

A product-focused project debrief for AndyMark.

We used the AndyMark **Redline Motors** on all our mechanical mechanisms besides our shooter and drivetrain. They performed just as well if not better than a 775 pro. With their high rpm and power output they were perfect for all of our other mechanisms when paired with planetary gearbox with an appropriate gear ratio.

The AndyMark **Multimounts** were especially useful for all of the Redline motors we used. We constantly struggle every year with bending motor leads and losing connection to our motors. These solder on Multimounts more than solve the problem and provided a reliable connection to all of our Redlines through the Anderson connection they provide. We did not have a chance to use the encoder mounting that is provided by the Multimounts due to not having that style of encoder.

We used the **100:1 sport planetary gearbox** and the **dual motor input** with two redline motors to power our climbing mechanism. This was perfect for a climber because this brand of planetary gearboxes is stronger than others, which makes it perfect for handling the strain of climbing.

The **Pixy Camera** was useful for vision object tracking. It was beneficial that the ball is a different hue than the field making it easier to track. It connected very easily to the RoboRio. We used the pixy for basic object recognition and tracking. We also understand it has the capability to do line tracking, subcontrol servos and so on. We also found that through LabView you can configure the brightness and mode of the camera which helped with our object tracking.

The **16mm box extrusion** was the perfect size to use to mount a motor on the roller part of our intake. This saved us the trouble of having to make sure there was room to use a 1x1 piece.

The **1/16" 2x1 aluminium** was put to good use in the structure for our intake. We also prototyped with the 2x1 aluminum to test our intake method shooter. This year was surprisingly light on the 2x1 use, but we are thankful for you donation.

The **stuffed goat**, Andy, provided us with a much needed morale boost in the late and early hours of the day. Andy has now become part of the MizzouFIRST Zoukeepers family.