

## **TECHNICAL MANUAL (CONTROLS)**

---

### **Models**

#### **■ Lossnay Unit**

**LGH-15RX<sub>3</sub>-E**

**LGH-25RX<sub>3</sub>-E**

**LGH-35RX<sub>3</sub>-E**

**LGH-50RX<sub>3</sub>-E**

**LGH-80RX<sub>3</sub>-E**

**LGH-100RX<sub>3</sub>-E**

**LGH-150RX<sub>3</sub>-E**

**LGH-200RX<sub>3</sub>-E**

#### **■ Lossnay Remote Controller**

**PZ-41SLB-E**

**PZ-52SF-E**

# CONTENTS

1. Summary .....	1
2. Applicable Models .....	1
3. Terminology .....	2
4. System Features and Examples .....	3
5. Examples of Applications Using External Control Input Terminals, Operation Monitor Output Terminals and Malfunction Monitor Output Terminals .....	21
6. Precautions When Designing Systems of M-NET .....	28
7. Cable Installation of the M-NET .....	31
8. System Designs of M-NET .....	34
9. Automatic Ventilation Switching .....	36
10. Cold Weather Area Operation Specifications .....	37
11. Troubleshooting .....	38
12. Installation method (Model LGH-RX <sub>3</sub> -E series) .....	52
13. Lossnay Remote Controller (PZ-41SLB-E) .....	63
14. Lossnay M-NET Remote Controller (PZ-52SF-E) .....	69
15. Appendix .....	74
* Centralised Controller (MJ-103MTRA) (Operation setting, Initial setting, Group configuration setting, Interlocked operation setting) .....	74
* Remote Controllers for Mr. Slim indoor unit .....	81
* Network Remote Controller (PAR-F25MA) (Interlocked registration) .....	82



# 1. Summary

---

This is a technical manual relating to the controls for implementing the following systems of the commercial-type Lossnay (LGH-RX3-E Series).

## Possible System Configurations

- (1) When using only the Lossnay remote controller.
- (2) Linking Lossnay and City Multi units.
- (3) Linking Mr. Slim (A-control, K-control).
- (4) Lossnay central control systems.
- (5) Linking with external equipment (BMS).

# 2. Applicable Models

---

## ● Lossnay (LGH-RX3-E)

These models have temperature sensors at RA and OA sides. It can automatically switch to the ventilation mode. (Lossnay/By-pass)

Model	Model
LGH-15RX3-E	LGH-80RX3-E
LGH-25RX3-E	LGH-100RX3-E
LGH-35RX3-E	LGH-150RX3-E
LGH-50RX3-E	LGH-200RX3-E

## ● Lossnay Remote Controller (PZ-41SLB-E)

Use when operating from 1 to 15 Lossnay units together at the same time. When using M-NET transmission to operate from centralised control, use the PZ-52SF-E.

It can start and stop the unit, change fan speed, switch the ventilation mode. It also includes indicators that show errors and when filter maintenance is required. Refer to page 63.

## ● Lossnay M-NET Remote Controller (PZ-52SF-E)

It can be used in combination with Mitsubishi Electric Air conditioner Network system (MELANS). Refer to page 69. Since this remote controller is supplied the power from the M-NET transmission line, it cannot be linked with Mr. Slim and other such systems that do not use M-NET.

**Please refer to the technical documentation for the other systems: City Multi, Mr. Slim and the central controller (MELANS).**

# 3. Terminology

---

## ● Interlocked Lossnay

This is a Lossnay linked to City Multi, or Mr. Slim indoor units. This is a Lossnay that has been set to interlocked group setting to receive signals and operate via indoor unit's remote controller → indoor unit → Lossnay.

## ● Non-interlocked Lossnay

This is a Lossnay that is not set to interlocked group setting with City Multi nor Mr. Slim indoor units. It operates using direct operating signals from the Lossnay remote controller and/or centralised controller.

## ● Ventilation Mode

This mode controls the Lossnay damper and permits selection of heat recovery (Heat ex.), by-pass or auto modes.

## ● Delayed Operation

The Lossnay that has been set to interlocked group setting with the indoor unit will have its operation delayed for 30 minutes after the operation of the indoor unit. When using PZ-41SLB-E, the time setting that can be set for delayed operation are 10, 20, 30, 40, 50, and 60 minutes.

## ● External Control Input

This is an input signal for operating the Lossnay that has been sent from an external device. It is compatible with 12V-24V DC or uncharged a-contact signal.

## ● Operation Mode

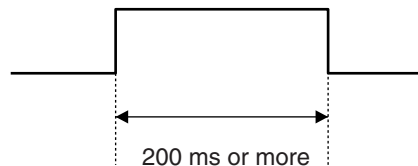
This mode is used for selecting enabling/disabling of the on/off control signal from an external device and for setting interlocked operation of the external device and the Lossnay.

Please Refer to page 22 for details.

<b>ON/OFF interlock:</b>	Enables both "ON → OFF" and "OFF → ON" external signals.
<b>ON interlock:</b>	Enables "OFF → ON" external signal. Disables "ON → OFF" external signal.
<b>OFF interlock:</b>	Enables "ON → OFF" external signal. Disables "OFF → ON" external signal.
<b>External priority:</b>	Same as on/off interlock but the OFF signal from the remote controller is ignored when the external control signal is on.

## ● Setting Pulse Input

When the control signal from the external device outputs a pulse such as the one shown below, pulse input setting is performed by the Lossnay. (Optional setting DIP switch 2-2 ON)



## ● Operation in Cold Areas

When the outdoor air is less than -10°C, continuous operation of the fan for drawing in supply air is cancelled, and intermittent operation is started.

## ● RA (Return Air)

This is the abbreviation for return air, which is the air drawn in from indoor.

## ● OA (Outdoor Air)

This is the abbreviation for outdoor air, which is the air drawn in from outdoor.

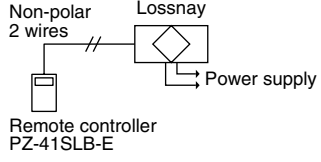
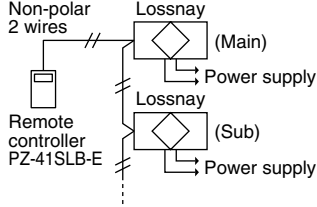
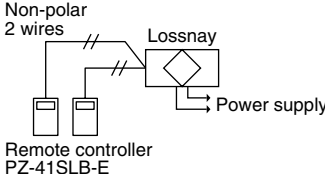
# 4. System Features and Examples

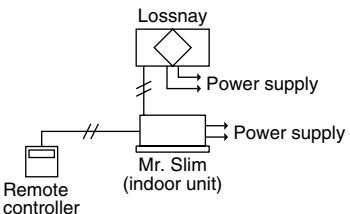
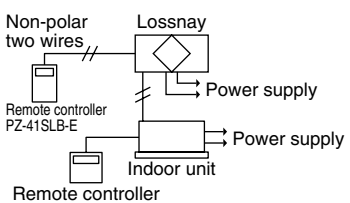
## 4.1 Features

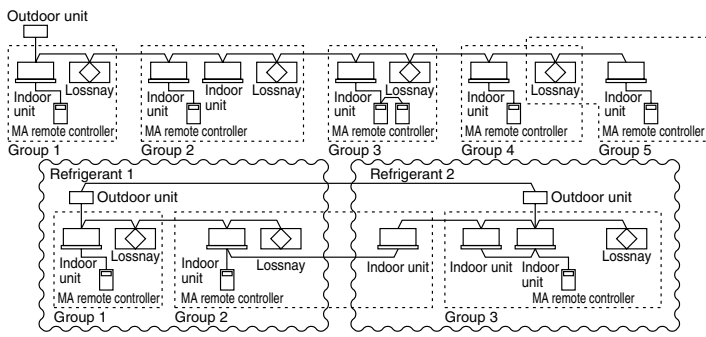
Classification	Item	Notes/Cautions
Control	<ul style="list-style-type: none"> <li>Multiple unit operation</li> <li>Remote controller operation</li> <li>External device operation</li> <li>External pulse control</li> <li>External monitor signal output</li> <li>Supply air fan monitor output</li> <li>External control operation mode setting</li> <li>Delayed start</li> <li>Automatic recovery following power supply interruption (*1)</li> <li>Power supply start/stop function</li> <li>High/low change input</li> <li>Remote/Local control change</li> <li>The M-NET air conditioning operation.</li> <li>Centralised control by Mitsubishi building air control management system</li> <li>Interlocked with Mr. Slim</li> </ul>	<p>Maximum 15 units with PZ-41SLB-E; 16 units with PZ-52SF-E or other M-NET controller.</p> <p>Last touch priority</p> <p>Signal form: 12VDC, 24VDC, uncharged a-contact</p> <p>Ditto</p> <p>Uncharged a-contact (external monitor/supply air fan monitor change)</p> <p>Ditto</p> <p>ON/OFF , ON, OFF and External priority ON/OFF mode.</p> <p>Delayed time can be varied only when the PZ-41SLB-E is connected.</p> <p>Return power automatic return is fixed when the PZ-41SLB-E is connected.</p> <p>Impossible when the PZ-41SLB-E is connected.</p> <p>Uncharged a-contact (Part sold separately is necessary)</p> <p>Uncharged a-contact (Part sold separately is necessary) (Connection is impossible when using PZ-41SLB-E)</p> <p>Only when M-NET transmission cable is connected</p> <p>Ditto</p> <p>Can not use the PZ-41SLB-E</p>
Function	<ul style="list-style-type: none"> <li>Lossnay (heat recovery) ventilation/By-pass ventilation automatic switch</li> <li>For cold area operation</li> </ul>	
Installation	<ul style="list-style-type: none"> <li>Remote controller 2 wires wiring (non-polar)</li> <li>Address setting unnecessary</li> <li>Test operation switch</li> </ul>	<p>When the PZ-41SLB-E is connected: PVC cable <math>\phi</math> 0.65 to 1.2 or strand wire 0.3 mm<sup>2</sup> to 1.25 mm<sup>2</sup>.</p> <p>When M-NET is connected: shielded wire or equivalent 1.25 mm<sup>2</sup> to 2.00 mm<sup>2</sup>.</p> <p>Excluding central controller system (except automatic address)</p> <p>For Lossnay single unit test operation</p>
Maintenance	<ul style="list-style-type: none"> <li>Filter maintenance display (remote controller display)</li> <li>Inspection display (remote controller, control board LED)</li> <li>M-NET power supply display (control board LED)</li> </ul>	

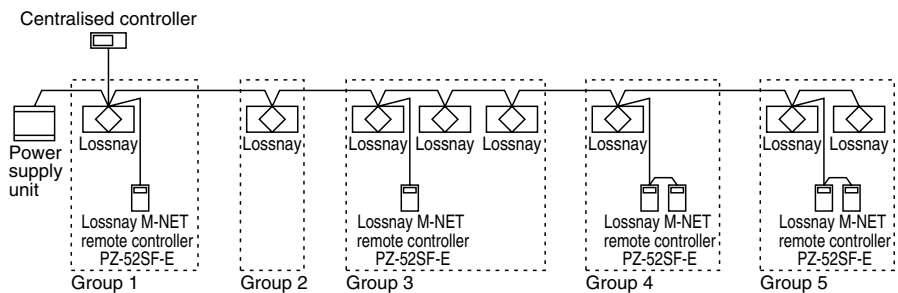
\*1 The operation condition is stored, and when the power is turned off and then back on, the operation condition returns to the previous condition. (When using PZ-41SLB-E, the start/stop condition from an external device is not stored.)

# 4.2 System Example

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Basic System (refer to page 9)</p>	<p>1 Lossnay with 1 remote controller</p>  <ul style="list-style-type: none"> <li>● This is a simple system. A Lossnay is operated independently with 1 remote controller.</li> </ul>	<p>Multiple Lossnay units with 1 remote controller</p>  <ul style="list-style-type: none"> <li>● Up to 15 Lossnay units can be controlled at one time with one remote controller. *</li> </ul>	<p>2 remote controller system with 1 Lossnay</p>  <ul style="list-style-type: none"> <li>● The Lossnay can be controlled from 2 remote locations.</li> <li>● The remote controller gives priority to the last touch.</li> </ul>
---	--	---	--

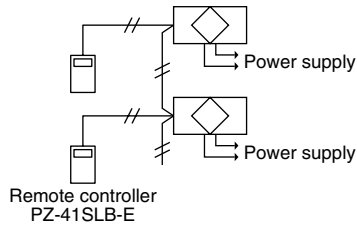
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Operation with an Air Conditioning Unit (refer to page 12)</p>	<p>Operating with Mr. Slim (A-control or K-control)</p>  <ul style="list-style-type: none"> <li>● The Remote controller (A-control or K-control) controls the air conditioning device and the Lossnay.</li> <li>● When using the A-control remote controller operating or switching fan speed for the Lossnay individually is possible.</li> </ul>	<p>Operating with an external device (refer to page 21)</p>  <ul style="list-style-type: none"> <li>● Selection of interlocked operation mode is possible.</li> <li>● Delayed start interlocked operation is possible.</li> </ul>
---	---	---

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>M-NET System</b></p>	<p>City Multi and Lossnay Interlocked System</p> <p>Air conditioning device and system control</p>  <ul style="list-style-type: none"> <li>● It is possible to operate 16 indoor units per 1 Lossnay</li> </ul>
--	---

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>M-NET System</b></p>	<p>Centralised Management System</p>  <ul style="list-style-type: none"> <li>● Control of start/stop, fan speed and ventilation mode is possible from the Lossnay M-NET remote controller.</li> <li>● Control of start/stop, fan speed and ventilation mode is possible from the centralised controller.</li> <li>● It is possible to set a maximum of 16 units for 1 group.</li> </ul>
--	---

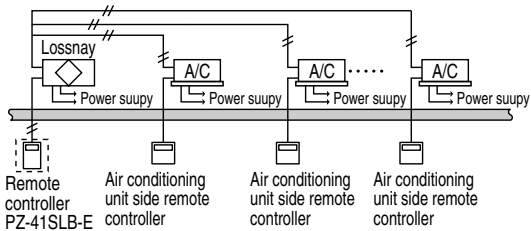
\* In the case of LGH-150/200RX3-E, there are 2 circuit boards installed in each unit, so count each unit as 2 Lossnay units.

2 remote controller system with multiple Lossnay units



- It is also possible to operate 2 remote controller units when using multiple Lossnay units.

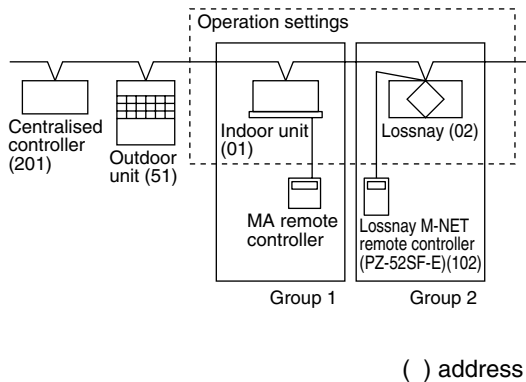
Interlocking multiple units  
When the operation signal is a uncharged a-contact signal



- Interlocking is possible from multiple air conditioning units, etc. (excluding pulse input)  
(Separately sold parts are necessary depending on the operation signal).

Interlocking/individual joint systems

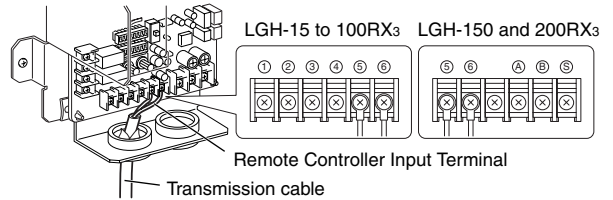
By making the group setting, interlock settings have become possible. (Joint use of the air conditioner remote controller and Lossnay remote controller is possible.)



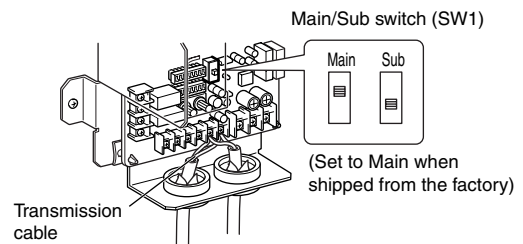
- Applicable indoor units are C type or later (for use with MA remote controller) models
- Do not set the air conditioning unit and Lossnay unit to be part of the same group.

Use Lossnay remote controller **PZ-41SLB-E**.  
(Do not use PZ-52SF-E).

Lossnay transmission connection terminal



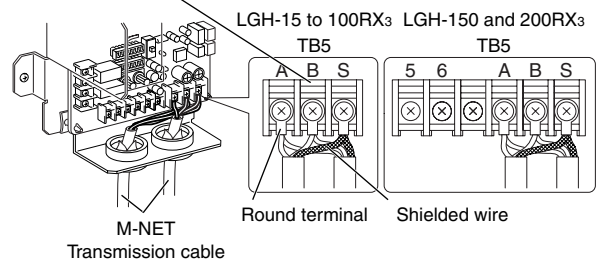
Setting



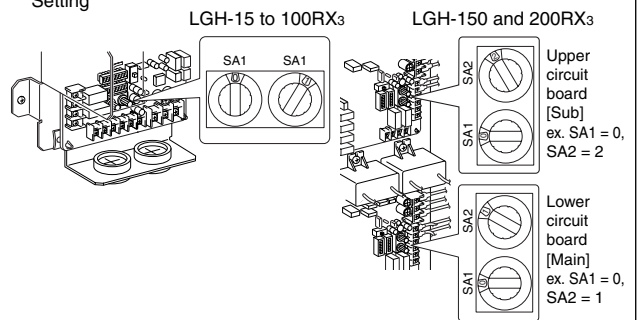
Use Lossnay M-NET remote controller **PZ-52SF-E**.  
(Do not use PZ-41SLB-E).

Lossnay transmission connection terminal

M-NET Transmission cable input terminal block



Setting



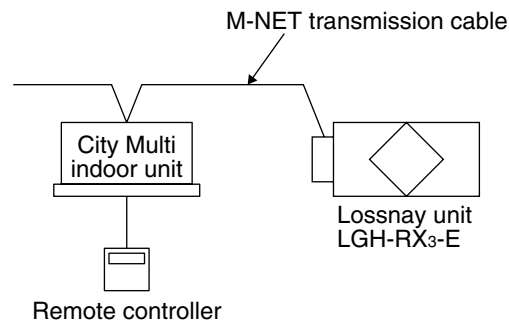
When the address number has been changed, the data in the memory is automatically reset.



## 4.3 System Selection

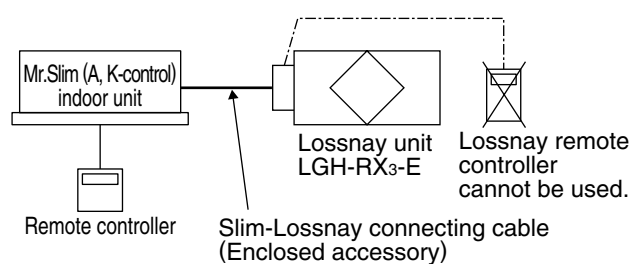
### Interlocked with City Multi (Refer to page 16)

Lossnay operation when indoor unit is stopped	○
Lossnay stopping when indoor unit is operating	○
Switching Lossnay fan speed	
When interlocked with indoor unit for compatibility with both R22 and R407C	High/Low
When interlocked with indoor unit for other than the above	Fixed to high
Ventilation mode	Fixed to automatic
Filter maintenance indicator	○
Lossnay error indicator	○
Delayed operation	○
External control operating mode selection	×
Number of indoor units for interlocked group setting with one Lossnay unit	16 units
Number of Lossnay units for interlocked group setting with one indoor unit	1 unit



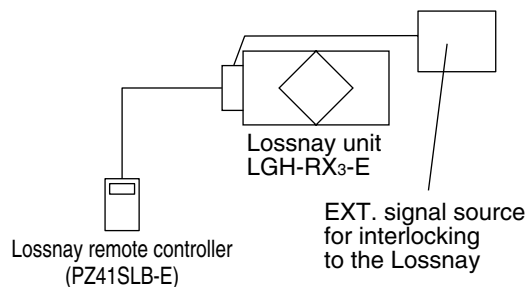
### Interlocked with Mr. Slim (Refer to page 12)

When using A-control remote controller	
Lossnay operation when indoor unit is stopped	○
Lossnay stopping when indoor unit is operating	×
Lossnay fan speed switching	High/Low
When using K-control remote controller	
Lossnay operation when indoor unit is stopped	×
Lossnay stopping when indoor unit is operating	×
Lossnay fan speed switching	Fixed to high
Other common items	
Lossnay error indicator	×
Ventilation mode	Fixed to automatic
Filter maintenance indicator	×
Delayed operation	○
External control operating mode selection	×
Number of indoor units for interlocked group setting with one Lossnay unit	1 unit
Number of Lossnay units for interlocked group setting with one indoor unit	1 unit



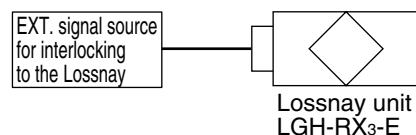
### Independent Lossnay Unit (Not interlocked with City Multi or Mr. Slim systems.) (Refer to page 9)

Start/Stop	○
Fan speed switching	High/Low
Ventilation mode	Heat ex. / By-pass/ Auto
Filter maintenance indicator	○
Lossnay error indicator	○
Delayed operation	○
External control operating mode selection	○
Number of Lossnay units (In the case of LGH-150/200RX3-E, count each unit as two for calculation)	15 units
Number of remote controllers	2 units

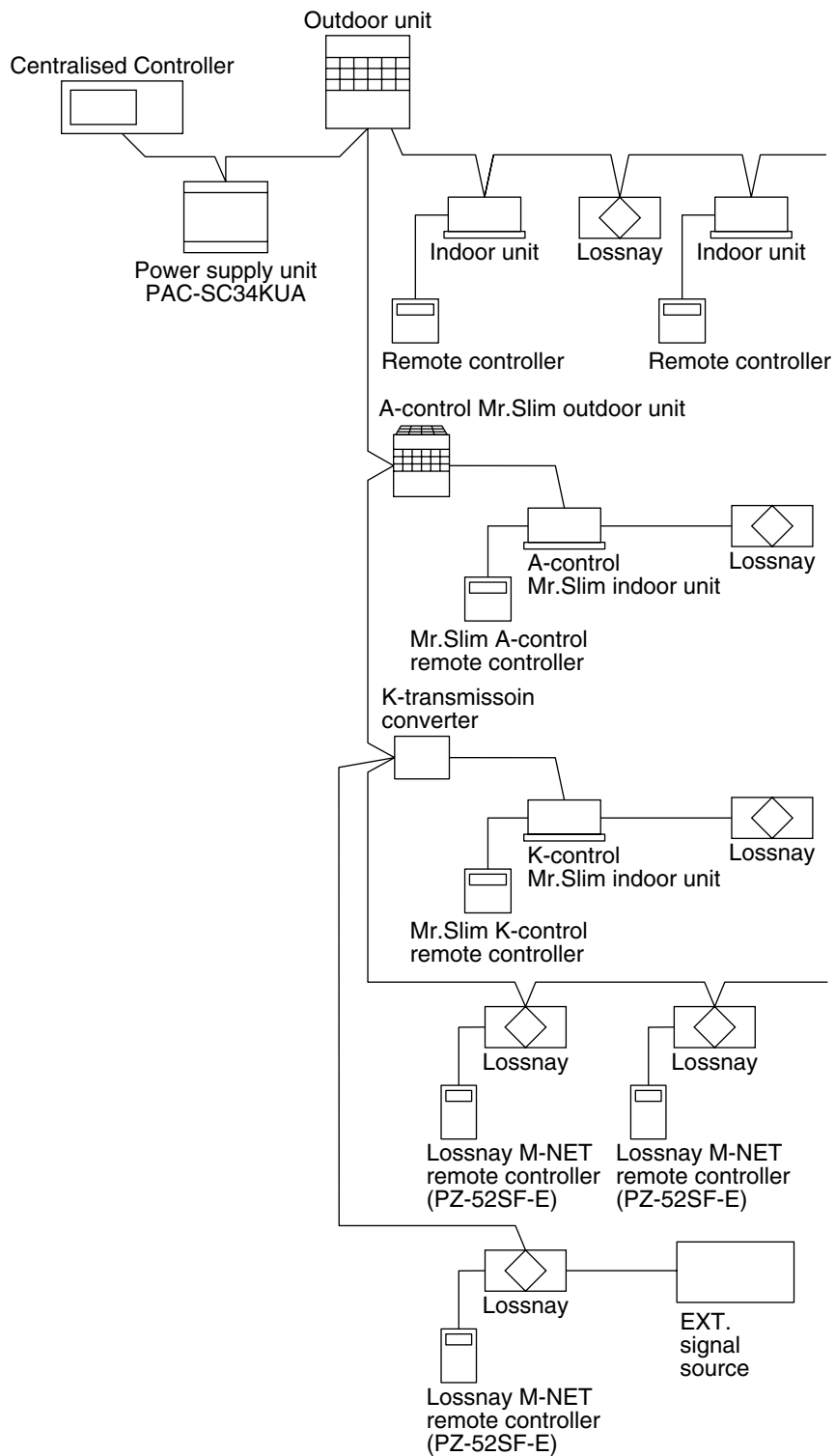


### Interlocked with external device (BMS) (Refer to page 21)

Start/Stop	○
Fan speed switching	Fixed to high
Ventilation mode switching	Fixed to automatic
Filter maintenance indicator	×
Lossnay error indicator	×
Delayed operation	○
External control operating mode selection	○



# Central Controller System



Central Controller System

## Caution:

- Lossnay remote controller PZ-41SLB-E can not be used.

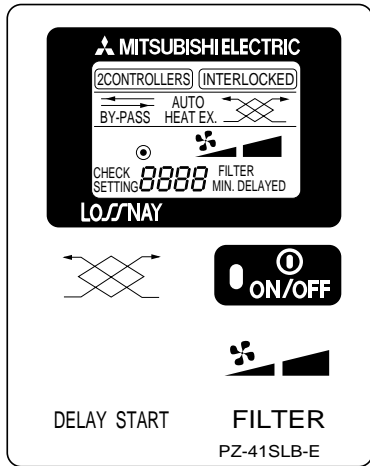
**Reference: Remote controller for the Lossnay and indoor unit.**

Refer to the technical documentation related to the Remote controller for the indoor unit.

**Remote controllers for Lossnay unit**

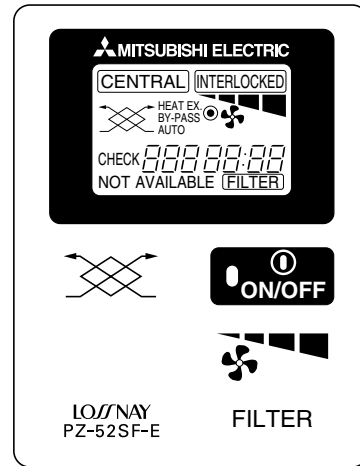
**Lossnay remote controller (PZ-41SLB-E)**

With Lossnay interlock switches and indicators.



**Lossnay M-NET remote controller (PZ-52SF-E)**

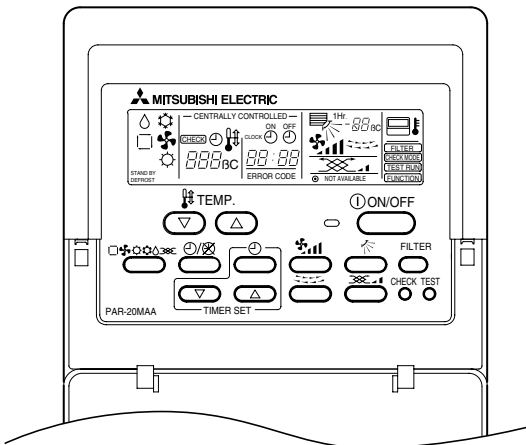
Without Lossnay interlock switches and indicators.



**Remote controllers for City Multi indoor unit**

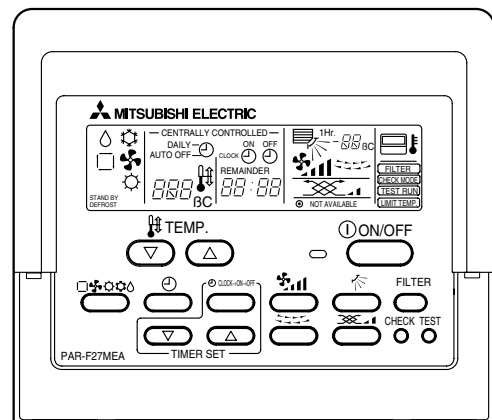
**Network remote controller (PAR-20MAA)**

With Lossnay interlock switches and indicators.



**Simple remote controller (PAR-27MEA)**

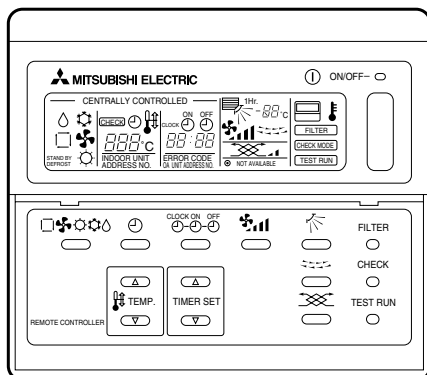
Without Lossnay interlock switches and indicators.



**Remote controllers for Mr. Slim indoor unit**

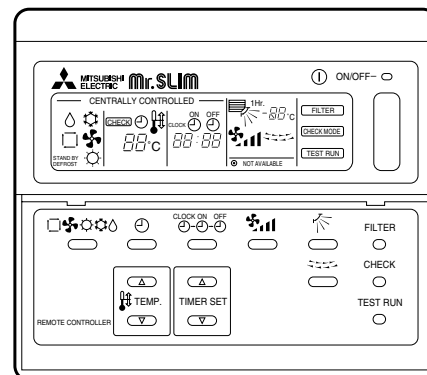
**A-control remote controller (PAR-27AA)**

With Lossnay interlock switches and indicators.



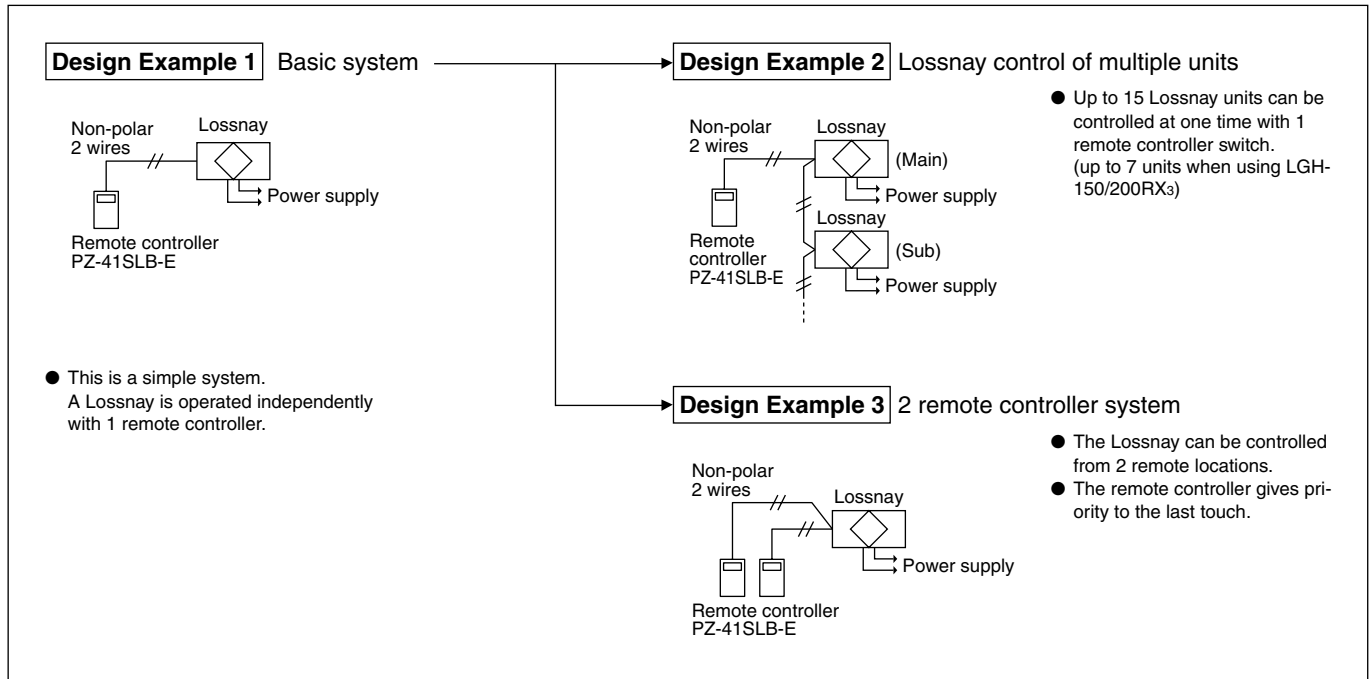
**K-control remote controller**

Without Lossnay interlock switches and indicators.



