



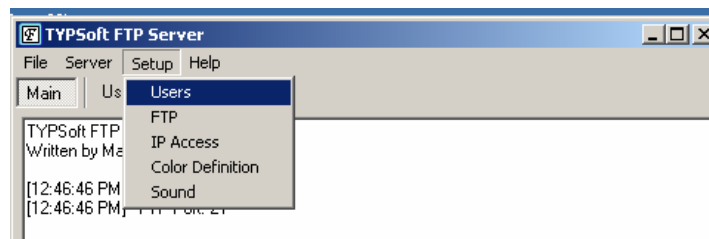
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FTP SERVER SOFTWARE FOR ETHERNET CONNECTION ON FANUC 160is, 180is, F310is & MITSUBISHI 600 SERIES

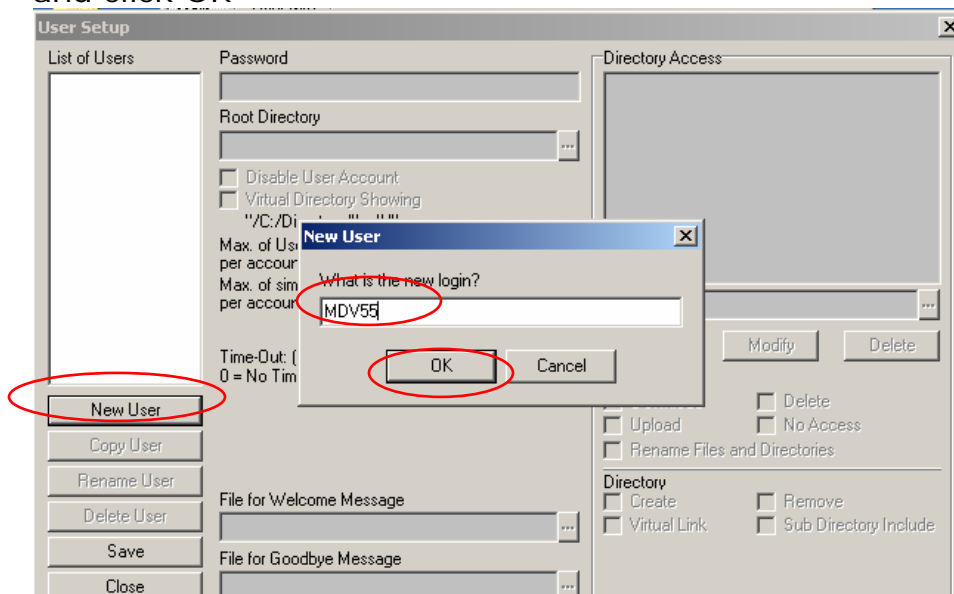
- Copy the entire "FTP SERVER TYPESOFT" folder to your PC. You do NOT have to install any software on your PC since this software will run from the folder you copy it into.
- To start the software click on the blue FTPSERV file in the folder you copied to your PC. (After the initial setup you can have the software automatically launch on Windows startup if you choose)



- Once the software has started select SETUP → USERS from the pull down menu as shown below.



- Click on the NEW USER tab then type in user name (e.g. MDV55) and click OK





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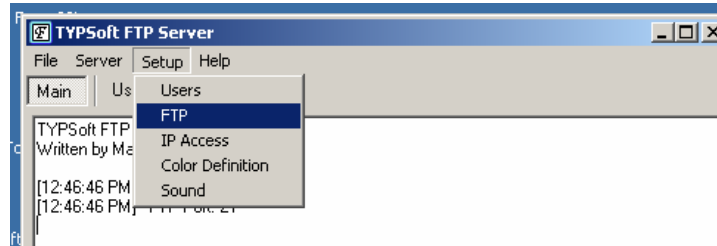
- Make sure the new user name is selected in the List Of Users then type in the password (e.g. OKK), Set the Root directory (eg. C:\) and set all other items circled below.

- Next click on the Directory Access value (e.g. C:\) so it is highlighted then set all circled items listed below. When you are finished click on SAVE then CLOSE tab.

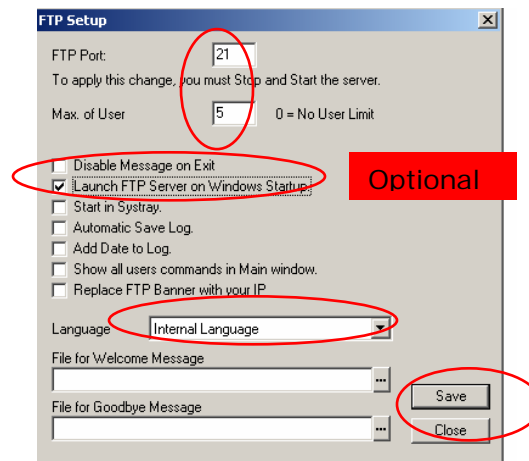


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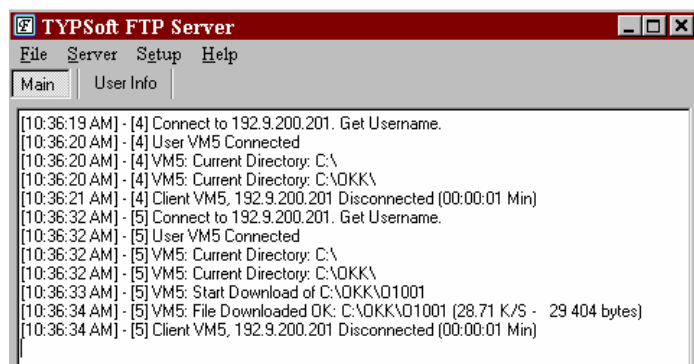
- Select SETUP → FTP from the pull down menu as shown below.



- Set the circled items as listed below then click SAVE and CLOSE tab.




- When you want to use the software for file transfer all you have to do is launch the program by clicking on the blue FTPSERV file or have the software automatically launch at Windows startup. When the NC tries to communicate with the PC you will see the communication log as shown below.

