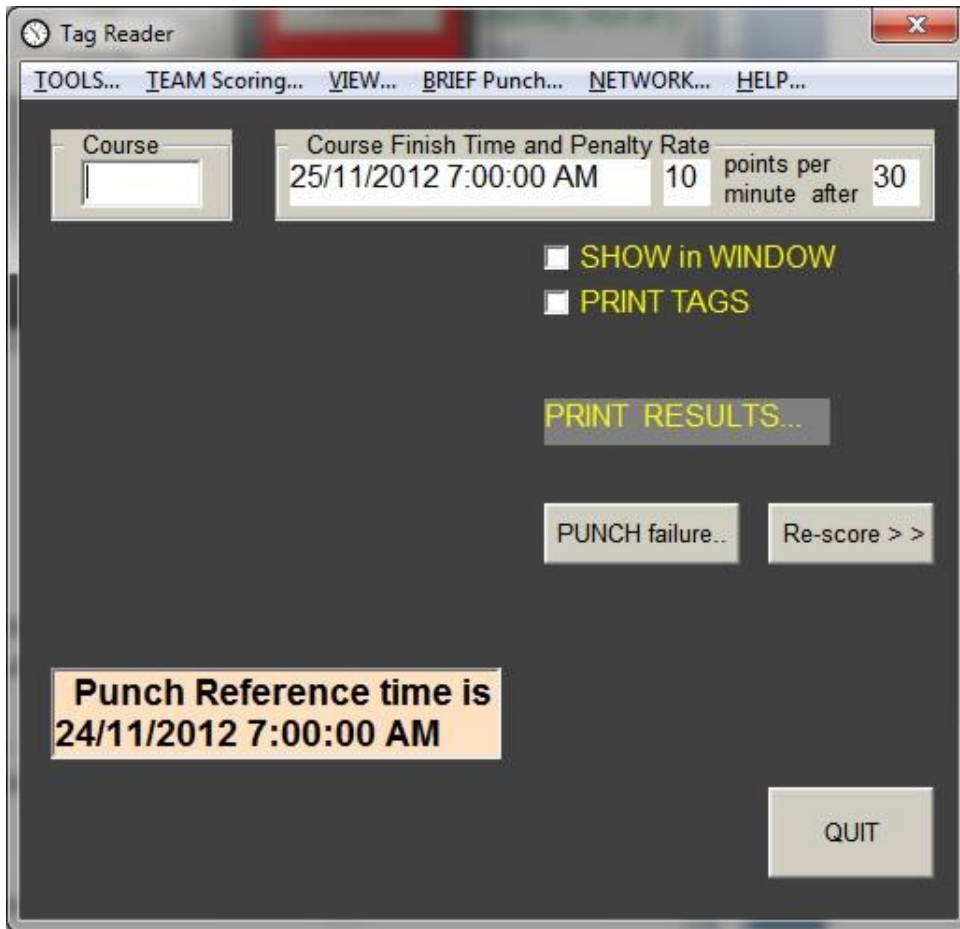
7.1 Scoring the Tags.

When ready, simply insert Tags and the score will display in the window. The course number is found from the Tagnums file already created, and this selects the appropriate scoring options. The displayed score will include late penalties and disqualification.
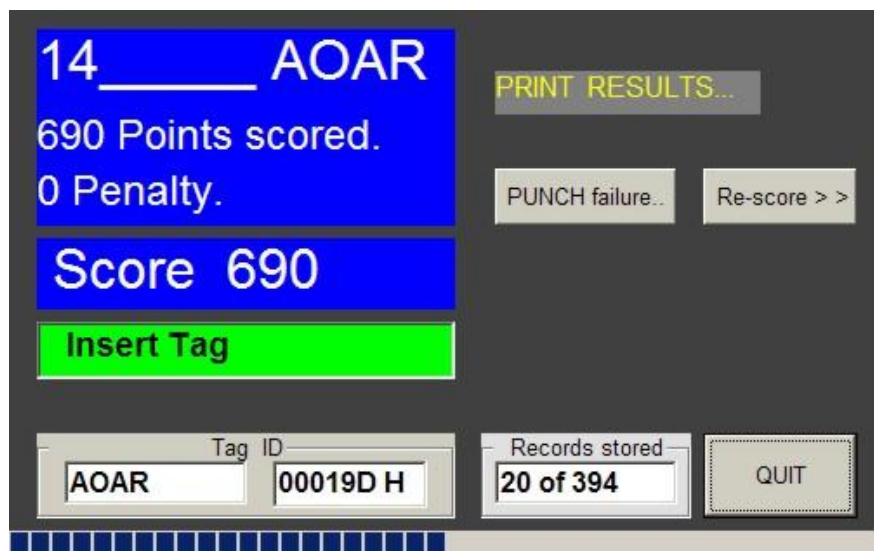
Note the "progress bar", showing the proportion of Team 14 that has been scored.

When the Tag is removed the display continues to show the last score read.

Two text files are saved; one is an image of the download from the Tag and is in a "RawTags" directory. The other is the one of interest and is saved in "ScoredTags" directory as "105____ ABAG.txt" or something similar. The "ABAG" is the Tag ID, and the 105 in this example is the team number which was assigned to that Tag.

This file is also copied into a sub-directory which has been given the course name. Thus all the Tags for Course 24 are in the "Course 24" directory, along with a "Course 24 ScoreSummary.txt" file and, eventually, a "Course 24 RESULTS.txt" file.

7.1.1   Printing the Tag data.

The scored Tag file gives a summary of the score for that Tag and could be printed out to give to the team. If the "PRINT TAGS" checkbox is ticked when the Tag is scored, the file will be sent directly to the system default printer as well as being saved. If you forgot to check the "PRINT TAGS" checkbox and you want a printout, you can re-score the Tag as described further on. You do not need the actual tag for this; it is done from the information saved in the "Rawtags" Directory.

To choose a printer and adjust the Page setup, use the TOOLS... Printer Options menu. This brings up another window which allows you to set Font size, paper size, orientation etc. for your printout. This is described in more detail later.

The scored file might look like this: (This was a 20-minute time-limit course.)

```
_____
Tag ID = ABAG  Team No. 15MO Tags=0010      Course 20
Line # PunchID Value  Time Punched          Split Time.

  1     11            18/04/2005 3:42:04 p.m.    72:42:04    BRIEFING. Score reset.
  2     50     50     19/04/2005 3:02:42 p.m.
  3     90     90     19/04/2005 3:05:54 p.m.    00:03:12
  4    102            19/04/2005 3:08:58 p.m.    00:03:04    FINISH TIME.
  5     62            19/04/2005 3:12:03 p.m.    00:03:05    DEPARTURE TIME.
  6    102            19/04/2005 3:18:03 p.m.    00:06:00    FINISH TIME.
  7     62            19/04/2005 3:22:01 p.m.    00:03:58    DEPARTURE TIME.
  8     43     40     19/04/2005 3:27:07 p.m.    00:05:06
  9     29     20     19/04/2005 3:29:02 p.m.    00:01:55
 10    102            19/04/2005 3:31:02 p.m.    00:02:00    FINISH TIME.
END

Recognised finish time 19/04/2005  3:31:02 p.m.
Time on course  0:23:59

 200    Points Scored.
  40    Over Course Time Penalty.
 Nil    Manual adjustment.

FINAL SCORE = 160
_____
```

A summary of final scores and finish times is given in a file called "Course xx ScoreSummary.txt" under each Course subdirectory. It is in Score Rank order, and is used by the "RESULTS" window. (xx is the Course name.)

The per-course summary files can provide the information for the event organisers to place in their own score records, but better information can be obtained by printing the RESULTS file from each course directory.

An extract from the "Course 24 ScoreSummary" file might look like this:

(The sequence across a line is Team No., Course, Gross, Penalty, and Net Score, Finish time, Tags scored for that team.)

ScoreSummary.txt

30	CRS 24 1320	0	1320 Points.	Finish 18/09/2005 5:39:17 AM	ADAL,ARAG
88	CRS 24 1320	0	1320 Points.	Finish 18/09/2005 11:31:50 AM	ALAN,AYAJ
66	CRS 24 1300	-20	1280 Points.	Finish 18/09/2005 12:01:08 PM	AJAG,AVAL
21	CRS 24 1270	0	1270 Points.	Finish 18/09/2005 11:13:57 AM	AQAF
20	CRS 24 1270	0	1270 Points.	Finish 18/09/2005 11:42:02 AM	ACAJ,APAN
75	CRS 24 1280	-30	1250 Points.	Finish 18/09/2005 12:02:28 PM	AKAH,AWAM
53	CRS 24 1230	0	1230 Points.	Finish 18/09/2005 4:08:30 AM	AGAK,AUAF
69	CRS 24 1230	0	1230 Points.	Finish 18/09/2005 9:04:43 AM	AJAK,AWAF
73	CRS 24 1190	0	1190 Points.	Finish 18/09/2005 11:08:04 AM	AKAF,AWAK
15	CRS 24 1140	0	1140 Points.	Finish 18/09/2005 11:51:33 AM	ABAM,APAH

Note that the file has sorted the teams into rank order, with a listing of the tags for that team at the end of each line. Where scores are equal, rank is determined by finish time.

7.1.2   Team Scoring and Tag printing options.

The TEAM Scoring…. Menu offers four choices. Toggle between ON and OFF by clicking.

1. "Print only when WHOLE TEAM scored."

2. "Only count Punches visited by whole team."

3. Allow MAXIMUM team score to over-ride

4. Lost TAG...

Choice 1 inhibits printouts until the whole team has scored, saving printer time and paper. By default, this choice is active.

This will give just one printout per team if all Tags are equal. If they are not equal, the highest-scoring and the lowest-scoring Tag will both print. A summary line describing which score is used appears at the top of each printout.

Choice 2, "Only count Punches visited by whole team" insists that scoring punches are logged by the whole team. If the Course being scored uses the MAXIMUM team score, this choice becomes inactive, even though it remains selected. (This allows for other Courses which take the MINIMUM score and require all members to use the punches).

As each Tag within a team is scored, its valid Punches are compared with those scored previously by the team. If some Punches scored by the latest Tag have not been scored by all the previous tags, those Punches are deducted from the current Tag. This means that when the whole team is scored, the lowest score will contain only Punches which ALL the team have visited.

Here is an example of a team where the last Tag scored used Punch 24 while the others used Punch 28. (Sample courtesy David Baldwin.) If "Only count Punches visited by whole team" is NOT checked, we get this result:

TEAM 33 scores are all equal. Printing Tag with latest Finish time.

| 33_____AZCN.txt | | | CRS test | | PAGE 1 of 1 |

Nancy East, Sally West and 1 other.

Line #	PunchID	Value	Time Punched	Split Time.	
1	20		25/03/2009 7:53:24 PM		BRIEFING. Score reset.
2	26	20	25/03/2009 7:53:59 PM	0:00:35	
3	28	20	25/03/2009 7:54:13 PM	0:00:14	
4	23	20	25/03/2009 7:54:27 PM	0:00:14	
5	21		25/03/2009 7:54:39 PM	0:00:12	FINISH TIME.
END					
	Handicap	2000			

Recognised finish time 25/03/2009 7:54:39 PM
Time on course 0:54:39

2060	Points Scored.
	No Time Penalty.
Nil	Manual adjustment.

FINAL SCORE = 2060

However, if "Exclude Only count Punches visited by whole team" IS checked, (the default), we get a different result. Note that the first Tags scored have not had their records altered; the exclusion process can only be meaningful when a Tag can search through the scored records of it earlier team-mates. (Aside: this event has a Handicap added from the spreadsheet.)

TEAM 33 scores are NOT equal. LOWEST Tag is valid and printed here. Highest Tag follows.

| 33_____AXCN.txt | | | CRS test | | PAGE 1 of 1 |

Nancy East, Sally West and 1 other.

Line #	PunchID	Value	Time Punched	Split Time.	
1	20		25/03/2009 7:53:19 PM		BRIEFING. Score reset.
2	26	20	25/03/2009 7:53:56 PM	0:00:37	
3	24	20	25/03/2009 7:54:06 PM	0:00:10	
4	23	20	25/03/2009 7:54:24 PM	0:00:18	
5	21		25/03/2009 7:54:36 PM	0:00:12	FINISH TIME.
END					

Some of your team have missed these Punches.
  24
Your score has been reduced by 20 points.
        Handicap   2000

Recognised finish time 25/03/2009 7:54:36 PM
Time on course   0:54:36

 2040   Points Scored.
        No Time Penalty.
 Nil   Manual adjustment.

FINAL SCORE = 2040

TEAM 33 scores are NOT equal. This is HIGHEST Tag scored. Lowest score is recognised.
        33_____AZCN.txt   CRS test   PAGE 1 of 1

Nancy East, Sally West and 1 other.
Line #   PunchID   Value   Time Punched   Split Time.

   1   20   25/03/2009 7:53:24 PM   BRIEFING. Score reset.
   2   26   20   25/03/2009 7:53:59 PM   0:00:35
   3   28   20   25/03/2009 7:54:13 PM   0:00:14
   4   23   20   25/03/2009 7:54:27 PM   0:00:14
   5   21   25/03/2009 7:54:39 PM   0:00:12   FINISH TIME.
END
         Handicap   2000

Recognised finish time 25/03/2009 7:54:39 PM
Time on course   0:54:39

 2060   Points Scored.
        No Time Penalty.
 Nil   Manual adjustment.

FINAL SCORE = 2060

    Choice 3 allows the administrator to over-ride the minimum score setting if something is wrong. Usually this results from un-erased Tags.

    Choice 4 is used to re-score an individual team in the event of a lost Tag from that team. The lost tag is created, and given a manual adjustment equal to the team's score.

SUMMARY:

- If using MINIMUM score on a course, exclusion of Punches not visited by the whole team will occur on the last Tag scored. This will affect the overall team result.

- You can cancel this process by un-checking the Menu item "Only count punches...".

- If you want a printout for each person, un-check the Menu item "Print only when WHOLE TEAM scored".

- Only use "Allow MAXIMUM score" to correct for a Tag which gives an unexplained and undesirable result.

- Use the "HELP..." Menu!

7.1.3   Using Several Printers.

Tags are normally printed on your computer's default printer (Chosen in "Control Panel – Printers and Faxes" in Win7, or "Settings – Devices – Printers and Scanners" in Win 10). If you have more than one Printer connected to your computer, you can get your Tag printouts to occur on each one in succession, in a cyclic manner.

Caution: The print rate will be twice as fast as your slowest printer (if two printers are used) or three times as fast (if three printers are used). If one printer is faster than this rate then you should use it alone.

To arrange this, click on the "TOOLS.. Printer Options" menu. This brings up a Window which allows setting of paper orientation, font size lines per page etc. as shown below.
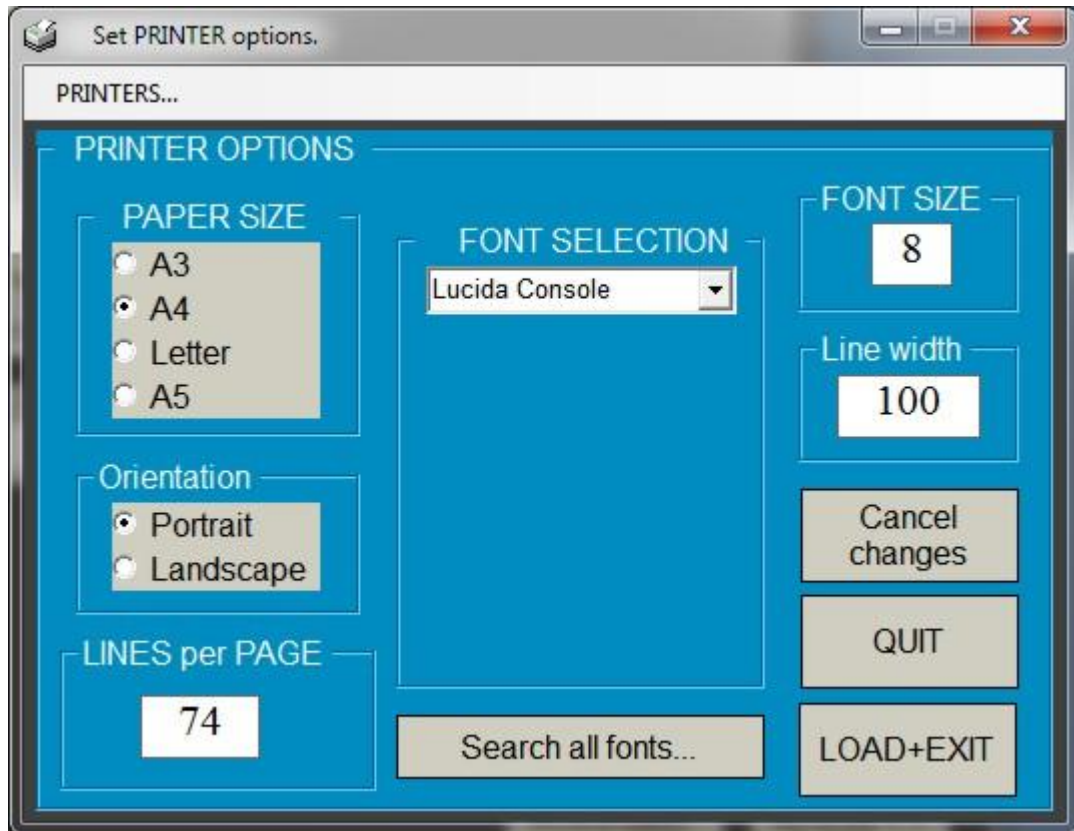
The use of this Window is pretty much self-explanatory. Choose your settings then click "LOAD+ EXIT" to save them.

Using "PRINTERS…" from the Menu bar gives access to two sub-menus, one for choosing multiple printers and the other for restoring the system default printer.

Clicking on "Select Printers…" opens the Printer Selection Window which shows all the Printers on your system, and the ones currently in use by this program.

The default Printer will show on the right list-box. You can add more printers by double-clicking on the printer name in the left box, which will add it to the right box.

To remove a Printer from the right box, double-click on it. You cannot delete all the printers; the system default will remain if there are no others.

Note: You must ensure that the printers you choose are connected to your computer and turned on, otherwise a large queue will build up in the system Print Spooler. Also, if you select a Printer where the driver is unavailable, such as an un-connected network printer, the program will crash when you attempt to print to it.

Note: When you exit the program, these choices will be automatically loaded when you re-start the Program. To revert to a single Printer you must restore the default printer from the Set Printer Options Menu.

7.1.4   Showing Names on Tag printouts.

Names of competitors will automatically be included in the Tag printouts, provided you have included the Names when you linked your spreadsheet during the Tags to Teams process.

As this information is primarily for showing ownership of the printout, only the first two names will show for teams with more than two members. Note that ALL names will show on Results printouts.

_____

TEAM 27 scores are all equal. Printing last Tag scored.
Hazel Williamson, Leanne Herrick and 2 others.
27_____   APAS   CRS Office Hours   PAGE 1 of 1

Line #	PunchID	Value	Time Punched	Split Time.
1	10		25/11/2006 8:47:49 AM	BRIEFING. Score reset.
2	26	20	25/11/2006 9:03:44 AM	0:03:44
3	35	30	25/11/2006 9:17:55 AM	0:14:11
4	33	30	25/11/2006 9:37:33 AM	0:19:38
5	81	80	25/11/2006 9:47:22 AM	0:09:49
6	23	20	25/11/2006 10:02:40 AM	0:15:18

etc…….

7.1.5 Duration-limited courses – Interim Reading.

People doing Duration-limited courses (for example, 15 hours in 24) will almost certainly return at some stage in their event. They must use a FINISH punch when they return, and a DEPART Punch when they leave again.

On departure, they may want to know how much time they have left. You can find out by reading one of their tags, as if you were scoring it. The SCORE screen will show how long they have been on-course, as usual. For example –

```
10      99      90      5/01/2008  7:25:51 PM   0:17:15
11      18              5/01/2008  7:55:25 PM   0:29:34        FINISH TIME.
END
```

```
Recognised finish time  5/01/2008  7:55:25 PM
Time on course   4:01:56
```

However, the program recognises that this is a duration-limited course, and provided that more than 30 minutes have elapsed since the FINISH Punch was used, it will not save the score as if it were a final reading. If you need a printout, print form the Score window.

7.1.6 Duration-limited courses – Missed FINISH or DEPART Punch.

These situations cannot be handled by adding a Failed Punch, because the time of punching is critical.

The only way of correcting for these errors is to "insert" a missed Punch directly into the SCORE display.

Double-click on the line BELOW where you wish to insert a missed Punch.
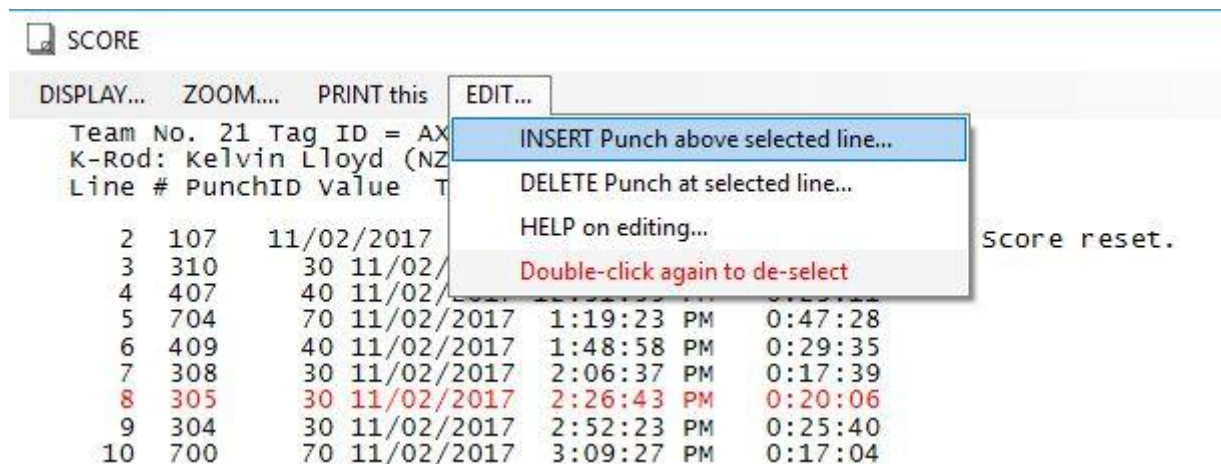
When you click the INSERT Menu, you will be guided through a process to select a Punch, and a time of punching. This is described in more detail in Section 7.2.3 below.

Note: You must be convinced of the correct time to allocate. You should probably get this by reading the tag of another team member.

7.1.7 Full Team Withdrawal.

A team may withdraw from a course after they have started it; perhaps because of injury problems or requesting transport home.

They must use a FINISH punch, and their Tags should be scored as usual. This is an important safety feature for ensuring that all teams have returned.

Because they have not finished late, they will not show as Disqualified, and they will have a non-zero score.

To correct this, re-score any one of the Tags, and type "withdrawn" in the Manual Score box –the one which shows Nil. As soon as you type "with" the score will show zero.

SAVE, then PRINT. The last few lines of the team printout will show this:

```
270    Points Scored.
       No Time Penalty.
Withdrawn.    Manual adjustment.

FINAL SCORE = 0 Withdrawn.
```

Let's assume team 37 has also withdrawn. The RESULTS printout for this course will list the withdrawn teams at the bottom, but still showing their gross score. They will be ranked in the withdrawn list by this score.

Place	Team	Gross	Penalty	Score	Finish					
16	38	330	0	330	7:43:00 PM	.	.	.	.	.
	Tiny Tim, Elizabeth Taylor.									
17	37	370	0	0	7:59:38 PM	Withdrawn.				
	No Moore, Dart Moore.									
18	16	270	0	0	8:20:58 PM	Withdrawn.				
	Corked Wine, Flour Miller.									

7.1.8   Partial Team Withdrawal.

If a team loses a member somewhere on course through exhaustion or injury, and they leave the affected person in safe custody such as a manned ANC or at the HH, you may wish permit the team to continue to score without that person, rather than withdraw them. This may be especially useful for non-championship events.

The process is similar to the "Withdrawn" method above. Get the affected person to use a FINISH punch, score their Tag, and then re-score it as above. Instead of typing "withdrawn", type "Ignored". This can be done before or after the rest of the team have returned and been scored.

7.1.9   Displaying Scores in a separate window.

If you have a second screen on your computer, or a Data Projector, you can display the Tag scores as they are read on this second screen. Click the "SHOW in WINDOW" checkbox and a new window called SCORE will open.

The SCORE Window is scalable, in that the font size in the window changes as you resize the window. By default, the Window shows only the summary of a Tag as you score it, so that the font size is large.

A typical Tag display will look like this.
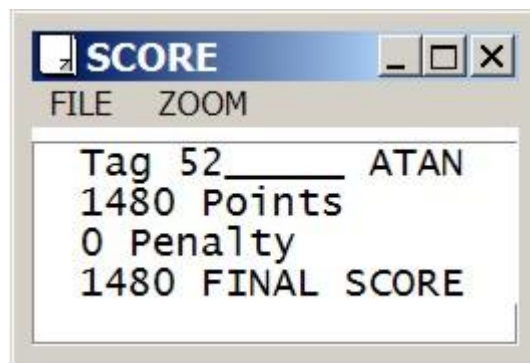
If the Window is expanded, the font size expands with it - -
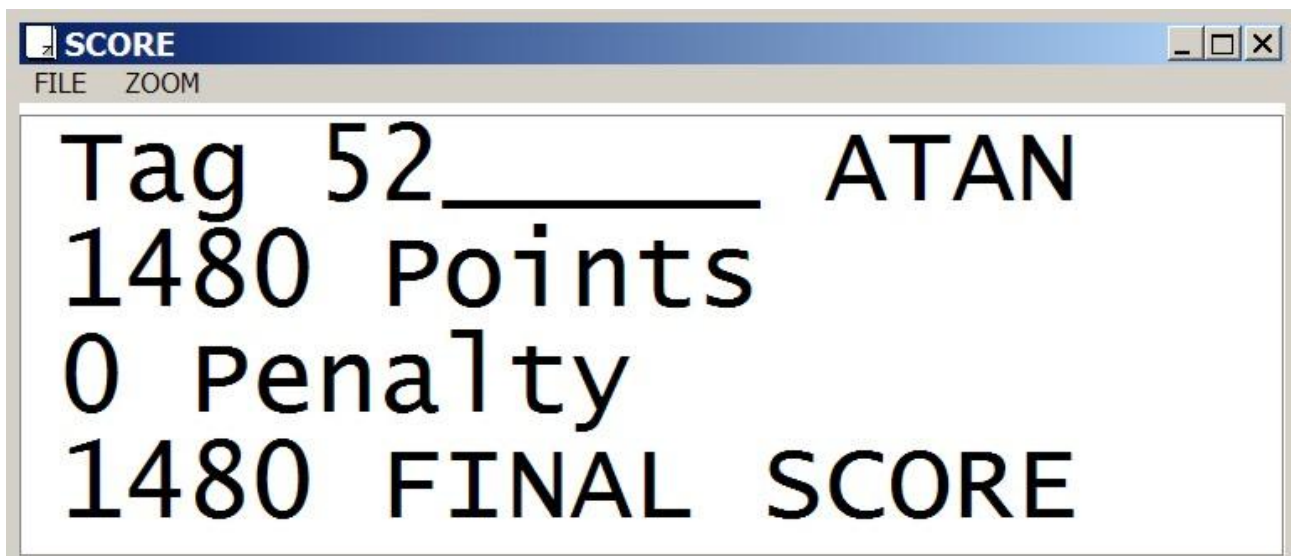
You can choose to see either a brief summary (good for an outside screen), or an exact detail of the scored file, from the FILE Menu.
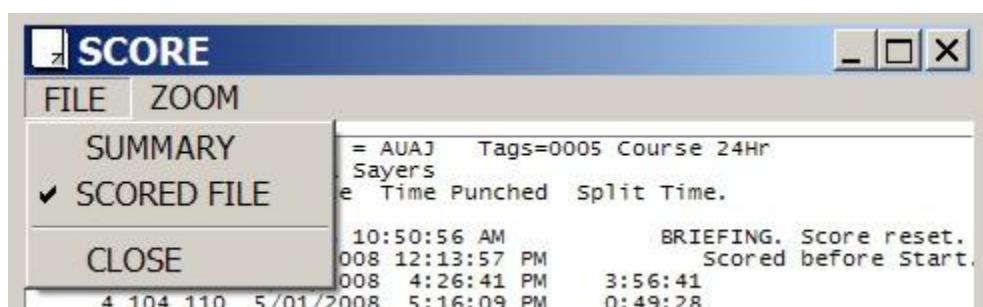
Whichever setting you choose will be saved when you quit the scoring window, and will be re-instated next time you open it.

By default, the Font size will adjust to fit the lines within the Window. You can choose to cancel the Auto Fit feature and use a fixed zoom in or out from the ZOOM… Menu.
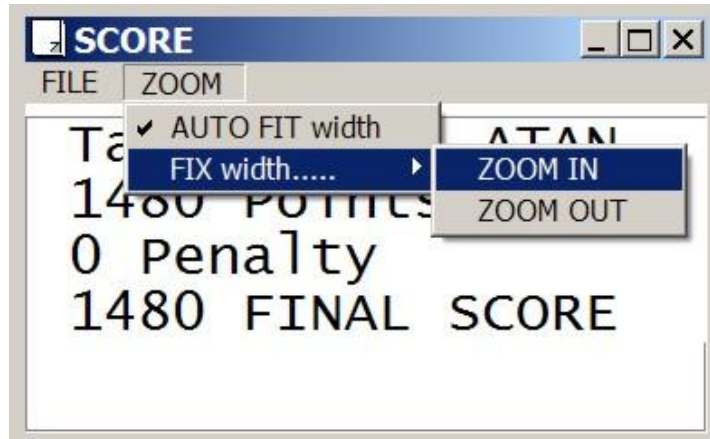
With a fixed ZOOM you can adjust the Window to a variety of displays, but note that the first and last lines always show.
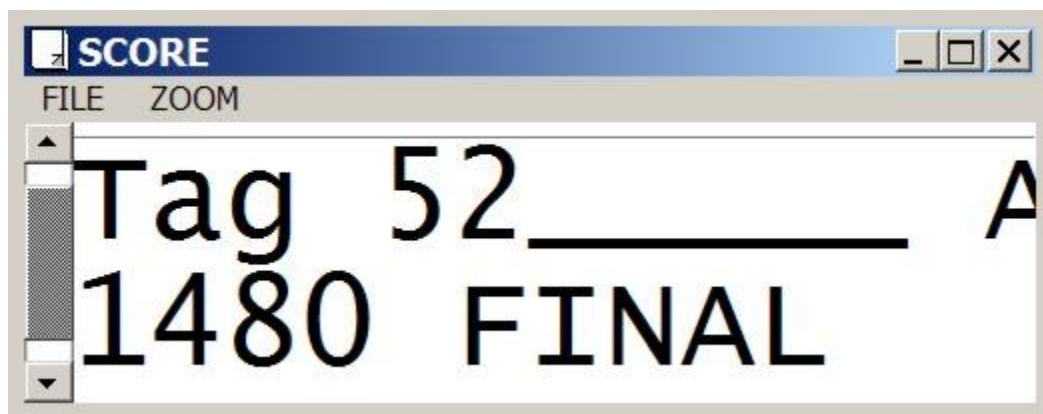
If there are more lines than can fit vertically in the Window, a scrollbar appears as shown above.

7.1.10 The "ROLLING RESULTS" Display.

From the Menu, click VIEW... Show Rolling Results.
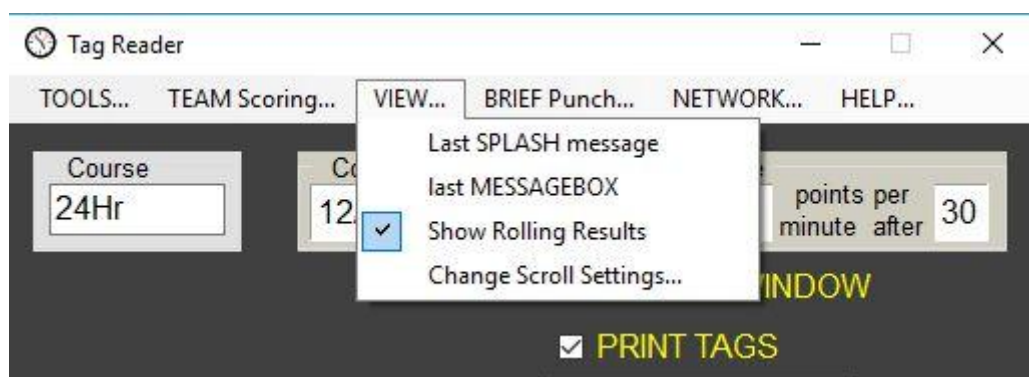
Another window opens which allows you to choose options. The defaults are pre-loaded.
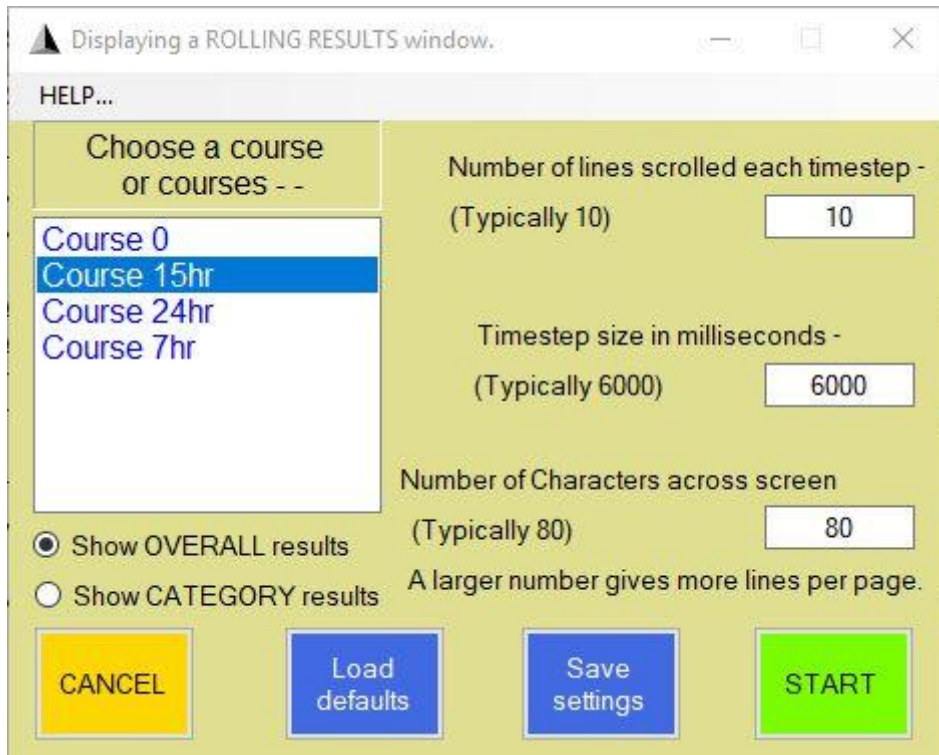
Choose which Course (or Courses) you want to display, and click START. A new RESULTS window opens, which is refreshed every 6 seconds (=6000 milliseconds).

This window can be re-sized to suit your needs, and can be moved off-screen to an attached external projector.

For convenience, you can place another copy of RogaineSCORE in your event folder. (You may need to rename it – perhaps to "RogaineSCORE - Copy.exe".) Start this copy, go to ReadTags, and set up the Rolling Results display. As long as this version is running, the display will continue to function, and update. You can quit and re-start the main program as you wish. The Rolling display extracts it information from the scored files.

7.2 Handling errors – Adjustments to Scores.

You may wish to adjust someone's score manually, perhaps because of a missed punch or incorrect Finish time. This is done by re-scoring the already saved Tag information.

Note that the **best way** of handling an incorrect or non-existent Finish Time or a missed Punch is as described in Sections 7.2.2 and 7.2.4 below. This is better than merely adding a number to the score.

For all manual re-scoring, you should click the "SHOW in WINDOW" box, and either turn off "PRINT TAGS" or turn the dummy printer on (from the TOOLS…Debug.. menu). By default, PRINT TAGS is disabled when you click "Re-score >>" and re-enabled when you click "<<Resume". You can turn PRINT TAGS on, but you will get a team printout for each tag you re-score within a team.

Manual re-scoring involves two steps; firstly, double-click the Tag you want to make the desired modification as described below. When the displayed results are what you want, you MUST click SAVE to incorporate and print the modified team result.

Click the " Re-score > > " button to open the re-score window. It looks something like this:

The Manual Re-scoring extension.
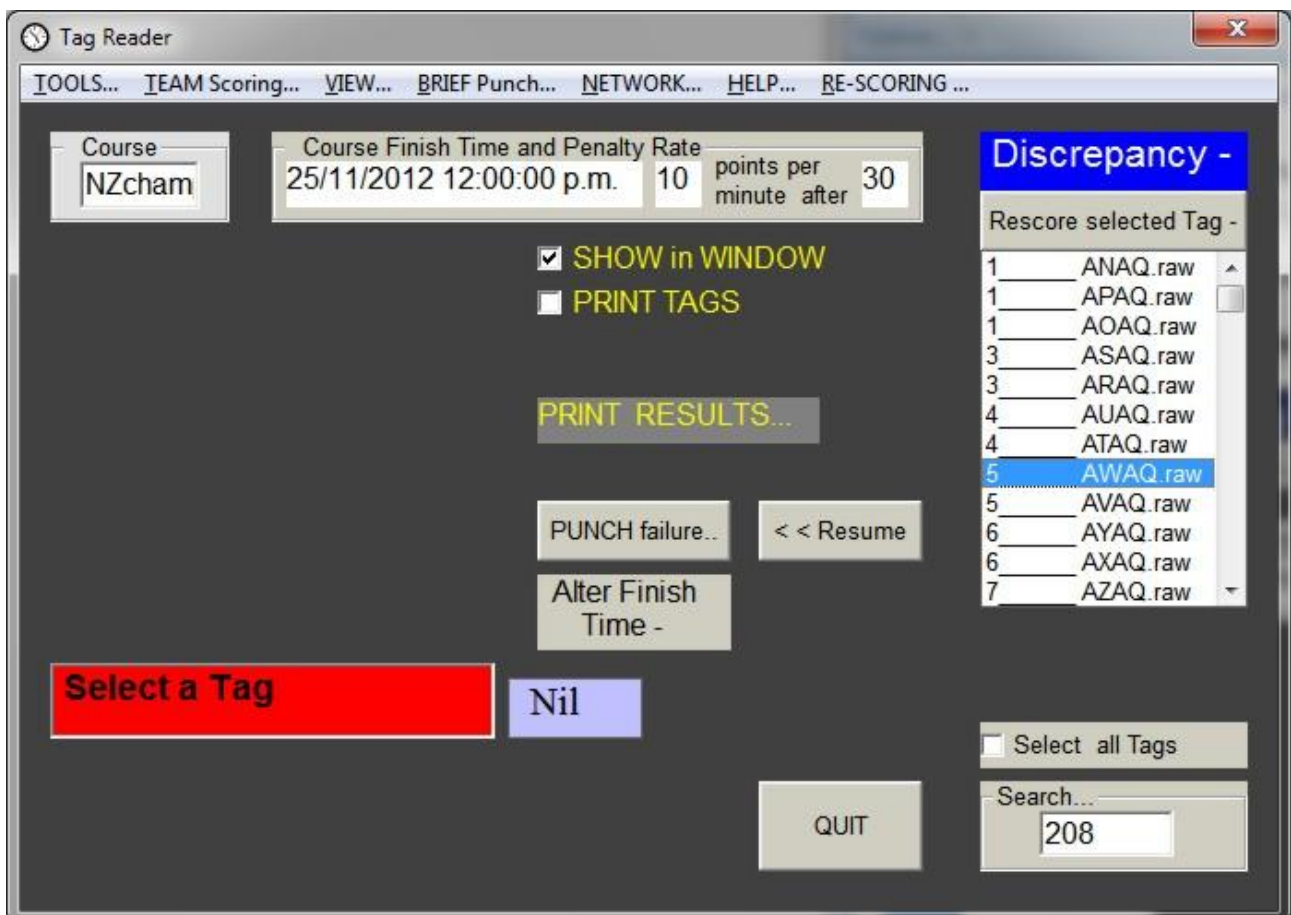
Select the Tag number from the file listbox, and click "Rescore selected Tag" or, alternatively, double-click the desired Tag.

Hint: To aid in finding the Tag number in the listbox, you may type the TadID code (eg. AWAF), or the team number, into the Search… box. The tag will be highlighted in the listbox. You may also use the scrollbars to scroll through the list.

When a tag is re-scored, the window looks something like this,
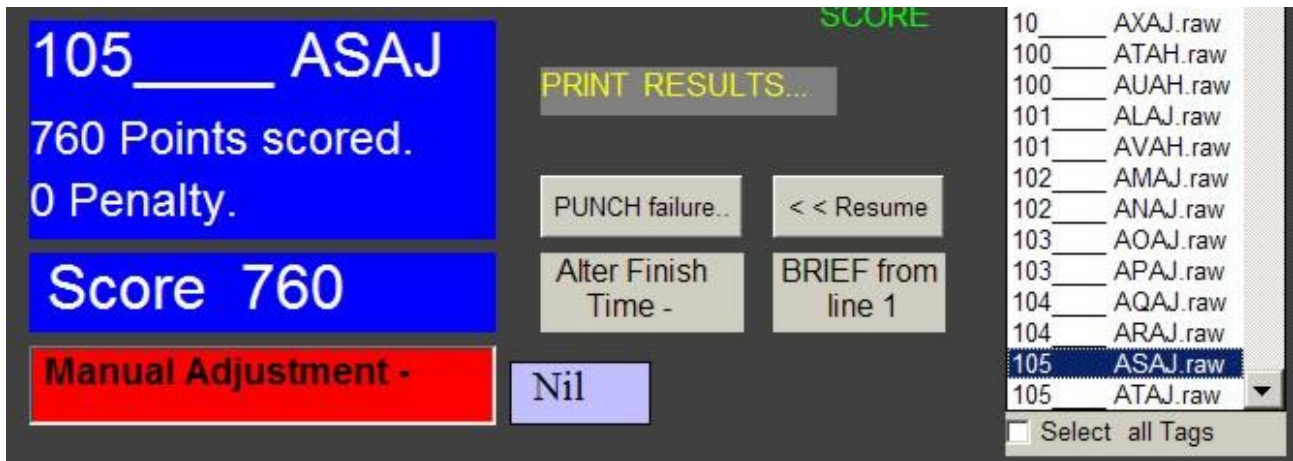
and the SCORE Window will show the existing scoring for that Tag.

