

Introduction : The Flaw Forge Player application is largely based on the old shareware game *Factory: The Industrial Devolution*, created by Patrick Calahan for the Macintosh in the 1990s. With his kind permission, I am proud to present the Flaw Forge Player. It comes in two versions running on macOS (15.5 or later) or iOS (18 or later). Both can be downloaded from the App Store. These applications are completely **free**. You can install one on each of your preferred devices. Note that your progress is not cross-platform, as levels are downloaded locally before you play. No ads, no hidden purchases, and no personal data collection. Visit the game's website at <https://flawforge.com> to learn more about the project and to access an ever-growing collection of game levels that you — the players — can enrich.

About the Game Levels: Flaw Forge introduces magazine-loaded levels, a new concept in user-generated content. Browse new magazine issues at <https://flawforge.com> as they are published, open them from the player to download the issue's levels, and play them directly. As the level catalogue grows through user contributions, the number of playable levels should increase rapidly. The idea is that players create and submit new levels themselves (see the Flaw Forge Editor section below).

How to Play: The game is controlled via mouse and menus on Mac, and via touch and swipe on iOS, as briefly described in the startup screen. Everything else is identical on both platforms. Each level consists of 4 scenes:

- 1- You are introduced to the new factory you will be working in.
- 2- You are presented with an assembly guide and must figure out how to achieve the production of a given product.
- 3- Now it's time to take control of a straightforward, poorly designed, or even chaotic factory and supervise production. Components may arrive in a fixed order or in a variable, randomised sequence (which is, of course, harder to manage). Your goal is to reach a given quota and minimise losses, working within a constrained truck capacity and a standard working day (9:00 am to 5:00 pm). You can adjust the pace of the assembly line by going back and forth through the following states: Paused → Slow → Intermediate → Fast.
- 4- When you choose to abort a level, or when the truck is full, the score screen appears, showing the truck's contents along with a complete report of your expenses and rewards. Progressing to the next level — or replaying the one you failed — depends solely on whether the quota was achieved, not on how efficiently you used the components.

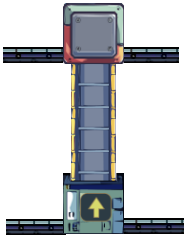
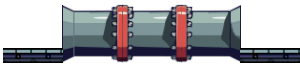
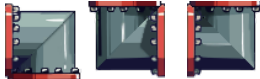
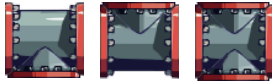
Working with the Assembly Lines: The assembly line always runs between a feeding pipe and a truck. Linear does not mean simple — crossings, loops, or the absence of storage areas can complicate your work in unexpected ways. The line consists of fixed modules that you operate and mobile components that are delivered to the line; your job is to assemble them correctly to deliver a finished product. All movement is handled by rubber belt conveyors, which can run horizontally in either direction or vertically in elevators. Components moving downward follow a mix of cartoon physics and gravity. Also note that the scene wraps around on both sides.

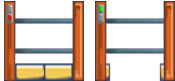
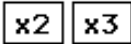
The modules:

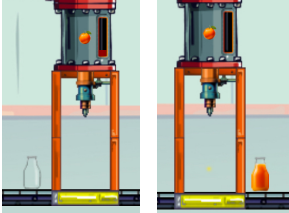
You can discover what each module does on your own by carefully studying the assembly guide before exploring the plant layout and by observing what they do in an assembly line (this should be quite natural). Alternatively, if you'd rather not spend time experimenting, here is a reference catalogue of the modules and their functions.

Whatever approach you choose, please make sure to complete the (very short) tutorial — the only level bundled with the Flaw Forge Player — before moving on to the magazine levels. If you skip it at first, you can always return to the startup screen from any score screen to launch it.

The Clock		Runs at 1 min per second of real time at Slow speed
The Emergency Pause Button		Equivalent to Pause (⌘ P, macOS) or to the swipe left gesture up to 3 times depending on the speed you start from (iOS)
The Belts		Belts go in a fixed direction. They can span all the factory and wrap the left and right sides (they have no visible ends in this case). Otherwise, the objects that are conveyed and that reach a Belt End will fall down after a brief cartoon-like stop in the air. <i>Falling components</i> follow gravity physics and will stop or not depending on the configuration: they can stop on a belt below, in a storage box or in an accumulator for example, but they don't if they go through a vertical pipe that crosses a belt or through a falling box with a vertical exit set.

