

Revision A:

● MCFZ-A18WV- E1 and MCFZ-A24WV- E1 have been added.

Please void OB344.

No. OB344 **REVISED EDITION-A**

SERVICE MANUAL

Wireless type **Models**

MCFZ-A12WV -ET(WH) MCFZ-A18WV -ET (WH) MCFZ-A24WV

- **■** [1] (WH)

(When installed on the floor) Indication of model name MCFZ-A12WV -E1 MCFZ-A18WV -E1 MCFZ-A24WV - E1 (When installed on the ceiling)

CONTENTS

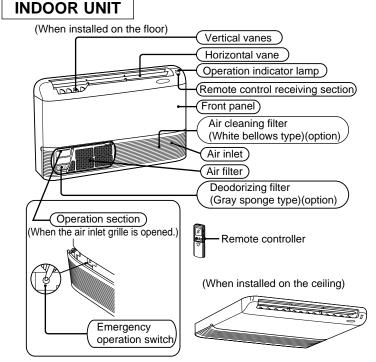
| 1. PART NAMES AND FUNCTIONS2 |
|--------------------------------|
| 2. SPECIFICATION4 |
| 3. NOISE CRITERIA CURVES5 |
| 4. OUTLINES AND DIMENSIONS6 |
| 5. WIRING DIAGRAM6 |
| 6. REFRIGERANT SYSTEM DIAGRAM8 |
| 7. SERVICE FUNCTIONS8 |
| 8. TROUBLESHOOTING10 |
| 9. DISASSEMBLY INSTRUCTIONS19 |
| 10. PARTS LIST21 |
| 11. OPTIONAL PARTS23 |

- This service manual describes technical data of indoor units.
- As for outdoor units MUZ-A12YV -E1 and MUZ-A12YVH -E1, refer to the service manual OB328 REVISED EDITION-A.
- As for outdoor units MUZ-A18YV -E1 and MUZ-A24YV -E1, refer to the service manual OB346 REVISED EDITION-A.



PART NAMES AND FUNCTIONS

MCFZ-A12WV -EI MCFZ-A18WV -EI MCFZ-A24WV -EI



| | Item | Q'ty |
|-----|--------------------|------|
| 1 | Installation plate | 2 |
| 2 | Unit fixing screw | 2 |
| | 5 × 12mm | |
| (3) | Wireless remote | 1 |
| 0 | controller | |
| (4) | Remote controller | 1 |
| • | holder | ' |
| (5) | Fixing screw for 4 | 2 |
| 0 | 3.5 × 16mm (Black) | |
| 6 | Battery (AAA) for | 2 |
| 0 | remote controller | |
| 7 | Drain hose | 1 |
| 8 | Drain pipe cover | 1 |
| 9 | Knockout cover | 1 |
| | | |

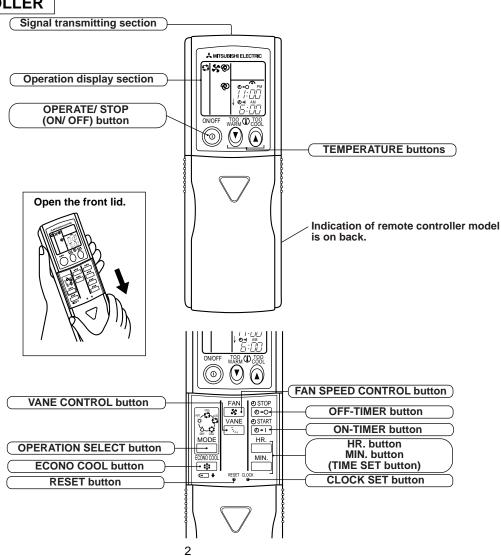
2

Screw for 9 4 × 10mm

ACCESSORIES

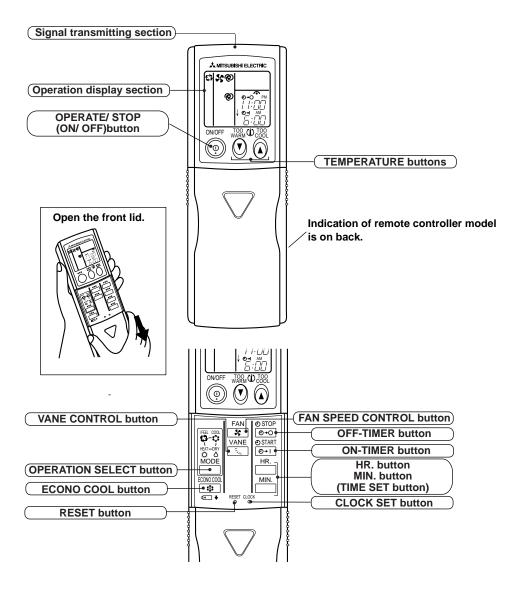
MCFZ-A12WV -E1

REMOTE CONTROLLER



MCFZ-A18WV -E1 MCFZ-A24WV -E1

REMOTE CONTROLLER



SPECIFICATION

| Indoor model | | MCFZ-A1 | 2WV - E1 | MCFZ-A18WV - E1 | | MCFZ-A24WV - E1 | | |
|--------------------|------------------------------|---------|---------------------------|-----------------------|-------------------|--------------------------|-------------------|--------------|
| | Function | | Cooling | Heating | Cooling | Heating | Cooling | Heating |
| | Power supply | | Single | Single phase | | phase | Single phase | |
| | | | 230V, | 50Hz | 230V, | 50Hz | 230V, | 50Hz |
| Capacity | Air flow(High/Med.*/Low*) | m³ /h | 780/636*/492* | | 840/696 | 6 * /570 * | 840/744 | */642* |
| | Power outlet | Α | 1 | 0 | 1 | 0 | 1 | 0 |
| <u>8</u> | Running current *1 | Α | 0. | 30 | 0.3 | 36 | 0.3 | 36 |
| Electrical data | Power input *1 | W | 6 | 6 | 8 | 0 | 8 | 0 |
| ata | Auxiliary heater | A(kW) | _ | _ | | | _ | _ |
| шъ | Power factor *1 | % | 9 | 6 | 9 | 7 | 9 | 7 |
| | Fan motor current ★1 | Α | 0. | 0.30 | | 0.36 | | 36 |
| | Model | | RB4V25-AC | | RB4V36-AC | | RB4V36-DB | |
| Fan motor | Winding | | WHT-BLK 182.2 | 2 BLK-YLW 68.9 | WHT-BLK 82.9 | BLK-YLW 65.6 | WHT-BLK 84.0 | BLK-YLW 46.2 |
| Fa | resistance(at 20°C) | Ω | YLW-BLU 47.5 BLU-BRN 31.5 | | YLW-BLU 36.0 | BLU-BRN 27.0 | YLW-BLU 37.2 | BLU-BRN 45.2 |
| | resistance (at 200) | | BRN-RED 22.9 | | BRN-RED 13.7 | | BRN-RED 13.6 | |
| | Dimensions W×H×D | mm | 1,100 × 6 | 550 × 180 | 1,100 × 650 × 180 | | 1,100 × 650 × 180 | |
| | Weight | kg | 2 | 5 | 25 | | 25 | |
| | Air direction | | 5 | | 5 | | | 5 |
| | Sound level(High/Med.*/Low*) | dB | 46/41 | * /35 * | 48/44 | * /39 * | 48/45 | */42* |
| ks a | Fan speed(High/Med.*/Low*) | rpm | 1,240/1,0 | 60*/845* | 1,320/1, | 145/960 | 1,320/1,1 | 90/1,060 |
| Special remarks | Fan speed regulator | | (| 3 | 3 | 3 | 3 | 3 |
| S 5 | Thermistor RT11(at 25°C) | kΩ | 1 | 10 | | 0 | 1 | 0 |
| | Thermistor RT12(at 25℃) | kΩ | 1 | 0 | 10 | | 10 | |
| | Remote controller model | | KG | 04B | KG | 04C | KG04C | |

