Most Valuable Creation of New Life with "R-COM"



# **USER'S MANUAL**

# DIGITAL EGG INCUBATOR Mx R-COM 50

(Standard Version)





# **R** COM 50

## Contents

#### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com



How to use R-COM 50

1. Introduction	
(1) R-COM 50 Introduction	3
(2) Safety Precautions	4 Introduction
(3) Identification of Parts and Composition	5
(4) Function of Digital Control & How to Operate	6
2. Before use	
(1) How to Assemble the Incubator / Egg-Turning plate	7 Before use
(2) What is an incubation room?/ Preparation for Incubation	8
3. Function Settings	
Incubation Start & Termination / (1) Incubator Initialization (Factory Setting) (2) Change Cels.& Fahr.	9 Function Settings
(3) How to Set Temperature & Humidity / How to Turn ON, OFF Humidification Function / How to Set Abnormal High or Low Temperatue Alarm / How to Set Egg Turning ON, OFF	0
4. Incubation	la substitue
(1) Humidity & Air Maintenance during Incubation / Maintenance after Hatching (2) Dew Condensation	1
5. How to Clean	
(1) How to Disassemble	2 How to Clean
(2) How to Clean	3
6. Product Information	
(1) Servicing / Frequently Asked Questions (FAQ)	4
(2) Troubleshooting	Product Information
(3) How to Calibrate the Temperature & Humidity	6
(4) Specification 1	7
Mark Evaluation	
Caution :	
Caution mark against a fault that can cause damage, troub	ole, or failure of incubation.
Prohibited It is necessary	to keep.
No not disassemble.	ower cord from outlet.
Ground Connection	on for preventing electric shock.
<b>I V</b> <sup>+</sup> <b>P J I D</b> : References or useful suggestions in using R-COM	50

Tip: References or useful suggestions in using R-COM 50

**ACAUTION** Warning of actions which may be dangerous or cause damage to the incubator.

2



#### **R-COM 50**

Thanks for choosing the Rcom 50 incubator.

The Rcom 50 incubator is the first incubator with creditability to have a superior design and function which help in controlling optimum incubation conditions. It has two sensors, one for detecting surrounding environments and the other for internal incubator conditions.

The Rcom50 is designed to be easy and simple to use as a customer orientated product, but please remember that the user's incubation knowledge and proper operation are very important for the best incubation result.

Therefore, be sure to read this user's manual carefully before you use this incubator.

The Rcom 50 offers optimum incubation conditions, but users need to observe and manage all incubation conditions such as species of eggs, temperature or humidity for each incubation period, and incubation circumstances .

#### Features

#### [Main Features]

- \* Outer Temp. Sensor included for Automatic Adjustment of Heating rate responding to Incubation Room Temperature
- \* Superior design with convenient operation
- \* Optimum air circulation technique with 5 strong BLDC fans
- \* Automatic Temp. & Humidity setting and control
- \* Body locking device
- \* Water supplement alarm function
- \* 48 eggs capacity for chicken size eggs (116 Quail egg size / 24 Goose egg size)
- \* Antiblastic Humidification method by heating water, which discourages bacterial growth
- \* Double-glazed view window for minimizing the influence of outside temperature
- \* Enhanced reliability by applying Swiss's Sensirion's 3rd generation temperature & humidity sensor
- \* Strong SMPS application for stable power supply

## [Safety Features]

- \* Alarm and display function of abnormal incubator temperature caused by sudden fluctuation of ambient temperature
- \* Incubation data memory function and power outage notification function in case of power failure
- \* Circulation fan cover for safety and electric safety cut-out switch on the upper main body for safety
- \* Heater supporter designed for heater tension control and its safety
- \* Safety cover applied for protecting humidification unit
- \* Humidification unit durability improved by water proof BLDC fan
- \* Alarm when water need replenishing

## [Easy Features]

- \* No need of separate humidification unit as it included in main body
- \* °C or °F convertible
- \* Easy attachment and detachment of double-glazed viewing window
- \* Universal egg tray for various size eggs
- \* Slide plate with embossed feature for preventing skid
- \* Variable air vent for adjusting air supply
- \* Bottom body designed for easy cleaning



# 1. Introduction

#### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com

#### **Electrical hazards**



Do not use a damaged power cord or loose outlet

Risk of electric shock or fire

a

Do not install in dusty or

Risk of damage or fire within

dirty environment.

