# Physical Assessmemt Model Physiko

# Instruction Manual



# KYOTO KAGAKU co.. LTD





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## Read me

This product is designed for training in medical education. Do not use it for other purposes.

Do not use the system in a way other than hereinafter prescribed. Manufacturer shall not be liable for damages or problems caused by noncompliance with the written instruction.

Read " Note in use" before use of model.

Handle the model carefully. Excessive force or physical impact may damage the product or result in problems.

If you have any questions, contact Kyoto Kagaku. (Contact address is printed on back cover)

## Features

- ① Physiko facilitates learning of the basic procedure for physical assessment comprehensively interfacing with PC.
- (2) Physiko facilitates practice for Pupil reflex, BP measurement(Right Arm), Pulsation (Carotid artery, Radical artery), Auscultation (Lung and Heart sound) and ECG.
- ③ Physiko provides many cases for each procedure, which facilitates learning of the features for each case.

## System Configuration

Physiko consists of following internal functions



## Terminal Box & Peripheral Device



% Specification and shape of devices are subject to change without notice.

## How to connect each device ①

Connect each device according to the following instruction and diagram.

- Connect the power cable of Terminal box to the outlet (AC 115V).
- Connect PC to Terminal box by USB cable.
- Connect the cable from Mannequin (96-pin terminal cable) to Terminal box.
- Connect the cable from the Sphygmomanometer to the Terminal box.
  - (Use the Sphygmomanometer provided in kit)
- Connect power cable from PC to outlet in Terminal box.

%It is possible to connect the cable "to ECG" to the Electrocardiographic Monitor you have. Pay attention not to make an impact on the PC or the Terminal box.

**%**Electrocardiographic monitor may not be able to connect to the Terminal box.



Back Side of Terminal Box



Connect each cable to suitable terminal carefully according to the figure of the back side of Terminal Box.

%Do not use the outlet in Terminal Box for another electric device since it is designed for the PC provided in kit.

Side of Terminal Box



Connect each cable to suitable terminal carefully according to the figure on side of Terminal Box.

Terminal side of PC



You may connect to any USB connectors of the Terminal side of PC.

%The layout of terminal is subject to change according to the model of PC. However the way of connection is not changed.

## ■Front side of Terminal Box



# How to use the software

Physical Assessment Model Physiko

[Start−Up PC ~ Top Menu]

## Start-Up PC

Turn on PC power button after finishing connection for devices.

 $(\mathbf{U})$  - This icon shows the main power button for PC.

The software is started up automatically when the power is turned on, and Top Menu is shown. If the message "The USB-BOX is not connected!" shows on the display, check the connection of each device.



## System Configuration



Each volume for Heart sound, Pupils light sensors and Microphone can be adjusted on this screen.

After adjusting each item, click the icon  $''{\rm Home}''$  on the right top corner on the screen.

Volume 🕄	Set
Volu	ume setting
	Heart sounds (P) Heart sounds (T) Heart sounds (M) Heart sounds (T) Heart sounds (M) Heart sound (M) Heart sound (M) Heart sound (M) Heart sou
Bowel sounds	Korotkov's sound  Microphone  Application  Non-application  Reset Save

The window on left can be opened by clicking the "Volume Set" icon. Adjust the volume suitably as you need.

- 1. Move the slider left to right to adjust each volume. The volume becomes higher by moving it to right. It becomes lower by moving it to left.
- 2. Click "Adopt" icon after setting each volume.
- 3. Click "Reset" icon to make the status before shipment.
- 4. Click "Cancel" icon to make the status before "Adopt".
- 5. Click "Using" to work the microphone.

## How to use software

## [System Confiruration]

#### How to adjust the pupils light sensors



Adjust the pupils light sensors according to the brightness in the room in order to make a normal pupils reflex.

Adjust the Sensitivity knob on the front of the terminal box in order to locate the indicator in the "Normal" range.



Sensitivity setting for contraction of the pupil

Normally the knob is set in a

counterclockwise status. If the pupils feels overreact to brightness, adjust the knob clockwise.

Pupils become insensitive to the light.



Sensitivity setting for dilation of the pupil Normally the knob is set in a counterclockwise status. If the pupils feels underreact to darkness, adjust the knob clockwise.

Pupils become sensitive to the darkness.

### If "!" logo is lighted, turn knobs again counterclockwise up to end and adjust them in order to locate the indicator in the "Normal" range.

#### How to adjust listening volume





Adjust listening volume to make the mouth move when microphone is used. Adjust the volume to light "Audible" sign when you speak into the microphone and "Inaudible" sign when you don't speak.

When turning knob counterclockwise, it becomes sensitive to even silent voice, and when turning clockwise, it becomes insensitive.

