International Sports Timing
PRODUCT SPECIFICATIONS
SWIMWARE Numeric Scoreboards

Introduction

The International Sports Timing SWIMWARE Numeric Scoreboards are solid state electronics, providing a low maintenance, durable, and attractive display. When connected to an IBM-compatible computer running TIMEWARE Timing System Software, our scoreboards display a running clock, cumulative splits, finish times and diving scores. Using POLOWARE Water Polo Software, the board displays the game clock, period, shot clock, exclusion clock and team scores. For more information on our software, see the software specification. SWIMWARE Numeric Scoreboards have a five year warranty.

I. Single-line Score Boards
   - A. Physical
     1. One 10 character, numeric display, including 2 characters for lane, 2 characters for place and 6 characters for time plus colon and period.
     2. Overall size is 8' 6" in length by 12" in height by 4" deep.
     3. Total weight is 45 pounds.
     4. Case consists of an aluminum extrusion coated with a matte black epoxy finish.
     5. Lens is transparent red, 1/8" shatterproof, non-glare Plexiglas which is easily removed from the front of the board.
   - B. Electrical
     1. All SWIMWARE Scoreboards must be connected to GFI (Ground Fault Interrupt) 110V 5 amp (min.) outlets. The outlet should be within 6' of the upper right corner of the board.
     2. Load requirement: .4 Amps.
     3. Connection to Computer Interface is via RS485 communications protocol over 2 wire, twisted pair with 4-conductor RJ11 connectors.
     4. All electronic devices are protected against corrosion
   - C. Display
     1. Characters are 6 1/2" high by 4 1/2" wide.
     2. Each character is formed by a 7-segment matrix of dots, 7 high by 5 wide. Each dot is formed by a cluster of 4 Light Emitting Diodes (LED's).
     3. The color of the LED's is red. The LED's are guaranteed by the manufacturer for 50,000 hours of operation.
   - D. Environmental
     1. The operating temperature range is 0 to +55 degrees Celsius.
     2. The storage temperature range is -55 to +85 degrees Celsius.
     3. The operating humidity is <= 90% non-condensing.
   - E. Operating Features for Swimming Events
     1. During a race, the right side of the board displays a running clock to a second.
     2. As the first finisher touches the pad, the board will display the place (preceded by a "P"), the lane (preceded by an "L") and the finish time to 1/100th of a second. This display will remain for 1-9 seconds (user selectable), or until another finish is registered and displayed. This will continue until all finishes have been displayed.

F. Operating Features for Diving Events
   1. At the beginning of a dive, the diver's number is displayed on the left side and the current score on the right side.
   2. At the completion of the dive, the score for that dive is displayed on the right side.

G. Operating Features with IST's POLOWARE Software
   1. The line displays the period preceded by a "P" on the left side and the game clock on the right side.

Multi-line Score Boards

A. Physical
   1. One 10 character, numeric display, including 2 characters for lane, 2 characters for place and 6 characters for time plus colon and period for each lane of the pool.
   2. Overall size is 8' 6" wide by 4" deep. Height of boards is as follows:

6 lane board	6' high
8 lane board	8' high
10 lane board	10' high

   3. Total weight is approximately 45 pounds x (number of 10 character lines).
   4. Case for each line consists of an aluminum extrusion coated with a matte black epoxy finish. Cases are notched to fit together as they stack to form multi-lane boards.
   5. Lens for each line is transparent red, non-glare, 1/8" shatterproof Plexiglas which is easily removed from the front of the board.

B. Electrical
   1. All SWIMWARE Scoreboards must be connected to GFI (Ground Fault Interrupt) 110V 5 amp (min.) outlets. The outlet should be within 6' of the upper right corner of the board.
   2. Load requirement:

6 lane board	2.8 Amps
8 lane board	3.6 Amps
10 lane board	4.4 Amps

   3. Connection to Computer Interface is via RS485 communications protocol over 2 wire, twisted pair with 4-conductor RJ11 connectors.
   4. All electronic devices are protected against corrosion

C. Display
   1. Characters are 6 1/2" high by 4 1/2" wide.
   2. Each character is formed by a 7-segment matrix of dots, 5 high by 7 wide. Each dot is formed by a cluster of 4 Light Emitting Diodes (LED's).
   3. The color of the LED's is red. The LED's are guaranteed by the manufacturer for 100,000 hours of operation.

D. Environmental
   1. The operating temperature range is 0 to +55 degrees Celsius.
   2. The storage temperature range is -55 to +85 degrees Celsius.
   3. The operating humidity is <= 90% non-condensing.

E. Operating Features for Swimming Events
   1. At the start of the race, the running clock to a second is displayed on the right side of the Lane 1 line.
   4. At the first pad hit in a lane, that line will display the cumulative time to 1/100th of a second on the right side.
   5. As subsequent pad hits occur, the cumulative time is incremented. On the Lane 1 line, the cumulative time is displayed for 7 seconds, then the running clock resumes.

