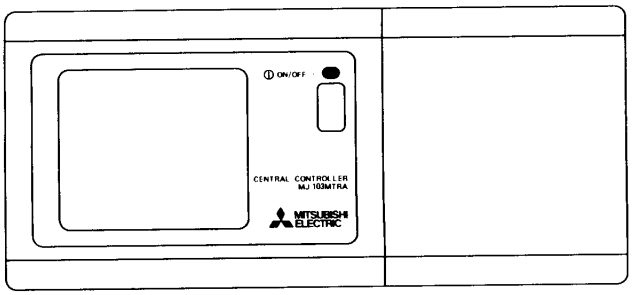
MITSUBISHI ELECTRIC

CE

Mitsubishi Electric Air-conditioner Network System

Central Controller
Model: MJ-103MTRA

Instruction Book



Contents

Before using the controller, please read this Instruction Book carefully to ensure correct operation. Store this Instruction Book in a location that is easy to find.

1. SAFETY

Please take a moment to review these safety precautions. They are provided for your protection and to prevent damage to the controller.
This safety information applies to all operators and service personnel.
After you have read this manual, always observe the procedures described in the explanations and store it with the installation manual in a location that is easy to find. If the controller is going to be operated by another person, make sure that this manual is given to him or her.

Symbols and Terms

⚠ **WARNING**	Statements identify condition or practices that could result in personal injury or loss of life.
⚠ **CAUTION**	Statements identify condition or practices that could result in damage to the controller or other property.

Specific Precautions

⚠ WARNING

- **Ask your dealer or technical representative to install.**
  If incorrect installation is done by a customer, it may cause an electric shock, fire, etc.
- **Securely install in a place which can withstand the weight of the controller.**
  If it is not enough, the controller may drop and cause an injury.
- **Make sure that the controller is connected to a rated power supply.**
  If the controller is not connected to a rated power supplly, it may cause a fire or damage to the controller.
- **Never remove the cover during operation.**
  Touching the charging parts of the controller may cause severe burns or other personal injury.
- **Stop the operation if any malfunction occurs.**
  If malfunctuin occures(burning smell, etc.) stop the operation and turn off the power supply. Contact the your dealer or technical representative immediate. If the controller continues to operate after a malfunction occurs, this may cause damage, electric shock or fire.
- **Do not move and re-install the controller by yourself.**
  If installation is incorrect, it may cause an electric shock, fire, etc. Ask your dealer or technical representative.
- **Contact your dealer if the controller will not be used any more or will be scrapped.**
- **Do not remodel or repair by yourself.**
  If the controller is remodeled or repair is not correct, it may cause an electric shock, fire, etc.
  Consult your dealer if repair are necessary.
- **Stop the operation immediately and notify the your dealer if an error code is displayed or malfunction occurs.**
  Fire or damage may cause if the controller is operated in this condition.

⚠ CAUTION

- **Do not install the controller in a place where inflammable gas could leak.**
  If gas leaks and collects around the controller, it may cause a fire or explosion.
- **Do not wash the controller with water.**
  It may cause an electric shock or malfunction.
- **Do not touch the switch with wet hands.**
  It may cause an electric shock.
- **Do not use the controller for special applications.**
  This product is designed for use with the MITSUBISHI ELECTRIC BUILDING AIR CONDITIONING CONTROL SYSTEM. Do not use the system for other air condition management operation or applications. It may cause malfunctions.
- **Do not apply insecticide or flammable sprays to the controller.**
  Do not place flammable spray near the controller and make sure it does not blow directly on the controller as this may cause in fire.
- **Do not use the controller in special environments.**
  The performance may be reduce or parts may be damaged if the controller is used in locations subject to large quantities of oil (including machine oil), steam, sulfide gas.
- **Do not touch the switches with sharp objects.**
  It may cause an electric shock or malfunction.
- **Operate the controller within the specified temperature range.**
  Observe the specified temperature range when operating the cntroller. If the controller is used outside the specified temperature range, it may cause serious damage. Be sure to check the operation temperature range in the operation manual.

2. Product Features

The central controller is capable of controlling up to 50 air conditioner units. It supports the follwing operating function.

[1] User operating function

(1) Operation

1. Virtually almost functions operated by local remote controller are supported.
   The central controller can be used to the indoor units in specific group ON or OFF, select the operating mode (COOL, DRY, FAN, AUTO and HEAT) for the indoor unit or HEAT RECOVERY, BY-PASS, AUTO for the OA processing unit), select the fan speed, select the air direction (4 direction and swing operation), select the ventilation mode (OFF, LOW speed, or HIGH speed), select TIMER MODE and select the temperature setting.
   In addition, room temperature can be displayed at the unit of each group upon request.
   (See 5-5 "User setting")
2. Local remote control operation can be prohibited for specific functions.
   Access to specific control functions, such as ON/OFF operation, mode selection ,temperature setting and filter sign reset operation can be prohibited for the local remote controls in collectively or each group.
3. Collectively setting
   Operation setting can be performs in collectively or each group.

(2) Weekly Schedule

1. The weekly schedule enables to set four different schedule patterns at weekly unit every each group. (P1 - P4)
   Of these, three patterns are to set ON/OFF schedule and remaining one pattern is to set the pattern to prohibit operation of the local remote controller.
   Four patterns (daily patterns) mentioned above enable to set the individual schedule time every each group.
2. The respective daily patterns enable to set three different ON times (to set prohibition time) and three different OFF times (to set permission time).
   In addition, it is possible to set ON time only (prohibition time only) and OFF time only (permission time only).
3. Easy setting
   Daily operation patterns and weekly schedules for one group can be easily be copied to the other groups.
4. Timer automatic recovery operation when recovering from a power down is supported.

(3) Operating status monitor

1. ON/OFF/MALFUNCTION status can be monitored by group or by unit.
2. The groups managed by the central controller may be displayed all together by group number or group name (first three characters). Collective display of all unit address is slso supported.
3. When displaying all groups at once, individual groups can be turned ON or OFF by designating them by the ▷ indicator.

(4) Malfunction monitor

1. The unit address where the malfunction occurred, the error code and the unit address of the unit that detected the malfunction are displayed on the malfunction monitor screen.
2. Pressing the reset key stops all the units connected to the same group, refrigerant system or linked group as the unit where the malfunction and reset them.

[2] System configuration setup and maintenance function

(1) Setup for system configuration

1. Registration can be made for the indoor units, local remote controllers and slave system controllers in the same group.
   And also registration can be made for the OA processing unit such as FRESH MASTER or LOSSNAY.
2. Group name may be specified. (Names may include alphanumeric characters.)
3. Group name may be copied.
4. Setting of group configuration and specify the group name may be performed as long as power is being supplied to the central controller. This mean that setting can be performed before the central controller is installed at the site, before installation of individual units is completed or while the power supply to some units is cut off.
5. System configuration data setting in the central controller can be deleted at once if necessary when replacing circuits wired board, etc.

(2) Refrigerant system monitor

All unit address (indoor, outdoor, etc.) can be displayed for individual refrigerant system on the refrigerant system monitor screen. This information is useful for checking the installation, such as address setting, transmission line connection and power supply connection.

(3) Interlocked group setting

Setting can be performed for indoor units interlocked with a OA processing unit.
If even one of the indoor unit interlocked with OA processing unit have made start to operate, the OA processing unit is activated.

(4) Malfunction log monitor

1. A log of the last 64 malfunction massage, in the order in which they occurred, can be monitored.
2. The data and time the malfunction occurred, the address of unit where it occurred, the error code and the address of unit that detected the malfunction are displayed.
3. All malfunction logged in the memory of the central controller and indoor unit can be reset at once.

[3] Other

(1) Overall statues display lamp

Displays normal operation/all OFF/malfunction status for the entire system.
(Normal operation/all OFF/malfunction status is indicated by the lamp being lit, not lit or blinking respectively)

(2) Collective ON/OFF switch

This switch allows turning all of the unit in the system ON or OFF at once.

(3) Power supply wiring

The central controller is supplied the power from PAC-SC34KUA Power Supply Unit via the M-NET transmission line. The central controller allows to be connected to M-NET transmission line at any position. (M-NET transmission line is the central control line which connected TB7 terminal of the outdoor unit)

(4) M-NET transmission line

The combined maximum distance between the outdoor units and the central controller, and between the outdoor units and farthest indoor units connected to the same refrigerant system or their remote ciontroller, may be extended up 500 meters.
Therefore, even if the total distance is made longer by installing the outdoor units all in row, there will be no problem so long as the above maximum total distance limitation is not exceeded.

3. Functions

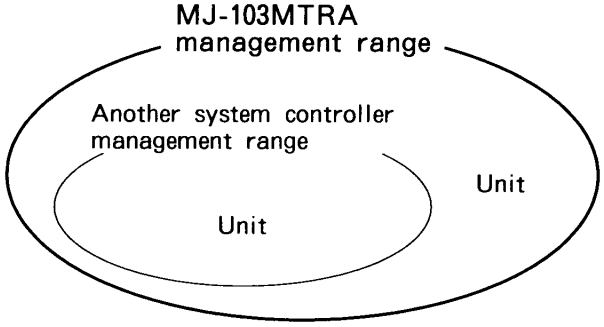
3-1 Specifications

Item		Specification	
Source power requirement		Input voltage	DC20V～DC30V, 0.07A Power received from PAC-SC34KUA Power Suplly Unit via M-NET transmission line.
Environmental condition		Temperature	Operating 0℃～+40℃ Non operating 0℃～+70℃
		Humidity	30～90%RH (No condensation)
Dimensions		120(H)×300(W)×80〔*19〕(D) ＊〔 〕:indicate the thickness from the wall.	
Weight		0.9kg	
System condition			
Number of control unit		Indoor unit or independent OA processing unit : 50 units maximum (50 groups maximum) Number of units (indoor or independent OA processing) in one group : 1-16 units ＊Note Both of indoor unit and independent OA processing unit can not register to the same group. Number of remote controllers in one group : 1-2 Number of system controllers in one group : 0-4 (including the number of remote controller in one group) : 0-3 for groups which have one remote controller. Number of indoor units interlocked with one OA processing unit : 0-16 (some types of OA processing unit can be only operate when interlocked to a maximum of 9 units)	
User operating function			
Operation	ON/OFF	The ON/OFF operation can be performed as a collective or each group.	
	Operation mode ＊1	The switch operation for the operation mode setting can be performed as a collective or each group. 〔Selectable operation mode for the indoor unit〕 Cool/Dry/Fan/Auto/Heat 〔Selectable operation mode for the independent OA processing unit〕 Heat recovery/By-pass/Auto	
	Fan speed ＊1	The switch operation to set the High and Low speed can be performed as a collective or each group. (The 4 fan speed setting is available to the indoor that has 4 levels)	
	Air direction and swing operation ＊1	The air flow direction can be switched to 4 directions and swing operation as a collective or each group	
	Temperature setting	Temperature setting can be performed at collective or each group. 〔Setting temperature range〕 Cool (Dry) operation : 19～30℃ Heat operation : 17～28℃ Auto operation : 19～28℃	

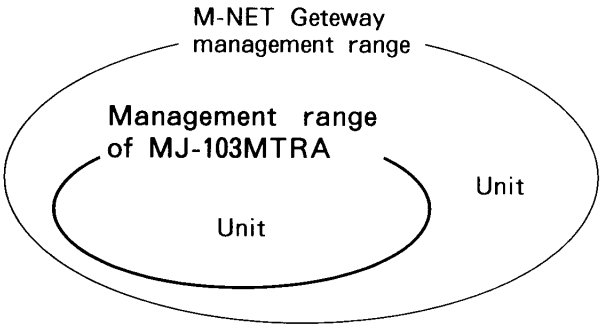
Item		Specification
Operation	Prohibit local remote control	The specific functions of a local remote controller can be prohibited as a collective or each group. 〔Prohibit function〕 ON/OFF operation, Operation mode setting, Temperature setting and Filter sign reset operation.
	Timer operation	The set schedule operations can be switched to ON/OFF (local remote controller operation prohibition/permission) for each group.
	Filter sign reset	The filter sign reset operation after the air filters are cleaned can be performed as a collective or each group.
	Ventilation operation *1	The ventilation operation of the interlocked OA processing unit can be performed as a collective or each group. 〔Ventilation operation〕 Low speed/High speed/Ventilation OFF
Monitor	Collective operation	The overall status lamp displays conditions of the collective statues.
	Each group operation	Each group operation is displayed on the operation setting screen(group) or operation monitor screen.
	Operation mode	Displayed on the operation setting screen(group).
	Fan speed	
	Air direction	
	Temperature setting	
	Timer operation	
	Filter sign	
	Local remote control prohibition	
	Ventilation operation	
	Room temperature display	
	Central control prohibition	
	External input signal condition	
	Malfunction	The unit address and error code are disprayed on the malfunction monitor screen when a malfunction occurs.
Other	Current time back-up	When the power is cut off, the current time is backed up for approximately one week. (When the controller is fully charged. The controller is fully charged by twenty-four hours after power feeded.)
	Timer setting	Operation pattern setting can be performed. ● Operation interval : Minimum 10 minutes ● The daily operation pattern and weekly schedule for each group can be set. ● A pattern of one day : P1/P2/P3/P1/P2/P3/P4/– * ON/OFF setting up to three times a day are possible for P1/P2/P3. * P4 enables to set operation prohibition of 3 times per day for the remote controller. * P1/P2/P3 implement the schedule which has combined P1/P2/P3 of ON/OFF pattern and P4 of remote controller operation prohibition pattern together. (P1 = P1 + P4 / P2 = P2 + P4 / P3 = P3 + P4 is displayed.) * – is a day without timer operation. ● "The reference temperature and set-back value" or "Setting temperature" which are linked with timer operation can be set.

Item		Specification
Other	Group name designation	Group name can be specified and display on the operation setting screen. * Group name setting is need at the initial setting.
	External signal input interface	Emergency stop/normal, ON/OFF, prohibit/permit for local remote operation can be controlled for units being controlled with a non-voltage contact signal input from an external source.
	External signal output interface	When one or more units being controlled are operating, the "ON" signal will be output, and if a malfunction occurs in one or more units, the "malfunction" signal will be output.
Initial setting (for installation and maintenance)		
Connecting information setting	Group setting	The group setting operation for units (indoor units, local remote controllers, independent OA processing unit and slave system controllers) are perfomred on the group setting screen.
	Interlocked setting	The interlocked setting for the ventilation equipment as the FRESH MASTER or LOSSNAY, etc to indoor unit is performed on the interlocked setting screen.
Monitor	Mulfunction history	A maximum of the 64 most recent malfunction are displayed on the malfunction log monitor.
	Refrigerant system monitor	The connected unit address are displayed on the refrigerant monitor screen.
Other	User setting	Some of the indication and function that appear on the each screen can be specify to match the needs of the user.
	Master system controller/ Slave system controller setting * 2	Master/Slave setting of the system controller.
	Prohibition setting enable /disable	The setting of a system controller which the local remote control prohibition enable or disable.
	The prohibited controller range setting	Selecting of the prohibited controller which is only local remote controller or both local remote controller and the other system controller.
	K-control type	The system composed of K-control type air conditioner equipment can be controlled using the K transmission converter (PAC-SC25KAA)

* 1 Each operation is available in accordance with the function of unit.
* 2 Master system controller and slave system controller.



