

# EZ Payloader Launch Checklist

Updated January 26, 2009

## Supplies Needed

- Completed EZ Payloader rocket
- Altimeter
- Rocket Motors
- Motor Igniters + Backups
- Recovery Material: "Dog Barf"
- Launch Pad
- Launch Controller + Safety Key

## Pre-Launch Checklist

- Insert Recovery Material
  1. Remove payload section and both parachutes from rocket body.
  2. Insert recovery material 2-3 body diameters long, and pack it gently down into the base of the rocket body  
*Recovery wadding prevents hot ejection charge from damaging parachute*
- Pack Parachutes & Shock Cord
  1. Review step 10 of construction directions for how to fold parachutes. Take care, the cutout center may make this tricky
  2. First pack rocket base parachute and shock cord
  3. Next pack payload section parachute
  4. Slide payload section into place on end of rocket body
- Prepare Rocket Motors  
*Always wear safety glasses while handling rocket motors!*
  1. Prepare igniters: remove single igniter from package, check to make sure wires do not short (touch) anywhere except for within the combustible tip
  2. Insert the combustible tip into the nozzle end of the rocket motor until it is up against the propellant grain inside. Bend the igniter leads back 90° and secure with the plug provided
  3. Make sure igniter leads do not short!
- Load Rocket Motor
  1. Insert motor + igniter assembly into rocket motor mount
  2. Insert motor lock ring to secure motor into rocket

*Rocket is now ready for launch*

## Launch Procedure

- Safety Key MUST be out of launch controller**
- Open payload compartment, turn altimeter on, replace & close payload bay
  - Record battery voltage as beeped out on start-up
  - Ensure pressure sensor is facing down toward motor, near air bleed holes
  - Make sure payload bay is closed before 'ready' beep sounds
- Slide rocket on to launch rod
- Attach alligator clips from launch controller to igniter ends
- Make sure alligator clips/igniters do not short against each other or launch stand!
- Retire immediately to safe distance & prepare for launch
- Insert Safety Key, countdown & launch!
- Remove Safety Key immediately after launch**

## Misfire Procedure

- Call "Misfire!"
- Remove Safety Key
- Wait 1 minute before approaching
- Remove rocket from launch stand, repair/replace motor assembly
- Begin launch procedure again

## Post-Recovery Procedure

- Recover both rocket body and payload section
- Altimeter will be beeping out max altitude. Remove altimeter from payload bay
- Attach altimeter to computer, download flight data. Name file according to convention:
  1. Rocket type (EZP),
  2. Motor designation, e.g., C6-5,
  3. S followed by section number,
  4. T followed by team number,
  5. F followed by flight number (for your team),
  6. Underscore then date in YYYYMMDD format.The file should end up with the .pfa extension. For example, if Team 2 of Section 3 flew their EZ-Payloader rocket for their third flight on a C6-5 on January 28, 2009, the file name would be EZPC6-5S3T2F3\_20090128.pfa
- Remove expended motor
- Check rocket body, fins, nosecone, parachutes for damage
- Prepare for next flight