For this Tag the SCORE window shows this.

```
Team No. 105   Tag ID = ASAJ           Tags=0018        Course  24Hr
Marj King, Rob Anderson
Line #   PunchID        Value    Time Punched          Split Time.

  1       46                     5/01/2008 11:31:44 AM           No BRIEF Punch. No score.
  2       75                     5/01/2008 12:21:03 PM           No BRIEF Punch. No score.
  3       58        50           5/01/2008  1:09:42 PM   0:39:42
  4      104       110           5/01/2008  1:58:51 PM   0:49:09
  5       45        40           5/01/2008  2:26:48 PM   0:27:57
  6       78        70           5/01/2008  3:07:54 PM   0:41:06
  7       53        50           5/01/2008  3:47:15 PM   0:39:21
  8       90        90           5/01/2008  4:38:50 PM   0:51:35
  9       82        80           8/01/2008  6:07:56 AM  61:29:06        After course closure.
 10       32        30           5/01/2008  6:19:53 PM               Split time negative.
 11       67        60           5/01/2008  7:35:35 PM   1:15:42
 12       21        20           5/01/2008  8:21:51 PM   0:46:16
 13       18                     5/01/2008  9:16:44 PM   0:54:53        FINISH TIME.
 14       28        20           6/01/2008  6:36:18 AM   9:19:34
 15       60        60           6/01/2008  8:04:07 AM   1:27:49
 16       35        30           6/01/2008  8:29:50 AM   0:25:43
 17       52        50           6/01/2008  9:01:33 AM   0:31:43
 18       16                     6/01/2008  9:36:23 AM   0:34:50        FINISH TIME.
END

Recognised finish time  6/01/2008  9:36:23 AM
Time on course  21:06:23

  760   Points Scored.
        No Time Penalty.
  Nil   Manual adjustment.

FINAL SCORE = 760
```

There are several situations and several ways of changing a Score. These are described in the next few sections. You can add a missing Punch, allow for the fact that a BRIEF Punch was not used, alter the recognised Finish time for the Tag, and, as a last resort, enter a numerical score adjustment.

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If a Punch has failed, there will be many teams (and many more Tags) which will need to be corrected. In this case it is better to "add a Punch" to the Teams which you believe qualify, instead of finding and adjusting each Tag. This is done using the 'PUNCH failure..' button, and is described in more detail in Section 7.2.4.

Note: When any adjustment is made **and saved** from the Re-score extension, the adjustment is recorded in the scored file for that Tag. (In the ScoredTags sub-directory.) If the Tag is opened for re-scoring at a later time, the previous adjustments will show automatically.

They can be removed by re-scoring the Tag. Another Button called "Remove manual editing" will show, and you can click this, then again, click "SAVE".

7.2.1   Inserting or moving a "BRIEF" Punch.

The example above shows two punches, 46 and 75, with no score credit, because no BRIEF punch was used, and the timestamp from these punches was earlier than 30 minutes after the start.

You can allow these two punches by clicking the "BRIEF from Line 1" button. The SCORE window will show the effect; the score has increased by 110, from 760 to 870.

Note: You can use the **up** and **down** arrows to change the line where scoring is allowed.

The updated score has been calculated but not saved. You must click SAVE to incorporate the change into the scoring system.

The relevant lines of the results look like this:

```
   1      46      40        5/01/2008 11:31:44 AM          Manual BRIEF allowed.
   2      75      70        5/01/2008 12:21:03 PM          Scored before Start.
   3      58      50        5/01/2008  1:09:42 PM   0:39:42
. . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . .

  16      35      30        6/01/2008  8:29:50 AM   0:25:43
  17      52      50        6/01/2008  9:01:33 AM   0:31:43
  18      16                6/01/2008  9:36:23 AM   0:34:50          FINISH TIME.
  END
  Manual BRIEF Accepted on line 1

  Recognised finish time  6/01/2008  9:36:23 AM
  Time on course  21:06:23
```

870   Points Scored.
       No Time Penalty.
Nil   Manual adjustment.

FINAL SCORE = 870

Once saved, re-scoring this Tag again will automatically include the modification.

Displaying lines before BRIEF Punch.

Assume that Punch 53 in the above example was a BRIEF Punch. The printout would look (in part) like this:

Line #	PunchID	Value	Time Punched	Split Time.	
7	53		5/01/2008 3:47:15 PM		BRIEFING. Score reset.
8	90	90	5/01/2008 4:38:50 PM	0:51:35	
9	82	80	8/01/2008 6:07:56 AM	61:29:06	After course closure.
10	32	30	5/01/2008 6:19:53 PM		Split time negative.
11	67	60	5/01/2008 7:35:35 PM	1:15:42	
12	21	20	5/01/2008 8:21:51 PM	0:46:16	
13	18		5/01/2008 9:16:44 PM	0:54:53	FINISH TIME.
14	28	20	6/01/2008 6:36:18 AM	9:19:34	
15	60	60	6/01/2008 8:04:07 AM	1:27:49	
16	35	30	6/01/2008 8:29:50 AM	0:25:43	
17	52	50	6/01/2008 9:01:33 AM	0:31:43	
18	16		6/01/2008 9:36:23 AM	0:34:50	FINISH TIME.
END					

………………………………..

FINAL SCORE = 440

Use the OPTIONS… Menu to uncheck "Hide lines before BRIEF Punch".

Re-score the Tag, and all the lines now show.

Line #	PunchID	Value	Time Punched	Split Time.	
1	46		5/01/2008 11:31:44 AM		No BRIEF Punch. No score.
2	75		5/01/2008 12:21:03 PM		No BRIEF Punch. No score.
3	58	50	5/01/2008 1:09:42 PM	0:39:42	
4	104	110	5/01/2008 1:58:51 PM	0:49:09	
5	45	40	5/01/2008 2:26:48 PM	0:27:57	
6	78	70	5/01/2008 3:07:54 PM	0:41:06	
7	53		5/01/2008 3:47:15 PM		BRIEFING. Score reset.
8	90	90	5/01/2008 4:38:50 PM	0:51:35	
9	82	80	8/01/2008 6:07:56 AM	61:29:06	After course closure.
10	32	30	5/01/2008 6:19:53 PM		Split time negative.
11	67	60	5/01/2008 7:35:35 PM	1:15:42	

12	21	20	5/01/2008 8:21:51 PM	0:46:16	
13	18		5/01/2008 9:16:44 PM	0:54:53	FINISH TIME.
14	28	20	6/01/2008 6:36:18 AM	9:19:34	
15	60	60	6/01/2008 8:04:07 AM	1:27:49	
16	35	30	6/01/2008 8:29:50 AM	0:25:43	
17	52	50	6/01/2008 9:01:33 AM	0:31:43	
18	16		6/01/2008 9:36:23 AM	0:34:50	FINISH TIME.
END					

……………………………………..

FINAL SCORE = 440

Note that all the scores before Line 7 have had their scores cancelled.

Moving a BRIEF Punch by inserting one elsewhere.

You may want to insert a BRIEF Punch at a different point in the Tag record; perhaps as a result of using an un-erased Tag, or a BRIEF Punch used in error during an event.

Check the "BRIEF from line..." Menu item to display the "BRIEF from line.." button.

Then use the arrows to allow a Manual BRIEF from whichever line you want. Subsequent BRIEF Punches will be ignored.
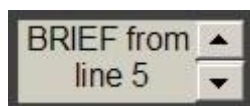
Choosing Line 5 as the allowed start produces the following result:

Line #	PunchID	Value	Time Punched	Split Time.	
1	46	40	5/01/2008 11:31:44 AM		Scored before Start.
2	75	70	5/01/2008 12:21:03 PM		Scored before Start.
3	58	50	5/01/2008 1:09:42 PM	0:39:42	
4	104	110	5/01/2008 1:58:51 PM	0:49:09	
5	45	40	5/01/2008 2:26:48 PM	1:56:48	Manual BRIEF allowed.
6	78	70	5/01/2008 3:07:54 PM	0:41:06	
7	53		5/01/2008 3:47:15 PM	0:39:21	BRIEF Punch ignored.
8	90	90	5/01/2008 4:38:50 PM	0:51:35	
9	82	80	8/01/2008 6:07:56 AM	61:29:06	After course closure.
10	32	30	5/01/2008 6:19:53 PM		Split time negative.
11	67	60	5/01/2008 7:35:35 PM	1:15:42	
12	21	20	5/01/2008 8:21:51 PM	0:46:16	
13	18		5/01/2008 9:16:44 PM	0:54:53	FINISH TIME.
14	28	20	6/01/2008 6:36:18 AM	9:19:34	

```
15      60      60          6/01/2008 8:04:07 AM  1:27:49
16      35      30          6/01/2008 8:29:50 AM  0:25:43
17      52      50          6/01/2008 9:01:33 AM  0:31:43
18      16                  6/01/2008 9:36:23 AM  0:34:50        FINISH TIME.
END
        Manual BRIEF Accepted on line 5
……………………………………..

    FINAL SCORE = 550
```

Line 5 is a scoring Punch, and its value is allowed by the Manual BRIEF. The preceding lines are all disallowed.

7.2.2   Manual modifications to Finish Time.

If someone forgot to use a "FINISH" Punch, or they used it later than their actual return, then manually re-score the Tag. Click "Alter Finish time - " and a Date-Time Picker will appear.
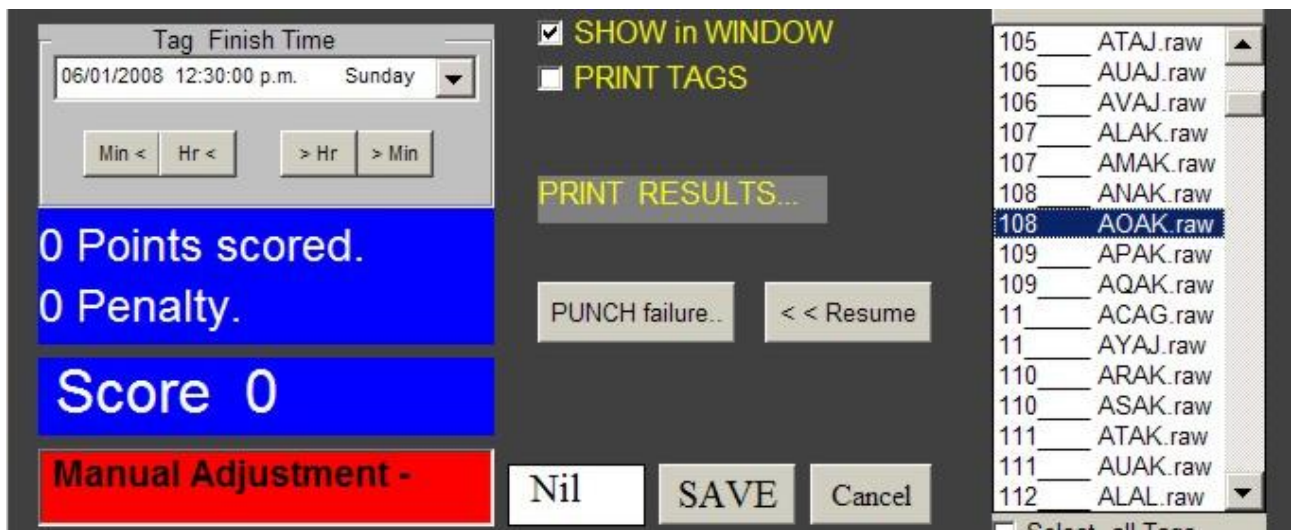
Set the finish time you think correct. You will note that the displayed results change every time you alter the finish time, even by a minute. Alterations made by typing directly into the Date-Time Picker will update automatically after about one second, while alterations made by clicking the Min and Hr buttons will update immediately.

When the finish time is correct, click "SAVE".

The last few lines of the updated printout may look like this: (The manual Finish time was set to 8:30 AM.)

```
32      63      60          6/01/2008 6:53:32 AM  0:37:38
33      58      50          6/01/2008 7:53:06 AM  0:59:34
34      75      70          6/01/2008 8:22:52 AM  0:29:46
35      67      60          6/01/2008 8:51:20 AM  0:28:28
END                                     (WARNING - No FINISH Punch found.)

Manual finish time  6/01/2008 8:30:00 AM
```

Time on course 20:00:00

  1500   Points Scored. (Ignores 60 points punched after Finish Time.)
          No Time Penalty.
  Nil   Manual adjustment.

FINAL SCORE = 1500

Manual Finish times will over-ride FINISH Punches.

Look at the last few lines of this example of a scored Tag:

23	43	40	6/01/2008 1:30:41 AM	0:30:02	
24	60	60	6/01/2008 2:03:05 AM	0:32:24	
25	18		6/01/2008 2:48:56 AM	0:45:51	FINISH TIME.
26	28	20	6/01/2008 6:04:36 AM	3:15:40	
27	52	50	6/01/2008 6:40:34 AM	0:35:58	
28	63	60	6/01/2008 7:25:40 AM	0:45:06	
29	58	50	6/01/2008 8:05:54 AM	0:40:14	
30	75	70	6/01/2008 8:35:11 AM	0:29:17	
31	67	60	6/01/2008 9:01:36 AM	0:26:25	
32	21		6/01/2008 9:28:32 AM	0:26:56	FINISH TIME.
33	46	40	6/01/2008 9:51:55 AM	0:23:23	
34	18		6/01/2008 10:24:22 AM	0:32:27	FINISH TIME.
END					

Recognised finish time 6/01/2008 10:24:22 AM
Time on course 21:54:22

  1720   Points Scored.
          No Time Penalty.
  Nil   Manual adjustment.

FINAL SCORE = 1720

If a Manual Finish Time is set to 7:30 am for this Tag, the result is this:

23	43	40	6/01/2008 1:30:41 AM	0:30:02	
24	60	60	6/01/2008 2:03:05 AM	0:32:24	
25	18		6/01/2008 2:48:56 AM	0:45:51	FINISH TIME.
26	28	20	6/01/2008 6:04:36 AM	3:15:40	
27	52	50	6/01/2008 6:40:34 AM	0:35:58	
28	63	60	6/01/2008 7:25:40 AM	0:45:06	
29	58	50	6/01/2008 8:05:54 AM	0:40:14	
30	75	70	6/01/2008 8:35:11 AM	0:29:17	
31	67	60	6/01/2008 9:01:36 AM	0:26:25	
32	21		6/01/2008 9:28:32 AM	0:26:56	FINISH TIME IGNORED.
33	46	40	6/01/2008 9:51:55 AM	0:23:23	
34	18		6/01/2008 10:24:22 AM	0:32:27	FINISH TIME IGNORED.
END					

Manual finish time 6/01/2008 7:30:00 AM
Time on course 19:00:00

  1500   Points Scored. (Ignores 220 points punched after Finish Time.)
          No Time Penalty.
    Nil   Manual adjustment.

FINAL SCORE = 1500

Note that the original FINISH Punches are ignored, and scores after 7:30 are also ignored. (50 + 70 + 60 + 40 points.)

7.2.3 Inserting Punches directly.

From Version 3.0.0 of the software, it is possible to insert a BRIEF or FINISH Punch (or any other punch) directly into the Scored display. This is most useful for inserting a DEPART punch in a duration-limited course, if someone forgot to register their departure.

This is NOT the best method of adding a failed scoring punch, which should be dealt with as described in the next few sections.

As an example, look at this screen:

```
DISPLAY...   ZOOM....   PRINT this   EDIT...
Team No. 125 Tag ID = ABA|
Dunedin Orienteering Godd|        INSERT Punch above selected line...        | (NZL)
Line # PunchID Value  Tim|        DELETE Punch at selected line...
                         |   Double-click on a line to select it. It goes RED.  |t.
    1   106   11/02/2017 10|   Double-click again to de-select it .
    2   509     50na 11/02/2|   Click this INSERT menu to insert a new Punch
    3   803     80na 11/02/2|   just above the selected line.
    4   511     50na 11/02/2017 1
    5   607     60na 11/02/2017 1         0:17:17
    6   903     90na 11/02/2017  2:16:26 PM   1:28:58
    7   709     70na 11/02/2017  3:01:23 PM   0:44:57
    8   804     80na 11/02/2017  3:41:14 PM   0:39:51
    9   405     40na 11/02/2017  3:58:05 PM   0:16:51
   10   506     50na 11/02/2017  4:23:25 PM   0:25:20
   11   309     30na 11/02/2017  4:51:40 PM   0:28:15
   12   311     30na 11/02/2017  5:28:12 PM   0:36:32
   13    18     10na 11/02/2017  5:43:15 PM   0:15:03
  END       (WARNING - No FINISH Punch found.)


Recognised finish time 11/02/2017  6:31:00 PM
Time on course   0:00:00 (No FINISH Punch found.)


      0 Points Scored. (Ignores 640 points punched after Finish Time.)
      0 Late Time Disqualification.
    Nil Manual adjustment.
```

There is no FINISH Punch so all the punches are na (Not Applicable). The END line has been double-clicked to select it, which turns it red. When the EDIT.. INSERT menu is clicked, you can choose a Punch to insert from a new display - -
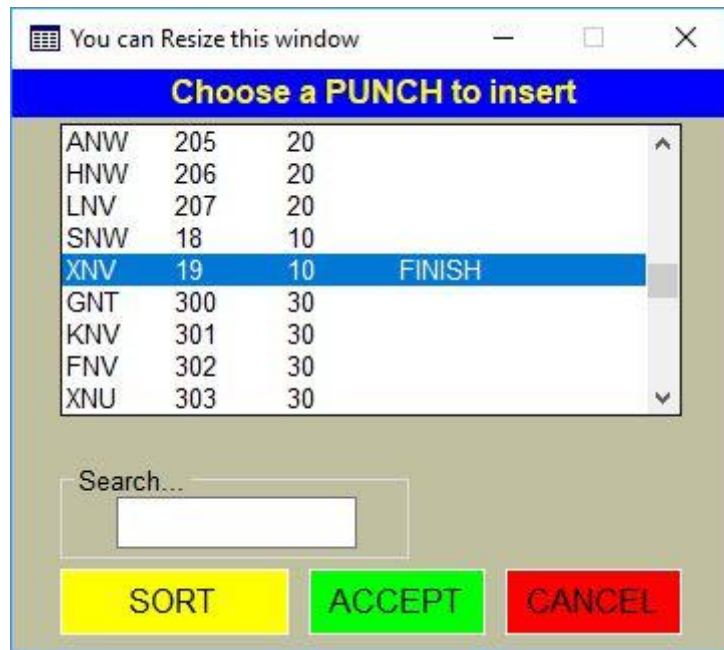
Scroll to the punch you want to insert, select it and click ACCEPT, or simply double-click it. This selects the punch. Next, you have to define the time of punching. Another window opens, with a suggested time pre-loaded into it -
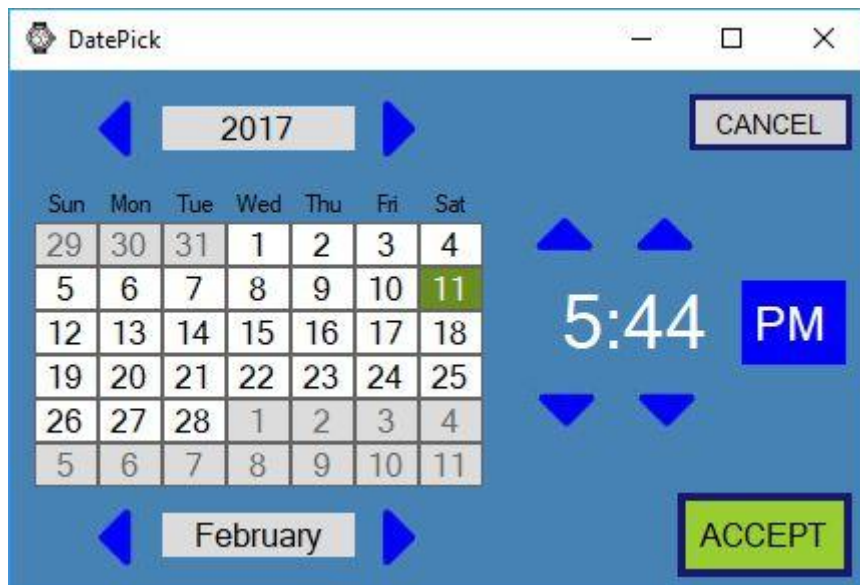
Use the blue controls to adjust the time, then click ACCEPT.

```
12  311      30 11/02/2017  5:28:12 PM   0:36:32
13   18      10 11/02/2017  5:43:15 PM   0:15:03
14   19         11/02/2017  5:44:15 PM   0:01:00 FINISH TIME. Inserted
END

Some of your team have missed these Punches.
   18
Your score has been reduced by 10 points.


Recognised finish time 11/02/2017  5:44:15 PM
Time on course    6:44:15


  630 Points Scored.
```

You must SAVE the altered Tag.

Note that you can also delete a Punch in the same way;

```
 6    903       90 11/02/2017  2:16:26 PM    1:28:58
 7    709       70 11/02/2017  3:01:23 PM    0:44:57
 8    804       80 11/02/2017  3:41:14 PM    0:39:51
 9    405       40 11/02/2017  3:58:05 PM    0:16:51
10    506       50 11/02/2017  4:23:25 PM    0:25:20
11    309       30 11/02/2017  4:51:40 PM    0:28:15
12    311       30 11/02/2017  5:28:12 PM    0:36:32
Delete SNW 0000 07:43:15 (18)
13     19       11/02/2017  5:44:15 PM    0:16:03 FINISH TIME. Inserted
END

Recognised finish time 11/02/2017  5:44:15 PM
Time on course    6:44:15

   630 Points Scored.
```

The edited changes are stored in the ScoredTags folder, in a file called Edit<Tag ID >.txt which is not deleted when you "Remove manual editing". It is thus a permanent alteration, which can only be removed from File Explorer, or if you delete ALL scored records (where you will be given the option of keeping or deleting the EDIT files).

7.2.4   Handling a damaged or mis-placed Punch.

There are two methods of providing a score adjustment for people who claim that a Punch wasn't working, or was miss-placed. The best method is to wait until all Tags have been scored, and then use the re-scoring window to add the lost Punches to all teams at once. The second method is done as each Tag is scored, and the adjustment shows immediately on the Tag printout. This is harder to implement.

Both methods have advantages; adding Punches after they have been read, by re-scoring, adds the listed Punches to ALL required teams, including all Tags within each team. Handling lost punches as tags are scored gives an instantly modified printout for that Tag, but does not alter any other Tags in that team.

With either method, Punches will not be added to any Tag that has correctly registered that Punch.

Method 1 - After Tags have been scored:

Click the Re-score >> button to show the list of scored Tags. Choose some or all of the Tags to be re-scored from the list box (one per team is enough) then click "PUNCH failure..".
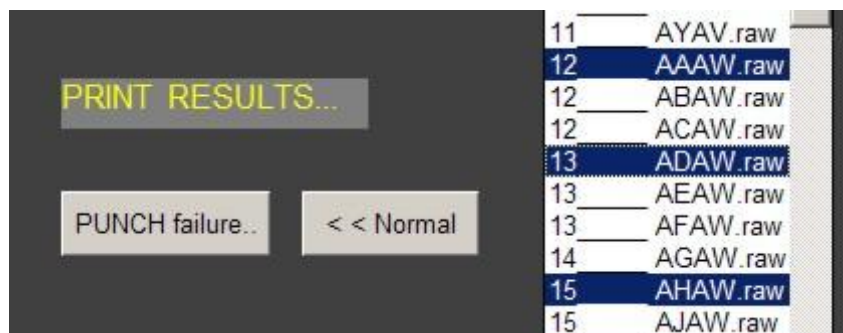
A new Window will open –

The selected Teams will appear in the big textbox. You can enter more team numbers directly into this box, with comma separators as shown.

Enter the desired Punch number (or numbers, separated by a comma) in the small textbox, then click OK. All the tags belonging to the listed Teams will have their scores modified by the value of the Punch. The extra points are included in the "Points Scored" line.

A modified tag printout with Punches 44 and 63 added could look like this:

```
28    59  50    29/07/2007 10:25:55 AM   0:19:02
29    54  50    29/07/2007 11:01:11 AM   0:35:16
30    16        29/07/2007 11:15:34 AM   0:14:23FINISH TIME.
END
      AddedPunch44        40
      AddedPunch63        60

Recognised finish time 29/07/2007  11:15:34 AM
Time on course   23:15:34

 940   Points Scored.
       No Time Penalty.
 Nil   Manual adjustment.

FINAL SCORE = 940
```

Added Punches can be deleted, either by using the REMOVE button for many Tags, or the "Delete manual editing" button if re-scoring an individual tag. (Click SAVE to keep the change for this individual Tag.)

Method 2 - As Tags are being scored: Close the "Re-score" Extension.

Click the "PUNCH failure" button to open the "Scoring a lost Punch" window, shown above. Note that it has reduced functionality in the Tag reading mode. Enter the number of the lost Punch (or punches, comma-separated) in the "Add This PUNCH-" box and click OK. (You cannot enter any teams in the TEAMS box while the Tag Reader window is not in the Re-score mode.)

A new Window "**AddPunchList**" will open, showing the new lost punch in yellow. Any Punches showing yellow will automatically add to the next tag scored. Any previously listed lost Punches will still be in the Window but will probably be coloured grey.

Click to toggle colour. Yellow will add Punch to all new Tag readings.

The yellow colour reverts to grey after the next Tag is scored. Clicking the punch box will toggle its colour, so if another Tag needs the same Punch added, just click the box to yellow before scoring the Tag.

The "**AddPunchList**" Window remains open, although the yellow reverts to grey as each Tag is scored. If the "Options… Yellow selection persists" menu item is checked, the yellow will persist and its punches will add to all tags subsequently read. This may be useful if nearly all teams have visited a lost punch.

If, subsequently, another Punch is reported as lost, click the "PUNCH failure" button again and enter this lost punch as described above. It will add to the existing "**AddPunchList**" Window, without having to re-list the original Punches.

Punches may be removed from the "**AddPunchList**" Window from the Options Menu. Check "Enable double-click Punch removal" then double-click the punch you want removed. If they are all removed, the window closes.

7.2.5   The Failed Punch list.

Any Punches where the clock is suspect, as shown by a comment "Punch clock failure" in a team printout, and any Punches which have been processed as "Punch Failure", are added to a Failed Punch List. This list is saved in a file called "FailedPunch_Options.txt".

7.2.6   Partially Failed Punches.

Occasionally, punches have worked on one Tag in a team but not others. This is usually the result of a flat battery or bad battery connection. The consequence is that the team will not be credited with that punch unless they have been credited with the lost Punch as described above. Some teams fail to recognise that they have missed a punch until after the results are presented.

When you first open the RESULTS Window, a search is made of all teams, for discrepancies in their score caused by one of the Punches from the Failed Punch List. If this is found, you will be given the opportunity of automatically checking those teams, or ignoring the possible error and proceeding to RESULTS. The default is to go to RESULTS.

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PARTIAL PUNCH FAILURE IS POSSIBLE.

You have 5 failed Punches and 29 teams with score discrepancies.
You can automatically search to see if any of the failed punches have caused the discrepancies,
but it could take at least 36 seconds. CLick YES to search or NO to ignore.

Yes   No
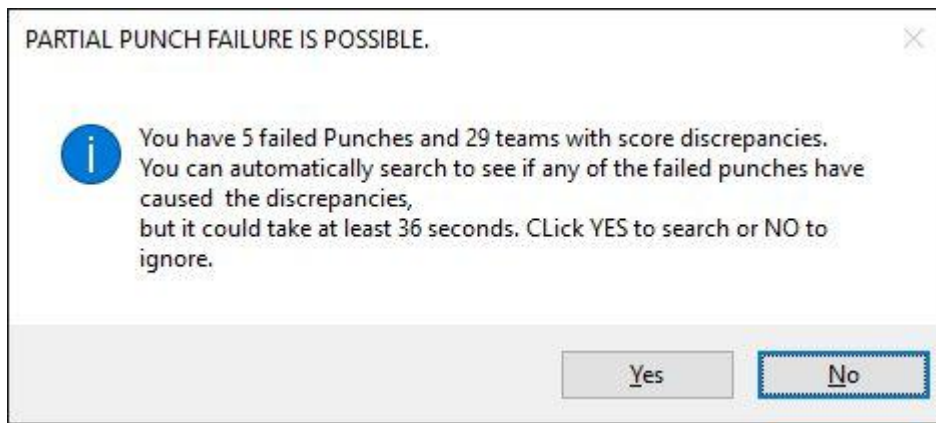
This check is only made the first time you open RESULTS. If you want to test again, close and then re-open READTAGS and click RESULTS again.

If you want to check for yourself, click NO (the default) to proceed to RESULTS, then close RESULTS to return to READTAGS. Then use Tools…Show failed Punch list to find out which failed punches there are, and write them down. Then open RE-SCORE and search for DISCREPANCIES. Then click each team in the Discrepancy list and manually examine it for one or more of the failed punches. This can be time-consuming. The automatic search is easier but could take some time, as shown.

If you click "Yes" then a search is made. If any discrepancies are caused by partially failed Punches you will be shown information in the "Score" window, where Tag scores are normally shown. If there are none, you will proceed directly to RESULTS.

If there are, you should PRINT the score window, then manually check each of the teams shown.

7.2.7   Direct numerical adjustment.

This should be a last resort. You are better to credit missed punches, adjust finish times, and insert FINISH or BRIEF punches rather than using this rough-shod approach.

If all else fails, select the Tag you wish to modify by clicking it in the listbox shown above. Then click "Rescore selected Tag" and the Window will change as normal. See the "Hint" in Section 7.2 above for methods of finding the Tag.
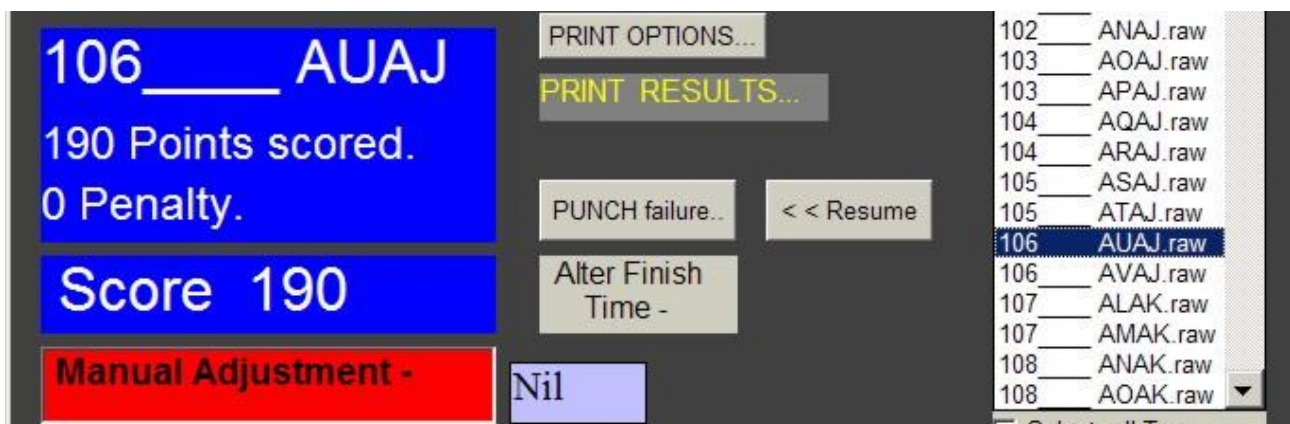
If a correction of, say, 35 points is to be added, clear the "Nil" box above and type 35 into it.

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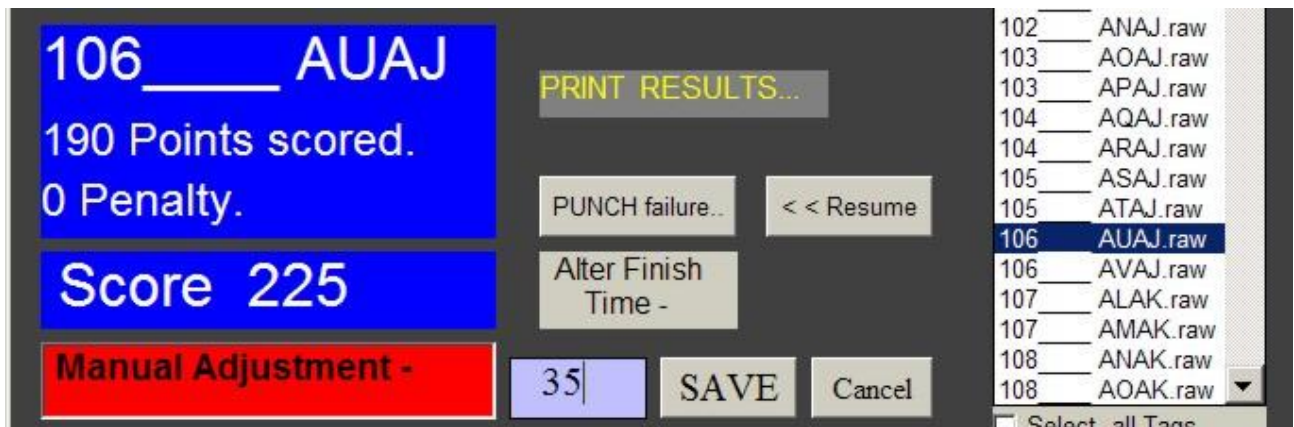
Click SAVE and the new score will apply. Make sure that "PRINT TAGS" is checked if a new printout is required.

Note: Negative numbers can be entered.

7.2.8   Lost Tags.

If a team says that one of their tags stopped working or was **LOST**, and you believe them, you can automatically create a RawTags file, and allocate a manual score equivalent to the rest of the team.

Score all the valid team punches first, then from the "TEAM Scoring..." Menu, click "Lost TAG". A window appears.

Enter the team number, and then click "ACCEPT". The rest is automatic. The names of the people in the team are shown.

If the team number you enter has already completely scored, you will get a message "There are no un-scored tags in team 7."

7.2.9   Removal of Manual Editing.

Once a manual modification has been made to a score, it is re-used in all future re-scoring of that Tag. You may wish to remove the modifications under some circumstances.

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Choose the Tag you want to clear of Manual Editing and re-score it as usual. If alterations are detected a new button appears, named "Remove manual editing." Click this button.

Alternatively, you can remove ALL manual editing from all scored Tags. From the Menu, click TOOLS…Delete Scored records…All Scored Results. After this, you will need to "Select all Tags" and re-score ALL Tags, as described in Section 7.2.11 below.

7.2.10   Superfluous Printouts when re-scoring.

Re-scoring when there is more than one tag per team causes unwanted extra printouts.

Whenever a Tag is scored, or re-scored, the program finds the tag numbers for all tags in that team (from tagnums.txt) and searches the scored file list for them. If all tags have been scored for that team, an overall team result will be printed (if the PRINT TAGS box is checked).

This printout shows only the last tag scored if all tags have equal scores, but will show all tags if there is a difference. The printout will also say which tag is taken as the team's overall result (the lowest or highest, depending on the Course setup). Regardless of which tag is used, the final results will take the slowest finish time of all the tags.

This means that when a tag is manually re-scored, a team printout will result. If you have to change two tags in a team, you will get two separate team printouts, and only the last will be the correct one.

Therefore, if you must re-score several tags in a team, turn off the PRINT TAGS box until just before you save the last Tag changes. Note that even with the PRINT TAGS box unchecked, when you have re-scored the last tag and clicked "SAVE", the SAVE button changes to PRINT. Click this and you will get a printout.

7.2.11   Re-scoring ALL tags –and why.

Before re-scoring ALL tags, you will need to remove existing scored records. You can either delete Summary files, or ALL Scored records. This latter action will remove all manual modifications and should be done only if necessary. Both actions are done from the TOOLS… Delete Scored records… Menu.

Delete Summary files under these circumstances:
- Course scoring rules have changed from MINIMUM Tag to MAXIMUM Tag or vice versa.
- If any team has changed their Course.

Delete ALL Scored records under these circumstances: (You will lose all manual changes)
- Changes to Course Start, Duration, or Finish times, or penalty rates.
- Some Tags have been given different Team numbers.
- You want to remove all manual editing of results.

Click "Re-score >>" then check the "Select all Tags" box. Then click "Rescore ALL Tags" and the progress is shown in the blue box as shown below.
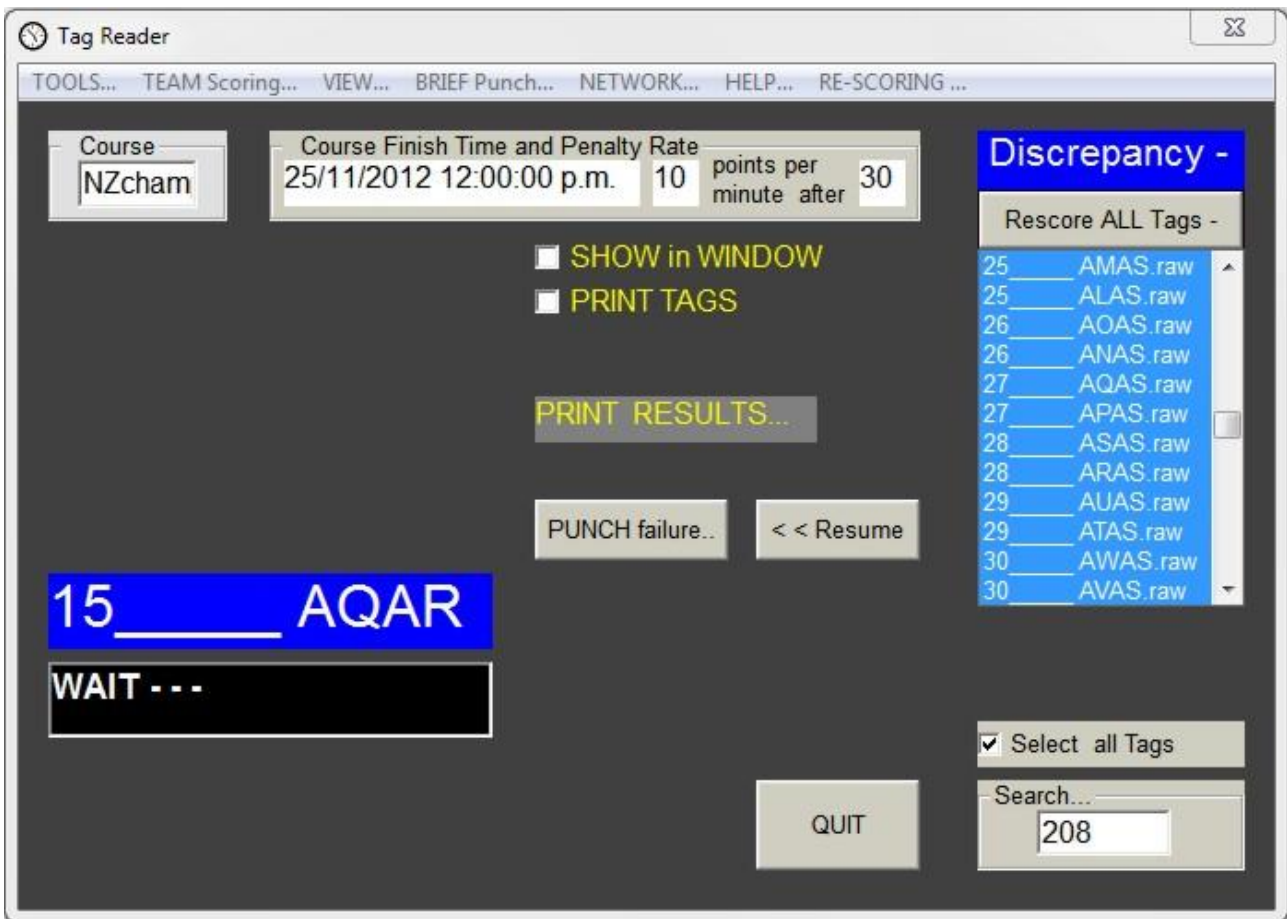
When finished, a message appears.

7.2.12   Discrepancies within teams.

Whenever you open the Re-score extension, a blue label saying "Discrepancy" will appear if any team has different scores within its Tags.
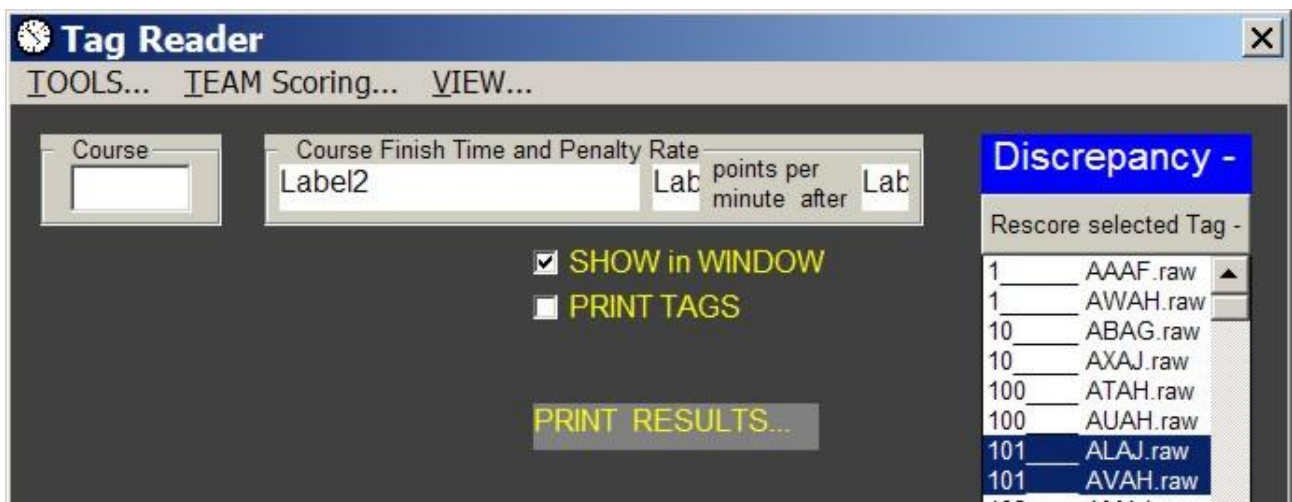
To find out which teams have discrepancies, click the "Discrepancy -" label. A message will appear telling you.
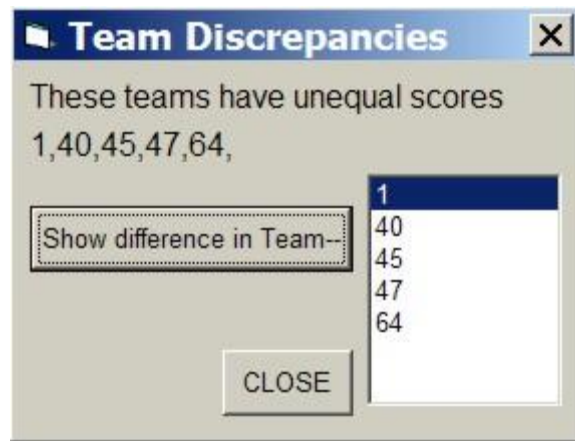
Click on the team you want to examine, and click "Show difference in team." (or simply double-click the team.)
The differences between Tags in that team will show in the Display window.
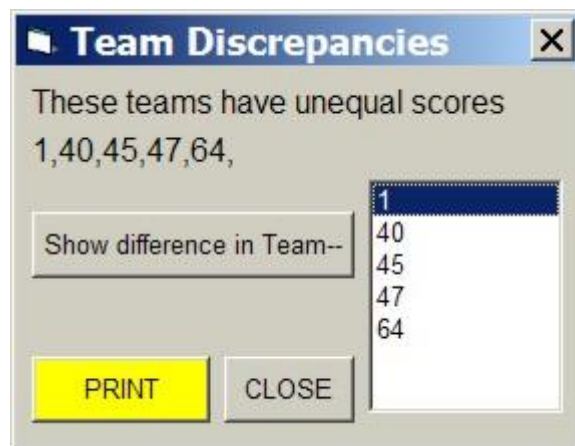
If you click the PRINT Button, the displayed differences will be printed.

```
Team No. 1        Jack Palmer, Jane Reynolds
AAAF FINAL SCORE = 640;      AWAH FINAL SCORE = 340
(Ignores 250 points punched after Finish Time.)
_____
AAAF scores not found in AWAH

Line #              Value
   4          43     40
  13          21     20
      No Time Penalty.
Manual     Adjust     50
_____
AWAH scores not found in AAAF

Line #              Value
  14          20     20
      No Time Penalty.
_____
```

You can continue to view discrepancies in this manner.