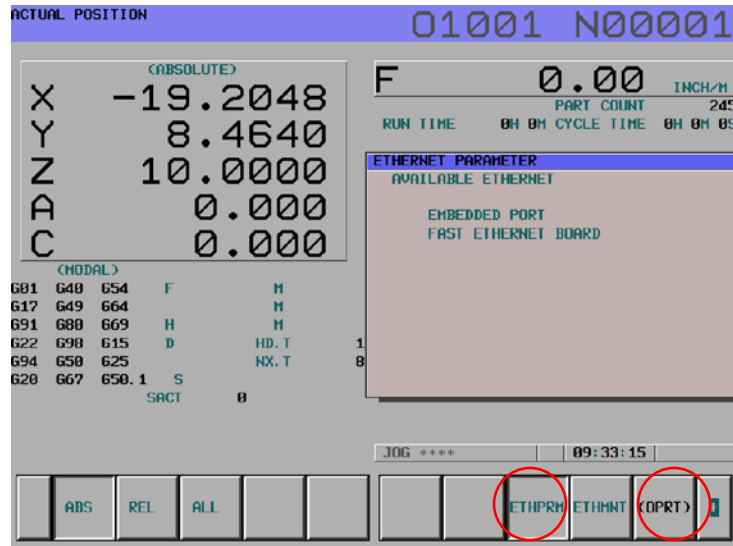




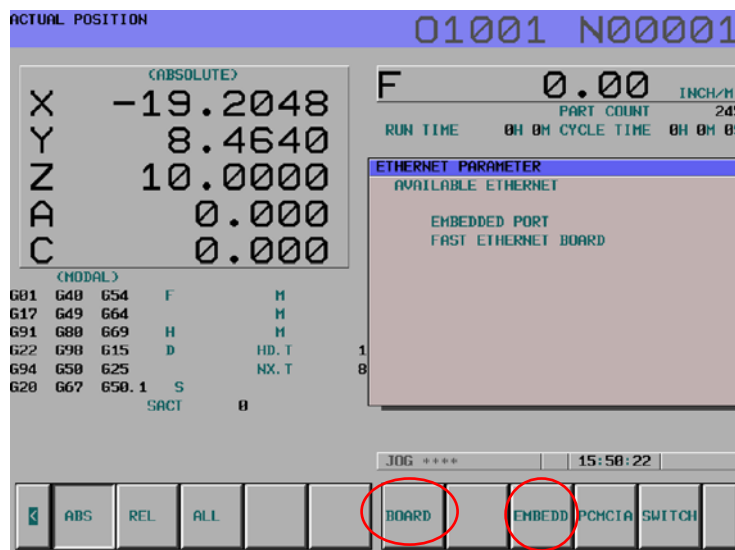
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FANUC 160is & 180is Basic NC Ethernet Settings

- Press the SYSTEM hard key then the  soft key until you see ETHPRM soft key. Press the ETHPRM soft key then (OPRT) soft key.



- Next you will have to press the (OPRT) soft key then select either EMBEDDED or BOARD soft key. Embedded Ethernet is for connecting to the NC memory and Board is for connecting to the OPTIONAL Data Server memory.



Select 1



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FANUC 160is & 180is EMBEDDED ETHERNET SETTING

Note: This information is to be used as a reference. Please refer to the FANUC Operation manual for more detail information.

- The NC I/O channel must be set to 9 to use the Embedded Ethernet function.
- Page 1 of the Ethernet parameters you must set IP address and Sub net mask of NC control.
 (Note: If these settings are changed power off the NC and restart the control)

The screenshot displays the FANUC CNC control interface. At the top, it shows 'ACTUAL POSITION' and '03001 N00000'. Below this, the 'ABSOLUTE' position is shown for X (1.4133), Y (17.1938), and Z (-0.0007). To the right, the 'F' (Feed) rate is 0.00 INCH/M, and the 'PART COUNT' is 184. The 'RUN TIME' is 47H59M and the 'CYCLE TIME' is 0H 0M 0S. The 'ETHERNET PARAMETER(EMBEDD)' screen is displayed, showing the 'MAC ADDRESS' as 00E0E402F560. Under the 'COMMON PARAMETER' section, the 'IP ADDRESS' is 192.9.200.201 (highlighted with a red circle) and the 'SUBNET MASK' is 255.255.255.0. The 'ROUTER IP ADDRESS' is blank. At the bottom, there are buttons for 'ABS', 'REL', 'ALL', 'STRING', 'LOCK', 'INPUT', and 'RETURN'. The status bar at the very bottom shows 'HDI **** * * * *', '23:36:56', and 'S 0 L 0%'.



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- Page 3 of the Ethernet parameters you must set the Port number (21), IP address of PC, Username, Password, and Log in Directory the NC will use to communicate with PC. This page is for connection 1.

ACTUAL POSITION 03001 N00000

(ABSOLUTE)

X 1.4133
Y 17.1938
Z -0.0007

(MODAL)

G01 G40 G54 F M
G17 G49 G64 M
G91 G80 G69 H M
G22 G98 G15 D HD. T 1
G94 G50 G25 NX. T 2
G20 G67 G50.1 S
SACT 0

F 0.00 INCH/M
PART COUNT 184
RUN TIME 47H59M CYCLE TIME 0H 0M 0S

ETHERNET PARAMETER(EMBEDD) PAGE: 3/ 2

(P. TRANSFER)

1. PORT NUMBER 21
IP ADDRESS 192.9.200.200
USERNAME
MDV55
PASSWORD
OKK
LOGIN DIR
PROGRAMS

MDI **** * 23:39:07 S 0 L 0%

ABS REL ALL STRING LOCK INPUT RETURN

- Page 4 is for Connection 2 settings.

ACTUAL POSITION 03001 N00000

(ABSOLUTE)

X 1.4133
Y 17.1938
Z -0.0007

(MODAL)

G01 G40 G54 F M
G17 G49 G64 M
G91 G80 G69 H M
G22 G98 G15 D HD. T 1
G94 G50 G25 NX. T 2
G20 G67 G50.1 S
SACT 0

F 0.00 INCH/M
PART COUNT 184
RUN TIME 47H59M CYCLE TIME 0H 0M 0S

ETHERNET PARAMETER(EMBEDD) PAGE: 4/ 2

(P. TRANSFER)

2. PORT NUMBER 21
IP ADDRESS 192.9.200.200
USERNAME
MDV55
PASSWORD
OKK
LOGIN DIR
OKK/TEST

MDI **** * 23:39:34 S 0 L 0%

ABS REL ALL STRING LOCK INPUT RETURN



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- Page 5 is for Connection 3 settings.

