

UC-584

Universal Transponder Antenna Coupler

A time-saving device that provides repeatable test results on the flight line or in the hangar

The UC-584 Universal Transponder Antenna Coupler solves the problem of reliable FAR Part 43 Appendix 'F' ERP (Effective Radiated Power) and transponder MTL (Minimum Trigger Level) testing in multi-path environments. The coupler mounts directly over the aircraft transponder antenna(s) and is secured in place with a toggle action grip, or slipped onto the top antenna when using the top mount coupler.

The UC-584 provides >20 dB of attenuation and minimizes the chance that airborne TCAS systems and air traffic controllers will see UUT transponder altitude replies under test conditions. The innovative design of the UC-584 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 VIAVI IFR6000, IFR6015, and APM-424(V)5 flight line test sets or to the VIAVI IFF-45TS bench test set, or to any suitable transponder test set.



Features

- Effective solution to FAR Part 43 Appendix 'F' ERP and MTL testing in multi-path environments
- Provides >20 dB of isolation
- Provides shielding for ADS-B performance testing UUT parametric tests
- Quick action antenna grip/release action
- Dual antenna kit configuration
- Top mount antenna for easy placement on larger aircraft
- Rugged design for ramp use
- Fits most 'Shark Fin' L-Band antennas

Benefits

- Reduces false intruders and interference with air traffic control tower¹
- High level of measurement repeatability is achieved, saving test time
- Universal design allows coupler to be used with any suitable transponder test set

¹ Effectiveness of the coupler is dependent on the distance of the ADS-B ground station to your test site and any shielding in your hangar.

General Specification

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 ±0.5 dB typical
Repeatability	<1 dB
Isolation	>20 dB
Connector	TNC Female

Physical Characteristics

Dimensions (UC-584 and UC-584S)	8.2 in x 5.75 in x 5.25 in (20.9 cm x 14.6 cm x 13.3 cm)
Weight (UC-584 and UC-584S)	2 lbs (0.9 kg)

Maximum aircraft antenna size accommodated

UC-584	
Width	3.9 in (9.9 cm)
Thickness	0.325 in (0.825 cm)
Height	2.9 in (7.37 cm)
UC-584S	
Width	3.9 in (9.9 cm)
Thickness	0.25 in (0.635 cm)
Height	3.75 in (9.52 cm)

Ordering Information

Versions and Options

Order Number	Description
112350	UC-584 Coupler Kit, single antenna
112349	UC-584 Coupler Kit, dual antenna

Optional Accessories

90106	Kit, Antenna Coupler Pole, 8 ft. w/ D Ring
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Kit Contents

Item	Part No.	Single	Dual
		Antenna Coupler Kit (112350)	Antenna Coupler Kit (112349)
Item	Part No.	Qty	Qty
 UC-584 L-Band Coupler (w/ clamping)	87431	1	1
 UC-584s L-Band Coupler (top mount)	142094	0	1
 Coaxial Cable (25 ft) (TNC-TNC)	62462	1	1
 Coaxial Cable (25 ft) (TNC-TNC, right angle)	141131	0	1
 Soft Case	142158	1	1
ID Card	139823 (single) 139824 (dual)	1	1
Application Notes	89148	1	1
Instruction Sheet	92715	1	1



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