

24C LOOP CHECKER GENERATOR

J94024C

TESTS

1. GENERAL

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

1.02 The tests covered are:

A. **Flat Output Level:** This test checks the flat output of the 24C generator.

B. **Shaped Output Level:** This test checks the shaped output at the line link, connector, or final 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 A493.316.

1.04 **Lettered Steps:** A letter a, b, c, etc, added to a step number in Parts 3 and 4 of this section indicates an action which may or may not be required, depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

2. APPARATUS

All Tests

2.01 A 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
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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.

SECTION A204.565

STEP	ACTION	VERIFICATION
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 900Ω position.	
	<i>Note:</i> 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	Observe that the 24C CHECK switch is in 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 24C 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 24C 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 near the line link frame (No. 1 and No. 5 XBR), connector frame (SXS), or final frame (panel office).
10a	If the 23A TMS is used — Connect the MEAS jack of the 23A set to the line link, connector bank, or final frame multiple appearance of the test line, SD-98100-01, associated with the 24C generator.
11b	If the 21A and 2AB TMS are used — Connect the MEAS jack of the 2AB set to the line link, connector bank, or final frame multiple appearance of the test line, SD-98100-01, associated with the 24C generator.
	<i>Note:</i> Test connections between the TMS and the line link, connector, or final frame appearance of the test line shall not exceed 10 feet in length.

STEP	ACTION	VERIFICATION
12	Block the test line circuit OS relay operated.	
13	Consult office records for the value of office loss. (This value should be recorded on the face of the 24C generator panel.) Let this value be represented by x.	
14	Operate the CHECK switch on the 24C generator to the LEV CHK position.	23A TMS reading $-0.5 + x \pm 0.2$ db average value. 21A TMS reading $-1.0 + x \pm 0.2$ db average value.
	<i>Examples:</i>	
	(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.	
15	Remove test connections and remove blocking tool from test line OS relay.	
16	Relocate the test set near the 24C generator panel.	
17a	If the 23A TMS is used — Connect the MEAS jack of the 23A set to the GEN OUT CAL jack on the 24C generator.	
18b	If the 21A and 2AB TMS are used — Connect the MEAS jack of the 2AB set to the GEN OUT CAL jack on the 24C generator.	
19	Operate the generator LEV CHK switch. Record the measurement.	TMS reading within 0.5 db of level measured at line link, connector bank, or final frame multiples.
20	Release CHECK switch.	

C. 3000-Cycle Frequency

9	Turn CHECK switch on 24C generator to FREQ CHK position.	
10	Starting from clockwise end, slowly turn FREQ CHK potentiometer R34 counterclockwise until the 23A set indicates a maximum.	TMS reading 2.8 ± 0.7 db more power than reading recorded in Test B.

D. 1000-Cycle Frequency

- 9 Turn CHECK switch on 24C generator to
FREQ CHK position.
- 10 Starting from counterclockwise end, slowly
turn FREQ CHK potentiometer clockwise
until measuring set indicates a minimum. TMS reading 6.0 ± 0.3 db less power than
reading recorded in Test B.
- 11 Disconnect test equipment.