

**SPLIT TYPE ROOM AIR  
CONDITIONER  
WALL MOUNTED type**

**SERVICE  
MANUAL**

Models	Indoor unit	Outdoor unit
	ASY20AGB-W	AOY20ANA
	ASY24AGB-W	AOY24ANA

**C O N T E N T S**

SPECIFICATIONS.....	1
REFRIGERANT SYSTEM DIAGRAM.....	2
CIRCUIT DIAGRAM.....	3
P. C. BOARD LAYOUTS.....	5
DISASSEMBLY ILLUSTRATION.....	7
PARTS LIST.....	13

# S P E C I F I C A T I O N S

TYPE		COOL	COOL
INDOOR UNIT		ASY20AGB-W	ASY24AGB-W
OUTDOOR UNIT		AOY20ANA	AOY24ANA
COOLING CAPACITY	(kW)	5.80 - 5.90	6.75 - 6.85

## ELECTRICAL DATA

POWER SOURCE	(V)	220 - 240	220 - 240
FREQUENCY	(Hz)	50	50
RUNNING CURRENT	(A)	10.3 - 11.0	12.6 - 12.8
INPUT WATTS	(kW)	2.11 - 2.27	2.66 - 2.81
EER	(kW/kW)	2.75 - 2.60	2.54 - 2.44
MOISTURE REMOVAL	(ℓ/hr)	2.0	2.8
AIR CIRCULATION-Hi	(m <sup>3</sup> /hr)	840	1,000

## COMPRESSOR

TYPE	Hermetic type, Permanent split condenser, 2 pole, Single phase, Induction motor		
CODE		2JS350D5AB02	2JS438D5AA02
REFRIGERANT	R-22	(g)	1,500
			1,870

## FAN MOTOR

POWER SOURCE	(V)	220 - 240	220 - 240
INDOOR UNIT	TYPE	MFA-20CTH	MFA-24CTH
	HI-SPEED (r.p.m.)	1,060 - 1,110	1,220 - 1,290
	MED-SPEED (r.p.m.)	890 - 970	1,050 - 1,140
	LO-SPEED (r.p.m.)	740 - 810	890 - 970
OUTDOOR UNIT	TYPE	MFB-247FB	MFB-247FB
	(r.p.m.)	735	735

## DIMENSIONS

INDOOR UNIT	HEIGHT (mm)	320	320
	WIDTH (mm)	1,250	1,250
	DEPTH (mm)	195	195
OUTDOOR UNIT	HEIGHT (mm)	643	643
	WIDTH (mm)	840	840
	DEPTH (mm)	336	336

## WEIGHTS

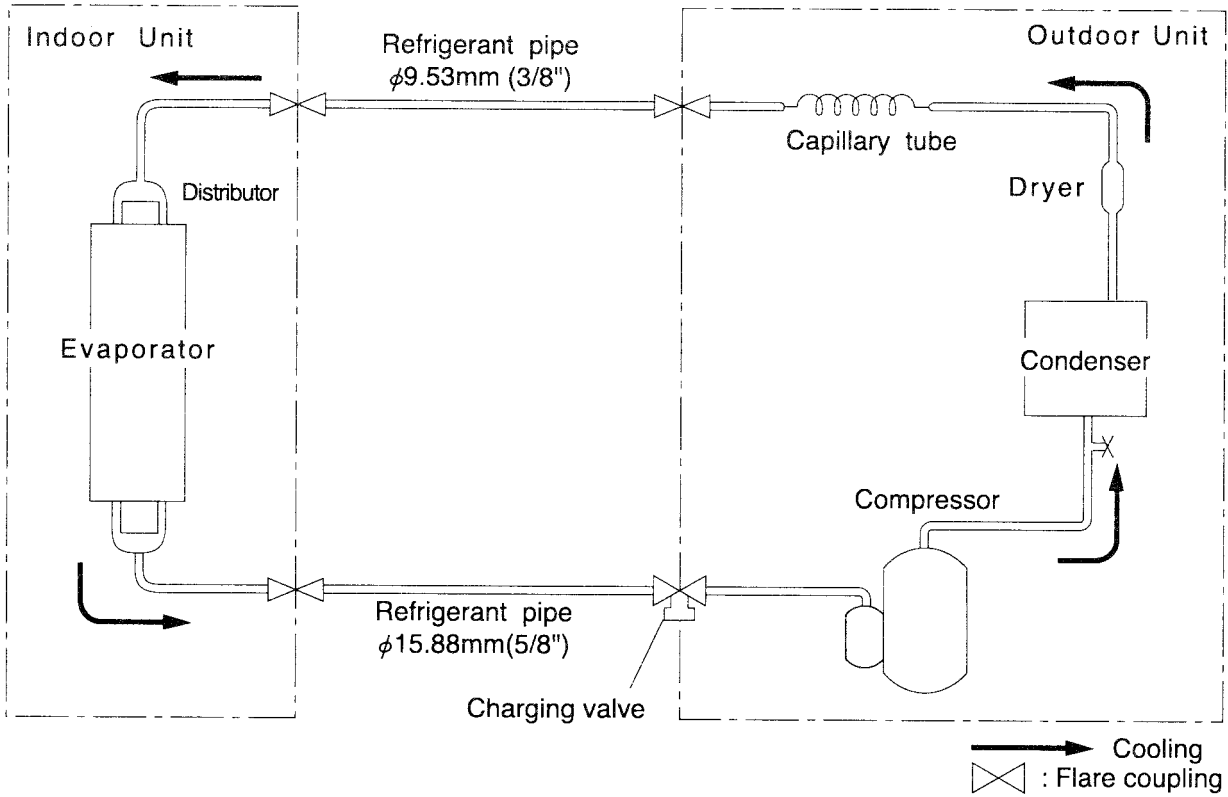
INDOOR UNIT	GROSS / NET (kg)	25 / 18	25 / 18
OUTDOOR UNIT	GROSS / NET (kg)	67 / 59	68 / 60

## REFRIGERANT CHARGING

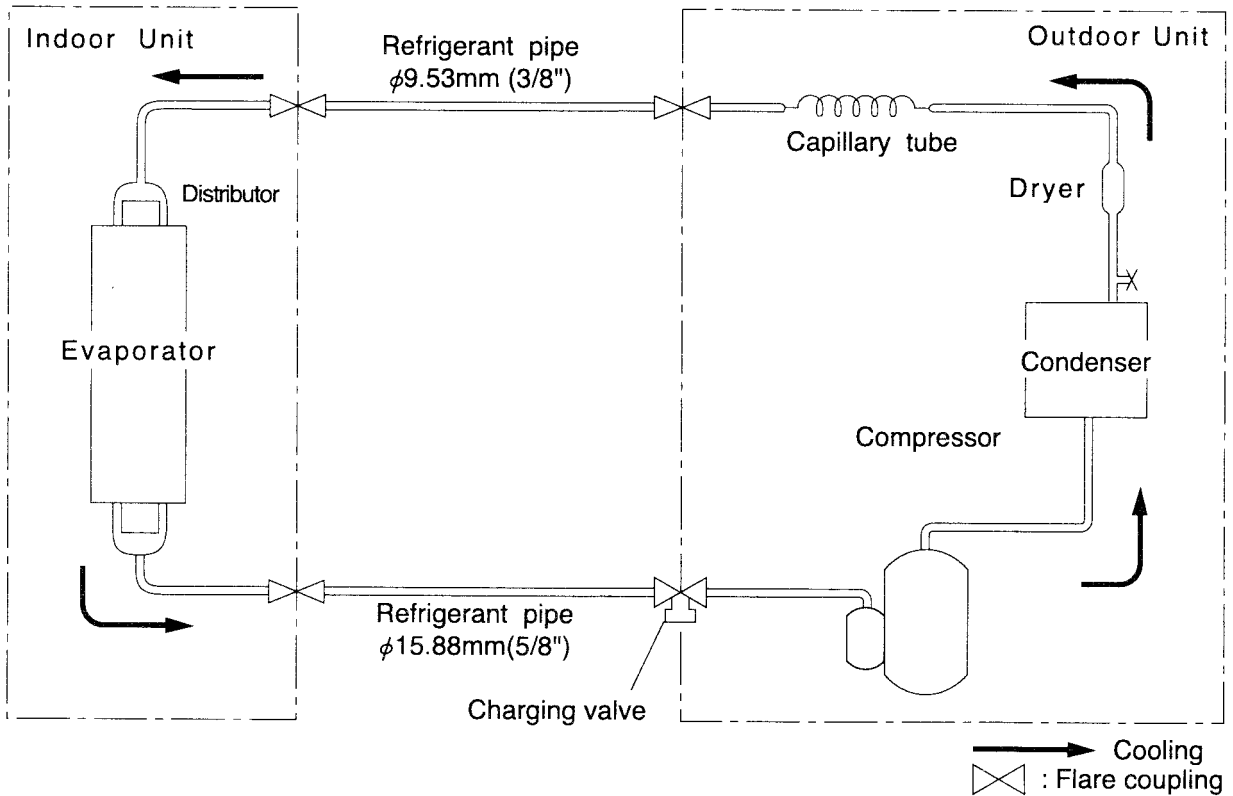
PIPE LENGTH		16 ft (5 m)	33 ft (10 m)	49 ft (15 m)	66 ft (20 m)
FULL CHARGE AMOUNT	ASY20A	1,500 g	1,580 g	1,660 g	1,740 g
		(52.9 oz.)	(55.7 oz.)	(58.6 oz.)	(61.4 oz.)
	ASY24A	1,870 g	1,950 g	2,030 g	2,110 g
		(66.0 oz.)	(68.8 oz.)	(71.6 oz.)	(74.4 oz.)

