

6

INPUT AND OUTPUT OF DATA





After you change a SRAM module, you must set various data again. This chapter describes the procedures to input and output the parameters, the part programs and the tool offset values.

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6.1 SETTING PARAMETERS FOR INPUT/OUTPUT

Setting procedure of parameters


Parameter writing is enabled with following steps 1 to 3.

- 1 Set to MDI mode or emergency stop state.
- 2 Press function key  several times or press soft key [SETTING] to display SETTING (HANDY) screen.
- 3 Set the cursor to PARAMETER WRITE and, press  and  keys in this order. Here alarm 100 will be displayed.
- 4 Press function key  several times to display the following screen.



PARAMETER	(SETTING)	O1234 N12345			
0000	SEQ	INI	ISO	TVC	
		0	0	0	0
0001		FCV			
		0	0	0	0
0012	RMV				MIR
X		0	0	0	0
Y		0	0	0	0
Z		0	0	0	0
B		0	0	0	0
0020	I/O CHANNEL				
		S	0	T0000	
REF	**** **		10: 15: 30		
[F SRH][READ][PUNCH][DELETE][]					


To make the cursor display in bit unit, press the cursor key  or .

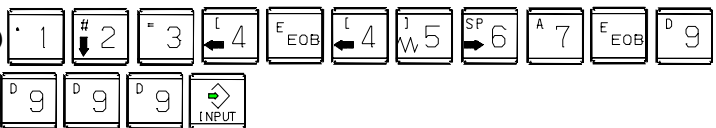
- 5 Press soft key [(OPRT)] and the following operation menu is displayed.
 - <1> Soft key [NO. SRH] :
Searched by number.
Examination) → [NO. SRH].
 - <2> Soft key [ON : 1] :
Item with cursor position is set to 1 (bit parameter)
 - <3> Soft key [OFF : 0] :
Item with cursor position is set to 0 (bit parameter)
 - <4> Soft key [+INPUT] :
Input value is added to the value at cursor (word type)
 - <5> Soft key [INPUT] :
Input value is replaced with the value at cursor (word type)
 - <6> Soft key [READ] :
Parameters are input from reader/puncher interface.
 - <7> Soft key [PUNCH] :
Parameters are output to reader/puncher interface.

6 After the parameters have been input, set PARAMETER WRITE on the SETTING screen to 0. Press  to release alarm 100.

7 Convenient method

<1> To change parameters in bit unit, press cursor key  or , then the cursor becomes bit length and you can set parameters bit by bit (Bit parameter only).

<2> To set data consecutively, use  key.

(Ex.1) 

This key sequence sets data as follows:

```


0      1234
0 => 4567
0      9999
0      0
    
```

(Ex.2) 

This key sequence sets data as follows:

```

0      1234
0 => 0
0      9999
0      0
    
```

<3> To set the same data sequentially, press .

(Ex.1) 

This key sequence sets data as follows:

```

0      1234
0 => 1234
0      1234
0      0
    
```

<4> Bit parameters can be set as follows:

(Ex.1) 

This key sequence sets data as follows:

```

0000 0000 0001 1000
0000 0000 => 0001 1000
0000 0000 0001 1000
0000 0000 0000 0000
    
```

8 After the required parameters are set, set PARAMETER WRITE to 0.

6.2 INPUTTING/ OUTPUTTING DATA

The CNC memorized the following data.

Outputting the data I/O device while the CNC is running normally.

- (1) CNC parameter
- (2) PMC parameter
- (3) Pitch error compensation amount
- (4) Custom macro variable values
- (5) Tool compensation amount
- (6) Part program (machining program, custom macro program)

6.2.1 Confirming the Parameters Required for Data Output

Be sure that data output cannot be done in an alarm status.

Parameters required for output are as follows :

In addition, (*) indicates the standard setting for input/output devices made by FANUC. Change these settings according to the unit you actually use.

(Parameter can be changed in MDI mode or emergency stop status.)

	#7	#6	#5	#4	#3	#2	#1	#0
0000							ISO	

ISO

- 0: Output with EIA code
- 1: Output with ISO code (FANUC cassette)

0020	Selection of I/O channel							
-------------	--------------------------	--	--	--	--	--	--	--

(*)

- 0: Channel 1 (JD56A of mother board)
- 1: Channel 1 (JD56A of mother board)
- 2: Channel 2 (JD36A of mother board)
- 4: Memory card interface

NOTE

An operation example shown here assumes that data input/ output is performed with an input/output unit connected to the JD56A. (I/O channel = 0)

	#7	#6	#5	#4	#3	#2	#1	#0
0101	NFD				ASI			SB2

NFD

- 0: Feed is output when data is output.
- 1: Feed is not output when data is output.

