

## 1.0 Introduction

Thank you for purchasing of this Watch. Your Watch features electronic sensors which measures and shows the outdoor conditions: weather forecast, temperature, pressure, altitude and compass directions.

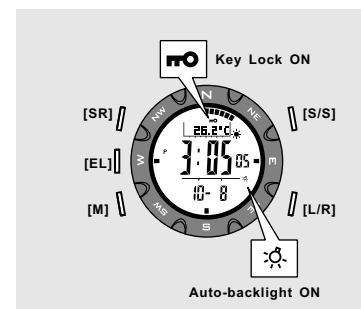
Your Watch also provides the essential information at the time during you are skiing, and these data can be further logged into a logbook for later review.

Your Watch also includes current time, daily alarm, chronograph, timer and dual time function.

To get the most of your purchase, it is advisable to use this stopwatch in conformity with the below notes:

- Be sure to carefully read this manual and keep it on hand for later reference when necessary.
- Avoid exposing your Watch to extreme conditions for an unreasonable time.
- Avoid rough usages or severe impacts to your Watch.
- Do not open the Watch's case unless a certified service agency because your Watch contains precise electronic sensors and components.
- Clean your Watch with a soft cloth occasionally that working for a longer use life of your watch.
- Keep your Watch away from magnets or the appliances which contains magnetic objects such as mobile phones, speakers and motors.
- Store your Watch in a dry place when it is not in use.

## 2.0 Buttons and Its Functions - Part B



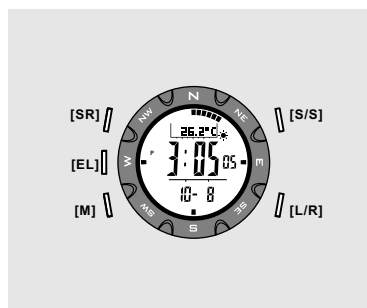
### EL Button [EL]

- To turn on the EL back light for about 3 seconds.
- Auto-backlight function
  - Hold down the [EL] button to turn ON or OFF this function.
  - When this function is ON, the auto-backlight indicator '☀' will appear, pressing any key will turn ON the EL back light too.

### Key Lock Function

- Hold down the [M] button and then hold down the [S/S] button (keep holding the [M] button at the same time) to turn ON or OFF this function.
- When this function is ON, the key lock indicator '🔒' will appear, pressing any key will NOT activate any function until key lock is turned OFF.

## 2.0 Buttons and Its Functions - Part A



### Mode Button [M]

- To select among Current Time, Daily Alarm, Chronograph, Timer and Dual Time Mode.
- To select among Ski, Ski Recall, Altimeter, Barometer and Compass Mode.
- To select among the setting items during setting display.

### Sensor Button [SR]

- To select between Sensor Mode and Timekeeping Mode.

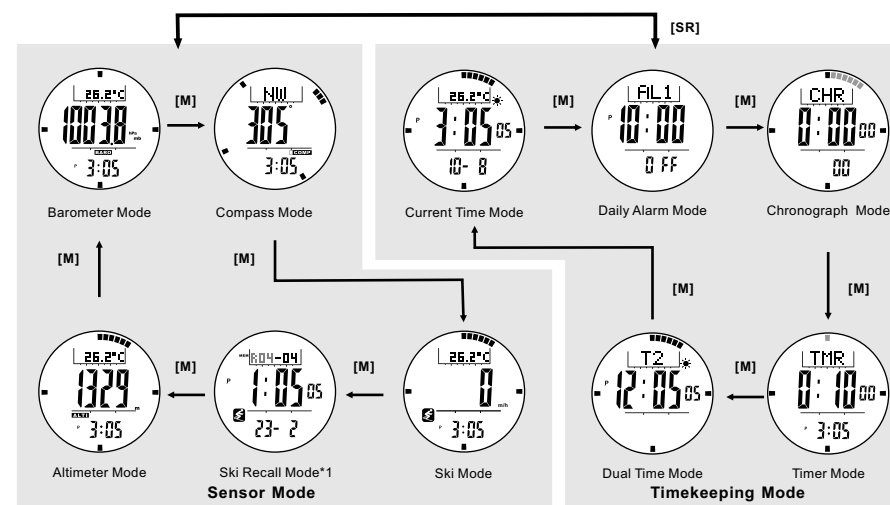
### Start/Stop Button [S/S]

- To select between functional displays under the same mode.
- To activate the 'start' or 'stop' chronograph function during chronograph mode.
- To toggle Yes/No.
- To increase the digits during setting display.

### Lap/Reset Button [L/R]

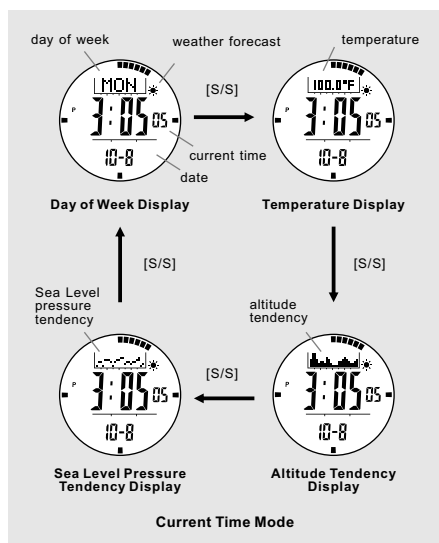
- To activate the 'lap' or 'reset' chronograph function during chronograph and timer mode.
- To move the cursor to left by one during History recalling display.
- To decrease the digits under setting display.
- To toggle Yes/No.

## 3.0 Major Function Modes - Timekeeping Mode and Sensor Mode



Remark 1: The Ski Recall Mode will be skipped If NO Ski Data was recorded.

## 4.0 Current Time Mode - Functional Display



### Functional Display

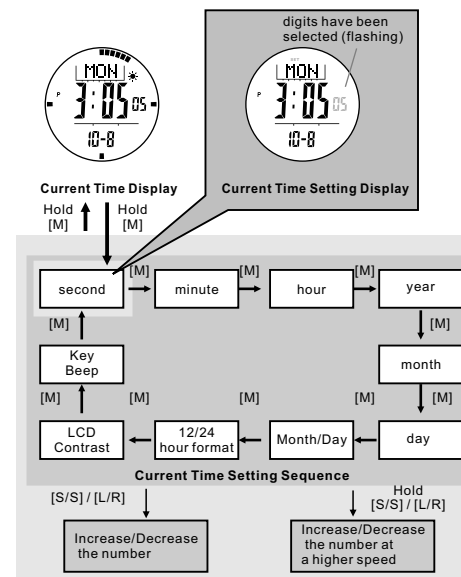
- The Current Mode includes four kinds of functional display:
  - Day of Week Display,
  - Temperature Display,
  - Altitude Tendency Display and
  - Sea Level Pressure Tendency Display.
- To select among different functional display, press the [S/S] button following the adjacent diagram.

**IMPORTANT:** If the user intends to get an accurate reading of air temperature, the user must taken off the watch from the wrist for 20 to 30 minutes before the actual measurement. It allows no body temperature effect on the Watch.

### Automatic Display Switching

- To activate the automatic switching feature, hold down the [S/S] button.
- As long as the button is hold, one of the four functional displays will appear one by one.

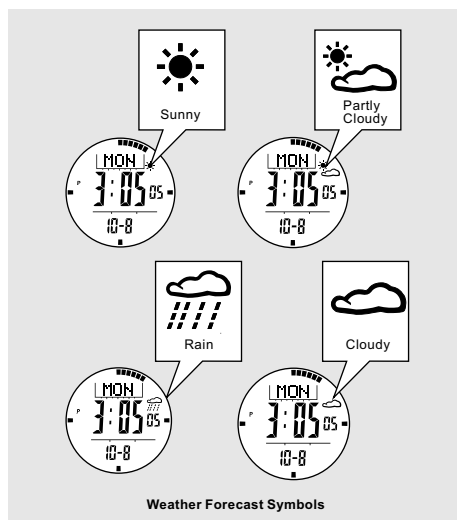
## 4.2 Current Time Mode - Setting the Current Time



### How to Set Current Time

- To select the setting display, hold down the [M] button for about 2 seconds in Current Time Mode. In setting display, the flashing "SET" icon will appear.
- In setting display, press the [M] button to change the selection following the adjacent Current Time Setting Sequence.
- When the second digits are flashing (selected), press the [S/S] or [L/R] button to reset the digits to "00".
- When the digits are flashing (selected), press the [S/S] or [L/R] button to increase / decrease the number. (Hold down the button change the number at a higher speed).
- When month-day order setting is selected, press the [S/S] or [L/R] button to select between month-day and day-month format. When 12/24 hour format setting is selected, press the [S/S] button to select between 12 and 24 hour format.
- When LCD contrast is selected, press the [S/S] or [L/R] button to increase / decrease the contrast level (1 to 10). When key beep setting is selected, press the [S/S] or [L/R] button to select between ON and OFF the beep.
- When the set is completed, hold down the [M] button to exit the setting display. The Watch will also exit the setting display if NO key-stroke has been activated for 1 minute.

## 4.1 Current Time Mode - Weather Forecast Feature



### Weather Forecast Feature

- A special feature of the Watch is the weather predicting function. It works by analyzing the changes of the past air pressure.

