

TC-201

TCAS/Transponder Antenna Couplers

A combined TCAS and transponder directional antenna coupler for the avionics maintenance industry.

The VIAVI TC-201 Antenna Coupler is used on TCAS and combined TCAS and transponder directional antennas, to shield the RF signal during testing of the TCAS or transponder system. The TC-201, when used with the AVX-10K, IFR6000, IFR6015 or APM-424(V)5, supports maintenance testing in the airborne condition while working to reduce interference with air traffic control or nearby aircraft.



Features

- Accommodates both phase and amplitude type antennas
- Reliable, FAR Part 43, Appendix F, ERP and MTL testing in high multi-path environments
- Provides >20 dB of isolation
- Provides shielding for all transponder and ADS-B performance testing
- Lower antenna adjustable support pole
- Perform four-quadrant testing by simply rotating the bearing selector dial
- TCAS bearing accuracy < 10 degrees

Benefits

- Reduces interference with air traffic control and nearby aircraft
- High level of measurement repeatability is achieved, saving test time
- Tests all quadrants of directional TCAS or TCAS/Transponder antennas
- No need to achieve line-of-sight with the antenna under test
- Eliminates the need for DD-1494 Frequency Authorization
- Universal design allows coupler to be used with any suitable TCAS/transponder test set

General Specification

Frequency	1030 MHz, 1090 MHz
Return Loss	> 9 dB
Insertion Loss	15.5 dB typical
Repeatability	< 1 dB
Isolation	> 20 dB
Bearing Accuracy	±18° max, <±10° typical
Connector	TNC female

Supported Antennas

Supported Equipment	TC-201A	TC-201B
 Collins TSA-4100 and Similar	•	•
 Honeywell/ACSS AT-910 and Similar	•	—
Minimum Recommended Fuselage Size	110"	92"

Physical Characteristics

Size	
Coupler Only	19 in. diameter (48.26 cm)
Kit with Transit Case	24.81 x 24.98 x 14.15 in. (63 x 63.45 x 35.94 cm)
Weight	
Coupler Only	11 lbs. (4.9 kg)
Kit with Transit Case	41 lbs. (18.6 kg)
Accommodates Antenna Dimensions	
Diameter	9.25" max
Oval Dimension	11" max
Antenna Height	2" max

Order Information

Versions and Options

Item Number	Description	TC-201A Single Coupler Kit (140889)	TC-201A Dual Coupler Kit (22164588)	TC-201B Single Coupler Kit (22163082)
		Quantity		
22130799	TC-201A Coupler	1	2	—
22163085	TC-201B Coupler	—	—	1
142743	Transit Case, Single	1	—	1
22164587	Transit Case, Dual	—	1	—
92863	Attenuator, 30 dB	1	2	1
142742	Extension Pole Kit	1	1	1
142839	Coax Cable TNC, 50'	1	2	1
90177	Monopole Extension	Optional	Optional	Optional



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