

Nomad HD Rover Assembly Guide



Robotic
CrustCrawler
Design & Development

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E-mail: Support@CrustCrawler.com

Web: <http://www.CrustCrawler.com>

Phone – 480-577-5557

Nomad HD Rover Kit Contents

Hardware Kit

- (1) Aluminum Nomad HD Rover Body and Caster Wheel Bracket
- (64) #4 ¼ inch Screws
- (4) #4 Washers
- (4) #4 3/8 inch screws
- (3) ¼" nylon spacers
- (3) #4 5/8 inch screws
- (3) #4 lock nuts
- (8) #8 ½ inch Screws
- (4) M4, 6mm screws
- (2) Steel Grasp Handles

Full Kit

- (1) Aluminum Nomad HD Rover Body and Caster Wheel Bracket
- (64) #4 ¼ inch Screws
- (4) #4 Washers
- (4) #4 3/8 inch screws
- (3) ¼" nylon spacers
- (3) #4 5/8 inch screws
- (3) #4 lock nuts
- (8) #8 ½ inch Screws
- (4) M4 6mm screws
- (2) Steel Grasp Handles
- (1) Parallax Wheel Kit
- (1) Parallax Caster Wheel Kit

Mounting the Drive Motors to the Motor Mount Plates

1. Identify the Left and Right hand motors by the markings on the side of the Parallax motor kit.
2. Assemble the motor mount and wheels kits according to the Parallax instruction manual.
3. Once the assembly is complete, using (4) #8 1/2" screws, install the left and right motors to the Motor Mount Plates as shown in figure #1

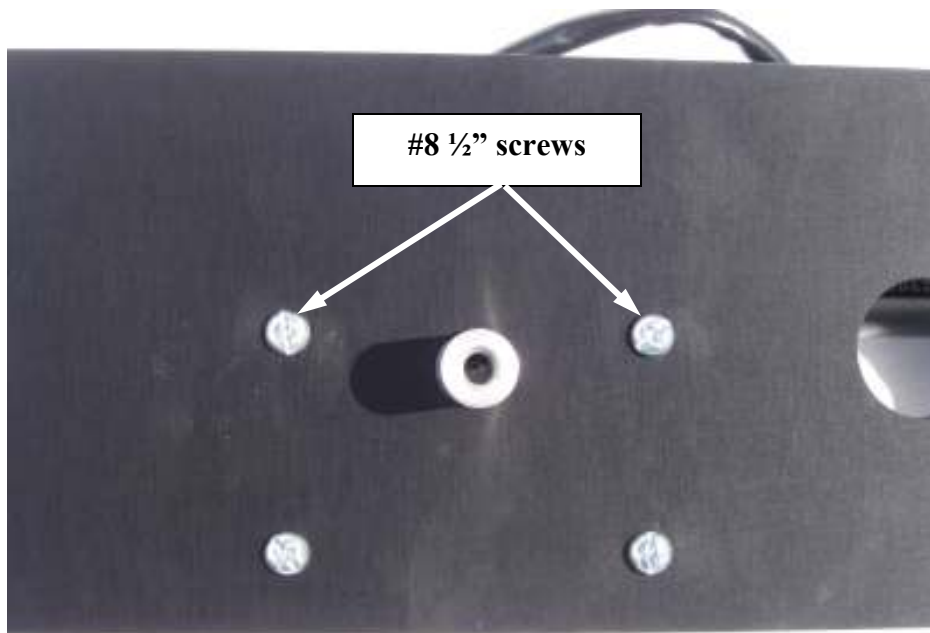


Figure 1

4. Grease the locking pins and the hole in the axle shaft with any type of grease. This will make installing the cotter pins in step #5 much easier.

5. Install the cotter pins into the axle shaft by lightly tapping them with a hammer until each end of the cotter pin is showing equally from both sides of the axle shaft as shown in figure 2.

Note: Be sure to place the axle shaft on a wood surface before tapping the cotter pins into the axle shaft.

