Elite III — an extended version of Elite for the BBC Microcomputer

Angus Duggan

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1 Introduction

Elite III is an extended version of Elite (versions I and II[1]) for the BBC micro. It will run on a BBC B with Acorn DNFS 1.20. No other commercial disc filing systems have been tested, although the author's own hierarchical disc filing system does work.

The extensions to Elite include many more ships, different player ship characteristics, an on-line encyclopedia, special cargo delivery missions, and support for the Delta-14B joystick/button unit.

2 Player Ships

Instead of being stuck with a Cobra Mk3, as in the original Elite, the player now starts with a puny Adder, and may buy different ships out of a selection which goes up to the enormous Anaconda, or the fast and lethal Asp Mk2.

Each of the ships has different operational parameters which affect its performance:

2.1 Combat factor

A ship's CF indicates its manoeuvrability. Ships with low CFs are slow to turn. The CF of most ships will be in the range 1–8.

2.2 Speed

The speed of a ship is measured in Light Mach, which is the proportion of the speed of light which the ship can go. The fastest generally encountered ship is the sidewinder scout ship, at 0.37 LM.

The speed display shows the same range of speeds for all ships; some slow ships will not be able to go as fast as the maximum speed which can be shown, and fast ships have an "overdrive" faster than the maximum speed shown.

[1] Elite version II was the normal disc version.

2.3 Cargo space

The cargo space of a ship determines how many standard tonne cannisters the ship can carry. Quantities of goods which are measured in kilogrammes or grammes are not limited by the cargo space of a ship. The largest cargo space of a ship which can be bought is 250 tonnes, for the Anaconda.

Cargo space may be traded off against equipment space; the cargo space figures given in the encyclopedia illustrate how much space a normal configuration will have. If less equipment is installed there will be more space for cargo.

2.4 Laser mounts

The maximum number of laser mounting positions on each ship will be 1, 2 or 4 selected from the front, back, left and right, in that order.

2.5 Shields and hull size

The shield power and hull size of ships have a dramatic effect on how difficult they are to destroy. In general, the larger the ship, the more damage the ship will be able to take. High powered shields are better against laser fire, but missiles can cause a lot of damage through shields. Ships with larger hull sizes can take more damage from missiles.

2.6 Laser power

The power of lasers which can be installed in a ship depends on the size of the ship, and the ship's technology level.

2.7 Equipment prices

The price of ship equipment depends on the age, rarity and technological sophistication of the ship. Newer ships tend to have better (and cheaper) equipment, but very common ships will also be cheap to fit out.

2.8 Number of missiles

The number of missiles which each ship can carry varies, from one on an Asp up to twelve for the Anaconda.

2.9 Hyperspace range

The maximum hyperspace range of each ship varies; in general, the smaller the ship, the smaller the range.

The fuel display shows a maximum of 7 light year's hyperspace fuel; the hyperspace range for the amount of fuel left is shown on the status screen.

3 Major Extensions

3.1 Special cargos

A major new addition to Elite is the *Special Cargos*. These are unspecified low bulk cargos which have to be delivered to their destination quickly. The special cargos label covers urgent documents, medical supplies, possibly passengers, and if the pilot's status is not clean, all sorts of illegal packages from designer drugs to illegally "donated" organs for transplantation.

Only one special cargo can be carried at once, and may be obtained by paying for the contract to carry it (CTRL-f2). There is unfortunately no indication that a special cargo is being carried, but if the W key is pressed while the long or short range chart is being displayed, the cursor will snap to the destination location. The speed of delivery of special cargos is important, and any delay (especially docking at space stations) will reduce the value of the contract. If the cargo is not delivered, or too long is taken about delivering it, it will expire, allowing another contract too be taken.

3.2 Encyclopedia

An on-line encyclopedia has been added, which may be called up while in the space station (CTRL-f6). The encyclopedia contains information about ships, ship equipment and controls. Access to the long and short range charts, data on systems and market prices is available while accessing the encyclopedia. To finish accessing the encyclopedia press CTRL-f6. It is important to let the disc stop before asking for information about ships, in case the information has to be loaded off the disc.

3.3 Buying ships

As mentioned above, the player can buy new ships (CTRL-f3). The types of ships which can be bought depends on the technology level and wealth of the star system. All of the equipment and cargo in the old ship will be lost, and should probably be sold before buying a new ship. The new ship will have minimal equipment, and will probably need re-equipping before use.

