

Thorax Dynamic Phantom





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 short 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.

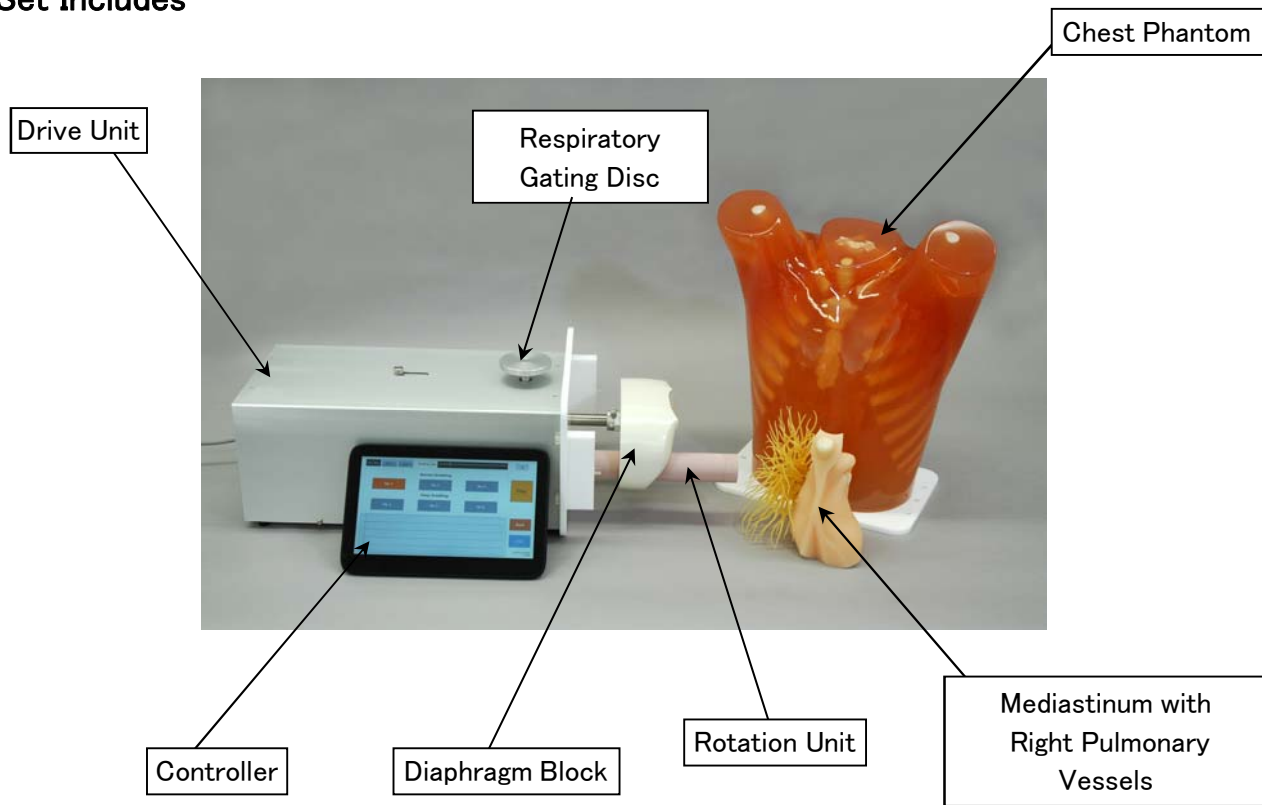
● Do not handle the power plug with wet hands

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.

Set Includes



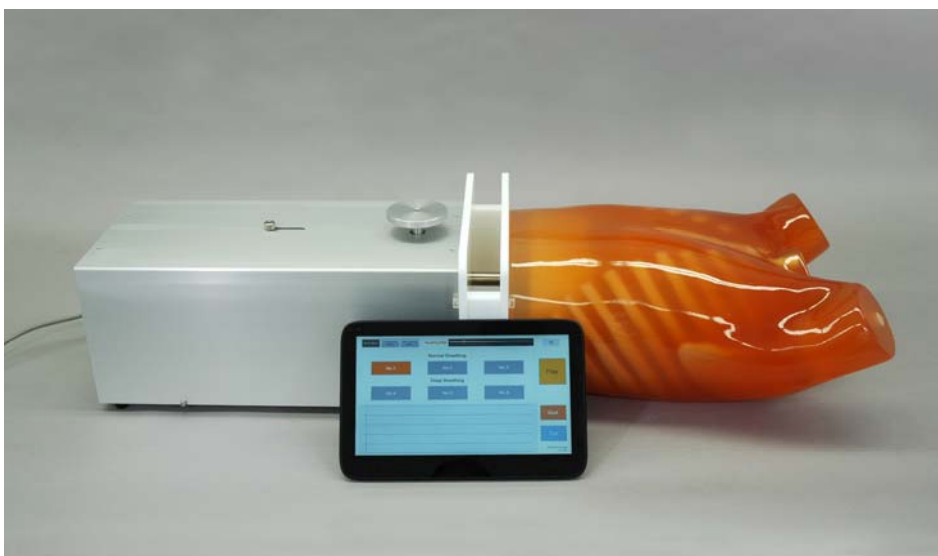
Accessories:

simulated tumors

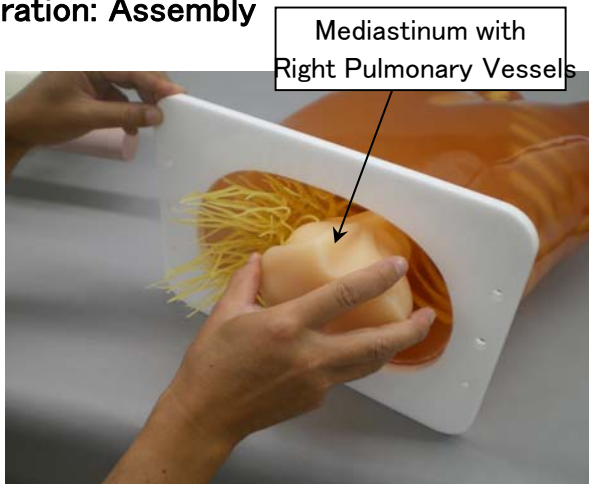
inserts for the rotation unit (three variations)

-This phantom consists of the chest phantom, mediastinum with right pulmonary vessels, rotation unit, drive units.

-Diaphragm block and the rotation unit moves according to the respiration pattern set on the controller.

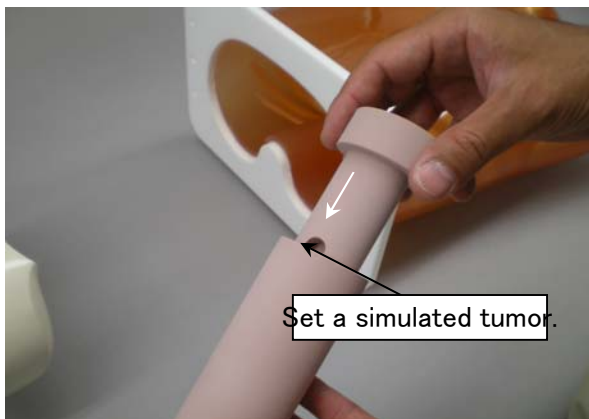


Preparation: Assembly



1. Insert the mediastinum into the chest phantom.

*The part is already set when the phantom is delivered.



2. Set a simulated tumor or a TLD in the pit made in the insert for the rotation unit.

Set the insert to the opening of the rotation unit, then attach the rotation unit to the drive unit.

* Three variations of inserts (once piece each) come with the set:

- for simulated tumors of 3, 5, 8mm dia
- for simulated tumors of 10,12 mm dia
- for TLD (with a pit of 3x 3x 1mm)



3. Lock the rotation unit with a pin.

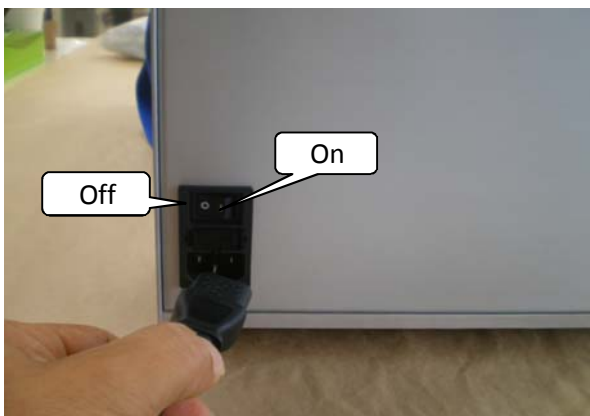
Preparation: Assembly



- 4 Mount the chest phantom to the drive unit.
Fix them together with screws.



