A1 DIGITAL DATA TRANSMISSION SYSTEM USING FOUR-PHASE DATA SETS PERIODIC TEST INTERVALS

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1. GENERAL

1.01 This section specifies the periodic tests and adjustments to be made on a routine basis on data circuits of the A1 Digital Data Transmission System using the four-phase type Digital Data Transmitters (DDT) and Digital Data Receivers (DDR).

1.02 ***In-Service Tests.*** No in-service tests are required on a routine basis.

1.03 ***Test Equipment — Routine Tests.*** Routine tests should be made ***monthly*** on the following test equipment as described in the reference section.

TEST CIRCUIT	REFERENCE SECTION
Word Generator Circuit	314-505-501
Matching and Error Counting Circuit	314-506-501
Parity Check Circuit	314-507-501

Other testing equipment and measuring sets should be routine tested or calibrated in accordance with the standard practices covering the specific item.

2. POINT-TO-POINT FACILITIES

2.01 ***Out-of-Service Tests — Overall Circuit.*** (Measure between DDT and DDR terminals.)

Note: On dual service circuits, on completion of testing on the channel not in use, the customer should be requested to manually transfer service to the alternate channel. This transfer will serve as an operating check of the Transfer and Control Circuit.

(a) ***1000-Cycle Net Loss***

Interval —

Overall Circuit — Quarterly

Interexchange Facilities — Monthly

Test Limit —

Maximum Variation from EML

— Overall Circuit ±4 db

— Interexchange Facilities ±2 db

(b) ***Frequency Response***

Interval — Annual

Test Limit — (Loss relative to 1000-cycle loss of Test a.)

300 — 1000 Cycles	−2 to +6 db
1001 — 2400 Cycles	−1 to +3 db
2401 — 2700 Cycles	−2 to +6 db

(c) ***Envelope Delay Distortion***

Interval — As required

Test Limit — Maximum 1000 microseconds between 1000 and 2400 cycles.

(d) ***Matching Error Check***

Interval — Quarterly

Test Limit — Less than 12 errors in 15 minutes. (See Section 314-500-505 for test method.) (If this requirement is not met, repeat for a second 15-minute period.)

(e) ***Steady Noise***

Interval — Quarterly

Test Limit —

→ Noncompandored Facilities — 52 dbrn
→ Compandored Facilities — 32 dbrn

The above limits are referred to the 0TLP and assume the circuit to be operated at → −10 dbm at the 0TLP. They should be used for overall circuit measurements only, the compandored limit applying only to cases where the entire circuit is made up of compandored facilities. Where a mixture of facilities exists, use the noncompandored limit. The use of a 3A NMS with "C Message" weighting is assumed.

(f) ***Impulse Noise***

Interval — Quarterly

Test Limit — (Using 6A Impulse Counter — Voiceband.)

Overall Circuit — (At 0TLP)

Noncompandored — 90 Counts/30 min. at 69 dbrn0.

*Compandored — 90 Counts/30 min. at 50 dbrn0.

* Use only where entire circuit is on compandored facilities, and of other than N2-type carrier facilities. For N2 carrier, see Section 314-550-305 for applicable noise limit and method of measurement.

3. AUTOVON SWITCHED NETWORK LINES

3.01 Periodic tests should be performed on 4-wire subscriber lines normally used for data and any specially conditioned PBX access lines which may alternately be employed to restore data circuits in accordance with Section 310-200-300.