



TIMEKEEPERS TRAINING COURSE



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TIMEKEEPING

1. INTRODUCTION

The systems used to measure the time swimmers take to cover the distance of an event vary from **manually operated digital stop watches** to the more modern **electronically operated automatic timing devices** and **video cameras**.

Timekeepers perform an indispensable function at any swimming gala. *The timing of a swimmer is the one aspect of the proceedings that is recorded for posterity. No one remembers what the referee or the judges did, but the timekeepers' work is preserved.* Reputations stand or fall by the times recorded, especially for outstanding performances, and they form the basis for a swimmer's future tactics and goals.

The same responsibilities and duties apply to Timekeepers at national, inter-provincial, league, age group, school trials, club championships and even club nights. The accuracy of the times recorded is as important to the swimmers finishing at the back of the field as it is to the winners and record breakers. These contestants normally accept that they cannot be winners but they set their own goals in possibly obtaining a certain position or achieving their personal best times.

In short, timekeepers perform an important role and have a very responsible part to play at all competitions

Timekeepers can add greatly to the smooth running of a gala if *they know what is expected of them* and also *have a good idea of what the other officials at a gala are doing* so that their respective duties can be coordinated. Knowing how you fit into the whole gala organization can make timekeeping interesting and can contribute to your enjoyment of a gala.

Swimmers make many sacrifices and work hard for their results. We therefore owe it to them to ensure that accurate times are achieved to cover their performances.



2. ROLE OF THE TIMEKEEPER

Timing is the Swimmer's measure of performance. The role of the Timekeeper is to *accurately determine the time it took each Swimmer to cover the distance of the event.*

Responsibilities of Timekeepers vary significantly depending on the type of timing equipment in use.

The **variety of duties** carried out by Timekeepers, depending on the **different systems utilised**, are detailed below:

Manual Watch Timekeeper - operates a hand-held digital stopwatch and is responsible for starting and stopping the watch.

Button Pusher - operates a button, which is part of the manual-electronic timing system. This Timekeeper is responsible for pushing the button at the finish only.

Head Lane Timekeeper – is responsible for *the timekeeping duties on an allocated lane, operates as a timekeeper, records all watch times on the lane, determines the official time of the swimmer and hands the timecard to the Assistant Chief or Chief Timekeeper.*

The Head Lane Timekeeper may assign one Timekeeper to take relay splits and intermediate times and also to report if a Swimmer *has missed the touch pad, has a light touch or any other irregularity*, which may occur on that lane.

Assistant Chief Timekeeper – manages the Timekeepers on one side of the pool by collecting and checking time cards after each race and attending to queries or problems that may occur on that side of the pool.

Chief Timekeeper - is in charge of all the Timekeepers, assigns Timekeepers to lanes, selecting one Timekeeper as the Head Lane Timekeeper, issues watches, programs etc. and coordinates the management of the timekeeping duties with the Assistant Chief Timekeeper.

At major galas the Organisers/Chief Timekeeper will try to arrange for three Timekeepers per lane in order that records may be recognized, even when an electronic timing device (ETD) is installed.



3. TIMING EQUIPMENT

FINA Rules and Regulations present a number of different types of timing systems and their primary and secondary uses.

An explanation of the approved systems used is presented below.

A. MANUAL TIMING

Manual timing requires the use of hand-held digital or dial stopwatches. Start and stop actions are performed by Timekeepers.

The **accuracy** of the times recorded depends on the **proficiency** of the respective Timekeepers and their **reflex actions** at the start and finish.

B. ELECTRONIC TIMING DEVICES (ETD)

The operation of electronic timing equipment shall be *under the control of appointed officials*. Times recorded by Automatic Equipment shall be used to determine the **winner, all placing and the time applicable to each lane**.

The placing and times so determined shall have precedence over the decisions of Timekeepers.

The **various electronically operated timing systems** utilised are detailed below:-

- 1) **Video Camera System** – is activated by the Starter's starting mechanism which achieves a common start to all lanes. It films at a minimum speed of 100 frames per second. **This equipment is utilised mainly for back-up purposes.**
- 2) **Semi-Automatic Timing (SAT)** - is activated by the Starter achieving a common start to all lanes. 'Finishes' are recorded by buttons pushed by Timers when each 'finish touch' of the Swimmers is observed.
The buttons are fitted to the end of a cable that is connected to the electronic timing equipment.
- 3) **Automatic Officiating Equipment (AOE)** - is started by the Starter's signal (starting mechanism, gun or horn) and is stopped at the finish as each Swimmer touches the pad.

Automatic timing equipment uses *pressure-sensitive panels or touchpads installed at the end of each lane*. The pads are connected to an electronic time and place-recording device. The Starter's *pistol or electronic horn* is also connected to the instrument and, when fired or



activated, starts the timing action. When the swimmer touches the pad, the timing action stops or in longer races, records the split time at any intermediate distance.

