# Contents

# Section 1 INTRODUCTION

The Wireless Scanners is the new generation instruments for ultrasonography with the outstanding feature of wireless.

Different with traditional ultrasound scanner with a cable connecting from probe to main unit, no cable appears at the end of the probe of the Scanners. The probe of a the Scanner is highly integrated with ultrasound image processing, power management and a wireless signal provider to be connected by the main unit. The main units different with traditional devices are now changed to be any iPad from Apple Inc. The probe acted as a Wi-Fi Access Point and can be connected by iPad. With the probe be connected through WiFi and the App is running, enjoy your days of working without the trouble making cables.

This manual is intended to provide a through overview of the Scanner and should be carefully read before starting operating the device.

Thank you for your trust in us to provide for your ultrasonography needs.

Display:         iPad / iphone/Android Series
Probe:            7.5MHz（linear）、10Mhz（linear）
Depth:           linear: 40-100mm,20-50mm
Display Mode:    B、BM
Gray Scale:      256 levels
Battery last:    > 3 hours
Size:            104mm x 50mm x 22mm
Weight:          < 0.3Kg

# Section 2 GETTING STARTED

**FOR YOUR PROTECTION,** please read these safety instructions completely before applying power to, or operating the system.

## 2.1 UNPACKING

The Scanner is carefully packed to prevent damage during shipment. Before unpacking, please note any visible damage to the outside of the shipping containers.

Items should be checked in order to ensure that all ordered items have been received. The following table lists the items which should be received with each particular system.

**Table 2-1   Items List for The Wireless Ultrasound Scanner**

| ITEMS | INCLUDED |
|---|---|
| The Wireless Ultrasound Probe | √ |
| USB Cable for Charging | √ |
| Wrist Strap | √ |
| The Wireless Ultrasound Scanner Users' Guide | √ |

Each item should be examined for any noticeable defects or damage that may have occurred during shipment although it is packed carefully. If any defect or damage exists, please contact to your local representative immediately to report the problem.

# 2.2 INSTALLING APP

1)Login in the App Store(IOS system)

Search "wireless US", You can find the wireless scan APP, download and install it to your iphone or ipad.

# 2.3 STARTING PROBE



1: Button for Power ON/OFF & LIVE/FREEZE

2: Battery Capacity Indicator
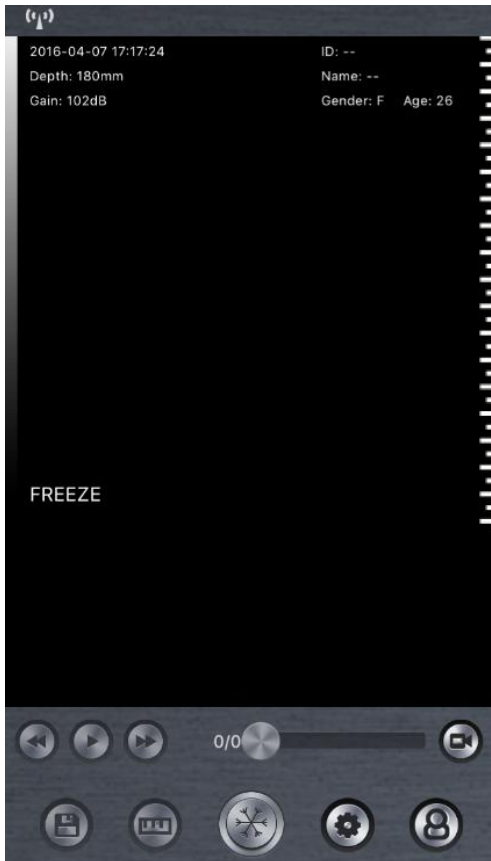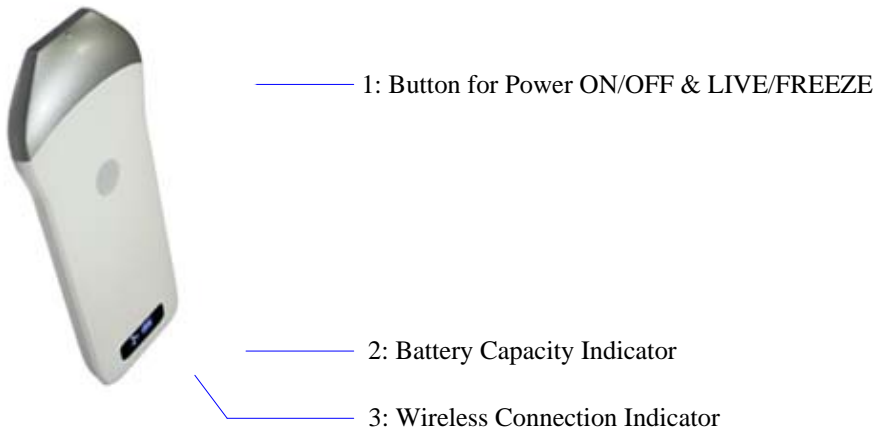
3: Wireless Connection Indicator