# 4.4 Basic System

## 4.4.1 System Summary



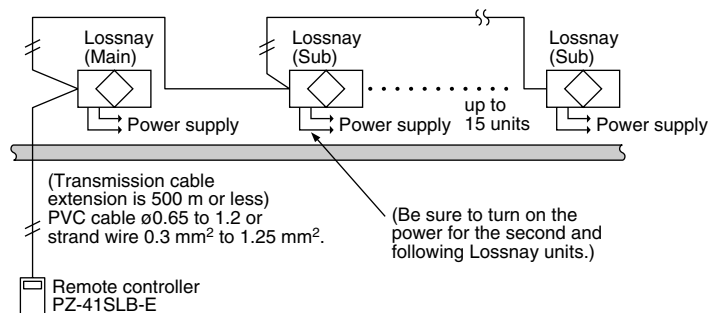
## 4.4.2 Operation of Multiple Units

Feature	For LGH-15 to 100RX <sub>3</sub> , 1 remote controller can operate from 1 to 15 Lossnay units. For using LGH-150/200RX <sub>3</sub> , 1 remote controller can operate from 1 to 7 Lossnay units.
Ordered part	Remote controller PZ-41SLB-E
Notes	<ul style="list-style-type: none"> <li>● Also connect the power to the second and following Lossnay units.</li> <li>● The maximum extension of the transmission cable is 500 m or less (between Lossnay and remote controller switch, between Lossnay and Lossnay).</li> <li>● The main or Sub setting on the Lossnay is necessary.</li> </ul>

### Note:

- The external device operation signal, and pulse signals can only be connected to the Lossnay on the “Main” setting.
- When the M-NET system is connected, do not connect the transmission cable to TM2.

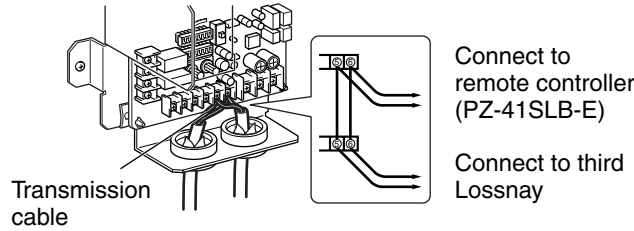
### System Example



## Combined Line Method

Connect the transmission cable from the first Lossnay to the second, the second to the third, and so on up to a maximum of 15 units.

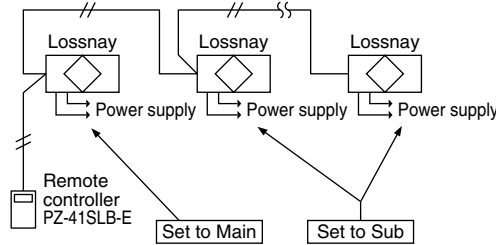
- (1) Up to four wires can be connected to one signal terminal when a transmission cable is  $\varnothing 0.65$  or strand wire  $0.3 \text{ mm}^2$ , or up to 2 wires in other cases.
- (2) The signal is non-polar, so it is not necessary to align polarity.



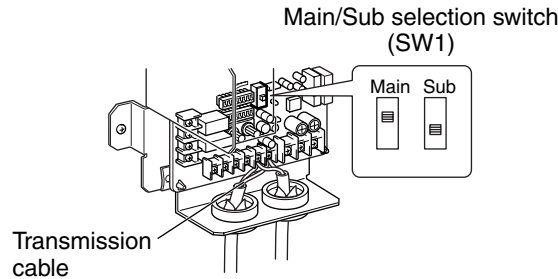
## Lossnay Main/Sub Setting

Be sure to make the Main/Sub setting when operating multiple Lossnay units.

When operating multiple Lossnay units, set the first one to "Main," set the second and following to "Sub." Be sure the power is off when making the settings.

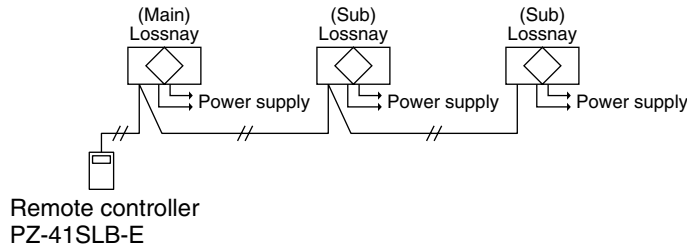


Change the Main/Sub switch (SW1) on the control board to "Sub" for the second and following Lossnay units.



## Operation Method

Up to 15 Lossnay units (up to seven units when using LGH-150/200RX<sub>3</sub>-E) can be operated when running at the same time. (Individual control is not possible)



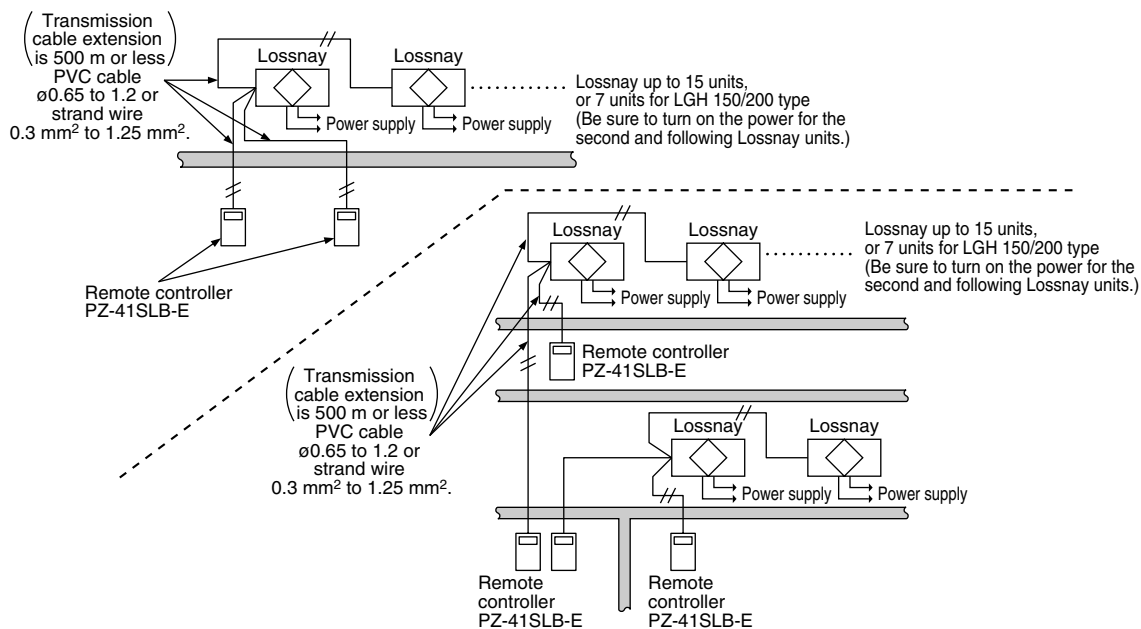
## Note:

- In the case of LGH-150/200RX<sub>3</sub>-E, there are two circuit boards installed in each unit. Therefore, count each unit as two units in calculations when controlling multiple units. For example, 5 LGH-150RX<sub>3</sub>-E units would count as 10 units. (For 150/200RX<sub>3</sub>-E type only, a maximum of seven units is possible.)

### 4.4.3 Operation with 2 Remote controllers

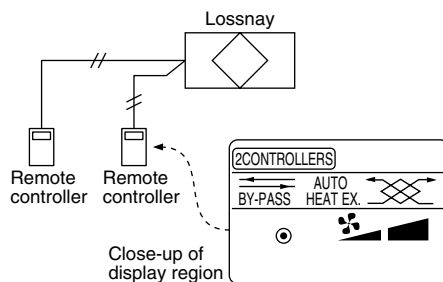
Characteristics	Remote controller	Note
<ul style="list-style-type: none"> <li>Lossnay can be operated from two remote locations.</li> <li>Lossnay conditions can be checked from two remote locations.</li> <li>The remote controller gives priority to the last touch.</li> </ul>	Lossnay remote controller PZ-41SLB-E	<ul style="list-style-type: none"> <li>Use only up to 2 remote controller (Operation will not go normally if 3 remote controller switches are connected.)</li> </ul>

#### System Example



#### Operation Method

- When there are 2 remote controllers, "2 CONTROLLERS" will display on the LCD readout's upper region.
- The operation is the same with each remote controller. In this case, the Lossnay gives operating priority to the last button push.



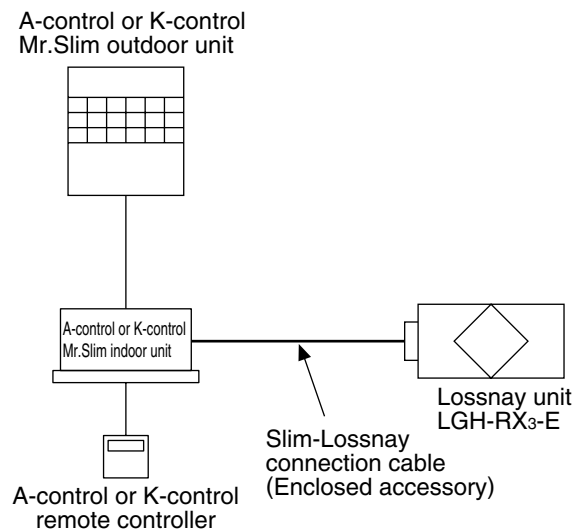
## 4.5 Interlocking with Mr. Slim

### 4.5.1 Interlocked Mr. Slim and Lossnay System

#### Features

- Interlocked operation with Mitsubishi air-conditioners is possible.

#### System Example



#### Lossnay Function Table (Interlocked settings)

Item		Details
Number of indoor units that can be set to interlocked operation with 1 Lossnay unit in each group		1 unit
Number of Lossnay units that can be set to interlocked operation with 1 indoor unit		1 unit
Operation of Lossnay unit only (When indoor unit is stopped)	A-control	Possible
	K-control	Not possible
Independent Lossnay unit start and stop (When indoor unit is operating)	A-control	Not possible
	K-control	Not possible
Delayed operation (Optional setting)		30 minute delayed operation when indoor unit cooling/heating is started
Fan speed switching	A-control	High/Low
	K-control	Fixed to high
Ventilation mode		Fixed to automatic
Filter indicator		Not possible
Error		Not possible
Restrictions and precautions		<p>* The Lossnay remote controller cannot be used on systems interlocked with Mr. Slim.</p> <p>When connecting a PZ-41SLB-E to a Lossnay unit, ON/OFF and High/Low operation by the PZ-41SLB-E cannot be reflected to the display of the Mr. Slim's A-control remote controller.</p>

**Controller Function Table especially regarded to the Lossnay unit**

Model		Local Remote		
		A-control remote controller	K-control remote controller	Lossnay remote controller
		PAR-S27AA		PZ-41SLB-E, PZ-52SF-E
Operation	Start/Stop	○	○	Not used to the interlocked Lossnays
	Fan speed switching	○	×	
	Ventilation mode switching	× (Automatic)	× (Automatic)	
	Priority instructions. Local permitted/prohibited	×	×	
Monitoring	Status (Operation/Stop)	○	○	
	Fan speed switching	○	×	
	Ventilation mode	×	×	
	Error	×	×	
	Error content	×	×	
	Filter sign	×	×	
	Local permitted/prohibited	×	×	

Switched and display                      ○ : Group only (or function available)    × : Not available

● For details about the operation or display of the A-control remote controller (PAR-27AA), refer to page 81.



## 4.6 Combination with City Multi

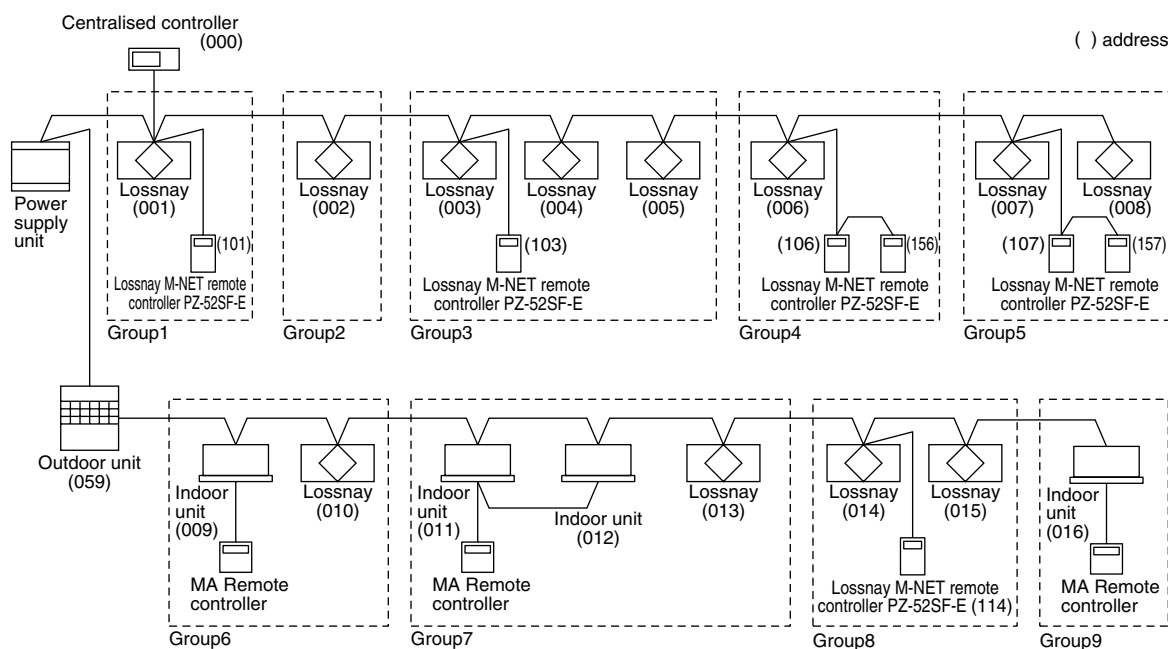
### 4.6.1 Independent Lossnay System with Lossnay M-NET Remote Controller and MELANS

#### Features

- The Mitsubishi Electric air-conditioner network system (MELANS) can operate and monitor each group of Lossnay units and air-conditioners.
- Can also perform operations using Lossnay M-NET remote controller.

#### System Examples: 1

The following groups can be configured.



- Group 1 : Group of 1 Lossnay unit and 1 Lossnay M-NET remote controller.
- Group 2 : Group without Lossnay M-NET remote controller.
- Group 3 : Group of multiple Lossnay units and 1 Lossnay M-NET remote controller.
- Group 4 : Group of 1 Lossnay unit and 2 Lossnay M-NET remote controllers.
- Group 5 : Group of multiple Lossnay units and 2 Lossnay M-NET remote controllers.
- Group 6 : Group of 1 indoor unit and 1 Lossnay unit in interlocked operation.
- Group 7 : Group of multiple indoor units and 1 Lossnay unit in interlocked operation.
- Group 8 : Group of multiple Lossnay units connected to 1 indoor unit transmission cable and 1 Lossnay M-NET remote controller.
- Group 9 : Group with no Lossnay units.

#### Caution:

- Lossnay remote controller PZ-41SLB-E can not be used.

## Lossnay Function Table (Group Setting)

Item	Details
Number of Lossnay remote controllers and/or MELANS units that can be connected to 1 Lossnay unit	5 units (Number of Lossnay remote controller is 2 units max.)
Operation of 2 remote controllers in 1 group	Possible
Fan speed switching	High/Low
Ventilation mode	Heat ex. / By-pass / Automatic
Filter indicator	3000 hours / 1500 hours / 4500 hours / No display
Error	Display

## Controller Function Table

Model		Local Remote			MELANS Series		
		Lossnay M-NET remote controller	ME remote controller	MA remote controller	Centralised controller	Centralised controller	
		PZ-52SF-E	PAR-F27MEA	PAR-20MAA	MJ-103MTRA	MJ-180A	
No. of controllable (Groups/Units)		1 Group/ 16 Units	Not used to the non-interlocked Lossnay			50 Groups/ 50 Units	100 Groups/ 100 Units ( *200 Groups/ 200 Units)
Operation	Start/Stop	○				◎	◎
	Fan speed switching	○				◎	○
	Ventilation mode switching	○				◎	◎
	Priority instructions. Local permitted/prohibited	×				◎	◎
Monitoring	Status (Operation/Stop)	○				○	○
	Fan speed switching	○				○	○
	Ventilation mode	○				○	○
	Error	○				○	○
	Error content	○				○	○
	Filter sign	○				○	○
	Local permitted/prohibited	○				○	○
Scheduling/ Recording	Weekly	×				○	○
	Stop/Starts per day	×				3	6
	Stop/Starts per week	×				21	42
	Minimum setting (minutes)	×				10	1
	Error record	×				○	○

Switches and display      ◎ : Group/batch      ○ : Group only (or function available)      × : Not available

\* Can be expanded to 200 units by using 2 gateway units.

- For details about the operation or display of the Lossnay M-NET remote controller (PZ-52SF-E) refer to page 69.
- For details about the operation or display of the Centralised controller (MJ-103MTRA) refer to page 74.

## 4.6.2 City Multi and Lossnay Interlocked System

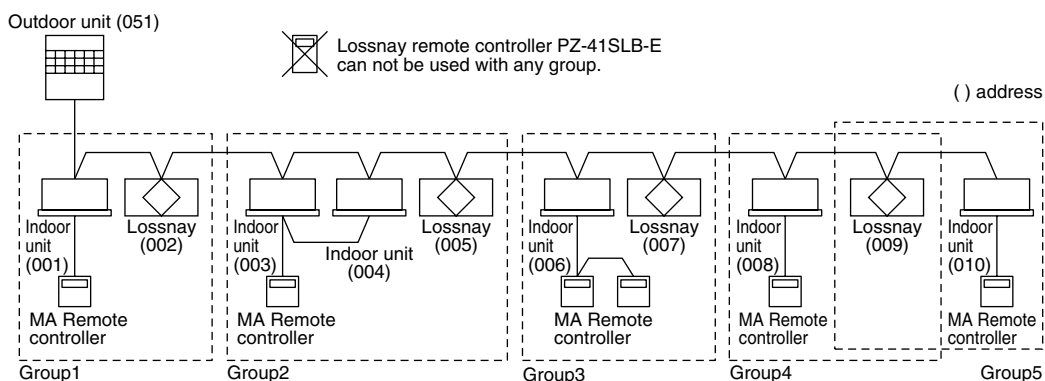
### Characteristics

- Interlocked operation with Mitsubishi air-conditioners is possible.
- Can also perform independent Lossnay operations using MA remote controller or ME remote controller.

### System Examples

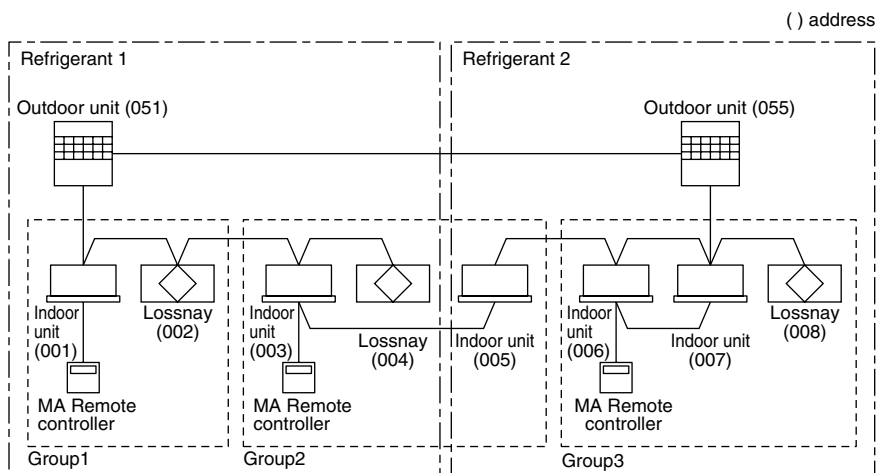
The following groups can be configured.

#### Single Refrigerant System



- Group 1 : Group of 1 indoor unit and 1 Lossnay in interlocked operation.
- Group 2 : Group of multiple indoor units and 1 Lossnay unit in interlocked operation.
- Group 3 : Group of 1 indoor unit with 2 remote controllers and 1 Lossnay unit in interlocked operation.
- Group 4, 5 : Group of multiple groups and 1 Lossnay unit in interlocked operation.

#### Multiple Refrigerants System



- Group 1 : Group of 1 indoor unit and 1 Lossnay in interlocked operation.
- Group 2 : Group of multiple indoor units (with different refrigerants) and 1 Lossnay unit in interlocked operation.
- Group 3 : Group of multiple indoor units (with same refrigerant) and 1 Lossnay unit in interlocked operation.

## Lossnay Function Table (Interlocked Settings)

Item		Details
Number of indoor units that can be set to interlocked operation with 1 Lossnay unit in each group		16 units per group
Number of Lossnay units that can be set to interlocked operation with 1 indoor unit		1 unit
Independent start/stop of ventilation (Lossnay)		Possible
Delayed operation (Optional setting)		30 minute delayed operation when indoor unit cooling/heating is started
Fan speed switching	Indoor unit compatible with both R22 and R407C	High/Low
	Units other than the above	Fixed to high
Ventilation mode		Fixed to automatic
Filter maintenance indicator		3000 hours / 1500 hours / 4500 hours / No display
Error		Display
Restrictions and precautions		* Lossnays cannot be interlocked to the indoor units using K-transmission converter.

## Controller Function Table especially regarded to the Lossnay unit

Model		Local Remote		
		Lossnay M-NET remote controller	ME remote controller	MA remote controller
		PZ-52SF-E	PAR-F27MEA	PAR-20MAA
Operation	Start/Stop	○	○	○
	Fan speed switching	○	○	○
	Ventilation mode switching	○	× (Automatic)	× (Automatic)
	Priority instructions. Local permitted/prohibited	×	×	×
Monitoring	Status (Operation/Stop)	○	○	○
	Fan speed switching	○	○	○
	Ventilation mode	○	×	×
	Error	○	○	○
	Error content	○	○	○
	Filter sign	○	○	○
	Local permitted/prohibited	○	○	○
Scheduling/Recording	Weekly	×	× (Daily)	×
	Stop/Starts per day	×	2	2
	Stop/Starts per week	×	×	×
	Minimum setting (minutes)	×	10	10
	Error record	×	×	×

Switches and display ○ : Function available × : Not available

● For details about the operation or display of the remote controller (PAR-F27MEA, PAR-20MAA), please refer to those Manuals.

## 4.6.3 MA Remote Controller/ME Remote Controller in Combination with Lossnay M-NET Remote Controller

### System

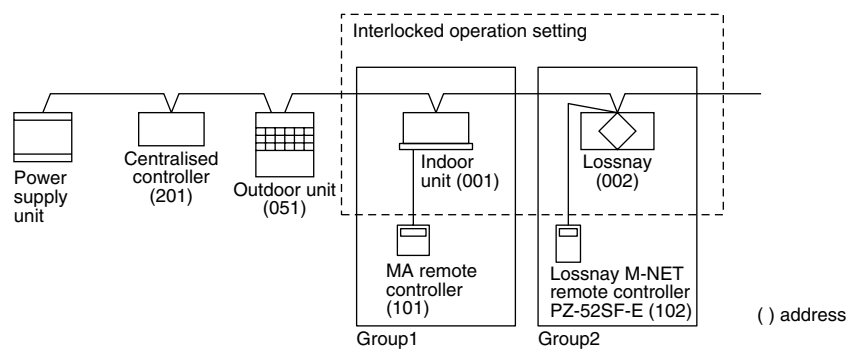
The MA remote controller, ME remote controller, and Lossnay M-NET remote controller can be used in combination.

### Combination of Air Conditioner Remote Control and Lossnay Remote Control

Indoor Unit	Lossnay LGH-RX3-E
Model for MA remote control (Type C or later)	○
Model for other than MA remote control (Type B or earlier)	×

○ : Compatible × : Incompatible

### System Examples: 1



### Setting Method

- (1) Make the Group setting for the indoor unit.
  - (2) Make the Group setting for the Lossnay unit.
  - (3) Set the indoor unit and Lossnay unit in interlocked operation.
- When using the centralised controller, make both the Group setting and operation setting for the previously mentioned units. Though the MJ-180A cannot set interlocked settings, it should set at MA/ME remote controllers.

### Characteristics

- (1) When the indoor unit is set for interlocked operation in 1 group:
  - Interlocked operation with the indoor unit from the air conditioner remote controller is possible and can switch between High/Low/Off.
  - From the air conditioner remote controller it is possible to switch the Lossnay only between High/Low/Off.
  - From the Lossnay remote controller it is possible to switch the Lossnay between High/Low/Off.
- (2) When the 2 or more indoor units with different group are set for interlocked operation, the Lossnay will operate if at least 1 group operates. The Lossnay will stop operation if all groups stop operation.
  - From an air conditioner remote controller it is possible to switch the Lossnay only between High/Low when other groups are operating.
  - From the Lossnay remote controller it is possible to switch the Lossnay between High/Low/Off.

### Note:

- If the display on the MA remote controller/ME remote controller, or other air conditioner remote controller, is cancelled, the air conditioner remote controller will not show the ventilation display even if you operate the Lossnay from the Lossnay M-NET remote controller.

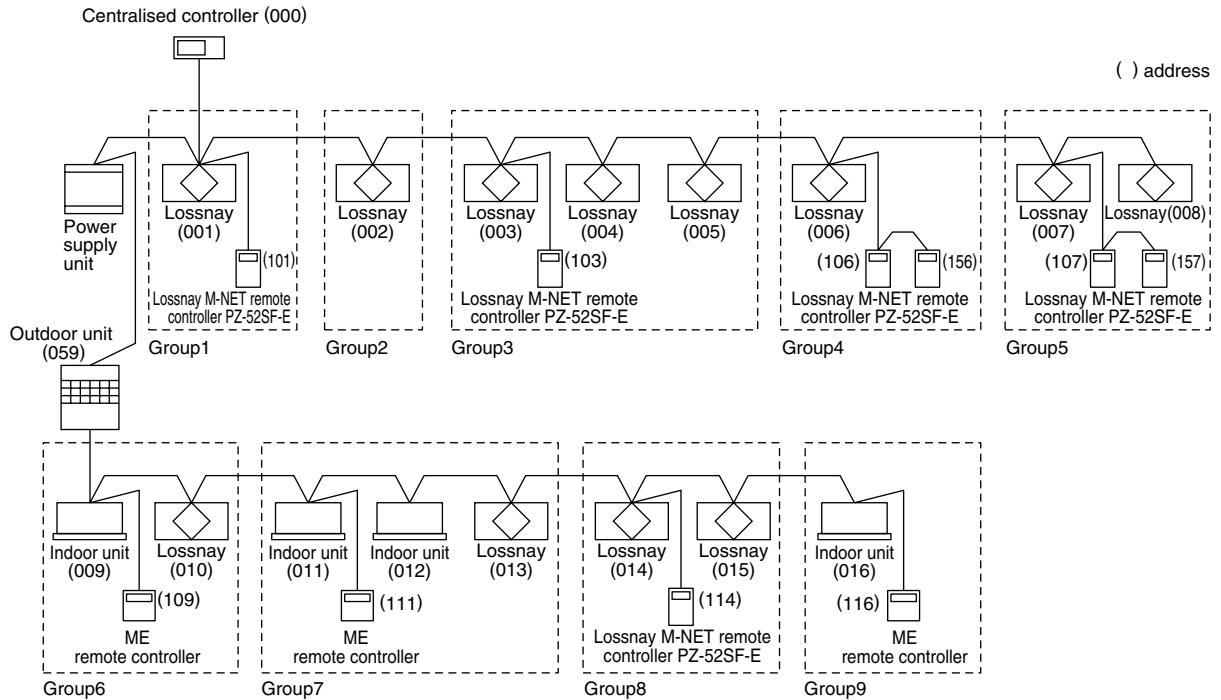
### Note:

Transmission cable power control for indoor units  
Be sure usage is within the following boundaries.

- Indoor units + ME remote controllers (compact remote controllers) + Lossnay M-NET remote controllers is less than or equal to 40 units.
- Indoor units are less than or equal to 20 units.  
(The numbers of MA remote controllers and Lossnay units are not included in the above number of units.)

## System Examples: 2

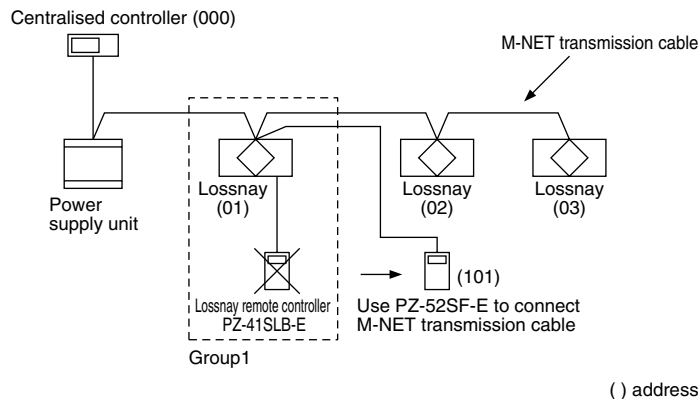
A mixed system including the City Multi can also be configured.



- Group 1 : Group of 1 Lossnay unit and 1 Lossnay M-NET remote controller.
- Group 2 : Group with no Lossnay M-NET remote controller.
- Group 3 : Group of multiple Lossnay units and 1 Lossnay M-NET remote controller.
- Group 4 : Group of 1 Lossnay unit and 2 Lossnay M-NET remote controllers.
- Group 5 : Group of multiple Lossnay units and 2 Lossnay M-NET remote controllers.
- Group 6 : Group of 1 indoor unit and 1 Lossnay unit in interlocked operation.
- Group 7 : Group of multiple indoor units and 1 Lossnay unit in interlocked operation.
- Group 8 : Group of multiple Lossnay units connected to an indoor unit transmission cable and 1 Lossnay M-NET remote controller.
- Group 9 : Group with no Lossnay units.

### Note:

- Do not use Lossnay remote controller PZ-41SLB-E in case of a system using M-NET transmission cable.



## 4.6.4 When Using the LONWORKS® Compatible Adaptor (LMAP02-E) to Connect to LONWORKS®

By using the LON® adaptor (model name: LMAP02-E), it is possible to control and observe Lossnays on a building management system using the LONWORKS®.

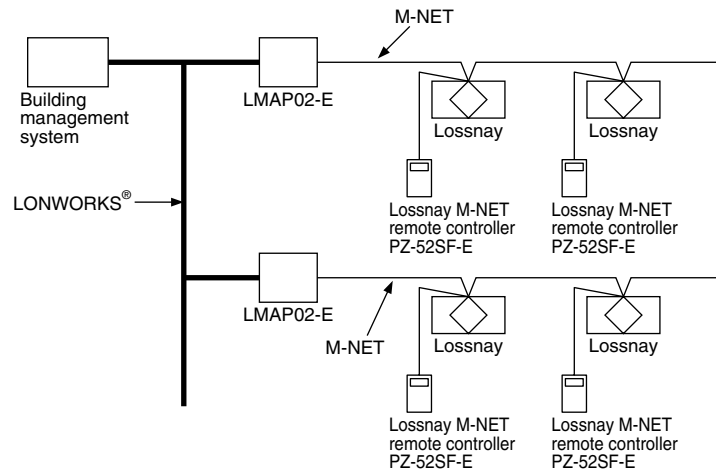
\* For specifications and functions of the LON® adaptor, refer to the materials regarding the LONWORKS® compatible adaptor.

**Table of Functions**

	<b>Contents</b>	<b>Individual Lossnay (Lossnay not set for interlocked operation)</b>	<b>Interlocked Lossnay (Lossnay set for interlocked opera- tion with City Multi)</b>
Operation	ON/OFF	○	×
	Change fan to High/Low	○	×
	Change ventilation mode	○	×
	Local prohibit ON/OFF	○	×
Observation	Operation condition	○	×
	Fan speed	○	×
	Ventilation mode (conditions)	○	×
	Errors	○	○
	Filter maintenance sign	○	×
	Local prohibit ON/OFF state	○	×

### System Example

(Using M-NET)



Connect the M-NET transmission cable to TB5 A,B of the Lossnay terminal block. (Refer to page 58).

