Manual No. ’10・SC-T-154

MHI

TECHNICAL MANUAL

AIR CONDITIONING CONTROL SYSTEM

CENTRAL CONTROL

SC-SL2NA-E

SC-SL3NA-AE

SC-SL3NA-BE

MITSUBISHI HEAVY INDUSTRIES, LTD.

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■Number of units in combinations of SC-SL1N-E, SC-SL2NA-E and SC-SL3NA-AE, BE (per system)

●In case of new SL (Super Link)

SC-SL3NA-AE, BE	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2
SC-SL2NA-E	0	1	2	3	4	5 ~ 8	1	2	3	4	5 ~ 8	0	1	2	3	4	5 ~ 8

●In case of previous SL

SC-SL3NA-AE, BE	0	0	0	0	1
SC-SL2NA-E	0	1	2	3	1 (×3)(1)

Notes (1) In case of previous SL, since SC-SL3NA-AE, BE is for connection of 3 Super Link systems, one unit of SC-SL2NA-E can be connected to each system.

(2) Number of units in combination as shown above is applicable to when the indoor units being controlled by each central control are not duplicated. When controlling the same indoor units with a plural number of central controls, it may affect the allowable number of indoor units for connection. For further details, please consult your dealr.

■Check indicator table

SL2NA-E SL3NA-AE, BE		Indoor unit control PCB		Outdoor unit control PCB		Location of trouble	Description of trouble	Repair method
Error code	Red LED	Red LED	Green LED	Red LED	Green LED			
E75	Keeps flashing	Stays OFF	Keeps flashing	Stays OFF	Keeps flashing	SL2NA-E SL3NA-AE, BE	・Communication error (Defective communication circuit on the main unit of SL2NA-E or SL3NA-E)	Replacement

1 CENTRAL CONTROL SC-SL2N-E

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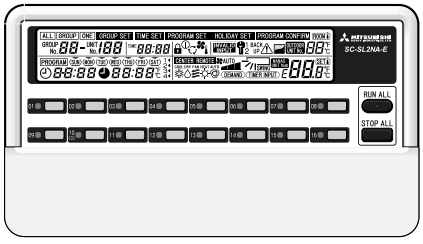

Abª kfqfl kp l ckbt ^ka mdbsfl r p Prmbol fkh %bt ^ka mdbsfl r p Pl &

New Super Link (new SL): All units connected to the network are models compatible with New Super Link (KXE6 model or later models. Central controller and I/F are from “N” models.) and SL setting is unchanged from shipment (“New” or “AUTO”).

Previous Super Link (previous SL): Units do not meet the conditions of New SL. When even a single unit connected to the network is an earlier model than KXE4 or the connected model is not compatible with New SL. Setting explained in Note (5) is required.

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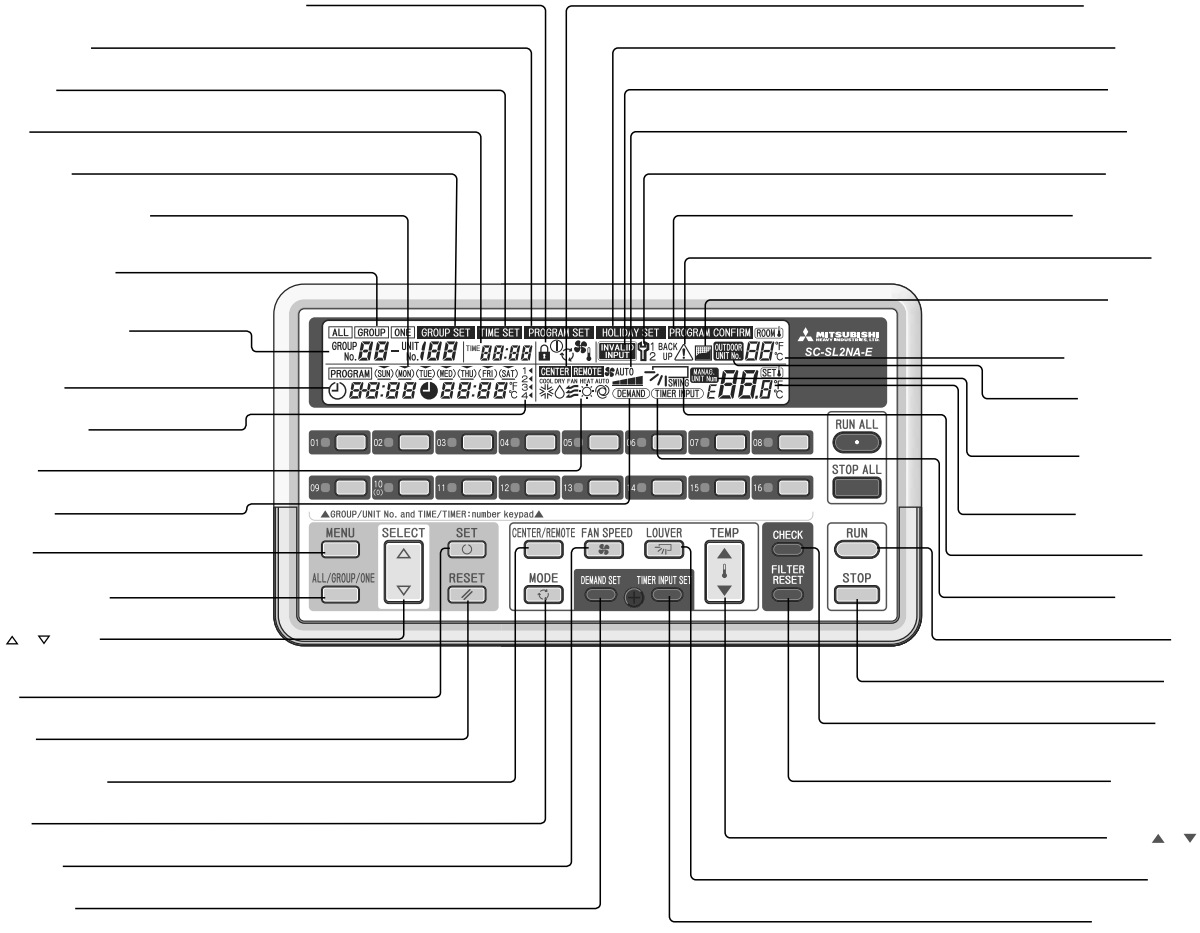

ALL
GROUP
ONE
GROUP SET
TIME SET
PROGRAM SET
HOLIDAY SET
PROGRAM CONFIRM
ROOM
GROUP No.
UNIT No.
TIME
INVALID INPUT
1 BACK
2 UP
OUTDOOR UNIT No.
SC-SL2NA-E
PROGRAM
SUN MON TUE WED THU FRI SAT
CENTER
REMOTE
AUTO
COOL DRY FAN HEAT AUTO
DEMAND
TIMER INPUT
SWING
MANAG. UNIT Nos.
SET
RUN ALL
STOP ALL
01 02 03 04 05 06 07 08
09 10 11 12 13 14 15 16
▲GROUP/UNIT No. and TIME/TIMER: number keypad▲
MENU
SELECT
SET
ALL/GROUP/ONE
RESET
CENTER/REMOTE
FAN SPEED
LOUVER
TEMP
MODE
DEMAND SET
TIMER INPUT SET
CHECK
FILTER RESET
RUN
STOP

(2) Operation and setting

Operation or setting is implemented individually, in the unit of group or in a batch for air-conditioners up to 64 units or 16 groups.

(3) Status monitor

Status monitor may be applied in the unit of group or air-conditioner.

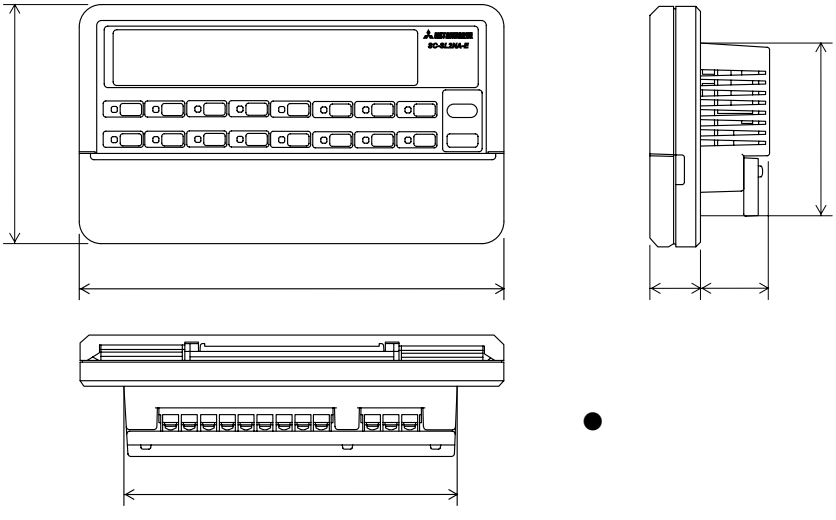
(4) Program setting

Operation program can be set in the unit of group. It is possible to register the ON/OFF time or ON time + Temperature setting at 4 times a day. Operation time can be designated in the unit of minute.

(5) Administration and control

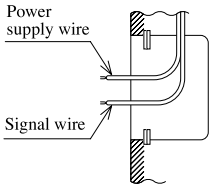
		•
		① ② ② ② ③

(6) Outline drawing

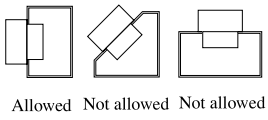


(7) Installation procedure

(a) Fk `^pb l cbj _baafkd fk ^ t ^ii)ª qpqbj _ba qeb ml t bopr mmiv wire, signal wire, and electrical box.
Keep the power supply wire and signal wire separated to prevent malfunctions.

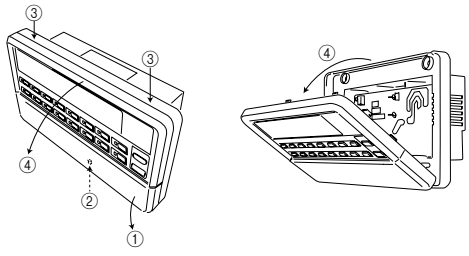


Note: Before connecting an external timer or emergency stop input, be sure to connect the wiring at the worksite first.

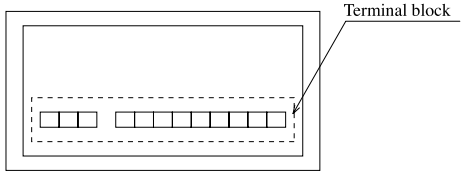


Please do not install facing upward or at a slant.

(b) Open the top case by following the procedure below.
① Grasp the indentations on the right and left sides, and pull forward to open the cover downward.
② Use a phillips-head screwdriver to remove the screw. (Be careful not to lose the screw.)
③ Open the top section in the direction 4 while gently pressing the top section.

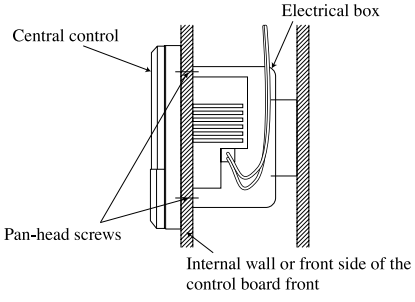


(c) Connect the power supply wire to the terminal.
(See section **(8) Electrical wiring.**)



Check the supply voltage, and make the correct connection.

(d) Use the supplied pan-head screws to secure the central control to the electrical box or control board.



(e) Use a precision screwdriver to make the control selector settings.
(For details, see section **(10) Control switch selection.**)

(f) Peel off the protective sheet on the screen of central control.

Important
Please peel off the protective sheet on the air conditioner screen when transferring the central control to the customer. Peel off before mounting the top case.

(g) Insert the top case back into its original location in the bottom case as before, and tighten the case mounting screws [(b), ②].
This completes the installation procedure.

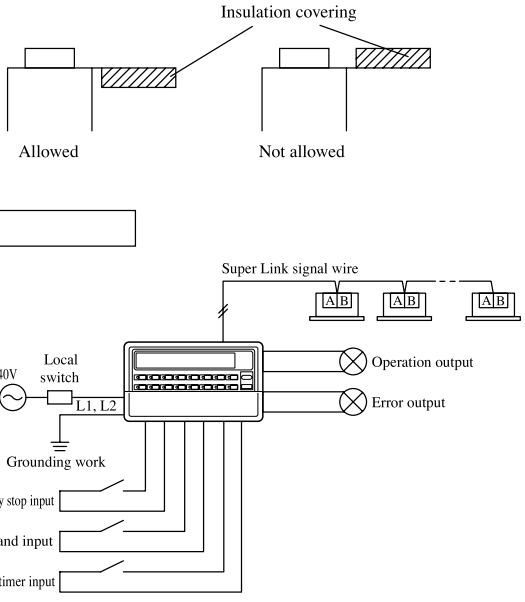
Caution
The case and power supply kit are an integrated unit. Please do not separate them.

(8) Electrical wiring

For safety reasons, please use the round crimping terminals with insulated sleeves for connecting all wires to the central control.

- Please do the grounding work. Please do not connect earth line with gas pipes, water pipes, lightning rods and grounding line of telephone.
- Please do not turn on the power supply (local switch) until all of the work is completed.
- Please wait at least two minutes after the indoor and outdoor units are turned on before turning on the power supply.
- Bu`bmqd oqeb `bkqp^i `l kqpl i fk qeb ª dr db) ^ii l c qeb `l j ml kbkqp ^db l _q^fkba ^qqeb pfdp % fdbp) pt fq ebp) dbi^vp) ml t bopr mmiv) lamps, etc.).
- Please be sure to build the breaker which is easily accessible with building equipment's wiring.
- Please be sure to use the supplied round crimping terminals when connecting wires to the power supply terminal block and Super Link terminal block.
- Please use demand input device, emergency stop input device and external timer input device comply with a relevant IEC safety standard.

Refer to the figure below for the terminal orientation.



Before connecting the wires, remove the cover of the terminal block.
After the work is completed, fix the cover of the terminal block as before.
The cover is used to prevent electric shock due to accidental contact.

Power supply wire	1.25mm²
Local switch	10A
Super Link signal wire (Note 1, Note 2)	Shielded wire (MVVS 2-core) 0.75mm² - 1.25mm² Max. 1000m per network (Max. distance: 1000m, Total wire length: 1000m)
Operation output, Error output, Demand input, Emergency stop input, External timer input wire	CCV, CPEV (2-core) 0.75mm² - 1.25mm² Max. 200m
Grounding wire	0.75mm² - 6mm²

Notes (1) Use a shielded wire for the Super Link signal wire.
Ground both ends of the shielded wire.
(Connect the ground for the central control to the ⏚ section in "System wiring".
(2) If the indoor and outdoor units connected to the network are all compatible units with New Super Link, a total wire length of 1500m per line is possible (maximum distance: 1000m). However, be sure to use a 0.75mm² wire diameter if the total wire length exceeds 1000m. For further information, please contact your sales representative or dealer.

