

Aviation

In this section we introduce you to two kits that satisfy the requirements of Part 66 modules 3 and 4 of the European Aviation Safety Agency syllabus which is internationally recognised as the gold standard for training Aviation maintenance engineers.



Our learning solutions:

- Designed around the requirements of modules 3 and 4
- 8 sets of full colour PDF worksheets with thorough topic coverage and teacher's notes
- Supplied in rugged storage trays

"We value the Locktronics equipment during the training of apprentices and engineers progressing down the route of EASA part 66 Maintenance Engineers Licence. They are invaluable both as demonstration equipment on short courses and apprentices conducting their own experiments, construction of circuits, testing and understanding of electrics, electronics and digital techniques".

Tony Russell, British Airways.





EASA electrical fundamentals (module 3)

This comprehensive solution is designed to fulfil the learning requirements of the European Safety Agency (EASA) module 3 - electrical fundamentals - for aircraft maintenance engineers. The solution contains all the Locktronics parts needed as well as 4 separate workbooks covering each of the sub-modules in the EASA specification.

Instruments	
To deliver this course you will also need:	
LK1110	Multimeter pack
HP7894	Signal generator
Components included	
1 Resistor, 10 ohm, 1W 5% (DIN)	1 Resistor, variable, 10k (DIN)
1 Resistor, 5.6k, 1/4W, 5% (DIN)	1 Faraday's law kit
1 Resistor, 12 ohm, 1W, 5% (DIN)	1 Lenz's law kit
1 Switch, on/off, metal strip	1 Resistor, 2.2k, 1/4W, 5% (DIN)
1 Diode, germanium	3 Resistor, 10k, 1/4W, 5% (DIN)
1 1:1 transformer with retractable ferrite core	1 Capacitor, 1 uF, Polyester
2 Lead, yellow, 500mm, 4mm to 4mm stackable	1 Resistor, 15k, 1/4W, 5% (DIN)
1 Transformer, 2:1 turns ratio	3 MES bulb, 6V, 0.04A
1 Resistor, 270 ohm, 1/2W, 5% (DIN)	1 Potentiometer, 250 ohm (DIN)
1 Fleming's motor rule apparatus	1 7 x 5 metric baseboard with 4mm pillars
1 Resistor, 22k, 1/4W, 5% (DIN)	3 MES bulb, 6.5V, 0.3A
1 Resistor, 47 ohm, 1/2W, 5% (DIN)	2 Lead, blue, 500mm, 4mm to 4mm stackable
1 Switch, push to make, metal strip	2 Power supply
1 Choke, 47mH	14 Connecting Link
3 Choke, 10mH	1 AC voltage source carrier
1 Choke, 5mH	2 Power supply carrier with battery symbol
3 Capacitor, 10 uF, Electrolytic, 25V	1 Ammeter, 0mA to 100mA
2 Capacitor, 4.7uF, electrolytic, 25V	1 Motor, 6V, open frame
2 Capacitor, 2.2 uF, Polyester	1 Fuse/universal component carrier
1 Resistor, 1k, 1/4W, 5% (DIN)	3 AA battery holder carrier
1 Alnico Rod Magnet	1 Solar cell
1 AC power supply, 12VAC, 1.5A, UK	1 Thermocouple and carrier
1 Locktronics User Guide	3 Lampholder, MES
1 Resistor, 100 ohm, 1W, 5% (DIN)	
Ordering information	
EASA electrical fundamentals solution including storage trays, baseboard, DC (multinational) and AC (UK) power supplies.	DIN LK9339
Corresponding curriculum	LK7378, LK7381, LK7393 & LK7415



EASA Electrical fundamentals 1

- Series and parallel circuits
- Measuring voltage and current
- Cells and batteries
- Thermocouples
- Photocells
- Ohm's law



EASA Electrical fundamentals 2

- Resistors in series and in parallel
- Series/parallel networks
- Voltage and current dividers
- Kirchoff's laws
- Power in DC circuits
- Power transfer



EASA Electrical fundamentals 3

- Capacitors and electrostatics
- Inductors and inductance
- DC motors
- Generator principles
- Transformers and their construction
- Transformer losses



EASA Electrical fundamentals 4

- AC measurements
- Inductance and capacitance
- LR and CR series AC circuits
- LCR series AC circuits
- LR and CR parallel AC circuits
- LCR parallel AC circuits
- Q factor and bandwidth
- Low pass and high pass filters
- Band pass and band stop filters

Note: These packs are delivered with an international DC power supply and a UK style (3 square pin) 220V AC power supply. If you are ordering outside the UK please let us know which kind of mains plug you require on the AC supply.



EASA electronic fundamentals (module 4)

This solution is designed to fulfil the learning requirements of the European Safety Agency (EASA) module 4 - electronic fundamentals - for aircraft maintenance engineers. The solution contains all the Locktronics parts needed including 4 separate workbooks covering each of the sub-modules in the EASA specification.