In the event that a breakdown of the automatic equipment occurs or that **it is clearly indicated that there has been a failure of the equipment**, or that a swimmer has failed to activate the Equipment, recordings of the Timekeepers shall be official.

Measurements Achieved with Automatic Timing Equipment.

- a) **Accurate placing and times measured to 1/100 of a second.**

NB: When timing to 1/1000 of a second is available, the third digit shall not be recorded or used to determine time or placement. **In the event of equal times, all swimmers who have recorded the same time at 1/100 of a second shall be accorded the same placing.**

- b) **Common and equal start to all lanes.** (Loud speakers, positioned at each starting platform and the timing equipment are activated simultaneously by the Starter.)
- c) **Detection of breaks at the start and with relay take-offs.**
- d) **Measurement of reflex reaction times at the start and with relay take-offs.**

NB: **Automatic take-off equipment** consists of a removable plate, fitted with a spring loaded trip switch with positive movement, and is positioned on the top of each starting platform. When the swimmer mounts the platform the spring and trip switch are depressed and as the swimmer's weight is lifted off the platform the trip switch opens and the time is recorded.

The measurements (**reaction time**) that can be measured when this '**Automatic take-off equipment**' is in operation are as follows;

- a) **At the start:** The time elapsed from when the Starter activates the automatic officiating equipment until the swimmers load is lifted off the platform.

NB: If a swimmer leaves the starting platform **faster than 0,1 of a second before the start** a 'false start' is declared as this is faster than the considered human reaction.



- b) **In relay take-offs:** The time elapsed from when the finishing swimmer touches the pad until the next swimmer's weight is lifted off the platform. **NB:** When this system is used a take-off time (break) of **minus 0,03 seconds** is allowed and the equipment takes **precedence** over the Stroke Judges and Inspectors of Turns.

NOTE: a) SAT times are generally 0.10 to 0.20 seconds slower than AOE times
b) Manual times are generally 0.10 seconds faster than AOE times.

4. PRIMARY AND BACK-UP TIMING SYSTEMS

A **Secondary Timing system** must be put into place to provide backup times in case the primary system malfunctions. FINA rules require that automatic officiating equipment be backed up by a secondary timing system. This is to ensure that the Swimmer will be provided with a time.

The **primary timing system** is either electronic equipment or manual watches from which the Swimmer's time will be recorded, unless that equipment has malfunctioned. *The minimum primary timing system should include three manual watches for each lane.*

The following **combinations of equipment and Officials** are utilized as **Primary and Back-up Timing Systems**. In all instances for primary and back-up timing purposes Finish Judges are used *when all lanes are not covered by three Timekeepers*.

a) **Automatic Officiating Equipment as Primary System.**

Back-up Systems:

- i. Video cameras filming at 100 frames per second minimum.
- ii. Semi-automatic timing equipment. (SAT)
- iii. Three Timekeepers with digital stopwatches per lane.

b) **Semi-automatic Timing Equipment as Primary System.**

Back-up Systems:

- i. Three Timekeepers with digital stopwatches per lane.
- ii. Finish Judges if all lanes are not covered by 3 Timekeepers.
- iii. Three Timekeepers per lane with reserve Timekeepers for back-up purposes.
- iv. Finish Judges used when less than three Timekeepers per lane are available.

5. FUNCTIONS OF A TIMEKEEPER

There are a few simple things that a timekeeper should attend to:



- i. Arrive in time (at least **30** minutes before starting time) and report to the Chief Timekeeper. Get allocated a lane and sign the duty register.
- ii. Bring a ballpoint pen. Rollerballs and pencils are not ideal on timecards if they happen to get wet.
- iii. Bring your own digital stopwatch if you prefer working it. You will get used to your own watch and will become more accurate with practice. Otherwise request a watch from the Chief Timekeeper and check that you know how it works.
- iv. Go to your allocated lane about five minutes before the gala starts so that the Chief Timekeeper can see you and know that you are at your post.

Information supplied to the Head Lane Timekeeper.

Depending on how the administration of the gala has been arranged the **supply of time cards/sheets** and the required information about the swimmers can occur in the following different ways.

- a) **A fully completed time card** will be received **from each swimmer** before each race.
- b) **When entries have been called for and a program has been pre-printed**, a *batch of timecards already filled in for all swimmers, who will be swimming in the lane*, will be supplied.
- c) In circumstances similar to b) above, **a copy of the program and a pack of blank time cards** are provided.
- d) At most galas these days, irrespective of the number of Timekeepers per lane and the use of automatic timing equipment, lane time sheets are used which give all relevant details of the events and swimmers for each lane. These time sheets are produced by the Meet Manager software, used by all Provinces and Clubs.

