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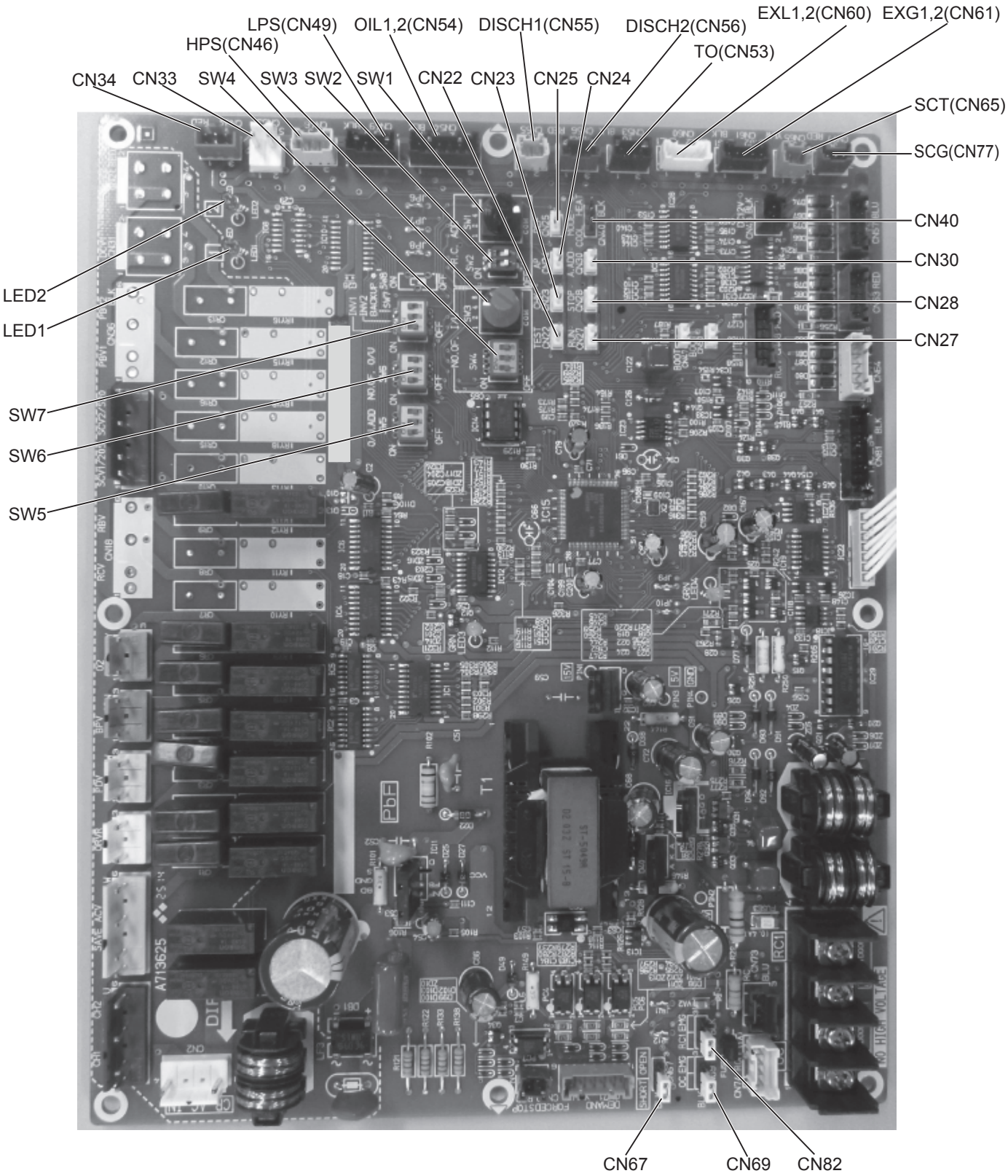