When MJ-103MTRA controls another system controller or when the system contains only MJ-103MTRA:
MJ-103MTRA is set as the master system controller.
* MJ-103MTRA performs the group setting in this configuration.

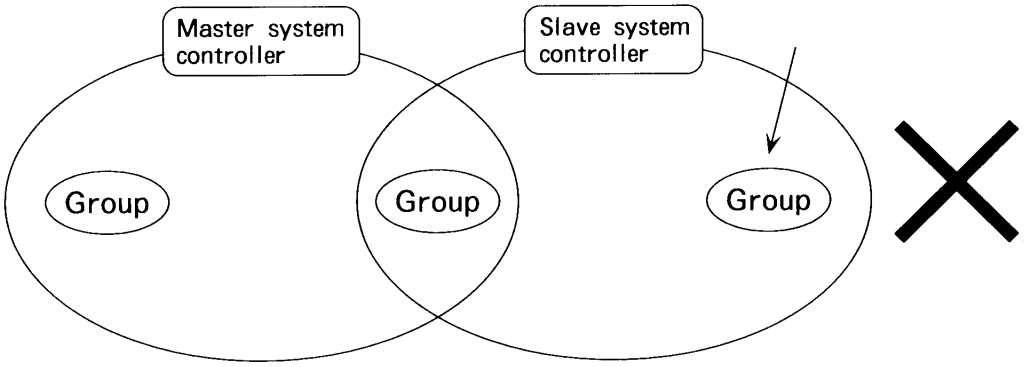


When MJ-103MTRA is controlled by another system controlle: (Example: MJ-300Gateway)
MJ-103MTRA is set as the slave system controller.
* The group setting is performed by Master system controller.

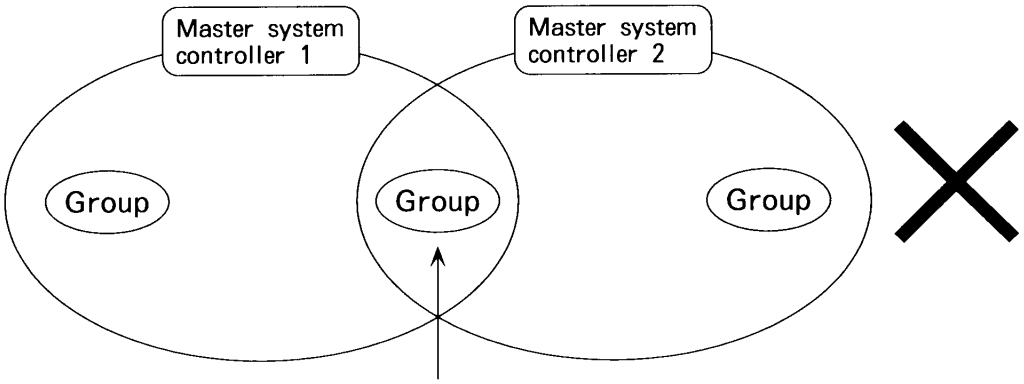
NOTE :

The follwing group setting cannot be performed.

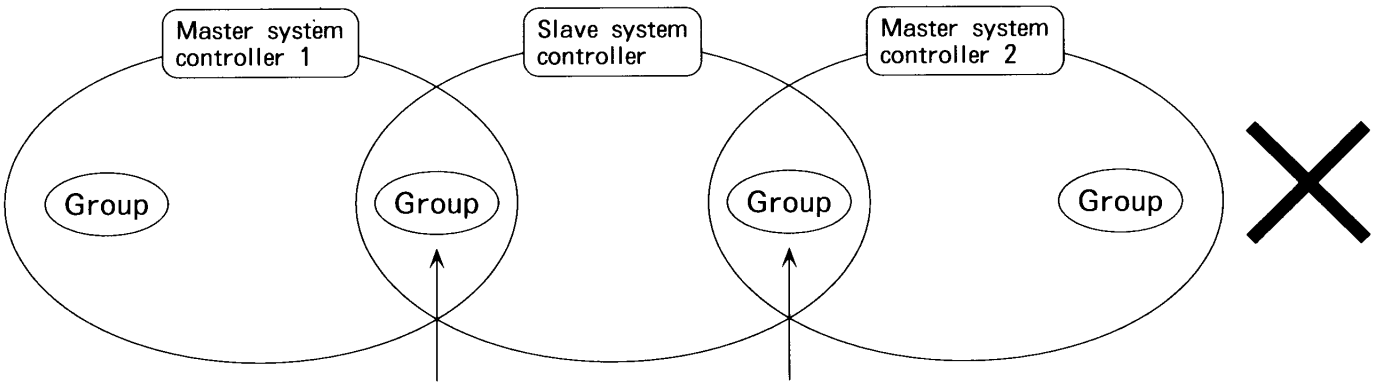
- Unit groups which are not under the management of the master controller and are managed by the slave system controller.



- A common group is managed by more than two master controllers.



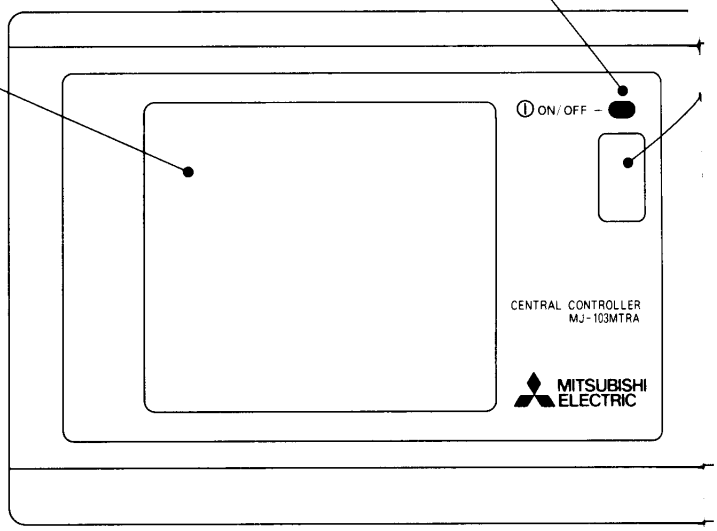
- A slave system controller which exceeds the management range of the master system controller of two or more.



3-2 Display Screen

Overall status lamp

The lamp indicates the unit operation condition.
ON ·····During operation
OFF·····All group are stopping
BLINKING·····Malfunction



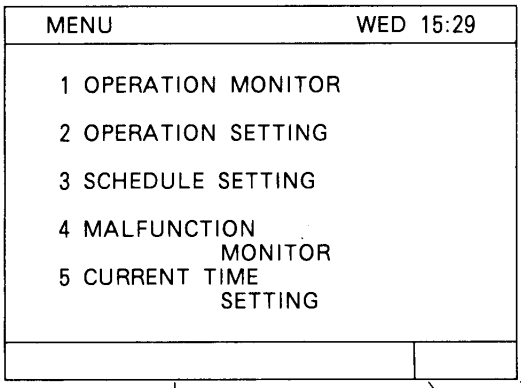
User operation menu

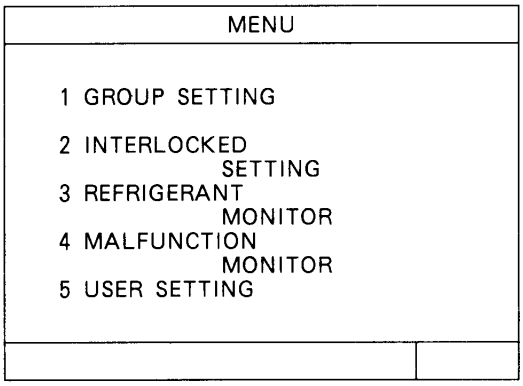
Dip switch No.1 is OFF

Initial setting menu (Installation/Maintenance)

Dip switch No.1 is ON

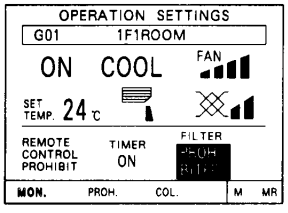
Dip switch operations





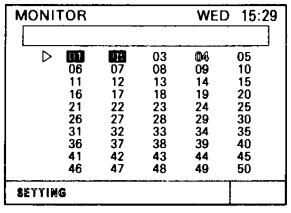
2 1 3 4

Operation setting function



Each operation and monitor of unit is performed in collective or group unit.
Refer to section "4. User operation (page 10)" for the detail of operation methods.

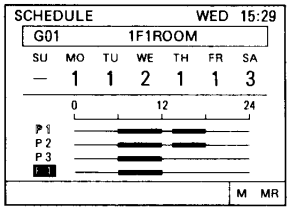
Operation monitor function



ON/OFF operation and monitor of unit are perfomed.
Refer to section "4. User operation (page 10)" for the detail of operation methods.

User operation function

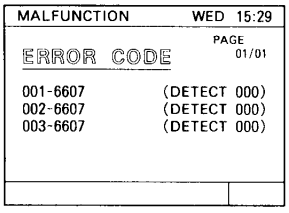
Timer setting function



The weekly schedule setting is performed in group unit.
Refer to section "4-3 Timer operation (page 19)" for the detail of operation methods.

Function when the timer operates

Malfunction monitor function



The unit address, error code and the unit address which detected the malfunction are displyed when a malfunction occurs.
Refer to section "4-4 Malfunction (page 23)"

Function when the unit malfunction

Corrective operation switch

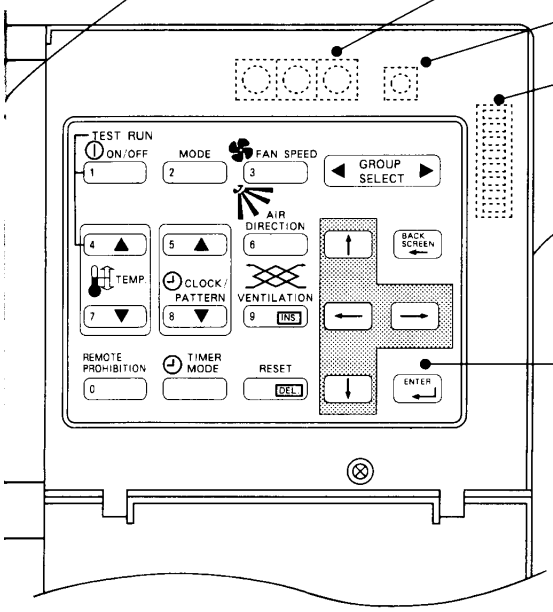
If this switch is pressed during the operation, the all group stop is performed.

The collective operation switch can be performed in the user setting mode for any screen. (Excluding menu screen)

Address setting rotary switches
Refer to section "5. Initial setting (page 25)" for explanation of the operation of these switches.

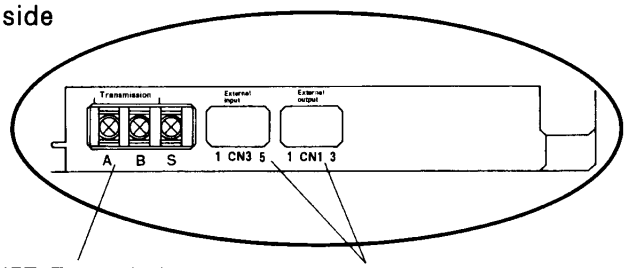
LCD contrast adjustment knob

Function selection dip switch
Refer to section "5. Initial setting (page 25)" for explanation of the operation of these switches.



Operation panel

Rear side

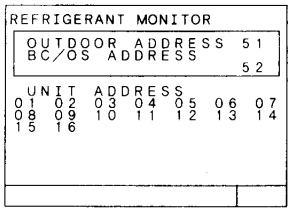


M-NET Transmission line terminal

External input/output interface connecter
Refer to section "7. External input/output function (page 36)" for the detail of operation of these connectors.

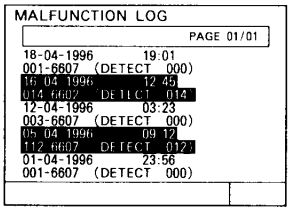
3
4

Refrigerant monitor function



The unit addresses are displayed for each refrigerant.
Refer to section "6. Maintenance (page 34)" for detail of operation.

Malfunction log monitor

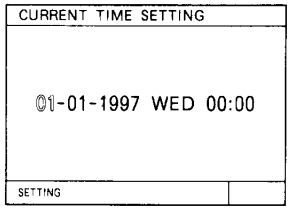


A malfunction logging which can be store maximum of 64 items can be monitored.
Refer to section "6. Start-up and maintenance (page 34)" for detail of operation.

Start-up and maintenance functions

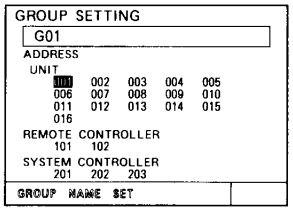
2
5
1
5

Current time setting



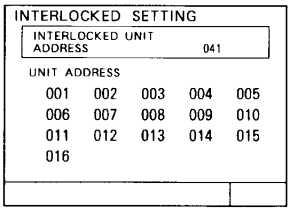
The current time setting can be performed.
Refer to section "4-5 Current time setting (page 24)" for the detail of operation methods.

Group setting function



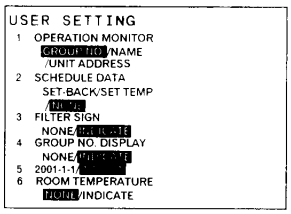
This performs the same group settings of the indoor unit, local remote controller and slave system controller, etc.
Refer to section "5. Initial setting (page 25)" for detail of operations.

Interlocked setting function



This function sets ether single or multiple indoor units, the FRESH-MASTER or any other OA processing unit that interlocking operates, as units in the same operation.
Refer to section "5. Initial settings (page 25)" for detail of operations.

User setting function



The function selections of the display method and timer settings that is displayed on the screen.
Refer to section "5. Initial settings (page 25)" for detail of operation.