Figure 2-1 The Wireless Ultrasound Probe

The Wireless Connection Indicator and the Battery Capacity Indicator on the probe may be invisible before the probe is turned on.

Press the button to turn on the probe. The Battery Capacity Indicator will be light to indicate the capacity of the battery. The four grids of the

indicator imply the battery capacity. (Probe charging will be described in section 4.)

Seconds after the probe turned on, the Wireless Connection Indicator will be light and blinking to notice that the probe is ready for a wireless connection from the iPad.

The probe can be turned off by hold down the button for seconds. When the probe is off, the indicators will be turned off.

## 2.4 WIRELESS CONNECTION

When the probe is waiting for a wireless connection as described in previously, launch the Settings of iPad, turn on the Wi-Fi (if not on), Find the SSID of the probe. The SSID is like: "SS-1 GMBFCA001", the suffix "GMBFCA001" is a code generated from Serial Number. Connect to the SSID with the password same as the Serial Number (in lower case). The Serial Number is in the form like "WSPBFCA001" with the prefix of "WSP". It can be found on the surface of the probe.

After Wi-Fi is connected, launch the WirelessScan App, after the connection from the app to the probe is confirmed, the Wireless Connection Indicator on the probe will be light with no blinking.

Every connection steps are done. The operations of using the system to finish ultrasonography task will be described in the next section.

Remark: the password should be small letter not capital letter.

# Section 3 APP OPERATIONS

## 3.1 ULTRASOUND SCAN

(1)
(2)
(3)
(4)

(5)

(6)          (7)

(8)     (9)   (10)  (11)  (12)  (13)    (14)

(18)

(17)

(16)

(15)
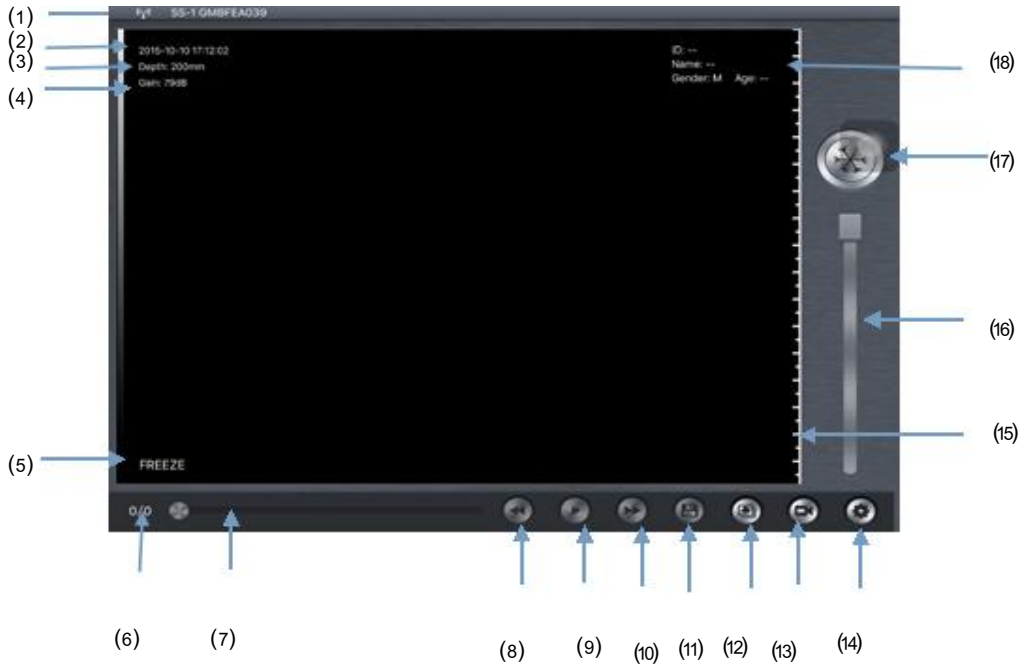
(1)Wireless Connection Status        (2)Date & Time of Image

