

8.12 DATA INPUT/OUTPUT BY EMBEDDED ETHERNET

8.12.1 FTP File Transfer Function

The operation of the FTP file transfer function is described below.

8.12.1.1 Host file list display

A list of the files held on the hard disk embedded to the host computer is displayed.

Procedure

- 1 Press the function key  .
- 2 Press the continuous menu key at the right end of the soft key display.
- 3 Press the [HOST] soft key. The host file list screen appears. The Ethernet functions currently available are displayed.

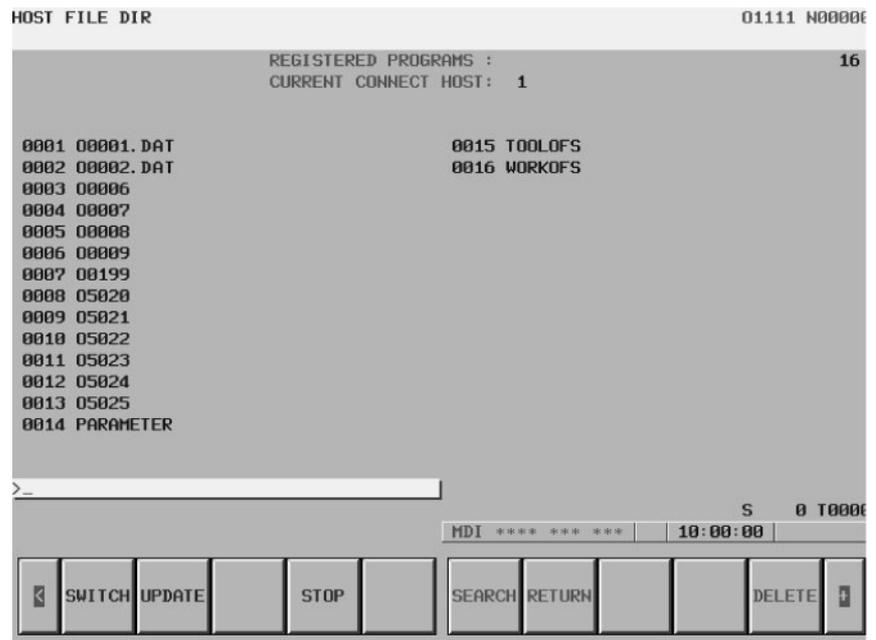


The upper row displays the usable embedded Ethernet function device.

The embedded port or PCMCIA card is displayed.

The lower row displays the usable Ethernet option boards. When no option board is installed, no information is displayed.

- 4 When you press the [EMBEDD] soft key, a list of the files held on the host computer specified with the embedded Ethernet port is displayed.

**NOTE**

Depending on the FTP server software, the number of displayed programs may differ between the host file list screen above and the host file list (detail) screen described below.

- 5 When a list of files is larger than one page, the screen display can be switched using the page keys  .
- 6 Press the [UPDATE] soft key to update the screen display.
- 7 Press the [SWITCH] soft key. The host file list (detail) screen appears.

HOST FILE DIR		01111 N0000	
REGISTERED PROGRAMS :		16	
CURRENT CONNECT HOST :		1	
0001	----- 1 owner group	362 Mar 25 2:07	00001.DAT
0002	----- 1 owner group	362 Mar 25 2:07	00002.DAT
0003	----- 1 owner group	362 Mar 25 2:07	00006
0004	----- 1 owner group	362 Mar 25 2:07	00007
0005	----- 1 owner group	362 Mar 25 2:07	00008
0006	----- 1 owner group	362 Mar 25 2:07	00009
0007	----- 1 owner group	362 Mar 25 2:07	00199
0008	----- 1 owner group	362 Mar 25 2:07	05020
0009	----- 1 owner group	362 Mar 25 2:07	05021
0010	----- 1 owner group	362 Mar 25 2:07	05022
0011	----- 1 owner group	1460 Mar 25 1:24	05023
0012	----- 1 owner group	524288 Feb 27 5:27	05024
0013	----- 1 owner group	524288 Feb 27 4:23	05025
0014	----- 1 owner group	908 Mar 2 4:47	PARAMETER

S 0 T0000

MDI **** * * * * * 10:00:00

NOTE

The host file list (detail) screen shown above is an example of screen display, and information displayed may vary according to the specification of the FTP server used with the host computer.

