

T.O. 31R1-2URR-286WC-1

PREVENTIVE MAINTENANCE WORK CARDS

RADIO RECEIVERS R-390/URR AND R-390A/URR

F34601-72-D-0655

THIS PUBLICATION REPLACES T.O. 31R1-2URR-286WC-1 DATED 1 JULY 1974.

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16 JUNE 1975

LIST OF EFFECTIVE CARDS

INSERT LATEST CHANGED CARDS. DESTROY SUPERSEDED CARDS.

NOTE: The portion of the text affected by the change is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and changed pages are:

Original 0 16 Jun 75

TOTAL NUMBER OF CARDS IN THIS PUBLICATION IS 14 CONSISTING OF THE FOLLOWING:

Card No.	# Change No.	Card No.	# Change No.	Card No.	# Change No.
Title	0	1-001 - 1-010	0		
A	0	2-001	0		
i	0				
ii Blank	0				
iii - iv	0				

#Zero in this column indicates an original page.

ADDITIONAL SETS OF THESE CARDS MAY BE OBTAINED IN ACCORDANCE WITH T.O. 00-5-2.

TABLE OF CONTENTS

Section	Card No.
Introduction	iii
I Scheduled Inspection Requirements	
28 Day Inspection	1-001
84 Day Inspection	1-003
II Scheduled Service Requirements	
168 Day Lubrication	2-001

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INTRODUCTION

These inspection work cards provide the requirements for Preventive Maintenance and will be used as a guide in performing the inspection to insure that no item is overlooked. The card size affords convenient handling by maintenance personnel while performing an inspection. Work requirement information is provided at the top and bottom of each card to permit establishment of a convenient filing system for the set of cards and to make it possible to readily select any particular card or group of cards in making work assignments to maintenance personnel. The inspection requirements on each card are arranged to provide a logical sequence of performance of the requirements pertaining to the equipment or system to which the cards apply. Requirements requiring the use of electrical power for accomplishment are identified by a commercial "at" (Ⓐ) symbol preceding the paragraph number for the requirement.

The test equipment listed in this manual are recommended types, equivalent units may be substituted.

INTRODUCTION (Cont)

Detailed instructions for the use of these cards and the description and application of other forms and charts to be used in conjunction with these cards are contained in 00-20 series T. O. 's. Changes and revisions to these cards will be published when necessary to add, delete, revise, or change requirements. Such revisions and changes will be based on factual data as a result of experience with equipment. Data will be gathered through A FM-66-1 data, field evaluation, unsatisfactory reports, and other factual failure data.

Recommended changes to this set of cards shall be submitted on AFTO Form 22, thru command channels in accordance with Section VIII, T. O. 00-5-1, to the following address: Commander, Sacramento ALC: MMST, McCLELLAN AFB, CA 95652

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.				
		SYS	SUB-SYS								
				28 DAY INSPECTION	ON	OUT	1-001				
				<p>a1. R-390A/URR NOISE FIGURE TEST.</p> <p>NOTE: THIS PROCEDURE APPLIES TO USAFSS UNITS ONLY AND IS NOT REQUIRED WHEN PERFORMANCE IS VERIFIED BY HQ USAFSS APPROVED SYSTEM TESTS.</p> <p>A. TEST EQUIPMENT REQUIRED.</p> <p>(1) MANUAL NOISE FIGURE METER (MODEL 503 OR EQUIVALENT).</p> <p>(2) MICROWATTMETER (BOONTON 42 OR EQUIVALENT).</p> <p>(3) RF DETECTOR (BOONTON 41-4B OR EQUIVALENT).</p> <p>B. MATERIALS REQUIRED.</p> <p>(1) CONNECTOR, ADAPTER, UG-970/U.</p> <p>C. PROCEDURE.</p> <p>(1) SET RECEIVER FRONT PANEL CONTROLS AS FOLLOWS. CONTROLS NOT LISTED CAN BE LEFT IN ANY POSITION.</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>CONTROL</u></td> <td style="text-align: center;"><u>POSITION</u></td> </tr> <tr> <td style="text-align: center;">LINE METER</td> <td style="text-align: center;">OFF</td> </tr> </table>				<u>CONTROL</u>	<u>POSITION</u>	LINE METER	OFF
<u>CONTROL</u>	<u>POSITION</u>										
LINE METER	OFF										
CARD No. 1-001	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE		CHANGE NO.			
					00:20	T.O. 31R1-2URR-286WC-1					