The Head Lane Timekeeper will *take appropriate actions according to the guidelines detailed below and depending on the system used to provide the information.*

- i) At the start of each race, check your swimmers name advise the Chief Timekeeper if a different swimmer appears for a race. The identity of the swimmer must be resolved before the start of the race.
- ii) Check that the swimmer has given you the right card – is it his/her card? Ask for his/her name. Is it the correct card for the next event? Check the program.



- iii) Be ready, on the instructions of the Chief Timekeeper, to amend your cards in line with any changes that have been approved after the cards were prepared.
- iv) Note the stroke and distance. This affects the end from which the race starts and you need to know how many lengths are to be swum so that you only stop your watch at the end of the race.
- v) *If a pack of blank cards and a program is provided*, fill out a card for each swimmer in your lane and blank cards marked 'No swimmer' as necessary. This is good reason to arrive at a gala with time to spare.
- vi) *If a batch of completed cards is received*, check through your pack of cards to see whether there is any missing.
- vii) Sign all your cards. This avoids delays between races.
- viii) Check that your pack is sorted in event and heat order number.
- ix) If your swimmer should be disqualified you must fill in the card as if nothing had happened. The referee will take whatever action is necessary.
- x) If your swimmer does not swim, draw 2 lines across the card and write 'NO SWIMMER' between the lines.
- xi) If your swimmer does not finish the race, then write *SWIMMER DID NOT FINISH*' on the card.
- xii) If your swimmers ask for their time you may tell them, provided you stress that it is an '**unofficial**' time. There are circumstances whereby a swimmer's recorded time could be altered.
- xiii) Be careful with the handling of the watch.
 - do not swing it at the end of the cord.
 - Hang it around your neck with the cord provided.

6. TIMING A SWIMMER



A. THE START (Concentrate - focus on the sound or flash - the greatest imprecision occurs at the start.)

- i) Zero your stopwatch
- ii) Position yourself so that you have a clear view of the starter, but try to be well back from the starting blocks.
- iii) Hold your watch so that the *hard part of your index finger's first joint* is on the start/stop button. (Don't use your thumb)
- iv) *Start your watch* on the **sound** or when you **see** the **flash/smoke** of the starting gun or **strobe light** when an ETD is used for starting.
- v) *Always start your watch*, even if you don't have a swimmer in your lane. A watch may fail on another lane and yours may be needed. Also, do not wander off if you have no swimmer, you may be needed.

B. DURING THE RACE

- i) Check that your watch is running. If you have a watch malfunction report it immediately to the Chief or Assistant Chief Timekeeper.
- ii) Count off the lengths as they are swum.
- iii) During the last length get into position for the finish – with your eyes in the plane of the end wall of the pool – and be careful not to obstruct the place judges' view of the numbers on the sides of the starting blocks.
- iv) For records to be recognised, three watches are needed and the Chief Timekeeper will either arrange for *three lane timekeepers*, or for the winning swimmer to be timed by **either two lane timekeepers plus himself**, or by *one lane timekeeper, the Assistant Chief Timekeeper and himself*. Or he may use *timekeepers from lanes without swimmers*.
- v) Do not coach or cheer swimmers during a race. Officials must be seen to be impartial.

C. THE FINISH

- i) Move to your timing position when your **swimmer** reaches the **15metre / false start rope**, BE CAREFUL NOT TO STAND ON THE TOP OF THE E.T.D PAD
- ii) When the swimmer touches the wall, stop the watch. Be very sure about this and do not anticipate a touch.
Hint: *watch the wall – do not watch the swimmers approaching.*
- iii) If an ETD 'back-up" button is being used, this is started by the electronic system but must be stopped by a timekeeper, exactly as with a hand-held stopwatch. The time will be recorded on the ETD print-out.
- iv) Step back from the pool edge immediately and return to your chair to record the time on your swimmers timecard. If there is more than one timekeeper, write down all the times.



Maximum of THREE times. Hold out your card for collection by the Chief or Assistant Chief Timekeeper.

(Returning to your chair 'clears the deck' for the referee, judges and chief timekeepers to get on with their jobs, as well as swimmers getting out of the pool, and other preparing for their race.)

- v) If your stopwatch does not stop at the end of a race, or you are aware that you did not time the swimmers accurately, advise the Chief or Assistant Chief Timekeeper.
- vi) Do not swing your arm as you press the start/stop button at the start or finish.
- vii) When required to take the time of the first, second or third swimmers i.e. when operating a Check Watch, you are required to *judge the finish* as well as *endeavor to take an accurate time*. In such instances ensure that you do not stand between two swimmers involved in a close finish.
- viii) Timekeepers should continually assess their performance by comparing their times with other Timekeepers on the lane.
 - eg; Times too fast. – too slow at the start.
 - Times too slow. – slow in stopping watch at the finish.

