

**⚠ Caution** | Do not mark on the products and its components with a pen or allow printed materials to come in contact with the surface. Ink marks cannot be removed.

MW34 CE

# Obstetric Examination Simulator

## Instruction Manual

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The Obstetric Examination Simulator is a representation of a 39-40 week pregnancy torso for training in skills for prenatal checkup including palpation, fetal heart auscultation, fundal height, abdominal circumference, and external pelvimetry.

## ■ Features

- Soft and elastic tissue material that provides true-to-life sensation of palpation
- Anatomically correct pelvis and fetus
- A variety of fetal position, presentation, and lie with one fetal unit
- Authentic fetal heart sounds recorded from real patients.

## ■ Training Skills

- Palpation: Leopold's maneuvers, CPD assessment
- Auscultation: fetal heart auscultation: auscultation with a Pinard stethoscope on the maternal abdomen, listening of Doppler monitor sounds through the external speaker;
  - umbilical blood flow
  - umbilical blood flow and fetal heart sounds (posterior and anterior)
  - fetal heart sound※ Real Doppler monitors (stethoscopes) cannot be used.
- Measurement: maternal abdominal girth, fundal height, and external pelvimetry

## Read before use

This Obstetric Examination Simulator has been developed for the training of medical and paramedical professionals only. Any other use, or any use not in accordance with the enclosed instructions, is strongly discouraged. The manufacturer cannot be held responsible for any accident or damage resulting from such use.

Please use this product carefully and refrain

from subjecting to any unnecessary stress or wear. Should you have any questions on this simulator, please feel free to contact our distributor in your area or KYOTO KAGAKU at any time.

(Our contact address is on the back cover of this manual)

※Be sure to refer to the handling and storage instructions on page 3 and always follow them.

## Set Includes

Before you start, ensure that you have all components listed below.



a. Pregnancy torso	1
b. AC adaptor	1
c. Remote controller	1
d. Talcum powder	1
Instruction manual	
e. USB cable	1

Power requirements:  
pregnancy torso; AC100-240V  
Power consumptions: 1W

For this CE version batteries are not required.

The rules below represent strongly recommended uses for safety.

## DOs and DON'Ts

### DOs

#### ● Operate the system under the designated circumstances

Power input: AC100V~230V plus or minus 10%, 50Hz/60Hz

Temperature range: between 0 degrees C and 40 degrees C (no congelation)

Relative humidity; between 0%to 80% (no condensation)

\*Connecting to power source outside of the designated range may lead to fire.

#### ● Safe disposition

To avoid shot circuit, do not run the simulator set above a power receptacle.

#### ● Handle the power plug and cord observing following precautions

1. Clean the head of the plug periodically.
2. Plug in the plug to the outlet firmly to the end.
3. Always hold the plug when unplugging. Do not pull the cable.
4. Do not force to bend, twist the cable and avoid scratching or cutting on it.

Failing to follow the above precautions can result in damage in the plug and the cable, constituting risk of fire or shock.

#### ● When the electric parts get warm or produce smoke, immediately turn off the power and unplug from the power source

Risk of fire. Contact your distributor or the manufacturer for repair.

#### ● Handle with care

The materials for the models are special compositions of soft resin.

Please handle them with utmost care at all times.

#### ● Storage

Store the simulator at room temperature, away from heat, moisture and direct sunlight.

Storage under the temperature above 50 degrees C may reduce the performance quality of the simulator.

### DON'Ts

#### ● Do not disassemble or open electric or precision components

Do not open up or disassemble the housing for electric parts or precision components.

Refrain from opening up any lids, caps or covers for such area, and never run the system while any of such covers are open.

\*Never disassembling the electric components, power plug and cable as it may create a risk of fire, shock or injury.

Contact your distributor or the manufacturer for repair.

#### ● Never wipe the product and components with thinner or organic solvent

#### ● Ink marks on the soft surface won't be removable

Don't mark on the product and components with pen or leave any printed materials in contact with their surface.

#### ● Do not give shocks

The electric components are precision instruments. Strong shocks or continuous vibration may cause breakages of its internal structure.

#### ● Do not run the system continuously over 2 hours

Take at least 30 minutes shutdown, turning off the power, every 2 hours.

