



The Game:

FREIGHT FRENZYSM presented by Raytheon Technologies is played on a 12 ft. x 12 ft. (3.7m x 3.7m) square field with approximately 1 ft. (0.3 m) high walls and a soft foam mat floor. There are two Alliances – “red” and “blue” made up of two Robots each. The Alliance neutral scoring elements are called Freight. There are 50 boxes which consist of 30 light, 20 medium, and 10 heavy Boxes, and 20 Cargo game pieces. At one end of the field are two Alliance neutral Warehouses which contain the freight. 20 Alliance neutral Ducks also make up Freight.

Robots must traverse over barriers to access Freight in the Warehouse. Two Alliance Shipping Hubs are located toward the center of the field, and one Shared Shipping Hub toward the back of the field. There are 4 barcodes, 2 for the red alliance and 2 for the blue alliance. The Carousels are located in the corners of the field towards the audience, and in front of the alliance stations. The Carousels are used to introduce Ducks onto the field and into play.

Prior to the start of the Match, Robots must be touching the wall closest to their alliance station and must possess one Pre-Load Box. Teams may swap the Duck located on the Barcode with their Team Shipping Element.

Matches have two distinct periods of play: a 30-second Autonomous period followed by a two-minute Driver-Controlled period. The last thirty seconds of the Driver-Controlled period is called the End Game which adds new scoring opportunities for the Robots to achieve.

Autonomous Period:

Robots may Deliver Pre-loaded Boxes to a randomly selected level of the Alliance Shipping Hub. Teams may opt to use the Duck placed on the field, or may use their Team Shipping Element, which provides more points when used to determine where Freight is delivered to the correct level of the Alliance Shipping Hub. Alliances also earn points by Navigating to the Storage Unit or Warehouse, Scoring Freight in the Storage Unit or Alliance Shipping Hub, and Delivering Ducks onto the Playing Field Floor via the Carousel.

Driver-Controlled Period:

Alliances earn points by collecting Freight from the Warehouse and Scoring the Freight in the Storage Unit, their Alliance Shipping Hub, or the Shared Shipping Hub

End Game:

Alliances may Deliver Ducks onto the Playing Field via the Carousels. If the Team Shipping Element was not introduced during pre-Match setup, Alliances may also Deliver their Team Shipping Element. The Team Shipping Element may be used to Cap their Alliance Shipping Hub to earn points. An Alliance will earn Balance points for the Alliance Shipping Hub being Balanced. If an Alliance’s section of the Shared Shipping Hub is contacting the tile floor, the Alliance will earn points.

Autonomous Period Scoring:

- Delivered Duck via Carousel: 10 points
- Navigating:
 - Parked In Alliance Storage Unit: 3 points
 - Parked Completely In Alliance Storage Unit: ... 6 points
 - Parked In Warehouse: 5 points
 - Parked Completely In Warehouse: 10 points
- Freight Completely In Alliance Storage Unit: 2 points
- Freight Completely On Alliance Shipping Hub: 6 points
- Autonomous Bonus:
 - Duck used to detect Shipping Hub Level: 10 points
 - Team Scoring Element used to detect Shipping Hub Level 20 points

Driver-Controlled Period Scoring:

- Freight Completely In Alliance Storage Unit: 1 point
- Freight in Alliance Shipping Hub:
 - Level 1: 2 points
 - Level 2: 4 points
 - Level 3: 6 points
- Freight Completely On Shared Shipping Hub: 4 points

End Game Scoring:

- Delivered Duck or Team Shipping Element via Carousel: 6 points
- Alliance Shipping Hub Balanced: 10 points
- Shared Shipping Hub tipped toward Alliance: 20 points
- Parked In a Warehouse: 3 points
- Parked Completely In a Warehouse: 6 points
- Alliance Shipping Hub Capped 15 points