

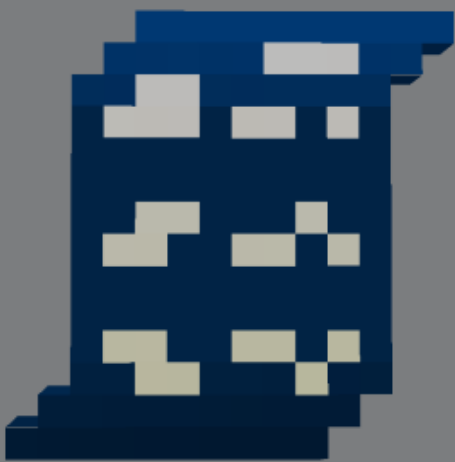
Multiblock Structure Hologram Projector

The **Multiblock Structure Hologram Projector** (MSHP) is a tool used to quickly show/build GregTech multiblocks. The MSHP has unlimited uses because it neither takes power nor durability. Right-click a multiblock controller with the MSHP in hand to display a full-size hologram of the multiblock for 20 seconds. Sneak right-click a multiblock controller with the MSHP in hand to actually build the multiblock, automatically taking blocks from an inventory provider (such as the player's inventory) and placing them in the world. The MSHP is also highly configurable with settings/options for nearly everything the player could want when building multiblocks.

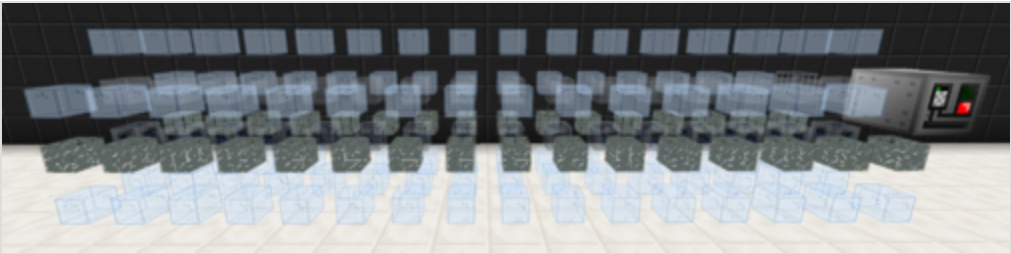
Hologram

Right-clicking a multiblock controller with the MSHP in hand displays a full-size hologram of the multiblock for 20 seconds. The timer can be refreshed by right-clicking the controller again. However, only one hologram can exist per player at any given time. Visualizing a multiblock without actually building it is extremely useful for determining the size of the multiblock and where to place all the necessary blocks/casings. It can also inform the player about the rotation of the multiblock (ie. does it extend left or right after flipping the controller with a wrench).

Multiblock
Structure Hologram
Projector



Mod	StructureLib
Relevant Quest	Advanced MB Construction
Tier	Steam



Example hologram of a max-length Assembly Line.

Hint Blocks

Beyond the mandatory blocks/casings, the hologram may also contain *hint blocks* to display all valid locations for specific hatches. Hint blocks 1-12 are shown below where the number of dots on each

hologram containing hint blocks is displayed, a corresponding message appears in chat to tell the player which hatches are associated with each hint block. For example, using the MSHP on the Electric Blast Furnace displays the following message in chat:

- Hint 1 dot: Output Hatch
- Hint 2 dot: Muffler Hatch
- Hint 3 dot: Input Bus, Maintenance Hatch, Input Hatch, Energy Hatch, Output Bus
- Hint general: Mandatory Air

This means any output hatch **MUST** be placed on a hint 1 dot, any muffler hatch **MUST** be placed on a hint 2 dot, and any of the remaining hatches **MUST** be placed on a hint 3 dot. The hint general refers to a hint block without any dots on it and usually signals the location for mandatory air. Not all hint blocks need a hatch and, depending on the multiblock, not all hatches are necessary. However, hint blocks cannot be left empty and at least require a casing block to occupy that space.



