

**THE GRAPHIC
ADVENTURE
CREATOR**

SPECTRUM

INCENTIVE SOFTWARE LTD.

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The Graphic Adventure Creator
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Document created by Martin M. Pedersen (tusk@daimi.aau.dk) on 20 Jan 97 with
the following comments...

[This text file is made from the original commodore 64 manual to GAC.

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]

The following alterations were made by rstuart@ukonline.co.uk on 9th Dec 99:

1. Addition of section 1.2 'Loading Instructions'
2. Re-writing of section 3.2 'Graphics Commands' for Spectrum
3. Addition of appendicies A and B
4. Other minor alterations to make document agree with Spectrum manual
5. Addition of product description from inlay

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THE GRAPHIC ADVENTURE CREATOR

For the Spectrum Computer

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(1.1) INTRODUCTION

=====

Welcome to the GRAPHIC ADVENTURE CREATOR!

This manual is intended as a simple introduction to writing adventures using GAC. The GRAPHIC ADVENTURE CREATOR is the best though of as a small programming language specifically designed for writing adventure games. Although it is smaller than other programming languages such as Basic or Pascal it can perform all of the complex tasks needed to write an adventure program, and although the instructions may seem complicated at first, a little time spent studying this manual will enable you to write your very own large scale adventures, far more easily and efficiently than by using basic or machine code.

Any adventures that you write using GAC are your own work, and may be sold as such without any prior permission being sought or payment to us being made. However in this case, you should include with your adventure something to the effect that it was written using the GRAPHIC ADVENTURE CREATOR, (C) 1986 by Sean Ellis/Incentive Software.

And now on with GAC!

CREDITS

DESIGN	by	Sean Ellis
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Thanks also to Lesley, Giles, Dave and John

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(1.2) LOADING INSTRUCTIONS

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The Graphics Adventure Creator (GAC) cassette contains four files. These are:

1. "GAC" - The Creator itself
2. "QS" - The Quickstart file
3. "ADVINMAN" - Adventure in Manual file
4. "RANSOM" - A small Graphic Adventure

To load GAC, type LOAD" and press enter. Once loaded, QS or ADVINMAN can be loaded by selecting T from the Main menu - these are data files.

QS - Quickstart, sets you up with the most commonly used verbs etc and common messages. A complete listing of its contents is contained in Appendix B, along with several other useful tables and charts.

ADVINMAN - Sets up the small adventure in the manual to work through and even edit!

The fourth file RANSOM is an example of a graphic runnable adventure created using GAC and can only be loaded from a reset machine with LOAD".

Write an Adventure in 30 Seconds! (For a Bit of Fun!)

First LOAD GAC in
Then "T" to load QS (Quickstart)

Press "R" - Start Stopwatch!
Press "1" (enter)
Type "A Cave" (enter) (enter) (enter)
Break (Caps-shift, Space)
Press (enter) - Stop Stopwatch!

The screen will display:

A Cave
What Now?

Try a few inputs

Presto! - A VERY simple adventure in 30 seconds?
Well look at it this way - it can only get better!

To get back to the main menu press 'Break', 'Break', 'Break'.

This simple example demonstrates how quick and easy GAC is to use. With a little time and imagination you will soon be creating professional Graphic Adventures!

Let Your Creation Begin!

(2.1) SECTION TWO - WRITING ADVENTURES

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There are several elements necessary to writing adventures using GAC. These are displayed on the Main Menu which is the first thing you will see after loading the program.

For convenience the menu is arranged in alphabetical order, which makes it easier for you to remember which keys to press in order to call up any part of GAC. At the top of the menu screen you will see the display showing "FREE:" which shows the memory free.

You may write the elements of your adventure in any order you like, although you may find that certain orders may make things easier than others.

What follows is a brief description of what each element of the main menu does, together with detailed instructions of how to use each one. They are presented in an order which you may find convenient to follow.

(2.2) VERBS

=====

Verbs are the words with which you will actually tell the computer what to do when you are playing an adventure. For example EAT or DROP. Directions such as WEST or UP are also treated as verbs. GAC allows you to enter and edit your own verbs when writing an adventure. Some of the most commonly used verbs are already in the Quickstart File, however since GAC allows you to enter up to 255 verbs, your imagination is the only limit to the commands you may incorporate into your adventure.

After pressing V from the Main Menu, you should see a prompt on the screen, * EDIT VERBS *, and a pointer >.

To enter a verb, simply type in a number, then a space followed by your verb. When you press RETURN the verb will be entered on the screen in alphabetical order.

If two or more verbs have the same meaning and you wish both to be accepted, ie., "Get" and "Take", simply allocate to them the same verb number. Try to think of as many similar words as you can in this way, since this will make your adventure appear more friendly.

EDITING - To edit, scroll the list using the cursor keys until the
----- desired verb is adjacent to use the pointer. Press Return,
edit the word, press Return again.

DELETE - Position the word to be deleted by the pointer and press
----- Delete.

RETRIEVE - Home will retrieve the last word deleted.

There is a brief summary of these instructions at the bottom of the screen.

NOTE: The verbs in the Quickstart File may be edited in exactly the same way as any other verbs.

More information about the use of verbs may be found in section(2.8) CONDITIONS.

PRESSING BREAK WILL RETURN YOU TO THE MAIN MENU

(2.3) ROOM DESCRIPTION

=====

The term "room" is used to refer to any location in your adventure. For example, "a forest", "a car", "a strange alien world" and so on. GAC allows you to use up to 9999 of these rooms, memory permitting, and to specify the connections to and from each room. You will probably find it easier if you have decided in advance what each room is and how the rooms are connected.

On pressing R from the main menu, the prompt "Which room number ? ..." should appear. At this point enter a room number n, followed by RETURN which will give the prompt "Room number n is ...". You can then enter the description which can be up to 255 characters long.

You will then see the prompt "Connections are.....?". The connections are specified in terms of a verb, which must part of the list already specified, followed by a space, followed by the room number it connects with. For example EAST 20.

You may have as many connections from a single room as you can fit into 255 characters, followed by RETURN, i.e.