NOTE: Test conditions are based on ISO 5151
Cooling: Indoor Dry-bulb temperature 27°C Wet-bulb temperature 19°C
Outdoor Dry-bulb temperature 35°C Wet-bulb temperature (24°C)
Heating: Indoor Dry-bulb temperature 20°C Wet-bulb temperature 15°C
Outdoor Dry-bulb temperature 7°C Wet-bulb temperature 6°C
Indoor-Outdoor piping length (one way): 5 m Wet-bulb temperature 19°C Wet-bulb temperature (24°C) Wet-bulb temperature 15°C

* Reference value

*1 Measured under rated operating frequency.

Specifications and rating conditions of main electric parts

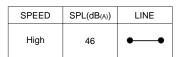
INDOOR UNIT

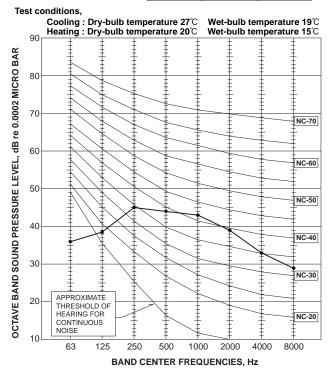
| Item | Model | MCFZ-A12WV - E1 | MCFZ-A18WV - E1 | MCFZ-A24WV - E1 | | |
|------------------------|-------------|-----------------------------|-----------------|-----------------|--|--|
| Indoor fan capacitor | (C11) | 1.8µF 440V | | | | |
| Fuse | (F11) | | 250V 3.15A | | | |
| Vane motor | (MV) | MP20 12V 250Ω | | | | |
| Varistor | (NR11) | ERZV10D471/TNR10V471K410 | | | | |
| Solid state relay (SI | R141~SR143) | AQG12212/ G3MC-201PL | | | | |
| Terminal block | (TB1/TB2) | 3P/ 4P | | | | |
| Relay | (X144) | G5NB-1A-DC12V/ G5N-1A-DC12V | | | | |
| Compressor contactor | (52C) | ALF1T12 | | _ | | |
| Indoor fan motor therm | nal fuse | | 145 ± 2℃ | | | |

3

NOISE CRITERIA CURVES

MCFZ-A12WV -E1





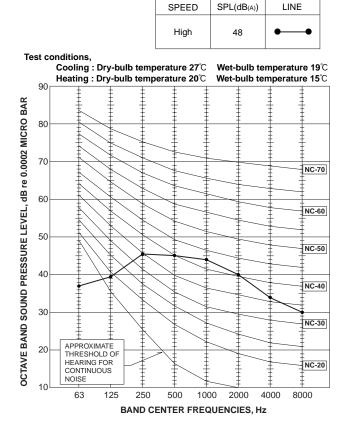
MCFZ-A18WV -E1

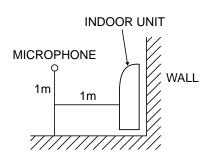
| SPEED | SPL(dB(A)) | LINE |
|-------|------------|------|
| High | 48 | •—• |

Test conditions, Cooling : Dry-bulb temperature 27°C Heating : Dry-bulb temperature 20°C Wet-bulb temperature 19℃ Wet-bulb temperature 15[°]C 90 OCTAVE BAND SOUND PRESSURE LEVEL, dB re 0.0002 MICRO BAR 80 70 NC-70 60 NC-60 50 NC-50 40 NC-40 30 NC-30 APPROXIMATE THRESHOLD OF HEARING FOR CONTINUOUS NOISE 20 NC-20 63 250 500 1000 2000 4000 8000

BAND CENTER FREQUENCIES, Hz

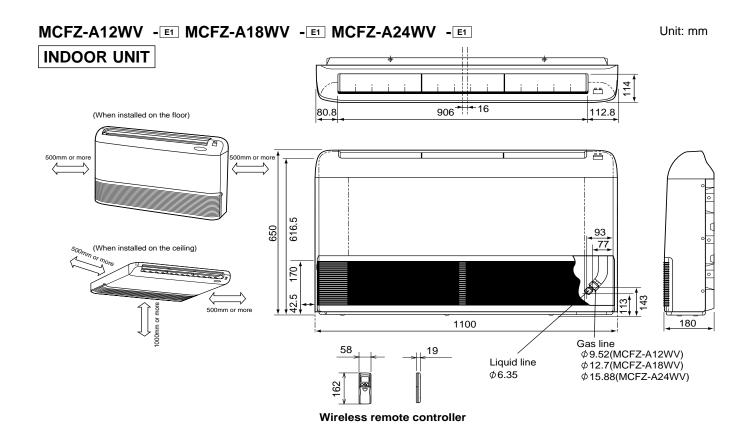
MCFZ-A24WV -E1





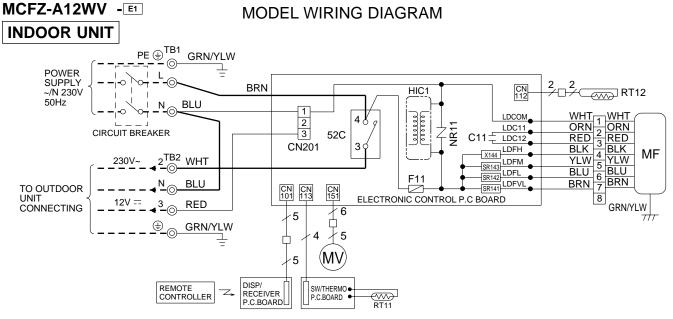
4

OUTLINES AND DIMENSIONS



5

WIRING DIAGRAM



| SYMBOL | NAME | SYMBOL | NAME | SYMBOL | NAME |
|--------|------------------------------|--------|-----------------------------|-------------|----------------------|
| C11 | INDOOR FAN CAPACITOR | MV | VANE MOTOR | SR141~SR143 | SOLID STATE RELAY |
| F11 | FUSE (3.15A) | NR11 | VARISTOR | TB1, TB2 | TERMINAL BLOCK |
| HIC1 | DC/DC CONVERTER | RT11 | ROOM TEMPERATURE THERMISTOR | X144 | RELAY |
| MF | INDOOR FAN MOTOR(INNER FUSE) | RT12 | INDOOR COIL THERMISTOR | 52C | COMPRESSOR CONTACTOR |

NOTES: 1.About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.

