

DIGITAL EGG INCUBATOR

MARU DELUXE PRO 100 / 200 (Slide Type)





Contents

* Read the manual completely before use.

MARU

How to use Rcom MARU DELUXE PRO 100 / 200

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Successful hatching depends on many numbers of factors. Neither Autoelex (Rcom) nor its global distributors and vendors can be held responsible for loss of life or property damage caused by user neglect, alteration, modification or painting, change of use or power failure. To avoid errors, mishaps and danger, carefully check this User Manual before initial use. Also please check the manual regularly to ensure your operation of the machine is correct.

_			Mark	Explana	tion	_	
	Caution : Caution mark against a fault that can cause damage, trouble, or failure of incubation.						
		\bigcirc	Prohibited.	•	It is necessary to keep.		
	🛞 Do not disassemble. 🛛 😨 Remove the power cord from outlet.						
	16	®	Do not touch.		Ground Connection for preventing electric shock.		
	(Ip	Tip: References c	or useful suggestions in	using Ro	om product		
	AC/	AUTION Warning	g of actions which may	be dange	rous or cause damage to the incubator.		

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1. Introduction

(1) Rcom MARU Introduction

Rcom MARU

Firstly, we sincerely thank you for purchasing Rcom MARU incubators.

It has been designed to analyze airflow using built in digital technology to maintain an optimal environment within the incubator cabinet. The incubation parameters are controlled using purpose built control systems coupled with high end sensors, all in order to permit optimum results. However, best results occur when the user, couples personal knowledge of the machine and of incubation and hatching along with observation skills with the Maru Incubators sensing, automation and control systems. The machine needs your help, good breeding flock, healthy flock diet, fertile eggs, reasonable incubation room environment and a 'clean' power supply in order to provide excellent results. User's knowledge of the machine and manage the incubator are very important. Certainly, the Maru provides an optimal incubation environment, but parameters need to be managed, i.e. temperature and humidity depends on egg species, environment, and capacity. Moreover, the Rcom MARU has been carefully designed to provide an optimal setting and or hatching environment, therefore, before using the incubator, we strongly recommend that you read the manual carefully.

Features of Rcom MARU

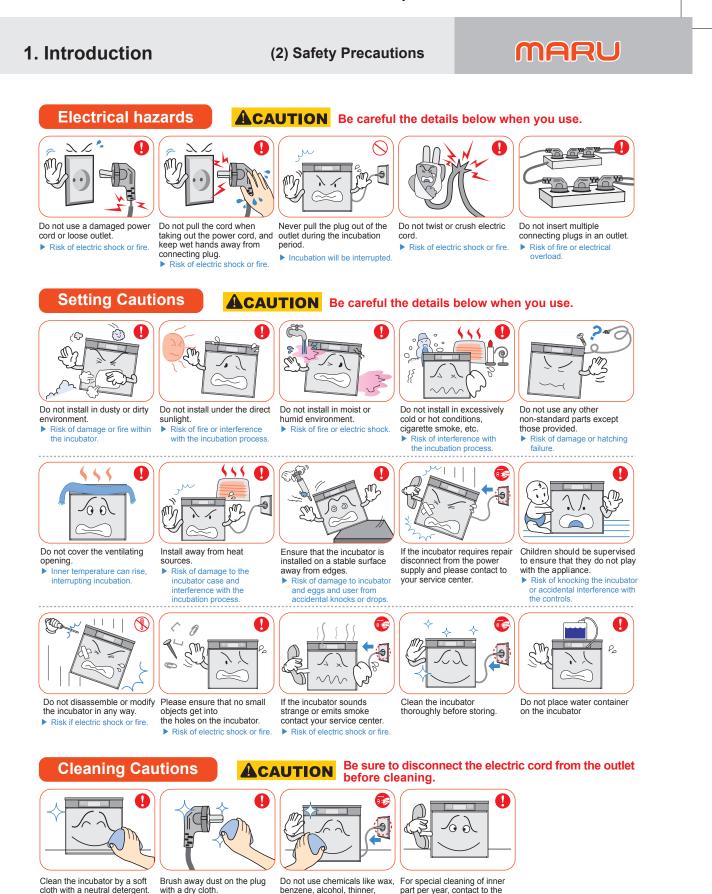
[Main Function]

- * Convenient jog dial operation for optimized user interface
- * LCD display with incubation information, and animation graphic design
- * Micro chip with optimum incubation conditions according to the species of birds, for incubation beginners
- * Manual setting Mode for incubation specialists
- * Superior design with convenient operation
- * Integrated simple control panel (superior maintenance)
- * Automatic temperature & humidity control and set function
- * Automatic egg turning & turning interval set function (1h, 2h, 3h)
- * LCD display for easy recognition of incubation state
- * Artificial intelligence electronic control system by Rcom technology
- * Precise temperature and humidity sensor produced by Sensirion, Swiss (ver. 3rd Generation of Sensirion, Swiss)
- * Transparent double insulated viewing window
- * Sliding vent to in the chamber
- * Dependable temperature by Rcom optimum air flow technology
- * Innovative PTC Heating Type humidifier eliminates bacteria from humidity reservoir
- * Built-in water level sensing switch automatically detect the water level inside the humidifier and alarm water refill is required
- * Increased temperature stability and energy efficiency due to high-density insulated body developed by Rcom
- * Built-in 'open door' micro-switch detection
- * Option to select ON/OFF function each of eggs on the universal tray

[Useful Function]

- * Degree C / degree F interchangeable
- * Self-examination function for sensing abnormal conditions
- * Separate humidifier not required due to built-in humidifier unit within the device
- * Warning & display function of abnormal temperature caused by ambient temperature fluctuation
- * Incubation data memory and alarm function in case of blackout
- * Equipped with water nipple in front for efficient water supply
- * Equipped with removable upper cover for convenience of cleaning or maintenance after incubation
- * Built in LED dome-light for ease of viewing when door is open
- * Universal tray sliding device for uniform egg incubation
- * Automatic egg rotation at any angle carried out by tray carrier filler
- * Adjustable universal tray and aluminum dividers suitable for most egg sizes

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part per year, contact to the service center.
If you don't clean the inside of incubator for a long time, dust can cause some trouble or a fire.

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aromatic, or lubricant, etc.





