WaspBio Clock™

User Manual

WaspBio Clock™   User Manual

Table of Contents

Introduction

Congratulations on your purchase of the WaspBio Clock! This manual explains how to use the terminal through the built in keyboard and how to connect to your Host computer.

What's in the Box

In your box you will find the following items:

1. WaspBio Terminal   1 unit
2. AC power adapter   1 pc
3. Drywall screws (Phillips)   2 pcs
4. Wall Anchors   2 pcs
5. Ethernet Cable   8 ft

Powering up the WaspBio

(You should mount the clock to the wall, if desired, prior to powering up the clock.)

1. Connect the power cable to the WaspBio terminal.

2. Connect the power cable to 110V 50Hz AC power source

Using the WaspBio Terminal Keyboard

Making Changes within the WaspBio Menus

To enroll users and perform other functions, you can use the WaspBio Clock's keyboard.

WaspBio Keypad:

Keypad Definition

 Confirms the current request.

 Scroll down.

 Access to Menu.

 Power button.

 Escape or cancel.

 Numeric keys.

 Scroll up.

At the Welcome screen, when the MENU key is pressed, the WaspBio terminal configuration options are enabled and you can make changes as needed. The key sequence to make changes and save those changes is as follows;

1. Arrow keys identify the item to be changed.

2. [OK] key to select the field (the field will be highlighted when it is selected).

3. The Arrow keys can then be used to change the option.

4. The [OK] key will accept or save the change.

5. To complete the save for a change, press the [ESC] key, then press [OK] to Save.

Welcome

8:55

02-18-05   FRI

System Opt

Save?
ESC   OK(SAVE)
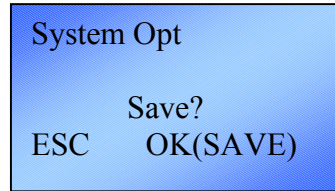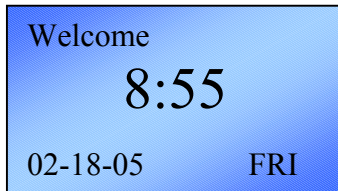
Correct Finger Placement

Finger placement and position is the first step in creating a good template image. The following pictures demonstrate correct and incorrect finger placement on the optic sensor.
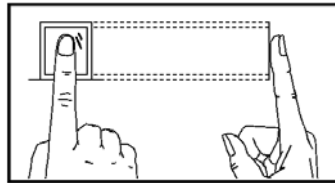
1. The correct way is to place a finger flat and centered on the sensor surface.

2. Examples of incorrect finger placement are shown below with descriptions.

Upright
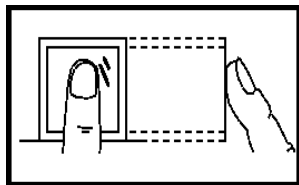
Not Centered

Skew or Side

Finger Top on edge of sensor

Note: Please adopt correct finger placement; Wasp Technologies assumes no responsibility for errors from the use of the clock.

Enroll Users

What is User Enrollment

Enrollment is the process of creating an ID number and scanning a user's finger three times to create a template. This template is associated with a user ID number and is stored in the clock. For information regarding backing up these fingerprint templates to your WaspTime Database, please refer to the ClockSetup online help.
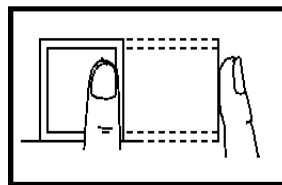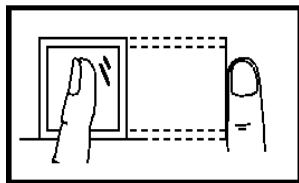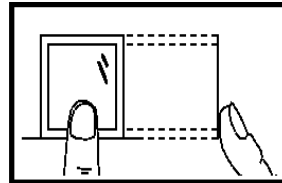
During user verification (when the user is punching in or out), the stored template is compared to the current fingerprint scan to confirm the user's identity.

Enrollment is performed at the clock designated as the Primary Clock in ClockSetup. The user can verify his/her fingerprint at the same clock terminal on which he/she was enrolled, and on any other clock terminal you transfer the fingerprint template to. For information on designating a clock as the Primary and on transferring fingerprint templates to other bioclocks, please refer to the ClockSetup online help.

