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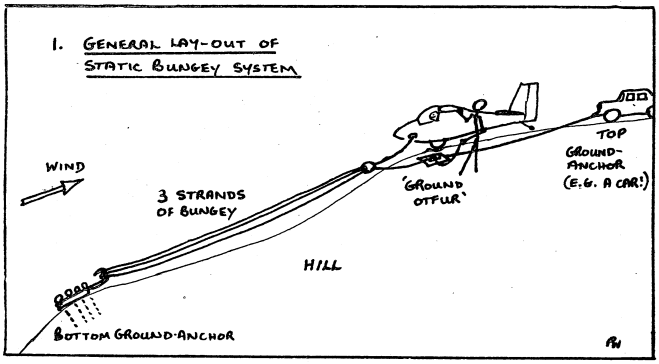
BUNGEY-EXPEDITIONING

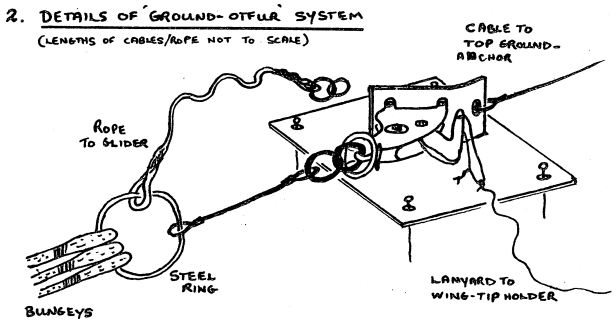
by Peter Whitehead

The mention of bungeying (catapult-launching) will bring a nostalgic tear to some of our older members, and probably a smile to some of our younger ones if they have visited the Long Mynd in Shropshire. Few, however, will realise that the technique of bungeying is being practised not too far from Portmoak.

Last year I became the trustee of a set of bungey equipment which has been developed over the last twenty years to its present state of elegant simplicity by a group within Cambridge University Gliding Club. In its present form it has been used for several years by Dr. Anthony Edwards (the S & G Armchair Pilot) and his wife, Catharina. They achieved many launches unaided by anyone else, for, whilst a 'Long Mynd' bungey launch involves a team of at least six people, this system allows a pilot to be launched with the help of one other person.

The important features of the system are shown in the two sketches below.





Note that just before the launch the tension is taken between the top and bottom ground-anchors, the rope to the glider only beginning to pull when the wing tip holder gives the release-lanyard a yank. The glider is prevented, in the pre-launch stage from running forward by chocking it with a piece of turf.

It is possible for two people to set up the equipment, rig the glider and be ready to launch within forty-five minutes of first arriving at the hill, assuming prior permission of the landowner/tenant has been obtained, of course.

Briefly this is achieved as follows:—

1. The fixed items, i.e. bottom ground-anchor, 'ground-otfur', and the top ground-anchor (best use a car — with the handbrake on, and in gear!) are positioned and fixed such that the bungeys, when stretched, will be twice their natural length.
2. The rop 'rings' are hooked into the 'ground-otfur' and each strand of bungey is stretched, in turn, down to the hook on the bottom ground-anchor. At this stage, I like to do a 'test launch' by pulling the lanyard, before the glider is even out of its trailer.
3. The glider is rigged and positioned to one side of the ground otfur so that it takes the slack out of the rope. It is then chocked and parked cross-wind.
4. With the rope to the glider lying free, the pilot and helper now stretch the bungeys again. Once the glider is re-positioned, and the pilot ready, the helper, only now, attaches the rope to the glider (the winch hook is best), and quickly takes up his position at the wing tip, lanyard in hand.

The Launch

The launch itself is the simplest type available to glider pilots. When the pilot signals, the wingtip holder pulls the lanyard. The glider quickly and smoothly accelerates, and is airborne within one to three seconds. Once airborne, the pilot keeps the glider low and pulls the 'bung' as he overflies the bottom ground-anchor (although the rope usually back-releases before this), checks the A.S.I. for sufficent speed, then turns along the hill.

From this point on the method of launch is irrelevant to the flight, but bear in mind that the pilot may be only 150 feet from the bottom of the hill, and therefore must constantly consider whether to turn away and land or carry on attempting to soar. Indeed, a launch must never be undertaken without a suitable landing field available (and pilot expecting to land there either straight from, or soon after, the launch, if the conditions do not permit soaring.