# REFRIGERANT SYSTEM DIAGRAM

Models : ASY20AGB-W / AOY20ANA



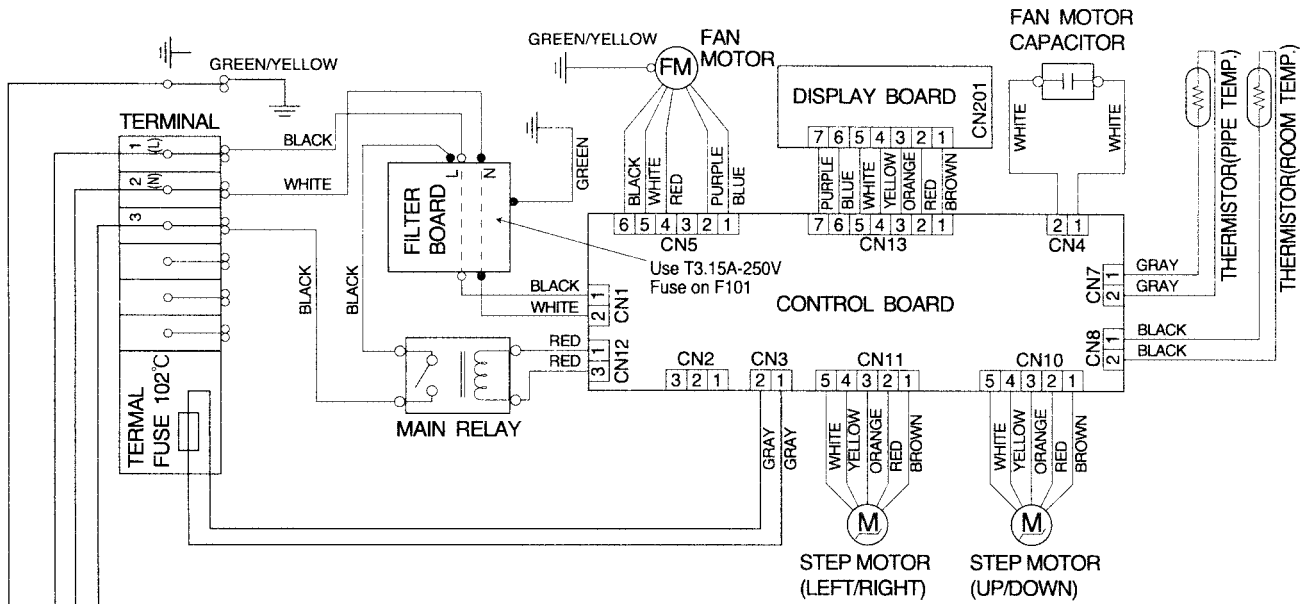
Models : ASY24AGB-W / AOY24ANA



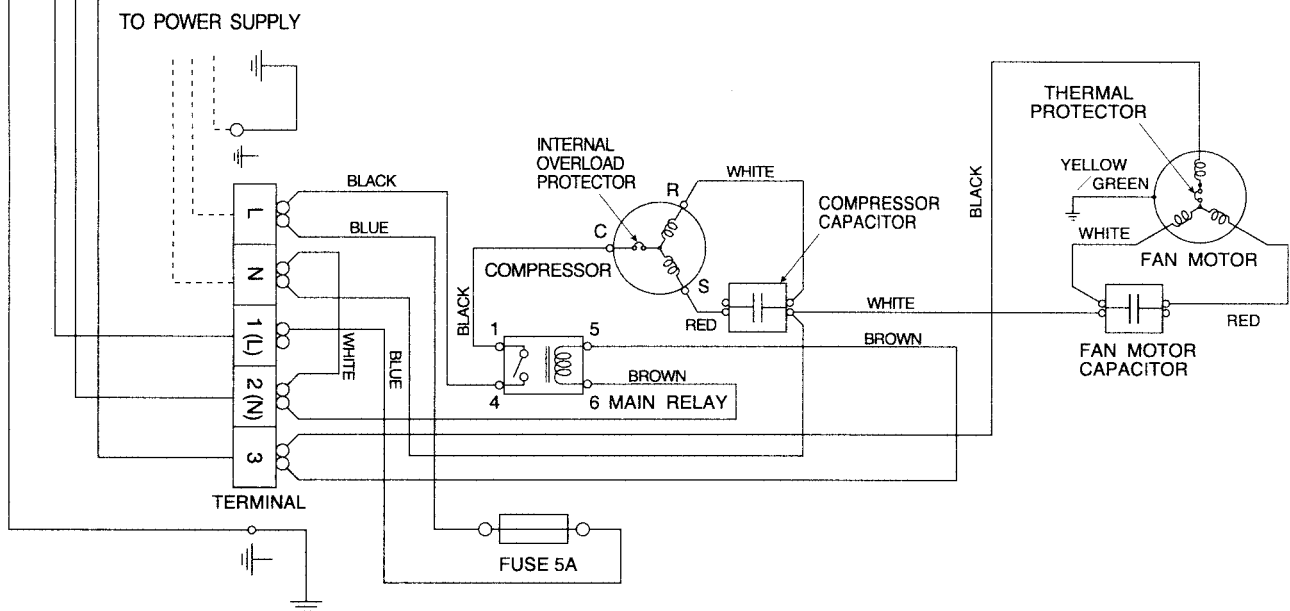
# CIRCUIT DIAGRAM

Models : ASY20AGB-W / AOY20ANA  
 ASY24AGB-W / AOY24ANA

## INDOOR UNIT

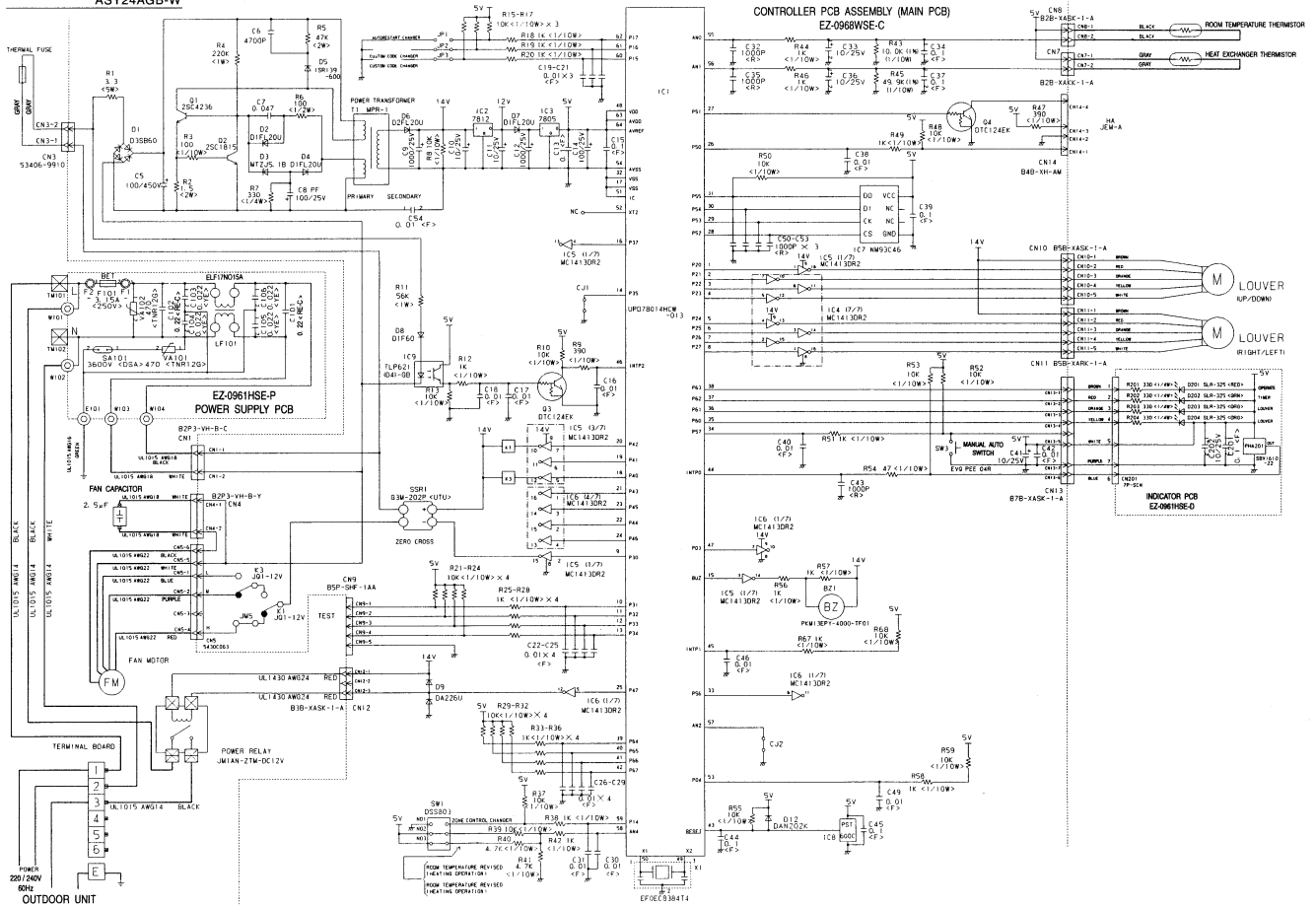


