

VECTOR BATTLE

3D VECTOR COMBAT

COMMODORE VIC-20 • COMMODORE PET

MILASOFT

YOUR MISSION

The enemy has entered the combat zone.

You command an armoured fighting vehicle equipped with a forward-firing cannon, defensive shields, radar and a limited fuel supply.

Navigate the vector battlefield, locate hostile units, destroy them before they destroy you, and keep your machine supplied with fuel.

The battlefield is continuous. Enemy vehicles may approach from any direction, disappear behind obstacles, circle your position and attack from outside your forward view.

Watch the radar. Watch your fuel. Keep moving.

STARTING THE GAME

VIC-20 VERSION

Requires a Commodore VIC-20 with at least 16K RAM expansion.

Load the VECTOR BATTLE program and type:

RUN

The VECTOR BATTLE title screen will appear.

Title Screen Controls

Use either the joystick or keyboard:

- **W / UP** — move menu selection up
- **S / DOWN** — move menu selection down
- **A / LEFT** — change option
- **D / RIGHT** — change option
- **SPACE / FIRE** — select

The menu allows you to:

- **START** the game
- turn **SOUND ON/OFF**
- select **JOY** or **KBD** control

When **START** is selected, press **SPACE** or **FIRE**.

Release the fire button or SPACE after starting. The cannon is deliberately disarmed until the starting press has been released, preventing an accidental shot as the battle begins.

VIC-20 CONTROLS

Keyboard

Key	Action
W	Drive forward
S	Reverse
A	Turn left
D	Turn right
SPACE	Fire cannon

SPACE may be held for continued firing whenever the cannon is ready.

Joystick

Control	Action
UP	Drive forward
DOWN	Reverse
LEFT	Turn left
RIGHT	Turn right
FIRE	Fire cannon

PET VERSION

VECTOR BATTLE is designed for the **Commodore PET 3032/4032 family with a 40-column display.**

The PET edition supports the original PET keyboard as well as optional controller configurations.

PET Keyboard Controls

Key	Action
8	Drive forward
2	Reverse
4	Turn left
6	Turn right
SPACE	Fire / autofire
RUN/STOP	Return to BASIC

These are the PET numeric keypad movement controls.

Holding SPACE continues to fire whenever the weapon is ready.

PET OPTIONS

From the PET title screen:

- **S** — toggle sound
- **I** — cycle control method
- **C** — calibrate joystick
- **SPACE** — start game
- **RUN/STOP** — quit to BASIC

Available control methods are:

- **KEYBOARD GFX**
- **KEYBOARD BUS**
- **JOYSTICK**
- **SNES PAD**

The two keyboard modes support the different keyboard matrices found on graphics-keyboard and business-keyboard PET machines.

Joystick Calibration

Select JOYSTICK and press **C**.

Follow the prompts to record:

1. Centre
2. Up
3. Down
4. Left
5. Right
6. Fire

This allows VECTOR BATTLE to work with a variety of PET user-port joystick interfaces rather than requiring one fixed wiring scheme.

A selected joystick or SNES controller's FIRE button may also be used to start the game.

THE BATTLEFIELD

VECTOR BATTLE presents the combat zone from the driver's position of your vehicle.

The world contains:

Mountains

The distant mountain range gives you a reference for movement and direction. As you travel forward or backward, the perspective of the landscape changes.

Cubes

Large wireframe cubes are solid obstacles.

You cannot drive through them.

They can also block cannon fire — yours and the enemy's.

Use them as cover, but do not assume that hiding means the enemy has forgotten where you are. Enemy contacts remain visible on radar and hostile tanks can manoeuvre around obstructions.

Fuel Diamonds

Floating diamond-shaped objects contain fuel.

Shoot the diamond with your cannon to collect it.

A successful hit replenishes part of your fuel supply.

You do not collect diamonds simply by driving through them.

YOUR CANNON

Your cannon fires a projectile into the 3D world.

It is **not** an instant-hit weapon.

After firing, the projectile continues toward the point and direction at which it was launched, even if you turn away afterward.

This means you can:

- fire at a target,
- immediately turn or manoeuvre,
- and still score a hit after the target has left your screen.

Shots may also strike cubes or fuel diamonds.

Aim Carefully

The centre sight shows your firing direction.

A wild shot remains in the world until it strikes something or reaches the end of its range. On the VIC-20 version only one player shell is normally allowed in flight at a time, so a badly aimed shot can leave your cannon unavailable until that shell expires.

Make every shot count.

ENEMY FIRE

Enemy vehicles fire real projectiles too.

A hostile shot begins at the enemy vehicle and travels through the battlefield toward you.

Enemy fire can:

- cross the battlefield visibly,
- be blocked by terrain,
- miss if you manoeuvre,
- or strike your vehicle and remove shield strength.

Watch for incoming fire and change direction rather than remaining stationary in an enemy firing lane.

RADAR

The radar shows hostile contacts around your vehicle, including enemies that are:

- behind you,
- outside your forward view,
- far in the distance,
- or hidden behind an obstacle.

Your view may be blocked.

Your radar is not.

Use the radar to determine the enemy's bearing, then turn toward the contact until it enters your forward view.

A distant contact may appear on radar before its vehicle becomes clearly visible on the battlefield.

