

SPLIT TYPE ROOM AIR  
CONDITIONER  
FLOOR CONSOLE/  
UNDER CEILING  
DUAL type

# SERVICE MANUAL

MODELS : Indoor unit  
ABU22

Outdoor unit  
AOU22

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## SPECIFICATIONS

INDOOR UNIT		ABL22
OUTDOOR UNIT		AOU22
COOLING CAPACITY	(BTU/h)	21,000 / 20,500

### ELECTRICAL SPECIFICATIONS

POWER SUPPLY	(V)	230 / 208
FREQUENCY	(Hz)	60
RUNNING CURRENT	(A)	9.6 / 10.4
INPUT	(KW)	2.18 / 2.14
EER	(BTU/hW)	9.63 / 9.58
MOISTURE REMOVAL	( l /hr)	2.5
AIR CIRCULATION-HI	(m <sup>3</sup> /hr)	950

### COMPRESSOR

TYPE	Hermetic type, Permanent split condenser, 2 pole, Single phase, Induction motor	
CODE	H25B220ABCA	
REFRIGERANT	R-22 (g)	1,950

### FAN MOTOR

POWER SUPPLY	(V)	230
INDOOR UNIT	TYPE	MFA-22DP
	HI-SPEED (r. p. m.)	1,200
	MED-SPEED (r. p. m.)	1,030
	LO-SPEED (r. p. m.)	910
OUTDOOR UNIT	TYPE	MFB-18MP
	(r. p. m.)	765

### DIMENSIONS

INDOOR UNIT	HEIGHT 7-13/16"(199mm) x WIDTH 39"(990mm) x DEPTH 25-25/32"(655mm)
OUTDOOR UNIT	HEIGHT 25-5/16"(643mm) x WIDTH 33-1/16"(840mm) x DEPTH 13-7/32"(336mm)

### WEIGHT

INDOOR UNIT	GROSS / NET	86 lbs. (39 kg) / 66 lbs. (30 kg)
OUTDOOR UNIT	GROSS / NET	167 lbs. (76 kg) / 150 lbs. (68 kg)

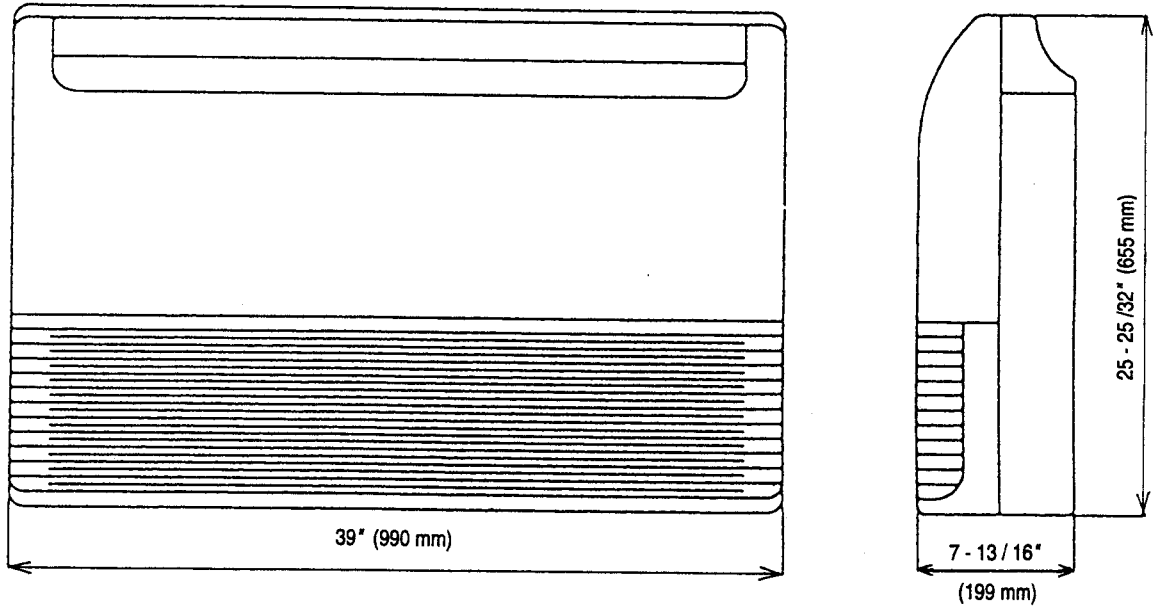
### ADDITIONAL REFRIGERANT

PIPE LENGTH	16 ft(5 m)	33 ft(10 m)	49 ft(15 m)	66 ft(20 m)
FULL CHARGE AMOUNT	1,950 g(68.8 oz.)	2,010 g(70.9 oz.)	2,070 g(73.0 oz.)	2,130 g(75.1 oz.)

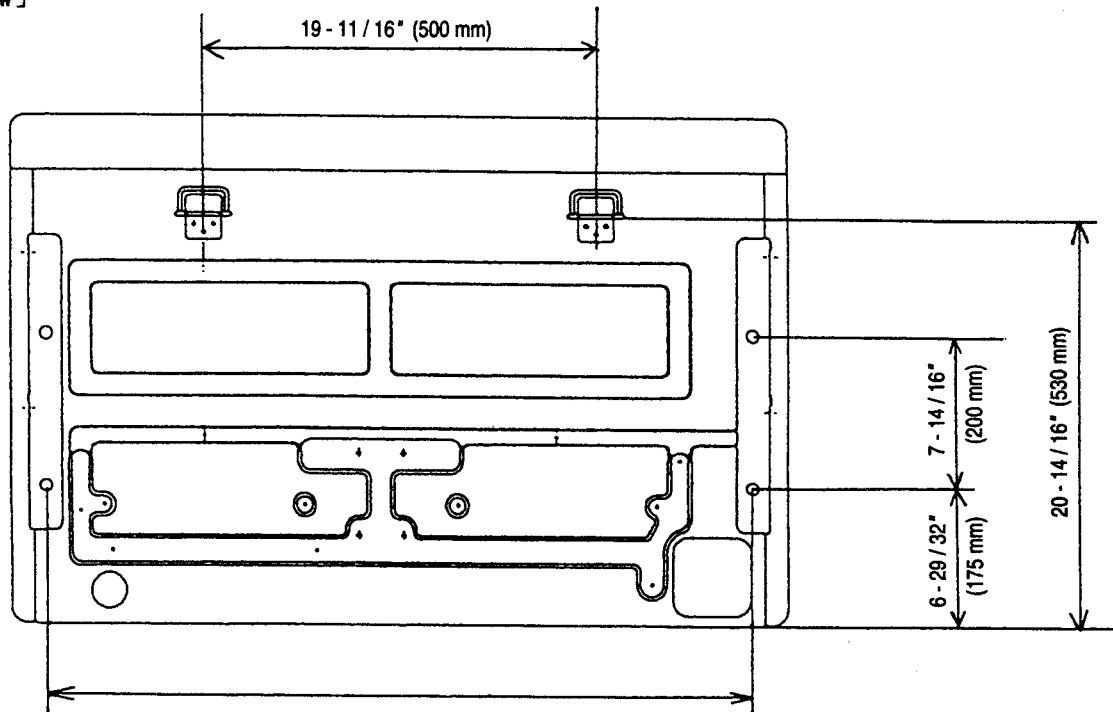
Note : Between 5 m and 20 m, when using a connection pipe other than that in the table, charge additional refrigerant with 0.42 oz. (12 g)/3.3 ft(1 m) as the criteria.

