MEMEX YASNAC i80 MEMORY UPGRADE INSTALLATION MANUAL

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CHAPTER 1: INTRODUCTION

The Yasnac i80 CNC has two distinct part program memory areas – a base memory or about 64k on the FC200 "SMON" board and an extended one on the FC120 "FILE" board (up to 1984k) for a total of 2 Megabytes.

All system data including Tool Offsets and Parameters are stored in the FC200 board and up to 160 meters (64k) of part program storage is also there.

Additional memory sizes from 320 meters (128k) to 5120 meters (2 Megs) are enabled in the Memex FC120 board. The Memex FC120 File storage board is plugged into the control's Masterboard at the position labeled "FC120".

The available Yasnac i80 memory options are as follows:

BOARD	MEMORY	OPTION
FC200	80M or 32k	
FC200	160M or 64k	
FC120-1	320M or 128k	OPM06 = xxxx 0011= 3
FC120-2	640M or 256k	OPM06 = xxxx 0100= 4
FC120-3	1280M or 512k	OPM06 = xxxx 0101= 5
FC120-4	2560M or 1 Megabyte	OPM06 = xxxx 0110= 6
FC120-5	**5120M or 2 Megabytes**	**OPM06 = xxxx 0111= 7**

A Yasnac i80 Version A Controller

CHAPTER 2: INSTALLATION OVERVIEW

Before starting the installation, power on the control and verify that the machine tool is in good working order. If the control has a system error during or after your installation, you will appreciate a backup.

The Memex i80 FC120 board contains only part programs, but they can also contain macro programs for tool changers that are protected from download. An install will erase all part programs during the REGEN (regenerate) process, so a complete backup of macro files is necessary. That said, a full backup is recommended on a regular basis anyway.

Please note that the Memex FC120 is not dependent upon the control's battery system as it comes equipped with the Perma-Charge Battery Backup feature.

Important! | If you are upgrading an existing Yasnac FC120 memory board with a larger Memex version, please note that the original board once removed from the control, will only retain its Part Program data for 20 minutes or so. For this reason, it is essential that the Part Programs be backed up properly on the computer via the RS-232 serial port. If in doubt, consult your Yasnac manuals, as they are your ultimate authority on your particular version of control.

YASNAC i80 MEMORY INSTALLATION

Time Needed: About 1 hour
Tools Needed: 1 Long Philips #2 Screwdriver
                             1 Small Slot Screwdriver
Components: 1 Memex MxI80 FC120 memory board
                             1 Set of Instructions
Controls: Yasnac i80 CNC

| Important! |

Before starting the installation, power on the control and verify that the machine tool is in good working order. Although not absolutely necessary for this installation, it is advisable that you have a current backup of your NC parameters, Tool Offsets and other Fixed Files (PC Parameters). That said, it is necessary to download all part programs, which will be explained further on.

COM Setup

1. Set up your computer to receive data through its COM port and connect it to your Yasnac control (with a standard null modem cable). Set the communication parameters on your PC for the data bits, stop bits and baud rate as determined by the applicable parameters for your control. Please refer to the "Yasnac i80 Technical Summary" section in the back of this manual for the appropriate parameters.

Set Ball to 2

2. With the **Power Off**, locate the Rotary Switch (the "Ball") on the FC200 "SMON" board. Turn the switch to position 2 with the small Setting Screwdriver provided, then Power On. By the way, setting the Ball to "2" will automatically set the Parameter Write Enable bit.

Macro File Unprotect

3. Check whether any 8000 or 9000 programs are protected and reset it in order to punch all the part programs (use MAIN, PARM, SETING):

> <u>SETING PARAMETERS</u>
> #20 =   xxxx xxx0 – to enable Display & Output of 8000-8999 programs
> #21 =   xxxx xxx0 – to enable Editing of programs of 8000-8999 programs
> #22 =   xxxx xxx0 – to enable editing of 9000-9999 programs
> #3004 = xxxx xxx0 – to enable Display & Output of 9000-9999 programs

4. Now with a computer connected properly to the Yasnac serial port, proceed to the **[P1 PROG]** screen and punch out all the part programs as you would normally. Check that all programs including the 8000-

9999 series are punched as this memory will be erased upon in following steps.

Find Options

5. On Power On, depress the **[MAINT]** or **[P4 MAT]** key to get to the Maintenance screen. Using the Up/Down Arrows on the right, highlight **[OPTION]** tab on the lower right (under **[LADDER])** of the menu (note this only shows when the Ball is set to "2"). When in the Option Parameters screen, cursor down to OPM06. Follow step 6 below to enable you to cursor right (Option 6) – then cursor right to set the bits.

See picture below for the Option screen you are looking for…


Set Option OP6

6. Now type in the Password of "**0000 0000**" (8 zeros) and press "WR" (or Write). Note that **you will see nothing** on the screen. However you will now be able to cursor across Option 6 and set the bits according to the table below (where x = leave alone)…

Note that some versions have a passcode of or "**YASNAC80**" not 8 zeros.