The Lossnay remote controller (PZ-41SLB-E) can not be used with this system.

Up to 50 units can be connected with 1 LMAP02-E (The LGH-150, 200RX3-E type should be counted as two).

For details about the system or connection cables of the LMAP02-E, refer to the technical materials, etc., regarding the LMAP02-E.

\* LONWORKS® is a registered international trademark, registered in the U.S.A to the Echelon Corporation.

# 5. Examples of Applications Using External Control Input Terminals, Operation Monitor Output Terminals and Malfunction Monitor Output Terminals

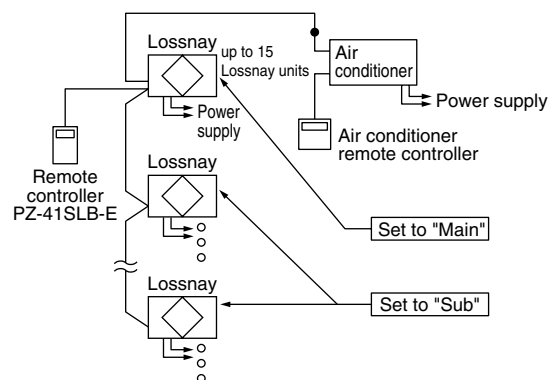
Various applications are possible by using the input/output terminals as shown below.

## Input/Output Specifications

	Terminal	Specification	Page
1	External control input terminal block (TM2 ① ② ③)	This is the input terminal block for start/stop the Lossnay unit using external equipment, such as a Mr. Slim (A-control or K-control) indoor unit or the BMS (Building Management System). Signal input can be by voltage (12V-24V DC) or uncharged a-contact signal. (Both voltage and no-voltage signals are compatible with pulse input. Set DIP switch 2-2 to ON. A pulse signal duration of 200 ms or more is needed.)	22/24-25-26
2	Operation monitor output terminal block (TM3 ⑨ ⑩)	Output terminal during Lossnay unit operation. (uncharged a-contact signal output.) Contact point rating: 2A/240V AC Within 2A/24V DC	25/27
3	Malfunction monitor output terminal block (TM3 ⑦ ⑧)	Output terminal during Lossnay unit malfunction. (uncharged a-contact signal output.) Contact point rating: 1A/240V AC Within 1A/24V DC	26 to 27

## Lossnay Main/Sub Setting

For a multiple Lossnay system that will begin operation from one signal from an air conditioner or the like, make sure the unit connected to the signal cable from the air conditioner is set to "Main," and all the others are set to "Sub."





# 5.1 External Control Operating Mode Selection

There are four modes when operating using signals from external equipment.

1. ON/OFF interlock (the last trigger from either external signal or remote control switch has priority)
2. ON interlock
3. OFF interlock
4. External priority ON/OFF interlock

## Operating Signal

Mode	When external signal is level signal.	When external signal is pulse signal. (Optional setting)
<b>ON/OFF interlock</b>	<p>External signal</p> <p>Remote controller [ON/OFF] button pressed</p> <p>Operating condition</p> <p>Operating Stopped</p>	<p>External signal</p> <p>Remote controller [ON/OFF] button pressed</p> <p>Operating condition</p> <p>Operating Stopped</p>
<b>ON interlock</b>	<p>External signal</p> <p>Remote controller [ON/OFF] button pressed</p> <p>Operating condition</p> <p>Operating Stopped</p>	<p>External signal</p> <p>Remote controller [ON/OFF] button pressed</p> <p>Operating condition</p> <p>Operating Stopped</p>
<b>OFF interlock</b>	<p>External signal</p> <p>Remote controller [ON/OFF] button pressed</p> <p>Operating condition</p> <p>Operating Stopped</p>	<p>External signal</p> <p>Remote controller [ON/OFF] button pressed</p> <p>Operating condition</p> <p>Operating Stopped</p>
<b>External priority ON/OFF interlock</b>	<p>External signal</p> <p>Remote controller [ON/OFF] button pressed</p> <p>Operating condition</p> <p>Operating Stopped</p>	<p>This mode does not exist.</p>

## Setting Method

When PZ-41SLB-E is used . . . . . Set with the remote controller. (Refer to page 67)

When PZ-41SLB-E is Not used . . . Set with the dip switch. (Refer to page 61)

## 5.2 Delayed Interlocked Operation (PZ-41SLB-E, M-NET)

- (1) It is possible to delay operation of the Lossnay with respect to the operation of the external device. (Energy saving effect.)
- (2) The times that can be set for delayed operation are 10, 20, 30, 40, 50, and 60 minutes.
- (3) Delayed operation does not occur if the Lossnay operation is cancelled within the last 2 hours.  
(If turned off for a short time, for example during a lunch break, if the direction to restart operation is given within 2 hours, the Lossnay will restart immediately.)
- (4) If an operation button is pressed on the remote controller while the delay timer is operating, the delayed operation is cancelled and normal operation begins.

### Setting Method

When PZ-41SLB-E is used . . . . . Set with the remote controller. (Refer to page 67)

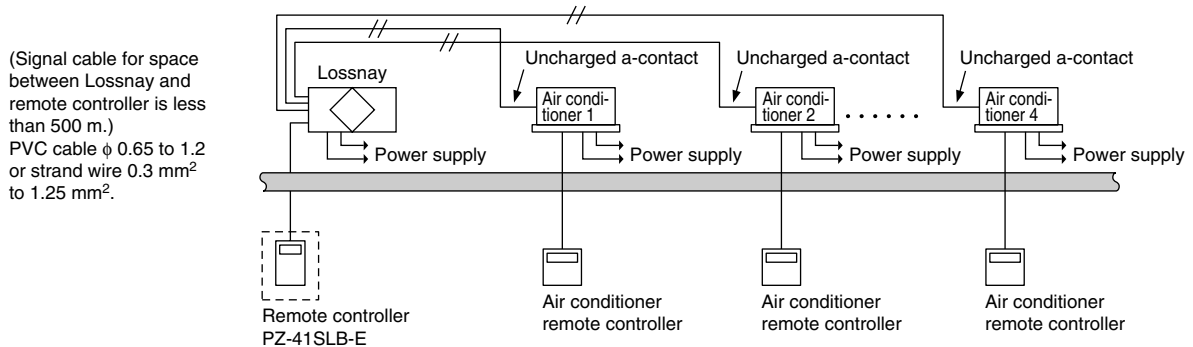
When PZ-41SLB-E is Not used . . . Set with the dip switch but fixed only for 30 minutes. (Refer to page 60)

## 5.3 Multiple External device Operation (PZ-41SLB-E, M-NET)

When there are multiple air conditioners or other external devices		
Characteristics	Ordered parts	Notes
Lossnay operates when any of the external devices operate.	Remote controller	<ul style="list-style-type: none"> <li>• External signals that can be received are listed below. Level signal, uncharged a-contact</li> <li>• If the external device is a pulse signal or charged signal multiple connections can not be made.</li> </ul>

### System Example

When the Operation Signal is a Uncharged a-contact Level Signal

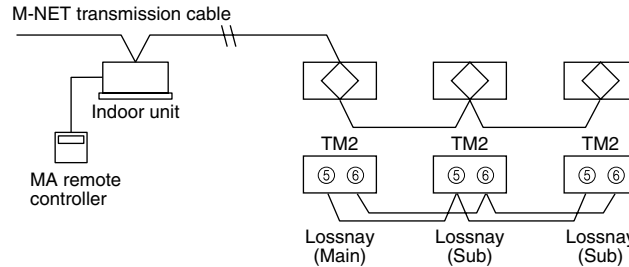


\* Illustration shows an example when using PZ-41SLB-E.

## 5.4 Multiple Lossnay Units in Interlocked Operation with One Indoor Unit. (M-NET only)

### [Example: System 1]

Set the Main/Sub switch of the Lossnay connected to the M-NET transmission cable to “Main,” set the second and following Lossnay units to “Sub,” and connect ⑤ and ⑥ of the Lossnay remote controller’s (PZ-41SLB-E) transmission cable terminal (TM2) to the corresponding point on the next unit.

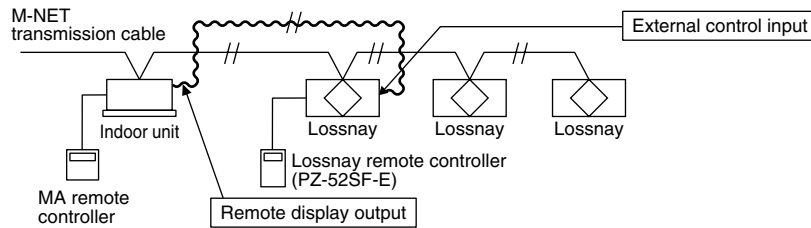


### (One Point Advice)

Register the first Lossnay unit and the indoor unit to be interlocked. It is not necessary to set the address or direct control for the second or following Lossnay units. Malfunctions of the Lossnay units after the second unit will not appear on the remote controller.

### [Example: System 2]

Use the Lossnay remote controller to set the air conditioners and Lossnay units to separate groups. Both interlocked operation of an air conditioner and Lossnay units can be performed independently by connecting the remote display output for the indoor unit and the external control input for the Lossnay unit.

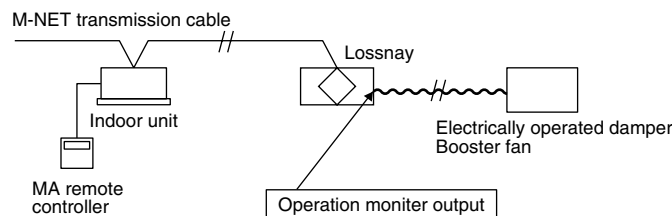


### (One Point Advice)

Do not register the indoor unit and Lossnay unit to be interlocked. In addition, ventilation switch on the MA remote controller will be invalid, and the Lossnays’ error indicator will appear only on the Lossnay remote controller.

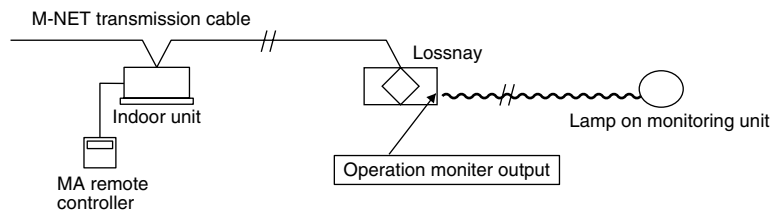
## 5.5 Interlocked Operation of Equipment such as the Electrically Operated Damper and Booster Fan. (M-NET only)

### [Example: System 3]



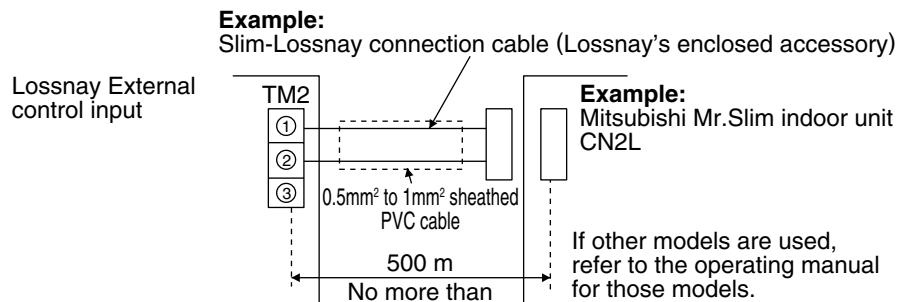
## 5.6 To Pick Up an Error Signal Externally (PZ-41SLB-E, M-NET)

### [Example System]



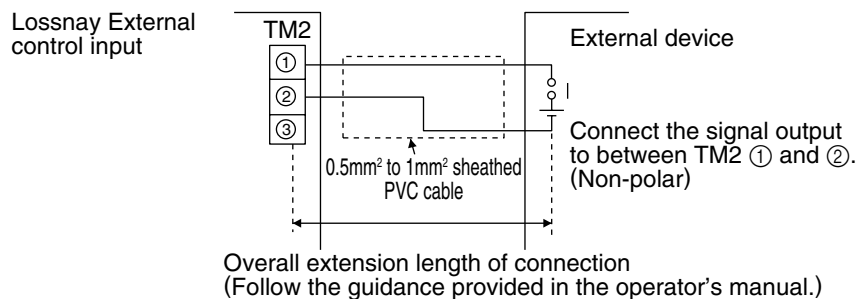
## 5.7 Connection Method (PZ-41SLB-E, M-NET)

### 1. Using a Mr. Slim (A-control or K-control) indoor unit

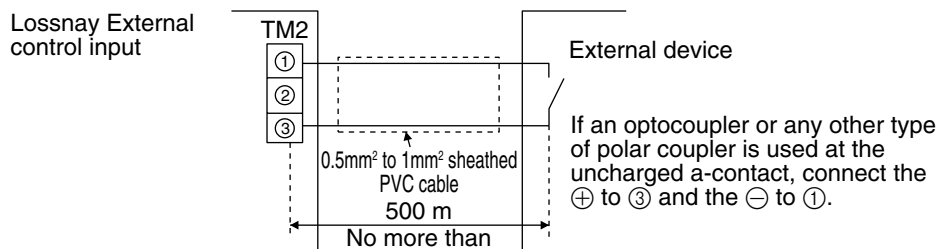


### 2. Using a 12V DC or 24V DC voltage signal

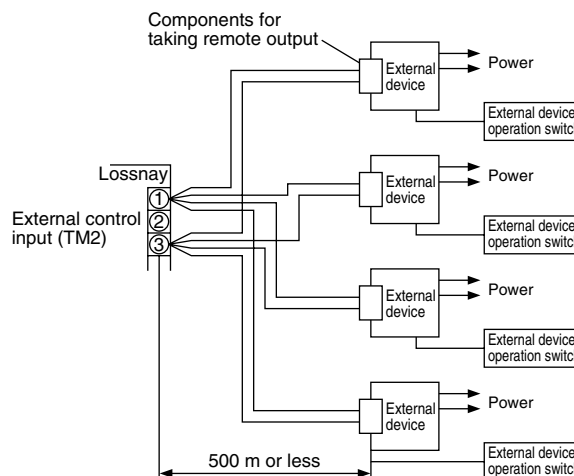
[When voltage pulse signal (12V DC or 24V DC) is used]



### 3. Uncharged a-contact



### 4. Many uncharged a-contacts.

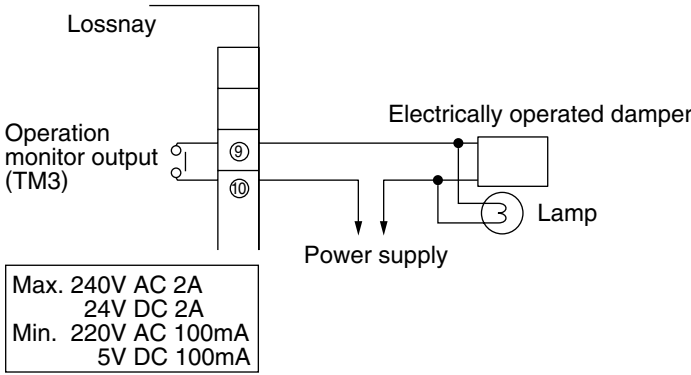


Connect ① and ③ of the external control input terminal (TM2) through the component for taking remote output at the uncharged a-contact.

#### Note:

- If an optocoupler or any other type of polar contact is used at the uncharged a-contact, connect the ⊕ to ③ and the ⊖ to ①.

## 5. Connecting to equipment such as an electrically operated damper and picking up the operating signals.



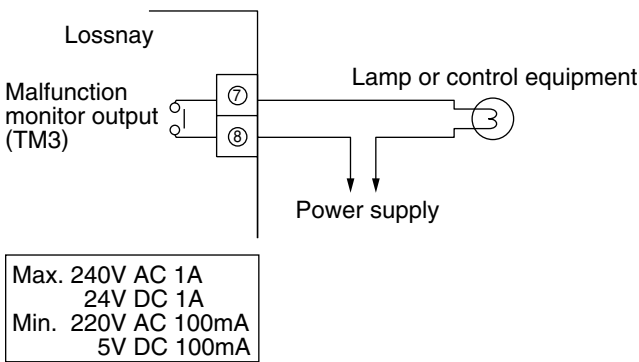
Connect the power supply cable from the electrically operated damper to ⑨ and ⑩ of the operation monitor output terminal (TM3).

### Note:

- The response time to an external control input signal is shown in the table below.

External Signal Type	Response Type
Level signal	Maximum 7 seconds
Pulse signal	Maximum 200 milliseconds

## 6. Picking up an error signal.



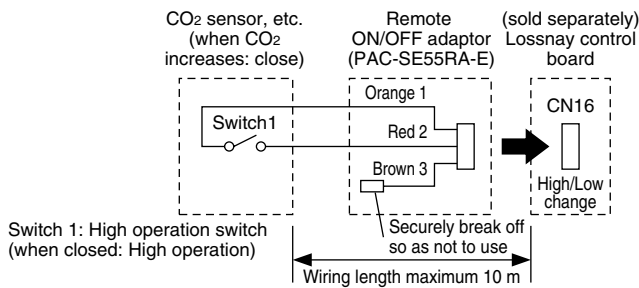
Connect to ⑦ and ⑧ of Malfunction monitor output terminal (TM3)

# 5.8 High/Low Change Input (PZ-41SLB-E, M-NET)

The fan speed of the Lossnay can be changed externally by using a commercially available CO<sub>2</sub> sensor, etc. The separately sold remote ON/OFF adaptor (PAC-SE55RA-E) is necessary for connection.

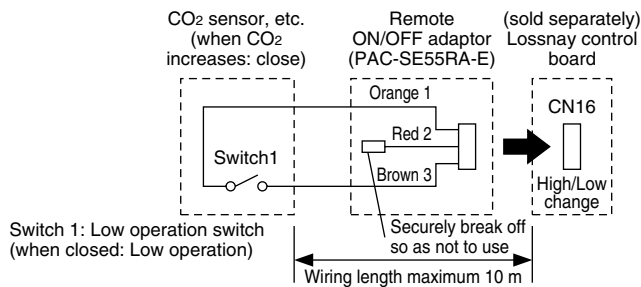
### Connection Method

- Externally Directed "High" fan speed Operation



When switch 1 is ON, the Lossnay operates at the "High" fan speed regardless of the remote controller setting. If you usually ventilate at "Low" fan speed operation, switch to "High" fan speed operation when the external sensor shows the air quality going down.

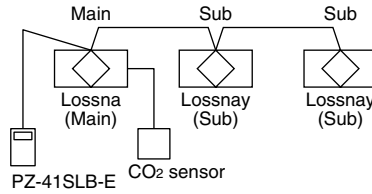
- Externally Directed "Low" fan speed Operation



When switch 1 is ON, the Lossnay operates at the "Low" fan speed regardless of the remote controller setting. If you usually ventilate at "High" fan speed operation, switch to "Low" fan speed operation when the external sensor shows few impurities in the air.

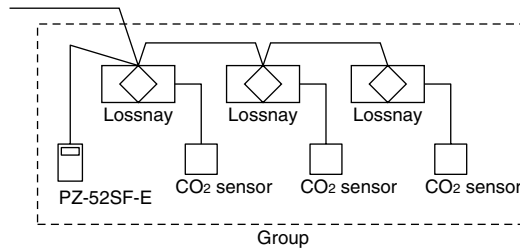
## 1 When using PZ-41SLB-E to connect multiple units

- Connect the sensor to the Lossnay with the “Main” setting.
- It is not necessary to connect to any Lossnay with the “Sub” setting.
- Connect any sensor, etc., connected to external change input to the Lossnay with the “Main” setting.
- Any Lossnay with the “Sub” setting will operate at the same High/Low setting as the Lossnay with the “Main” setting when there is sensor signal input.



## 2 When using M-NET for a group of multiple units

- For multiple groups, connect the sensor to each Lossnay.
- Even if the units are in the same group, you can only change Lossnay units connected to the sensor between High/Low operation.



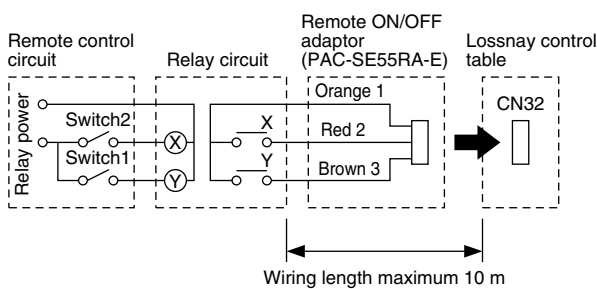
### Note:

- When using the M-NET system, the fan speed being input by this sensor signal will not be displayed on the remote controller.

## 5.9 Remote/Local control Change and ON/OFF Input (M-NET only)

The separately sold remote ON/OFF adaptor (PAC-SE55RA-E) is necessary for connection. Remote/Local changing is impossible when using PZ-41SLB-E.

- Insert the separately sold remote ON/OFF adaptor (PAC-SE55RA-E) into CN32 on the Lossnay control table



Switch 1 : When on, can not use the local remote controller (PZ-52SF-E) to turn ON/OFF.

\* When using PZ-41SLB-E, Remote/Local changing is impossible.

Switch 2 : When Switch 1 is ON, you can turn Switch 2 ON to operate the Lossnay, or turn Switch 2 to OFF to turn off the Lossnay.

Switch 1 : Remote/Local change switch

Switch 2 : ON/OFF switch

X, Y : Relay (Contact rating DC 1 mA)

### Note:

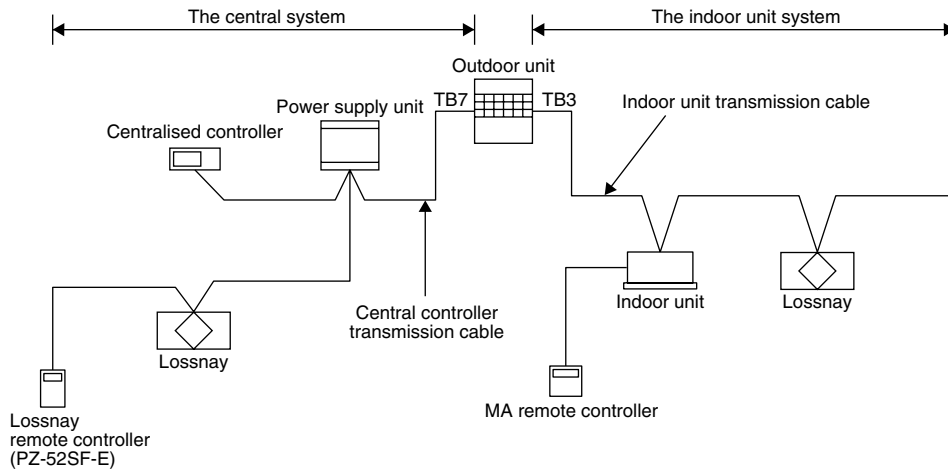
- External control input and Remote/Local changing can not be used at the same time.

# 6. Precautions When Designing Systems of M-NET

## 6.1 Power Supply of the M-NET Transmission Cable

On an M-NET system, the remote controller or central controller operate on power received from the transmission cable. Accordingly, there is need to provide power to the transmission cable.

There are two systems for supplying power. The central system is supplied by a power supply unit. The indoor unit system is supplied by an outdoor unit. The Lossnay and the Lossnay remote controller can be connected to either system.

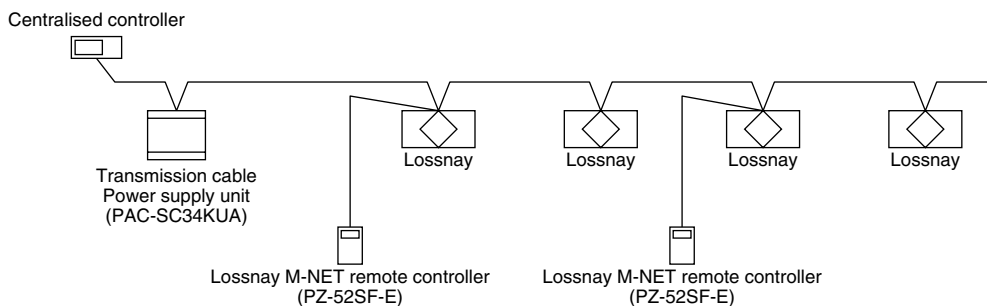


## 6.2 Restrictions When the Lossnay Units are Connected to the Central Controller M-NET Transmission Cable.

Due to the limited capacity of the power supply unit, the number of Lossnay remote controllers is restricted when the Lossnay M-NET remote controllers and Lossnay units are connected to the central controller transmission cable.

This does not apply to Lossnay units that do not receive power from the central controller transmission cable.

Number of centralised controllers		Non	1 unit	2 units	3 units	4 units
		Number of Lossnay M-NET remote controllers that can be connected.	Max. 30 units	Max. 26 units	Max. 22 units	Max. 18 units
	Power supply unit PAC-SC34KUA	Max. 30 units	Max. 26 units	Max. 22 units	Max. 18 units	Max. 14 units
	Transmission Booster PAC-SF46EPA	Max. 50 units	Max. 46 units	Max. 42 units	Max. 38 units	Max. 34 units

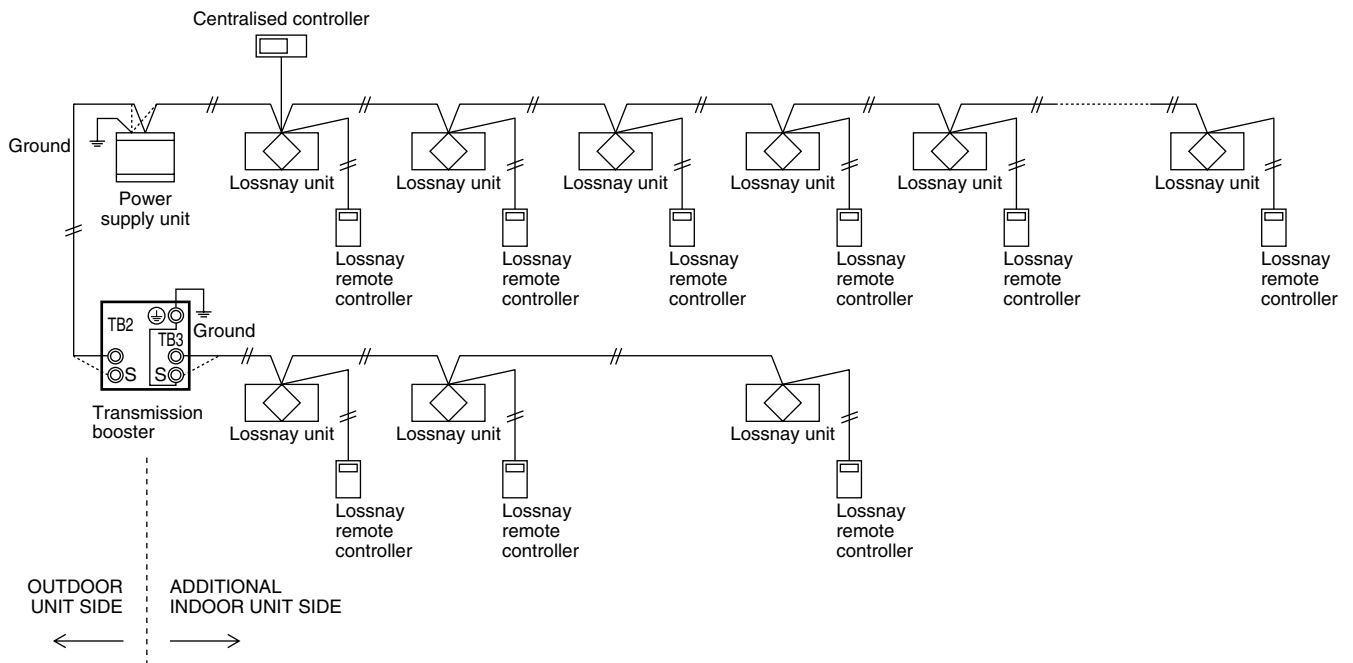


- In the case that a greater number of Lossnay remote controllers than that shown above is connected due to the use of a power supply unit (PAC-SC34KUA), a transmission booster (PAC-SF46EPA) becomes necessary.
- Transmission Booster (PAC-SF46EPA) can be used without a power supply unit (PAC-SC34KUA) if TB2 (OUTDOOR UNIT SIDE) is opened, and the M-NET transmission cable is connected to TB3 (ADDITIONAL INDOOR UNIT SIDE).

## 6.3 Wiring Example

### Example

<Centralised controller and Lossnay units>



### Note:

- This unit cannot be used to extend the transmission cable.

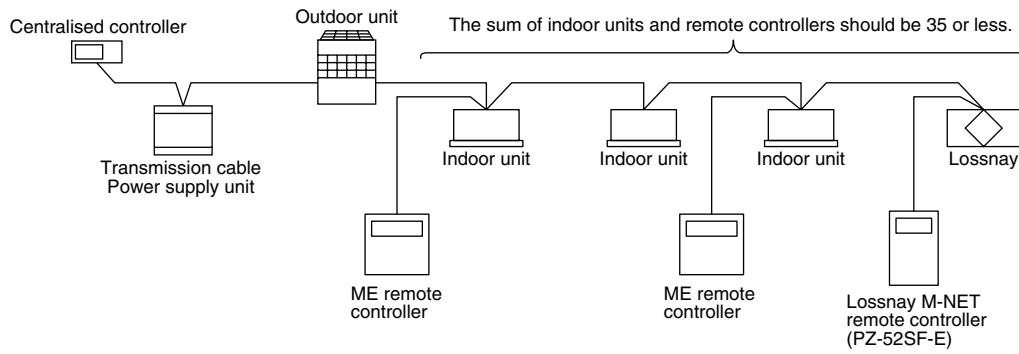


## 6.4 Power Supply to the Indoor Unit Transmission Cable.

In principle, the number of indoor units ME remote controllers and Lossnay M-NET remote controllers that can be connected to one outdoor unit will depend on the type of outdoor unit. The following are the general guidelines when connecting multiple indoor units and Lossnay units to an outdoor unit.

Indoor units + Remote controllers (Simple remote controllers) + Lossnay M-NET remote controllers  $\leq 35$

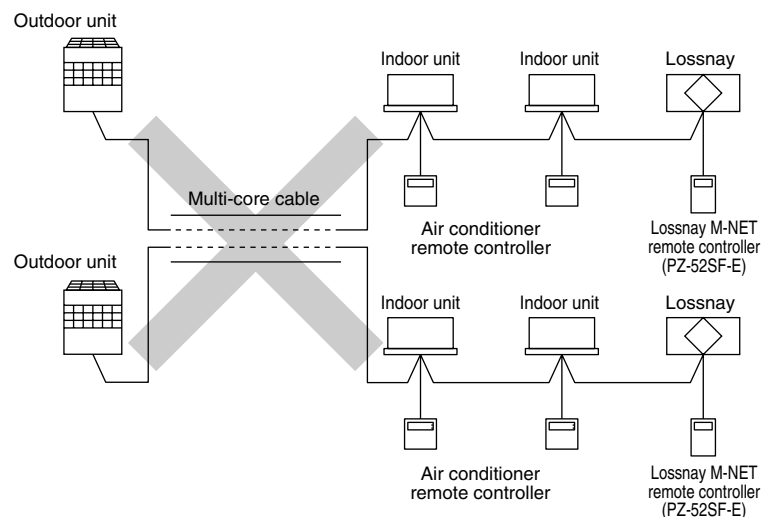
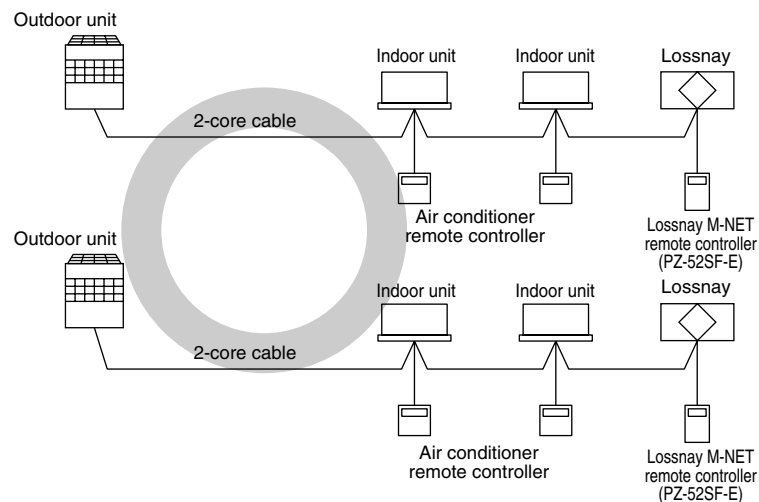
\* MA remote controllers and Lossnay unit's are Not counted.