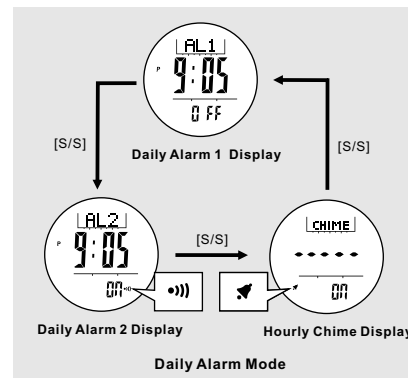
### How to Indicate the Coming Weather

- The Watch provides four different symbols to indicate the forecast weather, which includes:
  - Sunny
  - Partly Cloudy
  - Cloudy
  - Rain
- The weather forecast feature can be shown in the Current Time Mode and Dual Time Mode only.

**IMPORTANT:** Since the Watch predicts the coming weather by using the data of the changes in the air pressure, it is highly recommended that staying at the same altitude for at least 8 hours for a higher accuracy predication.

**IMPORTANT:** The Watch predicts the weather by adopting general weather prediction principles, it is NOT capable to reflect a dramatic changing of weather within a very short period of time.

## 5.0 Daily Alarm Mode - Daily Alarm 1, Daily Alarm 2 and Chime Display



### Daily Alarm 1 and Daily Alarm 2

- The Watch includes two daily alarms: Daily Alarm 1 and Daily Alarm 2. The Daily Alarm 1 and Daily Alarm 2 are working independently.
- Press the [S/S] button to switch among the Daily Alarm 1, Daily Alarm 2 and Chime Display following the adjacent diagram.

### How to Turn ON/OFF the Daily Alarm

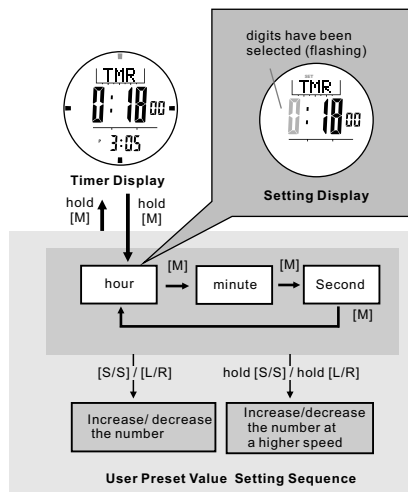
- To turn ON or OFF the Daily Alarm 1 (2), press the [L/R] button in Daily Alarm 1 (2) Display.
- When the Daily Alarm 1 (2) is ON, the alarm indicator '●' will appear.
- If the alarm indicator is appeared, the Watch will sound at the preset alarm time every day. When the alarm sounds, press any button to stop the beep.

### How to Turn ON/OFF the Hourly Chime

- To turn ON/OFF the Hourly Chime, press the [L/R] button in Chime Display.
- When the chime is ON, the chime indicator '🔔' will appear. If the Chime indicator is appeared, the Watch will beep once at the hour every hour ie. 1:00, 2:00, 3:00 etc.



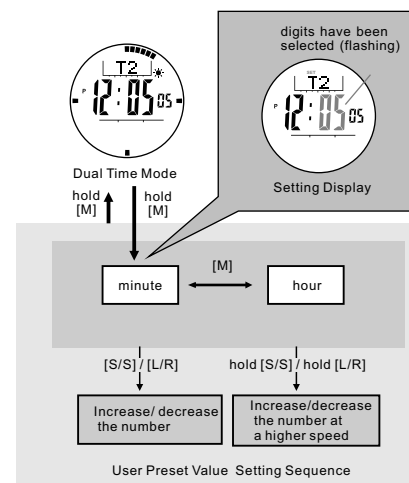
## 7.1 Timer Mode - Setting the User Preset Value



### How to Set the User Preset Value

- To select setting display, hold the [M] button for 2 seconds, and the flashing "SET" icon will appear.
- In setting display, press the [M] button to change the selection among hour, minute and second.
- When the digits are flashing (selected), press the [S/S] or [L/R] button to increase / decrease the number. (Hold down the button change the number at a higher speed).
- When the set is completed, hold down the [M] button to exit the setting display. The Watch will also exit the setting display if NO key-stroke has been activated for 1 minute.

## 8.0 Dual Time Mode - Dual Time and Setting the Dual Time



### Dual Time Mode

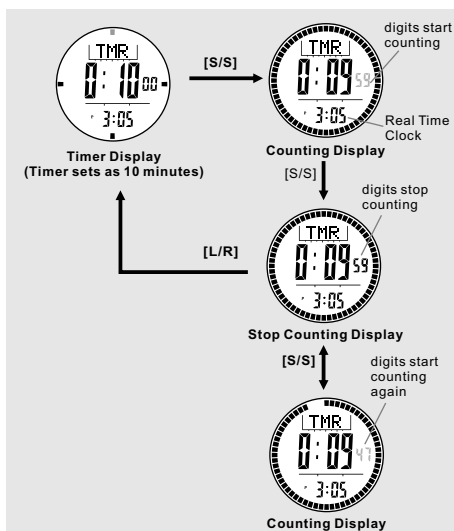
- The Watch includes a function to show the current time for a second time zone - Dual Time Mode.

- The second digits of the dual time will be associated with the Current Time Mode.

### How to Set the Dual Time

- To select setting display, hold down the [M] button for 2 seconds in Dual Time Mode, and the flashing "SET" icon will appear.
- In setting display, press the [M] button to change the selection between hour and minute.
- When the digits are flashing (selected), press the [S/S] / [L/R] button to increase / decrease the number. (Hold down the button change the number at a higher speed).
- When the set is completed, hold down the [M] button to exit the setting display. The Watch will also exit the setting display if NO key-stroke has been activated for 1 minute.

## 7.2 Timer Mode - Using the Timer



### How to Use the Timer

- When the Timer is set, press the [S/S] button to start the timer. Press the [S/S] button once again to stop the timer.
- The elapsed time will be continuously updated to the display.

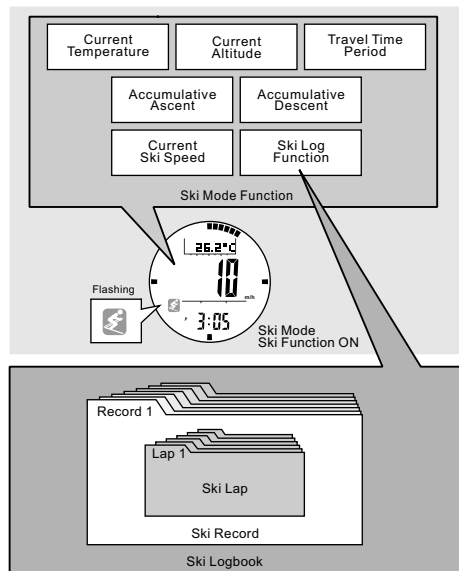
### Timer Alarm Sound

- In the last 10 minutes, the Watch will beep for every minute.
- In the last one minute, the Watch will beep for every 10 seconds. In the last 5 seconds, the Watch will beep for every second.
- At 0, a beep sound will last for 30 seconds. Press any button in this period will terminate the beep sound prematurely.

### How to Reload the Timer

- The last target time will be reloaded automatically at the end of the 30-second beep sound.
- To start a new counting by using a new target time, set the timer again by QSV or UPV.

## 9.0 Ski Mode - Ski Function Overview



### Ski Mode

- Once the Ski Function is turned ON, the 'Ski' icon 'SKI' will start flashing. The Watch will:
  - Exhibit the current ski data on display, and
  - Log (the Ski Log Function) the ski data into the Ski Logbook automatically or manually.

**NOTE:** The Watch will log ski data continuously once the Ski Function is turned ON even if the Watch is switched to other function mode subsequently.

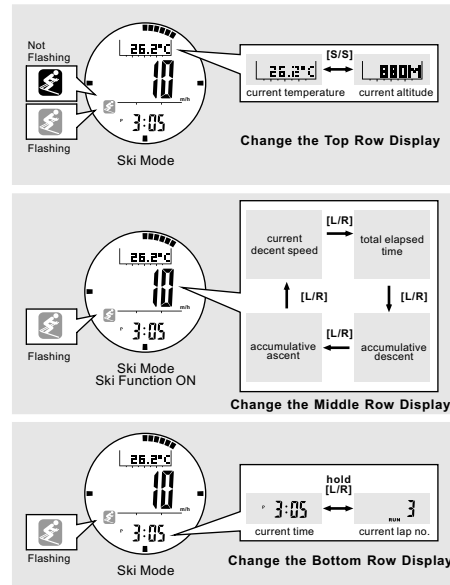
### Ski Logbook

- The Logbook organizes the ski data as follows:
  - Ski Lap - The ski data which was stored during the skier start/stop a ski run.
  - Ski Record - The ski record which stored a series of Ski Lap, and hence it provides the summary on all Ski Lap.

### Ski Recall Mode

- The logged ski data can be reviewed from the Ski Logbook in the Ski Recall Mode. Check the coming chapter 10.0 for more detail.

## 9.2 Ski Mode - Ski Mode Display



### Ski Mode Display

- Once the Ski Mode is selected, performing the below key operations to select the Ski Mode sub-functional displays.

#### Change the Top Row Display

- Press the [S/S] button to change the top row display between Current Altitude and Current Temperature.

