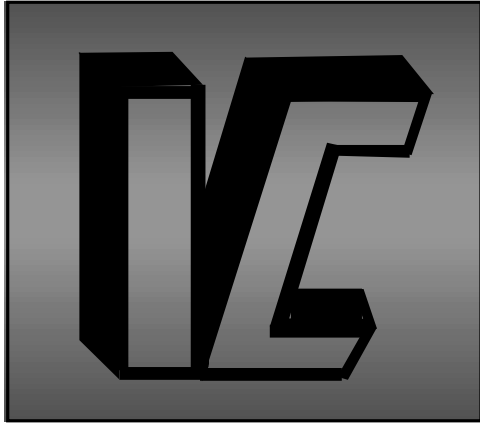




INVOCON INC.
INNOVATIVE CONCEPTS
IN SYSTEMS ENGINEERING

INVONET

USER'S MANUAL

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Software Installation Instructions

1. Create a working directory on your hard disk drive and install the Invonet software by executing the install command.

* Crystal Oscillator Frequencies

Network card 16.0 Mhz

Data acquisition card 2.0 Mhz, 2.4576 Mhz

User Instructions

A. Hardware Setup

1. Connect one end of the parallel cable to the operator node, the other to the parallel port of a PC. All units should be installed so that no antenna is within 20 cm of the user. This system must be installed by a trained installer.
2. Invoke the Invonet software by typing "Invetnet" and press enter. Turn on the power to the operator node. The screen should display the Invonet logo. Press any key to continue.
3. Turn on the power for any nodes you wish to be active in the network. Press F2 to select the remote nodes you wish to attempt to contact, then press escape. You will be prompted to "Go Configure Network". Press Y for yes, N for no. If you configure the network, the system will automatically contact the "Remote Data Gathering Units" (RDGU). Upon receiving a response, the screen will display the node number, the TX/RX signal strength, and the routing through the network. Press Esc to continue. You have now contacted and set up the RF link to each unit selected.
4. To enable the analog power of a particular RDGU, press "F5" and select the unit to power up. Upon receiving "Power Up Success" response, you may program the desired data channel for gain factor and set each unit for the desired sample rate.
5. To program the analog front end press "F4". Select the unit you wish to program from the menu by choosing the corresponding number. Choose the channel you wish to program then select the gain factor from the menu. Gain may differ between channels of one RDGU. From the menu select "Sample Rate" to display a menu of the possible sample rates, then select a sample rate. Once the selections are made, press enter to send the parameters to the RDGU. Wait for the unit to display "Channel Setup Ready". Proceed as above with the next unit, etc.

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Note: Channels which do not have a 350Ω strain gage attached or have a gage which is improperly installed will not allow that channel to be programmed. Channels which are setup successfully will be indicated by number directly below the RDGU number.

6. To calibrate a channel @ 100 μE or test a channel press “F8”.
7. To start data acquisition on selected channels, press the start bracket “[”. To stop the data acquisition and automatically retrieve all the data, press the end bracket “]”.

Data file names are generated in the following manner.

N2C31041 – Indicates Node 2, Channel 3, 10:41 a.m.

N3C41532 –Indicates Node 3, Channel 4, 3:32 p.m.

The files are stored in the current working directory. The user may load a data file to view by depressing the “L” key, then the file name. The last data file obtained on a particular channel may be loaded by entering “F” then node number, then channel number. For example, the sequence F53 will load the last data from channel 3 of node 5 on the screen.

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The following is a list of available functions.

F1 – Help Menu

F2 – Select Remote Units to Enter the Network

F3 – Deselect All Remote Units

F4 – Setup Channels

F5 – Power Up Analog Front End

F6 – Power Down Analog Front End

F7 – Reset Analog Front End

F8 – Calibrate or Test a Channel

F9 – Show Network Configuration

F10 – Configure/Reconfigure Network

“[“ – Stop Data Acquisition on Selected Channels

“]” – Stop Data Acquisition on Selected Channels

“v” – verify RF link between units.

“j” – Verify RF link for relayed units.

L – Load data file to view.

F – Find data file.

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