

October 27, 2007

Here's a tutorial on getting times from a Time Machine timer into MacCross Country using Mac OS 10.4.x. Preliminary tests with Mac OS 10.5 were successful.

The Overall dataflow is:

Time Machine -> Keyspan USB/Serial Adapter -> ZTerm -> Text file of times -> Panorama/MacCross Country.

[Time Machine](#) is a sports timer. A cable connects the Time Machine to the USB/Serial adapter. This has a telephone plug at the Time Machine end and a Mini-Din 8 plug at the Keyspan USA-28X end. A four-conductor telephone cable works well. You can also use wireless modems, which is beyond the scope of this tutorial.

Keyspan USA-28X USB/Serial Adapter

Many MacCross Country users used USA-28X USB/Serial Adapter with pre-OSX Macs where MacCross Country had built-in serial port capabilities. A cable with a telephone and Mini-Din8 plugs connected the USA-28X and the Time Machine. This still works.

Keyspan USA-19HS USB/Serial Adapter

The Keyspan USA-19HS USB/Serial Adapter has a single DB-9 port instead of a Mini-Din 8 connector. You can use the Time Machine cable to connect this adapter to the Time Machine

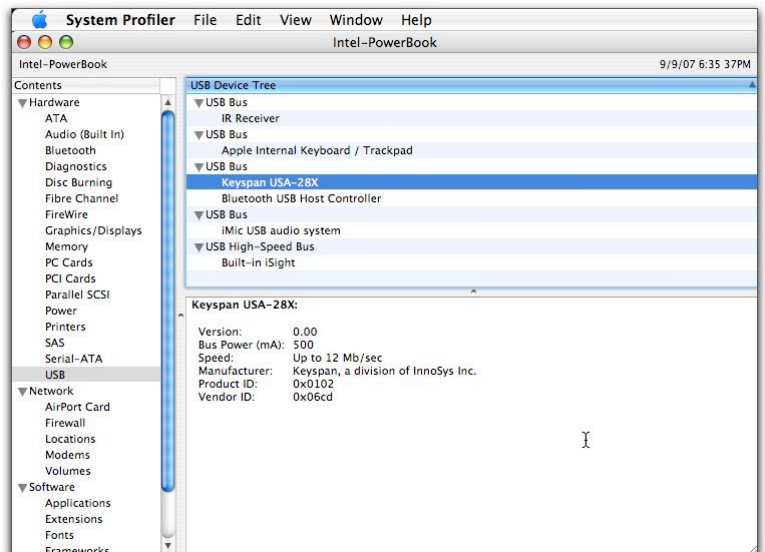
Install the Keyspan drivers, which are available at: Keyspan.com. Both the USA-28X and USA-19HS use the same driver. As of Sep 21, 2007, the Keyspan driver was version 2.4 for Mac OS X 10.2.8 - 10.4.x

Other USB/Serial adapters may also work as long as ZTerm can communicate through them.

Plug in Keyspan USB/Serial Adapter.

Verify that your Mac "sees" the Keyspan adapter using Apple's "System Profiler".

If you're running Parallels Desktop or other programs that share devices, quit them. Parallels may take control of the Keyspan USB/Serial adapter. See Parallels documentation to prevent this.



ZTerm Communications

ZTerm is a Macintosh serial port communications program. ZTerm is available at: homepage.mac.com/dalverson/zterm/.

Install and launch ZTerm communications application.

Set Settings > Connections.

