

MTS-916 SERIES

MODULAR TARGET SIMULATOR

- Rugged, portable target simulator for optically-guided weapons including AGM-65 (Maverick), MAU-169 (Paveway), and AGM-114 (Hellfire)
- Modular construction, supports IR, TV, CCD, and Laser missiles and bombs
- Direct replacement for AN/DSM-129, AN/DSM-787 & SMU-127 target simulators
- Fully compatible with AN/DSM-157 (GMTS) Test Set
- Fully compatible with MTS-206 Test Set (with enhanced test automation features)



DESCRIPTION

The MTS-916 is a state-of-the-art target simulator for optically-guided weapons such as the AGM-65 and TGM-65 Maverick missiles and guidance sections, MAU-169 Paveway kits, and AGM-114 missiles. Originally designed to replace the obsolete AN/DSM-129 (TV/CCD simulator) and the obsolete AN/DSM-787 (IR simulator), the MTS-916 is fully compatible with any Maverick tester using these legacy simulators. This includes the obsolete AN/DSM-157 (GMTS) as well as the new state-of-the-art MTS-206. Since its initial deployment, the MTS-916 family has been expanded to support testing of MAU-169 Paveway kits (Laser), the AGM-65E/E2, L Maverick, and the AGM-114 Hellfire missile family. Laser variants of the MTS-916 employ an innovative solid-state target design with no moving parts while the TV, CCD, and IR variants employ a moving collimator architecture with precision movement control.

FEATURES

The MTS-916 is a modular target simulator supporting TV/CCD, IR and Laser seekers and is available in multiple configurations.

- MTS-916-1 is used with TV and CCD Maverick seekers including the AGM-65A,B,H,K,J, and Jx
- MTS-916-2 is used with IR Maverick seekers including the AGM-65D,F,F2,G, and G2
- MTS-916-3 combines the capabilities of the MTS-916-1 and MTS-916-2
- MTS-916-4 is used with Laser Maverick seekers including the AGM-65E, E2, and L
- MTS-916-5 is used with Laser Hellfire seekers including the AGM-114B, K, M, N, and R
- MTS-916-6 combines the capabilities of the MTS-916-4 and MTS-916-5
- MTS-916-7 is used with Laser Paveway seekers including the MAU-169



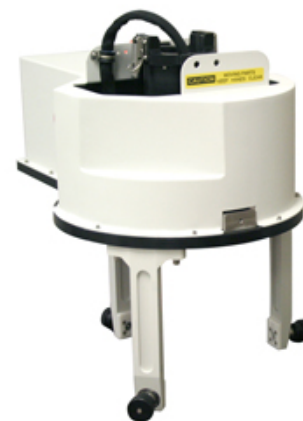
IR Optical Unit



Visible Optical Unit

MTS-916 Optics Unit (OU)

The Optical Unit of the MTS-916 contains the optical apparatus of the target simulator and several different configurations are available. There are three different optical units supporting the seven different MTS-916 configurations.



MTS-916 Mounting Collar (MC)

The Mounting Collar is designed to mount on AGM-65 Guidance Sections and can be secured via three quick release screws. The Mounting Collar is compatible with all Optical Units that require a moving collimator.

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MTS-916 Electronics Unit (EU)

The EU controls the Mounting Collar and the Optical Units and interfaces with the test set (the MTS-206 or the AN/DSM-157). The MTS-916 draws its operating power from the test set and operates in a manual mode to maintain compatibility with the AN/DSM-129 and AN/DSM-787. When used in conjunction with some configurations of the MTS-206, the MTS-916 EU also communicates with the test set and improves the test automation. The EUs used in conjunction with the TV/CCD OU and the IR OU are identical.

COMPATIBILITY AND FUTURE GROWTH

The MTS-916 was designed to be used in lieu of legacy target simulators such as the AN/DSM-129, the AN/DSM-787, and the SMU-127. Although the design of the MTS-916 may not be 100% Form-Fit-Function compatible with that of the legacy target simulators, it can be successfully used to replace them when used in conjunction with the AN/DSM-157 and the MTS-206.

