Left Front = leftY + leftX;

Left Rear = leftY - leftX;

Right Front = rightY - rightX;

Right Rear = rightY + rightX;

* Strafe value (x) is determined by taking the magnitude of both x values of the joysticks and using the larger one. Then assigning that larger value to x, used in determining the speeds to set the motors.

void TankShift(double leftX, double leftY, double rightX, double rightY)

{

//without deadband

//

//lf = ly + x;

//lr = ly - x;

//

//rf = ry - x;

//rr = ry + x;

//with deadband

double lf = 0, lr = 0, rf = 0, rr = 0; //lf = left front, lr = left rear, rf = right front, rr = right rear

double deadband = 0.1;

double max = 0;

if (fabs(leftY) >= deadband)

{

lf += leftY;

lr += leftY;

}

if (fabs(rightY) >= deadband)

{

rf += rightY;

rr += rightY;

}

double strafeSpeed;

if (fabs(leftX) > fabs(rightX))

{

strafeSpeed = fabs(leftX);

}

else

{

strafeSpeed = fabs(rightX);

}

if (fabs(strafeSpeed) >= deadband)

{

lf += strafeSpeed;

lr -= strafeSpeed;

rf -= strafeSpeed;

rr += strafeSpeed;

}

if (abs(lf) > max) {

max = abs(lf);

}

if (abs(lr) > max) {

max = abs(lr);

}

if (abs(rf) > max) {

max = abs(rf);

}

if (abs(rr) > max) {

max = abs(rr);

}

//normalize the wheel's speed values to fit in range of motor output (-1 to 1) if required

if (max > 1) {

lf = lf / max;

lr = lr / max;

rf = rf / max;

rr = rr / max;

}

}

leftFront->Set(lf);

leftFrontCenter->Set(lf);

leftRear->Set(lr);

leftRearCenter->Set(lr);

rightFront->Set(rf);

rightFrontCenter->Set(rf);

rightRear->Set(rr);

rightRearCenter->Set(rr);

}