

T-36C

NAV/COMM Test Set Datasheet



Description

The T-36C is a rugged-designed, user-friendly, high-precision instrument for rapid functional testing of VOR, LOC/GS, MB, and VHF COMM (AM/FM) avionic equipment.

With an intuitive and simple operator interface and battery operation of up to 8 hours on one charge, the T-36C navigation and communication capabilities allows the user to quickly, test, troubleshoot, and isolate problem systems on the ramp and in the shop.

The T-36C RF output allows testing from the flight deck of most large aircraft using an expandable, omnidirectional antenna. Testing of all functions can also be performed with the unit-under-test (UUT) directly connected to Test Set.



Features

- Tests VOR, LOC, GS, MB, VHF, and UHF COMM
- Pre-programmed test scenarios and settings
- Simultaneous LOC, G/S and MB output
- Allows testing at 25 kHz and 8.33 kHz spacing
- Compliant with European CE requirements
- Large easy to read backlit display
- Simple user interface and clearly identified switches
- Key board entry of nearly limitless parameters
- Internal battery charger included
- Standard 2 year limited warranty included

VOR

- Accurate generation of 30 Hz variable, reference, and 9960 Hz sub-carrier.
- Preset bearing simulation in 45° or slew in 1° increments.
- 30 Hz and 9960 Hz modulation can be deleted to check flag operation.
- Covers the entire VOR band of 108.00 to 117.95 MHz.
- 1020 Hz IDENT tone

LOC and GS

- Precise simulation of LOC/GS ground station signals.
- Allows selection of preset DDM deflections or manual slew in 0.001 increments.
- Simultaneous LOC/GS/MB Mode.
- Allows 90 and 150 Hz tones to be deleted

Communications (COMM)

- AM or FM with variable modulation and deviation settings.
- VSWR measurement allows testing of antenna system.
- Direct Connect and Antenna methods add versatility and accuracy.
- 25 MHz and 8.33 kHz channel selection.
- Accurate measurement of VHF/UHF frequency, power, and modulation.

Marker Beacon and ILS

- Easy user selection of 400, 1300, and 3000 Hz signals.
- Simultaneous MB and ILS output signals.
- Separate adjustment of DDM values, either preset or slew, in ILS.

Specifications *

TRANSMITTER Characteristics

* Standard Condition Values – As specified in Maintenance Manual and at selected Cal Positions.

RF FREQUENCIES		PRESET FREQUENCY VALUES***			KEYPAD ENTRY FREQUENCY CAPABILITY		
FUNCTION	KNOB	LO	MID	HI	FROM	TO	ACCURACY
Marker	MB	74.50 MHz	75.00 MHz	75.50 MHz	74.5000 MHz	75.5000 MHz	± 150 Hz
VOR OMNI	VOR	108.00 MHz	108.05 MHz	117.95 MHz	108.0500 MHz	117.9500 MHz	± 150 Hz
Localizer**	LOC	108.10 MHz	108.15 MHz	110.15 MHz	108.1000 MHz	119.9500 MHz	± 150 Hz
Glide Slope**	GS	334.70 MHz	334.55 MHz	334.25 MHz	329.1500 MHz	335.0000 MHz	± 300Hz
COMM	108-174	108.00 MHz	113.00 MHz	174.95 MHz	108.0000 MHz	118.0000 MHz	± 150 Hz
FREQUENCY SPACING IS IN 25 KHZ AND 8.33 KHZ STEPS							
** Localizer and Glideslope Frequencies are Automatically Paired				***All preset values can be user modified and saved to memory			

Power Output

FREQUENCY	RANGE	TOLERANCE
DIRECT CONNECT (RT Port)		
108 to 117.95 MHz	-25 to -100 dBm	± 2 dB
118 to 156 MHz	-25 to -90 dBm	± 2 dB
156 to 174MHz	-25 to -90 dBm	± 2 dB
Selectable in 1 dB steps		

FREQUENCY	RANGE	TOLERANCE
ANTENNA		
108 to 118 MHz	0 to -70 dBm	± 2.5 dB
118 to 156 MHz	0 to -60 dBm	± 2.5 dB
156 to 174 MHz	0 to -60 dBm	± 2.5 dB
Selectable in 1 dB steps		

NAVIGATIONAL Characteristics

FUNCTION	FREQUENCY	CONDITIONS	DEFAULT	ACCURACY	RANGE	RESOLUTION	SWITCH NAME					
Marker	0.4, 1.3, 3.0 kHz	-----	95 % mod	+/- 5 %	-----	-----	TONES					
Tone Frequency Accuracy ± 8 Hz @ 0.4, 1.3, 3.0 kHz												
VOR OMNI	9960 Hz & 30 Hz	0° Bearing	30 % mod	+/- 2 % Mod.	0° to 360°	1°	ILS/VOR VAR					
	Bearing Accuracy	± 1° at 0° degree bearing										
	FM Modulation	30 Hz reference at ± 480 Hz Peak deviation on 9960 Hz Sub carrier			Accuracy ± 30 Hz at peak deviation							
VOR Presets	0°	45	90	135	180	225	270					
		315	360	Key Pad Variable - 0° to 360° in 1° inc.								
Glide Slope	90 Hz & 150 Hz ± 1%	@ 0.0 DDM	40 % mod	+/- 2 % Mod.	0 to 0.400 DDM (U/D)	0.001 DDM	ILS/VOR VAR					
Localizer	90 Hz & 150 Hz ± 1%	@ 0.0 DDM	20 % mod	+/- 2 % Mod.	0 to 0.200 DDM (L/R)	0.001 DDM	ILS/VOR VAR					
PRESETS			U1/R1	U2/R2	FS	0C	FS	D2/L2	D1/L1		Accuracy at "ON COURSE" (OC)	
LOC	DDM		0.093	0.155	0.200	0.000	0.200	0.155	0.093		LOC	± 0.002 DDM
GS	DDM		0.091	0.175	0.400	0.000	0.400	0.175	0.091		GS	± 0.002 DDM
Key Pad Variable DDM in .001 DDM increments to full scale												
IDENT	1020 Hz	VOR	10% Fixed	+/- 5 % Mod ± 50 Hz.	-----	-----	MB/NAV ID					