The cause is usually a missed Punch on one of the Tags. You must decide whether to allow the extra points, and if so, how: by allowing a BRIEF punch, by adding a Punch, by altering a Finish time, or by a manual addition.

7.2.13   Searching for Scored Tag results.

This is done simply by selecting the desired tag exactly as for re-scoring. Use the Search.. box and type in the team number or Tag code. Click "SHOW IN WINDOW" to open the SCORE window, as described in Section 7.1.9, "Displaying Scores in a separate window."

From the SCORE window, use its FILE Menu to select SCORED FILE. Double-click the desired Tag and the Scored file will appear. Click Cancel whenever you like; the scored file remains in the window.

7.2.14   Difficulty reading a Tag.

Occasionally, a few Tags have **FAILED TO READ** completely when being scored. Since this was discovered a hardware alteration has been made to the Readers, and the method of reading the Tags has been changed from "dump" to "handshake". The problem appears to have been solved.

However if you do experience a problem at an event, there are several things you can try. The first is to change the method of reading from the Tools… Debug Menu.
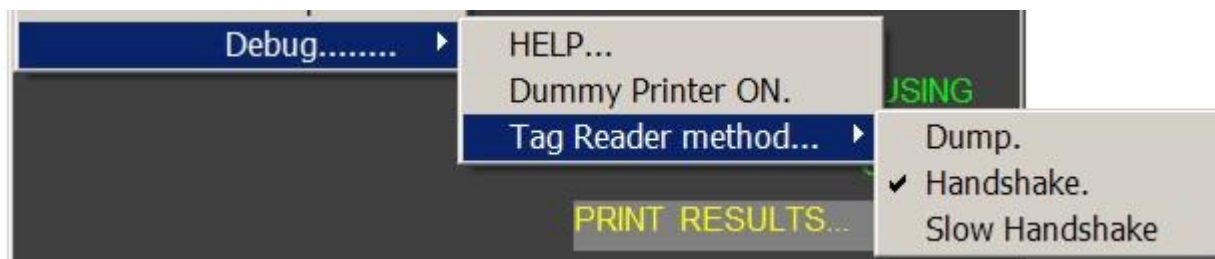
The default is Handshake, as shown.

You can try the "Slow Handshake" method. (Both Handshake and Slow Handshake will be ticked). This method is primarily intended for system testing but may be of use. Alternatively you can try the "Dump" method but this is unlikely to offer any improvement and may introduce errors.

Another option is to unscrew the clear plastic nozzle from the Reader and re-try. The exposed end of the Reader should be fully inserted into the Tag. This provides a closer coupling and may be effective. You may also try an alternative Reader.

If you are in an exceptionally hot place, cooling a Reader in a fridge may be effective. This is more likely to help with the original RS-232 Serial Port readers. The later USB readers have some temperature compensation built in.

7.2.15   Making extra Tag or Team printouts.

You may wish to re-print a Tag or Team file, without modifying any scores. Find the Tag from the Re-score list and open it as if you wanted to modify it. The "SAVE" button does not automatically appear until you change something, so to make it appear, simply click in the box where you would add a manual score. (The box that normally shows "Nil".) This brings up the SAVE button, and you click SAVE, then PRINT, to get the printout.

7.3 The ReadTags SEARCH tool.

This enables you to search the various text files for a person's name, or a team number, or details about a Punch.

From the ReadTags TOOLS... Menu, click SEARCH... A window opens.

```
SEARCH...                                          —    □    ×

    SEARCH ...
 ● For a NAME     [Peter                    ]    □ Match from start

 ○ For a TEAM      Enter the name of a person, or a    □ Match whole word
                   team name, and click 'SEARCH'.
 ○ For a PUNCH                                        [ SEARCH ]

                       Search results
 103 Vincent Pooch (NZL), Peter Jackson (NZL)            The Re-entrants
 110 Mike Harding (NZL), Peter Cleary (NZL), Alister Metherell (NZL)        Tc

    Click on an item above to see more details in the DISPLAY window.
                                                         [ CLOSE ]
```
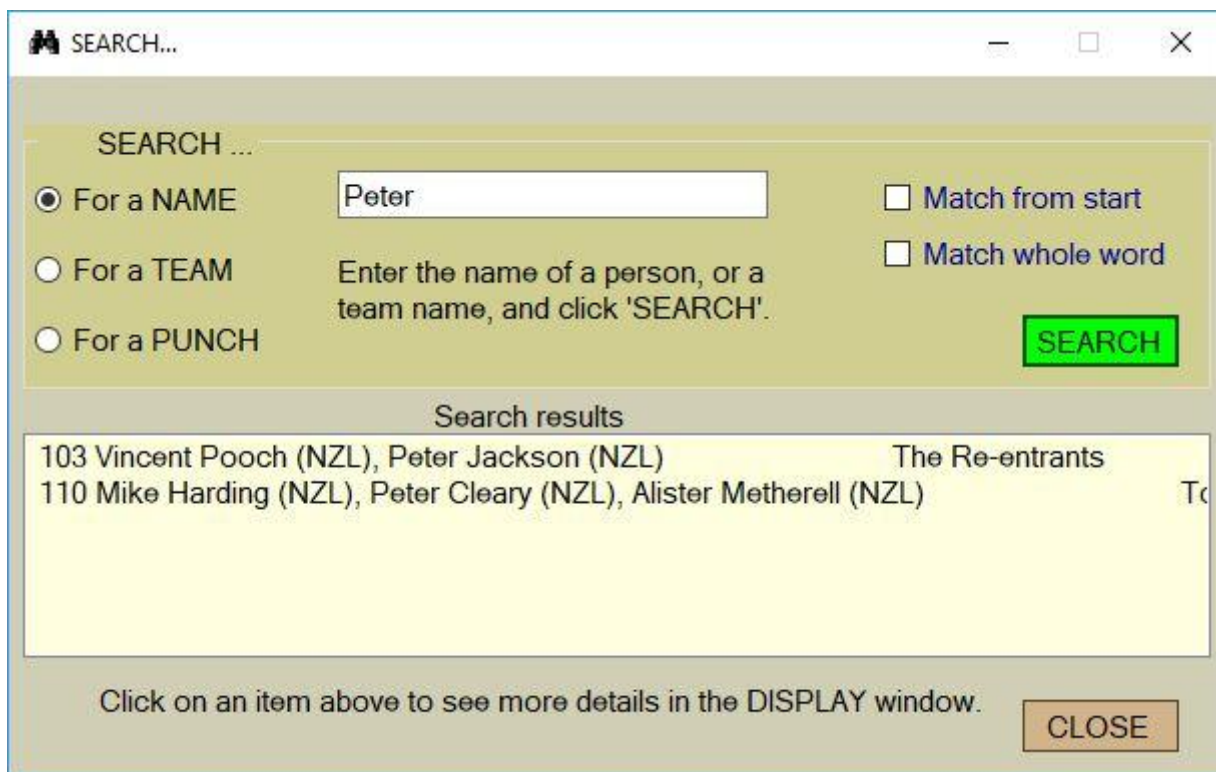
Choose one of the three Options on the left, type in a search name or number, and click "SEARCH". The sample above shows the results of searching for a name "Peter". Clicking on one of the items in the bottom white box displays more information in the SCORE Window.

Clicking on 103 Vincent Pooch shows this:

```
 SCORE                                                     —

 DISPLAY...  ZOOM....   PRINT this   EDIT...
     Team number  103  MSV      24hr
     Vincent Pooch (NZL), Peter Jackson (NZL)  The Re-entrants
     Tags in team = ARAQ ASAQ

     SCORED RESULTS - - -

     ARAQ Finish 12/02/2017 11:23:28 AM, Score = 1550
     ASAQ Finish 12/02/2017 11:23:30 AM, Score = 1550
```
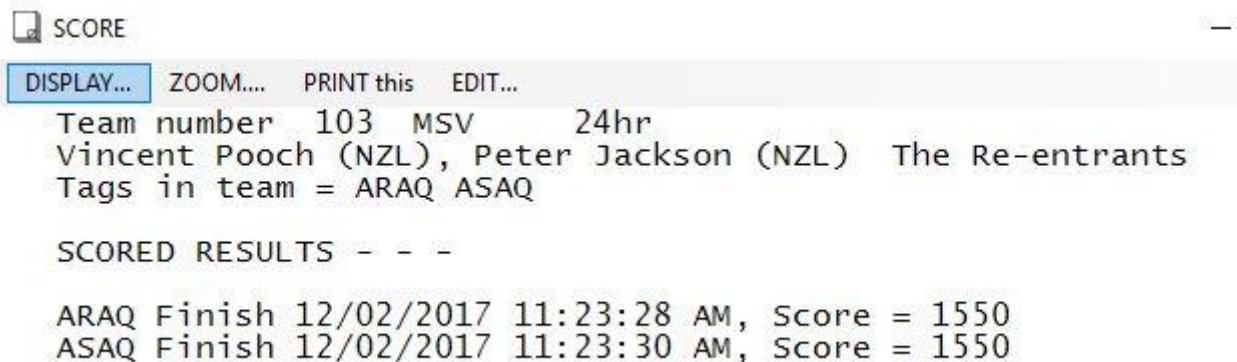
Searching for a Punch number, then selecting it in the bottom box, shows information about that Punch (extracted from scored Tag records).

```
 DISPLAY...   ZOOM....   PRINT this
 ∧  1003 VOR from Tags.txt
    118_____  AXAX   11/02/2017 1:43:41 PM  Marianna Cochrane (NZL), Denise
    118_____  AYAX   11/02/2017 1:44:18 PM  Marianna Cochrane (NZL), Denise
    117_____  AQAR   11/02/2017 1:48:38 PM  Colin Dixon (NZL), Douglas Woods
    117_____  ARAR   11/02/2017 1:48:42 PM  Colin Dixon (NZL), Douglas Woods
    25_____  AVAQ   11/02/2017 1:57:44 PM  Lisa Cutfield (AUS), Kerran Grae
```
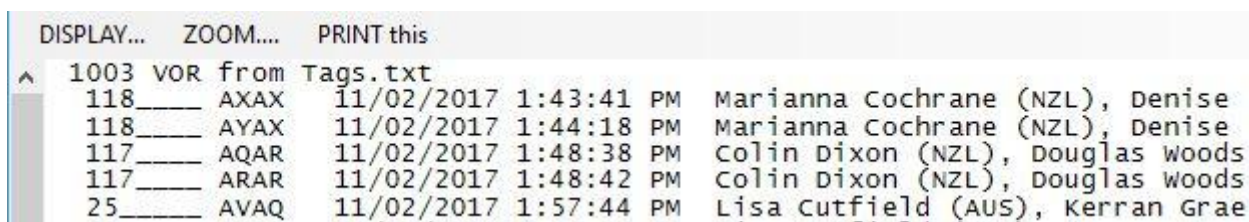
7.4 Printing the results – Overall and Section Winners.

When all Tags have been scored, or enough for interim results, click the "PRINT RESULTS…" button. This allows printing of the complete results, and a summary of the three winning teams in each section.

A window like this will appear.
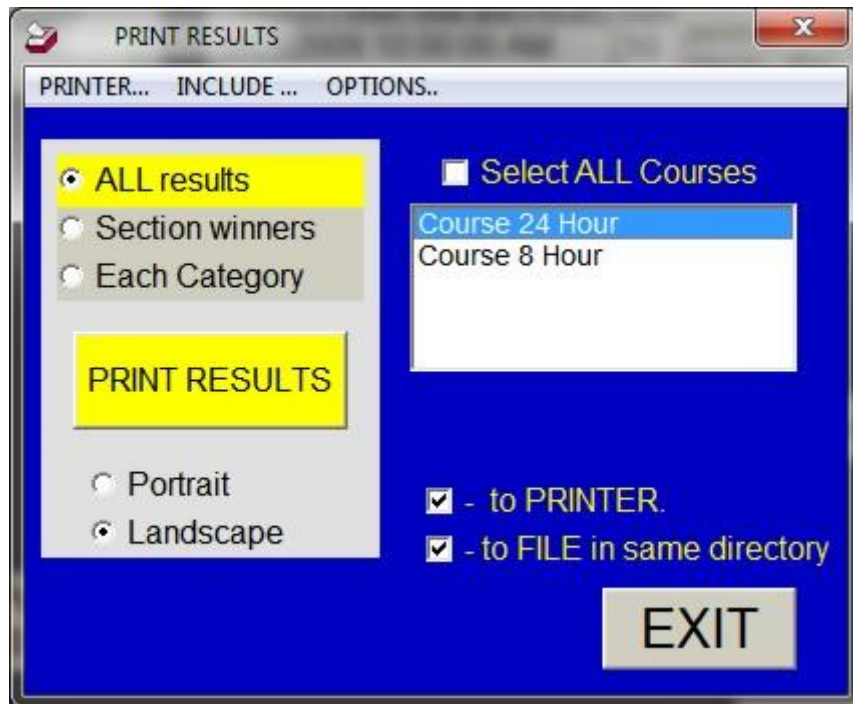
Note that the printing is *always* sent to the computer's *default system printer*. Use your system Control Panel to ensure the default printer is the one you have connected. Select the Courses you want results for, and check or uncheck the - to PRINTER box, then click PRINT. A yellow flash saying "DONE" appears momentarily. The PRINTER... menu allows you to change font size etc.

This process takes the data from the ScoreSummary file and creates the file "Course 24 RESULTS.txt" in the Course 24 directory, and other Course results in other Course directories. These should be the source file for interfacing to other software systems. The results are rank-ordered from highest score to lowest, and where equal scores occur, the ranking has been done on finish time. Rankings within Categories are also shown.

A typical results file will look like this - -

Place	Team #	Score	MO	MV	MSV	WO	WV	WSV	XO	XV	XSV	J
1	33	2590	1	.	.	.	.	.	.	.	.	.
2	52	2190	2	1	.	.	.	.	.	.	.	.
3	48	1600	3	.	.	.	.	.	.	1	.	.
4	47	1540	4	.	.	1	.	.	.	.	.	.
5	66	1310	5	.	.	.	.	.	1	.	.	.
* 6	28*	1270	6	.	.	2	.	.	.	.	.	.
7	152	1130	7	.	.	.	.	.	2	.	.	.
8	73	1080	8	.	.	.	.	.	.	.	.	.
9	83	960	9	.	.	3	.	.	.	.	.	.
10	18	640	10	2	.	.	.	.	.	.	.	.
11	82	250	11	.	.	.	.	.	3	2	.	.

The order of the categories across the top (MO, MV, MSV etc) is the same as the vertical order in the "Categories.txt" file, where the categories are derived from.

NOTE: The asterix on line 6 means that not all the Tags have been scored for Team 28.

The **Section Winners** printout may look, in part, like this:

```
-------------------------------------------------------------
Overall winners.
1       3400 points.        Team 55  ( 1 overall)
2       2850 points.        Team 63  ( 2 overall)
3       2720 points.        Team 21  ( 3 overall)
-------------------------------------------------------------


-------------------------------------------------------------
MO Section winners.
1       3400 points.        Team 55  ( 1 overall)
2       2850 points.        Team 63  ( 2 overall)
3       2510 points.        Team 64  ( 5 overall)
-------------------------------------------------------------


-------------------------------------------------------------
MV Section winners.
1       2380 points.        Team 22  ( 6 overall)
2       2110 points.        Team 74  ( 16 overall)
3       1940 points.        Team 67  ( 21 overall)
-------------------------------------------------------------


-------------------------------------------------------------
MSV Section winners.
1       2110 points.        Team 74  ( 16 overall)
2       1760 points.        Team 73  ( 31 overall)
-------------------------------------------------------------
```

Again, a text file is saved in each Course subdirectory. Options for including names and finish times, as described in later sections, also apply to the Winners printout. An extract may look like this:

```
-------------------------------------------------------------
MO Section winners.
1       3400 points.        Team 55  ( 1 overall)
        Chris Forne, Joe Jagusch.

2       2850 points.        Team 63  ( 2 overall)
        Greg Thurlow, David King.

3       2510 points.        Team 64  ( 5 overall)
        David Mangnall, Nathan Fa'avae.
-------------------------------------------------------------
```

7.4.1   Displaying the results in a Window.

Choose which form of results you want using one of the three Radius buttons, and un-check the "to PRINTER" box.
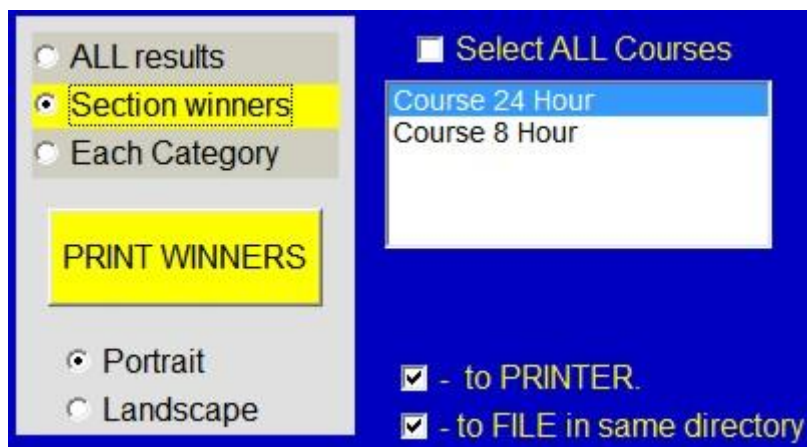
When the PRINT Button is clicked, the chosen results will appear in the same Display Window which is used for showing tag results as they are scored. As with the Tags, the Window can be re-sized and scaled for best effect.

7.5 Options available for the RESULTS printout.

You can include Gross and Penalty points in your printout, as well as final score. You can also include Names of team members, if a suitable text file exists. Use the "INCLUDE in output…" Menu to select these options.

7.5.1   Showing Gross and Penalty scores, and Finish time.

To show Gross scores and penalty points in your printout, and/or finish times, use the "INCLUDE in output…" Menu to select this option. These selected options will also apply to the Section Winners printout and display.
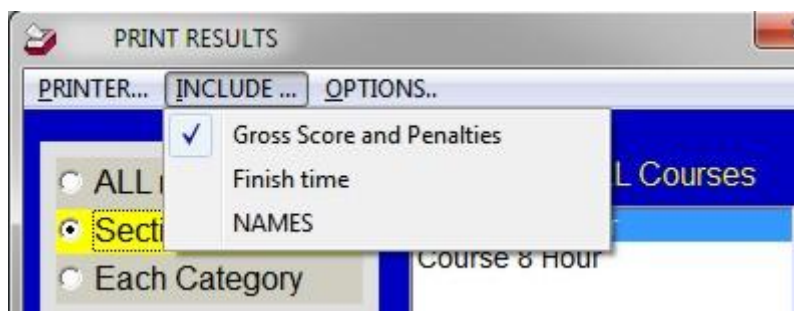
The printout now contains the extra columns.

Place	Team #	Gross	Penalty	Score	O	MO	MV	MSV	WO	WV	WSV	X
1	84	2370	0	2370	1	1	.	.	.	.	.	.
2	81	2310	0	2310	2	2	1	.	.	.	.	.
3	40	2250	0	2250	3	3	.	.	.	.	.	.
4	6	2160	0	2160	4	4	.	.	.	.	.	1
5	62	2030	0	2030	5	5	.	.	.	.	.	2
6	50	1960	0	1960	6	6	2	.	.	.	.	.
7	46	1960	0	1960	7	7	3	.	.	.	.	.
8	49	1870	-40	1830	8	8	.	.	.	.	.	3

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7.5.2   Including Names in the results.

You may also include **NAMES** in your printout. You must have linked Tags to Team numbers using a spreadsheet as described in Section 5.1, including Names from the spreadsheet.

Click the INCLUDE.. NAMES from file.. Menu item, as shown in the above Section.

Note: If you did not link Names into your Tagnums.txt file when setting up the Tags to Teams in Section 18.3.1, you can still go back and do that. Just make sure that you have the "Keep Existing Teams" box checked, to avoid changing team-tag assignments.

7.5.3   Ranking results with zero scores.

Zero scores are normally ranked in the RESULTS printout in no specific order; the scores are all equal. If you wish to have these scores ranked in finish-time order, use the OPTIONS.. Menu.
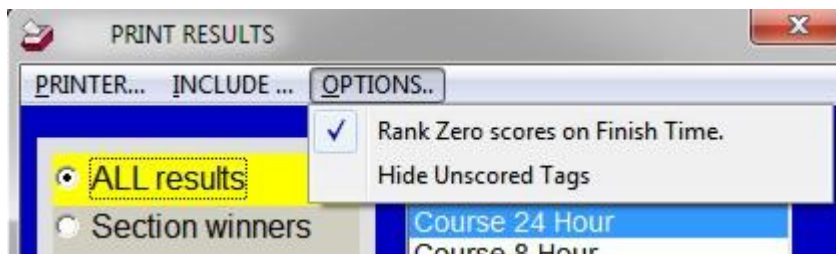
You can include or exclude un-scored Tags by using the "Hide Unscored Tags" Option.

7.5.4   Saving the ReadTags and Results settings.

The ReadTags window automatically saves all of its option settings (including the RESULTS and NAMES settings) on exit. Opening the Readtags Window restores all these settings. To reset all settings to default values, use the Readtags TOOLS... Restore default options menu.

7.5.5   Additional HTML source files.

If Names are included in the results, two additional text files are created in each scored directory. The new filenames end in *VRA_htm.txt and *NZRA_htm.txt and are tab-delimited text with the same columns and data as the html results system used by the VRA and the NZRA. Other formats are available on request.

The ReadTags window saves all of its option settings (including the RESULTS and NAMES settings) on exit. Opening the Readtags Window restores all these settings. To reset all settings to default values, use the Readtags TOOLS... Restore default options menu.

7.6 Finding out who hasn't returned.

At any stage during the scoring of Tags as people return, you can find out which Tags remain unscored. You will be in the Tag Reader window. There are two ways of doing this.

7.6.1   From the TOOLS... Menu.

Click "TOOLS… - Find unscored teams." from the menu bar. The Score Display window will show partially scored teams, as shown in this example:

```
SCORE                                                        _ □ ×
FILE   ZOOM

   PARTIALLY SCORED TEAMS...
   _____

   5        AJAV      unscored from    AGAV,AHAV,AJAV
   35       ABAY      unscored from    AXAX,AYAX,AAAY,ABAY,ACAY
```
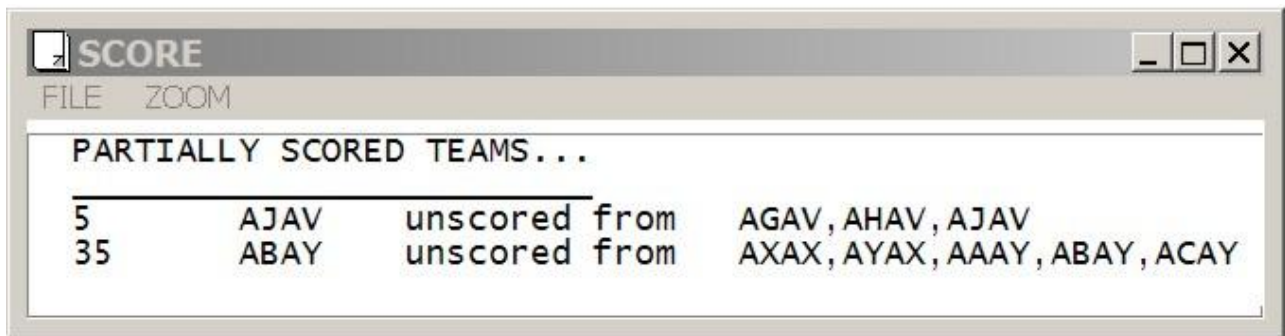
This shows the team number, the un-scored Tag code, and all the Tag codes for that team.

The un-scored tags are collected into Course order, with the first Course displayed being the course of the last Tag scored. This means that towards the end of a 6-hour course you can find who hasn't returned from that course, without being swamped by all of the teams still out on a longer course.

Note that Tags without team numbers do not show using this method. To find them you must use the next method, printing the ScoredTags course.

7.6.2   From the "PRINT RESULTS" Window.

Repeat the procedure descried in Section 7.4.1 above for displaying results in a window. This time, choose "ALL RESULTS" from the Menu, instead of Section WINNERS. From the Options Menu, un-tick "Hide unscored Tags" as shown in Section 6.5.3 above.

Select any course from the PRINT RESULTS window, and click "PRINT".

At the very bottom of the SCORE display window, all unscored Tags with team numbers will be listed. They will look like this.

```
Unscored Tag    5_____ AJAV
Unscored Tag    35_____ ABAY
```

If you use the ScoredTags course for the printout, all Tags without team numbers will show as well. The last few lines are like this . .

```
268    AWBJ   0      Not Scored.
269    AXBJ   0      Not Scored.
270    AYBJ   0      Not Scored.
271    AZBJ   0      Not Scored.

Unscored Tag    5_____ AJAV
Unscored Tag    35_____ ABAY
```

7.7 Automatic Tag Erasure and un-erasure.

Tags can be erased as they are scored, in preparation for the next event. This option requires careful use, to ensure that Tags are not scored before the event is completed. For example, you must not score a Tag if a team returns temporarily, part-way through an event, just to see how they are going.

To enable this feature automatically, a text file called AutoEraseActive.txt must exist in the directory where the RogaineSCORE executable exists; probably the Program Files\NavLight Rogaine Scoring folder. The contents of AutoEraseActive.txt are immaterial; it is merely its existence which enables the auto-erase feature by checking the menu item.

It can also be enabled by the user at any time, by checking the "Erase Tags when read" menu.

When auto-erasure is active, there are some safety measures:

- "Chain" courses do not erase the Tags at reading except for the final Course in the Chain.

- If a Tag is read less that 75% through a Course timeframe, a warning message appears giving the option of not erasing the Tag yet.

- You can un-erase a Tag by un-checking "Erase Tags when read" from the TOOLS menu, and re-reading the Tag.
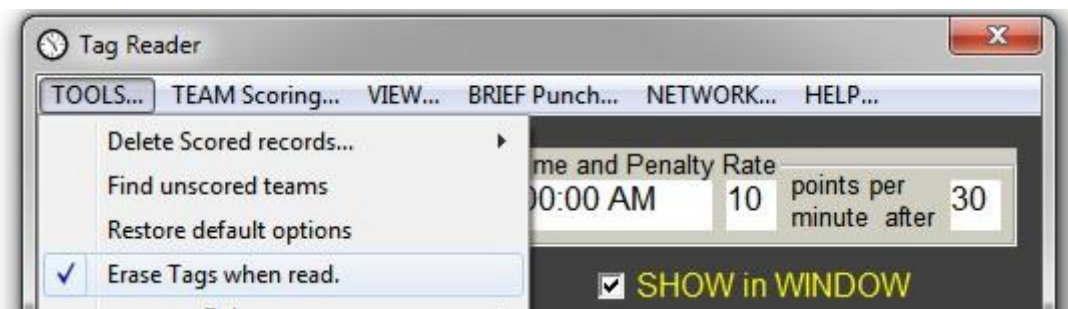
An erased Tag may be re-read, **provided it has not been subsequently punched**. A Tag is erased by setting its internal record counter to zero, but the records themselves are not erased. A copy of the record counter is written into the Tag when erased, and if you attempt to score a Tag with a zero record count, the stored count is used instead.

The risk of using auto-erasure is that some Tags may not be erased. This can arise because:

- A team did not complete a CHAIN course, so their tags are not erased.

- A Team had an interim score with the Tag Erasure disabled, then didn't have a final scoring.

- Not all Tags in a team were scored.

7.8 Networking - Using several computers for scoring.

Using several computers will speed up the scoring process for large events, and also provide redundancy in the event of a computer failure.

Each computer can have its own printer or printers, but you will need a Reader for each computer. The computers must also be networked. "Sharing" access must be allowed on the Event folders where the scoring will be done.

7.8.1   Computer set-up.

Presumably, one computer will have been used for handling registration, setting up the event details (Courses, categories, reference time etc.), and programming the Punches. This computer is initially the "Master", but other computers will eventually duplicate all the information from this one.

The Event folder (and sub-folders) on the "Master" computer must be accessible to all the networked computers, for both Read and Write access.

Each of the networked computers must have an Event folder established. At this stage, it can be an empty folder, but must allow Read and Write access to all the other computers. The best place is C:\Users\Public\RogaineEvents. The Public folder is easier to access from other computers, but can still be challenging in Windows 10. Click "Choose NETWORK FOLDERS… and a new window opens, offering additional help in setting up.

The RogaineSCORE.exe program must be copied into each event folder, or run from the "Program Files" directory and pointed to the Event folder.

On each computer, including the original "Master", start RogaineSCORE and open the READTAGS screen. There is a "NETWORK..." Menu item.
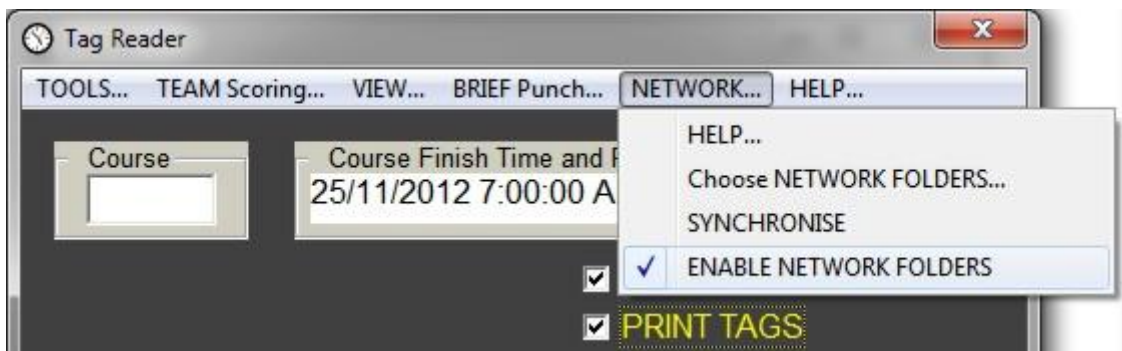
Click on "Choose NETWORK FOLDERS ..." to open the network setup screen.
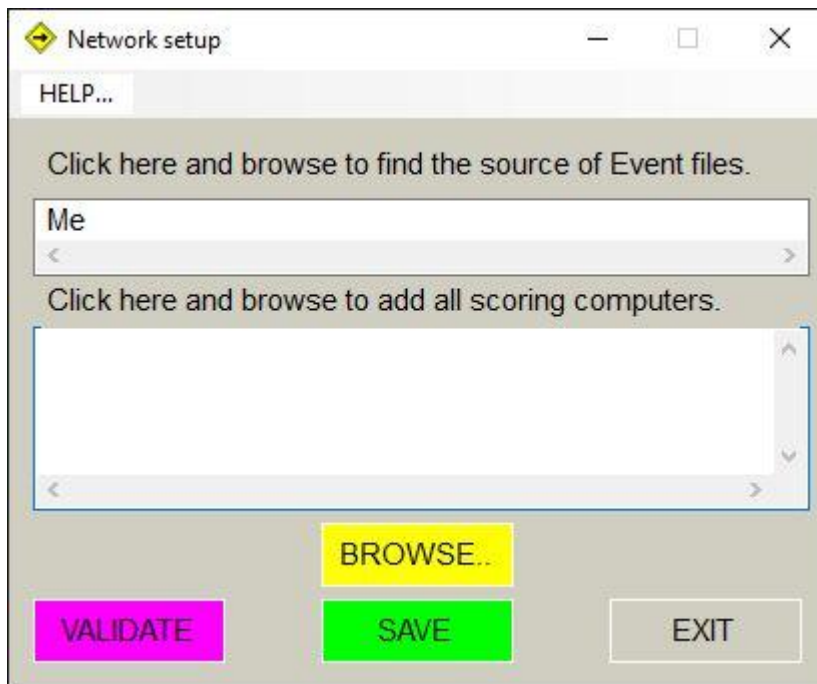
You need to find the original "Master" computer in the top box, and all others in the bottom box. Click on either box to select it. If you are the "Master", leave the top box empty, or "Me".

Then click the "BROWSE .." button to open a Windows Explorer screen, and use this to find an event folder on one of the other computers.
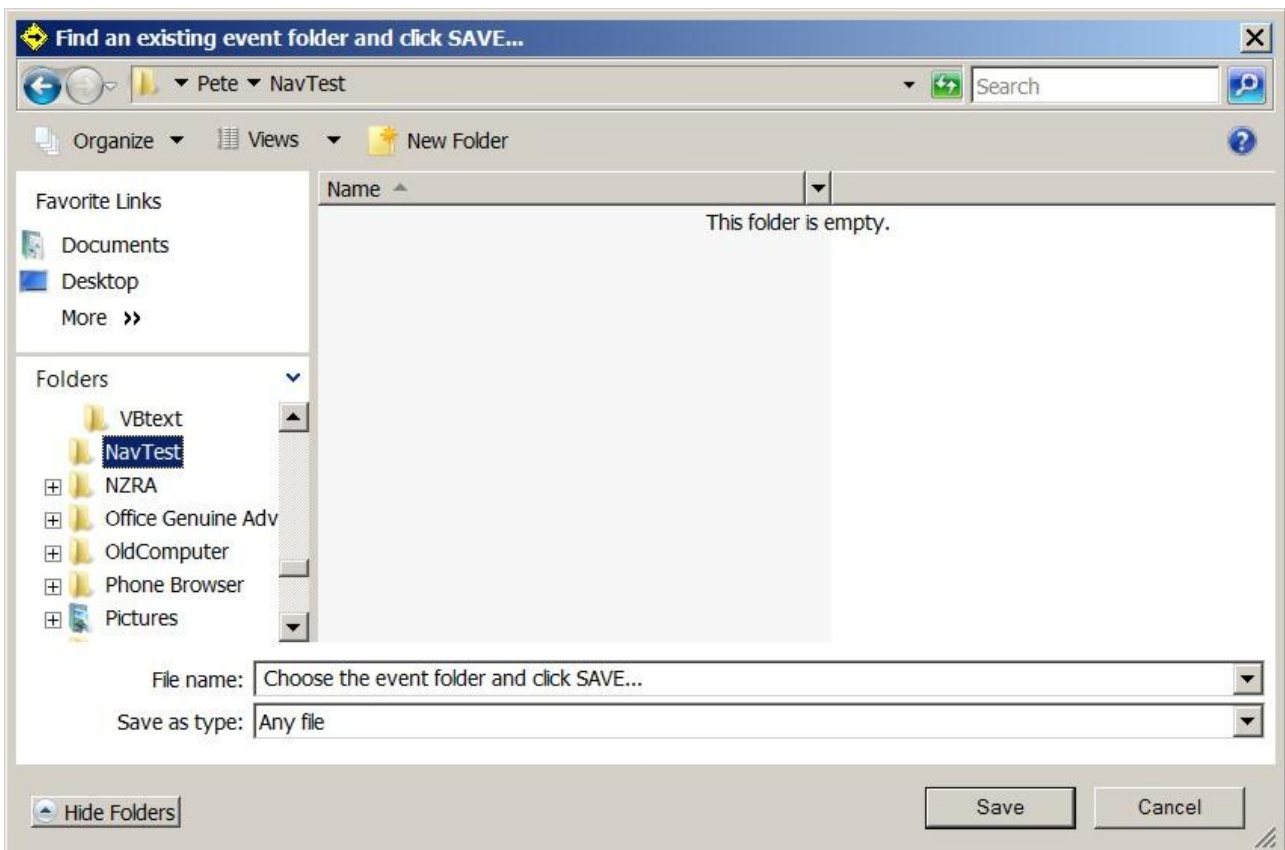
Click the "Save" button, and the chosen folder and its full path will be added to the white text box.

Repeat for all other computers on the network, but do not include the path for the computer you are currently operating.
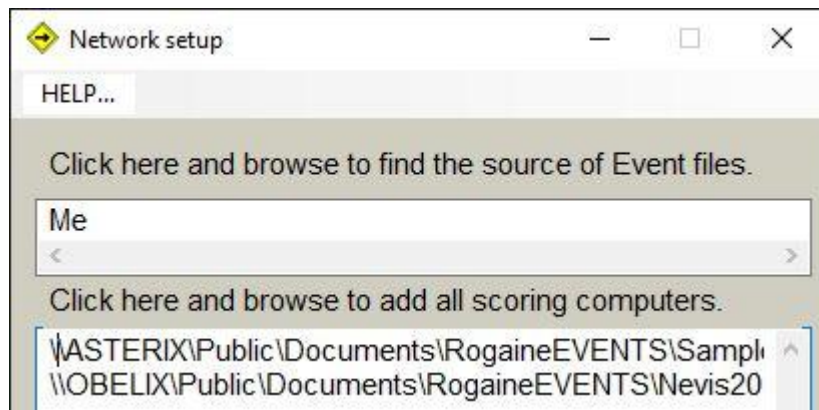
When all the paths are added, you can test access by clicking "VALIDATE". This writes, then reads, then deletes a file to each of the paths to check for access.

Click SAVE when finished. A file called "Network_Options.txt" is created, which holds these paths.

To DELETE a path, simply select it with the mouse and delete it in the text window. Click SAVE again.

7.8.2   File transfer –using SYNCHRONISE.

After the network setup, click the "SYNCHRONISE" Menu item on each of the non-Master computers. This will copy nearly all of the event files and folders from every other computer on the network.

Initially, most of the networked computers will have nothing in them, but the important files from the "Master" will be copied. This includes most of the .txt files, plus the "ScoredTags", "RawTags", "TeamData", and all the 'Course " folders.

Only .txt, .raw, and Excel files will be copied. Any other files will not be backed up.

Re-use the SYNCHRONISE menu item any time your computer is connected or re-connected to the network, or after any updates are made to the Event files on the "Master" computer. (Event files are ones which hold event information, such as Tagnums.txt, PunchNums.txt, TagReader_Options.txt, or any spreadsheets.)

- SYNCHRONISE only downloads files to your computer; it does NOT upload any from your computer to the other networked ones.

- SYNCHRONISE only copies new files, or existing ones if they have a later time and have different content.

- It is IMPORTANT that all computers have an accurate clock setting.

7.8.3   Scoring – IMPORTANT.

As Tags are scored or re-scored individually, raw and scored files are automatically written to the corresponding folders on other computers on the network. However the Summary files are **not modified**, to avoid conflicts.

This means that overall results can only be obtained by **Re-scoring ALL TAGS**. This can be done on any of the computers. Click Re-score>>, Select all Tags, then click Rescore ALL Tags -
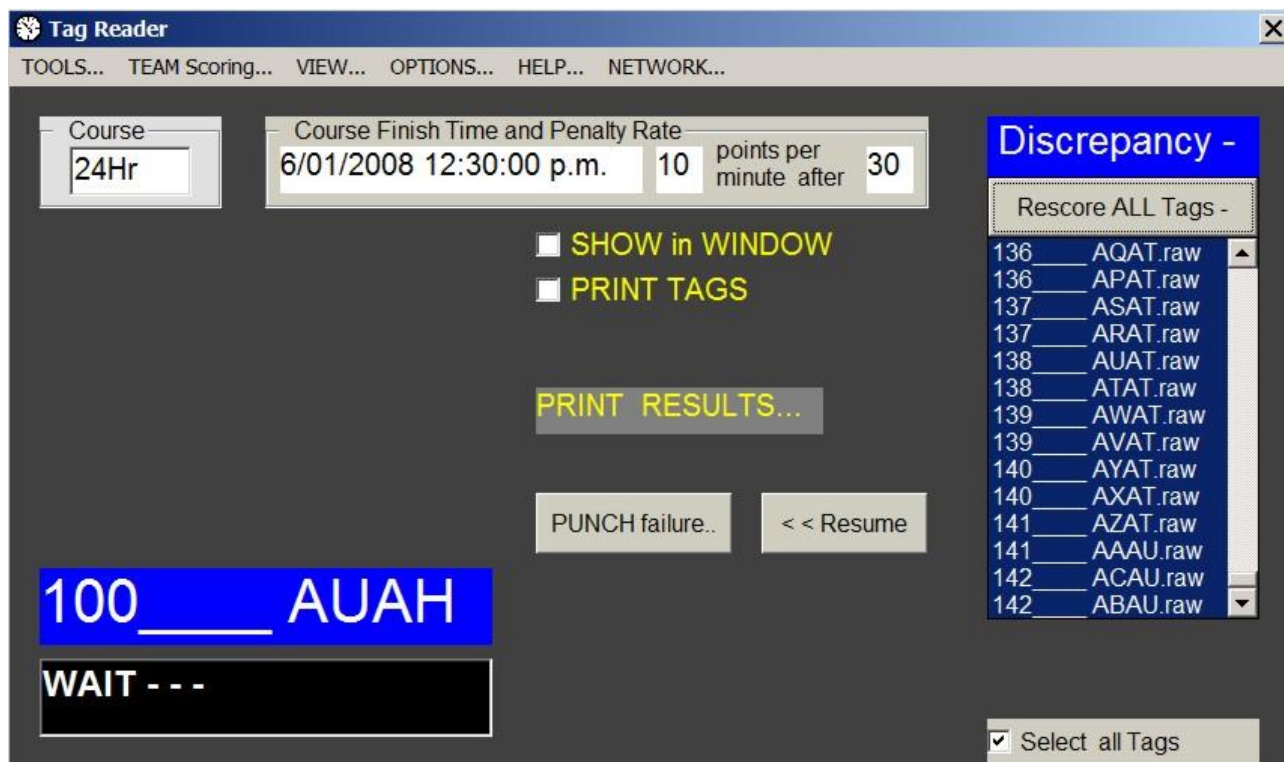
This can be done at any time, on any computer, and at any stage during the scoring process.

It is important to do this before looking for un-scored Tags (for missing teams) as this information is derived from the Score Summary files.

NOTE: If you are using the "SIMPLE READER WINDOW" described in the next section, you will have to show the Advanced window from the OPTIONS menu to re-score all, before getting results.

7.8.4   Normal usage of a network.

- Establish your event as usual on one computer. This should include all of the tag assignments to teams, people's names, different Courses, etc.

