



ASSEMBLY INSTRUCTIONS

Digital Assembly Guide & Video Instructions

Access the latest assembly instructions, video guides, and mounting configuration examples at
<https://gscentertainment.com/the-wind-sim-assembly-guide/>



Document Field	Information
Product Model	WS-120-DUO DUCT
Product Version	1.0
Document ID	GSC-WI-WS120D-001
Document Revision	A
Effective Date	2026-07-11

GSC Entertainment
Make Immersive Sim Racing Simple.

1. About This Guide

This guide provides the instructions required to assemble The Wind SIM by GSC Entertainment. Read all instructions before beginning assembly. Assembly should be completed using only the components and hardware specified in this document.

Document Information

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Product	The Wind SIM
Product Model	WS-120-DUO-DUCT
Product Version	1.0
Document ID	GSC-WI-WS120D-001
Revision	A
Effective Date	2026-07-11
Estimated Assembly Time	
Skill Level	[BEGINNER]

Safety Information

⚠ WARNING — ELECTRICAL AND MECHANICAL HAZARDS

Disconnect all power sources and USB connections before beginning assembly, disassembly, adjustment, or service. Never install, remove, or reposition electrical connections while the product is energized.

Verify correct voltage, polarity, wiring connections, and component placement before applying power. Incorrect wiring, reverse polarity, short circuits, damaged wiring, or the use of an incorrect power supply may result in component damage, overheating, fire, or personal injury.

Keep hands, tools, loose clothing, hair, and other objects clear of fan blades and moving components whenever power is connected. Never operate the fan assemblies unless all required guards, housings, and fasteners are properly installed and secured.

Do not use damaged components, wiring, connectors, or fasteners. Stop assembly or testing immediately if excessive heat, smoke, unusual odor, abnormal noise, damaged insulation, or unexpected operation is observed.

Only perform powered testing when specifically instructed by this work instruction.

⚠ CAUTION — PRODUCT DAMAGE AND ASSEMBLY QUALITY

Handle all components carefully during assembly. Do not overtighten fasteners installed into 3D-printed components. Excessive torque may crack, deform, strip, or permanently damage the part.

Ensure all components are properly aligned and seated before tightening fasteners. Do not force components into position or use fasteners to pull misaligned parts together.

Route wiring away from fan blades, pinch points, sharp edges, and areas where wires may be crushed between assembled components. Do not pull, twist, or carry the product by its wiring or connectors.

Do not manually rotate, bend, or apply excessive force to fan blades. Inspect all components for visible damage, loose hardware, improper alignment, and unrestricted fan movement before applying power.

Use only the specified tools, hardware, replacement components, and assembly procedures identified in this work instruction. Substitutions or unauthorized modifications may affect product performance, reliability, and final quality.

NOTICE — PROCESS CONTROL AND PRODUCT TRACEABILITY

Follow all assembly steps in the order specified by this work instruction. Do not skip, combine, or modify

assembly procedures unless authorized by the applicable GSC engineering or production documentation. Verify that the product model, product version, hardware revision, and required components match the applicable production record before beginning assembly.

Record all required unit identification, component substitutions, assembly deviations, rework, and inspection results in the designated production or quality-control record.

Use the current approved revision of this work instruction. Superseded or uncontrolled copies shall not be used for production assembly.

Upon completion of assembly, the product must proceed through the applicable GSC quality-control and functional testing process before packaging, release, or shipment.

