

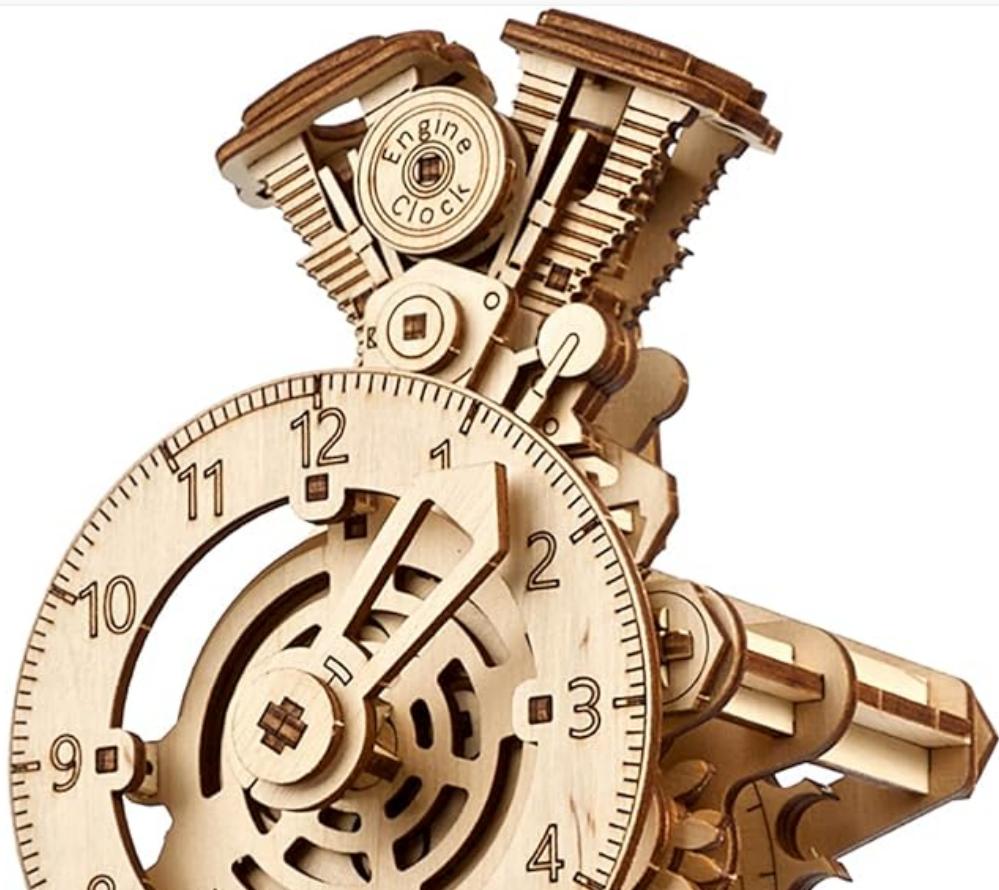
## UGEARS Engine Clock

# UGEARS Engine Clock 3D Wooden Puzzle Instruction Manual

Model: Engine Clock

## 1. INTRODUCTION

Thank you for choosing the UGEARS Engine Clock 3D Wooden Puzzle. This mechanical model kit offers an engaging and rewarding assembly experience, culminating in a functional clock with intricate moving parts. This manual provides essential information for assembly, operation, maintenance, and troubleshooting to ensure optimal performance and enjoyment of your model.





*Image 1: The fully assembled UGEARS Engine Clock, showcasing its intricate wooden gears and engine-inspired design.*

## 2. SAFETY INFORMATION

- This product contains small parts and is recommended for ages 14 and up. Keep out of reach of small children to prevent choking hazards.
- Exercise caution when detaching parts from the wooden boards. Some edges may be sharp.
- Do not apply excessive force during assembly, as this may damage the wooden components.
- Ensure a clean, well-lit workspace to facilitate assembly and prevent loss of small parts.

## 3. PACKAGE CONTENTS

Your UGEARS Engine Clock kit includes:

- 265 precisely laser-cut wooden puzzle pieces.
- Detailed, illustrated instruction manual.
- Additional components such as rubber bands, wax, and toothpicks for assembly.

LASER PRE-CUT  
PLYWOOD BOARDS  
ILLUSTRATED  
INSTRUCTIONS  
IN 11 LANGUAGES



## EVERYTHING IN THE BOX

*Image 2: All components included in the UGEARS Engine Clock kit, laid out for inspection.*

## 4. ASSEMBLY INSTRUCTIONS

The UGEARS Engine Clock is designed for assembly without glue or special tools. Follow the step-by-step instructions provided in the included manual carefully. Pay close attention to the illustrations for correct part orientation and connection.