- 2.Use copper conductors only. (For field wiring)
- 3.Symbols below indicate.

^{⊚ :} Terminal block □□□ : Connector

MCFZ-A18WV -E1 MODELS WIRING DIAGRAM MCFZ-A24WV -E1

INDOOR UNIT TB1 PE () GRN/YLW POWER SUPPLY BLU 1 2 3 2 2 RT12 CN 112 ~/N 230V HIC1 RED 50Hz WHT 1 WHT ORN 2 RED 3 BLK LDCOM CN201 LDC11 TAB12 BRN C11= LDC12 CIRCUIT BREAKER X144) LDFH SR142 LDFL SR141 LDFVL ELECTRONIC CONTROL P.C BOARD BLK 4 BLK YLW 5 BLU BRN 7 BRN MF TB2 BLU TO OUTDOOR UNIT CONNECTING 8 GRN/YLW Į5 (MV REMOTE CONTROLLER SW/THERMO P.C.BOARD DISP/ RECEIVER RT11 P.C.BOARD

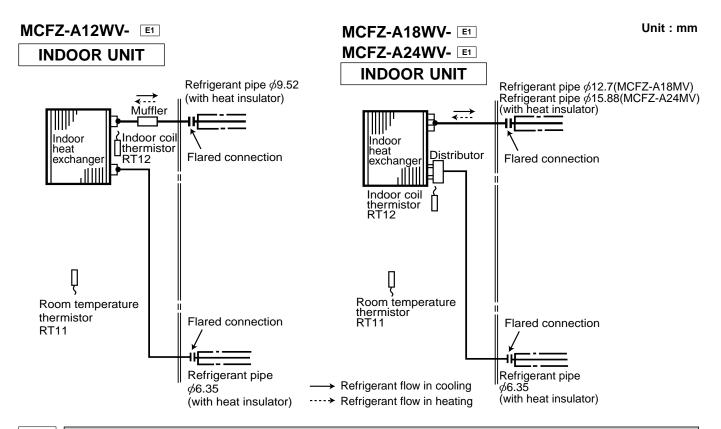
| SYMBOL | NAME | SYMBOL | NAME | SYMBOL | NAME |
|--------|------------------------------|--------|-----------------------------|-------------|-------------------|
| C11 | INDOOR FAN CAPACITOR | MV | VANE MOTOR | SR141~SR143 | SOLID STATE RELAY |
| F11 | FUSE (3.15A) | NR11 | VARISTOR | TB1, TB2 | TERMINAL BLOCK |
| HIC1 | DC/DC CONVERTER | RT11 | ROOM TEMPERATURE THERMISTOR | X144 | RELAY |
| MF | INDOOR FAN MOTOR(INNER FUSE) | RT12 | INDOOR COIL THERMISTOR | | |

NOTES: 1.About the outdoor side electric wiring refer to the outdoor unit electric wiring diagram for servicing.

- 2.Use copper conductors only. (For field wiring)
- 3.Symbols below indicate.
- ⊚ : Terminal block : Connector

6

REFRIGERANT SYSTEM DIAGRAM



7

SERVICE FUNCTIONS

MCFZ-A12WV -EI MCFZ-A18WV -EI MCFZ-A24WV -EI

7-1. TIMER SHORT MODE

For service, set time can be shortened by short circuit of JPG and JPS on the electronic control P.C. board.

The time will be shortened as follows. (Refer to page 17 or 18.)

3-minutes time delay : 3-minutes \rightarrow 3-seconds

Set time: 1 minute → 1-second

Set time : 3 minute → 3-second (It takes 3 minutes for the compressor to start operation. However, the starting time is shortened by short circuit of JPG and JPS.)

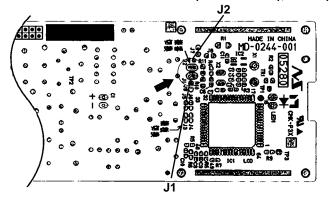
7-2. P.C. BOARD MODIFICATION FOR INDIVIDUAL OPERATION

A maximum of 4 indoor units with wireless remote controllers can be used in a room. In this case, to operate each indoor unit individually by each remote controller, P.C. boards of remote controller must be modified according to the number of the indoor unit.

How to modify the remote controller P.C. board

Remove batteries before modification. The board has a print as shown below;

Remote controller model: KG04B(MCFZ-A12WV), KG04C(MCFZ-A18/A24WV)



NOTE: For remodelling, take out the batteries and press the OPERATE/STOP(ON/OFF) button twice or 3 times at first.

After finish remodelling, put back the batteries then press the RESET button.

The P.C. board has the print "J1" and "J2". Solder "J1" and "J2" according to the number of indoor unit as shown in Table 1. After modification, press the RESET button.

Table1.

| | 1 unit operation | 2 units operation | 3 units operation | 4 units operation |
|------------|------------------|-------------------|-------------------|-----------------------|
| No. 1 unit | No modification | Same as at left | Same as at left | Same as at left |
| No. 2 unit | _ | Solder J1 | Same as at left | Same as at left |
| No. 3 unit | _ | _ | Solder J2 | Same as at left |
| No. 4 unit | _ | _ | _ | Solder both J1 and J2 |

How to set the remote controller exclusively for particular indoor unit

After you turn the breaker ON, the first remote controller that sends the signal to the indoor unit will be regarded as the remote controller for the indoor unit.

The indoor unit will only accepts the signal from the remote controller that has been assigned to the indoor unit once they are set.

The setting will be cancelled if the breaker has turned off, or the power supply has shut down.

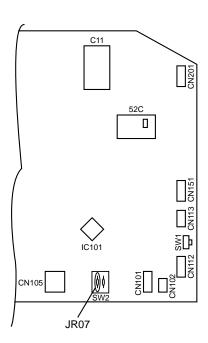
Please conduct the above setting once again after the power has restored.

7-3. AUTO RESTART FUNCTION

When the indoor unit is controlled with the remote controller, the operation mode, the set temperature, and the fan speed are memorized by the indoor electronic control P.C. board. The "AUTO RESTART FUNCTION" sets to work the moment power has restored after power failure. Then, the unit will restart automatically. However if the unit is operated in "I FEEL CONTROL" or "AUTO" mode before power failure, the operation is not memorized. In "I FEEL CONTROL" mode, the operation is decided by the initial room temperature.

How to release "AUTO RESTART FUNCTION"

- ①Turn off the main power for the unit.
- @Pull out the electronic control P.C. board. (Refer to page 19.)
- ③Solder jumper wire to the JR07 on the indoor electronic control P.C. board. (Refer to page 17 or 18.)



Operation

- ①If the main power has been cut, the operation settings remain.
- ②After the power is restored, the unit restarts automatically according to the memory.(However, it takes at least 3 minutes for the compressor to start running.)

NOTE

- •The operation settings are memorized when 10 seconds have passed after the indoor unit was operated with the remote controller.
- •If main power is turned OFF or a power failure occurs while AUTO START/STOP timer is active, the timer setting is cancelled.
- •If the unit has been off with the remote controller before power failure, the auto restart function does not work as the power button of the remote controller is off.
- •To prevent breaker off due to the rush of starting current, systematize other home appliances not to turn on at the same time.
- •When some air conditioners are connected to the same supply system, if they are operated before power failure, the starting current of all the compressors may flow simultaneously at restart.

