



**2021 VIRTUAL**

**REC FOUNDATION  
SUMMIT**

**BELL Vertical Robotics Competition**

**Jim Crane, Director of Developing Programs**



# 2021 VIRTUAL REC FOUNDATION SUMMIT

## BELL Vertical Robotics Competition BELL VRC

- Integration of Autonomous Ground and Flight Operation
- Drone Piloting and Driver Control of Multiple Ground Robots
- Team Logistics and Critical Thinking for Search & Rescue Mission
- Team Presentations

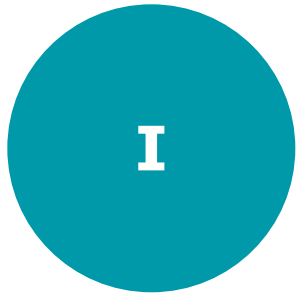


ROBOTICS EDUCATION & COMPETITION FOUNDATION  
Inspiring students, one robot at a time.



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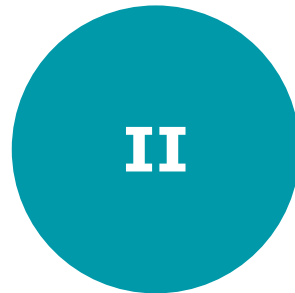
### **Phase 1 April 10th**

5 weeks

Build the Drone

### **Phase 2 September 25th**

Game Reveal, receive game components



### **Competitions Nov 5, 12, 13**

Each team competes at 1 event

Top teams from each event plays in the Championship on Dec 4th

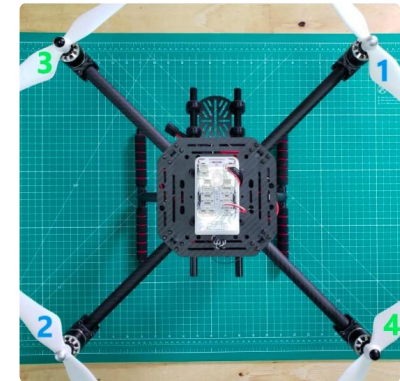
# **2021 Season Calendar**

Atypical 2021 Season



# BELL VRC

Assemble, Program, Calibrate  
Phase 1



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# Phase 1

## PRIMARY GOAL

- Build and Fly the Basic VRC Drone



## SECONDARY GOAL

- Build and ground test the Peripheral Control Computer (PCC)
- Activate Servo Actuators and LEDs using the PCC

## "OVERACHIEVER" GOAL

- Mount the Vehicle Management Computer (VMC) to the airframe
- Connect the VMC to the Flight Control Computer and perform Ground Testing

## 3D PRINTING PROJECT

- Teams to Design, Build and Test - Propeller Guards and LED Halo
- **Senior Design Project** - Documentation and Presentation of the design process & solution

<https://twitter.com/BellFlight/status/1400838662305288192>







# BELL Vertical Robotics Competition Phase 2

September 25, 2021 Reveal

**THANK YOU**



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