



DOWNHILL MOUNTAIN BIKE RACE TIMING

INTRODUCTION TO RACE TIMING

INSTRUCTION FOR USE OF TIMY SYSTEM

USE OF TIME.NET PC SOFTWARE

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ALGE Timing System



Downhill Racing - Marshal's Manual

1. Introduction

This manual is for use by Fat Tyre Flyers Personnel only, it covers the following topics:

- The component parts of the DOWNHILL RACE TIMING SYSTEM
- How to install the various timing components on site
- How to connect together the components of the timing system
- How to test each timing device
- Understanding the basics
- How to test the complete timing system
- How to use the system for race timing
- How to maintain the timing system
- How to import rider registration data from EXCEL
- How to use PC based software in conjunction with the timing device

This manual is NOT a general-purpose document, and does not seek to explain how to use the ALGE TIMY device and associated components in any way other than that specifically for the timing of DOWNHILL mountain biking races.

2. Description of System

Component parts that comprise the system:

- TIMY electronic stopwatch device
- STSnM1S Start Gate (with built in speech amplifier) and Wand
- STB1 Start Beep
- RLS1n Photocell with reflector (for finish line)
- SV4 Speech Amplifier
- Two sets of headphones
- 12V 7 ampere-hour battery pack and charger
- Red cable with DIN plugs for use with photocell and TIMY
- Two black cables with banana plugs

All the above is stored in a black plastic case, along with:

- Spare thermal paper rolls
- Spare 9V batteries
- Spare "C" Type batteries
- Phillips head screwdriver to change batteries in Start Beep and Start Gate
- Pliers and terminal screwdriver
- Gas powered soldering iron & gas canister
- Electrical tape
- Spare banana plugs
- A copy of this manual

Also stored separately are:

- Three reels of cable for "Top to bottom" signaling
- Stakes (star pickets) and guys etc for mounting of start gate and photo-cell
- Other miscellaneous items associated with the timing system and functions.
- A green carry-bag containing all necessary cables, powers-boards and extension leads

3. Description of System Parts

3.1. Start Gate

The Start Gate is used to send a pulse to the TIMY to indicate that a rider has started a run. It also has a built in speech amplifier that the start marshal utilizes for headphone communications to the timing marshal at the finish line.

The start gate must be mounted on a rigid wooden or steel (star) post that has guy wires to ensure it cannot twist or flex if necessary.

Tomato stakes must not be used, nor any other material that allows flexing or twisting to occur.

The Start Gate device is equipped with a chain lock that is strapped round the post and then tightened using a hand wheel. Ensure that the chain will not come loose or slip on any corners.

Screw in the wand after fitting the start gate device. Ensure that the wand is set at right angles to the direction of travel that the rider will take when he starts the run. This will ensure that the gate is opened correctly at each start.

NB : The gate will spring open when pushed beyond 15 degrees, and if setup correctly is virtually foolproof.

3.2. Start Beep

The Start Beep is used to audibly control the gap required between each rider.

The device should be mounted on a similar post (that not need be so robust) as the Start Gate post within easy reach of the Start Marshal.

The Start Beep has no function other than to provide an audible start signal to the rider in the gate. The TIMY will not begin timing until the rider has passed through the Start Gate.

Many riders like to lean on a post prior to “Snapping” out of the gate, ensure that a separate post is provided for this purpose and that the post is provided with a safety cap to avoid hand injury.

3.3. Photo Cell & Reflector

The photocell device is used to detect a rider crossing the finish line.

It consists of two parts:

- Transmitter
- Reflector

Both parts must be mounted on rigid wooden or steel posts. Vibrations must be minimized.

Vibration can cause false triggering and must be avoided to keep the timing task as simple as possible.

If rain, snow or hail is expected, it is recommended that a tent or cover be put over the finish line, photocell and reflector. Also, a dusty finish line can cause false triggering and must be managed.

Before setting up the photo cell, ensure the battery is serviceable, and then turn on the switch on the back of the transmitter.

The alignment of the transmitter and receiver is a relatively simple task, take care to ensure that the meter on the transmitter portion is at full range (green section) to ensure the best possible signal.

Once setup is complete, switch OFF the battery switch on the back of the transmitter.

NB : The internal battery should only be used if the beam is located remotely from the TIMY.

3.4. TIMY

The TIMY is an electronic device that should be placed on a stable surface in order that it may be operated without interference or confusion.

It is battery powered, but can be powered by any of the following sources:

- Internal re-chargeable batteries (limited time only – 30 minutes max with printer in use)
- External 240V power (with adaptor)
- 12V battery pack

Ensure that the cables to the TIMY are tidy and secure – the battery pack connector is particularly sensitive and if used, should be placed so that it cannot move.

Ensure that the operator has enough space to easily operate the TIMY without being cramped and also has enough space to refer to start lists.

We recommend that the timing area be provided with a tent and sides to avoid rain and sunshine distractions. A sign should also be provided to warn off riders who wish to approach the timing marshals.

NB : A quiet and distraction free environment is easily the most important item for a timing team to have after the system itself.

Do not allow any competitor to approach the timing marshal while racing is in progress.

Ensure that the TIMY operator has two “Spotters” to assist at the finish line.

Ensure that the start gate has a marshal, a rider queue organizer, and a first track marshal within sight of the start gate.

3.5. Large LED Information Display

The LED display is used to give spectators the following information:

- Race Plate (bib) number
- Running (or finished) time of that rider
- Current ranking (if rider is in top 5)

The device must be treated with care, never dropped, mounted securely and provided with a reliable power supply. The device is NOT waterproof and must therefore be provided with weather protection if necessary.

