

# INTERVAL™ 2000 SPLIT+RATE WATCH



### BUTTONS:

[HOLD] the button to perform [bracketed] functions (printed on the label in yellow).

**TC** (top center) **RATE [STORE]-ON [OFF]**

**TR** (top right) **START/STOP**

**TL** (top left) **SPLIT [CLEAR]**

**FL** (front left) **LAP/CUM [NEXT SEG]**

**FR** (front right) **RECALL [EXIT RECALL]**

### WINDOWS:

- 1 SPLIT TIME:** Displays either:
  - a) "LAP": Lap split - time between the last two presses of **TL** ... OR
  - b) "CUM": Cumulative split - elapsed time when **TL** was pressed.
 LAP/CUM can be switched at any time
- 2 RUNNING TIME:** Cumulative elapsed time.
- 3 RATE:** Rate of frequency of a cyclical event (rowing stroke, swimming stroke, stride, etc.) displayed in number of cycles per minute or number of seconds per cycle. Rate base (1, 2 or 3) indicator.
- 4 MEMORY COUNTER:** 0 to 999. If memory count is above 999, counter will roll over to 0.

### PHYSICAL:

- **DISPLAY BACKLIGHT:** Activates automatically in low light with every button press and stays on for 2.5 seconds.
- **PROTECTIVE COVER:** Protects watch from shock and scratches. **Reverse to protect the display when not in use.** Available in a choice of blue, red, green, yellow, gray or purple (order additional covers from NK or your supplier).
- **WATERPROOF and FLOATS:** Waterproof to 2 meters.

## SUMMARY OF FEATURES

With the Interval 2000, you can:

- Store up to 2000 data points in memory.
- Store multiple workouts or races in "segmented" memory, identified by date and time.
- Create up to 675 segments (depending on the number of splits stored in each segment).
- Take and view splits and rates without changing modes or screens.
- Take rates over 1, 2 or 3 cycles.
- Display rates as cycles per minute or seconds per cycle.
- Store rates in memory with the elapsed time at which they were taken.
- Clear data from one segment at a time or from all segments at once.

- View built-in clock and calendar.
- Time events in low light with automatically activated backlight.

And, with the optional computer interface and software, you can:

- Upload all memory data to a PC.
- Organize memory data by event, date and athlete.
- Assign athlete names to splits.
- Calculate speed and distance per stroke (when timing over a known distance).

To make the most of all of these advanced features, please read these instructions carefully.

**Like all NK products the Interval is WATERPROOF and FLOATS.**

## \*\*PLEASE READ! \*\* ABOUT THE INTERVAL'S RATE FUNCTIONS

**TAKING A RATE:** The Interval's rate feature allows you to measure the frequency of a repetitive event such as a rowing stroke, swimming stroke or running stride. To take a rate, press the rate button **TC** in sync with the cycle to be measured, such as when an oar or hand enters the water or foot strikes the ground. The Interval calculates the rate based on the time between the most recent two presses of the rate button. When you press **TC** repeatedly, the rate display updates each press based on the time between the two most recent presses of **TC**.

**RATE OPTIONS:** The Interval offers three rate function options - **rate base**, **rate display** and **rate storage**. These options allow you to use your watch in the manner best suited to your sport and coaching preferences. Please go to "SETUP" to set your rate options after reading this section.

**RATE BASE:** The "rate base" is the number of cycles (strokes, strides, etc.) you will count when taking a rate. (\*\* NOTE \*\* Changing the rate base will not change the rate measured, only how many cycles you count.) Your choices are BASE 1, 2 or 3:

- **BASE 1:** Rate base 1 lets you take rate measurements quickly, but sacrifices some accuracy. You can improve your accuracy by pressing **TC** repeatedly in time with the cycle.
- **BASE 2:** Rate base 2 offers higher accuracy than rate base 1, but still allows you to take multiple rates rapidly. Rate base 2 is also useful for measuring the armstroke/footfall frequency of bilateral movements. (Selecting rate base 2, then press **TC** every cycle. The displayed rate will be the armstroke/footfall rate.)