3.4 Tube version

A 6502 second processor version of Elite III is also included on the disc. If a second processor is detected during boot-up, then this version is loaded. It is slightly faster than the single-processor version, because the screen handling is done by the I/O processor, and the calculation by the second processor. This version does not need to access the disc when docking, or looking at the encyclopedia. The ships encountered in this version are the same as the standard version, but the combinations in which they appear are more varied.

4 Minor Alterations

A number of smaller changes and additions to the original Elite have been made.

4.1 Docking fee

If a player decides that cargo prices are too high to buy or too low to sell, the player may pay a 50 credit docking fee to remain in the space station for a while (CTRL-f1), to let the prices change.

4.2 Selling equipment

Equipment can be sold at half price (CTRL-f2) to make space for upgrades, different pieces of equipment, or to recover some of the investment, possibly before changing ships.

4.3 Ramming

Ramming ships is no longer an easy way of destroying ships, because the amount of damage done to other ships is approximately in proportion to the relative sizes of ships. Ramming is now seen as an aggresive act by the orbit control space station, and traffic police may take remedial action against offenders.

4.4 Hyperspace jumping

When a hyperspace jump is initiated, *all* of the controls are locked to allow the on-board computer to calculate positions and velocities for the jump.[2] Hyperspace jumping is therefore not a very good way of getting out of trouble, because of the lack of control during the countdown period. A Hyperspace Unit (see §6.2) should be considered as a second last escape route, with an Escape pod as the last.

4.5 Equipment changes

Energy bombs have been removed, for purposes of symmetry.[3] Extended Cargo Bays are no longer needed, because larger ships can be bought.

Hyperspace units and I.F.F. systems have been introduced in their place.

4.6 Sun finding

The compass display may be toggled between the planet and the sun by pressing the `F` key while in flight. On hyperspacing into a system, the compass will be reset to point at the planet. If this key is held down, the display will keep flipping between sun and planet, so you should just tap it once to change the compass.

4.7 Legal status

In Elite I/II, shooting innocent traders was not detrimental to the player's legal status. This has now been fixed — would-be pirates take note! It is also possible to get to "most wanted" status, in which case you will find the police attacking you as soon as you approach a space station. In this situation, getting as far away from the scene of the crime as possible is advisable.

4.8 Thargoids

Thargoids are no longer easy to destroy, as they were in the original Elite (one smallish trader destroying eight battle cruisers is a bit ridiculous!). The best tactics to deal with thargoids are to run away, either by hyperspacing out, or using an escape capsule. Failing these possibilities, the other likely option is to die!

[2] This also fixes the "Soiscear" bug of Elite I/II.

[3] In Elite III the principle "If you can do it to them, they can do it to you" has been followed; energy bombs were a big cop-out.

4.9 Ship positions and numbers

In the original Elite, it was easy to tell whether an object was a pirate, a trader, an asteroid or a police ship by the position in which it appeared on the flight grid scanner. In Elite III this is not possible, as objects now appear at random positions in the forward quadrant. The range at which objects appear has been increased to allow retreat from combat if desired. The numbers and distributions of objects which appear has also been altered, to create asteroid showers, trader convoys, police squadrons, and large pirate clans.

4.10 New ships

There are many more ships in Elite III than in the original Elite. Most of these are documented by the on-line encyclopedia, but it is not uncommon to see unknown ship types. In particular, it is rumoured that the Galactic Navy are testing a fast, heavily defended destroyer, and that a secret location is being used to develop a battle-carrier to combat the thargoids.

4.11 File incompatibilities

Commander files from the original Elite cannot be loaded into Elite III, or vice-versa. This change was necessary due to incompatibilities in usage between the versions. A separate BASIC program which will convert commanders is provided on the disc, along with a couple of example commanders.

4.12 Save/Load confirmation

If the player tries to save a file without actually doing anything with the commander, or tries to load a file without saving an altered commander, Elite III asks for confirmation. If in any doubt, respond to the "**Are you sure (y/n)**" message with "`N`". This feature prevents commanders from being overwritten on disc by accidentally saving on top of them, and prevents experience from being lost by loading files on top of the commander in memory.

4.13 Delta 14B Support

Support for the Delta 14B joystick/button unit has been added, in place of the BitStik support. The buttons may be plugged into either socket of the adaptor unit, and take over some of the flight control functions.

5 Alterations to displays

5.1 Missiles

The number of missiles which a ship can carry can be more than the number which are displayed on the screen, so the screen display acts as a "missiles low" display for the larger ships.