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.	
		SYS	SUB-SYS					
				28 Day INSPECTION	ON	OUT	1-001	
				<p>CONTROL POSITION</p> <p>AUDIO RESPONSE WIDE</p> <p>LIMITER OFF</p> <p>BANDWIDTH KC 2</p> <p>BREAK-IN OFF</p> <p>FUNCTION MGC</p> <p>BFO OFF</p> <p>ZERO ADJUST DISENGAGED</p> <p>RF GAIN 3/4 TO MAX CLOCKWISE</p> <p>(2) CONNECT THE OUTPUT OF THE NOISE FIGURE METER TO BALANCED ANTENNA JACK (J104) ON THE RECEIVER.</p> <p>(3) CONNECT THE RF DETECTOR TO THE MICROWATTMETER AND TO THE IF OUTPUT (J116) ON THE RECEIVER.</p> <p>(4) SET OUTPUT CONTROLS ON THE NOISE FIGURE METER TO MAXIMUM COUNTERCLOCKWISE (NO OUTPUT).</p>				
CARD No. 1-001	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE		CHANGE NO.
						T.O. 31R1-2URR-286WC-1		

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR ON	SERVICE OUT	CARD NO. 1-002	
		SYS	SUB-SYS					
				28 DAY INSPECTION				
				<p>(5) APPLY AC POWER TO TEST EQUIPMENT AND ALLOW 5 MINUTES WARM-UP TIME.</p> <p>(6) TUNE RECEIVER TO 00.750 MEGACYCLES.</p> <p>(7) SET RANGE SWITCH ON MICROWATTMETER FOR A CONVENIENT MID-SCALE READING.</p> <p>(8) ADJUST ANT TRIM FOR A PEAK INDICATION ON THE MICROWATTMETER.</p> <p>(9) NOTE THIS REFERENCE READING.</p> <p>(10) ADJUST OUTPUT CONTROLS ON THE NOISE FIGURE METER TO OBTAIN A 3dB INCREASE FROM THE REFERENCE READING OBTAINED IN STEP (9) ON THE MICROWATTMETER.</p> <p>(11) READ THE NOISE FIGURE OF THE RECEIVER ON THE NOISE FIGURE METER. IT SHOULD NOT EXCEED 11dB.</p> <p>(12) ADJUST OUTPUT CONTROLS ON NOISE FIGURE METER TO MAX COUNTERCLOCKWISE (NO OUTPUT).</p> <p>(13) REPEAT STEPS (7) THROUGH (12) FOR THE FOLLOWING FREQUENCIES: 01.500MC, 03.000MC, 06.000MC, 12.000MC AND 24.000MC.</p>				
CARD No. 1-002	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1		CHANGE NO.

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.
		SYS	SUB-SYS				
				84 DAY INSPECTION	ON	OUT	1-003
				CONTROL LINE GAIN AGC AUDIO RESPONSE LIMITER BANDWIDTH KC BFO PITCH BREAK-IN BFO DIAL LOCK ZERO ADJ LOCAL GAIN RF GAIN	POSITION 10 MED WIDE OFF 16 0 OFF ON UNLOCKED DISENGAGED MID-RANGE 10(MAXIMUM)		
CARD NO. 1-003	WORK AREA(S)	TYPE MECH RQR	MECH NO.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1		CHANGE NO.

