



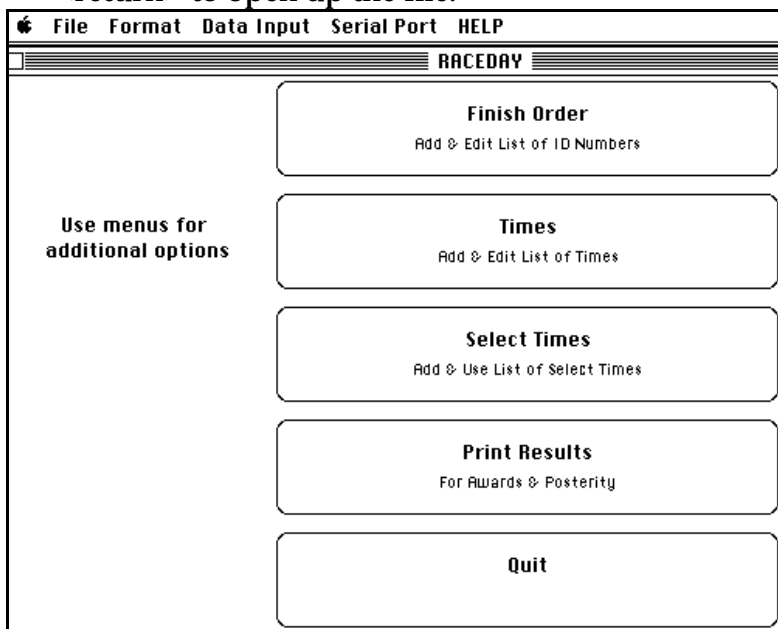
Demo Program for ARJ Road Race Programs

The “demonstration disk” contains a folder called “Easy Does It” which contains a program RACEDAY and the files for an 8K road race that had 600 finishers. Move the folder to your hard disk before you start working on it, so that you’ll have a backup copy in case you want to redo some of the operations.

The files in “Easy Does It” are as they would be after all the data have been entered, including the order of finish, times, and select times. They were prepared with the help of two other programs in the ARJ package, which are not included on this disk. With the help of this writeup you will be able to explore RACEDAY’s reporting capabilities and also some aspects of the data entry and correction process.

Results Output

Open up the “Easy Does It” folder and double-click on RACEDAY. This starts the program, which immediately starts looking for one of the files, ROSTER, which contains name-age-sex-team-city data (you cannot start the program by double-clicking on the file). Actually it first asks you how many ROSTERs are to be used; in some unusual circumstances I split it into two, but you should hit <return> or <enter> to accept the default of “one.”. The standard file dialog appears, with ROSTER selected. Simply hit <return> to open up the file.



The display at left now appears, showing the principal options of program RACEDAY. You can select one of these options by clicking on a button, or by pulling down one of the menus to the corresponding item, or by using the keyboard shortcut indicated in the menu (the shortcuts corresponding to the five buttons are ⌘F, ⌘T, ⌘S, ⌘P, and ⌘Q; e.g., to Quit press the “command” key ⌘ and “Q” simultaneously).

Formatting Options	
<input checked="" type="checkbox"/> Print hours	<input checked="" type="checkbox"/> Print minutes per mile
<input type="checkbox"/> Print ID number	<input type="checkbox"/> Print miles per hour
<input checked="" type="checkbox"/> Print class place	<input checked="" type="checkbox"/> Mark women with *
<input checked="" type="checkbox"/> Print home town	<input checked="" type="checkbox"/> Print title above header
<input type="checkbox"/> Print team name	<input type="checkbox"/> Print header on each page
<input type="checkbox"/> Note PR's	<input checked="" type="checkbox"/> Place Overall
<input type="checkbox"/> Team place	<input type="checkbox"/> Age 1 = Fr, etc.
<input type="checkbox"/> Eliminate "open" runners from age groups	
Start <input type="text" value="20"/>	End at <input type="text" value="650"/>
<input type="button" value="OK"/>	

