This product is designed and intended for use in a residential, commercial or light-industrial environment.
The product at hand is based on the following EU regulations:

- Electromagnetic Compatibility Directive 89/336/EEC

MITSUBISHI ELECTRIC CORPORATION
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MITSUBISHI ELECTRIC CORPORATION

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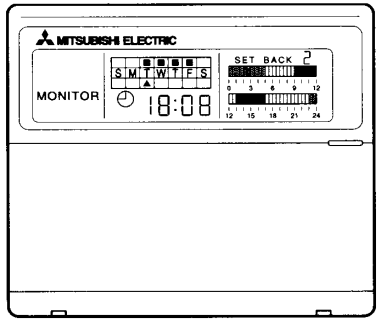
Mitsubishi Electric Building Air Conditioning Control System

PROGRAM TIMER PAC-SC32PTA

FOR USER



INSTRUCTION BOOK

Carefully read this book before use. It is recommended to safe keep this book for future reference.

MITSUBISHI ELECTRIC

Contents

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Thank you for purchasing PROGRAM TIMER for the Mitsubishi Electric Building Air conditioner. This Program timer has the following functions.

(1) DAILY TIMER FUNCTION
Timer operations of 3 patterns ON/OFF/SET BACK can be selected dividing the 24 hours into 30 minute units.

(2) WEEKLY TIMER FUNCTION
The above daily timer operation pattern can be selected for each day of the week.

1. PRECAUTION

For Your Safety

- Before attempting to use this controller, read this manual thoroughly for the proper use. The following words and symbols mark special messages throughout this guide.
- Be sure to follow the direction. Your safety is at stake.

⚠ WARNING	Indicates that failure to follow directions could result in bodily harm or loss of life.
⚠ CAUTION	Indicates that failure to follow directions could result in serious danger according to circumstances.

- After reading this manual, keep it available for prompt reference for operators.

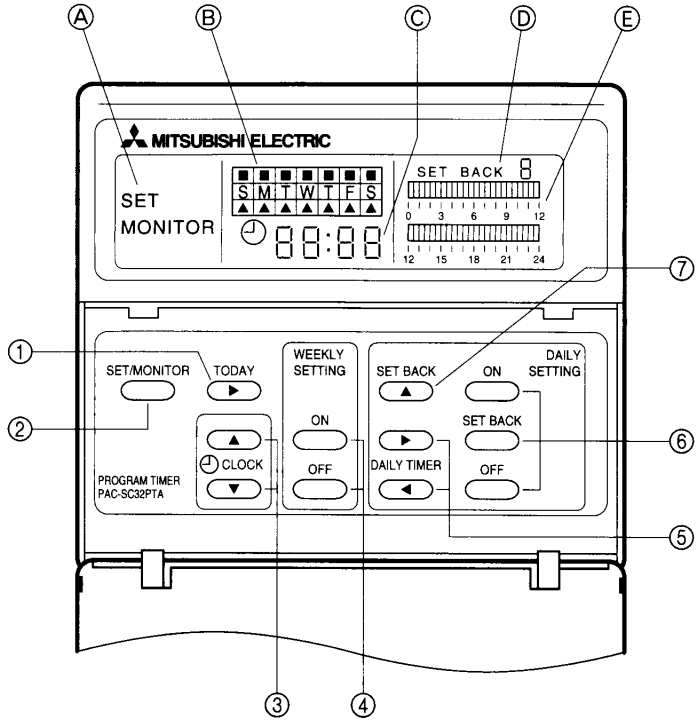
⚠ WARNING

- Installation must be executed only by authorized MITSUBISHI dealers or specialists.
  - Installation by non-authorized persons could cause errors that lead to electric shock and fire.
- Install the controller properly according to the installation manual.
  - Incomplete installation could result in electric shock and loss of life.
- Install the controller to a location resistant to weight.
  - Insufficient strength could cause the controller to fall and cause bodily harm.
- Electrical construction must be executed only by qualified persons according to the regulations and standards concerning the electrical equipment and wiring, and the operating manual.
  - Insufficient capacity of electric circuit or incomplete construction could result in electric shock and fire.
- Connect lines properly using the prescribed cables, and fix the cables securely so that the external force will not be conveyed to the terminal connections.
  - Incomplete connection or fastening could result in heat and fire.
- When relocating this controller , contact the authorized MITSUBISHI dealer or specialists.
  - Improper installation could result in electric shock and fire.
- NEVER attempt to modify or repair the controller by yourself.
  - Improperte repair could result in electric shock and fire. Contact your local dealer for servicing.

