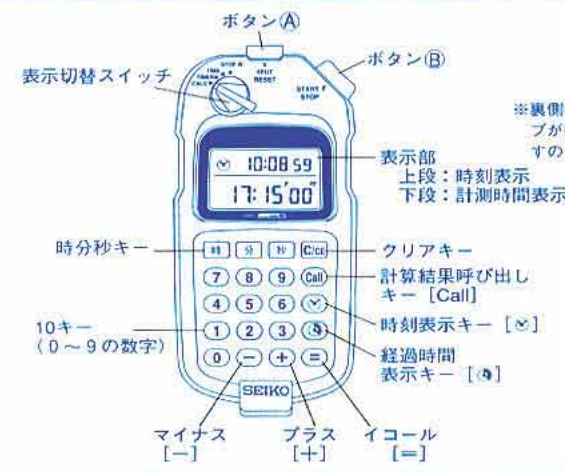
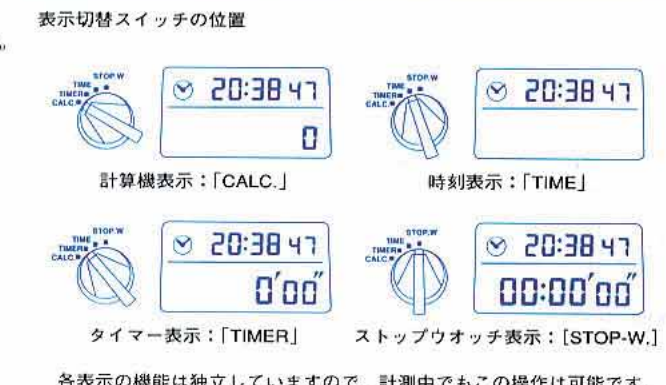


SEIKO セイコーストップウォッチ サウンドプロデューサー 取扱説明書 INSTRUCTION S351 このたびはセイコーストップウォッチサウンドプロデューサーをお買い上げいただきありがとうございます。

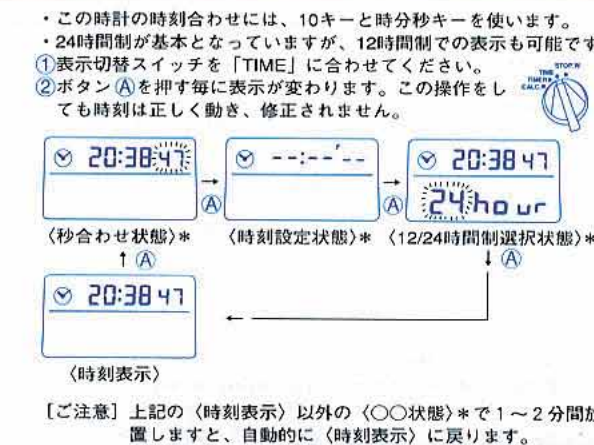
- この時計は、放送業務などを中心とした時間計測機能(タイマー・ストップウォッチ)のほかに、60進法の数値をそのまま入力・計算できる計算機能をもっています。
1. 10キーと時分秒キー入力により、60進法の時間数値の加算・減算計算ができます。
2. タイマーは、1秒単位で最大99時間59分59秒の設定が可能です。



この時計は使用用途別に4つの表示をもっています。それらの表示へは、表示切替スイッチで切り替えます。
表示切替スイッチの位置
計算機表示: 「CALC.」
時刻表示: 「TIME」



時刻表示の点灯・消灯を選択できます。
時刻表示を除いた「計算機表示」「タイマー表示」「ストップウォッチ表示」においては、パネル上段の時刻表示の点灯と消灯が選択できます。
時刻表示以外のどの表示においても、この選択は有効です。



全国共通フリーダイヤル 0120-612-911

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セイコーウォッチ株式会社 本社 〒105-8467 東京都港区虎ノ門 2-8-10 http://www.seiko-watch.co.jp/

- 時刻設定状態で10キーと時分秒キーを使って時刻を合わせます。
(例) 「午前10時」に合わせる場合。
キーの操作: [1] [0] [時] [0] [分] [0] [秒]
以下は省略可能です。
または、 [1] [0] [0] [0] [0] [0]