Pull down the File menu to "Print results" (or press the command and P keys – "⌘P" for short – or click once on the "Print Results" button). A dialog like the one at left appears, giving you a great deal of control over the format of the output. For most road races, you will check on the "Class place" (place in award class), home town, and perhaps the "Eliminate open runners from age groups." If you do check on the last item, you will then be asked how many open and masters men and women are considered to

be in "open" categories and are ineligible for age-group awards. Tab from one item to the other of that dialog until you have all of them entered to your satisfaction. If, as shown at left, you ask for a title above the header, you will be given an opportunity to print a three-line title (race name, place, date, e.g.) above the results; the default name is whatever you entered for a "finish line" name when you started RACEDAY.

Select output device	
<input checked="" type="radio"/> Dot-Matrix Printer (P)	
<input type="radio"/> Monitor (M)	P, M, F, or L
<input type="radio"/> File (F)	<input type="text"/>
<input type="radio"/> LaserWriter (L)	

You are then asked to select an "output device." If you don't want a permanent record of the output, select the Monitor by typing "M" (or "m") or clicking on the Monitor button. If you are connected to an Imagewriter or compatible, selecting Dot-matrix printer (type "P" or "p") gives you the output fastest. The

"LaserWriter" option actually works for any device selected with the Chooser, including an Imagewriter, but takes longer than the "P" option (which does not work with a LaserWriter, by the way) on an Imagewriter. Select File for an output device (you will then be asked to name the file) if you want to massage the output with a word processor. If you select "LaserWriter" or "Monitor" as the output device, you may be asked whether you want to print the results "in multiple columns." Click that box on just to see what they look like.

A Print Results menu now appears at the right end of the menu bar and, except when you select Monitor or Laser printer, a new set of buttons appears on the desktop to guide through the main results options. Pull the menu down to examine the choices available.

At the race site your first priority is to produce results in the award categories, usually by age group, and perhaps to score teams, usually by time. For most road races, your basic awards can be obtained quickly simply by pulling down the Print Results menu to "Standard road results" or clicking on the corresponding button. The program will then list the first N men, the first N women, the first N masters men and women, and the first M in each male and

Print Results	
Standard road	⌘R
Standard HC	⌘H
Order of Finish	⌘O
By Class	⌘C
Teams	
Alphabetized	⌘A
Open award winners	
For particular state	
For particular city	
For particular team	
For "coded" runners	
List "qualifiers"	
By zip code	▶

female age group, where M and N are numbers that you select. If you elected to exclude “open” runners from age group awards, the open award winners are listed instead of the first N open and masters. If teams have been entered, you can also score them at this time, but only by time (you can select the number of scorers) and not in classes. If those restrictions are not useful, leave the “Number of team scorers” at the default “2000;” presumably no team will have that number of finishers and the team scoring will be bypassed.

For greater control over the awards printouts, pull down the Print Results menu to “By class” (⌘C). The dialog at left allows you to print out the results for the first five women in each female age group, one after the other. Clicking the “All male classes” button instead allows you to do the same for all the male classes, and you can select any number in each class by typing that number in the “List how many finishers” box. If you had clicked on the “Eliminate open runners” box when selecting the format of the results, the runners you subsequently designated as being in “open” divisions will not be listed in these age-group results. To list the open awards winners, simply

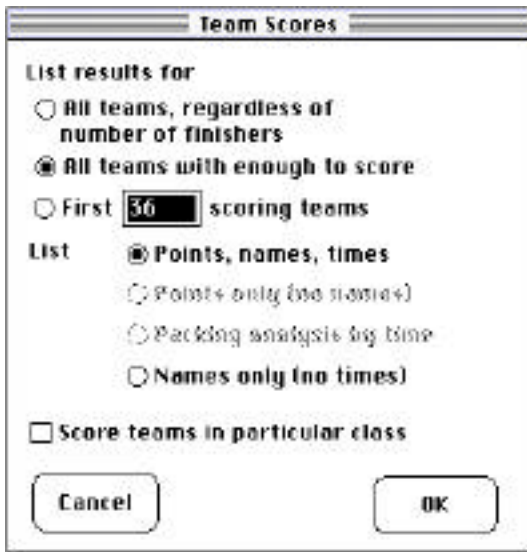
pull down the Print Results menu to “Open award winners.”