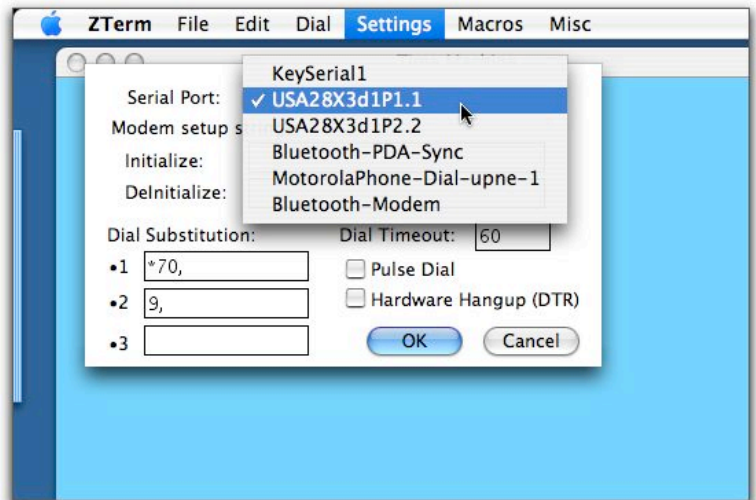
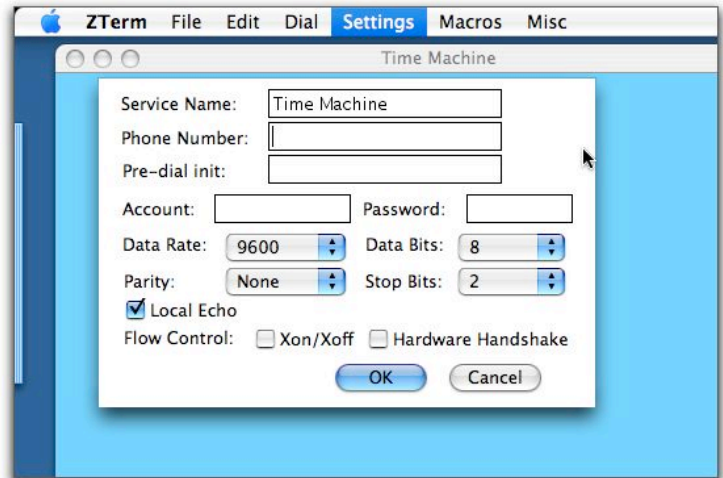
These must match the Time Machine RS232 settings. Normally, these are:

- Baud: 9600
- Parity: None
- Data Bits: 8
- Stop Bits: 2
- Flow Control: None

Check "Local Echo" so you can see what ZTerm is sending to Time Machine.

Set Settings > Modem

Choose **KeySerial1**, which is serial port 1 of either keyspan model. You can also manually choose port 1 (e.g. USA28X3d1P1.1). Port 2 may not work.



Choose Macros > Edit Macros

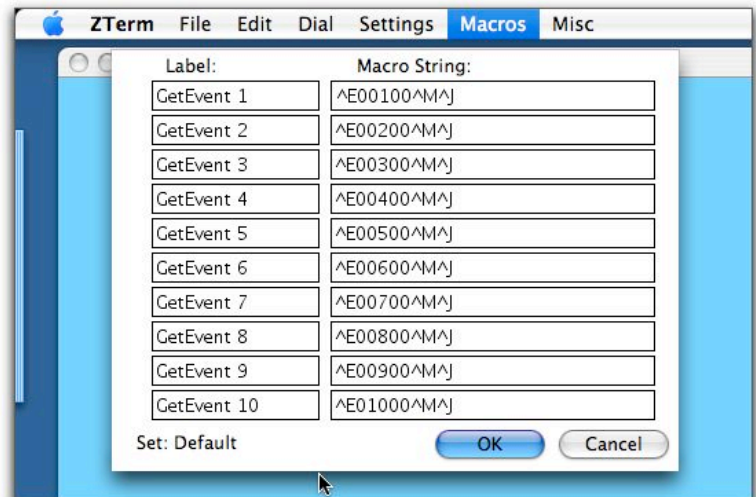
You can Label the macros with any title you want.

The Macro string coding to retransmit Time Machine times is:

^E (control E) is the Time Machine to retransmit data

001 is the three-digit event number. "001" is event 1.

00 means send times from all chutes.



^M is a carriage return.
^J is a line feed.

