

# TMC SPECIFICATION

NO. S 1253

REV:

COMPILED: *[Signature]*

CHECKED: R. Riano

APPD: *[Signature]*

SHEET 1 OF 5

TITLE:

TEST PROCEDURE  
FOR  
GPTM-10KAC  
AUXILIARY FRAME

# TMC SPECIFICATION

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SHEET 2 OF 5

TITLE: TEST PROCEDURE FOR GPTM-10KAC

This procedure will be used in conjunction with S-540E, Section 3.

## A. Test Equipment Required

1. TMC PTE Spectrum Analyzer
2. Square wave generator
3. Test Receiver

## B. Procedure

1. Turn on auxiliary frame main breaker CB3000. Connect a 50 ohm 2 watt dummy load to J3001.
2. Set CMR-4 controls as follows: meter switch, A1, Channel A1, A2, B1, B2 gain controls to 100. Mode switch to NORM. Carrier suppression, FULL.
3. Set CHG-4 controls as follows: Standby/On switch to ON. Frequency 2Mc.
4. Set TIS-3D controls as follows: Key mode 20MA. Shift cps 850. Center frequency 2000cps. Exciter switches to LINE. Mode switch to FAX. Test switch to LINE.
5. Connect two tone generator to terminals 17-19 of TB3002.
6. Connect spectrum analyzer input to J1 of APP-10, also place monitor switch to EXCITER.
7. From the two tone generator insert -10db into Channel A1, use CMR-4 input meter for monitoring this input. Observe A1 activity lamp must light. Note - two tone input will be changed to A2, B1, B2. Reference to auxiliary frame tuning chart.
8. Tune CHG-4 to 2Mc at 1/4 watt of output. Set up spectrum analyzer to display two tones at above frequency. Observe third order distortion, must be down 40db or better. Switch off two tones and observe carrier must be down 55db or better. Record results on tuning chart. Also repeat distortion test on all frequencies listed on tuning chart.

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## C. TIS-3D Keying

1. Turn off two tone generator.
2. Connect square wave generator to terminals 2-4 of TB3001. Set generator frequency at 25cps. Set output at 5 volts. Place TIS-3D exciter Channel 1 switch to FSK/FAX/CW position.
3. Adjust TIS-3D output to -10db. (observe) A1 activity lamp must light.
4. Place TIS-3D exciter Channel 1 switch to line. Place Channel 2 switch to FSK/FAX/CW. Observe B1 activity lamp must light.
5. Tune CHG-4 to a 1/4 watt off output. Tune a test receiver to the CHG-4 frequency. A clear FAX signal should be heard.
6. Disconnect leads from terminals 2-4 of TB3001 and connect to terminals 15-16 of TB3002.
7. Place TIS-3d mode switch to FSK position. A clear FSK signal should be heard.
8. Bring square wave generator output to zero.

## D. KIT-321 Check

1. Connect test PTT leads to terminals 3-4 of TB3001. Place mode switch on AX5031 to NORM. Position.
2. Turn on transmitter main power breaker, allow a 10 minute warm-up.
3. Turn on high voltage, observe the following: PA plate current should read approximately 500Ma, 1PA plate current should read approximately 200Ma, PA screen voltage should be approximately 1200 volts.
4. Place AX5031 mode switch in PTT position. (Observe) PA plate current should read zero. 1PA plate current should read zero. PA screen voltage should read approximately 600 volts.

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5. Depress test PTT switch. Observe the following: conditions the same as in paragraph D-3.
  6. Unshort PTT leads, also place AX5031 mode switch in CW position. (observe) the following: conditions the same as in paragraph D4.
  7. Increase square wave output to 5 volts. Observe the following: conditions the same as in paragraph D3.
  8. Turn off high voltage.
- E. Test Key Check
1. Place CMR-4 carrier switch to zero, mode switch to CW, CHG-4 gain control to half clockwise.
  2. Depress test switch on AX5040, observe output indication should appear on CHG-4 output meter. Release switch, output should disappear.
  3. Disconnect all test leads, remove dummy load from J3001 and reconnect P3001.

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SHEET 5 OF 5

TITLE: GPTM-10KAC "A" FRAME DATA SHEET SERIAL NUMBER -

CHG-4 MFG. NO. \_\_\_\_\_

TESTER: \_\_\_\_\_

CMR-4 MFG. NO. \_\_\_\_\_

TIS-3D MFG. NO. \_\_\_\_\_

DATE: \_\_\_\_\_

CHG-4 FREQ. MC	CMR-4 CHANNEL	DISTORTION AT 1/4 WATT
2	A1	
4	A1	
6	A1	
8	A2	
10	A2	
12	A2	
14	B1	
16	B1	
18	B1	
20	B2	
22	B2	
24	B2	
26	B2	
28	B2	
30	B2	

TIS-3D KEYING \_\_\_\_\_

AX-5031 CHECK \_\_\_\_\_

TEST KEY \_\_\_\_\_

CARRIER SUPPRESSION AT 2Mc \_\_\_\_\_

