Sanyo KHS1872 + CH1872 Service Manual

Dc inverter split system air conditioner

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Troubleshooting

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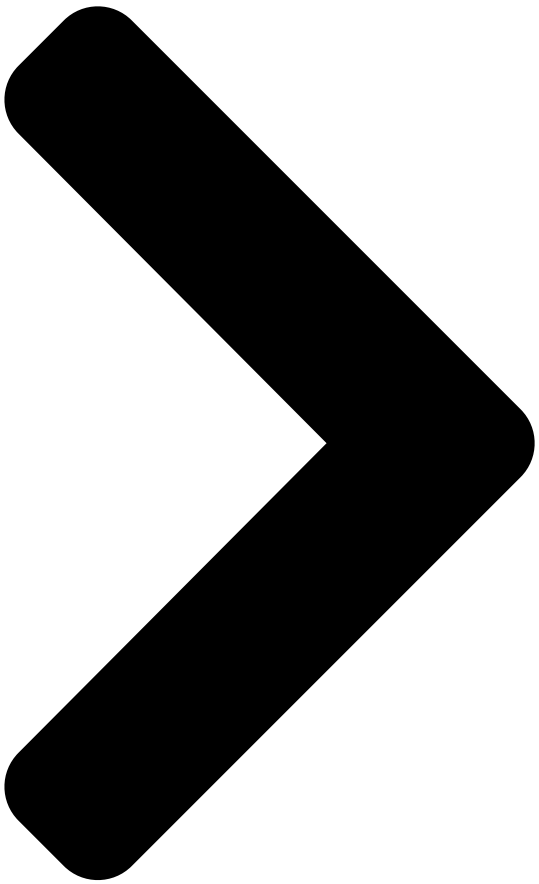
See also: Technical & Service Manual , Instruction Manual



Notice

CORRECTION

SERVICE FLASH

Please add this notice to the TECHNICAL & SERVICE MANUAL listed below.

Category :

DC INVERTER SPLIT SYSTEM AIR CONDITIONER

Model :

KHS1872 + CH1872 KHS2472 + CH2472

Destination :

North America

Serial No. : _____

Issue Number :

1

Indoor Model No. _____

KHS1872
KHS2472
< Reference No. >
Current
SM700656
The reason for change
A : Correction ●
D : Design change
Page No.
of the Manual
6, 7, 8 and 9
"2-1. Unit Specifications" has been corrected.

PRODUCTION CHANGE
ADDED INFORMATION

Product Code No.
1 852 099 85
1 852 099 86
New
SM700656-01
B : Quality reliability
E : Addition of parts
Contents
FILE NO.

Outdoor Model No.
Product Code No.
CH1872
1 852 330 38
CH2472
1 852 330 39
C : Standardization
F : New information
REFERENCE NO.
Date : Aug., 2006
Reason
for change
A

SM
700656-01

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Chapters

Troubleshooting

Related Manuals for Sanyo KHS1872 + CH1872

Air Conditioner Sanyo CH1872 Technical & Service Manual

Dc inverter split system air conditioner (111 pages)

Air Conditioner Sanyo KHS1872 Instruction Manual

Inverter-controlled split system air conditioner (50 pages)

Air Conditioner Sanyo 18KHS72 Installation Instructions Manual

Indoor/outdoor unit inverter split system air conditioner (25 pages)

Air Conditioner Sanyo 18KHS72 Specifications

Wall mounted air conditioners & heat pumps 9,000-24,000 btu/h 16-20 seer (2 pages)

Air Conditioner Sanyo XS1872 Technical & Service Manual

Dc inverter split system air conditioner (131 pages)

Air Conditioner Sanyo XHS1271 Technical & Service Manual

Dc inverter split system air conditioner (123 pages)

Air Conditioner Sanyo COOL Installation Instructions Manual

Inverter split system air conditioner (36 pages)

Air Conditioner Sanyo 24KHS72 Submittal Data

Split system indoor/outdoor wall mounted heat pump (2 pages)

Air Conditioner Sanyo CH1222 Service Manual

Split system air conditioner (30 pages)

Air Conditioner Sanyo KHS1822 Service Manual

Split system air conditioner (38 pages)

Air Conditioner Sanyo CH1822 Service Manual

Split system air conditioner (17 pages)