## How to use software

## [Patient mode (Preset) ]

Mode 1 (Patient cases)



Mode 1 provides twelve pre-set patient cases which can be chosen to learn. In this mode user cannot change patient data arbitrarily. Choose Mode 2 (Patient case editor) on Top menu when you create new patient and learn with that.



When you put cursor on the bar on left side of the screen, the data of its patient is shown on the right side of the screen. When you click the bar of the patient data, it changes to the screen for the physical assessment session. (It takes a little time to change screen.)



Regarding how to learn the patient cases, refer to page 16 to 20.

File Name

Name Florence

OL

Age 22

Height 168

Bood B

New case

Save

Execution

Continuous execution

dominal pain from thi

Sex Female

Weight 48

Body 35.8

## Creating patient case



**Physical Assessment** 

Click " N " on the left when creating patient case newly.

When you click 🕶 of each case, the pulldown selection is shown. Choose the item you like.

Regarding the blood pressure, click ▼ or ▲, or click the number you change and input by keyboard.

%You cannot input greater number to S4
than S5's.

How to input letter by keyboard (In the case of Japanese version of PC) Alphabet input mode is set usually. If it is not, switch to alphabet mode by following instruction.

Home

٠

٠

.

 $\overline{\mathbb{C}}$ 

Pupillary reflex

Pupillary dilation

Breath sounds

Heart sounds S3 gallop

S3 and S4 gallop Innocent murmur Aortic stenosis

Mitral regurgitation Mitral stenosis Aortic regurgitation

Sinus tachycardia Sinus bradycardia

Electrocardiography

Myocardial infarction

S4 gallop

Weak in the left lung



How to use software	[Patient cases editor]
How to use software How to save the file FileName       Date         Physical Taro       2006-03-01         hanako       2006-03-02         kyoto_kantaro       2006-03-02         FileName       Kanja01         Delete       Cancel       Saye	<pre>[Patient cases editor] When you save the created file, click "Save" icon. When the window is shown on the left, input filename to 1 by keyboard and click "Save" icon 2.</pre> **If you named existing filename, the dialogue is shown. You may change the filename to resave or overwrite.
Delete Cancel Save	



FileName PhysicalTaro	Date	04
hanako kyoto_kantaro	2006-03-0 2006-03-0 2006-03-0	02 02
Delete	Cancel	Open

When you delete created file, click "Save" or "Call data".

After the window is shown like the left, click the filename you delete like 1, and click "Delete" icon 2. Call data



When you open the saved file, click "Call data" bar. The window below is then shown.

FileName	Date
PhysicalTaro	2006-03-01
hanako kyoto_kantaro (1)	2006-03-02 2006-03-02
Delete (	ancel 2 Open

Click the filename you choose in the window opened 1 . Next click "Open" icon to open the file you chose 2 . If there is unsaved file, the window below will be shown.

File i Do you	-	 	out say	ving
Click				
	Yes	Ľ.	No	1

Click "Yes" if you don't save the file, and open another one. Click "No" if you save the file. Next, open the another one.

**%**Regarding how to save the file, refer to page 12.

13

## Execution

Click the "Execution" bar on the left, when you execute "Created file" or "Opened file". If you execute "Unsaved file", the window below will be shown.

File i Do voi		-		out	saving
Click					
	Yes		Ľ	No	

Click "Yes" if you don't save the file, and execute another one. Click "No" if you save the file, and click "Execution" after saving the file.

### Continuous execution ①



When you execute files continuously, click "Continuous execution" bar.

When you execute this mode, it is required that more than two files are saved. You can execute up to three files continuously.

### ■Choice of file to execute

FileName	Date 2006-03-01	
Physical Taro hanako kyoto_kantaro 1	2006-03-02 2006-03-02 2006-03-02	
Continuous execution pattern 1 Physical Taro	Selection         Release ↑           1         1           2         ▼Downerd	1
Execution time	Cancel Execution	1

Click the file to execute on the window opened 1. Next click "Choice" icon to transfer the file to "Continuous execution pattern" box 2. Repeat task 1 2 to choose up to three files.