#### ● Do not wet the electric components

Do not pour or spill water or liquid detergent over the electric components, power cable and power plug.

Running the system while the electric components are wet may create a shock hazard or a risk of fire.

#### ● Do not handle the power plug with wet hands

Risk of shock.

#### ● No fire

Do not put the product close to fire. It may lead to discoloration or deformation of the product as well as short circuit, creating a risk of fire.

## Caution

Caution indicates that a failure to observe the specified instructions may result in minor injuries or material loss and equipment damage. Be sure to observe all the caution statements.

<ul style="list-style-type: none"><li>● <b>Handle the manikin and the components with care.</b> Be sure not to drop the manikin and its components, since the product uses special resins.</li></ul>	<ul style="list-style-type: none"><li>● <b>Do not mark on the manikin or other components with a pen or allow printed materials to come in contact with the surface. Ink marks cannot be removed.</b></li></ul>
<ul style="list-style-type: none"><li>● <b>Storing the manikin in a dark, cool and dry space will help prevent the skin colors from fading and product from becoming deformed.</b></li></ul>	<ul style="list-style-type: none"><li>● <b>Never use organic solvents like paint thinner or alcohol to clean the skin, as this will damage the manikin.</b></li></ul>
<ul style="list-style-type: none"><li>● <b>The manikin may be cleaned with a wet cloth if necessary, using mildly soapy water or diluted detergent.</b></li></ul>	<ul style="list-style-type: none"><li>● <b>Even if the skin color of the manikin changes as it ages, the quality of the performance is not affected.</b></li></ul>

### PLEASE READ:

Always follow the handling and storage instruction below, to keep the material with its elasticity and durability.

#### AFTER USE:

- Apply talcum powder on the uterus, set the parts on the torso base and store them in the storage box.



- Do not let the parts come in contact with other resin items or printed materials.






The soft material of the parts may be deformed by contact with other resin items and marked by contact with printed material and they cannot be repaired.

- Maintain designated temperature, humidity and avoid direct sunlight for storage.

Store the simulator below 60 degrees celcius.

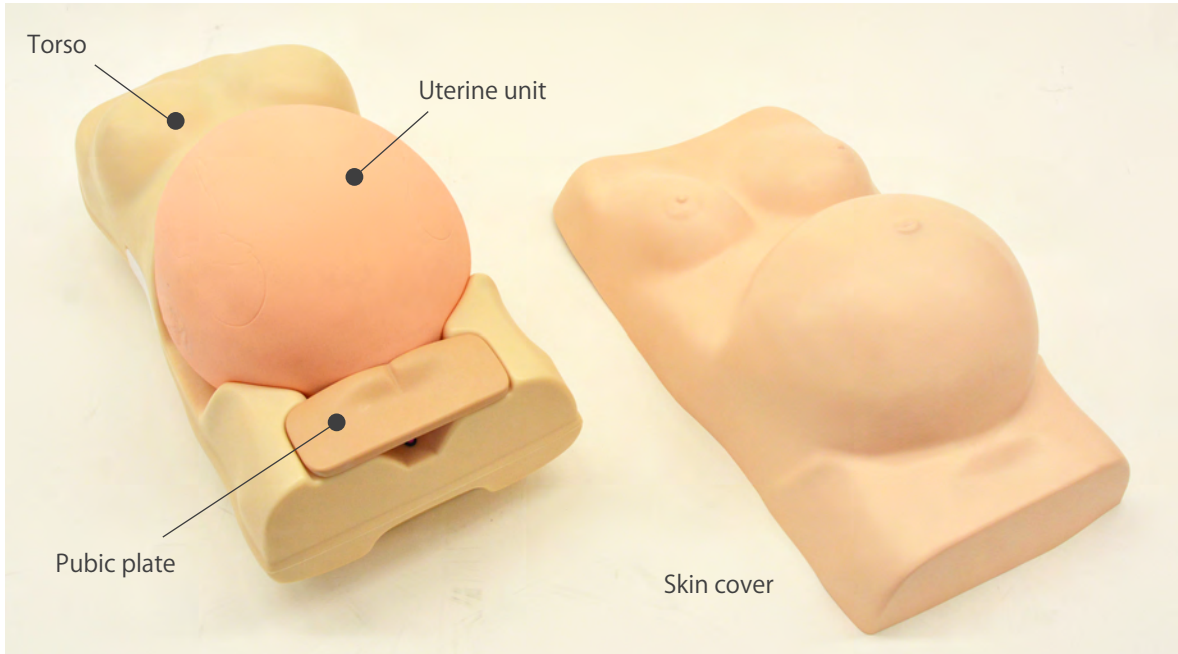
Change the storage place immediately when the temperature indicator shows color circles as below.