⚠ CAUTION

- DO NOT install the controller in a location that is near combustible gases.
  - If combustible gas leaks and accumulates around this controller, fire could result.
- DO NOT install the controller in a location where the ambient temperature rises above 40°C or falls below 0°C or is in direct sunlight.
  - Distortion and malfunction could result.
- DO NOT use this controller in a special environment.
  - Using this controller in a location exposed to oil (including machinery oil), steam, and sulfide gas could deteriorate the performance or damage the parts.
- DO NOT install the controller in places that have a lot of steam, such as a bathroom or kitchen.
  - Avoid a location where walls are subject to condensation. Malfunction could result.
- DO NOT install the controller in a location where acid or alkali solutions or particle sprays are frequently used.
  - Distortion and malfunction could result.
- DO NOT touch any of the control buttons with a wet hand.
  - Electric shock or a malfunction could result.
- DO NOT press any of the control buttons using a sharp object.
  - Electric shock or a malfunction could result.

2. NAME AND FUNCTIONS



Ⓐ SET/MONITOR DISPLAY:
When SET is displayed, clock adjustment, change of day, and daily and weekly timer settings can be performed. When MONITOR is displayed, all switches except SET/MONITOR SW are invalidated. This is normal status.

Ⓑ WEEKLY TIMER SETTING DISPLAY:
Used to select whether the operation pattern set using the PATTERN SETTING can be applied to different days of the week.

Ⓒ CURRENT TIME DISPLAY:
During MONITOR status, current time is display.
During daily timer setting, a time desire for timer setting is displayed.

Ⓓ SET BACK DISPLAY:
Indicates the setting set back range.

Ⓔ DAILY TIMER SETTING DISPLAY:
24 hours is divided into 48 blocks and each block is expressed in 30 minutes.
The block display consists of 3 patterns.

① WEEK DAY SETTING SW:
Used for week day setting.
Pushing (▶) SW moves the week day light display in order of **S** → **M** → **T** → **W** → ... enabling to set the week day.

② MODE SELECTOR SW:
Using this switch, select "MONITOR" or "SET" Mode
"MONITOR": Indicates the current timer setting. All switches expect MODE SELECTOR SW are invalidated then. This is the normal status.
"SET" : Set to "SET" mode for clock adjustment, change of day and daily and weekly timer settings.

③ CLOCK ADJUSTMENT SW:
Used for adjustment of the current time.
Push (▲) SW to advance the time. Each time the button is pushed the time advances by 1 minute, pushing continuously advances by 1 minute at 0.5 second intervals, and when the lower digit of the minute becomes "0" the time advances in 10 minute units.
(▼) SW is used for reversing the time. Each time the button is pushed the time reverses by 1 minute, pushing continuously reverses the time by 1 minute at 0.5 second intervals, and when the lower digit of the minute becomes "0" the time reverses in 10 minute units.

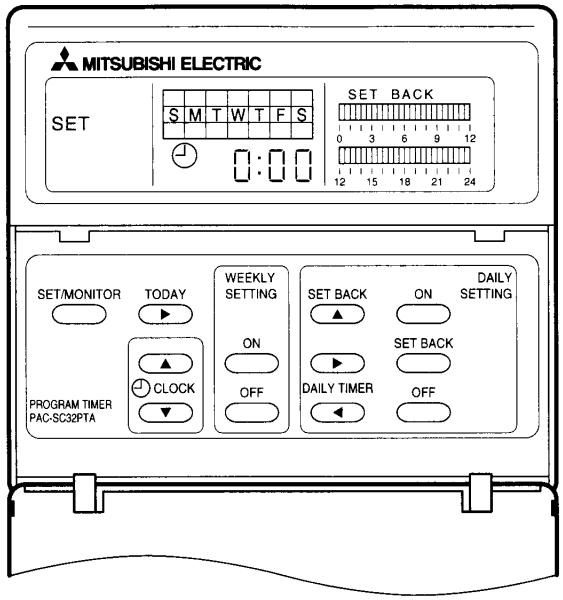
④ WEEKLY TIMER SW:
Used for setting timer in day of week unit.

