Packet Definition

- Must contain terminating characters: "\r\n"
- Maximum length is 34 bytes
  - 32 bytes for payload
  - 2 bytes for terminating characters
- No need for padding if less than maximum length
- Begin with 1 decimal digit in ASCII encoding, representing sequence number
- Followed by 3 ASCII characters for the packet type
- Followed by up to 0 to 28 Bytes for the packet's parameters, all digits in ASCII encoding
- Terminated by 2 byte terminating characters
- The following summarises a packet's contents

1 Byte	3 Bytes	0 to 28 Bytes	2 Bytes
Sequence Number	Packet Type	Packet Parameters	"\r\n"

Packet Types

Handler System:

Type	Parameters	Description
ACK	<ACK Number>	Acknowledges the packet with sequence number of <ACK Number>
DEG	<Joint>,<Angle>	From Controller to Handler: Sets the 1 digit <Joint> number to the 3 digit <Angle> in degrees. Only applicable to rotational joints. From Handler to Controller: Confirms <Joint> number is set to <Angle>°.
POS	<Joint>,<Position>	From Controller to Handler: Sets the 1 digit <Joint> number to the 3 digit <Position> in mm. Only applicable to translational joints. From Handler to Controller: Confirms <Joint> number is set to <Position>mm.

ARM	<R>,<θ>,<H>	From Controller to Handler:
		Sets the arm to the cylindrical coordinates (<R>,<θ>,<H>) where <R> is 3 digits in mm, <θ> is 3 digits in degrees, <H> is 3 digits in mm.
		From Handler to Controller:
		Confirms arm is set to (<R>,<θ>,<H>) coordinates.