# OUTLINE AND DIMENSIONS

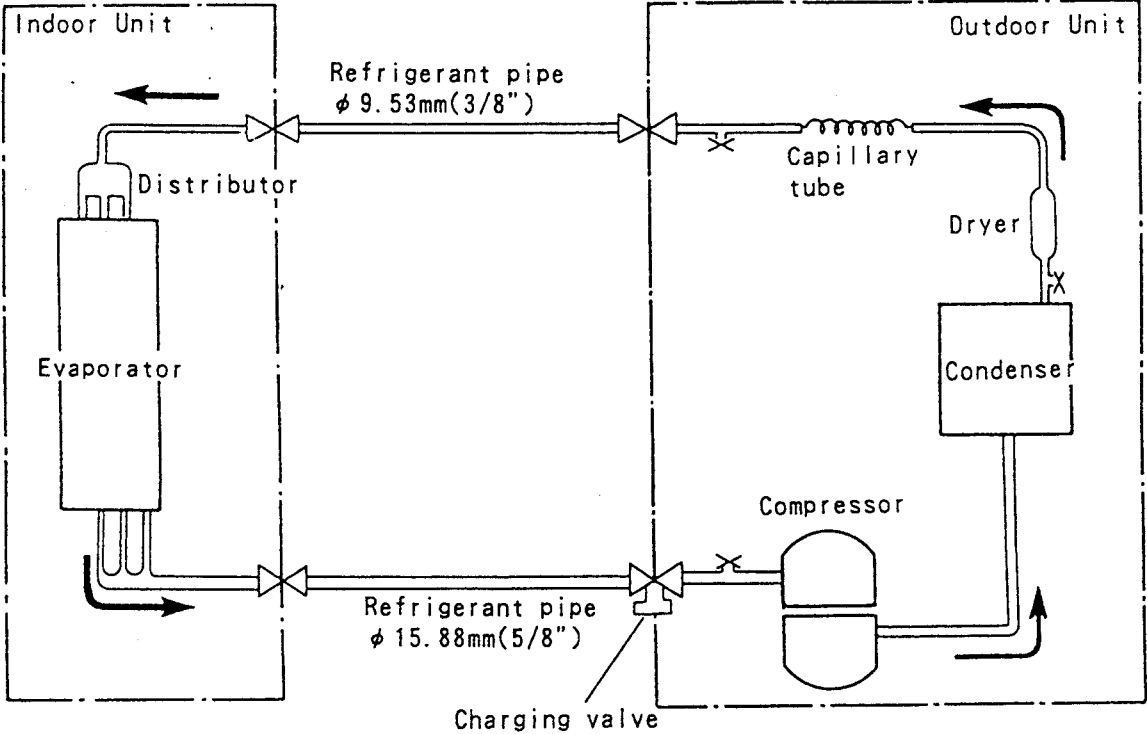
## INDOOR UNIT



### [Rear View]



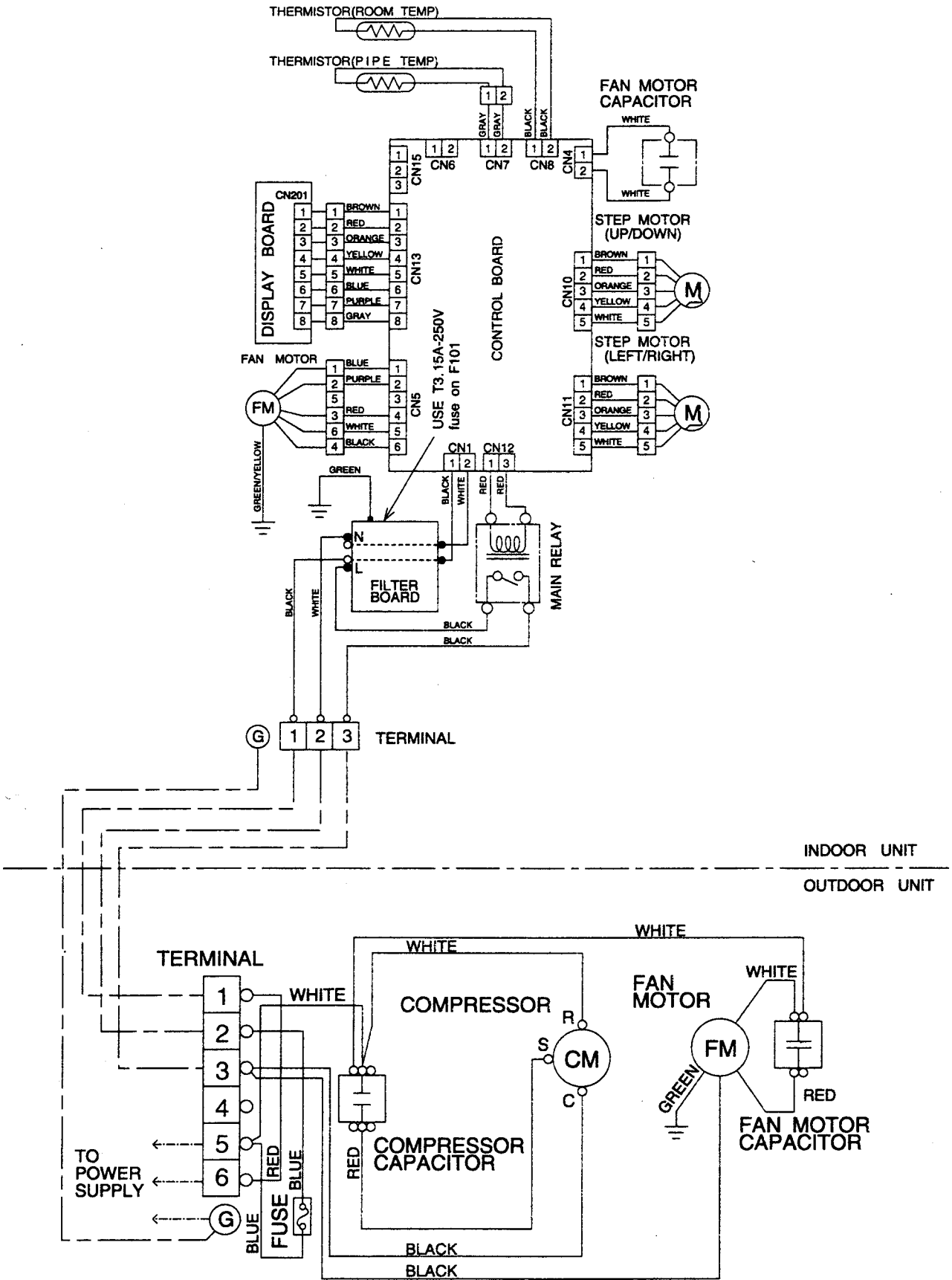
# REFRIGERANT SYSTEM DIAGRAM



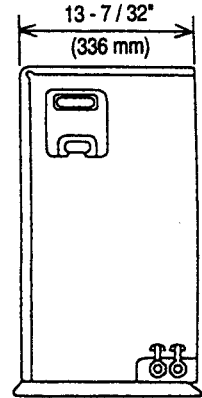
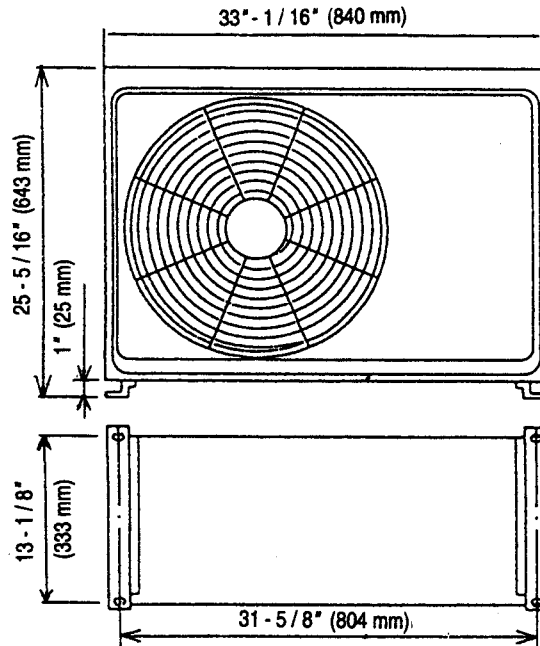
→ Cooling

⊗ : Flare coupling

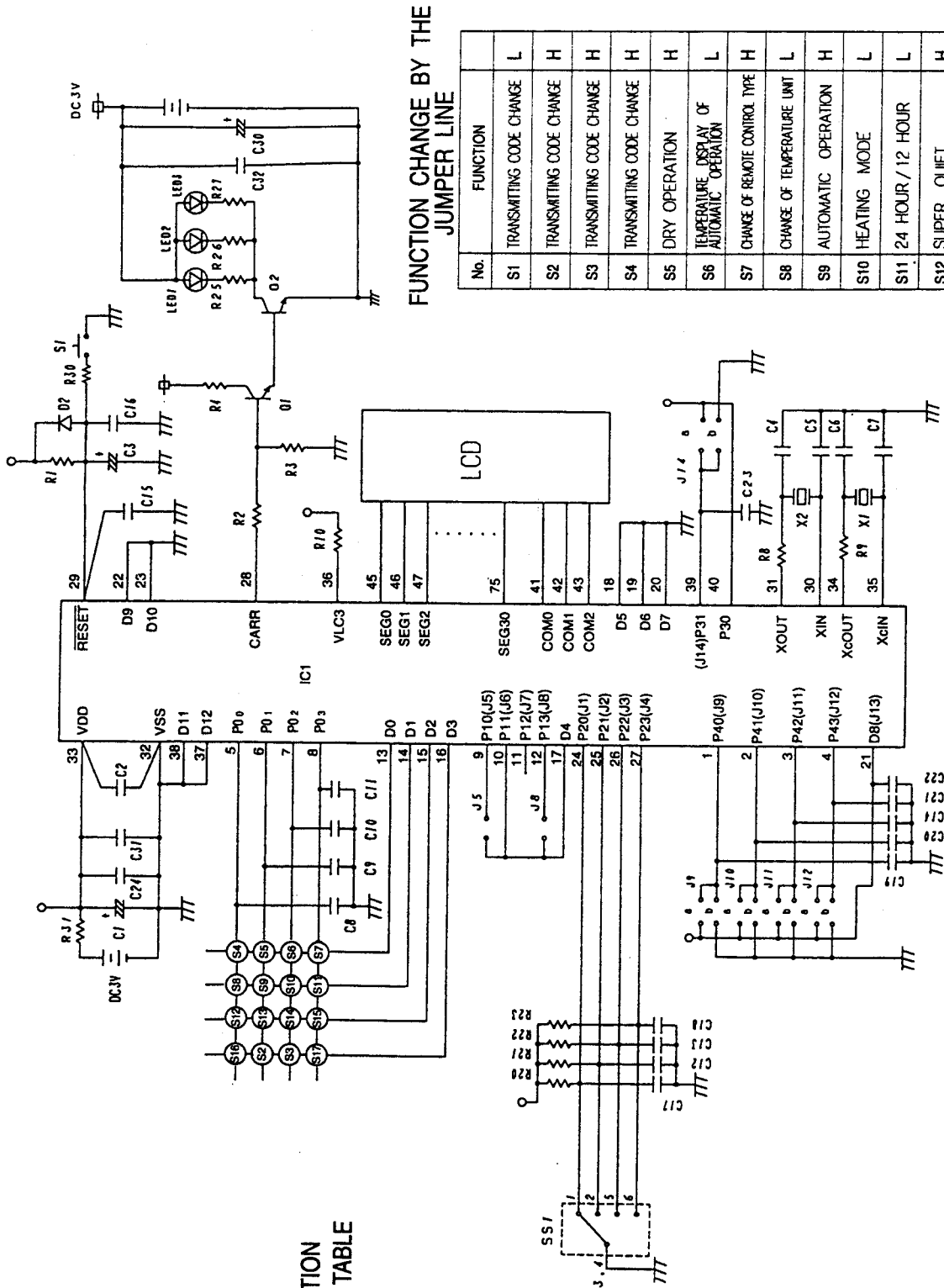
# CIRCUIT DIAGRAM



OUTDOOR UNIT



# REMOTE CONTROL UNIT CIRCUIT DIAGRAM



KEY NO. KEY FUNCTION CORRESPONDENCE TABLE

NO.	KEY FUNCTION
S1	ACL
S2	TIME ADJUST
S3	TEST RUN
S4	START/STOP
S5	MASTER CONTROL
S6	SET TEMP(+)-SET TIME(+)
S7	SET TEMP(-)-SET TIME(-)
S8	FAN CONTROL
S9	
S10	
S11	UP AND DOWN SWING
S12	UP AND DOWN WIND
S13	ENERGY SAVE
S14	RIGHT AND LEFT SWING
S15	TIMER
S16	SLEEP
S17	RIGHT AND LEFT WIN.J

