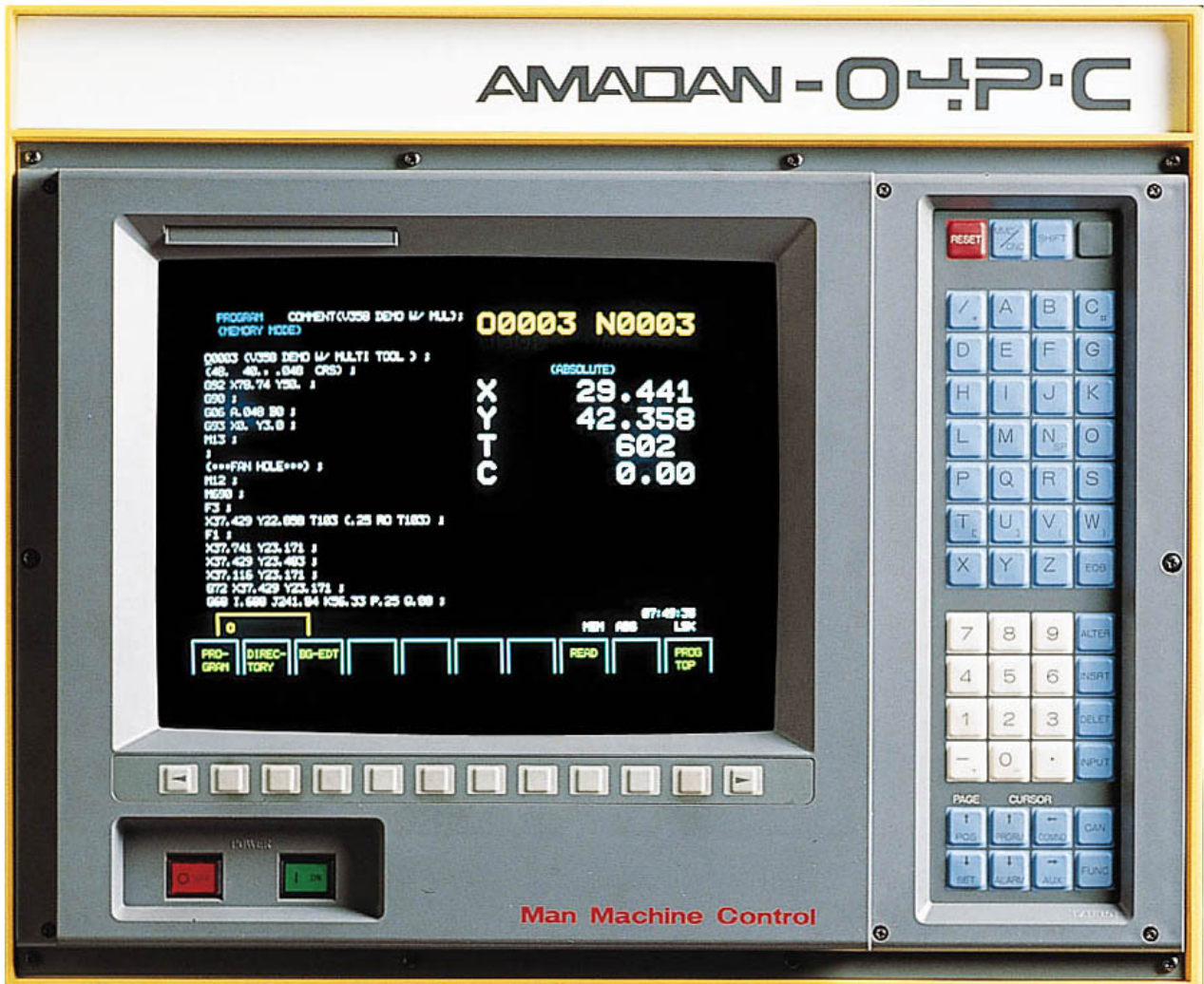


# Fanuc O4P-C Parameter and Macro Program Back-up and Restore Procedure



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(219) 464-9131

Amada Support,  
Rebuilds, Sales And  
Fanuc Control Upgrade

Amada America, Inc.  
7025 Firestone Blvd.  
Buena Park, CA 90621  
Phone: 714-739-2111  
Fax: 714-739-4099  
E-mail: info@amada.com

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## Preface.

This document details the method by which the customer should, at the earliest possible time, backup, to a remote computer the Parameters, and Macro programs that are required for the Fanuc O4P-C to operate correctly.

Parameters and Macro programs are unique to each machine and care must be taken not to interchange Parameters and Macros between machines.

The basic premise of these procedures is that the Parameters and Macro programs should be backed-up for safekeeping and kept readily available to be restored to the Fanuc O4P-C if the information is inadvertently changed or lost.

The backup procedure has three basic steps. Once backed-up these files should be stored in a secure place, possibly in more than one place.

1. Back-up the CNC parameters.  
The CNC parameters consist of the CNC, MMC, and Turret parameters.  
These three sets of parameters are backed-up and saved as a single file.  
Care should be taken that the file name used to store these parameters reflects their unique origin.  
Each machine has its own unique set of parameters and care must be taken not to interchange parameters between machines.
2. Backup the PMC parameters.  
As with the CNC parameters each machine has its own unique set of parameters.  
The file name used to store these parameters should reflect their unique origin.  
Care must be taken not to interchange parameters between machines.
3. Back-up the Macro programs.  
Macro programs are stored in the part program directory, and typically begin with a number "9".  
Depending on a machine's configuration the Fanuc O4P-C control may have any number of Macro programs.  
Care must be taken to back-up all relevant Macro programs.

The parameter restoring procedure has five basic steps

1. Enable the Fanuc O4P-C to allow over-writing of existing parameters.
2. Restore the CNC parameters.  
The CNC parameters consist of the CNC, MMC, and Turret parameters.  
These three sets of parameters are restored as a single file.  
Each machine has its own unique set of parameters and care must be taken not to interchange parameters between machines.
3. Restore the PMC parameters.  
As with the CNC parameters each machine has its own unique set of parameters and care must be taken not to interchange parameters between machines.
4. Enable the Fanuc O4P-C to allow editing of the macro programs.
5. Restore the Macro programs.  
Macro programs are stored in the part program directory and typically begin with a number "9".  
Depending of the configuration of the machine the control may have any number of Macro" programs.  
Care must be taken to restore all relevant Macro programs.

This procedure is written with the following basic assumptions:

1. The software being used to communicate to the Fanuc O4P-C is Amada's AMP1E DNC Data Transfer software.
2. The Fanuc O4P-C communication parameters are properly set and working.

3. The INPUT, and OUTPUT DEVICE used is SIO 3 configured to communicate with the AMP1E software.

Should this not be the case please record the current information in the following space.

INPUT DEVICE	SIO = 1	SIO = 2	SIO = 3
Parameter Number	310	311	312
Value			

OUTPUT DEVICE	SIO = 1	SIO = 2	SIO = 3
Parameter Number	310	311	312
Value			



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## Backing-up the Fanuc O4P-C Parameters.