ACTUAL POSITION 03001 N00000

(ABSOLUTE)

X 1.4133
Y 17.1938
Z -0.0007

F 0.00 INCH/M
PART COUNT 184
RUN TIME 47H59M CYCLE TIME 0H 0M 0S

ETHERNET PARAMETER(EMBEDD) PAGE: 5 / 2

3. PORT NUMBER 21
IP ADDRESS 192.9.200.200
USERNAME MDV55
PASSWORD OKK
LOGIN DIR
SAMPLES

(MODAL)

G01 G40 G54 F M
G17 G49 G64 M
G91 G80 G69 H M
G22 G98 G15 D HD. T 1
G94 G50 G25 NX. T 2
G20 G67 G50.1 S
SACT 0

HDI **** * 23:40:25

ABS REL ALL STRING LOCK INPUT RETURN

- You can then select which Connection parameters you would like to use for communication by selecting Connect 1, 2, or 3 by using the following procedure.
- Press the Edit mode then the PROGRAM Hard key. Next press the soft key until you see CONNECT soft key. Press the CONNECT soft key then (OPRT) soft key.

ACTUAL POSITION 01001 N00001

(ABSOLUTE)

X -19.2048
Y 8.4640
Z 10.0000
A 0.000
C 0.000

F 0.00 INCH/M
PART COUNT 245
RUN TIME 0H 0M CYCLE TIME 0H 0M 0S

ETHERNET CONNECT HOST
AVAILABLE ETHERNET
EMBEDDED PORT
FAST ETHERNET BOARD

(MODAL)

G01 G40 G54 F M
G17 G49 G64 M
G91 G80 G69 H M
G22 G98 G15 D HD. T 1
G94 G50 G25 NX. T 0
G20 G67 G50.1 S
SACT 0

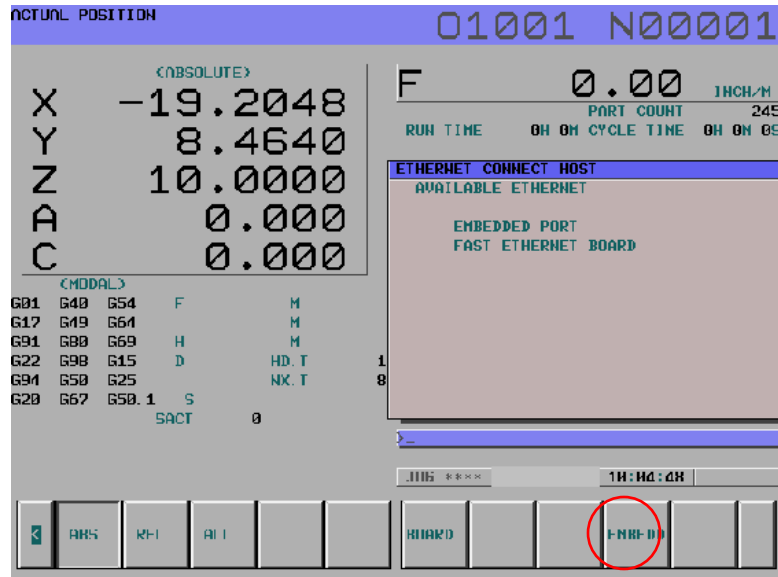
JOG **** 10:04:22

ABS REL ALL HD-DIR HOST CONNECT (OPRT)

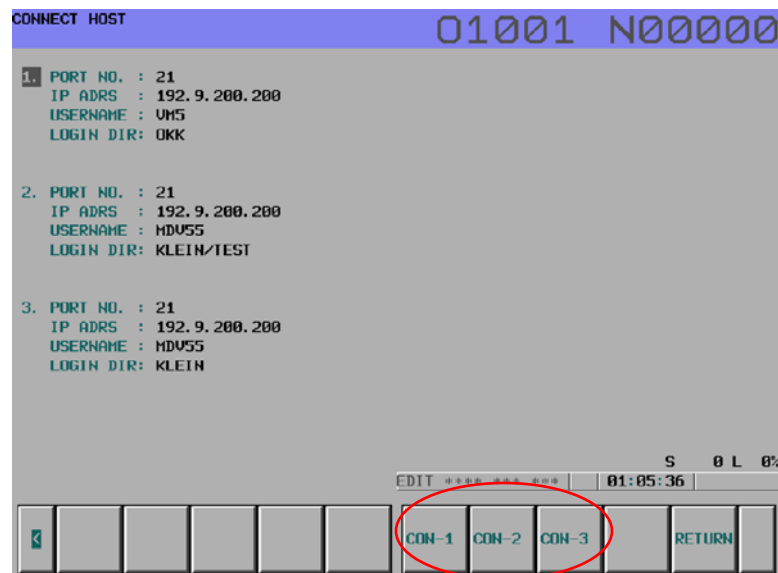


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- Next you will have to press the EMBEDDED soft key.




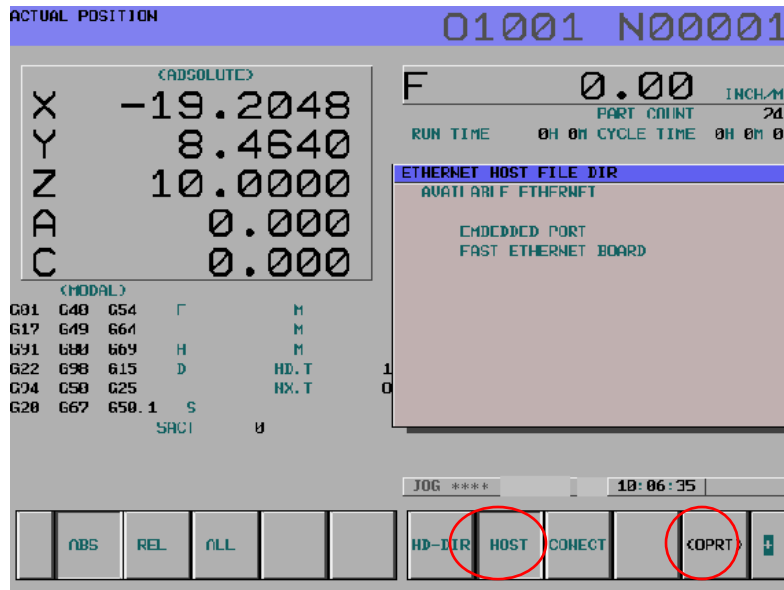
- The Connect screen will then be displayed and you can choose which connection settings you would like to use by pressing Con-1, Con-2, or Con-3 soft key. The set values for that connection will then be used when you transfer files.