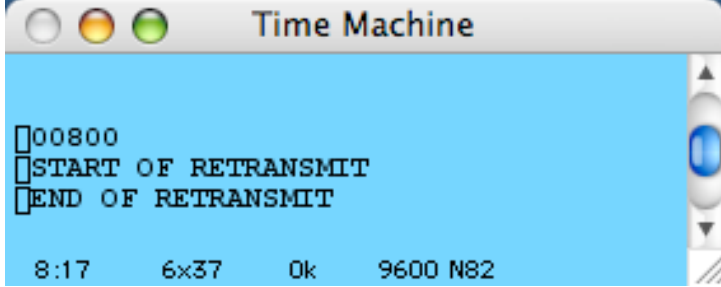
The Macros shown will command Time Machine to retransmit events 1 through 10. You can edit Macros to command Time Machine to do other things. See Time Machine documentation for details.

Test Import of Time Machine Times

If you have times in Time Machine, you can now test. Times will show on ZTerm screen.

In this example, Macro 3 is selected, which tells Time Machine to retransmit event 3 times.

If there are no events in Time Machine for an event,



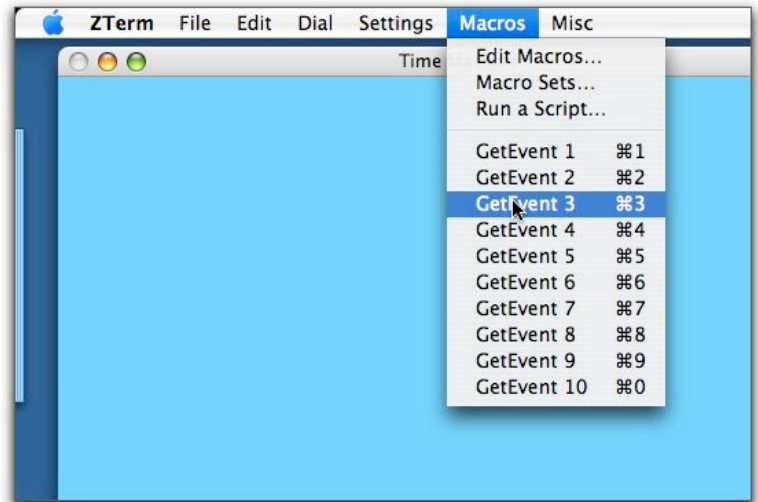
You'll get only

START OF RETRANSMIT

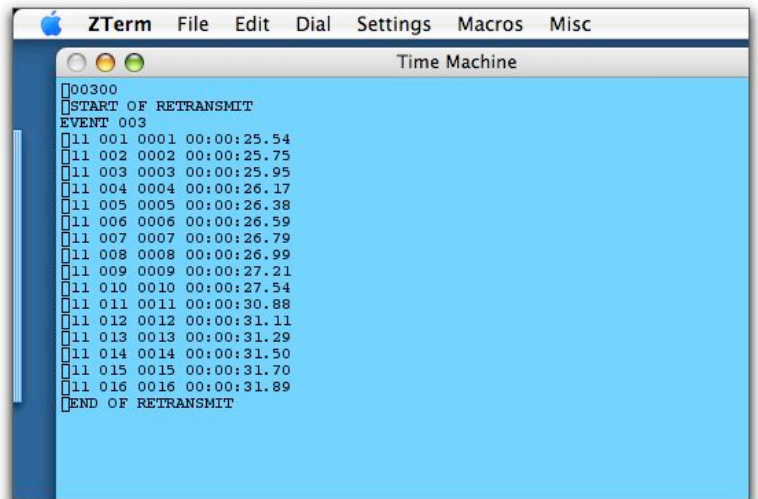
and

END OF RETRANSMIT

(You could type these macro commands directly into the ZTerm window. But, choosing a Macro on meet day is easier.)