\*The color circles are irreversible.

Before			After		
3F60	年	月貼付	3F60	年	月貼付
					
60	65	70	60	65	70

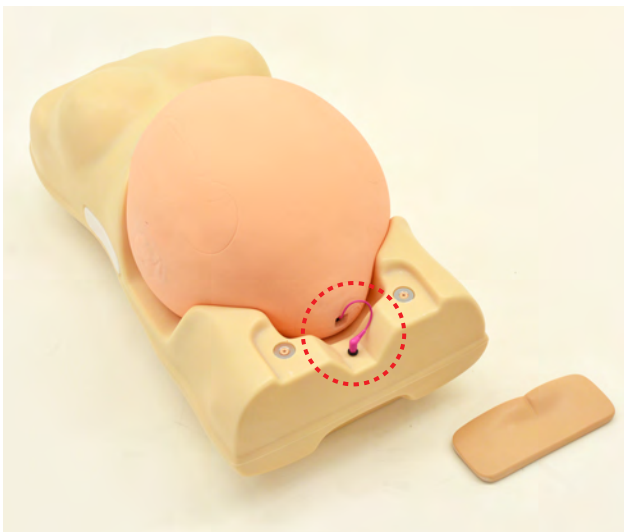
### Structure of Pregnancy Torso

Under the skin cover, the uterine unit and the pubic plate are placed on the torso base.



Under the pubic plate, there is a port for the speaker cable to connect the speaker embedded in the fetus and the torso base.

There are two ports for the sound cable. One is under the pubic joints and the second one is at the xiphoid process allow a variety of positioning of the uterine units.





### Transportation

1. The pregnancy torso is heavy. For safety, lift and carry the torso with 2 people.



2. When the torso has to be transported by one person, be sure to hold the indented areas found at both ends of the torso.



### Setting of Fetal Lie, Presentation and Position

1. Disengage the Velcro fasteners at the sides of the torso and remove the skin cover.



Do not leave the skin cover unattached to the torso base for long time. Folding mark and wrinkles may persist and may not be restorable.

Always keep the skin cover attached on the torso base, except the short while for positioning the uterine units.

2. Remove the pubic plate.



3. Be sure to unplug the sound cable (for fetal heart sounds) from the port before moving the uterine unit.

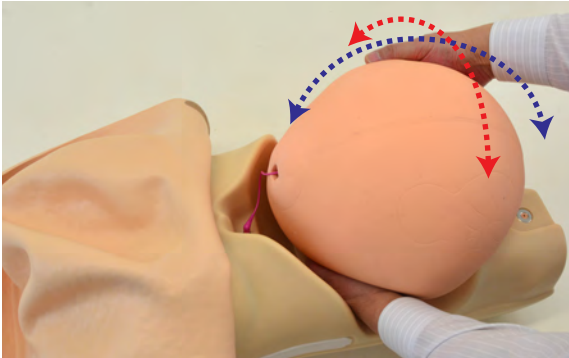


Always make sure to unplug the sound cable before moving the uterine unit. Otherwise, the wire may get damaged.



### Setting of Fetal Lie, Presentation and Position

4. Hold the uterine unit with both hands whenever moving, rotating or lifting the unit.  
 ※Fetal presentation can be set in 2 directions (vertex and breech). Fetal position can be set freely in 360 degrees.  
 When changing the presentation, be sure to connect the sound cable to the port before setting the uterine unit in place.



5. Position and orientation of the fetus is illustrated on the surface of the uterine unit.

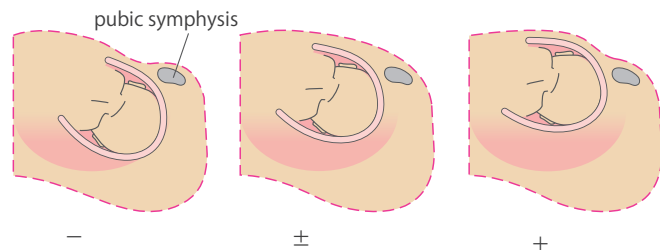


※The lines in the above photos are enhanced to facilitate visibility.

