



## Locator Operations – Level 1 Syllabus

### Course Information

<b>Organization</b>	Kansas Institute of Underground Technology
<b>Course Number</b>	HE 120
<b>Credits</b>	1
<b>Contact Hours</b>	15 – 2 days
<b>Instructor</b>	Lowell Marsh and Don Thomas
<b>E-mail Address</b>	lmarsh@ncktc.edu
<b>Course/Faculty Website</b>	undergroundtech.com
<b>Office</b>	North room in Diesel
<b>Campus</b>	North Central Kansas Technical College
<b>Address</b>	3033 Highway 24, PO Box 507
<b>City/State/Zip</b>	Beloit, KS 67420
<b>Office Hours</b>	Monday - Friday 8:00 AM-3:00 PM
<b>Phone</b>	800-658-4655 or 785-738-9012
<b>Meeting Times/Location</b>	Meeting times and Locations are to be announced.

### Description

Locator operation is designed to equip participants with knowledge and skill development for operating locator equipment according to the standards of the equipment manufacturer's operator's manual.

### Textbooks

Charles Machine Works, Ditch Witch. *Ditch Witch 900 R/T Operator's Manual*. CMW Issue 3.0 053-1118

### Core Abilities

- A. Illustrate the three locator functions in the active mode demonstrate the direct connect, induction and broadcast method of locating utilities assigned. Complete a passive locate of utilities.

### Program Outcomes

- A. Perform locates using the Ditch Witch model 950 receiver and transmitter of assigned area identifying all utilities in the assigned marking area designated for construction area.
- B. Participant will demonstrate ability to utilize various functions and controls of operator equipment.
- C. Participant will explain "Active Signal" and "Passive Signal" theory.
- D. Participant will demonstrate a "Passive Locate" technique.
- E. Participant will list the three ways of placing "Active Signal" on a line.
- F. Participant will demonstrate proper way to locate prescribed buried services during Field Activity.

## Competencies

1. Participants will demonstrate the ability to properly connect the locator equipment to a prescribed target line.
2. Participants will demonstrate the ability to locate and take a depth estimate of the prescribed target line.
3. Participants will demonstrate the ability to change transmitting frequencies of the locator equipment and match it with the receiver equipment.

## Grading Information

### Grading Rationale

Participation in lectures and class participation in lab will determine 50% of the score.

The following measurable learning objectives will serve as the basis for evaluation of participant performance during this course:

1. Participants will demonstrate the ability to properly connect the locator equipment to a prescribed target line.
2. Participants will demonstrate the ability to locate and take a depth estimate of the prescribed target line.
3. Participants will demonstrate the ability to change transmitting frequencies of the locator equipment and match it with the receiver equipment.
4. Complete a written exam demonstrating knowledge of locator method, theory and terms discussed in the lectures.

### Grading Scale

- A
1. Participant shall demonstrate the skill of connecting locator equipment, (i.e. direct connect wire and ground, induction antennae and broadcast method) and explain each method.
  2. Participant shall demonstrate ability to locate and take a depth estimate to the prescribed target line.
  3. Participant shall demonstrate the ability to change transmitter frequencies on the locator equipment and match the receiver frequency for making an accurate reading on a target line. And explain what method is most efficient and effective with the prescribed target line.
  4. Complete written exam with a score of 90% or higher.
- B
1. Participant shall demonstrate the skill of connecting locator equipment, (i.e. direct connect wire and ground, induction antennae and broadcast method)
  2. Participant shall demonstrate ability to locate and take a depth estimate to the prescribed target line.
  3. Participant shall demonstrate the ability to change transmitter frequencies on the locator equipment and match the receiver frequency for making an accurate reading on a target line.
  4. Complete written exam with a score of 80 to 89%.
- C
1. Participate in demonstrating operating locator equipment and placing known frequencies on a target line with infield operation
  2. Participant shall demonstrate knowledge of setting equipment up on a target line and trace the line to a target beginning and ending with the same recognized target (i.e. cable, gas line, phone, etc.)
  3. Complete written exam with a score of 70 to 79%
- D
1. Participate in field activities demonstrating the proper use of locator equipment
  2. Complete written exam with a score of 60 to 69%
- F
1. Participant failed to demonstrate proper use of locator equipment
  2. Complete written exam with a score less than 60%

## **Guidelines for Success**

### **Reference Material:**

The 950 TR Tracker Operator's Manual and materials will be available in the classroom. Video and CD training modules, power point presentations and operator manuals. Instructions (located in the classroom) and project and checklist forms for tracking progress will be made available.

### **Due Dates for Assignments:**

There is no homework or text book with this course. The assignments are during class time for the student to accomplish skill assessment with equipment and complete lessons for a grade.

### **Date of Final Examination:**

The final may be given after the allotted hands on training of the equipment. A written exam of the material covered in the training will consist of the final.

### **Late Assignment Policy:**

Assignments are hands-on and assigned while at the class. Late assignments will be according to attendance of the class.

### **Inclement Weather Policy:**

Students that miss the assigned allotted time are to notify the instructor no later than 30 minutes prior to the schedule event.

### **Services for Students with Disabilities:**

Students, with either a permanent or temporary disability, who require accommodation for more than one week, should request services by contacting the Student Services Office. Students requesting accommodations must present written documentation from a certified professional, which should include a statement identifying the disability as well as recommendations for accommodations. Contact, at least one month in advance, the Dean of Student Services (785) 738-2276 to make requests for accommodations.

### **Policy Regarding Academic Dishonesty:**

Academic dishonesty of any kind will not be tolerated while attending North Central Kansas Technical College. The examples of academic dishonesty are plagiarism, cheating, falsification or forgery of any assignments or examinations. Any student who participates in any form of academic dishonesty must accept the consequences of their actions. These consequences may include but are not limited to the following (a) verbal or written warning, (b) lowering of grade for assignment/activity, (d) failure of class assignment or exam.

### **Reading Assignments and Dates Due:**

Reading assignments will be during class. Each student is expected to read the student guide located on the table. Follow the operator's manual instructions and activate the electronic devices.

### **Writing Assignments and Dates Due:**

There are no specific writing assignments in this class. The class is hands-on with the equipment operation during class time. The projects offer a planning session to complete a pre-plan form for the project. This will then be a plan for recording results. A final exam may be given for student assessment.

### **Research Assignments and Dates Due:**

There is no specific research assigned with this class. However, any constructive suggestion for improvement or development that may apply to this class is welcomed. Any suggestions will be taken under advisement for adding to the training program.