7. RECORDING A TIME

- i) If there is only **one timekeeper**, then the swimmers shall have this time recorded as their official time.
- ii) If there are **two timekeepers**, then **the average time** shall be recorded as the official time for the swimmer. The time should be **rounded up to the next slowest 1/100 second**.
- iii) If there are **three timekeepers**, then the '**middle**' time shall be recorded as the official time. If **two or three** of the watches **read the same**, then this shall be the official time.
- iv) Sometimes there are **more than three people who have timed a swimmer**. The *times of the three timekeepers allocated to the lane will be used* and all other times will be ignored.
 - If there are *less than three watches then the lane timekeepers plus others up to three*, as nominated by the Chief Timekeeper, shall be used and all these watches will be of equal status.
- v) Have your time card ready for collection by the Chief or Assistant Chief timekeeper – don't keep him/her waiting!
- vi) **DO NOT ZERO YOUR WATCH** *until you have been given the instruction to do so by the Chief Timekeeper*.
 - If, however, you do not hear the instruction and the referee blows the whistle, signalling the start of the next race, you may then zero your watch. You may also zero your watch after a false start.



8. ADJUSTMENT OF TIMES

When using three Timekeepers per lane the final time and place is determined by the time.

The **adjustment of times will only be necessary** when **Finish /Place Judges** are utilized. (when less than three watches are used on some or all lanes). This will be done by the Referee together with the Chief Timekeeper.

It is essential that the sequence of times agrees with the order of finishing as determined by the Referee.

Where the times and placing disagree then the **two swimmers whose times and placing differ will both be credited with the average of all their times** – but their *placing as determined by the Referee will stand.*

This is why it is necessary to advise any swimmers who enquire about their watch times that these are **'unofficial'**./

NB: a) Only the winner with an official time derived from the three times on the specific lane can claim a record. An adjusted time cannot be recognised.

b) The Administrative Referee or Recorders are required to draw the attention of the Referee to any discrepancy 0.30 seconds faster or slower than AOE times.

9. RECORDS

For the record to be recognized, **Automatic Officiating Equipment** or **three watches accurate to 1/100 of a second**, must record the times

To be accepted for record purposes each timing device must be **started at the starting signal** of the race and **stopped at the instant any part of the swimmers body contacts the finish wall.**

A Timekeeper may operate only one watch or push button, it is necessary to have three Timekeepers on each lane to enable records to be claimed.



When three watches are initiated at the starting signal and one stops during the race, the times from the other two watches by themselves are not sufficient for record purposes. Hence the need for reserve Timekeepers.

Requirements for Recognition of Records

- a) **World Records. FINA SW 12.6**
 - Automatic Officiating Equipment.
 - Semi-automatic Officiating Equipment, with 3 x buttons each operated by a separate Official, in the event of AOE failure.
 - b) **South African (Senior and Age Group) and Africa Records.**
 - Automatic Officiating Equipment.
 - Semi-automatic Officiating Equipment. (buttons operated by 3 separate Officials as above.)
 - Three digital watches each operated by a separate Official.
- NB: Officials must be registered with an affiliated member.**

10. INTERMEDIATE DISTANCES

You could be called upon to time a swimmer at some intermediate distance during a race. For example, a swimmer may ask the referee for an official 100m time during a 400m race. This can be allowed as the swimmer started with the starting signal for the race and **records can be recognized, provided the swimmer completes the race.** This could also apply to the first swimmer of a relay team.

11. OBSERVANCE OF MISDEMEANOURS

If you observe a swimmer breaking a swimming rule during a race, you as a timekeeper are to take **no action** either to report it to the judges (that is their work), or to discuss it with the swimmer (that is the referee's job). You time the swimmer as if nothing had happened.

NO SMOKING IS ALLOWED ON THE POOL DECK (FINA Rule: GR 9)



TIMEKEEPERS: PROFICIENCY LEVEL REQUIREMENTS

Level I:

- a. To be at least 16 years of age.
- b. Completed a 65 minute course on Timekeeping and obtained an 80% pass for the Course Worksheet.
- c. Verbal assessment and advice by an experienced Timekeeper (Level II minimum).

Level II:

- a. Qualified Level I Timekeeper with experience of 5 galas.
- b. Practical evaluation on pool deck by at least two experienced Timekeepers (Level II or higher) over two separate galas.
- c. Verbal assessment by an experienced Timekeeper (Level II minimum).

Level III:

- a. Qualified Level II Timekeeper with experience at ten Level II grade Galas.
- b. Verbal assessment and practical evaluation on pool deck by Chief or Assistance Chief Timekeeper.

Level IV:

- a. Qualified Level III Timekeeper with experience of at least two official International galas.