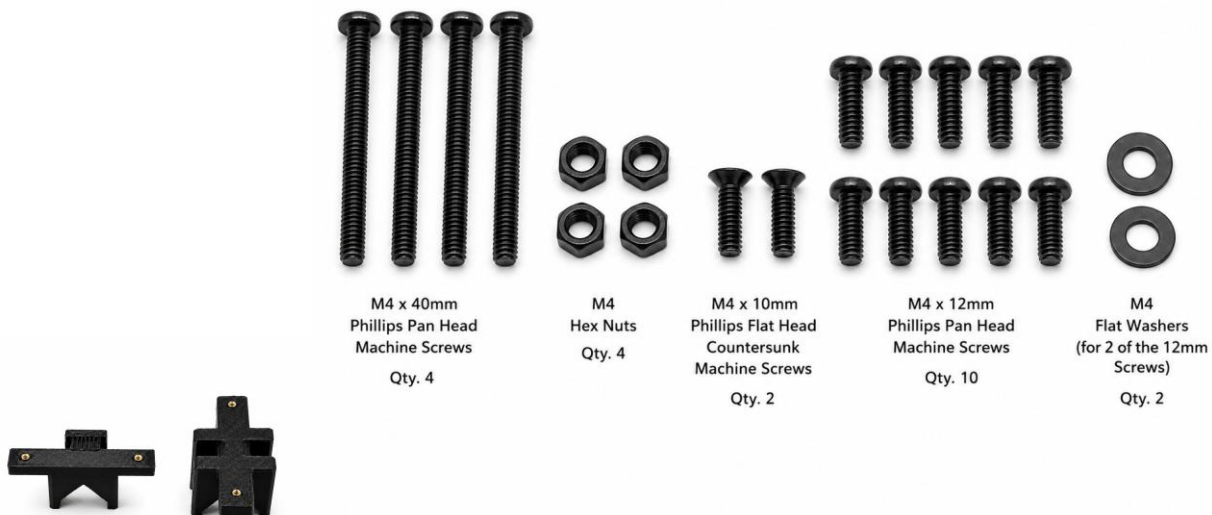
2. Package Contents

Before beginning assembly, verify that all required components are present.

Component / Package Contents	Qty.
CORE WIND SIM SYSTEM	
GSC WIND SIM CONTROLLER	1
12 V Power Supply	1
USB Data Cable	1
120 mm PWM Fans	2
Fan Housings	2
Fan Housing Covers	2
Swivel Fitting Fan Disks	2
Vertical Conversion Adapter Plates	2
CORE MOUNTING HARDWARE	
2-Inch Worm-Gear Clamps	2
3-Inch Worm-Gear Clamps	2
M4 × 40 mm Screws + M4 Nuts	8
M4 × 10 mm Countersunk Screws	4
M4 × 12 mm Round-Head Screws	20
M4 Flat Washers	4
AIR DUCT SYSTEM	
Air duct Adapter plate	2
3-Inch × 36-Inch Flexible Air Ducts	2
Air Duct Baffles	2
Perpendicular Air Duct Clamps	2
Screw-Gear Air Duct Clamps	4
4-Inch Air Duct Worm-Gear Clamps	2
AIR DUCT INSTALLATION HARDWARE	
M4 × 8 mm Screws + Washers + Extrusion Nuts	4 ea.
Clamp Mounting Surface Protection Tape	1 Roll
GSC WIND SIM ASSEMBLY TOOL SET	1 Set
10 mm Combination Wrench	1
Phillips Screwdriver	1
Flat-Head Screwdriver	1
H4 Hex Key	1
H2.5 Hex Key	1

NOTICE

Do not begin assembly if required components are missing or damaged.



3. Required Tools

The GSC WIND SIM Assembly Tool Set includes the tools required to complete standard mechanical assembly. Verify all required tools are present before beginning assembly.

Tool	Size / Specification	Purpose
Combination Wrench	10 mm	Tightening and securing M4 hex nuts
Phillips Screwdriver	Standard Phillips	Installing Phillips-head fasteners
Flat-Head Screwdriver	Standard Flat-Head	Adjusting worm-drive mounting clamps
Hex Key	H4	Installing and tightening applicable socket-head fasteners
Hex Key	H2.5	Installing and tightening applicable socket-head fasteners

NOTICE: Use only the correct tool size for each fastener. Do not use damaged or incorrectly sized tools. Do not overtighten fasteners installed into 3D-printed components.

