**GT New Horizons**

# Logistics Pipes

Logistics Pipes is a item transportation, crafting and automation mod that can not only manage your storage systems but also provide flexible on-demand autocrafting with its piping network.

This page covers the basics, as well as autocrafting. Autocrafting will be at the end, as well as the items involved in autocrafting will be at the end. Lots of documentation for this mod is missing, most of what is left is outdated wikis that cover very little of the mod, and barely comprehensible GitHub repositories. If something is incorrect or missing, feel free to correct it.

*Warning:* This guide is lengthy. It (will soon) contains all relevant information for GTNH Logistics Pipes.

## Pipes

There are several kinds of pipes in LP that will grant you a powerful system until you can afford AE2.

### Item Pipes

#### Unrouted Transport Pipe

Unrouted transport pipes are the pipes that you will use to connect different part of your logistics pipes system. It is the cheapest kind of pipe which also means it comes with multiple limitations listed below:

- Doesn't connect to any inventories
- Doesn't route items (don't use it for junctions)

#### Basic Logistics Pipe

This pipe is an upgrade to the unrouted transport pipes. It has routing functionalities. (You can use it for junctions.) This pipe is used for connecting the LP network to power via a "Logistics Power Junction". It is also the building block for all other pipes in the mod, so make sure you keep a lot stocked. When this pipe is connected to an inventory you can choose to set a filter, and set it as a default route. This allows the system to send items (either filtered or unfiltered.) to the connected inventory.

#### Provider Logistics Pipe

This pipe connects to an inventory and can extract items when requested. It also allows for Request Pipes/blocks to see the items in the inventory as a part of the GUI.

### MK2

Does the same thing as the MK1, just faster.

### Request Logistics Pipe

This pipe can request items from the LP network. It pulls from inventories with provider pipes/modules attached. It will output the items in connected inventories or drop them as an item if no inventory is attached.

### MK2

Does the same thing as the MK1, but has Thaumcraft integration (Untested)

### Supplier Logistics Pipe

This pipe can automatically request items for in inventory. It can take advantage of autocrafting to fill inventories. This is great for keeping certain amount of an item in stock.

It has 5 modes

- Bulk50 - Requests items when the inventory has half the amount specified.
- Bulk100 - Waits for the entire inventory to be empty before stocking the entire thing at once.
- Infinite - Infinitely requests items.
- Partial - Requests items whenever in inventory has room.
- Full - Will try to request the full amount of items at the same time. (Unconfirmed)

### Remote Orderer Logistics Pipe

Allows for wireless access to items in the LP network. Note: This is buggy, and by the time you have the technology to pull this off, you can afford AE2 anyway.

## Fluid Pipes

### Logistics Basic Fluid Pipe

Acts as a default route for fluids. **Must be filtered.** If it is not filtered, it will not work. It will fill an attached inventory with the specified fluid. It is recommended that you pull fluids from NEI, and not LP. This is because there are compatibility issues and it will not work.

### Logistics Fluid Extractor Pipe

Extracts fluids from a connected inventory and sends them into any available space in the LP network.

### Logistics Fluid Provider Pipe

This provides fluids whenever the LP system requests them. This is useful for autocrafting and Logistics Fluid Supplier pipes.

### Logistics Fluid Supplier

Exports configured fluid to attached containers. This pipe allows you to set exact amounts of fluids to be sent into an inventory.

### Logistics Fluid Request Pipe

When right clicked with a wrench, it will display all liquids currently in your LP Network. They can be requested and will be inserted into a connected tank.

### Logistics Fluid Container Supplier

Supplies fluids to machines/tanks via buckets or bucket-like items.

### Unnecessary Fluid Pipes

These pipes have better alternatives that do the same job. (Editors note: I can't even find any legit uses for these pipes that isn't covered by another pipe.)

### Logistics Fluid Connector Pipe

Allows interfacing with a Logistics Fluid Insertion Pipe. This pipe is obsolete because it has no other purpose.

### Logistics Fluid Insertion Pipe

Imports fluids into the LP network. This pipe is obsolete because of the fluid extractor pipe.

## Chassis

Chassis are a special kind of pipe, their functionality is defined by the modules contained within. It has different tiers which affect how many modules the chassis can hold. They can act as several kinds of pipes in one block.