## OUTDOOR UNIT



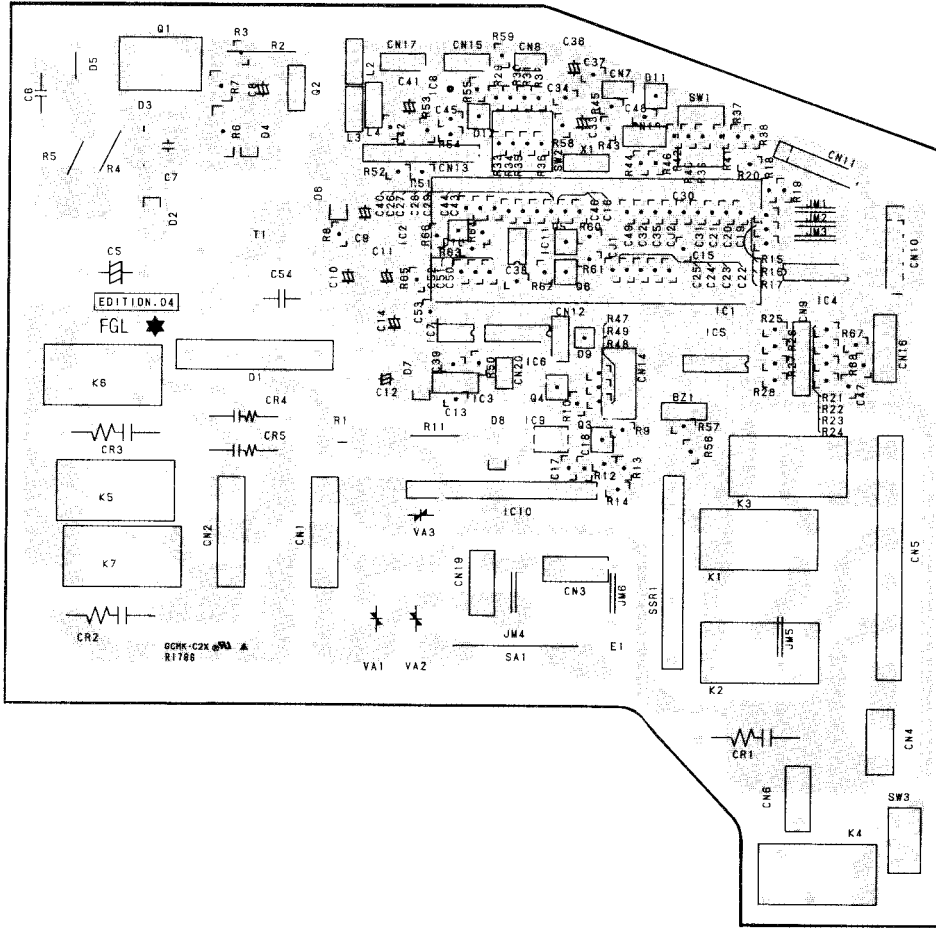
# INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

Models : ASY20AGB-W  
ASY24AGB-W



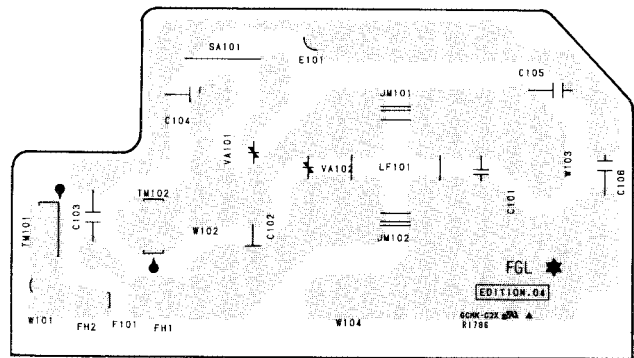
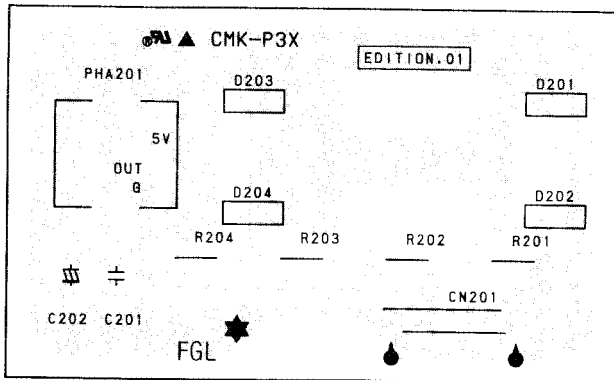
# P. C. BOARD LAYOUTS