BOARD MEMORY	OPTION
FC120-1 = 320M or 128k	opm06 = xxxx 0011 = 3
FC120-2 = 640M or 256k	opm06 = xxxx 0100 = 4
FC120-3 = 1280M or 512k	opm06 = xxxx 0101 = 5
FC120-4 = 2560M or 1 Megabyte	opm06 = xxxx 0110 = 6
FC120-5 = 5120M or 2 Megabytes	opm06 = xxxx **0111 = 7 (Default)**

7. Power off the control, and reset the Ball (FC200 rotary switch) to "E" (4 clicks back from 2 or counter-clockwise where you should be right now). Install the Memex MxI80 FC120 board at this point in the slot labeled FC120 on your main Yasnac masterboard. The unit installs from the bottom first and then rocks upwards until the connector is seated. When the MxI80 is firmly mounted, screw in the Philips screw at the top to secure it.
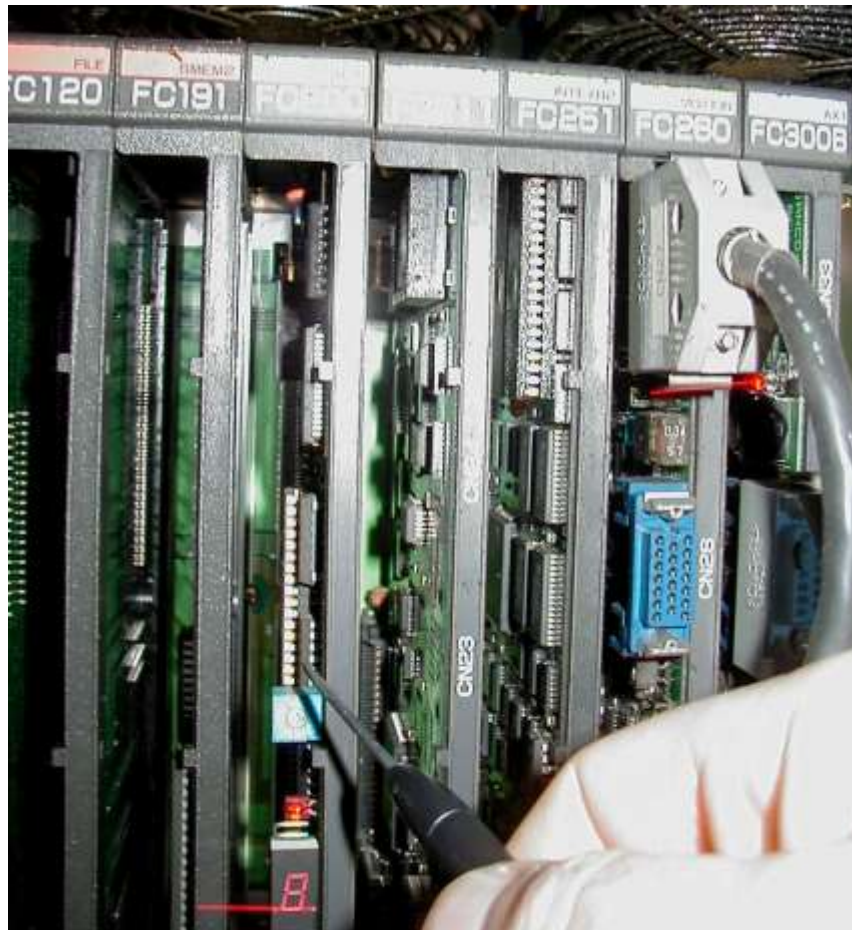
8. Power on the control and with the Ball on the FC200 board set to "E" you will get the INITIAL MENU - REGEN (regenerate) screen as shown below. Cursor down to the **PROGRAM** menu item and hit the WR (write key to mark it with an "*"). Then select the "INITI" soft key and you should get the picture below.

   Be very careful that you do NOT activate "SL ALL" (select all) or any other file other than PROGRAM as it will erase whatever is selected.

   When you have exactly what we have in the picture below, press the "Y" key to REGEN the new memory. You will get a screen confirming the new memory size and that all is well and the new memory is present.

9. Power off and reset the FC200 Ball back to "2".

10. Power on and proceed to reload the part programs that you downloaded earlier.

11. After all the part programs are loaded, including the 8000-9999 macro files, you should go back and reset the SETING parameters #20, 21, 22 & 3004 to their normal state.

12. When all is done, power off and reset the FC200 Ball to "0" or normal mode and power back on.

13. Finally, please re-check all i80 control functionality.

Congratulations, you are done!

Please note that the Ethernet with 3 serial port Universal Machine Interface(UMI) Option on the MxI80 board is covered in a separate manual.