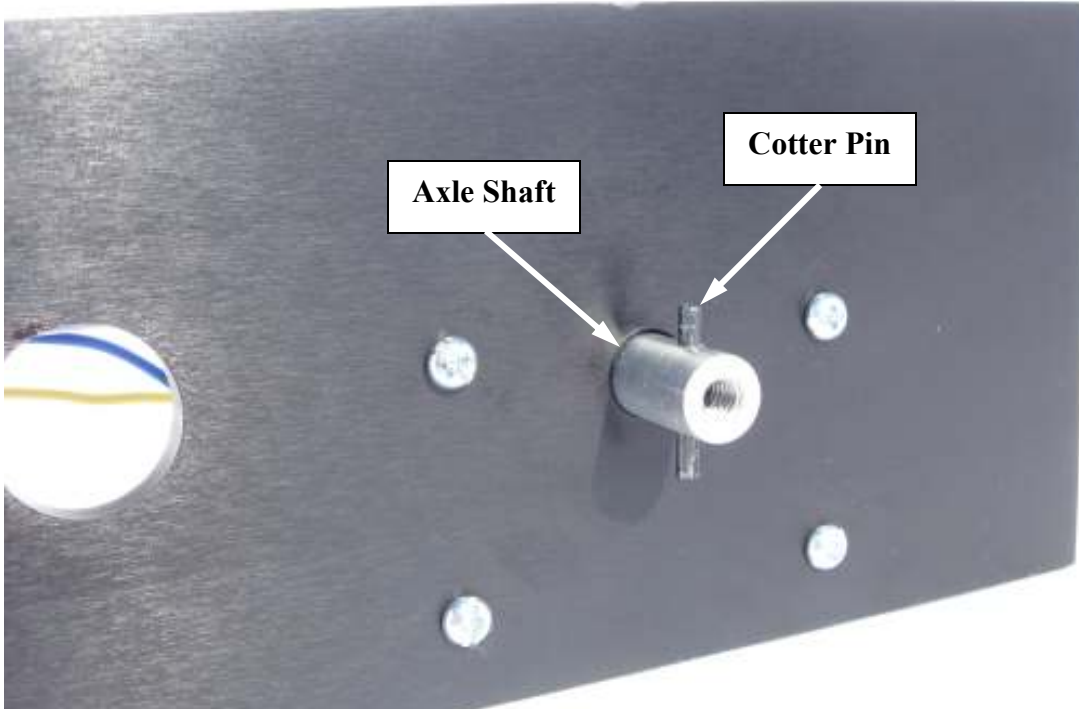


Figure 2

- Using (8) #4 1/4" screws, install each of the completed motor mount assemblies to the Bottom Panel as shown in figure 3.

