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E-SYSTEMS
Montek Division

Report No. 131500-603
14 January 1977

INTERIM TEST REPORT ON THE SHOCK-DROP TEST OF THE AN/TRN-41 TACAN NAVIGATIONAL SET

Prepared for:
Department of the Air Force
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Contract No. F19628-75-C-0200
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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 describing the failure and the proposed corrective action resulting from the Shock-Drop test on the AN/TRN-41 TACAN Navigational Set.

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SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

INTERIM TEST REPORT
ON THE SHOCK-DROP TEST OF THE
AN/TRN-41 TACAN NAVIGATIONAL SET

This test report is an interim report describing the failure and the proposed corrective action resulting from the Shock-Drop test on the AN/TRN-41 TACAN Navigational Set. After the corrective action has been taken, these tests will be repeated.

1. Test Identification. Transit drop test of 48 inches, as defined in Appendix V-A (shock 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 will meet the requirements of Specification No. 404L-701-5017A, Part I, paragraph 3.2.5.2.1 (20 August 1976).

4. Description of Test Article. The AN/TRN-41 system is comprised of three manportable packages for this test, as follows:

Receiver-Transmitter, Radio, RT-1202/T -- 34.5 pounds
Manportable Configuration of Antenna, AS-3132/T -- 39.5 pounds (consists of antenna RF cable and manportable packing).
Manportable Configuration of Ancillary Group -- 37.5 pounds, consisting of the following:
- Antenna Support Assembly, AB-1237/T
- BB-451 Battery and Adpater
- Interconnecting cables and ground stake
- Manportable packing

Each of the above three packages were dropped 48 inches as defined in the shock test procedure.

5. Summary of Test Results.

a. Pre-shock Operational Test. The system passed successfully the pre-shock operational tests as defined in Appendix VII of the Equipment Test Plan for Navigational Set, TACAN, AN/TRN-41. The data sheets from these tests are included as part of this report; however, the post-shock test was not accomplished because of the damage incurred to the equipment during the test.

b. Drop Test - Receiver-Transmitter. This unit incurred major damage as the result of the drop test. An itemized list of damages noted by Quality Assurance is included as part of the data sheets. A study of the damaged RT indicates that there are three areas in which corrective action will be required in order for this unit to pass this test. These are as follows:

(1) Rubber bumper blocks. These blocks failed to protect the RT on the rear heat sink side. The blocks were not large enough, which allowed the heat sink to hit the floor, causing a severe shock to the RT.

(2) Card Rack. The card rack securing the seven circuit card assemblies deformed badly. All of the connectors used in securing the circuit cards broke; the card guides became twisted and deformed, and all circuit cards became loose.

(3) Synthesizer Chassis. The mounting flanges on this assembly broke off; therefore, this assembly became loose and caused major secondary damage.

c. Drop Test - Antenna (Manportable Configuration). This unit incurred major damage as a result of the drop test. An itemized list of the damage noted by Quality Assurance is included as part of the data sheets. The major problem areas are as follows:

(1) The upper radome cracked.

(2) The lower radome cracked.

(3) Damage was done to the 15 Hz and 135 Hz rotating drums, caused from making contact with the radome.

(4) Pedestal base broke.

After the test, the antenna was energized and the speed control and trigger generating circuitry were checked and found to be all right.

d. Drop Test - Ancillary Group (Manportable Configuration). An itemized list of the damage sustained by this item is included as part of the data sheets. The major problem areas are as follows:

(1) Tripod base casting was deformed slightly, making the bubble level inaccurate.

(2) The battery adapter handle was bent; however, it was still functional.

e. Bench Handling Test. Because of the damage sustained by the units in the drop test and the redesign that will be required as a result of this damage, the bench handling test was not performed at this time, but will be performed after the redesign has been completed.

6. Description of Test Setup. Each of the three manportable units (RT, Antenna and Ancillary Group) was dropped 48 inches onto a two-inch thick plywood backed by concrete floor. The drop was accomplished using a quick-release hook and drop tester mechanism. Each drop was in line through the unit's center of gravity, and on the surfaces described in the test procedures.

7. Test Setup Diagrams/Photographs. See Attachment 1.

8. Test Equipment. None.

9. Test Data. See Attachment 2.

10. Test Condition. Not Applicable.

11. Discussion of Test Results.

a. Receiver-Transmitter (RT) Unit. The RT unit incurred major damage when it was dropped on the rear surface that mounts the heat exchanger. The rubber bumpers permitted the heat exchanger to strike the plywood floor with enough force to have an imprint of the exchanger on the floor. This severe shock deformed the rear of the case, broke the mounting of the synthesizer allowing it to float in the unit, and deformed the card cage so that the printed circuit cards became loose.

The rubber bumper blocks originally provided 1/8 inch clearance to the heat exchanger. This clearance has been increased by 1/2 inch and the area of these bumpers increased from 3.5 square inches to 9.0 square inches. The increase in depth and surface areas will prevent the heat sink from bottoming during drops.