Function when the current time

Required function for initial settings

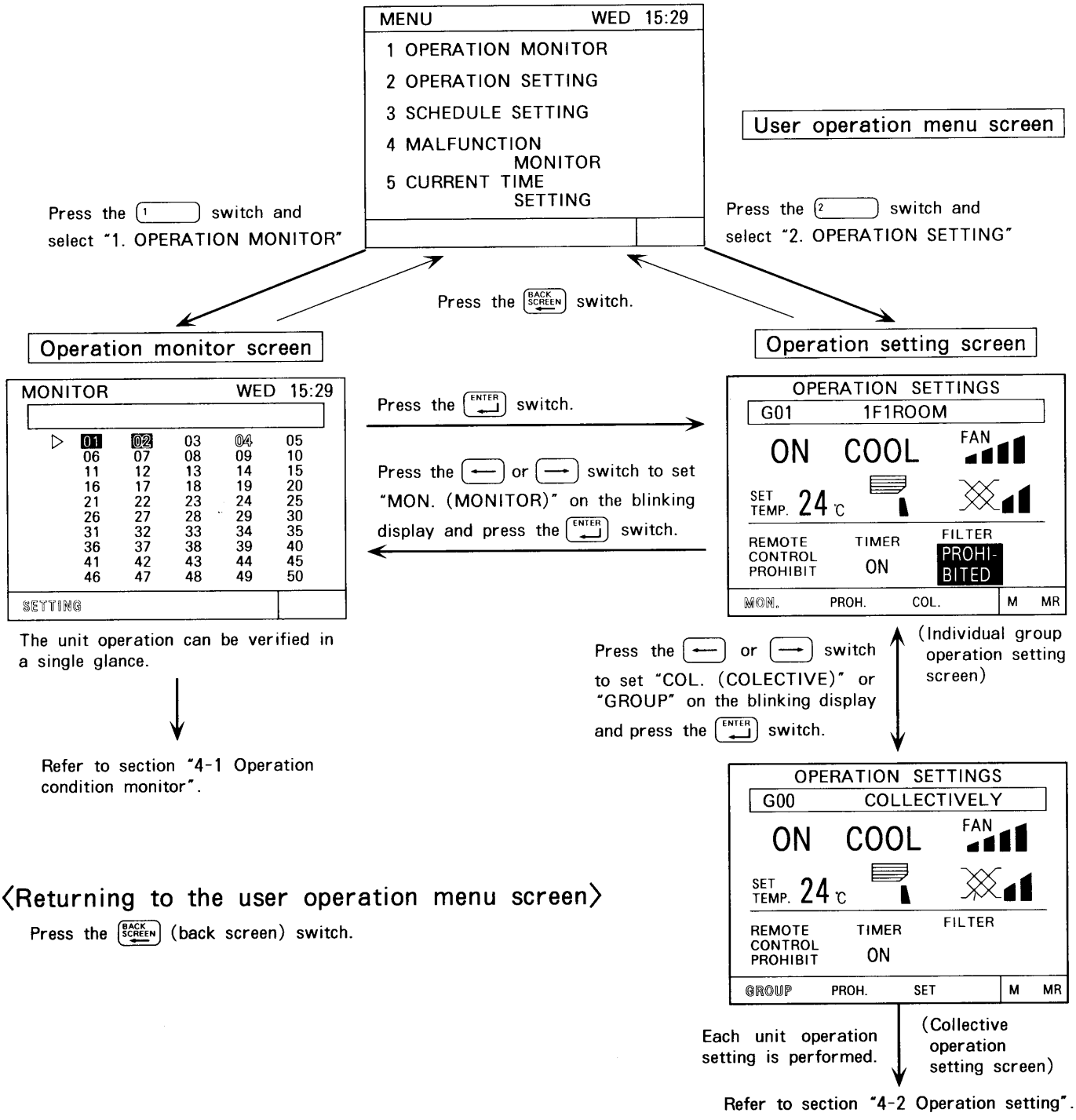
4. User operation

Used the following two screens when user operation is performed.

Operation monitor screen	This screen displays ON/OFF and malfunction condition of the unit. MJ-103MTRA normally displays this screen.
Operation setting screen	The unit operations can be performed by individual group or collective operation. These operation include the ON/OFF, operation mode, fan speed, temperature setting, air direction, ventilation setting, timer operation ON/OFF, local remote controller prohibition and filter sign reset are performed by group or collectively. In addition, this screen can also display the room temperature of each group .

- The collective operation can be performed on any screen (except for the menu screen) in the user operation mode (when dip switch No.1 is OFF).

〈Shifting to the operation monitor screen and operation setting screen〉



〈Returning to the user operation menu screen〉

Press the BACK SCREEN (back screen) switch.

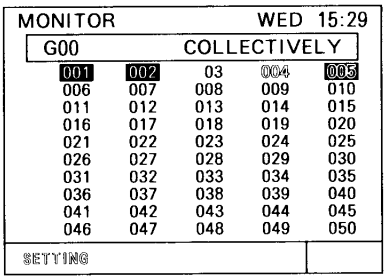
4-1 Operation condition monitor

- This function displays the ON/OFF/Mulfunction status of specific units or group.
- ON/OFF/Malfunction status is shown by the indication corresponding to the unit or group appearing in inverse, normal or blinking display.
- The user may select display items by unit address, group number or group name.
  Refer to section "5-5 User setting (page 33)" for detail of user setting.
- During the user operation mode, this screen returns from any screen if there is no operation for approximately 10 minuites.

(1) Operation Method

- Be careful because the operation method can be very acording to the display item.

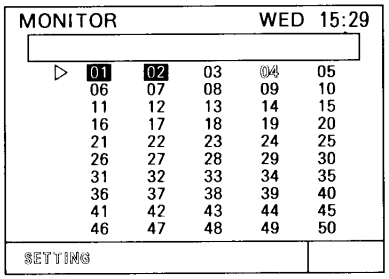
〈Unit address display〉



①Press the [◀ GROUP SELECT ▶] switch to change the display group in desired operation and monitor.

②When displaying the units in a given group, press the [ON/OFF 1] switch turn all the units in that group ON or OFF.

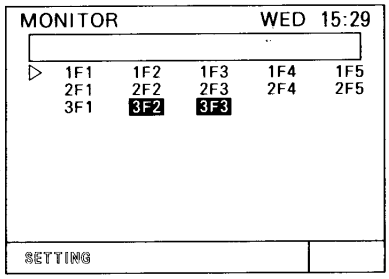
〈Group number display〉



①Press the [↑] [↓] [→] [←] switch to move the "▷" select the group number to be operated.

②Press the [ON/OFF 1] switch to set the displayed group unit in indicated by the "▷" symbol to the on/off mode.

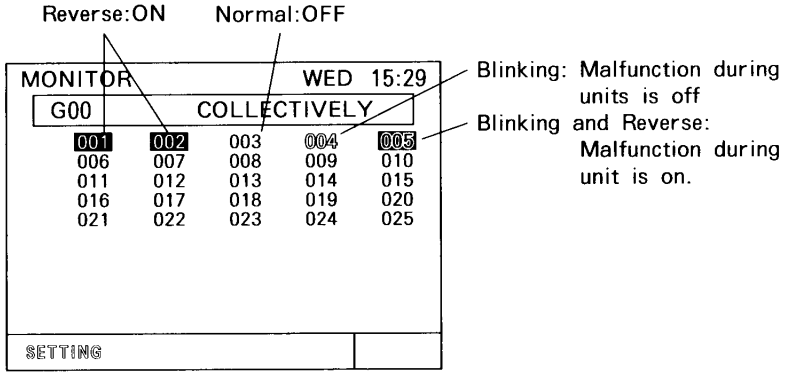
〈Group name display〉



①Press the [↑] [↓] [→] [←] switch to move the "▷" symbol. Select the group name to be operated.

②Press the [ON/OFF 1] switch to set the displayed group unit in indicated by the "▷" symbol to the on/off mode.

(2) Display contents

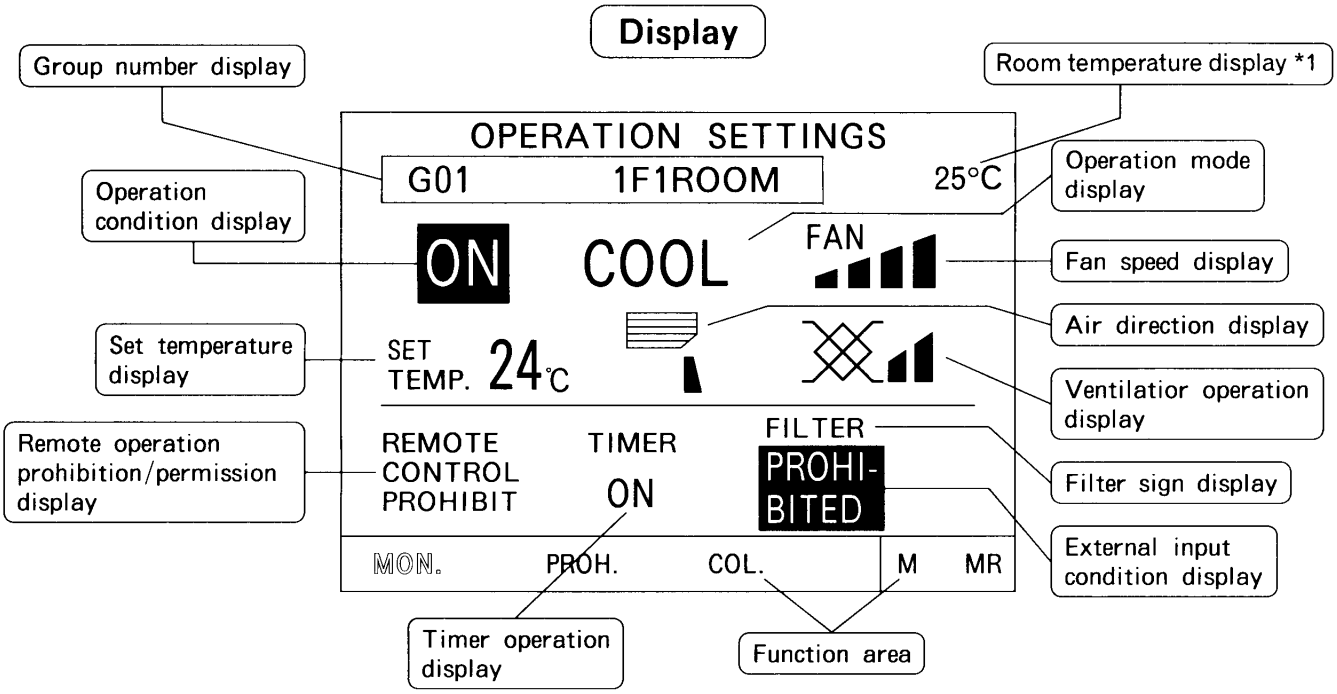


*When a malfunction occurs, refer to section "4-4 Malfunction (page 23)".

4-2 Operation setting

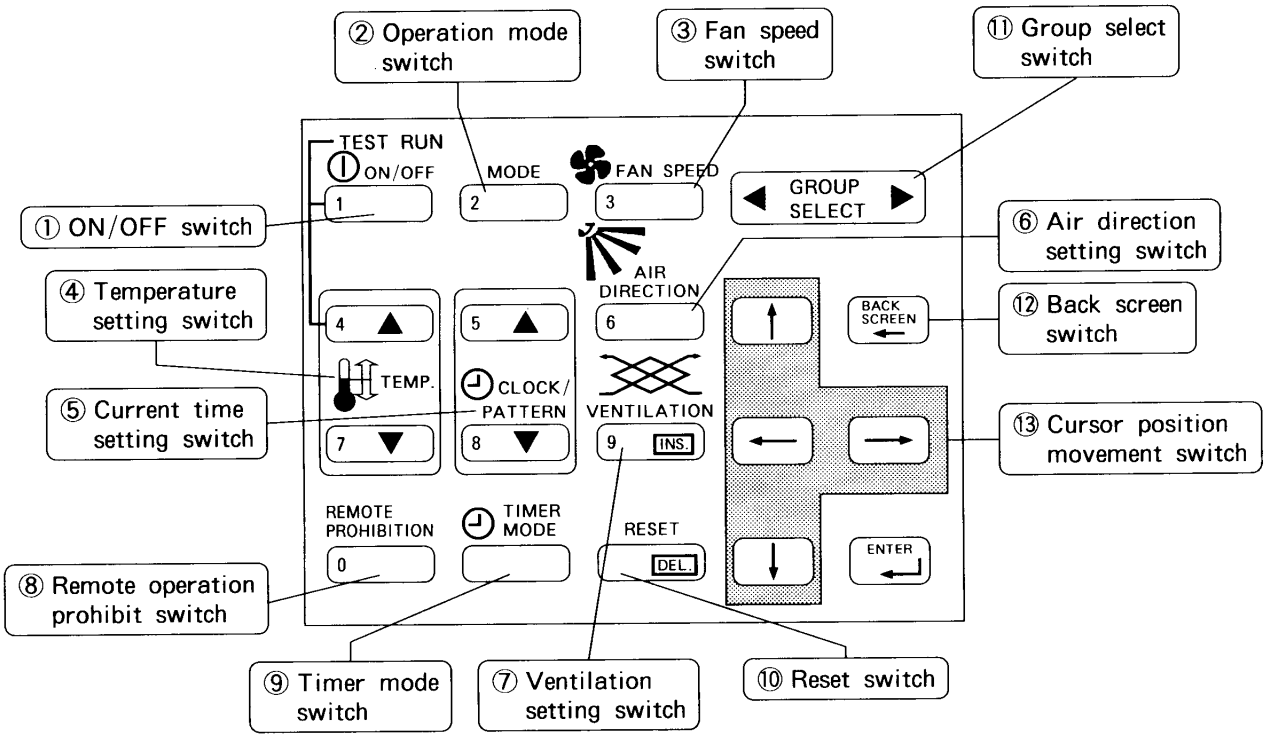
● There are two methods for the operatin, performing the operation classified by groups or collectieve operation.

4-2-1 Group operation setting



No.	Name of switches	Function	Display
①	ON/OFF switch	The ON/OFF condition of the displayed group is switched.	Operation status display →「ON」→「OFF」→ * When there is an interlocked OA processing unit, turning this switch ON starts operation in a [High] ventilated state.
②	Operation mode switch	Used to the type of the operation mode selection. Note: Operation mode can be selected according to the function of unit. If the unit is only cooling type. HEAT/AUTO mode may not appear on the display. Refer to the instruction manual of the air conditioner for more detail.	Each time to push the switch, a mode is selected in a sequence that goes from COOL, DRY, FAN, AUTO, HEAT and beck to AUTO for air conditioner group. → COOL → DRY → FAN → AUTO → HEAT → On the group composed of independent OA processing units, operation mode is selected in a sequence that goes from HEAT RECOVERY, AUTO, BY-PASS and back to HEAT RECOVERY. → (HEAT RECOVERY) → AUTO → BY-PASS →
③	Fan speed switch	The fan speed can be switched to four levels.The setting of the fan speed for a unit that has two levels can be selected as high or low.	Fan speed display 4 levels → FAN → FAN → FAN → FAN → 2 levels → FAN → FAN →
④	Temperature setting switch	The setting temperature change is performed.	The setting temperature display. The setting range change according to the operation mode. COOL/DRY 19~30℃ HEAT 17~28℃ AUTO 19~28℃

Operation panel

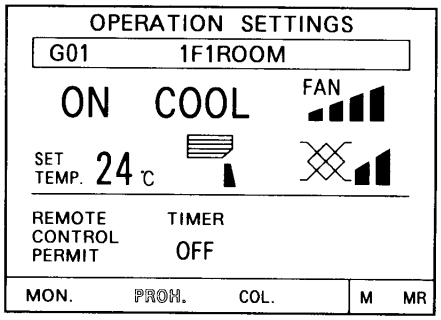


No.	Name of switches	Function	Display
⑤	Current time setting switch	These switches are used when the current time is set.	Refer to section "4-5 Current time setting".
⑥	Air direction setting switch	The Air flow direction can be selected.The air flow direction can be selected to four direction and swing operation(auto vane).	Air flow direction → (swing)
⑦	Ventilation setting switch	The operation mode of the interlocked OA processing unit can be performed. * Where there is no interlocked OA processing unit, the operation of this switch is invalid.	Ventilation volum setting display → (Low) → (High) → (Ventilation off)
⑧	Remote operation prohibit switch	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.
⑨	Timer more switch	The timer operation can be performed according to a previously set operation pattern.	Timer operation display 「ON」 → 「OFF」
⑩	Reset switch	The filter sign display reset is performed. The reset processing is completed by pressing this switch two times.	Filter display 「Filter」 → No display
⑪	Group select switch	The display group is changed.	Group number display This switch displays 1～50 group numbers. The switch can also display group names.
⑫	Back screen switch	Use to back to the user menu screen.	The menu screen will be returned.
⑬	Cursor position switch	The position of a cursor can be moved when a cursor is appear.	The cursor position (blinking) moves.