It will appear that the mechanical aspects of the launch are simple, and indeed they are. The bungey launch has enough power to launch a light glider in no-wind conditions and its safety has been proven by twenty years operation without a single launch accident during its supervision by Dr. Edwards. However, this has only been achieved by responsibility and caution on the part of the 'bungey-master'. It is upon his decision, as to whether certain criteria are satisfied, that success depends. These criteria have emerged from years of experience and they can only be learned through apprenticeship, assisting and flying from as many sites, and in as many different conditions, as possible.

Only after my participation in several expeditions has Dr. Edwards allowed me to take over the trusteeship of the equipment. For my part I have to try to keep the art alive and maintain its safety record.

The pitfalls for the unwary are numerous:—

They may involve:

1. The site chosen, e.g. a greatly convex or heather clad surface will sap the bungeys energy by friction giving a failed launch.
2. Weather conditions, e.g. strong thermic conditions can cause transient down slope gusts giving a failed launch.
3. Choice of glider K8's, Oly 463's or Oly 2's are ideal, but heavier, faster flying gliders including two seaters and glass gliders are unsuitable.
4. Choice of pilot: 'Cool' pilots with field landing abilities and experience are essential.

Why do we go on bungey expeditions when we can get launches so easily(?!) at a club? Because in excitement it ranks with the first off-the-clock climb in wave, the first time we leave the airfield on a cross country, the first field landing. For me it also represents the ultimate in freedom.

I shall be very glad to hear from anyone who would like to learn more through participation. I also have cine-film of a day's expedition into the Lammermuirs South-East of Edinburgh, last July, showing how two of us set out the equipment and launched the University K8.

P.S. Since I came to live in Edinburgh I have been scouting for suitable hills. There are many which fit the bill apart from one thing — no road to the top! If you know of a hill which you think is suitable and has easy access — I would be very grateful for the information to add to my list of potential sites.

RADIO — Don't Myth the Facts

by Peter Bower

The value of radio in my cockpit came alive for me when one day, having pushed out from Benarty Hill towards Cleish as far as I dared in my Oly 2B No: 114, I failed to contact any of that elusive wave which my instructor had earlier said "must be there." As I turned back towards the hill I noticed a sleek new glass job heading out some 500 feet above me. "Oh for his penetration" I thought. Just then an ethereal (and well known pundit's) voice rasped through the speaker of my latest toy. "114 from Baby Doll — you will contact good wave lift about 1 mile S.W. your present position."

"Baby Doll from 114, Roger and thanks. What is your position now?"

"Climbing through 11,000feet in 4 knts about 2 miles West of Cleish"

"Roger well done", I replied. It took all my courage and determination to turn back once more and push on for another mile or so in that low penetration machine. But that voice had sounded so sure and authoriative. I was searching for fields now, with no hope of regaining either the hill or the airfield. Oh joy! Oh rapture! — 2 knts down rapidly changed to zero sink and soon became 1 knt then 2 knts and 3 knts up. As I turned again towards the hill, now feeling well established at 4,500 feet, I could see the glass job rejoining the hill — he seemed desparately low! "He probably doesn't even know there's wave about without a radio" I said aloud as I smiled happily to myself, "and I'm not too proud to take other folk's advice."

I would have got both my Silver and Gold heights that day — if only my b——— barograph had not run down and stopped!! And the glass job did land out — but that's another story.

To get the best out of any radio it is vital to have it correctly wired and installed. So often I've seen portable sets flung into the cockpit with aerial tip tickling ears to toes. Be assured that under these conditions the range will rarely exceed your gliding range from the airfield.

The most important part of any installation is the aerial. As the strength of a chain is that of its weakest link — so the range and performance of your set is only as good as its aerial. Ideally this should be a 'half wave vertical dipole', which is a pair of rods about 41 ins long overall and the only suitable space is invariably the fin. By carefully 'folding' (a technical term whereby an aerial is shortened mechanically but preserves its electrical length) it can often be mounted in the fuselage aft the wings and clear of metal fittings, especially in the older wooden machines. Sometimes a quarter wave aerial is fitted — being typically 20½ ins. long, but this is less efficient, having only ¼ the power of a half wave aerial, UNLESS it is constructed as a 'ground plane' (fuselage only for this) system with radial elements. It then offers twice the power of a dipole and is frequently to be found to best effect on car roofs.