## 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)

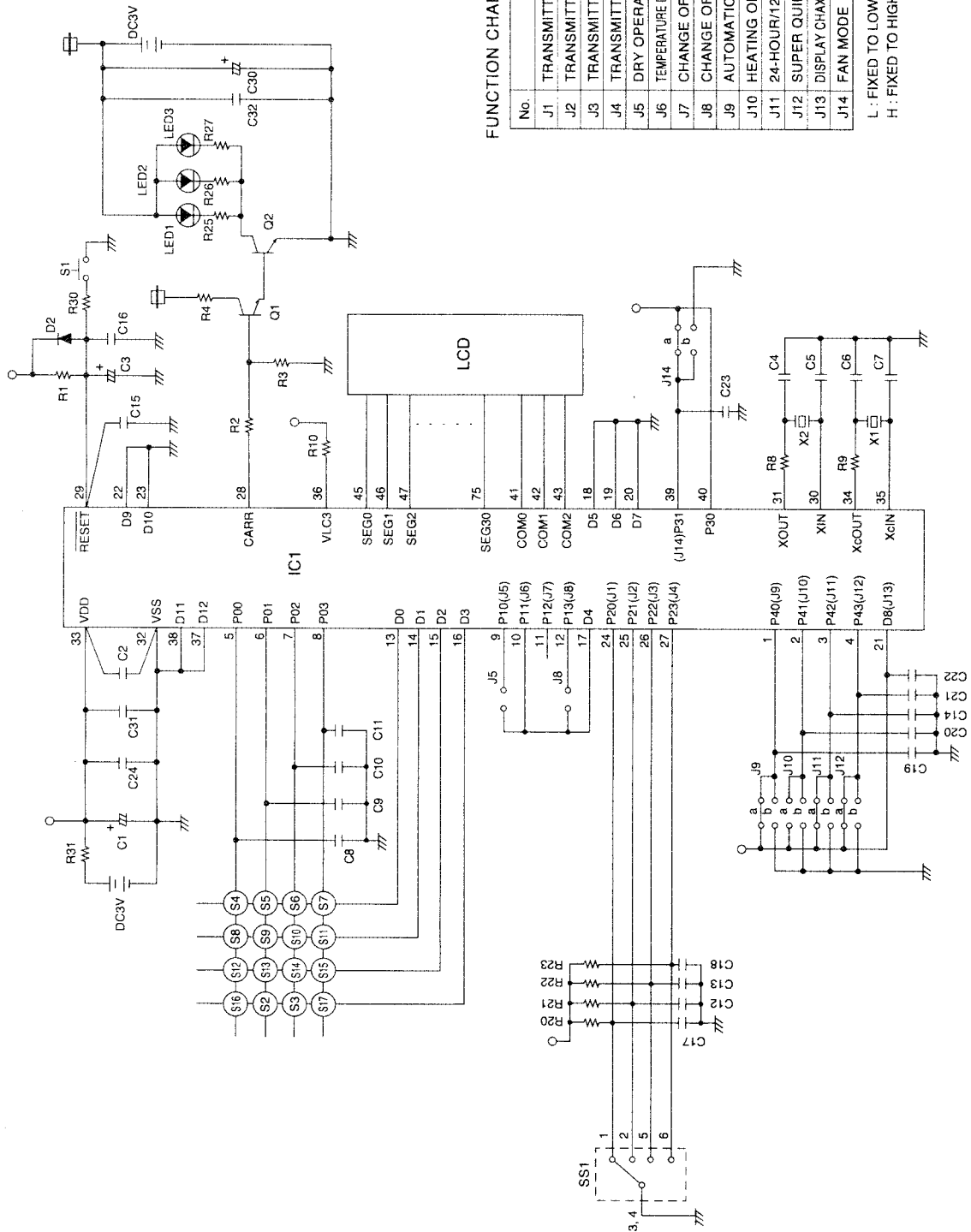


# REMOTE CONTROL UNIT CIRCUIT DIAGRAM

Models : ASY20AGB-W  
ASY24AGB-W

KEY NO. : KEY FUNCTION  
CORRESPONDENCE TABLE

No.	KEY FUNCTION
S1	ACL
S2	TIMER 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 SELECTOR
S16	SLEEP
S17	RIGHT AND LEFT WIND



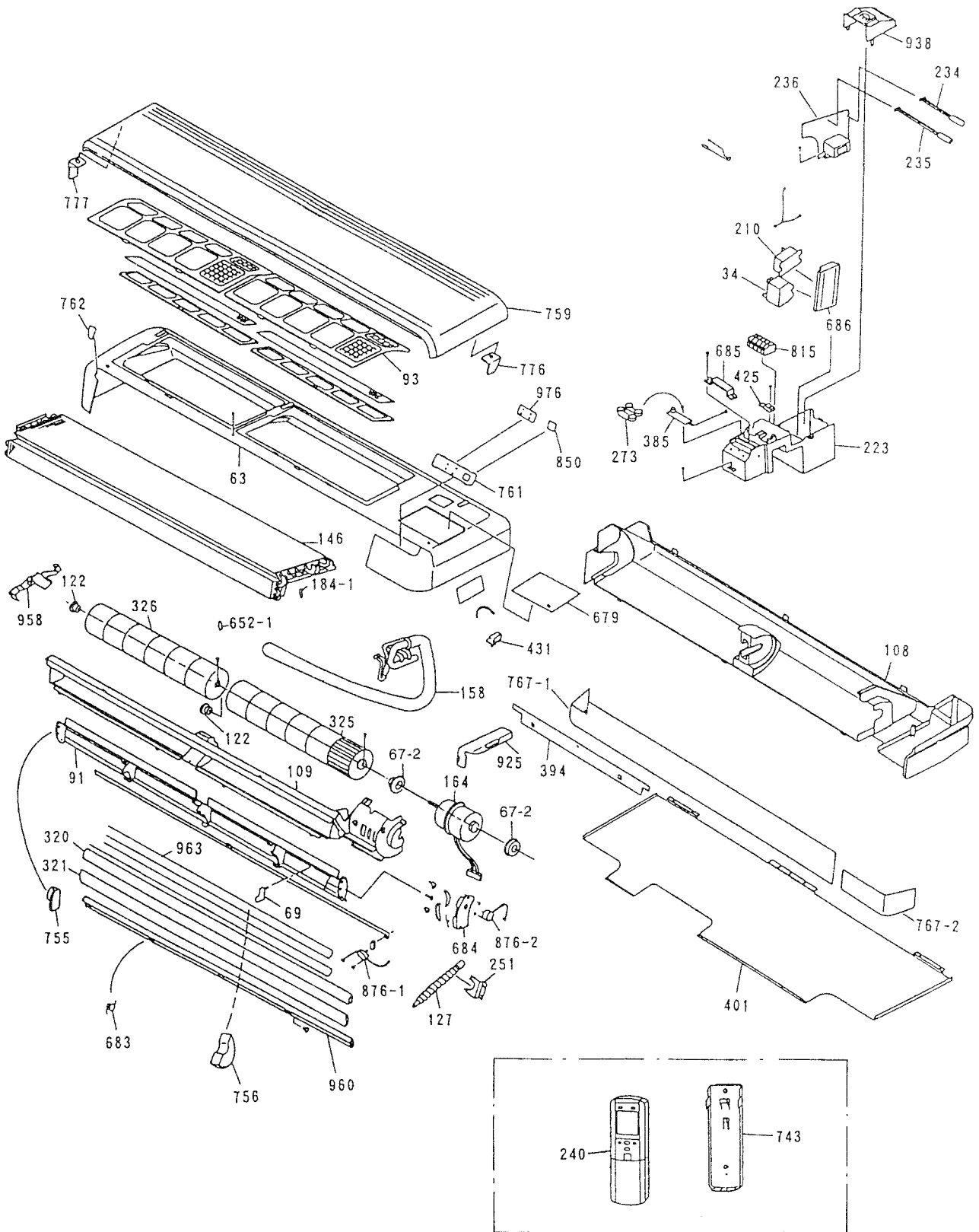
FUNCTION CHANGE BY THE JUMPER WIRE

No.	FUNCTION	
J1	TRANSMITTING CODE CHANGE	L
J2	TRANSMITTING CODE CHANGE	H
J3	TRANSMITTING CODE CHANGE	H
J4	TRANSMITTING CODE CHANGE	H
J5	DRY OPERATION	H
J6	TEMPERATURE DISPLAY OF AUTOMATIC OPERATION	L
J7	CHANGE OF REMOTE-CONTROL TYPE	H
J8	CHANGE OF TEMPERATURE UNIT	H
J9	AUTOMATIC OPERATION	H
J10	HEATING OPERATION	L
J11	24-HOUR/12-HOUR	H
J12	SUPER QUIET	H
J13	DISPLAY CHANGE OF AUTOMATIC OPERATION	H
J14	FAN MODE	H

