

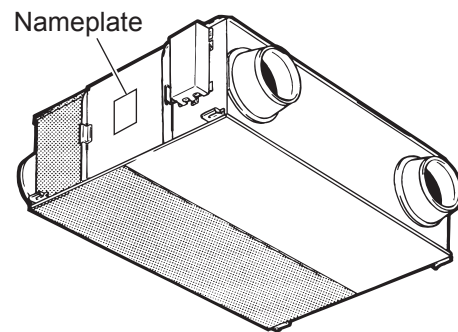
**LOSSNAY**

# **HANDBOOK**

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**MODEL**

**LGH-F470RX3-E**



**Warning:**









Repair work must be performed by the manufacturer, its service agent or a similarly qualified person in order to avoid hazards.




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# Safety precautions

- Please be sure to read the following safety precautions thoroughly before commencing with the maintenance work, and conduct the inspection and repair of the product in a safe manner.
- The types and levels of danger that may arise if the product is handled incorrectly are described by using the warning symbols shown below.

 <b>Warning</b>		Incorrect handling of the product may result in serious injury or death.	
<b>◇ Electric shock</b> If you must inspect the circuitry while the power is on, do not touch the live parts.  (Failure to heed this warning may result in electric shock.)	 Caution for electric shock	<b>◇ Turn off the power supply</b> Be sure to shut off the breaker before disassembling the unit for repair.  (Failure to heed this warning may result in electric shock.)	 Be sure to follow this instruction.
<b>◇ Modification is prohibited</b> Do not modify the unit.  (Failure to heed this warning may result in electric shock, fire and/or bodily injury.)	 Prohibited	<b>◇ Use proper parts and tools</b> For repair, be sure to use the parts listed in the service parts list of the applicable unit model and use the proper tools.  (Failure to heed this warning may result in electric shock, fire and/or bodily injury.)	 Be sure to follow this instruction.
<b>◇ Proper electric work</b> Use the electric wires designated for electric work, and conduct electric work in accordance with the "UL Standard," and the Installation Work Guide.  (Incomplete connection or wiring installation may result in electric shock and/or fire.)	 Be sure to follow this instruction.	<b>◇ Replace damaged and/or degraded parts</b> Be sure to replace the power-supply cord and lead wire in the event that they are damaged and/or degraded.  (Failure to heed this warning may result in electric shock and/or fire.)	 Be sure to follow this instruction.
		<b>◇ Check insulation</b> Be sure to measure the insulation resistance once the repair work is complete, and turn on the power supply after verifying that an insulation resistance of at least 10MΩ is obtained.  (If an insulation problem exists, it may result in electric shock.)	 Be sure to follow this instruction.

 <b>Caution</b>		Incorrect handling of the product may result in serious injury or damage to properties including buildings and equipment.	
<b>◇ Caution for bodily injury</b> Do not conduct any work at a location where you do not have a sure footing.  (Failure to heed this caution may result in a fall.)	 Prohibited	<b>◇ Wear gloves</b> Wear gloves when conducting work.  (Failure to heed this caution may result in injury to your hands from sharp metal or other edges.)	 Be sure to follow this instruction.

## Request during repair

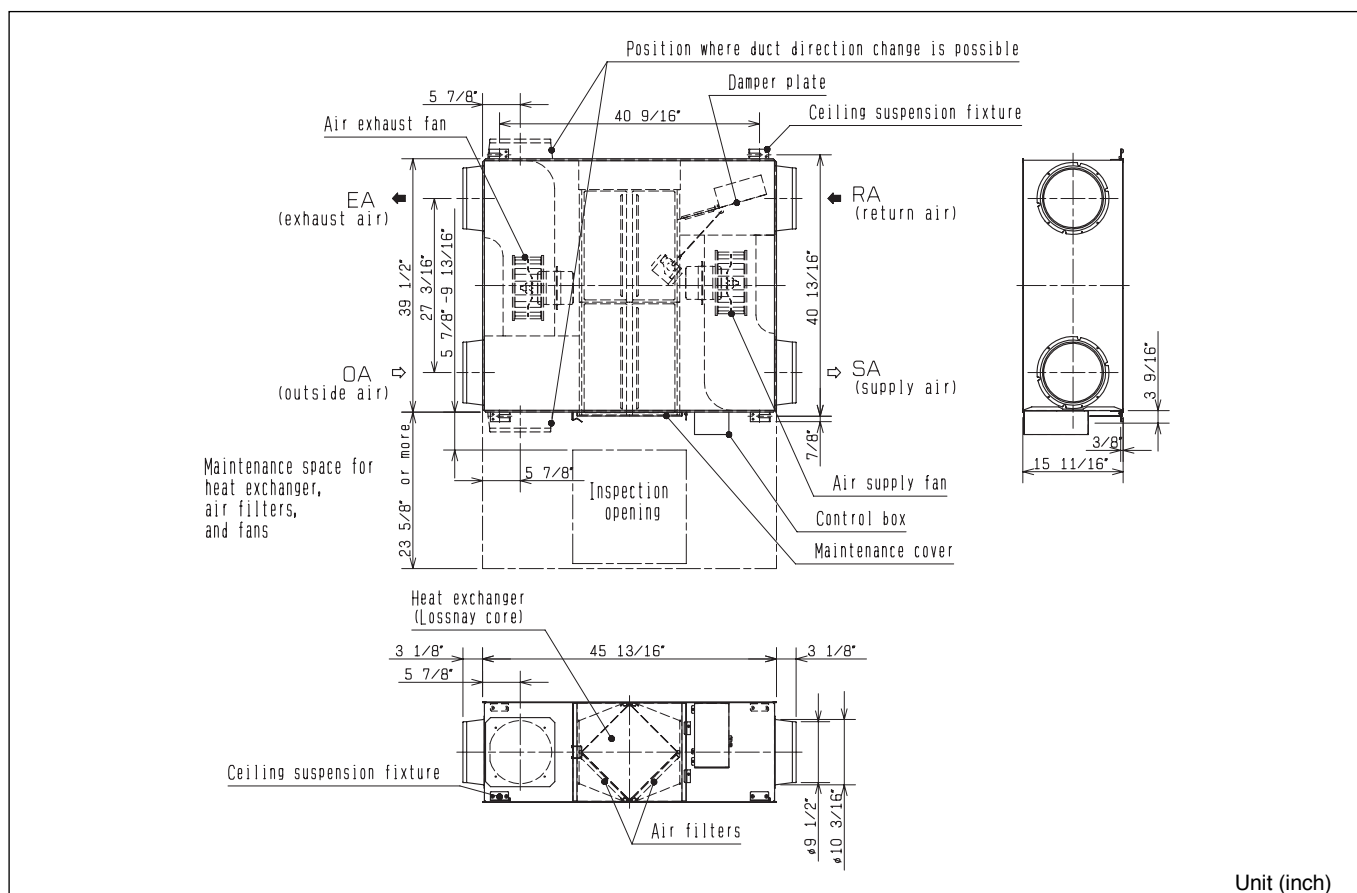
- Inspect the grounding, and repair it if incomplete.
- Make sure that the product operates correctly upon completion of repair. Clean the product as well as the surrounding area, and then notify the customer of the completion of repair.

# 1. Specifications

MODEL	LGH-F470RX3-E						
Control signal	Serial single communication (M-NET transmission)						
Heat exchange system	Air-to-air total heat (sensible heat + latent heat) exchange						
Heat exchanger material	Partition, spacing plate-special treated paper						
Cladding	Galvanized steel sheet						
Heat insulating material	Self-extinguishing urethane foam						
Motor	Totally enclosed capacitor permanent split-phase induction motor, 4 poles, 2 units						
Blower	9 5/8in. dia. centrifugal fan						
Operating environment (Supply air)	14°F to 104°F, RH 80% or less (5°F (※1) to 104°F, RH 80% or less) This environment is the general condition in air-conditioned room						
Functions	Lossnay ventilation/Bypass ventilation High(Extra high)-Low switching						
Weight	143 lbs						
Power supply	Single phase 208-230V 60Hz						
Ventilation mode	Lossnay ventilation			Bypass ventilation			
Fan speed		Extra high	High	Low	Extra high	High	Low
Current (A)		2.5-2.5	2.4-2.4	1.6-1.7	2.5-2.5	2.3-2.3	1.6-1.7
Power consumption (W)		515-560	485-525	325-375	505-545	473-510	326-370
Air volume (CFM)		470	470	330-380	470	470	330-380
External static pressure (in.H <sub>2</sub> O)		0.80-0.96	0.58-0.78	0.29-0.51	0.80-0.96	0.58-0.78	0.29-0.51
Temperature recovery efficiency (%)		69-69	69-69	73-72	—	—	—
Enthalpy recovery	Heating	62-62	62-62	66-65	—	—	—
efficiency (%)	Cooling	44-44	44-44	50-48	—	—	—
Sound level (dB)	Measured at 59in. under the center of panel	37-39	35.5-37	29.5-31.5	38.5-40.5	37-39	30.5-32.5
	Air outlets	48-50.5	45.5-48.5	38-40.5	—	—	—
Starting current	Under 5.0A or less						
Insulation resistance	10MΩ or more (DC500V megger)						
Dielectric strength	AC 1500V 1 minute						

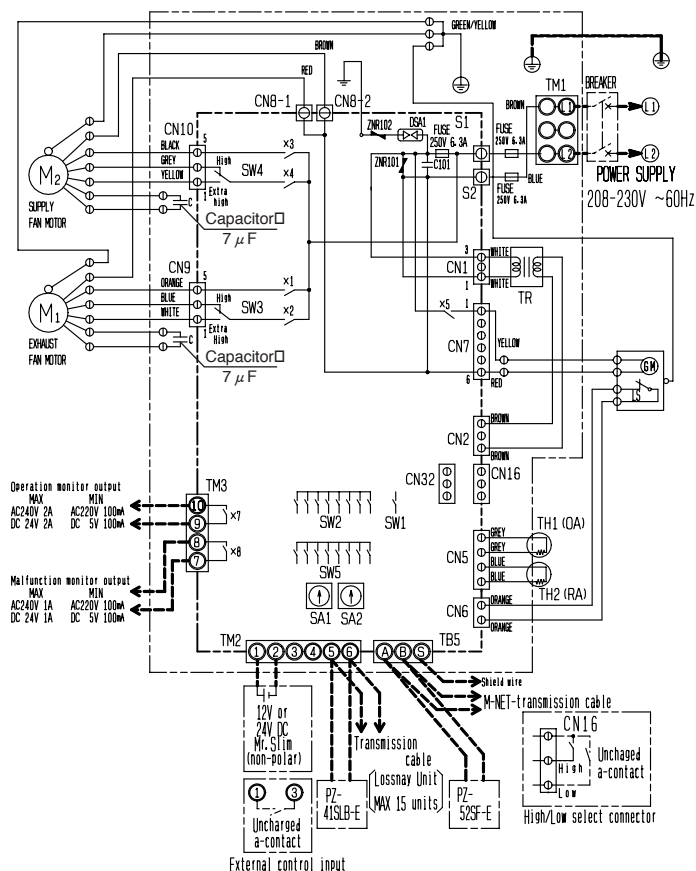
※The defrosting mode must be operated under 14°F or below.  
(Air supply fan drives 60 min.ON/10 min. OFF)

# 2. Dimensions



### 3. Wiring diagrams

- \* Connect the wires shown as dotted lines.
- \* Be sure to connect the grounding wire.
- \* Breaker should be provided by the customer.



