



ROOM AIR CONDITIONER

AVFE0024 **RL-24AA**
AVFE0027 **RL-27AA**
AVFE1022 **RL-22R**

SERVICE MANUAL

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

MODEL	RL-24AA	RL-27AA	RL-22R
COOLING CAPACITY (kW)	6.75 - 6.90	7.70 - 7.90	6.15 - 6.25
HEATING CAPACITY (kW)	—	—	6.25 - 6.35

ELECTRICAL SPECIFICATIONS

POWER SUPPLY (V)		220 - 240	220 - 240	220 - 240
FREQUENCY (Hz)		50	50	50
RUNNING CURRENT (A)	COOLING	13.6 - 13.8	15.5 - 16.0	11.5 - 11.5
	HEATING	————	————	10.4 - 10.4
STARTING CURRENT (A)		62.5	72	55
INPUT (kW)	COOLING	2.80 - 2.90	3.08 - 3.15	2.45 - 2.55
	HEATING	————	————	2.15 - 2.25
FUSE (A)		30	30	20

COMPRESSOR

TYPE	Hermetic type, Permanent split condenser 2 pole, Single phase, Induction motor		
CODE	H24B31QABKA 4 Leg 220 - 240V 50Hz	H23A383ABKA 4 Leg 220 - 240V 50Hz	AWG5528EXC-4 4 Leg 220 - 240V 50Hz
REFRIGERANT R-22 (g)	1,400	1,860	1,370

FAN MOTOR

CODE	MFC-247T 220 - 240V 50Hz	MFC-247T 220 - 240V 50Hz	MFC-246TD 220 - 240V 50Hz
HIGH POWER (r.p.m.)	1,155 - 1,215	1,150 - 1,200	1,200 - 1,250
SUPER QUIET (r.p.m.)	900 - 985	910 - 990	985 - 1,070

DIMENSIONS

HEIGHT	inch(mm)	16-7/8" (428)	16-7/8" (428)	16-7/8" (428)
WIDTH	inch(mm)	27-15/16"(710)	27-15/16"(710)	27-15/16"(710)
DEPTH	inch(mm)	34-9/16" (877)	34-9/16" (877)	34-9/16" (877)

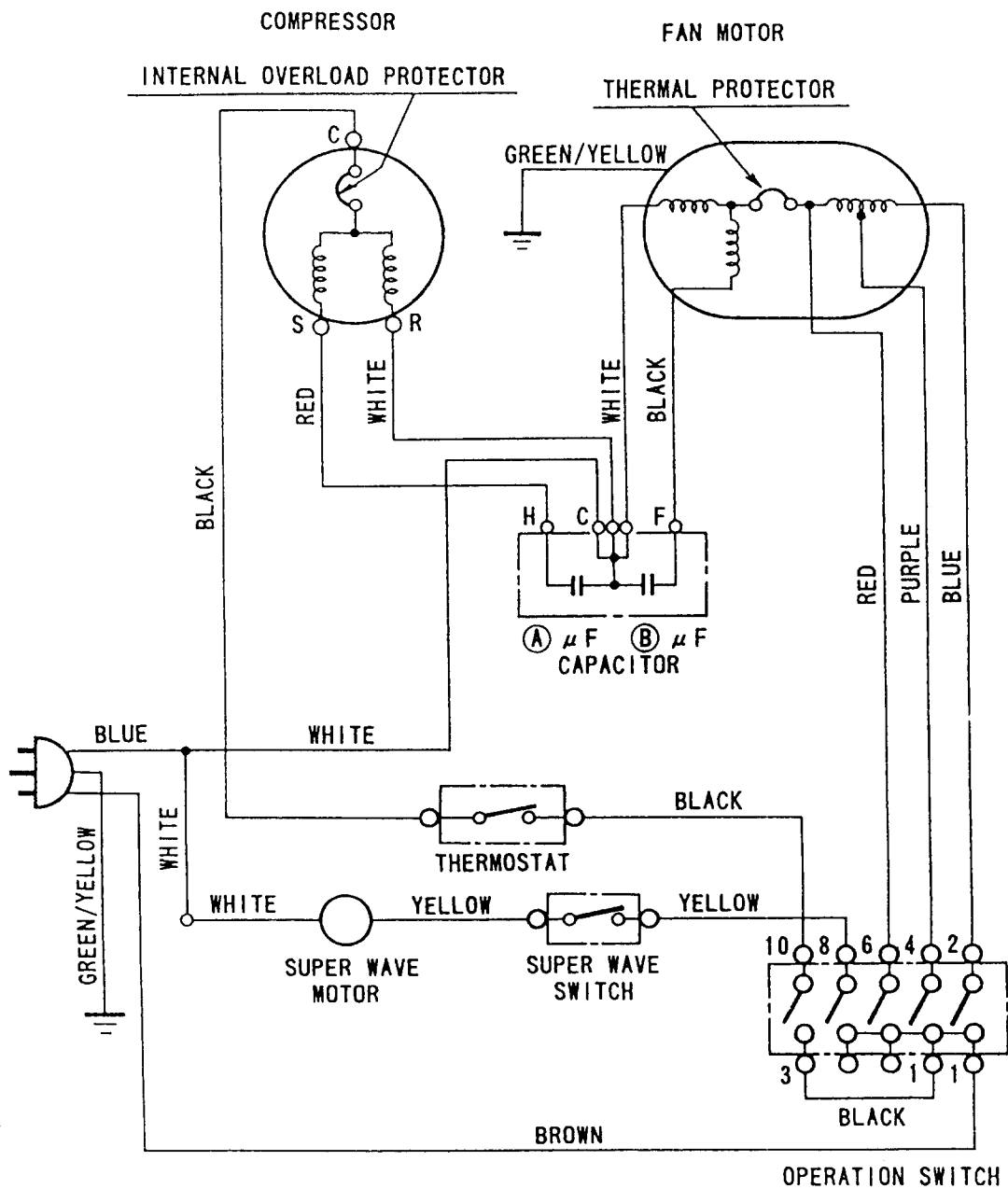
WEIGHT

GROSS WEIGHT	lbs. (kg)	234 (106)	245 (111)	216 (98)
NET WEIGHT	lbs. (kg)	207 (94)	221 (100)	190 (86)