Do not cover the

ventilating opening.

interrupting incubation.

Do not disassemble or

modify the incubator in

Risk if electric shock or fire.

anv wav

Inner temperature can rise,

the incubator



Risk of electric shock or fire

Do not install under the

Risk of fire or interference with

Install away from heat

direct sunlight.

the incubation process.

## **Setting Cautions**



Never pull the plug out of the outlet during the

0 ST

M

incubation period. Incubation will be interrupted

Do not install in moist of

Risk of fire or electric shock

Ensure that the incubator is

strange or emits smoke

Risk of electric shock or fire

ACAUTION

contact your service

center

humid environment



**ACAUTION** Be careful the details below when you use.

Do not twist or crush electric cord.

#### Risk of electric shock or fire.



Do not insert multiple connecting plugs in an outlet

Risk of fire or electrical overload

# **ACAUTION** Be careful the details below when you use.



Do not install in excessively cold or hot conditions, cigarette smoke, etc. Risk of interference with the incubation process



Do not turn the incubator upside down.

Water will pour out of the incubator, and view window can be dropped or damaged.



Clean the incubator thoroughly before storing.



Do not use any other non-standard parts except those provided. Risk of damage or hatching failure.



Children should be supervised to ensure that they do not play with the appliance.

Risk of knocking the incubator or accidental interference with the controls.



If the incubator requires repair disconnect from the power supply and please contact to your service center.



Please ensure that no small objects get into the holes on the incubator.

Risk of electric shock or fire

# **Cleaning Cautions**



Do not spray cleanser directly on the incubator surface



Clean the incubator by a soft cloth with a neutral detergent



Brush away dust on the plug with a dry cloth.



Be sure to disconnect the electric cord

Do not use chemicals like wax. benzene, alcohol, thinner, aromatic, or lubricant, etc.



For special cleaning of inner 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.

\* This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

**1. Introduction** 



(3) Identification of Parts and Compositio



#### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com



(3) Identification of Parts and Compositio



## [Function Operation & Explanation]

Function	How to Operate	Explanation	Page
Temp. Setting	SET TEMP + OF TEMP -	Setting of needed temp.	10
Humidity Setting	SET HOLD (HUMI -) OF (HUMI -)	Setting of needed humidity.	10
Egg-Turning Interval Setting	Default setting every1 hour (Lamp: ON) Bert HOLD Conce 2 times 3 times(OFF) 4 times CTURN + TURN + TURN (Lamp OR) (Lamp OR) repeat	Egg-Turning Interval Setting as required	10
Egg-Turning Test	TURN 5 Sec.	Egg-Turning Test (once)	10
Changing Cels. & Fahr.	TEMP + TEMP - CA > SET	Changing Cels. & Fahr.	9
Temp. Calibration	TEMP+ + TEMP- > CA > OF 5 Sec. SET	How to calibrate temperature.	16
Humidity Calibration	HUMI + HUMI - ► CA ► OF 5 Sec. Set	How to calibrate humidity.	16
Initialization (Factory setting)	SET + POWER IN ► rSt HOLD	Initialization	9
How to OFF Humidification Function	SET + HUMI- > 20%	Set Humidity as 20%	10
Setting Value Check	SET	Indication of setting Temperature and Humidity	

\* If you want to change setting value, keep pressing "SET" button and change the value.

DIGITAL INCUBATOR

1. Introduction

(4) Function of Digital Control & How to Operate (1) How to Assemble the Incubator / Egg-turning plate

# **R** COM 50



(1) How to Assemble the Incubator / Egg-turning plate



# 2. Before use

#### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com

#### What's an Incubation Room? / Preparation for Incubation

The Incubation Room is a confined space for setting and operating an incubator. Because the incubation room environment has a considerable effect on hatch rate, it's recommended to control the environment for setting up an incubator; there should be little noise and vibration around and temperature ranging  $20^{\circ}C-25^{\circ}C(68-77^{\circ}F)$  with small variation in temperature.