MARK ○ : Indicates terminal block  
① : Connector  
Ⓜ : Board insertion connector or fastening connector of control board

Symbol explanation			
M1:	Motor for exhaust fan	X8:	Relay contact (For mal-function monitor output)
M2:	Motor for supply fan	CN1:	Connector
C:	Capacitor		(Transformer primary)
GM:	Motor for Bypass move- ment	CN2:	Connector
LS:	Microswitch		(Transformer secondary)
TH1:	Thermistor for outside air	CN5:	Connector
TH2:	Thermistor for return air		(Thermistor)
SW1:	Switch (Main/Sub change)	CN6:	Connector
SW2,5:	Switch (Function selec- tion)		(Microswitch)
SW3:	High/E.High select switch (Exhaust fan)	CN7:	Connector (Motor for Bypass operation)
SW4:	High/E.High select switch (Supply fan)	CN8-1:	Tab connector (Fan motor)
TM1:	Terminal block (Power supply)	CN8-2:	Tab connector (Fan motor)
TM2:	Terminal block (Transmission cable and external control input)	CN9:	Connector (Fan motor)
TM3:	Terminal block (Monitor output)	CN10:	Connector (Fan motor)
TB5:	Terminal block (M-NET Transmission cable)	CN16:	Connector (High/Low switch)
S1,S2:	Connector (Power sup- ply)	CN32:	Connector (Remote control selection)
TR:	Control circuit trans- former	SA1:	Address setting rotary switch (10 digit)
X7:	Relay contact (For opera- tion monitor output)	SA2:	Address setting rotary switch (1 digit)
		LED1:	Inspection indicator lamp
		LED2:	Inspection indicator lamp
		LED4:	Power supply indicator lamp
		LED6:	M-NET indicator lamp

- PZ-41SLB-E and PZ-52SF-E cannot be used simultaneously.

## 4. Troubleshooting

Precautions when diagnosing malfunctions:

- When servicing, be sure to recreate the malfunction 2 to 3 times before initiating repairs.
  - When servicing always keep proper footing. Make sure that the outlet is disconnected from the wall, or the breaker is off when removing the casing or mounting or removing the parts of the unit.
  - Always connect the power wire properly.
  - When removing a transformer or printed circuit board, make sure the breaker is off.
  - When removing the circuit board, always hold it at both ends and remove carefully so as not to apply force to the surface mounted parts.
  - When removing the circuit board, be careful of the metal edges on the board.
  - When inserting or extracting pin connectors on the circuit board, hold the entire housing. Do not pull on the lead wires.
  - If a malfunction of the printed circuit board is suspected, check for any broken copper-printed pattern, burnt or discolored parts.
  - If the printed circuit board is replaced, make sure that the switch settings on the replaced board are the same as the old one.
- \* The names of the parts indicated are compatible with those listed under the "Name of part" in the chapter "Parts list".

### 4-1 Service Flow

Confirmation items

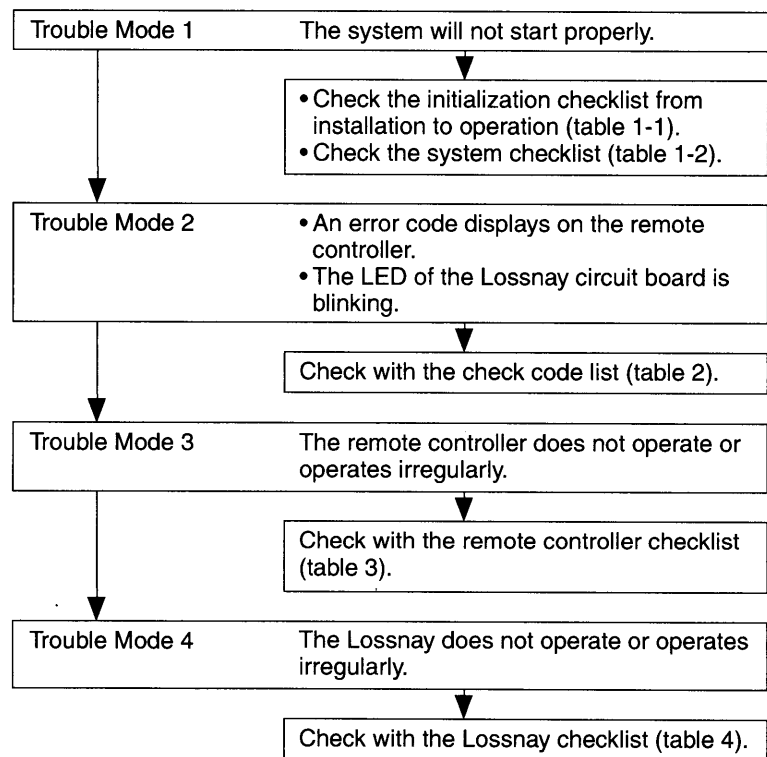
- ① Condition of trouble – remote controller display, etc.
- ② Frequency of trouble – date of start of operation and occurrence
- ③ Occurrence timing
- ④ Existence of drawings, equipment (including controllers and equipment sold separately), cables, wiring, and settings.

Applicable models

Lossnay  
LGH-F470RX<sub>3</sub>-E

Remote controller

PZ-41SLB-E  
PZ-52SF-E



## Error List

Classification	Error item	Measures taken by Lossnay	Remote controller display error code	LED 1 (green) Display (No. of blinks)	LED 2 (red) Display (No. of blinks)	Error monitor output	Cancellation measures			
							Reset power supply	Change address	Stop ↓ Start	Error delete
Unit error	Fan motor operation device error	• Cancellation	4000/4116 *1)	2 times	—	○	○	○	—	○
	Damper motor error	• Cancel damper operation • Other controls as normal	3602	3 times	—	○	○	○	○	—
	OA temperature sensor error	• Lossnay ventilation fixed (for “Auto” modes) • Other controls as normal	5101	4 times	—	○	○	○	—	○
	RA temperature sensor error	• Lossnay ventilation fixed (for “Auto” modes) • Other controls as normal	5102	5 times	—	○	○	○	—	○
	Test operation	• Fan: High speed • Lossnay ventilation fixed	0900	—	—	—	—	—	—	—
Communication error	Dual address	—	6600	—	6 times	○	○	○	○	—
	No ACK	—	6607	—	—	—	○	○	—	○
	No response	—	6608	—	—	—	○	○	—	○
	Controller communication error	• Cancellation	6607/6608	—	8 times	○	○	○	—	○
	Communication circuit error	—	6602/6603/ 6604	—	1 - 5 times	○	○	○	—	○
	Polarity not set	—	—	—	LED 6 turn off	—	○	○	—	○
	PZ-41SLB-E communication error	• Cancellation	6608	9 times	—	○	○	—	—	○

\*1) “4000” is displayed on PZ-41SLB-E only.

## 4-2 Items to Check

### (1) Trouble Mode 1: The system will not start properly.

Initialization checklist from installation to operation (Table 1-1)

After checking the system, check the points below up to operation.

No.	Checkpoint
1	Do the capacity of the main power supply on/off unit and wiring span meet specification?
2	Is the specified power supplied to the Lossnay power terminal (TM1)?
3	Is the wiring length of the transmission cable within specifications? When using PZ-41SLB-E: Overall extension within 1640 ft When using M-NET: Maximum power supply length within 656 ft, maximum distance between ends within 1640 ft
4	Does the transmission cable meet regulations? (Type, diameter)
5	Is the transmission cable wired at least 2 inch away from the power supply cable?
6	Are multiple transmission or signal cables wired to the same power cable duct?
7	Are multiple transmission cables wired with multi core cables?
8	Is the transmission cable connected to the terminal unit? (PZ-41SLB-E to TM2 ⑤, ⑥; M-NET to TB5 ①, ②)
9	Is the transmission cable securely connected to the Lossnay terminal unit?
10	When not using M-NET If using 1 Lossnay unit, is the Main/Sub change switch (SW1) on the Lossnay circuit board set to "Main"? If using 2 or more Lossnay units, is the Main/Sub switch set to "Main" on only one unit, and the other units are set to "Sub"?
11	When using M-NET Is the address switch on the Lossnay circuit board (SA1, SA2) set to the correct number?
12	When using external control input Do the specifications of the external signal match specifications of signals that can be input to the Lossnay?
13	When the external input signal is a pulse signal Is the pulse input switch (SW2-2) on the Lossnay circuit board set to ON?
14	When the external signal is 12V DC, 24V DC, or Mr. Slim (A-control) signal Is it connected to ①, ② on the Lossnay external control input terminal unit (TM2)?
15	When the external signal is an uncharged a-contact signal Is it connected to ①, ③ on the Lossnay external control input terminal unit (TM2)?
16	When M-NET is not being used Is the external input signal connected to the Lossnay set to "Main"?
17	Is the signal cable length within wiring specifications? 12V DC, 24V DC signal: Within limitation of the external device Uncharged a-contact signal: Within 1640 ft Mr. Slim (A-control) signal: Within 1640 ft
18	Is the signal cable wired at least 5 cm away from the power supply cable?
19	Is the output capacity of the Lossnay operation monitor/error monitor within specifications? Operation monitor output: Maximum 240V AC/24V DC 2A, minimum 220V AC/5V DC 100 mA Error monitor output: Maximum 240V AC/24V DC 1A, minimum 220V AC/5V DC 100 mA
20	Are the power supply cable, transmission cable, signal cable, etc., securely connected to the proper terminals?
21	Are the settings for the Mai/Sub switch, address switch, and function select switch correct?



