Shang Mu Architect
Help Manual

Introduction

1. Foreword

After Brevon's defeat, it became clear to us that threats from other worlds are very real. Invasions of Avalice will not stop here; it is not a matter of if, but when.

Through unmatched teamwork, our world's greatest warriors proved their potential, but greater terrors than even Brevon may lie in wait. We, at Shang Mu Academy, have received upgraded funding from Mayor Zao, to expand our facilities and advanced combat training programs.

You, architect, will assist me in building training rooms, combat arenas, and gymnasiums deep within the remote forests of Shang Mu, all in the name of teaching a new generation of heroes . The survival of our world may depend on it!

My name is Savvy Marigold. I am the lead architectural oversight developer of Shang Mu Academy. My mission is to teach you everything I know. Our training arenas should be challenging, but most importantly, safe and open for all!

It is very nice to meet you, architect! Let's get started!

2. Editor Controls

Keyboard

WASD: Pan camera

Space: Place a tile, or move a tile that was already placed
Left click: Click a menu button/Place a tile, or move a tile that was already placed
Right click: Click a menu button/Delete a tile underneath the cursor
Middle click wheel pressed: Copy a tile underneath the cursor
Middle click wheel scroll: Zoom in or out

C: Copy a tile underneath the cursor
E: Delete a tile underneath the cursor
X: Zoom in
TAB: Open the tile menu

CTRL: Change the size of the grid
SHIFT: Change between Automatic Tile-Switching Mode, and Manual Tile-Switching Mode
1: Raise current layer
Q: Lower current layer

Controller

Left stick: Move cursor
Right stick: Pan camera

A: Place a tile, or move a tile that was already placed
B: Copy a tile underneath the cursor
X: Delete a tile underneath the cursor
Y: Open the tile menu

LB: Lower current layer
RB: Raise current layer
LT: Change the size of the grid
RT: Change the current zoom level

Select: Change grid movement mode
Start: In play test mode: End play test mode / In editor mode: Return to the main menu

Additional Controls

F1: Enable debug view, and advanced sensor view, in player mode
F2: Reset game (Unsaved progress will be lost!)
F3: Cycle backwards through controller slots
F4: Cycle forwards through controller slots

F5: Save the current map file (Only works in editor mode.)
F6: Manually toggle the type of controller currently in use. (Xbox/PlayStation/Nintendo)
F7: Resize game window
F8: Alternate between vertical sync, or no vertical sync (Use the method that works best for you!)

F9: Enable controller overlay
F10: Adjust zoom level in player mode (Only while debug mode is turned on!)

F11: Mute or unmute music
F12: Take a screenshot

Pause Break: Enable debug profiler overlay (Useful for testing the performance of your stage!)

Alt+Enter: Switch between fullscreen and windowed modes

1: Change character to Lilac
2: Change character to Carol
3: Change character to Milla
4: Change character to Carol on her bike

(Note: Laptop users may need to press the FN key first to use these hotkeys. Press and hold FN, then the function key you want.)

3. How To Play

In Shang Mu Architect, the player has a roster of three characters to choose from: Lilac, Carol, and Milla.

There is more to these girls than meets the eye! They are varied and adept in their unique capabilities, if not made stronger by the power of their friendship! Please read below if you would like to learn more on how to play as them.

The Heads-Up Display (HUD)

Because Shang Mu Architect is a recreated simulation of Freedom Planet, it bears a similar heads-up display! (HUD) The rules of play are similar because of it.
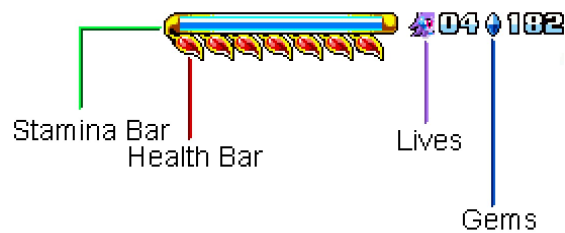
Stamina Bar – Special moves require a special form of energy! Some moves only work when this bar is full, (e.g, Lilac's Dragon Boost) or while there is some stamina left in the bar. Keep an eye on your stamina, so you are always prepared to deliver the hurt to baddies!

Health Bar – Your life force is split into several health petals on the HUD! Each petal represents two health points. (i.e, "HP") Lilac and Carol have 14 HP, while Milla has 10 HP. The girls are tough, but once they run out of health petals, they are knocked out and returned to a previous checkpoint!

Keep an eye out for health petals scattered across a stage, to restore your health, or collected a shield to give yourself +2 HP!

Lives – Each time you are knocked-out, (i.e, KO'd!) one of your lives are spent so you can return to a previous checkpoint. Once you run out of lives, the "game over" screen is displayed, and you are returned to the stage select screen.

Collect 1ups scattered across a stage to restore your lost lives!

Crystal Gems – Gems are a girl's best friend! Collecting one adds 5% to your stamina, if it is below 100%, and if you have collected over 200 gems, a 1up appears before you!

Collecting health petals while your health bar is full grants you 5% more stamina, as well!

The Goals of the Game

Timer————01:59:81
Targets————
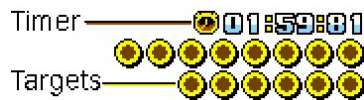
What separates Shang Mu Architect from Freedom Planet, however, are its goals. There are two types of game play goals!