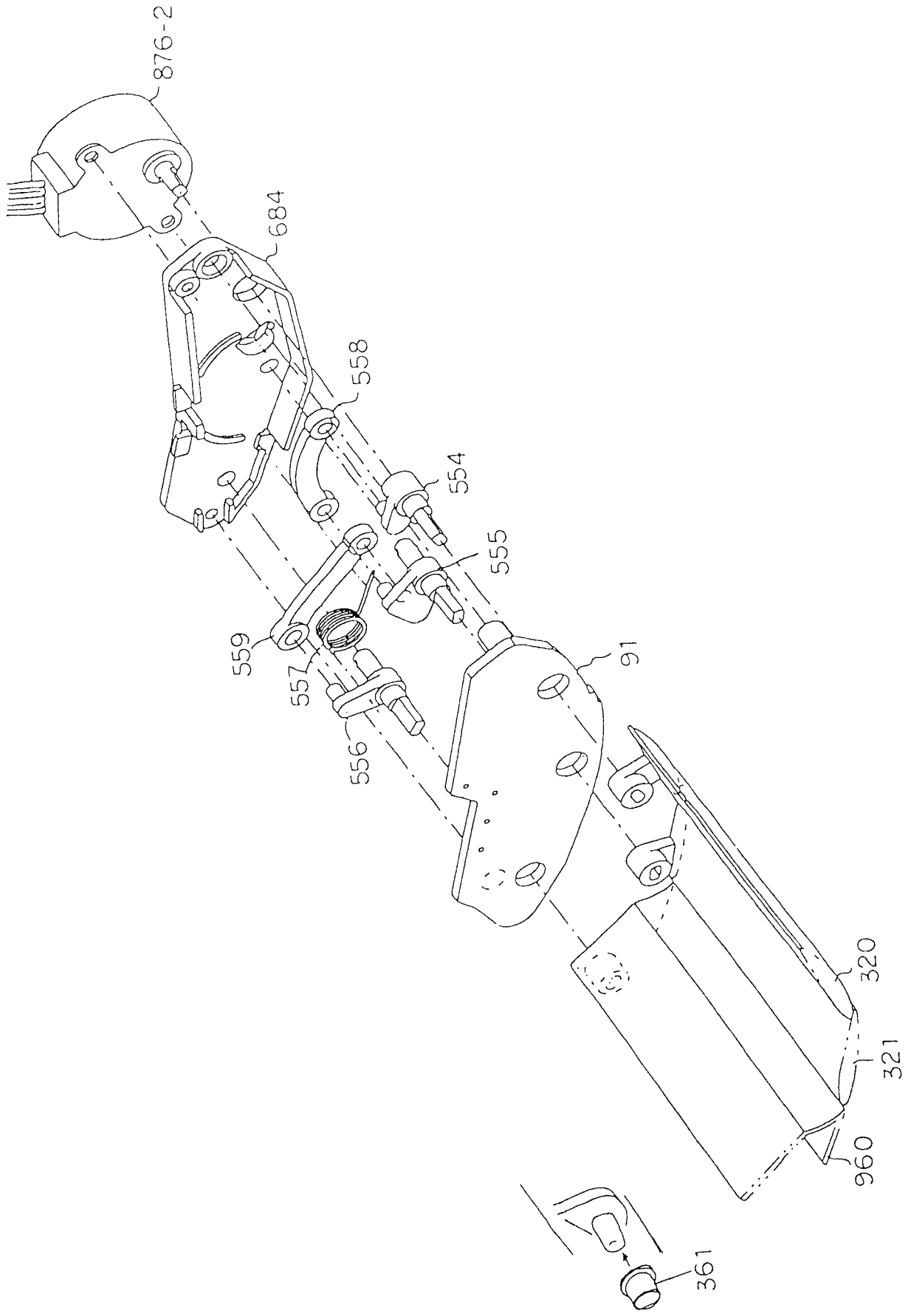
L : FIXED TO LOW LEVEL  
H : FIXED TO HIGH LEVEL