- MK1 - 1 Slot
- MK2 - 2 Slots
- MK3 - 3 Slots
- MK4 - 4 Slots

- Mk5 - 8 Slots

# Blocks

## Logistics Power Junction

The logistics power junction supplies power to the LP network. It can accept LV-HV(+?) amps of power.

## Logistics Request table

This is the heart of the system. It is similar to the crafting terminal from AE2. It can request items from inventories, send items to inventories, request things to be autocrafted, and craft items from its internal item buffer.

# Modules

To make a well-organized storage system you need ItemSinks. A default route is good for a wall of chests, but it is important for things to be organized when dealing with more complex systems. There are a lot of these, so this will be a lengthy section.

## ItemSinks

An ItemSink Module, when installed in a chassis, connected to an inventory, "sinks" or inserts, items into the inventory. They are often used for filtering bulk storage. (Drawers.) Different ItemSinks are used for specialized tasks and should be not be treated as interchangeable.

### Basic ItemSink

The basic ItemSink can set something as a default route. You can do this for cheaper with a "Basic Logistics pipe", so there isn't much reason to use them. Basic ItemSinks are a crafting ingredient to all the other ItemSinks.

### Polymorphic ItemSink

The Polymorphic ItemSink sorts things that are already present in the inventory. It is useful for sorting an inventory system with a lot of items inside. This is useful for drawer walls.

### Mod Based ItemSink

Sorts items based on what mod they are from. This can be useful for smaller mods, but gets congested with larger mods like Gregtech. It works great for mods like Thaumcraft where you want all of your items close to your research table, but also LP accessible.

Sorts items based on OreDict names. Configurable in the GUI, you can change what OreDict names the OreDict ItemSink will allow to be sorted.

### EnchantmentSink

Sorts any enchanted item into the connected inventory. It ignores durability of items.

### MK2

Adds a filter to the GUI.

### Type Filter ItemSink

Added by GTNH. Filters GregTech items by GT-Types, similarly to a Type Filter block. Types in GT are named groups containing similar items, more like a stricter version of Ore Dict.

Examples of existing types : dust, ingot, ore, crushedCentrifuged, gemFlawless; but also plate, bolt, wireFine, cable/wireGt(01-16)... Some additional Types were added by GTNH, so pay attention for more sneaky types like: cell, cellMolten, circuit, componentCurcuit.

### Creative Tab Based ItemSink

Sorts things based on what tab they are in the creative inventory.

## Item Logistics

This section contains modules that make items move. There is no "family" of modules like the ItemSinks here.

### Extractor Module

Extracts items slowly from an inventory, and sends them to any available space in the LP network. If you apply more then one to a chassis, it will pull two packets of items instead of 1. (In layman's terms, it stacks.)

### MK2

Pulls more items then the MK1, pulls them faster.

### MK3

Pulls more items then the MK2, pulls them faster.

### Advanced Extractor Module

Same thing as the normal Extractor Module, allows for filtering what does and doesn't get extracted.

### MK2

Pulls more items then the MK1, pulls them faster.

### MK3

Pulls more items then the MK2, pulls them faster.

### Passive Supplier Module

Acts as a high priority destination for the items configured in the GUI. It does not actively request items.

### Active Supplier Module

Sends active requests to the LP network for the items specified in the GUI. It will pull from the entire LP network to get the items it requests. This module can trigger autocraft requests. as long as the system knows how to make an item, and has the resources, it will request the item to fill its attached inventory.

### Provider Module

Acts the same as the pipe, just applied to a chassis.

### MK2

Provides items at a faster rate.

### QuickSort Module

When connected to an inventory, it will see all the items, and if they have a high priority destination that is not the default route, it will route them to it.

### Terminus Module

acts as a low-priority destination for items. If there is not room in the system, items will be sent here instead of being ejected from the pipes.

## Mod Integrations

### Thaumcraft

### Thaumic AspectSink

Sorts Thaumcraft aspects into containers. This is useful for cauldron automation, as well as infusion. You can make lots of creative automated systems for infusion. (Editors note: This may make infusion autocrafting possible in MV!)