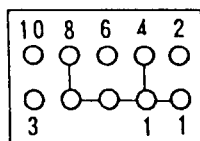
MOISTURE REMOVAL (ℓ/hr)	3.8	4.0	2.4
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CIRCUIT DIAGRAM

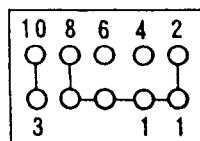
Models : RL-24AA
RL-27AA



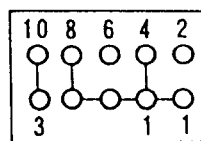
OPERATION SWITCH INTERNAL CONNECTIONS



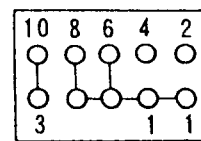
FAN



SUPER QUIET



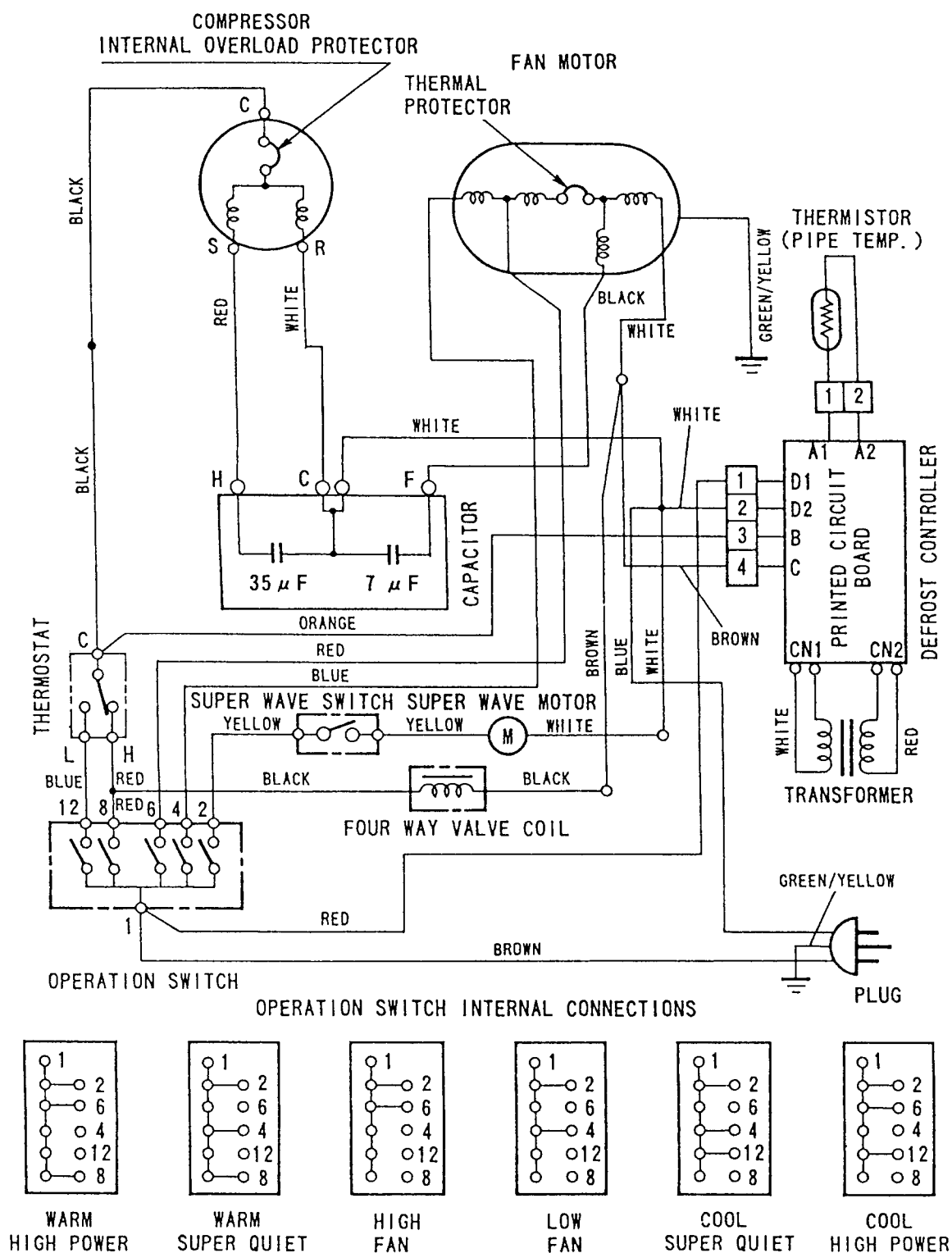
NORMAL



HIGH POWER

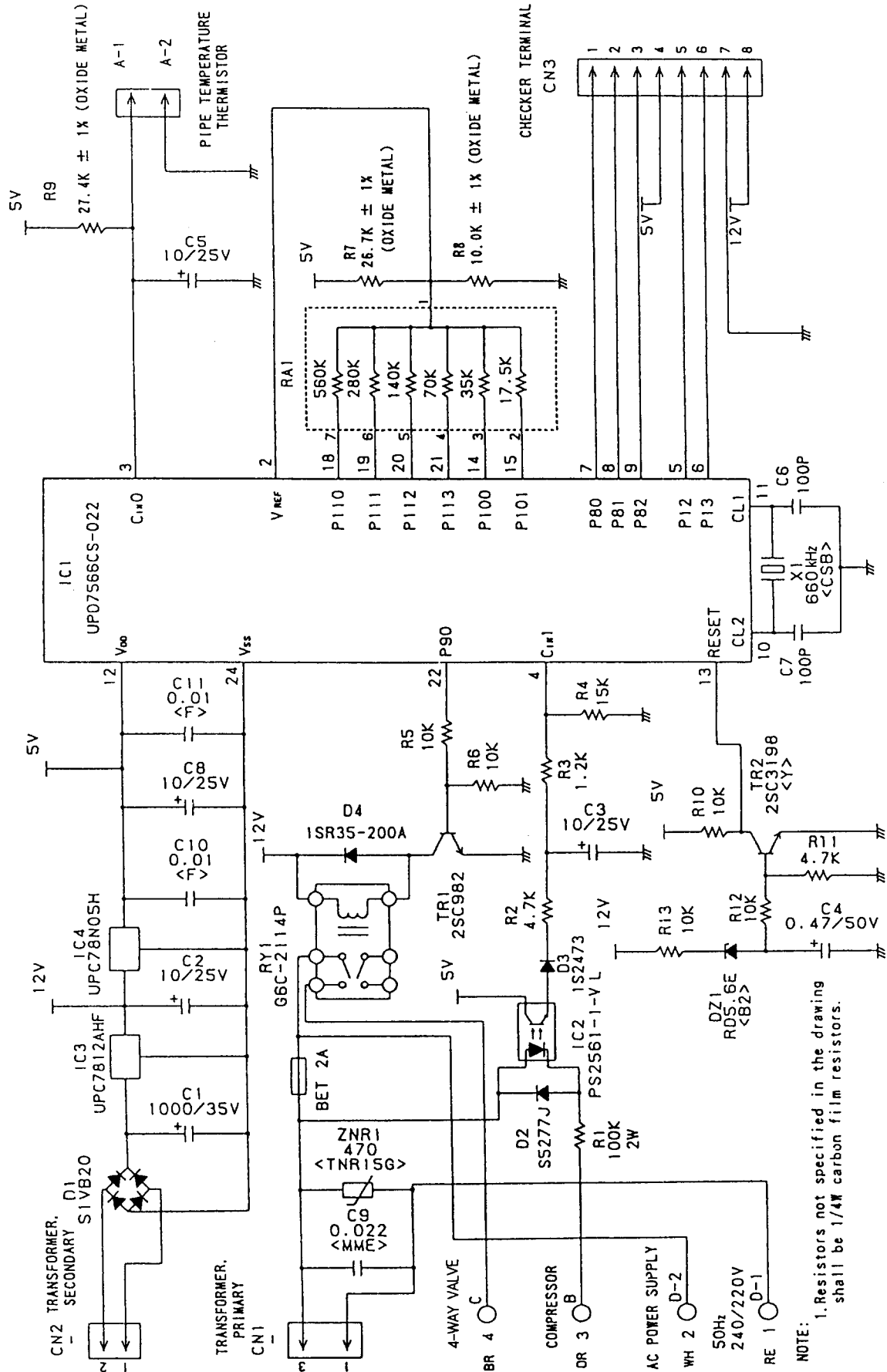
(A)	(B)	Applicable models
35	10	RL-27AA
45	10	RL-24AA

Model : RL-22R



MICROCOMPUTER CONTROL CIRCUIT

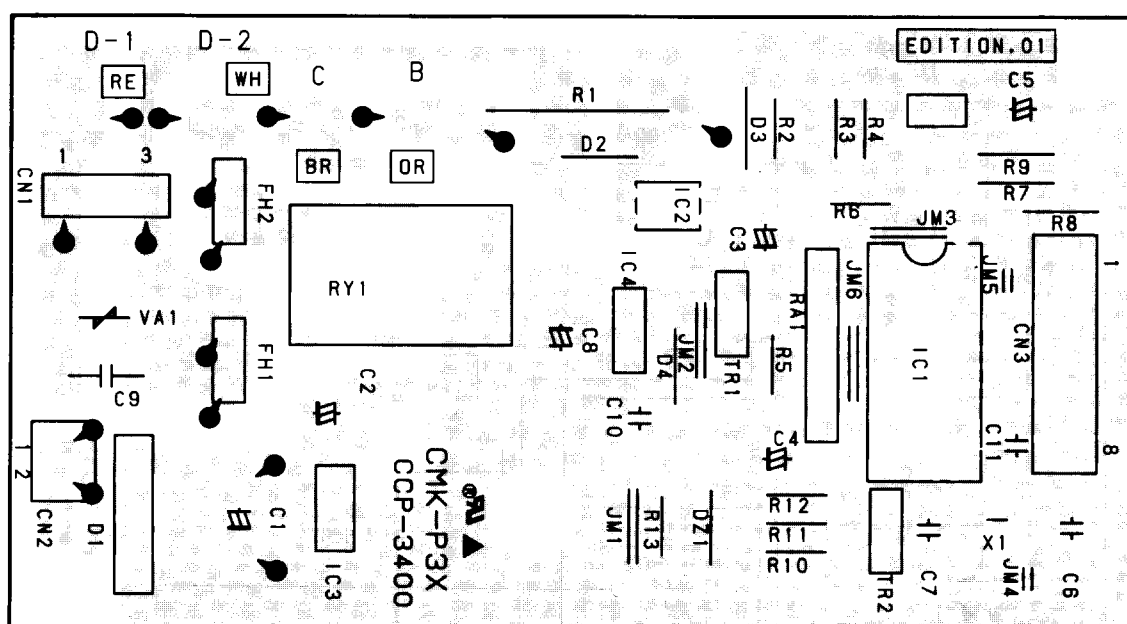
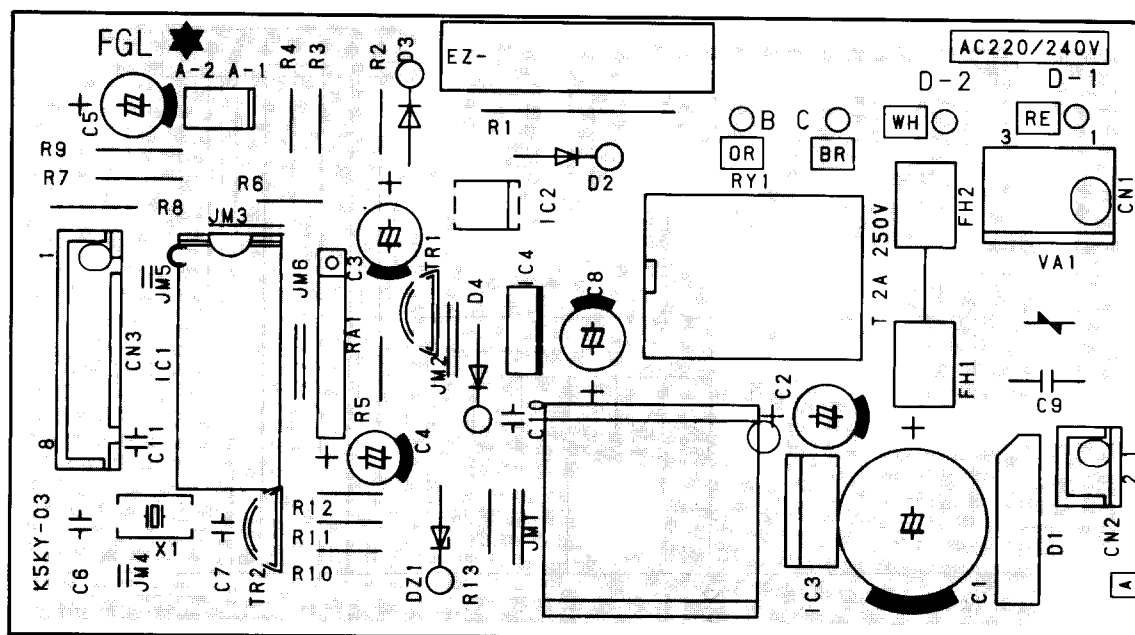
Model : RL-22R



