COMPUTER NOVEL CONSTRUCTION SET™

Create Your Own "Real-Time" Interactive Fiction.
No Programming Skills Required.

Developed by Robin Computing, Inc.

COMPUTER NOVEL CONSTRUCTION SET™

USER MANUAL

BY

ROBIN COMPUTING, INC.

32900-00

CREDITS:

PROGRAM DESIGN: David Weinberg, Rich Epstein & Frank Slaughter
PROGRAMMING: Robin Computing, Inc.
DOCUMENTATION & MANUAL: Michael Foster, David Weinberg, Michael Banks & Kathy Donovan
PACKAGE DESIGN: Robert Fernandez and Sean Bice
PACKAGE ART & ILLUSTRATION: Alan Lee & Associates
PROJECT MANAGEMENT: Michael Foster, Kathy Donovan & Gail Rothenberg

Limited Warranty. If during the first 90 days from purchase the disk is found to be defective, return the disk to Hayden for a free replacement. After 90 days send your disk and $10.00 for replacement. To obtain this warranty you must complete and return the enclosed registration card.

Neither Hayden Software Company nor the author(s) of this program are liable or responsible to the purchaser or user for loss or damage caused, or alleged to be caused, directly or indirectly by the software and its attendant documentation, including (but not limited to) interruption of service, loss of business, or anticipatory profits.

HAYDEN SOFTWARE COMPANY, INC

600 SUFFOLK STREET
LOWELL, MA 01854
800-343-1218
(in MA, call 617-937-0200)

TABLE OF CONTENTS

INTRODUCTION

The **Computer Novel Construction Set** comes complete with everything you need to write your own text adventures. Before you begin to create your own text adventures you should take some time to review this user manual.

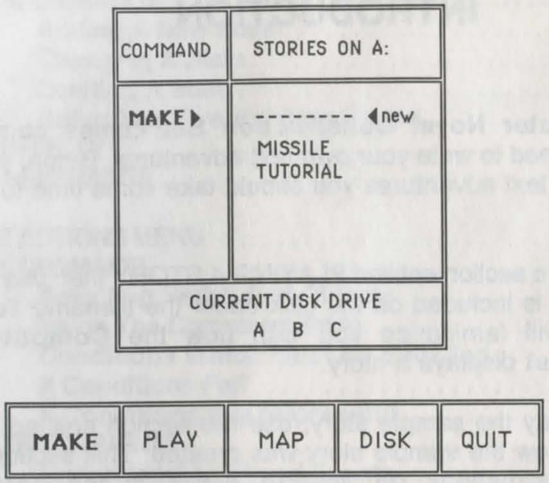
First, read the section entitled PLAYING A STORY then play the sample adventure which is included on the disk under the filename Tutorial. This sample story will familiarize you with how the **Computer Novel Construction Set** displays a story.

After you play the sample story, use the section entitled MAKING A STORY to see how the sample story was created. This section gives you step-by-step instructions on how to duplicate the sample story. Duplicating this story will give you some practice using the basic features of the Story Maker program.

Once you have played the sample story and have made your own version of it, you will have a good understanding of the **Computer Novel Construction Set** and its features. If you have questions about any of the the program's features, use the REFERENCE section of this manual. This section provides detailed information on both the basic and advanced features of the Story Maker program. In addition, the EXAMPLES section provides information on implementing some of the more common text adventure scenarios.

Refer to your reference card for instructions on how to start the **Computer Novel Construction Set**. When you boot the disk, the Main Menu will be displayed.

The Main Menu allows you to make, play, or map a story. A list of stories is displayed in the center of the screen. The first choice lets you make a new story. Use the Up and Down Arrow keys to select a story.



COMMAND

STORIES ON A:

MAKE ▶

◀ new

MISSILE

TUTORIAL

CURRENT DISK DRIVE

A B C

MAKE PLAY MAP DISK QUIT

Across the bottom of the screen are five options: MAKE, PLAY, MAP, DISK, and QUIT. Use the Left and Right Arrow keys to highlight the desired option. Try this now. Select an option by hitting **RETURN** or **ENTER**.

MAKE calls the Story Maker, the part of the program which lets you make a new story or change an existing one.

PLAY calls the Story Player, the part of the program which lets you play an existing story.

MAP calls the Story Mapper, the part of the program which displays a map of the rooms in the story.

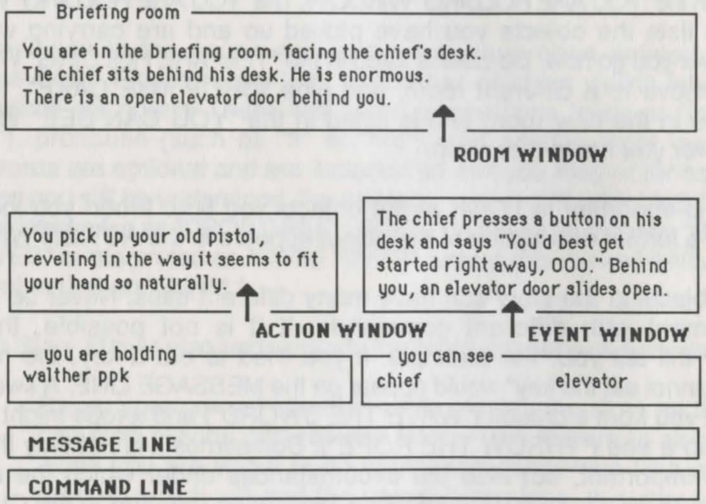
DISK lets you see a list of stories on another disk drive.

QUIT exits the **Computer Novel Construction Set**. Hitting **ESC** from the Main Menu also exits the program.

PLAYING A STORY

Playing a story created with the **Computer Novel Construction Set** is easy to do since there are so few commands to learn. This section introduces you to all the commands needed to play any story created with the program.

When a story begins, there is an introductory message that gives you an idea of what the story is about and what your goal is. After reading this message, you are given a description of where you are and what objects are in the area. Stories usually take place in many locations or "Rooms." Even if you are outside - in a meadow - it is still considered a room. Whatever room you are in, the screen will look something like this:



Briefing room

You are in the briefing room, facing the chief's desk.
The chief sits behind his desk. He is enormous.
There is an open elevator door behind you.

You pick up your old pistol, reveling in the way it seems to fit your hand so naturally.

The chief presses a button on his desk and says "You'd best get started right away, 00O." Behind you, an elevator door slides open.

you are holding
walther ppk

you can see
chief elevator

Most text in the story is displayed in boxes on the screen, or "windows." Each window contains different information about the story you are playing.

The ROOM WINDOW contains the room's name and a description of the surroundings. Rooms are connected to one another, and typing NORTH, SOUTH, EAST, or WEST tells the Story Player that you want to go to another room. When you tell the Story Player what you want to do, your command is entered on the COMMAND LINE. As you move from room to room, the text in the ROOM WINDOW changes to describe the room you are currently in. The room displayed on the screen is referred to as the CURRENT ROOM.

If there are objects in the CURRENT ROOM, they are described in the ROOM WINDOW and are also listed in the "YOU CAN SEE" WINDOW. When an object is in the CURRENT ROOM, you can manipulate it by simply entering a command. For example, you could type: "TAKE THE CAKE", "WASH THE FORK", or "EAT THE CAKE WITH THE FORK."

A common action is picking up objects. If the "YOU CAN SEE" WINDOW listed a Chocolate Cake and you typed "TAKE THE CAKE", the cake would appear in the "YOU ARE HOLDING" WINDOW. The "YOU ARE HOLDING" WINDOW always lists the objects you have picked up and are carrying with you. Wherever you go now, the cake is listed in the "YOU ARE HOLDING" WINDOW. If you move to a different room, and type "DROP THE CAKE", the cake remains in the new room and is listed in the "YOU CAN SEE" WINDOW whenever you are in that room.

It is important to LOOK at the objects you find. When you look at an object, a further description of the object appears in the ACTION WINDOW.

Objects in the story can have many different uses. Never be afraid to experiment with different commands; if it is not possible, the Story Player will tell you. For example, if you tried to eat a key, the response "You cannot eat the key" would appear on the MESSAGE LINE. A sword might protect you from a dragon ("WAVE THE SWORD") and a rope might help you climb up a tree ("THROW THE ROPE"). Sometimes it is not only the action that is important, but also the circumstances under which the action is performed. Waving your sword when there is no creature in the CURRENT ROOM would be useless, but if there is a dragon around, it would scare him away.

When you type in a command, a message usually appears in the ACTION WINDOW. The command "WASH THE FORK" might elicit the response, "You wash the dirty fork. It now looks clean enough to eat with." Read these messages carefully for they often contain clues about the object and its possible uses.

In real life, events occur regardless of your actions. This can also happen with the **Computer Novel Construction Set**. Events which happen all by themselves are called Timed Events. A wizard might appear, a cloud might pass overhead, or you might even get caught in an earthquake. The EVENT WINDOW informs you of these events as they take place.

SPECIAL FEATURES OF THE STORY PLAYER

The Story Player will attempt to understand all of your commands. If it doesn't recognize a word you enter, the message "I do not know the word <word>" will be displayed. Sometimes the Story Player will ask for more information. If there are both a Green Book and a Red Book in a room, and you enter "TAKE THE BOOK", the Story Player will ask you to specify which book you want to take. Simply enter "GREEN" or "RED." If you enter "TAKE THE GREEN BOOK" or "TAKE GREEN", the Story Player knows that you want to take the Green Book.

In addition to the nouns and verbs that have been defined for the story, the Story Player recognizes a number of short words which are neither verbs nor nouns. These words are prepositions (such as "in", "on", and "to"), pronouns (such as "it" or "his"), and articles (such as "the"). These words are optional and are included so that you may enter complete sentences and still be understood. For instance, entering "DROP THE GREEN BOOK" is interpreted as "DROP GREEN BOOK." In the same manner, "SWIM IN THE RIVER" is interpreted as "SWIM RIVER", unless you define "SWIM IN" as a different verb than "SWIM."

The Story Player also understands the following general commands:

SAVE Saves your current situation while playing the story so that you can stop playing and resume later. This feature is also useful when you are about to do something dangerous (like attack a dragon) which will end the game. If you lose, this way you can return to the point in your story where you saved your situation and try another command (maybe feed the dragon this time). You are allowed to save up to ten situations for each story, numbered 0 through 9. As a reminder, you can enter an optional comment ("about to attack dragon") after the save number.

LIST Gives a listing of the numbered SAVE situations and accompanying comments.

RESTORE Restarts the story at the point where it was previously SAVED. Choose the number (0-9) of the situation you want to restore.

RESTART Begins the story again.

SCORE Displays your current score.

QUIT Quits the Story Player (you may also hit **ESC**).

WAIT Allows time to pass and Timed Events to occur in the story. For example, if you enter a subway station and you do not see a train, you might "WAIT" to see if a train will arrive.

AGAIN Repeats the last command that was entered.

LOOK Displays an additional description of an object. EXAMINE and LOOK AT are synonyms for LOOK.

Spend a few minutes playing the story named TUTORIAL. It is a short story, but it uses many of the features of the **Computer Novel Construction Set**. Pay close attention to where and when various events take place. Once you have finished playing the story, turn to the Making A Story section of this manual. This section walks you through the process of making a duplicate version of the story on your own. You can compare your story with the original to see how well you have mastered the Story Maker program.

Load the **Computer Novel Construction Set** according to your reference card. Use the Arrow keys to highlight the story named TUTORIAL and the option PLAY, then press **RETURN** or **ENTER**.

MAKING A STORY

This section shows you how to construct a story using the various features of the **Computer Novel Construction Set**. At this point you should have already played the story named TUTORIAL so that you have an understanding of when and where the different messages are displayed. You will learn step-by-step how to make a copy of the story by following this tutorial. Be sure to enter all the information as indicated.

If you have any problems creating the new story, look at the completed version of the story already on the disk under the filename TUTORIAL.

HOW TO USE THE STORY MAKER

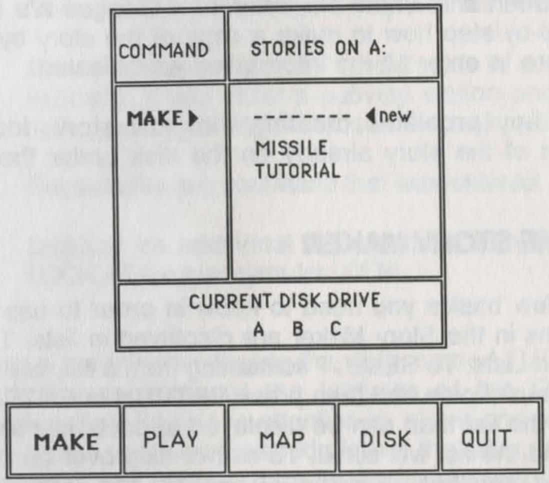
There are a few basics you need to know in order to use the Story Maker. Many items in the Story Maker are displayed in lists. These lists are called Selection Lists. To SELECT something from a list, use the Arrow keys to highlight your choice and then press **RETURN** or **ENTER**. If there are more items in the list than can be displayed at once, just keep hitting the Arrow keys and the list will scroll. To exit or skip over an option, hit **ESC**. To enter text, simply type in the information and press **ENTER** or **RETURN.**

If you make a mistake while typing, you can correct the mistake by using the appropriate editing keys listed on your reference card. If you are entering a description with more than one line of text, do not press **RETURN** or **ENTER** at the end of each line. Simply type in the entire description and hit **RETURN** or **ENTER** when you finish.

The remainder of the Tutorial takes you through the steps required to make a copy of the Tutorial story. In this story there are two rooms - a dungeon and a forest. The player begins the story chained to a wall in the dungeon. He finds a key and unlocks his chains. He escapes to the forest and finds a chest. When he opens the chest he finds an emerald. When he takes the emerald he wins the story. But if it takes him too long to do all of this, he "loses" the story.

MAKING THE PRACTICE STORY

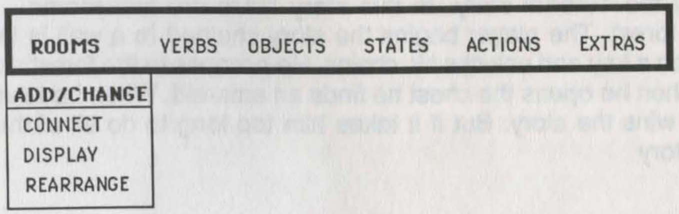
Load the **Computer Novel Construction Set** according to the directions on the enclosed reference card. Use the Arrow keys to highlight **"---------<new"** in the list of stories and **MAKE** in the list of commands and hit **RETURN** or **ENTER**.



Type in "PRACTICE" and press **RETURN** or **ENTER**. The Story Maker takes a few seconds to load and then the Story Maker Menu is displayed.

ROOMS MENU

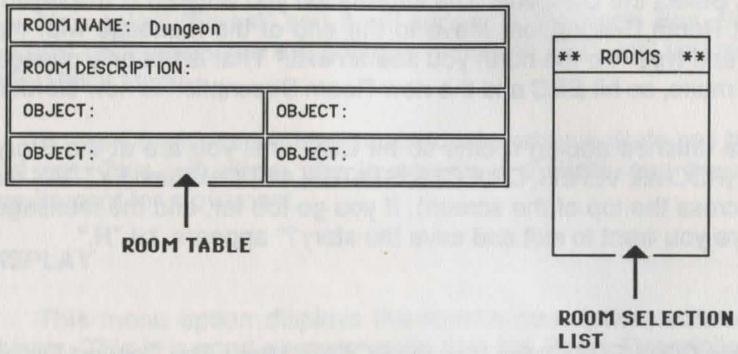
The Rooms Menu allows you to create the rooms that will exist in your story. It is also the place where you connect and change rooms.



Rooms are the locations in which your story takes place. Each room has a Room Name and a Room Description. There may also be some Objects in the room. By defining Connections between the rooms, you allow the player to move from room to room.