EAST 20 WEST 18 NORTH 19 SOUTH 21 JUMP 49 (RETURN)

You will then see a prompt asking for a picture number, which links this location with the appropriate picture should you wish to have one. In this case you should enter a picture number followed by RETURN. If you do not want a picture simply press RETURN. This returns you to the prompt "Which room number ?..." again.

All of the above may be edited at any time by using the cursor keys. BREAK at any point will return you to the WHICH ROOM? prompt, and BREAK at that point will return you to the Main Menu.

More information about the use of room descriptions can be found in section (2.7) CONDITIONS.

EDITING TEXT AND NUMBER INPUTS (this applies to all sections)

=====

Cursor keys 5 and 8 will move the cursor left and right, DELETE (Caps-Shift 0) deletes left of the cursor and EDIT (caps-shift 1) deletes the character at the cursor position and right of the cursor.

=====

PANIC BUTTON!!!

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At any time press BREAK, (several times if necessary) to return to the main menu.

(2.4) MESSAGES

=====

Messages consist of prompts, descriptions or other comments that appear on the screen when you play an adventure, i.e. "What now ?", or "You can't do that". Many of the more common system messages are contained in the Quickstart file, and are numbered from 240 to 255. GAC allows you to enter up to 255 messages which may appear at any point in your adventure.

Pressing "M" from the main menu will give the prompt "Which message number ?...". You should then enter a number followed by RETURN, then type in your message, which may be up to 255 characters long. Pressing RETURN will enter your message and repeat the "Which message number ?..." prompt.

To edit a message once it has been entered, simply recall the message and edit it using the cursor keys.

Please note that all messages from 240 to 255 should be defined, since these are essential system messages without which your adventure will not run correctly. You can edit these messages but you should be careful to preserve the meaning. For example, message 242, "Pardon ?" could be changed to "Eh ?".

Pressing BREAK will return you to the prompt EDIT MESSAGE? and BREAK from there will return you to the Main Menu.

More information about the use of messages can be found in section (2.7) CONDITIONS.

(2.5) NOUNS AND OBJECTS
=====

Nouns are the "things" that your adventure will recognise. For example, BOOK, SWORD and so on.

GAC frequently requires you to define things both as nouns and as objects: once as a noun so that the adventure will recognise it, and then as an object so that the program can move it around and do things with it. For example, SWORD is defined as a noun, but since you may wish to pick it up during your adventure, you must also define it as an object. A further example makes clear another point: if your adventure requires you to light a lamp. LAMP must be defined as a noun, and you must also define two objects, AN UNLIT LAMP and A LIT LAMP .

When you press N from the main menu, the prompt * EDIT NOUNS * will appear. Apart from this, the procedure for entering and editing nouns is exactly the same as that for editing verbs. (2.3)

When you press 0 from the main menu, the prompt "Which object number ?..." will appear. You should then enter a number n from 1 to 255 followed by RETURN. You will then see the prompt "Object number n is...". You may then enter the object description consisting of up to 255 characters followed by RETURN. This will produce the prompt "Starts in room number...". Enter the number of the room you wish this object to start in, or press RETURN. Pressing RETURN will assign the object to room zero, a special room which cannot be travelled to, and which contains "dead" and "unborn" object. For example, a piece of cake once eaten will be assigned to room zero. The prompt "and weighs..." will then appear. Enter the weight you wish to allocate to this object and press RETURN.

If the start room number remains at zero, the object is assigned to ROOM ZERO ; a special room which cannot be travelled to, which contains "dead" and "unborn" objects. For example, a piece of cake once eaten will be assigned to room zero.

BREAK will return you to the main menu.

More information about the use of nouns and objects can be found in section (2.7) CONDITIONS.

(2.6) ADVERBS
=====

In the GAC adverbs are used for two sorts of things: firstly to describe the precise way a verb is used, i.e. "move slowly" or "put down gently", and secondly they are used to differentiate between similar nouns. For example, if your adventure has three differently coloured boxes, the adverbs will specify the colours: RED, GREEN etc.

On pressing A from the main menu, the prompt * EDIT ADVERBS * will appear. Apart from this the procedure for entering and editing adverbs is exactly the same as that for editing verbs and nouns.

More information on the use of adverbs can be found in section (2.7) CONDITIONS.

(2.7) CONDITIONS

=====

When using GAC the conditions form the internal commands that simulate decision-making processes within the game. All the terms you have specified and the data you have entered is now drawn together to form the structure for your adventure-

"Conditions" tell the adventure that if certain things are true, then it is to perform some action, i.e., "if x is true then do y", though much more complicated conditions may be constructed, i.e.,

"if x and y are true then do t",

or "if z and q are true then do y and x", and so on.

The GAC has a special format for writing these conditions. For example, if you have defined verb number 16 to mean "Examine", and noun number 2 to mean "Room", then a condition using these terms might read :

"IF (VERB 16 AND NOUN 2) LOOK WAIT END"

Translated this means if "Examine Room" is typed in, describe the current room and wait for a new command.

The Conditional list below separates the words used for the "Conditions Part", 'If (Verb 16 and Noun 2)' and those used for the "Action Part", 'LOOK WAIT END'. For subscripts used (a, c, m, as, o, n, r, v, x and y) - See Appendix B.

i. CONDITION PART

VERB v	Is verb v typed ? (v is a number) VERB 7 will give a TRUE answer if verb number 7 was typed, otherwise it will give a false answer.
NOUN n	is noun n typed ? (similar to VERB)
ADVE a	is adverb a typed ? (similar to VERB)
HERE o	is object o here ? (i.e. in the same room as you ?) If you are in room 3 and object 1 is also in room 3, then HERE 1 will give a TRUE answer because object 1 is here.
CARR o	Is object o being carried ? (Similar to HERE).
AVAI o	Is object o available for use ? i.e. here or being carried? (Similar to HERE).
o IN r	Is object o in room r ? If object 1 is in room 3, as above, then 1 IN 3 will be TRUE, but 1 IN 4 will be FALSE.
WEIG o	Gets the weight of object o. In our adventure, weigh 2 would give the value 20, which is the weight of the rat.
SET? m	Is marker m set ?
RES? m	Is marker m reset ? (There are 256 markers, numbered 0 to 255. They are used to store information that can be in one of two states, like doors which are open or shut, light which are on or off, etc. There are three which are important for the adventure program : Mkr 0, if set, means that a room has been described since it was last reset. Mkr 1, if set, means you are in a light room, Otherwise you are in a dark room.