Up to ten fingers can be enrolled for a single user with the same ID number.

The clock can hold up to 1500 fingerprint templates and still maintain optimum performance (2 second response time).

If you use 1 to 1 verification only, you can enroll up to 3000 fingerprints, while still keeping optimum performance. Please see the chapter titled *Managing Match Thresholds* for further information on 1 to 1 verification.

How to Enroll Users

If this is the first enrollment on a new system, everyone is essentially an Enrollee, or a User. If there are already administrators setup in the system, only the administrators have the right to enroll new users.

There are three ways to enroll users:
- Fingerprint enrollment - used for most people who have good quality fingerprints.
- Password enrollment - used for those who can enroll successfully, but who are not able to provide quality fingerprints.
- Fingerprint and Password enrollment – used for those users who want to have the option to use fingerprints or a password for verification.

If there are no administrators, enroll yourself first (if you will be the administrator) and give yourself administrator access. To do this:
1. Press the [Menu] button.
2. Select User Manage.
3. Select Enroll Admin.

---

4. Follow the steps beginning on the next page to enroll with fingerprint or with fingerprint and password.

User ID Number

Before beginning enrollment, a user should be assigned a User ID. This User ID is used by the system to access the fingerprint record during user verification. Usually this is the badge number or employee number assigned in WaspTime.
By default the next available user ID number will be assigned to you automatically. You can change it with the up and down keys or the number keys (the range is 1 to 65534).

Enroll with Fingerprints

1. From the WaspBio Menu screen, navigate to "Enroll FP" and press "OK".

MENU ➡ **User Manage** ➡ **Enroll User** ➡ **Enroll FP**

The following screen will display:

New Enroll

User ID 00001
ESC   OK
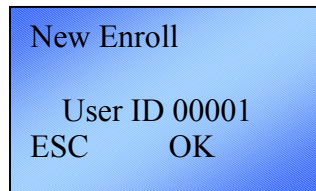
2. Select **OK** to continue. The following screen will display:

New Enroll

Place Finger…
ESC

3. Place your finger on the sensor 3 times. If successful, the following screen displays:

New Enroll
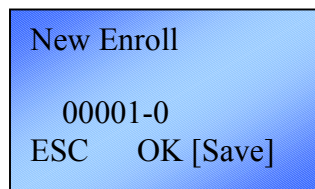
00001-0
ESC   OK [Save]

The last digit, 0, indicates that this is the first fingerprint for this user (User number 00001)

4. Select "OK" to save.

If there is a problem with the fingerprint capture you will be prompted to try again and should restart the enrollment process.

If you want to exit the New User Enrollment mode, press the "ESC" button. The system will then prompt you to enter back-up fingerprints for the user you just enrolled. You can then choose the User ID and enroll multiple fingerprints for that user.

Enroll with Password

1. Navigate Menu on the Clock to "Enroll Pwd", the press "OK".

MENU ➡ **User Manage** ➡ **Enroll User** ➡ **Enroll Pwd**

The following screen appears:
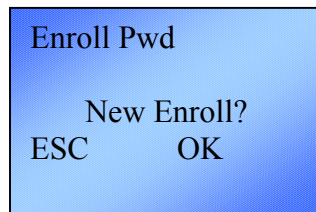
```
Enroll Pwd

    New Enroll?
ESC        OK
```
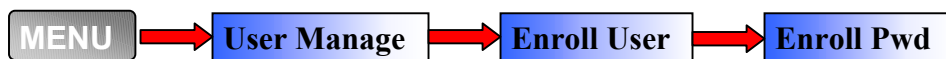
2. If known, input the user ID number and press **OK** .

Note: By default the next sequential user ID number will appear. You can change it with the up and down keys or the numeric keys (the range is 1 to 65534).

```
New Enroll

    User ID 00008
ESC       OK
```

3. The password is numeric and can be one to five digits in length. Enter the password, then press **OK** :

```
New Enroll

    Input Pwd *****
ESC       OK
```

4. Enter the password again to verify and press   OK

> New Enrollment
>   Input Pwd: *****
>   Pwd Affirm:
> *****
> ESC   OK

The following is displayed with the ID followed by the letter P. This last letter P indicates the user ID is stored with a password.

