

RETRO CODER

2000

OWNER'S MANUAL & QUICK REFERENCE

```
C:\> VER  
V-OS for VRK Systems personal computers
```

```
C:\> TYPE README.TXT  
It's 1991. You have a PC, a modem, a stack of floppies,  
and an empty room. Your brother left all of it behind.
```

```
C:\> _
```

CONTENTS

#	Section
01	Getting started
02	Desktop controls
03	VR controls
04	Your room
05	The PC: boot, BIOS and VOS Commander
06	Programs on your PC
07	EDIT - the code editor
08	Work, money and reputation
09	Making your own games
10	Settings
11	Saves, files and troubleshooting
12	Quick reference card

This manual covers controls and how things work. It doesn't spoil the story - the puzzles, codes and secrets are yours to find.

01 GETTING STARTED

Retro Coder 2000 is a working early-90s PC in a single room. Boot it, install games from floppies, dial in to the online network, take freelance programming jobs, and write your own games in the built-in VRK language. Play it on a monitor with mouse and keyboard, or in VR.

Choosing a mode

Steam offers two launch options: **2D with Mouse and Keyboard** (desktop) and **OpenXR + Controllers** (PCVR). You can also switch while playing: on desktop, pick up the VR headset on the desk; in VR, press **F12** on the keyboard (or open the VR menu) to go back to the desktop.

Story or Free Play

A new career asks you to choose:

STORY - a short intro, then the career: jobs, mail, the network and what your brother was mixed up in. Steam achievements are earned in Story only.

FREE PLAY - the whole machine as a sandbox for making and playing games, with no story.

Chose wrong? **Start Over** on the main menu (behind a confirmation) begins a fresh career.

Your first minutes

The dot-matrix printer next to the PC keeps a **TODO list** on the wall. It ticks tasks off as you finish them and prints a slip for each one. If you're not sure what to do next, read the TODO list.

02 DESKTOP CONTROLS

Walking around the room

Key / button	What it does
W A S D	Move
Mouse	Look
Left Shift	Sprint
E / Left click	Use, pick up, put down, sit at the PC
F / Right click	Use (alternate) - e.g. put on the VR headset
Z / Middle mouse (hold)	Zoom - read the wall sheets, notes and screen from a distance. Click a wall sheet to keep the zoom on; move to drop it
Esc	Pause menu (settings, quit) while standing

Seated at the PC

Key / button	What it does
Keyboard	Goes to the PC - type as on a real machine
Right click / F12	Stand up. While a program has the mouse, right click is Enter, so use F12
Ctrl+P	Print the screen on the dot-matrix printer
Hold Esc	Quit the running program (a quick tap is the program's own Esc - pause/back)
Ctrl+Alt+End	Restart the PC from anywhere - a stuck program, an app, the BIOS

A gamepad also works on desktop (left stick move, right stick look, A use, X alternate use, View stand up, left trigger zoom, Start menu). The PC itself is built for a keyboard - a keyboard is recommended for writing code.

03 VR CONTROLS

Moving and menus

Key / button	What it does
Left stick	Move (swap hands in Settings)
Right stick	Turn - snap or smooth
Grip / trigger	Grab objects: floppies, notes, the pager, the phone handset
Left Menu button	VR menu (settings, switch to desktop). Index: left B
Both grips at your face, 1 s	Switch to desktop mode
F12 on the keyboard	Back to desktop mode if the game started in VR by accident

Using the PC

Grab the keyboard with **both hands** to sit down in front of the screen; let go with both to stand up. While you hold the PC, that hand's controller drives it:

Key / button	What it does
Stick	W A S D and the arrow keys - move the cursor, steer games
Trigger	Space / confirm
A / X	Enter, and the apps' menus
B / Y	Backspace / back in apps
Hold B	Quit the running program
Lead hand trigger at boot	Enter the BIOS setup (the DEL key)

With one hand on the PC, your free hand still lends its A/X and B/Y buttons, so you can move and jump at once. Text boxes (web addresses, logins) open a retro on-screen keyboard you drive with the stick.

Around the room: point at the printer and pull the trigger to print the screen. Grab the pager and pull the trigger to light its display.

