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THE WANDERING ARCOLOGIST'S LETTER

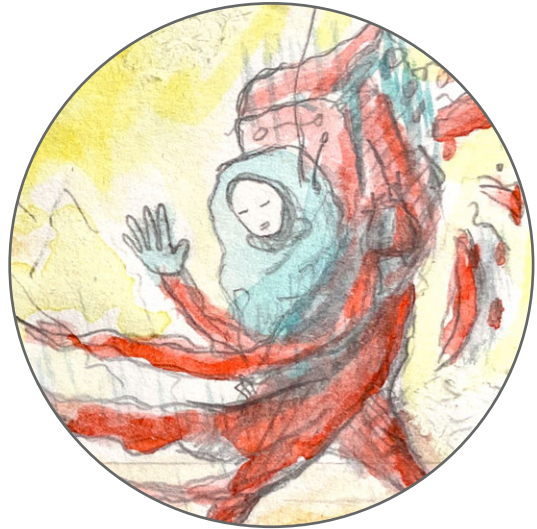
Dear Arcologist,

I hope this letter finds you in good spirits and health. I have been traveling to the edges of our world to recover lost maps from distant arcologies. Sadly, the ravages of the collapse have spread further - and faster - than the elders predicted. Like the kudzu, it is entirely asymmetrical and utterly chaotic.

Not all is lost, however. Without fail, each new arcology teaches me new techniques and building plans. I am eager to return to Tlön and begin implementing what I've learned.

Until then, please find the attached .txt file and return it to the Arcologist's Workshop for analysis. Who knows what secrets it may hold...

*Sincerely,
Virgil McCade*



MAPS

“A sun-bleached scrap of paper drifts down the causeway...”

```
16 8 Atlantis @virgil
13 6 shrine
13 5 hydroponics
13 8 spomenik
3 2 aviary
7 4 maze
7 5 topiary
16 7 fracture
16 5 auton
4 4 aviary
1 1 hive
7 7 hive
5 2 rave
16 1 fracture
12 3 kudzu
9 8 maze
```

Learning Objective: Generate a Map

1. Arcologies can be represented and shared via .txt files called “maps.”
2. Copy this map to your clipboard.
3. Visit <https://tyleretters.github.io/arcologies-docs/mapper> and paste it into the input field.
4. Change the style of the map.
5. Adjust some of the numbers directly in your browser.
6. Adjust some of the structure names in your browser.
7. Take a screenshot with your operating system.
8. Keep this screenshot safe... your final project is to rebuild Atlantis!

SEED & SAVE

“History does not repeat itself, but it rhymes.”

RESEED CIVILIZATION	
> DESTROY & SEED NEW	
CELL POPULATION	16
NOTE RANGE MIN	40
NOTE RANGE MAX	60

STRUCTURES	
HIVE	ENABLED
SHRINE	ENABLED
GATE	ENABLED
RAVE	DISABLED

Learning Objective: Seed & Save an Arcology Tailored for Your Gear

1. Launch **arcologies**.
2. Arcologies can be randomly seeded. This is a great way to get inspiration and start making music fast.
3. Navigate to the norns parameters **EDIT** menu.
4. Scroll down and select > **DESTROY & SEED NEW** several times.
5. Change the **CELL POPULATION**.
6. Disable the structures that you do not want or cannot use. (See table on next page.)
7. Scroll up and < **SAVE MAP**.
8. Scroll up and < **SAVE ARCOLOGY**.
9. Let's retrieve the files! Visit: <https://monome.org/docs/norns/manage/> and connect to your norns.
10. Copy your files from `/dust/data/arcologies` and `/dust/data/arcologies/maps` to your computer.