⑤ DAILY TIMER SW
Used for timer setting in 30 minute units.

⑥ ON/SET BACK/OFF SW
Used to specify the time setting pattern.

⑦ SET BACK SETTING SW
Used for set back setting.
Set back can be done in the range of 1, 2, 4, 6 and 8 °C.

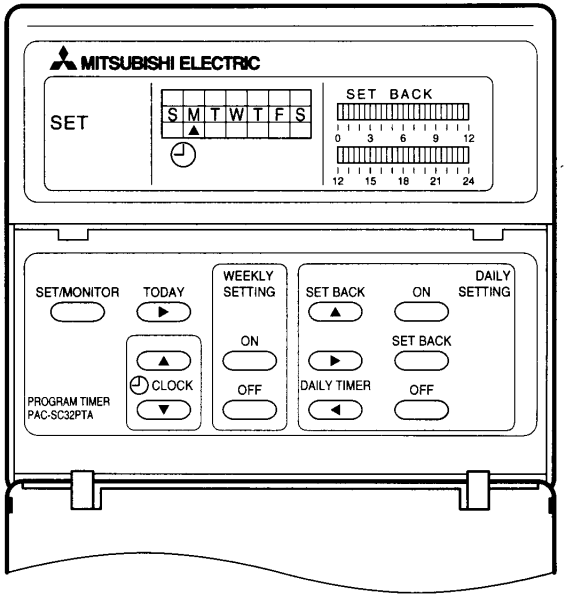
3. TIME ADJUSTMENT



(1) Push the "MODE SELECTOR" SW to select the "SET" mode.
(2) To advance the time push the "CLOCK ADJUSTMENT" SW (▲).
The clock advances by 1 minute each time the button is pushed. Keeping the button pushed continuously advances the time by 1 minute at 0.5 second intervals. Then, when the lower digit of the minute becomes "0" the time reverses in 10 minute units.
Time display is in 24 hour units.
(3) To reverse the time push the "CLOCK ADJUSTMENT" SW (▼).
Each time the button is pushed the clock reverses by 1 minute. Keeping the button pushed continuously reverses the time by 1 minute at 0.5 second intervals. Then, when the lower digit of the minute becomes "0" the time reverses in 10 minute units.
(4) You cannot set the seconds. However, each time the (▲) or (▼) "CLOCK ADJUSTMENT" SW is pressed, the second count restarts from zero.
(5) When setting ends, push "MODE SELECTOR" SW and return to "MONITOR" mode.
(6) Even if the mode display indicates "SET" mode, the current time displays unless either the (▲) or (▼) "CLOCK ADJUSTMENT" SW is pushed.

4. WEEK DAY SETTING

(1) Push the "MODE SELECTOR" SW and select the "SET" mode.
(2) Pushing the "TODAY" SW (▶) moves the "▲" cursor in the order of
S → M → T → W ...
While watching the current week day display set the current day of the week.
(3) When the settings are finished, push the "MODE SELECTOR" SW to return to the "MONITOR" mode.



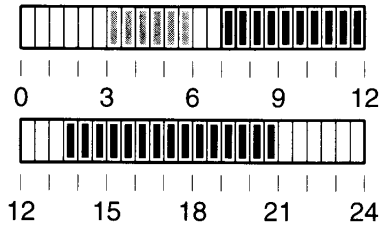
5. TIMER SETTING

(1) Daily timer setting

a) Display

As shown at the right, 24 hours is divided into 48 blocks and each block is expressed in 30 minute units. The block display consists of 3 patterns as shown below.

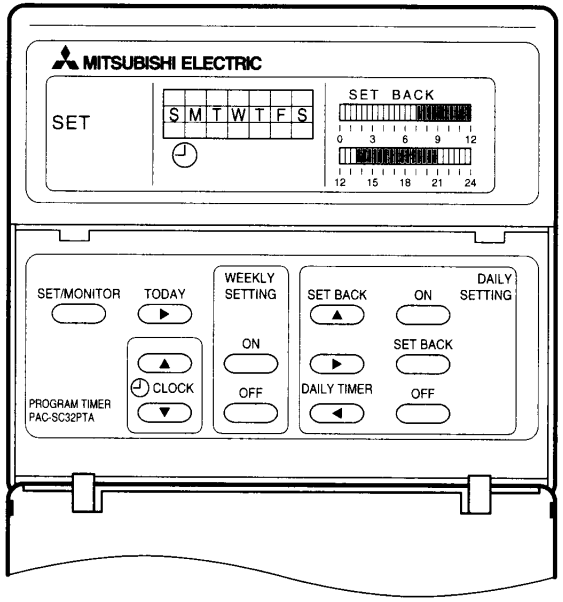
Lit block : Unit running command
Blinking : Unit set back operation command
Off : Unit stopping command