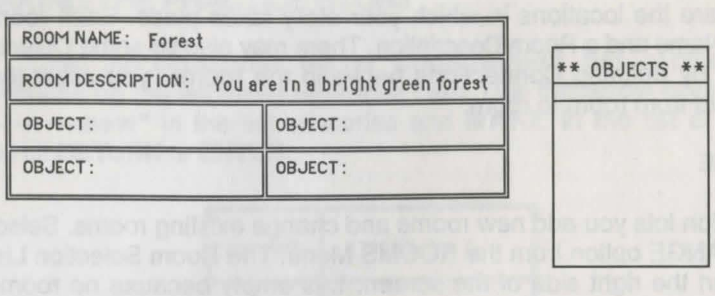
ADD/CHANGE

This option lets you add new rooms and change existing rooms. Select the ADD/CHANGE option from the ROOMS Menu. The Room Selection List will appear on the right side of the screen. It is empty because no rooms exist yet. The other window, the Room Table, contains the information about a room. To add a Room, type it's name. Type "Dungeon" (don't forget to hit **RETURN** or **ENTER**).



Dungeon appears in the Room Table and a large window appears so that you can enter the Room Description. Type "You are in a cold and damp dungeon" followed by **ENTER** or **RETURN**. The window disappears and only the first line of the description can be seen. Since you have not created any objects yet, there are no objects to place in the room now. Hit **ESC**. Congratulations! You have just created your first room.

Now add the Forest in the same manner. Type "Forest" followed by **ENTER** or **RETURN**. Then type "You are in a bright green forest. There are trees in all directions. To the south you see a dungeon" and press **ENTER** or **RETURN**. You still have not created any objects, so hit **ESC**.



ROOM NAME: Forest

ROOM DESCRIPTION: You are in a bright green forest

OBJECT:

OBJECT:

OBJECT:

OBJECT:

** OBJECTS **

Creating rooms is that simple! If you make a mistake, you can correct it at any time. To change a room, select it from the Room Selection List on the right side of the screen. For example, change the Dungeon's Room Description. Select the Dungeon. The information you entered is displayed. Next, select Room Description. Move to the end of the message with the Arrow keys and type "To the north you see an exit." That is the only change you want to make, so hit **ESC** and the new Room Description is now stored.

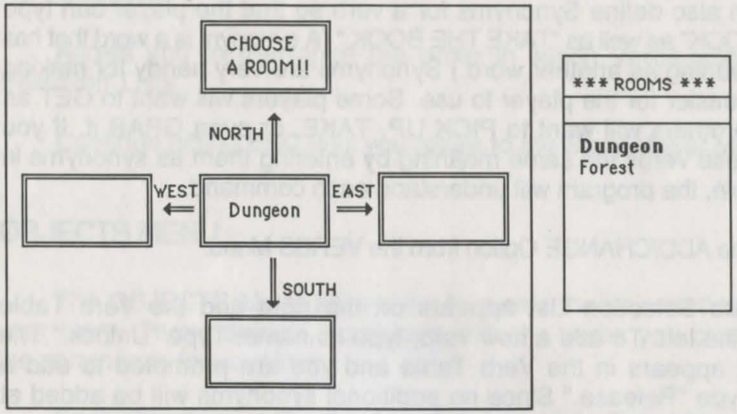
You are finished adding rooms so hit **ESC** until you are at the Story Maker Menu (ROOMS, VERBS, OBJECTS, STATES, ACTIONS, and EXTRAS are displayed across the top of the screen). If you go too far, and the message "Are you sure you want to exit and save the story?" appears, hit "**N**."

CONNECT

Select the CONNECT Option from the ROOMS Menu. The Connect Option lets you make connections between your rooms.

You see the Room Selection List on the right. To the left is a mapping layout consisting of five boxes, one in the center and the others labeled NORTH, SOUTH, EAST, and WEST. At the moment, the boxes are blank.

To make connections, you must select a starting room. Select the Dungeon. Note that "Dungeon" appears in the center box. Now you must choose the location of the Forest. To place it to the North of the Dungeon, first hit the Up Arrow key. The message "CHOOSE A ROOM!!" appears in the North Box and the Room Selection List appears to the right.



Now select "Forest" and it will appear in the North Box. Since this is the only connection you are going to make, hit **ESC** until you return to the Story Maker Menu.

Travel Conditions will be discussed later when a State has been added and set. This will allow you to see how a State can be used as a requirement for movement.

DISPLAY

This menu option displays the room's description, connections and objects. This is a good place to verify that the Room Description matches the connections. Since the Room Description for the Forest mentions a Dungeon to the south, you want to make sure that there is a connection to the south with the Forest.

REARRANGE

This option allows you to rearrange the order in which rooms appear in room selection lists.

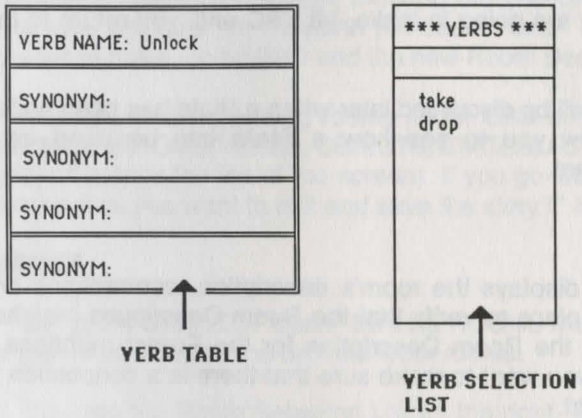
VERBS MENU

Verbs are the "action" words that the player can use during the story. These words, combined with the objects in the story, form your commands. The verbs Take and Drop already exist in the game's vocabulary, so you do not need to enter them. Be creative when defining your verbs so that the game's vocabulary will understand a wide variety of commands.

You can also define Synonyms for a verb so that the player can type "GET THE BOOK" as well as "TAKE THE BOOK." (A synonym is a word that has the same meaning as another word.) Synonyms are very handy for making your stories easier for the player to use. Some players will want to GET an object, while others will want to PICK UP, TAKE, or even GRAB it. If you give all of these verbs the same meaning by entering them as synonyms in the Verb Table, the program will understand each command.

Select the ADD/CHANGE Option from the VERBS Menu.

The Verb Selection List appears on the right and the Verb Table appears on the left. To add a new verb, type its name. Type "Unlock." The verb Unlock appears in the Verb Table and you are prompted to add a Synonym. Type "Release." Since no additional synonyms will be added at this time, hit **ESC**.



VERB NAME: Unlock

SYNONYM:

SYNONYM:

SYNONYM:

SYNONYM:

*** VERBS ***

take
drop

Add the verb Open. First, type "Open" and then hit **ESC**. Your Verb Selection List now contains the verbs Unlock and Open.

To change a verb or synonym, select the entry to be changed, delete the old information and enter the new information. After the changes are complete, hit **ESC**.

DISPLAY

Allows you to see how a Verb is used. Since you have not defined any Objects yet, you can't Unlock or Open anything.

REARRANGE

Allows you to rearrange the order in which Verbs appear in Verb Selection Lists.

Continue hitting **ESC** until you return to the Story Maker Menu.

OBJECTS MENU

The OBJECTS Menu allows you to create the objects that will exist in your story. These objects, combined with the verbs you create will form the commands for your story.

Each object has a Starting Location and an In Room Description. The starting location is where the object is at the beginning of the game. If objects are picked up and then dropped in new locations, the program displays them in their new locations, but the Object Table will always specify the starting location.

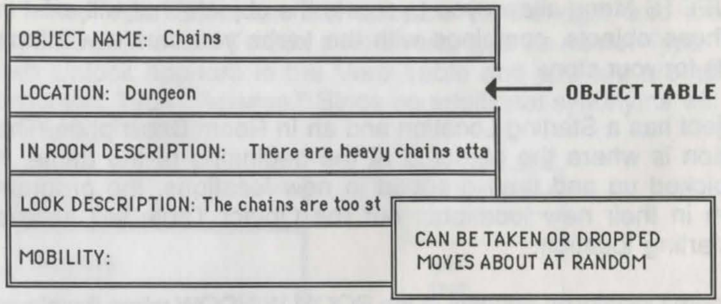
The In Room Description appears in the ROOM WINDOW when the player enters the room. The In Room Description is a brief description of the object that appears with the Room Description when an adventure is played. This description disappears once you pick up an object and leave the room, and is not repeated. It is not always necessary to provide an In Room Description for an object, especially if it is an immobile object and its description is embedded in the Room Description.

An object may also have a Look Description to give the player a more detailed examination of the object. The Look Description is the description that comes up when the player enters the command LOOK (object) during play. If you type "LOOK AT THE CAKE", for example, you might be told "The cake has 'Happy Birthday' written in the icing."

You can also specify whether the object may be "taken" or "dropped" or if it moves about at random. You may also choose to leave Mobility blank, in which case the object cannot be moved.

To add an object select the ADD/CHANGE Option from the OBJECTS Menu. The Object Selection List appears on the right and the Object Table appears on the left. Type "Chains." The object Chains will appear in the Object Table and you will be prompted to specify a starting Location.

The Room Selection List appears on the right with the rooms you had entered earlier. Select the Dungeon. The Chains will have the Dungeon as their starting location, which is where Chains belong. The Room Selection List disappears and you are prompted to enter an In Room Description. Type "There are heavy iron chains attached to the wall here." You are then prompted to enter a Look Description. Type "The chains are too strong to break, but there is a keyhole." The last field in the Object Table is Mobility. Since the Chains cannot be moved, you don't want to select either "CAN BE TAKEN OR DROPPED" or "MOVES ABOUT AT RANDOM."



OBJECT NAME: Chains

LOCATION: Dungeon

IN ROOM DESCRIPTION: There are heavy chains atta

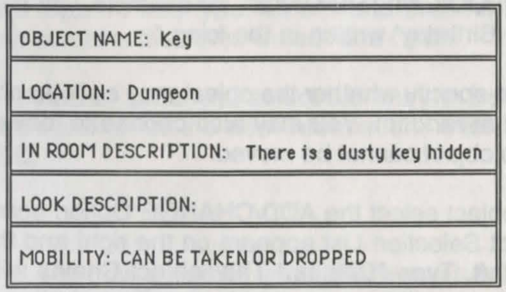
LOOK DESCRIPTION: The chains are too st

MOBILITY:

CAN BE TAKEN OR DROPPED
MOVES ABOUT AT RANDOM

Hit **ESC** to leave this field blank. The Chains are now in the Dungeon and you are ready to add the next object.

Type "Key" for the second object. Select the Dungeon for the location of the key. For the In Room Description type "There is a dusty key hidden in the dirt." Hit **ESC** to leave the Look Description blank. You want the player to be able to take the Key, so for Mobility select "CAN BE TAKEN OR DROPPED."



OBJECT NAME: Key

LOCATION: Dungeon

IN ROOM DESCRIPTION: There is a dusty key hidden

LOOK DESCRIPTION:

MOBILITY: CAN BE TAKEN OR DROPPED

Add another object by typing "Chest." For the location of the Chest, select the Forest. For the In Room Description type "There is an ancient chest among the leaves." For a Look Description type "It does not seem to be locked." Since the Chest cannot be moved, you want to leave the Mobility field blank, so hit **ESC**.

The last object to add is the Emerald. Type "Emerald." The Emerald is going to be discovered when the player opens the Chest, but if you put it in the Forest, the player will see it without opening the Chest. Hit **ESC** to skip the Location so that the Emerald will not appear anywhere initially and you can make it appear when the player opens the Chest. For the In Room Description type "Inside the chest you see a beautiful emerald." Leave the Look Description blank by hitting **ESC**. You want the player to be able to take the Emerald so for Mobility select "CAN BE TAKEN OR DROPPED."

DISPLAY

Allows you to view all information relevant to an Object.

REARRANGE

Allows you to rearrange the order in which Objects appear in Object Selection Lists.

STATES MENU

A State is a condition which results from an action or another state. To illustrate the concept of a State, think about a flashlight which can be ON or OFF. Now, if you wanted to have a flashlight in a game, it would most likely be turned OFF when the game started. There are two possible settings for the flashlight--Turned ON or Turned OFF. Since it is simpler to work with only one state, you would create the state "Flashlight Turned On" for use in your game. The initial setting of this state would be "OFF" since the flashlight would NOT be turned on.

States are used either to monitor actions or to make events occur in the story. For example, in the story you are creating the player starts out locked in chains. During the story, you need to know if the player is still locked up or if he has unlocked the chains . This information is maintained by a State. Choose a name for the State which describes the information being monitored. "Player is Free" is a good name for a state which remembers if the player has unlocked the chains.

Select the ADD/CHANGE Option from the STATES Menu. The State Selection List will appear on the right and the State Table will appear on the left. To add a new state, type its name. Type "Player is Free." The state "Player is Free" appears in the State Table and you are prompted for an Initial Setting. Select OFF, since the player will be locked up when the story begins. The State will be turned ON only when the player Unlocks the Chains. This new state "Player is Free", is now in the State Selection List.

DISPLAY

Allows you to view all information relevant to a State.

REARRANGE

Allows you to rearrange the order in which States appear in the State Selection Lists.

Hit **ESC** until you are at the Story Maker Menu.

TRAVEL CONDITIONS

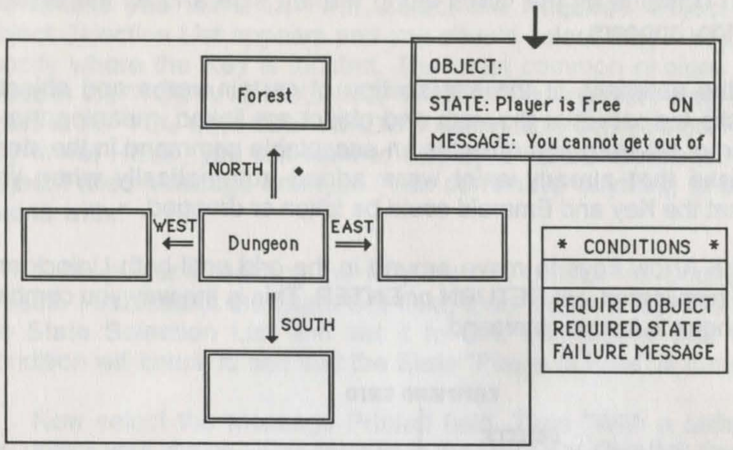
Travel Conditions are used to prevent the player from traveling in certain directions unless the specified conditions are met.

In this story you need to prevent the player from leaving the Dungeon unless he has Unlocked his Chains and is free. This is accomplished with a Travel Condition. The Travel Condition does not allow the player to leave the Dungeon unless the state "Player is Free" is set to ON.

To set the Travel Condition, first select the CONNECT Option from the ROOMS Menu and then select the Dungeon. "Dungeon" will appear in the center box and "Forest" should appear in the North Box.

Hit the TRAVEL CONDITION key (refer to your reference card). Now hit the Up Arrow to add a Travel Condition for going North from the Dungeon. The Travel Condition Table is displayed. There is no Required Object for this Travel Condition, so that field will be left blank. Select the Required State field. A State Selection List appears. Select the state "Player is Free." Select ON from the next list (indicating that the state must be on). Now select the Failure Message field. Type "You cannot get out of the dungeon as long as those chains are on your legs."

TRAVEL CONDITION TABLE



OBJECT:

STATE: Player is Free ON

MESSAGE: You cannot get out of

The Travel Condition is complete, so hit **ESC**. Notice the diamond which appears next to the arrow connecting the Dungeon and the Forest. This diamond reminds you that there is a Travel Condition set for going North from the Dungeon to the Forest.

Hit **ESC** until you are at the Story Maker Menu.

ACTIONS MENU

The ACTIONS Menu is where you put the story together. Here you link the verbs and objects that you have created to form Commands. After creating the raw materials--rooms, verbs, objects, and states--you join them together and allow them to interact in various ways with States and Timed Events.

