

**T.O.D.**  
**Editor**



**By John Behnke**



# TOD Editor

By John Behnke

**I — Introduction:** This program will allow you, the user, to create your own games for the Tunnels of Doom cartridge, or modify existing ones to your personal preferences. This program is for those adventure enthusiasts that like the challenge of an interactive graphics adventure, and are interested in constructing their own games. **TOD Editor** requires little or no knowledge of programming or computers in general, but some basic knowledge of the operation of the TI-99/4A. Additionally, users should be familiar with the general operation of menu-driven software. For more information on both of these subjects, see the manuals accompanying the machine.

**II — Requirements:** The operation of this program requires the following computer components:

- TI-99/4A Home Computer and monitor
- Disk drive and controller
- 32K memory expansion device
- Extended BASIC cartridge

Additional components required to fully utilize this program:

- Tunnels of Doom cartridge
- printer and RS232 device

**III — Getting Started:** Before loading **TOD Editor**, you must first prepare a game to be edited. To do this, copy the sample game (or any game that you wish to edit for that matter) onto a blank, newly initialized disk. It is important that the program is physically the first program on the disk. It is also recommended that the user allows the remainder of the disk to remain empty. Because **TOD Editor** directly modifies the sample game to your specifications, failure to first prepare a separate game disk may result in the destruction of information on the disk.

After preparing the sample disk, load the program by the procedure outlined in the section entitled "LOADING THE PROGRAM", and begin to modify your sample game with the features described in this manual under the heading "PROGRAM FUNCTIONS". It is recommended that first time or novice users read "TOD EDITOR TUTORIAL" before proceeding to this step.

**IV — Loading The Program:**



- (1) Turn off the computer and all peripherals.
- (2) Place the Extended BASIC cartridge in the cartridge slot, and turn on the machine.
- (3) Place the program disk in the drive designated #1.
- (4) Select Extended BASIC at the menu — the program will automatically load and execute.
- (5) When the program has started executing, remove the program disk and replace it with the disk containing the game to edit at the prompt.

The user can quit from the program and return to the Master Title Screen at any time by pressing FCTN "-" (or QUIT).

**V — Program Functions:** TOD Editor consists of two separate programs which can be used independent of each other. When the program is first loaded, the user must choose which program to execute. The first program, called program "A", contains the bulk of the major functions of the program - a menu of 18 items. The second program, called program "B", contains several functions for modifying relatively minor aspects of your game which may be important to some people.

**5.1 — Program "A":** This portion of the program contains the following routines, as they appear on your monitor screen when the program is executing:

#### TOD EDITOR

##### Input

- 1 To Enter Game Description
- 2 To Enter a Monster
- 3 To Enter a Monster Graphic
- 4 To Enter a Special Attack
- 5 To Enter a Quest Graphic
- 6 To Enter a Quest Item
- 7 To Print Monster Statistics
- 8 To Enter Character Types
- 9 To Enter Character Graphics
- 10 To Enter Weapons
- 11 To Enter Dungeon Graphics
- 12 To Enter a Touchstone
- 13 To Enter a Lantern
- 14 To Enter a Potion
- 15 To Enter a Scroll
- 16 To Enter a Wand
- 17 To Enter an Armor Type
- 18 To Enter a Shield

Choice? < 1 >



**5.1.1 — Enter Game Descriptions:** With this option you can designate the title of the game you are modifying, and an up to ten-line description of your quest. Because the cartridge does not permit lower-case letters, this text must be entered as upper-case letters only. This message will appear when you execute your game with the Tunnels of Doom cartridge.

