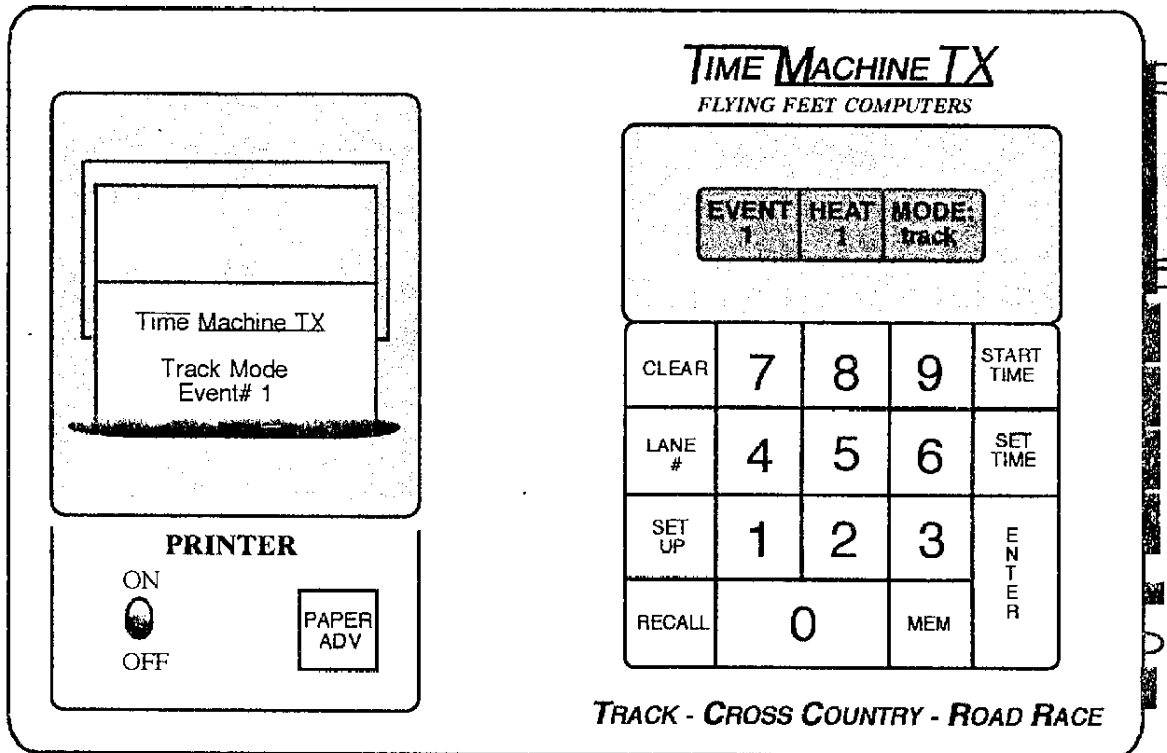


TIME MACHINE TX



**Interim Manual
for use with Time Machine TX
and Upgraded Time Machine II**

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Note: These instructions are in addition to (and sometimes replace) instructions in the User Manual and the TM II Draft Manual. A complete revision is forthcoming.

Operating Instructions

Menu operations

Most of the Time Machine II/TX functions are accessed through the use of "menu items" which are selected by the operator. When a function key (LANE #, SET UP, RECALL, MEM, and SET TIME) is pressed, the LCD display typically shows a "menu heading" on the top line and a "menu item" [in brackets] on the bottom line. Other menu items under that heading are displayed each time the function key is pressed (this is called "stepping").

The menu items start to repeat after all of them have been displayed. If a desired menu item is "passed up" because the function key was pressed too many times, you can "backstep" to it by pressing the zero key.

Once a desired menu item has been displayed [in square brackets], it is then selected by pressing the ENTER key or an appropriate numbered key (numbered keys are only used for selection/input when "→ _" appears in the display) and then the ENTER key. Selecting a menu item will cause some function to be performed (such as changing timing mode) or it will present you with another menu level (such as RS232 Operations).

If another menu is presented, then the LCD will show a new menu heading along with a menu item in brackets. Menu item selection is then performed in the same manner as described above. The number of menu levels you must go through to perform a desired operation depends on the type of operation required. The Time Machine II/TX was designed to minimize the number of keystrokes required to do frequently used operations, such as setting the time clock. Other operations, such as enabling the RS232 handshake line, may require going through as many as 4 levels. Fortunately these "menu intensive" operations are stored in nonvolatile memory, so once they have been performed, it is not necessary to repeat the process.