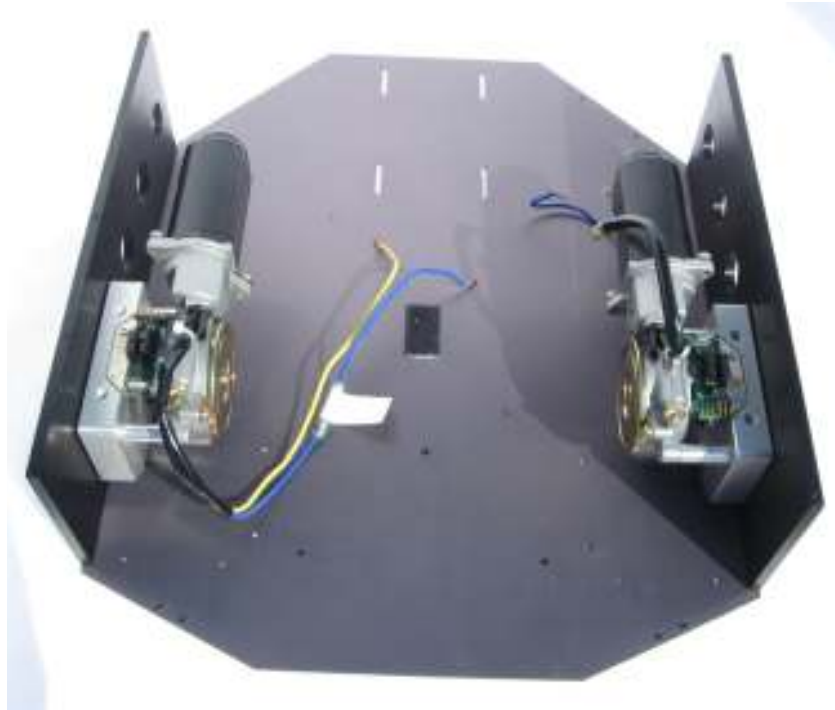


Figure 3

- Using (8) #4 1/4" screws, install the Front Panels (Figure 4) to the Bottom Panel and Motor Mount panels as shown in figure 5.