### 4.1. Preparation

- Carefully remove all parts from the wooden boards. Use a hobby knife or sandpaper to smooth any rough

edges or burrs on the connection points.

- Identify and sort parts according to the instruction manual to streamline the assembly process.
- Apply wax to all moving gears and axles as indicated in the instructions to ensure smooth operation and reduce friction.



*Image 3: Close-up of hands assembling small wooden components, highlighting the precision fit without the need for adhesives.*

## 4.2. Step-by-Step Assembly

Refer to the detailed, illustrated manual included in your kit for comprehensive step-by-step assembly. The process involves:

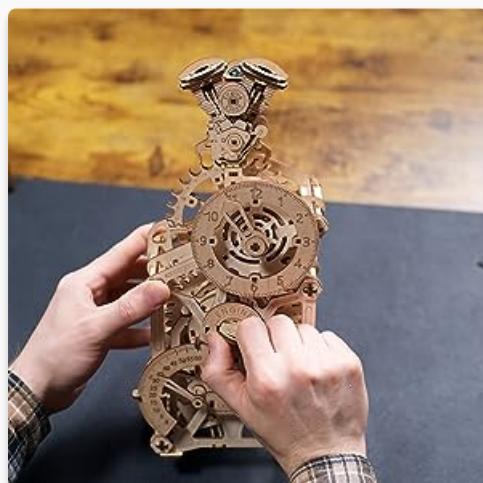
1. Constructing the base and main frame.
2. Assembling the gear trains and escapement mechanism.
3. Integrating the engine-inspired elements, including moving pistons.
4. Attaching the clock face, minute hand (retrograde mechanism), and seconds indicator.
5. Installing the pendulum and winding mechanism.



*Image 4: A user carefully assembling the internal gear system of the UGEARS Engine Clock.*



*Image 5: A user connecting larger structural components during the assembly of the clock's main frame.*



*Image 6: Fine-tuning the clock face and hands after the primary assembly is complete.*

## 5. OPERATING THE ENGINE CLOCK

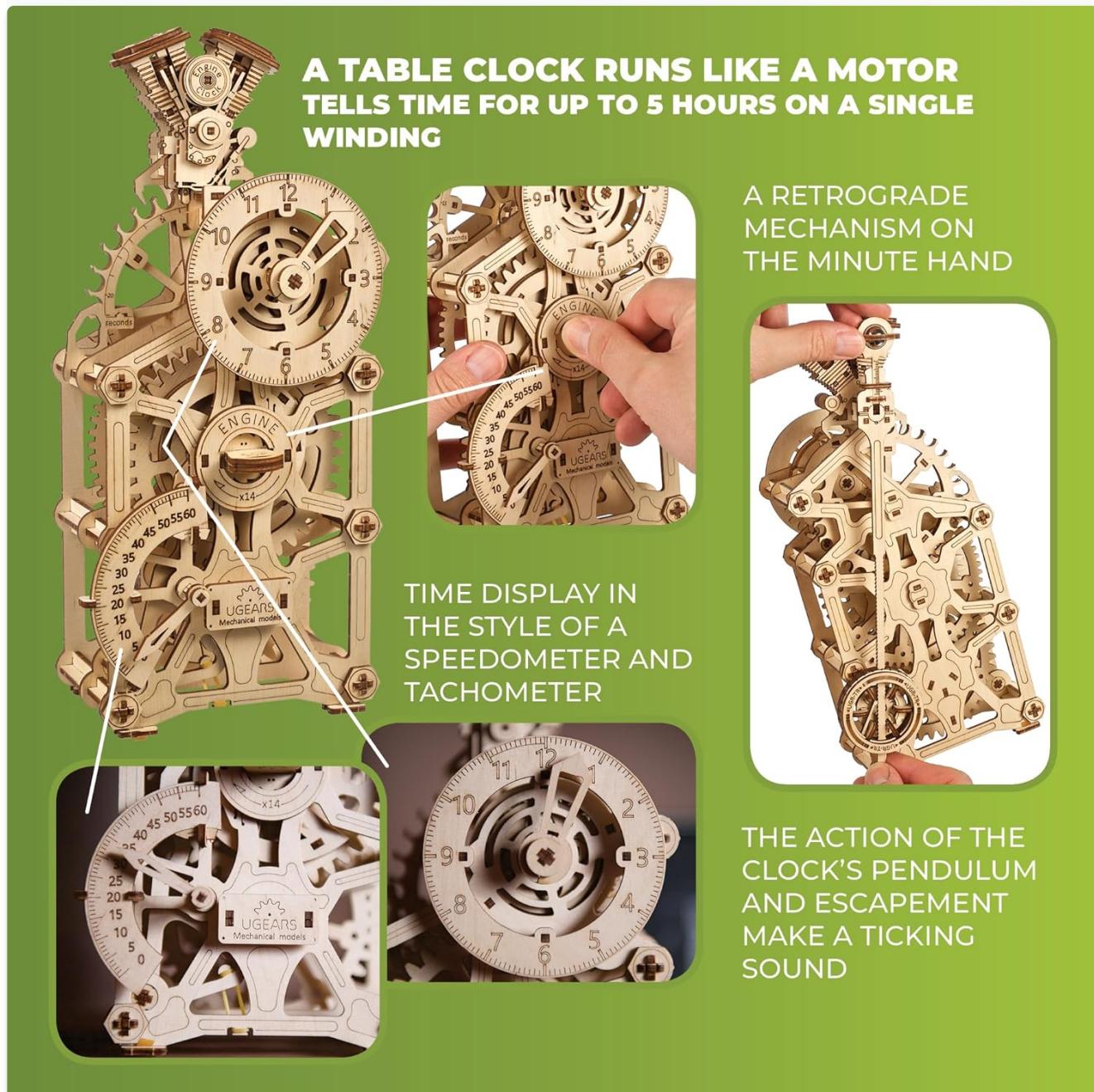
Once fully assembled, your UGEARS Engine Clock is ready to operate. It features a precise working mechanism that runs for approximately 5 hours on a single wind.