Mkr 2, if set, means you have a lamp or some other source of light.
If markers 1 and 2 are both reset, then the program will refuse to describe rooms, coming up with the "It's dark" message instead, since you are in a dark room without a lamp.
Mkr 3, if set, disables the scoring mechanism when you exit from the game.

CTR c Gives you the value of counter c.
x EQU? c Is x equal to the value of counter c ?
There are 128 counters, numbered from 0 to 127. They are most frequently used to store the number of moves since a particular event, (e.g., moves in the dark). Counter 0 holds the score and counters 126 and 127 hold the turns count since the start of the game.

TURN Gives the number of turns since the start of the game.

ROOM Gives you the room number of the room you're currently in.

AT r Gives a TRUE answer if you are in room number r.

condition AND condition will give a TRUE answer if both of the conditions give TRUE answers.
e.g. VERB 1 AND NOUN 2 will TRUE only if verb 1 and noun 2 are both typed.

condition OR condition will give TRUE if either condition is TRUE, or both.

condition XOR condition will give TRUE if one of the conditions is TRUE and the other FALSE.

NOT condition will give a TRUE answer if the condition was FALSE, and vice versa.
So NOT VERB 1 will be TRUE if verb 1 is NOT typed.

x < y Gives TRUE if number x is less than number y
x > y Gives TRUE if x is greater than y.
x = y Gives TRUE if x is EQUAL to y.

RAND x Gives a random number between 0 and (x-1). So RAND 10 will give any number at random in the range 0 to 9.

VBNO Gets the number of the verb in this command.
NO1 Gets the number of the first noun in this command, if any.
NO2 Gets the number of the second noun in this command, if any. These are used to check word order, and to GET and DROP object without having to have a condition for each one.

ii. ACTION PART

LOOK Describe the room you are in at the moment.
DESC r Describe room number r.

PICT Turns the picture display on.
TEXT Turns the picture display off, giving a text adventure.

GET o Get object number o. If it isn't here, or you've
 already got it, or it's too heavy then the
 appropriate message is displayed.

DROP o Drop object number o. If you haven't got it, then
 the appropriate message is displayed.

x SWAP y Exchange objects x and y. In our little
 adventure, 1 SWAP 5 will exchange the lamp with
 the lit lamp.

OBJ o Describe object number o.

LIST r List all the objects in room number r.

LIST WITH List all the objects carried with you.

o TO r Move object number o to room r. To destroy an
 object move it to room zero.

SET m Set marker m

RESE m Reset marker m. See SET? and RES? for an
 explanation of markers.

x CSET c Set x to be the value of counter number c.

INCR c Increase counter c by one. The maximum is 255.

DECR c Decrease counter c by one. The minimum is 0.
 Trying to increase past 255 or decrease past 0 is
 ignored.

GOTO r Go to room r and describe the new room

CONN v This checks through the connection table for a
 connection from the current room using verb v. If
 one is found, this returns the room number of the
 room you would have move to if you were to take the
 connection, otherwise it gives zero. As an
 example if you were in room 3 in our adventure,
 CONN 4 would return the value 2, because in the
 connections from room 3, verb 4 (WEST) would take
 you to room 2.

STRE x Set the maximum weight you can carry to x. STRE
 is short for STRENGTH.

BRIN o Brings object o here, if it exists.

FIND o Find objects o and move to it, if it exists.
 This does not acknowledge any restrictions, (such
 as connections), so it could be useful in a magic
 spell.

SAVE Saves the current game position to tape or disc.

LOAD Loads the current game position from tape or disc.
 These are useful for continuing a game after tea
 (or coffee - the kettle's probably boiled by now!)

WAIT Waits for a new command.

OKAY Prints "Okay" and waits for a new command.

EXIT Stops the game. Since the player is NOT asked,
 this is recommended for use when the player wins
 or is killed.

QUIT The player is first asked if he wants to quit. If
 he types "Y", the game terminates, otherwise the
 game continues. On abandoning the game, both the
 score and the number of moves taken are displayed,
 assuming this function has not been disabled by
 setting marker three.

MESS ms	Print message number ms.
PRIN x	Print number x.
LF	Prints a Linefeed. Everything from hereon is printed on a new line.
WITH	Is equal to the room number of where things are put when you are carrying them.
HOLD x	Halts the game for x fiftieths of a second, or until a key is pressed. For example, to freeze for 10 seconds, do HOLD 500.
x + y	As you may expect, returns the value of x added to y.
x - y	And this gives the value of x - y.

There are several things to note when writing conditions. Firstly all operations are performed strictly from left to right. Secondly GAC requires spaces both inside and outside brackets, and between words such as 'verb' and 'noun' and their numbers.

Thirdly, x and y need not be simply numbers, they can be more complex expressions. However you should note that since GAC performs all its operations from left to right, you should be careful about the order in which you enter things. Put any comparisons first, i.e. if (VERB > 5) AND NOUN 9) QUIT END

The conditions are checked by GAC at three different points, and are entered as High Priority, Low Priority and Local. The flow chart at the back of the manual indicates the order in which these are actioned.

The GAC checks for HIGH PRIORITY conditions before prompting for a player command. It checks for such things as whether you are still "alive", whether a light is flashing, etc.

Pressing H from the main menu will return the prompt "Which line number ?...". You should enter these lines in order, ie. 1, 2, 3 etc.

The GAC will not recognise a line number such as '5' when you have only entered two conditions so far, although it will insert a condition earlier in your list and remember accordingly. RETURN will give you the prompt "Line number n is....", at which point you should enter your condition and press RETURN which will give you the BREAK returns you to the main menu.