Reach the Target - Reach the brass target placed at the end of the stage, and hit it to complete the stage! Tin targets are placed along the way, acting as checkpoints. Hit a tin target, and you will return to it if you are knocked out. These stages are much like your traditional platformer stages.

Note: Hitting the tin targets is optional! If you want to save time, you can skip hitting them. Hitting the brass target always results in a win condition, no matter how many tin targets you hit!

Hit the Targets - All brass targets must be hit in order to win! These stages are non-linear and have no checkpoints, be careful! Which directions are the fastest routes is entirely up to you!

The timer is used to keep track of how much time it takes to complete a stage! Each time you clear it faster than before, a new personal best record is saved to the stage's file! Share your best times with your friends in a friendly game of competition, if you like!

Note: The timer is not, however, used to limit how long you can spend in a stage! You will not get a knock-out for "taking too long" to complete any stage! Wouldn't that be cruel?

Basic Controls

Keyboard

Arrow Keys: Move left or right, or look up or down
Z: Jump
X: Attack
C: Special
S: Switch
Enter: Pause

Controller

(Note: Xbox controllers are assumed)

Analog Stick: Move left or right, or look up or down
Directional Pad: Move left or right, or look up or down

[icon] : Special Attack

[icon] : Jump

[icon] : Attack

[icon] : Switch

[icon] : Pause

In-Game Moves List

For those who prefer in-game tutorials and/or learning resources, Shang Mu Architect features a built-in dynamic moves list, that changes the displayed moves based on context. Simply enable the moves list via the options menu in the pause screen!

The moves list adapts its displayed buttons to your assigned buttons for both Xbox and PlayStation controllers, as well as assigned keys on your keyboards!

(Note: Shang Mu Architect will detect your controller automatically, but if that fails, press the F6 key to manually toggle your displayed buttons between Xbox, PlayStation, and Nintendo console buttons! Xbox buttons are assumed by default.)

Playable Characters Moves List

Lilac

She is the leader of the trio, and the most headstrong to match! Seemingly nothing gets past her dragon boost and hair-defying offensive technique! Lilac's unshakable determination gives her the strength to see any mission through.

Normal Attack: ⊗

Lilac's hair whip works on the ground as well as the air. They are faster when she is also running faster!

Crouch Kick: ⬇ + ⊗ (While standing still)

Sometimes, you need to kick evil in the shins! This attack deals less damage than any of Lilac's other attacks, but the crouch kick really shines when you need to keep up your attacks while dodging overhead enemy fire!

Ground Cyclone: ⬇ + ⊗ (While moving)

Lilac performs her cyclone attack on the ground! The player can jump off of angled slopes at high speeds to achieve much greater heights while jumping!

Rising Slash: ⬆ + ⊗

This uppercut attack rises high into the air! Airborne enemies, beware! It must be started from the ground; it does not execute in mid-air.

Dive Kick: ⬇ + ⊗ (While in mid-air)

The dive kick is useful both in combat and platforming scenarios! Use it to drop hard and fast onto your enemies, break boxes on your way down, or land on a downhill slope for a great running start!

Cyclone: ⊕ (While in mid-air)

Lilac's cyclone attack allows her to slow her fall, and deal passive damage on the way down! Use it to keep your enemies stunned, or gain extra height with your jump!

Note: Cyclones use 0.25% of your stamina per tick. Keep an eye on your stamina meter!

Dragon Boost: 🔋

Use your head and see where it takes you! The dragon boost is a widely applicable attack, and you are temporarily invincible for its entire duration! Press the special key/button on the ground to boost forward, or hold Up to soar high into the air.

It can even be used in mid-air; hold either Up or Down to change your direction before the boost starts!

Note: The dragon boost uses a lot of stamina! Keep an eye on your stamina meter!

Carol

This spunky wildcat will never let you down! Her prowess in hand-to-hand combat, climbing, and bike-riding is unparalleled amongst the trio. No obstacle slows her approach, she can even drive up ladders on her bike! Carol is a driven force to be reckoned with.

Carol - When Dismounted From Her Bike

Normal Attack: ⊗

Carol's slashes work on the ground as well as the air. The moment your attacks make contact with an enemy, her attacks speed up, and deal damage faster! Keep tapping ⊗ to maintain your combo!

Pounce: ⬇ + Ⓐ, or while in mid-air, press Ⓐ

When you need a quick speed boost, or a change of direction, pouncing is one of Carol's best maneuverability tools! Simply crouch and tap the jump button, or press the jump button while in mid-air.

Roll: While on the ground, press ⬇

That's no pinball! Carol is able to curl into a ball and roll forward by simply holding Down! This allows her to passively damage enemies and break boxes. Rolling presents a speed advantage on slopes, too!

Wild Kick: 🔳

Ever seen a wildcat rammed by an attack cruiser, and survive without a scratch? Carol's furious wild kicks are truly unstoppable! Simply hold 🔳 to perform the attack, and ignore all damage for the duration of the attack!

Note: Wild kicks use a lot of stamina very quickly! Keep an eye on your stamina meter!

Wild Claws: Pounce or roll, then press ⊗

Carol has another trick up her sleeve: She can deal even more damage than her normal attacks with her wild claw attack! This single heavy slash attack can be chained in rapid succession, as well; there is no cool-down time, pummel away!