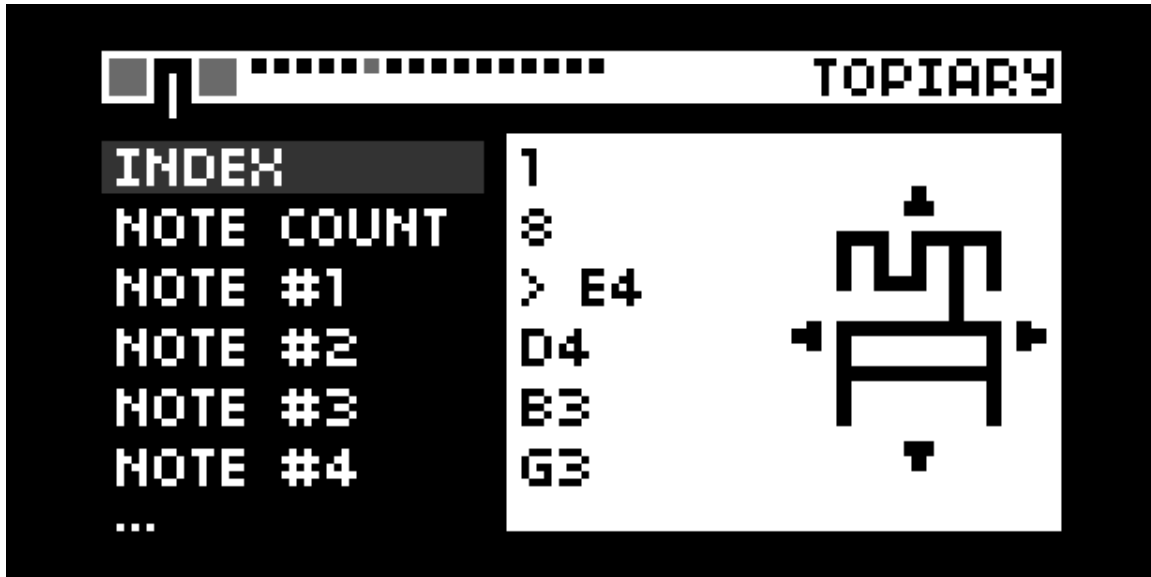
STRUCTURE CAPABILITIES



	NORNS	SAMPLES	MIDI	CROW
HIVE	X			
SHRINE	X			
GATE	X			
RAVE	X			
TOPIARY	X			
DOMES	X			
MAZE	X			
CRYPT		X		
VALE			X	
SOLARIUM	X			
UXB			X	
CASINO			X	
TUNNEL	X			
AVIARY				X
FOREST				X
HYDROPONICS	X			
INSTITUTION	X			
MIRAGE	X			
SPOMENIK				X
AUTOM				X
KUDZU	X			
WINDFARM	X			
FRACTURE			X	

CHORDS & MELODIES

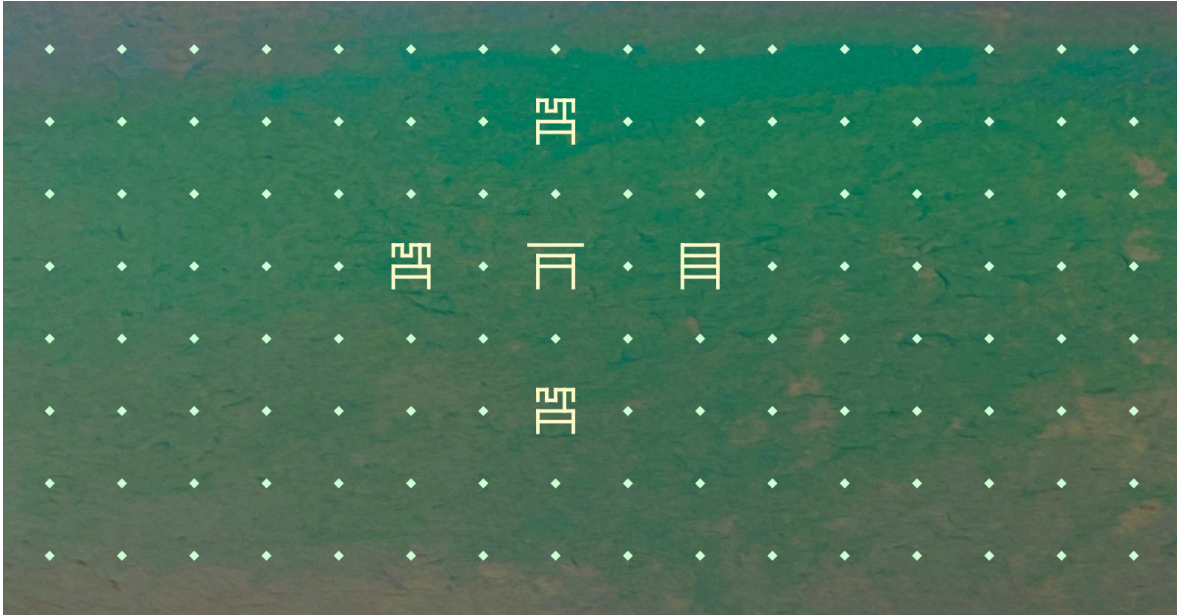
*“A dangerously innocuous structure,
the topiaries are endlessly groomed by the nuns and monks.”*



