



**Communication Settings for
Mitsubishi (CPU A1S61PN)**

and

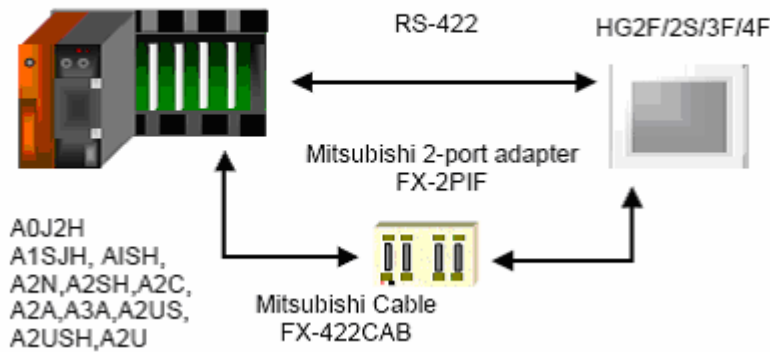
**IDEC Touchscreens
(5.7" HG2F, 10.4" HG3F, 12.1" HG4F)**

Introduction

This information will help you configure IDEC touchscreens (5.7" HG2F, 10.4" HG3F or 12.1" HG4F) and the Mitsubishi PLC (CPU: A1S61PN) using Melsec-A1S/A2C(CPU) protocol. For other supported Mitsubishi PLCs and \communication settings/range of addresses, please refer to WindO/I-NV2 manual. Select "Host Interface," then Connection to a PLC.

<http://www.idec.com/Products/ENG/PDF/manuals/WindOI/V282/English/mainmenu.pdf>

MELSEC-A Series (connected to the CPU Unit Programming Port)

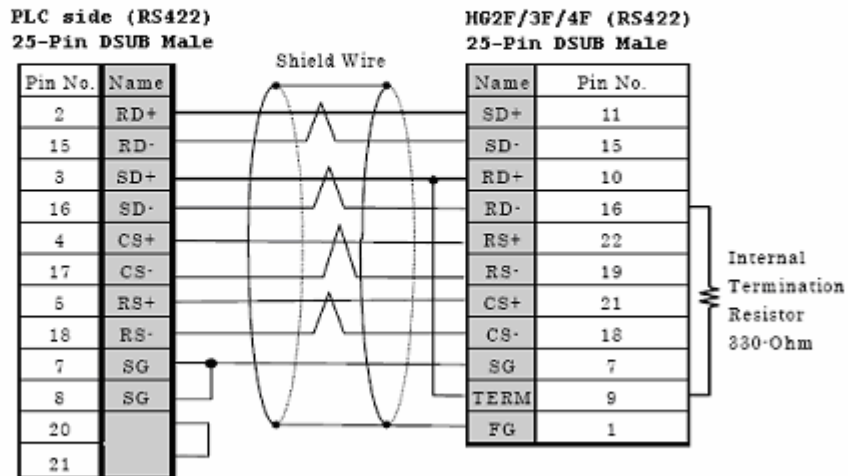


Mitsubishi MELSEC-A or FX series (RS422) to HG2F/3F/4F (RS422)

Applicable MELSEC-A PLCs:

A2N
A1SJH
A1SH, A2SH
A2C, A0J2H
A2A, A3A, A2US
A2USH, A2U
A2USH-S1

Cable Part Number: HG9Z-3C165A



Communication Settings

MELSEC-A Series: Connection to the Programming Port or 2-port Adapter

Item		Setting
Communication Interface		RS-422
Data Bits	Use the same settings as for the HG2F/2S/3F/4F	8 (fixed)
Baud Rate		9600 (fixed)
Parity		Odd (fixed)
Stop Bits		1 (fixed)



When using CPU Direct for the connection, the PLC program scan time will increase when it starts communicating with the HG2F/2S/3F/4F. Investigate this under your actual operating conditions.