(3)Depth        (4)Gain

(5)FREEZE/LIVE        (6)Cine loop Index

(7)Cine loop Slider　　　　　　　　　(8)Previous

(9)Play　　　　　　　　　　　　　　(10)Next

(11)Save Image　　　　　　　　　　　(12)Browse Stored Image

(13)Video　　　　　　　　　　　　　(14)Settings

(15)Scales of Image　　　　　　　　　(16)Gain Slider

(17)Run/Freezes Button　　　　　　　(18)　Patient Information

Figure 3-1 Main Screen

After the probe is connected, launch the App, the Main Screen will show similar in Figure 3-1. (No image is visible when the App is firstly launched.)

The Wireless Connection Status indicates the SSID of the Wi-Fi of the connected probe.

Press the Run/Freeze Button (7) to run and Freeze the probe. This button has the same function as the button on the probe in running or freezing the image. When running, Gain Slider (8) can be slide up/down to adjust the gain of the image. When the Image come to shown on the Image Area (2), the Imaging Date & Time (3), the Gain (4) and the Depth of Image (5) will be shown together with the ultrasound image. When the probe is running, label (6) will be shown as "LIVE", or it will be shown as "FREEZE". Scan depth of the ultrasound image can be adjusted by swipe down/up in image area when running.

When the image frozen, Label 11 shown the count of image in the cine loop and the index of current image of the cine loop. Users can use the Cine Loop Slider (12) to select the image in the cine loop. Three buttons (13,14,15)

on the right of the slider can also be used to select the images in the cine loop.

By press the Full-Screen-Button in the lower right corner of the Image Area, the Image Area will occupy the whole screen. In Full-Screen Mode, press the button to shift back Non-Full-Screen Mode. The Full-Screen-Button will hide after seconds automatically. Tap in image area to make it visible. In Full Screen mode, the button on the probe can be used to run or freeze the image.

## 3.2 ENTER PATIENT INFORMATION

First, ultrasound finger click the upper right of the software interface.
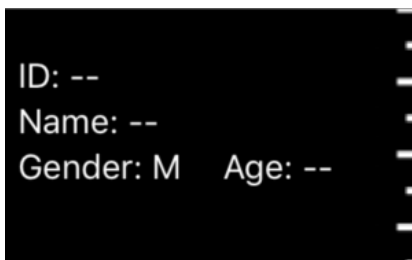


