Chapter 13: Remotely Download Via Modem_Link

13.1: Introduction

COM4 of The I-8417/8817/8437/8837 & COM2 of the W-8xx7 supports full modem signals. It has embedded the Modem_Link protocol for remotely download and monitoring since the I-8xx7 driver version of 2.14 & W-8xx7 driver version of 3.10. Please refer to Appendix C to make sure your I-8xx7 controller driver version is the same or higher. You can obtain the new released driver from:

http://www.icpdas.com/products/PAC/i-8000/isagraf.htm

To Remotely download and monitor program via the Modem_Link, I-8xx7's Com4 & W-8xx7's Com2 has to link to a modem. They have exactly the same pin assignments as the Com1 (9-pin Dsub) of the PC.
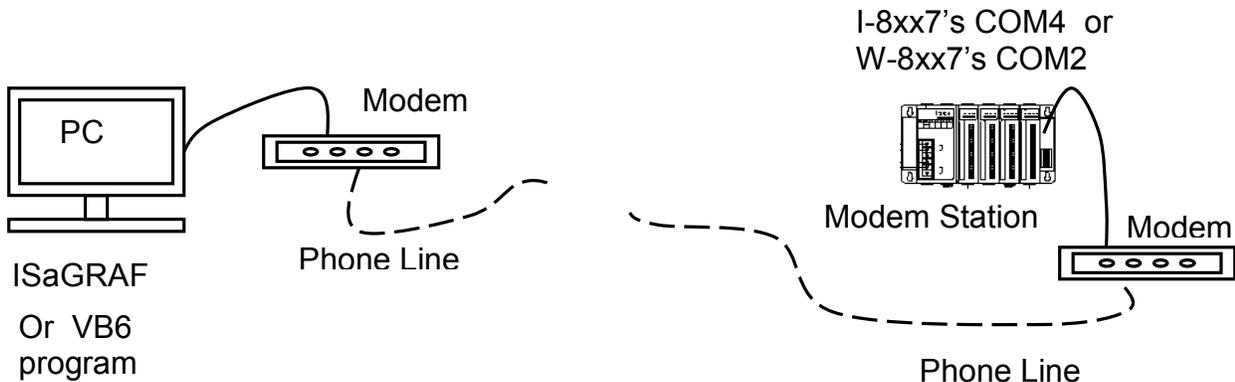
We name the controller as "**Modem Station**" since it will pick up the phone call coming from the remote PC running ISaGRAF. If the controller is either I-8437 or I-8837 (Ethernet controller), The configuration can be extended to link many controllers together. Therefore, the PC running ISaGRAF can remotely download to anyone of them through the modem and the Modem station.
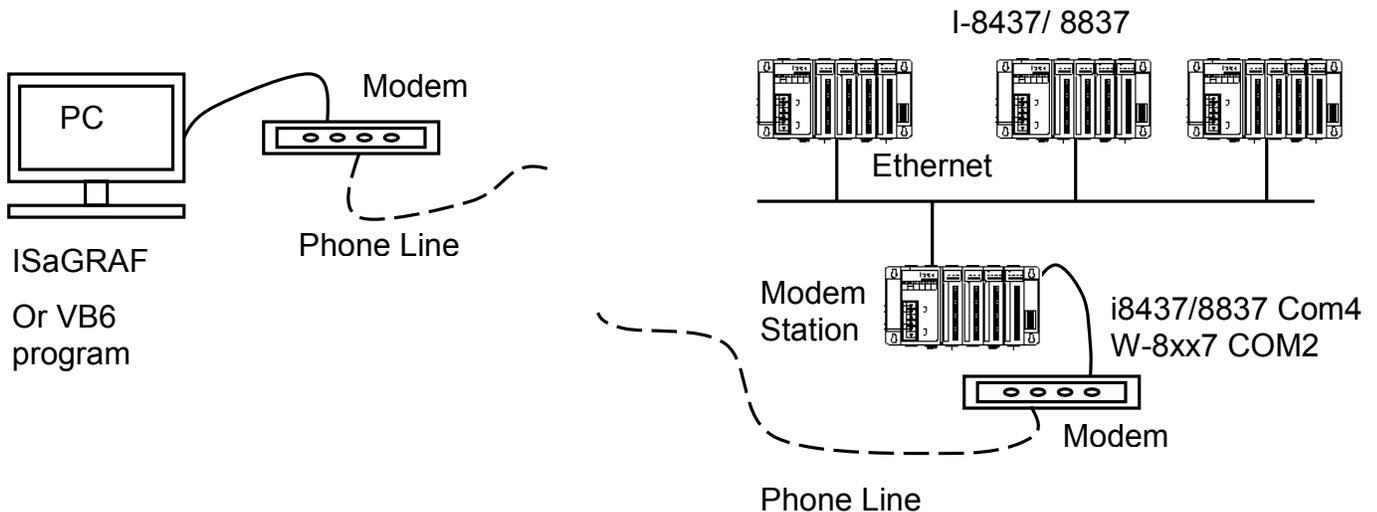
Note: W-8xx7's COM2 can be set as Modbus RTU port, **please disable it if using as "modem_link" port**. Please refer to W-8xx7's "Getting Started" Manual.