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.	
		SYS	SUB-SYS					
				84 DAY INSPECTION	ON	OUT	1-004	
				<p>(B) CONNECT HEADPHONES TO THE PHONES JACK ON THE RECEIVER FRONT PANEL.</p> <p>(C) PLACE FUNCTION SWITCH TO MGC POSITION.</p> <ol style="list-style-type: none"> 1. DIAL LAMPS LIGHT. 2. SIGNAL OR RECEIVER BACKGROUND NOISE IS HEARD IN HEADPHONES. <p>(D) TURN BANDWIDTH KC SWITCH TO EACH POSITION FROM 16 TO .1.</p> <ol style="list-style-type: none"> 1. NOISE LEVEL DECREASES. <p style="text-align: center;">NOTE</p> <p>IN ORDER TO CHECK THE ACCURACY OF THE CALIBRATION OSCILLATOR AND BEAT-FREQUENCY OSCILLATOR, IT WILL BE NECESSARY TO RECEIVE WWV OR WWVH ON ONE OF THEIR FREQUENCIES. RECEPTION SHOULD BE CHECKED AT EACH FREQUENCY AND THE ONE WITH THE STRONGEST SIGNAL USED. IF WWV OR WWVH CANNOT BE RECEIVED, OMIT STEPS (E) THROUGH (M) AND PROCEED WITH STEP (N). IF WWV OR WWVH IS USED, OMIT STEPS (N) THROUGH (P).</p>				
CARD No. 1-004	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE		CHANGE NO.
						T.O. 31R1-2URR-286WC-1		

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR ON	SERVICE OUT	CARD NO. 1-004												
		SYS	SUB-SYS																
				84 DAY INSPECTION															
				<p>(E) THE FOLLOWING ARE THE FREQUENCIES ON WHICH WWV AND WWVH CAN BE RECEIVED.</p> <table> <tr> <td>WWV</td> <td>WWVH</td> </tr> <tr> <td>2.5MHZ</td> <td>5.0MHZ</td> </tr> <tr> <td>5.0MHZ</td> <td>10.0MHZ</td> </tr> <tr> <td>10.0MHZ</td> <td>15.0MHZ</td> </tr> <tr> <td>15.0MHZ</td> <td>20.0MHZ</td> </tr> <tr> <td>20.0MHZ</td> <td></td> </tr> </table> <p>(F) TURN BANDWIDTH KC SWITCH TO 8.</p> <p>(G) TURN MEGACYCLE CHANGE CONTROL UNTIL DESIRED MEGACYCLE FREQUENCY APPEARS IN MEGACYCLE WINDOW.</p> <p>1. CONTROL MOVES SMOOTHLY AND HAS POSITIVE DETENT.</p> <p>(H) ROTATE KILOCYCLE CHANGE CONTROL UNTIL DESIRED KILOCYCLE FREQUENCY APPEARS IN KILOCYCLE WINDOW.</p>	WWV	WWVH	2.5MHZ	5.0MHZ	5.0MHZ	10.0MHZ	10.0MHZ	15.0MHZ	15.0MHZ	20.0MHZ	20.0MHZ				
WWV	WWVH																		
2.5MHZ	5.0MHZ																		
5.0MHZ	10.0MHZ																		
10.0MHZ	15.0MHZ																		
15.0MHZ	20.0MHZ																		
20.0MHZ																			
CARD No. 1-004	WORK AREA(S)	TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1	CHANGE NO.													

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.
		SYS	SUB-SYS				
				84 DAY INSPECTION	ON	OUT	1-005
				<p>1. CONTROL MOVES SMOOTHLY WITH NO BINDING.</p> <p>(I) ROTATE KILOCYCLE CHANGE CONTROL FOR MAXIMUM INDICATION ON CARRIER LEVEL METER.</p> <p>(J) SET BANDWIDTH KC TO 1.</p> <p>(K) TIGHTEN ZERO ADJ AND PEAK THE CARRIER LEVEL METER USING THE KILOCYCLE CHANGE CONTROL.</p> <p>1. NOTE THAT THE KILOCYCLE FREQUENCY INDICATOR DOES NOT MOVE IN THE DIAL WINDOW.</p> <p>(L) ROTATE ANT TRIM CONTROL FOR MAXIMUM INDICATION ON CARRIER LEVEL METER.</p> <p>(M) TURN FUNCTION SWITCH TO CAL.</p> <p>1. NO AUDIBLE TONE HEARD IN HEADSET (ZERO BEAT).</p> <p>2. TURNING EITHER BFO PITCH CONTROL OR KILOCYCLE CHANGE WILL PRODUCE AUDIBLE TONE.</p> <p>(N) TURN KILOCYCLE AND MEGACYCLE CHANGE CONTROLS TO DISPLAY 00000 IN FREQUENCY WINDOW.</p> <p>(O) TIGHTEN ZERO ADJ.</p> <p>(P) ADJUST KILOCYCLE CHANGE FOR PEAK CARRIER LEVEL METER INDICATION AND DIP ON LINE LEVEL METER.</p> <p>1. NO AUDIBLE TONE HEARD IN HEADSET (ZERO BEAT).</p>			
CARD No. 1-005	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1	CHANGE NO.