The card rack has been redesigned to provide more rigidity so that the rack does not spring out of shape, allowing the cards to become loose and breaking the connectors. To increase the rigidity of the case, the aluminum composition and temper were changed, the rear connector plate was redesigned to one piece fastened to the side and top of the case, and the new front cover adds rigidity to the case by fastening to the sides at four places, in addition to supporting the printed circuit cards.

The synthesizer casting was redesigned to provide more rigidity and support at the top of the unit. The thickness of the mounting flange was increased to 1/16 inch and two bosses were added at the top of the casting to fasten to the braces. Braces were installed at the top of the unit from the front to the rear to provide support for the synthesizer and receiver.

To reduce the weight of the RT unit, lightening holes were added to the gussets between the front and rear panels and the chassis, to the chassis and to some of the brackets.

b. Antenna Unit. The antenna unit incurred damage with two types of drops. First, an angular drop on the upper radome such that the radome was deformed, damaging the 15 Hz and 135 Hz rotating drums. Second, the angular drop on the lower portion cracked the pedestal and lower radome.

The antenna weighed 33 pounds and the packing 6.5 pounds for a total of 39.5 pounds. The configuration of the antenna and pedestal placed the center of gravity away from the back pack. The shape of the pack and center of gravity were items that should be redesigned.

The antenna pedestal was redesigned by removing the compass and reducing its height. A nylon ring was added to the top of the radome to mount the compass during alignment. At all other times, the compass will be with the ancillary equipment. The design of the compass will change from the north seeking type to a 360° type - it will be the same compass that is used in the AN/TRN-26 system. The reduction in height of the pedestal allows the packing to be arranged so that the center of gravity is closer to the man's back.

The smaller pedestal is packed so that the drop shock is not concentrated on the flange of the pedestal, but distributed over the lower section of the antenna.

The upper radome was strengthened by adding two plies of fiberglass across the sides and top of the radome. This strengthening now prevents the radome from touching the 15 Hz and 135 Hz rotating drums.

The packing design effectively increases the density of the pack around the antenna. This was accomplished by sandwiching 1/2-inch polyethylene with polyurethane. Around the base, the polyethylene was 1-inch thick. In addition, a 1/2-inch polyethylene sheet was placed completely around the circumference of the antenna replacing the existing polyurethane. The interior dimensions remained the same and the same canvas pack was used.

An unofficial drop test on the antenna unit was made with the reduced pedestal, reinforced radome and stiffer packing material. The antenna unit passed this test. In an effort to reduce weight, an unreinforced radome was substituted in the antenna unit and dropped again. This substitution of radomes reduced the weight by one pound. The radome was fractured in two places, and the 135 Hz and 15 Hz drums were hit on the drop using the unreinforced radome.

Based on these tests, the final configuration of the antenna unit will include the one pound heavier reinforced radome. We are investigating other methods of packing, including air packing to reduce the weight.

c. Ancillary Group. The tripod and battery adapter handle were damaged during the drop test of the ancillary group.

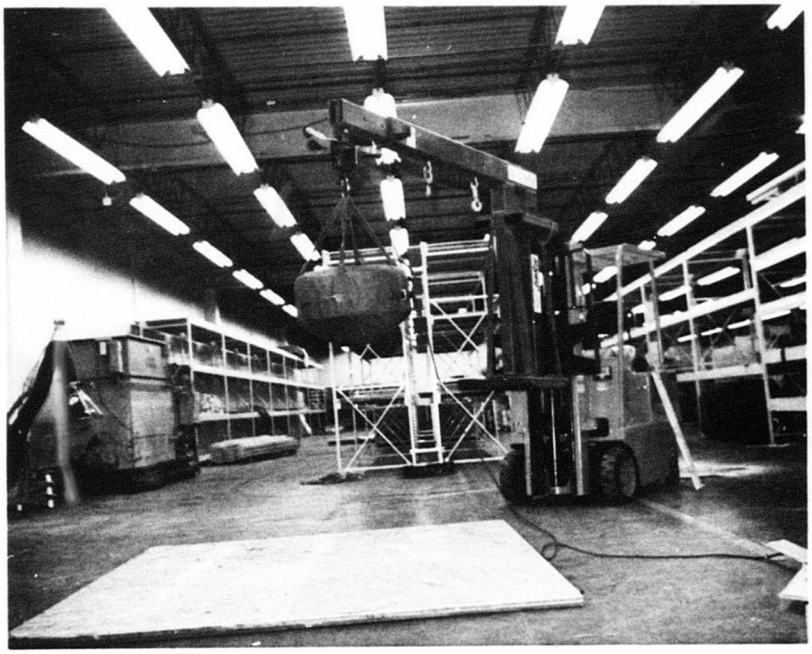
The legs of the tripod were fastened to the tripod base during this test. Each of the legs pierced the foam packing and damaged the canvas. This shock was transmitted by the leg to the base casting, and in one case, deformed the base at the point where the legs mount. The new packaging design will pack the three legs separate from the base. The antenna pedestal base was divided in two parts; one mounted and packed with the antenna unit providing protection to the connectors, and the second part packed in the ancillary group. This part of the antenna pedestal will be nested in the tripod base.