**5.1.2 — Enter a Monster:** The Tunnels of Doom cartridge can accommodate up to 51 monsters in a single game. With this option you can make any of these monsters have whatever abilities you wish to assign. You can remove a monster altogether from the game by giving it a name made up of spaces. Before entering the statistical description of each monster, you must indicate to **TOD Editor** which monster you are altering (from 1 to 51). The higher the number, the more experience points are awarded to characters when the monster is destroyed. You must input the following information about each monster:

- **Monster Name:** The singular name of the monster (Do not add an "s" to make the name plural - if there is more than one monster in a room, the module automatically adds an "s").
- **Monster Level:** The number that determines how hard a monster will be to defeat in combat.
- **Defense Level:** The number that determines how hard it will be to hit that monster in combat.
- **Attack Level:** Determines how much chance the monster has of inflicting damage on characters when attacking.
- **Ranged Attack:** The chance a monster has of attacking from a distance.
- **Maximum Damage:** The actual damage that is possible from an attack.
- **Special Attack %:** The percentage chance that a monster will use a special attack against a character. For no special attack ability, enter "0" at this prompt.
- **Special Attack Type:** The different special attacks available to a monster. The choices may be changed with Option #4 ("Enter A Special Attack") on the main menu.
- **Maximum Special Attack Damage:** The damage possible from a special attack.
- **Monster Graphic:** A monster can be represented in a game by one of 16 different pictures. Choose the appropriate "graphic" at this prompt. Each choice will be displayed on the screen as chosen. Each monster has two representations; the



defense graphic and the attack graphic. These pictures may be changed by using option #3 on the main menu.

- **Monster Sound:** A monster can be represented by one of 16 sounds made available by the cartridge. This sound is heard every time the monster attacks, or when a character listens at the door of a room containing the monster.
- **Mobility:** The percentage chance that a monster will move each turn.
- **Magic Resistance:** The percentage chance that a magical item or spell will not affect a monster. Enter this percentage as a multiple of 10 (exa: 0, 10, 20, 30, 40, etc...).
- **Speed:** The number of times a monster may attack or move during it's turn.
- **Negotiation:** This is the percentage chance that the monster will negotiate with the party of characters. NOTE: When a monster's speed is 3 or higher, the negotiation number may be randomly altered by the cartridge. For speeds of two or under, this value will always be as designated.

**5.1.3 — To Enter a Monster Graphic:** This menu option allows you to enter new monster pictorial representations, or graphics, for a game. After entering the number of the graphic to be altered (a number between 1 and 16), you will be asked whether you wish to alter either the attack or defense graphic. Each monster has two graphic stances, the first called the defense graphic, and second the attack graphic. To make a new monster graphic, you have to draw two graphics - attack and defense. See Section VI, entitled "USING THE GRAPHICS EDITOR", for more details on drawing these pictures.

**5.1.4 — To Enter a Special Attack:** This option is used to enter a special attack type. Each game can contain 20 different special attacks. Enter the number to change, then rename the attack, and specify what special effects the attack causes.

**5.1.5 — To Enter a Quest Graphic:** The option used to change the graphic representation of a quest item. Each game can contain only two such pictures, numbered 1 to 2. These graphics are displayed when a quest item is found. Use menu option #6 to specify the name of the quest item and it's graphic (the number you define with this option)

**5.1.6 — To Enter a Quest Item:** This option is used to enter a quest item. Each game can contain a maximum of 8 quest items. With this option, you can specify the name of each quest item (number 1 through 8), what graphic is used to represent it (either 1 or 2 - defined with option #5), and how much time there is to find it. For less than 8 quest items, enter the defaults for the prompts ("0").



**5.1.7 — To Print Monster Statistics:** This option can be used to print out a complete list of all the monsters statistics, if you have a printer attached to your computer. It will display the names of the monsters on your screen as it is printing them. You can have the list printed to the screen, if you so desire, by specifying "SCREEN" as the output device.

**5.1.8 — To Enter Character Types:** Option #8 is used to change the names of the available character types in a game. The type of magic items and weapons a character can use is automatically assigned by the cartridge according to the number of the character. The first character type can use all weapons but cannot use scrolls, the second character type can use scrolls but is limited in weapons and armor use, the third character type can use most weapons and armor, cannot use scrolls, but can avoid traps, while the fourth character type can only be used if the player opts to have a party of one. This character can use all weapons, armor, and scrolls, and can avoid traps.

