MILLION CONCEPT ELECTRONIC (SHENZHEN) CO., LTD.

Functional Operation Specification of Product

Model	W194		Development project	3D electronic paper step counter watch			
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I. Main functional characteristics

* The watch transmits step counter data via Bluetooth to the cell phone
* The watch automatically pairs with the Bluetooth device
* Time display: 1. display hours, minutes, seconds
  2. display in the form of 12/24 time system
* Step counter data display: Display number of steps, calories, distance, exercise time, speed, progress in accomplishing the target on the current day

* Motion data storage: Automatically store the motion data (number of steps, calories, distance, exercise time, progress in accomplishing the target) for the last 10 days, and upload the data via Bluetooth to the cell phone app for viewing
* Automatic sleep: The step counter function will automatically go into the sleep mode when there are no step counter signals for 3 minutes
* Sleep monitoring function
* Alarm clock vibration reminders and sedentary state reminders
* Adopt the ST LIS3DH 3D step counter sensor
* Use a rechargeable lithium battery that can be recharged wirelessly
* Low voltage alarm

II. Function parameter range

Year: 2014~2099

Number of steps: 0~99999

Calories: 0.0~9999.9 kcal

Distance display: 0.00~999.99 km or miles

Exercise time: 0:00~24:00

Target number of steps: 100~99900 steps (the default value is 10000 steps)

Age: 10~99 (the default value is 25)

Weight: 20~200 kg or 44~441 lbs (the default value is 75 kg or 165 lbs)

Step pitch: 30~180 cm or 12~71 inches (the default value is 70 cm or 28 inches)

III. E-link full display effect and key operating instructions

Touch control

S1=MODE

Note: 1. The S1 key should be operated as a touch trigger

Symbol display and function description:

: Step counter symbol: This symbol will be displayed when the step counter function is turned on, and will go off when this function goes into the sleep mode.

: Clock symbol: This symbol will be displayed when the time display mode is activated

: Step number symbol: This symbol will be displayed when the number of steps is displayed

: Calorie symbol: This symbol will be displayed when calorie value is displayed

: Distance symbol: This symbol will be displayed when the distance is displayed

: Speed symbol: This symbol will be displayed when the speed is displayed

: Bluetooth symbol: This symbol will be displayed when the Bluetooth function is turned on

: Exercise time symbol: This symbol will be displayed when the exercise time is displayed

: Battery symbol: This symbol will be displayed when battery power is running out

IV. Initialization after power-up

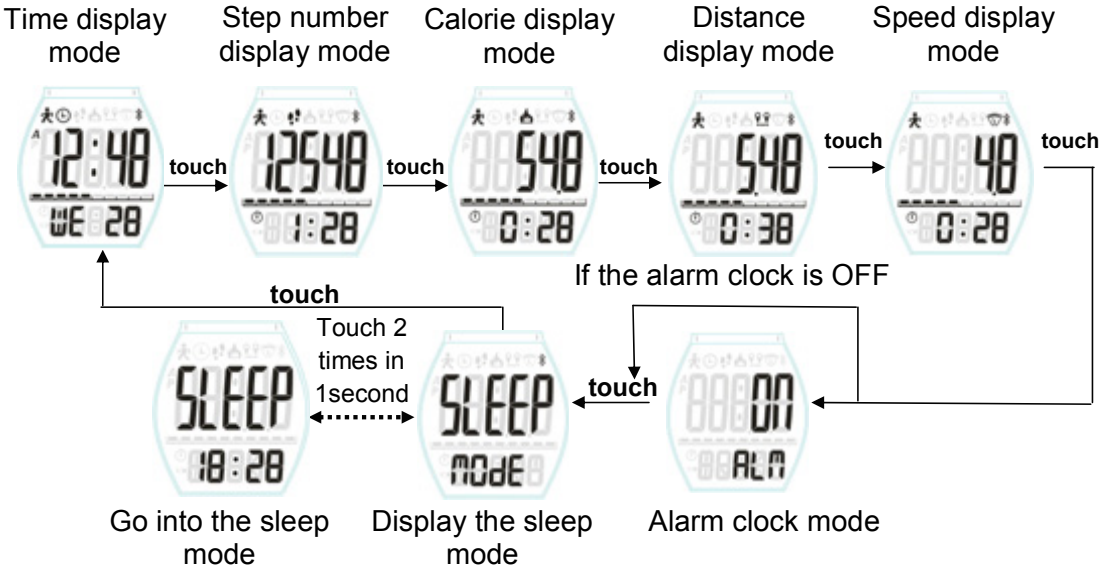
1. The watch will go into the time display mode 2 seconds after it is powered up or reset to E-link full

display

2. Time: AM12:00, 12-hour system
3. Target steps: 10000 steps, step counter function ON
4. Default parameters: age: 25 unit: metric/imperial; weight: 75 kg (165 lbs); step: 70 cm (28 inches)
5. Number of steps: 0 Step
6. Calories: 0.0 kcal
7. Distance: 0.00 km