Air Conditioner Sanyo KHS2422 Service Manual

Split system air conditioner (44 pages)

Air Conditioner Sanyo KHS2432 Instruction Manual

Split system heat pump (25 pages)

Air Conditioner Sanyo KHS0951 Instruction Manual

Split system air conditioner cool/dry/heat model (28 pages)

Air Conditioner Sanyo CH3082 Technical & Service Manual

Dc inverter split system air conditioner (109 pages)

Air Conditioner Sanyo COOL/HEAT Installation Instructions Manual

Split system air conditioner (20 pages)

Summary of Contents for Sanyo KHS1872 + CH1872

Page 1 Please add this notice to the TECHNICAL & SERVICE MANUAL listed below. Category : DC INVERTER SPLIT SYSTEM AIR CONDITIONER Date : Aug., 2006 Model : KHS1872 + CH1872 KHS2472 + CH2472 Destination : North America Serial No. : Issue Number : Indoor Model No.

Page 2 For Parts Service Contact SANYO Fisher Service Company A Division of SANYO North America Corporation 1165 Allgood Road, Suite 22, Marietta, GA 30062 U.S.A. Sanyo Canada Inc. 1-300 Applewood Crescent, Concord, Ontario L4K 5C7, CANADA Aug. / 2006 (T)

Page 3 TECHNICAL & SERVICE MANUAL FILE NO. KHS1872 + CH1872 KHS2472 + CH2472 Destination: North America DC INVERTER SPLIT SYSTEM AIR CONDITIONER Indoor Model No. Product Code No. Outdoor Model No. Product Code No. KHS1872 1 852 099 85 CH1872 1 852 330 38...

Page 4: Special Precautions

When Transporting Important! Please Read Before Starting Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin This air conditioning system meets strict safety and operating aluminum fins on the air conditioner can cut your fingers.

Page 5: Table Of Contents

Table of Contents Page 1. OPERATING RANGE .....2. SPECIFICATIONS 2-1. Unit Specifications .....2-2. Major Component Specifications .....2-3. Other Component Specifications .....3. DIMENSIONAL DATA .....4. REFRIGERANT FLOW DIAGRAM 4-1. Refrigerant Flow Diagram .....5. PERFORMANCE DATA 5-1.

Page 6 Page 10. TROUBLESHOOTING 10-1. Precautions before Performing Inspection or Repair .....10-2. Method of Self-Diagnostics .....10-3. Checking the Indoor and Outdoor Units .....10-4. Trouble Diagnosis of Fan Motor ..... 10-5. Noise Malfunction and Electromagnetic Interference .....11. CHECKING ELECTRICAL COMPONENTS 11-1.

Page 7: Operating Range

1. OPERATING RANGE Temperature Indoor Air Intake Temp. Outdoor Air Intake Temp. 95 °F D.B. / 71 °F W.B. 115 °F D.B. Maximum Cooling 67 °F D.B. / 57 °F W.B. 67 °F D.B. Minimum 80 °F D.B. / 67 °F W.B. 75 °F D.B.

Page 8: Specifications

2. SPECIFICATIONS 2-1. Unit Specifications Indoor Unit KHS1872 Outdoor Unit CH1872 < > 230V Voltage Rating 230V Single-Phase 60Hz Performance Cooling Heating Total Capacity BTU/h 17,500 (4,000 to 17,500) 20,400 (4,400 to 20,400) 5.15 (1.2 to 5.15) (1.3 to 6.0) Sensible Capacity BTU/h...

Page 9 Indoor Unit KHS1872 Outdoor Unit CH1872 < > 208V Voltage Rating 208V Single-Phase 60Hz Performance Cooling Heating Total Capacity BTU/h 17,500 (4,000 to 17,500) 20,400 (4,400 to 20,400) 5.15 (1.2 to 5.15) (1.3 to 6.0) Sensible Capacity BTU/h 13,100...

Page 10 Indoor Unit KHS2472 Outdoor Unit CH2472 < > 230V Voltage Rating 230V Single-Phase 60Hz Performance Cooling Heating Total Capacity BTU/h 24,200 (4,000 to 24,200) 29,000 (4,400 to 29,000) (1.2 to 7.1) (1.3 to 8.5) Sensible Capacity BTU/h 14,800...

