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COMPUTER-MANAGED INSTRUCTION FOR TANK COMMANDERS:
19K BNCOC MICROTICCIT TUTORIAL AND REFERENCE MANUAL
FOR INSTRUCTORS

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for

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20. Abstract (continued)

task-specific remedial training for students entering the course.

This report contains the manual used as a reference tool by BNCOC instructors who use the CMI system. The manual contains training materials and a suggested workshop agenda which can be used to provide an introduction and overview of MicroTICCIT and the CMI system.



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PREFACE

The Fort Knox Training Technology Field Activity (TTFA), a consortium within the Department of the Army consisting of representatives from the Training and Doctrine Command (TRADOC), the United States Army Research Institute (ARI), and the United States Army Armor Center (USAARMC) has been established to explore and apply training technologies to the Army's training programs. The specific focus of the Fort Knox TTFA is the improvement of the effectiveness and efficiency of training provided through the Basic Noncommissioned Officer's Course (BNCOC) for training M1 tank commanders (MOS 19K).

One of the major activities undertaken by the Fort Knox TTFA is the development of a computer-based instruction system for 19K BNCOC. The system includes a computer-managed instruction (CMI) system that relates to the administration and management of the 19K BNCOC course, and computer-assisted instruction (CAI) which provides task-specific remedial training necessary for students entering the 19K BNCOC course.

This manual, entitled **"19K BNCOC MicroTICCIT Tutorial and Reference Manual for Instructors"** is intended to serve as a reference tool for BNCOC instructors who use the CMI system. In addition, the manual provides training materials and a suggested workshop agenda which can be used to provide an introduction and overview of MicroTICCIT and the CMI system.

WORKSHOP INTRODUCTION

PURPOSE: The purpose of the workshop is to prepare 19K BNCOC instructors for using the MicroTICCIT System and the 19K BNCOC courseware for both instructional and administrative tasks.

OVERVIEW: The training specified for 19K BNCOC instructors is divided into two types of sessions:

- A large group instructional session during which basic concepts will be explained, and
- Individual workshops during which instructors will learn hands-on procedures at the MicroTICCIT terminal.

WORKSHOP MATERIALS: Each instructor will receive a copy of The 19K BNCOC MicroTICCIT Tutorial and Reference Manual for Instructors for use during the workshop. This Manual will serve as a reference for instructors as they use MicroTICCIT in BNCOC.

Part One of the Manual is a general introduction and overview of MicroTICCIT and its uses in 19K BNCOC. Part Two is organized as a reference.

A second manual, The 19K BNCOC MicroTICCIT Site Manager and Operator's Guide, has been developed for 19K BNCOC TICCIT operators. This manual includes technical information that may be of interest to some instructors. Other manuals are provided with MicroTICCIT System II by Hazeltine Corporation which may be used for general reference.

TRAINING OBJECTIVES

At the conclusion of the training, instructors should be able to:

1. Identify the parts of the MicroTICCIT system including both hardware and software components. [Pages 2-4]
2. Identify the courseware on MicroTICCIT designed for 19K BNCOC. [Pages 6-10, 52]
3. Identify the roles of instructors, TICCIT proctors and TICCIT operators. [Page 5]
4. Describe the TICCIT registration process and its relationship to the operation of the 19K BNCOC CMI System and MicroTICCIT courseware including each of the following:
 - a. Characteristics of TICCIT student identification numbers, user modes, authorization codes, course names and section numbers; [Pages 13-14]
 - b. Types of passwords used in the TICCIT environment. [Pages 13,15]
5. Identify the types of information which can be collected and retrieved using the TICCIT system utilities. [Pages 17-18]
6. Demonstrate the ability to log themselves and others on and off of MicroTICCIT. [Pages 22-23, 51]
7. Demonstrate the ability to access Course 0, Course 19, and Course 20. [Page 23]
8. Demonstrate the ability to access restricted BNCOC tests using the Proctor password. [Pages 26-27]
9. Demonstrate the ability to locate given tasks and tasks clusters of the 19K BNCOC course using Course 19. [Page 24]
10. Demonstrate the ability to access the Instructor Menu and to access information using the Student Progress Report utilities. [Pages 37-40]
11. Demonstrate the ability to use the MicroTICCIT keyboard and the light pen. [Pages 41-43]
12. Identify the appropriate action for TICCIT feedback messages. [Pages 36, 46]
13. Demonstrate the ability to use TICCIT Attention and Proctor functions. [Pages 47-48]
14. Demonstrate the ability to select and load appropriate videodiscs. [Pages 49-50]

15. Identify the 19K BNCOC tasks currently on MicroTICCIT. [Page 52]
16. Bring the TICCIT system UP. [Pages 20-21] (Only the operator brings TICCIT DOWN.)
17. Use Course 20 to enter off-line BNCOC test results and to print the BNCOC Master Record. [Pages 32-35]

Suggested Training Schedule

- Day 1** The workshop leader will install 19K BNCOC Courseware and CMI System with the site's TICCIT operator and register workshop participants.
- Day 2**
- Morning** Group orientation to MicroTICCIT and 19K BNCOC courseware including the CMI System
- Afternoon** Individual workshops with instructors*
- Day 3** Continue individual workshops with instructors*
- Day 4** Workshop for the site's TICCIT operator
- Day 5**
- Morning** Wrap-up group session; Review of MicroTICCIT workshop
- Afternoon** Workshop sessions for instructors and TICCIT operators
-

* Schedule 6 sessions per day, 3 in the morning, 3 in the afternoon.

WORKSHOP OUTLINE: GROUP SESSION

Part I of this manual will be used for the Group Session. The following topics are addressed:

1. Parts of the MicroTICCIT System
2. More About MicroTICCIT
3. Roles of MicroTICCIT Users
4. 19K BNCOC Courses on MicroTICCIT and Course 0
5. TICCIT Registration
 - Identification numbers and User Modes
 - Authorization levels and User Passwords
 - Course Numbers and Section Numbers
6. The Proctor Password
7. TICCIT Course Structure
8. Student Performance Data and Reports
9. Other Kinds of Information
 - Logging Tapes
 - NOTES function

WORKSHOP OUTLINE: INDIVIDUAL SESSIONS*

Instructors will use Part II of this Manual during individual sessions.

All instructors should be registered for Course 8, Course 19, and Course 20 prior to the workshop. The following topics are addressed in the individual sessions:

1. Bringing TICCIT Up
2. Logging On Procedures
3. Overview of 19K BNCOC Course 19 using the On-line Tutorial
4. The 19K BNCOC Tests; Accessing Restricted Tests
5. Overview of the Diagnostic Tests and Remedial Training
6. Using the NOTES key
7. Overview of the CMI System, Course 20, using the On-line Tutorial
8. Overview of Course 0, the Instructor Menu, and the Student Progress Report Menu
9. Logging Off Procedures
10. Other topics as requested by individuals

*** Participants are expected to have reviewed The 19K BNCOC Tutorial and Reference Manual for Instructors prior to the individual sessions.**

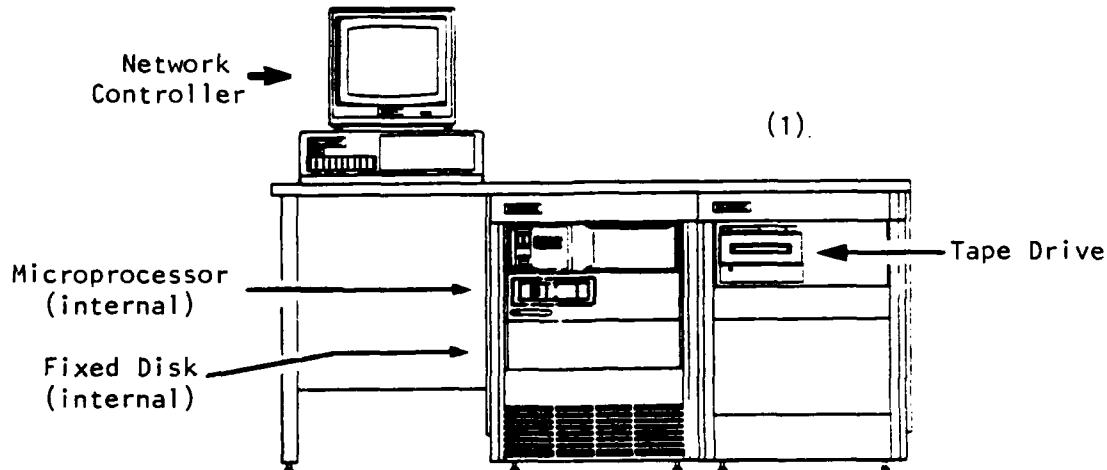
PART ONE

**THE 19K BNCOC MICROTICCIT
TUTORIAL**

PARTS OF THE MicroTICCIT SYSTEM

The Data General Host The system designated for use in 19K BNCOC is the MicroTICCIT System II. The system consists of:

- Data General's Eclipse S/20 microprocessor
- One 50 Megabyte hard (fixed) disk for storing programs and data
- A console or terminal (the Dasher model) which the TICCIT operator will use for communicating with the Data General System (not pictured; normally in position 1)
- A tape drive
- The MicroTICCIT Network Controller
- Other MicroTICCIT workstations (not pictured)



Data General's Operating System

Data General's operating system is RDOS (Real-Time Disk Operating System.) A real-time operating system can concurrently monitor and control multiple events occurring at the same time, e.g., students using the same courseware at several different workstations.

You know that RDOS is running and ready to accept commands when you see the **R** prompt at the Data General terminal.

