

# Z E P T O P O L I S

For Commodore VIC-20

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*ZEPTOPOLIS* is a turn-based city management game for the unexpanded Commodore VIC-20. Unlike most games, *ZEPTOPOLIS* has no pre-defined goal. You set your own path and define your own criteria for success.

To load *ZEPTOPOLIS* from tape, remove all expansion memory from your VIC-20, turn it on, put the tape in the Datasette, and hold down SHIFT while pressing RUN/STOP. Follow the instructions on the screen. For the cartridge version, simply insert the cartridge into the cartridge port, and power up. **Note:** *A joystick is required.*

## TL;DR

- Use the joystick to **move your pointer** around the screen
- To **build something**, press the joystick button. Use the joystick to select your structure, then press the button again
- Or, move the joystick down to **cancel the build**
- Or, move the joystick up, then press the joystick button to **end the year** (turn)
- To **start a new city**, press RESTORE
- To **save a city** to tape, press "S"
- To **load a city** from tape, press "L"

# How to Play ZEPTOPOLIS

The joystick moves the pointer around the screen.



To perform an action, press the joystick button. There are several types of actions, depending on what kind of structure is under the pointer.

(1) **You may build a structure.** Move the joystick to the left and right to select a structure to build. To build the structure, press the joystick button. The new structure will be built at the pointer's position. Any structure built on undeveloped land costs 5. If there's an existing structure or a Fire, the build cost is 10. This amount is deducted from your treasury.

(2) **You may see information about an existing structure.** At the top of the screen, at the right side, you'll see information about what other structures are *nearby* (meaning, "connected by four or fewer lengths of Road") or *adjacent* (meaning, "immediately to the north, south, east, or west"). You'll also see the next year's estimated revenue or maintenance cost for the structure.

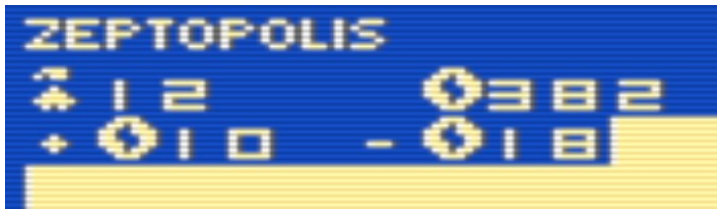


(3) **You may cancel the action.** Move the joystick down.

(4) **You may end the current year.** Move the joystick up, then confirm by pressing the joystick button.

When you end a year, the game will process the structures, calculate your maintenance costs and revenue, adjust residents and satisfaction rating. One unoccupied Home may become occupied, and one unoccupied Business may become occupied. It's also possible for unexpected disasters to arrive at this time.

You'll see a progress bar moving across the Detail Bar from left to right. When it's finished, the progress bar will be replaced by your annual budget statement. It will show your revenue and your maintenance costs for the previous year.



## Hands-Free Operation

If SHIFT LOCK is engaged when a new year begins, the year will immediately end, and year-end processing tasks will begin automatically. Let it run all night and see where your residents wind up without your wisdom!

# ***ZEPTOPOLIS* Structures**

Let's introduce the *ZEPTOPOLIS* structures! When reading these descriptions, note the following definitions:

- **"Nearby"** means that a structure is connected by Road, with no more than four lengths of Road between the two structures.
- **"Adjacent"** means that a structure is cardinally-adjacent, being directly to the north, south, east or west.
- Note that any "adjacent" structure is also "nearby."



## ***Road***

Roads allow residents to commute to work, get home, visit Businesses. Roads let fire trucks get to Fires, ambulances get to Clinics, and school buses get to Schools. Most structures require connected Roads in order to function fully.



## ***Unoccupied Home***

You can decide where Homes might go, but the home buyers will decide if the property is attractive. Residents may move in if there's a Wind Farm within five spaces.



## **Home**

A Home adds to your revenue, residents, and education level. A Home also attracts Businesses. Each year, a Home may contain between 3 and 6 residents. A Home with a nearby Clinic gets a one-resident bonus.

*Property Value Impacts: +2 to Businesses with at least one nearby Home, and +1 to Businesses with at least one adjacent Home. -2 to Homes with at least one adjacent Home.*



## **Unoccupied Business**

You can decide where Businesses might go, but the entrepreneurs will decide if the property is adequate. A Business might move in if there's a Wind Farm within five spaces, a Road adjacent to the property, *and* potential customers living nearby (or, instead, another adjacent Business).



## **Business**

A Business adds to your city's revenue and employment rate.