04 YOUR ROOM

Thing	What it's for
PC	VRK Systems personal computer. Sit down to use it. It remembers its state: leave it on and it's still on next time.
Floppy disks	Insert one into the drive to install or run what's on it. Some sets need several disks; some boxes have a 5-digit CD key. A dodgy disk can fail to read - just RETRY.
Dot-matrix printer	Prints the TODO slips and your screenshots (Ctrl+P). Tear printouts off from the end. Pin the pages you want to keep on the cork board behind the PC.
Modem	Your line to VRK-NET. LEDs show power, link and traffic. You'll need a login - it's somewhere in the room.
Red telephone	A real rotary phone. Dial numbers you find around the net. The phone and modem share one line: picking up the handset drops your connection.
Pager	Some messages come by pager as digits. Use the keypad guide sheet on the wall to read them.
Wall sheets	The TODO list, the pager guide, the calendar. Zoom in (Z / middle mouse) to read them.
Record player	Play the records on the shelf - or map your own music folders in Settings > General.

05 THE PC: BOOT, BIOS AND VOS COMMANDER

Boot and BIOS

The PC boots like the real thing: logo, memory test, beep. Press **DEL** during start-up (VR: the lead hand's trigger) to enter the BIOS setup and choose the CPU, memory, video card and screen resolution from the parts you own. **F10** saves and reboots. Better hardware runs heavier programs faster - a slow game on a 286 can turn smooth on a Shmentium. You start with a modest machine; upgrades are bought online.

VOS Commander

The file shell you land in: two panels side by side, like Norton Commander. Arrow keys move, Tab (or the other stick) switches panel, Enter opens. Programs run, text and pictures open in a viewer, sounds play.

Key / button	What it does
Enter	Open / run
Backspace	Up one folder
F2	Files menu
F4	Edit a text file
F5	Copy to the other panel's folder
F6	Move to the other panel's folder
Shift+F6	Rename
F7	New folder
F8	Delete (to C:\TRASH - restorable for 7 days)

C:\LIB, C:\SYSTEM and C:\BIN (shown in magenta) are read-only - the machine needs them. Everything else on the drive is yours.

The prompt

Prefer typing? The DOS-style console understands help, ls, cd, cat, edit <name>, exec <program>, natives (every built-in function) and reboot.

06 PROGRAMS ON YOUR PC

Program	What it does
DIALUP	Connect to an online service with a username and password. After the first successful login it types your details in for you.
VRKNavigator	The web browser. Press G to type an address. Search, shop, read, subscribe to newsletters. Watch what you download.
MAIL	Your inbox. Replies are picked from a short list, so the mood of your answer matters.
JOBS	The freelance board: take a job, open its files, fix or write the code, deliver.
FINANCE	Your credits, invoices and who still owes you.
CHAT	Channels full of locals with opinions. Sometimes you get to answer.
SETUP	Installs games from floppies and from downloads.
EDIT	The code editor - see the next section.
PAINT	Draw sprites and sprite sheets, with animation preview.
SNDEDIT / COMPOSER	Record and cut sounds with your microphone; compose 80s-style music on a note grid.
MAPEDIT	Level editor for 2D platform games and first-person worlds. Unlocks during the career (always open in Free Play).
Games	DZMARIO, MURTAL COMBAT, Krystalnoid, Block Buster, 3D Chess, Reversi and more - on floppies or for sale online.

Viruses are real here. An infected program won't run - it shows you a skull and switches the PC off. An antivirus finds and cleans them.

07 EDIT - THE CODE EDITOR

Key / button	What it does
F2	Save
F9	Build
F5	Build and run
F10	Pack the program into a shareable package
Esc	Close (asks about unsaved changes)
Ctrl+Z	Undo
Ctrl+F / F3	Find / find next
Ctrl+C / X / V	Copy, cut, paste (Windows clipboard; Shift+arrows to select)
Ctrl+L	Delete the current line
Ctrl+Enter	Go to the function under the cursor, or open an #include file
Ctrl+-	Jump back
F1	Help on the word under the cursor
Shift+F1	Code snippets

Prefer Vim? Settings > General > Code editor keys switches EDIT to a Vim key profile (:w, :q, :wq).

With controllers

Key / button	What it does
Stick	Move the cursor / page
Right trigger	Run
Left trigger	Build
Right stick left/right	Change the number under the cursor
Stick click	Snippets
Hold B	Close

When you run a program from EDIT, a single Esc stops it, and P acts as the program's own Esc so you can try its pause menu.

08 WORK, MONEY AND REPUTATION

Jobs

Clients post work on the JOBS board: broken programs to fix, data to convert, messages to decode, games to test. Accept a job and its files open in EDIT. Only the middle of a job file - **YOUR CODE** - is editable; the input and output parts are locked. Deliver from JOBS and the client's tester checks your work. A failed delivery shows the first case that went wrong.

Getting paid

Clients pay by invoice, and not all of them pay on time. FINANCE tracks who owes you; send reminders when needed. A day in the game passes every 20 minutes the PC is on.

