

# Launch Director Checklist

NS-78

Launch Location: Westminster Middle School

Launch date: June 30, 2018

## Payload Lineup:

Payload Name	POC Name	Passed Inspection	Inspector Initials
<del>Delores</del> Delores	Tyler Boyle, Michael Walker		
Phantom	Carlynn Singham		
Jessi	*		
PARM	Micah / Quinn KUPPE		
Irene	Michael Walker		
Dani	Tyler Boyle		
Verde	Zach Burnett		

Balloon Size(s):

Callsigns: W3EAX-8  
W3EAX-10

### L-3 Day Checklist

NA Verify all payloads have submitted launch readiness forms

### L-2 Day Checklist

✓ Conduct ground track meeting

? Print van inspection forms

✓ Create van position roster

### L-1 Day Checklist

✓ Pick up vans

✓ Conduct van inspections (attach checklists)

✓ Van 1 (Callsign: \_\_\_\_\_)

✓ Van 2 (Callsign: \_\_\_\_\_)

✓ Van 3 (Callsign: \_\_\_\_\_)

✓ Van 4 (Callsign: \_\_\_\_\_)

✓ Inspect all payloads against payload requirements document

✓ Charge batteries

✓ Portable car battery

✓ Wi-fi hotspot (AT&T)

✓ Wi-fi hotspot (Sprint)

✓ Verify AT&T hotspot is paid

✓ Inventory launch supplies (checklists in respective boxes)

✓ BLT Bucket

✓ Inflation Bucket

✓ Recovery Bucket

✓ Launch Kit

✓ Main tracking box

✓ Launch Solder Kit

✓ Verify completion of Command Module L-1 day checklist (attach checklist)

✓ Pack (attach checklist)

## L-0 Pre-Departure Checklist

- Conduct head count against van roster
- Signed waivers from all participants
- Verify all convoy vehicles have Zello
- Radio check

## L-0 Launch Site Checklist

### Launch/Inflation Setup Checklist

- ~~NA~~ Pre-launch setup meeting (See PAO)
- Tarp setup (indicate full or half configuration)
- Place BLT in optimal launch location
- Indication direction of payload string from balloon
- Parachute-to-balloon lanyard configured
- Parachute and ring untangled
- Command Module in place
- Harmless payload stickers on each payload
- Payload string lined up and assembled

### Pre-Inflation Checklist

- Hook lanyard from parachute around balloon neck before connecting to inflation tube***
- ~~NA~~ Tethers in place
- ~~NA~~ Brief 2 tether handlers (See PAO)
- Did Dr. Bowden call the tower? (See Dr. Bowden)
- Balloon in BLT ready to go (See BLT Engineer)

### Pre-Release Checklist

- Check payloads are ready
- Final communications check

### Countdown & Release

- Inform payload PoCs to hold payloads above the launch pad
- Tether handlers ready
- Slowly raise payload string
- Measure Total Free Lift = \_\_\_\_\_ (optional)
- Countdown from 10 (Final Countdown Song Optional)
- Release!

Release Time Mark = 8:44

### L-0 Post-Launch Checklist

- Ensure all materials are stowed in correct boxes/kit
- Stow all materials in lab
- Ensure vans are cleaned out
- Download APRS logs from aprs.fi and upload to server
- Remind payload designers to upload data to server

# Packing Checklist

NS-78

## Launch Equipment

- ~~Balloons Bowden~~
- Helium tanks Bowden
- Tarp (Big and Small) 7psn
- Parachute and Ring Bowden
- Command Module kit 12psn
- Broom Bowden
- Square Plywood Bases <sup>12</sup>psn
- Scale for Measuring Payloads 12psn
- BLT Bucket Bowden
- ~~Inflation Bucket Bowden~~
- Launch Kit → only 3 baked dessicants right now (12psn)
- Main tracking box 12psn
- Launch Solder Kit 12psn

## Recovery

- Bow Saw 12psn
- Extension Pole ~~#~~ }
- Scythe ~~#~~ } 12psn
- Sling Shot ~~#~~ }
- Recovery Bucket 12psn

Machete  
 ~~Wenbers~~

## Payloads

- Car battery
- Battery box
- Battery Charger

Payloads Bowden

~~Spare LVCs~~

→ Grab used  
dessicant  
in  
morning

→ Tyler

Tyler's Weather Ground Station

Tracking/Communications

Tracking Laptop(s)

Tracking Antennas

~~900s Ground station~~

Radios 12psn

Walkie-Talkies

Wi-Fi hotspot(s) → Tyler?

Power Inverter 12psn → 12psn

Power Strip(s) 7 & 12psn

~~Car magnets~~

# Command Module 1 Checklist

NS-78

## L-1day:

### Link

- Confirm ground system software is installed
  - GOSMOS
  - Virtual Serial Port Emulator
- Run Link test suite, confirm all tests pass
- Run test suites for all payloads flying, confirm all tests pass
- Confirm Link battery is charged, serial number: \_\_\_\_\_, voltage: \_\_\_\_\_ V

### Habduino (Top Plate)

- Habduino serial number W3EAX-10
- Confirm habduino battery is charged, serial number: BW-010, voltage: 8.18 V
- Turn on radios, confirm they get GPS lock, confirm APRS packets are sent

### Habduino (Bottom Plate)

- Habduino serial number W3EAX-8
- Confirm habduino battery is charged, serial number: BW-012, voltage: 8.27 V
- Turn on radios, confirm they get GPS lock, confirm APRS packets are sent

### Cell Tracker

- Confirm cell tracker battery is charged, serial number: BW-016, voltage: 8.18 V
- Turn on cell track, confirm it gets GPS lock, confirm text messages are sent
- Confirm positions are logged to SD

### Equipment

- Confirm command kit is packed with:
  - Spare battery, serial number: BW-009, voltage: 8.3 V
  - Spare habduino
    - Habduino serial number W3EAX-12
    - Turn on radios, confirm they get GPS lock, confirm APRS packets are sent
  - Spare empty micro SD card
  - MicroSD to SD card adaptor
  - USB-A to USB-B cable
  - USB-A to micro-USB cable
  - Spare mounting screws (x9)
  - Spare habduino antenna (x2)
  - Spare LVC
  - Wrench (for SMA connectors)
  - Screwdriver (for balloonduino screw terminals)
  - Screwdriver (for mounting screws)
  - Desiccants

Page Turn Over-->

# Command Module Checklist

NS- \_\_\_\_\_

## Pre-Flight Checklist

### Cell Tracker

- Tighten Cell Tracker GPS Connection
- Cell Tracker SD Card
- Tighten Cell tracker cellular connection
- Power connection
- Clear SD card

### Habduino (Top Plate)

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

### Habduino (Bottom Plate)

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

### Link

- ~~\_\_\_ Tighten Antenna Connection (bottom)~~
- ~~\_\_\_ Tighten Antenna Connection (side)~~
- ~~\_\_\_ 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
- ~~\_\_\_ Ground receiving packets from Link and all payloads~~
- \_\_\_ Place desiccants

#### \_\_\_ Seal Box