

Aviation Training Resources
P.O.Box 201121
Auckland Airport
Manukau 2150

List of current DVD's at January 2009

Aircraft Marshalling. *Duration 17 mins approx. PAL and NTSC format DVD*

Every year aircraft are damaged as a result of ramp events. Such accidents are costly yet easily avoided. By far the most common errors are caused by marshallers. These two programmes are a training aid for those who marshal aircraft and include a demonstration of the most common marshalling signals; *either* IATA or ICAO.

Basic Gas Turbine – an introduction. *An informative introduction to the Gas Turbine Engine. Duration 40 mins approx. PAL and NTSC format DVD*

This programme covers the basic theory of the Gas Turbine Engine, the part played by temperature and heat, as well as an overview of its operation. Areas covered include: Introduces the various theories and laws of Newton, Bernoulli, Boyle, Charles and Carnot. Thrust and Propulsive Efficiency - Thermal, Mechanical, Propulsive and Cycle efficiency. The effects of Density and Temperature on the Gas Turbine Engine. Engine types - Turbo jets, Turbo props, Turbo shafts, Free turbines. Engine designs and major components. Compressors - Centrifugal and Axial-flow. (briefly covers compressor surge and stall) Diffuser. Combustion chambers. Fuel injection and vaporization, Burners. Nozzle guide vanes, Turbine disc. Exhaust systems and Thrust reversal. The programme is non type specific and features both fixed wing aircraft and helicopters. An video resource intended to compliment any ground course introducing the gas turbine engine.

Gas Turbine Engine Handling. *Duration 15 mins approx. PAL and NTSC format DVD*

Every operator of gas turbine equipment is aware of the avoidable expense and down-time associated with incorrect engine handling. This informative training aid addresses problems faced by inexperienced pilots when handling a gas turbine engine. - Engine gas temperature indicators - TIT, ITT, TOT, EGT, T4. - Start up - Normal starts, Hot starts, Hung starts, False starts, Shut down. - Also, briefly illustrates the problem of an inflight flame-out. The programme features examples of both fixed wing aircraft and helicopters.

Hypoxia – Hypobaric (Hypoxic). *Intended for Technical Crew and Flight Attendant ab-initio and recurrent training. Duration 11 mins approx. PAL and NTSC format DVD*

Hypoxia is something that can affect all who fly. Aircrew should be familiar with the signs and symptoms of hypoxia both for their own safety and that of their passengers. This short programme illustrates cabin altitude, introduces the different types of Hypoxia, their signs and symptoms, its effect on passengers with medical conditions and stresses the importance of aircrew vigilance.

The Aeroplane/Airplane - an introduction. *Intended for Flight Attendant and other non-technical training. Duration 9 mins approx PAL and NTSC format DVD*

Air-passenger traffic is expected to triple over the next twenty years and the aviation industry will, in that period, train thousands of staff, many of whom will come into the industry with no knowledge of aircraft or what makes them fly. Aviation Training Resources has produced two informative, introductory programmes The Aeroplane/Airplane and Introduction to Flight. *The Aeroplane - An Introduction* is an elementary preface to the basic components of an aircraft and is aimed at non-technical staff. Topics include centre of gravity, the three movements - roll, pitch and yaw, control and trim surfaces, lift and drag devices as well as the undercarriage and lights. The programme presents the aircraft in a non-technical and easily understood manner.

Introduction to Flight. *Intended for Flight Attendant and other non-technical training. Duration 17 mins approx PAL and NTSC format DVD*

Introduction to Flight explains in basic terms what makes an aircraft fly. The programme includes, the atmosphere, its density, temperature and its variation with altitude. The aircraft wing and how lift is generated is explained in the simplest of terms. It covers the four basic forces - lift, weight, thrust and drag, along with the effects of imbalance. The fundamentals of the aircraft engine as it relates to thrust, including a short explanation on how a jet engine functions are also covered along with speed, the take-off, landing and flight turbulence. *Introduction to Flight* is for non-technical staff as an *ab initio* teaching tool or wherever there is need of a basic understanding of the theory of flight, it also compliments on-going type training.