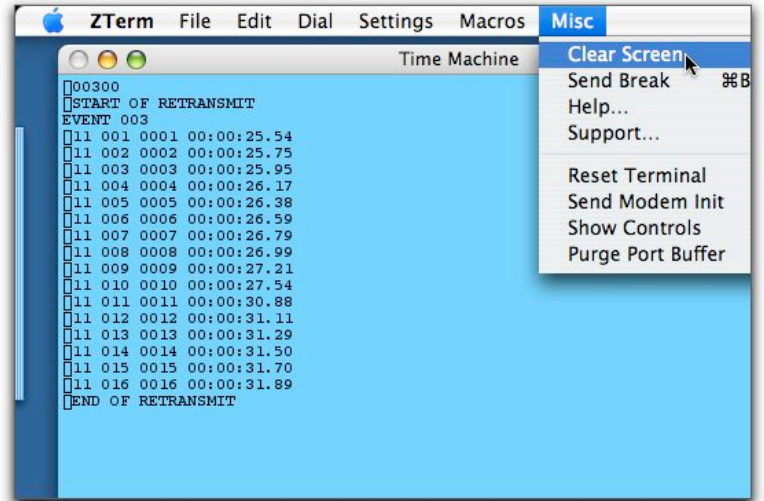


Here are test times from Time Machine's Event 3.



MacCross Country: Getting Times from the Time Machine Timer

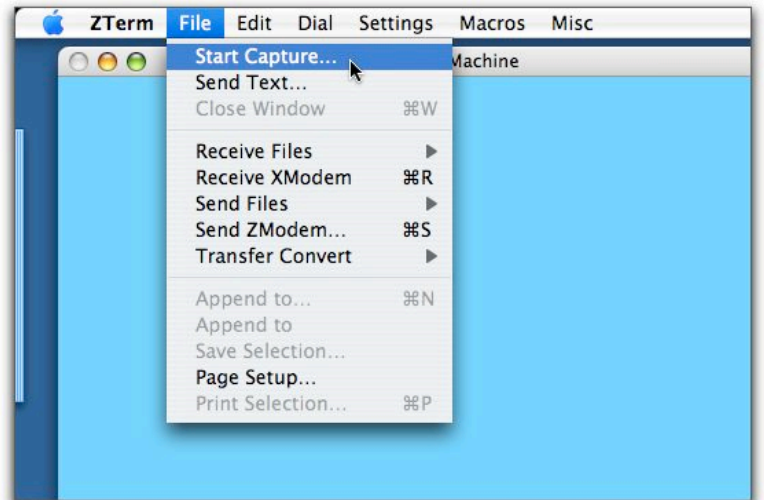
You can clear the ZTerm screen.



Capture Time Machine Times to a Text File

Choose File > Start Capture

Remember to stop capture after the last runner of each race finishes. You want each race's times to be in a separate text file.

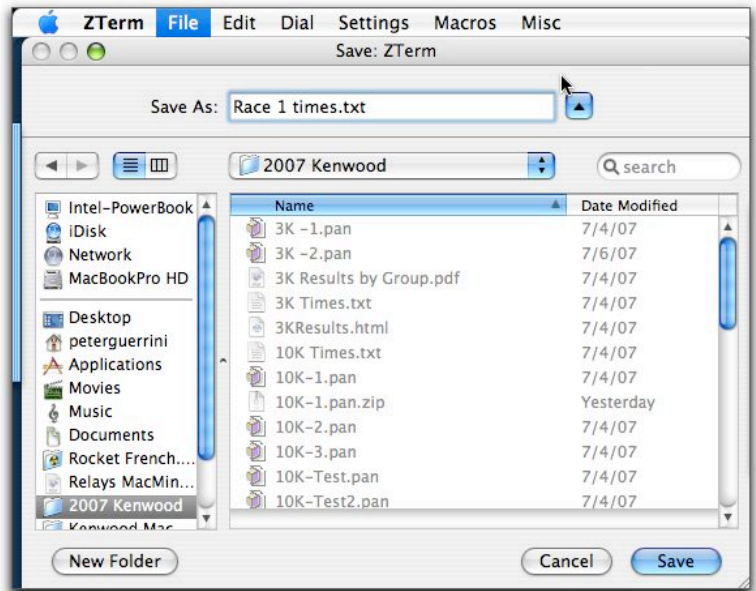


MacCross Country: Getting Times from the Time Machine Timer

Tell ZTerm where to save text file of times. This should be the meet folder where you save the MacCross Country files.