If a menu level was selected by mistake, the operator can easily "escape out" by pressing the CLEAR key. This action will either bring you back to a higher menu level, or bring you back to the normal timeclock display (depending on the menu level). Repeated pressing of the CLEAR key will always bring you back to the normal timeclock display. We encourage you to "step through" all of the various menu items and levels in order to become familiar with the many functions and capabilities of the Time Machine II/TX.

To recap:

- The keys: LANE #, SET UP, MEM, and RECALL have a menu of choices that appear when you press them. As you repeatedly press the key (this process is called "stepping") all the choices display one at a time and then start to repeat. Backstep at any time by pressing the ZERO key.
- A choice is made by pressing the ENTER key.
- Answer questions by stepping, pressing a number key, or pressing ENTER key.
- When you step between a [YES] or [NO] choice, it is called "toggling".

The following operations of the Time Machine II/TX are described in a "step-by-step" process:

Set time clock at 0:00:00 (for cross country or lap timing mode only)

1. Press SET TIME key. The display will show "Set Time Clock."
2. Press ENTER key. The display will show "Select Count Direction [UP]."
3. Press ENTER key twice if you want to count up and don't wish to set multiple (wave) starts.
4. Press SET TIME key if you want to count down. The display will show "Select Count Direction [DOWN]."
5. Press ENTER key twice if you want to count down and don't wish to set multiple (wave) starts.
6. Press START TIME key to start the clock.

If in any other mode: Press SET TIME key. While the key is depressed, the display shows the "cleared" time clock.

Set time clock at a time other than 0:00:00 (for cross country or lap timing mode only)

1. Press SET TIME key. The display will show "Set Time Clock."
2. Enter the desired time. If an error is made, press the CLEAR key.
3. Press ENTER key. The display will show "Select Count Direction [UP]."
4. Press ENTER key twice if you want to count up and don't wish to set multiple (wave) starts.
5. Press SET TIME key if you want to count down. The display will show "Select Count Direction [DOWN]."
6. Press ENTER key twice if you want to count down and don't wish to set multiple (wave) starts. It makes no difference if you choose [UP] or [DOWN] when setting clock to zero, the point is, you have to do it one way or the other.
7. Press START TIME key to start the clock.

Set multiple starts to other than one (for cross country mode only)

1. Press SET TIME key. The display will show "Set Time Clock."

2. Enter time if desired. Default time is zero. Press ENTER key.
3. When "Select Count Direction: [UP] or [DOWN]" appears, press ENTER key. The display will now show "Multiple Starts: # Of Starts → 1.
4. Enter the desired number of starts using the appropriate numbered key. If you make an error, press the correct numbered key and the display will correct. Do not press the CLEAR key to correct.
5. Press START TIME key to start the clock. For each multiple start desired, press the START TIME key or the gripswitch (connected to START/IN LANE 1 port) once.
6. Important: When any of the following conditions are met, the Time Machine II/TX is ready to record finish times:
 - a. Printer is on and "Event: _____" line and other heading data is printed following the last desired "Multiple Start" time.
 - b. Printer is on or off and pressing START TIME key no longer results in change to "st" display.

If either of these conditions are not met, pushing the gripswitch will result in another "Multiple Start" time being recorded. Pushing the ENTER key will result in two quick beeps and no action.

Set up Time Machine II/TX to score a cross country meet

1. Change timing mode to "X-Country" (See "To Change Timing Modes").
2. When you press the ENTER key to select the cross country mode, the display "Change Setup For A X-C Meet?[NO]" appears. Press the SETUP key and [YES] appears.
3. Press the ENTER key and the display briefly tells you that "TM Is Setup For A X-Country Meet", then displays "EVENT 1 | CHUTE 11 | 0.0 X-C".
4. You are now ready to time and score a cross country meet using NF/NCAA or your own customized rules. Time Machine II/TX is set to take finish times with gripswitch in "START IN/LANE 1" port, and record bib/race #'s with the base unit (key board) set to Chute 11.

Set up Time Machine II/TX to time a road race

1. Change timing mode to "X-Country" (See "To Change Timing Modes").
2. When you press the ENTER key to select the cross country mode, the display "Change Setup For A X-C Meet?[NO]" appears.
3. Press the ENTER key and "EVENT 1 | 0.0 X-Country" or "EVENT 1 | CHUTE

11 I 0.0 X-C" appears. If you do not want to display Chute 11, press the SET UP key until "Setup Parameter [DISPLAY OPTION] appears, then press the ENTER key and "Display BaseUnit Chute# ? [NO]" appears. Press the ENTER key again and "EVENT 1 I 0.0 X-Country" appears.