13.2: Download Program Via Modem_Link

Warnning:
Do not download a project which uses I-8xx7's Com4 & W-8xx7's COM2 to do other things to the "Modem station" controller. For ex, do not connect "Bus7000" & "Mbus" with port_no = 4 (for I-8xx7) & port_no=2(for W-8xx7). And do not use "Comopen" to open Com4(for I-8xx7) & Com2(for W-8xx7). It will disable "Modem_Link" if you use them for other purpose. That means, you can not remotely connect to it.

Note: W-8xx7's COM2 can be set as Modbus RTU port, **please disable it if using as "modem_link" port**. Please refer to W-8xx7's "Getting Started" Manual.

The first thing is to add a "modem password" to your ISaGRAF program of the "Modem station" controller for security. To do it, click on one empty slot No. from the I/O connection window. Then connect "Modem_PS" on the slot.
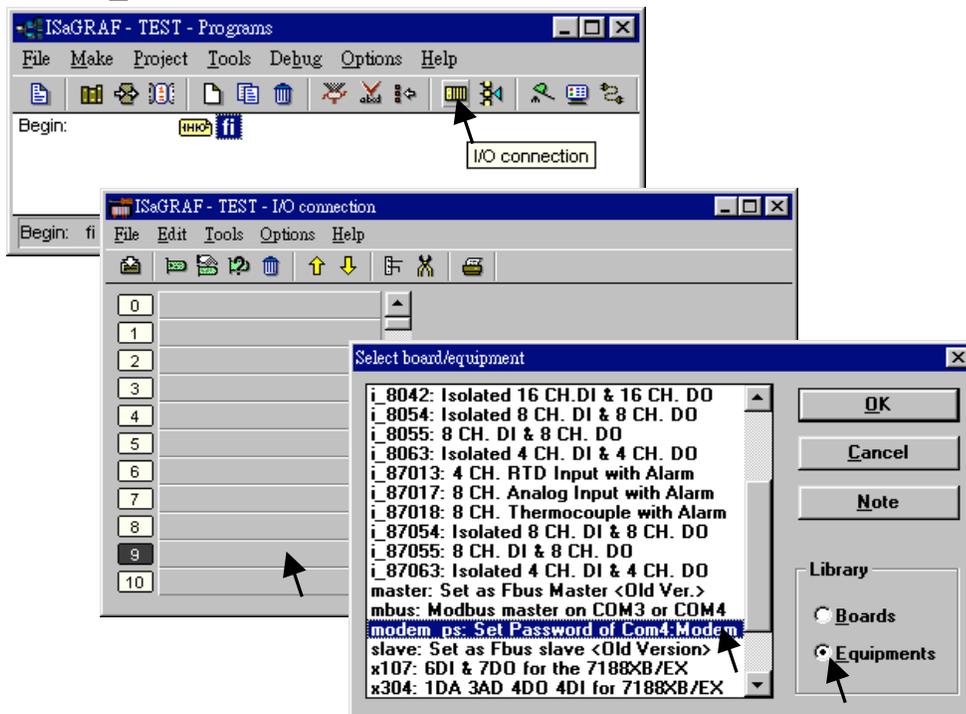
Then you got the window similar as below. Type in your prefered password for the "Modem station" controller. The password can contain up to 12 characters & can't use character " and '. Then re-compile it and download it to the "Modem station" controller.

