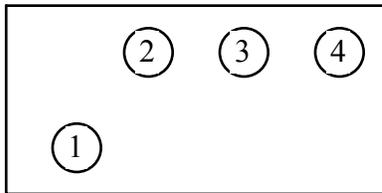# Notes On The Logger:

The logger logs constantly except when the batteries are disconnected and the charging and communications circuits are connected. Logger should be fully charged before it is connected to an application. The logger contains 1 Megabyte of non-volatile ram and can maintain its memory contents even in the event of a complete power failure, (i.e. data can always be recovered provided the memory has not already been erased). The logger can store over one year of data, and samples at a fixed rate of 15 minutes. Each sample will contain the date, time, and two pressures in kPA. Any communication between logger and computer requires a battery charger connected and a value of 14 volts at the logger end of the cable. Logger and computer communicate at a 9600 baud rate. Larger files may take a long time to download.

The logger is designed to operate on a low power budget. The logger should operate over a year if the batteries were fully charged at the start of test. When the charging cable is connected to the logger all sampling is suspended until the cable is disconnected and then all sampling will continue. When hooked up to download and charge, the communication and the charging lines must be hooked up to the same ground. The connection is as follows:

1) Ground
2) 14 volt line for chargers
3) Receive at Computer
4) Transmit at Computer

When the charging circuit is connected and communication between the logger and computer is established, any communications with the logger clock will not be successful until the next sample time. After the sample time communication with the clock can be successfully completed at arbitrary intervals. Maximum delay until clock is ready to communicate is fifteen minutes.

Software Procedure For HARTECH Logger

Installation:

Copy files from the floppy disk to your hard drive in the directory of your choice.
NOTE: This is a DOS program and will not function properly under Windows.

The Program:

Ensure that the logger is properly connected to the charger as well as your Personal Computer (see *Notes On The Logger* for connection diagram). Run the program by typing *PDL10* at the DOS command prompt. You will immediately be prompted for your comm. port. Use the arrow keys to select the correct port and press ENTER to accept. The main menu will then appear with the following options:

> 1) Set The Time And Date
> 2) Download Data
> 3) Erase Logger Memory
> 4) Exit Program.

1) Setting Time And Date:

The logger's time and date will be synchronized to the time and date of the computer connected. Once this option is selected the current computer time will be displayed. If this time is wrong you will have to reset the computer's time and try again. The current logger time will then be displayed with a synchronizing message followed by the current logger date with it's synchronizing message. The logger date and time will now have been set and you can press any key to continue. If the messages are not displayed within one second check the computer to logger connections and retry.

2) Downloading Data:

When downloading the logger data a file will be created in the same directory as the program. The file name will be displayed before any data is transferred from the logger to the computer. Please note that this file name is based on the number of previously download files in the directory and it will change accordingly. A message will then appear indicating that it is opening the logger's flash memory. It will then display the block number that it is currently reading. This is followed by the number of times a request for a block had to be retried. Once all the data has been downloaded successfully a download complete message will appear and you can press any key to return to the main menu. If The logger's memory file is not opened right away check the computer to logger connections and retry.

3) Erasing Logger Memory:

When this option is selected you will be prompted to confirm your desire to erase the logger's memory. This is followed by notifying you that all the data will be lost and prompt you for continuation. Answering no to any of the above responses will end the erasing of the memory. If it has been decided to continue with the erase an erasing memory message will be displayed. It requires about 15 seconds for the memory to erase to completion, will be confirmed by the logger, and an erase complete message will appear. And you can press any key to return to the main menu. If it is taking more than 30 seconds to get a erase confirmation check the logger to computer connections and retry.

4) Exiting Program:

If this option is selected the program will terminate immediately and you will be returned to the DOS command prompt.