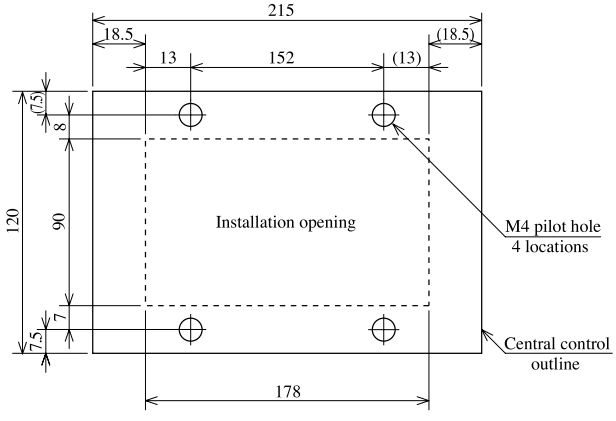
(9) Installation work

Please install the central control after turning off the power for fear of electric shock.
Please arrange or protect the wiring so that excessive force is not applied to the electrical wires.
Control PCBs (printed circuit boards) are mounted to both the top and bottom cases.
Be careful that you do not damage the PCBs when using a screwdriver and other tools.
The PCBs can be damaged by static electricity, and so be sure to discharge any static electricity accumulated on your body before starting the work.

(a) Installation place

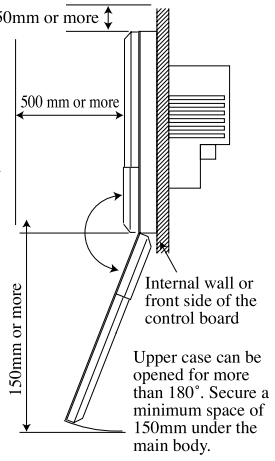
Please install in an indoor location that is not exposed to electromagnetic waves, water, dust, or other foreign substances.
Qeb l mbo^qfkd qbj mbo^q ob o^kdb l c qefp mol ar `qfp col j -Á@q 1-Á@+
Install in a location where the ambient temperature remains within the operating temperature range.
However, if the operating temperature range is exceeded, be sure to implement corrective measures such as installation of a cooling fan.
Be aware that continued usage of this of this central control outside the operating temperature range can result in operation problems.

(b) Space required for installation



The dotted lines show the installation opening section for installation on the control board (the dimensions are only an example).

Front of central control
500mm or more is needed
Bottom of central control
150mm or more is needed
Left, right and top of central control
50mm or more is needed



(c) In case of installing on the control board

Please be sure to lock the control board to protect persons from the electric shock.

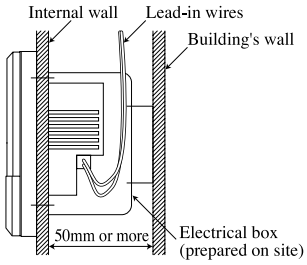
Avoid usage of heat-retaining materials and heat-insulating materials because these can result in heat buildup and adversely affect the operation of the central control.

Caution

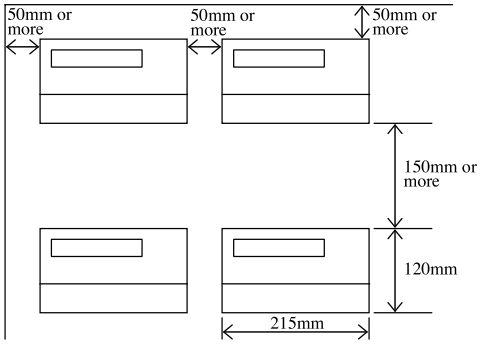
Please do not install devices that can cause the ambient temperature to rise in the same control board. Also, do not install multiple controllers in the same control board. These can cause heat to build up and result in false operation. If multiple central control must be installed in the same control board, take corrective measures to ensure that the temperature in the control board does not rise ^_l sb 1- Á@pr `e ^p _v fkpq^iifkd `l l ifkd c^kp+

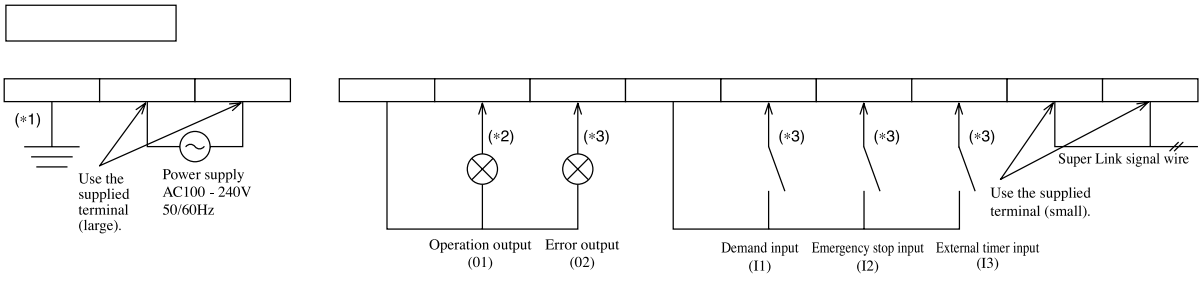
(d) In case of embedding in a wall

Mb^pb `eb`h qe^qqebdob fp pr c ª `fbkqpm^`b fkpfab qeb t ^ii+ Fc qeb dpj mbo^q db fkpfab qeb t ^ii bu`bbap 1- Á@ fkpq^ii qeb central control on the control board.



When performing the continued installation of multiple controllers, be sure to obtain the distance between units and service pm^`b ^p pel t k fk qeb ª dr db+





(*1) Please connect to gmund for signal wire and power supply wire.

(*2) The selected relay obtained at the site should have the following specifications: rated voltage of DC 12V and maximum power consumption of DC 0.9W or less (80mA or less)

(*3) The selected relay obtained at the site should have the following specifications: Non-voltage "a" contadinput and capable of withstanding a minimum applied load of DC12V and 10mA or less.

Note Do not connect the power supply wire to another terminal. Making the wrong connection can result in damage or burning of electrical parts and is extremely dangerous. Please check the wires again before turning on the power supply.

The DO and DI terminals are polar.

Do not connect three or more wires to the same terminal.

(10) Control switch selection

It is possible to change the setting as follows by settings of the PCB switches SW1 to SW10, J1, J2, and J3 on the central control.Please change the control on site as necessary. It is recommended to change the setting by using a precise driver.

(a) Switch

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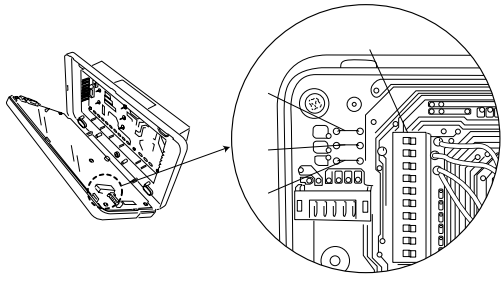
Power failure compensation function selector



(b) Jumper wires

(11) Setting the control target units

Make the settings for the units to be controlled by the central control.

For the setting procedure, see the user's manual attached to the central contrl.

At shipping, none of the units are set as target units for control, and so the units to be controlled by this central control must be set as control target units.

Three types of settings are available.

① Units are selected as control targets for central control and controlled as a group →Group setting

② Units are selected as control targets for central control but not grouped →Individual setting

③ Units are not selected as control targets for central control →Not target units for control
(or units will be controlled by another central control)

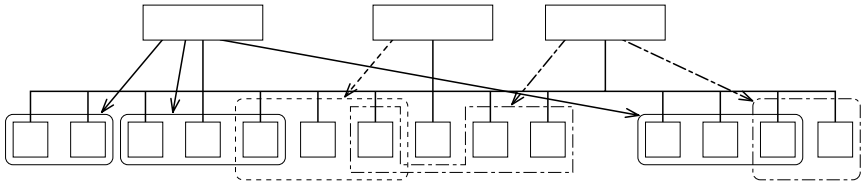
Be sure to set the current time. This is needed for the program settings and error history display.

Turn on the power and press the three buttons (MENU, RESET, GROUP No. 1-&^ql k`b j l db qp^k ª sb pb`l ka) qp^q`^k initialize the setting contents.

- **Group control when using multiple units**

  This central control can control up to 64 target units (up to 48 units when using the previous Super Link setting). Multiple central controls must be installed to control 65 or more air conditioner units.

  When connecting multiple central controls on a single network, any group settings can be made for each central control.



2 CENTRAL CONTROL SC-SL3NA-AE and SC-SL3NA-BE

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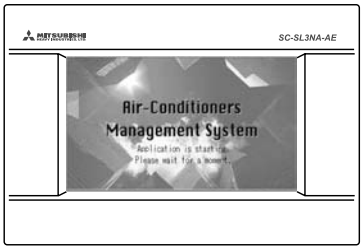

(2) Operation and setting

Operation and setting is implemented in group or in a batch for the maximum 128 groups (144 for previous SL).

Note (1) Operation or setting cannot be done in block.

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New Super Link (new SL): All units connected to the network are models compatible with New Super Link (KXE6 model or later models. Central controller and I/F are from “N” models.) and SL setting is unchanged from shipment (“New” or “AUTO”).

Previous Super Link (previous SL): Units do not meet the conditions of New SL. When even a single unit connected to the network is an earlier model than KXE4 or the connected model is not compatible with new SL.

Use the “Function setting” screen of main unit to set new or previous Super Link (new or previous SL). When the connecting network consists of previous Super Link, it is necessary to change the selection.

(3) Control selection setting

It is possible to change the setting as follows by setting on the “Function Setting”

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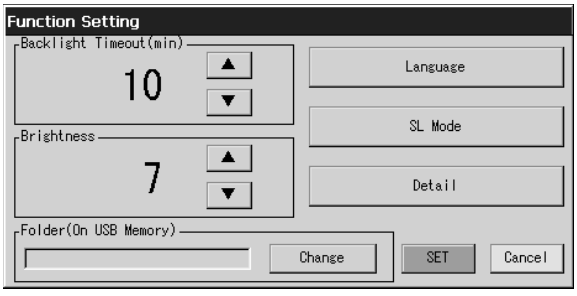

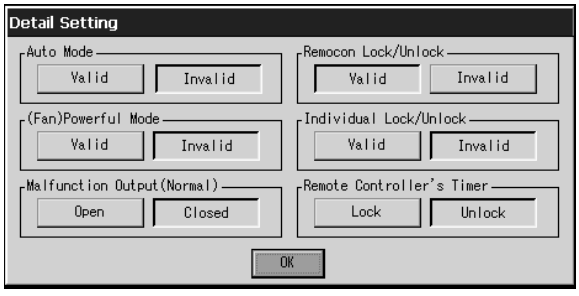

(4) Status monitor

Status monitor can be applied in the unit of block, group or air-conditioner.

(5) Schedule setting

This schedule can be set by each group every one minute.
It is possible to register the RUN/STOP time, operation mode, remote controller Lock/Unlock setting, temperature setting at 16 times a day.(*)

No.	Item	Description
1	Yearly schedule	Specify the date and select/specify the weekday, holiday, special day 1 or special day. It is possible to set for a year. However, it will not be reflected the next year so it is necessary to set it at least once every year.
2	Today's schedule	Set the schedule that is effective on the current day only. The day's schedule has the priority over yearly schedule.
3	Detailed daily schedule	Set each schedule of the weekday, holiday, special day 1 and special day 2 which are used for the yearly schedule.

(*) e.q

①	7:50	RUN/STOP:RUN	Lock/Unlock:−	Operation mode:Cool	Set temp.:25℃
②	9:40	RUN/STOP:STOP	Lock/Unlock:ALL Lock	Operation mode:−	Set temp.:−
③	10:00	RUN/STOP:RUN	Lock/Unlock:ALL Unlock	Operation mode:−	Set temp.:−
…					
⑯	23:00	RUN/STOP:STOP	Lock/Unlock:ALL Lock	Operation mode:−	Set temp.:−

(6) Management and control

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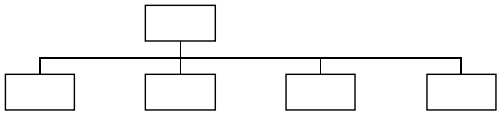
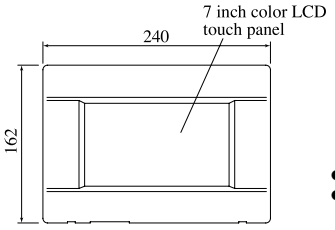
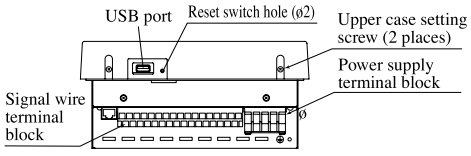
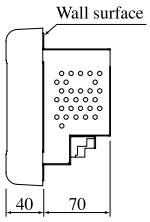


(7) Outline drawing







- Resin color: Pearl white (Close to Munsell N-8.5)
- Service space
  Front face: 500 mm or larger, bottom face: 200 mm or larger

(8) Installation work

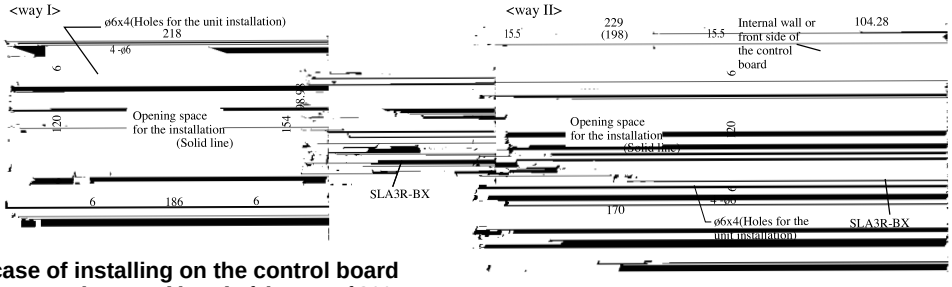
Please install the central control after turning off the power for fear of electric shock.
Please arrange or protect the wiring so that excessive force is not applied to the electrical wires.

(a) Installation place

Please install in an indoor location that is not exposed to electromagnetic waves, water, dust, or other foreign substances. The l mbo^qfkd qbj mbo^qc ob o^\kdb l c qe fp mol ar `qfp col j -Á@q 1-Á@+
Install in a location where the ambient temperature remains within the operating temperature range. However, if the operating temperature range is exceeded, be sure to implement corrective measures such as installation of a cooling fan. Be aware that continued usage of this central control outside the operating temperature range can result in operation problems.

(b) Space required for installation

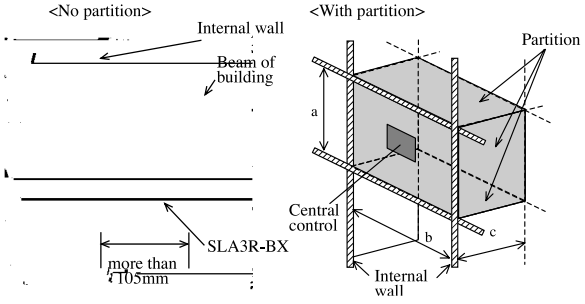
Please choose one of two ways.



1) In case of installing on the control board

- Please use the control board of the size of 300mm x 400mm x 120mm or larger.
- Please be sure to lock the control board to protect persons from the electric shock. Avoid usage of heat-retaining materials and heat-insulating materials because these can result in heat buildup and adversely affect the operation of the central control.