*1: Room temperature can be displayed by selecting the room temperature display function per "5-5 User Setting". (but limited to indoor unit group)

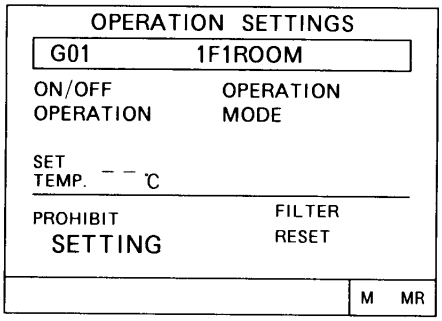
(1) Local remote control operation prohibition setting.

- MJ-103MTRA can prohibit the operation of item such as connected local remote controller or slave system controller for each group. The prohibit items are ON/OFF operation, operation mode, temperature setting and filter sign reset operation.



①Press the [◀ GROUP SELECT ▶] switch to display the group that the operation prohibition setting will be performed.

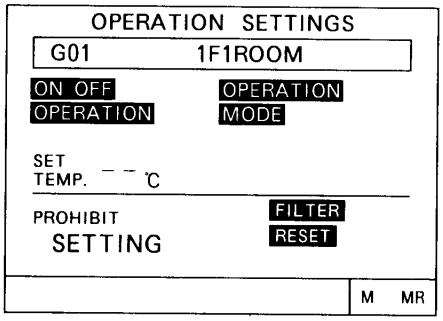
②Press the [←] or [→] switch to set "PROH. (PROHIBIT)" on the blinking display and press [ENTER] switch.



①The prohibit setting screen is displayed.

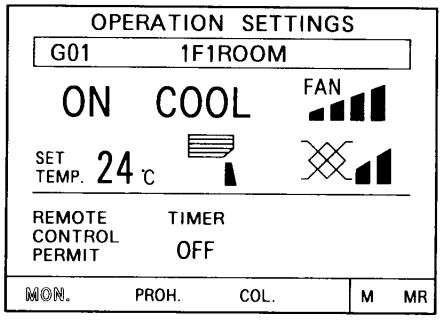
②Press the operation switch for the items to be prohibited.

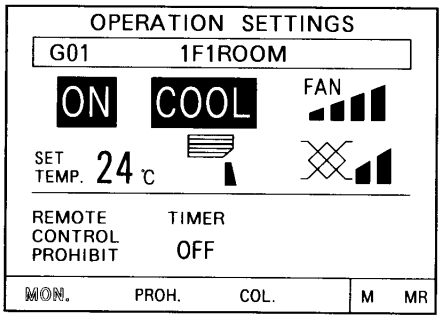
- When the ON/OFF operation is to be prohibited : [ON/OFF 1]
- When the operation mode is to be prohibited : [MODE 2]
- When the setting temperature is to be prohibited : [4 ▲] or [7 ▼]
- When the filter sign reset is to be prohibited : [RESET DEL]



①The items selected for prohibition are shown in reverse display.

②After setting of prohibit item, press the [BACK SCREEN] swith to back to the operation setting screen.





①The operation setting screen is displayed.

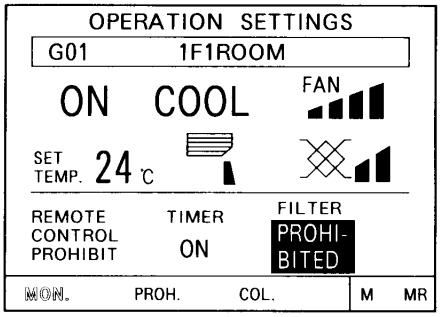
②Press the [REMOTE PROHIBITION 0] switich to set "PROHIBIT 「ON」".

Remote operation prohibition/permission display will be change 「PERMIT」 to 「PROHIBIT」 and the prohibited item set on the prohibit setting screen are shown in revers display.
The prohibit setting is completed.

NOTE:
- The system controller that performed the local remote control operation prohibition setting can operate the prohibited items.
- When the No.4 dip switch is set ON, the prohibit setting of the local remote control operating cannot be made. For details, refer to "5-1 Dip switch and rotary switch setting".

(2) MJ-103MTRA operation prohibition

- The operation of this controller is prohibited when an operation prohibition setting for this controller is received from a system controller other than this controller or when an external input signal is used.



The PROHI-BITED is displayed and the prohibition operation is display in reverse display when operation of this controller is prohibited by another system controller or an external input signal used.
The prohibition operation which is displayed in reverse display is not possible to operate in this condition.

(3) Using the function area

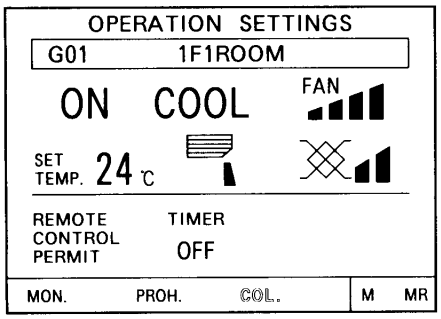
To select the function from the function area, use the [←] or [→] switch to move the cursor to the blinking to the function of your choise and press the [ENTER] switch. The current cursor position appears as a blinking indication on screen.

- MON. (MONITOR) : Shift to the operation monitor screen
- PROH. (PROHIBIT) : Shift to the prohibit setting screen
- COL. (COLLECTIVE) : Shift to the collective operation setting screen
- M (memory) : Stores the setting currently shown on the screen in memory.
- MR (memory read) : Reads the setting stored in memory and activates them for the currently displayed group.

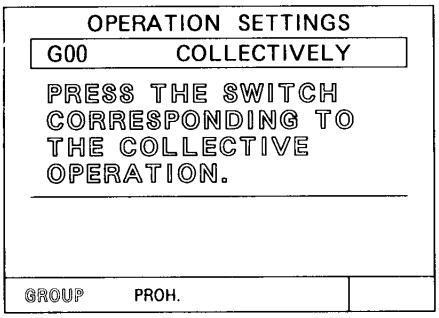
4-2-2 Collective operation setting

- A colective operation setting and a collective prohibit setting can be performed for all the group managed by this controller at one time.

(1) Collective operation setting



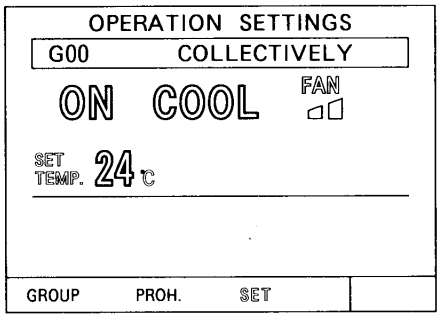
①Press the [←] [→] switch to set "COL. (COLLECTIVE)" in blinking display and press the [ENTER] switch on the group operation setting screen.



②The collective operation setting initial screen is displayed.

③Select the items for operation setting on the collective operation setting initial screen.
The operation method is same as described in section "4-2-1 Group operation setting" (Page 12).

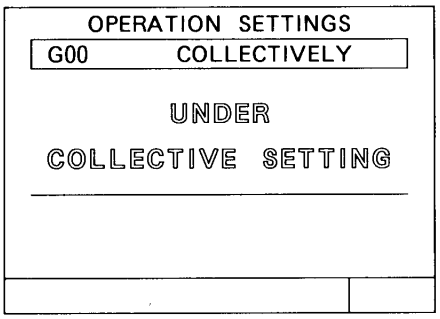
NOTE: The items which were not set, remain set to the same condition that were set before the collective operation was performed.

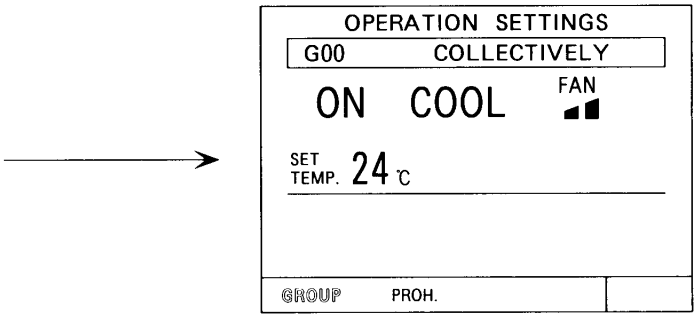


④The items selected for the operation blink on the collective operation setting screen.

⑤When all setting are completed, press the [←] [→] switch to display the "SET" in blinking display for the indicated function area.

⑥Press the [ENTER] switch one time to complete this setting.



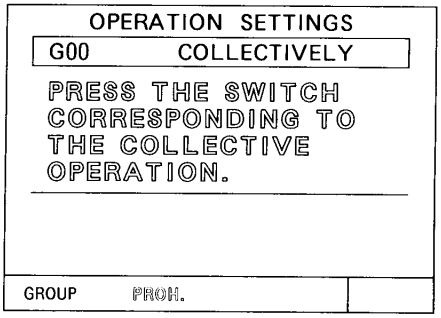


The collective setting is executed.
The collective setting takes approximately 20 seconds.

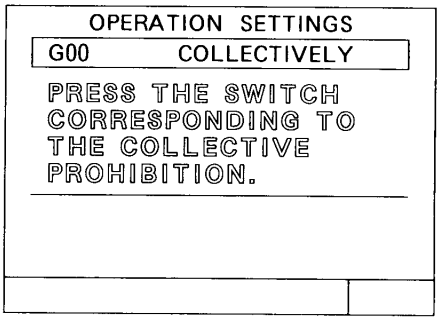
NOTE: The display of setting contents is erased when shift to another screen.

The collective setting is completed when the previous items light. (After the setting are comleted, start from step ③ to perform operation again if change operation are required.)

(2) Collective prohibit setting

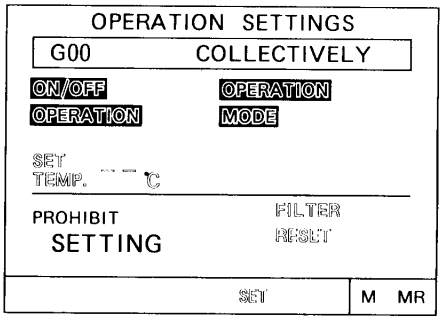


①Press the [←] [→] switch to set "PROH. (PROHIBIT)" in blinking display and press the [ENTER] switch on the collective operation setting initial screen.



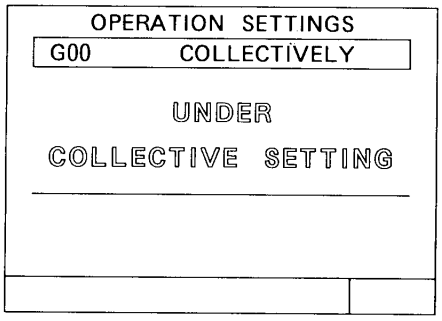
②The collective prohibit setting initial screen is displayed.

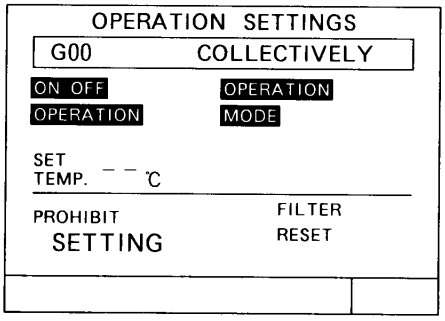
③Select the items to be prohibited or permitted on the collective prohibit setting initial screen.
Each time to press the switch corresponding to the prohibition item, the prohibition or permission is selected.
Prohibition setting : The prohibited item is displayed in reverse with blinking.
Permission setting : The permitted item is displayed with blinking.
The selection method concerning to prohibit/permit item is same as described in section "4-2-1 (1) Local remote control operation prohibit setting". (page 14)



④The items selected for the prohibition or permission are displayed with blinking.
And the "SET" is displayed with blinking in the function area.

⑤When all setting are completed, press the [ENTER] switch one time to complete this settings.

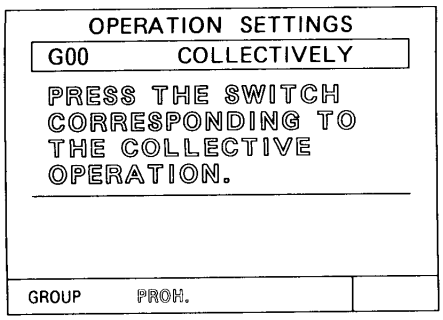




⑥The collective prohibit setting is excused.
The collective prohibit setting takes approximately 20 seconds.

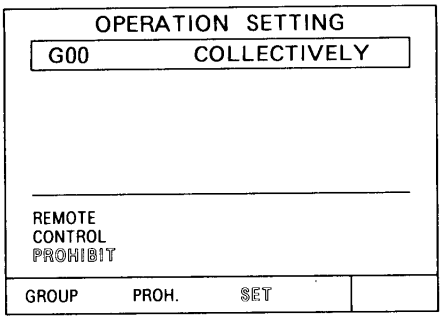
⑦The collective setting prohibition/permission item setting is completed when the previous item light.

⑧After setting of prohibit/permit items, press the [BACK SCREEN] switch to back to the collective operation setting initial screen.



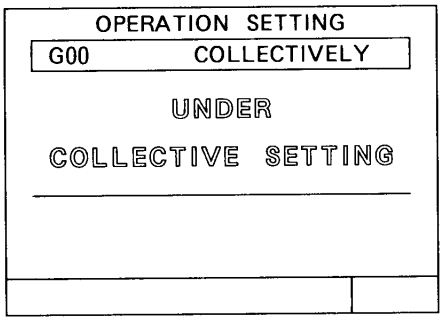
⑨The collective operation setting initial screen is displayed.

⑩Press the REMOTE PROHIBITION 0 switch to set "REMOTE CONTROL 「PROHIBIT」".

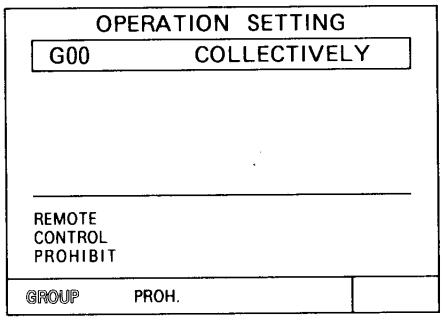


⑪Remote operation prohibition/permission display ("REMOTE CONTROL 「PROHIBIT」") is displayed with blinking.