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.
		SYS	SUB-SYS				
				84 DAY INSPECTION	ON	OUT	1-005
				<p>2. TURNING EITHER BFO PITCH CONTROL OR KILOCYCLE CHANGE WILL PRODUCE AUDIBLE TONE.</p> <p>(Q) SET BANDWIDTH KC SWITCH TO 4.</p> <p>(R) SET BFO PITCH TO +1.</p> <p>(S) ROTATE MEGACYCLE CHANGE THROUGH ITS RANGE IN 1MHZ STEPS.</p> <p>1. A CALIBRATE TONE SHOULD BE AT EACH 1MHZ STEP.</p> <p>2. NUMBERS 00 THROUGH 31 APPEAR IN FREQUENCY INDICATOR WINDOW.</p> <p>(T) LOOSEN ZERO ADJ.</p> <p>(U) ROTATE KILOCYCLE CHANGE THROUGH ITS ENTIRE RANGE.</p> <p>1. NUMBERS -980 THROUGH +020 APPEAR IN FREQUENCY INDICATOR WINDOW.</p> <p>2. CALIBRATE TONE AT EACH 100KHZ INCREMENT AND CARRIER LEVEL METER DEFLECTS.</p> <p>(V) TURN FUNCTION SWITCH TO STANDBY POSITION.</p> <p>1. NO NOISE OR SIGNAL IS HEARD.</p> <p>2. DIAL LAMPS REMAIN LIGHTED.</p> <p>(W) TURN FUNCTION SWITCH TO OFF POSITION.</p>			
CARD No. 1-005	WORK AREA(S)	TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1		CHANGE NO.

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.																
		SYS	SUB-SYS																				
				84 Day INSPECTION	ON	OUT	1-006																
<p>1. DIAL LAMPS GO OUT.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">THE FOLLOWING PROCEDURES ((2) THROUGH (4)) ARE NOT REQUIRED WHEN PERFORMANCE IS VERIFIED BY HQ USAFSS APPROVED SYSTEM TESTS.</p> <p>(2) AM SENSITIVITY CHECK.</p> <p>(A) POSITION RECEIVER FRONT PANEL CONTROLS AS FOLLOWS:</p> <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left;"><u>CONTROL</u></th> <th style="text-align: left;"><u>POSITION</u></th> </tr> </thead> <tbody> <tr> <td>LINE METER</td> <td>OFF</td> </tr> <tr> <td>LINE GAIN</td> <td>AS REQUIRED</td> </tr> <tr> <td>AUDIO RESPONSE</td> <td>WIDE</td> </tr> <tr> <td>LIMITER</td> <td>OFF</td> </tr> <tr> <td>BANDWIDTH KC</td> <td>8</td> </tr> <tr> <td>BREAK-IN</td> <td>OFF</td> </tr> <tr> <td>FUNCTION</td> <td>MGC</td> </tr> </tbody> </table>								<u>CONTROL</u>	<u>POSITION</u>	LINE METER	OFF	LINE GAIN	AS REQUIRED	AUDIO RESPONSE	WIDE	LIMITER	OFF	BANDWIDTH KC	8	BREAK-IN	OFF	FUNCTION	MGC
<u>CONTROL</u>	<u>POSITION</u>																						
LINE METER	OFF																						
LINE GAIN	AS REQUIRED																						
AUDIO RESPONSE	WIDE																						
LIMITER	OFF																						
BANDWIDTH KC	8																						
BREAK-IN	OFF																						
FUNCTION	MGC																						
CARD No. 1-006	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1		CHANGE NO.															