- Connect other computers into a network as described above.

- SYNCHRONISE each computer in turn.

- After setting up a printer and a reader on each computer, score Tags as usual, on any computer. It is probably good practice to score all the Tags from any team on the same computer.

- At or near the event finish, (or the finish of a Course), re-score ALL on one computer to get results. This can be done on any or all computers, as they do not affect each other in this operation.

- If any computer fails, the others should already hold up-to-date information, and should continue to operate normally. You will probably have to remove the failed computer from the Network Setup list, to avoid warning messages each time you score a tag.

7.8.5   Disabling the network paths.

When you start RogaineSCORE it searches for a file called Network_Options.txt, which holds a list of the paths to the networked computers.

If the file does not exist, you won't get any warning messages. (Normal one-computer usage).

If it does exist, the list is read and used each time you score a Tag. If the computers are not connected, you will get continual warning messages.

You can either delete the file, or clear all the lines in it, or un-check "ENABLE NETWORK FOLDERS" from the menu, by clicking on it.
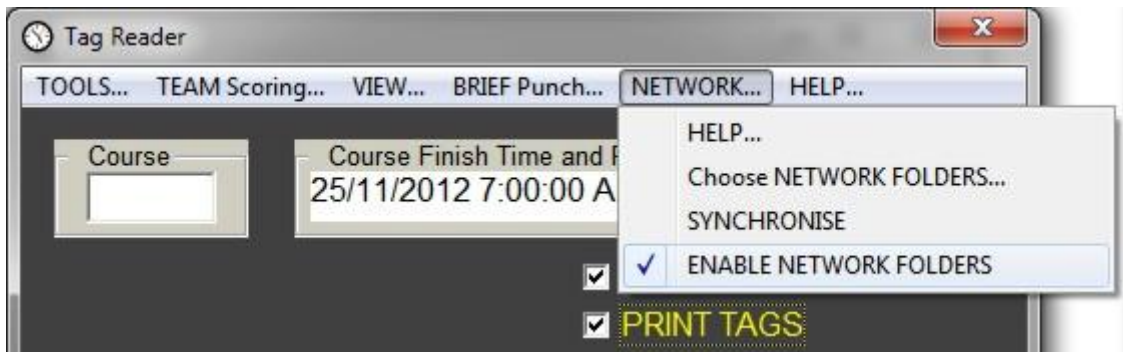
8 A SIMPLE SCORING WINDOW.

Version 47 onwards has a new scoring window which is intended to make scoring easier.
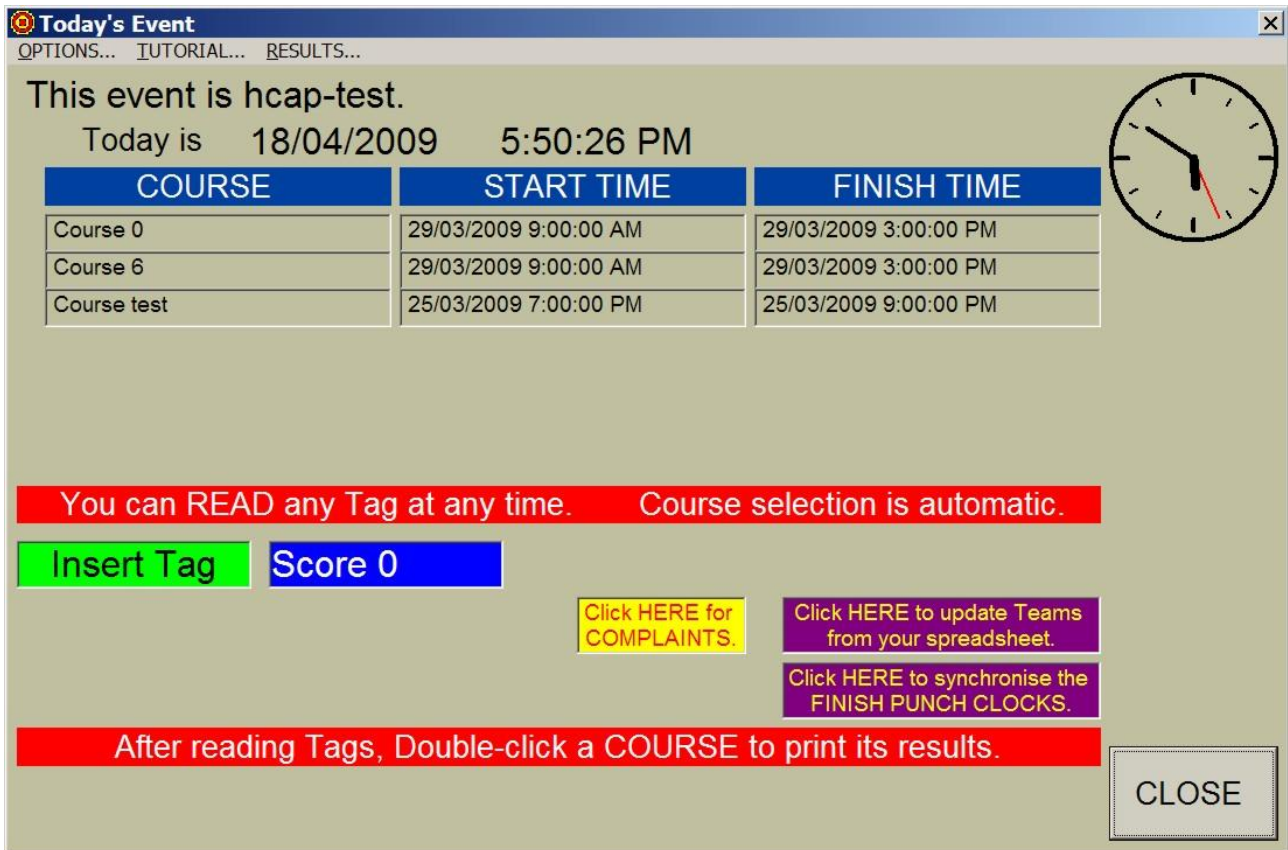
This Window is purely a user-interface to all of the screens and functions described in this Manual. It has reduced functionality in that some of your options and choices have been fixed to the most probable use. For example, you can't inhibit print-outs as Tags are scored.

It lists all the Courses in the event, as shown above. Each Course line has three boxes, Course name, Start time, and Finish time. These boxes change their back-ground colour to show what is happening:

- The appropriate COURSE box goes yellow as a Tag is read.

- The START TIME box flashes yellow for 5 minutes before Start time.

- The FINISH TIME box goes red after the finish time, up to disqualification time.

There is a live TUTORIAL with extensive examples. You will need a Reader and a Tag. You can run the tutorial at any time, even during an event.

You can revert to the normal screens from the OPTIONS… Menu bar by clicking "Show ADVANCED Scoring window". The simple screen will still be visible and will work in unison with the usual screen.
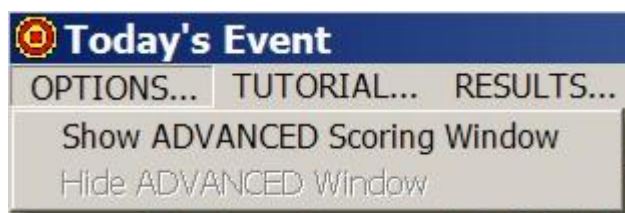
The Window is opened from the start-up screen, using the FILE.. Menu.
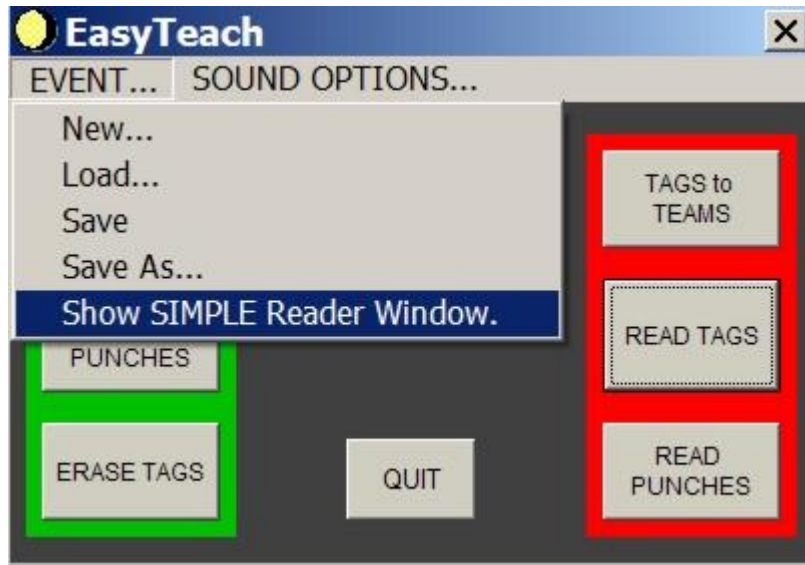
The "Today's Event" simple window will also open automatically on the event day.

8.1 Using the simple Window.

8.1.1   Scoring.

This is straightforward. Just read Tags as the teams finish.
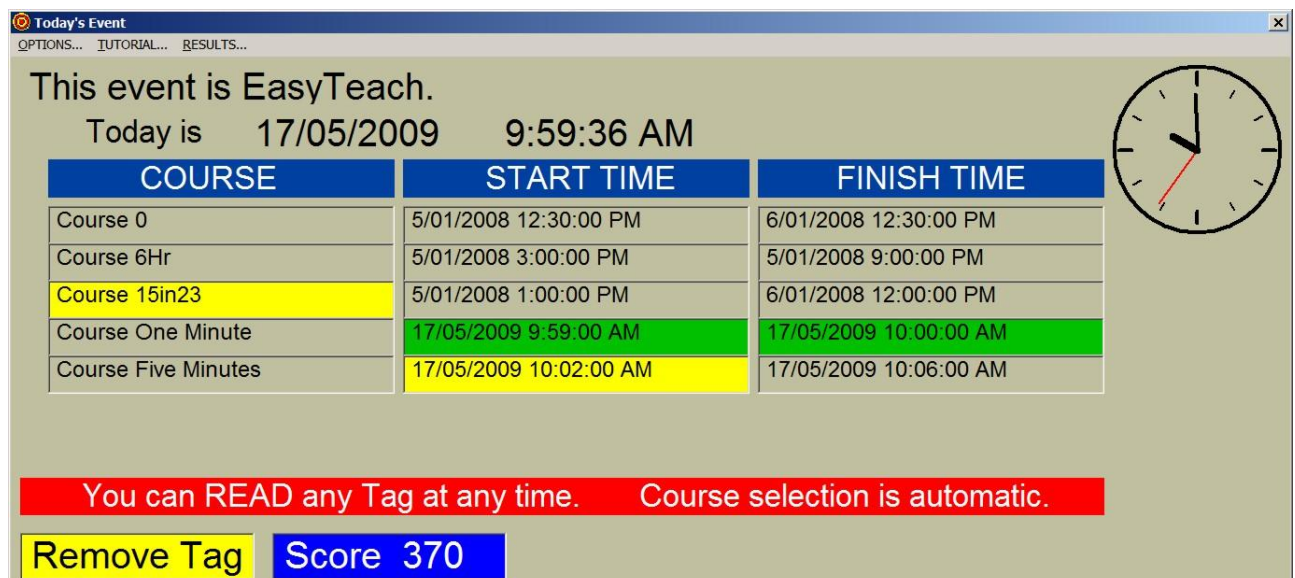
The back-ground of the Course, Start time, and Finish Time boxes changes as the event progresses.

1. The Course box goes yellow while a Tag is inserted, highlighting the Course which the Tag is on.

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2. The Start Time box flashes yellow in the 15 minutes prior to Course Start Time, to remind you of the need to have a BRIEFING talk to competitors and make sure that they have ALL used a BRIEF Punch before the start.

3. Both the Start and Finish time boxes are coloured green while a course is in progress, and the Finish box colours red after the finish time, up to the disqualification time for that Course.

A Team printout will occur automatically when all the Tags in a team are scored.

8.1.2 Adjusting the FINISH Punch clocks.

Before the first Course finishes, it is a good idea to check the clocks in the Finish Punches; firstly, to make sure they are still roughly correct, and secondly, to synchronise them exactly to the right time (within a fraction of a second). This is important for teams with the same scores, where ranking is based on finish time and they may have used different finish punches.

Click the "Click HERE to synchronise the FINISH PUNCH CLOCKS".

Instructions appear, which are self-explanatory.

8.1.3　Updating from your spreadsheet.

Click the purple button to update your team data from the spreadsheet. The process is fairly automatic, provided that the event setup has been properly linked to the spreadsheet, and any changes to it have been correctly saved as a tab-delimited text file in the "TeamData" sub-folder.

You may get a message saying that the spreadsheet file has not changed, and you will have a choice of re-doing the Tagnums file or not. The choice is arbitrary.

When updating is finished, there is a "Ding" and a yellow "SPLASH" message saying "FINISHED".

8.1.4　Printing results.

You can get a RESULTS printout at any time, by double-clicking the Course box of the course you want. (Note: If networking to other computers, you must re-score ALL first. See Section 7.8.3

This gives both a complete Results and a Winners printout, but only for the chosen course. To get results for all courses, you must double-click each Course box in turn.

8.2 Complaints.

Complaints about scored results are best dealt with after most of the scoring is complete, and you are not so busy. It is a good idea to keep a written Log of complaints, with team number and complaint entered into it.

The things you can do fall into four choices:

1. Adding a missed Punch.
2. Correcting a low score because someone missed a BRIEF Punch.
3. Adjusting a FINISH time because someone forgot to use a FINISH punch.
4. Adding or subtracting a score manually for any other reason.

When you click the "complaints" button you get this Window:
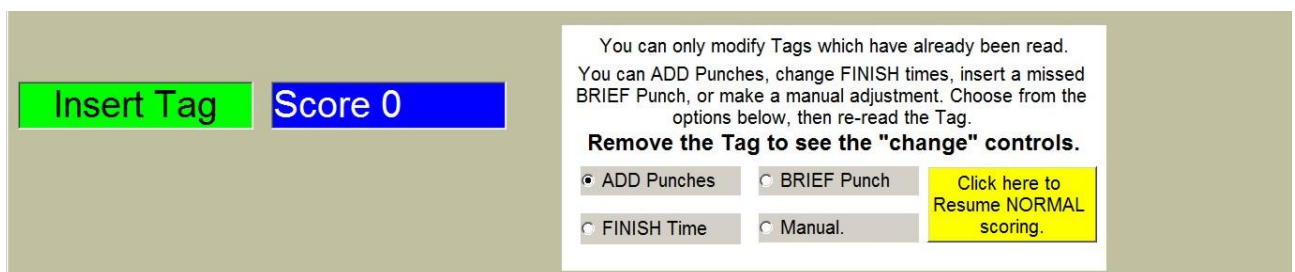
Choose which alteration you wish to make, and then insert and remove the Tag which needs correcting. A new set of instructions will appear, telling you how to make the alteration.

NOTE: With alterations, you will normally see the effect of the changes in the SCORE Window. Except for a lost Punch, the changes will not take place until you **click the "SAVE"** button.

8.2.1   A missed Punch.

The most likely complaint will be about a punch which has been miss-placed, lost, or in the wrong place. Chances are there will be several teams affected, and that is why it's best to do them all at once, after scoring has finished.

Choose the ADD Punches option as shown above, then re-read any Tag from one of the complaining teams. Remove the Tag and The display looks like this:
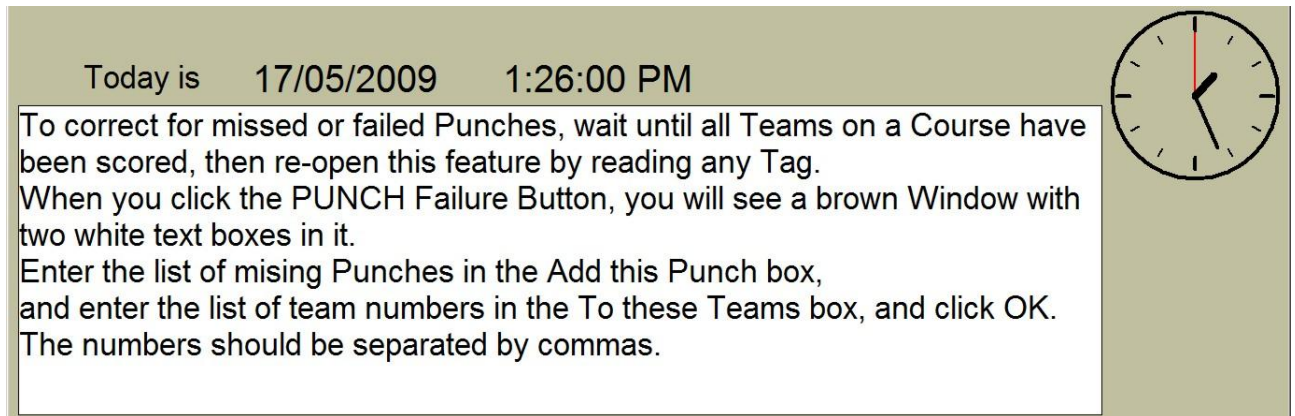
In addition, the Advanced scoring Window shows:
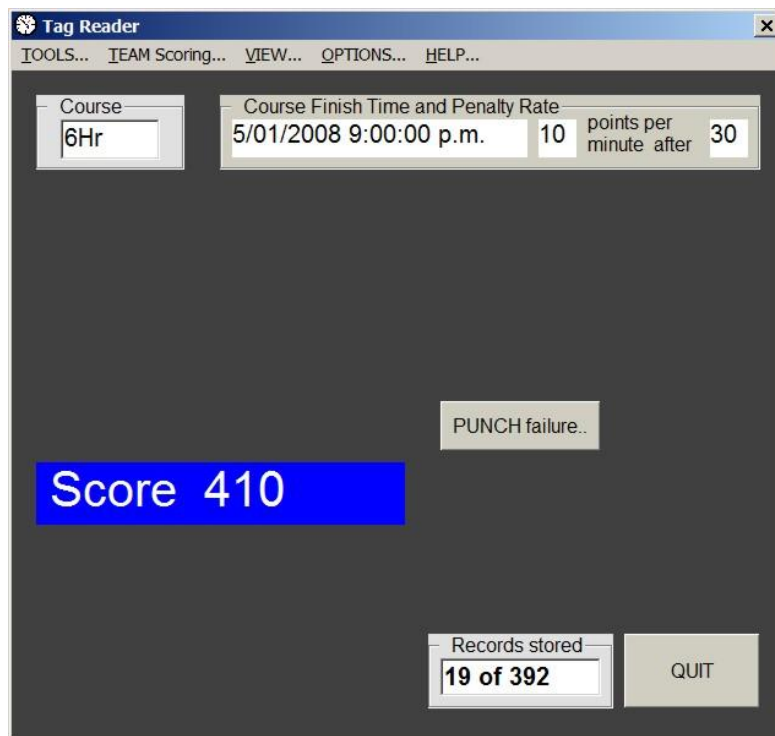
Click the PUNCH failure Button to open the Punch Failure window as described in Section 6.3.3 of this Manual.

Enter the punch you want to add in the top box, and all the teams you want to credit with this punch in the bottom box. The example above will add Punch 67 to teams 7, 13, 27, and 35.

Click OK. Each Tag in all the teams will be re-scored automatically.

Resume normal scoring by clicking the yellow "Click here to resume NORMAL scoring" button.

8.2.2   Inserting a BRIEF Punch.

As before, choose your option: in this case, the BRIEF Punch option. Re-read the Tag you want to alter and remove it to get this message:

Click the Insert BRIEF from Line 1 button,
and use the up and down arrows to choose the line you want.
The effect of the changes shows immediately in the white SCORE Window.
When the result is what you want, click the SAVE button, or CANCEL to go back.

The Advanced Window will show again, but this time with another control.

Score 410   BRIEF from line 1

The Tag SCORE window may look something like this:

```
Line # PunchID Value  Time Punched   Split Time.
  1   54      5/01/2008 12:34:56 PM   0:04:56 No BRIEF Punch. No score.
  2   44   40 5/01/2008  1:56:35 PM      1:21:39
  3   70   70 5/01/2008  3:39:22 PM      1:42:47
  4   43   40 5/01/2008  4:15:27 PM      0:36:05
  5   60   60 5/01/2008  4:24:25 PM      0:08:58
  6   64   60 5/01/2008  4:44:25 PM      0:20:00
  7   35   30 5/01/2008  5:16:47 PM      0:32:22
  8   52   50 5/01/2008  6:06:18 PM      0:49:31
  9   18      5/01/2008  6:58:57 PM      0:52:39 FINISH TIME.
```

After clicking the BRIEF from line 1 button the score window changes:

```
Line # PunchID Value  Time Punched    Split Time.

 1   54    50  5/01/2008 12:34:56 PM    0:04:56 Manual BRIEF allowed.
 2   44    40  5/01/2008  1:56:35 PM    1:21:39
 3   70    70  5/01/2008  3:39:22 PM    1:42:47
 4   43    40  5/01/2008  4:15:27 PM    0:36:05
 5   60    60  5/01/2008  4:24:25 PM    0:08:58
 6   64    60  5/01/2008  4:44:25 PM    0:20:00
 7   35    30  5/01/2008  5:16:47 PM    0:32:22
 8   52    50  5/01/2008  6:06:18 PM    0:49:31
 9   18        5/01/2008  6:58:57 PM    0:52:39 FINISH TIME.
```

Note that the first Punch now has a score of 50 points credited.

You MUST click the "SAVE" Button for the change to take effect.
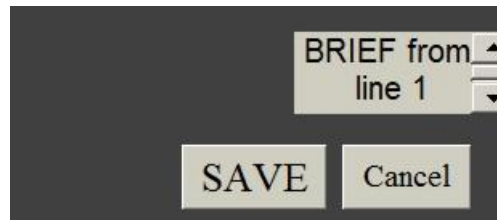
8.2.3   Altering a FINISH time.

As before, choose your option: in this case, the FINISH time option. Re-read the Tag you want to alter and remove it to get this message:

Click on the Alter Finish Time button to display the Tag Finish Time.
Use the left and right Arrows Min <, Hr <, > Hr, > Min to alter the Tag's Finish time.
The effect of the changes shows immediately in the white SCORE Window.
When the result is what you want, click the SAVE button, or CANCEL to go back.

The advanced window shows this:
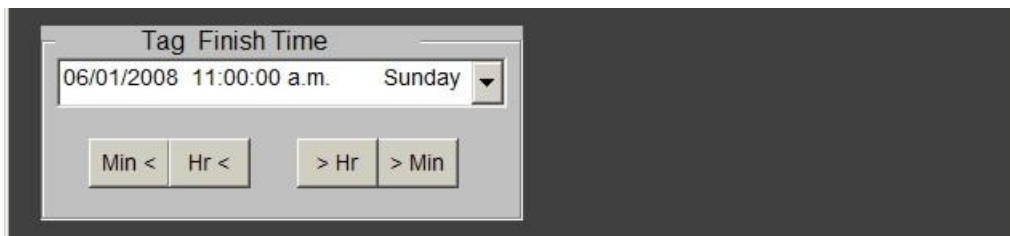
After selecting the desired Finish time, click "SAVE" as before.

8.2.4   Adding a MANUAL score or with-drawing a team.

As before, choose your option: in this case, the MANUAL option. Re-read the Tag you want to alter and remove it to get this message:

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As a last resort, you can over-ride all scoring with a Manual addition.
Enter the score you want to add in the Nil box. Negative numbers are allowed.
The effect of the changes shows immediately in the white SCORE Window.
When the result is what you want, click the SAVE button, or CANCEL to go back.

... and the Advanced Scoring Window looks in part like this:

Enter the Manual adjustment you want in the small box. The SCORE window immediately shows the effect of the change, and the SAVE Button appears.

As before, you must click SAVE to keep the alteration.

8.3 The Tutorial.

A **TUTORIAL** is provided. You will need a Reader and a spare Tag.

When you start the Tutorial, your existing event is saved as EasyBack.ach and the Tutorial (called EasyTeach.ach) is loaded. When you quit the tutorial, EasyBack is re-loaded to restore your original Event. If anything goes wrong, re-start the program and load Easyback.

The tutorial is pretty much self-explanatory. To progress through it, you either click the green "NEXT" button, or read your spare Tag.

9 UNDERSTANDING THE SCORING PROCESS.

This section gives a detailed account of how scoring information is stored and processed. It is provided for reference only and does not form part of the instructions required for normal system operation; however a knowledge of the section will enable a wider range of exceptions to be handled. The diagram below shows the scoring operation from the "READ TAGS" window.
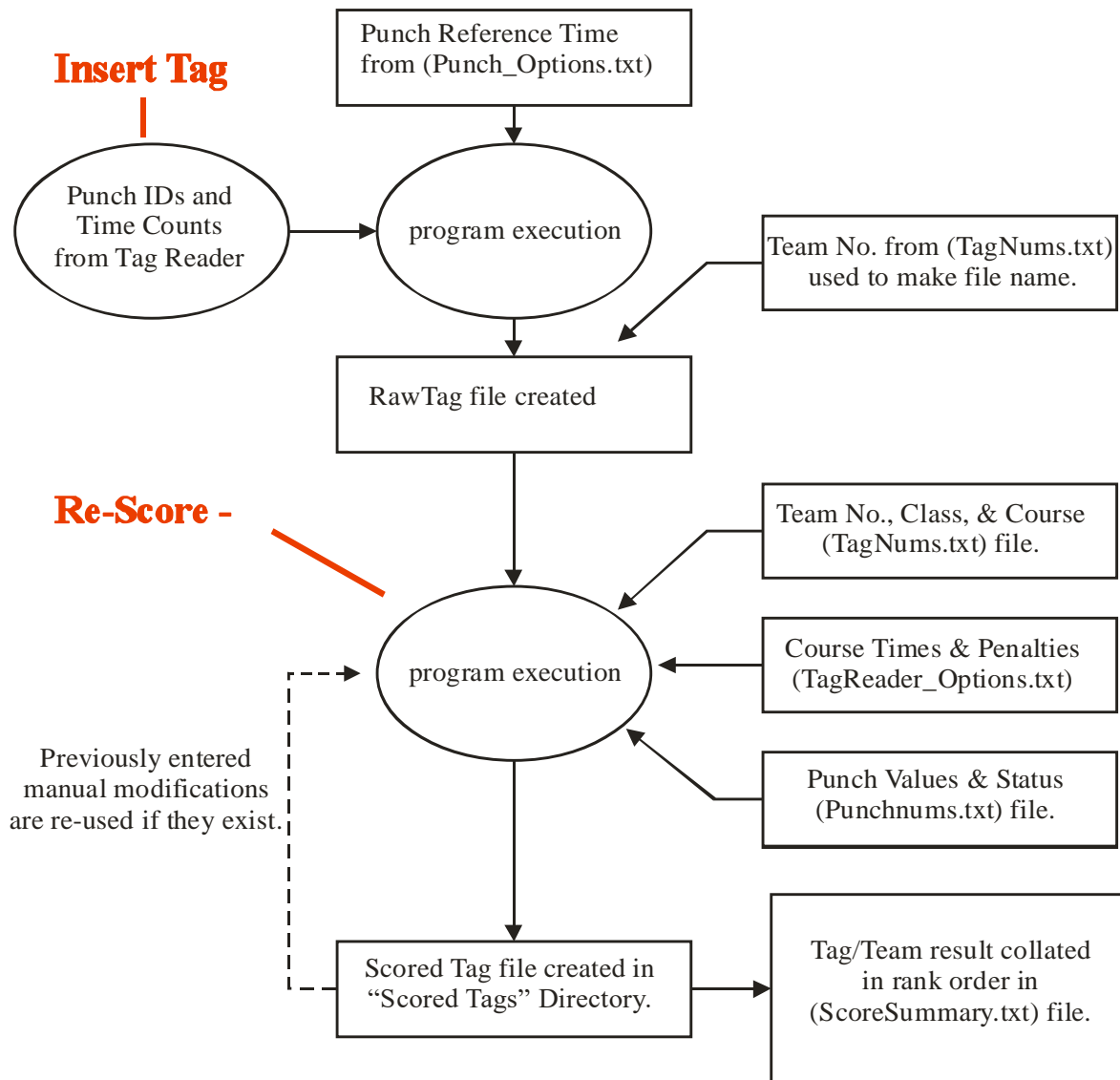
9.1.1 Reading a Tag.

When a Tag is read, its contents are stored in a **Rawtags** file. Apart from Tag data, the file also holds the Event Reference Time (taken from your event setup), and the team number for that Tag, taken from the Tags to Teams process (stored in Tagnums.txt).

The rawtag filename is formed by combining the team number and Tag ID code, eg.

41_____ AEAQ.raw

Note that a Tag can only be read if the Manual Re-score extension is closed.

9.1.2 Scoring a Tag.

The Rawtag file is then scored in exactly the same manner as a manual re-score. Punch value and punch status information (from Punchnums.txt) is used along with Names and Course number

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(from Tagnums.txt) and Course Start and Finish times and penalties (from Tagreader-Options.txt file). The resulting **scored** file, called for example **41_____ AEAQ.txt**, is stored in two places: the **ScoredTags** directory and the course directory for that Course. (Perhaps **Course 24Hr**).
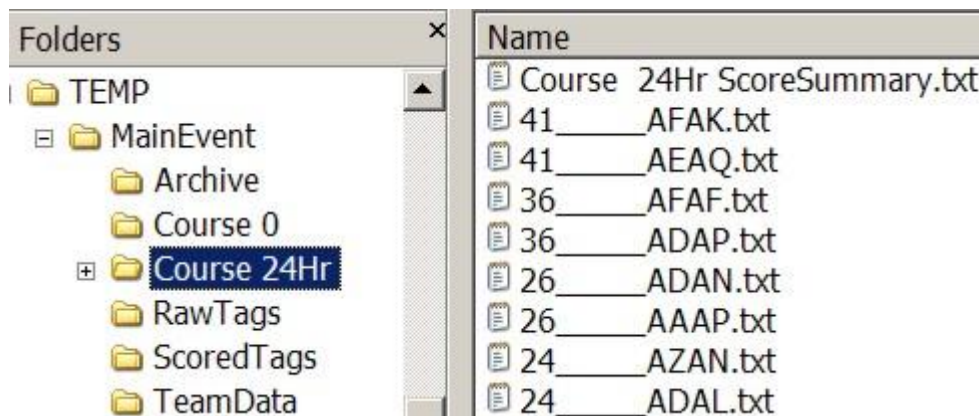
9.1.3   The Score Summary files.

Critically, the information taken from the scored Tag is immediately combined in score-order in the appropriate Course directory's ScoreSummary.txt file, after combining with other Tags from the same Team already listed in that file. An extract from the score summary file "Course 24Hr ScoreSummary.txt" might look like this:

34	CRS 24Hr	2190	0	2190 Points.	Finish 6/01/2008 10:27:54 AM	ACAQ,AEAM
1	CRS 24Hr	2070	0	2070 Points.	Finish 6/01/2008 10:35:45 AM	AAAF,AWAH
2	CRS 24Hr	2070	0	2070 Points.	Equal 6/01/2008 10:35:45 AM	AAAG
6	CRS 24Hr	1620	0	1620 Points.	Finish 6/01/2008 10:00:43 AM	AAAL,AWAN
41	CRS 24Hr	1620	0	1620 Points.	Finish 6/01/2008 10:13:48 AM	AEAQ,AFAK

For each Team, it shows the team number, Gross, penalty, and net score, finish time, and the Tags used to generate that score. The lines are in decreasing score order down the page. When two or more teams are equal, the word "Finish" is replaced by "Equal" in the second and subsequent teams.

The scored tag file is also saved in the Directory dedicated to each Course. For example, if the Scored Tag is on Course 24Hr, there will be a copy of the scored file in that directory. This copy is never used for any scoring process and is there only for possible Website information.

The scored tag file (41_____ AEAQ.txt) held in the ScoredTags directory is used only for storing manual scoring modifications (if any).

The **ScoreSummary** file for each course is the source of information for printing Course Results and Section Winners.

9.1.4   Deriving the Results.

The **RESULTS** process uses the score summary file for each Course to generate the overall and section printouts. Using the team number from each line, it extracts the Names and Categories from the Tagnums.txt file, then uses the score to calculate and print the results.

9.1.5   How post-scoring changes affect the scoring.

Names and Category changes.

From the above information, you can see that changes to Names or Categories of a team affect only the RESULTS printout. You use the TAGS to TEAMS Window to edit names and categories, save the Tagnums.txt file, then return to the READ TAGS window to re-do the PRINT RESULTS process.

Course change for a team.

If you use the TAGS to TEAMS window to assign a different Course to a team, they may well have a different score because of different start and finish times etc. so you need to manually re-score all the tags in that team. This will alter the Scored Tag files as required, and will also update the Score Summary files. However it won't get rid of this team from their previous course results; they will still register in the original course with their original score.

You therefore have two options: one is to simply re-score the changed team tags, and accept that they will still appear in their original course; and the other, *recommended* method is to remove the Summary files from the READ TAGS - TOOLS – Delete scored records Menu. The price for this is that you will have to then re-score ALL Tags. However you will retain all manual scoring information such as added Punches, altered finish times etc. as these will still exist in the Scored Tag files.

Team Number changes.

Why would you want to do this anyway? But if you insist, you go back to the TAGS to TEAMS window and change the team number for the tags required. When you re-open the READ TAGS window, the Rawtag files will automatically be re-named, so you will find them under their new team number in the re-score window. If you just re-score both Tags (and save them), they will be treated as a new team, and added to the appropriate results. However the original team will still exist in the results.

You must therefore delete Summary Files as described above, then re-score the new team tags. You will have to replace any manual editing in those tags.

Changes to Course Scoring rules – Start, Finish, or Duration times, penalties, or changing between MINIMUM tag and MAXIMUM tag.

After making the changes in the Event Setup, return to the READ TAGS window, delete Summary Files as described above, then re-score ALL. You will retain any manual changes.

Changes to EVENT REFERENCE time.

Don't. If you get a warning message when re-confirming a FINISH Punch, use the Daylight Saving system if appropriate. See section 4.1. Never change the event reference time after Punches have been programmed.

A huge mess-up.

Check that the scored tag ID codes match the team numbers in the TAGS to TEAMS window, and change the team numbers as appropriate. Then from the READ TAGS window, delete ALL Scored results, then re-score all. You will lose all manual editing.

9.2 The Punch_Options.txt file.

This file is created when you set the Event Reference Time from the EVENT SETUP Window. It can be modified in part from the PROGRAM PUNCHES Window. It should not be hand-edited.

An extract from the file is:

```
17/09/2005 12:00:00 PM
1 = Acceptable Clock tolerance in Seconds.
1.30      Volts  Lowest Battery Limit.
010       FLASH options
```

The first line, 17/09/2005 12:00:00 PM, is the Punch Reference Time. The time information stored in the Tags is the number of seconds before or after this time, so it must not be altered after the punches are programmed. Scoring times are taken as relative to the value saved in this file.

This first line, the Punch Reference Time, is the only contribution this file makes to the scoring process.

9.3 The RawTag files.

The information downloaded from each Tag is stored verbatim in the RawTags directory. Each file contains the Reference Time which was used to program the Punches, and an image of the data stored in the Tag. The Team number given to the file is extracted from the "TagNums.txt" file created in section 6.

A 15_____ ABAM.raw file may look like this:

```
Team No. 15  Tag ID = ABAM  Tags=0008  ReferenceTime=17/09/2005 12:00:00 PM  Check12531748
 DMB 0776 15:43:41
 XMC 0776 15:45:46
 RMC 0000 00:22:43
 UMC 0000 00:46:54
 UMC 0000 00:47:06
 QMB 0000 01:11:51
 TMC 0000 01:26:58
 XMD 0000 23:51:30
END
```

The top row copies the Reference Time from the Punch_Options.txt file, NOT from the Tag.

Then each data line contains the factory Punch ID code, and the time of punching relative to the Reference Time. The time format is 4 digits of Day of punching (typically 0000 or 0001) and then the time within that day. Thus 0000 00:46:54 above means the punch UMC was punched zero days, zero hours, 46 minutes and 54 seconds after the Reference Time.

If the Day number is over 0387 it is, in fact, a negative day count. 0776 days is really approximately minus 1 day (but not quite – it's all stored in seconds.) The record DMB 0776 15:43:41 actually means that the time of punching was 97 minutes and 23 seconds before the Reference Time.

The most important thing about the RawTag files is that they are *__INDEPENDENT__* of any of the course, Tag, or Event parameters except the Reference Time. Thus all these parameters can be altered after reading the Tags, and the whole event re-scored. For this reason, and to protect the integrity of the RawTag files, a checksum is included in the first line. **The RawTag files must never be hand-edited,** or an error will occur.

9.4 The ScoredTag files.

These files are created automatically after a Tag is inserted, or during a rescore process. The corresponding RawTag file is interpreted with all the tag, event, course, and category information to produce a scored result file. This is the file which is printed out for competitors.

File names are of the form 90_____ AYAL.txt

An example of a scored file is given in section 7.1.

MANUAL MODIFICATIONS.

If a Tag is being re-scored, and a manual finish time, or a manual correction, has been previously entered, these previous results are read back into the scoring process by default. If you want to change them, you must either re-edit the manual values, delete them as described in section 7.2.9, or delete the scored Tag file and then do a manual re-score.

9.5 The Results files.

These are recreated every time you do a "Print Results" operation. It uses the "ScoreSummary.txt" file and the "Categories.txt" file as its source data. See sections 7.1and 7.4 for an example of the "ScoreSummary.txt" and "Results.txt" files.

Results files are generated for each Course subdirectory but not the "ScoredTags" subdirectory.

9.6 Changing a Team Number for a competitor.

If a person changes their category or team number, or joins a team other than the one assigned to their Tag, then the alteration can be made to their Tag in the "Tags to Teams" window, section 18.4, or preferably from the spreadsheet EvenetEntries.xlsm if you are using it.

If the Event scoring has already commenced , with some or all tags having been read, then some raw and scored files will already have been generated. Starting the "READ TAGS" window will automatically rename their RawTag file to the new team number and will delete their previous ScoredTag file, but it will NOT automatically create a new Scored Tag file, nor will it delete the summary team information in the scoresummary files.

Therefore, after changing a team number (or category), and opening the "READ TAGS" window, you *must* "TOOLS… Delete Scored Records…Summary Files" from the menu bar. Then do a Re-score ->>. A message will appear saying "Some RAWfiles not scored. Select ALL tags and Rescore ALL tags."
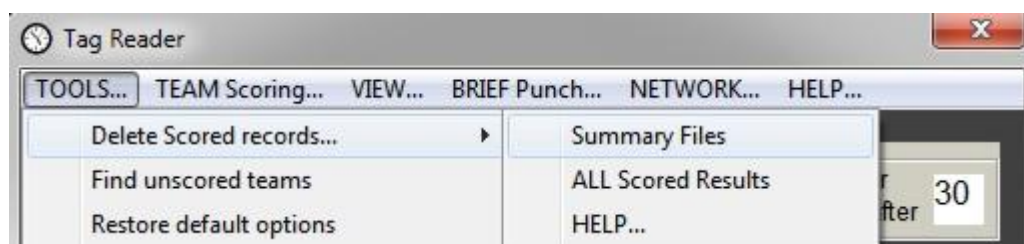
Do NOT simply rescore the affected Tags, because this does not create a new ScoreSummary file and the old team results will persist.

9.7 Using more than one computer for scoring.

This is best done by networking. See section 7.8. However you can do it manually as described below.

Hint: To speed up the scoring, you need another person or persons to collect the competitors into teams, cut the Tags from them and remove the straps, and place the Tags next to the person doing the scoring. The Tags can be read at around ten per minute if you do this, but you will get a queue at the printer if it can't print ten pages per minute.

If you expect a rush of finishers and your printer is not particularly fast, you could get a queue of people at the printer, waiting for their printouts.

A solution is to use more than one computer, each with its own printer and Reader unit. After setting up the event on one computer, copy all the files in its event folder onto the other computers.

Then you can score the individual tags on any of the computers. Make sure you send each competitor to the correct printer to collect their printout.

When all the Tag reading is done, or when you want to revert to one computer only, copy all the "_____.raw" files from the RawTags subdirectory of each computer into the RawTags subdirectory of the master computer. Then, on that computer, run a "Re-score ALL" process. (See section 7.2.11).

NOTE: DO NOT make any manual modifications to scores or finish times, except on the master computer. If someone needs a manual modification, then re-read their Tag into the master computer and do it there. Alternatively, you can wait until you have copied all the RawTag files onto the master computer and then do the manual scoring.

10 THE "READ PUNCHES" WINDOW.

This is not normally required, but may be useful if a team is overdue. All it does is to download the Punch record of the tags registered with it, and a timestamp within 8 minutes of each Tag insertion. Open the window and simply plug each Punch into the Reader in turn. The Tags are identified only by their internal Code, not team number.

The Punch files typically called "Punch AMK.txt" will be created in a "RawPunches" directory. Note that the Punch name is its permanent internal code, viewable through the clear nose of the Punch.

A typical file might look like this:

```
Punch Code AMK
 AYAH AXAF AJAH
Time  00:17:04
 AXAM ASAL ABAM AHAW ARAH ANAK
Time  00:34:08
 ACAW ADAM
Time  02:16:32
END
```

This shows the Tag IDs of all Tags presented, followed by a timestamp within 8 minutes. Where several Tags are punched within an 8-minute interval, they are collected together.

Apart from historical purposes, there are two reasons for recording the Punch visits. One is to read the "BRIEF" punches after the start, to check which people have left, although this is not likely to be needed.

The other occasion when reading a Punch might be valuable is if a team has not returned, and you want to read a Punch in the field to see if a particular Tag has been punched there. See below.

10.1 Searching for a particular Tag number

The procedure is exactly the same as above, but the Tag ID code being searched for must be entered in the box labelled "Enter Tag ID here".

If the Tag is found in a Punch, the time stamp immediately following the Tag record will display beside the Tag ID code. Entering acaw in the search box and inserting the Punch gives:
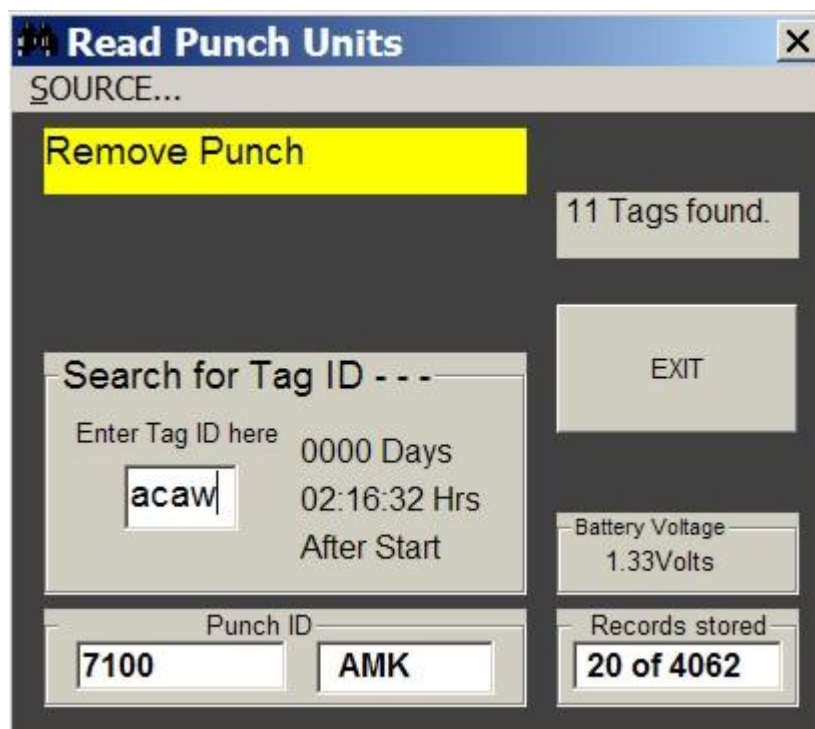
10.2 Creating Punch Records from the competitor's Tags.