> New Enroll
>
>   00008-P
> ESC   OK [Save]

5. Press   OK   , the previous message continues to be displayed while the data is stored.

Enroll with Password and Fingerprint

1. Navigate on the Clock to "Enroll FP & Pwd", then press "OK".

MENU ➡ **User Manage** ➡ **Enroll User** ➡ **Enroll FP & Pwd**

The following screen will appear:

> FP & Pwd
>
>   New Enroll?
> ESC   OK

2. Press   OK   at the FP & Pwd prompt:

This will begin a new enrollment process and request a user ID.

> New Enroll
>
>   User ID 00008
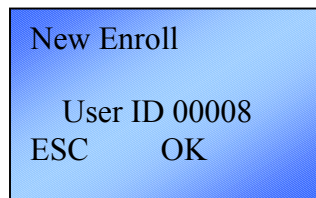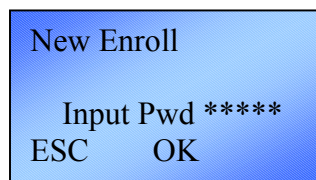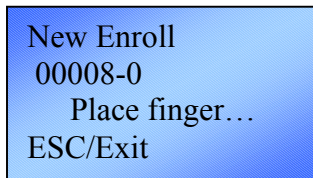> ESC   OK

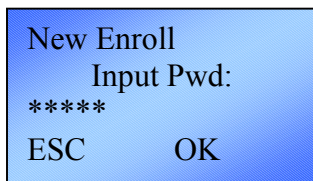3. If known, input the user Id number and press [**OK**].

   Note: By default the next sequential user ID number
   will appear. You can change it with the up and down keys or
   the numeric keys (the range is 1 to 65534).

4. When the following prompt appears, place the finger to be enrolled on the reader
   3 times as prompted:
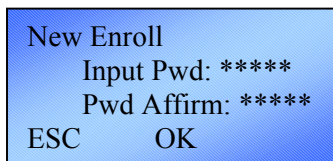
   ```
   New Enroll
    00008-0
        Place finger…
   ESC/Exit
   ```

5. When the following prompt appears, enter user's password, then press [**OK**]
   The Password is one to five digits in length.
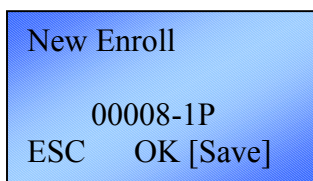
   ```
   New Enroll
         Input Pwd:
   *****
   ESC         OK
   ```

6. Input the password again for verification, press [**OK**] :

   ```
   New Enroll
         Input Pwd: *****
         Pwd Affirm: *****
   ESC       OK
   ```

   If successful the following will appear:

   ```
   New Enroll

         00008-1P
   ESC     OK [Save]
   ```

   Notice that the ID (00008) is followed by a number and the letter P. The number
   indicates the current fingerprint template associated with this ID (this user has
   two fingerprints entered into the system). The number sequence for fingerprints
   captured is 0-9. The letter P indicates the user ID is stored with a password.

   Note: In the example above for New Enroll, 00008—1P is broken down as ID –
   00008, Second fingerprint – 1 (where fingerprints captured are 0-9), and the last
   letter P means password.

7. Press OK . The message in the screen shot above continues to be displayed while the template is created.

Suggestions for Successful Enrollment

When a fingerprint is captured successfully, the verification speed will be fast. If the fingerprint is of poor quality, slow reads and false rejections are possible.

In order to improve the fingerprint verification quality, try the following suggestions:

Failures to Validate Enrollee or Fingerprints of Poor Quality

Problem	Resolution
Dry fingerprints	Moisten the finger by holding it to the palm in a fist position.
Not enough pressure on the sensor	The user should place a finger firmly and squarely on the sensor surface.
How to select the finger	The left or right index or middle finger is normally recommended. Otherwise the middle or ring fingers can be used to capture good fingerprint templates. Use fingerprints of good quality, not worn or injured.
How to place the finger	Place finger firmly on the sensor surface, finger placement must cover 2/3 of the sensor surface. The fingerprint should not touch perpendicular to the sensor surface. Do not touch the finger too fast; or move the finger on the sensor surface.
Fingerprint change Influence	Worn or injured fingers can influence verification. If the finger quality is too poor, use password verification.
Other	No matter how advanced the reader, there is a percentage of people whose fingerprint scans may not validate. For this small group, the alternatives are to use ID and fingerprint validation, lower the match threshold (explained later in this manual), or use password validation.