Display items

- | | |
|--|--|
| <ul style="list-style-type: none"> ● Number of registered program files ● Currently connected host | <p>The number of files registered in the directory (folder) of the host computer currently connected is displayed.</p> <p>The number of the host currently connected is displayed.</p> |
|--|--|

List of operations

- | | |
|--|---|
| <ul style="list-style-type: none"> ● SWITCH ● UPDATE ● STOP ● SEARCH ● DELETE ● READ | <p>This operation switches between normal display and detail display.</p> <p>This operation updates information displayed.</p> <p>This operation stops [SEARCH] operation.</p> <p>This operation updates screen information so that a file specified by its file number is placed at the start of the list.</p> <p>This operation deletes a file held on the hard disk embedded to the host computer.</p> <p>This operation reads a file held on the hard disk embedded to the host computer to the CNC part program storage. This soft key is displayed only when 9 is set as the input/output device number of the CNC, and the CNC is placed in the EDIT mode.</p> |
|--|---|

● PUNCH

This operation outputs a file held in the CNC part program storage to the hard disk embedded to the host computer. This soft key is displayed only when 9 is set as the input/output device number of the CNC, and the CNC is placed in the EDIT mode.

**8.12.1.2
Host file search**

When a list of the files held on the hard disk embedded to the host computer is displayed, a file can be placed at the start of the list by specifying its file number.

Procedure

- 1 Display the host file list screen.
- 2 Press the [SEARCH] soft key.
- 3 Type the file number of a file to be displayed at the start of the list with the MDI keys.
[Input format]
<file-number>
- 4 Press the [EXEC] soft key.
- 5 During search, "SEARCH" blinks in the lower-right corner of the screen.

**8.12.1.3
Host file deletion**

A file held on the hard disk embedded to the host computer can be deleted.

Procedure

- 1 Display the host file list screen.
- 2 Press the [DELETE] soft key.
- 3 Type the file number or file name of a file to be deleted, with the MDI keys.
[Input format]
<file-number>
or
<file-name>
- 4 Press the [EXEC] soft key.
- 5 During deletion, "DELETE" blinks in the lower-right corner of the screen.

NOTE

- 1 When a file number is used for deletion, only a file displayed on the host file list screen can be deleted.
- 2 The information displayed at the right end of the host file list (detail) screen is recognized as a file name. So, when deleting a host file from the host file list (detail) screen by specifying its file number, check that a file name is displayed at the right end of the screen, before specifying the file number.

8.12.1.4 NC program input

A file (NC program) on the host computer can be read to the CNC memory.

For the host file list screen

Procedure

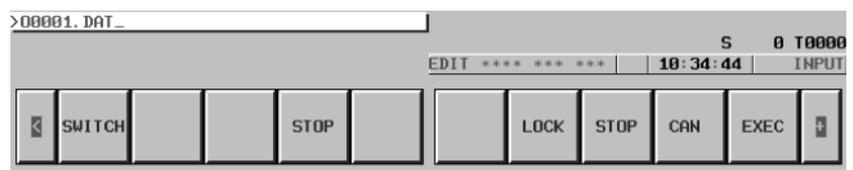
- 1 Place the CNC in the EDIT mode.
- 2 Display the host file list screen.
- 3 Press the [READ] soft key.
- 4 Type the file number or file name of an NC program to be input, with the MDI keys.
[Input format]
<file-number>
or
<file-name>
- 5 Press the [EXEC] soft key.
- 6 During input, "INPUT" blinks in the lower-right corner of the screen.

CAUTION

- 1 If the CNC memory holds an NC program that has the same O number as that of an NC program to be input, the NC program in the CNC memory is overwritten when bit 2 of parameter No. 3201 is set to 1.
- 2 If an NC program is input when bit 0 of parameter No. 3201 is set to 1, all NC programs in the CNC memory are automatically deleted before NC program input.