Each Tag used in an event contains a record of all the punches visited, and the exact time of the visit. After scoring an event, all the Tag records are held in the RawTags directory. By searching all these tag files for a given Punch, it is possible to construct a record of the visits to that punch in time sequence order.

From the SOURCE… Menu, select "Tag Records… For Punch number below".
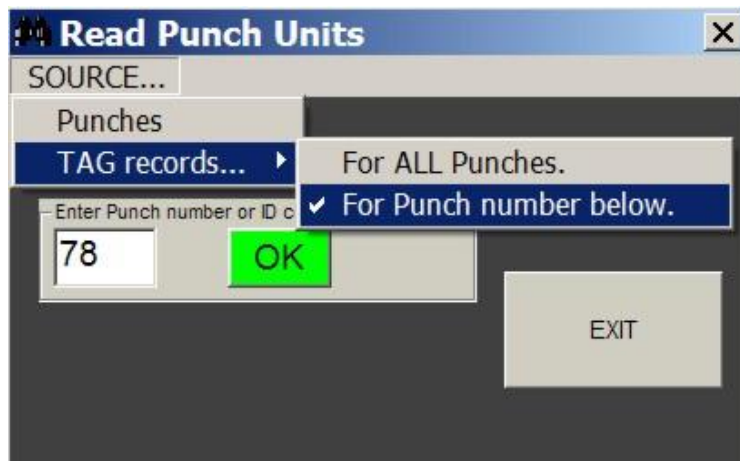
Note that the controls on the window related to reading actual Punches have disappeared.

Enter the desired Punch in the white textbox, either its number or its 3-letter ID code, and click OK. Punch XMK is number 78, so you may enter either XMK (case insensitive) or 78.

A file called "78 from tags.txt" is saved in a subdirectory called "PunchFromTags".

This file is also displayed in a scalable window, and could look like the picture below.
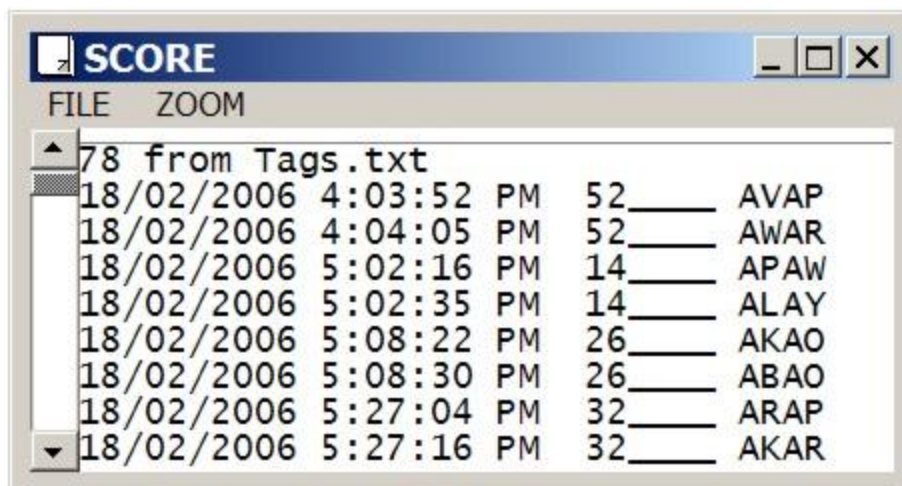
Note that the time of punching is now given to one-second resolution, instead of the eight minutes accuracy if downloaded from the Punch. The team number and Tag ID code (the name of the RawTag file) is shown after the time. As expected, both team-members have punched within a few seconds of each other.

To create files for all the Punches, choose "for ALL punches" from the menu. The display window does not show, but a text file for every Punch is created in the "PunchFromTags" sub-directory. Because this takes some time, a "Stop" button is shown in the window which will stop the process. The Punch currently being searched is shown in the yellow label.
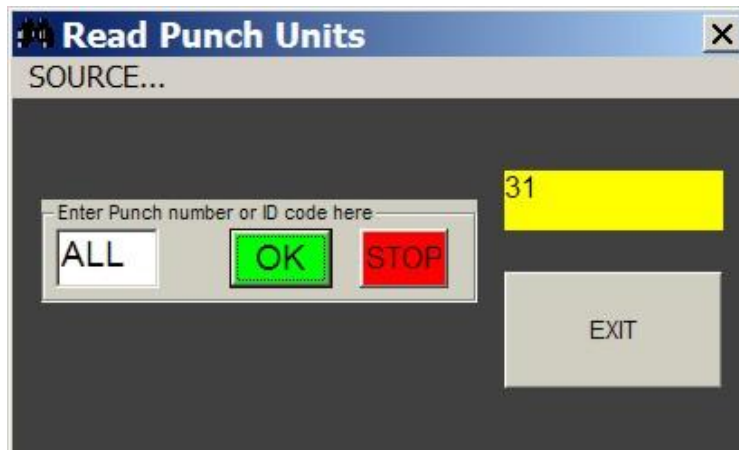
When finished, the yellow label changes to grey and says "Finished".

10.3 Checking the "BRIEF" Punches before Event start.

Every person with a Tag is required to use a "BRIEF" Punch before the event starts. This can be checked by reading all the "BRIEF" Punches in the READ PUNCHES window in the normal way.

As each BRIEF Punch is read, a display window will open automatically, showing which BRIEF punches have been read, and showing which teams have not had all their Tags briefed.

To avoid unused Tags from showing, only Tags which have a category and/or a team number and/or a name assigned to them in Tagnums.txt will show.

Any un-briefed team number display will also show the name of at least one team member from each team.
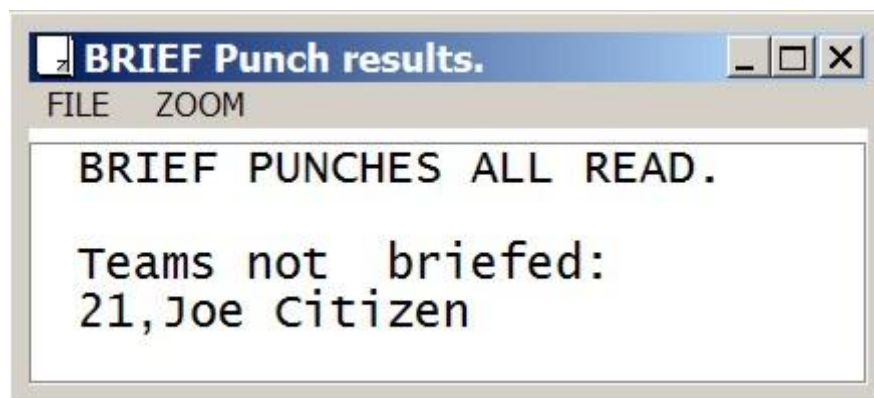
The automatic display when the last BRIEF Punch is read.

This display window will update automatically when another Punch is read, or when the window is closed.

11 INSTALLING THE SOFTWARE.

RogaineSCORE version 2.0.0 onwards (dated 2015 or later) does not need to be "installed", as older versions did.

You can copy the RogaineSCORE.exe file to an event folder and run it from there, but it is recommended that you should still place and run it from C:\Program Files\NavLight Rogaine Scoring. This folder should also contain other files:

An EventEntries.xls file (the name may contain a date, eg. EventEntriesOct2014.xls)

Several .wav files; Chord, Ding, Insert, Ringin, Start, Tada

Possibly your own TagTeams.txt and Punchnums.txt files.

11.1 Folder and File management.

The RogaineSCORE .exe file should reside in the C:\Program Files/Navlight Rogaine Scoring folder. It uses a pointer to determine which event folder it will use.

The pointer is a text file called WorkEnvironment.txt which is stored in a folder named C:\ProgramData\NavLightData.

Create a shortcut to RogaineSCORE and place it on your desktop.

If RogaineSCORE.exe is copied to an event folder, as was the case with earlier versions, it will still run the event within that folder.

11.1.1 Setting up an event Folder.

When you first start RogaineSCORE, it will search for an existing Folder named C:\Users\Public\Documents\RogaineEvents, and if this does not exist, will ask you if you want to create it. (Recommended.) If you choose YES, an event folder called "Sample Event" will be created. You would normally want a more meaningful name like "Winter Classic" or Spring 6 Hr" and these can be created as described in the next section.

Note: These folders will appear under My Documents in XP, or under \ <Yourname> in Vista.

The directory structure should look like this:
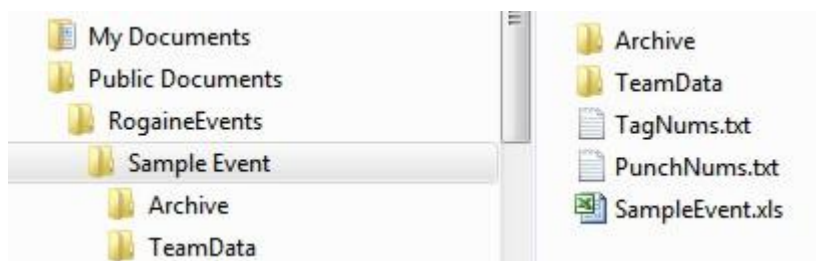
(In Win 10, My Documents becomes C:\Users)

Note that the Excel file, EventEntriesOct2014.xls, has been copied into the Sample Event Folder , but re-named Sample Event.xls. This spreadsheet has a built-in Macro, executed by clicking a yellow button, which copies the spreadsheet contents into a tab-delimited text file imaginatively called SpreadSheet.txt. It can also create Tagnums.txt directly.

This SpreadSheet.txt file provides the link between your spreadsheet and RogaineSCORE, and must be copied into the TeamData folder shown above. Note that this will happen automatically if the folder structure shown above is used, and your spreadsheet has been saved from the re-named EventEntries.xls (now called Sample Event.xls). In particular, The Excel file should be within the Event folder.

The PunchNums and TagNums files will only be copied if you have placed these yourself, into the Program Files\NavLight Rogaine Scoring folder. These files are unique to each set of NavLight hardware.

11.1.2   Changing or creating events.

When RogaineSCORE starts, it will operate in the same Folder as was last used. (For the technically competent user, the pathname is stored in a text file called WorkEnvironment.txt in the ProgramData\NavLightData folder.)

The Folder path can be displayed, changed, or created from the FOLDER… menu.
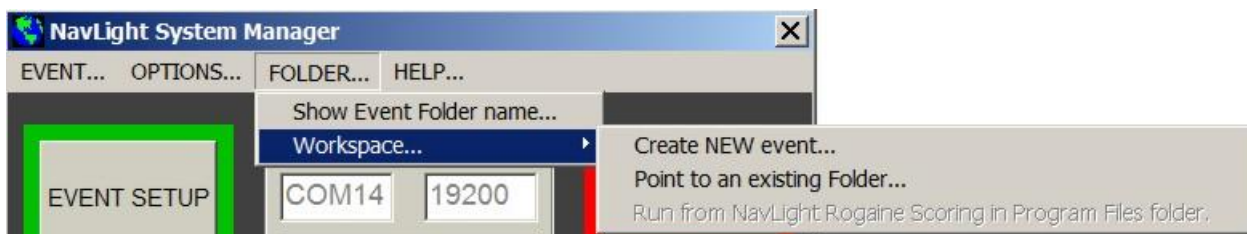
You can choose to create a NEW workspace, which will create the same directory structure as shown above but with a different event name of your choice, or you can point to an existing folder. If you use an existing folder, you must create the Archive and TeamData sub-folders yourself if they don't already exist.

If you click "Point to an existing Folder..." a standard Windows Explorer box will open, as shown in Section 10.3.1 below. Use this to locate the event folder you want, click on it, and then click "SAVE".

If you want to create a new event, clicking on this option will open a new window, which will show the current Event path and event name, each in different boxes.

You should keep the RogaineEVENTS folder as the parent folder for all your event sub-folders, but you can change this if you wish by double-clicking its box to open a Windows Explorer box.

Enter your new Event Name, for example, "Winter Classic" or "Spring 6 Hr", then click OK.

Your new event folder will be set up, complete with Archive and Teamdata sub-folders, and EventEntries.xls copied but re-named to your event name.

Clicking CANCEL leaves the window open but cancels any changes you make. Clicking QUIT closes the window and stops the new event creation.

11.1.3   Executing from within an Event Folder.

The RogaineSCORE.exe program can be copied into any existing event folder. This is called a "local" installation, and was the way all earlier versions operated.

If you do this, you should ensure that the TeamData sub-folder is created, and that the Excel file EventEntries.xls is copied into the folder above your event folder.

When running from within the event, the Workspace menu options are restricted. You may operate only within the existing event, or within the event pointed to by the text file ProgramData\NavlightData\Workenvironment.txt

The Workspace menu options look like this: (Sample Event is the current event for the original RogaineSCORE in the Program Files\Navlight Rogaine Scoring folder.
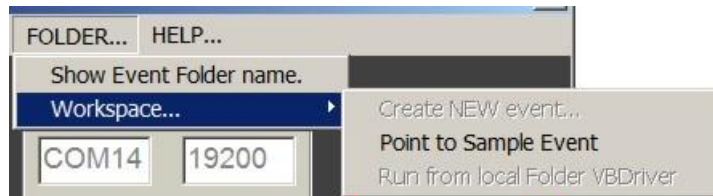
If you switch to the last event "Sample Event" in this example, the Folder menu will change and allow you to switch back to the original event folder.
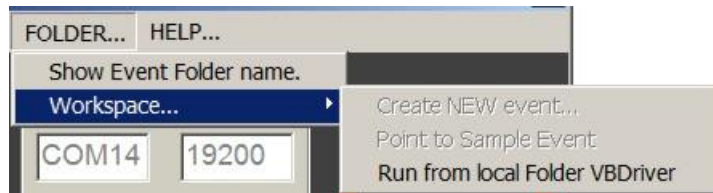
To create a new event, you need to run RogaineSCORE from the Program Files location.

11.1.4   Alternative installation in Windows XP.

In Windows XP, you should install the software as described above. However the software can also be set up from the single file RoagineSCORE.exe, by copying it into a directory of your choice.

In addition, there may be six files you need to place in your WINDOWS\SYSTEM32 directory if they are not already there. These are: MSCOMM32.OCX, mscomct2.ocx, MCI32.OCX, MSCOMCTL.ocx, comdlg32.ocx, and comctl32.ocx. Under usual Microsoft procedures, if these files already exist you should use the most recent one. There are six .WAV files you may add to your chosen program directory for enhanced sounds. They are: Insert, TADA, START, DING, RINGIN, and CHORD.

11.1.5 How the Folder environment expands.

As you run the software, other files and subdirectories will be created and files placed in them.

The Directory tree will look something like this after an event:
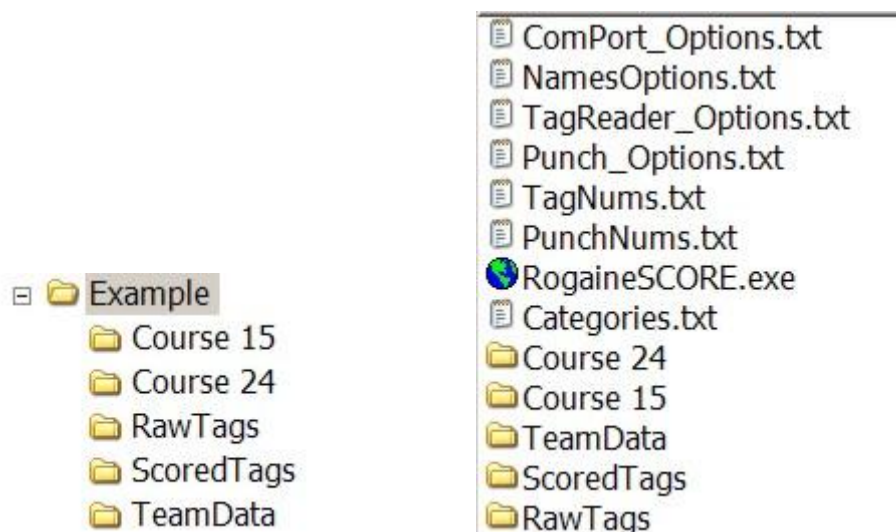
There may also be the .WAV files in the parent directory. (Where RogaineSCORE is.)

11.2 Setting up the COM PORT.

When first installed, you will need to find an available COM PORT (serial port) on your computer. Connect the reader through a USB cable.

Once you have the Reader connected, run the RogaineSCORE software and it should eventually find your Port. If it doesn't, there will be a yellow message on your window.

If the yellow flash doesn't disappear after about ten seconds while the Serial Port cycles, click on the yellow flash and wait a few seconds while it tries again. If still no luck, try manually changing the Serial Port by clicking the "Change" button. Another window will appear:
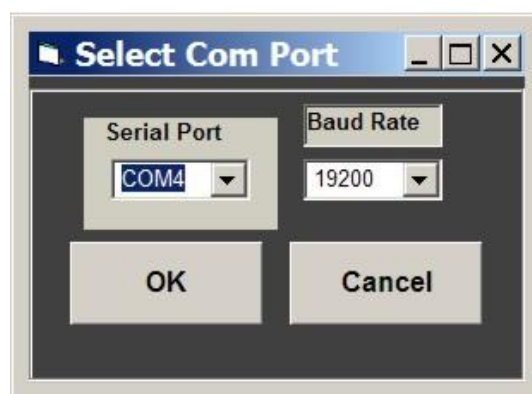
Try each COM port in turn, from 1 to 8, and click OK. If successful the yellow flash will disappear. For COM ports above 8, type COM and the port number in the Serial Port box (showing COM4 above).

Note that some of the software functions will still run without the Reader, such as setting up PunchNums, TagNums, Categories, re-scoring, and the Tutorial.

11.3 Some Windows fundamentals:

This section describes some of the basic file manipulation methods used in Windows, for users who may be unfamiliar with them. You may want to move or edit text files, or you may want to adjust your clock, or language settings.

11.3.1   File manipulation.

Right-click on the Start Button at the bottom left of your screen...
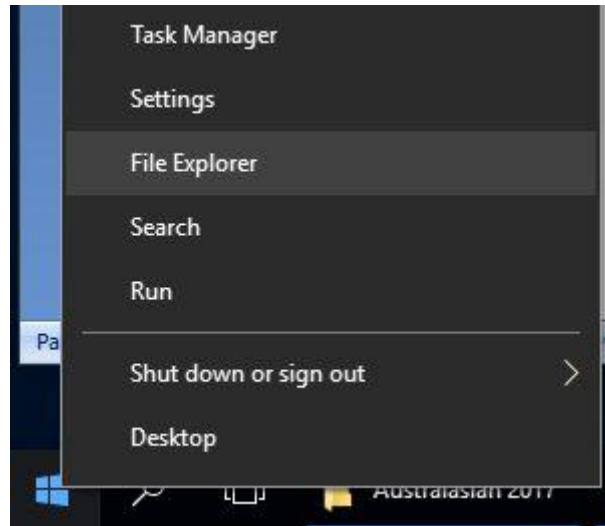
Then click "File Explorer" from the small list which shows. (This is Windows Explorer which enables you to explore files on your own computer. It is NOT the same as Internet Explorer.)

(In Windows7, click "Explore")

Right-click on Windows 7 Start to see this.

Explorer displays the structure of storage on your computer. Programs and documents are all treated as "files", stored in a "filing cabinet" in folders and sub-folders. You can start a program by double-clicking its name, or you can open a document the same way; double-clicking its name.

A left "pane" and a right "pane" show. The right one shows the contents of the folder which you select in the left pane.

The screens shown here are from Windows7. Windows 10 looks slightly different but behaves the same way.
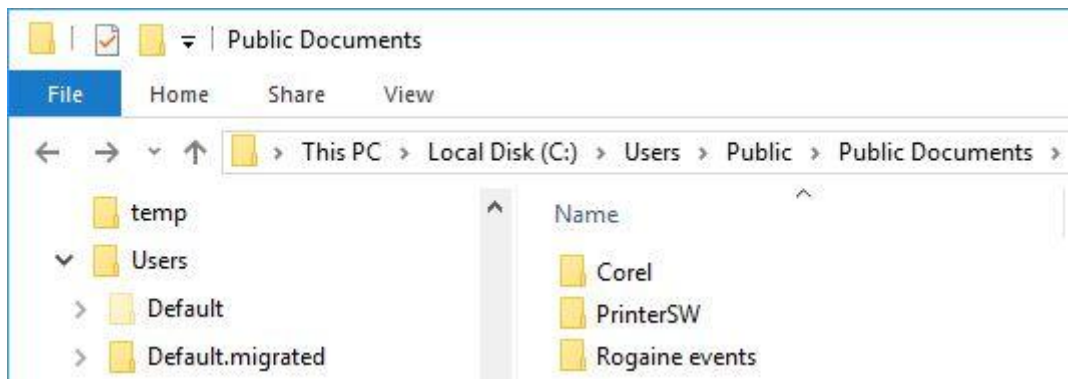
Windows 10 Explorer
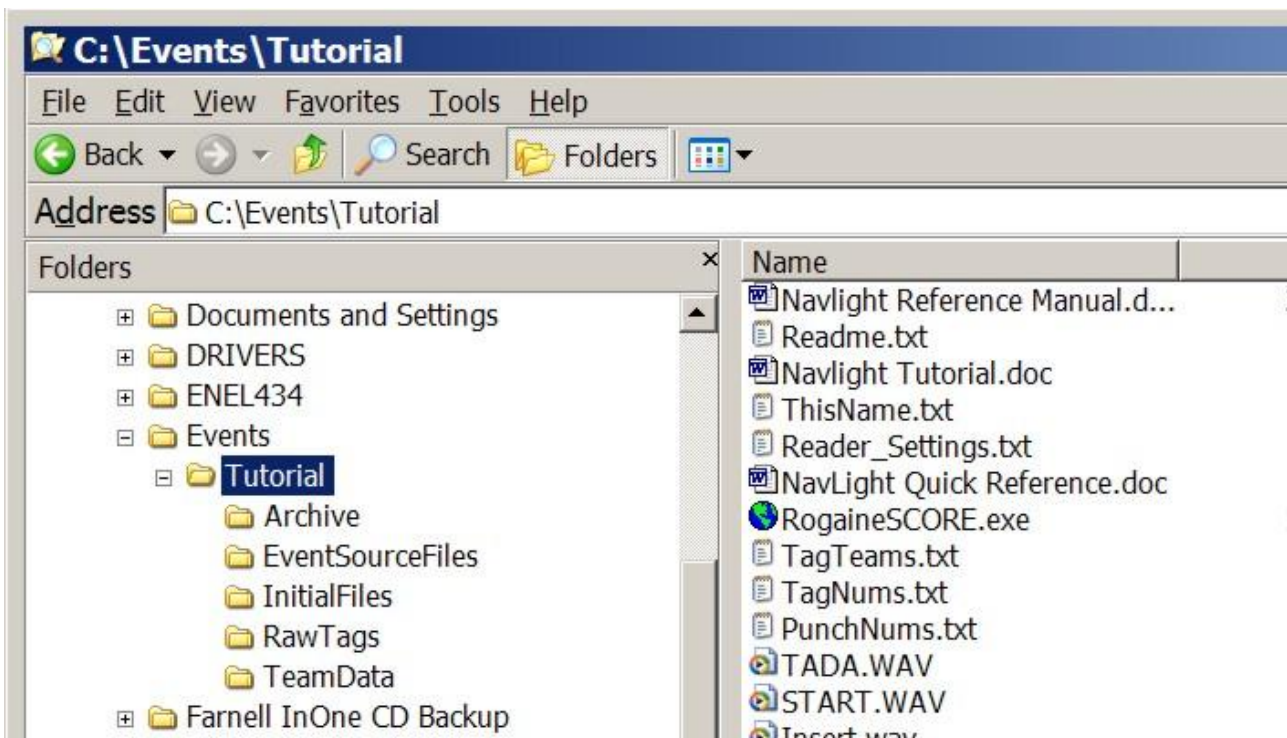
If a folder in the left pane has a + (or > in Win10) sign, it contains subfolders. Clicking on the sign expands the folder and the + or > is replaced with a – or ▼.

If you right-click a file, a list of options appears. Click "Copy", then navigate through Explorer to where you want to place a copy, right-click, and click "paste".

11.3.2   File types.

The files shown in the picture above have "extensions" showing. These extensions are the last three letters of the file name, separated from the main part of the name by a dot. All the storage files created and used by RogaineSCORE are text files; they end in .txt and will open in Notepad for viewing and editing if you double-click them.

Sometimes the extension does not show. This option is controllable by you. Click on the Tools- Folder Options menu item.
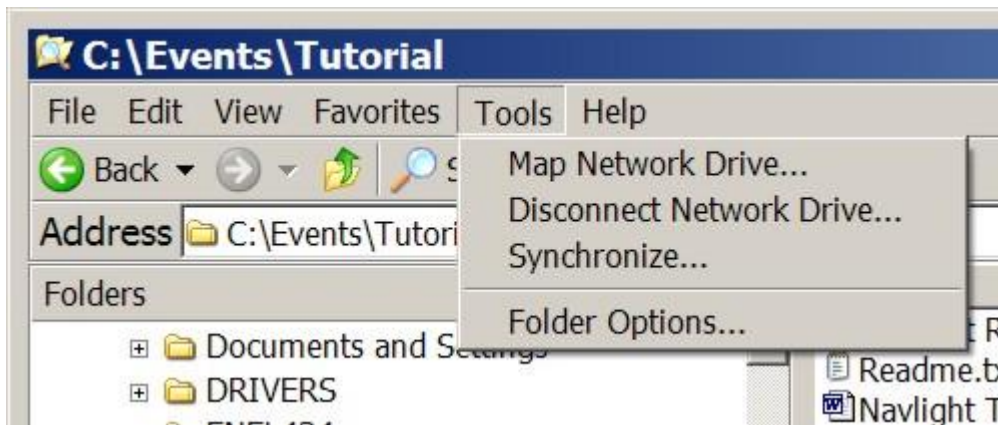
This will open the Folder Options Window. Click on the "View" Tab and scroll down if necessary to the item called "Hide extensions for known file types".
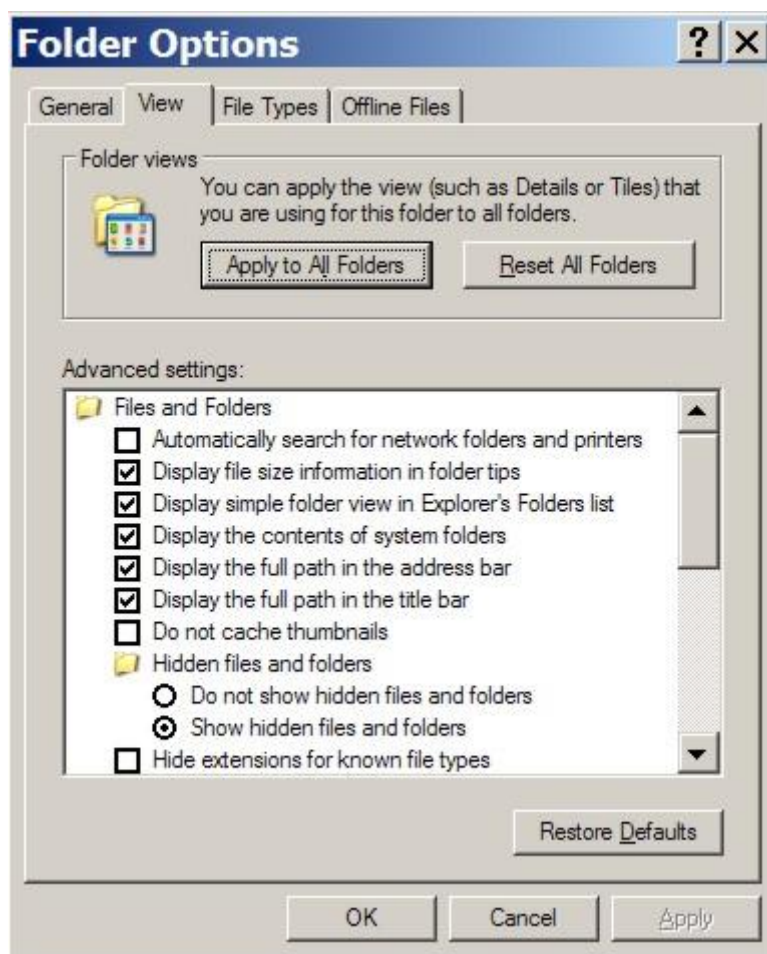
As seen, the "Hide extensions for known file types" box is not checked. This allows the extensions to show. If your computer has this box checked, you may want to un-check it then click "Apply".

11.3.3   Language settings, and Time formats.

Time manipulation is used to measure elapsed times, penalties etc. The way Time is handled varies from region to region around the world. Your computer must be set to one of the English languages which RogaineSCORE can handle. These include English (Australia) and English (New Zealand). Later versions may handle USA, UK, and Canada.

In Windows 7.

To change your Language settings, use Control Panel. You should be able to find this from your Start button, either directly or perhaps under "All programs" depending on your operating system.
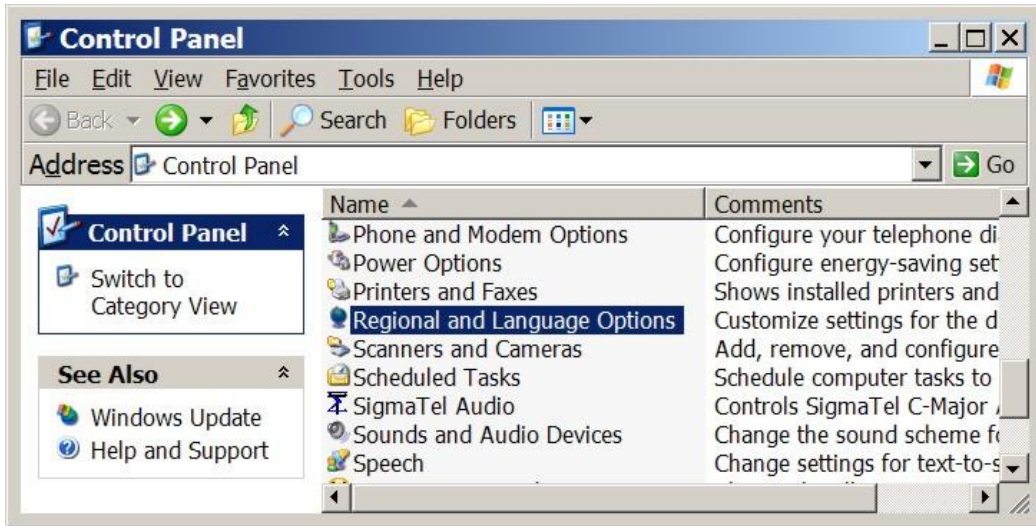
Click on "Regional and Language Options" to bring up the Language settings.
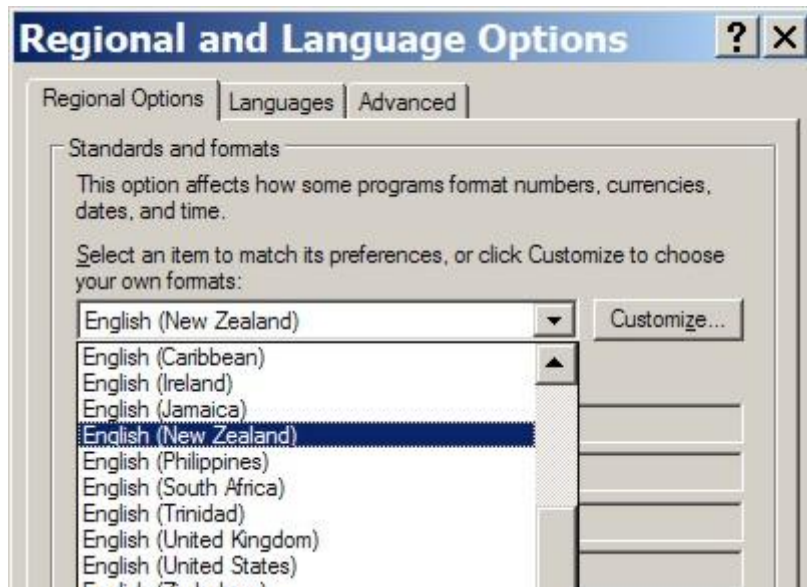
Choose "English (Australia)" and click "Apply" or "OK".

Note: you also use Control Panel to adjust your Date and Time settings. If you connect to the Internet regularly, your time setting is probably correct. Since the Punch clocks are set from your computer time, it is important that this is accurate.

In Windows 10.

Right-click the date and time display at the bottom-right of the screen.

A large Settings window appears. Find the "Related Settings" at the right of the screen.

Click on "Additional date, time, - - ". You see another window.
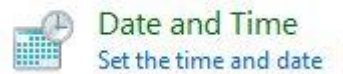
Then click Date and Time.

You finally get to this screen.
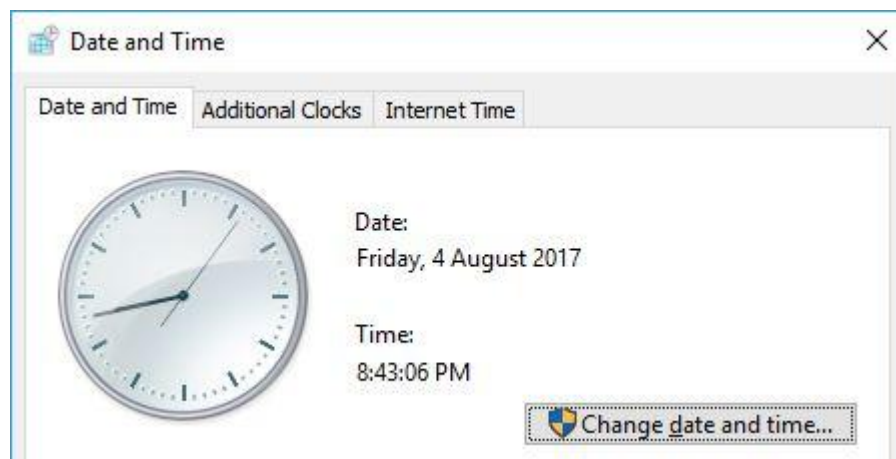
From here, it is obvious.

12 SOURCE TEXT FILES.

There are a number of .txt files stored in the directory where RogaineSCORE.exe is stored.

They include Categories.txt, PunchNums.txt, TagNums.txt, and TagReader_Options.txt. There are other .txt files but their main purpose is to record settings which you use regularly, such as the Com Port which your computer uses for the Reader. However you may wish to interface other software to this system through some of the .txt files.

Although these textfiles can be edited within notepad, it is generally preferable to edit them within the RogaineSCORE environment to ensure consistency, as there are several checks made as part of the editing process. In particular, the Course information held in Tagreader_Options.txt is best altered using the system.

12.1 Categories.txt

This file stores the age/gender classifications for your event.

The default for this file will be generated the first time you run the "EVENT SETUP Competitor Classes" window in section 3.4. It looks like this:

Categories txt:
```
(none)
MO
MV,MO
MSV,MV,MO
WO,MO
WV,WO,MO
WSV,WV,WO,MO
XO,MO
XV,XO,MO
XSV,XV,XO,MO
J,MO
```

The first line (none) must not be changed. The remaining lines list the categories which teams can compete in. You can alter these in any way you want.

Note: It is recommended that you alter this file by using the EVENT SETUP Procedure, as this includes a range of checks for consistency between major and minor classifications. However you can create this text file from an external source, such as Excel.

The first category in a line is a major category, like Mens Vets, Family, Junior, Mens Open etc. The rest of the line is the other categories that also apply to competitors in the major category. The category label should not be more than seven characters long.

The major categories by default are O, MO, MV, MSV, WO, WV, WSV, XO, XV, XSV, and J. You may decide that you don't want an Open or Junior or any Supervets categories, in which case you might change this file to look like this:
```
(none)
MO
MV
WO
WV
XO
```

```
        XV
```

The order that you list these categories is the order that they will print out in across the RESULTS printout, so you can re-arrange the order to suit your needs.

Note that, as shown, competitors are in ONE CATEGORY ONLY. If, as is usual, you want all teams to be eligible in the Mens Open category, you would add MO beside each category, separated with a comma.

```
        (none)
        MO
        MV,MO
        WO,MO
        WV,MO
        XO,MO
        XV,MO
```

You will probably want the Vets teams to be eligible for the Open categories within the same gender grouping, so you would add WO to WV and so on.

```
        (none)
        MO
        MV,MO
        WO,MO
        WV,WO,MO
        XO,MO
        XV,XO,MO
```

If you do create this file directly, you must ensure that the added categories exactly match the major ones and that there are no spaces.

12.2 PunchNums.txt

This file relates the factory-programmed 3-letter internal Punch ID code to its Punch Number label on the nose of the Punch, and its score value. Special functions such as BRIEF or FINISH are also saved here for each event.

The first line of the file is a header line, the second line is blank, and the third line has the word "START:" Following lines are the data files and the last line is "END:"

The file is best edited directly through the window, as described in section 3.5 above. However some users may want to alter this file from another source, such as an Excel Spreadsheet, to assign STATUS functions to Punches. The format of the file is tab-delimited text, and can best be examined by creating a file using RogaineSCORE and then studying it.

The only time it is necessary to hand-edit this file is if you have irrevocably lost a Punch, and you want to remove its ID Code from the file.

An extract from this file looks like this:

HMO	68	60	BRIEF
JMO	69	60	TEST
TMO	70	70	
RMM	71	70	
ZMO	72	70	
YMN	73	70	

For example, if you have lost Punch no. 72, you will need to delete the line starting with ZMO from the file.

Other attributes such as the Status values BRIEF, TEST, and FINISH are deleted or appended to the end of the line of the appropriate Punch, with Tab delimitations.

12.3 TagNums.txt

This file contains a list of all the Tags in your system. A line is used for each Tag, and it starts with a space followed by its 4-letter internal ID code. If the Tag is assigned to a Team, the team number is also entered on the line, followed by the major category of the team.

The first three lines and the last line have the same format as the Punchnms.txt file.

An extract from Tagnums.txt could look like this:

```
ALAY    41      M
AAAZ    41      M
AOAY    42      M
AMAY    43      X
APAY    43      X
ATAY    44      M
```

Alternative software could be used to assign the team numbers and the categories. The spreadsheet "EventEntries.xlsm" is an excellent way of doing this, and is the recommended method.

12.4 DETAILED FORMAT OF .TXT FILES.

There are five critical text files that you need for an event to run successfully. These are normally created and modified from within RogaineSCORE and/or from a spreadsheet "EventEntries.xlsm" but they can be created and modified from your own software programs (eg. Notepad, np++, or other spreadsheets.)

If you do use other programs, you need to be aware of the exact formatting of the txt files. For example, the line-ends must be CR,LF characters (ASCII codes Chr(13) and Chr(10)), and not simply LF as is used in some Linux systems. Also, spaces and tabs may look the same but they are interpreted differently.

In the explanations given below, spaces are either left as spaces or shown as <space>. Where several consecutive spaces are used, they may be shown as <space n>.

Tabs are always shown as <tab> or <TAB>.

Line ends, if not shown, are always <CR,LF>.

Each line starts at the first character, unless<space> or <tab> is shown

Blank lines are shown as <CRLF>

Respect the indicated Case of text. While some tolerance is allowed, don't risk it.

12.4.1 Tagnums.txt

This starts off as a list of the ID codes of all the Tags you will use (any spare tags can also be included).

A very small file could look like this.
```
TagID TEAM  CLASS COURSE       NAMES HANDICAP      TEAMNAME

START:
 ANAQ
```

```
  AOAQ
END:
```

In detail, this is

```
TagID<tab>TEAM<tab>CLASS<tab>COURSE<tab>NAMES<tab>HANDICAP<tab>TEAMNAME<CRLF>
```
<CRLF>   *Note:* A blank line.
START:<CRLF>   *Note:* Include the colon.
<space>ANAQ<CRLF>
<space>AOAQ<CRLF>
END:<CRLF   *Note:* Include the colon.

When more detail is added, like team, class, course etc, the different fields are separated by tabs. For example, if you do not have some fields, like categories (CLASS), or handicaps, in your event, you must still have the tab on each side of where the field would have gone. For example,

```
<space>ANAQ<tab>71<tab>XO<tab>7Hour<tab>D Trump, J Corbyn<tab><tab>WW 3<CRLF>
```

Note the two tabs after the names, and before the team name (WW3). This is because there is no Handicap (there hardly ever is, but the space for it must be preserved.)

If you do not have team names or handicaps, the line end can follow the competitor's names. That is, you do not need to include trailing tabs after the last field entry.

All Class abbreviations must EXACTLY match the ones created in Categories.txt, and all Course names must EXACTLY match the names used in TagReader_Options.txt.

12.4.2 PunchNums.txt

The basic form for this file, like Tagnums, is a list of the ID codes of all of the punches which you will use, and can contain others that you won't use.

A small example could look like this.
```
CPID  CPNUM Points      Status

START:
XME   29    20
WME   30    30
RMC   31    30
END:
```

The first number is the punch number, or label. It can include letters like 25a, but generally numbers only are used. The second number is the score value of the punch.

In detail, this is

```
CPID<tab>CPNUM<tab>Points<tab>Status<CRLF>
```
<CRLF>   *Note:* A blank line.
START:<CRLF>   *Note:* Include the colon.
XME<tab>29<tab>20<CRLF>
WME<tab>30<tab>30<CRLF>
RMC<tab>31<tab>30<CRLF>
END:<CRLF   *Note:* Include the colon.

If a punch is assigned to a status, (BRIEF,TEST,STARTS,DEPART,FINISH,G-??,LAP) then this status is added to the line. Note that STATUS punches should NOT have their score value changed. Status punches always ignore the score value.

```
WME<tab>30<tab>30<TAB>BRIEF<CRLF>
```

Note that GROUP punches must have the number of the punch they represent included, for example G-31 assigns the punch to duplicate Punch 31.

