6) Programmable Connector(J36,J2,J18) : Contact us if you want to use it.
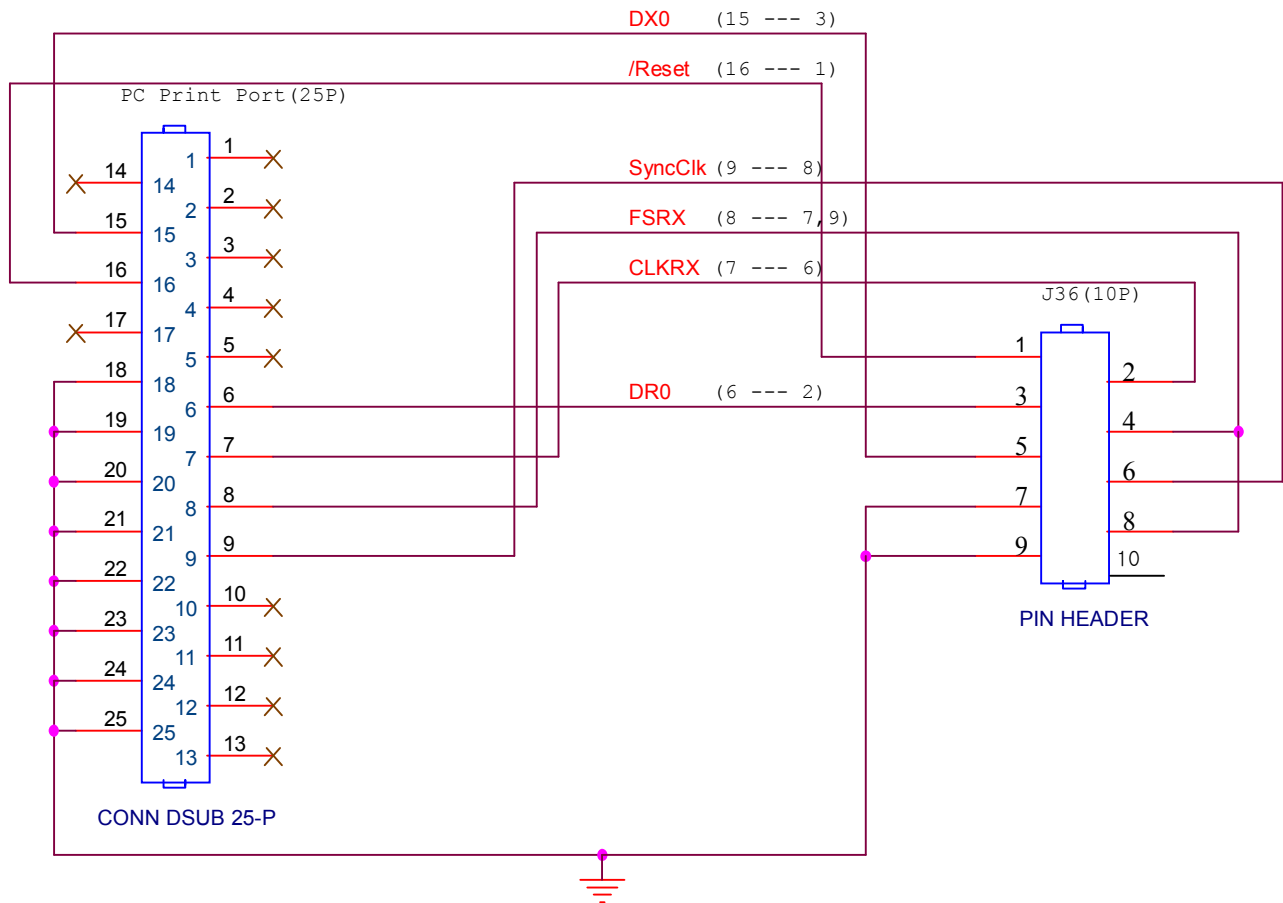
- **J36** : DSP programming connector
- Opposite Connector : HIF3F-10PA-2.54DSA/HIROSE   (P:Power, I:Input, O:Output)

Pin Arrangement	Pin No.	I/O	Signal Name	Description
J36 (pin layout: 1–2, 3–4, 5–6, 7–8, 9–10)	1	I	/ExReset	External Reset Input Signal
	2	I	CLKR	Data recevie clock
	3	I	DR	Data recevie
	4	I	CLKX	Data Transmit clock
	5	I	DX	Data Transmit
	6	I	Sys Clk	DSP Sync H1 clock
	7	I	BootSel	Boot Selection
	8	I	CLKX	Data Transmit clock
	9	P/O	5V Ground	Internal 5V Ground
	10	X	NC	

