went to hobby town and bought push rods and serve horns.

Assembled the elevator to the tail section. Used 5 hinges.

Assembly of the serve horn on elevator is now complete.

Implanted and glued support wall for front wheel assembly and control arm.

Implanted wood support under the fuselage for the main landing gear, main landing gear and wheels are complete and fastened with blind nuts on wood support.

Serve push rods and serve placement is being considered for next steps.

Testing rudder system outside of car at 50 mph.

Spring was displaced 12.5 inches. It takes 5.6 oz to displace it 12.5 inches.

\[
F_d = -\frac{1}{2} C_D (2.235)^2 (0.0088)(6)
\]

\[
= -0.348 \text{ lbf}
\]

\[
= 5.57 \text{ oz at } 50 \text{ mph} \approx 22.35 \text{ in}^3
\]
5.52 = 4.767% accurate
8.6

Thus, 35.23% error on actual calculations.

Max possible force on rudder:
\[ \frac{2.68}{0.57} = 9.13 \text{ lb} \]

Max possible force on aileron:
\[ \frac{1.7}{0.49} = 3.43 \text{ lb} \]

Max possible force on elevator:
\[ \frac{2.24}{0.49} = 4.57 \text{ lb} \]

10/21/67 Placed weight on servo with string.
Recorded current value of 300-250 ma.
Current draw from the system for a split second.
Average current draw is approx 100-150 ma at max force of 1.12 lb.

10/22/67 Routed the servo control cables through the plane and built the servo mount for the front wheel control and rudder control.

10/24/67 Went to hobby town and bought more
gear and wood for the other servo mount.
Finished servo mounts, glued tail section.
Mounted three servos, ailerons covered alond
Battery Charging

I_fast = \frac{\text{Capacity of bat tank}}{\text{Charge time in hours}}

C_rate = \frac{5}{2}

\text{Charge time} = 150 \text{ min} = 2.5 \text{ hr}

\frac{600 \text{ mA}}{2.5 \text{ hr}} = 240 \text{ mA}

\text{R_{sense}} = 0.25 \text{ V} / I_{fast} = \frac{1.25 \text{ V}}{540 \text{ mA}} = 1 \Omega

R_1 = \frac{\text{(min wall cube voltage }- 5)}{5 \text{ mA}}

\frac{2 - 5}{5 \text{ mA}} = 400 \Omega
Valentine Okonkow

October 18 2007
Went back to view the applied product and noticed that a minor layer was smudged which will be further addressed.

October 19 2007 (minutes)
* JP showed DNS the scale we will use to measure force of the rotor of the plane
* DNS said that he needs black and white for the power point
* DNS said we were talking about measurement and not plan
* Supplementary files for the solar power report (parallel & series)
* Picture can be added if it shows work done
* DNS said you need to have schematic of the plane before you can do the MAX 712/713 plan
* Need dates before MAX 7/2/13 can be worked on
* Goal is to get the plane ready to fly by 9/17
* DNS said put the damage in your report
Task:

* NEXT 7/10/13
* V/M* Solar Cell & Styrofoam
* F/T* Finish the tail section with the elevator and servo liner
* T/T* Take actual measurement of the current draw with the specific weight force of the sensor
* T/T* Complete the simulation flight test for the front or the rudder by using a car that is travelling at 65mph
* T/T* Team must decide what charge rate to use by the end of next week and components must be ordered from mouser
* F/T* Start the installation of the landing gears

* DNS said for solar report, he needs experimental test

* All text should be black without any shadow and background should be white a picture could be added.
Oct 19 2007
New fixture design sub-assembly done by the product "test-firing" whole project. Expect to be ready for consultation of a third party personnels.

Oct 20 2007
Work with Jean Paul on foot gear support wall for central servo, front gear assembly, main gear mount support, main gear assembly,

Jean Paul and I also worked on and completed the elevator system with servos. Servo was installed on elevator, main landing gear is completed with wheels, support rail is completed with front controllable wheel. Servo location are considered and planned.

Oct 23 2007
Continued research and report on solar power consideration, and its layout on the MiG 27 drone.

Oct 25 2007
Made further consideration on the solar power consideration based on the requirement of the ship
MAY 7/12/713
* October 10 2007 - I went to Daddy's place to get the right filler to glue the piano. I gave to fix and repair the piano but it got damaged. The filler we are using is not the right one because we didn't want to burn the house. I kept it in a good condition. But the helper from town guy told me they are out of stock and will get the other stuff soon. I have searched internet and informed Valentine about the problem.

* October 12 2007 - I have took G 9000 stay off school because of Eid (religious day).
October 15, 2007 - Team had
worked on prototype all day.
T. assigned me
work to do on the
next day. Need to
finish the circuit and
design of solar cell.

October 16, 2007 - Went to meet w/ 
Tao for the discussion of solar cell circuit. 
He was not able to help with the design. 
Sent him a message and emailed him.

October 17, 2007 - Meet with Flame to 
understand his project. My project and 
his project seem very similar.
Tai Q.

Week 8

Safe minimum input = 1.5 + (1.9V x # of cells)

10-19-07 (Friday)

- Inactive = 5μA from the battery.

- C: Charge to 5V

- Internal shunt regulator single current to regular
  Vt = 5V ⇒ Charge

- If Pdc = 20V (Input)

  In order to charge
  1) Battery already installed
  2) Battery carry over decision (Vdc < V tech)

- Black white no picture

- Black & green

- Math 7 & 8
In order to make the 713 work, we need the solar cell provide at least 7 volts and 250 mA.

On that day, Jean Paul and me came to the lab to run the cable from the tail section with the elevator and servo level. We also run the cable from the land rear wheel to the servo, too.