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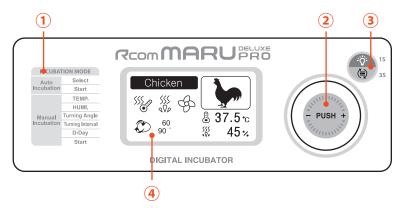
1. Introduction

(4) Name & Function of Operation Parts

MARU

Name & Function of Operation Parts

Rcom MARU DELUXE PRO 100 / 200



- Names and components of each part
- 1 Function Table

2 Jog Dial

- : Function can be selected in order by using the jog dial : Press and turn around to left and right
- Function setting mode will appear when pressed for 3 seconds
 - Temp. and humidity can be checked when pressed for 1 second

③ Room Light Button (1 second) /

Forced egg turning button (3 seconds) - The incubator turns eggs 1 time for artificial incubation.

④ **On screen** : Incubation conditions are displayed.

ICON		NAME AND FUNCTION	ICON		NAME AND FUNCTION
a a b c a b		**Choose a bird** * Chicken (1 * Duck (2) * Quail (3) * Pheasant (4) * Peacock (5) * Goose (6) * wildgoose (7) * G-Pheasant (8) * Turkey (9) * Other Birds (10)			Egg Turning Indication Manual Egg Turning Stop Indication Automatic Egg Turning Stop Indication Incubation Termination
Chicken		Species of Birds	¢		FAN Operation Display
∄ 37.5 ∙c	*	Current Temperature Display / Temperature Abnormal Display	() i i	555 <u>.</u> ??	Heater Stop Display / Heater Operation Display
<i>₩</i> 45%	OFF	Current Humidity Display / Humidification function OFF	980	555 QV2	Humidification Stop Display / Humidification Operation Display
60	90 °	Egg Turning Interval Indication _(minute) / Egg Turning Angle Indication	٥	\bigotimes	Water Supplement / Humidity Abnormal
		Alerting function when the door is open	Ę	$\mathbf{\hat{P}}$	Power Failure Notification

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MARU	:	2. Before use (5) De	scription of optional functions
Description o	f optional fu	nctions	
T.CAL (Temperature Calibration)		Fatal Damage	AUTIONS. We do no recommend alibrate by their own. If you need to e ask purchase place.
H.CAL (Humidity Calibration)	()\$	Fatal Damage	AUTIONS. We do no recommend alibrate by their own. If you need to e ask purchase place.
ALARM (Abnomal High Alarm)	High Temp	Alarm sounds when incubator temp. is temp. change or heating system disord * Setting Range : 0.0°C ~ 5.0°C (Defaul	
ALARM (Abnomal low Alarm)	Low Temp	Alarm sounds when incubator temp. is because of room temp. change or heat * Setting Range : 0.0°C ~ -5.0°C (Defau	ing system disorder
Unit	°Ę ▶₽	Selecting Centigrade (°C) and Fahrenh * Default Value : Centigrade (°C)	eit (°F)
Light		LCD Backlight management setting * Always On : Always BackLight On * Event On : 20 Sec. ON with Key inp	* Always Off : Always BackLight Off * Default Value : Always On
Sound	() }.).	ON/OFF Setting for Melody, other alarn * Default Value : ON	ns
ALL RESET Factory setting)	ALL	It returns to factory setting when you ch	nange the initial setting at discretion.
Info	(i)	Basic information of Incubator (versoin	Indication)

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2. Before use

(1) What is an Incubation Room? (2) How to install this Incubator / Preparing for Incubation

MARU

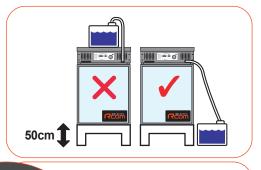
What is an Incubation Room?

The Incubation Room is a confined space for setting and operating an incubator efficiently. An Incubation Room environment has a considerable effect on hatch rate. Controlling the incubator environment is recommended; there should be little noise or vibration and constant temperature ranging upwards from 28°C(82.4°F) with small variation in temperature. For optimum performance, pay attention that your incubator isn't exposed to temperature drops compared with daytime. Do not directly exposed the incubator to sunlight during daytime. also, please incubator where direct wind from air-conditioner not to reach.

If you set a high temperature, condensation will occur and may causes water to leak from the incubator and it which is not a technical problem. You need to keep temperature between $28^{\circ}C$ ($82.4^{\circ}F$).

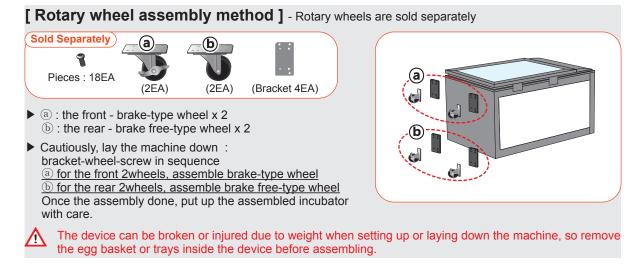
How to Install this Incubator

- Please set the incubator horizontally on a stable, tallish table (50[cm] or above)
- Ensure the incubator is completely level, so the door can close completely.
- Connect silicon tubing onto the nipple of incubator, and the other end of silicon tubing into a water container.
- Do not place water container on top of the incubator. It may flood the humidity unit.
- ✓ Using tap water or underground water instead of distilled water in this unit's humidification device will cause serious debris (scale) to develop. In this case, the inconvenience of frequent cleaning will occur and when left alone, may become the cause of malfunction or breakage. If you have any questions regarding such problems, <u>please contact</u> the place of purchase and failure of the device.