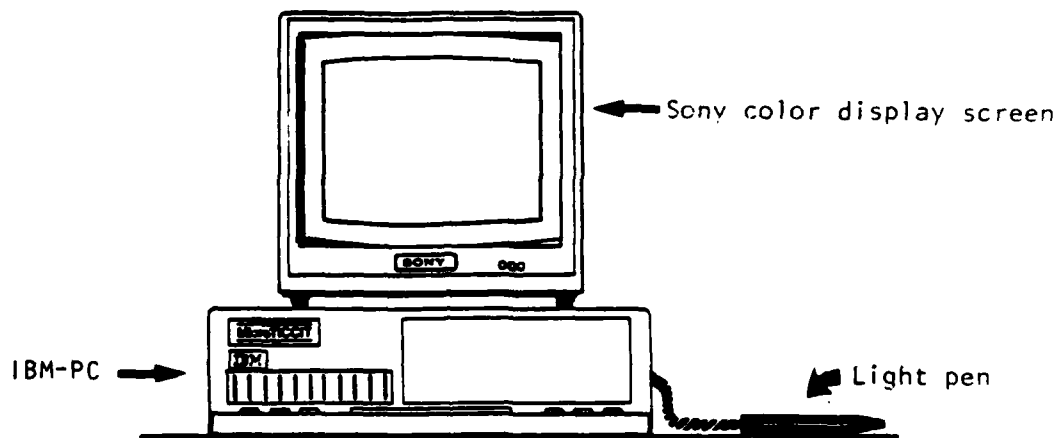
Command Line Interpreter The Command Line Interpreter (CLI) is a software interface that allows the TICCIT operator to communicate with the computer using a relatively simple set of commands. A TICCIT version of the CLI is available to operators at the MicroTICCIT workstations.

The MicroTICCIT Workstation The MicroTICCIT workstation consists of:

- an IBM-PC (with one or two disk drives),
- a Sony color display screen,
- a light pen, and
- a Sony videodisc player (not pictured).

The workstation is designed and configured to display TICCIT courseware. It can also be used as a terminal by TICCIT authors and operators.

One MicroTICCIT workstation is called the **Network Controller**. This workstation will be located near the Data General Host. It will be used by the TICCIT operator to bring TICCIT Down. Students and instructors can also use this workstation to access courseware.



The TICCIT Operating System (MPOS) Bringing TICCIT "up" means to transfer control of the computer and the disk from RDOS to MPOS, the TICCIT operating system. We usually just refer to TICCIT's operating system as TICCIT. To run TICCIT courseware and TICCIT utility programs, the operator will bring TICCIT "UP." You know that TICCIT is up and ready for action when you see the "?" prompt on the Data General console screen and the TICCIT start-up screen is displayed at the MicroTICCIT terminal.

MORE ABOUT MicroTICCIT

MicroTICCIT has two authoring languages used to develop courseware.

ADAPT The high level programming language that operates in the TICCIT environment is ADAPT, an authoring language developed to produce courseware. ADAPT can be used for other purposes, such as file management, but its main purpose is to write courseware.

APT A second programming language is available to authors called APT. This language is used mostly to create TICCIT maps and certain files used for TICCIT tests.

MicroTICCIT also has utility programs, software that helps users perform a variety of tasks.

Off-Line Utilities The TICCIT manuals provided by Hazeltine refer to certain programs as off-line utilities. The TICCIT operator will need to use these utilities to perform certain tasks at the MicroTICCIT site. An off-line utility refers to TICCIT programs that run under RDOS and must be called up at the Data General console, not the MicroTICCIT terminal. An off-line utility, therefore, is one that only runs when TICCIT is DOWN and RDOS is UP.

On-line Utilities There are many TICCIT programs or utilities which can be run at the MicroTICCIT terminal. For example, the operator can dump a file to tape or load a course at the MicroTICCIT terminal using either the TICCIT CLI, the special File Utilities Menu, or various other utilities which are available for authors, instructors, or operators. The Student Progress Reports are examples of on-line TICCIT utilities. In this context, we say on-line because we mean that TICCIT is UP and RDOS is DOWN.

On-line and Off-line Courseware When we refer to instructional materials, we also use the terms on-line and off-line. In this case, on-line instruction refers to instruction that occurs at the MicroTICCIT terminal. Off-line, however, means not on MicroTICCIT, e.g., in the classroom or in the field.

ROLES OF MicroTICCIT USERS

Students are one group of MicroTICCIT users. In 19K BNCOC, some tasks will be taught using MicroTICCIT courseware. BNCOC students will go to the MicroTICCIT lab and get instruction and take tests. Sometimes students will get instruction in the classroom and will use the MicroTICCIT only to take tests. Much of the instruction and testing will continue to take place in the classroom or in the field without using MicroTICCIT at all.

Instructors are other group of MicroTICCIT users. They will use MicroTICCIT to enter the results of student tests taken in the classroom or in the field.

When instruction and testing of students take place on MicroTICCIT, the system will collect and store performance data. When instruction and testing take place in the classroom or in the field, however, MicroTICCIT has no record of student performance. Instructors and other authorized personnel will enter the results of these off-line tests onto MicroTICCIT.

Proctors are another type of MicroTICCIT user. Someone must be on duty in the MicroTICCIT lab to help students use MicroTICCIT. This person must be knowledgeable about the 19K BNCOC course content and the structure of the course on MicroTICCIT. Proctor is a term used to name such a person. Sometimes the BNCOC instructor will be the Proctor. Sometimes the TICCIT operator will be the Proctor.

Proctors need to know how to give students access to restricted tests. They need to know how to bring TICCIT UP, how to load videodiscs, and where to find related course materials. Proctors need to know how to use MicroTICCIT, but they do not need technical knowledge about the operating systems or the programming languages on the system. Ordinarily, they will not be expected to bring TICCIT DOWN, to make backup tapes, and other such tasks. Those jobs will be done by the TICCIT operator.

The TICCIT Operator is the technical person. The operator controls the registration process. He or she loads the TICCIT courseware. Sometimes the operator may need to make modifications to the courseware. An operator needs to know how to use the ADAPT and APT programming languages. Operators need specialized knowledge of the TICCIT operating system (MPOS). They also need to know how to use RDOS, the Data General operating system. TICCIT operators perform daily back-ups of the system and do other routine tasks.

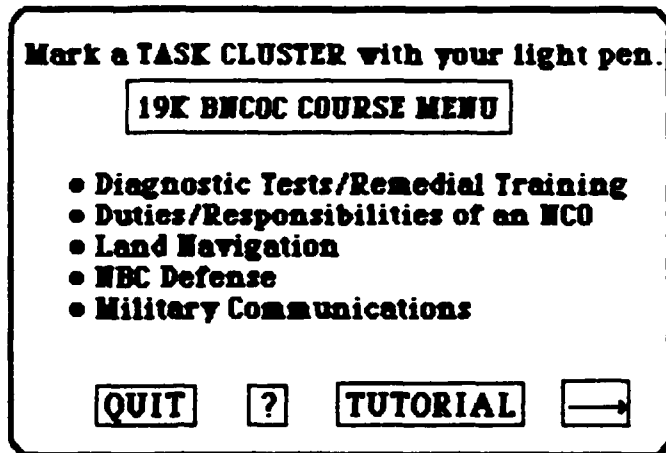
A TICCIT Site Manager may be needed in large MicroTICCIT operations. This person manages the site, sets up procedures, and assigns tasks to operators and proctors. In a smaller site, the TICCIT operator performs the tasks of the site manager.

19K BNCOC COURSES ON MICROTICCIT

Course 19

Course 19 on the Ft. Knox MicroTICCIT system is titled "19K BNCOC for Tank Commanders." This TICCIT course includes the menus that will allow you to access all of the TICCIT courseware developed for 19K BNCOC.

The Main Menu lists all of the 19K BNCOC Task Clusters including Cluster L, Diagnostic Tests and Remedial Training.



ICONS

At the bottom of the MicroTICCIT screen, there are symbols called icons. On the Main Menu shown above, the icons are QUIT, ?, TUTORIAL, and the arrow box. Touch these icons with the light pen. These icons are explained in detail in the "Reference Section" of this manual.

On-line Tutorials

There are two on-line tutorials: one designed for students, and one for instructors. Both tutorials explain how to use a light pen and how to move around the course using the menus. The instructor tutorial includes special topics, such as providing access to restricted tests, required by those users. Access the Tutorial by touching the TUTORIAL icon with the light pen.

Task Cluster Menus

After you select one of the Task Clusters from the BNCOC Course Menu, you will see a sub-menu that lists all of the tasks in that cluster. As an example, the Cluster B Menu is shown below. A complete list of the courseware and tests planned to be on-line are included at the end of this manual. (See "What's On Line?")

Mark an option with your light pen.

Cluster B: NCO Responsibilities/Training

- Duties & Responsibilities of an NCO
- Conduct Performance Counseling
- BTMS
- Physical Fitness Instruction
- MILES

? MENU

MicroTICCIT Tests

MicroTICCIT on-line tests conform to the general 19K BNCOC requirements. A student may take a test a maximum of three times. TICCIT will keep track of how many times each user takes a test and will refuse to give the test to the same user a fourth time.

MicroTICCIT tests are "restricted," i.e., a student may not access a test without a PROCTOR's help. Instructions for giving students access to tests are in the "Reference Section" of this manual.

Diagnostic Tests and Remedial Training

19K BNCOC's Task Cluster L includes instruction and testing of those tasks determined to be prerequisite to the 19K BNCOC course. The 19K BNCOC course on MicroTICCIT includes on-line testing and training for five of those prerequisite tasks.

