

**Shoot 'Em Up
Construction Kit
Manual**

Commodore 64/128

by Steve Peterson

Producer: Shelly Safir

Assistant Producer: Mark Wallace

AVANTAGE™

Table Of Contents

Introduction	1
How to Use This Manual	1
Getting Started	1
Using Menus	1
Playing Games	2
Space Hawk	2
Outlaw	2
Transputer Man	2
Creating Games	3
The Big Picture	3
Strategy	3
Sprite Editor	5
Object Editor	7
Character & Block Editor	10
SFX Editor	12
Player Limitations Editor	14
Attack Wave Editor	15
Level Editor	16
Front Editor	16
Storage	17
Keyboard Shortcuts	18

Introduction

Here it is, at last. A full-featured construction kit that focuses on what you know to be the greatest fringe benefit of the computer revolution: Games that destroy things. Create your own shoot 'em up, including your hero, his weapons, your weak slithering enemies and all the disgusting sounds they emit. Paint your own objects and backgrounds. Write your own front-end text. Create glorious explosions of color and sound. And, in the process, learn about SPRITES, CHARs, SFX, BLOCKS, and other deep dark secrets of game design. Go ahead. Get in there and get your hands dirty. No previous experience necessary.

Using This Manual

OK, you didn't buy this game to spend your time reading the manual. So here's how to avoid reading the stuff you don't need:

- 1 Read the Getting Started, Using Menus, and Playing Games sections, then play one of the games provided. Hey, that was easy.
- 2 When you want to create your own games, read the Creating Games section. You can get by with just reading about the parts that you're using. Of course, you might want to read all the way through first just to get a good idea of how things work. If you're a whiz with a Commodore, then you can probably figure out how to do things with only an occasional glance at this manual. But then you miss all the wisecracks and slick writing. Too bad.

GETTING STARTED

- 1 Turn on your disk drive and computer. Put the joystick in Port 2. Insert the Shoot "Em Up disk, label side up, and close the drive door.
- 2 Type **Load "*"8,1** and press **Return**. The game loads automatically; after the title screens, the Control Menu appears.

USING MENUS

All menus work the same way in the Shoot'Em Up Construction Kit. Here's how.

Choosing Menu Items

In any menu, you can access menu items in either of two ways:

- 1 Press the corresponding letter key listed (if any is listed) or
- 2 Move the joystick up/down to highlight the option you want highlighted. Then press the **fire button** to activate that menu item.

Important Notes

Hey, listen up! These few sentences will save you a lot of trouble.

All keyboard shortcuts are lower case; that is, you don't need to press the **Shift** key to make the keystroke work.

The **Space Bar** always returns you to the sub-menu where you were; the **X** key always takes you back to the Main Menu (except when you're Editing the Message in the Front End Editor; then you have to press **F7** to get back).

Playing Games

So you want to get right down to the action, eh? Fine. We included three sizzling, sophisticated, and very different examples of shoot-em-up action, all created with this very same Shoot 'Em Up Construction Kit. Choose one of these three games from the Control menu.

Check out your choices:

- 1 **Space Hawk.** Simple, yet terrifyingly beautiful. You control a gleaming spacecraft. Your goal: Inflict as much damage on the enemy aliens as inhumanly possible. Don't turn to us for more. If you want details, get deep into the utilities and scroll around for awhile.
- 2 **Outlaw.** You, pardner, are a sheriff. You cruise the territory looking for desperadoes, renegades, snakes, anything you can feel good about ventilating with a few Colt .45 slugs. If something in the game bothers you, you know where you can go.
- 3 **Transputer Man.** You man a PC board, and you're job is to de-bug the thing. Problem is, the bugs don't want to be debugged. In fact, they find you kind of annoying. It's obliterate or be obliterated. Gives a whole new meaning to the word "exterminator." Some of the bugs may bug you too. No problem. You've got a Sprite Editor, don't you?

Once you've picked one of the games, the Main Menu appears. Here's where you can mess around with the game, but that's all explained later in the Creating Games section. Right now, you just want to have some fun. So select Test Game, then you can decide whether you want to play for real or if you want to play in Cheat Mode. Just choose one of those options, and the game begins. It's OK, we won't see if you pick Cheat Mode. But you'll know. Wimp.