- 4.Assembly complete.

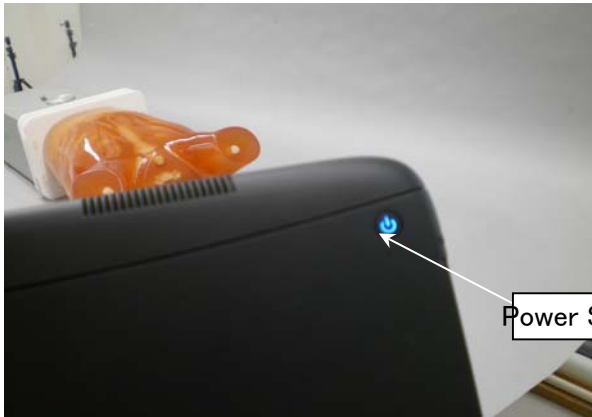


- 5 Connect to the power supply.
Turn on the power switch

*Be sure to turn on the power switch on the drive unit, before turning on the controller.



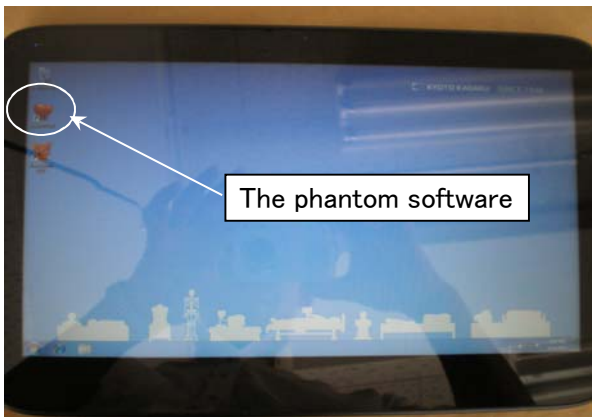
Turn on the controller



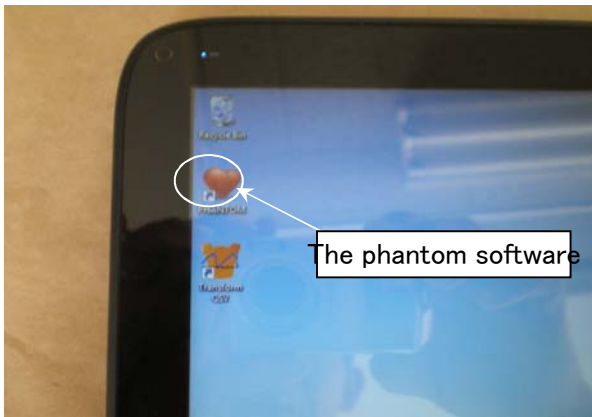
1. Turn on the controller.

*Power switch for the controller is at the back of the tablet.

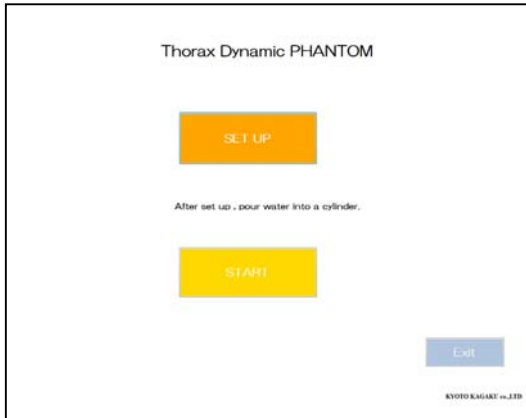
Long press the button until the LED indicator lit.



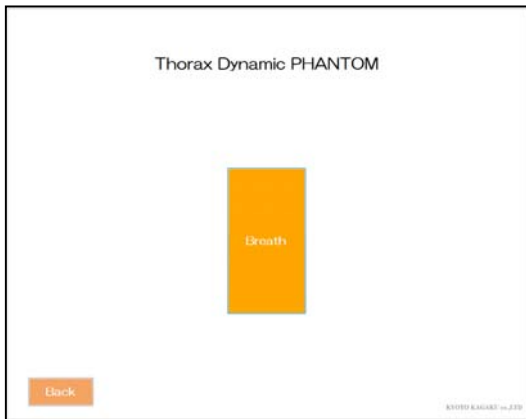
2 Open the phantom software by double clicking on the icon.