V. Function mode switching

Mode switching: With each touch of the touch area, you can switch among the following display modes in turn: time display → step number display →calorie display → distance display→ speed display → alarm clock display→ sleep display mode



Display description:

1. Through the app settings, you can control which modes to be displayed and sort the display of such modes

VI. Time display mode

Function description:

1. Display hours and minutes,
2. Display using the 12/24 time system
3. Automatically refresh the screen once every minute

Time display screen

Display description:

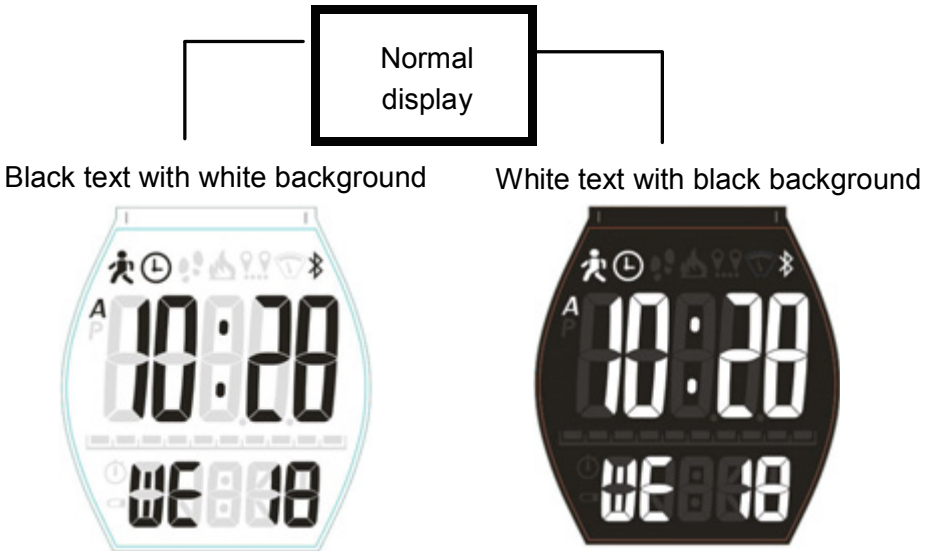
1. Display hours and minutes,
2. Progress in accomplishing the target number of steps is displayed in the middle
3. Week and day are displayed below

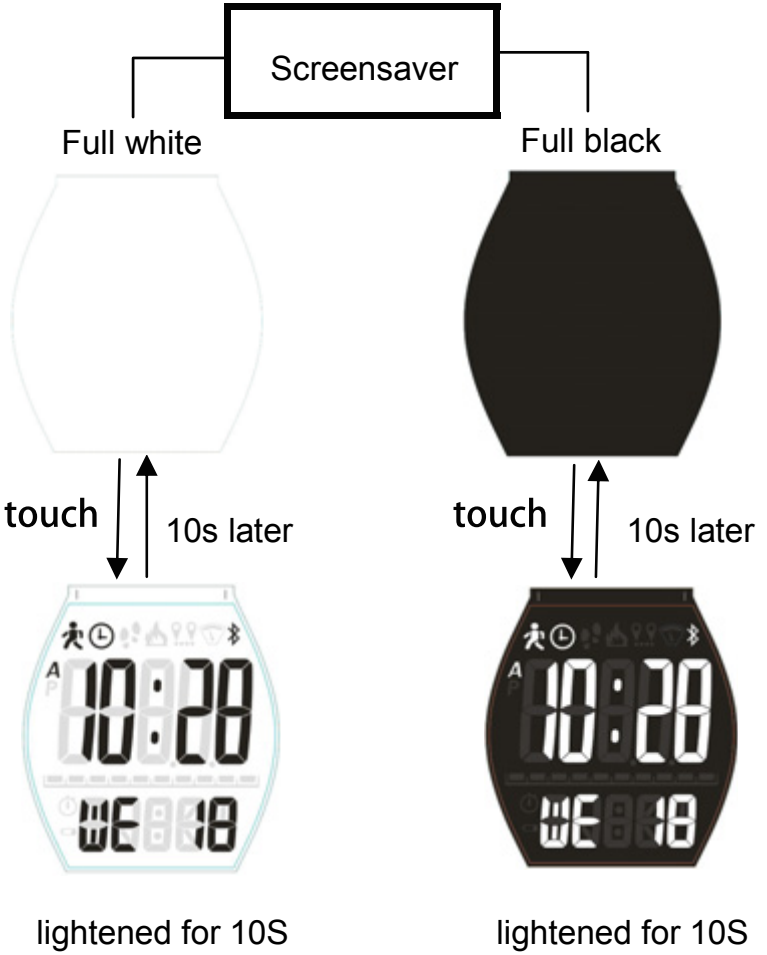
Operating instructions:

