Blood Pressure Analyzer+ MacOS V1.0.5

Software User Manual

Document No:UMBPAPMAC10501Rev. Date:2024-03-31Revision:1

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1 Introduction

Blood Pressure Analyzer+ is the blood pressure data collection APP which has been developed by Microlife corporation. It can transfer data from Microlife Blood Pressure monitoring devices via USB cable.

1.1 APP Specification

Support OS	MacOS 12~ 14
Languages	English
Report Type	CSV, PDF
Compatible Devices	Microlife USB BPMs with 3G/4G protocol
Communication Interface	USB

1.2 Symbols

The following symbols are shown in the software and explained as below.

#	Symbols	Interpretations
1	AFIB sens	AFIB (Atrial Fibrillation) This symbol doesn't apply to USA market.
2	-//-	IHD (Irregular Heartbeat Detection) If irregular pulse is detected, this symbol will be shown in the data table.
3	\bigcirc	Cuff fit A proper cuff fit is essential for accurate blood pressure read- ings. During the measurement, if the cuff is fitted properly, this symbol will be shown in the data table.

1.3 Installation

Select App Store from the Apple menu and then Mac App Store will open. Search the "Blood Pressure Analyzer+" to find the APP. Press install and then the APP will be installed on your Mac.

1.4 Uninstallation

Use the Finder to delete apps. Find the APP and drag it to the Trash.

2 User Interface of BPA+

There are three general buttons in area "A" and four main tabs in area "B" of the BPA+ APP. They are described as below:

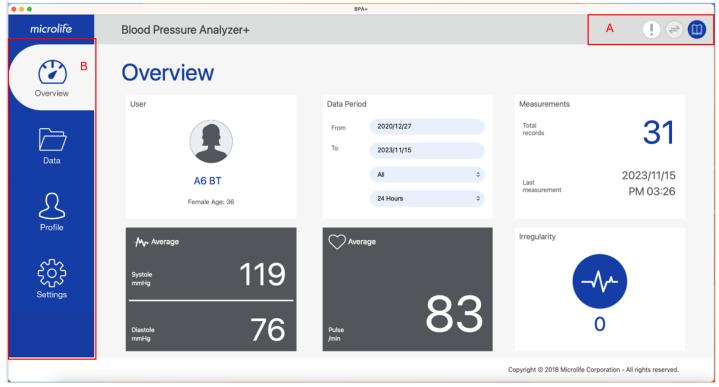


Fig-1





- Area B: Tabs
 - Overview Tab
 - Data Tab
 - Profile Tab
 - Settings Tab

2.1 General Buttons

There are three buttons on the right upper side and described as below:

Button	Function					
Software Version	When the button is pressed, the software version is shown as					
Button.	below.					
	BPA+ microlife Version V1.0.4					
Data Transfer	When the device is not connected, this button is disabled as					
Button	shown here 🖻.					
e	Once the device is connected, this button will be enabled as					
	shown here 🗢.					
	When the button is pressed, all data on the device will be					
	transferred to the APP.					
User Manual Button	When the button is pressed, it will direct to the user manual					
M	download page of the Microlife support website.					
	Note: To connect to the Microlife support website, the					
	internet is needed.					

2.2 Overview Tab

microlife	Blood Pressure Analyzer+	BPA+		() = (
	Overview			
Overview	User 1	Data Period	2 Measure	ments 3
[`		From 2020/12/27	Total records	31
Data		To 2023/11/15		01
	A6 BT	All	≎ Last	2023/11/15
R	Female Age: 36	24 Hours	• measure	PM 03:26
Profile	-M- Average	Average	Irregular 5	ity 6
202	systole 119		J	
کرکہ Settings				
	70	3	33	0
	Diastole 76	Pulse /min		Ŭ
			Copyright © 2	018 Microlife Corporation - All rights reserved.

Fig- 2

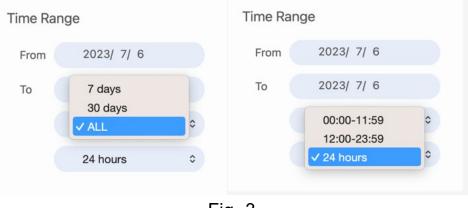
The information below will be found in the overview tab.