Any time you want to pause because the action's getting too hot, press **Run/Stop**. Press the **fire button** or the **Run/Stop** key again to start up the action. If you don't want to start up again, press **Q** to go back to the start of the game. Or any time you want to just bail out of the game, press the **Space Bar** to go back to the Test Game submenu, or press **X** to go back to the Main Menu.

Take a look at what can be done. Play the games for fun. Then go into the editors for edification. Check the parameters. And don't be afraid to monkey around with the programs.

That's the whole point. And the next section tells you how to do it.

Creating Games

You've played some of the games you found on the disk. But now it's time to fulfill your secret ambition and become a game designer, so you turned to this section. You came to the right place — it's all here.

The Big Picture

Games are built from several basic parts, which combine to form a complete game. The basic building block is a Sprite, which is a single 4-color drawing. Several Sprites can be combined to form an Object, which is animated (in other words, it shows a series of Sprites rapidly) and has other characteristics, like how tough it is and what kind of attacks it has. Objects can also have Sound Effects (SFX) attached to them. You can then define where these objects enter the Map, how many of them appear, and so on.

Of course, you have to have a Map where your game action takes place. The background of the game is a Map composed of Blocks. Each Block is made up of several Characters. You can draw the individual characters, then combine them into blocks. The blocks are then put together into the game map.

Each of these parts of the game has an Editor; that is, a place where you can create and manipulate these parts. Each of these editors are explained in detail in the following pages. The beginning of each section tells how the editor works, then describes the specific options available to you. But before you start wading into the editors, it's important to think about how you put together a game.

Strategy

How do you go about creating a game? Well, you could just jump into one of the editors and start fooling around. But you'll save time and make a better game if you plan out what you want to do before you start.

You can either start your game from scratch with a blank module, or modify one of the games we've included. In either case, have an idea in mind of what you want the game to be. Copy an arcade game with your own twist to it, or make a game on a subject you like. Sketch out a map of the game on paper, at least to get some idea of where you want the player to go.

Strategy (continued)

Decide on the objects you need in your game, then build your sprites to suit those objects. If you're clever, you can find ways to reuse the same sprite in several different objects. Use the sprites from the games included here as examples of how to do an animation. In fact, you can modify the sprites provided if you don't want to start from scratch.

Make up a character set to create the map. Note the techniques used in the games we've provided and in other games to create shadows and other visual effects. Remember, imitation is the sincerest form of flattery. Put the characters together into blocks. You'll probably find that you need to change some of the characters to get exactly the kind of block you want. That's OK — you'll probably need to go back and forth between different editors many times in the process of making your game just right.

Then build your map out of the blocks you've made. Once you have the sprites, objects, and maps done, you're home free. Do whichever section seems best — the order now doesn't matter. Mess with the Attack Waves or the Levels. Have some fun with the SFX.

When you've got the baddest game around, put it on a disk for a friend to use and watch his eyes bug out when you tell him you did it.

Start Here

From the Control Menu, start by choosing one of the three games provided to start as a template for your creation. (If you're an expert, select the Blank Module to start creating a game from scratch.) If you've already created some pieces of a game, you can load them in after you've gotten one of the modules loaded. If you're trying to figure out how this works, you should load in one of the games (say, Space Hawk) and try out these tools on the pieces that are already in there. Don't worry, unless you use the Storage menu to save these changes on the disk, nothing you do in here will affect the game permanently. So have some fun and mess around.

Main Menu

Once you've selected a game, the Main Menu appears (see Figure 1 below).

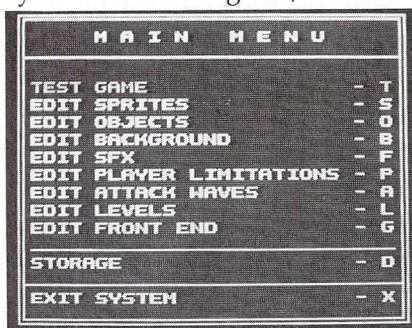


Figure 1. Main Menu

Each of the choices from the Main Menu is explained in detail below. The keyboard equivalent is shown in parentheses next to the choice. Remember, you don't have to press the **Shift** key to use any of the keyboard equivalents.