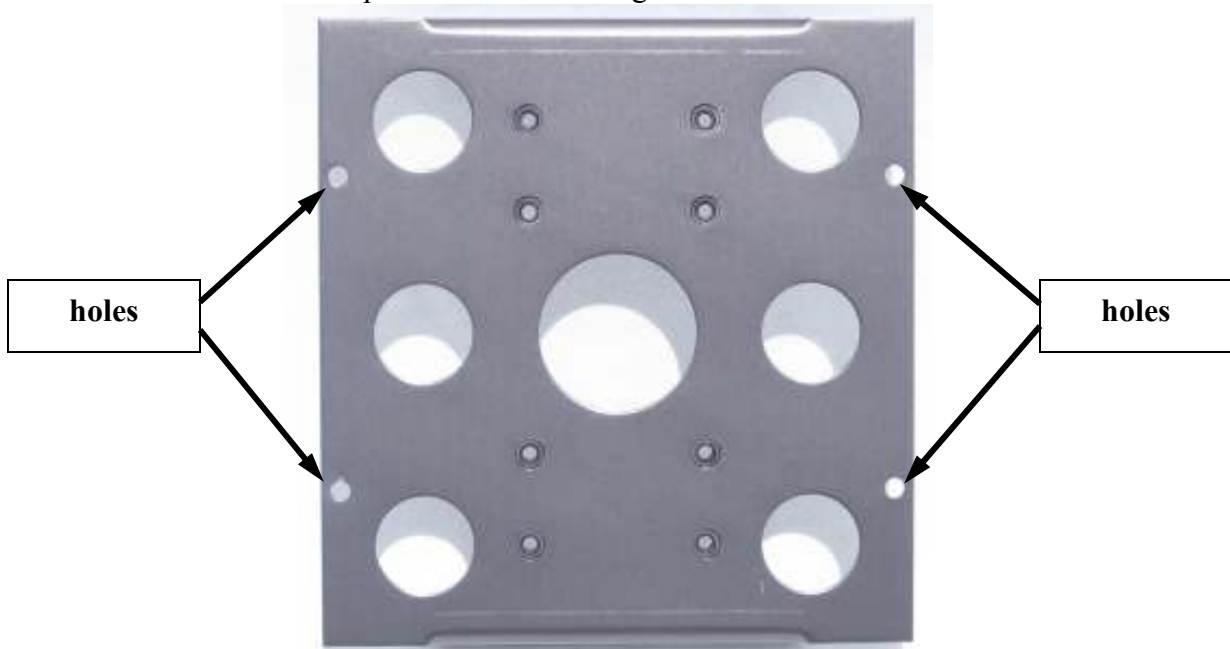


Figure 4

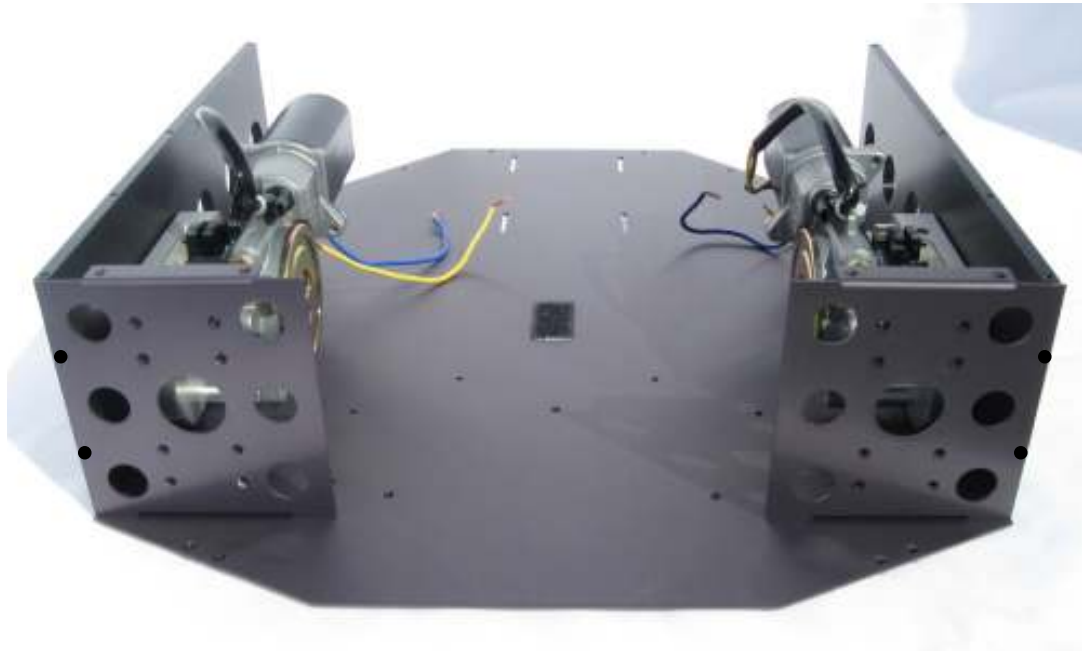


Figure 5

- Using (4) #4 1/4" screws install the Well Side panels to the Bottom Plate as shown in figure #6.

