BPBIO320S

User's Manual USA

BPBIO320S User Manual for Measurement Guide and Setup

Thank you for purchasing the BPBIO320S. This user's manual describes all the features of the BPBIO320S. Please read before use and keep it in a safe place. By following the manual instructions, you will be able to use the BPBIO320S more safely and effectively.

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Please note the important information below before reading this manual.

Warning

Failure to observe these precautions can result in personal injury or equipment damage.

Caution

Failure to comply with safety precautions can damage the equipment.

Note

Referring to notes can help improve equipment use.

Avertissement

Le non-respect de cette précaution pourrait entraîner des blessures ou des dommages matériels.

Attention

Le non-respect des consignes de sécurité peut endommager l'équipement.

Remarque

Le but est d'aider les utilisateurs à comprendre.

InBody

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Intended Use

The BPBIO320S is a digital monitor intended for use in measuring blood pressure and pulse rate in user population with upper arm circumference ranging from 17cm to 42cm (7-inch to 17-inch). The systolic blood pressure and diastolic blood pressure are measured by non-invasive blood pressure (“NIBP”) measuring method. The BPBIO320S may provide useful clinical information about the current health status of not only the users who are diagnosed with hypertension but also those who are not diagnosed with hypertension. Warnings and cautions described in the user’s manual should be observed at all times.

*This device is not designed for use in home environment.

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I. BPBIO320S Installation

A. Product Components

The BPBIO320S consists of the following components. Make sure the following components are present.

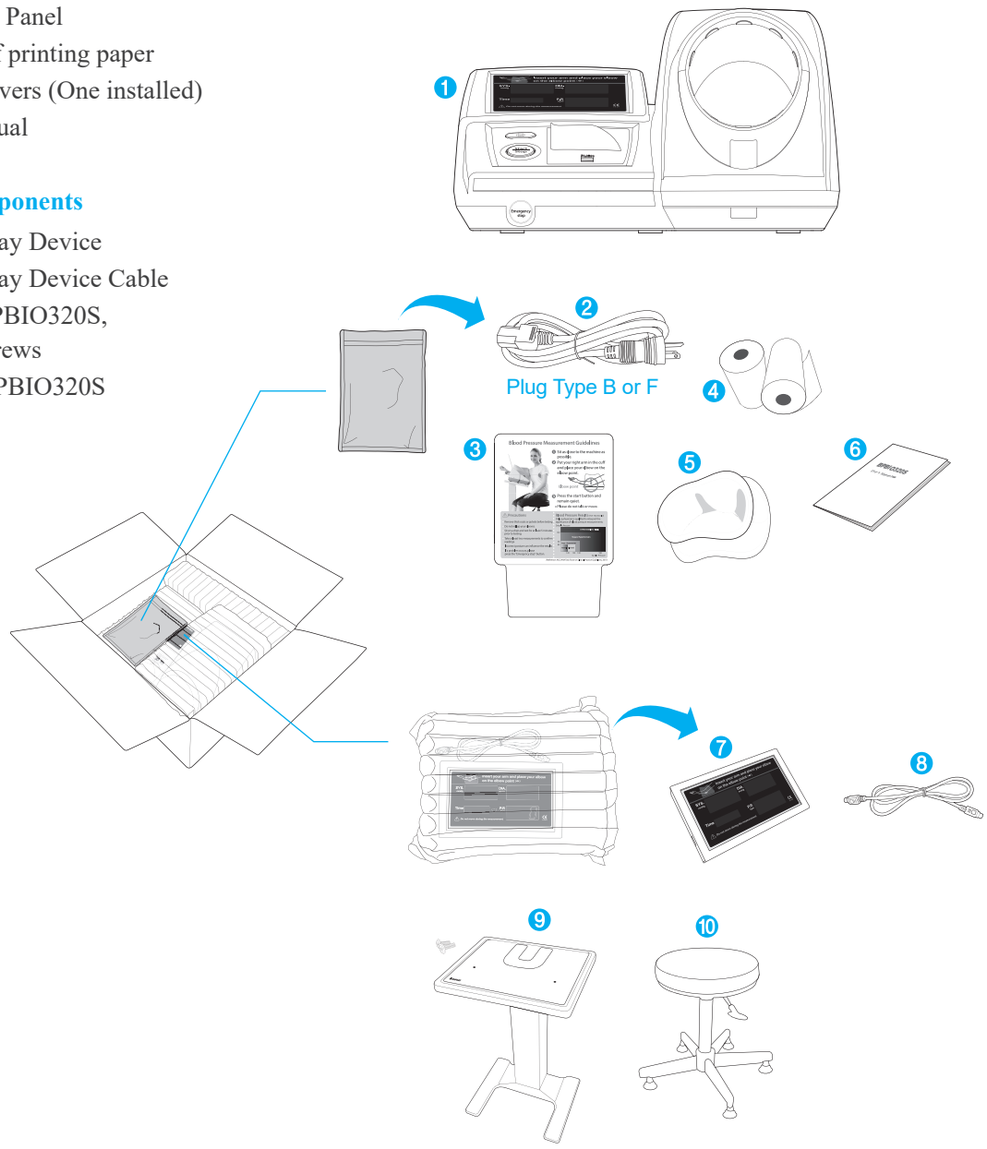
* Please check each component of the system for damage prior to installation.

Basic Components

❶ BPBIO320S
❷ Power cable (AC 250V 10A 1.8m) 1 EA
❸ Information Panel
❹ Two rolls of printing paper
❺ Two cuff covers (One installed)
❻ User's Manual

Optional components

❼ Multi-Display Device
❽ Multi-Display Device Cable
❾ Desk for BPBIO320S,
and two screws
❿ Chair for BPBIO320S



B. Operating Environment

Please make sure the environment is adequate for the BPBIO320S installation. This equipment is designed for indoor use. If installing the equipment outdoors, the following requirements must be fulfilled:

Temperature range	5 to 40ºC (41 to 104ºF)
Relative humidity	15 to 90% RH
Atmospheric pressure range	70 to 106 kPa

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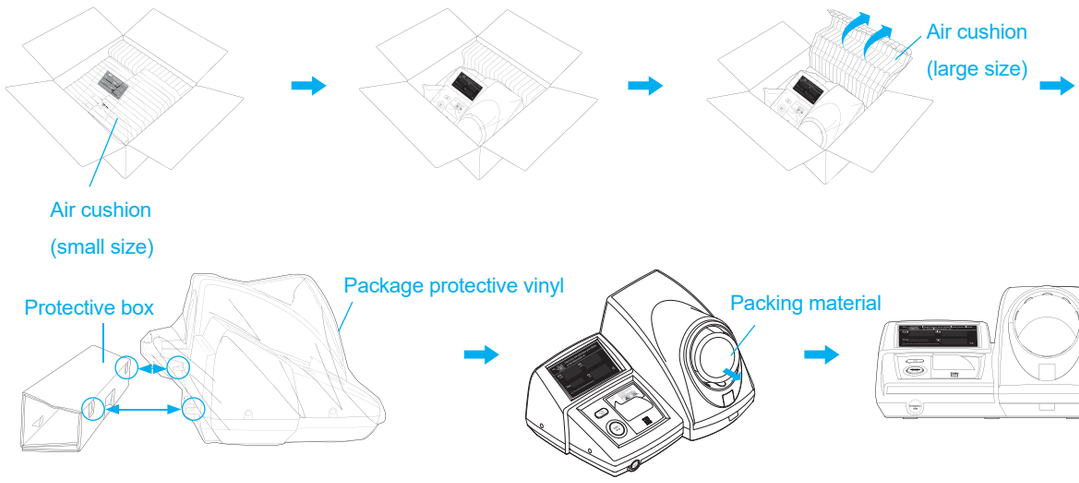
C. Installation Instructions

1. Open the BPBIO320S box, and remove the air cushion (small size). Unfold the air cushion (large size) and take out the BPBIO320S from the box, and then remove the protective box. Take off the protective vinyl out of the BPBIO320S, and remove the packing material.

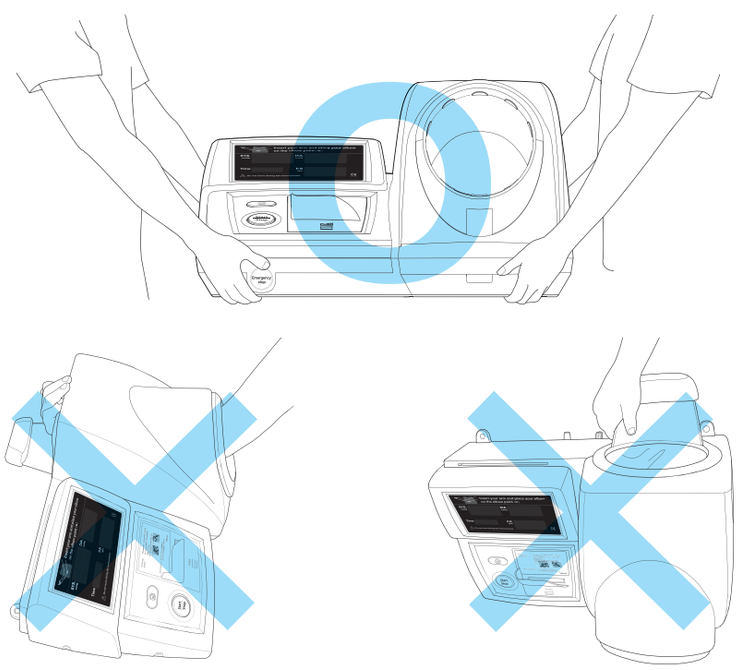


Caution

- Do not carry the equipment by holding the cuff.
- Keep packing material to repack the BPBIO320S at a later time. Dispose of trash according to local laws and regulations.
- Refer to the figure below when transporting the BPBIO320S.