Therefore, the special counter-measures are required to prevent the main voltage-drop or the rush of the starting current by adding to the system that allows the units to start one by one.

TROUBLESHOOTING

MCFZ-A12WV -E1 MCFZ-A18WV -E1 MCFZ-A24WV -E1

8-1. Cautions on troubleshooting

- 1. Before troubleshooting, check the following:
- (1) Check the power supply voltage.
- (2) Check the indoor/outdoor connecting wire for mis-wiring.

2. Take care the following during service.

- (1) Before servicing the air conditioner, be sure to first turn off the remote controller to stop the main unit, and then after confirming the horizontal vane has completely closed, turn off the breaker.
- (2) Be sure to unplug the power cord before removing the air inlet grille, the front panel, the cabinet, the top panel and the electronic control P.C. boards.
- (3) When removing the electronic control P.C. board, hold the edge of the board with care NOT to apply stress on the components.
- (4) When connecting or disconnecting the connectors, hold the housing of the connector. DO NOT pull the lead wires.



3. Troubleshooting procedure

- (1) First, check if the OPERATION INDICATOR lamp on the indoor unit is flashing on and off to indicate an abnormality. To make sure, check how many times the abnormality indication is flashing on and off before starting service work.
- (2) If the electronic control P.C. board is supposed to be defective, check the copper foil pattern for disconnection and the components for bursting and discoloration.
- (3) When troubleshooting, refer to the flow chart and the check table on page 11 and 12.

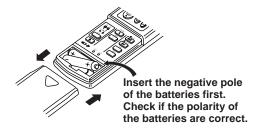
4. How to replace batteries

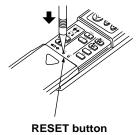
Weak batteries may cause the remote controller malfunction.

In this case, replace the batteries to operate the remote controller normally.

① Remove the front lid and insert batteries. Then reattach the front lid.

② Press the RESET button with tip end of ball point pen or the like, and then use the remote controller.



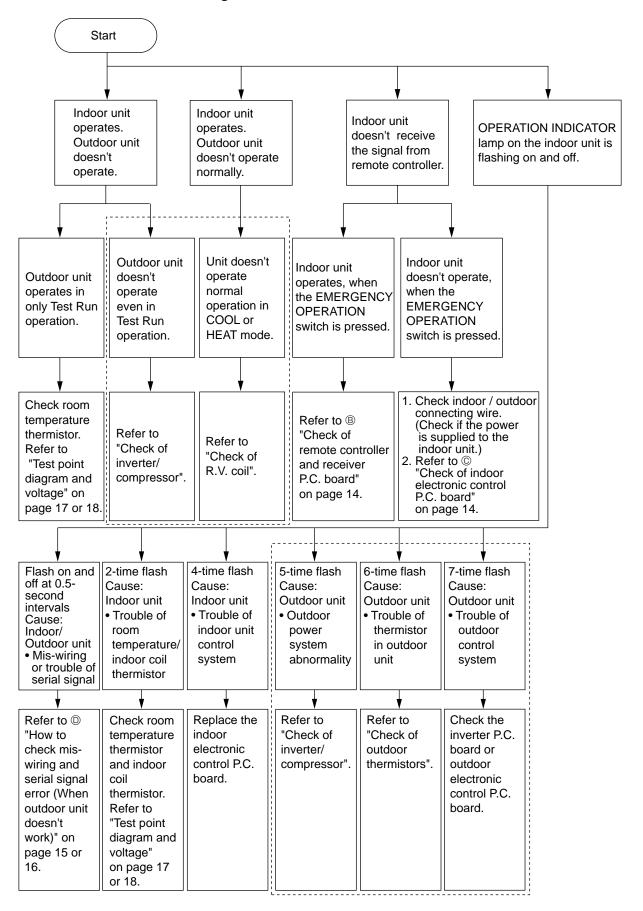


NOTE: 1.These figures show about MCFZ-A18WV or MCFZ-A24WV.

- 2. If the RESET button is not pressed, the remote controller may not operate correctly.
- 3. Remote controller of MCFZ-A12WV has a circuit to automatically reset the microcomputer when batteries are replaced.

This function is equipped to prevent the microcomputer from malfunctioning due to the voltage drop caused by the battery replacement.

8-2. Instruction of troubleshooting



As for outdoor units MUZ-A12YV and MUZ-A12YVH, refer to service manual OB328 REVISED EDITION-A. As for outdoor units MUZ-A18YV and MUZ-A24YV, refer to service manual OB346 REVISED EDITION-A.

1. Troubleshooting check table

• The following indication applies regardless of shape of the indicator.

| Operation Indicator | | Lighted |
|---------------------|---|-------------|
| | П | Not lighted |

- · Flashing of the OPERATION INDICATOR lamp (left-hand side lamp) indicates possible abnormalities.
- The OPERATION INDICATOR lamp (left-hand side lamp) is lighting during normal operation.

NOTE : Before taking measures, make sure that the symptom reappears for accurate troubleshooting. Self check table

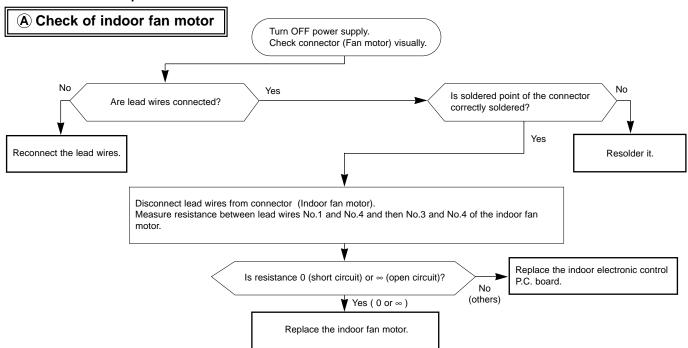
| No. | Abnormal point | Operation indicator lamp | Symptom | Detection method | Check point |
|-----|---|--|--------------------------------------|---|--|
| 1 | Mis-Wiring or Serial signal | 0.5-second ON ★○★○★○★○ 0.5-second OFF | Outdoor unit does not operate. | 3 minutes after power supply turns ON, when serial signal is not received. | Refer to "How to check mis-wiring and serial signal error." on page 15 or 16. |
| 2 | Indoor coil thermistor Room tempera- ture thermistor | 2-time flash ★○★○○○○★○★○○ 2.5-second OFF | Outdoor unit does not operate. | Detect Indoor coil/room temperature thermistor short or open circuit every 8 seconds during operation. | Refer to the characteristics of indoor coil thermistor, and room temperature thermistor on page 17 or 18. |
| 3 | Indoor control system | 4-time flash ★○★○★○★○◆○◆○★○★○★○★ 2.5-second OFF | Outdoor unit does not operate. | When it cannot properly read data in the nonvolatile memory of indoor electronic control P.C. board. | Replace the indoor electronic control P.C. board. |
| 4 | Outdoor power system | 5-time flash *\infty \infty \ | Outdoor unit does not operate. | When it consecutively occurs 3 times that compressor stops for overcurrent protection within 1 minute after start-up. | Refer to "Check of inverter/ compressor". Refer to service manual OB328 REVISED EDITION-A or OB346 REVISED EDITION-A. |
| 5 | Outdoor thermistor | 6-time flash ★○★○★○★○★○★○○○○★○ 2.5-second OFF | Outdoor unit does not operate. | <thermistor short=""> Thermistors are abnormal when they short after compressor start-up. <thermistor open=""> Thermistors are abnormal when they open after compressor start-up. However, discharge temperature thermistor is abnormal when open circuit is detected more than 10 minutes after compressor start-up.</thermistor></thermistor> | Shortage of refrigerant. Refer to "Check of outdoor thermistor". Refer to service manual OB328 REVISED EDITION-A or OB346 REVISED EDITION-A. |
| 6 | Outdoor control system | 7-time flash ★○★○★○★○★○★○★○○○○★ 2.5-second OFF | Outdoor unit does not operate. | When it cannot properly read data in the nonvolatile memory of inverter P.C. board or outdoor electronic control P.C. board. | Check the inverter P.C. board or outdoor electronic control P.C. board. Refer to service manual OB328 REVISED EDITION-A or OB346 REVISED EDITION-A. |