FUNCTION CHANGE BY THE JUMPER LINE

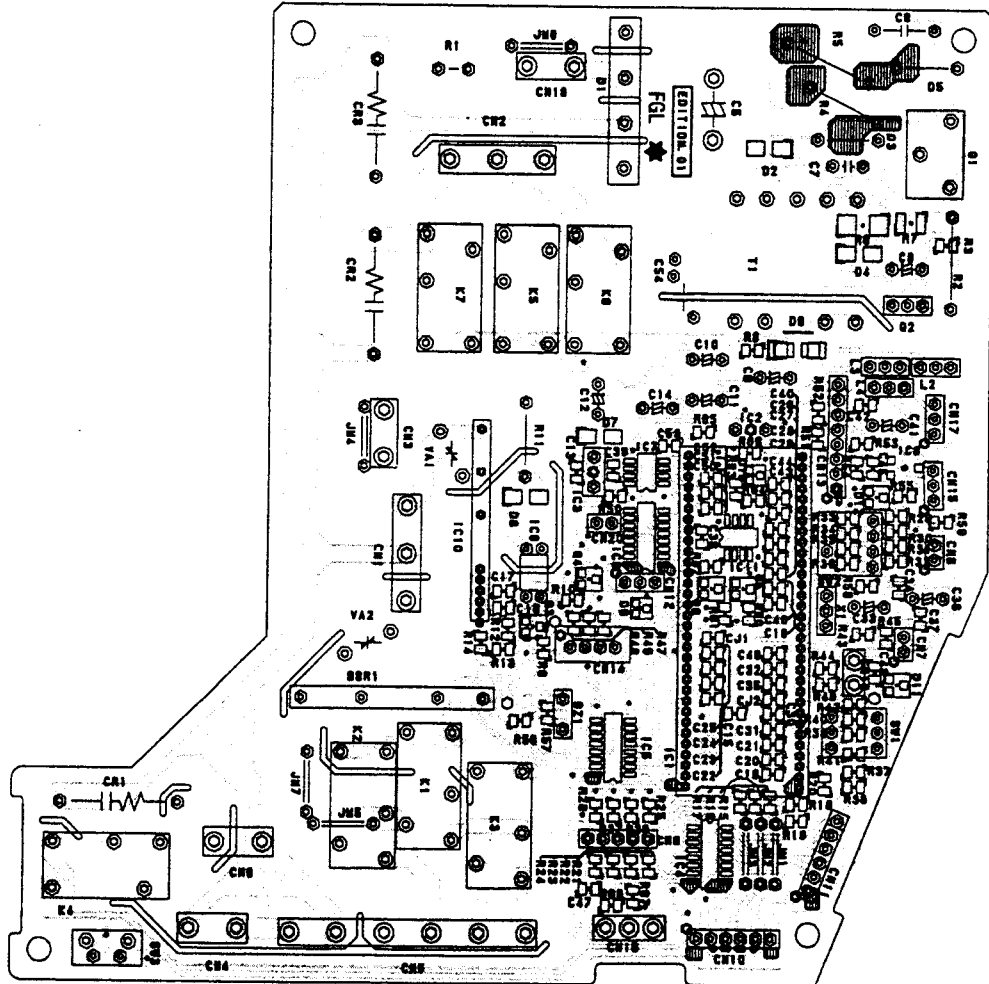
No.	FUNCTION
S1	TRANSMITTING CODE CHANGE L
S2	TRANSMITTING CODE CHANGE H
S3	TRANSMITTING CODE CHANGE H
S4	TRANSMITTING CODE CHANGE H
S5	DRY OPERATION H
S6	TEMPERATURE DISPLAY OF AUTOMATIC OPERATION L
S7	CHANGE OF REMOTE CONTROL TYPE H
S8	CHANGE OF TEMPERATURE UNIT L
S9	AUTOMATIC OPERATION H
S10	HEATING MODE L
S11	24 HOUR / 12 HOUR L
S12	SUPER QUIET H
S13	DISPLAY CHANGE OF AUTOMATIC OPERATION H
S14	FAN MODE H

L :  $\text{TTT}$  FIXED TO LOW LEVEL  
 H :  $\text{9}$  FIXED TO HIGH LEVEL

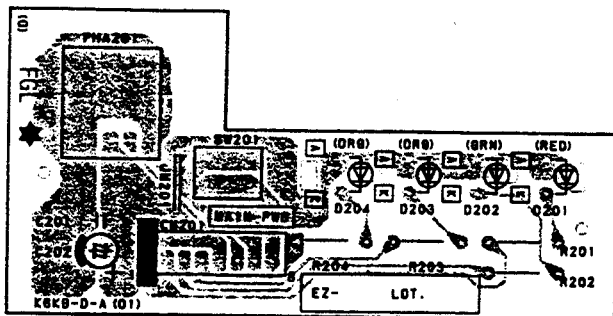
# P.C. BOARD LAYOUTS

## CONTROLLER P.C. BOARD ASSEMBLY

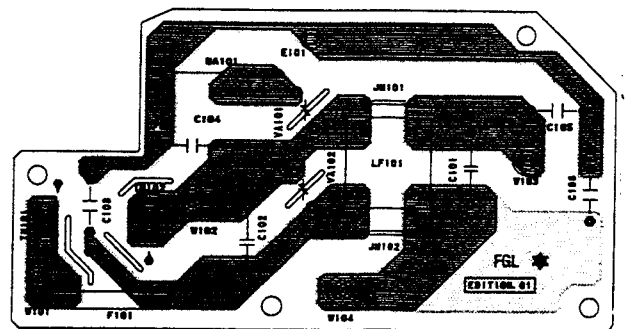
(Viewed from the solder side)



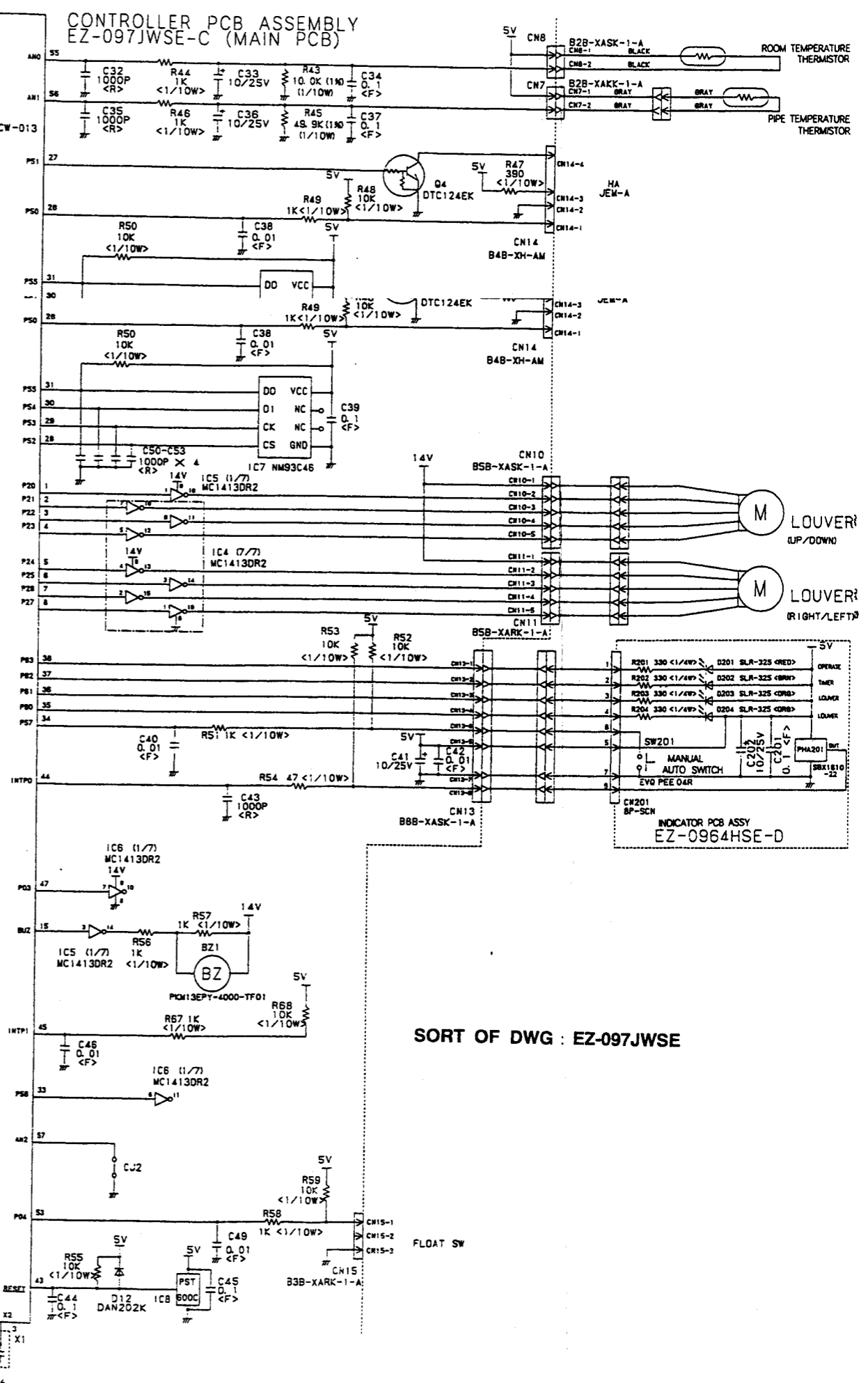
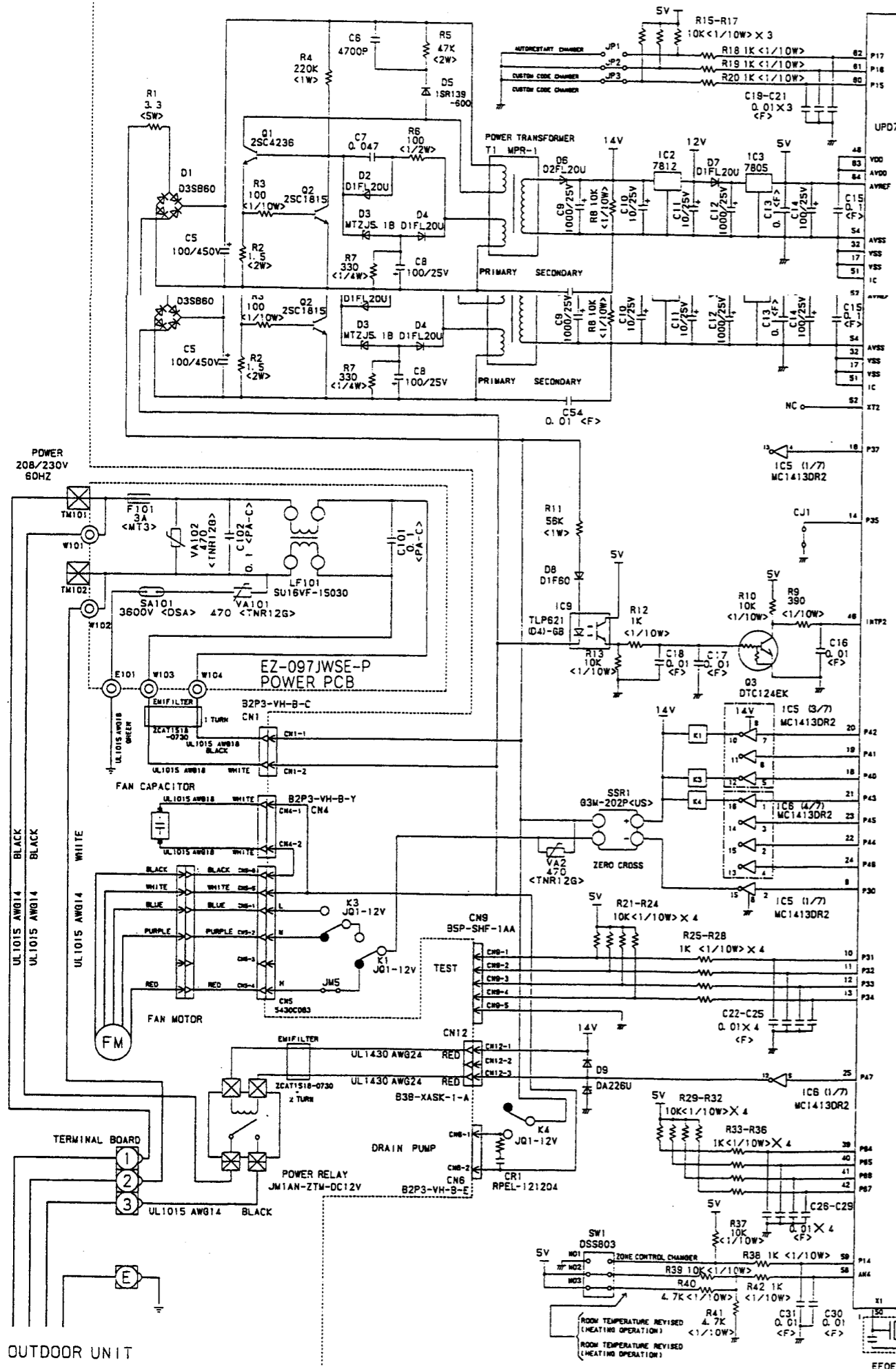
INDICATOR P.C. BOARD ASSEMBLY  
(Viewed from the solder side)