**IMPORTANT:** If the user intends to get an accurate reading of air temperature, the user must taken off the watch from the wrist for 20 to 30 minutes before the actual measurement. It allows no body temperature effect on the Watch.

#### Change the Middle Row Display

- Press the [L/R] button to change the middle row display among Ski Run's Current Descent Speed, Total Elapsed Time, Accumulative Descent and Accumulative Ascent.

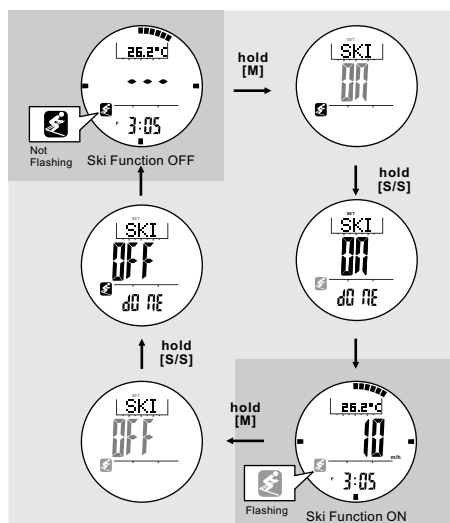
**NOTE:** This changing can be functioned only if the Ski Function is turned ON.

#### Change the Bottom Row Display

- Hold down the [L/R] button to change the bottom row display between Current Time and Current Lap.

**NOTE:** This changing can be functioned only if the Ski Function is turned ON.

## 9.1 Ski Mode - How to Turn ON/OFF the Ski Function



### How to Turn ON the Ski Function

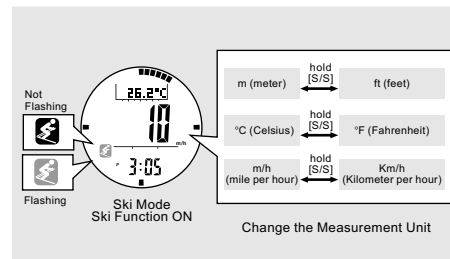
- Hold down the [M] button in Ski Mode to flash the 'ON' indicator.
- When the 'ON' indicator is flashing, hold down the [S/S] button until the 'DONE' indicator is appeared.
- Then the Ski Function is turned ON, and the ski icon will be flashing on the display.

**NOTE:** The Ski Function will be turned OFF automatically after it has been turned ON for 12 hours.

### How to Turn OFF the Ski Function

- Hold down the [M] button in Ski Mode to flash the 'OFF' indicator.
- Hold down the [S/S] button until the 'DONE' indicator is appeared.
- Then the Ski Function is turned OFF, and the ski icon will be stop flashing on the display.

## 9.3 Ski Mode - Change the Measurement Unit



### Change the Measurement Unit

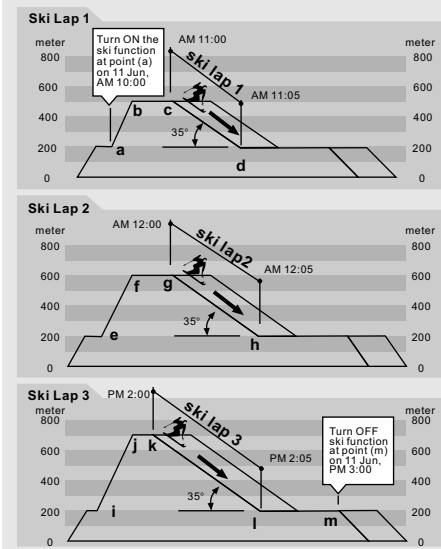
- Hold down the [S/S] button to change the measurement unit as the adjacent diagram:

- Distance measurement unit interchange between m (meter) and ft (feet).
- Temperature measurement unit interchange between °C (Celsius) and °F (Fahrenheit).
- Speed measurement unit interchange between m/h (mile per hour) and Km/h (kilometer per hour).

**NOTE:** These changings can be functioned even if the Ski Function is turned OFF.

## 9.4 Ski Mode - Ski Log Function

### Ski Record 1



### An Example to Illustrate Ski Log Function

- Assume a user enjoyed three ski runs within a day as it is outlined by the adjacent diagram. To enjoy the Ski Log function, the user needs to turn ON the Ski Function before the ski runs.
- The Watch will log the below ski data into Ski Logbook automatically, and these ski data can be reviewed in Ski Recall Mode later.

### Ski Record (the info and summary of all ski laps)

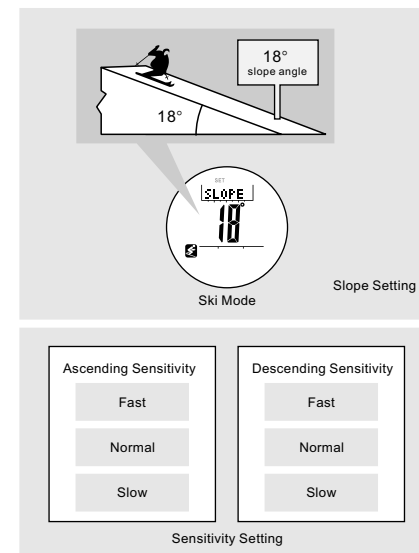
- The record date = 11 June.
- The record started time = AM10:00 00.
- The total travel time = 5: 00 00.
- The total number of ski lap recorded = 3 ski laps.
- The total descent time = 0:15 00.
- The accumulative descent = 1200m.
- The accumulative ascent = 1200m.
- The maximum descent speed = 15 Km/h\*.
- The highest altitude reached = 700 m.
- The lowest altitude reached = 200 m.
- The slope of the ski course = 35°

### Ski Lap (ski data)

- The lap started time = AM 11:00 00 (Lap 1), AM 12:00 00 (lap 2 ), PM 2:00 00 (Lap 3).
- The total descent time = 0:05 00 (Lap 1), 0:05 00 (Lap 2), 0:05 00 (Lap 3).
- The maximum descent speed = 9 Km/h\* (Lap 1), 11 Km/h\* (Lap 2), 15 Km/h\* (Lap 3).
- The average descent speed = 6 Km/h (Lap 1), 8 Km/h (Lap 2), 10 Km/h (Lap 3).
- The highest altitude reached = 500 m (Lap 1), 600 m (Lap 2), 700 m (Lap 3).
- The lowest altitude reached = 200 m (Lap 1), 200 m (Lap 2), 200 m (Lap 3).
- The altitude change = 300 m (Lap 1), 400 m (Lap 2), 500 m (Lap 3).
- The descent altitude change graph for every lap.

**NOTE:**\*These maximum speeds are dummy figures, the maximum speed can be logged in a real case only.

## 9.6 Ski Mode - What are Slope Setting and Sensitivity Setting



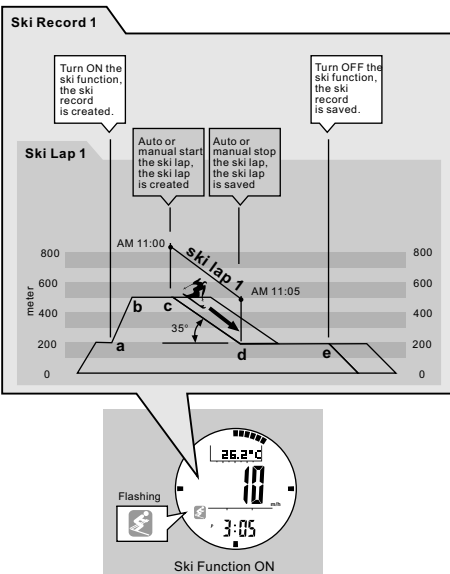
### Slope Setting

- The slope setting is the setting that inputs the slope angle of the ski field into the Watch.
- Most of the ski fields post that figure to skier on the ski field.

### Sensitivity Setting

- The Watch will activate the ski lap function (start the descent timer and create a ski lap) automatically when a ski run is started (a significant altitude loss is detected).
- Sensitivity setting is the setting that adjusts the accuracy for above auto-activation.
- Type of Sensitivity
  - Ascending sensitivity setting: Adjust the sensitivity for altitude ascend auto-activation.
  - Descending sensitivity setting: Adjust the sensitivity for altitude descend auto-activation.
- Level of Sensitivity
  - Fast Sensitivity: If sometimes false auto-activation is observed, select this setting to improve the performance.
  - Normal Sensitivity: If the auto-activation is functioned normally, keep this setting.
  - Slow Sensitivity: If the auto-activation can not be functioned, select this setting to improve the performance.

## 9.5 Ski Mode - How a Ski Lap is Logged



### How to Log a Ski Lap

- When the Ski Function is turned ON:
  - The Watch will create a Ski Record to log the starting time and date into the Ski Logbook.
- When a ski run is started subsequently, the Watch will create a Ski Lap automatically or manually to log the ski data into the Ski Logbook.

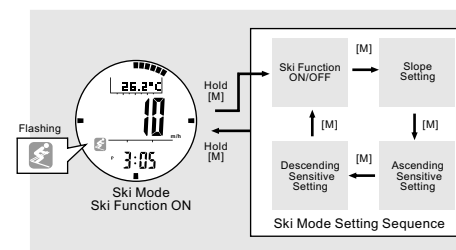
### How to Activate a Ski Lap Automatically

- To start a Ski Run: When a ski run is started and a significant altitude loss is detected, the decent time timer will start counting automatically, and a new ski lap is created.
- To stop a Ski Run: When a ski run is stopped and the altitude loss is not significant, the decent time timer will stop counting automatically, and the current ski lap is saved.

