Global Positioning System (GPS): Operating the Roving Unit
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1. If you are interested in differentially correcting your GPS measurements (DGPS), turn on the base station in Room 201 Chartlon Hall before heading out to the field for data collection (follow the steps described in the accompanying handout on "Operating the GPS Base Station").

2. Hook up the two camcorder batteries to the receiver.

3. Push the "on/Esc" button on the Handheld Controller of the roving unit. You should see the "M>" prompt.

4. Press the "r" key followed by "Enter". You should see the following message on the screen "*ASHTECH Reliance*   Press any Key".

5. Press any button to see the next screen. The screen will display the message "Testing Com1..." momentarily before showing the next screen (the main menu) with the heading "ASHTECH FAMLog for PSION Workabout". This screen provides information regarding the power and memory status of the unit. It also provides a number of options at the bottom that may be selected using the "U" key and the underlined letter of the desired option (e.g., you could press "U" and "T" simultaneously to run SE<u>T</u>UP).

6. Press the "U" and "S" keys simultaneously (for PO<u>S</u>N) to check on your current position and the number of satellites in view. You will see a screen that provides the current coordinates of the unit's position in latitude, altitude, and elevation. You will also see the number of satellites used to arrive at the measurement (SVs) and the number of SVs in view (e.g., "SVs: 6/8" indicates that there are 8 available satellites with 6 being used for making the measurement). You need to make sure that there are at least 4 available satellites to continue.

7. To return to the main menu, select the <u>R</u>ETN option by simultaneously pressing the "U" and "R" keys.

8. Setup you session using the SE<u>T</u>P option by simultaneously pressing the "U" and "T" keys. You only to follow this step once per session.

9. Delete the old "SESSION NAME" using the "Del" key and enter a new "SESSION NAME", up to 8 characters. You do not need to make any additional changes in this screen.

10. To return to the main menu, select the "<u>O</u>K" option by simultaneously pressing the "U" and "O" keys.

11. When you are ready to start making measurements, run the FAMLog program by selecting the "FAM" option. This is accomplished by simultaneously pressing the "U" and "F" keys. You will see the "FIELD ASSET MANAGEMENT MAIN MENU" where you could log-in field measurements.

12. Select the "FEAT" (feature) option by simultaneously pressing the "U" and "F" keys. You need to select one of several available features (Generic Point, Generic Area, Generic line, etc..).

13. Using the arrow keys, highlight the desired feature. Select the highlighted option by simultaneously pressing the "U" and "L" keys ("LOG"). This will start data logging.

14. As the data is being logged, you would need to enter a "Description or attribute" for the current feature. Enter a short description for reference and select "OK" by simultaneously pressing the "U" and "O" keys.

15. If you are using the "Generic Area" feature, measurements will be taken until you select the "STOP" option by simultaneously pressing the "U" and "T" keys. If you have selected the "Generic Point" feature, you could return to the previous menu by selecting the "DONE" option after simultaneously pressing the "U" and "D" keys.

16. Repeat steps 12 to 15 as desired. To quit the "SELECT THE FEATURE" screen and return to the previous menu, select the "QUIT" option by simultaneously pressing the "U" and "Q" keys.

17. To return to the main menu, select the "RETN" option by simultaneously pressing the "U" and "R" keys.

18. To end session, select the "EXIT" option from the main menu by simultaneously pressing the "U" and "X" keys. Confirm you selection by pressing the "Y" key for "Yes". You should now see the "M>" prompt. At this point, you can turn the unit off by pressing the "Off" button on the Handheld Controller.

19. If you turned on the Base station in 201 Charlton for DGPS, make sure that you return to the laboratory to turn off the unit (follow the steps described in the accompanying handout on "Operating the GPS Base Station").

20. Run the "Reliance Processor" software in 201 Charlton to display the measurements (follow the steps described in the accompanying handout on "Processing GPS Data".