⑫Press the ← or → switch to display the "SET" in blinking display for the indicated function area.
Press the ENTER switch one time to complete the collective prohibit setting.



⑬The collective prohibit setting is executed.
It takes approximately 20 seconds.



⑭The collective prohibit setting is completed when the remote operation prohibition/permission display is change to be light.

NOTE:
- The display of setting contents is erased when shift to another screen.
- The follwing restrictions in the collective operation settings.
  1. Temperature setting
     The range that can be set falls within 19℃～28℃ regardless of the operation mode.
  2. Operation mode selection, fan speed selection, air direction, etc., can be collectively set regardless of the functions of the unit. However, actual setting to a unit without functions cannot be performed. To obtain the correct setting contents, refer to the respective group operation setting screens.

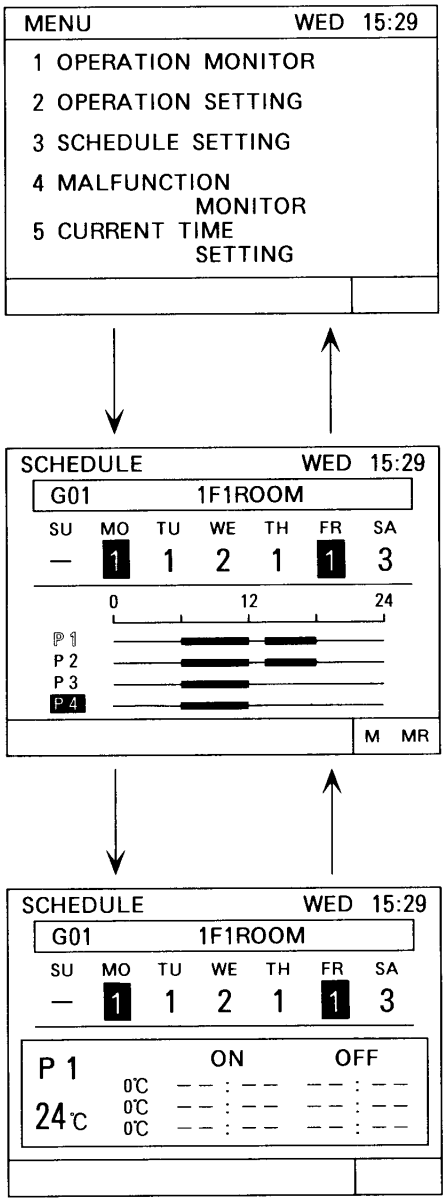
4-3 Timer operation

- A weekly schedule setting can be specified for each group.
- Possible to set on the timer the schedule to prohibit operation of the local remote controller in addition to ON/OFF schedule.
- Always set to current time on the current time setting screen when the schedule setting is performed.
  Refer to section "4-5 Current time setting".

〈Schedule setting function summary〉

① The ON and OFF (PROHIBITION and PERMISSION) times can be set in 10-minute units.
② The daily operation schedule can include up to three ON (PROHIBITION) time settings and three OFF (PERMISSION) time settings.
③ Three types (P1 - P3) of daily ON/OFF pattern and one type (P4) of prohibition/permission pattern are available respectively, each of which can be set every each group.
Week day which is not set in timer pattern is displayed with (–).
In addition, it is also possible to set the schedule which has combined P1 - P3 and P4 together .
(P1/P2/P3) In this case, both of ON/OFF pattern and prohibition/permission pattern are daily executed.
Any one of these options may be selected for each separate day of the week.
④ The schedule patterns can be copied easy to other group by the memory and memory read functions because the schedule contents can be recorded in the memory.
⑤ The setting temperature or set-back value setting can also be supported during timer operation.

〈Shifting to the schedule setting screen〉



User operation menu

Press the [3] switch to select "3 SCHEDULE SETTING".

Press the [BACK SCREEN] switch to back to the user operation menu screen.

Weekly schedule setting screen

- The schedule contents of each group can be monitor.
- Weekly schedule pattern setting can be performed.

Press the [←] [→] [↑] [↓] switch to move the cursor position to P1 (or P2 or P3 or P4). (The "P1" indication blinking.) And press the [ENTER] switch to the P1 (Pattern 1) schedule pattern setting screen.

Press the [BACK SCREEN] switch.

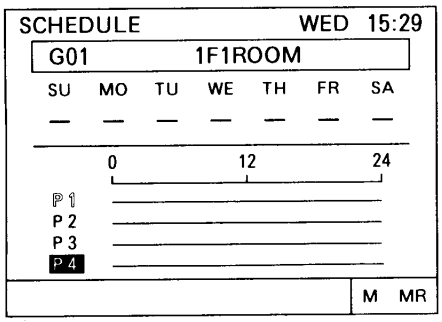
Schedule pattern setting screen

- Schedule pattern (P1~P3, P4) setting can be performed.

(1) Schedule pattern (P1~P3) setting

- Follow the procedures described below to set each daily schedule pattern for each group.
- The setting temperature or set-back values setting are also performed in the schedule setting operation. To enter the setting temperature or set-back value setting select SET-BACK or SET TEMP. Accordance with section "5-5 user setting (page 33)" in advance.
- The setting temperature or set-back value selected in this way take effect only during timer operation. Also set-back operation is cancelled if the setting temperature is changed using this central controller or a local remote controller.
  (The set-back operation resumes at the next timer-ON time)

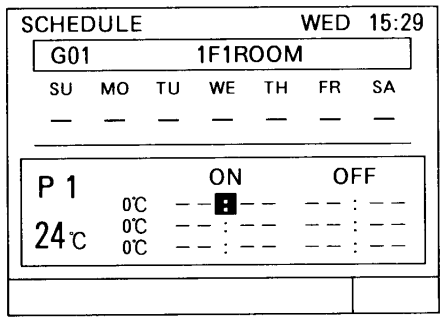
〈Schedule pattern setting (P1~P3, P4)〉



①Press the [◀ GROUP SELECT ▶] switch to display the group in desired the timer setting.

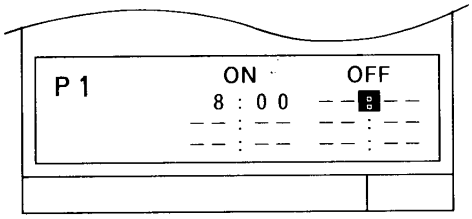
②Press the [←] [→] [↑] [↓] switch to move the cursor position to the pattern (P1~P3, P4) to be setting.

③Press the [ENTER] switch one time.



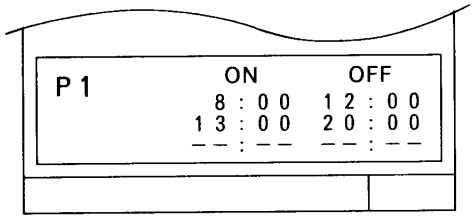
④The schedule pattern setting screen is displayed.

⑤Press the [←] [→] [↑] [↓] switch to move the cursor position to the first ON (PROHIBITION) time.



⑥Press the [CLOCK/PATTERN 5 ▲] / [8 ▼] switch to select the ON (PROHIBITION) time. (time is changed by 10 minutes unit.)

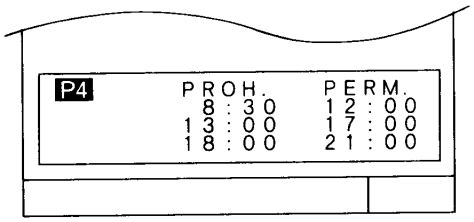
⑦Press the [ENTER] switch one time to set ON (PROHIBITION) schedule. (The cursor moves to the next setting position.)



⑧Perform operation ⑥ to select OFF (PERMISSION) time.

⑨Perform operation ⑦ to set the OFF (PERMISSION) time.

⑩Repeat operation ⑥ to ⑨ to set the second and third ON/OFF (PROHIBITION/PERMISSION) schedules in the same manner.
When the second or third ON/OFF (PROHIBITION/PERMISSION) schedule is not used, the characters "--:--" remain display and press the [ENTER] switch one time.



Setting example in case of P4

⑪To cancel the ON/OFF (PROHIBITION/PERMISSION) time that was set previously, use the [←] [→] [↑] [↓] switch to move the cursor to the time position to be cancelled and press the [RESET DEL] switch.

⑫When the P1 setting are completed, perform operation ② to ⑪ as necessary to perform the setting for P2 or P3 or P4.

(2) Set-back values and setting temperature setting

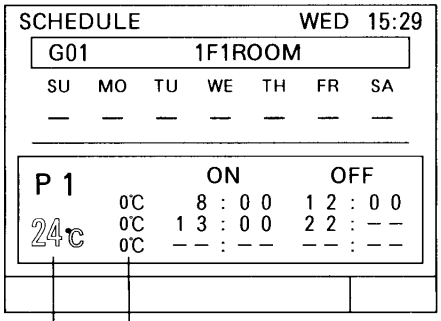
- Setting the set-back values and setting temperature can be performed only when selecting either "SET BACK" or "SET TEMP" on the user setting screen in the initial setting mode.
- Set-bak operation

  Set-back operation is a method which reduces the air conditioner running cost by controlling the operation with sepecified time band for lowered load. In other words the unit operates at a few degrees higher for cooling and a few degrees lower for heating in the specified time band.

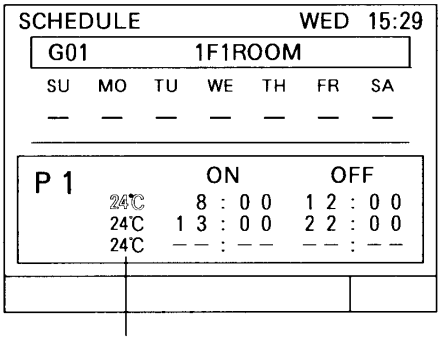
  《EXAMPLE》 When the reference temperature is 24℃ and the set-back value is set to 2℃.
  - Cooling operation : 24℃ + 2℃ = 26℃
  - Heating operation : 24℃ − 2℃ = 22℃
- Setting temperature operation

  This operation sets the temperature when timer ON is set to a predesignated temperature regardless of the operation mode.

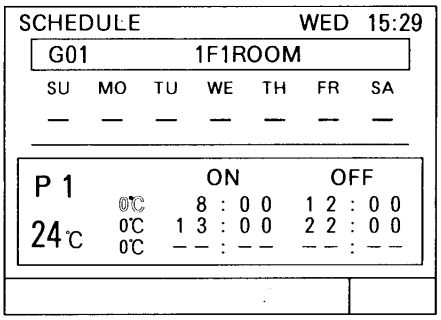
〈Set-back operation selected〉

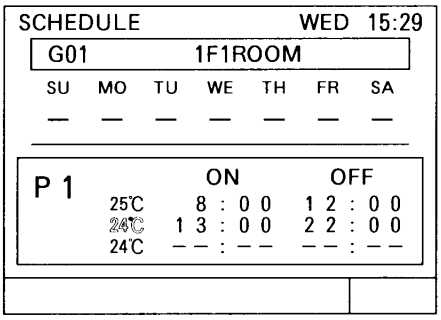


〈Setting temperature selected〉



①Press the [←] [→] [↑] [↓] switch to move the cursor position to the set-back reference temperature or setting temperature.





②Press the [5 ▲] / [8 ▼] (CLOCK/PATTERN) switch to select the following items.
- Set-back value;

  The reference temperature and set-back value for each ON time period are selected.
- Setting temperature:

  The setting temperature for each ON time period is selected.

③Press the [ENTER] switch to make setting.

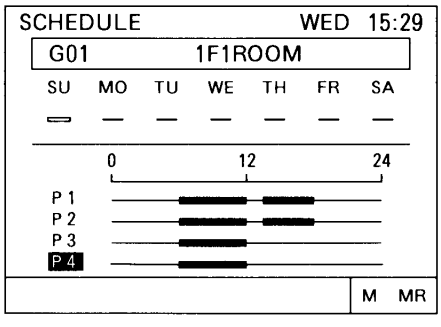
④Repeat operations ② and ③ to set the set-back value or setting temperature for each ON/OFF schedule.

⑤Press the [BACK SCREEN] switch.

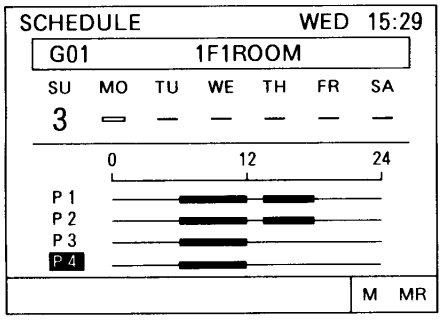
*The selecting range:
- The reference temperature for set-back operation : 19℃～28℃ (1℃ unit)
- The set-back value : 0～9 degree (1 degree unit)
- The setting temperature : 19℃～28℃ (1℃ unit)

(3) Weekly schedule setting

The schedule pattern P1 to P3, local remote control prohibition (P4), P1 to P3 of a composite pattern composed of P1 to P3 and P4, and non-timer operation (–) are set for each day.



①Press the [←] [→] [↑] [↓] switch to move the cursor to the pattern position to be set.



②Press the [5 ▲] / [8 ▼] (CLOCK/PATTERN) switch to select P1 to P4 or (–).

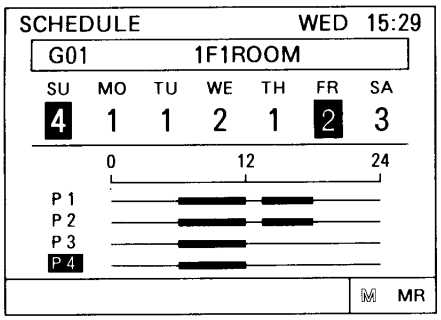
③Press the [ENTER] switch one time to complete the setting. (The cursor will move to the next setting position.)

④Repeat operations ② and ③ to assign the schedule pattern to each day.

NOTE: When the No.4 dip switch is set ON, P4 connot be set.

(4) Copying schedule content to other groups (memory, memory read)

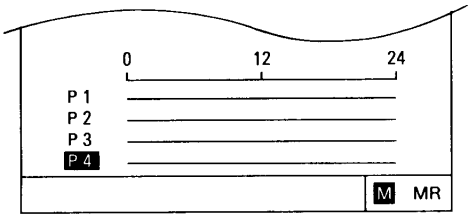
- The schedule pattern P1 to P3, weekly schedule pattern, set-back value or setting temperature of a one group can be recorded and copied to memory or to another desired group.
- Correction and modification can be easily performed after the copy operation is completed.



①Display the original group on the weekly schedule setting screen.

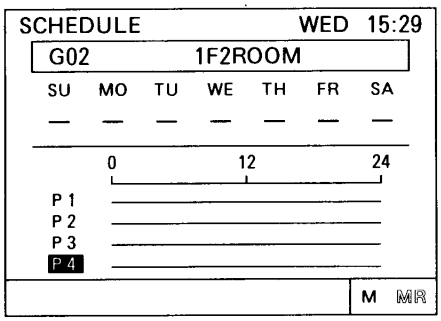
②Press the [←] [→] [↑] [↓] switch to move the cursor to "M".