【ご注意】
設定時刻が「23:59 59」を越えた場合は、〈時刻設定状態〉に戻ります。
「分」と「秒」桁に「60」以上の数値を入力した場合は、ボタンBを押したとき「時」または「分」桁上りします。
12時間制を選択してある場合、設定時刻を12時間制の数値に置き換え、スタートしますのでご注意ください。

- 秒合わせのしかた (30秒以内の置換・進みの修正は簡単にできます)
ふだんのご使用では秒だけを合わせ直すことが多いと思います。
そんなときは、この操作で簡単に秒合わせができます。
12/24時間制の切り替えのしかた
放送業務では、24時間制を中心に時刻を扱うため、この時計も24時間制を基本と考えています。

【ご注意】
秒表示が30〜59秒の時ボタンBを押すと「分」が1分くり上がり、「0」秒に合います。
30秒以上の修正の場合は、時刻の合わせが必要です。
ボタンBを押すと自動的に〈時刻表示〉になります。

【ご注意】
2つの入力方法があります。
10キーのみで数値を入れる方法
0~9のキーのみを使って入力する方法です。
比較的少ない数値を入れるときに便利です。

- 【ご注意】
数値の入力の前に [C/CE] キーを押して表示を「0」にしてください。
これらの方法は数値入力途中では併用できませんのでご注意ください。
「タイマー表示」や「ストップウォッチ表示」における最初のセットでも同じ方法による入力となります。

入力方法の詳細説明
表示切替スイッチを「CALC.」に合わせます。
10キーのみによる入力
電卓のように上の桁から順番に、数値のない桁は「0」を入れていく方法です。

- 【ご注意】
数値を間違えて入力してしまった場合は、[C/CE] キーを押して最初から入力してください。
60分または60秒以上の数値が入力された場合、数値入力終了し、[+] [-] [=] キーが入力されると桁上げ処理が実行されます。
この時、「」マークが点灯します。

【ご注意】
数値を間違えて入力してしまった場合は、[C/CE] キーを押して最初から入力してください。
「時」[分] [秒]には3桁以上は入りません。最初の数値を3桁以上入力すると、時分秒キーが無効になり自動的に「10キーのみ入力」になります。

【ご注意】
このように計算を実行するキーを押す前には[C/CE] キーは有効です。
しかし、計算が実行されてからは、元へは戻しませんので、[C/CE] キーを押し、最初からつづいて「3分25秒」の数値から入力してください。

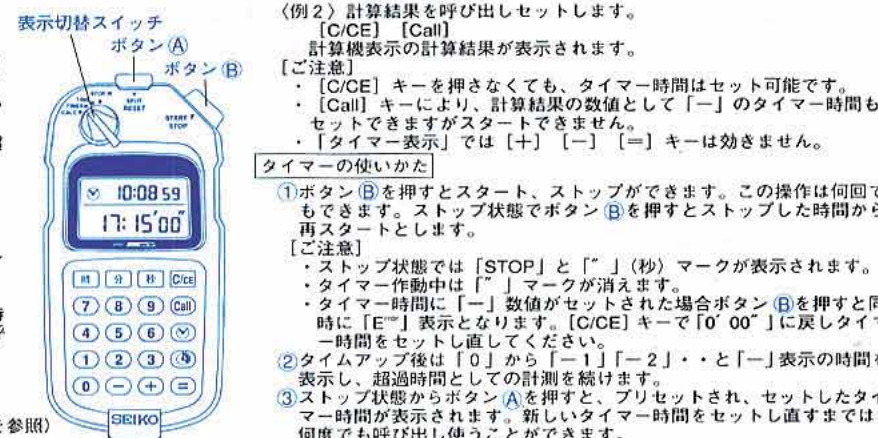
【ご注意】
このように計算を実行するキーを押す前には[C/CE] キーは有効です。
しかし、計算が実行されてからは、元へは戻しませんので、[C/CE] キーを押し、最初からつづいて「3分25秒」の数値から入力してください。

【ご注意】
計算結果がでていない場合、つまり数値入力だけでは、[Call] キーで呼び出すことはできません。このときは、その前の計算結果が呼び出されるので、数値をよくご確認ください。

【ご注意】
計算結果が「E」になった場合は、その前の計算結果も含めてメモリーから消えてしまいますので、[Call] キーによる呼び出しは「0」秒になります。

タイマーの使いかた [TIMER]

- この計算結果のメモリーは、次の計算結果がでて、あるいは計算結果が「E」となるまでは、記憶し続けられます。
メモリーの記憶内容は、計算機表示において見ることができます。
計算結果のメモリーを [C/CE] キーで消すことはできません。



【ご注意】
プリセットしてから [C/CE] キーを押すとそのまま記憶しているタイマー時間は消え、プリセットしても「00'00」になります。
スタートしてから最大100時間は計測表示します。
よってタイマー時間に「5分」をセットして計測し続けた場合、スタートから100時間経過した時に、「-99:55'分00''」の表示で自動的にストップになります。

ストップウォッチの使いかた [STOP-W.]

