

TRUTH ABOUT TURNS (PIVOT TURNS)

By Droids Robotics, 2015

Here are four ways of making a pivot turn. For the pivot turns below, you want Motor B to go exactly 1 rotation and Motor C to stay still. 1 2 Method 1: Uses Move Tank Method 2: Uses Move Block with one motor set to Steering Block with steering 0 and the other set to 50 set to 50. 3 Method 3: Uses Motor Blocks Method 4: Uses one Motor but stops Motor C Block to turn, and ignores Motor C's actions. Motor C may move a bit because it is dragged along. Motor C's mode was not 4

Data Logging Graph: shows the rotation sensor for motors B & C for the four pivot turns on the left.

Motor C

Motor B

	BLOCK	NOTES
Method 1 Method 2	Move Tank Move Steering	 Both have motor synchronization, ramp-up/ramp-down. They both let you make the two motors move at different speeds (using steering values for Move Steering or the separate input powers for Move Tank) Easy to create & use. The data logging graphs shows that they behave the same.
Method 3	Large Motor with one motor stopped	 Notice in the data log that this technique works the best! Motor C does not move during the turn. In practice, you may not notice this difference, but the data log shows there is a difference
Method 4	Large Motor	 Only one motor's parameters are set. The other motor may be "dragged along". Notice that the second motor is moving a lot (unintentionally) in the graph above Not a reliable way of turning.