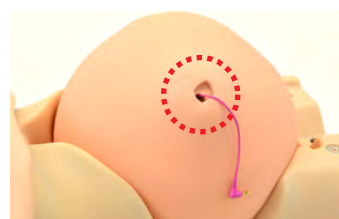
6. For training of CPD assessment (Leopold's fifth maneuver), place the uterine unit at vertex, and rotate it along the axis of the maternal torso to change the height of the fetal head against the pubic symphysis.



- CPD assessment (Leopold's fifth maneuver)



Do not try to enlarge the hole for the sound cable, or pull out the internal components from the uterine unit.



### Preparation for Auscultation

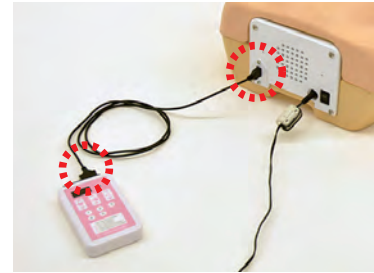
1. Connect AC adapter to pregnancy torso.



2. Connect reverse side of AC adapter to power socket.



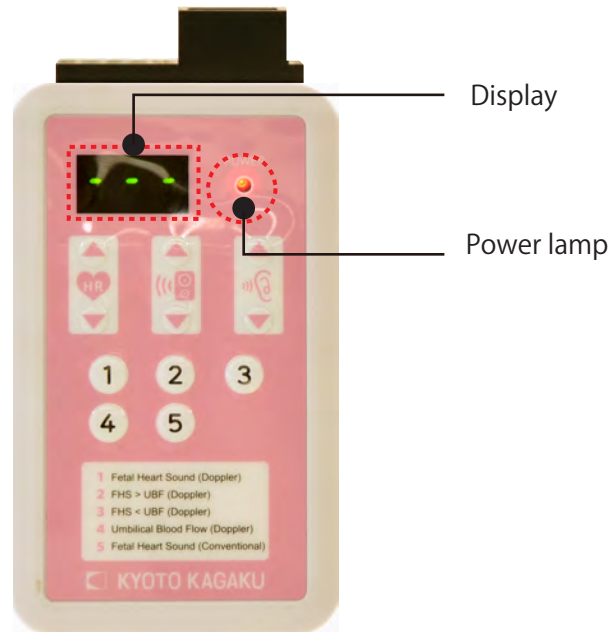
3. Connect remote controller and torso with USB cable.



4. Turn on power switch on the torso.

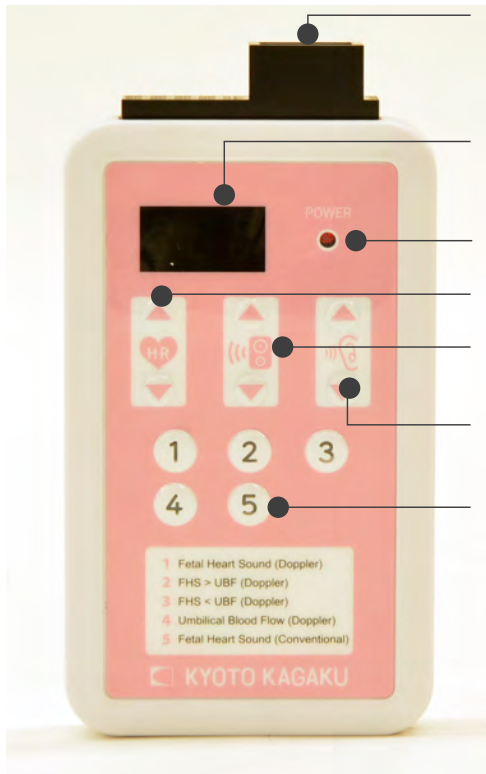


5. Display panel and power lamp will light up indicating preparation complete.



Be sure to turn on the power on the torso first and then turn on the remote controller. Remote controller may not work properly if the order is not followed.