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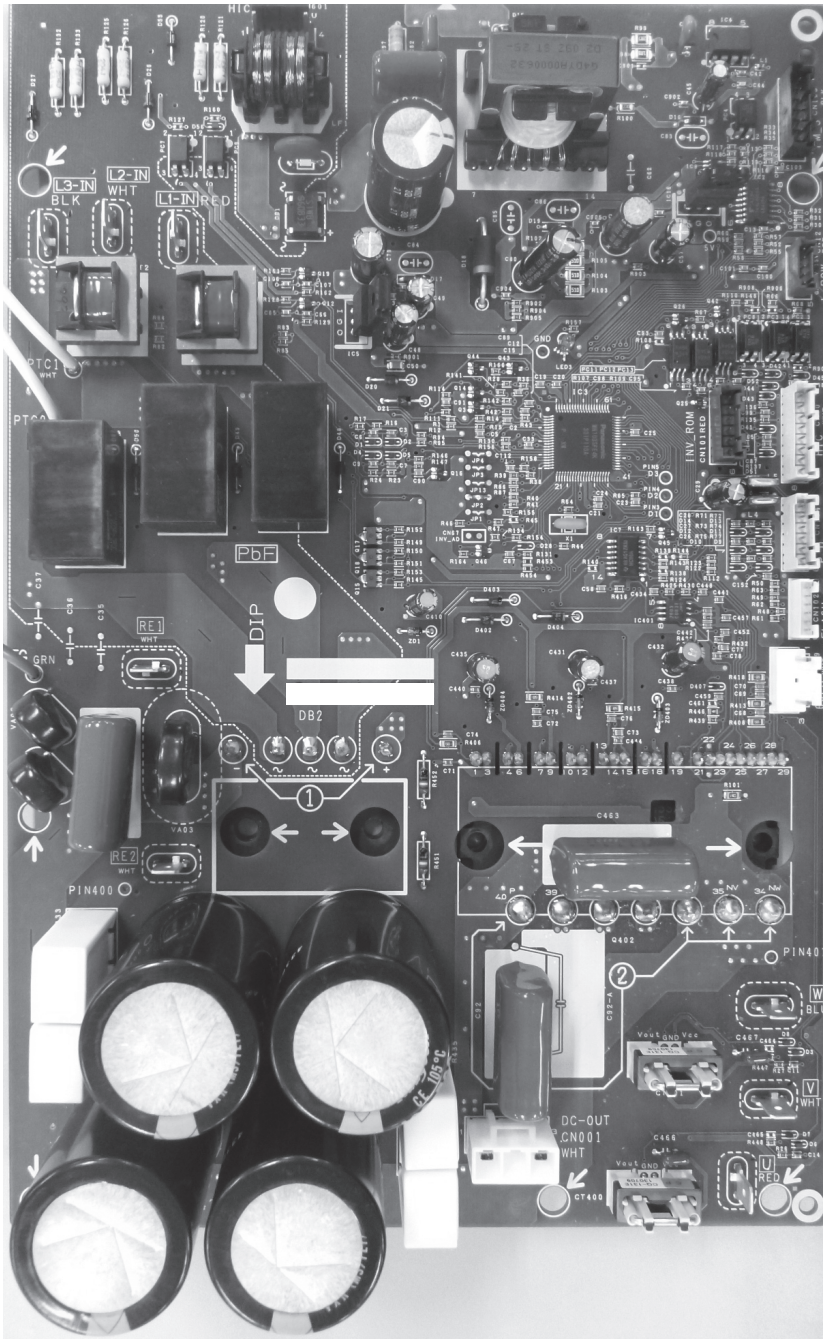

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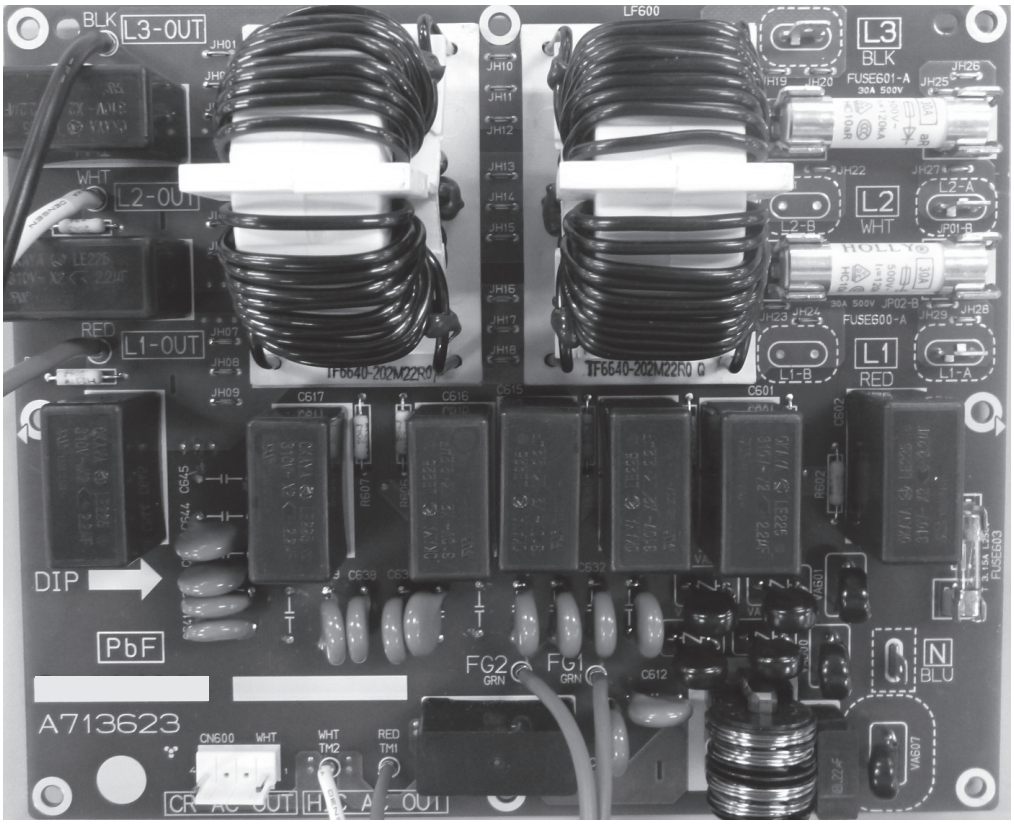