This procedure:

Backs-up the Fanuc O4P-C CNC and PMC parameters.

Prior to using this procedure Fanuc O4P-C communication parameters must be set correctly.

(See page 28 for details).

Prior to using this procedure the following conditions must be met:

1. A computer with AMP1E software must be connected to the Fanuc O4P-C RS232 port.
2. The correct cable must be used for AMP1E software. (See page 32 for details)
3. Configure the Fanuc O4P-C OUTPUT DEVICE to communicate with AMP1E software.
4. If communications software other than AMP1E is being used, the actions at the Fanuc O4P-C will remain the same but the proper software instructions will need to be determined.

At the computer:

NOTE: This section of the procedure backs-up the CNC parameters.

The CNC parameters consist of the CNC, MMC, and Turret parameters.

What you need to do.	Select DNC Data Transfer.
How to do it.	<b>From the AMP1E main page select "DNC Data Transfer".</b>
What you will see happen.	The display will change to show: DNC Data Transfer.





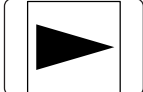







What you need to do.	Go to the O4PC upload page.
How to do it.	<b>From the DNC Data Transfer page select "Upload from O4P-C, O4P-D"</b>
What you will see happen.	The display will change to show: Upload NC Program from O4P-C, O4P-D.

What you need to do.	Enter the file name that you wish to save the CNC, MMC, and Turret parameters as. The file name should reflect that these are CNC parameters and the unique machine that they represent.
How to do it.	<b>The display shows the current path that the file name will be stored under. Simply type an 8-character alphanumeric file name.</b>
What you will see happen.	As you type the filename will be displayed.

What you need to do.	Press the ENTER key.
How to do it.	<b>Press the ENTER key on the keyboard.</b>
What you will see happen.	The display will change to show: "Ready to Upload (Y/N)? : Y

What you need to do.	Press the ENTER Key.
How to do it.	<b>Press the ENTER key on the keyboard.</b>
What you will see happen.	The display will change to show: Type "O" + (program number) and press Punch Key of O4P-C/O4P-D Control.

## At the Fanuc O4P-C

What you need to do.	Go to EDIT mode
How to do it.	Press the  key
What you will see happen.	The green lamp on the EDIT key will illuminate.
What you need to do.	Go to the ALARM/MESSAGE page.
How to do it.	Press the  and  pushbuttons simultaneously.
What you will see happen.	The display will change to show: ALARM/MESSAGE.
What you need to do.	Go to the PARAMETER page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: PARAMETER.
What you need to do.	Go to the PUNCH page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: A softkey labeled PUNCH.
What you need to do.	Enter P-9999 to upload the CNC parameters to the computer.
How to do it.	Press the       keys.
What you will see happen.	The display will change to show: P-9999.
What you need to do.	Initiate the Upload of the CNC parameters.
How to do it.	Press the  softkey
What you will see happen.	The display will change to show: The word PUNCH will begin blinking in the lower right hand corner of the CRT screen. If any problem is encountered with the data transfer, an error will be indicated in this same area.

## At the computer:

What you need to do.	Watch for end of data transfer.
How to do it.	<b>When the data transfer is complete the display will change to indicate -- End of Communication --.</b>
What you will see happen.	The data from the Fanuc O4P-C will be scrolling across the display. When the display indicates -- End of Communication - - continue with the next step.

What you need to do.	Go to the O4PC upload page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: Upload NC Program from O4P-C, O4P-D.


NOTE: This section of the procedure backs-up the PMC parameters.


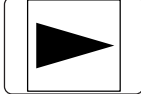







What you need to do.	Erase the current file name and enter the file name that you wish to save the PMC parameters as. The file name should reflect that these are PMC parameters and the unique machine that they represent.
How to do it.	<b>The display shows the current path that the file name will be stored under. Simply type an 8-character alphanumeric file name.</b>
What you will see happen.	As you type the filename will be displayed.

What you need to do.	Press the ENTER key.
How to do it.	<b>Press the ENTER key on the keyboard.</b>
What you will see happen.	The display will change to show: "Ready to Upload (Y/N)? : Y

What you need to do.	Press the ENTER Key.
How to do it.	<b>Press the ENTER key on the keyboard.</b>
What you will see happen.	The display will change to show: Type "O" + (program number) and press Punch Key of O4P-C/O4P-D Control.

## At the Fanuc O4P-C.

What you need to do.	Go to the ALARM/MESSAGE page.
How to do it.	<b>Press the</b>  <b>and</b> pushbuttons simultaneously.
What you will see happen.	The display will change to show: ALARM/MESSAGE.

What you need to do.	Go to the DIAGNOSIS page
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: DIAGNOSIS (I/O).
What you need to do.	Go to the PUNCH page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: A softkey labeled PUNCH.
What you need to do.	Enter P-9999 to upload the PMC parameters to the computer.
How to do it.	Press the       keys.
What you will see happen.	The display will change to show: P-9999.
What you need to do.	Initiate the Upload of the PMC parameters.
How to do it.	Press the  softkey
What you will see happen.	The display will change to show: At this time the word PUNCH will begin blinking in the lower right hand corner of the CRT screen. If any problem is encountered with the data transfer, an error will be indicated in this same area.

## At the computer:

What you need to do.	Watch for end of data transfer.
How to do it.	<b>When the data transfer is complete the display will change to indicate -- End of Communication --.</b>
What you will see happen.	The data from the Fanuc O4P-C will be scrolling across the display. When the display indicates the -- End of Communication -- continue with the next step.
What you need to do.	Go to the O4PC upload page
How to do it.	Press the "ESC" key
What you will see happen.	The display will change to show: Upload NC Program from O4P-C, O4P-D.

What you need to do.	Go to the DNC Data Transfer page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: Download DNC Data Transfer.
What you need to do.	Go to the AMP1E main page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: AMP1E main page.

This concludes the parameter back-up procedure.



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## Backing-up the Fanuc O4P-C Macro Programs.

This procedure:

Backs-up one Fanuc O4P-C Macro program. If the Fanuc O4P-C has more than one Macro program, portions of the procedure will need to be repeated to back-up the additional Macro programs.

**Note:** Not all Fanuc O4P-C controls have Macro programs installed. The number of Macro programs that any Fanuc O4P-C control has installed is dependent on the machine model and additional options or equipment that are attached to the machine.

Prior to using this procedure Fanuc O4P-C communication parameters must be set correctly. (See page 28 for details).