Note:
User can write Visual Basic program to acess to the I-8417/8817/8437/8837 & W-8xx7 via Modem. Please download VB6 demo source code at
http://www.icpdas.com/products/PAC/i-8000/I-8417.htm   or
ftp://ftp.icpdas.com/pub/cd/8000cd/napdos/isagraf/vb_demo/   or
CD-ROM:\napdos\isagraf\vb_demo\
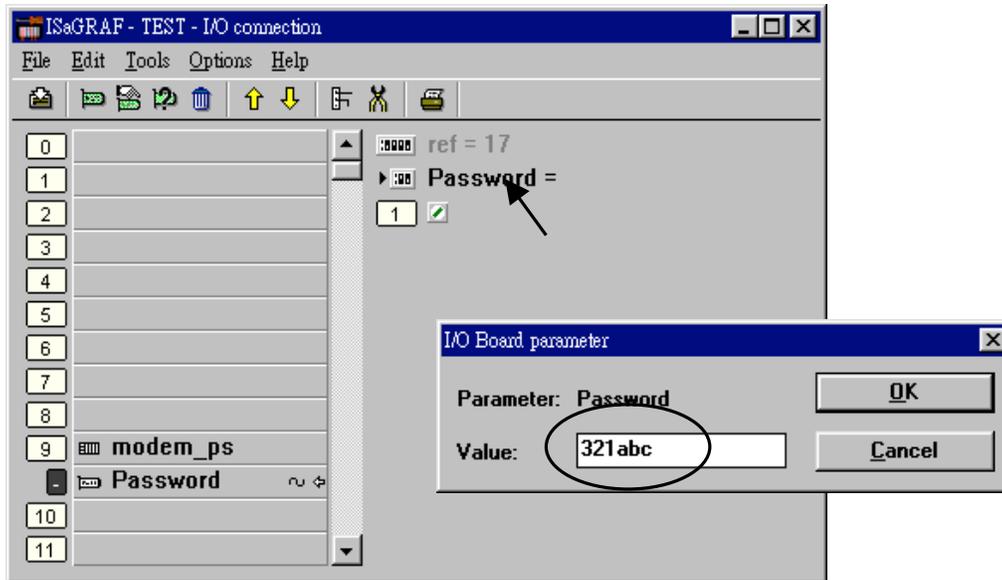
Very Important:
If you don't assign the Modem password to the "Modem station" controller, anyone who has the phone No. of your "Modem station" controller can link to it to do anything. Be very careful.

Now we are going to download and monitor the program of faraway controllers.