4. Assembly Instructions

Complete each step in order. Verify component orientation and alignment before tightening fasteners.

STEP 1 — Select mounting configuration

Components Required

- GSC Wind SIM Core Mounting Hardware Set



- Vertical Conversion Adapter Plates with fasteners



- Worm Gear Clamps – 2” or 3” (included)



Assembly Configuration Possibilities



Assembly Procedure

1. Identify your desired configuration.
2. If needed, Attach vertical mounting adapter. You will need to remove the 4 screws attaching the swivel fittings to the pipe clamp base [secure this first to the clamp base]
3. Secure the vertical mounting plate with provided m4 countersink screws
4. The vertical mount plate does allow for a degree of rotation. Find desired angle and tighten screws
5. Secure the swivel fittings to vertical mounting plate in desired position.

IMPORTANT

When using the vertical adapter plate, fix the adapter plate to the pipe clamp base first.

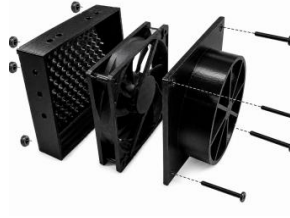
STEP 2 — Attach Fan Housing and fan mounting hardware

Components Required

- Pipe Clamp assembly



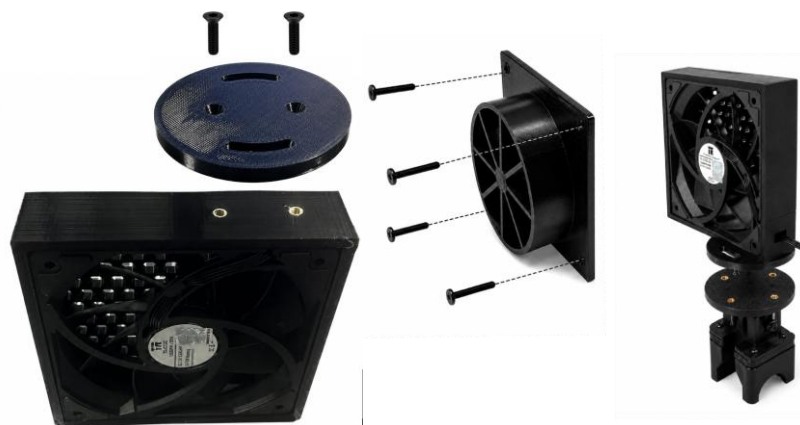
- Fan cover or optional Fan duct



- Swivel fitting fan disc



- Air duct assembly



Assembly Procedure

1. Attach swivel fitting fan disc to fan housing.
2. Attach fan housing assembling with disc to mounting assembly\

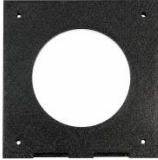
3. Attach fan cover to fan housing or connect air duct assembly to fan housing (see next step for air duct assembly instructions)

IMPORTANT

Make sure to install air duct assembly adapter plate and fan housing cover after the swivel disc is attached to the fan housing and the fan housing assembly with disc is attached to the mounting assembly .

STEP 3 — Air duct assembly instructions

Components Required

Worm gear clamp	
Air Duct fitting	
Air duct	
Air duct adapter plate	
Parallel/perpendicular air duct mount clamp	



Assembly Procedure

1. Assemble as pictured before attaching air duct adapter plate to fan housing.
2. Attach to fan housing in step 2 instead of fan housing cover.
3. Air duct assembly has a parallel and perpendicular mounting option

IMPORTANT

Air duct adapter plate screw slots need to face in the direction of air flow (towards the air duct tubing)

STEP 4 — Connecting to power and computer

Components Required

- 12V power supply



- USB A to micro USB cord



Recommended connection sequence:

1. Make sure **Sim Hub is closed or the WIND SIM output is at 0%.**
2. Connect the **12 V power supply to the WIND SIM controller/module.**
3. Connect the **USB cable to the computer.**
4. Open Sim Hub and verify the WIND SIM controller is detected.
5. Start the simulator.

