

DATE 22 October 1963

SHEET 1 OF 5

TMC SPECIFICATION NO. S-795



COMPILED

CHECKED

TITLE:

APPROVED

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10/25/63

TEST PROCEDURE - GPT-350D

DATE 22 October 1963
SHEET 2 OF 5

TMC SPECIFICATION NO. S-795



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TITLE: TEST PROCEDURE - GPT-350D

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A. INTRODUCTION

The GPT-350D is a general purpose radio transmitter system providing AM, MCW, and CW operation throughout a frequency range of 2 to 32 MC.

The average rated power output of this unit is 200 WATTS.

B. MAIN COMPONENTS

The GPT-350D consists of separate units integrated to form the transmitter system. These components are:

1. Rack Assembly RAK-19H.
2. Auxiliary Power Panel APP-5.
3. Power Supply PSP-350.
4. Linear RF Amplifier RFA-1.
5. General Purpose Exciter, GPE-1.
6. Variable Frequency Oscillator VOX-5.
7. Antenna Tuning System ATS-2.

C. TEST PROCEDURE

The test procedure for the GPT-350D system is outlined on the following pages. Before the system can be tested correctly, all components except the RAK-19H rack assembly must be tested and passed by the test department as per the specific test requirements for each unit.

OPERATE
NOTE: ON ATS-2, OVERLOAD RELAY, K103, MUST BE RESET TO CUTOFF TRANSMITTER AT 200 WATTS BY ADJUSTING R121.

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I. EQUIPMENT REQUIRED

1. 52 ohm dummy load, 500 W dissipation.
2. A-C power cable.
3. Test equipment rack - TMC Model PTE.
4. RF output cable, RG-8/U.
5. MWC24(7)S3, cable insulated shielded, 5ft.
6. CA-409 cable assembly, jumper 6 in.
7. H.P. VTVM, Model 410B, or equivalent.
8. Test Chart, GPT-350D.
9. Microphone with PTT switch.
10. Voltmeter, Simpson 260 or equivalent, (VOM).
11. Square wave generator, Boonton Model 71.
12. Test receiver (GPR-90 or equivalent).

II. PROCEDURE

1. Install A-C input power cable from RAK-19 to A-C line.
2. Connect fanning strips of test cable assembly to E502 on rear of APP-5 chassis.
3. Connect shielded lead from output of TTG mounted in test equipment rack PTE to 600 ohm audio input on GPE-1 (terminals 3 and 5 of E1).
4. Connect dummy load MONITOR OUTPUT to SIGNAL INPUT jack of PTE analyzer.
5. Connect cable from OUTPUT jack of CU-2 to dummy load input. Connect H.P. VTVM across dummy load.
6. Plug in a microphone with PTT switch into J5.
7. Set MAIN POWER switch on APP-5 to ON position. The red MAIN POWER indicator lamp should light, and rack blowers should start running.
8. Set MAIN LINE switch on PSP-350 to ON position. The MAIN POWER indicator lamp should light and RFA-1 blower should start running. NOTE: PSP-350 TRANSMITTER PLATES switch should be in STANDBY-REMOTE position; HV LINE switch in OFF position.

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9. Turn on POWER switch on GPE-1. The red lamp on front panel should light. Set XTAL switch on GPE-1 to REMOTE. Set OUTPUT control on GPE-1 to minimum (full counter-clockwise).
10. Turn on POWER switch on VOX-5. The red MAIN POWER lamp and INNER OVEN and OUTER OVEN lamps should light.
11. After a warm-up time of approximately 5 minutes, set the TRANSMITTER PLATES switch on ON position. The indicator lamp should light. The HV LINE OVERLOAD indicator should also light. Set TRANSMITTER PLATES switch on STANDBY-REMOTE position.
12. Close the PTT switch on the microphone. The TRANSMITTER PLATES and HV LINE OVERLOAD indicator lamps on PSP-350 should light.
13. Turn VOX METER switch to HFO position.
14. Set VOX HFO switch to ON position.
15. Set VOX MASTER OSCILLATOR FREQUENCY as required.
16. Adjust GPE-1 for maximum RF output and return OUTPUT control to minimum.
17. Set HV LINE switch on PSP-350 to ON position and close PTT switch on microphone. Red indicator should light and amber OVERLOAD indicator should go out.
18. Adjust GPE-1 and RFA-1 to obtain 200W CW. (102 VRMS @ 52 ohms).
19. Using single tone from the TTG in the PTE test rack, modulate the carrier and observe modulation on PTE scope.
20. Reduce transmitter output to zero.
21. Turn off all power switches and reduce all gain controls to zero. Remove A-C connections to line.
22. Check cables, hardware and slides for ease of movement. Units should tilt without obstruction.
23. This completes testing of system GPT-350D.

TEST CHART - GPT-350D

DATE: GPT-350D Ser. No. _____ RFA Ser. No. _____
 TEST BY: TS-2 Ser. No. _____ VOX Ser. No. _____
 CU Ser. No. _____ GPE-1 Ser. No. _____
 MCU Ser. No. _____ PSP-350 Ser. No. _____
 TU Ser. No. _____ APP-5 Ser. No. _____

REVISIONS					
SYM	DESCRIPTION	DATE	E.M.N. NO.	DRAFT	CHKD

FREQ. MC	VOX SETTING	GPE BAND	DRIVER BAND	1st AMPL. TUNE	PA GRID TUNE	PA TUNING	PA LOADING	PF LOADING SWITCH	MA, PA PLATE	MA, PA SCREEN	FORWARD POWER WATTS	REFLECTED POWER WATTS	ACTUAL POWER WATTS	REMARKS
2														
5														
10														
20														
30														

NOTE: 200 W, CW, is 102 VRMS across 52Ω load.

ITEMS

1. A-C power to APP-5
2. A-C power to PSP-350
3. A-C power to GPE-1
4. A-C power to VOX-5
5. Interlock Circuits
6. Modulation

ACCEPT	REJECT
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

REQ'D.	ITEM	PART NUMBER	DESCRIPTION	SYMBOL
LIST OF MATERIAL				
MATERIAL			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
FINISH			TITLE SHEET 5 of 5 - TMC SPECIFICATION NO.: S-795 TEST PROCEDURE CHART GPT-350D	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES			DRAWN	DATE
			CHECKED	DATE
			ELECT. DES.	DATE
			MECH. DES.	DATE
			S-795	
			SHEET 5 OF 5	
			REV. LTR.	

NOTES

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DECIMALS	TOLERANCES	FRACTIONS
.X ± .05		± 1/64
.XX ± .01		ANGLES
.XXX ± .005		± 0° 30'