# 7. Cable Installation of the M-NET

## 7.1 Precautions When Installing Wiring.

1. When routing transmission cable outside of the unit, position it 5 cm or more away cable for the power supply so that it will not pick up electrical noise. (Never use multi-core cable or place the transmission cable in the same conduit as the power supply cable.)
2. Never connect the power cable to the terminal block for the transmission cable. This erroneous connection will burn out the circuit board.
3. Always use 2-core cable for the transmission cable. Routing this transmission cable with the transmission cable from another system on the same multi-core cable will result in erroneous sending and receiving of signals which will cause misoperation.



## 7.2 Electrical Wiring

### Types of control cables

#### 1. Wiring the M-NET transmission cables

- Types of transmission cables  
Design cable in accordance with the following <Table 1>.
- Cross-sectional area  
1.25 mm<sup>2</sup> to 2.00 mm<sup>2</sup>

<Table 1>

System configuration	Single-refrigerant system		Multi-refrigerant system
Transmission cable length	Less than 120 m	More than 120 m	Regardless of length
Type of facility (Electrical noise potential)	Private residence or facility with no electrical noise.	Building free of electrical noise caused by inverters, electrical generators and/or high-frequency equipment (such as hospitals and radio stations.)	All facilities.
Type of facility (Electrical noise potential)	VCTF, VCTFK, CVV, CVS, VVR, VVF, or shielded cable such as CVVS or CPEVS	Shielded cable, such as CVVS or CPEVS.	

#### 2. Lossnay M-NET remote controller (PZ-52SF-E)

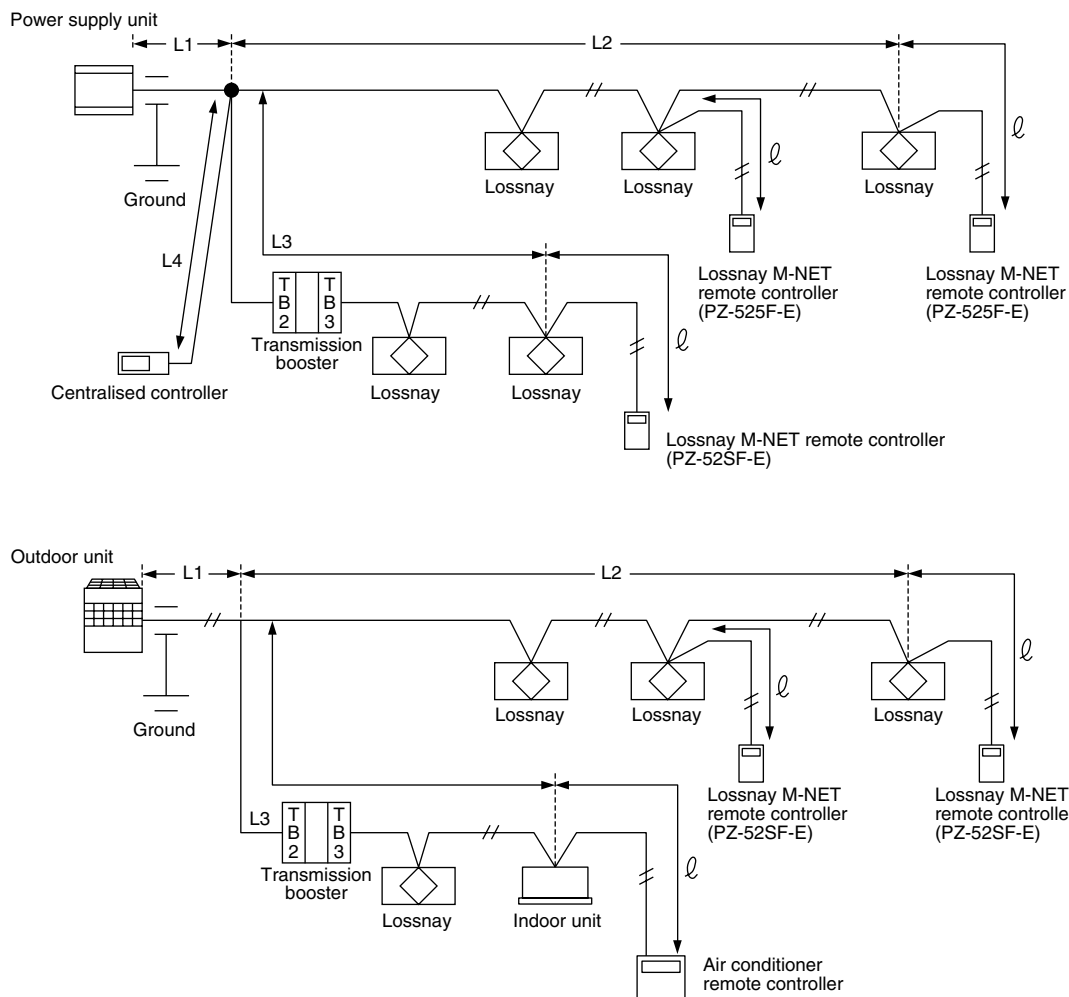
Lossnay M-NET remote controller	
Type of cables	Non-shielded cable up to 10 m in length sheathed PVC (2-core) 0.75 mm <sup>2</sup> to 1.25 mm <sup>2</sup> or equivalent. (The same specifications as table 1 for more than 10 m.)
Length	Add any portion exceeding 10 m up to the longest permissible transmission cable length of 200 m. (Shielded sections shall have a cross-sectional area of 1.25 mm <sup>2</sup> to 2.00 mm <sup>2</sup> .)

## 7.3 Length of Control Cable

- Maximum power supply cable length. ( $L1 + L2$ ,  $L1 + L3$ ,  $L1 + L4$ ): The longest length of the cable from the power supply unit or the indoor unit to the farthest terminal shall be less than 200 m.
- Maximum distance between ends ( $L2 + L3$ ,  $L2 + L4$ ,  $L3 + L4$ ): The length of cable between ends shall be less than 500 m.
- Remote controller cable length ( $\ell$ ): The distance between the remote controller and the terminal connected to it shall be 10 m or less.

### System Example

When using Lossnay remote controller or ME remote controller.



### Please:

- Always install the ground cable for the transmission cables in the following way. Route the central control system through the power supply unit. Route the indoor unit system through the ground terminal on the outdoor unit.
- If the cable length ( $\ell$ ) for the remote controller exceeds 10 m, use 0.75 mm<sup>2</sup>, change the section exceeding 10 m to the cable having a cross-sectional area of 1.25 mm<sup>2</sup> to 2.0 mm<sup>2</sup>. Add the exceeding section within the “maximum power supply cable length” restriction of 200 m and the “maximum distance between ends” restriction of 500 m.
- If the cable exceeds the maximum cable length and overall extended length, voltage will drop and cause malfunctioning.

# 8. System Designs of M-NET

## 8.1 Address Definitions

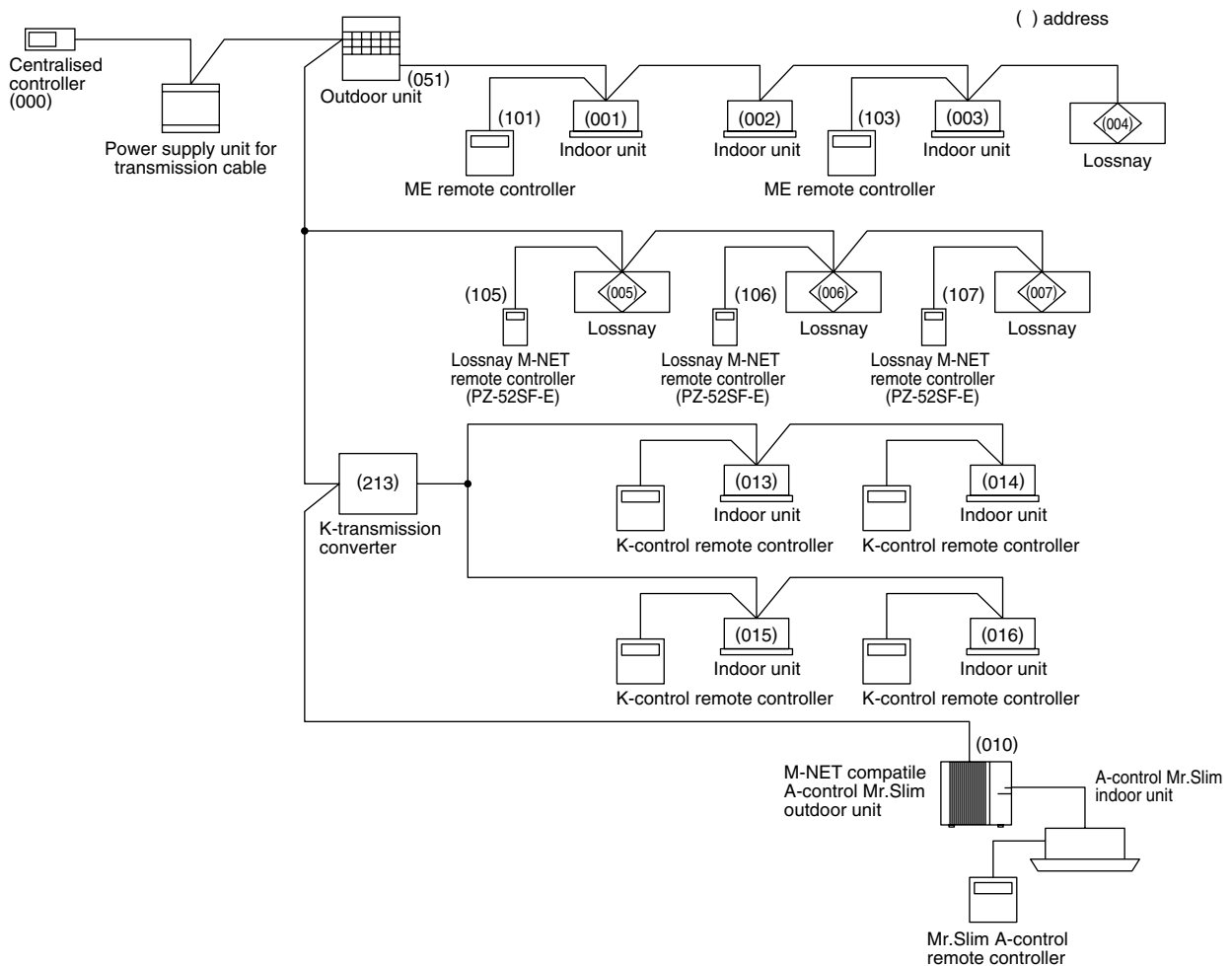
An address is a unique number used to identify each air conditioner and controller.

Device	Description	Address definition range
Indoor unit	Set to specify in order each refrigerant system.	001 to 050
Lossnay	Set to specify in order each refrigerant system.	001 to 050 (Note)
Outdoor unit	Minimum address of the indoor unit within the same refrigerant system. (+50)	051 to 100
Branch controllers	Minimum address of an outdoor unit. (+1)	052 to 100
Local remote controller (master)	Minimum address of an indoor unit or a Lossnay unit within the same group. (+100)	101 to 150
Local remote controller (secondary)	Minimum address of the indoor unit or a Lossnay unit inside the same group. (+150)	151 to 200
Central controller	When the K-control unit is in control. (000)	0, 201 to 250
K-transmission converter	Minimum address of the K-control type indoor unit. (+200) This cannot overlap with a system controller.	201 to 250

### Note:

- There is no need to set the address unless the Lossnay is connected to the M-NET transmission cable.

### System configuration example



## 8.2 Precautions When Performing Group Settings (when not interlocked with City Multi indoor unit)

Precautions	
1	The maximum number of Lossnay units in one group is 16. (Refer to page 15.)
2	When two remote controllers are used within the same group, set one remote controller as the master (address 101 to 150) and the other as the slave (address 151 to 200). (Refer to page 14.)
3	Group settings: ① Perform group settings at the centralised controller MJ-103MTRA when being used. If 2 or more centralised controllers are being used in combination, perform the group settings at the host one. (Refer to page 76.) ② If a centralised controller is not being used, use the Lossnay remote controller to perform the settings. (Refer to page 72.)
4	Do not set air conditioners and Lossnay units in the same group. If these units are set to the same group, the indoor unit or Lossnay will not operate.
5	Turn on the power source for the Lossnay when performing group settings.
6	If the group settings are performed by MELANS, be sure to also set the address for the Lossnay remote controllers to the group setting. If the remote controller address is not registered, "H0" remains displayed and the system does not start up.
7	No more than three Lossnay remote controllers can be set to the same group in a system using a central controller.

## 8.3 Precautions When Performing Interlock Settings (when interlocked with City Multi indoor unit)

Precautions	
1	The maximum number of indoor units that can be interlocked is 16. (Refer to page 17.)
2	1 Lossnay can be interlocked with an indoor unit. (Refer to page 17.)
3	Interlock settings: ① When a centralised controller (MJ-103 MTRA) is being used: if 2 or more centralised controllers are being used in combination, perform the group settings at the host one. (Refer to page 76.) ② When MA or ME remote controllers are being used except above ①: Use the MA or ME remote controller for the interlock settings. (Interlock settings cannot be performed with the MJ-180A.) (If ① or ② do not apply, interlock settings cannot be made.)
4	Do not register the Lossnay units in a group to be interlocked. Lossnay units that have been set to interlocked operation within the same group will not operate.
5	When performing the settings using a MA or ME remote controller, always set for interlocked operation to the smallest address indoor unit in a group. If the setting is not made in this manner, the message "This function is not available" will appear when operating the ventilation button and interlocking with the Lossnay unit will not be possible.
6	Turn on the power source for the Lossnay when performing interlock settings.

# 9. Automatic Ventilation Switching

## 9.1 Effect of Automatic Ventilation Mode

The automatic damper mode automatically provides the correct ventilation for the conditions in the room. It eliminates the need for troublesome switch operations when setting the Lossnay ventilator to “By-pass” ventilation. The following shows the effect “By-pass” ventilation will have under various conditions.

### 1. Reduces cooling load

If the air outside is cooler than the air inside the building during the cooling season (such as early morning or at night), “By-pass” ventilation will draw in the cooler outside air and reduce the cooling load on the system.

### 2. Cooling using outdoor air

During cooler seasons (such as between spring and summer or between summer and fall), if the people in a room cause the temperature of the room to rise, “By-pass” ventilation draw in the cool outside air and use it as is to cool the room.

### 3. Night purge

“By-pass” ventilation can be used to release hot air from inside the building that has accumulated in buildings a business district during the hot summer season.

### 4. Office equipment room cooling

During cold season, outdoor air can be drawn in and used as is to cool rooms where the temperature has risen due to the use of office equipment.

(Only when interlocked with City Multi and Mr. Slim indoor unit)

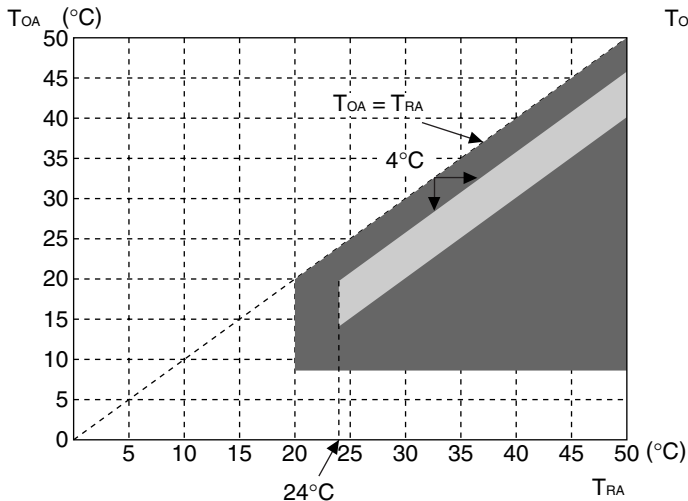
## 9.2 Switching between Heat Recovery and By-pass in the Automatic Ventilation Mode

Control of the automatic ventilation mode is performed according to the table below and automatic algorithm temperature maps. Note that operation is fixed at heat recovery when the fan is stopped or when there is an abnormality with the thermistor.

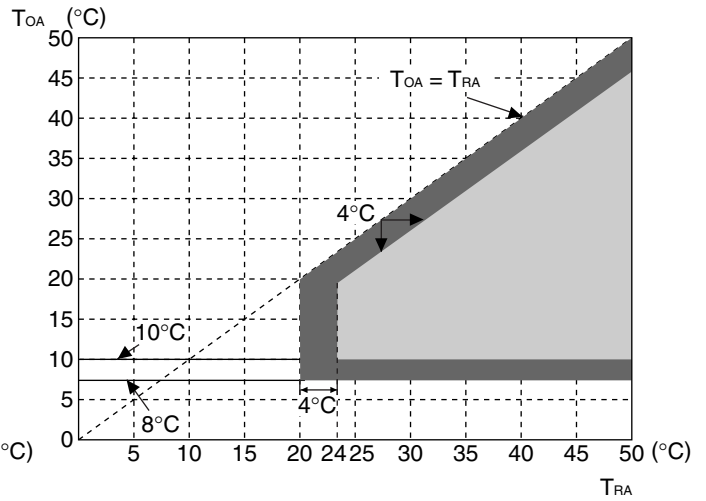
Conditions		Temperature Map
When in automatic ventilation mode when not interlocked with City Multi or Mr. Slim indoor unit. (Including when interlocked by external control input.)		According to (a).
When the outside temperature has been 28°C or higher in the last 24 hours.		According to (b).
Interlocked with City Multi indoor unit	Fan mode operation for all interlocked indoor units.	Fixed to Lossnay ventilation.
	Heating mode for one or more interlocked indoor units.	According to (c).
	When indoor units are stopped and only Lossnay unit is operated.	Fixed to Lossnay ventilation.
	Conditions other than the above.	According to (d).
Interlocked with Mr. Slim indoor unit	Mr. Slim in fan mode.	Fixed to Lossnay ventilation.
	Mr. Slim in heating mode.	According to (c).
	Mr. Slim in ventilation mode.	According to (a) or (d).
	Conditions other than the above.	According to (d).

### Note:

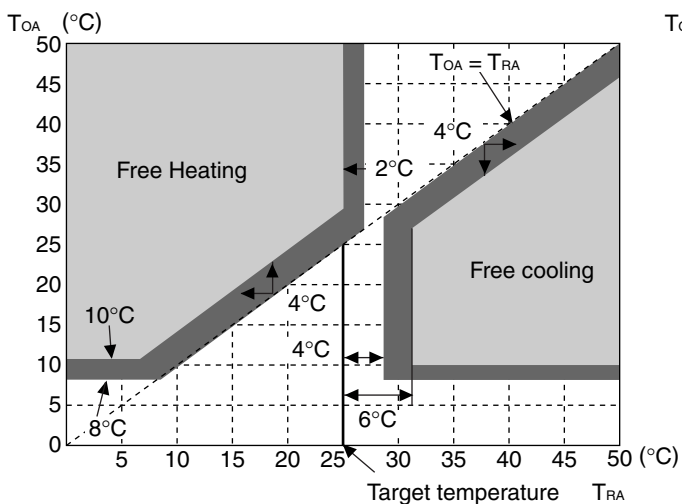
- There is a maximum delay of 30 seconds during damper switching.
- Even if “By-pass” is selected by the Lossnay remote controller, Lossnay ventilation will be performed if the outdoor temperature is 8°C or less. This is to prevent condensation.
- When multiple City Multi indoor units are connected in a group, the average set temperature for each indoor unit will be the target temperature. The set temperature is the target temperature for the Mr. Slim indoor unit.
- In the case of (b) when the indoor unit is stopped for the winter, cooling with outdoor air is performed because equipment in the room may cause a rise in indoor temperature.



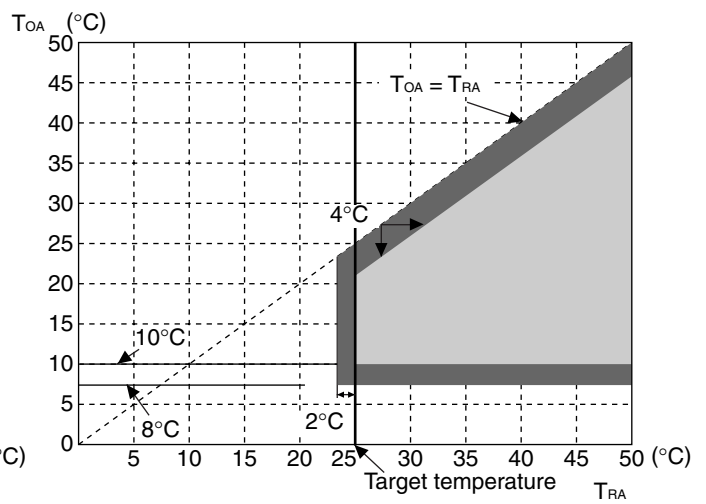
(a) When there is no target temperature



(b) When there is no target temperature and the outside temperature has been 28°C or higher in the last 24 hours.



(c) When there is a target temperature (Heating)



(d) When there is a target temperature (Cooling)  
Or the outside temperature has been 28°C or higher in the last 24 hours when interlocked with Mr.Slim and Mr.Slim in ventilation mode.

- Lossnay ventilation
- By-pass ventilation
- Comfortzone (Maintains the condition held prior to entering the range.)

$T_{OA}$ : Outdoor air temperature

$T_{RA}$ : Indoor air temperature

The indoor air and outdoor air temperature are detected by the two temperature sensors (thermistors) built into the main Lossnay unit.

## 10. Cold Weather Area Operation Specifications

When the OA temperature falls below -10°C during operation, the SA fan will change to intermittent operation, off for 10 minutes, on for 60 minutes. However, intermittent operation can not take place for 60 minutes after starting operation.



# 11. Troubleshooting

## 11.1 Service Flow

### Confirmation items

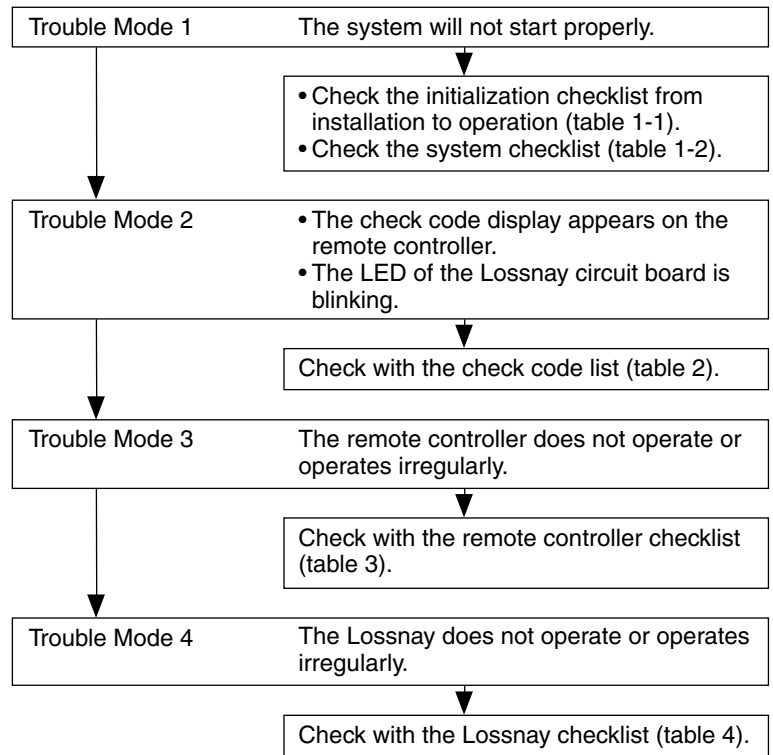
- ① Condition of trouble – remote controller display, etc.
- ② Frequency of trouble – date of start of operation and occurrence
- ③ Occurrence timing
- ④ Existence of drawings, equipment (including controllers and equipment sold separately), cables, wiring, and settings.

### Applicable models

Lossnay  
LGH-15 to 200RX<sub>3</sub>-E

### Remote controller

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



### Precautions when diagnosing malfunctions

- When removing a transistor or printed circuit board, make sure the breaker is thrown.
- 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 removing or inserting the connectors for the circuit board, hold the entire housing section. Never pull on the lead wires.
- When servicing, be sure to recreate the malfunction 2 to 3 times before starting repairs.
- If a malfunction of the printed circuit board is suspected, check for disconnected wires in the print pattern, burnt parts or discoloration.
- If the printed circuit board is replaced, make sure that the switch settings on the new board are the same as the old board.

## 11.1.1 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.

# 11.2 Items to Check

## 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)? (refer to page 54)
3	Is the wiring length of the transmission cable within specifications? When using PZ-41SLB-E: Overall extension within 500 m When using M-NET: Maximum power supply length within 200 m, maximum distance between ends within 500 m (refer to page 33)
4	Does the transmission cable meet regulations? (Type, diameter) (refer to page 56)
5	Is the transmission cable wired at least 5 cm 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? (refer to page 56, 58)
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"? (refer to page 57)
11	When using M-NET Is the address switch on the Lossnay circuit board (SA1, SA2) set to the correct number? (refer to page 59)
12	When using external control input Do the specifications of the external signal match specifications of signals that can be input to the Lossnay? (refer to page 56)
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? (refer to page 57)
14	When the external signal is 12V DC, 24V DC, or Mr. Slim (A-control or K-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 500 m Mr. Slim (A-control or K-control) signal: Within 500 m
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 500 m).</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." (refer to page 57)</li> <li>○ Check the length of the transmission cable wiring.</li> <li>○ Connect the transmission cable to TM2 ⑤ ⑥. (refer to page 56)</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 500 m).</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." (refer to page 57)</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               <table style="margin-left: 20px; border: none;"> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 5px;">12V DC, 24V DC:</td> <td style="padding: 0 5px;">Longer than limitations of external device</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 5px;">Uncharged a-contact:</td> <td style="padding: 0 5px;">Longer than 500 m</td> </tr> <tr> <td style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 5px;">Mr. Slim signal:</td> <td style="padding: 0 5px;">Longer than 500 m</td> </tr> </table> </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>	12V DC, 24V DC:	Longer than limitations of external device	Uncharged a-contact:	Longer than 500 m	Mr. Slim signal:	Longer than 500 m	<ul style="list-style-type: none"> <li>○ Check the connection to the external control input terminal (TM2) for the type of external signal. (refer to page 56, 57)</li> <li>○ Check the type of external signal and the setting of the pulse input switch (SW2-2). (refer to page 57)</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). (refer to page 64)</li> <li>○ Check the Interlocked Operation mode setting at the remote controller (PZ-41SLB-E). (refer to page 64)</li> <li>○ Connect the external control input signal to the Lossnay unit set to "Main."</li> </ul>
12V DC, 24V DC:	Longer than limitations of external device								
Uncharged a-contact:	Longer than 500 m								
Mr. Slim signal:	Longer than 500 m								

## (2) System 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><input type="radio"/> The Lossnay is not set for interlocked operation, or is set for interlocked operation at the wrong address.</li> <li><input type="radio"/> 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 200 m from the outdoor unit, longer than 500 m between ends.)</li> <li><input type="radio"/> PZ-41LSB-E is connected to the Lossnay local remote controller.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the Lossnay address, and set for an address corresponding to interlocked operation. (refer to "15. Appendix")</li> <li><input type="radio"/> Check the length of the transmission cable wiring.</li> <li><input type="radio"/> 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><input type="radio"/> The address that has been set for the group in MELANS and the address for the Lossnay are different.</li> <li><input type="radio"/> 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 200 m from the power supply unit, longer than 500 m between ends.)</li> <li><input type="radio"/> PZ-41LSB-E is connected to the Lossnay local remote controller.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the registered address in MELANS. (refer to "15. Appendix")</li> <li><input type="radio"/> Check the length of the transmission cable wiring.</li> <li><input type="radio"/> 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><input type="radio"/> It has been set for interlocked operation with the City Multi unit.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Cancel the interlocked operation setting. (refer to "15. Appendix")</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><input type="radio"/> Power is not supplied to the Lossnay, or power outside specifications is connected.</li> <li><input type="radio"/> The M-NET transmission cable is connected to TM2 ⑤ ⑥.</li> <li><input type="radio"/> The transmission cable is not properly connected to the MELANS or the City Multi.</li> <li><input type="radio"/> The length of the transmission cable wiring is longer than specifications (longer than maximum 200 m from the power supply unit, longer than 500 m between ends.)</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the power for the Lossnay and perform the registration again. (refer to "15. Appendix")</li> <li><input type="radio"/> Connect the transmission cable to TB5 ①, ②. (refer to page 58)</li> <li><input type="radio"/> Check the transmission cable connection. (refer to page 58)</li> <li><input type="radio"/> 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><input type="radio"/> The Group setting was made on a Lossnay remote controller in a system connected to a centralised controller MELANS.</li> <li><input type="radio"/> The length of the transmission cable wiring is longer than specifications (longer than maximum 200 m from the power supply unit, longer than 500 m between ends.)</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> In a system connected to MELANS, make the group setting with the MELANS (Do not make the group setting with the Lossnay remote controller). (refer to "15. Appendix" or page 72)</li> <li><input type="radio"/> 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><input type="radio"/> Over the number of units that can be controlled with the Lossnay remote controller.</li> <li><input type="radio"/> The length of the transmission cable wiring is longer than specifications (longer than maximum 200 m from the power supply unit, longer than 500 m between ends.)</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check remote control unit number limitations when using a power supply unit (refer to page 28).</li> <li><input type="radio"/> Check the length of the transmission cable wiring.</li> </ul>

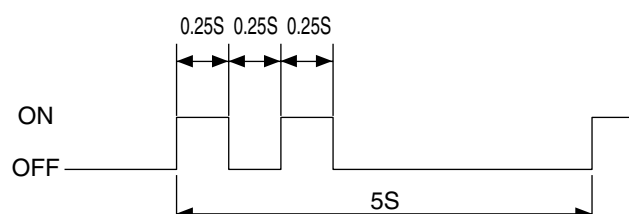
No.	Symptom	Cause	Corrective action
7	The power display “●” does not display when power is supplied to the system.	① When using City Multi and Lossnay interlocked system (connected to the indoor unit system) <ul style="list-style-type: none"> <li><input type="radio"/> The transmission cable is not correctly connected to the Lossnay remote controller.</li> <li><input type="radio"/> The power is not turned on for the outdoor unit.</li> <li><input type="radio"/> The length of wiring for the outdoor unit’s M-NET transmission cable is longer than specification (longer than 200 m).</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the transmission cable connection. (refer to page 70)</li> <li><input type="radio"/> Check the power to the outdoor unit.</li> <li><input type="radio"/> 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><input type="radio"/> The power supply unit is not connected to the transmission cable.</li> <li><input type="radio"/> The power to the power supply unit is not turned on.</li> <li><input type="radio"/> The length of wiring of the M-NET transmission cable from the power supply unit is longer than specification (longer than 200 m).</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Connect to the power supply unit. (refer to page 59)</li> <li><input type="radio"/> Check the power to the power supply unit.</li> <li><input type="radio"/> 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><input type="radio"/> Lossnay is Not supplied with specified power.</li> <li><input type="radio"/> The address for the Lossnay remote controller does not have a group setting at the MELANS.</li> <li><input type="radio"/> The M-NET transmission cable is connected to TM2 ⑤ ⑥.</li> <li><input type="radio"/> 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><input type="radio"/> Check the power to the Lossnay.</li> <li><input type="radio"/> Check the Lossnay remote controller address registration with the MELANS (“HO displays for 3 – 10 minute when electricity is supplied to the system). (refer to “15. Appendix”)</li> <li><input type="radio"/> Connect the transmission cable to TB5 ④, ⑤. (refer to page 58)</li> <li><input type="radio"/> Check the Lossnay registration with the Lossnay remote controller. (refer to “15. Appendix”)</li> </ul>
9	“LC 6608” displays on the remote controller and the Lossnay does not operate.	<ul style="list-style-type: none"> <li><input type="radio"/> The remote controller is PZ-41LSB-E and connected to the TB5 ④, ⑤.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> 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><input type="radio"/> The remote controller is PZ-41SLB-E and connected to the TM2 ⑤-⑥.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Change to the PZ-52SF-E remote controller (PZ-41SLB-E can not be used with a M-NET system).</li> </ul>

## Trouble Mode 2

### ● An error code displays on the remote controller.

### ● Lossnay circuit board LED is flashing or lit up.

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

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 500 m).</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). (refer to page 57)</li> <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> <li>○ Check the transmission cable connection. (refer to page 56)</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 500 m).</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> <li>○ Check the transmission cable connection. (refer to page 67)</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. (refer to page 62)</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 500 m).</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> <li>○ Check the transmission cable connection. (refer to page 56, 57)</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>

\*1 LC: Lossnay set to Main SLC: Lossnay set to Sub RC, SRC: remote controller (PZ-41SLB-E)

\*2 Because the LGH-150/200RX3-E is loaded with 2 control circuit units, "SLC" may display even with only 1 Lossnay. When "SLC" displays, check and perform maintenance on the upper side circuit.