【ご注意】
1秒単位で最大99時間59分59秒まで計測することができます。以降は「0」に戻り計測を続けます。
通常の「0」秒からの計測以外に、一秒単位で99時間59分59秒までの任意の時間からのスタートが可能です。

【ご注意】
ストップ状態では [STOP] と「」(秒) マークが点灯します。
計測中は「」マークが消えます。
スプリット状態では、「SPLIT」と「」マークが点灯します。

電池についてのお願いとご注意

電池交換
この時計は、新しい正常な電池を組み込んだ場合、その後約3年動作します。
電池寿命切れの電池をそのまま長時間放置しますと、漏液などで故障の原因になりますので、お早めに交換してください。

液晶パネルの交換

この時計の(液晶パネル)は7年が過ぎますと、コントラストが低下したり、数字が読みにくくなります。お買い上げ店に交換をお申し付けください。

お取扱いにあたって

防水
この時計は、10キーを持つ構造上、時計基準では非防水となります。雨天使用程度のみ防水は防ぎます。

長くご愛用いただくために

温度
この時計は、常温(5℃~35℃の範囲)の時に安定した精度が得られるように調整してあります。

製品仕様

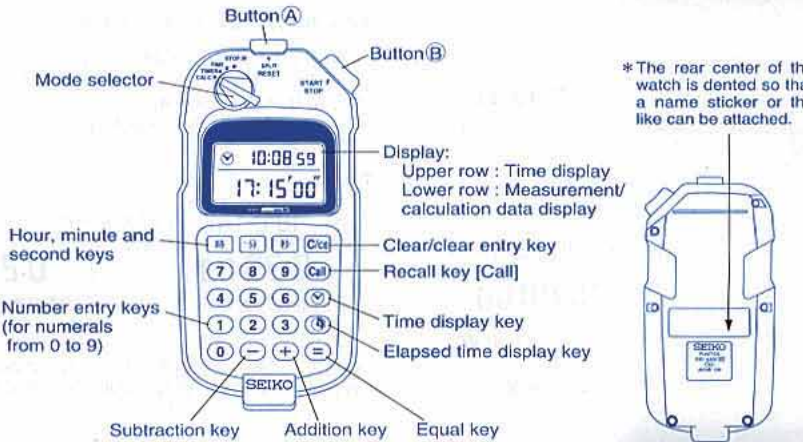
水素振動数・・・32,768 Hz (Hz=1秒間の振動数)
時間精度・・・常温(5℃~35℃)において±0.0006%以内 月差換算±15秒以内

保証について

保証期間内に、取扱説明書にそった正常なご使用状態で、万一故障した場合には、保証書を添えてお買い上げ店にお持ちください。保証内容は、保証書に記載したとおりです。

## ■ FEATURES

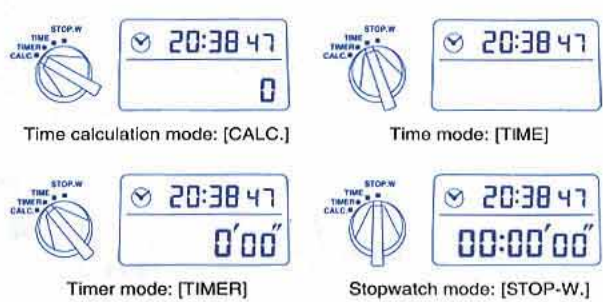
- The SEIKO Cal. S351 features timer and stopwatch functions designed for broadcasting use. It is also equipped with a convenient function to calculate times entered in the sexagesimal form.
- 1. Addition and subtraction of times can be made simply by entering the hour, minute and second digits with the number entry and time (hour, minute and second) keys.
- 2. The timer can be set for up to 99 hours, 59 minutes and 59 seconds in one second increments. Show the time elapsed from the end of the countdown with "-" sign. While the timer is counting down, the time elapsed from the start of the countdown can also be displayed.
- 3. The stopwatch can measure up to 100 hours in one second increments. After 100 hours, it will start counting again from "0" repeatedly. Split time measurement is also possible.
- 4. Changeover between 12- and 24-hour indications is possible.
- 5. The watch will not give out any beeping sound such as sound for button operation confirmation, as it will disturb the broadcast.