Instruments

To deliver this course you will also need:

LK1110	Multimeter pack	HP8279	Picoscope
HP7894	Signal generator		

Components included

1	Resistor, 100 ohm, 1W, 5% (DIN)	1	Transistor LHF, NPN
1	Potentiometer, 250 ohm (DIN)	1	Transistor RHF, NPN
1	Capacitor, 1,000 uF, Electrolytic 30V	1	Thyristor
2	Capacitor, 47uF, Electrolytic, 25V	3	Diode, power, 1A, 50V
4	Capacitor, 4.7uF, electrolytic, 25V	2	Switch, push to make, metal strip
3	Capacitor, 0.47 uF, Polyester	1	Transformer, 2:1 turns ratio
2	Resistor, 100k, 1/4W, 5% (DIN)	1	Zener diode, 8.2V
3	Resistor, 10k, 1/4W, 5% (DIN)	1	Transistor RHF, PNP
3	Resistor, 1k, 1/4W, 5% (DIN)	2	Power supply carrier with battery symbol
2	Resistor, 180 ohm, 1/2W, 5% (DIN)	1	Dual rail power supply carrier
1	Resistor, 500k, 1/4W, 5% (DIN)	12	Connecting Link
2	7 x 5 metric baseboard with 4mm pillars	1	Diode, germanium
2	Power supply	1	AA battery holder carrier
2	Lead, blue, 500mm, 4mm to 4mm stackable	2	LED, red, 5V (SB)
2	Lead, yellow, 500mm, 4mm to 4mm stackable	1	Switch, on/off, metal strip
2	Lead, black, 500mm, 4mm to 4mm stackable	2	Ammeter, 0mA to 100mA
2	Lead, red, 500mm, 4mm to 4mm stackable	1	Voltmeter, 0V to 15V
1	Resistor, 270 ohm, 1/2W, 5% (DIN)	1	OR gate carrier (ANSI)
1	AC power supply, 12VAC, 1.5A, UK	1	Zener diode, 4.7V
1	Resistor, 200k, 1/4W, 5% (DIN)	2	NOT gate carrier (ANSI)
1	Capacitor, 1nF, Polyester	1	Transistor LHF, PNP
1	Capacitor, variable, 15-140pF	1	Op Amp Carrier (TL081) with 2mm to 4mm Lead
1	Thermistor, 4.7k, NTC (DIN)	1	1:1 transformer with retractable ferrite core
2	Potentiometer, 10k (DIN)	1	Switch, changeover, toggle
1	Capacitor, 100uF, Electrolytic, 25V	1	Low power solar motor
1	Resistor, 2.2k, 1/4W, 5% (DIN)	1	AC voltage source carrier
1	Capacitor, 1 uF, Polyester	1	Bridge rectifier
1	Locktronics User Guide	1	Motor 3 to 12V DC, 0.7A
1	AND gate carrier (ANSI)		

Ordering information	DIN	ANSI
EASA electronic fundamentals solution including storage trays, baseboard, DC (multinational) and AC (UK) power supplies.	LK9282	LK9282A
Corresponding curriculum	LK7419, LK7422, LK7426 & LK7430	

Ordering information	DIN	ANSI
EASA electrical and electronic fundamentals combined solution including storage, baseboard, DC (multinational) and AC (UK) power supplies.	LK9672	LK9672A



EASA Electronic fundamentals 1

- Diodes and diode types
- Full and half wave rectifiers
- Rectifier efficiency
- Reservoir capacitors
- Voltage multipliers
- Thyristor and SCR circuits
- Zener diodes and circuits
- LEDs in AC and DC circuits



EASA Electronic fundamentals 2

- NPN and PNP transistors
- Transistor characteristics
- Transistor bias and decoupling
- Common base, common emitter and common collector circuits
- Class A, B and C amplifiers
- Other transistor circuits



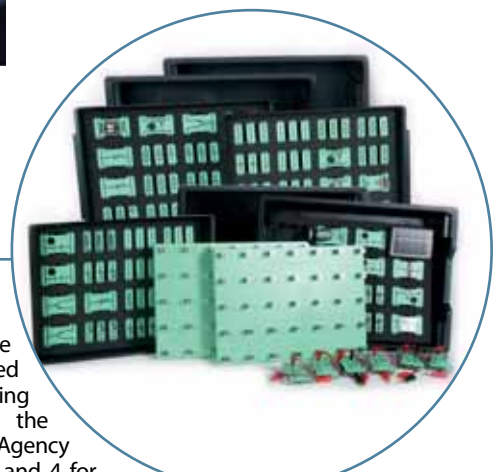
EASA Electronic fundamentals 3

- AND, OR, NAND, NOR and NOT gates
- Simple logic circuits
- Operational amplifiers
- Inverting and non-inverting amplifiers
- Integrator, differentiator, comparator
- Positive and negative feedback in amplifiers



EASA Electronic fundamentals 4

- Open and closed loop systems
- Analogue transducers
- Damping in feedback systems



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For a complete list of parts in this solution please see our website.