Enter team bib/race # data for a cross country meet

1. Press the SET UP key until the display shows "Setup Parameter: [TEAM BIB# DATA]".
2. Press the ENTER key. "Team Bib# Data: [ASSIGN BIB#S]" appears.
3. Press the ENTER key. "Team 1: Enter Lowest Bib#→ _" appears. Enter the lowest bib number assigned to team number 1.
4. Press the ENTER key. Repeat process until lowest bib numbers have been entered for all teams.
5. Press the CLEAR key, then press the SET UP key until "Team Bib# Data: [VIEW /PRINT DATA]" appears.
6. Press the ENTER key. A listing of teams with their Bib# Range will be printed out. The display then automatically returns to the timing display ("EVENT 1 I CHUTE 11 I 0.0 X-C"). If the bib number listing is correct, you are ready to time. If you have a late entry or there is an error, see "Edit Team Bib/Race # Data" next.

Edit team bib/race # data

1. Press the SET UP key until the display shows "Setup Parameter: [TEAM BIB# DATA]". Press the ENTER key.
2. Press the SETUP key until "Team Bib# Data: [EDIT TEAM DATA]" appears.
3. Press the ENTER key and select the type of change you wish to make by pressing the SET UP key.
4. Press the ENTER key and follow instructions.
5. Press the CLEAR key, then press the SET UP key until "Team Bib# Data: [VIEW /PRINT DATA]" appears.
6. Press the ENTER key and recheck your listing.

Merge data

1. Press the RECALL key until the display shows "Data Operations: [MERGE DATA]".
2. Press the ENTER key until "Merge [CHUTE 1] Times with Race#s" appears.

3. Select the appropriate chute # (normally 1) by pressing the RECALL key until the number appears. **Note:** Backstep to correct/change a chute number by pressing the zero key. Pressing the CLEAR key during this process will return you to the "Data Operations" menu.
4. Press the ENTER key. If you have in fact recorded times, the display will now display "Race#s Located in Chute# → _". Enter the appropriate number (normally 11) this time by pressing the numbered keys (use CLEAR key if you make a mistake).
5. The screen will momentarily show the message "Merge Completed: _ Times Merged", then shift automatically to display "Recall Data: [MERGED DATA]". See step 3. of "Recall Merged Data" next.

Recall merged data

1. Press the RECALL key until the display shows "Data Operations: [RECALL DATA]".
2. Press the ENTER key and then press the RECALL key until "Recall Data: [MERGED DATA]" appears.
3. Press the ENTER key and select the appropriate order (time or bib/race # order) by pressing the RECALL key.
4. Press the ENTER key and the list is displayed and printed (if the printer is on). Check the list. If you have a late entry or there is an error, see "Edit Data" next.

Edit data

1. Press the RECALL key until the display shows "Data Operations: [EDIT DATA]".
2. Press ENTER and select the edit option you wish to use by pressing the RECALL key. Press the ENTER key to make your selection.
3. Follow instructions until corrections are complete. **Note:** When the Time Machine II/TX asks for chute number when inserting or deleting times, enter the appropriate chute # by pressing the RECALL key. Backstep to correct by pressing the zero key. Pressing the CLEAR key during this process will return you to the "Editing Operations" menu.
4. After editing, the display will ask if you wish to "Re-Merge Times & Race#s ? [YES]"
5. Press the ENTER key, if you wish to re-merge the list, and again enter chute information as you did in "Merge Data" above. Continue with those instructions until you print a revised list.