Caution
Please do not install devices that can cause the ambient temperature to risea in the same control board. Also, do not install multiple controllers in the same control board. These can cause heat to build up and result in false operation. If multiple central control must be installed in the same control board, take corrective measures to ensure that the temperature in the control board does not ofpb ^_l sb 1-Á@pr `e ^p _v fkpq^\iifkd `l l ifkd c^\kp+

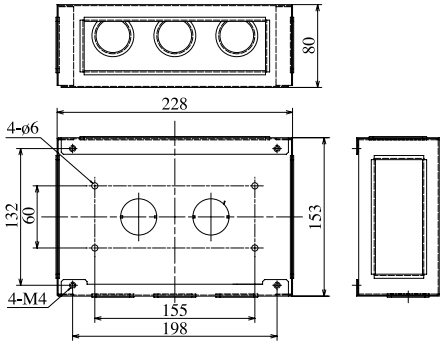


	a (height)(mm)	b (width)(mm)	c (depth)(mm)	space(m^3)
Example1	900	800	110	0.08
Example2	1800	400	110	0.08
Example3	1000	400	200	0.08
Minimum	600 or larger	400 or larger	110 or larger	

2) In case of embedding in a wall

Please be sure to use the special box, SLA3R-BX (sold pbm^o^qbiv&q pb `r ob pr c^ `fbkq^fo `fo `r i^qfl k pm^\`b+Fc the box is unused, the central control will not work properly because of heat buildup inside the box.
Please be sure to use for protecting persons from the electric shock.
Mb^pb `eb`h qe^q qe b pr c^ `fbkq pm^\`b fp ^s^fi^_ib fk the wall.
When the inside of the wall is divided and have a cavity, please create space more than 0.08m^3. Refer to the table below.
If there is no partition on the left, right, top and bottom of the central control, please create a space that is 105mm or deeper.
When you cannot create the sufficient space or thickness of the wall is above 15mm, please install the central control on the control board.

● Outline drawing of SLA3R-BX

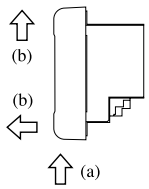


(c) Installation procedure

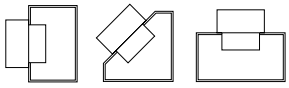
1) Remove the upper case

a) Take out two screws using a cross slot screwdriver. (Don't lose the screws)

b) Pull the upper case a little forward and push above. Then, upper case can be removed.



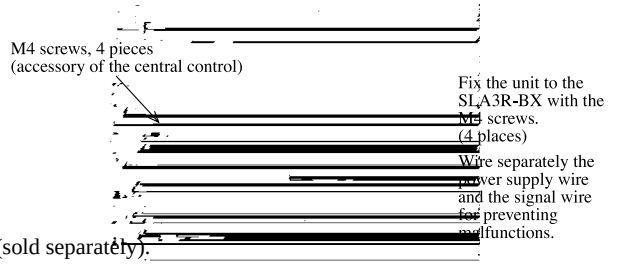
Caution



- Embed signal wire and power supply wire in a wall beforehand.
- Connect wires to the terminal block.
- @l k^a oj ml t bopr mmiv sl iq\db ^ka `l kkb`q`l odb`qiv+

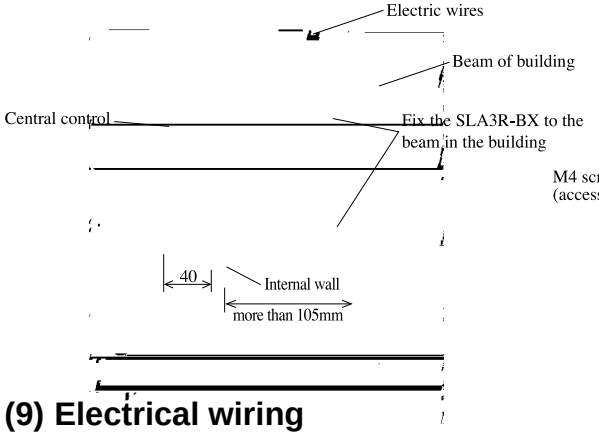
Please do not install facing upward or at a slant.

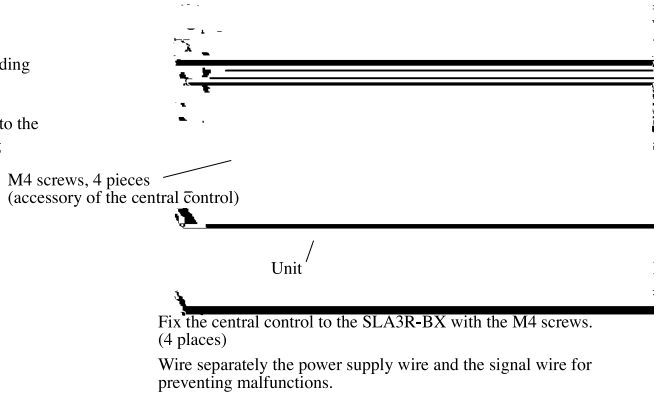
2) In case of installing on the control board



3) In case of embedding in a wall

• Please be sure to use the special box, SLA3R-BX (sold separately).



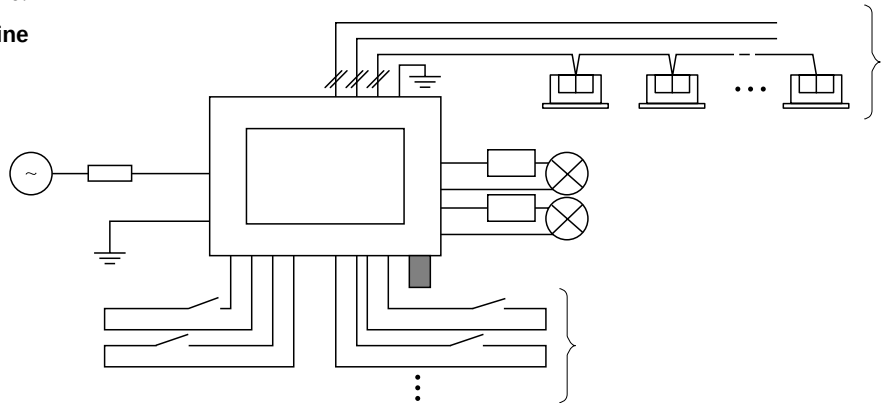


(9) Electrical wiring

For safety reasons, please use the round crimping terminals with insulated sleeves for connecting all wires to the central control.

- Please do the grounding work. Please do not connect earth line with gas pipes, water pipes, lightning rods and grounding line of telephone.
- Please do not turn on the power supply (local switch) until all of the work is completed.
- Please wait at least two minutes after the indoor and outdoor units are turned on before turning on the power supply.
- Bu`bmqcd oqeb`bkqp^i`l kqpl i fk qeb^a dr db)^ii l c qeb`l j ml kbkqp^db l _q^fkba ^qqeb pfdp %fobp)pt fq`ebp)obi^vp)ml t bopr mmiv) lamps, etc.)
- Please be sure to build the breaker which is easily accessible with building equipment's wiring.
- Pease be sure to use the supplied round crimped terminals when connecting wires to the power supply terminal block and Super Link terminal block.
- ?bcd db`l kkb`qfkd qeb t fobp)obj l sb qeb`l sbol c qeb dpoj fk^i _il`h+>odpo qeb t l dh fp`l j mibdpa)^u qeb`l sbol c qeb dpoj fk^i block as before. The cover is used to prevent electric shock due to accidental contact.
- Please use a gas meter or wattmeter, demand input device and emergency stop input device which comply with a relevant IEC safety Standard.

(a) Wiring outline



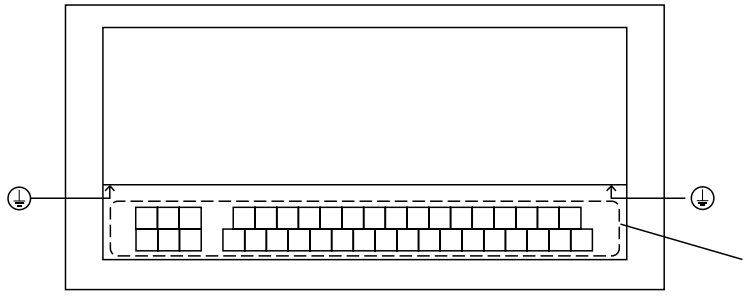
T fdkd Pmb` f` ^qfl kp

Power supply wire	1.25mm^2
Local switch	10A
Super Link signal wire (Note 1, Note 2)	Shielded wire (MVVS 2 - cores) 0.75mm^2 - 1.25mm^2. Max. 1000m per network (Max. distance: 1000m, Total wire length: 1000m)
The wire for operation output, error output, emergency stop and demand input	CVV CPEV (2 - cores) 0.75mm^2 - 1.25mm^2. Maximum length: 200m per system
The wire for gas meter or wattmeter	CVV CPEV (2 - cores) 0.75mm^2 - 1.25mm^2. Maximum length: 200m
Grounding wire	0.75mm^2 - 6mm^2

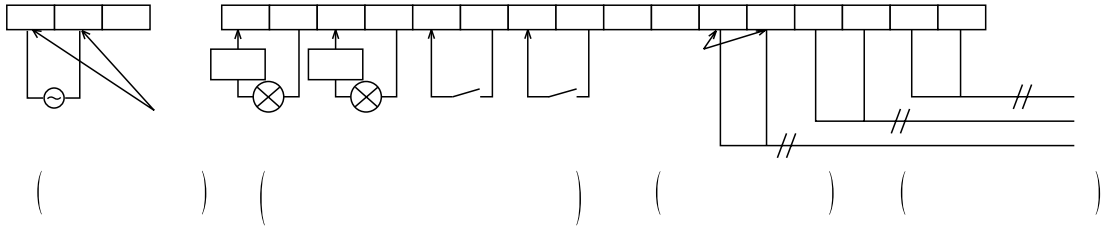
Notes (1) Ground both ends of the shielded wire.
(Please wire the ground of the central control at ⏚ Ground position "a" of "system wiring" in the diagram)

Notes (2) If the indoor and outdoor units connected to the network are all compatible units with new Super Link, a total wire length of 1500m per network is possible (maximum distance: 1000m). However, be sure to use a 0.75mm^2 wire diameter if the total wire length exceeds 1000m. For further information, please contact your dealer.

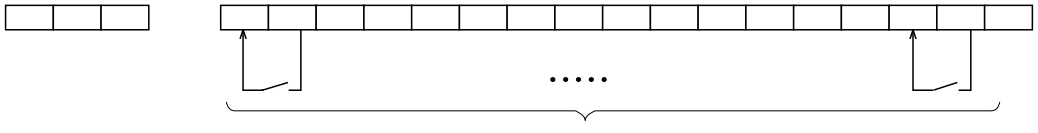
(b) System wiring



1) The upper tier of terminal block (*)



2) The lower tier of terminal block



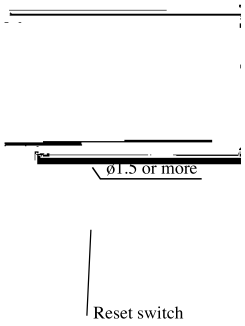
Caution
Do not connect power supply wire to another terminal block.When you connect by mistake, damage and damage by fire of the electric part are caused, and it is very dangerous.
Please check the wiring thoroughly again before it turns on power.

Caution
Mb^pb `l kkb` qeb d^p j bdpol oeb t ^qj bdpoe^qp^qfp` bp eb pmb` f` ^qfl k _bil t +
• the meter with pulse transmitter
• the meter with pulse width of 100ms or more
The energy consumption calculated by this central control does not conform to OIML, and there are no guarantees concerning the results of the calculations.

Notice
Please choose the new or previous setting of Super Link (SL) in the display of SL3NA-AE (SL3NA-BE). (See user's manual)
It is necessary to change if the connection network is for previous Super Link. Whether the real connection network is new Super Link or previous Super Link depends on the type of connected indoor unit,outdoor unit,etc. Inquire the agents or dealers for more information.
When the new Super Link setting, 1 system can connect up to a maximum of 128 units. Be sure to connect wiring to the Super Link terminal 1 (A1, B1). Be careful not to connect to the Super Link system 2 or 3, as SL3NA-AE (SL3NA-BE) will not be recognized.

(c) Reset switch

There is a switch to reset the power supply when the screen freezes.
Data is never deleted with this switch.
This central control will be reset in about 1 second.



Operating method

Please push the button which is the inner part of the small hole of the underside of the upper case using the clip which is extended straight or the tool which is similar to that.

> **Note**
> Please peel off the protection sheet of the screen when you pass the central control to the customers.Before you mount the upper case, please peel off the sheet.

After checking the wiring and doing reset switch operation, when the screen is not displayed, please contact the shop where the central control was purchased. This product consists of the exclusive parts, and you can not exchange the electrical equipment. Please do not disassemble other than this instruction manual stating.

(d) Other information

- This central control is electronic and independently mounted control.
- The type of this central control is automatic action for which the manufacturing deviation and the drift of its operating value, operating time or operating sequence have not been declared, and tested under the standard.
- The actions of this central control are full-disconnection on operation, a trip-free mechanism which cannot even momentarily be reclosed against the fault, an action which can only be reset by the use of a tool, and an action that does not require any external auxiliary energy source of electrical supply for its intended operation.
- The rated impulse voltage (impulse withstand voltage) is 2500V.
- The surface of touch panel and front cover produce an increase of temperature of about 15 degrees.

±Qeb ab^{a} kfqfl kp l c qvmbp l c `l kqpl i ^ob bib` qpf^i `l kqpl i) ^r qj ^qf` `l kqpl i) ^ka l mbo^qfkd `l kqpl i+

- The lifetime of the keying of touch panel is one million times. The lifetime of LCD is about 20,000 hours. (The brightness will become half of the starting value.)

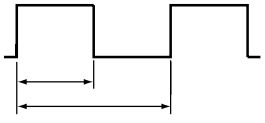
(10) About the accounting calculation

(a) Selection l ct ^qpfel r oj bdpo%b^p «l t *j bdpo&

Ql `^i`r i^dp qeb ^``l r kqj fq fp kb`bpp^ov q mol `r ob ^ t ^qpfel r o j bdpo%d^p «l t *j bdpo&^qpfdp+Pbib`q^ j bdpo^``l oafkd q qeb following items.

(b) Selecting the pulse unit

1) Restrictions on the pulse input receiving side



2) Selecting the pulse unit

① Calculate the total of power supply capacity required for the air-conditioners to be connected.

② Pbib`qmol s fpfl k^iiv ^k fkdpdo^dpa t ^qpj bdpoqe^q^{a} qp q qeb obnr fobj bkq+

③ Maximum operating status of air-conditioner: Estimated overload condition expected in the summer season, for example: If it is assumed to be the total power consumption × 1.2;

Example) Provided the total power consumption status = 100 kW and the power factor = 90%

If max. operating status = 100 × 1.2 = 120 kW, 3-phase, 200 V

I = 120 × 1,000/(1.732 × 200 × 0.9) = 385A

→ The watt-hour meter needs to have a capacity of 400 A.

If we select an oscillation device from Mitsubishi's products of 400 A:

- K11 type – Select the pulse unit 100 kWh/P or 10 kWh/P
- K12 type – Select the pulse unit 100 kWh/P or 10 kWh/P or 1 kWh/P

* For a further small pulse unit, consult a watt-hour meter manufacturer.