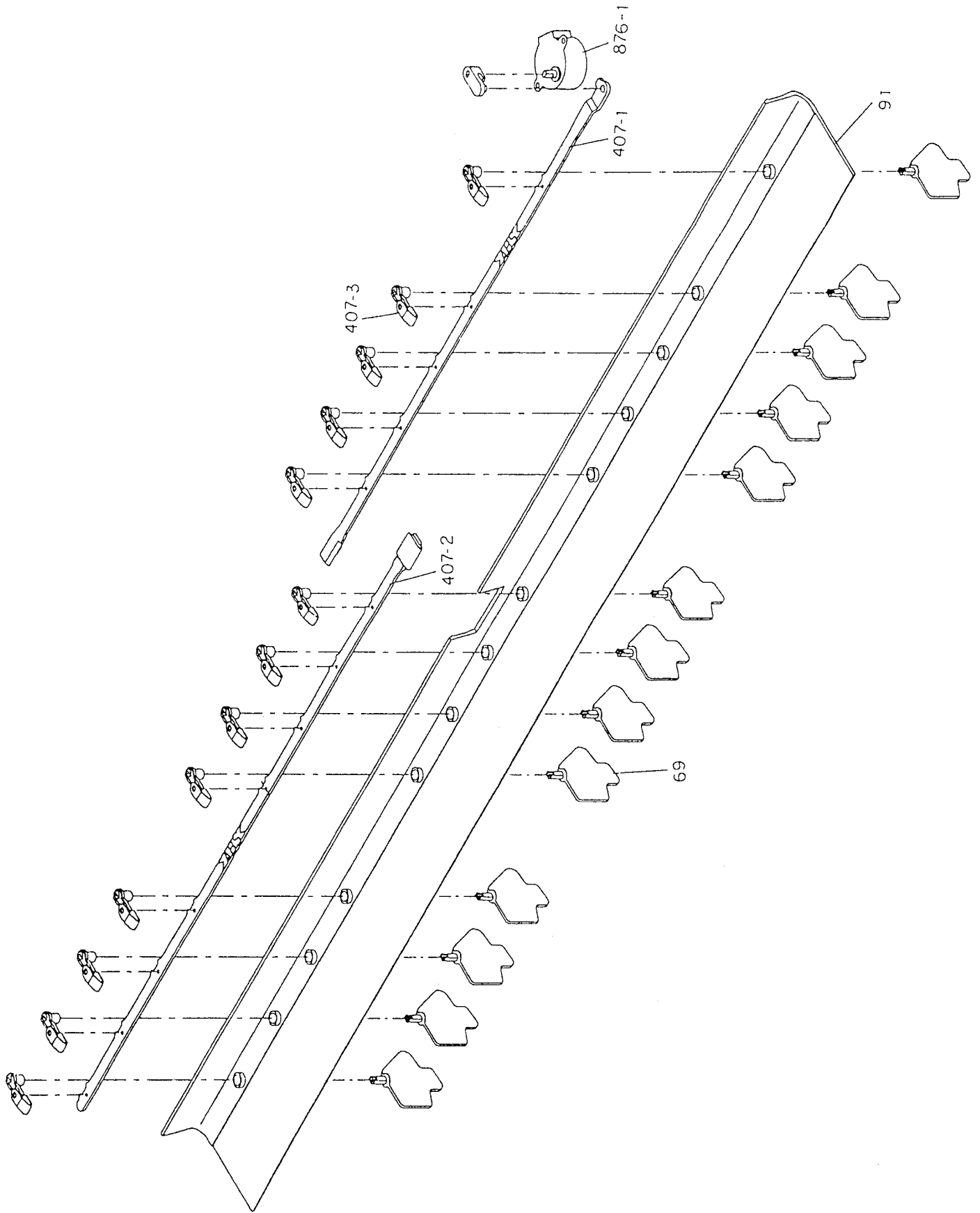
# DISASSEMBLY ILLUSTRATION

Models : ASY20AGB-W  
 ASY24AGB-W

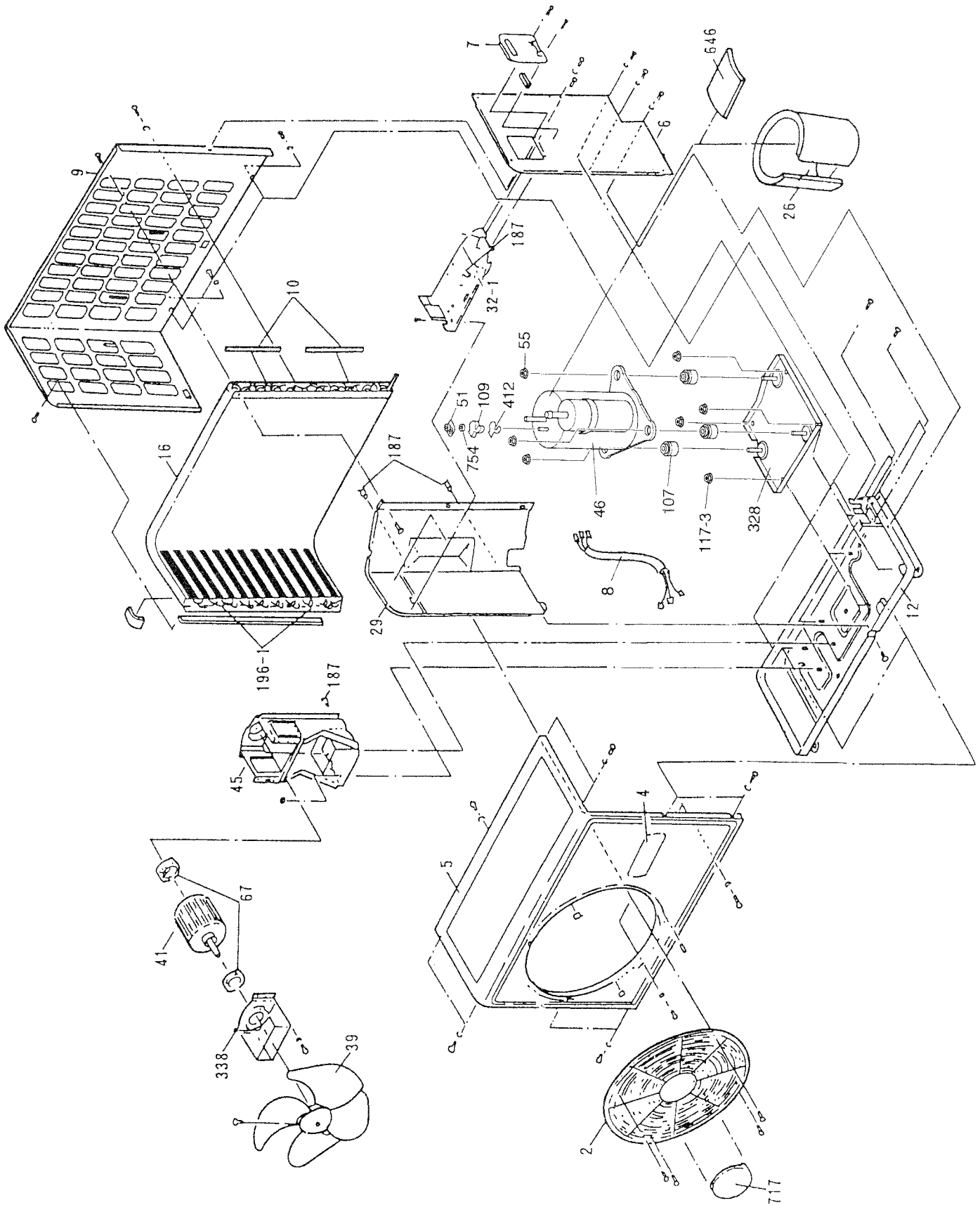




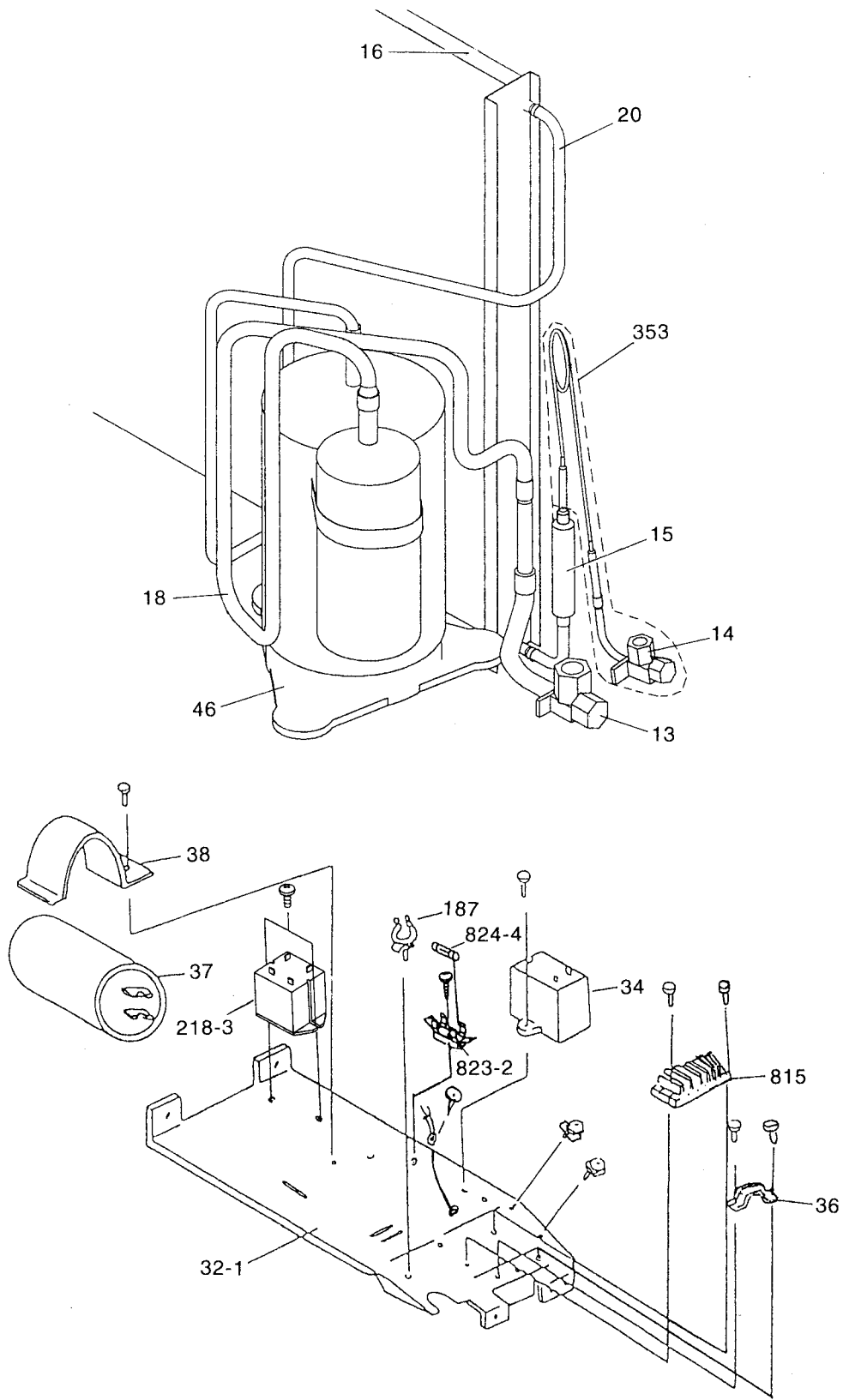




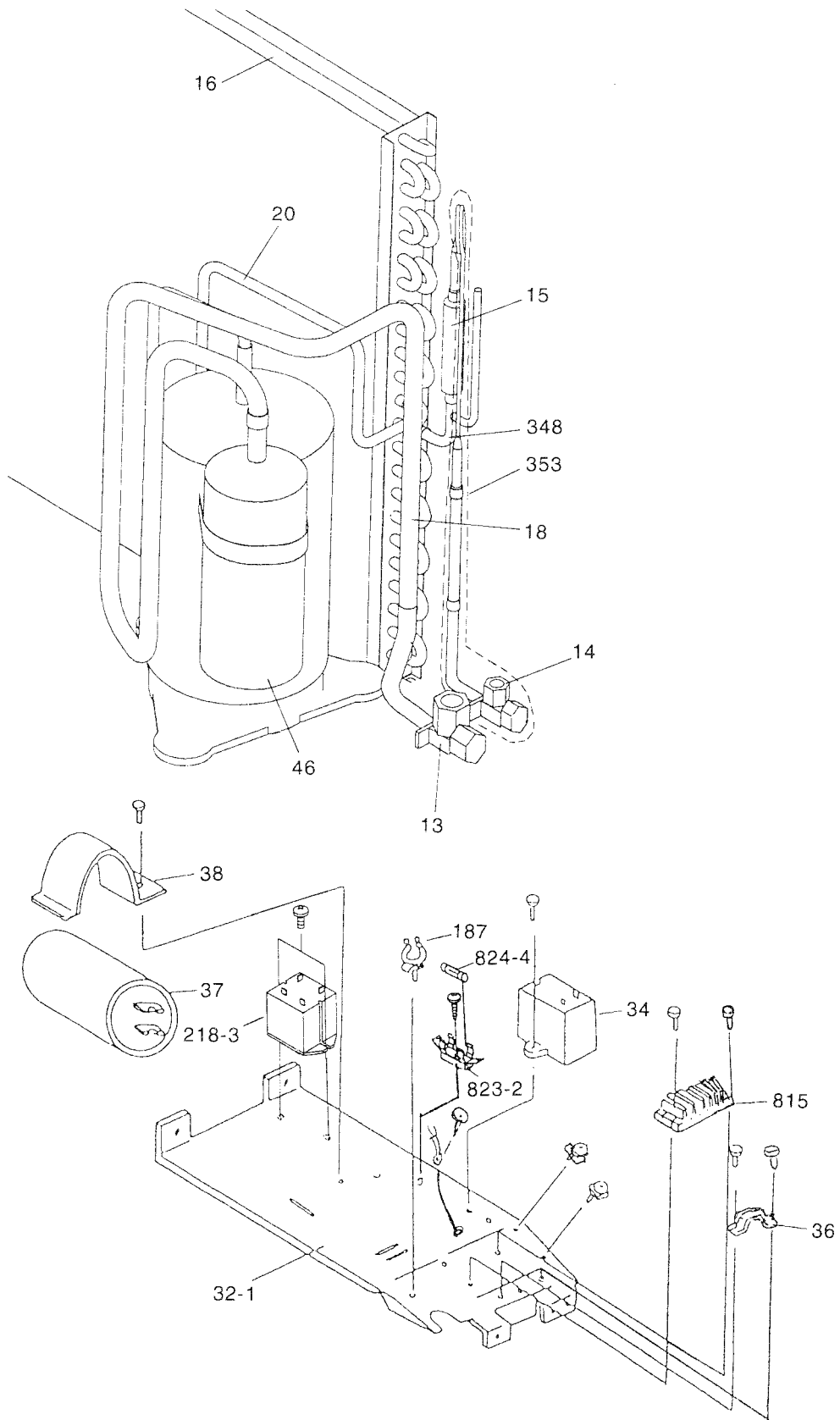
Models : AOY20ANA  
AOY24ANA



Model : AOY20ANA



Model : AOY24ANA



## PARTS LIST

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

### INDOOR UNIT

Ref. No.	Description	Part No.		Order Q'ty
		ASY20AGB-W	ASY24AGB-W	
34	Capacitor, Plastic	9700468073	9700468073	
63	Panel (Front) Total Assy	9358181010	9358181010	
67-2	Rubber-B (Vibration-proof)	9361237001	9361237001	
69	Louver	9357933016	9357933016	
91	Hinge Plate	9361281011	9361281011	
93	Air Filter	9357897011	9357897011	
108	Base	9357948010	9357948010	
109	Casing	9361280014	9361280014	
122	Shaft Holder-B	9357921006	9357921006	
127	Drain Hose Assy	9364231006	9364231006	
146	Evaporator Assy	9361995000	9361995000	
158	Joint Pipe Assy-E	9364296005	9364296005	
164	Fan Motor-In	9358878019	9358642016	
184-1	Thermistor Spring-A	313728262708	313728262708	
210	Main Relay	9356781007	9356781007	
223	Control Box	9357953007	9357953007	
234	Thermistor Assy-Room	9703299018	9703299018	
235	Thermistor Assy-Pipe	9701947010	9701947010	
236	Controller PCB Assy	9701941025	9701941025	
240	Remote Control Unit	9359913023	9359913023	
251	Bracket (Hose)-C	9362208017	9362208017	
273	Holder (Lamp)	9357958002	9357958002	
320	Flap (Upper)-F	9357938011	9357938011	
321	Flap (Lower)	9357940014	9357940014	
325	Cross Flow Fan-R Assy	9357918006	9357918006	
326	Cross Flow Fan-L Assy	9357919003	9357919003	
361	Bushing	9357942001	9357942001	
385	Indicator PCB Assy	9701869015	9701869015	