FILTER P.C. BOARD ASSEMBLY  
(Viewed from the solder side)



# INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRM

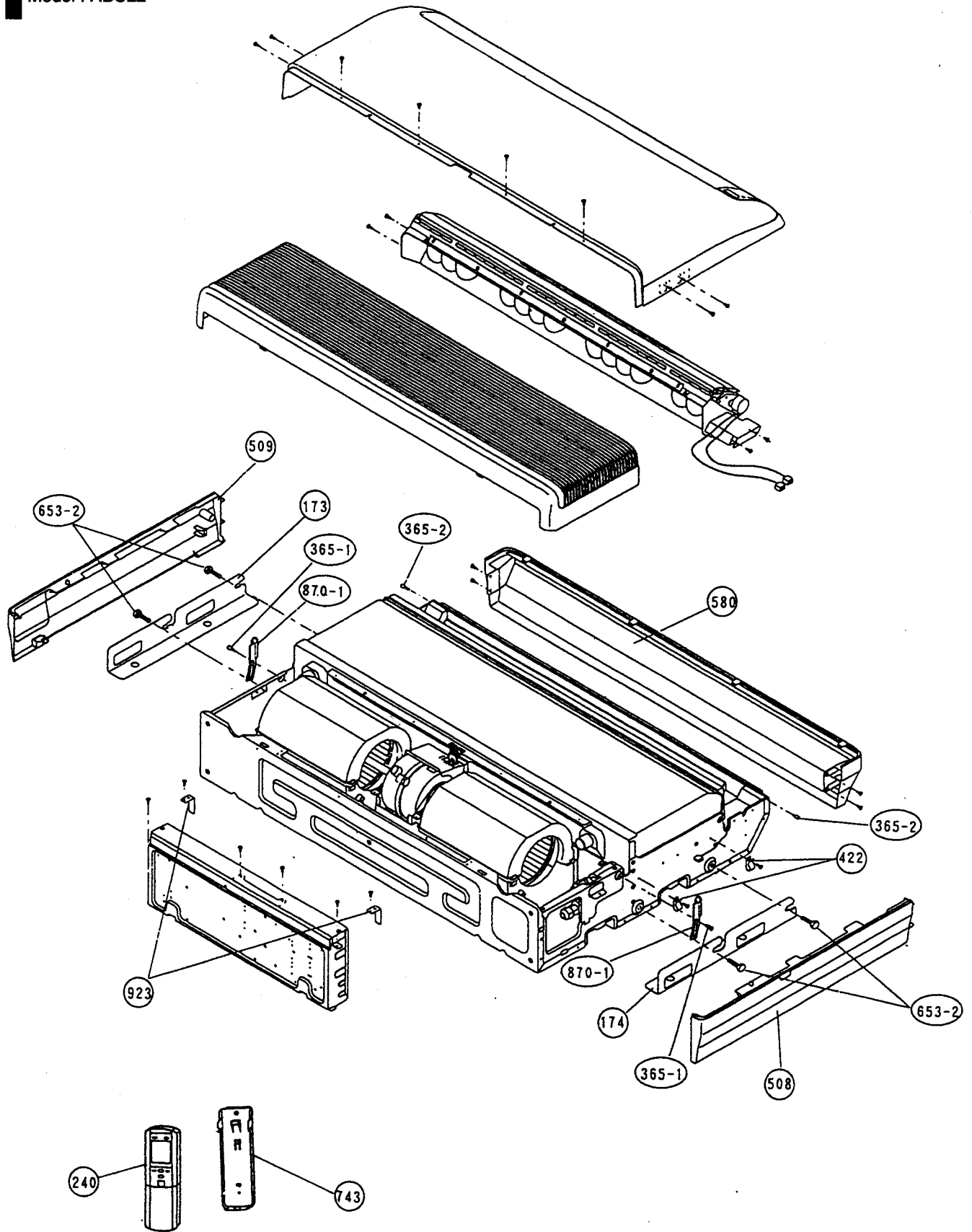


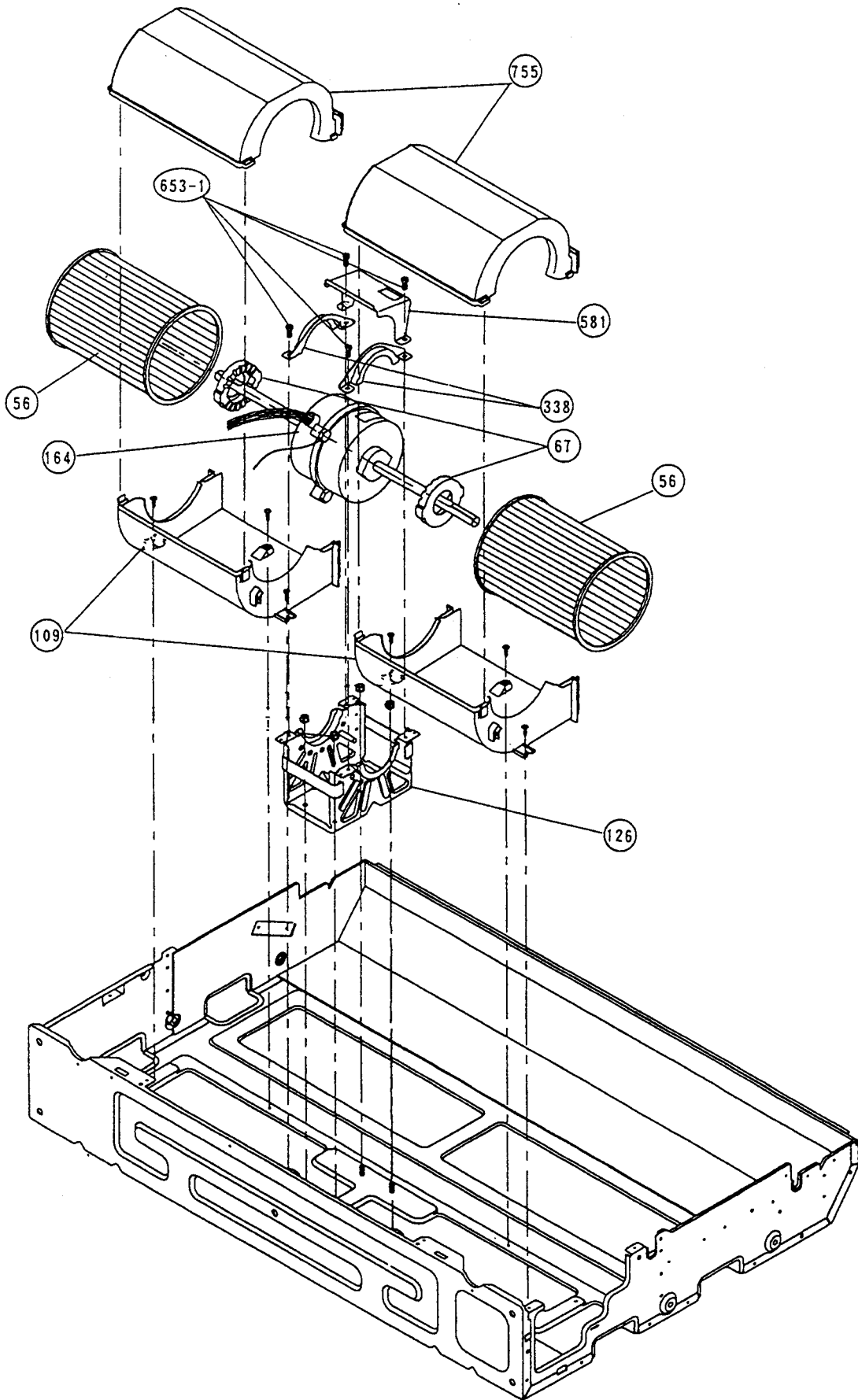
SORT OF DWG : EZ-097JWSE

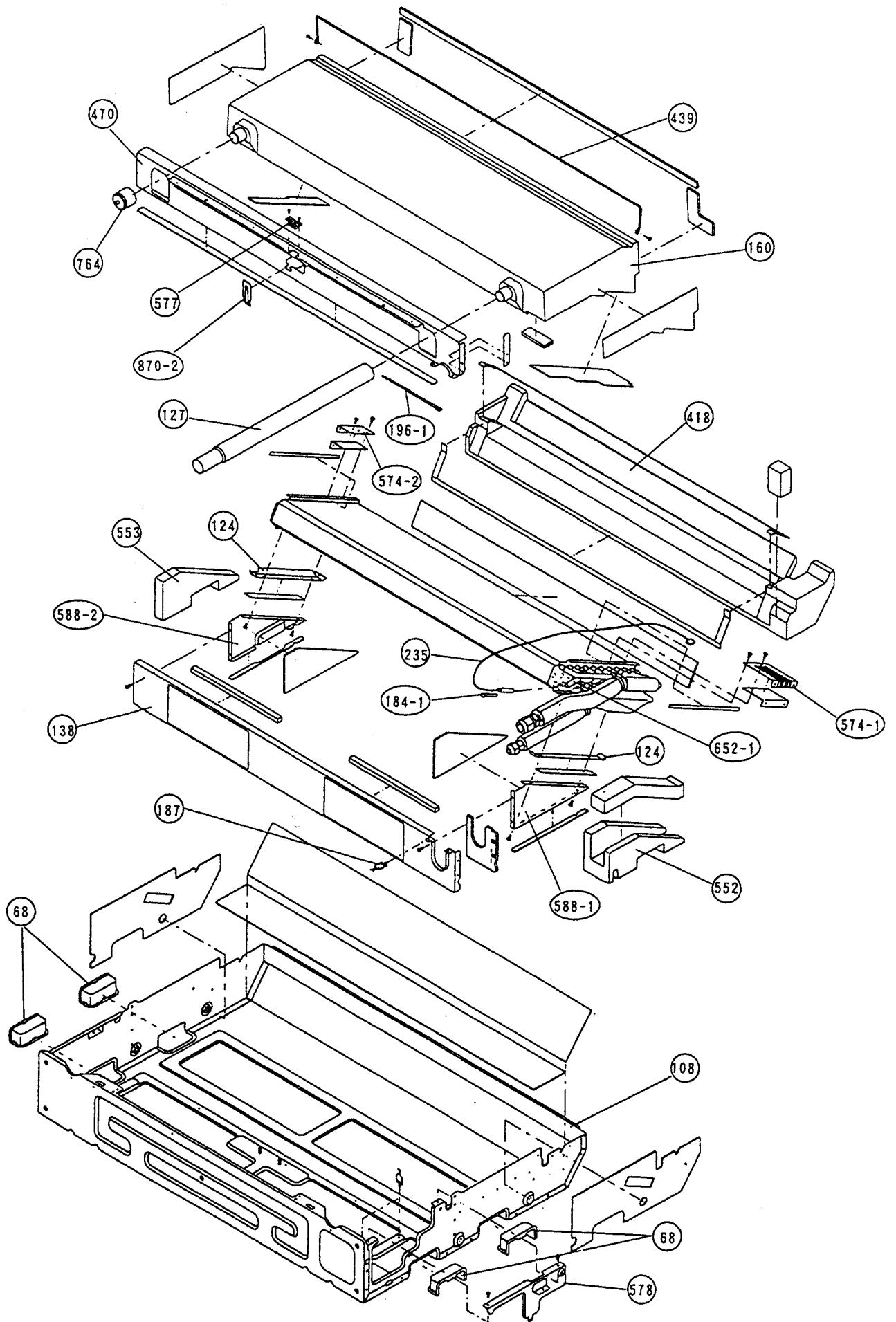
OUTDOOR UNIT

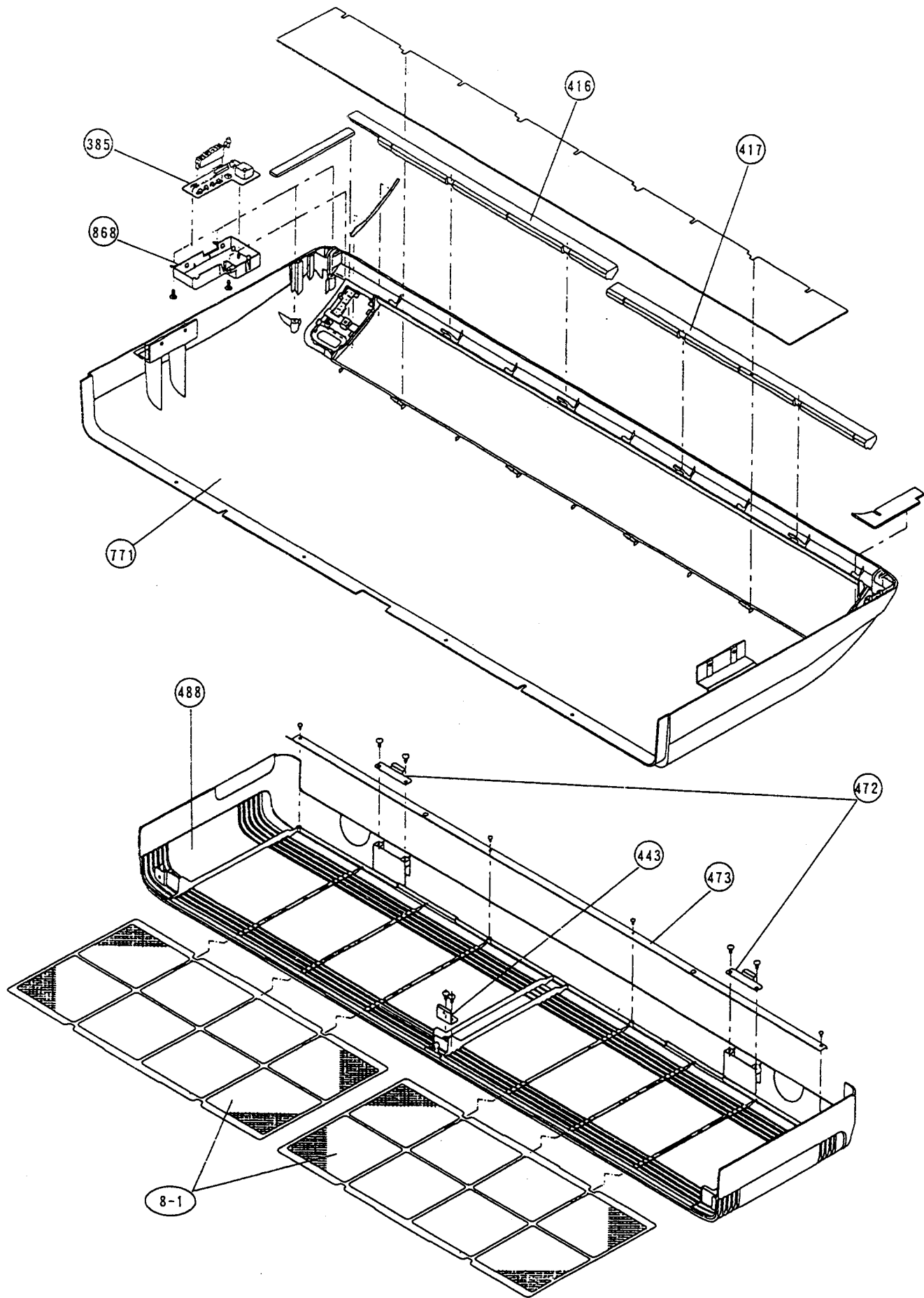
# DISASSEMBLY ILLUSTRATION

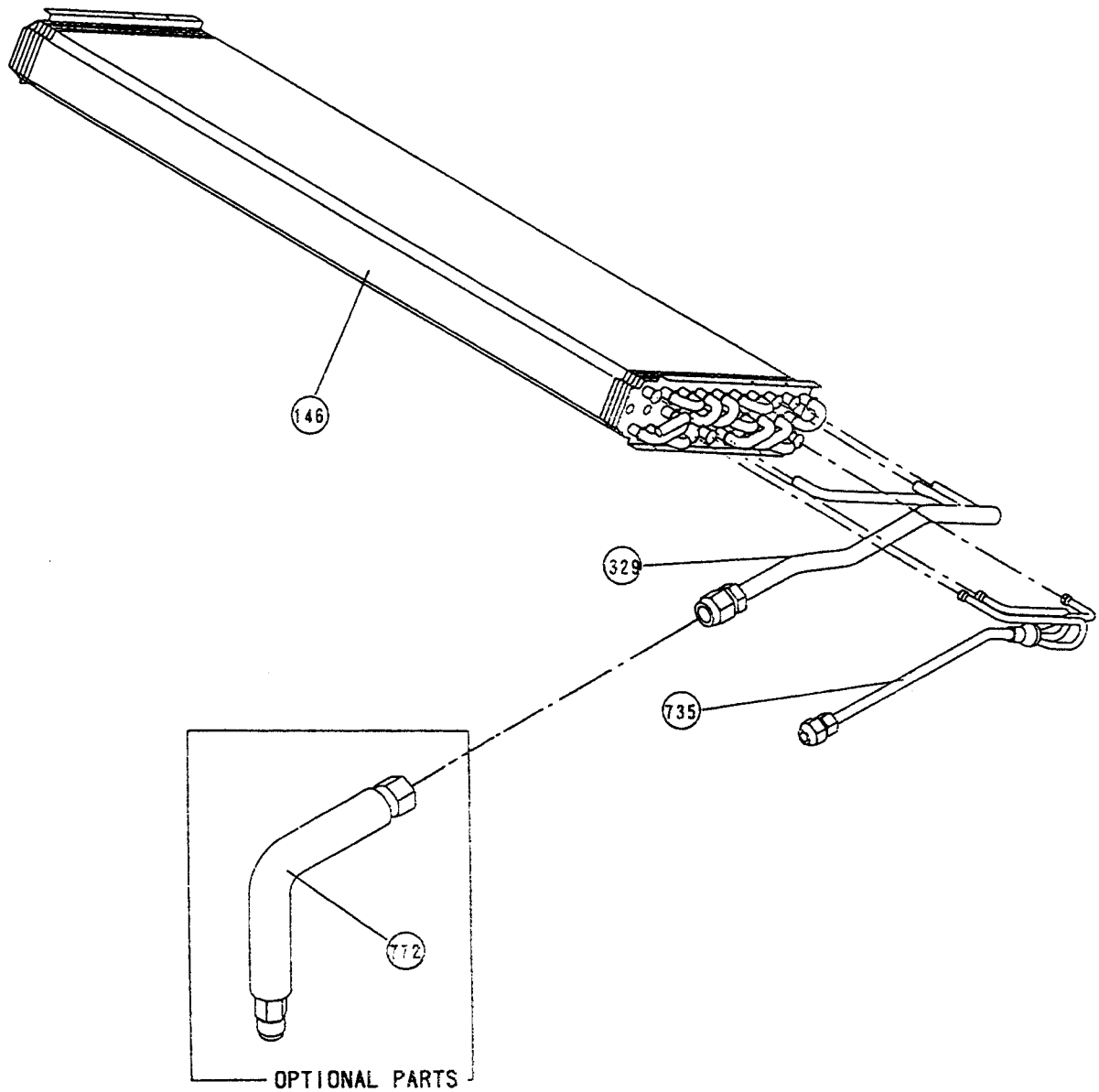
Model : ABU22



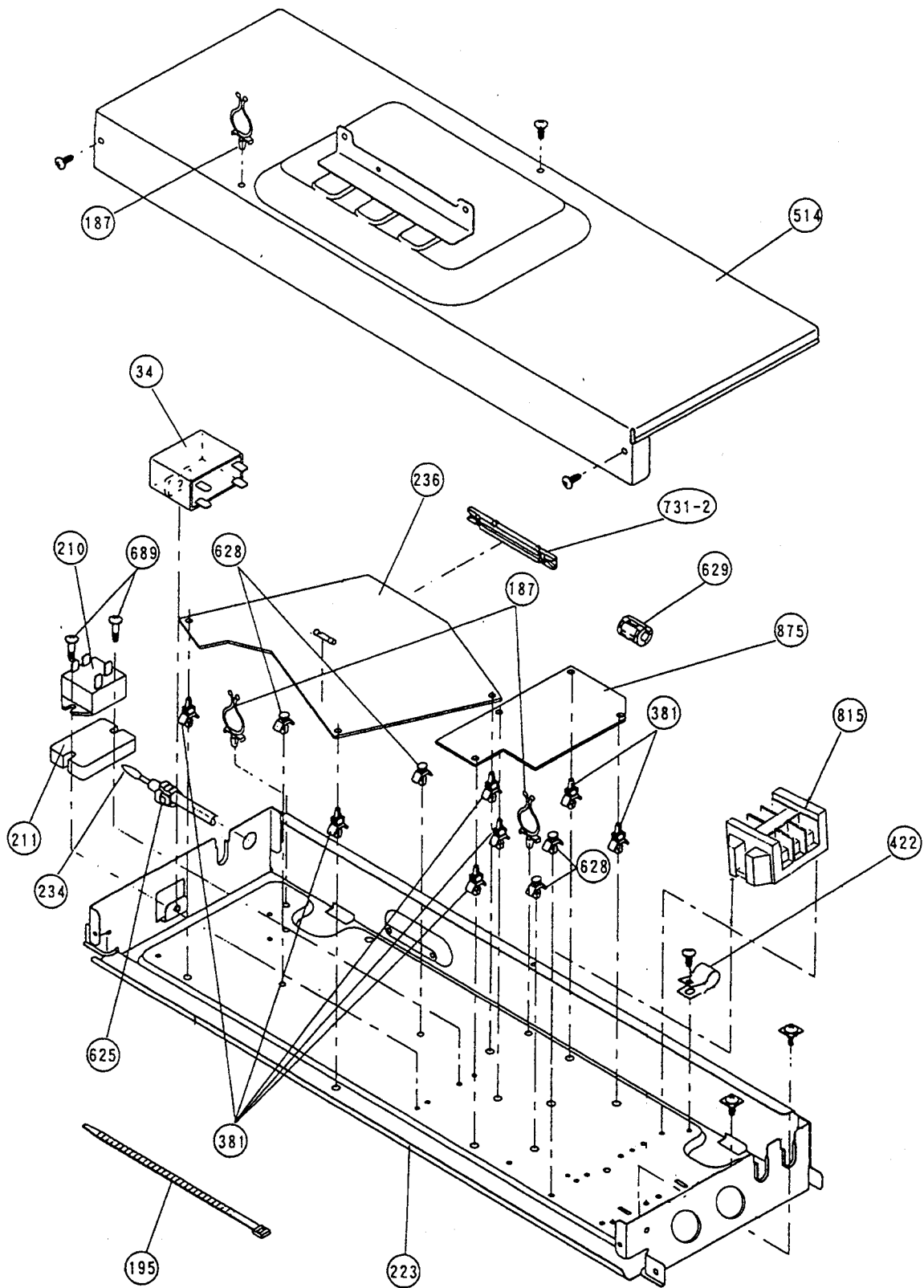




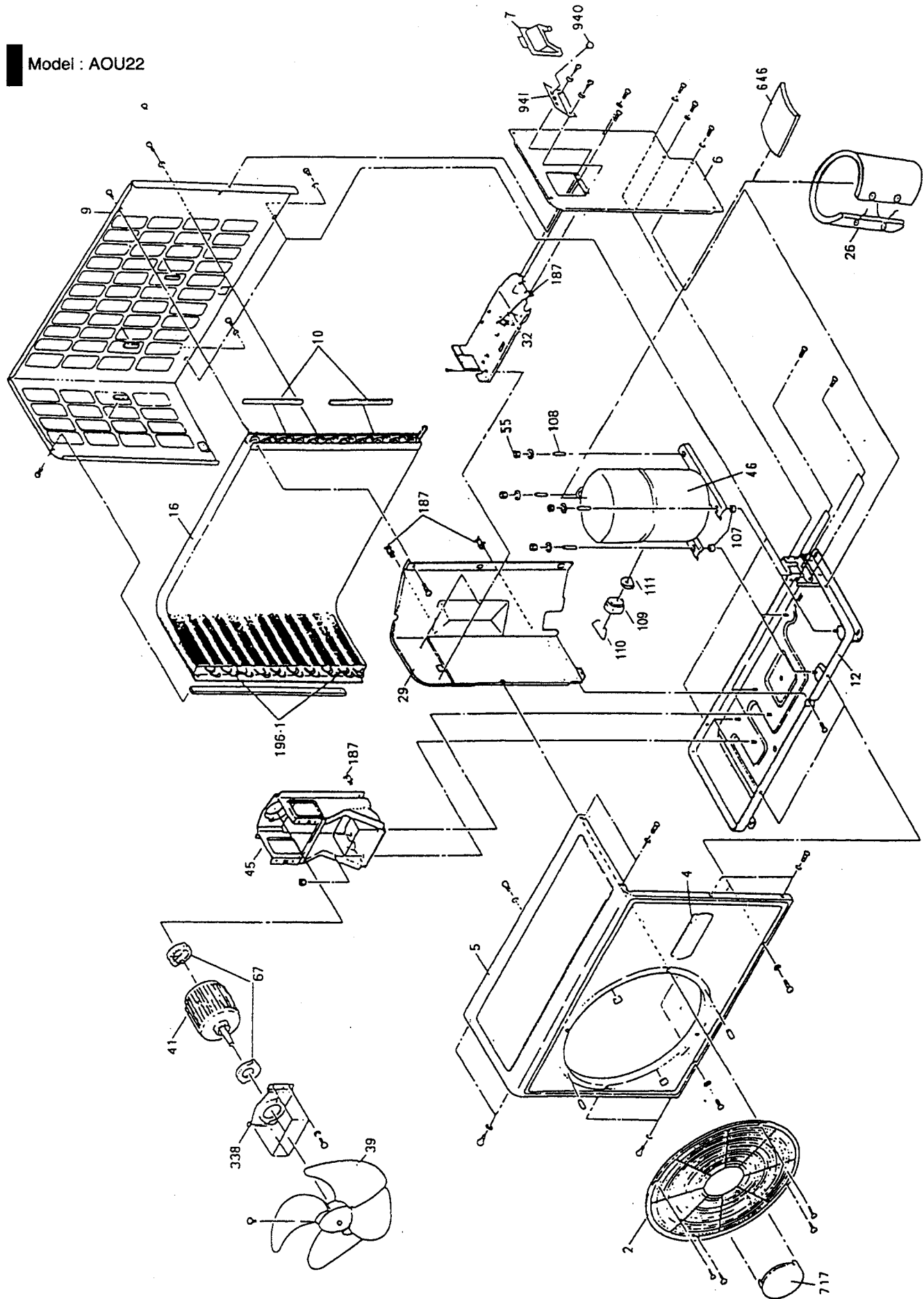


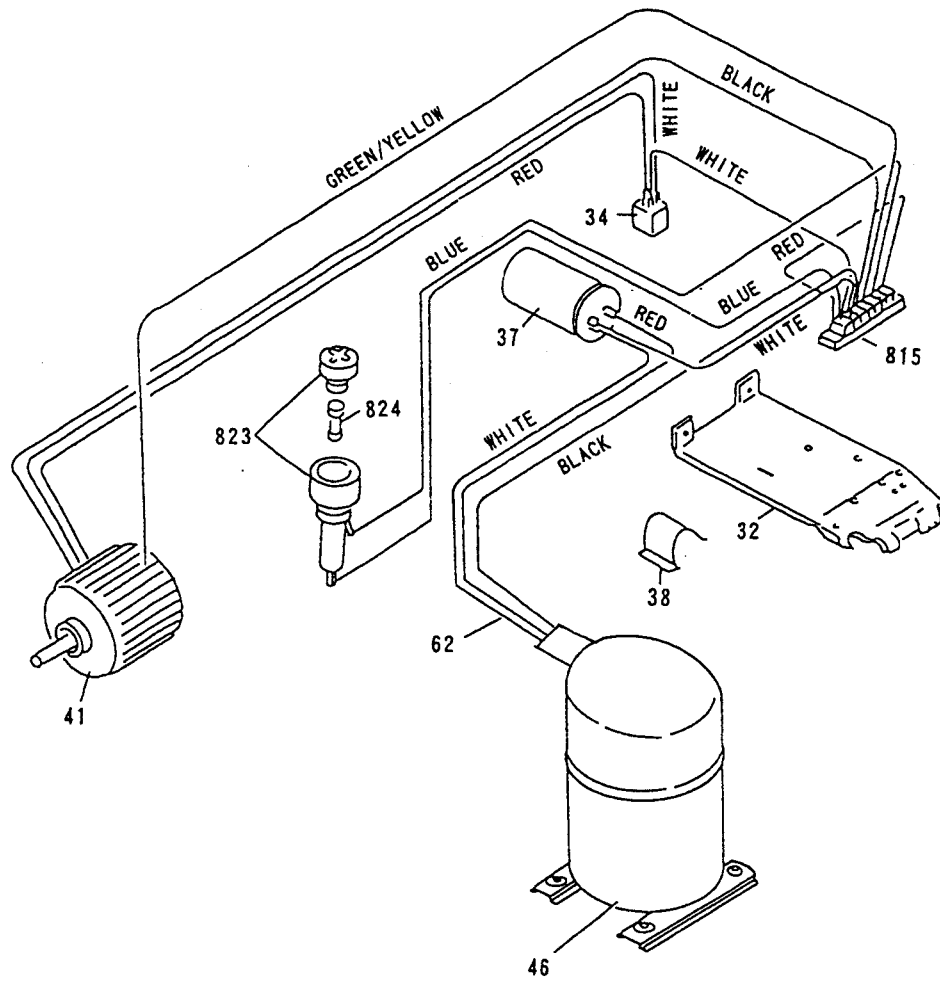
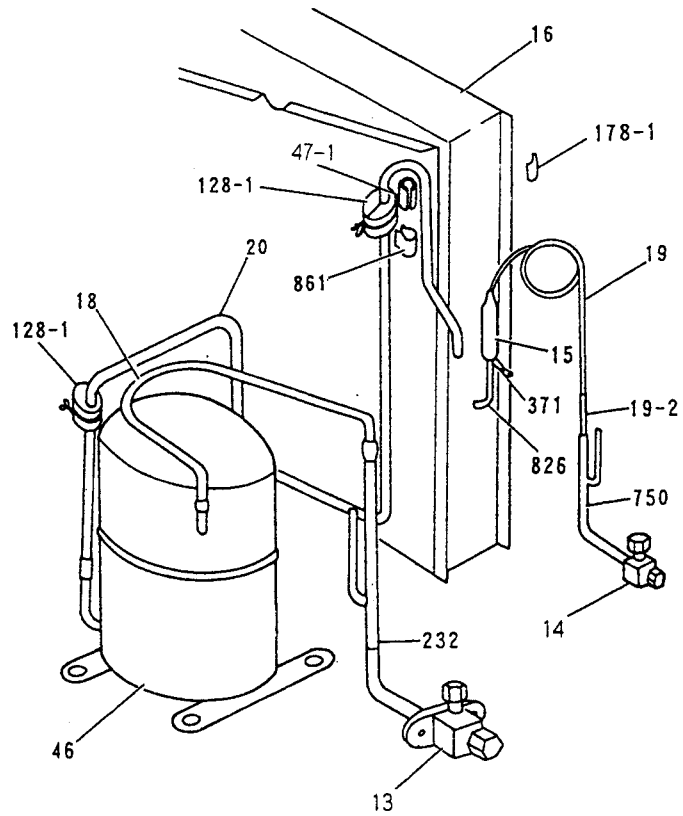






Model : AOU22





## PARTS LIST

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

### OUTDOOR UNIT (AOU22)

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
2	Fan Cover	9355498005		45	Motor Fixing Table Assy	313029311100	
4	Emblem-Rear "FUJITSU"	9351355005		46	Compressor Assy H25B22QABCA	9360289001	
5	Cabinet-A, Painted	9303876015		47-1	Rubber (Discharge Pipe)	313194159807	
6	Cabinet-C, Painted	9353549013		55	Special Nut M8 (For Comp.)	313252257701	
7	Panel(Top), Painted	9355480000		62	Wire Assy(Shield)-A	9357129013	
9	Cabinet-B, Painted	9303874011		67	Rubber (Vibration-proof)	313659068604	
10	Noise Insulation-E	313791106305		107	Rubber Seat-A (For Comp.)	313102081406	
12	Base Assy, Painted	9353452016		108	Sleeve-A (For Comp.)	313696081700	
13	3-Way Valve Assy	9357963013		109	Terminal Cover (For Comp.)	9355987004	
14	2-Way Valve Assy	9357964010		110	Lock Wire (For Comp.)	9355989008	