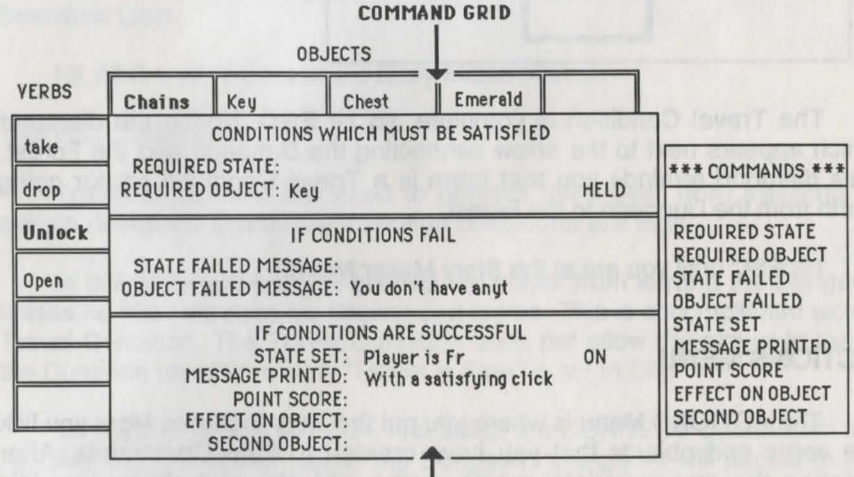
COMMANDS

Commands specify the actions which occur in a story. For instance, if the player types "TAKE THE EMERALD", the Command formed by the combination of TAKE and EMERALD would specify that a message will be displayed indicating the effect of taking the Emerald. The Command might also specify conditions which must be true before the Emerald can be taken. These conditions could require the Emerald to be in a certain location or a particular state to be set to ON or OFF.

Select the COMMANDS Option from the ACTIONS Menu. The Command Grid, which contains all the verbs along the left side and all the objects across the top, appears.

Note the asterisks at the intersection of certain verbs and objects. The asterisks indicate that the verb and object are linked, meaning that a combination of the verb and object is an acceptable command in the story. The asterisks that already exist were added automatically when you specified that the Key and Emerald could be taken or dropped.

Use the Arrow keys to move around in the grid until both Unlock and Chains are highlighted. Hit **RETURN** or **ENTER**. This is the way you combine a verb and noun to form a command.



CONDITIONS WHICH MUST BE SATISFIED

REQUIRED STATE:
REQUIRED OBJECT: Key HELD

IF CONDITIONS FAIL

STATE FAILED MESSAGE:
OBJECT FAILED MESSAGE: You don't have anyt

IF CONDITIONS ARE SUCCESSFUL

STATE SET: Player is Fr ON
MESSAGE PRINTED: With a satisfying click
POINT SCORE:
EFFECT ON OBJECT:
SECOND OBJECT:

COMMAND TABLE

When you select the Command, the grid will be covered by the Command Table. In this table you specify what will happen if the player types "UNLOCK CHAINS." It is not necessary to fill in all of the entries in the table . Often, many of them are left blank.

In order to unlock the Chains, they must be in the same room as the player. If the player tries to Unlock the Chains when he is not in the room with them, the message "I do not see the chains here" will automatically be displayed by the Story Player.

You will also want the Key to be held. The Story Player will not check this unless you tell it to. First, select the Required Object field. The Object Selection List appears and you should select "Key." You must now specify where the Key is located. The most common choices are HELD (listed in the "YOU ARE HOLDING" WINDOW during story play) and HERE (listed in the "YOU CAN SEE" WINDOW during story play). Select HELD. If the Key is not HELD, you will want to display a failure message. Select the Object Failed Message and type "You don't have anything to unlock your chains with."

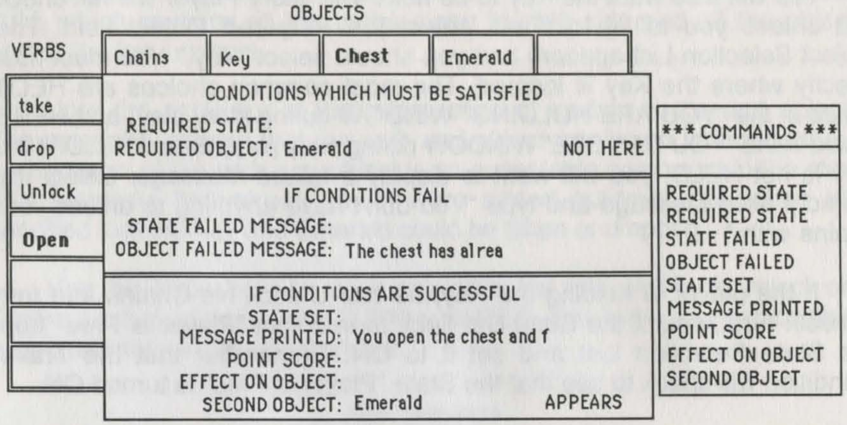
If the player is holding the Key, he can Unlock his Chains and free himself. First, select the State Set field, then select "Player is Free" from the State Selection List and set it to ON. Remember that the Travel Condition will check to see that the State "Player is Free" is turned ON.

Now select the Message Printed field. Type "With a satisfying click you unlock your chains." This completes the UNLOCK CHAINS Command. Hit **ESC** to return to the Command Grid.

The next Command you will need is OPEN CHEST. The player must Open the Chest to find the Emerald.

Select the intersection of OPEN and CHEST. A new Command Table appears. Select the Required Object field. Select "Emerald" and set it to NOT HERE. Remember that when you added the Emerald, you did not give it a starting location. Therefore, if the Emerald is located in the CURRENT ROOM, it means that the player has already Opened the Chest. Select the Object Failed Message and type "The chest has already been opened."

Now it is time to make the Emerald appear. From the If Conditions Are Successful box, select the Message Printed field and type "You open the chest and find a beautiful emerald." The options Effect On Object and Second Object move objects from one location to another. Effect On Object always refers to the highlighted object -- in this case the Chest. Second Object can refer to any object. You will want to leave the Chest where it is and move the Emerald out of the Chest so that it can be seen. Therefore, select the Second Object field. When the Object Selection List appears, select Emerald. The next window lists the choices of effects on the Emerald. Since you want it to appear in the CURRENT ROOM, select APPEARS, then hit **ESC** to return to the Command Grid.

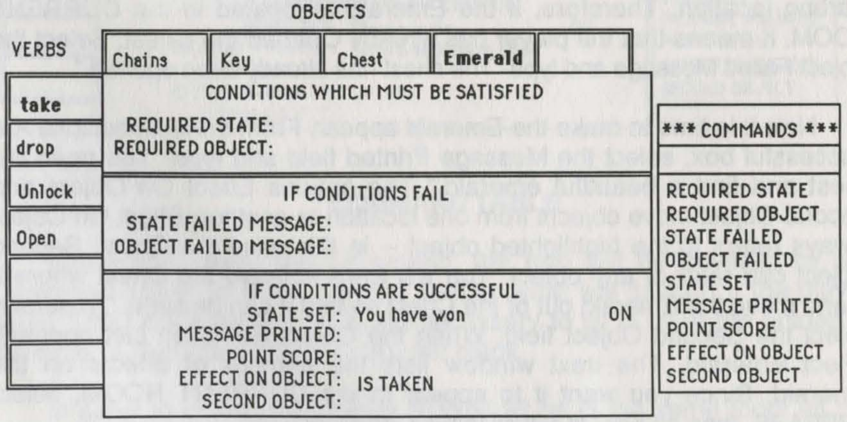


CONDITIONS WHICH MUST BE SATISFIED
REQUIRED STATE:
REQUIRED OBJECT: Emerald NOT HERE

IF CONDITIONS FAIL
STATE FAILED MESSAGE:
OBJECT FAILED MESSAGE: The chest has alrea

IF CONDITIONS ARE SUCCESSFUL
STATE SET:
MESSAGE PRINTED: You open the chest and f
POINT SCORE:
EFFECT ON OBJECT:
SECOND OBJECT: Emerald APPEARS

When the player removes the Emerald from the Chest, he wins the game. Select the Command TAKE EMERALD. You'll notice that there is already an Effect On Object entered because when you added the Emerald, you specified that it could be taken or dropped. The program automatically creates this entry for you. Now select the State Set field, select "You Have Won" from the State Selection List and select ON. "You Have Won" is a state that is usually added to a story. It allows you to specify how the story is won, in this case by taking the Emerald.



CONDITIONS WHICH MUST BE SATISFIED
REQUIRED STATE:
REQUIRED OBJECT:

IF CONDITIONS FAIL
STATE FAILED MESSAGE:
OBJECT FAILED MESSAGE:

IF CONDITIONS ARE SUCCESSFUL
STATE SET: You have won ON
MESSAGE PRINTED:
POINT SCORE:
EFFECT ON OBJECT: IS TAKEN
SECOND OBJECT:

Hit **ESC** again to return to the Story Maker Menu.

TIMED EVENTS

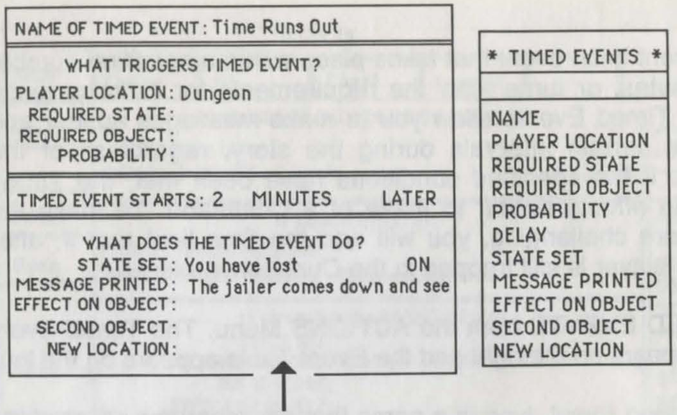
A Timed Event is an event that takes place within a specified number of seconds, minutes, or turns after the requirements for its occurrence have been met. Timed Events allow you to make messages appear and objects move at certain intervals during the story, regardless of the player's actions. If the specified conditions have been met, the Timed Event can create effects similar to those of a Command. To make the sample story more challenging, you will add the time limit that if, after two minutes, the player is still trapped in the Dungeon, he loses.

Select TIMED EVENTS from the ACTIONS Menu. The Timed Event Selection List appears on the right and the Event Table appears on the left.

To add a Timed Event, type in a name that describes the effect of the Timed Event. Type "Time Runs Out." There are many options, but you will only select the ones you need. First, select Player Location. The Room Selection List appears and you will select the Dungeon. This Timed Event will only occur while the player is in the Dungeon.

Now select Delay. This option determines how long the player must be in the Dungeon before he loses. Select 2. The next list contains the choices SECONDS, MINUTES, and TURNS. Select MINUTES. If the player is in the Dungeon for more than 2 minutes, the Timed Event will be executed and the player will lose.

When this Timed Event is executed, you want the player to realize that he has lost. Select the State Set field. Select "You Have Lost" and set it to ON. Select the Message Printed field and type "The jailer comes down and sees you are still trapped. He leads you off to the torture chamber. Try to escape a little quicker next time." You are done with this Timed Event, so hit **ESC**.



NAME OF TIMED EVENT: Time Runs Out

WHAT TRIGGERS TIMED EVENT?

PLAYER LOCATION: Dungeon
REQUIRED STATE:
REQUIRED OBJECT:
PROBABILITY:

TIMED EVENT STARTS: 2 MINUTES LATER

WHAT DOES THE TIMED EVENT DO?

STATE SET: You have lost ON
MESSAGE PRINTED: The jailer comes down and see
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

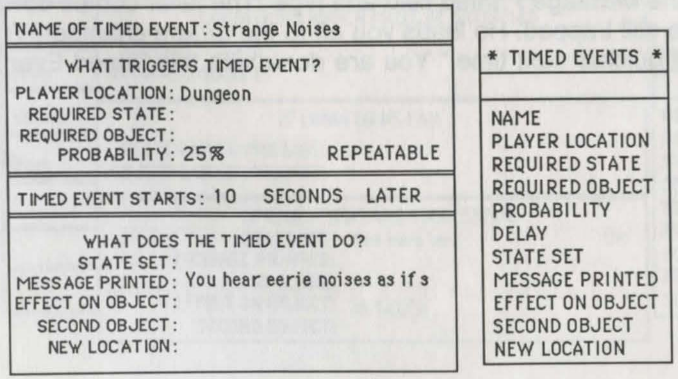
* TIMED EVENTS *

NAME
PLAYER LOCATION
REQUIRED STATE
REQUIRED OBJECT
PROBABILITY
DELAY
STATE SET
MESSAGE PRINTED
EFFECT ON OBJECT
SECOND OBJECT
NEW LOCATION

EVENT TABLE

You are now going to add two Timed Events which simply display a message. This adds realism to the player's captivity in the Dungeon.

For the first Timed Event you want the following effect: every 10 seconds there will be a 25% chance of the player hearing noises. This only occurs while he is still in the Dungeon. Name the Timed Event "Strange Noises." Select the Player Location field and then select the Dungeon. Next, set the Probability to 25% and then select REPEATABLE. Set the Delay to 10, and then select SECONDS. Select the Message Printed field and type "You hear eerie noises as if someone is approaching." Hit **ESC** and the Timed Event is entered.



NAME OF TIMED EVENT: Strange Noises

WHAT TRIGGERS TIMED EVENT?

PLAYER LOCATION: Dungeon
REQUIRED STATE:
REQUIRED OBJECT:
PROBABILITY: 25% REPEATABLE

TIMED EVENT STARTS: 10 SECONDS LATER

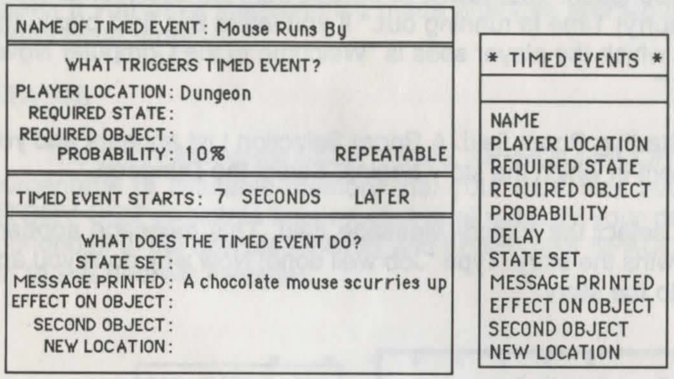
WHAT DOES THE TIMED EVENT DO?

STATE SET:
MESSAGE PRINTED: You hear eerie noises as if s
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

* TIMED EVENTS *

NAME
PLAYER LOCATION
REQUIRED STATE
REQUIRED OBJECT
PROBABILITY
DELAY
STATE SET
MESSAGE PRINTED
EFFECT ON OBJECT
SECOND OBJECT
NEW LOCATION

For the second Timed Event, there will be a 10% chance of the player seeing a mouse run by every 7 seconds. Name the Timed Event "Mouse Runs By." Select the Player Location field and then select the Dungeon. Set the Probability to 10%, and then select REPEATABLE. Set the Delay to 7, and then select SECONDS. Select the Message Printed field and type "A chocolate mouse scurries up to you. You nibble at its feet. The mouse runs away and deserts you." Hit **ESC**.



NAME OF TIMED EVENT: Mouse Runs By

WHAT TRIGGERS TIMED EVENT?

PLAYER LOCATION: Dungeon
REQUIRED STATE:
REQUIRED OBJECT:
PROBABILITY: 10% REPEATABLE

TIMED EVENT STARTS: 7 SECONDS LATER

WHAT DOES THE TIMED EVENT DO?

STATE SET:
MESSAGE PRINTED: A chocolate mouse scurries up
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

* TIMED EVENTS *

NAME
PLAYER LOCATION
REQUIRED STATE
REQUIRED OBJECT
PROBABILITY
DELAY
STATE SET
MESSAGE PRINTED
EFFECT ON OBJECT
SECOND OBJECT
NEW LOCATION

Hit **ESC** until you are back at the Story Maker Menu.

EXTRAS MENU

The EXTRAS Menu lets you add the finishing touches to your story. Here is where you add the introductory information for your story. This menu also provides options for saving your story and exiting the Story Maker.

INTRO & EXIT

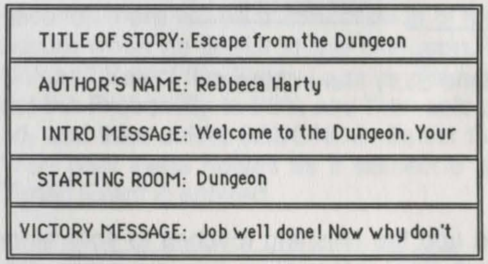
Select the INTRO & EXIT option from the EXTRAS Menu. Select the Title Of Story field (this title will appear as the story is loading) and type "Escape from the Dungeon." If you choose not to enter a title, or if you simply forget, this field will remain blank, but when your game is played the default title, "A Story," will be there.