The tripod base casting will be modified so that the mounts for each leg will be shortened to the lowest height. This reduction will result in a slight weight savings.

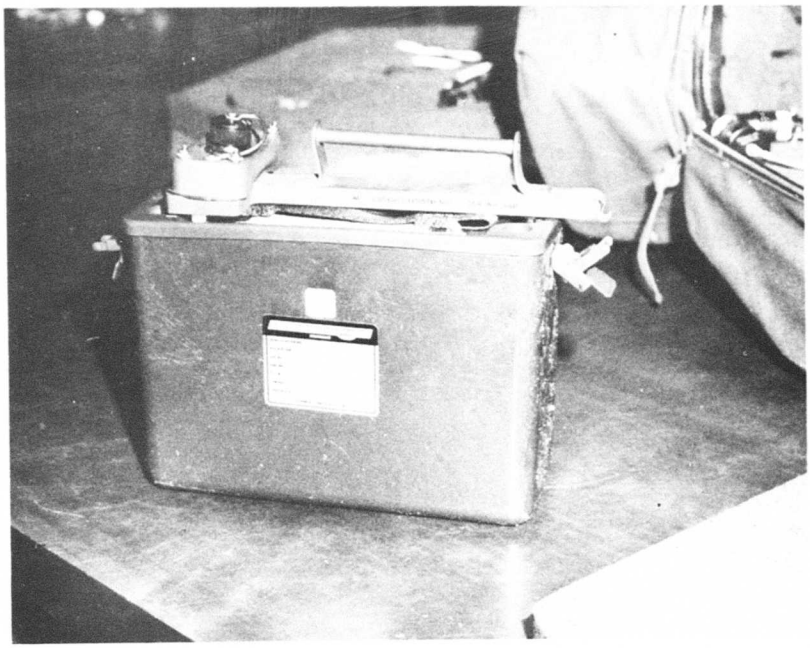
The legs will be mounted to the antenna base using quick disconnect ball pins.

The density of the packing surrounding the battery and battery adapter will be increased. In addition, the battery adapter will nest in the packing.