## ■ CHANGEOVER OF MODES

- The watch is provided with 4 modes.
- The mode can be changed by turning the mode selector.

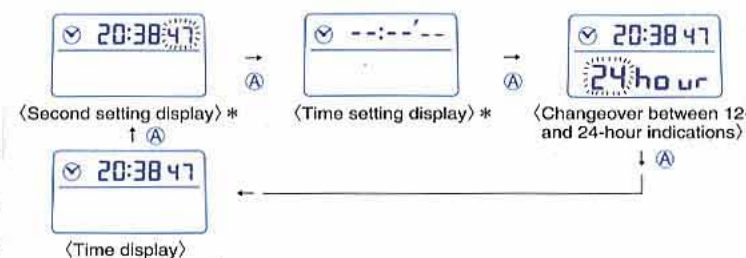
Positions of the mode marks for the mode selector



The timer and stopwatch continue counting even if the mode is changed to another.

## ■ HOW TO SET THE TIME [TIME]

- Use the number entry and time keys to set the desired time.
- The time you wish to set should be entered in the 24-hour indication. The entered time, however, can be displayed in the 12-hour indication.
- 1 Turn the mode selector to set the knob to "TIME".
- 2 With each press of button A, the display changes as follows: Even while the display changes, the watch continues operating normally.



Note: If the watch is left untouched with the second digits flashing or with "-" or "24 hour" displayed, the display will automatically return to the TIME in 1 to 2 minutes.

## ■ HOW TO USE THE TIME CALCULATION MODE [CALC.]

- The addition and subtraction of times can be made simply by entering the hour, minute and second digits.
- Up to ±99 hours 59 minutes and 59 seconds can be entered for calculation.
- The time can be entered either by using the number entry and time keys or by using the number entry keys only.
- The calculation result can be stored and recalled for use in the timer and stopwatch modes as the starting time.

Entry of times  
To enter the time digits, use the number entry and time keys as described below.

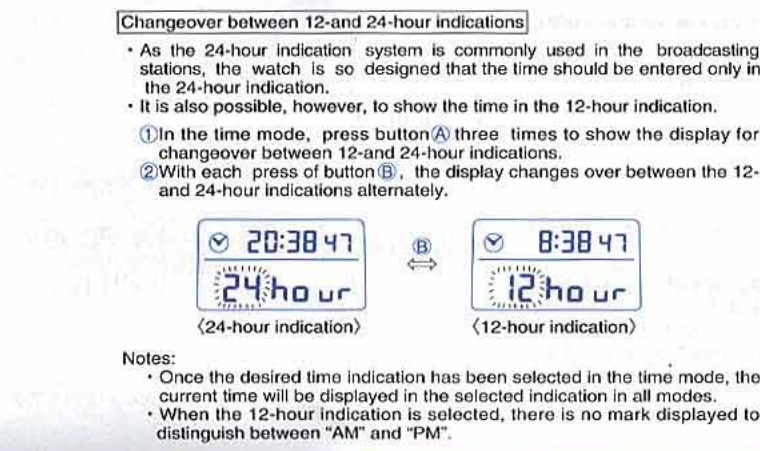
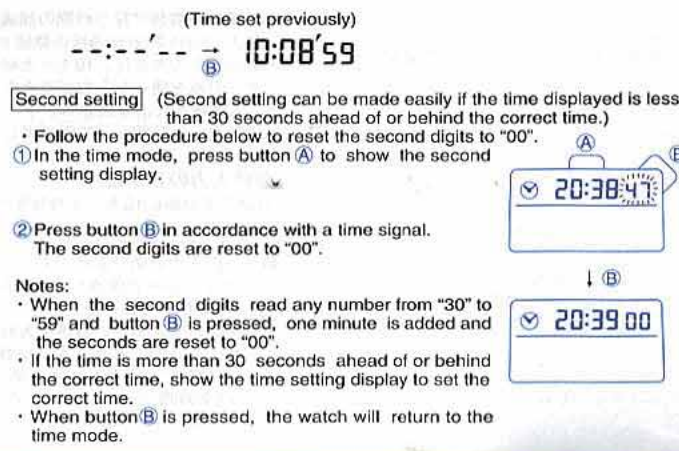
- Follow either of the two methods below.  
(Entry with the number entry keys only)
  - Use the number entry keys from [0] to [9] to enter the desired time.
  - This method is useful for entering time with a few digits.
  - Use the number entry and time keys.
  - Use the time keys ([H] [HOUR]), [M] [MINUTE] and [S] [SECOND]) together with the number entry keys to enter the desired time.
  - This method is useful for entering time having blank digits, for instance, "2 hours".