(1) Area 1: User basic information area

The username, gender, age can be found in this area.

(2) Area 2: Data Period area

This area shows the period of the readings. Users can customize the day and time period to filter the readings in the overview tab.





(3) Area 3: Measurements area

This area displays the total number of measurements and the latest measurement time.

(4) Area 4: Blood Pressure Readings Average Area

This area displays the average of the systolic and diastolic of all measurements of the selected data period.

Note: If the systolic & diastolic blood pressure averages are equal or higher than the corresponding threshold values in the settings, the values will be displayed in red.

(5) Area 5: Pulse Average Area

The average of the pulse is shown in this area for the selected time range.

(6) Area 6: Pulse Irregularity Area

If irregular pulse or AFIB is detected in the measurements, the number of detections is displayed in this area.

Note:

- The Microlife AFIB feature is available only on specific blood pressure monitor models.
- b. If the region is selected as USA, the AFIB symbol will not be displayed.

2.3 Data Tab

Users can review the detailed individual measurements in the list view, or review the corresponding measurement trend in the chart view at this tab.

Users can switch the below buttons (Fig -4) to select corresponding data presentation.



2.3.1 Data Table

This page is the default page shown in the data tab. Users can press the to switch to this page as below. Users can review all of the readings at this page. In addition, users can also export the CSV or PDF

report by pressing the 🔮 button.