Test Game (T)

You can test your masterpiece at any stage of development with this option. To pause, press **Run/Stop**. To quit, press **Q** while paused.

- F1 PROPER TEST. The real thing. No wimps. No whining. However, you may howl with a certain controlled fury if you wish.
- F3 CHEAT MODE. Test out the game starting from the last level edited. You have infinite lives, and you'll probably need every one.
- X Return to Main Menu.

Edit Sprites (S)

This gets you the Sprite Submenu, where you can enter the Sprite Editor to manipulate sprites, the key mobile elements of your game. Sprites can be your hero, the spacecraft, the aliens, the bullets, the explosions — anything that moves is a sprite.

Any of the submenu options brings up the Sprite Editor. The Sprite Editor lets you color, twist and turn every sprite in your game.



Figure 2. Sprite Submenu

You can use the keyboard equivalents listed while you're in the Sprite Editor to move from one task to another. For example, if you pressed F1 to select a sprite, when you're done you can press F7 to select a color. You can also use the Edit Sprite, Edit Color or Select Color parts of the Sprite Editor merely by moving the flashing cursor with the joystick to that part of the screen.

Any changes you make in any part of the Sprite Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press the **Space Bar** to return to the submenu at any time, or press **X** to return to the Main Menu.

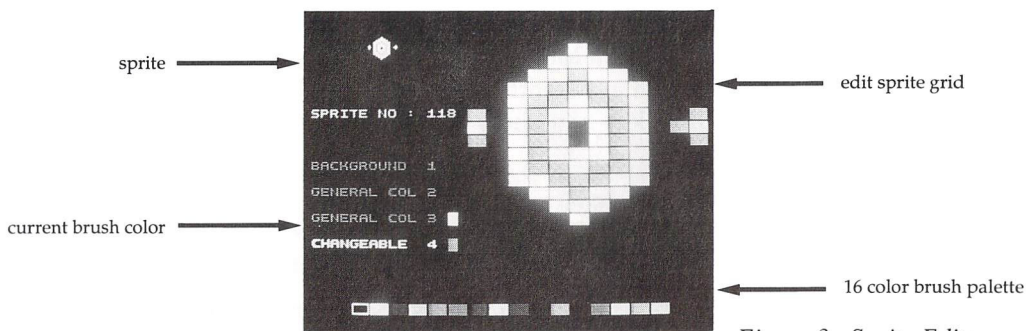


Figure 3. *Sprite Editor*

- F1 **SELECT SPRITE** — Scroll through all 127 possible sprites (from 000 to 126) by pushing the joystick up or down. The sprite appears with its number and a magnified version to the right. Select the sprite by pressing the **fire button** or any of the keyboard equivalents for other Sprite Editor options. If you press the **fire button**, you're automatically put into Edit Sprite mode, with the cursor in the magnified area (see below).
- F3 **EDIT SPRITE** — Move the flashing square around your magnified sprite by using the joystick. The sprite is a 12 x 21 grid of pixels; you can change any pixel to your current color by pressing the **fire button**. By holding down the fire button and moving around, you can easily draw continuous lines. If you move the cursor out of the magnified sprite area to the left or down, you can select the current color (see Select Color) or edit the current brush color (see Edit Color), respectively. Accept the changes by moving to another area of the Sprite Editor or by pressing the **Space Bar** or the **X** key.
- F5 **EDIT COLOR** — Change your current brush color by choosing from the palette of 16 colors at the bottom of the screen. Use the joystick to move the cursor left or right, and the chosen color changes in the sprite as you move. Press the **fire button** to make the change, or move the cursor to another part of the Sprite Editor.
- F7 **SELECT COLOR** — You can use up to 4 different colors for each sprite. Select one of them for painting by moving the joystick up or down. But choose carefully, because 2 of those colors must be used for all your sprites and 1 is the background color (for "erasing"). *Only one color can be different for every sprite you design.* Press the **fire button** to select the current color to use, or just move the cursor to a different part of the Sprite Editor.
- S **SLIDE SPRITE** — Use the joystick to slide your sprite up, down, left or right. Press the **fire button** to accept the change and enter Edit Sprite mode, or enter any other mode with the appropriate keyboard equivalent and the change is made.