Recommended shutdown/disconnection sequence: close Sim Hub or set wind output to 0%, disconnect USB, then disconnect 12 V power.

Step 5. Final Assembly Inspection

Before operating or packaging the product, verify the following:

- All required components are installed.
- All fasteners are secure.
- All components are properly aligned.
- Ducting or tubing is fully seated.
- Clamps are properly positioned.
- Wiring is routed correctly and protected.
- Wiring does not contact moving components.
- The fan rotates freely without obstruction.
- The completed assembly matches the reference image below.

Step 6. Quality Control Check

Inspection Item	Pass	Fail
Components installed correctly	☐	☐
Fasteners secure	☐	☐
Components properly aligned	☐	☐
Wiring properly routed	☐	☐
Fan rotates freely	☐	☐
Product visually inspected	☐	☐
Functional test completed	☐	☐

5. Sim Hub Setup

The Wind SIM by GSC ENT controller is pre-programmed for use with Sim Hub. Complete the following steps after the WIND SIM is fully assembled and connected to 12 V power and the computer by USB.

STEP 1 — Install and Open Sim Hub

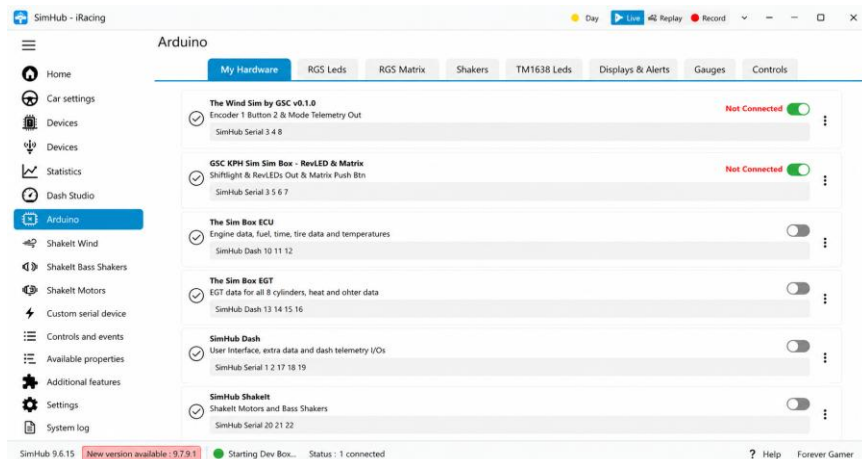
Setup Procedure

1. Download and install Sim Hub if it is not already installed.
2. Open Sim Hub and allow the application to fully load before continuing.

IMPORTANT

Use the current Sim Hub release available from the official Sim Hub website. An internet connection may be required for installation and game configuration.