### Preparation for Auscultation



- USB outlet
- Display panel
- Power lamp
- Heart rate
- External speaker volume
- Fetal heart sound volume
- Sound case options

- 5 variations of sound cases  
<Sounds recorded by a Doppler stethoscope>
  - 1, Umbilical blood flow
  - 2, Umbilical blood flow and fetal heart sounds (anterior, louder heart sounds)
  - 3, Umbilical blood flow and fetal heart sounds (posterior)
  - 4, Fetal heart sounds
 <Sounds recorded by a conventional stethoscope>
  - 5, Fetal heart sounds

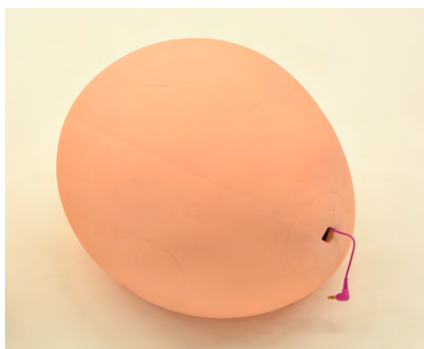
#### ● Controllable parameters

- Heart rate (60 ~ 180)
- Sound volume of internal speaker (0 ~ 10)
- Sound volume of external speaker (0 ~ 10)



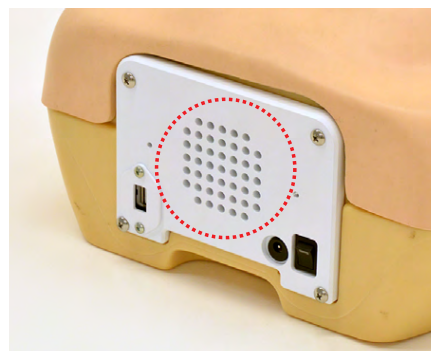
- Within a short interval of time, changing blood flow sound to heart sound or vice versa may cause malfunction of sound reproduction.
- When sound that you selected was different from reproduced sound, push the button again that you need reproduce the sound.
- When unexpected sounds such as beep sound occurred, turn off the main power switch once and then turn on the switch.

- Internal speaker (embedded in the fetus)



- The internal speaker is embedded in the fetus in the uterine unit. It is used for auscultation using Pinard or conventional stethoscope.

- External speaker (in the torso)



- The purpose of the external speaker is to share the sounds among a group of trainees.

## Preparation for Auscultation

《Remote controller manual》

### 1. Select sound case



- Select from option 1 to 5  
- Case names are listed at the bottom of the panel.



- Selection will be displayed as CA1-CA5.

- Green light will indicate the selected case.

### 2. Case volume adjustment



- Press ▼▲ to adjust volume

External speaker

Fetal heart sound (internal speaker)



- Volume will be shown on the display.

\*Volume range is 0-10 (0 equals off)

- Volume for external speaker and fetal heart sound can be adjusted separately.

### 3. Adjusting fetal heart rate



- Press ▼▲ on the heart rate section to adjust.

Heart rate



- Heart rate will be shown on display \*range of heart rate setting is between 60-180 bpm.

- Preparation complete

\*Press number button to select a different case.

Repeat the procedure 2-3.



When selecting different case or switching off remote control, volume and heart rate setting will be reset.



### Auscultation (Fetal Heart Sounds)

Anatomically correct landmarks of maternal pelvis and fetal parts, and innovative material of the uterine unit allow realistic palpation of the fetus. The uterine units can be freely oriented to represent different lies, presentations and positions, also allowing CPD assessment (Leopold's fifth maneuver).

#### ■ Leopold's maneuvers

Palpate parts of the fetus such as head, buttocks and the trunk through the steps from the first to the fourth maneuvers to assess fetal lie, presentation and position as well as degree of fetal descent.



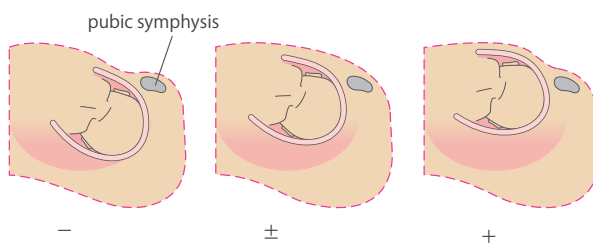
First maneuver



Fourth maneuver

#### ■ CPD assessment (Leopold's fifth maneuver)

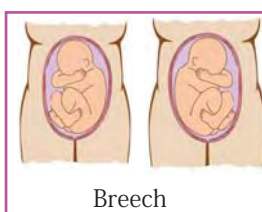
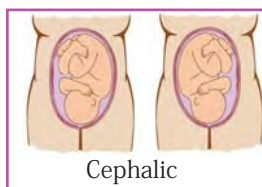
The height fetal head against the pubic symphysis can be changed by rotating the fetal unit to prepare different scenarios for CPD assessment (Leopold's fifth maneuver).