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- Press the  soft key then press the HOST soft key and (OPRT) soft key.




- Press the EMBEDDED soft key then the NC will connect with the PC and display the programs, which are in the folder you have designated.





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If you press the  soft key you will then see the READ and PUNCH soft keys. If you type O4500 and press the READ soft key, that program will be transferred to the NC memory. If you type a program number that is in the NC memory and press PUNCH it will be transferred to the PC.



- For more details on the operation of the EMBEDDED Ethernet function please refer to the FANUC operation manual.



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FANUC 310is Embedded Ethernet Settings

Note: This information is to be used as a reference. Please refer to the FANUC Operation manual for more detail information.

- The NC I/O channel must be set to 9 to use the Embedded Ethernet function.
- Press the SYSTEM hard key then the soft key until you see EMBED PORT soft key. Press the EMBED PORT soft key to display the screen below.

ACTUAL POSITION

ABSOLUTE

X 18.3659

Y 15.1397

Z -18.2348

B 179.995

MODAL

601 600 615 F M

617 698 640.1 H M

691 650 625 D M

622 667 6160 HD.T 1

694 697 613.1 S NX.T 5

620 654 650.1

640 664 654.2

649 669 680.5

S 0 SOV 100

COMMON: Setting[EMBEDDED]

BASIC

MAC ADDRESS 00E0EA03BADA

IP ADDRESS 192.168.0.95

SUBNET MASK 255.255.255.0

ROUTER IP ADDRESS

AVAILABLE DEVICE EMBEDDED 1/2

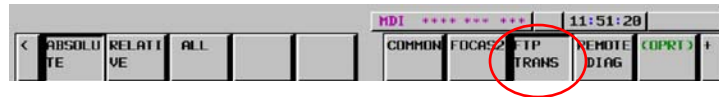
A>

- If the Common setting screen is not shown press the COMMON soft key so that the display matches the one shown above. On this page the IP address and Sub net mask of the NC control are set. (Note: If these settings are changed power off the NC and restart the control)

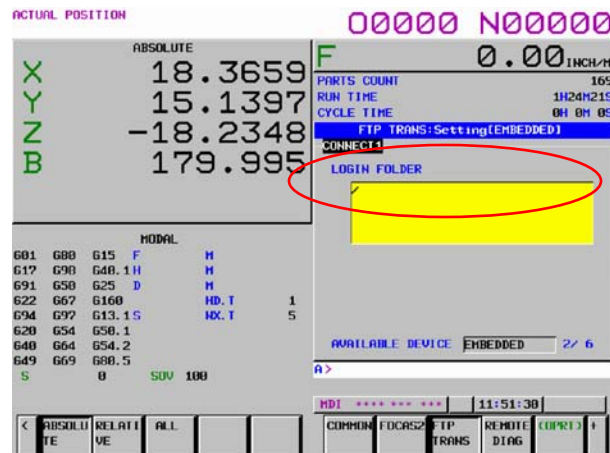
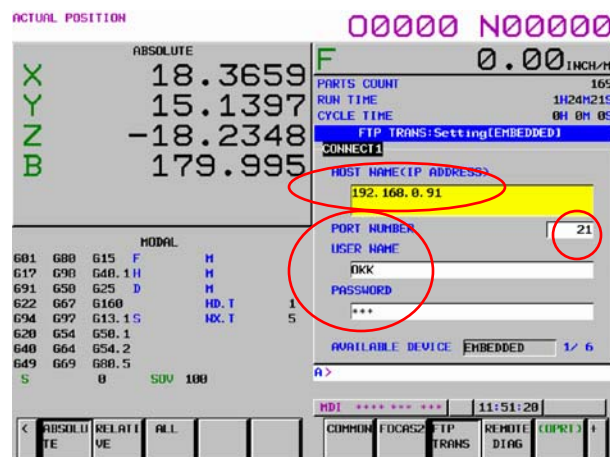


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- Press the FTP TRANS soft key to display the setting screen for the Host computer.



- On pages 1 & 2 of the Ethernet parameters you must set the Port number (21), IP address of PC, Username, Password, and Log in Directory the NC will use to communicate with PC. These pages are for Connection 1.





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- Pages 3 & 4 are for Connection 2 settings.

ACTUAL POSITION 00000 N00000

ABSOLUTE	
X	18.3659
Y	15.1397
Z	-18.2348
B	179.995

MODAL

G01	G80	G15	F	M
G17	G90	G40.1	H	M
G91	G50	G25	D	M
G22	G67	G160		
G94	G97	G13.1	S	NO. T 1
G20	G54	G50.1		5
G40	G64	G54.2		
G49	G69	G80.5		
S	0	SUV	100	

FTP TRANS:Setting(EMBEDDED)

CONNECT2

HOST NAME(IP ADDRESS)
 192.168.0.98

PORT NUMBER
 21

USER NAME
 OKK

PASSWORD

AVAILABLE DEVICE EMBEDDED 3/ 6

A>

MDI ***** 11:51:37

COMMON FOCRS2 TP REMOTE (OPRT)

ACTUAL POSITION 00000 N00000

ABSOLUTE	
X	18.3659
Y	15.1397
Z	-18.2348
B	179.995

MODAL

G01	G80	G15	F	M
G17	G90	G40.1	H	M
G91	G50	G25	D	M
G22	G67	G160		
G94	G97	G13.1	S	NO. T 1
G20	G54	G50.1		5
G40	G64	G54.2		
G49	G69	G80.5		
S	0	SUV	100	

FTP TRANS:Setting(EMBEDDED)

CONNECT2

LOGIN FOLDER
 /RICHARD/TEST

AVAILABLE DEVICE EMBEDDED 4/ 6

A>

MDI ***** 11:51:43

COMMON FOCRS2 TP REMOTE (OPRT)



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- Pages 5 & 6 are for Connection 3 settings.