## Forestry Bees

### BeeSink

Routes bees to connected inventories.

### Apiary Refiller

Removes products of dead queen bees, inserts new drones and princesses into the apiary. This module cannot do breeding, only automation of already established bees.

### Bee Analyzer Module

Acts as a high priority destination for unanalyzed bees entering the LP network. It will analyze the bees, and send them into a connected inventory. It can also be configured to extract the analyzed bees from the connected inventory and route them elsewhere to be utilized.

### Drone Terminus Module

Acts as a low-priority destination for drones. Only routes here if it is the only other option for the drones is the default route.

## Computer Craft

### CC Based QuickSort

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### CC ItemSink

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## Miscellaneous Modules

### Electric Buffer Module

Acts as an ItemSink for items that can store power.

### Electric Manager Module

This Module can automate charging and discharging of items. It can be set to charge a battery. It will send the battery to its connected inventory, (A block that can charge items.) and will extract it once fully charged. It can also discharge the battery, (Send it to be used.) in some sort of machine, and once empty, it will extract it. This is a poor way to charge machines, but you wont have to worry about cable loss! (Also it requires a lot of batteries.)

### Logistics Disk

While not technically a Module, it is applied like one. This is a powerful item (That may or may not be disabled in GTNH.) that can create macros, that send requests to the system. This is great for keeping items stocked. It must be attached to a MK2 or better Logistics Chassis.

# Upgrades

This is a lengthy section with poor documentation, please feel free to fix mistakes!

## Item Speed Upgrade

Makes items move faster in pipes.

## Disconnection Upgrade

Disconnects pipe connections in cardinal connections

- Up - Disconnects Up
- Down - Disconnects Down
- North - Disconnects North
- South - Disconnects South
- East - Disconnects East
- West - Disconnects West

## Combination Sneaky Upgrade

When inserted into a chassis, allows for the use of multiple Sneaky upgrades.

Needs "Logistics Pipe Controller" to remove upgrades.

### Sneaky Upgrades

These "Sneak" items into a face of a block the pipe is not connected to. Sneak can be translated into "insert". These upgrades do NOT allow Insertion of items into the machines face, however a pipe connected to the face can "Sneak" the items into another face of the machine. It is advised to use F3 to find directions.

- Up - Sneaks Items into the top face
- Down - Sneaks items into the bottom face

- South - Sneaks Items into the South face
- East - Sneaks items into the East face
- West - Sneaks items in the west face

### Disconnection Upgrade

This forces a pipe to disconnect from a cardinal direction. It is advised to use F3 to find directions.

- Up - Disconnects Up
- Down - Disconnects Down
- North - Disconnects North
- South - Disconnects South
- East - Disconnects East
- West - Disconnects West

### Upgrade Module Upgrade

Allows you to upgrade the modules in your chassis. This upgrade has been nerfed in GTNH, as such its usage will be minimal. It is mostly used for autocrafting via a chassis, which is not ideal because it can be significantly more expensive.

# Basic Storage system

A good storage system needs a few things: A place for items to go, A place for bulk items to go, and a way to access them all in one place. Luckily LP has all of that, and more!

This will tell how to make a basic storage system with LP!

## Creating the network

The first step is powering the network. You can do this by connecting any type of generator directly to a Logistics Power Junction. The Junction can be anywhere on the network and it will supply power to the entire system.

Next you want to have a place to insert and extract items. This can be done with a Logistics Request Table

Now you want a place for items to go. There are a few ways of doing this, first, a cheap option would be to get lots of chests, MK1 chassis, and Basic Pipes. Connect the basic pipe to the chest and right click it with a wrench and set it to a default route, don't bother filtering it. On a different face of the chest attach the MK1 Chassis and insert a provider module. Now you can insert and extract items from the Request table.

For bulk storage attach a MK2 chassis to a storage controller, insert a Polymorphic ItemSink, and a provider module. Set it to a higher priority and you are done!

**More information**

Now you have a basic LP Storage Network! Enjoy!

# Autocrafting

The biggest aspect of this mod is its sophisticated autocrafting! It is able to hold potentially infinite* recipes for each machine! It just takes some. . . "Creative engineering solutions"! It is also capable of autocrafting with fluids*! It is important to note that you cannot cancel an autocraft request. The only way to clear the system of requests is by restarting your server, or reloading your world.