Click on "Link setup", select "Modem_Link", and then click on "Setup"
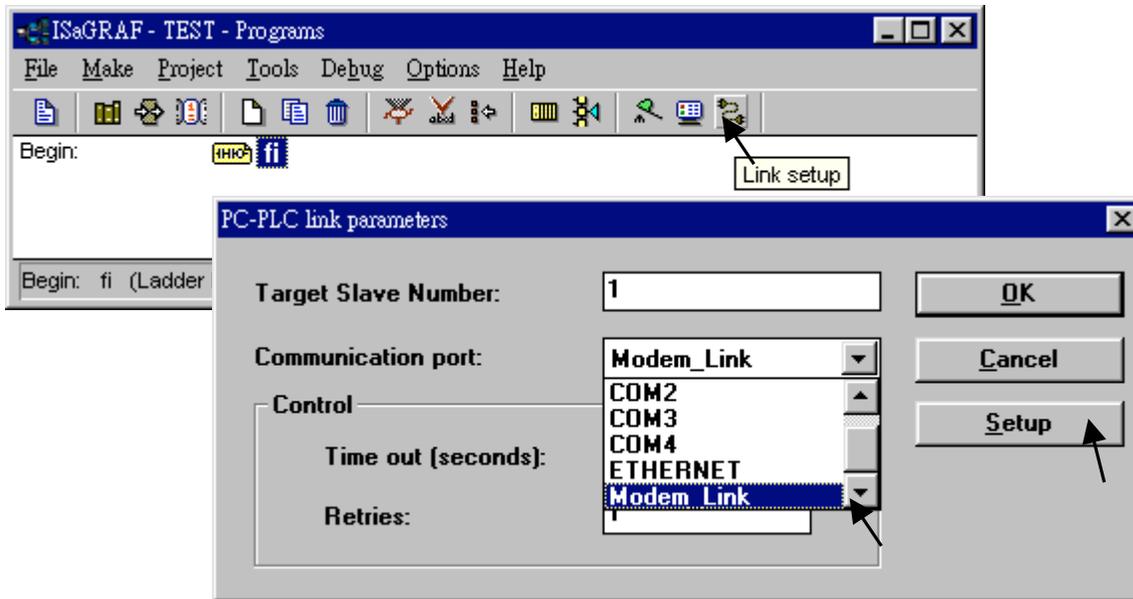
For windows NT, 2000 & XP users:

If you are going to connect the "Modem station" controller, check "Modem station", otherwise check "Other IP". "Other IP" means the target controller is not connect to a modem however connect to the "Modem station" controller via an ethernet cable, the IP address has to be assigned.
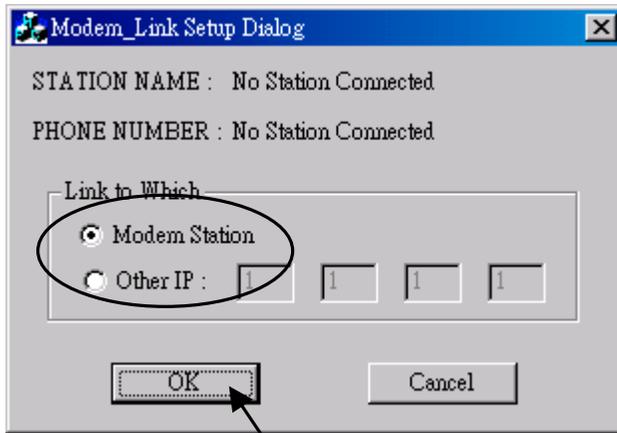
Then click on "debug". Select the correct Com port of your PC which will dial the modem. And then click on "Add Station" to add a station if you have none.
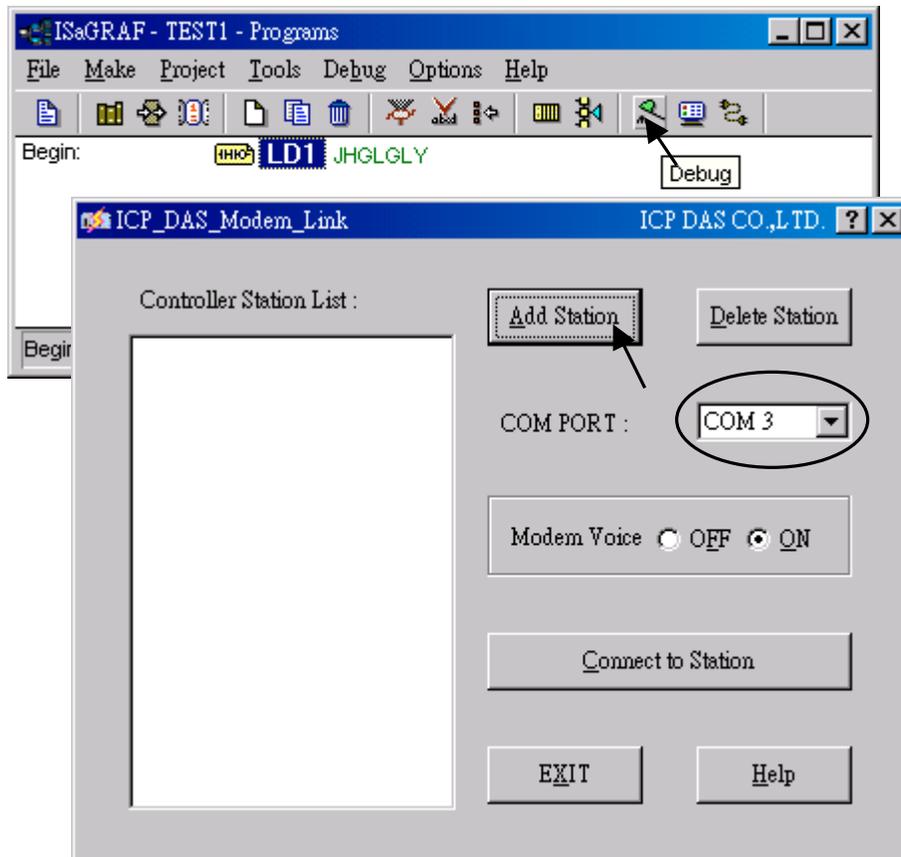
Then you will see the below window. Given a name for this new station and the target phone No. If you add a "," character inside the phone No. It will wait one second and then dial the rest No.

