Modifying Your Microlight

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I DON'T THINK I HAVE EVER SEEN A MICROLIGHT, OTHER THAN IN THE FACTORY, WHICH HAS NOT BEEN MODIFIED TO SOME EXTENT. LET'S FACE IT, EVEN IF YOU BUY A TOP OF THE RANGE MODEL, WITH ALL THE BELLS AND WHISTLES, YOU WILL GENERALLY STILL WANT TO INSTALL A COMMS SYSTEM AND THEN A VHF RADIO AND SO ON.

Note: Lanyards on radio and GPS and correct labelling and orientation of switches Photo: Kevin McNally

First of all, a modification to an aircraft is defined as 'a change or alteration to the standard specification.' In the HGFA, a mod will be defined as 'a permanent change or alteration.' Any installation that does not require tools, for example where Velcro is used, will not be regarded as a modification and requires no logbook entry.

However, if the installation involves an electrical supply, a permanently installed panel or bracket, or secondary restraints, then these items would be classed as 'Minor Mods' and must be recorded.

A 'Major Modification' is any mod to a structural component or integral part of an aircraft, ie, any part which would affect the safe operation of the aircraft, and as such must be authorised, in writing, by the manufacturer. Any such authorisation would be a legal document, and must remain with and become part of the Aircraft Logbook. Any other modification would be classed as a Minor Mod and may be made by the owner. Details of **any** modification made should always be entered in the Aircraft Logbook.

So, let us assume that you wish to install a VHF handheld radio into your trike. How hard can it be? All you need to do is find a space to put it, stick it there with Velcro and plug it in, right? Not quite. There are one or two other factors that you should be considering. After all, you are fitting an electrical device to an aircraft, not a car, and therefore, other factors apply. For example, if fitting the radio to the instrument panel with Velcro, some sort of secondary restraint, in the form of a lanyard or strap, should be fitted, in case the Velcro should fail during turbulence or a hard landing. I know of two separate instances, where an expensive GPS has been lost 'over the side' of a trike, due to insecure attachment. Fortunately, on neither occasion did it go through the prop!

If the installation involves the fitting of any electrical switches, then those switches should be mounted in the correct sense, ie, 'Down' for 'Off' (this is a general aircraft standard, hence the term 'Shut Down') and they should be labelled appropriately. There are additional considerations regarding the installation of antenna, comms box and power supply.

Okay, this is all well and good, but this sort of information is not that easily available to the average trike flyer. Well, in the UK, it is. They have a severely regulated system and when they do any mod to their microlight, that aircraft is then grounded until it has been checked and signed off by an inspector. In order to facilitate this process, they maintain a list of Technical Information Leaflets which include Standard Minor Modifications.

These include the installation of radio/intercom, transponder, strobe lights, camera, GPS and auxiliary power socket – just about everything you could wish to fit to a trike, and yes, panniers as well.

I would urge everybody who is contemplating modifying their microlight (in the UK, ultralights are known as three-axis microlights), to visit the BMAA (British Microlight Aircraft Association) website and check out these Technical Information Leaflets. By complying with the scope and detail of these leaflets, you would be maintaining the best possible standard of modification to your aircraft. Isn't that what we all want?

Go to [www.bmaa.org], select Tech Talk, then Technical Information Leaflets (TILs) or Standard Minor Modifications from the list of documents.

Safe Flying.