15	Dryer	313791082502		111	Terminal Packing	9355988001	
16	Condenser Assy	9356015010		128-1	Rubber (Discharge Pipe)	313155086308	
18	Suction Pipe	9355975001		178-1	Capillary Holder Rubber	313414274807	
19	Capillary Tube D3.2 x 2.0	9355977005		187	Clamp No.1219	313361271706	
19-2	Joint Pipe	9354268005		196-1	Clamp SKB-3M	312300787605	
20	Discharge Pipe	9355976008		232	Pipe Assy	9300990035	
26	Compressor Cover	9354036000		338	Motor Fixture Metal	313029297108	
29	Separate Wall	313986033213		646	Compressor Cover-B	313986355101	
32	Control Box Metal-A	9355491006		717	Center Plate (Fan Cover)	9351253011	
34	Capacitor (Fan Motor) 2.5 $\mu$ F/450V	9355306010		750	Pipe-A Assy	9301003017	
37	Running Capacitor 35 $\mu$ F/400V, D45	9356386059		815	Terminal-6P	9305488025	
38	Capacitor Clamp Metal (For D45)	313468061808		823	Fuse Holder	0500802111	
39	Propeller Fan Assy	9300855013		824	Fuse	0600106546	
41	Fan Motor Assy-Outer	9351333072		826	Condensing Pipe-B	9353601001	
				861	Pipe Absorber Clamp	313394229806	
				940	Hole Plug No.0875	9355891004	
				941	Conduit Plate	9355482004	

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**INDOOR UNIT (ABU22)**

Ref. No.	Description	Part No.	Order Q'ty	Ref. No.	Description	Part No.	Order Q'ty
3	Louver	9358561010		473	Filter Bracket	9358607008	
8-1	Air Filter	9358567012		488	Grille-F	9358532010	
34	Capacitor (Fan Motor) 2.7 $\mu$ F/440V	9700467076		500	Protect Cover	9358564004	
56	Sirocco Fan Assy	9358621004		502	Support Stay	9358599006	