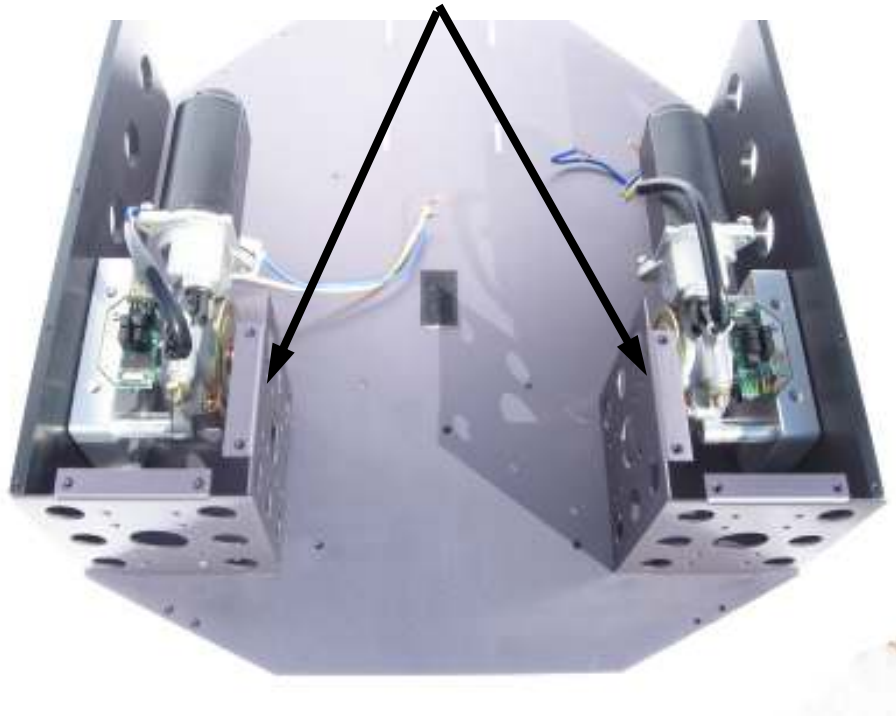


Figure 6

9. Using (2) #4 1/4" screws, install the Rear Well Plate to the Bottom Plate as shown in figure #7.

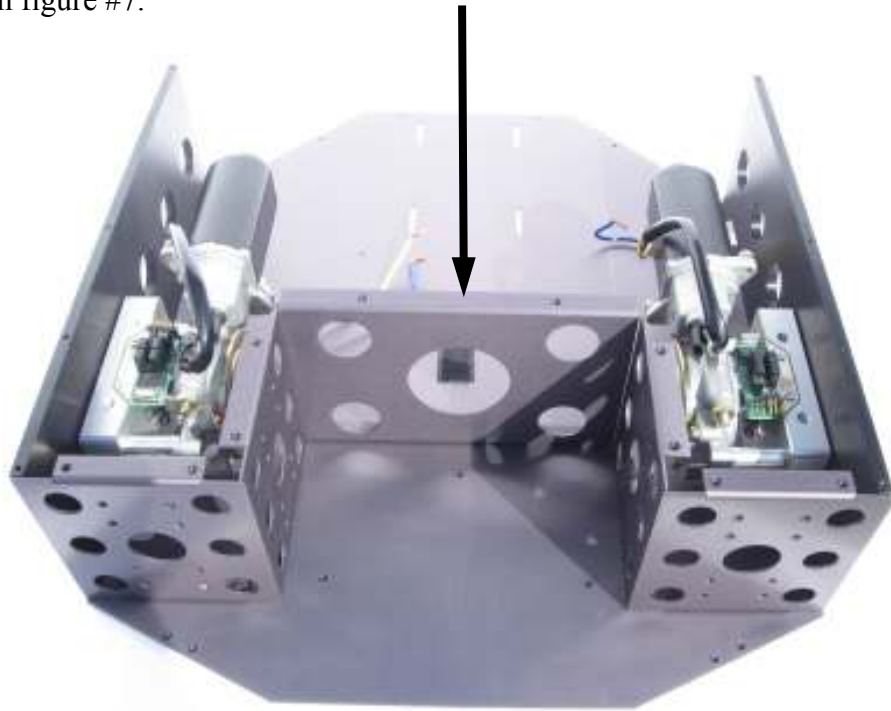


Figure 7

10. Using (4) #4 1/4" screws, install the Rear Side Panels to the Bottom Panel as shown in figure #8.

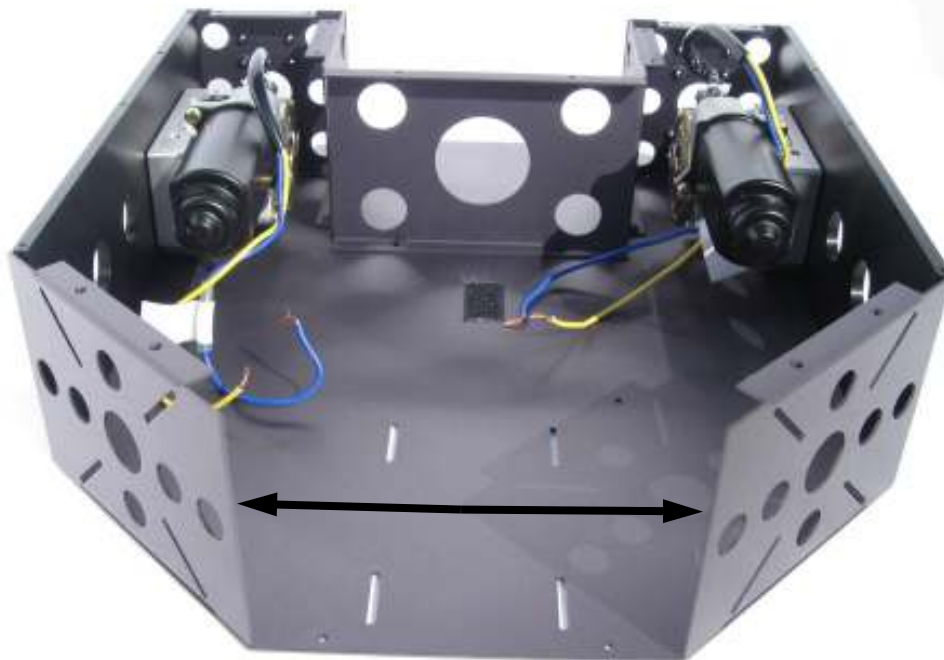


Figure 8

- Using (2) #4 screws, install the Rear Panel to the Bottom Panel with the Caster Wheel Pem nuts oriented towards the Bottom Panel as shown in figure9.