## System checklist

① Use this checklist when using a PZ-41SLB-E or an external device (Table 1-2-1)

No.	Symptom	Cause	Corrective action
1	Remote controller display does not appear.	<ul style="list-style-type: none"> <li>○ Power is not supplied to the Lossnay, or power outside specifications is connected.</li> <li>○ When using only 1 Lossnay, the Main/Sub switch (SW1) on the Lossnay circuit board is set to "Sub."</li> <li>○ The overall wiring length of the transmission cable is longer than specifications (longer than 1640 ft).</li> <li>○ The remote controller is connected to TB5 (M-NET transmission cable).</li> <li>○ PZ-52SF-E is connected to the Lossnay local remote controller.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the power supply to the Lossnay.</li> <li>○ Set the Main/Sub (SW1) switch to "Main."</li> <li>○ Check the length of the transmission cable wiring.</li> <li>○ Connect the transmission cable to TM2 ⑤,⑥.</li> <li>○ Change to the PZ-41SLB-E remote controller.</li> </ul>
2	Remote controller does not operate (Communication error display)	<ul style="list-style-type: none"> <li>○ When using multiple Lossnay units, the Main/Sub switch (SW1) on the Lossnay circuit board of the second or following unit is set to "Main."</li> <li>○ The overall wiring length of the transmission cable is longer than specifications (longer than 1640 ft).</li> <li>○ Multiple transmission cables are wired with multi core cables.</li> </ul>	<ul style="list-style-type: none"> <li>○ Set the Main/Sub switch (SW1) of the second and following Lossnay units to "Sub."</li> <li>○ Check the length of the transmission cable wiring.</li> <li>○ For the applied transmission cable, wire the transmission cables away from the other transmission cable.</li> </ul>
3	Interlocked operation with external device does not occur.	<ul style="list-style-type: none"> <li>○ The type of external signal does not match the connected terminal unit (charged, uncharged, Mr. Slim signal).</li> <li>○ The type of external signal does not match the pulse input switch (SW2-2) setting (level signal, pulse signal).</li> <li>○ The external device signal is not being input.</li> <li>○ The external device and signal cable wiring is longer than specifications.</li> <li> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> 12V DC, 24V DC: Uncharged a-contact: Mr. Slim signal: </div> <div> Longer than limitations of external device Longer than 1640 ft Longer than 1640 ft </div> </div> </li> <li>○ The Delayed Start mode is set at the remote controller (PZ-41SLB-E).</li> <li>○ The ON Interlocked Operation mode or OFF Interlocked Operation mode is set at the remote controller (PZ-41SLB-E).</li> <li>○ When using multiple Lossnay units, the external control input signal is connected to a unit with the "Sub" setting made.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the connection to the external control input terminal (TM2) for the type of external signal.</li> <li>○ Check the type of external signal and the setting of the pulse input switch (SW2-2).</li> <li>○ Check the external device.</li> <li>○ Check the length of the signal cable wiring.</li> <li>○ Check the Delayed Start mode setting at the remote controller (PZ-41SLB-E).</li> <li>○ Check the Interlocked Operation mode setting at the remote controller (PZ-41SLB-E).</li> <li>○ Connect the external control input signal to the Lossnay unit set to "Main."</li> </ul>

②System checklist when using the M-NET (Table 1-2-2)

No.	Symptom	Cause	Corrective action
1	Does not interlock with City Multi. (The Lossnay cannot be operated by the ventilation switch on the ME remote controller, MA remote controller, or MELANS.)	<ul style="list-style-type: none"> <li>○ The Lossnay is not set for interlocked operation, or is set for interlocked operation at the wrong address.</li> <li>○ The length of the M-NET transmission cable wiring from the outdoor unit or the system's overall wiring length is longer than specifications. (Longer than 656 ft from the outdoor unit, longer than 1640 ft between ends.)</li> <li>○ PZ-41LSB-E is connected to the Lossnay local remote controller.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the Lossnay address, and set for an address corresponding to interlocked operation.</li> <li>○ Check the length of the transmission cable wiring.</li> <li>○ Change to the PZ-52SF-E remote controller (PZ-41SLB-E can not be used with the M-NET).</li> </ul>
2	Cannot operate using the MELANS or Lossnay remote controller.	<ul style="list-style-type: none"> <li>○ The address that has been set for the group in MELANS and the address for the Lossnay are different.</li> <li>○ The length of the M-NET transmission cable wiring from the power supply unit or the system's overall wiring length is longer than specifications. (Longer than 656 ft from the power supply unit, longer than 1640 ft between ends.)</li> <li>○ PZ-41LSB-E is connected to the Lossnay local remote controller.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the registered address in MELANS.</li> <li>○ Check the length of the transmission cable wiring.</li> <li>○ Change to the PZ-52SF-E remote controller (PZ-41SLB-E can not be used with a M-NET system).</li> </ul>
3	A unit should operate independently by MELANS or the Lossnay remote controller, but it interlocks with another City Multi unit.	<ul style="list-style-type: none"> <li>○ It has been set for interlocked operation with the City Multi unit.</li> </ul>	<ul style="list-style-type: none"> <li>○ Cancel the interlocked operation setting.</li> </ul>
4	Cannot perform group settings for the Lossnay using MELANS, ME remote controller, or MA remote controller. (The remote controller shows "88" at the time of registration.)	<ul style="list-style-type: none"> <li>○ Power is not supplied to the Lossnay, or power outside specifications is connected.</li> <li>○ The M-NET transmission cable is connected to TM2 ⑤,⑥.</li> <li>○ The transmission cable is not properly connected to the MELANS or the City Multi.</li> <li>○ The length of the transmission cable wiring is longer than specifications (longer than maximum 656 ft from the power supply unit, longer than 1640 ft between ends.)</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the power for the Lossnay and perform the registration again.</li> <li>○ Connect the transmission cable to TB5 ④, ⑤.</li> <li>○ Check the transmission cable connection.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
5	When power is supplied to the system, the Lossnay remote controller continues to display "HO" and does not start. (Group registration information disappears.)	<ul style="list-style-type: none"> <li>○ The Group setting was made on a Lossnay remote controller in a system connected to a centralised controller MELANS.</li> <li>○ The length of the transmission cable wiring is longer than specifications (longer than maximum 656 ft from the power supply unit, longer than 1640 ft between ends.)</li> </ul>	<ul style="list-style-type: none"> <li>○ In a system connected to MELANS, make the group setting with the MELANS (Do not make the group setting with the Lossnay remote controller).</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
6	When power is supplied to the system, the remote control display goes blank and the system does not start.	<ul style="list-style-type: none"> <li>○ Over the number of units that can be controlled with the Lossnay remote controller.</li> <li>○ The length of the transmission cable wiring is longer than specifications (longer than maximum 656 ft from the power supply unit, longer than 1640 ft between ends.)</li> </ul>	<ul style="list-style-type: none"> <li>○ Check remote control unit number limitations when using a power supply unit</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>

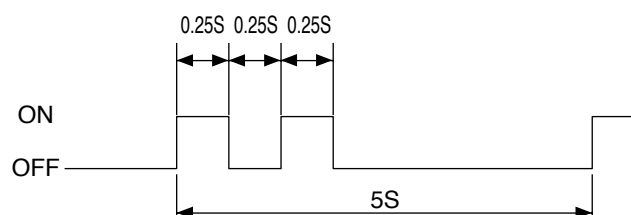
No.	Symptom	Cause	Corrective action
7	The power display “●” does not display when power is supplied to the system.	① When using City Multi and Lossnay interlocked system (connected to the indoor unit system) <ul style="list-style-type: none"> <li>○ The transmission cable is not correctly connected to the Lossnay remote controller.</li> <li>○ The power is not turned on for the outdoor unit.</li> <li>○ The length of wiring for the outdoor unit's M-NET transmission cable is longer than specification (longer than 656 ft).</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the transmission cable connection.</li> <li>○ Check the power to the outdoor unit.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
		② When using a Lossnay individual system or City Multi and Lossnay interlocked system connected to the central system. <ul style="list-style-type: none"> <li>○ The power supply unit is not connected to the transmission cable.</li> <li>○ The power to the power supply unit is not turned on.</li> <li>○ The length of wiring of the M-NET transmission cable from the power supply unit is longer than specification (longer than 656 ft).</li> </ul>	<ul style="list-style-type: none"> <li>○ Connect to the power supply unit.</li> <li>○ Check the power to the power supply unit.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
8	The “HO” on the remote controller continues to flash when the power is supplied to the system.	<ul style="list-style-type: none"> <li>○ Lossnay is Not supplied with specified power.</li> <li>○ The address for the Lossnay remote controller does not have a group setting at the MELANS.</li> <li>○ The M-NET transmission cable is connected to TM2 ⑤, ⑥.</li> <li>○ For a Lossnay individual system with no MELANS, Lossnay registration has not been performed by the Lossnay remote controller.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the power to the Lossnay.</li> <li>○ Check the Lossnay remote controller address registration with the MELANS (“HO displays for 3 – 10 minute when electricity is supplied to the system).</li> <li>○ Connect the transmission cable to TB5 ①, ②.</li> <li>○ Check the Lossnay registration with the Lossnay remote controller.</li> </ul>
9	“LC 6608” displays on the remote controller and the Lossnay does not operate.	<ul style="list-style-type: none"> <li>○ The remote controller is PZ-41LSB-E and connected to the TB5 ①, ②.</li> </ul>	<ul style="list-style-type: none"> <li>○ Change to the PZ-52SF-E remote controller (PZ-41SLB-E can not be used with a M-NET system).</li> </ul>
10	The operation specified by the centralised controller differs from the operation of the Lossnay.	<ul style="list-style-type: none"> <li>○ The remote controller is PZ-41SLB-E and connected to the TM2 ⑤, ⑥.</li> </ul>	<ul style="list-style-type: none"> <li>○ Change to the PZ-52SF-E remote controller (PZ-41SLB-E can not be used with a M-NET system).</li> </ul>

## (2) Trouble Mode 2

●An error code displays on the remote controller.

●The LED of the Lossnay circuit board is blinking.

An error code displayed on the remote controller (PZ-41SLB-E, PZ-52SF-E) or the M-NET controller and blinking or illumination of LED1 (green) or LED2 (red) on the circuit board shows the type of error. The LED blink interval is 0.25 seconds for both on and off. The display duration is approximately 5 seconds.