LOCAL CONDITIONS are checked for after the player has entered a command, and deal with things local to a particular room, for example, whether a particular object is in that room. Alternatively they might execute a player command to go to another room, or open a door at that location.

Pressing C from the main menu will give the prompt "Which room number ?". Entering a number followed by RETURN will give the prompt "Which line number ?....". Thereafter the procedure is exactly the same as for High Priority Conditions, except that each Room has it's own set of line numbers, (1, 2, 3 etc).

LOW PRIORITY CONDITIONS are also checked for after a single player command is entered, but are not associated with any room. For example, they might check whether you are carrying a particular object, independent of the location. After pressing L from the main menu, the procedure for entering and editing Low Priority Conditions is exactly the same as that for High Priority Conditions.

Further examples of High, Local and Low Priority Conditions can be found in Appendix A.

(2.8) BEGIN WHERE?

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The last element of your adventure, at least as far as the text is concerned, is to specify which room your adventure starts in.

Pressing B from the main menu will give the prompt to enter the start location room number.

Entering a room number followed by RETURN means that your adventure will start at this room. To change the start room, simply enter a new number.

BREAK will return you to the main menu.

(2.9) SAVE AND LOAD

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SAVING

After pressing S from the main menu, you will be asked if you wish to save a "Data File" or a "Runnable Adventure".

If you press 'D' for 'Data File', the computer will prompt for a file name. Enter your file name followed by RETURN. This will save your data which can be loaded into GAC at a later date for further development.

If you press 'R' for runnable adventure followed by 'Enter' your data will be saved as a Runnable Adventure, which can no longer be loaded into GAC for editing but will run on its own.

LOADING

Pressing T on the main menu followed by a file name will load a Data file into GAC for editing.

To load your Runnable Adventure type LOAD"" and press ENTER.

NOTE : Do not attempt to load a runnable adventure into GAC. It will run on its own !

(2.10) DELETE DATA

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Pressing X from the main menu will delete all your data.

N.B. Loading a new data file will have the same effect.

(3.1) SECTION THREE - GRAPHICS
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The Graphics part of GAC will enable you to draw pictures to go with the room descriptions in the text part of your adventure.

Press G from the Main Menu to enter the Graphics sections. You will see displayed a high-resolution Window and a Graphics Menu, together with prompt "Which picture number ?...". Enter the number of the picture you wish to design.

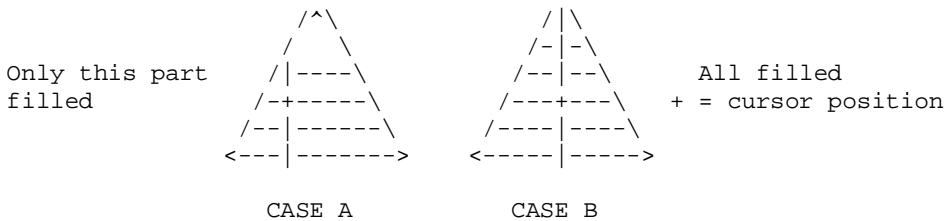
The Status Board from left to right:

```

PEN AND PAPER - The Pen starts "off" the Paper. The cursor will not
----- leave a trail and is free to be positioned without
affecting your picture. The Pen will be in the down
position whilst actually drawing. (L, E & R)
INK - The colour in this box shows the current status of
--- the Ink of the Pen.
PAPER - The colour here shows the current status of the
----- background, (the paper colour).
X & Y - These indicators show the current position of the
----- cursor. The bottom left corner X = 0 and Y = 0.
LAST - This shows the last command used.
-----
PIC - The picture number you are presently designing.
---
```

The fill Routine is designed to be fast and it can cope with irregular shapes, but you may need to press "F" more than once. If an area is left unfilled, then you can just move the cursor into that area and press "F" again.

Here is a simple method which will allow you to get the best results from your filling. If your shape has a high point, position the cursor directly under it. If it has a low point, position your cursor directly under it. Here is an example using a triangle...



The area filled is worked out by the fill routine checking up and down from the cursor position until it encounters a boundary. It is possible to fill the same area more than once using shading patterns consisting of different colours.

Finally, we have another very useful feature. This is the ability to merge pictures together. For instance, you find that, in your adventure you have a single basic cave shape, which you want to use in many of your pictures, but details differ. It is possible to include a picture already created into the picture you're in, by pressing "M", typing the number of the picture you want to include, and pressing ENTER. This is then drawn over the top of anything already there, (I usually do this right at the start and then draw around the merged picture). It is a very useful feature which saves a lot of time and memory too.

If you should run out of memory in one particular picture, you can get round this by moving to an unused picture and merging the full picture into the new one before continuing with your drawing.

Designing and drawing pictures on the Spectrum is hindered by the Spectrum's own 'Attribute Problem'. If you hold 'G' whilst at a picture, you will see a grid of bright and not so bright squares light up - each square is 8 by 8 pixels. The Spectrum itself will only allow two colours in any square at any time, one is called the Paper Colour and the other the Ink Colour.

By careful positioning of lines, ie. on the edge or corners of Attribute Squares, you can still get several areas of colour joining at one point. As you draw lines, GAC will update all the attributes as the line is elastic banded, this will aid effective positioning. Also as previously mentioned holding the 'G' key will overlay the Attribute Grid over the picture.

There is a demonstration picture (No. 99) on the 'Advinman' file that you can step through, edit, add to, delete or whatever! (Load in Advinman using the T option, press G and enter 99).

By careful design you can create stunning graphics like those included in the Ransom adventure.