Wall Climbing: Hold left or right against a wall

Carol can climb up walls, too! Simply hold forward against a wall, and either gently slide down, or jump again and again until you're above the wall!

Jump Kick: ⬇ + Ⓐ, while in mid-air

This downwards kick only works in mid-air, but it works wonders to vary your attacks, and it's easier to use than the wild claws!

High Kick: ⬆ + Ⓐ

This uppercut kick works on the ground, and in mid-air. It's a powerful, short-range kick that turns robots into scrap faster than you can say "Sushi"!

Carol - While Riding Her Bike

Dismount: While idling, press ⬇, then Ⓐ to hop off of the bike! Jump on the bike to mount it again!

Nitro Boost: 📱

Carol's bike can boost endlessly for extra speed! Be wary of your stamina meter, it costs energy to use the nitro boost.

Air Spin: While in mid-air, press Ⓐ

The bike's air spin doubles as an attack and a double jump! Knock enemies out of the air as you gain more air yourself!

Note: The air spin uses stamina, too! Keep an eye on your stamina meter!

Wild Claw: While in mid-air, press 📱

Same wild claw attack as before! The difference here is that the wild claw only works while you're in mid-air, when mounted on the bike.
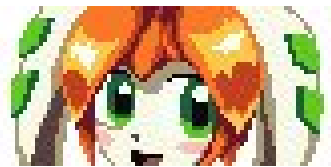
Milla

Don't let her quadrupedal stature and puppy dog eyes fool you, this pup is dynamite! She can fly with her ears for brief periods of time, throw heavy objects, and stir chaos with her phantom cubes. Milla's alchemical expertise changes the course of any battle.

Dig: While on a grassy surface, hold ⬇, then tap ❌ repeatedly to dig up gems and petals!

Puppy Float: While in mid-air, hold Ⓐ to float upwards for as long as you have stamina! Watch your stamina meter!

Summon Cube: Hold ❌ to spawn phantom cubes over Milla's head! Throw them by pressing again!

Shield Burst: While not holding a phantom cube, hold 📱 to raise up an energy shield! You can aim this shield in any direction with the d-pad.

Release 📱 to burst the shield as a short-range energy beam. This can be useful in a pinch!

Super Shield Burst: While holding a phantom cube, hold 📱 to transform your cube into a shield! Keep holding 📱 and press in any direction to aim the shield. Some enemy attacks can be blocked with the super shield!

Release 📱 to unleash a powerful, long-range energy beam! This burst deals a lot of damage, and its recoil is useful for platforming as a mini-double-jump, too!

Pickup Items: Milla can also pickup a lot of items, and throw them like phantom cubes! Simply press ❌ while standing on top of an item, and you are ready to go!

Change Cube Types: Milla can switch between two different types of cubes! Simply tap 📇 to switch cube types, while not holding a cube, then Milla will cycle between two cube types.

Green phantom cubes explode when they land! They can also be used to form a shield with the Shield Burst and Super Shield Burst techniques!

Bomb cubes behave differently from phantom cubes. They slide around upon landing, and absorb all damage they take, from either enemies or Milla, until they grow so large, they explode like a giant bomb!

Bomb cubes can also be bounced on by Milla, like a spring. Beware that the bomb cube will shrink, then pop, after so long, and each time Milla bounces on it, or against its sides, the cube shrinks slightly. This applies to any enemies bouncing off of bomb cubes, as well.

Note: These cubes cannot be used to form a shield; Milla will switch back to her phantom cubes to form a shield, if you are currently not holding a bomb cube!

Additional Note: This ability is not in line with the official Freedom Planet canon. This is a special ability unique to Shang Mu Architect; it is not seen in official games. Milla, despite her best efforts to tame the bomb cubes, deemed them too dangerous after the events of Shang Mu Architect, and instead experimented further with her phantom cubes' potential for combat.

Simple Editing

1. Placing Tiles

You will notice the A button on the Xbox controller (X on PlayStation) has two different prompts that can appear on the sidebar: "Place", and "Move". If there are no tiles underneath the cursor, it will be in "Place" mode, whereas if your cursor is hovering over a tile, it will be in "Move" mode.

Place mode allows you to place tiles down, whereas move mode allows you to pick up and move a tile. You can press and hold to drag tiles around, then release to place them back down.

Hovering over a tile also displays directional arrows over the tile. Clicking and dragging the tile by their corners allows you to repeat them as many times as you want!

Move mode, most importantly, changes your current layer for you while hovering over previously placed tiles, so you can pick it up without having to adjust your layer type beforehand.

For instances where auto-tile-switching mode presents a problem, (Such as placing a flat surface tile in-front of a scenery tile that was already placed.) you can switch to manual mode to control selected layers yourself, then click the mode switch button again to return to automatic mode.