•••				BPA+			
microlife	Blood Pressure A	nalyzer+					! 🔿 🕻
	Data						4
Overview	From 2023/ 7,	6 1	o 2023/11	1/22 All		≎ 24 Hours	•
	Ⅲ ≦						
	Date Time	SYS DIA	Pulse Irregu	ularity Cuff fit	Mode	Notes	
	2023/11/22 AM 02:1	3 133 72	80	$ \sim $			ŵ
Data	2023/11/11 PM 11:12	85 54	79	\bigcirc	MAM		Ŵ
\cap	2023/10/12 AM 06:3	9 144 70	82	\bullet \odot	MAM		Ŵ
25	2023/10/05 PM 03:2	5 121 10	3 130	\bullet \odot	MAM		Ŵ
Profile	2023/09/16 PM 09:4	3 143 70	80		MAM		Û
~~~>	2023/08/31 AM 11:00	6 136 72	83	<ul> <li></li></ul>	MAM		<b>Û</b>
ಕ್ಷಂತ್ರ	2023/08/10 AM 08:0	9 208 15	5 80	$\bigcirc$			Ŵ
Settings	2023/07/06 PM 03:0	8 82 55	79	$\bigcirc$			Û
						Copyright @	2018 Microlife Corporation - All rights reserved.

Fig- 5

#### Note:

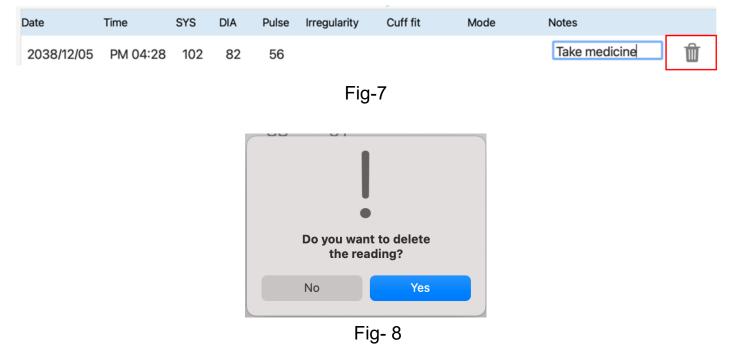
1. Only the measurement data within the selected date & time range will be displayed.

2. If the systolic & diastolic blood pressure averages are equal or higher than the corresponding threshold values in the settings, the values will be displayed in red.

Users can input a comment or edit the comment under the "Notes" column for the reading (Fig-6).

Date	Time	SYS	DIA	Pulse	Irregularity	Cuff fit	Mode	Notes	
2038/12/05	PM 04:28	102	82	56				Take medicine	
					Fig-	6			

If the reading is not needed, users can press (Fig-7) to delete the reading. Once the button is pressed, a message as Fig-8 will appear. Users can select "Yes" to proceed with deletion or select "No" to cancel deletion.



Users can also sort the readings by Date & Time, SYS, DIA, or Pulse individually, by clicking on the headers of these columns (Fig-9). Sorting may be helpful to find the lowest or highest values in the table quickly.

Date	Time	sys	DIA	Pulse	Irregularity	Cuff fit	Mode	Notes
28/03/2021	11:41	121	76	93		$\bigcirc$		<u> </u>
20/06/2020	11:06	120	72	69			MAM	Î
12/06/2020	14:10	116	76	75	<b>≁</b>			
28/05/2020	10:45	115	66	65	<b>≁</b>		MAM	Tired.
					Fig-9			

9

#### 2.3.2 Trend Chart Page

Users can press the *interview* button to switch to trend chart page to review the BP trend

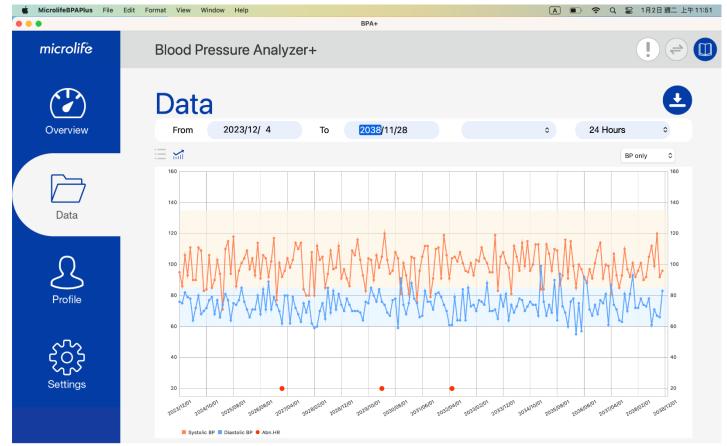
chart as Fig-10. Users can press the combo box to decide what kind of trend chart to show.

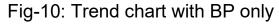
The trend chart can show at most 15 years' data. If the data period is over 15 years, the APP will modify the data period to 15 years automatically (based on the latest reading date).

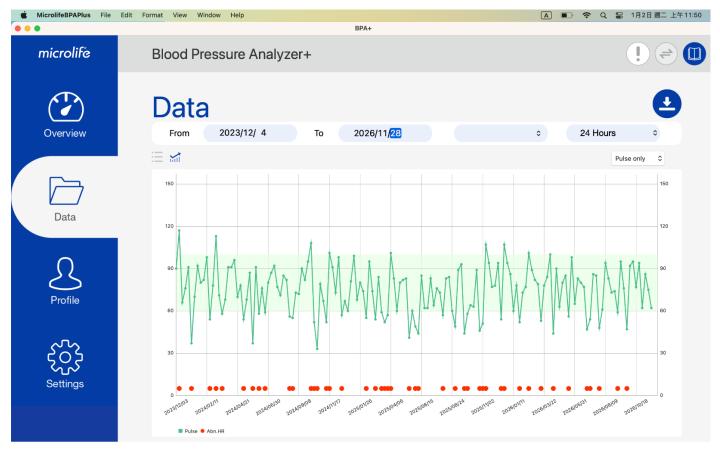
The APP supports the users to zoom in/ zoom out via the touch pad of the MacBook.

According to different data periods, the calculation algorithm of each point is different. It's interpretated as below.

Data Period	Data Range of each point	The value algorithm