Page 11 Indoor Unit KHS2472 Outdoor Unit CH2472 < > 208V Voltage Rating 208V Single-Phase 60Hz Performance Cooling Heating Total Capacity BTU/h 24,200 (4,000 to 24,200) 29,000 (4,400 to 29,000) (1.2 to 7.1) (1.3 to 8.5) Sensible Capacity BTU/h 14,800...

Page 12: Major Component Specifications

2-2. Major Component Specifications 2-2-1. Indoor Unit Indoor Unit KHS1872 Control PCB Part No. CB-KHS1872 Controls Microprocessor Control Circuit Fuse 250V 3A Remote Control Unit RCS-4HVPIS4U Type Cross-Flow Q'ty ... Dia. and Length inch (mm) 1 ... D3-11/16 / L33-9/32

(D94/L845) Fan Motor Type DC Motor...

Page 13 Indoor Unit KHS2472 Control PCB Part No. CB-KHS2472 Controls Microprocessor Control Circuit Fuse 250V 3A Remote Control Unit RCS-4HVPIS4U Type Cross-Flow Q'ty ... Dia. and Length inch (mm) 1 ... D3-11/16 / L33-9/32 (D94/L845) Fan Motor Type DC Motor Model ... Q'ty SIC-39CVL-D847-2-A ...

Page 14: Outdoor Unit

2-2-2. Outdoor Unit Outdoor Unit CH1872 Control PCB Part No. CB-CH1872 Controls Microprocessor Control Circuit Fuse 250V 25A Compressor Type DC Twin Rotary (Hermetic) Compressor Model / Nominal Output C-6RVN93H0M / 1,050W Compressor Oil ... Amount Pints (cc) FV50S ... 0.74 (350) R - S : 0.482 Coil Resistance (Ambient Temp.

Page 15 Outdoor Unit CH2472 Control PCB Part No. CB-CH2472 Controls Microprocessor Control Circuit Fuse 250V 25A Compressor Type DC Twin Rotary (Hermetic) Compressor Model / Nominal Output G8T265FU1JW / 2,410W Compressor Oil ... Amount Pints (cc) FV50S ... 1.49 (700) U - V : 0.36 Coil Resistance (Ambient Temp.

Page 16: Other Component Specifications

2-3. Other Component Specifications Indoor Unit KHS1872 KHS2472 Outdoor Unit CH1872 CH2472 • Indoor heat exchanger sensor (Model:PTM-D51H-S3-2 TH1) • Indoor air temp sensor • Compressor temp sensor (Model:PTM-D51H-S3-2 TH2) (Model:TKS293B) 32 50 68 86 104 122 140 158 176 194 (10) (15) (20) (25) (30) (35) (40) (0) (10) (20) (30) (40) (50) (60) (70) (80) (90) °F...

Page 17: Dimensional Data

3. DIMENSIONAL DATA Indoor Unit KHS1872 KHS2472 Unit: inch(mm)

Page 18 Outdoor Unit CH1872 23-15/16 5-11/32 15/32 11-17/32 Wide tube service valve dia.1/2" (12.70) 34-21/32(880) 2-17/32 Narrow tube service valve dia.1/4" (6.35) 3/32 1-13/16 5-23/32 2-13/32 Unit: inch(mm)

Page 19 Outdoor Unit CH2472 23-15/16 5-11/32 15/32 11-17/32 Narrow tube service valve dia.1/4" (6.35) 35-7/16(900) 2-15/16 Wide tube service valve dia.5/8" (15.88) 2-1/32 4-1/2 1-21/32 2-7/8 Unit: inch(mm)

Page 20: Refrigerant Flow Diagram

4. REFRIGERANT FLOW DIAGRAM 4-1. Refrigerant Flow Diagram Indoor Unit KHS1872 Outdoor Unit CH1872 KHS2472 CH2472 Indoor unit Outdoor unit Accumulator Wide tube service Wide tube valve High pressure switch Muffler H.P. 4-way valve Capillary tube for Electric split flow Narrow expansion tube...