To score a race

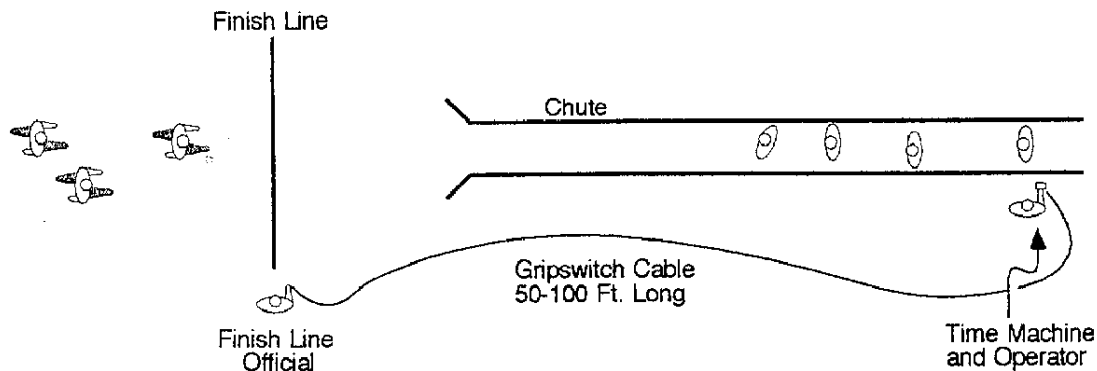
1. Press the RECALL key until the display shows "Data Operations: [RECALL DATA]".
2. Press the ENTER key and then press the RECALL key until "Recall Data: [TEAM SCORES]" appears.
3. When "Score Based On: [NCAA/NF RULES]" appears, press ENTER key (Press RECALL key to step through non-standard choices). The number of scorers and displacers will show momentarily on the screen and then "Recall Score From [MERGED DATA]" will appear.
4. Press the ENTER key and a complete breakout of team scoring will be displayed and printed (if the printer is on).

To determine team place numbers

1. Press the RECALL key until the display shows "Data Operations: [RECALL DATA]".
2. Press the ENTER key and then press the RECALL key until "Recall Data: [TEAM PLACE#S]" appears.
3. Press the ENTER key and "Recall #'s From [MERGED DATA]" appears.
4. Press the ENTER key and a complete breakout of team place numbers will be displayed and printed (if the printer is on).

Cross country mode quick setup

To setup for a cross country meet:



Step 1. Physical setup and timing. The Time Machine has been set up at the end of the chute where the operator can enter each competitor's number from the keyboard (set to chute 11). A 50' to 100' length of ordinary telephone extension cable is attached to the Time Machine at the Start In/LANE 1 port. At the other end is an experienced finish official with gripswitch in hand. As each competitor passes the finish line, he presses the gripswitch once. If he misses a finish, or hits too many, he notes a bib number near the mistake and tells an assistant who writes it down the time and whether it was an extra or a miss.

Step 2. Error correction (if needed) and merging. At the end of the race, the operators get together and check the tape to see if the "lane place" count is the same for chute 1 and chute 11. If not, they use the "EDIT" function from the "RECALL" menu. See p. 5 for details. At this time, the total number of times taken should match the total number of bib numbers taken. Merging takes times from the finish line (chute 1) and merges them with the race/bib/#s taken in the chute (chute 11).

Step 3. Team places and scoring. The operator is ready to print out team place numbers and score the meet when merging is complete.

Important note: Because the Time Machine provides the flexibility (many choices) to set up a running event in accordance with local procedures, the following recap of the Operating Instructions is repeated:

- The keys: LANE #, SET UP, MEM, and RECALL have a menu of choices that appear when you press them. As you continue to press the key (this process is called "stepping") all the choices display one at a time and then start to repeat. Backstep at any time by pressing the "zero" key.
- A choice is made by pressing the ENTER key.
- Answer questions by stepping, pressing a number key, or pressing ENTER key.
- When you step between a [YES] or [NO] choice, it is called "toggling".

Detailed Cross Country instructions:

- Turn on machine. Follow procedures for setting Cross Country mode on p. 11.

- When the display

Change Setup For A X-C Meet ?[YES]

 appears, press

ENTER

and the Time Machine will tell you it is set up for a cross country meet and then

EVENT 1	CHTE 11	0.0 X-C
-------------------	-------------------	-------------------

 automatically appears.

- If more than two teams are competing and/or bib numbers are being used,

press

SET UP

 until

Setup	Parameter:
[TEAM	BIB# DATA]

 appears. Press

ENTER

 and

Team	Bib#	Data:
[ASSIGN	BIB#S]	

 appears. Press

ENTER

 and answer the questions

in the display until the lowest bib numbers for all the teams have been entered.

- Press

CLEAR

 twice and the timing display again appears. Turn on printer if desired. Press

START TIME

 or gripswitch connected to "START IN/LANE 1" port.

- Press the gripswitch (50'-100' long) for every runner crossing the finish line.

The Time Machine TX is located at the rear of the chute (see diagram) where the

operator enters bib/race #s on the keyboard (pressing

ENTER

 to register each #).

- After the race is over, and all data recorded, press

START TIME

 and then

CLEAR

 without releasing the

START TIME

 button. This stops the clock. Check for errors, correct using edit procedures (under RECALL menu) if necessary.

• Press **RECALL** until **Data Operations: [MERGE DATA]** appears, press **ENTER**.