(3.2) GRAPHICS COMMANDS

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- Arrow Keys (5, 6, 7 & 8) - Move the cursor
- Arrow Keys + Caps. Shift - Move the cursor (steps of 8) quicker.
- L (1st press) - Line - Fixes one end of the line, (pen goes down). Now move the cursor about.
- L (2nd press) - Line - Fixes other end of the line, (pen goes up).
- E (1st press) - Ellipse/Circle - Sets centre (now move cursors).
- E (2nd press) - Ellipse/Circle - Fixes Ellipse/Circle
- R (1st press) - Rectangle - Sets a corner (now move cursor).
- R (2nd press) - Rectangle - Fixes Rectangle.
- D - Dot - Prints a Dot at cursor position
- I - Ink Colour
- P - Paper Colour
- V - Flash 0 = off 1 = on 8 = transparent
- B - Bright 0 = off 1 = on 8 = transparent
- T - Text Area and Border Colour
- G - Grid showing Attributes positions
- F - Fills from cursor area in INK
- A - Fills from cursor area in PAPER
- S - Shaded fills from cursor in a shade of Current Ink and Current Paper
- W - Draws whole picture
- M - Merge picture - prompts for a picture number and merges that picture with the one currently displayed. Note some shades will not merge well and a 'fill' will not fill past obstacles in the present picture.
- C - Cursor - when held will highlight the cursor position.
- Arrow Keys (5, 6, 7 & 8) and Symbol Shift - Steps through your picture to allow editing.
- S Shift 5 (left arrow) - Steps back one command

S Shift 8 (right arrow) - Steps forward one command
 S Shift 6 (down arrow) - Steps back five commands
 S Shift 7 (up arrow) - Steps forward five commands
 NB. When stepping through your picture you can still add and change the commands as normal.

Z - Jumps to start of picture
 Delete - Deletes last command
 Caps-shift 9 - Deletes from current position to end
 BREAK 1st time - Prompts new picture number
 BREAK 2nd time - Return to main menu

NB. For a Spectrum + or Spectrum 128 the arrow keys move the cursor in steps of 8, for accurate positioning use keys 5, 6, 7 and 8. (Left, down, up and right).

Editing pictures

, - Moves back one graphic command.
 . - Moves forward one graphic command.
 < - Moves back 8 graphics commands.
 > - Moves forward 8 graphic commands.

SHIFT * - Deletes all picture information held after the edit position.
 Z - Takes you back to the start of the picture.
 f7 - Toggle the graphics cursor speed, between 1 pixel per key press (default) and 4 pixels per key press.
 BREAK - Takes you back to the Main Menu.

Whilst stepping through the graphic commands the last command will be highlighted in green. If the last graphic command was a line, "Dot" will be highlighted in light blue.

(4.1) SECTION FOUR - TEST ADVENTURE
 =====

To test your adventure, get back to the main menu and simply press "ENTER" to enter the adventure.
 When are testing and adventure, the way to return to the main menu is to press BREAK as usual. This gives you the message "Press D for diagnostics or BREAK to escape....". If you press the "D" key, then all the markers and counters will be displayed on the screen. For the markers, a solid box indicates "SET" and an empty one indicates "RESET". The values of the counters are given as you would expect. To get back to the game press RETURN. If you press BREAK again, then you will get back to the main menu.

The error routine prints out a message indicating the nature of the error, plus a line of conditions if the error occurred in one of the condition tables.

"Message not found" means you have referred to a message that does not exist. If this appears immediately, check that you have included the system's special messages, numbers 240 and above.

"Room not found" means you have tried to describe or move to a room that doesn't exist.

"Object not found" means you have tried to pick up, drop or describe an object that does not exist.

"Marker not found" means you have tried to access a counter which

does not exist.

"Counter not found" means you have tried to access a counter which does not exist.

"Illegal value" means you have tried to look for a verb, noun or adverb with a number greater than 255, or you have tried to load a counter with a number greater than 255.

Here are a few hints for solving errors :

- i. Suspect typing error. Check that you really mean what you have said.
- ii. Have you forgotten to enter the room/object/message being referred to? if so enter it.
- iii. Have you forgotten to delete a condition which you didn't need, having deleted the objects/messages used by it?

(4.2) PLAYER COMMANDS

=====

This section deals with the commands a player gives when he plays the adventure. It is intended to give an idea of the complexity of the commands the adventure will understand.

Each command line consists of one or more simple commands, which in turn consist of a verb, and maybe an adverb and one or two nouns. Any word which the command interpreter does not understand as being a noun, verb or adverb is ignored.

Let us take a typical line and see how the program looks at it:

Get the gold, examine it, put it in the box then go north

Let us assume that the vocabulary includes :

ADVERBS: 1 IN

NOUNS :	3 GOLD	VERBS :	1 NORTH
	7 BOX		7 GET
	255 IT		8 PUT 16 EXAMINE

The command line is split into separate commands by the following : ".", ",", "?", ":", "and" and "then", so it becomes ;

Get the gold ","
Examine it ", "
Put it in the box "then"
go north

Each of these is canned for verbs, adverbs and nouns in that order, and may have their number stored;

	VERB	ADVE	NOUN1	NOUN2
Get the gold	7	0	3	0

Examine it	16	0	255	0

Put it in the box	8	1	255	7
--- --				
Go north	1	0	0	0

Then all occurrences of noun 255 ("It"), are replaced by the last noun typed before that, giving:

	VERB	ADVE	NOUN1	NOUN2
Get the gold	7	0	3	0
Examine it	16	0	3	0
Put it in the box	8	1	3	7
Go north	1	0	0	0

These values are the passed to the connection table, then to the conditions. See the diagram in Appendix B.

Note that all the letters in the vocabulary entries are significant - there is no truncation to only four or five letters. Thus RIVER and RIVET, TROUT and TROUSERS, and other like these are differentiated.