[Example of use]

When a file with the file name O0001.DAT held on the hard disk embedded to the host computer is to be input to the CNC memory, enter O001.DAT. Note, however, that the O number input to the CNC memory depends on the O number described in the file named O0001.DAT.



NOTE

When a file is input from this screen to the CNC memory, the O number described in the file is input.

For the program screen

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [PRGRM] soft key. The program screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [READ] soft key.
- 8 Type the O number of an NC program to be input, with the MDI keys.
[Input format]
<O-number>
- 9 Press the [EXEC] soft key.
- 10 During input, "INPUT" blinks in the lower-right corner of the screen.

**CAUTION**

- 1 If the CNC memory holds an NC program that has the same O number as that of an NC program to be input, the NC program in the CNC memory is overwritten when bit 2 of parameter No. 3201 is set to 1.
- 2 If an NC program is input when bit 0 of parameter No. 3201 is set to 1, all NC programs in the CNC memory are automatically deleted before NC program input.

NOTE

The valid O number of a file to be input to the CNC memory is Oxxxx (with xxxx representing a number) only.

8.12.1.5 NC program output

A file (NC program) in the CNC memory can be output to the host computer.

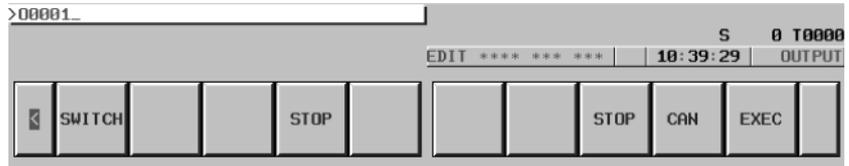
For the host file list screen

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Display the host file list screen.
- 3 Press the [PUNCH] soft key.
- 4 Type the O number of an NC program to be output, with the MDI keys.
[Input format]
<O-number>
- 5 Press the [EXEC] soft key.
- 6 During output, "OUTPUT" blinks in the lower-right corner of the screen.

[Example of use]

When an NC program (O0001) in the CNC memory is to be output to the hard disk embedded to the host computer, enter O0001.



NOTE

An outputted file name is Oxxxx.

For the program screen

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [PRGRM] soft key. The program screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [PUNCH] soft key.
- 8 Type the O number of an NC program to be output, with the MDI keys.
[Input format]
<O-number>

- 9 Press the [EXEC] soft key.
- 10 During output, "OUTPUT" blinks in the lower-right corner of the screen.

NOTE

An outputted file name is Oxxxx.

8.12.1.6 Input/output of various types of data

With the FTP file transfer function, the types of data listed below can be input/output. This subsection describes the input/output method.

- A) NC parameter
- B) Tool offset value
- C) Custom macro variable
- D) Workpiece orogin offset value
- E) Pitch error compensation data
- F) M code group
- G) Operation history data

Parameter input

Procedure

The file (NC parameter) on the host computer can be input to the CNC memory.

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [PARAM] soft key. The parameter screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [READ] soft key.
- 8 Press the [EXEC] soft key.
- 9 During input, "INPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name PRAMETER is used.

File format, restrictions

Refer to the operator's manual of each CNC.

Parameter output

The file (NC parameter) in the CNC memory can be output to the host computer.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [PARAM] soft key. The parameter screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [PUNCH] soft key.
- 8 Press the [EXEC] soft key.
- 9 During output, "OUTPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name PRAMETER is used.

File format, restrictions

Refer to the operator's manual of each CNC.

Tool offset value input

The file (tool offset value) on the host computer can be input to the CNC memory.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [OFFSET] soft key. The tool compensation screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [READ] soft key.
- 8 Press the [EXEC] soft key.
- 9 During input, "INPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name TOOLOFS is used.

File format, restrictions

Refer to the operator's manual of each CNC.