If you elected to print the results to a “LaserWriter” (or whatever device is selected by the Chooser), the dialog at left appears after each call for a different batch of results. To save you from having to repeatedly look at the formatting and output-device dialogs, the program assumes you will send results of

several types in the same format to the printer. Because they will stay in the LaserWriter’s memory until you stop filling it, you are given this opportunity to start printing what is currently in its memory, by clicking the box on, so the race management can get on with the awards and/or post the results for the runners and coaches.

If you have team competition, another of your priorities will be to score teams. As noted above, the “Standard road” menu item will score teams by time, the usual practice in road races. For the race for which these files were created, teams were scored by total time and the first four runners scored, which could be handled simply by typing “4” into the “Team scorers” box. However, the race scored teams by classes, and so needed the greater flexibility found in the “Teams” item of the the Print Results menu; see the dialog above. If you score by places, and leave the “Eliminate non-scoring teams and runners” box on, you are next asked how many

team members can displace (“bump”) other team scorers; those who finish after the number you specify are treated as unattached. For this race, click on the “Total of times” button and type “4” into the box.



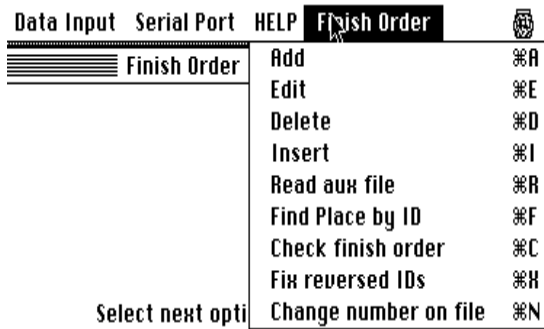
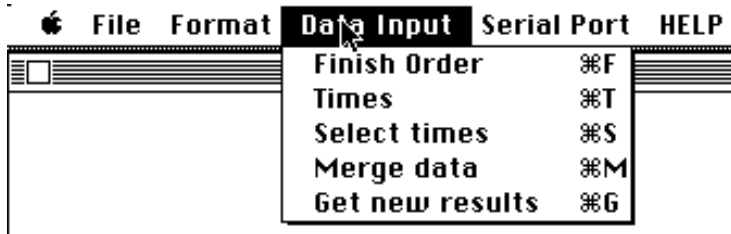
The program then goes into a cycle, bringing up the dialog at left until you click the cancel box, so that you may score teams in “classes.” To create a team “class,” you simply append a two-letter class code to the team name. In the race for which the data files were created, the team classes were Open Men (given the code “OM”), Open Women (“OW”), Coed (“CO”), and 2 + 2 (two men and two women; “22”). To score the teams by class, click on the bottom button in the dialog. You will be asked first for the two-letter team code and then for the full name of the team category. You would probably want to list either “All scoring teams” or the “First N.” The points-only choice is useful in cross country competition (and not available if you score by time).

Once you have dealt with the awards, you can print out all finishers in order. To do so pull down the Print Results menu down to “Order of finish” (⌘O). You may also want to experiment with the other choices available. To print out the results (in order of finish) for a particular state, you have to include the runners’ home towns in the results format, and identify the state with its standard two-letter postal code. To list the results for a particular team (also in order of finish), you identify the team by starting to type its name into a dialog box that appears. After you type one character, RaceDay finds the first team on file that begins with that character and displays it. If that’s the one you want, hit <return>. If not, input the second character. RaceDay continues its search through the file of team names, displaying the first one that begins with the two characters you typed, etc. A similar procedure is used in the data entry process.

