Chapter 7

Communicating with the CPU

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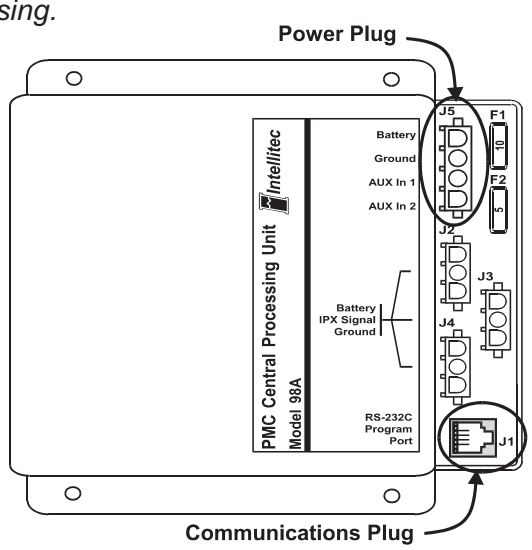
Once the program has been developed, it can be loaded into the PMC CPU for testing. The program will be stored and run from the non-volatile memory in the CPU Module. The program can be loaded into the CPU Module if it is either free standing, or connected in a vehicle system. To do this we have to set up communications between your computer and the CPU module.

CONNECTING THE CPU MODULE

The first step to loading the program is to power the CPU Module and connect it to your computer. If the module is connected in a vehicle, it is obtaining it's power from the vehicle. ***Be sure the battery power is being applied to the module.*** If it is not in a vehicle, it can be powered from a 12-24V power supply.

See the data sheet in Chapter 2 for the CPU that you are using.



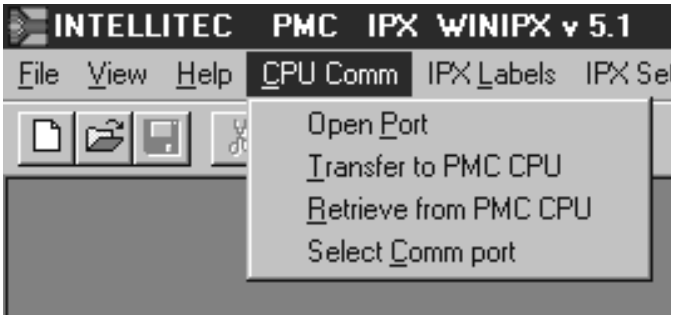
Connect the computer to the CPU Module using the RJ11 telephone cable and the hardware adapter key. Plug the adapter into the serial port of the computer. Plug the RJ11 cable into the adapter and then into the module.

The system is now ready to accept the program.

COMMUNICATING WITH THE CPU

Once the CPU has been connected and powered, communications can be established. To start the communications, go to the Main Menu and click on "CPU Comm".

This list offers four choices. *This flyout will appear:*



SELECTING THE COMM PORT

The software selects Comm Port 1 as the default. This should normally work for most computers. If this setting causes a conflict with some other device on your computer, you can go to this function and select a different port. If your computer does not have serial port, our recommendation is to purchase either a single or dual port, RS-232, PC card, this is a PCMCIA-style peripherial. There are several manufacturers in this market and the one manufacturer that we use at Intellitec is SIIG, website is www.siig.com. The model number for a single serial port device is IO1037, which uses 32-bit technology. These can be found at most electronic equipment outlets or purchased online.

OPENING AND CLOSING THE PORT

When the program starts, the port between your computer and the CPU Module is closed. This keeps changes you make to the program from getting into the CPU Module. To communicate with the CPU Module, the port has to be opened. To open the port, click on "Open Port". The port is now open. Only one active PMC program can establish communication with the CPU. **Be careful not to open more than one session of PMC on your computer.** A second session will not be able to open or close the port.

Once the port is open, it can be closed in a similar manner. To close the port, click on "CPU Comm" and the flyout will show "Close Port", instead of "Open Port". Clicking on this will close the port.

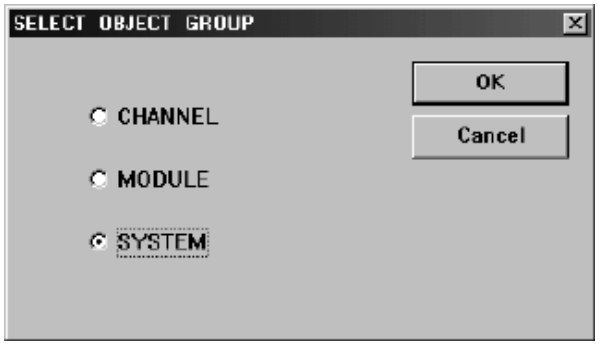
When the port is open, changes made to Boolean statements occur immediately. This is often useful when working on the vehicle to improve it. The effects of your changes occur as soon as you select *"*OK*"* from the Boolean editor screen. *If you do not want changes sent to the PMC CPU, close the port*.

Communicating with the CPU

SENDING THE PROGRAM

Once the CPU has been connected, the program can be loaded from the computer. If the vehicle file is not active, go to "File" on the task bar and select "Read PMC file". Open the file you wish to download to the CPU.

From the Main Menu, click on "CPU Comm". Open the Port to the CPU by clicking on "Open Port". Move the cursor to "Transfer to PMC CPU" and click. A window will open asking you to select a channel, module, or system.



In most cases you will select *system*. Click on *"OK"*. The program will be transferred from your computer to the CPU. This process will take some time. Once the program has been loaded, a message will come up announcing...

Please wait for this message. Click on "OK". The program can now be tested. Your computer can remain connected with the port open. After testing the program, you may want to make some minor changes to it. To do this, simply change the areas that you want. As long as the port is opened, those changes will automatically be loaded into the CPU. Then you can test the changes.

If you wish to prevent the changes from instantly going into the CPU Module, close the port before making any changes.

After making changes, remember to select *"Write PMC File", or "Save as"* from the file menu to save the file.

RETRIEVING THE PROGRAM

Once a program is loaded into the CPU, it can be retrieved in a similar manner to loading. Connect the communications cable to the PMC. From the Main Menu, click on "CPU Comm". Open the port. Move the cursor to "Retrieve from PMC CPU" and click. The program that is resident in the CPU Module will be retrieved into your computer.

Click "OK".
This will also retrieve all the information including module and channel labels. If need be, the file can now be saved to your hard drive, or floppy drive by clicking on the File menu and selecting "Write PMC File".

Once you have retrieved the file from the CPU, you can make changes to the existing program. Remember, that if the port is open, the changes will take effect as soon as you select "OK" in the screen where you have made the change. ***If you don't want the changes to take effect right away, close the port.*** If the port is closed while you make the changes, just open the port and select "Transfer to PMC CPU" to make them take effect.

IMPORTANT!!
SYNCHRONIZE THE PC AND PMC CPU

WHENEVER YOU CONNECT THE PC TO THE CPU, IT IS IMPORTANT TO SYNCHRONIZE THE TWO UNITS.

Open the port and either retrieve from the PMC CPU, or download a program from your computer. This will prevent the computer from running one program and the PMC CPU from running another.

If you wish to start with the program that is already in the vehicle, retrieve from the CPU.