<= 7days	A point means one hour	The average value within an hour
7~ 180 days	A point means one day	The average value within a day
180~3 years	A point means one week	The average value within a week
3~15 years	A point means one month	The average value within a month

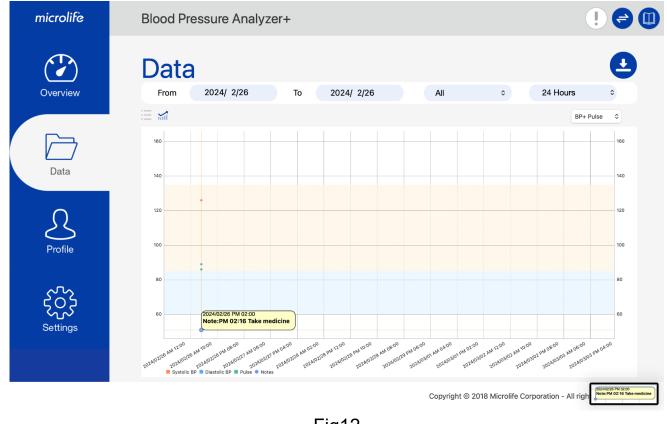








In addition, if the pulse is out of the normal range or a comment has been added, the circle will be shown on the bottom of the chart as below.





It's explained as below.

Circle colors	Interpretation	Example
● (Red)	If a red circle appears, it means the heart rate is abnormal.	2024/02/26 PM 02:00 HR:89
●(Blue)	If a blue circle appears, it means there is a comment.	2024/02/26 PM 02:00 Note:PM 02:16 Take medicine
●(Purple)	If a purple circle ap- pears, it means an ab- normal pulse and there is a comment.	2024/02/26 PM 02:00 HR:86 Note:PM 02:16 Take medicine

## 2.4 Profile Tab

Users need to create their user profile at the profile tab the 1st time they use the APP.

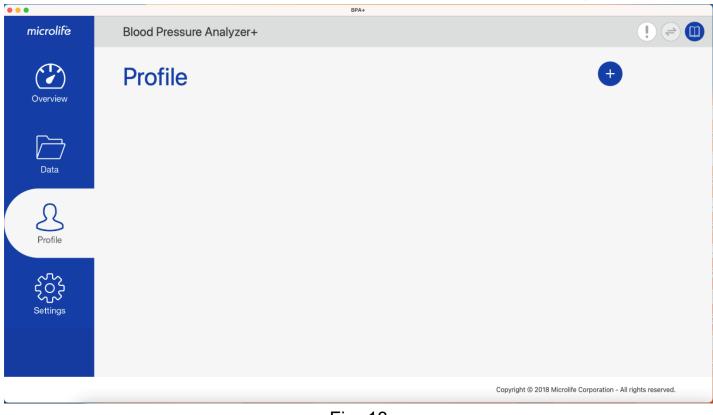


Fig- 13 Note: Refer to section 3.3 for details about creating a user profile.

microlife	Blood Pressure	Analyzer-	÷					
Overview	Setting: Software	S						
	Threshold SYS	135	≎ mmHg		Morning Range	05:00-10:59	\$	
Data	Threshold DIA	85	≎ mmHg		Evening Range	17:00-22:59	٥	
	Pulse Range	60	≎ bpm	)~(		100	≎ bpm	
<u>S</u>	Unit	ft/lb	٥		Region	USA	٥	
Profile	Date Format	ΥΥΥΥ/ΜΙ	⁄/DD ≎		Time Format	12	٢	
503	Ir	nport data		) (	E	Export data		
Settings	Blood Press	ure Mon	itor					
	Device ID							

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The below fields can be configured at the Settings tab:

(1) Threshold SYS  $\backsim$  (2) Threshold DIA  $\backsim$  (3) Pulse Range  $\backsim$  (4)Unit  $\backsim$  (5) Date Format

(6) Time Format (7) Morning Range and (8) Evening Range

#### Note:

2.5 Settings Tab

The Region can be selected only one time, when using the software for the first time after software installation. This setting cannot be changed once selected.

Users can press the "Import data" or "Export data" button to Import/ Export configuration, user profile, and measurement data of BPA+ software. Use this feature to migrate the BPA+ software data from one computer to another.

Note: "Import data" feature is compatible with the export patient file (in XML format) of the older Microlife BP Analyzer software.

# 3 Scenarios of BPA+

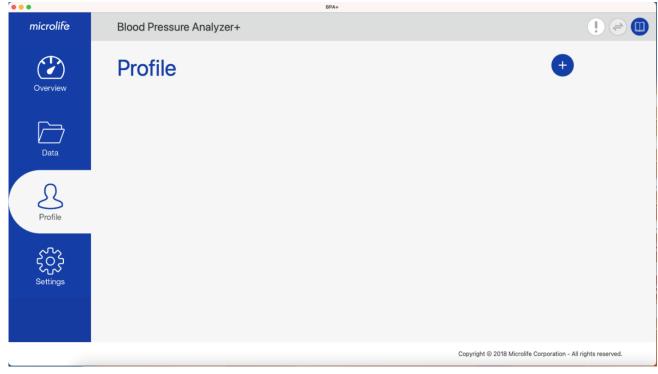
#### 3.1 Region Setting

Step1: Users have to select the region when the program is executed the first time. If you are located in the USA, please select "USA"; if you are located in countries other than USA please select "Others".

•••	BPA+	
microlife	Blood Pressure Analyzer+	
	Region	
	Others ✓ USA ° OK	