THE HEAD-UP DISPLAY

Your dashboard provides the information needed to survive.

RANGE

Displays the approximate distance to the current enemy.

Use RANGE together with radar to judge when an approaching contact is about to enter visual range.

KILLS

Shows the number of enemy units destroyed during the current run.

SHIELD / SHLD

Shows the remaining protection of your vehicle.

Every successful enemy hit removes shield strength.

When the shield reaches zero:

GAME OVER

FUEL / F

Shows your remaining fuel supply.

Fuel is limited.

The PET version consumes fuel continuously and uses more while driving forward than while reversing or remaining idle. Firing also consumes a small amount.

The VIC-20 version consumes fuel while your vehicle is moving.

When fuel reaches zero:

GAME OVER

Destroy fuel diamonds before your supply becomes critical.

SCORING — VIC-20

Each destroyed enemy tank is worth:

1,000 POINTS

The VIC-20 dashboard displays:

- your current score,
- number of kills,
- and the high score.

The high score is retained when a new game is started without reloading the program.

THE PET ENEMY FORCES

The PET battlefield contains several types of hostile unit.

LASER TANK — TANK

The standard armoured opponent.

Tanks manoeuvre for a firing position rather than blindly driving at you. They can turn, move around obstacles, exchange fire at range and break away after an attack.

SANDSLED — SLED

A mobile combat vehicle with different movement and fighting characteristics from the standard tank.

Never assume that every radar contact will behave the same way.

PULSAR — PULS

A stationary weapons platform.

Unlike mobile vehicles, the Pulsar does not pursue you. You must locate and engage it.

Pulsars begin appearing after you have survived several enemy kills.

MISSILE — MISS

The most urgent threat.

A missile moves rapidly toward your position, swerves as it attacks and can cross obstacles that stop normal ground vehicles.

It does not fire a cannon.

The missile itself is the weapon.

It is intended to be dodged rather than outrun.

Destroy it quickly or manoeuvre hard when it closes.

VIC-20 ENEMY TANKS

The VIC-20 edition concentrates on tank combat.

Enemy tanks use several combat personalities, ranging from hunters to more aggressive skirmishing and berserker behaviour.

They will:

- approach from range,
- aim before firing,
- exchange fire at a useful standoff distance,
- cross your firing line,
- break away after attacking,
- manoeuvre around cubes,
- and become more dangerous as your kill count rises.

Do not expect a tank to remain conveniently in your sights.

ARMOUR

Enemy tanks are armoured.

A hit does not necessarily destroy one immediately.

The first successful strike damages the vehicle and produces impact debris.

A final successful hit destroys it.

Do not mistake a hit effect for a kill — keep tracking the target until it explodes.

USING COVER

Cubes can save your life.

If an enemy is firing from ahead:

1. Move a cube between yourself and the enemy.
2. Watch the radar while the enemy is hidden.
3. Expect the enemy to manoeuvre for another firing lane.
4. Turn out from cover when you have a better shot.

Remember that your own cannon rounds can also strike the cube.

Cover works both ways.

FUEL MANAGEMENT

Fuel is as important as your shield.

A perfect combat run can still end if the tank runs dry.

Fuel diamonds restore **3 fuel units**, up to the maximum capacity of the vehicle.

Good commanders develop the habit of locating fuel **before** the gauge becomes critical.

Do not waste cannon fire at distant diamonds if an enemy is already closing on you.

Destroy the threat first.

Refuel second.

COMBAT TACTICS

KEEP MOVING

A stationary target gives hostile tanks time to line up a clean shot.

Move, turn and force the enemy to continually rebuild its firing solution.

USE THE RADAR

Do not search for an enemy by spinning blindly.

Find the radar contact first.

Then turn toward it.

FIRE WHEN ALIGNED

Your projectile travels through the world after leaving the cannon.

A shot fired at the wrong bearing does not magically follow the target.

TURN AFTER FIRING

You do not have to keep looking at your projectile.

Once the shell has been launched, you can immediately begin evasive manoeuvres.

WATCH FOR THE FIRST HIT

Armoured enemies can survive an initial strike.

Confirm the kill.

DON'T CAMP

Remaining in one place wastes fuel on the PET and gives the enemy time to increase pressure.

The battlefield rewards movement.

NEVER IGNORE A MISSILE

On the PET, a MISS radar contact takes priority over almost everything else.

GAME OVER

Your mission ends when either:

- **SHIELD reaches zero**, or
- **FUEL reaches zero**.

After GAME OVER, press **SPACE/FIRE** to return to the title screen and begin another mission.

On the PET, **RUN/STOP** may be used to return to BASIC.

QUICK REFERENCE

VIC-20 KEYBOARD

W — Forward
S — Reverse
A — Turn Left
D — Turn Right
SPACE — Fire

PET KEYBOARD

8 — Forward
2 — Reverse
4 — Turn Left
6 — Turn Right
SPACE — Fire
RUN/STOP — Quit

COMMANDER'S RULES

WATCH THE RADAR.

KEEP FUEL IN RESERVE.

USE COVER.

DON'T FIRE UNTIL YOU HAVE THE SHOT.

AND NEVER ASSUME THE ENEMY YOU CAN'T SEE ISN'T STILL THERE.

August 13, 2026