Prior to using this procedure the following conditions must be met:

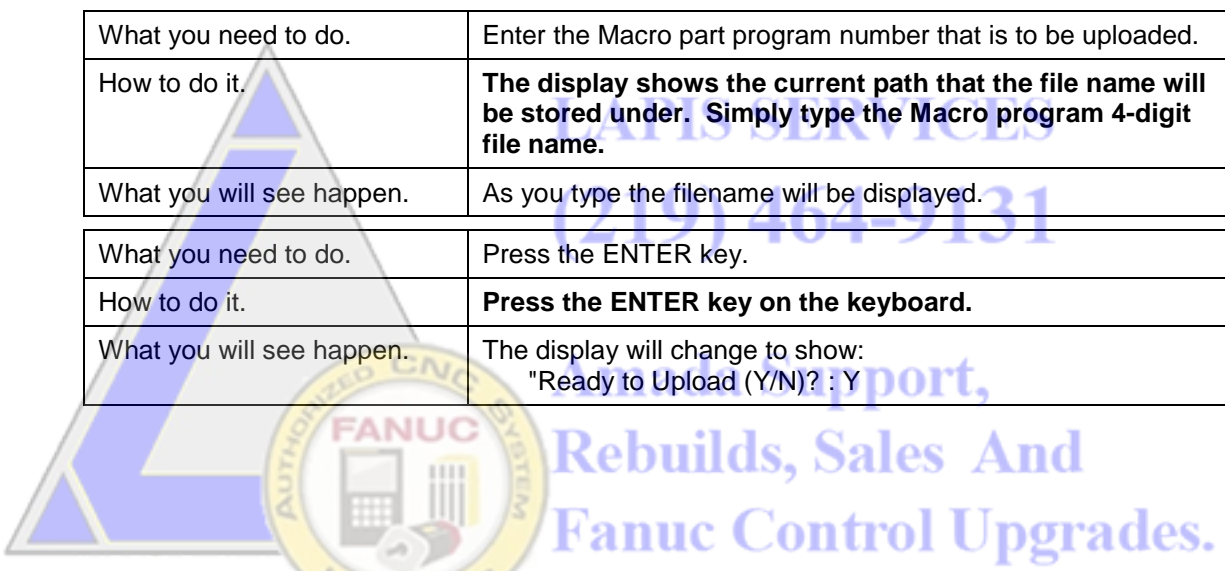
1. A computer with AMP1E software must be connected to the Fanuc O4P-C RS232 port.
2. The correct cable must be used for AMP1E software. (See page 32 for details)
3. The Fanuc O4P-C INPUT and OUTPUT DEVICE must be configured to communicate with AMP1E software.
4. If communications software other than AMP1E is being used, the actions at the Fanuc O4P-C will remain the same but the proper software instructions will need to be determined.

At the computer:

**Note:** This section backs-up one Macro program.

Repeat this portion of the procedure for each Macro program.


What you need to do.	Select DNC Data Transfer.
How to do it.	<b>From the AMP1E main page select "DNC Data Transfer".</b>
What you will see happen.	The display will change to show: DNC Data Transfer.
What you need to do.	Go to the O4PC upload page.
How to do it.	<b>From the DNC Data Transfer page select "Upload from O4P-C, O4P-D"</b>
What you will see happen.	The display will change to show: Upload NC Program from O4P-C, O4P-D.
What you need to do.	Enter the Macro part program number that is to be uploaded.
How to do it.	<b>The display shows the current path that the file name will be stored under. Simply type the Macro program 4-digit file name.</b>
What you will see happen.	As you type the filename will be displayed.
What you need to do.	Press the ENTER key.
How to do it.	<b>Press the ENTER key on the keyboard.</b>
What you will see happen.	The display will change to show: "Ready to Upload (Y/N)? : Y






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What you need to do.	Press the ENTER Key.
How to do it.	<b>Press the ENTER key on the keyboard.</b>
What you will see happen.	The display will change to show: Type "O" + (program number) and press Punch Key of O4P-C/O4P-D Control.


## At the Fanuc O4P-C

What you need to do.	Go to EDIT mode
How to do it.	Press the  key
What you will see happen.	The green lamp on the EDIT key will illuminate.

What you need to do.	Go to the PROGRAM page.
How to do it.	Press the  and  simultaneously
What you will see happen.	The display will change to show: PROGRAM (EDIT MODE)

What you need to do.	Go to the Directory page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: PROGRAM DIRECTORY

What you need to do.	Enter the 4-digit number of the Macro program to be uploaded.
How to do it.	Press the 4 number keys to enter the Macro program number
What you will see happen.	The Macro program number will appear in the lower left corner of the CRT screen.

What you need to do.	Initiate the Upload of the Macro program.
How to do it.	Press the  softkey
What you will see happen.	The display will change to show: At this time the word PUNCH will begin blinking in the lower right hand corner of the CRT screen. If any problem is encountered with the data transfer, an error will be indicated in this same area.

At the computer:

What you need to do.	Watch for end of data transfer.
How to do it.	<b>When the data transfer is complete the display will change to indicate -- End of Communication --.</b>
What you will see happen.	The data from the Fanuc O4P-C will be scrolling across the display. When the display indicates the -- End of Communication -- continue with the next step.

What you need to do.	Go to the O4PC upload page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: Upload NC Program from O4P-C, O4P-D.

Note: If additional Macro programs are to be backed-up, return to the beginning of this section (page 10) and repeat until all Macro programs have been backed-up. Then continue with the next step.

What you need to do.	Go to the DNC Data Transfer page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: Download DNC Data Transfer.

What you need to do.	Go to the AMP1E main page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: AMP1E main page.

This concludes the procedure.



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## Restore the Fanuc 04P-C Parameters to the Fanuc 04P-C

Prior to using this procedure the following conditions must be met:


1. The communications software used is Amada's Amp1e.
2. The computer with the AMP1E software must be connected to the Fanuc 04P-C RS232 port.
1. The correct cable must be used for AMP1E software. (See page 32 for details)
3. Configure the Fanuc 04P-C input device SIO3 to communicate with AMP1E software. (See Page 28 for details)
4. If communications software other than AMP1E is being used, the actions at the Fanuc 04P-C will remain the same but the proper software instructions will need to be determined.


















At the computer:




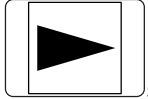

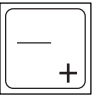


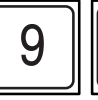


NOTE: This section of the procedure restores the CNC, MMC, and Turret parameters.

