

## Antenna Positioning System: Multi Axis

**Model No: JVM-TAP-3D-002**

### Precision Positioning for Advanced RF & EMC Testing

The **JVM-TAP-3D-002 Antenna Positioning System** is a **high-precision, multi-axis positioner** designed for use in **Anechoic Chambers** for testing antennas, payloads, and RF equipment. With the ability to rotate almost **360 degrees horizontally** and tilt at precise elevation angles, this system enables **highly accurate and repeatable measurements** in **EMI/EMC, RF, and wireless communication testing**.



### Key Features & Capabilities:

#### Customizable Axis Configuration:

- Standard **Three-Axis Movement** for **Azimuth, Elevation, and Polarization control**.
- **Expandable up to Seven-Axis** configuration based on specific testing requirements.

#### Heavy-Duty Turntable:

- Supports payloads **up to 35 tons**, ideal for large-scale automotive, aerospace, and defense applications.

#### Low RF Interference:

- Constructed with **low RF interference materials**, ensuring minimal electromagnetic disturbance.
- RF absorbers cover the metal portions to enhance chamber performance.

#### Advanced Control System:

- **Microcontroller-based** system with **Windows-based GUI** for precise operation.
- **RS-485 Modbus Interface** for seamless communication with external controllers (e.g., PC).
- **Automated & Manual Control Modes** – Supports **batch processing** for automated test sequences.



## Robust Structural Design:

- **Stable metallic base** for durability and housing electrical components.
- **Non-metallic materials** used where necessary to minimize RF interference.
- **360-degree rotational freedom** with high-precision **stepper motors and encoders** for accurate positioning.

## Enhanced Motion Control:

- **Position Accuracy:  $\pm 0.1^\circ$  to  $\pm 0.01^\circ$**
- **Speed: Up to 6 RPM to 50 RPM** ( Customization as per user's requirement)
- **Synchronous Control:** Ensures precise movement in any direction.

## User-Friendly Interface & Connectivity:

- **RS-485 / Ethernet** support for **host computer integration**.
- **Character LCD Display** for controller configuration and system monitoring.
- **Windows-based GUI** for easy operation and remote control.
- **Antenna Radiation Pattern Testing**

## Applications:

**5G, SatCom, and Wireless Communications Research**  
**Automotive, Aerospace, and Defense Testing**