User Verification

Users can verify themselves at the clock. The system
verifies through the three methods previously mentioned:
Fingerprint Verification
ID Number and Password Verification
ID Number and Fingerprint Verification

```
Welcome
  08:25
04-01-02     FRI
```
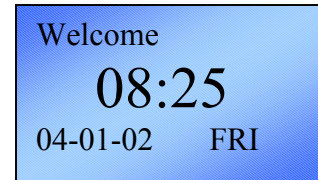
Fingerprint Verification

At the Welcome screen simply place the finger on the
sensor surface, and the following will appear:

```
FP Verify

Remove Finger
```

The message will display for about 0.5 seconds.

If the test is successful, it will say "Thank you",
and the following will appear:

```
FP Verify

        User ID 00008
        Verified!
```
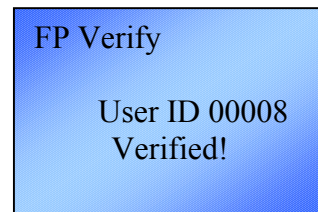
If the user identity cannot be verified, the user will
be prompted to try again, the following will appear:

```
FP Verify

Place Finger Agn:
```
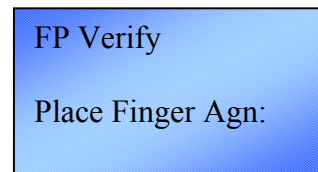
The message will display for about 0.5 seconds, and then return to the start-up window.

ID Number and FingerPrint

At the Welcome screen, enter your ID number. The
display will change to show the User ID entered.

```
Welcome
  08:25
04-01-02     FRI
```
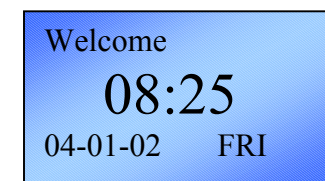
The option to enter a password is present, but not needed for ID Number and FingerPrint combination.

> 1:1 FP Verify
>
>   User ID 00008
> ESC   OK [Pwd]
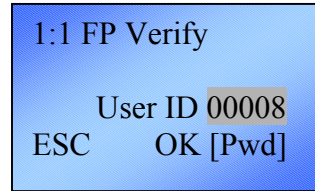
To verify, place an enrolled finger on the Reader. The following will appear:

> 1:1 FP Verify
>
>   User ID 00008
>   Verified!

ID Number and Password Verification

To start the verification process, enter the user ID number at the Welcome screen.

> Welcome
>   08:25
> 04-01-02   FRI
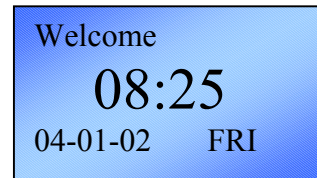
Once the user ID is entered, the clock displays the appropriate prompts for a user ID stored with a password.

> 1:1 FP Verify
>
>   User ID 00008
> ESC   OK [Pwd]
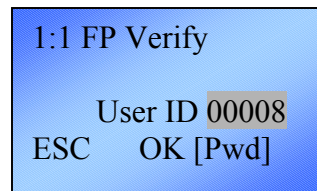
Press OK , to accept the password acknowledgement and the display will change to the Input Password prompt.

> Pwd Affirm
>
>   User ID 00008
>   Input Pwd: *****
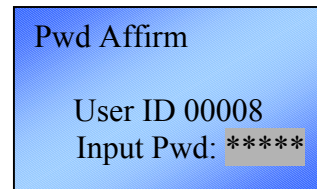
Input correct user password (passwords are masked by Asterisks). Press OK , and if verified the following will appear:

> Pwd Affirm
>
>   User ID 00008
>   Verified!

If the password cannot be verified an error message will appear.