MxI80 INSTALLATION CHECKLIST (for Yasnac i80 Controls)

1. Check Machine - Power On - Check for Machine Problems Before You Start.

2. Power Off, then Set the BALL on FC200 to "2".

3. Check that SETING Parameters pm20,21,22 & #3004 Bit 0 = 0 to enable 8000-9999 punch out

4. With the computer ready, punch OUT all the part programs – check 8000-9999 are outputted

5. Power On – Go to MAINT or P4 MAT Maintenance screen and find the Option Parameters

6. Set Option 6 Bits 0,1 &2 to a 3 for 320M, 4 for 640M, 5 for 1280M, 6 for 1 Meg and 7 for 2 Megs

7. Power off and set FC200 Ball to "E" – 4 clicks counterclockwise. Mount new MxI80 FC120 Board.

8. Power On to get REGEN screen. Select PROGRAM only (get "*" when selected). Press "INITI" and hit "Y" to REGENerate memory. Screen appears confirming new memory.

9. Power Off and reset FC200 Ball to "2".

10. Reload part programs from (P1) PROG screen.

11. Restore SETING Parameters # 20,21,22 & 3004 to initial values to re-protect 8000-9999 macro programs

12. Turn rotary switch back to 0.

13. Check machine functionality.

14. You are done…

CHAPTER 3: Yasnac i80 Technical Summary

Communication Parameter Settings (MAIN, PARM, SETING):

Bits: (7654 3210) = Order of Bits with "x" = don't care

0009 xxx0 xxxx – Specifies 1st COM Port on FC200 Board for Outputting (1 = FC903)
0009 xxxx xxx0 – Specifies 1st COM Port on FC200 Board for Inputting (1=FC903)
0010 0010 0010 – Specifies RS-232C as Equipment Allocation for Port 1 on FC200
0015 0010 0010 – Specifies RS-232C as Equipment Allocation for Port 2 on FC903

Port 1 Input Settings:
0004 xxx0 0x00 – Bit 4 = No Feed, Bit 3 = TH (Parity) for ISO Input, Bit 1 = no TV Check, Bit 0 = ISO Output
0011 x010 1111 – Bits 6&5 = Even Parity, Bit 4 = 7 data bits, Bit 3=2 stop (0=1 stop), Bits2,1,0 = BAUD
                (111= 9600 Baud, 110=4800, 101=2400, 100=1200, 011=600, 001=110 & 000=100 Baud)
0012 xxxx x011 – Bit 2 = no check of DTR line, Bit 1 = RTS flow control, Bit 0 = RS232 Control Codes

Port 1 Output Settings:
0006 xxx0 0x00 – Bit 4 = No Feed, Bit 3 = TH (Parity) for ISO Input, Bit 1 = no TV Check, Bit 0 = ISO Output
0013 x010 1111 – Bits 6&5 = Even Parity, Bit 4 = 7 data bits, Bit 3=2 stop (0=1 stop), Bits2,1,0 = BAUD
                (111= 9600 Baud, 110=4800, 101=2400, 100=1200, 011=600, 001=110 & 000=100 Baud)
0014 xxxx x011 – Bit 2 = no check of DTR line, Bit 1 = RTS flow control, Bit 0 = RS232 Control Codes

Port 2 Input Settings:
0016 x010 1111 – Bits 6&5 = Even Parity, Bit 4 = 7 data bits, Bit 3=2 stop (0=1 stop), Bits2,1,0 = BAUD
                (111= 9600 Baud, 110=4800, 101=2400, 100=1200, 011=600, 001=110 & 000=100 Baud)
0017 xxxx x011 – Bit 2 = no check of DTR line, Bit 1 = RTS flow control, Bit 0 = RS232 Control Codes

Port 2 Output Settings:
0018 x010 1111 – Bits 6&5 = Even Parity, Bit 4 = 7 data bits, Bit 3=2 stop (0=1 stop), Bits2,1,0 = BAUD
                (111= 9600 Baud, 110=4800, 101=2400, 100=1200, 011=600, 001=110 & 000=100 Baud)
0019 xxxx x011 – Bit 2 = no check of DTR line, Bit 1 = RTS flow control, Bit 0 = RS232 Control Codes

Macro Part Program Protection:

0020 xxxx xxx0 – Specifies Edit, display & Output of O8000-O8999
0021 xxxx xxx0 – Specifies Edit Operation of O8000-O8999
0022 xxxx xxx0 – Specifies Edit Operation of O9000-O9999
3004 xxxx xxx0 – Specifies Edit, Display & Output of O9000-O9999

FC200 Port 1 RS-232 Specification:

CN20 Connector - DB9 Female – Pin 1 = Frame Ground, Pin 2 = Send Data (TX), Pin 3 = Receive Data (RX),
Pin 4 = Ready To Send (RTS), Pin 5 = Clear to Send (CTS), Pin 6 = Data Set Ready (DSR), Pin 7 = Signal Ground,
Pin 8 = no connect, & Pin 9 = Data Terminal Ready (DSR)

A Yasnac i80 Model A with our MxI80 Memory Card
installed in the center slot labeled FC120
(with the 3 DB9 Ports and the Ethernet Port and no label at the top).

Note: To enable the Ethernet connection on our MxI80 board (and to set up the serial port COM1 for connection to the Yasnac Port A) please consult the UMI installation manual. Use the utility "LocateIP" found on our web site or on the NetDNC CD in the 100 Utilities folder.

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Thank you for Choosing Memex Memory

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