2. The Tile Menu
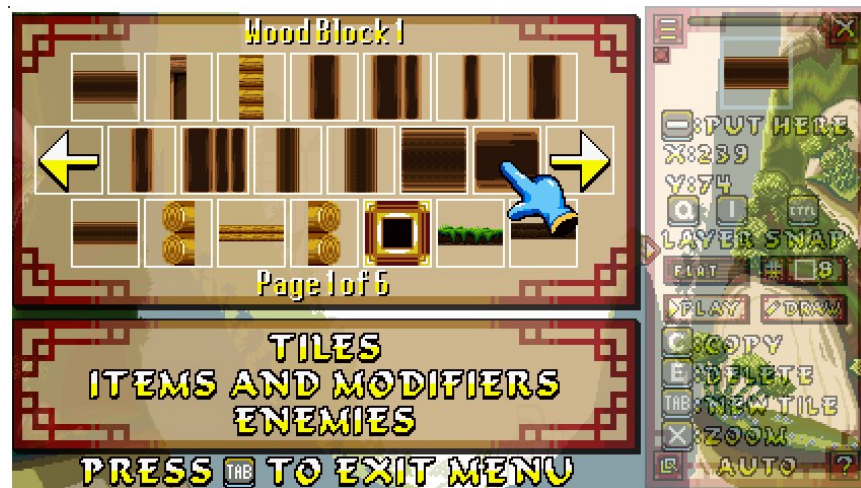
This is where all of your tiles, items, gimmicks, and even enemies, are for placing on the canvas. A varied suite of tiles and objects are always readily at your disposal from this menu.

Click the tile icon on the editor's sidebar, or press the Y button on the Xbox controller, (Triangle on PlayStation) to open the tile menu; hotkeys on the keyboard also close and open the menu on-demand. You may also click on the sidebar to close the tile menu.

3. Must-Have Objects
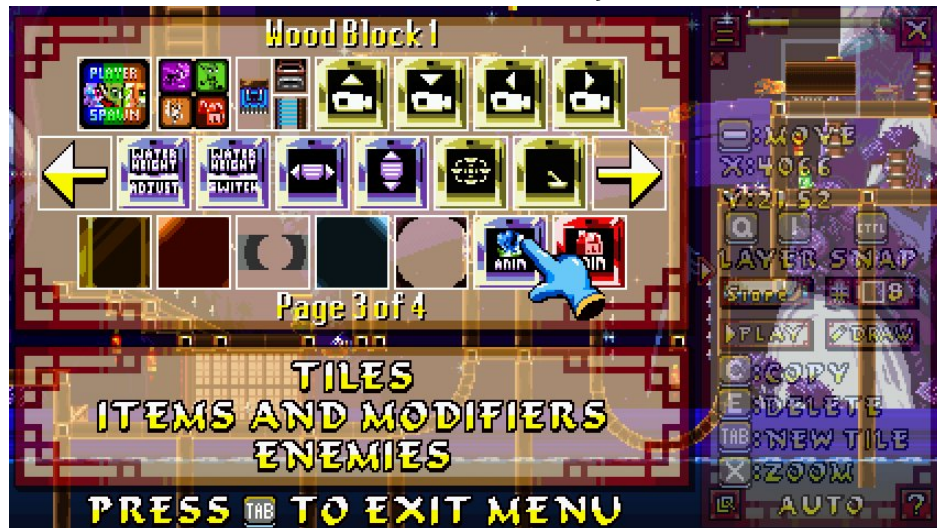
Modifiers allow for (optional) animation of certain item tiles, placing moving platforms, modifying their paths, adjusting the camera's boundaries and height of the water level, as well as setting the player's spawn point. These objects are essential for making your level function nicely!

Camera boundaries, moving platforms, and loop-de-loops feature in their own dedicated articles, in the following sections; the rest are described here:

Spawners

Universal player spawner. This is the starting point of the player in your stage! Any character can enter your stage from this spawner.

Lilac spawner. Only Lilac will be spawned in your stage, even if the player has selected another character.

Carol spawner. Only Carol will be spawned in your stage, even if the player has selected another character.

Milla spawner. Only Milla will be spawned in your stage, even if the player has selected another character.

Carol's gas can spawner. Carol will be spawned in your stage, starting off on her bike, even if the player has selected another character.

Key cards and Doors

Key cards are used to unlock doors through a nearby terminal! The player can carry as many keys as they like!

Key card terminals accepts key cards for unlocking doors. Simply place the key card terminal within a range of 128 pixels of a door object, and you're good to go!

 Laser doors are solid, and harm players if they touch them! You must insert a key card into a nearby key card terminal to deactivate the door's lasers.

(Note: Earth shields provide immunity from damage by laser doors. However, the player still cannot pass through them.)

This is the full scanning range of the key card terminal; any doors placed beyond this range will not be detected by the key card terminal.

Water Height Adjusters and Switches

 This water height adjuster object sets the height of the water level in the stage. Wherever it is placed in the stage, the water level will instantly rise up to its point! Only one object is needed per stage, and must be kept in order for the water level to be persistent, upon saving your stage.

 This water height switch allows you to adjust the water level dynamically while playing a stage! Simply place it over a switch tile, and watch the water rise up to the switch's level upon pressing it!

Shield Flower Decorators

You can place these over the player spawner, and they will start the stage with an earth shield!

You can place these over the player spawner, and they will start the stage with a fire shield!

You can place these over the player spawner, and they will start the stage with a metal shield!

You can place these over the player spawner, and they will start the stage with a water shield!

You can place these over the player spawner, and they will start the stage with a wood shield!

4. Grid Snapping

Everything you place is laid down on an 8x8 grid by default, and many tiles with non-standard resolutions have their origins pre-adjusted to comply with standard grids, but you will want more control over the placement of your tiles and objects in some cases.