394	Bracket Panel (Pipe)	9357951003	9357951003	
401	Bracket Panel	9357952000	9357952000	
407-1	Motor Rod	9357931005	9357931005	
407-2	Louver Rod	9357932002	9357932002	
407-3	Louver Stopper	9357934006	9357934006	
425	Earth Plate	9357957005	9357957005	
431	Fixture-A	313546156408	313546156408	
554	Flap Link-Upper	9357924007	9357924007	
555	Flap Link-Lower	9357925004	9357925004	
556	Diffuser Link	9357926001	9357926001	
557	Diffuser Spring	9357947006	9357947006	
558	Rod-A	9357927008	9357927008	
559	Rod-B	9357928005	9357928005	
652-1	Thermistor Holder Pipe	313806262805	313806262805	
679	Cover (Power)	9357916019	9357916019	
683	Balance Spring	9358151006	9358151006	
684	Motor Base	9357929002	9357929002	
685	Cover (Terminal)	9357955001	9357955001	
686	Holder (Relay)	9357960005	9357960005	
743	Remote Control Unit Holder	9359955016	9359955016	
755	Cover (Casing)-L	9363786019	9363786019	
756	Cover (Casing)-B	9363787016	9363787016	
759	Intake Grille-F	9357896014	9357896014	
761	Cover (Side)-R	9357901015	9357901015	
762	Cover (Side)-L	9357902012	9357902012	
767-1	Bottom Cover-A	9357949017	9357949017	
767-2	Bottom Cover-B	9357950013	9357950013	
776	Hook (Grille)-R	9357986012	9357986012	
777	Hook (Grille)-L	9357985015	9357985015	
815	Terminal-6P	9357954004	9357954004	
850	Receiver Window	9357917016	9357917016	
875	Filter PCB Assembly	9702017026	9702017026	
876-1	Motor Step-H	9359763000	9359763000	
876-2	Motor Step-V	9359762003	9359762003	
925	Panel (Evaporator-R)-B	9357909004	9357909004	
938	Cover (Switch)	9357956015	9357956015	
958	Bracket Panel (Eva.)	9358626009	9358626009	
960	Diffuser	9357941011	9357941011	
963	Fan Guard	9357936000	9357936000	
976	Display Window	9357903019	9357903019	