For ex. Given No. as "9,,22570001" will dial "9" first, then wait 2 seconds and then dial "22570001". The password must set to the same password of the "modem station" controller.
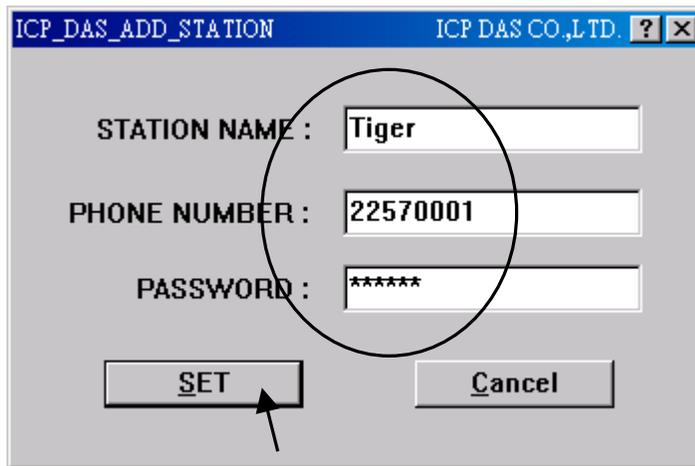
Click on the station you would like to connect first and then click on "Connect to Station" to command the modem dialing to the faraway controller.
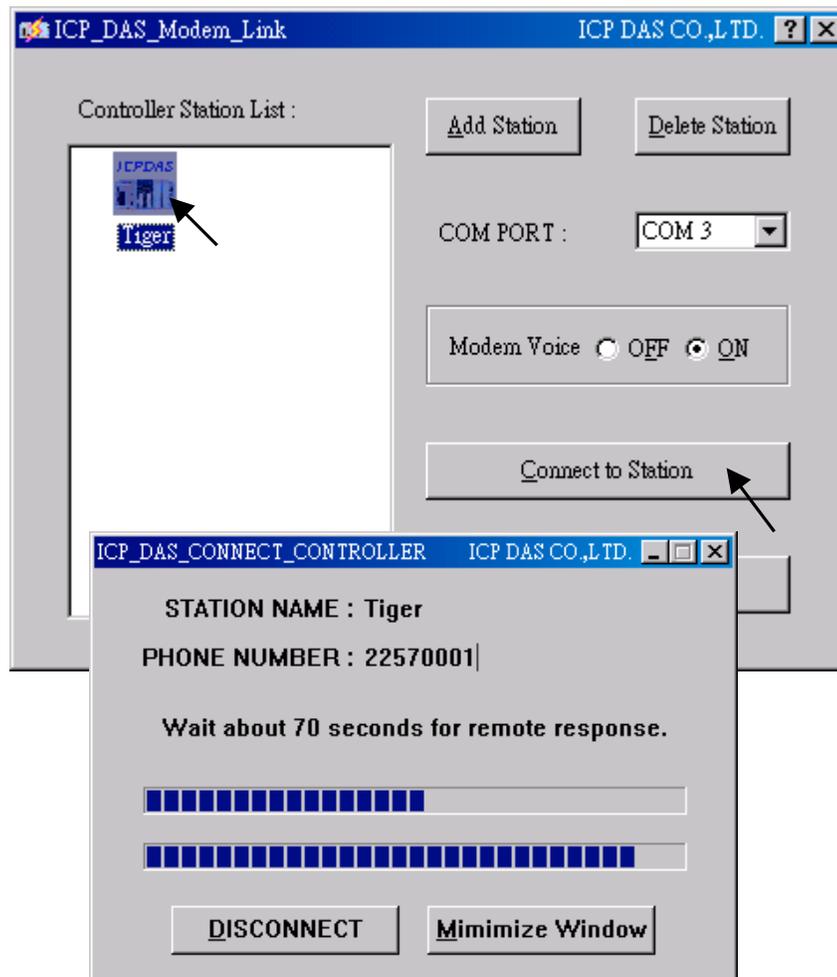
After the connection is Ok. You can download, monitor and change the variable value just like you did when the controller is near beside you.