Addressing

MELSEC-A(CPU)

Device		PLC type settings using WindO/I-NV2					Notes
		Device symbol	AnA (CPU)	AnN (CPU)	AnU (CPU)	A1S/A2C (CPU)	
Bit Device	Input Relay	X	0 to 7FF	0 to 7FF	0 to 1FFF	0 to 1FF	(*1)
	Output Relay	Y	0 to 7FF	0 to 7FF	0 to 1FFF	0 to 1FF	(*1)
	Internal Relay	M	0 to 8191	0 to 2047	0 to 8191	0 to 2047	
	Link Relay	B	0 to 7FF	0 to 3FF	0 to 1FFF	0 to 3FF	(*1)
	Latch Relay	L	0 to 8191	0 to 2047	0 to 8191	0 to 2047	
	Timer (contact)	TS	0 to 2047	0 to 255	0 to 2047	0 to 255	
	Timer (coil)	TC	0 to 2047	0 to 255	0 to 2047	0 to 255	
	Counter (contact)	CS	0 to 1023	0 to 255	0 to 1023	0 to 255	
	Counter (coil)	CC	0 to 1023	0 to 255	0 to 1023	0 to 255	
	Special Internal Relay	SM	9000 to 9255	9000 to 9255	9000 to 9255	9000 to 9255	
	Annunciator	F	0 to 2047	0 to 255	0 to 2047	0 to 255	
Word Device	Input Relay	WX	0 to 7F0	0 to 7F0	0 to 1FF0	0 to 1F0	(*1) (*2)
	Output Relay	WY	0 to 7F0	0 to 7F0	0 to 1FF0	0 to 1F0	(*1) (*2)
	Internal Relay	WM	0 to 8176	0 to 2032	0 to 8176	0 to 2032	(*2)
	Link Relay	WB	0 to 7F0	0 to 3F0	0 to 1FF0	0 to 3F0	(*1) (*2)
	Latch Relay	WL	0 to 8176	0 to 2032	0 to 8176	0 to 2032	(*2)
	Timer (current value)	TN	0 to 2047	0 to 255	0 to 2047	0 to 255	
	Counter (current value)	CN	0 to 1023	0 to 255	0 to 1023	0 to 255	
	Data Register	D	0 to 6143	0 to 1023	0 to 8191	0 to 1023	
	Link Register	W	0 to FFF	0 to 3FF	0 to 1FFF	0 to 3FF	(*1)
	Annunciator	WF	0 to 2032	0 to 240	0 to 2032	0 to 240	(*2)
	Special Internal Relay	WSM	9000 to 9240	9000 to 9240	9000 to 9240	9000 to 9240	(*3)
	Special Register	SD	9000 to 9255	9000 to 9255	9000 to 9255	9000 to 9255	
	File Register	R	-	-	-	0 to 8191	

(*1) Set this device using hexadecimal.

(*2) Set this device using a multiplier of 16.

(*3) This can only be used when the Link Unit is being used.



Depending on the type of PLC that you will be using, there are limits to the areas that can be used within the device ranges given above. Refer to the PLC manual for details.

Required Cables

- HG9Z-XCM1A (Connects PC and HG2F/3F/4F)
- HG9Z-3C165A (Connects Mitsubishi and HG2F/3F/4F)
- Interface for Melsec A/FX cable (Connects PC and Mitsubishi)

Required Software

- Install WindO/I-NV2 (programming software for HG2F/3F/4F)
- Install MELSEC MEDOC software (DOS based software for Mitsubishi PLC programming)

Manual

- WindO/I-NV2 for HG2F/3F/4F
 - <http://www.idec.com/Products/ENG/PDF/manuals/WindOI/V271/English/mainmenu.pdf> (Select Host Interface – Connection to the PLC for complete detail of communication settings and table addressing)

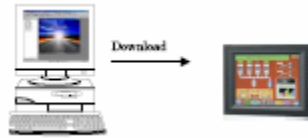
Devices used for testing

- Mitsubishi (CPU: A1S61PN)
- HG2F-SS22VCF (5.7" display)