> Pwd Affirm
>
>   User ID 00008
>   Error pwd !
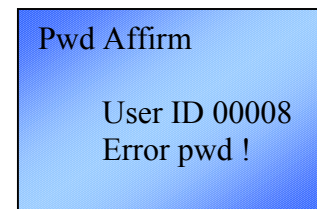
Authority Levels

WaspBio Clock has four authority or status levels, as defined below:

Users	People whose identity must be verified to have their attendance recorded.
Enrollers	Users who are authorized to enroll new users or delete users on the system.
Administrators	Users who can enroll new users and have the authority to change the settings of the terminal, except set Advanced Options.
Supervisors	Users who have authority to change the clock settings, including the system setup, as well as enroll new users.

 Note:
If there are no Administrators or Supervisors in the Clock, the Enrollers can enroll a new Administrator or Supervisor.

 If there is no Supervisor in the Clock, Administrator can enroll a Supervisor.

Managing Match Threshold Levels

Match Thresholds

The Match Threshold is a number that represents the degree to which verification is examined to ensure that the person is actually the person being identified. You can set match threshold levels on the Clock.

The Match Threshold Levels establish a balance between False Acceptance Rate (FAR) and False Rejection Rate (FRR). FAR measures how often a non-authorized user is falsely recognized and granted access to the system. FRR measures how often an enrolled and authorized user, who should be granted access to the system, is denied on the basis that the system did not recognize him.

 If the fingerprint verification is difficult for a certain user, he/she can use ID & Fingerprint verification (match one to one).

Raising the threshold increases accuracy, while lowering it decreases accuracy. The correct balance is essential. For users with worn or injured fingers, match threshold levels can (and should) be reduced.

A suggestion for the Match Threshold Value is shown in table 1:

Table 1—1 Suggested Match Threshold Settings

FRR	FAR	One to Many	One to One
High	Low	45	25
Middle	Middle	35	15
Low	High	25	10

Setting Match Threshold Settings

1. To change match threshold settings for **one to many** (1:N), navigate to Match Threshold, and press   OK   ..
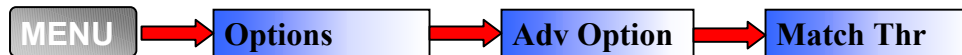
MENU ➡ Options ➡ Adv Option ➡ Match Thr

2. Use the arrow keys, or the number keys to set the threshold number desired and press   OK   .

3. To change the **one to one (1:1)**, match threshold setting, navigate to 1:1 Threshold, and press OK .

| MENU | ➡ | Options | ➡ | Adv Option | ➡ | 1:1 Thr |
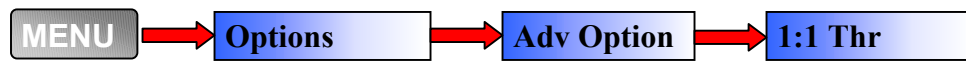
4. Use the arrow keys, or the number keys to set the threshold number desired and Press OK .

Setting System Options

Setting the Date and Time

1. Navigate to the Date/Time screen as follows and Press `OK` .

MENU ➡ **Options** ➡ **System Opt** ➡ **Date Time**
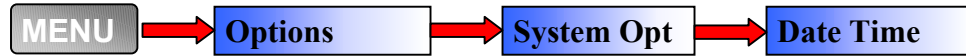
When you Access Date Time, the following will appear:

```
Date Time
      2004-01-02
      08:24:35
ESC          OK
```
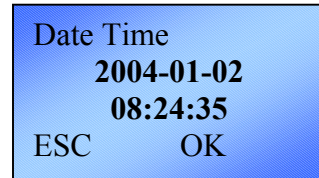
2. Scroll between the year, month, date, hour, minutes and seconds using the arrow keys. To modify the selected field, press `OK` and change the field using the number keys.

Changing the Language

1. Navigate to the Language screen as follows and press `OK` .

MENU ➡ **Options** ➡ **System Opt** ➡ **Language**
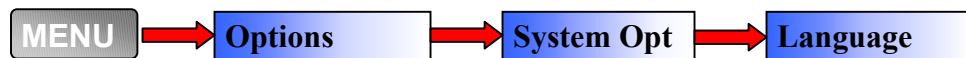
2. When the Language setting is accessed, it defaults to ENG. Use the arrow keys to select another language. The WaspBio comes with three built-in languages, simplified Chinese, traditional Chinese, and English for all displays.