Tool offset value output

The file (tool offset value) in the CNC memory can be output to the host computer.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [OFFSET] soft key. The tool compensation screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [PUNCH] soft key.
- 8 Press the [EXEC] soft key.
- 9 During output, “OUTPUT” blinks in the lower-right corner of the screen.

File name

The fixed file name TOOLOFS is used.

File format, restrictions

Refer to the operator’s manual of each CNC.

Workpiece origin offset value input

The file (workpiece origin offset value) on the host computer can be input to the CNC memory.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [WORK] soft key. The workpiece coordinate system setting screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [READ] soft key.
- 8 Press the [EXEC] soft key.
- 9 During input, “INPUT” blinks in the lower-right corner of the screen.

File name

The fixed file name WORKOFS is used.

File format, restrictions

Refer to the operator’s manual of each CNC.

Workpiece origin offset value output

The file (workpiece origin offset value) in the CNC memory can be output to the host computer.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [WORK] soft key. The workpiece coordinate system setting screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [PUNCH] soft key.
- 8 Press the [EXEC] soft key.
- 9 During output, "OUTPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name WORKOFS is used.

File format, restrictions

Refer to the operator's manual of each CNC.

Pitch error compensation input

The file (pitch error compensation) on the host computer can be input to the CNC memory.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [PITCH] soft key. The pitch error setting screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [READ] soft key.
- 8 Press the [EXEC] soft key.
- 9 During input, "INPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name PITCH is used.

File format, restrictions

Refer to the operator's manual of each CNC.

Pitch error compensation output

The file (pitch error compensation) in the CNC memory can be output to the host computer.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [PITCH] soft key. The pitch error setting screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [PUNCH] soft key.
- 8 Press the [EXEC] soft key.
- 9 During output, “OUTPUT” blinks in the lower-right corner of the screen.

File name

The fixed file name PITCH is used.

File format, restrictions

Refer to the operator’s manual of each CNC.

M code group input

The file (M code group) on the host computer can be input to the CNC memory.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [M-CODE] soft key. The M code group setting screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [READ] soft key.
- 8 Press the [EXEC] soft key.
- 9 During input, “INPUT” blinks in the lower-right corner of the screen.

File name

The fixed file name M-CODE is used.

File format, restrictions

Refer to the operator’s manual of each CNC.

M code group output

The file (M code group) in the CNC memory can be output to the host computer.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [M-CODE] soft key. The M code group setting screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [PUNCH] soft key.
- 8 Press the [EXEC] soft key.
- 9 During output, "OUTPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name M-CODE is used.

File format, restrictions

Refer to the operator's manual of each CNC.

Operation history data input

The file (operation history data) on the host computer can be input to the CNC memory.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [OPEHIS] soft key. The operation history screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [READ] soft key.
- 8 Press the [EXEC] soft key.
- 9 During input, "INPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name HISTORY is used.

File format, restrictions

Refer to the operator's manual of each CNC.

Operation history data output

The file (operation history data) in the CNC memory can be output to the host computer.

Procedure

- 1 Place the CNC in the EDIT mode.
- 2 Press the function key  .
- 3 Press the continuous menu key at the right end of the soft key display.
- 4 Press the [OPEHIS] soft key. The operation history screen appears.
- 5 Press the [(OPRT)] soft key.
- 6 Press the continuous menu key at the right end of the soft key display.
- 7 Press the [PUNCH] soft key.
- 8 Press the [EXEC] soft key.
- 9 During output, "OUTPUT" blinks in the lower-right corner of the screen.

File name

The fixed file name HISTORY is used.