*Property Value Impacts: +2 to Homes with at least one nearby Business, and -1 to Homes with at least one adjacent Business. +2 to Businesses with at least one adjacent Business.*



## **Wind Farm**

A Wind Farm provides power to Homes and Businesses. A Wind Farm's range is five spaces. Power lines are underground, so there's no need for Roads to deliver power. Homes and Businesses require power, so unoccupied properties will not become occupied without it, and an occupied property will be abandoned if it loses access to a Wind Farm.

*Maintenance: 5 per year*

*Property Value Impact: -1 to Homes and Businesses with at least one adjacent Wind Farm*



## **School**

A School is the heart of its community. It provides education to students living nearby. A School increases your satisfaction score, and contributes to Business confidence.

*Maintenance: 15 per year*

*Property Value Impacts: +2 to Homes with at least one nearby School, and +1 to Homes with at least one adjacent School (note that an adjacent School counts as both "adjacent" and "nearby")*



## **Firehouse**

A Firehouse puts out little fires before they become big Fires. It protects nearby Homes and Business from regular Fires (ones not caused by maintenance failures or disasters).

*Maintenance: 10 per year*

*Property Value Impacts: +2 to Businesses with at least one nearby Firehouse, and +1 to Businesses with at least one adjacent Firehouse (note that an adjacent Firehouse counts as both "adjacent" and "nearby"). -1 to Homes with at least one adjacent Firehouse*



## **Clinic**

A Clinic provides emergency and preventative medical care to nearby residents. It has the effect of adding one resident to each nearby Home.

*Maintenance: 10 per year*

*Property Value Impacts: +2 to Homes with at least one nearby Clinic. -1 to Homes with at least one adjacent Clinic.*





## **Park**

A Park provides a space to relax and enjoy the scenery, or to play some baseball, or to read quietly under a tree. Homes and Businesses alike benefit from Parks. Parks are an inexpensive way to improve property values.

*Maintenance: 1 per year*

*Property Value Impacts: +1 to Homes with at least one nearby Park, and +1 to Homes with at least one adjacent Park (note that an adjacent Park counts as both "adjacent" and "nearby"). +1 to Businesses with at least one adjacent Park.*



## **Lake**

A Lake is a small body of water that provides recreational and business opportunities. Lakes are part of your city's land when it is formed. Lakes cannot be removed; you have to build around them. But they have advantages!

In terms of property values, Lakes are treated as Parks, and provide the same revenue, but without maintenance costs.

Lakes can protect structures from Tornadoes, as a Tornado dissipates over a Lake. Sometimes, a Tornado forms over a Lake and dissipates immediately!

*Property Value Impact: Same as Park*

# The Overview Bar

The Overview Bar is at the top of the screen.



It has four parts. From left to right, these are as follows:



## Residents

How many people lived in your city at the end of the previous year. This will fluctuate, but each Home will contribute between 3 and 6 residents, plus one resident if there's a nearby Clinic.

If the residents icon is flashing, it means that Business confidence is low, and your Businesses are at risk of fleeing their properties.



## Treasury

Your current treasury amount. Keep an eye on your treasury to make sure you have enough to meet your maintenance costs.



## Satisfaction

The percentage of residents who think you're doing a good job.

The tens-place number is a rough estimate of the city's employment rate. The ones-place number represents the city's education level.

If the satisfaction icon is flashing, it means that unemployment is high, and your residents are at risk of moving out.



## Year

The year, starting at 2021, the year *ZEPTOPOLIS* was made. Each turn is another year.

# The Detail Bar

The Detail Bar is under the Overview Bar.



The left-hand side usually shows the previous year's budget, with revenue and maintenance costs. Use this to estimate the next year's budget, paying special attention to whether you'll be able to afford the next year's maintenance costs.

The right-hand side shows information about the structure under the pointer when you press the joystick button. It shows a list of all nearby and adjacent structures.

For Homes and Businesses, the far right-hand part of the Detail Bar shows the estimated revenue from the selected property ("estimated" because the city might change between now and the next year). For structures with maintenance costs, this area will show the maintenance cost as a negative number.

## More Info: Road Highlighting

When you place the pointer over a structure and press the joystick button, nearby roads will be highlighted to show the structure's effective range. This will help you to optimally place structures.

# Maintenance and Revenue

When you end the current year, the game scans your city and looks for structures with a maintenance cost (as described in **ZEPTOPOLIS Structures** and **Charts**). Maintenance cost is deducted from your treasury during this scan.

If your treasury cannot afford the maintenance, nothing is deducted. Instead, the structure has a chance of going into disrepair and being destroyed. This will show on-screen as a Fire.