ARCHITECTURE

The MTS-916-4, -5, -6, and -7 employ a state-of-the-art, solid-state target design with no moving parts using multiple laser collimators that simulate moving targets. The MTS-916-1, -2, and -3 utilize a moving collimator design with precision control that can be adjusted to control target movement speed and distance.



MTS-916-6 with Hellfire missile



MTS-916-7 Bench

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SPECIFICATIONS

ELECTRICAL SPECIFICATIONS	
Input Power	115 - 230 VAC, 50 - 400 Hz, single-phase, 2 A (max) (power taken from AN/DSM-157 or from MTS-206)
Communication Interface	USB-2 (used to interface between MTS-916 and MTS-206)
Video Interface Input	RS-170 (used to load custom images on MTS-916-1 only)
Warm-Up Time	Less than 3 minutes at $t > 0^{\circ}\text{C}$ Less than 10 minutes at $-15^{\circ}\text{C} < t < 0^{\circ}\text{C}$ Less than 20 minutes at $t < -15^{\circ}\text{C}$
OPTICAL SPECIFICATIONS	
Spectral Band (TV)	TV- $0.6\ \mu\text{m}$ to $0.9\ \mu\text{m}$
Spectral Band (IR)	IR- $8\ \mu\text{m}$ to $12\ \mu\text{m}$ AND $3\text{-}5\ \mu\text{m}$
Collimation	Sufficient to project image from infinity
Illumination Uniformity	$> 80\%$
Image Refresh Rate	30 Hz (min)
Light-Source Life	> 500 hours
MISSILE AND GCS SUPPORT	
MTS-916 Version	Missile / GCS Version Support
MTS-916-1 (TV/CCD)	AGM-65A, AGM-65B, AGM-65H, AGM-65K, AGM-65J, AGM-65Jx TGM-65A, TGM-65B, TGM-65H, TGM-65K, TGM-65J, TGM-65Jx
MTS-916-2 (IR)	AGM-65D, AGM-65F, AGM-65F2, AGM-65G, AGM-65G2 TGM-65D, TGM-65F, TGM-65F2, TGM-65G, TGM-65G2
MTS-916-3	Supports all missiles and GCS listed under MTS-916-1 AND MTS-916-2
MTS-916-4	AAGM-65E, AGM-65E2 TGM-65E
MTS-916-6	AGM-65E, AGM-65E2, AGM-114 TGM-65E
MTS-916-7	MAU-169 (Paveway)

ENVIRONMENTAL	
Operating Temperature	-35°F (-37°C) to $+140^{\circ}\text{F}$ ($+60^{\circ}\text{C}$)
Storage Temperature	-40°F (-40°C) to $+158^{\circ}\text{F}$ ($+71^{\circ}\text{C}$)
Relative Humidity	95%
Altitude (Operating)	15,000 ft
Altitude (Non-Operating)	40,000 ft
Vibration (Loose Cargo - in Storage Container)	MIL-STD-810E, Method 514.4
Vibration (Sine)	5 G max @ 55 Hz
Shock (Operating)	7 G for 10 ms (half-sine)
Shock (Non-Operating)	20 G for 10 ms (half-sine)
Salt Fog	IAW MIL-STD-810C, Method 509.2, Procedure I
Dust	IAW MIL-STD-810C, Method 510.2, Procedure I
Rain	IAW MIL-STD-810C, Method 506.2, Procedure II
EMI	IAW MIL-STD-461E Flight line support equipment
National Stock Number	NSN 4935-01-563-7787

Note: Specifications are subject to change without notice

ORDERING INFORMATION

MTS-916-1	Target Simulator, TV/CCD Only
MTS-916-2	Target Simulator, IR Only
MTS-916-3	Target Simulator, TV/CCD & IR NSN: 4935-01-563-7787
MTS-916-4	Target Simulator, Laser
MTS-916-6	Target Simulator, Laser (AGM-65/AGM-114)
MTS-916-7	Target Simulator, Laser (MAU-169)

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