

24B LOOP CHECKER GENERATOR TESTS

1. GENERAL

1.01 This section describes a method for testing the output level and frequency limits of the 24B loop checker generator.

1.02 The tests covered are:

- A. *Flat Output Level:* This test checks the flat output of the 24B generator.
- B. *Shaped Output Level:* This test checks the shaped output at the line link or connector frame.
- C. *3000-Cycle Frequency:* This test checks the 3000-cps end frequency.

D. *1000-Cycle Frequency:* This test checks the 1000-cycle end frequency.

1.03 If the requirements in this section are not met, refer to Section A493.315.

2. APPARATUS

All Tests

2.01 23A transmission measuring set J94023A or 21A transmission measuring set J94021A and a 2AB auxiliary transmission measuring set J94002AB.

2.02 W3C cord.

2.03 P3N cord (3 feet).

3. PREPARATION

STEP

ACTION

VERIFICATION

All Tests

Using 23A TMS

- 1 Set DIAL MEAS SLV key to MEAS.
- 2 INPUT 600 to 900 switch to 900.

Using 21A TMS and 2AB Auxiliary Transmission Sets

- 3 Connect the 21A set power cord to 115-volt ac supply, operate the power switch to ON, and allow set to warm up for 5 minutes before using for measurements.
- 4 Patch the 21A set INPUT DET IN 600 Ω jack to the 2AB set TMS jack.
- 5 Operate 2AB keys or switches as follows:
- 6 DIAL-SLV key to midposition.
- 7 2DB PAD key to OUT position.
- 8 TEST switch to REC 900 Ω position.

Note: Level measurements and requirements in this section have been corrected for the 0.5-db loss in the 2AB auxiliary set.

4. METHOD

STEP	ACTION	VERIFICATION
A. Flat Output Level		
9	Set the 24B FREQ CHK switch to its OPR position.	
10a	If the 23A TMS is used, connect the MEAS jack of the 23A set to the FLAT OUT CAL jack of the 24B generator.	23A TMS reading -8.7 ± 0.1 db average value.
11b	If the 21A and 2AB TMS are used, connect the MEAS jack of the 2AB set to the FLAT OUT CAL jack of the 24B generator.	21A TMS reading -9.2 ± 0.1 db average value.
12	Observe the meter of the TMS for at least 30 seconds.	The deviation from average value should be less than ± 0.1 db.
B. Shaped Output Level		
9	Locate the test set up near the line link frame (No. 5 XBR) or connector frame (SXS).	
10a	If the 23A TMS is used, connect the MEAS jack of the 23A set to the line link or connector bank multiple appearance of the test line, SD-98100-01, associated with the 24B generator.	
11b	If the 21A and 2AB TMS are used, connect the MEAS jack of the 2AB set to the line link or connector bank multiple appearance of the test line, SD-98100-01, associated with the 24B generator.	
	<i>Note:</i> Test connections between the TMS and the line link or connector appearance of the test line shall not exceed 10 feet in length.	
12	Block the test line circuit OS relay operated.	
13	Consult office records for the value of office loss. Let this value be represented by x.	
14	Operate the LEV CHK switch on the 24B generator.	23A TMS reading $-0.5 + x \pm 0.2$ db average value. 21A TMS reading $-1.0 + x \pm 0.2$ db average value.
15	Examples:	
	(a) If $x = 0.7$ db loss then $-0.5 + 0.7 = +0.2$ db; hence 23A TMS reading $= +0.2 \pm 0.2$ db.	
	(b) If $x = 1.2$ db loss then $-1.0 + 1.2 = +0.2$ db; hence 21A TMS reading $= +0.2 \pm 0.2$ db.	

STEP	ACTION	VERIFICATION
16	Remove test connections and remove blocking tool from test line OS relay.	
17	Relocate the test set up near the 24B generator panel.	
18a	If the 23A TMS is used, connect the MEAS jack of the 23A set to the GEN OUT CAL jack on the 24B generator.	
19b	If the 21A and 2AB TMS are used, connect the MEAS jack of the 2AB set to the GEN OUT CAL jack on the 24B generator.	
20	Operate the generator LEV CHK switch. Record the measurement.	TMS reading within 0.5 db of level measured at line link or connector back multiples.
21	Release LEV CHK switch.	

C. 3000-Cycle Frequency

9	Turn the FREQ CHK switch on the 24B generator to its 3000~ position.	
10	To check the 3000~ end frequency, turn potentiometer R75 on the 24B generator until the 21A indicates a maximum. (LEV CHK switch not operated.) This is not a setting; R75 may be left in any position after the test.	TMS reading 2.8 ± 0.7 db more power than reading recorded in Test B.

D. 1000-Cycle Frequency

9	To check the 1000~ end frequency, turn the FREQ CHK switch on the 24B generator to the 1000~ position. (LEV CHK switch not operated.)	TMS reading 6.0 ± 0.3 db less power than reading recorded in Test B.
10	Turn the FREQ CHK switch on the 24B to its OPR position.	
11	Remove test connections.	