## (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 200 m from the power supply unit, longer than 500 m 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. (refer to page 58) <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. (refer to page 62)
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. (refer to page 72 or "15. Appendix")
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 200 m).	<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.

\*1 The letters "LC" that display with the error code show a Lossnay unit type, and the number in the third column shows the address.

\*2 Because the LGH-150/200RX3-E is loaded with 2 control circuit units, 1 Lossnay unit has 2 addresses. Check and perform maintenance on the table related to the address set at the address switch (SA1, SA2).



### 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><input type="radio"/> Transmission cable is connected to the wrong terminal</li> <li><input type="radio"/> No Lossnay is set to "Main."</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"/> Transmission cable is not securely connected.</li> <li><input type="radio"/> The length of wiring of the transmission cable is longer than specification (longer than 500 m).</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the transmission cable connection (connected to ⑤ ⑥ of terminal unit TM2 on the Lossnay board). (refer to page 56)</li> <li><input type="radio"/> Turn off the main power supply and set the Main/Sub switch (SW1) (first unit to main, second and following units to sub). (refer to page 57)</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. (refer to page 56)</li> <li><input type="radio"/> 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><input type="radio"/> Multiple transmission cables have been wired using multi core wires.</li> <li><input type="radio"/> Transmission cable and power supply cable are too close.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Wire the transmission cable away from the other transmission cable.</li> <li><input type="radio"/> 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><input type="radio"/> Letters on the remote controller LCD are dim.</li> <li><input type="radio"/> The release of the Delay Start button or the Filter Reset button is not good.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Replace the remote control.</li> <li><input type="radio"/> 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><input type="radio"/> External priority ON/OFF setting is made.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the interlocked operation mode setting. (refer to page 64)</li> </ul>
5	Cannot switch fan speed with the remote controller.	<ul style="list-style-type: none"> <li><input type="radio"/> High/Low change input (CN16) is ON.</li> <li><input type="radio"/> 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><input type="radio"/> Check the High/Low change input (CN16). (refer to page 58)</li> <li><input type="radio"/> Check the function select switch (SW 2-4.5) (refer to page 60)</li> </ul>
6	Lossnay operates when the main power supply turns on and the remote controller displays.	<ul style="list-style-type: none"> <li><input type="radio"/> Main power supply was cut during Lossnay operation.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> 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><input type="radio"/> Transmission cable is connected to the wrong terminal</li> <li><input type="radio"/> There is no power supply unit (for Lossnay only systems).</li> <li><input type="radio"/> The power supply unit is not turned on.</li> <li><input type="radio"/> Transmission cable is not securely connected.</li> <li><input type="radio"/> Wiring length of the transmission cable is from the power supply unit or the outdoor unit is longer than specifications (maximum extension 200 m).</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the transmission cable connection (connected to ㉞, ㉟ of terminal unit TB5 on the Lossnay board). (refer to page 58)</li> <li><input type="radio"/> Install the power supply unit.</li> <li><input type="radio"/> Check the power to the power supply unit.</li> <li><input type="radio"/> Check the transmission cable connection. (refer to page 58)</li> <li><input type="radio"/> 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 200 m from the power supply unit, longer than 500 m 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. (refer to "15. Appendix" or page 72)</li> <li><input type="radio"/> Check the group setting at the MELANS. (refer to "15. Appendix")</li> <li><input type="radio"/> Check the power supply to the Lossnay. (refer to page 54)</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). (refer to page 58)</li> <li><input type="radio"/> Check the Lossnay address. (refer to page 59)</li> <li><input type="radio"/> If the board has been replaced, reset the group settings. (refer to "15. Appendix")</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 200 m from the power supply unit, longer than 500 m between ends).</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the power supply to the Lossnay. (refer to page 54)</li> <li><input type="radio"/> Check the power supply.</li> <li><input type="radio"/> Check the transmission cable connection. (refer to page 58)</li> <li><input type="radio"/> Check the transmission cable connection (connected to ①, ② of terminal unit TB5 on the Lossnay table). (refer to page 58)</li> <li><input type="radio"/> Check the Lossnay address. (refer to page 59)</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. (refer to "15. Appendix" )</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. (refer to page 61)</li> <li><input type="radio"/> Check the remote/nearby change input (CN32).</li> </ul>

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

### 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><input type="radio"/> Connectors for the fan connection or connectors for the control circuit section connection are not secure.</li> <li><input type="radio"/> Power supply is not supplied to the Lossnay, or power outside specifications is connected.</li> <li><input type="radio"/> Lossnay group setting is not made by using the M-NET. (LED2 lights)</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the lead wire connectors and the control circuit section connectors.</li> <li><input type="radio"/> Check the power supply. (refer to page 54)</li> <li><input type="radio"/> 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><input type="radio"/> The type of external signal does not match the connected terminal unit (charged, uncharged, Mr. Slim signal).</li> <li><input type="radio"/> The type of external signal does not match the pulse input switch (SW2-2) setting (level signal, pulse signal).</li> <li><input type="radio"/> The external device signal is not being input.</li> <li><input type="radio"/> 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 500 m Mr. Slim signal: Longer than 500 m)</li> <li><input type="radio"/> 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><input type="radio"/> 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><input type="radio"/> When using multiple Lossnay units, the external control input signal is connected to a unit with the "Sub" setting made.</li> <li><input type="radio"/> 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><input type="radio"/> There is a communication error with the remote controller or controller.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the external signal type and the external control input terminal (TM2) connection. (refer to page 56, 57)</li> <li><input type="radio"/> Check the external signal type and the pulse input switch (SW2-2) setting. (refer to page 57)</li> <li><input type="radio"/> Check the external device.</li> <li><input type="radio"/> Check the wiring length of the signal cable.</li> <li><input type="radio"/> Check the delayed start settings of the remote controller (PZ41SLB-E) and the function select switch (SW5-1). (refer to page 60, 64)</li> <li><input type="radio"/> Check the interlocked operation mode settings of the remote controller (PZ41SLB-E) and the function select switch (SW5-7, 8). (refer to page 61, 64)</li> <li><input type="radio"/> Connect the external control input signal to the Lossnay set to "Main." (refer to page 57)</li> <li><input type="radio"/> Connect the external control input signal to the Lossnay in the group with the lowest address.</li> <li><input type="radio"/> Check the remote controller or controller.</li> </ul>
3	Fan will not stop.	<ul style="list-style-type: none"> <li><input type="radio"/> The trial operation switch (SW 2-1) is ON.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the test operation switch (SW2-1). (refer to page 62)</li> </ul>
4	Lossnay operates when main power is turned on.	<ul style="list-style-type: none"> <li><input type="radio"/> The PZ-41SLB-E is being used.</li> <li><input type="radio"/> 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><input type="radio"/> By using the M-NET, the automatic recovery following power supply interruption (refer to page 61) 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><input type="radio"/> 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><input type="radio"/> Check the power supply ON/OFF setting of the function select switch (SW2-6). (refer to page 60)</li> <li><input type="radio"/> Check the automatic recovery following power supply interruption setting of the function select switch (SW5-4). (refer to page 61)</li> </ul>

No.	Symptom	Cause	Corrective action
5	Supply air fan periodically stops operating.	<ul style="list-style-type: none"> <li><input type="radio"/> When the outdoor air temperature is -10°C 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><input type="radio"/> 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><input type="radio"/> This is no error.</li> <li><input type="radio"/> 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><input type="radio"/> The indoor unit's outside air intake selection is invalid.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> 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><input type="radio"/> 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><input type="radio"/> Check the function select switch (SW5-3). (refer to page 60)</li> </ul>
8	Fan speed will not change.	<ul style="list-style-type: none"> <li><input type="radio"/> The High/Low switching extermary input (CN16) is set to ON.</li> <li><input type="radio"/> 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><input type="radio"/> The trial operation switch (SW2-1) is turned ON.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the High/Low change input (CN16). (refer to page 58)</li> <li><input type="radio"/> Check the function select switch (SW2-4,5). (refer to page 60)</li> <li><input type="radio"/> Check the trial operation switch (SW2-1). (refer to page 62)</li> </ul>
9	Damper board does not operate.	<ul style="list-style-type: none"> <li><input type="radio"/> The outside air temperature is less than 8°C.</li> <li><input type="radio"/> The damper board operation is defective.</li> <li><input type="radio"/> The thermistor related connectors are not securely connected.</li> <li><input type="radio"/> The damper related connectors are not securely connected.</li> <li><input type="radio"/> The trial operation switch (SW2-1 or SW2-3) is turned ON.</li> <li><input type="radio"/> 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><input type="radio"/> Check the outdoor air temperature.</li> <li><input type="radio"/> Remove the load and check or move the damper board by hand.</li> <li><input type="radio"/> Check the connections of the lead wire connectors and the circuit connectors.</li> <li><input type="radio"/> Check the connections of the lead wire connectors and the control circuit connectors.</li> <li><input type="radio"/> Check the trial operation switch (SW2-1 or SW2-3). (refer to page 62)</li> <li><input type="radio"/> 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><input type="radio"/> 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><input type="radio"/> This is no error.</li> </ul>
11	Operation monitor output is OFF during operation.	<ul style="list-style-type: none"> <li><input type="radio"/> 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 -10°C or less or when the air conditioner is defrosting.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> Check the function select switch (SW5-2). (refer to page 60)</li> </ul>
12	Delayed start operation does not work when Delayed start is set.	<ul style="list-style-type: none"> <li><input type="radio"/> 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><input type="radio"/> Set delayed start at the remote controller (the circuit board switch is not in effect when using the PZ-41SLB-E). (refer to page 64)</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><input type="radio"/> Using the PZ-41SLB-E.</li> </ul>	<ul style="list-style-type: none"> <li><input type="radio"/> 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><input type="radio"/> 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><input type="radio"/> Set interlocked operation at the remote controller (the circuit board switch is not in effect when using the PZ-41SLB-E). (refer to page 64)</li> </ul>

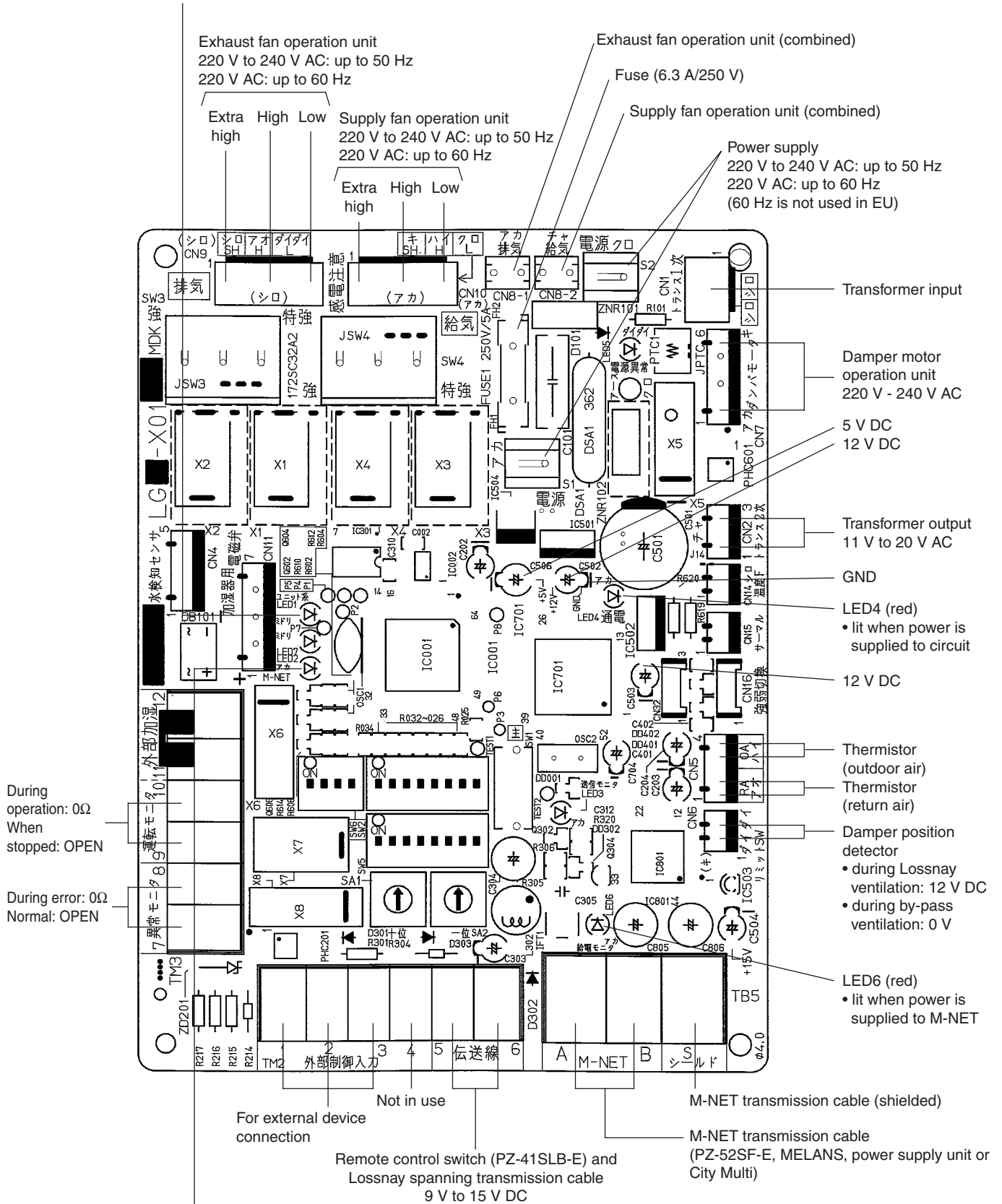
## Temperatures vs. thermistor resistance table

Temperature (°C)	Resistance value (kΩ)	Temperature (°C)	Resistance value (kΩ)	Temperature (°C)	Resistance value (kΩ)	Temperature (°C)	Resistance value (kΩ)	Temperature (°C)	Resistance value (kΩ)
-40	88.85 - ∞	-7	17.92	8	9.57	23	5.38	38	3.17
⋮	⋮	-6	17.16	9	9.20	24	5.19	39	3.06
-20	32.43	-5	16.43	10	8.84	25	5.00	40	2.96
-19	30.92	-4	15.74	11	8.49	26	4.82	41	2.86
-18	29.50	-3	15.08	12	8.17	27	4.65	42	2.77
-17	28.14	-2	14.45	13	7.85	28	4.49	43	2.68
-16	26.87	-1	13.86	14	7.55	29	4.33	44	2.59
-15	25.65	0	13.29	15	7.27	30	4.18	45	2.51
-14	24.51	1	12.74	16	6.99	31	4.03	46	2.43
-13	23.42	2	12.22	17	6.73	32	3.89	47	2.35
-12	22.39	3	11.72	18	6.48	33	3.76	48	2.28
-11	21.41	4	11.25	19	6.24	34	3.63	49	2.21
-10	20.48	5	10.80	20	6.01	35	3.51	50	2.14
-9	19.58	6	10.37	21	5.79	36	3.39	⋮	⋮
-8	18.73	7	9.96	22	5.58	37	3.28	87.5 -	0.72 - 0

# 11.3 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.



LED2 (red)

- Blinking indicates M-NET communication error (number of blinks indicated the type of error).
- Lit when not connected to other M-NET units (registered).

# 12. Installation method (Model LGH-RX3-E series)

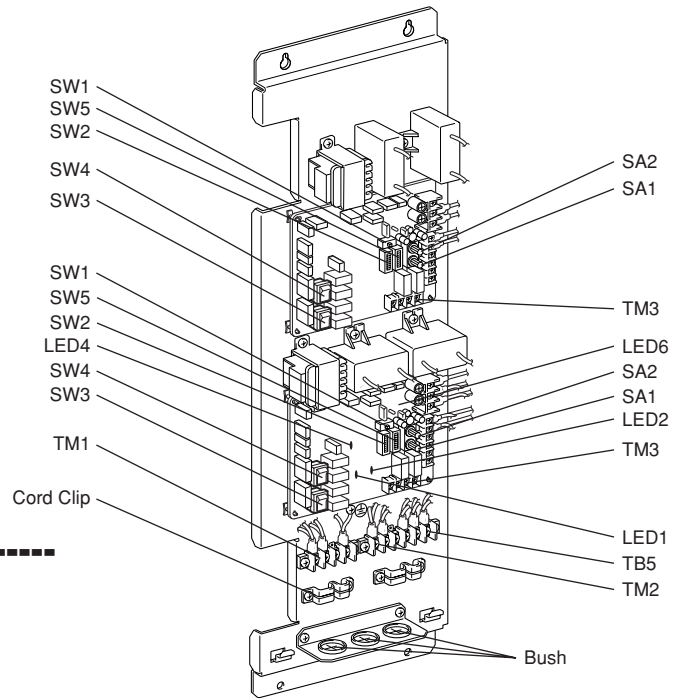
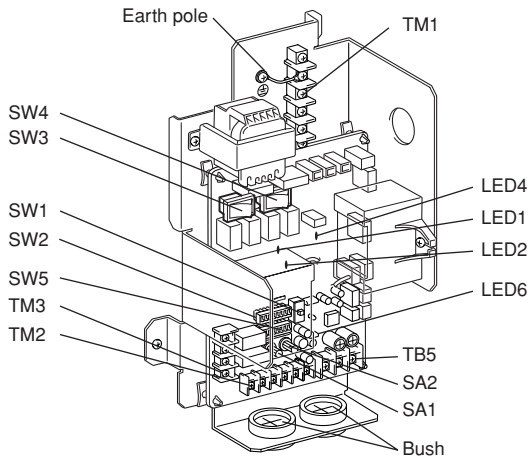
## 12.1 Electrical installation

With this product, the wiring installation method will vary according to the design of the system. Perform electrical installation for each of the required sections.

### 12.1.1 Names of components in control box

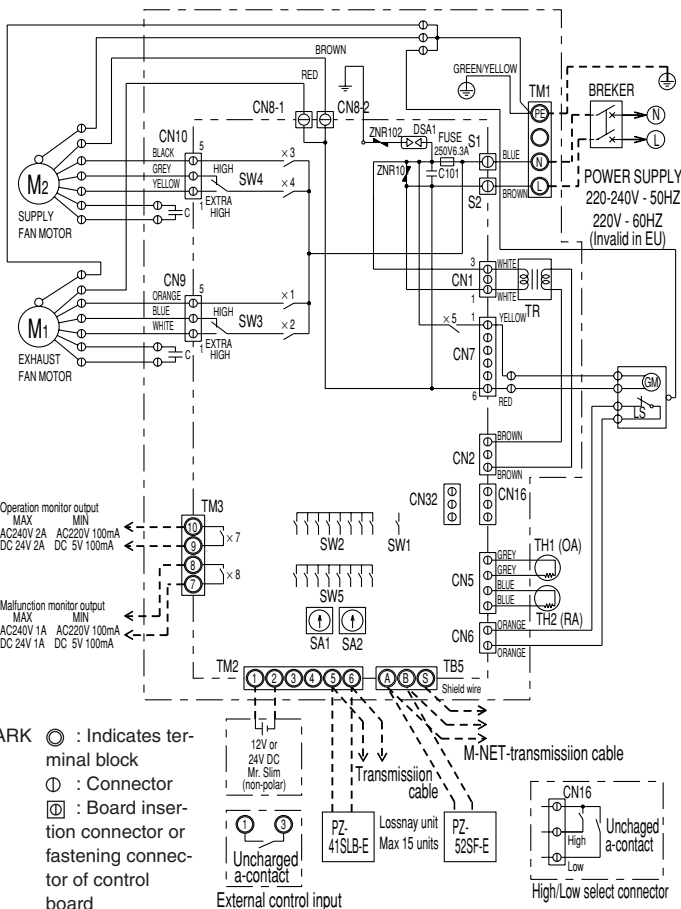
LGH-15 to LGH-100RX<sub>3</sub>

LGH-150 and LGH-200RX<sub>3</sub>



### 12.1.2 Wire connection diagram ----- Models LGH-15 to 100RX<sub>3</sub>

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

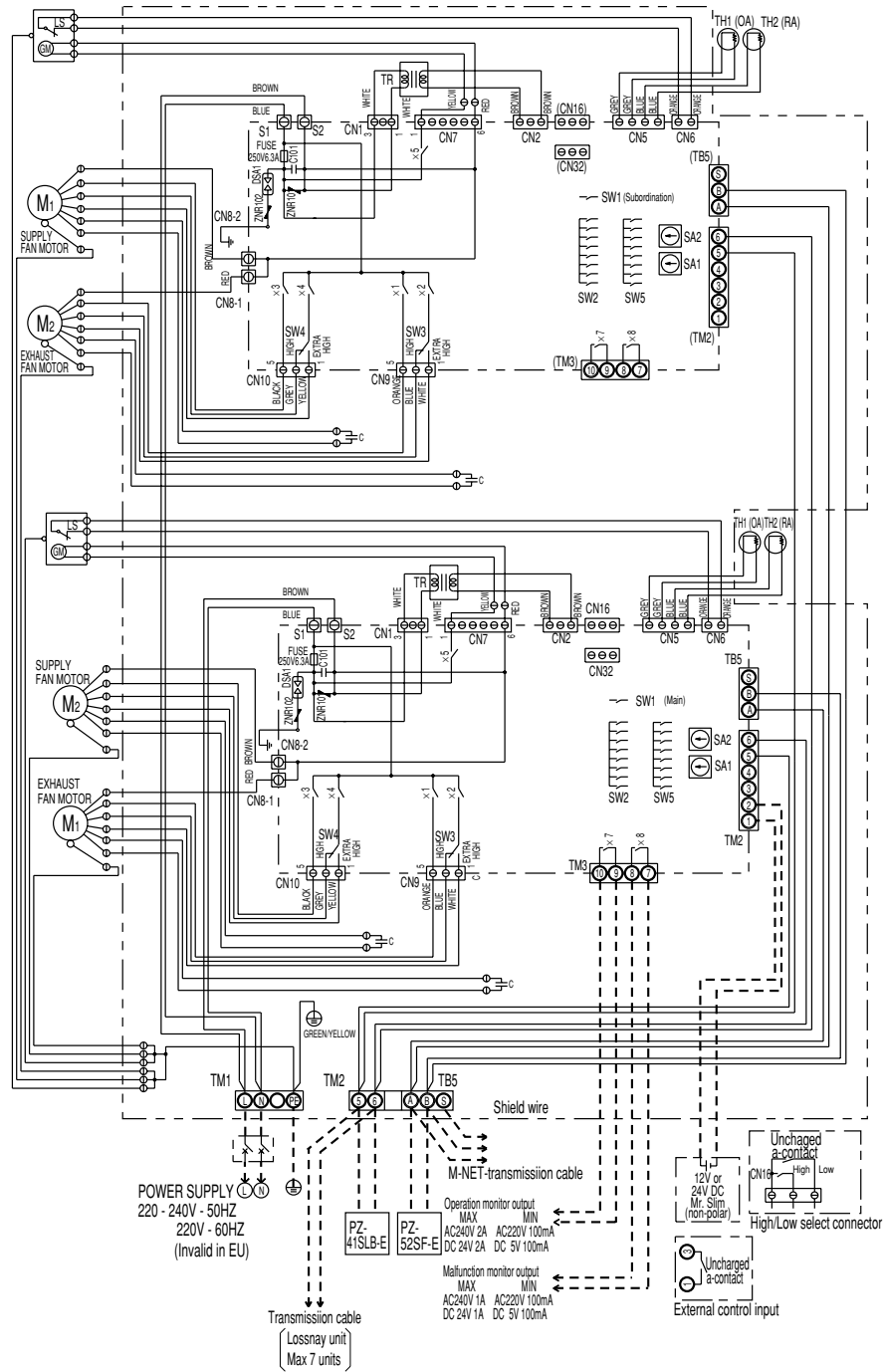


Symbol explanation			
M1:	Motor for exhaust fan	X8:	Relay contact (For malfunction monitor output)
M2:	Motor for supply fan	CN1:	Connector (Transformer primary)
C:	Capacitor	CN2:	Connector (Transformer secondary)
GM:	Motor for Bypass movement	CN5:	Connector (Thermistor)
LS:	Microswitch	CN6:	Connector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

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

# 12.1.3 Wire connection diagram ----- Models LGH-150 and 200RX3

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



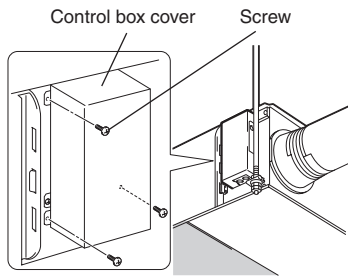
Symbol explanation			
M1: Motor for exhaust fan	TM1: Terminal block (Power supply)	CN1: Connector (Transformer primary)	CN32: Connector (Remote control selection)
M2: Motor for supply fan	TM2: Terminal block (Transmission cable and external control input)	CN2: Connector (Transformer secondary)	SA1: Address setting rotary switch (10 digit)
C: Capacitor	TM3: Terminal block (Monitor output)	CN5: Connector (Thermistor)	SA2: Address setting rotary switch (1 digit)
GM: Motor for Bypass movement	TB5: Terminal block (M-NET Transmission cable)	CN6: Connector (Microswitch)	MARK ⊙: Indicates terminal block
LS: Microswitch	S1,S2: Connector (Power supply)	CN7: Connector (Motor for bypass operation)	⊙: Connector
TH1: Thermistor for outside air	TR: Control circuit transformer	CN8-1: Tab connector (Fan motor)	⊠: Board insertion connector or fastening connector of control board
TH2: Thermistor for return air	X7: Relay contact (For operation monitor output)	CN8-2: Tab connector (Fan motor)	
SW1: Switch(Main/Sub change)	X8: Relay contact (For malfunction monitor output)	CN9: Connector (Fan motor)	
SW2,5: Switch (Function selection)		CN10: Connector (Fan motor)	
SW3: High/E.High select switch (Exhaust fan)		CN16: Connector (High/Low switch)	
SW4: High/E.High select switch (Supply fan)			

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



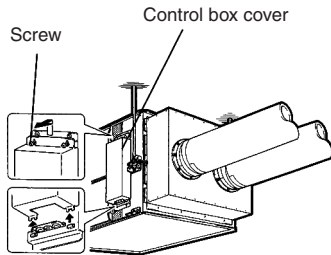
# 12.2 Connecting the power supply cable

LGH-15 to 100RX3

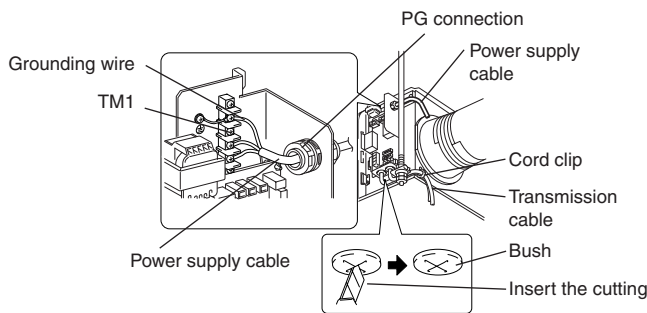


**1. Remove the screws and open the control box cover**

LGH-150 and 200RX3



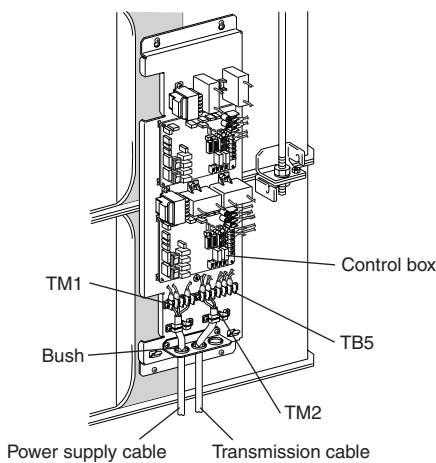
LGH-15 to 100RX3



**2. Connecting the power supply cable and transmission cable**

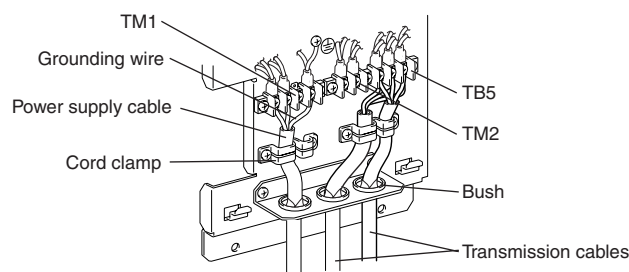
Pass the power cable through the bush\* and connect to the TM1 terminal block using the round terminals. Connect the grounding wire to the grounding terminal and secure tightening the bush. (\*: for PG connection or the like)

LGH-150 and 200RX3



**! CAUTION:**

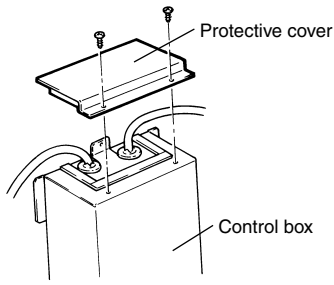
- Always separate the power supply cable and transmission cable by 5 cm or more to prevent malfunctioning of the unit.
- If the length of the stripped power cables wires is too long, the conductors may touch and cause shorting.



- (1) Refer to the wiring diagram and screw down the grounding wire and transmission cables to the terminal block.
- (2) Secure the power supply cable and transmission cables using the cord clamp.

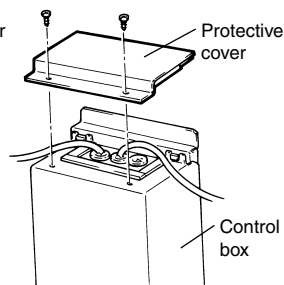
Upon completion of the wiring connections, replace the control box cover.

### LGH-15 to 100RX3



<When installing upside down>

### LGH-150 and 200RX3



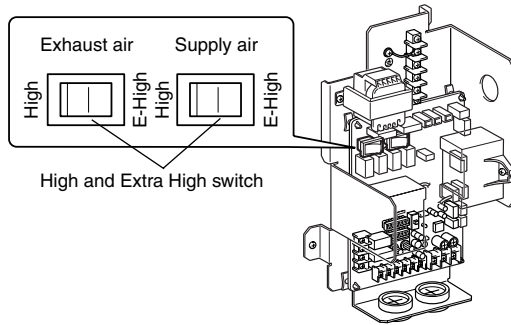
<When installing upside down>

## 3. When installing upside down

### ⚠ CAUTION:

- If installing and using this product upside down, the power supply cable outlet will be at the top. Be sure to attach the protective cover so that no drops of water can get inside the control box.

### LGH-15 to 100RX3

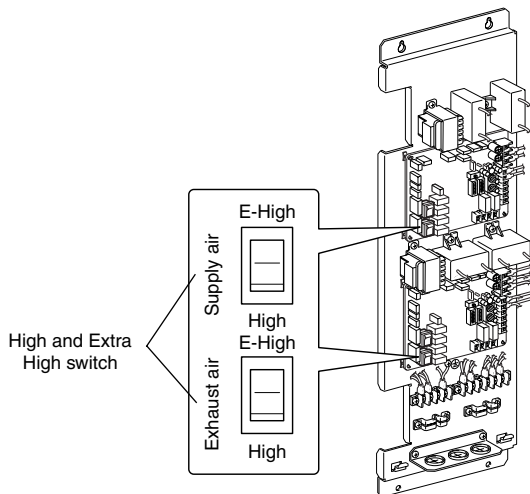


## 4. Changing the switch for High and Extra High

To increase the air volume, change the switch from “high” to “extra high”.

