

# Automation

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*"Sales, Service and Support for Modern Manufacturing"*

### Memory Backup and Restoration on New Berlin Machines

**Delphi- Athens, AL**

#### Backup

Verify the following parameters:

P0	0000 1010	(Establishes Settings page parameters)
P100	0000 0010	
P101	1000 0001	(Two stop bits with line feed)
P102	0	
P103	10	(Baud rate of 4800)
P3202.4 =	0	(Disable 9000 macro protect)
P9900	4	
P9901	0	
P9920	0110 0100	
P9921	1100 0010	

K17.1 = 1 (Keep relay used to enable I/O screen on PMC side)

Prepare the computer to receive a program. Remember that the device doing the receiving must be ready first. Set the computer to use 4800 baud, Even parity, 7 data bits, 2 stop bits.

Setup the computer to receive the .PAR parameter file.

Edit Mode  
Settings hard key  
PARAM soft key  
Right chapter key to display PUNCH  
EXEC soft key.

The machine will display output in the lower right corner while sending the file.  
Never trust the backup until you examine the file for bad data.

Setup the computer to receive the .PGM program file.

Edit Mode  
Program hard key  
OPRT soft key  
Right chapter key to display PUNCH  
Type in O-9999 (Note that this is the letter O not the number 0)  
EXEC soft key

This will punch out all of the programs as one file. Verify that the O9000 programs were received. Note that the first file in the program directory will now become the active file. Change this to the correct file for machine operation.

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Setup the computer to receive the .MAC Macro file.

Edit mode  
Settings hard key  
Right chapter key to display MACRO  
Right chapter key to display OPRT  
Right chapter key to display PUNCH  
EXEC soft key

Setup the computer to receive the .PMC PMC parameter file.

System hard key  
PMC soft key  
I/O soft key  
Verify the SPEED settings are set to 4800, N, 7, 2  
Left chapter key to display settings. Set to:  
    Channel = 1  
    Device = Others  
    Data Kind = Param  
    Function = Write  
EXEC soft key

Setup the computer to receive the .ALL ladder file.

Left chapter key to display settings. Set to:  
    Channel = 1  
    Device = Others  
    Data Kind = ALL  
    Function = Write  
EXEC soft key

I recommend that parameter P3202.4 be set back to a 1 to prevent someone from accidentally erasing the macro programs. Also, set keep relay K17.1 to a 0 to prevent access to the PMC editing functions.

**Once again, the backup is useless if the data is corrupted. Verify you have a good backup by looking at the files.**

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### Restoring the Memory

In the event of a memory loss due to a 900 series alarm or the replacement of the CNC use this procedure.

With the power off, pull the option 3 board from the motherboard. Clear the memory by powering up the CNC while holding the RESET & DELETE keys. A series of alarms will be displayed. Power the machine down and reinstall the option 3 board. Power up and ignore the alarms.

Set the following parameters:

P0	0000 1010	(Establishes Settings page parameters)
P100	0000 0010	
P101	1000 0001	(Two stop bits with line feed)
P102	0	
P103	10	(Baud rate of 4800)
P3202.4 =	0	(Disable 9000 macro protect)
P9900	4	
P9901	0	
P9920	0110 0100	
P9921	1100 0010	

K17.1 = 1 (Keep relay used to enable I/O screen on PMC side)

Power the machine down then back up.

(Remember that the device doing the receiving must be ready first. Set the computer to use 4800 baud, Even parity, 7 data bits, 2 stop bits.)

### Restore CNC Parameters

Edit Mode

Settings hard key

PARAM soft key

Right chapter key to display READ

EXEC soft key.

The machine will display LSK in the lower right corner. Start sending the .PAR file from the PC. The display will change to INPUT while the file is being received. After the file is loaded the alarm screen will appear again. Ignore it.

Power the machine down then up again.

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### Restore the PMC Parameters

System hard key

PMC soft key

I/O soft key

Verify the SPEED settings are set to 4800, N, 7, 2

Left chapter key to display settings. Set to:

Channel = 1

Device = Others

Data Kind = leave blank

Function = READ

EXEC soft key

Start sending the .PMC file from the PC. You will see the numbers on the CNC start to count up.

### Restore the PMC Ladder Logic

From the PMC menu, check to see if the ladder logic will display. If so, there is no need to restore the .ALL file. If not, use this procedure.

I/O Soft Key

Set the following:

Channel = 1

Device = Others

Data Kind = leave blank

Function = READ

EXEC soft key

Start sending the .ALL file from the PC. You will see the numbers on the CNC start to count up. This file will take around 30 minutes to load. Once the ladder logic is loaded verify that the ladder is in run mode. Look at the upper right corner of the screen. If it says run you're good. If not, left chapter over to the RUN soft key and press it.

Once these steps are completed power the machine down. Power it up holding the P and CANCEL hard keys in. This will tell the machine to ignore soft OT alarms. Set PWE = 0 if it is still active. Use caution when doing the first reference return. The machine has been told to ignore soft over travel values.

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### Restore the CNC Programs

Verify that parameter P3202.4 = 0  
Edit Mode  
Program hard key  
OPRT soft key  
Right chapter key to display READ  
EXEC soft key

Start sending the .PGM file from the PC

This will read in all of the programs. You will see the program numbers update on the screen as the files are read in. Verify that the O9000 programs were received.

### Restore the Macro Variables

The macro variables must be read in as a file then executed.

Edit Mode  
Program hard key  
OPRT soft key  
Right chapter key to display READ  
Type in O666 (or any other program number not in use)  
EXEC soft key

Start sending the .PGM file from the PC

Once the file is received place the machine into auto mode and run this file. It will update all of the macro variables. This is necessary before the tool offsets can be set.

### Setting the Tool Offsets

After this is completed run the normal machine program in single block mode. The program should have a macro call (O9000) that will go through and set all of the proper tool offsets. Verify this by observing the custom offset page. Note that this page will not display properly until the macro program has loaded the offset values.

I recommend that parameter P3202.4 be set back to a 1 to prevent someone from accidentally erasing the macro programs. Also, set keep relay K17.1 to a 0 to prevent access to the PMC editing functions.

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