Revenue is in the form of property tax, which is based on the value of each property (Home and Business) in your city. When you end the turn, the game evaluates the city. For each property, the property value is assessed for adjacent and nearby structures (as described in **ZEPTOPOLIS Structures** and **Charts**).

Assessed revenue is summed and put into your treasury *after* all maintenance is deducted.

Your treasury will never go negative, regardless of your maintenance costs; just keep in mind that losing structures to disrepair is the potential consequence of running a deficit.

# Major Disasters

While Zeptopolis is a pretty nice place to live--there's no pollution and no crime to speak of--it is occasionally beleaguered by a strange combination of natural disasters, Earthquakes and Tornadoes. Additionally, the world-at-large sometimes afflicts your city with Pandemics.

**An Earthquake** is caused by shifting tectonic plates in the earth's crust causing sudden and violent shaking, which damages many areas of your land. On-screen, this damage appears as Fire, and it indiscriminately destroys any structure on that land. If an Earthquake hits a Lake, land adjacent to that Lake will become flooded (see **Minor Disasters** below).

Earthquakes are sort of timed events. It will be at least 15 years between Earthquakes, but if one hasn't occurred 15 years after the last one, you know it's coming soon.

**A Tornado** is a powerful rotating vortex of wind over land. They are less destructive than Earthquakes, but they are more frequent. They are highly localized, so they may miss your city entirely, or hit it right in the center. A Tornado ends if its path takes it off-screen. If a Tornado hits a Lake, or starts over a Lake, it ends immediately.

Expect Tornadoes every few years, and don't be surprised if you get Tornadoes on consecutive years.

**A Pandemic** is a disease prevalent throughout the world, which will affect your city. Pandemics don't destroy buildings, but they reduce your population. Homes without a nearby Clinic will lose from 0-3 residents per year. Homes *with* a nearby Clinic will lose the +1 resident bonus, but will otherwise be protected from the Pandemic.

Pandemics, like Earthquakes, are loosely-timed events. It will be at least 25 years between Pandemics, but it could be more. A Pandemic will last between 1 and 4 years. During the Pandemic, the border of the screen will be yellow.

## Minor Disasters

**Fire** can break out in a Home or Business without a nearby Firehouse. It destroys the property.

Schools and Clinics have their own fire suppression systems, and will not burn down. Firehouses handle their own stuff. Parks and Roads cannot burn down. Have you ever seen a road on fire? No, you haven't.

**Flooding** is a rare secondary effect of an Earthquake. When an Earthquake hits a Lake, damage to the earth's crust causes water to spill into adjacent land and create an additional Lake. Such Lakes are permanent and destroy any structure that was there.

# Tips

- Don't build too much at once. Remember that only *one Home and one Business* may become occupied every year. Work on making your city stable before expanding too far.
- If you're hit by a disaster, prioritize rebuilding your Roads. If important structures are separated from properties, the impact of the disaster will be worse.
- After a disaster, wait to rebuild structures, if you can. The Fires will eventually go out, leaving empty land, which is less expensive to build on.
- The School is the most powerful structure in the game. A School provides lots of property value, and education improves Business confidence. Put as many Homes around Schools as you can.
- Make use of Lakes. They count as Parks for property values, they don't cost anything, they're indestructible, and they provide protection against Tornadoes. The risk of flooding (see **Minor Disasters**) is quite low, and it's worth this minor risk to build around Lakes.
- You can minimize the effects of a Pandemic by building Clinics everywhere in the Pandemic's first year. You can always replace the Clinics with something else when the Pandemic is over.
- You can control where Homes and Businesses move in by having only one or two unoccupied properties at a time.



# Why Are My Businesses Leaving?

Established Businesses may move out for a number of reasons.

**Check your power.** A Business will leave if its supporting Wind Farm is removed or is destroyed.

**Check your Roads.** If a Business has no adjacent Roads, it will move out 100% of the time.

**Business confidence is low.** If the residents icon is flashing, it means Business confidence is low; Businesses do not feel that your city offers a good business climate. Businesses will not move in, and existing Businesses are at risk of leaving.

You can raise Business confidence in a few ways:

- Add Homes, if possible. This may be a slow way to do it, as only one Home can become occupied each year, but the presence of customers is the primary driver of Business confidence.
- Strategically place Clinics. A Clinic adds one resident to each nearby Home, so it can be a fast way to bring more potential customers to Businesses.

- Strategically place Schools. Education level increases Business confidence in a community. If your education level is low, a School might do the trick.
- Decrease taxes for Businesses. If your cash flow is good, lowering the tax burden of Businesses by reducing property values is a viable strategy for keeping Business around.