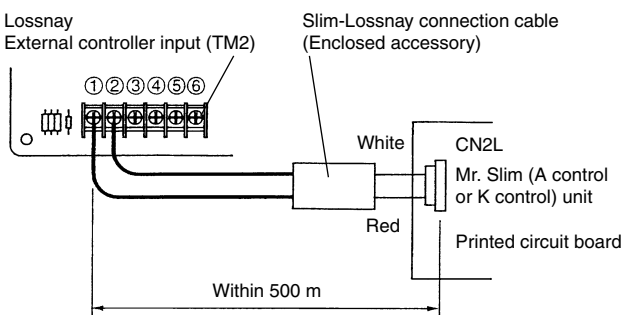
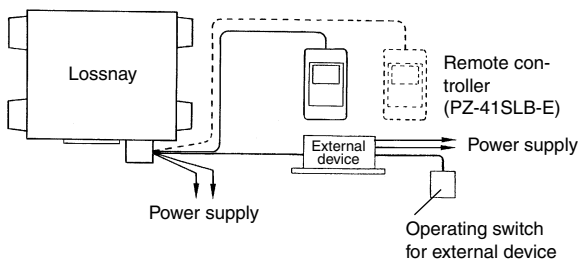
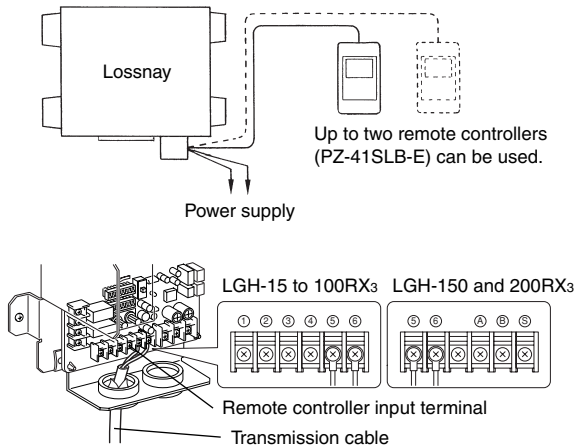
- The factory setting is “High”.
- Can be switched for each supply and exhaust separately.

### LGH-15 to 100RX3



The following system configuration can be created. Connect the necessary parts.

1. When connecting with remote controller (PZ-41SLB-E).
2. When interlocking with air conditioner or other external device.
3. When interlocking with a pulse output unit.
4. When operating multiple Lossnay units.
5. When connecting to CO<sub>2</sub> sensor when switching the High/Low switch externally.
6. When connecting to City Multi, Lossnay remote controller (PZ-52SF-E) or Mitsubishi Electric Air-Conditioner Network System (MELANS).



## 1. When connecting to remote controller (PZ-41SLB-E)

\* The PZ-41SLB-E cannot be used when centralised control of the Lossnay is used. Then follow the procedure for connecting the wire shown in 6. and use the Lossnay remote controller (PZ-52SF-E).

Securely connect the transmission cable (PVC insulated PVC jacketed and either between  $\varnothing 0.65$  and  $\varnothing 1.2$ , or between  $0.3 \text{ mm}^2$  and  $1.25 \text{ mm}^2$  in cross section) from the remote controller to 5 and 6 of the input terminal block (TM2). (No polarity)

- If there are two remote controllers, connect them in the same way.

### Note:

- Up to four  $0.3 \text{ mm}^2$  stranded wires or  $\varnothing 0.65$  PVC wires can be connected to one input terminal.
- For other types of wire up to two can be connected.

## 2. When interlocked with air conditioner or other external device

- (1) Connect the output signal cable from the external device to the input terminal block (TM2) of the external controller.
- LGH-150 and 200RX<sub>3</sub> are connected to the lower circuit board. (Main circuit board)

### CAUTION:

- The connection may vary according to the output signal type of the external device.

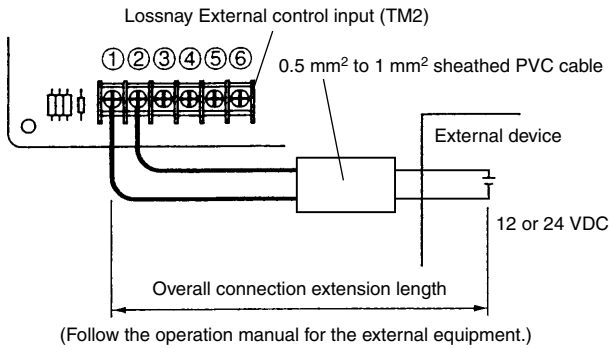
When using Mr. Slim air conditioner and (A control or K control) Interlock operation of except Mr. Slim (A control or K control) unit is not possible.

Connect the interlocking cable connector side to CN2L on the circuit board for the indoor Mr. Slim unit and connect the lead wire side to the ① and ② of the input terminal block (TM2) for the Lossnay external controller input. (No polarity)

- Always separate the power supply cable and the Slim-Lossnay connection cable for the Lossnay by 5 cm or more to prevent malfunctioning of the unit.
- **The Slim-Lossnay connection cable is 0.25 m long. When wiring, extend it as far as necessary.**

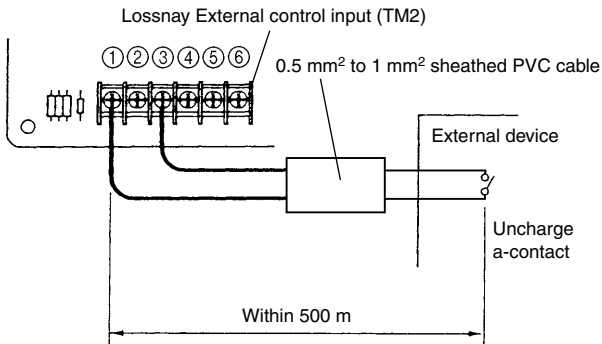
### Note:

- The Lossnay remote controller (PZ-41SLB-E) cannot be used with this system.
- The ventilation mode is "automatic ventilation".
- The Slim-Lossnay connection cable may be extended to a maximum length of 500 m (Extension cable specifications are as detailed below).  
Ensure that all connections are secure and that the appropriate insulation is provided.  
Extension cable sheathed PVC cable or cable- $0.5 \text{ mm}^2$  to  $1.0 \text{ mm}^2$ .



When the external device has a charged operating signal of 12V DC or 24 V DC

- Connect the operating signal (wire) from the external device via the remote output retrieval component (sold separately) to ① and ② on the external control input terminal block (TM2). (No polarity)



When the external device has an uncharged a-contact signal

- Connect the operating signal (wire) from the external device via the remote output retrieval component (sold separately) to ① and ③ on the external control input terminal block (TM2).

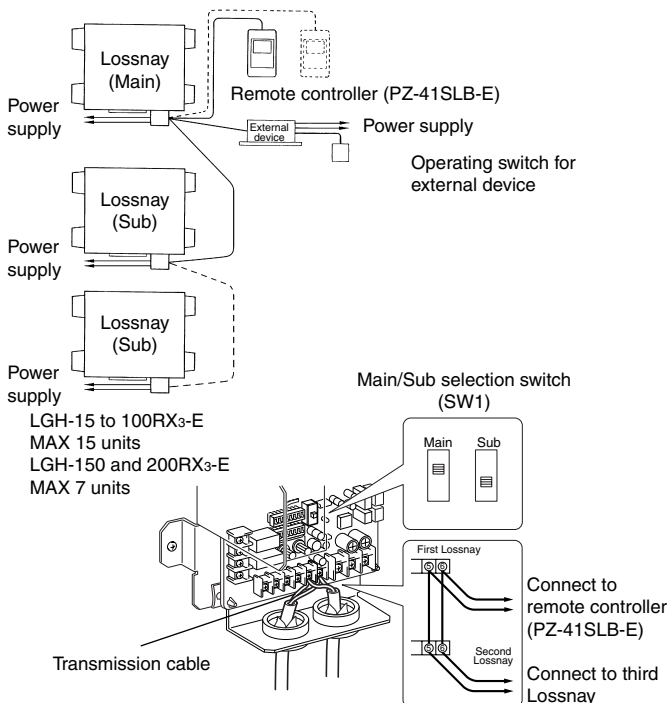
**Note:**

- If an optocoupler or any other type of polar coupler is used at the uncharged a-contact, connect the positive side to 3 and the negative side to 1.



**3. When interlocking with a pulse output unit**

- (1) Move the pulse input switch [SW2-2] to the ON position. On the LGH-150 and 200RX<sub>3</sub>, set both the upper and lower circuit boards the same.
- (2) Connect the pulse output device (i.e., building management system) to the external control input terminal block [TM2]. The LGH-150 and 200RX<sub>3</sub> connected to the lower circuit board. (Main circuit board)
  - A pulse width of at least 200 msec will be needed.
- (3) Wiring is to be performed in the same way as for item 2 above.



**4. When operating multiple Lossnay units**

- (1) Connect from Lossnay unit 1 to Lossnay unit 2, and from unit 2 to unit 3 and so on up to a maximum of 15 units (7 units for types 150 and 200) using a transmission cable (PVC insulated PVC jacketed and either between  $\phi 0.65$  and  $\phi 1.2$ , or between  $0.3 \text{ mm}^2$  and  $1.25 \text{ mm}^2$  in cross section).
- (2) Change the setting on the main/sub switch (SW1) on the second and subsequent Lossnay units to "sub".

**Note:**

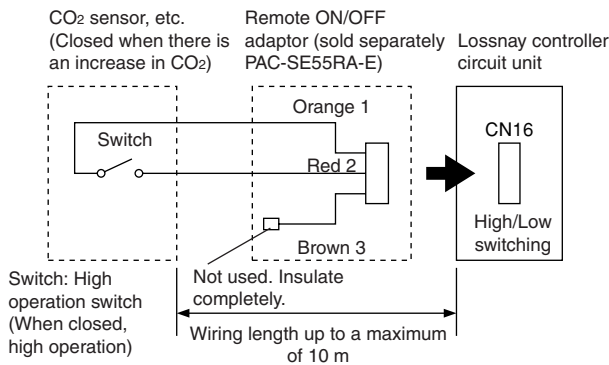
- Up to four  $0.3 \text{ mm}^2$  stranded wires or  $\phi 0.65$  PVC wires can be connected to one input terminal.
- For other types of wire up to two can be connected.
- The operation signal and pulse signal can be connected to the external device of the main Lossnay only.
- Connect the power to each respective Lossnay unit.

## 5. When switching High/Low speed externally (when CO<sub>2</sub> sensor or other unit is connected)

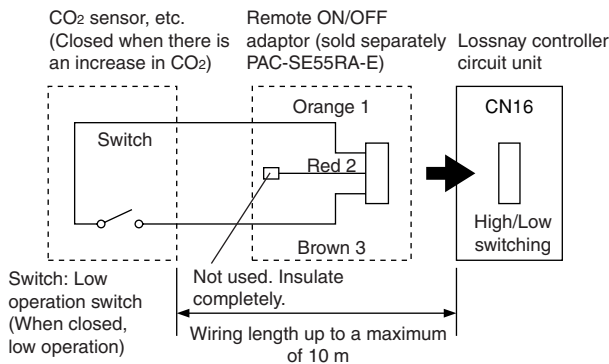
If a commercially available CO<sub>2</sub> sensor or other such unit is used as shown in the drawing, connect by inserting Remote ON/OFF Adaptor (PAC-SE55RA-E) (sold separately) to the CN16 connector (for switching between High/Low).

\* The LGH-150 and 200RX<sub>3</sub> are connected to the lower circuit unit. (Main circuit board)

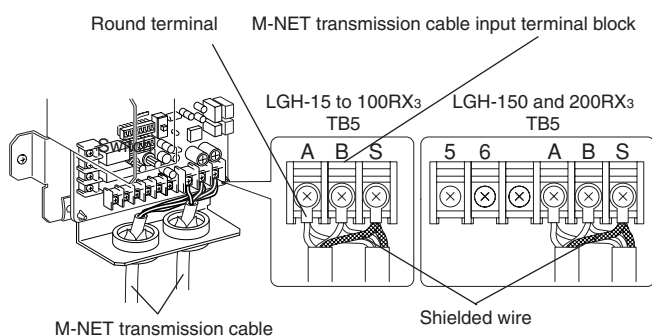
\* Note that if the remote controller is connected to a CO<sub>2</sub> sensor, the actual high and low fan speeds may not match on the remote controller.



- To force high speed externally  
When external switch is "ON" fan speed of the Lossnay will be set to "High".  
Regardless of the remote control setting.



- To force low speed externally  
When external switch is "ON" fan speed of the Lossnay will be set to "Low".  
Regardless of the remote control setting.



## 6. When connecting to the City Multi, Lossnay M-NET remote controller (PZ-52SF-E) or Mitsubishi Electric Air-Conditioner Network System (MELANS)

\* If centralised control is performed according the wire connection shown in this section, the remote controller (PZ-41SLB-E) cannot be used.

- One shielded wire is connected to the other shielded wire. (Terminal connection)

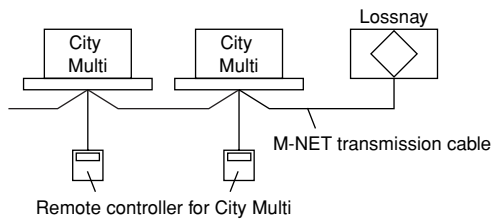
Address setting is required. (Refer to function setting section.)

M-NET transmission cable: Connect any of the following -- City Multi indoor unit, Lossnay remote controller (PZ-52SF-E) or Mitsubishi Electric Air-Conditioner Network System (MELANS) - to the Lossnay.

Type: (Shielded wire, CVVS/CPEVS)

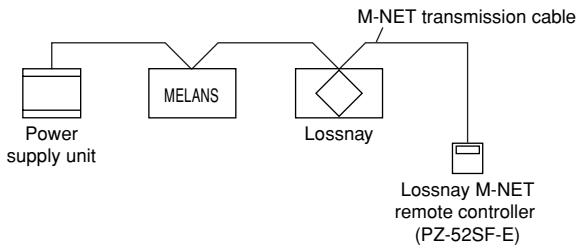
Wire diameter: 1.25 mm<sup>2</sup> to 2.0 mm<sup>2</sup>

- Securely connect the M-NET transmission cable to Ⓐ and Ⓑ on the transmission cable input terminal block (TB5). (Non-Polar)



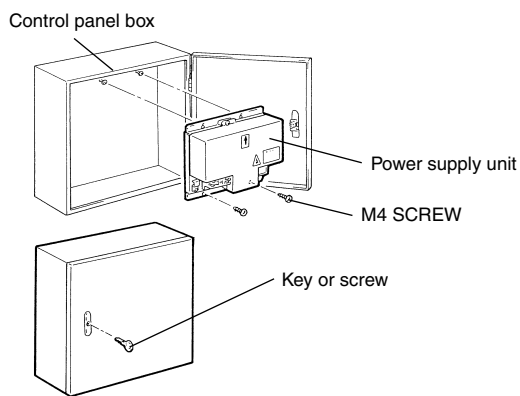
When interlocking with the City Multi

- Keep the overall length of the transmission cable within 500 meters. Note that the wiring length between the Lossnay and power supply unit (sold separately) or outdoor unit should be 200 meters or less.



Lossnay M-NET remote controller (PZ-52SF-E) or MELANS

- Connect the power supply unit (PAC-SC34 KUA)



- To use the power supply unit

Install the power supply unit on the control panel box as follows.

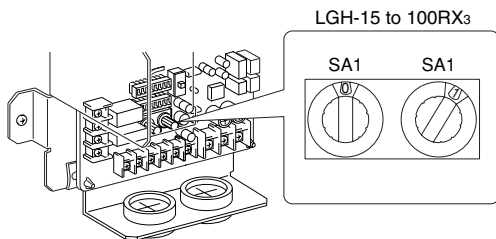
- (1) Screw the M4 SCREWS into the control panel box enough to keep them from falling out of place. Set them towards the top of the box.
- (2) Hang the power supply unit (from the top end) on the M4 SCREWS.
- (3) Lock the bottom end down with the M4 SCREW.
- (4) Tighten the top end screw securely.
- (5) Once installed, close the control panel box door for safely reasons and lock with the key or screw.

For more information, see the installation manual of the power supply unit.

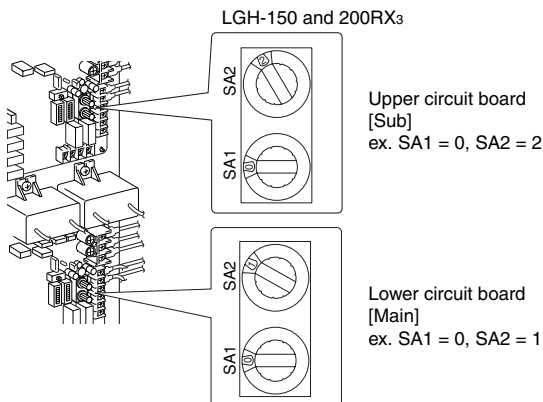
## 12.3 Function settings

You must set the address when connecting to the City Multi, Lossnay M-NET remote controller (PZ-52SF-E) and MELANS.

### 12.3.1 Setting the address



- \* When the address number has been changed, the data in the memory is automatically reset.



Use the following procedure when performing the address setting for dedicated Lossnay.

(The method to be employed in the determination of addresses will be dependent on the existing system. Refer to the appropriate technical documents for details.)

- (1) Remove the control box cover.
- (2) Use a straight-blade screwdriver to turn the address setting switch on the circuit board.
  - SA1 indicates the 10 digit and SA2 indicates the 1 digit.
  - The factory setting is "00"
  - On the LGH-150 and 200RX3, each upper and lower circuit board has an address. The lower circuit board takes the smaller number and the upper table takes the larger number.

## 12.3.2 Switching function selection switches (SW-2 and 5)

Perform the necessary function settings using the function selection switches (SW-2 and 5).

- The setting can be changed at any time.
- On the LGH-150 and 200RXs, set both the upper and lower circuit boards the same.

### 1. Settings for pulse input

Set as shown when connecting the pulse signal equipment from a building maintenance system to an external input.

SW2	OFF	ON	Mode
	2		
2			Pulse input

### 2. Setting for selection of fan speed method

Set when operation is fixed at high speed or low speed operation. There are three modes that can be set.

SW2	OFF	ON	Mode	Operation
	4 5			Normal (Factory setting)
4 5			Fixed at high mode	Normally operated at high speed.
4 5			Fixed at low mode	Normally operated at low speed.

### 3. Power supply ON/OFF function (cannot be set when PZ-41SLB-E is used)

Set can be switch when operation and stopping is performed by turning the power supply (220-240 V) for the Lossnay on and off.

SW2	OFF	ON	Mode	Operation
	6			OFF (Factory setting)
6			ON	Operation possible by turning power on and off.

### 4. Settings for delay (of operation at start-up of heating or cooling)

This is the mode for delaying the operation of the Lossnay for 30 minutes when the City Multi or Mr. Slim is started and when an external device is started. (If the PZ-41SLB-E is used, set it at the remote control. Refer to page 61.)

SW5	OFF	ON	Mode
	1		
1			Operation delay of 30 minutes * This function is invalid with in 2 hours' restart

### 5. Supply air fan monitor

SW5	OFF	ON	Mode
	2		
2			Corresponds to operation mode output (TM3 ⑨ ⑩) supply fan (The operation monitor output is off when the supply fan is stopped for operation in cold regions or during the City Multi or Mr. Slim defrosting.)

### 6. Stopping exhaust fan when defrosting air conditioner

Sets the operation of the exhaust fan (when the air supply fan is stopped) during defrosting of the air conditioner when Mr. Slim or City Multi indoor unit is connected to a duct.

SW5	OFF	ON	Operation
	3		
3			Exhaust fan stopped



## 7. Settings for automatic recovery following power supply interruption (cannot be set when PZ-41SLB-E is used)

Sets for automatic recovery following power supply interruption.

	OFF	ON	Mode	Operation
SW5	4		No automatic recovery (factory setting)	Stop after recovery
	4		Automatic recovery	Recover to operate in mode used before power outage

## 8. Settings for filter cleaning

Set the time for filter cleaning based on the estimated concentration of dust in the air. The factory setting is unlimited. (If the PZ-41SLB-E is used, set it at the remote control. Refer to page 67.)

The four combinations of settings shown in the drawing to the bottom are available settings for air filter cleaning.

	OFF	ON	Maintenance
SW5	5		3000 hours
	5		1500 hours
	5		4500 hours
	5		Unlimited (No "FILTER" display on remote controller) (factory setting)

### CAUTION:

- When the setting for the cumulative operation time of the Lossnay is exceeded, the filter cleaning display will appear on the air conditioner remote controller or the remote controller for the Lossnay. After cleaning the filter, the filter cleaning display can be reset by following the procedure for canceling the cumulative operation time as shown in the manual.

## 9. Settings for interlock mode

These settings will indicate how the Lossnay should operate when external devices are started or stopped. (If the PZ-41SLB-E is used, set it at the remote control. Refer to page 67.)

	OFF	ON	Mode	Units
SW5	7		ON/OFF interlock (Factory setting)	The Lossnay will start and stop in accordance with starting and stopping of an external devices. Subsequent operation will be possible using the remote controller for the Lossnay or MELANS.
	7		On interlock	The Lossnay will operate whenever an external devices are operated. Stopping of the Lossnay will be possible using its remote controller or MELANS.
	7		Off interlock	The Lossnay will stop whenever an external devices are stopped. Starting of the Lossnay will be possible using its remote controller or MELANS.
	7		External input given priority	The Lossnay will start and stop in accordance with starting and stopping of an external devices. Control using the remote controller for the Lossnay or MELANS will only be possible when an external devices are stopped.

## 12.4 Trial operation

After the overall system has been installed, before the ceiling panel is installed, make sure that no wires are wrongly connected, then carry out trial operation, referring to the user's manual for the remote controller.

### 12.4.1 Trial operation with the remote controllers (PZ-41SLB-E and PZ-52SF-E)



Follow the procedure shown in the operator's manual for the remote controller for confirming the following items.

- (1) Starting operation.
- (2) Fan speed selection.
- (3) Function selection.
- (4) Stopping operation.



## 12.4.2 Lossnay independent trial operation

- (1) Remove the control box cover.
- (2) Turn the trial operation switch (SW2-1 and SW2-3) "ON."
  - Operation will start with the "High" setting and with Bypass ventilation operating. (This will take approximately 45 seconds after the power is turned on.)
  - On the LGH-150 and 200RX3, set both the upper and lower circuit boards the same.
- (3) Turn the trial operation switch (SW2-1 and SW2-3) "OFF."
- (4) Install the cover in its original position on the control box.

	OFF	ON	Operation
SW2	1		Power supply will be supplied to the motor for the Lossnay fan and operation will be performed at the "High" setting.
	3		Power supply will be supplied to the motor for the Lossnay by-pass and operation of the damper plate will be performed.

## 12.4.3 Trial operation within the complete system

- Interlock system containing an air conditioner and/or external device
  - Use the remote controller for the air conditioner or the operating switches for the external device and confirm that the air conditioner and Lossnay are interlocked.
  - If delay time has been set, check that the Lossnay operates after the delay time has passed.
- If MELANS System
  - Use MELANS to confirm the operation of the Lossnay.

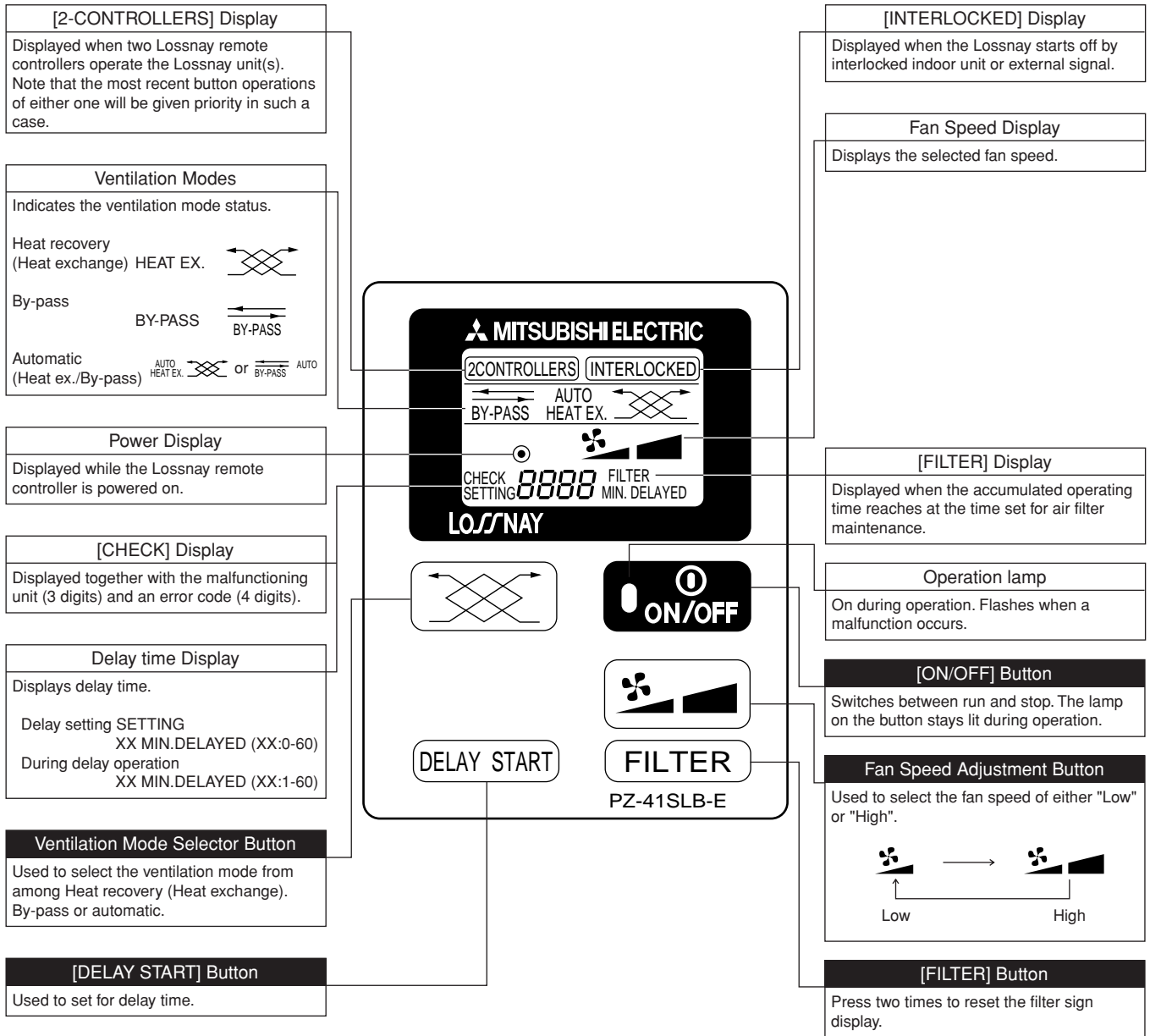
## 12.4.4 If trouble occurs during trial operation

Symptom	Remedy												
Will not operate even when the operation switch for the remote controller (PZ-41SLB-E) and/or operation switch for the Lossnay remote controller (PZ-52SF-E) is pressed.	<ul style="list-style-type: none"> <li>• Check the power supply. (The specified power supply is single-phase 220-240 V to 50 Hz and 220 V to 60 Hz.)</li> <li>• Check for a short circuit or disconnection in the transmission cable. (Check that the voltage between terminals in the transmission cables is 9 to 15 V DC for the PZ-41SLB-E and 20 to 30 V DC for the PZ-52SF-E.)</li> <li>• Check that there is 5 cm or more separating the transmission cable from the power supply cable and any other transmission cables.</li> <li>• Run the Lossnay independently using the trial operation switch (SW2-1) and check if it runs.                             <table border="1" style="margin-left: 20px;"> <tr> <td>Lossnay runs</td> <td>→</td> <td>Check the signal cables</td> </tr> <tr> <td>Lossnay doesn't run</td> <td>→</td> <td>Check the power supply</td> </tr> </table> </li> <li>• Check if there are three or more remote controllers connected (PZ-41SLB-E). (The maximum is two.)</li> </ul>	Lossnay runs	→	Check the signal cables	Lossnay doesn't run	→	Check the power supply						
Lossnay runs	→	Check the signal cables											
Lossnay doesn't run	→	Check the power supply											
"HO" flashes in remote controller for Lossnay (PZ-52SF-E).	<ul style="list-style-type: none"> <li>• Perform the registration operation using the remote controller for the Lossnay (PZ-52SF-E) or MELANS. (Refer to the installation instructions for the remote controller for the Lossnay or MELANS.)</li> </ul>												
Does not operate even when the operation switch for remote controller for Lossnay (PZ-52SF-E) or MELANS is pressed.	<ul style="list-style-type: none"> <li>• Check whether or not there is a power supply unit and that the power has been turned on. (On systems with only a Lossnay, a power supply unit is required.)</li> </ul>												
Air conditioner or external device does not interlock.	<ul style="list-style-type: none"> <li>• Check if the pulse input switch (SW2-2) is off.</li> <li>• Check the overall length between the air conditioner or external device and Lossnay. (Refer to technical publications or other such documents.)</li> <li>• Check the connections at the external control input terminal block (TM2). In the case of voltage charged 12 or 24 V DC output unit: Connect to external control input terminals ① and ②. In the case of uncharged a-contact output unit: Connect to external control input terminals ① and ③. In the case of Mr. Slim (A control or K control): Connect to external control input terminals ① and ②.</li> <li>• Perform the registration operation using the remote control for the air conditioner or MELANS. (Refer to the installation instructions for the remote control for the air conditioner or MELANS.)</li> <li>• Check if the delay has been set.</li> <li>• Check the overall length of the transmission cable between the external device and Lossnay. (Refer to technical publications or other such documents.)</li> <li>• Check if the transmission cable from the external device has come off of the external control input terminal.                             <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Operation signal</th> <th>Stop signal</th> </tr> </thead> <tbody> <tr> <td>Charged 12 or 24 VDC output unit</td> <td>12 or 24 V DC</td> <td>0 V DC</td> </tr> <tr> <td>Uncharged a-contact output unit</td> <td>Resistance: 0 W</td> <td>Unlimited resistance W</td> </tr> <tr> <td>Mr. Slim (A control or K control)</td> <td>2 to 6 V DC</td> <td>2 to 6 V DC</td> </tr> </tbody> </table> </li> <li>• Check, in the case of multiple units, whether the Main/Sub selection switch on the Lossnay unit which is connected to the external control input terminal is set on the Master setting, and check whether the Main/Sub selection switch on other Lossnay units are set to Sub.</li> </ul>		Operation signal	Stop signal	Charged 12 or 24 VDC output unit	12 or 24 V DC	0 V DC	Uncharged a-contact output unit	Resistance: 0 W	Unlimited resistance W	Mr. Slim (A control or K control)	2 to 6 V DC	2 to 6 V DC
	Operation signal	Stop signal											
Charged 12 or 24 VDC output unit	12 or 24 V DC	0 V DC											
Uncharged a-contact output unit	Resistance: 0 W	Unlimited resistance W											
Mr. Slim (A control or K control)	2 to 6 V DC	2 to 6 V DC											
Lossnay does not stop.	<ul style="list-style-type: none"> <li>• Check that the trial operation switch (SW2-1) is set to off.</li> </ul>												
The inspection indicator lamp (LED 1 Green) in the control box flashes.	<table border="1" style="width: 100%;"> <tr> <td>2 flashes</td> <td>Failure of Lossnay circuit</td> <td rowspan="4">Turn off the power supply and immediately contact your dealer.</td> </tr> <tr> <td>3 flashes</td> <td>Failure of damper motor system</td> </tr> <tr> <td>4 flashes</td> <td>Failure of Lossnay (OA side) motor system</td> </tr> <tr> <td>5 flashes</td> <td>Failure of Lossnay (RA side) motor system</td> </tr> <tr> <td>ON</td> <td>In delay period</td> <td>If there is no remote controller (PZ-41SLB-E), the lamp will go out after 30 minutes (of operation) has passed.</td> </tr> </table>	2 flashes	Failure of Lossnay circuit	Turn off the power supply and immediately contact your dealer.	3 flashes	Failure of damper motor system	4 flashes	Failure of Lossnay (OA side) motor system	5 flashes	Failure of Lossnay (RA side) motor system	ON	In delay period	If there is no remote controller (PZ-41SLB-E), the lamp will go out after 30 minutes (of operation) has passed.
2 flashes	Failure of Lossnay circuit	Turn off the power supply and immediately contact your dealer.											
3 flashes	Failure of damper motor system												
4 flashes	Failure of Lossnay (OA side) motor system												
5 flashes	Failure of Lossnay (RA side) motor system												
ON	In delay period	If there is no remote controller (PZ-41SLB-E), the lamp will go out after 30 minutes (of operation) has passed.											
The inspection indicator lamp (LED 2 Red) in the control box flashes.	<table border="1" style="width: 100%;"> <tr> <td>1 to 8 flashes</td> <td>Error in M-NET communication</td> <td>Turn off the power and immediately contact your dealer.</td> </tr> <tr> <td>ON</td> <td>Registration operation has not been performed.</td> <td>Use the controller to perform the registration.</td> </tr> </table>	1 to 8 flashes	Error in M-NET communication	Turn off the power and immediately contact your dealer.	ON	Registration operation has not been performed.	Use the controller to perform the registration.						
1 to 8 flashes	Error in M-NET communication	Turn off the power and immediately contact your dealer.											
ON	Registration operation has not been performed.	Use the controller to perform the registration.											