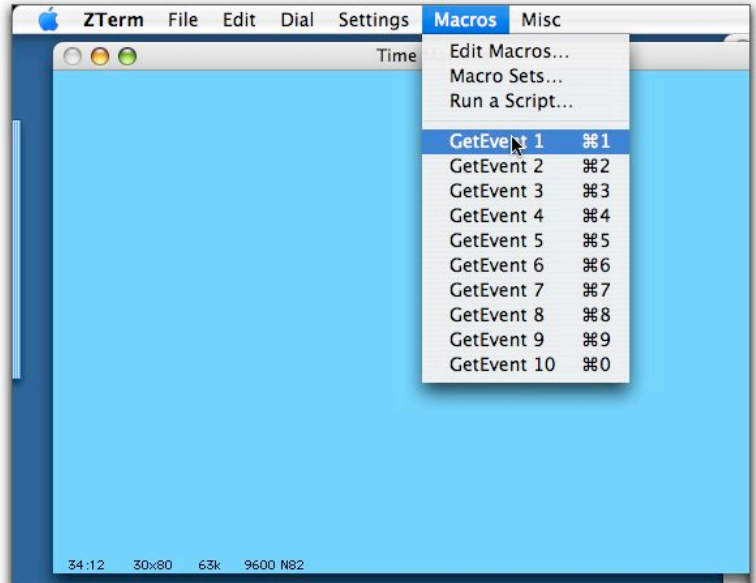
Name the text file with anything you want.
Example: "Race 3 Times.txt."

If you Start Capturing before a race winner finishes, you don't have to run a Macro to dump times. Time Machine always sends times as it records times as runners finish.



To make Time Machine retransmit a race's times, choose Macro to transmit race times.

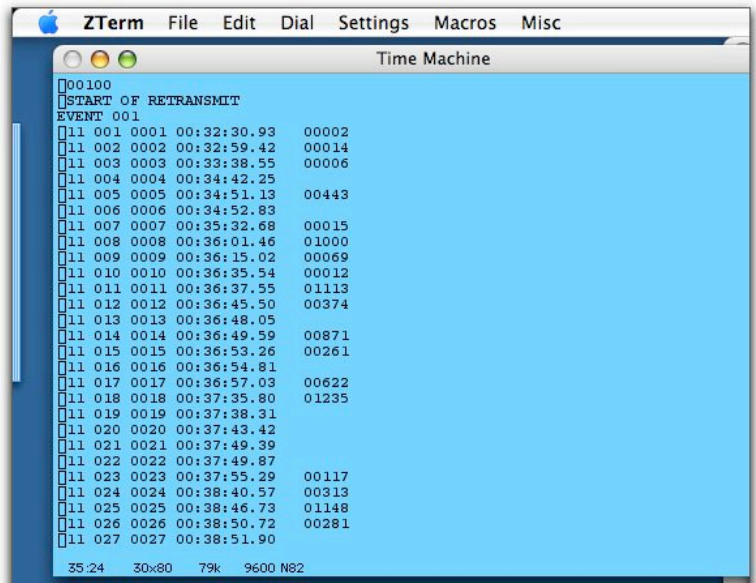
Here, Macro 1 tells Time Machine to retransmit race (Event) 1 times.



Time Machine sends times as they are recorded as runners finish and when commanded to retransmit. You can initiate a retransmit from either ZTerm or using the Time Machine keypad.