APPENDIX A

=====

Definitions and Conditions for "ADVINMAN"

i. NOUNS

1 TORCH 5 SERPENT
 1 LAMP 6 DOOR
 2 RAT 255 IT
 3 KEY
 4 GOLD
 4 BAR
 4 TREASURE
 5 SNAKE

ii. VERBS

1 NORTH 9 LOOK 15 LOAD
 2 SOUTH 10 LIST 15 RESTORE
 3 EAST 10 INVENTORY 16 EXAMINE
 4 WEST 11 QUIT 17 LIGHT
 5 UP 12 TEXT 17 ON
 6 DOWN 12 WORDS 18 EXTINGUISH
 7 GET 13 PICTURES 18 OFF
 7 TAKE 13 GRAPHICS 19 UNLOCK
 8 DROP 14 SAVE 20 SCORE
 1 N 2 S 3 E 4 W 21 EAT
 5 U 6 D

iii. ROOM DESCRIPTION

Room No.	Description (as it would appear)	Connections
1.	You are above the ground. There is a cave entrance to the east.	(press ENTER)
2.	You are in a large cavern. Passages lead east, west and south.	E 3
3.	You are in a cave. A snake is asleep in a corner and exits lead east and west.	W 3
4.	You are by a small lake. The only exit is west.	(press ENTER)
5.	You are outside a castle. A tunnel leads to the north and a large door can be seen to the east.	(press ENTER)
6.	You are in the castle strongroom. A door stands open to the west.	W 5

iv. OBJECTS

No.	Description	Starts in room	Weight
1.	a lamp	1	10
2.	a dead rat	5	20
3.	a key	4	1
4.	a gold bar	6	100
5.	a lit lamp	0	100

v. MESSAGES

240 What now ?....
 241 You can't
 242 Pardon?
 243 Press a key for another game....
 244 Are you sure (Y or N) ?
 245 You've already got that.
 246 You haven't got that.

247 You can't see that.
248 You're carrying too much to pick that up.
249 Your score was
250 and you took
251 It's dark. You can't see a thing.
252 I can't find that anywhere.
253 You can also see.
254 Okay
255 turns

i. Conditions - Local Don't type in the comments !

Room 1

IF (VERB 3) RESE 1 GOTO 2 WAIT END
If you typed "EAST", reset the dark/light marker, goto room 2
and wait for a new command.

Room 2

IF (VERB 4) SET 1 GOTO 1 WAIT END
If you typed "WEST", set the dark/light marker, goto room 1 and
wait for a new command.
IF (VERB 2) SET 1 GOTO 5 WAIT END
And a similar condition for going south too.

Room 3

IF (VERB 7 AND NOUN 5) MESS 14 HOLD 200 EXIT END
If you typed "GET SNAKE" then print message fourteen to say
how it reacts, freeze for four seconds and end the game.
IF (VERB 3) SET 1 GOTO 4 WAIT END
Again another move-from-dark-room-to-light-room condition, this
time east.

Room 4

IF (VERB 4) RESE 1 DOTO 3 WAIT END
I'll ley you work this one out (hint - look at rooms 1, 2, 3)
IF (VERB 7 AND NOUN 3) CTR 0 + 20 CSET 0 END
If you typed "GET KEY" then add twenty to counter 0 (the score)
IF (VERB 8 AND NOUN 3) CTR 0 - 20 CSET 0 END
If you typed "DROP KEY" then subtract 20 from ctr 0 (the score)

Room 5

IF (VERB 3 AND SET? 3) GOTO 6 WAIT END
If you typed "EAST" and marker 3 is set, (i.e. if the door has
been opened), goto room 6 and wait for a new command.
IF (VERB 3) MESS 7 WAIT END
If you typed "EAST" then print message 7 and wait for a new
command. Note that the door cannot be opened since if it was,
the last line would have worked and we would be waiting for a
new command by now.
IF (VERB 19 AND NOUN 6 AND CARR 3) SET 3 MESS 10 WAIT END
If you typed "UNLOCK DOOR" then set marker 3, (mark the door as
open), print message 10 and wait for a new command.
IF (VERB 1) RESE 1 GOTO 2 WAIT END
It is another light-to-dark movement, this time north to room 2

ii. Conditions - Low Priority

Those marked "*" are included in the Quickstart file.

IF (VERB 20) MESS 249 PRIN CTR 0 MESS 250 PRIN TURN MESS 255
WAIT END
If you typed "SCORE", print message 249, your score, message
250, the number of turns you has and message 255. Then wait
for a new command.

```

IF ( NO1 = 0 AND VERB 7 ) MESS 19 WAIT END
  If you typed "GET" by itself or with an unrecognised word,
  print message 19 "I'm sorry, but I don't know what one of those
  is..."
IF ( NO1 = 0 AND VERB 8 ) MESS 19 WAIT END
  And similarly for "DROP".
IF ( NO1 = 0 AND VERB 16 ) MESS 18 WAIT END
  And again for "EXAMINE".
IF ( VERB 7 AND NOUN 1 AND HERE 5 ) GET 5 OKAY END
  If you typed "GET LAMP" and there is a lit lamp here, then get
  it, print "OKAY" and wait for a new command.
IF ( NO1 < 5 AND VERB 7 ) GET NO1 OKAY END.
  If you typed "GET" and a noun with a number less than 5, then
  get the object with that noun's number. This only works
  because the objects and the nouns which refer to them have the
  same number. (A very useful trick!)
IF ( VERB 8 AND NOUN 1 AND CARR 5 ) DROP 5 OKAY END
  If you typed "DROP LAMP" and you've got a lit lamp, then drop
  it, print "Okay" and wait for a new command.
IF ( NO1 < 5 AND VERB 8 ) DROP NO1 OKAY END
  If you typed "DROP" and a noun whose number is less than 5,
  then drop the object with that noun number.
IF ( VERB 16 AND NOUN 1 AND AVAI 5 ) MESS 5 WAIT END
  If you typed "EXAMINE LAMP" and you have a lit lamp available
  then print out its more detailed description and wait for a new
  command.
IF ( NO1 < 5 AND VERB 16 AND AVAI NO1 ) MESS NO1 WAIT END
  If you typed "EXAMINE" and a noun whose number is less than 5,
  then print out the message with that noun number, it being the
  more detailed description of that abject, then wait for a new
  command.
* IF ( VERB 11 ) QUIT END
  If you typed "QUIT" then quit.
* IF ( VERB 9 ) LOOK WAIT END
  If you typed "LOOK" then describe this room and wait for a new
  command.
IF ( VERB 21 AND NOUN 2 AND CARR 2 ) DROP 2 2 TO 0 MESS 17 WAIT
END
  If you typed "EAT RAT" and you are carrying it, drop it, move
  to room 0, thus destroying it, print message 17 ("yum, yum")
  and wait for a new command.
* IF ( VERB 10 ) MESS 239 LIST WITH END
  If you typed "INVENTORY" then list the objects with you and
  wait for a new command.
* IF ( VERB 13 ) PICT OKAY END
  If you typed "PICTURES" then turn them on, print "OKAY" and
  wait for a new command.
* IF ( VERB 12 ) TEXT OKAY END
  And similarly for "TEXT".
IF ( VERB 17 AND NOUN 1 AND AVAI 1 ) 1 SWAP 5 CTR 0 + 20 CSET 0
MESS 15 SET 2 WAIT END
  type this all on one line. If you typed "LIGHT LAMP" and you
  have an unlit lamp, then exchange the lit lamp for the unlit
  one, tell the user that he has lit the lamp, increase the score
  by 20 and await a new command.
IF ( VERB 18 AND NOUN 1 AND AVAI 5 ) 1 SWAP 5 CTR 0 - 20 CSET 0
MESS 16 WAIT END
  And similarly for "LAMP OFF" ("EXTINGUISH LAMP").