You can choose 1x, 2x, 4x, and 8x respectively, by clicking the grid icon on the sidebar, or press RT on the Xbox controller. (R1 on PlayStation)

1x allows you the full freedom to place tiles precisely where you want them, whereas placement is more restricted at higher grid sizes, for easier placement of tiles.

The visual grid is disabled by default. It can be re-enabled by clicking on the grid icon with the mouse, or pressing the Copy button. (C by default, on keyboards.)
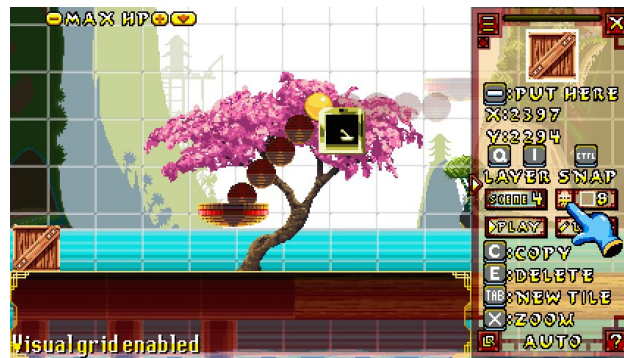
Note: The grid is largely a visual aid, for aligning items or tiles along a horizontal (or vertical) line. It does not reflect the real internal grid used by the editor.

The nature of games like Freedom Planet, as simulated here in Shang Mu Architect, demands greater precision for the placement of items and objects than a 32x32 grid allows. It is, however, still provided as a convenience.

5. Items and Gimmicks

One of the most essential features of a stage are its items and gimmicks. Stages would be empty places without them!

<u>Collectables</u>

Crystal shards increase the gem count, and each one the player collects boosts their stamina bar by 5%. Collecting 200 crystal shards grants one extra life! These are the most common items found throughout a stage.

Health petals increase the player's health bar by 1 out of 14 HP, and if they already have a full health bar, health petals increase their crystal shard count by 1 instead. These are usually placed at strategic points in a stage.

Crystal flowers drop several crystal shards each. They are quite useful for a quick energy boost!

Petal flowers drop six health petals each. These are typically useful health boosts before a challenging section of the stage.

Crates drop several crystal shards each. Mysteriously, gravity does not apply to them.

1ups grant the player one extra life! Attack their cages to free them, but be careful, don't let them hop away!

Air bubbles refill the player's breath gauge instantly! Generous placement of these air bubbles is great for beginners, whereas strategically placed bubbles may challenge seasoned players.

Gas cans allow Carol to hop on her motorbike! If the player has already used a gas can previously, they cannot pick up another one, unless they hop off of the bike. (Note: Milla can only pick up gas cans and throw them, like bomb flowers, whereas Lilac can't interact with them at all.)

Brass targets appear in both "Hit the Targets!" and "Reach the Target!" game modes. In the former, hitting them reduces the player's target count by 1, while in the latter, hitting a bronze target clears the player's entire target count.

Tin targets are exclusive to the "Reach the Target!" mode. Hitting them creates a checkpoint at the player's location, where they will respawn if they die.

Bronze targets are exclusive to editor mode. They appear in the place of brass targets, and respawn after they are destroyed; quite useful for testing purposes.

 Key cards open locked doors, via key card terminals placed nearby them. The player can carry as many key cards as they like!

Shields

Shields protect the player from damage for a limited number of hits, before they are popped by damage from either enemies or hazards. They extend the limits of the player's health bar, and provide situational advantages based on the shield's elemental type! Please read below for further details.

Each shield's separate HP meter appears below the traditional HUD, whenever a shield is in use.

(Note: Lilac and Carol's shields have 2HP, while Milla's shields provide up to 3HP.)
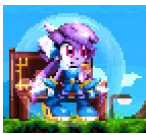
 Wood shields attract nearby health petals to the player! These petals are converted to gems when the player's health is at max capacity, much like picking up health petals normally.

 Water shields allow the player to breathe underwater, (Or even a vacuum!) for as long as the shield is active.

 Fire shields actively damage enemies upon contact, and protects the player from fire damage! However, fire shields will break upon contact with water.

 Earth shields attract nearby crystal shards to the player.

Metal shields grant the player immunity to damage from spiked surfaces in all directions, as well as immunity to electrical damage! (Note: They are not, however, immune to damage from enemies.)

Invincibility flowers make the player immune to all damage for 30 seconds! A timer appears on the HUD and flashes faster as the seconds tick by. Be aware of when the timer is about to stop!

Springs

Blue springs are useful for lightly bouncing the player in any of eight directions. They are applicable in many scenarios, experiment with them!

Gold springs are useful for strongly bouncing the player in any of eight directions, and must be used with more care. Experiment with them, discern what works best.

Variable resistance springs are useful for bouncing the player in any of four directions, at varying speeds! The harder the player lands on them, the harder it sends them flying! Experiment with them, and discern what works best!

6. Enemies

Placing enemies is simple enough; place them down on or above terrain tiles and watch them go!

There are, however, some notable differences in how enemies behave, compared to Play Mode. We will cover those here!