③Press the [ENTER] switch one time to record the setting date in memory.
*To erase date from the memory, return to the user operation menu screen.



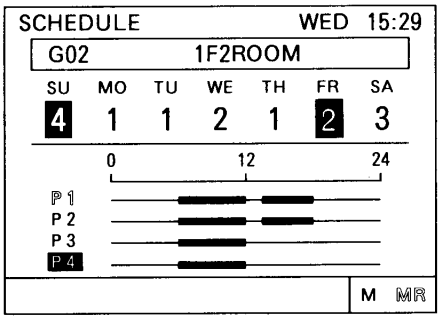
④"M" is displayed in reverse with blinking.

⑤Press the [◀ GROUP SELECT ▶] switch to select the group to which the data is to be copied.



⑥Press the [←] [→] [↑] [↓] switch to move the cursor to "MR".

⑦Press the [ENTER] switch to set the contents which will be the same as the setting data in memory.

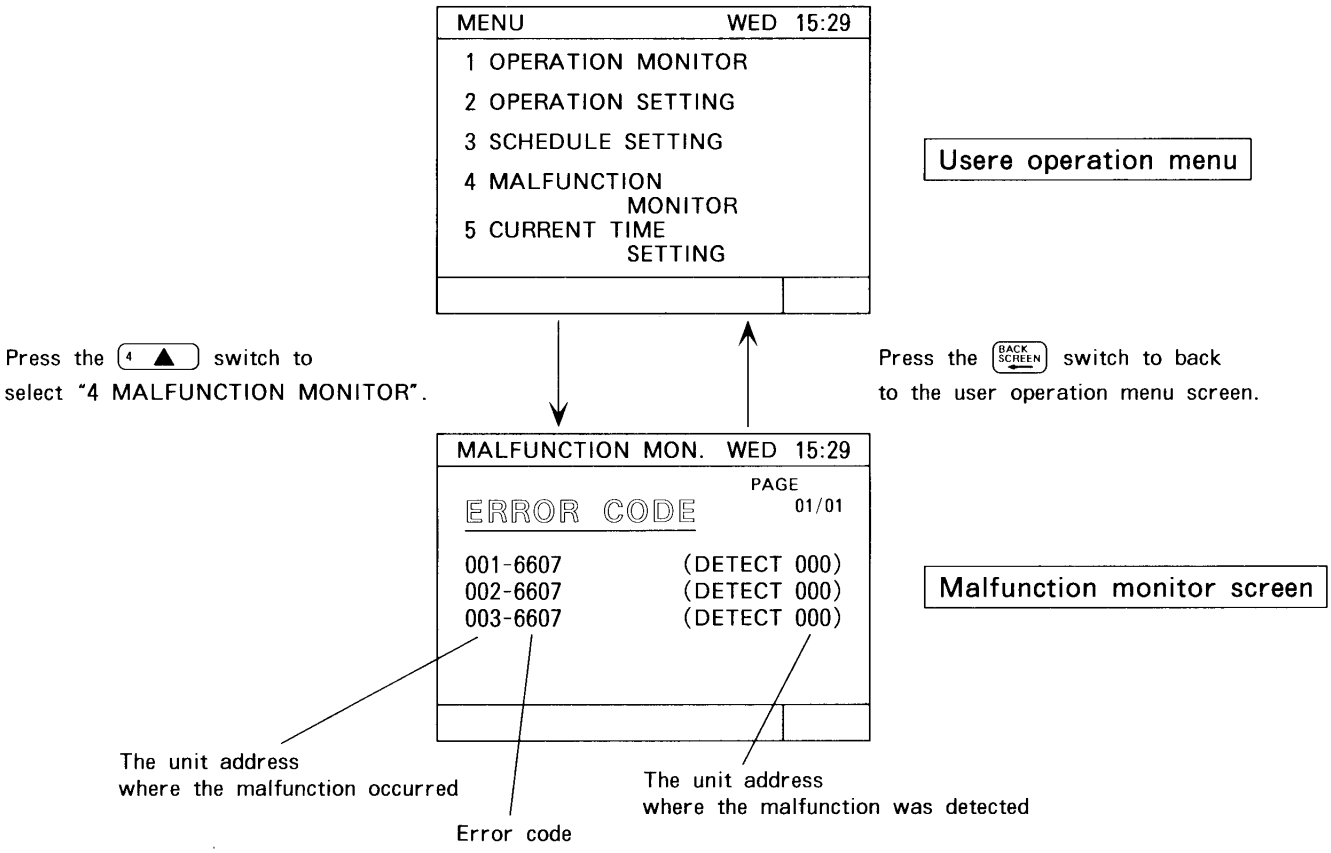


The same contents are displayed.
The contents stored in memory can be copied to other groups any number of times because these contents can not erased even if the memory read operation is used.

4-4 Malfunction

- The malfunction monitor function is used for conforming to the detaile of the malfunction condition when a malfunction is displayed on the operation monitor screen.
- The malfunction monitor function can display data describing up to nine malfunctions in the address number sequence on one page. This data contains the unit address where the malfunction occured, the error code and the unit addresss where the malfunction was detected.
- After checking the unit address where the malfunction occurred and the error code, please contact your dealer or technical representative as soon as possible.

〈Shifting to the malfunction monitor screen〉



NOTE: When there is no malfunction taking place, [NO ERROR] lights up instead of [ERROR CODE].

Page change operation

The page change opeation is performed by the [←] [→] [↑] [↓] switch.

Pressing the [→] or [↑] switch shows the current display page +1.

Pressing the [←] or [↓] switch shows the current display page −1.

Malfunction reset operation

Press the reset [RESET DEL] switch to reset all malfunctions.

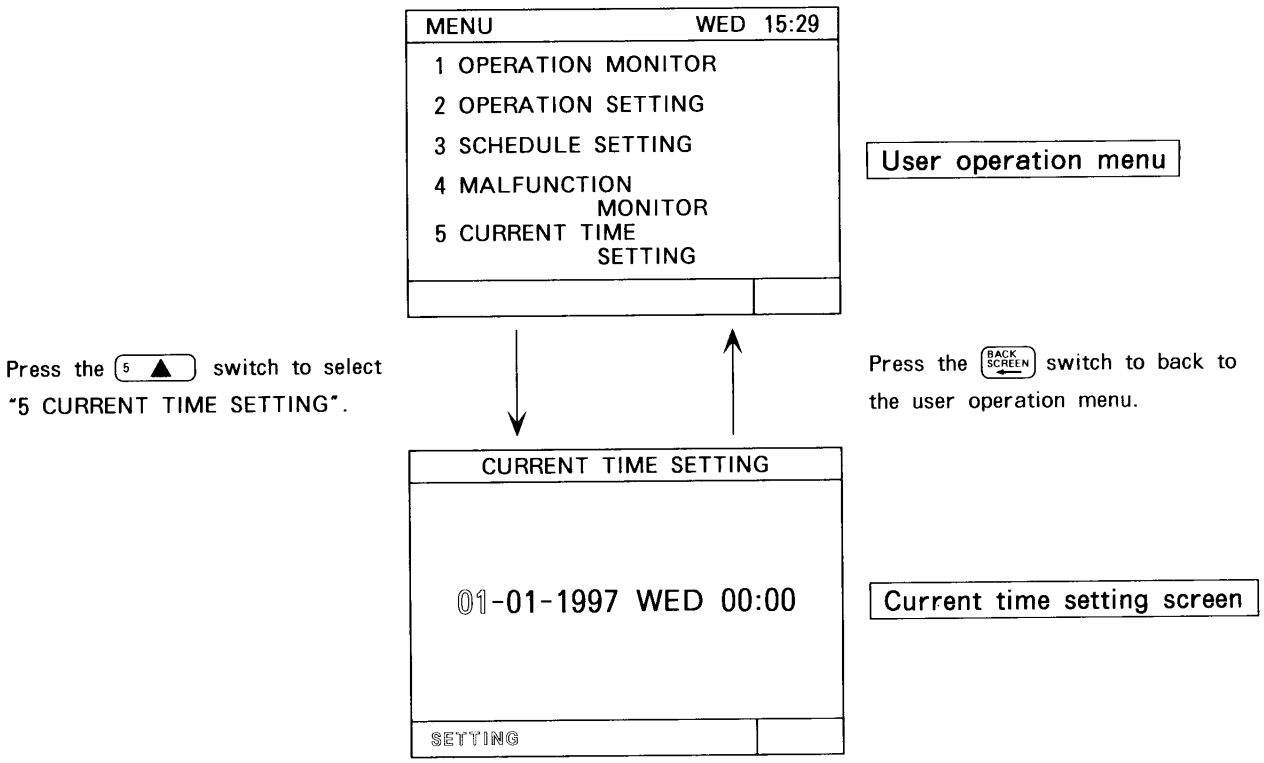
The reset operation can be performed on any page.

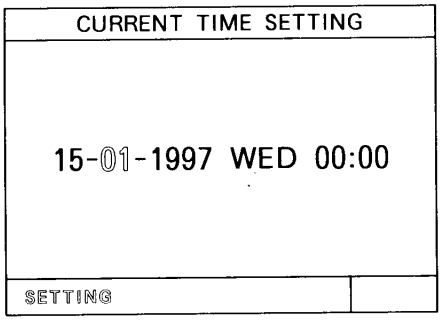
NOTE: When operation of the MJ-103MTRA is prohibited, reset operation is invalid.

4-5 Current time setting

The current time, day, month and year are set on the current time setting screen.

〈Shifting to the current time setting screen〉



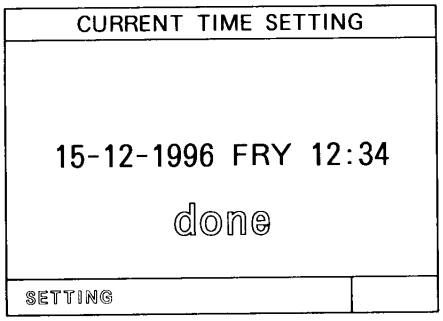


①Press the ← → switch to move the cursor position to be set.

②Press the 5 ▲ 8 ▼ (CLOCK/PATTERN) switch to set the number or day that are displayed.

③Repeat operations ① and ② to set the date day, month, year and time.

④Where all setting have been completed., press the ENTER switch.

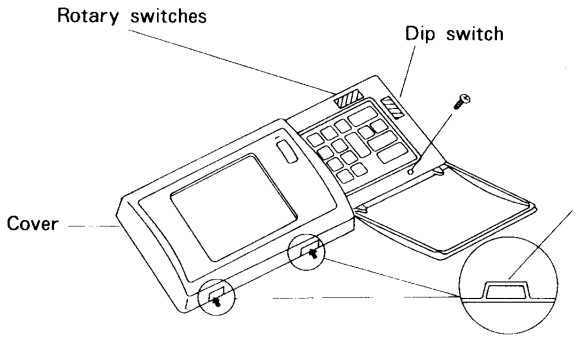


⑤The current time setting is executed and "done" is displayed with blinking for two seconds to indicate the current time setting completed and the clock count will start with the second reset to 0.

5. Initial setting

5-1 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.

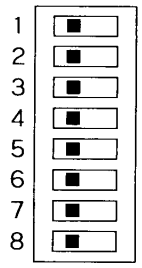
② Insert a screwdriver(−) into the slots and twist it to remove the cover from the upper case.

(1) Dip switch setting

● The functions of this controller are set acceding to the dip switch settings.
● Each switch is set to the ON and OFF positions as shown bellow.

● 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〉

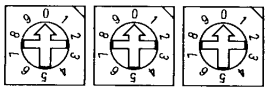


1 ——— OFF : User operation mode / ON : Initial setting mode
2 ——— OFF : Master system controller / ON : Slave system controller
3 ——— OFF : No K transmission converter installed / ON : K transmission converter installed
4 ——— OFF : Operation prohibit setting valid / ON : Operation prohibit setting invalid
5 ——— Reserved for future use (Leave this switch set to OFF)
6 ———
7 ——— External input changeover (refer to section "7 External input/output function")
8 ——— 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".

100digit 10digit 1digit



(Example : Address setting : 000)

Setting range : 000, 201～250 (Always set the address to "000" When the K transmisson converter is managed.)

NOTE: Observe the following precautions when this controller manages the M-NET models and K control models by using the K transmission converter (PAC-SC25KAA).
Refer to the K transmission converter instruction manual for further details.

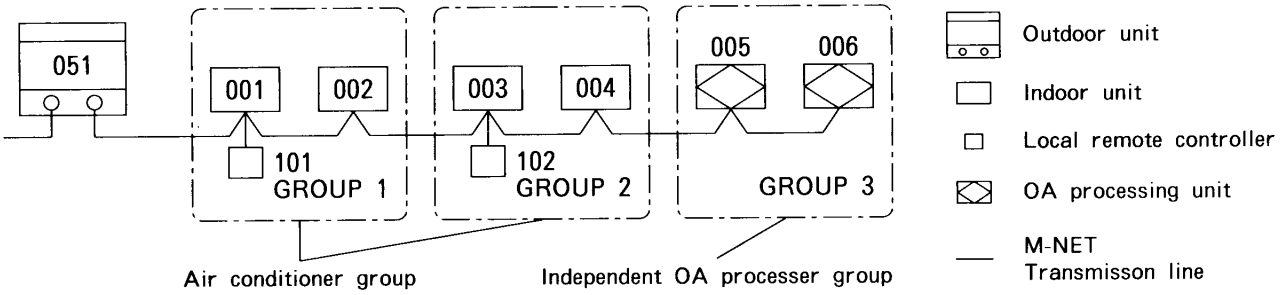
● Address of this controller
Always set the address of this controller to "000".
● Dip switch setting of this controller
Always set the No.3 switch of dip switch to ON.
● Indoor unit address
Set all the M-NET models of indoor units from 001, next, set the address of the K control indoor unit.

Indoor unit address	001～M-NET indoor unit maximum adress → K control indoor unit minimum address～ 050

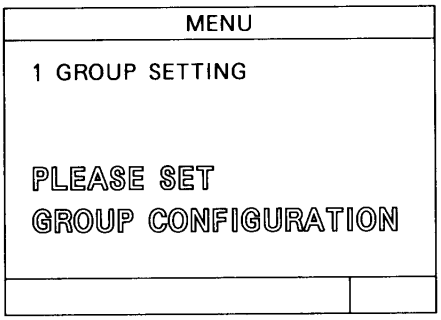
5-2 Group configuration setting

- Registration can be made for the indoor units, local remote controllers and slave system controllers in the same group.
- Registration can be also perfomed for the group which composed of only OA processing unit such as LOSSNAY. (Independent OA processing unit group)

〈Example for the group configuration〉

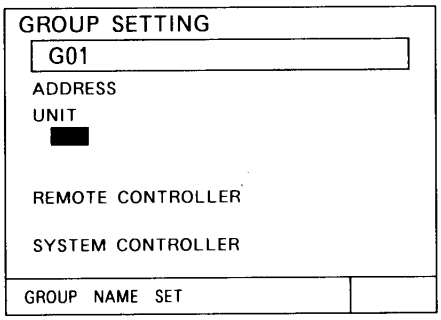


- Supply the power from the power supply unit (PAC-SC34KUA) through the M-NET transmission line.
- Perform the following procedures to set the group configuration becasue the interlocked operation setting will not be performed of the group configuration settings have not been performed.