### Auscultation (Fetal Heart Sounds)

Sounds recorded by the doppler and a conventional stethoscope can be used for training. **While training of auscultation of fetus, cephalic or breech position is recommended. Adjusting of angle and direction of uterus, reproduce the those positions.**

The doppler mode features fetal heart sounds, umbilical blood flow, as well as mixed sounds of fetal heart and umbilical blood flow. Remote controller allows switching between sounds, between speakers and also setting sound volume.



Auscultation with a conventional stethoscope.



Auscultation with a Pinard stethoscope.

### Measurement (Maternal Abdominal Girth, Fundal Height and External Pelvimetry)

Maternal body measurements can be done to estimate fetal weight, development and change in the volume of amniotic fluid. Anatomically correct landmarks include the pubic symphysis, the navel, the xiphoid process, the iliac crest, and the greater trochanters.

Maternal abdominal girth



Fundal height



A variety of external pelvimetry



Distantia spinarum (distance between iliac spines)



Distantia cristarum (distance between iliac crests)



Distantia trochanterica (distance between the prominent parts of trochanter major)

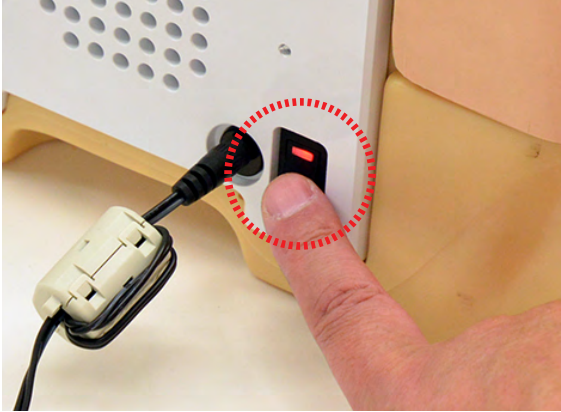


External oblique diameter

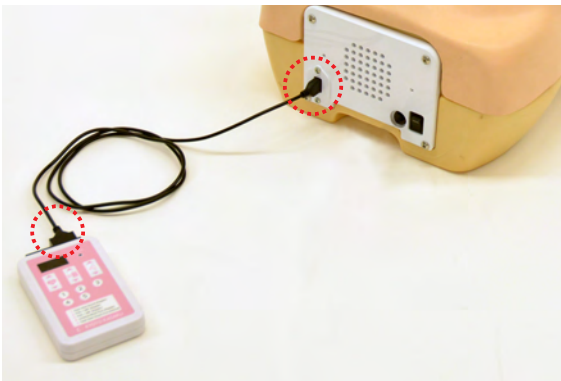
# After Training

## After Training

1. Turn off power switch on torso, unplug AC adapter.



2. Unplug USB cable connecting remote controller and torso.



3. Remove the abdominal skin cover and spread talcum powder on the surface of the uterine unit. Place the uterine unit on the torso base and replace the skin cover over it.



4. Unplug the sound cable from the port while not in use.




5. Clean the skin cover by wiping with a damp cloth, using water or mild detergent. **LET THE TORSO DRY NATURALLY**, then spread talcum powder on the surface before storing in a cool dry place.



※ This is to prevent accidental break of the wire that can be caused by dropping of the uterine unit from the torso base.



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Replacement  
parts

code	name
11414-010	Skin cover for MW34



Skin cover for MW34

For inquiries and service, please contact your distributor or KYOTO KAGAKU CO., LTD.

The contents of the instruction manual are subject to change without prior notice.

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Please contact the manufacturer for extra copies of this manual which may contain important updates and revisions.

Please contact the manufacturer with any discrepancies in this manual or product feedback. Your cooperation is greatly appreciated.

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