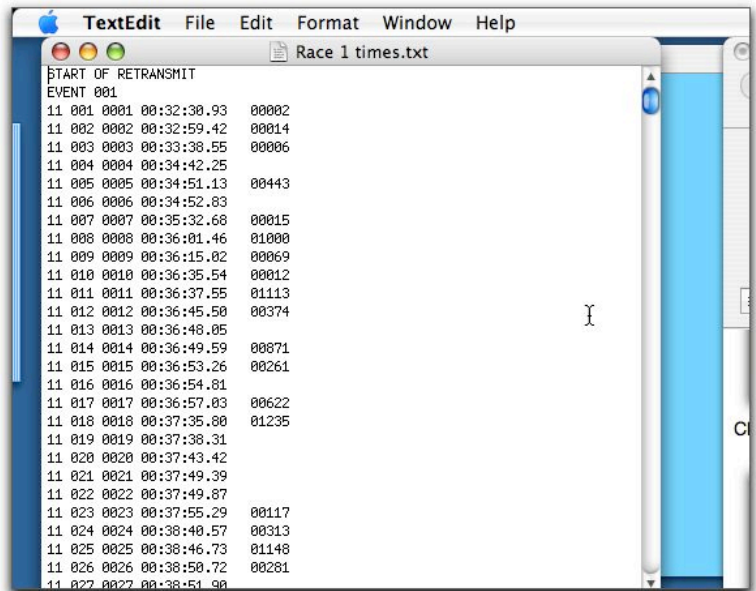
If you commanded ZTerm to Start Capture times will also go into a text file. You must capture if you want MacCross Country to import times.

The sample to the right shows both times and select bib numbers.

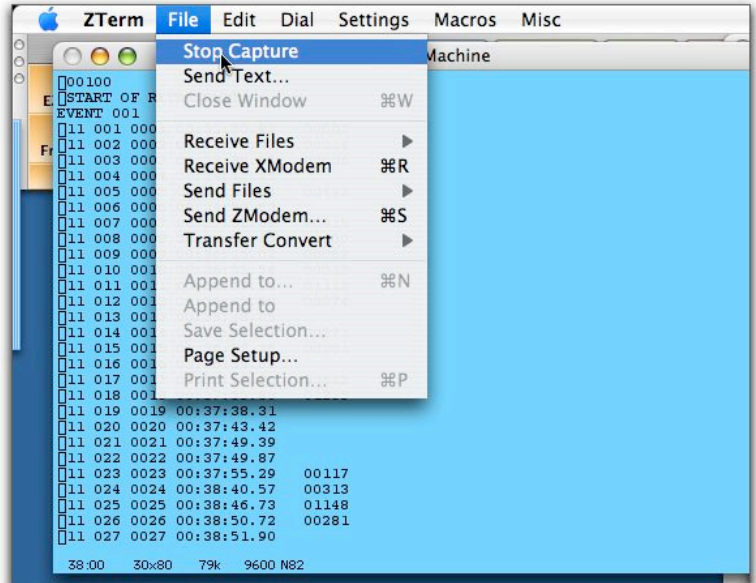


MacCross Country: Getting Times from the Time Machine Timer

Here are the times shown in "TextEdit". If necessary, you could edit times with most word processors.



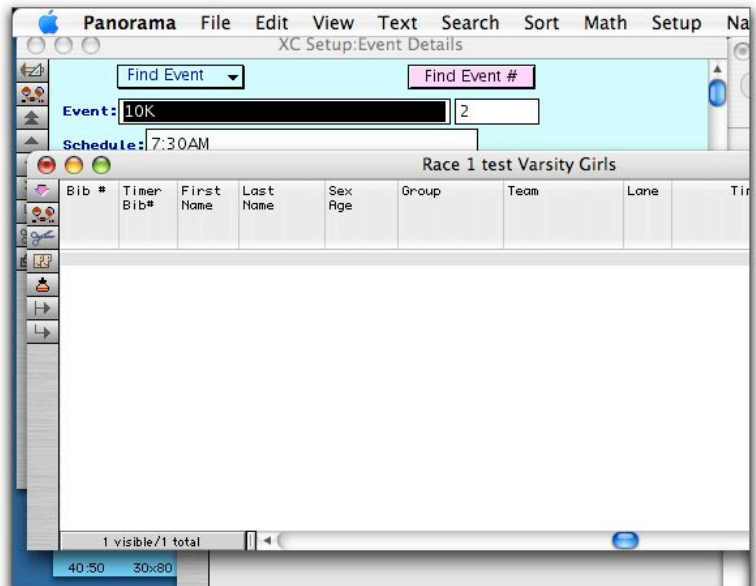
After the race is over, go to ZTerm, and choose File > Stop Capture. If you don't stop capture, may save garbage characters into the text file or put times from more than a single race into the same file.