Now select the Author's Name field and type your name. This name will appear on the title screen. Again, if you choose not to enter an author's name, or just forget to add one, the field will remain blank, but the title screen of the game as it is played will show "Anonymous" as the author.

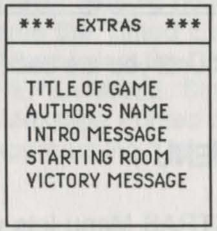
Next, select the Intro Message field. This is the message that appears after the title screen and usually sets the scene for the story. Type "Welcome to the Dungeon. Your task is to escape from the Dungeon and find a treasure. But hurry! Time is running out." If you leave this field blank, the default message which the player sees is "Welcome to the Computer Novel Construction Set!"

Select the Starting Room field. A Room Selection List appears and you can select the room in which the story begins. Select the Dungeon.

And finally, select the Victory Message field. This message appears when the player wins the story. Type "Job well done! Now why don't you add something else to the story."



```
TITLE OF STORY: Escape from the Dungeon
AUTHOR'S NAME: Rebbeca Harty
INTRO MESSAGE: Welcome to the Dungeon. Your
STARTING ROOM: Dungeon
VICTORY MESSAGE: Job well done! Now why don't
```



```
***  EXTRAS  ***

TITLE OF GAME
AUTHOR'S NAME
INTRO MESSAGE
STARTING ROOM
VICTORY MESSAGE
```

Hit **ESC** to return to the Story Maker Menu.

SAVE STORY

This option allows you to save your story in progress without exiting the Story Maker. The question "Are you sure you want to save all changes? (Y/N)" will appear in the center of the screen. Answer **"Y"** if you want to save the changes. The Story Maker will write your progress to disk, then return you to the Extras Menu. If you answer **"N"** or press **ESC**, you will be returned to the Extras Menu without your changes having been saved.

QUIT

This option allows you to quit the Story Maker without saving any of your changes. The question, "Are you sure you want to quit without saving changes? (Y/N)" will appear on the screen. Answering **"Y"** will return you to the Main Menu, without your changes having been saved. Pressing any other key will return you to the Extras Menu. Exiting this way is a fast way to get back to the Main Menu if you have no changes to save. This option is useful if you have inadvertently made changes and would like to restore the original story.

STATUS

This option displays the STORY NAME, APPROX MEMORY USAGE (i.e., the percentage of available memory that your data files take up), APPROX STORY SIZE (which is how much actual memory your data files take up, rounded of to the nearest kilobyte) and FREE DISK SPACE (again, rounded off to the nearest kilobyte).

* * * * * * * *

And that's the end of creating your practice story! It is now time to save your story. Hit **ESC** from the Story Maker Menu. When you are asked "Are you sure you want to exit and save story? (Y/N)" hit **"Y."** Your story is saved and you return to the Main Menu.

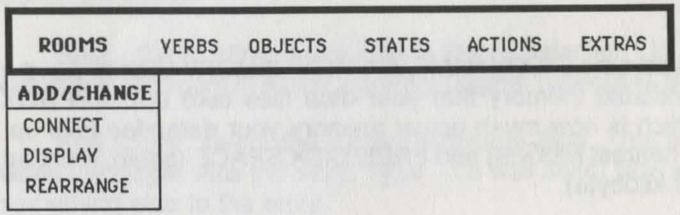
Go ahead and play your story! From the Main Menu use the Arrow keys to highlight **"PRACTICE"** in the list of stories and **PLAY** in the list of commands. Hit **RETURN** or **ENTER**. Now see if all the pieces have fallen into place.

Add more rooms or objects of your own design. When you are comfortable with what has been covered already, continue on to the Reference Section to expand your story making ability.

REFERENCE SECTION

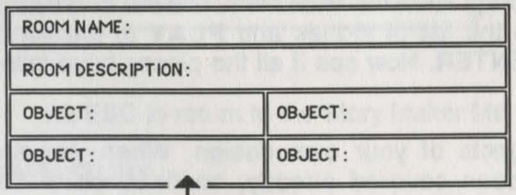
This section contains detailed information about the features of the STORY MAKER program. All information is broken down according to its location in the menu structure. To find the information you need, match the menu displayed on the screen to its corresponding menu in this section.

THE ROOMS MENU



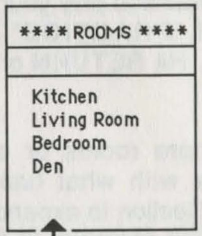
ADD/CHANGE

Rooms are added, changed, and deleted with the ADD/CHANGE Option. Selecting this option brings up the Room Table, which is used to display or enter specific information about a room. The Room Selection List, which lists the existing rooms, accompanies the Room Table.



ROOM NAME:	
ROOM DESCRIPTION:	
OBJECT:	OBJECT:
OBJECT:	OBJECT:

ROOM TABLE



**** ROOMS ****

Kitchen
Living Room
Bedroom
Den

ROOM SELECTION LIST

Adding A New Room

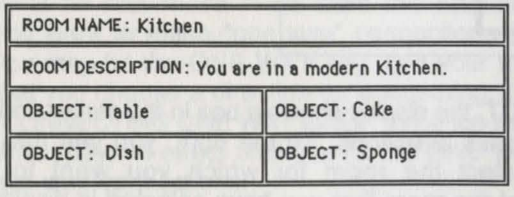
To add a new room, simply type the Room Name. This is the name that is displayed in the top left of the ROOM WINDOW when you play the story. After entering a Room Name, a window appears and you are prompted for a Room Description. This Room Description is displayed in the ROOM WINDOW whenever the player enters the room. Finally, you may select Objects to appear in this room when the story starts. A list of all the existing objects is displayed, and you may pick the ones to be placed in the room. If you don't want to place any objects in the room, simply hit **ESC** when an Object is highlighted.

√ In order to place an object in a room, the object must already exist. If the object you want to place in the room does not yet exist, use the OBJECTS Menu to first add the new object.

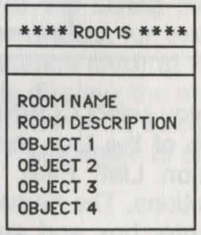
√ More than four objects may be placed in a room, but only the first four are displayed in the Room Table. To place more than four objects in a room, use the OBJECTS Menu.

√ When you play the story and enter a room, the ROOM WINDOW displays the Room Description followed by a description for each object located in that room. These are called In Room Descriptions.

√ An advanced feature exists that allows for creation of mazes. If a Room Name has a '#' character in it (i.e. Maze#1, Maze#2, Maze#3), the Story Player displays only the part of the Room Name before the '#'. This creates the effect of more than one room having the same name when the story is played (all of the above rooms would be displayed as "Maze" to the player).



ROOM NAME: Kitchen	
ROOM DESCRIPTION: You are in a modern Kitchen.	
OBJECT: Table	OBJECT: Cake
OBJECT: Dish	OBJECT: Sponge



**** ROOMS ****

ROOM NAME
ROOM DESCRIPTION
OBJECT 1
OBJECT 2
OBJECT 3
OBJECT 4

Changing A Room

To change an existing room, select it from the Room Selection List. The Room Table is filled with the current information about the room. From here, you may select an individual field to change. To delete the information for a field, highlight the field and hit the **DELETE** key.

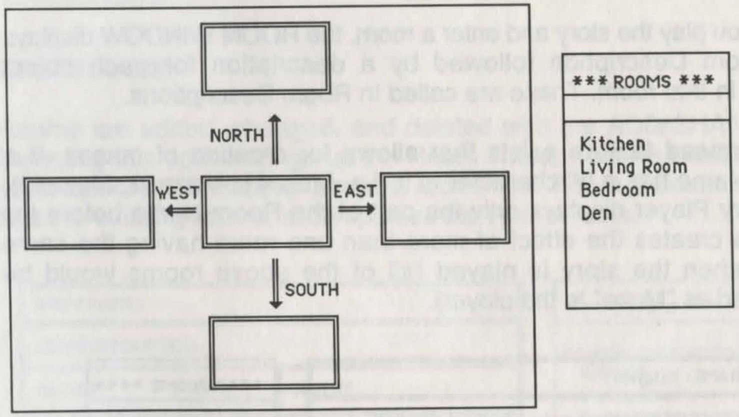
Deleting A Room

Highlight the room you wish to delete from the Room Selection List and hit the **DELETE** key.

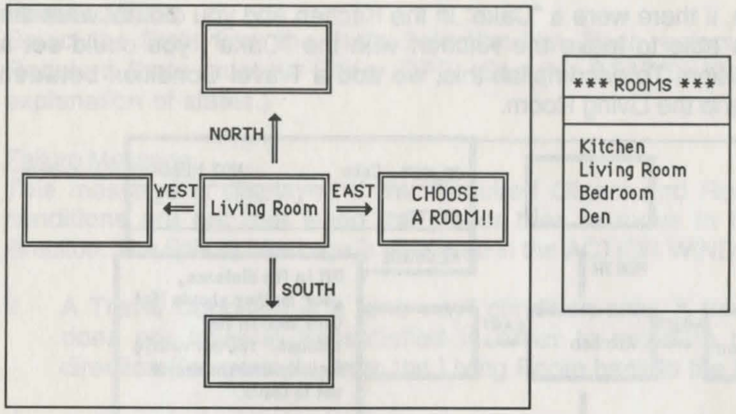
√ Deleting a room also deletes all connections made to the room, and the objects that were located in the room no longer have a starting location.

CONNECT

The CONNECT Option is used to connect rooms to other rooms by the four standard compass directions: North, South, East, and West. This option is also used to add Travel Conditions. A Travel Condition is a requirement that must be met before the player is allowed to move between two connected rooms. For example, you may specify a Travel Condition that requires the player to be holding a movie ticket in order to enter the movie theatre.



When you select CONNECT, the display shows a box in the center and a box in each of the four compass directions. To the right, you see the Room Selection List. First, select the room for which you want to make connections. The name of the room that you have selected is displayed in the center box and any existing connections are shown. Hit one of the Arrow keys to choose the direction for a connection (Up is North, Down is South, Right is East, and Left is West). You are then prompted to select a room to connect in the chosen direction.



Select the room to be connected. If you do not want to make a new connection, simply hit **ESC.** To delete an existing connection, choose the direction and hit the **DELETE** key. You may continue to make connections for the room in the center box or you may hit **ESC** and make connections for a different room.

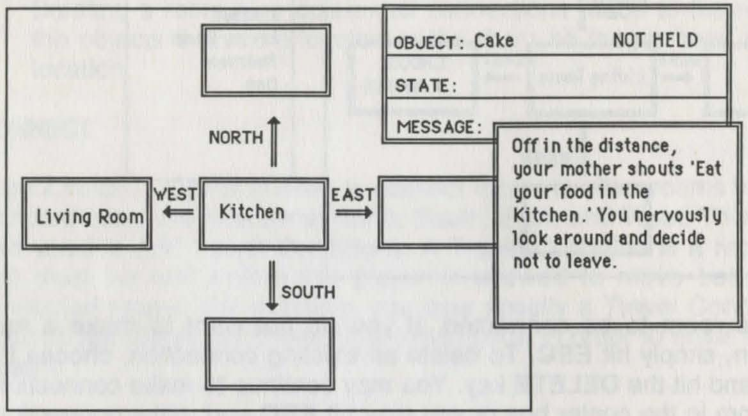
Rooms must be connected for the player to be able to move between them by typing "NORTH", "SOUTH", "EAST", or "WEST." If the player moves in a direction that has no connection, the message "You cannot go that way" appears. If the player moves in a direction that has a connection, the ROOM WINDOW displays the description for the new room.

√ When you connect rooms, you make "two-way" connections. For example, if you connect the "Kitchen" east of the "Living Room", the player can move East from the Living Room to the Kitchen, AND he can move West from the Kitchen to the Living Room. If you want to make "one-way" connections (for mazes, for example), you may hit the ONE WAY key (see your reference card) at the time that you choose a direction for connecting. This displays the message "CONNECTING ONE WAY ONLY" in the top left corner of the screen. ONE WAY stays in effect until you hit the ONE WAY key again to reinstate two-way connections.

Setting Travel Conditions

You may want to set up situations in which the player cannot automatically move between two rooms, even if there is a two-way travel connection. A Travel Condition allows you to restrict the player's ability to move between rooms that are connected.

For example, if there were a "Cake" in the Kitchen and you did not want the player to be able to leave the Kitchen with the "Cake", you could set a Travel Condition. To accomplish this, we add a Travel Condition between the Kitchen and the Living Room.



OBJECT: Cake NOT HELD
STATE:
MESSAGE: Off in the distance, your mother shouts 'Eat your food in the Kitchen.' You nervously look around and decide not to leave.

When you select the Kitchen from the Room Selection List, it is displayed in the center box. Hit the TRAVEL CONDITION key (see your reference card) and then choose West. You may specify a Required Object, a Required State, and a Failure Message. For our example, the Required Object is that the "Cake" is "NOT HELD", and the Failure Message is "Off in the distance, your mother shouts 'Eat your food in the kitchen'. You nervously look around and decide not to leave."

The Travel Condition works as follows: The player starts in the Kitchen. If he tries to move "West", the Story Player checks to see if he is carrying the Cake. If the player is not carrying the Cake (NOT HELD), he is allowed to move west and the ROOM WINDOW then displays the description for the Living Room. If the player is carrying the Cake, the Failure Message is displayed and he remains in the Kitchen.

With Travel Conditions, the Required Object and Required State conditions must be satisfied for the player to move in the specified direction. If these conditions are not satisfied, the Failure Message is displayed and the player stays where he is.

Required Object
Select the Object from the Object Selection List. Then, select whether the Required Object should be HELD, NOT HELD, HERE, NOT HERE, SOMEWHERE, or NOWHERE. (See the ACTIONS Menu for an explanation of these conditions.)

Required State
Select the State from the State Selection List. Then, select whether the Required State must be ON or OFF. (See the STATES Menu for a full explanation of states.)

Failure Message
This message is displayed if the Required Object and Required State conditions are not met when the player tries to move in the specified direction. The Failure Message is displayed in the ACTION WINDOW.

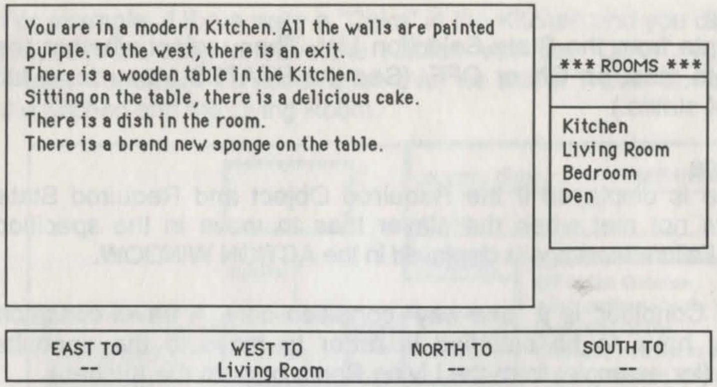
√ A Travel Condition is a "one-way" condition only. A travel condition does not have to be satisfied in order to move in the opposite direction (for example, from the Living Room back to the Kitchen).

√ A Travel Condition is not affected if you delete or change a connection. You must delete separately a travel condition by selecting it and deleting each of its fields.

√ A Travel Condition can be used to override the "You cannot go that way" message when the player tries to move in a direction that has no connections. Add the Travel Condition in the unconnected direction, leave the Required Object and Required State fields blank, and enter the desired message ("A dense forest prevents you from moving in that direction").

DISPLAY

The DISPLAY Option for Rooms lets you view what is displayed in the ROOM WINDOW when the story is played. The Room Description is displayed followed by the In Room Description for each Object that is located in the highlighted room. In addition, the connections from this room are shown at the bottom of the screen.



You are in a modern Kitchen. All the walls are painted purple. To the west, there is an exit.
There is a wooden table in the kitchen.
Sitting on the table, there is a delicious cake.
There is a dish in the room.
There is a brand new sponge on the table.

