# EmerSim (Emergency care training system by Simulated vital sign monitor) Application - User Manual (1 / 7)

# 1. Top Page

① EmerSim (Emergency care training system by Simulated vital sign monitor) is a training system with a vital monitor simulator. Below is a picture showing [EmerSim] application top page and menu settings.



\* Displaying vital values are listed below:

HR(Heart Rate), SpO2(Peripheral Oxygen Saturation), BP(Blood Pressure), RESP(Respiratory Rate)

\* Caution: To use [EmerSim] application, Wi-Fi® setup is required. Refer to "EmerSim - Quick Start Guide" for Wi-Fi® setup procedure.

# 2. Network display



Displaying currently connected network name.

# 3. Sound on/off

Press speaker icon to turn sound on or off. Sound enabled example:



Sound disabled example:



### 4. Monitor

## ■ 4-1. Displaying vital values

By pressing "Monitor" button on application Top Page, vital values will be displayed on the monitor screen.



<u>5-1. Scenario</u>
1) From Scenario I select Scenario to
EmerSim (Emergency care trainin × +
Sample scenario
【シナリオ1-1】羊水
【シナリオ1-2】肺೨
【シナリオ2-1】子宮
【シナリオ2-2】 子宮
【シナリオ3-1】 抗生
【シナリオ3-2】脳出
(* above is
2) Press "Control

### **5.** Controller Select

### List on Application Top Page, display on the Monitor.



# an image of example scenario list)

### ller" button.





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1) On top-right of the page, press "SCENES" button to display scenes list.

On the list, scenario description and vital values for each scene will be

0

SCENES

16

CLOSE O

### 3) Operational screen for the Monitor will be displayed.



displayed.

**120/60** (80)

98

## **5-3.** Operating vital values

Vital values are operated by a slider, numeric keypad and "+/-" buttons.

■ <u>5-3-1. Operating with slider</u>





**120/60** (80) **\*** 





HR



By moving slider to the left, vital value will decrease,

by moving slider to the right, vital value will increase.

### ■ <u>5-3-2.</u> <u>Operating with numeric keypad</u>

rmal							
1	2	3	Back				
4	5	6	Clear				
7	8	9	Cancel				
0 - ок							

By pressing on a vital value number, numeric key will be displayed.

After inputting value, press "OK" to update the vital value.

### 5-3-3. Operating with "+ / -" buttons



By pressing "+" button, vital value

will increase. By pressing "-" button, vital value will decrease.



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#### 5-4. Operating Waveform

1) Refer to picture below and press around the area to change waveform.

(Example image on PC)



#### (Example image for smartphone)



2) Waveform list will be shown. Select waveform from the displayed list.

## (Example image for PC)



(Example image for smartphone)



# 6) Asystole 7) Atrial fibrillation 8) Atrial flutter 9) Junctional 12) ST elevation 14) Torsades de pointes

Available	
1) Normal	

2) Poor perfusion



### Available waveforms for Heart Rate

1) Normal - NSR (Normal Sinus Rhythm) 2) 1°block (First-degree atrioventricular block) 3) 2°block (Mobitz I) (Second-degree atrioventricular block) 4) 2°block (Mobitz II) (Second-degree atrioventricular block) 5) 3°block (Third-degree atrioventricular block)

10) LBBB (Left bundle branch block) 11) RBBB (Right bundle branch block) 13) SVT (Supraventricular Tachycardia) 15) VF (Ventricular fibrillation)

16) VT (Ventricular tachycardia)

waveforms for SpO2

3) The waveform will be changed. (Example : from Normal-NSR to VF)





# EmerSim (Emergency ca

**5-5.** Switching to shown or hidden.

# In monitor's initial state all items are hidden.

1) Select an item to be shown on monitor. In picture below "HR" display status is being switched.



2) By switching to show state, value and waveform will be displayed on the monitor screen.

By switching to hide state, value and waveform will be hidden on the monitor screen.



<b>5. Returning to Top Page</b> return to Top Page from Controller screen, press on "Back".	<ol> <li>Input "Scenario Name", "Description" and press "SAVE". As Scenario saves, "Insert Completed" will be displayed.</li> </ol>
RCorr Social Correction of the second of th	Image: Second State St
Scenario and Scene settings	
A Construction of the program of the	Press       •• "+" in Scene column.         Image: Scenario Sce
the second	Scenario     Scenario       1. F     Sample scenario       Scenario     Scenario



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# ■ <u>6-2. Editing/Removing Scenarios and Scenes.</u>

1) Select an item from Scenario or Scene column and press 🕗 "Edit" button.