- When an inspection number blinks on the remote controller, follow the procedures shown in the installation and operating manuals provided with the switch.
- If the remote controller is not used, operate approximately 45 seconds after turning on the power for the Lossnay.

# 13. Lossnay Remote Controller (PZ-41SLB-E)

## 13.1 Operation




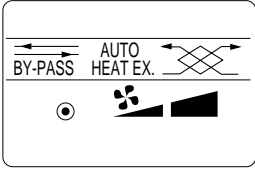
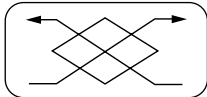
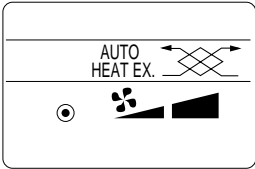
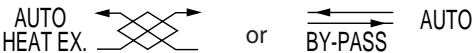

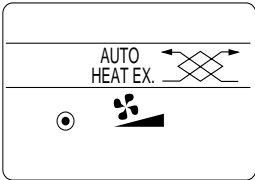

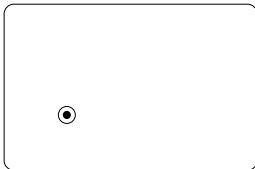
\* Entire panel is displayed for explanation.

### Note:

- When power is restored after an outage or when the corresponding breaker for the distribution box is reset, all modes will return to the condition before the supply of power was interrupted.

# 13.2 Mode of Use

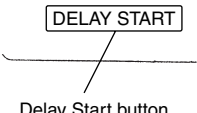
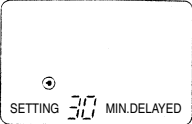
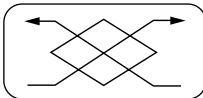
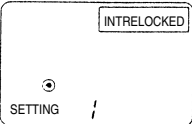
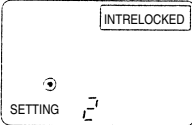
## ● Independent Operation of the Lossnay Unit:

Operation	Relevant button	Relevant display items	Sequence
1. Starting the Lossnay unit	 Operation lamp		Press the ON/OFF button and confirm that the Operation lamp turns on. The 2CONTROLLERS display item will be turned on if a double set of remote controllers is currently in use.
2. Setting the Ventilation mode		 The above display indicates that the unit is operating in non-automatic, bypass ventilation mode.	Press the Function selector button: Each time it is pressed, the corresponding display will change in accordance with the sequence [HEAT EX.] (non-automatic) → [BY-PASS] (non-automatic) → [AUTO]. If [AUTO] is selected, the display will change to indicate the current situation after two seconds have passed. 
3. Selecting the fan speed		 The above display indicates current operation with a gentle fan speed.	Press the Fan Speed selector button to select either Low or High fan speed.
4. Stopping the Lossnay unit	 Operation lamp		Press the ON/OFF button. (Press the ON/OFF button to turn off the Operation lamp.)

## ● Interlocked Operation with Indoor unit or external signal.

The Lossnay unit can be set up in such a way that it may be turned on and off by external device such as an air conditioners. In such a case, the remote controller's [INTERLOCKED] display will be turned on. Note that the selection of ventilation mode and of fan speed can be performed in the same way as for independent operation of the Lossnay unit.

### Settings for Interlocking the Lossnay unit with an external device

Setting	Relevant button	Relevant display items	Sequence
<b>Delay time</b> This setting is used to determine how long will elapse after the start of operation of the external device until the Lossnay unit begins to operate.	 Delay Start button	 The above display indicates a delay time of 30 minutes.	Each time the Delay Start button is pressed, the delay time will change in accordance with the repeating sequence (minutes) 0 → 10 → 20 → 30 → 40 → 50 → 60 ↑ When the button is released before 5 seconds have elapsed, the display will turn off and the current delay time will be selected. Note that a delay time of 0 minutes is set before shipment from the manufacturing plant.
<b>Interlocked mode</b> This setting is used to determine the way in which the Lossnay will respond to starting and stopping of Interlocked to an external device such as an air conditioner, etc. *: Note that the delay time will be invalidated in situations where a setting of [3] has been selected for the Operation mode or when the Lossnay unit is interlocked with a building-management system.	 Function selector button	  The above indicates a setting of [2].	1. Press and hold the Function selector button for at least 5 seconds to display the interlock setting. Note that this is set to [1] before shipment from the manufacturing plant.  2. Press the Function selector button to change the setting in the repeating sequence → 2 → 3 → 4 → 1 → When the button is released before 5 seconds have elapsed, the display will turn off and the current setting will be selected.

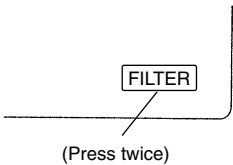
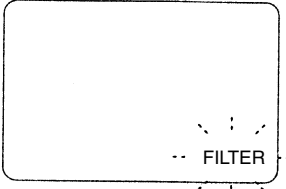
## Mode of Use (cont.)

### Interlocked Operation mode types and actions

Display number	Interlocked Operation mode	Action (of the external unit)	Action (of the building-management system)
1	ON/OFF Interlocking: Subsequent operation with the remote controller possible (factory setting)	When the external device begins to operate, the Lossnay unit will also begin to operate; when the external air conditioner stops operating, the Lossnay unit will also stop operating.	The Lossnay unit toggles between ON and OFF conditions in response to signals (or pulses) which are input from a building-management system or the like.
2	ON Interlocking	When the external device begins to operate, the Lossnay unit will also begin to operate; stopping of the Lossnay unit must be performed using the remote controller.	The Lossnay unit begins to operate in response to a signal (or pulse) which is input from a building-management system or the like; stopping of the Lossnay unit must be performed using the remote controller.
3	OFF Interlocking	When the external device stops operating, the Lossnay unit will also stop operating; starting of the Lossnay unit must be performed using the remote controller.	The Lossnay unit stops operating in response to a signal (or pulse) which is input from a building-management system or the like; starting of the Lossnay unit must be performed using the remote controller.
4	ON/OFF Interlocking: External inputs have priority	Same as for setting 1 above; however, it is not possible to stop the Lossnay unit using the remote controller while the external device is operating.	Same as for setting 1 above.

## 13.3 Care and Upkeep

### Actions required when the Filter Cleaning display begins to flash:

	Relevant button	Relevant display items	Sequence
<b>Filter reset</b> (i.e., clearing the total Lossnay-unit operating time)	 (Press twice)		Press the [Filter] button twice in immediate succession and confirm that the Filter display turns off.
<b>Cleaning of the Lossnay unit's filter</b>	Perform cleaning of the air filter and the Lossnay core in accordance with the instructions in the user's manual which was provided with the Lossnay unit.		
<b>Care of the remote controller</b>	To remove dirt from the remote controller's display window, wipe with a cloth to which detergent has been applied, and then wipe with a dry cloth to remove any remaining detergent. ● Paint thinner, alcohol, benzene, gasoline, kerosene, spray cleaner, cleaning alkali, etc.		

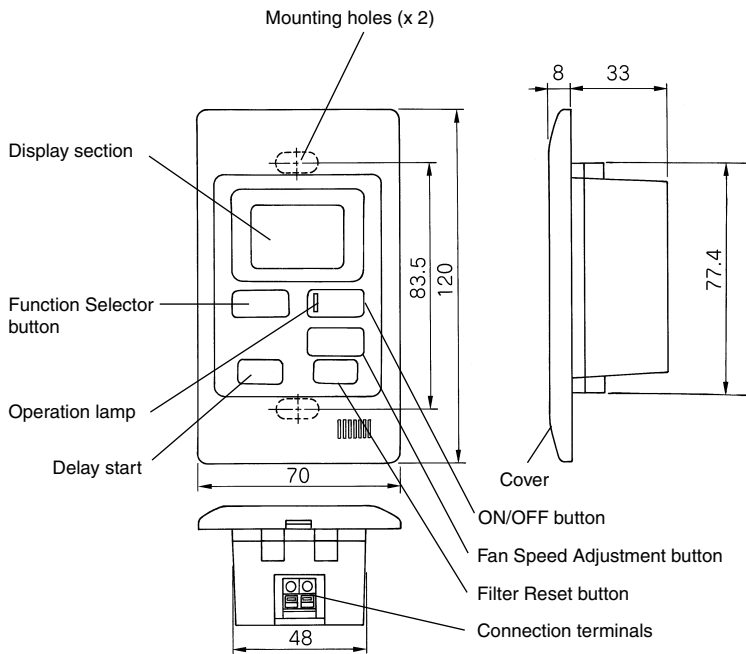
## 13.4 After-Sales Service

- If any of the following inspection numbers should be displayed on the remote controller, please contact the dealer from where this product was purchased for more information.

4000, 5101, 5102, 3602, 0900

- After-sales servicing of the remote controller unit should be ordered from the retail outlet from where this product was purchased.

# 13.5 Component Names and External Dimensions



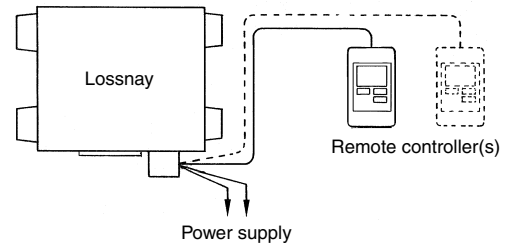
## Accessory parts

Screws ..... (x 2)

Units: mm

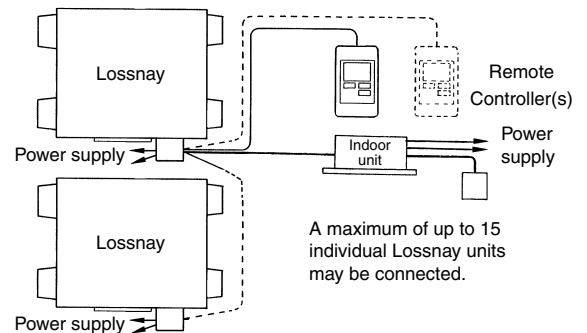
## Typical System Setup

<Independent operation of the Lossnay unit:>

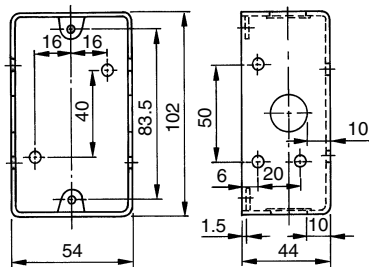


- When two individual remote controllers have been installed, the most recent control signals will be given priority.

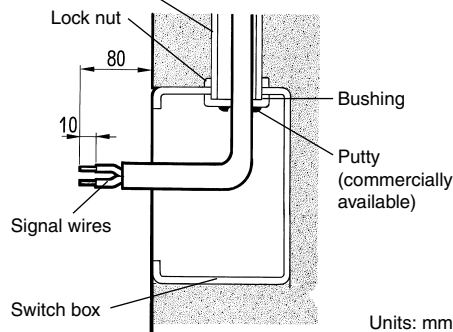
<Interlocked operation with an air conditioner, etc.:>



# 13.6 Installation Dimensions



Wiring duct (of 15 to 25-mm nominal diameter)



## 1. Wiring

- (1) Perform insertion of a single-unit switch box (without a cover).
- (2) Lay the wiring duct as far as the switch box.
- (3) Connect the signal wires from the Lossnay unit to the switch box. (Note that 2-core telephone cable should be used; furthermore, this cable should be of PVC insulated PVC jacketed and either between  $\varnothing 0.65$  and  $\varnothing 1.2$ , or between  $0.3 \text{ mm}^2$  and  $1.25 \text{ mm}^2$  in cross section.)
- (4) Use standard putty to create a secure seal so as to prevent frosting due to the intake of atmospheric air.

### Note:

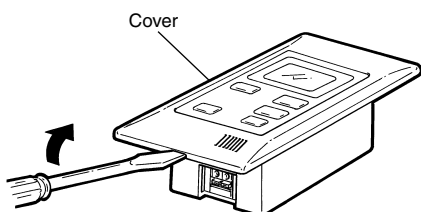
- Confirm that the Lossnay unit's power supply is not turned on before connecting its signal wire to the switch box.

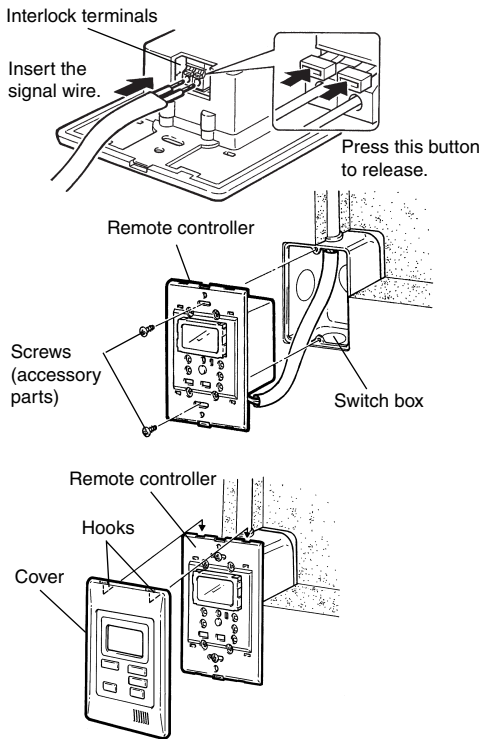
## 2. Cover removal

To remove the cover, insert the tip of a flat-head screwdriver into the notch and turn.

### Note:

- Take care during removal of the cover to avoid any damage being caused.





### 3. Connection of wiring and remote-controller mounting:

- (1) Fully insert the (non-polar) signal wiring into the connection terminals.
- (2) Gently tug on the wiring to confirm that it is being securely gripped.
- (3) Mount the remote controller on the switch box using the two screws provided as accessory parts.

### 4. Mounting of the cover

To mount the cover, secure the two hooks at its upper edge and press on its lower section until it is heard to snap into place.

### 5. Switching of function selection

- (1) Setting for filter maintenance



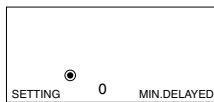
When Lossnay unit has operated for the time set as the cumulative-operation time, the Filter display will begin to flash indicating the cleaning of the filter is required. This setting time should be selected in accordance with the degree of contamination of the air in the unit's installation location. To perform an actual setting, press and hold the FILTER button for at least five seconds to display the setting value and to turn on the Filter display.

[FILTER] Then, press the Filter button to change the setting value in the repeating sequence (factory setting)

3000 → 4500 → OFF → 1500

When the button is released before 5 seconds have elapsed, the display will turn off and the current replacement time will be selected. Note that this value is set to [3000] before shipment from the manufacturing plant.

- (2) Setting for delayed interlocked operation



The delay-time setting is used to determine the length of the period that will elapse after the start of operation of the external devices until the Lossnay unit begins to operate. To perform an actual setting, press and hold the DELAY START button for at least five seconds while the Lossnay unit is currently stopped to display the setting value as shown in the diagram.

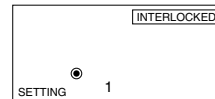
[DELAY START] Each time the DELAY START button is pressed, the delay time will change in accordance with the repeating sequence (factory setting)

0 → 10 → 20 → 30 → 40 → 50 → 60 minutes.

(0:original setting at factory shipment)

When the button is released before 5 seconds have elapsed, the display will turn off and the current delay time will be selected. Note that a delay time of 0 minutes is set before shipment from the manufacturing plant. Note also that when OFF Interlock mode has been selected, this setting value will be invalidated.

- (3) Setting for interlocked mode



The Interlocked-mode setting is used to determine the way in which the Lossnay unit will respond to starting and stopping of interlocked external device such as an air conditioner, etc. To perform an actual setting, press and hold the [INTERLOCKED] button for at least five seconds while the Lossnay unit is currently stopped to display the setting value as shown in the diagram.

[INTERLOCKED] Press the switch to change the setting in the repeating sequence

(factory setting)  
1 → 2 → 3 → 4

(1:original setting at factory shipment)


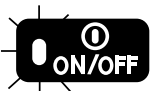

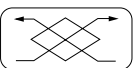




When the button is released before 5 seconds have elapsed, the display will turn off and the current setting will be selected. Note that this value is set to [1] before shipment from the manufacturing plant.

Interlocked Operation mode	Action
1 ON/OFF Interlocking	Starting and stopping of the Lossnay unit will be performed from external device -- specifically, when the external device begins to operate, the Lossnay unit will also begin to operate; when the external device stops operating, the Lossnay unit will also stop operating. Note that subsequent operation using the remote controller will be possible.
2 ON Interlocking	Starting of the Lossnay unit will be performed from external device -- specifically, when the external device begins to operate, the Lossnay unit will also begin to operate. Stopping of the Lossnay unit must be performed using the remote controller.
3 OFF Interlocking	Stopping of the Lossnay unit will be performed from external device -- specifically, when the external device stops operating, the Lossnay unit will also stop operating. Starting of the Lossnay unit must be performed using the remote controller.
4 ON/OFF Interlocking (with external-signal priority)	Starting and stopping of the Lossnay unit will be performed from external device -- specifically, when the external device begins to operate, the Lossnay unit will also begin to operate; when the external device stops operating, the Lossnay unit will also stop operating. However, it is not possible to stop the Lossnay unit using the remote controller while the external device is operating.

## 13.7 Trial Operation

**After installation has been completed, it is of the utmost importance that trial operation of the Lossnay unit and any external device such as an air conditioner is carried out.**

When power supply is supplied to the remote controller the [HO] display will flash (for approximately 40 seconds); following this, the system will switch to operation-start mode.

	Relevant button	Relevant display items	Sequence
1			Initiate the supply of power to the Lossnay unit. (The [HO] display will flash for approximately 40 seconds)
2			Press the ON/OFF button. The Operation lamp will turn on and the Lossnay unit will begin to operate.
3			Press the Function selector button: Each time it is pressed, the corresponding display will change in accordance with the sequence [HEAT EX.] (non-automatic) → [BY-PASS] (non-automatic) → [AUTO].
4			Press the Fan Speed Adjustment button to toggle between Low and High.
5			Press the Operation switch. The Operation lamp will turn off and the Lossnay unit will stop operating.

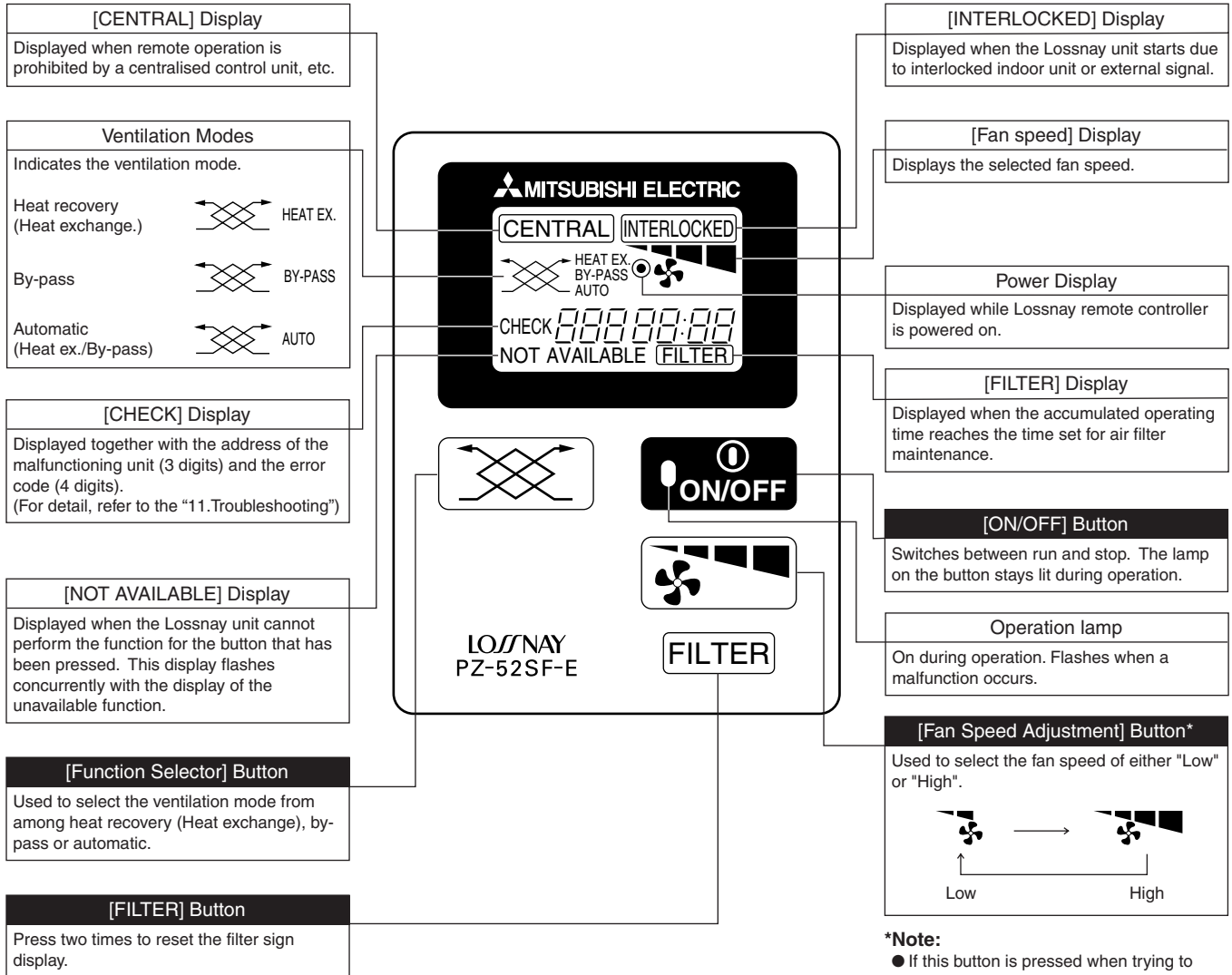
- Note that when the Ventilation Mode selector button is pressed, it will take up to 40 seconds before the operation of the damper changes accordingly.

**If an inspection number should be flashed, refer to the following table and take the required action.**

Inspection number	Cause	Required action
0900	The SW2 trial-operation switch from the Lossnay unit's controll box is On.	Turn off the trial-operation switch. (refer to page 62)
6608	If two or more Lossnay units are currently being used together, this number will indicate that the correct setting has not been performed using the units' Main/Sub switches.	Turn off the power supply and use the Main/Sub switches to specify one Lossnay unit as the Main and the others as Sub. Following this, turn the supply of power back on. Note that all Lossnay units are specified as Main before shipment from the manufacturing plant. (refer to page 57)
	If two remote controllers are currently being used together, this number may indicate that one of these controllers is not connected.	Turn off the power supply, connect the remote controller, and turn the power supply back on. (refer to page 67)
	If two remote controllers are used together, this number may indicate that both of these controllers are not set automatically when the power supply is turned on.	Turn off the power supply and turn the power supply back on.
	Multi-core cable has been used in place of a number of signal wires.	Switch back to the use of standard wiring and install each signal wire separately.
4000	A circuit abnormality has occurred in the Lossnay unit.	Turn off the supply of power and contact the retail outlet from where this product was purchased for further instructions.
5101	A breakdown has occurred in the Lossnay thermo (OA side).	
5102	A breakdown has occurred in the Lossnay thermo (RA side).	
3602	A breakdown has occurred in the damper motor.	

# 14. Lossnay M-NET Remote Controller (PZ-52SF-E)

## 14.1 Operation

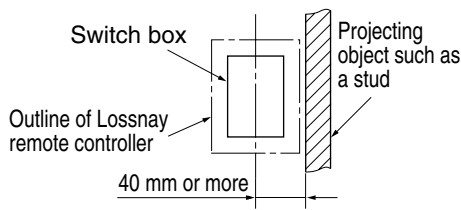


This remote controller can not be used on Lossnay units set for interlocked operation with Mr. Slim units.



# 14.2 Installing the Lossnay M-NET Remote Controller

## 14.2.1 Mount the switch box.



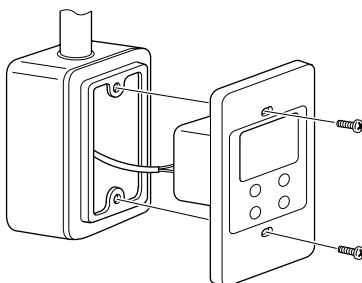
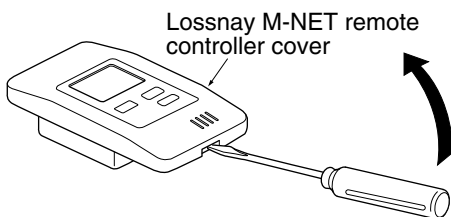
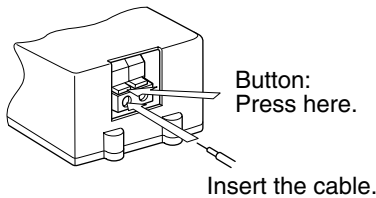
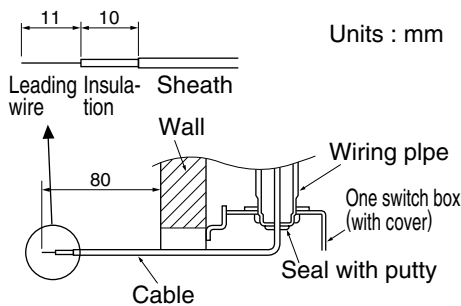
1. Install the switch box (purchased separately) as explained below.

### Note:

- Be sure to install the switch box with the clearance shown in the illustration at the left. (Check the space between the unit and any projections, such as a stud.)
- Leave a space of 120 mm or more below the Lossnay M-NET remote controller so that a screwdriver can be used.

2. Purchase the thin copper wiring conduit, lock nuts and bushings separately.

## 14.2.2 Install the Lossnay M-NET Remote Controller.



1. Pull out approximately 80 mm of cable from the wall and remove the insulation at the end.

2. Use putty to seal the cable hole in order to prevent insects from damaging the wiring and to prevent condensation on the Lossnay M-NET remote controller circuit board. If this hole is not sealed well, the Lossnay M-NET remote controller circuit board may be damaged.

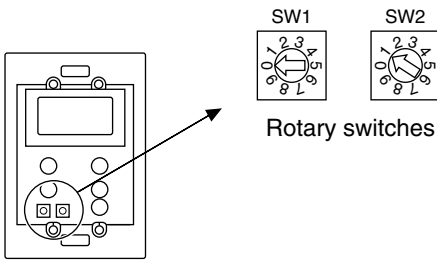
3. Connect the cable to the terminal board at the bottom rear of the Lossnay M-NET remote controller unit.

- The cable does not have polarity.
- When connecting stranded cable, hold down the tab on the terminal board while inserting the cable.
- The cable connects to the main terminal board when it is inserted into the bottom terminal.
- When disconnecting the cable, hold down the tab while pulling out the cable.
- After inserting the cable, slightly tug on it to check that it does not easily disconnect. If the cable is not securely connected, a short-circuit or malfunction may occur.

4. Remove the Lossnay M-NET remote controller cover using a standard screwdriver. Attach the Lossnay M-NET remote controller unit to the switch box using the two enclosed cross-recessed pan head screws. Use a standard screwdriver with a blade that is 4 mm or wider to remove the cover.

### CAUTION:

- Forcing off the cover using a screwdriver that is less than 4 mm wide may result in damage to the equipment or injuries.
- Attach the Lossnay M-NET remote controller to a level surface. Do not over-tighten the screws. Tight screws could damage or deform the case.



5. Set the Lossnay M-NET remote controller address.  
Set the Lossnay M-NET remote controller address using the rotary switches SW1 and SW2 on the front of the Lossnay M-NET remote controller.

■ Setting range: 101 to 200

- Rotary switch SW1 indicates the tens column and SW2 indicates the ones column. In addition, 100 is automatically added to the setting as shown below.

Rotary switch setting	01 – 99	00
Lossnay M-NET remote controller address	101 – 199	200

The address is set to 01 when the Lossnay M-NET remote controller is shipped from the manufacturer.

---

**! CAUTION:**

The address must be set if the Lossnay M-NET remote controller is to be used as a part of a multi-unit system. Set the address according to its position in the system. In addition, refer to page 59 for more information concerning the setting of the addresses.

---

6. After setting the Lossnay M-NET remote controller address, attach the Lossnay M-NET remote controller cover.

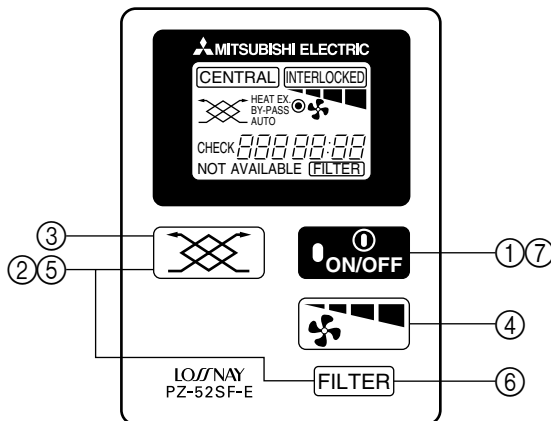
When attaching the Lossnay M-NET remote controller cover, set the top of the cover onto the two top hooks and then push in the at the bottom of the cover until it snaps into place.

If the bottom of the cover is attached first, the top of the cover cannot be attached. Forcefully pushing in the top of the cover to attach it may break the hooks.

# 14.3 Registering the Lossnay Unit with the Lossnay M-NET Remote Controller

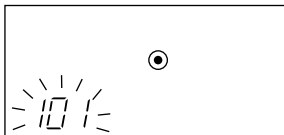
## Initial registration mode operation

A Lossnay unit must be registered with the Lossnay M-NET remote controller in a group arrangement. Register a Lossnay unit using the initial registration mode as shown below. In addition, the initial registration mode can be used to search for a Lossnay unit registered to the group or to delete a registration.



## Setting Procedure

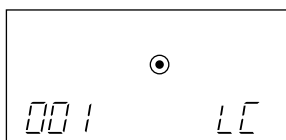
- ① Turn off the unit.  
(Perform the following operation after "HO" flashes on the display.)
- ② Hold down both and for more than 2 seconds.  
This starts the initial registration mode and the set Lossnay M-NET remote controller address flashes on the display.



- ③ Press to select the address of the Lossnay unit that you wish to register with this Lossnay M-NET remote controller. After the button is pressed once, the Lossnay M-NET remote controller address and then the Lossnay unit address is displayed. Afterwards, each press of the button increase the Lossnay unit address by 1 as shown below. Holding down the button changes the address more quickly.

[101] → [---] → [001] → [002] → ... → [098] → [099]  
 (Set Lossnay M-NET remote controller address) ↑  
 Flashes

- ④ When the address of the Lossnay unit that you wish to register is displayed, press to begin registering. If the registration is completed correctly, the display appears as shown below.



The Lossnay unit type, "LC", is displayed.

If the registration is not completed correctly, "88" flashes in the display. Check that the selected Lossnay unit address and the wiring are correct.

In the case of LGH-150/200RX3-E, there are 2 circuit boards installed in each unit. Because of this, set a separate address for each of the circuit boards, and register both of those addresses at the remote control.

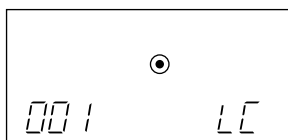
- ⑤ After registering, hold down both and for more than 2 seconds to end the initial registration mode and the normal display appears.

## Confirmation of registered address

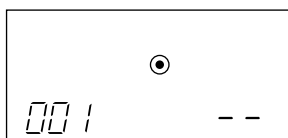
- ⑥ To display the addresses of the Lossnay units that are registered with this Lossnay M-NET remote controller.
- Each press of **FILTER** in step ② or ④ displays the address of a registered Lossnay unit and its type, "LC".  
If no Lossnay unit is registered, "--" appears in the address display and no type is displayed.

## Address deletion

- ⑦ To delete the address of a Lossnay unit registered with this Lossnay M-NET remote controller.
- Hold down [ON/OFF] twice for 2 seconds each time in either step ④ or after the registration is completed to delete the registration of the Lossnay unit that is currently displayed.