Hint Blocks 1-12, represented by the number of dots on each face.

Building Multiblocks

Sneak right-click a multiblock controller with the MSHP in hand to actually build the multiblock, automatically taking blocks from an inventory provider (such as the player's inventory) and placing them in the world. If the player does not have the necessary blocks/casings, the missing block will be highlighted in red in the hologram and the player will receive a message in chat: "Suggested to place [missing block] but none was found."

Sources

There are a few possible **inventory providers** where blocks/casing can be sourced from (see the table below). All are enabled by default, but this can be changed by sneak right-clicking the air with the MSHP in hand to open the settings menu, going into the "Inventory Providers" section, and dragging an entry over to the disabled side. This may be useful when building different multiblocks at the same time and you want to keep their blocks separate. The order in which they appear is also important because higher entries on the enabled side have a higher priority, meaning take blocks from those inventory providers first.

Also in the settings menu are **stack extractors** which are functionally the same to inventory providers except blocks are sourced from an item rather than an inventory. Of note is the "AE2 wireless" stack extractor which allows the player to build multiblocks directly from their AE2

Cookies help us deliver our services. By using our services, you agree to our use of cookies.

[More information](#)

network--extremely useful for larger multiblocks in the late game. Stack extractors can also be disabled and reordered to determine priority. However, all stack extractors have a lower priority than all inventory providers.

Inventory Providers	Stack Extractors
<ul style="list-style-type: none"> ▪ Main Player Inventory ▪ 5001-baubles ▪ 6000-adventure-backpack ▪ Ender Chest Inventory 	<ul style="list-style-type: none"> ▪ 0999-ae2wct-need-before-ae2 ▪ 0999-ae2fc-need-before-ae2 ▪ 1000-adventure-backpack ▪ 1000-ae2-portable-cell ▪ 1000-ae2-wireless ▪ 1000-forestry-backpack

Channels

Some multiblocks contain blocks with multiple tiers, such as the coils in an Electric Blast Furnace. The MSHP allows the player to specify the exact tier of these blocks by holding multiple MSHP in a single stack or by specifying the value of a channel, depending on the multiblock. Right-click the air with the MSHP in hand to open the channel menu. Channels are added in key-value pairs where the key is the name of the channel (ie. coil) and the value is an integer. If a channel exists but no entry is provided, the MSHP will default to the **master channel** or the number of stacked MSHP in the player's hand.

The following table lists all unique channels, their range of values, and their applicable multiblocks. Note the *gt_no_hatch* channel which works for all GregTech multiblocks and prevents the MSHP from auto-placing hatches. While that sounds like a limitation, it is actually extremely useful because auto-placed hatches are never in the right spot and the player always needs to move them anyway. A few value-to-block translations are also provided below.

Coil Tier Values	Glass Tier Values	Machine Casing Values
<ul style="list-style-type: none"> ▪ 1: Cupronickel ▪ 2: Kanthal ▪ 3: Nichrome ▪ 4: TPV-Alloy ▪ 5: HSS-G ▪ 6: HSS-S ▪ 7: Naquadah ▪ 8: Naquadah Alloy ▪ 9: Trinium ▪ 10: Electrum Flux ▪ 11: Awakened Draconium 	<ul style="list-style-type: none"> ▪ 1: (HV) Borosilicate Glass ▪ 2: (EV) Titanium Reinforced Borosilicate Glass ▪ 3: (IV) Thorium Yttrium Glass Block ▪ 4: (LuV) Rhodium-Plated Palladium Reinforced Borosilicate Glass ▪ 5: (ZPM) Iridium Reinforced Borosilicate Glass ▪ 6: (UV) Osmium Reinforced Borosilicate Glass ▪ 7: (UHV) Neutronium Reinforced Borosilicate Glass ▪ 8: (UEV) Cosmic Neutronium Reinforced Borosilicate Glass ▪ 9: (UIV) Infinity Reinforced Borosilicate Glass ▪ 10: (UMV) Transcendentally Reinforced 	<ul style="list-style-type: none"> ▪ 1: ULV ▪ 2: LV ▪ 3: MV ▪ 4: HV ▪ 5: EV ▪ 6: IV ▪ 7: LuV ▪ 8: ZPM ▪ 9: UV ▪ 10: UHV

Cookies help us deliver our services. By using our services, you agree to our use of cookies.