④ Check for when the power consumption is 120 kWh (Example)

- If 0.1 kWh/P is selected when the pulse input is the largest: 1,200 P/h = 20 P/min, which means it is 20 pulses/min, and so this is acceptable.
- If the duty cycle decreases to 1/10 (12 kWh), for example; If 10 kWh/P is selected, 1.2 P/h = 0.02 P/min, which means that there is no pulse within 10 minutes. It becomes 28.8 pulses for a day. If 1 kWh/P is selected, it is 12 P/h = 0.2 P/min, which means that there are 2 pulses/10 minutes.

Pfk`b fqfp pr c$^{a}$ `fbkqcl oqeb `^i`r i^qfl k fc qebdb fp 1 pulse a day, it is possible to use 10 kWh/P. However, since it is likely to produce calculation errors depending on the duty cycle, it is better to use 1 kWh/P.

a) Maximum count number of power pulse input

Watt-hour pulse unit	0.01kWh/P	0.1kWh/P	1kWh/P	10kWh/P
Maximum measurable watt-hour	4,320kWh/day	43,200kWh/day	432,000kWh/day	4320,000kWh/day
	180kWh/h	1,800kWh/h	18,000kWh/h	180,000kWh/h

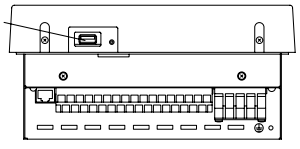
b) Maximum count number of gas pulse input

Gas volume pulse unit	0.01m^3/P	0.05m^3/P	0.1m^3/P	0.5m^3/P
Maximum measurable flow rate	4,320m^3/day	21,600m^3/day	43,200m^3/day	216,000m^3/day
	180m^3/h	900m^3/h	1,800m^3/h	9,000m^3/h

If 2 m^3/h is consumed at 0.05 m^3/P, it is 40 pulses/h. If 10 m^3/h is consumed at 0.5 m^3/P, it is 20 pulses/h.

(c) Energy consumption calculation nethod

Qeb _^pb l c `^i`r i^qfl k a^q\ fp l r qmr q^p ^ª ib) t ef`e `^k _b bafqba r pfkd l kb l c pmob^apebbqpl oqt ^ob ^s^fi^_ib col j j ^ohbq) s f^ USB memory. The base data are created on the monthly basis.



< Calculation procedure >

① Accumulate operation times of respective air-conditioners. (Per minute)

② Obtain the amount of operation for each air-conditioner (Ki) and accumulate it on the basis of time zone (within business hours, overtime hours) (Per minute)

$Ki = Ki + K_M$

K_M = : Amount of operation for air-conditioner per minute

Amount of operation is calculated with the following 3 j bqel ap+%Bbqqeb `^i`r i^qfl k j bqel a l k qeb ^fo*` l kafqfl kbo ab^ kfqfl k p`obbk of SC-SL3NA-BE.)

Amount of operation when the value converted to the rated expansion valve aperture of air-conditioner is E:

• MULTI 1 %Obcofdbo^kq«l t o^qb&Z> aa ^ `l ks bqpfl k s^ir b qe^qq\hbp fkq `l kpfabo^qfl k qeb «l t o^qb l c obcofdbo^kq«l t fkd qeol r de qeb Thermostat ON indoor unit. (ΣEj)
(Ej: Conversion value of indoor unit expansion valve aperture per minute)

• MULTI 2 %Qeb oj l pq^qL K,L CC&Z@l ks bqqeb qfj b t ebk obcofdbo^kqfp «l t fkd qeol r de qeb fka l l or kfq^ka ^aa+%Qeb oj l pq^qL K qfj b × E)

• RUN/STOP (Operation time): Convert the state when the remote controller is turned ON and add he value. (Operation time × E)
(E: Conversion value of indoor unit capacity per minute)

* Set the same watt meter (gas meter) system at the same type.

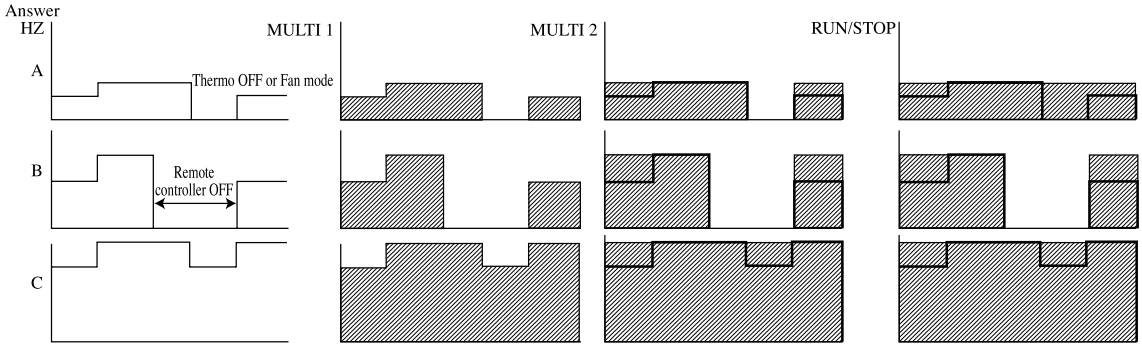
* If it is set at MULTI 1 or MULTI 2, indoor units in the fan mode are excluded from the proportional distribution.
If you need to include the indoor units under the fan mode in the proportional distribution, set it to RUN/STOP.

* When the air-conditioning is not used in a day (Ex. Holiday), and thus there is no operating indoor unit to divide in proportion, the portion of standby power does not match the value on the meter. It is necessary to re-calculate the accounting data using the spreadsheet software.

±> pfj mifª ba pl oqt ^ob q ba fqqeb ^``l r kqfkd a^q\ fp fk`ir aba fk qeb ^``bppl ofbp+Obd^oafkd qeb l mbo^qfkd j bqel a) obcbo q qeb j ^kr ^i attached to it.

• The accounting data can be output via the attached USB memory.

(Example) Method of proportional distribution in case of indoor units A, B, C operating as follows
(the shaded part indicates the accumulated operating volume).



① In case of MULTI 1 setting: Conduct proportional distribution according to the results of a accumulated answer Hz. Accumulation is not performed when the thermo is OFF or during the Fan mode operation.

Indoor unit A	Indoor unit B	Indoor unit C
25Hz	40Hz	60Hz

Total value of operating volume
(Total value of answer Hz)

Operating volume of indoor unit A = accumulated pulse counts × power consumption per pulse × 25/125 (25 + 40 + 60)
Operating volume of indoor unit B = accumulated pulse counts × power consumption per pulse × 40/125
Operating volume of indoor unit C = accumulated pulse counts × power consumption per pulse × 60/125

② In case MULTI 2 setting: Conduct proportional distribution according to the Hz corresponding to the air conditioner capacity %^m\` fqv bnr fs^ibkqE w7ª uba s^ir b&^ka qeboj l LK l mbo^qfkd qfj b+
@^m\` fqv bnr fs^ibkqE w7bnr fs^ibkqs^ir b l c^kpt boE wt ebk bubocqfkd qeb fkaf`^qba `^m\` fqv l c fkal l o r kfq%uba s^ir b abqboj fkba according to capacity).

Different from ①) qeb ª uba s^ir b fp^``r j r i^qba focbpmb`qfs b l c qeb ^kpt boE w+>``r j r i^qfl k fp kl qmbocd oj ba t ebk qeb qeboj l is OFF and during the Fan mode operation.

Indoor unit A	Indoor unit B	Indoor unit C
30Hz	50Hz	70Hz

Total value of operating volume
(capacity equivalent Hz × thermo On time)

Operating volume of indoor unit A = accumulated pulse counts × power consumption per pulse × 30/150 (30 + 50 + 70)
Operating volume of indoor unit B = accumulated pulse counts × power consumption per pulse × 50/150
Operating volume of indoor unit C = accumulated pulse counts × power consumption per pulse × 70/150

③ In case of RUN/STOP setting: Conduct proportional distribution according to the Hz corresponding to the air conditioner capacity %^m\` fqv bnr fs^ibkqE w7ª uba s^ir b&^ka dbj l qb `l kqpl iiboLK qfj b+
Same as ②) qeb `^m\` fqv bnr fs^ibkqE w%uba s^ir b&fp^``r j r i^qba ^``l oafkd q qeb dbj l qb `l kqpl iiboLK qfj b l kiv+>``r j r i^qfl k is also performed when the thermo is OFF and during the air supply operation.

Indoor unit A	Indoor unit B	Indoor unit C
40Hz	60Hz	70Hz

Total value of operating volume
(capacity equivalent Hz × remote controller ON time)

Operating volume of indoor unit A = accumulated pulse counts × power consumption per pulse × 40/160 (40 + 50 + 70)
Operating volume of indoor unit B = accumulated pulse counts × power consumption per pulse × 50/160
Operating volume of indoor unit C = accumulated pulse counts × power consumption per pulse × 70/160

★User login

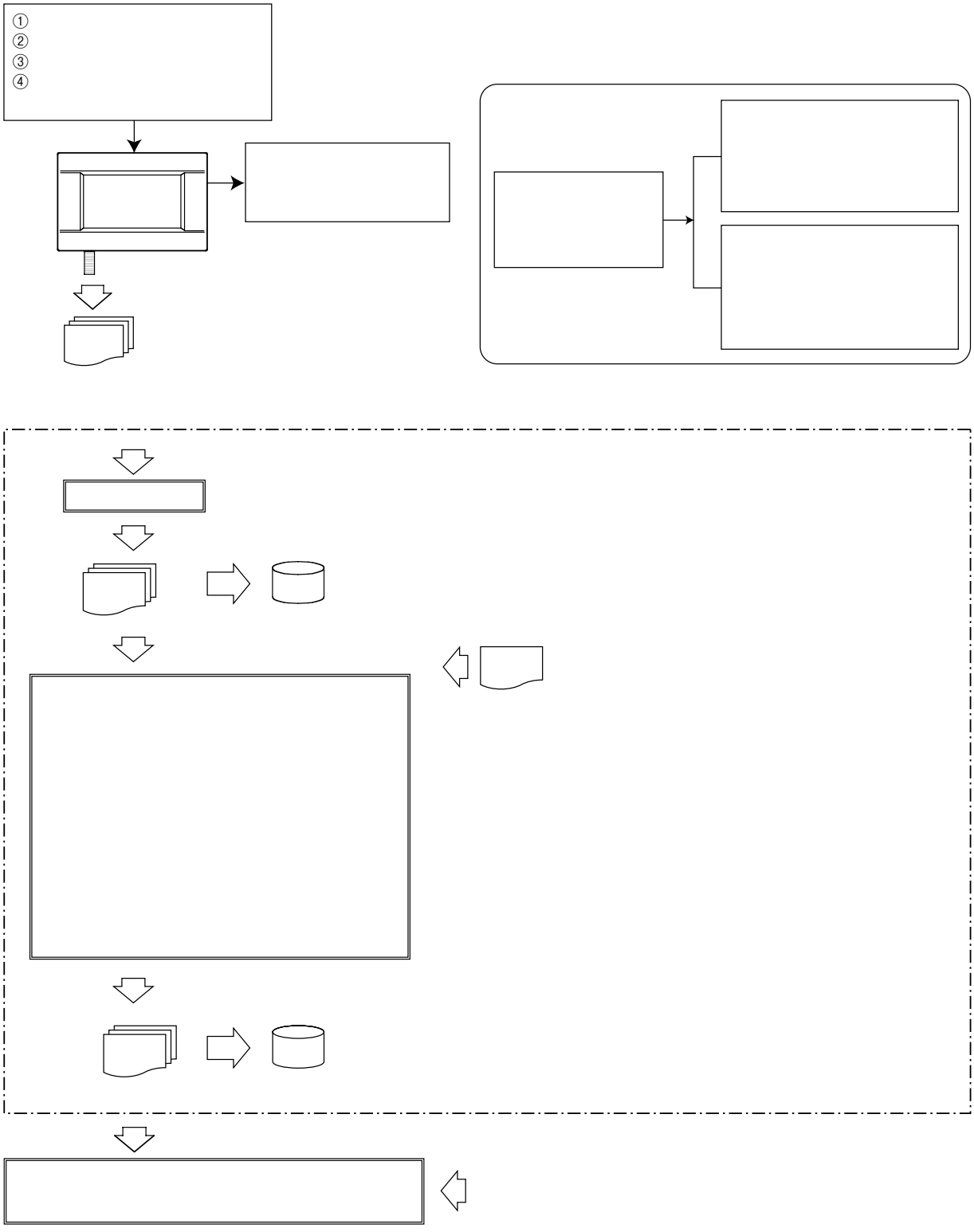
For owners the fee apportionment for multi machine air conditioners is more complicated and harder to explain to customers. In many cases it's best to use simple explanations.
In addition, consumption for multi machines are calculated based on volume, making it easy for excessive cooling and differences in building load to lead to discrepancies in electricity consumption. These different values are hard to explain. Therefore, it is easier to explain how many horsepower were used for how long.

At this point, recommend [RUN/STOP] registration
Both multi machines and single machines use [RUN/STOP] registration.
Recommend that separate electricity meters be installed for single machine and multi machine systems.
Display every unit of electricity (kW) on the electricity consumption board. For example, register P280H as 28.0.
Current operational value = electricity volume × time of operation, calculated according to the electricity volume ratio.

(d) Software overview (SL3N-BE Utility)

SL3N-BE Utility calculates the amount of energy consumption with air conditioner's running data saved by SC-SL3NA-BE. The amount of energy consumption is divided proportionally day by day according to the operating ratio of the air conditioner, and it is calculated as the group total amount of energy consumption for every period.

1) Flow of data processing



2) Function outline

● @^i`ri^qpp^ka j ^hbpqeb j l kqeiv a^q\ª ib l c qeb ^fo`l kafqfl kbqfpddl r mbkbodv `l kpr j mqfl k fk qeb pmb`fª ba mbofl a+
- The operating time and the energy (electricity and gas)consumption for each air conditioner's group.
- Qeb a^q\ª ib fp p^sba _v qeb @PS cl oj ^q+Qeb ^fo* l kafqfl kfkd `e^odb `^i`ri^qfl k fp ml ppf_ib _v qeb pmob^apebbqpl oq ^ob (Microsoft® Excel, etc.).

● Fj ml oqp qeb abª kfqfl k ª ib ^ka j l kqeiv a^q\ª ibp qe^q^ob p^sba _v P@*PI 0K> *? B) ^ka `l ksboqp ql @PS cl oj ^q+
- SL3K*? B Rqfifqv fj ml oqp qeb ddl r mabª kfqfl k ª ib ^ka qeb j l kqeiv a^q\ª ib p^sba _v P@*PI 3NA-BE via USB memory, and converts them into the CSV format.

3) Working environment

● Operating system
Microsoft® Windows® 2000 SP3, 4
Windows® XP
Windows Vista®
Windows® 7

● Hardware
Pentium 300 MHz or greater
128 MB RAM
5 MB free hard disk space
1 USB (1.1 or 2.0) port

● The screen size of SL3N-BE Utility is optimized by the following setup.
800 × 600 resolution display
Small font size

4) End user agreement

This software is for using SC-SL3NA-BE. Mitsubishi Heavy Industries, Ltd. (MHI) permits you to use two or more copies of this software on two or more computers.
This software and SC-SL3NA-BE do not warrant the contents of the calculation result.
Please be sure to use a calculation result in the customer's responsibility.
MHI or its suppliers are not liable for any damages whatsoever (including but not limited to damages for loss of business mol ª qp) _r pfkbpp fkqpoor mqfl k) l o^kv l qebomb`r kf^ov il pp&t ef`e obpr iqp col j ^k fk^_fifqv ql r pb qe fp pl oq ^ob+
Moreover, whatever the cause of failure and an obstacle, MHI cannot warrant the data saved at your memory storage (hard disk, USB memory).