Data Input

Because entering the data for a 600-runner race is a bit tedious for a demo, it has been done for you. You can, if you wish, remove all or part of what has been done and redo it.

The usual procedure is to start entering the ID numbers of the finishers as they are brought over (on spindles or stringers) from the finish line. Times (in order of finish) and select times (pairs of ID numbers and times for selected finishers) are entered later, or perhaps dumped into the Macintosh from one of the various timing devices that are compatible with ARJ. Then you would use the select times to check the finish order and times, make whatever corrections are found to be necessary, and print out the final results.



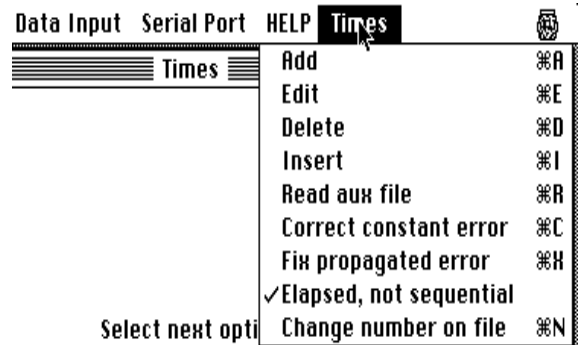
breaks; useful when you need to go back through the data to correct errors.

To allow you simulate data entry, you can now delete some of the data that have been entered for you. You can delete them all if you like, but I'd suggest just deleting the last few spindles. Pull the Finish Order menu down to "Delete" or press ⌘D and specify the first and last places you want to wipe out.

Now pull the Finish Order down to "Add" or press ⌘A or click on the "Add ID numbers" button. Type in a few ID numbers, pressing <return>, <enter>, <tab> or the down arrow to get to the next one. Note what happens if you enter the same ID twice (and also twice in a row), or if you choose an ID that was not assigned to a runner (try 560, for example, although actually 4 and 5 were also not assigned), or if you enter an ID outside the range of those that were available (1 to 1000). In the case of an unassigned (but available) ID, if the runner's name, age and sex were written on the finish tag, you can insert those data on the spot in the dialog that comes up if you retype the number. The system also beeps if no age was entered for the runner; if it was a race-day entrant, you may be able to read the age off the tag.

To check out the entry of times, pull the Data Input menu down to "Times" (or press the command and T keys; "⌘T" for short). A Times menu now appears on the right of the menu bar. In this case you don't have to delete any data to explore the data-entry process; you can simply tack on times to the end of the file. Pull it down to "Add" or press ⌘A. Accept the suggestion as to where to start adding (at the end of the existing file).

If RACEDAY is not already running, start it up as described above. To get a quick printout of the data that have been entered and that you will reenter, pull the Data Input menu down to "Finish Order" or click on the "Finish Order" button. A Finish Order menu then appears on the right end of the menu bar and a new set of buttons on the screen. Pull the menu down to "Check finish order" (or click on the "Reset Data" button) and accept the invitation to print out the results "in detail." The printout includes the runners' ID numbers and times, in order. It also shows the spindle



Times		
IF ADDING AT END, ENTER SECONDS IF NEW TIME IS WITHIN A MINUTE OF LAST ONE. CLICK ON TIME TO BE EDITED		
PLACE 965:	1:28:00.00	MINUTES INCREASED
PLACE 966:	1:28:05.00	
PLACE 967:	1:28:15.00	
PLACE 968:	1:29:05.00	MINUTES INCREASED
PLACE 969:	1:28:45.00	NEW TIME < OLD TIME
PLACE 970:	<input type="text" value="0"/>	
PLACE 971:	0	

RACEDAY remembers the hours and minutes of the previous finisher, which speeds up the rate of data input. If the next finisher's time is less than a minute more than the last time recorded, you need only type in the seconds. If the seconds are less than the seconds part of the last time recorded, the program assumes

that the minutes have increased by one, and beeps an acknowledgement. For example, the time for place 968 above was input by entering simply "5." When there is more than a minute between successive finishers, you type the minutes and seconds, only; do not separate them with colons (this applies also to entering the time of the first finisher). To edit a time already entered, however, you do have to type in colons and everything.