Figure 9

- Assemble the Caster Wheel Kit as shown in the Parallax assembly manual.
- Using (3) #4, 1/4" nylon spacers, (3) #4, 5/8" screws and (3) #4 lock nuts (from the Caster Wheel Mount kit bag), mount the Caster Wheel kit to the Caster Wheel Mounting Bracket as shown in figure 10 and 11.



Figure 10

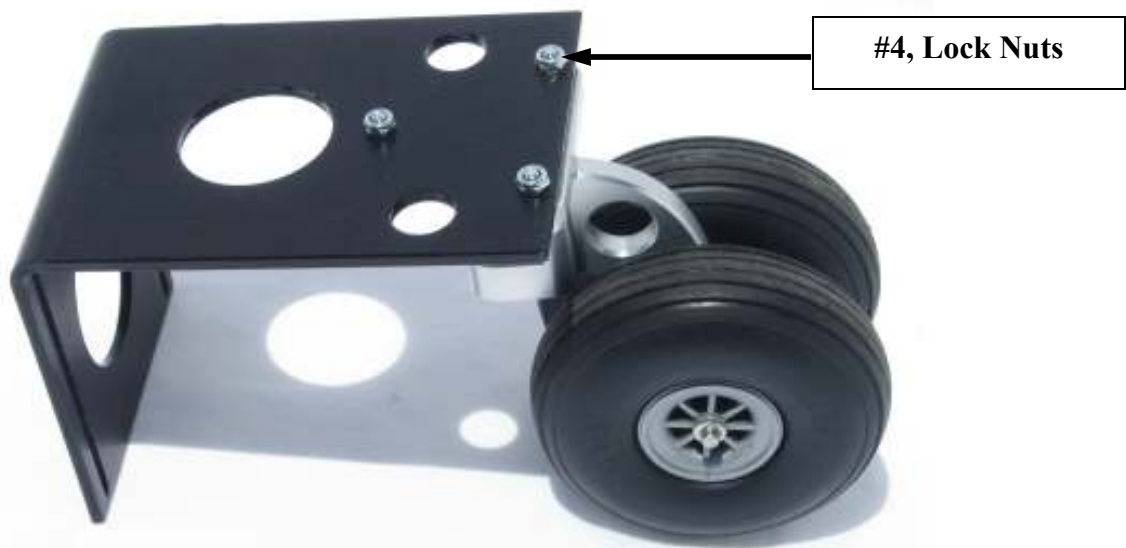


Figure 11

- Using (4) #4, 3/8" screws and washers mount the completed assembly from figure 11 to the Back Panel's Caster Wheel Pem Nuts as shown in figure 12 and figure 13.



Figure 12



Figure 13

15. Once assembly of the Nomad HD Rover is complete, you may have to adjust the Caster Wheel Bracket to ensure your Nomad HD Rover is level. Having the bracket mounted flush to the bottom plate of the Nomad HD Rover should bring it close to being level.

Using (4) M4, 6mm screws, install the Nomad HD Handles to the Top Cover Plate as shown in figure 14.

Note: Use thread locker solution when installing these screws such as Loctite or equivalent.