[More information](#)

- 14: Eternal

Key	Value	Applicable Multiblocks
coil (For Coil Tier)	1-14	Large Fluid Extractor ExxonMobil Chemical Plant Mega Blast Furnace Mega Alloy Blast Smelter Mega Oil Cracker Industrial Autoclave
glass (For Glass Tier)	1-10	Large Fluid Extractor Lapotronic Supercapacitor Mega Blast Furnace Mega Alloy Blast Smelter Mega Oil Cracker Miniature Wormhole Generator Fluid Shaper YOTTank
solenoid (For Solenoid Tier)	1-11	Large Fluid Extractor
height (For Height of Structure)	1-47	Lapotronic Supercapacitor
capacitor (For Capacitor Tier)	1-9	Lapotronic Supercapacitor (does not work)
cell (For Power Cell Tier)	1-6	Power Station Control Node (does not work)
field (For Storage Field Tier)	1-10	TFFT
machine casing (For Machine Casing Tier)	1-10	Precise Auto-Assembler MT-3662
machine (For Machine Casing Tier)	1-9	ExxonMobil Chemical Plant
pipe (For Pipe Casing Tier)	1-3	ExxonMobil Chemical Plant
casing (For Casing Tier)	1-8	ExxonMobil Chemical Plant
unit casing (For Unit Casing Tier)	1-5	Precise Auto-Assembler MT-3662

Cookies help us deliver our services. By using our services, you agree to our use of cookies.

More information

(For Motor Tier)		
manipulator (For Manipulator Tier)	1-4	<u>Quantum Force Transformer</u>
shielding (For Shielding Tier)	1-4	<u>Quantum Force Transformer</u>
spacetime compression (For Compression Tier)	1-9	<u>Eye of Harmony</u>
time dilation (For Time Dilation Tier)	1-9	<u>Eye of Harmony</u>
stabilisation (For Stabilisation Tier)	1-9	<u>Eye of Harmony</u>
gt_no_hatch (For Placing Hatches)	0-1	All GregTech multiblocks (0=Place Hatches, 1=Do Not Place Hatches)

