

" Programming Your V5 Controller" - Partial Gradesheet – (30 pts.)

Purpose: Students will learn how to program the Controller.



Go to the class site for tips on how to program all the buttons on your controller and coding hints that will allow you to achieve all the tasks stated below.

Remote Control Programming		
Program Controller: "Motion"	Program the Left joystick on your Controller so that your Robot's Left Wheel moves Forward and Backward. Then, program the Right joystick on your Controller so that your Robot's Right Wheel moves Forward and Backward. For this exercise, you will need to add "Motors" instead of "Drivetrain" for Motion. Save this program as "Minefield Retrieval"	10pts
Program Controller: "Arm & Claw."	Program the Controller so that the Arm will raise when L1 is pressed. The Arm will lower when L2 is pressed. The Claw will open when R1 is pressed and close when R2 is pressed. Note: the Arm should not slowly lower when L1 is no longer being pressed.	10pts
Brake	Create a Program that stops the Arm from raising or lowering and the claw stops opening or closing when the button is released.	10pts
Minefield Challenge	Student teams will compete with each other to successfully lift and place specified number of objects in a container within a specific length of time. Students are free to rewrite their programs so that their robots can perform successfully for this game.	

Note: Programming Motion.

Set motor velocity gives two options: "%" (accepts a range from -100% to 100%) or, "rpm" (accepts a range -600rpm to 600rpm; "rotations per minute" value based on the Gear Cartridge installed in the V5 Smart Motors used in the Drivetrain.)

Setting a V5 Smart Motor's velocity to a negative value will cause the Motor to spin in reverse.

Setting a V5 Smart Motor's velocity to 0 will cause the Motor to stop.