- Before entering time, press the clear/clear entry key to reset the digits to "0".
- The two methods above cannot be used in combination to enter the time. See the following cases as examples:  
(Case 1) To enter "2 hours and 15 minutes": Once you have entered [2] and [H] (HOUR) for the hour digits, you should not enter [1], [5], [0] and [0] but should enter [1], [5] and [M] (MINUTE).
- (Case 2) To enter "2 hours and 15 minutes": Once you have entered [2], [1], [5], [M] (MINUTE) but should enter [0] and [0].
- To set the starting time in the timer and stopwatch modes, also use either of the two methods above.



- Detailed explanation of entry methods  
Turn the mode selector to set the knob to "CALC."  
1 Entry with the number entry keys only
  - Use the number entry keys to enter numbers in the order of hour, minutes and second digits, entering [0] for the blank digits.  
Ex. 1) 2 hours 15 minutes 10 seconds [2] [1] [5] [1] [0] [0]
  - Ex. 2) 15 minutes 2 seconds [1] [5] [0] [2]
  - Ex. 3) 10 hours 8 seconds [1] [0] [0] [0] [8]
- Enter from the upper digits in order.
- Start entering from the digits having numbers. It is not necessary to enter [0] and [0] for the hour digits.
- Enter [0] for the blank digits.

- The time can be entered either by using the number entry and time keys or by using the number entry keys alone according to the time you wish to set. (For details, see "Entry of times" in HOW TO USE THE TIME CALCULATION MODE.)
- If a wrong number has been entered, press the clear/clear entry key and enter the correct one.
- The hour should be entered in the 24-hour indication. (If it is 2:00 p.m., for example, enter "14" instead of "2".)
- Any digits left unentered will be regarded as "0". (See HOW TO USE THE TIME CALCULATION MODE.)



- How to use the calculation result in other modes (Timer and stopwatch modes)
  - The calculation result obtained in the time calculation mode is automatically stored in memory and can be recalled and used as the starting time in the timer and stopwatch functions.
  - After a calculation is completed, change the mode to the timer or stopwatch before a new calculation is made.
  - Turn the mode selector to change the mode.
  - Then, press the recall key. The calculation result will be recalled and displayed.
  - Press button B to start the timer or stopwatch. (For details, refer to HOW TO USE THE TIMER and HOW TO USE THE STOPWATCH.)

- Remarks on the calculation
  - If the calculation result is more than 99 hours 59 minutes and 59 seconds or less than 99 hours 59 minutes and 59 seconds, the error mark "Error" will be displayed and no digits will be shown if the number entry key are pressed. In that case, press the clear/clear entry key to reset the digits to "0".
  - If the error mark is displayed, the calculation result retained in memory will be erased and "0" will be displayed by pressing the recall key in the timer or stopwatch mode.
  - If the mode selector is turned to change the mode from the time calculation mode to another during or after a calculation, entered time or calculation result shown on the display will be erased and "0" will be displayed when the mode is returned to the time calculation.

- 2 Entry with the number entry and time keys
  - After entering numbers, enter the time digit ([H] (HOUR), [M] (MINUTE) or [S] (SECOND)). This method is useful for entering time having blank digits.  
Ex. 1) 2 hours 15 minutes and 10 seconds [2] [H] (HOUR) [1] [5] [M] (MINUTE) [1] [0] [S] (SECOND) --In this case, the entry can be made more easily with the previous method using the number entry and time keys only.
  - Entry of [S] (SECOND) can be eliminated. (When [S] (SECOND) is entered, "-" will be displayed.)  
Ex. 2) 15 minutes and 2 seconds [1] [5] [M] (MINUTE) [2] [S] (SECOND) --Start entering from the digits having numbers.
  - Ex. 3) 10 hours and 8 seconds [1] [0] [H] (HOUR) [0] [8] [M] (MINUTE) --It is not necessary to enter [S] (MINUTE).