		Copyright $\circledast$ 2018 Microlife Corporation - All rights reserved.

Fig- 15

Step2: When the region setting is done, the profile page will be shown as below.



# 3.2 Synchronize the Date and Time

Before using the device, users need to set the date and time of the device first. The easiest way to set the date and time is users can synchronize it via the APP. Users can follow the procedure below to synchronize it.

Step1: Connect the device to the APP:

Connect the device to the computer. Once the device connection is ready, the

button on the right upper side will be enabled.

Step2: Press Step2: button, APP will check the date & time between the APP and device. If the date and time conflicts, the below dialog will be displayed.

microlife	Blood Pressure	e Analyze	r+		
Overview	Profile				+ 🕄 📛
	E-mail	BPA@mid	crolife.com.tw		
Data	Name	Е	$\checkmark$		
	Gender	1 Th dif	e date/time between device ferent. Do you want to sync. time?	and APP is the date &	
Profile	Date of Birth		Sync. date & time only nc. date & time and transfer dat ync. date & time and still transfe	a to the APP	
	Height	6	ft 3	inch	
Settings	Weight	187		lb	
					Copyright $\ensuremath{\textcircled{\odot}}$ 2018 Microlife Corporation - All rights reserved.

Fig- 17

#### 3.3 Create a User Profile

•••	BP/	A+
microlife	Blood Pressure Analyzer+	! ⇒ <b>(</b>
Overview	Profile	+
Data		
Profile		
Settings		
		Copyright $\otimes$ 2018 Microlife Corporation - All rights reserved.

Fig- 18

Step1: Press the  $\bigcirc$  button to create the user profile. Then the dialog below, as shown in Fig 19 will be displayed.

Note: Users have to create the user profile before they start to transfer the data from the device.

Step2: Input the Email and user basic information and then press the "OK" button to create the user profile.

0	Create	Profile		
E-mail				
Name				
Gender	Male			¢
Date of Birth	1970/	6/ 1		
Height	0	ft	0	inch
Weight	0			lb
Msg: [*] All fields a Before transferring profile first.			create a user	
	0	ЭК		

Fig- 19

Note: BPA+ allows multi-users usage. Users can repeat step1 to step2 to create other user profiles.

## 3.4 Download Data from the Device

Step1: Connect the device to your Mac. Once the device connection is ready, the

button will be enabled. Users can press this button at any tab to download the readings.

Before downloading the data, APP will check the date & time between the APP and device, if the date and time conflicts, the below dialog will be displayed. Users need to synchronize the date and time first.

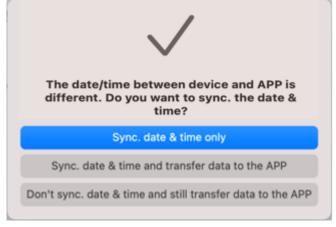


Fig- 20

Step2: When the Soutton is pressed, the message box will be shown as below. Users can select which user profile to be transferred.

microlife	Blood Pressu	re Analyzer+	! 🔿 🕕