Error display example: Fan motor operation device error

① Checklist of error codes displayed on the PZ-41SLB and LED displays (Table 2-1)

Error code	LED1 (green)	LED 2 (red)	Symptom	Cause	Corrective action
LC 6608	—	—	Lossnay communication error	<ul style="list-style-type: none"> <li>○ When using multiple Lossnay units, the main/sub setting has not been made for the second unit and following units.</li> <li>○ Multiple transmission cables have been wired using multi core wires.</li> <li>○ Transmission cable and power cable are too close.</li> <li>○ Transmission cable is not securely connected.</li> <li>○ The length of wiring of the transmission cable is longer than specification (longer than 1640 ft).</li> </ul>	<ul style="list-style-type: none"> <li>○ Turn off the main power supply and set the Main/Sub switch (SW1) (first unit to main, second and following units to sub).</li> <li>○ Wire the transmission cable away from the other transmission cable.</li> <li>○ Wire the transmission cable at least 2 inch away from the power supply cable.</li> <li>○ Check the transmission cable connection.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
RC6608 SRC 6608	—	—	Communication error between remote controllers (when 2 remote controllers are connected)	<ul style="list-style-type: none"> <li>○ Multiple transmission cables have been wired using multi core wires.</li> <li>○ Transmission cable and power supply cable are too close.</li> <li>○ Transmission cable is not securely connected.</li> <li>○ The length of wiring of the transmission cable is longer than specification (longer than 1640 ft).</li> </ul>	<ul style="list-style-type: none"> <li>○ Wire the transmission cable away from the other transmission cable.</li> <li>○ Wire the transmission cable at least 2 inch away from the power supply cable.</li> <li>○ Check the transmission cable connection.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
LC 0900 SLC 0900	—	—	Lossnay trial operation	<ul style="list-style-type: none"> <li>○ Trial operation switch on the Lossnay circuit board (SW 2-1 or SW 2-3) is set to ON board.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the test operation switch.</li> </ul>
LC 4000 SLC 4000	2 blinks	—	Fan motor operation device error	<ul style="list-style-type: none"> <li>○ Lossnay fan will not stop.</li> </ul>	<ul style="list-style-type: none"> <li>○ Replace the table.</li> </ul>
LC 3602 SLC 3602	3 blinks	—	Damper related error	<ul style="list-style-type: none"> <li>○ Damper board operation is not correct.</li> <li>○ Connectors for the damper unit are not correctly connected.</li> </ul>	<ul style="list-style-type: none"> <li>○ Remove the load and check or move the damper board by hand.</li> <li>○ Check the connection of the lead wire's connectors and the circuit connector.</li> </ul>
LC 5101 SLC 5101	4 blinks	—	OA thermistor related error	<ul style="list-style-type: none"> <li>○ Connectors for the thermistor are not correctly connected.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the connection of the lead wires connectors and the circuit connector.</li> </ul>
LC 5102 SLC 5102	5 blinks	—	RA thermistor related error	<ul style="list-style-type: none"> <li>○ Connectors for the thermistor are not correctly connected.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the connection of the lead wires connectors and the circuit connector.</li> </ul>
---	9 blinks	—	Remote controller communication error	<ul style="list-style-type: none"> <li>○ Multiple transmission cables have been wired using multi core wires.</li> <li>○ Transmission cable and power supply cable are too close.</li> <li>○ Transmission cable is not securely connected.</li> <li>○ The length of wiring of the transmission cable is longer than specification (longer than 1640 ft).</li> </ul>	<ul style="list-style-type: none"> <li>○ Wire the transmission cable away from the other transmission cable.</li> <li>○ Wire the transmission cable at least 2 inch away from the power supply cable.</li> <li>○ Check the transmission cable connection.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
"Filter" blinking	—	—	Warning to clean air filter by cumulative operation time	<ul style="list-style-type: none"> <li>○ Interval for cleaning Lossnay air filter has elapsed.</li> </ul>	<ul style="list-style-type: none"> <li>○ After cleaning the air filter press the "Filter" button on the remote controller 2 times.</li> </ul>
"HO" blinking	blinking	—	System is starting	<ul style="list-style-type: none"> <li>○ LED1 blinks at 1 second intervals during starting operation (maximum of 45 seconds.)</li> </ul>	<ul style="list-style-type: none"> <li>○ There is no error.</li> </ul>

\* LC: Lossnay set to Main SLC: Lossnay set to Sub RC, SRC: remote controller (PZ-41SLB-E)

② Checklist of error codes displayed on the PZ-52SF-E, M-NET controllers, and LED displays (Table 2-2)

Error code	LED1 (green)	LED 2 (red)	Symptom	Cause	Corrective action
6600	—	6 blinks	Multiple address error	<input type="radio"/> There is another unit with the same address setting.	<input type="radio"/> Check the addresses of devices in the system.
6607 6608	—	8 blinks	No ACK error  No answer error (M-NET communication error)	<input type="radio"/> Power supply to Lossnay is not turned on. <input type="radio"/> Lossnay address was changed. <input type="radio"/> Multiple transmission cables have been wired using multi core wires. <input type="radio"/> Transmission cable is not securely connected. <input type="radio"/> The length of wiring of the transmission cable is longer than specifications (longer than maximum 656 ft from the power supply unit, longer than 1640 ft between ends).	<input type="radio"/> Check the power to the Lossnay. <input type="radio"/> Check the Lossnay address. <input type="radio"/> Wire the transmission cable away from the other transmission cable. <input type="radio"/> Check the transmission cable connection. <input type="radio"/> Check the length of the transmission cable wiring.
0900	—	—	Lossnay trial operation	<input type="radio"/> Trial operation switch on the Lossnay circuit board (SW 2-1 or SW 2-3) is set to ON.	<input type="radio"/> Check the trial operation switch.
4116	2 blinks	—	Fan motor operation device error	<input type="radio"/> Lossnay fan will not stop.	<input type="radio"/> Replace the table.
3602	3 blinks	—	Damper related error	<input type="radio"/> Damper board operation is not correct. <input type="radio"/> Connectors for the damper unit are not correctly connected.	<input type="radio"/> Remove the load and check or move the damper board by hand. <input type="radio"/> Check the connection of the lead wires connectors and the circuit connector.
5101	4 blinks	—	OA thermistor related error	<input type="radio"/> Connectors for the thermistor are not correctly connected.	<input type="radio"/> Check the connection of the lead wires connectors and the circuit connector.
5102	5 blinks	—	RA thermistor related error	<input type="radio"/> Connectors for the thermistor are not correctly connected.	<input type="radio"/> Check the connection of the lead wires connectors and the circuit connector.
6602 6603 6604	—	1 - 5 blinks	Communication circuit section error	<input type="radio"/> Error with transmission cable. <input type="radio"/> Controller where error originally occurred is defective. <input type="radio"/> Lossnay board is defective.	<input type="radio"/> Check transmission cable relations. <input type="radio"/> Check the controller where the error occurred. <input type="radio"/> Replace the circuit board.
---	—	Lit	No M-NET connection information	<input type="radio"/> Lossnay does not have Group setting (registration) made.	<input type="radio"/> Check the Lossnay address and confirm that the group setting is made.
Filter blinking	—	—	Warning to clean air filter by cumulative operation time	<input type="radio"/> Interval for cleaning Lossnay air filter has elapsed.	<input type="radio"/> After cleaning the air filter press the "Filter" button on the remote controller 2 times.
---	Lit	—	In delayed start operation	<input type="radio"/> Delayed start operation is set at the function select switch (SW 5-1) on the Lossnay circuit board.	<input type="radio"/> There is no error.
---	LED6 (red) off		No power to M-NET transmission cable	<input type="radio"/> Power supply is not supplied to the M-NET transmission cable.  <input type="radio"/> Wiring length of the transmission cable is from the power supply unit or the outdoor unit is longer than specification (maximum extension 656 ft).	<input type="radio"/> Check the connection of the power supply unit, outdoor unit and transmission cable.  <input type="radio"/> Check the length of the transmission cable wiring.

\* The letters "LC" that display with the error code show a Lossnay unit type, and the number in the third column shows the address.

### (3) Trouble Mode 3: The remote controller does not operate or operates irregularly.

#### ① Checklist for when using the PZ-41SLB-E (Table 3-1)

No.	Symptom	Cause	Corrective action
1	Nothing displays on the LCD.	<ul style="list-style-type: none"> <li>○ Transmission cable is connected to the wrong terminal</li> <li>○ No Lossnay is set to "Main."</li> <li>○ Power supply to the Lossnay is not turned on.</li> <li>○ Lossnay is connected to a power supply with a rating outside specification.</li> <li>○ Transmission cable is not securely connected.</li> <li>○ The length of wiring of the transmission cable is longer than specification (longer than 1640 ft).</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the transmission cable connection (connected to ⑤, ⑥ of terminal unit TM2 on the Lossnay board).</li> <li>○ Turn off the main power supply and set the Main/Sub switch (SW1) (first unit to main, second and following units to sub).</li> <li>○ Check the power supply to the Lossnay.</li> <li>○ Check the power supply.</li> <li>○ Check the transmission cable connection.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>
2	Starts or stops, or the display changes, by itself.	<ul style="list-style-type: none"> <li>○ Multiple transmission cables have been wired using multi core wires.</li> <li>○ Transmission cable and power supply cable are too close.</li> </ul>	<ul style="list-style-type: none"> <li>○ Wire the transmission cable away from the other transmission cable.</li> <li>○ Wire the transmission cable at least 5 cm away from the power supply cable.</li> </ul>
3	Displays a error code that is not in the check list.	<ul style="list-style-type: none"> <li>○ Letters on the remote controller LCD are dim.</li> <li>○ The release of the Delay Start button or the Filter Reset button is not good.</li> </ul>	<ul style="list-style-type: none"> <li>○ Replace the remote control.</li> <li>○ Replace the remote control.</li> </ul>
4	Cannot stop the Lossnay with the remote controller (display shows "Interlocked").	<ul style="list-style-type: none"> <li>○ External priority ON/OFF setting is made.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the interlocked operation mode setting.</li> </ul>
5	Cannot switch fan speed with the remote controller.	<ul style="list-style-type: none"> <li>○ High/Low change input (CN16) is ON.</li> <li>○ The function select switch (SW2-4.5) on the Lossnay circuit has the fixed high or fixed low speed set.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the High/Low change input (CN16).</li> <li>○ Check the function select switch (SW 2-4.5)</li> </ul>
6	Lossnay operates when the main power supply turns on and the remote controller displays.	<ul style="list-style-type: none"> <li>○ Main power supply was cut during Lossnay operation.</li> </ul>	<ul style="list-style-type: none"> <li>○ Stop the Lossnay with the remote controller, then wait at least 10 second and turn off the main power supply .</li> </ul>

#### ② Checklist for when using PZ-52SF-E (Table 3-2)

No.	Symptom	Cause	Corrective action
1	Nothing displays on the LCD.	<ul style="list-style-type: none"> <li>○ Transmission cable is connected to the wrong terminal</li> <li>○ There is no power supply unit (for Lossnay only systems).</li> <li>○ The power supply unit is not turned on.</li> <li>○ Transmission cable is not securely connected.</li> <li>○ Wiring length of the transmission cable is from the power supply unit or the outdoor unit is longer than specifications (maximum extension 656 ft).</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the transmission cable connection (connected to ① , ② of terminal unit TB5 on the Lossnay board).</li> <li>○ Install the power supply unit.</li> <li>○ Check the power to the power supply unit.</li> <li>○ Check the transmission cable connection.</li> <li>○ Check the length of the transmission cable wiring.</li> </ul>