To disconnect from the target controller, close the " … Debugger" window. Then you can choose "No" to keep the phone connected, or "Yes " to hang off phone.
If you choose to keep the phone connected, you can open another ISaGRAF project to directly connect to another faraway target. The modem won't dial again.
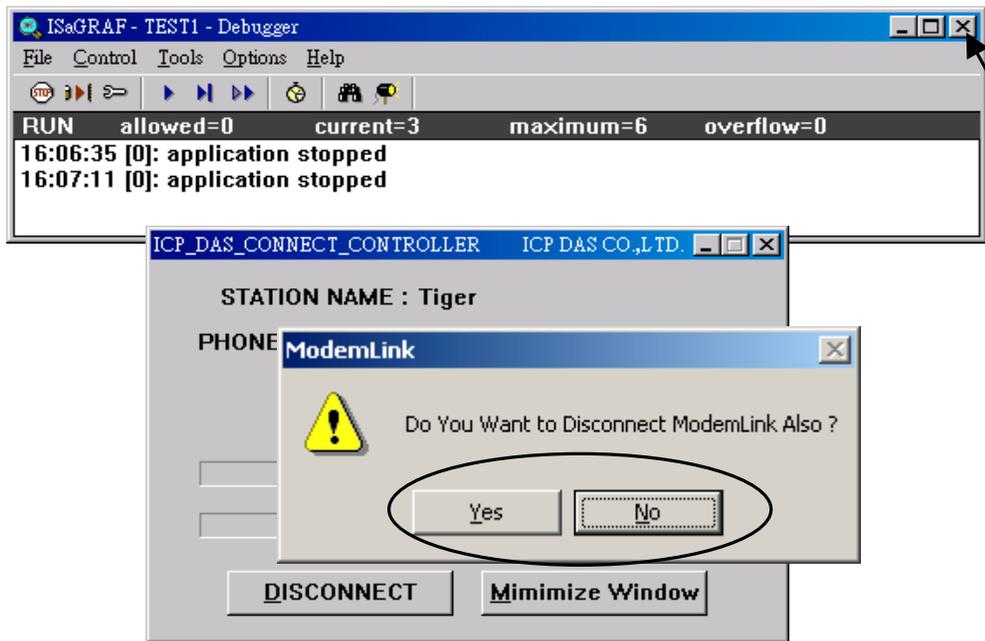
However, keep in mind, remember to disconnect the modem_link when you finish your work, don't waste the money to the telecom company.
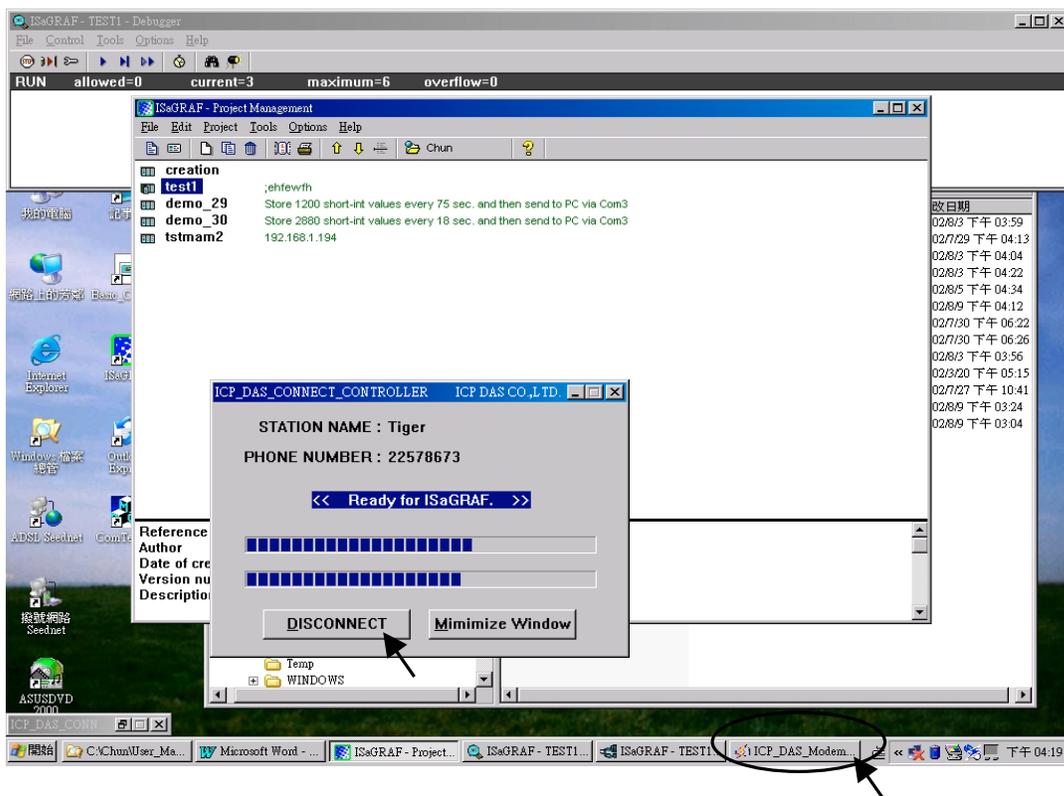
For windows 95 & 98 users:
Given the correct target phone No. and the correct Com port of your PC which will dial the modem. If you add a "," character indise the phone No. It will wait one second and then dial the rest No. For ex. Given