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.
		SYS	SUB-SYS				
				84 DAY INSPECTION	ON	OUT	1-006
				<p><u>CONTROL</u></p> <p>BFO</p> <p>DIAL LOCK</p> <p>ZERO ADJ</p> <p>LOCAL GAIN</p> <p>RF GAIN</p> <p>(B) CONNECT SIGNAL GENERATOR THRU 10dB ATTENUATOR OR DA-121/U DUMMY ANTENNA TO J104 (R-390A) OR J108 (R-390/URR) (BALANCED ANTENNA) ON THE RECEIVER.</p> <p>(C) CONNECT 600 OHM RESISTOR ACROSS THE VTVM INPUT TERMINALS. SET RANGE ON VTVM TO READ 0dB (.78VAC). CONNECT VTVM TO LINE AUDIO TERMINALS TB103, 10 & 13, ON REAR OF RECEIVER.</p> <p>(D) TUNE SIGNAL GENERATOR TO FIRST TEST FREQUENCY LISTED IN TABLE 1, ADJUST SIGNAL GENERATOR FOR 5 MICROVOLTS OUTPUT MODULATED 30% BY 400HZ</p>	<p><u>POSITION</u></p> <p>OFF</p> <p>UNLOCKED</p> <p>DISENGAGED</p> <p>AS REQUIRED</p> <p>10 (MAXIMUM)</p>		
CARD No. 1-006	WORK AREA(S)	TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O, 31R1-2URR-286WC-1		CHANGE NO.

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.												
		SYS	SUB-SYS																
				84 DAY INSPECTION	ON	OUT	1-007												
<p>TABLE 1</p> <p>TEST FREQUENCIES (MHz)</p> <table style="margin-left: auto; margin-right: auto;"> <tr><td>.75</td><td>7.6</td></tr> <tr><td>1.1</td><td>8.8</td></tr> <tr><td>1.9</td><td>15.2</td></tr> <tr><td>2.2</td><td>17.6</td></tr> <tr><td>3.8</td><td>30.4</td></tr> <tr><td>4.4</td><td></td></tr> </table> <p>(E) TUNE RECEIVER TO THE TEST FREQUENCY AND PEAK THE VTVM METER INDICATION WITH THE KILOCYCLE CHANGE AND ANT TRIM CONTROLS.</p> <p>(F) ADJUST LINE GAIN FOR A 0dB (.78VAC) INDICATION ON THE VTVM.</p> <p>(G) AT THE SIGNAL GENERATOR, TURN MODULATION OFF. THE INDICATION ON THE VTVM SHOULD DROP TO -10dB (.24VAC) OR BELOW.</p> <p>(H) REPEAT STEPS (2)(D) THROUGH (2)(G) FOR EACH TEST FREQUENCY LISTED IN TABLE 1.</p>								.75	7.6	1.1	8.8	1.9	15.2	2.2	17.6	3.8	30.4	4.4	
.75	7.6																		
1.1	8.8																		
1.9	15.2																		
2.2	17.6																		
3.8	30.4																		
4.4																			
CARD No. 1-007	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE	CHANGE NO.												
						T.O. 31R1-2URR-286WC-1													

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.																				
		SYS	SUB-SYS																								
				84 DAY INSPECTION	ON	OUT	1-007																				
				(3) SELECTIVITY AND OVERALL GAIN. (A) POSITION RECEIVER FRONT PANEL CONTROLS AS FOLLOWS: <table border="0"> <thead> <tr> <th><u>CONTROL</u></th> <th><u>POSITION</u></th> </tr> </thead> <tbody> <tr> <td>AUDIO RESPONSE</td> <td>WIDE</td> </tr> <tr> <td>LIMITER</td> <td>OFF</td> </tr> <tr> <td>BANDWIDTH KC</td> <td>1</td> </tr> <tr> <td>BREAK-IN</td> <td>OFF</td> </tr> <tr> <td>FUNCTION</td> <td>MGC</td> </tr> <tr> <td>BFO</td> <td>OFF</td> </tr> <tr> <td>DIAL LOCK</td> <td>UNLOCKED</td> </tr> <tr> <td>ZERO ADJ</td> <td>DISENGAGED</td> </tr> <tr> <td>RF GAIN</td> <td>10 (MAXIMUM)</td> </tr> </tbody> </table> (B) CONNECT SIGNAL GENERATOR TO J104 (R-390A) OR J108 (R-390/URR) (BALANCED ANTENNA) OF THE RECEIVER. ADJUST SIGNAL GENERATOR FOR A 3 MICROVOLT CW (UNMODULATED) OUTPUT AT 1.5MHZ.				<u>CONTROL</u>	<u>POSITION</u>	AUDIO RESPONSE	WIDE	LIMITER	OFF	BANDWIDTH KC	1	BREAK-IN	OFF	FUNCTION	MGC	BFO	OFF	DIAL LOCK	UNLOCKED	ZERO ADJ	DISENGAGED	RF GAIN	10 (MAXIMUM)
<u>CONTROL</u>	<u>POSITION</u>																										
AUDIO RESPONSE	WIDE																										
LIMITER	OFF																										
BANDWIDTH KC	1																										
BREAK-IN	OFF																										
FUNCTION	MGC																										
BFO	OFF																										
DIAL LOCK	UNLOCKED																										
ZERO ADJ	DISENGAGED																										
RF GAIN	10 (MAXIMUM)																										
CARD No. 1-007	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1		CHANGE NO.																			