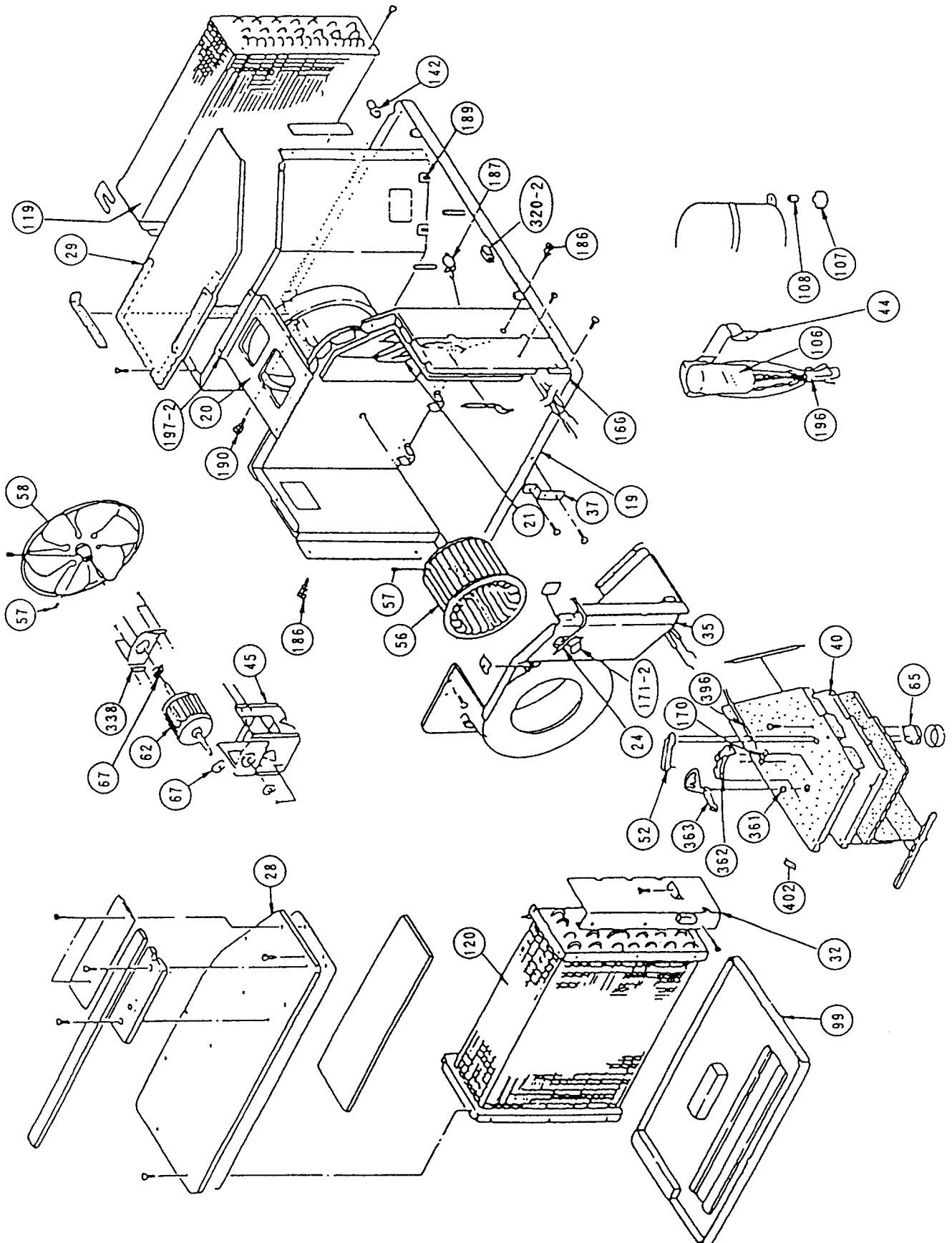
NOTE:
1. Resistors not specified in the drawing shall be 1/4W carbon film resistors.