ErnerSim (Emergency care trainin X +				-	0	×
← → C ① 保護されていない通信   192.168.3.37.8	080/#1		\$	<b>0</b>	Θ	1
< Back	Network Name [qtrain8001]					
Scenario	Scene	Attribute				
1. 📻 Sample scenario	1. Beginning	Description: some sentence				
	2. Emergency	HR : 90 (Normal)				
		SpO2 : 97 (Normal)				
		BP : 130/90				
		RESP : 20				
By drag&drop = icon, Scenarios order can be changed.	•	•				
			T		F	

#### 2) Scenario or Scene editing screen will be displayed.

EmerSim (Emergency care trainin: × +							-	0	×
← → C ① 保護されていない通信   192.168.	3.37:8080/#!					☆	🥶 🗈	Θ	1
< Back	N	letwork Name [qtrain8	001] 🕢						
Scenario	<b>C</b>		-						
1. 📻 Sample scenario	Scene Name Beginning	Sce	ne Settings	l	sentence				
	Description some sentence				(Normal)				
					(Normal)				
	HR 90	Sp02 97	80 130/90	RESP 20	/90				
	Normal - NSR	<ul> <li>Normal</li> </ul>							
_	CANCEL				SAVE				
By draglidrop * Icon, Scenarios order can be changed.									
						Ţ		D	

3) To edit, input "Scene Name", "Description", each Vital value and press "save". As Scenario or Scene updates, "Update Complete" will be displayed. 4) To remove, press on 🚺 "Remove" button.

# [Troubleshooting]

Can't press 🔲 "Remove" button. When Scenario includes Scenes, it's unremovable. Remove all included Scenes in the Scenario to remove it.

#### Scenario Settings

\* To delete scenario, all included scenes must be deleted first

# **7. Editing Common Settings**

#### 7-1. Changing color of vital items and waveform.

1) On application Top Page, press on "Settings" -> "Common Settings"



2) Press on "Font Color" for target Vital item. In the example below, RESP font color is changed from white to red.

Measurment Item	Notation	Font Color	Alert Settings	
1 Pland Processo	PD	yellow 🔻	Upper Limit18	0 Slinking Alert
1. DIUUU FIESSUIË	DF		Lower Limit4	Alarm Sound Alarm 1
2. Usert Bata	ЧР	green •	Upper Limit15	0 III Blinking Alert
2. Heart Nate			Lower Limit3	Alarm Sound Alarm 1
	C= 02	blue •	Upper Limit	Blinking Alert
<ol> <li>Peripheral Oxygen Saturation</li> </ol>	Sp02		Lower Limit 9	Alarm Sound Alarm 1
			Upper Limit 4	0 Slinking Alert
<ol> <li>Respiratory Rate</li> </ol>	RESP	white	Lower Limit 1	Alarm Sound Alarm 1

3) Select color from the list (as "red" in the example) and press "SAVE" button. "Update Complete" will be displayed.



and Controller scre
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вр 120/60 (80)
[before update]

7	<u>-2. Setting</u>	\
1)	In Common	Se
	Update Blink	u
	[Vital Sign Settings]	
	Measurment Item	
	1. 血圧	E
	2. 心拍数	ŀ
	3. 動脈血酸素飽和度	0)
	4.呼吸数	F
	Alert Settin	a

Alert Setting
Upper Limit
Lower Limit

2) Press "SAVE" button to complete update.

4) Vital value font color and/or waveform color will be updated on Monitor screens.



[after update]

# Vitals Alarm (blink / warning sound)

ettings screen, edit "Alert Settings" values for specific vital. upper/lower limit and check checkbox to enable it.

Notation	Font Color		Alert Settin	as			
	vellow		Upper Limit	180	<ul> <li>Blinking</li> </ul>	Alert	
3P			Lower Limit	40	Alarm Sound	Alarm 1	<u> </u>
ID	green		Upper Limit	150	Blinking	Alert	
IR			Lower Limit	30	Alarm Sound	Alarm 1	•
<b>`~</b> O3	blue		Upper Limit		Blinking	Alert	
φΟΖ			Lower Limit	94	Alarm Sound	Alarm 1	•
DESD	white	•	Upper Limit	40	Blinking	Alert	
(ESP			Lower Limit	11	Alarm Sound	Alarm 1	-
_							
5							
			•				
	180	$\checkmark$	Blinkir	na Alert			
	40	Aları	n Sound	d Alarm 1			٠

Without settings upper limit, even by checking blink, it won't work upon reaching the limit. Same with lower limit. Without checking Blink checkbox, values won't blink upon reaching set upper/lower limit.



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3) Upon reaching lower or upper limit in Monitor or Controller screen, target Vital value will blink.



7-3. Showing/hiding logo on Monitor screen 

Logo is displayed on Monitor screen by default

1) In "Common Settings", find "Monitor Screen Logo" [Other Settings] and press on select arrow. In the example below, Logo is being switched off.





7-4. Switching	g screen output (	(HDMI)	) settings

1) On application's Top Page, press on "Settings" -> "Screen Output Settings"



2) It's possible to change HDMI display settings for [EmerSim] device depending on TV/PC monitor. Select connecting screen type ("Connect to TV") or ("Connect to PC monitor"), and select according "Resolution, Refresh Rate".