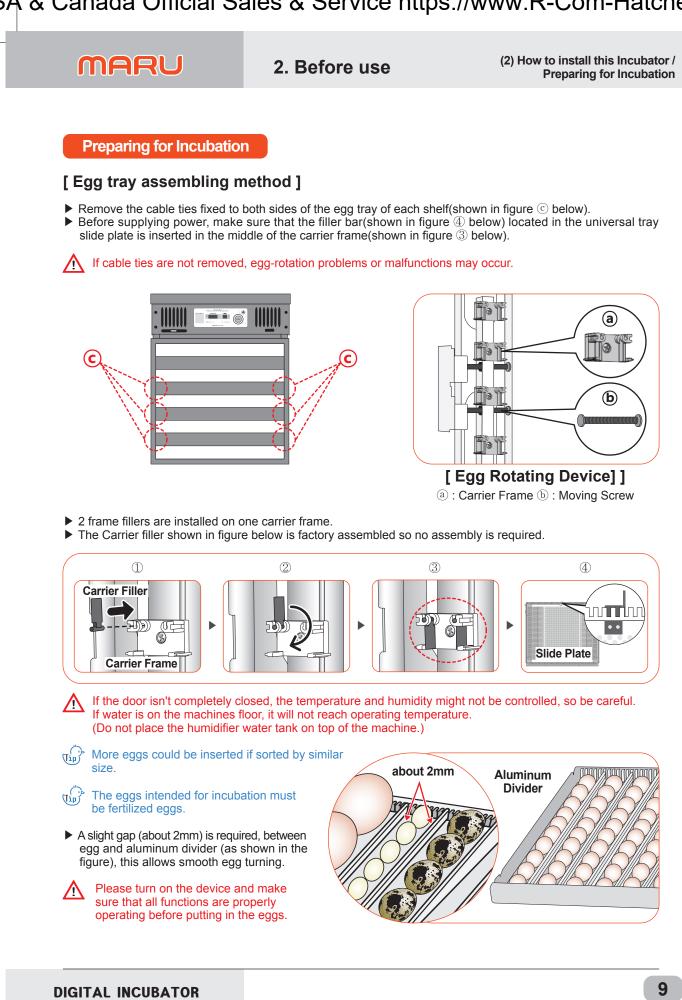
due to the consumer negligence (due to non-cleaning), even if it occurred with in the free A/S period, repair charges might occur when repairing , so use of distilled water is highly recommended.

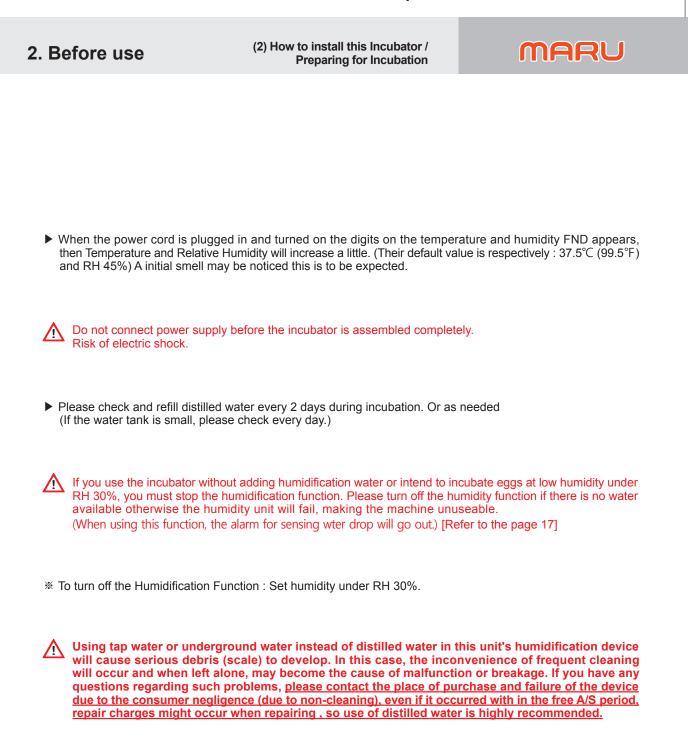
WATER IN



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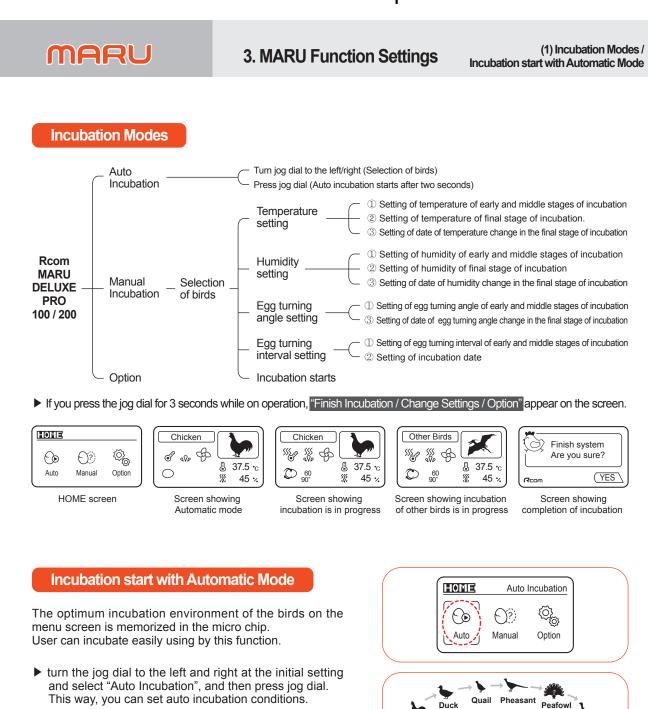




y You can buy the 'Distilled water' in your local market, and if you have any question, please contact the shop, where you purchased your machine.

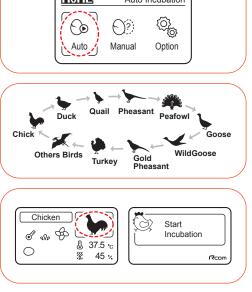
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If you turn the jog dial to the left and right to select the type of birds and press the dial for a moment, the message "Start system Are you sure?" comes up. Select "YES" by turning the jog dial to start auto incubation, or select "NO" to go back to the previous page. Or, select "Home" to go back to the main page.

When choosing the type of birds, press the jog dial for 2 seconds to skip "YES/NO" and start auto incubation.



(ip) In auto incubation, user only needs to select type of birds as incubation environments such as optimum temperature, humidity, egg turning, etc. are automatically controlled. User can change incubation environments if needed.

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3. MARU Function Settings

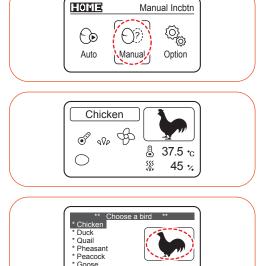
(2) Incubation start with Manual Mode

MARU

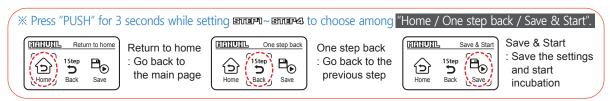
Incubation start with Manual Mode

This mode helps users to set temp. humidity, and egg turn ing etc. according to their needs. This mode is ideal for those persons who are experienced in incubation.