PRINTED CIRCUIT BOARD LAYOUTS

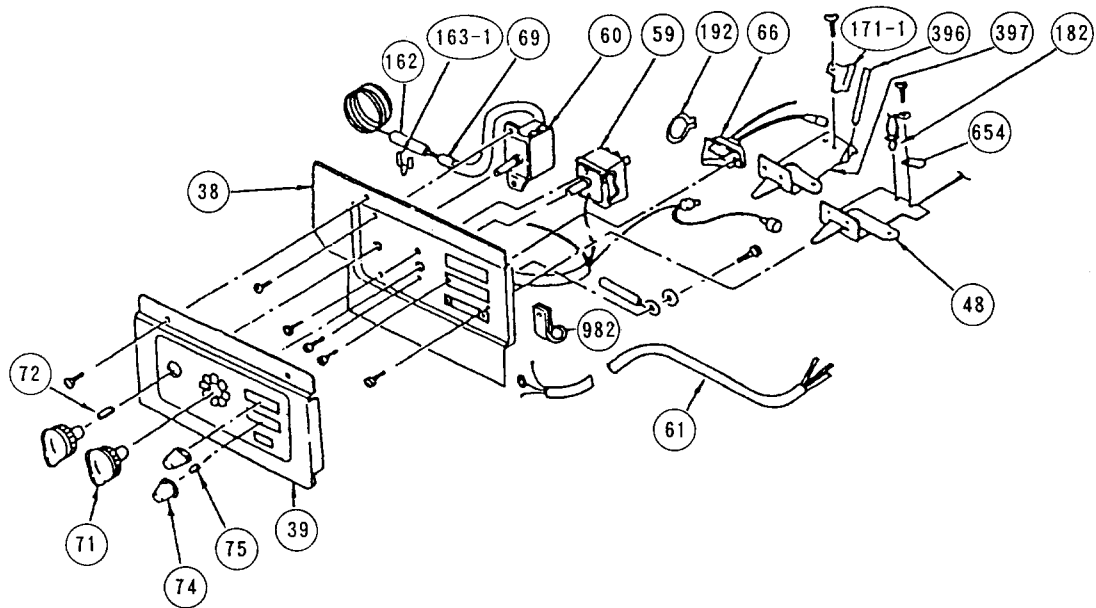
Model : RL-22R



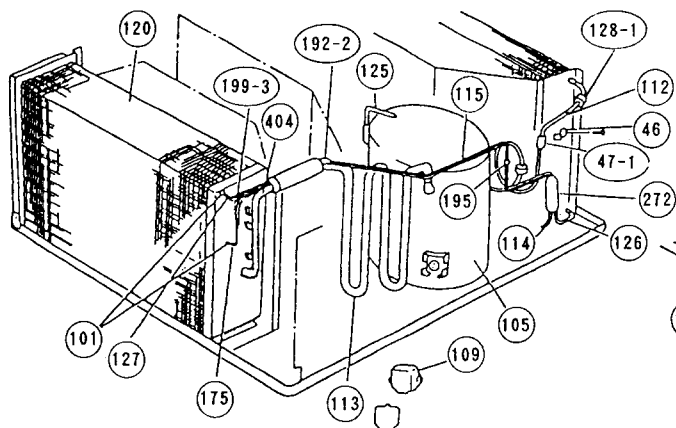
DISASSEMBLY ILLUSTRATION



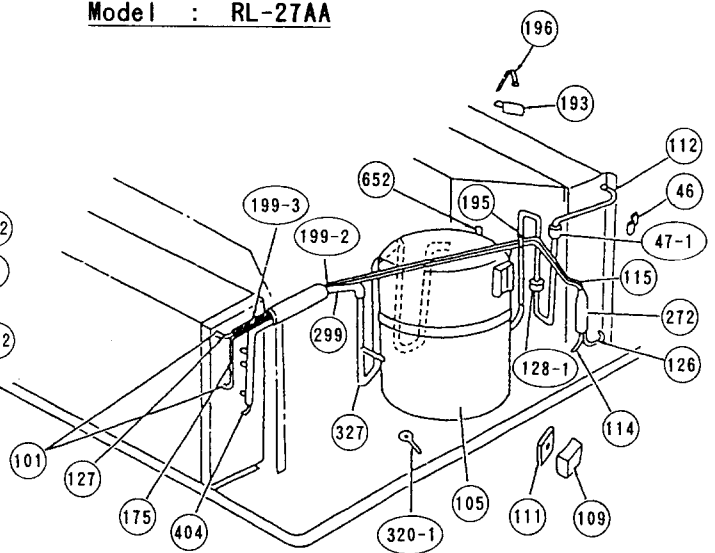
Models : RL-24AA
RL-27AA



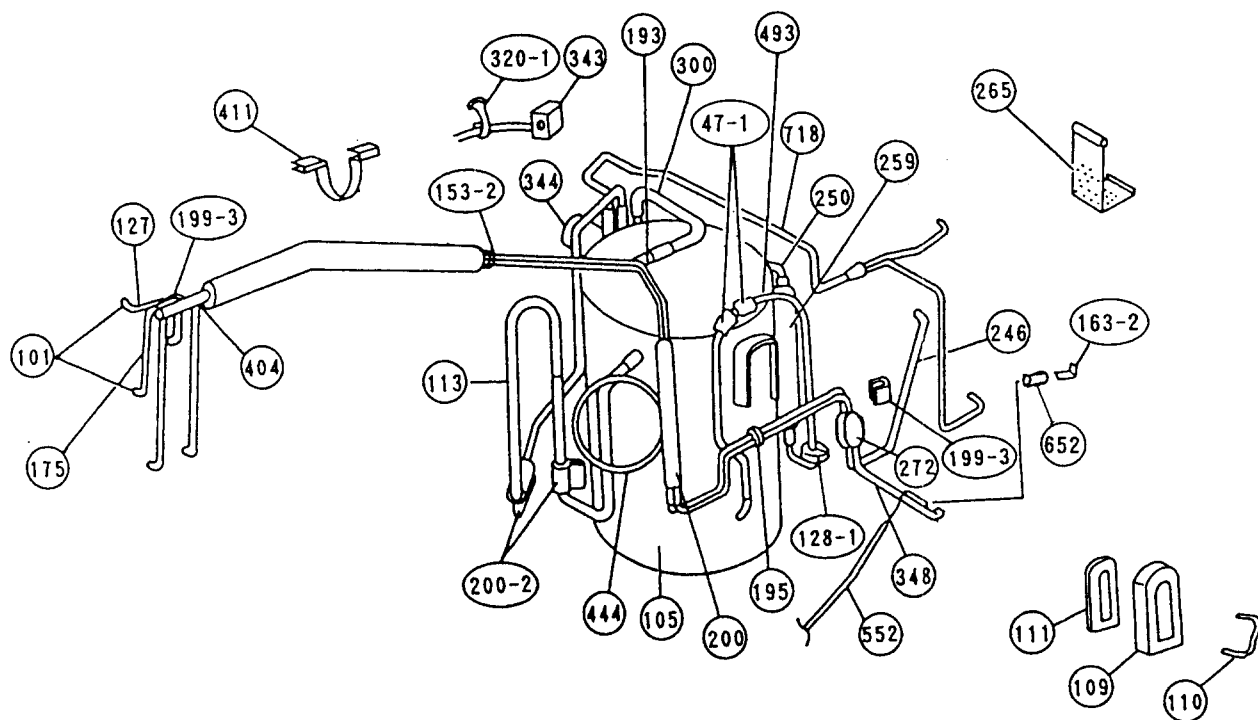
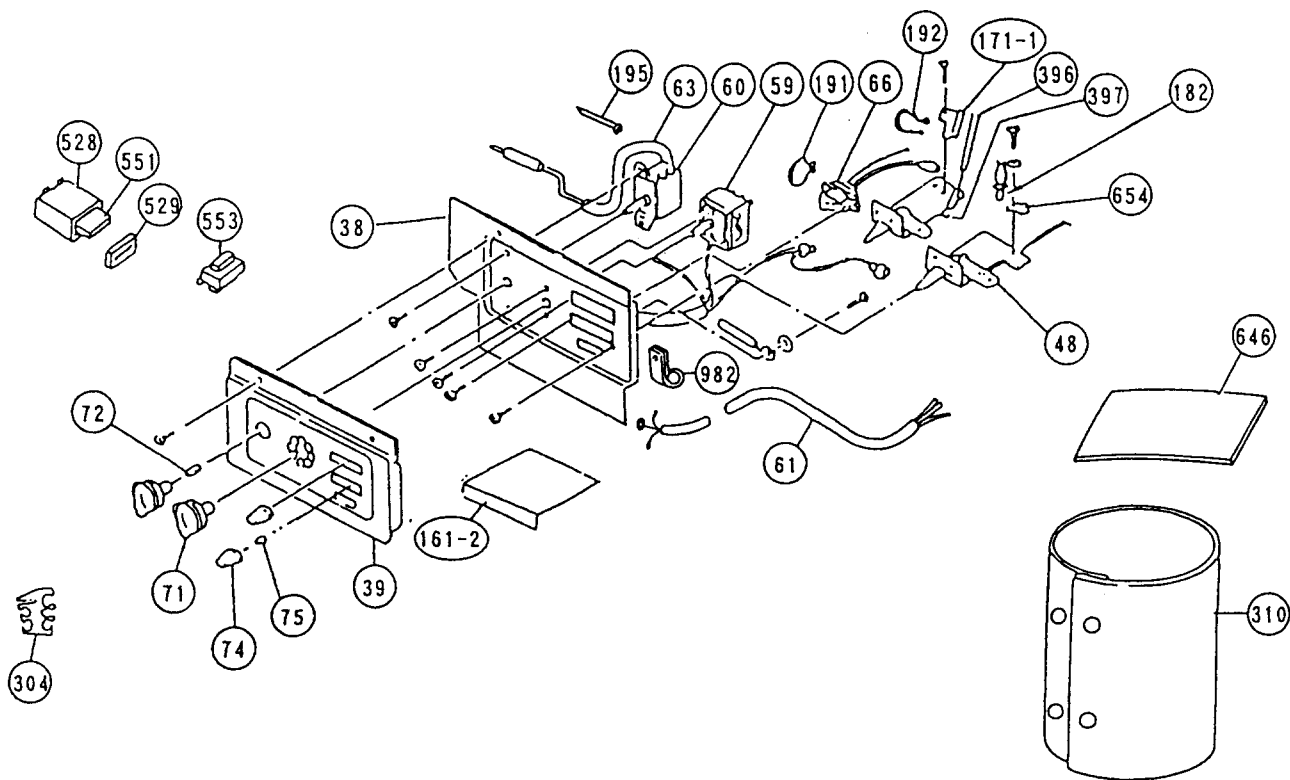
Model : RL-24AA