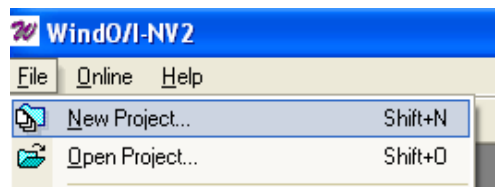
Step 1: WindO/I-NV2 Software

Configure the HG2F/3F/4F by creating a program in WindO/I-NV2 software

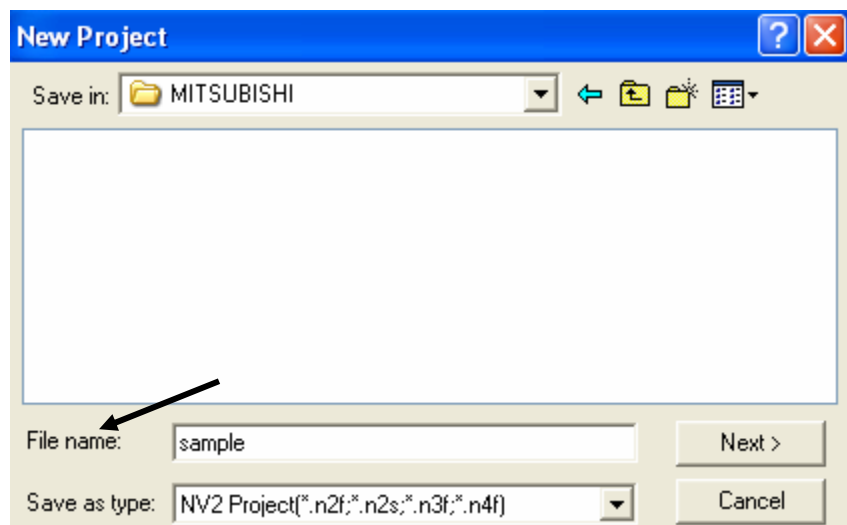
- 1) Connect the programming cable part number HG9Z-XCM1A from PC to HG2F/3F/4F (Serial 1 port).



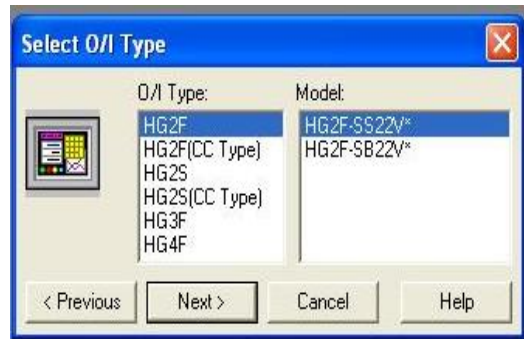
- 2) Launch WindO/I-NV2 software. Select File/New Project.



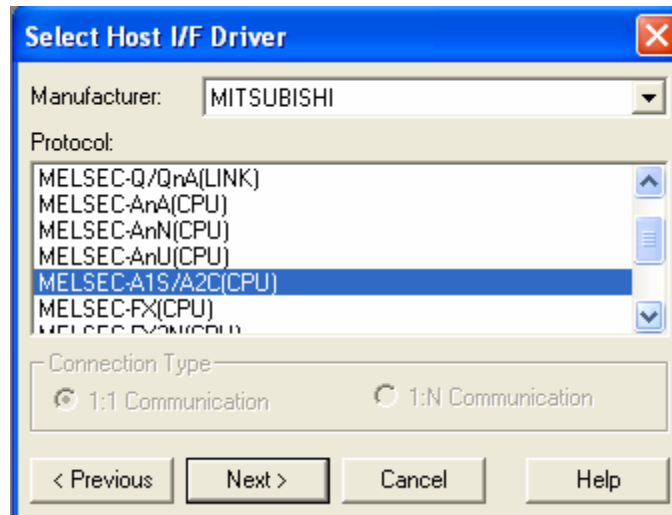
- 3) Create a project name. In this example, the project name is called "sample."



4) Click the Next button to choose the O/I and Model type.