### How to Activate a Ski Lap Manually

- Press the [M] button once in the Ski Mode to select 'MANUAL' Display, then the Watch is ready for manual start/stop a ski lap.
- To start a Ski Run: Press the [S/S] button once and start the ski run at the same time, then the decent time timer will start counting from 0 seconds, and a new ski lap is created.
- To stop a Ski Run: Press the [S/S] button once again when the ski run is stopped, then the decent time timer will stop counting, and the current ski lap is saved.

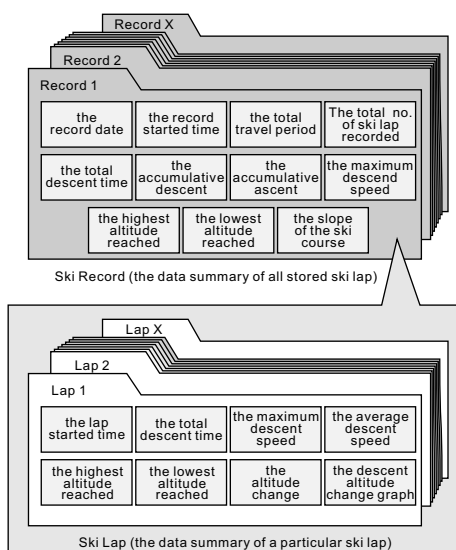
## 9.7 Ski Mode - Slope Setting and Sensitivity Setting



### How to Set the Slop and Sensitivity

- To select the setting display, hold the [M] button for about 2 seconds in Ski Mode, then the flashing "SET" icon will appear.
- In setting display, press the [M] button to change the selection following the adjacent diagram.
- When the 'ON' or 'OFF' is flashing, hold down the [S/S] or [L/R] button for about 2 seconds will turn ON ('ON' is flashing) or OFF ('OFF' is flashing) the Ski Function.
- When Slope angle is flashing, press the [S/S] or [L/R] button to increase / decrease the angle. (Hold down the button change the angle at a higher speed).
- When the 'Ate AS' (Ascending sensitive rate) appear, press the [S/S] or [L/R] button to change the setting among 'FAST' (Fast), 'SLOW' (Slow) and 'NORM' (Normal).
- When the 'Ate DS' (Descending sensitive rate) appear, press the [S/S] or [L/R] button to change the setting among 'FAST' (Fast), 'SLOW' (Slow) and 'NORM' (Normal).
- When the set is completed, hold down the [M] button to exit the setting display. The Watch will also exit the setting display if NO key-stroke has been activated for 1 minute.

## 10.0 Ski Recall Mode - Ski Logbook



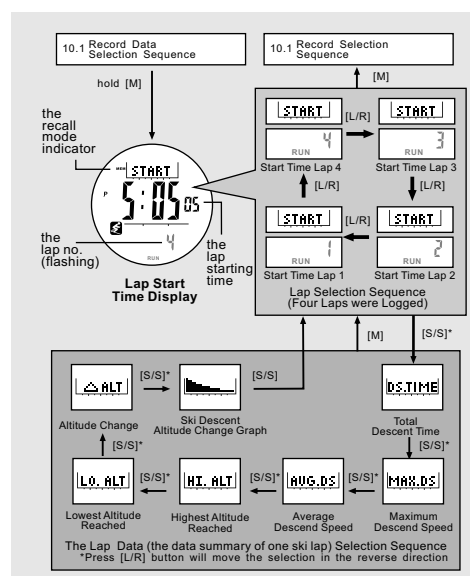
### Ski Record

- The Ski Record logs a series of Ski Laps, and it provides the summary of these ski laps:
  - The record date,
  - The record started time,
  - The total travel period,
  - The total number of ski lap recorded,
  - The total descent time,
  - The accumulative descent,
  - The accumulative ascent,
  - The maximum descent speed,
  - The highest altitude reached,
  - The lowest altitude reached and
  - The slope of the ski course.

### Ski Lap

- The Ski Lap logs the data of a particular ski lap, and it includes:
  - The lap started time
  - The total descent time
  - The maximum descent speed,
  - The average descent speed,
  - The highest altitude reached,
  - The lowest altitude reached,
  - The altitude change, and
  - The descent altitude change graph.

## 10.2 Ski Recall Mode - Ski Lap Recall



### How to Select the Ski Lap

- When one of the target record data (except Slope Review Display) is displayed, hold down the [M] button will enter the selection to select a target lap among the logged laps.
- To exit the lap selection sequence and back to Ski Recall Mode by pressing the [M] button once.

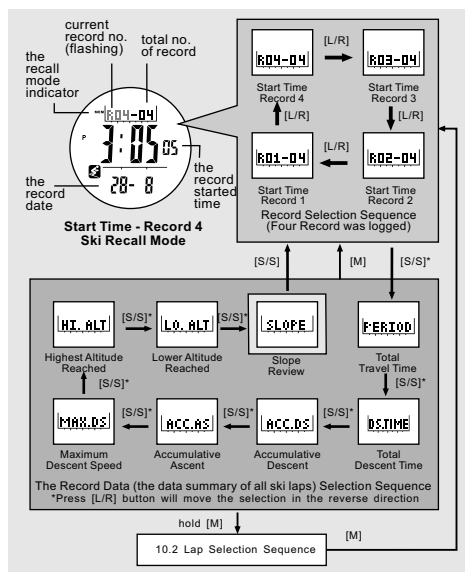
### How to Select among Different Ski Laps

- During the Lap Start Time Display, press the [L/R] button to select a target lap among the logged laps following the adjacent diagram.

### How to Review the Lap Data

- When a target lap is displayed, press the [S/S] to review different lap data displays following the adjacent diagram.
- To exit the lap selection sequence and back to Ski Start Time Display by pressing the [M] button once.

## 10.1 Ski Recall Mode - Ski Record Recall



### Ski Recall Mode Display

- When the Ski Recall Mode is selected:
  - The total number of logged record will be appeared on the top row of the display.
  - The starting time and date of the displayed record will be appeared on the middle and bottom row of the display respectively.

### How to Select among Different Ski Records

- Press the [L/R] button to select a target record among the logged records following the adjacent diagram.

### How to Review the Record Data

- When a target record is displayed, press the [S/S] to review the different record data. During the review, press the [M] button once to return to previous display.

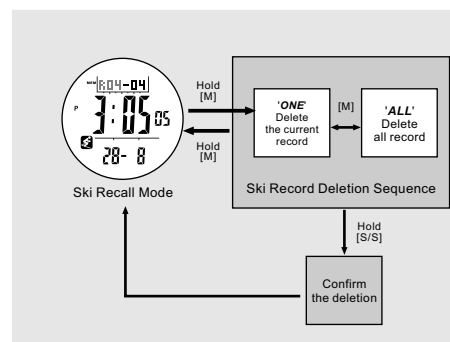
### How to Select the Ski Lap

- Check the coming chapter 10.2 for more detail on how to select a target lap among the logged laps.

**NOTE:** The slope angle can be changed (even after the ski record has been stored) as following:

- Hold down the [M] button in the Slope Review Display to select setting display, then press [S/S] and [L/R] button to change the angle. When the setting is completed, hold down the [M] button to exit the setting display.
- All speed related data will be updated automatically after the changing.

## 10.3 Ski Recall Mode - Delete the Ski Record

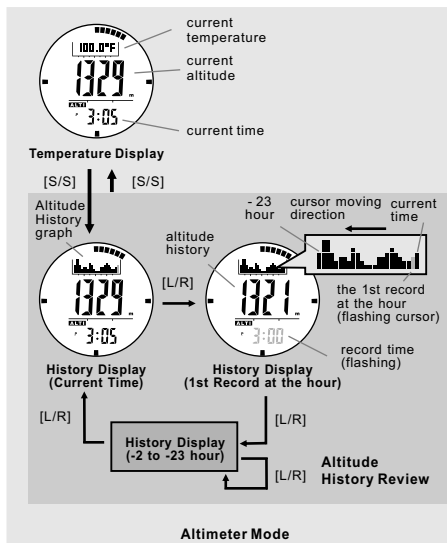


### How to Delete the Ski Record

- Hold down the button in the Ski Recall Mode to select the Record Deletion Display.
- In Record Deletion Display, press the [M] button to change the selection between 'ONE' (delete the current record) and 'ALL' (delete all record) following the adjacent Diagram.
- When the 'ONE' or 'ALL' is flashing (selected), hold down the [S/S] button to confirm the deletion or hold down the [M] button to abort the deletion and exit the setting display.

**NOTE:** When the Ski Function is turned ON, the current ski record can not be deleted.

## 11.0 Altimeter Mode - Temperature and History Display



### Functional Display

- The Watch includes two Altimeter functional displays: Temperature and History Display. One of the two functional displays will be appeared on the top row of the display.

- Press the [S/S] to select between Temperature and History Display.

### Fast sampling

- During the Altimeter Mode, hold down the [L/R] button will activate fast sampling (sample per second) for five minutes.