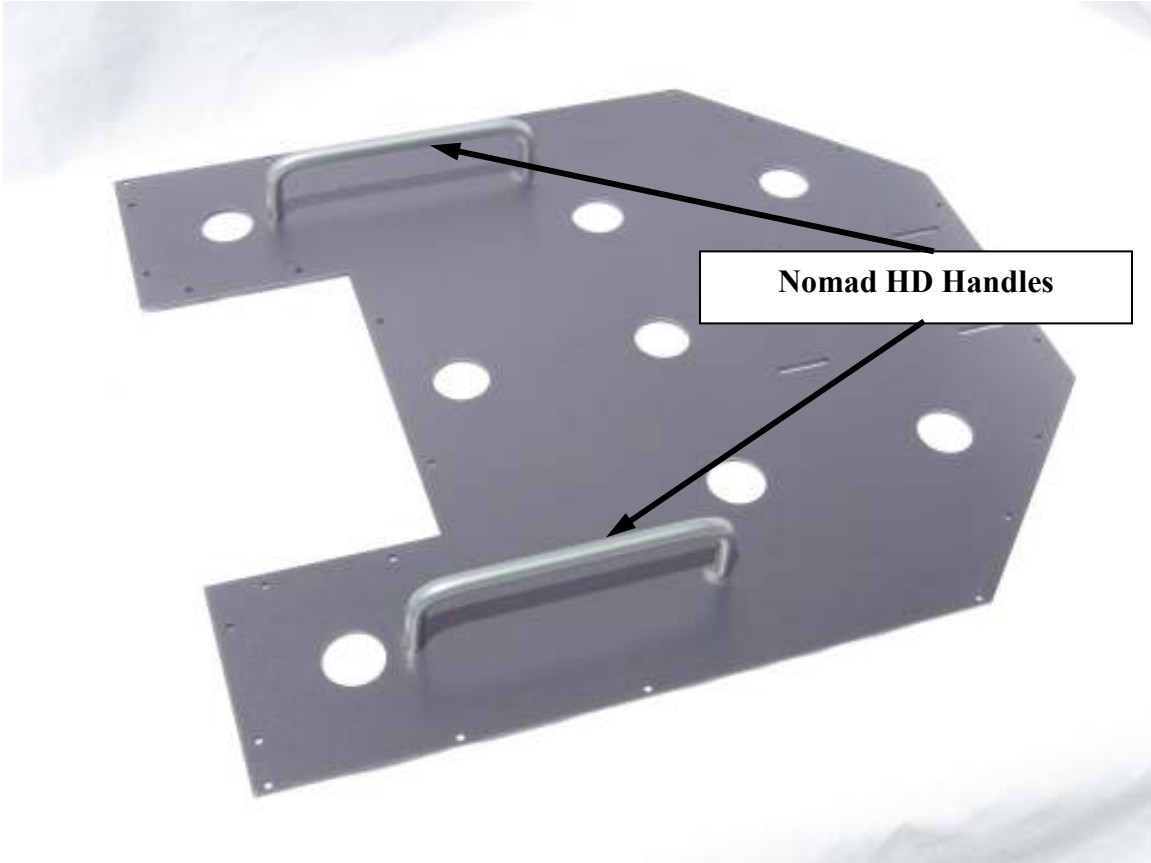


Figure 14

16. Using (24) #4, 1/4" screws, install the Top Cover onto the Nomad Assembly.

17. Install the motor wheels to the axles of the Nomad HD Rover.

The Completed Assembly

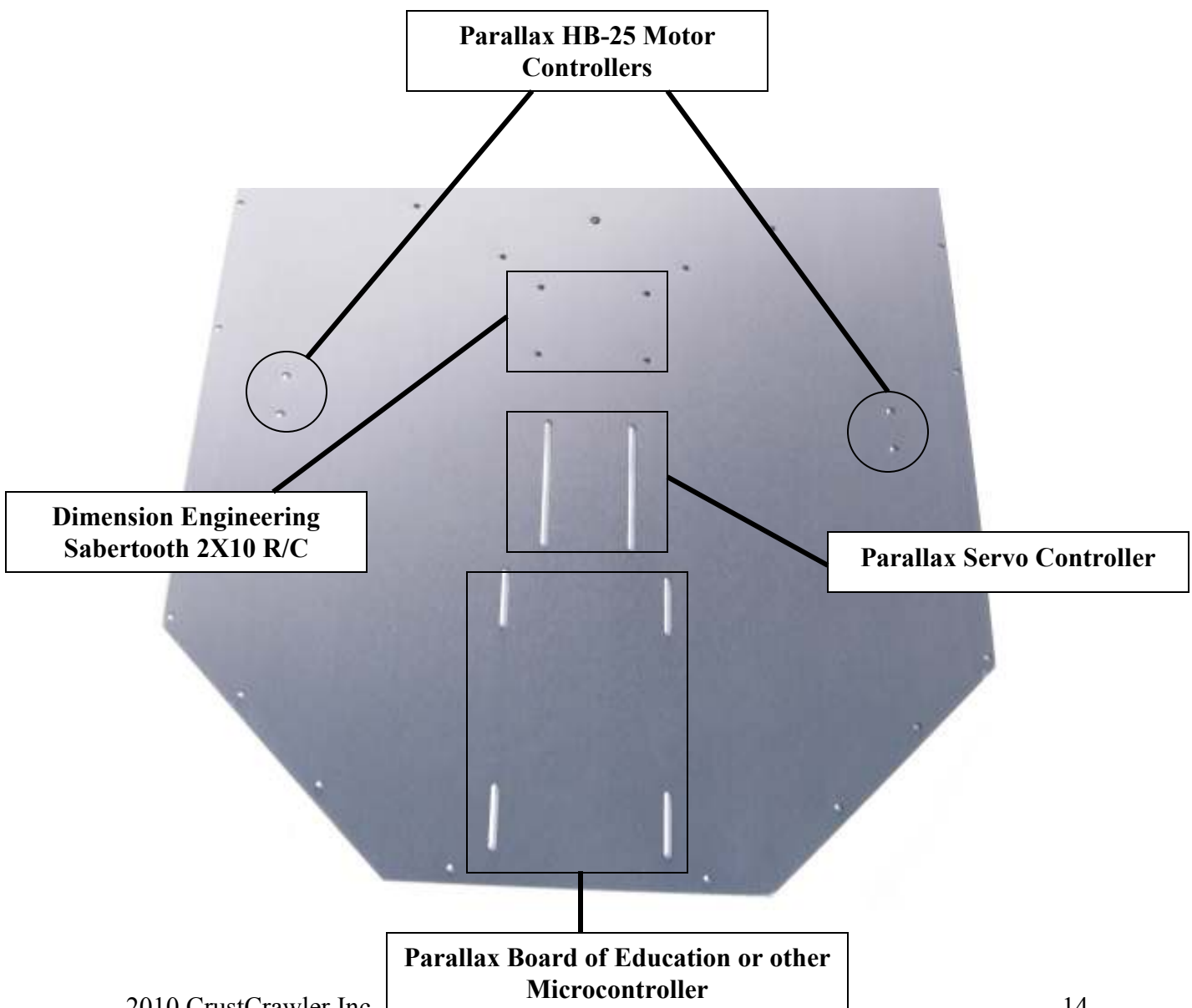


Bottom Plate Expansion Slots / Holes

CrustCrawler has designed the Bottom Plate of the Nomad HD Rover to accept most of the basic accessories listed on our product page. These accessories include:

- Parallax Board of Education
- Parallax Servo Controller
- Parallax HB-25 Motor Controllers
- Dimension Engineering Sabertooth 2 X 10 R/C motor controller

The larger slots on the Bottom Plate can accommodate other microcontroller boards that fit this standard dimension. If you are adding additional electronics to the Bottom Plate that does not fit the embedded slots / holes it is easy to mark and drill your own holes.



Question / Ideas

If you have questions about the assembly of your Nomad HD Rover or would like to share your project and ideas about your Nomad , please do not hesitate to contact us.

- **E-mail** – Support@CrustCrawler.com
- **Forum** - <http://forum.crustcrawler.com/phpBB3/index.php>
- **Phone**- 480-577-5557

For additional ideas on how to power your Nomad HD Rover, add controlling electronics, cameras etc. Crustcrawler has created a “project” guide available from our web site. Visit the Nomad HD Rover home page to download this handy guidebook.