PC Printer Port(D-Sub 25P)	MCS-80 (D-SUB 9P)	MCD-40P (Pin Header)
6	2	3
7	6	2
8	7,9	4,8
9	8	6
15	3	5
16	1	1
18,19,20,21,22,23,24,25	4,5	7,9

Note)
1) Take extra precautions on dealing with the ports above as they are used in maintenance of this product and mishandling them such as incorrect connection may cause malfunction or inoperative status.
2) Make sure to turn the **Servo Power OFF** before using the ports for maintenance purpose and proceed with connection upon removal of noise in surrounding areas.
3) Make sure to turn the power off when getting connected with the PC Print Port or detaching the connector.

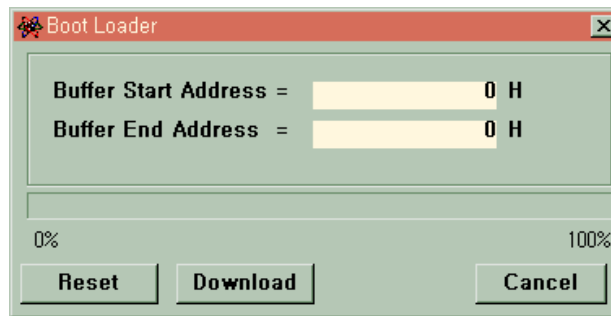**(1) How to Upgrade OS (Since MMI Version is different for Win98/ME and WinXP**
      Visit our website and go to "Achieve"->"MCS Achieve"->MMI and download it.)
  Note) Your PC must come with the 25Pin Print Port.(Print function Pin + Auxiliary Pin)
      (PRINT PORT SETTING -> Select the **ECP PRINT** Mode, ADDRESS **378** and **Interrupt No.07** in PC Print setup)

1) Go to "Help" in **MSW-MCS MMI** menu and check out the current H/W Version of the controller.

2) Use **MSW-MCS MMI** for upgrading OS.
   Execute MSW-MCS MMI. If "OS file" and "OS" item are not seen on the left hand side of menu close MSW-MCS MMI and open C:\Program Files\MSW-MCS\InitInformation.INI file, change Reseach=0 to Reseach=1, save the file and then execute MSW-MCS MMI again.

3) Turn the controller power off, get connection between the 25P **Print Port of PC and controller Boot Port**, **232 Port of PC** and **RS232 Port(J26) of controller,** and then turn the controller power back on. (Turn the Servo off to minimize the effect of noise while downloading OS.)

4) Go to "OS File" ->"Open Bin File" in MSW-MCS MMI menu and select the BIN file(OS file).(check the file size / date/ Buffer End Address)

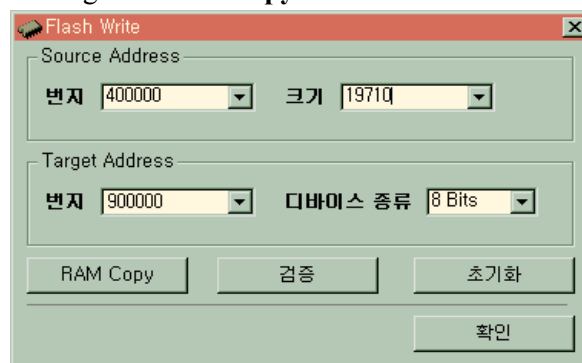5) Go to "OS" -> "DOWNLOAD" and press "Reset" -> "Download" button in "Boot Loader" window.

Note) If properly completed, the RDY LED of the controller will flash once and the controller will start operation.
If not completed properly, you don't get on-line and check **Boot Cable, PC Print Port / Setup** or **controller Boot Port**.

6) Upon completion of downloading close the Boot Loader window and click "**On-Line**" on menu and don't forget to check the On_ Line operation.
Subsequent works are available and valid only in **ON-LINE state.(Make sure to check it out.)**

Note) If you don't get On-Line check the note above as well as Serial Cable, PC Serial Setup, Boot Cable and Print Setup.

7) Make sure to check the On-Line status before selecting "**OS"->"Programming**" on the menu.

8) Click "Initialize" button on Flash Write window, wait a short while (until the "**Initialize**" button is reactivated) before clicking the "**Ram Copy**" button.

9) Upon completion of Ram Copy, click "**Verify**" button to verify whether OS inspection matches.

10) Make sure to turn the power off before removing the BOOT cable.(Removing the Boot Cable while power is turned on the ports on the controller and PC may be damaged.)

11) Go to "**Help**" on MSW-MCS MMI menu and check the current H/W Version of the controller on to see if upgrade has been successfully done.