The display requires a 12VDC power supply.

The device receives data information from the TIMY via a 2 core cable. The display is designed to operate with a maximum cable length of 15 meters. If the display is to be mounted further away than this, the DRIVER PAIR must be used.

When power is applied to the display, it performs a self-check to indicate that all segments are functional. The user must observe this check to ensure full functionality of each digit and segment.

When the self-check is complete, the display will wait for information from the TIMY. If no information is received, the display will show dashes.

3.6. Driver Pair

If the display is to be mounted further than 15 meters from the TIMY, the driver pair must be used to extend the signal over the required distance.

The maximum distance with the driver pair is 1500 meters, assuming:

- Connecting cable is twisted pair
- Connecting cable is shielded

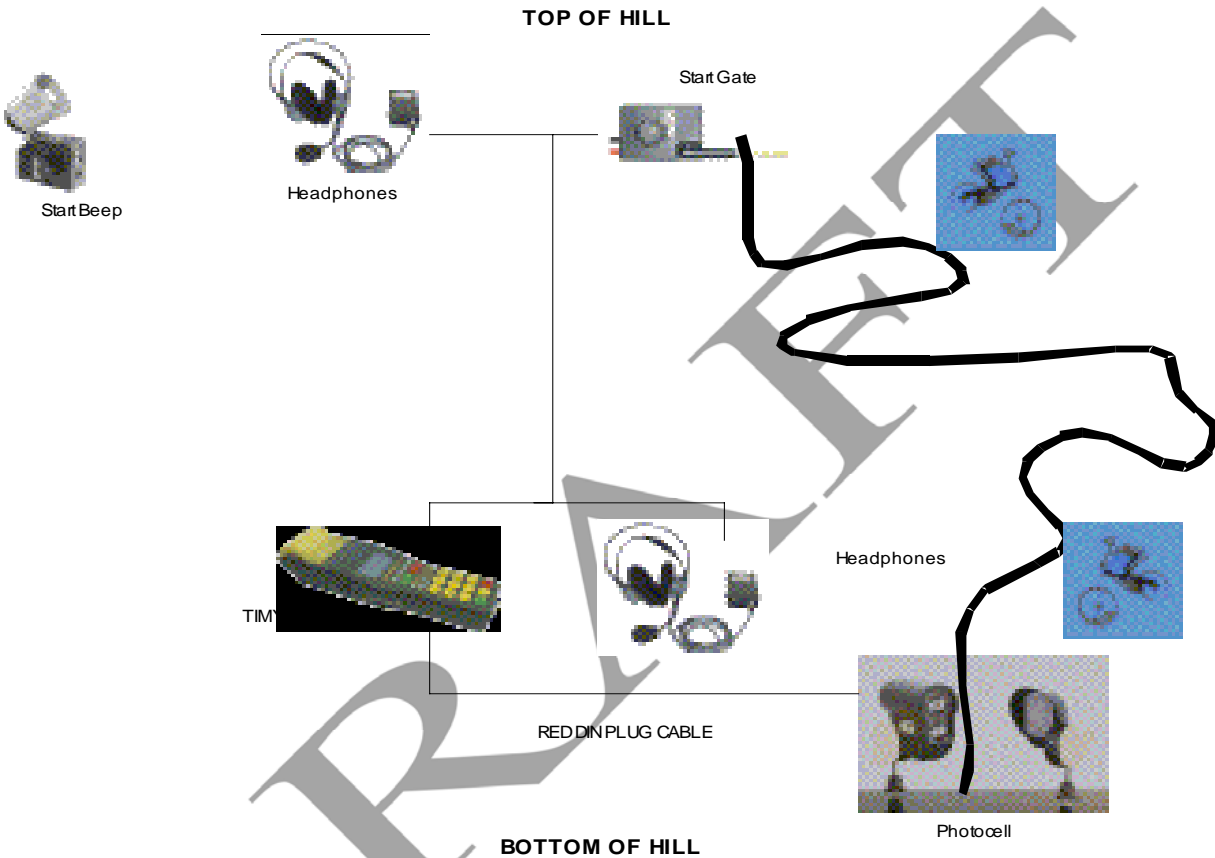
Each of the driver pair devices requires a 12V DC supply, this may be the same power supply that is used for the display (at the receive end) and the battery pack (at the transmit end).

Test the devices locally with a short length of cable before separating them by the length and height of a mountainside. The best way to do this is to wire the whole arrangement together with short lengths of cable.

Note : The kit has lots of such cables for this use, and there should always be spare cable and connectors available too.