- **BASE 3:** Rate base 3 yields the most accurate rate measurements.

**RATE DISPLAY:** You may display rate frequency as either **cycles per minute** (resolution of 1/2 cycle per minute) or **seconds per cycle** (resolution of 1/100th of a second).

**RATE MEMORY:** Rates are stored in the Interval's memory with a "time-stamp" (to a resolution of 1 second) indicating when the rate was taken. You may either store all rates taken (faster, but fills the memory quickly), or only selected rates. To store a rate in store selected mode ("SEL"), hold **TC** down on the second press of the rate-taking cycle until the watch beeps (about 1.5 seconds).

### OTHER INFORMATION:

- If you pause 10 seconds or more between rate measurements, the internal rate timer automatically zeroes. The lowest rates which can be measured are:
 

<b>Rate Base 1</b>	6 /min	(9.99 sec/cycle)
<b>Rate Base 2</b>	12/min	(4.50 sec/cycle)
<b>Rate Base 3</b>	18/min	(2.25 sec/cycle)
- If you pause less than 10 seconds between rate measurements, the internal rate timer will not rezero, and the rate value shown with the first press of **TC** will be based on the pause length, not an actual cycle length. The rate shown with the next press of **TC** will be correct.
- The Interval's 1-stroke mode differs from both the 1-stroke and the "AUTO" mode on the NK Chronostroke: The Interval's 1-stroke mode updates the stroke rate with every press of **TC** but does NOT average multiple stroke cycles. It is not necessary to manually rezero the stroke rate timer on the Interval.

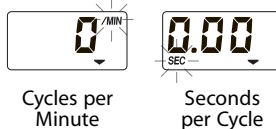
## SETUP

**\*\* IMPORTANT! \*\*** Select your rate preferences and set the date and time BEFORE using the Interval. The Interval is set to **Rate Base 1, Strokes/Minute** and **Store Selected Rate** when shipped.

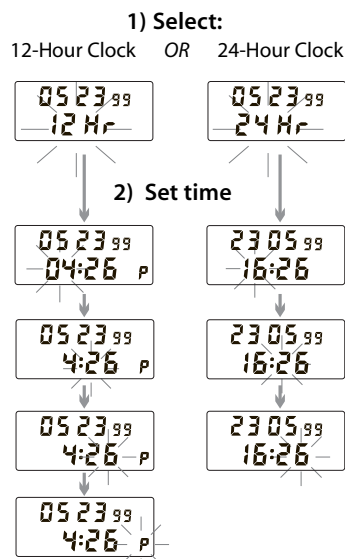
- 1) Press **TC** to turn on the watch.
- 2) To enter setup, press and hold **FL** and **FR** together until the watch beeps and the rate base arrow begins flashing.
- 3) Press **FR** to change the flashing item.
- 4) Press **FL** to select the item to be changed (rate base, rate display, ratememory, time and date).
- 5) To exit setup, press and hold **FL** until the watch beeps.



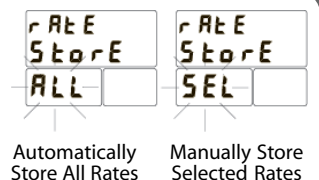
### RATE DISPLAY



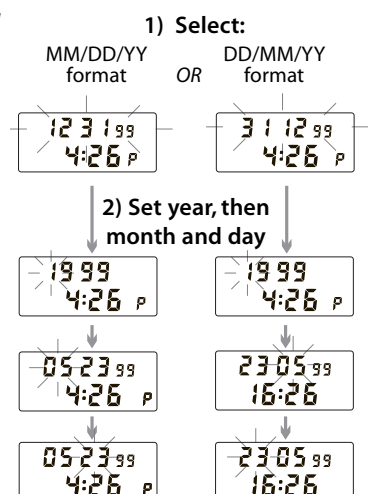
### TIME



### RATE MEMORY



### DATE



## OPERATION

### TO TIME AN EVENT

- 1) Press **TC** to turn on the watch.
- 2) Press **TR** to start the timer.
- 3) Press **TL** to store a split.
- 4) Press **FL** to change between "LAP" and "CUM" display in **[1]**. In "LAP" display, the lap split (the time between the last two presses of **TL**) will be displayed for **8 seconds**, after which the lap split time will start to run again (starting from 0:00'08"00). In "CUM" display, the cumulative split time will be displayed until the next split is stored. **You can change between lap and cum at any time.**
- 5) Press **TR** to stop the timer. The finish time and last lap split will be stored in memory.