No.	Symptom	Cause	Corrective action
2	Displays "HO" and does not start.	<ul style="list-style-type: none"> <li><input type="radio"/> It is less than 10 minutes since the power was supplied to the system.</li> <li><input type="radio"/> Group setting (registration) has not been made.</li> <li><input type="radio"/> Remote control address has not been registered in the group setting by the centralised controller.</li> <li><input type="radio"/> Power supply to the Lossnay is not turned on.</li> <li><input type="radio"/> Lossnay is connected to a power supply with a rating outside specification.</li> <li><input type="radio"/> Lossnay transmission cable connection terminal is wrong.</li> <li><input type="radio"/> Lossnay address was changed.</li> <li><input type="radio"/> Lossnay board was changed.</li> <li><input type="radio"/> The length of wiring of the transmission cable is longer than specifications (longer than maximum 656 ft from the power supply unit, longer than 1640 ft between ends).</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> After supplying power to the system, HO blinks for a maximum of about 10 minutes. (This is not an error.)</li> <li><input type="radio"/> Make the group setting (registration). If using a system with a centralised controller, register at the centralised controller. If there is only the Lossnay remote controller, register at the remote controller.</li> <li><input type="radio"/> Check the group setting at the MELANS.</li> <li><input type="radio"/> Check the power supply to the Lossnay.</li> <li><input type="radio"/> Check the power supply.</li> <li><input type="radio"/> Check the transmission cable connection (connected to ①, ② of terminal unit TB5 on the Lossnay board).</li> <li><input type="radio"/> Check the Lossnay address.</li> <li><input type="radio"/> If the board has been replaced, reset the group settings.</li> <li><input type="radio"/> Check the length of the transmission cable wiring.</li> </ul>
3	Cannot register the Lossnay from the remote controller or the controller.	<ul style="list-style-type: none"> <li><input type="radio"/> Power supply to the Lossnay is not turned on.</li> <li><input type="radio"/> Lossnay is connected to a power supply with a rating outside specification.</li> <li><input type="radio"/> Transmission cable to the Lossnay is not connected.</li> <li><input type="radio"/> Lossnay transmission cable connection terminal is wrong.</li> <li><input type="radio"/> Lossnay address is wrong.</li> <li><input type="radio"/> The length of wiring of the transmission cable is longer than specifications (longer than maximum 656 ft from the power supply unit, longer than 1640 ft between ends).</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the power supply to the Lossnay</li> <li><input type="radio"/> Check the power supply.</li> <li><input type="radio"/> Check the transmission cable connection.</li> <li><input type="radio"/> Check the transmission cable connection (connected to ①, ② of terminal unit TB5 on the Lossnay table).</li> <li><input type="radio"/> Check the Lossnay address.</li> <li><input type="radio"/> Check the length of the transmission cable wiring.</li> </ul>
4	Starts or stops, or the display changes, by itself.	<ul style="list-style-type: none"> <li><input type="radio"/> Set for interlocked operation with City Multi.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Cancel interlocked operation setting.</li> </ul>
5	Displays a error code that is not in the checklist.	<ul style="list-style-type: none"> <li><input type="radio"/> Letters on the remote controller LCD are dim.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Replace the remote controller.</li> </ul>
6	Cannot stop the Lossnay with the remote controller (display shows "Central").	<ul style="list-style-type: none"> <li><input type="radio"/> "Cancel Operation" setting is made from the MELANS.</li> <li><input type="radio"/> External priority ON/OFF setting is made.</li> <li><input type="radio"/> Remote/nearby switch input (CN32) is set to "Remote."</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the settings of the MELANS.</li> <li><input type="radio"/> Check the interlocked operation mode setting.</li> <li><input type="radio"/> Check the remote/nearby change input (CN32).</li> </ul>

#### (4) Trouble Mode 4: The Lossnay does not operate or operates irregularly.

① Lossnay checklist (Table 4).

No.	Symptom	Cause	Corrective action
1	The fan does not operate. The fan does not operate normally.	<ul style="list-style-type: none"> <li>○ Connectors for the fan connection or connectors for the control circuit section connection are not secure.</li> <li>○ Power supply is not supplied to the Lossnay, or power outside specifications is connected.</li> <li>○ Lossnay group setting is not made by using the M-NET. (LED2 lights)</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the lead wire connectors and the control circuit section connectors.</li> <li>○ Check the power supply</li> <li>○ Check the Lossnay address and the group setting (LED2 lights when not using M-NET. This is no error.)</li> </ul>
2	Interlocked operation with external device (air conditioner) does not occur.	<ul style="list-style-type: none"> <li>○ The type of external signal does not match the connected terminal unit (charged, uncharged, Mr. Slim signal).</li> <li>○ The type of external signal does not match the pulse input switch (SW2-2) setting (level signal, pulse signal).</li> <li>○ The external device signal is not being input.</li> <li>○ The external device and signal cable wiring is longer than specifications (12V DC, 24V DC: Longer than limitations of external device Uncharged a-contact: Longer than 1640 ft Mr. Slim signal: Longer than 1640 ft)</li> <li>○ The Delayed Start mode is set at the remote controller (PZ-41SLB-E) or the function select switch (SW 5-1) on the Lossnay circuit board.</li> <li>○ The ON Interlocked Operation mode or OFF Interlocked Operation mode is set at the remote controller (PZ-41SLB-E) or the function select switch (SW 5-7,8) on the Lossnay circuit board.</li> <li>○ When using multiple Lossnay units, the external control input signal is connected to a unit with the "Sub" setting made.</li> <li>○ In a group of multiple Lossnay units with the M-NET, the external control input signal is connected to a Lossnay unit other than the one with the smallest address.</li> <li>○ There is a communication error with the remote controller or controller.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the external signal type and the external control input terminal (TM2) connection.</li> <li>○ Check the external signal type and the pulse input switch (SW2-2) setting.</li> <li>○ Check the external device.</li> <li>○ Check the wiring length of the signal cable.</li> <li>○ Check the delayed start settings of the remote controller (PZ41SLB-E) and the function select switch (SW5-1).</li> <li>○ Check the interlocked operation mode settings of the remote controller (PZ41SLB-E) and the function select switch (SW5-7, 8).</li> <li>○ Connect the external control input signal to the Lossnay set to "Main."</li> <li>○ Connect the external control input signal to the Lossnay in the group with the lowest address.</li> <li>○ Check the remote controller or controller.</li> </ul>
3	Fan will not stop.	<ul style="list-style-type: none"> <li>○ The trial operation switch (SW 2-1) is ON.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the test operation switch (SW2-1).</li> </ul>
4	Lossnay operates when main power is turned on.	<ul style="list-style-type: none"> <li>○ The PZ-41SLB-E is being used.</li> <li>○ By using the M-NET, the power supply ON/OFF setting is set to ON at the function select switch (SW 2-6) on the Lossnay circuit board.</li> <li>○ By using the M-NET, the automatic recovery following power supply interruption (refer to page 168) setting is made at the function select switch (SW 5-4) on the Lossnay circuit board.</li> </ul>	<ul style="list-style-type: none"> <li>○ When the main power supply is turned off while the Lossnay is operating from the remote controller, the Lossnay will resume operation when the main power is turned back on (this is no error).</li> <li>○ Check the power supply ON/OFF setting of the function select switch (SW2-6).</li> <li>○ Check the automatic recovery following power supply interruption setting of the function select switch (SW5-4).</li> </ul>



No.	Symptom	Cause	Corrective action
5	Supply air fan periodically stops operating.	<ul style="list-style-type: none"> <li>○ When the outdoor air temperature is 14°F or less, operation stops after a fixed period of about 10 minutes to keep the Lossnay Core from freezing. (Cold weather area spec)</li> <li>○ When connected to a Mr. Slim or a City Multi by a duct, operation stops when the air conditioner is defrosting.</li> </ul>	<ul style="list-style-type: none"> <li>○ This is no error.</li> <li>○ This is no error.</li> </ul>
6	Takes in air from outdoors during interlocked operation with a Mr. Slim or a City Multi, but supply air fan doesn't stop operating when defrosting.	<ul style="list-style-type: none"> <li>○ The indoor unit's outside air intake selection is invalid.</li> </ul>	<ul style="list-style-type: none"> <li>○ Set the outdoor air intake selection of a indoor unit to "ON."</li> </ul>
7	The supply air fan and exhaust fan both periodically stop operating.	<ul style="list-style-type: none"> <li>○ When connected to Mr. Slim or City Multi by a duct and the function select switch (SW 5-3) on the Lossnay circuit board is ON, operation stops when the air conditioner is defrosting.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the function select switch (SW5-3).</li> </ul>
8	Fan speed will not change.	<ul style="list-style-type: none"> <li>○ The High/Low switching extermory input (CN16) is set to ON.</li> <li>○ The function select switch (SW2-4,5) on the Lossnay circuit board is set to the high fixed or low fixed fan speed.</li> <li>○ The trial operation switch (SW2-1) is turned ON.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the High/Low change input (CN16).</li> <li>○ Check the function select switch (SW2-4,5).</li> <li>○ Check the trial operation switch (SW2-1).</li> </ul>
9	Damper board does not operate.	<ul style="list-style-type: none"> <li>○ The outside air temperature is less than 46.4°F.</li> <li>○ The damper board operation is defective.</li> <li>○ The thermistor related connectors are not securely connected.</li> <li>○ The damper related connectors are not securely connected.</li> <li>○ The trial operation switch (SW2-1 or SW2-3) is turned ON.</li> <li>○ When using the remote controller to change ventilation mode, there may be a delayed start of up to 30 seconds depending on the timing.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the outdoor air temperature.</li> <li>○ Remove the load and check or move the damper board by hand.</li> <li>○ Check the connections of the lead wire connectors and the circuit connectors.</li> <li>○ Check the connections of the lead wire connectors and the control circuit connectors.</li> <li>○ Check the trial operation switch (SW2-1 or SW2-3).</li> <li>○ This is no error.</li> </ul>
10	Operation monitor output is late with regard to external control input ON/OFF.	<ul style="list-style-type: none"> <li>○ When using the PZ-41SLB-E there is a maximum delay of 7 seconds, or without using there is a maximum delay of 3 seconds.</li> </ul>	<ul style="list-style-type: none"> <li>○ This is no error.</li> </ul>
11	Operation monitor output is OFF during operation.	<ul style="list-style-type: none"> <li>○ When the function select switch (SW 5-2) on the Lossnay circuit board is ON, for operation monitor output for interlocked operation with the supply air fan, it turns OFF when the outside air is 14°F or less or when the air conditioner is defrosting.</li> </ul>	<ul style="list-style-type: none"> <li>○ Check the function select switch (SW5-2).</li> </ul>
12	Delayed start operation does not work when Delayed start is set.	<ul style="list-style-type: none"> <li>○ When using the PZ-41SLB-E, the circuit function select switch is set for delayed start.</li> </ul>	<ul style="list-style-type: none"> <li>○ Set delayed start at the remote controller (the circuit board switch is not in effect when using the PZ-41SLB-E).</li> </ul>
13	Lossnay does not operate when power is on even when the power on/off setting is made.	<ul style="list-style-type: none"> <li>○ Using the PZ-41SLB-E.</li> </ul>	<ul style="list-style-type: none"> <li>○ The power supply ON/OFF setting is not in effect when using PZ-41SLB-E.</li> </ul>
14	Interlocked operation is different from the settings.	<ul style="list-style-type: none"> <li>○ When using the PZ-41SLB-E, the circuit function select switch is set for interlocked operation.</li> </ul>	<ul style="list-style-type: none"> <li>○ Set interlocked operation at the remote controller (the circuit board switch is not in effect when using the PZ-41SLB-E).</li> </ul>