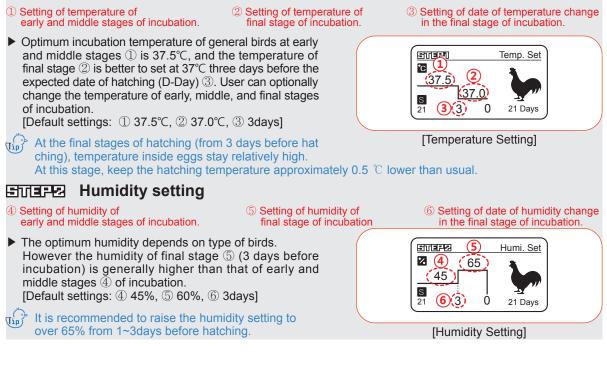
- At the initial setting, turn the jog dial to the left and right to select "Manual Incbtn" and then press the dial. This way, you enter the manual incubation setting mode.
- If you press the job dial once again on the manual incbtn setting mode, a list of bird types comes up. Select the type you want by turning the jog dial to the left and right and then press it. In the case you want to go back to the previous page, select "BACK".
- $(I_{10})^{(1)}$ If there is no proper option, please select option other bird, Refer to the Page14.
- Following the steps below, set temperature, humidity, angle and Turning Interval you want by turning the jog dial to the left and right. Then, press the dial to save the settings and move on to the next step.



' Wildgoose



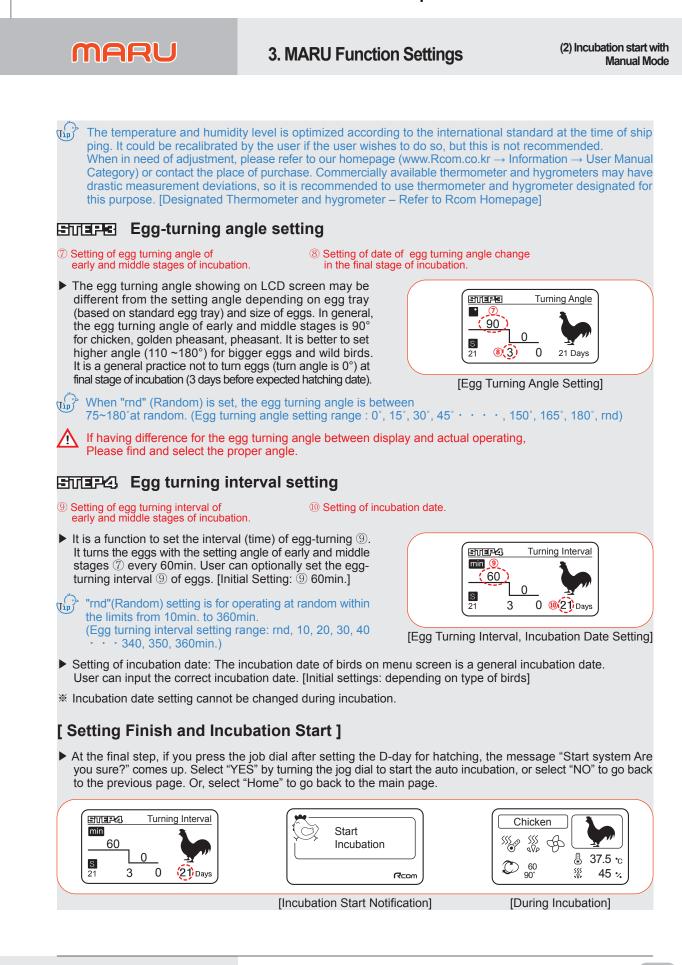
Temperature setting



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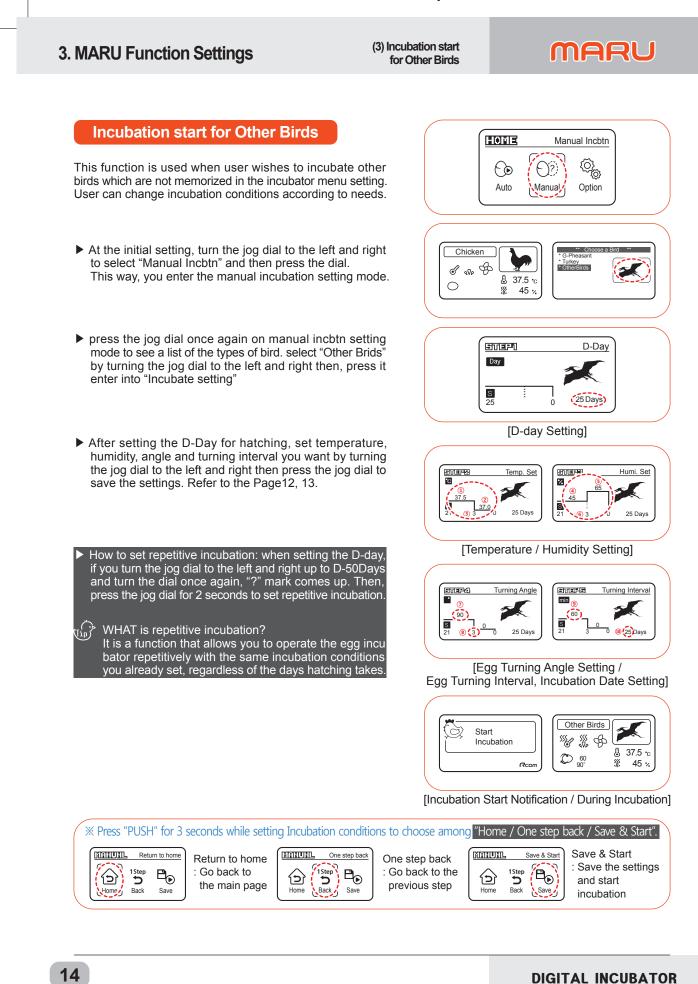
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MARU	3. MARU Function Settings	(4) Egg Turning Humidificatio
Egg Turning		
Make sure you stop egg turn In the case of auto incubation	ing and remove the dividers 3 days prior to n, the egg turning stops automatically 3 days	hatching. s before hatching.
 Forced egg tray turning methor turning will occur once. 	d : By pressing forced turn button (👸) for	3 seconds,
risk of falling from egg trays Please don't forget to turn of machine is recommended, i.	in special hatching room. Hatching chickens or being caught in mechanisms which may ca ff the turning function during hatch. [Hatching s e the Rcom Hatcher & Brooder – Rcom Maru H ng chicks are separated from incubating eggs	ause their death occasionally. separately in a specialist hatching &B 380, in this may your incubator
(i) It is recommended that turnin before hatching day.	g should be stopped 3 days	
The Rcom Maru sliding type egg turning to be separately to		ay inward (disengage turning) to turn the egg turning for the each layer
By slightly pulling the handle as shown in the figure, eg corresponding layer can be se	of the each layer forward, g turing function in the	
Try to balance weights egg nu trays to avoid straining the ma	umbers and weight in egg chine.	routward (disengage turning) to turn the egg turning for the each layer
[Good example for stopping tu	ming of each layer] o : turning, x : Stop turnin	ng
[Bad example for stopping turn	ing of each layer] o : turning, x : Stop turning	

