

Inverted Pendulum Cart Assembly Instructions – MEM 639

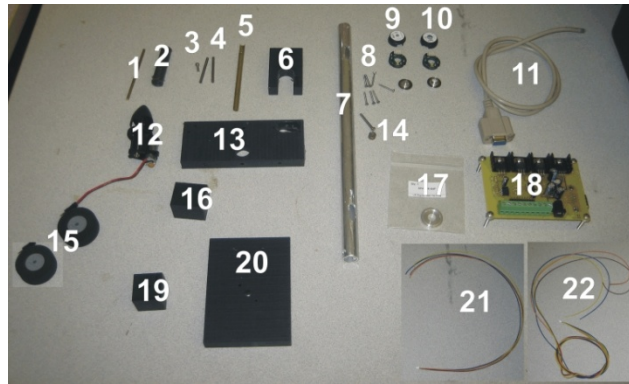


Figure 1. All parts of the cart assembly

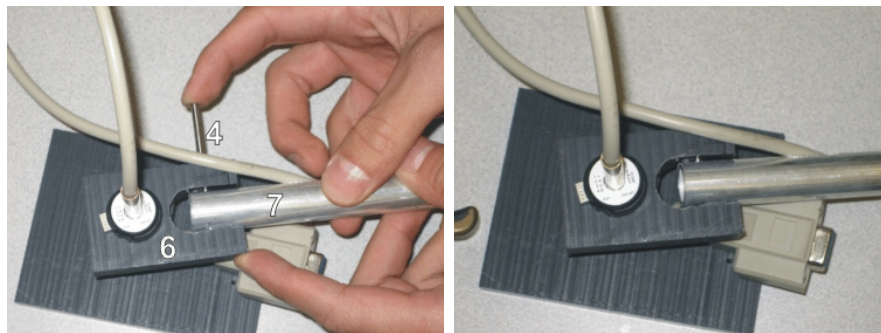


Figure 2. Attaching the pendulum cart to the pivot plate

1. Slide the pendulum cart arm into the opening of the pivot plate.
2. Secure the pendulum cart arm in place by inserting a dowel (4) through the through holes of the pivot plate and cart arm.

| Cart Assembly DAQ | NI USB - 6211 |
|---------------------------------|----------------------|
| A1 : Pendulum Encoder Chanel A1 | Pin 1 : P0.0 |
| B1 : Pendulum Encoder Chanel B1 | Pin 2 : P0.1 |
| A2 : Center Encoder Chanel A2 | Pin 3 : P0.2 |
| B2 : Center Encoder Chanel B2 | Pin 4 : P0.3 |
| E+ : Encoder Power +5 | Pin 10 : +5V |
| E- : Encoder Ground | Pin 11 : DGND |
| Ai+ : Command Voltage | Pin 12 : AO0 |
| Ai- : Command Ground | Pin 14: AO GND |
| M+ : Motor Voltage In | Pin 15: Ai0 |
| M- : Motor Ground In | Pin 16: Ai8 |

1. Connect the Cart Assembly pinouts to the NI USB-6211 according to the table above.
2. Plug the supplied power adapter into the motor driver board.