Attention

- *Ne portez pas l'équipement avec un seul bras, en utilisant la partie du brassard lors de son transport.*
- *Pour reconditionner BPBIO320S plus tard, les matériaux d'emballage fournis doivent être conservés. Les autres déchets doivent être éliminés conformément aux lois et règlements locaux pertinents.*
- *Reportez-vous à la figure ci-dessous lors du transport de BPBIO320S.*



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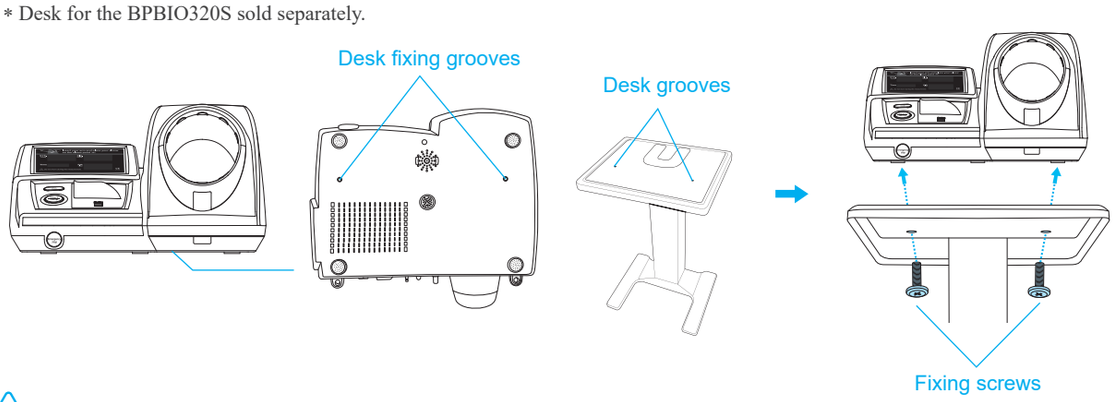
2. Place the equipment on a solid table that can withstand the weight of the BPBIO320S (approx. 9kg (20 lb)).
If desk for the BPBIO320S is available, align the grooves on the bottom of the BPBIO320S with the grooves on the desk and secure them with two fixing screws.

* Desk for the BPBIO320S sold separately.



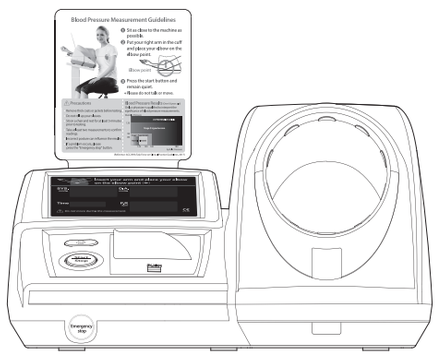
⚠ Caution

- Install the BPBIO320S on a flat, vibration-free floor.
  If the equipment is installed where the floor is not flat, it may topple during a test or the test results may be inaccurate.

⚠ *Attention*

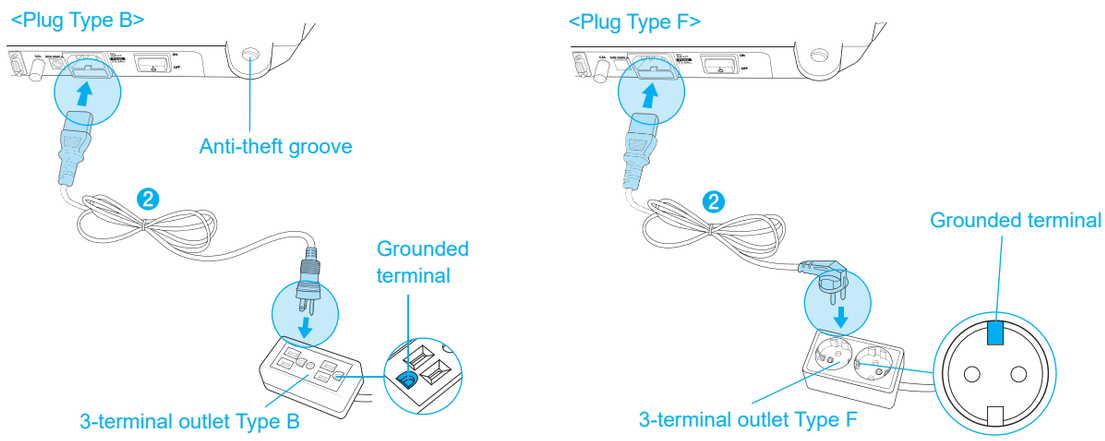
- *Installez BPBIO320S sur un sol plat et sans vibrations.*
  Si l'équipement est installé sur un sol qui n'est pas plat, il peut basculer pendant un test ou les résultats du test peuvent être inexacts.

3. Mount the Information Panel onto the BPBIO320S.



4. Connect the power cable provided with the BPBIO320S. Plug the power cable into a grounded 3-prong outlet.

* The anti-theft groove can be used to secure the equipment to the table.



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⚠ Caution

• If you are not using a power plug type B or F, you must use a 3-prong plug type with a ground pin.

⚠ *Attention*

• Si vous n'utilisez pas de fiche d'alimentation de type B ou F, vous devez utiliser une fiche à 3 broches avec une broche de mise à la terre.

⚠ Warning

• Do not install the equipment where the power cable is difficult to disconnect.

• Do not plug or disconnect the power cable with wet hands. There is a risk of electric shock.

• Always use an outlet supplied to the correct power supply (AC 100-240 V). An incorrect power supply may cause fire or malfunctions.

• When using a multiple tab, use it having enough power capacity or use an extension cable.

• Do not disassemble the equipment arbitrarily. This may cause electric shock, injury, product malfunction, and/or inaccurate results. Unauthorized disassembly will void the manufacturer's warranty.

• Do not let the BPBIO320S touch with other electronic devices when on. This may cause electric shock.

⚠ *Avertissement*

• N'installez pas l'équipement à un endroit où le cordon d'alimentation est difficile à débrancher.

• Ne branchez ou ne débranchez pas le cordon d'alimentation si vous avez les mains mouillées. Il existe un risque de choc électrique.

• Utilisez toujours une prise connectée à la bonne source d'alimentation (CA 100-240 V). Sinon, cela peut provoquer un incendie ou un dysfonctionnement.

• Lorsque vous utilisez une attache multiple, utilisez-la avec une capacité d'alimentation suffisante ou utilisez un câble d'extension.

• Ne démontez pas l'équipement de façon abusive. Cela peut causer un choc électrique ou une blessure, un dysfonctionnement du produit, ainsi qu'une inexactitude des résultats. De plus, cela ne sera pas couvert par la garantie du fabricant.

• Ne permettez pas au BPBIO320S allumé d'être en contact avec d'autres périphérique électroniques. Cela peut causer par un choc électrique.

⚠ Caution

• Plugging the device into an ungrounded outlet may cause malfunction or electric shock.

• Always handle the equipment with care. Exterior impact may cause trouble when operating the equipment.

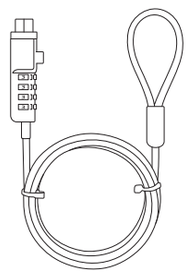
⚠ *Attention*

• L'équipement peut être endommagé par l'électrocution ou subir un dysfonctionnement, s'il est branché dans une prise non mise à la terre. Sinon les résultats du test peuvent être inexacts.

• Gérez toujours l'équipement avec soin. L'équipement peut subir des dommages en raison de fort choc.

5. Use the anti-theft groove to prevent theft.

* Theft protection cable is sold separately.



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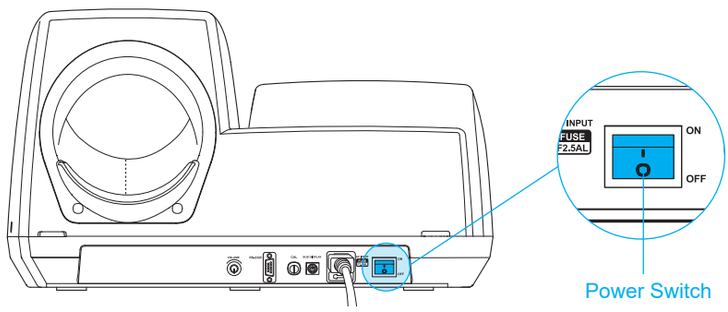
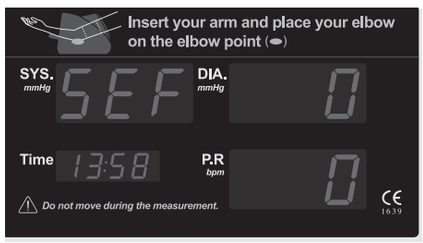
6. Turn the BPBIO320S on by pressing the power switch located on the back of the device.



7. When the BPBIO320S is turned on, the following screen is displayed and a calibration is automatically performed.



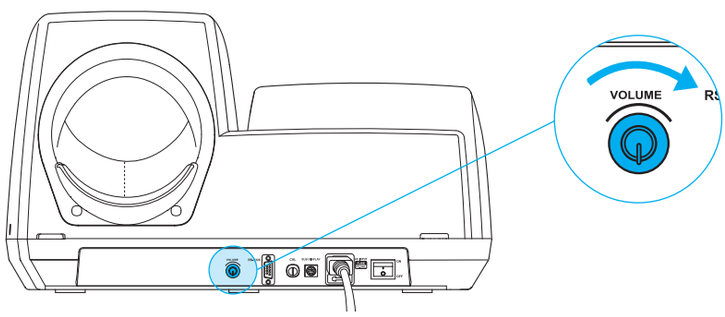
⚠ Caution

• Do not operate or touch the device while it is calibrating. It may cause errors to future tests.

⚠ *Attention*

• *Pendant l'auto-test (environ 10 secondes), n'utilisez ou ne touchez pas BPBIO320S. Des erreurs peuvent survenir ou les résultats du test peuvent être inexacts après l'auto-test.*

8. Adjust the volume by turning the volume knob on the rear of the BPBIO320S.



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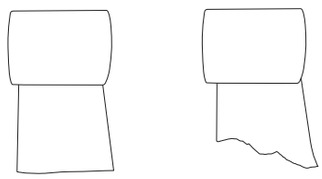
D. Loading and Reloading Printer Paper

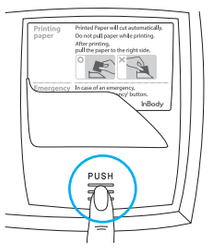
1. Loading Printer Paper

1) Cut off the end of the printer paper with scissors. If the end of the paper is ripped, it may cause a paper jam or damage the printer head.



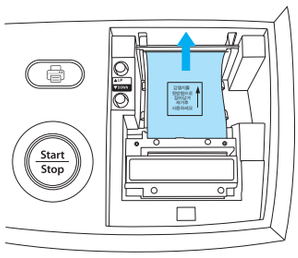
Paper cut with scissors Ripped paper

2) Open the cover by pressing 'PUSH' while the BPBIO320S is turned on.

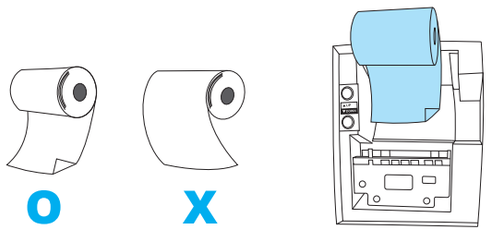


3) If the device is being used for the first time, remove the protective paper located inside.

* The protective paper (thermal printing paper) is in the printer groove. Pull upward to remove it.