67	Rubber (Vibration-proof)	313659068604		503	Louver Shaft	9358557006	
68	Cap. Plastic	9358563007		505	Louver Stopper	9358555002	
108	Base Assy	9359061021		506	Louver Rod	9358559000	
109	Casing, Plastic	9358543009		508	Cosmetic Panel-R	9358535011	
124	Dew Proof Plate	9359196006		509	Cosmetic Panel-L	9358536018	
126	Motor Fixing Table Assy	9358591000		514	Control Box Cover	9359097006	
127	Drain Hose Assy	9359242000		520	Flap Base	9358537015	
138	Separate Wall-A	9358584002		521	Louver Link Cover	9358558003	
146	Evaporator Assy C688E	9358870013		552	Insulation(Eva.)-R	9358575000	
160	Drain Pan Assy	9358568002		553	Insulation(Eva.)-L	9358857007	
164	Fan Motor Assy-IN MFA-24DP	9600364079		554	Flap Link-Upper (Step Motor-V)	9358551004	
173	Hanger Bracket-L	9358596005		555	Flap Link-Lower (Step Motor-V)	9358552001	
174	Hanger Bracket-R	9358595008		558	Rod-A (Step Motor-V)	9358550007	
184-1	Thermistor Spring-A	313728262708		574-1	Evaporator Fixture-R (Bracket)	9358589007	
187	Clamp No. 1219	313361271706		574-2	Evaporator Fixture-L (Bracket)	9358590003	
195	Clamp SKB-100	313361275805		577	Catch TL-119	9359096009	
196-1	Clamp SKB-3M	312300787605		578	Base Bracket (Reinforcement Metal)	9358586006	
210	Main Relay JM1AN-ZTM-DC12V	9356781007		580	Top Cover	9358534014	
211	Cushion Rubber	313806328306		581	Protector, Metal (Fan Motor)	9359282006	
223	Control Box	9358600016		588-1	Evaporator Bracket-R	9358587003	
234	Thermistor Assy	9701946020		588-2	Evaporator Bracket-L	9358588000	
235	Thermistor Assy-PIPE	9701102068		625	Cord Bushing KR-51	9359240006	