Page 21: Performance Data

5. PERFORMANCE DATA 5-1. Temperature Charts Indoor Unit KHS1872 Outdoor Unit CH1872 Cooling Characteristics (230V) Heating Characteristics (230V) (1.1) Outdoor fan speed High (3.4) (1.0) (2.9) (0.9) (2.4) (0.8) (1.9) (25) (30) (35) (40) (–5) (10) (15) (20) (25) Outdoor inlet air D.B. temp. °F(°C) Outdoor inlet air D.B.

Page 22 Indoor Unit KHS2472 Outdoor Unit CH2472 Cooling Characteristics (230V) Heating Characteristics (230V) (1.1) Outdoor fan speed High (3.4) (1.0) (2.9) (0.9) (2.4) (0.8) (1.9) (25) (30) (35) (40) (–5) (10) (15) (20) (25) Outdoor inlet air D.B. temp. °F(°C) Outdoor inlet air D.B. temp. °F(°C) Outdoor fan speed High (25)

Page 23: Air Throw Distance Charts

5-2. Air Throw Distance Charts Indoor Unit KHS1872 Room air temp. : 80°F (26.7°C) Cooling Fan speed High Horizontal distance (ft.) : Flap angle 0 , : Axis air velocity 0 : Flap angle 30 , : Axis air velocity 30 70 °F (21.1 °C) Room air temp.

Page 24 Indoor Unit KHS2472 80 °F (26.7 °C) Room air temp. : Cooling Fan speed High Horizontal distance (ft.) : Flap angle 0 , : Axis air velocity 0 : Flap angle 30 , : Axis air velocity 30 70 °F (21.1 °C) Room air temp.

Page 25: Electrical Data

6. ELECTRICAL DATA 6-1. Electrical Characteristics Indoor Unit KHS1872 Outdoor Unit CH1872 (1) Voltage:230V < > Cooling 230V Indoor Unit Outdoor Unit Complete Unit Fan Motor Fan Motor + Compressor Performance at 230V Single-phase 60Hz Rating conditions Running amp. Power input 1,468 1,500 Rating conditions:...

Page 26 Indoor Unit KHS2472 Outdoor Unit CH2472 (1) Voltage:230V < > Cooling 230V Indoor Unit Outdoor Unit Complete Unit Fan Motor Fan Motor + Compressor Performance at 230V Single-phase 60Hz Rating conditions Running amp. 10.3 10.8 Power input 2,300 2,355 Rating conditions: Indoor air temperature: 80°F (26.7°C) D.B.

Page 27: Electric Wiring Diagrams

6-2. Electric Wiring Diagrams Indoor Unit KHS1872 KHS2472 To avoid electrical shock hazard, be sure to WARNING disconnect power before checking, servicing and/or cleaning any electrical parts. TERMINAL BASE EVAPORATOR AC1 AC2 SI CONNECTOR FLAP FLAP 5P (WHT) LAMP 10P(WHT) FLAP MOTOR CONTROLLER ROOM THERMISTOR...

Page 28 Outdoor Unit CH1872 To avoid electrical shock hazard, be sure to WARNING disconnect power before checking, servicing and/or cleaning any electrical parts. REACTANCE POWER RELAY HIC + HIC + BD - BD - HIC - HIC - FERRITE TERMINAL CORE PLATE ACIN1 CONTROLLER...

Page 29 Outdoor Unit CH2472 To avoid electrical shock hazard, be sure to WARNING disconnect power before checking, servicing and/or cleaning any electrical parts. REACTANCE 1P-CONNECTOR (WHT) POWER RELAY 1P-CONNECTOR (WHT) FERRITE TERMINAL HEATER1 HEATER0 HIC + HIC + BD - BD - HIC -...

Page 30: Installation Instructions

7. INSTALLATION INSTRUCTIONS 7-1. Installation Site Selection 7-1-1. Indoor Unit To prevent abnormal heat WARNING generation and the possibility of fire, do not place obstacles, 6" (15 cm) 2" (5 cm) min. enclosures and grilles in front 2" (5 cm) min.

Page 31 7-1-2. Outdoor Unit Exhaust fan AVOID: Hot air Heat source heat sources, exhaust fans, etc. (Fig. 4) damp, humid or uneven locations. Outdoor unit choose a place as cool as possible. choose a place that is well ventilated. allow enough room around the unit for air intake/ Fig.