**\*\* NOTE \*\*** When the timer is stopped, then restarted, the stop/restart times will NOT be stored. The split time will be the same as if the timer was not stopped.

### TO TIME ANOTHER EVENT (CREATE A NEW SEGMENT)

To time another event, you may either **CREATE A NEW SEGMENT** or **CLEAR THE CURRENT SEGMENT** (see "To Clear Data"). Creating a new segment will preserve the data from the event you have just completed.

- 1) Press **TR** to stop the timer, then press and hold **FL** until the watch beeps to create a new segment. The next segment number will show in **[4]** and the other windows will show 0's.
- 2) Follow steps 2 through 6 of "TO TIME AN EVENT" to time a new event and store the times in Segment 2.
- 3) Repeat steps 1 and 2 to create and use new segments as desired.

### TO TAKE RATES

**PLEASE READ "ABOUT THE INTERVAL'S RATE FUNCTIONS" BEFORE USING YOUR INTERVAL TO MEASURE RATE.**

- 1) Press **TC** at a clear point in the cycle to be measured (blade or hand entering the water, footfall, etc.)
- 2) Press **TC** again at the same point in the cycle after the number of cycles you have selected as your rate base:



- 3) The rate will be displayed in **[3]**.

### TO STORE RATES

- 1) In STORE SEL mode, hold **TC** on the **second press** of the rate-taking cycle until the watch beeps (about 1.5 seconds).
- 2) In STORE ALL mode, simply take rates as outlined in steps 1 and 2 of "TO TAKE RATES" above. EVERY rate taken will be stored in memory.

#### \*\* NOTES \*\*

- Rates stored in memory are numbered separately from splits – split 1, split 2, split 3, rate 1, rate 2, split 4, etc. This ensures that the split and rate numbering will remain consistent with the actual laps.
- You cannot store rates when the timer is stopped but you can still take rates.
- If you pause less than 10 seconds between taking two rates, the Interval will calculate a rate based on the the pause length rather than the cycle length. In STORE ALL mode, this rate will also be stored in memory. Ignore these rates when recalling memory.

### TO RECALL DATA

You may recall data when the timer is running ("on the fly") or when the timer is stopped. **The timer continues to run internally when recalling on the fly.** When recalling on the fly, you may only review the segment currently being timed. As you recall data the split number OR

the rate number will be displayed in **[4]**.

- 1) **Recall on the fly**
  - a) Press **FR** to begin memory recall. The most recent stored data will be displayed first. Splits will be displayed in **[1]** and stored rates will be displayed in **[3]** with the rate time stamp (no hundredths) shown in **[1]**. The split or rate number will show in **[4]**. Each additional press of **FR** will step through the stored splits and rates *in reverse order*, i.e. split 5 – rate 4 – split 4 – rate 3 – split 3 – rate 2 – split 2 – rate 1 – split 1.
  - b) Press **FL** to toggle between lap and cum display of the split shown in **[1]**.
  - c) Press and hold **FR** to exit recall **OR**
  - d) Press ANY top button (**TL**, **TC** or **TR**) to exit recall **AND** perform the usual function of that button (store split, stop, take rate, etc.).

- 2) **Recall with timer stopped**

- a) Press **FR** to begin memory recall. The splits and rates from the *current segment* will be displayed, starting with the segment date and time, followed by the first split or rate. The lap split will be displayed in **[1]** and the cum split in **[2]**. The split or rate number will show in **[4]**. You will see the following screens displayed as you continue to press **FR**:

Segment Number with Date and Time Started

Stored Splits, Numbered in Order

Stored Rates, with Time Stamp, Numbered in Order

Total Time for Segment (Same as Stop Time)

Best (Fastest) Split Time and Number

Average of all Split Times for that Segment

Total Used Memory (of 2000) for all Segments

- b) Press **FL** to choose another segment to recall.
- c) Press and hold **FR** to exit recall.