3. Select the language that you will use, and press `OK` then press `ESC` to return to Options. The system will request confirmation for the displayed language. Press `OK` to accept the language displayed.

Resetting System Settings and Values to Default

The Advanced Option selections provide functions to reset settings and data deletion.

1. Navigate to the Advanced Options screen as follows, and press `OK` .

MENU ➡ **Options** ➡ **System Opt** ➡ **Adv Option**

The Advanced Option setting will display.

```
Adv Option       ▼
▶Restore Deflt
  Del AttLogs
  Clear all Data
```
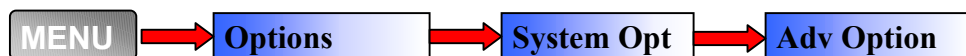
2. The arrow keys allow you to navigate to the desired function. Press **OK** to access the function, and follow the prompts.

3. Press **OK** to save.

The Advanced Option functions include:

Restore Deflt	Restores the various options to their default values.
Clear all Data	Deletes all enrolled users, fingerprints and logs.
Delete Logs	Deletes all logs of flash disk.
Clear Admin Pri	Clears all administrative privileges.

Only One to One Verification Mode

The WaspBio Terminal can be set to require one to one verification (User ID and fingerprint).

1. To do so, navigate to the Advanced Options menu and press **OK**.

MENU ➡ **Options** ➡ **System Opt** ➡ **Adv Option**

The Advanced Option setting will display.

```
Adv Option       ▼
▶Restore Deflt
  Del AttLogs
  Clear all Data
```

2. Use the arrow keys to navigate to the Only 1:1 Function. Press **OK**. Use the arrow keys to toggle between Yes and No.

3. Press **OK** to save.

Turn Off Voice

The voice confirms verification or denies verification by stating "Thank You" or "Please Try Again". This option can be turned off and on.

1. To do so, navigate to the Advanced Options menu and press OK .

MENU ➡ **Options** ➡ **System Opt** ➡ **Adv Option**
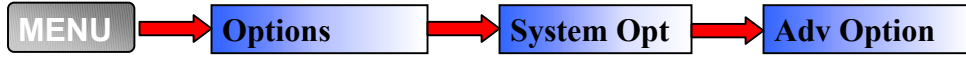
The Advanced Option setting will display.

2. Use the arrow keys to navigate to the Voice Function. Press OK . Use the arrow keys to toggle between Yes and No.

3. Press OK to save.

Adv Option   ▼
▶ Restore Deflt
   Del AttLogs
   Clear all Data

Establishing Your Ethernet Connection

The WaspBio Clock can be connected to a computer using a RJ-45 CAT 5 cable to connect to your Ethernet. Once connected to your computer, you can control certain functions on the WaspBio Terminal using WaspTime ClockSetup.

Ethernet connection

Ethernet Connection

The following steps will assist with the Ethernet setup. Note that when you first receive your clock you will need to manually set the date and time (see previous chapter) and manually set the IP Address, Net Mask and Default Gateway. After you have connected your clock to ClockSetup, changes to these items can be made through the ClockSetup Application.

1. Connect your WaspBio Clock to Ethernet port or hub using a standard RJ –45 CAT 5 Ethernet cable.

2. Plug the power cable to the power outlet to power on the WaspBioTerminal.

3. Wait for the power on screens to cycle through to the startup display.

```
Welcome
     08:25
04-01-02      FRI
```
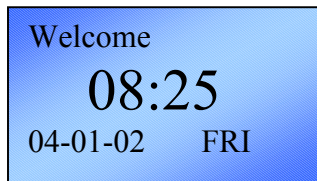
4. Press the **Menu** key.