4. Wiring the System Together

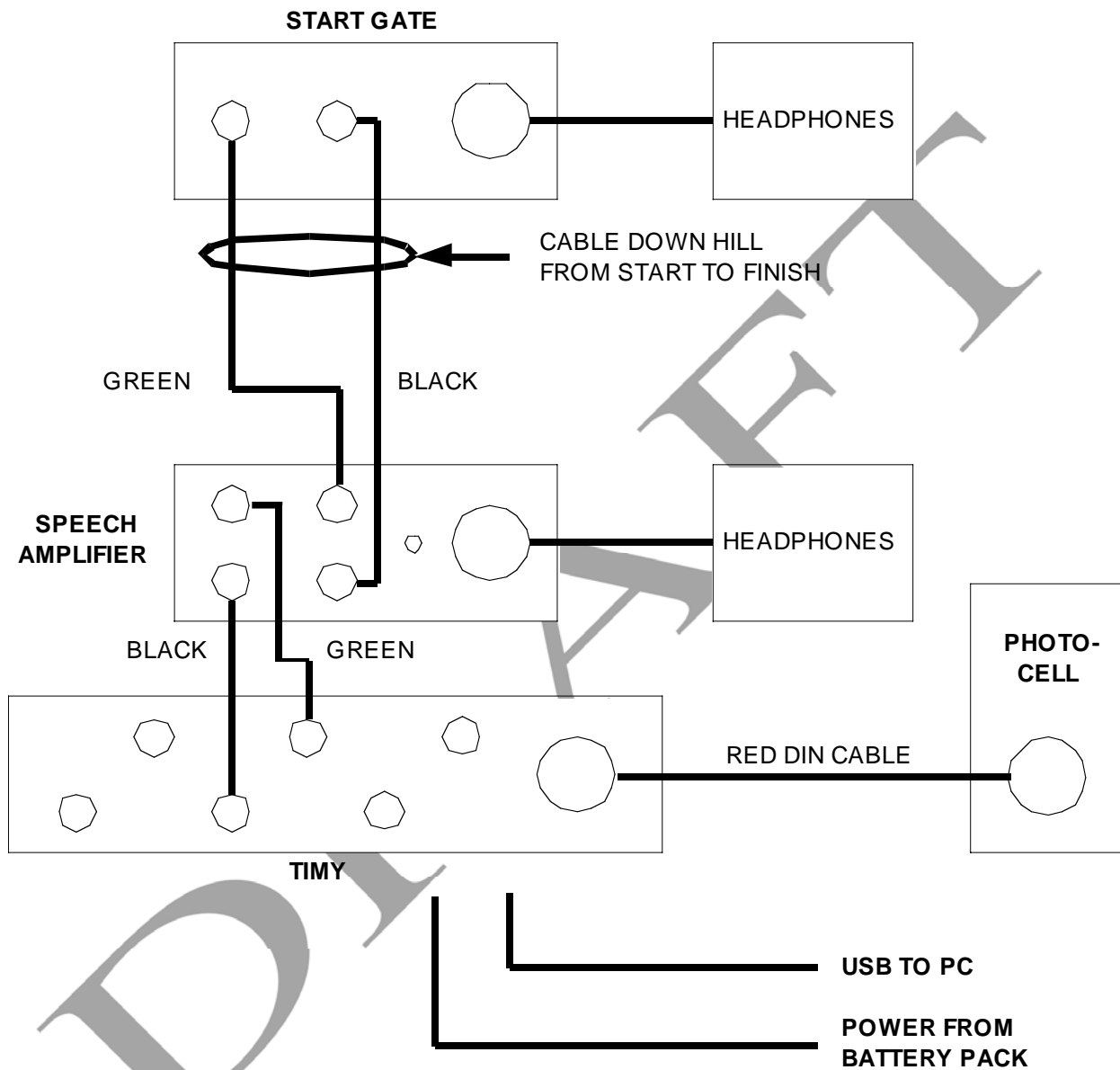
Once each item is mounted, the system may be placed as shown in the diagrams below:



4.1. Assembly Hints

- Do not leave the assembly and testing of the timing system until the last minute
- Always check all components are present before leaving home for the race (see 10 – Checklist)
- Always perform a test run with the system before starting the race, this can be combined with the “Sweep Run” by the riders representative.

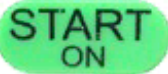
4.2. Wiring Connections



Note : Large display not shown

5. Testing the System Components

Once all cables are attached as shown above, it is necessary to test the components to ensure all features are functioning correctly.

- Turn on the TIMY by pressing the green START button : 
- Turn on the Speech Amplifier at the finish line, using the small toggle switch located in between the banana sockets and the DIN plug.
- Test the headsets between top and bottom and ensure sound is present and audible. Adjust volume on speech amplifier if necessary.
- If no sound, check connections, check polarity (i.e. are leads connected green to green and black to black), then check battery. Replace if necessary.
- Test Start Gate (open it) to ensure it is mechanically functional, and springs open as expected.
- Test Start Gate to ensure start signal is transmitted to TIMY (Beep)
- Test Photo Cell to ensure finish signal is transmitted to TIMY (Beep)

When you are satisfied that all items function correctly, you may proceed to the setup of the TIMY device settings.

6. TIMY Setup

This section does NOT assume that the user will be connecting a PC to the TIMY via the USB port.

- *The TIMY is a device that can provide a complete service for a race, including printed reports.*
- *The addition of PC and software simplifies the data entry and reporting process, and can also provide a “Real Time” display of ranking if required. The setup of the TIMY is identical whether a PC is used or not.*

Please also note that GREEN and RED are synonymous with START and STOP, and also with TOP and BOTTOM. Remembering this makes like a lot easier during normal operation.



Turns the device ON, and provides sync pulse during setup



Hold for 3 seconds to turn the TIMY off



Line Feed for the printer



Acts like a “SHIFT” key to get other functions.



Activates device MENU



Clears marked times or memory (in correct menu contexts) and acts as “Up one level” when in the menu



Cursor keys to navigate lists and select menu items

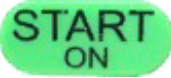


Confirms commands and rider BIB number at start gate,

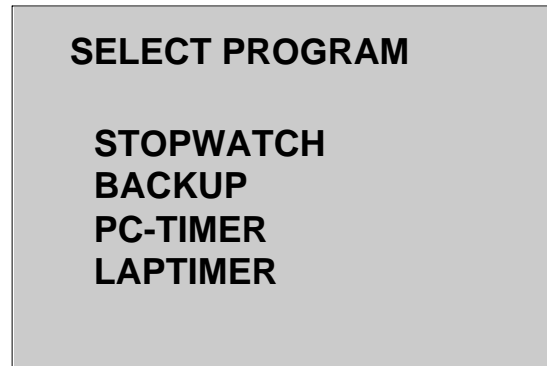


Confirms rider BIB number at finish gate.