When the display appears as shown above, hold down [ON/OFF] for 2 seconds each time.



If the registration is deleted correctly, "--" appears in the display.  
If the registration is not deleted correctly, "BB" flashes in the display. Check that the selected Lossnay unit addresses and the wiring are correct.

## Note:

- In the case of LGH-15 to 100RX<sub>3</sub>-E, up to 16 Lossnay units can be registered. In the case of LGH-150/200RX<sub>3</sub>-E, up to 8 units can be registered.
- If the registration cannot be completed or deleted correctly, either the set address or the wiring of the Lossnay unit whose registration you wish to add or delete may be incorrect. Check the wiring and the address that is set.

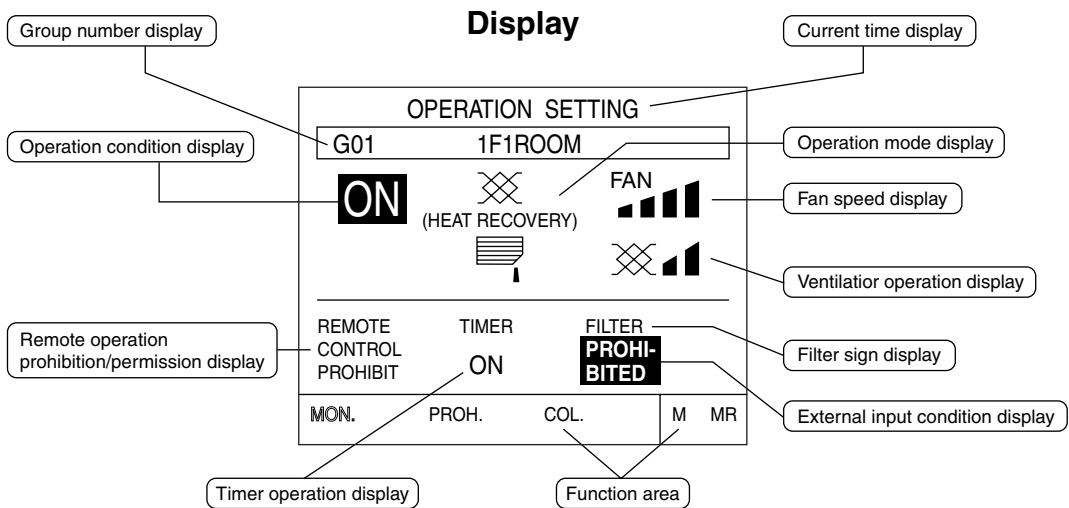
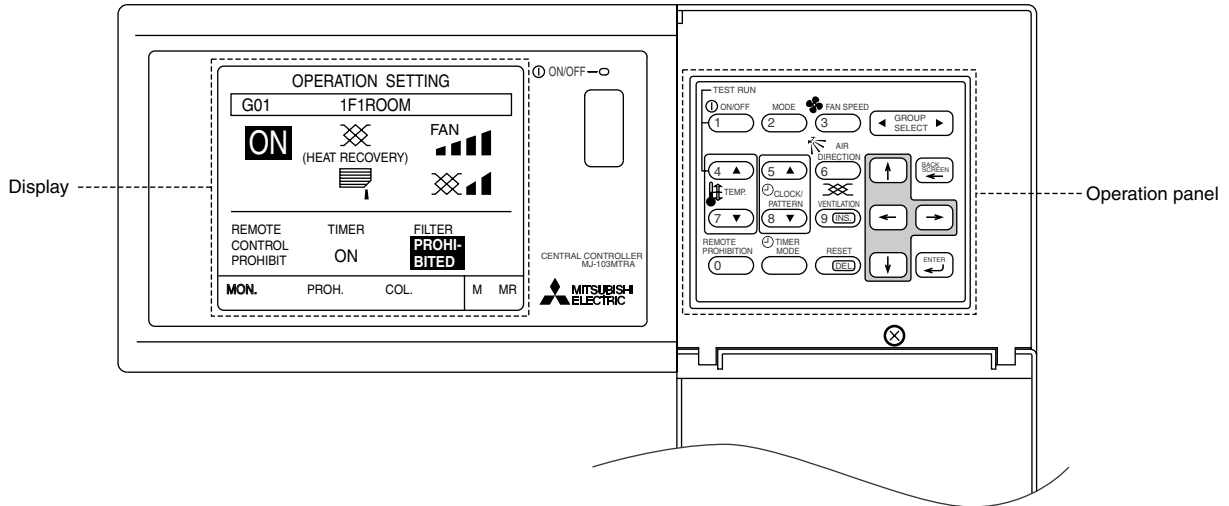
# 15. Appendix

## 15.1 Centralised Controller (MJ-103MTRA)

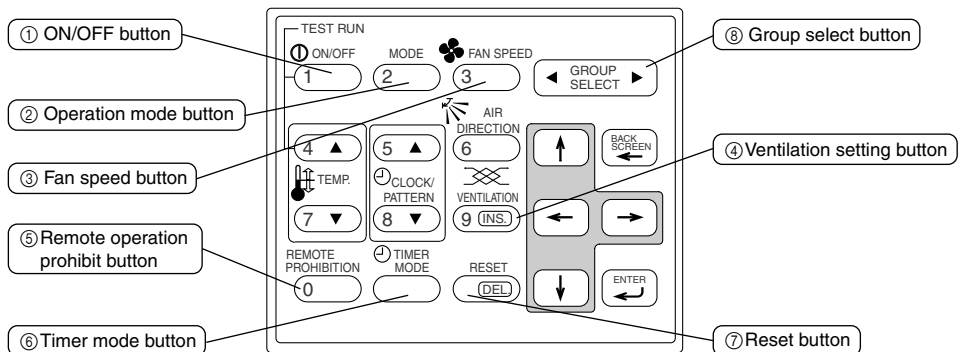
### 15.1.1 Operation setting

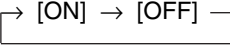

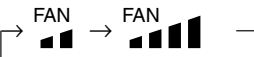

- There are two methods for the operation, performing the operation classified by groups or collective operation.

#### Group operation setting



#### Operation panel

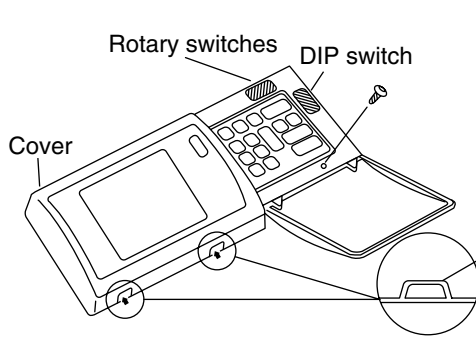


No.	Name of switches	Function	Display
①	ON/OFF button	The ON/OFF condition of the displayed group is switched.	Operation status display  * When there is an interlocked Lossnay unit, turning this switch ON starts operation in a [High] fan speed state.
②	Operation mode button	Used to the type of the operation mode selection.	On the group composed of independent Lossnay units, operation mode is selected in a sequence that goes from HEAT RECOVERY, AUTO, BYPASS and back to HEAT RECOVERY. 
③	Fan speed button	The Fan speed can be selected as high or low.	Fan speed display  * In the case of a group composed only of Lossnay units this does not display.
④	Ventilation setting button	The operation mode of the interlocked Lossnay unit can be performed. * Where there is no interlocked Lossnay unit, the operation of this button is invalid.	Ventilation volume setting display 
⑤	Remote operation prohibit button	Used to prohibit for the local remote control.	PROHIBIT : Local remote control specified on the prohibit setting screen is not possible. PERMIT : Local remote control is possible.
⑥	Timer more button	The timer operation can be performed according to a previously set operation pattern.	Timer operation display [ON] → [OFF]
⑦	Reset button	The filter sign display reset is performed. The reset processing is completed by pressing this button two times.	Filter display [ Filter ] → No display
⑧	Group select button	The display group is changed.	Group number display This switch displays 1 to 50 group numbers. The switch can also display group names.

## 15.1.2 Initial setting

### DIP switch and rotary switch setting

- Remove the cover from the controller and perform the DIP switch and rotary switch setting.



- ① Remove the cover screw.

#### Note:

- When this controller is shipped from the factory, the screw is contained in the same package.

- ② Insert a standard screwdriver into the slot and twist it to remove the cover from the upper case.

### 1. DIP switch setting

- The functions of this controller are set according to the DIP switch settings.
- Each switch is set to the OFF and ON positions as shown below.



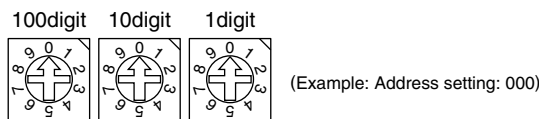
- The functions of this controller are selected by DIP switch.
- The DIP switches are set to OFF when the controller is shipped from the factory.

### DIP switch

1	<input checked="" type="checkbox"/>	ON	OFF: User operation mode	ON: Initial setting mode
2	<input checked="" type="checkbox"/>	OFF	OFF: Master system controller	ON: Slave system controller
3	<input checked="" type="checkbox"/>	OFF	OFF: No K-transmission converter installed	ON: K-transmission converter installed
4	<input checked="" type="checkbox"/>	OFF	OFF: Operation prohibit setting valid	ON: Operation prohibit setting invalid
5	<input checked="" type="checkbox"/>	Reserved for future use (Leave this switch set to OFF)		
6	<input checked="" type="checkbox"/>	External input changeover		
7	<input checked="" type="checkbox"/>			
8	<input checked="" type="checkbox"/>	The range of a controller which the operation is prohibited	OFF: Both of the system controller and the local remote controller	ON: Only the local remote controller

### 2. Rotary switch setting

- The address of this controller is set by the rotary switch.
- When this controller is shipped from the factory, the address is set to "000".



Setting range: 000, 201-250

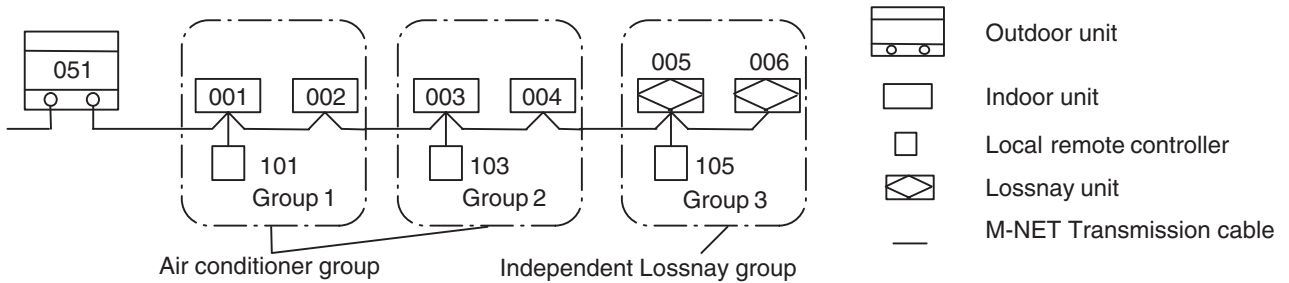
(Always set the address to "000" when K-transmission converter is being controlled.)

### 15.1.3 Group configuration setting

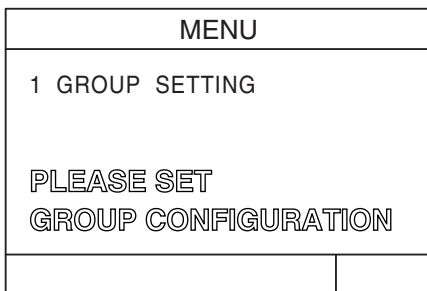
- Registration can be made for the indoor units, local remote controllers and slave system controllers in the same group.
- Registration can also be performed for the group that is composed of only Lossnay.

#### Example of a group configuration

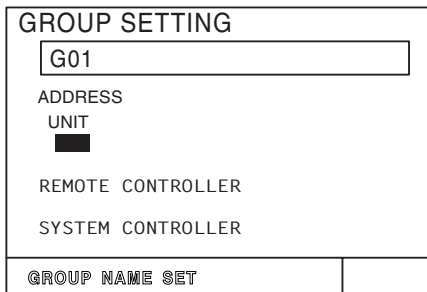
- Supply the power from the power supply unit (PAC-SC34KUA) through the M-NET transmission cable.



- Perform the following procedures to set the group configuration because the interlocked operation setting will not be performed for the group configuration settings that have not been set.



- ① When the power is supplied to the controller, the screen shown on the left is displayed.
- ② Press the  button to select "1 GROUP SETTING".



The configuration setting screen is displayed.

- ③ Press the  button to display the group number to be set.
- ④ Press the , , ,  button to move the cursor to the address display position to be set.
- ⑤ Use the numeric keypad to set the address of the indoor unit, local remote controller, and slave system controller in the display group number.

#### Operation example

For an indoor unit with an address of 012.

- 1) Input "0"
  - 2) Input "1"
  - 3) Input "2"
  - 4) Press the  button. 012
- \* It is also possible to enter "1" "2".

#### When the input is incorrect

Press the  button and continue to input the data. After pressing the  button, move the cursor to the addresses to be deleted and press the  button to delete these addresses.


#### Note:

- Do not set Lossnay units with the intention of interlocked operation, such as Lossnay, on this group setting menu.
- Even if the addresses are input in a non-sequential order, they will be switched to sequential order starting with the lowest address.
- The independent Lossnay unit cannot be set to the indoor unit group and it cannot be set as an interlocked Lossnay unit.



<b>GROUP SETTING</b>	
G03	
ADDRESS	
UNIT	
005	006
REMOTE CONTROLLER	
SYSTEM CONTROLLER	
GROUP NAME SET	

This is the procedure for registering all units and controllers in the displayed group number.

- ⑥ Repeat operation ③ to ⑤ to set all the groups controlled by this controller.
- ⑦ When all settings have been completed, press the  button.

**Note:**

- Be sure to set the local remote controller address when there is a local remote controller in the system. The local remote controller will not operate if the address setting is not performed.

INITIAL SETTING PLEASE WAIT	

- ⑧ The initial setting screen is displayed. Registration processing for the group configuration information and initial set up processing for each unit and each controller is executed when DIP switch No. 1 is set to OFF. (This process takes approximately five minutes.)


**Note:**

- If DIP switch No. 1 is set to ON at this time, the initial setting menu screen is displayed without the initial setting screen.

- ⑨ The user operation menu is displayed. Once the group configuration settings are completed, user operation can be performed. Refer to Section “14.4 Interlocked Operation Setting” when performing interlock operation settings.

**Additions:**

Deleting all group configuration data.

- Display “G00” on the group configuration setting screen and press the  button two times consecutively to delete all group configuration data and all interlocked operation data.

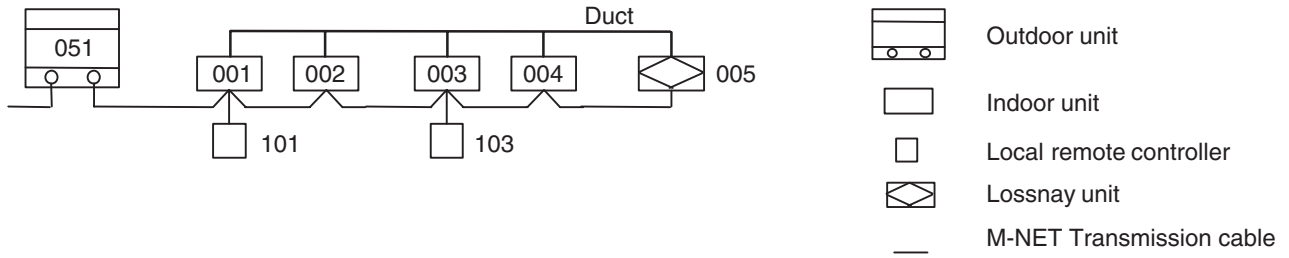
**Note:**

- Group registration cannot be made when this unit is set to the slave system controller by the DIP switch No. 2. However, confirmation of the contents of the group registration is possible.
- To change the group configuration setting, set DIP switch No. 1 in the cover to ON. This will bring up the initial setting menu screen. From that screen, select “1 GROUP SETTING” on the setting menu screen. Wait for the screen to appear and then change the setting.

## 15.1.4 Interlocked operation setting

- This is the procedure for registering the interlocked operation of an Lossnay unit with a single or multiple indoor units. All indoor units to be interlocked with an Lossnay unit for operation should be registered as group before-hand.

### Example of an interlocked group configuration



MENU	WED 15:29
1 OPERATION MONITOR 2 OPERATION SETTING 3 SCHEDULE SETTING 4 MALFUNCTION MONITOR 5 CURRENT TIME SETTING	

- ① Set DIP switch No. 1 in the cover to ON.

#### Note:

- Always uses the DIP switch No. 1 to change the setting.  
This operation will be invalid if performed on another screen.

MENU
1 GROUP SETTING 2 INTERLOCKED SETTING 3 REFRIGERANT MONITOR 4 MALFUNCTION LOG MONITOR 5 USER SETTING

- ② The initial menu screen is displayed.
- ③ Press the  button to select "2 INTERLOCKED SETTING".

INTERLOCKED SETTING
INTERLOCKED UNIT ADDRESS 005 UNIT ADDRESS <input type="text" value=""/>

- ④ The interlocked setting screen is displayed. The minimum address of the interlocked processing unit that can be set to interlocked operation with an indoor unit is displayed in "INTERLOCKED UNIT ADDRESS". The cursor is displayed in the unit address display position.
- ⑤ Press the  button to display the address number of the interlocked Lossnay unit that the setting will be performed on.

<b>INTERLOCKED SETTING</b>	
INTERLOCKED UNIT ADDRESS	005
UNIT ADDRESS	█

- ⑥ Use the numeric keypad to set the address of the indoor unit to operate with the displayed Lossnay unit.

### Operation example

For an indoor unit with an address of 012.

- 1) Input "0". 0
- 2) Input "1". 01
- 3) Input "2". 012
- 4) Press the → button. 012 █  
\* It is also possible to enter "1" "2".

### When the input is incorrect

Press the → button and continue to input the data. After pressing the



button, move the cursor to the addresses to be deleted and press the



button to delete these addresses.

<b>INTERLOCKED SETTING</b>	
INTERLOCKED UNIT ADDRESS	005
UNIT ADDRESS	001 002 003 004 █

- ⑦ Set the indoor units to operate with the displayed interlocked Lossnay unit.
- ⑧ Repeat operation ⑤ to ⑦ to set the indoor units in interlocked operation controlled by this controller.
- ⑨ When all settings are completed, press the ←  
BACK  
SCREEN button.

<b>MENU</b>	
1	GROUP SETTING
2	INTERLOCKED SETTING
3	REFRIGERANT MONITOR
4	MALFUNCTION MONITOR
5	USER SETTING

Initial setting screen is displayed.

This ends the interlocked operation setting.

Return to where user operations are performed to set DIP switch No. 1 to OFF. After the initial settings processing has been completed, the initial setting screen will be displayed.

### Note:

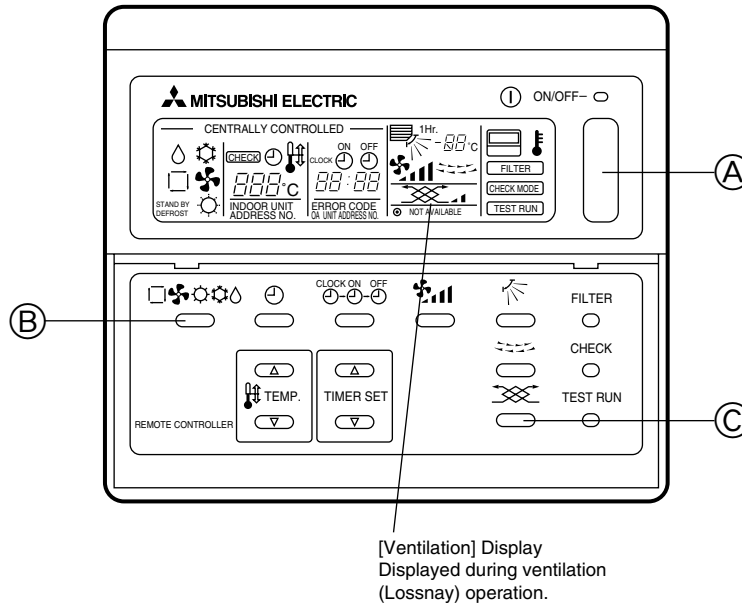
- The interlocked operation settings cannot be adjusted when this unit is set to being a slave system controller by the DIP switch No. 2. However, monitoring of the contents of the interlocked operation settings is possible.

**Please refer to the related documentation for details about the centralised controller.**

# 15.2 Remote Controllers for Mr. Slim indoor unit

## A-control remote controller (PAR-27AA)

Without Lossnay interlock switches and indicators.



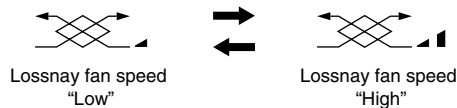
### 15.2.1 Method for operating Lossnay with A-control remote controller (when interlocked with Mr. Slim)

#### When operating Lossnay separately

- Press the “ON/OFF” button (A).
- Press the “Selecting operation” button (B). The display will show .
  - Use when you only want ventilation and there is no need for heating or cooling operation.
  - The does not display when the unit is not connected for interlocked operation with a ventilation unit.

#### When changing Lossnay fan speed

- Press the “Ventilation” button (C).

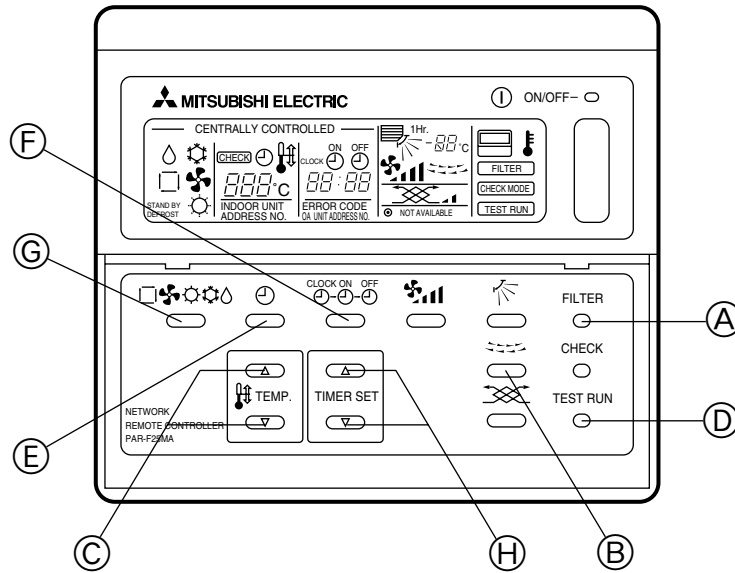


- The setting changes each time you press the button.

#### When running interlocked ventilation operation

- Press the “ON/OFF” button (A).
  - If there is a ventilation unit connected for interlocked operation, the ventilation unit will start operating automatically.
- Press the “Ventilation” button (C).
  - The Lossnay fan speed can be set to High or Low.

# 15.3 Network Remote Controller (PAR-F25MA)



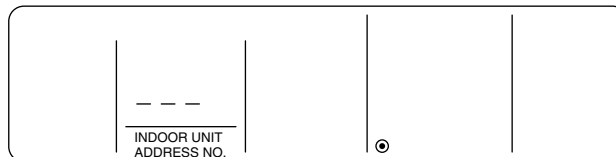
## 15.3.1 Method for Operating Lossnay with Network remote Controller (When Interlocked with City Multi Indoor Unit)

Operation method is same as A-control remote controller. Refer to page 81.

## 15.3.2 Initial registration mode

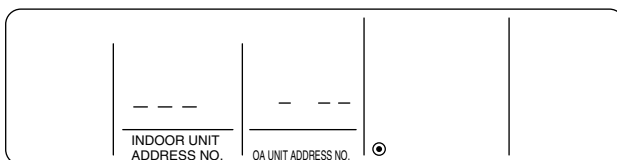
This is the procedure for registering the address of the indoor unit with the remote controller.

- ① Stop the remote controller by pressing the [ON/OFF] button.
  - If not indoor unit is registered, the “HO” display appears in the room temperature display. In this condition, registration can be performed as follows.
- ② Display “INDOOR UNIT ADDRESS NO.”
  - Press and hold down both the [FILTER] button (shown as **A**) and the “Louver” button (shown as **B**) at the same time for 2 seconds. The following display will appear.



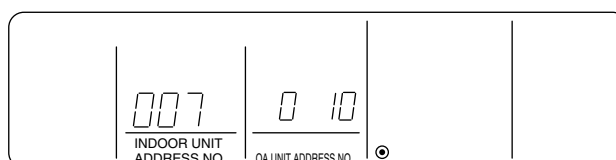
## 15.3.3 Interlocked registration

- ③ Display the “OA UNIT ADDRESS NO.”
  - Press the “Operation mode” button (shown as **C**) and the following display will appear. Press once again to return to “INDOOR UNIT ADDRESS NO.” shown in Step ②.

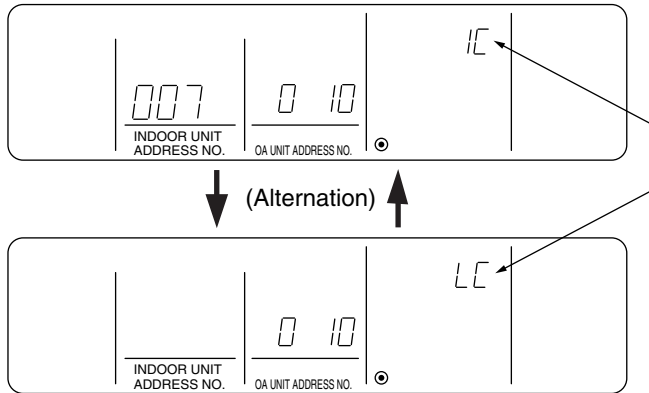


Both “INDOOR UNIT ADDRESS NO.” and “OA UNIT ADDRESS NO.” will appear simultaneously.

- Use the **[▲]** and **[▼]** [TEMP.] buttons (shown as **C**) to select the address of the indoor unit. Set it to the address of the indoor unit to be interlocked.
- Use the **[▲]** and **[▼]** [TIMER SET] buttons (shown as **H**) to select the address of the Lossnay unit to be registered.



- ④ To register the interlocked operation of the Lossnay unit and the indoor unit.
- Use the [TEST RUN] buttons (shown as ㉓) to register the relationship of the interlock between the Lossnay indicated in “OA UNIT ADDRESS NO.” and the indoor unit indicated in “INDOOR UNIT ADDRESS NO.”



- When registration has been completed successfully, the display alternates between the two displays shown in the figure.
- If there is an error in the registration, “88” will flash. This indicates the number of the unit.

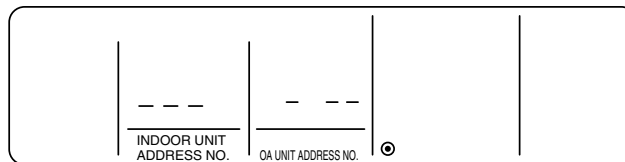
- ⑤ To return to the normal operation mode.
- Press and hold down both the [FILTER] button (shown as ㉑) and the “Louver” button (shown as ㉒) at the same time. This returns the unit to the normal operation mode. (OFF)

**Note:**

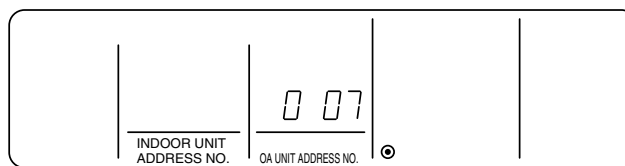
- Be sure to set the indoor unit to the lowest address number in a group followed by the Lossnay unit. If this is not performed, the Lossnay unit will not operate.
- If there are multiple indoor units to be interlocked with the Lossnay unit, perform Steps ③ and ④ above for each of them.

### 15.3.4 Searching for interlocked registered units

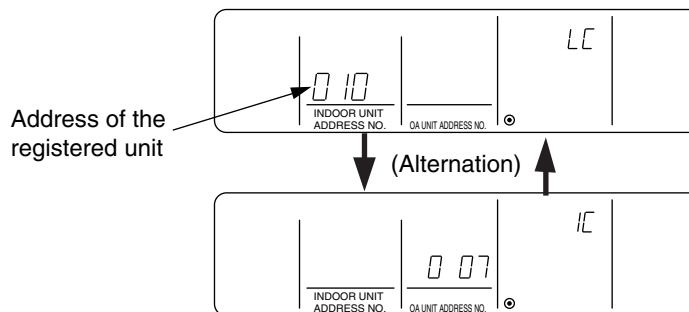
- ⑥ Display the indoor unit address No. at “OA UNIT ADDRESS NO.”
- Press the “Operation mode” button (shown as ㉔) and the following display will appear. Press once again to return to “INDOOR UNIT ADDRESS NO.” shown in Step ②.



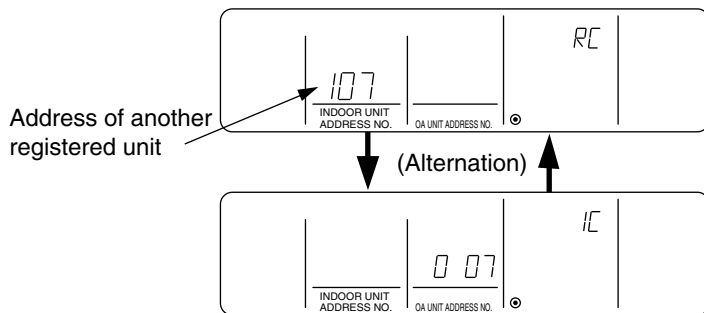
- ⑦ Use the ▲ and ▼ [TIMER SET] buttons (shown as ㉕) to select the address of the indoor unit to be registered. Select the indoor unit address number to be confirmed.



- ⑧ Press the “Timer/continuous” button (shown as ㉖). The display alternates between the two displays shown here.



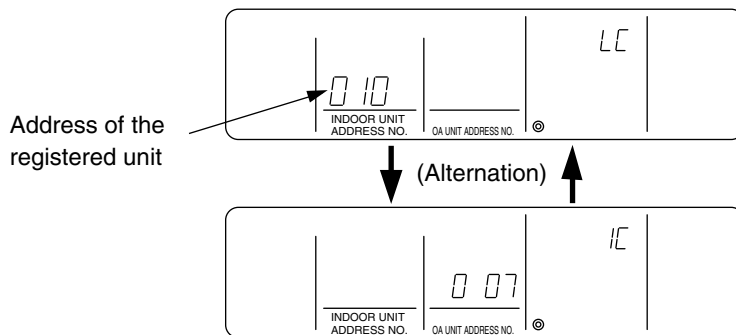
- ⑨ Press the “Timer/continuous” button (shown as Ⓔ) once again. The display will now alternate between the registered unit and the address of the next registered unit. (The way of display is the same as in step ⑧.)



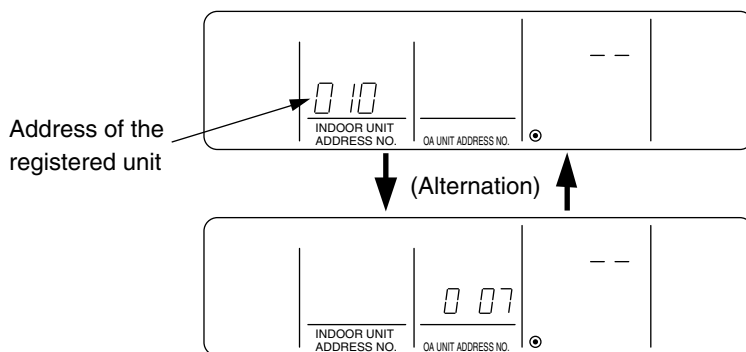
- ⑩ To return to the normal operation mode. Press and hold down both the [FILTER] button (shown as Ⓐ) and the “Louver” button (shown as Ⓑ) at the same time. This returns the unit to the normal operation mode (OFF).

### 15.3.5 To delete linked unit entries

- ⑪ From the initial registration mode display, perform an address search for linked units. Display the addresses of the Lossnay units to be deleted. Press the “Time conversion” button (shown as Ⓔ) twice to delete these units which are displayed according to their address number with the indoor unit.



When the above is displayed, press the “Time conversion” button (shown as Ⓔ) twice.



If the transmission is faulty, the properties will flash as “BB”. Check the wiring and the address definitions and then do the above operation again.

- ⑫ To return to the normal operation mode. Press and hold down both the [FILTER] button (shown as Ⓐ) and the “Louver” button (shown as Ⓑ) at the same time. This returns the unit to the normal operation mode (OFF).