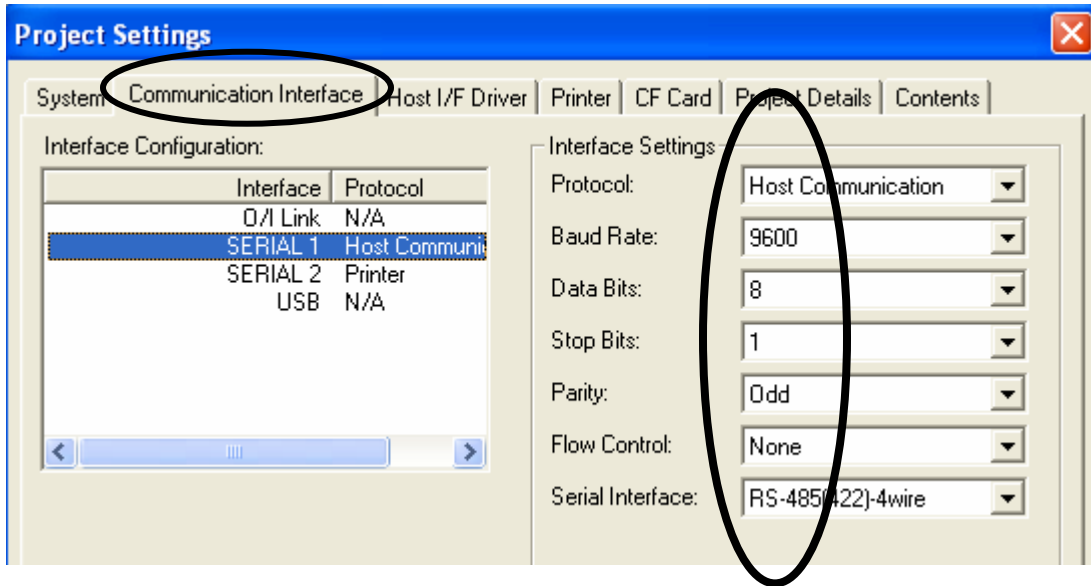


5) Host I/F Driver:
Manufacturer: Mitsubishi
Protocol: MELSEC-A1S/A2C (CPU)
Click the Next button to continue.

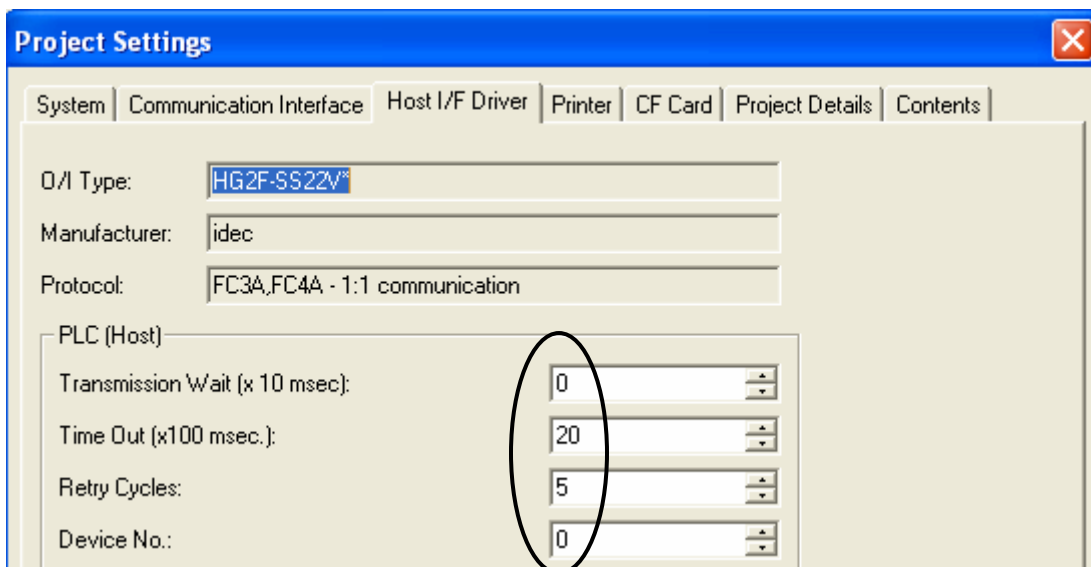



6) Project Settings

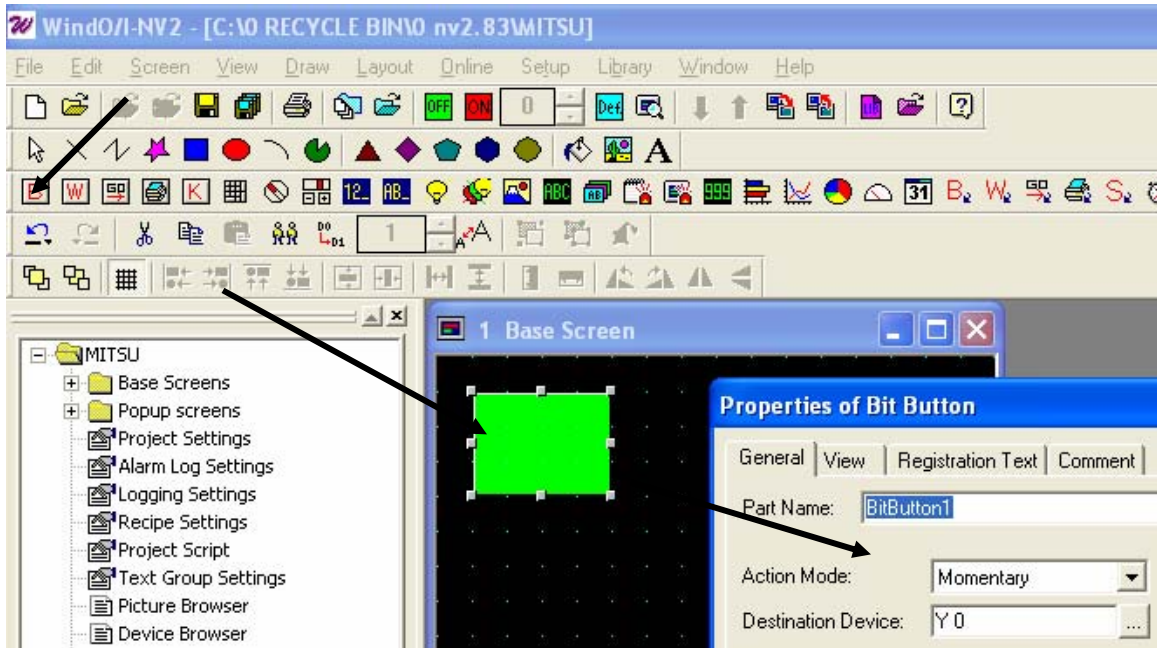
- a) Select the Communication Interface tab.
- b) Under Interface Configuration, select Serial 1 Host Communication.
- c) Follow the Interface Settings below as shown.



