

## CHIEF JUDGE ELECTRONICS QUESTIONNAIRE

*On the answer form provided, please circle the true statement(s) or fill in the appropriate answer(s). There may be more than one true statement for each question.*

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1. Some of the responsibilities of the Chief Judge Electronics are to:
  - a. advise the Referee and/or Chief Finish Judge whenever the equipment malfunctions;
  - b. notify the Chief Finish Judge whenever backup times should be used in lieu of automatic results;
  - c. observe the final touches of all swimmers;
  - d. observe all touches to ensure they are properly recorded by the automatic system;
  - e. physically operate the system computer;
  - f. ensure that the equipment is located so that he can clearly observe all finishes;
  - g. ensure that the system is stopped manually for a lane if it fails to stop automatically, and so indicate to the CFJ;
  - h. ensure that the system is activated by the Starter's signal;
  - i. ensure that the system is started manually if it fails to start automatically, and so indicate to the CFJ;
  - j. ensure that the equipment is in good working order before the meet begins;
  - k. be fully familiar with all rules pertaining to electronics and the operation of the complete system.

### PART A - TECHNICAL OPERATION

2. In order to be approved by SNC, an automatic judging and timing system shall:
  - a. provide times for all swimmers to 100ths of a second;
  - b. provide place results for all swimmers;
  - c. include a hand-held starting device which may be a pistol;
  - d. include a hand-held starting device which has a visual signal for the timers;
  - e. have an automatic lap-counter for each lane;
  - f. provide a hard-copy of the results of each heat;
  - g. produce a starting signal simultaneously for all lanes;
  - h. have a display board for all swimmers to see their results.
3. If a touch-pad fails to respond immediately when touched by a swimmer, the operator shall:
  - a. stop the system for the lane(s) concerned and invalidate the times and places;
  - b. not interfere with the system but let it function normally;
  - c. manually activate the touch for the lane(s) concerned and note "light touch" on the print-out;
  - d. ignore the problem and let the Chief Finish Judge resolve it.

4. If a race has been successfully started but the automatic system has failed to activate, the operator shall:
  - a. manually activate the system and inform the Chief Finish Judge/Referee;
  - b. manually activate the system and inform no one;
  - c. set up the equipment for the next race and wait.
  
5. The touch-pads in SNC-approved automatic judging and timing system shall:
  - a. extend at least 60 cm below the surface of the water;
  - b. extend at least 30 cm above the surface of the water;
  - c. have a maximum thickness of 1.00 cm;
  - d. have a sensitivity which will respond to a relatively light touch but not react to water turbulence;
  - e. be marked so as to conform with the rest of the pool and have a minimum border width of 2.5 cm;
  - f. be safe from electrical shock and not have sharp edges.
  
6. SNC-approved manual-electronic judging and timing systems shall:
  - a. provide three separate manually-operated stop buttons (push-buttons) at the finish-end for each lane;
  - b. provide times to 100th of a second;
  - c. be acceptable as a backup system provided it is independent, electrically and electronically, from the primary system;
  - d. be activated by the Head Lane Timer in each lane;
  - e. be activated by the Starter for all lanes;
  - f. be used as a primary system if satisfactory backup system is provided.

#### PART B - RULES APPLICATION

7. When automatic judging and timing systems are in use:
  - a. the places and times determined by the system shall be official, unless they are invalidated by the Referee or Chief Finish Judge;
  - b. times shall be recorded to 100ths, even if 1000ths are provided;
  - c. swimmers whose times are tied to 100ths shall be placed according to the manual backup times;
  - d. there shall also be a full complement of timers or another form of backup system;
  - e. only one timer per lane is satisfactory as a backup timing system;
  - f. a malfunction of the system shall require the race to be stopped and swum again.
  
8. It is accepted practice that an identified discrepancy of 0.30 seconds or more between the automatic and backup (manual) times for a lane shall:
  - a. be an indication of a possible "light touch" or equipment malfunction;
  - b. cause the Referee to order a re-swim;
  - c. cause the Chief Judge Electronics to stop the meet and check the touch-pads;

- d. cause the Chief Finish Judge to review both the automatic and backup places and times.
9. Two or more swimmers with good automatic times that are identical to 100ths of a second shall:
- a. be placed according to their order of finish as determined by the automatic system;
  - b. be declared tied;
  - c. be placed according to the automatic 1000ths of a second if these are available;
  - d. be placed according to the manual backup times;
10. When working with automatic judging and timing systems, it is possible to have:
- a. valid automatic times but invalid automatic places;
  - b. valid automatic places but invalid automatic times;
  - c. swimmers tied from different heats;
  - d. swimmers tied from the same heat;
  - e. automatic places and times invalidated by the Referee or Chief Finish Judge.

### PART C

11. Electrical Operators shall:
- a. operate or assist in the operation of any SNC approved automatic judging and timing equipment;
  - b. have authority over Chief Judge Electronics;
  - c. have the automatic timing equipment positioned anywhere with a view of the finish of the race;
  - d. have the automatic timing equipment positioned near the end of the pool in line with the finish;
  - e. be any person competent to run the equipment.

## CHIEF JUDGE ELECTRONICS ANSWER SHEET

*Please circle the true statement(s) or fill in the appropriate answer(s). There may be more than one true statement for each question.*

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