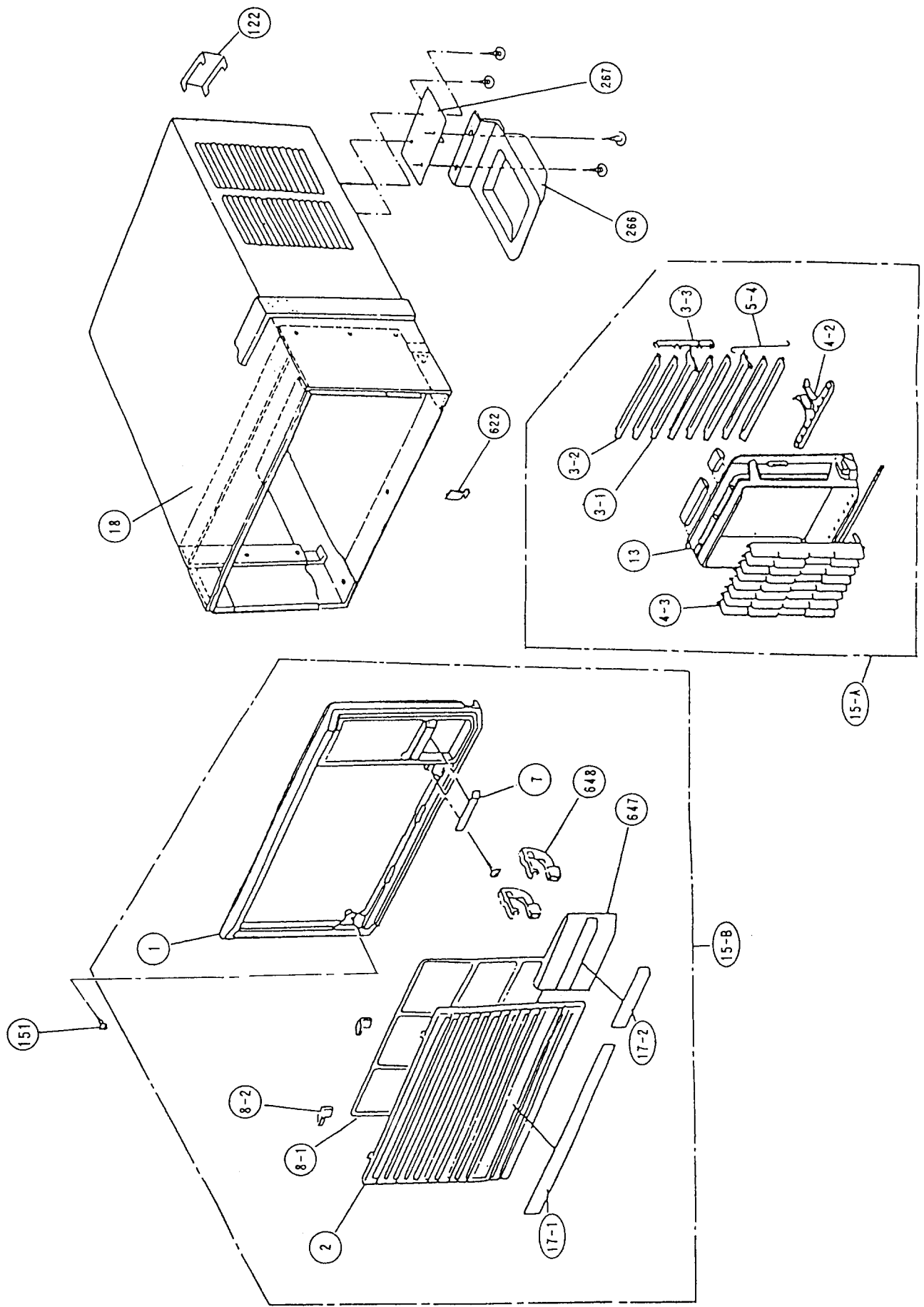


Model : RL-27AA



Model : RL-22R





PARTS LIST

FRONT PANEL PARTS

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.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
1	Front Panel	9353295040		13	Louver Frame	9352569029	
2	Removable Panel	9353296054		15-A	Louver Frame Assy	9352854026	
3-1	Louver-A	313687009100		15-B	Front Panel Assy	9353294098	
3-2	Louver-C	313687009409			w/o Louver Frame		
3-3	Louver-D	313687009607		17-1	Decoration Plate-A	9361829015	
4-2	Louver Link-E	313816009705			(Removable Panel)		
4-3	Louver-B	9352571022		17-2	Decoration Plate-B	9361831018	
5-4	Spring-C (Louver)	313687016305			(Switch Panel Lid)		
7	Emblem	9352574023		647	Switch Panel Lid	9353301048	
8-1	Filter	9353300010			(Front Panel, w/o Arm)		
8-2	Filter Clamp	9351413019		648	Switch Panel Lid Arm	9351579012	

CABINET & CHASSIS PARTS

Ref. No.	Description	Part No.			Ord. Q'ty
		RL-24AA	RL-27AA	RL-22R	
18	Cabinet Assy	9389090022	9389090022	9389090022	
19	Base Assy	9389084038	9389084052	9389084083	
20	Supporter-C	313427126453	313427126453	313427126453	
21	Exhaust Air Damper	313361121208	313361121208	313361121208	
24	Wire Lead-in Pipe	313041103003	313041103003	313041103003	
28	Blower Cover	313228041000	313228041000	313228041000	
29	Supporter-B Assy	313361042203	313394042200	313361042203	
32	Evaporator Cover	313228121402	313228121402	313228121402	
35	Spiral Plate	313361044100	313361044100	313361044100	
37	E. Fixture	313228120108	313228120108	313228120108	
38	Switch Box-A	9358025000	9358025000	9358025000	
39	Switch Panel	9358117019	9358118016	9358119013	
40	Switch Box Cover	313822249729	313822249729	9352247019	
44	Capacitor Band (Running Capacitor)	9357425009	9350067015	9350067015	
45	Motor Fixing Table Assy	313006249901	313006249901	313006249901	
46	Pipe Absorber Clamp	313394229806	313394229806	—	
47-1	Rubber (Discharge Pipe)	313194159807	313194159807	313194159807	
48	Damper Switch Assy	313710056110	313710056110	313710056110	
52	Louver Arm	313822122108	313822122108	313822122108	
56	Sirocco Fan Assy	313361047609	313361047609	313361047609	
57	Hex. Socket Screw	313616213202	313616213202	313616213202	
58	Propeller Fan Assy	313798048703	313798048703	313798048703	
59	Operation Switch	313851060108	313851060108	9351214012	
60	Thermostat	9354391000	9354389007	9354392007	
61	Power Cord Assy	9360713049	9360713049	9360713032	
62	Fan Motor Assy	313581067805	313581067805	313245067804	
63	Protection Tube-B	—	—	313203149606	
65	Super Wave Motor	9357535012	9357535012	9357535012	
66	Super Wave Switch	9354272002	9354272002	9354272002	
67	Rubber (Vibration-proof)	313659068604	313659068604	313659068604	
69	Protection Tube (Thermostat)	313337060303	313337060303	—	
71	Thermostat Knob	313579060806	313579060806	313579060806	
72	Knob Spring (Thermostat Knob)	313008061010	313008061010	313008061010	
74	Operation Knob	313185059205	313185059205	313185059205	
75	Knob Spring (Operation Knob)	313061128802	313061128802	313061128802	
99	Drain Pan	313361046115	313361046115	313361046115	
101	Inlet Pipe(Evaporator)-A	313354019106	313354019106	313354019106	