STEP 2 — Verify the WIND SIM Controller Connection

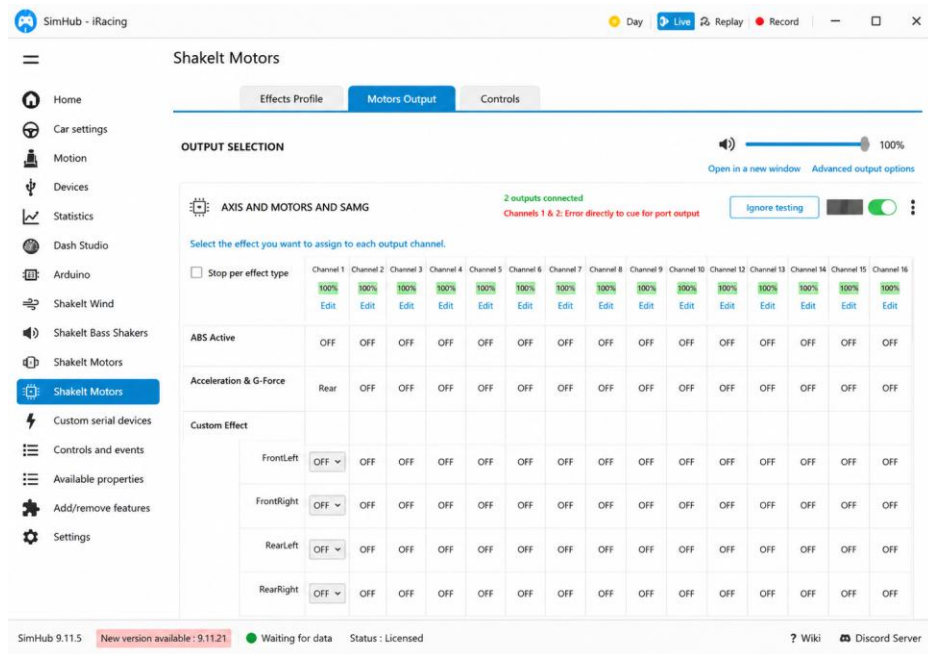


Setup Procedure

1. Select Arduino from the left-side menu in Sim Hub.
2. Open the My Hardware tab.
3. Locate the connected WIND SIM controller.
4. Verify that the controller status shows that it is connected and operating.

IMPORTANT

The WIND SIM controller is supplied pre-programmed. Do not use the Arduino Setup Tool to upload or replace the controller firmware unless instructed by GSC Entertainment support.



STEP 3 — Identify the Left and Right Fan Outputs

Setup Procedure

1. Use the Sim Hub output test controls to briefly activate the first fan channel.
2. Identify whether the left or right fan operates.
3. Assign or label that channel as the corresponding Left Fan or Right Fan output.
4. Repeat the test for the second fan channel.
5. Return both output tests to 0% before continuing.

STEP 4 — Open Shake It Wind

Setup Procedure

1. Select Shake It Wind from the Sim Hub menu.
2. Open the Motors Output tab.
3. Locate the WIND SIM controller in the output device list.
4. Enable the controller and both fan output channels if they are not already enabled.

IMPORTANT

Keep hands, tools, cables, clothing, and other objects clear of the fan blades during all powered testing.

STEP 5 — Configure the Wind Effect

Setup Procedure

1. Enable the vehicle speed effect in Shakelt Wind.
2. Select the applicable game telemetry source when prompted.
3. Set the initial wind intensity to a moderate level.
4. Adjust the minimum output, maximum output, and response curve to the desired airflow.
5. Save or apply the configuration.

RECOMMENDED

Begin with moderate output settings. Increase airflow gradually after confirming that both fans operate correctly and remain stable throughout the full output range.

STEP 6 — Complete a Final Operational Test

Operational Check

1. Start a supported simulator and enter a driving session.
2. Verify that the fans are stopped or operating at the configured minimum output while the vehicle is stationary.
3. Increase vehicle speed and confirm that airflow increases with vehicle speed.
4. Perform several sustained left- and right-hand corners and verify correct fan response. During right-hand cornering, the Left Fan should produce stronger airflow. During left-hand cornering, the Right Fan should produce stronger airflow.
5. Exit the driving session or close Sim Hub.
6. Verify that both fans return to 0% and stop.

SETUP COMPLETE

The WIND SIM is ready for use. Adjust the fan position, optional air ducts, and Sim Hub wind-effect settings as desired for airflow direction, intensity, and driver comfort.

SimHub Setup Troubleshooting

Issue	Check
Controller not shown in Sim Hub	Confirm that the USB cable is fully connected, try another USB port, and restart Sim Hub.
Fans do not operate during testing	Confirm that the 12 V power supply is connected and that both fan cables are fully seated.
Left and right fans are reversed	Swap the Left Fan and Right Fan channel assignments in Sim Hub.
Fans operate but do not change with speed	Confirm that the game is supported, telemetry is enabled, and the vehicle speed effect is active.
Fan does not stop at 0%	Stop testing, disconnect power, and contact GSC Entertainment support.