Especially, if there are frequent occasions when the temperature drops suddenly at night, compared with daytime, be sure to check from time to time and pay attention so that the incubator is not directly exposed to sunlight during daytime.

- Insert the electric cord in the connecting jack in the back of the main body and put the main plug into a socket. The LCD display will light up and show temperature.
   Open the watercap and fill the bole with clean water and
- Open the watercap and fill the hole with clean water and refill water after about 5 min. again; up to the limit line on its inside mark. (If you refill water during the incubation period, humidity goes down temporarily.)
- After filling up with water, never shake or turn over the main body of the incubator, which would cause water to spill inside the body and could cause a breakdown.
- During incubation period, check the water level about every three days and refill water, if necessary. (After you refill water, check again after 5min. and refill again.)
- In case you use the incubator without adding humidification water or intend to incubate eggs at low humidity under 20%, you must stop its humidification function. (When using this function, the alarm for sensing water drop will go out.) [See the description of humidification function ON/OFF on Page 10.]
  - \* How to turn off Humidification Function : Set humidity level at 20%.
  - It is recommended to use distilled water or de-ionised water to prevent alien matter being introduced around the humidifying heater.
  - Some gap (about 2mm) around the eggs is needed for easy egg turning as shown on the right. ►



When you use the 'universal rolling divider' which is sold separately, be careful to adjust the distance of rolling divider so that eace is

adjust the distance of rolling divider so that eggs do not roll out of position. Refer to the picture right side.



Place the eggs to incubate in the egg groove and then close the view window.

Be careful to close the view window completely; if not, the temperature and humidity will fail to go up.





8

**DIGITAL INCUBATOR** 

#### 2. Before use

# 3. Function Settings

 Incubation Start & Termination / Incubation Initialization (Factory Setting)
 Changing Cels.&Fahr.



#### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com

## How to start incubation

- If you connect the incubator with power cord, second dot ". " of temp. display is blink with alarm.
   Press SET to remove blink and then it starts incubation with existing temperature and humidity.
   (Factory default setting - Temp. : 37.5°C, Humidity : 45%)
- Be sure to turn ON egg turning before incubation starts and turn OFF before 3 days of hatching. At this time, it's recommendable to raise humidity up to 60~70%. [Refer to Egg Turning ON/OFF on Page 10.]



 $\tau_{\rm IP}$  There can be some smell the first time you use the incubator, that is normal.

Power Failure Notification: When firstly input power, or power failure during incubation, second dot " . " of temp. display is blink with alarm. Press SET to remove.

How to terminate incubation

After all eggs are hatched, you should REMOVE the power cord for incubation termination. (The incubator has no separate power switch.)

#### How to initialize incubator (Returning to factory default settings)

▶ It is for returning to the factory default setting.



It is for initializing the incubator setting or calibration to the factory settings when you handle the incubator improperly so that the value has changed. Unplug the power supply and hold SET button and re-plug the power supply as shown on picture. Then, rSt will show on the display, and the incubator will be initialized to factory setting.



3. Function Settings

9

(1) Incubation Start &Termination / Incubation Initialization (Factory Setting) (2) Changing Cels.&Fahr.



# 4. Incubation

### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com

### Humidity & Air Maintenance During Incubation

- 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 lid often. This is because if you open the lid often humidity will be rapidly decreased and it will take a long time to regain the proper humidity.
- ※ If incubatior temperature is higher than 37℃ and room temperature is low, it may be difficult to maintain humidity of over 70%. There may be some difference of humidity about ±5% according to the external environment, but no problem with 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 45~55% for waterfowl, 40~45% for poultry and 35~45% for parrot, in general. One day before hatching, all kinds of birds need about 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.