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(4) Egg Turning, Humidification (5) How to Terminate Incubation / Reset of Incubation circum start during incubating MARU 3. MARU Function Settings Humidification All kinds of bird need over RH 65% humidity during the period prior to hatching. Pumping Motor Test Method: During the operation of the machine, pressing the jog dial 3 times shortly will operate the pump motor. In case of water shortage, it works. When the inside of the incubator is filled with water, the pump motor works (Tip) for 0.5 second. (Check motor working sound) Please turn off the humidity unit if the unit is empty water otherwise, humidity unit will be broke or you may /!\ not no longer use the unit. So please turn off the humidity unit. [Refer to the page 17] Using tap water or underground water instead of distilled water in this unit's humidification device 八 will cause serious debris (scale) to develop. In this case, the inconvenience of frequent cleaning will occur and when left alone, may become the cause of malfunction or breakage. If you have any questions regarding such problems, please contact the place of purchase and failure of the device due to the consumer negligence (due to non-cleaning), even if it occurred with in the free A/S period, repair charges might occur when repairing, so use of distilled water is highly recommended. How to Terminate Incubation SST **Finish Incubation** (j) (j) Press the jog dial for 3 seconds while on incubation to (2)60 choose among "Finish Incubaiton / Change settings / Finish Option / Back". Change Option If you select "Finish Incubation" by turning the jog dial and press it, the message "Finish system Are you sure?" comes up. ÌÌ Finish system Finish Select "YES" by rotating the jog dial to the left and right, Are you sure? Incubation and press it to finish incubation, going back to the main YES page. Select "NO" and press the jog dial if you want to Rcon Rcor go back to the previous page. [Incubation Termination] Reset of Incubation circum start during incubating SET Change settings Press the jog dial for 3 seconds while on incubation to (D (Ç) 60 choose among "Finish Incubaiton / Change settings / Change Option / Back". Finish Option turn the jog dial to select "Change Settings" and press the jog dial. Then, the temperature setting page blinks. If you want to adjust temperature, turn the jog dial to the Parameter saved left and right of reset the temperature. Then, if you press the jog dial, the settings are saved with alerting message /sounds and you move on to the next step. Rcom (Adjust settings in the following order: temperature→ humidity→angle→turning interval) [Setting Save Message] If you press "PUSH" while setting incubation conditions, you can choose between "Quit/Save & Quit". Quit विभागगणा विभागस्वय Quit Save & Qui Save & Quit : Do Not Save Settings and ₿₀ ₿₀ : Save Settings and Move On ∍ ∍ Move On To The Incubation To The Incubation Page Quit Save Page. Quit Save 16

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 When you press the cabinet light button, you can ON/OFF the room light. [Default Value : OFF] When the door is open, the cabinet light turns on, when the door is closed, the light is OFF. Leaving the lamp on for a long period of time is not good for incubation. Humidity Settings and Humidifier Device OFF method If you use the incubator without adding humidification water or intend to incubate eggs at low humidity under RH 30%, you must stop the humidification function. Press the jog dial for 3 seconds while on incubation to choose among. "Finish Incubation / Change settings / Option / Back". 	(6) Room Light ON/OFF Setting (7) Humidifier Device OFF method (8) Water Shortage Detecting Function / Power Failure Alarm Function / Alerting function when the door is open
 turn the jog dial to select "Change Settings" and press the jog dial. Then, the temperature setting page blinks. If you press the jog dial when the temperature setting page blinks. Then, lower humidity until "OFF" sign is shown by turning the jog dial to the left and right and press the jog dial for 3 seconds to turn humidification function off, moving on to the incubation page. On the other hand, if you adjust humidity to over RH 30%, the humidification function is turned on. (Default Setting: ON) Chicken & Source &	<text><text><text><text><text></text></text></text></text></text>
 When water is running low, the water drop shaped "HU MIDITY" mark on the main page turns from \$\$\vert\$ → \$\$\vert\$ \$\vert\$ → \$\$\vert\$ \$\vert\$ \$\vert\$ = \$\$\vert\$ \$\vert\$ \$\vert\$	nning low, the water drop shaped "HU he main page turns from $\swarrow \rightarrow \diamond$ essage pops up with alerting sounds \square

It takes several minutes to get back to normal state once water is supplied.

Lasting water shortage makes that humidity display is changed to alarm is ringing. (Check humidity unit and refill water)

Power Failure Alarm Function

When you first switch on the power, or in case of power failure during incubation, display shows this icon and incubator and incubator alarm sounds for about 10sec. Press ENTER to remove.

\$\$\$\$ \$\\$} 55<u>8</u> (&) 60 90 $\hat{\mathbb{O}}$ 45 Chicken

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Egg Incubator Hatcher Maru Pro User Manual



3. MARU Function Settings /

4. Optional Functions

(8) Water Shortage Detecting Function / Power Failure Alarm Function / Alerting function when the door is open (1) The Abnormal Low Alarm Settings

MARU

Alerting function when the door is open

If the door is open for over 30 seconds during operation, the "Door Opened" icon pops up with alerting sounds. The icon disappears immediately if the door is closed.



The Abnormal Low Alarm Settings (Option function)

- WHAT is an abnormal temperature alerting function? It is a function that alerts the user to an abnormally high or low temperature inside the incubator.
- When incubator temperature is different from setting value, icon is changed , and display indicates current temp. and temp. difference alternatively.

The alerting sounds set off for 1 minute and automati cally stops. The alerting sign stays on until the jog dial is pressed.

[How to Set Abnormal High Temp. Setting]

- : When incubator temp. is higher than setting temp.
- ▶ Setting Range: 0.0°C ~ 5.0°C, Default Setting : 2.0°C
- Press the jog dial for 3 seconds to see the menu and turn the dial to the left and right to select "Option". Then, press it again to enter the option mode.
- On the option mode, turn the jog dial to the left and right to select "High Temp. Set", and press the jog dial to enter the "High Temp. Set" mode. Then, adjust the setting by turning the jog dial to the left and right. Now, press the jog dial to save the settings.