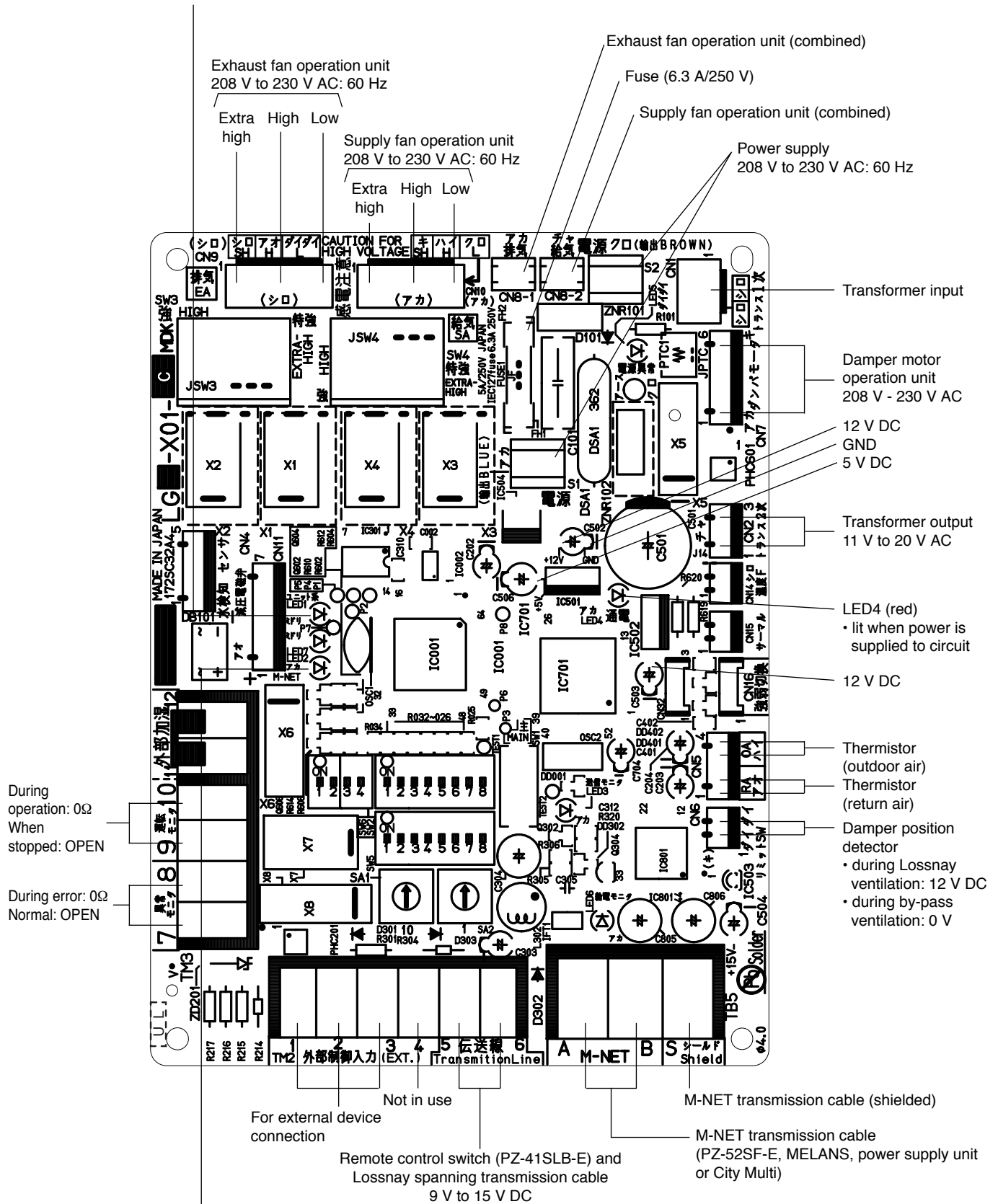
②Temperatures vs. thermistor resistance table

Temperature (°F)	Resistance value (kΩ)	Temperature (°F)	Resistance value (kΩ)	Temperature (°F)	Resistance value (kΩ)	Temperature (°F)	Resistance value (kΩ)	Temperature (°F)	Resistance value (kΩ)
-40	88.85 - ∞	19.4	17.92	46.4	9.57	73.4	5.38	100.4	3.17
⋮	⋮	21.2	17.16	48.2	9.20	75.2	5.19	102.2	3.06
-4	32.43	23	16.43	50	8.84	77	5.00	104	2.96
-2.2	30.92	24.8	15.74	51.8	8.49	78.8	4.82	105.8	2.86
-0.4	29.50	26.6	15.08	53.6	8.17	80.6	4.65	107.6	2.77
1.4	28.14	28.4	14.45	55.4	7.85	82.4	4.49	109.4	2.68
3.2	26.87	30.2	13.86	57.2	7.55	84.2	4.33	111.2	2.59
5	25.65	32	13.29	59	7.27	86	4.18	113	2.51
6.8	24.51	33.8	12.74	60.8	6.99	87.8	4.03	114.8	2.43
8.6	23.42	35.6	12.22	62.6	6.73	89.6	3.89	116.6	2.35
10.4	22.39	37.4	11.72	64.4	6.48	91.4	3.76	118.4	2.28
12.2	21.41	39.2	11.25	66.2	6.24	93.2	3.63	120.2	2.21
14	20.48	41	10.80	68	6.01	95	3.51	122	2.14
15.8	19.58	42.8	10.37	69.8	5.79	96.8	3.39	⋮	⋮
17.6	18.73	44.6	9.96	71.6	5.58	98.6	3.28	189.5	0.72 - 0

## 4-3 Circuit Test Point

LED1 (green)

- When blinking, there is an error with the Lossnay unit (number of blinks indicates the type of error).
- Blinks at 1 second intervals when starting.
- Lit during delayed start, normally off at other times.



## 5. Overhaul procedures

Precautions when overhauling the unit:

- Before replacing parts, take steps in accordance with the instructions listed in the chapter "Troubleshooting".
- When servicing, make sure that the outlet is disconnected from the wall, or the breaker is off. Exercise added care not to get an electric shock or hurt yourself when servicing.
- Make sure that the proper functioning of the unit is restored when the repair is complete.

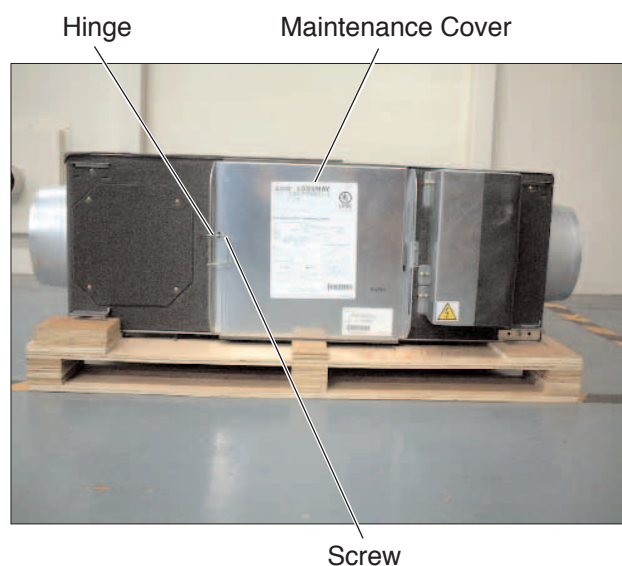
\*The names of the parts indicated are compatible with those listed under the "Name of part" in the chapter "Parts list".

### 5-1 Turning power off

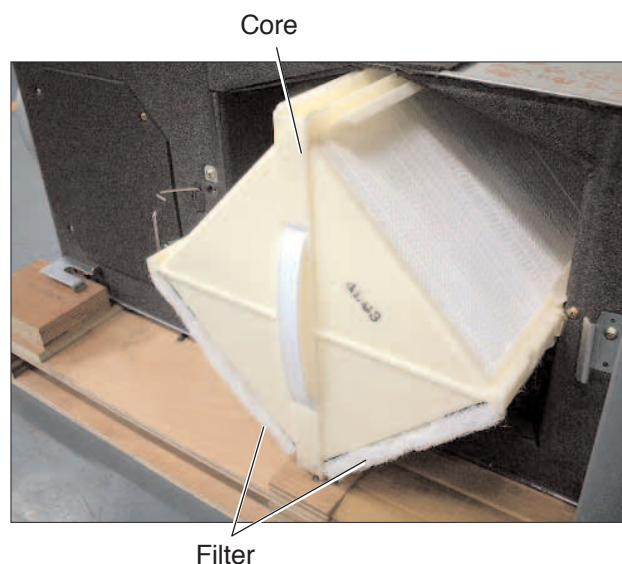
- ① Shutdown the unit.
- ② Turn off the breaker on the distribution board.