Cluster L Menu

When you select the Diagnostic Tests and Remedial Training Menu, a sub-menu (shown below) offers three choices:

Mark an option with your light pen.

19K BNCOC

Diagnostic Tests/Remedial Training

- **Diagnostic Tests**
- **Remedial Training**
- **Off-line Prerequisite Tests**

? **MENU**

Diagnostic Tests

The tests for the prerequisite tasks are called diagnostic because they are intended to measure the student's existing knowledge and/or skills. The student takes this test **prior to having received instruction** (training).

Remedial Training

The training material is called remedial because it is intended to remediate the student's lack of the knowledge and/or skills measured by the tests. A student does not see this instruction **unless he fails** the diagnostic test.

Student Records

TICCIT stores each student's test results (Pass/Fail), the number of test attempts (1 to 3), and the student's score. TICCIT cannot store results of off-line testing so those results must be entered by the instructor. Instructors will use TICCIT Course 20 to enter off-line test results. Course 20 is described below.

Videodisc

A videodisc has been developed to support the TICCIT courseware for the diagnostic tests and remedial training. The videodisc **must be** loaded before accessing this courseware. Instructions for loading videodiscs and using the videodisc player are included in the "Reference Section" of this manual.

Using the Light Pen Students will make all responses using the light pen. In each case, students mark the appropriate screen location with the light pen. TICCIT records the information and determines whether the student has responded appropriately. See "Using the Light Pen" in the "Reference Section" for more information.

Using the Keyboard Only instructors will need to use the MicroTICCIT keyboard. You will use the keyboard to log students on the system and to give them access to restricted tests. See "Using the Keyboard" in the "Reference Section" for more information.

Course 20

TICCIT Course 20 is part of the 19K BNCOC Computer Managed Instruction (CMI) System. This course includes the programs that will allow you to enter test results from instruction conducted off-line (i.e., not on MicroTICCIT.) Since most of the 19K BNCOC tasks are taught and tested either in the field or in the classroom without using MicroTICCIT, you will be entering most of the test results using this course.

Main Menu

The Main Menu for Course 20 offers the five choices shown below.

Mark an option with your light pen.

MAIN MENU		
19K BNCOC CMI SYSTEM		
•	Identify Course and Section	
•	Create/Update Master Record File	
•	Review CMI Roster	
•	Enter Off-Line Test Results	
•	Print BNCOC Reports	
QUIT	?	TUTORIAL

Course 20 Tutorial

From the Main Menu you can access a tutorial that will provide complete on-line instruction for Course 20. Just touch the **TUTORIAL** icon with the light pen.

TICCIT Course ● Instructors, authors, operators, and programmers will be registered in a TICCIT course called **Course** ●. If you log on to this course, you will reach the Supermenu which lists several sub-menus:

```

Supermenu

1. Author Menu
2. Operator Menu
3. Programmer Menu
4. Instructor Menu
5. Student Menu

Menu Page 1 Type number and press enter. [ ]

```

Your authorization level determines which sub-menus you may access. The highest security level is a Systems Programmer (SY). Users with that authorization code may access any part of the system.

Author Menu

The author's menu includes the ADAPT editor and the graphics editor and other utilities needed by authors. An instructor would only use this menu to develop or modify MicroTICCIT courseware. ADAPT training is required.

Operator Menu

Only TICCIT operators should have access to the Operator Menu where the Registration Menu and other important utilities are located. These utilities should never be used by people who do not know what they are doing, particularly when a course is being used by students during a BNCOC cycle. Many unpleasant things can happen such as completely wiping out the student performance data for an entire class, or making all the courseware inaccessible.

Programmer Menu

The programmer menu has utilities that will only be used by TICCIT operators with additional technical training.

Instructor Menu

Instructors will need to access the Instructor Menu to view Student Progress Reports. The Instructor Menu is described in detail in the "Reference Section" of this manual.

Student Menu

The lowest authorization code is Student (ST). These users can access the Student Menu and courses for which they are registered. The Student Menu includes games and access to the MicroTICCIT mailbox. While in a course, pressing **ATTN** and typing X allows a user to access the student menu.

TICCIT REGISTRATION

Introduction There is probably nothing more important to understanding TICCIT and successfully managing a MicroTICCIT site than understanding registration. To use MicroTICCIT, you must be registered in at least one course. Only a TICCIT operator should register users in a course.

The User ID When users are registered in a TICCIT course, the operator assigns each one a unique ID number which has from 1 to 9 digits. You will always use the same ID number no matter how many courses you are registered in. You can be registered in a maximum of ten courses. You will always enter this ID number when you log yourself on MicroTICCIT. When you log a student on MicroTICCIT, you will use the student's ID number.

User Password During registration, you may be assigned a 4 character password. If you have a password, you must enter it when you log on. User passwords provide some degree of protection against other users logging on to a course using a false ID and completing lessons or taking tests as that user. However, in an environment such as 19K BNCOC where students will be logged on by instructors and where tests are restricted, a password is probably more trouble than it's worth. It is not recommended that passwords be assigned to users other than TICCIT operators.

User Modes During registration in each course, the operator will assign a user "mode." The two most common modes are student and instructor. The mode is extremely important to the proper use of the 19K BNCOC courseware and the CMI system. All student users must be assigned a student mode because TICCIT only collects performance data for student users. No performance data are collected by the system for users registered in the instructor mode. All BNCOC instructors will be assigned the instructor mode in order to be able to access the 19K BNCOC CMI utilities (off-line data entry, print Master Record). A user may have a different mode for each course in which he is registered.

Authorization Code In addition to a user "mode," the operator also assigns each user an authorization code. This code determines which sub-menu on the Supermenu a user may access. For example, a student will be given an ST (student) code. He can only access the Student Menu and other courses for which he is registered. An instructor will be assigned an IN (Instructor) code. He can access the Instructor Menu. Each user may have different modes, but only one authorization code.

Course Number During the registration process, users are assigned to a specific TICCIT course. Users must enter this number when they log on. A course number can be from 1 to 3 digits. The 19K BNCOC course has been assigned the number "19." The Off-line Data Entry and Print Master Record utilities are part of TICCIT Course 20. Course numbers are assigned arbitrarily by authors during the development process and could be changed by the TICCIT operator. No two courses can have the same number, of course.

Section Number Students must be enrolled in a section in order to use the 19K BNCOC CMI System. A student can only be registered in one section for each course. Instructors are not enrolled in a section as no data will be collected about their actions on the system.

Sections are numbered from 00 to 99. Thus, up to 100 different sections of students could be enrolled in a single TICCIT course.

Review

- Every user may be enrolled in from 1 to 10 courses.
- User IDs are from 1 to 9 numbers.
- A 4 character user password is optional and not recommended for student users.
- Students are assigned a mode during registration. In 19K BNCOC students must be assigned a student mode to use Course 19. Instructors can be registered in Course 19, but they must be assigned an instructor mode.
- Each user is assigned an authorization code. This code determines which TICCIT submenus a user may access.
- Course numbers are 3 digit.
- Section numbers range from 00 to 99. Although a section number is optional on MicroTICCIT, the 19K BNCOC students must be enrolled in a section to use the 19K BNCOC CMI system.

The PROCTOR PASSWORD

Introduction The word **proctor** can be used in two different ways. Proctor is the term used to describe the person on duty in the MicroTICCIT lab who helps students use MicroTICCIT. Proctor is also used to describe a set of TICCIT functions used to perform certain actions, such as giving students access to restricted tests.

The PROCTOR password is from 1 to 6 characters (upper or lower case). Each user password can be different, but there is **only one Proctor Password** on the system at any given time.

Instructors will use the Proctor password to access proctor functions for unauthorized users. An author or instructor who is logged on a course may directly access the PROCTOR functions without using the passwords. Students, however, cannot. BNCOC instructors will use the PROCTOR password to give students access to restricted tests.

Changing Passwords Both types of TICCIT passwords (user and proctor) may be changed and **should be changed** at regular intervals by the TICCIT operator at each site. User passwords can be changed using the Registration Editor. A TICCIT utility is provided to change the PROCTOR password. Students can change their own passwords using an option on the Student Menu.

TICCIT COURSEWARE STRUCTURE

All TICCIT Courseware has a hierarchical structure:

COURSE, UNIT, LESSON, SEGMENT.

A TICCIT course is divided into units;
units are divided into lessons;
and lessons are divided into segments.

TICCIT labels are used to identify parts of the course in the Student Progress Reports. Test results for Unit 1, Lesson 1 would be identified by TICCIT as: 1.1.

Summary

- A TICCIT course can have a maximum of 30 units.
- A unit can have from 1 to 30 lessons.
- A lesson can have any number of segments.

STUDENT PERFORMANCE DATA AND REPORTS

When a student is registered into a MicroTICCIT course, TICCIT creates a data file to store his performance records in that course.

This file stores information such as:

- pass/fail test results,
- number of test attempts made,
- test scores, and
- time spent in a course, each unit, and each lesson.

TICCIT has a utility called **STUDENT PROGRESS REPORTS**. BNCOC instructors can access this utility from the Instructor's Menu. Information about the students' progress, both individually and as a class can be displayed on the MicroTICCIT screen. You can also print these reports using the system's printer.

To access student records, you must know the course number and the section number of your class. To access the records of an individual student, you must know his ID number.

• Of course, TICCIT can only store performance data when the student completes instruction or tests at the MicroTICCIT terminals.

Off-Line Test Results will be entered at the MicroTICCIT terminal using Course 20. Instructors will enter both test results (GO or NOGO) and test attempts (1 to 3) directly into the user's data file. Course 20 does not store the student's score.