### Temperature Display

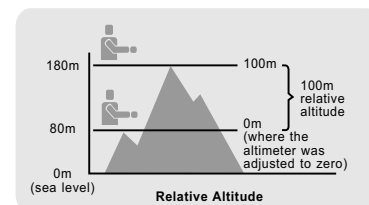
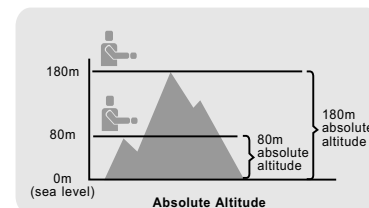
- In Temperature Display, the top display shows the current temperature in degree Celsius (°C) or degree Fahrenheit (°F).

**IMPORTANT:** To get an accurate reading of air temperature, you must remove the watch from the wrist that allows no body temperature effect on your watch.

### History Display

- The Watch records the altitude reading automatically every hour at the hour, i.e 1:00, 2:00, 3:00 and etc. These records will be plotted into a altitude record graph.
- In History Display, the altitude record graph shows on the top row of the display.
- To review the altitude records of the last 23 hours, press the [L/R] button to move cursor left cyclically, at the same time, the respective altitude record and its recording time (flashing) will appear on the display.

## 11.2 Altimeter Mode - Absolute and Relative Altitude



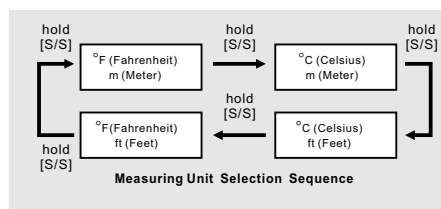
### Absolute and Relative Altitude

- Absolute altitude is the vertical distance between your current altitude and Sea Level (0 m).
- Relative altitude is the vertical distance between your current altitude and the altitude of a specific level at which you set the altimeter to zero.
- An example of using relative altitude:
  - The altitude difference between the starting point and the finish point of a trek can be measured by Relative Altitude.
  - Set the altitude to 'Zero' at the starting point, while the Watch will show the altitude difference at the finish point of the trek.

### How to Switch between Absolute and Relative Altitude

- Check the coming chapter 'Zero Altitude Adjustment' Chapter for more detail on how to set the current altitude to zero altitude.
- An 'r' indicator will be shown with the altitude reading as long as the Altitude has been adjusted by the 'Zero' adjustment.
- To switch the Watch back to absolute altitude measurement, employ one of the following altitude adjustments: Factory Default Adjustment, Sea Level Pressure Adjustment and Absolute Altitude Adjustment. Check the respective chapters for more detail on how to employ the adjustment.

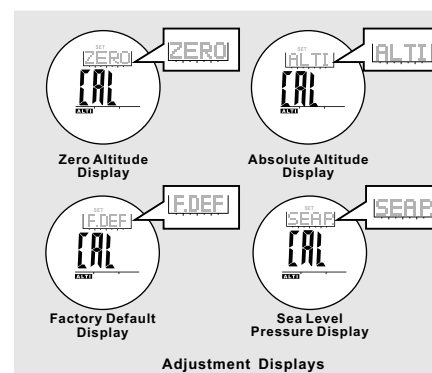
## 11.1 Altimeter Mode -Measurement Unit Selection



### How to Switch between Measurement Units

- The Watch display altitude either in meter (m) or feet (ft).
- The Watch display temperature either in degree Celsius (°C) or degree Fahrenheit (°F).
- To switch among different unit, hold down the [S/S] button to change the units following the adjacent diagram.

## 11.3 Altimeter Mode - Altimeter Adjustment Overview



### Why the Altimeter Need to be Adjusted ?

- As the absolute altitude is calculated from air pressure, the change of air pressure would affect the altitude reading.
- To achieve a more accurate result, the Watch needs to be calibrated from time to time as pressure may change gradually even within hours.

### Altimeter Adjustment

- There are 4 kinds of adjustment method: Zero Altitude, Absolute Altitude, Sea Level Pressure and Factory Default Adjustment.
- Zero Altitude: Adjust altitude mandatory to zero for relative altitude measurement. If the altimeter is adjusted by Zero Adjustment, an "r" indicator will be appeared on the display.
- Absolute Altitude: Set altitude to known value and it can recall for next setting.
- Sea Level Pressure: Input a specific sea level pressure which get from official site.
- Factory Default: Restore the Watch to default factory setting where assume Sea Level Pressure is 1013.2 mb

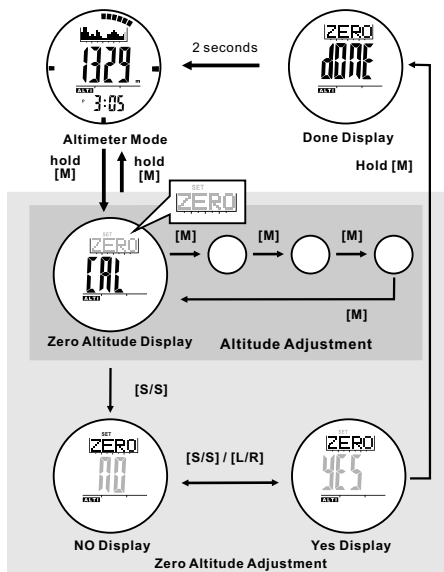
**NOTE:** When the Ski Function is turned ON, Altimeter Adjustment function is prohibited.

**NOTE:** Altitude is calibrated independently on each mode. For example, if absolute altitude is selected, the effect of the previous sea level pressure setting will be ignored.

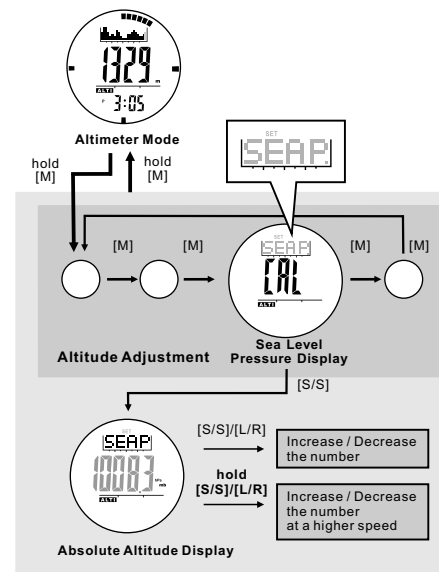
**NOTE:** The Watch includes an automatic Sea Level Pressure comparison feature, this smart feature allows NO fluctuation altitude readings will be recorded when staying at the same altitude.



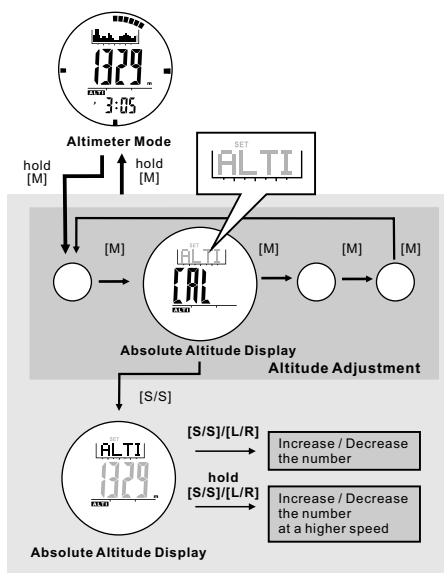
## 11.4 Altimeter Mode - Zero Altitude Adjustment



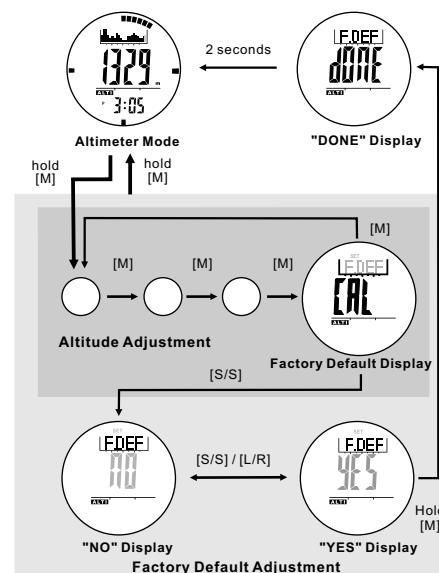
## 11.6 Altimeter Mode - Sea Level Pressure Adjustment



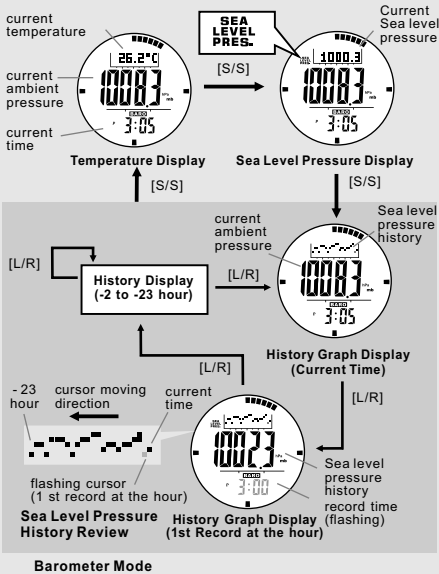
## 11.5 Altimeter Mode - Absolute Altitude Adjustment



## 11.7 Altimeter Mode - Factory Default Adjustment



## 12.0 Barometer Mode - Temperature and History Display



### Functional Display

- The Watch includes three Barometer functional displays: Temperature, Sea Level Pressure and History Graph Display. One of the three functional displays will be appeared on the top row of the display.