Merge [CHUTE 1] Times With Race#s appears. Press **ENTER** and **Races#s Located In Chute# → _** appears. Enter "11" and press **ENTER**, **Recall Data: [MERGED DATA]** appears.

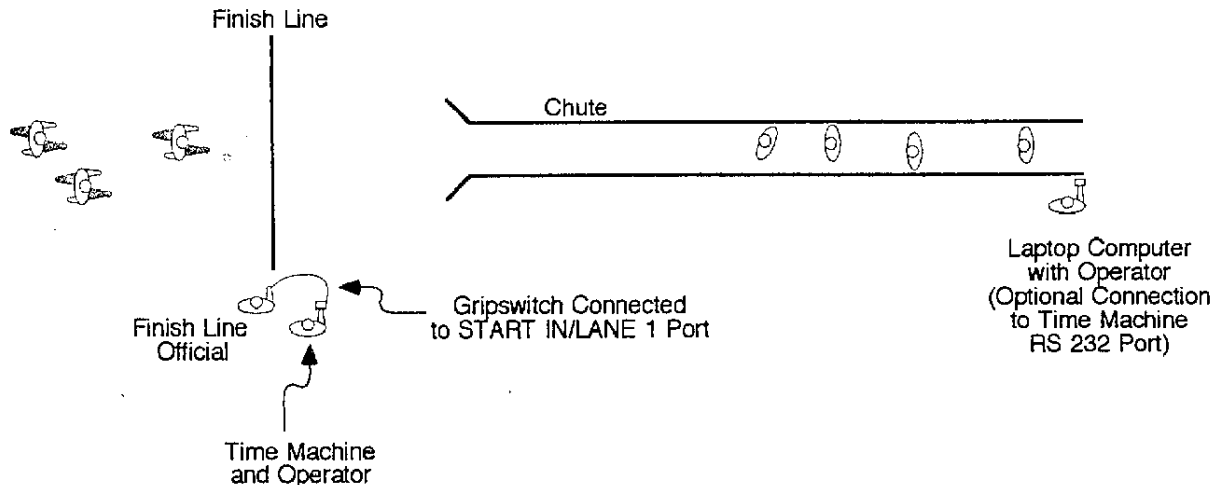
Press **ENTER**, step to desired order, and press **ENTER** again with printer turned on. This overall listing is not divided by teams.

• To get team places, press **RECALL** until **Data Operations: [RECALL DATA]** appears, press **ENTER** then step through menus by pressing **RECALL** until **Recall Data: [TEAM PLACE#S]** appears. Press **ENTER** and choose **Recall #'s From [MERGED DATA]**. Press **ENTER** and team place#s are printed.

• To get team scores, press **RECALL** until **Data Operations: [RECALL DATA]** appears, press **ENTER** then step through menus by pressing **RECALL** until **Recall Data: [TEAM SCORES]** appears. Press **ENTER**, choose rules (normally NCAA/NF), numbers of scorers and displacers (default 5 scorers, 7 displacers) and **Recall Score From [MERGED DATA]** appears. Press **ENTER** and team scores print.

Cross country mode quick setup

To setup for road racing.



Step 1. Checking the Time Machine TX. When setting up the TX for a cross country or road race, there are several things you should set/ check. Once you have set up your TX, these settings will stay in memory until you change them again.

- Make sure the TX is set for cross country timing mode. The display will tell what mode you are in. Check the way the grip switch input is set up by pressing the LANE # key. If there is a small "nd" in the left hand corner, then the lane #'s are not set at default (1,2,3, etc.). Set to default if so desired.
- Check the memory with the MEM key to see if it has been cleared or if not cleared that the event # you are in doesn't have any times in it. The TX will tell you to change event if there is data in it when the power is turned on.
- If you are downloading live to a computer, you need to check the RS232 set up to make sure you have communication to your computer. Also, it is generally best not to allow place numbers to be assigned to chute 11 (select times). Press the SET UP key until [PLACE NUMBER] appears to check this. Always test your TX/computer hookup before the race.
- Place a grip switch into the Start In/Lane 1 slot. You are now ready to time the race and you can turn the power off until you are ready to start the race.

Step 2. Physical setup and timing. Have one person assigned to press the gripswitch for each runner crossing the finish line (primary timing, chute 1) and another operating the TX (preferably a person trained on a ten key [accountant's] keyboard) to enter bib#'s and pressing the ENTER key when the runner crosses the line (select timing, chute 11). Turn the power on. Make sure the time clock is set to 0.0 on the display. (At the gun, press the Start In/Lane 1 grip switch (or the START

TIME key) and the time clock will be started. When the runners come across the line you can begin timing.