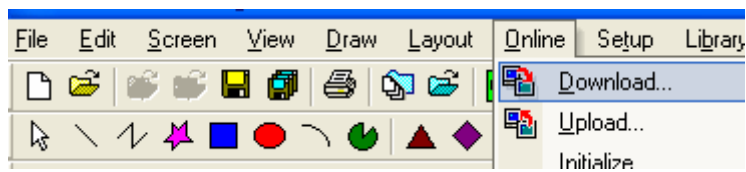
7) Select the Host I/F Driver tab. Again, use the following settings as shown below.



- 8) Create Base Screen 1. For a basic example, select the Bit Button icon  and drop it on the screen.
- Double click on the bit button to view the Properties.
 - Action Mode: <select> Alternate
 - Destination Device: Y0 (to turn ON output 0 in the PLC)
 - The View and Registration Text are optional.
 - Click the OK button.



- 9) Finally, download the project to the HG2F/3F/4F. Select Online - Download.

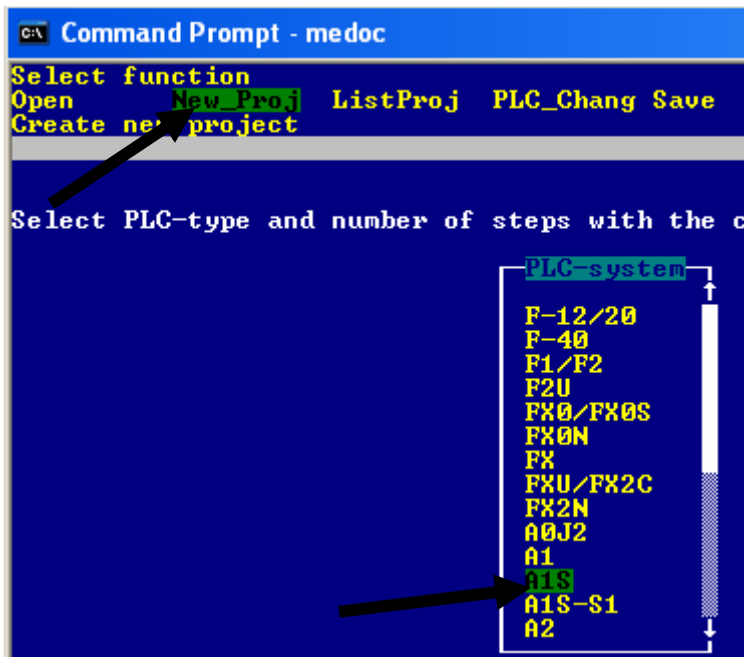


Step2: Mitsubishi Software: MELSEC MEDOC (DOS based software)