①When the power is supplied to the controller, the screen shown on the left is displayed.

②Press the [1] switch to select "1 GROUP SETTING".



The group configuration setting screen is displayed.

③Press the [◀ GROUP SELECT ▶] switch to display the group number to be set.

④Press the [←] [→] [↑] [↓] switch to move the cursor to the address display position to be set.

⑤Used the numeric keypayed switch to set the address of the indoor unit, local remote controller, slave system controller in the display group number.

〈Operation example〉

When the indoor unit which address is 012.

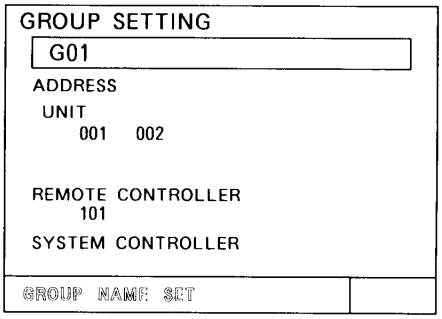
1) Input "0" 0
2) Input "1" 01
3) Input "2" 012
4) Press the [→] switch 012

* It is also possible just enter "1" "2".

〈When the input is incorrect〉

Before pressing [→] switch, continue to input the data. After pressing [→] switch, move the cursor to the addresses to be deleted and press the [RESET DEL] switch to delete these addresses.

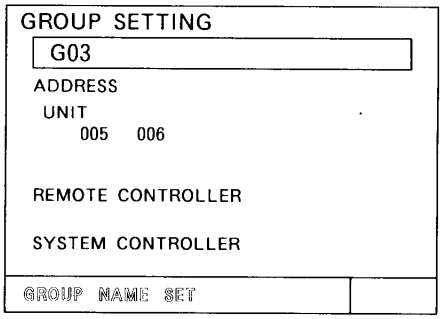
NOTE:
- Do not set the interlocked OA processing unit such as FRESH MASTER or LOSSNAY.
- Even if the addresses are input any order, it is switched to a sequence starting with low-order address.
- The independent OA processer unit can not set to the indoor unit group and it can not set to as a interlocked OA processor unit.



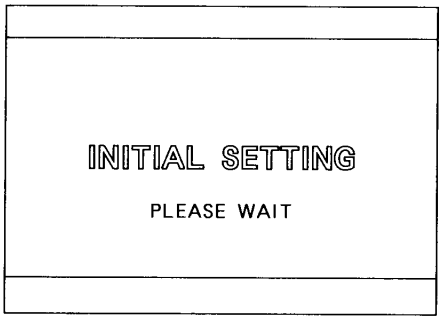
Set the all units and controllers to be registerd in the displayed group number.

⑥Repeat operation ③ to ⑤ to set all groups managed by this controller.

⑦When all setting are completed. press the [BACK SCREEN] switch.

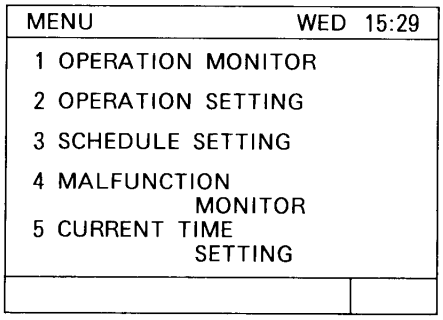


NOTE:
- When there is the local remote controller in the system, always be sure to set the local remote controller address. The local remote controller will not operate if the address setting is not perform.
- If there is the K transmission converter is component of the system, do not perform the group configurations setting in this controller for the K transmission converter.



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

NOTE: If the No.1 is ON at this time, the initial setting menu screen is displayed without the initial setting screen.



⑨The user operation menu is displayed.
User operation can be performed because the group configuration settings are completed.

When the interlocked operation settings are performed, refer to section "5-3 Interlocked operation setting".

When the group name settings are performed, refer to section "5-4 group name setting".

When the user setting are performed, refor to section "5-5 user setting".

Additions | Group configuration date collectively deletion

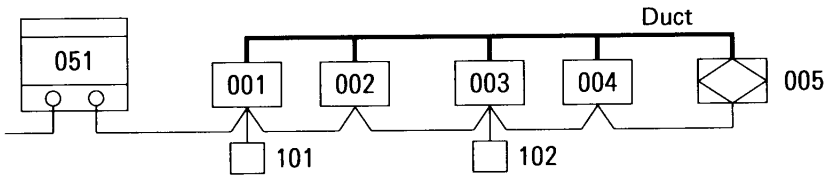
- DIsplay "G00" in the group configuration setting screen and press the [DEL] switch two times continuously to delete the all group configuration data and all interlocked operation data.

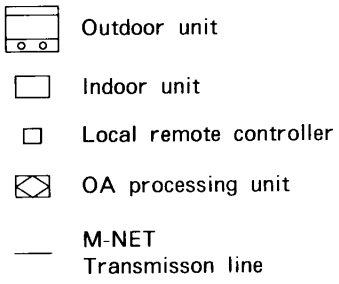
NOTE:
- When this unit is set to the slave system controller by the No.2 dip switch, group registration cannot be made. Confirmation of the contents of group registration is possible, however.
- To change the group configuration setting, turn ON the No.1 dip switch on the user operation menu screen and bring up an initial setting menu screen. Select "1. GROUP SETTING" on the setting menu screen, wait for the group setting screen to appear, and change the setting.

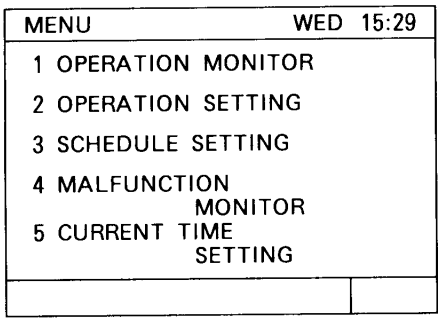
5-3 Interlocked operation setting

- Registration of interlocked operation of OA processing unit with single or multiple indoor unit is performed. All indoor units to be interlocked with OA processing unit for operation should be registered for the interlocking with OA processing unit.

〈Example for the interlocked group configuration〉

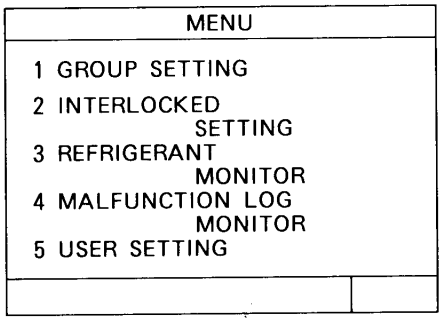






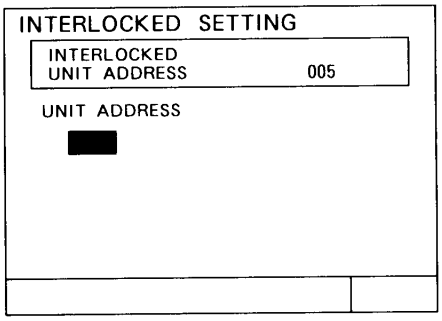
①Set No. 1 of dip switch to ON on the user operation menu screen.

NOTE: Always perform the No. 1 of dip switch to ON/OFF change operation from the user operation menu screen. Dip switch ON/OFF operation is invalid on the another screen.



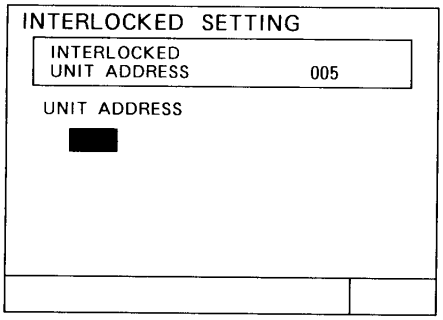
②Initial setting menu screen is displayed.

③Press the [2] switch to select "2 INTERLOCKED SETTING".



④The interlocked setting screen is displayed.
Minimum address of the interlocked OA processing unit which can be set to interlock with indoor unit is displayed on the "INTERLOCKED UNIT ADDRESS" display position. And the cursor is displayed in the unit address display position.

⑤Press the [◀ GROUP SELECT ▶] switch to display the address number of the interlocked OA processer unit that the setting will be perfomed on.



⑥Used the numeric keypad switch to set the address of the indoor unit that operates with displayed with displayed interlocked OA processing unit.

〈Operation example〉

When the indoor unt which address is 012.

1) Input "0" 0

2) Input "1" 01

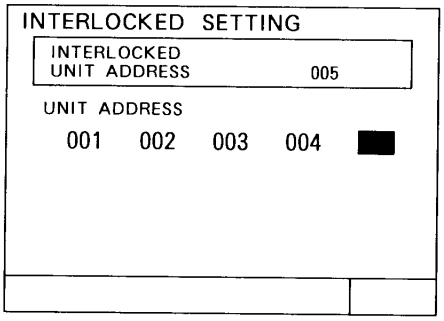
3) Input "2" 012

4) Press the [→] switch 012

* It is also possible just enter "1" "2".

〈When the input is incorrect〉

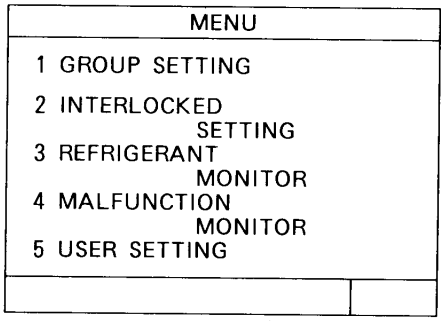
Before pressing [→] switch, continue to input the data. After pressing [→] switch, move the cursor to the address to be deleted and press the [RESET DEL] switch to delete these addresses.



⑦Set all the indoor unit that operates with displayed interlocked OA processing unit.

⑧Repeat operation ⑤ to ⑦ to set the indoor units in all interlocked operation unit managed by this controller.

⑨When all setting are completed, press the [BACK SCREEN] switch.



Initial setting screen is displayed.
This ends the interlocked operation setting.

When the interlocked operation settings are performed, refer to section "5-3 Interlocked operation setting".

When the group name settings are performed, refer to section "5-4 group name setting".

When the user setting are performed, refer to section "5-5 user setting".

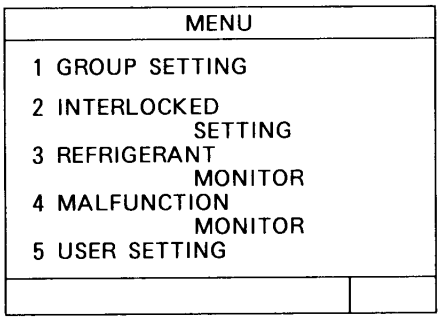
When the user operation is performed, return to the operation where dip switch No.1 set OFF. After the intial setting processing is completed (The initial setting screen will be displayed), refer to section "4 User operation (page 10)" and perform user operation.

NOTE: When this unit is set to slave system controller by No.2 dip switch, interlocked operation settings cannot be adjusted. Monitoring of the contens of the interlocked operation settings is possible, however.

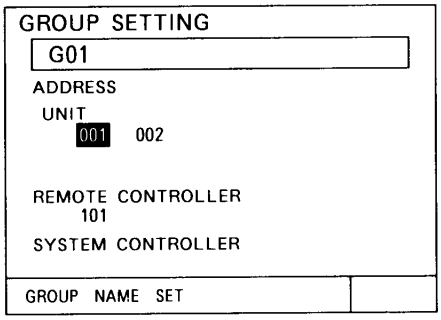
5-4 Group name setting

(1) Setting method

- Specify new group name.
- Either alphabet, numeric characters, hyphens or spaces can be used for name setting.
- Maximum of ten characters can be set.
- When the group name is displayed on the operation monitor screen, the first three characters of the group name are displayed.



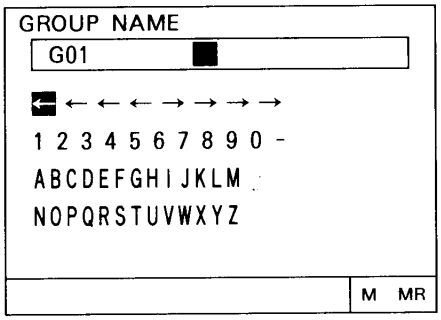
①Press the [1] switch to select "1 GROUP SETTING" on the initial setting menu screen.



②The group configuration setting screen is displayed.

③Press the [◀ GROUP SELECT ▶] switch to display the group number which will be set in the group name setting.

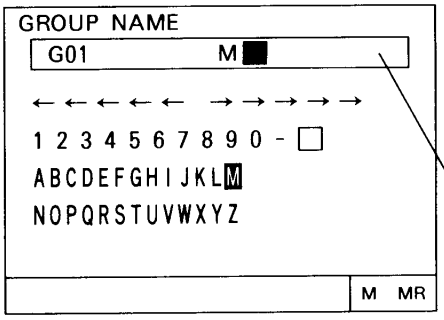
④Press the [ENTER] switch one time.



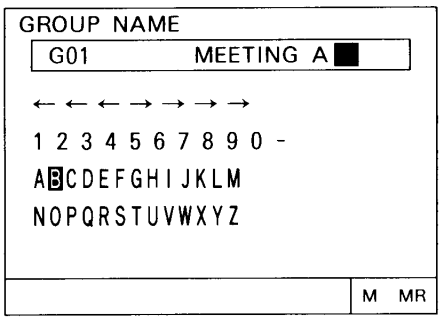
The group name setting screen is displayed.
⑤The character "←" is displayed in reverse.

⑥Press the [←] [→] [↑] [↓] switch to move the cursor to the desired character.

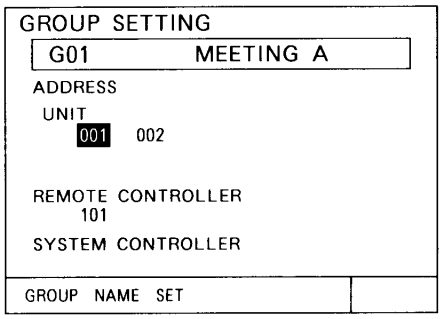
⑦Press the [ENTER] switch.



The selected character is displayed in the group name display area.
⑧Repeat operation ⑥ or ⑦ and set the group name.
When incorrect character is set, refer to section "Group name correction method (page 31)".



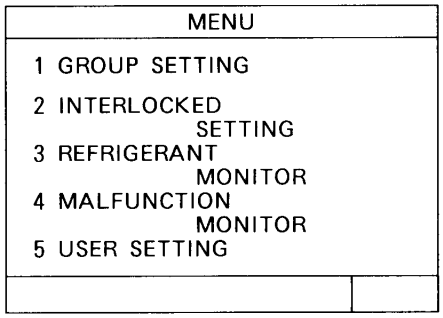
⑨When the group name setting is completed, press the BACK SCREEN switch.