Page 32: Recommended Wire Length And Diameter

7-2. Recommended Wire Length and Diameter Regulations on wiring diameter differ from locality to locality. For field wiring requirements, please refer to your local electrical codes. Carefully observe these regulations when carrying out the installation. Table 2 lists recommended wire lengths and diameters for power supply systems. NOTE Refer to the wiring system diagram (Fig.

Page 33: Remote Control Unit Installation Position

7-3. Remote Control Unit Installation Position The remote control unit can be operated from either a non-fixed position or a wall-mounted position. To ensure that the air conditioner operates correctly, do not install the remote control unit in the following places: In direct sunlight Behind a curtain or other place where it is covered More than 26' (8 m) away from the air conditioner...

Page 34: How To Test Run The Air Conditioner

7-4. How to Test Run the Air Conditioner After turning on power to the air conditioner, use the remote controller and follow the steps below to conduct the test run. (1) Set the remote controller in Test Run mode. (Fig. 8a) Press and hold the ION button.

Page 35: Remove The Grille To Install The Indoor Unit

Grille Air intake grille 7-5. Remove the Grille to Install the Indoor Unit Basically, these models can be installed and wired without removing the grille. If access to any internal part is needed, follow the steps as given below. Fig. 9a How to remove the grille Grasp both ends of the air intake grille, and remove it by opening towards the front and pulling towards...

Page 36: Maintenance

8. MAINTENANCE 8-1. Address Setting of the Remote Control Unit The address can be set in order to prevent interference between remote controllers when two indoor units are installed near each other. The address is normally set to "A." To set a different address, it is necessary to change the address on the Fig.

Page 37: Disconnecting And Connecting Positive Connector For Outdoor Unit

8-2. Disconnecting and Connecting Positive Connector for Outdoor Unit One of the two types of connectors illustrated at left is used. Their basic structure is the same for each. How to Disconnect Hold the resin connector cover, and pull the connector off. You cannot disconnect the connector by pulling the wire since it is locked inside.

Page 38: Functions

9. FUNCTIONS 9-1. Operation Functions Emergency operation SENSOR DRY Emergency operation is available when the remote During DRY operation, the system adjusts the room temperature and fan speed according to the conditions in the controller malfunctions, has been lost, or otherwise room, in order to maintain a comfortable room environment.

Page 39: Night Setback

HIGH POWER NIGHT SETBACK This function acts to raise the power but keeps the AC system in • When NIGHT SETBACK operation is set, the temperature and the same operating mode. fan speed settings will be adjusted automatically to allow This function is set with the HIGH POWER button on the remote comfortable sleep.

Page 40: Protective Functions

9-2. Protective Functions Overload prevention during heating Cold-air prevention during heating During HEAT operation, the temperature of the indoor heat During heating, the fan speed is set to "LL" (very low) or stopped. exchanger is used to control the frequency and lessen the load As the temperature of the indoor heat exchanger rises, the fan on the compressor before the protective device is activated.

Page 41: Defrost Detection And Release

Defrost detection and release CT (Peak current cut-off control) This function prevents the circuit breaker or fuse from operating • Reverse-Cycle Defrosting to open the circuit. This function works when electrical current has increased due to an increase in the cooling / heating load, or to a decrease in the power supply voltage.

Page 42: Troubleshooting

10. TROUBLESHOOTING 10-1. Precautions before Performing Inspection or Repair After checking the self-diagnostics monitor, turn the power OFF before starting inspection or repair. High-capacity electrolytic capacitors are used inside the outdoor unit controller (inverter). They retain an electrical charge (charging voltage DC 310V) even after the power is turned OFF, and some time is required for the charge to dissipate. Be careful not to touch any electrified parts before the controller LED (red) turns OFF.

Page 43: Indoor Unit

(1) Self-diagnostics Lamps INDOOR UNIT (1) OPERATION lamp (2) TIMER lamp (3) QUIET lamp ION lamp OPERATION button REMOTE CONTROL receiver Since the indications cover various units, the corresponding parts listed below may not be present in some models..OFF ..

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(2) If the self-diagnostics function fails to operate No indicators illuminate and the Check the indoor unit. indoor fan does not rotate. Check the power voltage. Blown Is the fuse blown? Normal Replace the circuit board or the fuse. Replace the controller.