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR ON	SERVICE OUT	CARD NO. 1-008												
		SYS	SUB-SYS																
				84 DAY INSPECTION															
<p>(I) REPEAT STEPS (3)(D) THROUGH (3)(H) FOR EACH BANDWIDTH LISTED IN TABLE 2.</p> <p style="text-align: center;">TABLE 2</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><u>BANDWIDTH KC</u></th> <th style="text-align: center;"><u>LIMITS</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">.8 TO 1.3KHz</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">1.9 TO 2.3KHz</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">3.6 TO 4.4KHz</td> </tr> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">7.5 TO 10.0KHz</td> </tr> <tr> <td style="text-align: center;">16</td> <td style="text-align: center;">14.0 TO 18.0KHz</td> </tr> </tbody> </table> <p>(J) SET BANDWIDTH KC TO 8. PEAK VTVM METER INDICATION WITH KILOCYCLE CHANGE AND ANT TRIM CONTROLS.</p> <p>(K) ADJUST RF GAIN TO INDICATE 20 MILLIVOLTS (0.02V) ON VTVM.</p> <p>(L) INCREASE SIGNAL GENERATOR OUTPUT LEVEL AS SPECIFIED IN TABLE 3. VTVM SHOULD INDICATE VALUES SPECIFIED IN TABLE 3.</p>								<u>BANDWIDTH KC</u>	<u>LIMITS</u>	1	.8 TO 1.3KHz	2	1.9 TO 2.3KHz	4	3.6 TO 4.4KHz	8	7.5 TO 10.0KHz	16	14.0 TO 18.0KHz
<u>BANDWIDTH KC</u>	<u>LIMITS</u>																		
1	.8 TO 1.3KHz																		
2	1.9 TO 2.3KHz																		
4	3.6 TO 4.4KHz																		
8	7.5 TO 10.0KHz																		
16	14.0 TO 18.0KHz																		
CARD No. 1-008	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1	CHANGE NO.												

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR ON	SERVICE OUT	CARD NO. 1-008	
		SYS	SUB-SYS					
				84 Day Inspection				
				<p>(c) CONNECT 50 OHM RESISTOR ACROSS VTVM INPUT TERMINALS. CONNECT VTVM TO J116 (IF OUTPUT) OF RECEIVER.</p> <p>(d) TUNE RECEIVER TO 1.5MHZ. ADJUST KILOCYCLE CHANGE AND ANT TRIM FOR A PEAK VTVM METER INDICATION.</p> <p>(e) ADJUST RF GAIN FOR A VTVM METER INDICATION OF 20 MILLIVOLTS (.02VAC).</p> <p>(f) TURN KILOCYCLE CHANGE CONTROL UPWARDS IN FREQUENCY UNTIL THE VTVM METER INDICATION DROPS TO 10 MILLIVOLTS (.01VAC). RECORD THE EXACT FREQUENCY AT WHICH THIS OCCURS FROM THE FREQUENCY WINDOW ON THE RECEIVER.</p> <p>(g) TURN THE KILOCYCLE CHANGE DOWNWARD IN FREQUENCY UNTIL THE PEAK READING (20 MILLIVOLTS) IS PASSED AND THE VTVM METER INDICATION AGAIN DROPS TO 10 MILLIVOLTS (.01VAC). RECORD THE EXACT FREQUENCY AT WHICH THIS OCCURS.</p> <p>(h) THE DIFFERENCE BETWEEN THESE TWO FREQUENCIES (STEPS (3)(F) AND (3)(G)) SHOULD BE WITHIN THE LIMITS GIVEN IN TABLE 2.</p>				
CARD No. 1-008	WORK AREA(S)	TYPE MECH RQR		MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1		CHANGE NO.