5) Installation instructions

a) Insert the CD-ROM "Air-Conditioners Management System" into your CD-ROM drive.
b) Run "setup.exe" from the CD-ROM to start the installation.

(e) Starting and quitting the software

1) Starting the SL3N-BE Utility

Double-click the short-cut icon displayed on Windows® desktop or select the program displayed on the Start menu. The Main Menu screen shown in Fig.1 will appear.

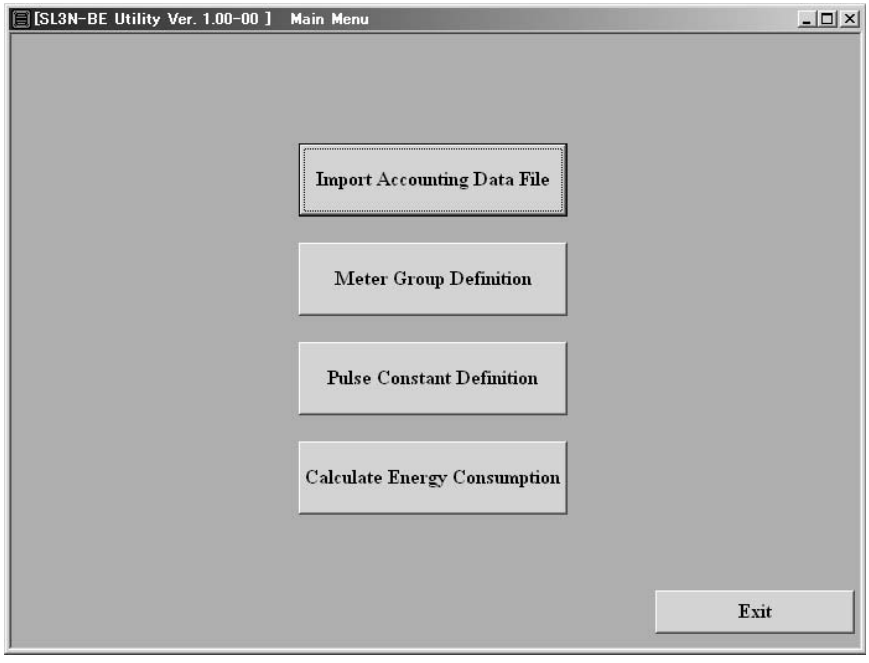


Fig.1 Main Menu screen

2) Quitting SL3N-BE Utility

Click [Exit] button, or [x] button of a title bar.

3) Screen changes

The screen changes are shown in Fig.2.

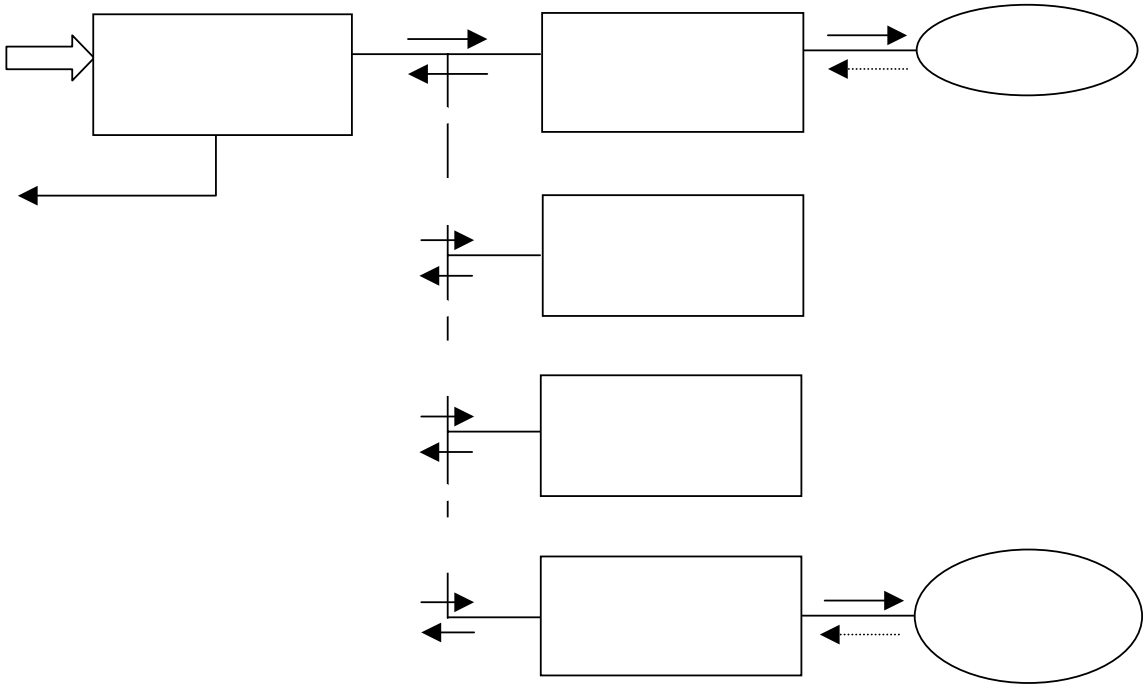


Fig.2 Screen changes and operation

6) Calculating energy consumption

a) Start the SL3N-BE utility

Double-click the short-cut icon displayed on Windows® desktop or select the program displayed on the Start menu. The Main Menu screen shown in Fig.3 will appear.

Step 1: Click [Import Accounting Data File] button on this screen.
Pqbm/ 7@if`h XI bqboDol r mAb^a kfqfl kZ_r qjl k l k qefp p`dbbk+
Pqbm07@if`h XMf ipb @l kpq^kqAb^a kfqfl kZ_r qjl k l k qefp p`dbbk+
Step 4: Click [Calculate Energy Consumption] button on this screen.

Since SL3K*? B Rqfifqv j bj l ofwbp qeb i^pqpbqqfkd l c J bqboDol r mAb^a kfqfl k ^ka Mf ipb @l kpq^kqAb^a kfqfl k) ^p il kd ^p there is no change in a setup, you may skip Step2 and Step3. However, we recommend that you check the contents of the setting whenever you calculate.

When you manage two or more SC-SL3NA-BEs, don't skip Step2 and STEP3. You need to read ("Open") the setting of each SC-SL3NA-BE's setteings in Step2 and Step3.

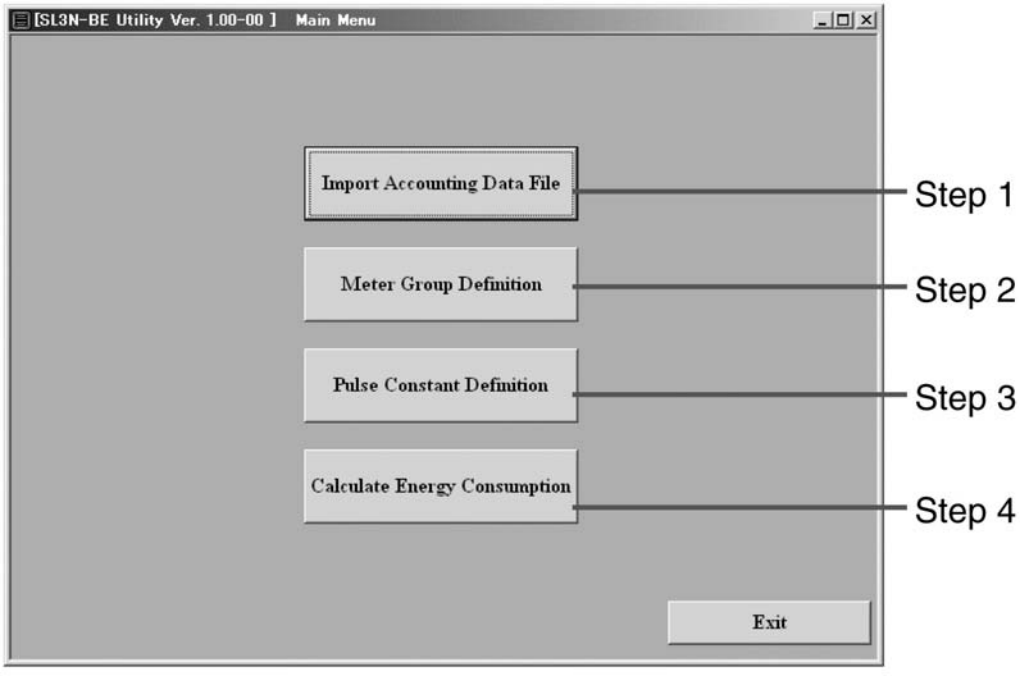


Fig.3 Main Menu screen

[Import Accounting Data File]: switches to the Import Accounting Data File screen.
XI bqboDol r mAb^a kfqfl kZ/pt fq`ebp qj qeb J bqboDol r mAb^a kfqfl k p`dbbk+
XMf ipb @l kpq^kqAb^a kfqfl kZ/pt fq`ebp qj qeb Mf ipb @l kpq^kqAb^a kfqfl k+
[Calculate Energy Consumption]: switches to the Calculate Energy Consumption screen.
XBufqZ/PI 0K*? B Rqfifqv ^a kfpe ^ka qefp p`dbbk `il pb+

Step 1: Import Accounting Data File

%&? bcl cbe^ka) bum1 oqj l kqeiv a^q\ª ibp q ^ RP? j bj l ov _v P@*PI 0K> *? B+

(2) Insert the USB memory in your personal computer.

(3&@af`h ^ `eb`h _l u+Pbib`qqeb aofsb k^j b l c ^ RP? j bj l ov) ^ka qeb cl iabok^j b) t ef`e bum1 oqba j l kqeiv a^q\ª ibp+

(4) Specify the year and the month to calculate.

%2&@af`h XEj m1 oqZ_r qq l k+Ob^afkd l r qª ibp t fii pq^oq+

%3&@l kª oj qeb pr``bpp l c ob^afkd l r qª ibp+Qebk) `if`h X? ^`hZ_r qq l k+

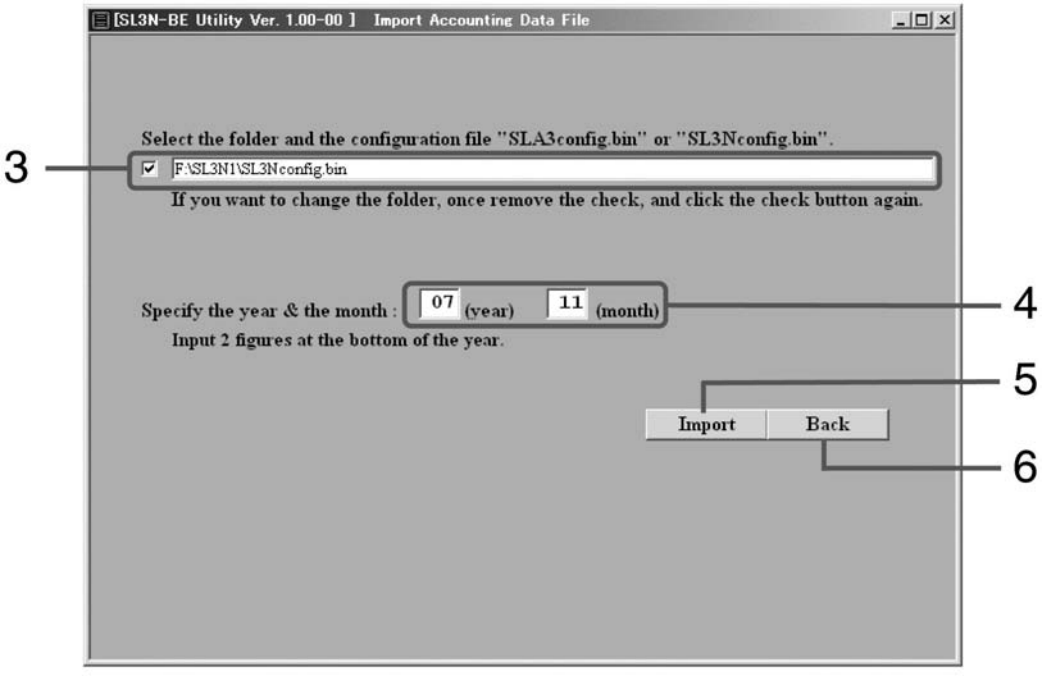
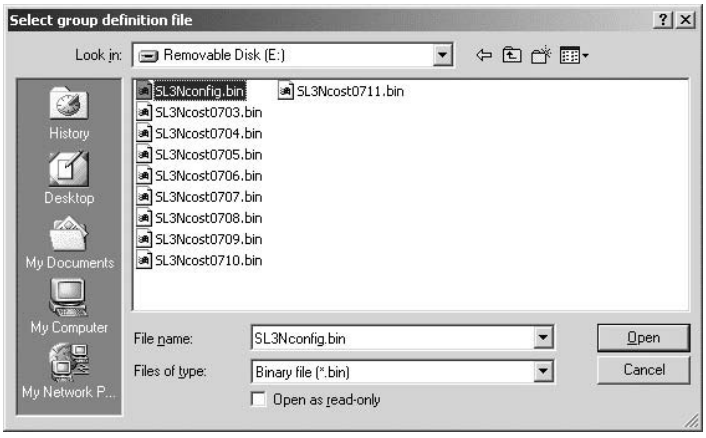


Fig.4 Import Accounting Data File screen

XEj m1 oqZ7Ej m1 oqp qeb ddl r mabª kfqfl k ª ib ^ka qeb j l kqeiv a^q\ª ibp+

[Back]: Returns to the Main Menu screen.

- Pbib`qfkd qeb `l kª dr o^qfl k %Ddl r mabª kfqfl k&² ib+
  Pbib`qqeb aofsb k^j b l c ^ RP? j bj l ov ^p pel t k fk Cfd-2) ^ka `el l pb qeb ª ib ¦ PI 3K`l kª d+_fk´ %Kbt Pr mboI fkh&l o ¦ PI > 0`l kª d+_fk´ %Mbs fl r p Pr mboI fkh&+



Cfd-2 Pbib`qDdl r mAbª kfqfl k Cfib af^il d _l u

● Importing Accounting Data Files

SL3K*? B Rqfifqv ob^ap ^ dol r maba kfqfl k a ib ^ka qeb j l kqeiv a^q\ a ib l c qeb j l kqe pmb`fa ba ql qeb vb^o ^ka qeb j l kqe )^ka qeb mobs fl r p j l kqe)^ka `l ksboqp qebj fkql qeb @PS a ibp+

Qeb `l ksboqba @PS a ibp ^ob qeb cl iil t fkd+

^&Dol r maba kfqfl k a ib %ib k^j b7Dcm=ps&

Group name, group composition

_&J l kqeiv a^q\ a ibp

b-1: Daily operating time (minutes), calculated value of the air conditioner for each period (the basis period and the overtime), in the Super Link system.