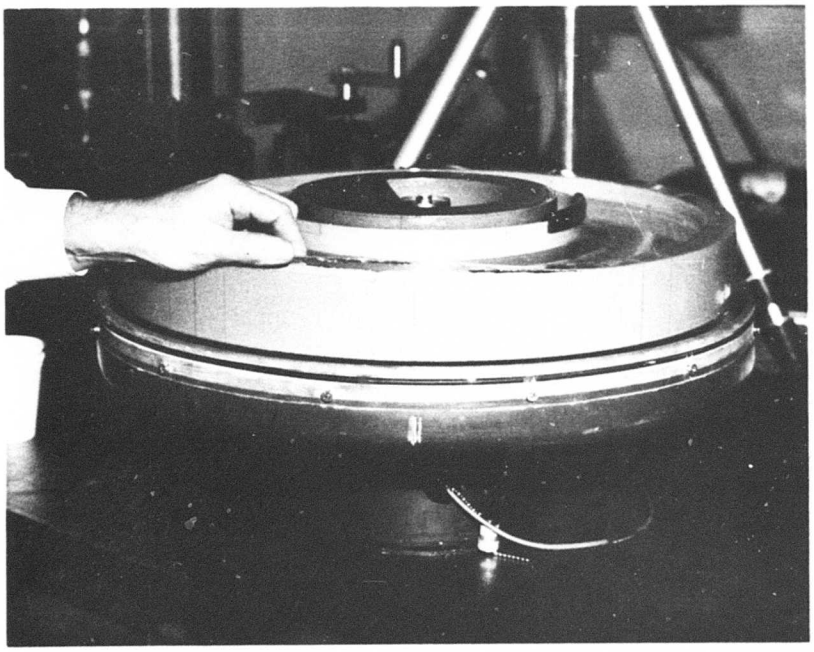
ATTACHMENT 1
DROP TEST PHOTOGRAPHS



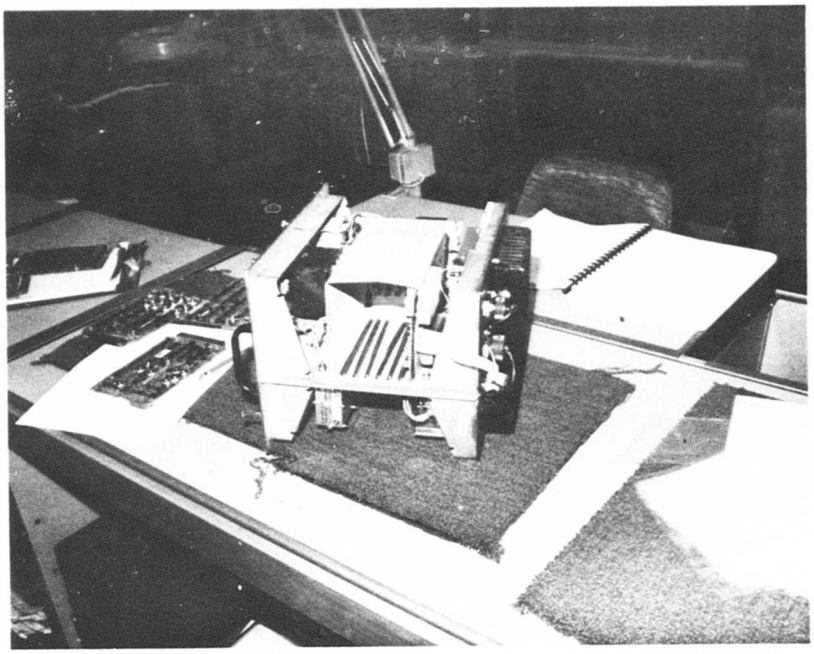
ANTENNA 48" DROP TEST

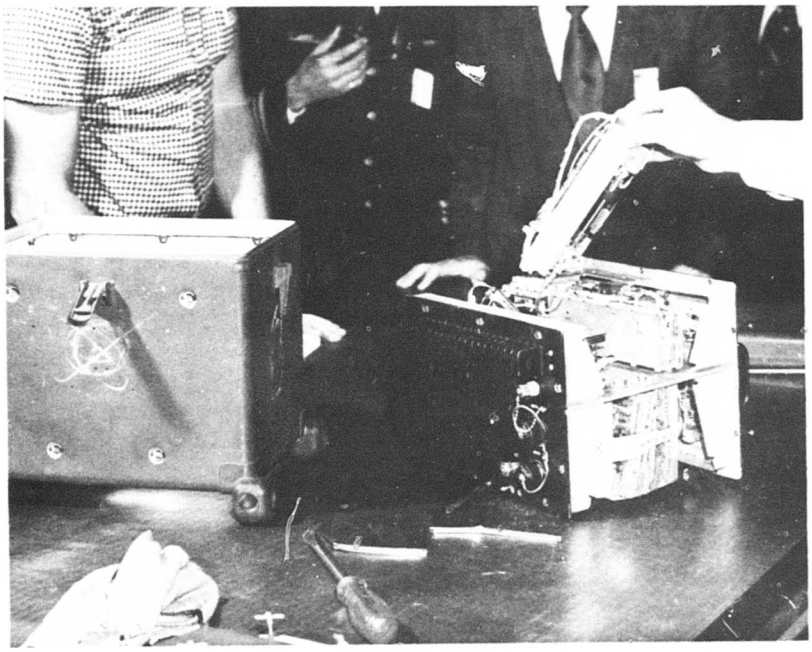


BATTERY AND ADAPTER AFTER 48" DROP TEST

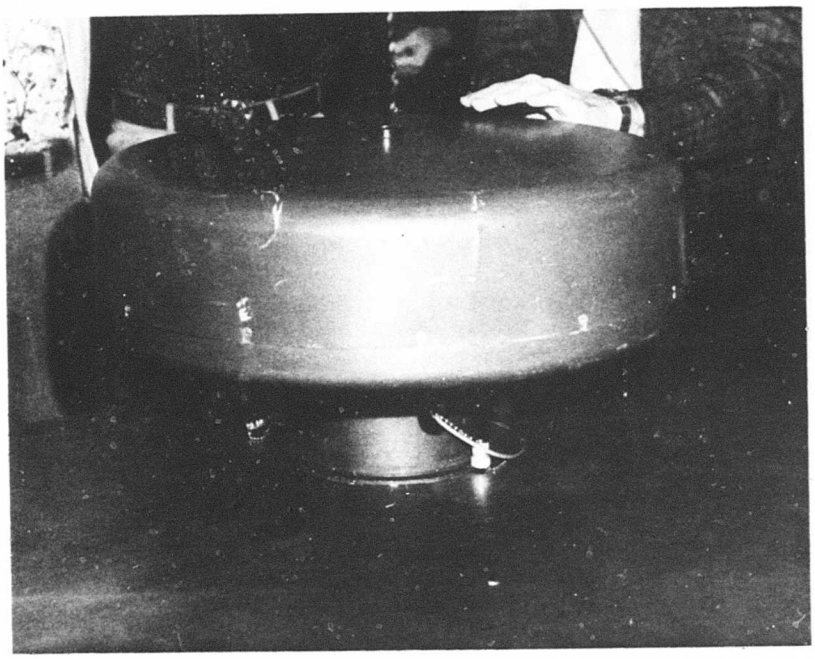


INSIDE ANTENNA AFTER 48" DROP TEST





RT AFTER 48" DROP TEST



ANTENNA - AFTER 48" DROP TEST

ATTACHMENT 2
TEST DATA

June 30, 1976

DATA SHEET

OPERATIONAL TESTS

AN/TRN-41

Test Pre Shock Test (AFT) Date 12/14/76

System Serial 001 Time 9:00 Am

Tech [signature]