ASI (*)

- 0: EIA or ISO code is used for input/output data.
- 1: ASCII code is used.

SB2



- 0: No. of stop bits is 1.
- (*) 1: No. of stop bits is 2.

0102	Number specified for the input/output device
-------------	---




Set value	Input/output device
0	RS-232-C (Used control codes DC1 to DC4)
1	FANUC CASSETTE ADAPTOR 1 (FANUC CASSETTE B1/B2)
2	FANUC CASSETTE ADAPTOR 3 (FANUC CASSETTE F1)
3	FANUC PROGRAM FILE Mate, FANUC FA Card Adaptor FANUC FLOPPY CASSETTE ADAPTOR, FANUC Handy File FANUC SYSTEM P-MODEL H
4	RS-232-C (Not used control codes DC1 to DC4)
5	Portable tape reader
6	FANUC PPR FANUC SYSTEM P-MODEL G, FANUC SYSTEM P-MODEL H

0103	Baud Rate
1: 50	7: 600
3: 110	8: 1200
4: 150	9: 2400
6: 300	(*): 10: 4800
	11: 9600
	12: 19200 [BPS]

6.2.2 Outputting CNC Parameters




- 1 Enter EDIT mode or the emergency stop condition.
- 2 Press function key  and soft key [PARAMETER] to select a parameter screen.
- 3 Press soft key [(OPRT)] and continuous menu key .
- 4 Press soft key [PUNCH] and [EXEC], and the parameters are started to be output.

6.2.3 Outputting Pitch Error Compensation Amount



- 1 Select EDIT mode.
- 2 Press the function key  and continuous menu key  several times, then press [PITCH] to select the pitch error compensation setting screen.
- 3 Press soft key [(OPRT)] and continuous menu key .
- 4 Press soft key [PUNCH] and [EXEC], then pitch error compensation amount is started to be output.

6.2.4 Outputting Custom Macro Variable Values

When custom macro function is equipped, values of variable No. 500 and later are output.

- 1 Press function key .
- 2 Press continuous menu key  and soft key [MACRO] to select custom macro variable screen.
- 3 Press soft key [(OPRT)] and then continuous menu key .
- 4 Press soft key [PUNCH] and [EXEC], then custom macro variable values are output.

6.2.5 Outputting Tool Compensation Amount



- 1 Select EDIT mode.
- 2 Press function key  and soft key [OFFSET] to display the tool compensation amount screen.
- 3 Press [(OPRT)] key and continuous menu key .
- 4 Press soft key [PUNCH] an [EXEC] key, and the tool compensation amount is started to be output.

6.2.6 Outputting Part Program

- 1 Confirm the following parameters. If this parameter is set to 1, rather than the value indicated by 1, change to MDI mode and then reset to 0.
However, if you changed the parameter setting, restore the original value after finishing this work.

	#7	#6	#5	#4	#3	#2	#1	#0
3202				NE9				NE8

- NE9 (*) 0: Programs of 9000s are edited.
1: Programs of 9000s can be protected.
(Protected programs are not output.)
- NE8 (*) 0: Programs of 8000s are edited.
1: Programs of 8000s can be protected.
(Protected programs are not output.)

- 2 Select EDIT mode.
- 3 Press function key  and press soft key [PROGRAM] to display program text.
- 4 Press [(OPRT)] key and press continuous menu key .
- 5 Input a program number to be output. To output all programs input as:

- 6 Press [PUNCH] and [EXEC] key, then program output is started.

6.2.7 Inputting CNC Parameters

- 1 Set to the emergency stop state.
- 2 Confirm that the parameters required to input data is correct.
In addition, (*) indicates the standard setting for input/output devices made by FANUC. Change these settings according to the unit you actually use.

<1> Press function key  several times, and press [SETTING] to display SETTING screen.

<2> Confirm that PARAMETER WRITE=1.

<3> Press function key  to select the parameter screen.