6.1. Activating the TIMY Device

Press and hold the  button

Then press the  button when prompted. The display will now show:



Press the  button, and then press . Then press any key on the keypad.

Note : Pressing the clear button deletes all records from the device, DO NOT DO THIS IF YOU WISH TO RETAIN RECORDS FROM AN EARLIER EVENT!!

If the time and date are wrong, now is your opportunity to correct it. Note that the time and date are not critical for downhill timing, but it is advisable to set them correctly to avoid confusion later on during verification and when producing reports.

Enter the time using the keypad numbers in the method as indicated on the display.

When finished entering the time, press 

Then enter the date in the format indicated by the display.

When finished, press the  button again.

The display will now show:

SYNC-TIME

23:35:00 HH:MM:SS
07-11-05 YY:MM:DD
WAIT FOR
SYNC-IMPULSE

The “Sync Impulse” is only used when two or more TIMY devices are connected together and need to synchronize their clocks. In the case where only one TIMY is


used, users need simply press the  button to initialize the time and date of the device once all parameters have been checked and altered if necessary.

The display will now read:

START 1	FIN:	1 0:00:00
Memo Disq Focus →→→		

The system is now ready to begin timing.

6.2. Turning the TIMY OFF

To switch the TIMY off, simply press and hold the  button for 3 seconds.

Then press the  when prompted.

Turning off the device does not cause any settings or timing data to be lost. All data is held in FLASH memory, and will remain even if the internal battery runs completely flat.


6.3. **Setting Basic Parameters for the TIMY**

Before proceeding to the use of the system, we need to verify that certain parameters are set for use in downhill racing. These should only need to be set once, but their checking should form part of the start-up procedure prior to a race.



Press the  to display the menu

GENERAL MENU

Press the  arrow until GENERAL is highlighted. Then press 

Press  to display the menu for PRECISION and ROUNDING.

Select **PRECISION** and ensure that 100th of a second is selected.

Press the  to go back one screen, (or press ) and then select the **ROUNDING** using the arrow keys and the green OK.

Ensure **ROUND** is selected.

Then use the  arrow to go back to the GENERAL menu.

Using the methods outlined above, make sure the following settings are made to the TIMY:

CHANGE HEAT

Leave alone. We do not use heats for downhill.

STN-AUTOMATIC

START	:	Manually
FINISH	:	Manually
AUTOMATIC-TIME	:	AutoTime-Max

SEC-MODE

This must be set to NO to ensure all times are in minutes and second (not simply seconds)

LANGUGE

English - don't change, this can be very difficult to change back.

STANDARD

Activation of this option will re-set the TIMY back to factory defaults. Do not use unless absolutely necessary.

PROGS ON OFF

You can switch off programs to avoid confusion if so required. They can be switched back on again later. We only use STOP WATCH, but it is OK to leave all the others ON since only one program can be active at any time.

CHANNELS MENU

This menu allows settings to the device at a low level for pulse durations etc. Do not adjust these settings.

INTERNAL

DELAY START C0 (channel zero – start gate)

Set to 01.00 seconds (Start gate becomes re-active 1 second after each activation)

DELAY C1 to C8 (channels 1 to 8 – finish line)

Note : Only channel 1 is used for downhill racing

Set this delay to 0.15 seconds. This will allow pulses to be accepted from the photo-cell every 150 milliseconds.

BEEP

Leave the beep ON

TED-RX

Leave OFF

CHANNEL PATTERN

Do not adjust

DISPLAY MENU

DELAYTIME

Leave at 5 seconds

INTERFACE MENU

DISPLAYBOARD

Only for use with an ALGE proprietary display board

RS232

Only for use with other intelligent devices, ensure this is set to 2400 baud, do not change.

GSM MODEM

Can be used to transmit values between TIMYs and other ALGE devices via a cell phone modem. Do not change.

PRINTER MENU

PRINTER MODUS

Leave as PRINTER-ON during normal use. If you are running low on battery and/or printer paper, you can turn the printer off. However, it is highly recommended that the printer be active at all times during a race to enable the marshal to verify all events after a category (or whole race) has completed.

PRINT STARTTIME

Leave as PRI START ON

AUTO LINE FEED

Set as 1

START LOGO

Leave on so that you can see how well the ALGE logo is printed when the device starts up. If there are any problems with the print quality, maintenance may be required.

PRINT DAYTIME

Leave on so that the time of day is printed at start up.

PROGRAMS MENU

This menu allows a new program to be selected, and for all existing data to be deleted. Since downhill only uses the **STOPWATCH** program, there should never be a need to select any other.

This menu will however be used to delete any existing times in memory that are no longer required.