Panorama - MacCross Country

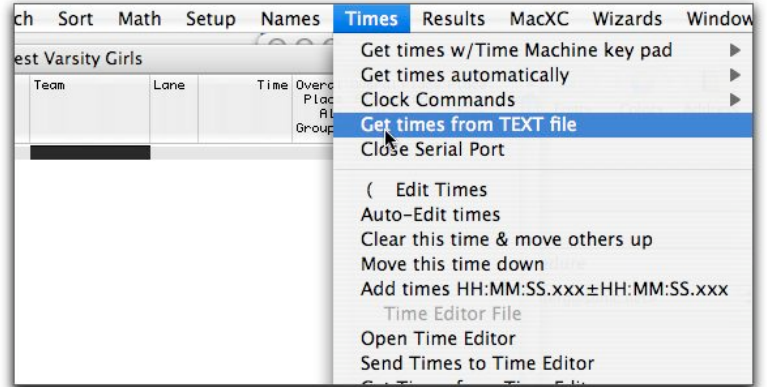
In Panorama - MacCross Country (MacXC) Setup > Event Details, choose your race.

Save the "Cross Country" file as your race name (e.g. "Varsity Girls").

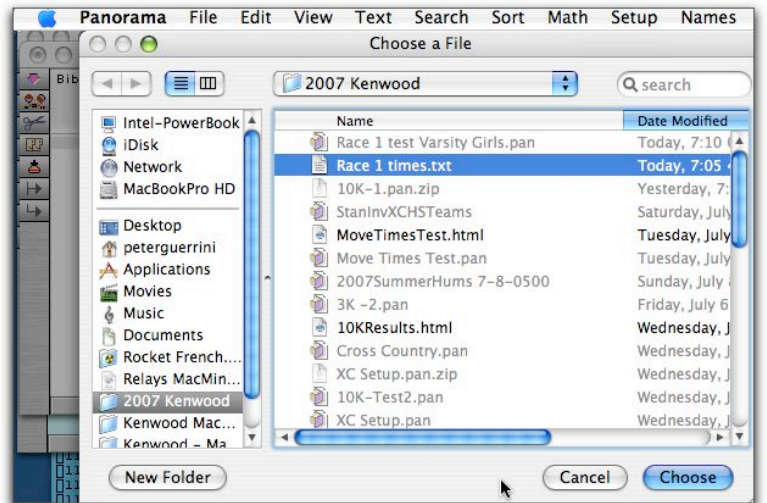


MacCross Country: Getting Times from the Time Machine Timer

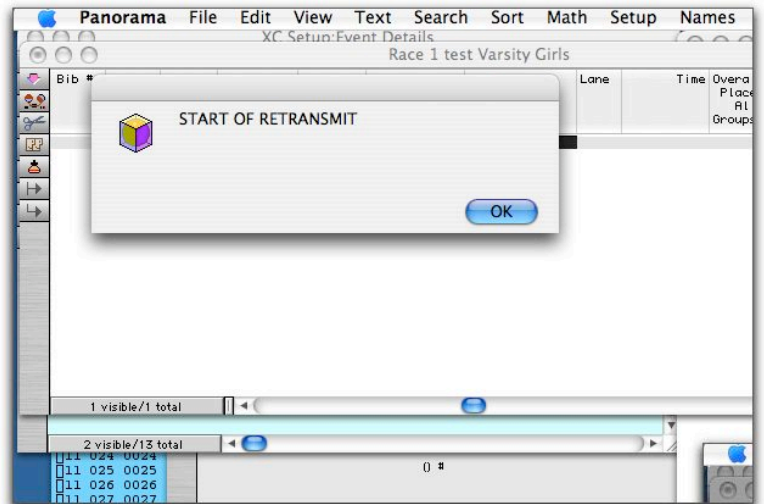
Choose Times > Get times from TEXT file



Pick the text file that you captured (e.g. "Race 1 times.txt")



In MacXC, you should see a "Start of Retransmit" dialog. This is the first line in the text file. Click OK. You'll then get another dialog with the event number (e.g. "EVENT 001"). Click OK.



