DATE 5/26/64	TMC SPECIFICATION NO. S- 834	0
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Sturmer COMPILED / CHECKED	TITLE: DRP-1F TEST PROCEDURE	
APPROVED		

DRP-1F TEST PROCEDURE

SS

OGILVIE PRESS, INC., BROOKLYN 17, N. Y. STOCK NO. 439M

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SHEET 2 OF 5		
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I. INTRODUCTION

The DRP-1F is a Diversity receiving system designed for the reception of Frequency Shift Teletype signals in the frequency range of 2 to 32 megacycles. With slight modification the system is also capable of receiving AM, CW and MCW signals in the same frequency range. It may be utilized in either Space or Frequency Diversity receiving systems.

II. COMPONENT UNITS

1. 2-FFR-3 Receivers.
2. 2-FFRD-5A Tuning Drawer, 2 to 4MC.
3. 2-FFRD-6A Tuning Drawer, 4 to 8MC.
4. 2-FFRD-7B Tuning Drawer, 8 to 16MC.
5. 2-FFRD-8B Tuning Drawer, 16 to 32MC.
6. 3-FFR-DPH Tuning Drawer, Storage Panel.
7. 1-CFA-1 Frequency Shift Converter.
8. 1-PSP-1 Power Supply Assembly.

NOTE: THIS SYSTEM SHOULD NOT BE TESTED UNLESS ALL THE UNITS NOTED IN SECTION II, HAVE BEEN TESTED AS PER THE INDIVIDUAL TEST PROCEDURE.

III. TEST EQUIPMENT REQUIRED

1. 1-Set of earphones.
2. 1-2000 ohm 20 watt resistor.
3. 1-A.C. line cord.
4. 1-457.550KC type CR-46/U BFO crystal.
5. 1-VOM Simpson Model 260 or equivalent.

IV. PRELIMINARY

1. Check rack for mechanical defects.
2. Check rack for wiring defects.

V. PROCEDURE (TEST IN SPACE DIVERSITY)

1. Plug earphones into PHONES jack of appropriate receiver when tuning. Connect one antenna to each receiver.

2. Connect 2000 ohm 20 watt resistor across terminals 8 and 9 of E1 on the CFA unit. Turn the LINE CURRENT control to full counter-clockwise direction.

3. Set toggle switch on rear of PSP-1 unit, to plus position.

4. Connect the A.C. line cord. Switch on all units.

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5. Set test switch on front panel of CFA-1 to MARK position. Adjust LINE CURRENT control on the CFA-1 unit, and, or the OUTPUT CURRENT control on the PSP-1 unit, for 60MA on the PSP-1 meter. Return test switch to LINE position.

6. The upper receiver is classified as the MASTER. It provides both HFO and BFO signal voltages to the lower receiver which is classified as the SLAVE.

7. Insert BFO crystal into the BFO crystal socket of the MASTER receiver.

8. The control settings for the MASTER receiver should be as follows:
HFO switch on HFO.
BFO switch on XTAL.
BFO toggle switch to ON.
NOISE LIMITER toggle switch to ON.
RF GAIN to suit.
AUDIO GAIN to .7V. across terminals 2 and 3 of E101.
AVC-MANUAL toggle switch to AVC.

9. The control settings for the SLAVE receiver should be as follows:
HFO switch on EXT HFO.
BFO switch on EXT BFO.
BFO toggle switch to ON.
NOISE LIMITER toggle switch to ON.
RF GAIN none (controlled by MASTER).
AUDIO GAIN to .7V. across terminals 2 and 3 of E101.
AVC-MANUAL toggle switch to AVC.

10. Plug in appropriate tuning drawers and tune to a teletype signal. For proper adjustment of the teletype signal tune the receivers as follows:
Set CH. 1 switch on CFA-1 to ON.
Set CH. 2 switch on CFA-1 to OFF.
Tune Channel 1 receiver (MASTER) until it is properly centered on the CFA-1 scope.
When properly centered on a keyed signal, the pattern approaches a vertical line on the face of the scope. As the receiver is tuned to one side of the discriminator the pattern will open into a rectangle to the left or right depending upon the direction of the tuning. The operator should so tune the receiver that he may see one rectangle appear after the other rectangle disappears upon passing through the discriminator center. Only then may he be certain that he is iperating in the region of the discriminator center rather than on one of its outer slopes.
Similarly, when drift occurs, the center line will expand into a rectangle as in the case of tuning.
Set CH. 1 switch on CFA-1 to OFF.
Set CH. 2 switch on CFA-1 to ON.
Repeat the tuning process for channel 2 receiver (SLAVE).
Set CH. 1 switch on CFA-1 to ON.

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For normal operation not exceeding 100WPM, the SPEED switch in the rear of the CFA-1 should be in the LOW position.

11. The meter on the front panel of the PSP-1 unit, should fluctuate in time with the signal received.

12. Check the rest of the tuning drawers for AM reception to see that they are functioning properly.

13. Check the three FFR-DFH tuning drawer storage panels to see that they are functioning properly. This will be evidenced by the fact that, when the tuning drawers are extracted, they are hot.

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THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, N.Y.

DRP-1F TEST DATA SHEET

SERIAL NO._____

MFG. NO._____

MECHANICAL CHECK----------OK
WIRING CHECK----------OK

2-FFR-3 Receivers checked----------OK
2-FFRD-5A Tuning Drawers checked----------OK
2-FFRD-6A Tuning Drawers checked----------OK
2-FFRD-7B Tuning Drawers checked----------OK
2-FFRD-8B Tuning Drawers checked----------OK
3-FFR-DPH Tuning Drawers checked----------OK
1-CFA-1 Frequency Shift Converter checked----------OK
1-PSP-1 Power Supply Assembly checked----------OK

FFR-3	SER #_____	FFR-3	SER #_____
FFRD-5A	SER #_____	FFRD-5A	SER #_____
FFRD-6A	SER #_____	FFRD-6A	SER #_____
FFRD-7B	SER #_____	FFRD-7B	SER #_____
FFRD-8B	SER #_____	FFRD-8B	SER #_____
FFR-DPH	SER #_____	FFR-DPH	SER #_____
FFR-DPH	SER #_____		
CFA-1	SER #_____	PSP-1	SER #_____

DATE_____

TESTER_____

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REVISION SHEET	THE TECHNICAL MATERIEL CORP. MAMARONECK NEW YORK	S-834 LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
5/27/64		1 of 5		O= ORIGINAL RELEASE FOR PRODUCTION	