2. Trouble criterion of main parts

MCFZ-A12WV - MCFZ-A18WV - MCFZ-A24WV - MCFZ-

| | Check method and criterion | | | | | | | |
|--|--|---|--|--|---|--|--|--|
| | | | | | | | | |
| Norm | Normal Abnormal | | | | | | | |
| 8kΩ ~ 2 | 20kΩ | Open or short-cire | cuit | | | | | |
| Measure the resistance between the terminals with a tester. (Part temperature 10°C ~ 30°C) | | | | | | | | |
| Color of lead | | Normal | | | | | | |
| r wire N | MCFZ-A12WV | MCFZ-A18WV | MCFZ-A24WV | Abriorniai | GRN YLW | | | |
| WHT-BLK | 175~190Ω | 79~87Ω | 80~88Ω | 07.27.27 | | | | |
| FUSE 2°C CUT OFF BLK-YLW YLW-BLU | 66~72Ω | 63~69Ω | 44~49Ω | | | | | |
| | 45~50Ω | 34~38Ω | 35~39Ω | | BLK YLW BLU BRN RED ORN WHT | | | |
| BLU-BRN | 30~33Ω | 25~29Ω | 43~47Ω | | | | | |
| BRN-RED | 22~24Ω | 13~15Ω | 13~15Ω | | | | | |
| Measure the resistance between the terminals with a tester. (Part temperature 10°C ~ 30°C) | | | | | | | | |
| Color of lead wire | | ormal | Abnormal | | RED ROTOR YLW ROTOR | | | |
| BRN-other one | 328 | - 356Ω | Open or short-circuit | | ORN GRN | | | |
| | Norm 8kΩ ~ 2 Measure the r (Part temperar Color of lead wire WHT-BLK BLK-YLW YLW-BLU BLU-BRN BRN-RED Measure the r (Part temperar Color of lead wire Color of lead wire BRN-other | Measure the resistance with a (Part temperature 10° C ~ 30° C Normal $8k\Omega \sim 20k\Omega$ Measure the resistance betwee (Part temperature 10° C ~ 30° C Color of lead wire MCFZ-A12WV WHT-BLK $175\sim190\Omega$ BLK-YLW $66\sim72\Omega$ YLW-BLU $45\sim50\Omega$ BLU-BRN $30\sim33\Omega$ BRN-RED $22\sim24\Omega$ Measure the resistance betwee (Part temperature 10° C ~ 30° C Color of lead wire No BRN-other 328 | Measure the resistance with a tester.(Part temperature 10° C ~ 30° C)NormalAbnormal $8k\Omega \sim 20k\Omega$ Open or short-circMeasure the resistance between the terminals wit (Part temperature 10° C ~ 30° C)Color of lead wireNormalMCFZ-A12WVMCFZ-A18WVWHT-BLK $175\sim190\Omega$ $79\sim87\Omega$ BLK-YLW $66\sim72\Omega$ $63\sim69\Omega$ YLW-BLU $45\sim50\Omega$ $34\sim38\Omega$ BLU-BRN $30\sim33\Omega$ $25\sim29\Omega$ BRN-RED $22\sim24\Omega$ $13\sim15\Omega$ Measure the resistance between the terminals wit (Part temperature 10° C ~ 30° C)NormalColor of lead | Measure the resistance with a tester.(Part temperature 10° C ~ 30° C)NormalAbnormal $8k\Omega \sim 20k\Omega$ Open or short-circuitMeasure the resistance between the terminals with a tester.(Part temperature 10° C ~ 30° C)Color of lead wireNormal MCFZ-A12WVMCFZ-A18WVMCFZ-A24WVWHT-BLK $175\sim190\Omega$ $79\sim87\Omega$ $80\sim88\Omega$ BLK-YLW $66\sim72\Omega$ $63\sim69\Omega$ $44\sim49\Omega$ YLW-BLU $45\sim50\Omega$ $34\sim38\Omega$ $35\sim39\Omega$ BLU-BRN $30\sim33\Omega$ $25\sim29\Omega$ $43\sim47\Omega$ BRN-RED $22\sim24\Omega$ $13\sim15\Omega$ $13\sim15\Omega$ Measure the resistance between the terminals with a tester.(Part temperature 10° C ~ 30° C)AbnormalColor of lead wireNormalAbnormalBRN-other $328\sim356\Omega$ Open or | Measure the resistance with a tester.(Part temperature $10^{\circ}\text{C} \sim 30^{\circ}\text{C}$)Normal $8k\Omega \sim 20k\Omega$ Abnormal Open or short-circuitMeasure the resistance between the terminals with a tester. (Part temperature $10^{\circ}\text{C} \sim 30^{\circ}\text{C}$)Abnormal MCFZ-A12WVAbnormal MCFZ-A18WVAbnormalWHT-BLK WHT-BLK $175-190\Omega$ 175-190 Ω $79-87\Omega$ 190-87 Ω 190-80 1 | | | |

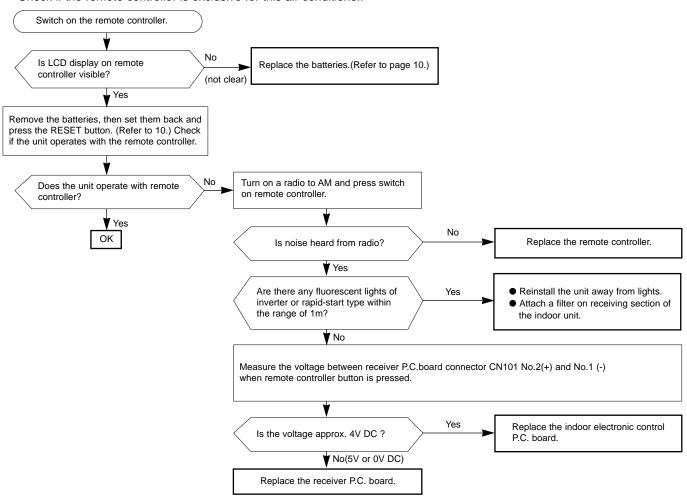
Indoor fan does not operate.