For instance, you will notice that placed enemies leave behind a "ghost", when they are first spawned. This is their starting position on the canvas. They will return to this position if the cursor hovers over the "ghost", for convenient copying, deleting, and moving. (Especially in cases where you might not be sure where the enemy has gone!)
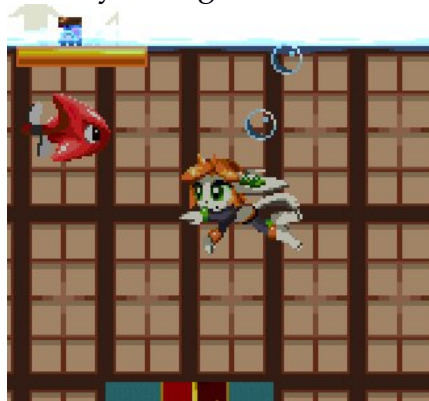
Enemies will also return to this position, if they are destroyed during play-testing. No worries about needing to replace them after they disappear! Defeat them as many times as you like!

7. Drawing Tools

Shang Mu Architect also offers drawing tools for your convenience, and further personalization of your levels!

Add your own details to scenery tiles, draw custom lanterns, write a message or give guidance to the player with directional arrows, draw fun doodles as easter eggs in your stages, etcetera, etcetera, etcetera! The possibilities are endless!

Simply click on the Draw button on the editor HUD, and you will be greeted to a host of new tools on the editor HUD, in place of the normal editor HUD. Click on the back button or the "exit" button on the HUD at any time to return to stage editing!

Current limitations, at the time of this writing:

- All drawn elements are handled on a single "art" layer, above all other tiles on a canvas. A sub-layering system is in the works
- The fill bucket tool is not ready yet
- Select tools are not available yet
- The color selector wheel is not ready yet
- Higher zoom levels than 200% are not available yet
- All drawn pixels are handled as tiles, instead of the planned system of mini-canvases controlled and drawn by nodes. Drawn pixels fill up the tile limit meter quickly, compared to placing terrain tiles. Keep that in mind while drawing!

All of these limitations will be addressed in future updates! Please be patient.

8. Game Modes

Break the Targets!

The premise of "Break the Targets!" is simple: Find all of the brass targets and destroy them to win. How the player achieves this goal can be entirely non-linear, and as challenging as the level designer wishes it to be.

Place only brass targets to mark your stage as a "Break the Targets!" stage.

Note: The placement of tin targets will change the mode to "Reach the Target!" instead.

Reach the Target!

"Reach the Target!" is essentially a linear platformer stage mode. A brass target is placed at the very end of the stage, and by hitting it, the player wins and their time is recorded.

Tin targets are placed along the way, which act as checkpoints if the player dies. The player can choose to take the time to hit the tin targets, or save time by ignoring them. It is a game of risk to improve their personal best records.

Placing tin targets sets your stage to "Reach the Target!" mode, regardless of how many brass targets you place. More than one brass target can be used as multiple endpoints for a stage.

9. Play and Edit Modes

Clicking the "Play" button on the sidebar disables editor controls, and spawns in the player character. You can use this to play test your stage in real-time, with additional information on the HUD to help you troubleshoot any problems you may encounter. Clicking the "Edit" button disables the player character and returns the editor to normal.

Note that the player's death state is disabled while in play test mode; their health bar will reset after it has reached zero, and they cannot drown, or fall into death pits; their Y position will reset to 64 pixels above the death pit if they fall into it.

If the player appears to "clip" above a certain platform, as you are testing, their crushing conditions were also disabled. In player mode, the player will normally be knocked-out in those scenarios.

Keyboard Controls

1: Switch to Lilac
2: Switch to Carol
3: Switch to Milla
4: Switch to Carol on her bike
Enter: Return to editor mode

Gamepad Controls

Press 🔳 while paused: Change characters (Does not work in editor mode!)

👉 : Return to editor mode

Note: Keep an eye on your object count, and FPS (frames-per-second) while in play test mode, to evaluate the performance of your stage.

10. Saving and Opening Stages

Saving Files

Once your stage is finished, or if you want to save your progress as you work, click the hamburger icon on the sidebar, and choose either Save or Save As from the file dialogue menu.

(Note: You can also press the F5 key to save files! Save often, as always!)

Save brings up the save window, if there wasn't a file previously saved in the current session, and if there was, it keeps saving all changes to the same file, while Save As always brings up the save window.

You can write the name of your stage, your author name, and a brief description of your stage, here.

(Disclaimer: Use an alias, instead of your real name, when distributing stage files online.)

If you would rather not save your stage, click the sidebar or "Cancel" on the save window.

(Note: Be organized with file names. Giving a file the same name as another will result in that stage being overwritten by the new file.)

Opening Files

To open a previously saved stage, or a stage that was shared with you, click the hamburger icon, then click Open from the file dialogue menu.


You will be greeted to a list of stages stored in the Maps folder, in Shang Mu Architect's root directory. Click the up or down arrows to scroll through stages, then choose a stage by clicking on its file name. Click open to restart the editor and load the stage.

(Note: Any progress not already saved from the previous session will be lost. Save your progress before opening another stage.)