- File name (in case of New Super Link system):
  SL3N1costYYMM.csv, SL3N2costYYMM.csv SL3N3costYYMM.csv, SL3N4costYYMM.csv
- File name (in case of previous Super Link system):
  SL1SLA3costYYMM.csv, SL2SLA3costYYMM.csv
  SL3SLA3costYYMM.csv

b-2: Daily cumulative pulses from meters (PI1-PI8) for each period.

- File name (in case of New Super Link system):
  PLSSL3NcostYYMM.csv
- File name (in case of previous Super Link system):
  PLSSLA3costYYMM.csv

Qebpba a ibp ^ob p^sba fk qeb k^j b l c¦A?´ cl iabo qe^qfkpq^iiba qeb mol do^j ¦PI 3N-BE Utility”. If you have not changed qeb cl iabo l c qeb fkpq^ii^qfl k cl iabo) qeb ^_l sb a ibp ^ob mi^\`ba fkql ¦@7,PI 0K? BRqfifqv,A?´+

YYMM means the year and the month.

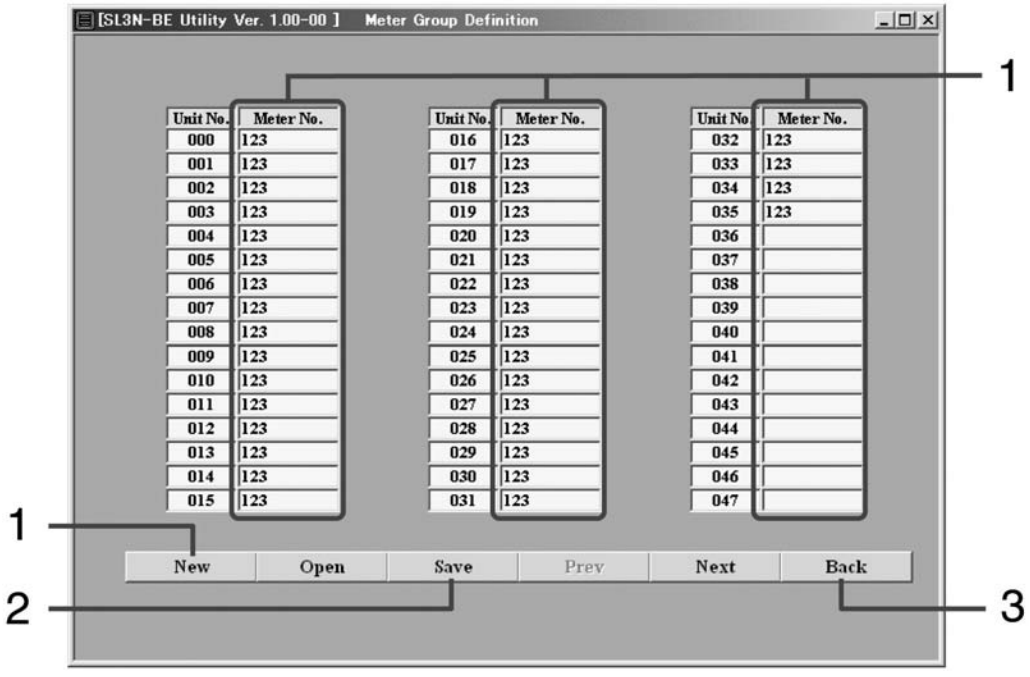
Pfk`b qeb `^m\`fqv l c ^ e^oa afph t fii _b fkpr ca `fbkq)mib^pb abibdp qeb ^_l sb*j bkqfl kba a ib l k`b fk ^ vb^o+

Pqbm/ 7Pbqqeb J bqboDdl r mAbª kfqfl k

SL3K*? B Rqifqv j bj l ofwbp qeb J bqboDdl r mAbª kfqfl k i^pqqfj b) ^ka db^ap fqt ebk pq^oqfkd+Vl r j ^v phfmqefp j bkr) ^p long as there is no change.

J bqboDdl r mAbª kfqfl k abª kbp q t ef`e bkbodv pvpqbj %ib`qpf` fqv l od^p&qeb ^fo`l kafqfl kbo_bil kdp+
It is possible to assign two or more meter numbers to one air conditioner's indoor unit. It is applicable to an air-conditioning system like a GHP (Gas Heat Pump) system that consumes different energy. It can apply, when measuring an outdoor unit and each indoor unit with another watt-hour meter. In this case, assign meter number of an outdoor unit to indoor units.

In case of the previous Super Link system, “Unit No.” shows the “Super Link” communication line number (1 - 3) and the indoor unit number (00-47).
Input the meter number (1 - 8) without a space into “Meter No.” column.



Cfd-3 J bqboDdl r mAbª kfqfl k p`dbbk

XKbt Z7Mfpe qefp_rqfl k t ebk vl r j ^hb ^ kbt abª kfqfl k ª ib+
XLmbkZ7Mfpe qefp_rqfl k t ebk qeb abª kfqfl k ª ib ^idb^av bufpqp+
[Save]: Push this button when you want to save the current setting.
[Prev]: returns to the previous SL page. Three pages of SL1 - 3 exist in this screen.
[Next]: returns to the next SL page.
[Back]: returns to the Main Menu screen.

Caution

Setting of this screen is important when carrying out distribution calculation of the appropriate energy consumption.
It is necessary to tie in setting with an actual installation situation. Please ask your installation contractor about setting.

● **First time**

(1) Click [New] button and input the Meter number.

%&@if`h XP^sbZ_rqlk^ka fkmrqqebªibk^j b+

(3) Click [Back] button.

● **2nd hereafter**

You don't have to select this menu. However, we recommend that you check the contents of the setting whenever you calculate.

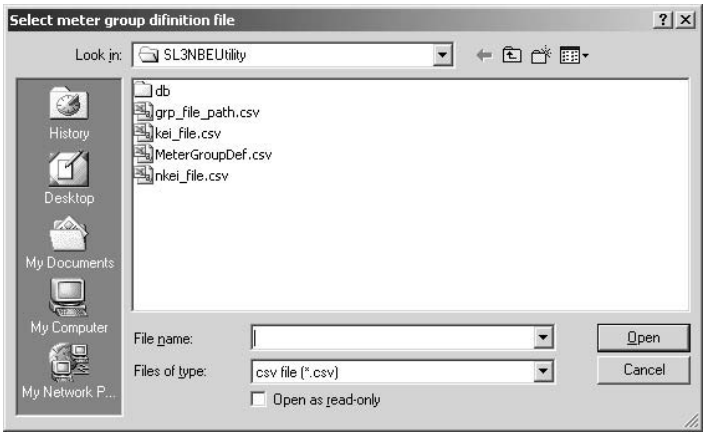
● **If you manage two or more SC-SL3NA-BEs**

%&@if`h XLmbkZ_rql k) pbib`qqebabª kfqfl kªib ^ka `eb`h qebpbqqfkdp+

(2) Click [Back] button.

. +Lmbkfkd qebabª kfqfl kªib

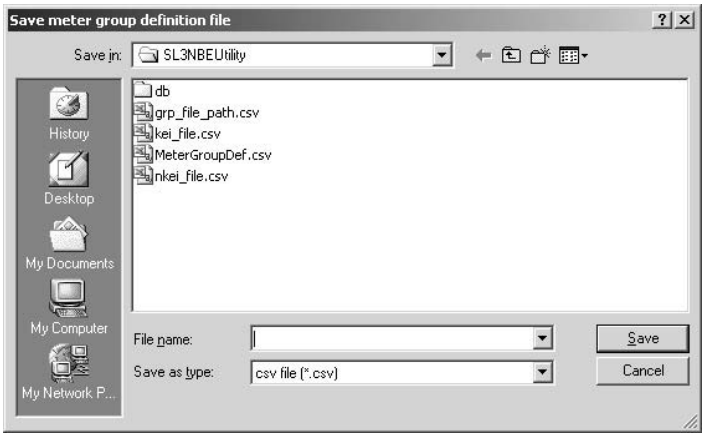
T ebk vl r `if`h XLmbkZ_rql k) Cfd+4 af^il d t fii ^mmb^o+@el l pb qebªib p^sba _bcl obe^ka+



Cfd+4 Pbib`qqebabª kfqfl kªib af^il d _l u

/ +P^sfkd qebabª kfqfl kªib

When you click [Save] button, Fig.8 af^il d t fii ^mmb^o+Fkmrqqebªibk^j b qe^qfpb^pv ql afp`ofj fk^qb) ^ka `if`h [Save] button.

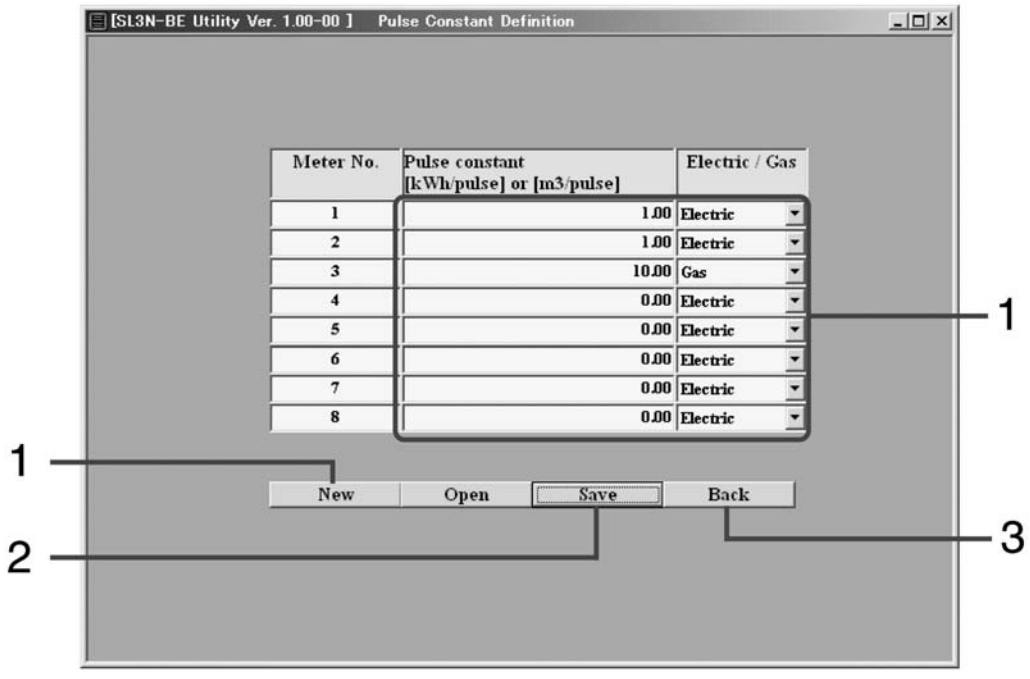


Cfd+5 P^sb qebabª kfqfl kªib af^il d _l u

Pqbm07Pbqqeb Mr ipb @l kpq^kqAbª kfqfl k

SL3K*? B Rqifqv j bj l ofwbp qeb Mr ipb @l kpq^kqAbª kfqfl k i^pqqfj b) ^ka ob^ap fqt ebk pq^oqfkd+Vl r j ^v phfmqeqfp j bkr) as long as there is no change.

Mr ipb @l kpq^kqAbª kfqfl k abª kbp ^ mr ipb `l kpq^kq^ka qeb bkbodv qvmb %ib`qpf`fqv l od^p&cl obs bov j bqbo+



Cfd+6 Mr ipb @l kpq^kqAbª kfqfl k p`obbk

XKbt Z7Mr pe qefp_r qfl k t ebk vl r j ^hb ^ kbt abª kfqfl k ª ib+

XLmbkZ7Mr pe qefp_r qfl k t ebk qeb abª kfqfl k ª ib ^iob^av bufpqp+

[Save]: Push this button when you want to save the current setting.

[Back]: returns to the Main Menu screen.

- **Caution**

  Setting of this screen is important when carrying out distribution calculation of the appropriate energy consumption. It is necessary to tie in setting with an actual installation situation. Please ask your installation contractor about setting.

- **First time**

  (1) Click [New] button and input the pulse constant.

  %&@lf`h XP^sbZ_r qfl k ^ka fkmr qeqb ª ib k^j b+

  (3) Click [Back] button.

- **2nd hereafter**

  You don't have to select this menu. However, we recommend that you check the contents of the setting whenever you calculate.

- **If you manage two or more SC-SL3NA-BEs**

  %&@lf`h XLmbkZ_r qfl k) pbib`qeqb abª kfqfl k ª ib ^ka `eb`h qeb pbqqfkdp+

  (2) Click [Back] button.

Step 4: Calculate Energy Consumption

SL3N-BE Utility carries out proportional division calculation based on the Monthly Data Files that imported, the Meter Dol r mAb^ kfqfl k ^ka qeb Mfipb @l kpq^kqAb^ kfqfl k+> ka fq`^i`r i^dpp qeb bkbodv `l kpr j mqfl k cl obsbov dol r m+

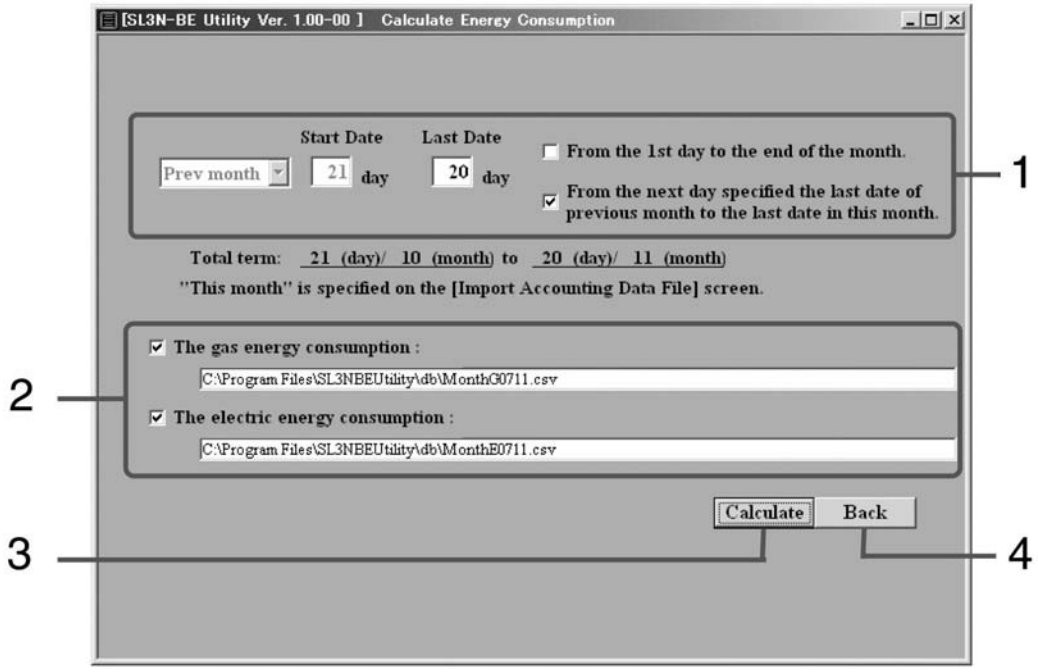
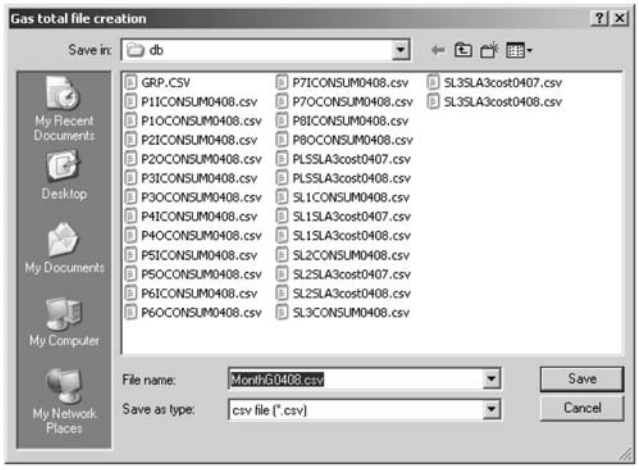


Fig.10 Calculate Energy Consumption screen

[Calculate]: calculates the energy consumption.
[Back]: returns to the Main Menu screen.