Master Channel Interactions

- | | |
|--|---|
| <ul style="list-style-type: none"> ▪ <u>Water Pump</u>: Determines Basic (T1) or Steel (T2) ▪ <u>Steam Grinder</u>: Determines Basic (T1) or High-Pressure (T2) ▪ <u>Steam Squasher</u>: Determines Basic (T1) or High-Pressure (T2) ▪ <u>Steam Purifier</u>: Determines Basic (T1) or High-Pressure (T2) ▪ <u>Steam Separator</u>: Determines Basic (T1) or High-Pressure (T2) ▪ <u>Steam Blender</u>: Determines Basic (T1) or High-Pressure (T2) ▪ <u>Steam Presser</u>: Determines Basic (T1) or High-Pressure (T2) ▪ <u>Electric Blast Furnace</u>: Determines Coil Tier ▪ <u>Pyrolyse Oven</u>: Determines Coil Tier ▪ <u>Algae Farm</u>: Determines Machine Casing Tier ▪ <u>Cleanroom</u>: Determines Size (Length, Width, and Height) ▪ <u>Oil Cracking Unit</u>: Determines Coil Tier ▪ <u>Distillation Tower</u>: Determines Height ▪ <u>Mega Distillation Tower</u>: Determines Height ▪ <u>Multi Smelter</u>: Determines Coil Tier ▪ <u>Dissection Apparatus</u>: Determines Pipe Casing Tier ▪ <u>Bacterial Vat</u>: Determines Glass Tier ▪ <u>TFFT</u>: Determines Storage Field Block Tier and Length ▪ <u>Industrial Coke Oven</u>: Determines Coke Oven Casing Tier ▪ <u>Extreme Entity Crusher</u>: Determines Glass Tier ▪ <u>Industrial Precision Lathe</u>: Determines Pipe Casing Tier ▪ <u>Industrial Maceration Stack</u>: Determines Casing Tier ▪ <u>Tesla Tower</u>: Determines Primary Winding Tier ▪ <u>Assembly Line</u>: Determines Length ▪ <u>Advanced Assembly Line</u>: Determines Length ▪ <u>Volcanus</u>: Determines Coil Tier ▪ <u>Hyper-Intensity Laser Engraver</u>: Determines Glass Tier ▪ <u>Fluid Shaper</u>: Determines Width ▪ <u>Zyngen</u>: Determines Coil Tier | <ul style="list-style-type: none"> ▪ <u>Dangote Distillus</u>: Determines Height ▪ <u>Industrial Sledgehammer</u>: Determines Anvil Tier ▪ <u>YOTTank</u>: Determines Height ▪ <u>Digester</u>: Determines Coil Tier ▪ <u>Solar Tower</u>: Determines Number of Reflector Rings ▪ <u>Extreme Industrial Greenhouse</u>: Determines Glass Tier ▪ <u>Neutron Activator</u>: Determines Height ▪ <u>Circuit Assembly Line</u>: Determines Length ▪ <u>Mega Chemical Reactor</u>: Determines Glass Tier ▪ <u>High Current Industrial Arc Furnace</u>: Determines Size (Width and Height) ▪ <u>Hot Isostatic Pressurization Unit</u>: Determines Coil Tier ▪ <u>Utupu-Tanuri</u>: Determines Coil Tier ▪ <u>Industrial Autoclave</u>: Determines Pipe Casing Tier ▪ <u>Linear Accelerator</u>: Determines Glass Tier and Length ▪ <u>Synchrotron</u>: Determines Glass Tier ▪ <u>Industrial Apicultural Acclimatiser and Drone Domestication Station</u>: Determines Glass Tier ▪ <u>Quantum Computer</u>: Determines Length ▪ <u>Electric Implosion Compressor</u>: Determines Containment Block Tier ▪ <u>Component Assembly Line</u>: Determines Casing Tier ▪ <u>Nano Forge</u>: Determines Machine Tier ▪ <u>Draconic Evolution Fusion Crafter</u>: Determines Casing Tier ▪ <u>Naquadah Fuel Refinery</u>: Determines Coil Tier ▪ <u>Dimensionally Transcendent Plasma Forge</u>: Determines Coil Tier ▪ <u>Forge of the Gods</u>: Determines Number of Rings ▪ <u>Mega Vacuum Freezer</u>: Determines Basic (T1) or Subspace Cooled (T2) |
|--|---|

Additional Settings

Under the "mod options" menu, there are additional settings/options for StructureLib that may be useful to the player. For instance, most hologram properties can be adjusted under client side configurations > hologram configurations:

- **hintLifespan**: The life span of a hologram in ticks (default: 400)

Cookies help us deliver our services. By using our services, you agree to our use of cookies.

More information

- **Max Coexisting Holograms:** Number of holograms that can exist at once (default: 1)
- **Remove Colliding Holograms:** Prevents overlap when displaying multiple holograms at once (default: True)

There are also some building properties that can be adjusted under common > hologram:

- **autoPlaceBudget:** Maximum number of blocks placed at once (default: 25)
- **autoPlaceInterval:** Interval in ticks between each auto-place (default: 300)

Retrieved from "https://wiki.gtnewhorizons.com/wiki/Multiblock_Structure_Hologram_Projector?oldid=12172"