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.								
		SYS	SUB-SYS												
				84 DAY INSPECTION	ON	OUT	1-009								
				<p style="text-align: center;">TABLE 3</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><u>SIGNAL GENERATOR OUTPUT (MICROVOLTS)</u></th> <th style="text-align: center;"><u>IF OUTPUT (MILLIVOLTS)</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">6</td> <td style="text-align: center;">40 ± 5</td> </tr> <tr> <td style="text-align: center;">15</td> <td style="text-align: center;">100 ± 10</td> </tr> <tr> <td style="text-align: center;">30</td> <td style="text-align: center;">200 ± 20</td> </tr> </tbody> </table> <p>(4) AGC CHECK.</p> <p>(A) SET RECEIVER CONTROLS AS LISTED IN STEP (3)(A) EXCEPT SET BANDWIDTH KC TO 4.</p> <p>(B) CONNECT SIGNAL GENERATOR TO J104 (R-390A) OR J108 (R-390/URR) (BALANCED ANTENNA) ON THE RECEIVER. ADJUST SIGNAL GENERATOR FOR 1.5 MICROVOLT OUTPUT MODULATED 30% BY 400HZ AT 1.5MHZ.</p> <p>(C) CONNECT 600 OHM RESISTOR ACROSS VTVM INPUT TERMINALS. CONNECT VTVM TO LINE AUDIO TERMINALS TB103, 10 & 13 ON RECEIVER REAR PANEL.</p> <p>(D) TUNE RECEIVER TO 1.5MHZ. PEAK VTVM METER INDICATION KILOCYCLE CHANGE AND ANT TRIM CONTROLS.</p> <p>(E) TURN FUNCTION TO AGC. ADJUST LINE GAIN FOR A VTVM METER INDICATION OF +10dBm (2.45VAC).</p>				<u>SIGNAL GENERATOR OUTPUT (MICROVOLTS)</u>	<u>IF OUTPUT (MILLIVOLTS)</u>	6	40 ± 5	15	100 ± 10	30	200 ± 20
<u>SIGNAL GENERATOR OUTPUT (MICROVOLTS)</u>	<u>IF OUTPUT (MILLIVOLTS)</u>														
6	40 ± 5														
15	100 ± 10														
30	200 ± 20														
CARD NO. 1-009	WORK AREA(S)	TYPE MECH RQR	MECH NO.	CARD TIME	PUBLICATION NUMBER AND DATE		CHANGE NO.								
					T.O. 31R1-2URR-286WC-1										

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.
		SYS	SUB-SYS				
				84 DAY INSPECTION	ON	OUT	1-009
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">DURING THE NEXT TWO STEPS, IT MAY BE NECESSARY TO CHANGE THE RANGE SETTING OF THE VTVM TO A HIGHER RANGE DEPENDING ON THE TYPE VTVM USED.</p> <p>(F) INCREASE SIGNAL GENERATOR OUTPUT LEVEL TO 150 MICROVOLTS. THE VTVM SHOULD INDICATE NO MORE THAN +13dBm (3.46VAC).</p> <p>(G) INCREASE SIGNAL GENERATOR OUTPUT LEVEL TO 1.5 MILLIVOLTS (1500 MICROVOLTS). THE VTVM SHOULD INDICATE NO MORE THAN +18dBm (6.15VAC).</p> <p>(H) SET AGC TO SLOW. ADJUST SIGNAL GENERATOR OUTPUT LEVEL FOR A FULL SCALE INDICATION ON THE CARRIER LEVEL METER.</p> <p>(I) DISCONNECT SIGNAL GENERATOR FROM THE RECEIVER AND NOTE THAT THE INDICATION ON THE CARRIER LEVEL METER SLOWLY DROPS TOWARDS ZERO.</p> <p>(J) RECONNECT SIGNAL GENERATOR TO THE RECEIVER. SET AGC TO MED.</p> <p>(K) DISCONNECT SIGNAL GENERATOR FROM THE RECEIVER AND NOTE THAT THE INDICATION ON THE</p>							
CARD No. 1-009	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE	CHANGE NO.
						T.O. 31R1-2URR-286WC-1	