4) Fold one corner of the provided printer paper and insert it in the direction as shown.



⚠ Caution

• The printer will not work if the paper is inserted incorrectly.

⚠ Attention

• L'imprimante ne fonctionnera pas, si le sens du papier de l'imprimante est incorrect.

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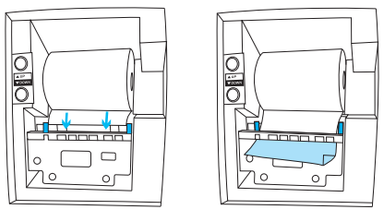
5) Insert the end of the paper through the feeder. The printer will automatically pull and cut the paper.



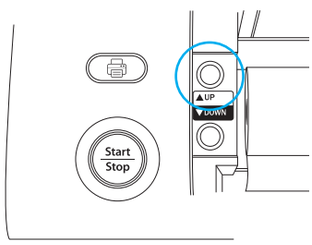
6) Remove the cut paper, and close the printer paper cover.

2. Reloading Printer Paper

1) Open the cover by pressing ‘PUSH’ mark on the bottom center of it while the BPBIO320S is turned on.

2) Press

button to remove the remaining paper.



3) Reload a new roll of printer paper by following the instructions for ‘Loading Printer Paper'.

Caution

• Remove all trash from previous printer paper rolls.

Attention

• *Retirez tous les déchets du papier précédent et rechargez lors du remplacement avec un nouveau papier.*

Note

• Two rolls of printer paper are provided with the BPBIO320S.

• If additional printer paper roll is needed, it must be purchased separately as it is a consumable item.

Remarque

• *Deux rouleaux de papier d'imprimante sont fournis avec le BPBIO320S.*

• *Si du papier supplémentaire est nécessaire, l'utilisateur peut l'acheter séparément comme un article consommable.*

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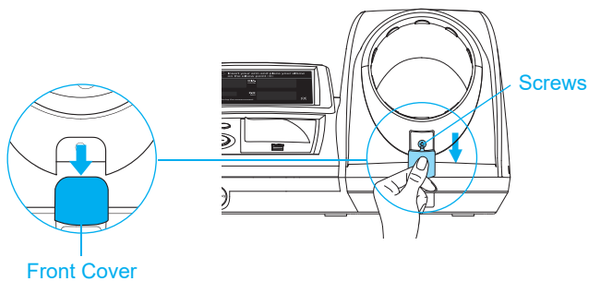
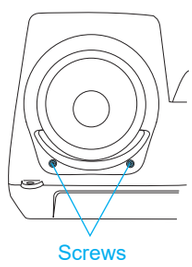
E. Replacing Cuff Cover

The cuff cover of the BPBIO320S should be replaced periodically for sanitary purposes. Follow the guide below to replace the cuff cover.

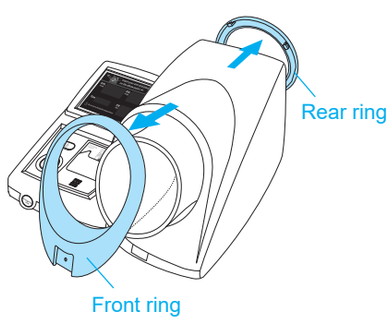
1. Remove the front cover of the BPBIO320S by pushing downward. Loosen the screw with a screwdriver.



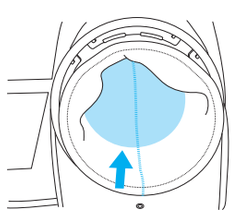
2. Loosen the two screws on the rear of the BPBIO320S with a screwdriver.



3. Remove the rings on the front and rear of the BPBIO320S by pulling the arrow mark and pull the cuff cover to remove it.



4. Place the seam of the new cuff cover down as shown, and align it with the front and rear ring.



⚠ Caution

• Blood pressure results may be inaccurate if the seam is not face down.

⚠ Attention

• *Le résultat du test de la pression artérielle peut ne pas être correct si la ligne de couture n'est pas orientée vers le bas.*

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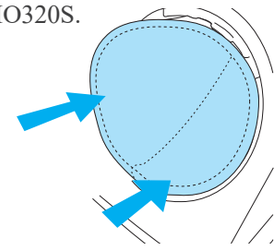
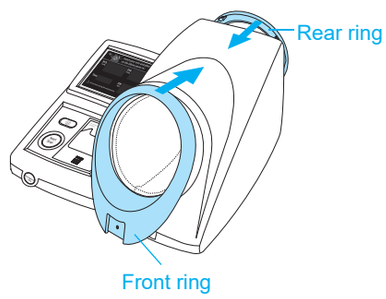
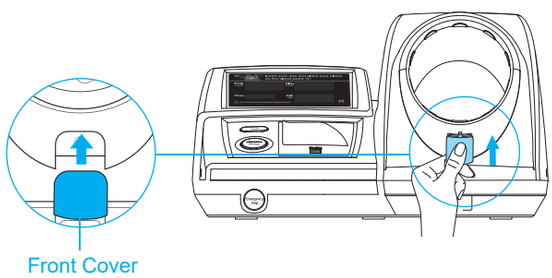
5. Secure the new cuff cover onto the grooves on the front and rear of the BPBIO320S.



6. Attach the previously removed front and rear rings on the BPBIO320S and secure them with screws.



7. Close the front cover of the BPBIO320S.



Note

- Two cuff covers are provided with the BPBIO320S. (One is already mounted in the equipment.)
- If additional cuff cloth is necessary, the user must purchase it separately as a consumable item.

Remarque

- *Deux pièces de tissu de brassard sont fournies avec le BPBIO320S. (L'une est déjà montée dans l'équipement.)*
- *Si un tissu de brassard supplémentaire est nécessaire, l'utilisateur doit l'acheter séparément en tant que consommable.*
- *L'utilisateur peut acheter des papiers d'imprimante sur le site Web https://shop.inbodyusa.com.*

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F. Setup

Setup consists of sound settings, motion sensor settings, elbow sensor settings, Automatic printing options, time stamps and Result sheet item(Outputting caution comment, PULSE graph, Additional result values).

Note

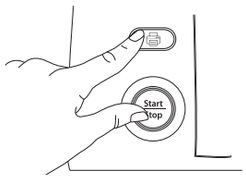
• Contents of results sheet output are only applicable to BPBIO320S.

Remarque

• Le contenu de la sortie de la feuille de résultats ne s'applique qu'à BPBIO320S.

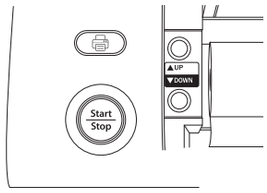
1. Settings

1) When button and button are pressed and held at the same time for 2 seconds while on the home screen, the first screen of the Setup, 'Sound Setting' is displayed.

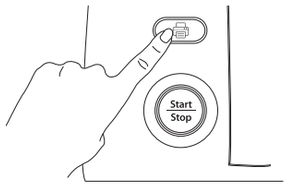


2) Use UP (▲) and DOWN (▼) buttons to change the settings.

∗ UP (▲) and DOWN (▼) are located beneath the cover of the device.



3) Press button to move to the next screen. Set values are automatically saved.



4) Press and hold button for 2 seconds to return to the home screen.

∗ The measurement value display time setting is applied when the blood pressure monitor restarts.

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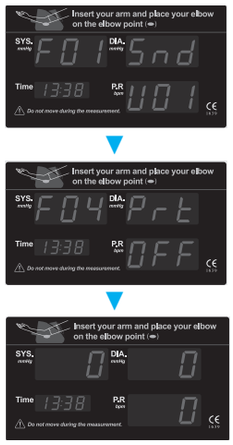
※ The following is an example showing how to change a ‘manual output’ Automatic printing options.

❶ While on the home screen, press and hold button and Start/Stop button at the same time for 2 seconds.

❷ Press button to move to F04PrL screen.

❸ Press ▲UP ▼DOWN button to select OFF.

❹ Press and hold button for 2 seconds to save changes and return to the home screen.



※ The following is an example showing how to change the screen timeout duration.

❶ While on the home screen, press and hold button and Start/Stop button at the same time for 2 seconds.

❷ Press button several times to move to F10 Lcd screen.

❸ Press ▲UP ▼DOWN button to select 10 .

❹ Press and hold button for 2 seconds to save changes and return to the home screen.

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2. Detailed description of Setup

When in the Setup menu, the following information is displayed in the Systolic, Diastolic and Pulse sections of the screen.

Function	Display			Description
	Systolic	Diastolic	Pulse	
Sound	F01	Snd	U01	Reading test instruction and measurement results
			U02	Reading test instruction only
			U03	Reading measurement results only
			bEF	Beep guide
			OFF	Mute
Setting up the motion sensor	F02	HI-	On1	Motion sensor is operating with “ding-dong” sound
			On2	Motion sensor is operating in silence
			OFF	Motion sensor is disabled
Setting up the Elbow Sensor	F03	Arn	On	Elbow sensor is operating
			OFF	Elbow sensor is disabled
Outputting results sheet	F04	Prt	On	Automatic printing of resulf sheet
			OFF	Manual printing of result sheet
Hour setting	F05	HOU		setting hour (0-23)
Minute setting	F06	MUt		setting minute (0-59)
Year setting	F07	YEa		setting year (2000-2063)
Month setting	F08	Mth		setting month (1-12)
Day setting	F09	daY		setting day (1-31)
Screen timeout duration	F10	LCd	5	Display the test result value for 5 seconds
			10	Display the test result value for 10 seconds
			20	Display the test result value for 20 seconds
			1M9	Display the test result value for 2 minutes

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Result sheet item	Caution commemt	F 11	bA	SIC	Output of caution comment
			SCH	OOL	Not used
	PULSE graph	F 12	grP	On	Output of pulse graph
				OFF	Not used
	Additonal result values	F 13	OPt	On	Mean arterial pressure/PULSE pressure /Pressure rate product output
				OFF	Not used
	QR code*	F 14	qr	On	Output of QR code*
				OFF	Not used
Measurement mode setting	3 consecutive measurements	F 15	Avg	On	3 consecutive measurements mode
				OFF	One time measurement mode

* “QR Code” is registered trademark of DENSO WAVE INCORPORATED.

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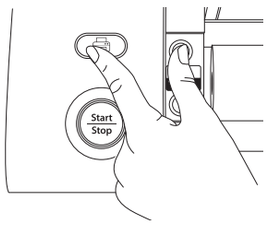
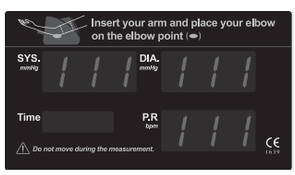
3. Blood Pressure Evaluation

1) While on the home screen, press and hold button and UP (▲) button at the same time for more than 2 seconds.