Pop-up screen

In ID, enter the name of the patient information bar, click on sex selection, picture mode, and then click OK, the patient information will be entered, if an input error, you can click again to modify or create new cases.
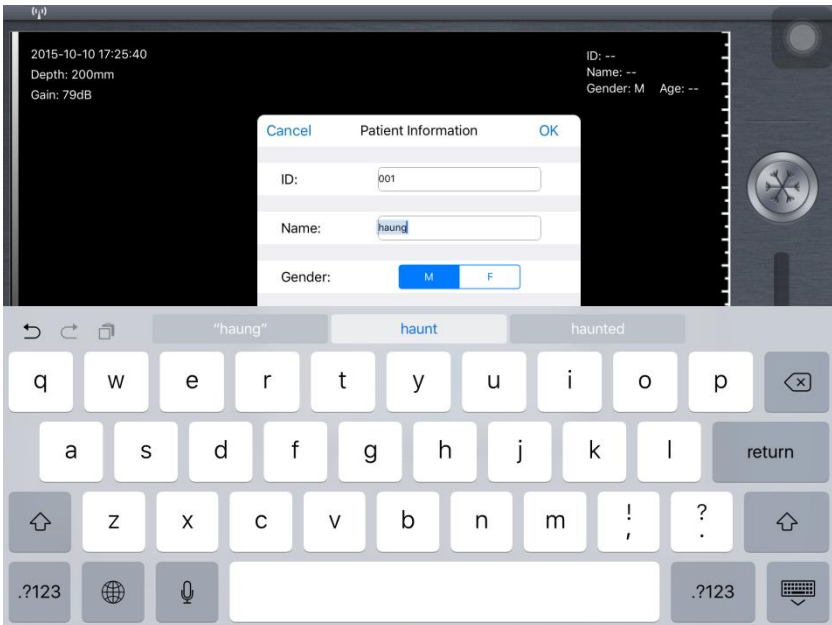
# 3.3 SELECT THE IMAGE MODE
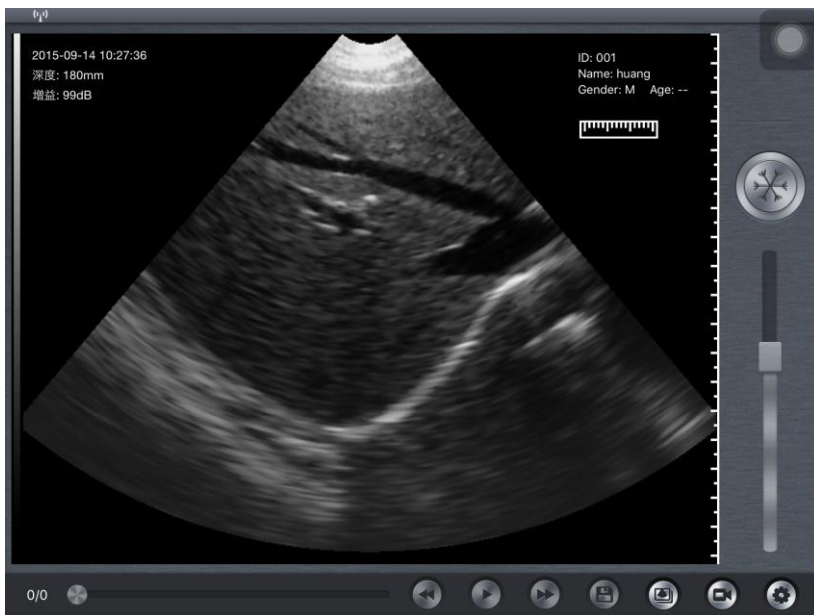
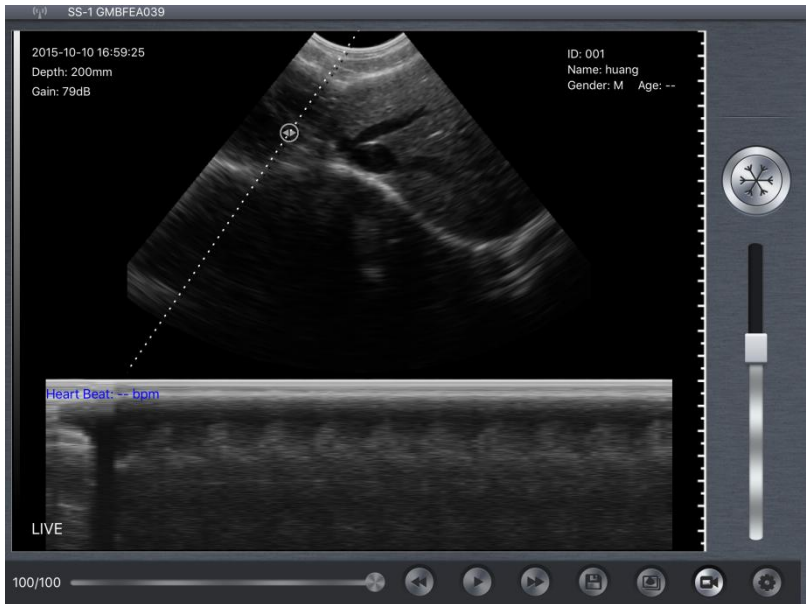Image Mode: **B Mode** | BM Mode

Image Mode: B Mode | **BM Mode**

Enter patient information section can select the image mode, select B mode or BM mode, you can enter different modes, as shown:
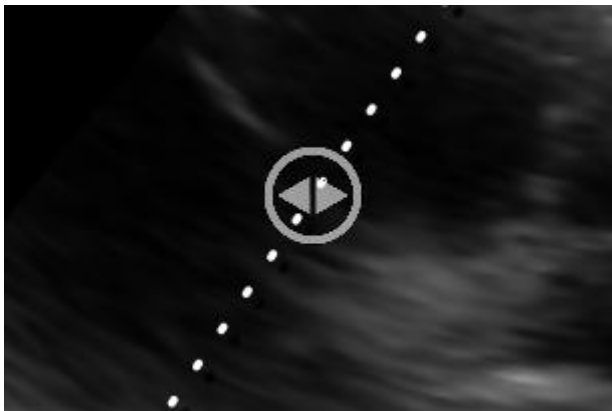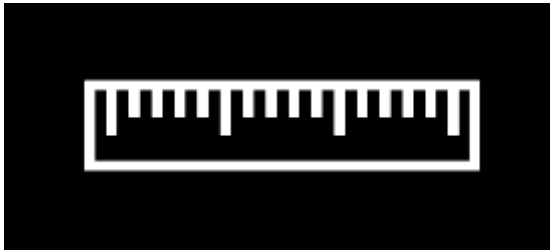
B mode:



