

# MechoNet RS-232 Protocol Document

## Port settings

The RS-232 settings should conform to:

- 19200 baud
- 1 start bit/1 stop bit
- no parity

## Cable connection

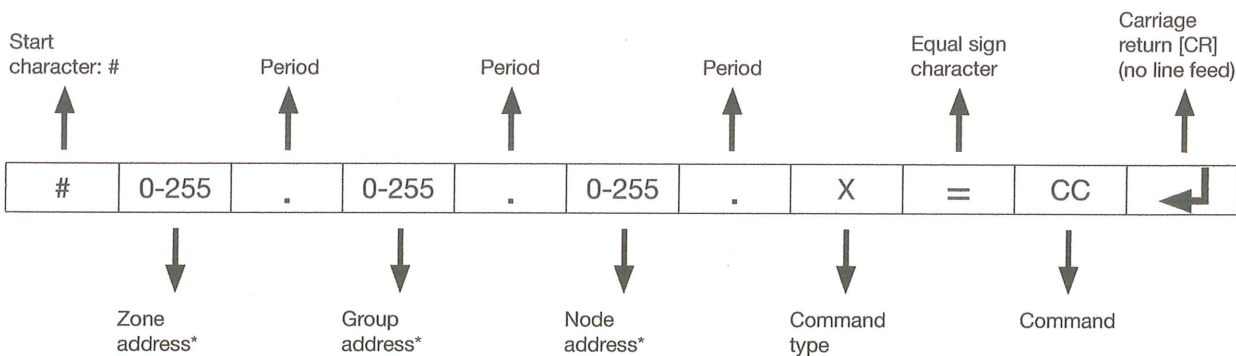
The RS-232 Port is an RJ12 port, which needs to be wired as shown here. (See page 3.)

The RS-232 command structure is a bi-directional ASCII-based message string, which utilizes an ASCII “#” to begin the string and an ASCII carriage return (CR) to end the string.

## ASCII command sequence

Start with #; end with CR.  
Baud rate = 19200, 8 bit, no parity, no handshaking.  
A backspace will move back one character.  
An escape will delete the entry.

For example, #24.12.0.A=UP will drive the motor up on devices in zone 24, group 12.



Command Description	Message	Example and Notes
Up	#Zone.group.Node= <b>UP</b> [CR]	#1.1.0.A=UP[CR]
Intermediate Position 1 (25% default)	#Zone.Group.Node= <b>G1</b> [CR]	#1.1.0.A=G1[CR]
Intermediate Position 2 (50% default)	#Zone.Group.Node= <b>G2</b> [CR]	#1.1.0.A=G2[CR]
Intermediate Position 3 (75% default)	#Zone.Group.Node= <b>G3</b> [CR]	#1.1.0.A=G3[CR]
Down	#Zone.Group.Node= <b>DN</b> [CR]	#1.1.0.A=DN[CR]
Stop	#Zone.Group.Node= <b>ST</b> [CR]	#1.1.0.A=ST[CR]
Toggle Normal/Uniform Mode	#Zone.Group.Node= <b>NT</b> [CR]	#1.1.0.A=NT[CR]

\*Notes:  
1. Use “0” (zero) unless returned information is coming from a specific device.  
2. Leading zeros may be omitted.



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## Address

Addresses for devices on the network loosely follow an Ethernet structure with three hierarchical levels.

\*When inputting an address into the RS-232 message string, the leading zeros in the address may be omitted. It is the decimal points which separate the structure in the address.

**Node Address**—A Node refers to a single device that needs controlling. This motor controller may be a part of a Group as well as a Zone in larger installation. A “0” here means this is a broadcast command to all nodes matching a specific Zone and Group Address.

**Group Address**—In a case where more than one Node is desired to be linked together for ease of simultaneous operation, this grouping is referred to as a Group. As an example, one may desire that all windows on the east side of the living room be controlled together to shield out the morning sun. A single button on a remote control device then could be used to operate all motor controllers comprising that Group. A “0” here means this is a broadcast to all devices in all Groups, within a specific Zone Address and potentially with a matching Node Address.

**Zone Address**—A Zone is the largest common denominator that can be controlled by a single control-button push. Typically, a Zone would include two or more Groups. As an example, a room would be considered a Zone. A “0” here means this is a broadcast to all devices in all Zones, potentially with a matching Group and Node Address.

## Function and Command

The next feature in the command structure is the Function and Command being issued. The table below provides the codes which map to a Function or purpose for the Command.

### Command Types

“X”	Description
A	Motor Control

Motor Control: For the devices addressed, this function will attend to various aspects about the motor, its setting, or status.

The set of commands which coincide with Motor Control include “Up” and “Down.”

Thus, the ASCII Command:

### #1.1.0.A=UP[CR]

will cause Motor Control Zones with Zone=1, Group=1, Node=0 to move Up. Setting Node=0 means all Node Addresses. Thus, if we had the following Command:

### #0.0.0.A=DN[CR]

will cause all Motor Control Zones to move Down.

### Motor Control

“CC”	Description
QY	Position
DN	Down
UP	Up
ST	Stop
G1	Go To Preset 1
G2	Go To Preset 2
G3	Go To Preset 3
NT	N/U Mode Toggle
S1	Set Preset 1
S2	Set Preset 2
S3	Set Preset 3