B) COM 50





#### Maintenance after Hatching

▶ Because newly-born chicks just after hatching have little protection against cold, a brooding room should certainly be prepared in advance for them. In case there is no separate brooder prepared, you may let them stay in the incubator for one day or more after hatching. If you move them to an brooder or brooding box, the inner temperature should be kept at 35 °C ~ 37 °C.

For the production method of a simple brooder, please refer to our website www.r-com.co.kr.

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.

If feather of chicks gets wet, chicks' body temperature falls down, and, if then, you must immediately dry by hair dryer.

## **※ Dew Condensation**

This is a naturally occurring phenomenon when there is a significant difference in temperature between inside and outside of the incubator during incubation period. If this occurs, water may form in inside bottom of the main body of the incubator(bottom part).



# **11** 4. Incubation

(1) Humidity & Air Maintenance during Incubation / How to manage after hatch (2) Dew Condensation



Pull out the electric cord from the connecting jack and also take out the plug from the outlet.

> Don't turn off the power soon after using the incubator, as this may cause a break down due to moisture left inside the main controller. At this time, it's better to firstly remove the water inside of the incubator and dry by operating it for 1 hour and then turn it off or open the view window and dry it naturally for 2~3 hours and, then, re-operate it, which may lengthen the life time of incubator. (Set humidification function OFF. / Refer to the page 10.)



#### How to disassemble and clean the incubator

# 1

ſ

Unlock and remove the locking buttons for four parts at the front and back of incubator by pulling them forward.



The bottom part of incubator should be thoroughly cleaned with water and dried. The upper part should be naturally dried in the well-ventilated place for about one day to remove moisture left inside of the incubator after hatching thoroughly.



Don't clean the product with organic solvents such as benzene, thinner, etc. which may cause deformation or decoloration of the plastic parts.



- When using humidification function, a lot of alien matter sticks to the humidification heating element (a). This may not cause failure, but when terminating incubation please clean the humidifying heater lightly with a soft brush.
- If you place the main body(upper part) on the floor, please don't let the humidification heating part touch with the floor.



You are recommended to use distilled water or de-ionised water to prevent alien matter being caught in around the humidification heating part (a).







DIGITAL INCUBATOR

5. How to Clean

(1) How to Disassemble

12



4

Start the vacuum cleaner to remove the dust as shown on the right and thoroughly shake out the minute dust with a fine brush.

If the incubator goes through incubations several times, feather, dust, shell, etc. accumulate inside the main body, which may cause a break down, so be sure to clean the product before storage.









If you finish cleaning the incubator, reassemble it in the reverse order of disassembly. Wipe out outside the main body with a wet cloth and dry it in a cool and well-ventilated place before storage.



[Refer to How to assemble on Page 7.]

Don't clean the product with organic solvents such as benzene, thinner, etc. which may cause deformation or decoloration.



(2) How to Clean



#### Servicing

All our R-Com digital incubators of Autoelex Co., Ltd. are made by precision systems under strict quality control. But occasionally some defective products are found on the way of their distribution. If any problem occurs, then please contact Autoelex service center or distributors in your country. We will do our best to solve the problems, if any, for you.

This product is designed in modular mode, so for its repair, if any, a qualified person can replace the part concerned with ease.