After typing in each time, press <return>, <enter>, <tab> or the down arrow to get to the next one. Experiment with this process until you are totally bored; hit the <escape> key to terminate data entry.

Although entering times is quick and easy, this step can be eliminated if you have a Chronomix 737X, TimeMachine, or TimeTech timer. Those devices are computers themselves, and the data they collect can be dumped into the ARJ files by manipulating the Serial Port menu item.

Data Input	Serial Port	HELP	Select Times
Select Times	Add	⌘A	
	Edit	⌘E	
	Delete	⌘D	
	Read aux file	⌘R	
	Interpolate times	⌘I	
	Check times	⌘C	
	Set times = selects		
	Sort by time		
Select next opti	Change number on file	⌘N	

Shift now to the Select Times part of the program by pulling down the Data Input menu to that item or pressing ⌘S. Pull down the Select Times menu that then appears to "Check times" (⌘C).

Select Time Checks	
Start at place	<input type="text" value="1"/>
Tolerance on times (seconds)	<input type="text" value="2"/>
Maximum frequency (runners/min)	<input type="text" value="100"/>
<input type="button" value="OK"/>	

and accept the defaults in the dialog above at right. RACEDAY now takes each ID-time pair in the select times file, looks for the place in the finish order of the runner with the ID part and in the times file for the places of the finishers whose times are within two seconds (if you accept the default "tolerance") of the times part. The finish order and times file in the "Easy Does It" folder have already been corrected; you will simply get a list of these places and a "frequency" (finishers per minute) that is computed by dividing the time interval between successive select times into the difference in the places of the finishers. The search stops if the frequency gets "too high," as may occur when an ID number is misrecorded, for example; in such a case you have to increase the default maximum frequency of 100 runners per minute to examine the full results.

Times		
TIMES AT RIGHT ARE SELECT TIMES FOR RUNNERS RECORDED AT THAT PLACE. CLICK ON TIME TO BE EDITED. <ESC> TO QUIT.		
PLACE 1:	36:05.23	
PLACE 2:	36:43.53	
PLACE 3:	37:18.25	
PLACE 4:	37:34.00	<37:30>
PLACE 5:	38:08.10	<38:00>
PLACE 6:	38:08.57	
PLACE 7:	38:00.05	
PLACE 8:	38:14.28	<38:05>
PLACE 9:	39:04.02	
PLACE 10:	39:12.55	<39:21>
PLACE 11:	39:20.72	<40:15>
PLACE 12:	40:14.71	<40:27>
PLACE 13:	40:25.85	<40:31>
PLACE 14:	40:30.10	<41:02>

To see how the select times are used, let us put some errors into the file of times. Go back to the Times part of the program (under the Data Input menu or ⌘T) and pull down the Times menu that now appears to “Edit” (⌘E). Type “1” when asked where to start the editing. The display resembles the one in which you entered the times in the first place, with the crucial difference that the select times are also shown for those places (runners) for whom they were recorded. As shown at left, the select times are enclosed in parentheses.

Pick a time for the “timer” to miss; that is, delete one of the times already entered. Just click the mouse on it, pull down the Times menu to “Delete” (⌘D) and type a “1” into the dialog that asks how many times are to be deleted at that place. Pick another place where your “timer” is going to hit the button too often; click on it, pull down the Times menu to “Insert” (⌘I) and type a “1” into the dialog that asks how many times are to be inserted at that place. You can access times beyond the first few that are shown by clicking on the arrow at the bottom of the display, and backtrack by holding the shift key down while you click on that arrow.