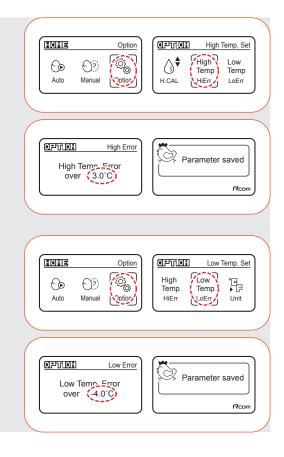
[How to Set Abnormal Low Temp. Setting]

: When incubator temp. is lower than setting temp.

- ▶ Setting Range: 0.0°C ~ 5.0°C, Default Setting : 3.0°C
- Press the jog dial for 3 seconds to see the menu and turn the dial to the left and right to select "Option". Then, press it again to enter the option mode.
- On the option mode, turn the jog dial to the left and right to select "Low Temp. Set", and press the jog dial to enter the "Low Temp. Set" mode. Then, adjust the setting by turning the jog dial to the left and right. Now, press the dial to save the settings.



When temp. difference is 2°C, it indicates 39.5°C and +2.0 alternatively (setting 37.5°C) When temp. difference is -3°C, it indicates 34.5°C and -3.0 alternatively (setting 37.5°C)



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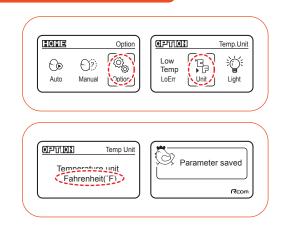
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4. Optional Functions

(2) How to change between Centigrade and Fahrenheit Temperature units (3) Hot to turn the backlight ON/OFF or to set the turning frequency (4) Sound ON /OFF (5) Return to Factory Settings

How to change between Centigrade and Fahrenheit Temperature units (Option function)

- Press the jog dial for 3 seconds to see the menu and turn the dial to the left and right to select "Option". Then, press it again to enter the option mode.
- On the option mode, turn the jog dial to the left and right to select "Temp. Unit", and press the jog dial to enter the "Change Temp. Unit" mode. Then, enter "Temp. Unit" mode by pressing the jog dial.
- On the "Temp. Unit" mode, turn the jog dial to the left and right to select Celsius or Fahrenheit. Now, press the jog dial to save the settings. [Default Setting: Celsius : °C]



Hot to turn the backlight ON/OFF or to set the turning frequency (Option function)

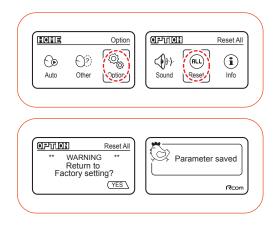
- Press the jog dial for 3 seconds to see the menu and turn the dial to the left and right to select "Option". Then, press it again to enter the option mode.
- On the option mode, turn the jog dial to the left and right to select "Backlight", adjust the setting and press the jog dial to save the settings *choose among "Always ON/ Always OFF/ Event On for 20 seconds [Default Setting : Always ON]

Sound ON /OFF (Option function)

- Press the jog dial for 3 seconds to see the menu and turn the dial to the left and right to select "Option". Then, press it again to enter the option mode.
- On the option mode, select "Sound" by turning the jog dial to the left and right, adjust the setting and press the jog dial to save the settings [Default Setting : ON]

Return to Factory Settings (Option function)

- When users have changed the incubator settings, but want to return to factory setting.
- Press the jog dial for 3 seconds to see the menu and turn the dial to the left and right to select "Option". Then, press it again to enter the option mode.
- On the option mode, select "Reset All" by turning the jog dial to the left and right, press the jog dial to enter the factory default mode.
- When entering the factory default mode, the message "Return to Factory Setting?" comes up.



Select YES by turning the jog dial to the left and right and press the jog dial to turn off the LCD screen along with messages and alerting sounds, going back to default in 15 seconds. Select NO and press the jog dial to go back to the previous page.



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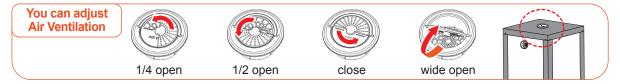
5. Incubation

(1) Humidity and Condensation principles, Air Flow considerations, and Post-Hatch maintenance (2) Dew Condensation

MARU

Humidity and Condensation principles, Air Flow considerations

- When hatching, humidity should be relatively high to prevent the thin membrane from drying out or hardening before hatching.
- When hatching, it's recommended not to open the door often. This is because if you open the door often humidity will be rapidly decreased and it will take a long time to regain the proper humidity.
- ▲ Incubator internal temperature is 37.5°C (99.5°F) or more, and hatching room temperature is below 28°C, in that case, RH 70% humidity is may not be able. The difference of ±5% humidity value may occur from the humidity sensors difference, and there are no problems at hatching.
- It's very important to maintain humidity higher 1~2 days before hatching than the early and middle incubation periods. Humidity requirements during incubation are RH 45~55% for waterfowl, RH 40~45% for poultry and RH 35~45% for parrot, in general. One day before hatching, all kinds of birds need about RH 65% humidity and sometimes need higher than that. However, in areas of high ambient humidity, lower levels of humidity may be needed during incubation.
- Air Controlling Lever : Outer fresh air can be flowed into incubator inside without affecting insulation. When eggs start hatching, open air controlling lever either fully or half-open.
- If the temperature where incubator installed is high, it will effects to incubator' setting temperature. In this case, you are able to adjust temperature by Air ventilation on the top of machine.



If you set high temperature, condensation will occur the near Air Vent and may causes licking water from the incubator and it is not a technical problem.

Post-Hatch maintenance

- Newborn birds are vulnerable to cold so it is essential to have a separate development room (brooding device) In case of developing (brooding) inside the incubator, the incubator can easily become contaminated with various bacteria which can become a major cause of reduction of hatching rate and various feather, dust, bark, manure and other pollutants can become the cause of incubator failure. In case of failure due to inappropriate usage can cause repair costs to occur even if it is within the free A/S period so purchasing of a separate development (brooding) is recommended. Instructions to build a simple development (brooding) room can be found on our homepage. (www.Rcom.co.kr → Rcom Study → Making a birdcage)
 - Do not developing chicks inside the incubator. It becomes the source of malfunction of the device and repair charges will rise even if it is within the free A/S period.

