



**SABRE BYTES
FRC TEAM 772
SANDWICH SECONDARY SCHOOL
LASALLE ON, CANADA**



GENERAL SPEC'S

- ORIENTATION: LONG
- WEIGHT: 119LBS
- HEIGHT: 46"
- WIDTH: 26"
- LENGTH: 36"

BALL COLLECTOR

- ROLLERS: ABS TUBES ON NYLON BUSHINGS
- URETHANE BELTING: MULTIPLE STRANDS EXTENDING FROM EACH ROLLER FOR QUICK BALL COLLECTION. SPACERS BETWEEN BELTING TO PREVENT JAMMING

HYBRID

- MULTIPLE HYBRID MODES TO ACCOMMODATE FOR EACH MATCH'S STRATEGY
- EASILY CHANGE MODES ON DASH BOARD

MODES

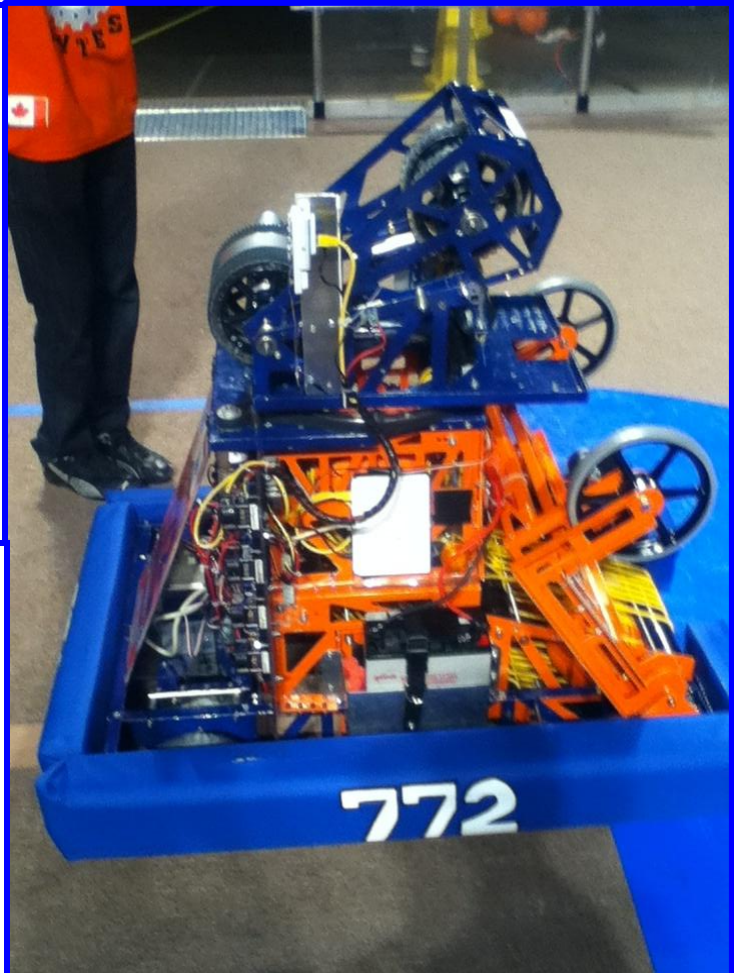
- MOVE FORWARD AND SHOOT 2 BALLS (LINE UP IN MIDDLE)
- FEED ALLIANCE PARTNER OUR TWO BALLS (LINE UP TO FEED ALLIANCE PARTNER)
- SHOOT TWO BALLS (WITHOUT MOVING). GET FED ALLIANCE PARTNERS BALLS (LINE UP IN MIDDLE)
- SHOOT TWO BALLS, GO TIP BRIDGE AND SHOOT BALLS COLLECTED FROM BRIDGE (LINE UP IN MIDDLE WITH NO ROBOT BEHIND)
- SHOOT TWO BALLS, GO TIP BRIDGE. (LINE UP IN MIDDLE WITH NO ROBOT BEHIND)
- DRIVE TO FENDER AND SHOOT TWO BALLS (LINE UP ON RIGHT SIDE)

SHOOTER

- DUAL WHEELED FOR A MORE CONSISTENT AND ACCURATE SHOT
- ADJUSTABLE SPEED FOR DIFFERENT DISTANCE SHOTS
 - FENDER SHOT
 - SHOT FROM FRONT OF KEY
 - SHOT FROM BACK OF KEY
 - SHOT FORM BRIDGE
- IN MOST CASES THE TOP WHEELS OF SHOOTER ARE NOT SPINNING, TO GET BACK SPIN. BACK SPIN WILL HELP GET OUR SHOTS MORE ACCURATE

TURRET

- SHOOTER IS MOUNTED ON A TURRET SYSTEM
- MAKES LINING UP THE SHOOTER FOR A SHOT A LOT EASIER AND QUICKER
- DRIVER HAS CONTROL OVER TURRET
- CAMERA TRACKING SYSTEM AND A GAUGE ON THE DASH BOARD HELPS DRIVER ALIGN SHOOTER



DRIVE TRAIN

ALL DRIVE TRAIN PARTS WERE WELL THOUGHT OUT TO COMBINE A LIGHTWEIGHT CHASSIS AND AN EXTREMELY DURABLE FRAME INTO ONE.