RL-24AA
RL-27AA
RL-22R

CABINET & CHASSIS PARTS (Continued)

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.			Ord. Q'ty
		RL-24AA	RL-27AA	RL-22R	
105	Compressor Assy	9354025004	9352456015	9360509031	
106	Running Capacitor	9354565203	9354708051	9354708075	
107	Rubber Seat-A (For Comp.)	9354026001	313102081406	313093081402	
108	Sleeve-A (For Comp.)	9354029002	313696081700	313093081706	
109	Terminal Cover (For Comp.)	9354028005	9352456022	313202059600	
110	Lock Wire (Terminal Cover for Comp.)	—	—	313202059706	
111	Terminal Packing (For Comp.)	—	9352456039	313202059807	
112	Discharge Pipe	9353958006	9351957001	—	
113	Suction Pipe	9353961006	—	9358047002	
114	Air Duct Pipe-E	313252257206	313252257206	—	
115	Capillary Tube	9354027008	313354082402	—	
119	Condenser Assy	313035083109	313058083105	9358141014	
120	Evaporator Assy	9353964014	9354735002	9352236020	
122	Emblem-B (Rear)	9361832008	9361832008	9361832008	
125	Process Pipe	9353962003	—	—	
126	Condensing Pipe-B	313228175806	313354175802	—	
127	Inlet Pipe(Evaporator)-B	313837019605	9352482007	9350326013	
128-1	Rubber (Discharge Pipe)	313155086308	313155086308	313155086308	
142	Drain Pipe	9351746018	9351746018	—	
151	Front Panel Screw	313221252806	313221252806	313221252806	
153-2	BR Sheet-C	—	—	313985108408	
161-2	Switch Box Metal	—	—	313854273601	
162	Thermostat Holder	313620262808	313620262808	—	
163-1	Thermo. Spring-A	313352262704	313352262704	—	
163-2	Thermo. Spring-A	—	—	313728262708	
166	Separate Wall	313228033206	313228033206	313228033206	
170	Clamp-B (Wire Lead-in Pipe)	313822119302	313822119302	313822119302	
171-1	Clamp-C (Wire Lead-in Pipe)	313822264807	313822264807	313822264807	
171-2	Clamp-C (Wire Lead-in Pipe)	313041264800	313041264800	313041264800	
175	Inlet Pipe(Evaporator)-C	313837019303	9352483004	9350327010	
182	Clamp No. 249	313361271505	313361271505	313361271505	
186	Clamp No. 347	313361271308	313361271308	313361271308	
187	Clamp No. 1219	313361271706	313361271706	313361271706	
189	Nut TFR-1	313618274407	313618274407	313618274407	
190	Nut TFR-3	313712274504	313712274504	313712274504	
191	Clamp No. 176	—	—	313361271600	
192	Clamp No. 062	313361271402	313361271402	313361271402	
193	Cushion Rubber (Dryer)	—	313376149201	313376149201	
195	Clamp SKB-100	313361275805	313361275805	313361275805	
196	Clamp SKB-150	313035356905	313035356905	313035356905	
197-2	Wind Guide Board-A Assy	313427272155	313427272155	313427272155	
199-2	BR Sheet	313414108209	313414108209	—	
199-3	BR Sheet	313102108205	313102108205	313102108205	
200	BR Sheet-B	—	—	313986108302	
200-2	BR Sheet-B	—	—	9351990022	
246	Outlet Pipe-A(Condenser)	—	—	9358054000	
250	Discharge Pipe-B	—	—	9358044001	
259	Muffer	—	—	313505083900	
265	Dew Proof Plate-B	—	—	313681273505	
266	Drain Boat	—	—	313681252701	
267	Drain Boat Holder	—	—	313681264008	
272	Strainer	9350203017	9350203017	9350379019	
299	Suction Pipe-B	—	9351953003	—	
300	Suction Pipe-C	—	—	9358050002	
304	Thermostat Fixture-B	—	—	313349051500	
310	Compressor Cover	—	—	9358061008	
320-1	Wire Clamp Metal	—	313202219903	313483219905	