Page 45: Checking The Indoor And Outdoor Units

10-3. Checking the Indoor and Outdoor Units (1) Checking the indoor unit Control Check items (unit operation) • The rated voltage must be present between inter-unit wirings 1 and 2. Use the remote controller to operate the unit in "TEST run" mode. To determine •...

Page 46: Trouble Diagnosis Of Fan Motor

10-4. Trouble Diagnosis of Fan Motor 10-4-1. Indoor Fan Motor This indoor DC fan motor contains an internal control PCB. Therefore, it is not possible to measure the coil resistance, and the following procedure should be used to check the motor. To perform diagnosis, operate the unit in cooling mode with indoor fan speed "High".

Page 47: Outdoor Fan Motor

10-4-2. Outdoor Fan Motor This outdoor DC fan motor contains an internal control PCB. Therefore, it is not possible to measure the coil resistance, and the following procedure should be used to check the motor. Perform the trouble diagnosis by Test Run mode described on Installation Instructions. Important: (A) Turn OFF the power before connecting or disconnecting the motor connectors.

Page 48: Noise Malfunction And Electromagnetic Interference

10-5. Noise Malfunction and Electromagnetic Interference An inverter A/C operates using pulse signal control and high frequencies. Therefore, it is susceptible to the effects of external noise, and is likely to cause electromagnetic interference with nearby wireless devices. A noise filter is installed for ordinary use, preventing these problems. However, depending on the installation conditions, these effects may still occur.

Page 49: Checking Electrical Components

11. CHECKING ELECTRICAL COMPONENTS Ground wire 11-1. Measurement of Insulation Resistance Clip The insulation is in good condition if the resistance exceeds 1M ohm. Probe 11-1-1. Power Supply Cord Insulation tester Clamp the grounding wire of power cord with the lead Fig.

Page 50: Checking Continuity Of Fuse On Pcb Ass'y

11-2. Checking Continuity of Fuse Fuse on PCB Ass'y Remove the PCB Ass'y from the electrical component box. Then pull out the fuse from the PCB Ass'y. (Fig. 5) Check for continuity using a multimeter as shown in PCB Ass'y Fig.

Page 51: Refrigerant R410A: Special Precautions When Servicing Unit

12. REFRIGERANT R410A: SPECIAL PRECAUTIONS WHEN SERVICING UNIT 12-1. Characteristics of New Refrigerant R410A 12-1-1. What is New Refrigerant R410A? R410A is a new refrigerant that contains two types of pseudo-non-azeotropic refrigerant mixture. Its refrigeration capacity and energy efficiency are about the same level as the conventional refrigerant, R22. 12-1-2.

Page 52: Checklist Before Servicing

12-2. Checklist before Servicing Use a clutch-type flare tool for R410A or the conventional flare tool. Note that sizes of the resultant flares differ between these two tools. Where a conventional flare tool is used, make sure to observe A Specification (amount of extrusion) by using the flare spacer.

Page 53: Tools Specifically For R410A

12-3. Tools Specifically for R410A For servicing, use the following tools for R410A Tool Distinction Tool Name Gauge manifold Charging hose Gas leak detector Refrigerant cylinder Charging cylinder Refrigerant recovery unit Vacuum pump with anti-reverse flow (*1) Tools specifically for R410A (Solenoid valve-installed type, which prevents oil from flowing back into the unit when the power is off, is recommended.) Vacuum pump (*2)...can be used if the following adapter is attached.

Page 54: In Case Of Compressor Malfunction

12-5. In Case of Compressor Malfunction Should the compressor malfunction, be sure to make the switch to a replacement CAUTION compressor as quickly as possible. Use only the tools indicated exclusively for R410A. See "12-3. Tools Specifically for R410A." 12-5-1. Procedure for Replacing Compressor (1) Recovering refrigerant Any remaining refrigerant inside the unit should not be (1) Recover refrigerant...

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(5) Recharging Configuration and characteristics of cylinders Be sure to charge the specified amount of Valve refrigerant in liquid state using the service port of the wide tube service valve. The proper amount is listed on the unit's nameplate. When the entire amount

cannot be charged all at once, charge gradually while operating the unit in Cooling Operation.