6.4. **RESET THE DEVICE AND CLEAR MEMORY**

To reset the device and clear the memory perform the following steps:



MENU



UP



UP



SELECT



CHANGE



SELECT (STOPWATCH)



CLEAR EVENTS FROM MEMORY



OR ANY OTHER KEY TO RETURN TO TIMING MODE

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7. DOWNHILL RACE TIMING CONCEPTS

7.1. Introduction

The system is easier to understand and use once the basic concepts of downhill racing and race timing are understood:

- Each rider must have a unique race plate number (bib).
- When a competitor begins a race, a START TIME is recorded against his number. This is displayed in “Real Time” (i.e. time of day) but the computer simply sees seconds and fraction of seconds.
- When a competitor crosses the finish line a FINISH TIME is recorded against his number.
- With both START and FINISH times recorded, a RACE TIME can be calculated by simply deducting one from the other.

This is the essence of downhill MTB timing.

The TIMY has inputs for both the START (C0) and FINISH (C1) lines, and can record and calculate many race times – more than enough for any downhill event.

Because the TIMY is (normally) located at the bottom of the race track, the operator (Race Marshal) can only see the contestants as they finish the race. However, there are a great many other things going on that may distract him and therefore he needs extra eyes and ears to help him accurately run the system. It is essential therefore that marshals and observers be assigned specific duties during a race., these are:

Start Marshal

It is the Start Marshal's task to ensure all riders are lined up in proper start order. It is also his task to ensure that the riders are sent at regular intervals once the track is clear and “live” in conjunction with Race Director.

If any track problems occur during the race, the Start Marshal will be advised by the Race Director that racing is paused, the start marshal must stop all queued riders from beginning their race run until the problem has been resolved and the track declared “live” again by the race director.

Queue Marshal

It is recommended that a second marshal be present to assist with the organization of riders before they reach the start gate. This leaves the gate marshal free to concentrate on ensuring the efficient start of each rider. *Many problems with timing in the past have arisen simply through false starts or other gate related issues, and many of these problems arose because the start marshal had too many things going on.*

First Track Marshal

The first track marshal is responsible for general safety observance and for stopping a rider if the gate was not triggered correctly when indicated to do so by the start marshal.

Observer 1 – Approach to Finish Line

The first observer “Spots” the rider plate number and records the finish order of the race for verification.

Observer 2 – Close to Finish Line

The second observer verifies the rider plate number and records the finish order of the race for verification.

DRY A F F F

7.2. RACE TIMING PROCEDURE

Start Gate

As each rider enters the start gate, the start marshal must advise the Timing Marshal:

“Rider ‘x’ in the gate”

The TIMY operator will enter bib ‘x’ into the TIMY and respond with,

“Prime rider ‘x’ ”

The Start Marshall will now count the rider down and instruct him to start. When the rider leaves the gate, the Start Marshal will say:

“Rider ‘x’ on track”

If the start is successful, the Timing Marshal will see this on the TIMY device and say:

“Roger Rider ‘x’ ”

The Timing Marshal thus confirms that a start signal was received from the Start Gate mechanism, and the race can continue.

If for any reason a start signal was not received at the TIMY when the rider exited the gate, the Timing Marshal will alert the Start Marshal by saying:

“Stop Rider ‘x’”

The Start Marshal will then signal to the first track marshal who will ask the rider to stop, walk back and start again. This can be done with a red flag or similar simple & reliable signaling system.

Finish Line

As each rider approaches the finish line, observers must identify the race plate (bib) number and tell the Timing Marshal. The Timing Marshall must then ensure that the number is entered in the TIMY ready for when the Photo-cell is broken.

A second observer should be used to confirm plate numbers, and to visually confirm which rider crosses the line first in the event of 2 or more riders finishing close together.

Both observers must keep a written record of the order in which riders finished. These records must be used by the Timing Marshal as a way of verifying the recorded times.

7.3. Things that can happen at a race that make life difficult

The following items are most commonly known to be issues that can occur:

- The start gate does not send a pulse when a rider leaves the start gate
- One rider passes another on the track, affecting the “natural” finishing order
- A rider crashes and does not complete the course (This is known as a Did Not Finish or DNF). *The timing marshal is responsible for maintaining a record of the start & finish status of all riders listed on the start list.*
- A rider is observed by track marshals breaking rules and is disqualified by the race director after having finished the race normally (The code for this is DSQ)
- Two or more riders approach the finish line at the same time
- Two or more riders cross the finish line at the same time

7.4. Technical issues that all timing marshals must be aware of

- Movement (generally rotation) of start gate, leading to missed trigger pulse
- False triggering of the finish line photo-cell due to vibration, rain, hail, sleet, snow or dust.
- Failure of the timing system central unit (TIMY) due to battery life or generator issues
- Large LED display failure
- Headset interference from generators
- PC software and printer issues

The Timing marshal (TIMY operator) must be fully aware of all these possibilities AT ALL TIMES DURING THE RACE and be prepared to ask the Race Director to pause the race in order to repair the fault.

Note : It is better to upset the few riders on course, than to risk upsetting all riders by producing a set of times that no one believes.

8. The Main Timing Screen

Users must familiarize themselves with the structure of this screen and the use of the function buttons before proceeding to use the system.