Indoor unit operates by pressing the EMERGENCY OPERATION switch, but does not operate with the remote controller.

(B) Check of remote controller and receiver P.C. board

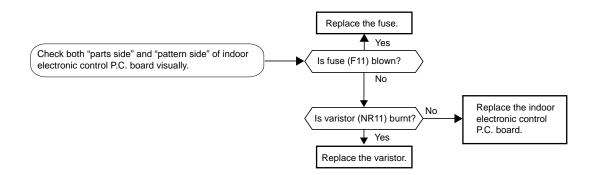
* Check if the remote controller is exclusive for this air conditioner.



The unit does not operate with the remote controller.

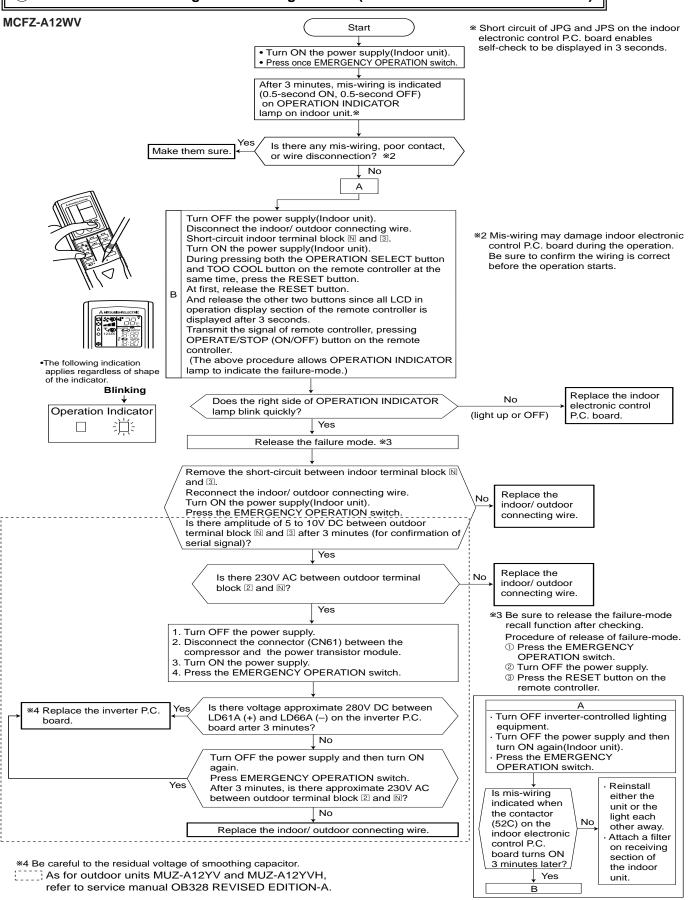
Also, the OPERATION INDICATOR lamp doesn't light up by pressing the EMERGENCY OPERATION switch.

© Check of indoor electronic control P.C. board



When OPERATION INDICATOR lamp flashes ON and OFF in every 0.5-second. Outdoor unit does not operate.

(D) How to check mis-wiring and serial signal error (when outdoor unit does not work)



MCFZ-A18WV MCFZ-A24WV Start • Turn ON the power supply (Indoor/ outdoor unit). • Press once EMERGENCY OPERATION switch. * Short circuit of JPG and JPS on the indoor After 3 minutes, mis-wiring is indicated electronic control P.C. board enables (0.5-second ON, 0.5-second OFF) on OPERATION INDICATOR self-check to be displayed in 3 seconds. lamp on the indoor unit.* Is there any mis-wiring, poor contact, Make them sure. or wire disconnection? *2 No Α Turn OFF the power supply (Indoor/ outdoor unit). Disconnect the indoor/ outdoor connecting wire. *2 Mis-wiring may damage indoor electronic Short-circuit indoor terminal block N and 3. Turn ON the power supply (Indoor/ outdoor unit). During pressing both the OPERATION SELECT button control P.C. board during the operation. Be sure to confirm the wiring is correct before the operation starts. and TOO COOL button on the remote controller at the same time, press the RESET button. At first, release the RESET button. В And release the other two buttons since all LCD in operation display section of the remote controller is displayed after 3 seconds. Transmit the signal of remote controller, pressing OPERATE/STOP (ON/OFF) button on the remote controller. (The above procedure allows OPERATION INDICATOR •The following indication applies regardless of shape lamp to indicate the failure-mode.) of the indicator. Blinking Replace the indoor No Does the right side of OPERATION INDICATOR electronic control Operation Indicator lamp blink quickly? (light up or OFF) P.C. board. - []-Yes П Release the failure mode. *3 Remove the short-circuit between indoor terminal block N and 3. Reconnect the indoor/ outdoor connecting wire. Replace the No Turn ON the power supply (Indoor/ outdoor unit). Press the EMERGENCY OPERATION switch. indoor/ outdoor connecting wire. Is there amplitude of 5 to 10V DC between outdoor terminal block N and 3 after 3 minutes (for confirmation of *3 Be sure to release the failure-mode serial signal)? recall function after checking. Yes Procedure of release of failure-mode. ① Press the EMERGENCY Reconnect the No Is there 230V AC between outdoor terminal OPERATION switch. power supply block ${\mathbin{ m L}}$ and ${\mathbin{ m N}}$? 2 Turn OFF the power supply cable. (Indoor/ outdoor unit). Yes 3 Press the RESET button on the remote controller. Check of power Is there 325V DC between CN801 ① and ③ on the outdoor electronic control P.C. board? supply. Turn OFF inverter-controlled lighting equipment. Yes Turn OFF the power supply and then turn ON again (Indoor/ outdoor unit). Replace the outdoor Press the EMERGENCY electronic control P.C. OPERATION switch board. Reinstall either the As for outdoor units MUZ-A18YV and MUZ-A24YV, After 3 minutes, unit or the is mis-wiring refer to service manual OB346 REVISED EDITION-A. indicated on light each No **OPERATION** other away. Attach a filter **INDICATOR** lamp on the on receiving section of indoor unit? the indoor Yes unit.

