Registers

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All registers should be set or initialized before they are called in a bank. A register is set by sending the register and register number you with to set followed by and equals sign and the value you wish to set, e.g.: P1.1=100, S10.1=500, V1.2=-50, V2.1="Ux".

It is possible to set a register inside a bank, but it cannot be set directly with a number. Any register set inside of a bank must be set from another register:

Correct	**Incorrect**
V1.1=100 B1.1 A1.1=V1.1 END.1	B1.1 A1.1=100 END.1

Any register can be queried by sending only the register number, E.g. to query P15.1 simply send:

P15.1

A response will be returned from the motor in the format P15.1=# where # is the value stored in that register.

List of Registers

P	Position
Unit: Pulses P1-P25 Min: -1000000000 Max: 1000000000	P registers define target positions as measured in pulses.
P5.1=1000	Set position 5 in motor 1 to 1000.
S	Speed
Unit: Pulses per Second (see *K37*) S1-S15 Min:-5000000 Max: 5000000	S registers define the target speed in a unit defined in parameter *K37* .
S2.1=430	Set speed 2 in motor 1 as 430.
A	Acceleration

Unit: Thousand Pulses per Second Squared A1-A8 Min:-32767 Max:32767	A registers define the target acceleration in thousands of pulses per second squared.
A8.1=50	Sets acceleration 8 in motor 1 as 50.
T	Timer
Unit: millisecond T1-T8 Min: 0 Max: 32767	T registers define a timer in milliseconds. This timer can be called in program or logic banks to wait for the specified amount of time.
T1.1=25000	Sets timer 1 in motor 1 to 25000 (25s).
M	Torque
Unit: Percent of Peak torque M1-M8 Min: 0 Max: 100	M registers define the torque limit for a move, as measured in a percentage of the motors peak torque.
M2.1=80	Sets the torque register 2 in motor 1 as 80%.
V	Variable Data
Unit: - V1-V15 Min: -2147483648 Max: 2147483647	Variable registers serve a number of purposes. Variable can be set to use current motor states as well as predefined numbers and text strings. When using the motor state variables or text strings, these must be defined using quotations. A comprehensive list and description of the internal state variables can be found under *Internal Variables*.
V2.1=”Px” V3.1=”abcd” V8.1=5432	Sets variable two in motor one as current position. Sets variable three in motor one as text string “abcd”. Sets variable eight in motor one as 5432.
N	Center Point
Unit: Pulses N1-N25 Min: -2147483648 Max: 2147483647	N registers are used to define the center point of a circle when using two motors in a coordinated motion system. For more information see *coordinated motion.* Can also be used as general purpose variable if coordinated motion is not used.
N12.1=1375	Sets center point data 12 in motor 1 to 1375.
R	Radius

Unit: Pulses R1-R25 Min: -1000000000 Max: 1000000000	R registers are used to define the radius of a circle when using two motors in a coordinated motion system. For more information see *coordinated motion.* Can also be used as general purpose variable if coordinated motion is not used.
R5.1=25000	Sets radius data five in motor one to 25000.