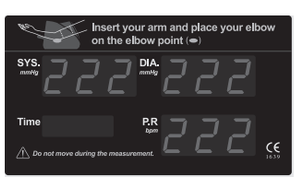


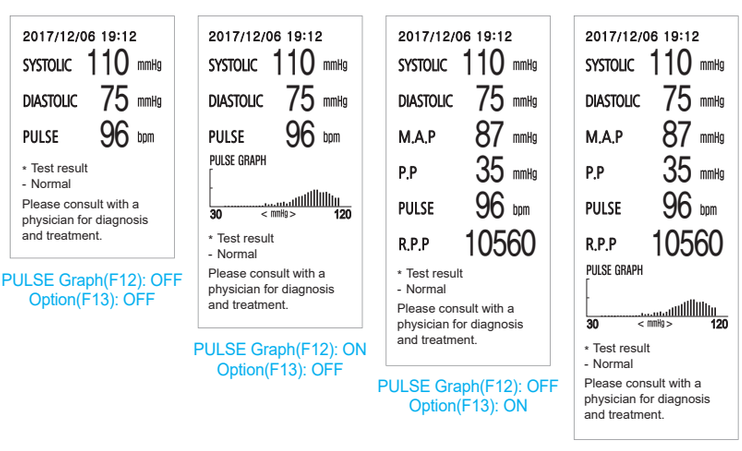
2) When 111 is displayed in the systolic blood pressure column, diastolic blood pressure column, and pulse column as shown below, the blood pressure evaluation has been disabled.



3) When 222 is displayed in the systolic blood pressure column, diastolic blood pressure column, and pulse column as shown below, the blood pressure evaluation has been turned on.

∗ Blood pressure evaluation comment type: Normal, Prehypertension, Stage 1 Hypertension, Stage 2 Hypertension





4) In order to change the blood pressure evaluation settings, press and hold button and UP (▲) button at the same time for more than 2 seconds.

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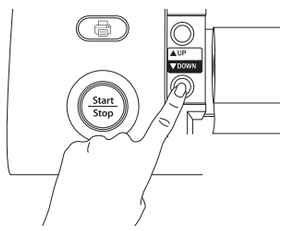
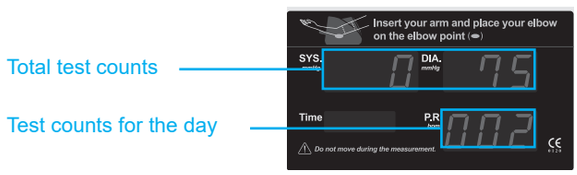
4. Displaying test counts

1) While on the home screen, hold the DOWN (▼) button for more than 2 seconds. Test counts for the day will be displayed in the diastolic blood pressure column. Test counts for the day and total test counts are printed.

2) When DOWN (▼) button is pressed again, the total test counts are displayed in the diastolic blood pressure column.





2017/12/06 09:12
* Today Count : 0002
* Total Count : 00075

Test count printout

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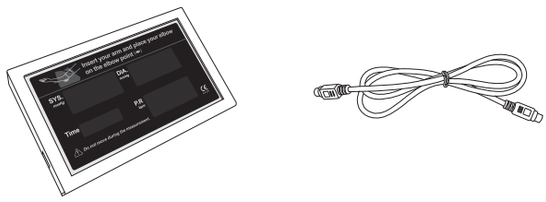
G. Connecting Multi-Display Device

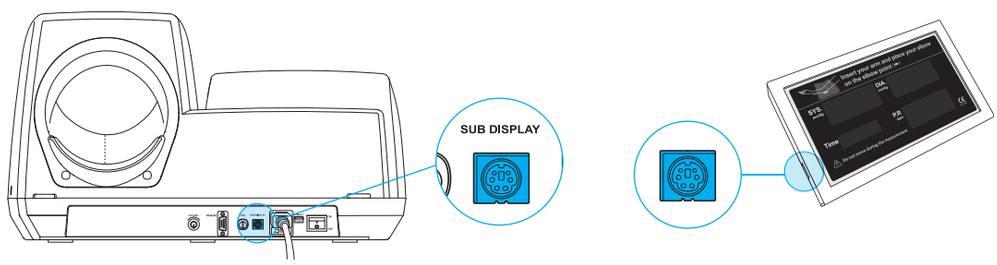
Check the results of a blood pressure test by connecting the multi-display device to the BPBIO320S.

* Multi-display device is optional, it can be purchased separately.
* The multi-display device is packaged in a separate air-cell in the BPBIO320S packaging box.

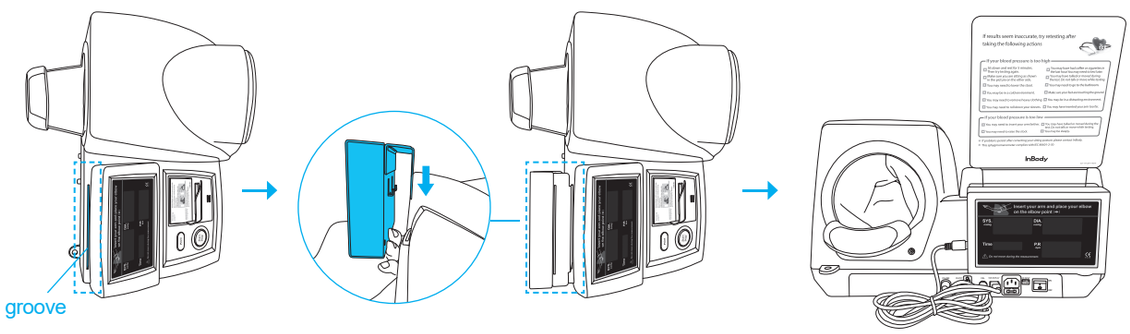
1. Prepare a multi-display device and a multi-display device cable.



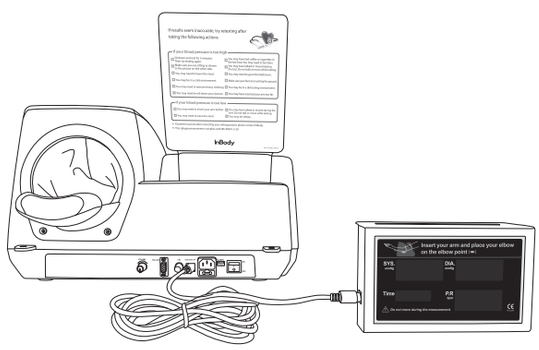
2. Connect the multi-display device cable to the SUB DISPLAY connection terminal on the back of the device while the BPBIO320S is turned off. Then connect the other end of the display device cable to connection terminal on the left of the display device.



3. Insert the connected multi-display device into the groove on the top of the BPBIO320S. Then, insert the Information Panel into the groove on top of the display device.



*The BPBIO320S can be used as as stand alone device as shown below.



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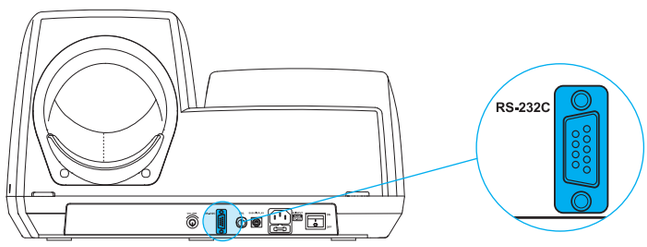
H. Connecting to InBody

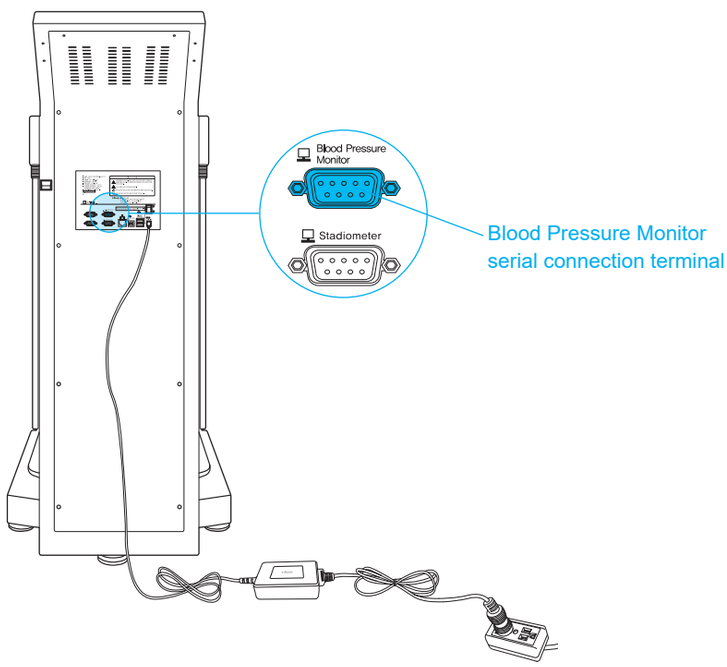
If the BPBIO320S connects to InBody products, the blood pressure test results can be transferred to the InBody.

* Only compatible with other InBody products
* Blood pressure values can be printed on the InBody Result Sheet.
* Serial cable is sold separately.

1. Turn off the BPBIO320S.
   * If the BPBIO320S is already turned on while being connected to the InBody, the connection may not be smooth.
2. Connect the serial cable to the RS232C (9-pin serial) connection terminal located on the back of the BPBIO320S. Connect the other end of the serial cable to the serial connection terminal on the InBody device.
   * Refer to the InBody manual to find the location of the serial connection terminal.



Example: InBody770



3. Turn on the BPBIO320S.
4. Devices will connect automatically.

Note

• Refer to the InBody product manual to print the blood pressure values on the InBody Result Sheet.

Remarque

• *Consultez le manuel du produit d'InBody pour la méthode d'impression des valeurs de la pression artérielle sur la fiche des résultats d'InBody.*

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I. Precautions for Maintenance

⚠ Caution

- Never move the equipment while the power is on.
- Do not let foreign objects, like dust and liquid to enter the device. Foreign objects can damage electric components.
- Clean the exterior of the device gently with a lint-free cloth once a week. Do not scratch the LED screen while cleaning the equipment.
- Replace the cuff cover when it becomes dirty or worn out.
- Packing material and other waste should be disposed of according to the laws and regulations.

Check the following before turning the equipment on.

- Make sure the equipment was not damanged from impact.
- Make sure the equipment is not contaminated.
- Make sure the equipment is not wet.
- Make sure the power cord is completely plugged in.
- Make sure the power cord is not damaged.
- Make sure the power cord is not a tripping hazard.

The BPBIO320S calibrates automatically when it is turned on. But it may be necessary for a specialist to inspect the device once every two years to maintain its performance and safety. If an error message appears during the selftest, please contact product support.