- FRAME: 1/8" SHEET METAL CHASSIS, BUILT FOR A ROBUST AND LIGHTWEIGHT DRIVE
- WHEELS: 6 WHEEL DRIVE. 8" ANDYMARK PNEUMATIC TIRES
- TOP SPEED: 10 FT/S (DRIVER CAN CONTROL TOP SPEED FOR QUICKER BRIDGE BALANCING)
- GEARBOXES: ANDYMARK GEN 2 SHIFTING TRANSMISSIONS. FIXED IN LOW GEAR
- CHAIN: #35 CHAIN TO PREVENT CHAIN FROM BREAKING
- CENTER WHEEL DROP: 1/8" DROP FOR EASY TURNING ABILITIES
- WHEELS ARE FIRST TO HIT WHEN GOING OVER THE BUMP, TO GET OVER QUICKLY AND EASILY

OFFENSIVE CAPABILITIES

- OUR ROBOT WAS SPECIFICALLY MADE TO HAVE AMAZING OFFENSIVE ABILITIES
 - OUR SHOOTER IS FAST AND ACCURATE AT SHOOTING 3-POINT SHOTS IN HYBRID AND DURING TELOP
 - THE DUAL WHEELED SHOOTER CAN SHOOT ACCURATELY FROM THE FENDER. HAS A GOOD SHOT FROM THE KEY IN THE CASE OF US BEING DEFENDED AGAINST. WE CAN ALSO SHOOT FROM THE BRIDGE FOR THOSE "HAIL MARY" LAST SECOND SHOTS.
 - DURING THE SEASON THE DRIVERS HAVE GOTTEN QUICKER AT PICKING UP BALLS. IT NOW TAKES ABOUT 15-20 SECONDS TO COLLECT 3 BALLS.
 - SHOOTING HAS AND IS STILL IMPROVING. SHOOTING 3 BALLS TAKES ABOUT 10 SECONDS.
 - WE HAVE RECENTLY INTRODUCED A "THROTTLE" TO THE DRIVERS CONTROLS. THIS HELPS THE DRIVER WITH BALANCING
 - WE CAN HANG OFF THE BRIDGE 18" TO MAKE ROOM FOR TWO OTHER ROBOTS. THIS HELPS TRIPLE BALANCE IN ELIMINATIONS.
- NOTE: WE HAVE TO BACK UP ONTO THE BRIDGE SO OUR CENTER OF GRAVITY IS CLOSER TO THE MIDDLE OF THE BRIDGE

DEFENSIVE CAPABILITIES

- THOUGH OUR ROBOT WAS MADE TO BE OFFENSIVE WE ARE ALSO A GREAT DEFENDER
- OUR DRIVE TRAIN GIVES US THE CAPABILITY OF PUSHING OTHER ROBOTS AROUND. WE HAVE AN INCREDIBLE AMOUNT OF TRACTION AND CAN PUSH ANYONE COLLECTING BALLS OR SHOOTING
- WE CAN COLLECT BALLS FROM THE OPPOSING ALLIANCE'S END OF THE FIELD AND FEED THE BALLS TO OUR ALLIANCE PARTNERS. (DID THIS WITH 1730 AND 3138 IN THE QUEEN CITY REGIONAL AND GOT HIGHEST QUALIFICATION SCORE)

FRC TEAM 772 IN 2012

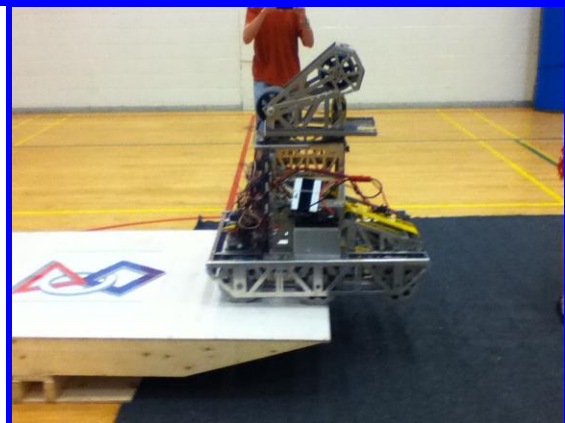
- COMPETED AT SMOKY MOUNTAINS REGIONAL, GREATER TORONTO WEST REGIONAL, AND QUEEN CITY REGIONAL
- WENT UNDEFEATED AT SMOKY MOUNTAINS REGIONAL (14-0-1)
- REGIONAL WINNERS AT SMOKY MOUNTAINS REGIONAL
- ENTREPRENEURSHIP AWARD AT SMOKY MOUNTAINS REGIONAL
- SEASON RECORD OF 27-12-1
- ROBOT NAME: DROID



Canada 



Dr. Anil Dhar- Pulmonary and Critical Care Medicine



ROBOT HANGING OFF THE BRIDGE 17"