### ■Choice of the executing time

FileName	Date	
PhysicalTaro	2006-03-01	
nanako	2006-03-02	
kyoto_kantaro	2006-03-02	
Continuous	Select J Belesse #	
execution pattern	Select V Release	
execution pattern 1 Physical Taro	1 min	Lupward
execution pattern 1 Physical Taro 2 hanako	<u>1 min</u> 1 min	
execution pattern 1 Physical Taro	1 min	Upward
execution pattern           1         Physical Taro           2         hanako           3         kyoto_kantaro	<u>1 min</u> 1 min	
execution pattern           1         Physical Taro           2         hanako           3         kyoto_kantaro	1 min 1 min 1 min	<b>V</b> Downward
execution pattern          1       PhysicalTaro         2       hanako         3       kyoto_kantaro         Execution time       1         1       1         1       1         1       1         2       hanako         3       kyoto_kantaro	1 min 1 min 1 min	
execution pattern          1       PhysicalTaro         2       hanako         3       kyoto_kantaro         Execution time       1min	1 min 1 min 1 min	<b>V</b> Downward
execution pattern          1       Physical Taro         2       hanako         3       kyoto_kantaro         Execution time       1         1min       1	1 min 1 min 1 min	<b>V</b> Downward
execution pattern          1       PhysicalTaro         2       hanako         3       kyoto_kantaro         Execution time       1min	1 min 1 min 1 min	<b>V</b> Downward
execution pattern          1       Physical Taro         2       hanako         3       kyoto_kantaro         Execution time       1         1min       1	1 min 1 min 1 min	<b>V</b> Downward

Choose the executing time according to following order. Click the file in "Continuous execution pattern" box you choose the executing time for ③. Next you click "Executing time"④, and choose one from five options of "executing time" you need in pull-down menu. Repeat task ③ ④ to choose proper "Executing time" for every file you chose.

% If you don't choose "Executing time" for a file, it will be one minute automatically. [Patient cases editor]

## Continuous execution 2

■Changing the order of files to execute

FileName	Date
PhysicalTaro	2006-03-01
hanako	2006-03-02
kyoto_kantaro	2006-03-02
連続実行パターン	選択↓ 解除↑
1 PhysicalTaro	1分 ▲上介
2 kyoto_kantaro	55
3 hanako	
実行時間	(5)
5分 7	キャンセル 実行

Click the file for which you change the order to execute 5. Next, you change the order of files by clicking "Up" or "Down" 6.

## ■Unlocking the chosen file

FileName	Date
PhysicalTaro	2006-03-01
hanako	2006-03-02
kyoto_kantaro	2006-03-02
Continuouo	
Continuous execution pattern	Select 4 Release 4 8
augention nottorn	
augention nottorn	
execution pattern           1         kyoto_kantare	
execution pattern           1         kyoto_kantaro           2         PhysicalTaro           3         hanako	o 5 min ▲Upward
execution pattern           1         kyoto_kantare           2         PhysicalTare	5 min AUpward

Click the file to unlock the choice 7. Next when you click "Unlock", the file is unlocked from the choice (8).

## Execution

FileName PhysicalTaro hanako kyoto_kantaro	Date 2006-03-01 2006-03-02 2006-03-02	Click "Execution" after finishing configuration (9).
Continuous execution pattern <b>1 kyoto kantaro</b> <b>2 Physical Taro</b> <b>3 hanako</b> Execution time <b>5 min</b>	Select ↓ Release ↓ 5 min 1 min 1 min Cancel Exection 9	*It takes a time for this system to transfer the data to the terminal box from PC when you choose next file in the continuous execution.

## How to use software [Patient cases]

### Learning course

When you go into Learning course, the screen below is shown first. Choose skill you would like to learn and click it.



### Basic operation for learning course ①

There are "The patient overview" and "Details of the findings" screens in each learning course. You can switch the screen by clicking the icon on top-left in the screen.



## [Patient cases]

## Basic operation for learning course 2



There is "Interpretation of findings" icon on bottom-right in each "Details of findings" screen. You can check what finding is by pressing this icon. The example screen is for Pupil reflex. The figure of icon is

The example screen is for Pupil reflex. The figure of icon is different in each skill.





There is "Case explanation" icon on bottom-right in each "Details of the findings" screen. You can check what case is by pressing this icon. (It is blank in "Patient case editor".)



#### How to use software [Patient cases] Basic Operation in learning course ③ You can adjust volume by click by "Volume Setting" icon in some cases. Volume setting $\rightarrow$ P.8 Refer to Volume setting Wukume setting Menu Home Pupillary reflex Blood pr Heart a To the patient overview Pulse wave pattern S5 S4 ())) Volume setting CAP - mmHg/SEC . pressurization The cuff Laft posterior low ang leid Laft anterior loss lgit antener in keng field Microphone C Application F Non-application -0 - 55 Canoel Reset Savo II IV END L\_L I Y Remeasurem CAP : Carotid arterial pulse

## ■Operation in ECG learning



Electrode Status "Indicate"



You can choose "Indicate" or "Hide" in Electrode status on ECG detail screen.



In ECG pasient screen, you can choose ECG wave by clicking ECG display surrounded in ..... line on left figure.

## [Patient cases]

#### Basic operation in learning course ④

How to use speaker in PC.



EX. In Heart sound, the cursor will be changed in the areas surround by red line.