⚠ *Attention*

- *Ne déplacez jamais l'équipement lorsqu'il est sous tension.*
- *Veillez à ne pas laisser pénétrer d'objets étrangers, tels que de la nourriture ou des boissons, dans l'équipement. Tout corps étranger, ayant pénétré à l'intérieur de l'équipement, peut causer de sérieux dommages aux composants électroniques.*
- *Nettoyez délicatement, une fois par semaine, l'extérieur de l'équipement avec un chiffon non pelucheux. Veillez particulièrement à ne pas rayer l'écran LED pendant le nettoyage de l'équipement.*
- *Remplacez le tissu de brassard s'il est sale ou usé.*
- *Les matériaux d'emballage et les autres déchets doivent être éliminés conformément aux lois et règlements pertinents.*

Vérifiez ce qui suit avant d'allumer l'équipement.

- *Vérifiez que l'équipement a été déformé en raison d'un impact.*
- *Vérifiez que l'équipement est contaminé.*
- *Vérifiez que l'équipement est humide ou non.*
- *Vérifiez que le cordon d'alimentation est complètement branché.*
- *Vérifiez que le cordon d'alimentation est endommagé ou non.*
- *Placez le cordon d'alimentation au bon endroit, sinon les gens pourraient se faire trébucher par le câble et tomber.*

BPBIO320S effectue un auto-test pour évaluer automatiquement l'anomalie du tensiomètre lorsqu'il est allumé ; toutefois, il est également nécessaire que le spécialiste effectue le test une fois tous les deux ans, afin de maintenir la performance et la sécurité de l'équipement. Si un message d'erreur (code d'erreur) apparaît pendant l'auto-test, veuillez contacter le revendeur ou le centre de service à la clientèle.

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II. Blood Pressure Test

A. Precautionary Steps

⚠ Caution

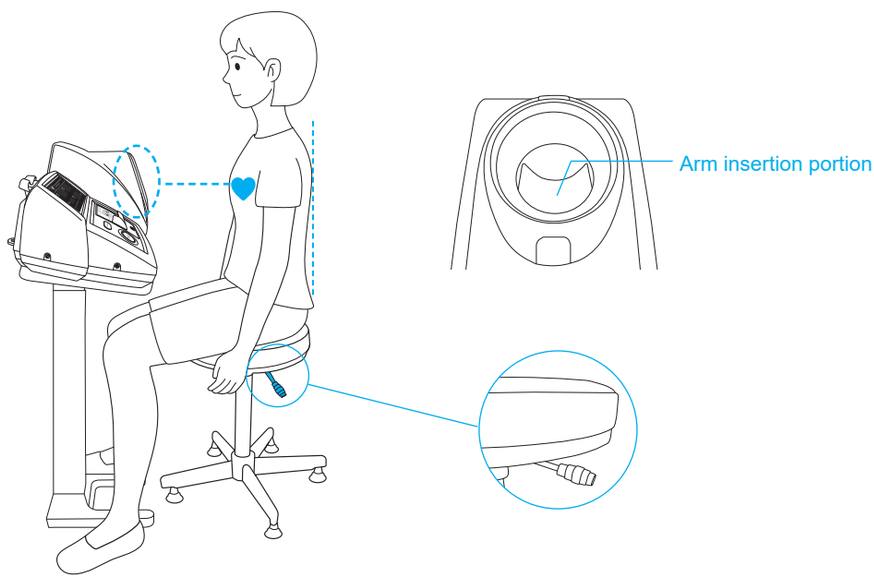
- User should rest at least 5 to 10 minutes before the test.
- Do not roll up the user's sleeve, but take off thick clothes.
- User should sit up straight in the chair.
- Insert the user's arm until the elbow is caught in the elbow groove.
- Adjust the height of the chair so that the inserted upper arm and the heart are horizontal.
- Test in a relaxed state.
- User should not talk or move during the test.
- The BPBIO320S uses the right arm. Test results may be inaccurate if the left arm is used.

⚠ *Attention*

- *Nous recommandons à l'utilisateur de se reposer au moins 5 à 10 minutes avant le test.*
- *Ne roulez pas la manche de l'utilisateur, mais enlevez les vêtements épais.*
- *Asseyez-vous aussi étroitement que possible sur la chaise.*
- *Insérez le bras de l'utilisateur jusqu'à ce que le coude soit coincé dans la partie rainurée.*
- *Réglez la hauteur de la chaise, de sorte que la partie supérieure du bras inséré et le niveau du cœur soient horizontaux.*
- *Pendant le test, effectuez l'examen dans un état détendu et stable.*
- *Évitez de parler ou de bouger durant le test.*
- *BPBIO320S est un périphérique de test dédié au bras droit. Les résultats du test peuvent être inexacts si la pression artérielle est examinée avec le bras gauche.*

B. Test Instructions

1. Adjust the height of the chair so that the inserted upper arm and the heart are horizontal.



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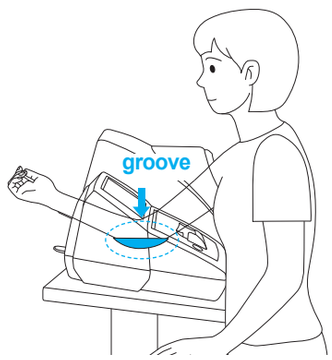
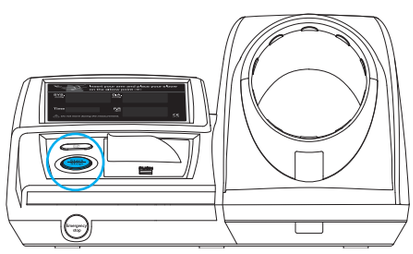
2. Rest for at least 5 minutes prior to taking the test.

∗ If examined in a bit unstable condition, the test result may be incorrect, and generally it will turn up higher than your usual blood pressure.

3. Insert the arm until the elbow is caught in the elbow groove, as shown.



4. Press Start/Stop button to start the test.



5. Pressure is automatically applied to the cuff, and the blood pressure is measured.

∗ Do not talk or move during the test.

∗ Relax while sitting up straight.

⚠ Caution

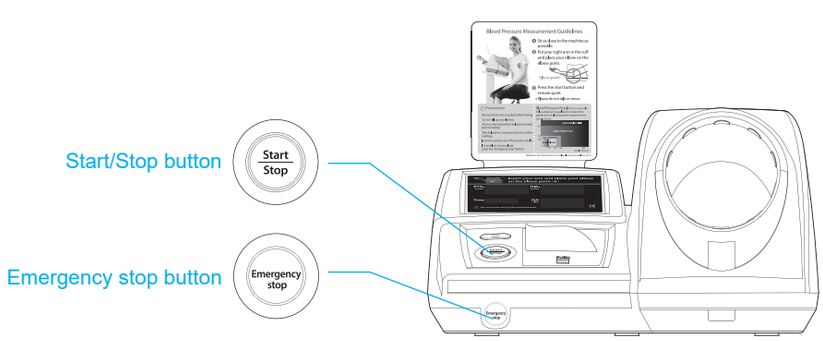
• If an emergency occurs during the test, press Start/Stop button or the Emergency stop button on the front bottom left of the BPBIO320S. The cuff will release quickly.

• If the air is not released after the button is pressed, turn off the BPBIO320S.

⚠ *Attention*

• *En cas d'urgence pendant le test, appuyez sur le bouton Start/Stop ou sur le bouton Emergency stop en bas à gauche de l'avant du BPBIO320S. Le brassard est relâché dès qu'il est automatiquement expulsé.*

• *Si l'air n'est pas expulsé même si vous appuyez sur le bouton, éteignez le BPBIO320S.*



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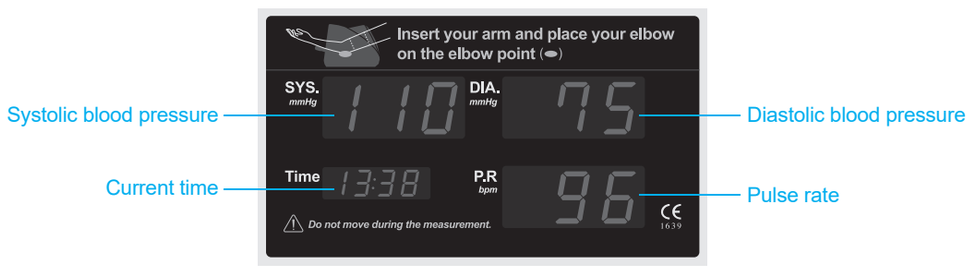
6. The cuff is automatically released after completing the test. Wait for the cuff to fully loosen and pull out your arm.

7. Check the results on the screen.

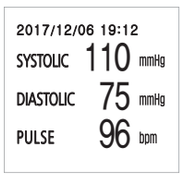
* The voice guide will be heard and the Result Sheet will be printed depeneding on settings.
* Do not pull the Result Sheet while it is printing. It will cut automatically.

* Example of test result screen

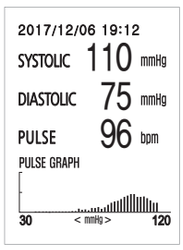


* Example of Result Sheet
(To print last five blood pressure test results, press and hold the print button while in standby mode.)

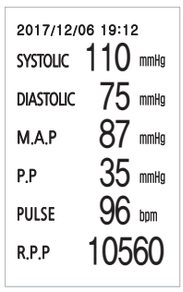
PULSE Graph(F12): OFF
Option(F13): OFF



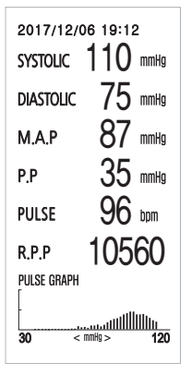
PULSE Graph(F12): ON
Option(F13): OFF



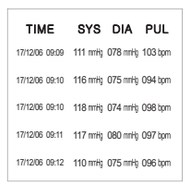
PULSE Graph(F12): OFF
Option(F13): ON



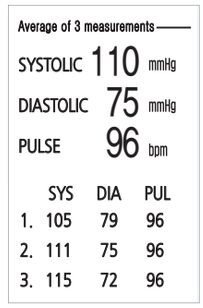
PULSE Graph(F12): ON
Option(F13): ON



Last 5 tests



3 consecutive measurements mode
(F12 : ON)



Note

• Refer to ‘Setup’ for change Result Sheet settings.