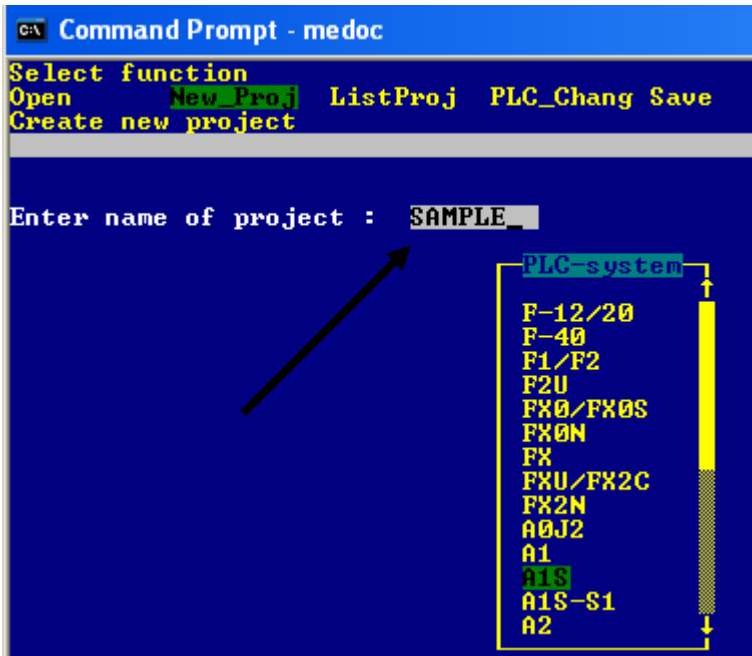
- 1) Connect the Interface cable between the PC and Mitsubishi PLC.
- 2) Launch MELSEC MEDOC software.
- 3) Select "Start" <press ENT>



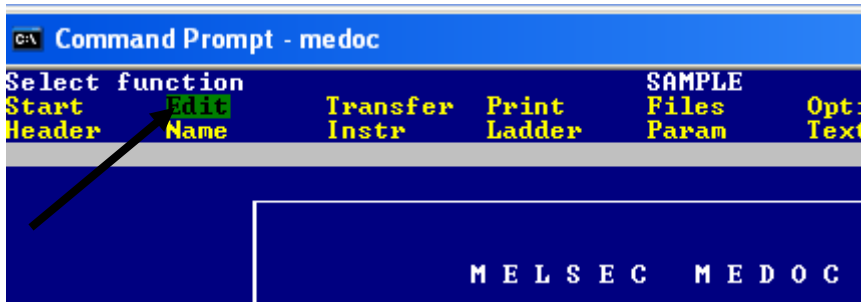
- 4) Select "New Proj" <press ENT>. Select the PLC type: A1S <press ENT>



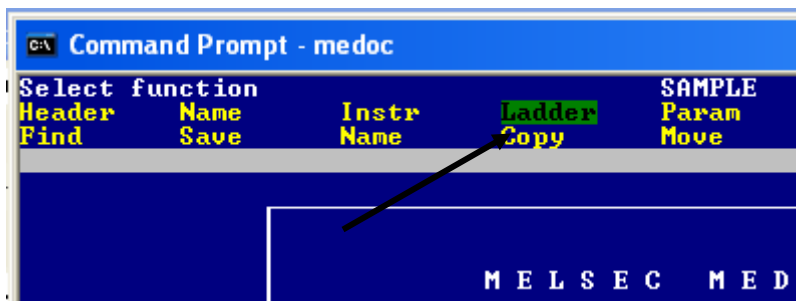
- 5) Enter the File Name. In this example, the file name is: SAMPLE <press ENT>, then <ESC>.