### Fast sampling

- During the Altitude Mode, hold down the [L/R] button will activate fast sampling (sample per second) for five minutes.

### Temperature Display

- In Temperature Display, the current temperature in degree Celsius (°C) or degree Fahrenheit (°F) shows on the top row of the display.

**IMPORTANT:** If you want to have an accurate reading of air temperature, you must remove the Watch from the wrist (for 20 to 30 minutes) that allows no body temperature effect on your watch.

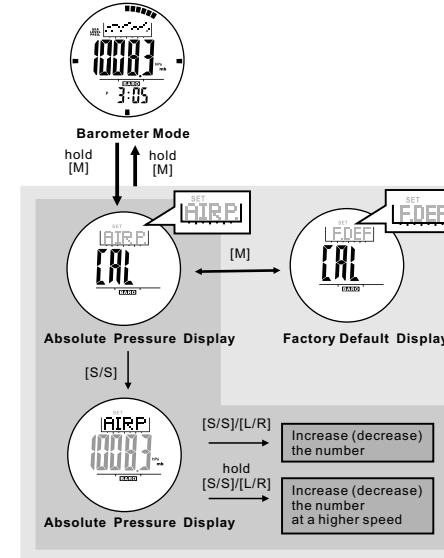
### Sea Level Pressure Display

- In Sea Level Pressure Display, the sea level pressure shows on the top row of the display.

### History Graph Display

- The Watch records the pressure reading automatically every hour at the hour, i.e 1:00, 2:00, 3:00 and etc. These records will be plotted into a pressure record graph.
- In History Display, the pressure record graph shows on the top row of the display.
- To review the pressure records of the last 23 hours, press the [L/R] button to move cursor left cyclically, then the respective pressure record and its recording time (flashing) will appear on the display.

## 12.2 Barometer Mode - Absolute Pressure Adjustment



### Before Calibrating the Barometer

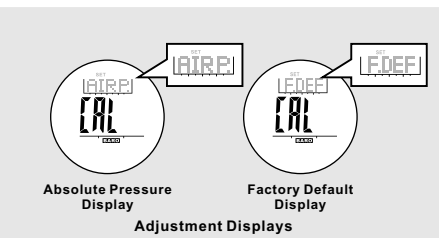
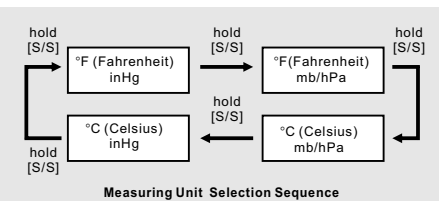
- Before calibrate the Barometer, you must have the absolute pressure of your current position, because that pressure value will be inputted into the Watch during the adjustment.
- Consult the nearest observatory station to get the ambient barometric pressure of your current position.

**IMPORTANT:** Input a incorrect pressure during the calibration procedure, it results a mistaken pressure reading in future.

### How to Adjust the Barometer by Using Absolute Pressure Adjustment

- The Watch can adjust the current pressure reading to a absolute pressure value.
- To select the Adjustment Display, hold the [M] button in Barometer Mode. Then press the [M] button to select between the Absolute Pressure Adjustment and Factory Default Adjustment.
- To adjust the Watch by using Absolute Pressure Adjustment, press the [S/S] button in Absolute Pressure Display, and the pressure reading will appear.
- When pressure reading is appear, press the [S/S] or [L/R] button to increase / decrease the number. ( Hold down the button changes the number at a higher speed).
- If the setting is completed, hold the [M] button to confirm setting and exit the adjustment display.

## 12.1 Barometer Mode - Measurement Unit Selection and Barometer Adjustment



### How to Switch between Measurement Units

- The Watch can display pressure in mb/hPa or inHg; the Watch can display temperature in degree Celsius (°C) or degree Fahrenheit (°F).
- To switch among different unit, hold down the [S/S] button to change the units following the adjacent units selection sequence.

### Why the Barometer Need to be Adjusted

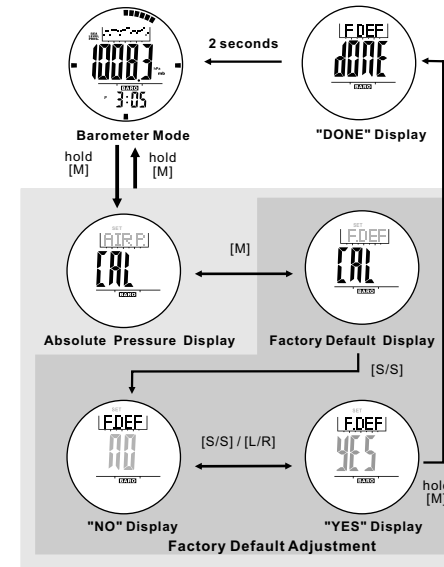
- The Watch was calibrated for you in the factory. For normal use, you need not to calibrate the Barometer.
- But for vigorous users, the Watch includes a adjustment procedure.

### Barometer Adjustment

- There are 2 kinds of Barometer adjustment method: Absolute Pressure and Factory Default Adjustment.
- Absolute Pressure: Input the known atmospheric pressure into the Watch directly.
- Factory Default: Restore the Watch to factory default setting.
- For in-depth information for each of the adjustment methods, it will be given in the coming sections.

**NOTE:** When the Ski Function is turned ON, Barometer Adjustment function is prohibited.

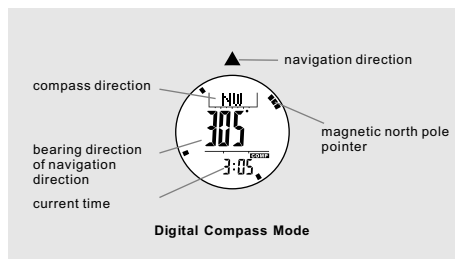
## 12.3 Barometer Mode - Factory Default Adjustment



### How to Adjust the Barometer by Using Factory Default Adjustment

- The Watch can also adjust the pressure reading calculation back to using factory default value.
- To select the Adjustment Display, hold the [M] button in Barometer Mode. Then press the [M] button to select between Absolute Pressure Adjustment and Factory Default Adjustment.
- To adjust the Watch by using factory default adjustment, press the [S/S] button in Factory Default Display, and the indicator "NO" will appear.
- When the indicator "NO" is appeared, press the [S/S] or [L/R] button to select between "YES" (reset the Watch to factory default) or "NO" (abort the resetting).
- To exit Adjustment Display, hold the [M] button for 2 seconds, and then the Watch will go back to Barometer Mode. If the "YES" Display is selected when exit the Adjustment Display, the "DONE" Display will appear for 2 seconds prior to the normal operation.

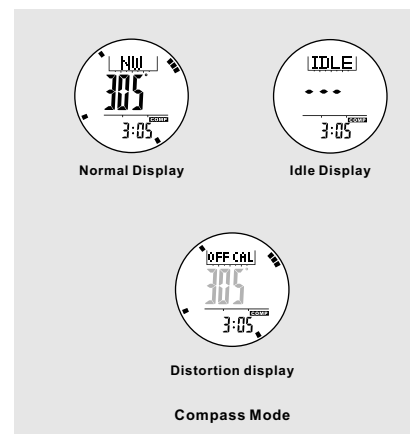
### 13.0 Compass Mode - Precautions



#### The Precautions when Using the Compass

- Keep your Watch away from magnets or the appliances which may contain magnetic objects such as mobile phones, speakers, motors and etc.
- The Watch, like most magnetic compass, points to the magnetic north which is slightly different from the true north. Check the 'What is Magnetic Declination' section for more detail.
- Perform the compass calibration from time to time, because the calibration reinforces the precision of the compass.
- To achieve a accurate result, you should avoid measuring direction on the following conditions:
  - The watch is placed close to a magnetic objects,
  - The watch is placed close to a metal objects,
  - The watch is placed close to an electrical appliances, and
  - The watch is placed inside a moving object or a ferroconcrete building.

### 13.2 Compass Mode - Compass Mode



#### Compass Mode

- In the Compass Mode, the top of the display shows the compass direction.
- The middle display shows the bearing direction.
- The bottom display shows the current time in hour and minute.
- The pointer encircled the display shows the direction of magnetic North analogically.

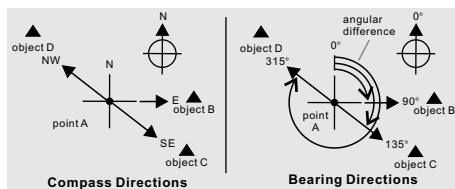
#### IDLE Mode

- If no any key operation for about 1 minute, the Watch will go to the IDLE Mode automatically. To activate the compass again, press any button.

#### Distortion

- If distortion is detected, the indicator "OFF CAL" with flashing direction digits will appear.
- Please refer to the coming section "Calibrating the Compass" to restore the compass to normal operation when distortion occur.