12.4.3 Punch_Options.txt

This is the file which holds your Event Reference Time. The first few lines look like this.

```
5/08/2017 10:00:00 AM
1 = Acceptable Clock tolerance in Seconds.
1.20   Volts  Lowest Battery Limit.
110   FLASH options
Course 0 =
```

The "Course 0 =" line is incremented and repeated (in hex code) up to 15, so the last few lines are this:

```
Course 9 =
Course A =
Course B =
Course C =
Course D =
Course E =
Course F =
Timeshift=0
```

The first line MUST be in the format shown. Day, Month, Year followed by Hours, Minutes, and Seconds. Hours are in 12 hour format, and AM or PM must be in capitals.

5/08/2017<space>10:00:00<space>AM<CRLF>

This is the standard date/time representation in Windows 10 for both Aus and NZ zones. (NZ used to use a.m. in Windows 7, but the program will convert it.)

The next two lines define the acceptable limits before a warning occurs, when punches are re-confirmed in the Program Punches window.

1<space>=<space>Acceptable<space>Clock<space>tolerance<space>in<space>Seconds.<CRLF>
1.20<space><space><space>Volts<space><space>Lowest<space>Battery<space>Limit.<CRLF>

The fourth line controls pre-and post-event light flashes, and "immediate Timestamps". A "1" means on, "0" means off, in the sequence Pre-event flash, Post-event flash, and Immediate Timestamps.

110<tab>FLASH options<CRLF>   *Note:* This is the usual setting.

The "Course =" lines were intended to save "Restricted Course" settings, but it is dangerous to save these and so they are no longer used, but must be retained for backwards compatibility.

Course<space>8<space>=<CRLF>

The last line is used for daylight saving. It gives the advance or retard time in seconds, so typical values are 3600, 0, or -3600.) is normal.

Timeshift=0<CRLF>

12.4.4 TagReader_Options.txt

This file contains all the Course information. It must have at least two lines in it. The first one describes some default Printer settings, and the second line sets values for the "Default Course 0", which is the Course information used by Tags which have not been assigned to a properly-named Course.

The first line is simple enough:

```
A4     Portrait    74     Arial 8
```

Which is constructed as:

A4<tab>Portrait<tab>74<tab>Arial<tab>8<CRLF>

A4 is the paper size, Portrait is the default orientation (you can use Landscape), 74 is the lines per page that you want, Arial is the font type (it must be a supported font on your system), and 8 is the font size.

The remaining lines all describe Courses.

```
Course #    Default Course 0  5/08/2017 12:00:00 PM   6/08/2017 12:00:00 PM   10
    30     False 24:00:00    10     Slowest Tag
```

All lines start with Course# followed by the Course name, then the Start and Finish times.

The next two numbers are the penalty points per minute late, and the minutes to Disqualification; in this example, 10 points per minute and 30 minutes to disqualification.

The "False" means that this Course is not Duration-limited, and the following time (in hours, minutes, and seconds) is the permitted time on the course. (This should be the same as the time between the Start and Finish times.)

The next number (10) is the penalty points per minute for exceeding the Course duration and should normally be the same as the late penalty. The final "Slowest Tag" means that, if two or more Tags from the same team have different scores, the lowest score is used. (The alternative is to have "Fastest Tag" which allows the highest score.)

For duration-limited courses, the word "False" becomes "True", and the following time is the permitted time-on-course, which should be less that the time difference between the Start and Finish times. The following number is the penalty rate for being over-Course time but not later than the Finish time, and can be different.

The line format is:

Course<space>#<tab>(Course Name)<tab>(Start time)<tab>(Finish time)<tab>(Penalty points)<tab>(Minutes to Disqualification)<tab>(False or True)<tab>(Over-time penalty)<tab>(Slowest or Fastest Tag)<CRLF>

The Course Names can have mixed case and spaces in them but not commas. Start and Finish times must follow the format described in Punch_Options.txt above. All Course names must EXACTLY match the course names used in Tagnums.txt.

12.4.5 Categories.txt

This is the file which lists the abbreviations you use for Age/Gender classifications. The default is given here. There are NO spaces, and NO Tabs, and every line ends with <CRLF>. The first line must be (none).

```
(none)
M
MV,M
```

```
MSV,MV,M
W
WV,W
WSV,WV,W
X
XV,X
XSV,XV,X
J
F
UV
```

M stands for Men, and MV is for Mens Vets. Note that MV is followed by a comma and M. This indicates that Mens Vets sra also competing in the Mens grade. Similarly, Mens Super Vets are listed as MSV,MV,M

13 OUTPUT TEXT FILES.

There are several types of files created during the scoring process. The ones likely to be of interest are the scored tag files held in the subdirectory for each course. For example, the Course 0 subdirectory (the default course) will have files like this:

```
Course 0 SECTION WINNERS.txt
Course 0 RESULTS.txt
Course  0 ScoreSummary.txt
74_____ AFFB.txt
74_____ AEFB.txt
73_____ AFBC.txt
73_____ AEBC.txt
```

The files starting with a team number, like 74_____ AEFB.txt are the scored files for each Tag. They contain the same data as the Scored tag files described in Section   7.1. You can extract individual Tag scores from these files.

13.1 The Score Summary.txt Files.

The Score Summary.txt file contains a list, in descending score order, of all team scores. Each line starts with the team number, the course, Gross, Penalty, and Net Points, Finish time, and Tag ID Codes for that team. An example of this format is given in Section 7.1 and a single line looks like this.

66   CRS 24 1300   -20   1280 Points.   Finish 18/09/2005 12:01:08 PM   AJAG,AVAL

This file contains all of the scoring details of each Team, but does not show category information or names. For these details, look at the RESULTS.txt files.

13.2 The Course RESULTS.txt Files

These files within each Course sub-directory again contain a rank-ordered list of all teams, but instead of showing finish times it shows the category rankings of each team. Names and other details can also be included as described in Section 7.5. A typical file could look like this:

Place	Team #	Score		MO	MV	MSV	WO	WV	WSV	XO	XV	XSV	J
1	138	3970		1	.	.	.	.	.	.	.	.	.
2	117	3730		2	.	.	.	.	.	.	.	.	.
3	112	3170		3	.	.	.	.	.	.	.	.	.
4	101	3170		4	.	.	.	.	.	.	.	.	.
5	132	2870		5	1	.	.	.	.	.	.	.	.
6	142	2830		6	.	.	.	.	.	1	.	.	.
7	104	2740		7	.	.	.	.	.	.	.	.	.
8	144	2730		8	.	.	.	.	.	2	.	.	.
9	122	2710		9	2	.	.	.	.	.	.	.	.
10	109	2700		10	.	.	.	.	.	.	.	.	.
11	106	2690		11	.	.	.	.	.	.	.	.	.

As usual, these files are tab-delimited text files. They represent a combination of the score summary file and the Categories.txt file. Names may also be included from the TeamData files if these exist and were included in the output. See Section 7.5.2.

13.3 The Course SECTION WINNERS.txt Files

These files within each Course sub-directory give the first three teams in each category. The category order is the same order as they are listed in the first line of the Results list above, and is determined by the sequence of listing in the EVENT SETUP – Competitor Classes Window.

A typical file might look, in part, like this:

```
--------------------------------------------------------------
 MO Section winners.
1  Team No. 138          3970 points.
2  Team No. 117          3730 points.
3  Team No. 112          3170 points.
--------------------------------------------------------------


--------------------------------------------------------------
 MV Section winners.
1  Team No. 132          2870 points.
2  Team No. 122          2710 points.
3  Team No. 126          2690 points.
--------------------------------------------------------------


--------------------------------------------------------------
 MSV Section winners.
1  Team No. 130          1160 points.
--------------------------------------------------------------
```

If **names** and Finish Times were included, (see section 7.5.2) the same file would be:

```
--------------------------------------------------------------
 MO Section winners.
1  Team No. 138          3970 points.     Finish time  11:38:25 AM
        Dave, Helen Bones, Volker Knock

2  Team No. 117          3730 points.     Finish time  11:49:04 AM
        Hugo and Harry Young

3  Team No. 112          3170 points.     Finish time  11:41:15 AM
        Jacob De Lacey, Robbie Lange, Ben Bowles
--------------------------------------------------------------


--------------------------------------------------------------
 MV Section winners.
1  Team No. 132          2870 points.     Finish time  11:36:01 AM
```

Heather Pugh Williams, Lisa Pilkington

2 Team No. 122   2710 points.   Finish time 11:36:02 AM
        Dave Laurie, Phil Bones

3 Team No. 126   2690 points.   Finish time 11:41:20 AM
        Keith Agmen, Steve Beckett, Greg Dobson, Greg Shirley

----

 MSV Section winners.
1 Team No. 130   1160 points.   Finish time 4:55:26 AM
        Aaron and Viv Prince, Sia Svensden

13.4 HTML source text files

Two textfiles are automatically created in each Course directory. These are "Course xxx VRA_htm.txt" and "Course xxx VNZRA_htm.txt" where xxx is the name you have given for each course.

These files closely resemble the website results format used by VRA and NZRA respectively.

Similar text files for other formats may be included on request.

14 ADDING/DELETING NEW TAGS AND PUNCHES.

New Punches must be added to the PunchNums.txt file. This is done from the EVENT SETUP window, PUNCH Values button, and FUNCTION… ADD NEW PUNCHES from the menu. This is described in section 3.5.3.

After doing this, you will need to assign a Points value to the new Punches in the PunchNums.txt file. This is best done using the PUNCH Values window as described in section 3.5.2. An extract from this file might look like this:

```
OMB        73           70
PMB        29           20
QMB
RMB        90           90
```

Note that the newly added Punch, QMB, does not have a Label or a Points value given to it. You must do this. You might, for example, decide to label this Punch 99, with a points value of 90. After modification the file will look like this:

```
OMB        73           70
PMB        29           20
QMB        99           90
RMB        90           90
```

It is possible to have more than one Punch with the same label, as long as they have the same score value and different ID codes. This allows for duplication at busy checkpoints, and for redundancy in major events.

New Tags are added to the Tagnums.txt file simply by erasing them for a new event. See section 5. Then proceed to assign Tags to Teams in the normal way. **New Tags** can also be added at event registration. See Section 18.1

Deleting lost Punches is done from the same window as is used for adding new Punches. See Section 3.5.5

Deleting Tags requires hand-editing of the Tagnums.txt files, and deleting the entire line with the 4 letter internal ID Code on it. An alternative method is to delete the wholeTagnums.txt file, and create a new one by erasing all your Tags for a new event.

Punches and Tags from other sets may be handled in bulk. See sections 3.5.4 (combining Punches from other sets) and 5.1 (Combining Tags from other sets).

15 TECHNICAL DETAILS.

15.1 Technical details of Punch.

This is small, robust, and efficient. It runs either on one AA battery or a re-chargeable AAA battery. The AA battery life is 6 months of pre-event time plus 50 days of competition time. Two-thirds of the weight is the battery. The AAA battery life is two months, although a battery in good condition can last three months, depending on usage

It can record over 3,000 Tag insertions. Each Tag Number is recorded, followed by a time-stamp with 8 minute resolution.

After battery insertion its internal clock must be set, along with a reference time which is usually the "Event Start Time". This procedure is done in seconds without disassembly through the PC reader and software.

The Punch operates in two modes; "Sleep" and "Awake". By default it is "Sleep" until its internal clock reaches the "Punch Reference Time" when it becomes "Awake". It stays in this mode for 36 hours before reverting to "Sleep" mode. Sleep mode is used to conserve battery life.

The Punch will work with a Tag at all times regardless of which mode it is in. The difference between "Sleep" and "Awake" is subtle. When in "Sleep", the Punch tests for the presence of a Tag every 2 to 3 seconds then goes back to sleep. When in "Awake" it tests three times a second and never sleeps. For the user, this means a delay of up to three seconds if used before the event start, and no delay after that. However, if a Tag is presented during "Sleep" the Punch wakes up for 8 hours before reverting to "Sleep".

The other difference between "Sleep" and "Awake" is the red light. During Sleep, this flashes gently approximately every 16 seconds. When Awake, it doesn't flash at all unless a Tag is detected, so there is no confusion for a user. After the event, it flashes every 16 seconds again, but brighter this time to help in locating it if it has become hidden by vegetation. Both the pre-event and post-event flashes can be independently inhibited. See Section 3.2.1.

With the older punches with AA batteries, when the Punch is turned on (by screwing the transparent head into the main casing) the LED flashes 6 times. This is a self-test routine. If any of the flashes are double ones, it means something could be wrong.

The first flash shows that the light and power supply are working.

The second one shows that the E2ROM (non-volatile memory chip) is working.

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The third flash shows that the timekeeping clock is working.

The fourth flash shows that the battery voltage is over 1.4.

The last 2 flashes test the coupling to a Tag. If one is connected, it will flash until removed.

15.1.1 FLASHING LIGHT Patterns

NORMAL.   When a Tag is Punched, the red light flashes with a single flash, repeated three times a second.

REPEATED INSERTION.   If a just-punched Tag is re-punched, the Punch recognises that the Tag has just been recorded, and will not add another record into the Tag. The red light gives a double flash, repeated two times a second.

TAG MEMORY FULL.   In this case, the red light gives two quick flashes and a third flash, a fraction of a second later. This pattern is repeated every two seconds. This is the "ERROR" flash. The Tag will not have the Punch recorded in its overloaded memory, but the Punch will record the Tag as a safety measure.

PUNCH MEMORY FULL.   The Tag will still be correctly punched, but the Punch cannot record the Tag visit. The indication is a double flash, identical to the REPEATED INSERTION flash.

INVALID COURSE. This is an advanced option and only arises if a Tag has been restricted to a specific course number, and the Punch has also been restricted, and the course numbers do not match. The indication is the "ERROR" flash as used when the Tag memory is full. (See above.)

15.2 Technical details of Tag

This is an unpowered, totally waterproof device weighing 7 grams. It is designed to be worn on the wrist, held with a vinyl security band which cannot be removed without destroying the band. The bands cost about 40c each.

Alternatively it can be suspended from the neck of a team member on a string, but this method allows others to carry the Tag and also results in knots when many tags are stored together.

It can record nearly 400 Punches. Each record contains the Punch Number and the time, with 1 second resolution. The punching process takes about half a second and success is indicated by a flashing light in the Punch.

It derives its power by magnetic coupling when placed on a Punch. As with the Punch, the Tag is read and reset through the PC reader and software.

16 ADVANCED OPTIONS.

16.1 The "Setter" Course

When people are placing checkpoints in the field before an event, it is a useful check to wear a spare Tag, and "Punch" every checkpoint as it is placed. On returning each day, or after several days, it is useful to read the tags to confirm that the punches all worked correctly.

If you simply "Read" the tags as if you were scoring them, you will get all kinds of errors, about no BRIEF or FINISH punches, and very strange punch and split times.

If instead, your tags are added to Tagnums.txt and given a Course name of "Setter", the Score display when you read them in READTAGS, will give the Punch number and the date and time of punching, with no other comments. All punch scores and status will be ignored.

You do not need to create a "Setter" Course in your event. Open the TAGS to TEAMS window, find your tag, and click in the Course box.
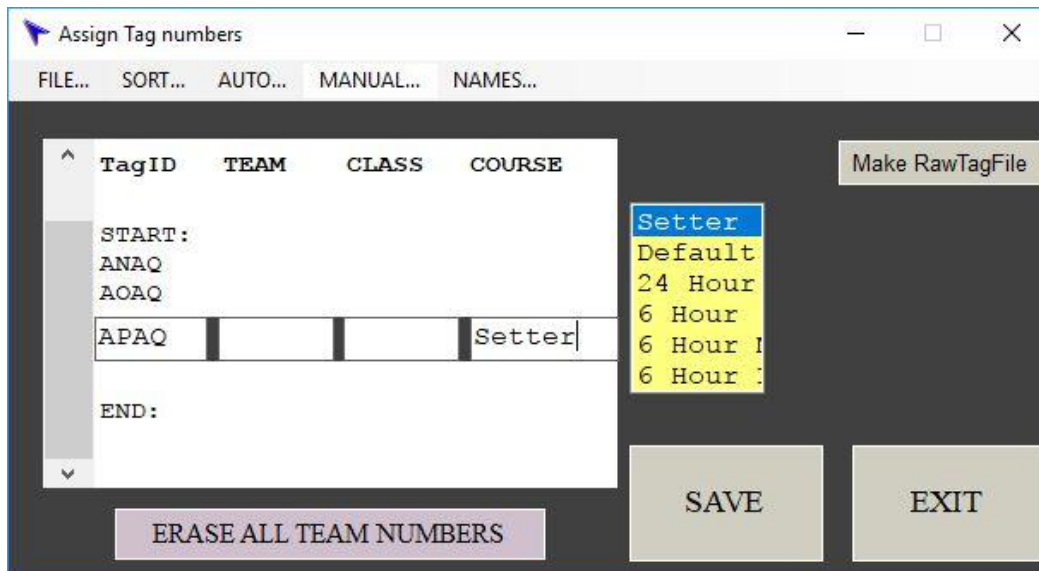
The "Setter" course is an option at the top of the Course list displayed. Click on it to select it, then SAVE. Repeat this for all of the tags you want to use for course setting.

The Tagnums.txt file will have a line in it -
<space> APAQ <tab> <tab> <tab> Setter

When you read the tag in READTAGS, the Score window will look like this.

16.2 Advanced Punch Options.

In the PROGRAM PUNCHES window, click the "Advanced >>>" button.
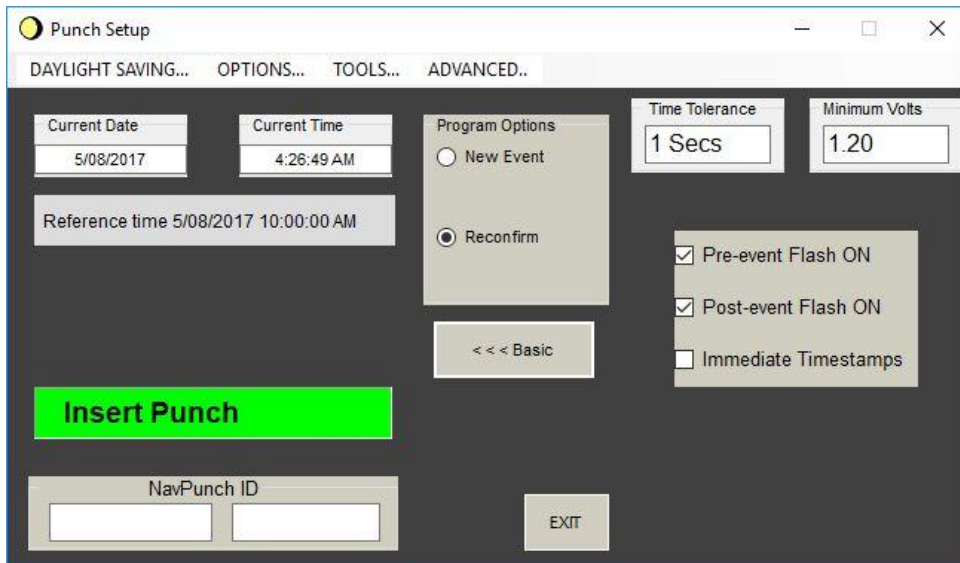
The **Time Tolerance** and **Minimum Volts** figures are the thresh-holds for signalling an alarm when a Punch is placed in the reader. If a Punch is found to have a lower voltage than the 1.4 shown, the Volts reading will flash in red when a Punch is inserted. Similarly, if the clock is more than one second wrong, the Clock Error frame will flash. In either case, the Beep which normally signals that the operation is complete will be inhibited.

The settings shown for these two parameters appear to be reasonable values.

The Restrictions to Courses checkbox is discussed in more detail in the "Restricting Tags and Punches" section below.

16.3 Calibrating the Punch Clocks.

As built, the internal clocks have an accuracy of 2 minutes/month, or worse if wide temperature variations are encountered. A calibration procedure exists which measures the clock inaccuracy over a period of 7 days or more, and then programs a correction factor into the non-volatile memory in the Punch. This improves the accuracy. The calibration procedure may have been done ex-factory, or you may wish to do an annual re-calibration, if clock errors are apparent.

Ensure your computer clock is accurate to the second for each step.

The first step is to make sure the Punches have been programmed with a Reference Time, (section 3.1) as for normal usage. This may have been from your last event. If so, re-confirm the Punches to ensure that the clock error is small –correct the error if not. Within one second is sufficient.

Then, click "PROGRAM PUNCHES" in the main window to re-start the Punch Setup window. The two white textboxes under "NavPunch ID" will appear.

Click in the right-hand textbox, and type in the word "calibrate".
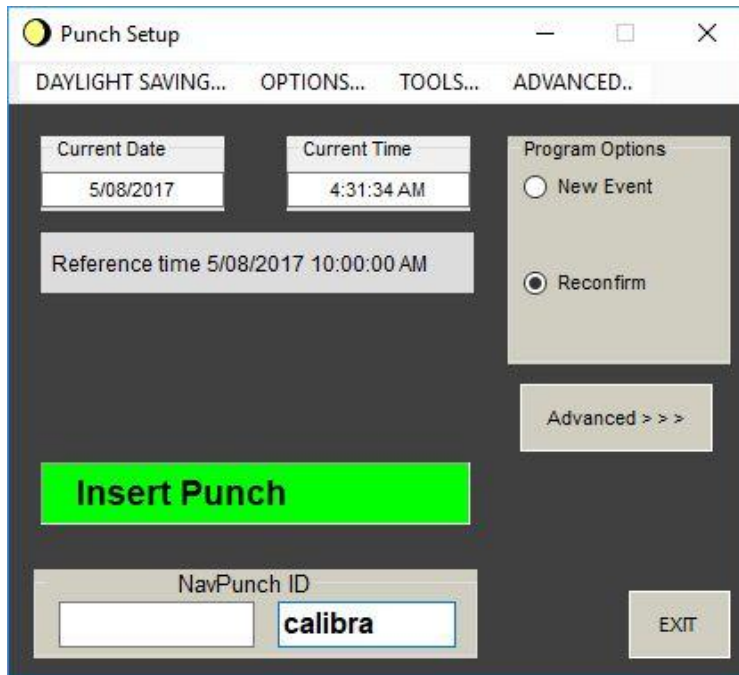
When the full word "calibrate" is entered, the window will change to the Calibration one.
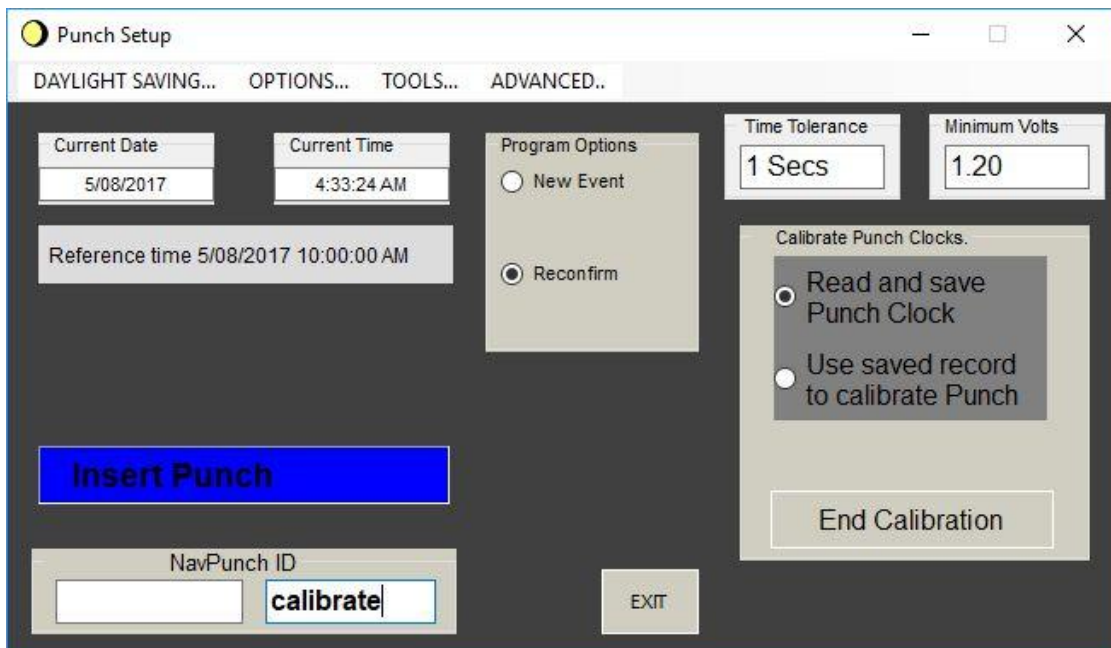
The Calibration window.

Note that the default option "Read and save Punch Clock" is selected. Insert each Punch in turn in the normal way. A text file called "PunchEngineering.txt" is created, which stores the exact time of reading of each Punch, and its current error. Finish by clicking End Calibration, or Exit.

The second step is carried out 7 days or more after the first. During the interval, the Punches should be kept at a temperature similar to their likely normal usage. (perhaps 10 to 20 degrees C?)

Ensure your computer clock is accurate to the second. Then re-start the Calibration window as above, but this time click the "Use saved record to calibrate Punch" option. Insert each of the Punches again, and they will be updated with a correction factor.

16.4 Restricting Tags and Punches.

If you have two simultaneous courses, for example 6 and 24 hour courses, you may wish to place a number of close-in checkpoints for the 6 hour people but not allow those punches for the 24-hour people. This is possible by using the "course restriction" facility, which requires each Punch and each Tag to have a "Course Restriction" programmed into it when you are initialising them.

Any Tags which are not restricted will score on all punches, with or without restrictions. Any punches which are not restricted will score on all Tags, whether restricted or not. It is only if a Punch and a Tag both have restrictions that a course match is checked.

For the example above, all of the 24 hour punches must be restricted to 24 hour, and all of the 6 hour punches must be restricted to 6 hour. If we allow the 6 hour people to use any punch, their Tags do no need to be restricted. However all of the 24 hour tags must be restricted to 24 hour.

If we do NOT want the 6 hour people to use the 24 hour punches, then their tags must also be loaded with the 6 hour restriction. If there are a few punches which can be used on either course, these punches must be loaded with restrictions to BOTH courses.

If a restricted Tag is placed in a restricted Punch, and the courses do not match, the light flashes repeatedly with three flashes instead of one. The Tag will not record the Punch, but the Punch will still record the Tag for safety purposes.

16.4.1 Entering Punch restrictions.

From the PROGRAM PUNCHES window, click ADVANCED>>>, select the New Event option to display the "Show Course Restrictions" checkbox, and click it.

Either type a course number into the box, or double-click a course from the box above. Another box appears, in which you can enter more restrictions.

When you have chosen the restrictions, insert the Punches you wish to restrict to these courses. The restriction settings are NOT saved when you exit the Window so do all the punches you need while it still shows the restrictions.

For Punches you do not want to restrict, clear the restriction boxes or re-start PROGRAM PUNCHES before programming.

16.4.2   Entering Tag Restrictions.

From the "ERASE TAGS" Window, click the "New Event" or "Load Course" Option to enable the Course Restriction box. If the tags have not yet been erased you will want the New Event Option. Click in the Course Restriction box.
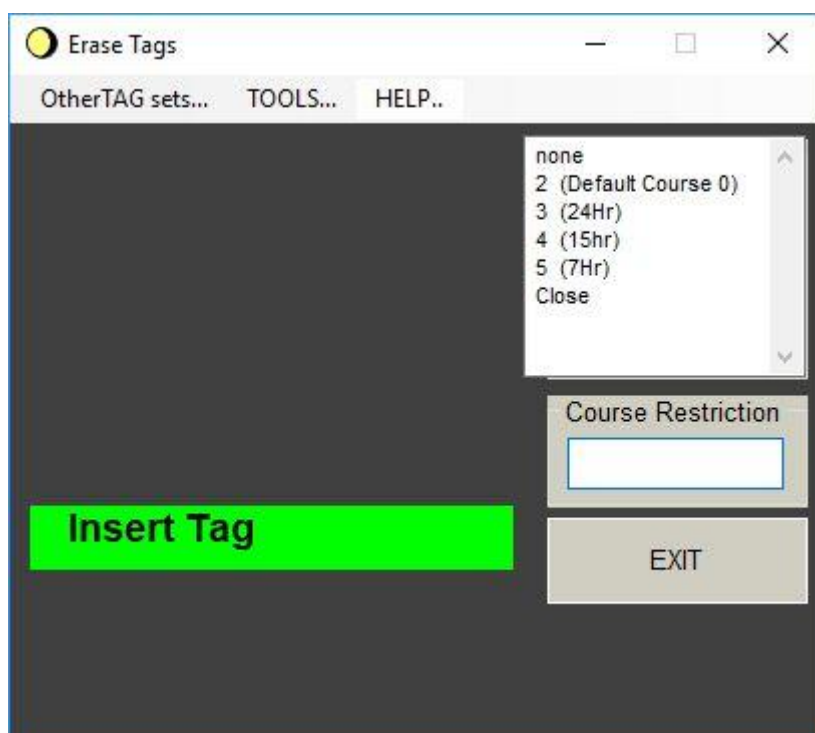
Either type a number into the box, or double-click the course from the list above. When the correct course is displayed, erase all the tags for that course.

Note that the restriction setting is NOT saved when you close the Window. You can check tags from the Read Status option; any restrictions will show.

16.5 File Management features.

16.5.1   Saving and Reloading whole events.

After scoring an event, you may want to archive all the setup files, all the RawTag files, and all the results files for future reference. You may also wish to re-load this information at a later date, for further scrutiny or for experimentation.

To allow this, an EVENT… Menu exists in the menu bar of the main Window. From this, you can save an event, load a previous event, or create a new event (which eradicates any existing event information).
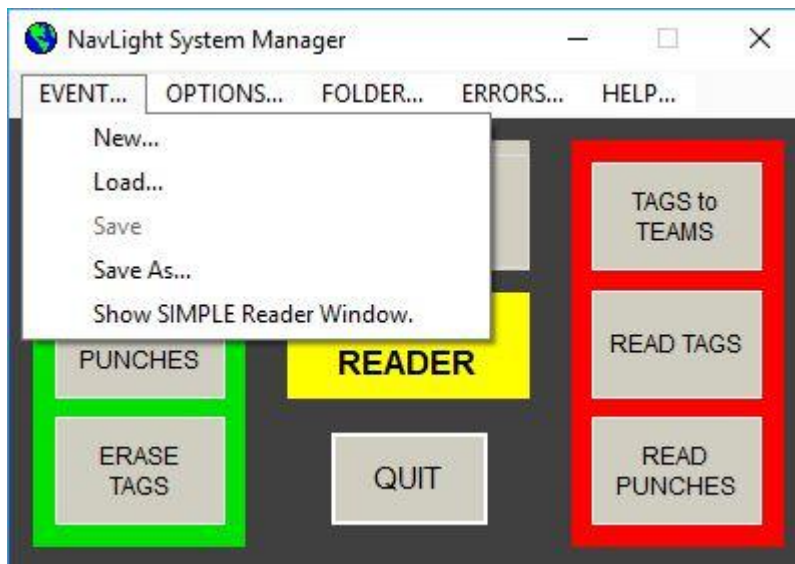
To SAVE your event the first time, you must click Save As… and the load/save Window will open.

Now type in the name of your event, (Hardys Hollow) and click SAVE. After saving, the name of the main Window will change to this new Event name. Every time you re-start RogaineSCORE, this event name will appear until you either re-load another event, or click the New… Menu item.

Once a name exists, the Save menu is valid, and you can continue to save your event by clicking Save. A serial number is added to the filename, and is incremented each time you save. Thus "Hardys Hollow" will become "Hardys Hollow(01)", "Hardys Hollow(02)", "Hardys Hollow(03)", etc.

This is useful to keep a record of your event files, such as Tagnums and Course information, as you develop you event and before the event is scored. Remember that the saved record is only as good as the last time it was saved. If you are certain that you don't want to increase the serial number you must use Save As…

Note that whenever you quit RogaineSCORE, your current data is not lost. It will re-load when you restart the program. It is only lost if you modify it or load a new or other event.

The archive files are text files with the extension .ach and are stored in a subdirectory called Archive.

To LOAD an existing event, click Load… from the Menu bar. The load/save window will open but this time the SAVE button is a LOAD button. Use the down-arrow beside the textbox to see all the saved events. Click on the one you want, then click LOAD.
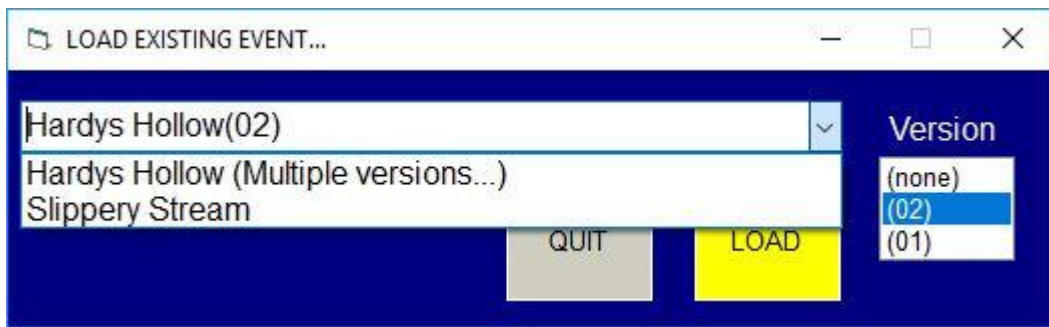
Note: The Load and New operations involve file and directory deletion, and may take a few seconds. Also, if any text files from the subdirectories are open (in Notepad for example), a delete will not be possible. You will get a system error message and RogaineSCORE will unload. If this happens, close the file and re-start the program. Very occasionally you may have to either log off, or re-start your computer, if the problem persists.

16.6 Bonus Scoring features.

Two event organisers have asked for special scoring conditions, and these have been incorporated in this release. The "bonus" points are awarded under special circumstances, such as scoring a hilltop punch within a minute of midnight, or scoring all five punches at the periphery of a course.

So far, three bonus systems have been incorporated, called 'BonusA', 'BonusB' , and 'BonusC'.

Bonus files are automatically invoked if the parent directory (where RogaineSCORE is located) contains a text file called "BonusXXX_Options.txt" where XXX is any combination of letters or numbers. So far, only XXX = A, B, or C are implemented.

The bonus files are saved with the event when it is saved, and re-loaded when the event is loaded from the archive.

16.6.1   BonusA scoring.

This concept offers a bonus if a given Punch or Punches are used between pre-determined times. For example, you can give a bonus of 50 points if a hilltop punch is visited while the moon is up, or 70 points if a lakeshore is visited at sunrise, or you can double all punch values between 2 AM and 5 AM.

The source textfile must be called BonusA_Options.txt, and its structure is as follows: The first line is a title line and is ignored. The suggested one here describes the format, but subsequent lines must follow the fixed format of tab-delimited values (not spaces).

Course	BONUS	Punch	START	END
24Hr	100	70	180	210
24Hr	20	60	300	360
24Hr	50	52	300	720

Each data line starts with the course it applies to, then the bonus points which will be awarded, then the punch which must be scored, then the Start and End times of the period for which the bonus is available. The times are measured in minutes from the start time for that course (which is not necessarily the same as the event reference time).

Bonus points are added after missing punches. Part of the scored tag record is like this:

```
1      14              5/01/2008 10:43:56 AM        BRIEFING. Score reset.
2      54     50       5/01/2008 12:34:21 PM  0:04:21
3      44     40       5/01/2008  1:56:07 PM  1:21:46
4      70     70       5/01/2008  3:40:01 PM  1:43:54
5      43     40       6/01/2008  4:15:52 PM  24:35:51      After course closure.
6      60     60       5/01/2008  4:45:25 PM           Split time negative.
7      35     30       5/01/2008  5:17:31 PM  0:32:06
8      52     50       5/01/2008  6:07:10 PM  0:49:39
9      18              5/01/2008  6:58:59 PM  0:51:49      FINISH TIME.
10     28     20       6/01/2008  6:02:49 AM  11:03:50
11     46     40       6/01/2008  6:40:24 AM  0:37:35
12     63     60       6/01/2008  8:28:56 AM  1:48:32
13     67     60       6/01/2008  8:50:18 AM  0:21:22
14     20     20       6/01/2008  9:31:09 AM  0:40:51
15     51     50       6/01/2008 10:15:32 AM  0:44:23
END
        BONUSA Points =      150      (Valid Punches = 70,52)
```

Because AddedPunches do not have a timestamp, they can't be used to affect bonusA points.

16.6.2   BonusB scoring.

This concept offers a bonus if all of a group of punches are scored. You might offer a bonus of 50 points if all 10-pointers around the hash house are scored, (thus doubling their value), or you might offer a bonus of 200 points if all the outlying punches are visited.

Like BonusA scoring, the amount of the bonus is independent of the punch values, but the time of punching is not taken into account, so AddedPunches from manual scoring can affect the BonusB scheme.

The source textfile must be called BonusB_Options.txt, and its structure is as follows: The first line is a title line and is ignored. The suggested one here describes the format, but subsequent lines must follow the fixed format of tab-delimited values (not spaces).

```
Course  BONUS  PUNCHLIST (Comma-separated).
24Hr    40     101,105
24Hr    20     46,58,82,44,55
24Hr    10     61,55,73
```

Each data line starts with the course it applies to, then the bonus points which will be awarded, then the list of all punches which must be scored.

Part of the scored tag record is like this:

```
5      101    100      5/01/2008  2:01:55 PM  0:42:42
6      66     60       5/01/2008  3:08:50 PM  1:06:55
7      55     50       5/01/2008  3:44:39 PM  0:35:49
8      105    120      5/01/2008  4:45:02 PM  1:00:23
9      65     60       5/01/2008  6:21:23 PM  1:36:21
10     41     40       5/01/2008  8:22:34 PM  2:01:11
11     64     60       5/01/2008  9:04:42 PM  0:42:08
12     64              5/01/2008  9:04:43 PM  0:00:01      Punched on Line 11
13     25     20       5/01/2008 10:08:47 PM  1:04:04
14     59     50       5/01/2008 10:43:57 PM  0:35:10
15     54     50       5/01/2008 11:44:28 PM  1:00:31
16     18              6/01/2008  0:13:42 AM  0:29:14      FINISH TIME.
17     28     20       6/01/2008  9:04:14 AM  8:50:32
18     35     30       6/01/2008  9:55:59 AM  0:51:45
```

19	16		6/01/2008 10:41:56 AM	0:45:57	FINISH TIME.
20	16		6/01/2008 10:43:47 AM	0:01:51	FINISH TIME.
END					

            BONUSB Points =   40   (Valid Punches = 101,105)

Another Tag could be like this:

26	46	40	6/01/2008 10:08:55 AM	0:48:38	
27	46		6/01/2008 10:09:19 AM	0:00:24	Punched on Line 26
END				(WARNING - No FINISH Punch found.)	

            AddedPunch101   100
            AddedPunch105   120
            BONUSB Points =   40   (Valid Punches = 101,105)

16.6.3   BonusC scoring.

You may want to offer an incentive to follow a particular sequence of checkpoints, to guide teams past some attractive scenery or to reward an unusually difficult route choice. The BonusC scheme offers this. Added punches are ignored.

The source textfile must be called BonusC_Options.txt, and its structure is as follows: The first line is a title line and is ignored. The suggested one here describes the format, but subsequent lines must follow the fixed format of tab-delimited values (not spaces).

Course	BONUS	PUNCHLIST (Comma-separated).
24Hr	80	54,44,70
24Hr	40	70,60
24Hr	20	52,28
24Hr	30	28,46,63
24Hr	30	65,105,61

Each data line starts with the course it applies to, then the bonus points which will be awarded, then the required sequence of punches which must be followed. Visits to the hash-house (BRIEF, START, FINISH or DEPART punches) will break the sequence.

Part of the scored tag record is like this:

1	14		5/01/2008 10:43:56 AM		BRIEFING. Score reset.
2	54	50	5/01/2008 12:34:21 PM	0:04:21	
3	44	40	5/01/2008 1:56:07 PM	1:21:46	
4	70	70	5/01/2008 3:40:01 PM	1:43:54	
5	43	40	6/01/2008 4:15:52 PM	24:35:51	After course closure.
6	60	60	5/01/2008 4:45:25 PM		Split time negative.
7	35	30	5/01/2008 5:17:31 PM	0:32:06	
8	52	50	5/01/2008 6:07:10 PM	0:49:39	
9	18		5/01/2008 6:58:59 PM	0:51:49	FINISH TIME.
10	28	20	6/01/2008 6:02:49 AM	11:03:50	
11	46	40	6/01/2008 6:40:24 AM	0:37:35	
12	63	60	6/01/2008 8:28:56 AM	1:48:32	
END					

            BONUSA Points =   170   (Valid Punches = 70,60,52)
            BONUSC Points =   80   (Valid Punches = 54,44,70)
            BONUSC Points =   30   (Valid Punches = 28,46,63)

Note that the sequence 52,28 has not counted, because of the FINISH Punch in between.

Another Tag could be like this:

```
4       65      60      5/01/2008 12:45:58 PM   0:15:58
5       105     120     5/01/2008 1:35:37 PM    0:49:39
6       105             5/01/2008 1:35:47 PM    0:00:10         Punched on Line 5
7       61      60      5/01/2008 2:54:14 PM    1:18:27
- - - - - - - - -
- - - - - - - - -

        BONUSC Points =       30      (Valid Punches = 65,105,61)
```

Note that Punch 105 has not broken the sequence, even though it has been punched twice, because the second punching follows immediately after the first punching.

If a Punch is re-visited, its score does not count. However for BonusC scoring, a re-visited punch is still eligible for the bonus, even though it may have been scored somewhat earlier. It may therefore be worthwhile for a team to re-visit a checkpoint if their plans have changed, and they follow a new route.

16.7 "CHAINED" and "TOTAL" Courses – combining several courses.

Separate, individual courses can be combined or linked into a collective event by setting up either a "Chain" or "Total" course. Some people can enter each individual course on its own, while other people can enter for a combination of several courses.

Those who enter a collection of courses will still be scored and ranked in the results for each individual course, but will also be given an overall score and ranking for the whole collection. It's like "adding the scores". If they are disqualified in one course (for being too late) they can still achieve scores in the other courses.

People entered in "chained" or "total" courses must *not* be re-entered in each individual course by the event organisers – this will happen automatically.

WHAT IS THE DIFFERENCE between Chained and Total courses?

"Chained" results should be used when the same team must compete in several courses. "Total" results are used if the same Course can be run at different times, but by different teams, and you need a combined result. "Total" courses can also be used instead of "chained" courses to add a team's results over several courses, but this is not as convenient or as safe.

In Chain courses, results with the same Tag ID are added. In Total courses, results with the same Competitor's NAMES are added. Normally you will not have a duplication of names and no results are added; you simply combine the two courses into one overall result.

The difference between CHAIN and TOTAL courses has the following consequences:

- **Chained** courses. These are used where the same team must compete in several courses. The competitors use the **same TAG** throughout the entire event. They must be scored as they finish each individual course, and they must use a BRIEF Punch

before the start of the next course. The Tag must **NOT** be erased. The Tag ID is used as the link to extract the scores from each set of course results.

Because the Tag is not erased between courses, it, and its Rawtag file, contain the entire event record, enabling a results re-construction if all scored records are deleted for some reason. The competitor's names are extracted from the Tagnums file and can be changed during the event, if required.