Reputation

Trust grows with good work for legitimate clients and opens better-paid jobs. Rude replies cost a little Trust. There is also a reputation that counts in other places - you'll hear about it when it matters.

Spending

Credits buy hardware upgrades (CPU, video card, memory, hard disk, modem), games and software. Most shops only work while you're online.

Stuck? Re-read your mail and the TODO list, and look around the net - hints are rarely in just one place.

09 MAKING YOUR OWN GAMES

Everything on the PC - including the games on your shelf - is built with the VRK language and its library. A complete program:

```
#include "graphics.inc"

score = 0 // runs once

update { // runs every frame
    ClearBlack()
    DrawText("HELLO", 26, 100, 3)
}
```

Start a project

Open **C:\PROJECTS** in VOS Commander and use **New Project**: pick a name and a template - text, 2D game or 3D game - and you get a working program to change. Open it, press **F5**, change a number, press F5 again.

The manuals on the drive

File	Covers
C:\DOCS\GUIDE.TXT	The language: variables, drawing, input, sound, packages, 3D, tile maps, menus, saves
VRKGL.TXT, SHADERS.TXT	3D graphics and shaders by video-card generation
WORLDS.TXT, ACTORS.TXT	First-person levels and scripted actors
MAPEDIT.TXT	The level editor (also F1 inside MAPEDIT)
PAINT.TXT, SNDEDIT.TXT, COMPOSER.TXT	Art, sound and music tools
SPOOL.TXT	Talking to helper programs outside the game through files

Sharing

Press **F10** in EDIT to pack your program into a .VPK package. Packages are plain files in your V-OS drive folder (see section 11) - send one to a friend and they install it with Enter in VOS Commander. Programs stay compatible with future versions.

10 SETTINGS

Open Settings from the main menu, the desktop pause menu (Esc) or the VR menu.

Tab	Options
Controls	Mouse sensitivity, invert Y, game mouse sensitivity, move hand, snap/smooth turning, comfort vignette, move speed, vibration, stick dead zone (helps with drifting controllers)
Graphics	Field of view, quality, anti-aliasing, bloom, resolution, display mode, VSync, FPS cap, VR render scale
General	Master volume, code editor keys (Classic / Vim), music folders for the record player

System requirements (minimum, tested)

Windows 10/11 64-bit · Intel Core i5 · 8 GB RAM · NVIDIA GTX 1080 Ti or equivalent · DirectX 11 · 3 GB disk. VR: an OpenXR-compatible headset with tracked controllers.

11 SAVES, FILES AND TROUBLESHOOTING

Where things live

Your career and your PC's hard drive are saved in:

```
Documents\My Games\Retro Coder 2000\
```

The V-OS_Drive folder inside is the in-game C: drive - your programs, pictures and packages are ordinary files there. Steam Cloud keeps the whole folder in sync between computers.

If something goes wrong

Problem	Try this
A program froze	Hold Esc (VR: hold B). If that doesn't help, Ctrl+Alt+End restarts the PC.
Launched in VR by mistake	Press F12 on the keyboard.
Can't stand up from the PC	F12 (or gamepad View). Right click is Enter while a program has the mouse.
Can't read a note or sheet	Hold Z or the middle mouse button to zoom.
Controller drifts in VR	Raise Settings > Controls > Stick dead zone.
A floppy won't read	Choose RETRY - old disks are like that.
PC switches itself off	A virus. Get an antivirus and clean the infected program.
Can't get online	You need the login for the dial-up service. Look around the room.

Support

Report bugs in the Steam discussions or at www.vrkemono.com/contact/. Please include what you were doing and, if you can, the game's log file (Player.log).

12 QUICK REFERENCE CARD

EVERYWHERE		EDIT / COMMANDER	
Esc	Pause menu (standing) / program back	F2	Save / Files menu
Hold Esc	Quit program	F5	Run / Copy
Ctrl+Alt+End	Restart PC	F9	Build
Ctrl+P	Print screen	F10	Pack
F12	Stand up / VR to desktop	F6	Move
Z / MMB	Zoom	F7	New folder
DEL at boot	BIOS	F8	Delete
F10 in BIOS	Save and reboot	Ctrl+F	Find
G	Browser: go to address	Shift+F1	Snippets

VR, holding the PC	Acts as
Stick	W A S D / arrows
Trigger	Space / confirm
A / X	Enter
B / Y	Backspace / back
Hold B	Quit program
Both hands on keyboard	Sit down
Left Menu	VR menu

Retro Coder 2000 © VRKemono. All in-game companies, products and people are fictional.