

COMMON SCORING SUPPORT EQUIPMENT (CSSE) AN/TSM-196B



Product description

The AN/TSM-196B Common Scoring Support Equipment (CSSE) is a general purpose scoring system support equipment suite for determining the operational status of scoring equipment on the bench or during preflight checks. The CSSE consists of five (5) elements: Radar Input Stimulator (RIS), Receiver Processor Unit (RPU), Radar Antenna Coupler (RAC), Radar Antenna Absorber (RAA), and a Telemetry Antenna Coupler (TAC) along with miscellaneous cabling and mounting hardware for the antenna couplers.

The RIS simulates passing projectiles for the scoring system and can be used either in a free space radiation mode or in a cabled configuration. The RPU contains an integrated telemetry receiver, bit synchronizer, and PCM decommutator capable of use with scoring systems utilizing PCM encoded telemetry data streams in the L and S band frequency spectrums. The RAC provides controlled coupling between the RIS and the scoring system radar antenna when precise measurement of system performance is required. The TAC provides controlled coupling between the RPU and the scoring system telemetry antenna when precise measurement of system performance is required. The system operates by providing a known Doppler return signal to the scoring system, detecting and processing the output of the system via its telemetry link then comparing the results to anticipated performance levels to determine the health of the scoring system.

The CSSE can be configured for use as either a cabled or free space "O" level flight line test set. The

cabled configuration prevents local interference from affecting the system measurements thereby permitting scoring system checkout to be done under adverse electromagnetic environmental conditions either on the flight line or inside hangers. The cabled configuration requires use of the RAC and TAC which are designed to mount over a variety of target body antennas. The RAC and TAC eliminate the effects of multipath and other forms of external interference. Use of the RAC and TAC permit quantitative measurements to be made of the scoring system radar sensitivity and telemetry transmitter output power.

Key features and benefits

- Single person "O" level operation
- Supports scalar and vector scoring systems
- AC or battery operated
- Includes radar stimulator, telemetry receiver, bit synchronizer, PCM decommutator, and data processor
- Menu driven operation with LCD display and keypad
- Quantitative end-to-end scoring system performance assessment when using antenna couplers
- Qualitative "GO/NO GO" scoring system performance assessment when using free space configuration

Applications

- Determines the operational status of scoring equipment on the bench or during preflight checks



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Specifications	
Compatibility	
Scoring systems	AN/DSQ-50A, VSS, SVDOPS-A
Telemetry bands	L and S band
PCM data rates	750 Kbps to 8.5 Mbps
Encryption	Clock and data interface to external decryption unit
Electrical	
Power source	
RPU	110 VAC 60 Hz or Up to 8 hrs with 6.5 V rechargeable DC battery (10 % duty cycle)
RIS	Up to 8 hrs with 9 V rechargeable DC battery (10% duty cycle)
Power consumption	
RPU	55 Watts max
RIS	2 Watts max
Environmental Temperature	
Non-Operational	-10 C to +71 C
Operational	0 C to +40 C
Shock	9 g (11 ms half sine) each axis
Bench handling	4" or 45 degree drop each edge
Loose cargo vibration	1.4G RMS up to 500Hz Vertical 0.2G RMS up to 500Hz Transverse 0.7G RMS up to 500Hz Longitudinal
EMI/EMC	
MIL-STD-461E	CE102, RE102, and RS103
Dimensions and Weight	
RPU	12.0" x 12.0" x 11.0" (W x L x H) < 25 lbs
RIS	3.0" x 7.0" x 1.8" (W x L x H) < 3 lbs (without antenna)
RAC	6.0" x 6.0" x 6.5" (W x L x H) < 4 lbs
TAC	6.0" x 6.0" x 6.5" (W x L x H) < 4 lbs