## Why Are My Residents Leaving?

Homes may become unoccupied for a couple of reasons:

**Check your power.** Residents will leave if their supporting Wind Farm is removed or destroyed.

**Low Satisfaction.** If the satisfaction icon is flashing, it means that your residents are at risk of moving out due to low employment. Residents might leave if they are unsatisfied, which means that they're un- or under-employed.

To increase employment, you'll need to increase the number of Businesses operating in your city.

# Saving and Loading A City

A lot of work can go into a city, so *ZEPTOPOLIS* allows you to save and load cities from tape<sup>1</sup>. If the pointer is blinking, move the joystick down. Then:

## Saving To Tape

- Press "S"
- The Detail Bar prompts you to press Record and Play. Do so, or press RUN/STOP to cancel the save.
- The screen border becomes red, indicating that the save is in progress
- Once the border becomes blue and the music starts, the save is complete

## Loading From Tape

- Press "L"
- The Detail Bar prompts you to press Play. Do so, or press RUN/STOP to cancel the load.
- The screen border becomes green, indicating that the load is in progress
- Once the border becomes blue and the music starts, you may resume building your city

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1 Hey, if tape is good enough for Scott Adams, it's good enough for me!

## **Diskette Menu (*Cartridge Only*)**

The cartridge version of *ZEPTOPOLIS* allows saving to and loading from diskette or SD2IEC. Press "F1" on your VIC-20's keyboard to launch the Diskette Menu, and insert your diskette or SD card.

### **Saving To Diskette**

- Choose a filename by typing any numeral, "0" through "9"
- Press "S"
- The screen border becomes red, indicating that the save is in progress
- Once the border becomes blue and the music starts, the save is complete

### **Loading From Diskette**

- Press "L"
- The screen will indicate that it is getting the directory. After a few seconds, the file browser will appear
- Use the joystick to select your file, and press RETURN
- The screen border becomes green, indicating that the load is in progress
- Once the border becomes blue and the music starts, you may resume building your city

## Rulesets

The ruleset used by *ZEPTOPOLIS* can be modified to make the game more or less challenging. Rulesets can be loaded from tape or diskette (cartridge version only) using the ***Loading From Tape/Diskette*** procedures above.

You may start a new city with the ruleset by pressing RESTORE, or you may simply resume a city in progress with the new ruleset.

Rulesets are available for download at:

[www.beigemaze.com/zeptopolis](http://www.beigemaze.com/zeptopolis)

## Ruleset Menu (*Cartridge Only*)

The cartridge version of *ZEPTOPOLIS* has a Ruleset Menu that allows you to install a selection of additional rulesets from the cartridge.

Press "F3" on your VIC-20's keyboard to enter the Ruleset Menu. Then press the number that corresponds to the ruleset you want to use.

You may start a new city with the ruleset by pressing RESTORE, or you may simply resume a city in progress with the new ruleset.

# Charts

## Structure Maintenance Costs and Abilities

<b>Structure</b>	<b>Maint</b>	<b>Special Ability</b>
Home		Contributes 3-6 residents
Business		Increases employment Rate
Wind Farm	5	Powers Homes and Businesses
School	15	Increases education level in nearby Homes
Firehouse	10	Prevents Fires in nearby Homes and Businesses
Clinic	10	+1 resident for nearby Homes
Park	1	
Lake		<ul style="list-style-type: none"><li>• Counts as a Park</li><li>• Dissipates Tornadoes</li></ul>

**Structure Property Value Impact on Homes**

<b>Structure</b>	<b>Nearby</b>	<b>Adjacent</b>
Home		-2
Business	+2	-1
Wind Farm		-1
School	+2	+1
Firehouse		-1
Clinic	+2	-1
Park/Lake	+1	+1

**Property Value Impact on Businesses**

<b>Structure</b>	<b>Nearby</b>	<b>Adjacent</b>
Home	+2	+1
Business		+2
Wind Farm		-1
School		
Firehouse	+2	+1
Clinic		
Park/Lake		+1

Maximum Property Value: 9

Minimum Property Value: 0

*"All adjacent structures are also nearby structures."*

--Jason

# Thanks

Thank you to the Denial community for input on early versions of this game, with special thanks to Victim\_RLSH for game play feedback, and Mike and srowe for helping with a particularly troublesome bit.

Thanks to my sons Murphy, Merric, Reilly ("what year was that computer even made?"), and Bird for their testing, and to my wife, Trinity, for putting up with some late nights.

# Licenses

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