```

```

* IF ( VERB 14 ) SAVE OKAY END
  If you typed "SAVE" then save the game position to tape or
  disc.
* IF( VERB 15 ) LOAD LOOK WAIT END
  If you typed "LOAD" then load in a previously saved game
  position.

```

iii. Conditions - High Priority

```

-----
IF ( RES ? 6 ) SET 6 STRE 111 3 CSET 1 END
  If marker 6 is reset (if this is the first move) then set
  marker 6 to say that it isn't the first move any more, set the
  strength and counter one to hold value three.
IF ( RES ? 1 AND RES ? 2 ) DECR 1 END
  If you are in total darkness, then decrease counter number one.
IF ( 1 EQU ? 1 AND RES ? 1 AND RES ? 1 ) MESS 20 END
  If counter one has reached value 1 then print that you can hear
  footsteps.
IF ( 0 EQU ? 1 ) MESS 21 EXIT END
  If counter 1 has reached zero then tell the player he has been
  "got" by the spider, and end the game.
IF ( AT 3 AND RES ? 4 AND CARR 2 ) SET 4 MESS 13 DROP 2 2 TO 0
  WAIT END
  If you are in room three with the rat and the snake hasn't been
  fed yet, mark the snake as fed, print the message to say so,
  and move the rat to room 0, destroying it.
IF ( AT 3 AND RES ? 4 ) MESS 8 EXIT END
  If you are in toom three without the rat and the snake hasn't
  been fed yet, then say that it kills you and exit from the
  game.
IF ( AT 1 AND CARR 4 ) MESS 9 EXIT END
  If you are back at the start carrying the gold then you win !

```

GET AND DROP

```

-----
Here is another useful feature! To save putting a Get and Drop
condition in for each and every object, here are two very useful
condition lines that will enable you to get and drop any object, (up
to No.10 in our example), at any location. To do this simply ensure
the Noun numbers match the Object numbers. ie.

```

```

      NOUN 1 = Hat          OBJECT 1 = a hat

```

and enter Low Priority Condition lines :

```

      IF ( NO1 < 10 AND VERB 7 ) GET NO1 OKAY END
      IF ( NO1 < 10 AND VERB 8 ) DROP NO1 OKAY END

```

APPENDIX B
 =====
 Tables and Charts

THE QUICKSTART DATA FILE

The "Quickstart" data file contains all the system messages, many useful verbs, and several of the common low priority conditions associated with them. This is to allow you to get straight in to writing the adventure that you want to write, without having to worry about things that are included in all adventures. The full contents are :

VERBS -----	NOUNS -----
6 D	255 IT
6 DOWN	
8 DROP	MESSAGES
3 E	-----
3 EAST	239 You are carrying
16 EXAMINE	240 What now ?....
7 GET	241 You can't.
13 GRAPHICS	242 Pardon ?
10 INVENTORY	243 Press a key for another game...
9 L	244 Are you sure ? (Y/N)...
10 LIST	245 You've already got that.
15 LOAD	246 You haven't got that.
9 LOOK	247 You can't see that.
1 N	248 You're carrying too much to pick that up.
1 NORTH	
13 PICTURES	249 Your score was
11 QUIT	250 and you took
15 RESTORE	251 It is dark. You can't see.
2 S	252 I can't find that anywhere.
14 SAVE	253 You can also see
2 SOUTH	254 Okay
7 TAKE	255 turns
12 EXIT	
5 U	
5 UP	
4 W	
4 WEST	
12 WORDS	

LOW PRIORITY CONDITIONS

```
IF ( VERB 9 ) LOOK WAIT END
  If you typed "LOOK", redescribe the room you're in and wait for a
  new command.
IF ( VERB 10 ) MESS 239 LIST WITH WAIT END
  If you typed "INVENTORY" then print "You are carrying" and list
  all the objects that are with you.
IF ( VERB 11 ) QUIT OKAY END
  If you typed "QUIT" then ask the adventurer if he is sure, and if
  he responds Y (for YES) then quit, otherwise print OKAY and wait
  for a new command.
IF ( VERB 12 ) TEXT OKAY END
  If you typed "TEXT" then turn the pictures off.
```


IF (VERB 13) PICT OKAY END
 If you typed "PICTURES" then turn the pictures on.
 IF (VERB 14) SAVE OKAY END
 If you typed "SAVE" then save the game position to tape or disc.
 IF (VERB 15) LOAD LOOK WAIT END
 If you typed "LOAD" then load a previously saved game position
 from tape or disc, then describe the room you are in.

i. ACTUAL GRAPHICS COLOURS

 0 BLACK
 1 BLUE
 2 RED
 3 MAGENTA
 4 GREEN
 5 CYAN
 6 YELLOW
 7 WHITE
 8 TRANSPARENT - ie. If paper is set to 8, you can draw over all
 colours of paper leaving the paper colour unchanged, (Ink,
 Flash or Bright).
 9 CONTRAST - ie. If ink is set to 9, the ink used will be
 either White or Black, whichever is the greatest contrast to
 the current paper colour. (Or Paper).

