ProMark2 TRAINING

MODULE 4

FIELD SET-UP PROCEDURES

AIM OF MODULE 4

- **EXPLAIN BRIEFLY THE IMPORTANCE OF INSPECTING SURVEY WORKSITES PRIOR TO CONDUCTING FIELD OPERATIONS**
- **STATE THE IMPORTANCE OF LOCATING SURVEY BENCHMARKS AND SITE IDENTIFICATION REFERENCES**
- **IDENTIFY PROPER TRIPOD SET-UP PROCEDURES FOR GPS OPERATIONS**
- **SHOW THE METHODS FOR MOUNTING AND SETTING THE ProMark2 RECEIVER FOR STATIC SURVEY**
- **IDENTIFY AND REVIEW THE ProMark2 MODE AND MENU SCREENS**
- **IDENTIFY STEPS FOR LOADING AND STORING INFORMATION FOR FIELD DATA COLLECTION**

SITE PREPARATION TIPS

- **CONDUCT PHYSICAL OBSERVATION OF THE WORKSITE TO ENSURE "MAXIMUM SKY" AVAILABILITY FOR RECEIVING GPS SIGNALS**

- **NOTE WORK SITE AREAS THAT COULD CAUSE POTENTIAL RECEIVER SIGNAL INTERFERENCE PROBLEMS [i.e. METAL FENCES, TALL BUILDINGS, TREES, AUTOMOBILES, RADAR/COMMUNICATION TOWERS, ETC,.]**

- **ESTABLISH GROUND SURVEY BENCHMARKS [i.e. HUBS, LATHES, MAGNAILS, ETC,.] WHERE TRIPODS WILL BE POSITIONED TO SUPPORT FIELD SURVEY OPERATIONS**

- **ANNOTATE "SITE LOCATION" AND "SITE NAMES" FOR REFERENCE IN A SURVEYORS FIELD LOG**

- **FOR FURTHER INFORMATION PERTAINING TO CONSTRUCTING SOLID GPS SURVEY NETWORKS, REFER TO THE "PRACTICAL GPS SURVEYING MANUAL" ON THE ASHTECH 'FTP' SITE FOR MORE DETAILS**

TRIPOD SET-UP PROCEDURES

- **USE FIXED HEIGHT TRIPODS TO AVOID POTENTIAL ERRORS ASSOCIATED WITH GPS ANTENNA HEIGHT MEASUREMENTS**

- **POSITION TRIPODS OVER DESIGNATED SURVEY BENCHMARKS**

- **ATTACH TRIBRACHS IF STANDARD TRIPODS ARE USED. REMOVE CENTER BRASS MOUNTING ADAPTER FROM TRIBRACH**

- **CONNECT THE VERTICAL ANTENNA EXTENSION TO THE EXTERNAL ANTENNA. CONNECT THE ANTENNA CABLE TO THE ANTENNA. SCREW ON THE BRASS MOUNTING ADAPTER TO THE VERTICAL ANTENNA EXTENSION**

TRIPOD SET-UP PROCEDURES (Cont'd)

- **MOUNT ENTIRE ANTENNA ASSEMBLY TO THE TRIBRACH ASSEMBLY. TIGHTEN AND SECURE TRIBRACH MOUNTING ADAPTER**
- **SET ANTENNAS AS HIGH AS POSSIBLE FOR MAXIMUM SIGNAL RECEPTION AND FOR AVOIDING POTENTIAL SIGNAL INTERFERENCE PROBLEMS**
- **SET THE FEET OF THE TRIPODS WELL INTO THE GROUND SURFACE TO MINIMIZE SHIFTING. USE SAND BAGS TO WEIGH DOWN THE FEET OF THE TRIPOD DURING WINDY CONDITIONS**
- **ORIENT GPS ANTENNAS TOWARDS "TRUE" NORTH [NOTE: FIND THE MAGNETIC DECLINATION IN YOUR LOCAL AREA TO CONVERT FROM MAGNETIC NORTH TO TRUE NORTH]**
- **LEVEL AND PLUMB THE TRIPOD ASSEMBLY VIA THE TRIBRACH FOR ACCURATE ANTENNA POSITIONING**

MOUNTING THE ProMark2

- **ATTACH THE FIELD RECEIVER BRACKET ONTO THE TRIPOD AND TIGHTEN SECURELY**

- **INSERT THE ProMark2 INTO THE CRADLE AND ENSURE THE LOCKING CLAMP FIRMLY SECURES THE RECEIVER. [NOTE: THIS BRACKET PROVIDES THE MECHANICAL SUPPORT AND ELECTRICAL CONTACT INTERFACE WITH THE EXTERNAL BATTERY PACK]**

- **ATTACH THE GOLD PLATED ANTENNA CONNECTOR OF THE EXTERNAL ANTENNA CABLE THROUGH THE EYELET OF THE FIELD RECEIVER BRACKET AND LOCK FIRMLY INTO THE RECEIVER ANTENNA SOCKET**

- **WARNING! CONNECTING THE EXTERNAL ANTENNA CABLE TO THE ProMark2 WITHOUT USING THE RECEIVER MOUNTING BRACKET CAN INVALIDATE THE UNIT WARRANTY**

ProMark2 FAQ's

Q: What is the little arrow on the top of the antenna?

A: This is an orientation mark for the antenna. Prior to surveying, all antennas should be oriented the same direction to optimize the accuracy of the system. The arrow should be pointed north.

Q: Can I use other GPS antennas with the ProMark2?

A: No! The ProMark2 uses a specially designed antenna that is always shipped with the receiver.

Q: Why is the ProMark2 hard to pull out of the cradle?

A: IMPORTANT! Be sure to disconnect the antenna cable on the back of the unit 'first' before removing the unit from the mounting bracket. Failure to remove the antenna cable before removing the unit from the cradle may result in damage to the antenna cable connector

GO TO MODULE FIVE