6. As the first finisher touches the pad, that line will display the lane number preceded by an “L”, the place preceded by a “P” and the finish time to 1/100th of a second. This will continue for each lane until all finishes are displayed.

F. Operating Features for Diving Events
   1. At the beginning of a dive, the diver’s number is displayed on the left side and the current score on the right side of the first line.
   2. At the completion of the dive, the score for that dive is displayed on the right side of the second line and the new total on the third line.

G. Operating Features with IST’s POLOWARE Software
   1. The first lane line displays the period preceded by a “P” on the left side and the game clock on the right side.
   3. The third lane line displays “S” and the shot clock on the left side.
   4. The fourth lane line displays “E” and the exclusion clock on the left side.
   5. The fifth lane line displays “H” and the home team score on the right side
   6. The sixth lane line displays “G” and the guest team score on the right side.

Multi-line Score Boards with Scrolling Message Line

A. Physical
   1. Option 1: One 16 character, alpha-numeric display capable of displaying fixed or alternating messages, or scrolling any message up to 1000 characters in length PLUS One 10 character, numeric display, including 2 characters for lane, 2 characters for place and 6 characters for time plus colon and period for each lane of the pool (eg. for a six lane pool, the board would have 7 lines: 1 message line plus 6 lane lines).
   2. Option 2: A “short” board with 1 message line plus half the number of lane lines, which would alternate lane information (eg. for a six lane pool, the board would have 4 lines: 1 message line plus 3 lane lines that would alternate data for lanes 1-3 and 4-6).
   3. Overall size is 8' 6" wide by 4" deep. Height of boards is as follows:

6 lane board	7' high
8 lane board	9' high
10 lane board	11' high

      NOTE: The addition of an option team logo panel adds one foot to the total height.
   3. Total weight is approximately 45 pounds x (total number of lines).
   4. Case for each line consists of an aluminum extrusion coated with a matte black epoxy finish. Cases are notched to fit together as they stack to form multi-lane boards.
   5. Lens for each line is transparent red, non-glare, 1/8" shatterproof Plexiglas which is easily removed from the front of the board.

B. Electrical
   1. All SWIMWARE Scoreboards must be connected to GFI (Ground Fault Interrupt) 110V 5 amp (min.) outlets. The outlet should be within 6' of the upper right corner of the board.
   2. Load requirement:

6 lane board	2.8 Amps
8 lane board	3.6 Amps
10 lane board	4.4 Amps

   3. Connection to Computer Interface is via RS485 communications protocol over 2 wire, twisted pair with 4-conductor RJ11 connectors.
   4. All electronic devices are protected against corrosion

C. Display
   1. Characters are 6 1/2" high by 4 1/2" wide.

2. Each character is formed by a 7-segment matrix of dots, 5 high by 7 wide. Each dot is formed by a cluster of 4 Light Emitting Diodes (LED's).
3. The color of the LED's is red. The LED's are guaranteed by the manufacturer for 100,000 hours of operation.

D. Environmental
1. The operating temperature range is 0 to +55 degrees Celsius.
2. The storage temperature range is -55 to +85 degrees Celsius.
3. The operating humidity is <= 90% non-condensing.

E. Operating Features for Swimming Events
1. Before a race, the display scrolls the event name and number; heat number and total number of heats on the message line. If meet management software is used, the scrolling line can also scroll the swimmers' lanes, team codes, first initials and last names. For relays, the team code is displayed instead of swimmer names.
2. When the timing system is armed, the scoreboard will display E# H# for heat and event numbers on the left side of the message line and "QUIET" on the right side of the line, giving the referee a visual confirmation that the race can begin.
3. At the start of the race, the running clock replaces QUIET on the scrolling line.
4. At the first pad hit in a lane, that line will display the cumulative time to 1/100th of a second on the right side.
5. As subsequent pad hits occur, the cumulative time is incremented.
6. As the first finisher touches the pad, that line will display the lane number preceded by an "L", the place preceded by a "P" and the finish time to 1/100th of a second. This will continue for each lane until all finishes are displayed.
7. After the last lane is finished, the scrolling line will display the order of finish by lane number.
8. When not in use for timing, the scoreboard message line can be used to display one 16 character fixed message, alternate two 16 character fixed messages, or scroll a message up to 1000 characters in length.

F. Operating Features for Diving Events
1. The round number and diver's number (and name, if available) is displayed on the message line
2. At the beginning of a dive, the diver's number is displayed on the left side and the current score on the right side of the first line.
3. At the completion of the dive, the score for that dive is displayed on the right side of the second line and the new total on the third line.

G. Operating Features with IST's POLOWARE Software
1. The first lane line displays the period preceded by a "P" on the left side and the game clock on the right side.
3. The third lane line displays "S" and the shot clock on the left side.
4. The fourth lane line displays "E" and the exclusion clock on the left side.
5. The fifth lane line displays "H" and the home team score on the right side
6. The sixth lane line displays "G" and the guest team score on the right side.
7. The scrolling message line can be used to scroll any 1000 character message during the match.