Page 56: In Case Refrigerant Is Leaking

12-6. In Case Refrigerant is Leaking Never attempt to charge additional refrigerant when refrigerant has been leaking CAUTION from the unit. Follow the procedure described below to locate points of leaks and carry out repairs, then recharge the refrigerant. (1) Detecting Leaks Use the detector for R410A to locate refrigerant leak points.

Page 57: Charging Additional Refrigerant

12-7. Charging Additional Refrigerant 12-7-1. When Tubes are Extended Observe the proper amount of refrigerant as stated in this service manual or the installation manual that came with the indoor unit. Charge additional refrigerant in liquid state only. Never charge additional refrigerant if refrigerant is leaking from the unit. Follow CAUTION instructions given in "12-6.

Page 58: Appendix Instruction Manual

APPENDIX INSTRUCTION MANUAL KHS1872 + CH1872 KHS2472 + CH2472
(OI-852-6-4180-801-00-0)

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Features This air conditioner is an inverter type unit that automatically adjusts capacity as appropriate. Details on these functions are provided below; refer to these descriptions when using the air conditioner. • Microprocessor Controlled Operation • Automatic Switching between Cooling and The interior compartment of the remote control unit Heating contains several features to facilitate automatic...

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Contents Page Features .....2 Product Information.....3 Alert Symbols.....3 Installation Location .....4 Electrical Requirements .....4 Safety Instructions.....4 Names of Parts .....5 Using the Remote Control Unit .....10 Operation with the Remote Control Unit .....12 1. Automatic Operation .....12 2. Manual Operation .....13 3.

Page 61: Installation Location

Installation Location • We recommend that this air conditioner be installed properly by qualified installation technicians in accordance with the Installation Instructions provided with the unit. • Before installation, check that the voltage of the electric supply in your home or office is the same as the voltage shown on the nameplate.

Page 62: Names Of Parts

Names of Parts Air intakes INDOOR UNIT Air outlet Remote control unit Drain hose Refrigerant tubes OUTDOOR UNIT Air outlet This illustration is based on the external view of a standard model. NOTE Consequently, the shape may differ from that of the air conditioner which you have selected.

Page 63: Unit Display And Operation Button

Unit Display and Operation Button INDOOR UNIT IMPORTANT OPERATION lamp TIMER lamp Avoid using radio equipment QUIET lamp QUIET such as mobile phone near ION lamp (within 4 ft.) the remote control receiver. Some radio OPERATION button equipment may cause malfunction of the unit.

Page 64: Remote Control Unit (Display)

Remote Control Unit (Display) Displayed when transmitting data Displayed when indoor unit sensor is in use Displayed when setting temperature Displayed when temperature is shown Displayed when setting timer Displayed when the time display is set to 12-hour time. Symbols (1) Operation mode (4) Timer 24-hour clock with ON/OFF...

Page 65: Remote Control Unit

Remote Control Unit Sensor Transmitter (Cover closed) Display ON/OFF operation button ION button 1 HR. TIMER button Temperature setting buttons (TEMP.) QUIET button MODE selector button FAN SPEED selector button NIGHT SETBACK button FLAP button HIGH POWER button ON TIME Advance button OFF TIME Advance button...

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Remote Control Unit (continued) Temperature setting buttons Press the button to

increase the set temperature. (TEMP.) Press the button to reduce the set temperature. The temperature setting changes by 1 °C or 2 °F each time one of the TEMP. buttons is pressed.

Page 67: Using The Remote Control Unit

Remote Control Unit (continued) SENSOR button When you press this button (use a small-tipped object such as a ballpoint pen), mark will appear at the display. And the room temperature is detected by the sensor which is built into the indoor unit and the air conditioner is controlled accordingly.

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Using the Remote Control Unit (continued) How to Use the Remote When using the remote control unit, always point the unit's transmitter head Control Unit directly at the air conditioner's receiver. Air conditioner (Indoor unit) Receiver Remote control (Transmitter head) unit Remote Control Unit The remote control unit may be operated either from a non-fixed position or from...

Page 69: Operation With The Remote Control Unit

Operation with the Remote Control Unit 1. Automatic Operation This unit automatically switches between cooling operation and heating operation according to the difference between the room temperature and the temperature setting. STEP 2 STEP 1 Check that the circuit breaker on the power panel is turned on. NOTE Once mode is selected and the unit is preset by following the steps below, you...