### 5-2 Blower Parts

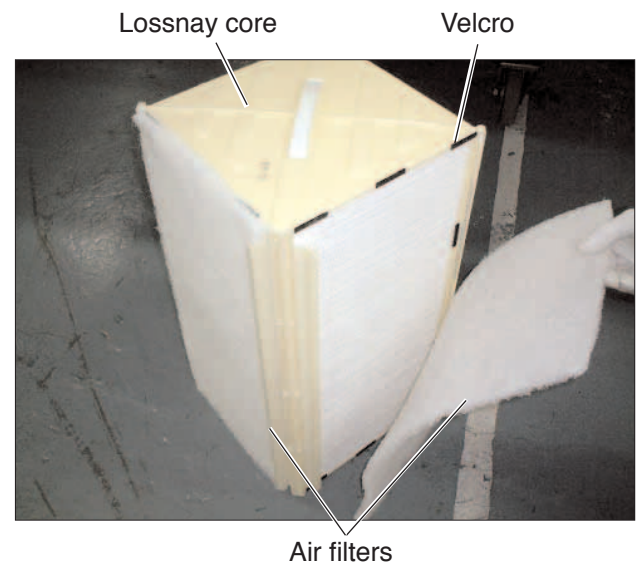
- ① Remove the cover fixing screw.
- ② Pull back the hinged clip.  
Open the door and lift off of the hinge brackets.



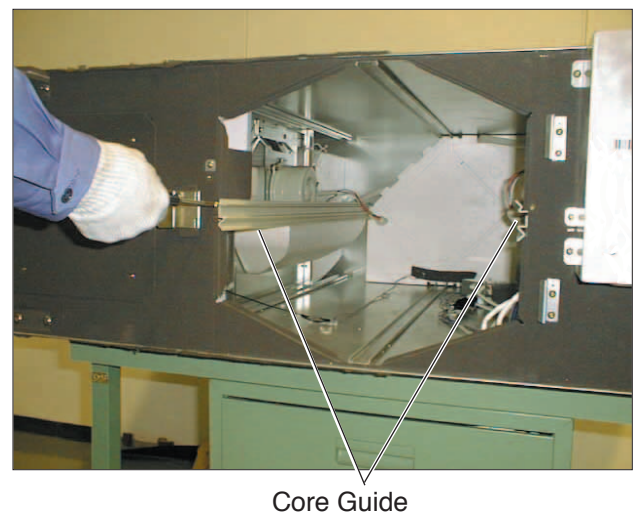
- ③ Take hold of the handle and draw the Lossnay cores out from the unit.



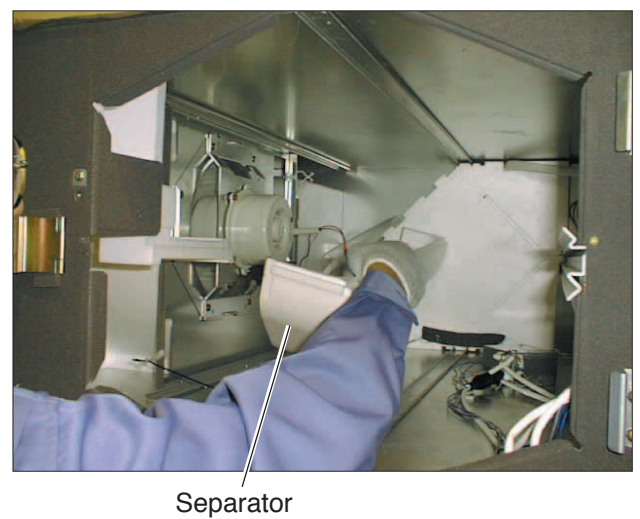
- ④ After pulling out the Lossnay cores. Pull the air filters, located at the bottom left and right of the Lossnay cores, off the velcro that holds them in place.



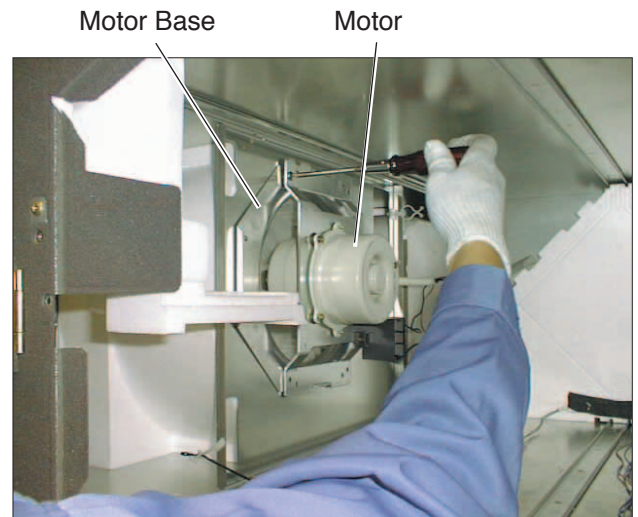
- ⑤ Remove screw from the core-guide, Remove core-guide.



- ⑥ Remove separator from the blower portion.



⑦ Remove screws from the motor base.



⑧ Remove the pre-assembled blower.



Pre-assembled Blower

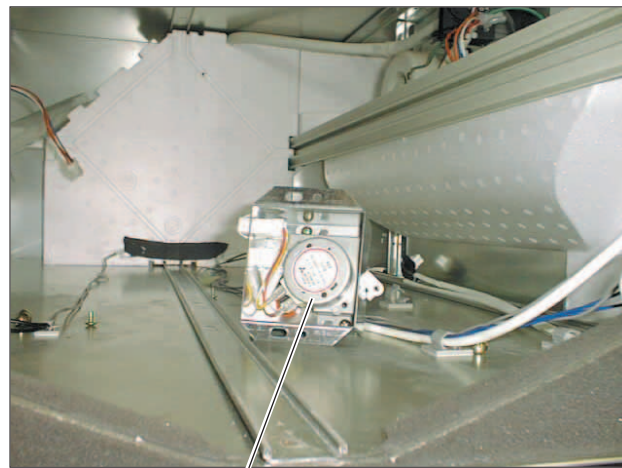
### 5-3 Damper Movement Motor Part (All units available)

① Remove (2) screws out from the damper motor cover.





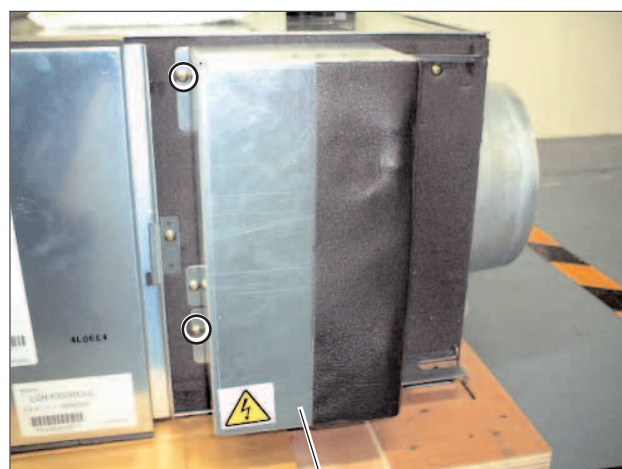
②Take the damper movement motor out of the cover.



Damper Movement Motor

## 5-4 Circuit Board Part

①Remove (2) screws from the control cover and open the control cover.



Control Cover

### Cautions:

- When reassembling, clamp the same as in the right fig.
- Be careful not to allow the item to contact the protruded part or capacitor inside the control cover. (Do not allow the protrusion to pinch the item.)

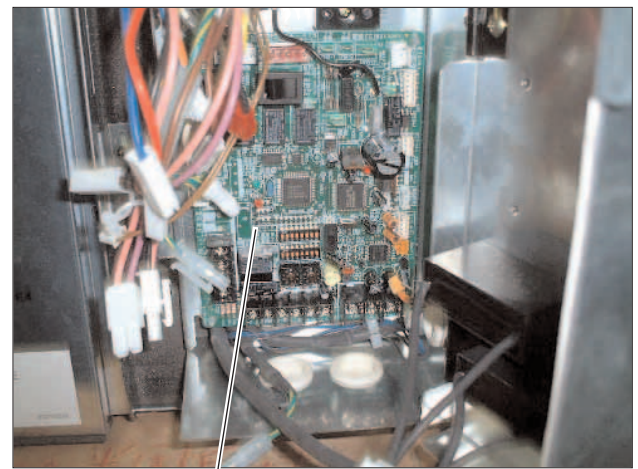


② Remove (2) screws from capacitors.



③ Remove all harnesses connected to the circuit board.

④ Take the circuit board out.



Circuit Board

## \*Precautions when replacing Product



### Cautions:

- Reverse the order to replace the Product.
- Make sure that the proper functioning of the unit is restored when the repair is complete.

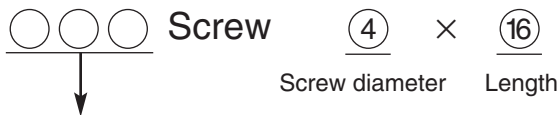


## 6. Parts list

### Please note the following when using the parts list.

1. When ordering parts, always indicate the part number, part name, and the number of parts required.
2. It may take time for you to receive the parts. Make an inquiry about a rush order.
3. No further notice if the specification changes.
4. Parts marked with  and  are critical for safety.
5. To maintain safety and performance, always replace the parts with the parts prescribed.
6. The numbers that are circled in the exploded view are the same as the reference number for the part being indicated.
7. When replacing the parts to which the nameplate is attached, remove the nameplate and attach it to the new parts.