**%**If the quality of sound from PC speaker is not good enough, we recommend you use the external speaker with built-in amplifier.

How to auscultate posterior in Lung sound mode

You can change to anterior or posterior by clicking the icon encircled by red dash line.





## [Patient cases]

Basic operation for learning course (5)

#### ■Notes in Blood pressure measurement



During cuff application for BP measurement, if "The cuff is not appropriately applied" message appears (see left), refer to the diagram below to insure that it is correctly done.



%Measure BP on the right arm. Don't do on the left.

## [Skills Training]

### Basic operation for Skills training



When you put the cursor on the skills bars of the left side, the corresponding picture for skill will appear. When you click the skills bar you will go to each skill's trainig section.

## ■Choice of case



There is "Select findings" icon on the top of the screen except "Blood pressure case".

When you click this icon, the pulldown cases appear. Choose a case to practice.

#### Setting for Blood pressure



You can set the value of S1,S2,S5 in Blood Pressure Measurement.

When you click "BP measurement" icon under the screen, Dialogue is shown and you can set each value by clicking and and icon beside numbers.



[How to quit]

How to quit software



Click "Home" icon on top-right in each screen to go to Top Menu. Next when you click "Quit" on bottom-right, the window below is shown. Click "Yes" to quit. The program ends and PC shut down automatically.

Do you want to o	quit Physiko?
Yes	No



## Preparation

## Pulse Strength Adjustment

Strength of carotid and radial arteries is controllable.

• Take off the cover pad located at the lower right waist of manikin.



• Adjust the pulse by turning knob clockwise or counter-clockwise.



Turn clockwise to raise pulse strength and turn counter-clockwise to lower pulse strength. Turning the knob fully left will make the pulse barely palpable.

 Strong pulse may result in louder device noise and interrupt auscultation.
 When it occurs, lower the pulse while listening.

As a safety measure, Physiko will automatically enter cooling mode when used with strong pulse for a prolonged period of time. When this happens, it is advised to switch off power, or weaken the pulse setting to cool the device.

Recommend setting of the pulse strength is marked as shown in above photo.



# Q

The message "Please confirm the connection with the device" has appeared.

# A

Please confirm it since there are the following possibilities. 1. Terminal BOX is not connected to a PC with a USB cable.

- I. TERMINAL DOA IS NOT CONNECTED TO A PC WITH A USD CADLE
- 2. The power (AC 115V) is not supplied to Terminal BOX.
- %The message doesn't disappear even if the state of 1 and 2 is solved. Click "OK" to delete the message when a correct connection is completed.

## Q

The message "It is within  $\bigcirc\bigcirc$  minutes to run out of battery" has appeared on the screen.

## <u>A</u>

PC is driven by battery without connecting to the power(115V). Connect PC power cable to outlet of Terminal Box.

The outlet of Terminal Box is for attached PC. Don't use it for others.

## Q

The screen was changed to OS mode, or the application program was frozen.

# A

PC needs to be restarted. [The screen was changed to OS mode] Click "Menu (A)" icon at the bottom of screen. Choose "Restart PC" bar on the opened menu and click "OK".

[The application program was frozen]
Press "Ctrl" key + "Alt" key + "Back space" key at a time.
If the screen was changed to OS mode, restart PC according to
above [The screen was changed to OS mode].



A

If you pressed "Ctrl" + "Alt" + "Back space" keys together but the screen did not change to OS mode, press the power switch for more than five seconds after confirming PC was silent. \*1 Pressing for more than five seconds makes PC shut down. Press the power switch again to start PC.

**※ 1** 

As the hard disk is working while PC is making small sound, wait for PC to be silent and press the power switch.

Caution! <u>Don't shut down the PC in this manner on a regular basis</u> or it may possibly break. This is the only way to shut down the PC when the application software is frozen abnormally.



ECG sensor is malfunctioning.



When Mannequin is stored under 50 degree F, ECG sensor might malfunction occasionally.

In this case, keep Mannequin at over 50 degree F for awhile and operate the system after it returns to room temperature.

## **DOs and DON'Ts**

## ⚠ DOs and DON'Ts

## DOs

#### Operate the system under the designated circumstances

Power input: AC100V $\sim$ 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

Handle the model carefully, like an actual patient. Excessive force or impact may damage the product or result in problems.

The materials for the models are special compositions of soft resin. Please handle them with utmost care at all times. For cleaning, wipe the model with water or soap water. If stain persists, wipe with alcohol and place talcum powder on the breast skin after dried.

#### 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 solvant

## 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.

When you use this model continually for a long time, it might malfunction occasionally due to heat in some circumstance. In this case, shut down the model for about 30 minutes and restart.

#### 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.

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.



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