Para. No.	Description	Pre Test	Test	Post Test	Requirements	Units
6.1	Calibrated RF insertion loss					
	P_L = 31.5 dB	N/A	N/A	N/A	N/A	N/A
	Used in determining RF peak power.					
6.2	System turn on normal operation	✓			Check if OK	N/A
6.3.1	Antenna radiated signal	✓				
	15 Hz				Check if OK	N/A
	135 Hz	✓			Check if OK	N/A
6.3.2	Antenna Speed	66.666			66.667 ±.133	ms
6.4.1.1	Correct identity code	✓			Check if OK	N/A
6.4.1.2	Identity period	✓			37.5 ± 3,75	Seconds
6.4.2	Peak power					
	(1) Reading of peak power meter Pm =	95			N/A	Watts
	(2) Convert to dBm - 10 log Pm x 10^3 = Pm dBm	49.8			N/A	dBm
	Total power output in dBm $Pm_{dBm} + P_L$ = *Insertion loss see 6.1 above.	51.2			50 dBm	dB
6.4.3.3	Pulse count	7210			7200 ± 180	Counts
6.4.4.2	Pulse shape					
	Width (50%)	3.52 µs			3.5 ± 0.5	µs
	Rise time (10-90%)	2.07 µs			2 ± 0.25	µs
	Fall time (90-10%)	2.50 µs			2.5 ± 0.5	µs
6.4.4.4	Pulse spacing	12.07 µs			12,0 ± 0.1	µs
6.4.5.2	Delay - 60 ±10 µs 15 Hz trig to first burst pulse.	62 µs ✓			Check if OK	

Additional Testing was not done because System Failed Prev Test.

DATA SHEET

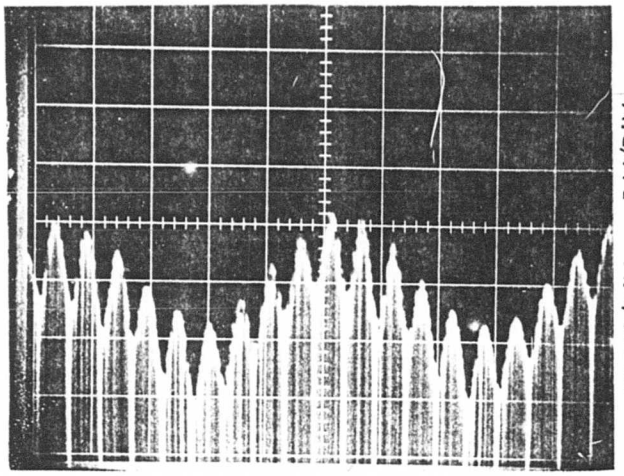
OPERATIONAL TESTS

AN/TRN-41 (Continued)

Para. No.	Description	Pre Test	Test	Post Test	Requirements	Units
6.4.5.3	Correct north Burst - 12 pulse pairs spaced 30 ± 0.1 μs	✓			Check if OK	
6.4.5.5	Delay 60 ± 10 μs - 135 Hz trig to first burst pulse	✓			Check if OK	
6.4.5.6	Correct Aux burst - 6 pulse pairs spaced 24 ± 0.1 μs	✓			Check if OK	
6.4.6.5	RT replies to 3300 interrogations	2650 ✓			≥2310 (Counts/Second	
6.4.6.7	Demand only mode - times to switch from ON to STBY within 70 seconds	67 ✓			Check if OK	
6.4.6.8	STBY mode	✓			Check if OK	
6.4.6.9	Demand Only mode - time to switch from STBY to ON ≤15 sec	145 ✓			Check if OK	
6.4.6.10	ON AIR mode	✓			Check if OK	
6.4.7.1	DME ONLY mode	✓			Check if OK	
6.4.7.2	Switch from DME to TACAN	✓			Check if OK	
6.4.8.1	Antenna Alarm - Within four seconds	✓			Check if OK	
6.4.8.2	Alarm Reset	✓			Check if OK	
6.4.8.3	RT Alarm - Within five seconds	✓			Check if OK	
6.4.8.4	Alarm Reset	✓			Check if OK	

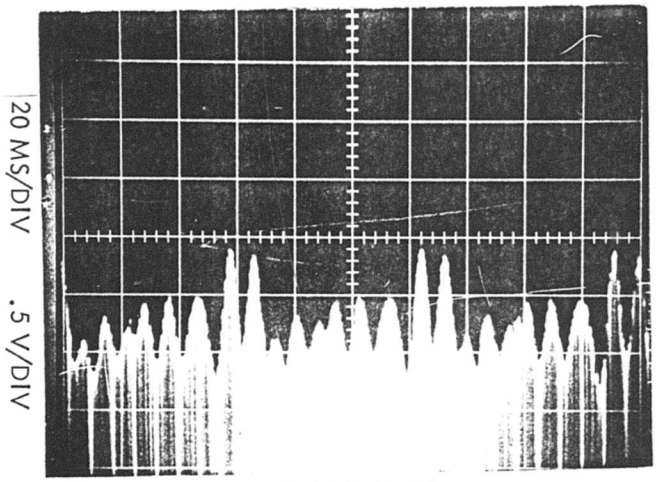
System Failed Shock Test so These Tests will Have to Be Re Run.