### 5.1. Winding the Clock

To wind the clock, gently turn the winding key or mechanism as indicated in your specific model's instructions. Do not overwind, as this can damage the internal spring mechanism.

## 5.2. Setting the Time

Adjust the clock hands to the correct time by carefully rotating them. The minute hand features a retrograde mechanism, moving back to zero after reaching 60 minutes.



*Image 7: Detailed views of the clock's functional elements, including the retrograde minute hand and the seconds indicator designed like a speedometer.*

## 5.3. Adjusting Timing Accuracy

The clock's accuracy can be fine-tuned by adjusting the weights on the pendulum and the ball at the top. Experiment with small adjustments to achieve precise timekeeping.

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*Video 1: An official UGEARS video demonstrating the assembly process and the functional movement of the Engine Clock, including its gears, pistons, and time-telling mechanisms.*

## 6. MAINTENANCE

Proper maintenance ensures the longevity and smooth operation of your UGEARS Engine Clock.

- **Cleaning:** Use a soft, dry cloth or a small brush to gently remove dust from the gears and surfaces. Avoid using water or cleaning solutions, as they can damage the wood.
- **Lubrication:** Periodically reapply wax to moving parts, especially gears and axles, to maintain smooth movement and reduce friction. Refer to the original assembly instructions for specific lubrication points.
- **Storage:** Store the clock in a stable environment, away from direct sunlight, extreme temperatures, and high humidity, which can cause wood warping or damage.

## 7. TROUBLESHOOTING

If your UGEARS Engine Clock is not functioning as expected, consider the following common issues and solutions:

Problem	Possible Cause	Solution
Clock does not run or stops frequently.	Insufficient lubrication, parts binding, incorrect assembly.	Ensure all moving parts are adequately waxed. Check for any misaligned or binding gears. Re-examine assembly steps for errors.
Timekeeping is inaccurate.	Pendulum not correctly adjusted.	Adjust the weights on the pendulum and the top ball as described in the operation section to fine-tune the timing.
Parts feel stiff or difficult to move.	Lack of lubrication, rough edges on parts.	Apply more wax to the affected areas. Gently sand any rough edges that may be causing friction.

## 8. SPECIFICATIONS

- **Model:** Engine Clock
- **Brand:** UGEARS
- **Number of Parts:** 265
- **Approximate Assembly Time:** 5 hours
- **Dimensions (Assembled):** Height: 11.8 in (300 mm), Length: 5.6 in (142 mm), Depth: 4.7 in (120 mm)
- **Weight:** 10.4 ounces (package weight)
- **Recommended Age:** 14+ years
- **Material:** High-quality plywood
- **Operation:** Mechanical, no batteries required. Runs for approximately 5 hours on a single wind.



*Image 8: Visual representation of the assembled clock's dimensions and key statistics.*

## 9. WARRANTY AND SUPPORT

For any questions regarding assembly, missing parts, or operational issues, please contact UGEARS customer support. Refer to the contact information provided in your product packaging or visit the official UGEARS website for assistance.