

Avionics

UC-584

Universal Transponder Antenna Coupler



Time-saving transponder antenna coupler, providing repeatable test results on the ramp or in the hangar

- Reliable FAR Part 43 Appendix 'F' ERP and MTL testing in high multi-path environments
- Provides >20 dB of antenna isolation for Mode S transponder altitude and diversity tests
- <1 dB repeatability
- Rugged design for ramp use
- Fits most 'Shark Fin' L-Band antenna's
- Quick action antenna grip/release action

TRANSPONDER ANTENNA COUPLER

The UC-584 Universal Transponder Antenna Coupler is designed to solve the problem of reliable FAR Part 43 Appendix 'F' ERP (Effective Radiated Power) and transponder MTL (Minimum Trigger Level) testing, in the high multi-path ramp and hangar environments. The Antenna Coupler mounts directly over the aircraft transponder antenna and is retained in place with a toggle action grip.

The Antenna Coupler provides 20 dB of transponder antenna isolation, ensuring airborne TCAS systems and SSR ground stations do not see UUT transponder altitude replies under test conditions where the air-data system is pressurized to flight levels. ADS-B transponder antennas exhibit gain in the forward direction, which adds to the complication of where to position test antennas in relation to the aircraft antenna to achieve a repeatable ERP test. The innovative design of the Antenna Coupler includes an integral positioning slot ensuring a high level of measurement repeatability is achieved, saving test time.

The UC-584 can be connected to the Aeroflex IFR 6000/6015 direct connect port. The coupler's 1.5 dB insertion loss may be compensated for by adding this amount to the setup menu cable loss parameter.

SPECIFICATIONS

TRANSPONDER ANTENNA COUPLER

Frequencies

1030 MHz, 1090 MHz

Return Loss

>7.71 dB at both the antenna under test input and coupler input

Insertion Loss

0.6 dB \pm 0.5 dB

Repeatability

<1 dB

Isolation

>20 dB

Connector

TNC Female

PHYSICAL CHARACTERISTICS

DIMENSIONS

Height

5.25 inches (13.3 cm)

Width

5.75 inches (14.6 cm)

Depth

8.25 inches (20.9 cm)

Weight

2 lbs (0.9 kg)

ORDERING INFORMATION

When ordering, please include the Order Number listed below:

Ordering

Numbers	Description
86931	UC-584 Universal Transponder Antenna Coupler