- **Total** courses. These are used when a Course can be run at different times; for example, the same 6-hour course can be offered on a Saturday and again on a Sunday, but teams can compete only once. Teams on the second Course **should** be issued with tags which have not been used previously, and they **must** have previously unused team numbers. Each course **must** have a different name, for example 6hrDay1 and 6hrDay2. Teams are entered in their appropriate course, not in a "Total" course.

  Note that if tags must be re-used because of shortages, the second course **MUST** be run as an entirely separate event, in its own event folder.

  If any teams compete in both events and have **identical names** for their members, the results from the different courses will be added together. This has the same effect as a "chained" course, but it requires exactly identical names, and results reconstruction is not possible from the Tag records.

16.7.1 Setting up the individual courses.

This is no different from any other course setup. You decide on start and finish times for each course, penalty points etc. and a course name. Create the courses as described in section 3.3 .

The only thing you must do, is to ensure that the end of one course occurs before the start of the next one. You will get a warning message when you try to combine the courses if there is an over-lap.

A typical example would be to have a 6 hour course on a Saturday, another one on the Sunday, and perhaps a third one during the night.

Course name	Start	Finish
First6	1:00 PM Sat	7:00 PM Sat
Mid6	9:00 PM Sat	3:00AM Sun
Last6	6:00 AM Sun	12:00 PM Sun

16.7.2 CHAINING the courses. Checkpoint re-use.

After you have created the individual courses with their own start and finish times, use the EVENT SETUP - COURSE Data again to create a new Course.

The first five letters of the new course name MUST be "Chain" so you should call the chained courses Chain, Chain1, ChainFence or similar.

When you type Chain in the Course name box, a new frame opens –

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The upper list box "Courses available" shows all the courses you have created. Select the ones you want for this chained course by double-clicking on them in the order they run. They will appear in the bottom box, "Courses in chained event". You can also drag-and-drop them into the bottom box.

To remove entries from the bottom box, double-click them.

Note that you can allow checkpoints to be re-used over all courses, or accept the default of not permitting them to be re-used. This default means that if checkpoint 37 is used on course First6 by a team, they will not get any more credit for it by re-scoring it on a later course.

The Course START and FINISH times for Chain courses have no meaning. They can be left at whatever they were when you typed Chain in the Course box.

You can have several chained courses within the same event. For example, you may want another course called ChainTwo which includes only the First6 and Last6 courses.
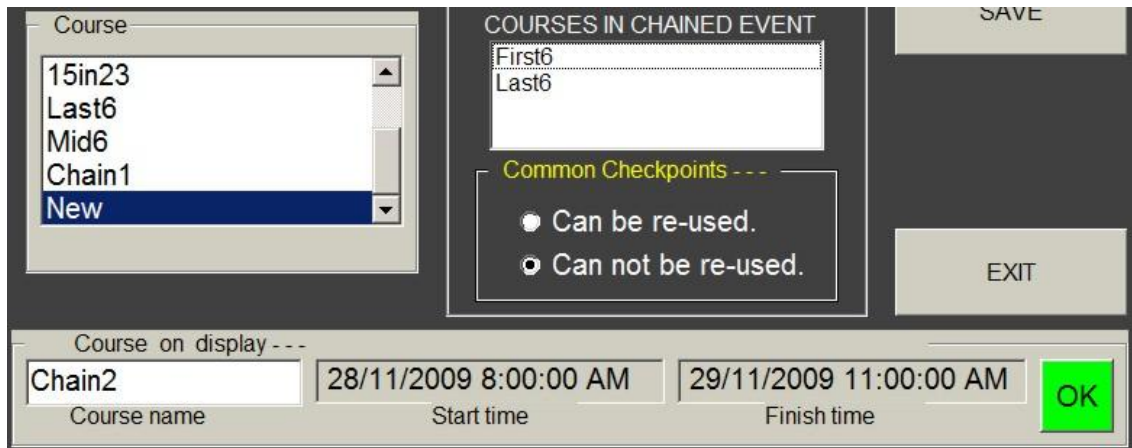
16.7.3   TOTAL course setup.

The procedure for setting up a "total" course is similar to a "chain" course, as outlined above. The only difference is that the first five letters of the course name must be "total" instead of "chain". (Case-insensitive.)

You will also not have the option of checkpoint re-use: checkpoints will be re-usable by default. Teams are entered in their respective courses, not in the Total course. Results are only combined during the RESULTS process, not the scoring process.

16.7.4   How to enter people.

Teams always choose a course in any event where there is more than one course. For Chained courses, you assign the name of the Chain course. Do **NOT** also try to enter the teams in the respective courses within the chain course.

Here is a sample from the TAGS to TEAMS Window. This is normally downloaded from a spreadsheet, but can be assigned within this window.

In this example, team 2 is entered in the First6 course, team 4 in the Last6, and team 3 is in ChainTwo which means they are also competing in First6 and Last6, as determined in the Event Setup, and will be scored and placed in those courses as well as getting an overall ranking for both courses.

16.7.5   Chain Courses use the same Tags.

Teams in Chain courses will use the same Tag throughout the whole event. It is *essential* that they use the BRIEF and FINISH Punches on **EACH** course!

As they finish each course, their tags must be read. They should get a printout of their score for that course in the normal way, but do NOT remove their Tags.

The Tag must **not** be erased between courses.

Note: if someone forgets to use a brief or finish punch, or forgets to get their Tags read after a course, it is still possible to score them using the re-score process, but it can be complicated. Good course management should ensure that everyone uses the BRIEF and FINISH punches, and are scored promptly at the end of each course.

16.7.6   Either-day (total) courses.

There are occasions where a 6-hour course is offered on both a Saturday and a Sunday, with teams choosing to do the course on either day but not both. They are still competing among the teams from both days, so the final scores from both days must be combined for a final result.

If Tags are not required to be re-used, you can create a Total course linking both courses, as in the Chain example above where a First6 and Last6 were chained together. Now, you link the two courses in a Total course.

Teams enter in either the First6 or Last6 course, NOT the Total course. They score as normal in their course. The results are not combined during tag scoring, only during the RESULTS processing.

If tags **ARE to be re-used**, then they must be erased between courses. The second course must be run as a completely separate event in its own event folder, with completely separate Course setup and Tagnums files. The tags can then be re-allocated for that event. The original event does not need a Total course. The final event course setup must have the Total course, and it must include a link to the first course event folder.

16.7.7   Other "total" courses.

You may want to combine the results of several courses, but after the event has been set up and you have re-used Tags between the separate courses. "Chain" course summaries rely on having the same Tag ID's so you cannot use a "chain" course.

Instead, you can set up a "total" course, which combines the results of the separate courses, but based on competitor's names instead of their Tag IDs to create their totals. Teams with IDENTICAL competitor's names will have their course totals added together into a final overall result.

16.7.8   Getting the results.

As with all courses, you use the "Print Results" Window to show the results for any Course. Chained and Total courses are no different. You can get the results for individual courses within the chain, (eg. Last6), or you can get the overall result by printing the Chain or Total course.
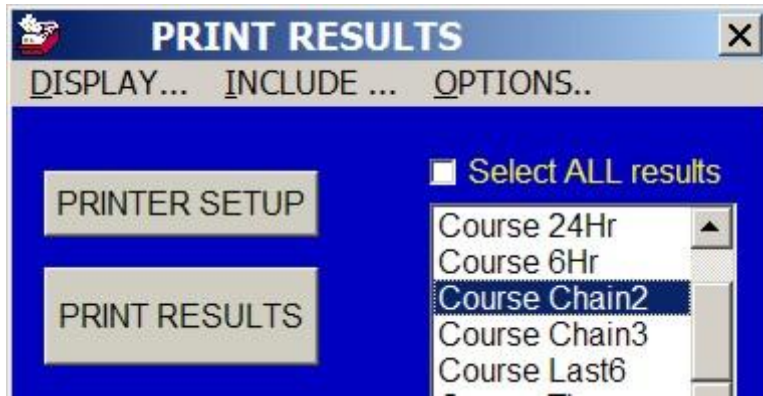
The Finish time shown in the results is the finish time for their last course.

16.7.9　　　　Re-scoring chained Tags.

Tags are scored using their entire Punch record. When a Tag has more than one course on it, it is necessary to define the boundary between courses in the record.

This is attempted automatically. If the individual courses have been scored as they finished (as they should be) then the scored history will determine the boundaries.

If there are no scored records, then an algorithm attempts to determine the boundaries. This algorithm uses Punch Time and Punch Status as a guide; in particular, it looks for a FINISH/BRIEF boundary.

In all cases, the Display window shows the last Course scored.
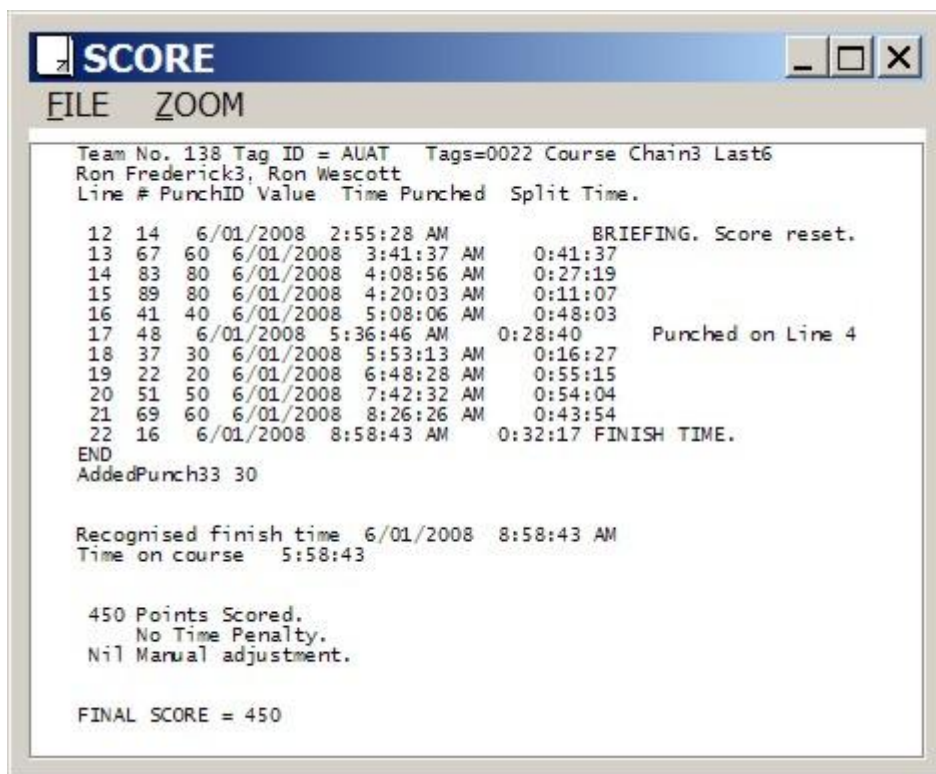
A green button appears saying "Score previous Chain course."

Click on the green button to see each previous Course in the Display window.


```
SCORE

FILE   ZOOM

Team No. 138 Tag ID = AUAT    Tags=0022 Course Chain3 6Hr
Ron Frederick3, Ron Wescott
Line # PunchID Value  Time Punched   Split Time.

   1   14      5/01/2008  2:44:50 PM              BRIEFING. Score reset.
   2   86   80  5/01/2008  3:24:40 PM     0:24:40
   3   74   70  5/01/2008  3:49:48 PM     0:25:08
   4   48   40  5/01/2008  4:37:21 PM     0:47:33
   5   20   20  5/01/2008  5:21:58 PM     0:44:37
   6   95   90  5/01/2008  6:07:43 PM     0:45:45
   7   16      5/01/2008  6:37:11 PM     0:29:28 FINISH TIME.
   8   99   90  5/01/2008  7:22:31 PM     0:45:20
   9   15      5/01/2008  8:15:07 PM     0:52:36 DEPARTURE TIME.
  10  100  100  5/01/2008  8:33:20 PM     0:18:13
  11   16      5/01/2008  8:59:43 PM     0:26:23 FINISH TIME.


Recognised finish time  5/01/2008  8:59:43 PM
Time on course    5:59:43


 490 Points Scored.
     No Time Penalty.
 Nil Manual adjustment.


FINAL SCORE = 490
```

As usual, you can alter the finish time on any course, award manual points, add missing Punches, and alter the BRIEF line. You must SAVE the change, and optionally PRINT it. (Clicking the Nil Button above will show the SAVE Button, and clicking this will change it to PRINT button.)

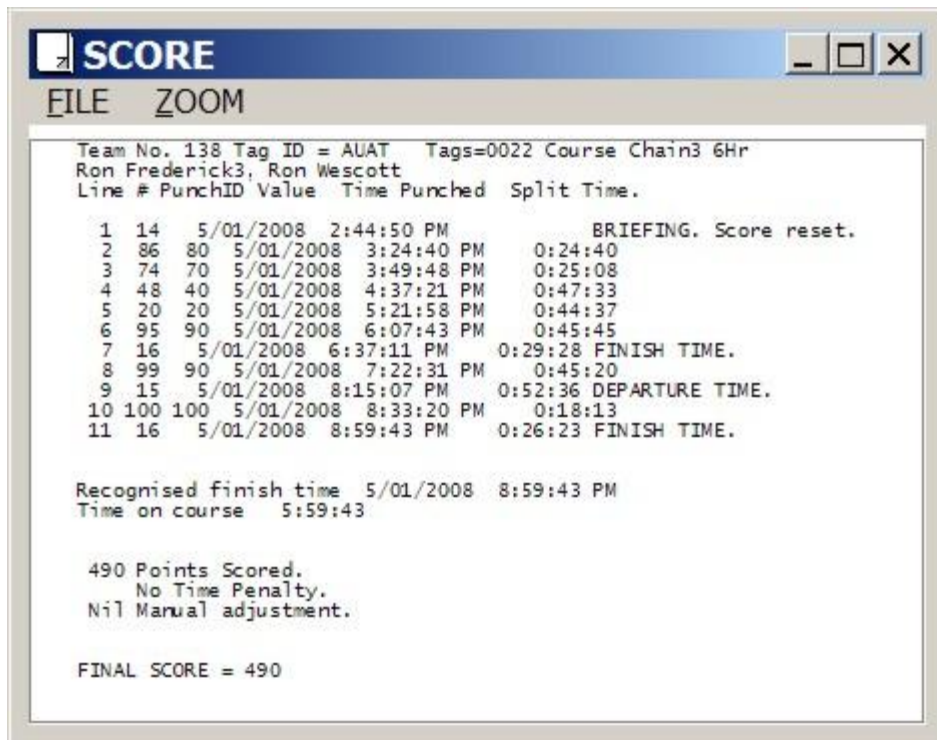*Caution*: Altering the BRIEF line on a Chain course implies that the line you choose is the start of that Course. You have changed the boundary between courses, and when you SAVE the change, you will get a warning that the previous course has changed and must be SAVED. The previous course, suitably modified, will show in the Display window. You must SAVE it, or re-score the original Course and move the BRIEF line back to the original position.

Note: A manually inserted BRIEF in a chained course cannot be removed by the "Remove Manual editing" button.

Note: If a previous course shows zero score because a BRIEF line has been moved into it at the end, inserting a Manual BRIEF in this previous course at its start will over-ride the BRIEF at the end, and the score will be restored.

17 The FIELD SCANNER.

The "Field scanner" is a small portable punch-reading device with a 2-line LCD display. Its purpose is to read Punches in the field, without having to carry a computer and a reader. This is primarily for locating visits from missing teams if they have not returned from an event.

It is optimised for low cost and portability, and while it will function without any specific preparation, it is easily programmed to search for a specific tag or team.

While not necessary, it can be programmed from the READ TAGS window to search for specific teams. Read the scanner instead of a Tag. A number of choices are presented, but initially, you are set up to load it with teams who have not returned.

17.1 Information on a Punch – 8 minute accuracy.

Each Punch stores a sequential record of the Tag ID codes of each Tag presented to the punch. A time-stamp is inserted at approximately 8-minute intervals, provided a Tag has been punched. (Exactly 512 seconds.)

To reduce data storage, this time-stamp is not recorded if there have been no tags presented since the previous time stamp.

Extract from a Punch record:
ADBN AABN
Time 0000 14:30:24
 ACCT AFCT AECT ADCT
Time 0000 14:38:56
 ANCN APCN AOCN
Time 0000 15:30:08

This shows that tags ADBN and AABN were recorded less than 8 minutes before the 14:30:24 time stamp, and ACCT, AFCT, AECT, and ADCT were recorded less than 8 minutes before the 14:38:56 time stamp.

Then there is a 50 minute gap before the 15:30:08 time stamp. However the three tags ANCN, APCN, and AOCN were all recorded within the 8 minutes preceding the 15:30:08 time stamp. Thus the time-stamp data can fix a time of punching to within 8 minutes.

17.2 Field scanner use, and the navigation key.

To use the scanner, simply insert a punch. The scanner is powered from the punch except for the LCD display, which needs the CR2032 coin battery fitted. Battery life should be ten years or more with normal light usage.

The scanner has a crude form of a "navigation key" as used on all mobile phones. This has four direction controls; left, right, up, and down. The left and right movements have no effect, but the up and down ones are used to scroll through the recorded lines from the punch.

There is also a "select" function which is available by depressing the switch without moving it up or down. In the current version this has no effect.

17.3 Field scanner display format.

When a punch is connected to the scanner, its two lines show something like this:

Punch connected.
ADBN

Push the down-key on the "navigation switch". (Similar to the navigation button on a mobile phone.) The next two lines will show:

14 Mar 14:30:24
ACCT

Note that only one tag is displayed at a time. Use the down-key to continue showing the recorded Tags and the time stamps.
14 Mar 14:30:24
AFCT

You can scan upwards also, by using the up-key.

CAUTION: The lines on the display are in the ***exact sequence*** recorded on the punch. Therefore the tags ACCT AFCT were recorded AFTER the 14:30:24 time-stamp, but they may have been a long time after. **You must continue scanning until you get another time-stamp to find the most accurate timing for these Tags.** All Tag records will be less than 8 minutes BEFORE their following timestamp.

If you go upwards in reverse order you will see the time-stamp on the bottom line and the tags on the top. This timestamp will be within 8 minutes of the tags displayed.

FAST SCANNING.

Holding the switch in either the up or down direction will cause continuous scanning in that direction until you release it.

17.4 Automatic scanning for lost teams.

The scanner can be pre-programmed to automatically search for lost teams. For this to happen, the scanner must know which tags are "lost". When this information is loaded, an automatic scan will stop when each tag in the list is located.

You are possibly familiar with the READ TAGS Menu item TOOLS...Find unscored teams. You can use this at any stage while scoring an event to see which teams have not returned.

Here is a screen-shot from the 9th WRC at Cheviot, NZ after finding un-scored teams. (These people had in fact returned but their tags had not been read.)

```
┌─────────────────────────────────────────────┐
│ 🗔 SCORE                        ─  □  ✕      │
├─────────────────────────────────────────────┤
│ FILE   ZOOM                                 │
├─────────────────────────────────────────────┤
│                                             │
│  UNSCORED TEAMS from WRC2010(02): O...      │
│                                             │
│     Team 5     ATAQ,AUAQ     not scored.    │
│  Aaron Scott (NZL), David Sutherland (NZL)  │
│                                             │
│                                             │
│  >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>         │
└─────────────────────────────────────────────┘
```

This window shows the missing team and its Tag ID codes ATAQ,AUAQ. These are important because they are the only information recorded on a punch.

If the scanner was loaded with these Tag Ids in a "search list", it can continuously scan through a punch, stopping when a match is found. Continuous scanning is caused by continuing to hold the "navigation" switch down or up. Scanning is either forward or reverse, depending on which direction you hold the button.

17.4.1   Loading "lost teams" into the Scanner.

You must have the "READ TAGS" window open. You will probably already be scoring the last few teams at the end of an event.

To switch to Scanner mode, all you need to do is to plug the reader into a scanner instead of a Tag. After a short time you will be told that the scanner has been detected, and you can then remove the scanner while you decide what to program into it.

The Field Scanner window will open.

The Field Scanner window

- The left-hand list shows the tags which will be loaded into the scanner's search list. It defaults to the same list as the last scanner programmed, or if none, then it loads from the un-scored tags list. It may be populated from saved files or by reading the scanner itself by using the FILE... menu.

- The centre list shows teams where some tags have been scored but some have not. You may want to include the missed tags into the search list. If so, double-click on the ones you want to add. They will be transferred to the search list.

- The right-hand list is empty. You can search your entire Tagnums file here, by entering a team number, or a name, or a tag ID into the search box. All matching tags will show and you double-click on those you want to add to the search list.

- When you are ready, click on the green button and then insert the scanner you wish to program. This can be any scanner.

- To program more scanners with the same list, place each scanner in turn into the reader. Click the green button without removing the scanner.

Hint: to see the names of any tag, click on the tag. Names will appear on the bottom line.

To use the SEARCH BOX for the right-hand list, enter a team number, or a name, or a tag ID into the search box. All matching tags will show.

This shows all entries with 22 in them. Double-click on those you want to add to the search list.

You can search for names, even though the names may not all show. Click on a team to see the names in the bottom box. In this example both teams have a Richard in them, but the bottom one is clicked.

17.4.2   Clicking the green button or quitting.

When your list looks right, click the green button and connect a scanner to be programmed. You can connect the scanner before or after clicking the button.

The list will download, and you can see the progress in the READTAGS window. It can take some time, depending on the number of teams to be downloaded. At the same time, a file is saved called Scanner_Options.txt which stores the list you used, and which is displayed by default the next time you connect a scanner.
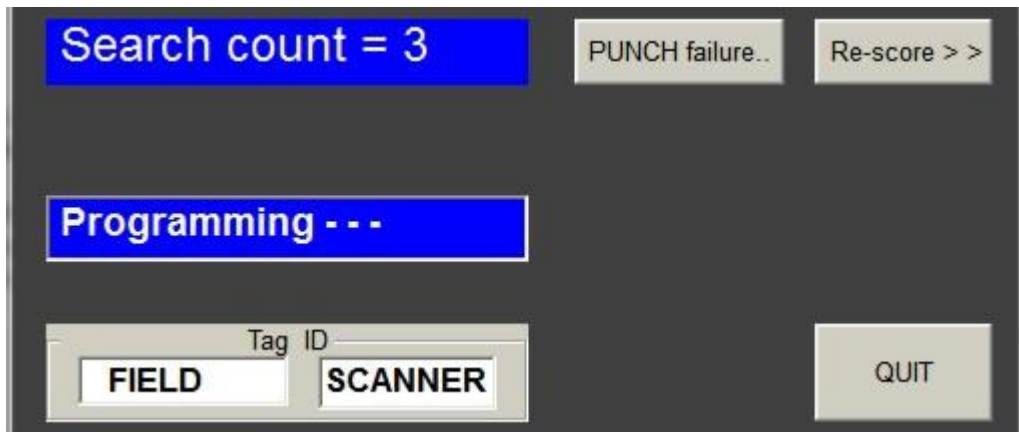
When finished, you are told to remove the scanner. You can then continue reading Tags or programming more scanners, whichever is detected.

If you connect a Tag instead of a scanner, the program will read the Tag in the normal way. Any search lists you may have created will be lost unless you saved them yourself first. (See below.)

If you use the CANCEL button you revert immediately to reading Tags.

17.4.3   Loading or saving lists.


LOADING:

Use the FILE... menu to see the choices.

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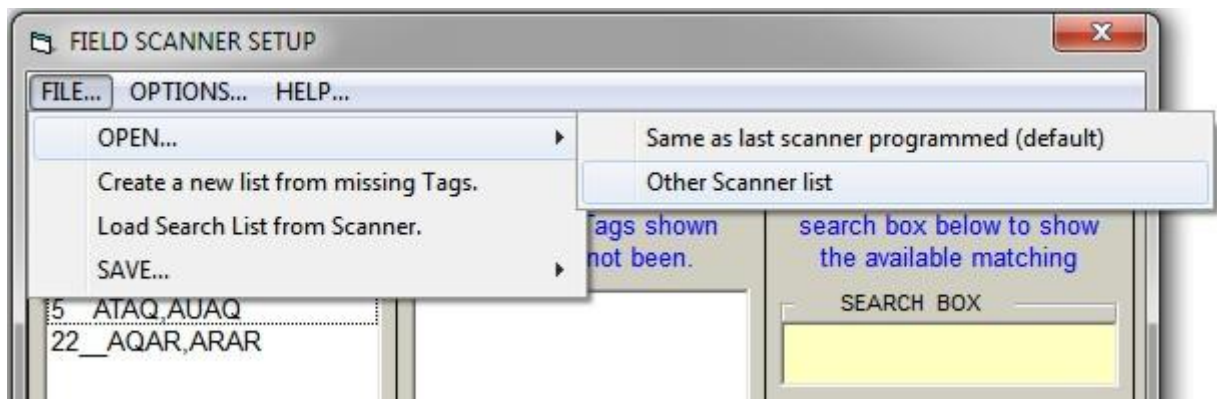
You can load the information used in the last scanner programmed (called Scanner_Options.txt) which was created automatically when you programmed it, or you can open a Dialog box to search for the file you want to open. Filenames should start with the letters "Scanner_ but this is not compulsory.

You can also re-load the list from the current missing tags information in your event, or you can see what saved list exists on the scanner just used to open the window. (The information was gathered when the scanner was read. You do not have to re-connect the scanner.)

SAVING:

Use the FILE... menu to see the choices.
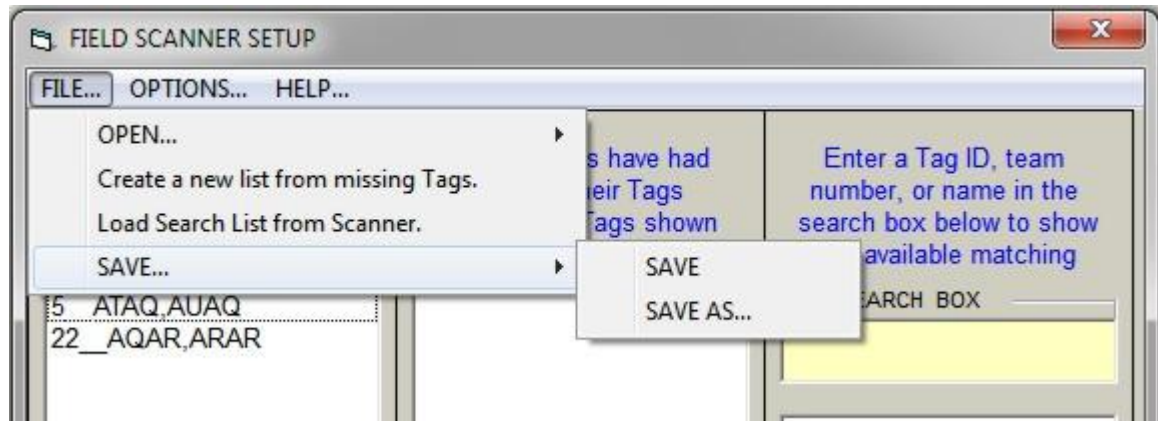
If you click "SAVE", it saves the list with the name "Scanner_Options.txt". This also happens when you program a scanner with this list.

The other option is to click "SAVE AS". A standard Windows dialog box will open, where you enter a filename and click SAVE.

It is suggested that you start any filename with the letters "Scanner_" for example "Scanner_5PM.txt" but you can use any filename.

18 The TAGS to TEAMS Window.

The TAGS to TEAMS Window was the preferred method of assigning Tags to people and teams, but has been superseded by the spreadsheet "EventEntries.xls" which creates Tagnums.txt directly. It has extensive help files also, along with robust error-checking procedures.

The TAGS to TEAMS Window still serves as a method for inspecting Tagnums.txt, and will still be required if you wish to assign Tags randomly at Registration time.

18.1 Live Assignment of Tags, using the Reader.

While most organisers prefer to pre-assign Tags to people, and put each team's Tags in a "registration pack", there are occasions when this may not be convenient. The most likely situation is where extra Tags are required from another organisation for a large event.

These extra Tags will not be registered in your own Tagnums.txt file, and neither will they have permanent numbers associated with them. (Or if they have, they may duplicate your own permanent numbers.) They may also not be erased.

You can allocate the Tags randomly to each team in turn. This can be done either at Event Registration, or previously if you want to place the Tags in a Registration Pack without having to hunt down each Tag by its code.

If the new Tags have been previously erased, they do not need to be erased again just to add them to your Tagnums file. This will happen automatically using this new process, which will add new tags to your tagnums.txt file and will also erase all tags which have not already been assigned to a team.
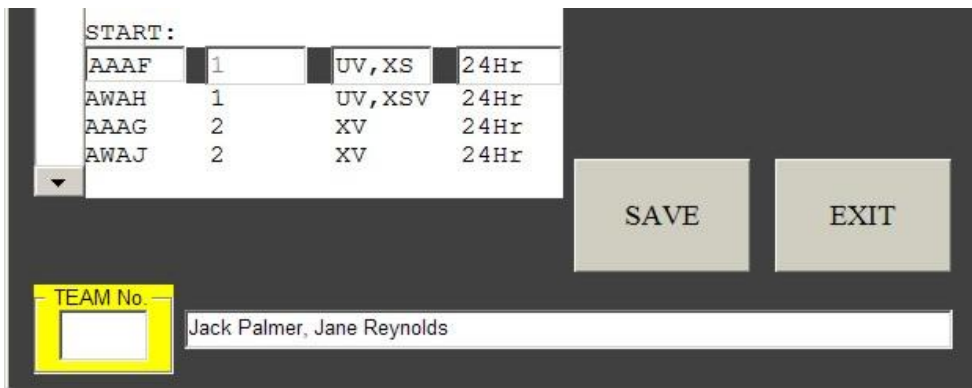
NOTE: You should establish your spreadsheet linkage before doing this, from Event Setup – Spreadsheet Link. You may also wish to pre-allocate your own permanent Tagfile, before adding the new Tags. If you want to do this, it should be done BEFORE adding the new Tags.

Start the TAGS to TEAMS Window, and use the Menu to click on "CLICK to ENABLE allocation by reading".
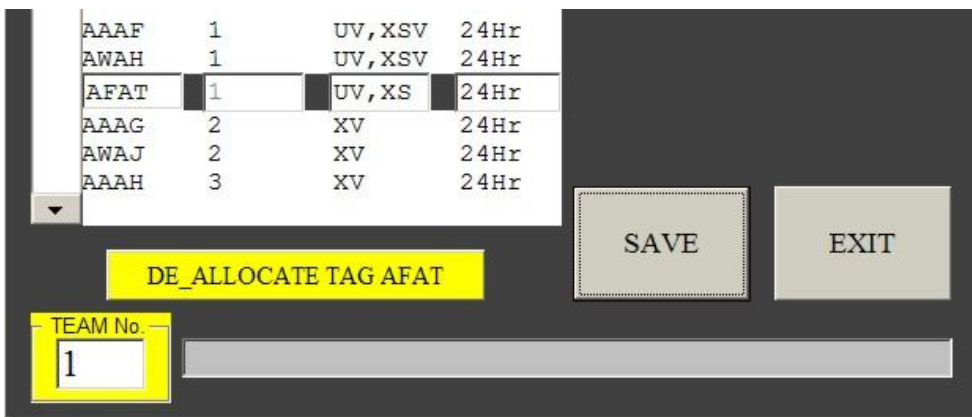

(Note: The Allocation options menu lets you decide how many tags should be issued: one or two per team, or one per person. You will get warning messages if you over- or under –allocate tags to a team.)

The lower part of the window changes when you click to enable allocation by reading.

```
START:
AAAF    █1      █ UV,XS   █ 24Hr
AWAH     1        UV,XSV    24Hr
AAAG     2        XV        24Hr
AWAJ     2        XV        24Hr
▼
```
SAVE   EXIT

TEAM No.
[   ]   Jack Palmer, Jane Reynolds

Imagine you want to add another Tag to team 1. Type 1 in the yellow box, then insert the reader into the new Tag.


```
AAAF      1       UV,XSV   24Hr
AWAH      1       UV,XSV   24Hr
AFAT    █ 1     █ UV,XS  █ 24Hr
AAAG      2       XV       24Hr
AWAJ      2       XV       24Hr
AAAH      3       XV       24Hr
▼
```
DE_ALLOCATE TAG AFAT

SAVE   EXIT

TEAM No.
[1]

Note that the new Tag, AFAT, has been added to Team 1, along with all the information.

Now try a team where no Tags have yet been assigned. Team 130 was entered into the yellow box, and Tag AFAT read. (This works for all Tags, whether they are new or already in your TagNums file.)


```
AVAO     129      M        24Hr
AWAO     129      M        24Hr
AFAT   █ 130    █ M       █ 24Hr
AYAP     133      M        Last6
AZAP     133      M        Last6
ALAT     134      XSV      Last6
▼
```
DE_ALLOCATE TAG AFAT

SAVE   EXIT

TEAM No.
[130]   Shane Venning, Michael Strickland, Ann-Marie Jarzebowski

Tag AFAT has been assigned to Team 130, and the Category, Course, and people's names have been entered from the spreadsheet file.

Inserting another Tag while 130 is in the yellow box will also add that Tag to team 130.

NOTES:

- You must create the spreadsheet linkage before assigning the Tags.

- The information for Team 130 was derived from the spreadsheet file.

- As you add Tags, they are automatically sorted by team number.

- You can allocate as many tags as you wish to a team.

- As Tags are allocated, give them to the team or place them in a Registration pack.

- You will get a warning if the Tag is already allocated.

- You are able to edit the names directly for the first Tag in a team. (Caution - -)

- You can de-allocate any Tag which is showing in the central boxes.

- You can select an existing Tag by typing its 4-letter code in the green Search box.

- With practice, this can be a very fast way of assigning new Tags. Enter the Team Number then keep "reading" the Tags for that team. Don't forget to change the team number between teams.

18.1.1   Errors in your Spreadsheet.

This method of assigning Tags does not have as rigorous a check as auto-assigning does. However it will pick up incorrect Categories and incorrect Courses, and give you the option of correcting these. Corrections are global in the sense that one alteration of "24 Hour" to "24Hr" will automatically correct all future incidences of "24 Hour" as long as the window is open.

Here is an example where the spreadsheet uses "24 Hr" and the EVENT SETUP has a Course name of "24Hr".

When a Tag is inserted, the difference is noted and a "replacement" screen appears:
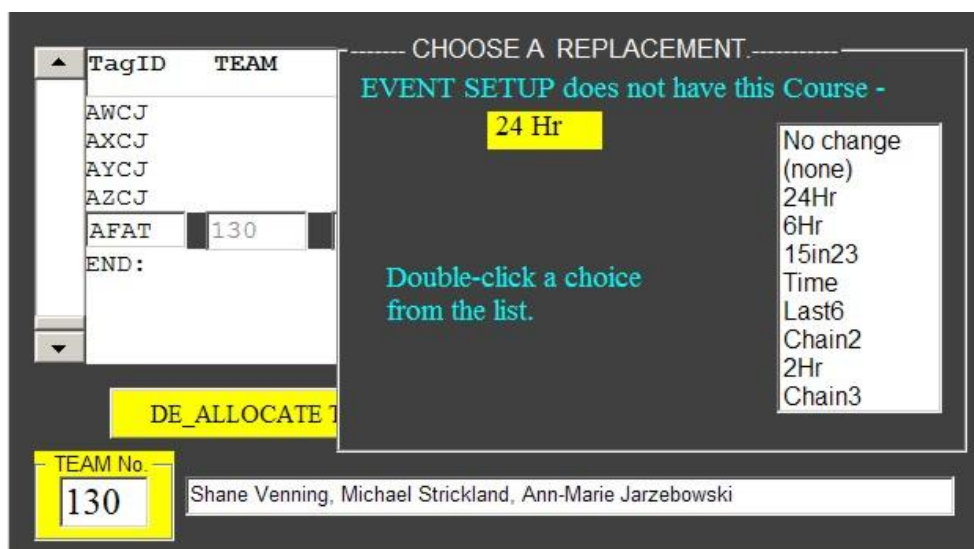
Click on the desired substitution from the white list on the right. In this case, double-clicking "24Hr" is obvious. With Category selection, the options of "No change" or (none) may be more applicable.

18.2 Manual generation of Tag-Team data.

The remainder of this chapter has been taken directly from the earlier Reference Manual and has not been revised.

It is highly desirable to have team numbers given to each competing team. You may also wish to have different classes (categories) of competitor, for instance, Mens and Womens classes, and you may also have multiple courses, such as 6 Hour and 12 Hour.

You need to relate this information to each Tag issued to a team. This can be done automatically or manually from the TAGS to TEAMS Window.

When this window is opened, the Tagnums.txt file is displayed in a controlled environment as shown:
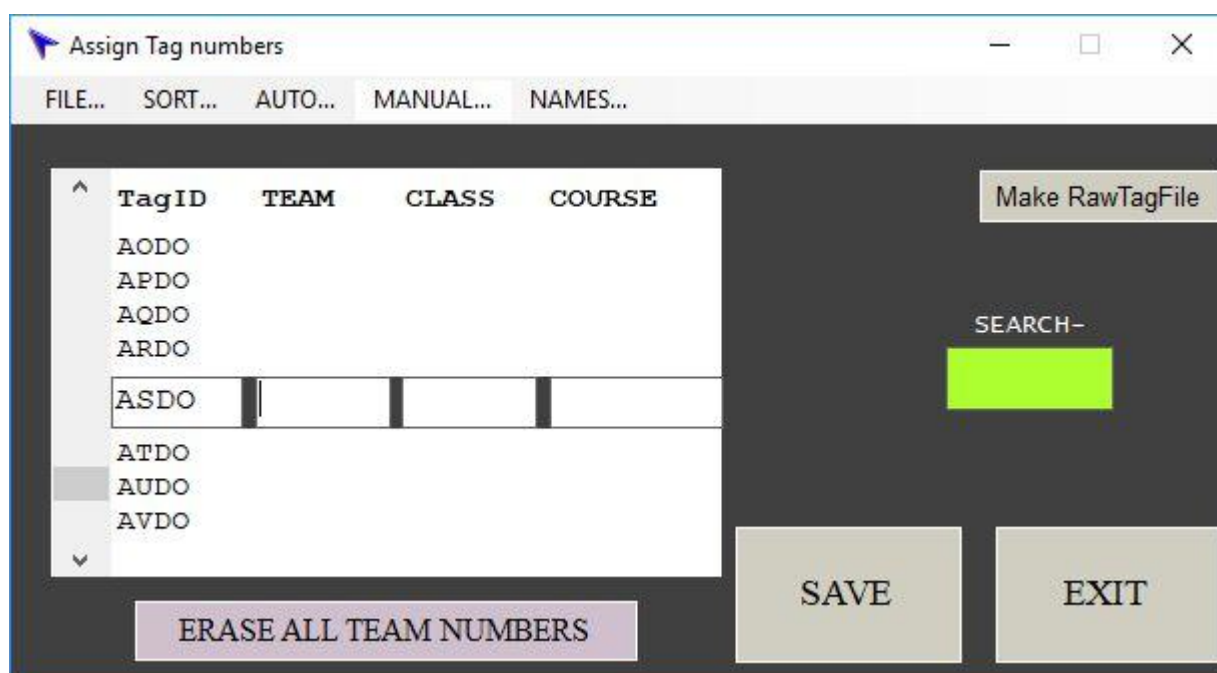
This Window allows you to enter a Team number, a Class, and a Course for each Tag. Only the Team number can be typed in directly, with the Class and Course being selected from choices which display when you click in the correct box. These choices come from the Event Setup information entered as described in section 3.3 and 3.4 above. The Tag-Team data can be entered using different methods as described in the next few sections.

18.3 Automatic generation of the Tag-Team Data.

Team information such as team numbers, people's names, team name. classes, courses, and handicaps must be included in the Tagnums.txt file. This data can be automatically inserted from a spreadsheet. For events with only a single class and course, automatic generation is possible without a spreadsheet, but is not recommended.

The Spreadsheet method – Recommended.

By far the easiest method is to use data extracted from an event spreadsheet, and join this to your permanent TagTeams file. This will also greatly improve the speed and completeness of the RESULTS printouts when you score the event.

When you start the "EVENT SETUP" Window, a subdirectory called TeamData will be created under the directory where your RogaineSCORE software is located. From your spreadsheet, save the sheet as a Tab-delimited Text file, and place this .txt file in the TeamData subdirectory.

18.3.1   Linking to your Speadsheet.

Your spreadsheet will contain many columns, with Team numbers in one column, names of competitors in another (or several) columns, which Class each team has entered in another column, which Course in another, and more columns relating to payments, Tee shirt sizes, addresses, etc etc.

The "Link to Spreadsheet" window can be used now, but need not be if this has been done in the "EVENT SETUP" as described in section **Error! Reference source not found.**. If this has been done, jump down to "**The Automatic Generation Window**" below.
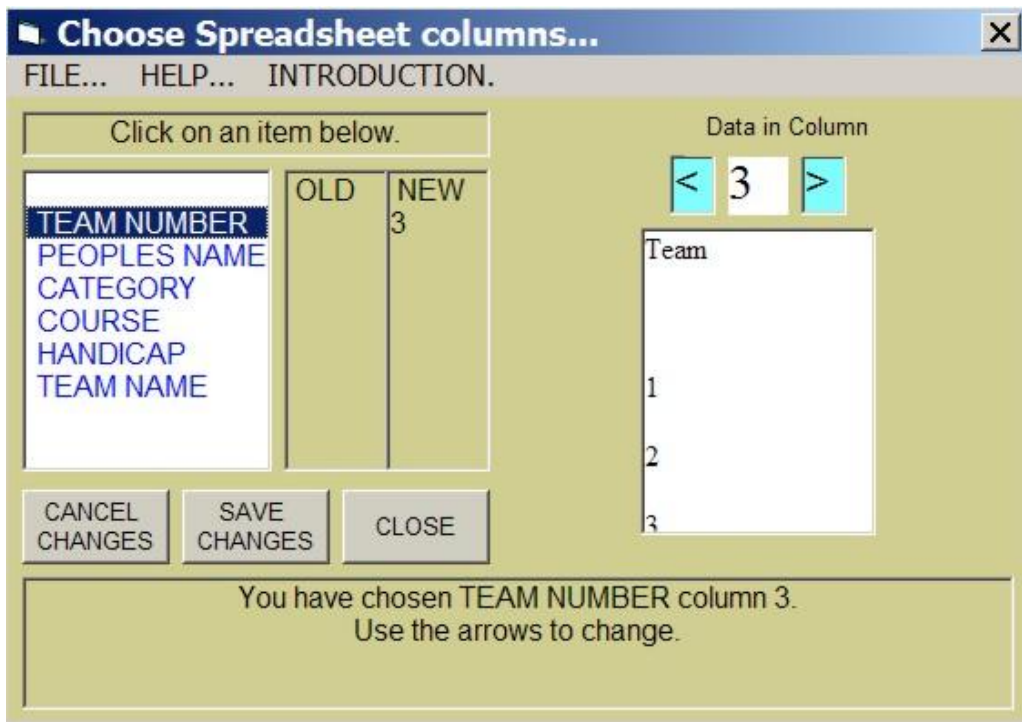
NOTE: The CLASS entry should show major ones only, eg. SXV and not X,XV,SXV.