5. Use the down arrow key to highlight **Options**, then press the **OK** key.

```
Menu
    User Manage
  ▶ Options
    Sys Info
```
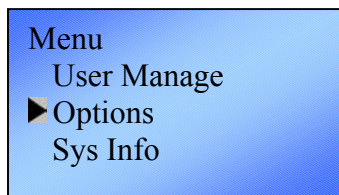
6. Use the down arrow key to highlight **Comm Opt**, then press the **OK** key.

```
Options        ▼
    System Opt
    Power Mng
  ▶ Comm Opt
```
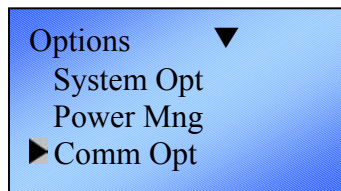
The following options will be available by using the down arrow to scroll selections.

```
Comm Opt          ▼
   Baud Rate  1115200
   Dev Num     1
   Net Speed  Auto
   IP address
   Net Mask
   Gateway
   RS232       No
   RS485       No
   Comm Key  0
```
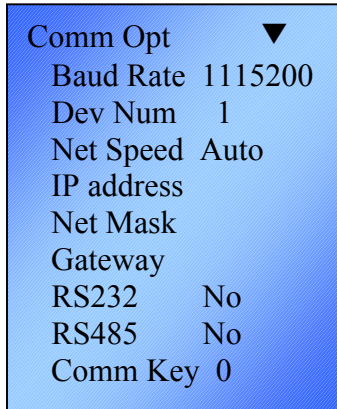
7. To configure the Ethernet connection, the options on this screen should be set as follows:

Baud Rate: Leave at the Default

Device Number: machine ID, the range is 1 to 255. The default is 1. The Device Number is recognized by the software.

Net Speed: Leave at the Default value (Auto).

IP address: Defaults to IP address 192.168.0.0. You can enter a new IP address here, if needed.

Net Mask: This should match the subnet mask on your Service computer.

To determine the subnet mask:

1. On the computer where you installed the service, select **Start > Run**.
2. Type **cmd** in the **Open** field, then click the **OK** button. The **Command** prompt screen appears.
3. On the **Command** prompt screen, type **ipconfig**. Your computer's settings will appear. A listing for **Subnet Mask** will appear. You need to match your IP address to the format of your Subnet Mask.

   Example: If your Subnet Mask is 255.255.0.0 and the IP Address shown on the ipconfig screen is 192.168.0.1, you should set your clock's IP Address to 192.168.xxx.xxx where the last two sets of numbers are any numbers of your choosing between 1 and 254.

Gateway: This needs to be set to your computer's gateway address. To determine the address, follow the steps described for Net Mask, above. In the ipconfig information there is a listing for Default Gateway. Enter this number in the Gateway field.

If you do not plan to put the clock on the other side of the router from your WaspTime software, the gateway can be left as the default (192.168.1.1).

RS232: Yes

RS485: No

Com Key: Leave at the default value (0).

Care and Maintenance

Cleaning the optical sensor may be required if performance begins to degrade or is visibly obstructed. A fine, lint free optical quality cloth can be used to wipe off the optical plate and the terminal.

Menu Map

BioTime™ Menu Map

Enroll User
Enroll FP
Enroll Pwd
FP & Pwd

Enroll Admin
Enroll FP
Enroll Pwd
FP & Pwd

User Manage
Enroll User
Enroll Admin
Delete

System Opt
Date Time
Language
Fmt
Adv Option

Adv Option
Reset Opts
Del AttLogs
Clear All Data
Clr Admin Pri
Show Score
Match Thr
Only 1 To 1
1:1 Thr
Voice
Image Qlt

Power Mng
Shutdown
Power On
Sleep
Idle
Idle Min

Options
System Opt
Power Mng
Comm Opt
Log Opt
Auto Test

Comm Opt
BaudRate
Dev Num
Net Speed
IP Addr
Net Mask
Gateway
RS232
RS485
COMM Key

Menu
User Manage
Options
PenDrive Mng
System Info

Log Opt
Alm SuperLog
Alm AttLog
ReCheck Min

Auto Test
Run All Test
LCD Test
Voice Test
FP Reader
Key Test
RIC Test

PenDrive Mng
Download Attlog
Download User
Upload User

Sys Info
User Cnt
FP Cnt
Att Log
Admin Cnt
Pwd Usr
Super Logs
Free Space Info
Dev Info

Free Space Info
FP Cnt
Att Log
Super Logs

Dev Info
FPCnt(100)
AttLog(10k)
Super Logs
Manu Time
Serial Num
Device Name
Alg Version
Firmware Ver