



Specialists in Aviation Design & Certification





# Aviation Design and Certification

Bournemouth Aviation is an EASA approved design organisation dedicated to providing specialist design engineering and certification expertise within the aviation industry. Our professional team understands your requirements and can respond accordingly. Strong project management and commercial skills ensure each project runs smoothly and to budget.

## Your solution to Aviation Design and Certification

- European Aviation Safety Agency (EASA) Minor and Major (STC) modifications for all aircraft types including fixed and rotary wing.
- Structural design and stress analysis using FEA and MATHCAD.
- Electrical design and load analysis.
- Interior re-design and VIP Interiors including installation of IFE.
- FMEA and reliability studies.
- EMC/RFI reports and testing to RTCA/DO-160 and ED-14.
- DDP certificates for component approval.
- Technical publications.
- Draughting and design support.
- Project management and EASA liaison.
- Design and sub-contract manufacture of avionic racks, trays and wiring harnesses; avionic systems; cabin interiors; electrical systems and airframe secondary structure.
- FAA approvals through our Alliance Partners.
- Special projects.
- Modification and testing of seats.
- Aircraft importation through our Alliance Partners.
- Passenger seat layouts, emergency equipment layouts and exterior livery drawings.

**Bournemouth Aviation** is located on the south coast of England, close to Bournemouth International Airport with excellent road and rail links to London's main airports. With modern in-house facilities, including a large conference room, we can host meetings at all levels.



Computer Aided Design (CAD) is an important part of the design process, as often a fleet of aircraft will require the same modification with small alterations to accommodate differences in build standard. AutoCAD allows for quick and simple modifications of the original design package to enable full fleet embodiment at a realistic price.



We provide Avionics Design and Integration for all aircraft systems, including TCAS, Mode S, PRNAV, FMS, EGPWS, RVSM, Weather Radar, Autopilot, EFIS, IFE and many other projects. We can also supply wiring harnesses, trays and racks, providing our customers with a complete turnkey solution.



EASA approved design and manufacture of specialist video display and recording systems. Our Flight Deck Door Monitoring Systems (FDDMS) are widely used by many operators to meet ED-123, ICAO Annex 6 and JAR-OPS regulations. A high quality system with proven reliability.



## International Projects

With our EASA approvals valid throughout Europe, we provide a truly international service. In addition, overseas projects have been completed for Middle Eastern, Far Eastern, African, American and Scandinavian countries.



We design modifications to aircraft interiors, from new bulkheads and seat layouts to complete VIP interiors.

We can manufacture and supply to your specifications through our Alliance Partners.



Structural modifications to existing galleys to include new ovens, microwaves, water boilers and refrigeration units. In addition, we design new storage units and bulkheads as part of passenger seat layout service.



Design and Certification of special projects for Fisheries, Police Forces, Rescue Services and Ariel work including FLIR systems, internal and external radar and camera mounts, night sun searchlights, video monitoring systems, helicopter cargo hooks and microwave downlinks.



We design and certify in-flight entertainment systems, from simple 10" bulkhead mounted TVs or drop down monitors to specialist large plasma screen installations for royalty.

[www.bac-uk.com](http://www.bac-uk.com)

### STRESS ANALYSIS

Using Finite Element Analysis and MathCAD hand calculations, our EASA approved Stress Department handles both in-house and third party projects.

### STRUCTURAL DESIGN

Our EASA approved structures Department specialises in secondary structures design and modifications including:

- Antenna installations
- Helicopter cargo hooks
- Avionics racks
- Product testing and approval
- Instrument panels
- Modifications to galleys
- Aircraft interiors
- Seat certification

### EMC TESTING AND EQUIPMENT APPROVAL

We produce Declaration of Design and Performance (DDP) certificates for installing commercial equipment into aircraft. As part of this approval process, we comply with RTCA/DO-160 and ED-14 using approved test facilities at our Alliance Partners.

We produce FMEA and Reliability reports and also environmental test reports.

### TECHNICAL PUBLICATIONS

We are approved to produce Flight Manuals, Maintenance Manuals and IPC supplements for all aircraft types.

### FAA APPROVALS

Using our Alliance Partners, we can complete design and certification for regulatory authorities requiring FAA approval.

### AVIONICS DESIGN AND INTEGRATION

Our EASA approved Avionics Design Department specialises in all aspects of avionics upgrades to meet the latest European and International legislation.



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EASA DESIGN APPROVAL  
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Alliance Partners:  
Oakenhurst Group of Companies (EASA POA Part 21 manufacturers) email: sales@oakenhurst.com  
EMC Projects (UKAS and CAA approval) email: enquiries@emc-projects.co.uk  
DC Aerospace (FAA DER) email: dcaero@msn.com  
FlyerTech Ltd (E3 importation) email: sales@flyertech.com