ACTUAL POSITION 00000 N00000

ABSOLUTE F 0.00 INCH/M

X 18.3659
Y 15.1397
Z -18.2348
B 179.995

MODAL

G01	G80	G15	F	M
G17	G90	G40.1	H	M
G91	G50	G25	D	M
G22	G67	G160	HD. T	1
G94	G97	G13.1	S	5
G20	G54	G50.1		
G40	G64	G54.2		
G49	G69	G80.5		
S	0	SOV 100		

FTP TRANS: Setting(EMBEDDED)

CONNECT3

HOST NAME(IP ADDRESS) 192.168.0.91

PORT NUMBER 21

USER NAME OKK

PASSWORD ***

AVAILABLE DEVICE EMBEDDED 5/6

MDI 11:51:50

COMMON FOCUS2 TIP REMOTE (COPY) I

TRANS DIAG

ACTUAL POSITION 00000 N00000

ABSOLUTE F 0.00 INCH/M

X 18.3659
Y 15.1397
Z -18.2348
B 179.995

MODAL

G01	G80	G15	F	M
G17	G90	G40.1	H	M
G91	G50	G25	D	M
G22	G67	G160	HD. T	1
G94	G97	G13.1	S	5
G20	G54	G50.1		
G40	G64	G54.2		
G49	G69	G80.5		
S	0	SOV 100		

FTP TRANS: Setting(EMBEDDED)

CONNECT3

LOGIN FOLDER

AVAILABLE DEVICE EMBEDDED 5/6

MDI 11:51:56

COMMON FOCUS2 TIP REMOTE (COPY) I

TRANS DIAG

- You can then select which Connection parameters you would like to use for communication by selecting Connect 1, 2, or 3 by using the following procedure.



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- While on the FTP TRANS screen press the OPRT soft key then the HOST SELECT soft key.

ACTUAL POSITION 00000 N00000

ABSOLUTE F 0.00 INCH/M

X 18.3659
Y 15.1397
Z -18.2348
B 179.995

MODAL

G01	G80	G15	F	M
G17	G90	G40.1	H	M
G91	G50	G25	D	M
G22	G67	G160	HD.T	1
G94	G97	G13.1	S	5
G20	G54	G50.1		
G40	G64	G54.2		
G49	G69	G80.5		

S 0 SUV 100

FTP TRANS:Setting(EMBEDDED)

CONNECT3

HOST NAME(IP ADDRESS)
192.168.0.91

PORT NUMBER 21

USER NAME OKK

PASSWORD ***

AVAILABLE DEVICE EMBEDDED 5/6

A>

MDI ***** 11:51:50

COMMON FOCUS TIP REMOTE (OPRT) I

TRANS

ACTUAL POSITION 00000 N00000

ABSOLUTE F 0.00 INCH/M

X 18.3659
Y 15.1397
Z -18.2348
B 179.995

MODAL

G01	G80	G15	F	M
G17	G90	G40.1	H	M
G91	G50	G25	D	M
G22	G67	G160	HD.T	1
G94	G97	G13.1	S	5
G20	G54	G50.1		
G40	G64	G54.2		
G49	G69	G80.5		

S 0 SUV 100

FTP TRANS:Setting(EMBEDDED)

CONNECT3

HOST NAME(IP ADDRESS)
192.168.0.91

PORT NUMBER 21

USER NAME OKK

PASSWORD ***

AVAILABLE DEVICE EMBEDDED 5/6

A>

MDI ***** 11:53:59

HOST SELECT RSTART EMB / INPUT

PCMCIA



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- You can then select Connection 1, 2, or 3 by pressing the corresponding soft key.

ACTUAL POSITION

04500 N00000

ABSOLUTE

X 18.3659

Y 15.1389

Z -18.2348

B 179.994

MODAL

G01 G80 G15 F M

G17 G90 G40.1 H M

G91 G50 G25 D M

G22 G67 G160 HD. T 1

G94 G97 G13.1 S MX. T 5

G20 G54 G50.1

G40 G64 G54.2

G49 G69 G80.5

S 0 SOV 100

FTP TRANS:Setting[EMBEDDED]

CONNECT3

HOST NAME(IP ADDRESS)

192.168.0.91

PORT NUMBER 21

USER NAME

OKK

PASSWORD

AVAILABLE DEVICE EMBEDDED 5/6

A>

EDIT ***** 14:59:59

CONNECT 1 CONNECT 2 CONNECT 3

- Press the Edit mode then the PROGRAM Hard key. Next press the FOLDER soft key followed by the OPRT soft key.

EDIT ***** 11:56:29

PROGRAM FOLDER NEXT CHECK OPRT

- Press the DEVICE CHANGE soft key followed by the EMB ETHER soft key.

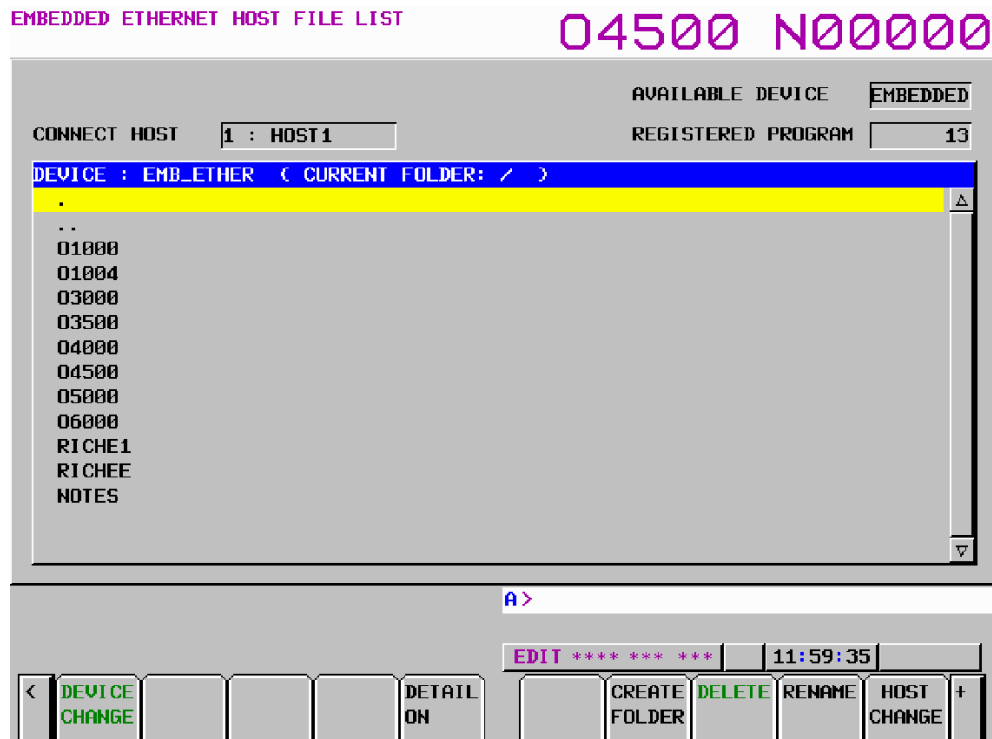
DEVICE CHANGE DETAIL ON


CNC MEM MEM CARD EMB ETHER



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- The NC will connect with the PC and display the programs, which are in the folder you have designated in the connection parameters. You can press the HOST CHANGE soft key to toggle thru connect 1, 2, & 3. Each time this is pressed the screen will update a program list according to the connection settings.