#### Frequently Asked Questions (FAQ)

Troubles	Expected Causes (Possibility)	Countermeasures
In case hatching rate is low	<ul> <li>When the egg is an unfertilized egg.</li> <li>Getting infected by germs</li> <li>Wrong incubation setting</li> <li>Health condition of mother bird</li> <li>Improper egg turning</li> </ul>	<ul> <li>Check possibility of egg surviving</li> <li>Disinfect the incubator</li> <li>Check all settings of incubator. Especially, check them focusing on the temperature.</li> <li>Review care of health of mother bird.</li> <li>Check if egg turning is normal.</li> </ul>
When a chick hatches out earlier than expected or a deformed chick hatches out	<ul> <li>Setting temperature too high</li> <li>Egg turning was not operating normally</li> </ul>	<ul> <li>Lower temp. setting of the incubator about 0.5℃(1°F) ex) 37.5℃ → 37.0℃</li> <li>Check if egg turning function is OFF</li> </ul>
When a chick hatches out later than expected	Setting temperature too low	<ul> <li>Raise temp. setting of the incubator about 0.5℃(1°F)</li> <li>ex)37.0℃ → 37.5℃</li> </ul>
When hatching dates are so different from each egg (When all chicks don't hatch out at the same time but over a long period)	<ul> <li>Eggs stored for different lengths of time</li> <li>Diffferent incubation temperatures</li> </ul>	<ul> <li>Set limits to egg storage time properly</li> <li>Check Temperature difference in the incubator. (sunlight, temp of incubation room, etc.)</li> </ul>
When intending to hatching various eggs at the same time	Incubation days are different, so hatching rate falls down.	<ul> <li>Mark hatching date on eggs and move them to other incubator (brooder) just on the marked date.</li> <li>In case of putting in many eggs at the same time, it's convenient to prepare a spare incubator available as a brooder</li> </ul>

## 6. Product Information



#### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com

### Troubleshooting

CIRCUMSTANCE	ITEMS TO BE CONFIRMED	SOLUTIONS
No signs of power to the incubator.	<ul> <li>Check electric cord is properly connected.</li> <li>Check if there is a power outage.</li> <li>Check whether the plug is damaged.</li> </ul>	<ul> <li>Connect the cord again.</li> <li>Check the main socket with any other electric appliances.</li> <li>Try to insert to another outlet.</li> </ul>
Temperature will not go high enough.	<ul> <li>Check your setting temperature.</li> <li>Check the air circulation FAN is working.</li> <li>Initialize the incubator. [Refer to the page 9]</li> </ul>	<ul> <li>Set the temperature as required.</li> <li>Take the power plug out of the outlet, and disassemble the main body for cleaning around the air circulation fan with brush.</li> </ul>
Alarm sounds with HI indication (abnormal high temp.)	<ul> <li>Check if room temperature is too high</li> <li>Check if incubator is exposed to the direct rays of sun</li> </ul>	<ul> <li>Adjust room temperature between 20°C and 25°C.</li> <li>Install incubator without the direct rays of sun</li> <li>Return incubator to factory setting [Refer to page 9]</li> </ul>
Alarm sounds with LO indication (abnormal low temp.)	<ul> <li>Check if room temperature is too low</li> <li>Check if incubator heater(temperature controlling- system) is normally working</li> </ul>	<ul> <li>Adjust room temperature between 20°C and 25°C.</li> <li>Place thermometer inside of incubator and check if setting temperature is correct</li> <li>Return incubator to factory setting [Refer to page 9]</li> </ul>
Humidity will not go high enough.	<ul> <li>Check your setting humidity.</li> <li>Close the view window again after checking.</li> <li>Initialize the incubator. [Refer to the page 9]</li> </ul>	<ul><li>Supply water.</li><li>Set the humidity again as required.</li></ul>
The machine makes some noise. - It is normal that the machine emits some sounds because it uses air circulation fan for working.	Check if there is any hatching debris such as feather or eggs-shell in the incubator FAN.	Take out the plug out of the outlet and disassemble the main body and clean around the air circulation fan with brush.
Egg-Turning fails to work.	<ul> <li>Check that the Egg-turning stoppage is not activated. (Egg-turning lamp lighting)</li> <li>Check that there are no foreign items on the egg turning tray.</li> <li>Check if egg turning plate is assembled correctly. [Refer to the page 7]</li> </ul>	<ul> <li>If you need to turn the eggs, you can manually re-start egg-turning.</li> <li>Unplug the power supply and disassemble the main body for cleaning the egg turning tray and gear.</li> <li>Assemble egg turning plate as the picture on page 7.</li> </ul>
Dew foams in the incubator.	<ul> <li>Check the incubator is not placed too cold circumstances.</li> <li>When you turn OFF incubator and then turn on.</li> </ul>	<ul> <li>Move the incubator to where the ambient air temperature is over 20°C.</li> <li>Dew condensation is normal.</li> <li>Dry the incubator completely under well ventilated place.</li> </ul>
Water leaks from the machine.	<ul> <li>Check that you have not overfilled the incubator.</li> <li>Check that the incubator placed on inclined surface.</li> <li>Check if it is Dew condensation</li> </ul>	<ul> <li>Do not fill water over LIMIT indication.</li> <li>Place incubator under a level surface.</li> </ul>

A Hatching result could be affected with various factors, and manufacturer do not have any responsibility for loss of eggs or birds.