- M MIRROR SPRITE** — Flip your sprite vertically or horizontally by moving the joystick up/down or left/right. Press the **fire button** to accept the change and enter Edit Sprite mode, or enter any other mode with the appropriate keyboard equivalent and the change is made.
- C COPY SPRITE** — Copy any sprite you've designed to another "sprite number" (location). First, scroll to the sprite you wish to copy by moving the joystick up or down. Press the **fire button**. Then move the cursor to the place you want the sprite copied. Press the **fire button** again; the change is made and you enter Edit Sprite mode.
- E ERASE SPRITE** — First select the sprite you wish to erase using Select Sprite. Then select Erase Sprite. Shoot 'Em Up will ask you to confirm with a "yes-or-no" prompt. Simply highlight "yes" and press the fire button again, or press "no" to return to Edit Sprite mode. This doesn't eliminate the sprite number, it merely puts the background color on every pixel in the sprite.
- X EXIT** — Returns you to the Main Menu.

Edit Objects (O)

This choice brings up the Object Submenu, where you can enter the Object Editor to take the Sprites you've designed, combine them into Objects and give them a role within the game. It may be the hero, an enemy, a missile, an explosion sequence, or just a wandering aimless piece of flotsam or jetsam. Each of these Game Objects is given a number, some of which are constant — for example, 00 is always "Player 1," 01 is always "Player 1 Bullet," etc.

Any of the submenu options brings up the Object Editor. An Object is any number or type of Sprites up to 18 that you put in a sequence and then control such things as its color or speed.



Figure 4. Object Submenu

You can use the keyboard equivalents listed while you're in the Object Editor to move from one task to another. For example, if you pressed F1 to select an object, when you're done you can press F5 to edit a color.

Edit Objects (continued)

Any changes you make in any part of the Object Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press the **Space Bar** to return to the submenu at any time, or press **X** to return to the Main Menu.

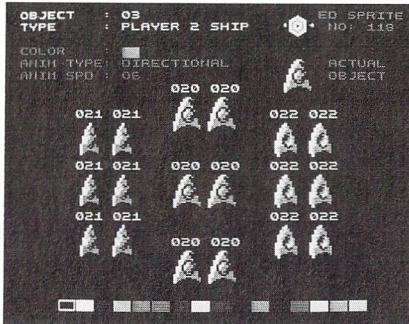


Figure 5. Object Editor

- F1 **SELECT OBJECT** — Scroll through your library of up to 58 objects available for editing and modification by moving the joystick up or down. Press the **fire button** to select the object and go to Test Object mode.
- F3 **TEST OBJECT** — Displays the object you are editing as it appears when animated in the game. To exit, press any other keyboard equivalent, or **Space Bar** to go to the Object submenu.
- F5 **EDIT COLOR** — As mentioned before (see Edit Color in the Edit Sprite section), one of your four brush colors is changeable from sprite to sprite. Change that color to any of the 16 in your palette by using the joystick to move left or right, then press the **fire button** when you have the desired color. You are now in Test Object mode.
- F7 **SELECT SPRITE AND PLACE** — This lets you decide how your objects will animate. Select a sprite from your library by scrolling with the joystick and pressing the fire button. Move the joystick to place the sprite in any of the animation frames for that object, then press the **fire button** again. Watch the Actual Object window to see how your changes affect the object's animation. To exit, press any other keyboard equivalent, or press **Space Bar** to go to the Object submenu.
- S **EDIT ANIM SPEED** — Choose how quickly you want your object to animate. Move the joystick up or down to set the speed from 01 (fastest animation speed) to 16 (slowest). Press the **fire button** to make your choice and enter Test Object mode.