- Addition
  - Standard calculation
    - Enter a time, [+], another time and [=].  
Ex.) (3 minutes and 25 seconds)+(2 minutes and 1 second)=[3] [2] [5] [+] [2] [0] [1] [=]
  - Successive addition
    - Ex.) (1 minute and 15 seconds)+(34 seconds)+-(15 minutes and 3 seconds)=[1] [1] [5] [+] [3] [4] [+], [+][1] [5] [0] [3] [=]
- Subtraction
  - Standard calculation
    - Ex.) (4 minutes and 18 seconds)-(1 minute and 54 seconds)=[4] [1] [8] [-] [1] [5] [4] [=]
  - Successive subtraction
    - Ex.) (2 hours)-(1 hour and 36 minutes)-(8 seconds)=[2] [H] (HOUR) [-] [1] [H] (HOUR) [3] [6] [M] (MINUTE) [-] [-] [8] [S] [=]

- Correction of wrong entries
  - When a wrong number has been entered but [-] or [=] key is not pressed: Press the clear/clear entry key and enter the correct one.  
Ex.) (3 minutes and 25 seconds)+(2 minutes and 1 second): [3] [2] [5] [+] [3] [0] [1] --To correct "3" to "2": [C/C] [2] [0] [1] [=]

## ■ HOW TO USE THE TIMER [TIMER]

- The timer can be set for up to 99 hours, 59 minutes and 59 seconds in one second increments.
- Once the timer is set, the set time is stored in memory and can be used repeatedly unless it is canceled.
- The timer can be set either by entering a time with keys or by recalling the calculation result obtained in the time calculation mode.
- The remaining time is displayed in one second increments, and the time elapsed from the start of the countdown can also be displayed while the elapsed time display key is kept pressed.
- After the set time is up, the timer continues counting to show the time elapsed from the end of the countdown, with "-" sign attached before the digits, for example, "0", "-1", "-2", and so on.

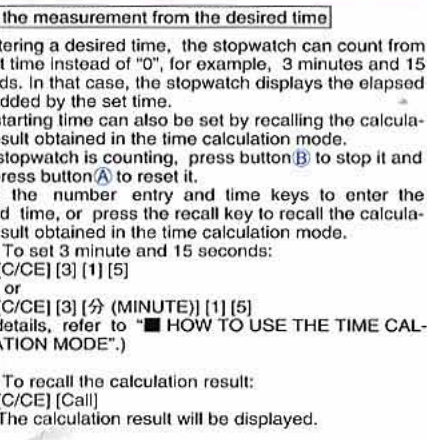


- Timer operation
  - When the timer is stopped, "STOP" and "-" marks are displayed.
  - While the timer is counting down, "-" mark is not displayed.
  - When a negative time (a time having a minus sign) is set for the timer and button B is pressed to start the timer, the error mark "Error" is displayed. In that case, press the clear/clear entry key to reset the digits to "0", "00", and enter a proper time.
- To start or stop the timer, press button B. Restart and stop of the timer can be repeated by pressing the button. The timer restarts counting down from the time shown on the display.

- Standard measurement
  - To start and stop the measurement, press button B. Restart and stop of the stopwatch can be repeated by pressing the button. The accumulated elapsed time measurement is possible.
- Split time measurement
  - The split time measurement function is convenient in checking the elapsed time while the measurement is in progress.

## ■ HOW TO USE THE STOPWATCH [STOP-W.]

- The stopwatch can measure up to 99 hours 59 minutes and 59 seconds in one second increments. After 100 hours, it will start counting again from "0" and continues counting.
- Split measurement is possible.
- The stopwatch can be set to count from a desired time up to 99 hours 59 minutes and 59 seconds in one second increments.
- The starting time can be set by entering a time with the number entry and time keys or by recalling the calculation result obtained in the time calculation mode.
- 1 Turn the mode selector to set the knob to "STOP-W.".
- 2 If the stopwatch is counting, press button B to stop it and then press button A to reset it.



- After the starting time setting is completed, press button B to start the stopwatch. For the stopwatch operation, refer to the stopwatch operation explained above.