ii. SUBSCRIPTS USED WITH CONDITION WORDS

 a - adverb number
 c - counter number
 m - marker number
 ms - message number
 o - object number
 n - noun number
 r - room number
 v - verb number
 x,y - any numbers

iii. WORDS USED IN CONDITIONS

Words	Markers	Counters	Rooms	Commands
-----	-----	-----	-----	-----
VERB v	SET m	CSET c	GOTO r	OKAY
NOUN n	RESE m	INCR c	CONN r	WAIT
ADVE a	SET? m	DECR c	ROOM	EXIT
NO 1	RES? m	CTR c	AT r	QUIT
NO 2		x EQU? c	DESC r	
VBNO		TURN	LOOK	

Objects	Decisions	Tape and Disc
-----	-----	-----
GET o	OBJ o	IF
DROP o	LIST o	END
o SWAP o	WEIG o	SAVE
HERE o	STRE o	LOAD
CARR o	o TO r	
AVAI o	BRIN o	
o IN r	FIND o	

Other

MESS ms	x = y
x + y	WITH
x - y	PICT
condition AND condition	TEXT
condition OR condition	RAND x
condition XOR condition	PRIN x
NOT condition	HOLD x
x > y	LF

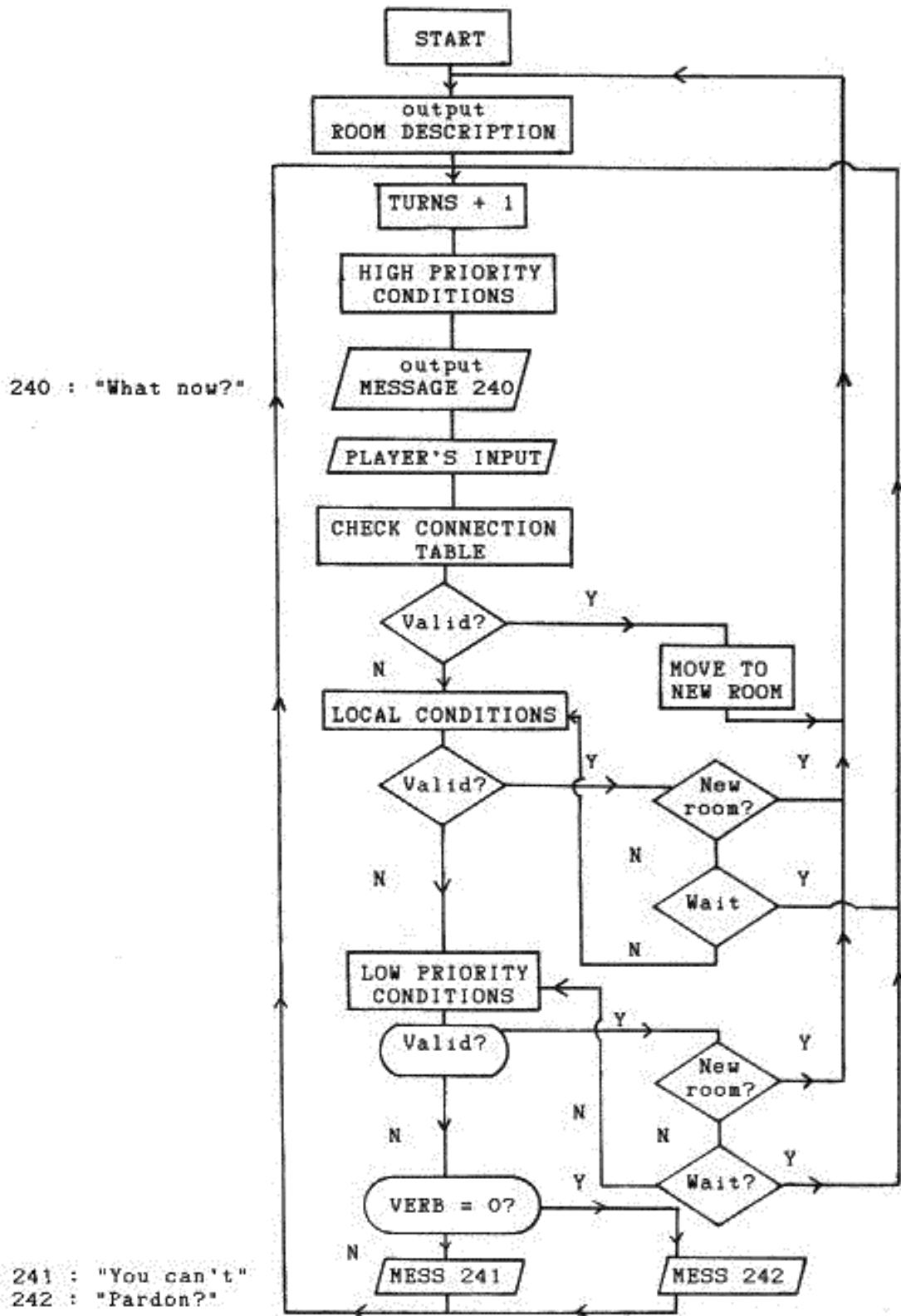
iv. COUNTERS AND MARKERS USED BY THE SYSTEM

Counter 0 - Holds the score
 1 x 126 } Count the number of turns since the beginning
 256 x 127 } of the game.

Marker 0 - If set means that a room has been described since
 last reset.
 1 - If set, you are in a light room.
 2 - If set, you have a source of light.
 3 - If set, disables the scoring mechanism.

v. RANGES OF NUMBERS

	No. allowed	No. of characters
Rooms	1..9999	255
Objects	1..255	255
Messages	1..255	255
Verbs	1..255	35
Nouns	1..255	35
Adverbs	1..255	35
Graphics	1..9999	
Markers	0..255	
Counters	0..127	
[Which score]	0..255	



The internal commands QUIT and EXIT return the player to the first room with the program initialized. There is no end as such.