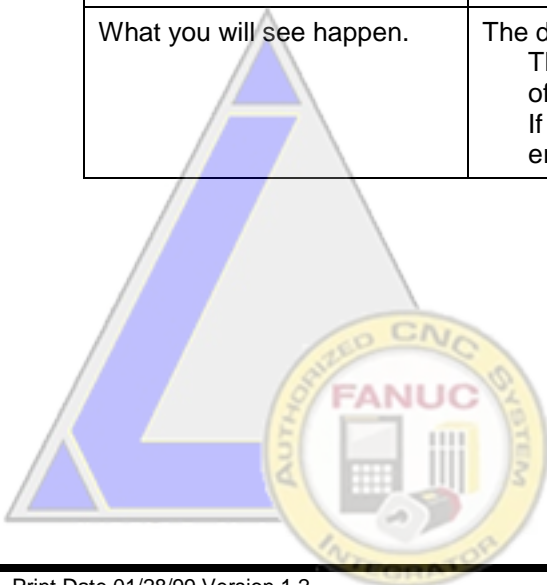
What you need to do.	Select DNC Data Transfer.
How to do it.	<b>From the AMP1E main page select "DNC Data Transfer".</b>
What you will see happen.	The display will change to show: DNC Data Transfer.
What you need to do.	Go to the O4PC Download page
How to do it.	<b>From the DNC Data Transfer page select "Download to O4P-C, O4P-D"</b>
What you will see happen.	The display will change to show: Download NC Program to O4P-C, O4P-D.
What you need to do.	Enter the path and file name of the CNC, MMC, and Turret parameters.
How to do it.	<b>Modify the path if required and type the 8-digit file name for the parameters.</b>
What you will see happen.	As you type the name will be displayed.
What you need to do.	Initiate the download procedure.
How to do it.	<b>Press the F10 [Dnload] key on the keyboard.</b>
What you will see happen.	The display will change to show: "Press READ key on 04P-C/04P-D control".

At the Fanuc 04P-C:

What you need to do.	Turn the EDIT PROTECT off.
How to do it.	Turn the EDIT PROTECT key-switch  to the off position.
What you will see happen.	No visible sign.

What you need to do.	Enter MDI mode.
How to do it.	 Press the  key.
What you will see happen.	The green lamp on the MDI mode key will illuminate.
What you need to do.	Go to the SETTINGS page
How to do it.	 and  Press the  and  keys simultaneously.
What you will see happen.	The display will change to show: SETTING.
What you need to do.	Go to the SETTING (SET DATA) page.
How to do it.	 Press the  softkey.
What you will see happen.	The display will change to show: SETTING (SET DATA)
What you need to do.	Change the display to the PARAMETER SET page.
How to do it.	 Press the  key
What you will see happen.	The display will change to show PARAMETER SET.
What you need to do.	Change the PARAMETER WRITE ENABLE value to 1.
How to do it.	  and  Press the   and  keys.
What you will see happen.	The display will change to show: PARAMETER ENABLE = (1). ALARM/MESSAGE. An ERROR NO. 100 is displayed.
What you need to do.	Put the Fanuc O4P-C in an EMERGENCY STOP condition.
How to do it.	 Press the  button
What you will see happen.	The NC READY lamp will turn off. The STOP lamp will illuminate.

What you need to do.	Go to the ALARM/MESSAGE page.
How to do it.	  <p>Press the <b>FUNC</b> and <b>ALARM</b> pushbuttons simultaneously.</p>
What you will see happen.	The display will change to show: ALARM/MESSAGE.
What you need to do.	Go to the PARAMETER page.
How to do it.	 <p>Press the <b>PARAMETER</b> softkey.</p>
What you will see happen.	The display will change to show: PARAMETER.
What you need to do.	Go to the READ page.
How to do it.	 <p>Press the <b>Play</b> softkey.</p>
What you will see happen.	The display will change to show A softkey labeled READ.
What you need to do.	Enter P-9999 to download the parameters to the computer.
How to do it.	<p>Press the</p>       <p>keys.</p>
What you will see happen.	The display will change to show P-9999.
What you need to do.	Initiate the download of the parameters.
How to do it.	 <p>Press the <b>READ</b> softkey</p>
What you will see happen.	The display will change to show The word READ will begin blinking in the lower right hand of the CRT screen. If any problem is encountered with the data transfer, an error will be indicated in this same area.



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## At the computer

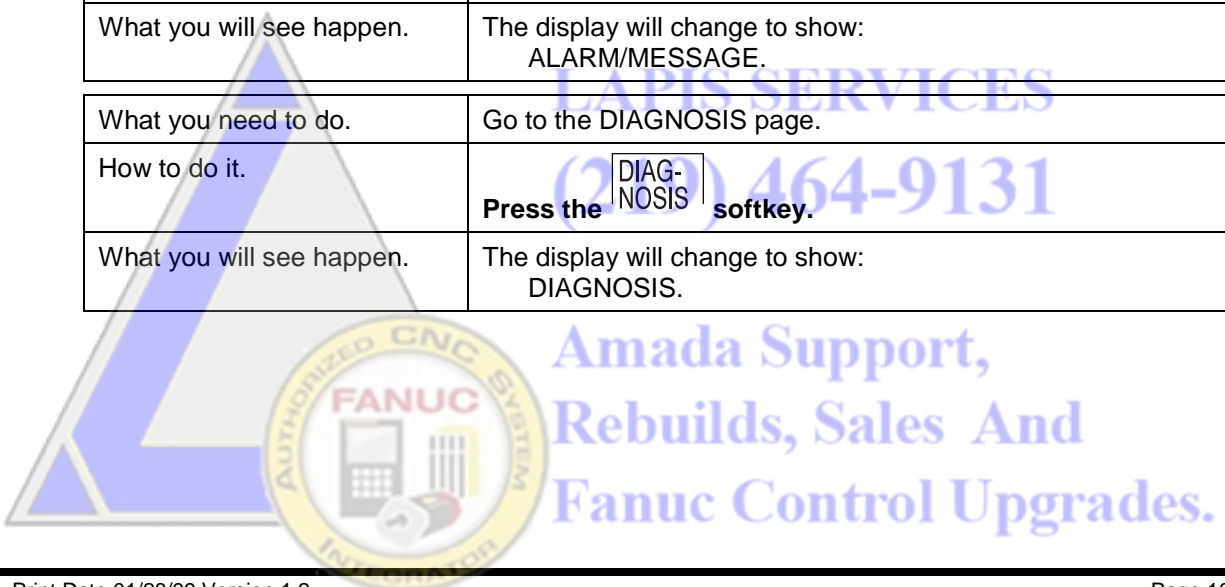
What you need to do.	Watch for end of data transfer.
How to do it.	<b>When the data transfer is complete the display will change to indicate -- End of Communication --.</b>
What you will see happen.	The data from the Fanuc O4P-C will be scrolling across the display. When the display indicates -- End of Communication - - continue with the next step.
What you need to do.	Return to the Download NC Program to O4P-C, O4P-D page.
How to do it.	<b>Press the ENTER key.</b>
What you will see happen.	The display will change to show Download NC Program to O4P-C, O4P-D

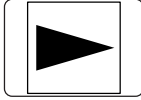







NOTE: This section of the procedure restores the PMC parameters.

What you need to do.	Erase the current file name and enter the path and file name of the PMC parameters.
How to do it.	<b>Modify the path if required and type the 8-digit file name for the PMC parameters.</b>
What you will see happen.	As you type the name will be displayed.
What you need to do.	Initiate the download procedure.
How to do it.	<b>Press the F10 [Dnload] key on the keyboard.</b>
What you will see happen.	The display will change to show Press READ key on O4P-C/O4P-D control.