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

**OUTDOOR UNIT**

Ref. No.	Description	Part No.		Order Q'ty
		AOY20ANA	AOY24ANA	
2	Fan Cover	9350214020	9350214020	
4	Emblem-Rear "FUJITSU"	9351355005	9351355005	
5	Cabinet-A, Painted	9303876015	9303876015	
6	Cabinet-C, Painted	9353549013	9353549013	
7	Connector Cover	9358011010	9358011010	
8	Wire Assy (Shield)-D	9359904076	9359904076	
9	Cabinet-B, Painted	9303874011	9303874011	
10	Noise Insulation-E	313791106305	313791106305	
12	Base Assy, Painted	9353452054	9353452054	
13	3-Way Valve Assy	9364523002	9364523002	
14	2-Way Valve Assy	9357964010	9357964010	
15	Dryer	9353789006	9353789006	
16	Condenser Assy	9353455055	9353455055	
18	Suction Pipe Assy	9364274003	9363043013	
19	Capillary Tube	9364270005	-	
20	Discharge Pipe	9364271002	9363042016	
26	Compressor Cover-A	9363020007	9363020007	
29	Separate Wall	313986033213	313986033213	
32-1	Control Box Metal-A	9353595003	9353595003	
34	Capacitor (Fan Motor)	9357965017	9357965017	
36	Cord Holder Metal	9356934007	9356934007	
37	Running Capacitor	9703107016	9703107016	
38	Capacitor Clamp Metal	9351770013	9351770013	
39	Propeller Fan Assy	9300855013	9300855013	
41	Fan Motor Assy-Out	9600738023	9600738023	
45	Motor Fixing Table Assy	313029311100	313029311100	
51	Special Nut M5(For Comp.)	9300301015	9300301015	
46	Compressor Assy	9363446005	9363019001	
55	Special Nut M8	313252257701	313252257701	
67	Rubber (Vibration-proof)	313659068604	313659068604	
107	Rubber Seat-A (For Comp.)	9351049010	9351049010	
109	Terminal Cover (For Comp.)	9351048013	9351048013	
117-3	Hex.Nut w/Spring Washer	301721180114	301721180114	
187	Clamp No. 1219	313361271706	313361271706	
196-1	Clamp SKB-3M	-	312300787605	
218-3	Power Relay	9353619006	9353619006	
328	Compressor Plate-B	9363049015	9363049015	
338	Motor Fixture Metal	313029297108	313029297108	
348	Outlet Pipe(Cond.)	-	9363041019	
353	Valve-A Assy	9364268002	9364325002	
412	Terminal Gasket	9351051013	9351051013	
646	Compressor Cover-B	9363021004	9363021004	
717	Center Plate	9350216017	9350216017	
754	Terminal Gasket Washer	9351053017	9351053017	
815	Terminal-5P	9356497021	9356497021	
823-2	Fuse Holder	0500063024	0500063024	
824-4	Fuse	0600222529	0600222529	

CONTROLLER PCB ASSEMBLY (Ref. No.236)

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

Ref. No.	Description	Part No.	Order Q'ty	Ref. No.	Description	Part No.	Order Q'ty
IC1	IC $\mu$ PD78014HCW-013	9702426026		R54	Res. 47k $\Omega$ $\pm$ 5%	0200212425	
IC3	IC NJM7805FA	0100462081		CJ1,2,JM7	Res. 0 $\Omega$	0200212012	
IC4~6	Transistor Array $\mu$ PA2003GR	0100028041		JM9	Res. 0 $\Omega$	0200230016	
IC7	IC BR93LC46RF-EZ	0100295016		C5	Cap. Elec. 450V 100 $\mu$ F	0300256060	
IC8	IC PST600CMTR	0101461120		C6	Cap. Plastic 4700pF	0300269091	
IC9	Photo Coupler TLP621(D4)-GB	0000117074		C7	Cap. Plastic 50V 0.047 $\mu$ F	0300169339	
Q1	Xstr 2SC4236	0000164047		C8	Cap. Elec. 25V 100 $\mu$ F	0301197560	
Q2	Xstr 2SC1815	0000002011		C9	Cap. Elec. 25V 1000 $\mu$ F	0301196495	
Q3,4	Xstr DTC124EKA	0000936033		C10,33,36,41	Cap. Elec. 25V 10 $\mu$ F	0301192312	
D1	Diode D3SB60	0000689045		C12	Cap. Elec. 25V 1000 $\mu$ F	0301158264	
D2,4,7	Diode D1FL20U	0000746519		C13,15,34,37,39,44,45	Cap. Ceramic 50V 0.1 $\mu$ F	0300311752	
D3	Diode MTZJ5.1B	0000852166		C14	Cap. Elec. 25V 100 $\mu$ F	0301192350	
D5	Diode 1SR139-600	0000353120		C16~31,38,40,42,46,49	Cap. Ceramic 50V 0.01 $\mu$ F	0300311738	
D6	Diode D2FL20U	0000906500		C32,35,43,50~53	Cap. Ceramic 50V 1000pF	0300308509	
D8	Diode D1F60	0000208024		C54	Cap. Ceramic 0.01 $\mu$ F	0300727539	
D9	Diode DA226U	0000625036		SW3	Switch, Push EVQ-PFE-04R	9700891017	
D12	Diode DAN202K	0000684019		T1	Transformer ETS28AS118AH	9702727017	
R1	Res. Cement 3.3 $\Omega$ $\pm$ 10%	0200153148		X1	Ceramic Resonator EF0EC8384T4	9701261017	
R2	Res. Metal 1.5 $\Omega$ $\pm$ 5%	0201107119		BZ1	Ceramic Buzzer PKM13EPY-4000-TF01	9701298013	
R3	Res. 100 $\Omega$ $\pm$ 5%	0200212500		K1,3	Relay JQ1-12V	9701316014	
R4	Res. Carbon 220k $\Omega$ $\pm$ 5%	0200111353		SSR1	Relay G3M-202P-UTU	9701829019	
R5	Res. Metal 47k $\Omega$ $\pm$ 5%	0201107652		CN1	Plug, PCB 5-1123724-2	0501321574	
R6	Res. 100 $\Omega$ $\pm$ 5%	0200731506		CN3	Plug, PCB 53406-9910	0500951048	
R7	Res. 330 $\Omega$ $\pm$ 5%	0200708621		CN4	Plug, PCB 2-1123724-2	0501321529	
R8,10,13,15~17,21~24,29~32,37,39,48,50,52,53,55,59,68	Res. 10k $\Omega$ $\pm$ 5%	0200213019		CN5	Plug, PCB 5430C063	0500957026	
R9,47	Res. 390k $\Omega$ $\pm$ 5%	0200212647		CN7	Plug, PCB B2B-XAKK-1-A	0501045227	
R11	Res. Metal 56k $\Omega$ $\pm$ 5%	0201106662		CN8	Plug, PCB B2B-XASK-1-A	0501045012	
R12,18~20,25~28,33~36,38,42,44,46,49,51,56~58,67	Res. 1k $\Omega$ $\pm$ 5%	0200212746		CN9	Plug, PCB B5P-SHF-1AA	0500006069	
R40,41	Res. 4.7k $\Omega$ $\pm$ 5%	0200212906		CN10	Plug, PCB B5B-XASK-1-A	0501045043	
R43	Res. 10k $\Omega$ $\pm$ 1%	0200279497		CN11	Plug, PCB B5B-XARK-1-A	0501045517	
R45	Res. 49.9k $\Omega$ $\pm$ 1%	0200279824		CN12	Plug, PCB B3B-XASK-1-A	0501045029	
				CN13	Plug, PCB B7B-XASK-1-A	0501045067	
				CN14	Plug, PCB B4B-XH-AM	0500005314	

INDICATOR PCB ASSEMBLY (Ref. No.385)

FILTER PCB ASSEMBLY (Ref. No.875)

Ref. No.	Description	Part No.	Order Q'ty
D201	Diode SLR-325VC RED	0000813259	
D202	Diode SLR-325MC GRN	0000813242	
D203,204	Diode SLR-325DC ORG	0000813235	
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	
PHA201	Remote Control Amplifier SBX1810-22	0101525129	
CN201	Wire w/Connector UL1430 AWG28 L=430	9701856015	
	Lamp Holder	9357958002	

Ref. No.	Description	Part No.	Order Q'ty
FH1,2	Fuse Holder PFC5000-0502	0500158072	
SA101	Arrester DSA-362MA-05	0600168032	
VA101,102	Varistor TNR12G471K	0000038010	
TM101,102	Plug Contact 86028	0500536016	
F101	Fuse 2183.15	0600285210	
C101,102	Cap. Prastic 0.22 $\mu$ F	0300304099	
C105,106	Cap. Prastic 0.022 $\mu$ F	0301052098	
LF101	EMI Filter ELF17N015A	0400197119	
E101	Wire w/Terminal UL1015 AWG16 GRN L=250	9701880010	
W101	Wire w/Terminal UL1015 AWG14 BLK L=120	9702060039	
W102	Wire w/Terminal UL1015 AWG14 WHT L=180	9702060046	
W103,104	Wire Assy UL1015 #18 2P	9702080013	