

Flight Director Checklist

NS-59

Launch Location = Everett Area Highschool

Launch Date = Oct 29, 2016

Attempt Number = #1

Payloads:

Cmd

Tyrion

Camera payload

Lawrence's payload

Comments:

96,700 ft - Rich

86,500 - Camera

One Month in Advance:

- Vehicle Rental (check that outlets work)
- Helium Ordered
- HAM Radio Club notified about using UMD's call sign

Launch Week

Pre-Flight Planning Checklist

- Send the launch announcement email
- Create Zello station
- Print waivers
- Preliminary weather check
- Preliminary ground track check
- Payloads determined and ordered
- Vehicles identified and configured for tracking

Pre-Flight Systems Checklist

- BLT Bucket (check Inventory)
- Inflation Bucket (check Inventory)
- Recovery Bucket (check Inventory)
- Launch Kit (check Inventory)
- Balloons (2) Size of 1 3000g Size of 2 3000g
- Batteries (check if charged)
- Bow Saw
- Clean Up Bucket (Broom, Dust Pan, Garbage)
- Extension Pole
- Functioning Radios and GPS
- Helium
- Machete
- Parachute and Ring + Assembled Command Module kit
- Payloads
- Phone Chargers
- Power Inverter
- Scythe
- Soldering Iron & wire
- Sling Shot
- Spare LVCs
- Radios/GPS
- Tarp (Big and Small)
- iGrav 3

- Tracking Antennas
- Tree Climbing Gear
- Van Keys
- Walkie-Talkies
- Wi-Fi hotspot
- 900s Ground station
- Tie in complete

FAA Notification Checklist

- File NOTAM (6 hours prior)
- Call NOTAM desk (866-225-7410 ext 9) to get NOTAM number:
NOTAM # _____
- Call Washington Center (2 hours prior): 703-771-3470
- Call HGR Tower 301-797-2039 at 7am

Radios + Callsigns Checklist

Command Module: W3EAX -8, W3EAX -12

Main tracking van: _____

Second tracking van: _____

Specific payloads: _____

Others: _____

PRE-LAUNCH MEETING / PRE-LAUNCH DAY

- Launch Confirmation/Postponement Email

Pre-Launch Meeting

- Everyone should have signed a waiver: new ones collected, sign-In sheet for other visitors
- Launch time goal: 9:00
- Assign/prepare for jobs (BLT, Comms, Nav, etc.)

- Chase Vehicles will need to leave semi-immediately be ready to leave within 5-10 minutes of launch
- Everyone helps clean up, so we can get out efficiently

Final Checks

- Waiver Check
- Weather Check
- Ground Track Check
- Zello Check

Launch Day

On launch pad

- Parachute to Balloon lanyard configured
- Parachute and Ring assembled
- Command Module in place
- Payload string lined up and assembled
- Harmless payload stickers on each payload
- Payload string weighed: Necessary Free Lift = 11.45
- Antennas in place total payload weight
- No sharp edges or weak links

Pre-Inflation Checklist

- Helium Tanks uncovered and regulator hooked up
- Hook lanyard from parachute around balloon neck before connecting to inflation tube!**
- Instructions and Gloves to BLT anchors
- Instructions given to tether handlers & tether in place
- Full payload string laid out and ready to go
- Balloon in BLT ready to go

Inflation

BLT Instructions: (Always use BLT!!!)

- Lay out BLT with inside facing up (Velcro side down). Immediately fold together to prevent moisture from getting inside the BLT.
- When ready for inflation, Place balloon in the center with the neck facing one open end.
- Fold around the balloon, the Velcro seem should be towards one side so it doesn't end up on the top when fully inflated
- Designate people to hold BLT down. (At least 4 people)

Start inflating at max flow rate

Inflation Complete: Measure Total Free Lift = 7lbs

Pre-Release Checklist

- Check payloads are ready
- Good final communications check
- Call tower @ 6 min

Countdown & Release

- All Payloads turned on
- Raise Stack above pad in full flight configuration
- Telemetry and Downlink good
- Tether handlers ready
- Countdown from 10
- Release

Release Time Mark = 9:11

Initial Heading of Flight = East

Post launch (during chase) / *postchase summary & changes*

Final Altitude: 53,000 ft

Notes:

check material strength at 3000g v. 1600g

- Possible cause for early bursts seen in
Use of 3000g balloons over the past
few flights

Email balloon manufacturers about burst diameters/
material strengths information

!!!

Must drop above Lawrence's payload for any (possible)
future launches

Command Module Checklist

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Pre-Flight Checklist

Cell Tracker

- Cell Tracker GPS Connection
- Cell Tracker SD Card
- Cell tracker cellular connection
- Power connection

Habduino (Top Plate) #8

- Habduino GPS Connection
- 2M RF Connector (Out the back)
- Power connection

Habduino (Bottom Plate) #12

- Habduino GPS Connection
- 2M RF Connector (Out the front)
- Power connection

Link

- Antenna Connection
- Power connection

Systems Check

-Top Plate

- Top LVC Switched on
- Cell Tracker On
- Habduino On
- Receive Text from cell tracker
- Received Packets from Hab
- Place desiccants

-Bottom Plate

- Bottom LVC Switched on
- Habduino On
- LINK On
- Received Packets from Hab
- Link system is lock (Verify with ground)
- Place desiccants

Seal Box -

if all steps are checked do the following

Ada SD
adapter to
RF

REMOVE BEFORE FLIGHT™