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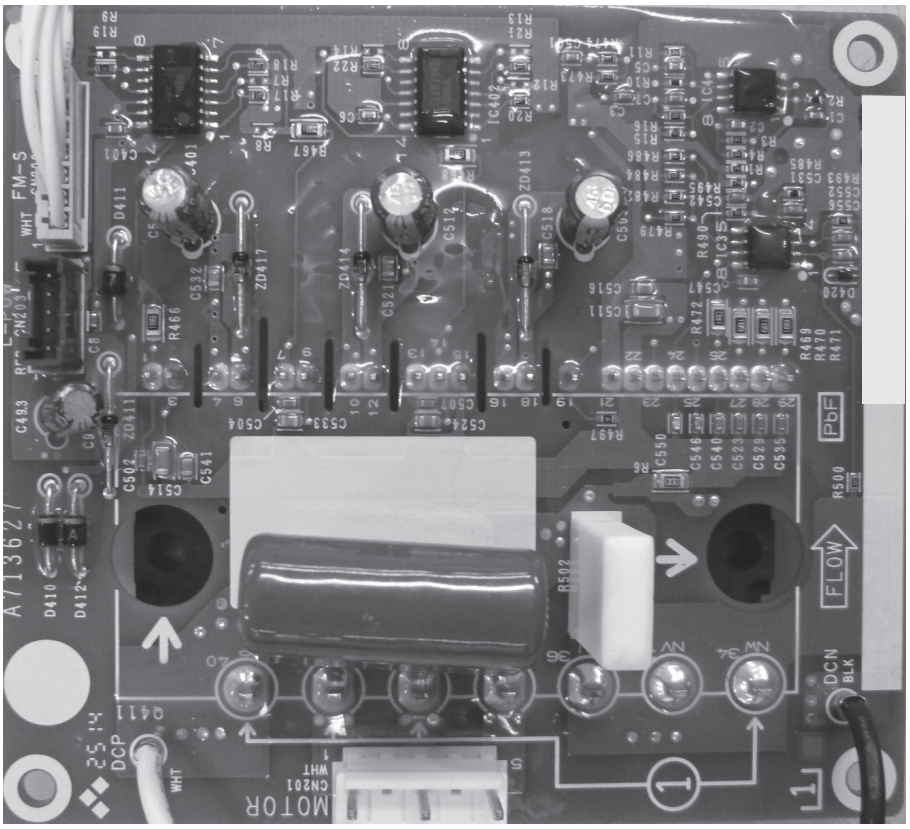

