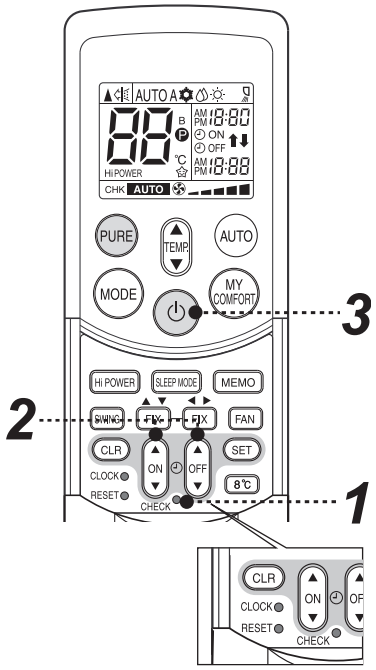
10-6. Self-Diagnosis by Remote Controller (Check Code)

- If the lamps are indicating B to E as shown on Table 10-5-1, execute the self-diagnosis by the remote controller.
- When the remote controller is set to the service mode, the indoor controller diagnoses the operation condition and indicates the information of the self-diagnosis on the display of the remote controller with the check codes. If a fault is detected, all lamps on the indoor unit will flash at 5Hz and it will beep for 10 seconds (Beep, Beep, Beep ...). The timer lamp usually flashes (5Hz) during self-diagnosis.

10-6-1. Using Remote Controller in Service Mode

Fig. 10-6-1



Alphanumeric characters are used for the check codes.

5 is 5.	6 is 6.
A is A.	b is B.
C is C.	d is D.

1 **Push [CHECK] button with a tip of pencil to set the remote controller to the service mode.**

- " 00 " is indicated on the display of the remote controller.

2 **Push [ON ▲] or [OFF ▼] button**
If there is no fault with a code, the indoor unit will beep once (Beep) and the display of the remote controller will change as follows :

→ 00 → 01 → 02 ··· 1d → 1E → 33 →

- The TIMER indicator of the indoor unit flashes continuously. (5 times per 1 sec.)
- Check the unit with all 52 check codes (00 to 33) as shown in Table-10-6-1.
- Push [ON ▲] or [OFF ▼] button to change the check code backward.
  If there is a fault, the indoor unit will beep for 10 seconds (Beep, Beep, Beep...).

Note the check code on the display of the remote controller.

- 2-digits alphanumeric will be indicated on the display.
- All indicators on the indoor unit will flash. (5 times per 1 sec.)

3 **Push [START/STOP] button to release the service mode.**

- The display of the remote controller returns to as it was before service mode was engaged.

4 **Time shortening method.**

1) Push SET button while pushing CHECK button.
2) Push [START/STOP] button.

10-6-2. Check Code

1) After servicing, push the START/STOP button to return to the normal mode.
2) After servicing by the check code, turn off breaker of the power supply, and turn on breaker of the power supply again so that memory in the microcomputer returns the initial status.
   However, the check codes are not deleted even if the power supply is turned off because they are stored in the fixed memory.
3) After servicing, push [CLR] button under check mode status and then send the check code “7F” to the indoor unit. The error code stored in memory is cleared.