**5.1.9 — To Enter Character Graphic:** With this option you can change the graphic representation of a character. Each of the four available characters has two different graphics - an attack and defense stance. See Section 5.1.3 for more information.

**5.1.10 — To Enter Weapons:** Use this option to rename the weapons available in a game. The higher the number of the weapon, the more powerful the weapon is in combat.

**5.1.11 — To Enter Dungeon Graphics:** This option is used to change the "Dungeon Graphic" that appears in the beginning of the game, and when a player finds the general store. Use this option to make a unique graphic that distinguishes your adventure from others. It can consist of your initials, the initials of the name of your game, or anything you want to design actually.

**5.1.12 — To Enter a Touchstone:** This option is used to alter the names and effect of a touchstone. There are five different touchstones available in a single game. Select which one you would like to change by number.

**5.1.13 — To Enter a Lantern:** With this option you can modify any of the five lanterns available in a game. You can elect to change it's name name and effect.

**5.1.14 — To Enter a Potion:** A game may contain up to five different potions. This option can is used to change the name, and effect of each.

**5.1.15 — To Enter a Scroll:** The Tunnels of Doom cartridge supports a large variety of scrolls, up to 15 different ones in all. Select the number you wish to alter, then re-enter its name and it's effect.



**5.1.16 — To Enter a Wand:** This option will allow you to change the name and effect of any of the five wands available in a single game.

**5.1.17 — To Enter an Armor Type:** You can re-name the armor types available in a game with this option. Because the effects of the armor are static and unchangeable, you can only change the names. The greater the number of the armor being renamed, the greater it's strength in combat.

**5.1.18 — To Enter a Shield:** Like the previous option, you can only rename the available shields with this option. Again, the higher the number, the stronger the shield.

**5.2 — Program "B":** This program contains options that the beginning user of TOD Editor probably won't use for a while. Basically, with this program you can redraw some of the more fundamental graphics of your game. This program contains the following routines, as they appear on your monitor screen when the program is executing:

```
TOD Adventure Editor
```

```
Enter
```

- 1 To Change Dungeon Names
- 2 To Enter Weapons Graphics
- 3 To Enter Map Graphics
- 4 To Enter Directions
- 5 To Enter Magic Items
- 6 To Enter Room Graphics
- 7 To Enter Miscellaneous

```
Choice? <1>
```

**5.2.1 — To Change Dungeon Names:** With this option you can change the name of the store, the phrases displayed when a value is opened, and the names for the fountains, statues, treasures, vaults, and food. You can also change the "password". Simply follow the directions on the screen for each.

**5.2.2 — To Enter Weapons Graphics:** This and the following six items are used to redraw many of the fundamental graphics elements of a game. This particular option is used to redraw the representations for the missile, hand-weapon, and ranged weapon graphics. For this section and others read the section entitled "USING THE GRAPHICS EDITOR" for more information.

**5.2.3 — To Enter Map Graphics:** This option is used to redraw the map graphics for all directional hallways and doors, stairs and fountains. Changes to these graphics are visible whenever the game players find a map.



**5.2.4 — To Enter Directions:** This menu contains options for redrawing the elements of the directional sign that appears at the top of the screen when moving through the dungeon.

**5.2.5 — To Enter Magic Items:** With this menu you can redraw the graphic representations of a wand, scroll, touchstone, lantern, statue and fountain.

**5.2.6 — To Enter Room Graphics:** These options will allow you to redraw the basic elements of room graphics. You can change the representations of walls, corners and doors.

**5.2.7 — To Enter Miscellaneous:** The graphics that can be changed in this menu cannot be readily assigned to some other section - and so they were stuck in a section entitled "miscellaneous". With this section you can change the graphics for the cursor, armor, shields, the map, chest, vault, a dead thing, the stairs up and the stairs down.