*** ROOMS ***

Kitchen
Living Room
Bedroom
Den

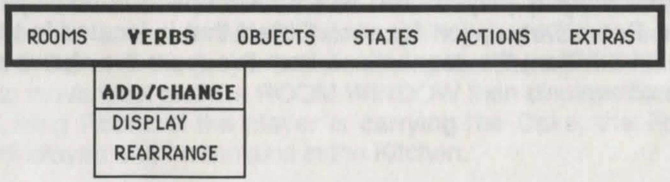
EAST TO	WEST TO	NORTH TO	SOUTH TO
--	Living Room		--

REARRANGE

This option lets you change the order of the Rooms in the Room Selection List, allowing you to group your rooms in any way you want.

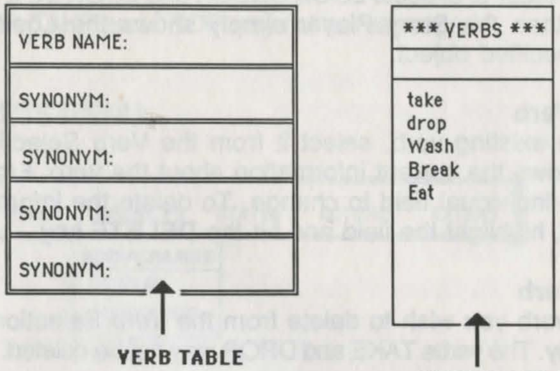
Select a room to reposition. The selected room starts to blink and you may then use the Arrow keys to move the selected room to a new position in the room list. When the selected room is where you want it, hit **RETURN** or **ENTER** to stop the blinking and relocate the room.

THE VERBS MENU



ADD/CHANGE

Verbs, the action words in a story's vocabulary, are added, changed, and deleted with the ADD/CHANGE Option. Selecting this option brings up the Verb Table, which is used to display or enter specific information about a verb. The Verb Selection List, which lists the existing verbs, accompanies the Verb Table. The verbs TAKE and DROP are permanent and always displayed in the first two positions of the Verb Selection List. These verbs cannot be deleted or rearranged. You may, however, add synonyms for them (and we advise it!).



VERB NAME:
SYNONYM:
SYNONYM:
SYNONYM:
SYNONYM:

*** VERBS ***

take
drop
Wash
Break
Eat

VERB TABLE

VERB SELECTION LIST

Adding A New Verb

To add a new verb, simply type the Verb Name. A verb may have one or two words. Here are some verbs commonly found in text adventures: READ, OPEN, CLOSE, PUSH, LOCK, UNLOCK, SHOOT, EAT, DRINK, THROW, BREAK. Compound verbs may include a preposition: CLIMB UP, CLIMB DOWN, JUMP IN, or JUMP OVER.

Next, you may enter up to four Synonyms for a verb. For example, you can create the synonyms GET, GRAB and PICK UP for the verb TAKE, so that the player can type in whichever word seems most natural to him. All verbs and synonyms must be unique.

After you have added a verb, use the COMMANDS section to specify objects of the verb.

√ If you do not want to distinguish between expressions like JUMP THE RIVER, JUMP IN THE RIVER, JUMP OVER THE RIVER, simply define the verb JUMP. The Story Player allows the player to use any or no preposition with the object. If you define a compound verb such as JUMP IN, the Story Player requires the preposition "IN."

√ DO NOT add the verb LOOK. This verb is predefined to display an object's "Look Description" when you look at an object. If you define the verb LOOK, the Look Descriptions for objects become useless. However, you may safely add compound verbs like LOOK UNDER and LOOK IN. The Story Player requires that both words be entered in order to execute LOOK UNDER and LOOK IN. If only LOOK is entered, then the Story Player simply shows the Look Description for the specified object.

Changing A Verb

To change an existing verb, select it from the Verb Selection List. The Verb Table shows the current information about the verb. From here, you may select an individual field to change. To delete the information for an individual field, highlight the field and hit the **DELETE** key.

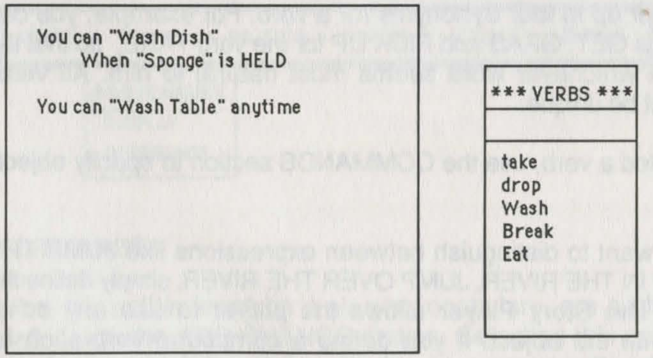
Deleting A Verb

Highlight the verb you wish to delete from the Verb Selection List and hit the **DELETE** key. The verbs TAKE and DROP may not be deleted.

√ Deleting a verb also deletes its synonyms and all the Commands associated with that verb.

DISPLAY

The DISPLAY Option for Verbs lists the objects with which the highlighted verb can be used. The display also shows the Required Object and Required State for the corresponding Command, if they exist. This window provides a useful overview of how each verb is used.



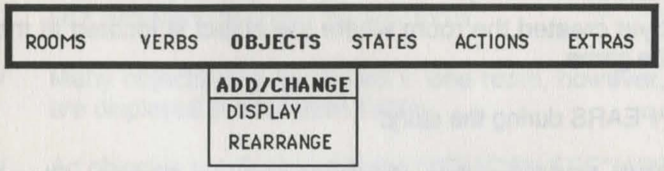
```
You can "Wash Dish"
     When "Sponge" is HELD

You can "Wash Table" anytime
```

REARRANGE

This option lets you change the order of the Verbs in the Verb Selection List, allowing you to group your verbs any way you want. See Rearrange under the ROOMS Menu for detailed instructions on its use.

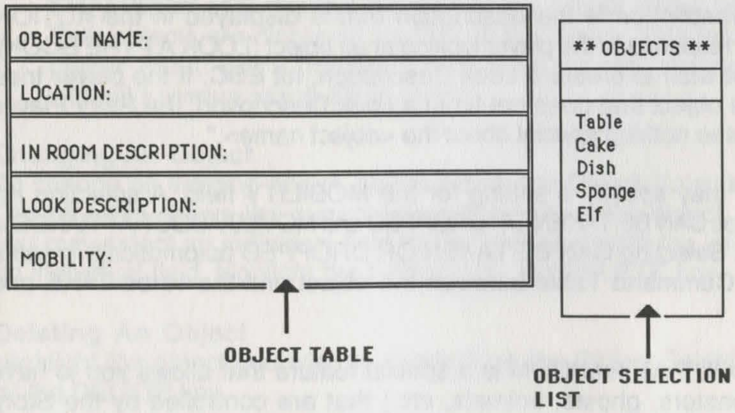
√ The verbs TAKE and DROP may not be rearranged.

THE OBJECTS MENU



ADD/CHANGE

Objects are added, changed, and deleted with the ADD/CHANGE Option. Selecting this option brings up the Object Table, which is used to display or enter specific information about an object. The Object Selection List, which lists the existing objects, accompanies the Object Table.



Adding A New Object

To add a new object, simply type the Object Name. This is the name that is displayed in the "YOU CAN SEE" WINDOW when the player enters the room where the object is located. The name also appears in the "YOU ARE HOLDING" WINDOW when you are carrying the object. An object name may be one or two words. Often, a two-word object name includes an adjective (RED BOOK or BIG MAN).

After entering an object name, select the starting location for the object from the Room Selection List. However, you may not want to put an object in a specific room at the beginning of the story for the following reasons:

You have not yet created the room where the object is located at the beginning of the game.

The object APPEARS during the story.

The object REPLACES another object (the object "Broken Glass" replaces "Coke Bottle" if the player enters "BREAK THE COKE BOTTLE").

If you do not want to place the object in a room initially, simply hit **ESC**.

You are next prompted for an In Room Description. This text is displayed in the ROOM WINDOW when the player enters the room. If you do not wish to create an In Room Description, hit **ESC**, and this field remains blank.

The Look Description is the description that is displayed in the ACTION WINDOW in response to the player looking at an object (LOOK AT THE BOOK). If you do not wish to create a Look Description, hit **ESC**. If the player tries to look at an object that does not have a Look Description, the Story Player responds "I see nothing special about the <object name>."

Finally, you may specify a setting for the MOBILITY field. A selection list with the choices CAN BE TAKEN OR DROPPED and MOVES ABOUT AT RANDOM is displayed. Selecting CAN BE TAKEN OR DROPPED automatically creates links in the Command Table between the object and the verbs TAKE and DROP.

MOVES ABOUT AT RANDOM is a special feature that allows you to have objects (monsters, ghosts, animals, etc.) that are controlled by the Story Player. After each turn or after a random amount of time, each randomly-moving object may move into one of the rooms connected to the room that it is in. Randomly-moving objects are not restricted by Travel Conditions. If a randomly-moving object winds up in the same room as the player, its In Room Description is displayed in the EVENT WINDOW (a typical description is "All of a sudden a <object> has just entered the room ..."). If the object exits the room that the player is in, a message is displayed to that effect. A randomly-moving object does not move around if the player is holding it or if it is NOWHERE. This is a good feature for a story that takes place in a jungle or a haunted house. If you do not want to select CAN BE TAKEN OR DROPPED or MOVES ABOUT AT RANDOM, hit **ESC**. The field will be left blank and the object will be immovable.

√ In order to locate an object in a room, the room must already exist. If the room you want to place the object in does not yet exist, use the ROOMS Menu to create the new room.

√ Many objects may be placed in one room, however, only the first four are displayed in the Room Table.

√ An object is not displayed in the "YOU CAN SEE" WINDOW if it does not have an In Room Description. This feature is useful for hiding objects in a room.

√ After an object has been taken or moved from its starting location, its In Room Description will no longer be displayed. However, Object Name will still be displayed in the "YOU CAN SEE" WINDOW.

√ If an Object Name has a '#' character in it (i.e. Elf#1, Elf#2), the Story Player only displays the part of the Object Name before the '#'. Both objects are displayed as "Elf" to the player. This feature lets the player meet Elf#1 (friendly) and Elf#2 (mean) during the story without knowing which Elf is which.

Changing An Object

To change an existing object, select it from the Object Selection List. The Object Table shows the current information about the object. From here, you may select an individual field to change. To delete the information for an individual field, highlight the field and hit the **DELETE** key.

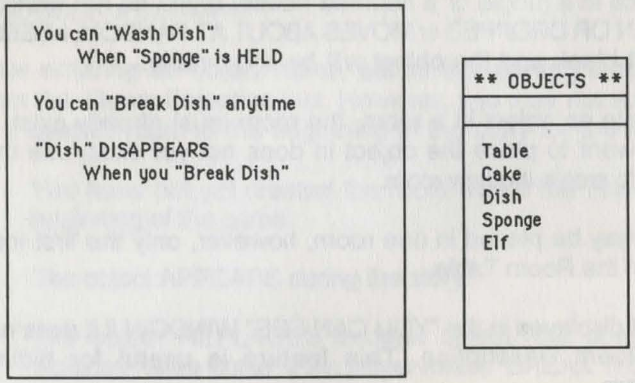
Deleting An Object

Highlight the object you wish to delete from the Object Selection List and hit the **DELETE** key.

√ Deleting an object also deletes the Commands associated with that object. If the deleted object was specified in the Required Object or Second Object field (for Travel Conditions, Commands, or Timed Events), that field becomes blank.

DISPLAY

The DISPLAY Option for Objects describes how an object is used with various Commands and how an object is used throughout the Timed Events. This window provides a useful overview of how each object is used.



```
You can "Wash Dish"
     When "Sponge" is HELD

You can "Break Dish" anytime

"Dish" DISAPPEARS
     When you "Break Dish"
```

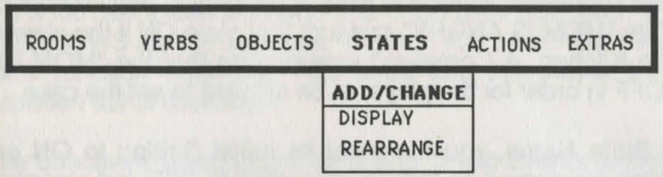
```
** OBJECTS **

Table
Cake
Dish
Sponge
Elf
```

√ The object display does not reflect any Travel Conditions which may exist.

REARRANGE

This option allows you to change the order of the Objects in the Object Selection List, allowing you to group your objects in any way you want. Unlike the other REARRANGE options, this one affects the story when it is played. The order in which the objects are displayed in the Object Selection List is the same order that the In Room Descriptions are displayed in a ROOM WINDOW with more than one object. See Rearrange under the ROOMS Menu for a detailed explanation of its use.

THE STATES MENU

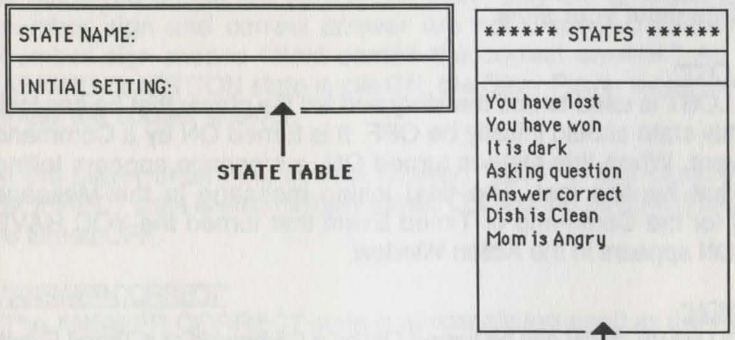


States are used to monitor what is happening in the story. A State has two possible settings: ON or OFF. States can be tested to see if they are ON or OFF, and they can be set to ON or OFF. A Travel Condition may require a State to be either ON or OFF before allowing the player to move from one room to another. Commands and Timed Events test and set States in order to determine which actions occur during the story.

Five states already exist, and cannot be deleted or rearranged. These are YOU HAVE LOST, YOU HAVE WON, IT IS DARK, ASKING QUESTION, and ANSWER CORRECT. These special states are described later.

ADD/CHANGE

States are added, changed, and deleted with the ADD/CHANGE Option. Selecting this option brings up the State Table, which is used to display or enter specific information about a state. The State Selection List accompanies the State Table.



```
STATE NAME:

INITIAL SETTING:
```

STATE TABLE

```
****** STATES ******

You have lost
You have won
It is dark
Asking question
Answer correct
Dish is Clean
Mom is Angry
```

STATE SELECTION LIST

Adding A New State
To add a new state, simply type in a State Name. A state name may be any number of words and should correspond to what is happening. For example, you may name a state "MOM IS ANGRY" and turn that state ON if the player breaks a dish in the Kitchen. A Command may require that the "MOM IS ANGRY" State be OFF in order for the player to be allowed to eat the cake.

After entering the State Name, you must set its Initial Setting to ON or OFF. Typically, States are named so their initial setting is OFF, but you can define your states in any manner you choose.

Changing A State
To change an existing state, select it from the State Selection List. The State Table shows the current information about the state. From here, you may select an individual field to change.

Deleting A State
Highlight the state you wish to delete from the State Selection List and hit the **DELETE** key. The five special states may not be deleted.

√ Deleting a state also deletes all references to it in Travel Conditions, Commands, and Timed Events.

Using The Five Existing States
As mentioned above, there are five permanent special states: YOU HAVE LOST, YOU HAVE WON, IT IS DARK, ASKING QUESTION, and ANSWER CORRECT. These states have special predefined meanings and can be used in certain situations throughout your story.

"YOU HAVE LOST"
YOU HAVE LOST is used to end the story and tell the player that he has lost. Obviously, this state should initially be OFF. It is turned ON by a Command or Timed Event. When this state is turned ON, a message appears telling the player that he has lost. The final losing message in the Message Printed field for the Command or Timed Event that turned the YOU HAVE LOST state ON appears in the Action Window.

"YOU HAVE WON"
The state YOU HAVE WON can be turned ON by a Command or a Timed Event. When this State is turned ON, the corresponding Message Printed that was specified in the Command or Timed Event that turned the YOU HAVE WON State ON appears in the ACTION WINDOW. After the player reads this message, the Victory Message that you enter in the INTRO & EXIT Option of the EXTRAS Menu (described later) is displayed.