MacCross Country: Getting Times from the Time Machine Timer

Here are the times and select bib numbers from the Time Machine.11.

Repeat for other races.

- Set up MacXC
- Set ZTerm start capture
- Receive times.
- Stop capture.
- Import

You can hold the mouse button down to interrupt importing times to type or scan bib numbers. To resume importing, put the cursor on the line where the next time should go.

Choose Times > Get times from TEXT file.

Remember Time Machine sends times as runners finish. If you "Start Capture" during the race before the winner finishes, you don't have to run the macro. You need to run the macro only if you want to retransmit the times from TM.

Retransmitting times from Time Machine.

There are several versions of Time Machine. Each has slightly different ways to push the buttons.

If the clock is stopped:

- Press "Set Up" button. (You should see the "Event Number" setup parameter. (See Time Machine documentation if clock is running.)
- Press "Set Up" about 7 more times until it says "RS232 Port" (You could also press the "Back Step" (e.g. zero key) about once to get to the same "RS232 Port" parameter
- Press Enter to enter the RS232 parameter section. The first item should be to "Re-XMIT DATA". Press "Enter"
- Specify Time. Press Enter
- Begin Re-xmit at time 0. Press Enter

Times should transmit. You should see them on the ZTerm screen. If you were capturing, they'd also be in a text file.

Bib #	Timer Bib#	First Name	Last Name	Sex	Age	Group	Team	Lane	Time	Overall Place	Overall Place in Groups
2	2	K.C.	Cody	M	21	H20-24		11	0:32:31	1	
14	14	Jeff	Jackson	M	19	H17-19		11	0:33:00	2	
6	6	Todd	Rose	M	34	H30-34		11	0:33:39	3	
443	443	Nina	Eseed	F	44	F40-44		11	0:34:43	4	
		Brendan	Scanlon	M	19	H17-19		11	0:34:52	5	
		Nina	Eseed	F	44	F40-44		11	0:34:53	6	
15	15	Ty	Strange	M	45	H45-49		11	0:35:33	7	
1000	1000	Nike	Wor tman	M	22	H20-24		11	0:36:02	8	
69	69	Carlos	Castelo	M	38	H35-39		11	0:36:15	9	
12	12	Blake	McDowall	M	18	H17-19		11	0:36:36	10	
1113	1113	Sten Lin	Lockert	M	16	H14-16		11	0:36:38	11	
374	374	Erik	Olson	M	15	H14-16		11	0:36:46	12	
		Nina	Eseed	F	44	F40-44		11	0:36:48	13	
871	871	Brad	O'Brien	M	45	H45-49		11	0:36:50	14	
261	261	Nathan	Huckeba	M	17	H17-19		11	0:36:54	15	
		Nina	Eseed	F	44	F40-44		11	0:36:55	16	
622	622	Don	Stewart	M	45	H45-49		11	0:36:57	17	
1235	1235	Nina	Bongio-Kari	M	18	H17-19		11	0:37:36	18	
		Nina	Eseed	F	44	F40-44		11	0:37:39	19	
		Nina	Eseed	F	44	F40-44		11	0:37:44	20	
		Nina	Eseed	F	44	F40-44		11	0:37:50	21	
		Nina	Eseed	F	44	F40-44		11	0:37:50	22	

If you send the wrong race from Time Machine, change the Transmit Area.

- Go to RS232 Port.
- Press Setup to get to "CHNG XMT AREA".
- Using the Setup Key, then ENTER key, navigate your way to "CHANGE EVENT#" option.
- Press ENTER to see "Retransmit Data from Event #".

If you don't know Time Machine's philosophy of how to navigate through it's zillions of options, this can be confusing. See Time Machine manual.