Mode switching: Switch to the step number display mode with one touch

1. Normally, in the app settings, you can set black text with white background/white text with black background, but the default is black text with white background
2. In APP's settings, you can set screen saver on/off. The screen saver Enable is defaulted to be off, and at this time the White/Black button is grayed and disabled. If Enable is on, then you can set background completely in white or black
3. Based on the 2 points above , it can be concluded that the default is normal display + screensaver OFF when MCU is powered on

4. In case the screen saver is turned on, after the last touch operation and maintaining the normal display for 10 seconds, it will go into the screensaver mode in full black or full white (Note: It continues to record the real-time data if it is in the sleep mode); if there is no touch operation, it will always maintain a full black background or a full white background




Screensaver
Full white
Full black
touch
10s later
touch
10s later
10:28
WE 18
10:28
WE 18
lightened for 10S
lightened for 10S

VII. Step number display mode

Function description:

1. Display the number of steps on the current day
2. Automatically refresh the screen every 10 seconds
3. Automatically return to the time display mode in case of no touch for 1 minute or no effective step count

Step count display screen

Display description:

1. Display the number of steps
2. Progress in accomplishing the target number of steps is displayed in the middle
3. Exercise time is displayed below

Operating instructions:

Mode switching: Switch to the calorie display mode after the touch operation

VIII. Calorie display mode

Function description:

1. Display the calories on the current day
2. Automatically refresh the screen every 10 seconds
3. Automatically return to the time display mode in case of no touch for 1 minute or step count

Calorie display screen no effective

Display description:

1. Display calories

2. Progress in accomplishing the target number of steps is displayed in the middle
3. Exercise time is displayed below

Operating instructions:

Mode switching: Switch to the distance display mode after the touch operation

IX. Distance display mode

Function description:

1. Display the distance on the current day
2. Automatically refresh the screen every 10 seconds
3. Automatically return to the time display mode in case of no touch for 1 minute or no effective step count

Distance display screen

Display description:

1. Display the distance
2. Progress in accomplishing the target number of steps is displayed in the middle
3. Exercise time is displayed below

Operating instructions:

Mode switching: Switch to the speed display mode after the touch operation

X. Speed display mode

Function description:

1. Display the real-time speed
2. Automatically refresh the screen every 10 seconds
3. Automatically return to the time display mode in case of no touch for 1 minute or no effective step count

Speed display screen

Display description:

1. Display the speed
2. Progress in accomplishing the target number of steps is displayed in the middle
3. Exercise time is displayed below

Operating instructions:

Mode switching: Switch to the speed display mode after the touch operation

XI. Alarm clock mode

Function description:

1. Display the preset alarm clock information. The alarm clock is defaulted to be OFF when MCU is powered on

Enable the alarm clock

2. Through APP's settings, you can control the watch to turn on four groups of alarm clock. When the alarm time is reached, it will skip from any mode to the current alarm clock display screen, and the watch will drive the motor to vibrate for 10s
3. When the alarm clock is vibrating, you can touch twice within 1 second to interrupt the vibration of the current alarm clock, and the screen will skip to the time display mode (Note: The time mode display screen will automatically appear after end or interruption of vibration)

Operating instructions:

Mode switching: Switch to the sleep display mode after the touch operation

Note: The alarm clock is defaulted to be turned off when the watch is powered on; when the alarm clock is turned off, the alarm clock mode will not be displayed. If several groups of alarm clock have been preset, the mode switching will only display "ALMON"