Important note: Because the Time Machine provides the flexibility (many choices) to set up a running event in accordance with local procedures, the following recap of the Operating Instructions is repeated:

- The keys: LANE #, SET UP, MEM, and RECALL have a menu of choices that appear when you press them. As you continue to press the key (this process is called "stepping") all the choices display one at a time and then start to repeat. Backstep at any time by pressing the "zero" key.
- A choice is made by pressing the ENTER key.
- Answer questions by stepping, pressing a number key, or pressing ENTER key.
- When you step between a [YES] or [NO] choice, it is called "toggling".

Detailed Roadracing instructions:

- Turn on machine. Clear memory if desired (see p. 17).
- Press CLEAR or wait until starting display shifts to any of the following five timing

displays:

EVENT	0.0
1	X-Country

EVENT	HEAT	MODE:
1	1	lap

EVENT	HEAT	MODE:
1	1	train

EVENT	HEAT	MODE:
1	1	swim

EVENT	HEAT	MODE:
1	1	track

- If anything but the "X country" display comes up, continue with the following steps:


- Press SET UP until Setup Parameter: [TIMING MODE] appears, press ENTER.
- Press SET UP until Timing Mode: [CROSS-COUNTRY] appears, press ENTER.
- Change Setup For A X-C Meet ?[NO] appears. Press ENTER and EVENT 1 0.0 X-Country

appears. If a start time other than zero and/or multiple starts are desired,

see pp. 18 and 19. Turn printer on if desired.

- To start clock, press  or gripswitch connected to "START IN/LANE


1" port. The clock will start from zero. Press the gripswitch again (after the clock is started) and times will be recorded. Enter bib #'s on base unit and

press  and select times will be recorded. To stop the timeclock, press

 and hold it down while pressing . The clock will stop.

- Press  and select [STORED TIMES] from the [RECALL DATA]




menu. Make your choice between [TIME ORDER], [RACE# ORDER], OR

[CHUTE# ORDER], press  a final time and your list will be printed.

- If you wish to download times to a computer, check event number by pressing

 and then  when [EVENT NUMBER] appears. Change if necessary

or press  if number is O.K. Then press  again until [RS232 PORT]

appears. Press  and  appears. Press 

twice again and data is transmitted to the computer. Note: If RS232 is connected to a computer during timing, times will be downloaded automatically as they occur. If not, times may be re-transmitted at any time as explained here.

Track mode quick setup

To setup for a track meet:

Step 1. Setting up TM II/TX: The head timer has attached the multilane adapter and ten gripswitches. He pressed the LANE # key until "Program Lane#s: [MULTILANES]" shows. He presses the ENTER key and follows instructions to number the switches as follows:

Switch [1] = #1	Switch [6] = #4
Switch [2] = #1	Switch [7] = #5
Switch [3] = #2	Switch [8] = #6
Switch [4] = #2	Switch [9] = #7
Switch [5] = #3	Switch [10] = #8

He has previously applied masking tape to the gripswitches and numbered the switches to correspond to the place each switch will time (lane timing is easier and more efficient, but is frowned on by officials wearing blue blazers). He assigns two #1 gripswitches to the first place timers, two #2 gripswitches to the second place timers, and one gripswitch each to the timers for third through eighth place. He has some timers with stop watches that will be backing up the times on first through third place. For lane timing he would assign one gripswitch to each lane, with the two center fastest seeded lanes getting an extra gripswitch each.

Step 2. Preparation to record start. The head timer connects another gripswitch to the START IN/LANE 1 port. One of his first place timers will use it to start the TM II/TX at the beginning of each race. In addition, the head timer will start each race using the START button on the TM II/TX keyboard. This insures a good start for the machine. The first input registering on the time circuit will start the clock, the second input will have no effect.


Step 3. Conduct of meet. The head timer clears the memory (see clearing memory, page 17). This action resets the unit to event #1, heat #1. As the first running event is not until event #5, he presses the SET UP key until "Setup Parameter: [EVENT NUMBER]" appears and presses the ENTER key. He follows instructions in the display, then presses the ENTER key again. The display now reads "EVENT 5, HEAT 1, MODE: track" and the head timer is ready to time event #5 which is a middle distance event with seven runners and one heat. Both he and the designated starter push their respective buttons upon observing the starter's smoke and the TM II/TX starts. As the race finishes and timers push their buttons, the TM II/TX prints the raw data, with all times appearing. The head timer then presses the START TIME key and while holding it down, presses the CLEAR key to stop the clock. He then pushes the SET TIME key and the clock returns to 0, and the display indicates event #5, heat #2.