You can print the **BNCOC Master Record** using Course 20. TICCIT only produces a report of student performance data when students use MicroTICCIT. Much of the 19K BNCOC coursework will be conducted in classrooms or in the field. Instructors need a report that shows all of the 19K BNCOC performance data in the BNCOC Master Record format.

Course 20 reads all of the information in the students' data files. It gathers results of both on-line coursework and the off-line test results entered by the instructor. These data are stored in a file on the disk which can be printed from the MicroTICCIT terminal using the system's line printer.

OTHER KINDS OF INFORMATION

Logging Tapes can be used to gather information about every student response while they are logged on MicroTICCIT. These data are used to produce ITEM ANALYSIS reports.

An ITEM ANALYSIS report provides information about group performance on individual items of a test or activity. Instructors can find out which items are missed most frequently, for example.

To collect logging data, the TICCIT operator must place a tape in the system's tape drive and indicate to the system that logging is desired. TICCIT will then collect and store data automatically.

Instructors will need assistance from the TICCIT operator to convert these data into an ITEM ANALYSIS report.

If you want to collect information about a course from the users, you can collect NOTE data. Users press the NOTE key on the MicroTICCIT keyboard. TICCIT displays a special screen and the user types his comment. The user can leave the message SIGNED or UNSIGNED. TICCIT stores the user's location in the course and the message. The user is then returned to the course and may continue instruction.

A NOTES data report lists all of the comments typed by users. It identifies the course location where the comment was made. You can display the report on the screen or print it out.

Part Two

**THE 19K BNCOC MICROTICCIT
INSTRUCTOR'S REFERENCE**

BRINGING TICCIT UP

Introduction

When you come into the TICCIT lab, check the MicroTICCIT terminal display. The screen display tells you whether TICCIT is UP (ready for action) or DOWN.

If the screen is dark, you can press the **ATTN** key. If the display does not appear, the terminal is probably turned off. Turn it on using the **ON/OFF** switch on the right side of the IBM/PC terminal.

Bringing TICCIT UP

If you see a display saying that TICCIT is resting or other message indicating that TICCIT is not ready, you must bring TICCIT UP at the Data General console. Follow these simple steps:

- Turn the brightness up on the Data General console by sliding the Brightness switch (located at the bottom right of the console) to the right.
- Put the console ON LINE by holding down the **CMD** key at the same time you press the **ON-LINE** key. Then press the **ALPHA LOCK** key. You will see two red lights on if the system is ready to accept a command.
- You should see the "**FILENAME?**" prompt on the screen. This indicates that **RDOS** is ready to accept a command.
- Press the carriage return (**CR**) key.
- You will be asked to supply the date (**M/D/Y**) and then the time (**H:M:S**). Type in the appropriate information and press **CR**.
- You will see a series of messages from the system, then the TICCIT prompt "**R**" will appear. Type the word "**UP**" and press **CR**.
- You will see more messages from the system and then the TICCIT "**?**" prompt will appear. TICCIT is ready for action. If you look at a MicroTICCIT terminal, you should see the log on screen.

19K BNCOC MicroTICCIT Instructor's Reference

- Turn off the ON-LINE light by pressing the CMD key and the ON-LINE key simultaneously. Turn off the ALPHA LOCK light by pressing the ALPHA LOCK key once. Dim the Data General console screen. This action will prevent accidental use of the system.

- It is a good idea to have the TICCIT operator assist you the first time you try this procedure.

Bringing TICCIT DOWN Only the TICCIT operator should attempt to bring the system down.

LOGGING ON PROCEDURES

Introduction

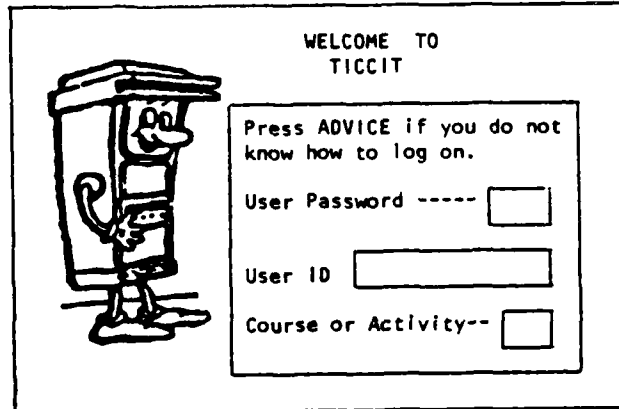
The first display you see when you sit at the MicroTICCIT terminal is the START-UP display. At the Ft. Knox location, it is a tank and the message:

***** Press ATT'M to Start *****

Find the **ATT'M** key at the top right of the MicroTICCIT keyboard. See the left display. Press **ATT'M** once to access the LOG ON display.

ATT'M	EXIT	
GO		BACK

		ADVICE
ENTER		



The LOG ON Display The LOG ON display shown above includes three "Prompts" and Response Boxes. If you have any questions about logging on, you can press the **ADVICE** key (also located on the right side of the keyboard).

While in **ADVICE**, press the key marked **GO** to advance to the next display. Press **BACK** to return to the previous display. Press **EXIT** to return to the LOG ON display.

The Cursor

As you use TICCIT, you will sometimes notice a character on the screen that looks like this: []. This character is called a cursor. The cursor tells you where the text will appear if you type information using the keyboard.

Before You Use the Log On Display

Logging on MicroTICCIT requires the use of some other keys. They are the arrow and the **TAB** keys located on the lower left of the keyboard. The arrow keys move the cursor one character space up, down, left, or right. The **TAB** key moves the cursor to the beginning of the next response box.

19K BNCOC MicroTICCIT Instructor's Reference

Prerequisites

- Before you can log on to a TICCIT system, you must be registered in a TICCIT course. The TICCIT operator is the only person who should register a user on the system.
- To use any TICCIT course, the student must be registered in that course. To use the 19K BNCOC course, the student or instructor must be enrolled in Course 19. To use the off-line data entry system, the instructor must be enrolled in Course 20.
- The student must have a TICCIT ID number. An ID number is assigned when the student is registered in a course. Assigning a password is optional.

Procedures for Logging the Student on MicroTICCIT

- The log on display (above) has three "prompts" and three response boxes.

User Password: _____
User ID: _____
Course or Activity: _____

- Enter the student's password (if applicable) in the first box; otherwise continue to the next step.
- Press the TAB key (located to the lower left of the keyboard) to advance the cursor to the next box.
- Type the student's ID number.
- Press the TAB key to advance the cursor to the next box.
- Type the Course Number (the BNCOC course number is 19).
- Press the ENTER key (located to the bottom right of the keyboard).

Result

The Course Menu will appear listing the Task Clusters of the BNCOC Course.

You will use the same procedure to log students or yourself on Course 19 or on any other TICCIT course for which you are registered.

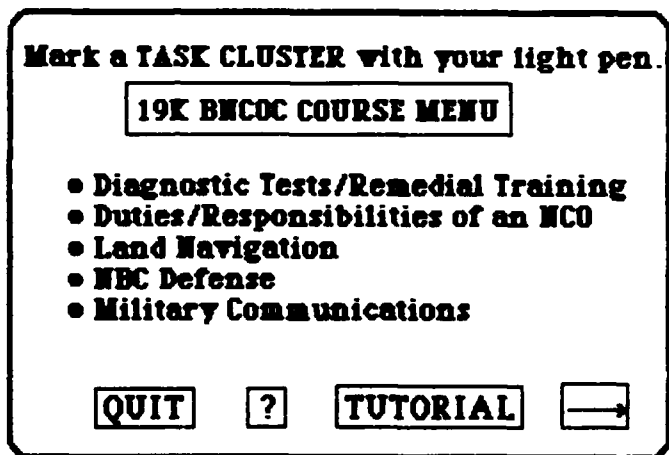
OVERVIEW OF 19K BNCOC COURSE STRUCTURE ON MICROTICCIT: COURSE 19

Introduction

Course 19 on the Ft. Knox MicroTICCIT system is titled "19K BNCOC for Tank Commanders." This TICCIT course includes the menus that will allow you to access all of the MicroTICCIT courseware developed for 19K BNCOC.

The 19K BNCOC Course Menu

The 19K BNCOC Course Menu lists all of the 19K BNCOC Task Clusters including Cluster L, Diagnostic Tests and Remedial Training. At the bottom of the screen you will see a set of icons (symbols) that you will use.



Course Icons

Here is a description of each icon from left to right.


QUIT Touch this icon for instructions about logging off MicroTICCIT.

? This icon takes you to a HELP page. The HELP pages provide additional information about using various parts of the course.


TUTORIAL This icon takes you to instructions about using MicroTICCIT. There are two versions of the TUTORIAL on-line: one for instructors and one for students. TICCIT will know whether the user is an instructor or a student because that information is entered during registration.

Course Icons
Continued

MENU Touch this icon with the light pen when you want to return to the previous menu.

 Touch the light pen to the right arrow when you want to advance to the next page. This icon only appears on a screen when there is more information on another page.

Other Icons

 Touch the light pen to this icon when to return to a previous screen. This icon only appears on screens when there is more than one page of information. You will not use this icon to return to a previous menu.

GO ON You will also see this icon in some courseware. This symbol has the same meaning as the right arrow. It will advance you to the next page of the course.

On-line Tutorials

There are two on-line tutorials: one for students, and one for instructors. Both tutorials explain how to use a light pen and how to move around the course using the menus. The instructor tutorial includes special topics, such as providing access to restricted tests.

Sub-Menus

After you select one of the Task Clusters from the Course Menu, TICCIT will take you to a sub-menu that lists all of the tasks in that cluster. Touch the HELP icon "?" to find out which tasks have on-line courseware. A few of the tasks have on-line tests but do not have on-line instruction. A complete list of the courseware and tests planned to be on-line is included at the end of this manual.