236	Controller PCB Assy EZ-097JWSE-C	9702469016		628	Locking Spacer-B	313005446558	
240	Remote Control Unit AR-DL10	9359913108		629	EMI Filter	0400056133	
320	Flap(Upper)-F	9358538012		652-1	Therm. Holder Pipe	313806262805	
321	Flap (Lower)	9358541012		653-1	Bolt (Fan Motor Fixing)	0700156014	
329	Coupling Pipe Assy	9358819005		653-2	Bolt	0700190018	
338	Motor Fixture	9358594001		684	Motor Base	9358562000	
361	Bushing, Plastic	9357942001		689	Screw, Grip Tapping SNH4016 ZNY w/Grip	9357837000	
361-2	Bushing-B, Plastic	9358554005		731-2	Holder (Guide Rail)	0600241018	
361-3	Bushing-C, Plastic	9358553008		735	Distributor Assy	9358814000	
365-1	Special Screw	9359092001		743	Remote Cont. Holder Case	9359955016	
365-2	Special Screw	9359091004		755	Casing Cover	9358544006	
381	Locking Spacer KGLS-4S	313209391506		764	Drain Cap	9358746004	
385	Indicator PCB Assy EZ-0964HSE-D	9701873012		771	Panel Assy "FUJITSU"	9359076018	
407	Motor Rod	9358560006		815	Terminal-3P	9305488018	
408	Louver Link	9358556009		868	PCB Holder	9358547007	
416	Insulation-A	9358574003		870-1	Arm	9358565001	
417	Insulation-B	9358914007		870-2	Center Arm	9359280002	
418	Insulation (Flap Base)	9358572009		875	Filter PCB Assy EZ-097JWSE-P	9702399016	
422	Clamp NK-10N	9359183006		876-1	Step Motor-H	9359106012	
439	Drain Pan Wire	9358598009		876-2	Step Motor-V	9359105015	
443	Arm Bracket, Metal	9359281009		923	Control Box Bracket	9358717004	
470	Separate Wall-B	9358585009					
472	Grille Support	9358602003					