Remarque

• *Reportez-vous à la section « Configuration » pour le réglage de la « Sortie de la Fiche des Résultats ».*

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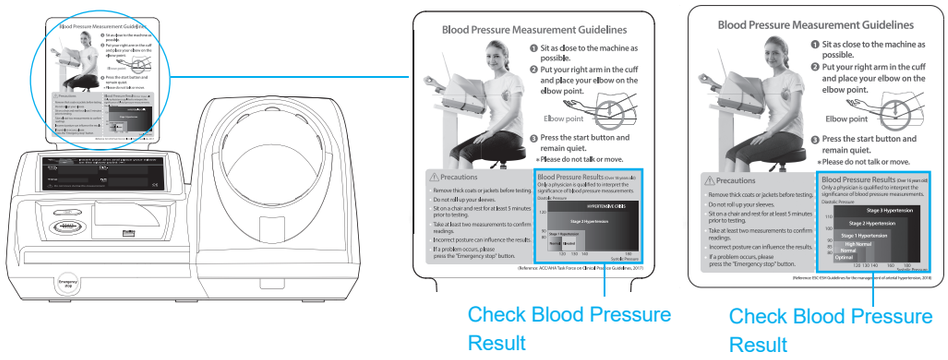
* The user can check results by using 'Check Blood Pressure Result' at the bottom right of the Information Panel
* Consult a physician for accurate diagnosis.



Note

- Rest for 5 minutes before testing again.
- Blood pressure can vary. Consult your physician for accurate diagnosis.

Remarque

- *Si l'utilisateur veut à nouveau tester la pression artérielle, veuillez suffisamment vous reposer pendant plus de 5 minutes.*
- *La pression artérielle peut varier en fonction de la situation. Veuillez consulter votre médecin pour un diagnostic précis.*

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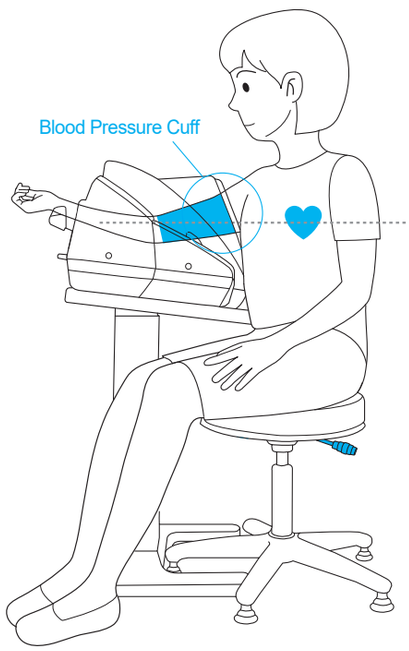
C. Test Posture

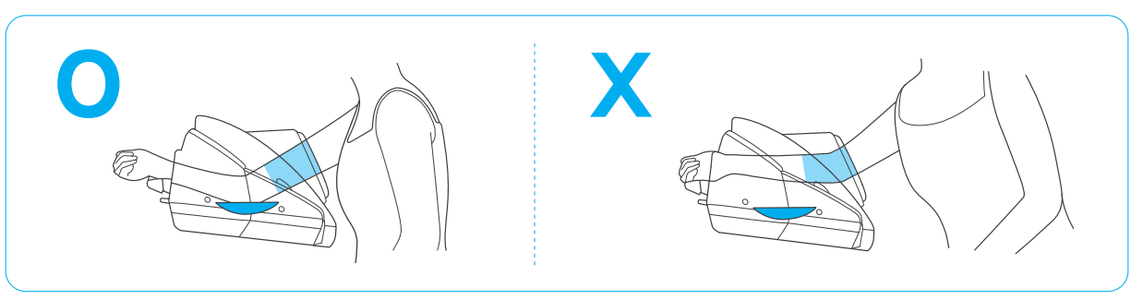
For correct test results, sit with proper posture while taking the test.



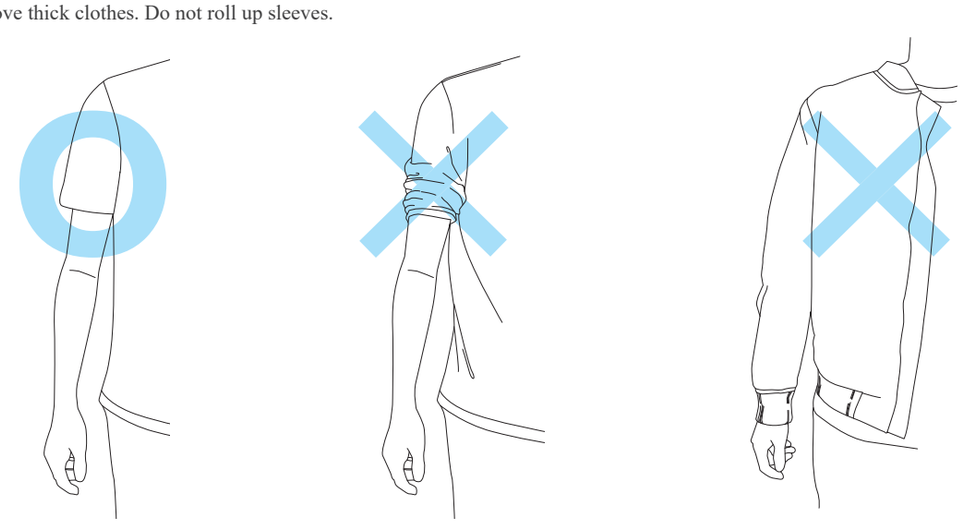
Adjust the height of the chair so the upper part of the right arm and the heart are horizontal with each other.

Sit as as close as possible to the BPBIO320S

*Be sure to place the elbow in the elbow groove before starting the test.



*Remove thick clothes. Do not roll up sleeves.



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III. Transportation and Storage

A. Cautions during Transportation

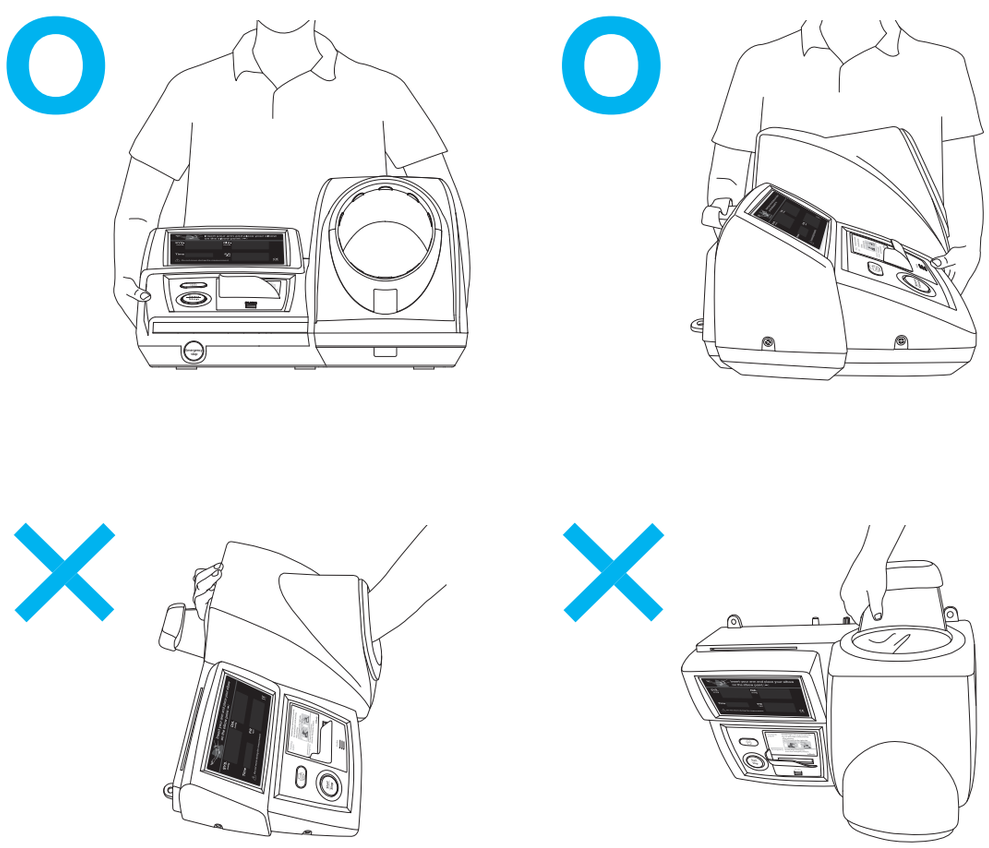
To transport the BPBIO320S safely, two people should keep the equipment parallel to the ground.

Caution

• When transporting the equipment alone, keep the equipment horizontal while transporting.

Attention

• *Lorsque vous transportez l'équipement seul de façon inévitable, soulevez-le en le maintenant horizontal comme suit.*



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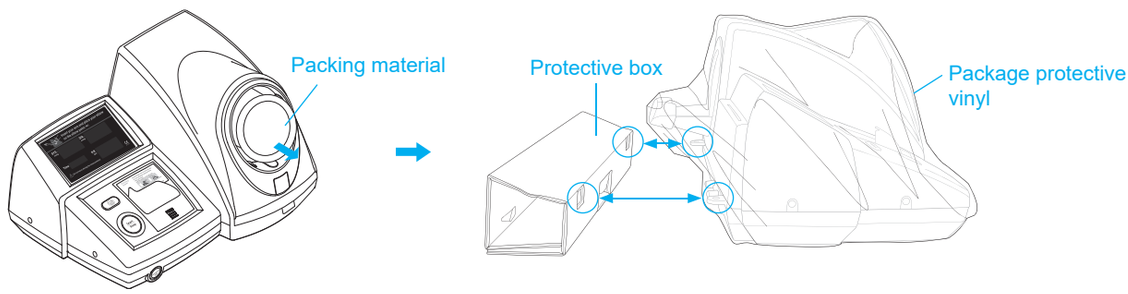
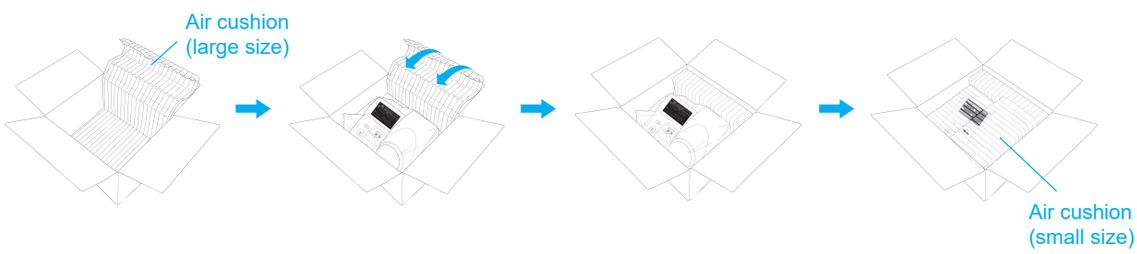
B. Repacking Instructions

1. Turn off the BPBIO320S.
2. Remove all connected cables and put the packing material into the BPBIO320S. Wrap package in protective vinyl. Insert the protective box into the anti-theft groove on the rear of the BPBIO320S.