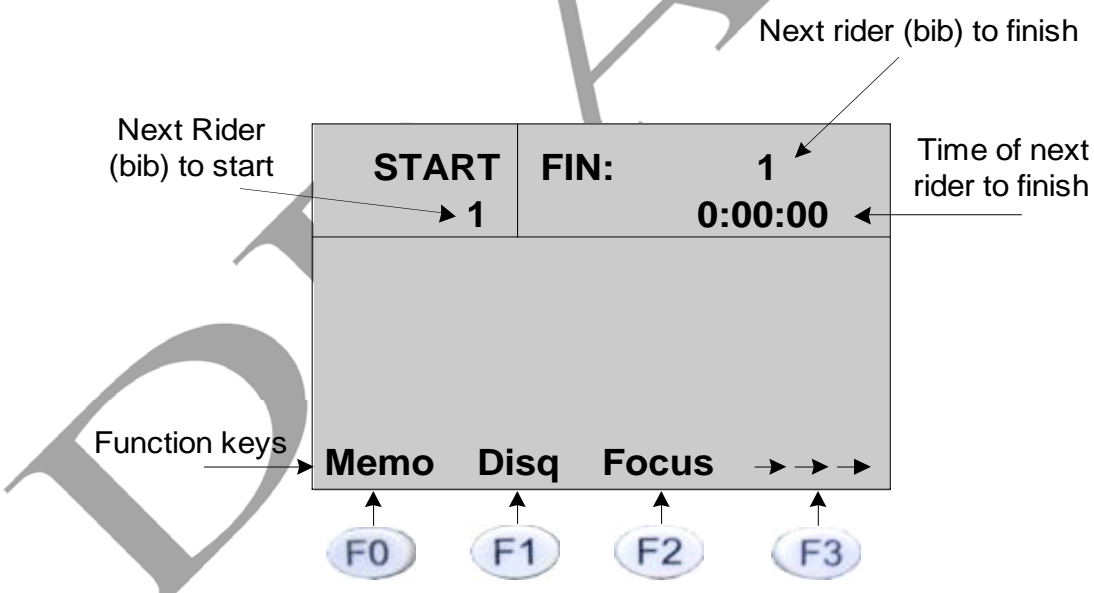
Note that in any screen the items at the bottom of the screen are accessed by the function keys:



These function keys (F1 to F4) are context sensitive and will therefore change their function dependant upon which menu the operator is in.


8.1. New Race

The screen shown below is of a new race, the TIMY is clear and has no events stored in memory:




The user can see that currently, rider 1 ("Bib" 1) is the next to start. Rider 1 is also indicated on the right hand side of the LCD as the next rider to finish.

8.2. Start

When a rider is to start, the user simply enters the number using the keypad, and then presses the  button to confirm.

8.3. Finish

As a rider approaches the finish line, the marshal must type the bib number on the keypad and then press the  button BEFORE THE RIDER CROSSES THE LINE.

This can lead to panic if the observers do not advise the Timing Marshal in time of the plate number(s).

There is another method of running the system that will be outlined in addition to the “Normal” method of operation. This alternative method is known as “MEMO Mode”

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9. Using the TIMY for Race Timing

9.1. Starting a rider

Say, for example bib 100 was entered as the next rider to start, the display would now show:

START 100	FIN: 1 0:00:00
Memo Disq Focus →→→	

When the rider starts, the gate will open and a pulse will be sent to the TIMY. The display will look something like the following:

START 100	FIN: 1 0:00:00
100	1:36
Memo Disq Focus →→→	

This screen indicates that rider 100 is on the track, and that he has been riding for 1 minute and 36 seconds.

The start marshal now places rider 101 (for example) in the gate, and advises the timing marshal ("Rider 101 in the gate"). The timing marshal enters this number into the device in the same way as before.

101



The rider then leaves the start gate and start his race run.

The display will now look something like this:

START 100	FIN:	1 0:00:00
100		2:03
101		0:35
Memo	Disq	Focus →→→

The Start Marshal and the Timing Marshal work together to ensure all riders are put into the gate in correct order, and that they generate start pulses from the gate.

9.2. Finish Line Protocol

After a number of riders are on the course, some will begin to approach the finish line, the Timing Marshal must now rely on his observers to accurately note the finish order.

It is recommended that the following procedure be followed:

- Observer A “Spots” rider approaching finishing line, and clearly announces the Bib Number, and writes it down.
- Observer B correlates Bib number, and notes finish order in writing. These lists are compared for verification purposes at the end of each category.
- Observer B is useful in regards to confirmation of actual finish order and as a check on observer A.
- Observer A should be positioned well before the finish line (say 20 to 30 meters) but close enough to be heard when announcing the bib number. Binoculars may be provided if desirable, and even a throat mic and a small PA would help if there is a lot of noise from wind, crowds, music or any other source.
- Observer B should be placed in line with (or close to) the Photo cell in order to be able to accurately assess which rider crossed the beam first. This observer must be able to be clearly heard by the Timing Marshal.


9.3. Example Finish

In our example, let us assume that riders 100 to 110 are the full complement of a category.

(Riders started in numerical order)

First rider to finish: 100

Observer A announces “100”, and writes this number down as being the first finisher in the category.

Timing Marshal enters 100  before the rider crosses the photocell.

Observer B verifies “100” and writes this number down as being the first finisher in the category.

The display will now look something like this *just before* rider 100 breaks the photocell beam at the finish line:

START 100	FIN: 100	3:34
100		3:34
101		2:56
102		1:59
Memo	Disq	Focus →→→

If a large display is connected, it will show rider 100's time as it increments one second at a time.

The screen will look like this after rider 100 breaks the beam:

START 100	FIN:	100 3:38.01
100 RTM		3:38.01
101		2:56
102		1:59
Memo	Disq	Focus →→→

Note that rider 100 is shown as having finished by the RTM (Runtime) tag beside the number, and the time now includes fractions of a second. (*Live times only show whole seconds*)

As each rider approaches the finish line, the Timing Marshal must be advised of the bib number so that he can enter it in the TIMY.

If a display is connected, this runtime time is shown until the next finishing rider number is entered on the TIMY.