- T EDIT ANIM TYPE** — Here you can choose whether your object will animate in a Sequence (of up to 18 Frames) or whether its animation depends on direction of movement — that is, the animation changes when the joystick moves. Move the joystick up or down to change the number of frames being used (from 1 to 18) or to choose directional animation. Press the **fire button** to make your choice and enter Test Object mode.
- E EDIT ENEMY BITS** — This option lets you set the characteristics of an enemy object, such as Speed, Points, Hits To Kill, Fire Rate, etc. First you must have an actual enemy object selected; if the object selected isn't an actual enemy, then you enter Test Object mode. Move the joystick up or down until the bit you want to edit is highlighted. Then press and hold the **fire button** and move the joystick up or down to change the value of the bit. Release the fire button when you have the right value. The following bits can be edited:

<u>Feature</u>	<u>Description</u>
Speed	From 1-3 (how fast it moves)
Points	From 0-2550 (points you get for destroying it)
Hits To Kill	From 1-15 (number of shots needed to destroy it)
Fire Type	Cross, diagonal, any direction, random (how it fires)
Fire Rate	1-99 (slowest rate to highest rate)
Bullet Speed	0-3 (slowest to fastest)
Explosion SFX	0-8 (which effect in the library will be used)
Bullet SFX	0-8 (which effect do you want to use)
Explosion Object	1-8 (which object in the library will explode when hit by a bullet)
Bullet Object	1-8 (which object in the library do you want to be the bullet)
Enemy to Ship	When your ship collides with the enemy, what's the result : Enemy Die (yes/no), Ship Die (yes/no)?
Enemy to Bullet	When your bullet hits the enemy, what happens: Enemy Die (yes/no), Bullet Die (yes/no)?

Edit Objects (continued)

To exit, press any other keyboard equivalent, or press **Space Bar** to go to the Object submenu.

C **COPY OBJECT** — Copy an object to another Object File #. Scroll through the object library using the joystick; press the **fire button** to select the object to copy. Repeat the process to choose another file in which to copy the object. To exit, press any other keyboard equivalent, or press **Space Bar** to go to the Object submenu.

X **EXIT** — Return to Main Menu.

Edit Background (B)

This option gets you the Background Submenu, where you can enter the Background and Character Editor to create the map for your game. The Background of your game is made up of Characters (4 pixels x 8 pixels) which are bolted together to make Blocks (5 Characters x 5 Characters). These are slotted into the Map to create your very own landscape.

Most of the submenu options bring up the Background Editor; the exceptions are Select Block, Edit Map, Paint Block, and Copy Block.

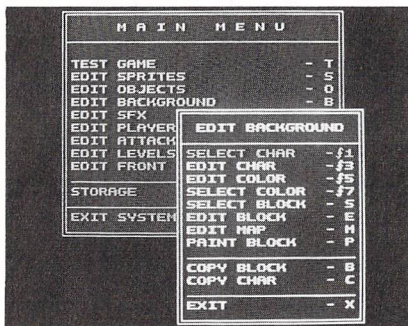


Figure 6. Edit Background Submenu

The keyboard equivalents listed can be used while you're in the Background Editor to move from one task to another in the Background Editor. For example, if you pressed F1 to select a character, when you're done you can press F5 to edit a color. You can also use the Select Character, Edit Character, Edit Color, Select Color or Edit Block parts of the Background Editor merely by moving the flashing cursor with the joystick to that part of the screen.

Any changes you make in any part of the Background Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press the **Space Bar** to return to the submenu at any time, or press **X** to return to the Main Menu.