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1. Outdoor Unit Control PCB

1-5. Functions

A. ADD pin (2P, White) (CN30)	Auto address setting pin • Short-circuit this pin for 1 second or longer to automatically set the addresses at the indoor units that are connected to that outdoor unit and are within the same system. • The system address is "1" at the time of shipment. Auto address setting is necessary even for communications lines in a single system where the inter-unit control wiring does not cross to any other systems. • While auto address setting is in progress, the 2 LEDs (LED1, 2: Red) on the outdoor unit control PCB blink alternately. (Short-circuiting this pin while auto address setting is in progress will stop the auto address setting operation.)
SW1 Rotary switch (10 positions, Black)	Outdoor system address setting switch • The setting is "1" at the time of shipment. It is not necessary to change the setting if wiring is connected only to an outdoor unit and indoor units in a single system and the inter-unit control wiring does not cross multiple systems. • If wiring links the inter-unit control wiring for multiple systems to the same communications lines, then a different address must be set for each refrigerant tubing system. • If wiring links multiple systems, a maximum of 30 systems (up to 64 indoor units) can be connected. This setting can be set up to "39," however control will be for 30 systems even if the setting is set to higher than 30. An alarm will be displayed if system addresses are duplicated. (For details, see Table 7-1.)
SW2 DIP switch (2P, Black)	Switches for setting system address 10s digit and 20s digit • If 10 systems or more are set, the setting is made by a combination of this DIP switch and S002. • If 10 - 19 systems are set, set switch 1 (10s digit) to ON. • If 20 - 29 systems are set, set switch 2 (20s digit) to ON, and set switch 1 (10s digit) to OFF. • If 30 systems are set, set both switch 1 (10s digit) and switch 2 (20s digit) to ON. (For details, see Table 7-1.)
SW3 Rotary switch (10 positions, Red)	Switch for setting the number of connected indoor units. In order to allow the outdoor unit to manage indoor units in the same refrigerant system, set the number of connected indoor units. (For details, see Table 7-2.)
SW4 DIP switch (3P, Black)	Switches for setting the 10s, 20s, and 30s digit for the number of connected indoor units • If 10 systems or more are set, the setting is made by a combination of this DIP switch and S003. • If 10 - 19 systems are set, set only switch 1 (10s digit) to ON. • If 20 - 29 systems are set, set switch 2 (20s digit) to ON, and set switch 1 (10s digit) to OFF. • If 30 - 39 systems are set, set only switch 3 (30s digit) to ON. • If 40 - 49 systems are set, set switch 3 (30s digit) to ON, and set switch 1 (10s digit) to ON. • If 50 - 59 systems are set, set switch 3 (30s digit) to ON, and set switch 2 (20s digit) to ON. • If 60 - 64 systems are set, set switch 3 (30s digit) to ON, and set switch 2 (20s digit) to ON, and set switch 1 (10s digit) to ON. (For details, see Table 7-2.)
SW5 DIP switch (3P, Black)	Unit address setting switch • The setting is "1" at the time of shipment. (For details, see Table 7-4.)
SW6 DIP switch (3P, Black)	Setting of the number of outdoor units • Turn the switches ON according to the number of outdoor units (1 - 4). (For details, see Table 7-3.)
SW7 DIP switch (3P, Black)	Backup operation switch If an INV1 compressor has malfunctioned, turn INV1 ON and BACKUP SW ON to operate the outdoor unit using only INV2 compressor. If an INV2 compressor has malfunctioned, turn INV2 ON and BACKUP SW ON to operate the outdoor unit using only the INV1 compressor.