**VI — Using the Graphics Editor:** The graphics editor is a simple screen-editor for designing the representation of characters, monsters, and the dungeon graphic. Operation is detailed on the screen. Use the arrow keys ("E", "S", "D", and "X") to move the cursor, and turn on and off the draw feature with the "1" and "0" keys. Press "ENTER" when finished. You can have print the picture you enter along with the hexadecimal code for that character just after leaving the editor.

**VII — Saving a Game:** Because the program makes modifications to the game you are editing AS you edit it, you don't have to worry about saving and loading games. It's automatically done for you. When you are finished editing any game(s) that you wish to edit, and have QUITed from the program (FCTN "="), it is advisable to copy the game onto a new disk. The game can then be renamed or played safely.

**VIII — Program Notes:** Because of the nature of the program and the amount of information that can be changed, you should expect to spend several hours creating your own unique games. However, because saving and loading of games is automatically performed after every change, you can work on a game over many sessions. The only problem you may encounter doing this is keeping track of where you left off. To best keep track of everything, modify the game step by step in the order of the modifying options. If you get tired of working on your game before you are done, simply write down the last option you were on when you quit. The next time you start working on the game, simply check your slip of paper for the step you should start with. It is recommended that you keep a separate permanent data disk as a work disk. When creating new games, simply modify this one and copy it onto a regular disk when finished. If you wish to edit another game, copy that game over the one on the data disk. Remember, the game MUST be the first program on the data disk (physically occupy the first block of 52 sectors on a diskette).



TOD Editor is sold to the user protected. Because it is protected, a backup copy is provided to the user. If both the backup copy and the original should fail, return the program disk to Asgard Software for a free replacement. Include \$.75 for return postage, or a stamped, self-addressed envelope. If you do not include return postage by either of these methods, we will not return a corrected copy to you.

Users of this program hold all rights to the individual games they create with the program. These games may be freely traded, given away, or sold at any time. Asgard Software will give authors a free evaluation of games created with TOD Editor if the author provides a copy on a SSSD disk, and return postage (if you wish the disk returned after the evaluation). Asgard Software may purchase the rights to sell evaluated games, or offer authors limited term, high-yield sales contracts. Offers are given at our discretion, and no garranty, written or explicit is implied that we will make an offer for the created game.

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# TOD Editor Tutorial

By John Behnke

This tutorial is for those who need help in understanding the many and often complex commands of TOD Editor. It is assumed that you have knowledge of how the game is played and have had some actual experience in playing a Tunnels Of Doom adventure. If you are still not familiar with all the commands and features of the game, I strongly suggest that you play a few more games so you can more easily understand the elements of the game.

## About The TOD Adventure Module

The Tunnels of Doom module was released by Texas Instruments in 1982 as a sequel to the popular "Adventure" series. The price of the module was \$45, which was very expensive even at that time when games typically cost \$20 or more. Many people purchased this module because Texas Instruments promised more adventures for it at a much lower price at a later date. Of course, these games never materialized.

The Adventure module cost almost as much, but was physically inferior to the Tunnels of Doom cartridge. If you read the back cover of the manuals accompanying both, you would have discovered that the Tunnels Of Doom module had 30,000 bytes of memory versus 6,000 for the Adventure cartridge. This implies that games written for the TOD module can be much more complex than games for the Adventure module. The TOD module contains the general rules for the game, sound effects, various input and output routines, and the TOD theme music that you hear when you are constructing a dungeon or descending stairs. Games for the TOD module can be used with either diskette or cassette systems because the game is loaded into the 16,000 byte Video Display Processor memory that is in every console. In adding the memory in both the module and the actual game loaded into VDP memory, we find that a single game consists of 46,000 Bytes, or 46K of program. This is an enormous amount of memory.