"IT IS DARK"
When the IT IS DARK state is turned ON, the message "It is too dark to see" is displayed in the ROOM WINDOW. If the player looks at anything, he is told "It is too dark to see anything." The "YOU CAN SEE" and "YOU ARE HOLDING" WINDOWS are not displayed. The ACTION and EVENT WINDOWS, however, still function normally. This state lets the player try to overcome the sudden fall of darkness.

By effectively using Commands and Timed Events to turn this state ON and OFF, you can simulate dark caves and nighttime. For example, you can use a Timed Event to turn ON the IT IS DARK state when the player is in a certain room and the Required Object (maybe a "Flashlight") is NOT HELD.

"ASKING QUESTION"
ASKING QUESTION is a state that allows the Story Player to ask the player questions and see if he can answer them correctly. When a Command or Timed Event specifies that the state ASKING QUESTION is turned ON, the question-answer sequence starts. In the Message Printed field of that Command or Timed Event, there must be a question. The question must be followed by a number sign (#), which is followed by the correct answer.

For example, suppose you have the Command, PUSH BUTTON. When it meets the requirements that you specified (Required Object, Required State), this Command turns ON the state ASKING QUESTION. The Message Printed field contains the text, "After pushing the button on the control panel, lights begin to flash. A countdown of some type has started and a computerized voice says 'What is the correct access code?' #1234." When this message is displayed during the play of the story, only the question is shown; the number sign and correct answer are not displayed to the player. The number sign means "Next comes the correct answer." As long as the ASKING QUESTION state is still ON, the Story Player looks for the player to enter the correct answer.

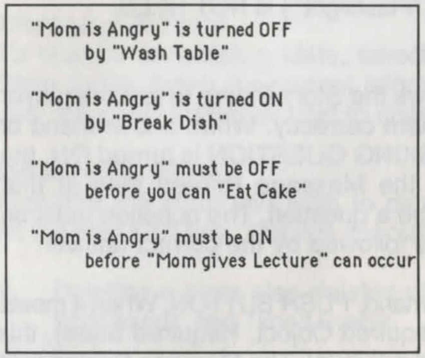
If the player enters the correct answer, "1234" in this case, the ANSWER CORRECT state is automatically turned ON and the ASKING QUESTION State is turned OFF.

"ANSWER CORRECT"
The ANSWER CORRECT state is almost always used as the Required State for a Timed Event which asks a question. The Timed Event waits until ANSWER CORRECT is turned ON, and then it reacts to the fact that the player answered the question correctly. Continuing the example above, the Timed Event may display the message "You have entered the correct code, the countdown has been aborted."

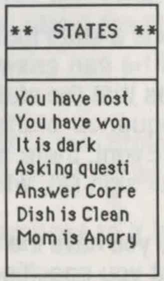
√ The Timed Event that checks for ANSWER CORRECT should set the State ANSWER CORRECT to OFF after responding to it. This way you are able to effectively use more than one question in a story. If a second question is asked, the first question is forgotten.

DISPLAY

The DISPLAY Option for States shows all Commands and Timed Events that use the highlighted state as a Required State or as a State Set. This window provides a useful overview of how each State is used.



```
"Mom is Angry" is turned OFF
   by "Wash Table"

"Mom is Angry" is turned ON
   by "Break Dish"

"Mom is Angry" must be OFF
       before you can "Eat Cake"

"Mom is Angry" must be ON
       before "Mom gives Lecture" can occur
```



```
** STATES **

You have lost
You have won
It is dark
Asking questi
Answer Corre
Dish is Clean
Mom is Angry
```

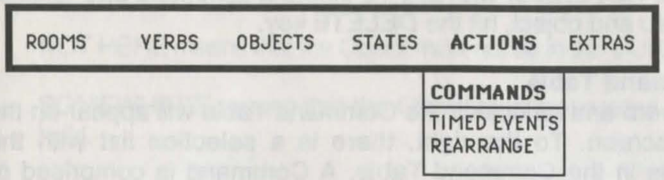
√ The state display does not reflect any Travel Conditions which may exist.

REARRANGE

This option lets you change the order of the States in the State Selection List, allowing you to group your states any way you want. See Rerarrange under the ROOMS Menu for a detailed explanation of its use.

√ The five special states may not be rearranged.

THE ACTIONS MENU

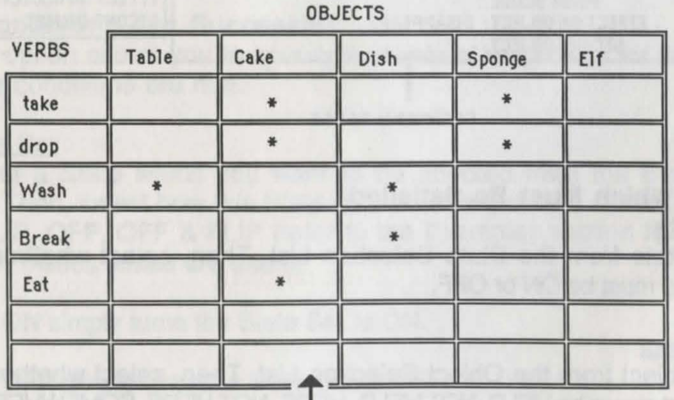


```
ROOMS   VERBS   OBJECTS   STATES   ACTIONS   EXTRAS

                                   COMMANDS
                                   TIMED EVENTS
                                   REARRANGE
```

The ACTIONS Menu is the heart of the story creation process. Here, you construct the Commands and Timed Events. Commands link objects and verbs. Timed Events are used to have objects and messages appear independently of the player's actions.

COMMANDS

When you select the COMMANDS Option, the Command Grid is displayed. Verbs are shown in a column along the left and Objects are shown in a row across the top. The boxes with asterisks where a verb and an object meet represent a verb and object linked in a legitimate command. If there are too many verbs or objects to display the entire Command Grid on one screen, it can be scrolled left and right or up and down using the arrow keys.



OBJECTS

VERBS	Table	Cake	Dish	Sponge	Elf
take		*		*	
drop		*		*	
Wash	*		*		
Break			*		
Eat		*			

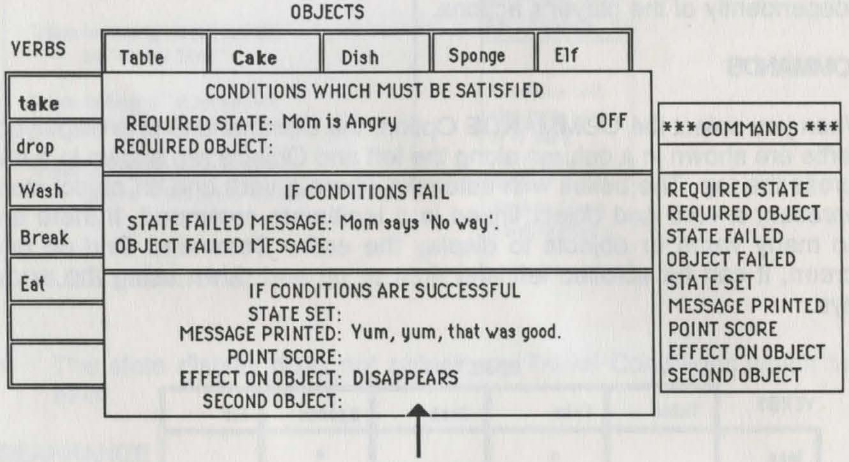
COMMAND GRID

Selecting Verbs And Objects

To add or change a Command, highlight the intersection of the desired verb and object, and hit **RETURN** or **ENTER**. To delete a command and "unlink" the highlighted verb and object, hit the **DELETE** key.

Using The Command Table

After selecting a verb and an object, the Command Table will appear on the left side of the screen. To the right, there is a selection list with the same headings as in the Command Table. A Command is comprised of CONDITIONS WHICH MUST BE SATISFIED, what happens IF CONDITIONS FAIL, and what happens IF CONDITIONS ARE SUCCESSFUL. All of the fields for a Command are optional, so do not feel that you must fill in each entry for a Command to be legitimate.



CONDITIONS WHICH MUST BE SATISFIED

REQUIRED STATE: Mom is Angry OFF
REQUIRED OBJECT:

IF CONDITIONS FAIL

STATE FAILED MESSAGE: Mom says 'No way'.
OBJECT FAILED MESSAGE:

IF CONDITIONS ARE SUCCESSFUL

STATE SET:
MESSAGE PRINTED: Yum, yum, that was good.
POINT SCORE:
EFFECT ON OBJECT: DISAPPEARS
SECOND OBJECT:

COMMAND TABLE

Conditions Which Must Be Satisfied

<u>Required State</u>

Select the State from the State Selection List. Then, select whether the Required State must be ON or OFF.

<u>Required Object</u>

Select the Object from the Object Selection List. Then, select whether the Required Object should be HELD, NOT HELD, HERE, NOT HERE, SOMEWHERE, or NOWHERE:

HELD means the player must be carrying the Object.

NOT HELD means that the player must not be carrying the Object.

HERE means that the Object must be in the CURRENT ROOM (the room displayed in the ROOM WINDOW).

NOT HERE means that the Object must not be in the CURRENT ROOM.

SOMEWHERE means that the Object must be located in any room or be held.

NOWHERE means that the Object must not be located in any room and must not be held (this is true when an object DISAPPEARS, is REPLACED BY another object, or if an object's starting location is left blank).

If Conditions Fail

These messages appear in the ACTION WINDOW if the conditions are not met.

<u>State Failed Message</u>

This message is displayed if the Required State condition is not met when the player enters this Command.

<u>Object Failed Message</u>

This message is displayed if the Required Object condition is not met when the player enters this Command.

If Conditions Are Successful

This option allows you to specify a variety of responses for the command, if the conditions are met.

<u>State Set</u>

Select a State which you want to be affected from the State Selection List. Then, select how this State is to be affected. The options are ON, ON & FLIP, OFF, OFF & FLIP (refer to the Examples section for situations in which theses states are used):

ON simply turns the State Set to ON.

OFF simply turns the State Set to OFF.

ON & FLIP turns the State Set to ON, and changes the Required State to the opposite of its current setting (the Required State gets FLIPPED!). You are able to change two related states with only one Command. For example, if you have a Command "Turn On Light" with the Required State "Room Is Dark" set to ON and a State Set "Elf Appears" set to ON

& FLIP, the following will happen. When the player enters the Command "Turn On Light," the Required State "Room Is Dark" will be flipped to OFF and the State Set "Elf Appears" will be turned ON.

OFF & FLIP turns the State Set to OFF, and changes the Required State to the opposite of its current setting. In the above example, if you want the Elf to become unfriendly and leave when you scream at him, create a Command "Scream at Elf", a Required State "Elf Is Present" set to ON and a State Set "Elf Is Friendly" set to OFF & FLIP. When the player screams at the Elf, the Required State "Elf is Present" will be flipped to OFF and the State Set "Elf Is Friendly" will be turned OFF.

√ The ON & FLIP and OFF & FLIP options allow you to modify the Required State and the State Set in one shot.

Message Printed
This is the message that is displayed in the ACTION WINDOW if the Required State and Required Object conditions were satisfied.

Point Score
Points may be added to the player's total score if the Command is successful. Select the number of points: 5, 10, 25, or 50. If you feel that an action is important, award some points for it!

√ The points for a Command are only awarded once, even if the Command is successfully executed multiple times.

√ Once the player has received all of the points in a story, the story ends and the Victory Message is displayed. This is just as if the YOU HAVE WON state were turned ON. Note that if a story has a total of zero points (no Commands awarded any points), then the story can only be won by the YOU HAVE WON state being turned ON.

Effect On Object
The Effect On Object field is where you may specify the effect on the object that is being linked with the Verb. Select one of these effects: IS TAKEN, IS DROPPED, APPEARS, DISAPPEARS, or REPLACED.

IS TAKEN means that the object is now being held and is displayed in the "YOU ARE HOLDING" WINDOW.

IS DROPPED means that the object is no longer being held, and appears in the "YOU CAN SEE" window.

APPEARS means that the object is now located in the CURRENT ROOM and is moved from its previous location (this is one example of how Objects that were NOWHERE become located SOMEWHERE).

DISAPPEARS means that the object is now located NOWHERE. It remains out of the story unless a command causes it to APPEAR later.

REPLACED means that the object is replaced by another object. Select the new object from the Object Selection List. When you REPLACE an object, the original object is now located NOWHERE, and the new object is located where the original object used to be.

Second Object
The Second Object field lets you affect another object in addition to the object being linked. Select the Object from the Object Selection List. Then select APPEARS, DISAPPEARS, IS TAKEN, or IS DROPPED.

√ For a Command to be successful, the Story Player automatically requires that the object being linked must either be in the CURRENT ROOM or be HELD. For example, "READ THE BOOK" automatically fails if the Object BOOK is not in the CURRENT ROOM or is not HELD. In most cases, this EFFECTis exactly what you want so it is not necessary to specify the linked object as a Required Object.

√ You may specify the linked object as the Required Object to override the default requirement of the Object being in the CURRENT ROOM or HELD. Use this idea if you are not satisfied with the standard "I do not see the <object> here" response. This is also useful for a Command like "CALL THE DOG." You would only call the dog if it were not in the CURRENT ROOM. To implement this, you specify a Required Object--DOG is NOT HERE. This Required Object allows the Command to execute successfully while the DOG is not in the CURRENT ROOM.

√ If there are no Required State and no Required Object, then the Command will be successful (subject to the above discussion).

√ If both the Required State and Required Object conditions fail, the State Failed Message is the only message displayed.

√ If an object has a mobility of CAN BE TAKEN OR DROPPED, Commands are created for the object and the verbs TAKE and DROP. The only field that is not blank in these Commands is the Effect On Object, which is filled with IS TAKEN or IS DROPPED, respectively. You may modify these Commands if you wish.

√ If an object has a mobility of CAN BE TAKEN OR DROPPED, Commands are created for the object and the verbs TAKE and DROP. The only field that is not blank in these Commands is the Effect On Object, which is filled with IS TAKEN or IS DROPPED, respectively. You may modify these Commands if you wish.

TIMED EVENTS

A Timed Event can make objects or messages appear, make states change, or relocate the player automatically at specified times during your story. A Timed Event creates effects similar to those resulting from a Command, however, the Timed Event can occur without the player typing at the keyboard. This "real-time" feature adds a new dimension to interactive stories, allowing for true simulated time, real-time battles, and scenes occurring continuously.

After selecting this option from the ACTIONS Menu, the Timed Event Table is displayed on the left side of the screen, and the Timed Event Selection List is displayed on the right.

Understanding Timed Events

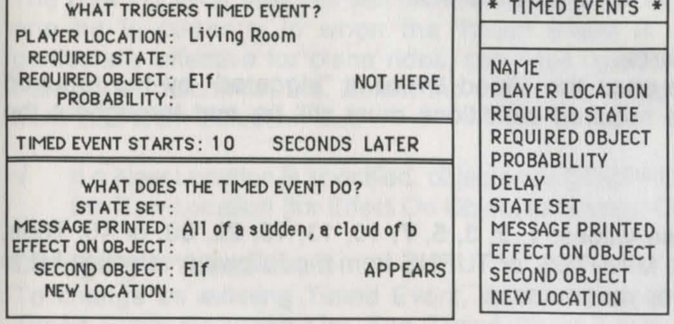
A Timed Event is made up of three parts: conditions that must be met to "trigger" the event, a delay during which the conditions must still be met, and actions that the Timed Event performs. During the story, the Story Player constantly checks to see if the conditions for any Timed Event are met. If so, the Timed Event is "triggered" and the delay for that event begins. During the delay, all of the conditions must still be met. When the delay expires, the specified actions are performed. If, during the delay, the conditions are no longer met, the Story Player waits until they are once again met, and restarts the delay. A description of each field of the Timed Event follows.

Adding A Timed Event

To add a Timed Event, simply type the name of the Timed Event. Give the Timed Event a name that hints at its purpose. For example, if the Timed Event makes an Elf suddenly appear, name it "Elf Appears." This name is never seen by the player and is solely for your own information.

What Triggers The Timed Event?