5.2 Status

The status screen shows the type of ship which the player owns in the centre of the screen, in place of "Equipment".

5.3 Inventory

The inventory screen has a new line to show how much cargo space the currently owned ship has.

5.4 Disc access menu

The disc access menu no longer displays the competition score, but does ask for confirmation of risky operations.

6 Equipment

The equipment available for ships in Elite III is mostly the same as the equipment in Elite I/II. There are two new pieces of equipment, the I.F.F. System, and the Hyperspace Unit, in place of Cargo Bay Extensions and Energy Bombs. Some other pieces of equipment have modified effects in Elite III.

6.1 I.F.F. System

The Identification Friend or Foe system is designed to help pilots detect potential aggressors, and to prevent them from accidentally attacking innocent traders. When an I.F.F. System is installed, the colour of the bars on the flight grid scanner will show what the type of the objects detected are. The colours of the head and tail of the bar are:

Head	Tail	Ship Type
White	White	Station Tracked
Blue	Blue	Clean
Blue	Blue and Red	Offender/Fugitive
Blue	Blue and White	Debris
White	White and Red	Missile

Station Tracked ships are being tracked by Orbit Space Control, and any interference with them is likely to bring heavy penalties.

Clean ships are usually traders, or occasionally bounty hunters.

Offenders or Fugitives are usually pirates, but may also be bounty hunters.

Debris includes asteroids, barrels, boulders, and anything else which happens to be drifting about.

6.2 Hyperspace Unit

The Hyperspace Unit is an invention which is designed to get ships out of trouble quickly, saving their cargo. When activated, it does an instantaneous hyperspace jump to a random star system in the galaxy. No guarantees are made about the suitability of the system jumped to. The hyperspace unit is destroyed by this action, and cannot be re-used.

6.3 Docking Computers

Docking Computers have the same effect in Elite III as in Elite I/II, except that while the docking computers are on, no shuttles or civilian craft will be allowed to leave the space station, preventing collisions.

6.4 Missiles

Missiles in Elite III no longer automatically destroy other ships, but they do cause severe damage, and are very useful against ships with tough shields, or for finishing off ships when in a large battle.

7 Controls

7.1 Common controls

f4	Long range chart
f5	Short range chart
f6	Data on hyperspace system
f7	Show market prices
f8	Show status screen
f9	Show inventory

Common Map Controls

← → ↑ ↓	Move cursor
D	Distance to hyperspace system
O	Move cursor to current system
W	Move cursor to special cargo destination

7.2 Encyclopedia controls

CTRL-f6	Close Encyclopedia

7.3 In-Flight controls

<	Anti-clockwise roll
>	Clockwise roll
S	Dive
X	Climb
SPC	Accelerate
?	Decelerate
TAB	Activate Hyperspace Unit
ESC	Fire Escape Pod
F	Toggle compass between Sun and Planet
V	Turn on Docking Computer
P	Turn off Docking Computer
J	Micro-Jump
H	Hyper-Jump
CTRL-H	Galactic Hyper-Jump
A	Fire Laser
T	Target Missile
M	Fire Missile
U	Unarm Missile
E	Activate E.C.M.
f0	Front view
f1	Rear view
f2	Left view
f3	Right view

7.4 In-Station controls

f0	Launch ship
CTRL-f0	Pay docking fee to stay In-Station
f1	Buy cargo
CTRL-f1	Buy special cargo
f2	Sell cargo
CTRL-f2	Sell ship equipment
f3	Buy ship equipment
CTRL-f3	Buy new ship
CTRL-f6	Access Encyclopedia Galactica
@	Disc access menu

In-Station Map Controls

F	Find planet
SHIFT-← → ↑ ↓	Move cursor fast

7.5 Game controls

COPY	Freeze game

Game Controls while frozen

S	Sound on
Q	Sound off
A	Toggle keyboard auto-recentring
Y	Reverse joystick Y channel
X	Toggle startup message display
K	Toggle keyboard/joystick control
J	Reverse both joystick channels
F	Toggle flashing information
CAPS-LOCK	Toggle keyboard damping
@	Toggle between keyboard/Delta-14B control
ESC	Start new game
DEL	Unfreeze game

7.6 Delta-14B controls

Fire Laser		Fire Laser
Decelerate	Fire Laser	Accelerate
Unarm Missile	Fire Missile	Target Missile
Hyperspace Unit	E.C.M.	Escape Pod
Docking Computer On	Micro-Jump	Docking Computer Off