With the TOD Editor you can edit the 16,000 byte game diskette. The module of course cannot be changed, and because many of the features of the game are in the module, you are unable to change many features of the game. Some other aspects of the game that are possible to change have been left out because they are complex and really add nothing to the game by changing them. An example of this are the hallways. It's possible to change the hall graphics, but since the module builds the halls from a library of graphics, you would have to carefully plan your changes, and change



everything. This type of change is not really necessary unless you give a high priority to the color and shape of a door. The module also assigns different colors to the character sets, and if you were to change the graphics, the colors might not match. I hope this explains why certain things are unchangable. I'm sure it will not hamper the construction of your masterpiece dungeon in any way. Now on to the tutorial!

## Creating Your First Dungeon

Note: I will be going over the use of Program "A". Program "B" is intended for more experienced users who wish to change aspects of the game that may be too difficult to understand for the first time user of this program.

After loading the program as per the instructions in the main manual, you will see the main title screen. I will now explain in detail TOD Editor, and change one aspect of each option that is available.

### Option #1: Enter Game Description

When you are waiting for a dungeon to be dug, you are shown the title of the dungeon and a description of the game. This option allows you to input this into your own dungeon. You will be prompted to enter the title of the dungeon. At this point, enter the name you wish to give it. Keep in mind that what you see is what you get. In other words, what you see on the screen is what you will see in the game. So center each line the way you wish it to appear in the game.

Example:

```
Column 1234567890123456789012345678
Title:          MY FIRST DUNGEON
Line 1  THIS IS MY FIRST DUNGEON.
2  THE OBJECT IS TO TRY AND WIN
3  THE GAME AND GATHER LOTS OF
4  GOLD. AVOID THE MONSTERS AS
5  THEY WILL TRY AND KILL YOU.
6
7          BY JOHN DOE
8
9          SEPTEMBER 1985
10
```

If you were to type this in, that's how it would appear in the game. As you can see, this was just an example. Here are some examples of things you may want to include in your description:

- o A short description of what the player's goals are.
- o A warning about any special dangers that you have placed in your dungeon.
- o Your name and possibly the date the dungeon was made.

You do not have much space to enter a detailed description of your dungeon so you may want to write a short Basic program or TI-Writer file that describes the dungeon in greater detail. In general, the short description that you can enter should be interesting and contain information that the player will need to know in order to accomplish his task.



## Option #2: Entering A Monster

You are allowed to Enter 51 different monsters. You need not use all 51. To exclude a monster number, simply enter spaces for the monsters name and zeros for all prompts (and "N" for any questions). There are many questions asked for this option, so I will go over an example and explain what it does:

Question Asked	You Enter	Effect On Game
Number to Change?	1	You wish to change the first of the 51 monsters. In general, the higher the number, the more experience you gain by killing it. You should assign the higher numbers to the stronger monsters.
Monster Name?	TIGER	Monster #1 will be called a TIGER.
Monster Level?	4	This is how strong the monster is on a scale from 0-15. 0 is the easiest, 15 the hardest.
Defense Level?	3	This number shows how well the monster is able to protect himself in battle, on a scale from 0-15 - 0 is easy, 15 hard.
Attack Level?	3	This number shows how strongly a monster attacks; from 0-15. 0 is not a strong attack, 15 is very strong.
Ranged Attack?	N	A ranged attack means that the monster can attack you even if he is not next to the defender.
Maximum Damage?	5	This number is how many hit points of damage the monster can inflict if he hits the defender in an attack.
Special Attack %?	10	This is the percentage chance in 100 that the monster will use a special attack on the defender. Since 0 is the monster does not have a special attack.
Special Attack Type	*Special*	At this point you will see a special attack type on your screen. Hit ENTER when you have found an attack you want.
Maximum Special Damage	6	This number is how many hit points of damage the monster can inflict on the defender with a special attack.
Monster Graphic:	*Special*	You will now see some graphics on the screen at a time. These are the monster graphics that you can choose from. Each of the 16 different monsters have 2 graphics, one for when he is idle and the other when he is attacking or is hit. Use the "S" key to skip until you find the graphic you wish to use and then hit ENTER.