Page 70: Manual Operation

Operation with the Remote Control Unit (continued) 2. Manual Operation STEP 2 STEP 3 STEP 1 STEP 4 STEP 5 Check that the circuit breaker on the power panel is turned on. NOTE If the automatic operation settings of the unit do not meet your needs, press the setting buttons as described below and change the settings as desired.

Page 71: Adjusting The Fan Speed

Operation with the Remote Control Unit (continued) • Choose the best position in the room for the remote control unit, which also NOTE acts as the sensor for room comfort and transmits the operating instructions. Once you've found this best position, always keep the remote control unit there.

Page 72: Night Setback Mode

Operation with the Remote Control Unit (continued) 5. Night Setback Mode Night Setback Mode is used for saving energy. Press the NIGHT SETBACK button while operation. mark appears in the display. To release the night setback function, press the NIGHT SETBACK button again. A.

Page 73: Quiet Mode

Operation with the Remote Control Unit (continued) 6. QUIET Mode QUIET Mode is used to reduce the fan sound of the indoor unit. Press the QUIET button. mark appears in the display. To cancel, press QUIET button again. • In QUIET Mode, the fan rotates at a slower speed than the fan speed setting. •...

Page 74: Special Remarks

Special Remarks ''DRY'' ( ) Operation How it works? • Once the room temperature reaches the level that was set, the unit's operation frequency is changed automatically. • During DRY operation, the fan speed automatically runs at lower speed for providing a comfortable breeze.

Page 75: Setting The Timer

Setting the Timer NOTE In the descriptions below, the following settings are used for the temperature and time indicator selector button on the bottom front section of the remote control. • Temperature: °F • Time: AM, PM 1. How to set the present (Example) To set to 10:30 pm.

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Setting the Timer (continued) 3. How to set the ON time (Example) To start operation at 7:10 am. Operation Indication 1. Press the ON TIME setting The timer indication is button once. displayed, and the present ON time is shown. 2.

Page 77: Using The 1-Hour Off Timer

Using the 1-Hour OFF Timer 1. 1-Hour OFF Timer This function causes the unit to operate for one hour and then stop, regardless of whether the unit is on or off when this button is pressed. indicator in the display indicates that this function is operating. Setting procedure: Regardless of whether the unit is operating or stopped, press the 1 HR.

Page 78: Adjusting The Airflow Direction

Adjusting the Airflow Direction 1. Horizontal The horizontal airflow can be adjusted by moving the vertical vanes with your hands to the left or right. When the humidity is high, the vertical vanes should be in the front CAUTION position during the cooling or dehumidifying operation. If the vertical vanes are positioned all of the way to the right or left, condensation may begin to form around the air vent and drip down.

Page 79: Operation Without The Remote Control Unit

Operation without the Remote Control Unit INDOOR UNIT If you have lost the remote control unit or it has trouble, follow the steps below. When the air conditioner is not running Each time the OPERATION button is pressed, the type of operation conducted is indicated by the changing color of the OPERATION lamp.

Page 80 Care and Cleaning (continued) Anti-Mold Filter The anti-mold filter behind the air intake grille should be checked and cleaned at least once every two weeks. How to remove the anti-mold 1. Grasp both ends of the air Air intake grille filter intake grille, and remove it by opening towards the front and...

Page 81 Care and Cleaning (continued) Air Clean Filter The air clean filter removes dust and dirt from the air, and reduces odors and smoke from tobacco. This air clean filter cannot remove harmful gases or vapors nor ventilate air in the room.

Page 82: Troubleshooting

Troubleshooting If your air conditioner does not work properly, first check the following points before requesting service. If it still does not work properly, contact your dealer or service center. Trouble Possible Cause Remedy Air conditioner does not run at all. 1.

Page 83 For Parts Service Contact SANYO Fisher Service Company A Division of SANYO North America Corporation 1165 Allgood Road, Suite 22, Marietta, GA 30062 U.S.A. Sanyo Canada Inc. 1-300 Applewood Crescent, Concord, Ontario L4K 5C7, CANADA Aug. / 2006 (T)

This manual is also suitable for:

Khs2472Ch1872Ch2472