#### \* Check your display manual for "resolution" and "refresh rate".

Resolution         Refresh Rate (frequency)           1. 640x350         85Hz           2. 640x400         85Hz
1. 640x350 85Hz 2. 640x400 85Hz
2. 640x400 85Hz
3. 720x400 85Hz
4. 640x480 60Hz
5. 640x480 72Hz
6. 640x480 75Hz
7. 640x480 85Hz
8. 800x600 56Hz

3) In the example below, "PC monitor connect" is selected with "Resolution, Refresh Rate" of [20. 1024×768 120Hz].



	Confirmation To apply settings, the d reconnect to the device
5)	[EmerSim] devid below. Refer to smartphone] for
	Output settings of the device can be ch

Disconnected f	rom [qtrain8	001]. Checl	k Wi-Fi conne
$\overline{\ }$			
		Vet	:wo
	Diso	<b>Net</b>	<b>WO</b> necte
	<b>I</b> Disc to t	Net conr	<b>:WO</b> necte levic

6) As Wi-Fi® connects, Top Page will be displayed with set resolution and refresh rate".



4) After selecting "Resolution, Refresh Rate" press "APPLY SETTINGS" button. A confirm message saying ["To apply settings, the device will be restarted. During restart Wi-Fi connection will be lost. Please reconnect to the device after restart is complete. "] will be displayed. Press "OK" button.

device will be restarted. During restart Wi-Fi connection wi e after restart is complete.	ll be lost. Plea:	se
	ОК	CANCEL

ce reboots and Wi-Fi connection will be lost as on example "EmerSim - Quick Start Guide" [3-2. Preparing your PC, r Wi-Fi® setup procedure.



ed from [gtrain8001]. Check Wi-Fi connection ce and ensure the cable is properly plugged in.



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### 8. Optional Functions

- 8-1. Simulation Sound On/Off/Mute
- 1) Along with monitor sound, there are playable simulation sounds. By pressing on "Bell Icon" on the top, playlist will be displayed.



2) In the example below, "phone" simulation sound is being played.

Stop Alert Sound		Stop Alert Sound
Stop Sound Effect		Stop Sound Effect
Alert(emergency) 🜔		Alert(emergency)
Alert(normal) 🜔		Alert(normal)
Ambulance 🜔		Ambulance
Newborn crying 🜔		Newborn crying
Nurse call 🜔		Nurse call
Phone •	>	Phone

- 3) To stop simulation sound, press **u** "Stop" button.
- 4) To mute simulation sound, press 💦 "Mute" button.

### 8-2. Stopwatch function

- 1) Press "Start" to begin displaying elapsed time.
- 2) Press "Stop" to stop displaying elapsed time.
- 3) Press "Reset" to reset elapsed time.



# 9. Troubleshooting Please check content below for troubleshooting. agreement. ■ 9-1. [EmerSim] device is not working. Is the device turned on? Refer to "EmerSim - Quick Start Guide" [3-1. Preparing [EmerSim] device] and check if device LED is red. Is the device overheated? [EmerSim] device might not function properly under high temperatures. Unplug the device and let it cool down before turning it on again. Do not place the device near heat generating sources or in direct sun. Is Wi-Fi® connected? Refer to "9-2. Wi-Fi® Connection Issues". ■ 9-2. Wi-Fi® Connection Issues Is Wi-Fi® signal strong enough? Being away from the [EmerSim] device or having wall in between might cause connection issues. Try connecting while being closer to the device. Is Wi-Fi<sup>®</sup> setup complete? Refer to "EmerSim - Quick Start Guide" [3-2. Preparing your PC, smartphone] and verify settings. 9-3. Vital items / waveforms are not displayed on the monitor In Controller set each vital item display setting to "ON". Each vital item has a monitor icon. Please click on the icon to switch between show and hide mode. By default, vital items are hidden on the monitor. Please set each vitals visibility according to the training procedure. Refer to "5-5. Switching between show and hide state." ■ 9-4. Sound is not working Does connected display support speakers? Check if speakers function properly. Set sound to On. Refer to "3. Sound on/off" Inquiries ■ <u>9-5. HDMI output is not working</u> Developer/Distributor PENGUIN SYSTEM Is device resolution and refresh rate set according to connected TV or PC monitor?

Refer to "7-4. Switching screen output (HDMI) settings"

[6. Usage Precautions] [7. Radio Wave Precautions] [8. Power Source Precautions] [9. Main Specifications] [10. Warranty Period]

Upon usage, user accepts agreement to above mentioned.

"Seller warrants to Buyer that the Product will materially conform to the specifications set forth in Exhibit.

EXCEPT FOR THE WARRANTY SET FORTH ABOVE, SELLER MAKES NO WARRANTY WHATSOEVER WITH RESPECT TO THE PRODUCT, INCLUDING ANY (A) WARRANTY OF MERCHANTABILITY; OR (B) WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; WHETHER ARISING BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE."



# 10. Usage Precautions and Warranty Period

Please read articles below in "EmerSim - Quick Start Guide" and accept usage



+81-29-893-2275 Phone Number https://www.penguins.co.jp/er URL E-mail qtr@penguins.co.jp



publication number: Ver.1.0.5-r4