**\* Machines like assemblers can get clogged if you aren't careful.**

**\*While LP can craft *With* fluids, It can not C*raft* fluids. You can get around this by actively exporting items to fluid extractors, importing the fluids, and storing them in buffers.**

## Autocrafting Essentials

### Pipes

### Crafting Logistics Pipe

This pipe is similar to a AE2 Pattern. You tell it what to input, and what to expect back in return. It also has three Satellite slots, and a number attached to it. Satellites each have a number, or frequency, attached to them. Set it to the same number as the Satellite you want to send the items to and the LP network will route the items to that Satellite.

### MK2

Can craft 16 items at a time.

### MK3

Can craft a stack of items at a time.

The MK2 and MK3 Crafting Pipes are mostly useless as the MK1 is plenty fast and doesn't over craft expensive items.

### Satellite Logistics Pipe

Items are routed to this pipe when told to by a Crafting Logistics Pipe.

Note: it is advised to keep track of what machines have what Satellite with a clipboard. A good format is

[Machine type] [Circuit #] [Satellite #] [Fluid Satellite #] Example for coating wires: Assembler C24

**Rule:** Each Crafting Logistics Pipe can only be set to one Satellite, but each Satellite can have an unlimited amount of crafting pipes set to its frequency.

### Fluid Satellite Logistics Pipe

This pipe **requires** a Fluid Crafting Upgrade. Routes fluids for autocrafting tasks. The same rule of the item version applies.

## Upgrades

### Fluid Crafting Upgrade

Adds a section in the crafting pipes GUI. Allows you to set a Fluid Satellite, a type of fluid, and an exact amount of the fluid.

### Advanced Satellite Upgrade

Applies to a Crafting Logistics Pipe, Allows every slot of the crafting GUI to be sent to a Satellite instead of just 3. Also allows for items to be send to different Satellites. This is useful in long chains that need inputs in different places.

### Crafting Cleanup Upgrade

Remove items from crafting that are not consumed. i.e. buckets.

### Crafting Byproduct Extraction Upgrade

Removes byproducts from machine.

## Modules

### Crafting Module

Acts as a Crafting Logistics Pipe, just inserted into a chassis.

### MK2

Same as Crafting Logistics Pipe MK2

### MK3

Same as Crafting Logistics Pipe MK3

## Blocks

### Logistics Crafting Table

This is the equivalent of a AE2 Molecular assembler. It can only be set to one recipe. These need a Crafting Logistics Pipe on them set to the same recipe for the Request Table to be able to see it as an available recipe. It is important to note, these don't play nice with GT tools.

## Tools

### Item Pipe Sign Creator

Works on Logistics Crafting Pipes, and Logistics Crafting Tables. Creates a sign on the pipe that visually shows what recipe is stored within.

### Logistics HUD Armor

When worn on the players head, it displays a visual HUD of everything happening in your LP network. This can be useful for seeing what satellite uses what frequency if you don't write them down. It also shows what modules are in a pipe, and you can even edit them without being in the pipes GUI. This can save on wrench durability.

Note: It wont show what's in crafting pipes that were configured before the glasses were crafted.

# Autocrafting

Note: LP is expensive and requires MV to start autocrafting. Remember, the first thing you autocraft, should be the stuff needed to autocraft. LP is an old mod and has older and less refined approach of doing autocrafting. However, most if not all early-mid game crafting can be performed with it.

### Theory

- Items are not digital, input buffers are required.

If you place bare pipe on a machine, and request thousands of items, those which won't fit will travel back and forth, and after some time will be dropped in the world.

- Craft is "centered" on a Crafting Pipe/Module.

In AE the whole system knows about performed crafting, and the result of it can be inserted in any way in any of it's points. LP's approach is much less flexible and only the Crafting Pipe/Module knows about the crafting that it's performing. In order for result to count, it has to be actively extracted by a

Crafting Pipe/Module from the inventory it's connected to. This means, you cannot "push" the resulted items even into the Pipe that requested it; you have to put it back into a connected chest, and allow crafting pipe to extract it.