## ■ NOTES ON THE BATTERIES

- BATTERY LIFE
  - A new normal battery will last approximately three years.
  - If the timer is used more than 10 times a day, the battery life may be less than the specified period.
  - The battery in your watch may run down in less than the specified period after the date of purchase, as it is a monitor battery inserted at the factory to check the functions and performance of the watch.
  - The battery in your watch will therefore be replaced with a new one only at cost even if it runs down within the guarantee period.
- BATTERY LIFE INDICATOR
  - When flashing "B" mark appears in the upper left of the display, replace the battery with a new one as soon as possible. Otherwise, the watch may stop operating in 2 to 3 days. We suggest that you have the battery replaced by a retailer from whom your watch was purchased or a SEIKO dealer.
  - Even though the flashing "B" mark is displayed, time accuracy is not affected.

## ■ CARE OF YOUR STOPWATCH

- BATTERY CHANGE
  - For battery replacement, be sure to have the battery replaced with a new one at the retailer from whom the watch was purchased, and specify a genuine battery.
  - If the old battery is left in the watch for a long time, a malfunction may be caused due to battery leakage, etc. Have it replaced with a new one as soon as possible.
  - Battery replacement is charged even if it runs down within the guaranteed period.
  - Once the case back is opened for battery replacement or other purpose, the original water resistant quality designed for the watch may deteriorate when it is closed. When you have the battery replaced with a new one, also request the water resistant test pertaining to the water resistant quality of your watch. If your watch has 10-bar or higher water resistant quality, be sure to have such test performed on the watch every time the battery is replaced. Please note that it takes several days to check the water resistant quality of your watch. When requesting the checking, therefore, please check the period required for it.
- WATER RESISTANT
  - Being equipped with the number entry and other keys as used in calculators, your watch is not water resistant according to the water resistance standard for watches. It can withstand, however, the accidental contact with splashes of water or rain. If the watch is wet, wipe it thoroughly dry with a soft dry cloth or the like.
- ANTI-SHOCK
  - Light activities will not affect your watch, but be careful not to drop your watch or hit it against hard surfaces, as this way cause damage.
- ANTI-MAGNETIC
  - Magnetism will not affect the watch.
- TEMPERATURE
  - Your watch is designed to work with stable accuracy between normal temperature range of 5°C and 35°C.
  - Do not leave your watch in direct sunlight or very high temperatures for a long time.
  - The display may become black, but this condition will be corrected when the watch returns to normal temperature.
  - The above conditions will be corrected when the watch returns to normal temperature.
  - If the watch is left in temperatures over 60°C or below -10°C for a long time, the watch may stop operating, battery leakage may be occurred, or the battery life may be shortened.
- CHEMICALS
  - As plastic materials are used for the watch case, be careful not to expose the watch to solvents (such as alcohol and gasoline), cosmetic spray, detergent, adhesives or paints, as the case, bracelet, etc. will be discolored, deteriorate or deform through the chemical action.
- STATIC ELECTRICITY
  - The IC (Integrated Circuit) used in your watch will be affected by static electricity, which may disturb the display. Keep your watch away from close contact with subobjects as TV screens which emit strong static electricity.

## ■ LIQUID CRYSTAL PANEL TO PRESERVE THE QUALITY OF YOUR STOPWATCH ■ SPECIFICATIONS

- Frequency of crystal oscillator.....32,768 Hz (Hz=Cycles per second)
- Loss/gain (monthly rate).....Loss than 0.0006% or 15 seconds at normal temperature range (5°C ~ 35°C)
- Operational temperature range.....-10°C ~ +50°C (For the display -0°C ~ +50°C)
- Display medium.....Nematic Liquid Crystal, FEM (Field Effect Mode)
- Battery.....Miniature lithium battery SB-T51 (CR2032), 1 piece
- Battery life indicator.....Flashing "B" mark is shown on the display.
- IC (Integrated Circuit).....C-MOS-LSI, 1 piece
- Display system.....Current time (hour, minutes and seconds), calculation data (hour, minutes and seconds) and "Error" mark
- Timer mode.....Current time (hour, minutes and seconds), remaining time (hour, minutes and seconds), "STOP" and "Error" marks
- Time mode.....Current time (hour, minutes and seconds) and "Error" mark
- Stopwatch mode.....Current time (hour, minutes and seconds), measured time (hour, minutes and seconds), "SPLIT", "STOP" and "Error" marks

\* The specifications above are subject to change without prior notice, for product improvement.