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Terminal pin (3P, Black) (CN67)	For communications circuit impedance matching • A connecting socket (3P, Black) is attached to the terminal plug at the time of shipment from the factory. • In the case of link wiring which combines the inter-unit control wiring for multiple systems into a single communications circuit, When using, refer to the item “4. Auto Address Setting” under the section “7. TEST RUN” in the Service Manual & Test Run Service Manual.
LED1, 2 (2P, Red)	• LED 1 and 2 blink alternately while auto address setting is in progress. • Display the alarm contents for alarms which were detected by the outdoor unit.
RUN pin (2P,White) (CN27)	Start pin Short-circuit this pin and apply a pulse signal to start all indoor units in that refrigerant system.
STOP pin (2P, White) (CN28)	Stop pin Short-circuit this pin and apply a pulse signal to stop all indoor units in that refrigerant system.
AP pin (2P, White) (CN24)	Vacuuming pin • To perform vacuuming of the outdoor unit, short-circuit this pin and then turn the power ON. All solenoid valves turn ON and vacuuming begins smoothly. (Do not perform auto address setting at this time.) • Release the short-circuit to return the unit to normal status.
MODE pin (3P, Black) (CN40)	Indoor unit Heating/Cooling mode change pin • During the summer season, short-circuit this pin in the cooling mode. Then, perform auto address setting. When auto address setting is completed, release the short-circuit to return the unit to normal status. • When heating mode is short-circuited, heating operation can be used. • When cooling mode is short-circuited, cooling operation can be used.
TEST pin (2P, White) (CN22)	• This pin is used to test the PCB at the factory. • When the power is turned ON after this pin has been short-circuited, all output signals will be output in sequence. (Sequential output does not occur if this pin is short-circuited when the power is already ON.) Releasing this pin returns the unit to normal control.
CHK pin (2P, White) (CN23)	When set to short-circuit, changes to test run mode. (Test run mode is automatically cancelled after an hour.) When short-circuit is cancelled, test run mode is cancelled.
DEF pin (2P, White) (CN25)	When the pin of the main unit is short-circuit in heating mode, defrosting operation is started. Even if short circuited, defrosting will not be activated immediately.
SNOW plug (3P, Red) (CN34)	Can be used when installing a snowfall sensor device.
SILENT plug (2P, White) (CN33)	Can be used when setting the outdoor unit fan in sound absorbing mode.
OC EMG terminal (3P, Black) (CN69)	If “TO INDOOR UNIT” accidently connected to high voltage, use the terminal base TM1. Method: 1. Replace the pins 1 and 2 of CN69 with the pins 2 and 3. 2. Disconnect JP11.
RC1 EMG terminal (3P, Black) (CN82)	If “TO OUTDOOR UNIT” accidently connected to high voltage, use the terminal base TM1. Method: 1. Replace the pins 1 and 2 of CN82 with the pins 2 and 3. 2. Disconnect JP12.

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Table 7-1.
Setting the System Address
[SW1: Rotary switch (Black), SW2: 2P DIP (Black)]

	Outdoor system address	SW1 setting	SW2 setting	
			1P (10s digit)	2P (20s digit)
1 refrigerant system only	1	0	OFF	OFF
Link wiring	1	1	OFF	OFF
	2	2	OFF	OFF
	3	3	OFF	OFF
	4	4	OFF	OFF
	5	5	OFF	OFF
	6	6	OFF	OFF
	7	7	OFF	OFF
	8	8	OFF	OFF
	9	9	OFF	OFF
	10	0	ON	OFF
	11	1	ON	OFF
	12	2	ON	OFF
	13	3	ON	OFF
	14	4	ON	OFF
	15	5	ON	OFF
	16	6	ON	OFF
	17	7	ON	OFF
	18	8	ON	OFF
	19	9	ON	OFF
Link wiring	20	0	OFF	ON
	21	1	OFF	ON
	22	2	OFF	ON
	23	3	OFF	ON
	24	4	OFF	ON
	25	5	OFF	ON
	26	6	OFF	ON
	27	7	OFF	ON
	28	8	OFF	ON
	29	9	OFF	ON
	30	0	ON	ON

Table 7-2.
Setting the Number of Indoor Units
[SW3: Rotary switch (Red), SW4: 3P DIP (Black)]

Number of Indoor Units	SW3 Setting	SW4 Setting		
		1	2	3
1	1	OFF	OFF	OFF
2	2	OFF	OFF	OFF
3	3	OFF	OFF	OFF
9	9	OFF	OFF	OFF
10	0	ON	OFF	OFF
11	1	ON	OFF	OFF
19	9	ON	OFF	OFF
20	0	OFF	ON	OFF
21	1	OFF	ON	OFF
29	9	OFF	ON	OFF
30	0	OFF	OFF	ON
31	1	OFF	OFF	ON
39	9	OFF	OFF	ON
40	0	ON	OFF	ON
41	1	ON	OFF	ON
49	9	ON	OFF	ON
50	0	OFF	ON	ON
51	1	OFF	ON	ON
59	9	OFF	ON	ON
60	0	ON	ON	ON
61	1	ON	ON	ON
62	2	ON	ON	ON
63	3	ON	ON	ON
64	4	ON	ON	ON

Table 7-3.
Setting the Number of Outdoor Units
[SW6: DIP switch (Black)]

Number of Outdoor Units	SW6 Setting		
	1	2	3
1	ON	OFF	OFF
2	OFF	ON	OFF
3	ON	ON	OFF
4	OFF	OFF	ON

Table 7-4.
Setting the Outdoor Unit address
[SW5: DIP switch (Black)]

Outdoor Unit Address	SW5 Setting		
	1	2	3
1	ON	OFF	OFF
2	OFF	ON	OFF
3	ON	ON	OFF
4	OFF	OFF	ON

– MEMO –