

**TRUNK REQUIRMENTS**  
**P/AR MEASUREMENTS**  
**VOICEBAND DATA TRANSMISSION PARAMETERS**

**1. GENERAL**

**1.01** Peak-to-average ratio (P/AR) maintenance and immediate action limits are given upper and lower bounds. The value of P/AR is that characteristic of a trunk's or facility's ability to handle data with a single number. The typical value is really the mean of many P/AR measurements taken on trunks with particular facilities. The maximum and maintenance limits represent values two standard deviations above and below the typical value. A maximum value for the maintenance limit is given because it is well known that echos with certain delay times can enhance the P/AR reading, thus giving misleading results. The setting of upper and lower bounds is similar to what is done for the slope requirements. The

lower bound immediate action limits are established by reducing the maintenance limit by 1 for a single facility, 2 for 2-facility, and 3 for 3-facility trunks. The upper bound immediate action limits are established by increasing the maximum limit by 1 for single facility, 2 for 2-facility and 3 for 3-facility trunks. Table A provides the typical values for various facilities and combination of facilities. In addition, maintenance and maximum limits are provided. Maintenance limits are the minimum acceptable P/AR values while the maximum limits are the highest acceptable P/AR values.

**1.02** The P/AR maintenance limits for cable are provided in Tables B and C. Only the minimum P/AR values are given.

**NOTICE**

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TABLE A

P/AR VALUES FOR SINGLE AND MULTI-FACILITY CHANNELS

TYPE	MAXIMUM	MAINTENANCE LIMIT	TYPICAL VALUE
0, ON, N3	94	86	90
N1	98	86	92
L or Radio	99	87	93
N2	101	93	97
T1	102	93	97
2T1	97	88	92
2N3	93	83	88
2N2	96	88	92
2N1	93	85	89
T1 + N3	95	87	91
T1 + N2	96	88	92
N1 + N3	97	87	92
ON + T1	96	87	91
ON + A	93	83	88
ON + N3	93	83	88
ON + N2	96	88	92
ON + N1	96	88	92
2 ON	91	83	87
T1 + N1	96	87	91
N2 + N3	97	87	92
N1 + N2	95	87	91
2 "A" Type	92	82	87
A + T1	95	86	90
A + N3	91	83	87

TABLE A (Contd)

## P/AR VALUES FOR SINGLE AND MULTI-FACILITY CHANNELS

TYPE	MAXIMUM	MAINTENANCE LIMIT	TYPICAL VALUE
A + N2	96	86	91
A + N1	96	86	92
3A	83	74	78

In No. 4 ESS with analog trunking, single facility, use values for T1+ facility under consideration. For No. 4 ESS with T1 carrier interfacing via a digroup terminal, use T1 values.

TABLE B

## P/AR VALUES FOR NONREPEATERED CABLE

TYPE	LENGTH	MAINTENANCE LIMIT
Nonloaded	0-18 Kft.	97
H88	0-18 Kft.	94

TABLE C

## P/AR VALUES FOR REPEATERED CABLE

TYPE	LENGTH	MAINTENANCE LIMIT
Nonloaded	0-18 Kft.	90
H88	0-36 Kft.	90
H88	> 36 Kft.	80