BM mode:

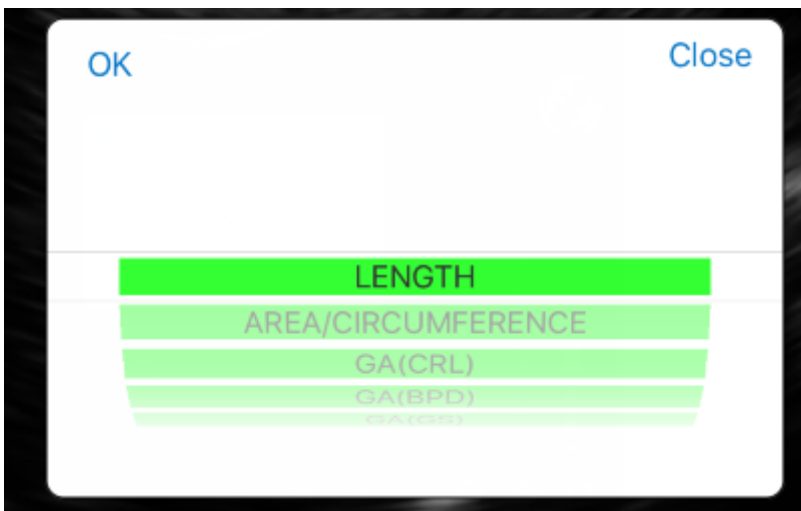In the BM mode, by clicking with your finger to move here, you can adjust the position of M sample lines:
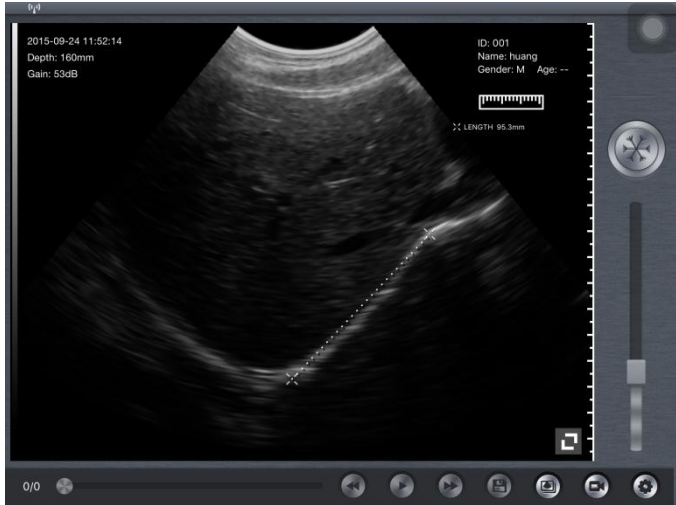
# 3.4 MEASUING

In B mode, finger clicking here, you can use measuring tools.
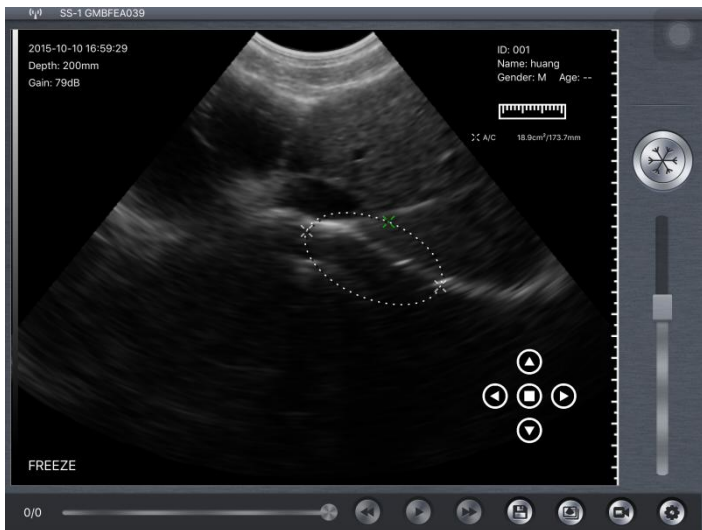


There are length, area measurements, select the desired measurement unit, click OK.
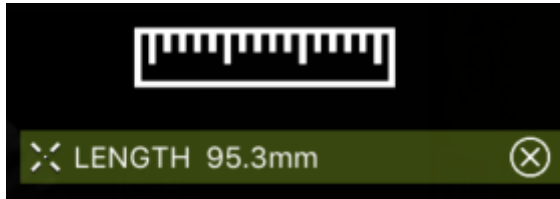


Click the option to be measured with a finger position, then double-click the selected form data once, it will be displayed in the upper right.