Step 4. Printing heat results. The head timer presses the RECALL key and "Recall Data: [FINISH RESULTS]" appears. The ENTER key brings up the message "Recall Heat Result For [LAST HEAT]". He presses ENTER again and the TM II/TX prints the final times, rounded up to the nearest tenth of a second. The head timer sees that the next running event is #8 and enters that as he did before.

Step 5. Selecting semi-finalists: The head timer is now ready to time event #8 which will have four heats, with the first two from each heat advancing to the finals. It has been decided by the meet officials that four runners will be selected as alternates. The event proceeds smoothly with all raw times being printed for each heat. At the end of the event, the head timer presses the RECALL key and then the ENTER key. He steps through the RECALL menu until the display "Recall Results for (Semi) Finals" appears and presses ENTER. He answers the question as to number of qualifiers per heat, and number of extra times required and then presses ENTER. The tape shows the first two finishers from each heat followed by the next four fastest runners from the rest of the field. The head timer sets the TM II/TX for the next running event and takes a short break.

Detailed instructions for a track meet:

- Turn on machine. Clear memory if desired (see page 17).

- Press  or wait until starting display shifts to any of the following five timing

displays:

EVENT	HEAT	MODE:
1	1	track

EVENT	0.0
1	X-Country

EVENT	HEAT	MODE:
1	1	lap


EVENT	HEAT	MODE:
1	1	train

EVENT	HEAT	MODE:
1	1	swim


- If anything but the "track" display comes up, continue with the following steps:

- Press  until  appears, press .

- Press  until  appears, press .

-  appears. Now that you have the "track" display, or

if it came up when you turned on the Time Machine, press and momentarily hold

-  and you will see that the timer is set to zero. Turn the printer on and you are

ready to time the first running event. At the end of the event, the printer tape will display


all the times entered by the gripswitches. At this point, you need to stop the

clock by pressing and holding down the  key while pressing . You are

now ready to recall times for finish results. To get finish times properly rounded


up to the nearest tenth of a second, press  and 



appears. Press  and  appears. Press  and

the printer prints out the finish results, indicating any ties. Press  to return

the display  and you will notice that heat 2 is shown.

If you are going to another event, press  until 

shows. Press  and follow display instructions, entering event # for the next

running event (e.g. 5). Press  and TM II/TX shows 

You're ready for event #5.

Swim timing quick setup

To setup for a swim meet using training mode.

Note: These instructions guide the user in timing a swim meet using the Time Machine II/TX, without the special swim harness (cabling) or touch pads. No graphic instructions are provided. Previous TM II instructions detailed SWIM MODE setup.

Step 1. Setting up TM II/TX . The local "Y" is hosting a meet in a six lane pool. The TM II/TX will be located behind the center of the starting blocks (protected by a clear plastic bag if necessary). The LANE # key is pressed until "Program Lane#s: [MULTILANES]" shows. "ENTER" is pressed and the operator follows instructions to number the switches as follows:

Switch[1] = #1	Switch[6] = #4
Switch[2] = #2	Switch[7] = #4
Switch[3] = #2	Switch[8] = #5
Switch[4] = #3	Switch[9] = #5
Switch[5] = #3	Switch[10] = #6

Notice that the slowest seeded lanes (outside) have only one gripswitch each assigned while the remaining lanes have two. Using the TRAINING MODE, the times (as in the SWIM MODE) will be recorded to the nearest 1/100th of a second, and in the usual case of two different times per lane, final times are processed in accordance with NF/NCAA rules (same lane times of 24.41 and 24.45 are printed as taken, but when heat/events are recalled, the time will appear as 24.43)

Step 2. Setting up gripswitches. Using the multilane adapter, station the TM II/TX as far back from the center of the starting blocks as possible to avoid splashing. Use 14' gripswitches for the outside lanes and 7' gripswitches for the center lanes.

Step 3. Conduct of meet. The TM II/TX operator clears the memory (See Clearing Memory, page 17). This action resets the unit to event #1, heat #1. He then turns on the printer. Events may have single or multiple heats. For the multi-heat events, the heat times will be the final times for swimmers. As each heat is run, the printer is printing lap, split (for races over two lengths) and final times. At the end of each heat, press and hold the START TIME key while pressing the CLEAR key to stop the clock. Press the SET TIME key to get ready for timing the next heat. If a new event is next, the operator prints the heat/event results (see Step 4. next) then presses the SET UP key until "Setup Parameter: [EVENT NUMBER]" appears, presses the ENTER key and enters the new number.