MicroTICCIT Tests

MicroTICCIT on-line tests conform to the general 19K BNCOC requirements. A student may take a test a maximum of three times. TICCIT will keep track of how many times each user takes a test and will refuse to give the test to the same user a fourth time.

MicroTICCIT tests are "restricted," i.e., a student may not access a test without PROCTOR intervention. Instructions for giving students access to a test are included on the next page of this manual.

GIVING STUDENTS ACCESS TO RESTRICTED TESTS

- Introduction** All 19K BNCOC tests on MicroTICCIT are restricted; that means that a student cannot access a test without intervention from an instructor or TICCIT Proctor.
- Prerequisites**
- Follow the instructions described in the manual section titled "Logging on Procedures."
 - When the Course Menu appears (the list of BNCOC Task Clusters), proceed to the steps outlined below.
- Locating a Test**
- At the Course Menu, use the light pen to mark the Cluster title corresponding to the test the student wants to take. See the section of this manual titled "What's on Line" to find the tasks which are currently on-line. Then locate the title of the test the student needs to take.
 - Mark the Task Cluster to branch to the Cluster Menu.
 - Mark the title of the appropriate task with the light pen.
 - You will see a sub-menu which gives you two options: "Take the test" or "Return to Menu."
 - Mark "Take the test on this task."
 - You will be branched to a display that asks the student if he is ready to take the test. If the title of the test is NOT the one the student wants to take, mark the MENU icon. If the student is ready to proceed with the test, mark the TEST icon.
 - Proceed through the screens until the TICCIT Advisor intervenes requesting proctor approval. Steps for allowing the student access to the test are provided below.

19K BNCOC MicroTICCIT Instructor's Reference

Accessing the Test

- Press the **ATT'M** key (located to the upper right of the keyboard).
- In the lower right of the screen a prompt will be displayed saying "Enter Command Desired."
- Type the letter **P** (for proctor).
- Press the **TAB** key (located to the lower left of the keyboard) to advance the cursor to the white boxes appearing to the right of the "Enter Command Desired" prompt.
- Type the **PROCTOR** password. (Ask the TICCIT operator for the current **PROCTOR PASSWORD** if you're not sure.) Be sure to type it exactly. Use the shift key to produce uppercase characters if appropriate. You will not be able to see the letters you've typed. For security reasons, they are masked in white. **Note:** If you enter an incorrect password, the system will redisplay the page requesting proctor approval. Try again. Remember that typing in upper or lower case may be necessary.
- Press the **ENTER** key (located to the lower right of the keyboard).
- Another prompt will appear: "Enter Proctor Function Desired."
- Type the letter **"Y"** for "Yes."
- Press the **ENTER** key (located to the lower right of the keyboard).

Result

This will permit the student to access the restricted test. He can proceed now on his own.

OVERVIEW OF 19K BNCOC DIAGNOSTIC TESTS AND REMEDIAL TRAINING

Introduction

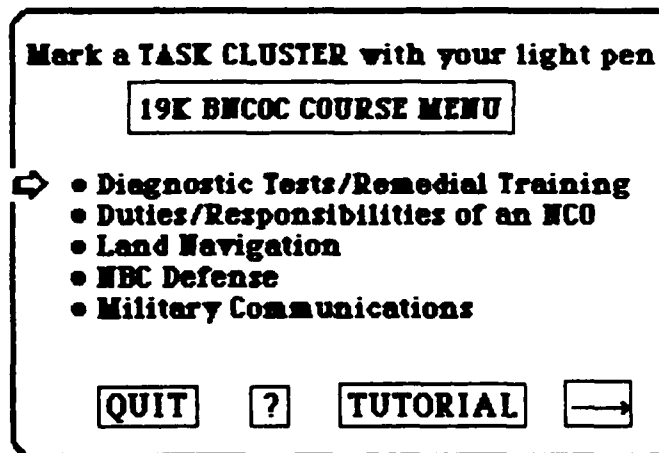
19K BNCOC's Task Cluster L includes instruction and testing of those tasks determined to be prerequisite to the 19K BNCOC course. The 19K BNCOC course on MicroTICCIT includes on-line testing and instruction for five of those prerequisite tasks.

Accessing the Instruction

To use the instruction and tests for the five on-line prerequisite tasks, you must log the student on the system. Then choose the first menu item on the Course Menu, Diagnostic Tests and Remedial Training.

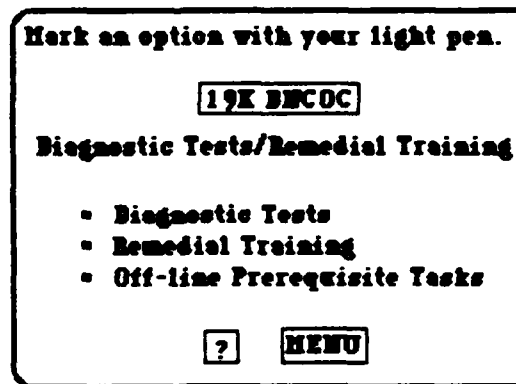
19K BNCOC Course Menu

Mark the menu item using the light pen.



Sub-Menu

The first sub-menu (shown below) offers three choices:



19K BNCOC MicroTICCIT Instructor's Reference

Diagnostic Tests

The tests for the prerequisite tasks are called diagnostic because they are intended to measure the student's existing knowledge and/or skills. The student takes this test **prior to having received instruction.**

Remedial Training

The training material is called remedial because it is intended to remediate the student's lack of the knowledge and/or skills measured by the tests. A student does not see this instruction **unless he fails** the diagnostic test.

Other TICCIT instructional segments will be different. Ordinarily, the student must do the instructional activities before taking the test.

On-Line

Prerequisite Tasks

There are 5 prerequisite tasks on-line. Both instruction and tests are included. The menu listing these tasks is:

Mark an option with your light pen.

19K BNCOC

Remedial Training

- Six Digit Grid
- Operate a Radio Set
- Communicate Using Visual Signals
- Recognize/Identify Friendly/Threat Vehicles
- Establish Tank Firing Positions

?

MENU

Off-Line

Prerequisite Tasks

There are several other tasks which are prerequisite to the 19K BNCOC course. Those tasks are tested off-line (either in the field or in classrooms). Students who do not pass these tests receive remedial instruction, but that instruction is not on MicroTICCIT.

Videodisc

A videodisc has been developed to support the MicroTICCIT courseware for the diagnostic tests and remedial training. The videodisc **must be** loaded before accessing this courseware. Instructions for loading videodiscs and using the videodisc player are included later in this manual.

19K BNCOC MicroTICCIT Instructor's Reference

Taking the Tests

The student must begin by taking all five diagnostic tests in the order in which they are listed. If a student passes a test, the test name on the menu will change from **CYAN** (light blue) to **GREEN**. If the student fails the test, the task title will change from **CYAN** to **RED**. Once begun, a student must complete a test. TICCIT will record the test attempt information.

See "TICCIT Colors and What They Mean" for more information.

Accessing Restricted Tests

All 19K BNCOC tests are restricted; that is, a student cannot access a test without instructor (or Proctor) assistance. See "Giving Students Access To Restricted Tests" for more information.

Second and Third Test Attempts

The student cannot take a test again until he has completed the appropriate remedial instruction. A student may take a test a maximum of three times.

Accessing the Courseware

A student will not be able to access the Remedial Training until he has taken all five diagnostic tests at least one time. He may access only the instruction for the task he failed. Remedial instruction must be completed before a student can take the corresponding test again.

If a student exits the system without completing a remedial lesson the task name on the menu will change from **CYAN** to **YELLOW**. The color **YELLOW** indicates that a lesson has been started but not completed. Successful completion of a lesson will change the task name from **CYAN** to **GREEN**.

Student Records

TICCIT stores each student's test results (Pass/Fail), the number of test attempts (1 to 3), and the student's score. TICCIT cannot store results of off-line testing so those results must be entered by the instructor. Instructors will use TICCIT Course 20 to enter off-line test results. Course 20 is described in the next section of this manual.

19K BNCOC MicroTICCIT Instructor's Reference

Using the Light Pen Students will make all responses using the light pen. In each case, students mark the appropriate screen location with the light pen. TICCIT records the information and determines whether the student has responded appropriately. See "Using the Light Pen" for more information.

Using the Keyboard Only instructors will need to use the MicroTICCIT keyboard. You will use the keyboard to log students on the system and to give them access to restricted tests. See "Using the Keyboard" for more information.

OVERVIEW OF 19K BNCOC CMI SYSTEM: COURSE 20

Introduction

TICCIT Course 20 is part of the 19K BNCOC Computer Managed Instruction (CMI) System. This course includes the programs that will allow you to enter test results from instruction conducted off-line (i.e., not on MicroTICCIT). Since most of the 19K BNCOC tasks are taught and tested either in the field or in the classroom without using MicroTICCIT, you will be entering most of the test results using this course.

Main Menu

The Main Menu for Course 20 (shown below) lists five options, each of which is explained further below:

Mark an option with your light pen.

MAIN MENU
19K BNCOC CMI SYSTEM

- Identify Course and Section
- Create/Update Master Record File
- Review CMI Roster
- Enter Off-Line Test Results
- Print BNCOC Reports

QUIT **?** **TUTORIAL**

Course Icons

You will see these icons (symbols) at the bottom of your screen when you use Course 20.

Course Icons

?	Help Pages
→	Go to next screen
←	Go back to previous screen
MENU	Return to previous menu
TUTORIAL	Receive on-line instructions

**Identify Course
and Section**

Before you begin entering off-line test results you must identify the course number and section number of your students.