Learning Objective: Make Music!

1. Launch **arcologies** and, if you still have structures from previous exercises, hold norns key #3 to delete them all.
2. Create a structure by pressing any key on your grid.
3. Change the structure into a topiary by cycling through structures with norns encoder #2 and norns encoder #3.
4. Play with the various attributes of the topiary. What happens when you change the note count?
5. Navigate back to the main screen with norns encoder #1. Change the scale and root. What happened to your topiary?
6. Open some ports on the topiary by pressing the adjacent glowing keys.
7. Setup a hive (or rave or dome or maze) to send signals to the topiary.
8. Press norns key #2 to start playback.
9. Select the topiary. What happens when signals collide with it? Can you hear anything? You should!

CHORDS & MELODIES



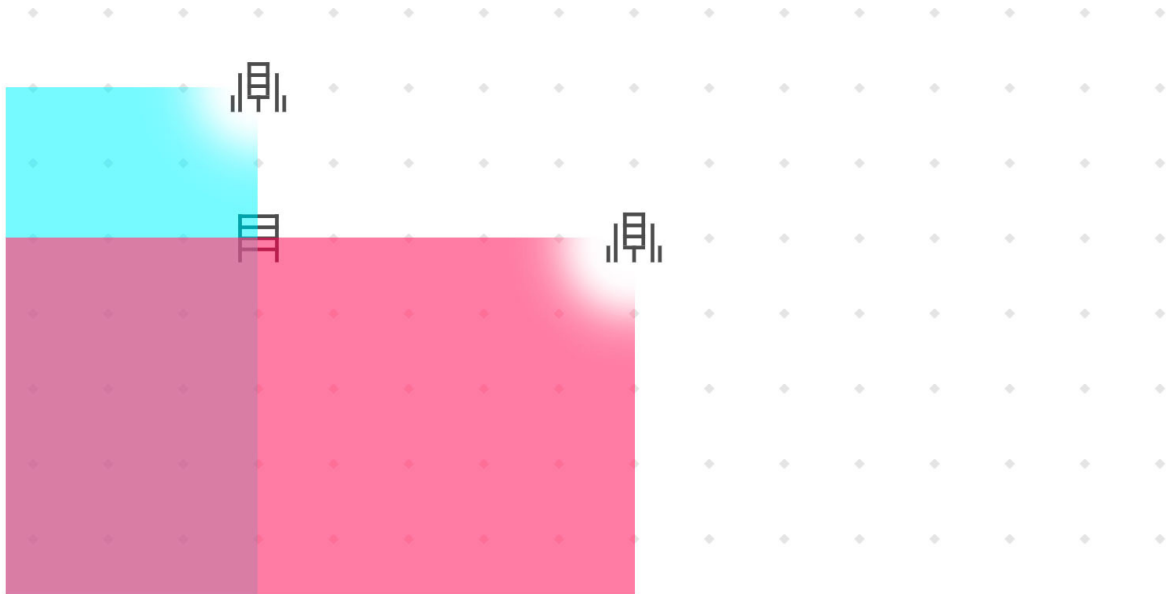
Learning Objective: Make Chords!

1. Using the above map as inspiration, make three topiaries play at notes at the same time to create a chord.
2. Which ports need to be open to make this arcology work?

Advanced Tip

Any new multi-note structure is randomly seeded with notes in the current scale. But if you copy and paste the topiaries, each will have the same note progression. Copy and paste structures by holding down the key on grid and then pressing any empty key.