Monster Sound:	0	There are 16 different sounds built into the module. It's hard to describe exactly what a sound "sounds" like and you may want to experiment with them to get to know them. key to select that type.
Mobility?	75	This number represents the % probability that the monster will move during his turn.
Magic Resistance?	0	This number is the percentage chance that any magic you use against him will not work.
Speed?	2	This is how many moves the monster can make each turn. 2 is standard. For a 2, the monster can move once and attack once or move twice.
Negotiation?	0	This is the percentage chance that the monster will take a bribe not to attack the party. I don't think that lions take bribes so I put a "0" here. Or can they be bribed?

### Option #3: Entering A Monster Graphic

You are able to use 32 monster graphics in a game. Each monster has two graphics, attack and defense. So you can have 16 different monsters each using two graphics. When you enter a new monster graphic, you will really have to enter two. The first graphic is what the monster will look like when there is no action. The second is what it looks like when it is attacking or has been hit by a party member. When you select this option, you will be asked which graphic to change. Enter a number between 1 and 16. After that, you will be asked to enter either a D to draw a defensive graphic or A to enter the attack graphic. The two should look the same but the attack graphic should have some small changes to make it look like movement when the graphics are changed from one to another. Here's a set you may use as an example:

Defense													Attack																		
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
1																1															
2																2															
3																3															
4																4															
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Notice how the attack graphic is just like the defensive one but with a few small







manual for more information on this.

### Options #7-18

These options are pretty much self explanatory, but are explained in sufficient detail in the instructions. The first 6 options may be hard to understand so I suggest you try them out a few times, see what effect them have on the game, and go on from there. It's not as hard as it seems.

### Special Note On Printers

Option #7 will work on most 80 column printers but the Print Graphic feature was written for the Gemini 10X and SG-10 printers. Some Epson printers will also work. Give it a try and see what happens. The print graphic feature just dumps the graphic you draw (only in program A) to the printer and displays the Hex code so you could reproduce it in one of your own programs. You may want to write a program that uses the dungeon graphics (monsters) and describes them and also gives instructions to the game in detail. I'm sorry if your printer is not compatible but it would not be feasible to include more printer types as their codes are incompatible and Program A fills up the memory completely. The Gemini printers are the most popular for the TI and that's why I included that particular printer.

Have Fun And Enjoy! — John Behnke

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## ADDENDUM

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### INFORMATION REGARDING THE CHANGES TO UPDATE IT AS BETA PROGRAM

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This program has been upgraded to include additional features not found in version one. I will outline them here as they are not covered in the documentation that is included in the manual.

#### Changes

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1. TGD Editor is no longer copy protected. This aspect of the program was removed to permit you to make your own back-up copies and to attain full compatibility with the Myarc disk controller card. Only one copy of the program is included. It is recommended that you make a backup of the disk before use, and place the original in a safe place. This program is copyrighted. You are allowed to make copies of this program for your own personal use only.
2. The loader speed has been greatly increased.
3. The main menu screen in program A has been modified. Use the up and down arrow keys ("E" and "X") to make your selection, and then press "ENTER" to go to that option.
4. Option J, "Enter Game Description", has been changed to allow you to edit the description before saving it. Furthermore, the program now permits the use of spaces (" ") in the description.
5. The graphic editor in program A has been enhanced to include the following features:
  - a. Clear pattern to 'off' blocks.
  - b. Clear pattern to 'on' blocks.
  - c. Horizontal Flip.
  - d. Vertical Flip.
  - e. Inverse pattern.
  - f. Isolate pattern.
  - g. Cursor may now be moved without leaving a trail.
  - h. Pattern can be 'nudged' in any direction.
6. The "Print Graphic" option will now work with all printers. The default codes are pre-set for Epson compatible printers. You may change these by sending up to five control codes to your printer that represent your printer's special functions.
7. A few small aesthetic errors have been corrected. These mostly pertain to the centering of text and the removal of extra characters that were left if the entire field was not used.

Enjoy  
John Behrke 1986