PRE SHOCK TEST - RADIATED DET SIGNAL 12/15/76



ANT S/N 001 WITH RT S/N 002

POST SHOCK TEST - RADIATED DET SIGNAL 12/16/76



ANT S/N 001

June 30, 1976

AN/TRN-41 DATA SHEET
FOR SHOCK

DATE 2/16/76

TIME ____________

ITEM	SERIAL NO.	CHECK TO SHOW COMPLETION: DROP TEST	CHECK TO SHOW COMPLETION: BENCH HANDLING	INSPECTION AFTER TEST REMARKS
RECEIVER-TRANSMITTER	002	✓	These Test Were Done Because of The Failures In The Drop Test -	See attached sheet -
ANTENNA IN MANPORTABLE PACKAGE	001	✓		See attached sheet
ANTENNA SUPPORT ASSEMBLY CABLES AND BATTERY IN MANPORTABLE PACKAGE	001	✓		See attached sheet -
DC POWER FILTER	Not Tested At This Time	—	—	—

The drop tests failed and all will have to be repeated.

TECHNICIAN [signature] DATE 12/16/76

ENGINEER [signature] DATE 12/16/76

QA REPRESENTATIVE [signature] DATE 12-16-76

DCASD [signature] DATE [illegible]

RT POST DROP TEST INSPECTION SUMMARY -

Note - The RT was not opened and inspected after each drop. Instead the inspection was not made until after all the 4 foot drops had been completed; therefore, much of the damage in the RT was caused by drops being accomplished with loose parts inside (secondary failures). The primary failures are described in this report.

1- SYNTHESIZER CHASSIS - The mounting flanges on this assembly broke off. Thus this assembly became loose inside the RT causing major secondary damage.

2- CARD RACK - The card rack securing the 7 circuit card assemblies deformed badly. All of the connectors used in securing the circuit cards broke. The circuit cards came loose and as a result certain components on CCA were damaged. Card guides are twisted and deformed.

3- Rubber bumper blocks on the corners of the RT failed to protect the RT on the rear heat sink side - blocks are not large enough and as a result the rear heat sink accrually hit the floor which caused a severe shock to the RT. It is believed that this resulted in most of the damage in the unit.

12/16/76

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

E.T. S/N 002 AFTER 4' DROP TEST.

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	1	P/N 131120-100 S/N 003 AS MOUNTING HARDWARE NUT NEAREST W13 (3) TURNS LOOSE						
	2	AS W10 & W11 HAVE HAD THE TOPS OF THE I.C. BROKEN OFF						
	3	J1 (41) TOP LIP OF CONNECTOR HAS BEEN DAMAGED SEVERAL PLACES						
	4.	J1(41) TOP CENTER OF LIP BENT IN.						
	5	J1(41) PINS 11-12 & 24 ARE BENT						
	6	THE '+24V' TERMINAL IS BENT.						
	7.	AR1 E2 BENT						
	8.	AR1 TOP COVER IS DENTED BENT, SCRATCHED & COVER IS NOT FLUSH TO CHASSIS.						