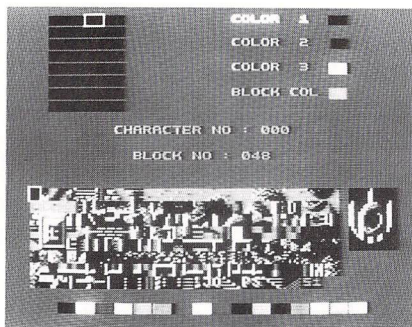


Figure 7. Background Editor

- F1 **SELECT CHAR** — Select one of the 254 characters from the Character Stock by moving the flashing cursor with the joystick; press the **fire button** to make your selection. The selected character appears in the upper left corner, magnified.
- F3 **EDIT CHAR** — Use the joystick and fire button to paint the character the same way you painted your sprites (see Edit Sprites).
- F5 **EDIT COLOR** — Modify the current color using the 16 color palette at the bottom of the screen. Use the joystick to move the cursor left or right, and the chosen color changes in the sprite as you move. Press the **fire button** to make the change, or move the cursor to another part of the Background Editor.
- F7 **SELECT COLOR** — Choose a paint color. You can work with 4 in each Block. The first 3 colors are constant for the entire Map, but the fourth can be different on every block. This “block color” can be any of the first 8 in the palette. Select one of them for painting by moving the joystick left or right; press the **fire button** to select the current color to use, or just move the cursor to a different part of the Background Editor.
- S **SELECT BLOCK** — Choose from your library of 64 blocks for either Edit Block or Edit Map by moving the flashing cursor with the joystick; press the fire button to make your selection and enter the Background Editor.
- E **EDIT BLOCK** — Choose a place to deposit your chosen character into your chosen block by moving the flashing cursor with the joystick; press the **fire button** to make your choice.
- M **EDIT MAP** — Insert your edited block anywhere on the map (which is 512 x 8 Blocks) by moving the flashing cursor with the joystick; press the **fire button** to make your choice. To exit, press any other keyboard equivalent, or press **Space Bar** to go to the Background submenu.

Edit Background (continued)

- P PAINT BLOCK** — This option lets you paint an entire block at once, instead of painting each character. The screen shows a blow-up of any block you have selected, which can be painted freely using the palette displayed. Any changes made in one character will affect all the other characters identically in that block. Use the joystick and **fire button** to paint the character the same way you painted your sprites (see Edit Sprites).
- B COPY BLOCK** — Copy one block from your library onto another block. Move the cursor onto the block you wish to copy and press the **fire button**. Then move the cursor to “copy-to” location and press the **fire button** again.
- C COPY CHAR** — Same procedure as Copy Block.
- X EXIT** — Return to Main Menu.

Edit SFX [Sound Effects] (F)

This option brings up the Edit SFX Submenu, where you can enter the SFX Editor to create the sounds for the objects in your game. The SFX Editor is a comprehensive sound mixing module lets you tailor your own SFX (Sound Effects).

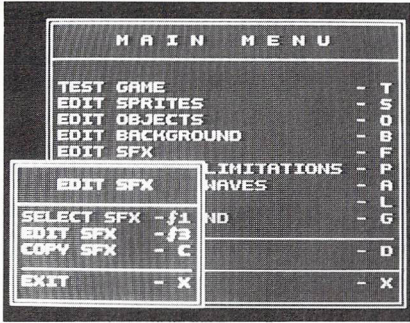


Figure 8. Edit SFX Submenu

The keyboard equivalents listed can be used while you’re in the SFX Editor to move from one task to another in the SFX Editor. For example, if you pressed F1 to select a sound effect, when you’re done you can press F3 to edit the sound effect.

Any changes you make in any part of the SFX Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press the **Space Bar** to return to the submenu at any time, or press **X** to return to the Main Menu.



Figure 9. SFX Editor

- F1 SELECT SFX** — Scroll through your library of 24 sounds by moving the joystick up, down, left, and right. Listen to each sound by pressing the fire button. Once you've highlighted an SFX you want to edit, press the F3 button.
- F3 EDIT SFX** — Use the joystick to move the "slider bars" up and down, altering various elements of the sound. Switch sliders by moving the joystick left or right, and test the sound at any time by pressing the **fire button**. The eight slider controls are:
- | | |
|---------------|--|
| WAVE FORM | choose 4 different forms |
| ATTACK: | length of time sound takes to reach peak |
| DECAY: | length of time from sound peak to end |
| PITCH: | alters pitch or tone |
| SPEED (RISE): | how fast pitch rises |
| TIME (RISE): | how long pitch rises |
| SPEED (FALL): | how fast pitch falls |
| TIME (FALL): | how long pitch falls |
- C COPY SFX** — Use the same copy procedure as with other Copy options. Move the joystick to the SFX you want copied, then press the fire button. Then move the SFX where you want it and press the fire button again.
- X EXIT** — Return to Main Menu.