9.4. Verification

When all riders have finished their run, the TIMY operator and both observers must compare results and agree that the finishing order is correct. Any adjustments to riders times may be made at this point.

9.5. Out of Race Order Finishes

When one rider overtakes another, the start & finish orders will be different, the marshals must be ready for this - and to be able to react quickly, calmly and smoothly. This only comes with practice, and mistakes WILL be made. However, good observers will ensure that no mistakes are irretrievable.

In the event that 2 (or more) riders approach the line together, the TIMY operator must be made aware as soon as possible so that he can switch to MEMO mode.

This should be done by the first observer announcing, "MEMO!", and then noting the finishing order.


Observer B should also announce MEMO, and also write down the finishing order at the line.

If the timing marshal cannot enter Memo mode before the riders cross the line, the times can still be edited later. See section 9.8 "Editing Race Times"

9.6. Memo Mode

This mode allows the TIMY to record finish times that have no rider (bib) number assigned to them. In effect, the times are written as a "Memo" and can be assigned later when there is less pressure.

NOTE : This is why it is so important that observers ensure they know and agree upon the finish order. Memo mode will not save a poorly organized race marshal or observers who do not perform well.

Memo mode is achieved simply by pressing  when in normal timing mode. Times will be recorded as below:

START	MEMO:	0
↑ 105		3:45:34
m	1C1M	3:52.65
m	2C1M	3:52.94
Enter	Copy	Exit

The display indicates that two riders crossed the line within 31 hundredths of a second of each other. These times are marked with a small “m” (memo) and consecutively numbered, “1C1M” indicates consecutive memo 1, Channel 1 (finish line), MEMO mode.


Once the riders have finished, the timing marshal should be told which rider was first and which was second (by observer B), he can then enter the bib numbers as follows:

Type the first rider number to cross the line (eg 105) then press




Then, type the second rider to cross the line (eg 104) then press



Then press  to invoke the “EXIT” command, and return to the normal timing display mode.

***** DO NOT FORGET TO RETURN TO NORMAL TIMING MODE!!! *****

9.7. Disqualification

The  function button *can* be used to disqualify a rider, but in downhill racing this function should be avoided during the race itself.

When a category’s riders have completed their race runs, the Race Director will decide if any riders are to be disqualified.

9.8. Editing Race Times

The TIMY allows the timing marshal to make changes to rider's times if necessary. The most likely example of this is when :

- The TIMY was NOT in Memo mode when the riders crossed the line
- Two riders cross the line close together
- The finish order is incorrect
- A time is recorded in the TIMY for which no bib has been allocated

Note : Because the editing may take up to a minute to complete, it is recommended that the Race Marshall wait until the category is complete before attempting any activity of this sort. Ask the start marshal to hold riders until all editing has been completed.

Example

Rider 4 crosses the line, the timing marshal had "4" waiting in the TIMY as the next finisher. This part of the process is correct and results in a good event.

However, another rider finishes immediately after rider 4, and there is not enough time for the timing marshal to enter the next number.


The printer will record the following:

0004	STM	15:06:01.97
	FTM	15:06:50.30
	RTM	0:48.33
?0004	FTM	15:06:52.24
	RTM	0:50.27

The TIMY allocates another finish time to the bib "4", and prepends a "?" to the number to alert the marshal to an un-allocated runtime. It also calculates a temporary runtime (RTM) to the number.

It is now up to the marshal to allocate this finish time (FTM) to a real rider number.

Let us assume that the second rider across the line was number 6.

Press the →→→ /  button to enter the time editing mode, the screen will now look like this:

START ↑ 105	Fin : 104 3:45:34
104 RTM 3:52.65	
Start	Finish RT →→→

Any of the rider's times can be altered from this screen:

The →→→ / **F3** button is used to go back to the normal timing screen.

To edit a finish time, press **F1**, the screen will look like this:

START ↑ 105	Fin : 104 3:45:34
Edit Start Time	
StNo:	101 ← Flashing
Enter	Exit

Enter the rider number (in this example, 6, and then press **OK**

Because the TIMY has not yet seen rider 6 finish, the display will show all zeros:

00:00:00.0000

And the first zero will be flashing.

The user now simply enters the finish time from the printer roll:

15:06:52.24 and then presses **OK**. Then press **F3**

The printer will record the changes:

0006	STM	15:06:07.20
i	FT	15:06.52.2400
	RT	0:45.04

The “I” character indicates to anyone reading the tally roll that this time was manually entered information, and must therefore be verified with the observers records.

Note : It is possible to change any of the times (Start, Finish & Run) using this method. We do not expect that a start time should ever need to be changed. Most problems will occur with finish times. Use this function if the MEMO key was not pressed when 2 riders crossed the line close together.

9.9. Using MEMO Mode as the “Normal” Method

As mentioned before, some timing marshals may prefer to use MEMO mode as the norm. However, the operator must still switch between memo and normal mode in order to enter new riders for starting.

This mode is good for ensuring all times are correctly allocated, but will take more time and use more printer paper (no big deal, paper is cheap – just make sure you have plenty of spare rolls).

It is a matter of personal preference, and how well the interaction works between the TIMY operator and the observers.

Note : Remember that when operating this way, not to let the Start Marshall allow any rider to leave the gate until you are back into Normal Mode and ready to receive the pulse.

9.10. Finish Time Allocation after Racing Has Finished

If things are hectic, it may be advisable to wait until the end of the category until changes are made to the TIMY's records.

Note: Every event (Start or finish) is recorded on the printer, and the entire event may be tracked from there (in conjunction with observers records) for verification.