*1D 121

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	9	U2 TOP PLACE SEVERAL SCRATCHES THRU OUT						
	10	U2 TOP TAG LOOSE						
	11	U1 TOP TAG LOOSE						
	12	U1 TOP COVER APPEARS TO HAVE SHIFTED APPROX. 030"						
	13	W1 P2 (38) SOLDER CRACKED						
	14	W1 P1 (39) CABLE SMASHED ADJACENT TO END OF CONNECTOR						
	15	W2 P2 (36) SOLDER CRACKED						
	16	W4 P1 (32) SOLDER CRACKED						
	17	AS CORNER BY W13 APPEARS TO HAVE BEEN HIT & DE-LAMINATED						
	18	CHASSIS BOTHS HAVE THE MOUNTING FLANGES BROKEN OFF						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEP
	19	THE CHASSIS BELOW CP1 HAS (2) HALF MOON DENTS 1/8" X 5/16" & A CRACK 3/8" LOCATED 3/8" FROM DENTS						
	20	THE R.F. GASKET HAS LOST ITS SEALING EFFECT (5) PLACES.						
	21	U1 LOOSE TO PLATE						
	22	CP1 LOOSE TO PLATE						
	23	THE THREADED STAND-OFF IN THE CENTER OF THE PLATED THREADED OUT OF THE A4 BOARD INSTEAD OF THE MOUNTING HARDWARE COMING OUT						
	24	L2 BINDING SCREW BROKEN OFF						
	25	W11 P2 (56) COAX CABLE SPLIT & BENT 1/4" FROM REAR OF CONNECTOR						
	36	W11 P1 (51) CONNECTOR PULLED APART.						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	27	PIN DIODE ASSY S/N 001 J2 (56) (1) LOCKWASHER MISSING, P/N 131180-100						
	28	DIODE ASSY J1 (55) HAS (1) LOCKWASHER MISSING.						
	29	COVER HAS SEVERAL DEEP SCRATCHES LOCATED ABOVE FL1						
	30	THE BRACKET FOR DIODE ASSY, THE (2) MOUNTING SCREWS TO CHASSIS WERE (2) THREADS LOOSE & NOW THE INBOARD SCREW IS STRIPPED						
	31	THE (2) SCREWS FROM BRACKET TO DIODE ASSY EACH WAS LOOSE BY 1/2 TURN.						
	32	P/N 131140-100 S/N 003 RECEIVER ASSY J1 (10) & J2 (11) EACH HAVE (2) EXTRA FLAT WASHERS USED FOR MOUNTING HARDWARE						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	33	C1 & C3 TERMINALS ARE BENT 45°						
	34	WHEN THE RECEIVER WAS INSTALLED IN THE R.T. IT HAS (3) PAN HEAD SCREWS USED WITH NO FLAT WASHERS &/OR LOCK-WASHERS.						
	35	WHEN RECEIVER WAS REMOVED TOP LEFT SCREW MISSING TOP RIGHT 4 TURNS LOOSE BOTTOM LEFT 7 TURNS LOOSE BOTTOM RIGHT 3/4 TURN LOOSE						
	36	P/N 131160-100 S/N 005 POWER AMPLIFIER C16 & C17 NEGATIVE END LEAD BROKE OFF AT BODY OF CAPACITOR						
	37	NOTE C3 IS SAME TYPE CAPACITOR AS C16 & C17 ABOVE						
	38	THE 149137-001 BOARD IS CRACKED IN TWO PLACES.						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	39	POWER AMPL. J1(16) & J2(15) EACH HAVE (2) EXTRA FLAT WASHERS.						
	40	COVER HAS BEEN DAMAGED BELOW E10 & P.C. BOARD WAS STRUCK BY E10						
	41	AT4 LOOSE.						
	42	FL2 LOOSE						
	43	FL1 MOUNTING HARDWARE BY J1(1) LOOSE (2) TURNS						
	44	FL1 BOTH NYLON CLAMPS BROKEN						
	45	RED WIRE TO P2(17) BJ#8 HAS DAMAGED INSULATION 6" BEHIND CONNECTOR						
	46	U2 LOOSE						
	47	WIRE #123 TO TB1-3 INSULATION IS DAMAGED TO THE INNER [illegible]						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	48	A10 P/N 131170-100 S/N 001 APPEARS TO HAVE HIT CHASSIS AT C1 NEGATIVE END SOLDER JOINT ON THE DIP SIDE OF BOARD						
	49	GRAY WIRE TO TB1-1 HAS DAMAGED INSULATION						
	50	BLACK WIRE TO TB1-7 DAMAGED INSULATION						
	51	AR3 HAS (1) MOUNTING SCREW MISSING						
	52	THE (2) MOUNTING SCREWS FOR AR3 BRACKET ARE LOOSE (1) BY J3 (27) 2¼ TURNS.						
	53	SS BIN #3 BROKEN WIRE STRANDS.						
	54	YELLOW WIRE TO TB1-4 DAMAGED INSULATION						
	55	CARD CAGE BOTH SIDES BENT INWARD TOTAL LENGTH OF CAGE APPROX .15A						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	56	CARD CAGE TOP BENT UPWARD APPROX .150						
	57	CARD CAGE REAR FOLDS TOP & BOTTOM BENT OUT APPROX. 20°.						
	58	TOP CARD GUIDES FOR A1, A3, A4 & A6 BOTH ENDS PULLED OUT.						
	59	TOP CARD @CAGE [redacted]-A2-[redacted] [redacted] A5 & [redacted] FRONT PULLED OUT						
	60	CARD CAGE BOTTOM A2- A3 & A4 GUIDES PULLED OUT						
	61	ALL CARD GUIDES REMAINING ARE TWISTED & DE[redacted]ORMED						
	62	XA1-2-5-6 & 7 CONNECTORS BROKEN AT TOP OF CARD CAGE						
	63	XA3 & XA4 CONNECTORS BROKEN AT BOTH ENDS.						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	64	P.C. BOARD RETAINER STRAP BADLY DEFORMED						
	65	XA1 THRU XA7 SEVERAL BROKEN WIRES THRU OUT APPROX. 15						
	66	XA4 PIN #33 PARTIALLY PULLED OUT OF CONNECTOR						
	67	W13 COAX CABLE BROKEN BEHIND EACH CONNECTOR						
	68	A1 S/N 006 TOP RIGHT CORNER DAMAGED & DE-LAMINATED						
	69	A1 CONNECTOR METAL STRIP BURRED THRU OUT						
	70	A1 GUIDE PIN BENT						
	71	A2 S/N 004 TOP RIGHT CORNER DAMAGED & DE-LAMINATED						
	72	A2 CONNECTOR METAL						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	73	A2 R56 BROKEN LEAD						
	74	A2 GUIDE PIN BROKEN						
	75	A2 PINS 49 & 50 ARE BURRED AT END						
	76	A3 S/N 002 TOP RIGHT CORNER DAMAGED & DE-LAMINATED						
	77	A3 EJECTOR NOT SEATED PROPERLY						
	78	A3 PIN #15 BROKEN						
	79	A3 PIN #40 BADLY BENT						
	80	A4 S/N 002 U43 U12 HAVE CHIPPED CONFORMX COATING						
	81	A4 PIN #16 BROKEN						
	82	A4 CONNECTOR METAL STRIP BURRED THRU OUT						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	83	A5 S/N 001 METAL STRIP BURRED THRU OUT						
	84	A7 S/N 001 U8 CONFORMAL COATING CHIPPED OFF						
	85	A7 R43 BROKEN AT LEAD SEAL						
	86	A1 U11 TOP BROKEN OFF						
	87	REAR OF CASE ALL AROUND BENT INWARD						