11. Sharing Your Stages

Sharing stages with your friends, either locally or online, is paramount to improving your skills as an architect. To share your stages with someone else, open Shang Mu Architect's directory and look for a "Maps" folder. Within that folder, you will find all of your previously saved stages.
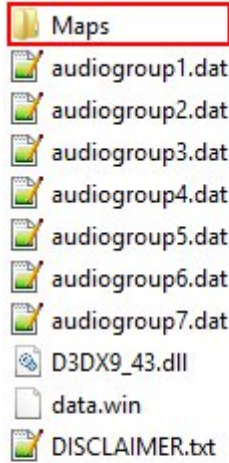
Find the stage you want, and copy it to a flashdrive, SD card, or even a floppy disk.

If you would like to share your stages online, consider joining the Shang Mu Architect Discord! Upload your stage in #map-releases, then discuss it with others in #map-discussion.

https://discord.gg/HMezeSn

Advanced Editing

In this section, we will cover more complex topics about stage editing that, while not necessary for beginners or casual editors, are vital for editors who want more complex and challenging stages.

1. Layers

Layers as a concept is largely abstracted away from the user, and in many cases, it is not necessary to worry about them. However, once more detailed scenery or demanding layouts are needed, it becomes important to learn the basics of the layer system, to get the most out of your stages.

Every aspect of the collisions and scenery in Shang Mu Architect are partitioned into layers, like so:

0: Flat Surface Tiles
1: Slope Surface Tiles
2: Floor-Over-Floor Tiles (FOFs)
3: Item Tiles (These will be removed in future updates.)
4: Scenery Tiles
5: Scenery Tiles
6: Scenery Tiles
7: Scenery Tiles
8: Scenery Tiles
9: Scenery Tiles
-1: Scenery Tiles
-2: Scenery Tiles
-3: Scenery Tiles
-4: Scenery Tiles
-5: Scenery Tiles
100000: Flag Tiles
Objects

(There are two or more additional flag tile layers, but tiles on those layers are directly controlled by objects.)

Tiles

How tiles are drawn is greatly affected by what layer they are on. Scenery tiles 4-9, for instance, are drawn behind flat surface tiles, slopes, moving platforms, and item tiles, whereas scenery tiles -1 through -5 are drawn above the rest.

Objects

Objects function dramatically different from tiles, and thus have their own layer. You can tell an object from a tile by whether or not the "object" graphic is on the layer icon. The object layer warrants further explanation:

It is an abstract layer to simplify the user's understanding of the interface, so it is technically not a true layer. While objects and tiles can be layered over or underneath each other with differing or similar depth values, they cannot share layers with each other, so it is important to keep them as visually distinct as they are technically.

In automatic layer-switching mode, both objects and tiles can be interacted with freely, as long as your selected item is a tile. If you have selected an object, only other objects can be interacted with.

In manual layer-switching mode, tiles are exclusively detected if you have selected a tile from the tile menu, whereas if you have selected an object, only other objects can be interacted with.

Word of Caution

While you can place as many objects and tiles as you want in Shang Mu Architect, objects can adversely impact performance on low-end computers if many of them are placed in dense concentrations. (For instance, building a bridge entirely with 1ups instead of wooden tiles.) Please be conscious of how many objects are placed in each area of your level.

There is also a hard limit on the number of tiles that can be placed, to prevent performance drops on all computers. The editor allows up to 16,000 tiles per stage. Reaching this upper limit normally is difficult, even for long stages; regardless, it is important to keep in mind.

This tile limit meter above the displayed item, on the editor HUD, shows you how close you are to reaching this upper limit, and flashes red in the event that you have placed a 16,000th tile. The editor will prevent you from placing more tiles until some tiles have been deleted.

2. Moving Platforms

What is a world without platforms floating in mid-air? There are four types of moving platforms in Shang Mu Architect:

Horizontal and vertical moving platforms

Horizontal and vertical moving platforms are stage staples! Simply click and drag the moving platform controller from the start of the path you would like for your platform, to the endpoint of that path.

Release the button, and you are done! A line is drawn where the path starts and ends, and there are flag tiles at each end of the path, to control the direction of your floating platform!

Note: Horizontal platforms are locked to a horizontal path, while vertical platforms are locked to a vertical path.

Pinwheel platforms

The pinwheel is four floating platforms all moving together along a predefined circular path. Its object spawns all of the necessary tiles for you, and starts controlling their movement automatically. Simply place it and move it as you please!

Pendulum platform

The pendulum platform is simply one floating platform that swings back and forth in a rapid motion. Its object spawns all of the necessary tiles for you, and starts controlling its movement automatically. Simply place it and move it as you please!

3. Loop-De-Loops

Loop-de-loops allow the player to run through an elliptical structure, in a great show of speed and finesse. There are two types of loops, so please read carefully!

Classic Loop-De-Loop

The classic loop is one of the simplest loop structures to create! The player runs through the left end, then exits the right, and visa versa! There are two ways to place them:

Simple Mode:

Select the "Loop Logic Controller" from the "Items and Modifiers" page on the Tile Menu, then search for the spot where you would like your loop to be, and place it! (Zoom in or out as you need to.) It's that simple! Congratulations on making your first loop!

Advanced Mode:

For instances where you may have already made a loop with tiles yourself, you can optionally place a Loop Logic Controller at any point over an existing loop.

Simply place the Loop Logic Controller from the "Items and Modifiers" page, on the tile menu, over your loop, and you are done! Congratulations on making your first loop!

Assuming all went well, you should now see the Loop Logic Controller placed over the loop, and collision boxes drawn all over the loop, to show you that it is automatically handling layer-changing on its own.

