





#### Introduction

The Generic Hand Skills Trainer (GenSkill) is a free standing physical prepresentation of a typical Flying Control Run. The GenSkill provides an ideal platform for students to practise rigging procedures, including wirelocking, whilst removing and installing typical aircraft components in a confined space. The training aid is in service with schools, academies and defence colleges around the world and is regularly used as a test piece at the WorldSkills finals.

Using basic hand tools students can practise and develop the skills required for aircraft maintenance activities, including:

- Wirelocking
- Split Pinning
- Component Removal / Refit
- Control Rod Rigging
- Lubrication
- Electrical Continuity Checks

The electrical avionic modification component builds and enhances on the training capability of the standard GenSkill training device by introducing a functioning low voltage aircraft circuit as a fabrication and modification embodiment to extend training to avionic skills. The electrical and mechanical modification, henceforth known as the Test Piece. A Test Box (GSE) will be required to enable the Test Piece to be electrically checked.

The electrical avionic mod kit has been designed to enable the student to perform the following additional electrical tasks on the rig:

- Crimping
- Soldering
- Contact insertion/extraction and
- Techniques associated with protective sleeving





www.pennantplc.com

Contact: sales@pennantplc.co.uk





#### **Key Features**

- Fuselage shaped shell containing access panels secured with a range of aircraft fasteners;
- Internal components typical of aircraft systems:
  - Control system (Control rods, pivot blocks, pivot arm. Torque tube);
  - Hydraulic components (PFCU, Rigid Pipes, Manifolds and Valves);
  - Avionic LRU (Cable, Connectors, Mounting Tray with aircraft tie-downs, LRU).
- Aircraft Component Recognition;
- Safetying by lock wire, Safe-T-Cable, split pin and torqueing;
- Fastener recognistion / identification;
- Control Linkage Rigging;
- Does not require expensive aircraft parts;
- Designed to allow the observation of repetitive tasks in training;
- Covers knowledge and learning tasks involved with the following standards & qualifications.
   EASA/EMAR pt66, FAA, City & Guilds and CASA MEA Units.

#### With the addition of the electrical modification component:

- Introduction of a functioning low voltage aircraft circuit;
- Carry out a service bulletin which incorporates embodiment of an avionic modification;
- Electrical harness fabrication;
- Sheet metal fabrication;
- Testing of the system with a portable test set;
- Instructor controlled fault harness replaces the student harness with in-built faults;
- Interactive Electronic Technical Publication, S1000D laid out in ATA2200 format with performance support material.



## Aviation Regulations Alignment Standard Genskill (Items in RED additional Mod Kit)

Module 6 Materials & hardware  Module 7 Maintenance practices  Module 10 Aviation legislation  Module 11 Aeroplane, aerodynamics, structures and systems  Module 13 Aircraft structures  Module 13 Aircraft structures and systems  Module 14 Aircraft maintenance (Military Foundation Competence): Unit 2014, 205 & 206  Af68-60 Level 3 Diploma in Aviation Maintenance (Military Development Competence): Unit 2013, 1,02, 304 & 455  4708-30 Level 3 Diploma in Aviation Maintenance (Military Development Competence): Units 306, 308, 310 & 312  MEA223 Pabricate aircraft electrical structures and in Aircraft maintenance (Military Development Competence): Units 306, 308, 310 & 312  MEA223 Repricate aircraft electrical test equipment to perform basic electrical tests  MEA238 Febricate aircraft electrical test equipment to perform basic electrical tests  MEA238 Febricate aircraft electrical test equipment to perform basic electrical tests  MEA239 Febricate aircraft electrical test equipment to perform basic electrical tests  MEA236 Use Electrical test  MEA236 Semove and install aircraft fixed wing flight control system components  MEA311 Inspect aircraft hydro-mechanical, gaseous and landing gear systems and components  MEA311 Test and troubleshoot aircraft fixed wing flight control system and components  MEA338 Remove and install aircraft hydro-mechanical and landing gear system components

#### **Supported Training**

The students perform practical maintenance tasks, through the access panels. The flying control tasks include:

- Inspect Flying Control System
- Lubricate Flying Control Torque Tube & Lubricate Pivot Arm Assemblies
- Remove, Install & Examine Torque Tube Assembly & Outer Bell Crank
- Remove & Install Powered Flying Control Unit, PFCU Control Rods, Pivot Arm Assemblies & Torque Tube Lever Assembly
- Rigging of PFCU and Control Linkage

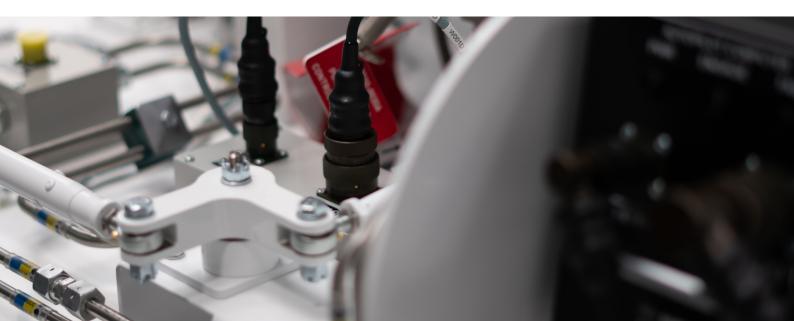
The hydraulic practical tasks include inspect hydraulic system, remove and install the follow: 4 port manifold, 6 port manifold, 3 way depress valve, pressure transducer, rigid pipework and flexible pipework.

The electrical avionic mod kit provides students with the opportunity to carry out and inspect electrical compartment LRU, remove and install line replaceable unit (LRU), carry out electrical harness continuity checks, troubleshoot/fault tree analysis, sheet metal fabrication and harness fabrication, as part of the avionics practical tasks.

On task completion the instructor/supervisor can open the hinged, shell top to inspect and debrief the student on their resultant standard of work.

### **Physical Specifications**

PARTICULAR	VALUE	UNIT
Length	1110	mm
Width	1575 Note 1	mm
Height	1565 Note 1	mm
Weight	120	Kg
Note <sup>1</sup> : Lid Open		





# **Supplied Documentation**

Integrated Electronic Technical Publication (IETP)

## **Optional Accessories**

	GENSKILL	MOD KIT
Spares Pack (Scaled at 1-5 Genskills)	<b>✓</b>	<b>✓</b>
Consumables Starter Kit	<b>✓</b>	<b>✓</b>
GenSkill Joining Kit (Join two single GenSkills together end to end)	✓	✓
Additional Test Set	<b>✓</b>	<b>✓</b>
Additional Fault Harness	<b>✓</b>	<b>✓</b>
Student Toolkit	<b>✓</b>	×