No. as "9,,22570001" will dial "9" first, then wait 2 seconds and then dial "22570001". The password must set to the same password of the "modem station" controller. If you are going to connect the "Modem station" controller, check "Modem station", otherwise check "Other IP". "Other IP" means the target controller is not connect to a modem however connect to the "Modem station" controller via an ethernet cable, the IP address has to assign.
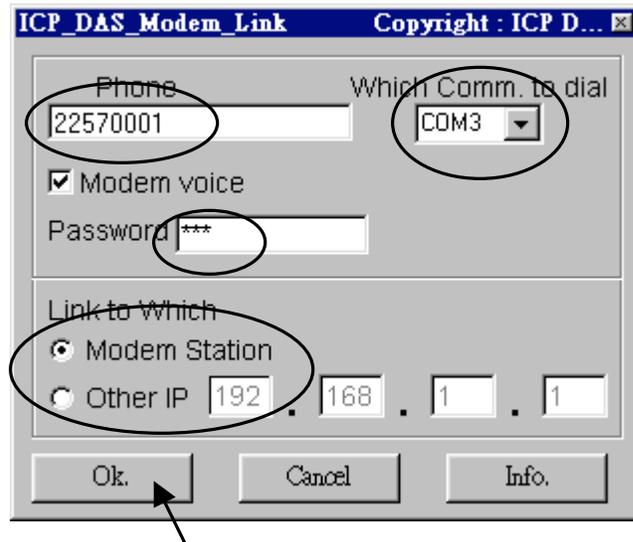
Then click on "debug" to start dialing the modem to connect to the faraway controller.
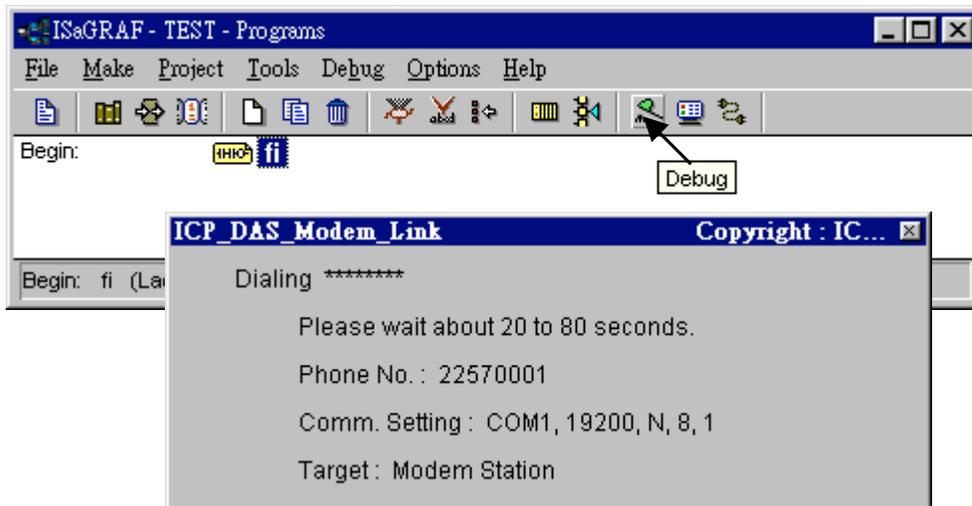
After the connection is Ok., you can download a new program, monitor the variable status just like you did when the controller is near beside you.