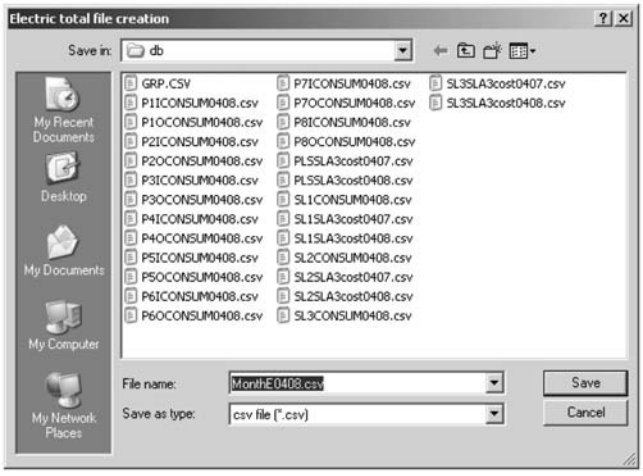
(1) Specify the period to calculate.
%&Pmb`fcv qeb k^j b l c qeb bkbodv `l kpr j mqfl k a^q\ ^ ib ^ka qeb cl iabo k^j b+
±Qeb cl iabo k^j b ^ka ^ ib k^j b `^k _b `e^kdba+
±Mb^pb pmb`fcv _l qe l c ^ ib k^j bp cl `^i`r i^dp l kiv d^p l o bib`qpf fqv+
(3) Click [Calculate] button.
(4) Click [Back] button.

1. When you click the check box “The gas energy consumption”, Fig.11 dialog box will appear. If you want to change the ^ ib k^j b) qeb cl iabo k^j b ^ka qeb aofsb k^j b) pbib`q^kl qebo aofsb k^j b ^ka qeb cl iabo k^j b) ^ka qvmb ^kl qebo ^ ib name that you want.



Cfd+. Fkmr qqeb ^ ib k^j b af^il d _l u

2. When you click the check box “The electric energy consumption”, Fig.12 dialog box will appear. If you want to change qeb ª ib k^j b) qeb cl iabo k^j b ^ka qeb aofsb k^j b) pbib`q^kl qebo aofsb k^j b ^ka qeb cl iabo) ^ka qvmb ^kl qebo ª ib k^j b that you want.



Cfd+ / Fkmr qqeb ª ib k^j b af^il d _l u

0+PI 0K*? B Rqfifqv j ^hbp qeb cl iil t fkd ª ibp ^p ^ `^i`r i^qfl k obpr iq+

① The energy consumption in basis period every Meter number:
- File name: P1ICONSUMYYMM.csv, P2ICONSUMYYMM.csv, …, P8ICONSUMYYMM.csv

② The energy consumption in overtime period every Meter number:
- File name: P1OCONSUMYYMM.csv, P2OCONSUMYYMM.csv, …, P8OCONSUMYYMM.csv

③ The running time and energy consumption every indoor unit:
- File name (in case of New Super Link system):
  SL3N1CONSUMYYMM.csv, SL3N2CONSUMYYMM.csv,
  SL3N3CONSUMYYMM.csv, SL3N4CONSUMYYMM.csv
- File name (in case of previous Super Link system):
  SL1CONSUMYYMM.csv, SL2CONSUMYYMM.csv, SL3CONSUMYYMM.csv <Note 1>

④ The running time and energy (electricity and gas) consumption for every group:
- File name (in case of New Super Link system):
  NGRP1CONSUMYYMM.csv, NGRP2CONSUMYYMM.csv,
  NGRP3CONSUMYYMM.csv, NGRP4CONSUMYYMM.csv
- File name (in case of previous Super Link system):
  GRPCONSUMYYMM.csv <Note 1>

⑤ Qeb J l kqeiv Bkbodv @l kpr j mqfl k ª ib7
±Abc^r iqª ib k^j b %il r `^k `e^kdb&J l kqeDVVJ J_+ps) J l kqeBVVJ J_+ps

Qebpb ª ibp ^ob p^sba fk qeb k^j b l c¦A?´ cl iabo qe^qfkpq^iiba qeb mol do^j ¦PI 3N-BE utility”. If you have not changed qeb cl iabo l c qeb fkpq^ii^qfl k cl iabo) qeb ^_l s b ª ibp ^ob mi^`ba fkq ¦@7,PI 0K? BRqfifqv,A?´+
YYMM means the year and the month.
Pfk`b qeb `^m^`fqv l c ^ e^oa afph t fii _b fkpr cª `fbkq) mib^pb abibqb qeb ^_l s b*j bkqfl kba ª ib l k`b fk ^ vb^o+

<Note 1>
When using Microsoft® Bu`bi) fqkbbap cl afs fab ^ka ob^a l r qqeb ª ib) pfk`b qebob fp qeb obpqpf`qfl k l c ^ j ^ufj r j l c 256 columns. Refer to Appendix 2.

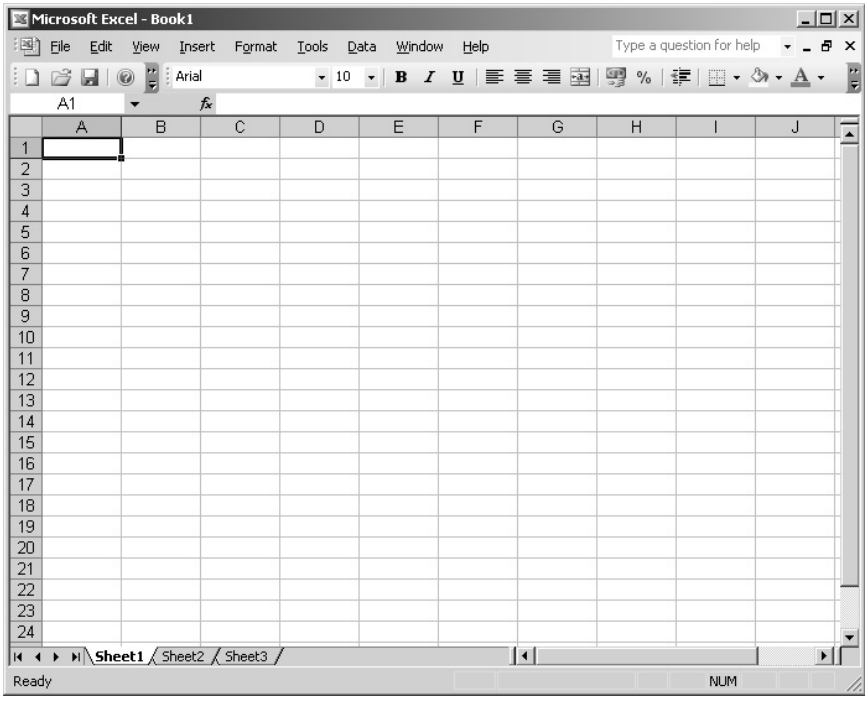
>mmbkafu . +Qeb fj ^db l cqeb J l kqeiv Bkbodv @l kpr j mqfl k ª ib

*** C:¥Program Files¥SLB3EUtility¥db¥MonthE0503. csv (02/05 - 03/14)

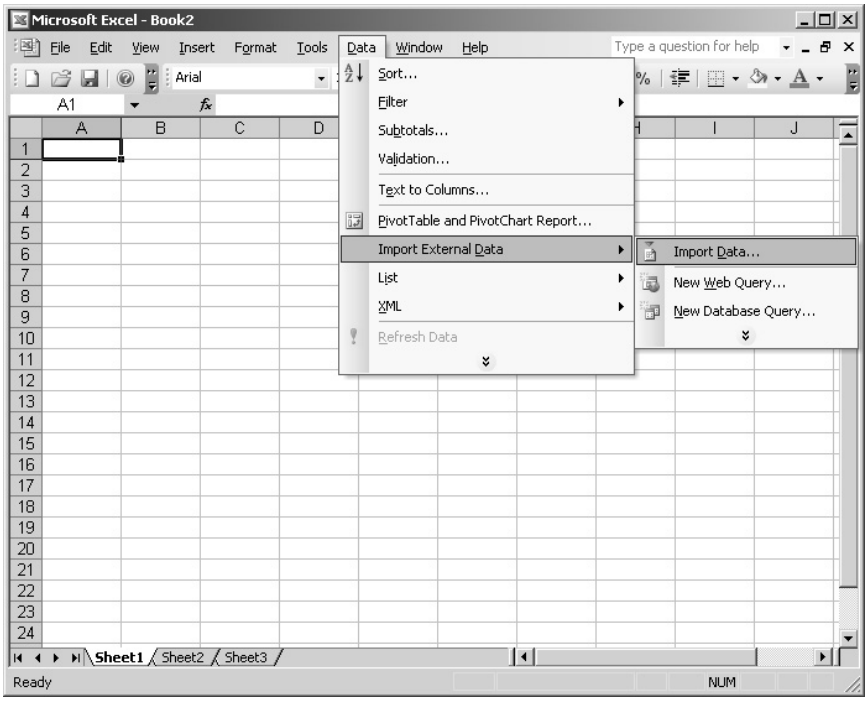
Group No	Group Name	Basic Period [H]	Overtime [H]	Basic Period [kWh]	Overtime [H]
1	1F ENTRANCE GATE	0.0	0.0	0.000	0.000
2	1F ENT. HALL STH	0.0	0.0	0.000	0.000
3	1F ENT. HALL NRTH	0.0	0.0	0.000	0.000
4	1F ENT. HALL EST	870.0	0.0	1595.992	0.000
5	2F ENTRANCE ELV.	31.7	0.0	65.959	0.000
6	2F PASSAGE NORTH	650.8	0.0	1119.757	0.000
7	2F PASSAGE SOUTH	1057.4	0.0	1657.156	0.000
8	3F ENTRANCE ELV.	287.1	0.0	471.401	0.000
9	3F PASSAGE NORTH	806.7	0.0	1226.261	0.000
10	3F PASSAGE SOUTH	388.2	0.0	654.044	0.000
11	4F ENTRANCE ELV.	3.2	0.0	5.689	0.000
12	4F PASSAGE NORTH	484.2	0.0	868.573	0.000
13	4F PASSAGE SOUTH	485.4	0.0	1124.734	0.000
14	5F ENTRANCE ELV.	133.2	0.0	326.014	0.000
15	5F PASSAGE NORTH	169.3	0.0	325.835	0.000
16	5F PASSAGE SOUTH	434.6	0.0	874.511	0.000
17	6F ENTRANCE ELV.	0.0	0.0	0.000	0.000
18	6F PASSAGE NORTH	623.4	0.0	1129.392	0.000
19	6F PASSAGE SOUTH	647.5	0.0	1100.648	0.000
20	7F EMTRANCE ELV.	211.5	0.0	322.490	0.000
21	7F PASSAGE NORTH	535.8	0.0	809.279	0.000
22	7F PASSAGE SOUTH	615.0	0.0	1124.523	0.000
23	8F ENTRANCE ELV.	0.0	0.0	0.000	0.000
24	8F PASSAGE NORTH	462.1	0.0	710.040	0.000
25	8F PASSAGE SOUTH	462.1	0.0	710.040	0.000
26	MHIE OFFICE #1	171.0	0.0	293.380	0.000
27	MHIE OFFICE #2	490.0	0.0	1012.432	0.000
28	MHIE OFFICE #3	7.7	0.0	11.402	0.000
29	MHIE CONF. ROOM 1	267.8	0.0	458.081	0.000
30	MHIE CONF. ROOM 2	267.9	0.0	458.081	0.000
31	MHIE CONF. ROOM 3	0.1	0.0	0.000	0.000
32	MHIS OFFICE #1	0.4	0.0	0.000	0.000
33	MHIS OFFICE #2	219.3	0.0	3.681	0.000
34	MEE OFFICE #1	438.4	0.0	7.362	0.000
35	MEE OFFICE #2	437.3	0.0	6.248	0.000
36	MEE OFFICE #3	218.7	0.0	3.124	0.000
37	MEE OFFICE #4	124.5	0.0	173.841	0.000
38	MCFE OFFICE #1	0.0	0.0	0.000	0.000
39	MCFE OFFICE #2	0.0	0.0	0.000	0.000
40	MLP-UK OFFICE #1	0.0	0.0	0.000	0.000
41	MLP-UK OFFICE #2	0.0	0.0	0.000	0.000
42	MLP-UK OFFICE #3	0.0	0.0	0.000	0.000
43	MLP-UK OFFICE #4	0.0	0.0	0.000	0.000
44	MC OFFICE #1	0.0	0.0	0.000	0.000
45	MC OFFICE #2	0.0	0.0	0.000	0.000
46	MC OFFICE #3	0.0	0.0	0.000	0.000
47	MC OFFICE #4	0.0	0.0	0.000	0.000
48	MC CONF. ROOM 701	0.0	0.0	0.000	0.000
49	MC CONF. ROOM 702	0.0	0.0	0.000	0.000
50	MC CONF. ROOM 703	0.0	0.0	0.000	0.000
51	MC CONF. ROOM 710	0.0	0.0	0.000	0.000
52	MC CONF. ROOM 711	0.0	0.0	0.000	0.000
53	unused				
54	unused				
55	unused				
56	unused				
57	uhused				
58	unused				
59	unused				

>mbkafu / +Afsfafkd ^ka Ob^afkd l r qœb @PS ª ib r pfkd J f` d pl œ® Excel

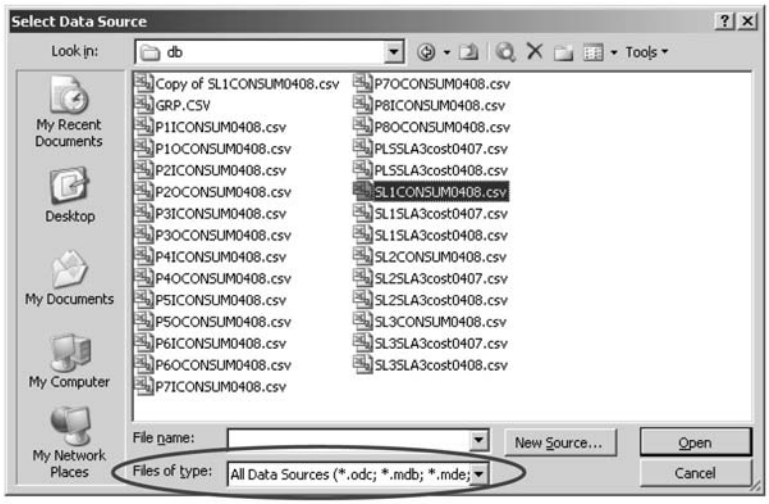
. &L mbk ^ kbt ª ib ^ka j l sb ^ ` r qpl oq œb ml pfqfl k t ebcb vl r t ^kqq il `^œ+



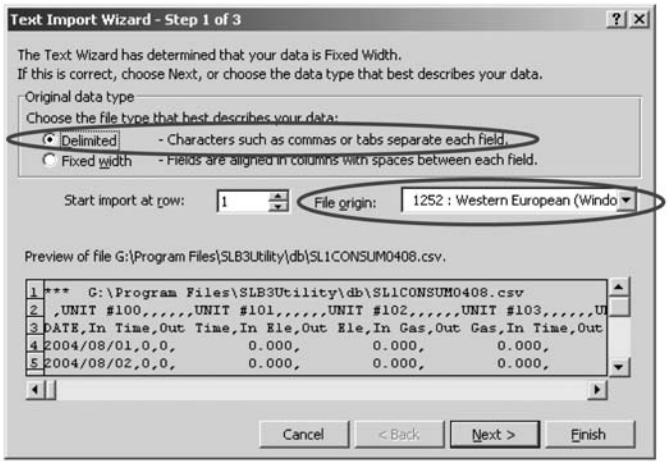
2) Choose the “Import External Data” menu and the “Import Data…” menu in the menu bar.