Overview	Prof	Please select a user profile to transfer data:	+ 🔒 🖨
Data	E-mail Name Gender Date of I	Other_100 DDD aaaa over15year BPA Proceed to transfer data? No	
Profile	Height	6 ft 3 inch 187 lb	
Settings		Copyright © 2018 Micro	life Corporation - All rights reserved.

Fig- 21

Note:

(1) If there is only one user profile created, only one user profile is displayed. If there are multiple user profiles created, all of the user profiles will be shown.

Step3: Select a user profile and then press the "ok" to transfer the data from the device.

Step4: When the data download is done, the pop- up message will be displayed. Press the "OK" button and then users can start to review their latest readings at the readings page of Data Tab.

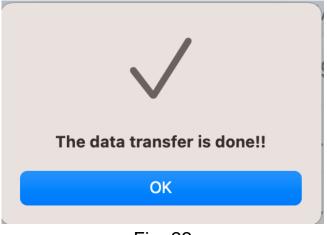
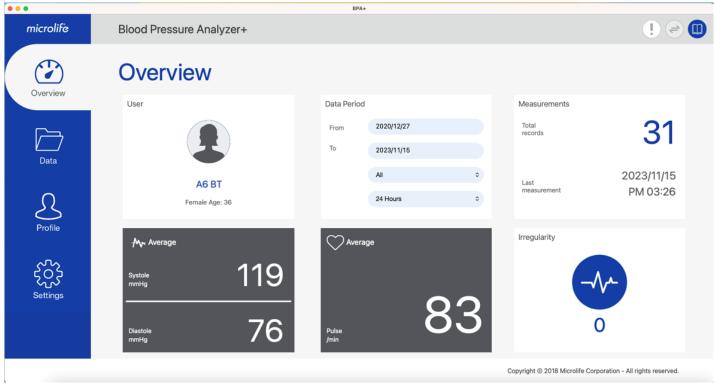


Fig- 22



Step5: Then the update overview tab will be shown as below.

Fig- 23

# 3.5 Select Another User Profile

The BPA+ program allows users to create multiple user profiles. If users would like to review another user's readings, they can switch to the corresponding profile.

		BPA+		
microlife	Blood Pressur	e Analyzer+		! = <b>(</b>
Overview	Profile			+ 😌 🖨
	E-mail	A6 BT 240130@gmail.com		
Data	Name	A6 BT		
	Gender	Female	٥	
Profile	Date of Birth	1987/ 6/ 5	٢	
	Height	5 ft 5	inch	
Settings	Weight	50.5	di	
			Copyright © 2018 M	licrolife Corporation - All rights reserved.
		Fig_24		

Step1: Press the Obutton and then the users list will be shown as below. Then users can select the specific user and press the "OK" button to manipulate continuously.

microlife	Blood Pressu	re Analyzer	+			! 🖨 🕕
Overview	Prof	Please		er profile to tran	osfer data:	+ 名 🖨
Data	E-mail Name Gender	Other_ DDD aaaa over15 BPA	<u>1</u> 00			
Profile	Date of I	_	ed to transfe	Yes	No	
Settings	Height	6 187	ft <u>3</u>	lb		
					Copyright © 2018 Micro	blife Corporation - All rights reserved.

Fig-25

## 3.6 Export CSV/ PDF Report

The BPA+ APP can export CSV or PDF report. Users can export it and take to the physicians.

Step1: Decide the data period in the Data tab first.

microlife	Blood Pre	ssure Ar									
			nalyze	er+							
	Data										•
Overview	From	2023/ 7/	6	То	2	023/11/22	All		0 24 Hours	0	
	ii 📈										
	Date	Time	SYS	DIA	Pulse	Irregularity	Cuff fit	Mode	Notes		
	2023/11/22	AM 02:13	133	72	80	-1+-	$\bigcirc$			Ŵ	
Data	2023/11/11	PM 11:12	85	54	79		$\bigcirc$	MAM		Û	
$\cap$	2023/10/12	AM 06:39	144	70	82	-~-	$\bigcirc$	MAM		Ŵ	
25	2023/10/05	PM 03:25	121	103	130	-^-	$\bigcirc$	MAM		Ŵ	
Profile	2023/09/16	PM 09:43	143	70	80	-^-	$\bigcirc$	MAM		Ŵ	
~~~	2023/08/31	AM 11:06	136	72	83	-^-	$\bigcirc$	MAM		Ŵ	
દ્રુટ	2023/08/10	AM 08:09	208	155	80		\bigcirc			Ŵ	
Settings	2023/07/06	PM 03:08	82	55	79		\bigcirc			Û	