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COMMUNICATIONS Characteristics

FOR FREQUENCY RANGES – SEE TRANSMITTER CHARACTERISTICS SECTION			
Communication Modes	AM, FM, UHF and VHF in Amplitude Modulation (AM) and Frequency Modulated (FM)		
Communication AM			
Communication Tones AM	1020 Hz	Accuracy ± 50 Hz	Modulation ± 5% @ 120 MHz
Variable Range - 0 to 95% AM	150 Hz	Accuracy ± 50 Hz	Modulation ± 5% @ 120 MHz
Audio Output Level	100 – 900 mv in 100 mv steps	Accuracy ± 50 mv	
Communication FM			
FM Modulation Variable	Range from 1 kHz - 10 kHz Deviation in 1 kHz steps	± 2 kHz Deviation / 1020 Hz @ 120 MHz	
Tone	1020 Hz	Accuracy ± 50 Hz	
Output Level	100 – 900 mv in 100 mv steps	Accuracy ± 50 mv	

RECEIVER Characteristics

Frequency Range	Same as COMM Ranges	Frequency Counter Measurement Accuracy	+/-500 Hz of selected Frequency
Maximum Input Level (RT port)	25 W	Power Measurement Range	0 dBW to +14 dBW (1 to 25 W) Direct Connect (CW Only)
Power Measurement Accuracy	+/-20 % (CW Only)		
AM Measurement Range	0 to 100% Modulation	AM Measurement Tolerance	+/- 5% @ 120 MHz
FM Measurement Range	0 to 15 kHz	FM Measurement Tolerance	+/- 2 kHz @ 120 MHz
Sensitivity (Antenna port)	-10 dBm AM; -30 dBm FM		
VSWR Measurement	1.0 to 5.0; +/- 1		

MISCELLANEOUS SPECIFICATIONS & Characteristics

Size	15.5 X 9.4 X 6.5 inches	Operating Temperature	-28° C to +55° C
Weight	20 pounds	Storage Temperature	-50° C to +70° C
Case Style	MIL-PRF-28800, Class 2	Case Color	Yellow
Input Power Requirements	100 to 240 VAC +/- 10%	Input Power Consumption	20 Watts
Input Power Frequency	50 to 400 Hz	Input Current	0.17 Amps AC
AC Fuse Requirements	1.0 A SB (2 req.)	DC Fuse Requirements	5.0 A SB (2 req.; internal to Test Set)

Note: Input power specified for battery charging simultaneously with Test Set operation.

Standard Accessories and Options

- Standard 2 Year Limited Warranty included
- Multi Band Omni Antenna
- Operational and Maintenance Manual
- AC Power Cord
- Direct Connect Cable
- All Accessories store in Test Set cover
- 5 & 10 Year Warranty Plans available

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For more information on our exciting product lines → www.telinstrument.com

TB-2100 ATC/DME Bench Test Set



- Test TCAS, DME, and Transponder
- Transmits and receives ADS-B (1090 MHz squitter)
- Transmits Traffic Information System (TIS) intruder flight data
- Meets test requirements for European Mode S Elementary and EHS
- Performs test requirements per FAR Part 43, Appendix F
- Allows DME testing on all channels (108.00 to 117.95 MHz)
- Compliant with European CE requirements

TR-211 Multi-Function Test Set



- Test VOR, Localizer, Glideslope, and Marker Beacon
- Easy to use, one-man operation
- Full range of tests to comply with CAT III periodic ramp certification
- Fully adjustable functions allow precise testing and measurement
- Allows testing from flight deck

FlexiBus Databus Analyzers



- Test Transponder, ATRBS, and Mode S with unrivaled accuracy
- Color LCD touch display features wide viewing angle
- Continuous display of critical measurements including power, pulse parameters, percent reply, and frequency
- Easy to navigate menus require minimal training to operate
- IEEE Compatible

TR-220 Multi-Function Test Set



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- Test DME and Transponder with Elementary and EHS
- Receives and displays ADS-B (1090 MHz squitter)
- Transmits TIS intruder flight data for 4 intruders
- Performs test requirements per FAR Part 43, Appendix F
- Allows DME testing on all channels (108.00 to 117.95 MHz)
- Compliant with European CE requirements

T-300 Navigation Test Set



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- Displays ARINC 429 data in Engineering and /or Hex formats
- Up to 60 user tables permit storage and recall of commonly used transmitted words
- Receive 1024 label/SDI combinations
- Trap and store 3500 ARINC 429 labels
- Rechargeable NI-MH batteries permits up to 24 hours of operation