- 6) Select EDIT <press ENT>



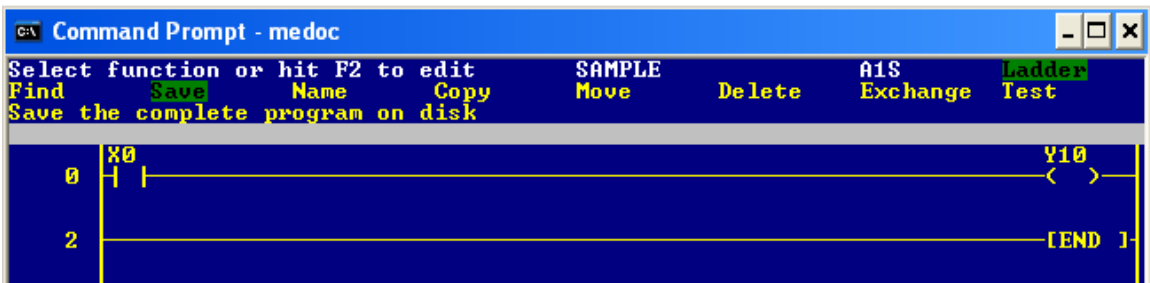
- 7) Select LADDER <press ENT>



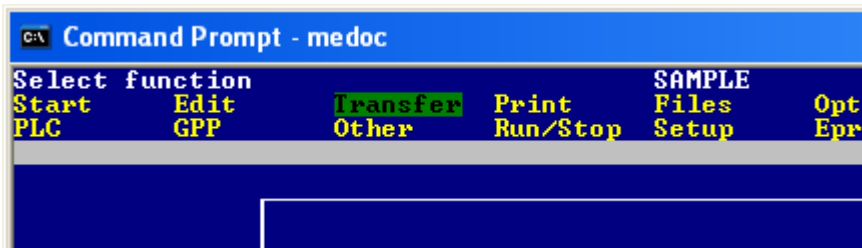
- 8) In Ladder, press F2 and then F7 to edit the ladder.
 - a) Select the normally open <press 1>, enter X0 <press ENT>.
 - b) Select the output coil <press 7>, enter Y10 <press ENT> from the bottom menu.
 - c) Next rung, Enter an END statement <type the word END then press ENT>
 - d) Press F7, then ESC key.



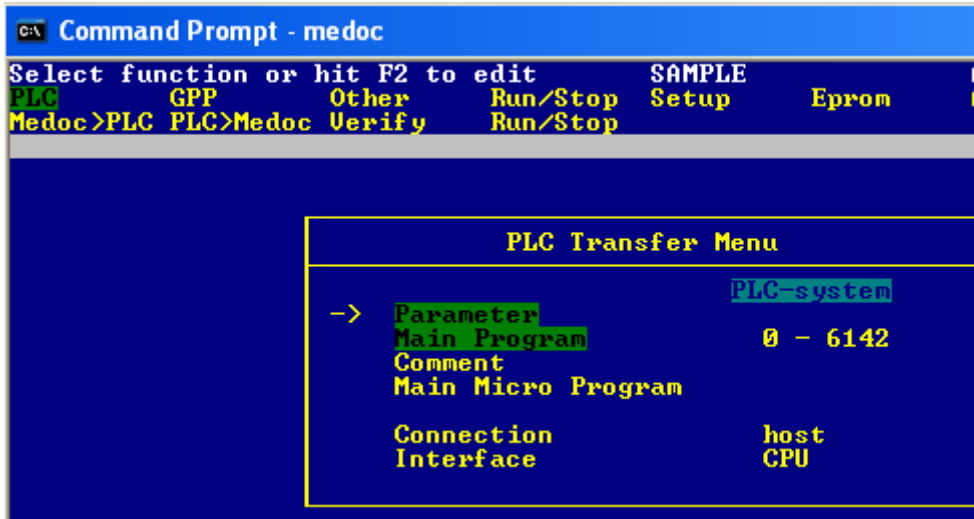
- 9) Select Save, then press the ESC (twice).



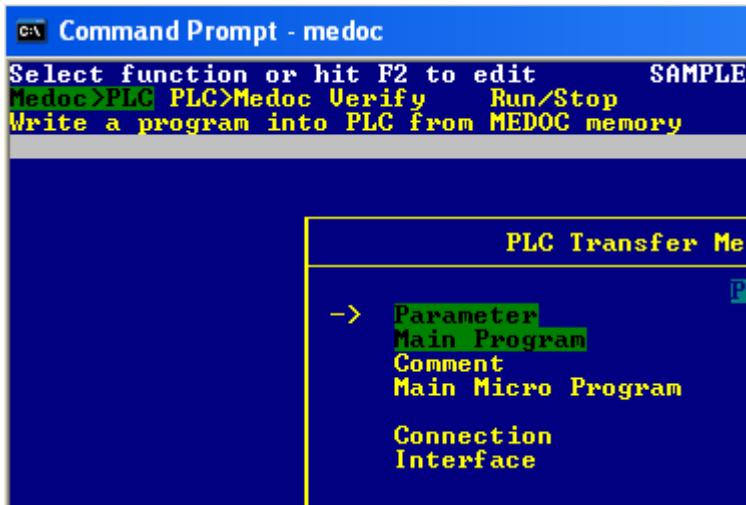
- 10) Select Transfer <press ENT>.



11) Select PLC <press ENT>.



12) Select Medoc>PLC <press ENT>.



13) You may now test the communication between the HG and Mitsubishi PLC.