Only when the time preset for the alarm clock is reached, any screen will skip to the current group of numbers (if more than one group of numbers are enabled, the other groups still will not be displayed)

XII. Sleep mode

Function description:

1. Monitor the sleep

Sleep display screen

Display description:

1. The "SLEEP MODE" prompt is displayed before starting the sleep function
2. "SLEEP and the current time" is displayed after going into sleep monitoring

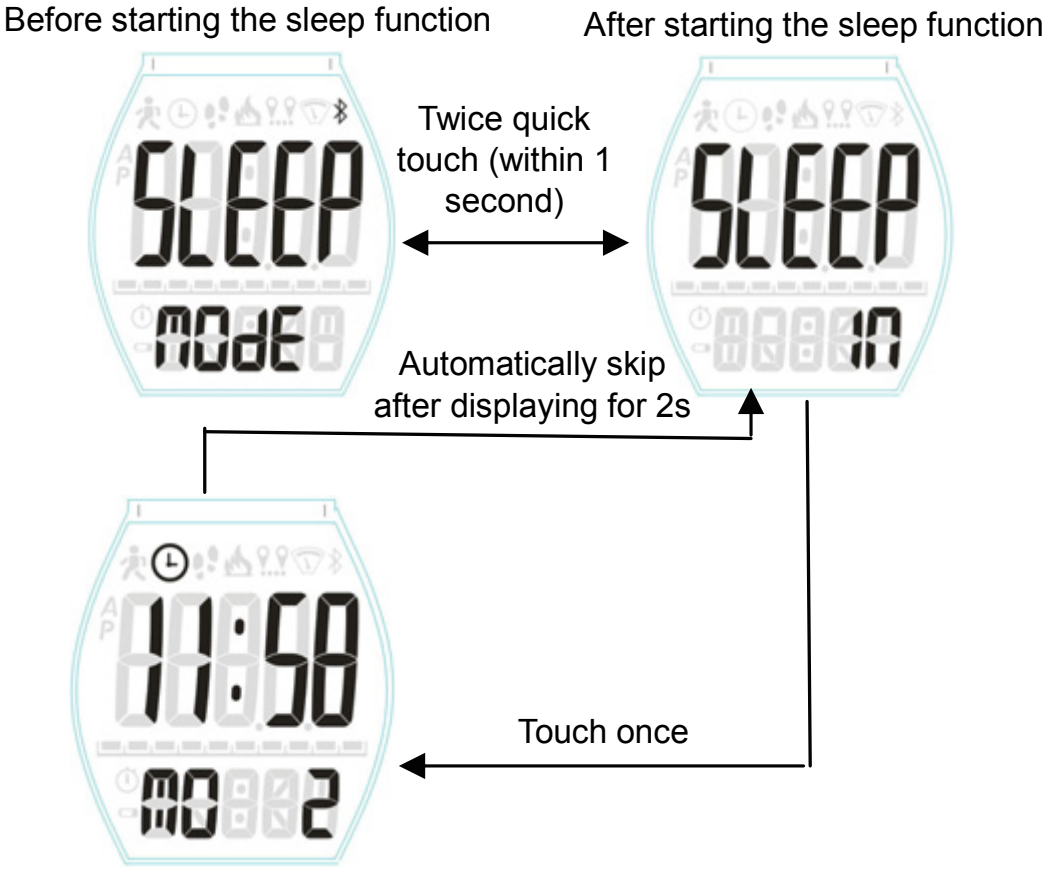
Operating instructions:

Mode switching: Switch to the time display mode after pressing the S1 key

Go into the sleep mode: At the sleep interface, carry out touch operation twice within 1 second to go into the sleep mode

Exit the sleep mode: In the sleep mode, carry out touch operation twice within 1 second to exit the sleep mode and go into the time mode

View the time under the sleep mode: Touch once in the SLEEP IN interface, it will display the current time for 2s, and then automatically skip to the SLEEP IN interface


Before starting the sleep function
After starting the sleep function
SLEEP
MODE
Twice quick touch (within 1 second)
SLEEP
IN
Automatically skip after displaying for 2s
11:58
MO 2
Touch once

Note: 1. The above does not have the sleep reminder function. If it has the intelligent sleep reminder function, please refer to Article 1.17 and 1.18 of the Bluetooth Communication Agreement for specific requirements.

