

# 3D GAME MAKER

## 3D ROOM DESIGNER

The room designer program lets you position objects and aliens where you like within the rooms, and also to add and remove the exits which connect rooms. You can also specify which colour you would like a room to be.

The screen display shows the current room you are editing and also a number of 'status' indicators. If these get in your way you can turn them off.

Along the top of the screen is the 'memory left' indicator. This shows the amount of memory you have used up compared to the total amount available.

The display in the lower righthand corner of the screen shows the position of the current room. The game area is a 16 by 16 matrix of rooms but it is only possible to display one quarter of this at any time. The 2 by 2 display at the left shows which quarter is currently being displayed.

In the lower lefthand corner of the screen are two displays showing the position of the 'current' object within the room (the current object can be moved around the room using the joystick). The first shows the position of the object horizontally, while the second shows its height within the room.

The following commands are available:

ENTER	Insert current object at the current position (NOTE: there is limit to the number of objects you can have in a room and when this has been reached the command will stop working).
SPACE	Remove object immediately below the current position.
N	Select next object type.
M	Select previous object type.
CAPS & 1 - 7	Set room colour.
I	Toggle status indicators on/off.
P	Epson FX80 screen dump (Hilderbay/Kempston interface).
X	Exit (return to main menu).

Room exits can be inserted or removed by first positioning the current object in an exit and then pressing ENTER or SPACE.

## 3D ADVENTURE

3D ADVENTURE is an example of the kind of game you can create with the 3D GAME DESIGNER. The central character is controlled by joystick as follows:

FORWARD	— to walk forward
LEFT	— to turn left
RIGHT	— to turn right
FIRE	— to jump (forward if walking, vertically if not)
BACK	— to release a fireball

If at any time you get hopelessly stuck or lost, pressing 'A' (for abort) will stop the game and get you back to the menu screen.

To design your own game you are provided with two programs — 3D ROOM DESIGNER and 3D GRAPHIC EDITOR. The room designer enables you to select and position objects within a room, and the graphic editor lets you redesign all the graphics in the game. In both cases, data is saved to tape and loaded into 3D ADVENTURE using options on the menu screens.

## 3D GRAPHIC EDITOR

In general, operations are performed by using a joystick to position the arrow over a field and then pressing the fire button.

The left half of the screen contains a magnified image of the current graphic. This is the 'edit' field. A graphic is edited by positioning the arrow over any part of this field and then pressing the fire button to set or reset a pixel.

The top of the right half of the screen contains three fields. These are (from left to right) the graphic, the mask (used to clear a space in the background), and the graphic superimposed over the mask. To edit the mask first position the arrow over the mask field and then press the fire button. This copies a magnified image of the mask to the edit field where it may then be edited as above. To return to the graphic again, position the arrow over the graphic field and press the fire button.

The remainder of the screen contains the options panel. In the centre of the panel are four scroll fields. Selecting any of these and then pressing fire will scroll the graphic in the appropriate direction, using 'wrap-round' so that no part of the graphic is lost. The purpose of the arrow field in the top left hand corner of the panel is to determine which field is to be affected when you select a new INK or PAPER colour. It can be made to point to enter the graphic field (up) or the edit field (left). The field in the centre left of the panel indicates the current graphic number.

The rest of the fields are as follows:

NEXT	Selects the next graphic.
BACK	Selects the previous graphic.
MASK	Generates a mask automatically, but you may still want to edit it slightly.
ABORT	Cancels changes you have made to the current graphic.
ERASE	Completely erases the current graphic.
PICK	Stores a copy of the current graphic in a temporary buffer. For use with DROP.
DROP	Copies the contents of the PICK buffer to the current graphic. Useful if you want the current graphic to be very similar to the previous one (NOTE: only works for graphics of the same shape and size).
BASE	Displays a 'base' under the current graphic.
FLIP	Flips the graphic over left to right.
FILL	To do a fill operation first activate this field and then move the arrow to where you want the fill to start in the edit field. Then press the fire button (NOTE: if you position the arrow over a pixel that is already set, nothing will happen).
EXIT	Returns you to the main menu.

A screen dump can be obtained on an Epson FX80 printer (with Kempston centronics interface) by pressing 'P'.

## 3D GRAPHIC EDITOR SPRITE NUMBERS

1 nearest half of doorway	7c missile going away (1)
2 furthest half of doorway	7d missile going away (2)
3 wall section (1)	8a disintegration sequence (6)
4 wall section (2)	8b disintegration sequence (5)
5 wall section (3)	8c disintegration sequence (4)
6 wall section (4)	8d disintegration sequence (3)
7a missile coming forward (1)	8e disintegration sequence (2)
7b missile coming forward (2)	8f disintegration sequence (1)

## 3D GRAPHIC EDITOR SPRITE NUMBERS (cont.)

- |   |  |
|---|--|
| 9a player feet coming forward (1)                     | 16 fixed block   |
| 9b player feet coming forward (2)                     | 17 poisonous block   |
| 9c player feet coming forward (3)                     | 18 pushable block  |
| 9d player feet coming forward (4)                     | 19 Southwest-moving block  |
| 10a player feet going away (1)                        | 20 Southeast-moving block  |
| 10b player feet going away (2)                        | 21 Northeast-moving block  |
| 10c player feet going away (3)                        | 22 Northwest-moving block  |
| 10d player feet going away (4)                        | 23 Up/down-moving block  |
| 11a player head coming forward (1)                    | 24 Down/up-moving block  |
| 11b player head coming forward (2)                    | 25 Southwest conveyor block  |
| 11c player head coming forward (3)                    | 26 Southeast conveyor block  |
| 11d player head coming forward (4)                    | 27 Northeast conveyor block  |
| 12a player head going away (1)                        | 28 Northwest conveyor block  |
| 12b player head going away (2)                        | 29a Jelly monster coming forward (1)                               |
| 12c player head going away (3)                        | 29b Jelly monster coming forward (2)                               |
| 12d player head going away (4)                        | 29c Jelly monster going away (3)                                   |
| 13a player head coming forward, turned left           | 29d Jelly monster going away (4)                                   |
| 13b player head coming forward, turned right          | 30a bubble (1)   |
| 14a player head going away, turned left               | 30b bubble (2)   |
| 14b player head going away, turned right              | 31a robot going Southwest  |
| 15a finish sprite (4) — must be zapped to finish game | 31b robot going Southeast  |
| 15b finish sprite (3)                                 | 31c robot going Northwest  |
| 15c finish sprite (2)                                 | 31d robot going Northeast  |
| 15d finish sprite (1)                                 | 32 disintegrating block  |
|   | 33 following block (follows player, can also be used as transport) |

## MEMORY LEFT INDICATOR