Fig-26

Step2: Press the 🕑 button and select which format to be exported.



Step3: Once the report export is done, the message box will be shown as below.

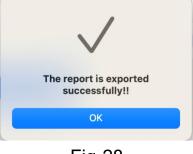


Fig-28

3.7 Import/ Export Data

The BPA+ APP provides data import/export functions. Users can import the data from the BPA+ APP or export data to another Mac.

	microlife	Blood Pressure	Analyze	r+					! 🗢 🕕
	Overview	Settings Software	6						
		Threshold SYS	135	≎ mmHg		Morning Range	05:00-10:59	٢	
	Data	Threshold DIA	85	≎ mmHg		Evening Range	17:00-22:59	٥	
		Pulse Range	60	≎ bpm)~(100	≎ bpm	
	2	Unit	ft/lb	٥		Region	USA	•	
	Profile	Date Format	YYYY/N	IM/DD ≎		Time Format	12	٥	
	563	In	nport data) (E	Export data		
	Settings	Blood Press	ure Mo	nitor					
		Device ID							
1						Copyright @	0 2018 Microlife Corp	oration - All rights	s reserved.



3.7.1 Import Data

Step1: Switch to Settings Tab.

Step2: Press the "Import data" button.

Step3: Select the file and then import it.

microlife	Blood Pressu	re Analyzer+						
Overview Data	S Favorites ② Recents 本 Applications P Documents ③ Downloads Locations ④ iCloud Drive Tags ● 紅色 ● 燈色 ● 黃色 ● 緑色 ● 鬣色 ■ 皺色 ● 繁色 ● 次色	 AA+_CSV_Re06160545.csv AA+_CSV_Re06160545.csv AA+_CSV_Re06160545.csv AA+_CSV_Re0611409.csv AA+_CSV_Re08114409.csv AA+_CSV_Re06132522.csv AA+_CDF_Re06160539.pdf AA+_PDF_Re06160539.pdf AA+_PDF_Re06114418.pdf AA+_PDF_Re06132558.pdf AA+_PDF_Re06132558.pdf AA+_PDF_Re06132558.pdf AA+_PDF_Re06132558.pdf AA+_PDF_Re06132558.pdf AA+_PDF_Re102113429.pdf BPA+_PDF_R102113429.pdf BPA+_PDF_R1021134242.pdf BPA+_PDF_R102113554.pdf BPA+_PDF_R102113554.pdf 	Documents		Q Search	59 59	¢ ¢ ¢ bpm ¢	
Profile	Date Format	YYYY/MM/DD	٠	Time Forma	it 12		\$	
Settings		Import data SSURE Monitor			Export data			
				Сор	yright © 2018 Microli	fe Corporat	tion - All rights reserved.	

Fig-30

Step4: Press "Import" and then data will be imported. Once the data import is done, the message below will be displayed.



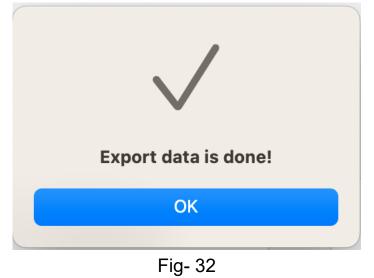
3.7.2 Export Data

Step1: Switch to Settings Tab.

Step2: Press the "Export data" button.

Step3: Select the data save path and then export it.

Step4: Press "Export" and then data will be exported. Once the data export is done, the message below will be shown.



4 User Manual

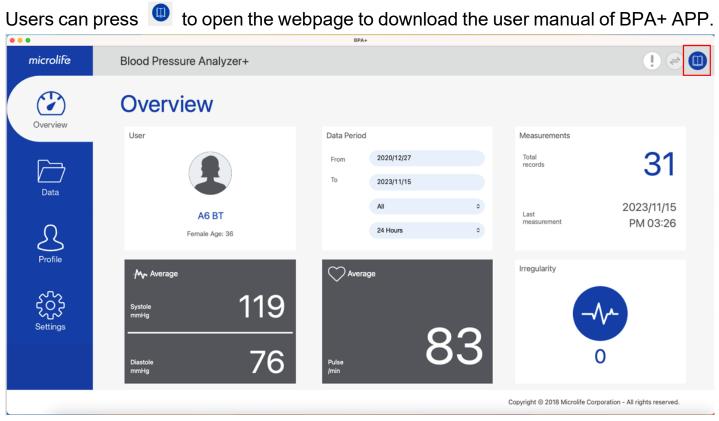


Fig- 33