Table 10-6-1

Block distinction		Operation of diagnosis function				Judgment and action
Check code	Block	Check code	Cause of operation	Air conditioner status	Remarks	
00	Indoor P.C. board etc.	0C	Short-circuit or disconnection of the room temperature sensor (TA sensor).	Operation continues.	Displayed when error is detected.	1) Check the room temp. sensor. 2) When the room temp. sensor is normal, check P.C. board.
		0d	Being out of place, disconnection, short-circuit, or migration of heat exchanger sensor (TC sensor)	Operation continues.	Displayed when error is detected.	1) Check heat exchanger sensor. 2) When heat exchanger sensor is normal, check P.C. board.
		0F	Being out of place, disconnection, short-circuit, or migration of heat exchanger sensor (TCj sensor)	Operation continues.	Displayed when error is detected.	1) Check heat exchanger sensor. 2) When heat exchanger sensor is normal, check P.C. board.
		11	Lock of indoor fan or trouble on the indoor fan circuit	All off	Displayed when error is detected.	1) Check the motor. 2) When the motor is normal, check P.C. board.
	Not displayed	12	Trouble on other indoor P.C. boards	Operation continues.	Displayed when error is detected.	1) Replace P.C. board.
01	Connecting cable and serial signal	04	Return serial signal is not sent to indoor side from operation started. 1) Defective wiring of connecting cable 2) Operation of compressor thermo Gas shortage Gas leak	Operation continues.	Flashes when trouble is detected on Return serial signal, and normal status when signal is reset.	1) When the outdoor unit never operate: • Check connecting cable, and correct if defective wiring. • Check 25A fuse of inverter P.C. board. • Check 6.3A fuse of connecting cable of inverter unit and outdoor unit. 2) To display [Other] block during operation, check compressor thermo. operation and supply gas (check gas leak also). 3) Unit operates normally during check. If return serial signal does not stop between indoor terminal board 2 and 3, replace inverter P.C. board. If signal stops between indoor terminal board 2 and 3, replace indoor P.C. board.
02	Outdoor P.C. board	14	Inverter over-current protective circuit operates. (Short time)	All off	Displayed when error is detected.	Even if trying operation again, all operations stop immediately. : Replace P.C. board.
		16	Position-detect circuit error or short-circuit between windings of compressor	All off	Displayed when error is detected.	1) Even if connecting lead wire of compressor is removed, position detect circuit error occurred. : Replace P.C. board. 2) Measure resistance between wires of compressor, and perform short-circuit. : Replace compressor.
		17	Current-detect circuit error	All off	Displayed when error is detected.	Even if trying operation again, all operations stop immediately. : Replace P.C. board.

Block distinction		Operation of diagnosis function				Judgment and action
Check code	Block	Check code	Cause of operation	Air conditioner status	Remarks	
02	Outdoor P.C. board	18	Being out of place, disconnection or short-circuit of the outdoor heat exchanger sensor (TE) or suction temp. sensor (TS)	All off	Displayed when error is detected.	1) Check sensors (TE, TS). 2) Check P.C. board.
		19	Disconnection or short-circuit of discharge temp. sensor	All off	Displayed when error is detected.	1. Check discharge temp. sensor (TD). 2. Check P.C. board
		1A	Outdoor fan drive system error	All off	Displayed when error is detected.	Position-detect error, over-current protective operation of outdoor fan drive system, fan lock, etc. : Replace P.C. board or fan motor.
	Not displayed.	1b	Being out of place, disconnection or short-circuit of the outdoor temp. sensor (TO)	Operation continues	——	1. Check outdoor temp. sensor (TO). 2. Check P.C. board.
	Outdoor P.C. board	1C	Compressor drive output error, Compressor error (lock, missing, etc.), Break down	All off	Displayed when error is detected.	1) Check power voltage. (220–230–240 V +10%) 2) Overload operation of refrigeration cycle Check installation condition (Short-circuit of outdoor diffuser). 3) When 20 seconds passed after start-up, position-detect circuit error occurred. : Replace compressor. Trouble on P.M.V.
03	Others (including compressor)	07	Return serial signal has been sent when operation started, but it is not sent from halfway. 1) Compressor thermo. operation Gas shortage Gas leak 2) Instantaneous power failure	Operation continues	Flashes when trouble is detected on return serial signal, and normal status when signal is reset.	1) Repeat Start and Stop with interval of approx. 10 to 40 minutes. (Code is not displayed during operation.) Supply gas. (Check also gas leak). 2) Unit operates normally during check. If return serial signal does not stop between indoor terminal block 2 and 3, replace inverter P.C. board. If signal stops between indoor terminal block 2 and 3, replace indoor P.C. board.
		1d	Compressor does not rotate. (Current protective circuit does not operate when a specified time passed after compressor had been activated.)	All off	Displayed when error is detected.	1) Trouble on compressor 2) Trouble on wiring of compressor (Missed phase)
		1E	Discharge temp. exceeded 117°C	All off	Displayed when error is detected.	1) Check discharge temp. sensor (TD). 2) Gas leakage 3) Trouble on P.M.V.
		1F	Break down of compressor	All off	Displayed when error is detected.	1) Check power voltage. (220–230–240 V +10%) 2) Overload operation of refrigeration cycle Check installation condition (Short-circuit of outdoor diffuser).
		08	4-way valve inverse error (TC sensor value lowered during heating operation.)	Operation continues	——	1) Check 4-way valve operation.