After entering the name, specify which conditions must be true before the Timed Event is "triggered." You may select any combination of the following fields. ALL of the conditions you specify must be met.



```
NAME OF TIMED EVENT: Elf Appears

        WHAT TRIGGERS TIMED EVENT?
PLAYER LOCATION:  Living Room
 REQUIRED STATE:
REQUIRED OBJECT:  Elf              NOT HERE
    PROBABILITY:

TIMED EVENT STARTS: 10    SECONDS  LATER

         WHAT DOES THE TIMED EVENT DO?
          STATE SET:
   MESSAGE PRINTED:  All of a sudden, a cloud of b
 EFFECT ON OBJECT:
     SECOND OBJECT:  Elf              APPEARS
      NEW LOCATION:
```

```
* TIMED EVENTS *

NAME
PLAYER LOCATION
REQUIRED STATE
REQUIRED OBJECT
PROBABILITY
DELAY
STATE SET
MESSAGE PRINTED
EFFECT ON OBJECT
SECOND OBJECT
NEW LOCATION
```

Player Location
Select a room from the Room Selection List. This requires that the player be in this room in order for the Timed Event to be triggered.

Required State
Select a state from the State Selection List. Then, select whether the Required State must be ON or OFF. The Timed Event can only be triggered if this state is set as you prescribe.

Required Object
Select the Object from the Object Selection List. Then, select whether the Required Object should be HELD, NOT HELD, HERE, NOT HERE, SOMEWHERE, or NOWHERE. The Timed Event can only be triggered if this object is located as you specify.

Probability
Even if all of the above conditions were satisfied, you could further specify the probability of the Timed Event occurring. Select one of these percentages: 5%,10%,25%,50%,75%, or 100%. Additionally, you also may select whether this event is REPEATABLE or NOT REPEATABLE.

If this field is left blank, the probability defaults to 100% and the Timed Event is REPEATABLE.

It is important to realize that the Probability is checked at the end of the delay. If the Player Location, Required State, and Required Object conditions are met, the delay is begun. When the delay expires, the Probability is checked. If the Probability fails, the delay will be allowed to elapse again before rechecking the Probability. For example, if a Timed Event has a Probability of 50% and a Delay of 10 seconds, it means that once every ten seconds there is a 50% chance that the Timed Event will be executed if the other conditions are met.

Timed Event Starts
The delay begins once the Timed Event is "triggered" by the required conditions. These required conditions must still be met throughout the delay.

Delay
Select one of these values: 1, 2, 3, 5, 7, 10, 13, 15, 20, 30, or 45. Then, select SECONDS, MINUTES, or TURNS from the following selection list to specify the units for your number.

What Does The Timed Event Do?
A Timed Event, like a Command, can initiate several responses. These include setting a state, printing a message, affecting the required object or another object, and transporting the player to a new location. These actions are only performed if the Timed Event is "triggered" and the required conditions are met throughout the delay period.

State Set
Select a State that you want to be affected from the State Selection List . Then, select how this State is affected. The options include ON, ON & FLIP, OFF, OFF & FLIP.

Message Printed
Type a message that will be displayed when the Timed Event is executed. The Message Printed appears in the EVENT WINDOW. The message tells the player what has happened. For example, "All of a sudden, a cloud of blue smoke appears and a nasty looking elf is in the room with you" might appear.

Effect On Object
This field specifies the effect on the Required Object that you entered in the "WHAT TRIGGERS THE TIMED EVENT?" section. If you did not specify a Required Object, this field should be left blank. Choose IS TAKEN, IS DROPPED, APPEARS, DISAPPEARS, or REPLACED from the Selection List. If you selected REPLACED, select the new object that replaces the Required Object from the Object Selection List.

Second Object
This field allows you to affect another object in addition to the Required Object. Select an object from the Object Selection List. Choose APPEARS, DISAPPEARS, IS TAKEN or IS DROPPED from the Selection List.

New Location
The New Location field lets you move the player to a room other than the one he is currently in when the Timed Event is executed. This is particularly effective for plane rides, car rides, space flights, trap doors, transporter machines, etc. Select the room where the player will end up from the Room Selection List.

√ If a New Location is specified, objects are DROPPED and APPEAR in the New Location (for Effect On Object or Second Object).

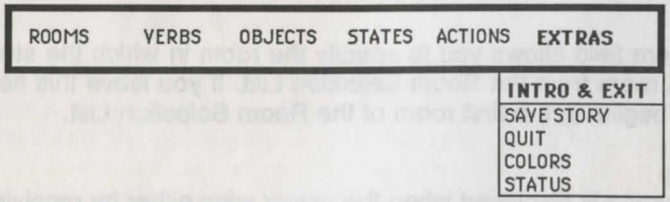
Changing A Timed Event
To change an existing Timed Event, select the desired event from the Timed Event Selection List. The Timed Event Table shows the current information about the event. From here, you may select an individual field to change. To delete the information for an individual field, highlight the field and hit the **DELETE** key.

Deleting A Timed Event
Highlight the Timed Event you wish to delete from the Timed Event Selection List and hit the **DELETE** key.

REARRANGE

This option lets you change the order of the Timed Events in the Timed Event Selection List, allowing you to group your Timed Events in any way that you desire. See Rearrange under the ROOMS Menu for detailed instructions on its use.

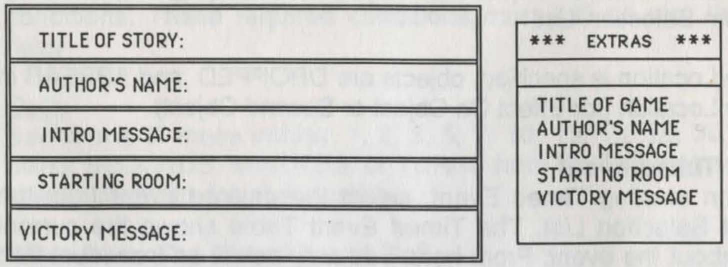
EXTRAS



The EXTRAS Menu lets you add final touches to your story and provides some options for facilitating the story-making process.

INTRO & EXIT

The INTRO & EXIT Option allows you to add a Title, the Author's Name, an Introductory Message, a Starting Room, and a Victory Message.



TITLE OF STORY:

AUTHOR'S NAME:

INTRO MESSAGE:

STARTING ROOM:

VICTORY MESSAGE:

*** EXTRAS ***

TITLE OF GAME
AUTHOR'S NAME
INTRO MESSAGE
STARTING ROOM
VICTORY MESSAGE

Title Of Story
The Title Of Story is displayed on the opening Title Screen when the Story Player is loading the story. If you do not enter a title, the title "A Story" is used.

Author's Name
The Author's Name is very important (you do want credit, don't you?). Enter your name; it is displayed on the Title Screen. If you leave this field blank, the name "Anonymous" is displayed as the author's name.

Intro Message
The introductory message appears immediately after the title screen of the story. Normally, it is a scene-setting description and may explain the player's objectives. If you do not enter an Intro Message, the message "Welcome to the Computer Novel Construction Set" is displayed.

Starting Room
The Starting Room field allows you to specify the room in which the story begins. Select a room from the Room Selection List. If you leave this field blank, the story begins in the first room of the Room Selection List.

Victory Message
The Victory Message is displayed when the player wins either by receiving all of the points or if the "YOU HAVE WON" state is turned ON. If you do not enter a Victory Message, the message "Good job! You have won." will appear.

SAVE STORY

To save your story without exiting the program, select SAVE STORY. You are asked if you are sure you want to do this. Hit 'Y' to save the story. Hitting any other key does not save the story.

√ If you do not save your story before quitting, none of your changes are saved to your disk!

√ Note that saving your story creates a new version of the story and the old version is discarded. If you want to retain the old version, make a separate copy of the story files BEFORE using the Story Maker program.

QUIT

To quit from the Story Maker without saving any changes, select QUIT. You are asked if you are sure you want to quit without saving your changes. Hit 'Y' to quit the Story Maker. Hitting any other key returns you to the EXTRAS Menu.

Use this option if you have just saved the story with SAVE STORY or if you do not want any changes you made to be saved.

STATUS

The STATUS option displays technical information about your story. You see a window that shows the story's name, the approximate memory usage, the approximate story size, and the free disk space. These numbers give an indication of how much space your story takes up on the disk.

USING THE PROGRAM UTILITIES

The following utilities are included on your **Computer Novel Construction Set** disk:

THE STORY MAPPER

The Story Mapper program displays a map of the rooms in a story. It is accessed from the Main Menu. If the entire map does not fit on one screen, you can use the arrow keys to move the map across the screen and see all of the rooms. If all of the rooms in a story are not connected to each other, hitting **RETURN** or **ENTER** allows you to see the other "pieces" of the map. To print out a map, you can hit **"P"** while looking at the map. If you have single sheets of paper, hit **"S"** instead. Make sure that the printer is on and connected.

Each room name is enclosed in a box. The box has a single or double border around it. A double border means that the room appears on the map more than once. This happens whenever the Story Mapper cannot draw all of the connections for the room. In most cases, we advise connecting rooms which are adjacent to one another. The Story Mapper program works best in these cases. If you make a really intricate maze (by connecting rooms which are not adjacent), the Story Mapper will give you some interesting results!

THE STORY CODER

This utility allows you to encode and decode your story files. This will allow your friends to play your story, but it will prevent them from changing your story, and from getting clues by looking at your story files. Run this utility the first time to encode your story. Run this utility again to decode your story. You are requested for an optional password. If you decide to encode the story with a password, you must decode the story with the same password. Do not forget your password! (See your reference card for instructions.)

THE STORY PACKER

This utility allows you to save disk space by removing any deleted messages from the story. It has no effect on how the story is played. (See your reference card for instructions.)

EXAMPLES

The purpose of this section is to provide you with examples of how some common text adventure scenarios can be implemented with the **Computer Novel Construction Set.** Although these examples may not illustrate the exact situations you will incorporate into your stories, they will help you to develop your own ideas.

TRAVEL CONDITION AND REPLACING AN OBJECT

Scenario:

The player is in the Kitchen. To the west is the Dining Room. There is a door in the Kitchen which is closed. The player cannot leave the Kitchen until the door is opened.

This is a very common situation involving a Travel Condition. You need to know whether the door is open or closed. The best method is to use two separate doors, an Open Door and a Closed Door, and check which one is in the Kitchen. The player only sees one of them at a time, and therefore thinks of them as a single door. By having two different doors, you can give each of them their own In Room Description, one mentioning that the Door is open and the other that it is closed. If you use a state "Door is Open" to keep track of the Door, the Door would only have a single In Room Description and Look Description. Use the Effect On Object REPLACED to switch between the two Doors. Just make sure you don't end up with both Doors in the same room!

If two objects share part of their name (Door, for example), and the player refers to the common part of the name, the Story Player assumes he is referring to the object which is located in the CURRENT ROOM.

It is important to realize that OPEN is being used both as an adjective (Open Door) and as a verb (Open). The Story Player is able to determine how the word OPEN is being used in either case.

First, add two rooms, the Kitchen and Living Room, and two verbs, Open and Close. Next, add two objects, an Open Door and a Closed Door. Leave the Open Door's starting Location blank and select the Kitchen as the starting Location for the Closed Door.

ROOM NAME: **KITCHEN**
ROOM DESCRIPTION: **YOU ARE IN A MODERN KITCHEN.**
OBJECT: **CLOSED DOOR**
OBJECT:
OBJECT:
OBJECT:

ROOM NAME: **LIVING ROOM**
ROOM DESCRIPTION: **YOU ARE IN A WELL-FURNISHED LIVING ROOM.**
OBJECT:
OBJECT:
OBJECT:
OBJECT:

VERB NAME: **OPEN**
SYNONYM:
SYNONYM:
SYNONYM:
SYNONYM:

VERB NAME: **CLOSE**
SYNONYM: **SHUT**
SYNONYM:
SYNONYM:
SYNONYM:

OBJECT NAME: **OPEN DOOR**
LOCATION:
IN ROOM DESCRIPTION: **THE DOOR TO THE WEST IS OPEN.**
LOOK DESCRIPTION:
MOBILITY:

OBJECT NAME: **CLOSED DOOR**
LOCATION: **KITCHEN**
IN ROOM DESCRIPTION: **THERE IS A CLOSED DOOR TO THE WEST.**
LOOK DESCRIPTION:
MOBILITY:

Connect the Kitchen west to the Living Room and add a Travel Condition. The Required Object is the Open Door which must be HERE. The Failure Message is "The door is closed, you silly goose."

Add the Command OPEN CLOSED DOOR. The Effect On Object is REPLACED by the Open Door. The Message Printed is "The door creaks as you open it."

Add the Command CLOSE OPEN DOOR. The Effect On Object is REPLACED by the Closed Door. The Message Printed is "The door closes with a bang."

VERB: **OPEN**
OBJECT: **CLOSED DOOR**

CONDITIONS WHICH MUST BE SATISFIED
REQUIRED STATE:
REQUIRED OBJECT:
IF CONDITIONS FAIL
STATE FAILED MESSAGE:
OBJECT FAILED MESSAGE:
IF CONDITIONS ARE SUCCESSFUL
STATE SET:
MESSAGE PRINTED: **THE DOOR CREAKS AS YOU OPEN IT.**
POINT SCORE:
EFFECT ON OBJECT: **REPLACED BY: OPEN DOOR**
SECOND OBJECT:

VERB: **CLOSE**
OBJECT: **OPEN DOOR**

CONDITIONS WHICH MUST BE SATISFIED
REQUIRED STATE:
REQUIRED OBJECT:
IF CONDITIONS FAIL
STATE FAILED MESSAGE:
OBJECT FAILED MESSAGE:
IF CONDITIONS ARE SUCCESSFUL
STATE SET:
MESSAGE PRINTED: **THE DOOR CLOSES WITH A BANG.**
POINT SCORE:
EFFECT ON OBJECT: **REPLACED BY: CLOSED DOOR**
SECOND OBJECT:

What if the player enters "OPEN THE DOOR" and there is already an Open Door in the room? You have not entered the Command OPEN OPEN DOOR, so the Story Player responds "I cannot open the open door." If you want a more realistic message, enter the Command OPEN OPEN DOOR and add the Message Printed "It is already open." You can do the same for the Command CLOSE CLOSED DOOR. Add the Message Printed "It is already closed."

FLIPPING STATES

Scenario:

The player lifts a set of barbells and the exertion makes him hungry. He then eats a cake and it makes him sleepy.

This scene requires you to keep track of two different conditions; whether the player is hungry and whether the player is sleepy. This is a perfect time to use states and the ON & FLIP setting. The ON & FLIP and OFF & FLIP options let you set a state and also change the Required State.

Add the room Bakery and the verbs Eat and Lift. Add the objects Cake and Barbells and set their starting Location to the Bakery. Enter the State "Player Is Hungry" and set its Initial Setting to OFF. Enter the State "Player Is Sleepy" and set its Initial Setting to OFF.

ROOM NAME: **BAKERY**
ROOM DESCRIPTION: **YOU ARE IN A BAKERY.**
OBJECT:
OBJECT:
OBJECT:

VERB NAME: **EAT**
SYNONYM: **MUNCH**
SYNONYM:
SYNONYM:
SYNONYM:

VERB NAME: **LIFT**
SYNONYM: **RAISE**
SYNONYM:
SYNONYM:
SYNONYM:

OBJECT NAME: **CAKE**
LOCATION: **BAKERY**
IN ROOM DESCRIPTION: **THERE IS A TASTY LOOKING CAKE HERE.**
LOOK DESCRIPTION:
MOBILITY: **CAN BE TAKEN OR DROPPED**

OBJECT NAME: **BARBELLS**
LOCATION: **BAKERY**
IN ROOM DESCRIPTION: **THERE IS A SET OF HEAVY BARBELLS HERE.**
LOOK DESCRIPTION:
MOBILITY: **CAN BE TAKEN OR DROPPED**

STATE NAME: **PLAYER IS HUNGRY**
INITIAL SETTING: **OFF**

STATE NAME: **PLAYER IS SLEEPY**
INITIAL SETTING: **OFF**

You can now add the necessary Commands. The Command LIFT BARBELLS sets the State "Player Is Hungry" to ON. The Message Printed is "Working out like that gives you an appetite."