Step 4. Printing heat/event results. At the end of each event (multi-heat or single heat), and before changing to next event number, the TM II/TX operator presses the RECALL key until "Recall Data: [FINISH RESULTS]" appears. He presses the ENTER key then RECALL key again to display "Recall Heat Result In: [LANE ORDER]or [PLACE ORDER]" or "Recall Overall Event Results". He chooses by pressing the ENTER key and the times for the heat/event are sorted and printed in the requested order. The operator then sets the TM II/TX for the next event, *making sure to skip the event # for diving.*

Clearing memory

Whenever the message "Warning, Event # Must Be Changed, Because Data In Memory Uses This #" appears, the operator must decide whether the old data in storage is necessary or can be erased. The operator can clear all of the data in memory or just a specific heat or event. A "Delete All Of The [DATA]..." process requires 5

precise steps which were designed to prevent accidental loss of timing data during conduct of a meet. In the following example, the display EVENT HEAT MODE: for track is shown, however the basic process is the same for any timing mode. To clear memory of all data:

- Press CLEAR to return to

EVENT	HEAT	MODE:
1	1	track

. Press MEM, keep key
- down while pressing CLEAR again. Press MEM until

Delete All Of The [DATA] From Mem

- shows and press ENTER. Press MEM until

Are You Sure? [YES]

 shows.
- Press ENTER and memory is cleared and heat and event are set to 1. You may,

of course, elect to delete just the last event or last heat from memory.

Multilane/place settings (track or swim mode)

When the LANE # key is pressed, a standard default setup and two additional choices are offered:

1. MULTILANES, this allows any grip switch/pad to lane combination.
2. DEFAULT, lanes numbered 1→10.
3. 10→1, lanes numbered in reverse.

For swimming: Setting will generally be either DEFAULT or 10→1, depending on which side of the pool the TM II is placed. To change lane number setup press LANE # key until desired display is shown and press ENTER key. For any number of lanes up to and including 10, the Time

Machine will allow for numbering either from the left or the right. You can also set up numbering to account for a pad or lane that is out of action.

For Lap Timing or Lap Training: Lane setting is accomplished as it is for swimming.

For track: The simplest setup is to assign lane/place #1 to gripswitches one and two, lane/place #2 to gripswitches three and four, and lanes/places #3 through #8 to gripswitches five through ten. To do this, press the LANE # button until the display "Program

Lane#s: [MULTILANES]" appears. Press ENTER and follow instructions on the display. If it is important to get three times on any one place, use three gripswitches and get the last place time(s) with a stopwatch. Apply masking tape to the gripswitches

and number the switches according to the multilane setup. This will prevent confusion and having timers pick up the wrong switch when they return from checking runner's names. To create a custom lane/place setup using the multilane feature:

• Press **LANE #** until **Program Chute#s [MULTILANES]** or **Program Lane#s [MULTILANES]** appears. Press **ENTER** and the display **Switch[1] = #1 Change It To → _** appears.

Enter the actual lane you wish switch number [1] to time and press **ENTER**. You will notice the display changes to number [2] and again asks what number you wish to change it to. Continue in this manner until the switches are numbered to your satisfaction.

• Review your changes by pressing **LANE #** to step through each switch assignment, then press **CLEAR** to return to the main timing display.

Counting up or down from a given time in cross country mode

When starting a race scheduled to start at exactly a given local time, or starting runners with a stopwatch synchronized to the time machine, it may be advantageous to use the SET TIME key

to set the TIME MACHINE to a time other than zero. The dictates of your particular race will tell you whether an up or a down count is best. To set an up or down count from a given time:

• With the clock stopped, press **SET TIME** and **Set Time Clock: H:M:S → 0** appears.

• Enter a time, let's say 10 seconds, press **ENTER** and **Select Count Direction: [UP]** appears. Press **SET TIME** again and you toggle to [Down]. Regardless of your choice, when you press **ENTER**, **Multiple Starts: # Of Starts →** appears. If you are using multiple starts you can enter the number of starts desired (up to nine) otherwise the default value is one.

• Assume no multiple starts, press **ENTER** and **CHT: 10.0 #00 st 0.00** or **Down Count Selected 10.0** (if you selected down count) appears.

• To start count up/down press **START TIME** or gripswitch connected to START IN/ LANE 1 port.