3. Place the large air cushion on the bottom of the packing box and place the BPBIO320S on it. Cover with the small air cushion and seal the box with tape.



⚠ Caution

• When repacking the equipment, protective packing materials provided by InBody must be used.

⚠ Attention

• *Lors du reconditionnement de l'équipement, les matériaux d'emballage de protection fournis par InBody doivent être utilisés.*

C. Transportation and Storage Environment

The BPBIO320S should be transported or stored under the following conditions.

Temperatures range	-20 to 70ºC (-4 to 158ºF)
Relative humidity	10 to 95% RH (No Condensation)
Atmospheric pressure range	50 to 106 kPa

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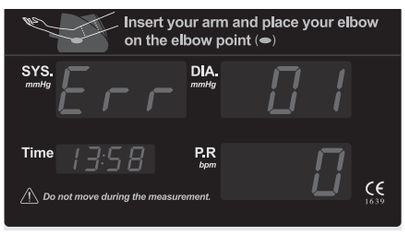
IV. FAQ

If a problem persists, please contact InBody.

A. Error Code

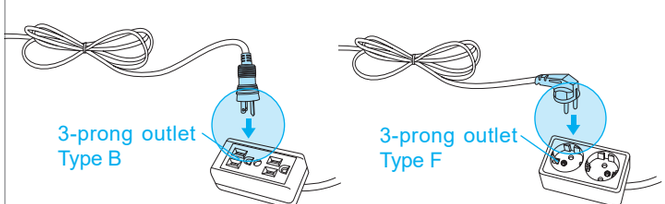
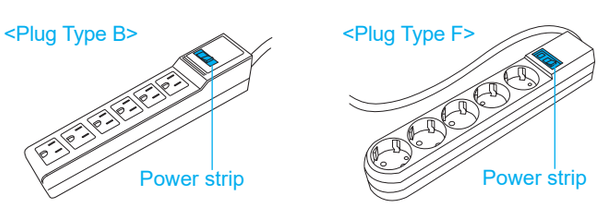
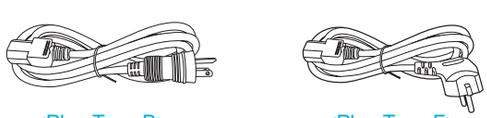
The error messages can be displayed on the screen if they occur during the test.



Please provide the error code to Product Support.

B. Regarding the Equipment

If problems cannot be resolved with the information below, please contact InBody.

Problem	Cause	Corrective measures
The device is not turning on.	This can occur when the power cable is not fully inserted into the power outlet.	• Plug the power cable into a grounded 3-prong outlet. <Plug Type B> <Plug Type F>  • When using a power strip, make sure the switch is turned on. <Plug Type B> <Plug Type F>  • Make sure the power cable (AC 250V 10A) provided by InBody is in use.  <Plug Type B> <Plug Type F>

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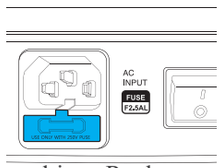
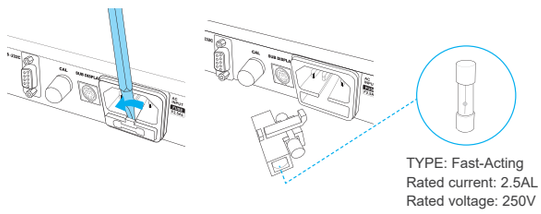
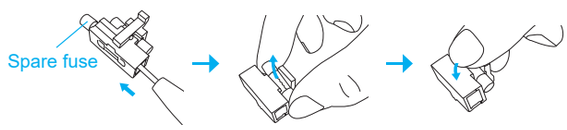
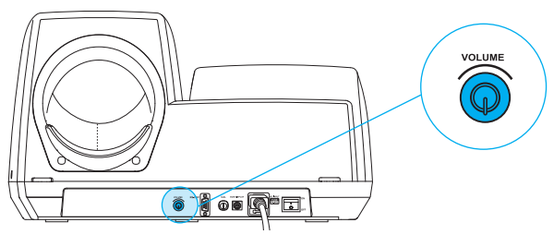
Question	Cause	Measures
The device is not turning on.	The fuse is blown.	Turn off the BPBIO320S, and replace the fuse. ❶ The fuse socket is located on the back of the device beneath the power plug.  ❷ Pull the fuse out by using a flathead screwdriver. Replace the fuse with the provided spare fuse. Additonal fuses can be purchased if necessary.   **⚠ Warning** • Be sure to turn off the power when replacing the fuse. • The correct rated fuse must be used. (250V, 2.5AL) ***⚠ Avertissement*** • Éteignez complètement l'appareil lorsque vous devez remplacer le fusible. • Veillez à utiliser un fusible de calibre approprié (250V, 2.5 A)
Voice guide does not work.	The volume knob on the rear of the blood pressure monitor may be turned off.	Turn on the volume knob on the rear of the BPBIO320S. 
	The sound setting has been set to 'Beep guide' or 'Disable speaker.'	If the sound setting F01 is set at bEF, only the 'beep' sound (alarm sound) will be heard. If it is set at OFF, no sound will be heard. If you want the voice guide to be heard, set the sound setting to U01. * Refer to Setup on page 13 to change the sound settings.

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Question	Cause	Measures
The Result Sheet is not printing.	Printing may be disabled.	Check whether the settings for automatic printing option is on/off. If the setting is OFF the result sheets will only be printed manually.(Manual printing: The result sheet is printed only when the button is pressed.) * Refer to page 13 'F. Setup' section and change the automatic printing option.
	The printer may be out of paper.	Since the printer papers are consumables, the replacement cycles of the paper depend on the number of times result sheets have been printed.
	Printer paper may be installed incorrectly.	Open the cover, and check the direction of the printer paper. * Refer to 'Loading and Reloading Printer Paper' on page 9.
	The cover may not be closed completely.	Make sure the central cover is properly closed.

Caution

• The company is not liable for the problems occurred when others repair and inspect the equipment except employees of InBody Co., Ltd.

Attention

• *InBody Co, Ltd se décharge de toute responsabilité en cas de problème si la maintenance et l'inspection de votre appareil ne sont pas.*

Note

• Since error messages and things of detail such as incorrect result sheets can be used as a basis for A/S, please record or keep all of them.

Remarque

• *Puisque les messages d'erreurs et/ou les fiches de résultats erronés peuvent être utilisés pour le service après-vente, veuillez en prendre note dans un registre et/ou garder les copies en filière.*

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C. Regarding the Test

If problems cannot be resolved with the information below, please contact InBody.

Question	Answer
・Test results are incorrect.	・The arm and heart are not aligned during the test. Adjust the height of the chair to align the arm and heart.

O

Correct testing posture. The height of the arm and the heart is aligned.

X

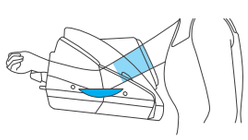
Incorrect testing posture. The arm is higher than the heart. Blood pressure value will be measured lower.

X

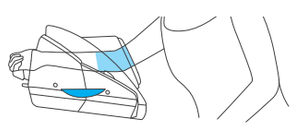
Incorrect testing posture. The arm is lower than the heart. Blood pressure value will be measured higher.

・Inserting the arm too far or not far enough may produce incorrect results. Place elbow in elbow groove for accurate results.

O



X



・Thick clothes or rolled up sleeves may produce incorrect results.

O

X

X

・The user may have tested without sufficient rest. Take the test after resting at least 5 minutes.

・Do not talk or move during the test.

∗ Blood pressure may vary throught the day. InBody recommends testing at different times of the day.

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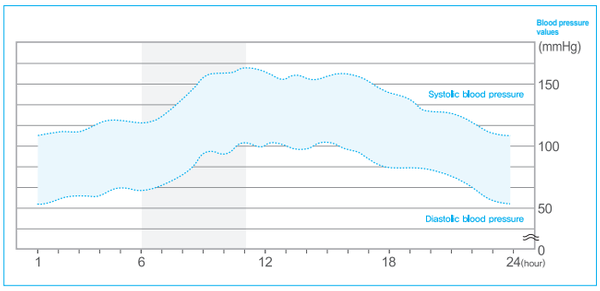
Question	Answer
・When should blood pressure be measured?	・Blood pressure may vary throughout the day, as shown below.  Therefore, the best time to test is when users can test regularly on a daily basis. It is recommended to test at the same time each day under the same conditions.
・How frequently can tests be done?	・The automatic blood pressure monitor applies pressure to the arm to measure blood pressure. Consecutive testing may put a strain on blood vessel. Rest for about 5 minutes between tests.
・Is there any case that I should not test?	・Automatic blood pressure monitor applies pressure to the arm to measure blood pressure. If you had blood drawn or had an injection given in the either arm, it is recommended to wait at least 1 hour before testing, or measure with another arm.
・Can results vary depending on the testing environment and temperature?	・BPBIO320S can operate at 5 to 40ºC (41 to 104ºF). However, if the user feels that the temperature is low or high, this feeling makes the blood vessels expand or contract, so it will ultimately affect the blood pressure results. It is recommended to test in a stable condition in an environment where no cold or heat is felt. ・The user will not be able to perform a natural and stable test if the user is testing in a loud or distracted environment. It is recommended to test in an environment free from noise and disturbances.
・The blood pressure values are different at home and at the hospital.	・The blood pressure may change: - Within 1 hour after meals - After having alcohol or caffeine - After smoking - After taking a bath - After exercise - After urination or defecation - When testing in an unfamiliar location
・The blood pressure values are different at home and at the hospital.	・Blood pressure can change depending on the environment. Test in the same environment when managing blood pressure. ・Psychologically, people ten to feel stable at home than at hospital. Hospital-tested blood pressure tends to be higher than home-tested blood pressure.