Example shown at right means the following:

7:00 ~ 12:00, 13:30 ~ 21:00 — Lit → Unit is operating
3:00 ~ 6:00 (hatched) — Blinks → Set back operation
21:00 ~ 3:00, 6:00 ~ 7:00 / 12:00 ~ 13:30 — Off → Unit has stopped

b) Daily timer setting



① Push the "MODE SELECTOR" SW and select the "SET" mode.
② Since the block for the current time is blinking move the blinking block to a time desired for timer setting by pushing the "DAILY TIME" SW (▶ or ◀).
(If the set back operation is already set, that block is also blinking but at a slower interval)
③ Specify the time setting pattern in the following manner.
[For running] → Push the "ON" SW (ON) → that block lights → the blinking block moves to the next.
[For set back operation] → Push the "SET BACK" SW (SET BACK) → that block blinks → the blinking block moves to the next.
[For stopping] → Push the "OFF" SW (OFF) → that block goes out → the blinking block moves to the next.
A continuous timer pattern can be set by pushing the ON SW, SET BACK SW or OFF SW continuously.
④ When the timer pattern setting ends push the "MODE SELECTOR" SW and return to the "MONITOR" mode.

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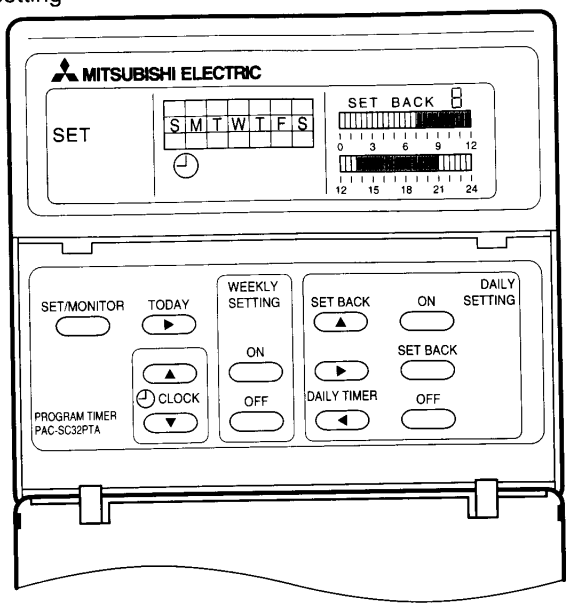
(2) Set back setting



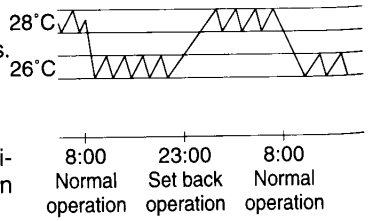
① Push the "MODE SELECTOR" SW and select the "SET" mode.
② Push the "SET BACK SETTING" SW. Set back can be done in the range of "1", "2" "4", "6" and "8" °C.
The set back display indicates the setting in the range of "1", "2", "4", "6" and "8" then returns to "1" after "8" is indicated.
③ When the settings are finished, push the "MODE SELECTOR" SW and return to the "MONITOR" mode.
When in the "MONITOR" mode set back will not be displayed unless the set back pattern is set by step (1)-b) above.
④ Even during the set back operation the temperature setting display on the remote controller remains unchanged.