MODULATION



Learning Objective: Modulate the Hive

1. Create two hydroponics that modulate the hive's metabolism but not each other's. To do so, configure their territories using the above image as inspiration. Both of these hydroponics have a **S/W** territory, but there are many (near infinite?) solutions to this.
2. Set one to **ADD** and set the other to **SUBTRACT**.
3. Make sure the hive is sending signals to each.
4. What would happen if you moved a hydroponics closer? Further away?
5. How might the **SET** operator be useful?

Advanced Tip

Many structures besides hives have metabolisms. Metabolism usually controls the rate of signal creation, but sometimes (like in the case of mirages or kudzu) it doesn't. Try modulating another structure besides a hive! Domes are euclidean rhythm generators. Mazes are Turing machines (analog shift register). These are especially fun targets.

FINAL PROJECT



Learning Objective: Collaboration!

1. Your final project is to build Atlantis with a small group and/or partner!
2. Create a new arcology inspired by either the map from Chapter 1 or one of the adventures from the Epilogue.
3. Save your arcology and send it to another member in your group.
4. Build off the arcology you just received from your team mate.
5. Generate a map (and audio if you can) for final critique.
6. Finally, we'll go around the room and everyone will have a chance to share their arcology and something they learned.

ADVENTURES

Narratives

A kudzu garden surrounded by crumbling institutions. One day, they will fall and the kudzu will escape...

It was absolutely marvelous – an entire arcology powered by a single windfarm. With each structure, the signal split into more and more...

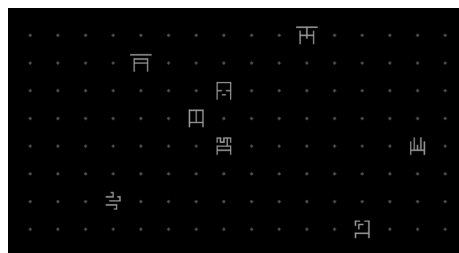
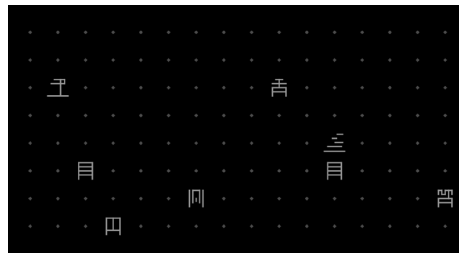
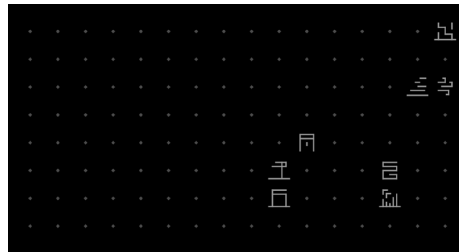
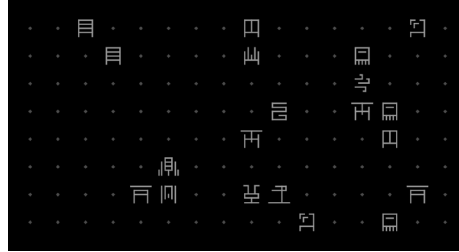
The arcology had seven gates and each gate only had two ports active. They seemed to always be inverting.

The arcology made no sound, but instead was a “light painting.”

At the arcology center, four raves. At the perimeter, so many topiaries and crypts. A beautiful dance of life and death.

A sparse place filled with mirages and shrines...

Maps



Missions

Download the crypts community sample pack. Recreate Brian Eno's 1/2 with the “airports” crypt. <https://github.com/tyleretters/crypts>

Create a poly-rhythmic arcology based on 3/4, 4/4, and 7/4 signatures.

Reproduce “Ode to Joy” with only shrines and one hive.

Seed an arcology with 32 structures and build something musical only by deleting structures and changing their attributes.

Create a self-modulating system with no less than three hydroponics and two domes.

Use institutions to create a “pinball machine” for signals.

Search for an ancient map online and use it as inspiration to make an arcology.

Visit <https://tyleretters.github.io/arcologies-docs/gallery> and reproduce something cool with your own style.

Advanced: In the code, try changing the “PolyPerc” engine to something else: <https://github.com/tyleretters/arcologies/blob/main/lib/t#L8>