

COMMUNICATIONS DATA SHEET NO. 201

TEMPERATURE CORRECTION DATA

Correction for Cable Gauge

$$\text{Corrected Length} = \text{Physical Length} \times \sqrt{\frac{40}{X}} \quad \text{miles}$$

X is the weight of conductor

This correction is only used for categories C2, C5, C6, C8.

Correction for Remaining Minor Categories

Minor Category	Main Category					
	C 2	C 3	C 5	C 6	C 8	C 9
C 2	1.0				0.83	
C 3		1.0				0.63
C 5			1.0	0.93		
C 6			1.08	1.0		
C 8	1.2				1.0	
C 9		1.6				1.0

Unit Factor

Unit	EQ3/18	EQ3/21	EQ3/20	EQ3/20	EQ3/24	EQ3/19	EQ3/23	EQ3/22
	EQ3/2	EQ3/3	TCU/5 C5	TCU/5 C6	TCU/6	EQ3/8	EQ3/9	EQ3/10
Unit Factor	350	630	950	880	1700	330	350	900
§I/Step (dB)	0.742	0.655	1.400	1.267	2.450	0.614	0.441	1.470

Temperature Ranges

	LONDON	BRISTOL	MANCHESTER	GLASGOW	BURGHEAD
Mean Minimum °C	3.2 (2.8)	3.5 (3.2)	2.7 (2.4)	2.6 (2.0)	2.3 (2.0)
Mean Maximum °C	17.6 (18.2)	18.6 (18.8)	16.0 (16.2)	15.7 (16.4)	14.5 (14.5)

Circuit Categories & Allocation of Units

<u>Category</u>	<u>Unit</u>	<u>Number of Steps</u>	<u>Loss on Step 1</u>	<u>Cable Construction</u>
C 2	EQ 3/2 EQ 3/18	6	0	40lb unloaded
C 3	EQ 3/3 EQ 3/21	3	2.5 dB	40lb 16mH 0.568 miles
C 5	TCU/5 EQ 3/20	3	0	40lb 16mH 1.136 miles 40lb 22mH 0.568 miles
C 6	TCU/6 EQ 3/24	3	0	40lb 22mH 1.136 miles
C 8	EQ 3/8 EQ 3/19	6	0	40lb Carrier Phantom 40lb Bunched Pairs
C 9	EQ 3/9 EQ 3/23	3	3 dB	20lb 22mH 0.284 miles
C 10	EQ 3/10 EQ 3/22	3	5 dB	25lb 16mH 0.568 miles

Change of Insertion Loss for 1000<sup>o</sup> miles

Frequency	Circuit Category						
	C 2	C 3	C 5	C 6	C 8	C 9	C 10
50 Hz	1.37	0.54	0.45	0.32	1.20	0.63	0.65
70	1.37	0.54	0.47	0.35	1.20	0.73	0.74
100	1.37	0.67	0.54	0.41	1.20	0.89	0.87
150	1.37	0.77	0.63	0.56	1.20	1.05	1.55
250	1.44	0.91	0.87	0.82	1.29	1.24	1.31
500	1.70	1.05	1.25	1.23	1.46	1.34	1.51
1 kHz	2.12	1.04	1.47	1.44	1.86	1.26	1.63
2	2.81	0.92	1.50	1.44	2.63	1.03	1.61
3	3.39	0.76	1.45	1.35	3.27	0.73	1.47
4	3.86	0.59	1.33	1.23	3.78	0.43	1.29
5 kHz	4.24	0.43	1.21	1.09	4.32	0.16	1.1
6	4.57	0.24	1.08	0.97	4.68	-0.08	0.88
6.5	4.65	0.15	1.00	0.91	4.92	-0.25	0.77
7	4.82	0.02	0.95	0.85	5.12	-0.41	0.65
7.5	4.92	-0.08	0.88	-	5.28	-0.61	0.55
8	5.02	-0.22	0.83	-	5.46	-0.85	0.47
8.5	5.16	-0.35	-	-	5.62	-1.07	0.35
9	5.24	-0.53	-	-	5.76	-1.2	0.12
10	5.41	-0.88	-	-	6.02	-1.6	-0.16
11	5.58	-1.37	-	-	6.23	-2.19	-0.55
12	5.70	-	-	-	6.38	-2.92	-
13	5.80	-	-	-	6.54	-	-
14	5.98	-	-	-	6.66	-	-
15	6.05	-	-	-	6.70	-	-
16	6.18	-	-	-	6.87	-	-

Loss on Various Steps of TCU's.

Unit	Step	1 kHz Loss (dB)
EQ 3/2 EQ 3/18	1	0
	2	0.3
	3	0.7
	4	3.1
	5	3.0
	6	2.9
EQ 3/3 EQ 3/21	1	2.5
	2	3.0
	3	4.6
TCU/5 EQ 3/20	1	0
	2	2.45
	3	3.75
TCU/6 EQ 3/24	1	0
	2	3.5
	3	4.9
EQ 3/8 EQ 3/19	1	0
	2	0.1
	3	0.5
	4	1.1
	5	2.4
	6	2.1
EQ 3/9 EQ 3/23	1	3.0
	2	3.6
	3	3.6
EQ 3/10 EQ 3/22	1	5.0
	2	6.0
	3	8.9