TABLE OF HYPERBOLIC FUNCTIONS OF PROPAGATION CONSTANTS

NON-LOADED 24 GAUGE ASM, CSM CABLE AT 1000 CPS

(Propagation Constant, γ = .2466 + j .2513 Per Mile)

Miles (ℓ)	Sinh $\gamma\ell$	Cosh $\gamma\ell$	Tanh $\gamma\ell$	Coth $\gamma\ell$
0	0 + j 0	1 + j 0	0 + j 0	∞ - j∞
1	.2413 + j .2563 .3520 /46.7°	.9982 + j .0619 1.0001 /3.5°	.2567 + j .2408 .3520 /43.2°	2.0723 - j1.9437 2.8412 /43.2°
2	.4499 + j .5415 .7040 /50.3°	.9851 + j .2473 1.0157 /14.1°	.5594 + j .4092 .6931 /36.2°	1.1645 - j .8518 1.4428 /36.2°
3	.5899 + j .8805 1.0598 /56.2°	.9378 + j .5539 1.0891 /30.6°	.8775 + j .4207 .9731 /25.6°	.9266 - j .4443 1.0276 /25.6°
4	.6186 + j1.2894 1.4301 /64.4°	.8185 + j .9746 1.2727 /50.0°	1.0884 + j .2791 1.1237 /14.4°	.8620 - j .2211 .8899 /14.4°
5	.4854 + j1.7703 1.8356 /74.7°	.5755 + j1.4932 1.6002 /68.9°	1.1413 + j .1149 1.1471 /5.8°	.8672 - j .0873 .8716 /5.8°
6	.1311 + j2.3049 2.3086 /86.7°	.1454 + j2.0776 2.0827 /86.0°	1.1084 + j .0145 1.1085 /0.7°	.9020 - j .0118 .9021 /0.7°
7	- .5093 + j2.8474 2.8925/100.1°	- .5426 + j2.6726 2.7271/101.5°	1.0604 - j .0250 1.0607 /1.4°	.9425 + j .0222 .9428 /1.4°
8	-1.5005 + j3.3165 3.6401/114.4°	-1.5597 + j3.1906 3.5514/116.1°	1.0245 - j .0304 1.0250 /1.7°	.9752 + j .0289 .9756 /1.7°
9	-2.8972 + j3.5877 4.6114/128.9°	-2.9665 + j3.5039 4.5910/130.2°	1.0041 - j .0234 1.0044 /1.3°	.9953 + j .0232 .9956 /1.3°
10	-4.7279 + j3.4870 5.8747/143.6°	-4.7966 + j3.4371 5.9009/144.4°	.9955 - j .0139 .9956 /0.8°	1.0043 + j .0140 1.0044 /0.8°

Note: The data in this table are furnished for use with formulae such as those on Page 35 of Section AB92.075, "Introduction to Telephone Transmission Theory."