Generating Room : Space for hatching (breaking of the egg) and used 1~3 days before hatching (Rcom maru H&B)

Development (Brooding) Room : A device designed for newly hatched chicks to adjust to the environment by maintaining proper temperature and humidity for certain amount of days. (Rcom maru H&B / Rcom bird brooder &ICU)

As there is some difference in chick feed for each kind of bird, so it's desirable to obtain useful information about the chicks before hatching.

Dew Condensation

Dew condensation is natural phenomenon which can be occurred when incubator inner temperature is big different from outer temperature. So, water can leak from the incubator during humidification, which is normal. Appropriate Incubator internal temperature is between 28° C (82.4° F).



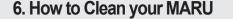
DIGITAL INCUBATOR

Egg Incubator Hatcher Maru Pro User Manual

MARU	6. How to Clean your MAR	(1) Instructions Disassembling and Clean
Instructions for Disassem	ibling and Cleaning	
Power cord must be remove machine.	d from the outlet of the	
If you turn the incubator off and door closed after high humidity moisture inside the incubator e electric and electronic circuits. Th be sure to open the incubator doo moisture inside of incubator.	incubation, accumulated vaporates and sticks to his could cause problems,	Power Cord
[Cleaning the Controller		
 As shown in the picture, unscrew located in the corners of the inc cover with the screwdriver and cover. 	w 6 screws ubators	
 Remove all the remaining water humidity unit. 	from the Vineg	jar
(ip) If a lot of dirty substance(scal formed in the humidifier unit, it in vinegar overnight will nea the humidifier unit. If a lot of scale has formed it are not using distilled water, p distilled water as it prolongs i	soaking atly clean is likely you blease use	
 dirty substance(scale) can form humidity unit and pan should be by using a vacuum cleaner, brue further cleaning aided by vinega 	e removed sh and/or	
If there are any dirty substand in the humidifier unit and pan be removed.	ce(scale) , it must	

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Egg Incubator Hatcher Maru Pro User Manual

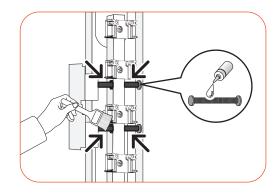


(1) Instructions for Disassembling and Cleaning

MARU

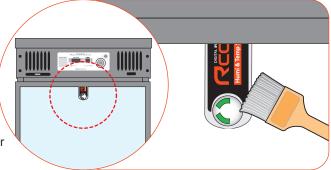
[Egg Rotator Cleaning method]

- For sliding type, after hatching, feathers and dust (dander) might be attached to the areas near carrier frame and moving turning screw, interfering with the egg turning capabilities.
- After hatching, remove the contaminants using brush and drop 1~2 drops of the lubricant to the moving screw portion, as shown in the picture, will lead to smooth device operation.



[Cleaning the Temperature, Humidity sensor]

This sensor part lies in upper part inside the incubator, behind the controller assembly but in front of the fan/heater unit. Occasionally, fluff, feathers, dirt (Dander) or water disturbs the accurate measurement of temperature & humidity. Please clean Dander away with a soft brush.

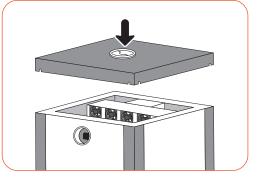


[Cleaning the Incubator Cabinet]

- ▶ After hatching, remove the universal trays and dividers from the incubator, and clean the inside with a vacuum cleaner. Brush inside the cabinet again and then vacuum again, until satisfied that the incubator is clean.
- After several hatching, dust or bird feathers (Dander) can build up in the mechanisms, controller and humidity unit and cause incorrect operation or malfunction. So, ensure you clean the incubator carefully after each hatch. (The life span of the humidity unit can be reduced when used without cleaning.)

Feather Dander and dust can clog up or foul circulation fans; this can make the fans noisy and also destroy the fans. It is very important to clean your incubator, for maintenance reasons and also to increase incubation success.

- Clean the universal trays, dividers with water and an anti septic solution, and then dry naturally or operate incubator temporary to dry them.
- Be careful not to allow moisture into the power connecting parts on the rear of the incubator.



- Do not clean the incubator with benzene or thinner. There is a risk of transformation or dis-colorization.
- ▶ Reassemble in the reverse order of disassembling and store machine safely in a cool dry place.

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Egg Incubator Hatcher Maru Pro User Manual

MARU	7. Product Informat	(1) How to Service your M. Replacing the F General mainten
Replacing Fuse		
Back		
 Fuse is located at the top power connection part o back side of incubator. 		 Replace (a) (Used Fuse) fuse with (b) (Spare Fuse) fuse. For AC 100V use : 250V 5.0A Ø5*20mm For AC 230V use : 250V 3.0A Ø5*20mm
ccasionally some defective ontact Autoelex service ce	s of Autoelex Co., Ltd. are made by precision products are found on the way of their distrib enter or distributorsin your country. We will d gned in modular mode, so for its repair if any	ution.If any problem occurs, then please o our best to solve the problems, if any
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Casionally some defective ontact Autoelex service ce or you. This product is desi- oncerned with ease. * Complaint Departm Troubles In case hatching rate is low When a chick hatches out earlier than expected or a deformed chick	 products are found on the way of their distribution of their distribution your country. We will digned in modular mode, so for its repair, if any ment : 82-55-337-2560 * E-mail Expected Causes (Possibility) When the egg is an unfertilized egg. Getting infected by germs. Wrong incubation setting. Health condition of mother bird. 	 bution.If any problem occurs, then please o our best to solve the problems, if any a qualified person can replace the part Receipt : Rcom@Rcom.co.kr Countermeasures Inspect the egg to check possibility of egg surviving. Disinfect the incubator. Check all settings of incubator. Especially, check them focusingon the temperature. Review care of health of mother bird.
ccasionally some defective ontact Autoelex service ce or you. This product is desi oncerned with ease. * Complaint Departn	 products are found on the way of their distributer or distributors your country. We will digned in modular mode, so for its repair, if any ment : 82-55-337-2560 * E-mail Expected Causes (Possibility) When the egg is an unfertilized egg. Getting infected by germs. Wrong incubation setting. Health condition of mother bird. Improper egg turning. Setting temperature high. 	 bution.If any problem occurs, then please of our best to solve the problems, if any, a qualified person can replace the part Receipt : Rcom@Rcom.co.kr Countermeasures Inspect the egg to check possibility of egg surviving. Disinfect the incubator. Check all settings of incubator. Especially, check them focusingon the temperature. Review care of health of mother bird. Check if egg turning is normal. Lower temp. setting of the incubator about 0.5°C (1°F) ex) 37.5°C (99.5°F) → 37.0°C (98.6°F)

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When intending to

at the same time

hatching various eggs

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Incubation days are different, so hatching

Eggs might be contaminated by chicks

rate falls down.

that hatched first.