When you close the " … Debugger" window, the PC will command the modem to hang off the phone and disconnect with the faraway controller.
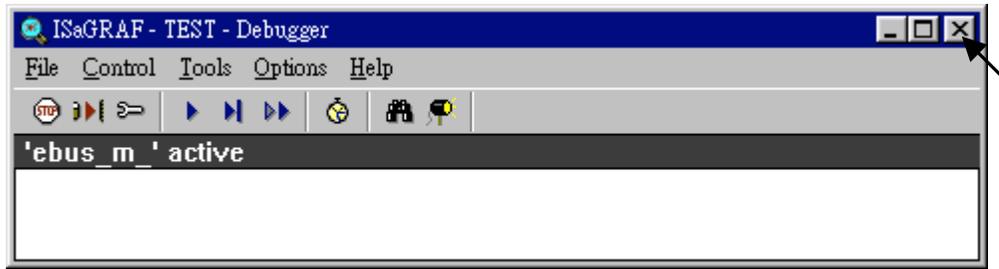
Note:

The Modem_Link software installed on windows 95 & 98 doesn't support "keep the phone connected" function. That means each time you close the " … Debugger" window, the phone will be hanged off too. So next time when click on "debug", you will see the modem dialing again to conect to the faraway controller.

For Windows NT, 2000 and XP users, the modem will not dial if you keep the phone connected.