В

TEST POINT DIAGRAM AND VOLTAGE MCFZ-A12WV -EI

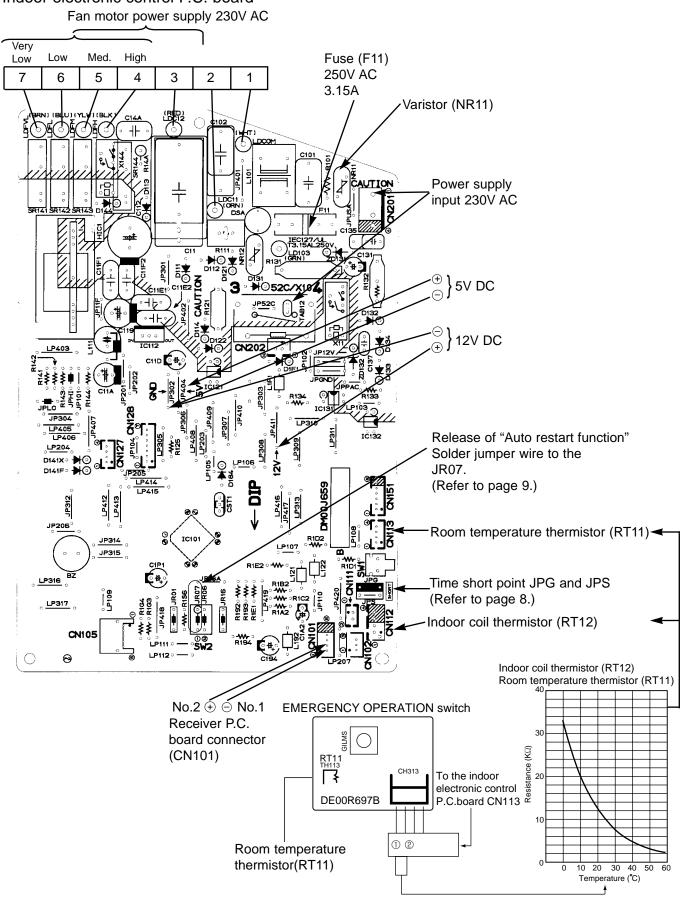
Indoor electronic control P.C. board Fan motor power supply 230V AC Very Med. High Fuse (F11) Low Low 250V AC 6 5 4 3 2 3.15A Varistor (NR11) Power supply input 230V AC 5V DC ₱⊚52C/X10 12V DC Release of "Auto restart function" Solder jumper wire to the JR07. (Refer to page 9.) JP206 Room temperature thermistor -IC101 (RT11) JP315 LP316 Time short point JPG and JPS (Refer to page 8.) o <u>LP317</u> Indoor coil thermistor (RT12) CN105 Indoor coil thermistor (RT12) Room temperature thermistor (RT11) **EMERGENCY OPERATION switch** No.2 ⊕ ⊝ No.1 Receiver P.C. 30 board connector (CN101) To the indoor 20 electronic control DE00R697B P.C.board CN113 Room temperature 1) 2 thermistor(RT11) 10 20 30 40 Temperature (°C)

TEST POINT DIAGRAM AND VOLTAGE

MCFZ-A18WV -E1

MCFZ-A24WV -E1

Indoor electronic control P.C. board

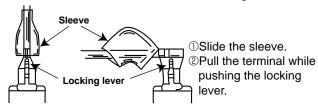


DISASSEMBLY INSTRUCTIONS

<"Terminal with lock mechanism" Detaching points>

In case of terminal with lock mechanism, detach the terminal as shown below. There are two types (Refer to (1) and (2)) of the terminal with lock mechanism. The terminal with no lock mechanism can be removed by pulling it out. Check the shape of the terminal and work.

Slide the sleeve and check if there is a locking lever or not.



MCFZ-A12WV -E1 MCFZ-A18WV -E1 MCFZ-A24WV -E1 INDOOR UNIT

OPERATING PROCEDURE

1. Removing the electronic control P.C. board.

- (1) Pull out the upper part of the grille. (Photo 1)
 - (2) Remove the screws of the grille.
 - (3) Remove screws of terminal block cover. Remove the terminal block cover and remove the terminal block.
 - (4) Remove the screws of the electronic box cover.
 - (5) Pull out the electronic control P.C. board.

Photo 3 MCFZ-A12WV



Electronic control P.C. board

MCFZ-A18WV MCFZ-A24WV



Electronic control P.C. board

PHOTOS

Photo 1

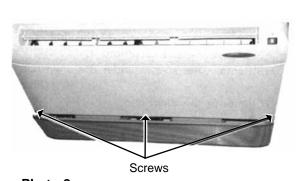
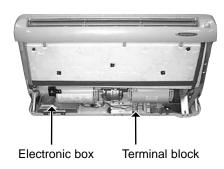


Photo 2



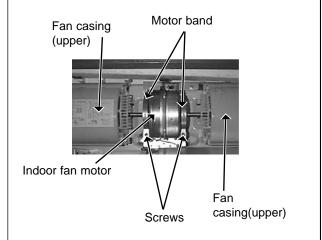
OPERATING PROCEDURE

2. Removing the indoor fan motor

- (1) Remove the grille. (Refer to 1(1) (2).)
- (2) Remove the fan casing.(upper)
- (3) Disconnect the connector of the indoor fan motor.
- (4) Disconnect the ground wire of the fan motor.
- (5) Remove the screws of the motor band and remove the
- (6) Take out the sirocco fan and the indoor fan motor.

PHOTOS

Photo 4



3. Removing the indoor heat exchanger.

- (1) Remove the grille. (Refer to 1(1) (2).)
- (2) Remove the screws on both side and in front of the front panel. (Photo 5)
- (3) Remove the screws of the nozzle assembly. (Photo 6)
- (4) Remove the electronic box. (Refer to 1.)
- (5) Remove the indoor fan motor. (Refer to 2.)
- (6) Remove the screws of the motor support.
- (7) Remove the fan casing. (lower)
- (8) Remove the insulation of the drain pan and remove the screws. (Photo 7)
- (9) Remove the screws under the drain pan. (Photo 8)
- (10) Remove the drain pan.
- (11) Remove the indoor heat exchanger.

Photo 5

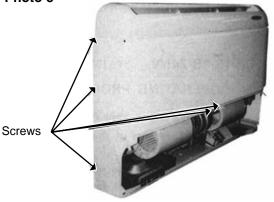


Photo 6

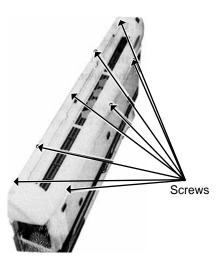


Photo 7

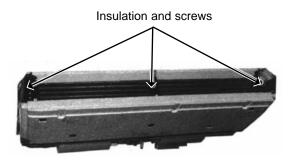
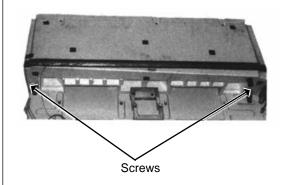


Photo 8



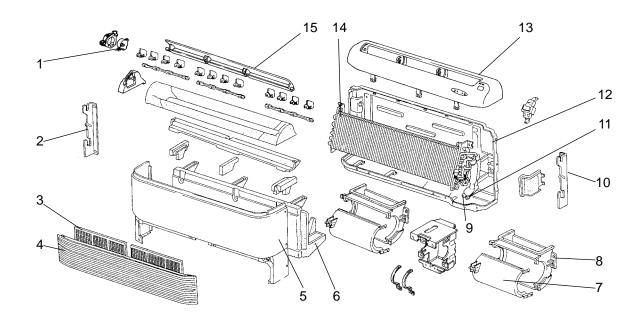
10 PARTS LIST

MCFZ-A12WV -E1 (WH)

MCFZ-A18WV - E1 (WH)

MCFZ-A24WV -E1(WH)

10-1. INDOOR UNIT STRUCTURAL PARTS



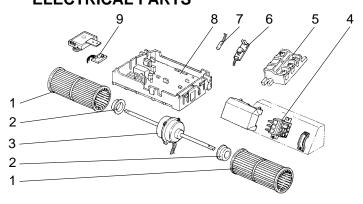
Part number that is circled is not shown in the illustration.