### TO CLEAR DATA

- 1) **To clear the current segment**, press and hold **TL** for approximately 1 seconds. The watch give one short and one long beep at which point "CLEAR SEG" will be replaced by "CLEAR ALL" on the display. **Release TL** to avoid clearing all data. The watch display will show all 0's and you may store new times in that segment. You must wait until after the first long beep to release **TL** to clear the segment.
- 2) **To clear a different segment**, press **FR** to enter recall mode, then **FL** to select the segment you wish to clear. Then follow step 1 to clear that segment. If you have lots of data stored in the watch, the display will flash "BUSY" while it reorganizes the data. The display will show all 0's and the next available segment number in **[4]**. You may now store times in the new segment OR re-enter memory recall to select a different segment to clear.

**\*\* NOTE \*\*** When you have multiple segments stored in your watch and you clear an interim segment, the segments stored after the cleared segment will "drop down" to replace the cleared segment. For example, if you delete Segment 5, Segment 6 will move to the Segment 5 position, Segment 7 will move to the Segment 6 position, etc. New data will be stored in the next available segment number.

- 3) **To clear all data from all segments**, follow step 1 above but CONTINUE holding **TL** after the first long beep and "CLEAR ALL" appears on the display for approximately 3 MORE seconds (6 seconds total). The watch will beep quickly 4 more times then give one long beep and show all 0's and "SEG 1" in **[4]**. You may release **TL** at any time before the final long beep to avoid clearing all data in memory.

### TO DISPLAY DATE AND TIME

Press **FL** and **FR** together to display the current date and time for 5 seconds.

### TO ACTIVATE THE BACKLIGHT

The backlight will be activated automatically with every button press in low light conditions and will stay on for 2.5 seconds. To activate the backlight without storing a split or stopping the timer, you can press **TC** or **FL**.

**\*\* NOTE \*\*** The backlit display will be clearest when the top is tilted slightly away from you. Please keep this in mind if mounting your watch on a fixed surface.

### TO TURN THE INTERVAL OFF

Press and hold **TC** to turn the Interval off. To preserve battery life, the Interval will also turn itself off after 20 minutes of no activity (timer stopped, no button presses) or 10 hours of running unattended (timer running, no button presses). All memory data will be preserved and the watch will return to the state it was in when it was turned off.

**\*\* NOTE \*\*** You must exit the setting routine before you can turn the Interval off with **TC**.

### TO CHANGE THE BATTERY

When the Interval's display grows dim, the watch battery needs to be changed. All memory data will be lost when you change the battery, so be sure to record or upload your data when you notice the display growing dim.

The Interval uses two CR2032 lithium cells, commonly available where watch batteries are sold. The batteries are stacked one on top of the other in the battery compartment. The "top" battery (closer to the battery door) runs the backlight, the "bottom" battery (closer to the circuit board) runs the watch functions.

- 1) Open the battery compartment with a coin and tap the back of the watch on your palm to remove the batteries.
- 2) Change the affected battery. As batteries are not very expensive, we recommend you change both batteries. **\*\* NOTE \*\*** You can use a functioning backlight battery to power the watch temporarily by switching the positions of the batteries.

### WARRANTY

The Interval is guaranteed against defects in materials and workmanship for one year from the date of purchase. The provisions of this warranty do not apply to batteries or products which have been subjected to misuse, negligence, accident, alteration or improper maintenance or repair.

Please call 610-447-1555 or e-mail support@nkhome.com with problems. You will also find technical information online at www.nkhome.com.

# NK

**NIELSEN-KELLERMAN**

104 West 15<sup>th</sup> St. Chester, PA 19013  
(610) 447-1555 · fax (610) 447-1577  
www.nkhome.com