►

23

Mark hatching date on eggs and move

on the marked date.

Hatcher&Brooder.

them to other incubator(brooder) just

In case of putting in many eggs at the same time, it's convenient to prepare a spare incubator available as a

7. Product Information (2) Tro

(2) Troubleshooting(FAQ)



Troubleshooting(FAQ)

For more detailed self-diagnosis, see Rcom homepage "SELF DIAGNOSIS" category.

Circumstance	Items to be confirmed	Solutions
No signs of power to the incubator.	 Check electric cord is properly connected. Check if there is a power outage. Check whether the plug is damaged. Check the fuse. 	 Connect the cord again. Check the main socket with any other electric appliances. Try to insert to another outlet. Change the Fuse. [Refer to the page 23]
When temperature is too high / When temperature is too low	 Check your setting temperature. Initialize the incubator. [Refer to the page 19] Please check the bottom of machine is wet or not. 	 Set the temperature as required. Please remove moisture. Please put the water tank on the floor and use.
Alarm sounds with "HI" indication (abnormal high temp.)	 Check if room temperature is too high. Check if incubator is exposed to the direct rays of sun. In case of lowering temperature. 	 Adjust room temperature 28°C (82.4°F) Install incubator without the direct rays of sun. Return incubator to factory setting. [Refer to page 19]
Alarm sounds with "LO" indication (abnormal low temp.)	 Check if room temperature is too low. (especially during night) please check the bottom of machine is wet or not. 	 Adjust room temperature 28°C (82.4°F) Place thermometer inside of incubator and check if setting temperature is correct. Please remove moisture. Please put the water tank on the floor and use.
Humidity will not go high enough.	 Check your setting humidity. Close the door again after checking. Initialize the incubator. [Refer to the page 19] Check if pumping is working. [Refer to the page 16] 	 Supply water. Check if silicon tube is blocked. Set the humidity again as required. Clean the humidity unit. [Refer to page. 21~22]
The machine makes some noise. - A little noisy occurs from the inside of circulation fan.	 Check if there is any hatching dust such as feather or eggs-shell in the incubator FAN. A little noisy is not faulty. 	 Remove power and then open maintenance cover to clean the FAN for air circulation. [Refer to page 21~22]
Egg-Turning fails to work.	 Check that the Egg-turning stoppage is not activated. Check that there are no foreign items on the egg turning tray. Check if egg turning plate is assembled correctly. Check to see if the egg rturning for the each layer has stopped. [Refer to the page 15] Check to see if the filler bar for the slide plate is located in the middle of the carrier filler. [Refer to the page 9] 	 If you need to turn the eggs, you can manually re-start egg-turning. Cancel the egg turning for each layer. [Refer to the page 15] Check to see if the carrier frame filler is installed. [Refer to the page 9] Lubricate the vertical gear.
Dew foams in the incubator.	 Check the incubator is not placed too cold circumstances. When you turn OFF incubator and then turn ON. In case of setting high humidity. 	 Adjust room temperature 28°C (82.4°F) Dew condensation is a natural phenomenon and not a malfunction of the device. [Refer to the page 20]
Water leaks from the machine.	 Check if you did not place the water container on the incubator. Check that the incubator placed on inclined surface. Check if it is Dew condensation. When set as high humidity. When moved without taking out the water tank for the humidifier unit. When humidity unit is not cleaned. 	 Please put the water tank on the floor and use. Place incubator under a level surface. Dew condensation is a natural phenomenon and not a malfunction of the device. Remove the remaining water in the humidity unit using pipettes or syringe. Clean the dust(scale) from the humidifier unit after use.

Test the incubator to be sure that the incubator works without any problem before placing eggs in the incubator. Please ensure you remember how to use the machine and maybe re-read instructions.

DIGITAL INCUBATOR

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7. Product Information

(3) Specification

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1-1 Name : Rcom MARU DELUXE PRO 100 / 200 Specification 1-2 Model : PX-100SD / PX-200SD

NAME	ST Series Model No.	Capacities [Chick egg size]	Egg Turning Method	Egg turning angle [°]	Egg turning Interval [min]	Each-Story Egg Turning ON/OFF	Functional Ranger
100	PX-100SD	96	Slide Type	0,15°,30°, 45° 165°, 180°,rnd	0,10,20360	0	Temperature: 20~42°C (68~107.6°F) Humidity: 30~70%
200	PX-200SD	192	Slide Type	0,15°,30°, 45° 165°, 180°,rnd	0,10,20360	0	Temperature: 20~42°C (68~107.6°F) Humidity: 30~70%
NAME	ST Series Model No.	Humidification Device	The number of Trays	Dimensions (WxLxH) [mm]	Weight [Kg]	Maximum electric power [W]	Average electric power [W]
100	PX-100SD	0	2 floors	484*637*414	19	440	70
200	PX-200SD	0	4 floors	484*637*573	26	440	70

We are not allowed to extend warranty therefore we ONLY provide 1 year warranty service. /!\ If you do not register, we provide limited warranty service for 1year based on factory releasedate.

- You will be asking for service charge if you are in below cases. 1. Broken or Problem caused by 'No cleaning' or 'Improper handling' 2. Broken or problem caused by 'Not using distilled water' 3. Broken or problem caused by 'Trying Bird hatching in incubator' (Please den't try bird batching in incubator dur

 - (Please don't try bird hatching in incubator. Please use Hatcher during bird hatching.)
 - Broken or problem caused by 'Wrong controling(Using)'
 - 5. Broken or Problem caused by using the machine out of User's Manual.6. Broken or problem caused by 'Customer's mistake or fault'

※ Product Registration Procedures

If you are a new member of Rcom, you need to log in our website at www.Rcom.co.kr 1. Click "SIGN UP" on top of the right corner.

- 2. Fill out the information on the blanks.
- If you already registered your information on the Rcom website, please log in to www.Rcom.co.kr. 1. Click "Login" on top of the right corner. 2. Select "Customer" and click "Register Products".

- Fill out the information on the blanks.

You will need below information to register on our website.

- Your name.
 Your (home/company) address & Email address, country.
- Your product(model) name & Serial number.
 Date of purchase & Name of purchased shop you bought from.

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Rcom is designed for user's easy and convenient use. It can be changed without notice for improvement in performance design.treatment, and software, etc.



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