### 13.1 Compass Mode - Compass Directions and Bearing Directions



Marks	Compass Directions	Bearing Directions
N	North	349° - 11°
NNE	North Northeast	12° - 33°
NE	Northeast	34° - 56°
ENE	East Northeast	57° - 78°
E	East	79° - 101°
ESE	East Southeast	102° - 123°
SE	Southeast	124° - 146°
SSE	South Southeast	147° - 168°
S	South	169° - 191°
SSW	South Southwest	192° - 213°
SW	Southwest	214° - 236°
WSW	West Southwest	237° - 258°
W	West	259° - 281°
WNW	West Northwest	282° - 303°
NW	Northwest	304° - 326°
NNW	North Northwest	327° - 348°

#### The Direction of an Object

- The direction of an object from a point can be specified in either compass directions or bearing directions.
- The Watch includes both compass directions and bearing directions.

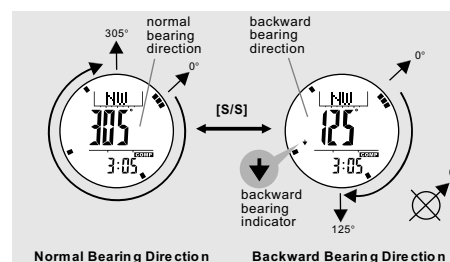
#### The Compass Directions

- The compass directions are shown on the adjacent table.
- For example, in the figure on the left, the compass direction of object B from point A is East. The compass direction of object C from point A is Southeast. The compass direction of object D from point A is Northwest.

#### The Bearing Directions

- The Bearing direction of an object is defined as the angular difference between North and the object. (Assume 0° for North, and the measuring range is from 0° to 359°).
- For example, in the figure on the left, the bearing direction of object B from point A is 90°. The bearing direction of object C from point A is 135°. The bearing direction of object D from point A is 315°.

### 13.3 Compass Mode - Backward Bearing Direction and Compass Lock



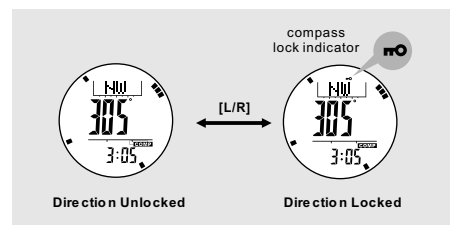
#### Backward Bearing Direction

- The Watch includes a backward bearing function.
- The backward bearing direction is the bearing direction that on the opposite direction from normal bearing direction.
- When the 'Backward Bearing' indicator "S/S" is appeared, the Watch is showing the backward bearing direction of the navigation direction.
- In Compass Mode, press the [S/S] button to select between normal and backward bearing direction.

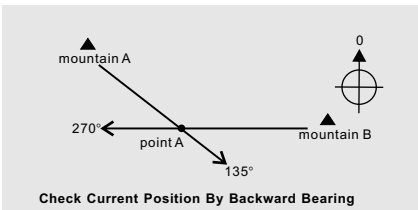
#### Compass Lock

- The Watch includes a compass lock function that locks the important direction readings.
- In Compass Mode, press the [L/R] button to lock/unlock the direction readings.
- When the "Lock" indicator, "L/R" is appeared, the compass direction, bearings direction and the magnetic north pole pointer are locked.

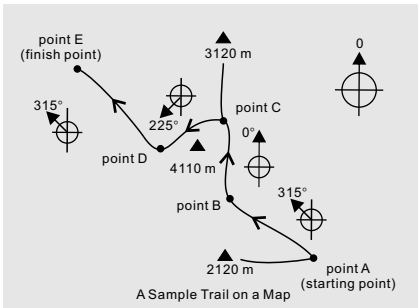
**NOTE:** The Compass Lock will be released automatically when the Watch enter IDLE Mode.



### 13.4 Compass Mode - Applications of the Compass



Check Current Position By Backward Bearing



A Sample Trail on a Map

#### Check your position by Backward Bearing Directions

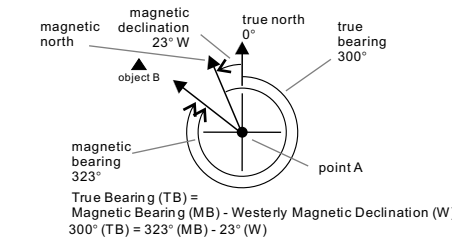
- Spot two distant identifiable landmarks such as mountains, light-house, fort and building of your current position, for example the mountain A and B.
- Check out the backward bearing directions of mountain A and B of your current position, such as 135° from mountain A and 270° from mountain B.
- Use a ruler to draw the line 135° on the map which starting from the mountain A. Draw the lines 270° on the map which starting from the mountain B.
- Your current position on the map will be the intersection point (point A) of the lines 135° and 270°.

#### Check the Trek Course Correct

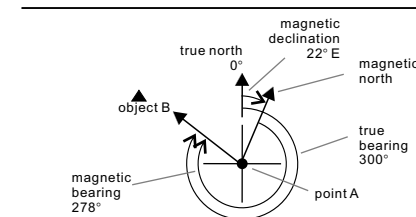
- During a trekking, the Watch can keep your course correct. For example, the correct trail starts from point A and finishes at point E as it is drawn on the adjacent map.
- Mark the points (identifiable landmarks) where the trail turns its direction or the trail branches its way, such as the point A, B, C, D and E on the adjacent map.
- Find out the bearing directions of point B from point A (315°), point C from point B (0°), point D from point C (225°), and then point E from point D (315°).
- During the trekking, make sure that the heading direction is 315° from point A to point B. Performing the similar checking in other sections of the trail.

**IMPORTANT:** If you are in doubt of the directions and positions of the trail, consulting the park administration office before starting the trekking.

### 13.6 Compass Mode - Magnetic Declination Compensation



Compensate the Bearing with Westerly (W) Magnetic Declination



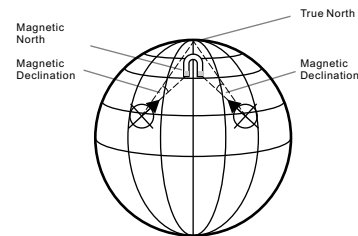
True Bearing (TB) = Magnetic Bearing (MB) + Easterly Magnetic Declination (E)  
300° (TB) = 278° (MB) + 22° (E)

Compensate the Bearing with Easterly (E) Magnetic Declination

#### Magnetic Declination Compensation

- To compensate an object's bearing by subtract westerly (W) magnetic declination or add easterly (E) magnetic declination with the magnetic bearing.
- Example 1:** Westerly magnetic declination 23° and the compass needle points 323°.
  - TB = MB - W. While MB = 323° ; W = 23°
  - TB = 323° - 23°
  - TB = 300°
  - The true bearing will be 300°.
- Example 2:** Easterly magnetic declination 22° and the compass needle points 278°.
  - TB = MB + E. While MB = 278° ; E = 22°
  - TB = 278° + 22°
  - TB = 300°
  - The true bearing will be 300°.
- The Watch allows you compensate the compass bearing at a place where the magnetic declination is either Westerly declination or Easterly declination.
- Check the coming chapters "Calibrating the Compass" for more detail of the setting.

### 13.5 Compass Mode - Magnetic Declination



#### What is Magnetic Declination

- The Magnetic North Pole which is slightly different from the True North Pole.
- This Watch, like most magnetic compass, points to the Magnetic North Pole. On the contrary, everything measure from a map is related to the True North Pole.
- The angular difference between Magnetic North Pole and True North Pole is called magnetic declination. Its amount (degrees and minutes) and direction (easterly and westerly) depend on where you are in the world.
- For serious compass user or who intends to perform accurate navigation, compass must be adjusted for magnetic declination.
- The Watch also includes a compensation setting for Magnetic Declination. Check the coming section "Calibrating the compass - Magnetic Declination Mode" for more detail.

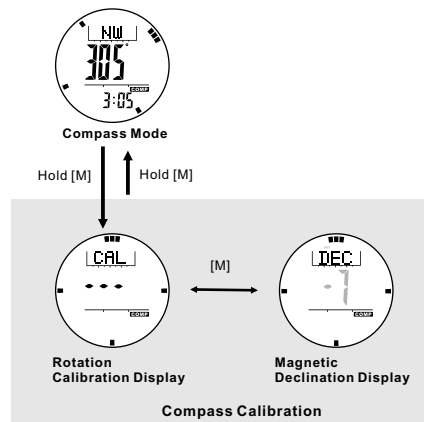
#### Magnetic Declination Information

- Most topographic maps include a small arrow which shown magnetic north pole and or the magnetic declination information.
- For the benefit of user, this user manual includes the magnetic declination for some major cities. Check the coming section 'Magnetic Declination at Major Cities' for more detail.
- For those cities whose names are not included in the list, you can input that city's latitude and longitude into one of the below magnetic declination calculation websites (as at 28 Oct 2005) to get the magnetic declination:
  - [http://gsc.nrcan.gc.ca/geomag/index\\_e.php](http://gsc.nrcan.gc.ca/geomag/index_e.php)
  - <http://www.ngdc.noaa.gov/seg/geomag/declination.shtml>