## 6. Product Information

#### Rcom Mx 50 Incubator Sales & Service www.RcomCo.com

As this incubator was made with the optimum conditions set at the factory, you don't need to calibrate the temperature or humidity before use except for sensitive birds.



**R**) COM 50

Operate incubator for an hour before calibration for temperature stabilization. And then, observe the temperature or humidity at several position above 15mm of the egg tray mat with your thermometer, and calibrate with average value.



Low priced thermometers or hygrometers which you can easily purchase from the market have large deflection of measurement. This could cause hatching failure, and it is recommended to use highly precise thermometer or hygrometer.





Press TEMP button and TEMP button at the same time. CA sign will show on the Temp. display, and after 5sec. pressing the buttons, the display will blink.



- ▶ Calibrate the temperature with (Law y button or (Law y button) button. (Calibration extent : ±9.9℃)
- If you want to raise incubator temperature 0.5 °C higher, you should calibrate 0.5 °C lower at temp. calibration mode.



► If you press SET button, the setting will be completed. (If you don't press any key, it automatically set after 5 Sec.)

<After Calibration>

DIGITAL INCUBATOR

5 Sec.) it automatically set after 5 Sec.) If you can not rely on your thermometer or hygrometer, you can initialize the incubator to factory setting. (Refer to the page 9)

6. Product Information

completed.



NG ON 🔵 🛛 🔵 WAT DIGITAL INCUBATO

5Sec.





- ► Calibrate the humidity with → button or → button. (Calibration extent: ±20%)
- If you want to raise incubator humidity 5% higher, you should calibrate 5% lower at humidity calibration mode.



(3) How to Calibrate the Temperature & Humidity

(If you don't press any key,



## **Specification**

# 1-1 NAME : DIGITAL INCUBATOR R-COM 501-2 MODEL NO. : MX 50 (STANDARD)

# [Specification]

Power	AC 100V~120V, 50/60Hz AC 220V~240V, 50/60Hz	
Temp. limits	20.0°C ~ 42.0°C	
Working Temperature	ldeal:20℃ ~ 25℃ Min. 15℃ / Max. 30℃	
Humidity Limits	20% ~ 70% ( It can be changed according to the conditions )	
Power Consumption	Max. 120W (Average 65W)	
Egg-Turning Interval	Various according to the tray	
	For all size egg : Various sized egg incubation is: Universal tray (Included) available	
Capacity	Small : 116 eggs (Quai	egg size) : Small egg tray (option)
	Standard : 48 eggs (Chick egg size) : Standard egg tray (option)	
	Large       : 24 eggs (Goose egg size)       : Large egg tray (option)	
Net Weight	6.65kg(Including Universal Tray)	Gross Weight 9.5kg
Size	(W)633×(L)523×(H)171 (mm)	
Fuse Standard	250V 2.0A (∅5×20mm)	

\* Register your product Serial No. on our website for free 2 years gurantee.

\* Refer to website for how to register. (Free 1 years gurantee in case not registerd.)

- If you are new member of Rcom website,
- 1. Visit www.r-com.co.kr
- 2. Click English version
- 3. Click "REGISTER" at the left side of page.
- 4. Full in your information according to description.
- 5. Register completed.

17

- ▶ If you already registered your information on Rcom website
- 1. Log on www.r-com.co.kr
- 2. Click "Member information change" at the left side of page.
- 3. Check "YES" to the question "Did you purchase Rcom products?"
- 4. Fill in your information according to description.

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



# www.RcomCo.com



Rcom is the Best Design with High Quality, Value, and Performance!