Part of Data used for which test [illegible] PAGE 1 OF 2

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DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. ________

ANTENNA S/N 001

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	1	THE 135 HZ ELEMENT ASSY S/N 001 HAS THE MATERIAL BROKEN AT TOP CROWN FROM THE 140° MARK TO 200° MARK ALSO FROM 260° MARK TO 350° MARK. NOTE THE SEPERATION EXTENDS THRU THE MATERIAL !						
	2.	(3) SETS OF (3) WIRES EACH ARE BROKEN REF ABOVE.						
	3.	(2) WIRES LOCATED AT 290° & 300° THERE IS A CRACK 1" X 3/8" FROM THE CROWN OF THE FOAM						
	4.	AT 310° THERE IS A 1" CRACK FROM CROWN						
	5	UPPER RADOME (4) PLACES HAVE CRACKS APPROX 4" & IS DE-LAMINATED IN THE ADAJACENT AREAS						
	6.	LOWER RADOME APPROX 2/3 OF THE OUTER WALL HAS CRACKED & DE-LAMINATED AT EDGE.						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

ANTENNA S/N001

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
	7	LOWER RADOME HAS (6) AREAS CRACKED MATERIAL, 1- A 1" CRACK THRU REFERENCE MARK 2- 4 NUTS COUNTER CLOCK WISE FROM REF MARK A 3/4" IS PRESENT AT BOTTOM OF RELIEF CUT THE 1" MORE CC/W IS ANOTHER 3/4" CRACK IN RELIEF CUT 3- 2 MORE NUTS C-C/W THERE IS A 1 1/2" CRACK LOCATED 1/2" BELOW RELIEF CUT 4 THEN 1 1/2 NUTS AWAY STILL C/CW IS A 1/4 CRACK AT BOTTOM OF RELIEF CUT 5 & 3 NUTS FURTHER, STILL C-C/W IS A 1/4 CRACK ON THE RELIEF CUT						
	8	THE PEDESTAL BASE CRACKED COMPLETELY AROUND & LARGE PIECES FELL OFF BASE						

Part of the Test or Inclinary Group

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

TRIPOD SER # 001

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
		DISCREPANCIES AFTER 4' DROP TEST						
		SUPPORT ASSEMBLY ANTENNA P/N 1312.00						
	1	TRIPOD BASE IS TWISTED IN AREA						
		WHERE LEG ASSEMBLY BOLTS TO						
		TRIPOD BASE, TWO PLCS. AXIS OF						
		LEG ASSEMBLIES HAS SHIFTED .250						
		BETWEEN MTG BOLTS.						
	2.	WITH TRIPOD LEVELED USING BUBBLE						
		LEVEL IN TRIPOD BASE, MOUNTING						
		SURFACE WHICH INTERFACES WITH						
		THE PEDESTAL SHOWS A 5° INCLINATION.						
	3.	THE MOUNTING SURFACE IN THE TRIPOD						
		BASE HAS BEEN BENT SLIGHTLY,						
		CAUSING THE PEDESTAL TO "ROCK"						
		WHEN INSTALLED						
	4.	THE LEG ASSEMBLIES HAVE INDENTATIONS						
		WHERE LEGS FOLDED OVER EACH OTHER						

DISCREPANCY AND REWORK RECORD ACTIVITIES

Part of Data Sheet for Shock Test
12/16/76 BATTERY

R.M.R. NO. _____

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
		1ST TEST						
		BATTERY CASE COVER						
		SHOWN SIGNS OF						
		LEAKAGE ON INSIDE OF						
		TOP COVER						

DISCREPANCY AND REWORK RECORD ACTIVITIES

R.M.R. NO. _____

P/N 131570-100 S/N 001 HANDLE

OPERATION REJECTED	NO.	DISCREPANCY RECORD/REWORK INSTRUCTIONS	MRB	SCRAP	RWK	OPERATOR	REJECT	ACCEPT
		1st test						
	1.	COVER PLATE FOR J1(G) COVER IS BENT INWARD ALL AROUND NAT						
	2	COVER IS BENT IN @ TOWARDS HANDLE OF THE INSIDE & OUTSIDE EDGES.						
	3	(2) OF THE 4 FLAT HEAD SCREWS ARE BENT						