### 13.7 Compass Mode - Magnetic Declination at Major Cities

No.	Country/Place	Major City	Declination	No.	Country/Place	Major City	Declination
1	Afghanistan	Kabul	2-E	33	Netherlands	Amsterdam	1-W
2	Australia	Canberra	12-E	34	New Zealand	Wellington	22-E
3	Austria	Vienna	2-E	35	Norway	Oslo	0
4	Bahrain	Manama	2-E	36	Pakistan	Islamabad	2-E
5	Bangladesh	Dhaka	0	37	Philippines	Manila	1-W
6	Belgium	Brussels	1-W	38	Portugal	Lisbon	5-W
7	Brazil	Brasilia	19-W	39	Russia	Moscow	9-E
8	Canada	Ottawa	14-W	40	Singapore	Singapore	0
9	Chile	Santiago	5-E	41	South Africa	Cape Town	23-W
10	China	Beijing	6-W	42	Spain	Madrid	3-W
11	China	Hong Kong	2-W	43	Sweden	Stockholm	3-E
12	Costa Rica	San Jose	0	44	Switzerland	Bern	0
13	Cuba	Havana	3-W	45	Taiwan	Tai-pei	3-W
14	Czech Republic	Prague	2-E	46	Thailand	Bangkok	0
15	Denmark	Copenhagen	1-E	47	UAE	Abu Dhabi	1-E
16	Egypt	Cairo	3-E	48	United Kingdom	London	3-W
17	Finland	Helsinki	6-E	49	United States	Washington, DC	10-W
18	France	Paris	1-W	50		Juneau	25-E
19	Germany	Berlin	1-E	51		Phoenix	12-E
20	Greece	Athens	3-E	52		Little Rock	2-E
21	Hungary	Budapest	4-E	53		Sacramento	16-E
22	India	New Delhi	1-E	54		Denver	10-E
23	Indonesia	Jakarta	1-E	55		Atlanta	4-W
24	Israel	Jerusalem	3-E	56		Honolulu	10-E
25	Italy	Rome	1-E	57		Boston	16-W
26	Japan	Tokyo	7-W	58		Saint Paul	2-E
27	Jordan	Amman	3-E	59		Jackson	1-E
28	Kenya	Nairobi	1-E	60		Santa Fe	10-E
29	Korea	Seoul	7-W	61		Oklahoma City	6-E
30	Malaysia	Kuala Lumpur	1-E	62		Salem	18-E
31	Mexico	Mexico City	6-E	63		Harrisburg	11-W
32	Nepal	Kathmandu	0	64		Salt Lake City	14-E

### 13.8 Calibrating Mode - Calibration the Compass



#### When to Calibrate the Compass

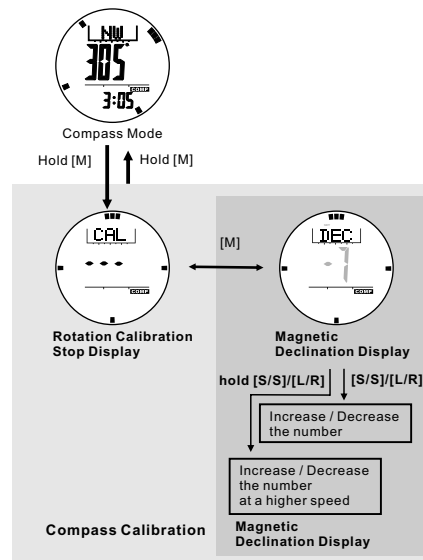
- The Watch has to employ a compass calibration in one of the following conditions:
  - 1) The Watch is using for the first time,
  - 2) The battery has been replaced,
  - 3) The bearing direction digits are flashing, and the "OFF CAL" indicator appear,
  - 4) The compass use in a location that is apart from the place in which the compass had been calibrated,
  - 5) The user intends to regulate the precision of the digital compass.

#### How to Calibrate the Compass

- The compass calibration includes two different processes: Rotation Calibration Mode and Magnetic Declination Setting.
- It is advisable to carry out them both from time to time, that achieves a more accurate reading.

**IMPORTANT:** If the Watch has not been calibrated, the direction made by the Watch may be a inaccurate direction.

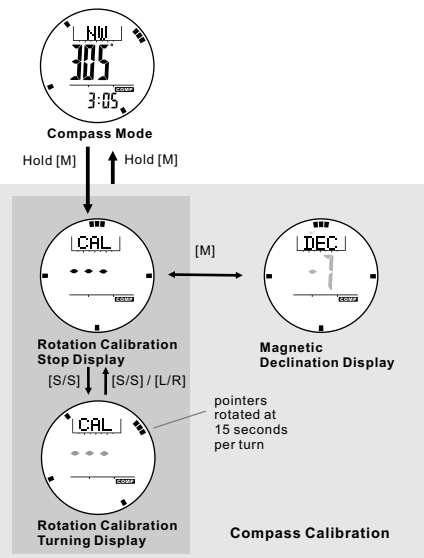
### 13.10 Calibrating the compass - Magnetic Declination Mode



#### Magnetic Declination Mode

- Check the coming section "Magnetic Declination at Major Cities" to get the magnetic declination of the city which is close to your current position. That angle will be inputted into the Watch during the calibration.
- To select Magnetic Declination Display, press the [M] button in Rotation Calibration Display.
- When the current magnetic declination is appeared, press the [S/S] or [L/R] button to increase / decrease the number. (Hold down the button changes the number at a higher speed).
- If the setting is completed, hold the [M] button to confirm setting and exit the adjustment display.

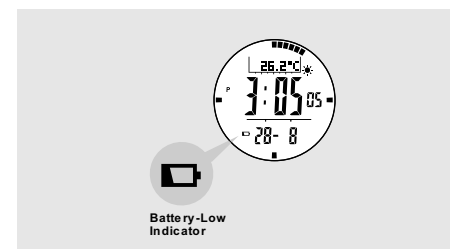
### 13.9 Calibrating the Compass - Compass Rotation Calibration Mode



#### Rotation Calibration Display

- To select the Rotation Calibration Display, hold the [M] button in Compass Mode.
- To start rotation calibration, press [S/S] button once. The pointers will start rotating, turning the watch (keep parallel to the horizon) in the same direction of the rotating pointers for more than 2 turns.
- Press [S/S] or [L/R] button to stop the calibration when the 2-turn rotation calibration is completed.
- When the pointer stop rotating, hold the [M] button to back to the Compass Mode or press the [M] button once to set the magnetic declination.

### 14.0 Battery - Battery Low Indication and Battery Replacement



#### Battery Low Detection

- When the battery-low indicator appears on the display, it means that the capacity of the battery is low. It is recommended to replace the battery with a new CR2032.
- However, if the appearance of battery-low indicator is caused by using the Watch under very cold condition, the indicator will be disappeared when normal temperature returns.

**NOTE:** It is recommended to complete the battery replacement by a certified service agency, because this Watch contains precise electronic sensors and components.

**IMPORTANT:** If the battery has been replace, all memory will be cleared. Follow the previous chapter "Calibrating the Compass" to calibrate the compass before using the Compass.

## 15.0 Specifications - Part A

### Current Time Mode

- Hour, minute, second, am, pm, month, date, and day of week or barometer pressure history display, altitude history and temperature

### Time System

- 12-hour or 24-hour format

### Calendar System

- Auto-Calendar pre-programmed from the year 2004 to 2099

### Weather Forecast

- 4 symbols to indicate the predicated weather

### Daily Alarm Mode

- 2 daily alarms
- Hourly chime

### Alarm Sounds

- Sounds for 30 seconds at preset time of real time clock

### Chronograph Mode

#### Resolution

- 1/100 second

#### Measuring Range

- 99 hours 59 minutes 59.99 seconds

#### Measuring Mode

- 100 lap memories
- Recall lap memories and total time

### Timer Mode

#### Resolution

- 1 second resolution

#### Measuring range

- 99 hours 59 minutes 59 seconds

#### Operation Mode

- Countdown

#### Quick Set

- 5 quick set Values (3, 5, 10, 15 and 45 minutes)

#### Timer Sounds

- Sounds for 30 seconds when count to zero

#### Dual Time Mode

- Hour, minute, second, am, pm

#### Weather Forecast

- 4 symbols to indicate the predicated weather

## 15.0 Specifications - Part B

### Ski Mode

- Ski Lap trigger: Automatic or Manual
- Ski Slope setting: 5° to 90°
- Sensitivity type: Ascending and Descending
- Sensitivity Level: Fast, Normal and Slow
- Altitude range: -706m to 9164m (-2316ft to 30066ft)
- Travel Time: Maximum 99 minutes, 59.99 seconds.
- Ski Lap memory: 47 ski lap

### Altimeter Mode

#### Resolution

- 1m (1ft)

#### Measuring range

- -706m to 9164m (-2316ft to 30066ft)

#### History Recall

- Last 24 hours

### Barometer Mode

#### Resolution

0.1 hPa/mbar (0.01 inHg)

#### Measuring Range

- 300 hPa/mbar to 1100 hPa/mbar (8.85 inHg to 32.48 inHg)

#### History Recall

- Last 24 hours

### Compass Mode

#### Resolution

- 1° display (digital); 1 of 60 pointers (graphical)

#### Measuring range

- 0° to 359° (digital); 1 to 60 pointer (graphical)

#### Others

- Digital bearing reading Lock
- Digital backward bearing

### Thermometer

#### Resolution

- 0.1 °C (0.1°F)

#### Measuring range

- -10.0 °C to 60.0 °C (14.0 °F to 140.0 °F)

#### Backlight

- Electro-Luminescent (EL) backlight

#### Battery

- Single 3V lithium battery (CR2032)

#### Battery Low Detection

- Battery voltage low indicator