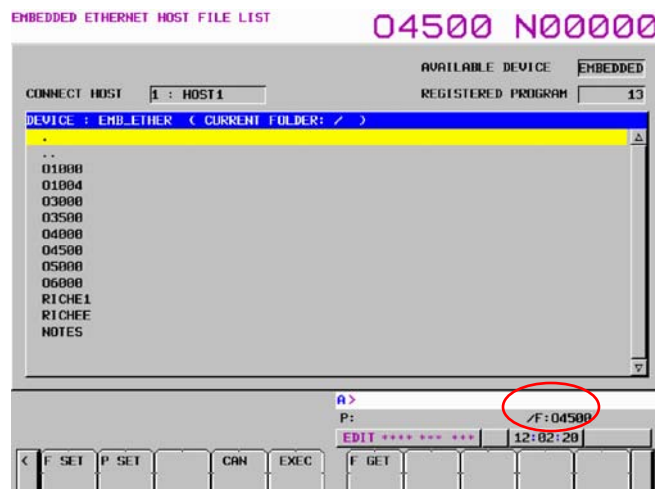
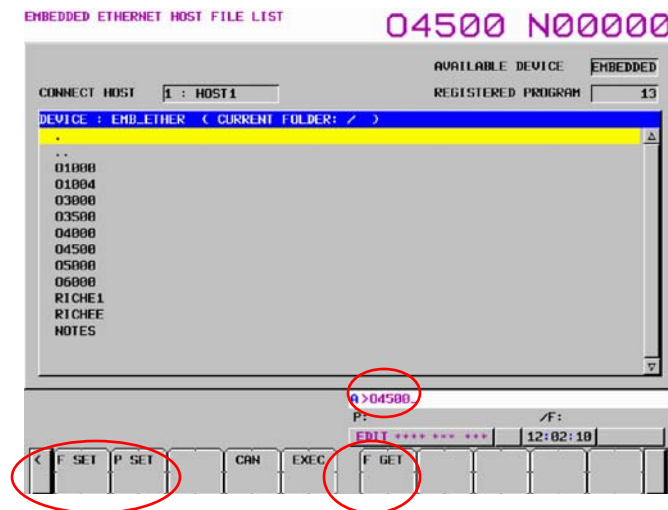
- If you press the  soft key you will then see the READ and PUNCH soft keys.





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- It is important to remember that when you use the Read /Punch function that the files will be transferred to and from the current path set as the Foreground folder.
- To Read a file from the PC to the NC press the READ soft key. Then you can either type the file name to be transferred and press F SET soft key or move the cursor to select a program, press the F GET soft key then F SET soft key. Next type the program name to be used in the NC and press P SET. If no program name is specified for P SET the name in the program file will be used as the name in the NC.





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- For the punch function the same basic operation is used but you will specify the program number to be punched by typing the number and using P SET. The F SET will be used if you would like to change the file name after it is transferred to the PC.
- For more details on the operation of the EMBEDDED Ethernet function please refer to the FANUC operation manual.



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FANUC 160is,180is DATA SERVER ETHERNET SETTING

Note: This information is to be used as a reference. Please refer to the FANUC Operation manual for more detail information.

- Page 1 of the Ethernet parameters you must set IP address, Sub net mask, and Router IP (If necessary) of NC control. (Note: If these settings are changed power off the NC and restart the control)

ACTUAL POSITION 01001 N00001

(ABSOLUTE)

X -19.2048
Y 8.4640
Z 10.0000
A 0.0000
C 0.0000

(MODAL)

601 640 654 F M
617 649 664 M
691 680 669 H M
622 690 615 D HD. T
694 650 625 NX. T
620 667 650.1 S
SACT 0

F 0.00 INCH/M
PART COUNT 245
RUN TIME 0H 0M CYCLE TIME 0H 0M 0S

ETHERNET PARAMETER PAGE: 1/ 5

MAC ADDRESS 00E0E401C3B9
NUMBER OF SCREENS 11
MAXIMUM PATH 1
HDD EXISTENCE 2

IP ADDRESS 192.9.200.201
SUBNET MASK 255.255.255.0
ROUTER IP ADDRESS

JOG **** 09:29:00

ABS REL ALL STRING LOCK INPUT

- Page 2 of the Ethernet parameters you must set the Port number (21), IP address of PC, Username, Password, and Log in rectory the NC will use to communicate with PC. This page is for connection 1.

ACTUAL POSITION 01001 N00001

(ABSOLUTE)

X -19.2048
Y 8.4640
Z 10.0000
A 0.0000
C 0.0000

(MODAL)

601 640 654 F M
617 649 664 M
691 680 669 H M
622 690 615 D HD. T
694 650 625 NX. T
620 667 650.1 S
SACT 0

F 0.00 INCH/M
PART COUNT 245
RUN TIME 0H 0M CYCLE TIME 0H 0M 0S

ETHERNET PARAMETER PAGE: 2/ 5

(DATA SERVER)
1. PORT NUMBER 21
IP ADDRESS 192.9.200.200
USERNAME RICH
PASSWORD
LOGIN DIR

JOG **** 09:29:30

ABS REL ALL STRING LOCK INPUT



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- Page 3 is for Connection 2 settings.