CABINET & CHASSIS PARTS (Continued)

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.			Ord.
		RL-24AA	RL-27AA	RL-22R	Q'ty
320-2	Wire Clamp Metal-B	313874219907	—	313874219907	
327	Suction Pipe-A Assy	—	9351954017	—	
338	Motor Fixture	313006297103	313006297103	313006297103	
343	Solenoid Coil	—	—	9359618027	
344	4-Way Valve	—	—	313943302804	
348	Outlet Pipe-B(Condenser)	—	—	9358055007	
361	Bushing	313822302108	313822302108	313822302108	
362	Guide Plate	313822301803	313822301803	313822301803	
363	Moving Plate(Switch Box Cover)	313822301905	313822301905	313822301905	
396	Wire Lead-in Pipe(C)	313822330607	313822330607	313822330607	
397	Select Lever Assy	313822336015	313822336015	313822336015	
402	Arm Holder	—	—	313818124307	
404	Coupling Pipe-F	313711122706	313354122701	9358051009	
411	Supporter-A	—	—	9350023011	
444	Capillary Assy	—	—	9358056004	
493	Discharge Pipe-A	—	—	9358043004	
528	Control Box-A	—	—	313728265005	
529	Control Box-B	—	—	313937265106	
551	Defrost Cont.PCB Assy	—	—	9701558018	
552	Thermistor Assy	—	—	341226300101	
553	Power Transformer	—	—	9701821013	
622	Bracket(Typhoon Lock)	9355835008	9355835008	9355835008	
646	Compressor Cover-B	—	—	313986355101	
652	Thermistor Holder Pipe	—	313714262805	313937262801	
654	Clamp-A(Wire Lead-in Pipe)	313061103204	313061103204	313061103204	
718	Discharge Pipe-C Assy	—	—	9358045008	
982	Cord Clamp	9357886008	9357886008	9357886008	

(Ref.No. 551)

DEFROST CONT. PCB ASSEMBLY

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
1C1	IC μ PD7566CS-022	0100007015		R4	Res. Carbon 1/4W 15k Ω $\pm$ 5%	0200038292	
1C2	IC PS2561-1-VL	0000050456		R5, 6, 10	Res. Carbon 1/4W 10k Ω $\pm$ 5%	0200038254	
1C3	IC μ PC7812AHF	0100008104		12, 13			
1C4	IC μ PC78N05H	0100884012		R7	Res. Metal 2W 26.7k Ω $\pm$ 1%	0201028780	
D1	Diode 1SVB20	0000292054		R8	Res. Metal 2W 10.0k Ω $\pm$ 1%	0201028797	
D2	Diode 1SR139-600	0000353120		R9	Res. Metal 2W 27.4k Ω $\pm$ 1%	0201028735	
D3	Diode 1S2473	0000017015		RA1	Res. Array RKM7LW 1752G	0200070018	
D4	Diode 1SR35-400A	0000353038		X	Ceramic Resonator CSB660P	9701240012	
DZ1	Diode RD5.6EB2	0000025010		ZNR	Varistor TNR15G471K	0000038072	
TR1	Xstr 2SC982TM	0000005012		RY1	Relay G6C-2114P-US	9700050018	
TR2	Xstr 2SC3198	0000860017		FH1, 2	Fuse Holder PFC5000-0502	0500158072	
C1	Cap. Elec. 35V 1000 μ F	0300915493		FUSE	Fuse 2A-250V	0600222550	
C2, 3, 5, 8	Cap. Elec. 25V 10 μ F	0300004258		CN1	Plug, PCB B2P3-VH-B	0500011728	
C4	Cap. Elec. 25V 0.47 μ F	0300004302		CN2	Plug, PCB B2B-XH-A	0500005055	
C6, 7	Cap. Ceramic 50V 100pF	0300011072		CN3	Plug, PCB B8B-XH-A	0500005024	
C9	Cap. Ceramic 250V 0.022 μ F	9702061012		C, B, D-1	Wire w/Connector 172338-1	9700051015	
C10, 11	Cap. Ceramic 50V 0.01 μ F	0300013113		D-2			
R1	Res. Metal 2W 100k Ω $\pm$ 5%	0200047133		A-1, 2	Wire w/Connector 172336-1	9700052012	
R2, 11	Res. Carbon 1/4W 4.7k Ω $\pm$ 5%	0200038179		JM4, 5	Wire Assembly IPS-1041-2	9700035015	
R3	Res. Carbon 1/4W 1.2k Ω $\pm$ 5%	0200038032					



MANUFACTURER:

Fuji Denki Sosei Co., Ltd.

Tokyo, Japan