Note: When you measure other data, such as area, in addition to a finger click
Adjust the size, can also be used to adjust the virtual scroll ball.



Click on the right data⊗，Measurement data can be deleted:

3.3 STORAGE OF IMAGES

When image is showing in image area, Save Image Button (16) can be pressed to save the image to the album of the iPad.

By pressing the Browse Stored Image Button (17), users can select a stored image and show it on the image area.

The stored images can be exported with same method as photos exporting using iTunes or other equivalent methods.

# 3.5 SETTINGS

If users hold the probe on the right hand, and want to operate the software by the left hand, the software provides settings to adjust the interface.

Press the setting button(18), settings screen will appear as Figure 3-5 below.
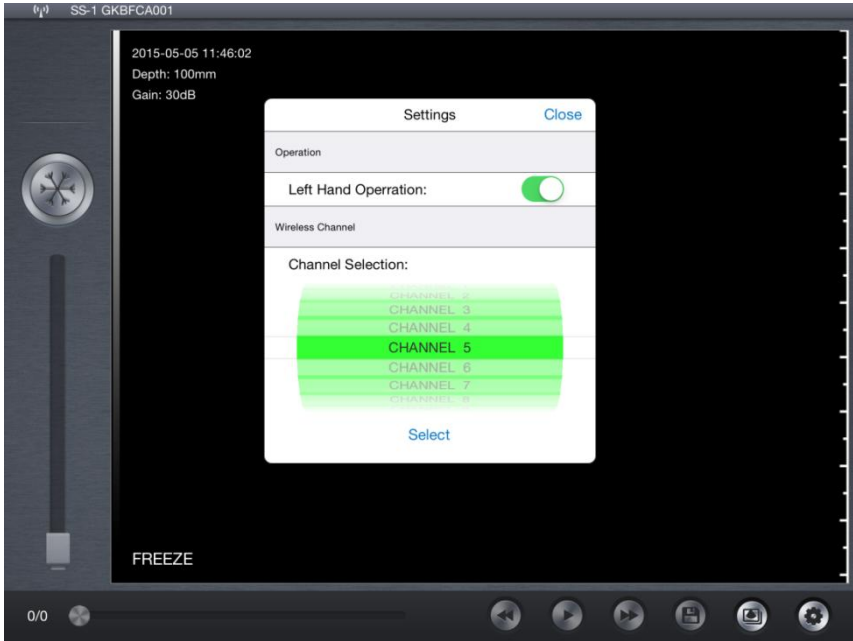
Figure 3-5 Settings Screen

Switch ON/OFF the Left Hand Operation to adjust the screen to convenience operators.

When the system is using in an environment where the WiFi channel is crowd, a new channel can be selected for the probe by pick a channel from the picker and tap Select button. After 2 seconds, please restart the probe to make the new channel available and the user also have to reconnect the probe with a different SSID.

# Section 4 MAINTANCE

## 4.1 PROBE CHARGING

When battery goes down, it is necessary to recharge the probe. Pull the insertion at the end of the probe, than connect the USB Charger and USB Cable with the probe to charge the probe as shown in figure 4-1. When in charging, the battery indicator will be blinking and the grids indicate the capacity of the battery charged.

Figure 4-1 Charge the Probe

If four grids all light and the indicator not blinking means the battery is fully charged. Unplug the USB cable and the insertion should be carefully plugged to make the probe able to keep out water.

# 4.2 WATERPROOF IPAD

A waterproof bag is provided by local repository. Users can use it to protect the iPad when it is used in humidity or dirty fields.

# 4.3 CLEANING

Periodic cleaning of the probe is all that is usually required. The probe can be cleaned by soft cloth or paper or water directly at the head. The probe with the waterproof level of IPX5 can be washed using clean water but users should NOT soak the probe in water.

# 4.4 STORAGE

When not in use, it is recommended that the equipment should be put in the case. While stored the equipment should be protected from temperature extremes.