File format, restrictions

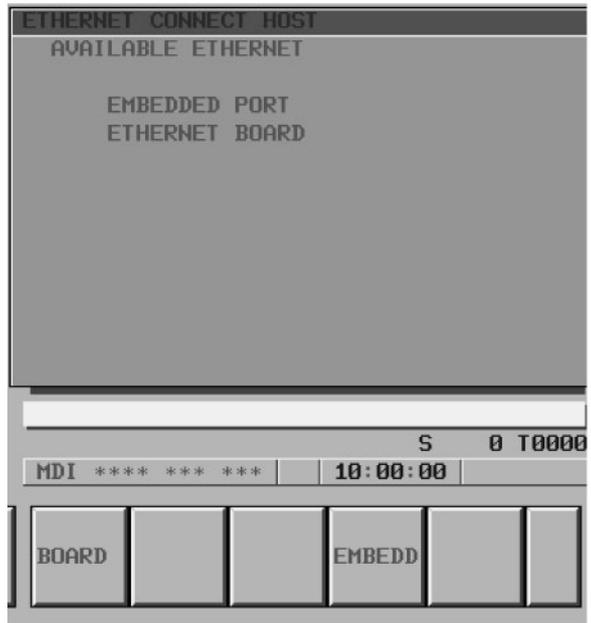
Refer to the operator's manual of each CNC.

8.12.1.7 Checking and changing of the connection host

The host computer to which the FTP file transfer function attempts to make a connection as the current communication destination can be checked.

Procedure

- 1 Press the function key  .
- 2 Press the continuous menu key at the right end of the soft key display.
- 3 Press the [CONNECT] soft key. The connection host change screen appears. The Ethernet functions currently available are displayed.

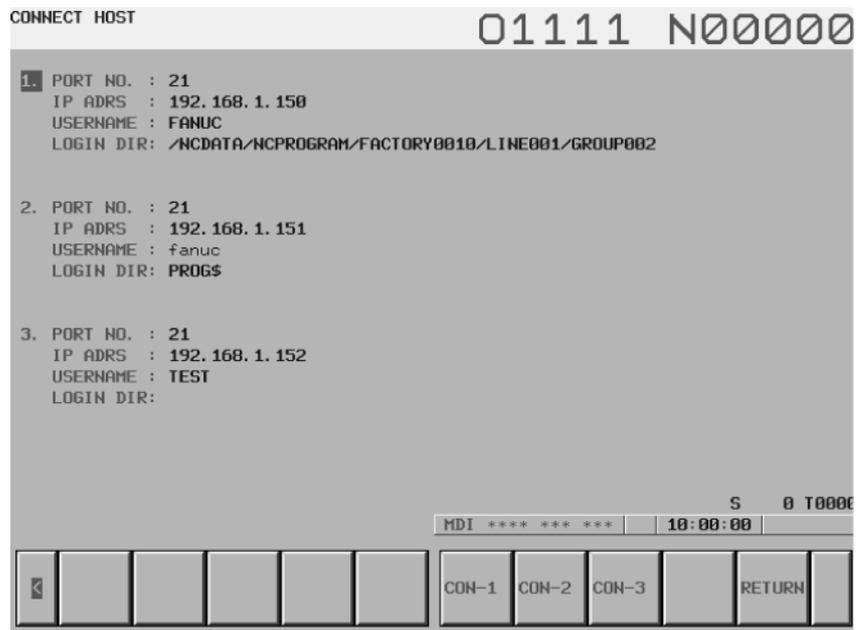


The upper row displays the usable embedded Ethernet function device.

The embedded port or PCMCIA card is displayed.

The lower row displays the usable Ethernet option boards. When no option board is installed, no information is displayed.

- 4 When you press the [EMBEDD] soft key, a list of the connection host computers specified with the embedded Ethernet port is displayed. If the usable embedded Ethernet function device is the PCMCIA card, the [PCMCIA] soft key is displayed instead of the [EMBEDD] soft key. When you press the [PCMCIA] soft key, a list of the connection host computers specified with the PCMCIA Ethernet card is displayed.



NOTE

The title of the host computer that is the current communication destination of the data server board is displayed in reverse video.

- 5 The connected host can be changed by pressing the [CON-1], [CON-2], or [CON-3] soft key.

Display items

- **Port number, IP address, user name, login DIR** Those values that are set on the Ethernet parameter setting screen are displayed.

List of operations

- **CON-1** This operation changes the connected host to host 1.
- **CON-2** This operation changes the connected host to host 2.
- **CON-3** This operation changes the connected host to host 3.