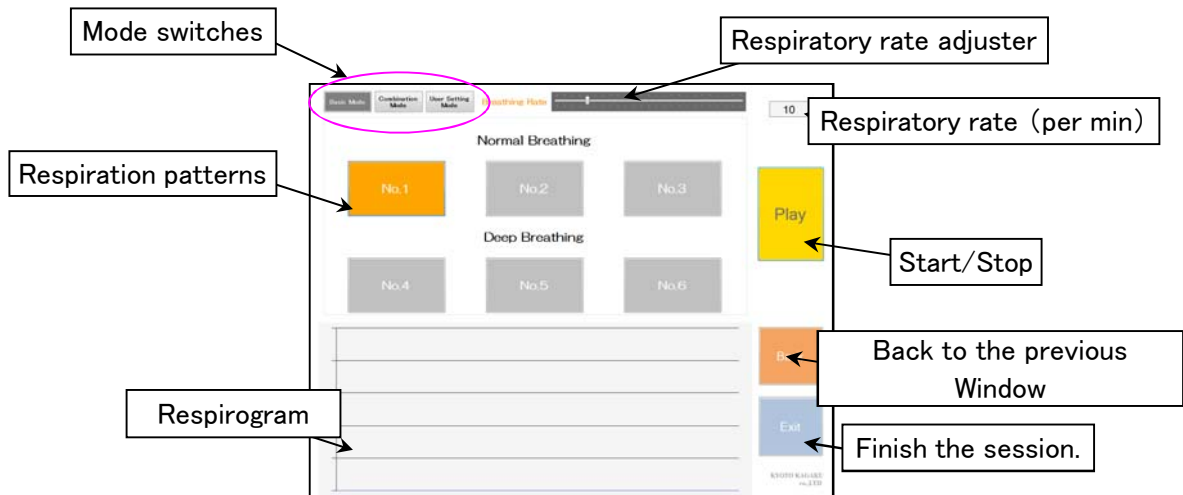
Operate the phantom



1 Press the set up button to initialize the system.



2 Press the Breath button.

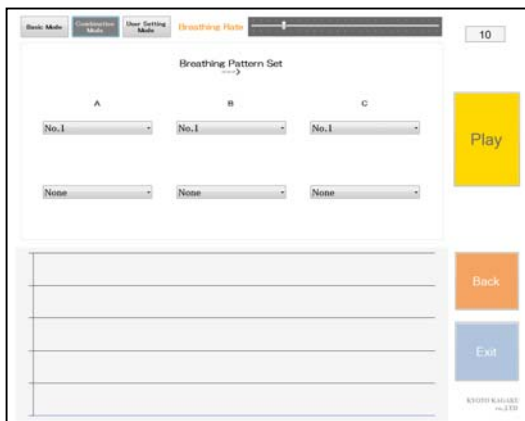


*Setting can be changed while the phantom is not in motion.



Basic Mode

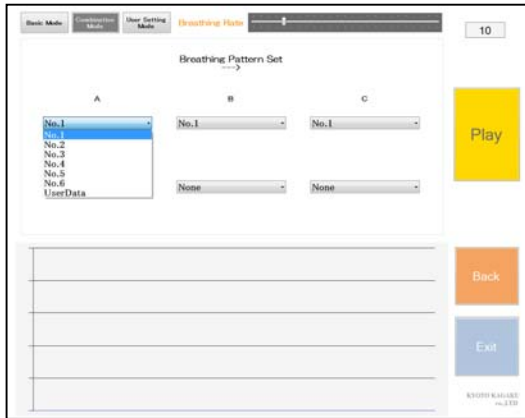
Six preset respiratory patterns can be simulated.



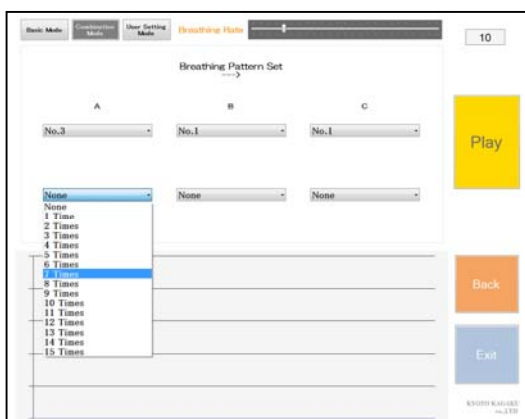
Combination Mode

Original cases can be created by setting the number of cycles to replay for chosen preset patterns to replay in series.