Now go back to the Select Times part of the program (under the Data Input menu or ⌘S) and repeat the checking operation that you did earlier: pull down the Select Times menu to “Check times” (⌘C), select the monitor for an output device and accept the defaults in the dialog above. You will get messages about the need to insert a time close to where you deleted one and to delete one where you inserted an extra. Go back to the Times part of the program and see if you can use its “Edit” option to implement those instructions. If you want to use the “Check times” output as your guide, you should start at the end of the times list and work backwards; say you will start editing shortly before the last correction, and shift-click on the arrow to work your way back up. The select times at the right should be a big help. In the display above the selected “38:08.57” was artificially inserted. Note that the select times no longer agree satisfactorily with the individual times to their left. The “Check times” option indicates that a deletion is required at place 8, although the extra time was introduced at place 5.

For further enlightenment on the utility of select times, go back to the Finish Order part of the program (under the Data Input menu or ⌘F) and select the “Check” item, electing to print out results in the neighborhood of the places where you introduced errors. You’ll see that the select times on the right side of the printout no longer match the individual times to their left.

Reverse order starting at	<input type="text" value="125"/>
Ending at place	<input type="text" value="150"/>
	<input type="button" value="OK"/>

Select times also help detect errors in the finish order. So let’s make one. ID tags are usually collected at the end of the chute, whereas select times are recorded at the finish line. Runners may get out of order between the two points. Go back to the Finish Order part of the program (under the Data Input menu or ⌘F) and pull the Finish Order menu down to “Fix reversed IDs” (⌘X). This item, which is actually used to fix a problem, will now be used to create one. Simply select a range of places in which the ID numbers will be reversed. Then go back once more to the

Select Times part of the program and use its “Check times” option. Set the “maximum frequency” to 1000 so the checking process doesn’t quit on you. The pattern of complaints is typical for this type of error: a call for a massive insertion of times, followed by a string of “number found at” messages (with the places at which the numbers are found in decreasing order), and then a call for deleting a matching number of times.

Other errors you may wish to simulate include the mislabelled spindle syndrome. If the spindles were not used in the order they were numbered, some finishers are put in a block in front of where they should be. Again you can simulate the error by using the device that corrects it. Pull down the Finish Order menu (first type command-F to get it if it’s not showing already) to “Move misplaced spindle.” A dialog will ask you for the places of the beginning and end of the misplaced IDs (input their present places) and the ID number you want the data inserted before. After you create the error, go back to the Select Times part of the program. The “Check times” option will again call for massive insertions and deletions, but this time the “found at” messages will not start right after the first call for an insertion. In a real case, you would go back to printouts created as you enter each spindle of data (or the spindles themselves) to find the places that the spindle presently occupies, and the first ID number on the spindle the data should be put in front of.

Apple Raceberry JaM has quite a few more neat features not covered in this brief “tutorial.” Award groups are very flexible; up to 18 based on age for each sex, and additional groups not based on age. Data entry is very efficient; the data entry program maintains files of cities, teams, and zip codes to speed their entry. On-screen proofreading helps insure accuracy of the data you need to have right on race day (name, age, sex, team, and shirt size). If you get the data base package, you can use it to build up a data base from races that you score and look up runners’ addresses in that data base when you go to score your next one.

You can sort the runners by last name (alphabetically), zip code, personal best time, and age group, and list them in those orders (as well as in numerical order, of course) or print labels on dot-matrix and laser printers. You can also scroll through a list of the runners in alfa, zip, or PR order if you’re looking for someone whose name you can’t quite remember.

After the race you may want to send the results to your local newspaper and/or put them on the Internet. If you send your output to a file, you have several formats available, including tab delimited (useful when you intend to spruce up the output with a word processor), “newspaper” (basically AP format, which may be of enough interest to your local newspaper that they may let you modem the results into their computer for their agate sections), and “HTML” (Hyper Text Markup Language), the language of the Internet. Check out the multitude of results I have sent to my Web site <http://www.raceberryjam.com>. You can be sure I wouldn’t have sent them all up if it weren’t easy to prepare the files.