## At the Fanuc O4P-C:

What you need to do.	Go to the ALARM/MESSAGE page.
How to do it.	 <p><b>Press the  and  pushbuttons simultaneously.</b></p>
What you will see happen.	The display will change to show: ALARM/MESSAGE.
What you need to do.	Go to the DIAGNOSIS page.
How to do it.	 <p><b>Press the  softkey.</b></p>
What you will see happen.	The display will change to show: DIAGNOSIS.












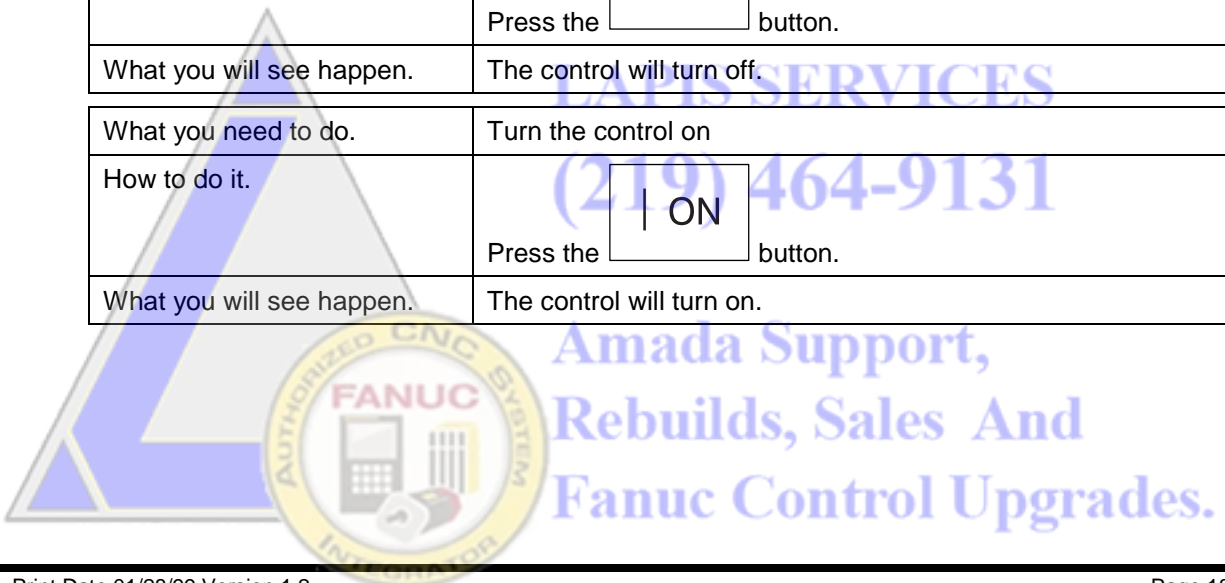
What you need to do.	Go to the READ page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: A softkey labeled READ.
What you need to do.	Enter P-9999 to download the parameters to the computer.
How to do it.	Press the       keys.
What you will see happen.	The display will change to show P-9999.
What you need to do.	Initiate the download of the parameters.
How to do it.	Press the  softkey
What you will see happen.	The display will change to show The word READ will begin blinking in the lower right hand of the CRT screen. If any problem is encountered with the data transfer, an error will be indicated in this same area.



### At the computer

What you need to do.	Watch for end of data transfer.
How to do it.	<b>When the data transfer is complete the display will change to indicate -- End of Communication --.</b>
What you will see happen.	The data from the Fanuc O4P-C will be scrolling across the display. When the display indicates -- End of Communication - - continue with the next step.
What you need to do.	Go to the O4PC download page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: Download NC Program to O4P-C, O4P-D.
What you need to do.	Go to the DNC Data Transfer page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: Download "DNC Data Transfer.
What you need to do.	Go to the AMP1E main page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: AMP1E main page.

## At the Fanuc O4P-C:

What you need to do.	Change the display to the SETTING (SET DATA) page.
How to do it.	Press the  and  pushbuttons simultaneously.
What you will see happen.	The display will change to show: SETTING (SET DATA).
What you need to do.	Change the display to the PARAMETER SET page.
How to do it.	If the display does not show PARAMETER SET. Press the  key
What you will see happen.	The display will change to show: PARAMETER SET.
What you need to do.	Change the ENABLE parameter value to 0.
How to do it.	Press the   , and  keys.
What you will see happen.	The display will change to show PARAMETER ENABLE = (0).
What you need to do.	Clear the ERROR 100 display.
How to do it.	Press the  key.
What you will see happen.	No visible display.
What you need to do.	Turn the control off.
How to do it.	Press the  button.
What you will see happen.	The control will turn off.
What you need to do.	Turn the control on
How to do it.	Press the  button.
What you will see happen.	The control will turn on.



What you need to do.	Release the EMERGENCY STOP error.
How to do it.	<p>EMERGENCY STOP</p>  <p>Rotate the  to release the switch</p>
What you will see happen.	The display will change to show: EMERGENCY STOP error is removed.

This concludes the parameter restore procedure.



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## Restoring the Fanuc 04P-C Macro Programs.

This procedure:

Restores one Fanuc 04P-C Macro program. If the Fanuc 04P-C has more than one Macro program, portions of the procedure will need to be repeated to restore the additional Macro programs.

**Note:** Not all Fanuc 04P-C controls require Macro programs. The number of Macro programs that a Fanuc 04P-C control has installed is dependent on the machine model and additional options or equipment that are attached to the machine.





Prior to using this procedure Fanuc 04P-C communication parameters must be set correctly. (See page 28 for details).

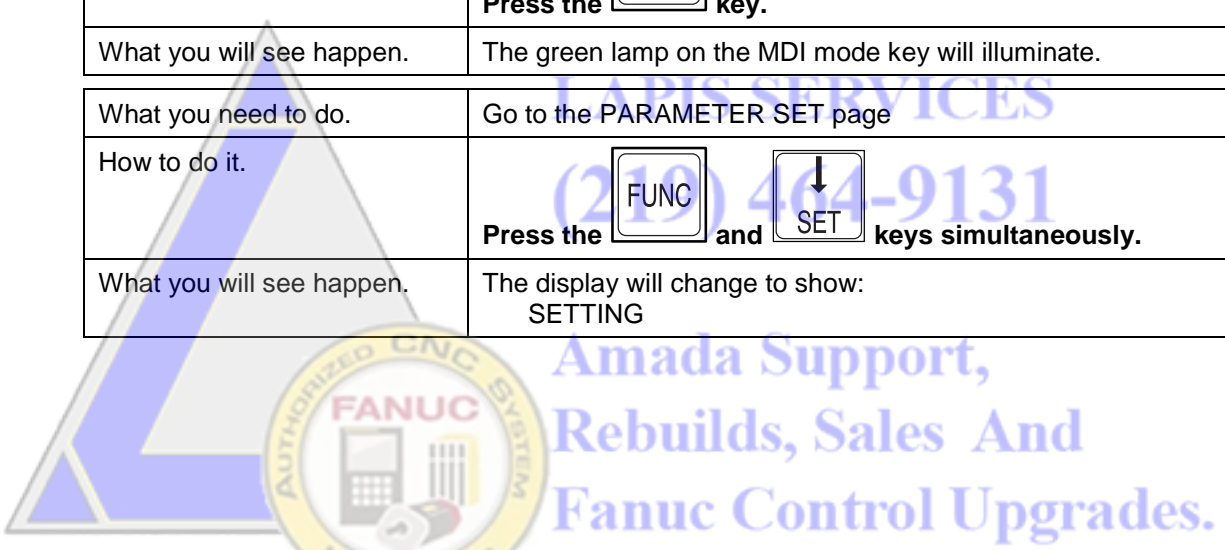
Prior to using this procedure the following conditions must be met:












1. The communications software used is Amada's Amp1e.
2. A computer with AMP1E software must be connected to the Fanuc 04P-C RS232 port.
3. The correct cable must be used for AMP1E software. (See page 32 for details)
4. The Fanuc 04P-C INPUT and OUTPUT DEVICE must be configured to communicate with AMP1E software.
5. If communications software other than AMP1E is being used, the actions at the Fanuc 04P-C will remain the same but the proper software instructions will need to be determined.

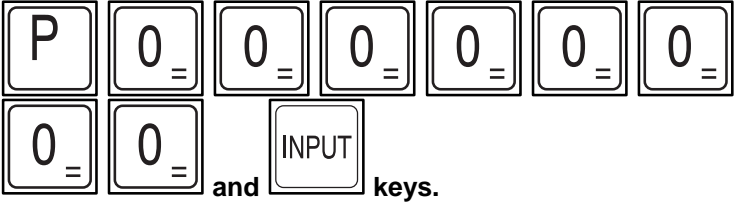
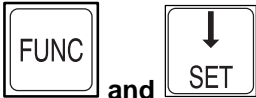






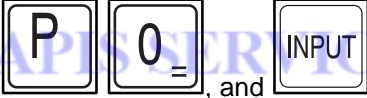





At the Fanuc 04P-C control:

**Note:** This section configures the Fanuc 04P-C to allow the Macro programs to be restored.

What you need to do.	Turn the EDIT PROTECT off.
How to do it.	<p>Turn the <b>EDIT PROTECT key-switch</b>  <b>to the off position.</b></p>
What you will see happen.	No visible sign.
What you need to do.	Enter MDI mode.
How to do it.	<p>Press the  <b>key.</b></p>
What you will see happen.	The green lamp on the MDI mode key will illuminate.
What you need to do.	Go to the PARAMETER SET page
How to do it.	<p>Press the  and  <b>keys simultaneously.</b></p>
What you will see happen.	The display will change to show: SETTING



What you need to do.	Go to the SETTING (SET DATA) page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: SETTING (SET DATA)
What you need to do.	Go to the SETTING (SET DATA) PARAMETER SET page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: SETTING (SET DATA) PARAMETER SET
What you need to do.	Change the PARAMETER WRITE ENABLE value to 1.
How to do it.	Press the   and  keys.
What you will see happen.	The display will change to show: PARAMETER ENABLE = (1). The display changes to ALARM/MESSAGES page. An ERROR NO. 100 is displayed.
What you need to do.	Go to the PARAMETER display page.
How to do it.	Press the  softkey
What you will see happen.	The display will change to show: PARAMETER
What you need to do.	Move the cursor to parameter 318.
How to do it.	Press the     and  keys.
What you will see happen.	The display will change to show: The cursor on parameter number 318.
What you need to do.	Write down the current value of parameter 318.
How to do it.	<b>Write down the current value of parameter 318 in this space.</b>
What you will see happen.	No visible sign.









What you need to do.	Change the value of parameter 318 to 00000000.
How to do it.	<p><b>Press the</b></p>  <p><b>keys.</b></p>
What you will see happen.	The display will change to show: Parameter 318 = 00000000.
What you need to do.	Go to the PARAMETER SET page
How to do it.	 <p><b>Press the</b>  <b>and</b>  <b>keys simultaneously.</b></p>
What you will see happen.	The display will change to show: SETTING
What you need to do.	Go to the SETTING (SET DATA) page.
How to do it.	 <p><b>Press the</b>  <b>softkey.</b></p>
What you will see happen.	The display will change to show: SETTING (SET DATA)
What you need to do.	Go to the SETTING (SET DATA) PARAMETER SET page.
How to do it.	 <p>Press the  softkey.</p>
What you will see happen.	The display will change to show: SETTING (SET DATA) PARAMETER SET
What you need to do.	Change the ENABLE parameter value to 0.
How to do it.	 <p>Press the , , and  keys.</p>
What you will see happen.	The display will change to show: PARAMETER ENABLE = (0).
What you need to do.	Clear the ERROR NO. 100 display.
How to do it.	 <p>Press the  key</p>
What you will see happen.	The ERROR NO. 100 alarm is removed.

At the computer:

NOTE: This section of the procedure restores one Macro program.

What you need to do.	Select DNC Data Transfer.
How to do it.	<b>From the AMP1E main page select "DNC Data Transfer".</b>
What you will see happen.	The display will change to show: DNC Data Transfer.
What you need to do.	Go to the O4PC Download page
How to do it.	<b>From the DNC Data Transfer page select "Download to O4P-C, O4P-D"</b>
What you will see happen.	The display will change to show: Download NC Program to O4P-C, O4P-D.
What you need to do.	Enter the path and file name of the Macro program.
How to do it.	<b>Modify the path if required and type the 4-digit file name for the Macro program.</b>
What you will see happen.	As you type the name will be displayed.
What you need to do.	Initiate the download procedure.
How to do it.	<b>Press the F10 [Dnload] key on the keyboard.</b>
What you will see happen.	The display will change to show: "Press READ key on O4P-C/O4P-D control".

At the Fanuc O4P-C.

What you need to do.	Go to EDIT mode
How to do it.	 <b>Press the</b>  <b>key</b>
What you will see happen.	The green lamp on the EDIT key will illuminate.
What you need to do.	Go to the PROGRAM page.
How to do it.	 and  Press the  and  simultaneously
What you will see happen.	The display will change to show: PROGRAM (EDIT MODE)
What you need to do.	Go to the Directory page.
How to do it.	 <b>Press the</b>  <b>softkey.</b>
What you will see happen.	The display will change to show: PROGRAM DIRECTORY

What you need to do.	Enter the 4-digit number of the Macro program to be uploaded.
How to do it.	<b>Press the 4 number keys to enter the Macro program number</b>
What you will see happen.	The Macro program number will appear in the lower left corner of the CRT screen.

