

## ARA-552

### Analog Radio Altimeter Test Set

The ARA-552 Radio Altimeter Analog Adapter is designed to facilitate flight line testing of aircraft autoland systems, ground proximity warning systems, and installed altimeter systems. Together with the ARA-552 Hand Held Controller, it provides sophisticated capabilities for testing a wide range of analogue altimeters in a variety of aircraft.

The ARA-552 Test Set facilitates testing of analogue altimeters by providing simulated aircraft radio altitude information in a flight-line environment. Using operator-defined parameters such as start altitude, stop altitude, and vertical speed, the Test Set defines a radio altitude ramp. This information, along with error and fault control information, is transmitted through a cable adapter to up to three aircraft altimeters. The three-part sequence accurately simulates descent, approach, flare, and touchdown. The ARA-552 Test Set may be used whenever active control of the radio altitude bus is a test requirement.

The following accessories are available for the ARA-552:

- Various interface cables to support a wide variety of aircraft altimeters
- DC altitude board
- Relay board

An ARA-552 Test Set with DC output and relay simulation options can simulate an entire altimeter system for aircraft where the actual altimeter has been removed. For relay simulation, three output channels are provided, each generating FLAG, A/P WARN, and six ALTITUDE TRIP relays to simulate altimeter functions. Four selectable sets of trip altitude points are available.

The ARA-552 is housed in a portable, weather-resistant case. The detachable lower portion of the case houses the electronics and the upper half provides storage space for cables, manuals, and the hand-held controller. The principal electronic circuits are attached to the front panel, which is easily removed for maintenance. The printed circuit assemblies are designed for convenient removal and replacement using standard electronic shop tools.



## Features

- Can drive up to three altimeters independently
- Can interface directly to aircraft wiring or simulating altimeter
- Automatic configuration for altimeter by means of interface cable
- Generates DC altitude voltages according to one of four programmed relationships to simulate a removed altimeter
- Displays altimeter output DC voltage converted to feet of altitude, according to altimeter specifications. ARINC 552 DC altitude voltage conversion circuitry for display of altimeter output voltage in feet, with a resolution of one foot
- Can simulate the autopilot warn and system flag relays of a removed altimeter
- Can simulate the altitude trip relays of a removed altimeter according to one of four pre-programmed banks of set points
- Displays FLAG, TRIP, and A/P WARN RELAY contact closures
- Triple frequency synthesizers and output conditioning circuitry for 860F-1/4 test signals
- Self-test controls for altimeter under test
- Consistent interpretation/operation, regardless of the altimeter being tested
- Microprocessor-based design for high accuracy
- Operates from internal battery or AC line power

For testing of digital radio altimeters, the ARA-552 can be used with the ADC-552 Digital Converter, which converts digital radio altitude data from the ARA-552's hand-held controller to a digital format consistent with the ARINC 429 specification.



## Specifications

- DC Altitude Output:  
Three channels, 0 V to 30 V, according to altimeter specifications
- Frequency Output:  
Three channels, sinewave 600 Hz to 200 kHz
- Power:  
115 or 230 VAC, 47-440 Hz or self-contained battery
- Dimensions:  
19-1/2 in x 9-1/2 in x 13-1/2 in (50 cm x 24 cm x 34 cm)
- Weight:  
24 lbs (11 kg) with battery

For more information on the ARA-552 Test Set or other Atlantis test equipment products, contact Customer Support at:



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