TEAM NAMES and HANDICAPS are optional additional columns in Version 47 on.

Click the "AUTO…From Spreadsheet File…" menu item to open the AUTO ASSIGN Window.
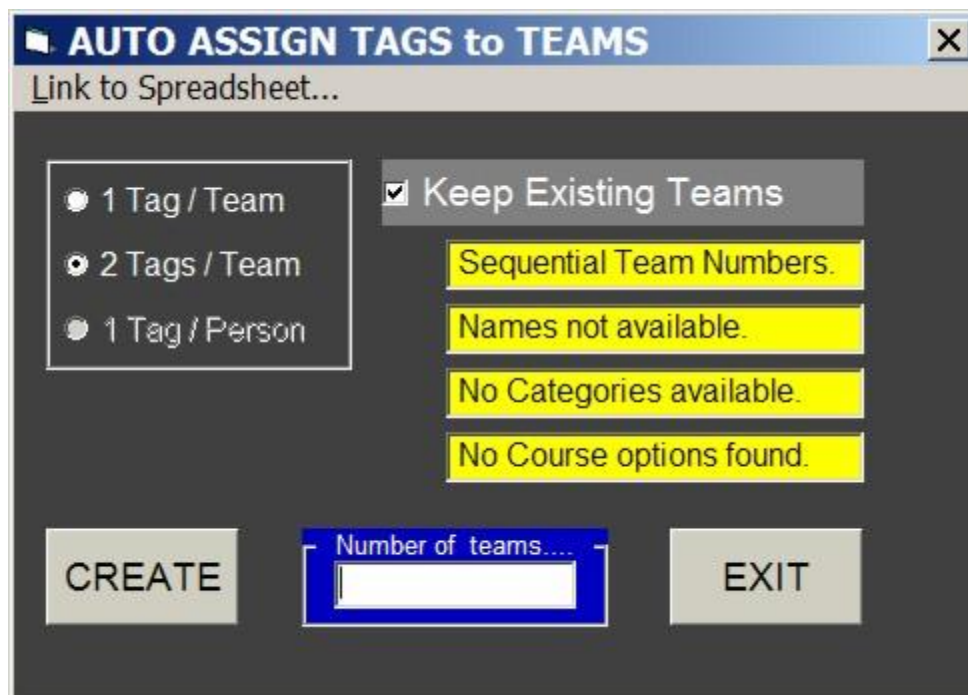
If not already done in EVENT SETUP, use the **Link to Spreadsheet…** Menu item to open the Spreadsheet Window.
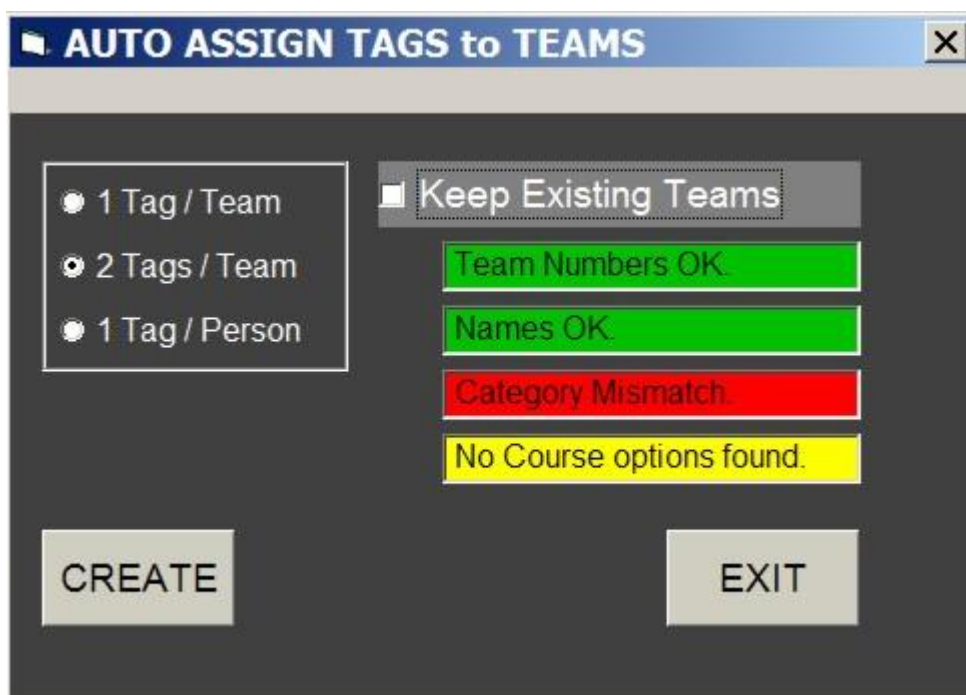
The use of this Window is described in more detail in Section **Error! Reference source not found.** above.

Extensive context-sensitive HELP is available from the HELP… menu.

The Automatic Generation Window.

Click the "AUTO… from Spreadsheet file" menu item to open the AUTO ASSIGN Window.

The Window offers three choices of tag distribution. The default is 2 Tags/Team. Choose which option you want and click "CREATE". The Window will close and your Tags to Teams Window will show the new Tag to Team assignments. Don't forget to SAVE this before exiting.

There are four Information boxes, describing the source of Team numbers, Names, Categories, and Course information. If all is OK they will be coloured green. Yellow means no options have been found, while red means that they have been found but there is a mismatch between the descriptions you used on your spreadsheet, and the ones used in your Event Setup. This usually happens with Category data, where your Event Setup may use X for a mixed team, and your spreadsheet may have "Mixed" in it. These discrepancies can be fixed by the methods described in the next few sections.

Finding the status of each Information Source.

If the Information Box is green, clicking and holding on the Box will display a message telling you where the information is coming from.

If the Box is yellow or red, clicking the Box brings up a selection of choices as described below.

18.3.2   Problem - a Yellow Information Box.

The example above shows a yellow information box saying "No Course Options found". This is because no Course Column was selected from the NAMES window. Click on the label and a frame appears showing all the course names you loaded in the "Event Setup".

Click on the course which you want, then click OK. The course you chose will be assigned to all teams. If you don't want any course name attached to teams, click cancel. Click the "CREATE" button to create the new Tag to Team data.

18.3.3   Problem - a Red Information Box.

A red information box means that you have selected a column from your spreadsheet, but some of the entries in that column don't match the ones in your event setup. Clicking the red box will open the same frame as above, but the incorrect word will appear in white letters.
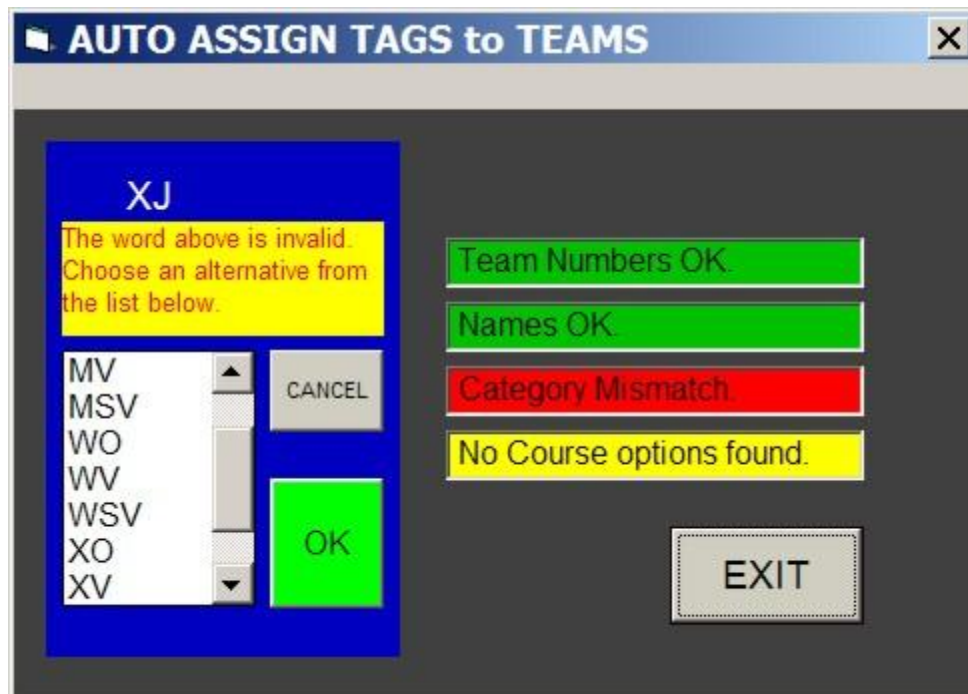
Find the correct equivalent and select it, then click OK. (A double-click does both actions.) If you want to ignore a wrong word, click OK without selecting anything.

If the mismatches are now OK, the frame disappears; if not, the next un-matched word appears in white letters at the top. Again, click "CREATE" when completed.

18.3.4   Keeping Existing teams.

Imagine you have already assigned Tags to team numbers, and issued some Tags to people. This will typically occur before Registration, with perhaps the Tags being included in "registration packs". Some new teams may be entered at the last minute, and you need to assign Tags to them.

In this case you can still use the AUTO feature, but click the "Keep Existing Teams" checkbox. This preserves the tag assignments of all teams where there is existing Course or Class information, and uses un-assigned Tags for the new teams.

If a spreadsheet has had some modifications to teams, such as different categories or different names but the same team number, the modifications will be incorporated when the Auto allocation is run. If a team has been deleted from the spreadsheet completely, along with its team number, it will remain allocated unless the "Keep existing teams" is not checked. Note that if "Keep existing teams" is not checked, existing team number to Tag allocations will remain unchanged, but the removed team will disappear from the Tagnums file.

18.3.5   Automatic Tags to Teams without a spreadsheet.

Even without a spreadsheet, you can generate team numbers for Tags automatically. You will not have any Course or Category information, although you can add these manually later if desired.

This method is useful if you have a very simple event, with a single course and no class categories. Use the Auto.. From Spreadsheet file Menu to open the Auto Assign window:
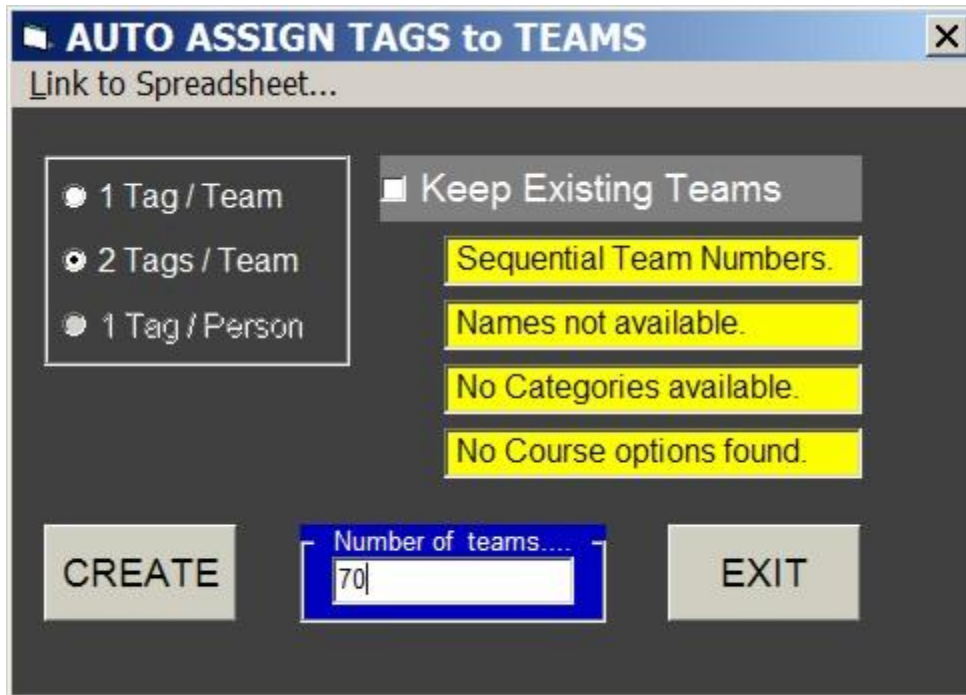

Enter the number of Teams you want, choose 1 or 2 Tags per team, and click "CREATE".

Your Tagnums.txt file is now ready to save, or manually add further information.

18.3.6   Saving and Printing your Tagnums.txt file.

After you have generated your Tagnums file you must save it, and you will probably also want a printout. You can SAVE either by clicking the SAVE Button, or from the Menu - -
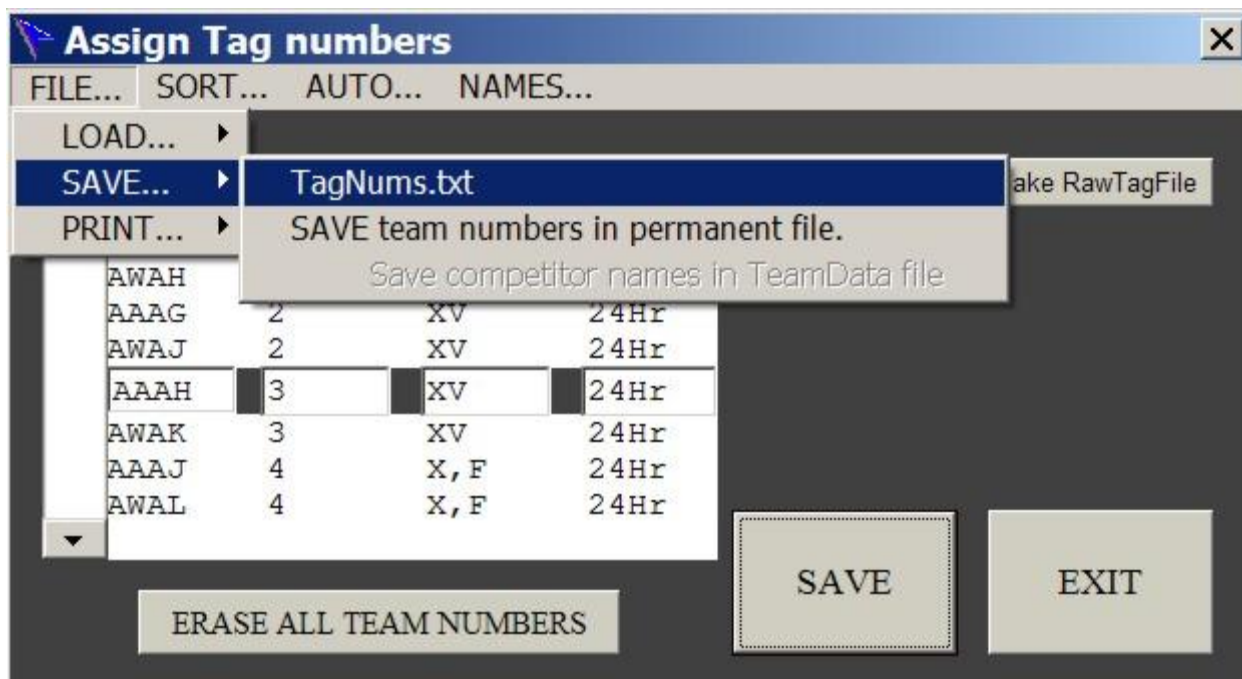
To get a printout, use the FILE…PRINT Menu.
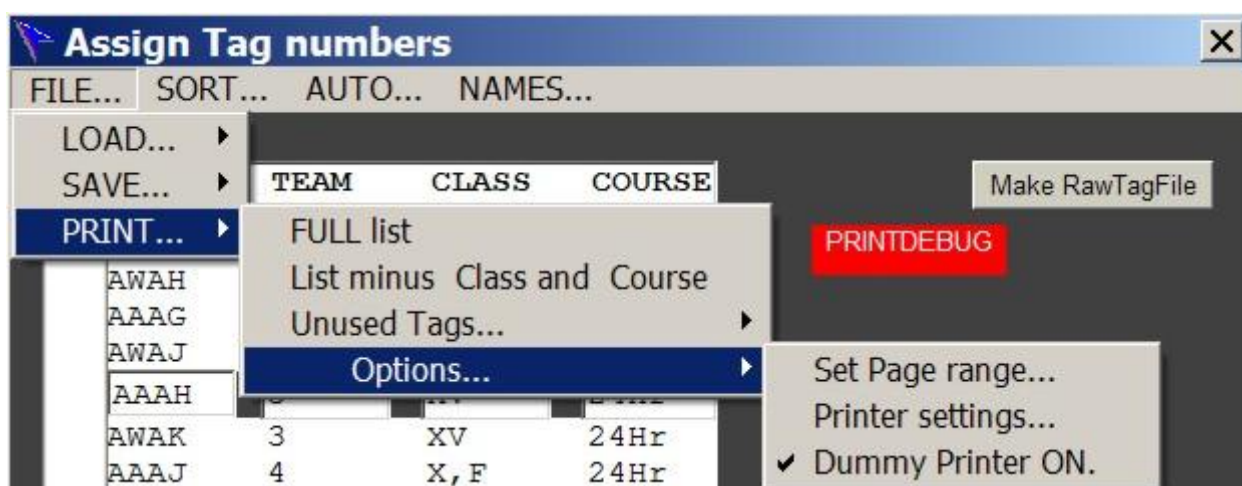
Note that in this example, the Dummy Printer has been turned ON by clicking its menu item. This brings up the red message PRINTDEBUG in the window. Now, when you print the FULL list as shown, the resulting printout will go to a file called DEBUGPrint.txt in the parent directory, where RogaineSCORE is placed. To get a real printout you must turn the dummy printer off, either by clicking its menu item or by clicking the red PRINTDEBUG label, then print again.

The list may look like this:

TagID	TEAM	CLASS	COURSE	TAGLABEL	
AAAF	1	XV	24 Hr	1A	Robinson Crusoe, Vivienne Leigh, Bruce the great
AWAH	1	XV	24 Hr	1B	
AAAG	2	X,F	24 Hr	2A	Abel Gordon, Beta Gordon, Chloe Gordon, Denise Gordon,
AWAJ	2	X,F	24 Hr	2B	Gordons Gin
AAAH	3	WV	24 Hr	3A	Aspa Distra, Juicy Fruit

| AWAK | 3 | WV | 24 Hr | 3B | |

_____

| AAAJ | 4 | M | 6hr | 4A | Alaster Mclean and Grand Castor |
| AWAL | 4 | M | 6hr | 4B | |

_____

18.4 Manually Entering Team Information.

Changes or additions to your Tag-Team assignments will occur either as late entries (but before you issue Tags to people), or after Registration has commenced. Some changes may even be required after the event has started, such as name or category changes. Changes to existing teams will not affect Tag assignments and can be done through your spreadsheet (unless you have one Tag per person, and the number of team members changes), but giving un-assigned Tags to people means you can no longer use the Auto-assign function, and you must do it manually.

18.4.1 Changing or Adding Teams before Registration.

For late entries or team member changes before the event Registration, you will probably have Tags already assigned to the original teams through your spreadsheet.

New entries, or name changes to existing teams, can be handled by entering them into your spread-sheet and creating a new text file in the Teamdata directory. You can over-write the original text file by using the same name, if you wish.

Then run the whole auto-assign process again, KEEPING EXISTING TEAMS. The additional teams will be allocated to unused Tags and the existing team numbers will keep their original tags. Name changes within existing team numbers will be incorporated.
Note that all of your last-used settings (such as names and teams columns) will automatically re-load, so this process is very quick.

18.4.2 On-the-Day entries.

With events which allow "on-the-day" entries, you will need to assign unused tags to the new entries. Start by printing lists of the available Tags from the File… Print... Unused Tags Menu.
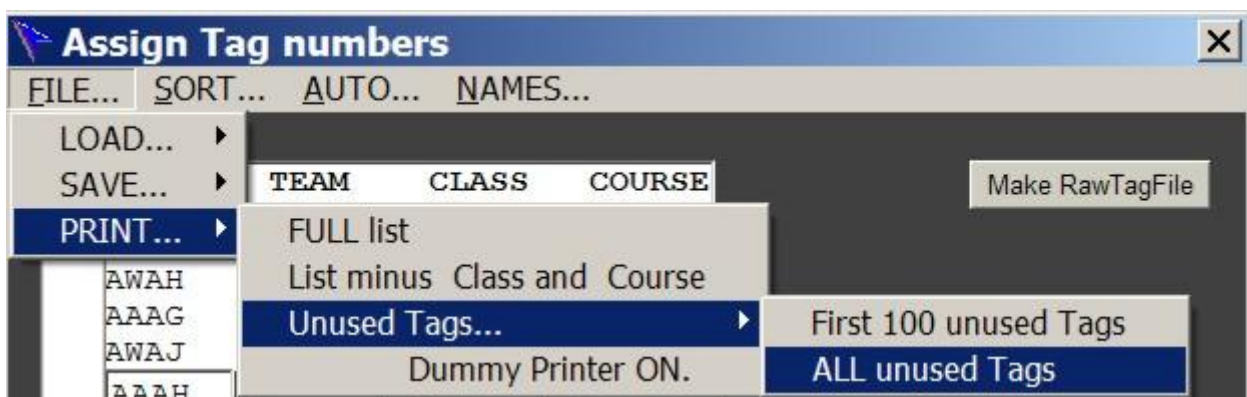
This will print lists of the unused Tags, along with permanent Tag Numbers if they exist for your Tags. The list might look like this - - -
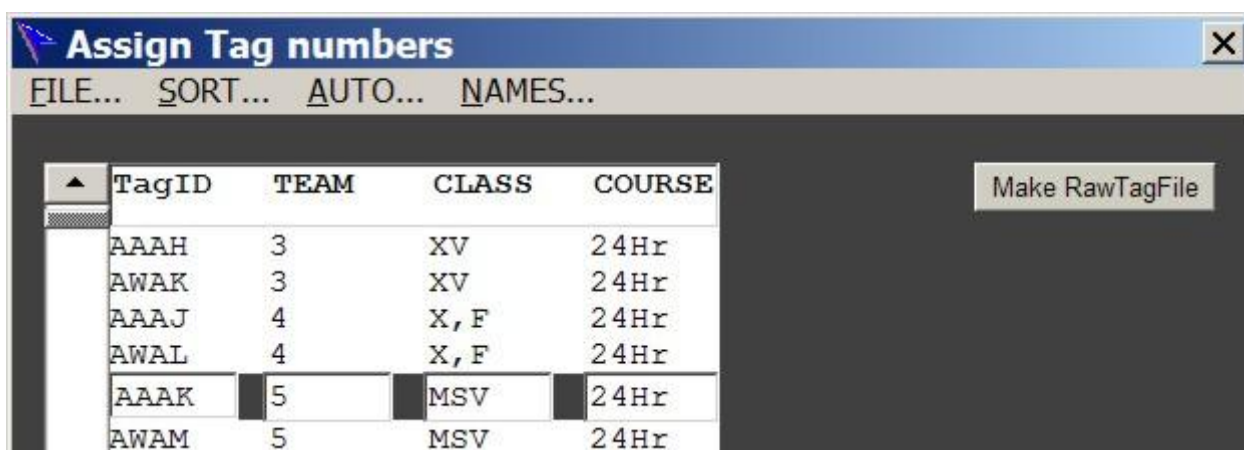
TagID	TEAM	CLASS	COURSE	TAG LABEL
AHAF			54A	
AJAQ			54B	
ALAF				
AMAF				
ANAF				
AOAF				
APAF				

Give this list to your Registration desk. They must write down the Team number, any class or course information, and competitor's names on the list.

This list can then be manually entered into the Tags to Teams Window as described below.

18.4.3 Manually entering Team Data.

Only the line in the middle of the Assign Tags display can be edited.

The Tag line AAAK can have its team, class, course, and names edited.

The Tag file can be scrolled through by several means; using the scroll bar to the left, clicking in the area above or below the line; by typing a known Tag ID code directly into the left pane of the line, (AAAK above); or by connecting the Reader to an actual Tag.

Hint: Placing a Tag in the Reader is the most accurate way to locate the line you want.

When the correct Tag ID is shown, the Team number can be entered. This can be any combination of letters and numbers, but a numerical system is recommended. The Team number should consist of not more than seven characters, including spaces. Letters may be used but this could alter the sequence when the SORT… option is used.

After entering a team number, click the "CLASS" box and the available categories options will appear on the right. Click on the category you want; XSV in this case.
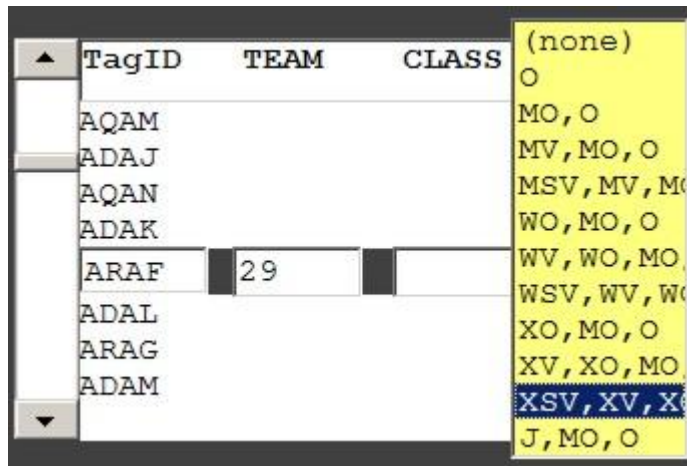
Note that the classifications show the major class first, followed by all the eligible classes. For instance, a MV team is competitive in the MO and O classes. How these classifications are controlled is from another text file called Categories.txt, which is described in Section 3.4.

Click "XSV,XV,XO,O" and the major category XSV will appear in the box, and the focus moves to the COURSE box, along with the Courses available.
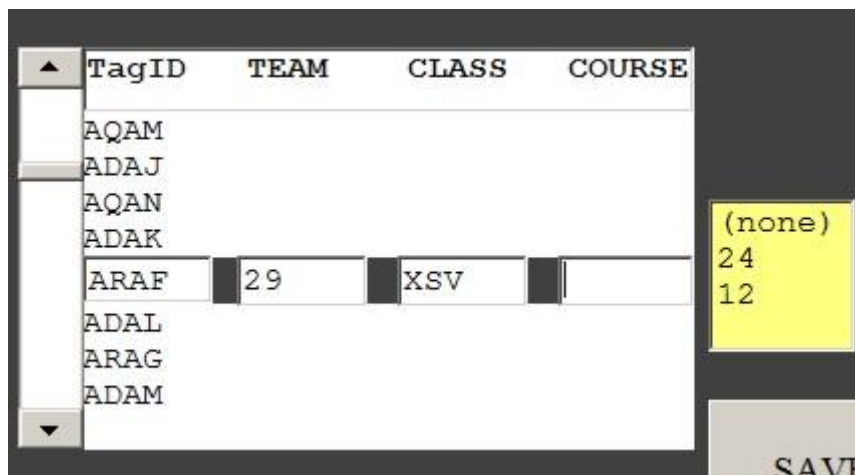
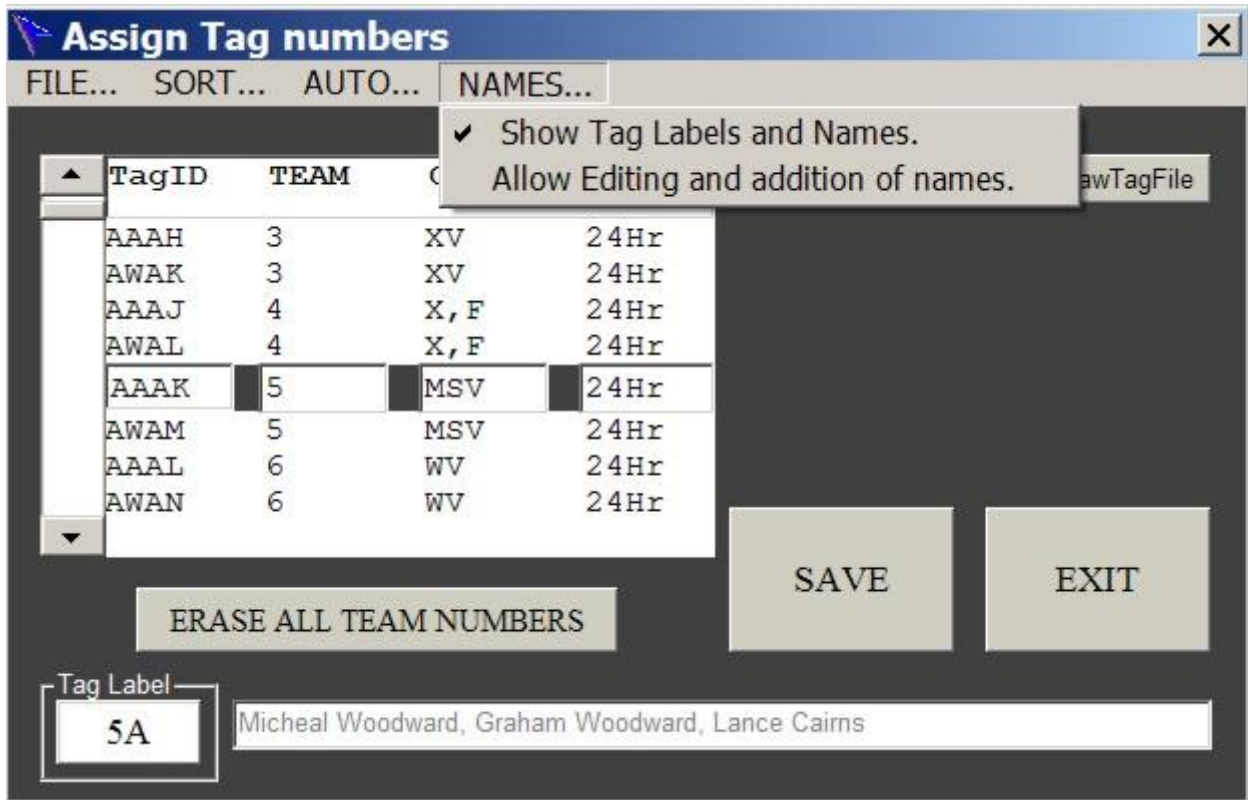Click on the desired Course (24) and the line is complete.

To save the line, you **MUST** move the line out of the Edit line. Click above or below the Edit line, or use the scroll bar.
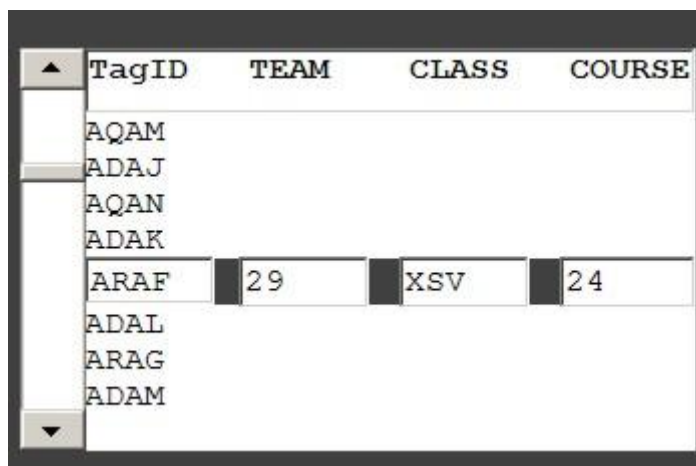
Note: The Class and Course can be set to (none) which clears the boxes.

EDITING or ADDING NAMES.

The team members names can be displayed by clicking NAMES… Show Tag labels and names.

The competitor names show in the bottom box, along with the permanent Tag number if it exists. If "Allow Editing and addition of names" is checked, the names appear in bolder font, and you can alter or enter names in this bottom box. If you have more than one Tag for each team, you can only enter names into the first Tag.

Alterations are kept when you scroll to another line, but the Tagnums file is not saved with these alterations until you click "SAVE".

Note: You can back-annotate your source textfile with the modifications from the FILE… SAVE… Save competitor names in TeamData file Menu item. A version number is added to the saved file. This feature is not available unless you have checked the "Allow Editing and addition of names" Menu item.

18.5 Teams with more than one Tag.

It is desirable to give two Tags to a team, or a Tag to every member of a Team. This ensures that ALL team members visit the checkpoints, and also gives a backup if a Tag should fail. Every member of a Team *must* have the same team number, but of course the Tags will have different ID Codes.

(*Note*: If Team numbers have text characters after the number, such as 35A, only the numeric part is recognised as a team number. This is useful for Permanent Tag files.)

When the Tags are scored, each individual Tag may get its own printout showing score, finish time, penalties etc. but when the final results are compiled, all Tags in the same team will have their scores combined. The result will normally take the lowest individual score and the slowest time, although an option exists for taking the highest score. (See Section 3.3). Therefore if a team notices a difference in their scores they need to appeal to the organisers, who have the option of manually altering a Tag score. There is also provision in the Tag Reading window to search for discrepancies in team scores.

18.5.1   Entering Tag data for teams.

The first Tag for a team is entered with the team number in the normal was as described in Section 18.4 above. The second and subsequent Tags are unlikely to appear in sequential order in the display but they will be collated when a team number is entered.

For example, let's say you have just assigned Tag ADAL to Team 30 as shown below.

TagID	TEAM	CLASS	COURSE
ADAJ	28	XO	24
AQAN	28	XO	24
ARAF	29	XSV	24
ADAK	29	XSV	24
ADAL	30	MV	24
AAAF			
ABAF			
ACAF			

The next Tag you issue may be ARAG. You insert the Reader into the Tag, or type arag in the left-hand box, and the display finds the Tag as shown here.

TagID	TEAM	CLASS	COURSE
ANAG			
AOAG			
APAG			
AQAG			
ARAG			
ASAG			
ATAG			
AUAG			

Now enter 30 in the Team box, and when you click the CLASS box, it and the COURSE box will duplicate the information from the ADAL Tag which was previously assigned to team 30.

In addition, all the team 30 Tags will now appear just above the line you are working in.

Although the Course has (none) highlighted, MV appears in the CLASS box, and the Course box will already be loaded with the course 24 copied from the earlier tag. You only need to scroll to another Tag, or insert the next one, and the values for ARAG will be set.

18.6 Other features of the "TAGS to TEAMS" Window.

For a NEW EVENT.

When starting a new event, the historical record from the previous event may load when you start this window. Click "ERASE ALL TEAM NUMBERS" to clear everything but the TagID codes.

PRINTING a list of Tag allocations.

For administrative use, it is very useful to have a printed list showing team numbers with Tag codes. This list can also show competitor names, if the Link to File technique described in Section 18.3 is followed. Use the FILE… PRINT… Menu.

Note: You can print to a text file called "DEBUGPrint.txt" instead of your printer by clicking FILE… PRINT… Dummy Printer ON. A red label saying PRINTDEBUG will appear. You can now use the FILE… menu to print, as usual, then open the DEBUGPrint.txt file in the main directory.

Clicking the red PRINTDEBUG label will close the dummy printer, and printing will revert to your printer.

SORT Options.

The displayed tags to teams data can be sorted from the SORT… Menu, either by Tag ID Code, or Team Number, or in the order of permanent team numbers in TagTeams.txt if it exists.

Make RawTagFile.

This button should only be used in the case of a Tag lost or failing to operate while in use during an event. To assign a manual score to a Tag, its RawFile must exist, but cannot be created if it can't be read. Selecting the appropriate TagID in the editable line, and clicking this button, will create a minimal RawTag file for the Tag which will enable Manual re-scoring.

18.7 Permanent Team numbers - Highly Recommended.

Paul Cassidy from VRA has evolved the concept of a permanent team number for each Tag. Assuming that each team will have two tags, then two Tags will be numbered 1, two will be numbered 2, etc. The numbers 1, 2, 3, … are written on permanent labels and attached to the back of the Tags. Each Tag will then always have the same team number associated with it – a "permanent" team number. The Tags are then stored in numbered compartments in a plastic storage box, obviously with two Tags per compartment. This makes issuing, storing, counting, and tracking of Tags much simpler.

An improvement is to add "a" and "b" to the two Tags with the same team number, so the Tag sequence will be 1a, 1b, 2a, 2b, 3a, 3b, 4a, 4b etc., which allows greater flexibility in assigning Tags for events where only one Tag per team is used, or when ALL competitors must wear a Tag.

Allowing for permanent storage of the team number -Tag ID code simplifies using the Tags to Teams Window, and also permits the automatic generation of the TagNums.txt file from other sources such as a spreadsheet, which will typically contain Team number, team names, and team category data. This automatic generation is described in Section 18.3 above.
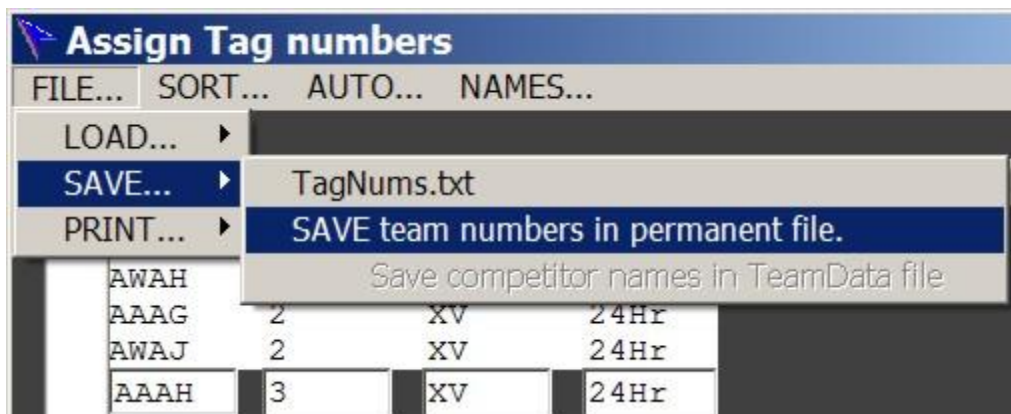
18.7.1   Creating a Permanent Team-Tag file.

You can use the automatic Tags to Teams function to generate a permanent file. This will assign Team numbers from 1 upwards to Tag codes,

- Open the TAGS to TEAMS Window in the normal manner.
- Click "ERASE ALL TEAM NUMBERS".
- From the Menu, click AUTO…Generate Permanent Team Numbers. The AUTO ASSIGN Window will open.
- Choose either two Tags per team (default) or one Tag per team. Choosing two does not prevent you from using only one Tag per team for any event.
- Click "CREATE" from the AUTO ASSIGN Window, which will then close. A message will advise you to save the permanent file.
- Click FILE… SAVE… SAVE team numbers in permanent file from the Menu.
- Answer YES or NO to include "a" and "b" suffixes to the permanent numbers.

MAKE SURE you stick Team Number labels (1a, 1b, 2a, 2b -) on the back of your Tags.

*Note*: You can save any existing Tagnums.txt as a permanent file without using Auto create.

Note that only the team numbers are permanently saved; category and course information is only saved in TagNums.txt.
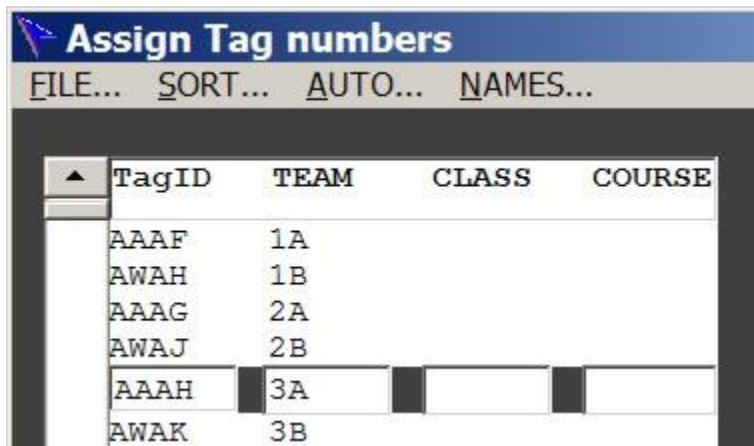
18.7.2   Using a Permanent Team-Tag file.

By far the best way is to use the automatic feature described in Section 18.3 above.

Alternatively, open the TAGS to TEAMS Window, and from the FILE menu, Load permanent team numbers.
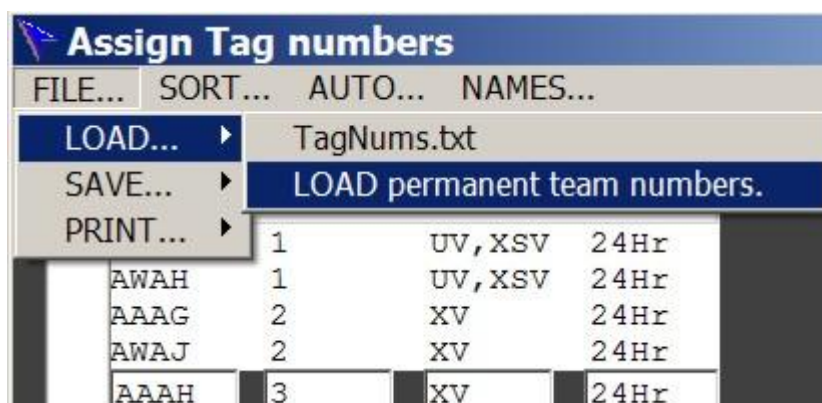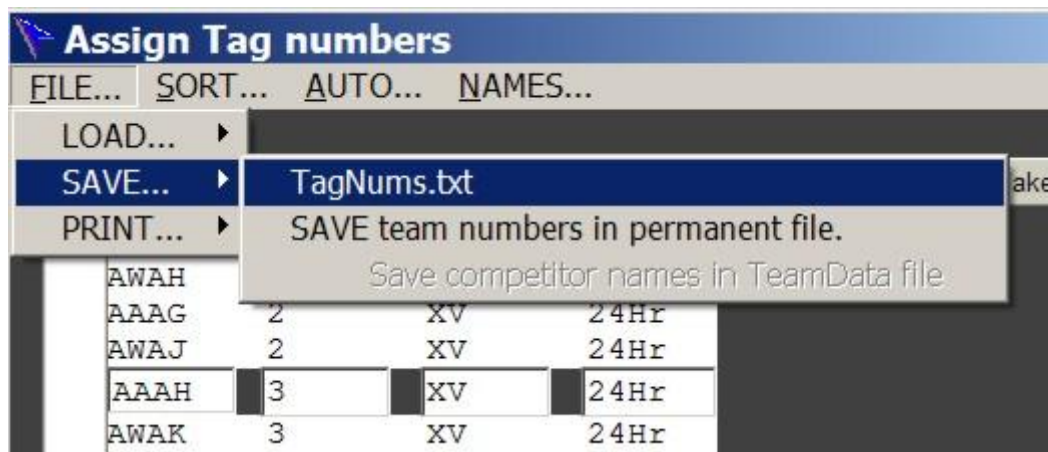
After loading, the team numbers will appear.

You can now add the CLASS and COURSE information as described in Section 18.3 or Section 18.4 above.

When these additions are made, you must save your file as TagNums.txt, from the FILE-SAVE-TagNums.txt menu.

This replaces any existing TagNums.txt file.