Edit Player Limitations (P)

This option lets you set and change game limitations for Players 1 & 2.

Any changes you make in any part of the Player Limitations Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press the **Space Bar** to return to the submenu at any time, or press **X** to return to the Main Menu.



Figure 10. Player Limitations Editor

- F1** **PLAYER #1** — Move the cursor with the joystick to highlight the limitation you want to change. Then, while holding down the fire button, move the joystick up or down to make changes. Possible limitations are:

PLAYER ENABLED	yes/no
NUMBER OF LIVES	1 - 7
SPEED	1 - 5 (low to high)
AMOUNT OF BULLETS	1 - 3 (in motion at any given time)
BULLET SPEED	1 - 9 (low to high)
DIRECTIONAL FIRE	yes/no (must fire in direction of movement)
BULLET DURATION	0 - 99 (how far bullet travels)
COLLISION w/CHARACTER	0 - 255 (stops PLAYER from traveling over impassable obstructions — collision with characters #0-255 or higher has the following result)
AND PLAYER WILL	stop/die
EXTRA MAN AT 10,000	yes/no
EDIT PLAYER AREA	(define boundaries of movement for PLAYER 1, hold down button and move joystick)
EDIT START POSITION	(move PLAYER 1 around the screen to find suitable spot for game start)

To exit, press **Space Bar** to go to the Background submenu.

F2 **PLAYER #2** — Same as Player #1.

X **EXIT** — Return to Main Menu.

Edit Attack Waves (A)

Time to decide where your filthy, corrupt Manifestations of Evil go and what paths they follow. In other words, this option lets you set and change where enemy objects go on the Map. Keep an eye on the Memory Units Free indicator — complicated flight paths can use up a lot of program space, and the indicator lets you know when you're running low.

Any changes you make in any part of the Attack Waves Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press the **Space Bar** to return to the submenu at any time, or press **X** to return to the Main Menu.

F1 **INSERT ENEMY** — First, select an enemy object from the library of slime you have created, using the joystick to scroll through the choices. Press the fire button to select the enemy. The Map appears with the word "ROUGH" at the bottom. Move the joystick to indicate roughly where you want the enemy to begin its movement, and press the fire button. The word "FINE" replaces "ROUGH" — now you can move to the exact spot. Press the **fire button** to make the enemy appear and move it into Start Position. Press **fire button** again to let it go. Now move the joystick around to establish the route the enemy should take, then press **F7** to store the information.

F3 **JOIN ENEMIES** — This function lets you join two or more enemies together to form one large enemy. After pressing **F1** and placing a First Enemy, press **F3**, choose the Second Enemy to join, then locate the First Enemy using the "ROUGH/FINE" method (see Insert Enemy above). Press the **fire button**. The words "LINK TO WHAT" appear. Move the cursor to the First Enemy and press the **fire button**. Now the word "OFFSET" appears. Put the Second Enemy where you want it and press the **fire button**.

F5 **DELETE ENEMIES** — Use the "ROUGH/FINE" method to find any Enemy you want to remove. Press the **fire button** and a cross-hair indicator appears. Place it over the enemy and press the **fire button** again.

Edit Levels (L)

Set up to 22 different levels for a really scary shoot-em-up. Each level may be (1) Still, (2) Automatically Scrolling or (3) Push Scrolling, and may span any area of the Map you have defined.

Still means that the screen never changes, Automatic Scrolling means that the screen will change "landscapes" but what you do as the player doesn't have anything to do with it, and Push Scrolling means that the screen landscape will change, but only as you (as the player) move ahead.

Any changes you make in any part of the Level Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press the **Space Bar** to return to the sub-menu at any time, or press **X** to return to the Main Menu.

F1 EDIT LEVEL PARAMETERS — Choose the Parameter you want to change from the table displayed. Hold down the fire button and move the joystick to alter the values which determine:

TYPE	Still, Scroll, or Push
SPEED	of Scrolling
DURATION	of Still Screen
END OF LEVEL	what happens next ... Redraw, Continue, or Loop

Redraw refreshes the Still screen so that the landscape remains the same (but not necessarily the enemy set-up, etc.; **Continue** makes the game go to the next level; and **Loop** sends the game back to the beginning of the level just played (with the same landscape, enemy set-up etc.).