ACTUAL POSITION 01001 N00001

(ABSOLUTE)

X -19.2048
Y 8.4640
Z 10.0000
A 0.000
C 0.000

(MODAL)

G01 G40 G54 F M
G17 G49 G64 M
G91 G80 G69 H M
G22 G98 G15 D HD. T
G94 G50 G25 NX. T
G20 G67 G50.1 S
SACT 0

F 0.00 INCH/M
PART COUNT 245
RUN TIME 0H 0M CYCLE TIME 0H 0M 0S

ETHERNET PARAMETER PAGE: 3/ 5

(DATA SERVER)
2. PORT NUMBER 21
IP ADDRESS 192.9.200.200
USERNAME RICH
PASSWORD
LOGIN DIR /RICHARD

JOG **** 09:29:39

ABS REL ALL STRING LOCK INPUT

- Page 4 is for Connection 3 settings.

ACTUAL POSITION 01001 N00001

(ABSOLUTE)

X -19.2048
Y 8.4640
Z 10.0000
A 0.000
C 0.000

(MODAL)

G01 G40 G54 F M
G17 G49 G64 M
G91 G80 G69 H M
G22 G98 G15 D HD. T
G94 G50 G25 NX. T
G20 G67 G50.1 S
SACT 0

F 0.00 INCH/M
PART COUNT 245
RUN TIME 0H 0M CYCLE TIME 0H 0M 0S

ETHERNET PARAMETER PAGE: 4/ 5

(DATA SERVER)
3. PORT NUMBER 0
IP ADDRESS 192.9.200.200
USERNAME UPSAX
PASSWORD
LOGIN DIR /RICHARD/INT CRANK


JOG **** 09:29:46

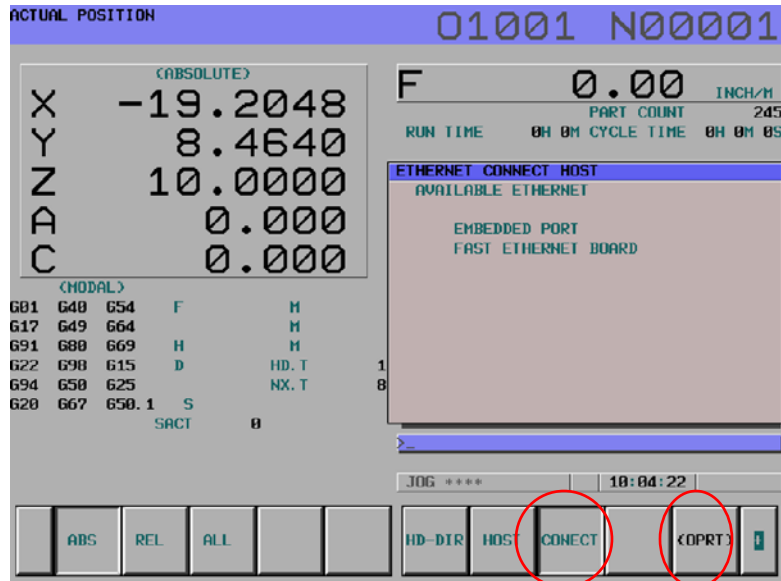
ABS REL ALL STRING LOCK INPUT

- You can then select which Connection parameters you would like to use for communication by selecting Connect 1, 2, or 3 by using the following procedure.

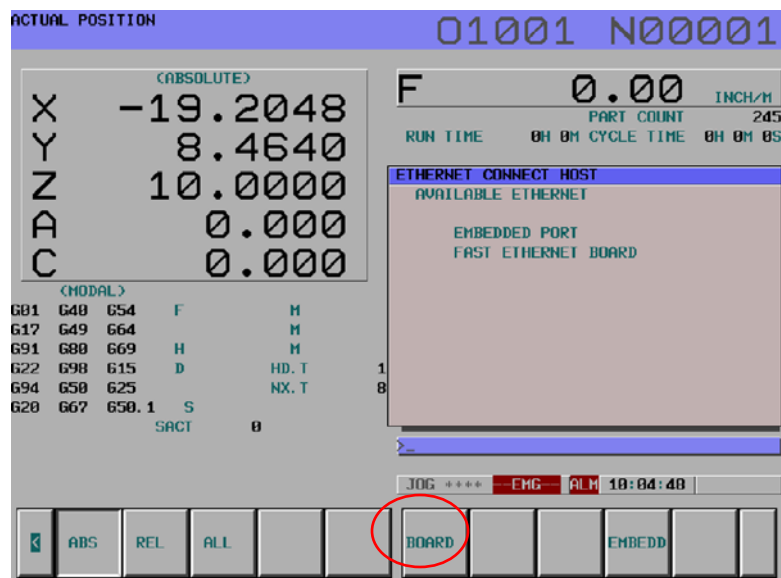


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- Press the Edit mode then the PROGRAM Hard key. Next press the  soft key until you see CONNECT soft key. Press the CONNECT soft key then (OPRT) soft key.



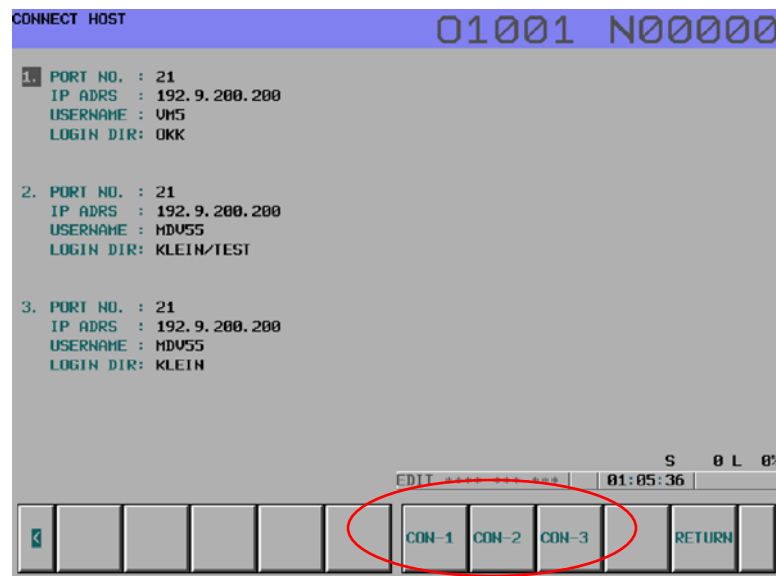
- Next you will have to press the BOARD soft key.



