Free sample from The Drone Kit & Flight Planner. This is worksheet 4 of 11. Get all 11 worksheets: dronegearsetup.com/kit/drone-kit-flight-planner

Battery Plan for a Shoot

How many packs the day needs, worked out before the day

Pilot	**Job**
Date	**Location**

Divide the airborne minutes the job needs by usable flight time per pack, then add one pack as contingency. For most paid work that lands at three packs: two for the job and one for the flight you did not plan. Field charging only adds packs back if the day is long enough to absorb a cool-down plus a charge.

Airborne minutes the job needs

Shot or task	Minutes airborne	Repeats	Total

Pack count

Input	Your figure	Notes
Total airborne minutes needed		From the table above
Usable minutes per pack		From sheet 2, measured not rated
Packs for the work		Rounded up

Input	Your figure	Notes
Contingency packs		One, minimum
Packs owned		
Shortfall		
Field charging available?		Power station, car, mains
Cool-down before charge (min)		15 to 20 typically
Charge time per pack (min)		40 to 90 depending on source
Turnaround per pack (min)		Cool-down plus charge
Packs recoverable during the day		Day length / turnaround

A hot pack charged straight off the aircraft ages faster and charges slower. The cool-down is not optional padding.

Cold weather derate

Lithium packs lose capacity in the cold and a cold pack sags under load, which is what triggers an unexpected low-voltage landing. Below about 10 C, plan on 20 to 30 percent less usable time and pre-warm packs in an inside pocket rather than in the case.

Temperature	Expected derate	Measured on the day
Above 20 C	None	
10 to 20 C	5 to 10 percent	
0 to 10 C	20 to 30 percent	
Below 0 C	30 percent or more	

Packs, charging and storage

Store LiPo packs at roughly 3.8 V per cell, never below 3.0 V resting, and charge at or near 1C. Ignoring any of the three is the usual cause of a swollen pack.

- **DJI Mini 4 Pro Intelligent Flight Battery Plus**: The extended pack that buys real minutes, and the one that pushes a sub-250 g aircraft over the registration threshold. Weigh it on sheet 1.
- **DJI 30W USB-C Two-Way Charging Hub**: Charges packs in sequence unattended, which is what a field turnaround actually needs.
- **Jackery Explorer 300 portable power station**: Enough to recover several packs on a location with no mains, and it will also run a laptop for an offload.
- **Zeee fireproof LiPo charging bags (2 pack)**: Charge and transport inside one. Cheap insurance against the one failure mode that damages more than the pack.

Current prices and our latest picks for each item: **dronegearsetup.com/kit/drone-kit-flight-planner/gear/**

Researched guidance, not professional advice. FAA weight thresholds, Remote ID rules and airspace authorizations change. Confirm the current rule at faa.gov/uas before you rely on this kit, and treat every figure here as a planning aid rather than an authorization.