SET BACK RANGE

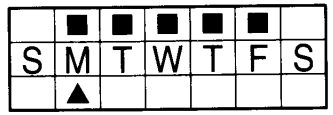
1 :	1 deg (°C)
2 :	2 deg (°C)
4 :	4 deg (°C)
6 :	6 deg (°C)
8 :	8 deg (°C)

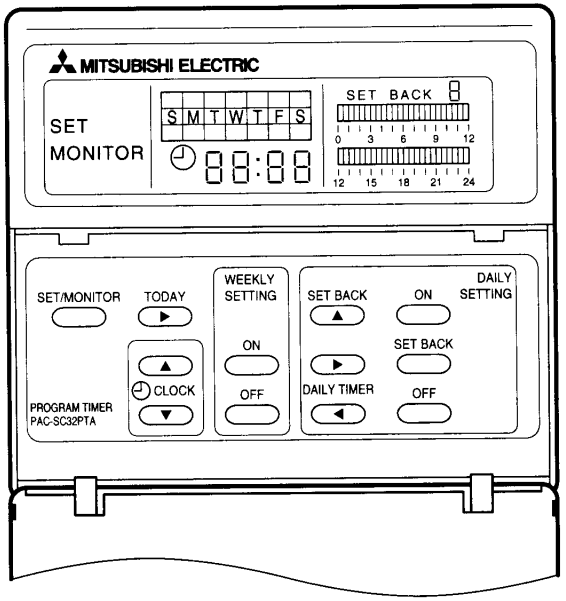
NOTE: Set back operation
Set back operation is a method which reduces the air conditioner running cost by controlling the operation with specified time band for lowered load. In other words the unit operates at a few degrees higher for cooling and a few degrees lower for heating in the specified time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

EXAMPLE: Air conditioning in a hotel operating 24 hours.
8:00 ~ 23:00 Cooling 26°C setting
23:00 ~ 8:00 Set back operation
2°C set back → 28°C
As shown in the graph the thermostat setting automatically rises 2°C during the set back specified time, then returns to normal setting when the time ends.



(3) Weekly timer setting
The weekly timer setting allows you to select on which days of the week the one-day operation pattern (set in (1)-b) will come into effect. The day of the week lit up in the lower row of the display indicates the current day (today); the days lit up in the upper row indicate the days for which the one-day operation pattern is currently activated (in the example at left Monday through Friday are selected for timer operation while Saturday and Sunday are not selected).



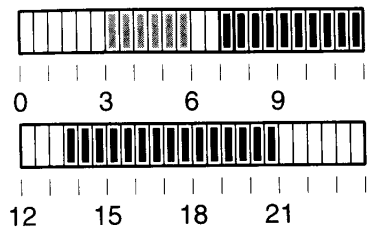


① Push the "MODE SELECTOR" SW and select the "SET" mode.
② At this time the upper row section of the current week day blinks. If the weekly timer operation is to be selected push the "WEEKLY TIMER SETTING" SW (ON), and if it will not be used push it (OFF).
Subsequently the next week day starts blinking, thus repeat the same procedure for selection.
③ When the weekly timer setting is finished, push the "MODE SELECTOR" SW and return to the "MONITOR" mode.

6. TIMER OPERATION

This section explains the timer operation' showing the following examples of set patterns.

Lit : Air conditioner unit running command.
Blinking : Air conditioner unit set back operation command.
Off : Air conditioner unit stopping command.



In the example at left

7:00 ~ 12:00, 13:30 ~ 21:00 Lit → Unit is operating
3:00 ~ 6:00 (hatched) Blinks → Set back operation
21:00 ~ 3:00, 6:00 ~ 7:00 } Off → Unit has stopped
12:00 ~ 13:30 }

(1) When connected to a remote controller

① Push the "TIMER MODE" SW of the remote controller and set the "◴" mode. The unit operates in the pattern set with the program timer. Selecting the "TIMER OFF" mode ("◴" is not displayed) invalidates the program timer operation pattern.
If the program timer is connected, the 24 hours ON/OFF timer of the remote controller cannot be used.

7. THE TIME OF GUARANTEE

The program timer has a function to keep the time setting when electricity is cut off, using the battery within the remote controller.

- The time of guarantee : 48 hours

NOTE: It takes 30 minutes to re-charge the battery completely.
Re-charging the battery will be done automatically.

8. SPECIFICATION

PROGRAM TIMER SPECIFICATION

Parts name	:	Program timer
Parts No.	:	PAC-SC32PTA
Exterior dimension (mm)	:	130 × 120 × 18
Installation	:	Wall mount
Type of clock	:	Quarts
Clock accuracy	:	±50 seconds/month at 25°C
Display -time	:	Liquid crystal display
-Week	:	Liquid crystal display
-Timer setting unit	:	Liquid crystal display
Program cycle	:	24 hours
Timer setting unit	:	30 minutes
No. of set points	:	48/day
Power rating	:	5V DC ±5% (supplied by remote controller)