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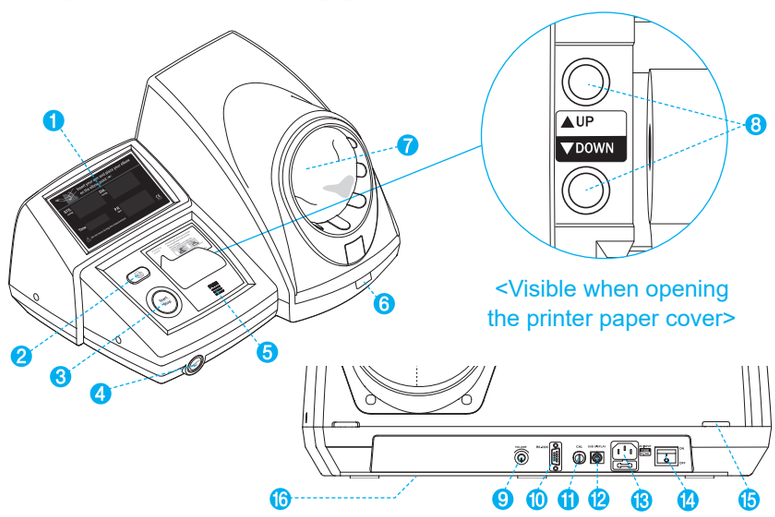
V. Others

* The BPBIO320S was manufactured by the quality control procedures of InBody Co., Ltd. InBody Co., Ltd. complies with ISO9001 and ISO13485 which are international quality management systems.
* This equipment complies with IEC60601-1, the international safety standard for electronic medical equipment. This equipment also complies with IEC60601-1-2, the international standard for electromagnetic compatibility.

A.Exterior and Functions

The names and functions of each part of the BPBIO320S are as follows:

* Please check each component of the system for damage prior to installation.



❶		: A display screen showing results, current time, etc.
❷		: A button to print Result Sheet
❸		: A button to start or stop a test
❹		: Emergency stop button
❺		: Printer paper cover
❻		: Motion sensor to automatically switch from sleep to standby mode
❼	Elbow Sensor	: A sensor to guide the correct examination posture
❽		: UP/DOWN buttons to adjust settings
❾		: Volume control knob
❿		: RS232C (9-pin serial) connection terminal
⓫		: A port used to connect a mercury monitor in order to adjust the pressure value
⓬		: A terminal used to connect a multi-display device
⓭		: Input for external power source (AC 100-240V, 50/60Hz), Fuse (F2.5AL, 250V)
⓮		: A switch used to turn the equipment on/off
⓯		: A groove that can be fixed to a table for theft prevention
⓰		: Speaker

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B.Safety Information

⚠ Warning

- If this equipment has been altered, it must be inspected to ensure that it can be used safely.
- Results can only be interpreted by experienced healthcare professionals. It cannot be used for diagnosis, medication, or other treatments performed at the consumer's discretion without a doctor's prescription.

⚠ *Avertissement*

- *Si cet équipement a été modifié, il faut s'assurer qu'il peut être utilisé de manière cohérente et sûre, par le biais d'inspections et de tests appropriés.*
- *Les résultats de tests ne peuvent être interprétés que par des professionnels de la santé expérimentés et ne peuvent être utilisés sans ordonnance médicale pour le diagnostic, les médicaments ou d'autres traitements effectués à la discrétion du consommateur. Veuillez consulter avec le médecin.*

⚠ Caution

- Excessively high or low temperatures, humidity and pressure may affect the operation of the equipment and may cause malfunction. Use blood pressure monitor within the range specified in the product specifications.
- Do not touch the external device connections such as RS232C (9-pin serial) connection terminal on the back of the equipment.
- Packing material and other wastes should be disposed of according to the relevant laws and regulations.

⚠ *Attention*

- *Des températures excessivement élevées ou basses, l'humidité et la pression peuvent affecter le fonctionnement de l'équipement et provoquer des dysfonctionnements. Utilisez un tensiomètre dans la plage spécifiée, dans les spécifications du produit.*
- *Ne touchez pas les connexions externes du périphérique, telles que la borne de raccordement de RS232C (série à 9 broches) à l'arrière de l'équipement.*
- *Les matériaux d'emballage et les autres déchets doivent être éliminés conformément aux lois et règlements pertinents.*

Safety Symbols

	Danger high voltage
	Warning / Caution
	Note
	BF-type equipment
	Power on
	Power off

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Other Symbols

	Manufacturer		Serial number
	Authorized representative in the EUROPEAN COMMUNTY		Alternating current
	European conformity		Operating instructions
	Complies with AAMI ES60601-1 CSA-C22.2 No. 60601-1 (MET mark only applies for USA and Canada.)		

C. Product Classification

Oscillometric multi-functional electronic blood pressure monitor

- Type of protection against electric shock: Class 1 device
- Level of protection against electric shock: BF-type
- Level of protection against flooding: General Equipment (No special protection against external water infiltration)
- Class against electromagnetic radiation intensity: Class A

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D. Specifications

Test Instructions	Oscillometric
Test range	Pressure: 0-300 mmHg Pulse: 30-240 bpm
Degree of Precision	Pressure: ±2 mmHg Pulse: ±1.5%
Test result	Systolic blood pressure, diastolic blood pressure, Mean arterial pressure, Pulse pressure, PULSE rate, RPP (rate pressure product)
Test Time	Approx. 30 seconds on average (20-50 seconds depending on the pulse and blood pressure value)
Pressurization Time	Approx. 10 seconds
Minimum scale unit	1 mmHg
Screen Type	7-Segment LED
Result output	Result value, PULSE graph, Last 5 measurements
Storage function	Can store results for up to 1 million tests
Energy saving	Automatically enters the energy saving mode after 2 minutes of idle time.
Dual safety mechanism	When the Start/Stop button is pressed, the cuff rapidly releases air. The cuff automatically releases when the air pressure exceeds 300 mmHg. When the Emergency Stop button is pressed, the cuff quickly deflates.
Voice guide	Guides user through blood pressure menasurement and results.
Printer	High-speed thermal printer with a built-in automatic cutter (width: 2.25 in / 5.7 cm)
Rated voltage and power consumption	AC 100-240V, 50-60Hz, 30VA
Dimensions	489 (W) × 409 (D) × 284 (H) mm 19.3 (W) × 16.1 (L) × 11.2 (H) in
Weight	9kg (19.84 lb)
Operating environment	Temperature 5 ~ 40°C (41 ~ 104°F), Humidity 15 ~ 90% RH, Atmospheric pressure 70 ~ 106 kPa
Storage environment	Temperature -20 ~ 70°C (-4 ~ 158°F), Humidity 10 ~ 95% RH, Atmospheric pressure 50 ~ 106 kPa (No Condensation)

* Specifications are subject to change without notice.
* This product is a medical device. Please read the guide and precautions before using this blood pressure monitor.

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E. EMC Declaration

Test Name	IEC 60601-1-2 4th Edition	Ref. Standard	Ports to Test	AC Mains Voltage	Test Level Required	Notes
Mains terminal disturbance voltage	4th	CISPR 11:2015/ AMD2:2019	AC Mains	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz	Group 1, Class B	
Radiated disturbance	4th	CISPR 11:2015/ AMD2:2019	Enclosure	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz Battery	Group 1, Class B	
Harmonic Current Emissions	4th	IEC 61000-3-2:2018	AC Mains	230V~50Hz	Class A	
Voltage Fluctuations and Flicker	4th	IEC 61000-3-3:2013/ AMD1:2017	AC Mains	230V~50Hz	Pst = 1 Plt = 0.65 Dmax = 4% DC = 3.3%	
Electrostatic Discharges (ESD)	4th	IEC 61000-4-2:2008	Enclosure	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz Battery	±8 kv contact ±2 kv, ±4 kv ±8 kv, ±15 kv Air	1 pulse/ 1sec contact 8 kV air 15kV
Radiated RF elecromagnetic Fields	4th	IEC 61000-4-2:2008	Enclosure	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz Battery	10 V/m 80 MHz-2.7 GHz 80% AM at 1kHz RF Wireless Comm. (Refer to test report clause 1.15)	Dwell Time is 3 sec
Electric Fast Transients and bursts	4th	IEC 61000-4-4:2012	AC Mains	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz	±2 kv, AC, 100 hk PRR	5 pulses at 0°, 90°, 180°, 270°
Surges	4th	IEC 61000-4-5:2014/ AMD1:2017	AC Mains	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz	±0.5 kv, ±1 kv L to N (CM) ±0.5 kv, ±1 kv ±2 kv L & N to PE (CM)	5 pulses at 0°, 90°, 180°, 270°
Conducted Disturbances, induced by RF fields	4th	IEC 61000-4-6:2013	AC Mains & all I/O	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz Battery	3 Vrms 150 Hk to 80 Mk 80% AM at 1Hk, 2Hz 6 Vrms in ISM Bands, amateur radio bands between 0.15 Mk and 80Mk	Dwell time is 3 sec

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Power-frequancy Magnetic Field	4th	IEC 61000-4-8:2009	Enclosure	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 230V, 50Hz Battery	30 A/m 50 Hz & 60 Hz	
Voltage Dips, Interruptions, and variations	4th	IEC61000-4-11:2004/ AMD1:2017	AC Mains	100V, 50Hz 100V, 60Hz 120V, 60Hz 220V, 60Hz 240V, 50Hz 240V, 60Hz	0% UT for 0.5 cycle	AT 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°
					0% UT for 1 cycle	AT 0°, 180°
					50Hz : 70% UT for 25 cycles 60Hz : 70% UT for 30 cycles	AT 0°, 180°
					50Hz : 70% UT for 250 cycles 60Hz : 70% UT for 300 cycles	AT 0°, 180°

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Electromagnetic immunity

The [Model name] is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. Portable RF communications equipment should be used no closer than 30 cm (12 inches) to any part of the [Model name]. Otherwise, degradation of the performance of this equipment could result.

Immunity test	Band a)	Service a)	Modulation b)	IEC60601 test level	Compliance level
Proximity fields from RF wireless Communications IEC61000-4-3	380 - 390 MHz	TETRA 400	Pulse modulation b) 18Hz	27 V/m	27 V/m
	430 – 470 MHz	GMRS 460 FRS 460	FM c) ±5 kHz deviation 1 kHz sine	28 V/m	28 V/m
	704 – 787 MHz	LTE Band13, 17	Pulse modulation b) 217 Hz	9 V/m	9 V/m
	800 – 960 MHz	GSM800:900 TETRA 800 iDEN 820 CDMA 850 LTE Band 5	Pulse modulation b) 18 Hz	28 V/m	28 V/m
	1700 – 1990 MHz	GSM 1800 CDMA 1900 GSM 1900 DECT LTE Band 1,2,4,25 UMTS	Pulse modulation b) 217 Hz	28 V/m	28 V/m
	2400 – 2570 MHz	Bluetooth WLAN 802.11b/g/n RFID 2450 LTE Band 7	Pulse modulation b) 217 Hz	28 V/m	28 V/m
	5100 – 5800 MHz	WLAN 802.11a/n	Pulse modulation b) 217 Hz	9 V/m	9 V/m

NOTE : If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1m. The 1m test distance is permitted by IEC 61000-4-3.

a) For some services, only the uplink frequencies are included.
b) The carrier shall be modulated using a 50% duty cycle square wave signal.
c) As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.

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