What you need to do.	Initiate the download of the Macro program.	
How to do it.	Press the <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>READ</td></tr></table> softkey	READ
READ		
What you will see happen.	The display will change to show: At this time the word READ will begin blinking in the lower right hand corner of the CRT screen. If any problem is encountered with the data transfer, an error will be indicated in this same area.	

At the computer.

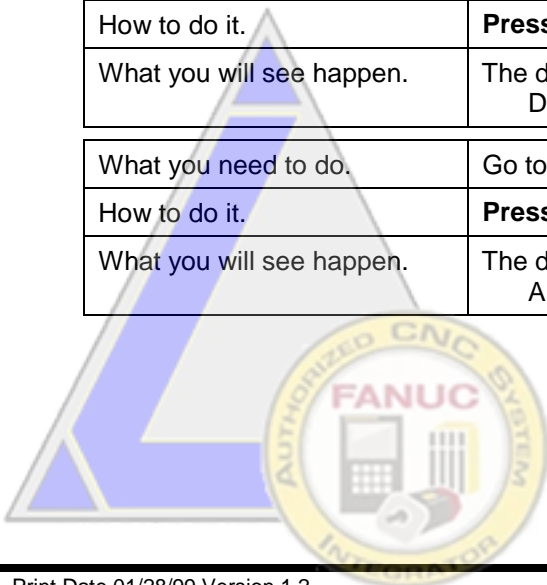
What you need to do.	Watch for end of data transfer.
How to do it.	<b>When the data transfer is complete the display will change to indicate -- End of Communication --.</b>
What you will see happen.	The data from the Fanuc O4P-C will be scrolling across the display. When the display indicates the -- End of Communication -- continue with the next step.

What you need to do.	Go to the O4PC upload page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: download NC Program from O4P-C, O4P-D.

Note: If additional Macro programs are to be restored, return to the beginning of this section (page 23) and repeat until all Macro programs have been restored. Then continue with the next step.

What you need to do.	Go to the DNC Data Transfer page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: Download DNC Data Transfer.










What you need to do.	Go to the AMP1E main page
How to do it.	<b>Press the "ESC" key</b>
What you will see happen.	The display will change to show: AMP1E main page.



















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## At the Fanuc O4P-C

Note: This section deals with returning the Fanuc O4P-C parameters to their original state.

What you need to do.	Enter MDI mode.
How to do it.	Press the  key.
What you will see happen.	The green lamp on the MDI mode key will illuminate.
What you need to do.	Go to the PARAMETER SET page
How to do it.	Press the  and  keys simultaneously.
What you will see happen.	The display will change to show: SETTING
What you need to do.	Go to the SETTING (SET DATA) page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: SETTING (SET DATA)
What you need to do.	Go to the SETTING (SET DATA) PARAMETER SET page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: SETTING (SET DATA) PARAMETER SET
What you need to do.	Change the PARAMETER WRITE ENABLE value to 1.
How to do it.	Press the   and  keys.
What you will see happen.	The display will change to show: PARAMETER ENABLE = (1). The display changes to ALARM/MESSAGES page. An ERROR NO. 100 is displayed.
What you need to do.	Go to the PARAMETER display page.
How to do it.	Press the  softkey
What you will see happen.	The display will change to show: PARAMETER

What you need to do.	Move the cursor to parameter 318. Or the correct value for your software.
How to do it.	<b>Press the</b>     <b>and</b>  <b>keys.</b>
What you will see happen.	The display will change to show: The cursor on parameter number 318.
What you need to do.	Reset parameter 318 to its original value
How to do it.	<b>Press the</b>  <b>the original values as recorded on page</b>  <b>21 and</b>  <b>keys</b>
What you will see happen.	The display will change to show: parameter 318 has returned to its original value.
What you need to do.	Go to the PARAMETER SET page
How to do it.	<b>Press the</b>  <b>and</b>  <b>keys simultaneously.</b>
What you will see happen.	The display will change to show: SETTING
What you need to do.	Go to the SETTING (SET DATA) page.
How to do it.	<b>Press the</b>  <b>softkey.</b>
What you will see happen.	The display will change to show: SETTING (SET DATA)
What you need to do.	Go to the SETTING (SET DATA) PARAMETER SET page.
How to do it.	<b>Press the</b>  <b>softkey.</b>
What you will see happen.	The display will change to show: SETTING (SET DATA) PARAMETER SET
What you need to do.	Change the ENABLE parameter value to 0.
How to do it.	<b>Press the</b>   <b>, and</b>  <b>keys.</b>
What you will see happen.	The display will change to show: PARAMETER ENABLE = (0).

What you need to do.	Clear the ERROR 100 display.
How to do it.	Press the  key
What you will see happen.	The ERROR 100 alarm is removed.

This concludes the procedure.



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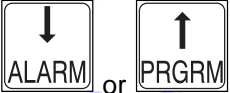
## Fanuc 04P-C Communication Parameters




Prior to attempting to backup or restore the Fanuc 04P-C parameters and Macro programs the communication parameters must be set correctly.


This procedure:




1. Sets the communication parameters to communicate with Amada's AMP1E software.
2. Sets the communication parameters to the default factory values.
3. If software other than Amada's AMP1E software is being used, configure the parameters accordingly.


At the Fanuc 04P-C control:




What you need to do.	Turn EDIT PROTECT off.
How to do it.	 <b>Turn the EDIT PROTECT key-switch to the OFF position.</b>
What you will see happen.	No visible sign.
What you need to do.	Enter MDI mode.
How to do it.	 <b>Press the MDI key.</b>
What you will see happen.	The green lamp on the MDI mode key will illuminate.
What you need to do.	Go to the PARAMETER SET page
How to do it.	 <b>Press the FUNC and SET keys simultaneously.</b>
What you will see happen.	The display will change to show: SETTING (?) actual display is dependent on prior use.
What you need to do.	Go to the SETTING (SET DATA) page.
How to do it.	 <b>Press the SET DATA softkey.</b>
What you will see happen.	The display will change to show: SETTING (SET DATA)
What you need to do.	Move the cursor to INPUT DEVICE setting.
How to do it.	 Press the ALARM or PRGRM key until the cursor is at INPUT DEVICE.
What you will see happen.	The cursor will move one space each time the key is pressed


What you need to do.	Change the INPUT DEVICE to 3. Or the correct value for your software.
How to do it.	Press the   and  keys.
What you will see happen.	The INPUT DEVICE display will change to show: INPUT DEVICE = (3).






What you need to do.	Move the cursor to the OUTPUT DEVICE setting
How to do it.	Press the  key to move the cursor to the OUTPUT DEVICE setting.
What you will see happen.	The cursor will move one space every time the key is pressed.

What you need to do.	Change the OUTPUT DEVICE to 3. Or the correct value for your software.
How to do it.	Press the   , and  keys.
What you will see happen.	The OUTPUT DEVICE display will change to show: OUTPUT DEVICE = (3).