**OPTIONAL PARTS FOR INDOOR UNIT**

Ref. No.	Description	Part No.	Order Q'ty
772	Joint Pipe-A	9302812021	

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

**CONTROLLER PCB ASSEMBLY (Ref. No. 236)**

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
IC1	IC $\mu$ PD78014hCW-013	9702426026		C5	Cap. Elec. 450V 100 $\mu$ F	0300312797	
IC2	IC NJM7812FA	0100462104		C6	Cap. Plastic 4700pF	0300269091	
IC3	IC NJM7805FA	0100462081		C7	Cap. Plastic 50V 0.047 $\mu$ F	0300169339	
IC4~6	Xstr $\mu$ PA2003GR	0100028041		C8	Cap. Elec. 25V 100 $\mu$ F	0301197560	
IC7	IC MM93C46M8-X	0101622026		C9	Cap. Elec. 25V 1000 $\mu$ F	0301196495	
IC8	IC PST600CMTR	0101461120		C10, 11, 33, 36, 41	Cap. Elec. 25V 10 $\mu$ F	0301192312	
IC9	Photocoupler TLP621(D4)-GB	0000117074		C12	Cap. Elec. 25V 1000 $\mu$ F	0301158264	
Q1	Xstr 2SC4236	0000164047		C13, 15, 34, 37, 39, 44, 45	Cap. Ceramic 50V 0.1 $\mu$ F	0300311752	
Q2	Xstr 2SC1815	0000020211		C14	Cap. Elec. 25V 100 $\mu$ F	0301192350	
Q3, 4	Xstr DTC124EK	0000517034		C16~31, 38, 40, 42, 46, 49	Cap. Ceramic 50V 0.01 $\mu$ F	0300311738	
D1	Diode D3SB60	0000689045		C32, 35, 43, 50~53	Cap. Ceramic 50V 1000pF	0300308509	
D2, 4, 7	Diode D1FL20U	0000746519		C54	Cap. Ceramic 0.01 $\mu$ F	0300209127	
D3	Diode MTZJ5.1B	0000852166		K1, 3, 4	Relay JQ1-12V	9701316014	
D5	Diode 1SR139-600	0000353120		SSR1	Relay G3M-202P-US	9701317011	
D6	Diode D2FL20U	0000906500		SW1	Switch, Slide DSS803	9701392018	
D8	Diode D1F60	0000208024		T1	Switching Transformer MPR-1	9701976010	
D9	Diode DA226U	0000625036		X1	Ceramic Resonator EFOEC8384T4	9701261017	
D12	Diode DAN202K	0000684019		BZ1	Buzzer PKM13EPY-4000-TF01	9701298013	
R1	Res. Cement 5W 3.3 $\Omega$ $\pm$ 10%	0200153148		CR1	Network RPEL-121204	9701125012	
R2	Res. Metal 2W 1.5 $\Omega$ $\pm$ 5%	0201107119		CN1	Plug, PCB B2P3-VH-B-C	0500011773	
R3	Res. 1/10W 100 $\Omega$ $\pm$ 5%	0200212500		CN4	Plug, PCB B2P3-VH-B-Y	0500011827	
R4	Res. Carbon 1W 220k $\Omega$ $\pm$ 5%	0200111353		CN5	Plug, PCB 5430C063	0500957026	
R5	Res. Metal 2W 47k $\Omega$ $\pm$ 5%	0201107652		CN6	Plug, PCB B2P3-VH-B-E	0500011759	
R6	Res. 1/2W 100 $\Omega$ $\pm$ 5%	0200731506		CN7	Plug, PCB B2B-XASK-1-A	0501045227	
R7	Res. 1/4W 330 $\Omega$ $\pm$ 5%	0200708621		CN8	Plug, PCB B2B-XASK-1-A	0501045012	
R8, 10, 13, 15~17, 21~24, 29~32, 37, 39, 48, 50, 52, 53, 55, 59, 68	Res. 1/4W 10k $\Omega$ $\pm$ 5%	0200213019		CN9	Plug, PCB B2P-SHF-1AA	0500006069	
R9, 47	Res. 1/10W 390 $\Omega$ $\pm$ 5%	0200212647		CN10	Plug, PCB B5B-XASK-1-A	0501045043	
R11	Res. Metal 1W 56k $\Omega$ $\pm$ 5%	0201106662		CN11	Plug, PCB B5B-XARK-1-A	0501045517	
R12, 18~20, 25~28, 33~36, 38, 42, 44, 46, 49, 51, 56~58, 67	Res. 1/10W 1k $\Omega$ $\pm$ 5%	0200212746		CN12	Plug, PCB B3B-XASK-1-A	0501045029	
R40, 41	Res. 1/10W 4.7k $\Omega$ $\pm$ 5%	0200212906		CN13	Plug, PCB B8B-XASK-1-A	0501045074	
R43	Res. 1/10W 10k $\Omega$ $\pm$ 1%	0200279497		CN14	Plug, PCB B4B-XH-AM	0500005314	
R45	Res. 1/10W 49.9k $\Omega$ $\pm$ 1%	0200279824		CN15	Plug, PCB B3B-XARK-1-A	0501045319	
R54	Res. 1/10W 47 $\Omega$ $\pm$ 5%	0200212425					
CJ1, 2	Res. 0 $\Omega$	0200212012					

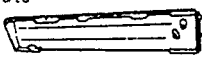
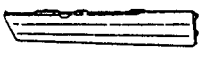

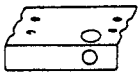


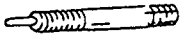




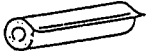

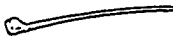
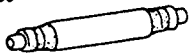

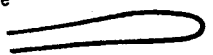
**INDICATOR PCB ASSEMBLY (Ref. No. 385)**

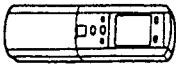
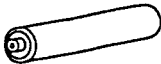
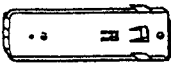

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
D201	Diode SLR-325VC RED	0000813259		PHA201	Remote Control Amplifier SBX1610-22	0100417050	
D202	Diode SLR-325MC GRN	0000813242		SW201	Switch, EVQ-PAG-04K	9700450016	
D203, 204	Diode SLR-325DC ORG	0000813235		CN201	Wire w/Connector JC25/XMR Lamp Holder 94N40	9701875016 9358548004	
C201	Cap. Ceramic 0.1 $\mu$ F	0300988251					
C202	Cap. Elec. 25V 10 $\mu$ F	0300004258					
R201~204	Res. Carbon 1/4W 330 $\Omega$ $\pm$ 5%	0201038659					

**FILTER PCB ASSEMBLY (Ref. No. 875)**


Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
C101, 102	Cap. Plastic 0.1 $\mu$ F	0300894835		F101	Fuse MT3 3A-250V	0600239527	
SA101	Arrester DSA-362MA-05	0600168032		E101	Wire w/Terminal GRN L=120	9702066062	
VA101, 102	Varistor TNR12G471K	0000038010		W101	Wire w/Terminal BLK L=80	9702066017	
TM101, 102	Plug Contact 86028	0500536016		W102	Wire w/Terminal WHT L=100	9702361013	
LF101	EMI Filter SU16VF-15030	0400134114		W103, 104	Wire #18 2P	9702067014	

## INDOOR UNIT ACCESSORIES

Name and Shape	Application	Part No.	
Cover plate (left) 		9358536018	
Cover plate (right) 		9358535011	
Tapping screw ( $\phi 4 \times 10$ ) 		301171164104	
Installation template 	For positioning the indoor unit For under ceiling type.	9359107002	
Bracket (left) 	For suspending the indoor unit from ceiling	9358596005	
Bracket (right) 		9358595008	
Anchor bolt(M12) 		} 313806339400	
Special nut 			
Spring washer 			301821112213
Wall bracket 		For suspending the indoor unit on the wall.	9358597002
Tapping screw ( $\phi 4 \times 20$ ) 		For fixing the wall bracket.	301141164200
Coupler heat insulator (large) 	For indoor side pipe joint (Large pipe)	9350716012	
Coupler heat insulator (small) 	For indoor side pipe joint (Small pipe)	313209328104	
Nylon fastener 	For fixing the drain hose	312300787605	
Drain hose 		9359242000	
Insulation (drain hose) 	Adhesive type 70 $\times$ 230	9359225003	
VT wire 	For fixing the drain hose L 280mm	313806350303	

Name and Shape	Application	Part No.
Remote control unit 	Use for air conditioner operation	9359913108
Battery 	For remote control unit	313187358304
Remote control unit holder 	For mounting the remote control unit	9359955016
Tapping screw (ø3 x 12) 	For remote control unit holder installation	301141533125

### OUTDOOR UNIT ACCESSORIES

Name and Shape	Application	Part No.
Hexagon wrench 	For air purge	9351228019

**Parts Orders**

Parts may be ordered from

FUJITSU GENERAL AMERICA, INC.

353 RTE 46 W.

FAIRFIELD NJ 07004 PHONE 1-973-575-0380

FAX 1-973-575-2194

Specify complete Part No., Model & Description to ensure  
correct parts are supplied.

FUJITSU GENERAL AMERICA, INC.  
353 ROUTE 46W., FAIRFIELD, N.J. 07004