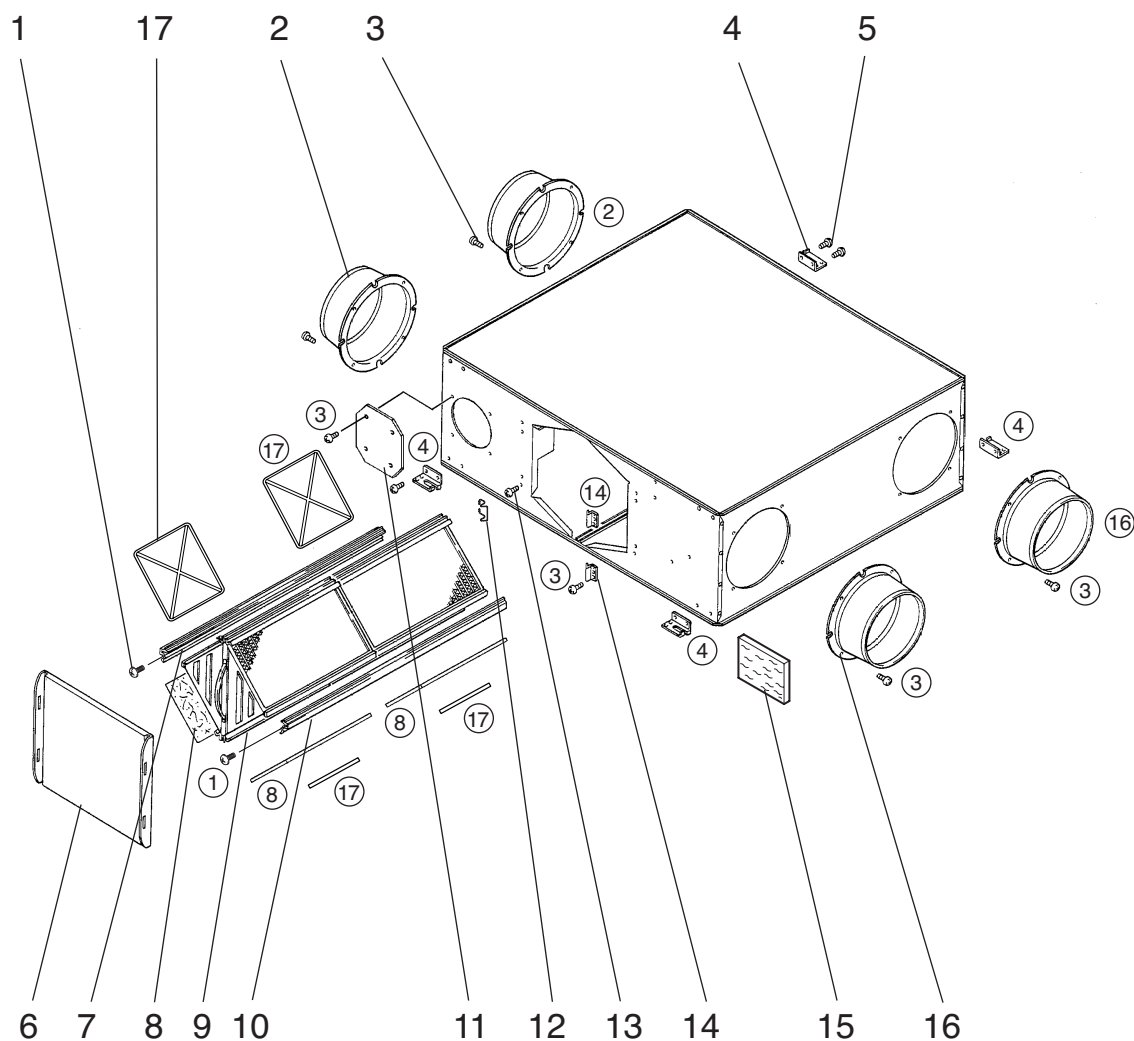
### Description of screw abbreviations



Abbreviation	Description
PC screw	Cross recess flat head machine screw
PRC screw	Cross recess oval head machine screw
PP screw	Cross recess pan head machine screw
SW · PP screw	Cross recess pan head screw with spring washer
PPT screw	Cross recess tapping screw
PCT screw	Cross recess flat head tapping screw
PTT screw	Cross recess truss head tapping screw
PT screw	Cross recess truss head machine screw
SET screw	Slotted head stop screw
SQ · SET screw	Square head stop screw
P · SET screw	Pan head stop screw
PMT screw	Primer truss head screw
HS · SET screw	Hexagon head stop screw
P · R · W screw	Cross recess round wood screw
P · C · W screw	Cross recess flat head wood screw
P · R · C · W screw	Cross recess round and flat wood screw
R · W screw	Slotted round wood screw
PW · PP screw	Cross recess pan head screw with small washer
SW-PW · PP screw	Cross recess pan head machine screw with spring washer and flat washer

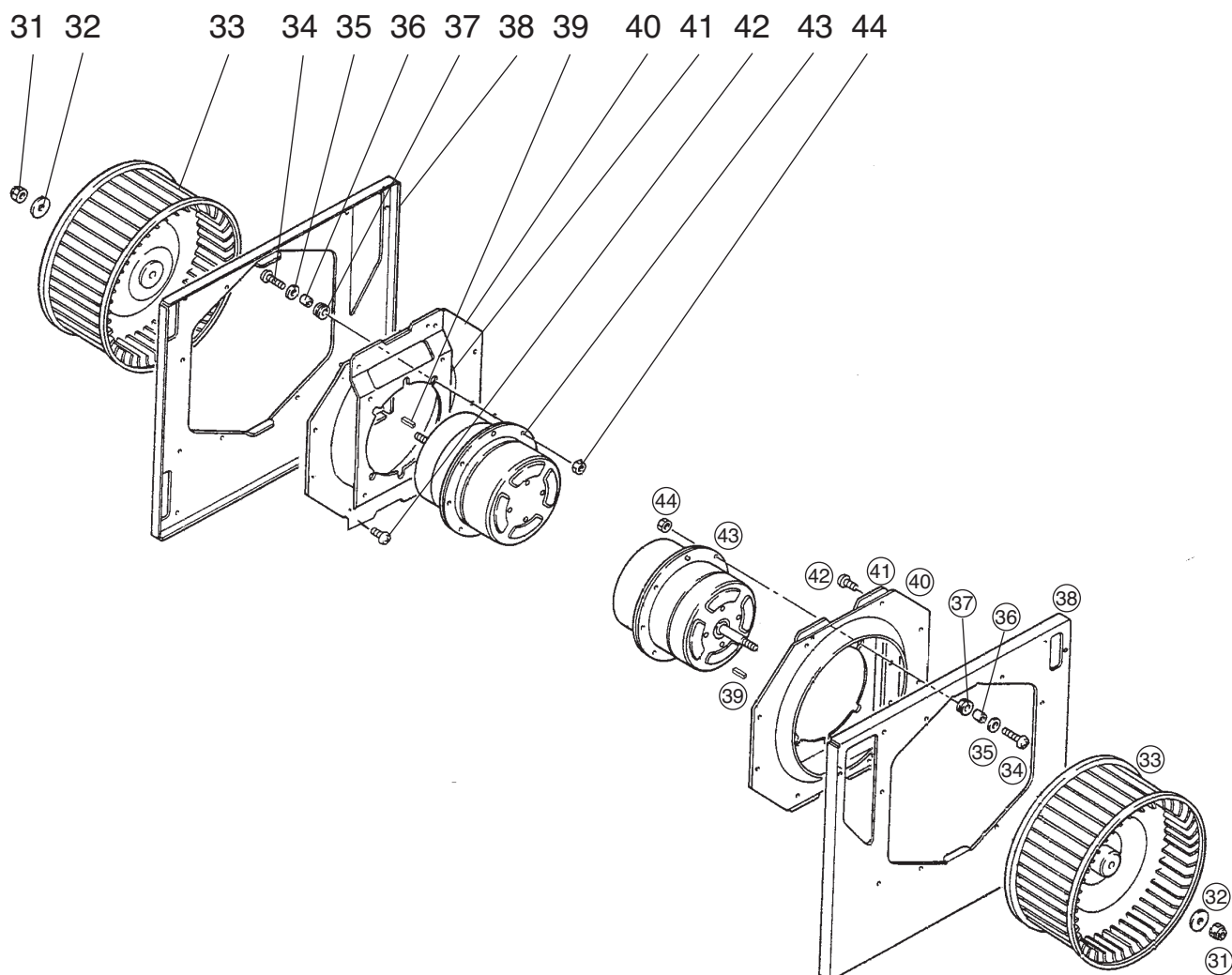
# LGH-F470RX3-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
1	PTT screw 4x12	H00 000 488	2		
2	Flange	R50 430 609	2		
3	PTT screw 4x8	H00 000 487	62		
4	Hanger	R50 095 380	4		
5	PT screw 6x12	H00 000 244	16		
6	Maint. cover	Y50 039 707	1		
7	Core guide	R50 218 381	1		
8	Filter	R50 529 717	4	⚠	
9	Lossnay core	R50 480 711	2	⚠	With filter stoppers
10	Core guide	R50 480 381	1		
11	Cover	R50 358 704	2		
12	Hinge	R50 466 344	1		
13	Spl screw 4x11	M34 074 017	1		
14	Fix piece	Y50 029 712	2		
15	Sound absorber	Y50 126 718	1		
16	Flange	Y50 021 609	2		
17	Filter stopper	R50 522 710	8		



## LGH-F470RX3-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
31	Special nut (M12)	R50 218 067	2		Left-handed
32	Washer (12)	K83 466 113	2		
33	Centrifugal fan	R50 479 480	2	⚠	φ 245
34	PT screw 6x20	H00 157 008	8		
35	Spl washer (6)	M34 043 080	8		
36	Spacer	R50 000 095	8		
37	Bush	R50 217 225	8		
38	Fan base	R50 480 707	2		
39	Key	Y50 033 104	2		5x5x11.5
40	Inlet ring	R50 264 711	2		
41	Motor fix plate	R50 218 712	2		
42	PTT screw 5x10	H00 189 007	16		
43	Motor	Y50 114 453	2	⚠	
44	Nut (M6)	H00 061 050	8		



## LGH-F470RX3-E

No.	Name of part	Parts No.	Q'ty pcs/unit	Critical for safety	Remarks
51	Motor cover	Y50 061 693	1		
52	Pull spring	R50 074 156	1		
53	Damper support	R50 473 715	1		
54	Special bush	M31 234 089	2		
55	Damper	R50 473 716	1		
56	Damper motor	Y50 061 260	1	⚠	AC220・240V
57	PTT screw 4x6	H00 312 007	13		
58	Special bush	R50 054 225	2		
59	Rod	R50 265 150	1		
60	Thermistor	Y50 126 215	1	⚠	
61	Cord clip	R50 399 223	4		
62	Cord clip	R50 399 224	4		
63	PP screw 4x8	H00 000 003	2		
64	Transformer	Y50 047 216	1	⚠	AC230V
65	Fix plate	Y50 126 706	1		
66	Fuse holder	Y55 001 281	2		
67	PPT screw 3x10	H00 000 676	2		
68	Fuse	Y50 113 280	2	⚠	6.3A・AC250V
69	Fuse cover	Y55 001 280	2		
70	PT screw 4x8 BS	H00 011 008	1		
71	Lock washer (4)	H00 013 076	4		
72	Support piece	H00 605 095	4		
73	Support piece	H00 605 096	3		
74	Control base	Y50 113 708	1		
75	Side cover	Y50 113 707	1		
76	Bush	K82 163 225	3		
77	Control cover	Y50 113 706	1		
78	Wiring diagram	Y50 114 361	1		
79	Hinge	R50 155 344	2		
80	Capacitor	Y50 114 235	2	⚠	7.0μF 440VAC
81	PPT screw 4x12	H00 154 005	2		
82	Terminal block	K81 432 236	1	⚠	3P
83	Insulator plate	Y50 110 226	1		
84	Cord band	M45 017 228	1		Black
85	Circuit board	Y50 113 171	1	⚠	LG-X01-A
86	Cord clip	M35 164 224	1		
87	Lead wire	Y50 047 231	1	⚠	100mm

