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E-SYSTEMS
Montek Division

Report No. 131500-602
14 January 1977

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INTERIM TEST REPORT
ON THE IMPACT TEST OF THE ANCILLARY GROUP
FOR THE
AN/TRN-41 TACAN NAVIGATIONAL SET

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1. REPORT NUMBER (18) ESD-TR-77-301 (19)	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
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17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) AN/TRN-41 TACAN Navigational Set		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This test report is an interim report defining the failures and the proposed corrective action resulting from the impact test on the ancillary group for the AN/TRN-41 TACAN Navigational Set.		

408354 (3)

INTERIM TEST REPORT ON THE IMPACT TEST OF THE ANCILLARY GROUP FOR THE AN/TRN-41 TACAN NAVIGATIONAL SET

This test report is an interim report defining the failures and the proposed corrective action resulting from the impact test on the ancillary group for the AN/TRN-41 TACAN Navigational Set.

1. **Test Identification.** Impact drop test of 16 feet, as defined in Appendix V-B (Impact test procedure) of the Equipment Test Plan for Navigational Set, TACAN, AN/TRN-41.
2. **Functional Purpose of Test.** AN/TRN-41 system qualification.
3. **Test Objectives.** To demonstrate that the system meets the requirements of Specification No. 404L-701-5017A, Part 1, paragraph 3.2.5.2.2 (20 August 1976).
4. **Description of Test Article.** Airdroppable configuration of the ancillary group weighs 56 pounds and consists of the following:

Antenna Support Assembly
BB-451 Battery and Adapter
Interconnecting Cables and ground stake
Manportable Packing
Airdroppable Packing

5. **Summary of Test Results.** The only significant damage sustained as a result of this test was bending of the battery adapter (connector bracket). The damaged adapter was still functional.
6. **Description of the Test Setup.** The airdroppable package containing the ancillary group was dropped 16 feet on a two-inch thick plywood, backed by concrete floor. The unit was dropped 10 times and a quick release hook and drop tester mechanism was used in accomplishing the drops.
7. **Photographs.** See Attachment 1.
8. **Test Equipment.** None.
9. **Test Data.** See Attachment 2.
10. **Test Condition.** Not Applicable.

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11. **Discussion of Test Results.** The protection offered by the airdroppable package appears to be adequate for this unit; however, this test will have to be repeated because of a redesign effort on the manportable packaging for this unit. The changes that will be made to the manportable packing will provide better protection for the battery adapter.

12. **Certification.** The data sheets shown in Attachment 2 have been signed by a Montek Quality Assurance representative and a DCAS representative, certifying that the test results are authentic, accurate, current and in accordance with the related test plan.

ATTACHMENT 1
TEST SITE PHOTOGRAPH



16-FOOT DROP TEST - ANCILLARY GROUP

ATTACHMENT 2
TEST DATA

June 30, 1976

DATA SHEET

IMPACT

DATE 12/16/76

ITEM	DROPS										INSPECTION
	1	2	3	4	5	6	7	8	9	10	
RECEIVER-TRANSMITTER; AIR DROP CONFIGURATION											
ANTENNA; AIR DROP CONFIGURATION											
ANTENNA SUPPORT ASSY CABLES AND BATTERY; AIR DROP CONFIGURATION	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	see attached sheet

TECHNICIAN Daniel SmithDATE 12/16/76ENGINEER Blake De VeylaDATE 12/16/76QA REPRESENTATIVE Annis F. BaileyDATE 12-16-76DCASD Jim N. JonesDATE 12-16-76

This test will have to be repeated because of
pending design changes to the man-portable package.

BEST AVAILABLE COPY

DISCREPANCY AND REWORK RECORD ACTIVITIES
Part of Data Sheet for IMPACT TEST ON ANTENNA SUPPORT
BATTERY AN/17N-41
R.M.R. NO.

AN/TKN-41

[illegible]

R.M.R. NO.

BAG FOR TRIP

[illegible]

R.M.R. NO.

HANDLE P/N 131570-100 S/N 001

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	1	AFTER 10 EACH, 16' THE HOLDING ROD OF THE HANDLE HAS SHIFTED TOWARDS, J1(6) CONNECTOR APPROX. 1/4"						
	2	THE (4) MOUNTING SCREWS THE J1(6) COVER ARE ALL BENT TOWARDS THE HANDLE ROD						
	3	J1(6) COVER IS BENT IN ALL AROUND CONNECTOR APPROX. 1/4"						
	4	J1(6) COVER IS FOLDED TOWARDS HANDLE ROD BY 1/4"						
	5	J1(6) THE COVER GASKET IS CUT SEVERAL PLACES						

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