F3 EDIT LEVEL MAP — Set the beginning and end markers for each Level by selecting this option. Push the joystick down to view the beginning marker, and push the joystick up to view the end marker. To reposition the markers for each level hold down the fire button and move the joystick.

Edit Front End (G)

At last, your chance to compose the Great American Mini-Novel. Create a truly unique set of opening credits & messages. Are you Hemingway, Faulkner, or some bleak postmodern synthesis? Hey. Let it flow, man.

Any changes you make in any part of the Front End Editor stay until you change them back, or until you load a new game. If you want to save these changes permanently, use the Storage Menu. Press **F7** to return to the Main Menu.

- F1 **EDIT CHARACTER SET** — Alter the current character set or create a new one from scratch. (Use the same paint method as in Edit Sprite.) To exit, press any other keyboard equivalent, or press **Space Bar** to go to the Background submenu.
- F3 **EDIT MESSAGE** — Make your own title screen. Position the cursor and start typing. To exit, press F7 to go to the Background submenu.
- F5 **EDIT MESSAGE FX** — Select one of the 23 different color combinations by moving the joystick up or down. To exit, press any other keyboard equivalent, or press **Space Bar** to go to the Background submenu.
- F7 **EXIT** — Return to Main Menu.

Storage (D)

Scroll through the Save/Load selections (listed below) with the joystick and press the **fire button** to choose an option. After you've designed and saved a game on a formatted disk, you no longer need the Master disk to play it. Give it to friend if you'd like and he can play it.

All the Save options ask you to enter a file name for the file to be saved. Press **Return** to save the file. You should have a formatted disk ready in the drive. DO NOT save files on your program disk, as it is already full.

LOAD — Loads any stored games or portions of games on disk.

SAVE SPRITES — Saves the collection of sprites that you have created.

SAVE BACKGROUND — Saves the backgrounds that you have created.

SAVE OBJECTS — Saves the collection of objects that you have created.

SAVE SFX — Saves the collection of sound effects that you have created.

SAVE ATTACK WAVES — Saves the attack waves that you have created.

SAVE LEVELS — Saves the collection of levels that you have created.

SAVE CHARACTER SET — Saves the character sets that you have created.

SAVE ALL DATA — Saves all the data you have created.

SAVE FINISHED GAME — Saves the complete game you have created so that anyone can play it.

X **EXIT** — Return to Main Menu.

KEYBOARD SHORTCUTS

Main Menu

T Test Game

- F1 Proper Test
- F3 Cheat Mode
- X Exit

S Edit Sprites

- F1 Select Sprite
- F3 Edit Sprite
- F5 Edit Color
- F7 Select Color
- S Slide Sprite
- M Mirror Sprite
- C Copy Sprite
- E Erase Sprite
- X Exit

O Edit Objects

- F1 Select Object
- F3 Test Object
- F5 Edit Color
- F7 Select Sprite and Place
- S Edit Anim Speed
- T Edit Anim Type
- E Edit Enemy Bits
- C Copy Object
- X Exit

B Edit Background

- F1 Select Char
- F3 Edit Char
- F5 Edit Color
- F7 Select Color
- S Select Block
- E Edit Block
- M Edit Map

P Paint Block

- B Copy Block
- C Copy Char
- X Exit

F Edit SFX

- F1 Select SFX
- F3 Edit SFX
- C Copy SFX
- X Exit

P Edit Player Limitations

- F1 Player 1
- F3 Player 2
- X Exit

A Edit Attack Waves

- F1 Insert Enemy
- F3 Join Enemies
- F5 Delete Enemy
- X Exit

L Edit Levels

- F1 Edit Level Parameters
- F3 Edit Level Map
- X Exit

G Edit Front End

- F1 Edit Character Set
- F3 Edit Message
- F5 Edit Message FX
- F7 Exit

D Storage

- X Exit

X Exit System

- Are You Sure?
- Y Yes
- N No