• Mark the three digit course number with your light pen. It will appear beside the word **COURSE**. If you make a mistake, mark the icon **START OVER** and try again.

• After you enter the course number, mark **ENTER SECTION**. Then mark the two digit section number.

COURSE:	SECTION:
1 2 3 4 5 6 7 8 9 0	
START OVER ? MENU ENTER SECTION	

Once you enter this information, you can return to the main menu by marking **MAIN MENU**.

**Create/Update Master
Record File**

Only the TICCIT operator will be able to access this option. See the MicroTICCIT Site Manager and Operator's Manual for more information.

Review CMI Roster

This option allows you to review the names of the students on the roster in a particular course and section.

Before you select this option, you must enter the course number and section (option 1). You will see a list of students and ID numbers in the course and section you selected.

Course: 019 Section: 00 Date: 07/29/85

ID #	Name
213212312	Allen, George H.
849320192	Brown, Peter W.

• Mark **MENU** to return to the Main Menu.

19K BNCOC MicroTICCIT Instructor's Reference

**Enter Off-Line
Test Results**

- Identify the course and section (see Menu Option 1).
- Select a Task Cluster from the Course Menu.
- Choose a task from the Task Cluster Menu.
- Enter the test results for each student enrolled in the course by marking GO or NOGO under the appropriate Test Attempt number (example data entry page shown below).

Task Cluster:	Task:
Title:	
Student Name:	
Student ID:	

Test Attempts

GO/NOGO		GO/NOGO		GO/NOGO
NO ATTEMPT		?		MENU →

- Mark → to go to the next student.
- Mark ? if you need help.
- Mark Menu to return to the Task Cluster Menu to select a different task.

Fixing Mistakes

You can change the test attempts to NO ATTEMPT and reenter the data.

Test Attempt Colors

When you mark GO, the box will turn GREEN.
When you mark NOGO, the box will turn RED.

Print BNCOC Reports This option allows you to print the BNCOC Master Record. You are taken to the sub-menu shown below, which lists four choices:

Print BNCOC Reports

- Create and print **FIRST** Master Record *
- Print **EXISTING** Master Record
- Create and print **UPDATED** Master Record
- Print End of Course Award

*Select this option only once, at the start of each BNCOC cycle. Mark ? for more information.

? MENU

You will not use Option 1. This is reserved for the TICCIT operator.

Option 2 prints the current Master Record file and will not include any changes or additions made since the last update.

Option 3 will read the data in each student's permanent record file and completely revise the existing Master Record file. This process will take up to several minutes.

The printout of Option 2 and 3 will list each student's name and ID number and his results on each BNOCC test, both off-line and on-line tasks. Results are coded as follows:

- NA = No attempt**
- G1 = GO on first test attempt**
- G2 = GO on second test attempt**
- G3 = GO on third test attempt**
- N1 = NOGO on first test attempt**
- N2 = NOGO on second test attempt**
- N3 = NOGO on third test attempt**

Option 4 will produce a list of students, their ID numbers and their total number of NOGOs within BNCOC. This list will be useful in determining End of Course Awards.

Course 20 Messages

Entering Course and Section numbers

If you make a mistake while entering Course numbers and Section numbers, you will get a message.

MESSAGE: The course number must be 3 digits. Mark START OVER or ENTER SECTION.

PROBLEM: You tried to enter more than 3 digits for a course number.

MESSAGE: The course number must be 3 digits. Complete the number or mark START OVER.

PROBLEM: You marked ENTER SECTION without entering a 3 digit course number.

MESSAGE: A section number must be 2 digits. Mark START OVER or MAIN MENU.

PROBLEM: You tried to enter more than 2 digit for the section number.

MESSAGE: The section number must be 2 digits. Complete the number or mark START OVER.

PROBLEM: You marked the MAIN MENU without entering a 2 digit section number.

Session Order

You cannot select options 2, 3, 4, or 5 from the Main Menu without first establishing the course and section number via option 1. You will receive a message at the top of the Main Menu display saying:

Identify a COURSE and SECTION number!

Invalid Course and/or Section Numbers

If you enter an invalid course and/or section number, you will receive the message below. This message will be displayed at the bottom of the screen in the color cyan: **STACK OVERFLOW.**

If you are not certain you entered the correct course and section number for your students, ask the TICCIT operator. If the number you entered was correct, ask the operator to make sure that a TICCIT Roster File and a Master Record File have been created for that course and section.

Creating a Master Record File

MESSAGE: You are not authorized for this option.

PROBLEM: The Master Record File can only be created by the TICCIT operator.

THE INSTRUCTOR MENU

Introduction

The TICCIT operator will enroll you into Course 0 when you are registered on the TICCIT system. Course 0 is a special TICCIT course for TICCIT instructors, authors, and operators. Students are not enrolled in this course. If you Log On to Course 0, you will see the **SUPERMENU**.

Supermenu

1. Author Menu
2. Operator Menu
3. Programmer Menu
4. Instructor Menu
5. Student Menu

Menu Page 1 Type number and press enter. []

As an instructor, you will be able to access the Instructor Menu and the Student Menu. Type the number of the menu you wish to access and press **ENTER** or **GO**. (Locate these keys on the right keypad.)

Instructor Menu

If you select the Instructor Menu, you will be given a new set of options. They are:

Instructor Menu

1. Student Progress Menu
2. Monitor a Student
3. Terminal Status Display
4. Student Menu

Menu Page 1 Type a number and press enter. []

19K BNCOC MicroTICCIT Instructor's Reference

Student Progress Menu

The Student Progress Menu gives you on-line access to information about each student or the class progress in a particular course. You will see the following sub-menu.

Report on Individual Students

1. Unit/Lesson Status
2. Test Results
3. Predict Performance

Class Reports

4. Unit/Lesson Status
5. Course/Unit Summary
6. Predict Performance

Press **GO** for next page. On the second page you will be able to access two sub-menus:

- Report Support Facilities
- Prediction Support Facilities.

Report support facilities and prediction support facilities are tasks for the TICCIT operator and are not included in this manual.

You can press the **ADVICE** key for more information.

Individual Reports

To access information about an individual student's progress, you will need to know the course number and the student's ID number. You will be able to find information about all lessons and tests completed by students on-line. TICCIT reports several kinds of information such as time in a lesson or unit, status (pass/fail), score, attempts. Note that information is displayed in the appropriate TICCIT colors; that is, red for fail, green for pass, black for not started yet, etc.

Note also that a TICCIT unit corresponds to a BNCOC task cluster; a TICCIT lesson corresponds to a BNCOC task.

Results of tests entered using Course 20 will not be displayed. See the description of Course 20 to access that information.

Class Reports

To access information about all of the students enrolled in a course, you will need to know only the course number and the section number.

19K BNCOC MicroTICCIT Instructor's Reference

Printed Reports

TICCIT Student Progress Reports may be printed if your system has a printer. The 19K BNCOC Master Record can be printed using the utility located in TICCIT Course 20.

If you do not know the section number, ask your TICCIT operator for assistance.

MONITORING A STUDENT

When a student is using a MicroTICCIT course, you may monitor his activities on-line by selecting this option. You will need to know the terminal number where the student is working. When you select this option, TICCIT will inform the student that he is being monitored with a message at the bottom of his display screen.

TERMINAL STATUS DISPLAY

The purpose of this TICCIT utility is to allow you to see which terminals are in use or available for use. You may need this capability if TICCIT terminals are located in different areas or rooms or if there are a large number of terminals in the TICCIT lab.

STUDENT MENU

This option allows the instructor to use the Student Menu without returning to the Super Menu. The Student Menu offers the following options:

Student Menu

1. Mailbox
2. Terminal-to-Terminal
3. User Directory
4. Change Courses
5. Videotapes
6. Change Password
7. Games

Menu Page 1 Type a number and press enter. []

Mailbox

Instructions for using the TICCIT Mailbox are provided on-line. Instructors might leave messages for other instructors or students.

Terminal-to-Terminal Instructors or students can call another terminal by typing the terminal number and use MicroTICCIT to type messages to each other.

19K BNCOC MicroTICCIT Instructor's Reference

- User Directory** This menu option allows instructors or students to quickly get a list of all the people who are registered in one or more TICCIT courses.
- Change Courses** If a user is registered in more than one course, this option allows him to change to another course without logging off and logging on again.
- Videotapes** There are no videotapes available to users at the Ft. Knox MicroTICCIT site because that equipment is not part of the system configuration. The system is equipped with a videodisc player instead.
- Change Passwords** An instructor or student can change his password using this option. The user's password is always accessible to the TICCIT operator; however. The Proctor Password is changed only by using a TICCIT utility developed for that purpose.
- Games** There are several TICCIT games on the system which are available to students and instructors.

USING A LIGHT PEN

Introduction

The CMI system and MicroTICCIT courseware has been written to make data entry as simple as possible. Therefore, all user responses except for logging on and off and using proctor functions require you to use the light pen. This is true for both instructors and students.

The on-line tutorial in Course 19 also has instructions for using the light pen.

The Light Pen

The light pen is part of the MicroTICCIT terminal. It looks like a black overgrown pen and is attached to the terminal on a long back cord. A light pen is called an "input device" because you use it to input information to the computer. The computer keyboard is another kind of input device.

Using a Light Pen

The computer knows exactly where you have touched the display screen with the light pen. So, when you touch the pen to the screen, you are sending data to the computer.

When you mark certain locations on the display screen, the computer will respond. You will use the light pen to do three main things:

- Mark icons such as the right and left arrows and the MENU box.
- Mark the CYAN menu items to branch to those task clusters, tasks, or tests.
- Mark answers to activity and test questions.