<4>

0020	Selection of I/O channel
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- (*) 0: Channel 1 (JD56A of mother board)
 1: Channel 1 (JD56A of mother board)
 2: Channel 2 (JD36A of mother board)
 4: Memory card interface

<5>

	#7	#6	#5	#4	#3	#2	#1	#0
0101	NFD				ASI			SB2

- NFD 0: Feed is output when punching out.
 1: Feed is not output when punching out.
 ASI 0: EIA or ISO code is used.
 1: ASCII code is used.
 SB2 0: No. of stop bits is 1.
 (*) 1: No. of stop bits is 2.

<6>


0102	Specification number of I/O device
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Set value	Input/output device
0	RS-232-C (Used control codes DC1 to DC4)
1	FANUC CASSETTE ADAPTOR 1 (FANUC CASSETTE B1/B2)
2	FANUC CASSETTE ADAPTOR 3 (FANUC CASSETTE F1)
3	FANUC PROGRAM FILE Mate, FANUC FA Card Adaptor FANUC FLOPPY CASSETTE ADAPTOR, FANUC Handy File FANUC SYSTEM P-MODEL H
4	RS-232-C (Not used control codes DC1 to DC4)
5	Portable tape reader
6	FANUC PPR FANUC SYSTEM P-MODEL G, FANUC SYSTEM P-MODEL H








<7>

0103	Baud rate
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- 1: 50 7: 600 11: 9600
 3: 110 8: 1200 12: 19200 [BPS]
 4: 150 9: 2400
 6: 300 (*)10:4800

- 3 Press continuous menu key .
- 4 Press soft key [READ] and [EXEC]. Then input of parameters are started.
- 5 Upon completion of parameter input, turn off the power then turn on the power again.
- 6 Alarm 300 is issued if the system employs an absolute pulse coder. In such a case, perform reference position return again.



6.2.8 Inputting Pitch Error Compensation Amount

- 1 Release the emergency stop and select EDIT mode.
- 2 Confirm that PARAMETER WRITE=1 on the setting screen.
- 3 Press function key  and soft key [PROGRAM] to display program contents.
- 4 Press function key  several times, soft key [PARAM], continuous menu key  and [PITCH] to select the screen for pitch error compensation amount.
- 5 Press the function key  and continuous menu key  several times, then press [PITCH] to select the pitch error compensation setting screen.
- 6 Press soft key [(OPRT)] and continuous menu key .
- 7 Press soft key [READ] and [EXEC], then the pitch error compensation amount is started to be input.
- 8 After data has been input, press function key  twice to display the SETTING screen and return the PARAMETER WRITE to 0.

6.2.9 Inputting Custom Macro Variable Values

- * If the system is equipped with the custom macro function, input the variable values.
- 1 Select EDIT mode.
 - 2 Press function key  then soft key [PROGRAM] to display program contents.
 - 3 Press the function key  and press continuous menu key  several times, then press [PITCH] to select the pitch error compensation setting screen.
 - 4 Press soft key [(OPRT)] and continuous menu key .
 - 5 Press soft key [READ] and [EXEC], then the pitch error compensation amount is started to be input.

6.2.10 Inputting Tool Compensation Amount

- 1 Select EDIT mode.
- 2 Turn off the program protect (KEY=1).
- 3 Press function key , and soft key [OFFSET] to display the tool compensation amount screen.
- 4 Press soft key [(OPRT)] and continuous menu key .
- 5 Press [READ] key and [EXEC] key and data input is started.

6.2.11 Inputting Part Programs

Confirm the following parameters. If the setting is different from the value indicated by (*), reset to the specified value only during this work. (Change it in MDI mode).

	#7	#6	#5	#4	#3	#2	#1	#0
3201		NPE					RAL	

NPE When programs are registered in part program storage area, M02,M30 and M99 are:

0: Regarded as the end of program.

(*) 1: Not regarded as the end of program.

RAL When programs are registered:

(*) 0: All programs are registered.

1: Only one program is registered.

	#7	#6	#5	#4	#3	#2	#1	#0
3202				NE9				NE8

NE9 (*) 0: Programs of 9000s can be edited.

1: Programs of 9000s are protected.


NE8 (*) 0: Programs of 8000s can be edited.

1: Programs of 8000s are protected.

* For PPR, item 4 is not required.

1 Confirm that mode is EDIT mode.

2 Turn off the program protect (KEY3=1).

3 Press function key  and press soft key [PROGRAM] to select a part program file.

4 Press soft key [READ] and [EXEC], then data input is started.