If the loop was not setup correctly, however, the Loop Logic Controller may report an error, and it will be as specific as it can in the error message console to help you fix it! Like so:

As you can see, this process will not work with double-sided loop pieces; only inside loop pieces. Using any other tiles to complete a loop may not work.

Loop Exits

Running through classic loop-de-loops is fun! However, what if you would like the player to exit one point of the loop, to run on the neighboring wall? The Loop Logic Controller is not designed for that!

This is where the Loop Exit object comes in handy! By simply placing it on the point along the loop, where you would like the player to exit, it will do the rest for you.

Make a loop, like so:

Then, place the Loop Exit object, from the "Items and Modifiers" section of the Tile Menu, at the bottom-left corner of the loop:

Now, the player exits the bottom of the loop, while the Loop Exit object is handling everything for you!

4. Debug Mode

In Shang Mu Architect, you also have tools to reveal more detailed information about the properties of objects in your stage! These are useful for troubleshooting issues with stages, as well as learning how various objects can work to your advantage.

Debug Mode has two different forms: One for play mode, and another similar mode for the editor.

Play Mode

By pressing F1 in play mode, you can see all active collision sensors and detailed player stats, as well as enemy health and debug information for your stage's various controller objects.

Pressing F1 again reveals even more information about the player's collision sensors!

Context-sensitive sensors, such as those related to mixed surface collisions, will appear and disappear based on their conditions, while active sensors will remain on-screen most of the time. (Also based on context in some cases!)

It is highly recommended that the advanced sensor view be enabled while recording videos of bugs you would like to report.

The sensor view provides a better understanding of how the collision systems in Shang Mu Architect behave, and allows the developers to see where the collision system is misbehaving and when.

Below the characters section of the debug HUD, you will notice an origins list of what sensors each colored stone group represents:

Blue: Flat surface sensors
Cyan: Flag tile sensors
Green: Slope surface sensors
Pink: Flat wall running sensors
Orange: Edge sensors

(Note: This origins list is exclusive to play mode.)

Editor Mode

The editor also has its own Debug Mode! Enable it by clicking on the advanced object viewer button below the hamburger icon, on the editor HUD.

As with play mode, object properties are visible while debug elements are enabled, as well as the player's collision sensors!

5. Tile Properties Window

Simply hover the cursor over a tile, and you will be greeted to a tile properties popup menu above the tile. Moving the cursor away from the tile causes the pop-up to disappear.

The properties available for you to modify will vary based on the surface type of the tile. Decoration tiles can be horizontally or vertically flipped, and even have their transparency adjusted, while slope tiles only allow their transparency to be adjusted. Build a ghost house out of ghost wood, if you like, because you can!

(Note: The properties of item tiles cannot be modified at all, and neither can flag tiles, or floating platform tiles.)

6. Camera Boundaries

There is a hard size cap on all stages made in Shang Mu Architect, 16,000x4,000, which mirrors the typical size of a "frame" in Freedom Planet, but if you would like to produce a smaller stage, you can arbitrarily set those camera boundaries yourself.

The camera objects in the "Items and Modifiers" section of the tile menu, allow you to do this. Do note that the top-left corner of each camera object represents the X/Y position where the camera boundaries will be set.

These camera objects can be placed wherever you like, only one parameter of the camera's boundaries are set by each object.

Top: Affects the ceiling of the stage
Left: Affects how far the camera can scroll to the left
Right: Affects how far the camera can scroll to the right
Bottom: Affects where the bottom of the stage will be

The player character will largely treat these arbitrary camera boundaries as solid walls, whereas the bottom camera boundary is treated as a death pit.

(Note: Lilac's dragon boost will not bounce off of left or right camera boundaries, and Carol cannot wall climb off of them; nor can Carol's bike drive up or down them. You will need to place flat surface walls nearby the camera boundaries to achieve that effect, if you want it.)

(Additional Note: For many reasons, the camera boundary objects do nothing while in editor mode; you will only see their effects in player mode outside of the editor.)

7. Health Modifier

At all times, you can modify the player's starting health as you like in the top-left corner of the screen. Simply click the down arrow to lower the menu.

This will affect how much health the player starts your stage off with, either a full health bar, or only part of their health bar. Simply click the minus and plus icons to change the values.

You will notice that the health petals are colored a fall orange while in editor mode. This is to indicate that the player is invulnerable in this state; the player is disabled and stops drawing their player sprite until they are reactivated in play test mode.

This is useful for balancing the desired difficulty curve for your stage, but do keep in mind the range of skill levels your players may have when modifying their starting health.

Conclusion

That should cover the basics! Thank you for taking your time to learn how to play Shang Mu Architect! It is my hope that this manual is a useful reference, as you bring all of your new, exciting ideas to the canvas, and experiment with everything the editor has to offer.

If you are ever frustrated, and need answers this manual cannot provide, or there is something wrong with the editor, don't forget to visit our community. You can receive help from fellow architects like yourself, and report issues directly to our staff!

I am happy to play a small part in your journey of studying stage design. It is my hope that being an architect is not only fun, but sparks those wonderful sensations of fulfillment, while you played and created something for others to enjoy.

This is your big chance to make stages with Lilac and her friends! Have fun learning and playing each others' creations!

~Savvy Marigold