The Command EAT CAKE has a Required State of "Player Is Hungry" which must be ON. The State Failed Message is "You look at the cake and decide you are not that hungry after all." The State Set is "Player Is Sleepy" set to ON & FLIP. The ON & FLIP option sets "Player Is Sleepy" to ON and changes the Required State ("Player is Hungry") to OFF. The Message Printed is "You eat the cake. Boy, that makes you want to take a nap."

VERB: **LIFT**
OBJECT: **BARBELLS**

<u>CONDITIONS WHICH MUST BE SATISFIED</u>
REQUIRED STATE:
REQUIRED OBJECT:
<u>IF CONDITIONS FAIL</u>
STATE FAILED MESSAGE:
OBJECT FAILED MESSAGE:
<u>IF CONDITIONS ARE SUCCESSFUL</u>
STATE SET: **PLAYER IS HUNGRY ON**
MESSAGE PRINTED: **WORKING OUT LIKE THAT GIVES YOU AN...**
POINT SCORE:
EFFECT ON OBJECT:
SECOND OBJECT:
VERB: **EAT**
OBJECT: **CAKE**

<u>CONDITIONS WHICH MUST BE SATISFIED</u>
REQUIRED STATE: **PLAYER IS HUNGRY ON**
REQUIRED OBJECT:
<u>IF CONDITIONS FAIL</u>
STATE FAILED MESSAGE: **YOU LOOK AT THE CAKE AND DECIDE ...**
OBJECT FAILED MESSAGE:

IF CONDITIONS ARE SUCCESSFUL
STATE SET: **PLAYER IS SLEEPY ON & FLIP**
MESSAGE PRINTED: **YOU EAT THE CAKE. BOY, THAT MAKES YOU...**
POINT SCORE:
EFFECT ON OBJECT:
SECOND OBJECT:

If you wanted some crumbs to be left after the player had eaten the Cake, you would add an Effect On Object of REPLACED by Crumbs.

TIMED EVENTS

Scenario:
The player meets an Elf in a Forest. He battles the Elf and either he kills the Elf or the Elf kills him.

Battles are best created with Timed Events. Four Timed Events can make a realistic battle. One Timed Event has the Elf kill the player. Another has the Elf slip on dangerous rocks and become vulnerable. The third has the Elf recover and start fighting again. The final Timed Event has the battle continue with neither the Elf nor the Player gaining an advantage.

First, add the room Forest and the verb Kill. Add the objects Sword and Elf and set their starting Location to the Forest. Enter the State "Elf Is Vulnerable" and set its Initial Setting to OFF.

ROOM NAME: **FOREST**
ROOM DESCRIPTION: **YOU ARE IN A DAMP FOREST.**
OBJECT: **SWORD**
OBJECT: **ELF**
OBJECT:
OBJECT:

VERB NAME: **KILL**
SYNONYM:
SYNONYM:
SYNONYM:
SYNONYM:

OBJECT NAME: **SWORD**
LOCATION: **FOREST**
IN ROOM DESCRIPTION: **THERE IS A SWORD HERE.**
LOOK DESCRIPTION:
MOBILITY: **CAN BE TAKEN OR DROPPED**

OBJECT NAME: **ELF**
LOCATION: **FOREST**
IN ROOM DESCRIPTION: **THERE IS A NASTY ELF HERE.**
LOOK DESCRIPTION:
MOBILITY:

STATE NAME: **ELF IS VULNERABLE**
INITIAL SETTING: **OFF**

The first Timed Event is called "Elf Wins". The battle can only happen if the Elf is in the CURRENT ROOM, so the Required Object is the Elf is HERE. The Probability is10%. Since the Elf can only win once, the Timed Event is NOT REPEATABLE. The Delay is set to 5 Seconds. The State Set "You have lost" is set to ON, and the Message Printed is "The Elf stabs you with his dagger. You are dead. "

The second Timed Event is called "Elf Slips". If the Elf is in the CURRENT ROOM for 7 seconds, you give him a 50% chance of slipping and being easily killed. The Required Object is also the Elf is HERE. You don't want the Elf falling again until he gets back up, so the Required State is "Elf Is Vulnerable" which must be OFF. The Probability is 50% and REPEATABLE. The Delay is set to 7 Seconds. The State Set "Elf Is Vulnerable" is set to ON and the Message Printed is "The Elf falls on the rocks."

The third Timed Event reverses the second one. It is called "Elf Recovers". If the Elf has slipped, he recovers his footing after 10 seconds. The Required Object, of course, is the Elf is HERE. The Required State is "Elf Is Vulnerable" which must be ON. This prevents him from recovering his footing if he hasn't fallen yet. The Delay is set to 10 Seconds. The Message Printed is "The Elf has regained his footing." The State Set is "Elf Is Vulnerable" is turned OFF.

The fourth Timed Event is called "Elf Fights". It displays a message which makes the battle more exciting. Every 5 seconds the Elf has a 50% chance of attacking. The Required Object is the Elf is HERE. The Probability is 50% and Repeatable. The Delay is set to 5 Seconds. The Message Printed is "The Elf darts in and tries to catch you off guard."

NAME OF TIMED EVENT: **ELF WINS**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION:
REQUIRED STATE:
REQUIRED OBJECT: **ELF HERE**
PROBABILITY: **10% NOT REPEATABLE**
TIMED EVENT STARTS: **5 SECONDS**
WHAT DOES THE TIMED EVENT DO?
STATE SET: **YOU HAVE LOST ON**
MESSAGE PRINTED: **THE ELF STABS YOU WITH HIS DAGGER. YOU...**
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

NAME OF TIMED EVENT: **ELF SLIPS**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION:
REQUIRED STATE: **ELF IS VULNERABLE OFF**
REQUIRED OBJECT: **ELF HERE**
PROBABILITY: **50% REPEATABLE**
TIMED EVENT STARTS: **7 SECONDS**
WHAT DOES THE TIMED EVENT DO?
STATE SET: **ELF IS VULNERABLE ON**
MESSAGE PRINTED: **THE ELF FALLS ON THE ROCKS.**
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

NAME OF TIMED EVENT: **ELF RECOVERS**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION:
REQUIRED STATE: **ELF IS VULNERABLE ON**
REQUIRED OBJECT: **ELF HERE**
PROBABILITY:
TIMED EVENT STARTS: **10 SECONDS**
WHAT DOES THE TIMED EVENT DO?
STATE SET: **ELF IS VULNERABLE OFF**
MESSAGE PRINTED: **THE ELF REGAINS HIS FOOTING.**
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

NAME OF TIMED EVENT: **ELF FIGHTS**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION:
REQUIRED STATE:
REQUIRED OBJECT: **ELF HERE**
PROBABILITY: **50% REPEATABLE**
TIMED EVENT STARTS: **5 SECONDS**
WHAT DOES THE TIMED EVENT DO?
STATE SET:
MESSAGE PRINTED: **THE ELF DARTS IN AND TRIES TO CATCH YOU...**
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

Finally, you will add a way for the player to win. You need the Command KILL ELF. The Required State "Elf Is Vulnerable" must be ON. The Required Object is Sword which must be HELD. The State Failed Message is "The Elf avoids your attack." The Object Failed Message is "With what, your hands?" The Message Printed is "With a thrust of your sword you kill the Elf. He disappears in a puff of smoke." The Effect On Object is that the Elf DISAPPEARS. By making the Elf disappear, you prevent the battle from continuing.

VERB: **KILL**
OBJECT: **ELF**

CONDITIONS WHICH MUST BE SATISFIED
REQUIRED STATE: **ELF IS VULNERABLE ON**
REQUIRED OBJECT: **SWORD HELD**
IF CONDITIONS FAIL
STATE FAILED MESSAGE: **THE ELF AVOIDS YOUR ATTACK.**
OBJECT FAILED MESSAGE: **WITH WHAT, YOUR HANDS?**
IF CONDITIONS ARE SUCCESSFUL
STATE SET:
MESSAGE PRINTED: **WITH A THRUST OF YOUR SWORD** ...
POINT SCORE:
EFFECT ON OBJECT: **DISAPPEARS**
SECOND OBJECT:

You could extend this battle scene by making the Elf a randomly moving object, by adding more Timed Events, or by allowing the Elf to steal your weapon.

CHANGING THE PLAYER'S LOCATION

Scenario:
The player enters a spaceship. The spaceship flies to the moon and drops off the player.

Since there is no way to place the player in an object, this situation is handled by making the spaceship a room as well as an object. This room has no connections to other rooms, however. Instead, you add a Timed Event to put the player in the Spaceship Room and another to remove him. You should leave him in the Spaceship Room for a few seconds to simulate the voyage from earth to the moon.

Add the rooms, NASA Space Station, Inside Spaceship, and MoonBASE III. Add the verb Enter. Add the object Spaceship and set its starting Location to the NASA Space Station. Enter the state "Getting into Spaceship" and set its Initial Setting to OFF.

ROOM NAME: **NASA SPACE STATION**
ROOM DESCRIPTION: **YOU ARE IN THE NASA SPACE STATION**
OBJECT: **SPACESHIP**
OBJECT:
OBJECT:
OBJECT:

ROOM NAME: **INSIDE SPACESHIP**
ROOM DESCRIPTION: **YOU ARE IN A MODERN SPACESHIP**
OBJECT:
OBJECT:
OBJECT:
OBJECT:

ROOM NAME: **MOONBASE III**
ROOM DESCRIPTION: **YOU ARE AT THE NEW MOONBASE.**
OBJECT:
OBJECT:
OBJECT:
OBJECT:

VERB NAME: **ENTER**
SYNONYM:
SYNONYM:
SYNONYM:
SYNONYM:

OBJECT NAME: **SPACESHIP**
LOCATION: **NASA SPACE STATION**
IN ROOM DESCRIPTION:
LOOK DESCRIPTION:
MOBILITY:

STATE NAME: **GETTING INTO SPACESHIP**
INITIAL SETTING: **OFF**

The Command ENTER SPACESHIP has a State Set "Getting Into Spaceship" which is turned ON.

VERB: **ENTER**
OBJECT: **SPACESHIP**

CONDITIONS WHICH MUST BE SATISFIED
REQUIRED STATE:
REQUIRED OBJECT:
IF CONDITIONS FAIL
STATE FAILED MESSAGE:
OBJECT FAILED MESSAGE:
IF CONDITIONS ARE SUCCESSFUL
STATE SET: **GETTING INTO SPACESHIP ON**
MESSAGE PRINTED:
POINT SCORE:
EFFECT ON OBJECT:
SECOND OBJECT:

The first Timed Event is called "Start Ride". The Player Location is the "NASA Space Station." The Required State is "Getting into Spaceship" which must be ON. This Timed Event always occurs as soon as this State is set, so there is no Probability or Delay. The State Set is "Getting into Spaceship" which is set to OFF. The New Location is "Inside Spaceship." The Second Object is "Spaceship" and it APPEARS. The Spaceship appears in the New Location so that the player can refer to the Spaceship while he is in the room "Inside Spaceship."

The second Timed Event is called "End Ride." The Player Location is "Inside Spaceship." The Delay is set to 7 Seconds. That's plenty of time to get to the moon. The Message Printed is "The spaceship drops you off at MoonBase III and returns to NASA." Finally, a New Location, "MoonBase III," puts the player at his destination.

NAME OF TIMED EVENT: **START RIDE**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION: **NASA SPACE STATION**
REQUIRED STATE: **GETTING INTO SPACESHIP ON**
REQUIRED OBJECT:
PROBABILITY:
TIMED EVENT STARTS:
WHAT DOES THE TIMED EVENT DO?
STATE SET: **GETTING INTO SPACESHIP OFF**
MESSAGE PRINTED:
EFFECT ON OBJECT:
SECOND OBJECT: **SPACESHIP APPEARS**
NEW LOCATION: **INSIDE SPACESHIP**

NAME OF TIMED EVENT: **END RIDE**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION: **INSIDE SPACESHIP**
REQUIRED STATE:
REQUIRED OBJECT:
PROBABILITY:
TIMED EVENT STARTS: **7 SECONDS**
WHAT DOES THE TIMED EVENT DO?
STATE SET:
MESSAGE PRINTED: **THE SPACESHIP DROPS YOU OFF AT MOONBASE...**
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION: **MOONBASE III**

For a more complicated journey, you could make a number of Spaceship Rooms and move the player from one to the next with Timed Events. Instead of one "Inside Spaceship," you could have a "Blasting Off Spaceship," a "Flying Spaceship" and a "Landing Spaceship."

ASKING QUESTIONS

Scenario:
The player is in a classroom. The teacher asks a question. If the player answers correctly, he receives a gold star.

This scenario is a typical use for the predefined states, "Asking Question" and "Answer Correct."

Add the room Classroom and the objects Teacher and Gold Star.

ROOM NAME: **CLASSROOM**
ROOM DESCRIPTION: **YOU ARE IN A SMALL, BARE CLASSROOM.**
OBJECT: **TEACHER**
OBJECT:
OBJECT:
OBJECT:

OBJECT NAME: **TEACHER**
LOCATION: **CLASSROOM**
IN ROOM DESCRIPTION: **A STERN TEACHER IS AT THE FRONT...**
LOOK DESCRIPTION: **SHE HAS A WART ON HER NOSE.**
MOBILITY:

OBJECT NAME: **GOLD STAR**
LOCATION:
IN ROOM DESCRIPTION: **THERE IS A SHINY GOLD STAR HERE.**
LOOK DESCRIPTION: **IT HAS FIVE POINTS.**
MOBILITY: **CAN BE TAKEN OR DROPPED**

A Timed Event "Teacher asks Question" asks the question. The Player Location is the Classroom. The Probability is set to 100% and NOT REPEATABLE. The question is only asked once. The State Set "Asking Question" is set to ON. The Message Printed is "What color is the sky? #blue". Notice that the Message Printed contains both the question and the answer indicated by the "#" character.

NAME OF TIMED EVENT: **TEACHER ASKS QUESTION**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION: **CLASSROOM**
REQUIRED STATE:
REQUIRED OBJECT:
PROBABILITY: **100% NOT REPEATABLE**
TIMED EVENT STARTS:
WHAT DOES THE TIMED EVENT DO?
STATE SET: **ASKING QUESTION ON**
MESSAGE PRINTED: **WHAT COLOR IS THE SKY? #BLUE**
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

A Timed Event "Color is Blue" checks if the player types the correct answer. The Player Location is the Classroom. The Required State is "Answer Correct" which must be ON. This state is set by the Story Player as soon as the correct answer to a question is typed in. The State Set

"Answer Correct" is set to OFF to prevent the Timed Event from being triggered again. The Message Printed is "That's the right answer. Here is a gold star." The Second Object is Gold Star and it APPEARS. Notice that this is not the Effect On Object because Effect On Object acts on the Required Object and there is no Required Object.

A Timed Event "Time is Up" gives the player 30 seconds to type the correct answer. The Player Location is the Classroom. The Required State is "Asking Question" which must be ON. The Delay is set to 30 Seconds. The State Set "Asking Question" is set to OFF. The Message Printed is "I'm sorry, your time is up. The correct answer is blue."

NAME OF TIMED EVENT: **COLOR IS BLUE**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION: **CLASSROOM**
REQUIRED STATE: **ANSWER CORRECT ON**
REQUIRED OBJECT:
PROBABILITY:
TIMED EVENT STARTS:
WHAT DOES THE TIMED EVENT DO?
STATE SET: **ANSWER CORRECT OFF**
MESSAGE PRINTED: **THAT'S THE RIGHT ANSWER. HERE IS...**
EFFECT ON OBJECT:
SECOND OBJECT: **GOLD STAR APPEARS**
NEW LOCATION:

NAME OF TIMED EVENT: **TIME IS UP**
WHAT TRIGGERS THE TIMED EVENT?
PLAYER LOCATION: **CLASSROOM**
REQUIRED STATE: **ASKING QUESTION ON**
REQUIRED OBJECT:
PROBABILITY:
TIMED EVENT STARTS: **30 SECONDS**
WHAT DOES THE TIMED EVENT DO?
STATE SET: **ASKING QUESTION OFF**
MESSAGE PRINTED: **I'M SORRY, YOUR TIME IS UP. THE CORRECT...**
EFFECT ON OBJECT:
SECOND OBJECT:
NEW LOCATION:

HAYDEN
SOFTWARE

Hayden Software Company, Inc., 600 Suffolk Street, Lowell, MA 01854