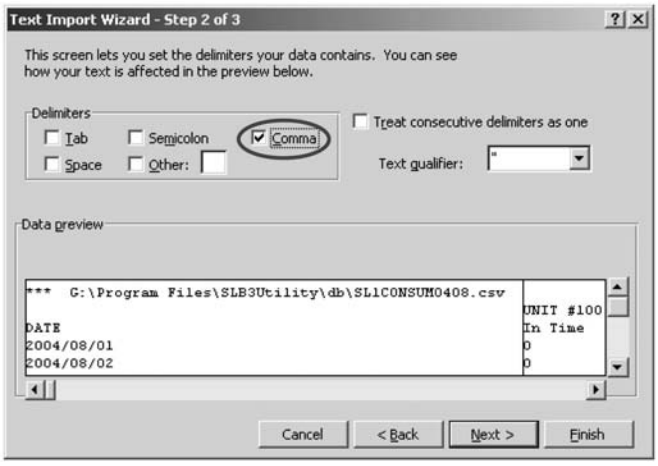
3&Pbib`q¦>ii Cfibp%+&fk qeb qeb¦Cfibp l cqvmb´ ^ka `el l pb qeb @PS ª ib t ef`e vl r t ^kqd ob^a+@tf`h qeb¦L mbk´ _r qll k+



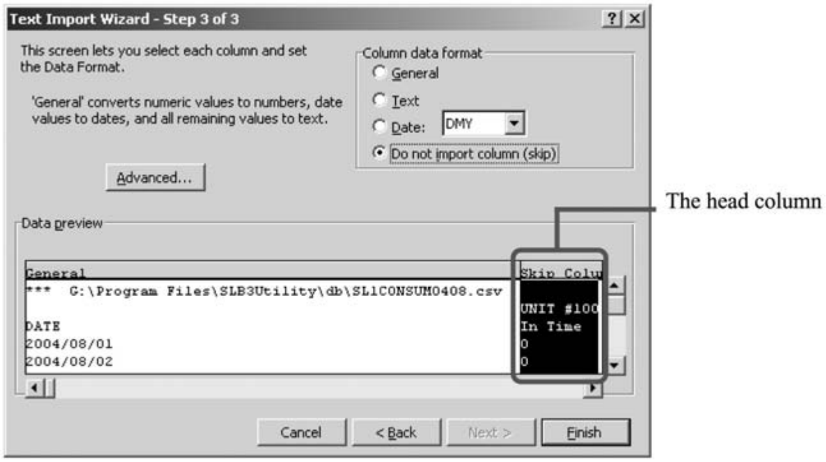
1&Pbib`qeb¦Abifj fdpa´ l mqfl k _r qll k ^ka qeb ª ib cl oj ^q¦T bpdpok Br ol mb^k´ fk qeb¦Cfib l ofdfk´ aol m*al t k)^ka `if`h XKbuq >] button.



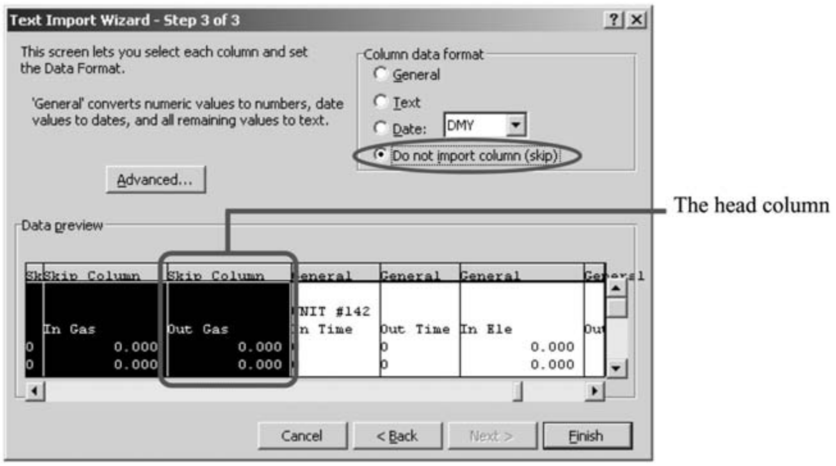
5) Select “Comma” in the “Delimiters” section of the dialog box, and click [Next >] button.



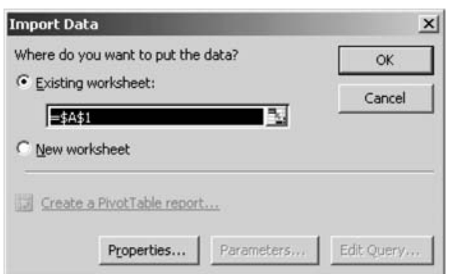
6) Click the head column to exclude under the “Data preview”.



7) Click the last column to exclude, pressing [Shift] key (on keyboard), under the “Data preview”. Click the "Do not import column (skip)" in the “Column data format”, and click [Finish] button.



5&@lf`h XLHZ_r ql k+Qeb a^q\ fk qeb @PS ª ib t fii _b fj ml qba q Bu`bi pebbq+

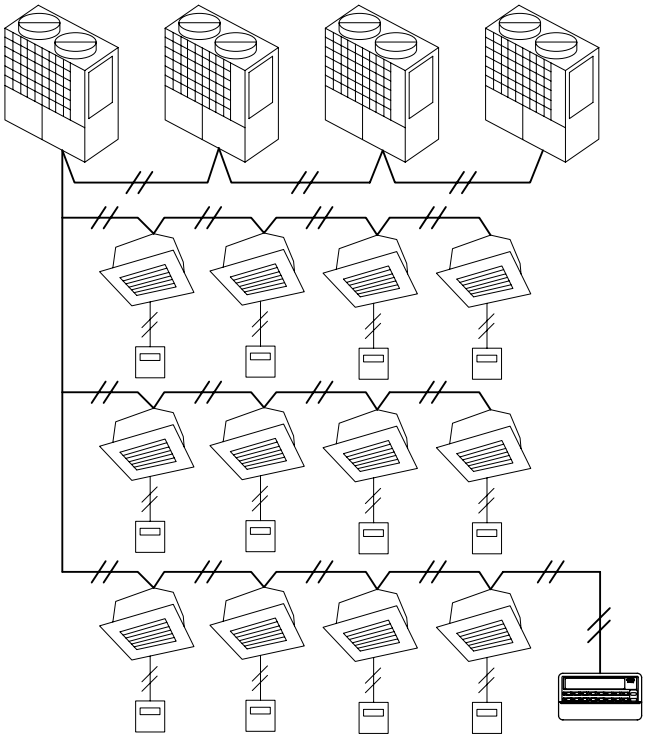


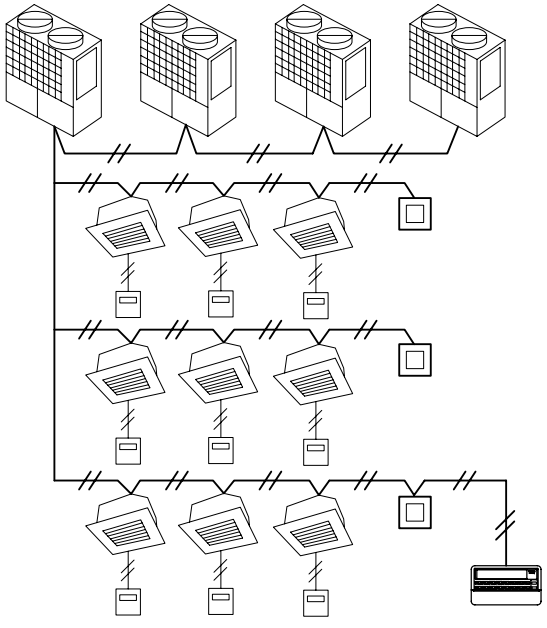
3 TROUBLESHOOTING

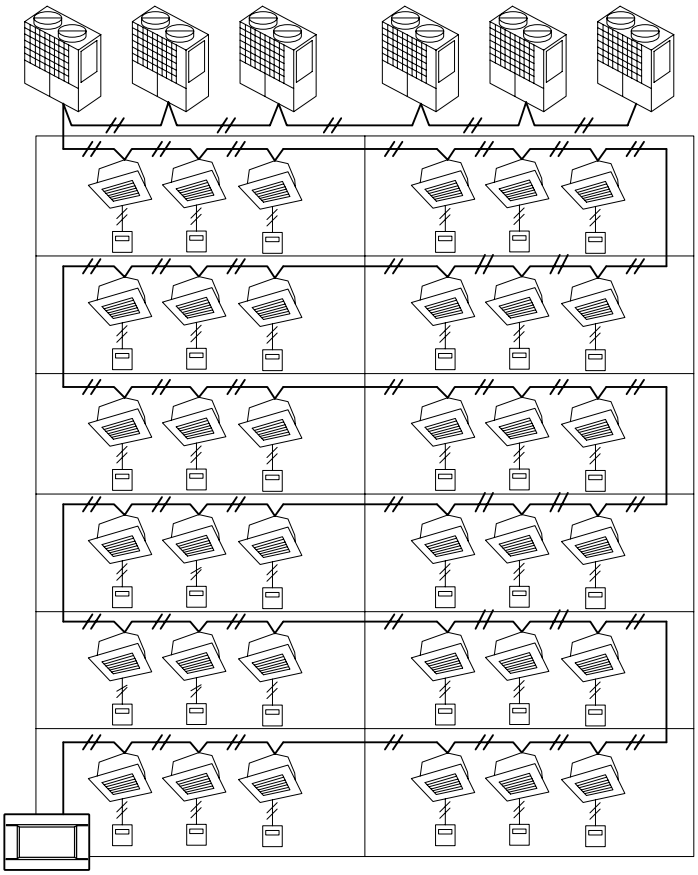
	A malfunction has occurred with the unit. The malfunctioning unit is stopped. Contact the shop where the unit was purchased. The shop will need the following information: "unit icon color", "malfunction situation", "model name of the malfunctioning unit", "Error No. (E00)" etc.
	A communication problem has occurred. Contact the shop where the unit was purchased. The shop will need the following information: "unit icon color", "malfunction situation", "model name of the malfunctioning unit" etc.
	Clean the air filter. (See the manual attached to the air conditioning unit for the cleaning method.) Press the filter reset button after cleaning.
	Regular inspection is necessary. Contact the shop where the unit was purchased. The shop will need the following information: "maintenance display color", "unit model name" etc. * The unit number and maintenance display content can be checked on the UNIT INFORMATION screen.
	It is possible that there is malfunction due to electrostatic discharge. Turn the power off, then turn it on again (power supply reset). When it does not operate normally with the procedure above, it can be assumed that the unit was damaged, so contact the shop where the unit was purchased with the "malfunction situation".
	• The backlight (illumination) is turned OFF after a fixed period of time to preserve the screen. Touch the screen. (It may take a little time for the display to reappear.) • It is possible that there is malfunction due to electrostatic discharge. Turn the power off, then turn it on again (power supply reset). When it does not operate normally with the procedure above, it can be assumed that the unit is damaged, so contact the shop where the unit was purchased with the "malfunction situation".
	When multiple units are registered in a group, the settings for the representative unit for the group are displayed. Check the status display for each of the units. Run/Stop displays "Run" if one or more units in the group are running, and it displays "Stop" if all units are stopped.
	Check the schedule settings. The group settings that have been scheduled can be changed.
	The unit may get warm, but this is not a problem. When the room is hot, it gets warm more readily. Use in an environment where the temperature around it is 40°C or lower.
	• If the total operating time in a day is less than 30 minutes, there has been no operation for calculating purposes. Therefore the calculating results may be a little low. • Even if the air conditioner is not used all day long such as on a holiday, standby electricity is still consumed. If power consumption is allotted to only the operated indoor units on a pro-rated basis, standby electricity consumed on holidays is not included in the calculation result. As a result, the total calculation result becomes different from the actual power consumption. On the other hand, if power consumption of standby electricity is proportionally allotted to all indoor units including those not being operated, the total calculation result coincides with actual power consumption. However, in this case, the power consumption of standby electricity is allotted to not only the tenants actually operating indoor units but also the dummy tenants and the tenants not operating indoor units. This may cause problems among tenants so that this method has not been adopted. If there is any difference between the total calculation result and the actual power consumption, try to reallocate the power consumption to the tenants actually operating indoor units respectively by using the spreadsheet software according to the calculation results.
	It is possible that either the definition file has not been saved to the USB memory or there is an error in specifying the folder to be read. Check again and then perform the operation again. If this message appears again, contact the shop where the unit was purchased.
	There is a possibility that the USB memory has damaged or the files in the USB memory have damaged. Delete all the files in the USB memory and create them again. If this message appears again, contact the shop where the unit was purchased.
	The USB memory may not have been fully inserted. Remove the USB memory, and reinsert it. If this message appears again, it is possible that the USB memory is damaged or the USB memory is not the attachment. Replace it with the bundled USB memory and try the operation again. If this message appears again, contact the shop where the unit was purchased.

	Contact the shop where the unit was purchased. (Re-check the communications line connections of the units.)
	Perform operations according to the messages on the screen or turn the power off and then on (power supply reset). If the message appears again, contact the shop where the unit was purchased.
	When the intake-air temperature is 0°C or less, “--” is displayed. When it differs from the display of remote controller, contact the shop where the unit was purchased.
	This function can be applied to the indoor units, which are the model KXE4 or later, and to the remote controller, which is the model RC-E1 or later. Make sure to select “Invalid” for the Individual Lock/Unlock on the Function setting screen.
	There may be inadequacy for communication line or the setting of this center console. Please contact the shop where the unit was purchased.
	This may possible that the central control or power system has malfunction. Please contact the shop where the unit was purchased.

4 CONNECTION EXAMPLE







AIR CONDITIONING CONTROL SYSTEM

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