## Examples of automation

Note: sadly, one of the strongest tool of LP automation -- Satellite Pipes, really sucks due to original poor UI implementation. If you are planning to build a big LP system, their use should be minimized. They might be improved by GTNH devs in a future: https://github.com/GTNewHorizons/GT-New-Horizons-Modpack/issues/17984, and if they will, most information below will be obsolete and just use them instead of filtering.

1) Complex recipes
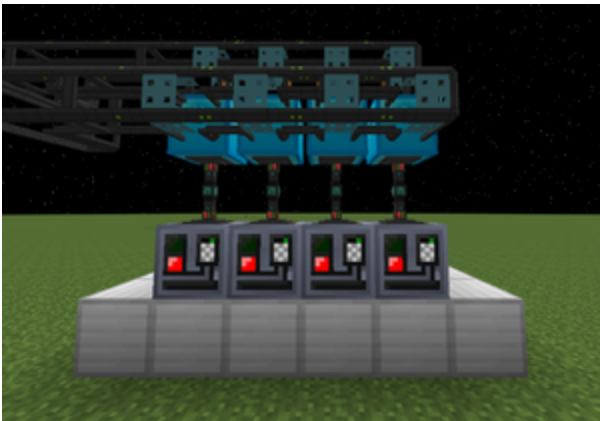


Where being complex means requiring different items, which most recipes do. They cannot be shared with simple extraction from single chest into multiple machines, one input chest should be used only by one machine.

To minimize use of Satellite pipes, item filter is used on blacklist mode, listing inside items that machine is going to perform. Use two cheap EnderIO filters one on extraction side of chest, one on insertion for the machine to save time on crafting upgraded ones.

Note: yes, with this setup there are some heavy restrictions of 8-10 recipes that can be programmed for machine. Also because of Blacklist we cannot share recipes where one result can be ingredient in another recipe. But the sad reality is that there's no features like the AE's Blocking Mode for small scale item management, and you need split your recipes within a lot of machines anyway to avoid jamming.

Also, If you need to parallelize complex recipe, you can just add another copy of Crafting module to another machine, and upon requesting craft LP will split resources between all the copies.

2) Simple recipes parallelization
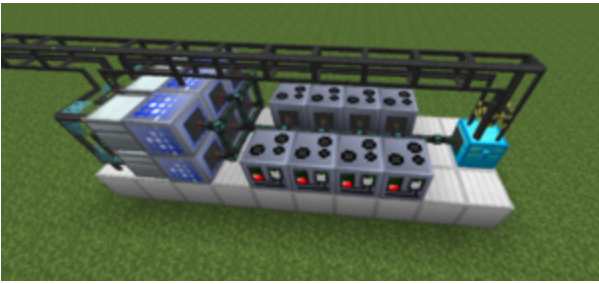
Simple recipe is a recipe where only one item type is needed. In GTNH recipes like this are only a few and they need to be parallelized (like plates, wires...) but it's easy to do. You would need to do some filtering in the end, if you are past the point of a single chest, and one of the filters that can be used is GT Filter block that has 9 slots for filtering.

Another cool trick you can do with GT Filters is perform recipes which require number of the same items as the simple ones:



If you are crafting dense plates, you would need to put a filter as a buffer between input chest and the rest of machines, set stack size to 9, set filter to empty Blacklist to accept any items. The connected conduit should be inactive, preferably in "never active" state, with a Round Robin turned on. This way insertion will be done only by GT item filter, which was programmed to insert only exact item quantities to prevent machines from jamming when spreading items too thin. However the round robin on a Conduit will still work even when items are inserted by filter.

# References

- Getting Started (Logistics Pipes)

- Logistics Pipes - Tekkit2 Wiki (https://tekkit2.fandom.com/wiki/Logistics_Pipes)

- Logistics Pipes - FTB Wiki (https://ftbwiki.org/Logistics_Pipes)

- Logistics Pipes - Technic Wiki (https://technicpack.fandom.com/wiki/Logistics_Pipes)

- GitHub - EnchantmentSink (https://github.com/RS485/LogisticsPipes/issues/299)

- http://rs485.thezorro266.com/wiki - Wayback machine, very little information.

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