Error Messages

If you touch the light pen to an area of the screen that is not programmed to accept a response, TICCIT will tell you where you should have responded. Your incorrect response is ignored by TICCIT. You cannot get into trouble by touching the wrong place on the screen, so feel free to experiment.

USING THE KEYBOARD

Introduction

The MicroTICCIT keyboard is divided into three areas: The right-hand keypad, the center keypad, and the left-hand keypad. You will only use the keyboard for a few specific functions. Most of the time you will use the light pen for data entry. (See Using the Light Pen.)

The Center Keypad

The Center Keypad is the part of the keyboard that looks almost like a typewriter. It also looks very similar to the keyboards of other computer systems. You will use this keyboard for entering commands and passwords when you give students access to restricted tests. You will also use it when you log on and off MicroTICCIT.

	!	@	#	\$	%	^	&	*	()	-	+	
	1	2	3	4	5	6	7	8	9	0	-	+	
ALT CODE	Q	W	E	R	T	Y	U	I	O	P	[]	RET URN
SHIFT LOCK	A	S	D	F	G	H	J	K	L	:	"	'	
SHIFT	Z	X	C	V	B	N	M	,	.	?	/		SHIFT

Right-Hand Keypad

The right-hand keypad has several special function keys. This keypad is specially configured for the TICCIT system. There are three keys that you will use quite often:

ATT'N, **ENTER**, and **ADVICE**. When you use the **ADVICE** function key you will also use **GO**, **BACK**, and **EXIT**.

ATT'N	EXIT	REPEAT
GO	SKIP	BACK

OBJ'TIVE	MAP	ADVICE
HELP	HARD	EASY
RULE	EXAMPLE	PRACTICE
ENTER		

ATT'M

When you press the **ATT'M** key, you are asking for the computer's attention. You will see the prompt character [] at the bottom of the screen waiting for you to type information. For example, you might type "o" for "off" and press **ENTER** to log off MicroTICCIT.

ENTER

The **ENTER** key is always used after you type some information at the computer keyboard. When you press the **ENTER** key, you are sending the data you typed to the computer.

ADVICE

This TICCIT function key is usually programmed to give you more information about whatever you see on the screen. You will only use the **ADVICE** key when you are using TICCIT programs. The CMI System and the MicroTICCIT courseware use special **ICONS** such as ? or **HELP** to branch the user to help screens.

GO, BACK, and EXIT

Pressing the **GO** key will advance you to the next screen. **BACK** will return you to the previous screen. **EXIT** will return you to wherever you came from when you pressed the **ADVICE** key, probably to a menu.

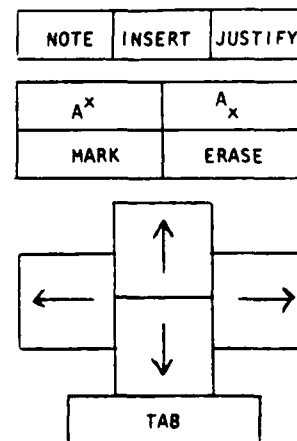
MAP

You may sometimes see instructions that tell you to press the **MAP** key. **MAP** is a TICCIT function. The CMI System and the MicroTICCIT courseware for 19K BNCOC have menus and do not use TICCIT maps. If you press the **MAP** key, you will return to the last menu that you used.

The LEFT-HAND Keypad

The left-hand keypad has several keys that you will use to move the cursor, the character that tells you where you are entering data on the keyboard that looks like this: []. You will not always see a cursor on the screen.

The keys you will use to move the cursor are the four arrow keys and the **TAB** key.



USING THE NOTE KEY

NOTE

Notice the **NOTE** key at the top, left-hand corner of the keypad. You can use this key when you want to make a comment about the CMI system or any part of the MicroTICCIT courseware in Course 20. Your comments about the MicroTICCIT courseware that you will be using will assist the developers in making improvements. MicroTICCIT provides an easy method for you to provide information while you are using the material. Please read the instructions below carefully.

Procedures

- Find the **NOTE** key at the top left of the MicroTICCIT keyboard.
- When you are logged on MicroTICCIT, press the **NOTE** key at any time you wish to make a comment about anything you see on the screen. • You will immediately see a blank screen. Type your message. Use the Left Arrow key to erase an error if necessary.
- MicroTICCIT will record the name of the course you are using and specific information about the exact location in the course. It will also record your message.
- You have a choice between leaving a **SIGNED** or an **UNSIGNED** message.
- Find the **MAP** and the **EXIT** keys on the far right of the MicroTICCIT keyboard.
- Press **EXIT** to record a **SIGNED** message. TICCIT will name your message and your name.
- Press **MAP** to record an **UNSIGNED** message. TICCIT will save your message, but will not record your name.

Reentering the Course You will automatically resume the course at the exact location at which you left. Press the **NOTE** key any time you wish to leave a message or a comment.

TICCIT COLORS AND WHAT THEY MEAN

Introduction

When you use the 19K BNCOC Course, the colors that you will see on the menus have special meanings. Colors used to display menu options reflect the present status of the student within that Task or Task Cluster.

CYAN

Menu items will ordinarily appear in **CYAN** until a change in the student's status takes place. **CYAN** (light blue) means that the student has either not entered that lesson material before or he has not completed it. **CYAN** usually indicates that the area is light pen active; that is, touching the area with the light pen will cause the computer to respond in some way.

RED

A menu item displayed in **RED** means that a test was attempted and failed. The student's performance data records on TICCIT will reflect a **NOGO** result for that task. Once a menu item has changed from **CYAN** to **RED**, it will remain **RED** until the student passes that test.

GREEN

When a student has passed a test, the color of the task title on the menu will change from **CYAN** (or **RED**) to **GREEN**. Students will not be able to select or reenter an area of the courseware where the menu is colored **GREEN**. The student's performance data records on TICCIT will reflect a **GO** result that for that task.

YELLOW

When a menu item is displayed in **YELLOW**, the student has started this activity but has not completed it. **YELLOW** will never be used for tests because a student must finish a test before exiting. A test which is not completed will be considered an official test attempt. The menu item will be displayed in **RED** until the student has successfully passed the test.

BLACK

When a menu item appears in **BLACK**, the lesson or test has not been accessed by the student. Ordinarily, the color **CYAN** will be used in 19K BNCOC courses.

WHITE

WHITE menu items may indicate that the lesson or test must be completed off-line; that is, in the field or classroom.

FEEDBACK MESSAGES AND WHAT TO DO

Introduction TICCIT puts feedback messages on the bottom line of the display screen from time to time. Hopefully, none of these messages will indicate serious problems.

Courseware Errors If you should get a full screen report that you cannot branch to a certain location, or other kind of message indicating courseware problems, call the TICCIT operator. You should not get these kinds of messages unless you are reviewing courseware which is still under development.

A **CYAN** (light blue) message from TICCIT indicates a TICCIT software error. This is serious. Tell your TICCIT operator immediately. The operator will probably need to call Hazeltine, so write down the exact message that you received and try to remember what you did just before you got the message.

When You Log On When you log on and enter a course number, you might get a message that "You are not registered for this course." You may have typed the wrong user ID or wrong course number. Try again. If you get the message again, tell your TICCIT operator.

Using the Supermenu If you have an instructor's authorization code, you cannot access the Operator Menu. If you select that option, you will get a message saying, "You are not authorized for this option."

Menus list the options that you can choose. You will type a number and press GO. If you type a number that doesn't exist, you will get this message: "Select from the options given."

CMI and Courseware Error Messages

If you touch the display screen at the wrong place using your light pen, TICCIT will tell you about it. The message will probably tell you where you should have pressed.

If you are taking a test, for example, TICCIT will tell you, to "Mark in the location specified."

ATTENTION FUNCTIONS

ATTENTION Commands

As an instructor, you will need to know about three of the Attention Commands:

"o" or "off" -- Use this command to log off and save all the data you have entered.

"p" -- Use this command to call the proctor function when you want to give a student access to a restricted test.

"x" -- Use this command to access the student menu. You will be able to change to another course and other actions.

Complete list of Attention Commands

a	Supply the correct answer
c	Use the calculator function
d	Show the results of fixed length tests
m	Return to course map or menu
n	Do not monitor me, clean up status
off	Log off TICCIT, save my results
p	Use proctor functions--password needed
s	Enter survey mode
x	Go to the student menu
y	Answer a call

Some of these commands may be turned off by the courseware developers for users in student mode.

You can display the list of Attention Commands on-line by pressing **ATT'M** and then the **ADVICE** key.

Using the ATT'M Function

- Log on to TICCIT.
- Press the **ATT'M** key.
- Press the letter corresponding to the commands listed above using the center keyboard.
- If you select "p" for Proctor function, then press **TAB** and enter the Proctor Password.
- Press **ENTER**.

PROCTOR FUNCTIONS

PROCTOR Commands

When a student wants to take a restricted test, you must use the proctor function. The only proctor command you will use is the "y" command. A complete list of proctor functions is included in the TICCIT documentation provided by Hazeltine Corporation.

"y" Allow student to take a restricted test

Using the Proctor Function

- Press **ATT'N**.
- Type **"p"** and press **ENTER**.
- Press **TAB** and type the Proctor Password.
- Type **"y"** and press **ENTER**.