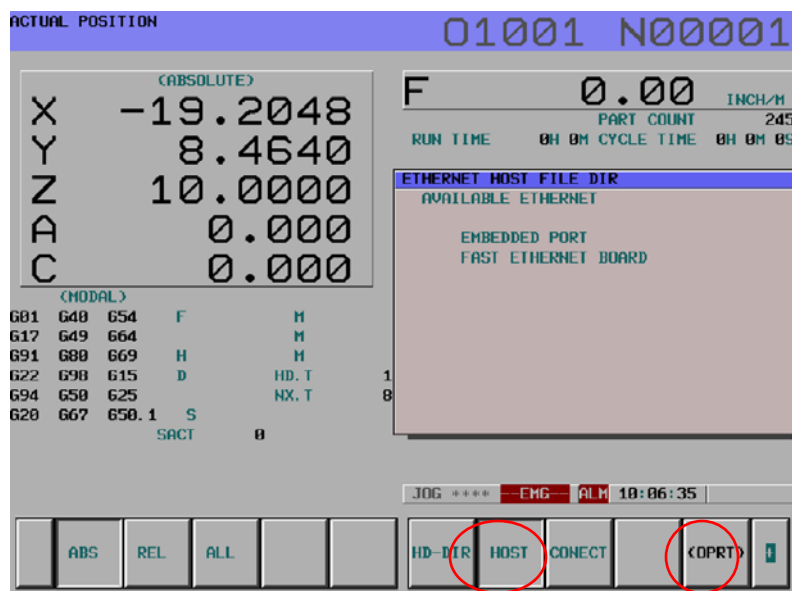


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- The Connect screen will then be displayed and you can choose which connection settings you would like to use by pressing Con-1, Con-2, or Con-3 soft key. The set values for that connection will then be used when you transfer files.




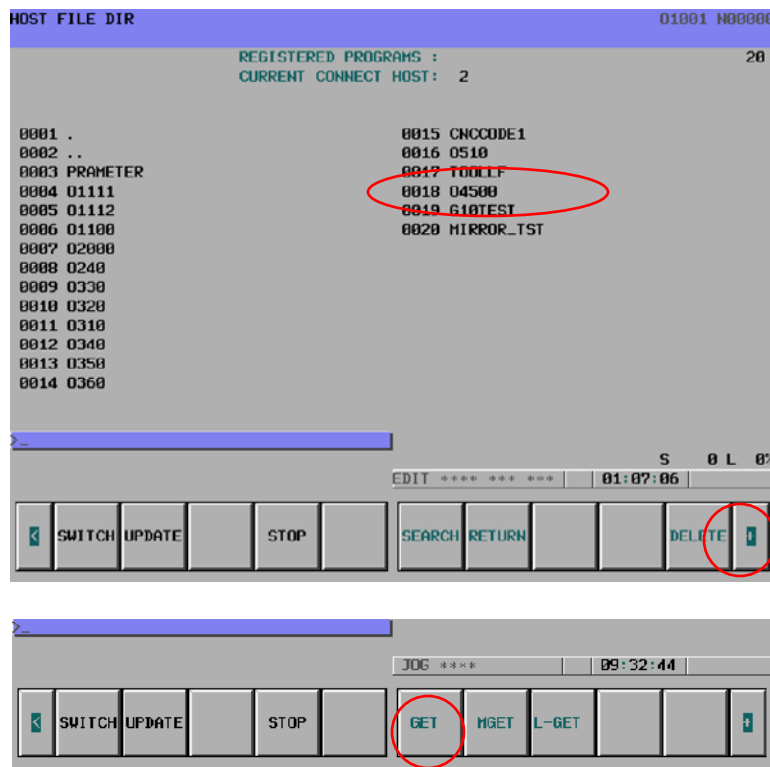
- Press the ◀ soft key then press the HOST soft key and (OPRT) soft key.






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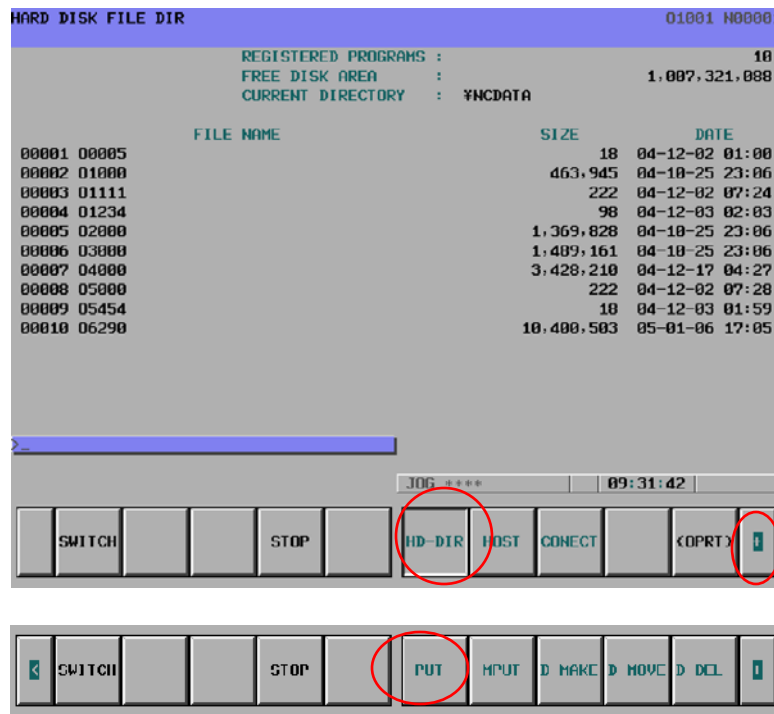
- If you press the  soft key you will then see the GET soft key. If you type (File Number, Program Number to be listed on Data Server) 18,04500 and press the GET soft key, that program will be transferred to the Data Server memory.





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- If you press the HD-DIR soft key you will see a list of the programs currently stored on the Data Server memory. If you press the  soft key then you will see the PUT soft key. If you type (the File number, Program Number) 1,00005 and press PUT soft key the program will be transferred to the PC.



- For more details on the operation of the DATA SERVER and Ethernet function please refer to the FANUC operation manual.
- For details on the operation of the Ethernet function on a Mitsubishi control please refer to the Mitsubishi Operation Manual.
- Extreme care must be taken when connecting the Ethernet cables and while making the settings on your PC. Setting parameter conflicts can cause the entire network to fail.
- The FTP software included with this information package is shareware. There is no charge for the use of this product.