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.
		SYS	SUB-SYS				
				84 DAY INSPECTION	ON	OUT	1-010
				<p>CARRIER LEVEL METER DROPS MORE QUICKLY THAN IN STEP (4)(I).</p> <p>(L) RECONNECT SIGNAL GENERATOR TO THE RECEIVER. SET AGC TO FAST.</p> <p>(M) DISCONNECT SIGNAL GENERATOR FROM THE RECEIVER AND NOTE THAT THE INDICATION ON THE CARRIER LEVEL METER DROPS MORE QUICKLY THAN IN STEP (4)(K).</p>			
CARD NO. 1-010	WORK AREA(S)	TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE		CHANGE NO.
					T.O. 31R1-2URR-286WC-1		

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR	SERVICE	CARD NO.	
		SYS	SUB-SYS					
				168 DAY LUBRICATION	OFF	OUT	2-001	
<p>01. R-390()/URR LUBRICATION AND VISUAL CHECK.</p> <p>A. TEST EQUIPMENT REQUIRED.</p> <p>(1) NONE.</p> <p>B. MATERIALS REQUIRED.</p> <p>(1) SMALL BRUSH.</p> <p>(2) OIL (MIL-L-7870).</p> <p>(3) GREASE (MIL-G-4721).</p> <p>(4) CLEANING SOLVENT.</p> <p>(5) LINT-FREE CLOTH.</p> <p>C. PROCEDURE.</p> <p>(1) USING A SMALL BRUSH DIPPED IN CLEANING SOLVENT, REMOVE DIRT, GRIT AND GREASE FROM GEARS, CAMS, SLUG RACK SLOTS, SHAFTS AND BEARINGS OF THE GEAR TRAIN.</p> <p>(2) USE A SMALL BRUSH OR LINT-FREE CLOTH WETTED WITH CLEANING SOLVENT TO REMOVE DIRT, GREASE AND STAINS FROM EXTERIOR AND INTERIOR SURFACES OF THE RECEIVER.</p>								
CARD No. 2-001	WORK AREA(S)		TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE		CHANGE NO.
					00:60	T.O. 31RI-2URR-286WC-1		

INSPECTION WORK CARD

MAN MIN	WORK AREA	WORK UNIT		INSPECTION REQUIREMENTS	ELECTRICAL PWR OFF	SERVICE OUT	CARD NO. 2-001
		SYS	SUB-SYS				
				168 DAY LUBRICATION			
				<p>(3) USING A SUITABLE APPLICATOR, APPLY ONE DROP OF OIL TO EACH CAM ROLLER AND SHAFT BEARING.</p> <p>(4) USING A SMALL BRUSH, APPLY A THIN FILM OF GREASE TO THE GEAR TEETH, SLUG RACK SLOTS AND MEGACYCLE DETENT CAM.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">ROTATE THE MEGACYCLE CHANGE AND KILOCYCLE CHANGE CONTROL KNOBS BACK AND FORTH OVER THEIR RANGE SEVERAL TIMES TO ALLOW GREASE TO SPREAD OVER THE GEARS, CAMS AND SLUG RACK SLOTS.</p> <p>(5) CHECK RECEIVER VISUALLY FOR COMPLETENESS.</p> <p>(6) CHECK ALL SURFACES AND EXTERNAL COVERS FOR EVIDENCE OF FUNGUS, RUST, CORROSION OR DAMAGE.</p> <p>(7) INSPECT KNOBS, JACKS, SWITCHES, RELAYS, CONNECTORS, FUSE HOLDERS AND PILOT LAMPS FOR CONDITION AND TIGHTNESS.</p> <p>(8) CHECK TIGHTNESS OF ALL MOUNTING SCREWS.</p> <p>(9) INSPECT WIRES AND CABLES FOR WEAR OR DAMAGE.</p>			
CARD No. 2-001	WORK AREA(s)	TYPE MECH RQR	MECH No.	CARD TIME	PUBLICATION NUMBER AND DATE T.O. 31R1-2URR-286WC-1		CHANGE NO.

INSPECTION WORK CARD