What you need to do.	Go to the SETTING (SET DATA) PARAMETER SET page.
How to do it.	Press the  softkey.
What you will see happen.	The display will change to show: SETTING (SET DATA) PARAMETER SET = (0) 0: DISABLE 1: ENABLE



What you need to do.	Change the PARAMETER WRITE ENABLE value to 1.
How to do it.	Press the   , and  keys.
What you will see happen.	The display will change to show: PARAMETER ENABLE = (1). The display changes to ALARM/MESSAGES page. An ERROR NO. 100 is displayed.


What you need to do.	Go to the PARAMETER display page.
How to do it.	Press the  softkey
What you will see happen.	The display will change to show: PARAMETER

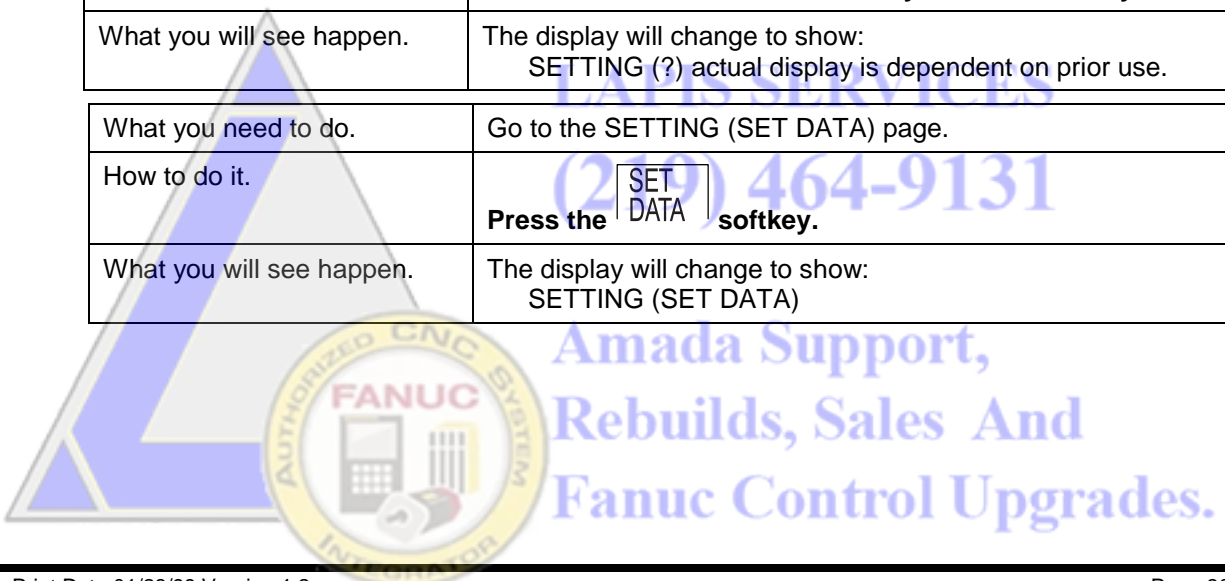
What you need to do.	Move the cursor to parameter 312. Or the correct value for your software.
How to do it.	<b>Press the</b>     <b>and</b>  <b>keys.</b>
What you will see happen.	The display will change to show: The cursor on parameter number 312.






What you need to do.	Record the current value of parameter 312.
How to do it.	<b>Record the current value of parameter 312. In this space</b>  <b>It may be necessary to reset parameter 312 to the original value if the normal communication values are not those required by the AMP1E software.</b>

What you need to do.	Change the value of parameter 312 to 00011010. Or the correct value for your software.
How to do it.	<b>Press the</b>          <b>and</b>  <b>keys.</b>
What you will see happen.	The display will change to show: Parameter 312 = 00011010.

What you need to do.	Go to the PARAMETER SET page
How to do it.	<b>Press the</b>  <b>and</b>  <b>keys simultaneously.</b>
What you will see happen.	The display will change to show: SETTING (?) actual display is dependent on prior use.

What you need to do.	Go to the SETTING (SET DATA) page.
How to do it.	<b>Press the</b>  <b>softkey.</b>
What you will see happen.	The display will change to show: SETTING (SET DATA)



What you need to do.	Change the display to the PARAMETER SET page.
How to do it.	Press the  key.
What you will see happen.	The display will change to show: SETTING (SET DATA) PARAMETER SET = (0).
What you need to do.	Change the ENABLE parameter value to 0.
How to do it.	Press the  ,  , and  keys.
What you will see happen.	The display will change to show: PARAMETER ENABLE = (0).
What you need to do.	Clear the ERROR 100 display.
How to do it.	Press the  key
What you will see happen.	The ERROR 100 alarm is removed.

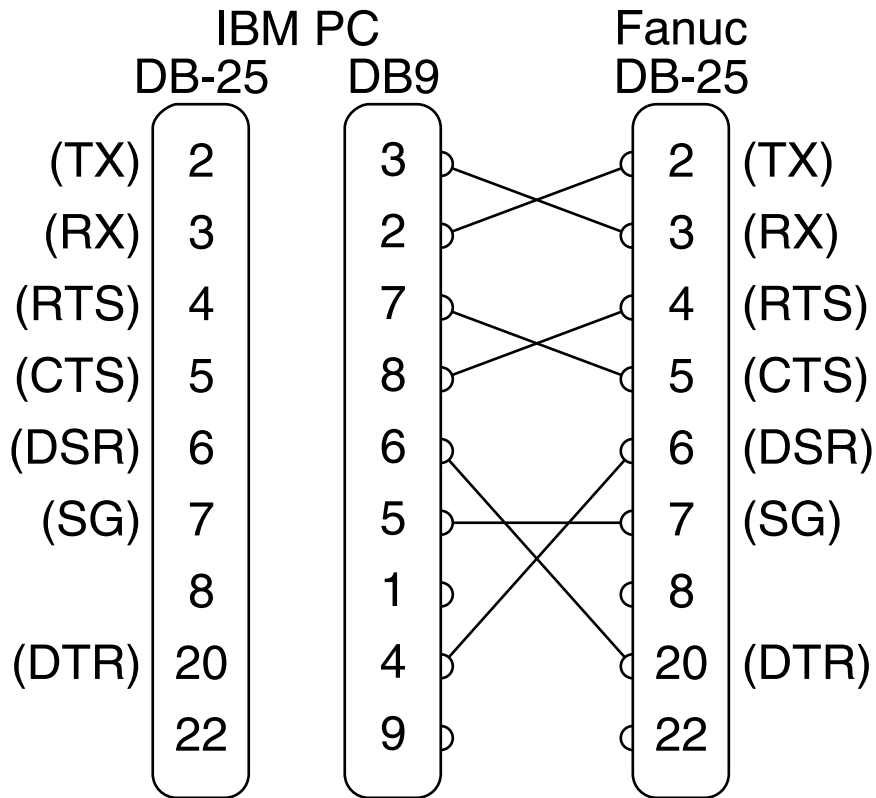
This concludes the procedure.



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## AMP1E Cable Configuration



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