USING THE VIDEO DISC PLAYER

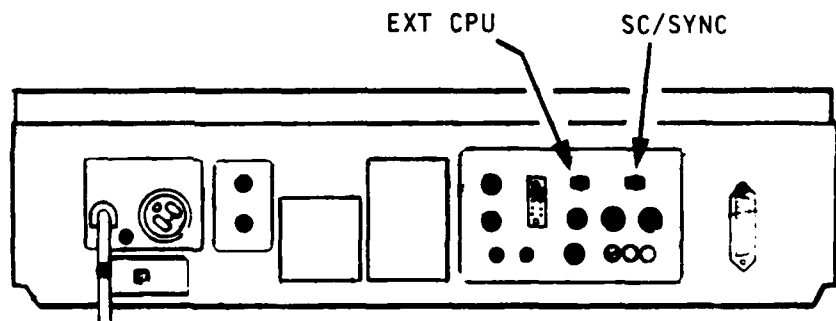
Introduction

The MicroTICCIT courseware designed for 19K BNCOC often has material stored on videodisc as well as the computer. The section of this manual titled "What's On Line" includes information about whether or not the part of the BNCOC course you wish to use has a videodisc.

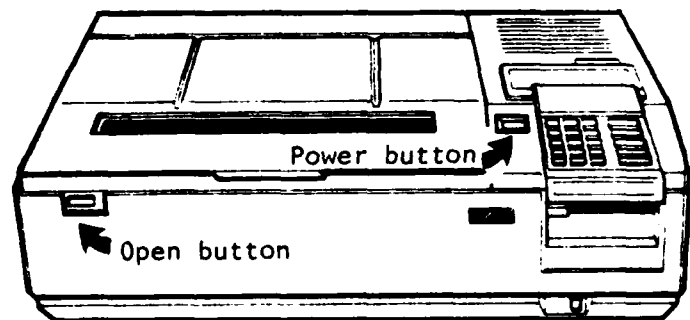
Using the videodisc player is a simple process. The operating procedures are divided into steps to TURN-ON and SHUT-DOWN the recorder.

Turn-on Procedure

- Select the proper videodisc for the course you are using from your videodisc library. Ask your TICCIT operator for assistance if necessary.
- Check the two toggle switches on the rear of the videodisc player. The **EXT CPU** switch should be in the ON position and the **SC/SYNC** switch should be in the **EXT** position. In other words, both switches should be selected towards these positions to allow TICCIT to control the player operation.



- The **POWER** switch is located on the top right-middle of the player just to the left of the remote control unit. Press the **POWER** switch once to turn the unit on and you will be ready to load your course disc.



Open the Player

- Open the player by pressing the **OPEN** switch on the top-left-front of the unit and load the videodisc previously selected. The disc must be loaded with the desired side **face down**. The disc should be labeled with the name of the task or task cluster.

- After loading the disc, close the top of the player and the unit will initialize (get ready to play) automatically. The system is now ready to use with the TICCIT courseware.

Shut-Down Procedure

- Re-open the player by pressing the **OPEN** switch and remove the videodisc.

- Turn the unit off by pressing the **POWER** switch.

- Put the videodisc back into its proper place in the videodisc library. **Consult the TICCIT operator or Proctor for assistance if necessary.**

Logging Off Procedures

Introduction

When you are ready to stop what you are doing at the MicroTICCIT terminal, you will follow the "logging off" procedures.

Before You Log Off

Ordinarily, instructors will want to return themselves and the BNCOC students to the MAIN MENU before logging off.

TICCIT will store the user's course location when you log off and will return the user to that exact location when he logs on again.

Unless, there is a specific reason, return to the Main Menu before following the procedures below.

Procedures

HOW TO LOG OFF

- Press the **ATTN** key at the upper right of the keyboard.
- Type the word **OFF**.
- Press the **ENTER** key at the lower right of the keyboard.

? **MENU**

On-line Help

The Course Menu of Course 19 has an icon called **QUIT**. If you touch this icon with your light pen, you will receive instructions about logging off.

WHAT'S ON LINE?

CLUSTER	TASK	PRODUCT	DATE
L. Diagnostic Tests and Remedial Training	1. Six Digit Grid	Course & Test*	Fall 85
	2. Operate a Radio Set	Course & Test*	Fall 85
	3. Communicate Using Visual Signals	Course & Test*	Fall 85
	4. Recognize/Identify Friendly/Threat Vehicles	Course & Test*	Fall 85
	5. Establish Tank Firing Positions	Course & Test*	Fall 85
B. NCO Duties & Responsibilities	2. Conduct Performance Counseling With A Subordinate	Test only	Aug. 85
C. Land Navigation	4. Identify Terrain Features	Course & Test*	July 85
	5. Orient Map	Course & Test*	July 85
	6. Determine Location	Course & Test*	July 85
	7. Intersection and Resection	Course & Test*	July 85
	8. Terrain Analysis	Course & Test*	July 85
E. Military Communications	1. CEOI	Course & Test*	???
I. Tank Commander's Station/Tank Gunnery	1. Call For Fire	Course & Test*	????
	2. Select Firing Position	Test Only	Aug 85
	3. Estimate Range	Test Only	Aug 85

* Requires Videodisc

INSTRUCTOR GLOSSARY

ADAPT	The TICCIT courseware authoring language.
APT	A TICCIT courseware authoring language which has been largely replaced by ADAPT but which is still used by authors for creating course maps and test control files.
ATT'M key	A function key on the MicroTICCIT keyboard which must be pressed to LOG ON, LOG OFF, or access other Attention Functions.
CAI	An abbreviation for Computer Assisted Instruction, a term used to refer to instructional materials delivered on a computer; also called courseware.
CBI	An abbreviation for Computer Based Instruction, a term used to refer to instruction delivered on a computer; also called CAI or courseware.
CLI	An abbreviation for the Command Line Interpreter, as special interface program that allows you to communicate with the operating system.
CMI	An abbreviation for Computer Managed Instruction, a term used to refer to programs used to collect and report student performance data as they use computer instruction.
computer terminal	A display screen and keyboard or other input device (such as a light pen) that lets you communicate with a computer.
console	Another term used to refer to the Data General terminal.
Course 0	A special TICCIT course for authors, operators, instructors, and programmers that gives user access to the Super Menu.
Course 19	The 19K BNCOC MicroTICCIT course which includes courseware, tests, an on-line tutorial, and course menus.
Course 20	The 19K BNCOC MicroTICCIT course which includes CMI utilities, such as a utility for entering off-line test results for students listed in a particular course and section and a utility for printing the BNCOC Master Record and other reports.
courseware	A term used to refer to instructional materials designed to deliver instructional materials on a computer; also called CAI.

MicroTICCIT Instructor's Glossary

cursor	The character on a computer screen that lets you know where on the screen the text that you type will appear. The TICCIT cursor looks like this: [].
Dasher	The type of computer console or terminal used to communicate with the Data General Host computer.
Data General Host	The computer used to run the TICCIT operating system.
Eclipse	The type of microprocessor used to run the TICCIT system.
hard (fixed) disk	A permanent disk installed in the Data General Host computer system which stores programs and data.
hardware	A term used to refer to computer equipment such as the hard disk, the printer, the terminals, the videodisc player, etc.
ICON	A symbol on the computer screen which prompts the user to take some action.
light pen	An input device used at the MicroTICCIT terminal which allows users to touch the screen to respond to prompts as an alternative to using the keyboard.
logging off	The process of exiting from the computer so that the system knows a particular user is now off-line.
logging on	The process of identifying a user to the computer consisting of typing in an identification number and a course number.
megabyte	One million bytes; a byte is a piece of information which a computer can interpret, usually one character.
menu	A list of choices on a computer screen which branch the user to specified routines or course locations.
microprocessor	The computer; TICCIT systems use the Eclipse model.
MicroTICCIT workstation	A computer terminal consisting of an IBM-PC, a Sony display screen, used to interface with the TICCIT operating system and display ADAPT courseware; optional equipment includes the light pen, the Sony videodisc player and other equipment.
MPOS	The TICCIT operating system.

MicroTICCIT Instructor's Glossary

NOTE key	A MicroTICCIT function key which accesses a TICCIT utility which allows a user to interrupt a course at any location and type in a message; used to collect information from users.
NOVA	The name of the microprocessor used in some TICCIT systems; now replaced with the Eclipse model.
off-line courseware	Parts of a course not on MicroTICCIT.
off-line utility	A program which performs a particular task, as opposed to application programs, which is run on the Data General console, not the MicroTICCIT terminal, such as MLOAD (load a TICCIT module), etc.
on-line courseware	Any part of the course which has TICCIT courseware.
on-line utility	A program which performs a particular task such as the Student Progress Reports, which can be accessed at the MicroTICCIT terminal (e.g., on-line).
operating system	A collection of programs that perform tasks such as loading other programs into memory and controlling system peripherals such as the display screen, the printer, the videodisc, disk drives, etc.
Proctor password	A password which gives a user access to TICCIT's Proctor functions.
prompt	Any word or symbol on the computer screen which suggests that the user should enter information.
RDOS	An abbreviation for Real-Time Operating System, the Data General's multi-user operating system.
restricted test	A TICCIT test that cannot be accessed by a user in student mode without intervention by someone who knows the Proctor password
software	Computer programs.
SYSOP	An abbreviation for System Operator.
TAL	An outdated version of the TICCIT authoring language; now replaced by ADAPT.
TICCIT operator	A special user who is authorized to conduct registration, transfer courseware, etc.
TICCIT proctor	Usually an instructor who has some training in the use of the TICCIT system but who also manages the instruction in the TICCIT lab.

• **MicroTICCIT Instructor's Glossary**

utility program

A program designed to perform a task such as run a Student Progress Report as opposed to TICCIT courseware or other application programs.

user ID

The unique number assigned to a user during the registration process which is entered during logging on. The user ID is from 1 to 9 digits.

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