The Elevator, Bottom Box and Exit Box The Elevator, Bottom Box and Exit Box (continued)		Elevators never appear alone. They start climbing behind a bottom box that you can choose and continue until they reach an exit box that will deliver climbing components to the right or to the left, depending on the direction of the belt at that point. Note that bottom boxes can also appear in the body of elevators (not only at the bottom like this). 👉 Click or tap on the bottom box to change its output direction.
The Neutral Box		It looks like an Exit Box but it does nothing, except that it will hide the component that moves behind it. It's just like a horizontal pipe connected to the belts.
The falling box		Whatever is below it, it allows component entry from the top or lateral sides, depending on local configuration. 👉 Click or tap the arrow to set the exit direction, horizontal or vertical.
The Pipe Conveyors	    	The horizontal, elbow or crossing pipes that belong to the Assembly Line are conveyors. <i>You may see the same pipes not connected to the line elsewhere in the game. They are only adornments.</i> Pipe Elbows like this one are connected to a Belt (or connected together). Here this setup will function like a Left Belt End as components will enter from the right and fall vertically in the pipe afterwards. You will not find this configuration with a Belt that goes to the Right as components cannot climb the Pipes. This is the function of Elevators. The collection of elbows and crossings will all operate the same way. Just look at them and follow the components!
The Vertical Pipe		It is a neutral module that masks the falling components behind it. Never mind if it stands before or behind a crossing Belt Conveyor, falling will continue.

The Accumulators	    	The Single Storage Module can hold any mobile component that is dropped in it if its closed, or release it when open (👉 click or tap) . It can be controlled by an automatic switch below it (see below). The Multiple Storage Module can store up to 12 predefined components and release one on demand or by an automatic switch control . <i>The amount contained will appear as a red indicator in the white rectangle at the bottom. Carefully watch the indicator to guess the module's capacity, it's proportional.</i> Beware that if a wrong component enters the module, all its content is lost and a garbage component is released! Here the module can store only green triangles. It is empty. The Liquid Storage Module is absent from the original Factory game, so it will appear only starting at issue #2 of the Flaw Forge Magazine. It is fed with components that can be mixed into a liquid. This module functions as a reservoir for the filler that stands just below it. Liquid delivery is only possible if the reservoir is not empty. <i>Like for the Multiple Storage Module there is a red bar that climbs in the black window to indicate the amount of liquid available.</i> Special indications for the storage modules are displayed beside it. Like for Single Storage Modules, Multiple Storage Modules can release a component only if clicked or tapped. In some cases, the delivery of a new element (solid or liquid) requires that 2 or 3 components have entered the Storage Module. The indicator bar must be red to allow delivery, otherwise the amount stored is insufficient.
In and Out Modules		Each scene contains at least a Feeding Pipe and a Truck Exit, either the full truck or the pipe.

In and Out Modules		Note that the Truck side (not the pipe) displays the icon of the finished product. You may also encounter two more modules: The Recycler and the Trash.
The Fillers		If liquid delivery is needed into a recipient, you will find one of the 3 Filler Modules. Liquid availability can be controlled or not by a liquid accumulator above it. The Filler Module is always under the control of an automatic switch. <i>Example: Before and after filling a bottle with orange juice.</i>
The Oven, The Washer		These modules can be switched on and off by the user. They are placed directly on the belts.
The Transformers		They can be either placed directly on the belts or controlled by automatic switches
The Automatic Switches		They come in two versions. The Naked Switch (above) can be set to 'On' (Yellow bar) or 'Off' (Brown bar). You will see all the transformation that happens in it. Typically this is the model you will encounter under the Fillers.

The Automatic Switches		The Press Switch has a press integrated in it. It comes down during the assembly as shown. The press will mask all that happens behind the iron curtain. Sometimes Sparks may be visible from behind the press to represent some metal cutting or soldering work.
The Decor Modules The Decor Pipes	?	I will not show them to you here. They just do nothing in the game except make it a little more fun or self-explanatory. You will encounter, Windows, Ladder, Balcony (with you on it), Smoke, Parts of a big metal Tank, Gears, Danger signs etc... Discover them as you progress through the game.

Testing a Level (macOS only)

As you can contribute to Flaw Forge development by submitting new levels (see the Editor's manual), you need to test these levels into the player fist. To do so, use the Game Control → Test level... (⌘E) menu item to quickly test your level in the Player. It will launch a classical Open dialog and let you load any .fflevel level file saved by the Editor.

While in test mode, capacity and quota limits still appear but they are disabled, allowing you to play the level without restrictions.

To end the test, use the Game Control → Abort (⌘B) command. This displays the Score Screen and lets you resume your game progression or returns you to the Player's home screen.