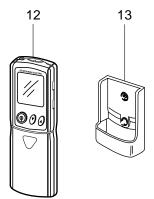
| Q'ty/unit | | | | | | | |
|-----------|-------------|------------------------|-----------|------------|------------|------------|----------------|
| | | Part No. Part name | Symbol | | 1 | | |
| No. | Part No. | | in Wiring | MCFZ-A12WV | MCFZ-A18WV | MCFZ-A24WV | Remarks |
| 110. | | | Diagram | - E1 | - E1 | - E1 | Remarks |
| | | | g | (WH) | (WH) | (WH) | |
| 1 | E02 227 303 | VANE MOTOR | MV | 1 | 1 | 1 | |
| 2 | E02 179 971 | INSTALLATION METAL (L) | | 1 | 1 | 1 | |
| 3 | E02 179 100 | AIR FILTER | | 2 | 2 | 2 | |
| 4 | E02 179 010 | GRILLE (WH) | | 1 | 1 | 1 | |
| 5 | E02 179 000 | FRONT PANEL (WH) | | 1 | 1 | 1 | |
| 6 | E02 215 700 | DRAIN PAN | | 1 | 1 | 1 | |
| 7 | E02 179 237 | FAN CASING (U) | | 2 | 2 | 2 | |
| 8 | E02 179 238 | FAN CASING (L) | | 2 | 2 | 2 | |
| | E02 151 666 | UNION (GAS) | | 1 | | | ϕ 9.52 |
| 9 | E02 179 667 | UNION (GAS) | | | 1 | | ∮12.7 |
| | E02 138 666 | UNION (GAS) | | | | 1 | <i>ϕ</i> 15.88 |
| 10 | E02 179 972 | INSTALLATION METAL (R) | | 1 | 1 | 1 | |
| 11 | E02 138 667 | UNION (LIQUID) | | 1 | 1 | 1 | ϕ 6.35 |
| 12 | E02 179 231 | BACK PANEL (IN) | | 1 | 1 | 1 | |
| 13 | E02 227 235 | NOZZLE (WH) | | 1 | 1 | 1 | |
| 14 | E02 823 620 | INDOOR HEAT EXCHANGER | | 1 | | | |
| 14 | E02 824 620 | INDOOR HEAT EXCHANGER | | | 1 | 1 | |
| 15 | E02 227 040 | VANE (WH) | | 1 | 1 | 1 | |
| 16 | E02 179 142 | GRILLE CATCH (WH) | | 3 | 3 | 3 | 3PCS/SET |

MCFZ-A12WV -E1(WH) MCFZ-A18WV -E1(WH) MCFZ-A24WV -E1(WH)

10-2. INDOOR UNIT ELECTRICAL PARTS

10-3. ACCESSORY AND REMOTE CONTROLLER





10-2. INDOOR UNIT ELECTRICAL PARTS

Part numbers that are circled are not shown in the illustration.

| No. | Part No. | Part name | Symbol in Wiring | Q'ty/unit | | | |
|------|-------------|---|-----------------------------|------------|------------|------------|-----------|
| | | | | MCFZ-A12WV | MCFZ-A18WV | MCFZ-A24WV | Remarks |
| 140. | rait No. | Fait name | Diagram | -E1 | - E1 | - E1 | Remarks |
| | | | g | (WH) | (WH) | (WH) | |
| 1 | E02 179 500 | SIROCCO FAN | | 2 | 2 | 2 | |
| 2 | E02 179 505 | FAN MOTOR RUBBER MOUNT | | 2 | 2 | 2 | 2PCS/SET |
| | E02 228 300 | INDOOR FAN MOTOR | MF | 1 | | | RB4V25-□□ |
| 3 | E02 229 300 | INDOOR FAN MOTOR | MF | | 1 | | RB4V36-□□ |
| | E02 684 300 | INDOOR FAN MOTOR | MF | | | 1 | RB4V36-□□ |
| 4 | E02 842 375 | TERMINAL BLOCK | TB2 | 1 | | | 4P |
| 4 | E02 826 375 | TERMINAL BLOCK | TB2 | | 1 | 1 | 3P |
| 5 | E02 823 375 | TERMINAL BLOCK | TB1 | 1 | 1 | 1 | 3P |
| 6 | E02 227 468 | RECEIVER P.C. BOARD | DISP/RECEIVER P.C. BOARD | 1 | 1 | 1 | |
| 7 | E02 327 307 | INDOOR COIL THERMISTOR | RT12 | 1 | 1 | 1 | |
| | E02 842 452 | ELECTRONIC CONTROL P.C. BOARD | | 1 | | | |
| 8 | E02 875 452 | ELECTRONIC CONTROL P.C. BOARD | | | 1 | | |
| | E02 876 452 | ELECTRONIC CONTROL P.C. BOARD | | | | 1 | |
| 9 | E02 215 328 | SWITCH & ROOM TEMPERATURE THERMISTOR P.C. BOARD | SW/THERMO P.C. BOARD | 1 | 1 | 1 | |
| 10 | E02 820 385 | VARISTOR | NR11 | 1 | 1 | 1 | |
| 11 | E02 127 382 | FUSE | F11 | 1 | 1 | 1 | 3.15A |

10-3. ACCESSORY AND REMOTE CONTROLLER

| 42 | E02 842 426 | REMOTE CONTROLLER | 1 | | | KG04B |
|----|-------------|--------------------------|---|---|---|-------|
| 12 | E02 826 426 | REMOTE CONTROLLER | | 1 | 1 | KG04C |
| 13 | E02 527 083 | REMOTE CONTROLLER HOLDER | 1 | 1 | 1 | |

11

OPTIONAL PARTS

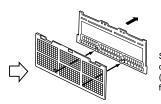
MCFZ-A12WV - MCFZ-A18WV - MCFZ-A24WV - MCFZ-

11-1. AIR CLEANING FILTER

- If the air cleaning filter is clogged, it may lower the unit's capacity or cause condensation at the air outlet.
- The air cleaning filter is disposable. The standard usable term is about 4 months. However, if the color of the filter turns to dark brown, replace soon.



Remove the air filter and the air cleaning filter together.



Separate the air cleaning filter (white bellows type) from the air filter.

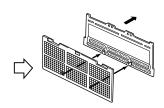
| Models | Part No. |
|--|---------------|
| MCFZ-A12WV -E1 MCFZ-A18WV -E1 MCFZ-A24WV -E1 | MAC - 1200 FT |

11-2. DEODORIZING FILTER

- Clean the filter every two weeks. When it becomes too dirt, clean it more often.
- Replace the filter with a new one when its color can not be restored even after washing or when the filter becomes dark.
- Standard interval for the filter replacement is about 1 year.



Remove the air filter and the deodorizing filter together.



Separate the deodorizing filter (gray sponge type) from the air filter.

| Models | Part No. |
|----------------|---------------|
| MCFZ-A12WV -E1 | |
| MCFZ-A18WV -E1 | MAC - 1700 DF |
| MCFZ-A24WV -E1 | |



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