The group configuration setting screen is displayed.

⑩Repeat operation ③ to ⑨ and perform the group name setting for each group.

⑪When all the group name setting are completed, press the BACK SCREEN switch.

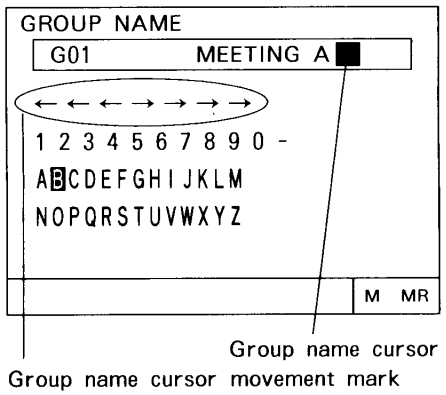


⑫The initial setting menu screen is displayed.

To perform the user setting, refer to section "5-4 user setting (page 33)".

To perform the user operation, return the operation where dip switch No.1 is OFF. Next refer to section "4 user operation" and perform user operation.

〈Group name correction〉



When performing corrections to the group name, move the group name cursor to the character to be correct.

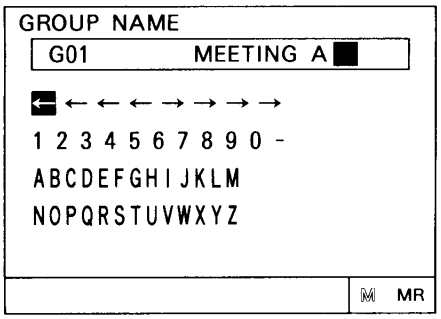
Group name cursor movement method

Move the cursor to one of the group name cursor movement mark using the ← → ↑ ↓ switch.

- Deletion methods
  Move the group name cursor to the character to deleted and press the DEL switch to delete the character.
- Insertion methods
  Move the group name cursor to the location where character is to be insert and press the 9 INS switch to enter desired space.

(2) Group name copy

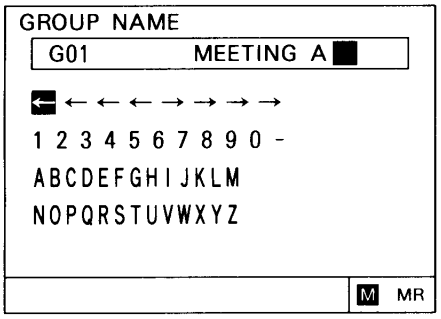
- A certain group name can be copied to another group.
  (This method use the "M" (memory) and "MR" (memory read) functions.)
- It is convenient to use a group name for other groups because a group name that was copied can also be corrected.



①Press the [◀ GROUP SELECT ▶] switch to display the original group on the group name setting screen.

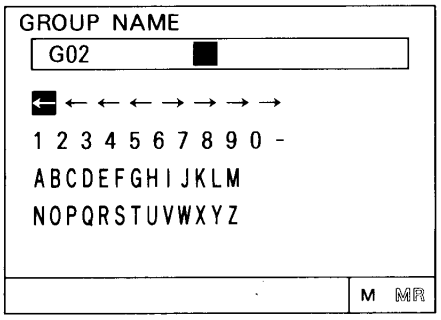
②Press the [←] [→] [↑] [↓] switch to move the cursor to "M".

③Press the [ENTER] switch one time to record the setting name in memory.



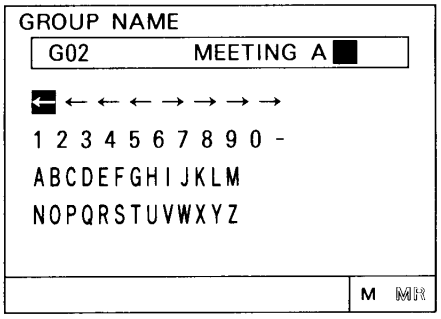
④"M" is displayed in reverse with blinking.
Recording the setting name to memory is completed.

⑤Press the [◀ GROUP SELECT ▶] switch to select the copy destination group.



⑥Press the [←] [→] [↑] [↓] switch to move the cursor "MR".

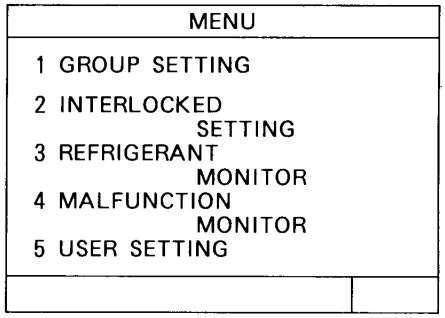
⑦Press the [ENTER] switch to read in memory.



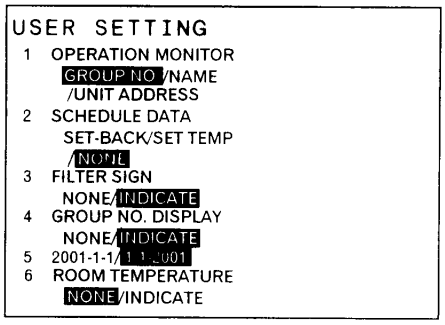
⑧Preformed the memory read for the group name.
Refer to section "(1) setting method (page 30)" and perform the correction of the group name.

5-5 User setting

- To match the needs for the user, this menu is to specify some of the indications and functions that appear on the user operating screen.



①Press the [5 ▲] switch to select "5 USER SETTING" on the initial setting menu sceen.



Setup condition before delivery from the shop

The user setting screen is displayed.

②Press the [←] [→] [↑] [↓] switch to select the items to be set.

③When all the selection are completed, press the [BACK SCREEN] switch to return to the initial setting menu screen.

Item 1. Operation monitor screen display settings

"GROUP NO."	: Group are indicated by group number on the operation monitor screen.
"NAME"	: Group are indicated by their first three characters of the group name on the operation monitor screen.
"UNIT ADDRESS"	: Individual units are indicated by their unit address on the operation monitor screen.

Item 2. Setting the set-back value and the setting temperature used in conjunction with schedule operation.

- The set-back value or the setting temperature setting are possible when operation is linked with the schedule operation.

"SET-BACK"	: Allows setting set-back value used in conjunction with ON/OFF patterns during schedule operation.
"SET TEMP"	: Allows setting of the setting temperature used in conjunction with ON/OFF patterns during schedule operation.
"NONE"	: The schedule operation is only performs normal ON/OFF patterns.

Item 3. Setting filter sign indication

"INDICATE"	: Allows the indication of filter sign.
"NONE"	: Filter sign is not indicated.

Item 4. Group number display

"INDICATE"	: Enable display of group number on the operation setting screen and the schedule setting screen.
"NONE"	: Group number is not indicated.

Item5. Change to the sequence of current time

"2001-1-1"	: Current time indicate in a sequence of year, month and date on the current time setting screen.
"1-1-2001"	: Current time indicate in a sequence of date, month and year on the current time setting screen.

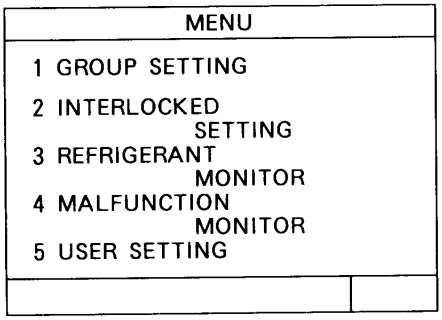
Item 6. Room temperature indication

"INDICATE"	: Indicated every each group
"NONE"	: Not indicated every each group

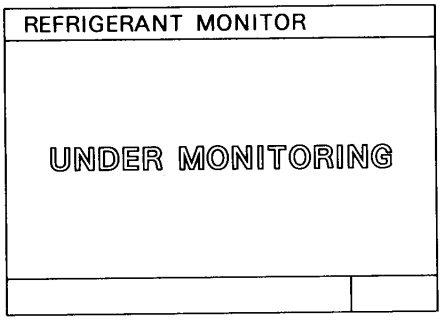
6. Maintenance function

6-1 Refrigerant system monitor function

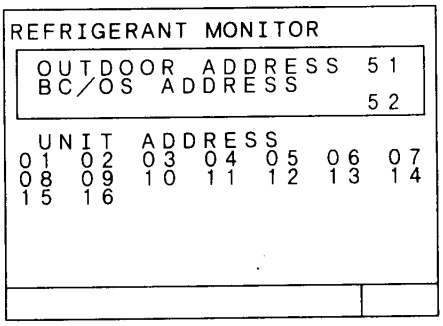
- This function allows monitoring of unit address of indoor units or BC controller (R2 series only) by refrigerant system. It is useful for checking address settings, transmission line connection during installation.



①Press the [3] switch to select "3 REFRIGERANT MONITOR" on the initial setting menu screen.



The processing for monitoring of the refrigerant system is executed. Please wait.



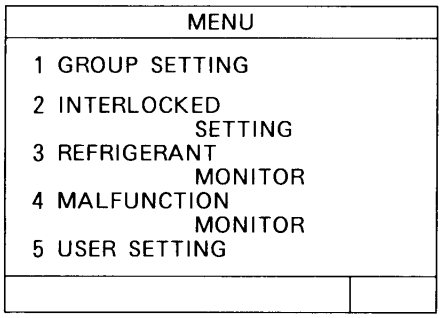
The refrigerant system monitor screen of the lowest outdoor unit address is displayed.

Press the [◀ GROUP SELECT ▶] switch to change the displayed refrigerant system.

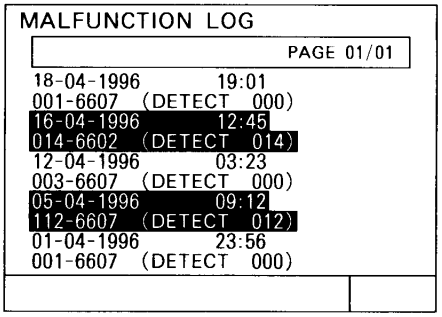
When the monitoring is end, press the [BACK SCREEN] switch to back to the initial setting menu screen.

6-2 Malfunction log monitor function

- This function allows monitoring of a log of the last 64 malfunction.
- The contents of malfunction and time time the malfunction is occurred are displayed. The contents of malfunction are the address of unit where it occured, the error code and the address of unit that detected the malfunction.
- These data are remain in memory even if supplied power is cut off.
- The malfunction log data can be deleted using the malfunction log reset operation. If the malfunction log data are reset after the system is maintenance, the log will provide a convenient record of the malfunction that have occurred aftre that time when the system is next maintenance.



①Press the [4 ▲] switch to select "4 MALFUNCTION MONITOR" on the initial setting menu screen.



The malfunction log monitor screen is displayed.

②Changing pages on the malfunction log monitor screen.

Each time to this switch is pressed, the current page +1 is displayed.

Each time to this switch is pressed, the current page −1 is displayed.

③Malfunction log reset operation

Press the [RESET DEL] switch to clear the malfunction log.

7. External input/output function

7-1 External input function

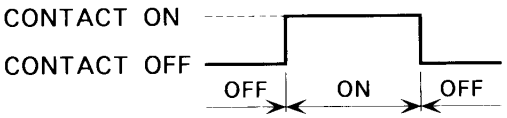
(1) The function of external input

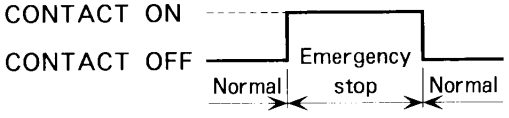
- Emergency stop/normal operation, ON/OFF, local remote control prohibit/permit can be controlled for all air conditioners being controlled with a non-voltage contact signal input from an external input source. (Select with the dip switches)
- The condition of external input signal is displayed on the operation setting screen for each group.

No.	Function of external input signal	Dip switch		Remarks
		No.6	No.7	
1	External input signal not used	OFF	OFF	———
2	Perform emergency stop with level signal	OFF	ON	During emergency stop, only ON/OFF of the central controller and local remote controller's operation will be prohibit.
3	Perform ON/OFF operation with level signal	ON	OFF	Only the ON/OFF operation of the central controller and the local remote controller will be prohibit.
4	Perform ON/OFF operation, prohibit/permit operation with pulse signal	ON	ON	Set the pulse width while the contact is ON to 0.5 to 1.0 second.

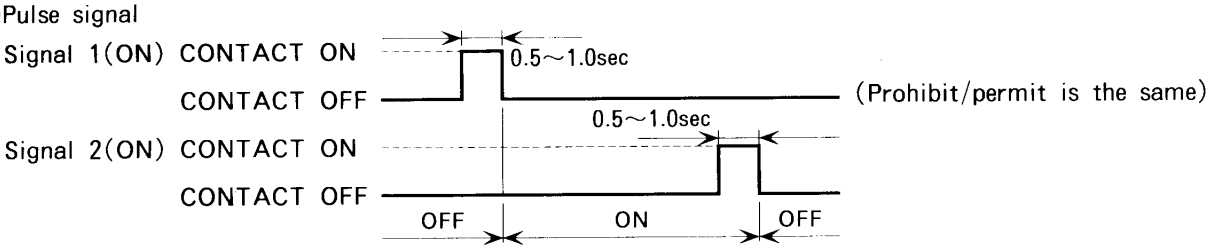
(2) Level signal and pulse signal

①Level signal





②Pulse signal



(3) Specification of external input interface

CN3	Lead wire	Emergency stop/normal level signal	ON/OFF level signal	ON/OFF, prohibit/premit pulse signal
No.1	Orange	Emergency stop/normal input	ON/OFF input	ON input
No.2	Yellow	Not used	Not used	OFF input
No.3	Blue	Not used	Not used	Local remote controller prohibit input
No.4	Violet	Not used	Not used	Local remote controller permit input
No.5	Green	Common (0V)		

(A) Level signal

①When the level signal is selected, the operation (only ON/OFF operation) for the central controller and the local remote controller are prohibited (except during normal operation).

②When the emergency stop/normal operation signal is selected, the status will be chaneged from normal operation to emergency stop when the external input signal contact turns OFF to ON, and will be changed from emergency stop to normal operation when external input signal contact turns ON to OFF.

③When ON/OFF input signal is selected, the status will be changed from OFF to ON when the external input signal contact turns OFF to ON, and will be changed from ON to OFF when the external input signal contact turns ON to OFF.

(B) Pulse signal

①Even if the ON signal is input during ON, the status will remain at the ON status.

②When the local remote controller is prohibited, the ON / OFF operation, operation mode selection and tempurature setting from the local remote controller is prohibited.

③Set the pulse width (contact ON time) to 0.5 to 1.0 second.

7-2 External output function

(1) The function of external output

- The "ON" signal is output when one or more air conditioner are ON operation.
- The "Malfunction" signal is output when one or more air conditioner malfunctions.

(2) Specification of external output interface

CN1	Lead wire	Description of each terminal
No.1	Red	Common (DV 5V)
No.2	Black	ON/OFF
No.3	Brown	Malfunction/Normal

①"ON" signal and "Malfunction" signal will both be output.

This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is based on the following EU regulations:

- Low Voltage Directive 73/23/EEC
- Electromagnetic Compatibility Directive 89/336/EEC

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