Whenever the TIMY is in MEMO MODE, it will print a small "m" besides any event, to mark the fact that it is an unallocated time.

If the TIMY was not in Memo mode when multiple riders crossed the line, the printer will show a question mark before a number that has already been allocated.

Each memo is also given a consecutive number so that the Time Marshal may see which memo needs to be used when adjusting rider's times for simultaneous finishing. This number is also shown on the printer paper.

Each memo is deleted from memory after it has been used.

It is easier to edit times using memo mode than having to manually enter full finish times for a rider, it is also less prone to entry errors by the operator.



Whenever manually adjusting or correcting times ALWAYS refer to the written records of both observers and compare these to the printed record from the TIMY.

If this is not clear enough, use the CLASSEMENT (see 9.11 below) function to print all riders that have finished the race and compare this list to the observers verified lists.

9.11. **Print Race Reports – “CLASSEMENT”**

Classement allows a race to run and a report prepared *without the need for a PC*.



To use this function, press the  (menu) key. Then press the  key.

To print a range of riders' race times at an event (i.e. a category), press the down arrow  then press the  again.

The screen will now ask for a range of bib numbers. Use the numeric keys to enter the starting plate then push the green OK, and then repeat the process for the end of range.

For example, to get a report for all Elite riders, enter as follows:

1  99 

Then press  again (unless you need to enter multiple ranges), then press  again. The report will be printed.

9.12. Example of Printer Output

This example shows a race from start to finish, including Classement report:

Plate No. (Bib)	Start Time (STM)	Finish Time (FTM)	Race Time (RTM)	Notes by Timing Marshal (Based on advice from observers)	Edits to memos by Timing Marshal
0801	8-48-14.90	8-51-40.67	3-25.77		
0802	8-48-45.31	8-52-30.53	3-45.22		
0803	8-49-15.65	8-52-56.29	3-40.64		
0804	8-48-45.12	8-52-09.70	2-23.66		
0805	8-50-15.28	8-53-24.77	3-09.49		
0806	8-50-45.35	8-53-23.47	2-30.12		
0807	8-51-15.27	8-54-15.95	3-01.69		
Memo Mode Entries (2 riders approach finish)	1 C11	8-53-23.47			
	2 C11	8-53-24.77			

CLASSEMENT	
CLASS	RUNTIME
Nr	001 -> 007
1	0804 RTM 2-23.66
2	0805 RTM 2-30.12
3	0807 RTM 3-01.69
4	0806 RTM 3-09.49
5	0801 RTM 3-25.77
6	0803 RTM 3-40.64
7	0802 RTM 3-45.22

10. Categories, Qualifying & Runs

10.1. Discussion

It is important that the timing marshal clearly understands these items:

- What categories are there in the race?
- How many runs will each category have?
- Are the runs cumulative (i.e. the times add up)
- Are some runs for qualifying purposes?

In addition to these questions, the marshal must also be aware that if a PC and external LCD display is to be used (for ranking display purposes).

This manual only discusses the most common method of running a downhill race.

- Multiple categories (usually 12 or 13)
- Qualifying runs for 5 categories, in plate (bib) order
- Race run is slowest qualifier first

The PC and extra LCD screen is usually used, which means that the ranking is available for perusal by the riders at the finish line. The large LED display is for viewing by spectators although in certain circumstances this may serve both riders and spectators.

When connected to a PC and the TIME.net software application, the TIMY gives the timing marshal a sophisticated tool for start lists, finish lists and real time ranking.

10.2. Limitations of TIMY and TIME.net

However, users must be aware that the software was NOT designed for downhill racing, and is therefore not perfectly suited. Some features must be adjusted in order to use the application for downhill racing.

Note:

Both the TIMY and TIME.net add up the times from all heats for each rider – this is NOT what is required for downhill racing and must be avoided by special operation of the software.

Setting up the TIMY for heats is explained below.

10.3. Heats, TIMY and TIME.net








The TIMY allows for heats – but these heats are summed together to comprise a “Total Time”. This is usually NOT the way a downhill race is run, so users must be aware of this feature, and be able to work around it.

Heat 1 (Qualifying)

The marshal uses the TIMY in exactly the manner as outlined above.

Heat 2 (Final Run)

The user must perform the following keystrokes on the TIMY.

-  MENU
-  CHANGE
-  STOPWATCH
-  SAVE (Current runs)
-  SELECT NEXT HEAT
-  CONFIRM
-  START NUMBER (Use same rider [bib] number)

The TIMY is now ready to record a whole new set of times for the second run.

The first run should be the first “Heat”. The second run should be the second heat, for those categories that are specified to receive a second run.

This method ensures that every run for every rider will be stored in the TIMY. Thus, even if the PC were to fail, the times can be printed using the CLASSEMENT feature.

11. Check List

- TIMY device (fully charged)
- 240V power adaptor
- 12VDC battery with connectors
- USB cable for communications from TIMY to PC
- Spare USB cable
- At least 2 rolls of thermal printer paper for the TIMY

- Cable reels

- Start Gate & wand
- Finish Line Photocell transmitter
- Finish line photocell receiver
- Connector chains
- Start BEEP
- Communications interface
- Headsets (2 off)

- Spare batteries (C type and PP9)
- Tools
- Spare cable
- Spare connectors
- Electrical tape

- Copy of all software on CD and/or USB stick
- Copy of standard rider list on CD and/or USB stick

- PC (laptop) with all accessories
- Printer and USB converter (if necessary)
- Printer paper