XIII. Bluetooth transmission mode

Function description:

1. In APP's settings, the user can choose to set the Bluetooth starting mode, which can be one of the following three modes:
   1) Automatic broadcast, namely, Bluetooth is always on
   2) Manual start of Bluetooth, namely, Bluetooth is on for 30s by every touch

3) Regular start of Bluetooth, namely, Bluetooth is on for 5 minutes at a scheduled time point

2. The Bluetooth logo will be displayed for 30s every time Bluetooth is started; the watch will have a corresponding vibration response (for 1S) every time after successful synchronization with APP
3. During data transmission between the watch and APP, the Bluetooth logo will flash in 1hz; after successful synchronization and vibration, the Bluetooth logo will disappear.

Note: Please refer to Article 1.15 and1.16 of the Million Communication Agreement for specific details of Bluetooth starting mode

XIV. Charging mode

Function description:

1. During the charging process, the electronic paper displays the charging screen, in which, the electronic paper will display FULL when it is fully charged, otherwise CHr. If there is a touch action during the charging process, it will display the time screen for 2s, and 2s later, automatically skip to the charging screen

Charging　　Fully charged　　Display for 2s

XV. Factory test mode

Function description:

1. Open test App, touch the watch once to communicate the watch with App and check the watch display:
   1) If it displays OK, that means the product is non-defective. Touch the touch area once and immediately loosen, the motor will vibrate for 0.5s (used to detect the motor's vibration function), and the watch will long display 12:00 AM Th 1 (2015-1-1 12:00AM, the time to stop running), clear all the data and go into the factory mode

2) If it displays CHR, that means the watch has power less than 40%, and it's necessary to charge the watch's battery and test again before shipment
3) If the low power symbol is displayed on the screen, it's necessary to charge for some time and then test again with this App
4) If none of the above situations (that is, the connection with Test APP fails) occurs, it's necessary to re-connect with Test App for test. (to avoid Bluetooth crowding and misjudgment caused by too fast operation)

2. Upon receipt of the sample, under the factory mode, long touch the contact area for 5 seconds to exit the factory mode; then open App to set synchronization of personal information with the watch, update the time display, age, unit display mode, weight, step pitch, target number of steps and other parameters and data on the watch

XVI. General description:

1. The progress in accomplishing the target is divided into 10 squares, and each square is 10% of the preset target number of steps.
2. At 0 o'clock midnight, the pedometer will automatically save the current day's data (number of steps, exercise time, calories, distance and progress in accomplishing the target), and the screen will be reset
3. If there is no step counter signal or key operation for 3 minutes, it will automatically go into the sleep mode. In the sleep mode, the step counter function will be turned off, and the display of the step counter " " will be turned off as well. Under the sleep mode, if there is touch operation on the touch area or step counter signals are detected, it will exit the sleep mode and return to the last state before the sleep mode.

4. When there is a key operation, it will automatically turn on the Bluetooth function and display the "" prompt, and 30 seconds later, the Bluetooth function will be automatically turned off.
5. Communication with the watch can be realized through App's settings. You can choose which screens for the watch to open for mode switching, and App also can control the order of such display screens
6. Upon going into the factory test mode,→ first check battery power, if the power is less than 40%, it will display CHR instead of OK
7. When the battery power is below 10% (i.e. 3.56V), the Bluetooth and motor vibration functions will be turned off, and the power shortage symbol will be displayed

8. The operation of quickly touching twice within 1s means the interval between the start of the first touch and the end of the second touch is ≤ 1s
9. Every time it synchronizes with APP, the Bluetooth logo will flash (The flash time depends on the amount of data to be transmitted). After a successful synchronization, the watch will give a vibration prompt for 1s. Upon vibration, the Bluetooth logo will disappear
10. The function of sedentary state reminder is added. If the preset sedentary time is reached, the motor will vibrate for 5s
11. For alarm clock vibration, the vibration will last 10s in different frequencies, in the 1-3s, it vibrates for 0.3s and pauses for 0.7s per time, in the 4-6s, it vibrates for 0.5s and pauses for 0.5s per time, in the 7-9s, it vibrates for 0.8s and pauses for 0.2s per time, and in the last 1 second, it vibrates without pause

12. If it is in sleep, when you touch once under the standby mode (full black or full white), it will display SLEEP IN for 3s and then automatically go into the standby mode (full black or full white); when you touch once under the SLEEP IN interface, it will display the time for 2s; when you quickly touch twice under the SLEEP IN interface, it will exit the sleep mode (otherwise, you've no idea whether it is in sleep in face of full black or full white)