Up to three preset patterns can be chosen for a combination.



1. Select a respiratory pattern from the pull down list.



2. Choose a number to repeat from the pull down menu.

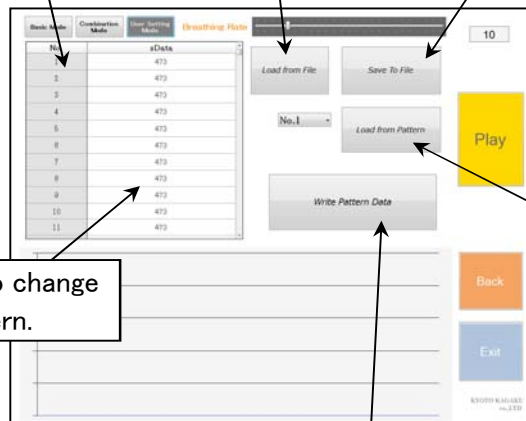
User Setting Mode

Create original respiratory patterns manually, by modifying preset respiratory patterns.

Total 500 steps.
1 step represents approx. 0.02sec.
500 steps represent approx.10 sec.

Load a saved pattern.

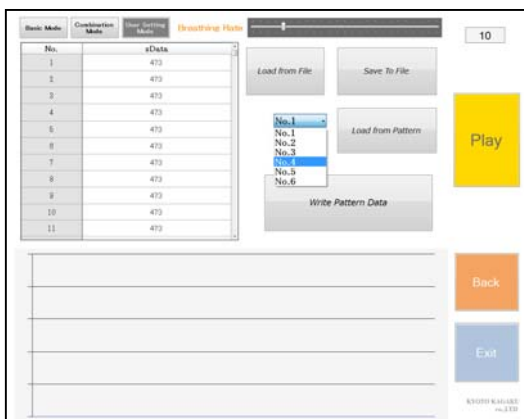
Save the created pattern.



2.Modify the value to change the respiratory pattern.

1. Load a preset respiratory pattern to modify.

3. Send the created pattern to the system.
*This process may take several minutes.



- 1 Load a preset pattern
- 2 Modify the balue
- 3 Press "Write Pattern Data"
- 4 Play
- 5 Press "Save To File" to save the new pattern.

Other settings

Range of the motion of the rotation unit can be adjusted with two adjustment knobs.

Length of a horizontal slide: 38mm–64mm

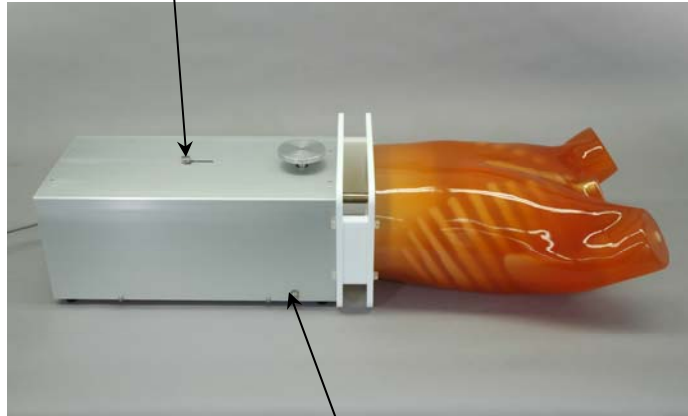
Wides of the rotation angle: 50–70 degrees

** maximum movement of the diaphragm block is 38mm.*

Rotation unit motion adjustment knob.

Turn clock wise: reduce the length of the slide. The shortest length is 38mm.

Turn counter clock with: increase the length of the slide. The longest is 64mm



Rotation unit angle adjustment knob

Turn clockwise : Wider rotation upto 70 degrees.

Turn counter clockwise: Narrower rotation to 50 degrees.

KYOTO KAGAKU co.,LTD

URL: <http://www.kyotokagaku.com> e-mail: rw-kyoto@kyotokagaku.co.jp

Worldwide Inquiries & Ordering

Kyotokagaku Head Office and Factories:

15 Kitanechoya-cho, Fushimi-ku, Kyoto, 612-8388, JAPAN

Tel: +81-75-605-2510 Fax: +81-75-605-2519

All American regions

KYOTOKAGAKU AMERICA INC.

3109 Lomita Boulevard, Torrance, CA 90505-5108, USA

Tel: 1-310-325-8860 Fax: 1-310-325-8867

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